



Lam Environmental Services Limited

Contract No. CV/2012/07
Development at Anderson Road –
Footbridge D and Associated Works Area

CONTRACT NO: CV/2012/07

**DEVELOPMENT AT ANDERSON ROAD -
FOOTBRIDGE D AND ASSOCIATED WORKS AREA**

**BASELINE MONITORING REPORTING OF NOISE AND
AIR QUALITY (REVISION 6)**

CLIENTS:

Lam-Po Wing Joint Venture

PREPARED BY:

**Lam Environmental Services
Limited**

11/F Centre Point
181-185 Gloucester Road,
Wanchai, H.K.

Telephone: (852) 2882-3939

Facsimile: (852) 2882-3331

E-mail: info@lamenviro.com

Website: <http://www.lamenviro.com>

APPROVED BY:

A handwritten signature in blue ink, appearing to be "Derek Lo", written over a horizontal line.

Derek Lo
Environmental Team Leader

DATE:

30 May 2013

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30 May 2013

By Fax (3656 3100 / 2407 8382) and Post

Engineer's Representative
Ove Arup & Partners
Level 5, Festival Walk
80 Tat Chee Avenue
Kowloon Tong, Kowloon
Hong Kong

Attention: Mr. Dennis Leung

Dear Sir,

**Re: Contract No. CV/2012/07
Development at Anderson Road
Footbridge D and Associated Works Area
Baseline Monitoring Reporting of Noise and Air Quality (Revision 6)**

Reference is made to the Environmental Team's submission of the draft Baseline Monitoring Report for Noise and Air Quality received by E-mail on 07 May 2013 and the subsequent revision of the report (Revision 6) by E-mail on 28 May 2013.

We are pleased to inform you that we have no adverse comment on the revised report received by E-mail on 28 May 2013.

Thank you very much for your kind attention and please do not hesitate to contact the undersigned should you have any queries.

Yours sincerely,



David Yeung
Independent Environmental Checker

c.c. Lam Attn: Mr. Derek Lo
LPWJV Attn: Mr. Tak-Leung Lo

Fax: 2882 3331
Fax: 3171 7222

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TABLE OF CONTENTS

EXECUTIVE SUMMARY.....3

1. INTRODUCTION.....5

1.1 Background5

1.2 Purpose of the Report.....5

1.3 Structure of the Report5

2. AIR QUALITY.....6

2.1 Monitoring Requirements6

2.2 Monitoring Equipment.....6

2.3 Monitoring Location.....6

2.4 Monitoring Parameters, Frequency and Duration6

2.5 Monitoring Methodology7

2.6 Result and Observations9

2.7 Action and Limit Levels.....10

3. NOISE MONITORING.....12

3.1. Monitoring Requirement.....12

3.2. Monitoring Equipment.....12

3.3. Monitoring Locations.....12

3.4. Monitoring Parameters, Frequency and Duration12

3.5. Monitoring Methodology13

3.6. Results and Observations13

3.7. Action and Limit Levels.....14

4. CONCLUSION.....16

LIST OF TABLES

Table 2.1	<i>Air Quality Monitoring Equipment</i>
Table 2.2	<i>Locations of Air Quality Monitoring Stations</i>
Table 2.3	<i>Air Quality Monitoring Parameters, Frequency and Duration</i>
Table 2.4	<i>Summary of 1-hour TSP Baseline Monitoring Results conducting on April 2008</i>
Table 2.5	<i>Summary of 24-hour TSP Baseline Monitoring Results conducting on April 2008</i>
Table 2.6	<i>Summary of 1-hour TSP Baseline review Monitoring Results conducting on August 2008</i>
Table 2.7	<i>Summary of 24-hour TSP Baseline review Monitoring Results conducting on August 2008</i>
Table 2.8	<i>Derivation of Action and Limit Levels for Air Quality</i>
Table 2.9	<i>Action and Limit Levels for Air Quality from the reviewed baseline report</i>
Table 2.10	<i>Action and Limit Levels for Air Quality Monitoring Station AQM1 of This Project (CV/2012/07)</i>
Table 3.1	<i>Monitoring Equipments</i>
Table 3.2	<i>Locations of Baseline Noise Monitoring Stations</i>
Table 3.3	<i>Noise Monitoring Parameters, Frequency and Duration</i>
Table 3.4	<i>Summary of Baseline Daytime Noise Monitoring Results</i>
Table 3.5	<i>Summary of Baseline Evening Noise Monitoring Results</i>
Table 3.6	<i>Summary of Baseline Night-time Noise Monitoring Results</i>
Table 3.7	<i>Summary of Baseline Daytime Noise Monitoring Results applied for Noise Monitoring Station NM1 and NM2 of This Project (CV/2012/07)</i>
Table 3.8	<i>Summary of Baseline Evening Noise Monitoring Results applied for Noise Monitoring Station NM1 and NM2 of This Project (CV/2012/07)</i>
Table 3.9	<i>Summary of Baseline Night-time Noise Monitoring Results applied for Noise Monitoring Station NM1 and NM2 of This Project (CV/2012/07)</i>
Table 3.10	<i>Criteria for Action and Limit Levels for Construction Noise</i>

LIST OF FIGURES

Figure 1	Monitoring Location Layout Plan
Figure 2	Site Location Plan of This Project

EXECUTIVE SUMMARY

- i. The main objective of the project “Development at Anderson Road – Footbridge D and Associated Works Area” (Hereafter called “this Project”) is to construct a footbridge, Footbridge D, and associated lift towers across Shun On Road between the existing Shun Tin Estate and the future development platform. Works would be commenced in May 2013.

