



THE GOVERNMENT OF THE HONG KONG
SPECIAL ADMINISTRATIVE REGION
TERRITORY DEVELOPMENT DEPARTMENT
HK ISLAND & ISLANDS DEVELOPMENT OFFICE

Agreement No. CE 7/99

**Northern Access Road for Cyberport Development
Design and Construction**

QUARTERLY ENVIRONMENTAL MONITORING AND AUDIT SUMMARY REPORT NO. 11

January 2004

Document No. R/2146/210/1 Issue 1



Babtie Asia

with sub-consultants

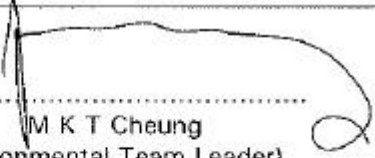

Urbis Ltd

Wilbur Smith Associates Ltd

BMT Reliability Consultants Ltd

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Certified by:	
	M K T Cheung (Environmental Team Leader)
Verified by:	
	B Douglas (Independent Environmental Checker)
<p><i>* It is noted that air monitoring did not meet the EM and A requirement due to equipment failure in November and December. This report is verified on the basis that spare equipment will be provided to cover such events in future</i></p>	

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Approved for Issue by:

----- A M Pearson
Position: Project Director
Date: 10/2/04

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EXECUTIVE SUMMARY

This is the eleventh Quarterly Environmental Monitoring and Audit (EM&A) Summary Report for the project of Northern Access Road for Cyberport Development. The contract entitled 'Contract No. HK10/2000, Northern Access Road for Cyberport Development at Telegraph Bay' was awarded to China Harbour Engineering Company (Group) on 31 October 2000 and the commencement date of construction was on 27 March 2001.

This report summarises the EM&A activities for the project from 27 September 2003 to 26 December 2003.

Noise Level

24-hour continuous noise monitoring was operated during the reporting period.

No noise level exceedance was recorded at both stations. As a mitigation measure, a semi-enclosure was erected along the demolished section of the existing bridge at Sha Wan Drive to mitigate the noise.

Air Quality

One 24-hour TSP and three 1-hour TSP were taken in every six-days for monitoring. The monitoring stations are Pine Court and Magnolia Villa.

Almost all measurement results show compliance with action and limit level at both stations. Only one 24-hour TSP action level non-compliance was recorded on 18 December 2003 at Pine Court. It was found that a strong monsoon signal was hoisted by the Hong Kong Observatory at that day. As a result, the marginal exceedance in TSP action level might be due to strong wind.

However, the Contractor has installed the sprinkler system and increased spraying water and added tarpaulin shelter for minor slope stabilization works near the crest slope to depress dust from arising.

1.0 ENVIRONMENTAL STATUS

1.1 Construction Programme

The contract consists of the construction of bridge foundations, bridge substructure, bridge deck, electric substation, retaining walls and cascade, demolition works, earthworks, roadwork, drainage works, watermains laying works and landscaping works. The Contract was awarded on 31 October 2000 and construction commenced on 27 March 2001. The construction duration was extended due to the unforeseeable site condition and the programme completion date for construction works shall be few months into year 2004. A detailed programme is included in the monthly reports.

1.2 Project Organization and Management Structure

An environmental team (ET) was established to carry out monitoring, audit and environmental management. In addition, an Independent Environmental Checker

(IC(E)) was employed to verify the overall environmental performance of the Project, including the implementation of environmental mitigation measures, submissions relating to environmental monitoring and auditing, and any other submissions required under the Environmental Permit. A detailed organization chart with contact details is included in the monthly reports.

1.3 Summary of Work Progress from 27 September 2003 to 26 December 2003

- Utilities laying
- Watermains and drains laying
- Bridge No. 2 construction
- Geotechnical works
- Reinforced earth wall (RW2) construction
- Slope surface drainage channel construction

The general layout and location of Northern Access Road is shown on figure 1.1 and drawings T/2146/1003 and W/2146/1004.

Two monitoring stations, both for noise and air quality, are located in Pine Court & Magnolia Villa. Locations are shown on figure 1.2 and 1.3.

2.0 SUMMARY OF EM&A REQUIREMENT

2.1 Monitoring Parameter

2.1.1 Noise

The construction noise levels were measured in terms of the A-weighted equivalent continuous sound pressure level (L_{eq}).

$L_{eq(30 \text{ min})}$ was measured to determine the noise impact for the time period between 0700 – 1900 hours on normal weekdays and $L_{eq(5 \text{ min})}$ was taken at times other than normal weekdays.

2.1.2 Air Quality

Monitoring and audit of the Total Suspended Particulates (TSP) levels is carried out by the ER & ET to ensure that any deteriorating air quality can be readily detected and timely action can be taken to rectify the situation.

Three 1-hour and one 24-hour TSP monitoring in every six-days is carried out to indicate the impacts of construction dust on air quality. The 24-hour TSP levels are conducted by following the standard high volume sampling method as set out in the Title 40 of the Code of Federal Regulations, Chapter 1 (Part 50), Appendix B.

2.2 Action and Limit Level

2.2.1 Noise

The action and limit level for construction noise in EM&A Manual is outlined in Table 2.1.

Table 2.1 Action and Limit Levels for Construction Noise

Time Period	Action Level	Limit Level
0700 – 1900 hrs on normal weekday	When one documented complaint is received	75* dB(A)
0700 – 2300 hrs on holidays; and 1900 – 2300 hrs on all other days		60/65/70** dB(A)
2300 – 0700 hrs of next day		45/50/55** dB(A)

* reduce to 70 dB(A) for schools and 65 dB(A) during school examination periods
 ** to be selected based on Area Sensitivity Rating.

2.2.2 Air Quality

The action and limit level for air quality are outlined in Table 2.2 & 2.3.

Table 2.2 Action and Limit Levels for 1-hour TSP

Location	Action Level, $\mu\text{g}/\text{m}^3$	Limit Level
Pine Court	427	500
Magnolia Villa	423	

Table 2.3 Action and Limit Levels for 24-hour TSP

Location	Action Level, $\mu\text{g}/\text{m}^3$	Limit Level, $\mu\text{g}/\text{m}^3$
Pine Court	160	260
Magnolia Villa	153	

3.0 MONITORING RESULTS

3.1 Noise

Noise Monitoring Results for Pine Court and Magnolia Villa during the reporting period are summarized in Figure 3.1 & 3.2 respectively.

3.2 Air Quality

Air Quality Monitoring Results (Both 1-hour and 24-hour sampling results) for Pine Court and Magnolia Villa, during the reporting period are summarized in Figure 3.3 & 3.4 respectively.

