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

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

(DECEMBER 2007)

Prepared by: _____
LAW, Sau Yee
Senior Environmental Officer

Approved by: _____
LAU, Chi Leung
Environmental Team Leader

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EXECUTIVE SUMMARY

This monthly EM&A report (No.32) 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 31 December 2007.

Construction Progress

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

Item	*Construction Works*
1	*Roadworks along Road D1 and Road SL3*
2	*Roadworks and paver laying at Section 2*
3	*Installation of movement joint at MLS Bridge*
4	*Floor Finishing works and installation of handrails in MLS Subway*
5	*CCTV inspection for Section 2 and Section 3*
6	*Outstanding works and defect rectification works for Toilet No.2*
7	*Landscape softworks at Section 11 and 12*
8	*Outstanding works at works areas previously possessed by CWJV at Section 5 (Road L4)*
9	*Construction of crossing at Section 5*
10	*Drainage pipe rectification works for Section 6*
11	*Outstanding works at Section 7, 8, 9, and 10*

Environmental Monitoring Progress

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

- *Noise Monitoring (Day-time): 4 Occasion at 4 designated locations*
- *24-hour TSP Monitoring: 6 Occasions at 3 designated locations*
- *1-hour TSP Monitoring: 13 Occasions at 3 designated locations*
- *Weekly-site inspection: 5 Occasions*

Noise Monitoring

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

Air Monitoring

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

Wastewater Monitoring

No wastewater monitoring was carried out in this reporting month since the effluent discharge point had been removed.

Site Inspection

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

Concerned Parties	*Dates of Audit / Inspection in December 2007*
Weekly site inspection (ET)	*01, 08, 15, 22, 27*
Monthly site inspection (IEC/LWKJV/RE)	*27*

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 outstanding finding in the previous month, watering was provided for unpaved area at SA-3.during the weekly site inspection on 08/12/07.*	*No further action should be taken since the finding was improved.*	*No further ET verification should be taken since the finding was improved.*
2	*Air*	*Follow up action to the outstanding finding in the previous month, most of the stockpiles at SA-3 were found removed during the weekly site inspection on 27/12/07.*	*No further action should be taken since the finding was improved.*	*No further ET verification should be taken since the finding was improved.*
3	*Site Practice*	*Follow up action to the outstanding finding in the previous month, the 200L chemical containers at SA-3 were removed during the weekly site inspection on 01/12/07.*	*No further action should be taken since the finding was improved.*	*No further ET verification should be taken since the finding was improved.*
4	*Site Practice*	*A 20L plastic container containing chemical was found without drip tray at SA-3 during the weekly site inspection on 22/12/07.*	*LWKJV replied to provide drip tray or relocate the chemical container to an appropriate storage area...*	*During the subsequent weekly site inspection on 24/12/07, the container was removed.*
5	*Site Practice*	*Follow up action to the outstanding finding in the previous month, rubbish such as lunch boxes and aluminum cans at Void Abutment were cleaned up during the weekly site inspection on 15/12/07.*	*No further action should be taken since the finding was improved.*	*No further ET verification should be taken since the finding 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. 120m^3 inert C&D materials and 42020kg general refuse were generated in this reporting month. All inert C&D materials were reused in the Contract and other wastes were handling under the instruction and procedure stated in the WMP in this reporting month.

Environmental Complaints

No environmental complaints were received in this monitoring month.

Notification of summons and successful prosecutions

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

Future Key Issues

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

- *Noise and air quality impact due to construction works;*
- *Maintain wheel washing facilities properly;*
- *Cleanup the access road regularly;*
- *Watering, hydro-seeding or covering all stockpiles with tarpaulin to avoid wind and water erosion;*
- *Diverting the silty runoff to sedimentation trap or sedimentation tanks;*
- *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 31 December 2007.

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 1and 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. Joe Yip*	*Site Representative*	*2442 1123*	*2442 9733*
Hyder	*Mr. Alexi Bhanja*	*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

Item	*Construction Activities*
1	*Roadworks along Road D1 and Road SL3*
2	*Roadworks and paver laying at Section 2*
3	*Installation of movement joint at MLS Bridge*
4	*Floor Finishing works and installation of handrails in MLS Subway*
5	*CCTV inspection for Section 2 and Section 3*
6	*Outstanding works and defect rectification works for Toilet No.2*
7	*Landscape softworks at Section 11 and 12*
8	*Outstanding works at works areas previously possessed by CWJV at Section 5 (Road L4)*
9	*Construction of crossing at Section 5*
10	*Drainage pipe rectification works for Section 6*
11	*Outstanding works at Section 7, 8, 9, and 10*

Table 3.2 Implementation of Environmental Mitigation Measures

General construction works	• *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;* • *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.*

4.0 AIR QUALITY MONITORING

4.1 Monitoring Requirement

1-hour and 24-hour TSP monitoring were required to 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	---				01/12/07	13:45	14:45
						04/12/07	09:45	10:45
						06/12/07	13:00	14:00
						08/12/07	09:10	10:10
						11/12/07	10:00	11:00
						13/12/07	10:15	11:15
						15/12/07	13:00	14:00
						18/12/07	11:00	12:00
						20/12/07	10:00	11:00
						22/12/07	08:40	09:40
						24/12/07	14:20	15:20
						27/12/07	10:20	11:20
						29/12/07	14:06	15:06
AM3	Cheung Shue Tan Village (Near the outer building, temple)	---				01/12/07	09:30	10:30
						04/12/07	15:46	16:46
						06/12/07	14:20	15:20
						08/12/07	13:05	14:05
						11/12/07	14:00	15:00
						13/12/07	15:30	16:30
						15/12/07	14:30	15:30
						18/12/07	09:30	10:30
						20/12/07	16:00	17:00
						22/12/07	13:00	14:00
						24/12/07	16:55	17:55
						27/12/07	17:00	18:00
						29/12/07	16:50	17:50
AM5	Near Wen Chih Tang at the CUHK	---				01/12/07	14:50	15:50
						04/12/07	10:57	11:57
						06/12/07	17:00	18:00
						08/12/07	14:20	15:20
						11/12/07	15:22	16:22
						13/12/07	13:00	14:00
						15/12/07	17:00	18:00
						18/12/07	16:40	17:40
						20/12/07	17:20	18:20
						22/12/07	14:11	15:11
						24/12/07	15:35	16:35
						27/12/07	15:20	16:20
						29/12/07	13:00	14:00
AM1	HKIB Staff Accommodation	03/12/07	16:00	04/12/07	15:21	---		
		08/12/07	10:30	09/12/07	09:45			
		14/12/07	10:00	15/12/07	09:16			
		20/12/07	10:02	21/12/07	09:24			
		24/12/07	09:55	25/12/07	08:59			
		29/12/07	10:40	30/12/07	10:25			
AM3A	Cheung Shue Tan (in front of Man Kee Store)	03/12/07	16:35	04/12/07	16:21	---		
		08/12/07	10:45	09/12/07	10:38			
		14/12/07	09:30	15/12/07	08:55			
		20/12/07	16:05	21/12/07	15:55			
		24/12/07	09:25	25/12/07	09:41			
		29/12/07	10:30	30/12/07	10:49			
AM5	Near Wen Chih Tang at the CUHK	03/12/07	16:15	04/12/07	15:31	---		
		08/12/07	10:10	09/12/07	09:44			
		14/12/07	09:45	15/12/07	09:11			
		20/12/07	17:22	21/12/07	16:54			
		24/12/07	09:43	25/12/07	09:10			
		29/12/07	10:05	30/12/07	09:43			

4.5 Monitoring Methodology

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 0.6m^3/min and 1.7m^3/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 recoded.
- Before weighting, all filters were equilibrated in a desiccator for 24 hour with the temperature of 25°C $\pm$ 3°C and the relative humidity (RH) <50% $\pm$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.

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.

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 ($\mu g/m^3$)*		*1-hr TSP ($\mu g/m^3$)*	
	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 (Lx). 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 Leq, L10 and L90 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 $L_{eq(5\text{-}min)}$);*
- *One set of measurements between 1900-2300 hours (3 consecutive $L_{eq(5\text{-}min)}$)*;*
- *One set of measurements between 2300-0700 hours of next day (3 consecutive $L_{eq(5\text{-}min)}$)*;*
- *One set of measurements between 0700-1900 hours on holidays (3 consecutive $L_{eq(5\text{-}min)}$)*.*

(*): 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 five 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	*04/12/07*	*09:57*	---	---	---	---	---	---
	11/12/07	*10:02*	---	---	---	---	---	---
	18/12/07	*11:10*	---	---	---	---	---	---
	27/12/07	*10:25*	---	---	---	---	---	---
NM2	*04/12/07*	*13:15*	---	---	---	---	---	---
	11/12/07	*16:30*	---	---	---	---	---	---
	18/12/07	*15:20*	---	---	---	---	---	---
	27/12/07	*11:35*	---	---	---	---	---	---
NM3	*04/12/07*	*16:00*	---	---	---	---	---	---
	11/12/07	*14:02*	---	---	---	---	---	---
	18/12/07	*09:40*	---	---	---	---	---	---
	27/12/07	*17:10*	---	---	---	---	---	---
NM8	*04/12/07*	*11:10*	---	---	---	---	---	---
	11/12/07	*15:20*	---	---	---	---	---	---
	18/12/07	*16:50*	---	---	---	---	---	---
	27/12/07	*15:30*	---	---	---	---	---	---

5.5 Monitoring Procedures and Calibration Details

Operation/Analysis Procedures

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

Maintenance and Calibration

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

5.6 Action and Limit Levels

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

Table 5.5 Action and Limit Levels for noise monitoring

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

* = *Reduce to 70 dB(A) for schools and 65 dB(A) during school examination periods.*
** = *Area Sensitivity Rating (ASR) C is selected from the "Technical Memorandum on Noise from Construction Work Other Than Percussive Piling".*

5.7 Event-Action Plans

Please refer to the Appendix E for details.

5.8 Results

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

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

6.0 WASTEWATER MONITORING

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

During this reporting month, no wastewater monitoring was required to be carried out since the wastewater monitoring had been carried out on 18 June 2007 and the Discharge Licence required carrying out wastewater monitoring at effluent discharge point quarterly.

No wastewater monitoring was carried out in this reporting month since the effluent discharge point had been removed.

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.

No wastewater monitoring was carried out in this reporting month since the effluent discharge point had been removed.

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 (01, 08, 15, 22 and 27 December 2007). Monthly joint site inspection at 27 December 2007 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 outstanding finding in the previous month, watering was provided for unpaved area at SA-3.during the weekly site inspection on 08/12/07.*	*No further action should be taken since the finding was improved.*	*No further ET verification should be taken since the finding was improved.*
2	*Air*	*Follow up action to the outstanding finding in the previous month, most of the stockpiles at SA-3 were found removed during the weekly site inspection on 27/12/07.*	*No further action should be taken since the finding was improved.*	*No further ET verification should be taken since the finding was improved.*
3	*Site Practice*	*Follow up action to the outstanding finding in the previous month, the 200L chemical containers at SA-3 were removed during the weekly site inspection on 01/12/07.*	*No further action should be taken since the finding was improved.*	*No further ET verification should be taken since the finding was improved.*
4	*Site Practice*	*A 20L plastic container containing chemical was found without drip tray at SA-3 during the weekly site inspection on 22/12/07.*	*LWKJV replied to provide drip tray or relocate the chemical container to an appropriate storage area...*	*During the subsequent weekly site inspection on 24/12/07, the container was removed.*
5	*Site Practice*	*Follow up action to the outstanding finding in the previous month, rubbish such as lunch boxes and aluminum cans at Void Abutment were cleaned up during the weekly site inspection on 15/12/07.*	*No further action should be taken since the finding was improved.*	*No further ET verification should be taken since the finding 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 Construction Site at Pak Shek Kok Development Package 2A, Tai Po / Ma Liu Shui, N.T.	*GW-RN0559-07*	*06/01/08*	*29/06/08*	*Group A* *Two Poker, vibratory, hand-held (CNP170)* *Two Concrete lorry mixer (CNP044)* *One Excavator, tracked (CNP081)* *Group B* *One Asphalt Paver (CNP004)* *One Roller, Vibratory (CNP186)* *One Road Roller (CNP185)* *One Dump Truck (CNP067)* *Group C* *One Dump Truck (CNP067)* *One Excavator, tracked (CNP081)* *One Crane, mobile (diesel) (CNP048)* *One Lorry with crane*
Wastewater Discharge License	*3246 – Part A*	*01/11/06*	*31/12/09*	*Discharge of trade Effluent, surface run-off and all other wastewater arising from the construction site and sedimentation tank to Coastal water or communal drain for the carriage of surface drainage water.*
Wastewater Discharge License	*3246 – Part B*	*06/12/04*	*05/12/09*	*Discharge of trade Effluent, surface run-off and all other wastewater arising from the construction site and on-site aerobic waste water treatment system to soak-away pit.*
Chemical Waste Producer	*5113-729-LL 1113-01*	*24/09/04*	*---*	*Spent lubricating oil, spent battery parts containing heavy metals*

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

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

- *All stockpiles should be covered with clean tarpaulin sheets, spraying with water or hydro-seeding to avoid wind and water erosion;*
- *Size of tarpaulin sheet should be larger than surface size of stockpile in order to resume normal function of tarpaulin sheet;*
- *The heights from which fill materials are dropped should be controlled to a practical height to minimize the fugitive dust arising from unloading or provide a canvas with larger surface area;*
- *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;*
- *Bigger sumpit for increasing wastewater input should provide for any necessary;*
- *Providing briefing to the concerned site staff on remedial actions, such as handling method of chemicals and chemical waste;*
- *Regular maintenance of excavator or any diesel cater machines should be provided in order to avoid any possible smoke nuisance;*
- *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

ll 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)*	*120*	*Reused in the Contract*	*129243*
	Broken Concrete (m^3)	*20*	*N/A*	*1231*
	Reused in the Contract (m^3)	*100*	*N/A*	*128100*
	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*	*N/A*	*37.705*
	Paper/Cardboard Packaging (1000kg)	*0*	*N/A*	*2.806*
	Plastics (1000kg)	*0*	*N/A*	*0.083*
	Chemical Waste (1000kg)	*0*	*N/A*	*3.4*
	Other, e.g. General Refuse (1000kg)	*42.02*	*SENT*	*1928.79*

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.

No wastewater monitoring was carried out in this reporting month since the effluent discharge point had been removed.

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	*January 2008*	*February 2008*
Noise Monitoring (Day-time)	*03, 08, 15, 22, 29*	*05, 12, 19, 26*
1-hour TSP	*02, 03, 04, 05, 08, 10, 12, 15, 16, 17, 19, 22, 24, 26, 28, 29, 31*	*02, 05, 06, 11, 12, 14, 16, 18, 19, 21, 23, 26, 28, 29*
24-hour TSP	*04, 10, 16, 22, 28*	*02, 06, 12, 18, 23, 29*
Site Inspection	*05, 12, 19, 26*	*02, 06, 16, 23*

12.2 Upcoming construction works scheduled in the coming two months

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

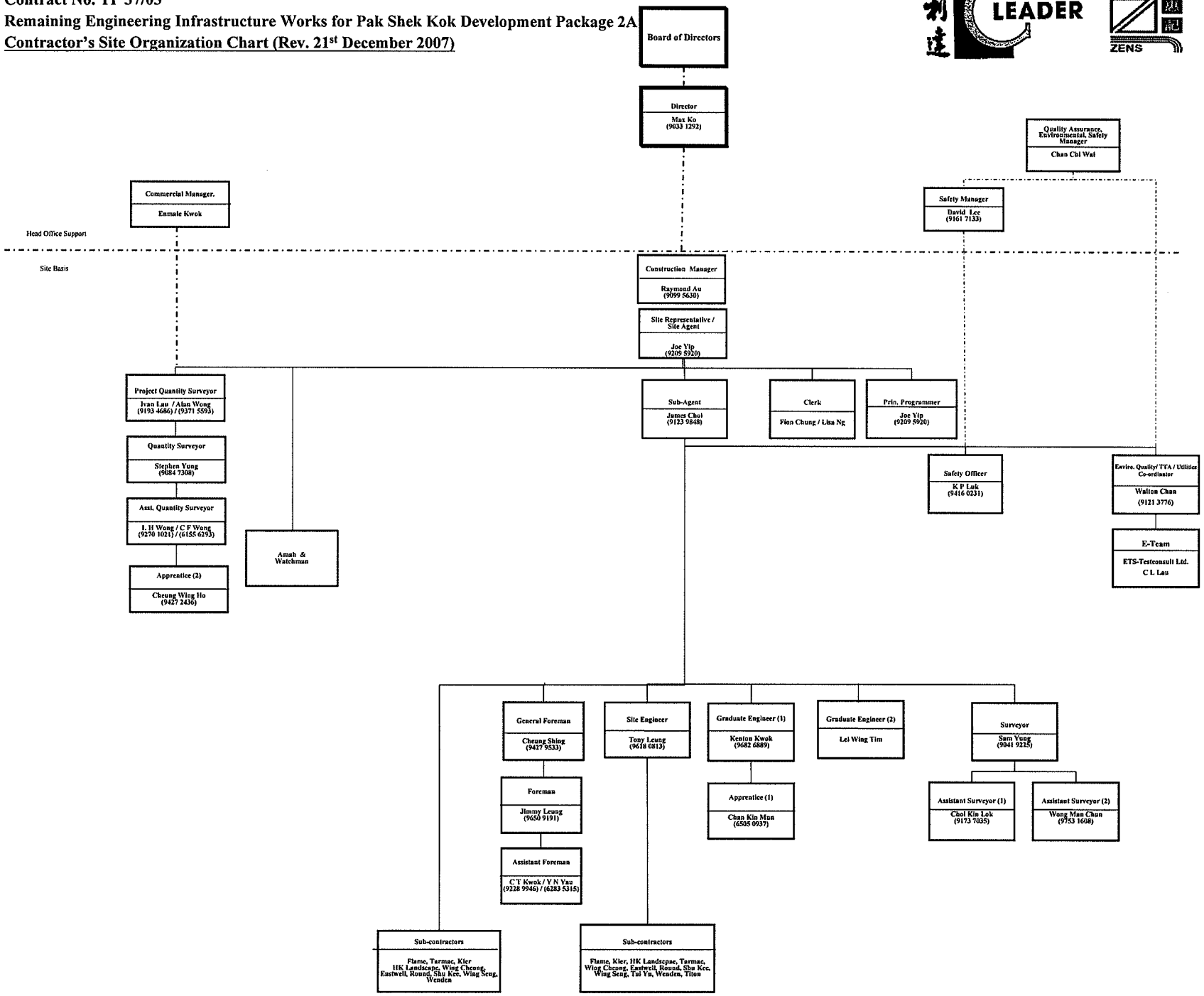
Table 12.2 Construction activities planned in the coming two months

Item	*Construction Activities planned to be carried out in the coming two months*
1	*Laying of bituminous materials at road SL3 and road D1*
2	*Paving works of footpath adjacent to Subway*
3	*Construction of loading and unloading area would be commenced after the traffic diversion works at Ma Liu Shui*
4	*CCTV inspection for Section 2 and 3*
5	*Removal of debris and surplus material on site*
6	*MJ installation at of MLS Bridge (Alternative Design)*
7	*Roadworks at the existing MLS Bridge*
8	*Floor finishing works and defects rectification works for the proposed MLS Subway (Alternative Design)*
9	*Outstanding works and defect modification works for Toilet No.2, Section 7 and 8*
10	*Construction of the bicycle packing area and crossing under Section 5*
11	*Soft landscaping works at Section 11 and 12*

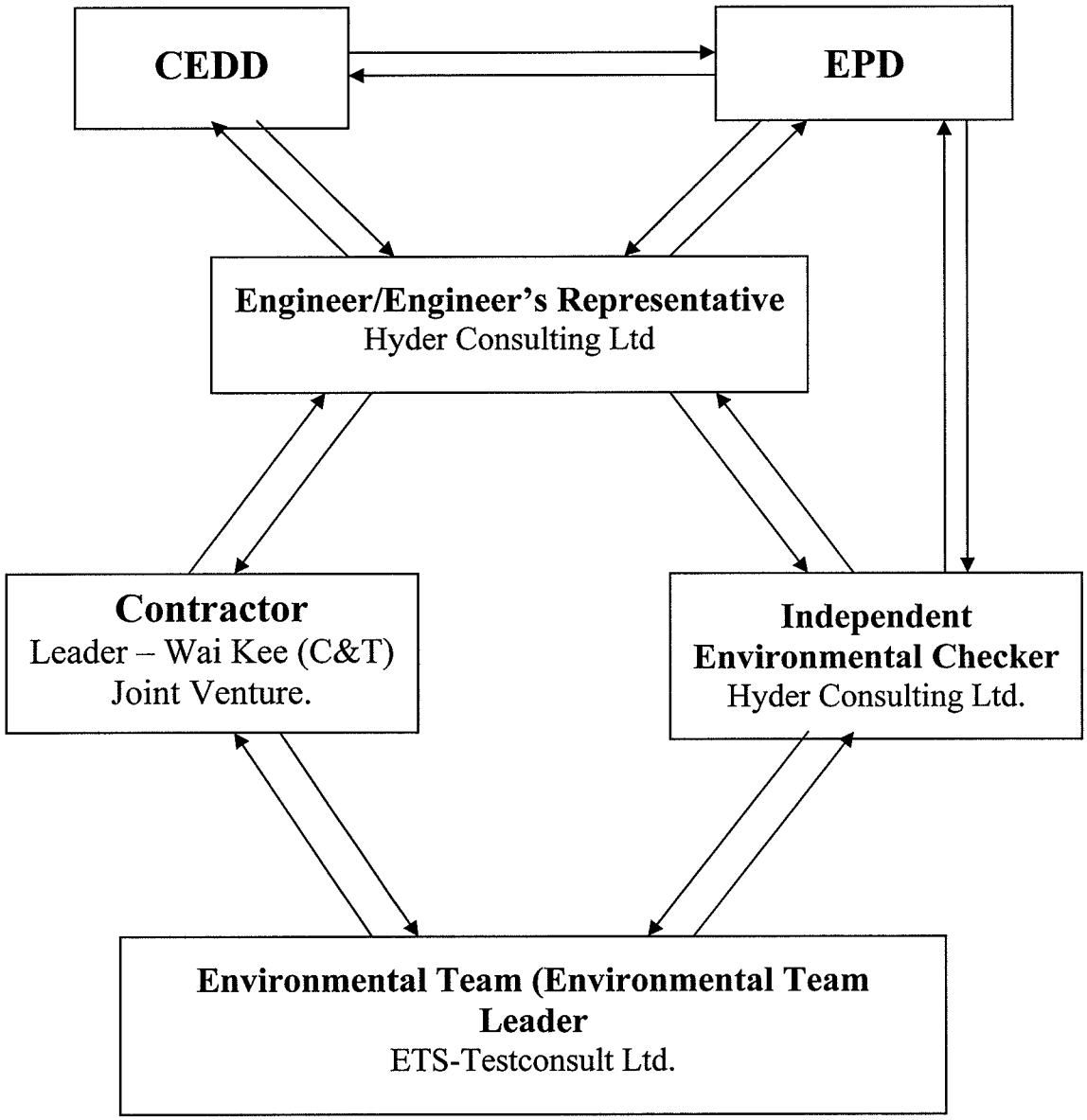
Appendix A

Organization Chart and Lines of Communication

Leader - Wai Kee (C&T) Joint Venture
Contract No. TP 37/03
Remaining Engineering Infrastructure Works for Pak Shek Kok Development Package 2A
Contractor's Site Organization Chart (Rev. 21st December 2007)



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 : Graseby GMW

Date of Calibration : 21 November 2007

Serial No. : 1178 (ET / EA / 003 / 01)

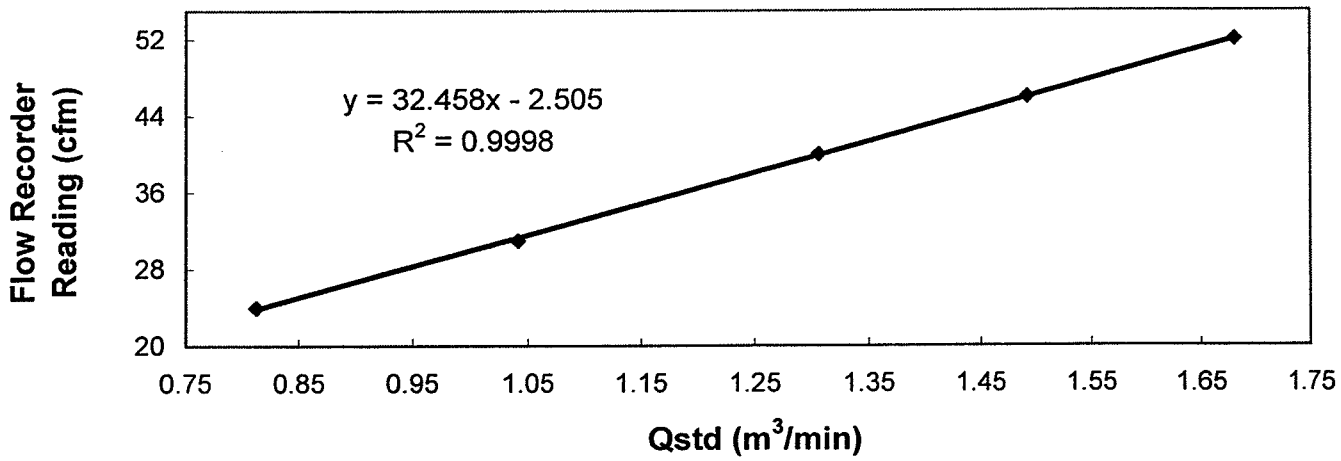
Calibration Due Date : 20 January 2008

Method : Based on Operations Manual for in series calibration method by TISCH ENVIROMENTAL Model Te-5025A calibration kit

Results :

Flow recorder reading (cfm)	52	46	40	31	24
Qstd (Actual flow rate, m^3/min)	1.68	1.49	1.31	1.04	0.81
Pressure : 761.31 mm Hg		Temp. : 300 K			

Sampler 1178 Calibration Curve
Site: Pak Shek Kok (AM-1)
Date of Calibration: 21 November 2007



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 (Senior Environmental Officer)

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 : Graseby GMW

Date of Calibration : 21 November 2007

Serial No. : 7179 (ET / EA / 003 / 16)

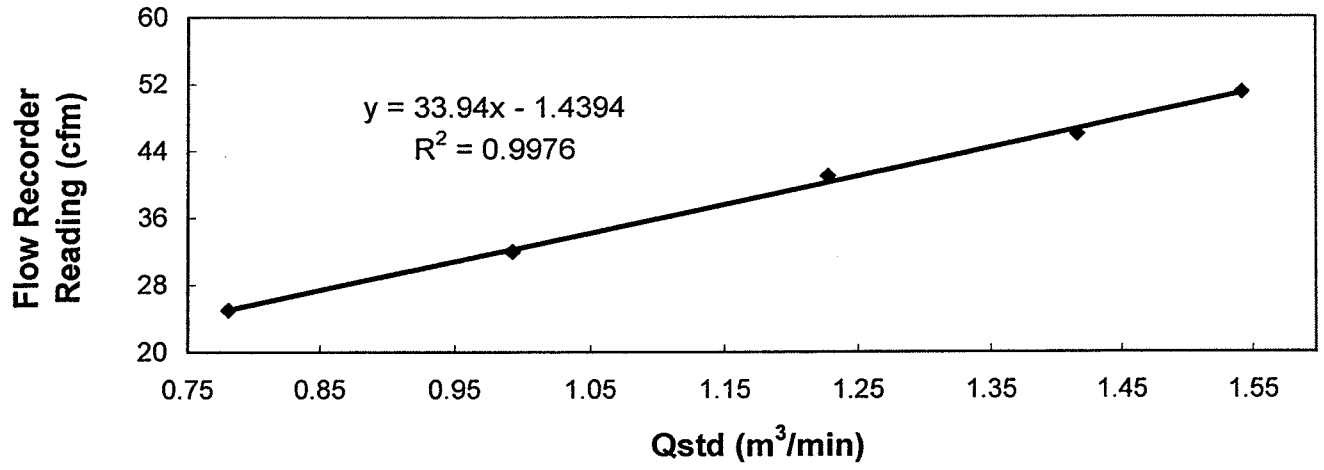
Calibration Due Date : 20 January 2008

Method : Based on Operations Manual for in series calibration method by TISCH ENVIROMENTAL Model Te-5025A calibration kit

Results :

Flow recorder reading (cfm)	51	46	41	32	25
Qstd (Actual flow rate, m^3/min)	1.54	1.42	1.23	0.99	0.78
Pressure : 761.31 mm Hg		Temp. : 300 K			

Sampler 7179 Calibration Curve
Site: Pak Shek Kok (AM-3A)
Date of Calibration: 21 November 2007



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
(Senior Environmental Officer)

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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 : Graseby GMW

Date of Calibration : 21 November 2007

Serial No. : 1172 (ET / EA / 003 / 11)

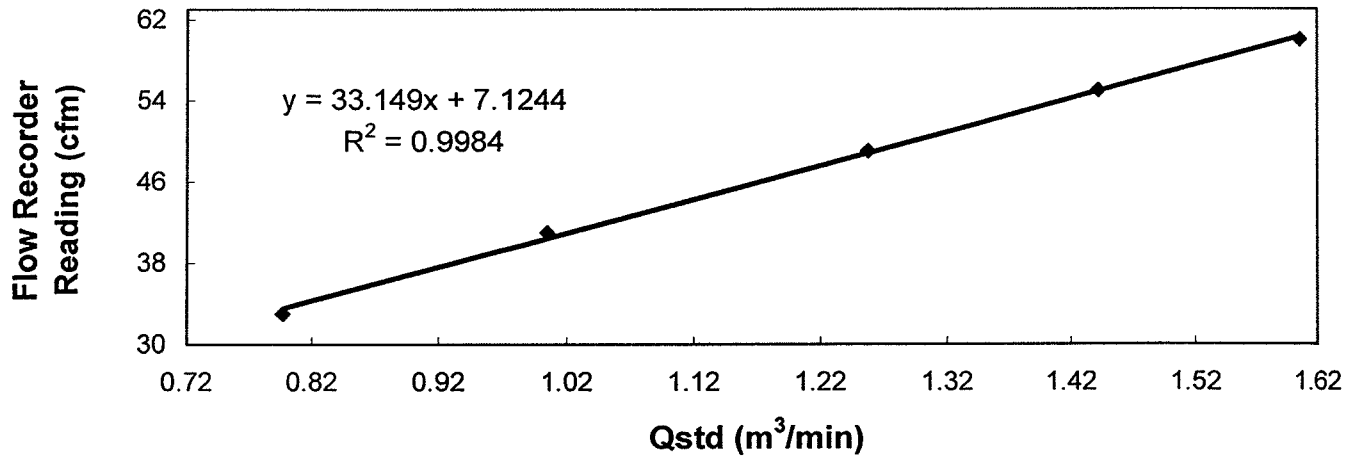
Calibration Due Date : 20 January 2008

Method : Based on Operations Manual for in series calibration method by TISCH ENVIROMENTAL Model Te-5025A calibration kit

Results :

Flow recorder reading (cfm)	60	55	49	41	33
Qstd (Actual flow rate, m^3/min)	1.60	1.44	1.26	1.00	0.80
Pressure : 761.31 mm Hg		Temp. : 300 K			

Sampler 1172 Calibration Curve
Site: Pak Shek Kok (AM-5)
Date of Calibration: 21 November 2007



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
(Senior Environmental Officer)

