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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)

FINAL EM&A REVIEW REPORT

(FROM OCTOBER 2002 TO MAY 2005)

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INDEPENDENT ENVIRONMENTAL CHECKER

CHECK CERTIFICATE

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Independent Environmental Checker

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EXECUTIVE SUMMARY

The Final EM&A Review Report 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 22 October 2002 to 31 May 2005.

Construction Progress

The major construction works in during the construction period were as below:

- Construction of Local Roads L1, L2, L4 (part) and L5 (part);
- Construction of Distributor Road D1,
- Construction of Sewage Pumping Station No. 1 and 2;
- Connection of cycle track to an existing subway;
- Extension of Existing Pak Shek Kok Underpass beneath Road D1,
- Construction of Box Culvert C10;
- Construction of water main;
- Construction of associated drainage and sewerage works;
- Construction of footpath, cycle track network and roadside planting areas;
- Other works which are shown on the Drawings or specified or which may be ordered in accordance with Conditions of Contract.

Environmental Monitoring Progress

The summary of the monitoring activities during the reporting period is listed below:

- Noise Monitoring (Day-time): 138 Occasions;
- Noise Monitoring (Evening-time): 118 Occasions;
- Noise Monitoring (Holiday): 112 Occasions;
- 24-hour TSP Monitoring: 160 Occasions;
- 1-hour TSP Monitoring: 406 Occasions;
- Weekly-site inspection: 138 Occasions.

Noise Monitoring

No exceedances of Action and Limit levels for noise monitoring were recorded during the reporting period.

Air Monitoring

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

Environmental Complaints

No environmental complaints were received in this reporting period.

Notification of summons and successful prosecutions

Two notifications of summons and prosecutions with respect to environmental issues registered over the course of the Project. Details of the notifications of summons and prosecutions were present at Section 7.3.

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 Finally EM&A Review Report summarizes the impact monitoring results and audit findings of the EM&A program during the reporting period from 22 October 2002 to 31 May 2005.

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 Civil Engineering and Development Department (CEDD).

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 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.

2.4 Contact Details of Key Personnel

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

Table 2.1 Contact Details of Key Personnel

Organization	*Project Role*	*Name of Key Staff*	*Tel. No.*	*Fax No.*
CEDD	*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 DURING THE CONSTRUCTION PERIOD

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

A summary of the major construction activities undertaken during the construction period are:

- Construction of Local Roads L1, L2, L4 (part) and L5 (part);
- Construction of Distributor Road D1,
- Construction of Sewage Pumping Station No. 1 and 2;
- Connection of cycle track to an existing subway;
- Extension of Existing Pak Shek Kok Underpass beneath Road D1,
- Construction of Box Culvert C10;
- Construction of water main;
- Construction of associated drainage and sewerage works;
- Construction of footpath, cycle track network and roadside planting areas;
- Other works which are shown on the Drawings or specified or which may be ordered in accordance with Conditions of Contract.

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 and Duration

Table 4.1 summarizes the monitoring parameters, monitoring duration and frequencies of air quality monitoring.

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*

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.

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 D 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 during the reporting period 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 during the reporting period 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 and Frequency

Noise monitoring for the A-weighted levels Leq, L10 and L90 were recorded. The following guide on the regular monitoring frequency for each monitoring station on a per week basis when noise-generating activities are underway:

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

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

Duration, frequencies and parameters of noise measurement are presented in Table 5.1.

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*

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 D 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 from 22 October 2002 to 31 May 2005, from 07 December 2002 to 22 February 2005 and from 08 December 2002 to 24 April 2005 respectively. 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 the 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

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. 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.

During the construction period, total seven wastewater monitoring were carried out from 19 March 2003 to 14 October 2004.

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 during the construction period. Hence, no further mitigation measures and action were required.

8.0 SUMMARY OF ENVIRONMENTAL COMPLAINTS

No environmental complaints on this Project were received during the reporting period.

9.0 ENVIRONMENTAL SUMMONS

There were two notification of summons respect to environmental issues registered during the reporting period. 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.*
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 WASTE MANAGEMENT

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)	*33.7*	*Disposed of at NENT and SENT Landfills*
General Refuse (m^3)	*883*	*Disposed of at NENT and SENT Landfills*
Chemical Waste (L)	*3596*	*Collected by licensed waste hauliers*

11.0 SITE INSPECTION / AUDIT

Totally 138 ET weekly site inspections were undertaken during the reporting period. Besides, 28 Monthly joint site audits were carried out by the RE, the IEC, POC and ET. The summary of weekly site inspection and monthly joint site audit findings during the reporting period is shown in Table 11.1.

Table 11.1 Summary of Weekly Site Inspection and Monthly Joint Site Audit Findings

Inspection Parameter	Findings
Air Quality	Air quality was found satisfactory in this reporting year. No noticeable dust was generated at the area of reclamation site. Only small amount of dust was generated from the vehicle outside the site.
Noise Quality	Noise quality was found satisfactory in this reporting year. Only low impact in noise quality was observed from the public traffic outside the site. All construction works were carried out following the valid noise permit.
Waste Management	Waste management was found satisfactory during this reporting year. No accumulation of construction waste and general refuse was observed at the site.

12.0 IMPLEMENTATION STATUS

12.1 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).

Air Quality
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
Noise mitigation measures 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.

12.2 Implementation Status of Event and Action Plan

There were no exceedances in air quality and noise monitoring parameters recorded during the reporting period. Hence, no further mitigation measures were required.

12.3 Implementation Status of Environmental Complaint Handling

No complaints had been received during the reporting period.

13.0 REVIEW OF VALIDITY OF EIA PREDICATIONS AND RECOMMENDATIONS

According to the environmental monitoring results, no exceedances in both air quality and noise monitoring were recorded during the reporting period. Hence, the Project complied with all environmental standards and legislation as mitigation measures of the construction and operation stage recommended in the EIA Report were implemented satisfactorily. This compliance reflected that the EIA predictions were found accurate and the recommended mitigation measures were effective on the environmental monitoring and audit mechanisms.

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 during the reporting period. At the same time, no noise monitoring exceedances were recorded and no complaints were received. 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.

Appendix A

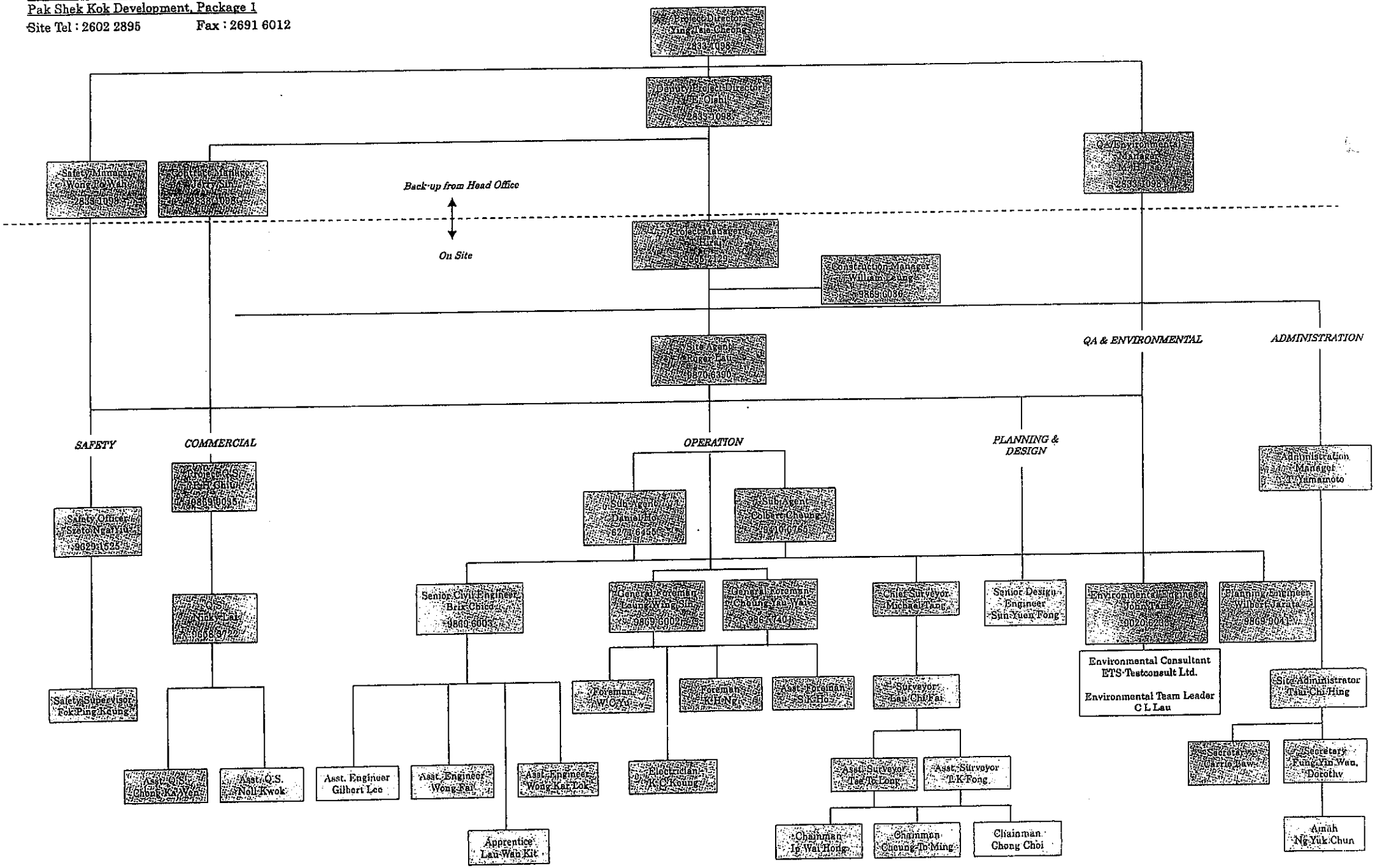
Organization Chart and Lines of Communication