One measurement exceeded the action/limit level from the station at Pine Court during windy day on 18 December 2003. The Contractor has rectified the problem by installing a sprinkler system, increasing the frequency of water spraying and erecting a shelter for excavation near the crest slope dust suppression.

During the reporting period, the high volume sampler was broken down from 17 November 2003 to 24 December 2003. Nevertheless, the Contractor has tried the best to repair the monitoring apparatus immediately and minimize the amount of data loss.

4.0 RECORD OF NON-COMPLIANCE, COMPLAINTS, NOTIFICATION OF SUMMONS AND SUCCESSFUL PROSECUTION

4.1 Noncompliance and Deficiency

4.1.1 Noise

No noise level exceedance was recorded at both stations. Despite this, the Contractor had erected a large noise barrier to shield the rock breaking activity. In addition, a semi-enclosure was erected along the demolished section of the existing bridge at Sha Wan Drive to mitigate the noise.

4.1.2 Air Quality

Almost all measurement results show compliance with action and limit level at both stations. Only one 24-hour TSP action level non-compliance was recorded on 18 December 2003 at Pine Court. It was found that a strong monsoon signal was hoisted by the Hong Kong Observatory at that day. As a result, the marginal exceedance in TSP action level might be due to strong wind. However, the Contractor has installed the sprinkler system and increased spraying water and erected a shelter for excavation near the crest slope to depress dust from arising.

4.2 Complaint

No complaint was received. As a mitigation measure, the Contractor used the pre-split method to break up the rock.

4.3 Notification of Summons and Successful Prosecutions

No notification of summons or successful prosecution was received by the Contractor in the reporting period.

5.0 ADVICE ON THE SOLID AND LIQUID WASTE MANAGEMENT STATUS

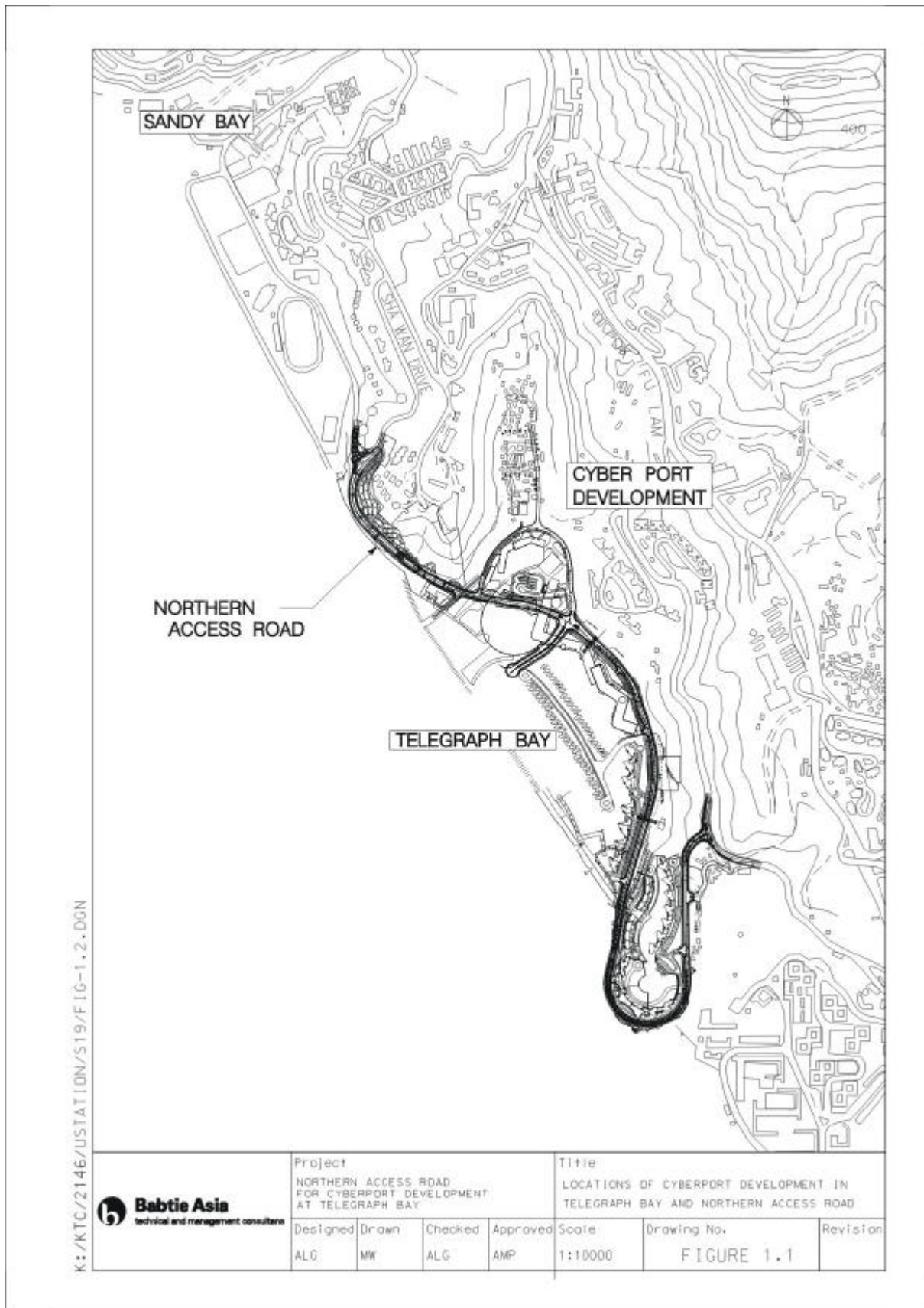
The waste management plan was approved by EPD.

The 'trip and ticket' system has been implemented for the disposal of construction and demolition waste.