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

Internal Calibration Report of Dust Trak Monitor

Manufacturer : TSI - 8520 Dust Trak

Date of Calibration : 12 July 2007

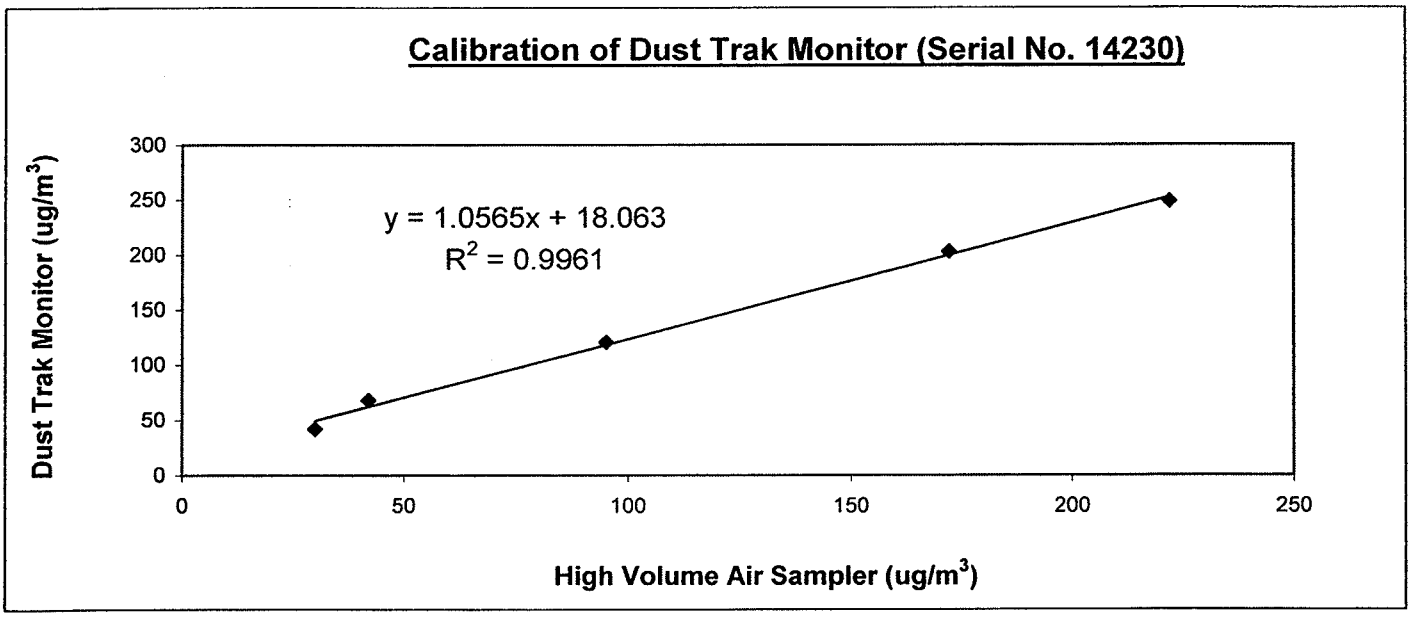
Serial No. : 14230 (ET/EA/001/04)

Due Date : 11 January 2008

Method : Parallel measurement (five-point calibration) by placing the Dust Trak Monitor and High Volume Air Samper together under the same environmental condition

Results :

Dust Trak Monitor (ug/m^3)	42	68	121	203	249
High Volume Air Sampler (ug/m^3)	30	42	95	172	222
High Volume Air Sampler Serail No.: 1178		Calibration Due Date: 14 July 2007			



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 : LEUNG, Ka Chun (Assistant Environmental Officer)

Approved by : LAW, Sau Yee (Senior Environmental Officer)

Appendix B2

Air Quality Monitoring Results

Summary of 24-hr TSP Monitoring Results

Monitoring Station : AM1
Location : HKIB Staff Accommodation

Start		Finish		Elapse Time		Sampling Time (hrs)	Flow Rate (m^3/min.)		Average (m^3/min.)	Filter Weight (g)		Conc. ($\mu g/m^3$)	Weather Condition
Date	Time	Date	Time	Initial	Final		Initial	Final		Initial	Final		
03/12/07	16:00	04/12/07	15:21	12350.37	12373.72	23.35	1.3095	1.3095	1.3095	2.7515	3.0295	152	Sunny
08/12/07	10:30	09/12/07	09:45	12373.73	12396.98	23.25	1.3403	1.3403	1.3403	2.7766	3.0021	121	Sunny
14/12/07	10:00	15/12/07	09:16	12396.98	12420.25	23.27	1.1555	1.1555	1.1555	2.9289	3.0699	87	Sunny
20/12/07	10:02	21/12/07	09:24	12420.25	12443.61	23.36	1.1555	1.1555	1.1555	2.8547	2.9462	56	Cloudy
24/12/07	09:55	25/12/07	08:59	12443.61	12466.67	23.06	1.0939	1.0939	1.0939	2.8391	2.9323	62	Cloudy
29/12/07	10:40	30/12/07	10:25	12466.67	12490.42	23.75	1.0939	1.0939	1.0939	2.7402	2.9857	157	Cloudy

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

Start		Finish		Elapse Time		Sampling Time (hrs)	Flow Rate (m^3/min.)		Average (m^3/min.)	Filter Weight (g)		Conc. ($\mu g/m^3$)	Weather Condition
Date	Time	Date	Time	Initial	Final		Initial	Final		Initial	Final		
03/12/07	16:35	04/12/07	16:21	17838.32	17862.08	23.76	0.9853	0.9853	0.9853	2.7294	2.8396	78	Sunny
08/12/07	10:45	09/12/07	10:38	17862.08	17885.97	23.89	0.9853	0.9853	0.9853	2.7554	2.8691	81	Sunny
14/12/07	09:30	15/12/07	08:55	17885.97	17909.39	23.42	1.0147	1.0147	1.0147	2.9069	3.0138	75	Sunny
20/12/07	16:05	21/12/07	15:55	17909.39	17933.23	23.84	1.0147	1.0147	1.0147	2.8212	2.9061	58	Cloudy
24/12/07	09:25	25/12/07	09:41	17933.23	17957.50	24.27	1.0147	1.0147	1.0147	2.8101	2.8813	48	Cloudy
29/12/07	10:30	30/12/07	10:49	17957.50	17981.81	24.31	1.0147	1.0147	1.0147	2.7369	2.8819	98	Cloudy

Monitoring Station : AM5
Location : Wen Chih Tang at the CUHK

Start		Finish		Elapse Time		Sampling Time (hrs)	Flow Rate (m^3/min.)		Average (m^3/min.)	Filter Weight (g)		Conc. ($\mu g/m^3$)	Weather Condition
Date	Time	Date	Time	Initial	Final		Initial	Final		Initial	Final		
03/12/07	16:15	04/12/07	15:31	7720.53	7743.79	23.26	0.6901	0.6901	0.6901	2.7652	2.9069	147	Sunny
08/12/07	10:10	09/12/07	09:44	7743.79	7767.35	23.56	0.6901	0.6901	0.6901	2.7289	2.8519	126	Sunny
14/12/07	09:45	15/12/07	09:11	7767.35	7790.78	23.43	0.6599	0.6599	0.6599	2.9114	2.9964	92	Sunny
20/12/07	17:22	21/12/07	16:54	7790.78	7814.32	23.54	0.6599	0.6599	0.6599	2.8397	2.8961	61	Cloudy
24/12/07	09:43	25/12/07	09:10	7814.32	7837.77	23.45	0.7504	0.7504	0.7504	2.7917	2.8407	46	Cloudy
29/12/07	10:05	30/12/07	09:43	7837.77	7861.40	23.63	0.7203	0.7203	0.7203	2.7223	2.8773	152	Cloudy

Summary of 1-hr TSP Monitoring Results

Monitoring Station : AM1 (HKIB Staff Accommodation)

Date	Monitoring Period		1-hr TSP (μg/m^3)			Weather
	Start	Finish	Minimum	Maximum	Average	
01/12/07	13:45	14:45	53	468	191	Sunny
04/12/07	09:45	10:45	96	379	145	Cloudy
06/12/07	13:00	14:00	102	447	133	Cloudy
08/12/07	09:10	10:10	70	394	148	Cloudy
11/12/07	10:00	11:00	97	409	118	Cloudy
13/12/07	10:15	11:15	75	553	202	Sunny
15/12/07	13:00	14:00	87	396	117	Cloudy
18/12/07	11:00	12:00	95	422	144	Sunny
20/12/07	10:00	11:00	97	386	89	Cloudy
22/12/07	08:40	09:40	60	379	135	Cloudy
24/12/07	14:20	15:20	79	418	153	Cloudy
27/12/07	10:20	11:20	103	397	157	Sunny
29/12/07	14:06	15:06	60	506	184	Cloudy

Monitoring Station : AM3 – Cheung Shue Tan in front of Man Kee Store

Date	Monitoring Period		1-hr TSP (μg/m^3)			Weather
	Start	Finish	Minimum	Maximum	Average	
01/12/07	09:30	10:30	42	345	89	Sunny
04/12/07	15:46	16:46	48	323	78	Cloudy
06/12/07	14:20	15:20	87	364	79	Cloudy
08/12/07	13:05	14:05	64	355	105	Cloudy
11/12/07	14:00	15:00	67	326	62	Cloudy
13/12/07	15:30	16:30	62	432	120	Sunny
15/12/07	14:30	15:30	64	340	76	Cloudy
18/12/07	09:30	10:30	68	351	93	Sunny
20/12/07	16:00	17:00	64	321	67	Cloudy
22/12/07	13:00	14:00	53	343	96	Cloudy
24/12/07	16:55	17:55	47	329	69	Cloudy
27/12/07	17:00	18:00	60	312	88	Sunny
29/12/07	16:50	17:50	46	424	100	Cloudy

Summary of 1-hr TSP Monitoring Results

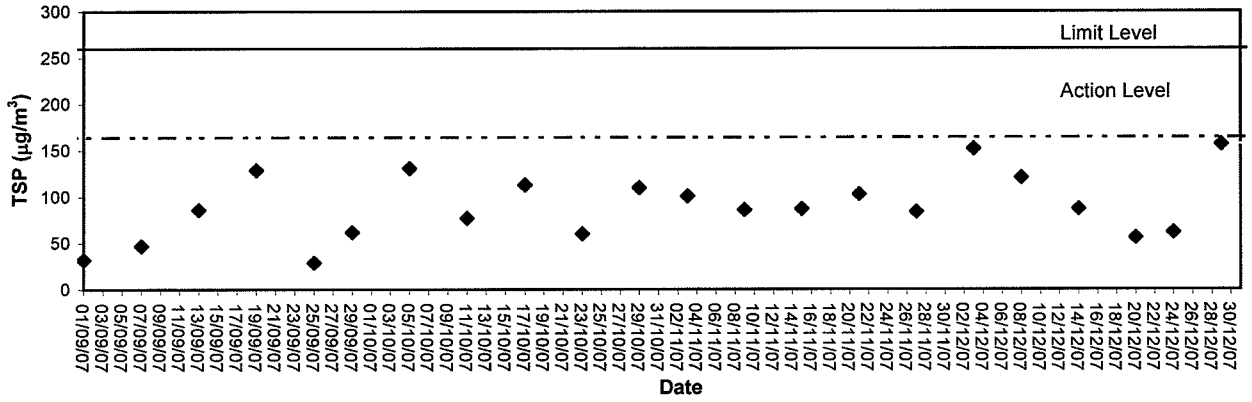
Monitoring Station : AM5 - Near Wen Chih Tang at the CUHK

Date	Monitoring Period		1-hr TSP (μg/m^3)			Weather
	Start	Finish	Minimum	Maximum	Average	
01/12/07	14:50	15:50	49	440	146	Sunny
04/12/07	10:57	11:57	60	359	101	Cloudy
06/12/07	17:00	18:00	94	381	106	Cloudy
08/12/07	14:20	15:20	72	379	115	Cloudy
11/12/07	15:22	16:22	73	342	77	Cloudy
13/12/07	13:00	14:00	68	476	143	Sunny
15/12/07	17:00	18:00	70	357	81	Cloudy
18/12/07	16:40	17:40	60	321	81	Sunny
20/12/07	17:20	18:20	78	343	77	Cloudy
22/12/07	14:11	15:11	57	355	106	Cloudy
24/12/07	15:35	16:35	60	380	99	Cloudy
27/12/07	15:20	16:20	74	324	105	Sunny
29/12/07	13:00	14:00	53	455	124	Cloudy

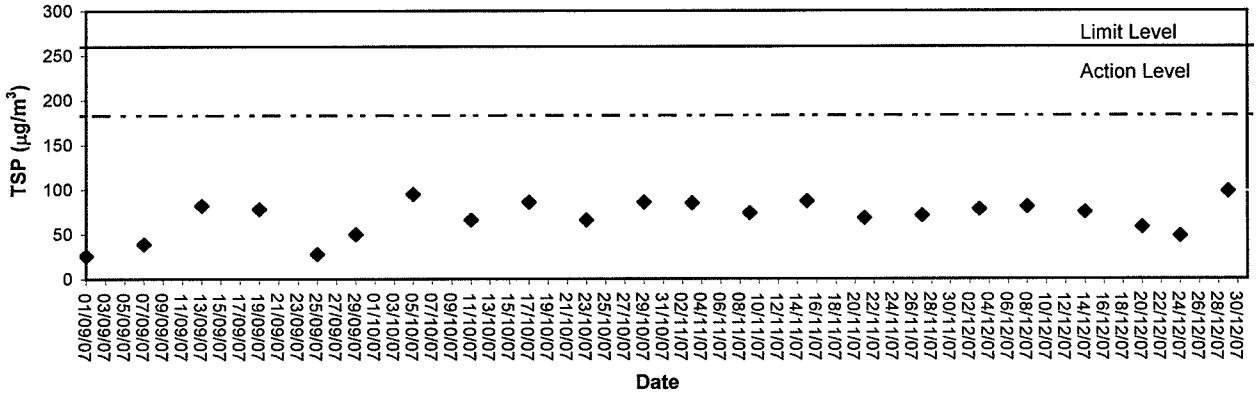
Appendix B3

Graphical Plots of Air Quality Monitoring Data

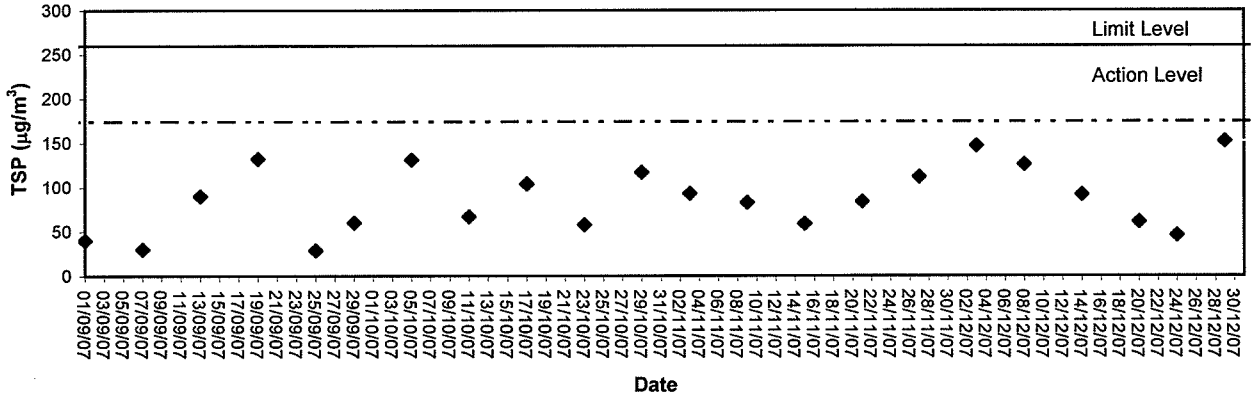
24-hour TSP level at AM1 (HKIB Staff Accommodation)



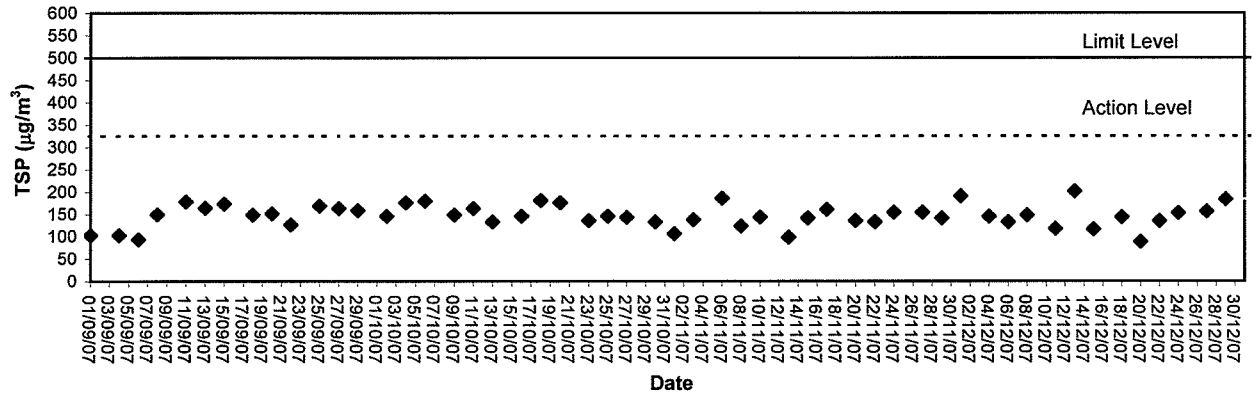
24-hour TSP level at AM3A (Cheung Shue Tan in front of Man Kee Store)



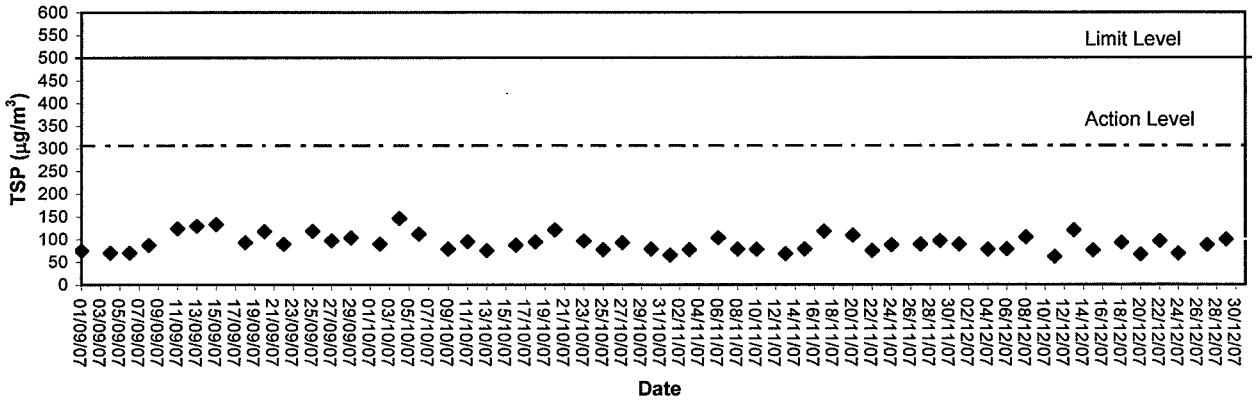
24-hour TSP level at AM5 (Wen Chih Tang at the CUHK)



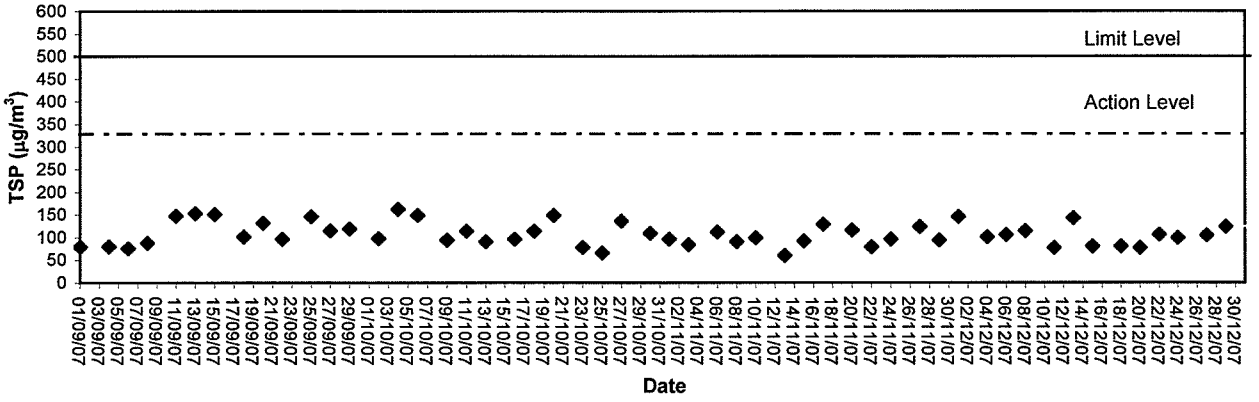
1-hour TSP level at AM1, HKIB Staff Accommodation



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

Hong Kong Calibration Ltd.
香港校正有限公司

Calibration Certificate

Certificate No. 71392A

Customer : ETS-Testconsult Limited

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

Order No. : Q70569 **Date of receipt :** 30-Mar-07

Item Tested

Description : Sound Level Calibrator
Manufacturer : Rion
Model : NC-73 **Serial No. :** 10644871

Test Conditions

Date of Test : 17-Apr-07 **Supply Voltage :** –
Ambient Temperature : (23 ± 3)°C **Relative Humidity :** (50 ± 25) %

Test Specifications

Calibration check.
Calibration procedure : F21, Z02.

Test Results

All results were within the manufacturer's specification.
The results are shown in the attached page(s).

Main Test equipment used:

Equipment No.	Description	Cert. No.	Due Date	Traceable to
S014	Spectrum Analyzer	62914	7-Jul-07	NIM-PRC & SCL-HKSAR
S024	Sound Level Calibrator	62691	22-Apr-07	NIM-PRC & SCL-HKSAR
S041	Universal Counter	63839	22-Aug-07	SCL-HKSAR

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

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

Calibrated by : P.F. Wong **Approved by :** Dorothy Cheuk

Date: 2-May-07

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

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Hong Kong Calibration Ltd.
香港校正有限公司

Calibration Certificate

Results :

1. **Level Accuracy (at 1 kHz)**

UUT Nominal Value	Measured Value	Mfr's Spec.
94 dB	93.96 dB	± 1 dB

Uncertainty : ± 0.1 dB

2. **Frequency Accuracy**

UUT Nominal Value	Measured Value	Mfr's Spec.
1 kHz	0.981 kHz	± 2 %

Uncertainty : ± 0.1 %

3. **Level Stability** : 0.1 dB
   Uncertainty : ± 0.01 dB

4. **Total Harmonic Distortion** : < 1.0 %
   Mfr's Spec. : < 3 %
   Uncertainty : ± 2.3 % of reading

Remark : 1. UUT : Unit-Under-Test
2. The uncertainty claimed is for a confidence probability of not less than 95%.
3. The above measured values are the mean of 3 measurement.
4. Atmospheric Pressure : 990hPa
5. This certificate is to supercede our former certificate no. : 71392

---------- END ----------

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Hong Kong Calibration Ltd.
香港校正有限公司

Calibration Certificate

Certificate No. 71391

Customer : ETS-Testconsult Limited

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

Order No. : Q70569 **Date of receipt :** 30-Mar-07

Item Tested

Description : Precision Integrating Sound Level Meter
Manufacturer : Rion
Model : NL-31 **Serial No. :** 00110024

Test Conditions

Date of Test : 17-Apr-07 **Supply Voltage :** --
Ambient Temperature : (23 ± 3)°C **Relative Humidity :** (50 ± 25) %

Test Specifications

Calibration check.
Calibration procedure : Z01.

Test Results

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

Main Test equipment used:

Equipment No.	Description	Cert. No.	Due Date	Traceable to
S017	Multi-Function Generator	C071115	14-Mar-08	SCL-HKSAR
S024	Sound Level Calibrator	62691	22-Apr-07	NIM-PRC & SCL-HKSAR

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

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

Calibrated by : P.F. Wong **Approved by :** Dorothy Cheuk

Date: 17-Apr-07

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

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Calibration Certificate

Results :

1. SPL Accuracy

UUT Setting			Applied Value (dB)	UUT Reading (dB)
Level Range (dB)	Weight	Response		
20 – 100	L_A	Fast	94.07	94.0
		Slow		94.0
	L_C	Fast		94.1
	Lp	Fast		94.1
30 – 120	L_A	Fast	94.07	94.0
		Slow		94.0
	L_C	Fast		94.0
	Lp	Fast		94.1
30 – 120	L_A	Fast	113.95	113.9
		Slow		113.9
	L_C	Fast		113.9
	Lp	Fast		114.0

IEC 651 Type 1 Spec. : ± 0.7 dB
Uncertainty : ± 0.1 dB

2. Level Stability : 0.0 dB

IEC 651 Type 1 Spec. : ± 0.3 dB
Uncertainty : ± 0.01 dB

3. Linearity

3.1 Level Linearity

UUT Range	Applied Value (dB)	UUT Rdg (dB)	Variation (dB)	IEC 651 Type 1 Spec. (inside Primary)
130	114.0	114.1	0.1	± 0.7 dB
130	104.0	104.0	0.0	
120	94.0	94.0 (Ref.)	0.0	
110	84.0	84.1	0.1	
100	74.0	74.1	0.1	
90	64.0	64.1	0.1	
80	54.0	54.1	0.1	

Uncertainty : ± 0.1 dB

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Calibration Certificate

3.2 Differential level linearity

UUT Range	Applied Value (dB)	UUT Rdg (dB)	Variation (dB)	IEC 651 Type 1 Spec.
120	84.0	84.0	0.0	± 0.4
	94.0	94.0 (Ref.)	--	
	95.0	95.0	0.0	± 0.2
	104.0	104.0	0.0	± 0.3
	105.0	105.0	0.0	± 1.0

Uncertainty : ± 0.1 dB

4. 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	- 26.3	- 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	- 3.3	- 3.2 dB, ± 1 dB
1 kHz	0.0 (Ref.)	0 dB, ± 1 dB
2 kHz	+ 1.3	+ 1.2 dB, ± 1 dB
4 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

5. Time Averaging

Applied Burst duty Factor	Applied Leq Value (dB)	UUT Reading (dB)	IEC 804 Type 1 Spec.
continuous	40.0	40.0	--
1/10	40.0	39.9	± 0.5 dB
$1/10^2$	40.0	40.0	
$1/10^3$	40.0	39.9	± 1.0 dB
$1/10^4$	40.0	39.9	

Uncertainty : ± 0.1 dB

Remark : 1. UUT : Unit-Under-Test
2. The uncertainty claimed is for a confidence probability of not less than 95%.
3. Atmospheric Pressure : 990 hPa.
4. The internal cal reference of UUT was drifted from 94.0 dB to 93.4 dB.

---------- END ----------

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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		
04/12/07	09:57	57.1	59.5	54.1	1.1	Fine
11/12/07	10:02	57.8	60.4	56.2	1.0	Cloudy
18/12/07	11:10	57.7	60.1	54.0	1.0	Fine
27/12/07	10:25	58.6	61.3	55.2	0.9	Fine

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		
04/12/07	13:15	54.7	57.3	53.0	1.0	Fine
11/12/07	16:30	55.0	57.6	52.3	0.8	Cloudy
18/12/07	15:20	55.7	58.9	52.5	1.1	Fine
27/12/07	11:35	56.7	59.4	52.9	1.0	Fine

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		
04/12/07	16:00	51.5	53.8	48.4	0.5	Fine
11/12/07	14:02	52.0	54.7	49.6	1.0	Cloudy
18/12/07	09:40	52.9	55.1	49.4	1.1	Fine
27/12/07	17:10	54.1	56.7	52.0	1.2	Fine

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

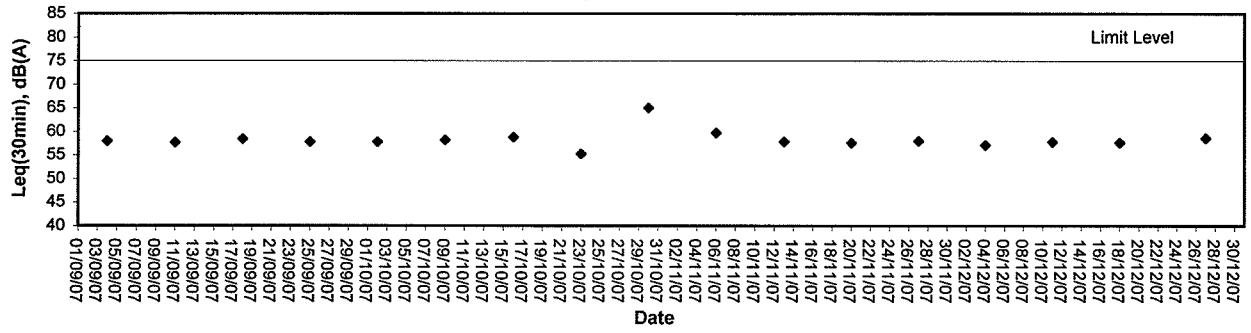
Date	Start Sampling Time (hh:mm)	Noise Level dB (A)			Wind Speed (m/s)	Weather Condition
		$L_{eq(30min)}$	L10	L90		
04/12/07	11:10	55.2	57.7	52.6	0.9	Fine
11/12/07	15:20	54.8	57.1	52.8	1.3	Cloudy
18/12/07	16:50	53.8	57.1	50.2	1.4	Fine
27/12/07	15:30	54.9	57.8	52.9	1.0	Fine

Appendix C3

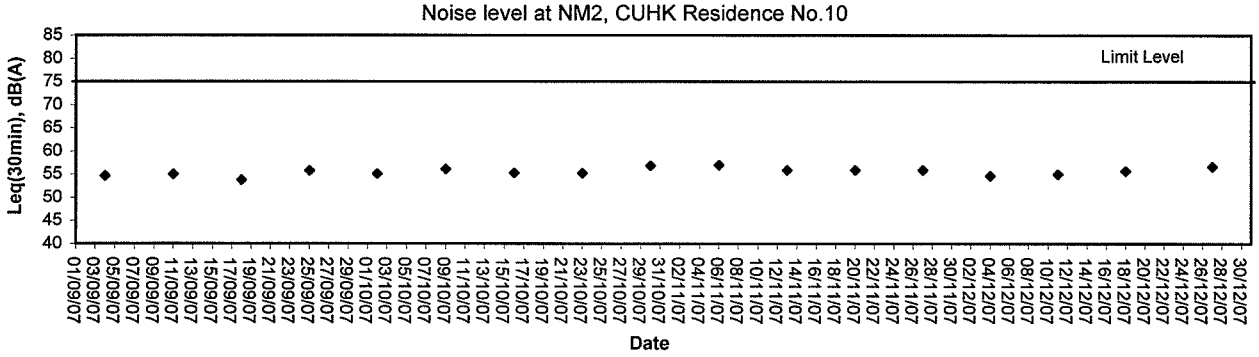
Graphical Plots of Noise Monitoring Data

Noise Monitoring (Day-time)

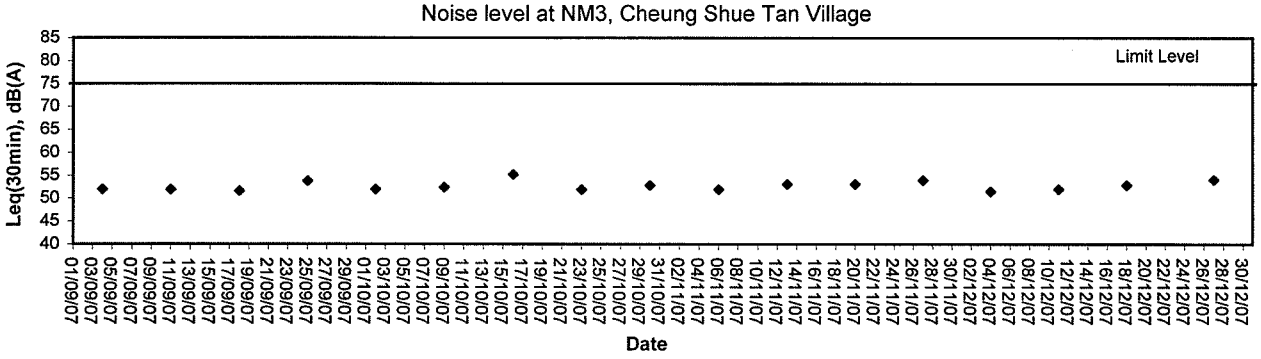
Noise level at NM1, HKIB Staff Accommodation



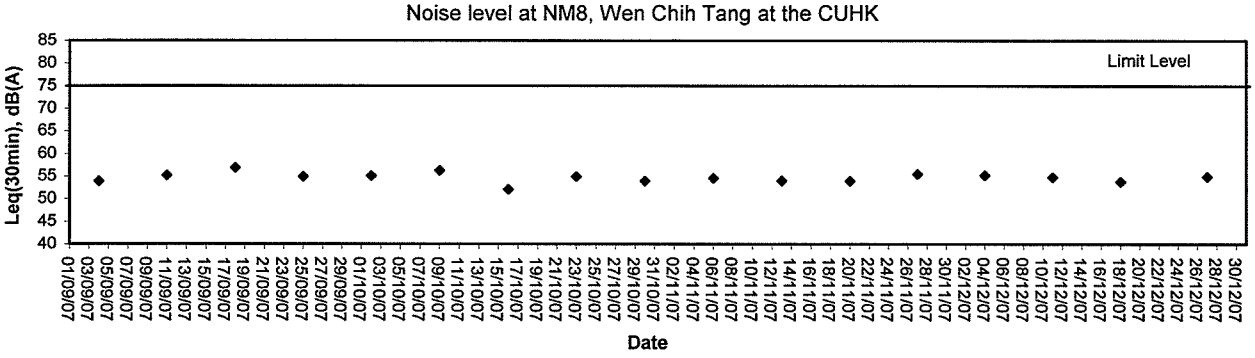
Noise level at NM2, CUHK Residence No.10



Noise level at NM3, Cheung Shue Tan Village



Noise level at NM8, Wen Chih Tang at the CUHK



Appendix D

Weather Condition

Weather Condition

Date	Rainfall (mm)	Max. Temp (°C)	Min. Temp. (°C)	Relative Humidity (%)	Wind Direction	Wind Speed (m/s)
01/12/07	0.0	23.1	13.8	73	110	<5
02/12/07	0.0	26.2	16.1	72	070	<5
03/12/07	0.0	23.6	15.5	61	030	<5
04/12/07	0.0	22.2	15.1	64	010	<5
05/12/07	0.0	21.0	17.1	61	020	<5
06/12/07	0.0	23.2	15.8	67	360	<5
07/12/07	0.0	22.3	14.9	65	020	<5
08/12/07	0.0	21.8	16.2	71	360	<5
09/12/07	0.0	22.4	17.0	74	360	<5
10/12/07	0.0	24.6	17.5	75	110	<5
11/12/07	0.0	25.7	15.5	72	120	<5
12/12/07	0.0	26.5	17.8	74	050	<5
13/12/07	0.0	25.8	16.6	72	050	<5
14/12/07	0.0	22.6	16.9	73	100	<5
15/12/07	0.0	23.3	17.0	75	090	<5
16/12/07	0.0	22.5	18.4	75	120	<5
17/12/07	0.0	24.3	18.0	74	350	<5
18/12/07	0.0	23.4	16.8	81	110	<5
19/12/07	0.5	19.4	16.8	84	350	<5
20/12/07	0.0	23.1	17.3	77	080	<5
21/12/07	0.0	25.6	19.1	76	090	<5
22/12/07	0.0	25.2	18.6	84	070	<5
23/12/07	2.5	20.2	17.7	89	350	<5
24/12/07	37.5	18.5	14.9	82	350	<5
25/12/07	0.0	19.1	14.0	71	350	<5
26/12/07	0.0	20.9	13.3	72	100	<5
27/12/07	0.0	22.1	14.7	74	090	<5
28/12/07	0.0	23.8	14.4	80	360	<5
29/12/07	0.0	21.1	14.8	60	350	<5
30/12/07	0.0	18.0	13.0	47	040	<5
31/12/07	0.0	16.8	10.7	34	030	<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			
	ET Leader	IC(E)	ER	CNOTRACTOR
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 Contactor'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 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 Contract 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 if abated.