Tin Wan House (NM1) and Ning Po No.2 College (NM2 and AQM1) were found to be the nearest sensitive receivers which may be affected by the construction works of this Project. According to the Environmental Monitoring and Audit Manual (EM&A Manual), Planning & Engineering Feasibility Study for development at Anderson Road, the proposed monitoring stations, On Yat House (ID2) and Sau Nga House (ID3), are the closest stations around the site boundaries of this project. Therefore, the baseline results in the baseline report and baseline review report of the master project, Development at Anderson Road – Site Formation and Associated Infrastructure Works (CV/2007/03) (Hereafter called “Master Project”), of ID2 and ID3 would be used to set out baseline levels for the air quality and noise monitoring. **Figure 1** shows the locations of monitoring stations of this project and the master project. **Figure 2** shows the site location plan of this project.

Air Quality

- ii. The baseline monitoring of air quality was conducted between 1 April 2008 and 14 April 2008 for both stations, On Yat House (ID2) and Sau Nga House (ID3). It was recorded in terms of 1-hour Total Suspended Particulates (TSP) and 24-hour TSP. The weather during the monitoring period was either sunny or cloudy, with a few occasions of drizzles.

The averaged 1-hour TSP level was $94.6\mu\text{g}/\text{m}^3$ at ID 2 and $95.7\mu\text{g}/\text{m}^3$ at ID 3. The averaged 24-hour TSP was $53\mu\text{g}/\text{m}^3$ at ID 2 and $64.9\mu\text{g}/\text{m}^3$ at ID 3.

While the first baseline monitoring for On Yat House (ID 2) and Sau Nga House (ID 3) had been completed in April 2008, and the impact monitoring had been started in June 2008, a baseline review monitoring for air quality was proposed for those monitoring stations since several exceedances of dust levels were recorded during the impact monitoring period even though no construction activities were carried out in the vicinity of those stations.

Upon agreed by ER and IEC, the baseline review monitoring of air quality was carried out from 14 to 20 August 2008 for consecutive 7 days at ID 2 and ID 3. The baseline air quality was recorded in terms of 1-hour Total Suspended Particulates (TSP) and 24-hour TSP. The weather during the monitoring period was sunny.

The averaged 1-hour TSP level was $47.0\mu\text{g}/\text{m}^3$ at ID 2 and $53.7\mu\text{g}/\text{m}^3$ at ID 3. The averaged 24-hour TSP level was $111.9\mu\text{g}/\text{m}^3$ at ID 2 and $113.4\mu\text{g}/\text{m}^3$ at ID 3.

Air quality monitoring data from the reviewed report are used to set up the action and limit level of this project since the reviewed report obtained the latest record of air quality monitoring data

Noise Monitoring

- iii. The baseline monitoring of noise was conducted between 31 March 2008 and 14 April 2008, as well as on 26 and 27 April 2008 for ID 2 and ID 3. The baseline noise monitoring on 26 and 27 April 2008 were conducted to compensate the lost of data due to the failure of software during data downloading on 12 and 13 April 2008, upon agreement with the ER and IEC. Leq (30-minutes) were recorded for non-restricted hours (07:00 – 19:00 of normal weekdays) and Leq(5-minutes) were recorded for restricted hours (19:00 – 23:00 and 23:00 – 07:00 of normal weekdays, whole day of Sundays and Public Holidays).

The averaged baseline noise level at ID 2 during daytime of normal weekdays was 62.0 dB(A) (with range 58.7 – 69.0 dB(A)); during evening time and Public Holidays was 59.5 dB(A) (with range 54.8 – 64.6 dB(A)); and during night-time was 57.6 dB(A) (with range 48.4 – 64.1 dB(A)).

The averaged baseline noise level at ID 3 during daytime of normal weekdays was 64.1 dB(A) (with range 60.0 – 69.0 dB(A)); during evening time and Public Holidays was 60.7 dB(A) (with range 56.6 – 68.8 dB(A)); and during night-time was 59.0 dB(A) (with range 48.9 – 70.1 dB(A)).



1. INTRODUCTION

1.1 Background

1.1.1. The main objective of the project “Development at Anderson Road – Footbridge D and Associated Works Area” (Hereafter called “this Project”) is to construct a footbridge, Footbridge D, and associated lift towers across Shun On Road between the existing Shun Tin Estate and the future development platform. Works would be commenced in May 2013.

1.1.2. For this project, Tin Wan House (NM1) and Ning Po No.2 College (NM2 and AQM1) will be the monitoring station during the construction period. Owing to this contract is under the master project and on the other hand, the construction area is vicinity to the monitoring station (On Yat House) ID2 and (Sau Nga House) ID3 of the master project, so that the baseline noise and air quality monitoring will adopt the baseline data from those stations instead of conducting baseline monitoring. All the baseline data are referred to the baseline report from the public domain web site (www.anderson-road.com/main.htm).

1.2 Purpose of the Report

1.2.1 The purpose of this baseline report is to review the baseline conditions of the Project site and to establish the baseline levels for air quality and noise according to the EM&A Manual. These levels would be used as the basis for the assessing environmental impact and compliance during construction of the Project.

1.3 Structure of the Report

Section 1 *Introduction*

Section 2 *Air Quality* – Describes the baseline air quality monitoring.