6.0 CONCLUSION

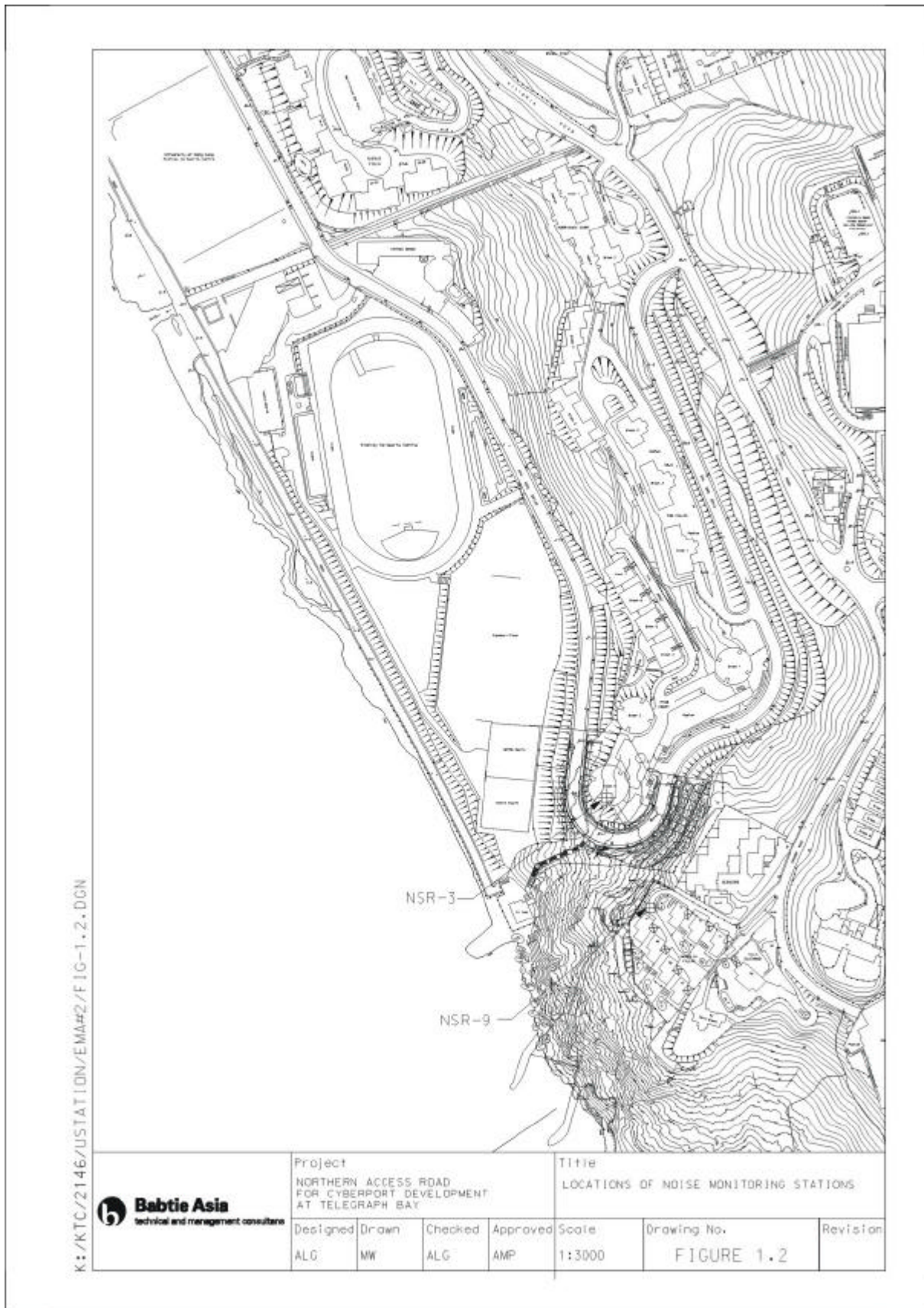
The monitoring work is proving effective and is generating data with the necessary statistical power to categorically identify, or confirm the absence of, impact attributable to the works.

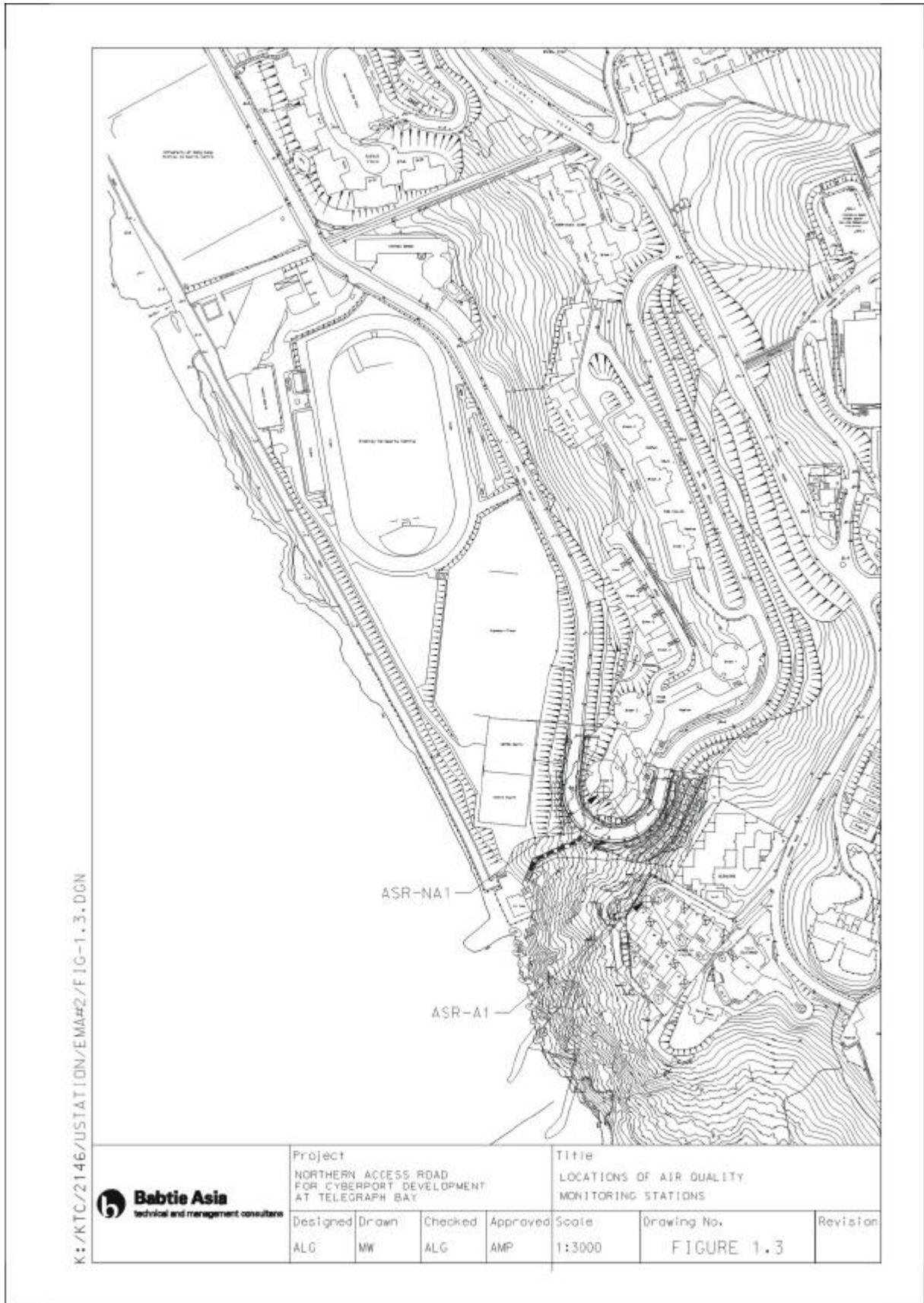
Figures



K:\KTC\2146\USTATION\S19\FIG-1.2.DGN

 Babtie Asia technical and management consultants	Project NORTHERN ACCESS ROAD FOR CYBERPORT DEVELOPMENT AT TELEGRAPH BAY				Title LOCATIONS OF CYBERPORT DEVELOPMENT IN TELEGRAPH BAY AND NORTHERN ACCESS ROAD		
	Designed ALG	Drawn MW	Checked ALG	Approved AMP	Scale 1:10000	Drawing No. FIGURE 1.1	Revision