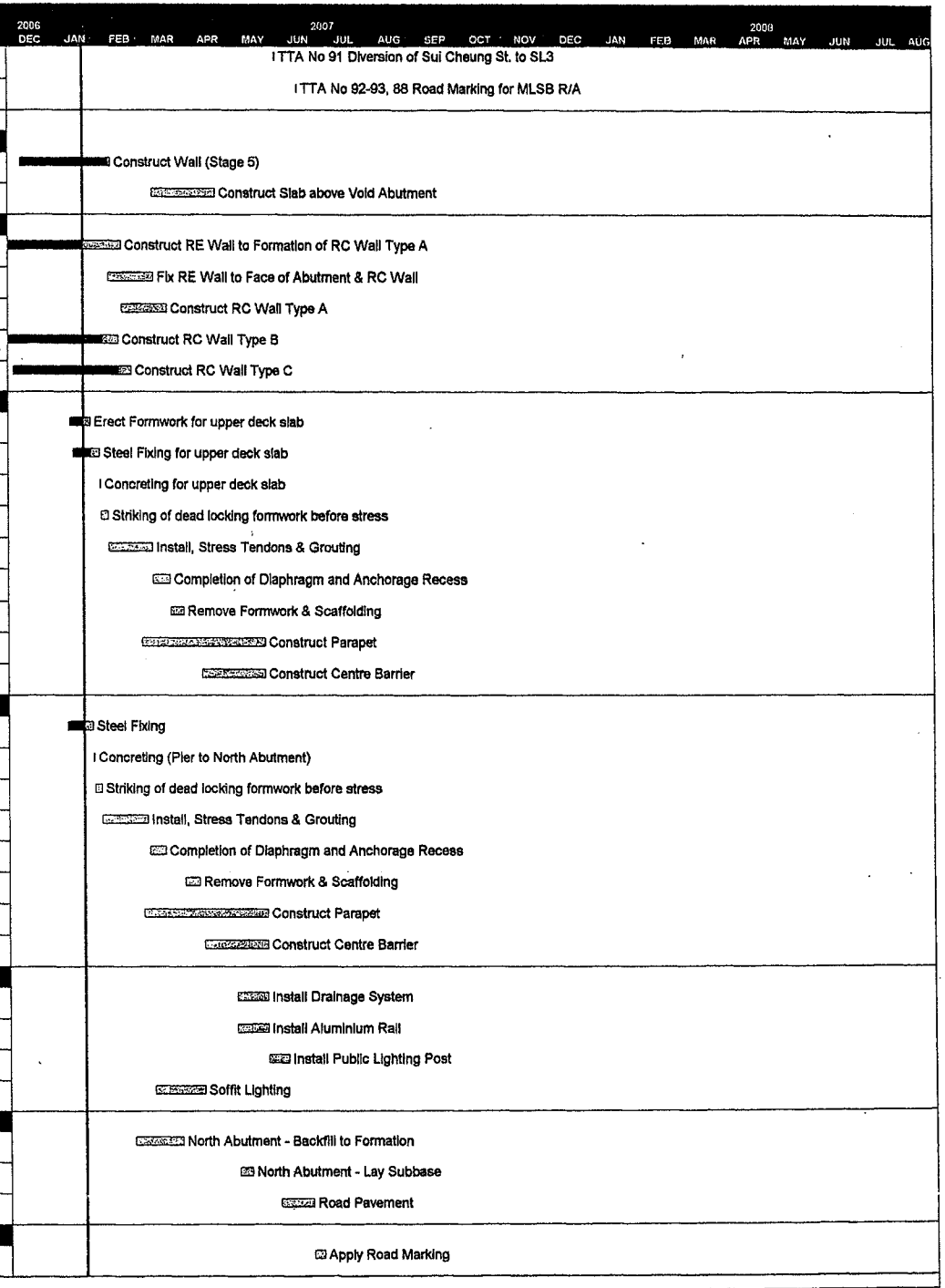
Event / Action Plan for Construction Noise

EVENT	ACTION			
	ET Leader	IC(E)	ER	CNOTRACTOR
Action Level	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	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	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	1. Submit noise mitigation proposal to IC(E) 2. Implement noise mitigation proposals
Limit Level	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	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 advice the ER accordingly 3. Supervise the implementation of remedial measures	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 protion of the 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 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

Act ID	Description	Original Duration	Percent Complete	Total Float	Early Start	Early Finish	Late Start	Late Finish
A2TTMS1050	TTA No 91 Diversion of Sui Cheung St. to SL3	1	0	0	30MAY07	30MAY07	30MAY07	30MAY07
A2TTMS1060	TTA No 92-93, 88 Road Marking for MLSB R/A	1	0	35d	14JUN07	14JUN07	27JUL07	27JUL07
Proposed Ma Liu Shui Bridge								
Voided Abutment								
A2MBVA1000	Construct Wall (Stage 5)	16	90	26d	09DEC06 A	07FEB07	09DEC06 A	15MAR07
A2MBVA1100	Construct Slab above Void Abutment	36	0	23d	08MAR07	19APR07	04APR07	17MAY07
North Abutment								
A2MBNA0200	Construct RE Wall to Formation of RC Wall Type A	36	40	7d	13SEP06 A	14FEB07	13SEP06 A	26FEB07
A2MBNA0300	Fix RE Wall to Face of Abutment & RC Wall	24	0	7d	06FEB07	08MAR07	14FEB07	16MAR07
A2MBNA1300	Construct RC Wall Type A	24	0	7d	15FEB07	17MAR07	27FEB07	26MAR07
A2MBNA1400	Construct RC Wall Type B	36	75	16d	06NOV06 A	12FEB07	06NOV06 A	06MAR07
A2MBNA1500	Construct RC Wall Type C	18	75	40d	04DEC06 A	21FEB07	04DEC06 A	10APR07
Bridge Deck - Voided Abutment to Pier								
A2MBDA0600	Erect Formwork for upper deck slab	12	70	23d	11JAN07 A	24JAN07	11JAN07 A	23FEB07
A2MBDA0700	Steel Fixing for upper deck slab	8	40	23d	13JAN07 A	30JAN07	13JAN07 A	01MAR07
A2MBDA0800	Concreting for upper deck slab	1	0	23d	31JAN07	31JAN07	02MAR07	02MAR07
A2MBDA0850	Striking of dead locking formwork before stress	4	0	23d	01FEB07	05FEB07	03MAR07	07MAR07
A2MBDA0900	Install, Stress Tendons & Grouting	23	0	23d	06FEB07	07MAR07	08MAR07	03APR07
A2MBDA0950	Completion of Diaphragm and Anchorage Recess	10	0	51d	08MAR07	19MAR07	09MAY07	19MAY07
A2MBDA1000	Remove Formwork & Scaffolding	8	0	51d	20MAR07	28MAR07	21MAY07	29MAY07
A2MBDA1100	Construct Parapet	70	0	32d	28FEB07	22MAY07	07APR07	29JUN07
A2MBDA1200	Construct Centre Barrier	36	0	32d	10APR07	22MAY07	18MAY07	29JUN07
Bridge Deck - Pier to North Abutment								
A2MBDC0700	Steel Fixing	8	40	26d	09JAN07 A	25JAN07	09JAN07 A	28FEB07
A2MBDC0800	Concreting (Pier to North Abutment)	1	0	26d	26JAN07	26JAN07	01MAR07	01MAR07
A2MBDC0850	Striking of dead locking formwork before stress	4	0	26d	27JAN07	31JAN07	02MAR07	06MAR07
A2MBDC0900	Install, Stress Tendons & Grouting	24	0	26d	01FEB07	03MAR07	07MAR07	03APR07
A2MBDC0950	Completion of Diaphragm and Anchorage Recess	10	0	62d	05MAR07	15MAR07	18MAY07	29MAY07
A2MBDC1000	Remove Formwork & Scaffolding	8	0	51d	29MAR07	07APR07	30MAY07	07JUN07
A2MBDC1100	Construct Parapet	70	0	31d	01MAR07	23MAY07	07APR07	29JUN07
A2MBDC1200	Construct Centre Barrier	36	0	31d	11APR07	23MAY07	18MAY07	29JUN07
Miscellaneous works								
A2MBMW0100	Install Drainage System	18	0	31d	03MAY07	23MAY07	08JUN07	29JUN07
A2MBMW0200	Install Aluminium Rail	18	0	31d	03MAY07	23MAY07	08JUN07	29JUN07
A2MBMW0300	Install Public Lighting Post	12	0	37d	24MAY07	06JUN07	09JUL07	21JUL07
A2MBMW0400	Soffit Lighting	28	0	91d	08MAR07	10APR07	26JUN07	28JUL07
Roads and Paving								
A2MBRP0100	North Abutment - Backfill to Formation	28	0	40d	22FEB07	26MAR07	11APR07	14MAY07
A2MBRP0200	North Abutment - Lay Subbase	8	0	40d	04MAY07	12MAY07	21JUN07	29JUN07
A2MBRP0300	Road Pavement	18	0	24d	01JUN07	22JUN07	30JUN07	21JUL07
Road Marking , Traffic Sign and Fencing								
A2MBRM0100	Apply Road Marking	6	0	24d	23JUN07	29JUN07	23JUL07	28JUL07



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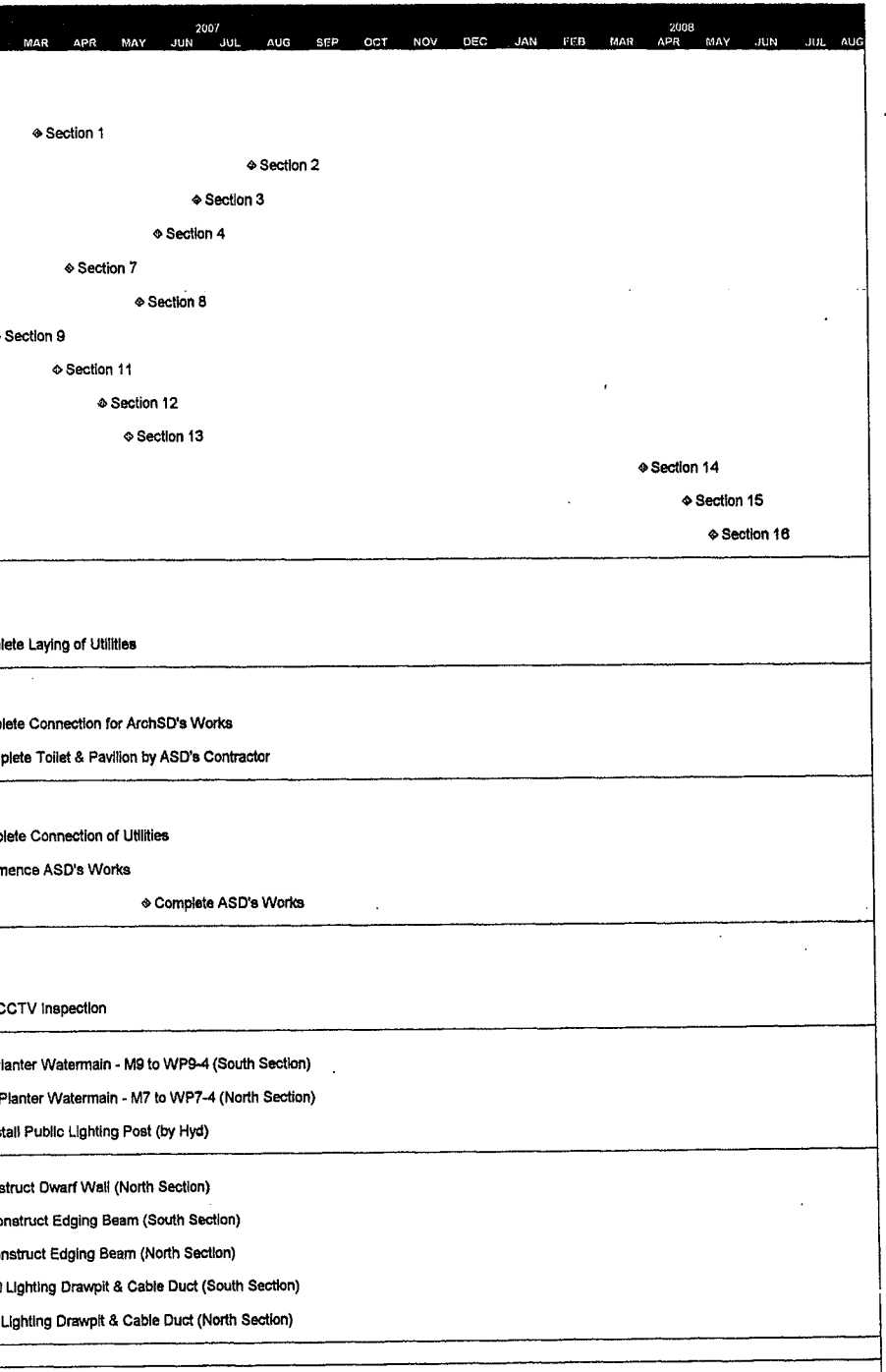
LEADER
WAI KEE

Act ID	Description	Original Duration	Percent Complete	Total Float	Early Start	Early Finish	Late Start	Late Finish
ction Completion								
CD0100	Section 1	0	0	0		15MAR07		15MAR07 *
CD0200	Section 2	0	0	0		28JUL07		28JUL07 *
CD0300	Section 3	0	0	0		23JUN07		23JUN07 *
CD0400	Section 4	0	0	0		29MAY07		29MAY07 *
CD0700	Section 7	0	0	0		03APR07		03APR07 *
CD0800	Section 8	0	0	0		17MAY07		17MAY07 *
CD0900	Section 9	0	0	0		16FEB07		16FEB07 *
CD1100	Section 11	0	0	0		26MAR07		26MAR07 *
CD1200	Section 12	0	0	0		23APR07		23APR07 *
CD1300	Section 13	0	0	0		09MAY07		09MAY07 *
CD1400	Section 14	0	0	0		26MAR08		26MAR08 *
CD1500	Section 15	0	0	0		23APR08		23APR08 *
CD1600	Section 16	0	0	0		09MAY08		09MAY08 *
ilestone								
Section 5								
MSS50100	Complete Laying of Utilities	0	0	-537d		19JAN07		31JUL05 *
Section 7								
MSS70100	Complete Connection for ArchSD's Works	0	0	-537d		19JAN07		31JUL05 *
MSS70300	Complete Toilet & Pavilion by ASD's Contractor	0	0	-444d		23JAN07		05NOV05 *
Section 8								
MSS80100	Complete Connection of Utilities	0	0	-274d		19JAN07		20APR06 *
MSS80200	Commence ASD's Works	0	0	-297d	20JAN07 *		29MAR06	
MSS80300	Complete ASD's Works	0	0	-299d		17MAY07		22JUL06 *
ection 1								
Amenity Area								
Drainage Works								
A1AMDW1100	CCTV Inspection	10	0	26d	30JAN07	09FEB07	05MAR07	15MAR07
Utility Works								
A1AMUT0100	Planter Watermain - M9 to WP9-4 (South Section)	15	0	10d	20JAN07	06FEB07	01FEB07	21FEB07
A1AMUT0200	Planter Watermain - M7 to WP7-4 (North Section)	15	0	6d	25JAN07	10FEB07	01FEB07	21FEB07
A1AMUT0300	Install Public Lighting Post (by Hyd)	10	0	34d	20JAN07	31JAN07	05MAR07	15MAR07
Public Lighting, Duct and Kerb								
A1AMPK0200	Construct Dwarf Wall (North Section)	21	80	0	10NOV06 A	24JAN07	10NOV06 A	24JAN07
A1AMPK0300	Construct Edging Beam (South Section)	22	50	23d	21NOV06 A	01FEB07	21NOV06 A	03MAR07
A1AMPK0400	Construct Edging Beam (North Section)	18	50	25d	16OCT06 A	30JAN07	16OCT06 A	03MAR07
A1AMPK0500	Lighting Drawpit & Cable Duct (South Section)	14	30	23d	08JAN07 A	13FEB07	08JAN07 A	15MAR07
A1AMPK0600	Lighting Drawpit & Cable Duct (North Section)	14	30	25d	15JAN07 A	10FEB07	15JAN07 A	15MAR07
Roads and Paving								



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LEADER
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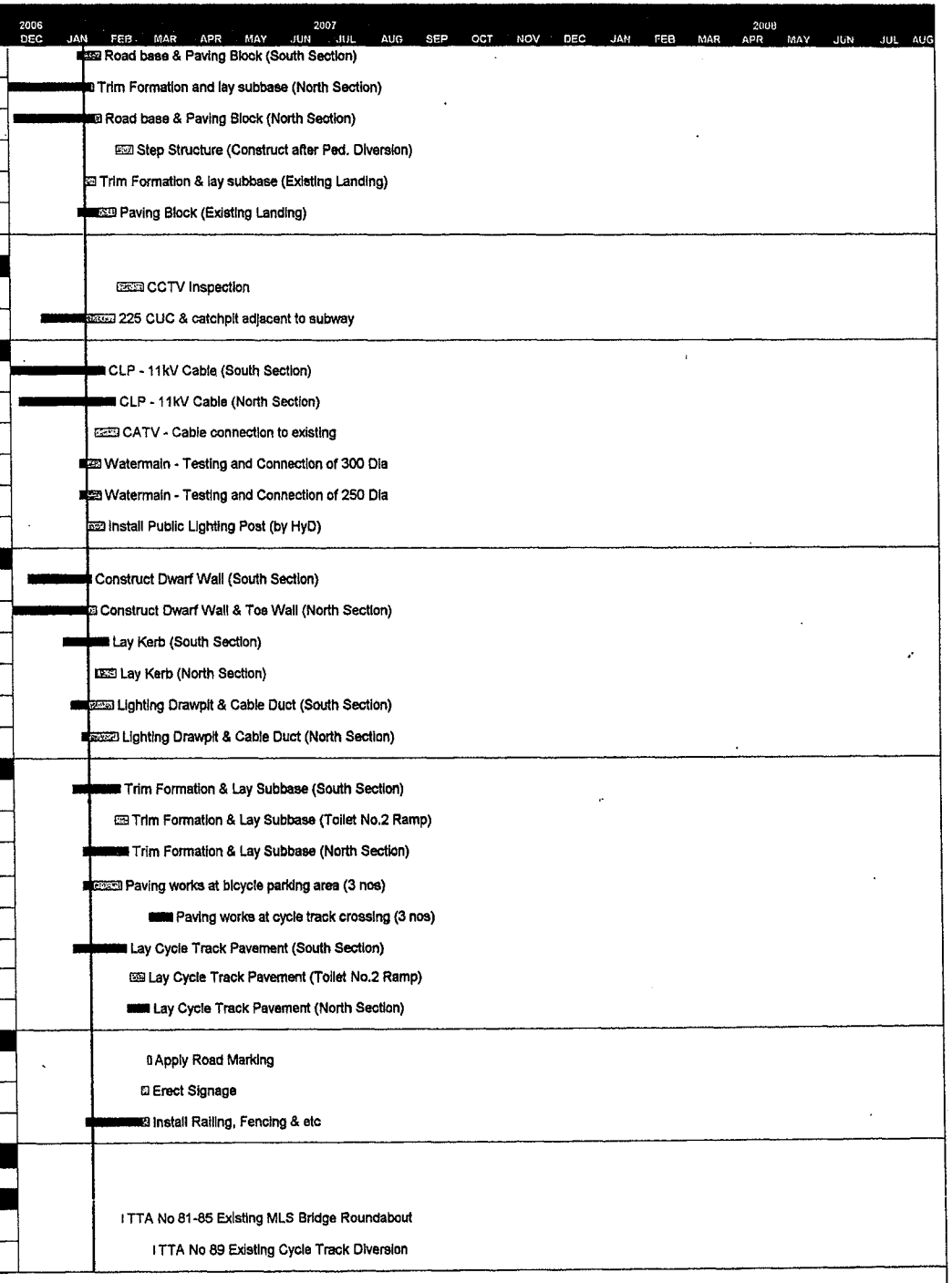
Act ID	Description	Original Duration	Percent Complete	Total Float	Early Start	Early Finish	Late Start	Late Finish
A1AMRP0100	Road base & Paving Block (South Section)	20	50	34d	16JAN07 A	31JAN07	16JAN07 A	15MAR07
A1AMRP0150	Trim Formation and lay subbase (North Section)	10	85	34d	27NOV06 A	26JAN07	27NOV06 A	10MAR07
A1AMRP0200	Road base & Paving Block (North Section)	40	90	34d	04DEC06 A	31JAN07	04DEC06 A	15MAR07
A1AMRP0207	Step Structure (Construct after Ped. Diversion)	7	0	15d	10FEB07	21FEB07	03MAR07	10MAR07
A1AMRP0208	Trim Formation & lay subbase (Existing Landing)	7	0	15d	20JAN07	27JAN07	07FEB07	14FEB07
A1AMRP0210	Paving Block (Existing Landing)	14	20	15d	15JAN07 A	09FEB07	15JAN07 A	02MAR07
Cycle Track								
Drainage Works								
A1CTDW0600	CCTV Inspection	12	0	14d	10FEB07	27FEB07	02MAR07	15MAR07
A1CTDW0610	225 CUC & catchpit adjacent to subway	28	40	21d	21DEC06 A	08FEB07	21DEC06 A	08MAR07
Utility Works								
A1CTUT0300	CLP - 11kV Cable (South Section)	36	70	0	01SEP06 A	01FEB07	01SEP06 A	01FEB07
A1CTUT0400	CLP - 11kV Cable (North Section)	28	40	0	06DEC06 A	08FEB07	06DEC06 A	08FEB07
A1CTUT1010	CATV - Cable connection to existing	14	0	5d	26JAN07	10FEB07	01FEB07	16FEB07
A1CTUT1300	Watermain - Testing and Connection of 300 Dia	16	50	4d	15JAN07 A	29JAN07	15JAN07 A	02FEB07
A1CTUT1400	Watermain - Testing and Connection of 250 Dia	16	50	9d	15JAN07 A	29JAN07	15JAN07 A	08FEB07
A1CTUT1500	Install Public Lighting Post (by HyD)	10	0	34d	20JAN07	31JAN07	05MAR07	15MAR07
Public Lighting, Duct and Kerb								
A1CTPK0100	Construct Dwarf Wall (South Section)	18	90	0	11DEC06 A	22JAN07	11DEC06 A	22JAN07
A1CTPK0200	Construct Dwarf Wall & Toe Wall (North Section)	18	70	1d	28NOV06 A	25JAN07	28NOV06 A	26JAN07
A1CTPK0300	Lay Kerb (South Section)	14	50	0	03JAN07 A	02FEB07	03JAN07 A	02FEB07
A1CTPK0400	Lay Kerb (North Section)	11	0	12d	25JAN07 A	07FEB07	25JAN07 A	24FEB07
A1CTPK0500	Lighting Drawpit & Cable Duct (South Section)	18	20	10d	08JAN07 A	05FEB07	08JAN07 A	16FEB07
A1CTPK0600	Lighting Drawpit & Cable Duct (North Section)	18	5	2d	15JAN07 A	08FEB07	15JAN07 A	10FEB07
Roads and Paving								
A1CTRP0100	Trim Formation & Lay Subbase (South Section)	12	50	0	09JAN07 A	09FEB07	09JAN07 A	09FEB07
A1CTRP0150	Trim Formation & Lay Subbase (Toilet No.2 Ramp)	8	0	16d	06FEB07	14FEB07	28FEB07	08MAR07
A1CTRP0200	Trim Formation & Lay Subbase (North Section)	18	70	0	15JAN07 A	14FEB07	15JAN07 A	14FEB07
A1CTRP0250	Paving works at bicycle parking area (3 nos)	21	20	2d	15JAN07 A	09FEB07	15JAN07 A	12FEB07
A1CTRP0260	Paving works at cycle track crossing (3 nos)	14	0	0	28FEB07	15MAR07	28FEB07	15MAR07
A1CTRP0500	Lay Cycle Track Pavement (South Section)	8	70	0	08JAN07 A	12FEB07	08JAN07 A	12FEB07
A1CTRP0550	Lay Cycle Track Pavement (Toilet No.2 Ramp)	6	0	16d	15FEB07	24FEB07	09MAR07	15MAR07
A1CTRP0600	Lay Cycle Track Pavement (North Section)	10	0	0	13FEB07	27FEB07	13FEB07	27FEB07
Road Marking , Traffic Sign and Fencing								
A1CTRM0100	Apply Road Marking	3	0	13d	26FEB07	28FEB07	13MAR07	15MAR07
A1CTRM0200	Erect Signage	4	0	15d	22FEB07	26FEB07	12MAR07	15MAR07
A1CTRM0300	Install Railing, Fencing & etc	6	40	15d	15JAN07 A	26FEB07	15JAN07 A	15MAR07
Section 2								
Temporary Traffic Management Scheme								
TTA Implementation								
A2TTMS1020	TTA No 81-85 Existing MLS Bridge Roundabout	1	0	28d	08FEB07	08FEB07	16MAR07	16MAR07
A2TTMS1030	TTA No 89 Existing Cycle Track Diversion	1	0	14d	01MAR07	01MAR07	17MAR07	17MAR07