Section 3 *Noise* – Describes the baseline noise monitoring.

Section 4 *Conclusion*

2. AIR QUALITY

2.1 Monitoring Requirements

2.1.1. In accordance with the EM&A Manual, baseline 1-hour and 24-hour TSP levels at 5 air quality monitoring stations should be established by conducting baseline 1-hour and 24-hour TSP monitoring for at least 14 days. This report only presents the baseline monitoring works at On Yat House (ID 2) and Sau Nga House (ID 3) as these two monitoring station are nearest to this project's site area.

2.2 Monitoring Equipment

2.2.1. 24-hour TSP air quality monitoring was performed using High Volume Sampler (HVS) located at each designated monitoring station. The HVS meets all the requirements of the EM&A Manual. Portable direct reading dust meters were used to carry out the 1-hour TSP monitoring. Brand and model of the equipment is given in Table 2.1.

Table 2.1 Air Quality Monitoring Equipment

Equipment	Brand and Model
Portable direct reading dust meter (1-hour TSP)	Sibata Digital Dust Monitor (Model No. LD-3)
High Volume Sampler (24-hour TSP)	Tisch Total Suspended Particulate Mass Flow Controlled High Volume Air Sampler (Model No. TE-5170)

2.3 Monitoring Location

2.3.1 Monitoring stations, ID 2 and ID 3 were set up at the proposed locations in accordance with master project's EM&A Manual. **Figure 2** shows the locations of monitoring stations ID 2 and ID 3. Table 2.2 describes the details of the two monitoring stations of air quality monitoring.

Table 2.2 Locations of Air Quality Monitoring Stations

ID	Location	Monitoring Station
ID2	On Yat House	Roof top of the premises facing Lee On Road
ID3	Sau Nga House	Roof top of the premises facing Sau Mau Ping Road

2.4 Monitoring Parameters, Frequency and Duration

2.4.1 Table 2.3 summarizes the monitoring parameters, frequency and duration of baseline TSP monitoring.

Table 2.3 Air Quality Monitoring Parameters, Frequency and Duration

Monitoring Station	Parameter	Frequency and Duration
ID 2 & ID 3	1-hour TSP	3 times (at three consecutive hours) per day while the highest dust impact was expected, for 14 days
	24-hour TSP	Daily, for 14 days

2.5 Monitoring Methodology

24-hour TSP Monitoring

- (a) The HVS was installed in the vicinity of the air sensitive receivers. The following criteria were considered in the installation of the HVS.
- (i) A horizontal platform with appropriate support to secure the sampler against gusty wind was provided.
 - (ii) The distance between the HVS and any obstacles, such as buildings, was at least twice the height that the obstacle protrudes above the HVS.
 - (iii) A minimum of 2 meters separation from walls, parapets and penthouse for rooftop sampler.
 - (iv) No furnace or incinerator flues nearby.
 - (v) Airflow around the sampler was unrestricted.
 - (vi) Permission was obtained to set up the samplers and access to the monitoring stations.
 - (vii) A secured supply of electricity was obtained to operate the samplers.
 - (viii) The sampler was located more than 20 meters from any dripline.
 - (ix) Any wire fence and gate, required to protect the sampler, did not obstruct the monitoring process.
 - (x) Flow control accuracy was kept within $\pm 2.5\%$ deviation over 24-hour sampling period.
- (b) Preparation of Filter Papers
- (i) Glass fibre filters, G810 were labelled and sufficient filters that were clean and without pinholes were selected.
 - (ii) All filters were equilibrated in the conditioning environment for 24 hours before weighing. The conditioning environment temperature was around 25 °C and not variable by more than ± 3 °C; the relative humidity (RH) was < 50% and not variable by more than $\pm 5\%$. A convenient working RH was 40%.
 - (iii) All filter papers were prepared and analysed by ALS Technichem (HK) Pty Ltd., which is a HOKLAS accredited laboratory and has comprehensive quality assurance and quality control programmes.
- (c) Field Monitoring
- (i) The power supply was checked to ensure the HVS works properly.
 - (ii) The filter holder and the area surrounding the filter were cleaned.
 - (iii) The filter holder was removed by loosening the four bolts and a new filter, with stamped number upward, on a supporting screen was aligned carefully.
 - (iv) The filter was properly aligned on the screen so that the gasket formed an airtight seal on the outer edges of the filter.
 - (v) The swing bolts were fastened to hold the filter holder down to the frame. The pressure applied was sufficient to avoid air leakage at the edges.

- (vi) Then the shelter lid was closed and was secured with the aluminum strip.
 - (vii) The HVS was warmed-up for about 5 minutes to establish run-temperature conditions.
 - (viii) A new flow rate record sheet was set into the flow recorder.
 - (ix) On site temperature and atmospheric pressure readings were taken and the flow rate of the HVS was checked and adjusted at around 1.1m³/min, and complied with the range specified in the EM&A Manual (i.e. 0.6-1.7 m³/min).
 - (x) The programmable digital timer was set for a sampling period of 24 hrs, and the starting time, weather condition and the filter number were recorded.
 - (xi) The initial elapsed time was recorded.
 - (xii) At the end of sampling, on site temperature and atmospheric pressure readings were taken and the final flow rate of the HVS was checked and recorded.
 - (xiii) The final elapsed time was recorded.
 - (xiv) The sampled filter was removed carefully and folded in half length so that only surfaces with collected particulate matter were in contact.
 - (xv) It was then placed in a clean plastic envelope and sealed.
 - (xvi) All monitoring information was recorded on a standard data sheet.
 - (xvii) Filters were then sent to ALS Technichem (HK) Pty Ltd. for analysis.
- (d) Maintenance and Calibration
- (i) The HVS and its accessories were maintained in good working condition, such as replacing motor brushes routinely and checking electrical wiring to ensure a continuous power supply.
 - (ii) HVSs were calibrated using TE-5025A Calibration Kit prior to the commencement of baseline monitoring.

