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TEST REPORT

PENTA-OCEAN CONSTRUCTION COMPANY LIMITED

REMAINING ENGINEERING INFRASTRUCTURE WORKS FOR PAK SHEK KOK DEVELOPMENT PACKAGE 1 (CONTRACT NO.: TP 35/02)

QUARTERLY EM&A SUMMARY REPORT

(FROM APRIL TO JUNE 2004)

Prepared by: Linda Law
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INDEPENDENT ENVIRONMENTAL CHECKER

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EXECUTIVE SUMMARY

This report is the fifth quarterly EM&A summary report (No.6) and 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 1 (Contract No: TP 35/02) during the reporting period from 01 April to 31 June 2004.

Construction Progress in this Quarter

The major construction works in this quarter are as below:

Month	Major Activities
April	▪ *Excavation for twin DN 2500 pipes and it associated outfall* ▪ *Installation of precast unit for Twin DN 2500 Outfall* ▪ *Drainage work in Area 1, Area 2, Area 9A, Area 9B, Area 7B, Zone S2, Area 15* ▪ *Subway SB1 Finishing work in Zone N2* ▪ *Watermain works in Area 8A and Area 2, Area 9A and Area 15* ▪ *Sewage works in Area 1, Area 15 and Area 16* ▪ *Installation of the Watermain works at Zone L* ▪ *Formation of stockpile areas and hydroseeding in Zone T and J* ▪ *Modification of headwall and trapezoidal channel at Zone L* ▪ *Bored pilling works for D1 bridge* ▪ *Finishing workings for the PSK construction of underpass extension structure* ▪ *Bored pilling works for pump station no.2* ▪ *Installation of foul sewer line at Zone L and under PSK bridge* ▪ *Roadworks for Area 1, Area 2, Area 8A and Area 8B* ▪ *Connection works to existing 5-cell culvert* ▪ *Sheetpiling works at pumping station no.2*
May	▪ *Excavation for twin DN 2500 pipes and it associated outfall* ▪ *Installation of precast unit for Twin DN 2500 Outfall* ▪ *Drainage work in Area 1, Area 2, Area 9A, Area 9B, Area 7B, Zone S2, Area 15* ▪ *Subway SB1 Finishing work in Zone N2* ▪ *Watermain works in Area 8A and Area 2, Area 9A and Area 15* ▪ *Sewage works in Area 1, Area 15 and Area 16* ▪ *Installation of the Watermain works at Zone L* ▪ *Formation of stockpile areas and hydroseeding in Zone T and J* ▪ *Modification of headwall and trapezoidal channel at Zone L* ▪ *Bored pilling works for D1 bridge* ▪ *Finishing workings for the PSK construction of underpass extension structure* ▪ *Bored pilling works for pump station no.2* ▪ *Installation of foul sewer line at Zone L and under PSK bridge* ▪ *Roadworks for Area 1, Area 2, Area 8A and Area 8B* ▪ *Connection works to existing 5-cell culvert* ▪ *Sheetpiling works at pumping station no.2*
June	▪ *Excavation works for PS1 and PS2* ▪ *Drainage and water main works under KCRC bridge* ▪ *Drainage works in Area 7A, Area 15, Zone P and Zone H* ▪ *Watermain installation works* ▪ *Roadworks for Area 15 and Zone P* ▪ *Pile cap construction for road D1 bridge* ▪ *Demolition of yellow bridge* ▪ *Demolition of cyclist bridge at the northern entrance* ▪ *Construction of footpath & cycle track along Area 1, 2, 6, 7B, 8A, 9A, 9B and Area 15* ▪ *CCTV for drainage pipelines C40 and at Area 8A and 9A* ▪ *Subway SBI E&M works* ▪ *Sewage works in Area 1, Area 4, Area 15 and Area 6* ▪ *Construction of pumping station no.1 and no.2*

Environmental Monitoring Progress

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

- Noise Monitoring (Day-time): 13 Occasions at 3 designated locations;
- Noise Monitoring (Evening-time): 14 Occasions at 3 designated locations;
- Noise Monitoring (Holiday): 13 Occasions at 3 designated locations;
- 24-hour TSP Monitoring: 16 Occasions at 2 designated location;
- 1-hour TSP Monitoring: 36 Occasions at 2 designated locations;
- Weekly-site inspection: 13 Occasions.

Noise Monitoring

No exceedances of Action and Limit levels for noise monitoring were recorded in this quarter.

Air Monitoring

No exceedances of Action and Limit levels were recorded for 24-hr TSP and 1-hr TSP monitoring in this quarter.

Environmental Complaints

No environmental complaints were received in this reporting period.

Notification of summons and successful prosecutions

No notification of summons and prosecutions with respect to environmental issues registered in this quarter.

The monitored environmental data indicated that no unacceptable environmental impacts arising from the Project had been caused to the surrounding sensitive receivers. The environmental measures had been effective in controlling potential impacts to within acceptable sensitive receivers. However, the Contractor had been recommended to introduce more effort on environmental mitigation measures to minimize the environmental impact from the Project.

1.0 INTRODUCTION

Penta-Ocean Construction Co., Ltd. (POC) appointed Environmental Team (ET) of ETS-Testconsult Limited (ETL) to undertake the Environmental Monitoring and Audit for Remaining Engineering Infrastructure Works for Pak Shek Kok Development Package 1 (Contract No.: TP 35/02).

Under the requirements of 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 quarterly EM&A summary report summarizes the impact monitoring results and audit findings of the EM&A program during the reporting period from 01 April to 30 June 2004. It covers 3 monthly reports produced for April 2004, May 2004 and June 2004.

2.0 PROJECT INFORMATION

2.1 Background

Remaining Engineering Infrastructure Works for Pak Shek Kok Development Package 1 (Contract No.: TP 35/02) was planned and designed by the Territory Development Department (TDD).

As the main Contractor of the captioned project: contracted by, POC 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

The details of construction programme (from February to June 2004) 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.*
TDD	*Employer*	*Mr. H W Lau*	*2158 5629*	---
Hyder	*Engineer*	*Mr. Herman Fong*	*2911 2233*	*2827 2891*
Hyder	*Independent Environmental Checker*	*Ir. Coleman Ng*	*2911 2233*	*2827 2891*
POC	*Contractor*	*Mr. Roger Lau*	*9870 6390*	*2691 6012*
ETL	*Contractor's Environmental Team*	*Mr C L Lau (Environmental Team Leader)*	*2946 7792*	*2695 3944*

3.0 CONSTRUCTION PROGRESS IN THIS QUARTER

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

A summary of the major construction activities undertaken in this quarter is shown in Table 3.1.

Table 3.1 Major Construction Activities in this quarter

Location	*Major Construction Activity*
Area 1, Area 2, Area 9A, Area 9B, Area 7A, Area 7B, Zone S2, Area 15, Zone P and Zone H	*Drainage work*
Zone P, Area 1, Area 15, Area 2, Area 8A and Area 8B	*Roadworks*
Zone N2	*Subway SB1 Finishing work*
Area 8A and Area 2, Area 9A and Area 15	*Watermain works*
Area 1, 4, 15 and16	*Sewage works*
Zone L	*Installation of the Watermain works*
Zone T and J	*Formation of stockpile areas and hydroseeding*
Zone L	*Modification of headwall and trapezoidal channel*
Zone L and under PSK bridge	*Installation of foul sewer line*
KCRC bridge	*Drainage and water main works*
PS1 and PS2	*Excavation works*
Road D1 bridge	*Pile cap construction*
Area 1, 2, 6, 7B, 8A, 9A, 9B and Area 15	*Construction of footpath & cycle track*
Northern entrance	*Demolition of cyclist bridge*
C10, Area 8A and 9A	*CCTV for drainage pipelines*
---	*Excavation for twin DN 2500 pipes and it associated outfall*
---	*Installation of precast unit for Twin DN 2500 Outfall*
---	*Bored pilling works for D1 bridge*
---	*Finishing workings for the PSK construction of underpass extension structure*
---	*Bored pilling works for pump station no.2*
---	*Connection works to existing 5-cell culvert*
---	*Sheetpiling works at pumping station no.2*
---	*Demolition of yellow bridge*
---	*Subway SBI E&M works*
---	*Watermain installation works*

4.0 AIR QUALITY MONITORING

4.1 Monitoring Locations

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

- HKIB Staff Accommodation (on ground floor near the entrance facing south-east) for 1-hr TSP monitoring;
- 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.

4.2 Monitoring Parameters, Frequency, Duration and Schedule

Table 4.1 summarizes the monitoring parameters, monitoring duration and frequencies of air quality monitoring. The air quality monitoring schedule for 24-hr and 1-hr TSP monitoring at designated monitoring locations in this quarter is summarized in table 4.2.

Table 4.1 Monitoring parameters, duration and frequency 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*

Table 4.2 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*	---				*01/04/04*	*11:04*	*12:04*
						03/04/04	*09:30*	*10:30*
						06/04/04	*09:00*	*10:00*
						08/04/04	*09:30*	*10:30*
						10/04/04	*10:13*	*11:13*
						13/04/04	*10:15*	*11:15*
						15/04/04	*08:20*	*09:20*
						17/04/04	*09:30*	*10:30*
						20/04/04	*09:42*	*10:42*
						22/04/04	*14:30*	*15:30*
						24/04/04	*09:26*	*10:26*
						27/04/04	*09:16*	*10:16*
						29/04/04	*11:04*	*12:04*
						04/05/04	08:45	09:45
						06/05/04	09:04	10:04
						08/05/04	11:04	12:04
						11/05/04	08:40	09:40
						13/05/04	09:30	10:30
						15/05/04	08:45	09:45
						18/05/04	10:04	11:04
						20/05/04	09:01	10:01
						22/05/04	09:14	10:14
						25/05/04	10:04	11:04
						27/05/04	09:28	10:28
						29/05/04	09:21	10:21
						01/06/04	*13:28*	*14:28*
						03/06/04	*09:35*	*10:35*
						05/06/04	*09:00*	*10:00*
						08/06/04	*08:25*	*09:25*
						10/06/04	*09:00*	*10:00*
						12/06/04	*11:00*	*12:00*
						15/06/04	*11:00*	*12:00*
						17/06/04	*14:30*	*15:30*
						19/06/04	*09:30*	*10:30*
						23/06/04	*14:10*	*15:10*
						24/06/04	*09:50*	*10:50*
						26/06/04	*08:35*	*09:35*
						29/06/04	*11:00*	*12:00*

Air quality monitoring stations	Location	Monitoring Period						
		24-hr TSP				1-hr TSP		
		Start		Finish		Date	Start	Finish
		Date	Time	Date	Time			
AM3	Cheung Shue Tan Village (near the outer building, temple)	---				01/04/04	15:08	16:08
						03/04/04	13:00	14:00
						06/04/04	11:00	12:00
						08/04/04	10:51	11:51
						10/04/04	14:00	15:00
						13/04/04	14:30	15:30
						15/04/04	13:40	14:40
						17/04/04	14:04	15:04
						20/04/04	14:21	15:21
						22/04/04	15:52	16:52
						24/04/04	10:53	11:53
						27/04/04	15:00	16:00
						29/04/04	13:08	14:08
						04/05/04	14:25	15:25
						06/05/04	10:41	11:41
						08/05/04	13:07	14:07
						11/05/04	13:15	14:15
						13/05/04	14:19	15:19
						15/05/04	13:08	14:08
						18/05/04	13:09	14:09
						20/05/04	10:38	11:38
						22/05/04	10:40	11:40
						25/05/04	10:28	11:28
						27/05/04	11:02	12:02
						29/05/04	10:48	11:48
						01/06/04	15:42	16:42
						03/06/04	10:50	11:50
						05/06/04	10:20	11:20
						08/06/04	11:05	12:05
						10/06/04	10:20	11:20
						12/06/04	13:20	14:20
						15/06/04	13:00	14:00
						17/06/04	10:48	11:48
						19/06/04	10:50	11:50
						23/06/04	15:32	16:32
						24/06/04	13:15	14:15
						26/06/04	13:10	14:10
						29/06/04	13:30	14:30
AM1	HKIB Staff Accommodation	01/04/04	15:15	02/04/04	15:00			
		07/04/04	13:30	08/04/04	14:45			
		13/04/04	10:20	14/04/04	10:12			
		19/04/04	10:03	20/04/04	10:14			
		23/04/04	16:50	24/04/04	16:50			
		29/04/04	11:00	30/04/04	11:00			
		05/05/04	09:40	06/05/04	09:40			
		11/05/04	08:50	12/05/04	08:50			
		17/05/04	16:45	18/05/04	16:45			
		22/05/04	10:10	23/05/04	10:10			
		28/05/04	11:00	29/05/04	11:00			
		03/06/04	16:50	04/06/04	16:50			
		09/06/04	10:42	10/06/04	10:01			
		15/06/04	11:10	16/06/04	11:10			
		21/06/04	15:00	22/06/04	15:04			
		26/06/04	08:30	27/06/04	08:36			
AM3A	Cheung Shue Tan (in front of Man Kee Store)	01/04/04	11:00	02/04/04	11:37	---		
		07/04/04	13:40	08/04/04	13:55			
		13/04/04	14:40	14/04/04	14:46			
		19/04/04	10:17	20/04/04	10:48			
		23/04/04	17:18	24/04/04	17:18			
		29/04/04	13:00	30/04/04	13:00			
		05/05/04	09:30	06/05/04	09:30			
		11/05/04	13:05	12/05/04	13:05			
		17/05/04	15:55	18/05/04	15:55			
		22/05/04	11:00	23/05/04	11:00			
		28/05/04	11:30	29/05/04	11:30			
		03/06/04	10:45	04/06/04	10:45			
		09/06/04	10:57	10/06/04	10:57			
		15/06/04	08:40	16/06/04	08:40			
		21/06/04	15:20	22/06/04	15:32			
		26/06/04	13:05	27/06/04	13:05			

4.3 Wind Data Monitoring

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

4.4 Action and Limit Levels

Action and Limit levels for 24-hr TSP and 1-hr TSP derived as illustrated in Table 4.3.

Table 4.3 Action and Limit Levels for 24-hr TSP and 1-hr TSP

Monitoring Location	*24-hr TSP (μg/m³)*		*1-hr TSP (μg/m³)*	
	Action Level	*Limit Level*	*Action Level*	*Limit Level*
AM1	*164 **	*260 **	*325 **	*500 **
AM3	---	---	*306*	*500*
AM3A	*183*	*260*	---	---

* = 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

4.5 Event-Action Plans

Please refer to Appendix E for details.

4.6 Air Quality Monitoring Results

4.6.1 24-hour TSP Monitoring

24-hour TSP monitoring was carried out at monitoring stations, AM1 and AM3 in the reporting period. Graphical presentation of 24-hour TSP monitoring results for these reporting months is shown in Appendix B.

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

4.6.2 1-hour TSP Monitoring

1-hour TSP monitoring was carried out at monitoring stations, AM1 and AM3 in the reporting period. Graphical presentation of 1-hour TSP monitoring results for these reporting months is shown in Appendix B.

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

5.0 Noise Monitoring

5.1 Monitoring Locations

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.

5.2 Monitoring Parameters, duration, Frequency and Schedule

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 5.1.

Table 5.1 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*

The noise monitoring programme of monitoring locations (Day-time, Evening-time, Holiday and Night-time) is summarized in Table 5.2.

Table 5.2 Monitoring Schedule for noise monitoring stations

Noise monitoring stations	*Monitoring Period*							
	Day-time		*Evening-time*		*Holiday*		*Night-time*	
NM1	*06/04/04*	*09:05*	*01/04/04*	*19:00*	*04/04/04*	*14:20*	---	---
	13/04/04	*10:25*	*06/04/04*	*19:06*	*11/04/04*	*14:16*	---	---
	20/04/04	*10:03*	*13/04/04*	*19:42*	*18/04/04*	*14:00*	---	---
	27/04/04	*09:18*	*20/04/04*	*19:00*	*25/04/04*	*09:00*	---	---
	---	---	*27/04/04*	*19:15*	---	---	---	---
	04/05/04	*08:40*	*04/05/04*	*19:08*	*02/05/04*	*13"40*	---	---
	11/05/04	*08:45*	*11/05/04*	*19:00*	*09/05/04*	*09:45*	---	---
	18/05/04	*10:11*	*18/05/04*	*19:00*	*16/05/04*	*09:45*	---	---
	25/05/04	*09:10*	*25/05/04*	*19:42*	*23/05/04*	*09:45*	---	---
	---	---	---	---	*30/05/04*	*13:00*	---	---
	01/06/04	*13:30*	*01/06/04*	*19:00*	*06/06/04*	*10:02*	---	---
	08/06/04	*08:30*	*08/06/04*	*19:00*	*13/06/04*	*09:45*	---	---
	15/06/04	*11:05*	*15/06/04*	*19:02*	*20/06/04*	*13:00*	---	---
	24/06/04	*09:45*	*24/06/04*	*19:00*	*27/06/04*	*15:20*	---	---
	29/06/04	*11:05*	*29/06/04*	*19:00*	---	---	---	---
NM2	*06/04/04*	*10:10*	*01/04/04*	*19:25*	*04/04/04*	*14:55*	---	---
	13/04/04	*16:04*	*06/04/04*	*19:40*	*11/04/04*	*14:50*	---	---
	20/04/04	*15:48*	*13/04/04*	*20:08*	*18/04/04*	*14:40*	---	---
	27/04/04	*10:33*	*20/04/04*	*19:25*	*25/04/04*	*09:25*	---	---
	---	---	*27/04/04*	*19:50*	---	---	---	---
	04/05/04	*10:50*	*04/05/04*	*19:42*	*02/05/04*	*14:16*	---	---
	11/05/04	*11:15*	*11/05/04*	*19:25*	*09/05/04*	*10:10*	---	---
	18/05/04	*15:12*	*18/05/04*	*19:25*	*16/05/04*	*10:10*	---	---
	25/05/04	*13:16*	*25/05/04*	*20:10*	*23/05/04*	*10:10*	---	---
	---	---	---	---	*30/05/04*	*13:37*	---	---
	01/06/04	*14:49*	*01/06/04*	*19:35*	*06/06/04*	*10:34*	---	---
	08/06/04	*15:30*	*08/06/04*	*19:25*	*13/06/04*	*10:10*	---	---
	15/06/04	*14:20*	*15/06/04*	*19:35*	*20/06/04*	*13:55*	---	---
	24/06/04	*11:00*	*24/06/04*	*19:25*	*27/06/04*	*15:56*	---	---
	29/06/04	*14:47*	*29/06/04*	*19:33*	---	---	---	---

Noise monitoring stations	Monitoring Period							
	Day-time		Evening-time		Holiday		Night-time	
NM3	06/04/04	11:05	01/04/04	19:50	04/04/04	15:30	---	---
	13/04/04	14:41	06/04/04	20:12	11/04/04	15:30	---	---
	20/04/04	14:30	13/04/04	20:33	18/04/04	15:20	---	---
	27/04/04	15:08	20/04/04	19:30	25/04/04	09:55	---	---
	---	---	27/04/04	20:28	---	---	---	---
	04/05/04	14:30	04/05/04	20:14	02/05/04	14:52	---	---
	11/05/04	13:10	11/05/04	19:50	09/05/04	10:40	---	---
	18/05/04	13:16	18/05/04	19:50	16/05/04	10:40	---	---
	25/05/04	10:35	25/05/04	20:36	23/05/04	10:40	---	---
	---	---	---	---	30/05/04	14:17	---	---
	01/06/04	15:39	01/06/04	20:10	06/06/04	11:00	---	---
	08/06/04	11:10	08/06/04	19:50	13/06/04	10:40	---	---
	15/06/04	13:05	15/06/04	20:08	20/06/04	14:19	---	---
	24/06/04	13:10	24/06/04	19:50	27/06/04	16:33	---	---
	29/06/04	13:35	29/06/04	20:07	---	---	---	---

5.3 Action and Limit Levels

The Action and Limit levels for noise levels derived as illustrated in Table 5.3.

Table 5.3 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".

5.4 Event-Action Plans

Please refer to the Appendix E for details.

5.5 Noise Monitoring Results

Day-time, Evening-time and Holiday noise monitoring were carried out at monitoring Stations, NM1, NM2 and NM3 in this reporting period. No night-time noise monitoring were required since no construction works were processed during the night-time period. Graphical presentation of the monitoring results for these reporting months are shown in Appendix C.

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

6.0 WASTEWATER MONITORING

6.1 According to the Discharge of Industrial Trade Effluent Licence (Licence No.: 2946), POC is required to carry out wastewater monitoring of suspended solids quarterly at all effluent discharge points within the site.

6.2 POC appointed ET of ETL to sampling the wastewater samples at the effluent discharge points. The collected sample will be transport to the Environmental Laboratory of ETL for suspended solids content analysis. The Environmental Laboratory of ETL is HOKLAS accredited and the test method used for suspended solids analysis is also HOKLAS accredited in accordance with the 2540D of Standard Methods for the Examination of Water and Wastewater (APHA 19th edition).

6.3 Under the Wastewater Discharge Licence (No.: 2946), the discharge limit of Suspended Solids content of the effluent at this site should be 30mg/L. It means that the suspended solids of wastewater discharged should be less than 30mg/L or otherwise no wastewater can be discharged under this Licence.

6.4 During this quarter, one wastewater monitoring was carried out.

Wastewater monitoring of one discharge point was carried out by ET at 05 June 2004. During this monitoring, one wastewater sample was collected from the effluent discharge point and transport to ETL immediately for analysis. The result of suspended solids content of the wastewater sample was found below 30mg/L and within the discharge limit of the Discharge Licence.

6.5 The test report for the wastewater monitoring was attached in Appendix I.

7.0 Review of the Reasons for and the implications of Non-compliance

According to the summary of environmental monitoring results, no exceedances of noise and air quality monitoring were recorded in this quarter. Hence, no further mitigation measures and action were required.

8.0 Summary of Environmental Complaints

No environmental complaints on this Project were received in this quarter. A statistical summary of environmental complaints is presented in Table 8.1.

Table 8.1 Statistical Summary of Environmental Complaints

Reporting Month	*Complaints Statistics*		
	Frequency	*Cumulative*	*Complaint Nature*
April 2004	*0*	*0*	*N/A*
May 2004	*0*	*0*	*N/A*
June 2004	*0*	*0*	*N/A*

9.0 Environmental Summons

There were no notification of summons respect to environmental issues registered in this quarter. Cumulative log of Notification of Summons and Prosecution is tabulated in Table 9.1.

Table 9.1 Cumulative Log of Notification of Summons and Prosecution

Date	*Detail of Notice of Summons or Prosecution*	*Action Taken*	*Environmental Outcome*
16 Oct 2002	*The site main haul road was neither paved with any one of concrete, bituminous materials, hard core or metal plates, nor had the entire road surface maintained wet by the spraying of water or dust suppression chemical.*	• *POC paved the site main haul road with concrete and bituminous materials;* • *The road surface was wet by the spraying of water regularly by POC.*	*It was observed that the problem of dust emission from the site main haul road has been improved. No further complaint or ticket was received until September 2003.*

Date	*Detail of Notice of Summons or Prosecution*	*Action Taken*	*Environmental Outcome*
11 July 2003	*Three stockpiles of dusty material namely aggregate, were wither covered entirely by impervious sheeting, nor place in an area sheltered on top and three sites, nor sprayed with water or dust suppression chemical so as to maintain entire surface wet.*	*The stockpiles of aggregates / excavated materials were covered with tarpaulin sheet / sprayed with water in order to avoid the dust emission.*	*No further complaints were received during the reporting month.*

10.0 Status of Environmental Licensing and Permitting

All permits/licenses obtained in this quarter are summarized in Table 10.1.

Table 10.1 Summary of environmental licensing and permit status

Description	*Permit No.*	*Valid Period*		*Section*
		From	*To*	
Environmental Permit	*EP-108/2001*	*05/11/02*	*---*	*Whole work site*
Construction Noise Permit (Percussive Piling)	*PP-TN0005-04*	*18/02/04*	*18/06/04*	*1 drop hammer driving steel sheet pile*
Construction Noise Permit (General / Prescribed construction works)	*GW-TN0095-04*	*15/03/04*	*14/09/04*	*Group A (For Area B or C):* • *1 Dump truck (CNP 067)* • *2 Excavator, tracked (CNP 081)* • *1Bulldozer (CNP 030)* *Group B (For Area A, D or E):* • *1 Dump trucks (CNP 067)* • *1 Excavator, tracked (CNP 081)* *Group C (For Area B, B2 or E):* • *1 Crane, mobile (CNP 048)* • *1 Generator (CNP 102)* • *1 Vibration Hammer* • *1 Power Pack* *Group D (For Area B2 or E):* • *1 Generator (CNP 102)* • *1 Crane, mobile (CNP 048)* • *1 Oscillator, piling large diameter bored (CNP 165)* • *2 Concrete lorry mixers (CNP 044)* *Group E (For Area B2 or E):* • *2 Concrete lorry mixers (CNP 044)* • *1 Concrete pump lorry (CNP047)* • *1 Poker, handheld (CNP 170)* *Group F (For Area B2 or E):* • *2 Concrete lorry mixers (CNP 044)* • *1 Crane, mobile (CNP 048)* • *1 Poker, handheld (CNP 170)* *Group G (For Area B, C or D):* • *2 Concrete lorry mixers (CNP 044)* • *1 Excavator, tracked (CNP 081)* • *1 Poker, handheld (CNP 170)* *Group H (For Area B2 or E):* • *1 Air compressor, air flow >10m³/min and ,30m³/min (CNP 002)* • *1 Crane, mobile (diesel) (CNP 048)* • *1 Generator, silenced, 75 dB(A) at 7m (CNP 102)* • *1 piling, large diameter bored crab and chisel (CNP 164)* • *1 piling, large diameter bored oscillator (CNP 165)* • *1 Piling, large diameter bored, reverse circulation drill (CNP 166)*

Description	Permit No.	Valid Period		Section
		From	To	
Construction Noise Permit (General / Prescribed construction works) (Continued)	GW-TN0095-04	15/03/04	14/09/04	Group I (For Area B, C or D): • 1 Dump truck (CNP 067) • 1 Asphalt Paver (CNP 004) • 1 Roller, vibratory (CNP 186) • 1 Road Roller (CNP 185) Group J (For Area A or F): • 1 Excavator, tracked (CNP 081) • 1 Roller, vibratory (CNP 186)
Construction Noise Permit (General / Prescribed construction works)	GW-TN0287-04	01/07/04	30/09/04	Group A • 1 Crane, mobile (CNP 048) • 1 Generator (CNP 102) Group F (For Area B2 or E): • 1 Lorry with Crane
Waste Producer	5213 729 P2800 11	03/10/02	---	Generating waste at the work site
Wastewater Discharge License	No. 2946	18/12/02	18/12/07	Discharge of trade Effluent, surface run-off and all other wastewater arising from the construction site and sedimentation tank

11.0 WASTE MANAGEMENT

11.1 Summary of Waste Quantities

The summary of waste generated at the site in the reporting period is summarized in Table 11.1.

