

MTR Corporation Limited

**Siu Ho Wan Station and  
Siu Ho Wan Depot Replanning Works**

Baseline Monitoring Report

(October 2021)

Verified by: James Choi *James*

Position: Independent Environmental Checker

Date: 28 October 2021

MTR Corporation Limited

**Siu Ho Wan Station and  
Siu Ho Wan Depot Replanning Works**

Baseline Monitoring Report

(October 2021)

Certified by:           Lisa Poon           

Position:           Environmental Team Leader          



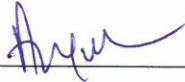
Date:                           28 October 2021

**MTR Corporation Limited**

Consultancy Agreement No. NEX/1062

**Siu Ho Wan Station and Siu Ho Wan  
Depot Replanning Works – Advance  
Construction Works****Baseline Monitoring Report**

October 2021

	Name	Signature
Prepared & Checked:	Vanessa Ao	
Reviewed & Approved:	 Y T Tang	

Version: A Date: 27 October 2021

This report is prepared for MTR Corporation Limited and is given for its sole benefit in relation to and pursuant to Consultancy Agreement No. NEX/2213 and may not be disclosed to, quoted to or relied upon by any person other than MTR Corporation Limited without our prior written consent. No person (other than MTR Corporation Limited) into whose possession a copy of this report comes may rely on this report without our express written consent and MTR Corporation Limited may not rely on it for any purpose other than as described above.

AECOM Asia Co. Ltd.  
12/F, Grand Central Plaza, Tower 2, 138 Shatin Rural Committee Road, Shatin, NT, Hong Kong  
Tel: (852) 3922 9000 Fax: (852) 3922 9797 www.aecom.com

**Table of Content**

	Page
<b>EXECUTIVE SUMMARY .....</b>	<b>I</b>
<b>1 INTRODUCTION.....</b>	<b>1</b>
1.1 Background .....	1
1.2 Purpose of the Baseline Monitoring Report .....	2
1.3 Report Structure.....	2
<b>2 BASELINE DUST MONITORING.....</b>	<b>3</b>
2.1 Monitoring Requirement.....	3
2.2 Monitoring Equipment .....	3
2.3 Monitoring Locations .....	3
2.4 Monitoring Parameters, Frequency and Duration .....	4
2.5 Monitoring Methodology.....	4
2.6 Results and Observations .....	4
2.7 Action and Limit Levels .....	4
<b>3 BASELINE NOISE MONITORING .....</b>	<b>6</b>
3.1 Monitoring Requirements .....	6
3.2 Monitoring Equipment .....	6
3.3 Monitoring Locations .....	6
3.4 Monitoring Parameters, Frequency and Duration .....	7
3.5 Monitoring Methodology.....	7
3.6 Results and Observations.....	7
3.7 Action and Limit Levels .....	8
<b>4 CONCLUSION .....</b>	<b>9</b>
4.1 Dust Monitoring .....	9
4.2 Noise Monitoring .....	9

**List of Tables**

Table 2.1	Dust Monitoring Equipment
Table 2.2	Dust Monitoring Stations
Table 2.3	Baseline Dust Monitoring Stations
Table 2.4	Dust Monitoring Parameters, Frequency and Duration
Table 2.5	Summary of 1-hr TSP Baseline Monitoring Results
Table 2.6	Derivation of Action and Limit Levels for Dust Level
Table 2.7	Action and Limit Levels for Dust Level
Table 3.1	Noise Monitoring Equipment
Table 3.2	Noise Monitoring Stations
Table 3.3	Baseline Noise Monitoring Stations
Table 3.4	Noise Monitoring Parameters, Frequency and Duration
Table 3.5	Summary of Baseline Daytime Noise Monitoring Results of Normal Weekdays (0700 – 1900 hrs)
Table 3.6	Summary of Baseline Evening Noise Monitoring Results of Normal Weekdays (1900 – 2300 hrs)
Table 3.7	Summary of Baseline Daytime and Evening Noise Monitoring Results of Sunday and Public Holiday (0700 – 2300 hrs)
Table 3.8	Summary of Baseline Night-time Noise Monitoring Results of All Days (2300-0700 hrs)
Table 3.9	Criteria for Action and Limit Levels for Construction Noise

**List of Figures**

NEX1062/S/SHD/ACM/Z10/101	Scope of the Project
NEX1062/S/SHD/ACM/Z10/401	Locations of Advance Construction Works Boundary
NEX1062/S/SHD/ACM/Z10/402	Locations of Baseline Noise and Dust Monitoring Point

**List of Appendices**

Appendix A	Baseline Dust and Noise Monitoring Proposal
Appendix B	Calibration Certificates of Monitoring Equipments
Appendix C	Baseline Dust Monitoring Results
Appendix D	Baseline Noise Monitoring Results

## EXECUTIVE SUMMARY

MTR Corporation Limited (MTRCL) had commenced a study to formulate a technically feasible development scheme for the Proposed Comprehensive Residential and Commercial Development atop Siu Ho Wan Depot (hereinafter referred to the “SHD Topside Development”) to optimize housing supply. To facilitate the construction of the SHD Topside Development, railway related works would be required. The existing Siu Ho Wan Depot (SHD) will undergo replanning works to make room for the phased construction of the SHD Topside Development, while maintenance and supporting services to the existing Tung Chung Line (TCL), Airport Express Line (AEL) and Disneyland Resort Line (DRL) should be maintained without causing disruption to the normal operation. A new Siu Ho Wan Station (SHO) has also been proposed along the TCL tracks to meet transport needs of the SHD Topside Development and enable building of a sustainable community.

The Environmental Impact Assessment (EIA) Report (Register No.: AEIAR-214/2017) for the SHO and SHD Replanning Works (hereafter referred to as the “Project”) was approved on 29 November 2017 under the Environmental Impact Assessment Ordinance (EIAO). Following the approval of the EIA Report, an Environmental Permit (EP) was granted on 22 March 2021 (EP No: EP-588/2021) for the construction and operation of the Project.

In accordance with the approved Environmental Monitoring and Audit Manual (EM&A Manual) for the Project, baseline environmental monitoring should be conducted prior to the commencement of construction works. Pursuant to EP Condition 3.3, Baseline Monitoring Report shall be submitted to the Director of Environmental Protection (DEP) at least 2 weeks before the commencement of construction of the Project.

As the piling work and construction of cable bridges and associated civil works for cable diversion under Works Contract 1731 and 1732, are tentatively scheduled to commence in Q4 2021, baseline dust and noise monitoring was conducted according to the EM&A Manual before the commencement of construction works at SHD.

The baseline monitoring for dust and noise was carried out between 20 September and 5 October 2021 at the designated monitoring locations. Background air quality was measured in terms of 1-hr total suspended particulate (TSP). Continuous baseline noise monitoring for A-weighted levels  $L_{eq}$ ,  $L_{10}$  and  $L_{90}$  was conducted in a sample period of 30 minutes for non-restricted hours (0700 – 1900 hrs of normal weekdays) and 5 minutes for restricted hours (1900 – 2300 hrs and 2300 – 0700 hrs of normal weekdays and whole day of Sundays and Public Holidays). Baseline monitoring for dust and noise was conducted for a period of at least 2 weeks.

The averaged 1-hr TSP levels at the designated Dust Monitoring Stations (i.e. DM1, DM6 and DM7) are summarized in the following table:

Baseline TSP Monitoring Results	Dust Monitoring Station ID		
	DM1	DM6	DM7
<b>1-hr TSP</b>			
Average ( $\mu\text{g}/\text{m}^3$ )	68.8	48.1	52.6
Range ( $\mu\text{g}/\text{m}^3$ )	47.3 – 103.3	37.0 – 66.7	36.3 – 91.9

The averaged baseline noise levels at the designated Noise Monitoring Stations (i.e. CNA, CNB) are summarized in the following table:

Baseline Noise Monitoring Results	Noise Monitoring Station ID	
	CNA	CNB
Averaged baseline noise level during daytime of normal weekdays ( $L_{eq, 30min}$ , dB(A))	65	61
Averaged baseline noise level during evening time of normal weekdays ( $L_{eq, 5min}$ , dB(A))	65	60
Averaged baseline noise level during daytime and evening time of General Holiday including Sunday ( $L_{eq, 5min}$ , dB(A))	64	60
Averaged baseline noise level during night-time ( $L_{eq, 5min}$ , dB(A))	61	58