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

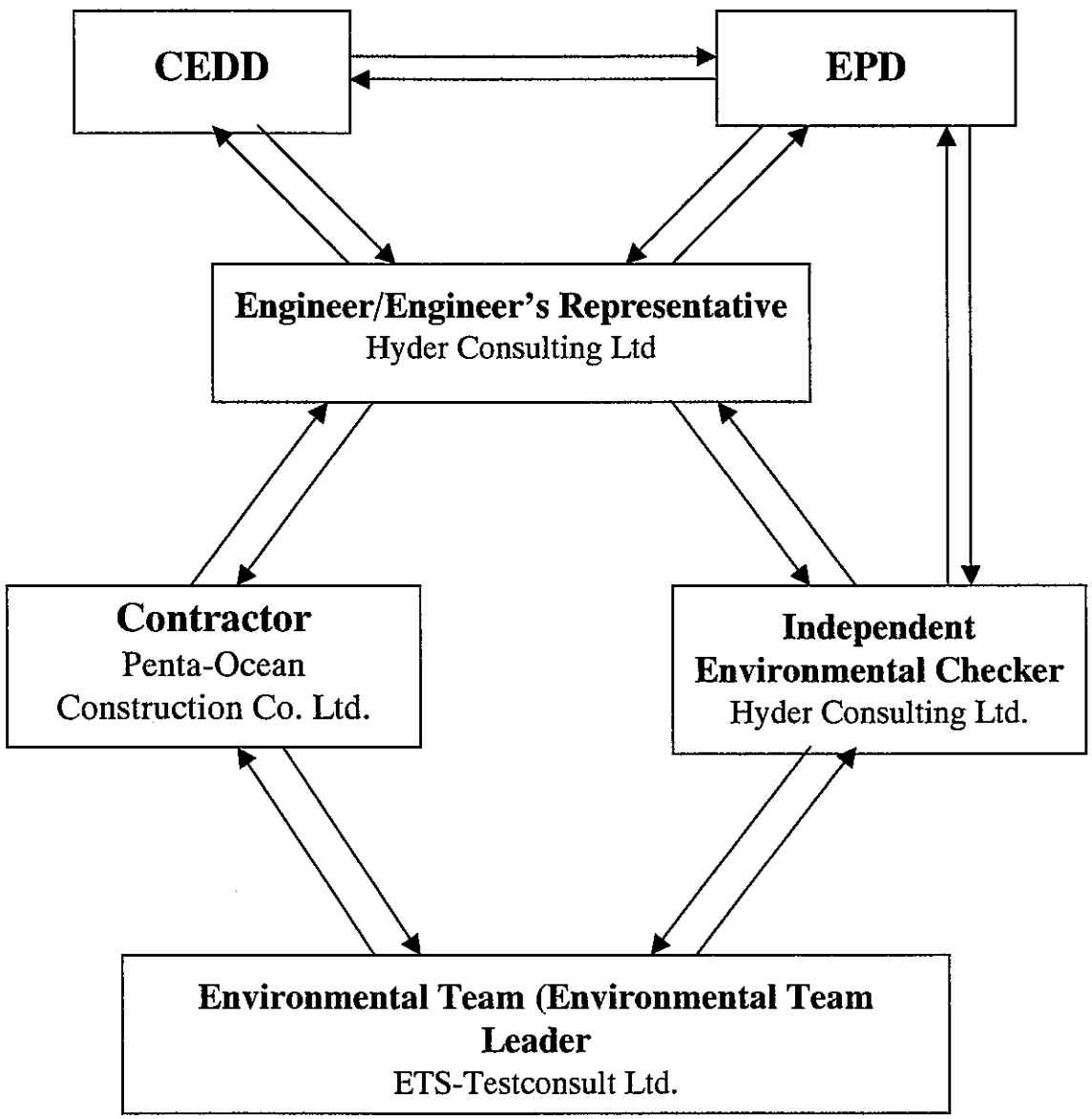
Project Site Organization Chart (with contact details)

Rev. H

Date : 19 Aug 03



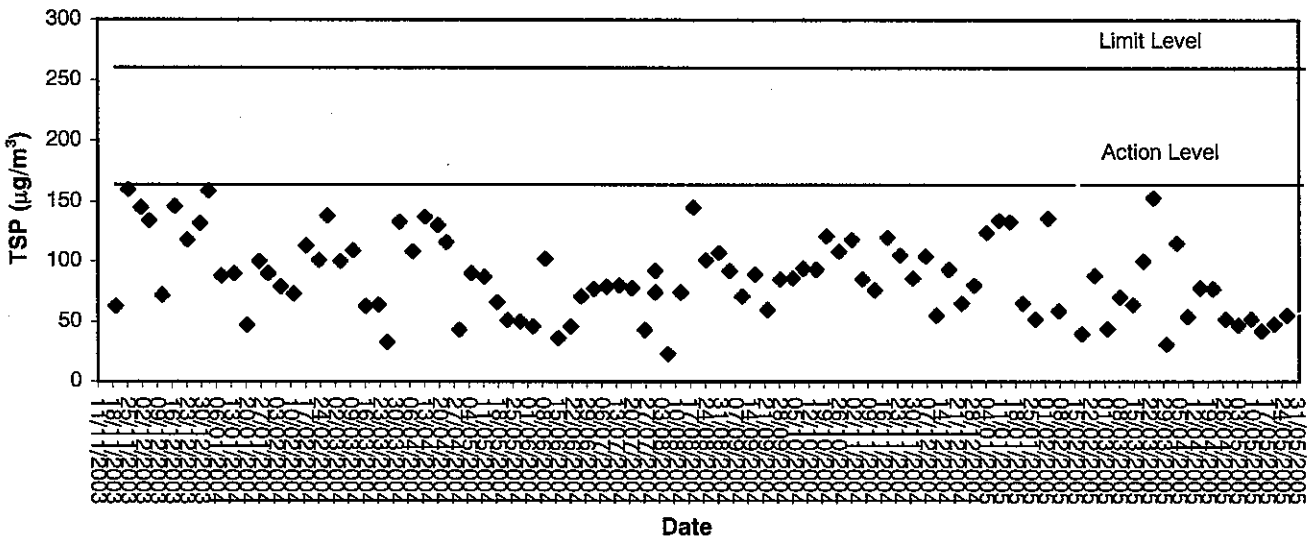
Lines of Communication



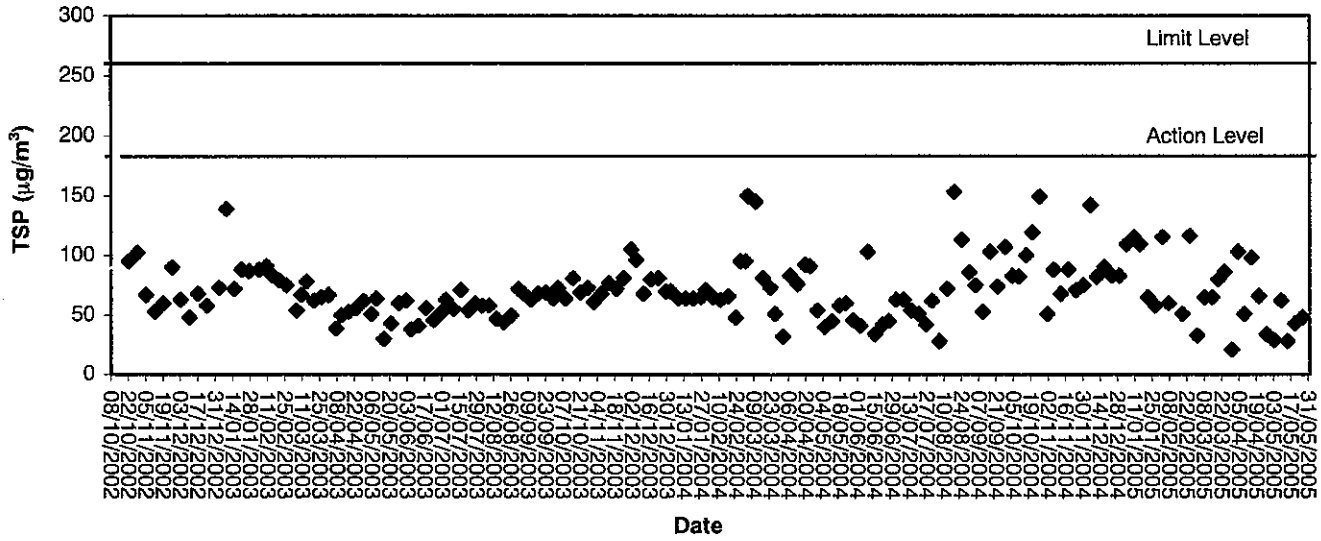
Appendix B

Graphical Plots of Air Quality Monitoring Data

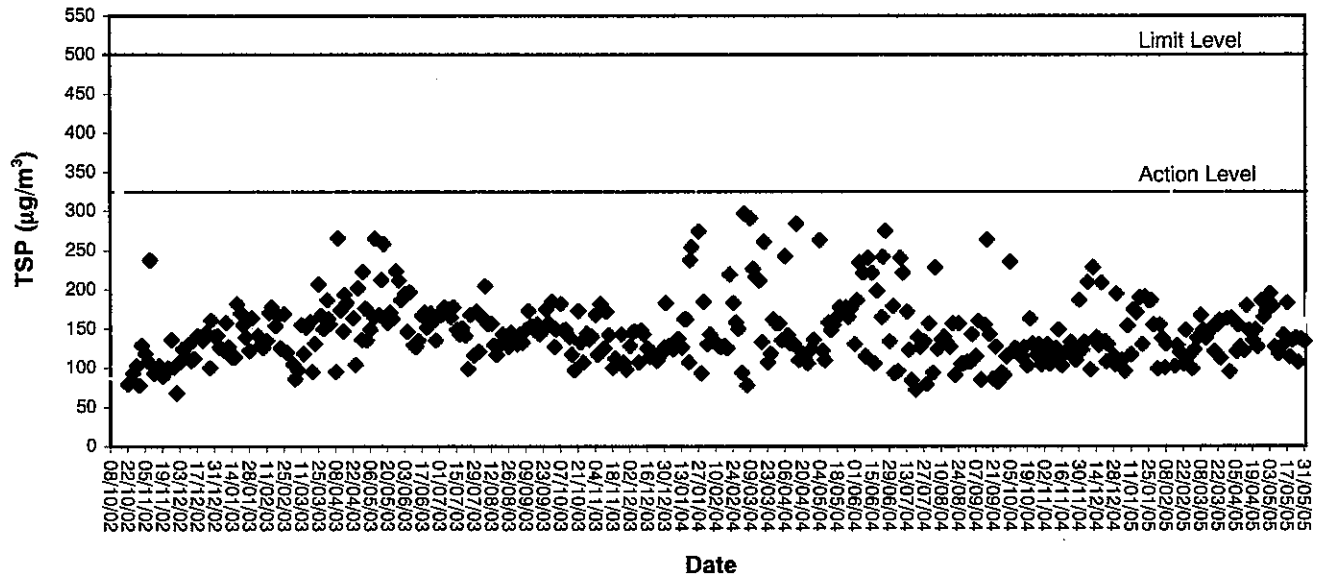
24-hour TSP level at AM1 (HKIB Staff Accommodation)