Table 11.1 Summary of Quantities of Waste generated at this reporting period

Type of Waste	Quantity	Disposal Location
C&D Material (Inert) (m^3)	0	Nil
C&D material (Non-inert) (m^3)	0	Nil
General Refuse (m^3)	145	Disposed at NENT Landfills
Chemical Waste (L)	0	Nil

12.0 SITE INSPECTION / AUDIT

12.1 Summary of Weekly Site Inspection and Monthly Joint Site Audit Findings

Weekly site inspection was carried out by the ET. A total 13 weekly site inspections were undertaken in this quarter. Monthly joint site audit was carried out by the RE, the IEC, POC and ET at 22 April, 20 May and 17 June 2004 in this quarter. The summary of weekly site inspection and monthly joint site audit findings from this quarter is shown in Table 12.1.

Table 12.1 Summary of Weekly Site Inspection and Monthly Joint Site Audit Findings

April 2004				
Item	Aspects	Findings	Action(s) taken by POC	ET Verification
1	Air (Obs)	Dark smoke emitting from a backhoe operating near Pump Station NO. 1 was observed during site inspection (22 April 2004).	▪ The defective machine was stopped to use immediately. ▪ The Contractor replied to remind the subcontractor to maintain the site equipment more frequently and stop to use the defective equipment until repaired.	▪ During the subsequent weekly site inspection, no dark smoke was found emitted from the site equipment. ▪ Therefore, this finding was closed.

Remark: "NC" = Non-compliance and "Obs" = Observation

April 2004				
Item	Aspects	Findings	Action(s) taken by POC	ET Verification
2	Chemical (Obs)	A 25L container of diesel was found near the PSK nullah without provision of drip tray during site inspection (22 April 2004)	▪ The Contractor replied to place all chemical containers inside the drip tray with appropriate capacity.	▪ During the subsequent weekly site inspection, all containers were found with drip trays. ▪ Therefore this finding was closed.
3	Water (Obs)	The silt curtain installed at Area B Outfall was damaged during the site inspection (22 April 2004).	▪ The Contractor replied to repair the site curtain immediately.	▪ During the subsequent site inspection, the silt curtain at Area B Outfall was found repaired. ▪ Therefore, this finding was closed.
May 2004				
Item	Aspects	Findings	Action(s) taken by POC	ET Verification
1	Air (Obs.)	Some of the stockpiles of C&D and excavated materials were not entirely covered during monthly site inspection. They should be backfilled, entirely covered with impervious tarpaulin sheets or hydroseeded.	The stockpile of C&D and excavated material were covered with tarpaulin sheets, some slope of the stockpile was already hydroseeded.	During the subsequent weekly site inspection, part of the stockpile of C&D and excavated material were covered with tarpaulin sheets or hydroseeded. POC was reminded to cover or wet the stockpiles especially before the holidays at dry season.
2	Water (Obs)	Standing water was observed at different parts of site area during monthly joint site inspection.	The standing water was clean-up immediately.	During the subsequent site inspection, no standing water was observed at these areas.
3	Waste (Obs)	Rubbish bin at the Contractor site office was full during monthly site inspection.	The rubbish bin was clean up immediately.	The rubbish bin was clean up during subsequent site inspection.
June 2004				
Item	Aspects	Findings	Action(s) taken by POC	ET Verification
1	Air (Obs.)	Some of the stockpiles of C&D and excavated materials were not entirely covered during weekly site inspection. They should be backfilled, entirely covered with impervious tarpaulin sheets or hydroseeded.	The stockpile of C&D and excavated material were covered with tarpaulin sheets, some slope of the stockpile was already hydroseeded.	During the last weekly site inspection in this reporting month, most of the stockpile of C&D and excavated material were covered with tarpaulin sheets or hydroseeded.
2	Water (Obs)	Standing water was observed at different parts of site area during weekly and monthly joint site inspections.	The standing water was clean-up immediately.	During the last site inspection in this reporting month, no standing water was observed at these areas.
3	Chemical (Obs)	Oil stains were found on the ground outside the Chemical Waste Store during monthly site inspection.	Oil strains were removed immediately after the monthly site inspection.	No oil strain was observed during subsequent site inspection.
4	Water (Obs)	During the monthly site inspection, the back fall of wastewater was ineffective and therefore the wastewater was carried onto the public road by vehicles.	The entrance of the wheel washing facility was paved to increase the slope and therefore the wastewater back fall more effectively.	During the last weekly site inspection, the entrance of the wheel washing bay had paved to increase the slope of backfall.
5	Water (Obs)	The capacity of new wheel washing bay and sand trap adjacent to the wheel washing bay at Road L2 was found too small for wastewater treatment during monthly site inspection.	The Construction Team reply to increase the efficiency of wheel washing facility rather than increase in the capacity of wheel washing bay due to the technical problem.	During the last weekly site inspection, the finding was still observed. Hence, the finding will be verified at the next reporting month.

Remark: "NC" = Non-compliance and "Obs" = Observation

13.0 IMPLEMENTATION STATUS

13.1 Implementation Status of Environmental Mitigation Measures

POC has been implementing the required environmental mitigation measures according to Implementation of Mitigation Measures (clause 4.2, 5.2 and 6.2) in Environmental Management Plan for Contract No. TP 35/02 Remaining Engineering Infrastructure Works for Pak Shek Kok Development Package 1 (Revision 2). A summary of the implementation schedule of the mitigation measures is presented in Appendix H.

Air Quality
Only partial stockpiles were covered by using tarpaulin sheets and hydroseeded. The Contractor was reminded to water, hydro-seed 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.

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

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, proper maintenance of sedimentation system and drainage facilities, and remove the sand/rubbish accumulated in the drain/channel and sedimentation tanks regularly.

Waste Management
POC has been implementing most mitigation measures on waste management. However, rubbish was observed at the site and insufficient skips or bins were provided for collecting rubbish at site. The Contractor was remained to provide more manpower to clean up of rubbish accumulated at the site and provide rubbish bin/skips for collected the rubbish.

13.2 Implementation Status of Event and Action Plan

There were no exceedances in air quality and noise monitoring parameters recorded in this quarter. Hence, no further mitigation measures were required.

13.3 Implementation Status of Environmental Complaint Handling

No complaints had been received during this quarter.

14.0 Conclusions and Recommendations

All 1-hr TSP and 24-hr TSP levels in air quality monitoring were recorded below the Action and Limit levels in this quarter. At the same time, no noise monitoring exceedances were recorded and no complaints were received in this quarter. Therefore, no further mitigation measures and actions were required.

The monitored environmental data indicated that no unacceptable environmental impacts arising from the Project had been caused to the surrounding sensitive receivers. The environmental measures had been effective in controlling potential impacts to within acceptable sensitive receivers. However, the Contractor had been recommended to introduce more effort on environmental mitigation measures to minimize the environmental impact from the Project.

Based on the site inspections and audit findings during the reporting period, the following recommendation for further improvement of the current conditions are as below:

- All stockpiles with a volume of greater than 50m^3 should be covered with clean tarpaulin sheets, watering or hydro-seeding to avoid wind and water erosion;
- Providing more manpower to clean up of rubbish accumulated at the site;
- Providing rubbish bin/skips for collected the rubbish;
- Site inspection and maintenance of all sedimentation system and drainage facilities by the contractor's site staff should be conducted regularly to ensure proper and efficient operation all the times;
- Draining the stagnant water out from the idle sedimentation tank and channel to prevent mosquito breeding;
- Diverting silty runoff to sedimentation system before discharge;
- Placing enough sand bags or other protection should be applied to prevent the silty surface runoff onto the drains system;
- Removing the sand/rubbish accumulated in the drain/channel regularly;
- Removing the oil in the drip tray and treat as chemical waste if necessary
- Checking and maintaining all the site machines regularly to prevent oil leakage;
- Providing briefing to the concerned site staff on remedial actions in case of oil spillage, such as handling method of chemical waste;
- Maintain good waste management at the site.

Appendix A

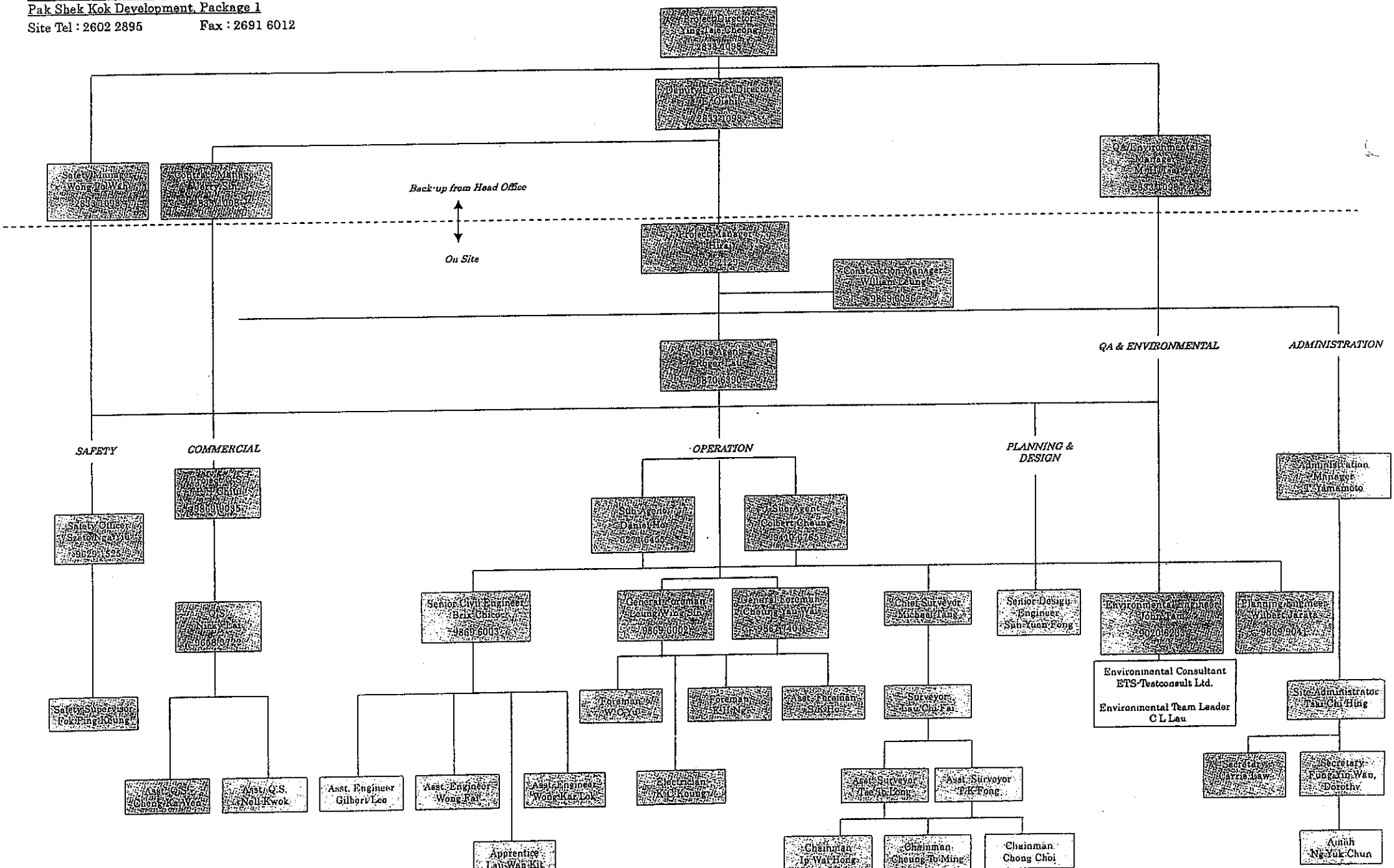
Organization Chart and Lines of Communication

Contract No. TP 35/02
Remaining Engineering Infrastructure Works for
Pak Shek Kok Development, Package 1
Site Tel : 2602 2895 Fax : 2691 6012

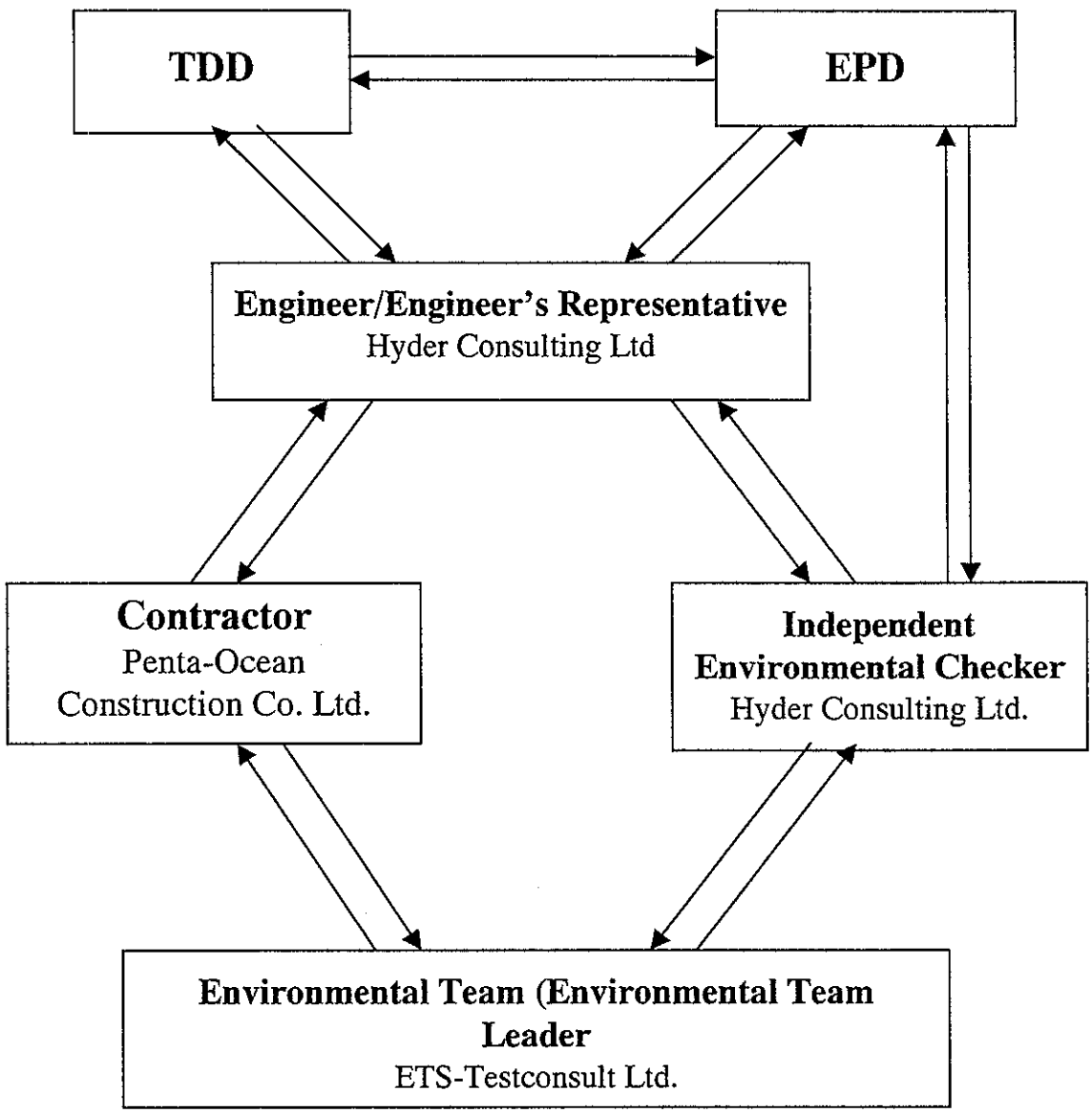
Project Site Organization Chart (with contact details)

Rev. H

Date : 19 Aug 03

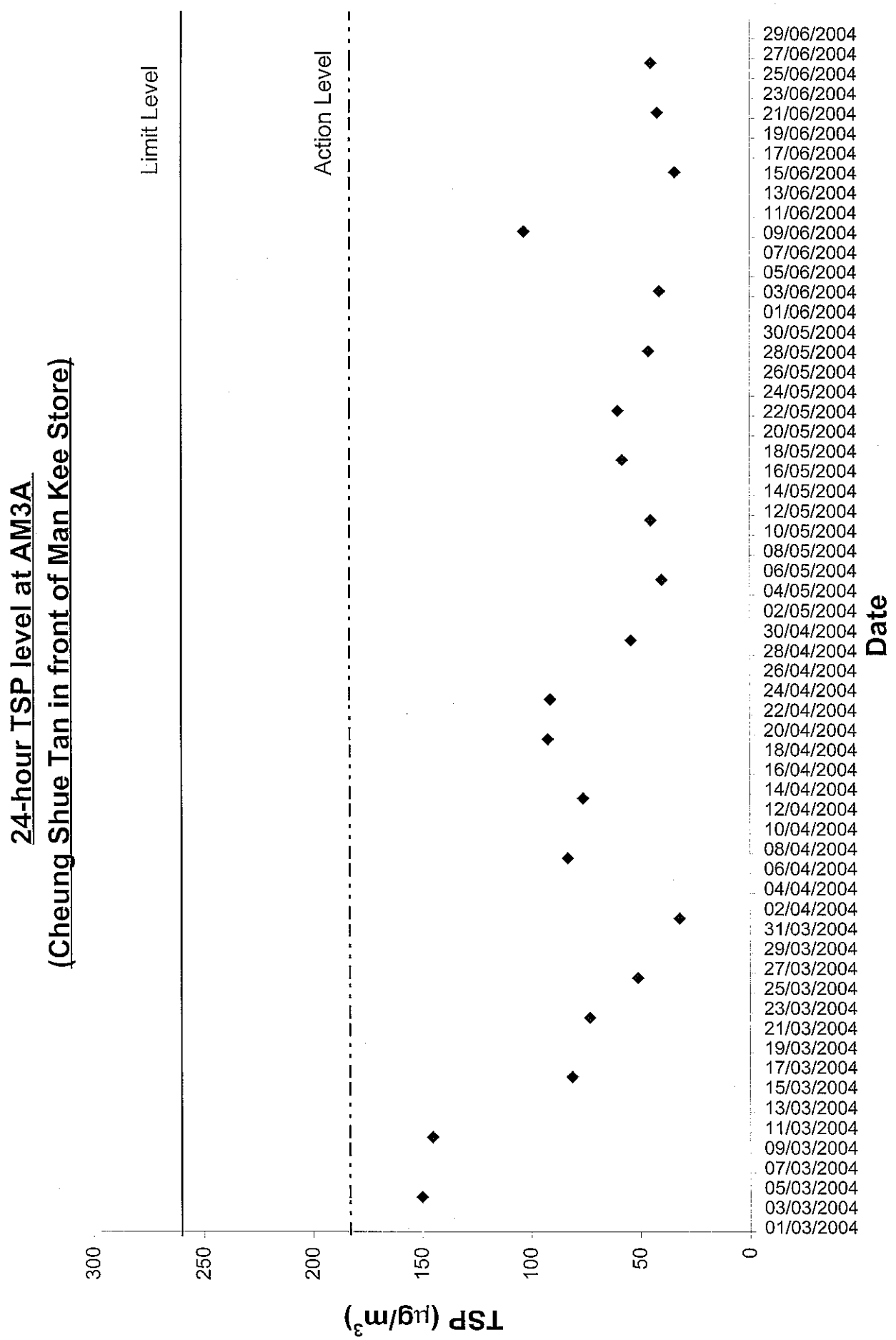


Lines of Communication



Appendix B

Graphical Plots of Air Quality Monitoring Data


24-hour TSP level at AM3A
(Cheung Shue Tan in front of Man Kee Store)
Limit Level
Action Level
TSP (μg/m³)
300
250
200
150
100
50
0
Date
29/06/2004
27/06/2004
25/06/2004
23/06/2004
21/06/2004
19/06/2004
17/06/2004
15/06/2004
13/06/2004
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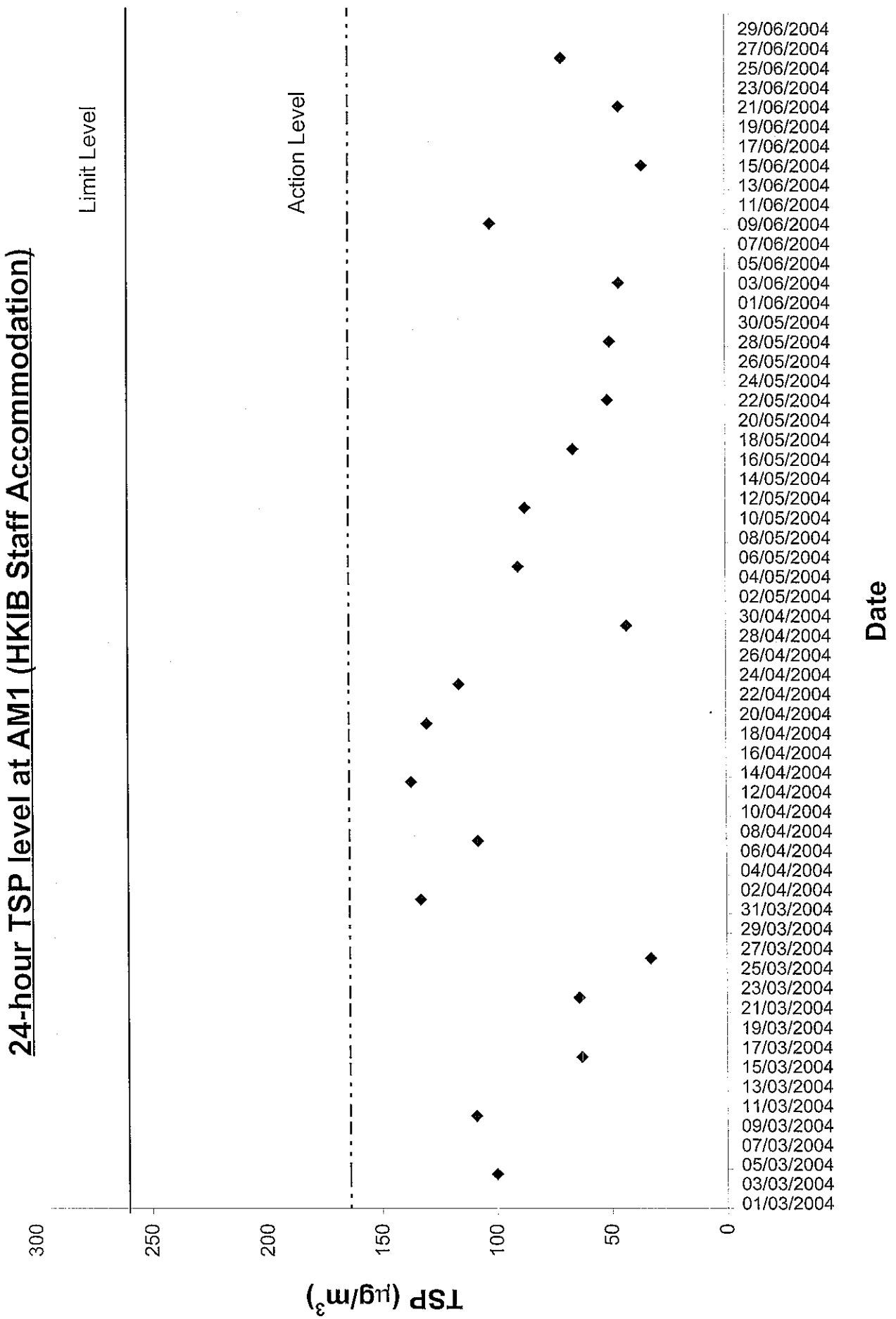
01/03/2004