## 1 INTRODUCTION

### 1.1 Background

- 1.1.1 MTR Corporation Limited (MTRCL) had commenced a study to formulate a technically feasible development scheme for the Proposed Comprehensive Residential and Commercial Development atop Siu Ho Wan Depot (hereinafter referred to the “SHD Topside Development”) to optimize housing supply. To facilitate the construction of the SHD Topside Development, railway related works would be required. The existing Siu Ho Wan Depot (SHD) will undergo replanning works to make room for the phased construction of the SHD Topside Development, while maintenance and supporting services to the existing Tung Chung Line (TCL), Airport Express Line (AEL) and Disneyland Resort Line (DRL) should be maintained without causing disruption to the normal operation. A new Siu Ho Wan Station (SHO) has also been proposed along the TCL tracks to meet transport needs of the SHD Topside Development and enable building of a sustainable community.
- 1.1.2 The Environmental Impact Assessment (EIA) Report (Register No.: AEIAR-214/2017) for the SHO and SHD Replanning Works (hereafter referred to as the “Project”) was approved on 29 November 2017 under the Environmental Impact Assessment Ordinance (EIAO). Following the approval of the EIA Report, an Environmental Permit (EP) was granted on 22 March 2021 (EP No: EP-588/2021) for the construction and operation of the Project.
- 1.1.3 The key elements of the Project (**Figure No. NEX1062/S/SHD/ACM/Z10/101** refers) as assessed in the approved EIA Report are listed below:
- SHD Replanning Works within the existing site boundary;
  - Construction of concrete slab, which would also support for construction of the podium decking, the residential towers and facilities above for SHD Topside Development, and property enabling works for the SHD Topside Development;
  - A new SHO and the associated trackworks at existing AEL/TCL, as well as western access and local access; and
  - Provision of the sewerage network outside existing SHD boundary to cater sewage generated by the proposed SHO and Re-provisioned SHD.
- 1.1.4 In order to maintain the existing depot’s daily operation and minimize disturbance to the existing depot, the SHD Replanning Works will be executed in four stages with limited construction access and works area. Each stage of replanning works includes depot structure and foundation construction, temporary / permanent relocation and re-provision of depot facilities and tracks that subsequently require considerable time for testing and commissioning (T&C), etc.
- 1.1.5 To facilitate first stage of replanning works, advance construction works would include (i) construction of cable bridges and associated civil works for cable diversion; (ii) construction of temporary vehicular access bridge; (iii) trial piling for SHD Phase 1; (iv) demolition of paint shop; and (v) construction of engineering vehicle (EV) tracks. Location of advance construction works boundary is shown in **Figure No. NEX1062/S/SHD/ACM/Z10/401** and advance construction works sites would be located within this works boundary. The piling work and construction of cable bridges and associated civil works for cable diversion under Works Contract 1731 and 1732, are tentatively scheduled to commence in Q4 2021.
- 1.1.6 In accordance with the approved Environmental Monitoring and Audit Manual (EM&A Manual) for the Project, baseline environmental monitoring should be conducted prior to the commencement of construction works. Pursuant to EP Condition 3.3, Baseline Monitoring Report shall be submitted to the Director of Environmental Protection (DEP) at least 2 weeks before the commencement of construction of the Project.
- 1.1.7 A Baseline Dust and Noise Monitoring Proposal (BD&NMP) (**Appendix A** refers) which provides the details of baseline monitoring requirements and the proposed designated



monitoring locations was agreed by EPD in August 2021. Baseline dust and noise monitoring was conducted at the designated dust and noise monitoring stations according to the agreed BD&NMP before the commencement of construction works at SHD.

## **1.2 Purpose of the Baseline Monitoring Report**

1.2.1 This Baseline Monitoring Report contains baseline measurement findings of the monitoring stations. The purposes of this Baseline Monitoring Report are to:

- Summarise the findings of baseline dust level and noise monitoring; and
- Establish the Action and Limit (A/L) levels in accordance with the EM&A Manual for the subsequent impact monitoring during construction stage.

## **1.3 Report Structure**

1.3.1 This Baseline Monitoring Report comprises the following sections:

- Section 1 introduces the background of the Project and purpose of this Report;
- Section 2 presents the baseline monitoring requirements, methodologies and monitoring results of dust;
- Section 3 presents the baseline monitoring requirements, methodologies and monitoring results of noise; and
- Section 4 concludes the findings of baseline monitoring.

**2 BASELINE DUST MONITORING**

**2.1 Monitoring Requirement**

2.1.1 In accordance with the EM&A Manual, baseline 1-hr Total Suspended Particulate (TSP) levels should be monitored and audited. TSP baseline monitoring should be carried out for a continuous period of at least two weeks with three sets of 1-hour ambient measurements taken daily at the designated monitoring stations prior to the commissioning of major construction works.

**2.2 Monitoring Equipment**

2.2.1 Portable direct reading dust meters were used to carry out the 1-hr TSP monitoring. Portable direct reading dust meters used in this baseline monitoring were proven to IEC to be capable of achieving comparable result as that of the HVS and thus were used for sampling. Brand and model of the equipment are given in **Table 2.1**.

**Table 2.1 Dust Monitoring Equipment**

Equipment	Brand and Model	Quantity	Serial Number
Portable direct reading dust meter (1-hr TSP)	Sibata Digital Dust Monitor (Model No. LD-3B)	3	A.005.09a, A.005.11a, A.005.16a

2.2.2 The portable direct reading dust meters were calibrated at 1-year interval against a High Volume Sampler, TE-5170. Calibration certificates of the Laser Dust Monitors are provided in **Appendix B**.

**2.3 Monitoring Locations**

2.3.1 Locations of the designated dust monitoring stations (**Appendix A** refers) are shown in **Figure No. NEX1062/S/SHD/ACM/Z10/402** and are detailed in **Table 2.2**.

**Table 2.2 Baseline Dust Monitoring Stations**

Monitoring Station No.	Air Sensitive Receiver (ASR) ID in EIA Report	ASR Description	Remark
DM1	A2	Siu Ho Wan Government Maintenance Depot	<ul style="list-style-type: none"> <li>As the G/F of this ASR would be affected by the construction works of the Project, monitoring will be conducted at the ground level.</li> <li>Same monitoring location during impact monitoring.</li> </ul>
DM6	Near A128	Proposed Development Atop Siu Ho Wan Depot (Phase 1b) (Planned)	<ul style="list-style-type: none"> <li>Vehicular emissions from North Lantau Highway are the major sources of TSP concentrations, therefore the baseline TSP concentrations along the southern boundary of SHD would be of similar magnitude.</li> <li>Away from existing the maintenance activities at the siding area to minimise the dust contribution, if any, from the existing maintenance activities to allow for a conservative approach in determination of Action and Limit Levels for impact monitoring.</li> <li>Impact monitoring will be conducted at DM2 to DM5<sup>(1)</sup> according to the corresponding population intake programme.</li> </ul>
DM7	Near A136	Proposed Development Atop Siu Ho Wan Depot (Phase 1c) (Planned)	

Note:

(1) A review of ambient conditions and background 1-hour TSP at the monitoring locations (DM2 to DM5) without dust generating activities (i.e. during public holiday) should be conducted by ET before population intake of the planned ASRs atop SHD. The purpose of review is to check the validity of Action and Limit Levels developed according the baseline monitoring results at DM6 and DM7.

**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 Dust Monitoring Parameters, Frequency and Duration**

Parameter	Duration	Frequency
1-hr TSP	Consecutive days of at least 2 weeks before commencement of major construction works	3 times per day

**2.5 Monitoring Methodology**

*1-hr TSP Monitoring*

2.5.1 The 1-hr TSP measurement followed manufacturer’s instruction manual. Before initiating a measurement, zeroing the portable dust monitor was carried out to ensure maximum accuracy of concentration measurements.

2.5.2 The 1-hr TSP was sampled by drawing air into the portable dust monitor where particular concentrations were measured instantaneously with an in-built silicon detector sensing light scattered by the particulates in the sampled air. Continuous TSP levels were indicated and logged by a built-in data logger compatible with Windows based program to facilitate data collection, analysis and reporting.

**2.6 Results and Observations**

2.6.1 The baseline dust monitoring was conducted between 20 September and 5 October 2021. Major dust source affecting the monitoring results was vehicular emissions from North Lantau Highway. Gentle wind was recorded throughout the monitoring period, with gentle to strong wind recorded occasionally. Details of influencing factors such as weather conditions and site observation are presented in **Appendix C**.

2.6.2 The baseline monitoring results for 1-hr are summarized in **Tables 2.4**. Detailed TSP monitoring results are presented in **Appendix C**.

**Table 2.4 Summary of 1-hr TSP Baseline Monitoring Results**

1-hr TSP Levels	Dust Monitoring Station ID		
	DM 1	DM 6	DM 7
Average (µg/m <sup>3</sup> )	68.8	48.1	52.6
Range (µg/m <sup>3</sup> )	47.3 – 103.3	37.0 – 66.7	36.3 – 91.9

**2.7 Action and Limit Levels**

2.7.1 The air quality monitoring results of 1-hr TSP were below the Limit Level set out in the EIAO-TM and Air Quality Objective (AQO) respectively at the monitoring locations. The Action and Limit Levels for air quality impact monitoring were established according to the criteria and methodology in the EM&A Manual as presented in **Table 2.5**.

**Table 2.5 Derivation of Action and Limit Levels for Dust Level**

Parameter	Action Level	Limit Level
1-hr TSP Level in $\mu\text{g}/\text{m}^3$	For Baseline Level $\leq 384 \mu\text{g}/\text{m}^3$ , Action Level = (baseline level *1.3 + Limit level) /2  For Baseline Level $> 384 \mu\text{g}/\text{m}^3$ , Action Level = Limit Level	500 $\mu\text{g}/\text{m}^3$

2.7.2 **Table 2.6** shows the derived Action and Limit Levels for air quality impact monitoring during the construction of the Project.