1-hour TSP Monitoring

- (a) Measuring Procedures
- The measuring procedures of the 1-hour dust meter were in accordance with the Manufacturer's Instruction Manual as follows:
- (i) Turn the power on.
 - (ii) Close the air collecting opening cover.
 - (iii) Push the "TIME SETTING" switch to [BG]
 - (iv) Push "START/STOP" switch to perform background measurement for 6 seconds.
 - (v) Turn the knob at SENSI ADJ position to insert the light scattering plate.
 - (vi) Leave the equipment for 1 minute upon "SPAN CHECK" is indicated in the display.
 - (vii) Push "START/STOP" switch to perform automatic sensitivity adjustment. This measurement takes 1 minute.
 - (viii) Pull out the knob and return it to MEASURE position.
 - (ix) Push the "TIME SETTING" switch the time set in the display to 3 hours.
 - (x) Lower down the air collection opening cover.
 - (xi) Push "START/STOP" switch to start measurement.
- (b) Maintenance and Calibration
- (i) The 1-hour TSP meter was calibrated at 1-year intervals against a continuous particulate TEOM Monitor, Series 1400ab..

2.6 Result and Observations

- 2.6.1 The baseline monitoring was carried out in April 2008, during which, the weather was either sunny or cloudy, with occasional drizzle events. Major dust sources were from nearby traffic emissions and operation of Anderson Quarry.
- 2.6.2 All the baseline data are referred to the baseline report from the public domain web site (www.anderson-road.com/main.htm)
- 2.6.3 The baseline monitoring results for 1-hour TSP and 24-hour TSP are summarized in Table 2.4 and 2.5 respectively.

Table 2.4 Summary of 1-hour TSP Baseline Monitoring Results conducting on April 2008

	ID 2	ID 3
Maximum ($\mu\text{g}/\text{m}^3$)	103.4	100.3
Minimum ($\mu\text{g}/\text{m}^3$)	88.2	88.5
Average ($\mu\text{g}/\text{m}^3$)	94.6	95.7

Table 2.5 Summary of 24-hour TSP Baseline Monitoring Results conducting on April 2008

	ID 2	ID 3
Maximum ($\mu\text{g}/\text{m}^3$)	72.9	114.5
Minimum ($\mu\text{g}/\text{m}^3$)	26.4	41.3
Average ($\mu\text{g}/\text{m}^3$)	53.0	64.9

- 2.6.4 The baseline review monitoring on air quality was carried out consecutively from 14 to 20 August 2008, during which, the weather was sunny. Major dust sources were from nearby traffic emissions and operation of Anderson Quarry.
- 2.6.5 The baseline review monitoring results for 1-hour TSP and 24-hour TSP are summarized in Table 2.6 and 2.7 respectively.

Table 2.6 Summary of 1-hour TSP Baseline review Monitoring Results conducting on August 2008

	ID 2	ID 3
Maximum ($\mu\text{g}/\text{m}^3$)	76.7	71.4
Minimum ($\mu\text{g}/\text{m}^3$)	24.4	25.0
Average ($\mu\text{g}/\text{m}^3$)	47.0	53.7

Table 2.7 Summary of 24-hour TSP Baseline review Monitoring Results conducting on August 2008

	ID 2	ID 3
Maximum ($\mu\text{g}/\text{m}^3$)	216.3	201.8
Minimum ($\mu\text{g}/\text{m}^3$)	70.6	50.9
Average ($\mu\text{g}/\text{m}^3$)	111.9	113.4

2.7 Action and Limit Levels

- 2.7.1 The air quality monitoring results, in terms of 1-hour TSP and 24-hour TSP, were below the Limit Level set out in the Air Quality Objective (AQO) at the two monitoring locations.
- 2.7.2 All the baseline data are referred to the baseline report from the public domain web site (www.anderson-road.com/main.htm).
- 2.7.3 The Action and Limit Levels for air quality impact monitoring were based on the criteria adopted from the EM&A Manual as presented in Table 2.8.

Table 2.8 Derivation of Action and Limit Levels for Air Quality

Parameter	Action Level	Limit Level
1-hour TSP Level in $\mu\text{g}/\text{m}^3$	For Baseline Level $<154 \mu\text{g}/\text{m}^3$, Action Level = average of Baseline Level plus 30% of Limited Level For Baseline Level $> 154 \mu\text{g}/\text{m}^3$ and Baseline Level $< 269 \mu\text{g}/\text{m}^3$, Action Level = $350 \mu\text{g}/\text{m}^3$ For Baseline Level $> 269 \mu\text{g}/\text{m}^3$, Action Level = 130% of Baseline Level	500
24-hour TSP Level in $\mu\text{g}/\text{m}^3$	For Baseline Level $<108 \mu\text{g}/\text{m}^3$, Action Level = average of Baseline Level plus 30% of Limited Level For Baseline Level $> 108 \mu\text{g}/\text{m}^3$ and Baseline Level $< 154 \mu\text{g}/\text{m}^3$, Action Level = $200 \mu\text{g}/\text{m}^3$ For Baseline Level $> 154 \mu\text{g}/\text{m}^3$, Action Level = 130% of Baseline Level	500

2.7.4 Table 2.9 shows the derived Action and Limit Levels for air quality impact monitoring for the Master Project from the reviewed baseline report.