24-hour TSP level at AM1 (HKIB Staff Accommodation)
Limit Level
Action Level
TSP (μg/m³)
300
250
200
150
100
50
0
Date
29/06/2004
27/06/2004
25/06/2004
23/06/2004
21/06/2004
19/06/2004
17/06/2004
15/06/2004
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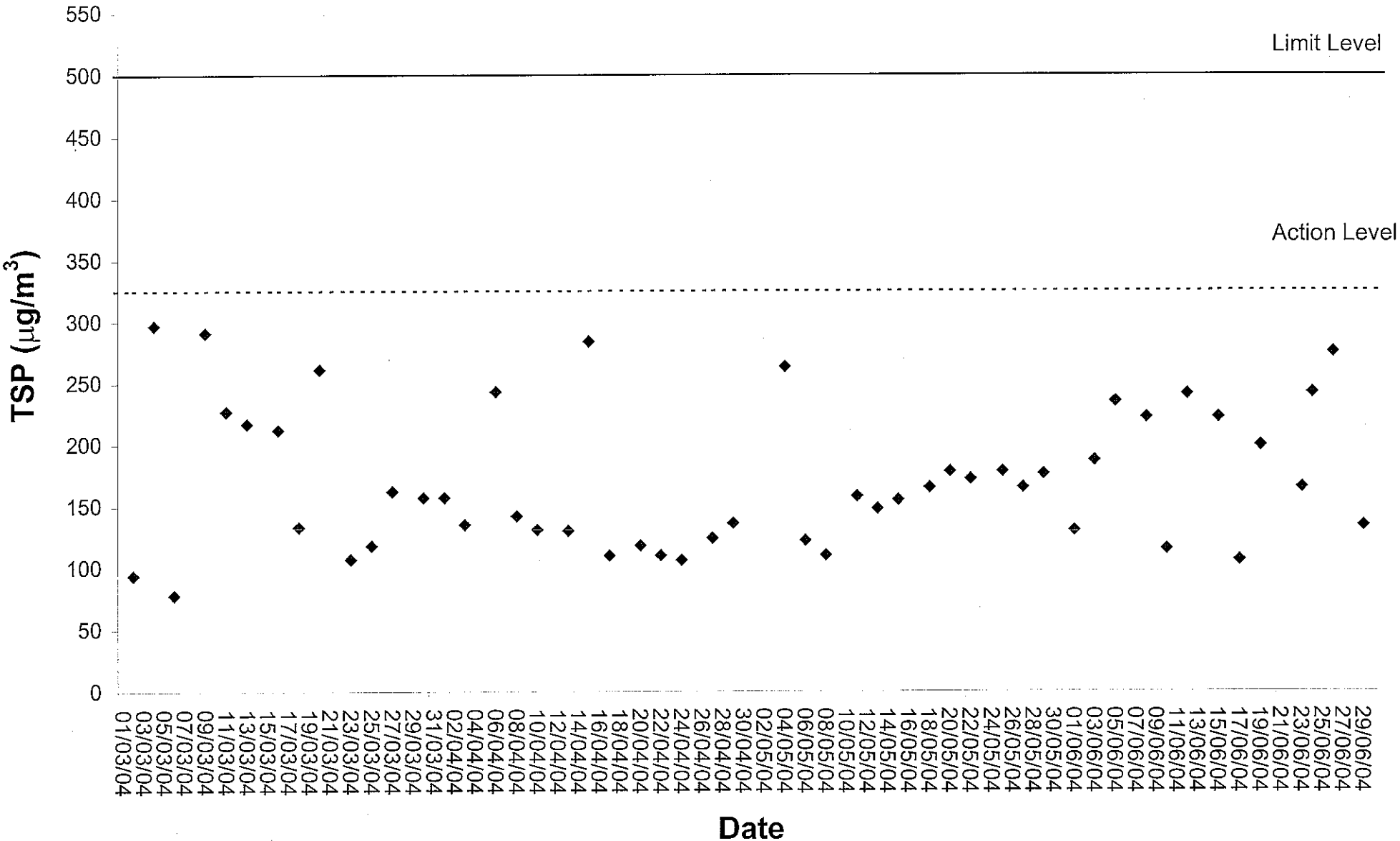
15/03/2004
13/03/2004
11/03/2004
09/03/2004
07/03/2004
05/03/2004
03/03/2004
01/03/2004

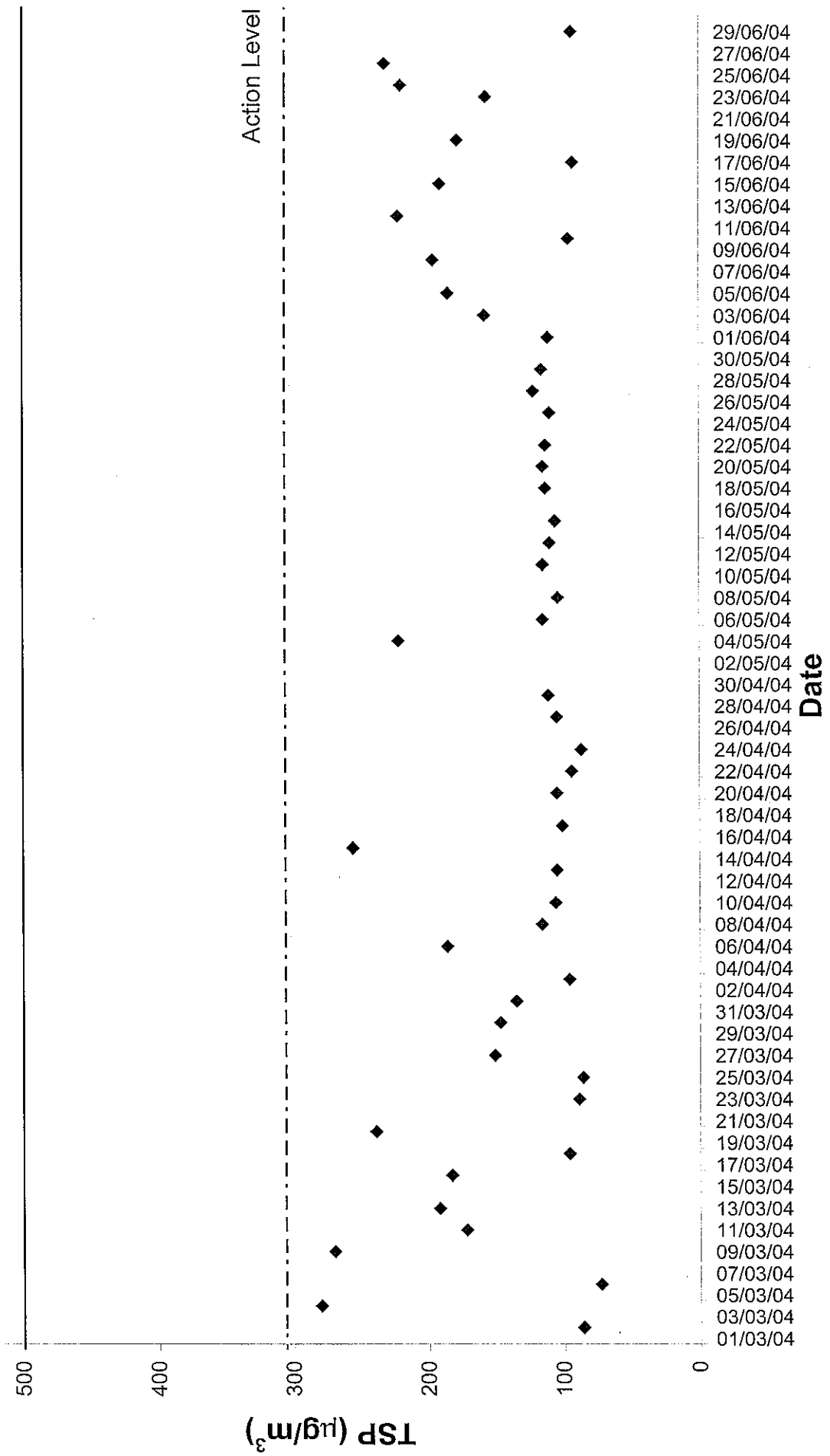
1-hour TSP level at AM1, HKIB Staff Accommodation



東業德勤測試顧問有限公司
ETS-TESTCONSULT LIMITED

1-hour TSP level at AM3, Cheung Shue Tan Village

(near the outer building, a temple)

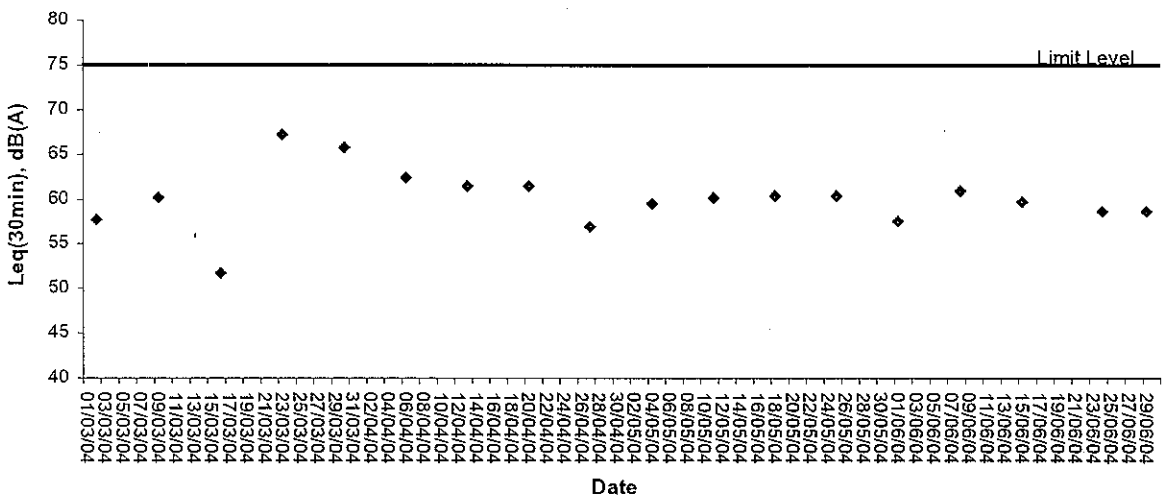


Appendix C

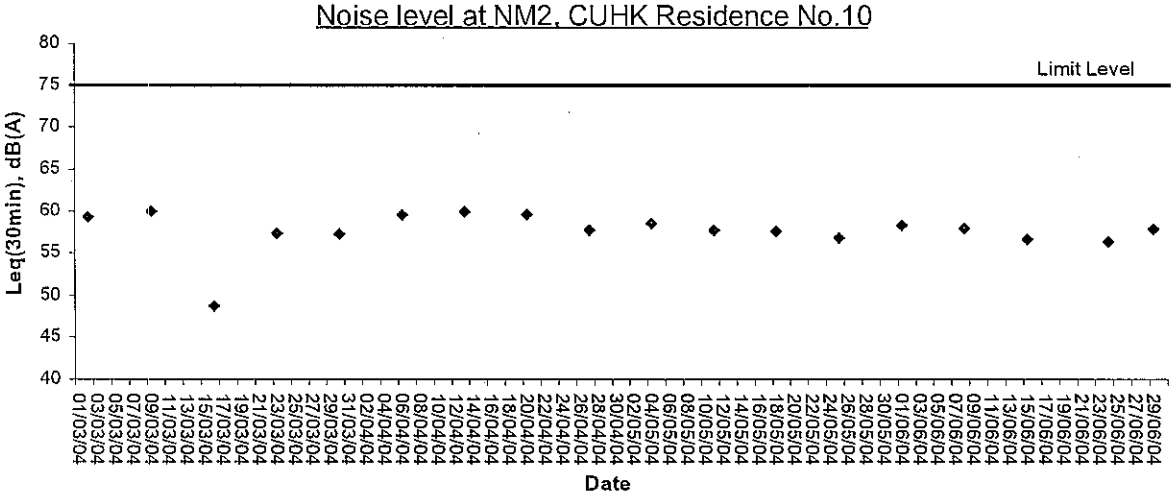
Graphical Plots of Noise Monitoring Data

Noise Monitoring (Day-time)

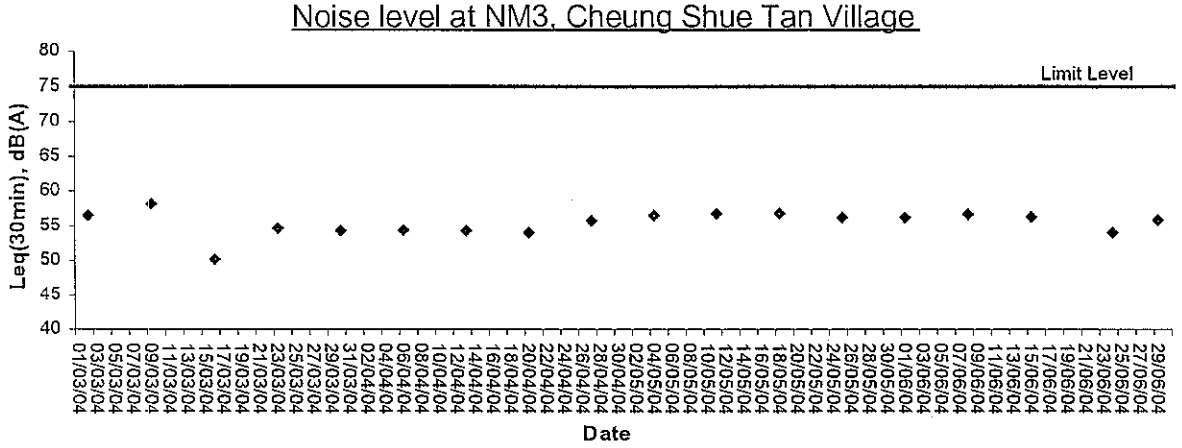
Noise level at NM1, HKIB Staff Accommodation



Noise level at NM2, CUHK Residence No.10

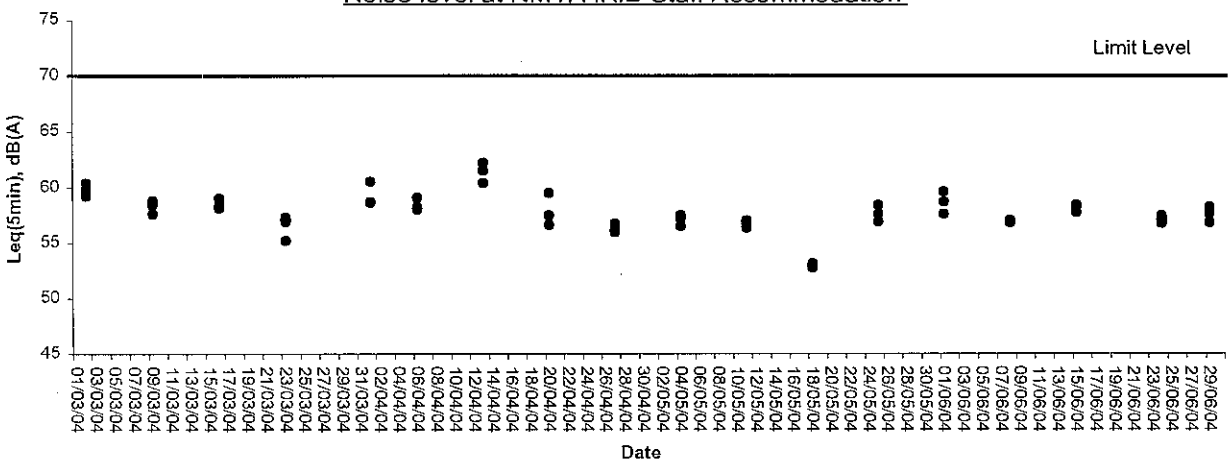


Noise level at NM3, Cheung Shue Tan Village

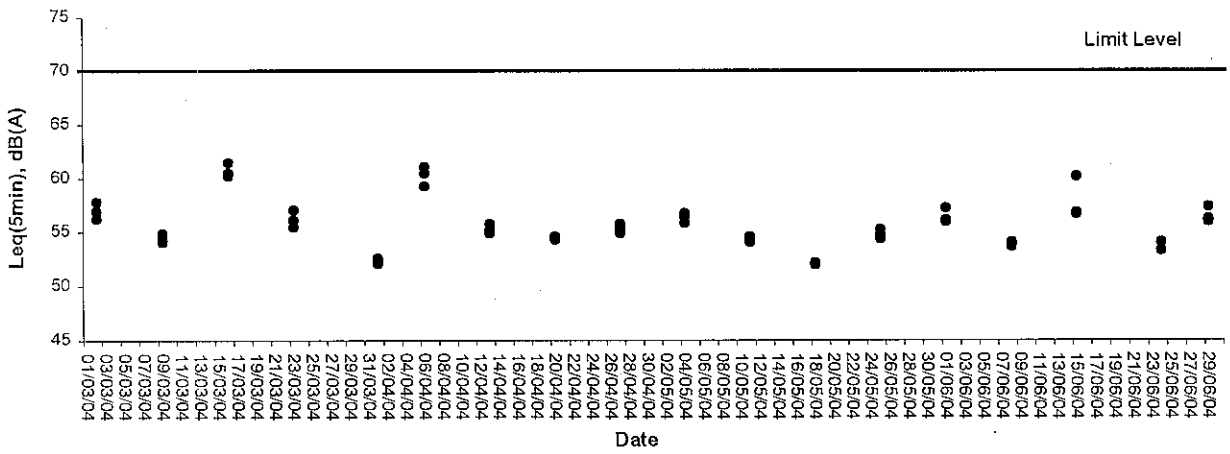


Noise Monitoring (Evening-time)

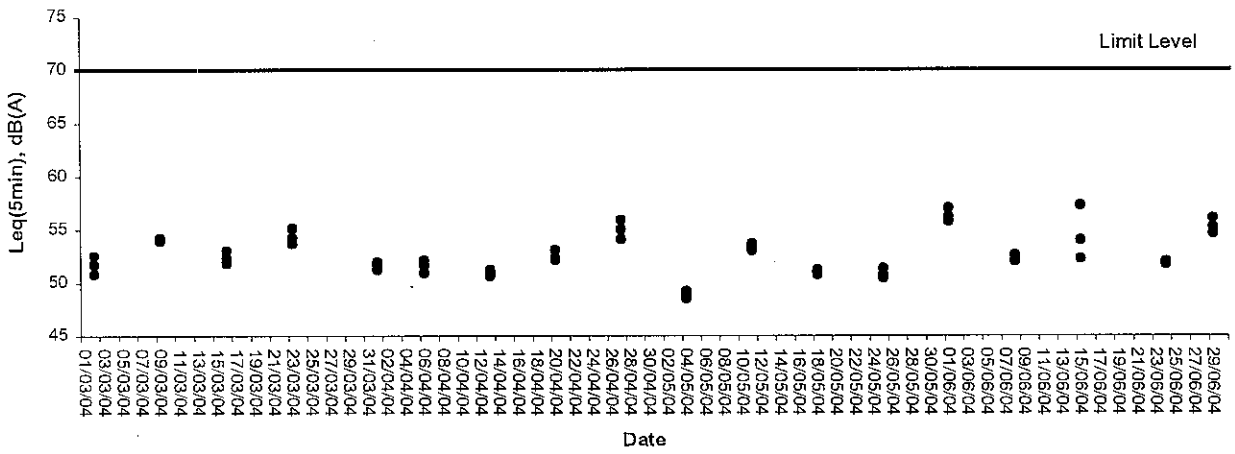
Noise level at NM1, HKIB Staff Accommodation



Noise level at NM2, CUHK Residence No.10

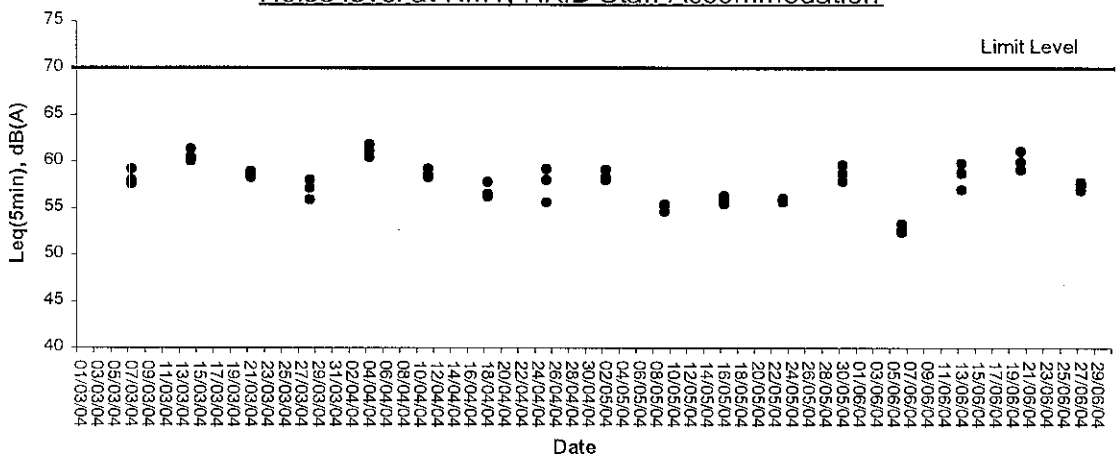


Noise level at NM3, Cheung Shue Tan Village

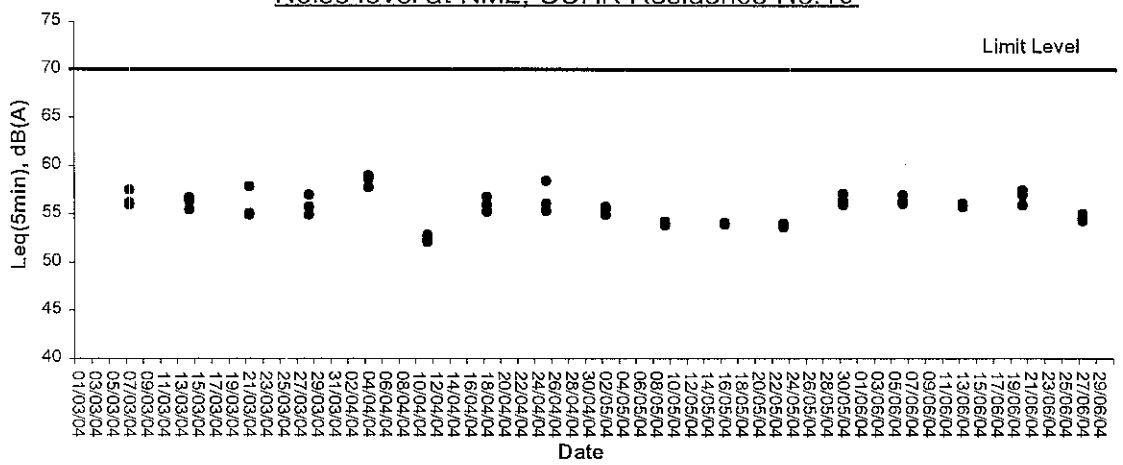


Noise Monitoring (Holiday)

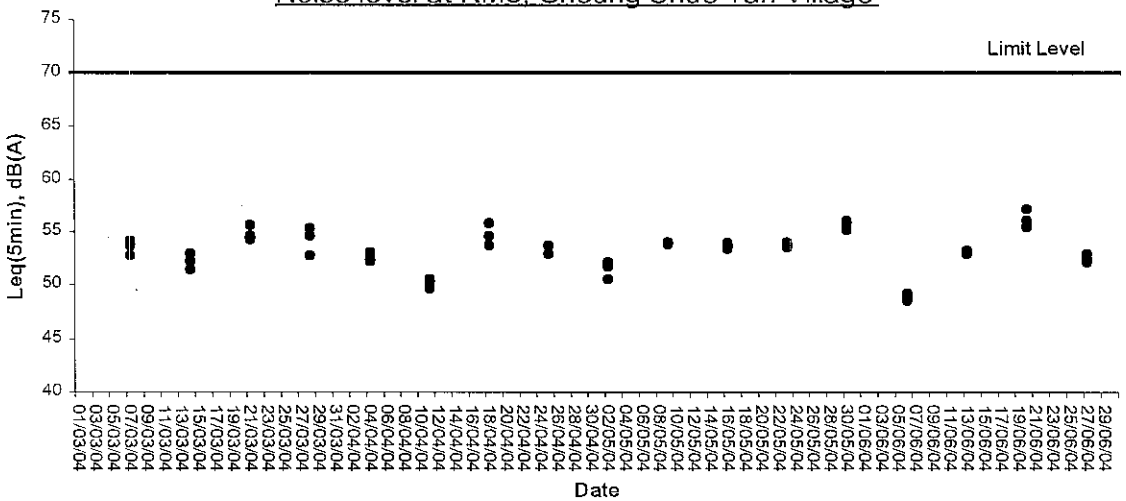
Noise level at NM1, HKIB Staff Accommodation



Noise level at NM2, CUHK Residence No.10



Noise level at NM3, Cheung Shue Tan Village



Appendix D

Weather Condition

Weather Condition

Date	Rainfall (mm)	Max. Temp (°C)	Min. Temp. (°C)	Relative Humidity (%)	Wind Direction	Wind Speed (m/s)
01/04/04	21.0	21.7	18.9	93	NE	<5
02/04/04	Trace	21.1	18.8	79	NE	<5
03/04/04	2.2	22.0	16.5	81	E	<5
04/04/04	Trace	22.6	18.9	85	SE	<5
05/04/04	-	20.6	17.8	81	SE	<5
06/04/04	-	23.1	19.4	86	E	<5
07/04/04	0.2	25.0	21.3	90	SE	<5
08/04/04	2.0	23.1	18.0	76	NE	<5
09/04/04	-	20.7	18.1	78	E	<5
10/04/04	-	23.4	19.2	79	SW	<5
11/04/04	-	27.2	21.2	82	S	<5
12/04/04	-	27.0	22.5	80	SW	<5
13/04/04	Trace	28.6	23.8	84	SW	<5
14/04/04	54.3	24.8	20.2	93	NE	<5
15/04/04	0.3	21.8	20.0	87	NE	<5
16/04/04	2.4	23.2	21.1	89	SE	<5
17/04/04	55.4	26.8	21.4	93	SW	<5
18/04/04	-	26.8	21.4	72	S	<5
19/04/04	-	29.2	22.4	69	SE	<5
20/04/04	-	27.5	23.1	79	E	<5
21/04/04	-	27.4	24.1	87	SE	<5
22/04/04	-	30.7	25.4	77	SW	<5
23/04/04	-	29.9	25.9	80	SW	<5
24/04/04	Trace	27.1	22.3	85	E	<5
25/04/04	Trace	23.1	20.9	88	E	<5
26/04/04	Trace	26.8	22.9	87	S	<5
27/04/04	8.5	29.5	23.3	79	NE	<5
28/04/04	0.9	24.8	21.8	83	E	<5
29/04/04	Trace	23.6	22.1	89	E	<5
30/04/04	-	28.6	22.9	86	SE	<5

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

Weather Condition

Date	Rainfall (mm)	Max. Temp (°C)	Min. Temp. (°C)	Relative Humidity (%)	Wind Direction	Wind Speed (m/s)
01/05/04	-	28.6	24.3	84	NW	<5
02/05/04	-	29.1	24.9	86	SW	<5
03/05/04	-	30.6	25.1	80	SW	<5
04/05/04	Trace	27.8	22.3	83	NW	<5
05/05/04	6.4	24.4	19.0	78	N	<5
06/05/04	-	26.1	22.5	82	N	<5
07/05/04	-	25.8	23.3	79	SE	<5
08/05/04	124.4	25.3	23.0	91	NW	<5
09/05/04	-	30.5	23.5	79	NW	<5
10/05/04	-	30.7	24.7	80	NW	<5
11/05/04	-	28.9	25.9	86	S	<5
12/05/04	-	30.4	26.2	81	SW	<5
13/05/04	Trace	30.6	27.5	80	SW	<5
14/05/04	31.6	28.1	23.7	90	NW	<5
15/05/04	1.5	28.5	24.5	89	NW	<5
16/05/04	Trace	30.4	25.7	83	NW	<5
17/05/04	-	28.5	25.1	75	NW	<5
18/05/04	Trace	27.7	24.6	82	NW	<5
19/05/04	1.6	27.4	24.9	83	NW	<5
20/05/04	1.1	27.3	23.5	81	NW	<5
21/05/04	16.9	25.9	21.9	90	N	<5
22/05/04	0.2	25.4	22.3	84	NE	<5
23/05/04	-	28.5	23.6	77	S	<5
24/05/04	Trace	29.0	24.3	73	E	<5
25/05/04	Trace	28.2	25.0	84	SE	<5
26/05/04	Trace	29.3	25.3	83	N	<5
27/05/04	-	31.4	26.6	80	SW	<5
28/05/04	10.1	31.0	25.8	81	W	<5
29/05/04	0.6	29.6	26.1	83	W	<5
30/05/04	-	30.1	26.4	81	SW	<5
31/05/04	-	32.4	27.0	76	NW	<5

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

Weather Condition

Date	Rainfall (mm)	Max. Temp (°C)	Min. Temp. (°C)	Relative Humidity (%)	Wind Direction	Wind Speed (m/s)
01/06/04	-	30.9	26.6	81	E	<5
02/06/04	7.7	30.1	26.2	84	SE	<5
03/06/04	Trace	29.9	27.0	82	SE	<5
04/06/04	Trace	29.7	26.6	77	E	<5
05/06/04	Trace	28.4	26.4	80	E	<5
06/06/04	8.3	27.8	25.0	86	E	<5
07/06/04	1.2	27.6	24.5	87	NE	<5
08/06/04	Trace	29.4	26.0	78	NE	<5
09/06/04	Trace	30.4	26.0	7	SE	<5
10/06/04	-	29.1	26.1	77	SE	<5
11/06/04	-	29.1	25.9	70	SE	<5
12/06/04	-	29.6	26.3	71	E	<5
13/06/04	-	30.1	26.3	65	E	<5
14/06/04	-	60.2	26.1	4	E	<5
15/06/04	27.9	28.3	25.8	88	N	<5
16/06/04	2.9	30.0	26.5	82	SE	<5
17/06/04	Trace	31.2	27.6	80	S	<5
18/06/04	Trace	31.3	27.6	79	SW	<5
19/06/04	Trace	32.3	28.4	76	SW	<5
20/06/04	34.2	33.2	25.6	78	SW	<5
21/06/04	27.0	31.8	25.3	85	SW	<5
22/06/04	8.7	32.2	27.6	79	SW	<5
23/06/04	9.7	31.3	27.3	81	SW	<5
24/06/04	Trace	32.3	28.9	76	S	<5
25/06/04	Trace	32.3	28.6	75	S	<5
26/06/04	1.6	32.3	28.0	78	SE	<5
27/06/04	0.2	31.5	28.1	80	SE	<5
28/06/04	Trace	32.7	28.3	74	E	<5
29/06/04	-	34.2	29.2	72	N	<5
30/06/04	15.3	32.9	27.4	81	NE	<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	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.

abated.