**Table 2.6 Action and Limit Levels for Dust Level**

Parameter	Station ID	Action Level ( $\mu\text{g}/\text{m}^3$ )	Limit Level ( $\mu\text{g}/\text{m}^3$ )
1-hr TSP Level in $\mu\text{g}/\text{m}^3$	DM1	294.7	500
	DM6	281.3	500
	DM7	284.2	500

**3 BASELINE NOISE MONITORING**

**3.1 Monitoring Requirements**

3.1.1 In accordance with the EM&A Manual, baseline noise monitoring should be conducted for at least two weeks to obtain background noise levels prior to the commissioning of major construction works.

**3.2 Monitoring Equipment**

3.2.1 Noise monitoring was performed using sound level meter at each 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 Noise Monitoring Equipment**

Equipment	Brand and Model	Quantity	Serial Number
Sound Level Meter (Type 1)	Nti XL2	2	A2A-17440-EO, A2A-17788-EO
Acoustic Calibrator	B&K (Model No. 4226)	1	2288444

3.2.2 The sound level meters and acoustic calibrators were verified by the certified laboratory once every two years. Calibration certificates of the sound level meters and acoustic calibrator are provided in **Appendix B**.

**3.3 Monitoring Locations**

3.3.1 Locations of the designated noise monitoring stations (**Appendix A** refers) are shown in **Figure No. NEX1062/S/SHD/ACM/Z10/402**. **Table 3.2** describes the details of the monitoring stations.

**Table 3.2 Baseline Noise Monitoring Stations**

Monitoring Station No.	Noise Sensitive Receiver (NSR) in EIA Report	NSR Description	Remark
CNA	N02	Proposed Development Atop Siu Ho Wan Depot - Planned	<ul style="list-style-type: none"> <li>• Dominant noise sources in Siu Ho Wan area include rail noise from TCL and AEL and road traffic noise from North Lantau Highway.</li> <li>• Away from existing the maintenance activities at the siding area to minimise the noise contribution from the existing maintenance activities.</li> <li>• Impact monitoring will be conducted at CN1 to CN3<sup>(1)</sup> according to the corresponding population intake programme.</li> </ul>
CNB	N02	Proposed Development Atop Siu Ho Wan Depot - Planned	

Note:

(1) A review of ambient conditions and background noise levels at the monitoring locations (CN1 to CN3) without construction noise generating activities (i.e. during public holiday) should be conducted by ET before population intake of the planned NSRs atop SHD. The purpose of review is to check the validity of baseline conditions according to the baseline monitoring results at CNA and CNB.

**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**

Time Period	Duration, min	Parameters
Daytime: 0700-1900 hrs on normal weekdays	30 (Leq(30-min))	Leq, L10 & L90
Evening: 1900-2300 hrs on normal weekdays	15 (average of 3 consecutive Leq(5-min))	
Night-time: 2300-0700 hrs on all days		
General Holidays and Sundays: 0700-2300 hrs		

**3.5 Monitoring Methodology**

3.5.1 The monitoring procedures are summarised as below:

- (a) Free-field measurements were made at all monitoring locations.
- (b) The battery condition was checked to ensure the correct functioning of the meter.
- (c) 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) parameters: Leq, L10 and L90
  - (iv) time measurement: Leq(30-minutes) during non-restricted hours i.e. 07:00 – 1900 hrs on normal weekdays; Leq(5-minutes) during restricted hours i.e. 19:00 – 23:00 hrs and 23:00 – 07:00 hrs of normal weekdays, whole day of Sundays and Public Holidays
- (d) Prior to and after each noise measurement, the meter was calibrated using the acoustic calibrator for 94dB(A) at 1000 Hz. The difference in the calibration level before and after measurement was less than 1.0 dB(A).

**3.6 Results and Observations**

3.6.1 The baseline noise monitoring was conducted between 20 September and 5 October 2021. There was no other major activity influencing the measured noise levels during the baseline noise monitoring period. The dominant noise sources were the road traffic from North Lantau Highway and rail traffic from TCL and AEL. Trace rainfall was observed throughout the monitoring period. Data recorded in these periods were discarded. Details of influencing factors such as weather conditions and site observation are presented in **Appendix D**.

3.6.2 The baseline noise monitoring results are summarized in **Tables 3.4 to 3.7**. Detailed noise monitoring results are presented in **Appendix D**.

**Table 3.4 Summary of Baseline Daytime Noise Monitoring Results of Normal Weekdays (0700 – 1900 hrs)**

Monitoring Station ID	30-min Average Noise Levels, dB(A)			Range, dB(A)		
	Leq	L10	L90	Leq	L10	L90
CNA	65	64	56	64 – 66	62 – 67	54 – 57
CNB	61	62	53	60 – 65	60 – 65	51 – 55

**Table 3.5 Summary of Baseline Evening Noise Monitoring Results of Normal Weekdays (1900 – 2300 hrs)**

Monitoring Station ID	5-min Average Noise Levels, dB(A)			Range, dB(A)		
	L <sub>eq</sub>	L <sub>10</sub>	L <sub>90</sub>	L <sub>eq</sub>	L <sub>10</sub>	L <sub>90</sub>
CNA	65	63	54	62 – 66	60 – 67	53 – 55
CNB	60	61	52	57 – 63	57 – 66	51 – 54

**Table 3.6 Summary of Baseline Daytime and Evening Noise Monitoring Results of Sunday and Public Holiday (0700 – 2300 hrs)**

Monitoring Station ID	5-min Average Noise Levels, dB(A)			Range, dB(A)		
	L <sub>eq</sub>	L <sub>10</sub>	L <sub>90</sub>	L <sub>eq</sub>	L <sub>10</sub>	L <sub>90</sub>
CNA	64	62	53	60 – 67	58 – 67	52 – 55
CNB	60	61	50	56 – 65	54 – 67	47 – 54

**Table 3.7 Summary of Baseline Night-time Noise Monitoring Results of All Days (2300-0700 hrs)**

Monitoring Station ID	5-min Average Noise Levels, dB(A)			Range, dB(A)		
	L <sub>eq</sub>	L <sub>10</sub>	L <sub>90</sub>	L <sub>eq</sub>	L <sub>10</sub>	L <sub>90</sub>
CNA	61	60	52	54 – 66	57 – 65	50 – 54
CNB	58	58	51	52 – 64	54 – 63	47 – 54

3.6.3 Results indicated that the average baseline daytime noise monitoring results at all monitoring stations did not exceed the criteria of 75dB(A) for residential premises. The major noise sources affecting the noise background were observed to be road traffic noise from North Lantau Highway and rail traffic from TCL and AEL.

**3.7 Action and Limit Levels**

3.7.1 The Limit Levels are only applicable for the monitoring stations where no residual impact is anticipated. In the event that residual impact is predicted in the Construction Noise Mitigation Plan (CNMP) which would be submitted under EP-588/2021 Condition 2.10, the residual impact shall be taken into account by comparing the future impact monitoring results with the Predicted Construction Noise Levels in the CNMP instead of the Limit Level.

3.7.2 During the impact monitoring period, the baseline noise level should be deducted from the future impact monitoring result for comparison with the Limit Level or the Predicted Construction Noise Level in case residual impact is anticipated as predicted in the approved CNMP.

3.7.3 The Action and Limit Levels of noise monitoring have been set in accordance with the criteria specified in the EM&A Manual as shown in **Table 3.8** below.

**Table 3.8 Criteria for Action and Limit Levels for Construction Noise**

Time Period	Monitoring Station	Action Level	Limit Level, dB(A)
0700-1900 hrs of normal weekdays	CNA	When one documented valid complaint is received	75
	CNB		75

**4 CONCLUSION****4.1 Dust Monitoring**

- 4.1.1 Baseline dust monitoring was carried out between 20 September and 5 October 2021 at 3 designated monitoring stations. Among these 3 monitoring stations, monitoring stations DM6 and DM7 are considered as representative of the baseline condition of impact dust monitoring stations (i.e. DM2 – DM5). Baseline Dust and Noise Monitoring Proposal was submitted and approved by EPD, and therefore there is no revision for inclusion in the EM&A Manual.
- 4.1.2 The air quality monitoring results of 1-hr TSP were below the Limit Level set out in the EIAO-TM and Air Quality Objective (AQO) respectively at all monitoring locations. Action and Limit Levels for air quality at each location were derived from the baseline monitoring results.