Table 2.9 Action and Limit Levels for Air Quality from the reviewed baseline report

Parameter	Monitoring Station	Action Level ($\mu\text{g}/\text{m}^3$)	Limit Level ($\mu\text{g}/\text{m}^3$)
1-hour TSP	ID 2	197.0	500
	ID 3	203.7	500
24-hour TSP	ID 2	200.0	260
	ID 3	200.0	260

2.7.5 Air quality monitoring data from the reviewed report are used to set up the action and limit level of this project since the reviewed report obtained the latest record of air quality monitoring data.

2.7.6 After comparing the levels of ID2 and ID3, the Action level of 1- hour TSP ID2 is $197.0\mu\text{g}/\text{m}^3$ and 24- hour TSP is $200.0\mu\text{g}/\text{m}^3$ while Action level level of 1- hour TSP ID3 is $203.7\mu\text{g}/\text{m}^3$ and 24- hour TSP is $200.0\mu\text{g}/\text{m}^3$. The action and limit level of ID2 are relatively lower than those of ID3, since action and limit level of ID2 are more rigorous it will be used to set up the baseline level of this project.

2.7.7 Table 2.10 shows the derived Action and Limit Levels for air quality impact monitoring which will be applied for the air quality monitoring station (AQM1) of this Project (CV/2012/07).

Table 2.10 Action and Limit Levels for Air Quality Monitoring Station AQM1 of This Project (CV/2012/07)

Parameter	Monitoring Station	Action Level ($\mu\text{g}/\text{m}^3$)	Limit Level ($\mu\text{g}/\text{m}^3$)
1-hour TSP	AQM1	197.0	500
24-hour TSP	AQM1	200.0	260

3. NOISE MONITORING

3.1. Monitoring Requirement

3.1.1 In accordance with the EM&A Manual, baseline noise levels at 5 monitoring stations should be established by conducting daily noise monitoring for 2 weeks. This report only presents the baseline monitoring works at On Yat House (ID 2) and Sau Nga House (ID 3).

3.2. Monitoring Equipment

3.2.1. Noise monitoring was performed using sound level meter at each designated monitoring station. The sound level meters deployed comply with the International Electrotechnical Commission Publications (IEC) 651:1979 (Type 1) and 804:1985 (Type 1) specifications. Acoustic calibrator was deployed to check the sound level meters at a known sound pressure level. Brand and model of the equipment is given in Table 3.1.

Table 3.1 Monitoring Equipments

Equipment	Brand and Model
Integrated Sound Level Meter	B&K (Model No. 2238)
Acoustic Calibrator	B&K (Model No. 4231)

3.3. Monitoring Locations

3.3.1 Monitoring stations, ID 2 and ID 3 were set up at the proposed locations in accordance with EM&A Manual. **Figure 1** shows the locations of monitoring stations ID 2 and ID 3. Table 3.2 describes the details of the three monitoring stations.

Table 3.2 Locations of Baseline Noise Monitoring Stations

ID	Location	Monitoring Station
ID2	On Yat House	1m from the exterior of the roof top façade of the premises facing Lee On Road
ID3	Sau Nga House	1m from the exterior of the roof top façade of the premises facing Sau Mau Ping Road

3.4. Monitoring Parameters, Frequency and Duration

3.4.1 Table 3.3 summarizes the monitoring parameters, frequency and duration of baseline noise monitoring.

Table 3.3 Noise Monitoring Parameters, Frequency and Duration

Monitoring Station	Parameter	Frequency and Duration
ID 2 & ID 3	Leq (30-minutes) for non-restricted hours; Leq (5-minutes) for restricted hours	Daily for 14 days

3.4.2 For On Yat House (ID 2) and Sau Nga House (ID 3), baseline noise monitoring was conducted from 31 March 2008 to 14 April 2008, as well as on 26 and 27 April 2008. 26 and 27 April 2008 were supplementary baseline noise monitoring period to make up for the lost of data, due to failure of software during data downloading on 12 and 13 April 2008, upon agreement with the ER and IEC.

3.5. Monitoring Methodology

3.5.1 Monitoring Procedure

- (a) The sound level meter was set on a tripod at a height of 1.2 m above the ground.
- (b) Façade measurements were made at all monitoring locations.
- (c) The battery condition was checked to ensure the correct functioning of the meter.
- (d) Parameters such as frequency weighting, the time weighting and the measurement time were set as follows:
 - (i) frequency weighting: A
 - (ii) time weighting: Fast
 - (iii) time measurement: Leq(30-minutes) during non-restricted hours i.e. 07:00 – 1900 on normal weekdays; Leq(5-minutes) during restricted hours i.e. 19:00 – 23:00 and 23:00 – 07:00 of normal weekdays, whole day of Sundays and Public Holidays
- (e) Prior to and after each noise measurement, the meter was calibrated using the acoustic calibrator for 94dB(A) at 1000 Hz. If the difference in the calibration level before and after measurement was more than 1 dB(A), the measurement would be considered invalid and repeat of noise measurement would be required after re-calibration or repair of the equipment.
- (f) During the monitoring period, the Leq, L10 and L90 were recorded. In addition, site conditions and noise sources were recorded on a standard record sheet.
- (g) Noise measurement was paused during periods of high intrusive noise (e.g. dog barking, helicopter noise) if possible. Observations were recorded when intrusive noise was unavoidable.
- (h) Noise monitoring was cancelled in the presence of fog, rain, wind with a steady speed exceeding 5m/s, or wind with gusts exceeding 10m/s.