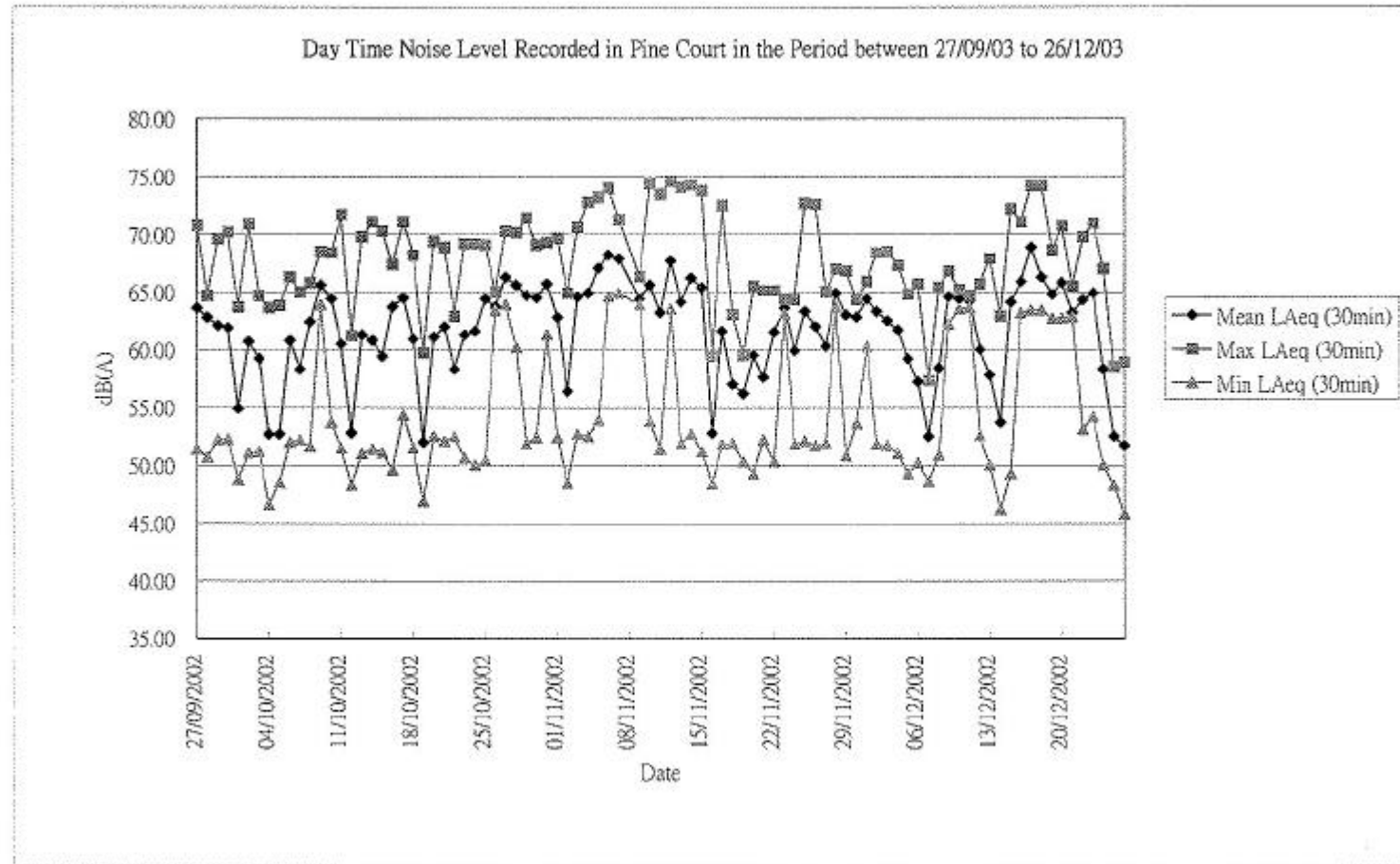


Figure 3.1

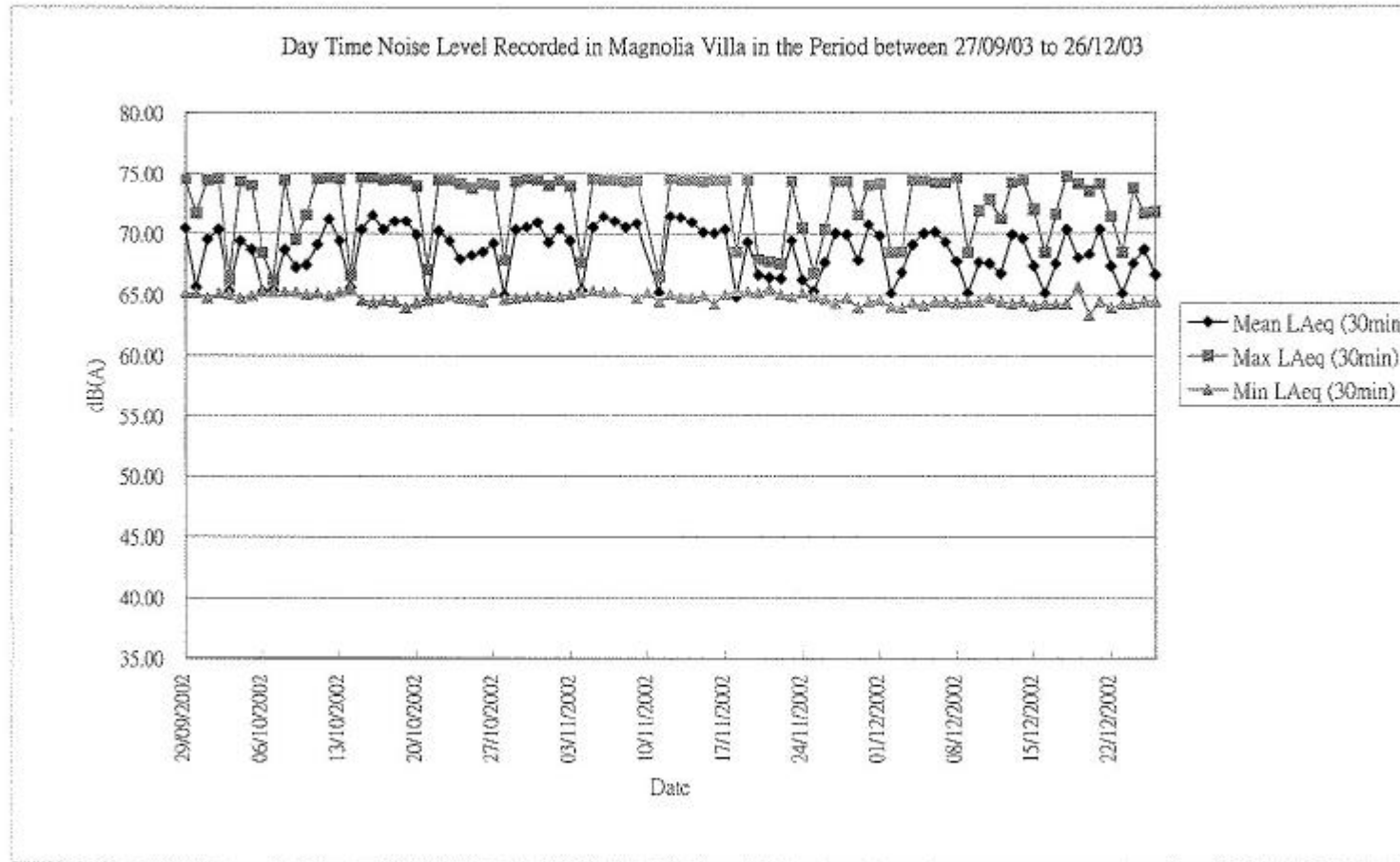