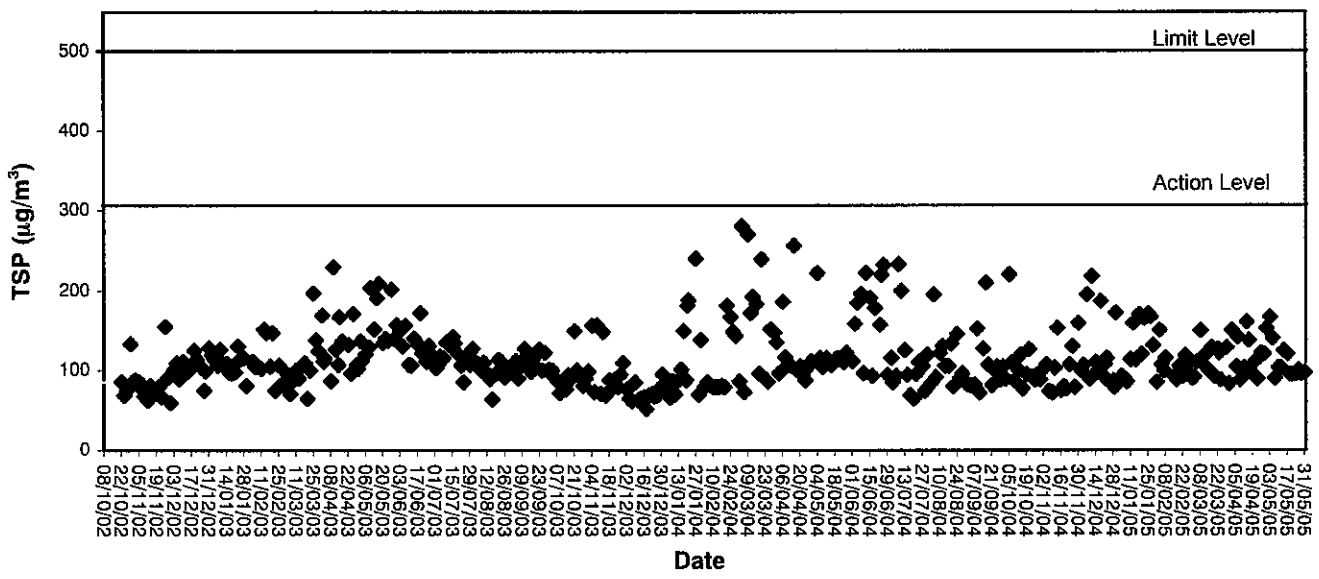
24-hour TSP level at AM3A
(Cheung Shue Tan in front of Man Kee Store)



1-hour TSP level at AM1, HKIB Staff Accommodation



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

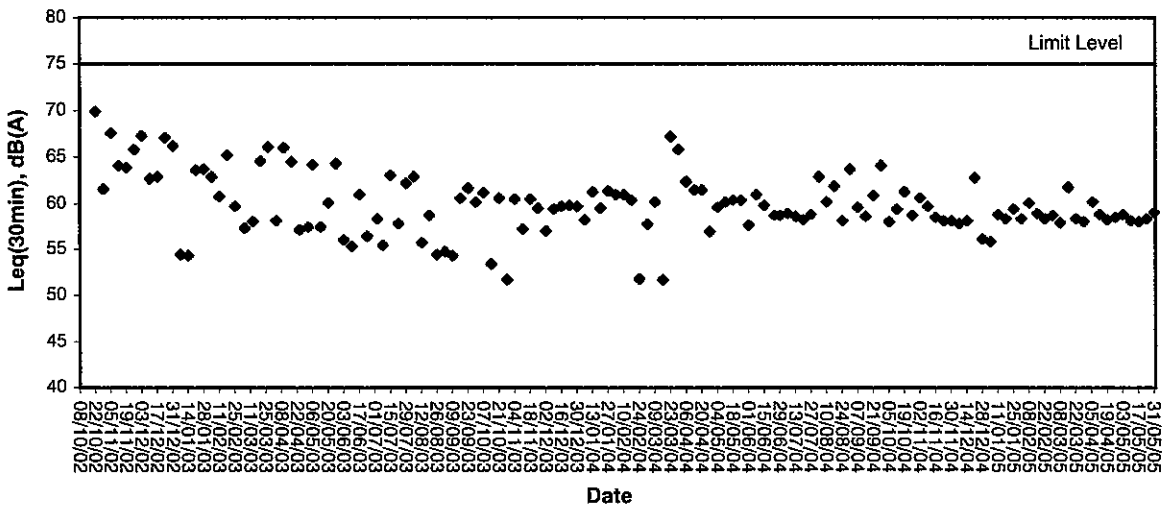


Appendix C

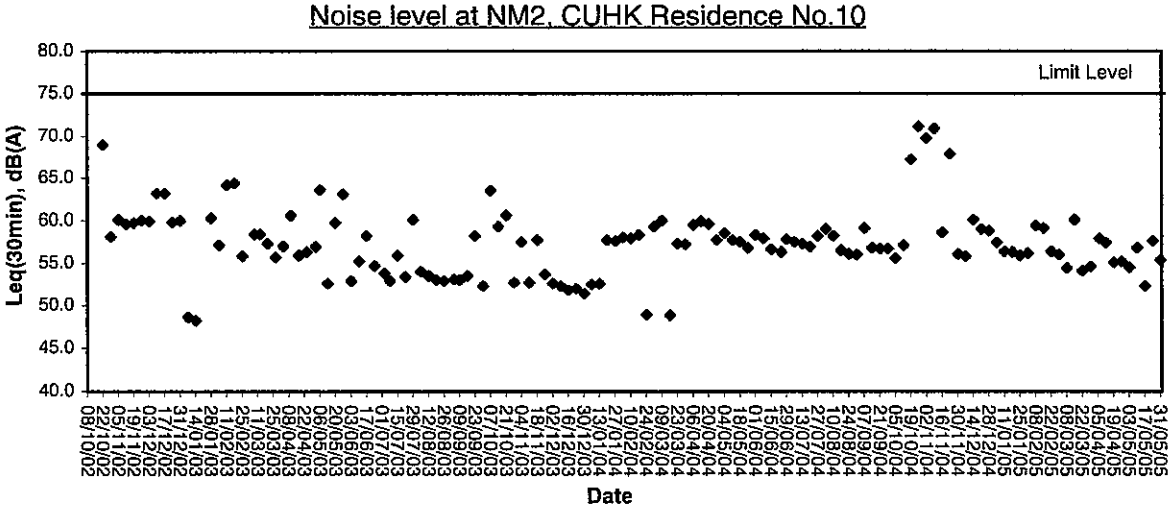
Graphical Plots of Noise Monitoring Data

Noise Monitoring (Day-time)

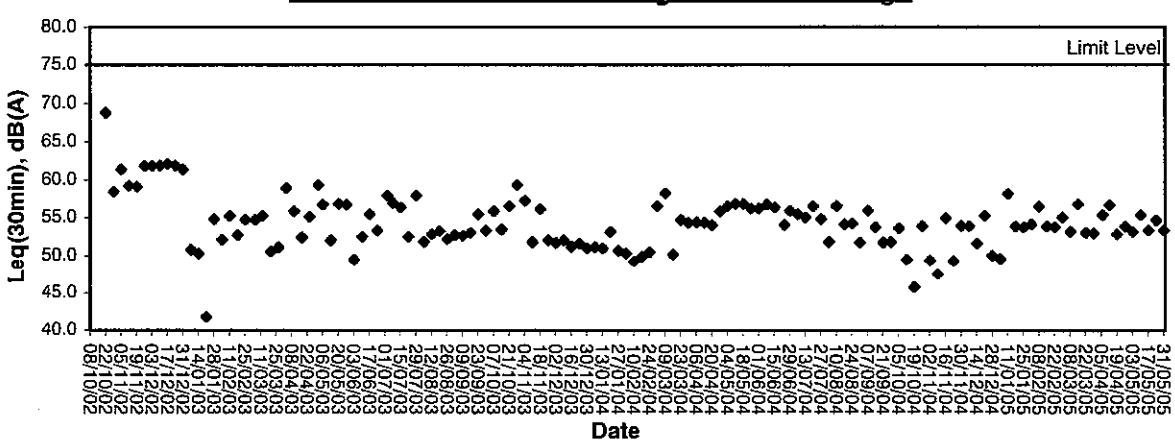
Noise level at NM1, HKIB Staff Accommodation