3.6. Results and Observations

3.6.1 There was no major activity influencing the measured noise level during the baseline noise monitoring period. The dominant noise sources were from nearby traffic emissions and operation of Anderson Quarry.

3.6.2 All the baseline data are referred to the baseline report from the public domain web site (www.anderson-road.com/main.htm)

3.6.3 The baseline noise monitoring results for noise is summarized in Tables 3.4 to 3.6.

Table 3.4 Summary of Baseline Daytime Noise Monitoring Results

0700-1900 hrs of normal weekdays	30-min Mean of Noise Levels, dB(A)		
	Leq	L10	L90
ID 2	62.0	63.4	60.3
ID 3	64.1	66.1	61.6

Table 3.5 Summary of Baseline Evening Noise Monitoring Results

1900-2300 hrs of normal weekdays, 0700-2300 hrs of Sundays and Public Holidays	5-min Mean of Noise Levels, dB(A)		
	Leq	L10	L90
ID 2	59.5	60.9	58.0
ID 3	60.7	62.0	58.6

Table 3.6 Summary of Baseline Night-time Noise Monitoring Results

2300-0700 hrs	5-min Mean of Noise Levels, dB(A)		
	Leq	L10	L90
ID 2	57.6	59.9	54.1
ID 3	59.0	60.6	53.2

3.6.4 At both monitoring locations ID 2 and ID 3, the averaged baseline results are 75dB(A) for domestic premises.

3.7. Action and Limit Levels

- 3.7.1. The Action and Limit Levels of noise monitoring have been set in accordance with the derivation criteria specified in the EM&A Manual as shown in Table 3.10 below.
- 3.7.2. All the baseline data are referred to the baseline report from the public domain web site (www.anderson-road.com/main.htm).
- 3.7.3. Noise monitoring data from the report are used to set up the action and limit level of this project.
- 3.7.4. After comparing the results of ID2 and ID3, all the noise level results of ID2 are relatively lower than those of ID3, since lower noise level result of ID2 can be a more rigorous reference for considering measured noise level when there is exceedance, the noise level result of ID2 will be used as the reference when there is exceedance in this project.

3.7.5. Table 3.7, 3.8 and 3.9 shows the baseline result from ID2 which will be applied for the noise monitoring station (NM1 & NM2) of this Project (CV/2012/07) as a reference for considering measured noise level when there is exceedance.

Table 3.7 Summary of Baseline Daytime Noise Monitoring Results applied for Noise Monitoring Station NM1 and NM2 of This Project (CV/2012/07)

0700-1900 hrs of normal weekdays	30-min Mean of Noise Levels, dB(A)		
	Leq	L10	L90
NM1	62.0	63.4	60.3
NM2	62.0	63.4	60.3

Table 3.8 Summary of Baseline Evening Noise Monitoring Results applied for Noise Monitoring Station NM1 and NM2 of This Project (CV/2012/07)

1900-2300 hrs of normal weekdays, 0700-2300 hrs of Sundays and Public Holidays	5-min Mean of Noise Levels, dB(A)		
	Leq	L10	L90
NM1	59.5	60.9	58.0
NM2	59.5	60.9	58.0

Table 3.9 Summary of Baseline Night-time Noise Monitoring Results applied for Noise Monitoring Station NM1 and NM2 of This Project (CV/2012/07)

2300-0700 hrs	5-min Mean of Noise Levels, dB(A)		
	Leq	L10	L90
NM1	57.6	59.9	54.1
NM2	57.6	59.9	54.1

Table 3.10 Criteria for Action and Limit Levels for Construction Noise

Time Period	Action Level	Limit Levels
0700-1900 hrs of normal weekdays	When one documented complaint is received from any one of the sensitive receivers	65/70/75 dB(A)*
1900-2300 hrs of normal weekdays, 0700-2300 hrs of Sundays and Public Holidays		60/65/70 dB(A)**
2300-0700 hrs		45/50/55 dB(A)**

Remarks:

* Standard maximum permissible noise level for different nature of the NSR(s) in accordance with the *TM on Environmental Impact Assessment Process*.

** To be selected based on the Area Sensitivity Rating of A/B/C, and the conditions of the applicable CNP(s) must be followed.



4. CONCLUSION

- 4.1. Baseline air quality monitoring was carried out from 1 to 14 April 2008 for ID 2 and ID 3. Action and Limit Levels for air quality at each location were derived from the baseline monitoring results, in accordance with the EM&A Manual.

- 4.2. Baseline noise monitoring was carried out from 31 March 2008 to 27 April 2008 for ID 2 and ID 3. The Action level of construction noise is based on documented complaints received, while the Limit Level is the level at a specific limit according to EIAO-TM.