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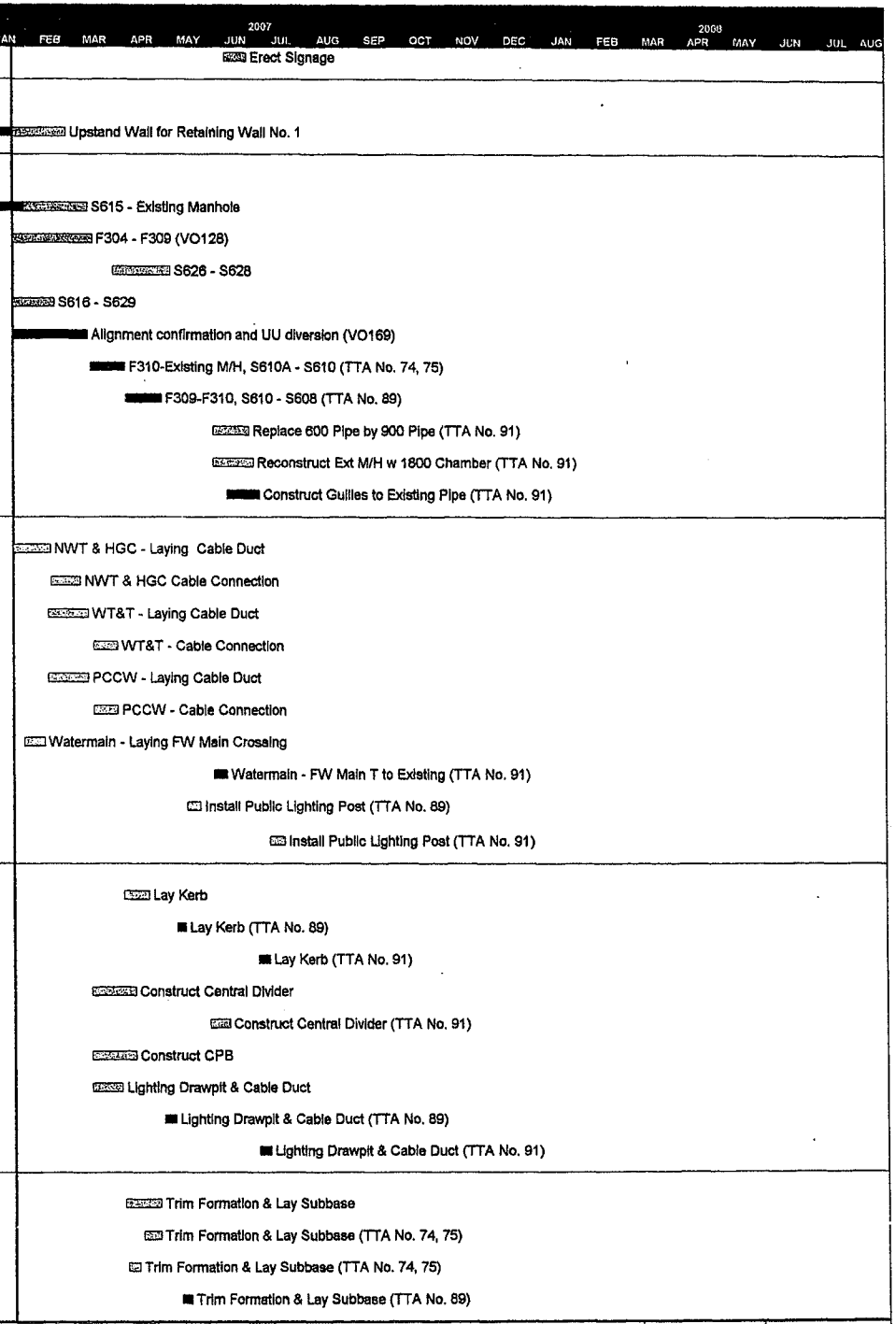
A2MBRM0200	Erect Signage	12	0	24d	08JUN07	22JUN07	09JUL07	21JUL07
Retaining Wall No. 1								
A2REWA1210	Upstand Wall for Retaining Wall No. 1	35	20	16d	10DEC06 A	24FEB07	10DEC06 A	15MAR07
Road D1								
Drainage Works								
A2RDDW0200	S615 - Existing Manhole	38	5	53d	21DEC06 A	10MAR07	21DEC06 A	14MAY07
A2RDDW0210	F304 - F309 (VO128)	42	0	53d	20JAN07	13MAR07	27MAR07	16MAY07
A2RDDW0300	S626 - S628	31	0	40d	27MAR07	03MAY07	15MAY07	20JUN07
A2RDDW0350	S616 - S629	24	0	92d	20JAN07	16FEB07	14MAY07	09JUN07
A2RDDW0410	Alignment confirmation and UU diversion (VO169)	40	0	0	20JAN07	10MAR07	20JAN07	10MAR07
A2RDDW0500	F310-Existing M/H, S610A - S610 (TTA No. 74, 75)	20	0	0	12MAR07	03APR07	12MAR07	03APR07
A2RDDW0600	F309-F310, S610 - S608 (TTA No. 89)	20	0	0	04APR07	27APR07	04APR07	27APR07
A2RDDW0700	Replace 600 Pipe by 900 Pipe (TTA No. 91)	20	0	4d	31MAY07	23JUN07	05JUN07	28JUN07
A2RDDW0800	Reconstruct Ext M/H w 1800 Chamber (TTA No. 91)	22	0	4d	31MAY07	26JUN07	05JUN07	30JUN07
A2RDDW0900	Construct Gullies to Existing Pipe (TTA No. 91)	18	0	0	09JUN07	30JUN07	09JUN07	30JUN07
Utility Works								
A2RDUT0300	NWT & HGC - Laying Cable Duct	21	0	26d	20JAN07	13FEB07	23FEB07	19MAR07
A2RDUT0310	NWT & HGC Cable Connection	14	0	53d	14FEB07	05MAR07	21APR07	08MAY07
A2RDUT0400	WT&T - Laying Cable Duct	21	0	26d	12FEB07	10MAR07	17MAR07	11APR07
A2RDUT0410	WT&T - Cable Connection	14	0	32d	14MAR07	29MAR07	21APR07	08MAY07
A2RDUT0500	PCCW - Laying Cable Duct	21	0	32d	12FEB07	10MAR07	24MAR07	18APR07
A2RDUT0510	PCCW - Cable Connection	14	0	35d	14MAR07	29MAR07	25APR07	11MAY07
A2RDUT0600	Watermain - Laying FW Main Crossing	12	0	101d	27JAN07	09FEB07	31MAY07	13JUN07
A2RDUT0700	Watermain - FW Main T to Existing (TTA No. 91)	8	0	0	31MAY07	08JUN07	31MAY07	08JUN07
A2RDUT1000	Install Public Lighting Post (TTA No. 89)	8	0	56d	14MAY07	22MAY07	20JUL07	28JUL07
A2RDUT1100	Install Public Lighting Post (TTA No. 91)	8	0	9d	07JUL07	16JUL07	18JUL07	26JUL07
Public Lighting, Duct and Kerb								
A2RDPK0100	Lay Kerb	14	0	72d	02APR07	18APR07	28JUN07	14JUL07
A2RDPK0200	Lay Kerb (TTA No. 89)	6	0	0	07MAY07	12MAY07	07MAY07	12MAY07
A2RDPK0300	Lay Kerb (TTA No. 91)	6	0	0	29JUN07	06JUL07	29JUN07	06JUL07
A2RDPK0400	Construct Central Divider	24	0	76d	12MAR07	09APR07	11JUN07	10JUL07
A2RDPK0500	Construct Central Divider (TTA No. 91)	12	0	22d	28MAY07	09JUN07	23JUN07	07JUL07
A2RDPK0600	Construct CPB	24	0	76d	12MAR07	09APR07	11JUN07	10JUL07
A2RDPK0700	Lighting Drawpit & Cable Duct	18	0	62d	12MAR07	31MAR07	25MAY07	14JUN07
A2RDPK0800	Lighting Drawpit & Cable Duct (TTA No. 89)	6	0	0	28APR07	05MAY07	28APR07	05MAY07
A2RDPK0900	Lighting Drawpit & Cable Duct (TTA No. 91)	6	0	0	29JUN07	06JUL07	29JUN07	06JUL07
Roads and Paving								
A2RDRP0100	Trim Formation & Lay Subbase	20	0	72d	02APR07	25APR07	28JUN07	21JUL07
A2RDRP0200	Trim Formation & Lay Subbase (TTA No. 74, 75)	10	0	68d	14APR07	25APR07	06JUL07	17JUL07
A2RDRP0300	Trim Formation & Lay Subbase (TTA No. 74, 75)	6	0	68d	04APR07	11APR07	26JUN07	03JUL07
A2RDRP0400	Trim Formation & Lay Subbase (TTA No. 89)	6	0	0	09MAY07	15MAY07	09MAY07	15MAY07



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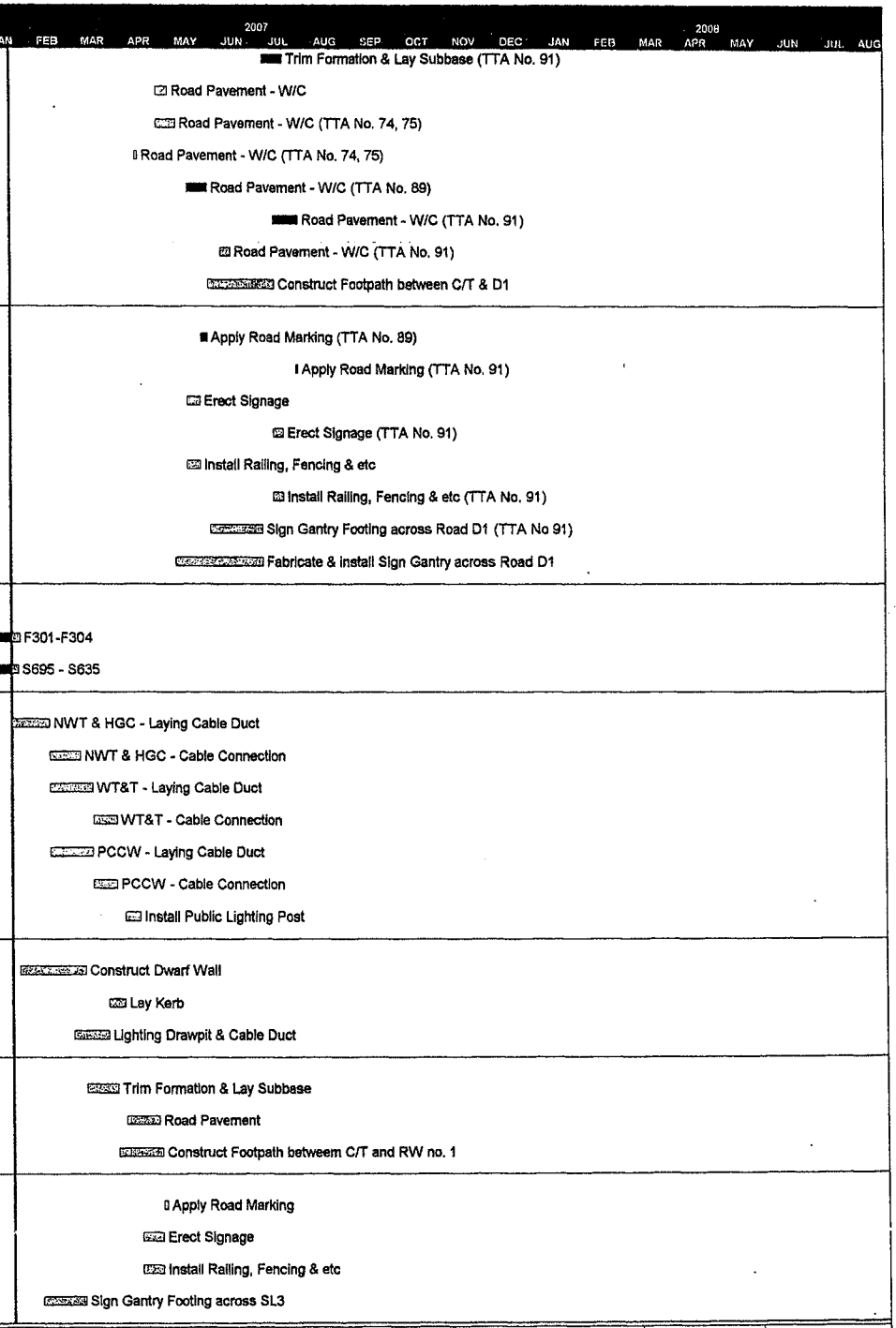
A2RDRP0500	Trim Formation & Lay Subbase (TTA No. 91)	12	0	0	05JUL07	18JUL07	05JUL07	18JUL07
A2RDRP0700	Road Pavement - W/C	6	0	72d	26APR07	03MAY07	23JUL07	28JUL07
A2RDRP0800	Road Pavement - W/C (TTA No. 74, 75)	10	0	68d	26APR07	08MAY07	18JUL07	28JUL07
A2RDRP0900	Road Pavement - W/C (TTA No. 74, 75)	2	0	68d	12APR07	13APR07	04JUL07	05JUL07
A2RDRP1000	Road Pavement - W/C (TTA No. 89)	12	0	0	16MAY07	29MAY07	16MAY07	29MAY07
A2RDRP1100	Road Pavement - W/C (TTA No. 91)	15	0	0	12JUL07	28JUL07	12JUL07	28JUL07
A2RDRP1200	Road Pavement - W/C (TTA No. 91)	6	0	22d	07JUN07	13JUN07	05JUL07	11JUL07
A2RDRP1300	Construct Footpath between C/T & D1	36	0	14d	30MAY07	12JUL07	15JUN07	28JUL07
Road Marking , Traffic Sign and Fencing								
A2RDRM0100	Apply Road Marking (TTA No. 89)	4	0	0	25MAY07	29MAY07	25MAY07	29MAY07
A2RDRM0200	Apply Road Marking (TTA No. 91)	2	0	0	27JUL07	28JUL07	27JUL07	28JUL07
A2RDRM0400	Erect Signage	8	0	54d	16MAY07	24MAY07	20JUL07	28JUL07
A2RDRM0500	Erect Signage (TTA No. 91)	6	0	7d	12JUL07	18JUL07	20JUL07	26JUL07
A2RDRM0600	Install Railing, Fencing & etc	8	0	54d	16MAY07	24MAY07	20JUL07	28JUL07
A2RDRM0700	Install Railing, Fencing & etc (TTA No. 91)	6	0	7d	12JUL07	18JUL07	20JUL07	26JUL07
A2RDRM0850	Sign Gantry Footing across Road D1 (TTA No 91)	28	0	21d	31MAY07	04JUL07	26JUN07	28JUL07
A2RDRM0900	Fabricate & install Sign Gantry across Road D1	48	0	21d	08MAY07	04JUL07	01JUN07	28JUL07
Road SL3								
Drainage Works								
A2RSDW0400	F301-F304	18	75	27d	14OCT06 A	25JAN07	14OCT06 A	01MAR07
A2RSDW0600	S695 - S635	21	80	7d	30OCT06 A	24JAN07	30OCT06 A	01FEB07
Utility Works								
A2RSUT0200	NWT & HGC - Laying Cable Duct	21	0	24d	20JAN07	13FEB07	21FEB07	16MAR07
A2RSUT0210	NWT & HGC - Cable Connection	14	0	45d	14FEB07	05MAR07	12APR07	27APR07
A2RSUT0300	WT&T - Laying Cable Duct	21	0	24d	14FEB07	13MAR07	17MAR07	11APR07
A2RSUT0310	WT&T - Cable Connection	14	0	24d	14MAR07	29MAR07	12APR07	27APR07
A2RSUT0400	PCCW - Laying Cable Duct	21	0	30d	14FEB07	13MAR07	24MAR07	18APR07
A2RSUT0410	PCCW - Cable Connection	14	0	30d	14MAR07	29MAR07	19APR07	05MAY07
A2RSUT0500	Install Public Lighting Post	8	0	36d	04APR07	13APR07	18MAY07	28MAY07
Public Lighting, Duct and Kerb								
A2RSPK0100	Construct Dwarf Wall	34	0	7d	25JAN07	08MAR07	02FEB07	16MAR07
A2RSPK0200	Lay Kerb	9	0	26d	24MAR07	03APR07	25APR07	05MAY07
A2RSPK0300	Lighting Drawpit & Cable Duct	20	0	26d	01MAR07	23MAR07	31MAR07	24APR07
Roads and Paving								
A2RSRP0100	Trim Formation & Lay Subbase	18	0	30d	09MAR07	29MAR07	14APR07	05MAY07
A2RSRP0200	Road Pavement	18	0	26d	04APR07	25APR07	07MAY07	28MAY07
A2RSRP0300	Construct Footpath betweem C/T and RW no. 1	24	0	24d	30MAR07	27APR07	28APR07	26MAY07
Road Marking , Traffic Sign and Fencing								
A2RSRM0100	Apply Road Marking	2	0	24d	28APR07	30APR07	28MAY07	29MAY07
A2RSRM0200	Erect Signage	12	0	24d	14APR07	27APR07	14MAY07	28MAY07
A2RSRM0300	Install Railing, Fencing & etc	12	0	24d	14APR07	27APR07	14MAY07	28MAY07
A2RSRM0400	Sign Gantry Footing across SL3	21	0	31d	08FEB07	07MAR07	20MAR07	13APR07



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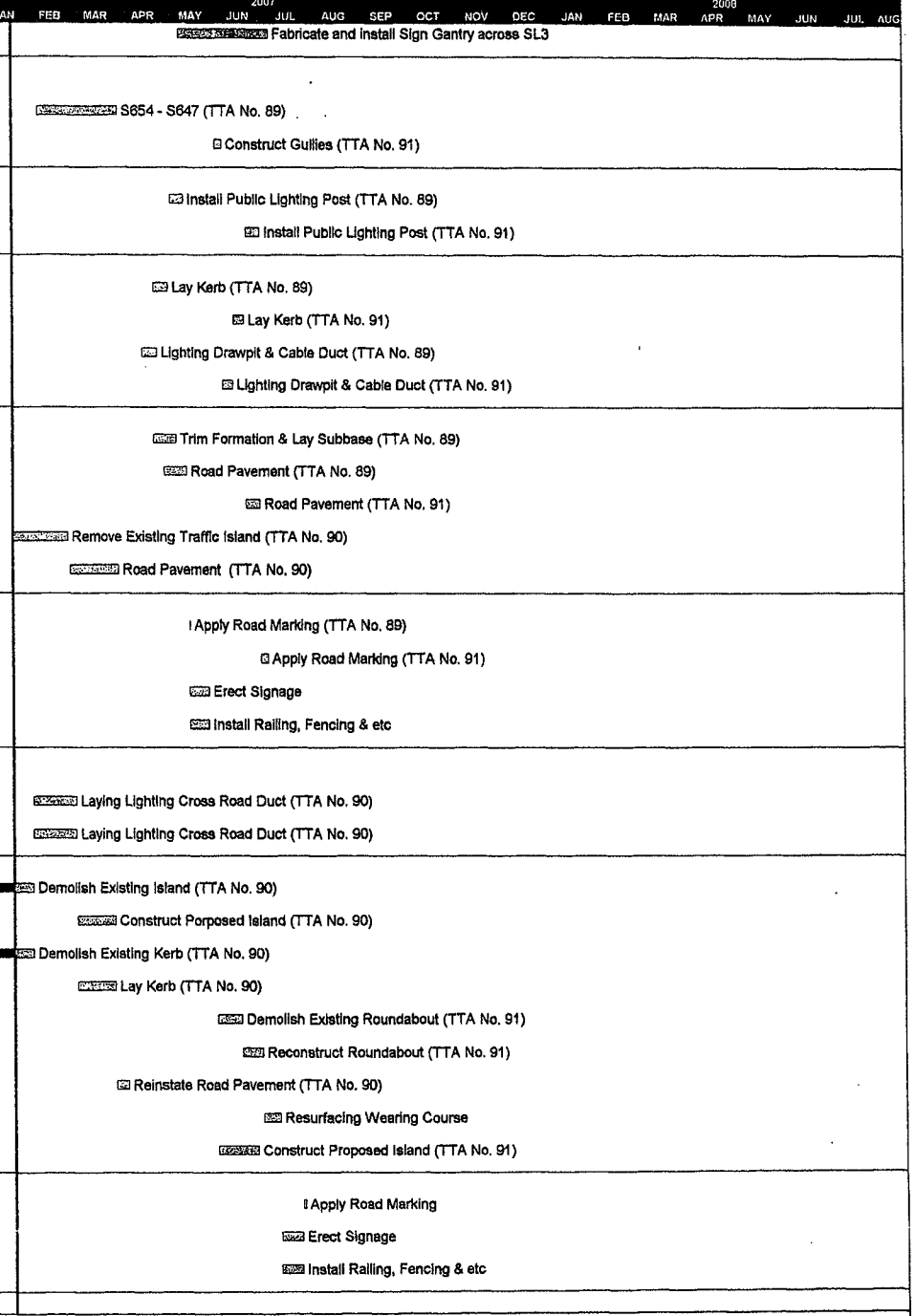
LEADER

WAI KEE
ZEHS

Act ID	Description	Original Duration	Percent Complete	Total Float	Early Start	Early Finish	Late Start	Late Finish
A2RSRM0500	Fabricate and Install Sign Gantry across SL3	48	0	21d	08MAY07	04JUL07	01JUN07	28JUL07
Existing Sui Cheung Street								
Drainage Works								
A2SCDW0200	S654 - S647 (TTA No. 89)	42	0	49d	06FEB07	29MAR07	09APR07	28MAY07
A2SCDW0300	Construct Gullies (TTA No. 91)	4	0	22d	31MAY07	04JUN07	27JUN07	30JUN07
Utility Works								
A2SCUT0900	Install Public Lighting Post (TTA No. 89)	8	0	66d	02MAY07	10MAY07	20JUL07	28JUL07
A2SCUT1000	Install Public Lighting Post (TTA No. 91)	8	0	22d	20JUN07	28JUN07	17JUL07	25JUL07
Public Lighting, Duct and Kerb								
A2SCPK0100	Lay Kerb (TTA No. 89)	8	0	49d	21APR07	30APR07	20JUN07	28JUN07
A2SCPK0200	Lay Kerb (TTA No. 91)	6	0	22d	12JUN07	18JUN07	10JUL07	16JUL07
A2SCPK0300	Lighting Drawpit & Cable Duct (TTA No. 89)	8	0	49d	14APR07	23APR07	12JUN07	21JUN07
A2SCPK0400	Lighting Drawpit & Cable Duct (TTA No. 91)	6	0	22d	05JUN07	11JUN07	03JUL07	09JUL07
Roads and Paving								
A2SCRP0100	Trim Formation & Lay Subbase (TTA No. 89)	12	0	49d	21APR07	05MAY07	20JUN07	04JUL07
A2SCRP0200	Road Pavement (TTA No. 89)	12	0	49d	28APR07	12MAY07	27JUN07	11JUL07
A2SCRP0300	Road Pavement (TTA No. 91)	8	0	22d	20JUN07	28JUN07	17JUL07	25JUL07
A2SCRP0400	Remove Existing Traffic Island (TTA No. 90)	28	0	100d	20JAN07	24FEB07	23MAY07	25JUN07
A2SCRP0500	Road Pavement (TTA No. 90)	28	0	100d	26FEB07	29MAR07	26JUN07	28JUL07
Road Marking , Traffic Sign and Fencing								
A2SCRM0050	Apply Road Marking (TTA No. 89)	1	0	63d	14MAY07	14MAY07	28JUL07	28JUL07
A2SCRM0100	Apply Road Marking (TTA No. 91)	3	0	22d	29JUN07	03JUL07	28JUL07	28JUL07
A2SCRM0200	Erect Signage	12	0	49d	14MAY07	26MAY07	12JUL07	25JUL07
A2SCRM0300	Install Railing, Fencing & etc	12	0	49d	14MAY07	26MAY07	12JUL07	25JUL07
Existing Sui Cheung Street Roundabout								
Public Lighting, Duct and Kerb								
A2SRPK0100	Laying Lighting Cross Road Duct (TTA No. 90)	21	0	103d	02FEB07	01MAR07	08JUN07	04JUL07
A2SRPK0200	Laying Lighting Cross Road Duct (TTA No. 90)	21	0	98d	02FEB07	01MAR07	31MAY07	25JUN07
Roads and Paving								
A2SRRP0100	Demolish Existing Island (TTA No. 90)	21	50	103d	20DEC06 A	01FEB07	20DEC06 A	07JUN07
A2SRRP0200	Construct Porposed Island (TTA No. 90)	21	0	103d	02MAR07	26MAR07	05JUL07	26JUL07
A2SRRP0300	Demolish Existing Kerb (TTA No. 90)	21	50	96d	03JAN07 A	01FEB07	03JAN07 A	30MAY07
A2SRRP0400	Lay Kerb (TTA No. 90)	21	0	96d	02MAR07	26MAR07	26JUN07	20JUL07
A2SRRP0500	Demolish Existing Roundabout (TTA No. 91)	14	0	3d	31MAY07	15JUN07	04JUN07	20JUN07
A2SRRP0600	Reconstruct Roundabout (TTA No. 91)	10	0	3d	16JUN07	28JUN07	21JUN07	03JUL07
A2SRRP0700	Reinstate Road Pavement (TTA No. 90)	7	0	96d	27MAR07	03APR07	21JUL07	28JUL07
A2SRRP0800	Resurfacing Wearing Course	8	0	3d	29JUN07	09JUL07	04JUL07	12JUL07
A2SRRP0900	Construct Proposed Island (TTA No. 91)	21	0	6d	31MAY07	25JUN07	07JUN07	03JUL07
Road Marking , Traffic Sign and Fencing								
A2SRRM0100	Apply Road Marking	2	0	3d	24JUL07	25JUL07	27JUL07	28JUL07
A2SRRM0200	Erect Signage	12	0	3d	10JUL07	23JUL07	13JUL07	26JUL07
A2SRRM0300	Install Railing, Fencing & etc	12	0	3d	10JUL07	23JUL07	13JUL07	26JUL07
Existing Ma Liu Shui Bridge								



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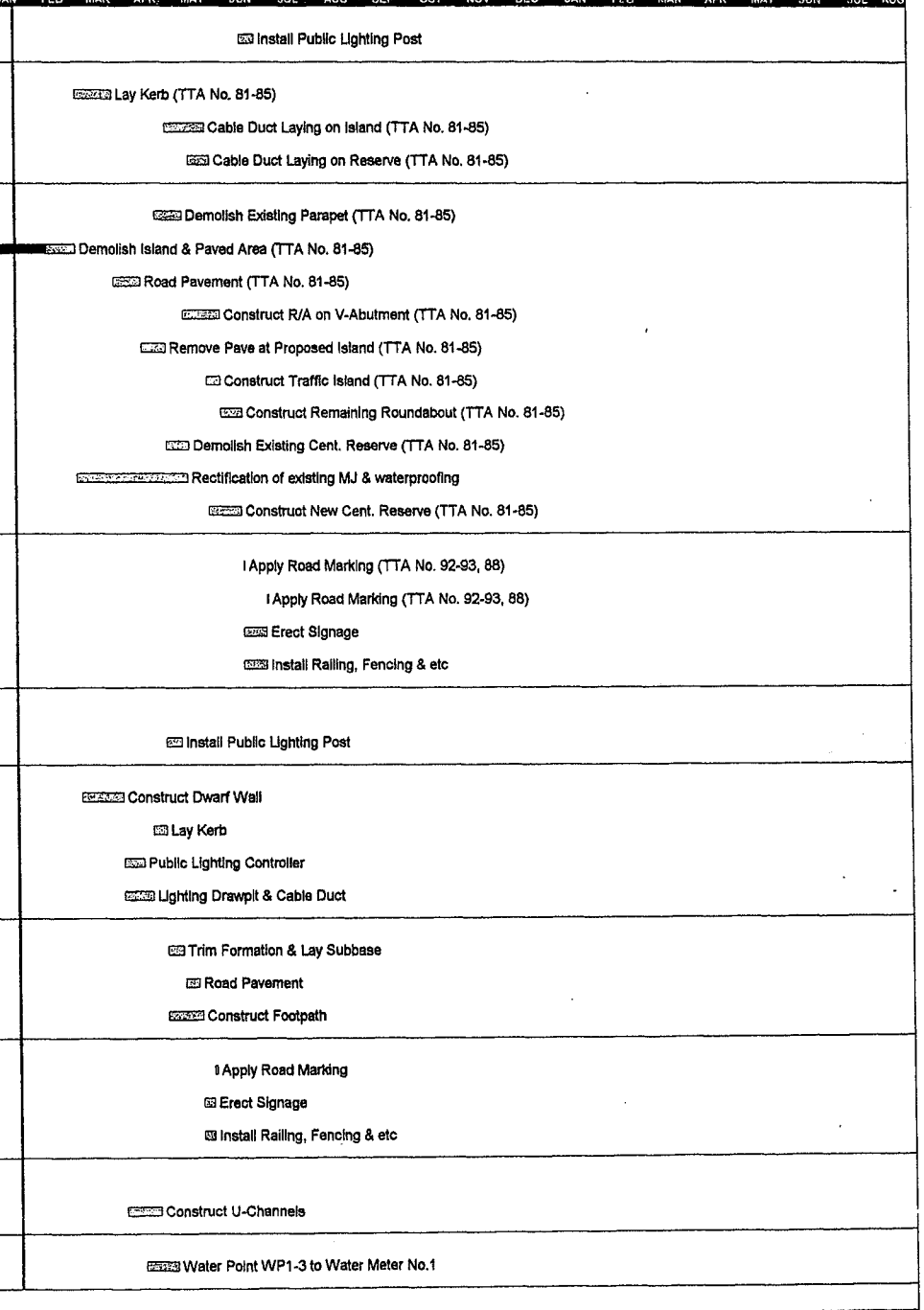
Early bar
Progress bar
Critical bar
Summary bar
Start milestone point

Leader - Wai Kee (C&T) Joint Venture
TP37/03 - Critical Path Reference Program for RP10 (Progress Updated to 20 January 2007)

LEADER
WAI KEE

Act ID	Description	Original Duration	Percent Complete	Total Float	Early Start	Early Finish	Late Start	Late Finish
Utility Works								
A2EBUT0100	Install Public Lighting Post	8	0	28d	14JUN07	23JUN07	19JUL07	27JUL07
Public Lighting, Duct and Kerb								
A2EBPK0100	Lay Kerb (TTA No. 81-85)	21	0	28d	28FEB07	23MAR07	02APR07	26APR07
A2EBPK0200	Cable Duct Laying on Island (TTA No. 81-85)	21	0	35d	27APR07	22MAY07	08JUN07	04JUL07
A2EBPK0300	Cable Duct Laying on Reserve (TTA No. 81-85)	12	0	28d	12MAY07	25MAY07	14JUN07	28JUN07
Roads and Paving								
A2EBRP0100	Demolish Existing Parapet (TTA No. 81-85)	14	0	23d	20APR07	07MAY07	18MAY07	02JUN07
A2EBRP0200	Demolish Island & Paved Area (TTA No. 81-85)	14	10	28d	08JAN07 A	27FEB07	08JAN07 A	31MAR07
A2EBRP0300	Road Pavement (TTA No. 81-85)	14	0	28d	24MAR07	10APR07	27APR07	14MAY07
A2EBRP0400	Construct R/A on V-Abutment (TTA No. 81-85)	21	0	23d	08MAY07	31MAY07	04JUN07	28JUN07
A2EBRP0500	Remove Pave at Proposed Island (TTA No. 81-85)	14	0	28d	11APR07	26APR07	15MAY07	30MAY07
A2EBRP0600	Construct Traffic Island (TTA No. 81-85)	8	0	35d	23MAY07	31MAY07	05JUL07	13JUL07
A2EBRP0700	Construct Remaining Roundabout (TTA No. 81-85)	12	0	23d	01JUN07	14JUN07	29JUN07	13JUL07
A2EBRP0800	Demolish Existing Cent. Reserve (TTA No. 81-85)	12	0	28d	27APR07	11MAY07	31MAY07	13JUN07
A2EBRP0850	Rectification of existing MJ & waterproofing	60	0	39d	28FEB07	10MAY07	16APR07	26JUN07
A2EBRP0900	Construct New Cent. Reserve (TTA No. 81-85)	18	0	28d	24MAY07	13JUN07	27JUN07	18JUL07
Road Marking , Traffic Sign and Fencing								
A2EBRM0100	Apply Road Marking (TTA No. 92-93, 88)	1	0	35d	15JUN07	15JUN07	28JUL07	28JUL07
A2EBRM0200	Apply Road Marking (TTA No. 92-93, 88)	1	0	23d	30JUN07	30JUN07	28JUL07	28JUL07
A2EBRM0300	Erect Signage	12	0	23d	15JUN07	29JUN07	14JUL07	27JUL07
A2EBRM0400	Install Railing, Fencing & etc	12	0	23d	15JUN07	29JUN07	14JUL07	27JUL07
Car Park and Access Road								
Utility Works								
A2CPUT0500	Install Public Lighting Post	8	0	70d	26APR07	05MAY07	20JUL07	28JUL07
Public Lighting, Duct and Kerb								
A2CPPK0100	Construct Dwarf Wall	23	0	22d	02MAR07	28MAR07	28MAR07	24APR07
A2CPPK0200	Lay Kerb	8	0	52d	17APR07	25APR07	18JUN07	27JUN07
A2CPPK0300	Public Lighting Controller	10	0	83d	29MAR07	10APR07	09JUL07	19JUL07
A2CPPK0400	Lighting Drawpit & Cable Duct	15	0	52d	29MAR07	16APR07	31MAY07	16JUN07
Roads and Paving								
A2CPRP0100	Trim Formation & Lay Subbase	8	0	60d	26APR07	05MAY07	09JUL07	17JUL07
A2CPRP0200	Road Pavement	8	0	60d	07MAY07	15MAY07	18JUL07	26JUL07
A2CPRP0300	Construct Footpath	18	0	52d	26APR07	17MAY07	28JUN07	19JUL07
Road Marking , Traffic Sign and Fencing								
A2CPRM0100	Apply Road Marking	2	0	52d	25MAY07	26MAY07	27JUL07	28JUL07
A2CPRM0200	Erect Signage	6	0	52d	18MAY07	24MAY07	20JUL07	26JUL07
A2CPRM0300	Install Railing, Fencing & etc	6	0	52d	18MAY07	24MAY07	20JUL07	26JUL07
Amenity Area								
Drainage Works								
A2AMDW0100	Construct U-Channels	18	0	83d	29MAR07	19APR07	09JUL07	28JUL07
Utility Works								
A2AMUT0100	Water Point WP1-3 to Water Meter No.1	18	0	62d	10APR07	30APR07	23JUN07	14JUL07