Figure 3.2

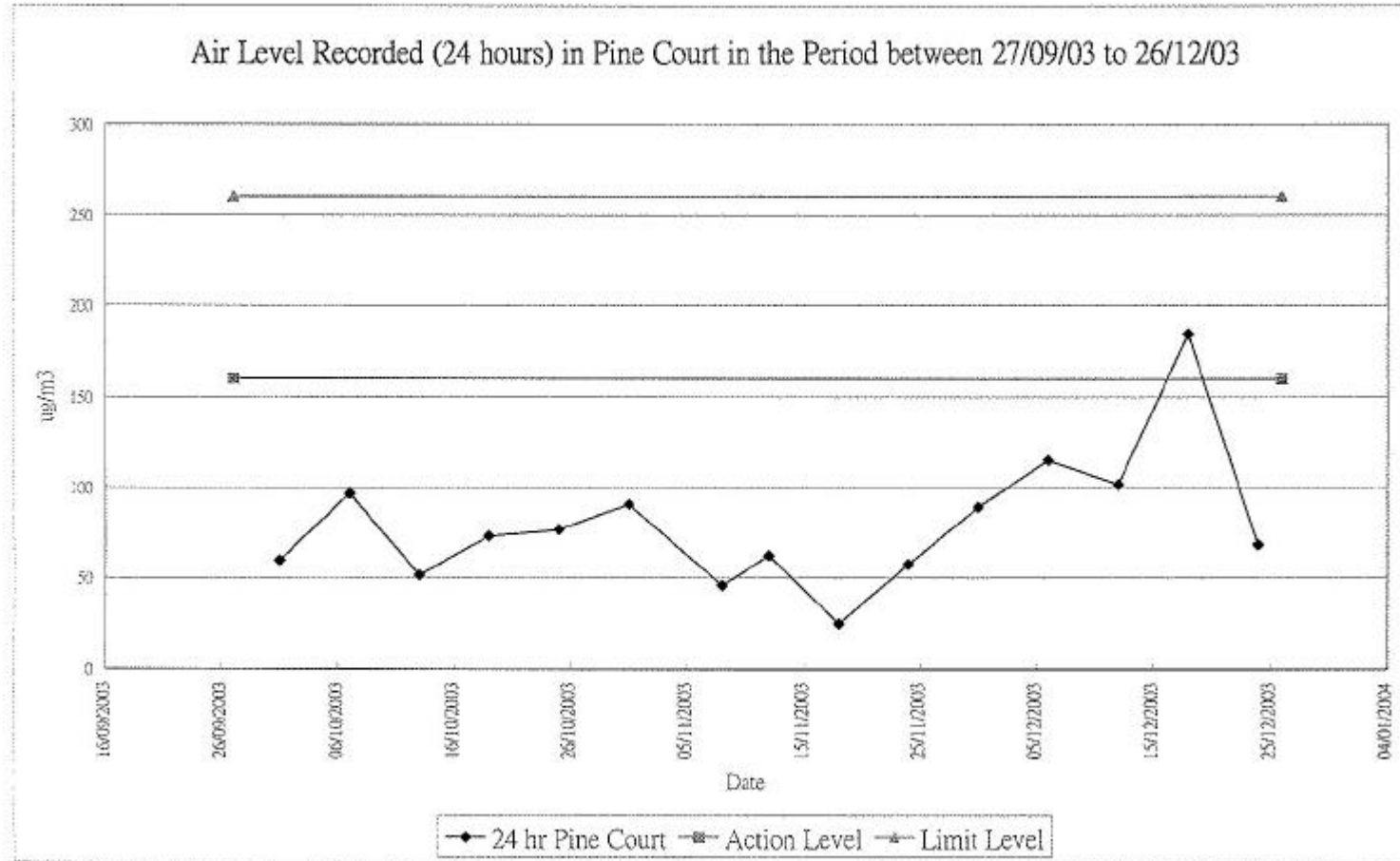


Figure 3.3