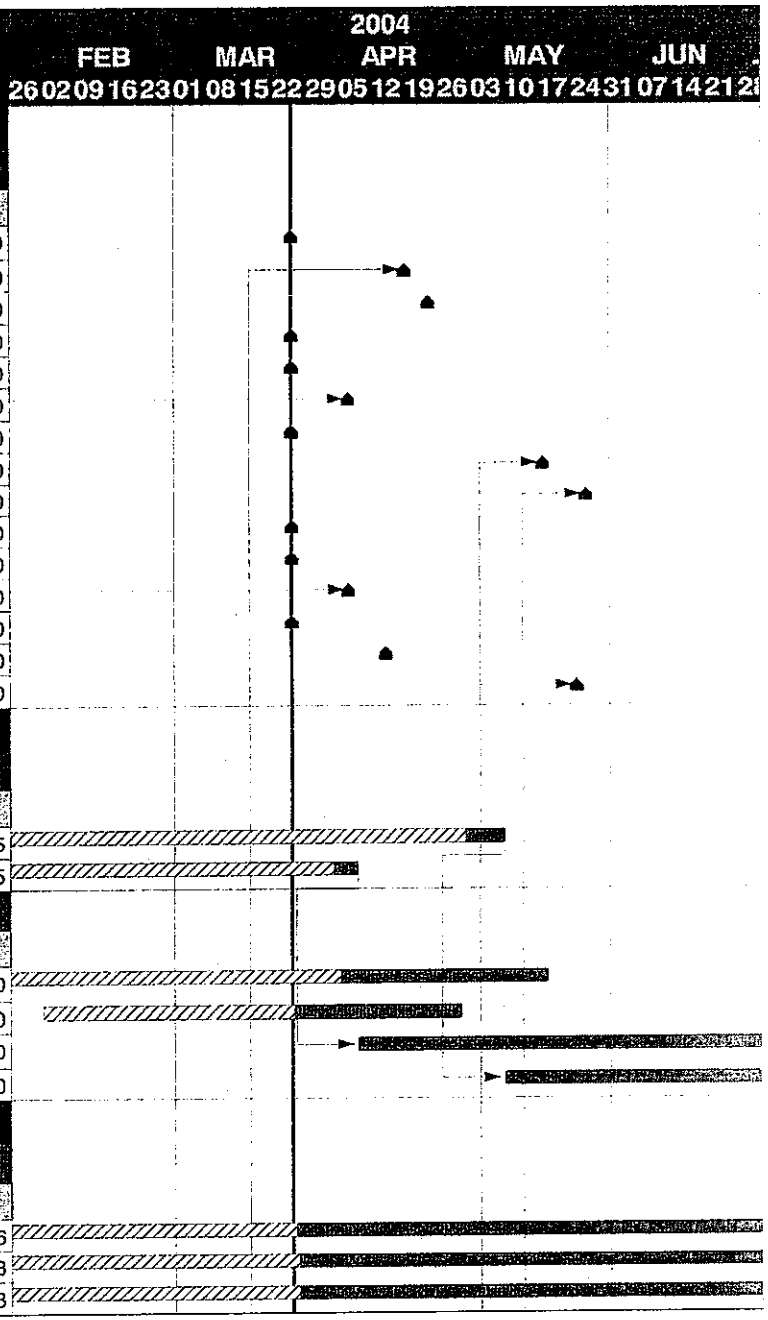
Table 3.2d Event / Action Plan for Construction Noise

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	Orig Dur	Early Start	Early Finish	Percent Complete
KEY DATES					
Completion Dates					
*					
KD-2010	Section 1- Works in Area 1, except LS & EW	0		25MAR04 *	0
KD-2010A	Achievement Date for KD-2010	0		18APR04	0
KD-2010B	Assumed Extension of Time for Area 1	0		23APR04 *	0
KD-2100	Sec.10-Area 9A+9B/Area 8A&10A Roadwork,not LS+EW	0		25MAR04 *	0
KD-2100B	Assumed Extension of Time for Section 10	0		25MAR04 *	0
KD-2100A	Achievement Date for KD-2100	0		06APR04	0
KD-2060	Section 6- Works in Area 7B, except LS & EW	0		25MAR04 *	0
KD-2060A	AchievementDateforKD-2060(affected by corr.pipe)	0		17MAY04	0
KD-2060C	Subst.CompletionofArea7B not affectedbycorr.pipe	0		26MAY04	0
KD-2020	Section 2- Works Area 2, except LS & EW	0		25MAR04 *	0
KD-2020B	Assumed Extension of Time for Area 2	0		25MAR04 *	0
KD-2020A	Achievement Date for KD-2020	0		06APR04	0
KD-2040	Section 4- Waterworks in Areas 3, 4 & 6	0		25MAR04 *	0
KD-2040B	Assumed Extension of Time for KD-2040	0		14APR04 *	0
KD-2040A	Achievement Date for KD-2040	0		24MAY04	0
SUBMISSION, PROCUREMENT, ITA, DIVERSION, ETC.					
Submission & Approval					
*					
B0-205600	Design Submission - Fabricated Movement Joints	60	28NOV03 A	09MAY04	95
B0-170100	Design Submission - Prestressing	60	26DEC03 A	08APR04	95
Preliminaries & Procurement					
*					
B0-123010	Pumping Stations E&M, Pumps, etc.	180	25DEC03 A	18MAY04	70
B0-202110	Fabrication & Delivery - Bridge Bearings	90	02FEB04 A	30APR04	60
B0-170110	Fabrication & Delivery - Prestressing	90	09APR04	07JUL04	0
B0-205610	Fabrication & Delivery-Fabricated Movement Joint	90	10MAY04	07AUG04	0
PRELIMINARIES					
Part 1.1 Preliminaries					
*					
B1-0103E1	Operate/ maintain Moble Phones, 4nr	1020	03SEP02 A	17JUN05	56
B1-0107D0	Update Waste Management Plan	1080	03SEP02 A	15AUG05	53
B1-0107E0	Implement & Monitor Waste Management Plan	1080	03SEP02 A	15AUG05	53



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Progress bar
Critical bar
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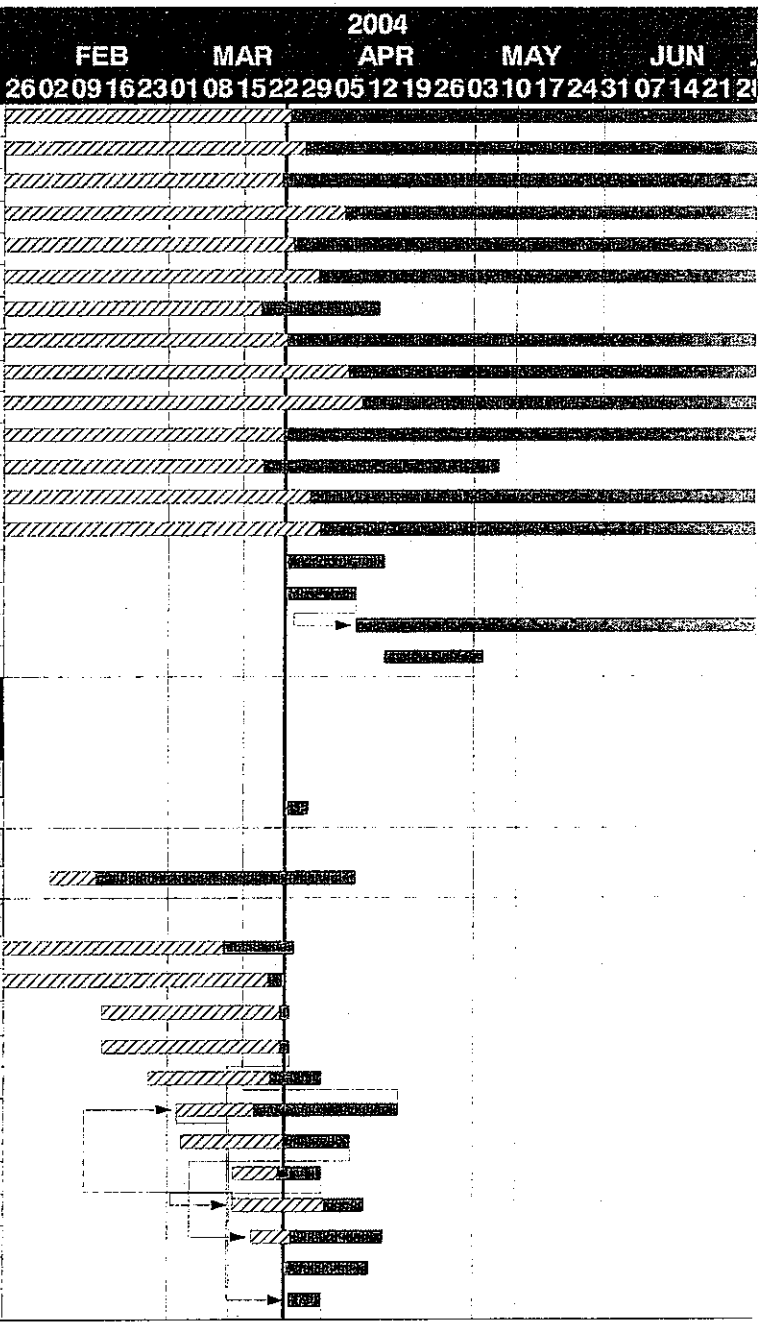
Contract No.TP35/02
Remaining Engineering Infrastructure Works for Pak Shek Kok Development Package 1
3Months Rolling Program

Act ID	Description	Orig Dur	Early Start	Early Finish	Percent Complete
B1-0102B0	Operate & maintain 4-wheel drive vehicle, 2 nr	1001	05SEP02 A	29MAY05	57
B1-0101G0	Maintain/remove measures for traffic flow	1140	10SEP02 A	17OCT05	50
B1-0102D0	Progress Photographs, 30nr	900	01OCT02 A	20MAR05	60
B1-0106N0	Maintain Noise Monitoring	1118	09OCT02 A	05OCT05	50
B1-0103J3	Maintain W.Washing Facilities, WB3 at Zone N2	700	11OCT02 A	02SEP04	77
B1-0106K0	Maintain Air Monitoring	1104	16OCT02 A	09OCT05	49
B1-0107L0	Maintain Ex.Cyclist/Ped.Bridge at Zone H	392	27NOV02 A	14APR04	95
B1-0103E2	Operate/ maintain Mobile Phones, 3nr	1020	03DEC02 A	17SEP05	47
B1-0101D5	Servicing Contractor's Site Accommodation	1045	16DEC02 A	30SEP05	47
B1-0101B0	Servicing Engineer's Site Accommodation	1037	25DEC02 A	26SEP05	47
B1-0103J5	Maintain W.Washing Facilities, WB5 at Zone A	480	28APR03 A	21AUG04	69
B1-0107I0	Maintain Ex.Cyclist/Pedestrian Bridge@N.RoundA	320	21MAY03 A	09MAY04	86
B1-0103J2	Maintain W.Washing Facilities, WB2 at Zone Q	424	10AUG03 A	23SEP04	57
B1-0103J4	Maintain W.Washing Facilities, WB4 at Zone L	424	15AUG03 A	23SEP04	57
B1-0103B1	Erect Signboards, 1nr at Zone A	21	26MAR04	15APR04	0
B1-0103I1	Construct W.Washing Facilities, WB1 at Zone E	15	26MAR04	09APR04	0
B1-0103J1	Maintain W.Washing Facilities, WB1 at Zone E	211	10APR04	06NOV04	0
B1-0103B4	Erect Signboard, 1nr	21	16APR04	06MAY04	0
CONSTRUCTION					
Section 1- Works in Area 1, except LS & EW					
Part 4.1 Drainage & Sewerage - Section 1					
B4-0106E2	Trapezodial channel, at NW corner of H Site 2	5	26MAR04 A	30MAR04	10
Section 1 - Utilities					
UT-0100P7	Powers(11kV), L2/Ch.200-283	17	05FEB04 A	09APR04	15
Part 5.1 Roadworks - Section 1					
B5-0105A5	Lightings, Cycle track & Footpath, L1/Ch.100-160	10	18DEC03 A	27MAR04	85
B5-0102A3A	Rdworks&Fpath,D1/Ch.320-470(10mwideabvePSKundp.)	7	14JAN04 A	25MAR04	95
B5-0102A3	Roadwrks&Footpth,D1/Ch.320-470(NotabvePSKundp.)	22	16FEB04 A	26MAR04	95
B5-0102A4	Roadworks & Foothpath, D1/Ch.470-540	12	16FEB04 A	26MAR04	95
B5-0102A7	Roadworks, L2/Ch.200-283	25	26FEB04 A	02APR04	70
B5-0109A0	Roadwork Furnitures & Miscellaneous	25	03MAR04 A	18APR04	35
B5-0105A3A	Lightings, Cycletrack, D1/Ch.320-470	35	04MAR04 A	08APR04	60
B5-0105A11	Lightings,Cycletrck&Foothpth,D1side rd.remaining	15	15MAR04 A	02APR04	50
B5-0105A2	Lightings, Cycle track & Footpath, D1/Ch.240-320	30	15MAR04 A	11APR04	70
B5-0105A4	Lightings, Cycle track, D1/Ch.470-540	10	19MAR04 A	15APR04	30
B5-0105A7	Lightings, Cycle track & Footpath, L2/Ch.200-283	18	26MAR04	12APR04	0
B5-0102A13	Divert CycleTrack toCarriageway besideUnderpass	7	27MAR04	02APR04	0



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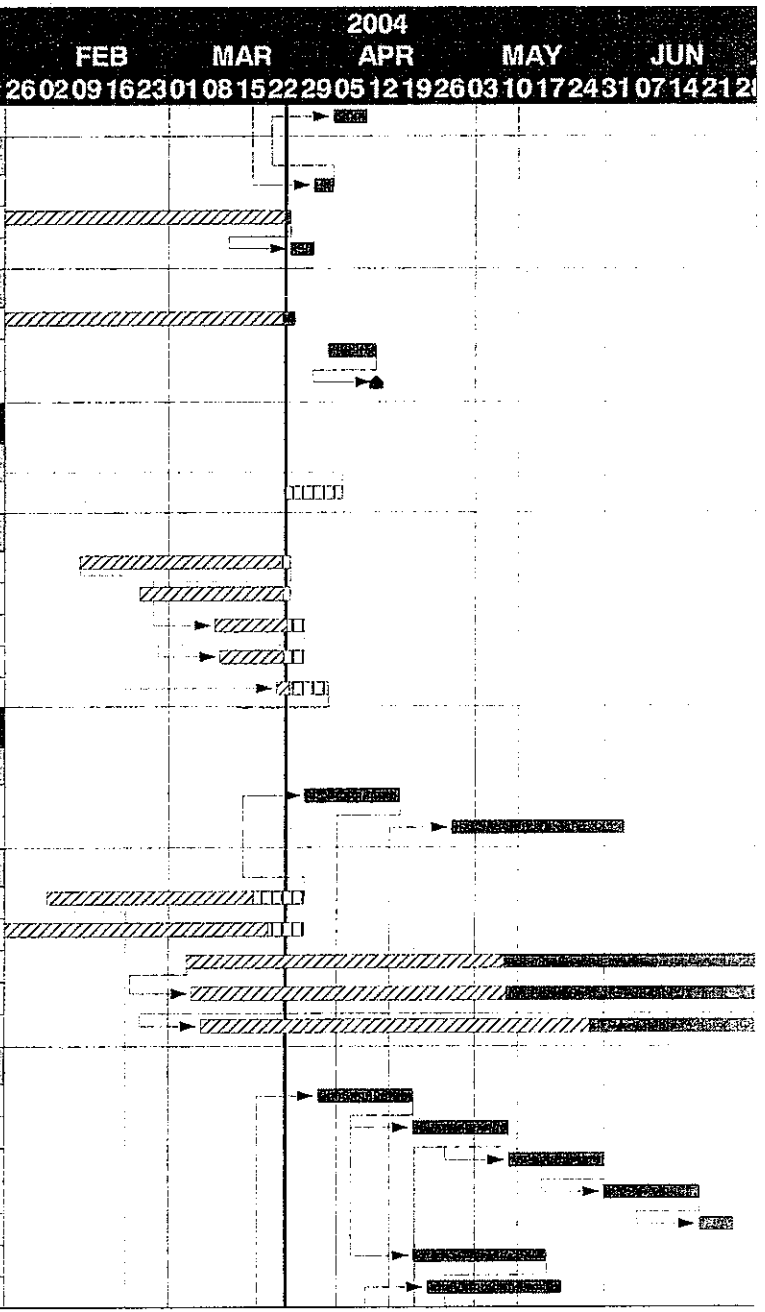
Start milestone point
Finish milestone point

Contract No.TP35/02
Remaining Engineering Infrastructure Works for Pak Shek Kok Development Package 1
3Months Rolling Program

Act ID	Description	Orig Dur	Early Start	Early Finish	Percent Complete
B5-0109A10	Roadworks D1 remaining beside Tolo Highway	7	05APR04	11APR04	0
Part 8.1 Subway Barrel & Pump House (Und. Ext.)					
B8-010800	Drainage, Backfill & Strut Removal of Bay 1	4	01APR04	04APR04	0
B8-010950	Finishing & Furnitures	75	26NOV03 A	26MAR04	99
B8-010880	Misc Works	5	27MAR04	31MAR04	0
Part 8.2 Ramp & Stairway (PSK Underpass Ext.)					
B8-011800	Finishing & Furnitures	72	12NOV03 A	27MAR04	98
B8-011600	Misc works	10	04APR04	13APR04	0
B8-011950	Underpass Extension - Programmed Completion	0		13APR04	0
Section 2- Works in Area 2, except LS & EW					
Part 4.2 Drainage & Sewerage - Section 2					
B4-0213F2	Trapezodial channel, N corner of H Site 3	12	26MAR04	06APR04	0
Part 5.2 Roadworks - Section 2					
B5-0216E2	Lightings, Cycle track & Footpath, L5/Ch.100-150	12	11FEB04 A	26MAR04	95
B5-0215A4	Roadworks, L5/Ch.220-300	16	24FEB04 A	26MAR04	95
B5-0216E3	Lightings, Cycle track & Footpath, L5/Ch.150-220	15	11MAR04 A	29MAR04	80
B5-0216E4	Lightings, Cycle track & Footpath, L5/Ch.220-300	16	12MAR04 A	29MAR04	75
B5-0218A0	Roadwork Furnitures & Miscellaneous	12	24MAR04 A	03APR04	25
Section 3-Works in Areas3,4+6,except Sec.4+LS&EW					
Part 3.3 Earthworks - Section 3					
B3-0308M1	Deposition & Compaction, L2/Ch.100-200	20	30MAR04	18APR04	0
B3-0308M2	Deposition & Compaction, D1/Ch.780-920	36	30APR04	04JUN04	0
Part 4.3 Drainage & Sewerage - Section 3					
B4-0317D21	P/c pipe, L2/Ch.100-200 remaining	20	04FEB04 A	29MAR04	80
B4-0317C4	Clay pipe, at Open Channel, F606-F609	70	27OCT03 A	29MAR04	95
B4-0323B10	Open Channel - Formworks Full Phase	35	05MAR04 A	16JUL04	50
B4-0324C10	OpenChannel-Jointfiller/sealant,waterstopFPhase	35	06MAR04 A	16JUL04	50
B4-0324A10	Open Channel - Concrete Full Phase	35	08MAR04 A	18AUG04	50
Section 3 - Utilities					
UT-0300G1	Gas Mains, L2/Ch.100-200	20	02APR04	21APR04	0
UT-0300P1	Powers(11kV), L2/Ch.100-200	20	22APR04	11MAY04	0
UT-0300T1A	PCCW, L2/Ch.100-200	20	12MAY04	31MAY04	0
UT-0300T1B	HGC-New World, L2/Ch.100-200	20	01JUN04	20JUN04	0
UT-0300T1C	CATV, L2/Ch.100-200	7	21JUN04	27JUN04	0
UT-0300G2	Gas Mains, D1/Ch.780-920	28	22APR04	19MAY04	0
UT-0300T1D	Gas Mains at Area 6 under bridge	28	25APR04	22MAY04	0



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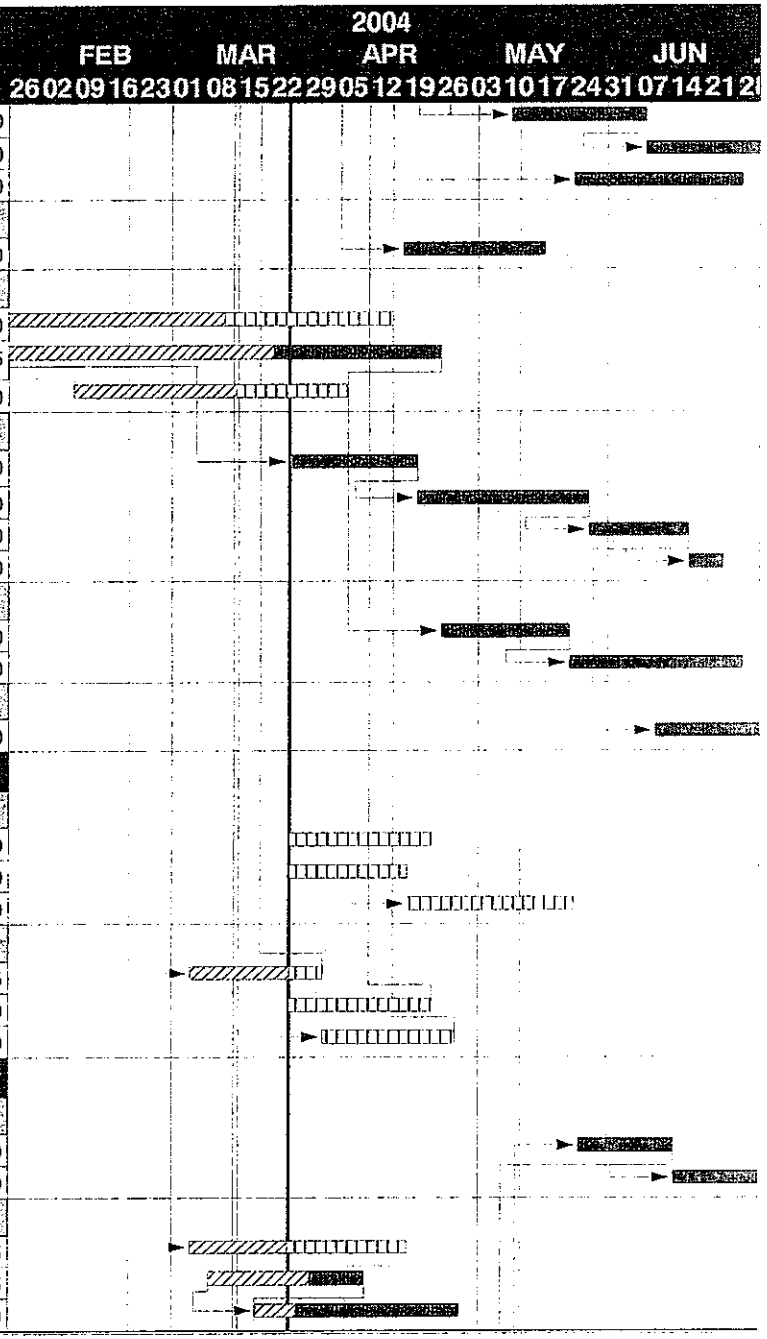
Start milestone point
Finish milestone point