Noise level at NM2, CUHK Residence No.10

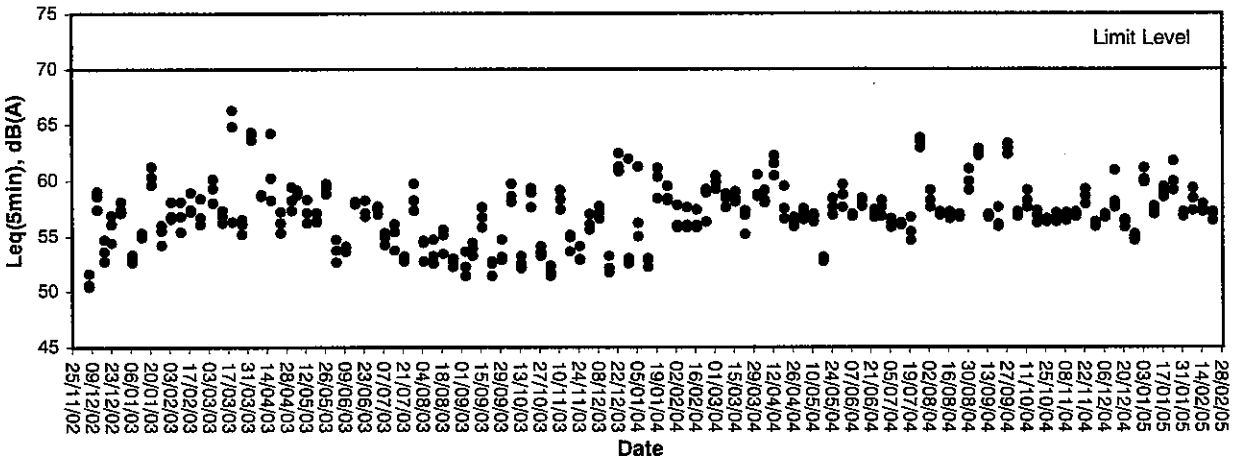


Noise level at NM3, Cheung Shue Tan Village

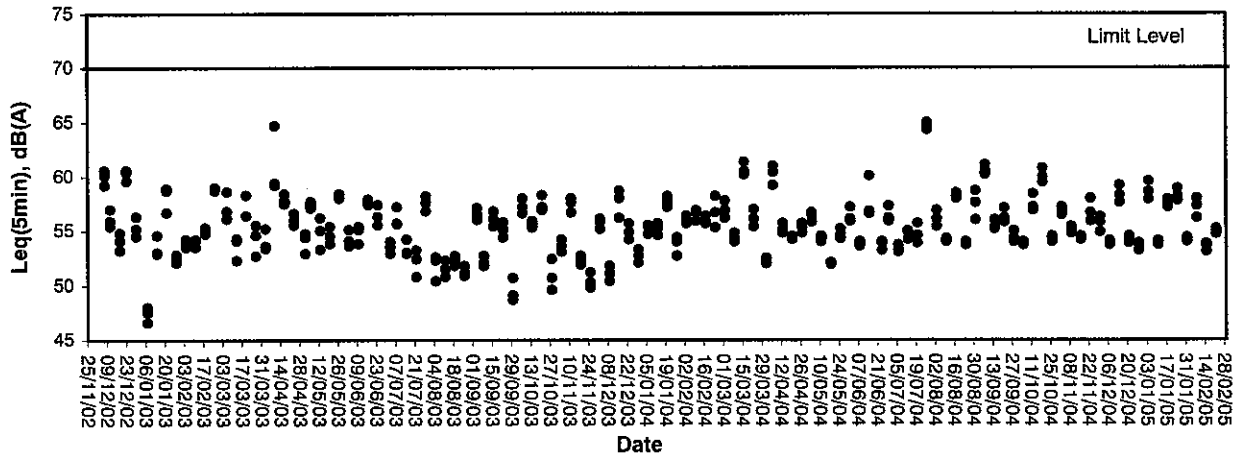


Noise Monitoring (Evening-time)

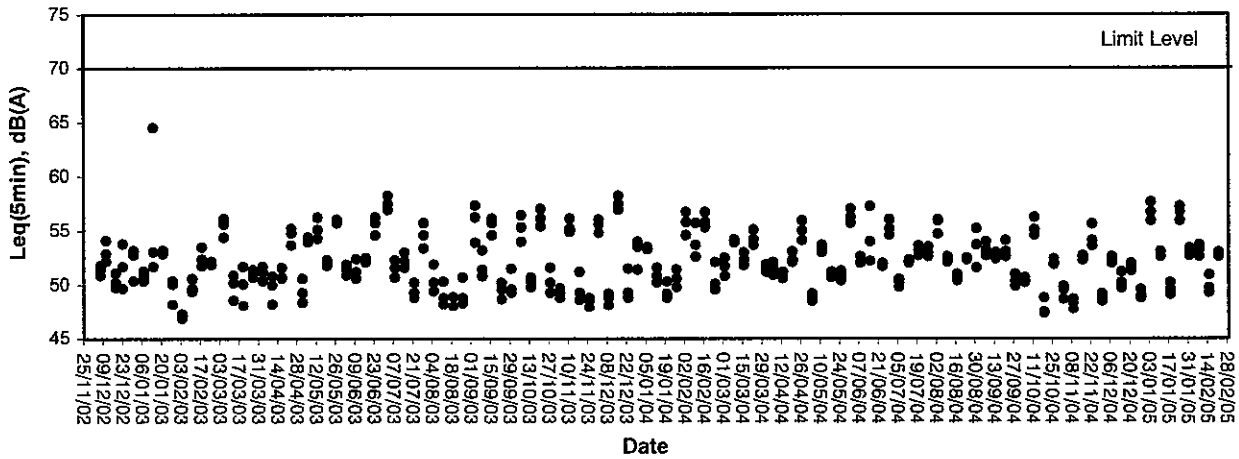
Noise level at NM1, HKIB Staff Accommodation



Noise level at NM2, CUHK Residence No.10

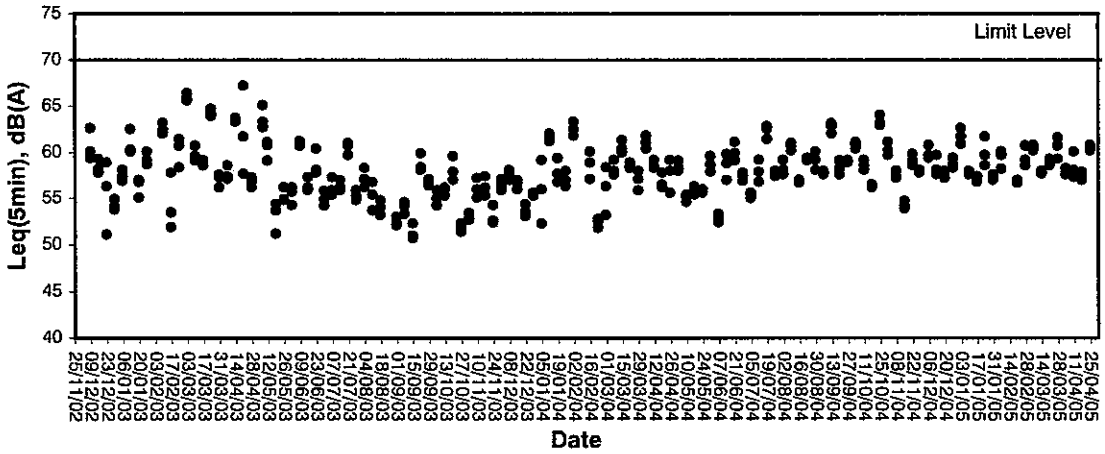


Noise level at NM3, Cheung Shue Tan Village

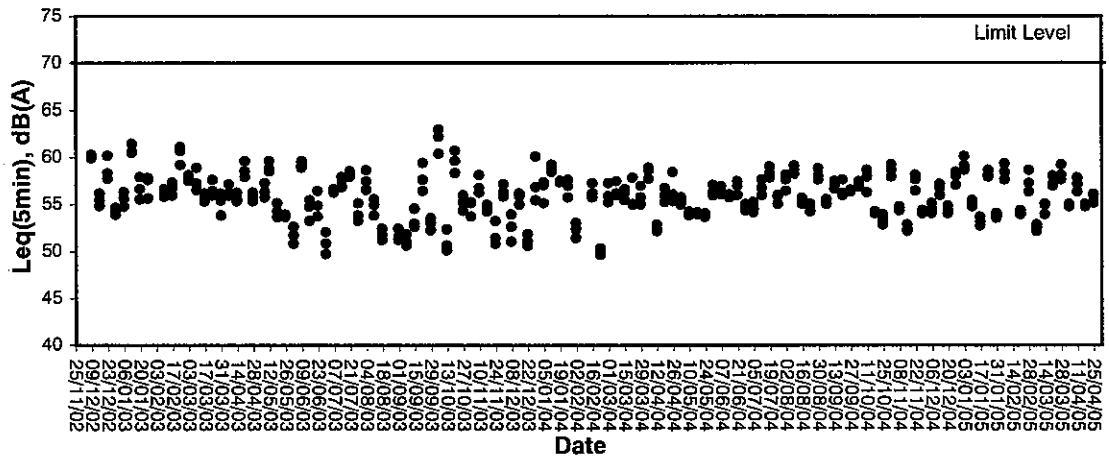


Noise Monitoring (Holiday)

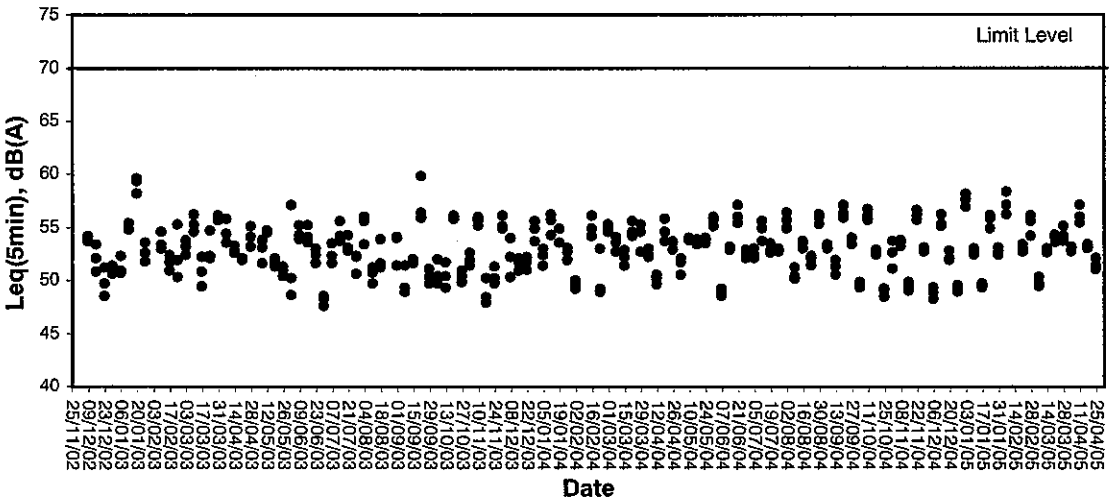
Noise level at NM1, HKIB Staff Accommodation