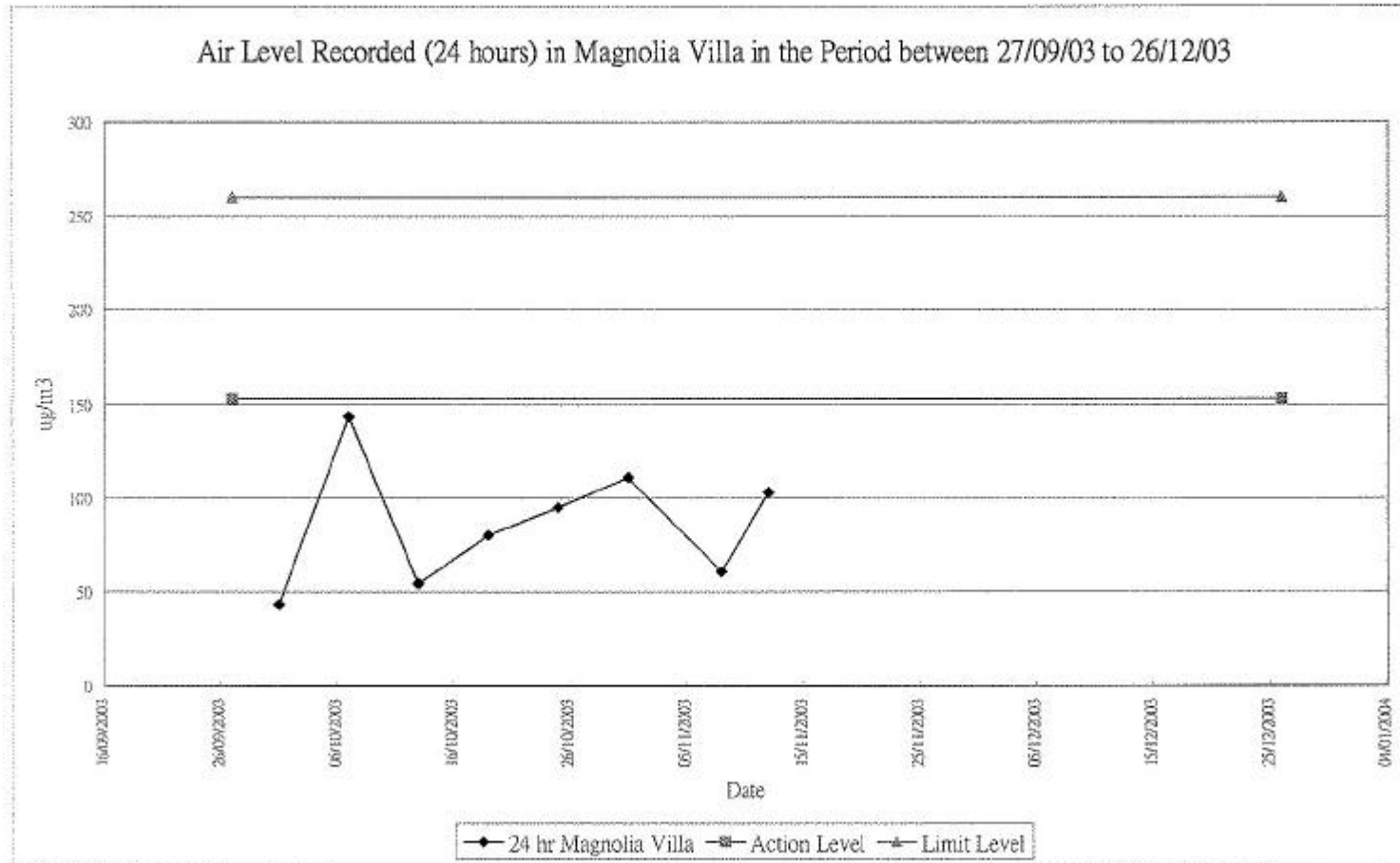


Figure 3.4

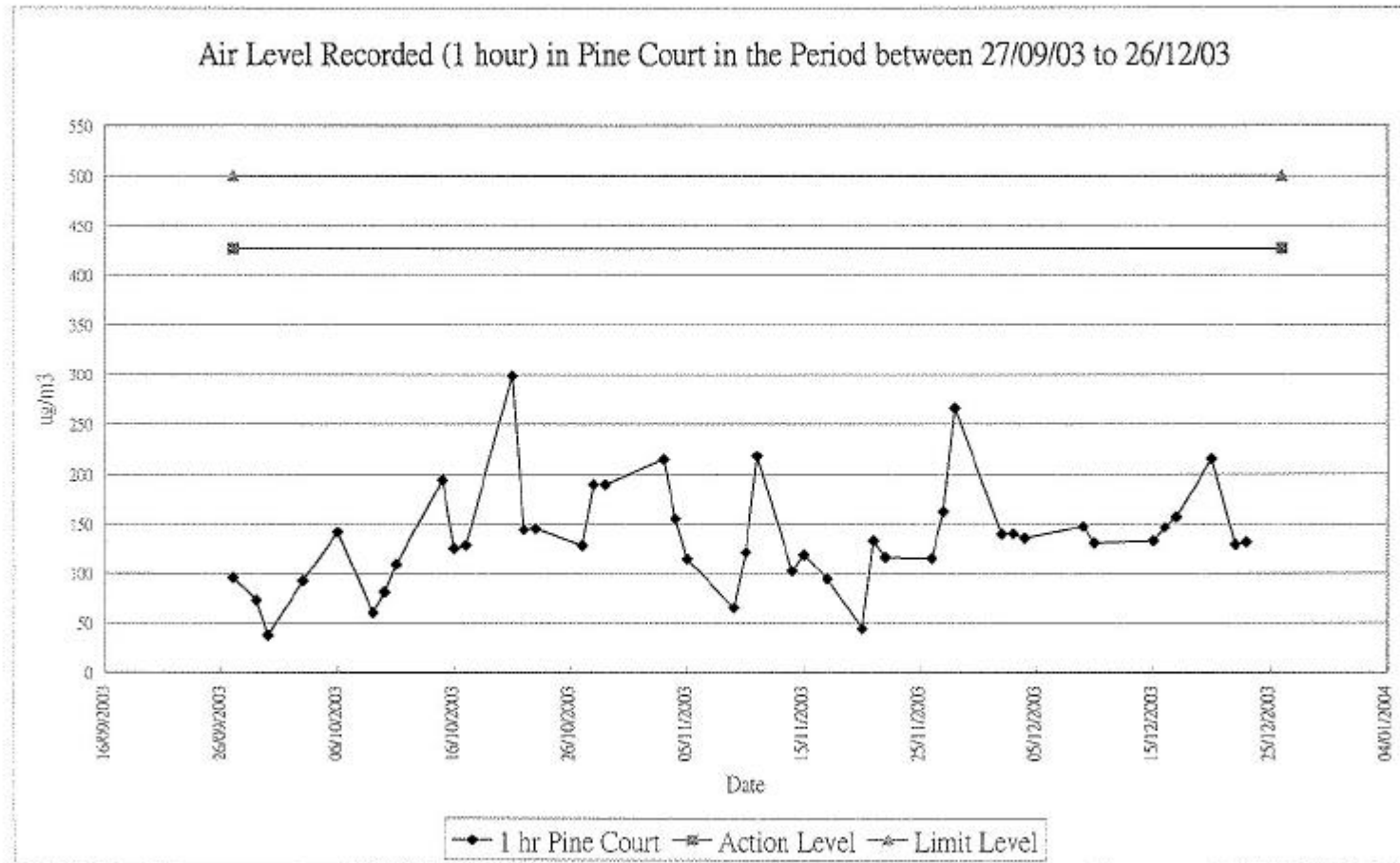


Figure 3.5