Contract No.TP35/02
Remaining Engineering Infrastructure Works for Pak Shek Kok Development Package 1
3Months Rolling Program

Act ID	Description	Orig Dur	Early Start	Early Finish	Percent Complete
UT-0300P2	Powers(132kV & 11kV), D1/Ch.780-920	28	12MAY04	08JUN04	0
UT-0300T2A	PCCW, D1/Ch.780-920	25	09JUN04	03JUL04	0
UT-0300G4B	Gas Main at Area 4	35	25MAY04	28JUN04	0
Part 5.3 Roadworks - Section 3					
B5-0325C1	Roadworks, L2/Ch.100-200	30	19APR04	18MAY04	0
Part 7.1 - Piling					
B7-031020	Install Bored Piles, 2300dia, 10nr	110	21OCT03 A	16APR04	80
B7-031025	Pile Testing	90	17JAN04 A	26APR04	65
B7-031050	Watermain Connection by WSD	30	09FEB04 A	06APR04	60
Part 7.2 - Substructure - East Abutment					
B7-032010	Excavation East Abutment	27	26MAR04	21APR04	0
B7-032030	Abutment Cap East Abutment	36	22APR04	27MAY04	0
B7-032040	Abutment Wall, Lower - East Abutment	21	28MAY04	17JUN04	0
B7-032070	Bearing	7	18JUN04	24JUN04	0
Part 7.3 - Substructure - West Abutment					
B7-033010	Excavation West Abutment	27	27APR04	23MAY04	0
B7-033030	Abutment Cap West Abutment	36	24MAY04	28JUN04	0
Part 7.5 - Retaining Walls					
B7-035030	Retaining Wall No. 2	35	11JUN04	15JUL04	0
Section 4- Waterworks in Areas 3, 4, & 6					
Part 6.3 Waterworks - Section 4 except Area 6					
B6-0424C3	Waterworks under footpath at Area 3	30	26MAR04	24APR04	0
B6-0425H10	Watermain Across YauKingLane at Area 4 remaining	25	26MAR04	19APR04	0
B6-0424C4	Waterworks, under footpath at Area 4	35	20APR04	24MAY04	0
Part 6.4 Waterworks - Section 4 in Area 6					
B6-0417C1	Waterworks, L2/Ch.100-200	26	05MAR04 A	01APR04	75
B6-0424C14	Waterworks at Area 6, Under bridge	30	26MAR04	24APR04	0
B6-0417C2	Waterworks, D1/Ch.780-920	28	02APR04	29APR04	0
Section 5-Work in Area 7A,except PumpStn.1,LS&EW					
Part 3.4 Earthworks - Section 5					
B3-0511L2	Excavate, D1/Ch.620-780	20	26MAY04	14JUN04	0
B3-0511L1	Excavate, D1/Ch.540-620	25	15JUN04	09JUL04	0
Part 4.5 Drainage & Sewerage - Section 5					
B4-0528F3	P/c pipe, At PS1	30	05MAR04 A	19APR04	45
B4-0528F2	P/c pipe, D1/Ch.620-780	45	09MAR04 A	10APR04	65
B4-0528F1	P/c pipe, D1/Ch.540-620	45	19MAR04 A	30APR04	20



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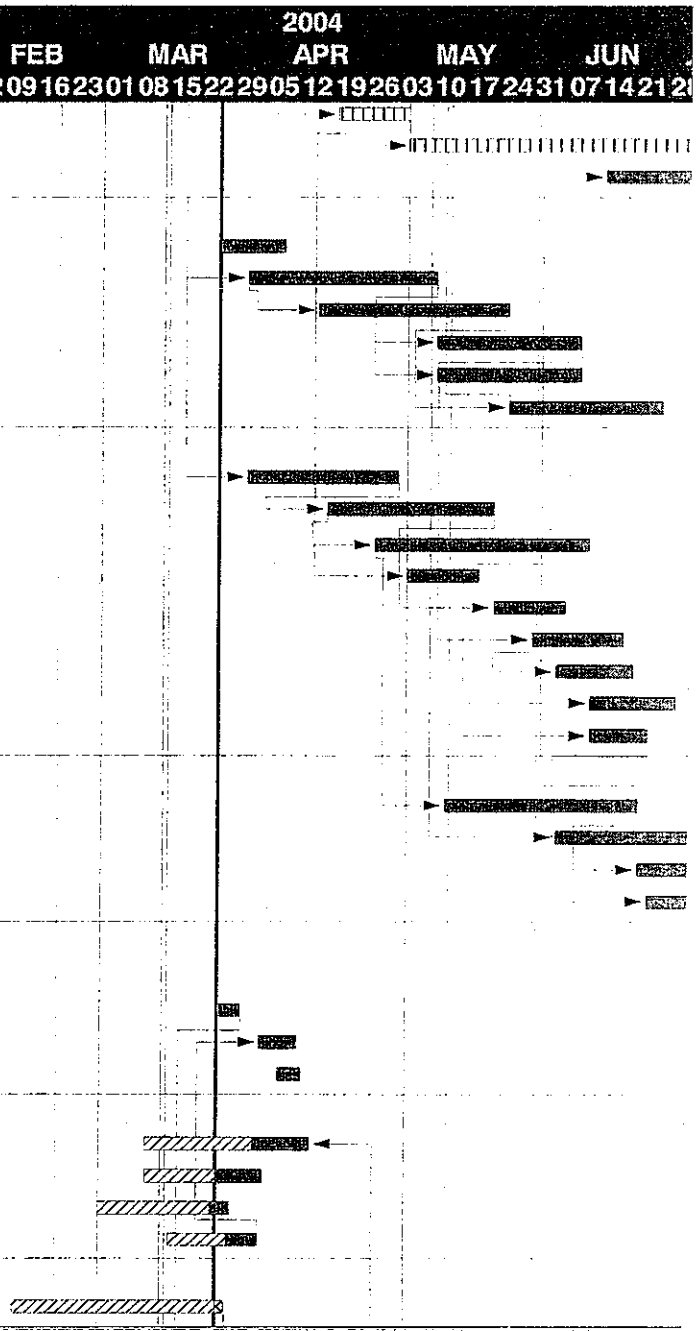
Act ID	Description	Orig Dur	Early Start	Early Finish	Percent Complete
B4-0530A3	Clay pipe, At PS1	15	20APR04	04MAY04	0
B4-0535A1	SewerRising Main, At PS1	60	05MAY04	03JUL04	0
B4-0533B	Trapezodial channel, west of Site 2	40	15JUN04	24JUL04	0
Part 6.5 Waterworks - Section 5					
B6-0501A0	Trial Pits	14	26MAR04	08APR04	0
B6-0503A2	Watermains, D1/Ch.620-780	40	01APR04	10MAY04	0
B6-0503A5	Replace Existing Watermain,Ch.620-770	40	16APR04	25MAY04	0
B6-0503A1	Watermains, D1/Ch.540-620	30	11MAY04	09JUN04	0
B6-0503A3	Watermains, At PS1	30	11MAY04	09JUN04	0
B6-0503A6	Realigned existing watermain connection by WSD	32	26MAY04	26JUN04	0
Section 5 - Utilities					
UT-0500P2	Powers(11kV), D1/Ch.620-780	32	01APR04	02MAY04	0
UT-0500T2A	PCCW, D1/Ch.620-780	35	18APR04	22MAY04	0
UT-0500T2B	HGC-New World, D1/Ch.620-780	45	28APR04	11JUN04	0
UT-0500P3	Powers(11kV) at PS1	15	05MAY04	19MAY04	0
UT-0500T3A	PCCW at PS1	15	23MAY04	06JUN04	0
UT-0500P1	Powers(11kV), D1/Ch.540-620	19	31MAY04	18JUN04	0
UT-0500T1A	PCCW, D1/Ch.540-620	16	05JUN04	20JUN04	0
UT-0500T1B	HGC-New World, D1/Ch.540-620	18	12JUN04	29JUN04	0
UT-0500T3B	HGC-New World at PS1	12	12JUN04	23JUN04	0
Part 5.5 Roadworks - Section 5					
B5-0541B2	Cycle track & Footpath, D1/Ch.620-780	40	13MAY04	21JUN04	0
B5-0540F2	Roadworks, D1/Ch.620-780	40	05JUN04	14JUL04	0
B5-0541B1	Cycle track & Footpath, D1/Ch.540-620	20	22JUN04	11JUL04	0
B5-0541B3	Footpath, At PS1	15	24JUN04	08JUL04	0
Section 6- Works in Area 7B, except LS & EW					
Part 3.5 Earthworks - Section 6					
B3-0616A4	Deposition & Compact, L3/Ch.140-220	5	26MAR04	30MAR04	0
B3-0616A1	Deposition & Compact, L3/Ch.220-280	8	04APR04	11APR04	0
B3-0616A2	Deposition & Compact, L3/Ch.100-140	5	08APR04	12APR04	0
Part 4.6 Drainage & Sewerage - Section 6					
B4-0643C	Trapezodial channel, at L3	30	11MAR04 A	14APR04	65
B4-0643C3	Trapezodial channel, at L5	25	11MAR04 A	04APR04	60
B4-0642A15	Existing Corrugated Pipe Realignment/Demolition	20	01MAR04 A	28MAR04	85
B4-0642A11	P/c pipes, L3/S81 to 5Cell Culvert	25	16MAR04 A	03APR04	65
Part 6.7 Waterworks - Section 6					
B6-060000	Waterworks - Section 6, Area 7B	45 *	12FEB04 A	27MAR04	96



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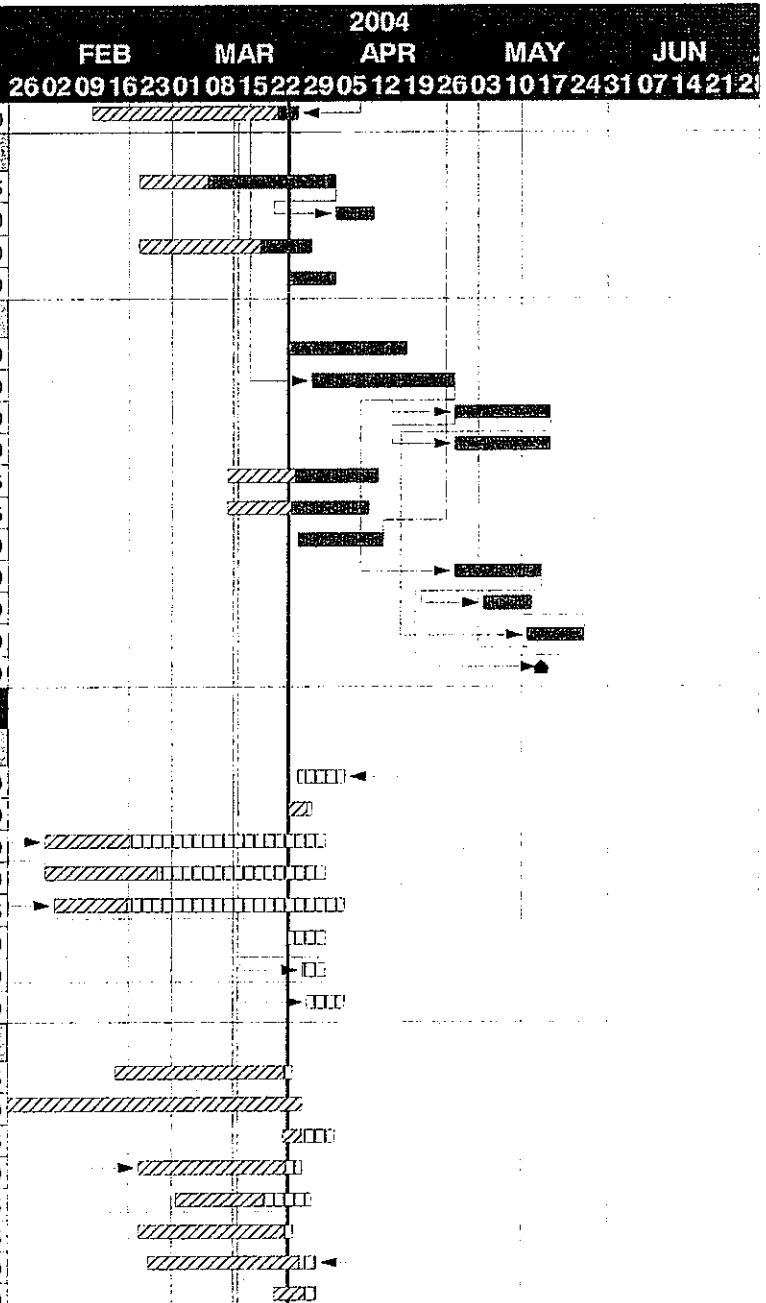
B6-0655A3	Watermains, L5/Ch.300-420	20	13FEB04 A	27MAR04	90
Section 6 - Utilities					
UT-0600P4	Powers(11kV), L3/Ch.140-220	15	23FEB04 A	04APR04	35
UT-0600P2	Powers(132kV & 11kV), L3/Ch.100-140	8	05APR04	12APR04	0
UT-0600P3	Powers(132kV & 11kV), L5/Ch.300-420	16	23FEB04 A	30MAR04	70
UT-0600P1	Powers(11kV), L3/Ch.220-280	10	26MAR04	04APR04	0
Part 5.6 Roadworks - Section 6					
B5-0652A4	Lightings, Cycle track & Footpath, L3/Ch.140-220	25	26MAR04	19APR04	0
B5-0651A4	Roadworks, L3/Ch.140-220	30	31MAR04	29APR04	0
B5-0651A2	Roadworks, L3/Ch.100-140	20	30APR04	19MAY04	0
B5-0652A2	Lightings, Cycle track & Footpath, L3/Ch.100-140	20	30APR04	19MAY04	0
B5-0651A3	Roadworks, L5/Ch.300-420	35	13MAR04 A	13APR04	45
B5-0652A3	Lightings, Cycle track & Footpath, L5/Ch.300-420	30	13MAR04 A	11APR04	45
B5-0652A1	Lightings, Cycle track & Footpath, L3/Ch.220-280	18	28MAR04	14APR04	0
B5-0651A1	Roadworks, L3/Ch.220-280	18	30APR04	17MAY04	0
B5-0653J0	RoadworkFurnitures&Misc.affected by corru. pipe	10	06MAY04	15MAY04	0
B5-0652A13	RoadworkFurnitures&Misc.not affected corr. pipe	12	15MAY04	26MAY04	0
B5-0653J10	CompletionofRemainingPortionaffectedbycorr.pipe	0		17MAY04	0
Sec.10-Areas9A+9B/ Areas8+10A Roadwork,not LS+EW					
Part 4.10 Drainage & Sewerage - Section 10					
B4-1078B14	Trapezoidal Channel,Area 9B Promenade remaining	10	28MAR04	06APR04	0
B4-1078B2	300-U channel, Area 9A	25	26MAR04	30MAR04	80
B4-1698B0	Placing Twin DN2500 Pipes	12	03FEB04 A	02APR04	30
B4-1698G0	Placing Rubble mound/Levelling course	14	03FEB04 A	02APR04	40
B4-1698E0	Backfilling & Misc. Works	10	05FEB04 A	06APR04	25
B4-1698D20	Place Levelling Stone	8	26MAR04	02APR04	0
B4-1698D0	Install p/c Toe Blocks & Outfall Units	5	29MAR04	02APR04	0
B4-1698F0	Reinstatement of Seawall	8	30MAR04	06APR04	0
Part 5.9 Roadworks - Section 10					
B5-1059B0	Vehicular gates, Area 8A, 2x2nr	25	18FEB04 A	26MAR04	95
B5-1065C2	Lighting & Cycletrack, Area 9A	59	02JAN04 A	28MAR04 A	100
B5-1065F2	Chain Link Fence, Area 9A	15	25MAR04 A	04APR04	35
B5-1065F3	Chain Link Fence, Area 9B, Zone S3	15	23FEB04 A	28MAR04	90
B5-1065G5	Vehicular gates, Area 9B, 1x2nr	14	02MAR04 A	30MAR04	65
B5-1065F5	Chain Link Fence, Area 9B, Zone M	15	23FEB04 A	26MAR04	95
B5-1065F4	Chain Link Fence, Area 9B, Zone M, Promenade	8	25FEB04 A	31MAR04	90
B5-1065C14	Lighting&Cycletrack,Area9B,ZoneM,Prome.remaining	8	23MAR04 A	31MAR04	70



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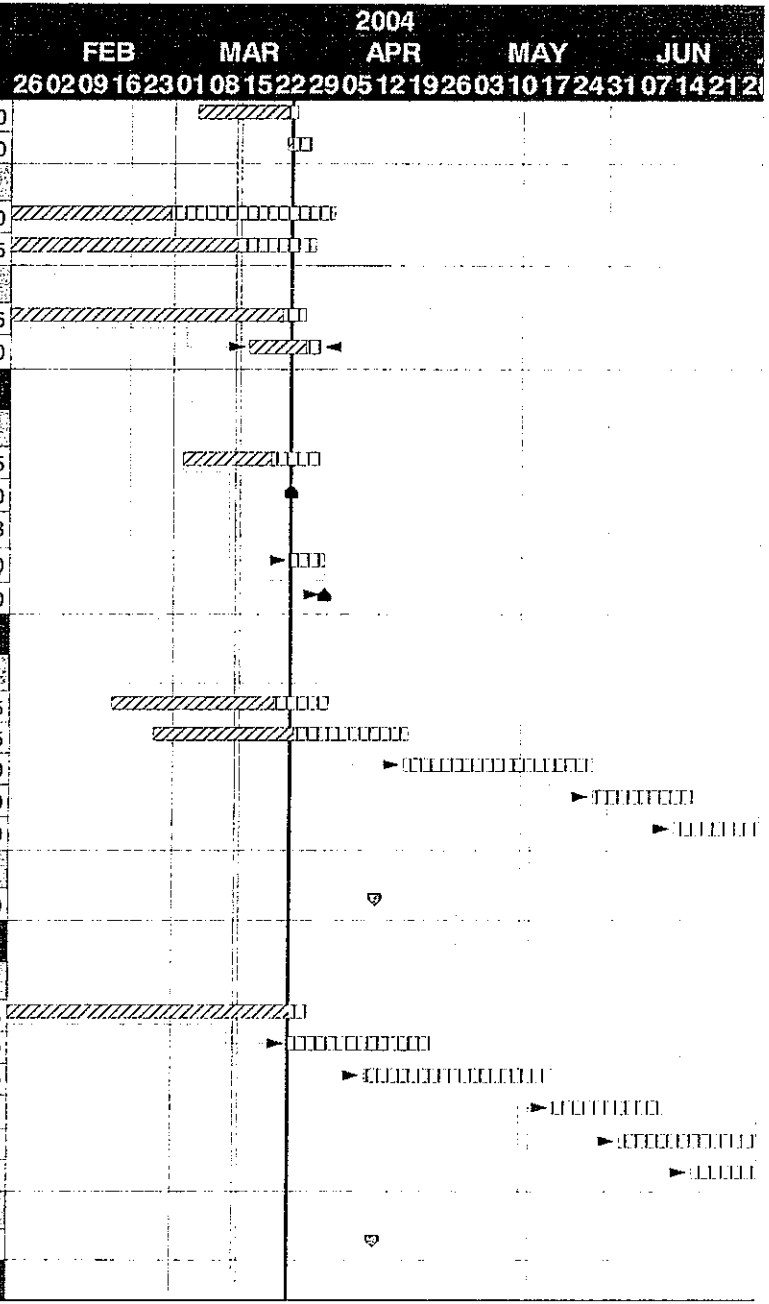
B5-1065C6	Lighting & Cycletrack, Area 10A	5	06MAR04 A	26MAR04	90
B5-1065F6	Chain Link Fence, Area 10A	5	25MAR04 A	29MAR04	20
Part 9.1 Subway Barrel & Pump House (SB1)					
B9-100700	Drainage	30	10DEC03 A	03APR04	70
B9-100900	E&M Works	30	12DEC03 A	30MAR04	85
Part 9.2 Ramps (SB1)					
B9-108510	Finishing & Furnitures at side of HKIBT	50	22DEC03 A	28MAR04	95
B9-109010	E&M Works at side of HKIBT	30	17MAR04 A	31MAR04	80
Sec.11-Earthwork&Works of Culvert C10 in Area10A					
Part 10 Pipe Culvert C10					
BC-111000	Backfilling rest	17	03MAR04 A	31MAR04	65
BC-110700	Inspection by DSD	0		25MAR04	0
BC-110650	Construct Manhole C10-1A	15	26MAR04	25MAR04	98
BC-110690	Extraction of sheetpile and Lateral Support	7	26MAR04	01APR04	0
BC-110780	Completion of Remaining Portion of Pipe Culvert	0		01APR04	0
Section 12- Works of Sewage Pumping Station No.1					
Part 11.1 Pumping Station 1 Piling+Struct.Work					
BS-120250	Pile Testing	30	17FEB04 A	02APR04	75
BS-120300	Sheetpiling	55	26FEB04 A	19APR04	55
BS-120350	Excavation & Strutting	40	19APR04	28MAY04	0
BS-120400	Construct Baseslab	21	29MAY04	18JUN04	0
BS-120500	Construct Walls	42	15JUN04	26JUL04	0
Part 11.4 Electrical & Mechanical Equipment					
BS-124030	Link Application	0	13APR04 *		0
Section 13- Works of Sewage Pumping Station No.2					
Part 11.2 Pumping Station 2 Piling+Struct.Work					
BS-130200	InstallBoredPiles,2.22dia,2.3bellout,4nrAlt.Des.	70	11JAN04 A	29MAR04	95
BS-130250	Pile Testing	30	26MAR04	24APR04	0
BS-130350	Excavation & Strutting	40	11APR04	20MAY04	0
BS-130400	Construct Baseslab	24	21MAY04	13JUN04	0
BS-130500	Construct Walls	42	04JUN04	15JUL04	0
BS-130650	Waterproofing	30	19JUN04	18JUL04	0
Part 11.4 Electrical & Mechanical Equipment					
BS-134030	Link Application	0	13APR04 *		0
Section 15- Waterworks in Area 15					