Noise level at NM2, CUHK Residence No.10



Noise level at NM3, Cheung Shue Tan Village



Appendix D

Event-Action Plans

Event / Action Plan for Air Quality

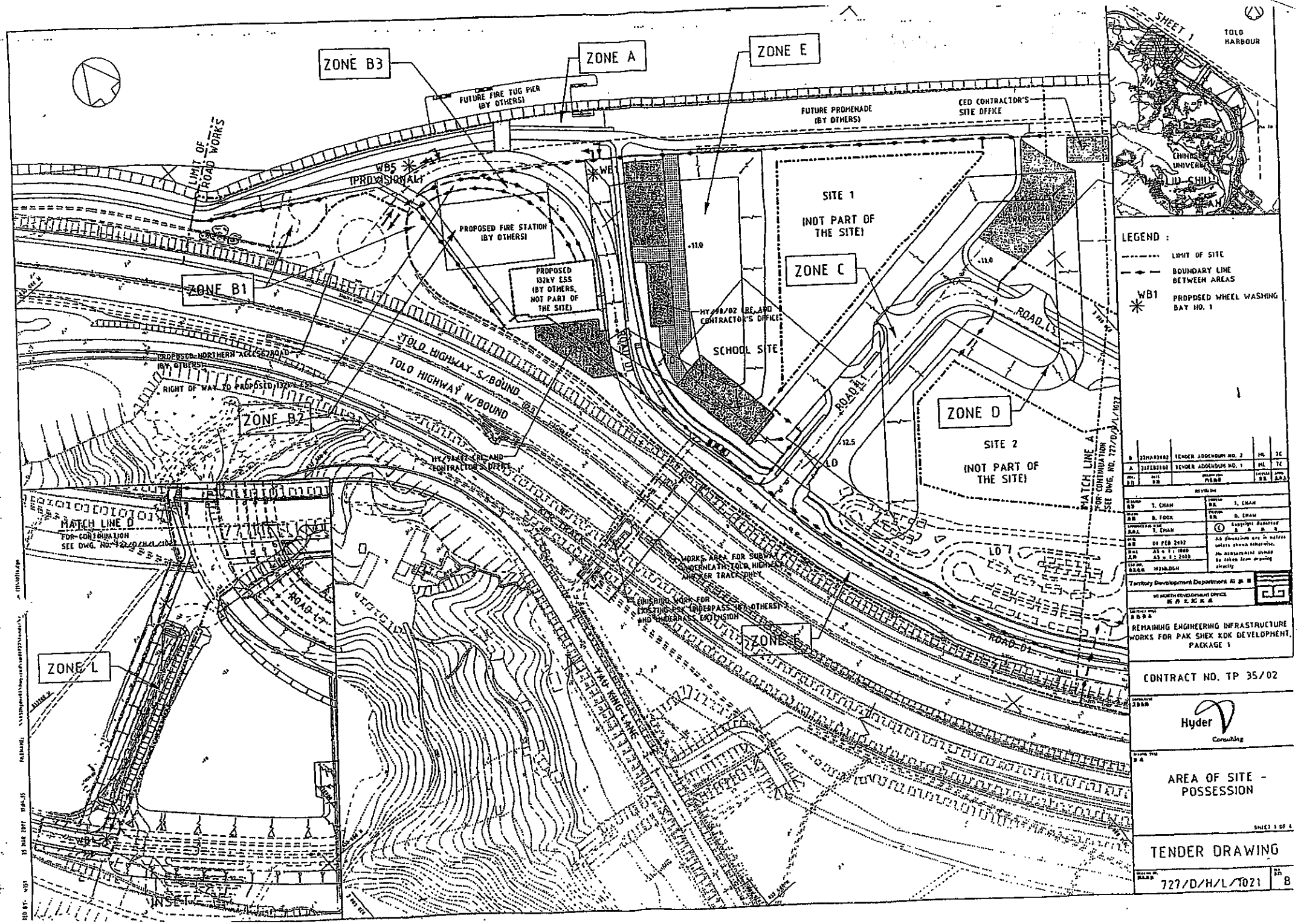
EVENT	ACTION			
	ET Leader	IC(E)	ER	CNOTRACTOR
Action Level				
1. Exceedance of one sample	1. Identify source 2. Inform IC(E) and ER 3. Repeat measurement to confirm finding 4. Increase monitoring frequency to daily	1. Check monitoring data submitted by ET 2. Check Contractor's working method.	1. Notify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

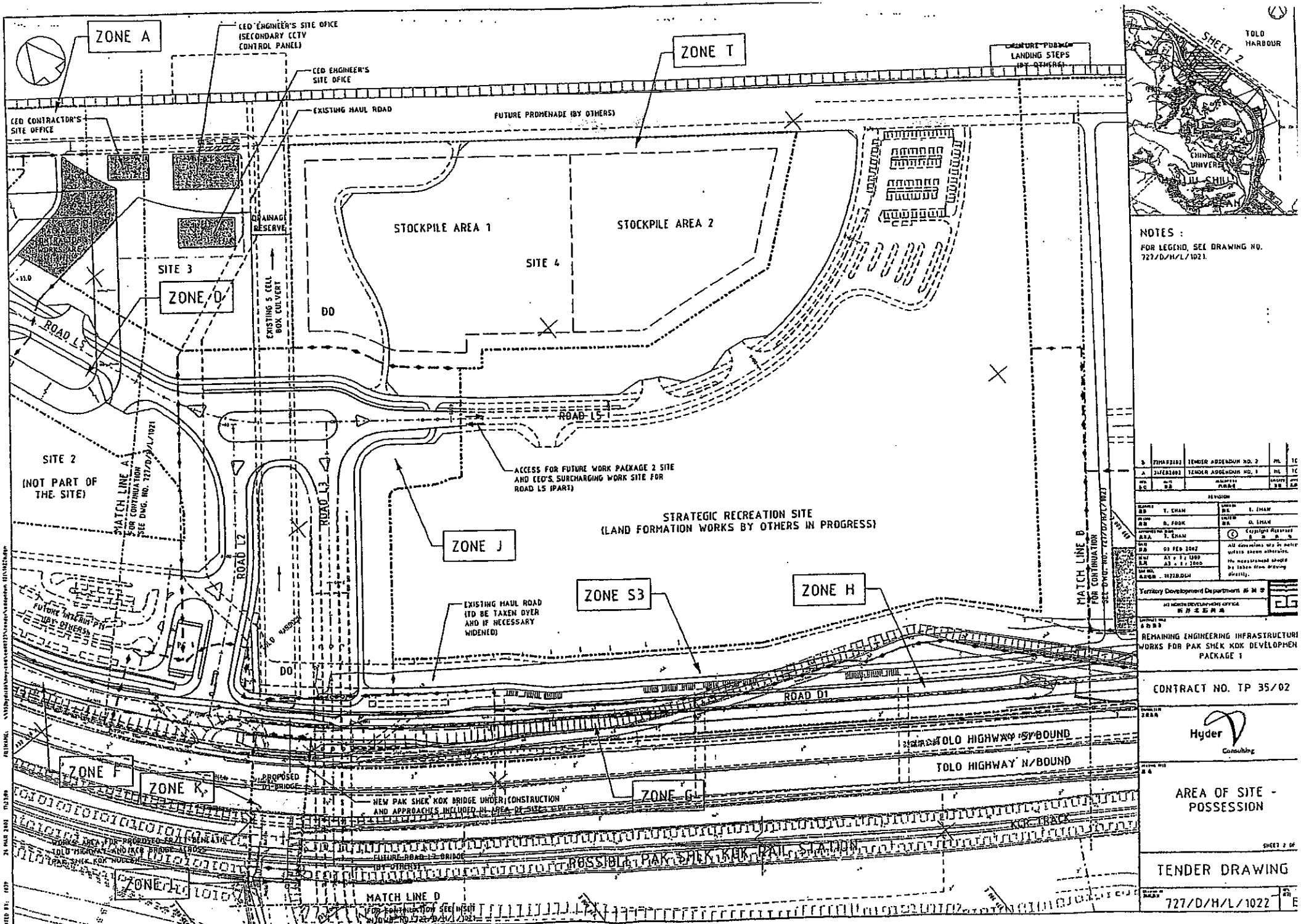
Event / Action Plan for Construction Noise

EVENT	ACTION			
	ET Leader	IC(E)	ER	CNOTRACTOR
Action Level	1. Notify IC(E) and Contractor 2. Carry out investigation 3. Report the results of investigation to the IC(E) and Contractor 4. Discuss with the Contractor and formulate remedial measures 5. Increase monitoring frequency to check mitigation effectiveness	1. Review the analyzed results submitted by the ET 2. Review the proposed remedial measures by the Contractor and advise the ER accordingly 3. Supervise the implementation of remedial measures	1. Confirm receipt of notification of failure in writing 2. Notify Contractor 3. Require Contractor to propose remedial measures for the analyzed noise problem 4. Ensure remedial measures are properly implemented	1. Submit noise mitigation proposal to IC(E) 2. Implement noise mitigation proposals
Limit Level	1. Notify IC(E), ER, and Contractor 2. Identify source 3. Repeat measurement to confirm findings 4. Increase monitoring frequency 5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented 6. Inform IC(E), ER and EPD the causes & action taken for the exceedances 7. Assess effectiveness of Contractor's remedial action and keep IC(E), EPD and ER informed to the results 8. If exceedance stops, cease additional monitoring	1. Discuss amongst ER, ET and Contractor on the potential remedial actions 2. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advice the ER accordingly 3. Supervise the implementation of remedial measures	1. Confirm receipt of notification of failure in writing 2. Notify Contractor 3. Require Contractor to propose remedial measures for the analysed noise problem 4. Ensure remedial measures are properly implemented 5. If exceedance continues, consider what protion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated	1. Take immediate action to avoid further exceedance 2. Submit proposals for remedial actions to IC(E) within 3 working days of notification 3. Implement the agreed proposals 4. Resubmit proposals if problem still not under control 5. Stop the relevant portion of works as determined by the ER until the exceedance is abated