Figure 1. Monitoring Location Layout Plan

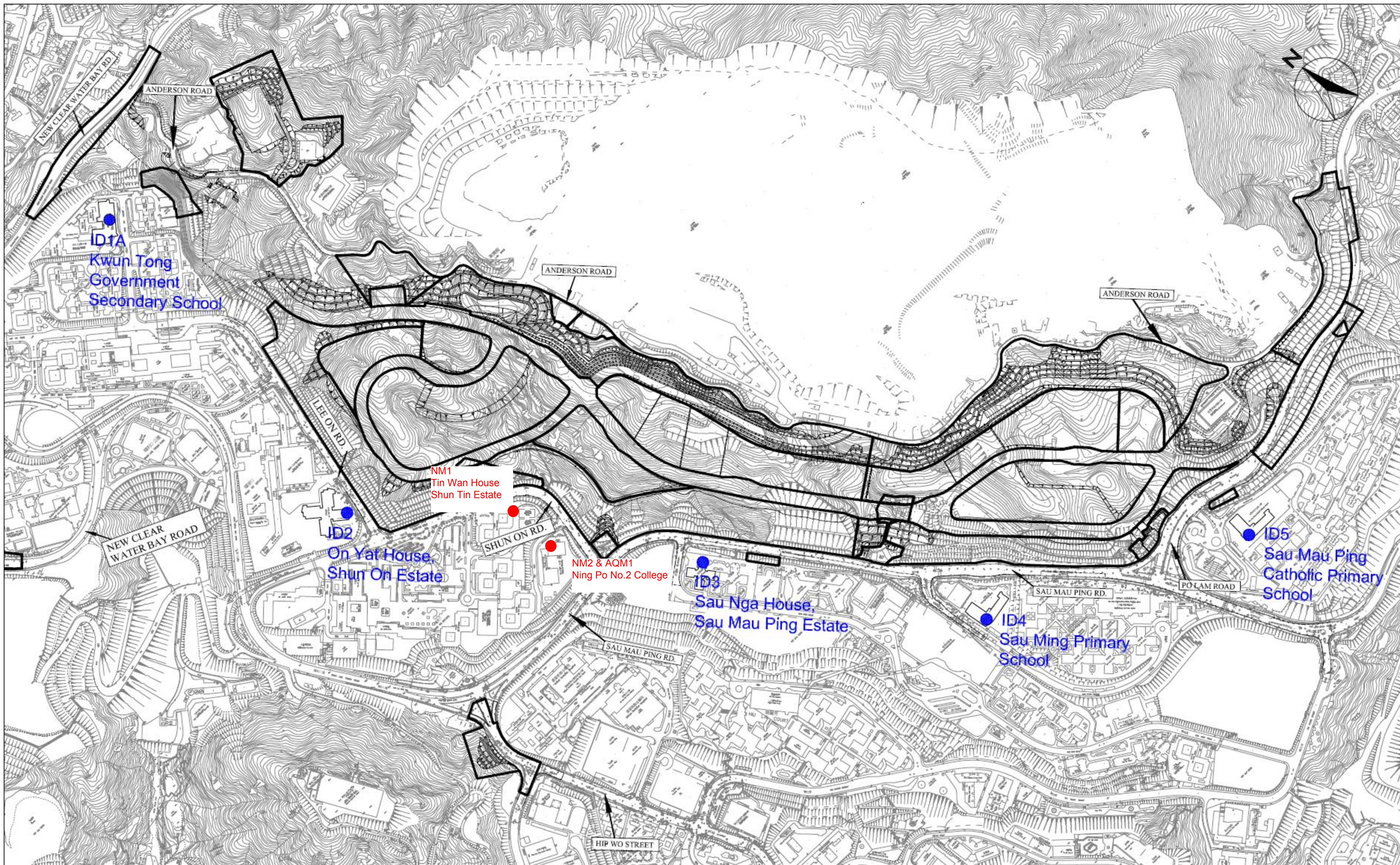


Figure 1. Environmental Monitoring Location

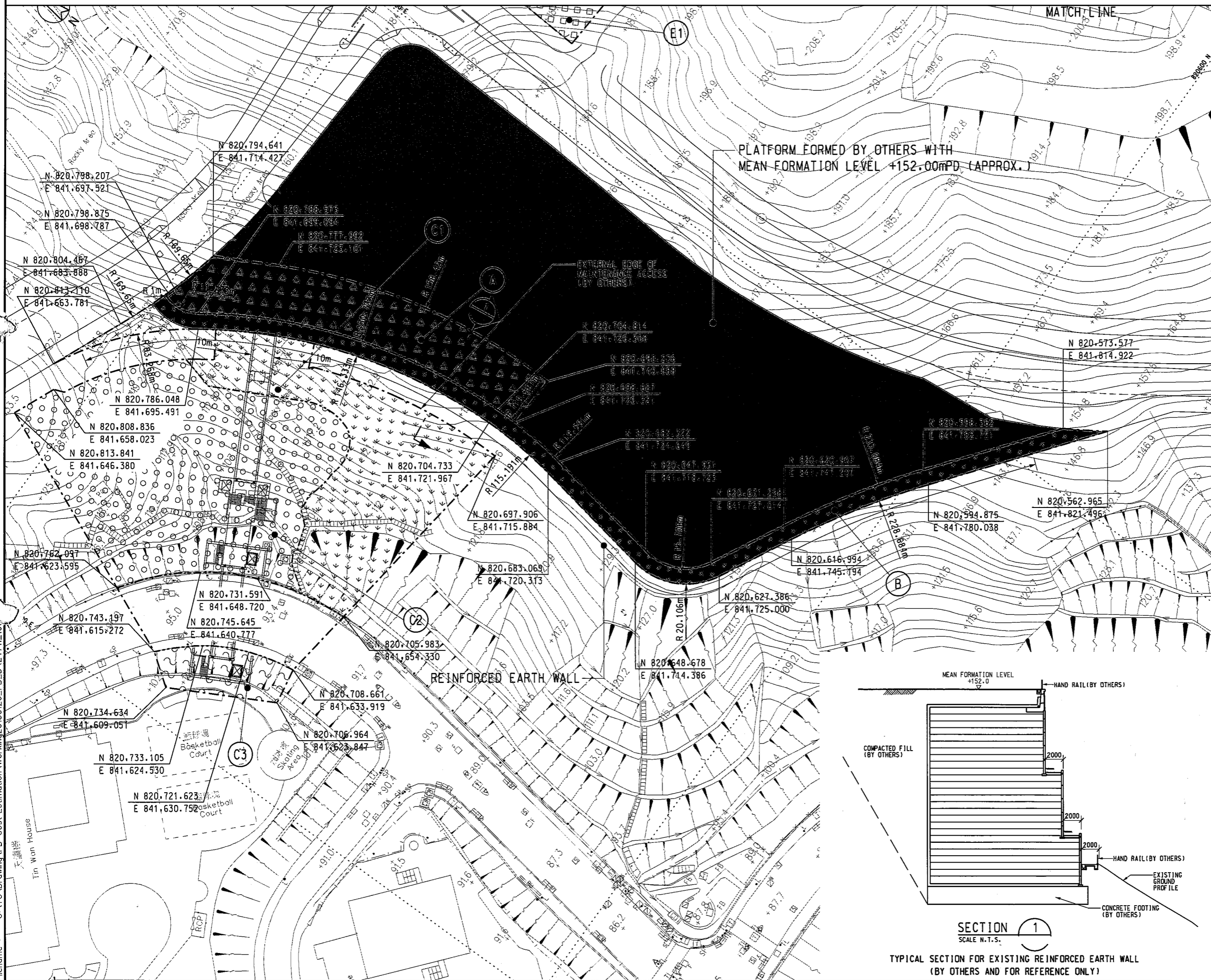
LEGEND

- Tentative impact monitoring station
- Monitoring station of master project



Figure 2. Site Location Plan

Figure 2. Site Location Plan of This Project (CV/2012/07)



KEY PLAN

LEGEND:

- SITE BOUNDARY
- △ △ △ PORTION A OF SITE (DESIGN LIVE LOAD = 20kPa)
- × × × PORTION B OF SITE (DESIGN LIVE LOAD = 5kPa)
- ▽ ▽ ▽ PORTION C1 OF SITE
- ○ ○ PORTION C2 OF SITE
- □ □ PORTION C3 OF SITE
- ■ ■ PORTION E1 OF SITE