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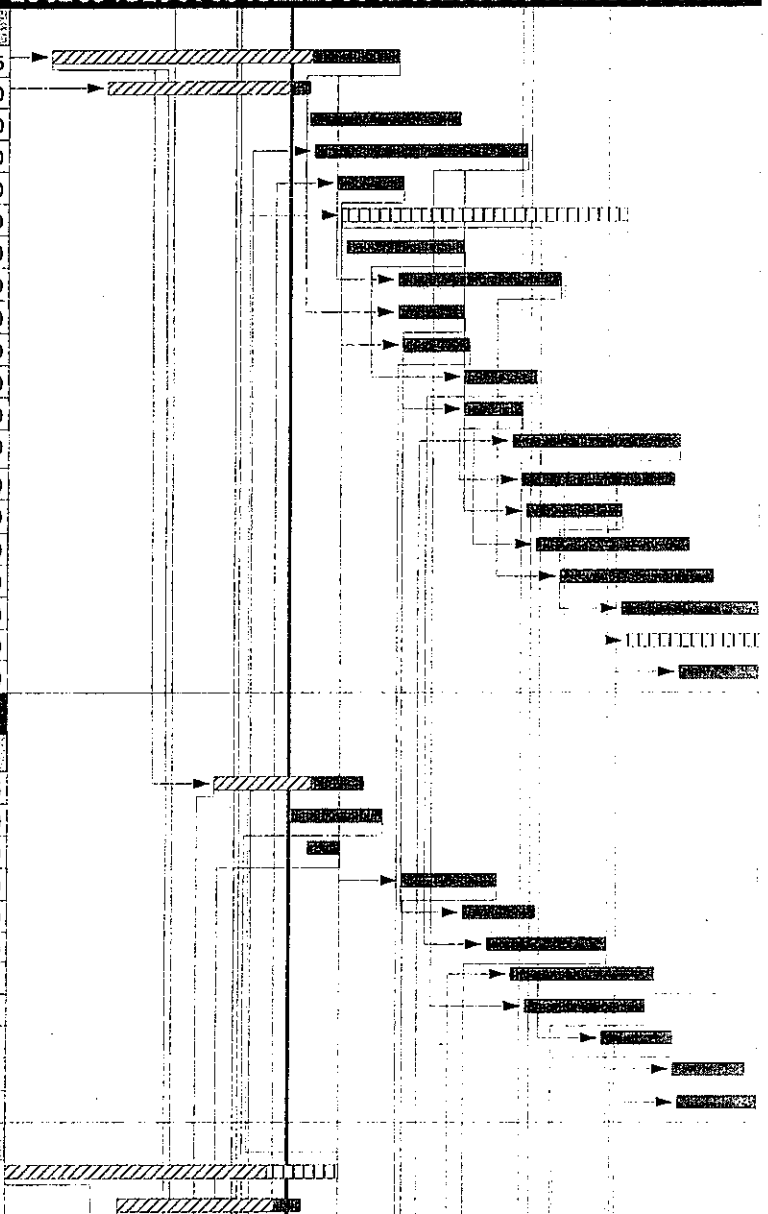
Part 6.10 Waterworks - Section 15					
B6-1595D4	Waterworks, D1/Ch.1500-1860	90	04FEB04 A	17APR04	75
B6-1595D2	Waterworks, D1/Ch.1200-1360	40	16FEB04 A	29MAR04	90
B6-1595D22	Watermain Connection by WSD,D1/Ch.1200-1270	32	30MAR04	30APR04	0
B6-1595D51	Waterworks, D1/Ch.1020-1200	45	31MAR04	14MAY04	0
B6-1595D8	Waterworks, L4/Ch.317-397	14	05APR04	18APR04	0
B6-1595D6	Waterworks, D1/Ch.1900-2180	60	06APR04	04JUN04	0
B6-1595D1	Waterworks, D1/Ch.920-1020	25	07APR04	01MAY04	0
B6-1595D14	Replace Existing Watermain, D1/Ch.1690-1860	34	18APR04	21MAY04	0
B6-1595D5	Waterworks, D1/Ch.1860-1900	14	18APR04	01MAY04	0
B6-1595D7	Waterworks, L4/Ch.397-437	14	19APR04	02MAY04	0
B6-1595D11	Replace Existing Watermain, D1/Ch.920-990	15	02MAY04	16MAY04	0
B6-1595D15	Replace Existing Watermain,D1/Ch.1860-1920	12	02MAY04	13MAY04	0
B6-1595D3	Waterworks, D1/Ch.1360-1500	35	12MAY04	15JUN04	0
B6-1595D25	Watermain Connection by WSD,D1/Ch.1860-1920	32	14MAY04	14JUN04	0
B6-1595D31	Replace Existing Watermain, D1/Ch.1100-1200	20	15MAY04	03JUN04	0
B6-1595D21	Watermain Connection by WSD, D1/Ch.920-990	32	17MAY04	17JUN04	0
B6-1595D24	Watermain Connection by WSD, D1/Ch.1690-1860	32	22MAY04	22JUN04	0
B6-1595D41	Watermain Connection by WSD, D1/Ch.1100-1200	32	04JUN04	05JUL04	0
B6-1595D16	Replace Existing Watermain, D1/Ch.2080-2180	32	05JUN04	06JUL04	0
B6-1595D13	Replace Existing Watermain, D1/Ch.1380-1490	22	16JUN04	07JUL04	0
Section 16- Remainder of Works, except LS+EW					
Part 3.11 Earthworks - Section 16					
B3-1622M4	Excavate, D1/Ch.1500-1860	45	10MAR04 A	10APR04	65
B3-1622M2	Excavate, D1/Ch.1200-1360	20	26MAR04	14APR04	0
B3-1622N6A	Deposit/Compact,L4/Ch.100-160	7	30MAR04	05APR04	0
B3-1622N8	Deposit & Compact, L4/Ch.317-397	20	19APR04	08MAY04	0
B3-1622M5	Excavate, D1/Ch.1860-1900	15	02MAY04	16MAY04	0
B3-1622M1	Excavate, D1/Ch.920-1020	25	07MAY04	31MAY04	0
B3-1622N9	Deposit/ Compact, N.end, Promenade	30	12MAY04	10JUN04	0
B3-1622M11	Excavate,D1/Ch.1020-1200	25	15MAY04	08JUN04	0
B3-1622M6	Excavate, D1/Ch.1900-2180	15	31MAY04	14JUN04	0
B3-1622N7	Deposit/ Compact, L4/Ch.397-437	15	15JUN04	29JUN04	0
B3-1622N3	Deposit/ Compact, D1/Ch.1360-1500	30	16JUN04	15JUL04	0
Part 4.11 Drainage & Sewerage - Section 16					
B4-1683B36	Drainage, D1, S0076-S0080 remaining	75	26DEC03 A	05APR04	85
B4-1685B16	Sewerage, D1, F056-F058	20	19FEB04 A	28MAR04	85



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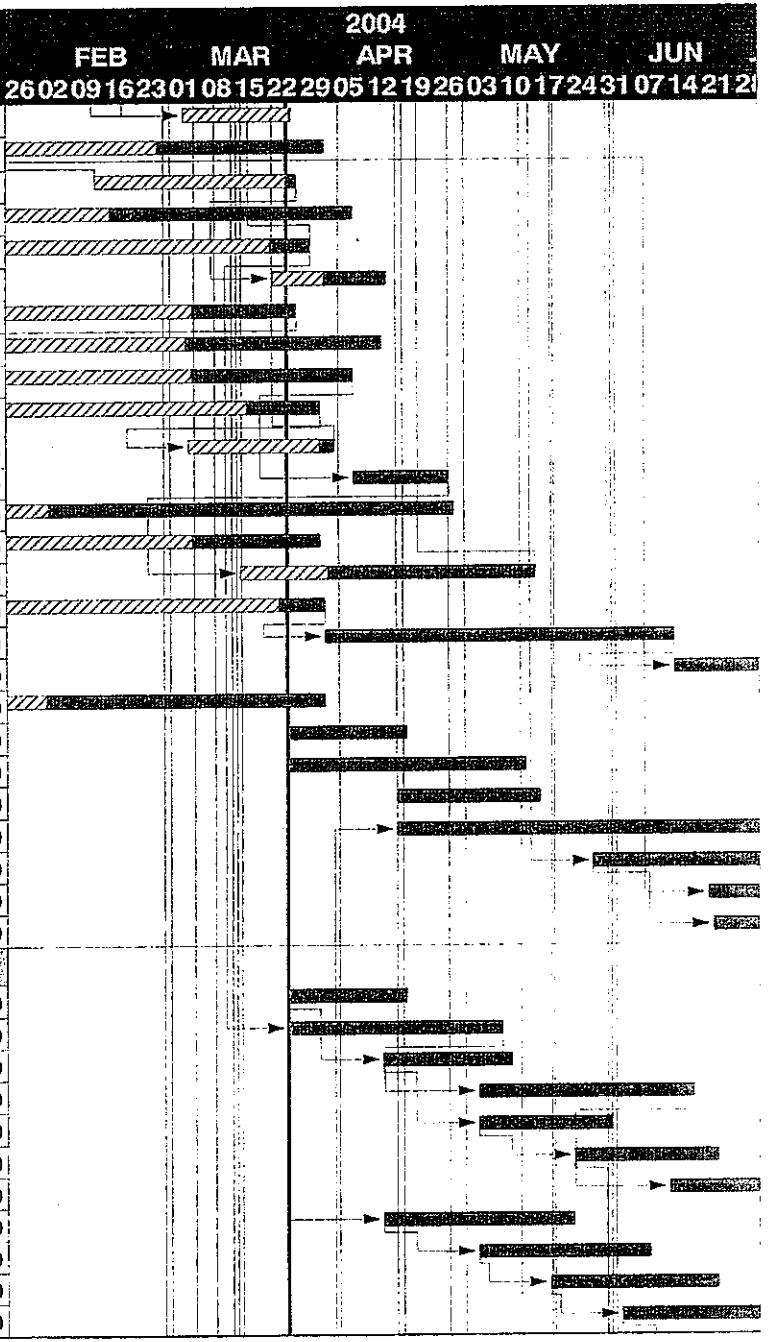
B4-1685B12	Drainage,D1, S0080 to Existing	25	04MAR04 A	26MAR04	98
B4-1683B2	Drainage, D1, S0051-S0056	40	08OCT03 A	02APR04	80
B4-1691B4	Sewerage Rising Mains, D1, Ch1500-F47	30	14FEB04 A	27MAR04	95
B4-1685B11	Sewerage, D1, F034-F038	72	25JUL03 A	08APR04	80
B4-1683B11	Drainage ,D1, S0043-S0051	90	13OCT03 A	30MAR04	95
B4-1685B5	Sewerage, D1, F051-F052	35	23MAR04 A	15APR04	45
B4-1683B7	Drainage, L4, S406-S401	14	01NOV03 A	27MAR04	85
B4-1683B17	Drainage, L4, S406-S407	45	02JAN04 A	14APR04	60
B4-1683B27	Drainage, L4, S406-S404	35	02JAN04 A	08APR04	65
B4-1683B8A	Drainage,L4,S402-S406 remaining	36	15JAN04 A	01APR04	80
B4-1691B8	Sewerage Rising Mains, L4, F044-F45+	30	05MAR04 A	04APR04	90
B4-1691B7	Sewerage Rising Mains, L4, +F045-F046	20	09APR04	28APR04	0
B4-1683B3	Drainage, D1, S0056-S0061	70	10NOV03 A	29APR04	50
B4-1685B3	Sewerage, D1, F040-F042	35	18NOV03 A	01APR04	80
B4-1691B3	Sewerage Rising Mains, D1, F046-Ch1500	25	16MAR04 A	16MAY04	30
B4-1078B15	Preparation Works for 2.5m Trapezoidal Channel	60	27DEC03 A	02APR04	90
B4-1078B25	Fabrication Works and Delivery of 2.5m Trapz.Ch.	55	03APR04	14JUN04	0
B4-1078B35	Installation and Construction of 2.5m Trap. Ch.	60	15JUN04	13AUG04	0
B4-1689C4	Trapezoidal Channel, Area 14	14	26DEC03 A	02APR04	40
B4-1689C2	Trapezoidal Channel, NE of School Site	25	26MAR04	19APR04	0
B4-1689D6	Trapezoidal Channel, D1, L4 to Culvert C10	50	26MAR04	14MAY04	0
B4-1689C7	Trapezoidal Channel, W of H.Site 1, Promenade	30	18APR04	17MAY04	0
B4-1689D9	Trapezoidal Channel, L5 South	100	18APR04	26JUL04	0
B4-1689C6	Trapezoidal Channel, Zone T	60	29MAY04	27JUL04	0
B4-1689D2	Trapezoidal Channel, D1at S0049 to Area 9B bound	30	22JUN04	21JUL04	0
B4-1689C8	Trapezoidal Channel, at H Site 3	40	23JUN04	01AUG04	0
Section 16 - Utilities					
UT-1600G1	Gas Mains, D1/Ch.920-1020	25	26MAR04	19APR04	0
UT-1600G11	Gas Mains, D1/Ch.1020-1200	45	26MAR04	09MAY04	0
UT-1600P1	Powers(11kV), D1/Ch.920-1020	27	15APR04	11MAY04	0
UT-1600P11	Powers(11kV), D1/Ch.1020-1200	45	05MAY04	18JUN04	0
UT-1600T1A	PCCW, D1/Ch.920-1020	28	05MAY04	01JUN04	0
UT-1600T1B	HGC-New World, D1/Ch.920-1020	30	25MAY04	23JUN04	0
UT-1600T1F	PCCW,D1/Ch.1020-1200	50	14JUN04	02AUG04	0
UT-1600G2	Gas Mains, D1/Ch.1200-1360	40	15APR04	24MAY04	0
UT-1600P2	Powers(11kV), D1/Ch.1200-1360	36	05MAY04	09JUN04	0
UT-1600T2A	PCCW, D1/Ch.1200-1360	35	20MAY04	23JUN04	0
UT-1600T2B	HGC-New World, D1/Ch.1200-1360	35	04JUN04	08JUL04	0



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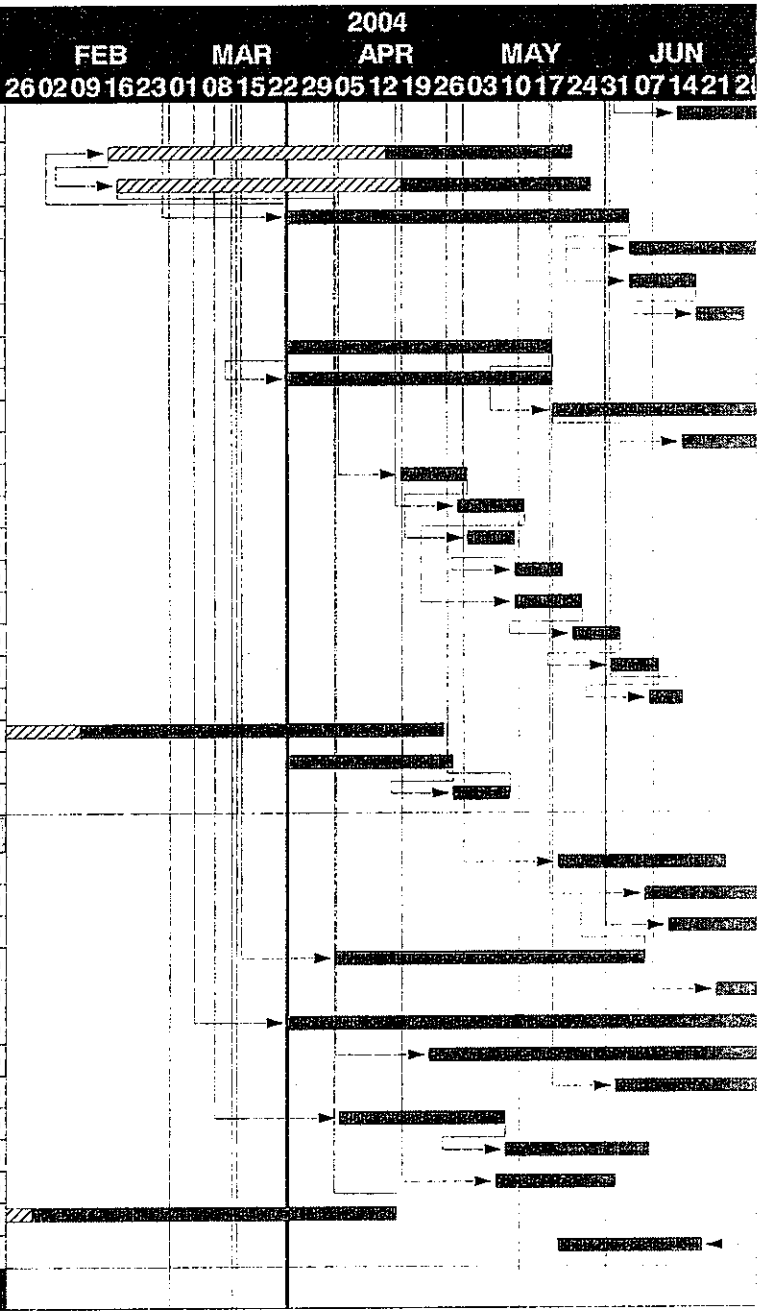
UT-1600G3	Gas Mains, D1/Ch.1360-1500	32	16JUN04	17JUL04	0
UT-1600T4A	PCCW, D1/Ch.1500-1860	75	17FEB04 A	24MAY04	60
UT-1600T4B	HGC-New World, D1/Ch.1500-1860	85	19FEB04 A	28MAY04	60
UT-1600G4	Gas Mains, D1/Ch.1500-1860	72	26MAR04	05JUN04	0
UT-1600P4	Powers(11kV), D1/Ch.1500-1860	72	06JUN04	16AUG04	0
UT-1600G5	Gas Mains, D1/Ch.1860-1900	14	06JUN04	19JUN04	0
UT-1600T5A	PCCW, D1/Ch.1860-1900	10	20JUN04	29JUN04	0
UT-1600G6	Gas Mains, D1/Ch.1900-2180	56	26MAR04	20MAY04	0
UT-1600P6	Powers(11kV), D1/Ch.1900-2180	56	26MAR04	20MAY04	0
UT-1600T6A	PCCW, D1/Ch.1900-2180	47	21MAY04	06JUL04	0
UT-1600T6B	HGC-New World, D1/Ch.1900-2180	63	17JUN04	18AUG04	0
UT-1600P8	Powers(11kV), L4/Ch.314-397	14	19APR04	02MAY04	0
UT-1600G8	Gas Mains, L4/Ch.320Crossing	14	01MAY04	14MAY04	0
UT-1600T8A	PCCW, L4/Ch.314-397	10	03MAY04	12MAY04	0
UT-1600T8B	HGC-New World, L4/Ch.314-397 (Both sides of rd.)	10	13MAY04	22MAY04	0
UT-1600P7	Powers(11kV), L4/Ch.397-437	14	13MAY04	26MAY04	0
UT-1600T7A	PCCW, L4/Ch.397-437	10	25MAY04	03JUN04	0
UT-1600T7B	HGC-New World, L4/Ch.397-437 (Both sides of rd.)	10	02JUN04	11JUN04	0
UT-1600T7C	CATV, L4/Ch.397-437	7	10JUN04	16JUN04	0
UT-1600P0	Powers(132kV & 11kV), NE of Site 1, Promenade	60	10DEC03 A	27APR04	45
UT-1600T9A	PCCW, N. end, Promenade	35	26MAR04	29APR04	0
UT-1600T9B	HGC, N. end, Promenade	12	30APR04	11MAY04	0
Part 5.10 Roadworks - Section 16					
B5-1670A1	Roadworks, D1/Ch.920-1020	35	22MAY04	25JUN04	0
B5-1670A11	Roadworks,D1/Ch.1020-1200	62	09JUN04	09AUG04	0
B5-1672A1	Cycle Track & Footway, D1/Ch.920-1020	28	14JUN04	11JUL04	0
B5-1670A2	Roadworks, D1/Ch.1200-1360	65	05APR04	08JUN04	0
B5-1672A2	Cycle Track & Footway, D1/Ch.1200-1360	45	24JUN04	07AUG04	0
B5-1670A4	Roadworks, D1/Ch.1500-1860	110	26MAR04	13JUL04	0
B5-1672A4	Footway, D1/Ch.1500-1860	90	25APR04	23JUL04	0
B5-1670A6	Lightings & Roadworks, D1/Ch.1900-2180	90	03JUN04	31AUG04	0
B5-1670A6A	Roadworks, L4/Ch.100-160	35	06APR04	10MAY04	0
B5-1674G10	Roadworks Furniture&Miscellaneous, L4/Ch.100-160	30	11MAY04	09JUN04	0
B5-1670A8	Roadworks, L4/Ch.315-397	25	09MAY04	02JUN04	0
B5-1670A0	Cycle Track, NE of H.Site 1, Promenade	75	04AUG03 A	17APR04	70
B5-1672A9	Cycle Track & Footway, N.end, Promenade	30	22MAY04	20JUN04	0
Section 17- Areas 1,2,6,7A+7B Landscape Softwork					



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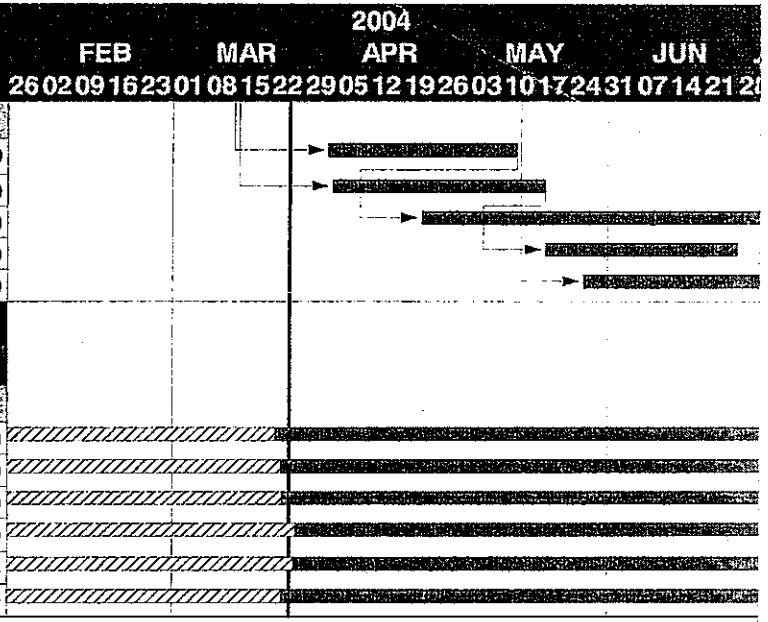
Page number	10A
Page count	11A
Number/Version	TP35/02/3MON/019
Company name	Penta-Ocean Construction Co. Ltd.

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

Contract No.TP35/02
Remaining Engineering Infrastructure Works for Pak Shek Kok Development Package 1
3Months Rolling Program

Act ID	Description	Orig Dur	Early Start	Early Finish	Percent Complete
Part 12-1 Landscape Works - Section 17					
BL-1705A1	Area 1- Drain,Duct+Pipework & Preparation Works	40	03APR04	12MAY04	0
BL-1705A2	Areas 2+6- Drain,Duct+Pipework& PreparationWorks	45	04APR04	18MAY04	0
BL-1707A1	Area 1- Planting Works	100	23APR04	31JUL04	0
BL-1707A2	Areas 2+6- Planting Works	40	19MAY04	27JUN04	0
BL-1705A4	Area 7B- Drain,Duct+Pipework & Preparation Works	45	27MAY04	10JUL04	0
SITE SAFETY					
Part 14 Site Safety					
*					
BT-1401D0	Provide Safety Officer, 2nr.	810	27AUG02 A	23NOV04	70
BT-1401C0	Update Safety Plan	810	31AUG02 A	23NOV04	70
BT-1401G0	Arrange & Attend Weekly Safety Walk	805	03SEP02 A	22NOV04	70
BT-1401H0	Provide Safety Training	810	10SEP02 A	23NOV04	70
BT-1401E0	Attend Site Safety Committee & Mgmt.Committee	810	26OCT02 A	11JAN05	64
BT-1401K0	Participate in safety promotional campaign	694	28NOV02 A	26OCT04	69



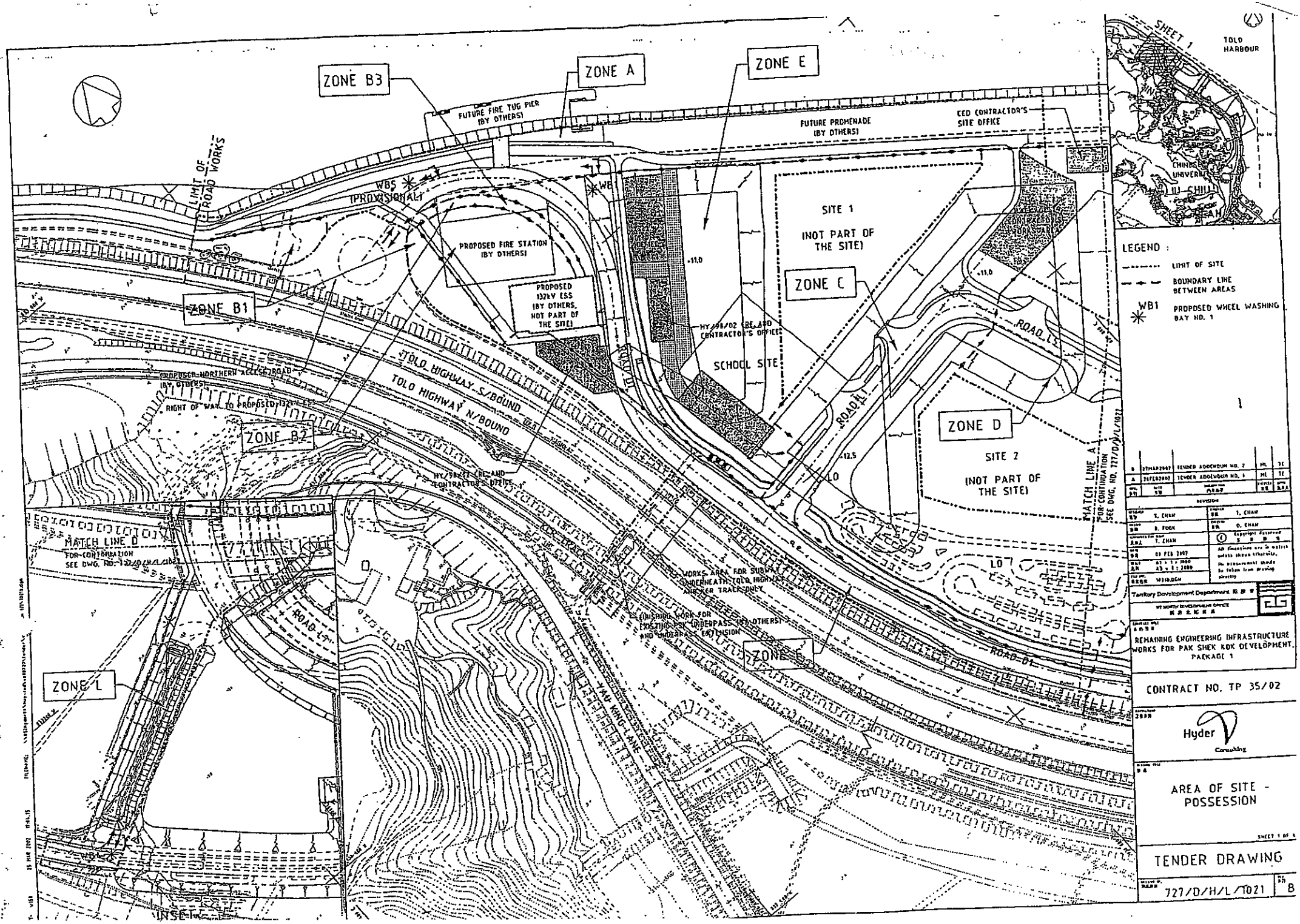
Data date	26MAR04
Page number	11A
Page count	11A
Number/Version	TP35/02/3MON/019
Company name	Penta-Ocean Construction Co. Ltd.