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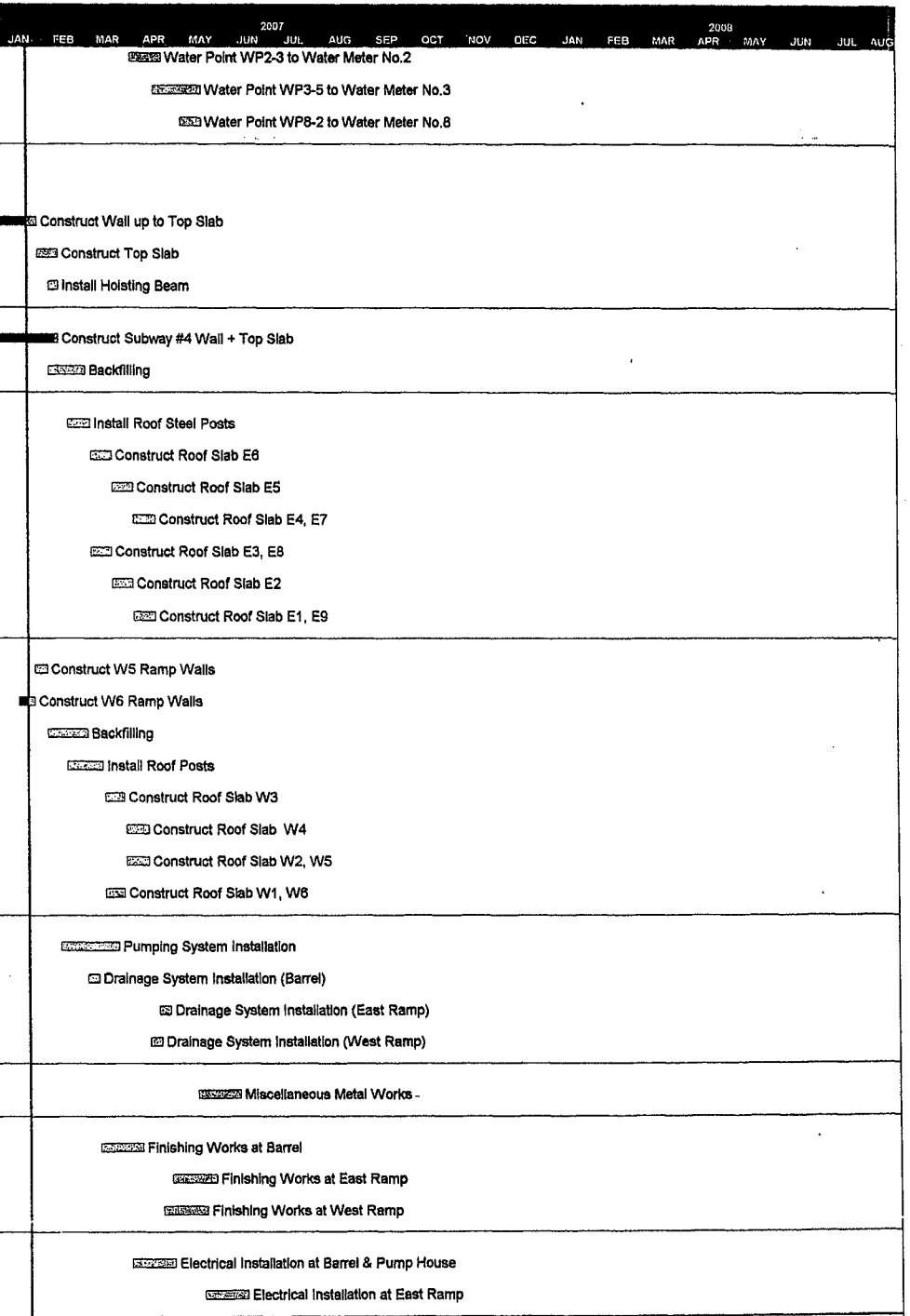
Early bar
Progress bar
Critical bar
Summary bar
Start milestone point

Leader - Wai Kee (C&T) Joint Venture
TP37/03 - Critical Path Reference Program for RP10 (Progress Updated to 20 January 2007)

LEADER

WAI KEE

Act ID	Description	Original Duration	Percent Complete	Total Float	Early Start	Early Finish	Late Start	Late Finish
A2AMUT0200	Water Point WP2-3 to Water Meter No.2	17	0	83d	30MAR07	19APR07	10JUL07	28JUL07
A2AMUT0300	Water Point WP3-5 to Water Meter No.3	26	0	62d	14APR07	15MAY07	28JUN07	28JUL07
A2AMUT0400	Water Point WP8-2 to Water Meter No.8	12	0	62d	02MAY07	15MAY07	16JUL07	28JUL07
Section 3								
Ma Liu Shui Subway								
Pump House Construction								
A3MSPH0300	Construct Wall up to Top Slab	12	50	10d	06DEC06 A	26JAN07	06DEC06 A	07FEB07
A3MSPH0400	Construct Top Slab	12	0	10d	27JAN07	09FEB07	08FEB07	24FEB07
A3MSPH0500	Install Hoisting Beam	6	0	10d	03FEB07	09FEB07	15FEB07	24FEB07
Subway Barrel Construction								
A3MSSB0900	Construct Subway #4 Wall + Top Slab	16	80	10d	25DEC06 A	09FEB07	25DEC06 A	24FEB07
A3MSSB1000	Backfilling	18	0	10d	03FEB07	27FEB07	15FEB07	10MAR07
Subway East Ramp Construction								
A3MSSE2700	Install Roof Steel Posts	10	0	10d	16FEB07	02MAR07	03MAR07	14MAR07
A3MSSE2800	Construct Roof Slab E6	12	0	10d	03MAR07	16MAR07	15MAR07	28MAR07
A3MSSE2900	Construct Roof Slab E5	12	0	10d	17MAR07	30MAR07	29MAR07	12APR07
A3MSSE3000	Construct Roof Slab E4, E7	12	0	10d	31MAR07	14APR07	13APR07	26APR07
A3MSSE3100	Construct Roof Slab E3, E8	12	0	10d	03MAR07	16MAR07	15MAR07	28MAR07
A3MSSE3200	Construct Roof Slab E2	12	0	10d	17MAR07	30MAR07	29MAR07	12APR07
A3MSSE3300	Construct Roof Slab E1, E9	12	0	10d	31MAR07	14APR07	13APR07	26APR07
Subway West Ramp Construction								
A3MSSW1400	Construct W5 Ramp Walls	7	0	13d	25JAN07	01FEB07	09FEB07	16FEB07
A3MSSW1500	Construct W6 Ramp Walls	10	60	13d	14JAN07 A	24JAN07	14JAN07 A	08FEB07
A3MSSW1600	Backfilling	20	0	13d	02FEB07	28FEB07	21FEB07	15MAR07
A3MSSW1700	Install Roof Posts	18	0	13d	15FEB07	10MAR07	06MAR07	26MAR07
A3MSSW1800	Construct Roof Slab W3	12	0	13d	12MAR07	24MAR07	27MAR07	10APR07
A3MSSW1900	Construct Roof Slab W4	12	0	13d	26MAR07	09APR07	11APR07	24APR07
A3MSSW2000	Construct Roof Slab W2, W5	12	0	13d	28MAR07	09APR07	11APR07	24APR07
A3MSSW2100	Construct Roof Slab W1, W6	12	0	25d	12MAR07	24MAR07	11APR07	24APR07
Pumping and Drainage System								
A3MSPD0100	Pumping System Installation	30	0	31d	10FEB07	20MAR07	22MAR07	26APR07
A3MSPD0200	Drainage System Installation (Barrel)	7	0	25d	28FEB07	07MAR07	29MAR07	06APR07
A3MSPD0210	Drainage System Installation (East Ramp)	7	0	10d	16APR07	23APR07	27APR07	05MAY07
A3MSPD0220	Drainage System Installation (West Ramp)	7	0	13d	10APR07	17APR07	25APR07	03MAY07
Miscellaneous works								
A3MSMW0100	Miscellaneous Metal Works	24	0	13d	11MAY07	07JUN07	26MAY07	23JUN07
Finishing Works								
A3MSFW0100	Finishing Works at Barrel	24	0	25d	08MAR07	04APR07	07APR07	05MAY07
A3MSFW0200	Finishing Works at East Ramp	24	0	10d	24APR07	22MAY07	07MAY07	02JUN07
A3MSFW0300	Finishing Works at West Ramp	24	0	13d	18APR07	16MAY07	04MAY07	31MAY07
E & M Works								
A3MSEM0100	Electrical Installation at Barrel & Pump House	24	0	25d	28MAR07	25APR07	27APR07	25MAY07
A3MSEM0200	Electrical Installation at East Ramp	24	0	10d	15MAY07	11JUN07	26MAY07	23JUN07



Start date	10JUN04
Finish date	09MAY08
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Run date	06FEB07
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Early bar
Progress bar
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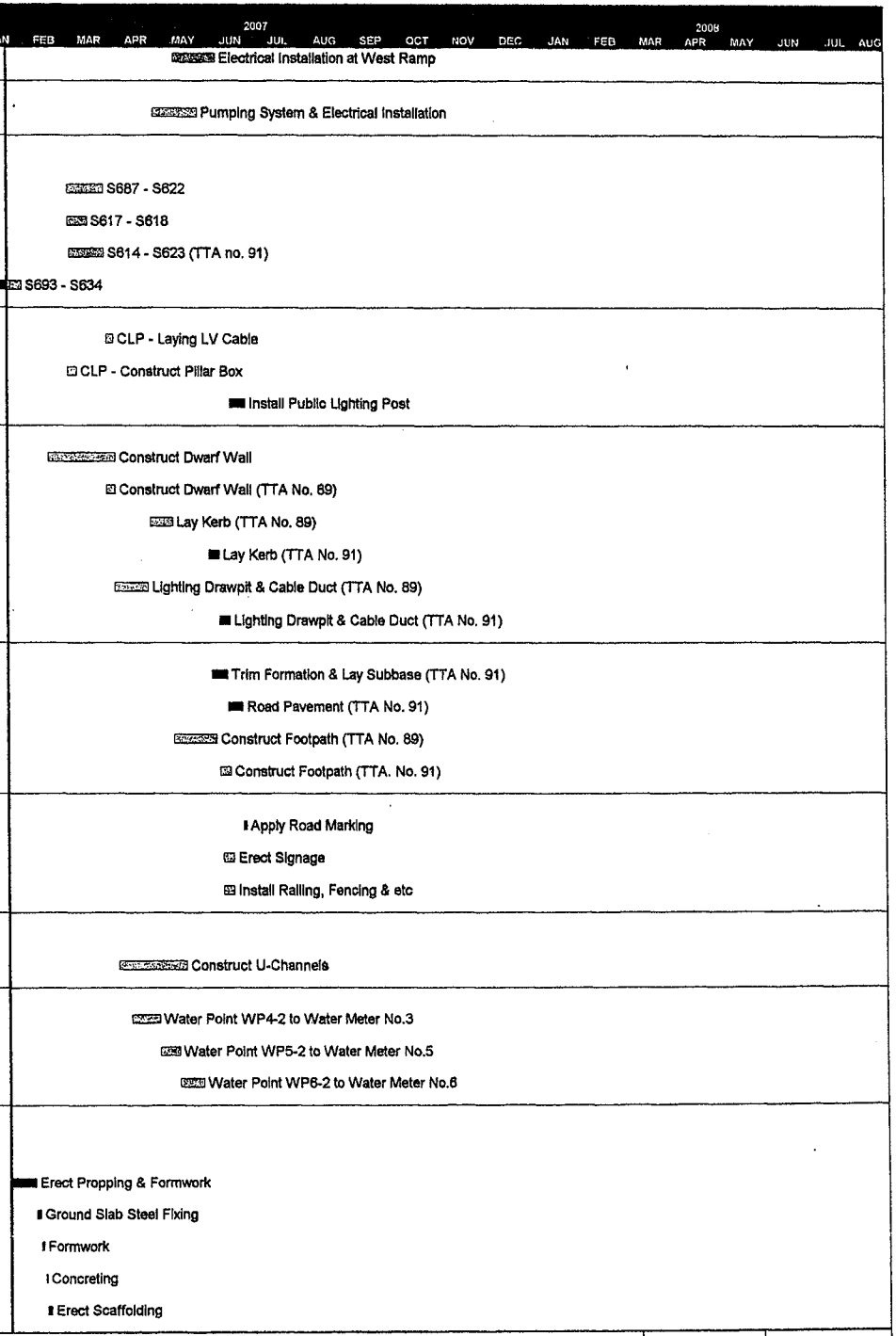
Summary bar
Start milestone point

Leader - Wai Kee (C&T) Joint Venture
TP37/03 - Critical Path Reference Program for RP10 (Progress Updated to 20 January 2007)

Act ID	Description	Original Duration	Percent Complete	Total Float	Early Start	Early Finish	Late Start	Late Finish
A3MSEM0300	Electrical Installation at West Ramp	24	0	15d	09MAY07	05JUN07	26MAY07	23JUN07
Testing and Commissioning								
A3MSTC0100	Pumping System & Electrical Installation	24	0	25d	26APR07	24MAY07	26MAY07	23JUN07
Loading and Unloading Area								
Drainage Works								
A3LUDW0700	S687 - S622	21	0	14d	01MAR07	24MAR07	17MAR07	11APR07
A3LUDW0800	S617 - S618	11	0	24d	01MAR07	13MAR07	29MAR07	11APR07
A3LUDW1000	S614 - S623 (TTA no. 91)	20	0	14d	02MAR07	24MAR07	19MAR07	11APR07
A3LUDW1100	S693 - S634	21	60	13d	10JUL06 A	29JAN07	10JUL06 A	13FEB07
Utility Works								
A3LUUT0100	CLP - Laying LV Cable	5	0	13d	26MAR07	30MAR07	11APR07	16APR07
A3LUUT0200	CLP - Construct Pillar Box	5	0	29d	01MAR07	06MAR07	04APR07	10APR07
A3LUUT0300	Install Public Lighting Post	8	0	0	14JUN07	23JUN07	14JUN07	23JUN07
Public Lighting, Duct and Kerb								
A3LUPK0100	Construct Dwarf Wall	35	0	13d	16FEB07	31MAR07	07MAR07	17APR07
A3LUPK0200	Construct Dwarf Wall (TTA No. 89)	6	0	14d	26MAR07	31MAR07	12APR07	18APR07
A3LUPK0300	Lay Kerb (TTA No. 89)	12	0	13d	23APR07	07MAY07	09MAY07	22MAY07
A3LUPK0400	Lay Kerb (TTA No. 91)	6	0	0	31MAY07	06JUN07	31MAY07	06JUN07
A3LUPK0500	Lighting Drawpit & Cable Duct (TTA No. 89)	18	0	13d	31MAR07	21APR07	17APR07	08MAY07
A3LUPK0600	Lighting Drawpit & Cable Duct (TTA No. 91)	6	0	0	07JUN07	13JUN07	07JUN07	13JUN07
Roads and Paving								
A3LURP0100	Trim Formation & Lay Subbase (TTA No. 91)	8	0	0	02JUN07	11JUN07	02JUN07	11JUN07
A3LURP0200	Road Pavement (TTA No. 91)	8	0	0	12JUN07	21JUN07	12JUN07	21JUN07
A3LURP0300	Construct Footpath (TTA No. 89)	24	0	13d	08MAY07	04JUN07	23MAY07	20JUN07
A3LURP0400	Construct Footpath (TTA. No. 91)	6	0	5d	07JUN07	13JUN07	13JUN07	20JUN07
Road Marking , Traffic Sign and Fencing								
A3LURM0100	Apply Road Marking	2	0	0	22JUN07	23JUN07	22JUN07	23JUN07
A3LURM0200	Erect Signage	6	0	5d	09JUN07	15JUN07	15JUN07	22JUN07
A3LURM0300	Install Railing, Fencing & etc	6	0	5d	09JUN07	15JUN07	15JUN07	22JUN07
Amenity Area								
Drainage Works								
A3AMDW0100	Construct U-Channels	36	0	33d	02APR07	15MAY07	12MAY07	23JUN07
Utility Works								
A3AMUT0100	Water Point WP4-2 to Water Meter No.3	16	0	23d	10APR07	27APR07	08MAY07	25MAY07
A3AMUT0200	Water Point WP5-2 to Water Meter No.5	10	0	23d	28APR07	10MAY07	26MAY07	06JUN07
A3AMUT0300	Water Point WP6-2 to Water Meter No.6	14	0	23d	11MAY07	26MAY07	07JUN07	23JUN07
Section 4								
Public Toilet No. 2								
Ground Floor Slab Construction								
A4PTGF0100	Erect Propping & Formwork	14	0	0	20JAN07	05FEB07	20JAN07	05FEB07
A4PTGF0200	Ground Slab Steel Fixing	3	0	0	06FEB07	08FEB07	06FEB07	08FEB07
A4PTGF0300	Formwork	2	0	0	09FEB07	10FEB07	09FEB07	10FEB07
A4PTGF0400	Concreting	1	0	0	12FEB07	12FEB07	12FEB07	12FEB07
A4PTGF0500	Erect Scaffolding	3	0	0	13FEB07	15FEB07	13FEB07	15FEB07



tart date	10JUN04
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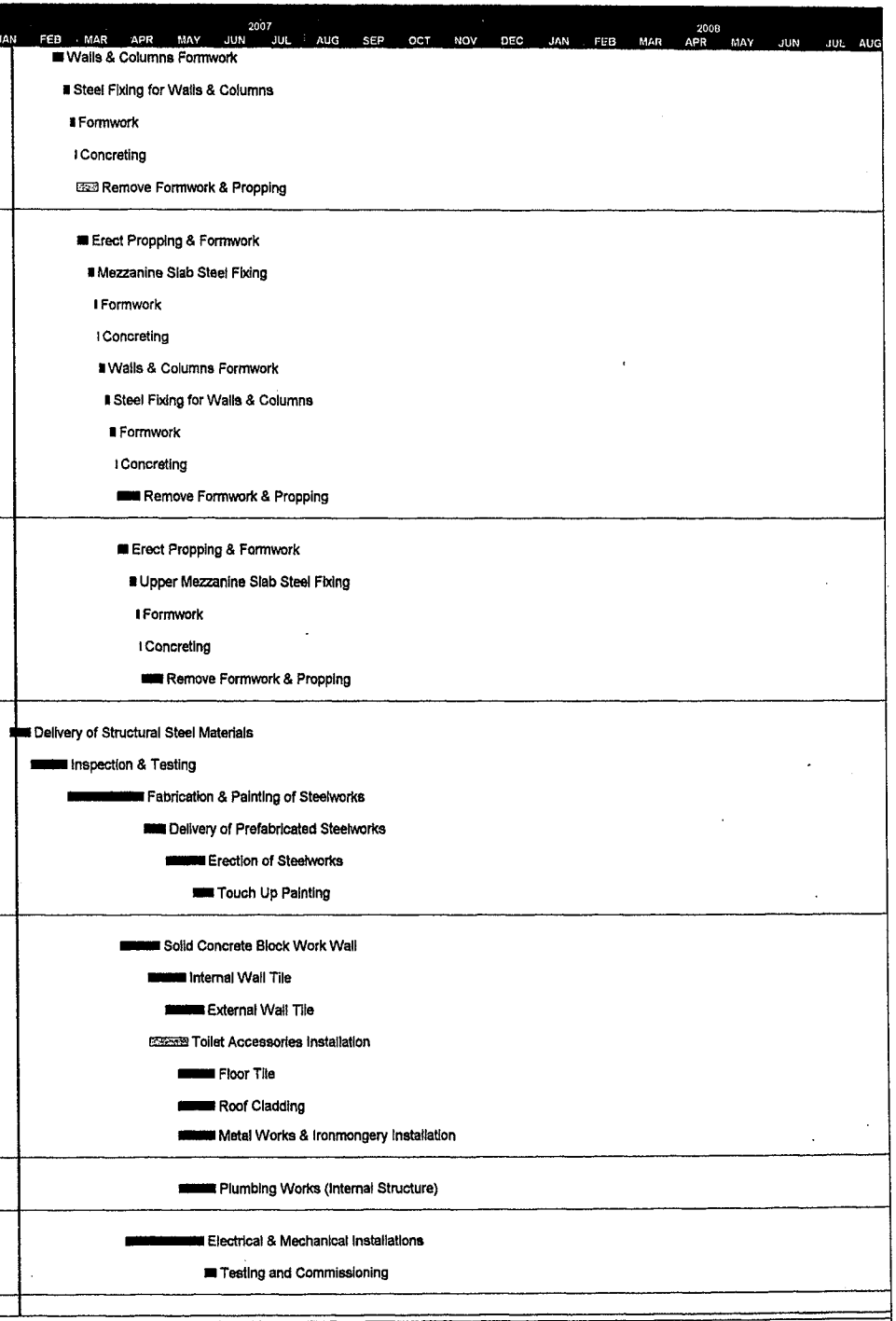
Early bar
Progress bar
Critical bar
Summary bar
Start milestone point

Leader - Wai Kee (C&T) Joint Venture
TP37/03 - Critical Path Reference Program for RP10 (Progress Updated to 20 January 2007)

LEADER
WAI KEE

Act ID	Description	Original Duration	Percent Complete	Total Float	Early Start	Early Finish	Late Start	Late Finish
A4PTGF0600	Walls & Columns Formwork	3	0	0	16FEB07	22FEB07	16FEB07	22FEB07
A4PTGF0700	Steel Fixing for Walls & Columns	3	0	0	23FEB07	26FEB07	23FEB07	26FEB07
A4PTGF0800	Formwork	3	0	0	27FEB07	01MAR07	27FEB07	01MAR07
A4PTGF0900	Concreting	1	0	0	02MAR07	02MAR07	02MAR07	02MAR07
A4PTGF1000	Remove Formwork & Propping	12	0	10d	03MAR07	16MAR07	15MAR07	28MAR07
Mazzanine Floor Slab Construction								
A4PTMF0100	Erect Propping & Formwork	6	0	0	03MAR07	09MAR07	03MAR07	09MAR07
A4PTMF0200	Mezzanine Slab Steel Fixing	3	0	0	10MAR07	13MAR07	10MAR07	13MAR07
A4PTMF0300	Formwork	2	0	0	14MAR07	15MAR07	14MAR07	15MAR07
A4PTMF0400	Concreting	1	0	0	16MAR07	16MAR07	16MAR07	16MAR07
A4PTMF0500	Walls & Columns Formwork	3	0	0	17MAR07	20MAR07	17MAR07	20MAR07
A4PTMF0600	Steel Fixing for Walls & Columns	3	0	0	21MAR07	23MAR07	21MAR07	23MAR07
A4PTMF0700	Formwork	3	0	0	24MAR07	27MAR07	24MAR07	27MAR07
A4PTMF0800	Concreting	1	0	0	28MAR07	28MAR07	28MAR07	28MAR07
A4PTMF0900	Remove Formwork & Propping	12	0	0	29MAR07	12APR07	29MAR07	12APR07
Upper Mazanine Floor Slab Construction								
A4PTUF0100	Erect Propping & Formwork	6	0	0	29MAR07	04APR07	29MAR07	04APR07
A4PTUF0200	Upper Mezzanine Slab Steel Fixing	3	0	0	06APR07	09APR07	06APR07	09APR07
A4PTUF0300	Formwork	2	0	0	10APR07	11APR07	10APR07	11APR07
A4PTUF0400	Concreting	1	0	0	12APR07	12APR07	12APR07	12APR07
A4PTUF0500	Remove Formwork & Propping	12	0	0	13APR07	26APR07	13APR07	26APR07
Structural Steelworks								
A4PTSS0400	Delivery of Structural Steel Materials	12	30	0	16JAN07 A	29JAN07	16JAN07 A	29JAN07
A4PTSS0500	Inspection & Testing	18	0	0	30JAN07	22FEB07	30JAN07	22FEB07
A4PTSS0600	Fabrication & Painting of Steelworks	42	0	0	23FEB07	13APR07	23FEB07	13APR07
A4PTSS0700	Delivery of Prefabricated Steelworks	12	0	0	14APR07	27APR07	14APR07	27APR07
A4PTSS0800	Erection of Steelworks	21	0	0	28APR07	23MAY07	28APR07	23MAY07
A4PTSS0900	Touch Up Painting	12	0	0	16MAY07	29MAY07	16MAY07	29MAY07
Architectural Builder's Works and Finishes								
A4PTAB0100	Solid Concrete Block Work Wall	21	0	0	29MAR07	23APR07	29MAR07	23APR07
A4PTAB0200	Internal Wall Tile	21	0	0	16APR07	10MAY07	16APR07	10MAY07
A4PTAB0300	External Wall Tile	21	0	0	27APR07	22MAY07	27APR07	22MAY07
A4PTAB0400	Toilet Accessories Installation	21	0	15d	17APR07	11MAY07	05MAY07	29MAY07
A4PTAB0500	Floor Tile	21	0	0	05MAY07	29MAY07	05MAY07	29MAY07
A4PTAB0600	Roof Cladding	21	0	0	05MAY07	29MAY07	05MAY07	29MAY07
A4PTAB0700	Metal Works & Ironmongery Installation	21	0	0	05MAY07	29MAY07	05MAY07	29MAY07
Plumbing Works								
A4PTPL0100	Plumbing Works (Internal Structure)	21	0	0	05MAY07	29MAY07	05MAY07	29MAY07
E & M Works								
A4PTEM0100	Electrical & Mechanical Installations	42	0	0	31MAR07	21MAY07	31MAR07	21MAY07
A4PTEM0110	Testing and Commissioning	7	0	0	22MAY07	29MAY07	22MAY07	29MAY07



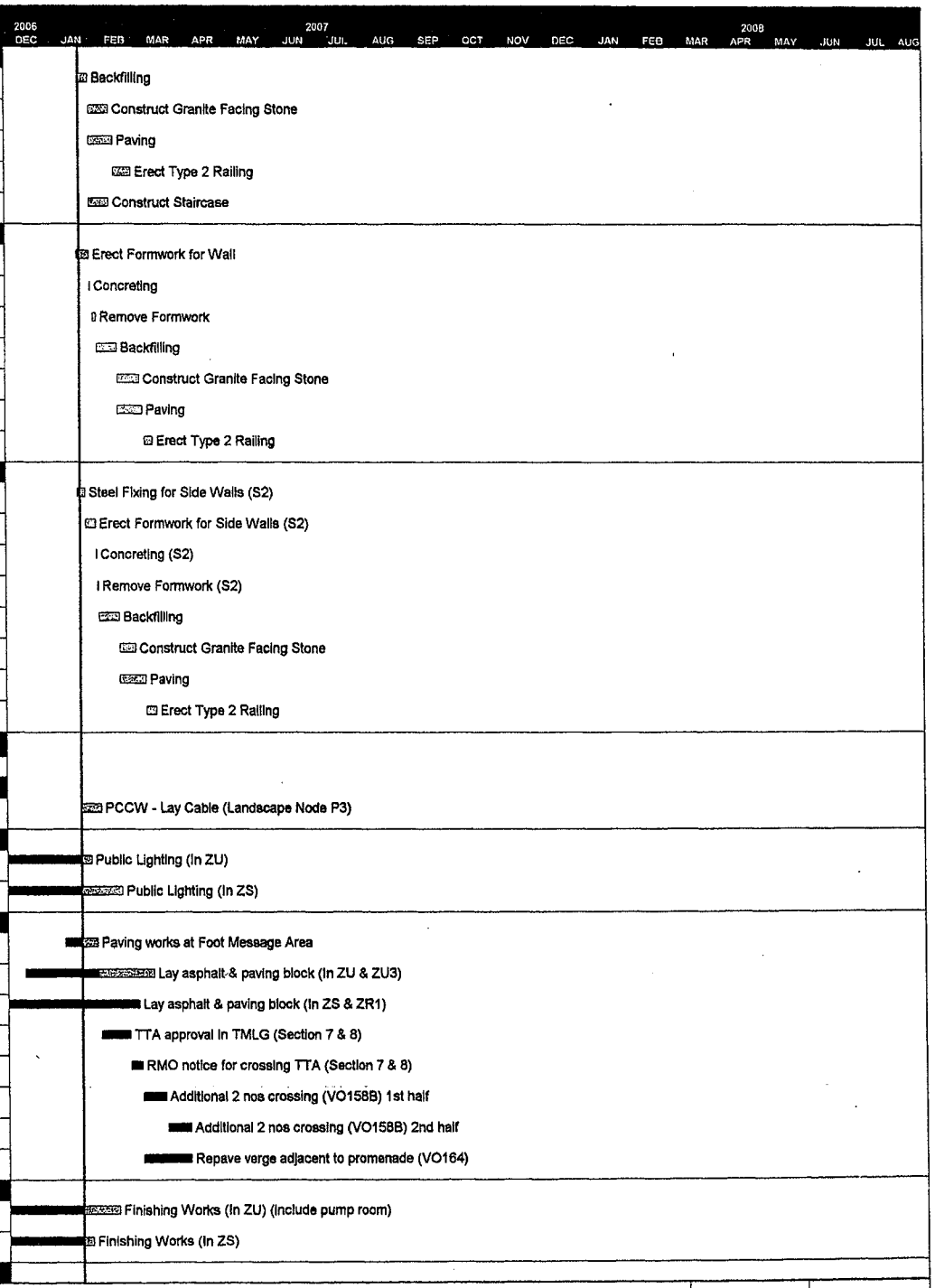
Ramp Wall

Start date	10JUN04
Finish date	09MAY08
Data date	20JAN07
Run date	06FEB07
Page number	10A

Early bar
Progress bar
Critical bar
Summary bar
Start milestone point

Leader - Wai Kee (C&T) Joint Venture
TP37/03 - Critical Path Reference Program for RP10 (Progress Updated to 20 January 2007)