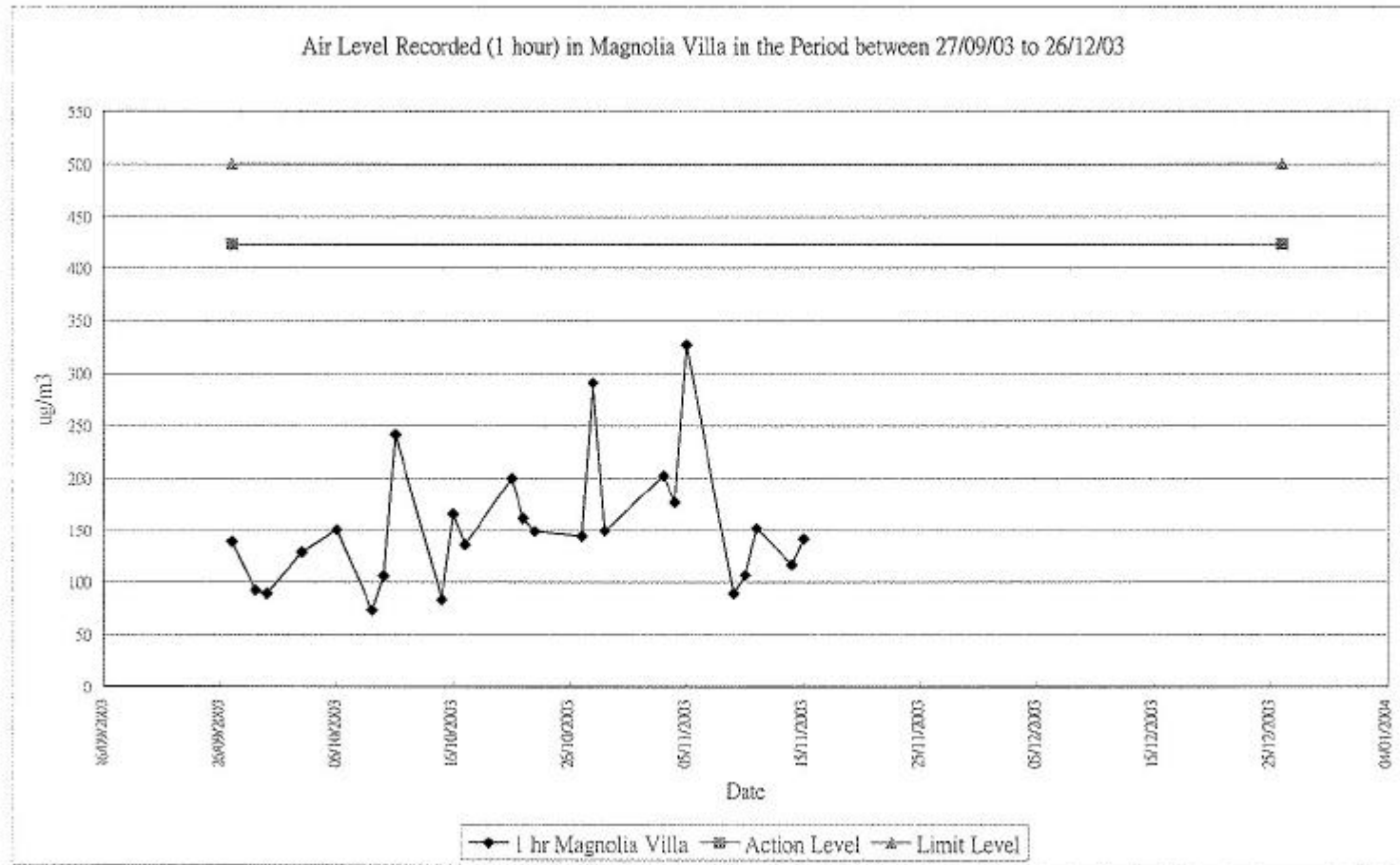
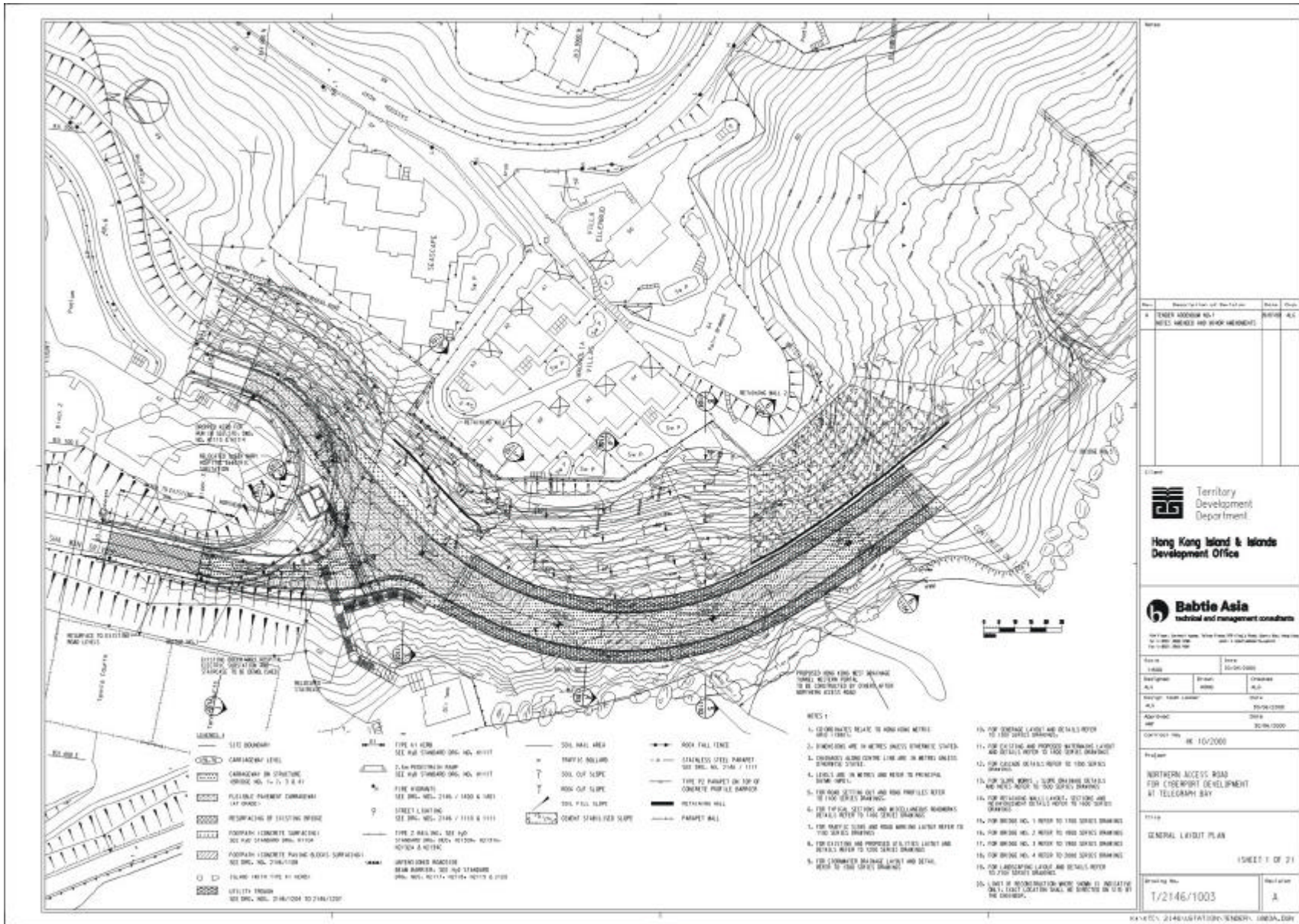