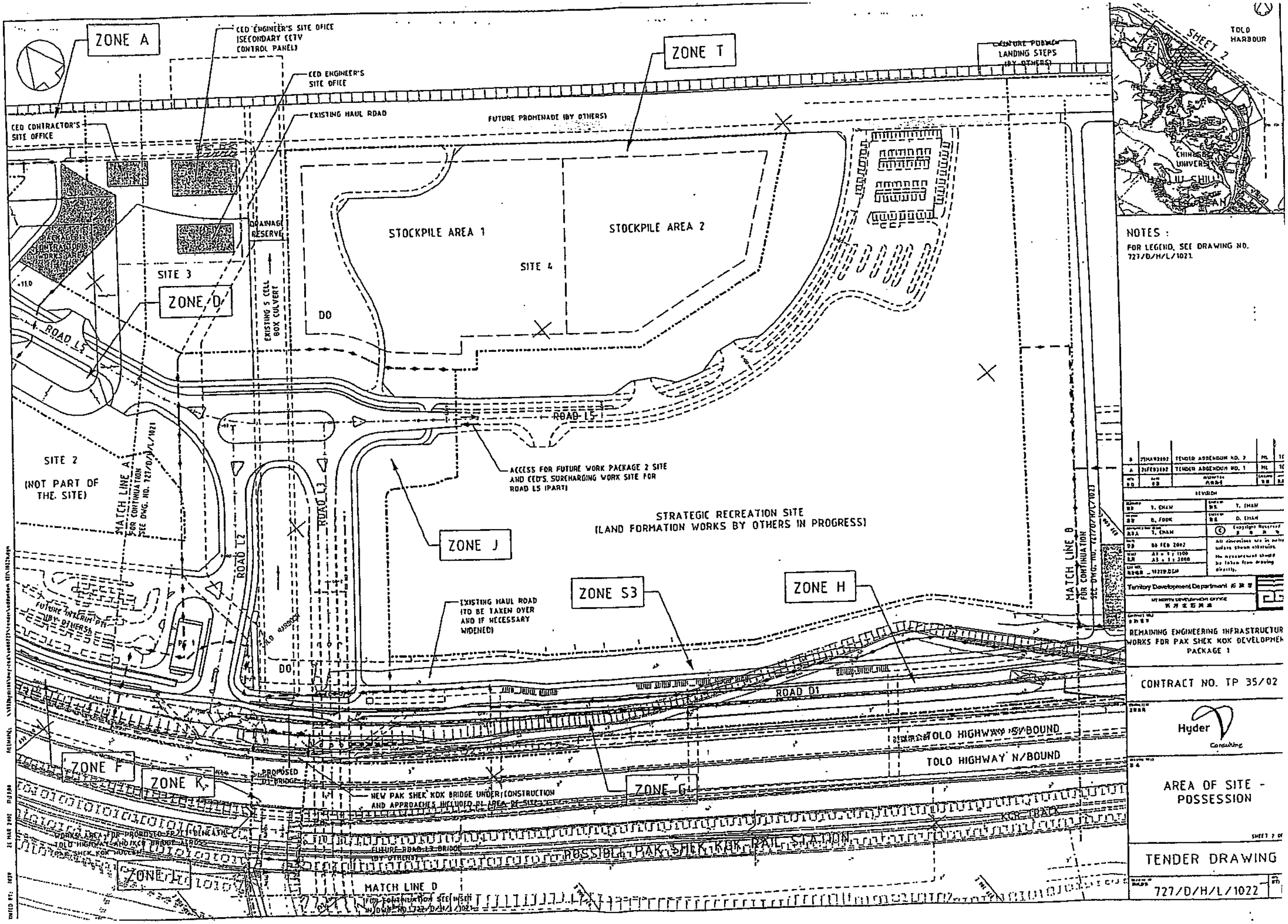
Early bar
Progress bar
Critical bar
Summary bar
Start milestone point
Finish milestone point

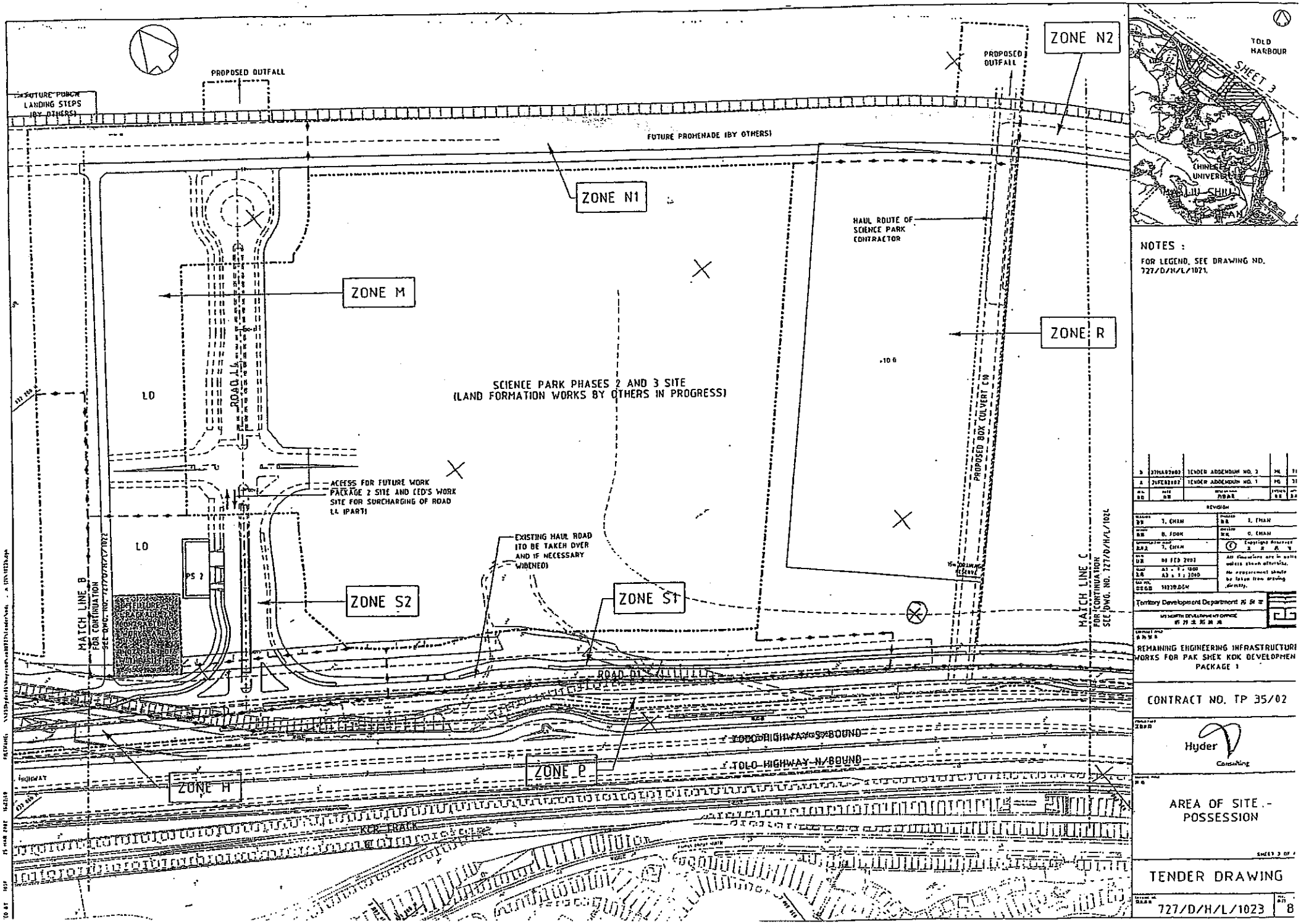
Contract No.TP35/02
Remaining Engineering Infrastructure Works for Pak Shek Kok Development Package 1
3Months Rolling Program

Appendix G

Construction Site Area


ZONE B3
ZONE A
ZONE E
FUTURE FIRE TUG PIER (BY OTHERS)
FUTURE PROMENADE (BY OTHERS)
CED CONTRACTOR'S SITE OFFICE
LIMIT OF ROAD WORKS
WB5 (PROVISIONAL)
PROPOSED FIRE STATION (BY OTHERS)
SITE 1
(NOT PART OF THE SITE)
ZONE C
ZONE B1
PROPOSED 132kV ESS (BY OTHERS, NOT PART OF THE SITE)
HY/2002/02 CE AND CONTRACTOR'S OFFICE
SCHOOL SITE
ROAD L2
TOLO HIGHWAY S/BOUND
TOLO HIGHWAY N/BOUND
PROPOSED NORTHERN ACCESS ROAD (BY OTHERS)
RIGHT OF WAY TO PROPOSED 132kV ESS
ZONE B2
HY/2002/02 CE AND CONTRACTOR'S OFFICE
ZONE D
SITE 2
(NOT PART OF THE SITE)
MATCH LINE A FOR CONTINUATION SEE DWG. NO. 727/D/H/L/1022
MATCH LINE D FOR CONTINUATION SEE DWG. NO. 727/D/H/L/1023
ROAD L1
ROAD L7
WORKS AREA FOR SUBWAY UNDERNEATH TOLO HIGHWAY AND ANCHOR TRAILS ONLY
FINISHING WORK FOR EXISTING PAK UNDERPASS (BY OTHERS) AND UNDERPASS EXTENSION
ZONE F
ZONE L
HAU KING LANE
INSET
SHEET 1
TOLO HARBOUR
CHINESE UNIVERSITY
LEGEND :
LIMIT OF SITE
BOUNDARY LINE BETWEEN AREAS
WB1 PROPOSED WHEEL WASHING BAY NO. 1
REMAINING ENGINEERING INFRASTRUCTURE WORKS FOR PAK SHEK KOK DEVELOPMENT, PACKAGE 1
CONTRACT NO. TP 35/02
Hyder Consulting
AREA OF SITE - POSSESSION
TENDER DRAWING
727/D/H/L/1021
B


ZONE A
CED ENGINEER'S SITE OFICE (SECONDARY CCTV CONTROL PANEL)
CED ENGINEER'S SITE OFICE
EXISTING HAUL ROAD
CED CONTRACTOR'S SITE OFFICE
ZONE T
FUTURE PUBLIC LANDING STEPS (BY OTHERS)
FUTURE PROMENADE (BY OTHERS)
DRAINAGE RESERVE
STOCKPILE AREA 1
STOCKPILE AREA 2
SITE 4
SITE 3
ZONE D
EXISTING 5 CELL BOX CULVERT
DO
ROAD L5
SITE 2
(NOT PART OF THE SITE)
MATCH LINE A
FOR CONTINUATION SEE DWG. NO. 727/D/H/L/1021
ROAD L2
ROAD L3
ACCESS FOR FUTURE WORK PACKAGE 2 SITE AND CED'S SURCHARGING WORK SITE FOR ROAD L5 (PART)
STRATEGIC RECREATION SITE
(LAND FORMATION WORKS BY OTHERS IN PROGRESS)
ZONE J
ZONE S3
ZONE H
MATCH LINE B
FOR CONTINUATION SEE DWG. NO. 727/D/H/L/1023
EXISTING HAUL ROAD (TO BE TAKEN OVER AND IF NECESSARY WIDENED)
FUTURE INTERIM PTI (BY OTHERS)
ROAD D1
TOLO HIGHWAY S/BOUND
TOLO HIGHWAY N/BOUND
ZONE F
ZONE K
PROPOSED D1 BRIDGE
NEW PAK SHEK KOK BRIDGE UNDER CONSTRUCTION AND APPROACHES INCLUDED IN AREA OF SITE
ZONE G
KCR TRACK
POSSIBLE PAK SHEK KOK RAIL STATION
FUTURE ROAD L3 BRIDGE (BY OTHERS)
ZONE L
MATCH LINE D
TOLO HARBOUR
SHEET 2
NOTES :
FOR LEGEND, SEE DRAWING NO. 727/D/H/L/1021.
B TENDER ADDENDUM NO. 2
A TENDER ADDENDUM NO. 1
REVISION
T. CHAN
B. FOOK
D. CHAN
06 FEB 2002
Copyright Reserved
All dimensions are in metres unless shown otherwise.
No measurement should be taken from drawing directly.
Territory Development Department
NT NORTH DEVELOPMENT OFFICE
REMAINING ENGINEERING INFRASTRUCTURE WORKS FOR PAK SHEK KOK DEVELOPMENT PACKAGE 1
CONTRACT NO. TP 35/02
Hyder Consulting
AREA OF SITE - POSSESSION
TENDER DRAWING
727/D/H/L/1022



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FOR LEGEND, SEE DRAWING NO. 727/D/H/L/1021.

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A	21FEB2003	TENDER ADDENDUM NO. 1	MK	TI

REVISION

DESIGNED BY T. CHAN	PROJECT DIR T. CHAN
DRAWN BY B. FOOK	CHECKED BY C. CHAN
APPROVED BY T. CHAN	© Copyright Reserved
DATE 06 FEB 2003	All dimensions are in metres unless shown otherwise. No measurement should be taken from drawing directly.
SCALE A3 : 1 : 1000 A3 : 1 : 2000	
DGN FILE 10230.DGN	

Territory Development Department
NT NORTH DEVELOPMENT OFFICE

REMAINING ENGINEERING INFRASTRUCTURE WORKS FOR PAK SHEK KOK DEVELOPMENT PACKAGE 1

CONTRACT NO. TP 35/02

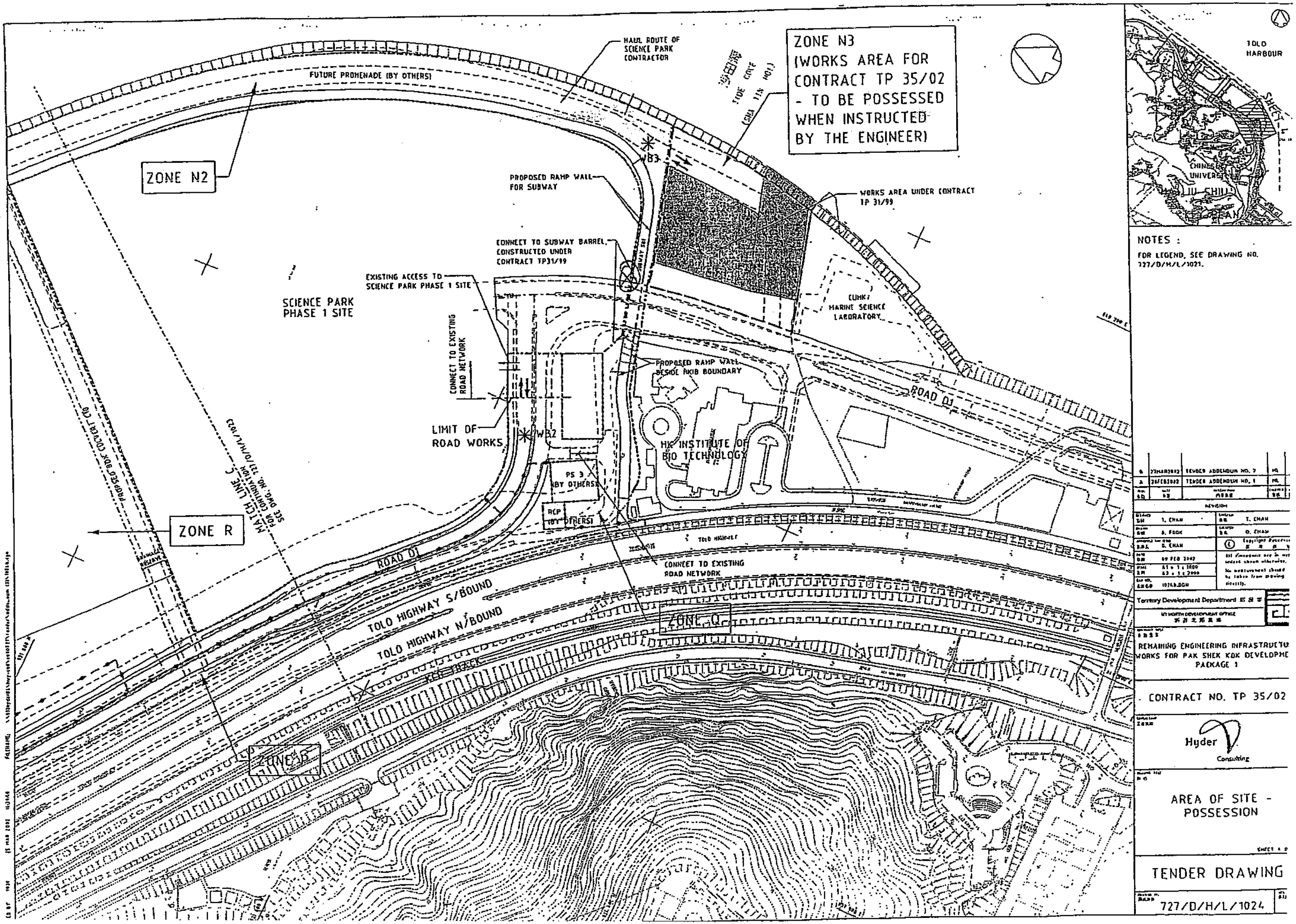
Hyder Consulting

AREA OF SITE - POSSESSION

SHEET 2 OF 4

TENDER DRAWING

DRAWING NO. 727/D/H/L/1023 REV. B


ZONE N3
(WORKS AREA FOR CONTRACT TP 35/02 - TO BE POSSESSED WHEN INSTRUCTED BY THE ENGINEER)
HAUL ROUTE OF SCIENCE PARK CONTRACTOR
FUTURE PROMENADE (BY OTHERS)
ZONE N2
PROPOSED RAMP WALL FOR SUBWAY
WORKS AREA UNDER CONTRACT TP 31/99
CONNECT TO SUBWAY BARREL CONSTRUCTED UNDER CONTRACT TP31/99
EXISTING ACCESS TO SCIENCE PARK PHASE 1 SITE
SCIENCE PARK PHASE 1 SITE
CUHK MARINE SCIENCE LABORATORY
CONNECT TO EXISTING ROAD NETWORK
PROPOSED RAMP WALL BESIDE HKIB BOUNDARY
ROAD D1
LIMIT OF ROAD WORKS
HK INSTITUTE OF BIO TECHNOLOGY
PS 3 (BY OTHERS)
RCP (BY OTHERS)
ZONE R
MATCH LINE C
FOR CONTINUATION SEE DWG. NO. 727/D/H/L/1023
PROPOSED BOX CULVERT C10
CONNECT TO EXISTING ROAD NETWORK
TOLO HIGHWAY S/BOUND
TOLO HIGHWAY N/BOUND
ZONE Q
ZONE S
TOLO HARBOUR
NOTES :
FOR LEGEND, SEE DRAWING NO. 727/D/H/L/1021.
TENDER ADDENDUM NO. 2
TENDER ADDENDUM NO. 1
T. CHAN
B. FOOK
O. CHAN
09 FEB 2002
Territory Development Department
NT NORTH DEVELOPMENT OFFICE
REMAINING ENGINEERING INFRASTRUCTURE WORKS FOR PAK SHEK KOK DEVELOPMENT PACKAGE 1
CONTRACT NO. TP 35/02
Hyder Consulting
AREA OF SITE - POSSESSION
TENDER DRAWING
727/D/H/L/1024

Appendix H

Summary of the Implementation schedule of Mitigation Measures

東華德勤測試顧問有限公司
ETS-TESTCONSULT LIMITED

Summary of the Implementation Status of Mitigation Measures

April 2004

The Summary of Implementation status of Mitigation Measures

Aspect	Mitigation Measures	Implementation Status		
		Y	N	N/A
Air	- The height from which fill materials were dropped was controlled to a practical height to minimize the fugitive dust arising form unloading.	√		
	- During transportation by truck, material was loaded to a level higher than the side and tail boards, and should be dampened or covered before transport.	√		
	- All stockpile of aggregate or spoil were enclosed or covered and water applied in dry or windy condition.		√	
	- Effective water sprays were used on the site at potential dust emission sources such as unpaved area.	√		
	- The haul road was either paved or regular watering.	√		
	- Vehicle speed was limited to 20 km/hr.	√		
	- Adequately designed wheel washing facilities including a high pressure water jet were provided at all main entrance of work site.	√		
Noise	- Only well maintained plant was operated on-site and plant should be serviced regularly during the construction works.	√		
	- Machines and plants that were in intermittent use were shut down between work periods or throttled down to a minimum.	√		
	- Plant known to emit noise strongly in on direction, where possible, were orientated so that the noise is directed away from nearby NSRs.	√		
	- Silencers or mufflers on construction equipment were considered.	√		
Water	- Recirculation system was used to reduce SS from the vehicle wheel washing facility.	√		
	- Fuel tanks on site were housed within drainable trays and regularly drained of rain water.	√		
	- Washing area and road exiting were paved from washing facility.	√		
	- Permanent / Temporary ditches were provided to facilities run-off discharge into the appropriate watercourses, via a sediment trap/sediment retention basin, prior to discharge.	√		
	- Sedimentation tanks with adequate capacity to settle the sand and silt out were provided.	√		
	- Sedimentation tanks were regularly cleaned and maintained in order to control their efficiency and to prevent the recycled water overflow to drains.	√		
	- All drainage facilities were adequate for the controlled release of storm flows.	√		
	- Exposed soil areas were minimized to reduce the potential for increased siltation and contamination of run-off.	√		
	- All chemical stores were contained (bunded) such that spills are not slowed to gain access to water bodies.	√		
	- Chemical toilets were provided to handle the sewage from the on-site construction workforce.	√		

The Summary of Implementation status of Mitigation Measures

Aspect	Mitigation Measures	Implementation Status		
		Y	N	N/A
Waste	- Wastes were handle and store in a manner, which ensure that they were held securely without loss or leakage, thereby minimizing the potential for pollution.	√		
	- Authorized or licensed waste hauliers were use to collect the specific category of waste.	√		
	- Wastes were removed in a timely manner.	√		
	- The waste storage areas were maintained and cleaned regularly.	√		
	- Windblown litter and dust during transportation by either covering trucks or transporting wastes in enclosed containers were minimized.	√		
	- Waste disposal permits were obtained form the appropriate authorities.	√		
	- Wastes were disposed at licensed sites.	√		
	- Procedures such as a ticketing system were developed to facilitate tracing of loads, particularly for chemical waste, and to ensure that illegal disposal of wastes does not occur.	√		
	- Records of the quantities of wastes generated, recycled and disposal were maintained.	√		
Chemical Waste	- Under the Waste Disposal (Chemical Waste) (General) Regulation, chemical waste producers were registered with EPD.	√		
	- Chemical wastes were transported by a registered chemical waste collector to a facility licensed to receive chemical waste.	√		
	- Containers used for the storage of chemical wastes were:			
	1. Suitable for the substance they are holding, resistant to corrosion, maintained in a good condition, and securely closed;	√		
	2. Enclosed on at least 3 sides;	√		
	3. Have an impermeable floor and bunding, of capacity to accommodate 110% of the volume of the largest container or 20% by volume of the chemical waste stored in that area, whichever is the greatest;	√		
	4. -Have adequate ventilation;	√		
	5. Covered to prevent rainfall entering (water collected within the bund must be tested and disposal as chemical waste if necessary);	√		
	6. Arranged so that incompatible materials are adequately separated.	√		

東業德勤測試顧問有限公司
ETS-TESTCONSULT LIMITED

Summary of the Implementation Status of Mitigation Measures

May 2004

The Summary of Implementation status of Mitigation Measures

Aspect	Mitigation Measures	Implementation Status		
		Y	N	N/A
Air	- The height from which fill materials were dropped was controlled to a practical height to minimize the fugitive dust arising form unloading.	√		
	- During transportation by truck, material was loaded to a level higher than the side and tail boards, and should be dampened or covered before transport.	√		
	- All stockpile of aggregate or spoil were enclosed or covered and water applied in dry or windy condition.		√	
	- Effective water sprays were used on the site at potential dust emission sources such as unpaved area.	√		
	- The haul road was either paved or regular watering.	√		
	- Vehicle speed was limited to 20 km/hr.	√		
	- Adequately designed wheel washing facilities including a high pressure water jet were provided at all main entrance of work site.	√		
Noise	- Only well maintained plant were operated on-site and plant should be serviced regularly during the construction works.	√		
	- Machines and plants that were in intermittent use were shut down between work periods or throttled down to a minimum.	√		
	- Plant known to emit noise strongly in on direction, where possible, were orientated so that the noise is directed away from nearby NSRs.	√		
	- Silencers or mufflers on construction equipment were considered.	√		
Water	- Recirculation system was used to reduce SS from the vehicle wheel washing facility.	√		
	- Fuel tanks on site were housed within drainable trays and regularly drained of rainwater.	√		
	- Washing area and road exiting were paved from washing facility.	√		
	- Permanent / Temporary ditches were provided to facilities run-off discharge into the appropriate watercourses, via a sediment trap/sediment retention basin, prior to discharge.	√		
	- Sedimentation tanks with adequate capacity to settle the sand and silt out were provided.	√		
	- Sedimentation tanks were regularly cleaned and maintained in order to control their efficiency and to prevent the recycled water overflow to drains.	√		
	- All drainage facilities were adequate for the controlled release of storm flows.	√		
	- Exposed soil areas were minimized to reduce the potential for increased siltation and contamination of run-off.	√		
	- All chemical stores were contained (bunded) such that spills are not slowed to gain access to water bodies.	√		
	- Chemical toilets were provided to handle the sewage from the on-site construction workforce.	√		

The Summary of Implementation status of Mitigation Measures

Aspect	Mitigation Measures	Implementation Status		
		Y	N	N/A
Waste	- Wastes were handle and store in a manner, which ensure that they were held securely without loss or leakage, thereby minimizing the potential for pollution.		√	
	- Authorized or licensed waste hauliers were use to collect the specific category of waste.	√		
	- Wastes were removed in a timely manner.	√		
	- The waste storage areas were maintained and cleaned regularly.	√		
	- Windblown litter and dust during transportation by either covering trucks or transporting wastes in enclosed containers were minimized.	√		
	- Waste disposal permits were obtained form the appropriate authorities.	√		
	- Wastes were disposed at licensed sites.	√		
	- Procedures such as a ticketing system were developed to facilitate tracing of loads, particularly for chemical waste, and to ensure that illegal disposal of wastes does not occur.	√		
	- Records of the quantities of wastes generated, recycled and disposal were maintained.	√		
Chemical Waste	- Under the Waste Disposal (Chemical Waste) (General) Regulation, chemical waste producers were registered with EPD.	√		
	- Chemical wastes were transported by a registered chemical waste collector to a facility licensed to receive chemical waste.	√		
	- Containers used for the storage of chemical wastes were:			
	7. - Suitable for the substance they are holding, resistant to corrosion, maintained in a good condition, and securely closed;	√		
	8. - Enclosed on at least 3 sides;	√		
	9. - Have an impermeable floor and bunding, of capacity to accommodate 110% of the volume of the largest container or 20% by volume of the chemical waste stored in that area, whichever is the greatest;	√		
	10. - Have adequate ventilation;	√		
	11. - Covered to prevent rainfall entering (water collected within the bund must be tested and disposal as chemical waste if necessary);	√		
	12. - Arranged so that incompatible materials are adequately separated.	√		