**4.2 Noise Monitoring**

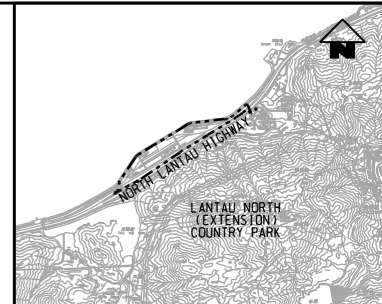
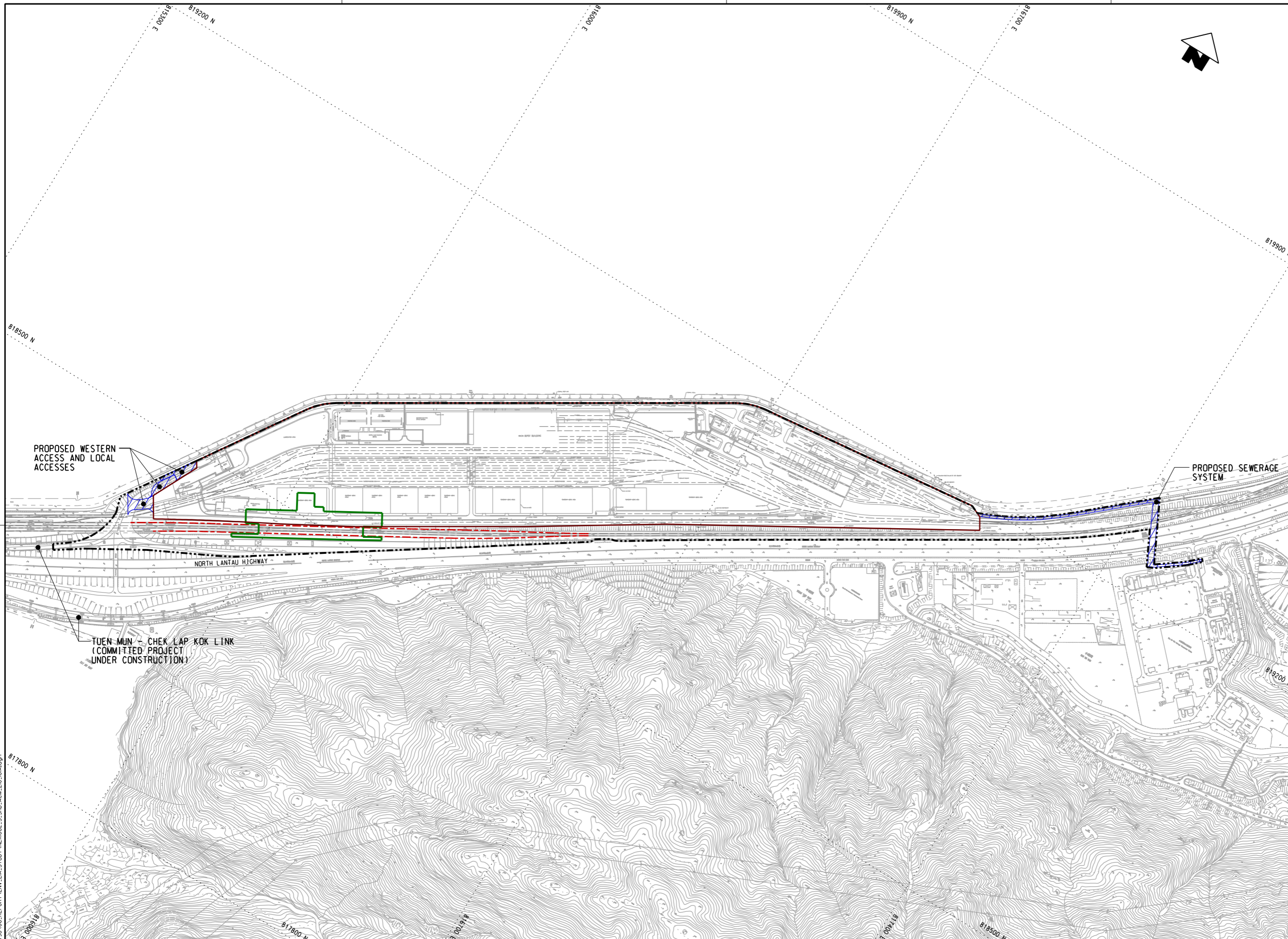
- 4.2.1 Baseline noise monitoring was carried out between 20 September and 5 October 2021 at 2 designated monitoring stations at Siu Ho Wan Depot area. The 2 monitoring stations, CNA and CNB, are considered as the representative of baseline condition of noise monitoring stations (i.e. CN1 – CN3). Baseline Dust and Noise Monitoring Proposal was submitted and approved by EPD, and therefore there is no revision for inclusion in the EM&A Manual.
- 4.2.2 At all monitoring locations, the averaged baseline daytime noise levels are well below the stipulated limit of 75dB(A). The major noise sources affecting the noise background were observed to be road traffic noise from North Lantau Highway and rail traffic from TCL and AEL.
- 4.2.3 The Action Level of construction noise is based on documented valid complaints received, while the Limit Level for each monitoring location is set at a specific limit according to EIAO-TM and the EM&A Manual.



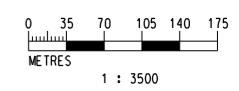
---

**FIGURE**

---



- KEY PLAN**  
(SCALE 1 : 50000)
- LEGEND:**
- EXISTING/REPROVISIONED SHD BOUNDARY
  - SCHEME BOUNDARY
  - MODIFIED TCL/AEL ALIGNMENT
  - PROPOSED SHD (INDICATIVE)
  - SUPPORTING FACILITY



P:\Projects\60493798\01\_CAD\_ADMIN\02\_UTILITY\01\_PLOT\_DRIVER\13\_BW\_COL\_SYSTEM.STD.PLT  
 PLOTTED BY: ZENKFA 2017/2/16 11:59:22  
 P:\Projects\60493798\06\_REPORT\NEW\ENL\STUDY\NEX1062\_S\_SHD\_ACM\_Z10\_101A.dgn

REV	DESCRIPTION	BY	DATE	APPROVED	REV	DESCRIPTION	BY	DATE	APPROVED
A	PRELIMINARY DESIGN REPORT ISSUE	SN	18AUG16	HL					

DRAWN	ZENG FU XIU
DESIGNED	ANTHEA FUNG
CHECKED	SAM NG
APPROVED	HL
DATE	18/AUG/2016

**MTR**

SIU HO WAN DEPOT

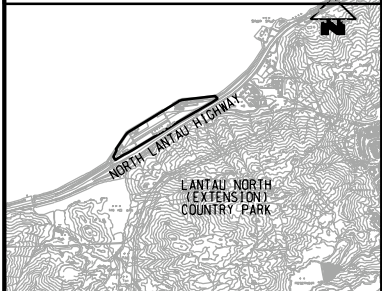
ORIGINATOR

**AECOM** in association with **Aedas**

CADD REF. NEX1062\_S\_SHD\_ACM\_Z10\_101A.dgn

TITLE		SIU HO WAN STATION AND SIU HO WAN DEPOT REPLANNING WORKS	
SCOPE OF PROJECT		SCOPE OF PROJECT	
SCALE	DRAWING NO.	REV.	
1 : 3500 @ A1	NEX1062/S/SHD/ACM/Z10/101	A	

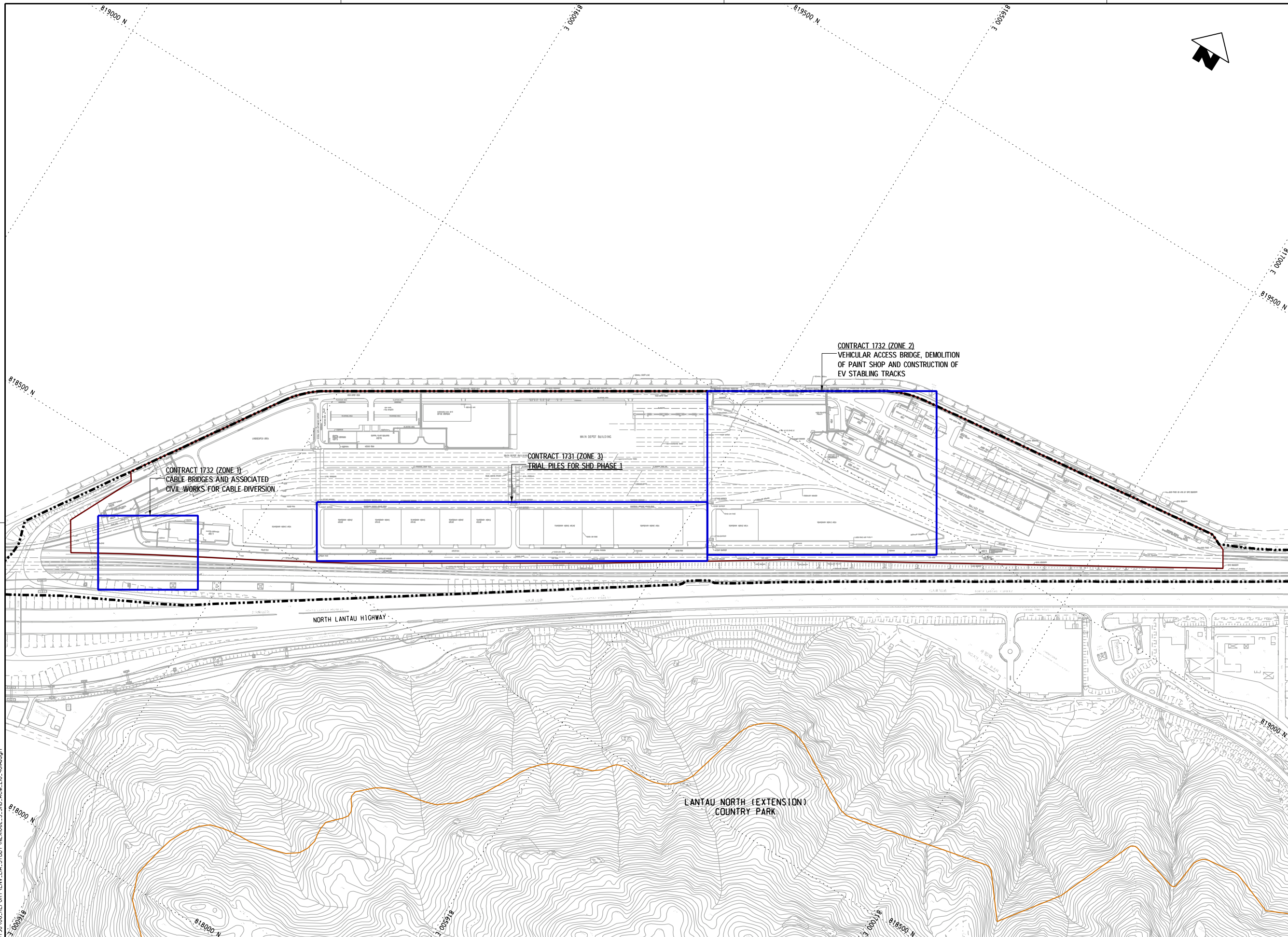
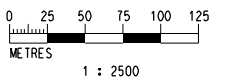
B.D. REF. NO.:



KEY PLAN  
(SCALE 1 : 50000)

LEGEND:

- SCHEME BOUNDARY
- EXISTING/REPROVISIONED SHD BOUNDARY
- LANTAU NORTH (EXTENSION) COUNTRY PARK
- ADVANCE WORKS BOUNDARY (INDICATIVE)



P:\Projects\60493798\01\_CAD\_ADMIN\02\_JUSTIFICATION\_PLOT\_DRIVER\33\_BIR\_COL\_SYSTEM\_STO.PLT  
Default PLOTTER: LIP 2021/6/9 9:09:18  
P:\Projects\60493798\02\_REPORT\ENV\EN\STUDY\NEX1062\_S\_SHD\_ACM\_Z10\_401A.dgn

DRAWN	ZENG FU XIU
DESIGNED	ANTHEA FUNG
CHECKED	SAM NG
APPROVED	HL
DATE	13/DEC/2016

**MTR**

SIU HO WAN DEPOT

ORIGINATOR

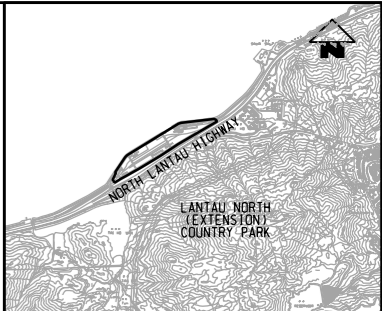
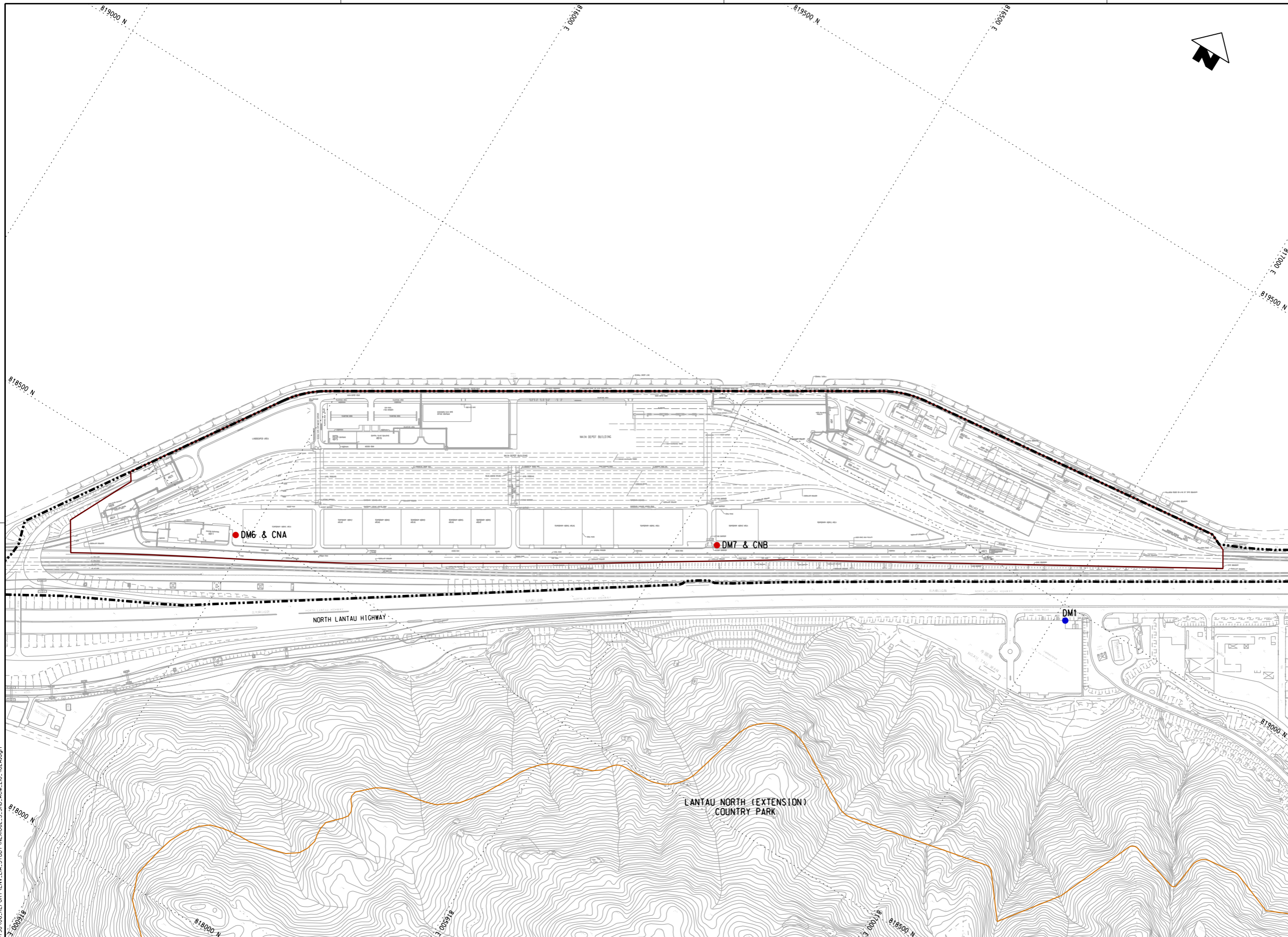
**AECOM** in association with Aedas

CADD REF. NEX1062.S\_SHD\_ACM\_Z10\_401A.dgn

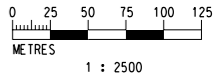
TITLE		SIU HO WAN STATION AND SIU HO WAN DEPOT REPLANNING WORKS	
		LOCATIONS OF ADVANCE CONSTRUCTION WORKS BOUNDARY	
SCALE	1 : 2500 @ A1	DRAWING NO.	NEX1062/S/SHD/ACM/Z10/401
REV.			

REV	DESCRIPTION	BY	DATE	APPROVED	REV	DESCRIPTION	BY	DATE	APPROVED
A	PRELIMINARY DESIGN REPORT ISSUE	SN	13DEC16	HL					

DO NOT SCALE DRAWINGS. ALL DIMENSIONS SHALL BE VERIFIED ON SITE.  
© MTR CORPORATION LIMITED 2008. COPYRIGHT IN RESPECT OF THIS DRAWING / DOCUMENT IS OWNED BY THE MTR CORPORATION LIMITED OF HONG KONG. NO REPRODUCTION OF THE DRAWING / DOCUMENT OR ANY PART BY WHATEVER MEANS IS PERMITTED WITHOUT THE PRIOR WRITTEN CONSENT OF THE MTR CORPORATION LIMITED.