- ▨ ▨ ▨ PORTION E2 OF SITE
- PLATFORM FORMED BY OTHERS WITH MEAN FORMATION LEVEL +152.00mPD (APPROX.)

Rev	Description	By	Date
-	ISSUE FOR CONSTRUCTION	CL	01/13

Consultant
ARUP 奧雅納工程顧問
 Ove Arup & Partners Hong Kong Limited

Contract No. and Title:
 Contract No. CV/2012/07
 Development at Anderson Road –
 Footbridge D and Associated Works

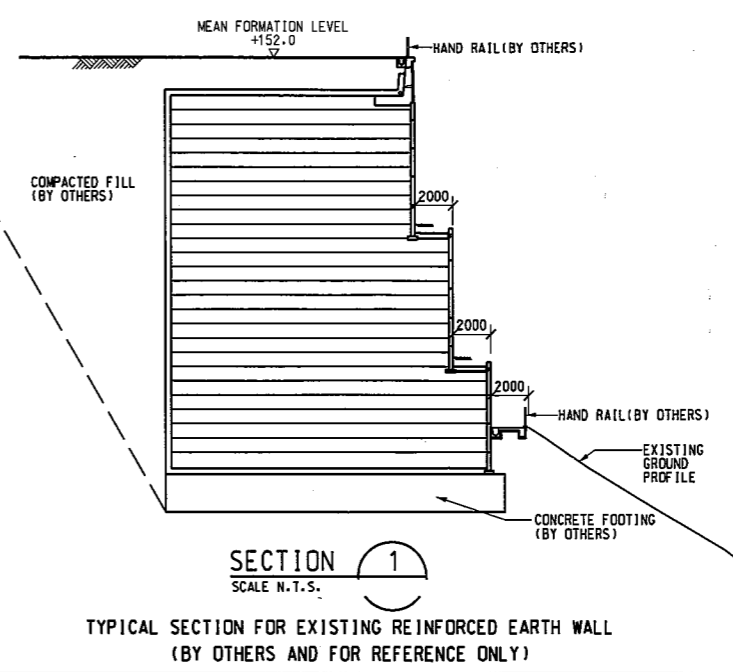
Drawing title
PORTION OF SITE
 (SHEET 1 OF 2)

Drawing no.	24711/1007	Rev.	-
Drawn	Date	Checked	Approved
MHL	10/12	CL	WY
Scale	1:500 @ A1 / 1:1000 @ A3	Status	WORKING

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