Figure 3.6

Drawings

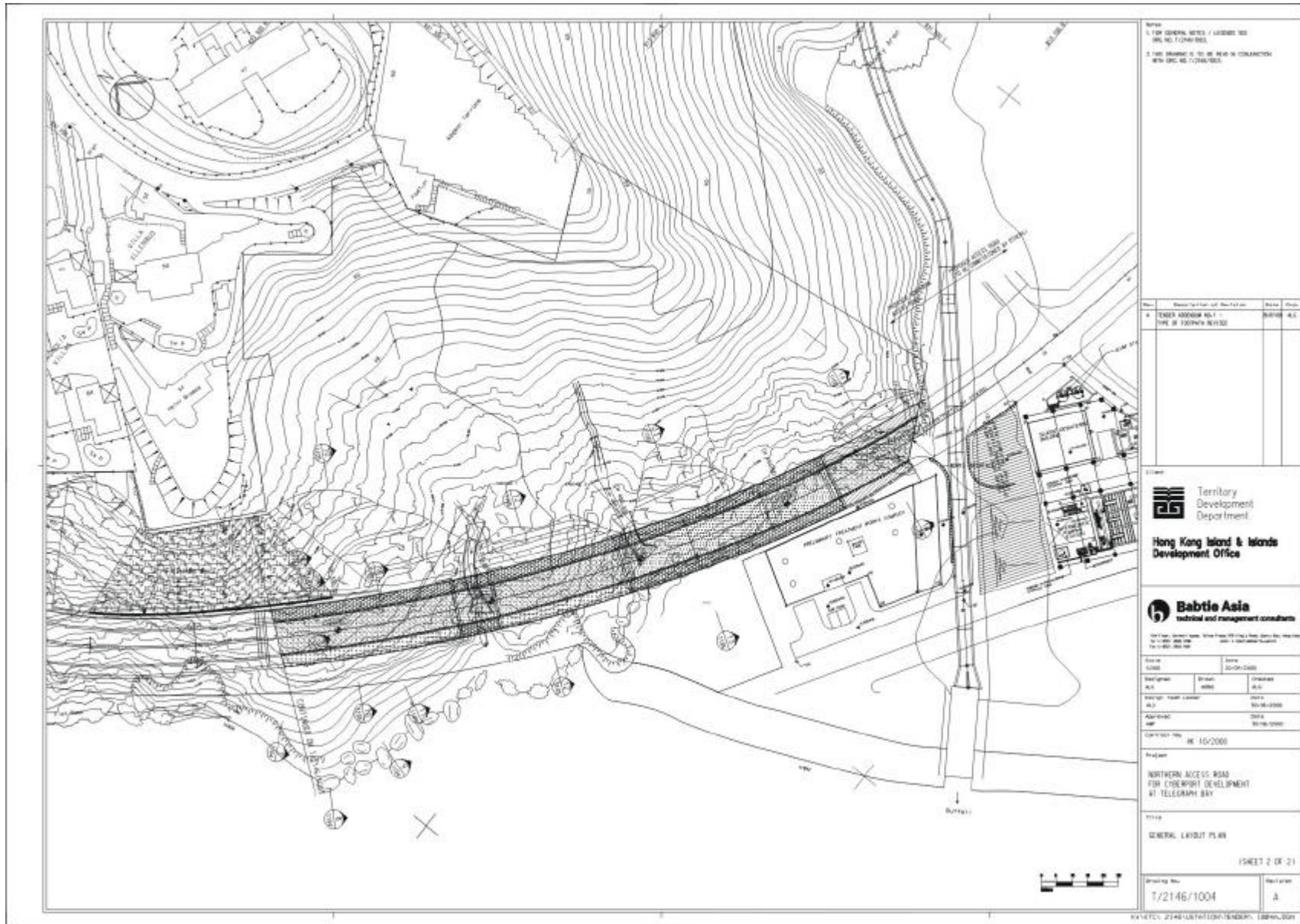


Rev.	Description of Change	Issue Date	By	Check
1	ISSUED			

Territory Development Department
Hong Kong Island & Islands Development Office

Babtie Asia
technical and management consultants

Scale	1:500	Date	20/01/2000
Author	ALC	Checked	ALC
Designer	ALC	Drawn	ALC
Project / Client / Location	NORTHERN ACCESS ROAD FOR CYBERPORT DEVELOPMENT AT TELEGRAPH BAY		
Project No.	2146/1000		
Contract No.	HK 10/2000		
Project	NORTHERN ACCESS ROAD FOR CYBERPORT DEVELOPMENT AT TELEGRAPH BAY		
Sheet No.	T/2146/1003		
Scale	A		



Notes:
 1. FOR GENERAL NOTES / LEGEND SEE
 ENG NO. T/2146/004
 2. THIS DRAWING IS TO BE READ IN CONJUNCTION
 WITH ENG NO. T/2146/003

Rev.	Description of the Part	Date	Drawn
A	TENDER ADDENDUM NO. 1 - TYPE OF TENDER NO. 1/200		BA/04/04

Client:
 Territory Development Department
 Hong Kong Island & Islands Development Office

Babtie Asia
 technical and management consultants

Scale: 1:5000 Date: 20-04-2004

Design:	Drawn:	Checked:
ALC	MBB	ALC
Approved:	Date:	Scale:
MBB	20/04/2004	1:5000

Contract No. HK 10/2000
 Project:
 NORTHERN ACCESS ROAD
 FOR CYBERPORT DEVELOPMENT
 AT TELEGRAPH BAY

Title:
 GENERAL LAYOUT PLAN

Sheet 2 of 21

Drawing No. T/2146/1004 Revision A

9/4/2004 2:44:10 PM T/2146/1004.TXD/MBB/ALC