Act ID	Description	Original Duration	Percent Complete	Total Float	Early Start	Early Finish	Late Start	Late Finish
Ramp Wall - North								
A4RARN2200	Backfilling	6	0	78d	20JAN07	26JAN07	26APR07	03MAY07
A4RARN2300	Construct Granite Facing Stone	12	0	80d	27JAN07	09FEB07	07MAY07	19MAY07
A4RARN2400	Paving	14	0	78d	27JAN07	12FEB07	04MAY07	19MAY07
A4RARN2500	Erect Type 2 Railing	8	0	78d	13FEB07	24FEB07	21MAY07	29MAY07
A4RARN2600	Construct Staircase	12	0	88d	27JAN07	09FEB07	16MAY07	29MAY07
Ramp Wall - Toilet								
A4RART1000	Erect Formwork for Wall	6	1	20d	18JAN07 A	26JAN07	18JAN07 A	22FEB07
A4RART1100	Concreting	1	0	20d	27JAN07	27JAN07	23FEB07	23FEB07
A4RART1200	Remove Formwork	3	0	20d	29JAN07	31JAN07	24FEB07	27FEB07
A4RART1400	Backfilling	12	0	66d	01FEB07	14FEB07	24APR07	08MAY07
A4RART1500	Construct Granite Facing Stone	10	0	68d	15FEB07	01MAR07	11MAY07	22MAY07
A4RART1600	Paving	12	0	66d	15FEB07	03MAR07	09MAY07	22MAY07
A4RART1700	Erect Type 2 Railing	6	0	66d	05MAR07	10MAR07	23MAY07	29MAY07
Ramp Wall - South								
A4RARS1700	Steel Fixing for Side Walls (S2)	6	50	19d	18JAN07 A	23JAN07	18JAN07 A	14FEB07
A4RARS1800	Erect Formwork for Side Walls (S2)	6	0	19d	24JAN07	30JAN07	15FEB07	24FEB07
A4RARS1900	Concreting (S2)	1	0	19d	31JAN07	31JAN07	26FEB07	26FEB07
A4RARS2000	Remove Formwork (S2)	1	0	19d	01FEB07	01FEB07	27FEB07	27FEB07
A4RARS2200	Backfilling	12	0	65d	02FEB07	15FEB07	24APR07	08MAY07
A4RARS2300	Construct Granite Facing Stone	6	0	71d	16FEB07	26FEB07	16MAY07	22MAY07
A4RARS2400	Paving	12	0	65d	16FEB07	05MAR07	09MAY07	22MAY07
A4RARS2500	Erect Type 2 Railing	6	0	65d	06MAR07	12MAR07	23MAY07	29MAY07
ection 7								
Waterfront Promenade								
Utility Works								
A7WPUT0610	PCCW - Lay Cable (Landscape Node P3)	12	0	2d	20JAN07	02FEB07	23JAN07	05FEB07
Public Lighting, Duct and Kerb								
A7WPPK0100	Public Lighting (In ZU)	60	90	24d	03APR06 A	26JAN07	03APR06 A	27FEB07
A7WPPK0200	Public Lighting (In ZS)	60	60	6d	03APR06 A	16FEB07	03APR06 A	27FEB07
Roads and Paving								
A7WPRP0050	Paving works at Foot Message Area	18	50	21d	08JAN07 A	30JAN07	08JAN07 A	27FEB07
A7WPRP0100	Lay asphalt & paving block (In ZU & ZU3)	50	40	21d	12DEC06 A	09MAR07	12DEC06 A	03APR07
A7WPRP0200	Lay asphalt & paving block (In ZS & ZR1)	50	40	0	21OCT06 A	27FEB07	21OCT06 A	27FEB07
A7WPRP0205	TTA approval in TMLG (Section 7 & 8)	14	0	0	02FEB07	21FEB07	02FEB07	21FEB07
A7WPRP0206	RMO notice for crossing TTA (Section 7 & 8)	7	0	0	22FEB07	01MAR07	22FEB07	01MAR07
A7WPRP0210	Additional 2 nos crossing (VO158B) 1st half	14	0	0	02MAR07	17MAR07	02MAR07	17MAR07
A7WPRP0220	Additional 2 nos crossing (VO158B) 2nd half	14	0	0	19MAR07	03APR07	19MAR07	03APR07
A7WPRP0230	Repave verge adjacent to promenade (VO164)	28	0	0	02MAR07	03APR07	02MAR07	03APR07
Finishing Works								
A7WPFW0100	Finishing Works (In ZU) (include pump room)	30	30	39d	09JAN06 A	13FEB07	09JAN06 A	03APR07
A7WPFW0200	Finishing Works (In ZS)	55	90	54d	13APR06 A	26JAN07	13APR06 A	03APR07
E & M Works								



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Early bar
Progress bar
Critical bar
Summary bar
Start milestone point

Leader - Wai Kee (C&T) Joint Venture
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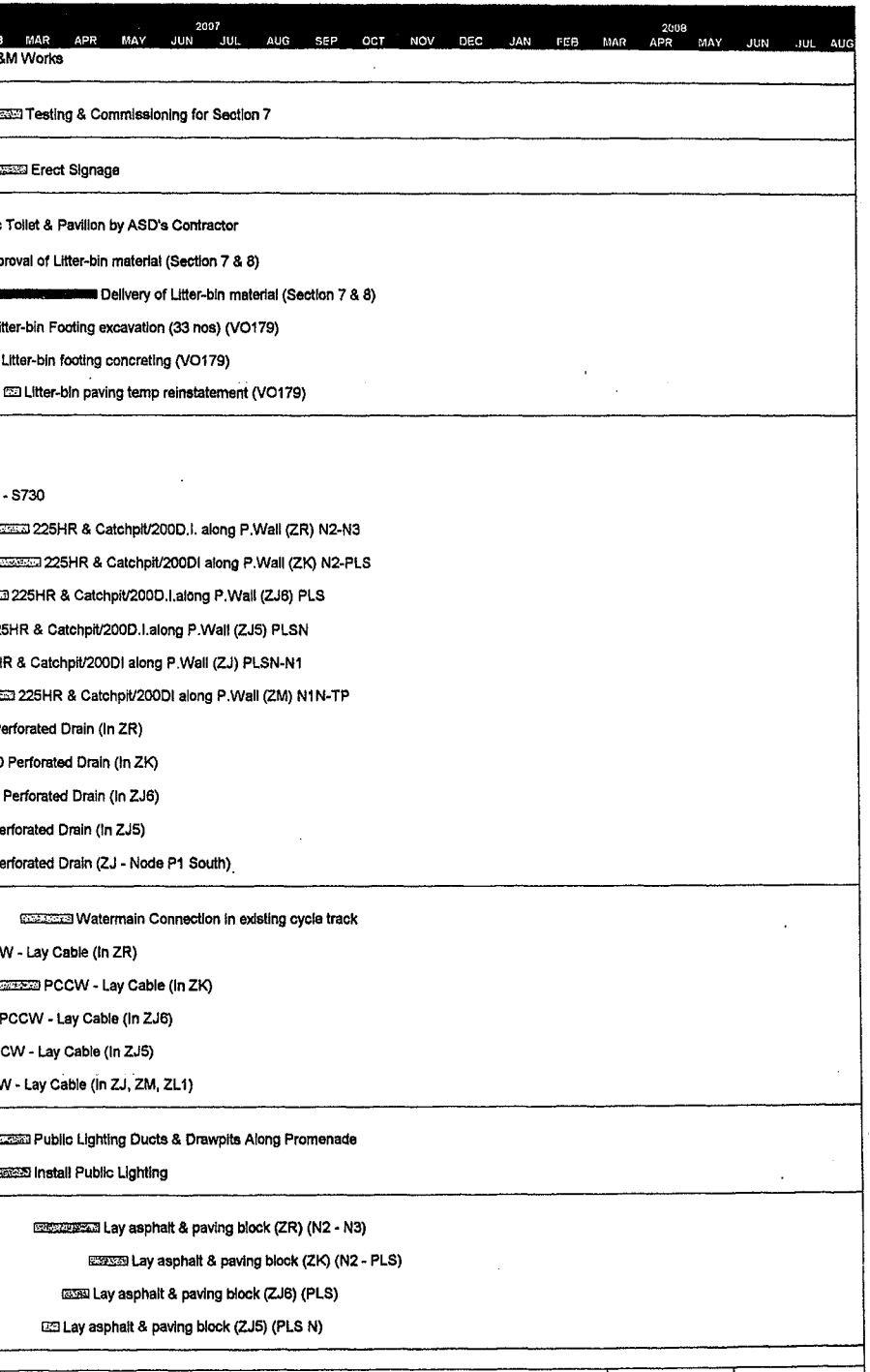
LEADER
WAI KEE

Act ID	Description	Original Duration	Percent Complete	Total Float	Early Start	Early Finish	Late Start	Late Finish
A7WPEM0700	E&M Works	30	75	25d	19AUG06 A	08FEB07	19AUG06 A	13MAR07
Testing and Commissioning								
A7WPTC0100	Testing & Commissioning for Section 7	14	0	25d	14FEB07	05MAR07	19MAR07	03APR07
Road Marking , Traffic Sign and Fencing								
A7WPRM0300	Erect Signage	20	0	22d	10FEB07	08MAR07	12MAR07	03APR07
Landscape Hardworks								
A7WPHL1600	Public Toilet & Pavilion by ASD's Contractor	297	99	-366d	28DEC04 A	23JAN07	28DEC04 A	05NOV05
A7WPHL1605	Approval of Litter-bin material (Section 7 & 8)	12	0	0	20JAN07	02FEB07	20JAN07	02FEB07
A7WPHL1606	Delivery of Litter-bin material (Section 7 & 8)	63	0	0	03FEB07	21APR07	03FEB07	21APR07
A7WPHL1610	Litter-bin Footing excavation (33 nos) (VO179)	6	0	26d	03FEB07	09FEB07	09MAR07	15MAR07
A7WPHL1620	Litter-bin footing concreting (VO179)	6	0	26d	10FEB07	16FEB07	16MAR07	22MAR07
A7WPHL1630	Litter-bin paving temp reinstatement (VO179)	10	0	26d	21FEB07	03MAR07	23MAR07	03APR07
ection 8								
Waterfront Promenade								
Drainage Works								
A8WPDW0400	S729 - S730	14	75	5d	09AUG06 A	24JAN07	09AUG06 A	30JAN07
A8WPDW0800	225HR & Catchpit/200D.I. along P.Wall (ZR) N2-N3	48	20	23d	15AUG06 A	08MAR07	15AUG06 A	04APR07
A8WPDW0900	225HR & Catchpit/200DI along P.Wall (ZK) N2-PLS	24	0	18d	13FEB07	15MAR07	09MAR07	06APR07
A8WPDW1000	225HR & Catchpit/200D.I.along P.Wall (ZJ6) PLS	12	0	36d	06FEB07	22FEB07	23MAR07	06APR07
A8WPDW1100	225HR & Catchpit/200D.I.along P.Wall (ZJ5) PLSN	6	0	37d	30JAN07	05FEB07	17MAR07	23MAR07
A8WPDW1200	225HR & Catchpit/200DI along P.Wall (ZJ) PLSN-N1	50	90	53d	15AUG06 A	25JAN07	15AUG06 A	31MAR07
A8WPDW1300	225HR & Catchpit/200DI along P.Wall (ZM) N1N-TP	30	5	39d	01JAN07 A	26FEB07	01JAN07 A	13APR07
A8WPDW1900	150 Perforated Drain (In ZR)	19	90	0	13OCT06 A	22JAN07	13OCT06 A	22JAN07
A8WPDW2000	150 Perforated Drain (In ZK)	18	40	2d	17OCT06 A	01FEB07	17OCT06 A	03FEB07
A8WPDW2100	150 Perforated Drain (In ZJ6)	9	60	5d	03JAN07 A	29JAN07	03JAN07 A	03FEB07
A8WPDW2200	150 Perforated Drain (In ZJ5)	5	80	12d	12DEC06 A	20JAN07	12DEC06 A	03FEB07
A8WPDW2300	150 Perforated Drain (ZJ - Node P1 South)	24	95	16d	05NOV06 A	20JAN07	05NOV06 A	08FEB07
Utility Works								
A8WPUT0200	Watermain Connection in existing cycle track	28	0	36d	02MAR07	03APR07	14APR07	17MAY07
A8WPUT0700	PCCW - Lay Cable (In ZR)	48	92	2d	09AUG06 A	24JAN07	09AUG06 A	26JAN07
A8WPUT0800	PCCW - Lay Cable (In ZK)	22	0	9d	13FEB07	13MAR07	27FEB07	23MAR07
A8WPUT0900	PCCW - Lay Cable (In ZJ6)	10	0	2d	01FEB07	12FEB07	03FEB07	14FEB07
A8WPUT1000	PCCW - Lay Cable (In ZJ5)	6	0	2d	25JAN07	31JAN07	27JAN07	02FEB07
A8WPUT1100	PCCW - Lay Cable (In ZJ, ZM, ZL1)	44	95	3d	30SEP06 A	22JAN07	30SEP06 A	25JAN07
Public Lighting, Duct and Kerb								
A8WPPK0300	Public Lighting Ducts & Drawpits Along Promenade	60	40	36d	21OCT06 A	06MAR07	21OCT06 A	18APR07
A8WPPK0400	Install Public Lighting	24	0	36d	03FEB07	06MAR07	21MAR07	18APR07
Roads and Paving								
A8WPRP0100	Lay asphalt & paving block (ZR) (N2 - N3)	35	0	23d	09MAR07	19APR07	06APR07	17MAY07
A8WPRP0200	Lay asphalt & paving block (ZK) (N2 - PLS)	20	0	9d	13APR07	07MAY07	24APR07	17MAY07
A8WPRP0300	Lay asphalt & paving block (ZJ6) (PLS)	14	0	9d	27MAR07	12APR07	07APR07	23APR07
A8WPRP0400	Lay asphalt & paving block (ZJ5) (PLS N)	10	0	9d	14MAR07	24MAR07	24MAR07	04APR07



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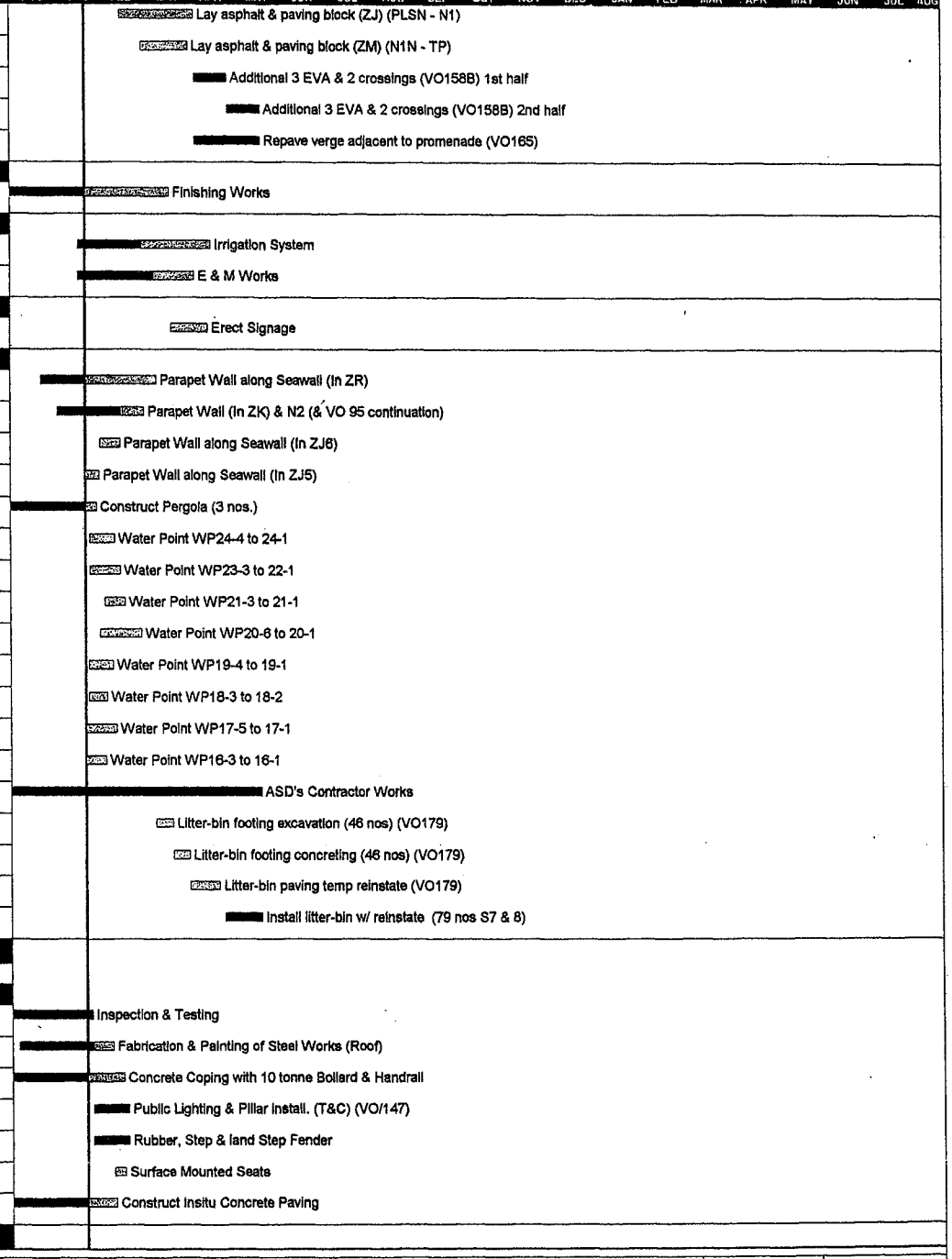
Early bar
Progress bar
Critical bar
Summary bar
Start milestone point

Leader - Wai Kee (C&T) Joint Venture
TP37/03 - Critical Path Reference Program for RP10 (Progress Updated to 20 January 2007)

LEADER

WAI KEE

Act ID	Description	Original Duration	Percent Complete	Total Float	Early Start	Early Finish	Late Start	Late Finish
A8WPRP0500	Lay asphalt & paving block (ZJ) (PLSN - N1)	40	0	2d	13FEB07	03APR07	15FEB07	06APR07
A8WPRP0502	Lay asphalt & paving block (ZM) (N1N - TP)	28	0	39d	27FEB07	30MAR07	14APR07	17MAY07
A8WPRP0510	Additional 3 EVA & 2 crossings (VO158B) 1st half	18	0	0	04APR07	25APR07	04APR07	25APR07
A8WPRP0520	Additional 3 EVA & 2 crossings (VO158B) 2nd half	18	0	0	26APR07	17MAY07	26APR07	17MAY07
A8WPRP0530	Repave verge adjacent to promenade (VO165)	36	0	0	04APR07	17MAY07	04APR07	17MAY07
Finishing Works								
A8WPFW0100	Finishing Works	60	23	50d	08SEP06 A	17MAR07	08SEP06 A	17MAY07
E & M Works								
A8WPEM0900	Irrigation System	50	20	27d	15JAN07 A	14APR07	15JAN07 A	17MAY07
A8WPEM1000	E & M Works	30	20	36d	15JAN07 A	03APR07	15JAN07 A	17MAY07
Road Marking , Traffic Sign and Fencing								
A8WPRM0200	Erect Signage	21	0	29d	19MAR07	12APR07	23APR07	17MAY07
Landscape Hardworks								
A8WPHL0700	Parapet Wall along Seawall (In ZR)	47	20	23d	21DEC06 A	08MAR07	21DEC06 A	04APR07
A8WPHL0800	Parapet Wall (In ZK) & N2 (& VO 95 continuation)	22	50	18d	01JAN07 A	28FEB07	01JAN07 A	21MAR07
A8WPHL0900	Parapet Wall along Seawall (In ZJ6)	12	0	18d	30JAN07	12FEB07	23FEB07	08MAR07
A8WPHL1000	Parapet Wall along Seawall (In ZJ5)	8	0	18d	20JAN07	29JAN07	10FEB07	22FEB07
A8WPHL1200	Construct Pergola (3 nos.)	72	90	50d	10APR06 A	27JAN07	10APR06 A	30MAR07
A8WPHL1300	Water Point WP24-4 to 24-1	15	0	39d	23JAN07	08FEB07	13MAR07	29MAR07
A8WPHL1400	Water Point WP23-3 to 22-1	18	0	36d	23JAN07	12FEB07	09MAR07	29MAR07
A8WPHL1500	Water Point WP21-3 to 21-1	12	0	2d	02FEB07	15FEB07	05FEB07	21FEB07
A8WPHL1600	Water Point WP20-6 to 20-1	21	0	5d	30JAN07	26FEB07	05FEB07	03MAR07
A8WPHL1700	Water Point WP19-4 to 19-1	15	0	16d	22JAN07	07FEB07	09FEB07	01MAR07
A8WPHL1800	Water Point WP18-3 to 18-2	12	0	19d	22JAN07	03FEB07	13FEB07	01MAR07
A8WPHL1900	Water Point WP17-5 to 17-1	18	0	40d	20JAN07	09FEB07	12MAR07	31MAR07
A8WPHL2000	Water Point WP16-3 to 16-1	12	0	44d	20JAN07	02FEB07	16MAR07	29MAR07
A8WPHL2200	ASD's Contractor Works	303	69	-246d	28JUL06 A	17MAY07	28JUL06 A	22JUL06
A8WPHL2210	Litter-bin footing excavation (46 nos) (VO179)	10	0	2d	08MAR07	19MAR07	10MAR07	21MAR07
A8WPHL2220	Litter-bin footing concreting (46 nos) (VO179)	10	0	2d	20MAR07	30MAR07	22MAR07	02APR07
A8WPHL2230	Litter-bin paving temp reinstate (VO179)	16	0	2d	31MAR07	19APR07	03APR07	21APR07
A8WPHL2240	Install litter-bin w/ reinstate (79 nos S7 & 8)	21	0	0	23APR07	17MAY07	23APR07	17MAY07
Section 9								
Public Landing Step								
Land Works								
A9LSLW0800	Inspection & Testing	30	90	0	01NOV06 A	23JAN07	01NOV06 A	23JAN07
A9LSLW0900	Fabrication & Painting of Steel Works (Roof)	48	75	2d	05DEC06 A	06FEB07	05DEC06 A	08FEB07
A9LSLW1000	Concrete Coping with 10 tonne Bollard & Handrail	30	30	3d	13NOV06 A	13FEB07	13NOV06 A	16FEB07
A9LSLW1400	Public Lighting & Pillar Install. (T&C) (VO/147)	21	0	0	24JAN07	16FEB07	24JAN07	16FEB07
A9LSLW1500	Rubber, Step & land Step Fender	21	0	0	24JAN07	16FEB07	24JAN07	16FEB07
A9LSLW1600	Surface Mounted Seats	7	0	2d	07FEB07	14FEB07	09FEB07	16FEB07
A9LSLW1700	Construct Insitu Concrete Paving	18	5	7d	01NOV06 A	08FEB07	01NOV06 A	16FEB07
Section 11								



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Early bar
Progress bar
Critical bar
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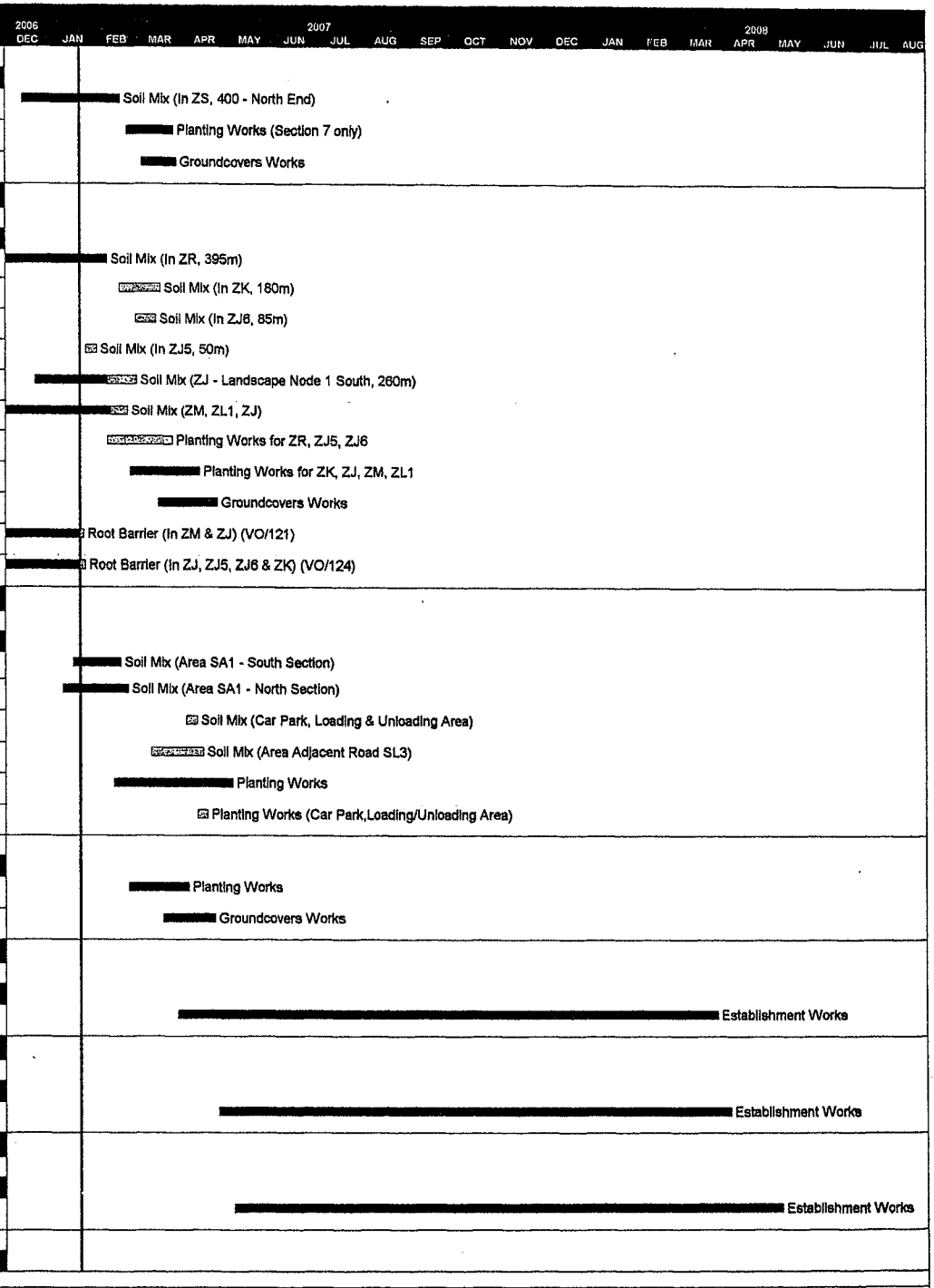
Start milestone point

Leader - Wai Kee (C&T) Joint Venture
TP37/03 - Critical Path Reference Program for RP10 (Progress Updated to 20 January 2007)

LEADER

WAI KEE

Act ID	Description	Original Duration	Percent Complete	Total Float	Early Start	Early Finish	Late Start	Late Finish
Area SA6, SA11B & SA14								
Landscape Softworks								
B1AASL0600	Soil Mix (In ZS, 400 - North End)	30	21	0	12DEC06 A	16FEB07	12DEC06 A	16FEB07
B1AASL0800	Planting Works (Section 7 only)	28	0	0	21FEB07	24MAR07	21FEB07	24MAR07
B1AASL0900	Groundcovers Works	20	0	0	03MAR07	26MAR07	03MAR07	26MAR07
ection 12								
Area SA7, SA10, SA11A, SA12 & SA13								
Landscape Softworks								
B2ABSL0100	Soil Mix (In ZR, 395m)	47	70	0	21OCT06 A	07FEB07	21OCT06 A	07FEB07
B2ABSL0200	Soil Mix (In ZK, 180m)	21	0	2d	16FEB07	15MAR07	22FEB07	17MAR07
B2ABSL0300	Soil Mix (In ZJ6, 85m)	12	0	5d	27FEB07	12MAR07	05MAR07	17MAR07
B2ABSL0400	Soil Mix (In ZJ5, 50m)	7	0	13d	24JAN07	31JAN07	08FEB07	15FEB07
B2ABSL0500	Soil Mix (ZJ - Landscape Node 1 South, 260m)	28	50	16d	21DEC06 A	27FEB07	21DEC06 A	17MAR07
B2ABSL0600	Soil Mix (ZM, ZL1, ZJ)	71	90	51d	21OCT06 A	21FEB07	21OCT06 A	23APR07
B2ABSL0650	Planting Works for ZR, ZJ5, ZJ6	35	0	22d	08FEB07	23MAR07	09MAR07	19APR07
B2ABSL0700	Planting Works for ZK, ZJ, ZM, ZL1	40	0	0	23FEB07	11APR07	23FEB07	11APR07
B2ABSL0800	Groundcovers Works	34	0	0	14MAR07	23APR07	14MAR07	23APR07
B2ABSL1100	Root Barrier (In ZM & ZJ) (VO/121)	18	90	13d	06NOV06 A	22JAN07	06NOV06 A	06FEB07
B2ABSL1200	Root Barrier (In ZJ, ZJ5, ZJ6 & ZK) (VO/124)	26	90	13d	13NOV06 A	23JAN07	13NOV06 A	07FEB07
ection 13								
Area SA1, SA2, SA3, SA4 & SA5								
Landscape Softworks								
B3ACSL0100	Soil Mix (Area SA1 - South Section)	30	28	0	15JAN07 A	16FEB07	15JAN07 A	16FEB07
B3ACSL0200	Soil Mix (Area SA1 - North Section)	30	30	0	08JAN07 A	21FEB07	08JAN07 A	21FEB07
B3ACSL0300	Soil Mix (Car Park, Loading & Unloading Area)	6	0	19d	02APR07	09APR07	25APR07	02MAY07
B3ACSL0400	Soil Mix (Area Adjacent Road SL3)	30	0	7d	09MAR07	13APR07	17MAR07	21APR07
B3ACSL0500	Planting Works	65	0	0	12FEB07	03MAY07	12FEB07	03MAY07
B3ACSL0600	Planting Works (Car Park,Loading/Unloading Area)	6	0	19d	10APR07	16APR07	03MAY07	09MAY07
Area SA8, SA9, SA15, SA16, SA17 & SA18								
Landscape Softworks								
B3ADSL0100	Planting Works	35	0	0	22FEB07	03APR07	22FEB07	03APR07
B3ADSL0200	Groundcovers Works	30	0	0	17MAR07	21APR07	17MAR07	21APR07
ection 14								
Area SA6, SA11B & SA14								
Establishment Works								
B4AAEW0100	Establishment Works	305	0	0	27MAR07	26MAR08	27MAR07	26MAR08
ection 15								
Area SA7, SA10, SA11A, SA12 & SA13								
Establishment Works								
B5ABEW0100	Establishment Works	290	0	0	24APR07	04APR08	24APR07	04APR08
ection 16								
Area SA1, SA2, SA3, SA4 & SA5								
Establishment Works								
B6ACEW0200	Establishment Works	312	0	0	04MAY07	09MAY08	04MAY07	09MAY08
Area SA8, SA9, SA15, SA16, SA17 & SA18								
Establishment Works								



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Early bar
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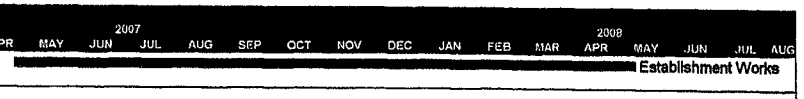
Leader - Wai Kee (C&T) Joint Venture
TP37/03 - Critical Path Reference Program for RP10 (Progress Updated to 20 January 2007)

Act ID	Description	Original Duration	Percent Complete	Total Float	Early Start	Early Finish	Late Start	Late Finish
B6ADEW0100	Establishment Works	321	0	0	23APR07	09MAY08	23APR07	09MAY08