東業德勤測試顧問有限公司
ETS-TESTCONSULT LIMITED

Summary of the Implementation Status of Mitigation Measures

June 2004

The Summary of implementation Status of Mitigation Measures

Aspect	Mitigation Measures	Implementation Status		
		Y	N	N/A
Air	- The height from which fill materials were dropped was controlled to a practical height to minimize the fugitive dust arising form unloading.	√		
	- During transportation by truck, material was loaded to a level higher than the side and tail boards, and should be dampened or covered before transport.	√		
	- All stockpile of aggregate or spoil were enclosed or covered and water applied in dry or windy condition.		√	
	- Effective water sprays were used on the site at potential dust emission sources such as unpaved area.	√		
	- The haul road was either paved or regular watering.	√		
	- Vehicle speed was limited to 20 km/hr.	√		
	- Adequately designed wheel washing facilities including a high pressure water jet were provided at all main entrance of work site.	√		
Noise	- Only well maintained plant were operated on-site and plant should be serviced regularly during the construction works.	√		
	- Machines and plants that were in intermittent use were shut down between work periods or throttled down to a minimum.	√		
	- Plant known to emit noise strongly in on direction, where possible, were orientated so that the noise is directed away from nearby NSRs.	√		
	- Silencers or mufflers on construction equipment were considered.	√		
Water	- Recirculation system was used to reduce SS from the vehicle wheel washing facility.	√		
	- Fuel tanks on site were housed within drainable trays and regularly drained of rain water.	√		
	- Washing area and road exiting were paved from washing facility.	√		
	- Permanent / Temporary ditches were provided to facilities run-off discharge into the appropriate watercourses, via a sediment trap/sediment retention basin, prior to discharge.	√		
	- Sedimentation tanks with adequate capacity to settle the sand and silt out were provided.	√		
	- Sedimentation tanks were regularly cleaned and maintained in order to control their efficiency and to prevent the recycled water overflow to drains.	√		
	- All drainage facilities were adequate for the controlled release of storm flows.	√		
	- Exposed soil areas were minimized to reduce the potential for increased siltation and contamination of run-off.	√		
	- All chemical stores were contained (bunded) such that spills are not slowed to gain access to water bodies.	√		
	- Chemical toilets were provided to handle the sewage from the on-site construction workforce.	√		

The Summary of implementation status of Mitigation Measures

Aspect	Mitigation Measures	Implementation Status		
		Y	N	N/A
Waste	- Wastes were handle and store in a manner, which ensure that they were held securely without loss or leakage, thereby minimizing the potential for pollution.		√	
	- Authorized or licensed waste hauliers were use to collect the specific category of waste.	√		
	- Wastes were removed in a timely manner.	√		
	- The waste storage areas were maintained and cleaned regularly.	√		
	- Windblown litter and dust during transportation by either covering trucks or transporting wastes in enclosed containers were minimized.	√		
	- Waste disposal permits were obtained form the appropriate authorities.	√		
	- Wastes were disposed at licensed sites.	√		
	- Procedures such as a ticketing system were developed to facilitate tracing of loads, particularly for chemical waste, and to ensure that illegal disposal of wastes does not occur.	√		
	- Records of the quantities of wastes generated, recycled and disposal were maintained.	√		
Chemical Waste	- Under the Waste Disposal (Chemical Waste) (General) Regulation, chemical waste producers were registered with EPD.	√		
	- Chemical wastes were transported by a registered chemical waste collector to a facility licensed to receive chemical waste.	√		
	- Containers used for the storage of chemical wastes were:			
	13. - Suitable for the substance they are holding, resistant to corrosion, maintained in a good condition, and securely closed;	√		
	14. - Enclosed on at least 3 sides;	√		
	15. - Have an impermeable floor and bunding, of capacity to accommodate 110% of the volume of the largest container or 20% by volume of the chemical waste stored in that area, whichever is the greatest;	√		
	16. - Have adequate ventilation;	√		
	17. - Covered to prevent rainfall entering (water collected within the bund must be tested and disposal as chemical waste if necessary);	√		
	18. - Arranged so that incompatible materials are adequately separated.	√		

Appendix I

Wastewater Monitoring
–
Test Reports of Wastewater Samples from Discharge Points

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

HOKLAS 022

TEST REPORT

Form : E/EN/R/01/Issue 4 (1/1) [08/02]

Environmental Testing of Water & Wastewater

Report No. : ENA40277
Date of issue : 11 June 2004
Page No. : 1 of 1

Information provided by client

Client name : Penta - Ocean Construction Co Ltd.
Client address : 30/F MLC Tower 248 Queen's Road East Wan Chai HK
Sample Source : Remaing Engineering Infrastructure Works for Pak Shek Kok Development. Package 1 (Contract No. TP35/02)
Sample Type : Wastewater
ate of sampling : 05 June 2004
Sample Description : The sample were collected in 500ml plastic bottles and chilled when received.

Laboratory information

Date Received : 05 June 2004

Result

Client Sample ID	Lab Ref No	Test	Method Used	Result	Expanded Uncertainty*	Date Tested
Sample 1 (Discharge Point at D1 Bridge)	W16970 (01)	Total Suspended Soilds	In house method TPE/006/W	29mg/L	N/A	07 June 2004

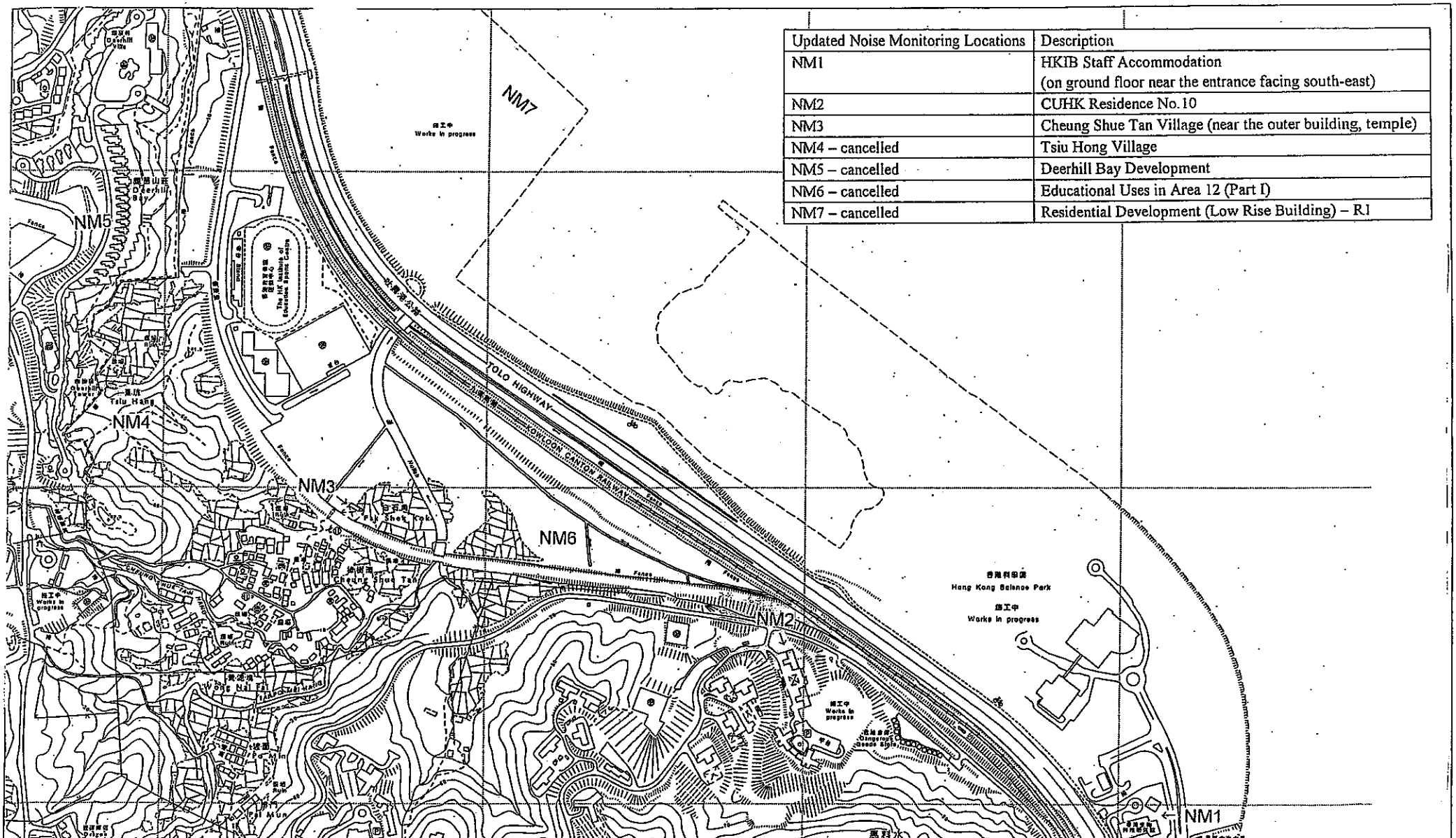
Remark (if any : * All uncertainty was calculated at 95% confidence level and sampling uncertainty is not included. Coverage factor is 2.0 (assume that effective degree of freedom is infinity).

Checked by : Linda Law
Linda Law
Chemist

Approved by :
C L Lau
Chief Chemist

TPE/001/W

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 Works for Pak Shek Kok Development, Package 1
Contract No. TP35/02

Figure 1 Location of Noise Monitoring Stations

Scale : ---

Revised Date:
15/11/2002

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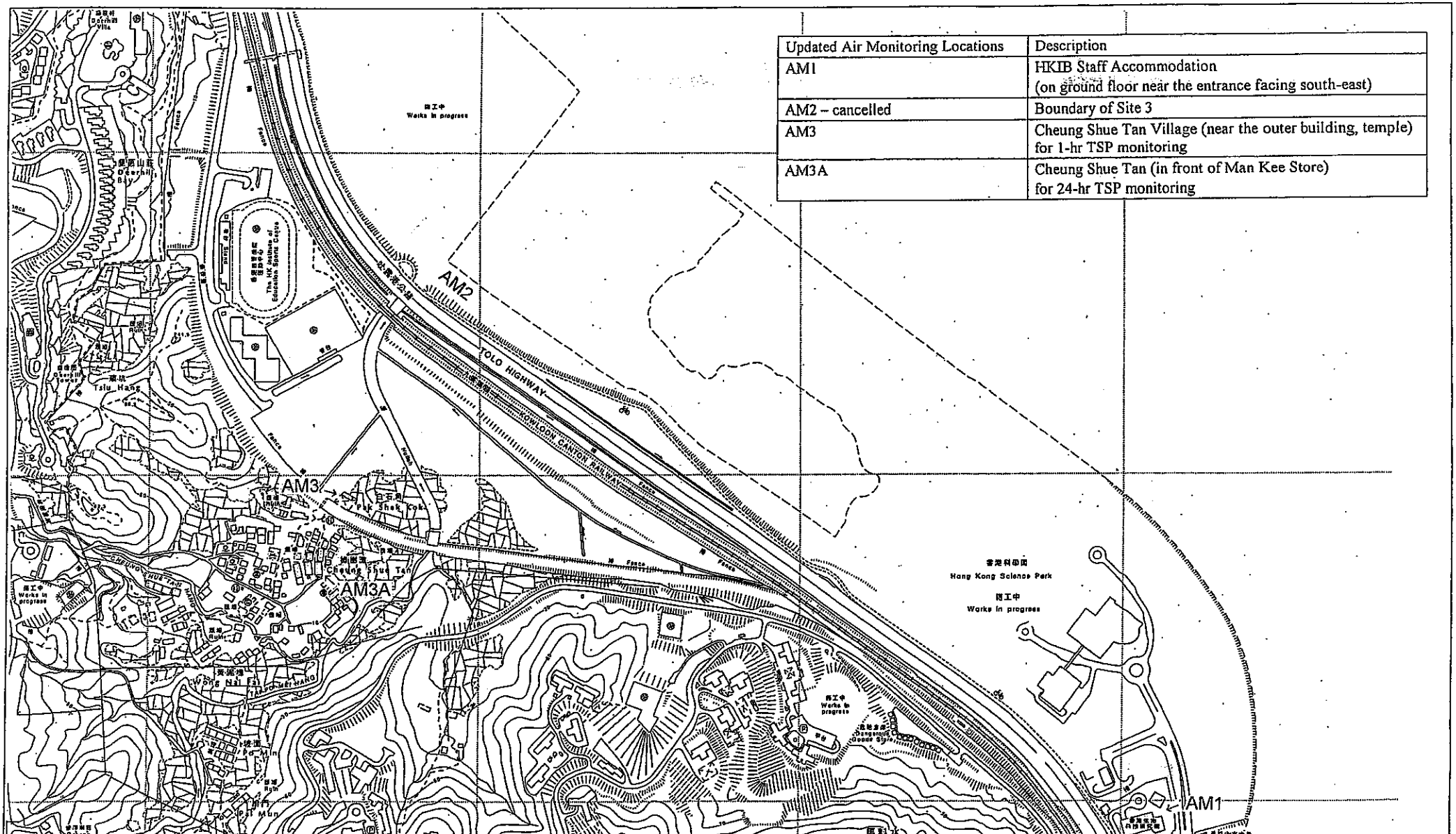

Updated Air Monitoring Locations	Description
AM1	HKIB Staff Accommodation (on ground floor near the entrance facing south-east)
AM2 – cancelled	Boundary of Site 3
AM3	Cheung Shue Tan Village (near the outer building, temple) for 1-hr TSP monitoring
AM3A	Cheung Shue Tan (in front of Man Kee Store) for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

Remaining Engineering Works for Pak Shek Kok Development, Package 1
Contract No. TP35/02

Figure 2 Location of Air Monitoring Stations

Scale : ---

Revised Date:
15/11/2002

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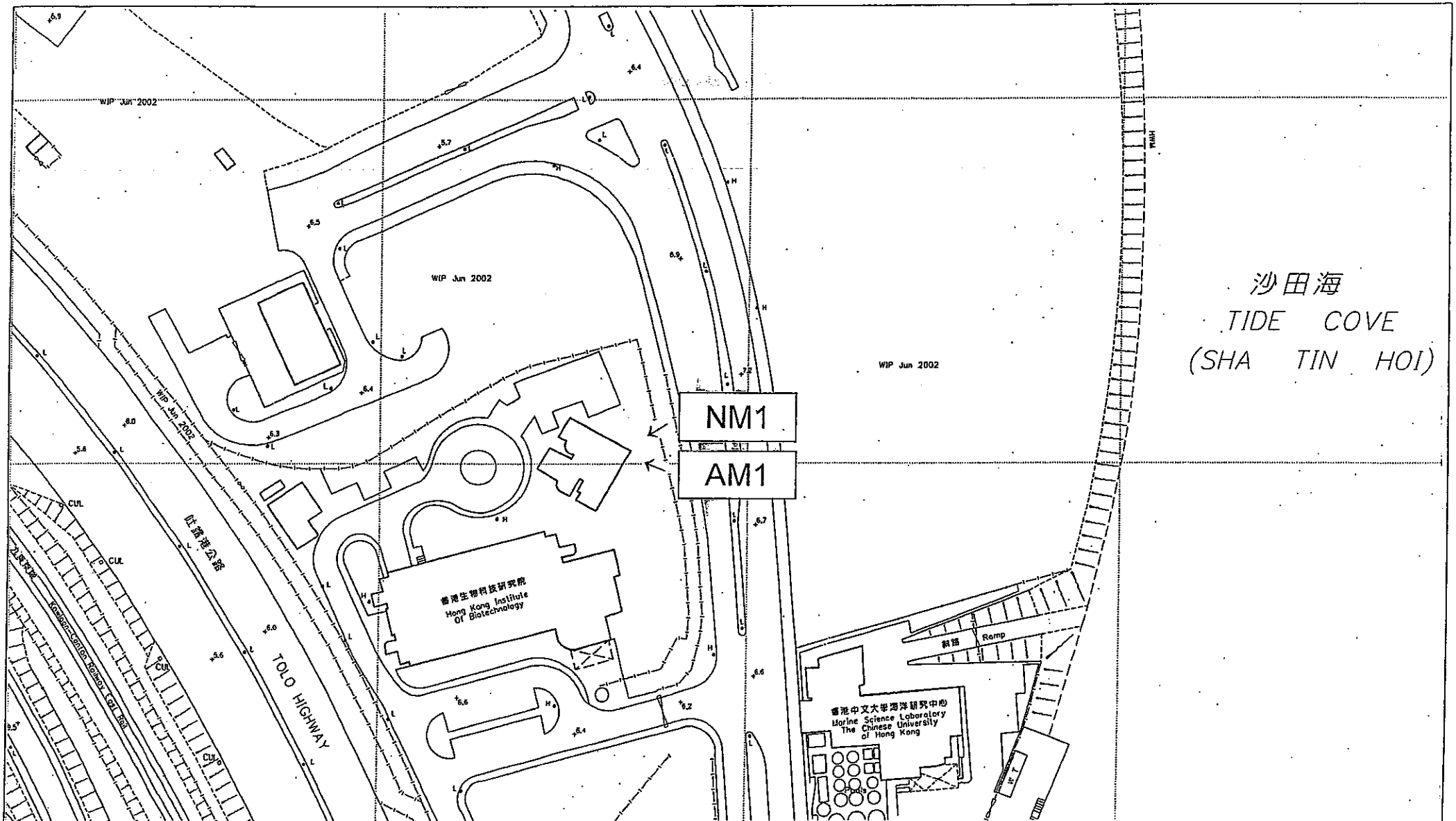

Remaining Engineering Works for Pak Shek Kok Development, Package 1
Contract No. TP35/02

Figure 3 Location of Air and Noise Monitoring Stations at HKIB Staff Accommodation

Scale : ---

Revised Date: 15/11/2002

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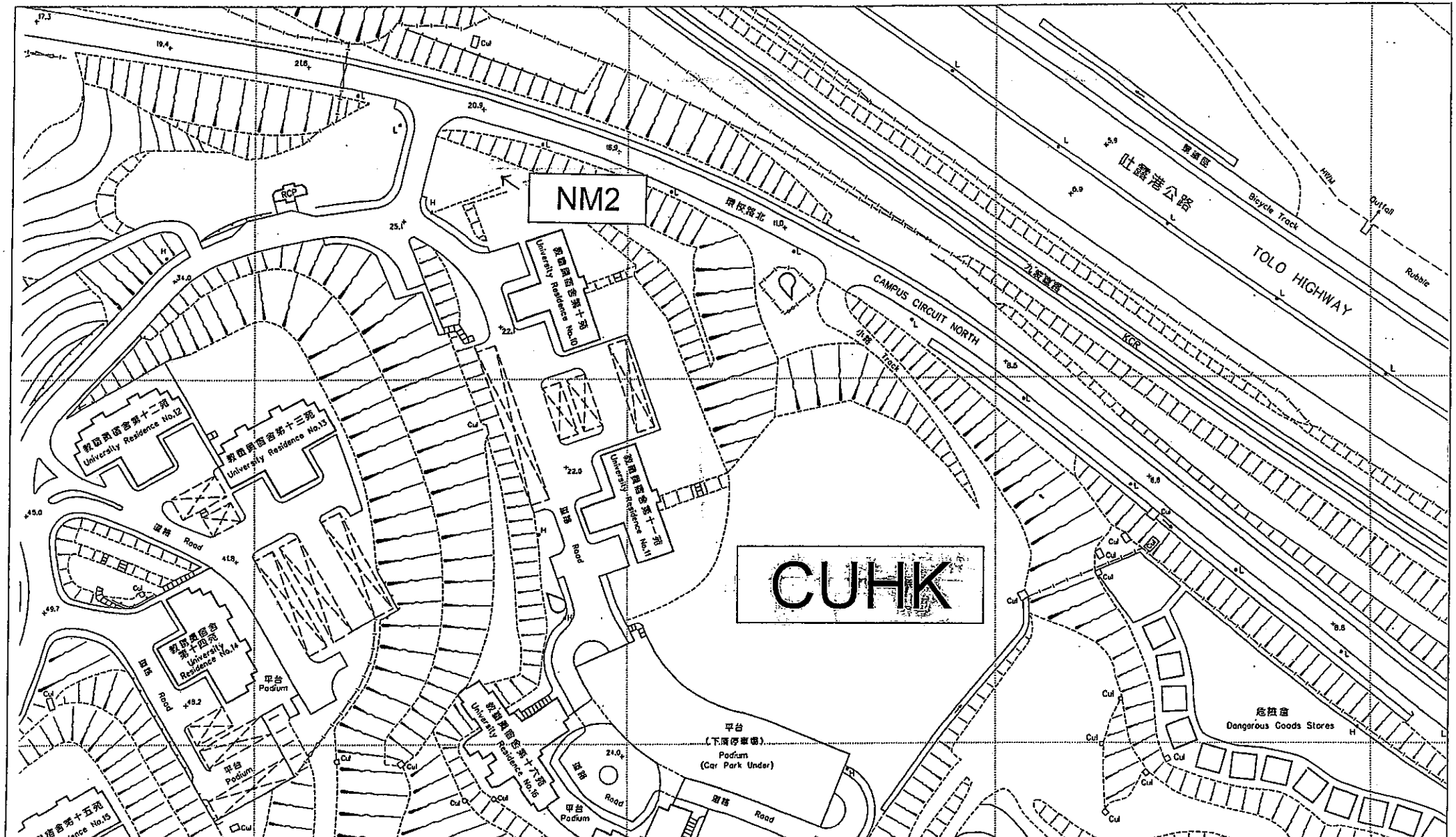

Remaining Engineering Works for Pak Shek Kok Development, Package 1
Contract No. TP35/02

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

Scale : ---

Revised Date:
15/11/2002

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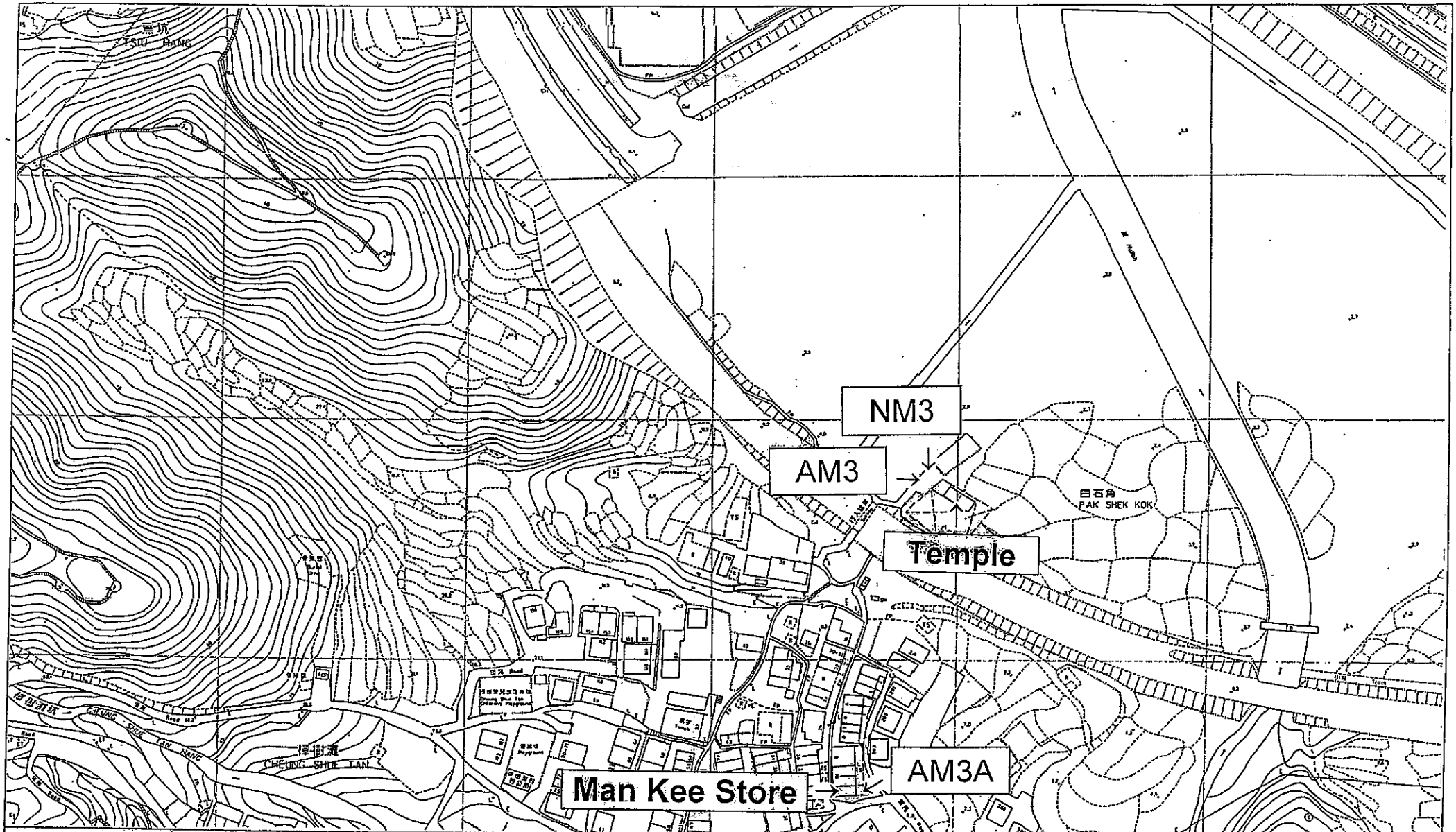

Remaining Engineering Works for Pak Shek Kok Development, Package 1
Contract No. TP35/02

Figure 5 Location of Air and Noise Monitoring Stations
at Cheung Shue Tan Village

Scale : ---

Revised Date:
15/11/2002

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