- KEY PLAN**  
(SCALE 1 : 50000)
- LEGEND:**
- SCHEME BOUNDARY
  - EXISTING/REPROVISIONED SHD BOUNDARY
  - LANTAU NORTH (EXTENSION) COUNTRY PARK
  - PROPOSED BASELINE DUST MONITORING POINT
  - PROPOSED BASELINE NOISE AND DUST MONITORING POINT



P:\Projects\60493798\01\_CAD\_ADMIN\02\_JUSTIFICATION\_PLOT\_DRIVER\33\_BW\_COL\_SYSTEM\_STO.PLT  
 DefaulT PRINTED BY: LIP 2021/07/25 09:59:59  
 P:\Projects\60493798\06\_REPORT\ENV\EN\STUDY\NEX1062\_S\_SHD\_ACM\_Z10\_402A.dgn

REV	DESCRIPTION	BY	DATE	APPROVED	REV	DESCRIPTION	BY	DATE	APPROVED
A	PRELIMINARY DESIGN REPORT ISSUE	SAM NG	06SEP21	HL					

DRAWN	ZENG FU XIU
DESIGNED	ANTHEA FUNG
CHECKED	SAM NG
APPROVED	HL
DATE	06/SEP/2021

**MTR**

SIU HO WAN DEPOT

**AECOM** in association with Aedas

CADD REF. NEX1062\_S\_SHD\_ACM\_Z10\_402A.dgn

TITLE		SIU HO WAN STATION AND SIU HO WAN DEPOT REPLANNING WORKS LOCATIONS OF BASELINE NOISE AND DUST MONITORING POINT	
SCALE	DRAWING NO.	REV.	
1 : 2500 (A1)	NEX1062/S/SHD/ACM/Z10/402	A	

---

**Appendix A**

**Baseline Dust and Noise Monitoring Proposal**

---

MTR Corporation Limited

**Siu Ho Wan Station and  
Siu Ho Wan Depot Replanning Works**

Baseline Dust and Noise Monitoring Proposal

(August 2021)

Certified by: \_\_\_\_\_ James Choi 

Position: Independent Environmental Checker

Date: 9 August 2021


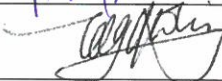


**MTR Corporation Limited**

Consultancy Agreement No. NEX/1062

**Siu Ho Wan Station and Siu Ho Wan  
Depot Replanning Works – Advance  
Construction Works****Baseline Dust and Noise Monitoring  
Proposal**

August 2021

	Name	Signature
Prepared & Checked:	 Karen Fung	
Reviewed & Approved:	Y T Tang	

Version: - Date: 5 August 2021

This report is prepared for MTR Corporation Limited and is given for its sole benefit in relation to and pursuant to Consultancy Agreement No. NEX/1062 and may not be disclosed to, quoted to or relied upon by any person other than MTR Corporation Limited without our prior written consent. No person (other than MTR Corporation Limited) into whose possession a copy of this report comes may rely on this report without our express written consent and MTR Corporation Limited may not rely on it for any purpose other than as described above.

AECOM Asia Co. Ltd.  
12/F, Grand Central Plaza, Tower 2, 138 Shatin Rural Committee Road, Shatin, NT, Hong Kong  
Tel: (852) 3922 9000 Fax: (852) 3922 9797 www.aecom.com



**Table of Content**

	Page
<b>1. INTRODUCTION.....</b>	<b>1</b>
1.1 Background .....	1
1.2 Purpose of this Proposal.....	1
<b>2. BASELINE DUST MONITORING.....</b>	<b>3</b>
2.1 Introduction .....	3
2.2 Baseline Dust Monitoring Parameters .....	3
2.3 Baseline Dust Monitoring Equipment and Methodology .....	3
2.4 Baseline Dust Monitoring Stations .....	5
2.5 Determination of Air Quality Criteria for Impact Monitoring .....	6
2.6 Applicability of Baseline Monitoring Data for Planned ASRs .....	7
<b>3. BASELINE NOISE MONITORING .....</b>	<b>8</b>
3.1 Introduction .....	8
3.2 Baseline Noise Monitoring Parameters.....	8
3.3 Baseline Monitoring Equipment and Methodology .....	8
3.4 Baseline Noise Monitoring Station .....	9
3.5 Applicability of Baseline Monitoring Data for Planned NSR.....	10

**List of Tables**

Table 2.1	Baseline Dust Monitoring Programme
Table 2.2	Proposed Baseline Dust Monitoring Stations
Table 2.3	Proposed Action and Limit Levels for Impact Monitoring
Table 3.1	Baseline Noise Monitoring Station

**List of Figures**

NEX1062/S/SHD/ACM/Z10/101	Location of the Project
NEX1062/S/SHD/ACM/Z10/401	Location of Advance Construction Works
NEX1062/S/SHD/ACM/Z10/402	Locations of Proposed Baseline Dust and Noise Monitoring Point

**List of Appendices**

<b>Appendix A</b>	Technical Specification of Sibata Digital Dust Monitor (Model No. LD-3B)
<b>Appendix B</b>	Equipment Calibration Record of Sibata Digital Dust Monitor (Model No. LD-3B)

## 1. INTRODUCTION

### 1.1 Background

- 1.1.1 MTR Corporation Limited (MTRCL) had commenced a study to formulate a technically feasible development scheme for the Proposed Comprehensive Residential and Commercial Development atop Siu Ho Wan Depot (hereinafter referred to the “SHD Topside Development”) to optimize housing supply. To facilitate the construction of the SHD Topside Development, railway related works would be required. The existing Siu Ho Wan Depot (SHD) will undergo replanning works to make room for the phased construction of the SHD Topside Development, while maintenance and supporting services to the existing Tung Chung Line (TCL), Airport Express Line (AEL) and Disneyland Resort Line (DRL) should be maintained without causing disruption to the normal operation. A new Siu Ho Wan Station (SHO) has also been proposed along the TCL tracks to meet transport needs of the SHD Topside Development and enable building of a sustainable community.
- 1.1.2 The Environmental Impact Assessment (EIA) Report (Register No.: AEIAR-214/2017) for the SHO and SHD Replanning Works (hereafter referred to as the “Project”) was approved on 29 November 2017 under the Environmental Impact Assessment Ordinance (EIAO). Following the approval of the EIA Report, an Environmental Permit (EP) was granted on 22 March 2021 (EP No: EP-588/2021) for the construction and operation of the Project.
- 1.1.3 The key elements of the Project (**Figure No. NEX1062/S/SHD/ACM/Z10/101** refers) as assessed in the approved EIA Report are listed below:
- SHD Replanning Works within the existing site boundary;
  - Construction of concrete slab, which would also support for construction of the podium decking, the residential towers and facilities above for SHD Topside Development, and property enabling works for the SHD Topside Development;
  - A new SHO and the associated trackworks at existing AEL/TCL, as well as western access and local access; and
  - Provision of the sewerage network outside existing SHD boundary to cater sewage generated by the proposed SHO and Re-provisioned SHD.
- 1.1.4 In order to maintain the existing depot’s daily operation and minimize disturbance to the existing depot, the SHD Replanning Works will be executed in four stages with limited construction access and works area. Each stage of replanning works includes depot structure and foundation construction, temporary / permanent relocation and re-provision of depot facilities and tracks that subsequently require considerable time for testing and commissioning (T&C), etc.
- 1.1.5 To facilitate first stage of replanning works, advance construction works would include (i) construction of cable bridges and civil provision for the cable diversion; (ii) construction of temporary vehicular bridge; (iii) trial piling; (iv) erection of site protective hoarding and fencing; and (v) construction of engineering vehicle (EV) tracks. Location of advance construction works is shown in **Figure No. NEX1062/S/SHD/ACM/Z10/401**.
- 1.1.6 According to the approved EM&A Manual (Register No.: AEIAR-214/2017), prior to the commencement of construction works, baseline dust and noise monitoring should be conducted to review the baseline conditions and establish Action and Limit Levels.
- ### 1.2 Purpose of this Proposal
- 1.2.1 The purpose of this Baseline Dust and Noise Monitoring Proposal is to provide the proposed monitoring methodology, equipment, monitoring locations and criteria for the baseline dust and noise monitoring; and to propose baseline dust and noise monitoring locations for agreement with the Independent Environmental Checker (IEC) and Environmental Protection Department

(EPD). This Proposal also discusses the applicability of monitoring data for monitoring of future construction of SHO and 4-stage of SHD replanning works.

**2. BASELINE DUST MONITORING**

**2.1 Introduction**

- 2.1.1 The major dusty construction activities of the Project would mainly be related to construction dust from excavation, piling, materials handling, spoil removal, backfilling and wind erosion which would generate insignificant amount of small size particulates. No significant Respirable Suspended Particulates (RSP) or Fine Suspended Particulates (FSP) impacts would be anticipated and hence monitoring of 24-hour RSP and 24-hour FSP levels are not proposed. Therefore, only 1-hour Total Suspended Particulates (TSP) is recommended to be monitored and audited at the proposed monitoring locations.
- 2.1.2 This section presents the methodology, equipment, monitoring locations and criteria for the baseline dust monitoring.

**2.2 Baseline Dust Monitoring Parameters**

- 2.2.1 Baseline monitoring should be carried out to determine the ambient 1-hour TSP levels at the monitoring locations prior to the commencement of the major construction works. Before commencing the baseline monitoring, the ET should inform the IEC of the baseline monitoring programme such that the IEC can conduct on-site audit to ensure accuracy of the baseline monitoring results.
- 2.2.2 TSP baseline monitoring should be carried out for a continuous period of at least two weeks with three sets of 1-hour ambient measurements taken daily at the selected monitoring stations. During the baseline monitoring, there should not be any dust generating activities in the vicinity of the monitoring stations. General meteorological conditions (wind speed, direction and precipitation) and notes regarding any significant adjacent dust producing sources should also be recorded throughout the baseline monitoring period. A summary of baseline monitoring is presented in **Table 2.1**.