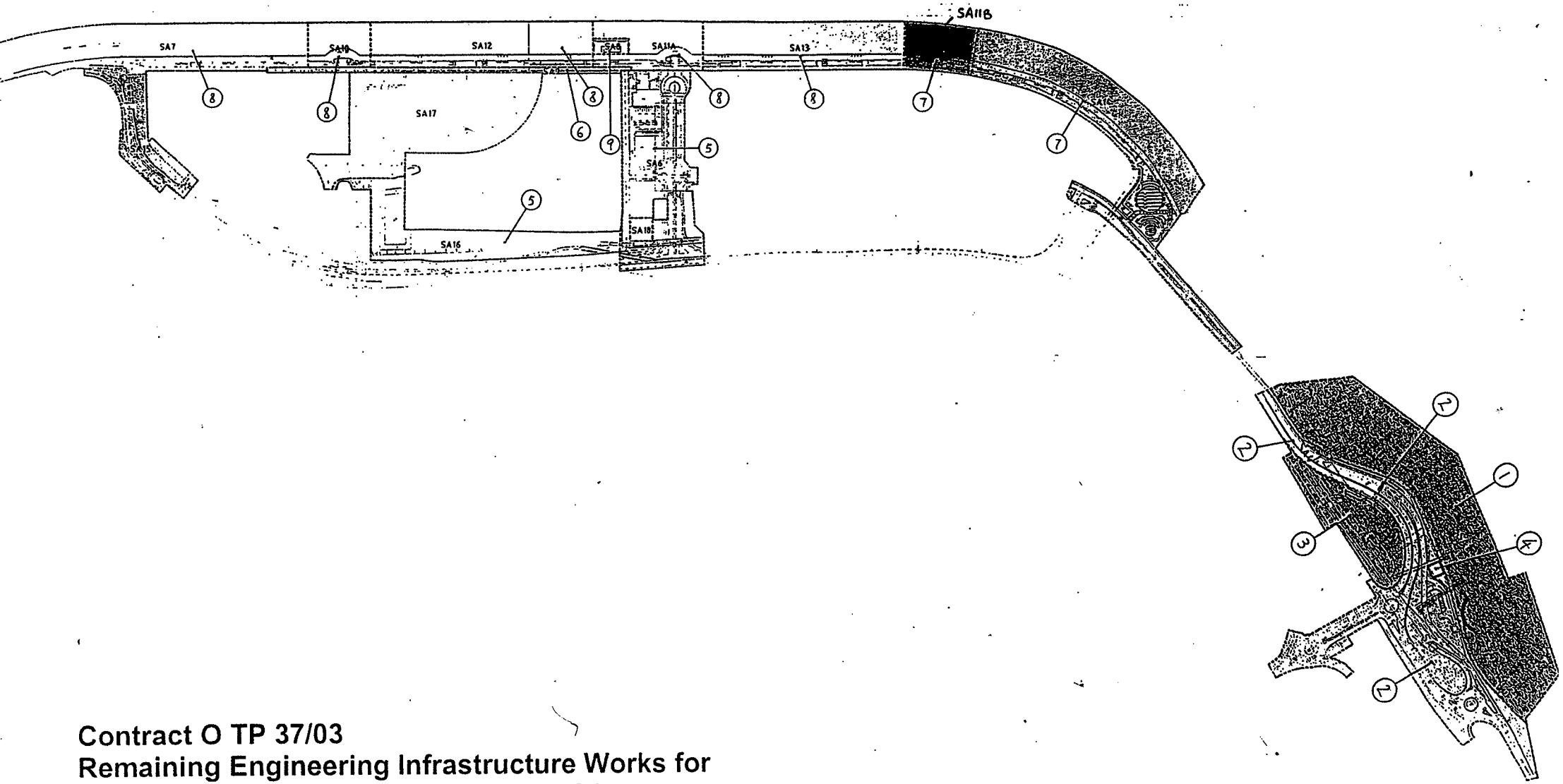
tart date	10JUN04
inish date	09MAY08
ata date	20JAN07
un date	06FEB07
age number	15A

Early bar
Progress bar
Critical bar
Summary bar
Start milestone point

Leader - Wai Kee (C&T) Joint Venture
TP37/03 - Critical Path Reference Program for RP10 (Progress Updated to 20 January 2007)

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

SITE INSPECTION CHECKLIST ON THE IMPLEMENTATION OF ENVIRONMENTAL MITIGATION MEASRUES

Inspection Date : 1 December 2007 Inspected by Name : (RSS) Michelle Fung (LWKJV) Walton Chan (ET) H. T. Chow
Time : 11:00 Signature :

Weather Condition : Sunny / ~~Fine / Overcast / Drizzle / Rain / Storm / Hazy~~
Wind : ~~Calm~~ / Light / ~~Breeze / Strong~~
Temperature : 17 °C
Humidity : ~~High / Moderate~~ / Low

Mitigation Measures on Waste Management	Implementation Stages*			Remark
	Yes	No	N/A	
Air Quality				
▪ The heights from which fill materials are dropped should be controlled to a practical height to minimize the fugitive dust arising from unloading.	✓			
▪ During transportation by truck, material should be loaded to a level lower than the side and tail boards, and should be dampened or covered before transport.	✓			
▪ All stockpile of aggregate or spoil should be enclosed or covered and water applied in dry or windy condition.		✓		item 4
▪ The haul road should be either paved or regular watering.	✓			
▪ Unpaved areas should be watered regularly to avoid dust generation.		✓		item 3
▪ The public road around the site entrance should be kept clean and free from dust.	✓			
▪ Vehicle speed should be limited to 20 km/hr.	✓			
▪ Wheel washing facilities should be provided at all main entrance of work site.	✓			
▪ The enclosures should be around the main dust-generating activities.	✓			
▪ Dusty materials should be sprayed prior to loading.	✓			
▪ All plant and equipment should be well maintained e.g. without black smoke emission.	✓			
▪ Vehicle and equipment should be switched off while not in use.	✓			
▪ Open burning should be prohibited.	✓			
Noise				
▪ The constructions works should be scheduled to minimize noise nuisance.	✓			
▪ Only well maintained plant should be operated on-site and plant should be serviced regularly during the construction works.	✓			
▪ Machines and plants that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum.	✓			
▪ Plant known to emit noise strongly in on direction, should, where possible, should 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 MEASRUES

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.	✓			
▪ Temporary stockpiles of excavated materials should be covered during rainstorms.		✓		item 4
▪ 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 MEASRUES

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

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

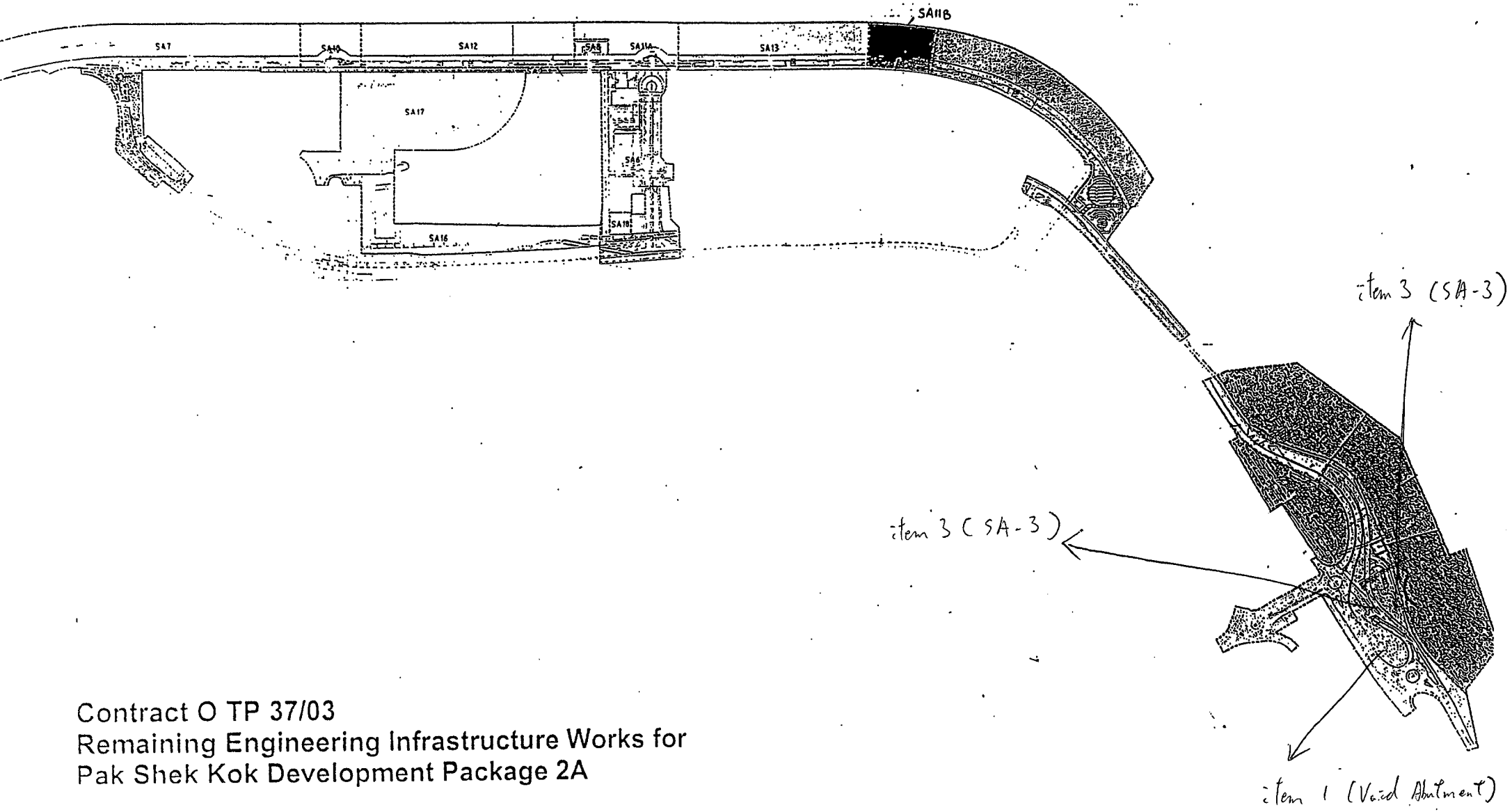
SITE INSPECTION CHECKLIST ON THE IMPLEMENTATION OF ENVIRONMENTAL MITIGATION MEASRUES

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.		✓		item 1
• 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 the previous site inspection item 2 on 31/10, item 2 on 10/11, item 1 on 17/11 and item 1 on 23/11, rubbish such as lunch boxes were still noted on the ground near the container at void abutment.	Void Abutment	The Contractor should provide rubbish bin and collect the rubbish regularly.	8-12-2007
2.	Follow up action to the previous site inspection item 3 on 23/11, some 2no L chemical containers at SA-3 were removed.	SA-3	Follow up action was completed, no further action to be taken.	N/A
3.	Follow up action to the previous site inspection item 4 on 23/11, unpaved area at SA-3 was still dry.	SA-3	The Contractor was reminded to water the unpaved area more frequently in order to avoid dust generation.	8-12-2007
4.	Follow up action to the previous site inspection item 5 on 23/11, stockpiles at SA-3 were still without covered.	SA-3	The Contractor should cover the stockpiles by using tarpaulin sheets.	8-12-2007

	RSS	LWKJV	ET
Signature:			
Name:	Michelle Fung	Watson Chow	H. T. Chan
Date:	1 Dec 2007	1 Dec 2007	1-12-2007



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

Location and Key Pan

SITE INSPECTION CHECKLIST ON THE IMPLEMENTATION OF ENVIRONMENTAL MITIGATION MEASRUES

Inspection Date : 8 December 2007 Inspected by Name : (RSS) Brian Chan (LWKJV) Kenson Kwok (ET) H. T. Chow
Time : 10:00 Signature :

Weather Condition : ~~Sunny~~ / Fine / ~~Overcast / Drizzle / Rain / Storm / Hazy~~ Temperature : 18°C
Wind : ~~Calm~~ / Light / ~~Breeze / Strong~~ Humidity : ~~High / Moderate~~ / Low

Mitigation Measures on Waste Management	Implementation Stages*			Remark
	Yes	No	N/A	
Air Quality				
▪ The heights from which fill materials are dropped should be controlled to a practical height to minimize the fugitive dust arising from unloading.	✓			
▪ During transportation by truck, material should be loaded to a level lower than the side and tail boards, and should be dampened or covered before transport.	✓			
▪ All stockpile of aggregate or spoil should be enclosed or covered and water applied in dry or windy condition.		✓		item 3
▪ The haul road should be either paved or regular watering.	✓			
▪ Unpaved areas should be watered regularly to avoid dust generation.	✓			
▪ The public road around the site entrance should be kept clean and free from dust.	✓			
▪ Vehicle speed should be limited to 20 km/hr.	✓			
▪ Wheel washing facilities should be provided at all main entrance of work site.	✓			
▪ The enclosures should be around the main dust-generating activities.	✓			
▪ Dusty materials should be sprayed prior to loading.	✓			
▪ All plant and equipment should be well maintained e.g. without black smoke emission.	✓			
▪ Vehicle and equipment should be switched off while not in use.	✓			
▪ Open burning should be prohibited.	✓			
Noise				
▪ The constructions works should be scheduled to minimize noise nuisance.	✓			
▪ Only well maintained plant should be operated on-site and plant should be serviced regularly during the construction works.	✓			
▪ Machines and plants that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum.	✓			
▪ Plant known to emit noise strongly in on direction, should, where possible, should 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 MEASRUES

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.	✓			
▪ Temporary stockpiles of excavated materials should be covered during rainstorms.		✓		item 3
▪ Manholes should be covered and sealed.	✓			
▪ All chemical stores shall be contained (bunded) such that spills are not allowed to gain access to water bodies.	✓			
▪ Vehicles and plant should be cleaned of earth, mud and debris before leaving the site.	✓			
▪ Vehicle washing facilities should be provided at every site exit.	✓			
▪ Vehicle washing facilities should be adequate to settle out the sand and silt.	✓			
▪ Washing area and road exiting from washing facility should be paved.	✓			
▪ Access road should have sufficient back fall toward washing facility.	✓			
Dredging Activities				
▪ Dredging of designated contaminated marine mud shall only be undertaken by a suitable grab dredger using a close grab.			✓	
▪ Mechanical grabs shall be designed and maintained to avoid spillage and shall be seal tightly while being lifted.			✓	
▪ All vessels shall be sized such that adequate clearance is maintained between vessel and the sea bed and under water pipelines at all states of the tide to ensure that undue turbidity is not generated by turbulence from vessel movement or propeller on the water within the site.			✓	
▪ The works shall cause no visible foam, oil, grease, scum litter or other objectionable matter to be present on the water within the site.			✓	
▪ All barges shall be fitted with tight fitting seals to their bottom openings to prevent leakage of materials.			✓	
▪ Excess material shall be cleaned from the decks and exposed fittings of the barges before the vessels are moved.			✓	
▪ Loading of barges shall be controlled to prevent splashing of dredging material to the surrounding water and the barges shall not be filled to a level which will cause overflowing of material or polluted water during loading or transportation.			✓	
▪ Adequate freeboard shall be maintained on barges to ensure that decks are not washed by wave action.			✓	

SITE INSPECTION CHECKLIST ON THE IMPLEMENTATION OF ENVIRONMENTAL MITIGATION MEASRUES

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

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

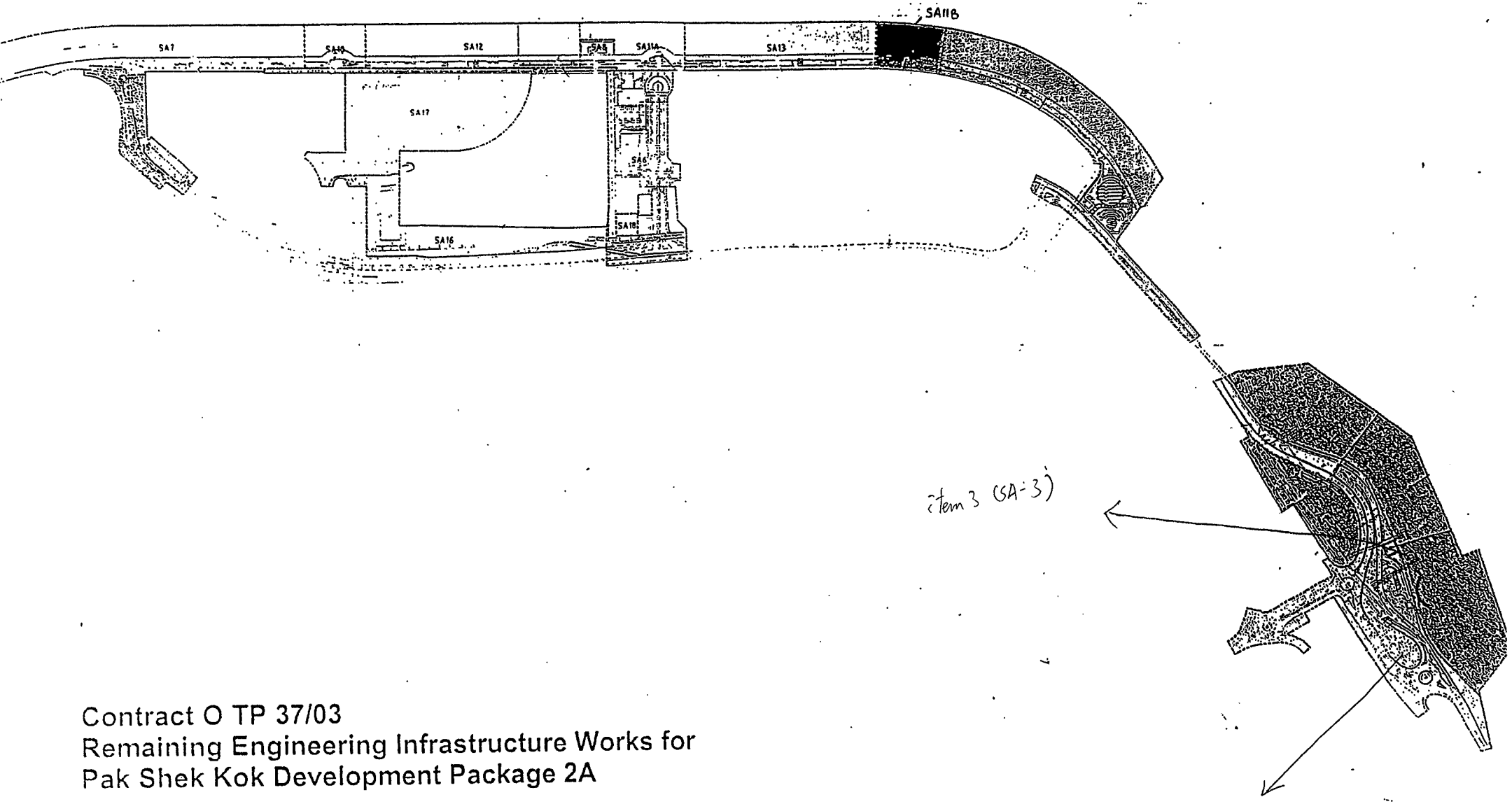
SITE INSPECTION CHECKLIST ON THE IMPLEMENTATION OF ENVIRONMENTAL MITIGATION MEASRUES

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.		✓		Item 1
• 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 the previous site inspection item 2 on 31/10, item 2 on 10/11, item 1 on 17/11, item 1 on 23/11 and item 1 on 1/12, rubbish such as lunch boxes were still noted on the ground near the container at void abutment	Void Abutment	The Contractor should provide rubbish bin and collect the rubbish regularly.	14-12-2007
2.	Follow up action to the previous site inspection item 4 on 23/11 and item 3 on 1/12, water the unpaved area was observed at SA-3.	SA-3	Follow up action was completed, no further action to be taken.	N/A
3.	Follow up action to the previous site inspection item 5 on 23/11, and item 4 on 1/12, stockpiles at SA-3 were still without covered.	SA-3	The Contractor should cover the stockpiles by using tarpaulin sheets.	14-12-2007

	RSS	LWKJV	ET
Signature:			
Name:	Brian Cheng	Kenton Kwok	H. T. Chan
Date:	8/12/2007	8/12/07	8-12-2007



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

Location and Key Pan

SITE INSPECTION CHECKLIST ON THE IMPLEMENTATION OF ENVIRONMENTAL MITIGATION MEASRUES

Inspection Date : 18 December 2007 Inspected by Name : (RSS) Michelle Fung. (LWKJV) [illegible] (ET) H.T. Chow
Time : 10:30 Signature : [signature] [signature] [signature]

Weather Condition : Sunny / ~~Fine / Overcast / Drizzle / Rain / Storm / Hazy~~ Temperature : 21°C
Wind : ~~Calm~~ / Light / ~~Breeze / Strong~~ Humidity : ~~High / Moderate~~ / Low

Mitigation Measures on Waste Management	Implementation Stages*			Remark
	Yes	No	N/A	
Air Quality				
▪ The heights from which fill materials are dropped should be controlled to a practical height to minimize the fugitive dust arising from unloading.	✓			
▪ During transportation by truck, material should be loaded to a level lower than the side and tail boards, and should be dampened or covered before transport.	✓			
▪ All stockpile of aggregate or spoil should be enclosed or covered and water applied in dry or windy condition.		✓		item 2
▪ The haul road should be either paved or regular watering.	✓			
▪ Unpaved areas should be watered regularly to avoid dust generation.	✓			
▪ The public road around the site entrance should be kept clean and free from dust.	✓			
▪ Vehicle speed should be limited to 20 km/hr.	✓			
▪ Wheel washing facilities should be provided at all main entrance of work site.	✓			
▪ The enclosures should be around the main dust-generating activities.	✓			
▪ Dusty materials should be sprayed prior to loading.	✓			
▪ All plant and equipment should be well maintained e.g. without black smoke emission.	✓			
▪ Vehicle and equipment should be switched off while not in use.	✓			
▪ Open burning should be prohibited.	✓			
Noise				
▪ The constructions works should be scheduled to minimize noise nuisance.	✓			
▪ Only well maintained plant should be operated on-site and plant should be serviced regularly during the construction works.	✓			
▪ Machines and plants that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum.	✓			
▪ Plant known to emit noise strongly in on direction, should, where possible, should 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 MEASRUES

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.	✓			
▪ Temporary stockpiles of excavated materials should be covered during rainstorms.		✓		item 2
▪ Manholes should be covered and sealed.	✓			
▪ All chemical stores shall be contained (bunded) such that spills are not allowed to gain access to water bodies.	✓			
▪ 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 MEASRUES

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

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

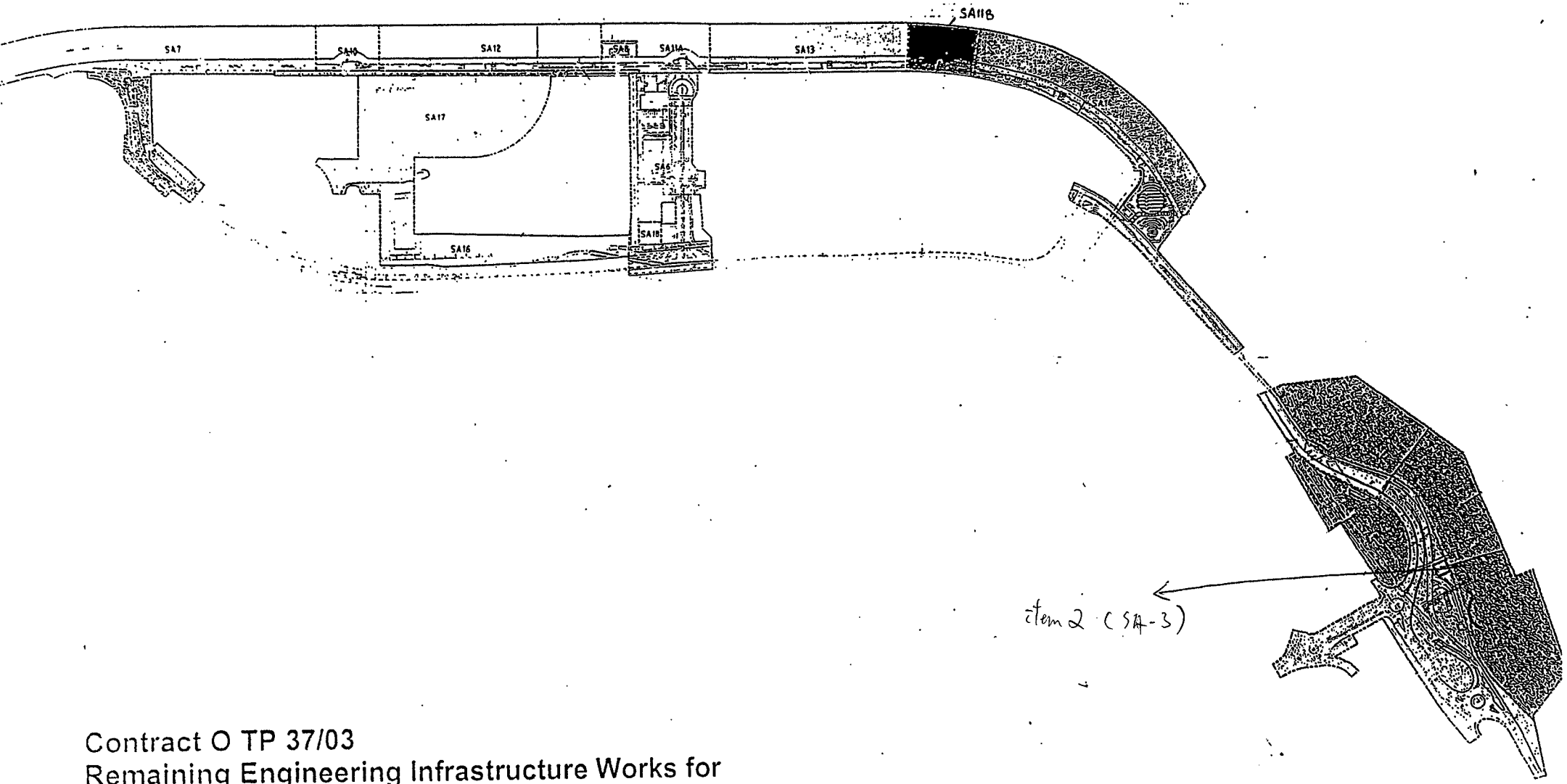
SITE INSPECTION CHECKLIST ON THE IMPLEMENTATION OF ENVIRONMENTAL MITIGATION MEASRUES

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 the previous site inspection item 2 on 31-10-07, item 2 on 10-11-07, item 1 on 17-11-07, item 1 on 23-11-07, item 1 on 1-12-07 and item 1 on 8-12-07, rubbish on the ground at void abutment was cleaned up.	Void Abutment	Follow up action was completed, no further action to be taken.	N/A
2.	Follow up action to the previous site inspection item 1 on 23-11-07, item 4 on 1-12-07 and item 3 on 8-12-07, stockpiles at SA-3 were still without covered.	SA-3	The Contractor should cover the stockpiles by using tarpaulin sheets.	22-12-07

	RSS	LWKJV	ET
Signature:			
Name:	Michelle Fung	Maurice Chan	H.T. Chow
Date:	15 Dec 2007	15 DEC 2007	15 - 12 - 2007



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

Location and Key Pan

SITE INSPECTION CHECKLIST ON THE IMPLEMENTATION OF ENVIRONMENTAL MITIGATION MEASRUES

Inspection Date : 22 December 2007 Inspected by Name : (RSS) Bryan Cheng (LWKJV) Watson Cheung (ET) H.T. Chow
Time : 10:30 Signature :

Weather
Condition : ~~Sunny / Fine~~ / Overcast / ~~Drizzle / Rain / Storm / Hazy~~ Temperature : 22°C
Wind : Calm / Light / Breeze / Strong Humidity : ~~High~~ / Moderate / ~~Low~~

Mitigation Measures on Waste Management	Implementation Stages*			Remark
	Yes	No	N/A	
Air Quality				
▪ The heights from which fill materials are dropped should be controlled to a practical height to minimize the fugitive dust arising from unloading.	✓			
▪ During transportation by truck, material should be loaded to a level lower than the side and tail boards, and should be dampened or covered before transport.	✓			
▪ All stockpile of aggregate or spoil should be enclosed or covered and water applied in dry or windy condition.		✓		item 1
▪ The haul road should be either paved or regular watering.	✓			
▪ Unpaved areas should be watered regularly to avoid dust generation.	✓			
▪ The public road around the site entrance should be kept clean and free from dust.	✓			
▪ Vehicle speed should be limited to 20 km/hr.	✓			
▪ Wheel washing facilities should be provided at all main entrance of work site.	✓			
▪ The enclosures should be around the main dust-generating activities.	✓			
▪ Dusty materials should be sprayed prior to loading.	✓			
▪ All plant and equipment should be well maintained e.g. without black smoke emission.	✓			
▪ Vehicle and equipment should be switched off while not in use.	✓			
▪ Open burning should be prohibited.	✓			
Noise				
▪ The constructions works should be scheduled to minimize noise nuisance.	✓			
▪ Only well maintained plant should be operated on-site and plant should be serviced regularly during the construction works.	✓			
▪ Machines and plants that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum.	✓			
▪ Plant known to emit noise strongly in on direction, should, where possible, should 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 MEASRUES

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.	✓			
▪ Temporary stockpiles of excavated materials should be covered during rainstorms.		✓		item 1
▪ 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 MEASRUES

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

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

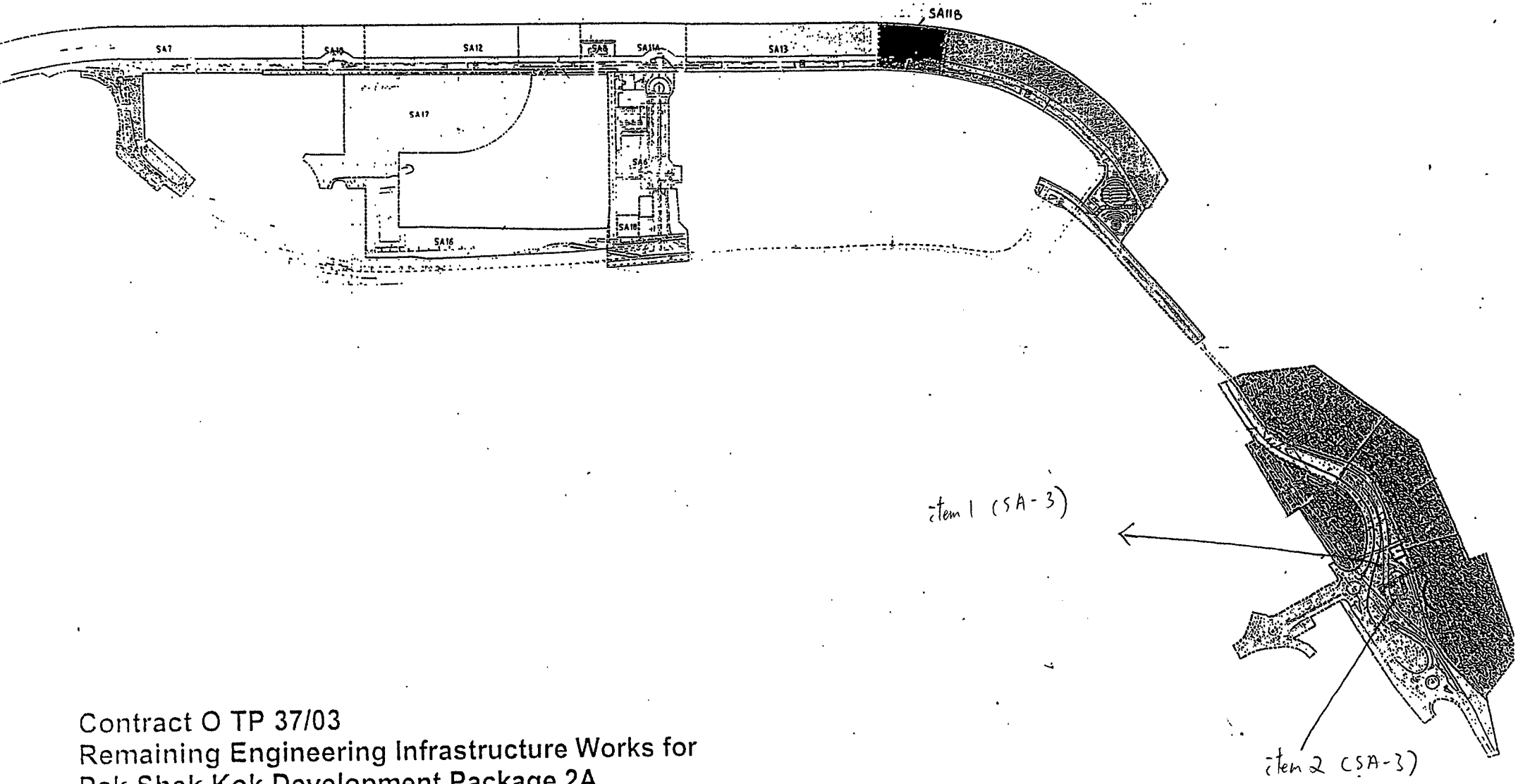
SITE INSPECTION CHECKLIST ON THE IMPLEMENTATION OF ENVIRONMENTAL MITIGATION MEASRUES