Appendix E

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)
WB1
PROPOSED FIRE STATION (BY OTHERS)
PROPOSED 132kV ESS (BY OTHERS, NOT PART OF THE SITE)
SITE 1
(NOT PART OF THE SITE)
ZONE C
ZONE B1
HY/98/02 CRE AND CONTRACTOR'S OFFICE
SCHOOL SITE
ROAD D1
ROAD L1
TOLO HIGHWAY S/BOUND
TOLO HIGHWAY N/BOUND
PROPOSED NORTHERN ACCESS ROAD (BY OTHERS)
RIGHT OF WAY TO PROPOSED 132kV ESS
ZONE B2
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
WORKS AREA FOR SUBWAY UNDERNEATH TOLO HIGHWAY AT HER TRACK DRIFT
FINISHING WORK FOR EXISTING PAK UNDERPASS (BY OTHERS) AND UNDERPASS EXTENSION
ZONE
ZONE L
ROAD D1
ROAD L7
WB2
INSET
SHEET 1
TOLO HARBOUR
CHINESE UNIVERSITY
LIU SHIU
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



NOTES :

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

No.	Date	Description	By	Ch'k
B	19MAR2003	TENDER ADDENDUM NO. 2	ML	TC
A	24FEB2003	TENDER ADDENDUM NO. 1	ML	TC

DESIGNED: T. SHAM
DRAWN: D. FOOK
CHECKED: T. SHAM
DATE: 09 FEB 2002
SCALE: A1 1:1000, A3 1:2000
DWG NO.: H728.DGN

Territory Development Department
HK NORTH DEVELOPMENT OFFICE

REMAINING ENGINEERING INFRASTRUCTURE WORKS FOR PAK SHEK KOK DEVELOPMENT PACKAGE 1

CONTRACT NO. TP 35/02

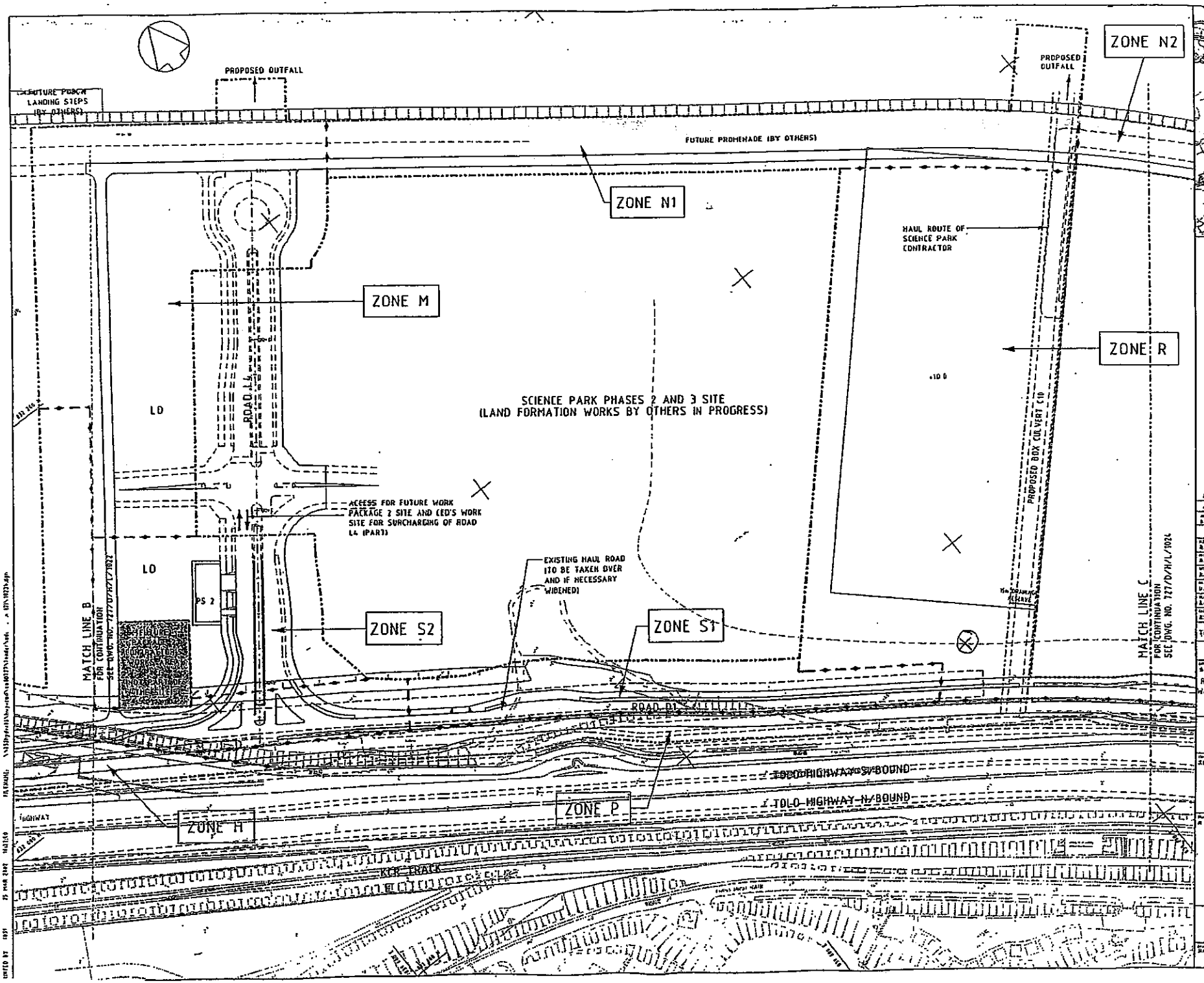
Hyder Consulting

AREA OF SITE - POSSESSION

SHEET 2 OF

TENDER DRAWING

727/D/H/L/1022 E



NOTES :

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

B	27MAR2002	TENDER ADDENDUM NO. 2	MK	
A	25FEB2002	TENDER ADDENDUM NO. 1	MK	

REVISION

DESIGNED BY	Y. CHAN	CHECKED BY	I. CHAN
DRAWN BY	B. FOOK	VERIFIED BY	O. CHAN
INFORMATION AND DATA BY	I. CHAN	© Copyright Reserved	
DATE	08 FEB 2002	All dimensions are in mm unless shown otherwise.	
SCALE	A3 : 1 : 1000 A3 : 1 : 2000	No measurement should be taken from drawing directly.	
DGN NO.	1023.DGN		

Territory Development Department 地政總署

NT NORTH DEVELOPMENT OFFICE 新界北發展處

REMAINING ENGINEERING INFRASTRUCTURE WORKS FOR PAK SHEK KOK DEVELOPMENT PACKAGE 1

CONTRACT NO. TP 35/02

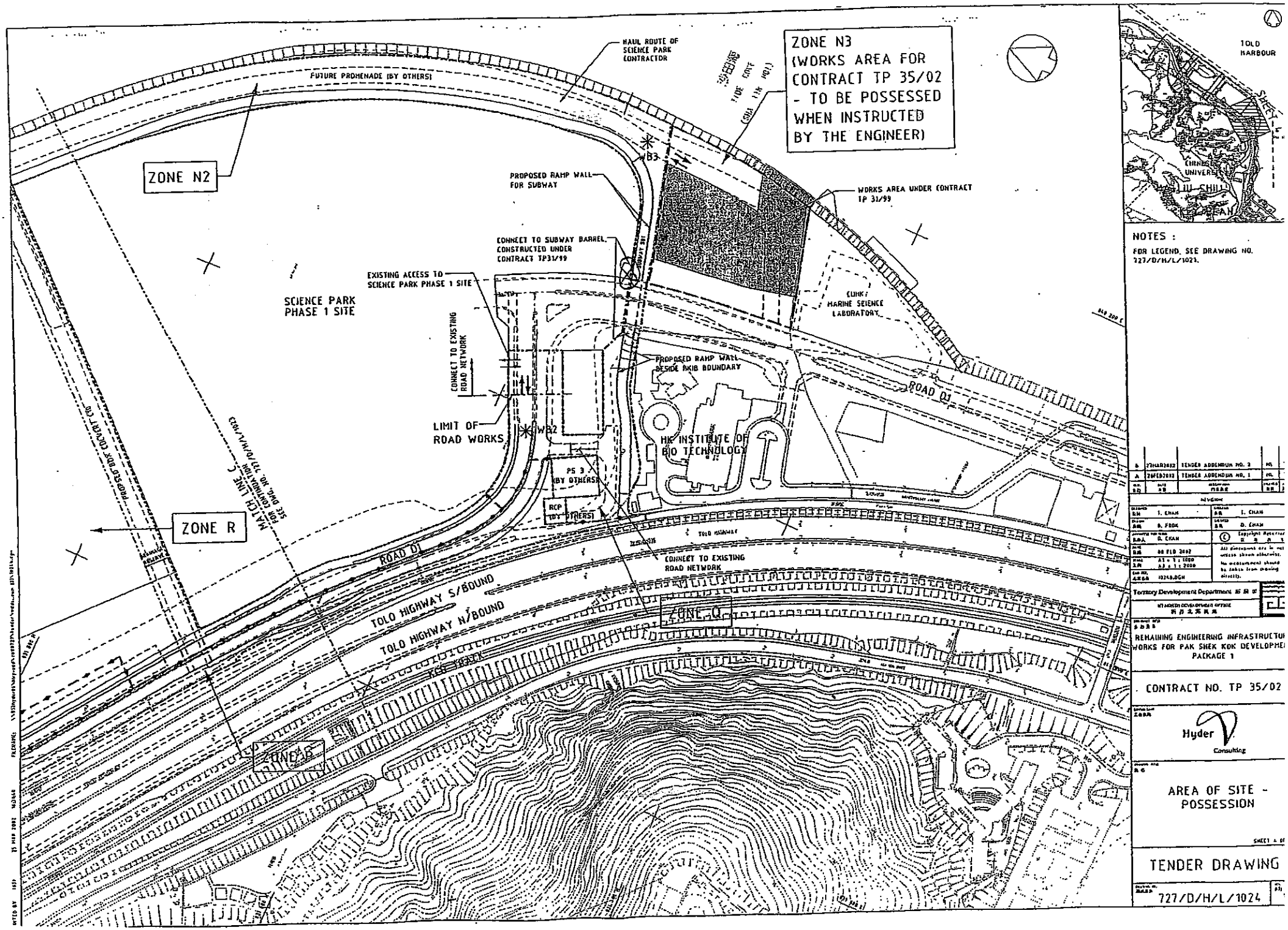
Hyder Consulting

AREA OF SITE - POSSESSION

SHEET 3 OF 4

TENDER DRAWING

727/D/H/L/1023 | B



NOTES :

FOR LEGEND, SEE DRAWING NO. 727/D/H/L/1023.