**Table 2.1 Baseline Dust Monitoring Programme**

<b>Monitoring Period</b>	<b>Duration</b>	<b>Sampling Parameter</b>	<b>Frequency</b>
Baseline Monitoring	Consecutive days of at least 2 weeks before commencement of major construction works	1-hour TSP	3 times per day

**2.3 Baseline Dust Monitoring Equipment and Methodology**

Portable Direct Reading Dust Meter

- 2.3.1 The benefit of using direct reading dust meter is to allow prompt and direct results during the monitoring such that the Contractor(s) can take prompt action upon receipt of the measured data. In addition, the direct reading dust meter is capable to provide comparable results of monitoring data as that provided by high volume sampler (HVS). Furthermore, the direct reading dust meter has been widely adopted to measure 1-hour TSP levels for a few designated projects including:
  - Expansion of Hong Kong International Airport into a Three-Runway Systems;
  - Tung Chung New Town Extension (East);
  - Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities – Passenger Clearance Building;

- Hong Kong-Zhuhai-Macao Bridge Hong Kong Link Road Section between Scenic Hill and Hong Kong Boundary Crossing Facilities; and
  - Harbour Area Treatment Scheme Stage 2A Construction of Sewage Conveyance System from Aberdeen to Sai Ying Pun.
- 2.3.2 According to its beneficial use and comparable performance, a direct reading dust meter, Sibata Digital Dust Monitor (Model No. LD-3B), will be used to measure 1-hour TSP levels. Based on the direct reading method, the measured data can be directly obtained for EM&A reporting and prompt action can be taken by the Contractor if necessary.
- 2.3.3 The Sibata Digital Dust Monitor (Model No. LD-3B) is an aerosol photometer designed to read the relative mass concentration of aerosol. The technical specification of Sibata Digital Dust Monitor (Model No. LD-3B) is provided in **Appendix A**. To measure an accurate mass concentration of the aerosol at hand, a comparison measurement using the gravimetric method will be needed to convert a conversion factor (so called the K factor) to the instrument. A comparison test has been carried out annually with a Tisch Environmental Mass Flow Controlled Total Suspended Particulate (TSP) High Volume Sampler (HVS) to obtain the conversion factor (K factor) (**Appendix B** refers). The meter counts in minutes multiplied by the conversion factor will generate the equivalent dust concentration measured by HVS.
- 2.3.4 Internal checking of Sibata Digital Dust Monitor LD-3B will be carried out before each monitoring event. First, reading of the dust monitor in [BG] mode is zero response. Then, reading of dust monitor in sensitivity adjustment scale setting will be checked. For example, the sensitivity adjustment scale setting is 799 CPM for Sibata Digital Dust Monitor LD-3B. Once the internal checking is finished, monitoring of 1-hour TSP levels can be started.
- 2.3.5 The measuring procedures of the 1-hour dust meter will be undertaken in accordance with the Manufacturer's Instruction Manual as follows:
- Place the 1-hour dust meter at least 1.3m above ground;
  - Set POWER to "ON" and make sure that the battery level will not be flashed or in low level;
  - Pull the air sampling inlet cover up;
  - Push the knob at MEASURE position;
  - Set time/mode setting to [BG] by pushing the time setting switch. Then, start the background measurement by pushing the start/stop switch once. It will take 6 sec. to complete the background measurement;
  - Turn knob to SENSI. ADJ position and press in;
  - Push Start/Stop switch once;
  - Gently return knob to the MEASURE position;
  - Push the time setting switch to change the time setting display to [LOG] at the bottom left of the liquid crystal display;
  - Remove the cap and start measurement; and
  - Information such as sampling date, time, count value and site condition will be recorded during the monitoring period.
- 2.3.6 The 1-hour portable direct reading dust meter will be calibrated every year against a Tisch Environmental Mass Flow Controlled TSP HVS to check the validity and accuracy of the results measured by direct reading method. The checking results will be submitted to the IEC for information.

#### Wind Data Monitoring

2.3.7 The wind data from the existing weather station, i.e. Automatic Weather Buoy No.8 (Hong Kong International Airport, East) operated by Hong Kong Observatory which is located in the vicinity of the designated monitoring location, will be used to check the wind speed and wind direction. This Automatic Weather Buoy (22°18'21"N, 113°57'14"E) is located at the northwest of SHD and the anemometer is set up at 9m above mean sea level with no high-rise building nearby. This Automatic Weather Buoy is considered as the closest weather station to the Project areas that can provide representative wind data in the Siu Ho Wan areas. It is also considered as a reliable data source for the wind data, therefore no additional wind monitoring equipment is deemed necessary to obtain the wind data for the Project.

**2.4 Baseline Dust Monitoring Stations**

2.4.1 Based on the findings of the EIA Report, the worst potentially affected locations due to the construction activities of the Project have been identified for TSP monitoring and are listed in **Table 2.2**. As the podium of SHD Topside Development is yet to be built, the dust monitoring stations (i.e. DM2 – DM5) could not be set up for baseline dust monitoring. In addition, construction works of the Project would remain during the population intake at the proposed development atop SHD, baseline monitoring at the designated monitoring locations (i.e. DM2 – DM5) without dust generating activities could not be conducted. Advance baseline monitoring is therefore proposed in order to determine the Action and Limit Levels at the planned ASRs. It is anticipated that the vehicular emissions from North Lantau Highway is the major sources of TSP concentrations, therefore the baseline TSP concentrations along the southern boundary of SHD would be of similar magnitude. In addition, considering the maintenance activities such as track and OHL maintenance and engineering train formation being conducted at the siding area, it is suggested to conduct baseline monitoring away from the maintenance activities in order to minimise the dust contribution, if any, from the existing maintenance activities. As such, alternative baseline dust monitoring station is proposed at DM6 and DM7, which is considered to be representative of the baseline condition of impact dust monitoring stations (i.e. DM2 – DM5).

2.4.2 The proposed baseline monitoring locations are provided in **Table 2.3**, with their locations shown in **Figure No. NEX1062/S/SHD/ACM/Z10/402**.

**Table 2.2 Proposed Dust Monitoring Stations**

Monitoring Station No.	Air Sensitive Receiver (ASR) ID in EIA Report	ASR Description	Remark
DM1	A2	Siu Ho Wan Government Maintenance Depot	<ul style="list-style-type: none"> <li>Existing ASR</li> </ul>
DM2	Near A108	Podium level of Phase 1a SHD Topside	<ul style="list-style-type: none"> <li>Planned ASR, development layout is subject to change.</li> <li>Podium of Phase 1a SHD is yet to be built.</li> </ul>
DM3	Near A125	Podium level of Phase 1b SHD Topside	<ul style="list-style-type: none"> <li>Planned ASR, development layout is subject to change.</li> <li>Podium of Phase 1b SHD is yet to be built.</li> </ul>
DM4	Near A118	Podium level of Phase 1a SHD Topside Development	<ul style="list-style-type: none"> <li>Planned ASR, development layout is subject to change.</li> <li>Podium of Phase 1a SHD is yet to be built.</li> </ul>
DM5	Near A146	Podium level of Phase 1a SHD Topside Development	<ul style="list-style-type: none"> <li>Planned ASR, development layout is subject to change.</li> <li>Podium of Phase 1a SHD is yet to be built.</li> </ul>

**Table 2.3 Proposed Baseline Dust Monitoring Stations**

Monitoring Station No.	Air Sensitive Receiver (ASR) ID in EIA Report	ASR Description	Remark
DM1	A2	Siu Ho Wan Government Maintenance Depot	<ul style="list-style-type: none"> <li>As the G/F of this ASR would be affected by the construction works of the Project, monitoring will be conducted at the ground level.</li> <li>Same monitoring location during impact monitoring.</li> </ul>
DM6	Near A128	Proposed Development Atop Siu Ho Wan Depot (Phase 1b) (Planned)	<ul style="list-style-type: none"> <li>Vehicular emissions from North Lantau Highway is the major sources of TSP concentrations, therefore the baseline TSP concentrations along the southern boundary of SHD would be of similar magnitude.</li> </ul>
DM7	Near A136	Proposed Development Atop Siu Ho Wan Depot (Phase 1c) (Planned)	<ul style="list-style-type: none"> <li>Away from existing the maintenance activities at the siding area to minimise the dust contribution, if any, from the existing maintenance activities to allow for a conservative approach in determination of Action and Limit Levels for impact monitoring.</li> <li>Impact monitoring will be conducted at DM2 to DM5<sup>(1)</sup> according to the corresponding population intake programme.</li> </ul>

Note:

(1) A review of ambient conditions and background 1-hour TSP at the monitoring locations (DM2 to DM5) without dust generating activities (i.e. during public holiday) should be conducted by ET before population intake of the planned ASRs atop SHD. The purpose of review is to check the validity of Action and Limit Levels developed according to the baseline monitoring results at DM6 and DM7.