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 the previous site inspections item 1 on 23-11-07, item 4 on 1-12-07, item 3 on 8-12-07, and item 2 on 14-12-07, stockpiles at SA-3 were still without covered.	SA-3	The Contractor should cover the stockpiles by using tarpaulin sheets.	27-12-2007
2.	A 20L plastic chemical container was placed on the ground without drip tray.	SA-3	The Contractor was reminded to provide drip tray for all chemical containers.	27-12-2007

	RSS	LWK JV	ET
Signature:			
Name:	Brian Cheng	[illegible]	H. T. Chow
Date:	22/12/2007	22/12/2007	22-12-2007



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

Location and Key Pan

SITE INSPECTION CHECKLIST ON THE IMPLEMENTATION OF ENVIRONMENTAL MITIGATION MEASRUES

Inspection Date : 27/12/07 Inspected by Name : (RSS) Michelle Feng (LWKJV) Watson Chan (ET) Linda Lam
Time : 14:15 Signature :

Weather
Condition : (Sunny) / Fine / Overcast / Drizzle / Rain / Storm / Hazy Temperature : 21 °C.
Wind : Calm / (Light) / Breeze / Strong Humidity : High / Moderate / Low

Mitigation Measures on Waste Management	Implementation Stages*			Remark
	Yes	No	N/A	
Air Quality				
▪ The heights from which fill materials are dropped should be controlled to a practical height to minimize the fugitive dust arising from unloading.	✓			
▪ During transportation by truck, material should be loaded to a level lower than the side and tail boards, and should be dampened or covered before transport.	✓			
▪ All stockpile of aggregate or spoil should be enclosed or covered and water applied in dry or windy condition.	✓			
▪ The haul road should be either paved or regular watering.	✓			
▪ Unpaved areas should be watered regularly to avoid dust generation.	✓			
▪ The public road around the site entrance should be kept clean and free from dust.	✓			
▪ Vehicle speed should be limited to 20 km/hr.	✓			
▪ Wheel washing facilities should be provided at all main entrance of work site.	✓			
▪ The enclosures should be around the main dust-generating activities.	✓			
▪ Dusty materials should be sprayed prior to loading.	✓			
▪ All plant and equipment should be well maintained e.g. without black smoke emission.	✓			
▪ Vehicle and equipment should be switched off while not in use.	✓			
▪ Open burning should be prohibited.	✓			
Noise				
▪ The constructions works should be scheduled to minimize noise nuisance.	✓			
▪ Only well maintained plant should be operated on-site and plant should be serviced regularly during the construction works.	✓			
▪ Machines and plants that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum.	✓			
▪ Plant known to emit noise strongly in on direction, should, where possible, should 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 MEASRUES

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.	✓			
▪ 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 MEASRUES

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

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

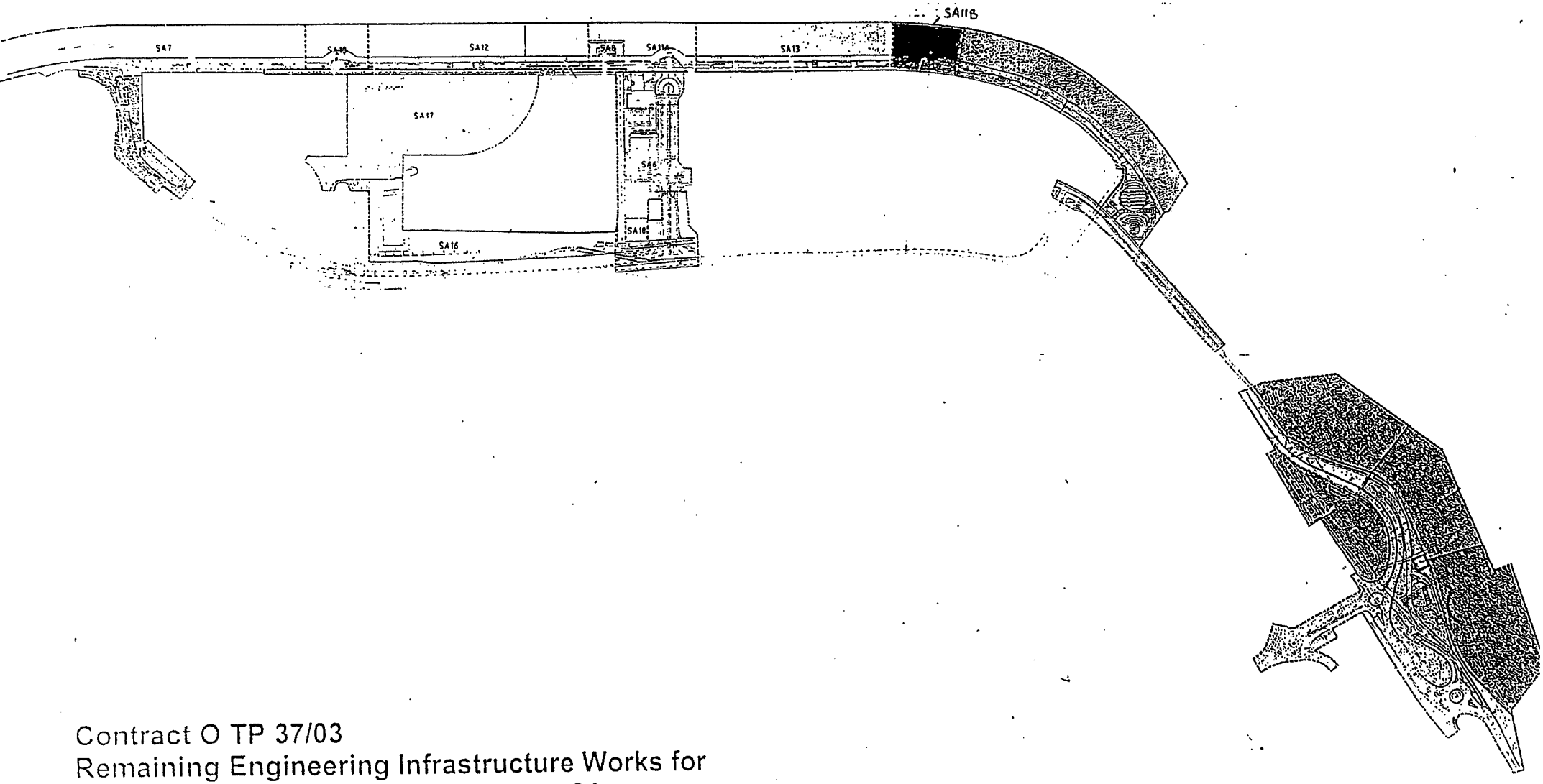
SITE INSPECTION CHECKLIST ON THE IMPLEMENTATION OF ENVIRONMENTAL MITIGATION MEASRUES

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 the previous site inspections item 5 on 23/11/07, item 4 on 01/12/07, item 3 on 08/12/07, item 2 on 15/12/07 & item 1 on 22/12/07, most of the stockpiles were removed and only small amount was waiting for backfill. No or very low dust impact was observed.	SA - 3	The Contractor was reminded to water the site as general practice.	N/A
2.	Follow up action to the previous site inspection item 2 on 22/12/07, the 20L plastic chemical container at SA-3 was removed.	SA - 3	No further action was required to be taken by the Contractor.	N/A
	No new observation was note in this site inspection.			

	RSS	LWKJV	ET
Signature:			
Name:	Michelle Fung.	WALTON CHOW	Linda Lam
Date:	27 Dec 2007	27 DEC 2007	27/12/07



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

Location and Key Pan

Appendix I

IEC and RE Comments on Monthly EM&A Report
–
November 2007

IEC and RE Comments on Monthly Environmental Monitoring and Audit Report – November 2007

Item No.	Document Reference	Comment	ET Response
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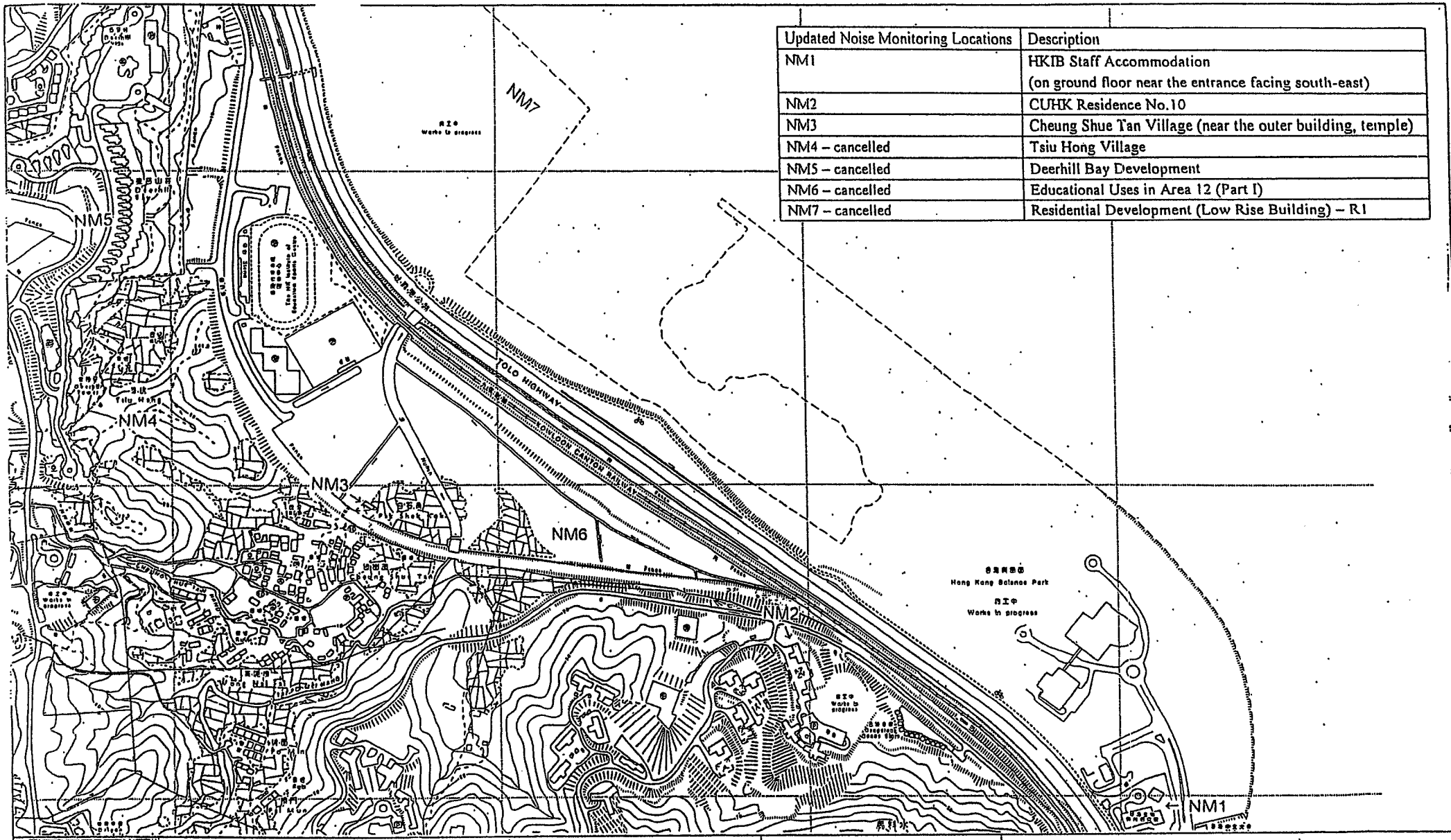
Figures



Updated Noise Monitoring Locations	Description
NM1	HKIB Staff Accommodation (on ground floor near the entrance facing south-east)
NM2	CUHK Residence No.10
NM3	Cheung Shue 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) – R1

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

Scale : ---

Revised Date:
June 2004

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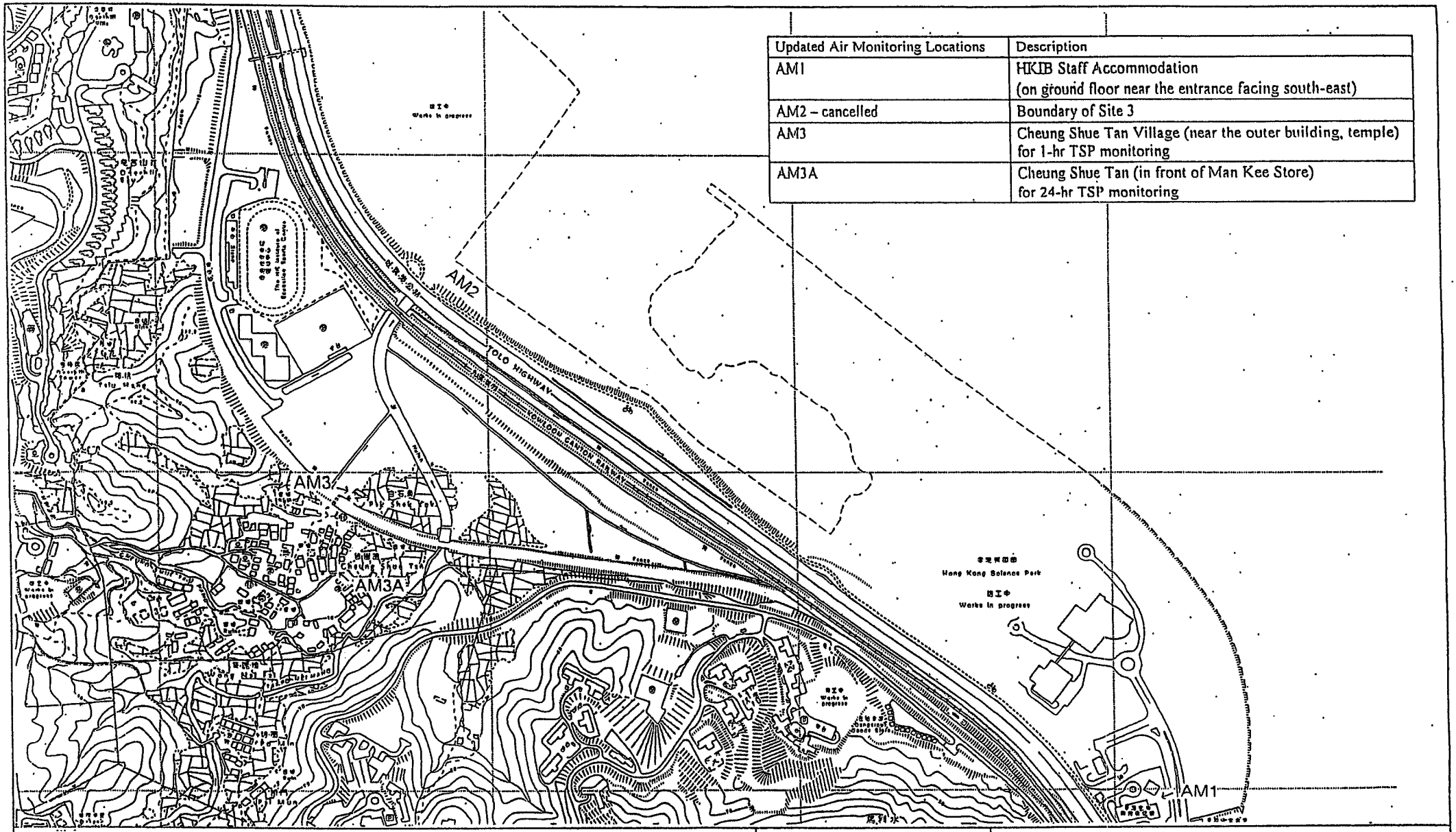
ETS-TESTCONSULT LIMITED



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

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

Figure 2 Location of Air Monitoring Stations

Scale : ---

Revised Date:
June 2004

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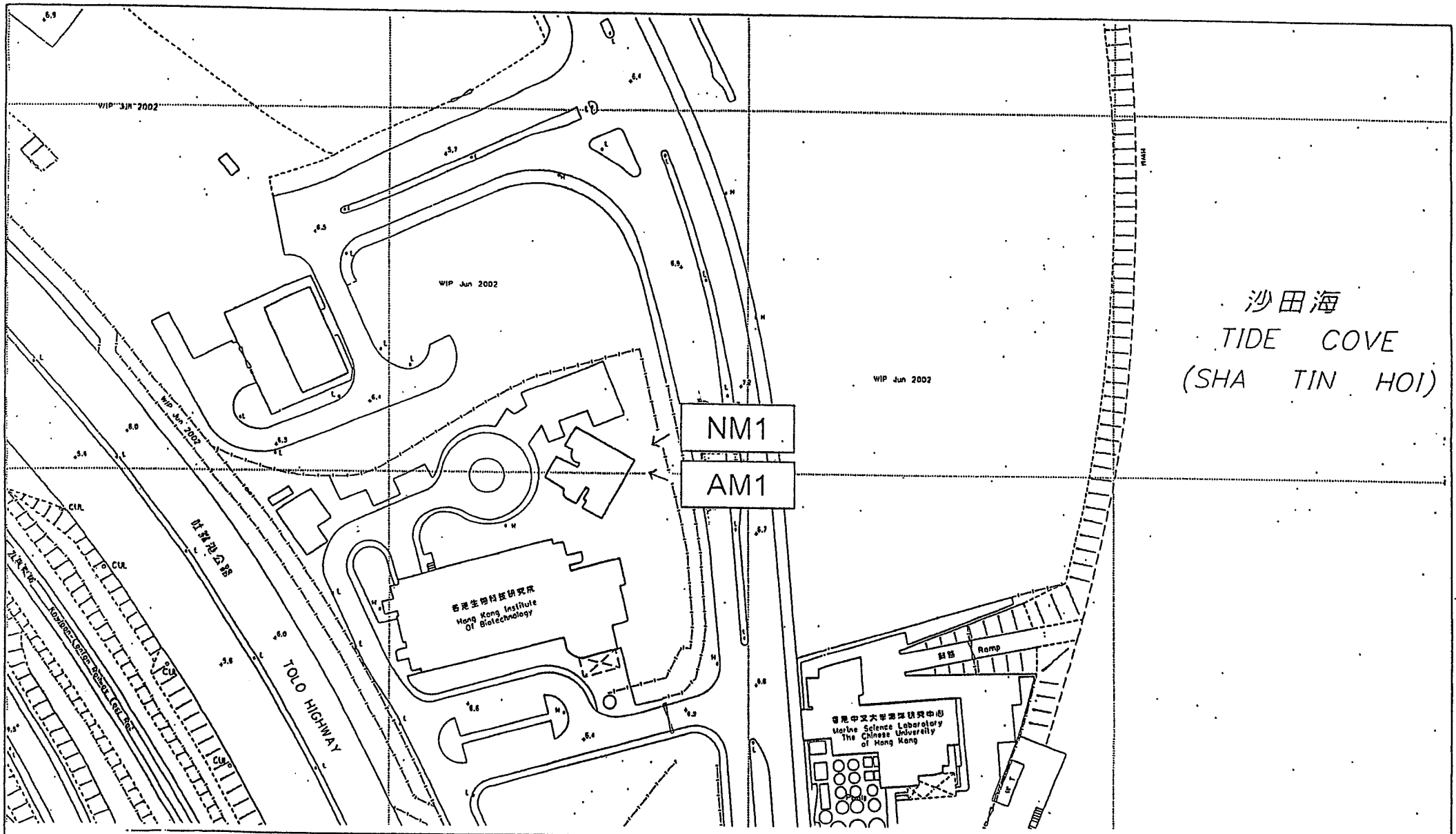
ETS-TESTCONSULT LIMITED



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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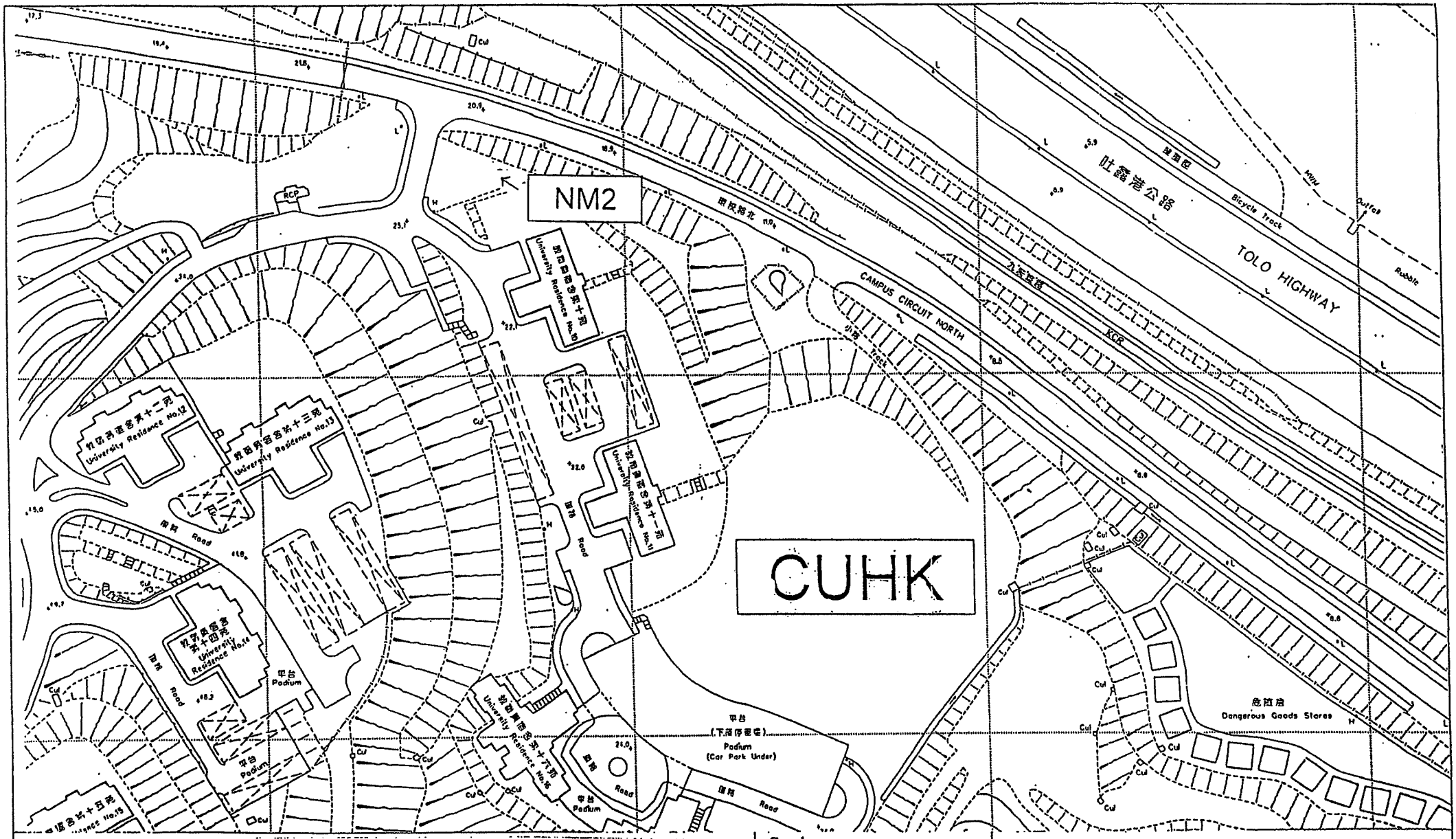

Remaining Engineering Infrastructure Works for
Pak Shek Kok Development Package 2A
Contract No. TP 37/03

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

Scale : ---

Revised Date:
June 2004

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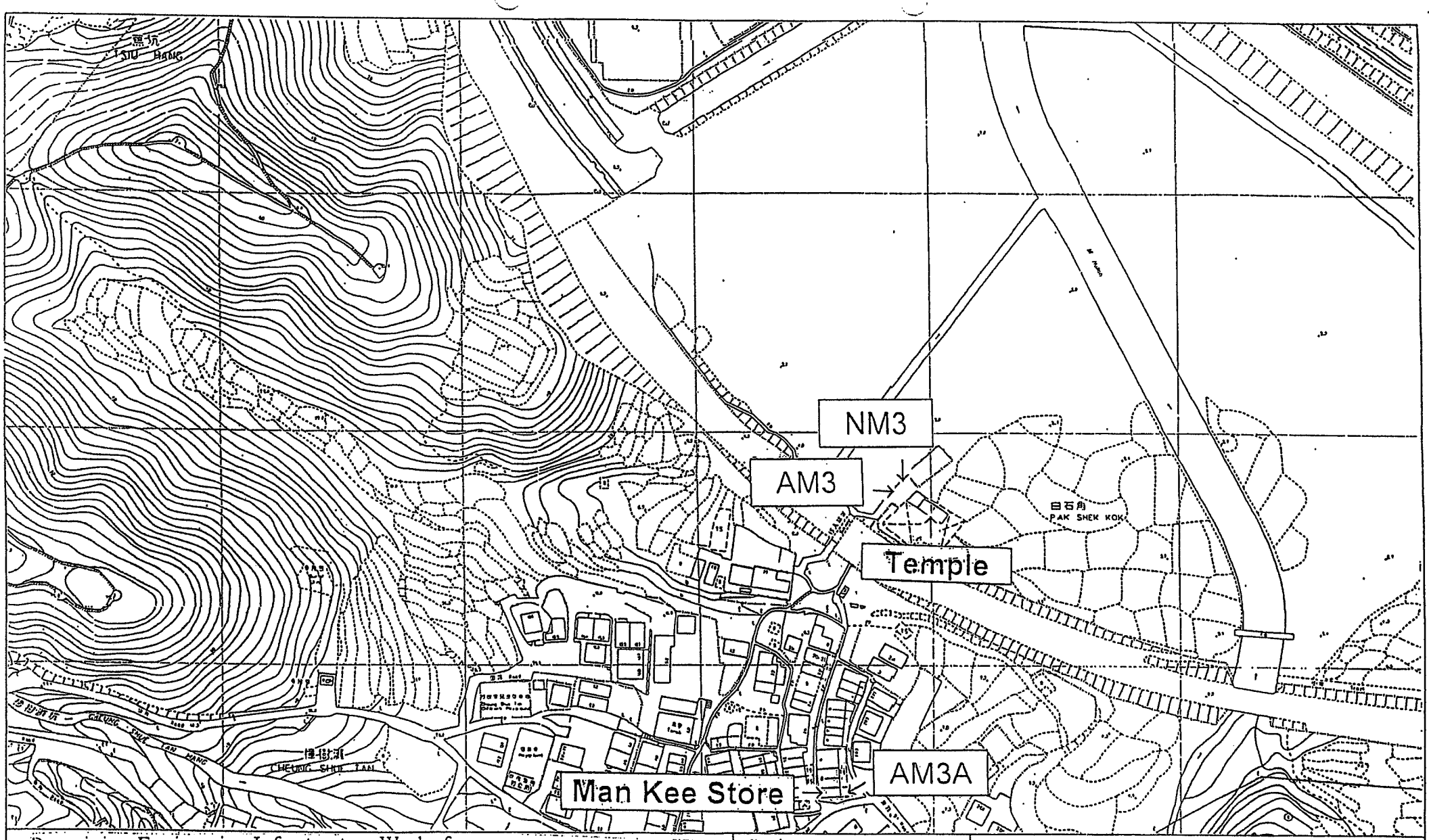
ETS-TESTCONSULT LIMITED

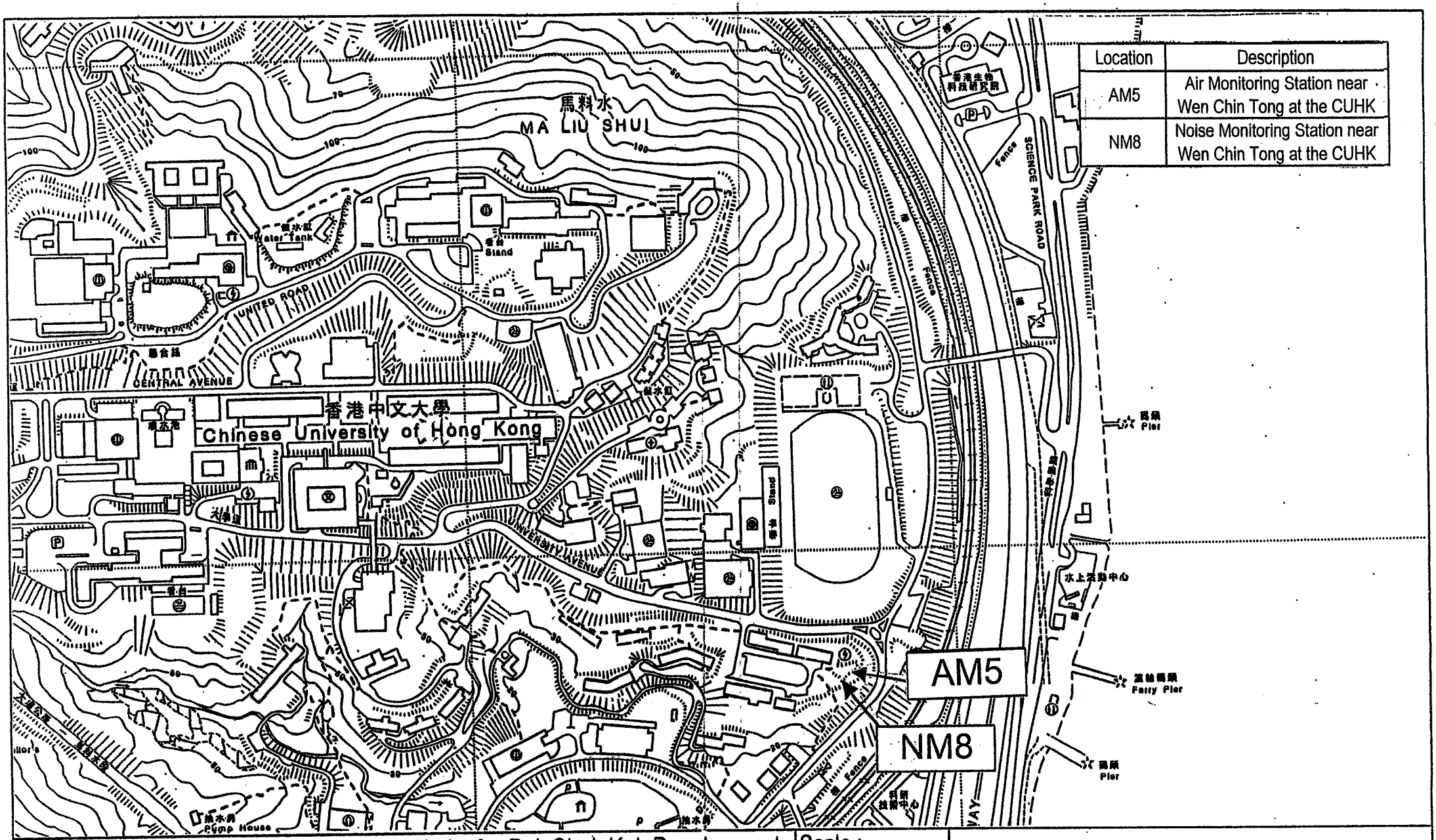


Remaining Engineering Infrastructure Works for
Pak Shek Kok Development Package 2 A
Contract No. TP 37/03
Figure 5 Location of Air and Noise Monitoring Stations
at Cheung Shue Tan Village

Scale : ---

Revised Date:
June 2004

東業德勤測試顧問有限公司
ETS-TESTCONSULT LIMITED



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

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

Scale : ---

Revised Date : October 2004

東業德勤測試顧問有限公司
ETS-TESTCONSULT LIMITED