B	27MAR2002	TENDER ADDENDUM NO. 2	MS
A	26FEB2002	TENDER ADDENDUM NO. 1	MS

DESIGNED BM I. CHAN
DRAWN AB I. CHAN
CHECKED BM B. FOK
APPROVED BR D. CHAN
COMPUTER FILE NO. E.M.A. D. CHAN
DATE 08 FEB 2002
SCALE H 1 : 1000, V 1 : 2000
JOB NO. 4.8.868 10248.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

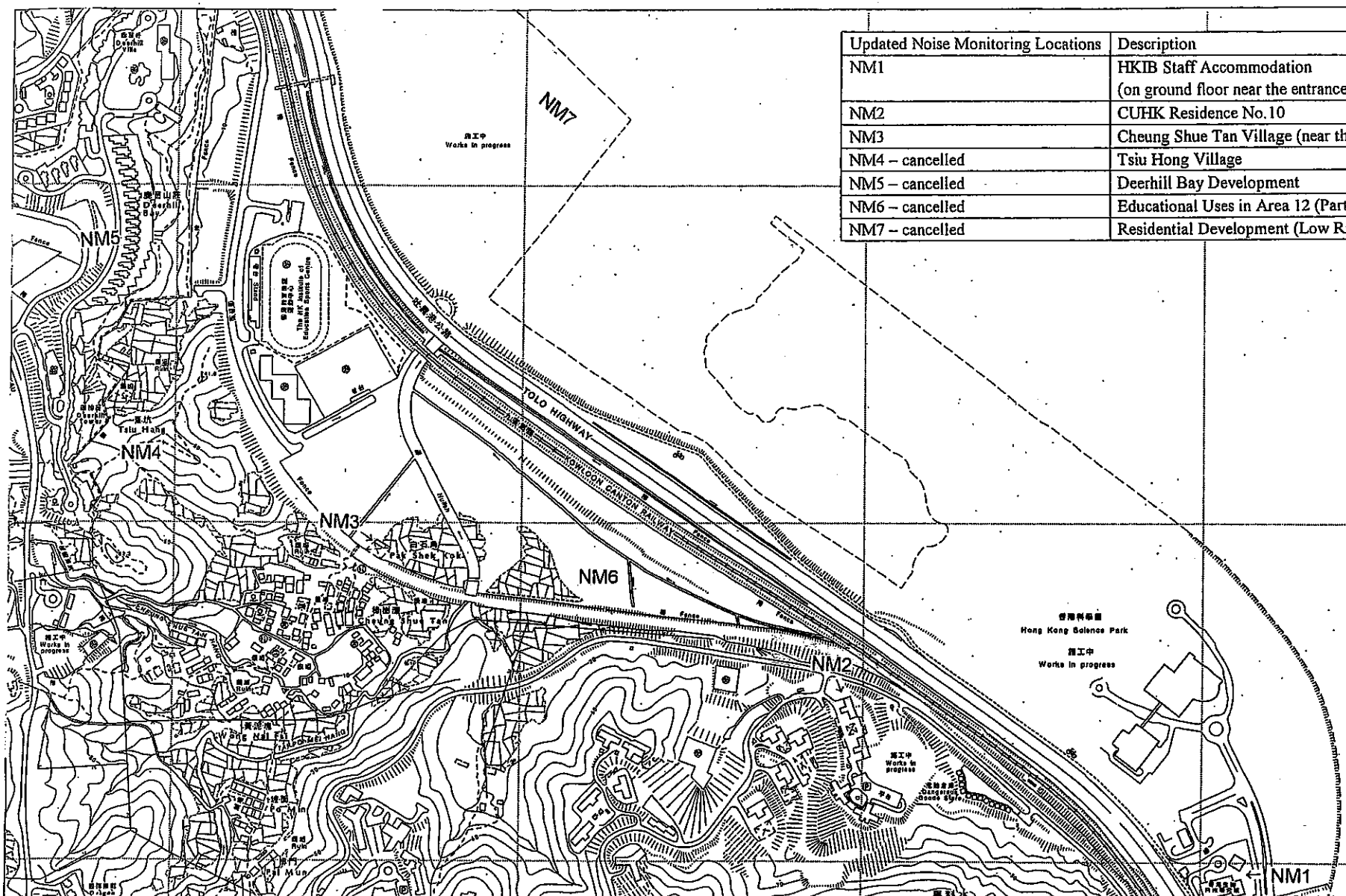
AREA OF SITE - POSSESSION

SHEET 1 OF

TENDER DRAWING

DRAWING NO. 727/D/H/L/1024

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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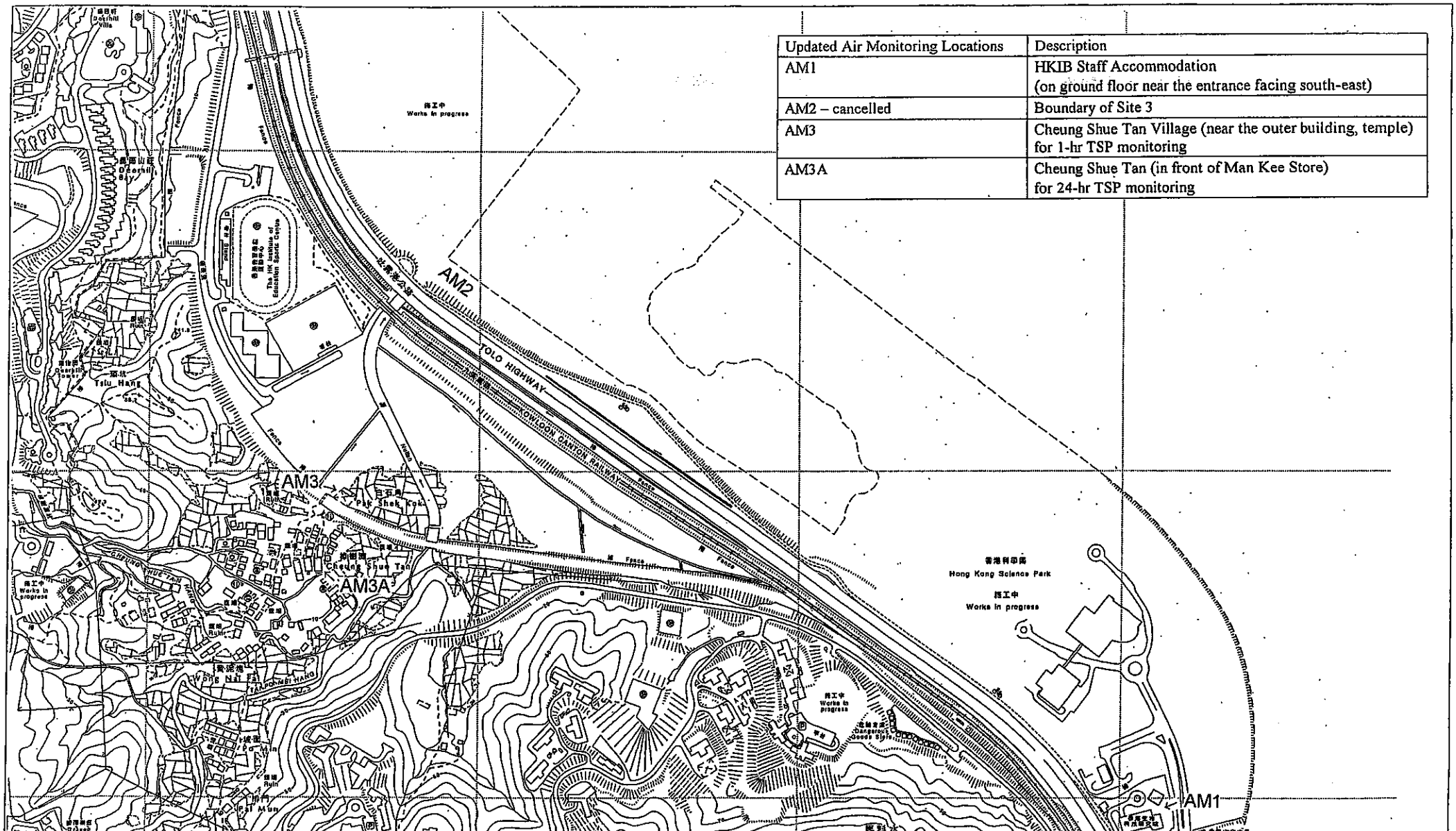
ETS-TESTCONSULT LIMITED



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

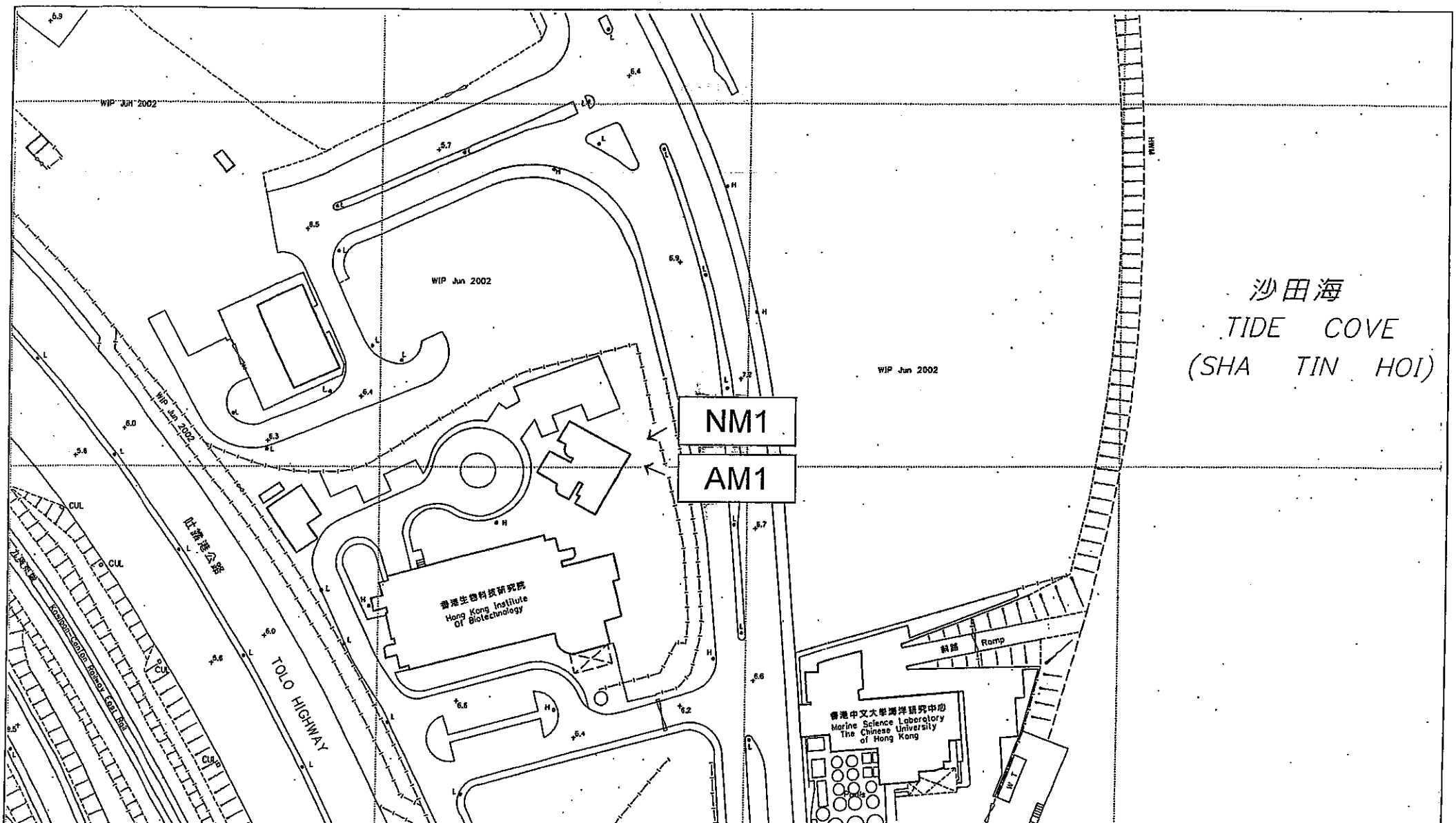
Remaining Engineering Works for Pak Shek Kok Development, Package 1
Contract No. TP35/02

Figure 2 Location of Air Monitoring Stations

Scale : ---

Revised Date:
15/11/2002

東業德勤測試顧問有限公司
ETS-TESTCONSULT LIMITED



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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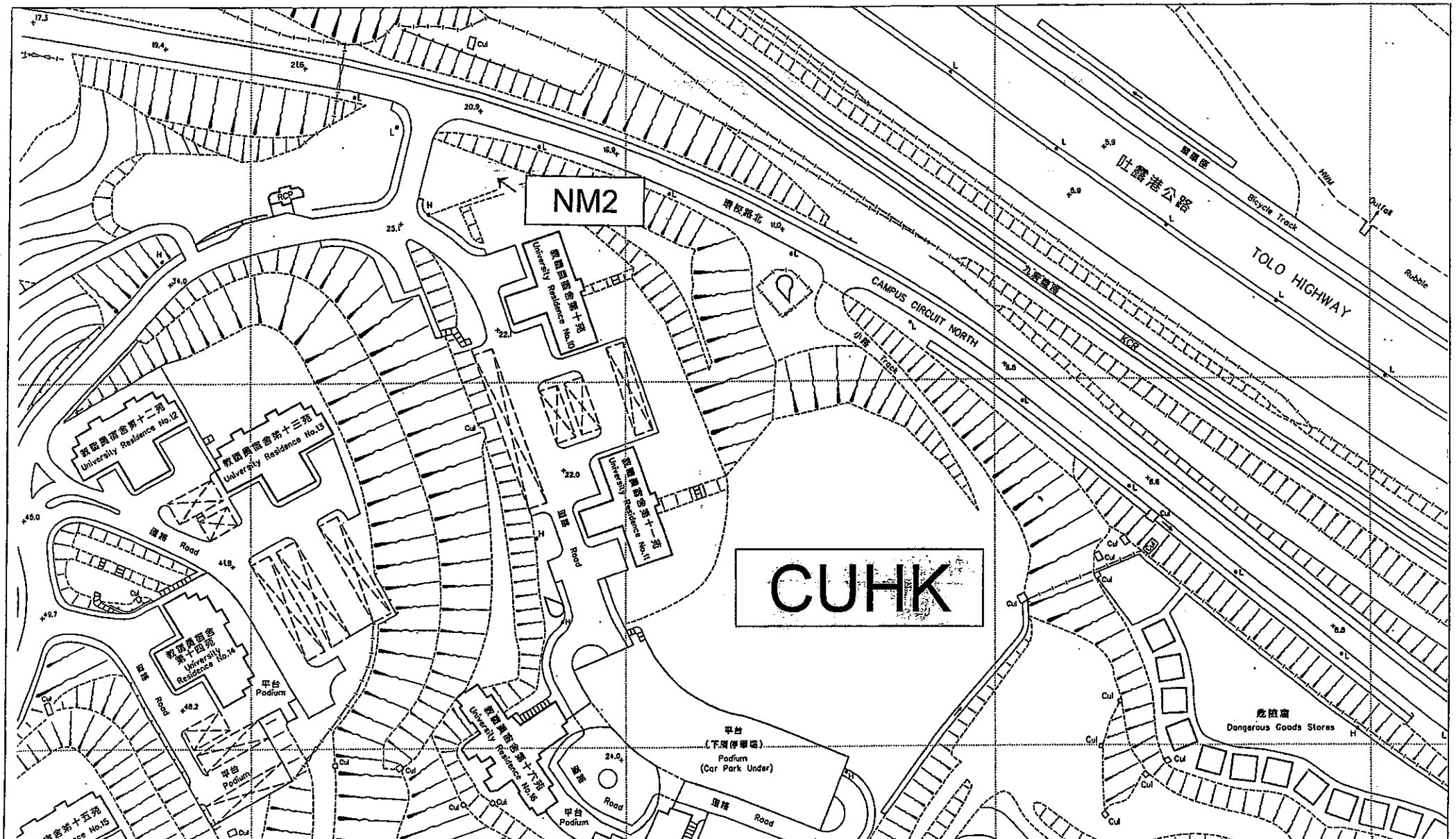
ETS-TESTCONSULT LIMITED



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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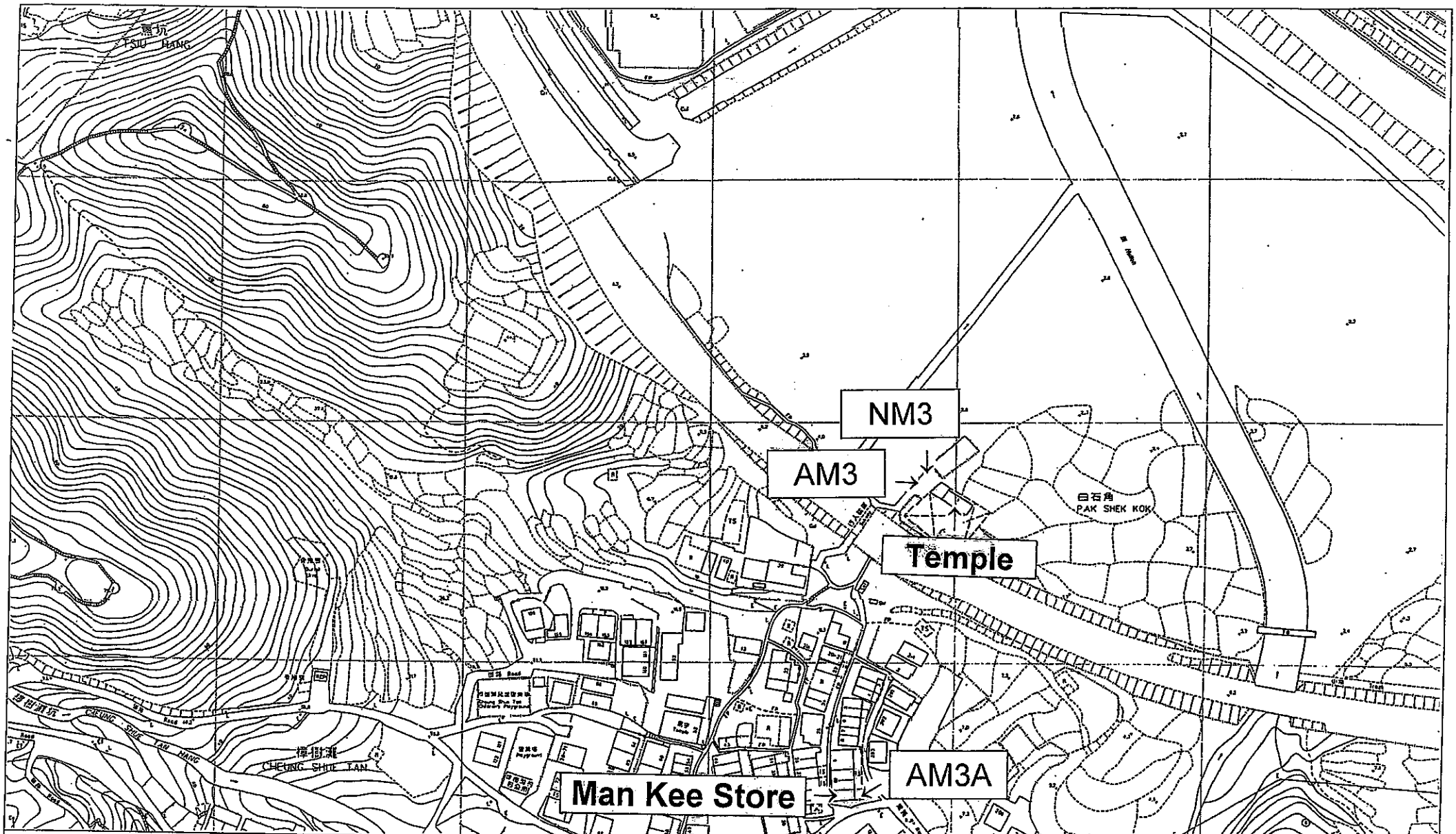

Remaining Engineering Works for Pak Shek Kok Development, Package 1
Contract No. TP35/02

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

Scale : ---

Revised Date:
15/11/2002

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