2.4.3 In exceptional cases, when insufficient baseline monitoring data or questionable results are obtained, the ET Leader shall liaise with the IEC to agree on an appropriate set of data to be used as a baseline reference and submit to EPD for approval.

2.4.4 If the ET Leader considers that significant changes in the ambient conditions have arisen, a repeat of the baseline monitoring may be carried out to update the baseline levels and air quality criteria, after consultation and agreement with the ER, the IEC and the EPD.

**2.5 Determination of Air Quality Criteria for Impact Monitoring**

2.5.1 The baseline monitoring results obtained from DM6 and DM7 form the basis for determining the air quality criteria for the impact monitoring at DM2 to DM5. The ET will compare the impact monitoring results with air quality criteria set up for 1-hour TSP. **Table 2.4** shows the air quality criteria, namely Action and Limit levels to be used.

**Table 2.4 Proposed Action and Limit Levels for Impact Monitoring**

Parameter	Action Level <sup>(1)</sup>	Limit Level
1-hour TSP	<ul style="list-style-type: none"> <li>For <math>BL \leq 384\mu\text{g m}^{-3}</math>, <math>AL = (BL * 1.3 + LL)/2</math></li> <li>For <math>BL &gt; 384\mu\text{g m}^{-3}</math>, <math>AL = LL</math></li> </ul>	$500\mu\text{g m}^{-3}$

Note:

(1) BL = Baseline level, AL = Action level, LL = Limit level.

**2.6 Applicability of Baseline Monitoring Data for Planned ASRs**

- 2.6.1 As mentioned in **Table 2.2**, construction works of the Project would remain during the population intake at the proposed development atop SHD, therefore baseline monitoring at the designated monitoring locations (i.e. DM2 – DM5) without dust generating activities could not be conducted. Advance baseline monitoring is therefore proposed in order to determine the Action and Limit Levels at the planned ASRs. Before population intake of the planned ASRs atop SHD, a review of ambient conditions and background 1-hour TSP at the monitoring locations (DM2 to DM5) without dust generating activities (i.e. during public holiday) should be conducted by ET. At least 12 sets of 1-hour TSP should be obtained to review the ambient conditions and to check the validity of Action and Limit Levels developed according the baseline monitoring results at DM6 and DM7. The review findings should be verified and agreed by IEC before submitting to EPD, prior to the commencement of impact monitoring at the planned ASRs..



### 3. BASELINE NOISE MONITORING

#### 3.1 Introduction

3.1.1 This section presents the methodology, equipment, monitoring locations, and protocols for the monitoring of baseline noise monitoring.

#### 3.2 Baseline Noise Monitoring Parameters

3.2.1 Baseline noise monitoring will be conducted prior to the commencement of the construction works of the Project. The baseline noise levels will be measured for a continuous period of at least 14 consecutive days at a minimum logging interval of 30 minutes for daytime (between 0700 and 1900 hours of normal weekdays) and 15 minutes (as three consecutive  $L_{eq, (5 \text{ minutes})}$  readings) for evening time (between 1900 and 2300 hours on normal weekdays), general holidays including Sundays (between 0700 and 2300 hours) and night-time (between 2300 and 0700 on all days). The  $L_{eq}$ ,  $L_{10}$  and  $L_{90}$  will be recorded at the specified interval. Before commencing the baseline monitoring, the ET should inform the IEC of the baseline monitoring programme such that the IEC can conduct on-site audit to ensure accuracy of the baseline monitoring results.

#### 3.3 Baseline Monitoring Equipment and Methodology

3.3.1 In accordance with the Technical Memorandum (TM) issued under the NCO, sound level meters (SLM) in compliance with the International Electrotechnical Commission Publications 651: 1979 (Type 1) and 804: 1985 (Type 1) specifications should be used for carrying out the noise monitoring. Immediately prior to and following each noise measurement the accuracy of the sound level meter should be checked using an acoustic calibrator generating a known sound pressure level at a known frequency. Measurements may be accepted as valid only if the difference between calibration levels obtained before and after the noise measurement is less than 1.0 dB. The SLM will be calibrated every two years and the acoustic calibrator will be calibrated annually.

3.3.2 The details of noise measurement procedures are described as follows:

- The microphone head of the sound level meter will be positioned approximately 1m from the exterior of the noise sensitive façade and 1.2m above ground. If no building façade can be accessed, a façade correction of +3dB(A) will be made to the noise level obtained by free field measurement;
- The wind shield will be provided for microphone head;
- The battery condition will be checked to ensure good functioning of the meter;
- Parameters such as frequency weighting, time weighting, and measurement time will be set as follows:
  - Frequency weighting – A
  - Time weighting – fast
  - Time measurement – The baseline and impact monitoring periods are provided in **Table 3.1**.
- Prior to and after the noise measurement, the SLM will be calibrated using the calibrator;
- Noise monitoring will be cancelled in the presence of rain; and
- All noise monitoring will be conducted with the wind speed not exceeding 5m/s and no gusts exceeding 10m/s. The wind speed will be checked with a portable wind speed meter capable of measuring wind speeds in m/s.

- 3.3.3 There should not be any construction activities in the vicinity of the monitoring stations during the baseline monitoring. Any non-project related construction activities in the vicinity of the monitoring stations during the baseline monitoring should be noted and the source and location of such activities should be recorded.
- 3.3.4 In exceptional cases, when baseline monitoring data obtained are insufficient or questionable, the ET Leader should liaise with the IEC and EPD to agree on an appropriate set of data to be used as the baseline reference.

**3.4 Baseline Noise Monitoring Stations**

- 3.4.1 Based on the findings of the EIA Report, the worst potentially affected locations due to the construction activities of the Project have been identified for construction noise monitoring and are listed in **Table 3.1**. As the podium of SHD Topside Development is yet to be built, the noise monitoring stations (i.e. CN1 – CN3) could not be set up for baseline noise monitoring. In addition, as stated in Section 3.2.10 of approved EM&A Manual, there should not be any construction activities in the vicinity of the monitoring stations during the baseline monitoring. However, it is anticipated that construction works of the Project would remain during the population intake at the proposed development atop SHD, it is not feasible to conduct the baseline monitoring at the designated monitoring locations (i.e. CN1 – CN3) without construction activities of the Project. As such, baseline monitoring is proposed to be conducted before commencement of construction works to obtain the ambient noise condition in Siu Ho Wan area. It is anticipated that the road traffic noise from North Lantau Highway and rail traffic from TCL and AEL are the dominant noise sources in SHD, therefore the baseline noise levels along the southern boundary of SHD would be of similar magnitude. In addition, considering the maintenance activities such as track and OHL maintenance and engineering train formation being conducted at the siding area, it is suggested to conduct baseline monitoring away from the maintenance activities in order to minimise the noise contribution from the existing maintenance activities. Therefore, alternative baseline noise monitoring station is proposed at CNA and CNB, which is considered to be representative of the baseline condition of impact noise monitoring stations (i.e. CN1 – CN3).
- 3.4.2 The proposed baseline noise monitoring location is listed in **Table 3.2** with its location shown in **Figure No. NEX1062/S/SHD/ACM/Z10/402**.

**Table 3.1 Proposed Noise Monitoring Stations**

Monitoring Station No.	Noise Assessment Point (NAP) in EIA Report	NSR Description	Remark
CN1	101-06	Stage 2 SHD Replanning Works	<ul style="list-style-type: none"> <li>• Planned NSR, development layout is subject to change.</li> <li>• Podium of Phase 1a SHD is yet to be built.</li> </ul>
CN2	118-04	Stage 3 SHD Replanning Works	<ul style="list-style-type: none"> <li>• Planned NSR, development layout is subject to change.</li> <li>• Podium of Phase 1a SHD is yet to be built.</li> </ul>
CN3	149-04	Stage 3 & 4 SHD Replanning Works	<ul style="list-style-type: none"> <li>• Planned NSR, development layout is subject to change.</li> <li>• Podium of Phase 1c SHD is yet to be built.</li> </ul>

**Table 3.2 Baseline Noise Monitoring Stations**

Monitoring Station No.	Noise Sensitive Receiver (NSR) in EIA Report	NSR Description	Remark
CNA	N02	Proposed Development Atop Siu Ho Wan Depot - Planned	<ul style="list-style-type: none"> <li>• Dominant noise sources in Siu Ho Wan area include rail noise from TCL and AEL and road traffic noise from North Lantau Highway.</li> <li>• Away from existing the maintenance activities at the siding area to minimise the noise contribution from the existing maintenance activities.</li> <li>• Impact monitoring will be conducted at CN1 to CN3<sup>(1)</sup> according to the corresponding population intake programme.</li> </ul>
CNB	N02	Proposed Development Atop Siu Ho Wan Depot - Planned	

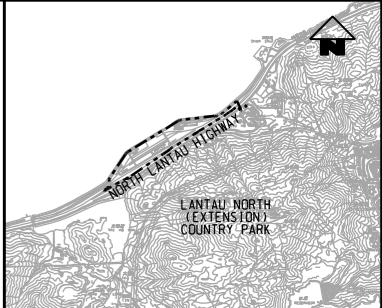
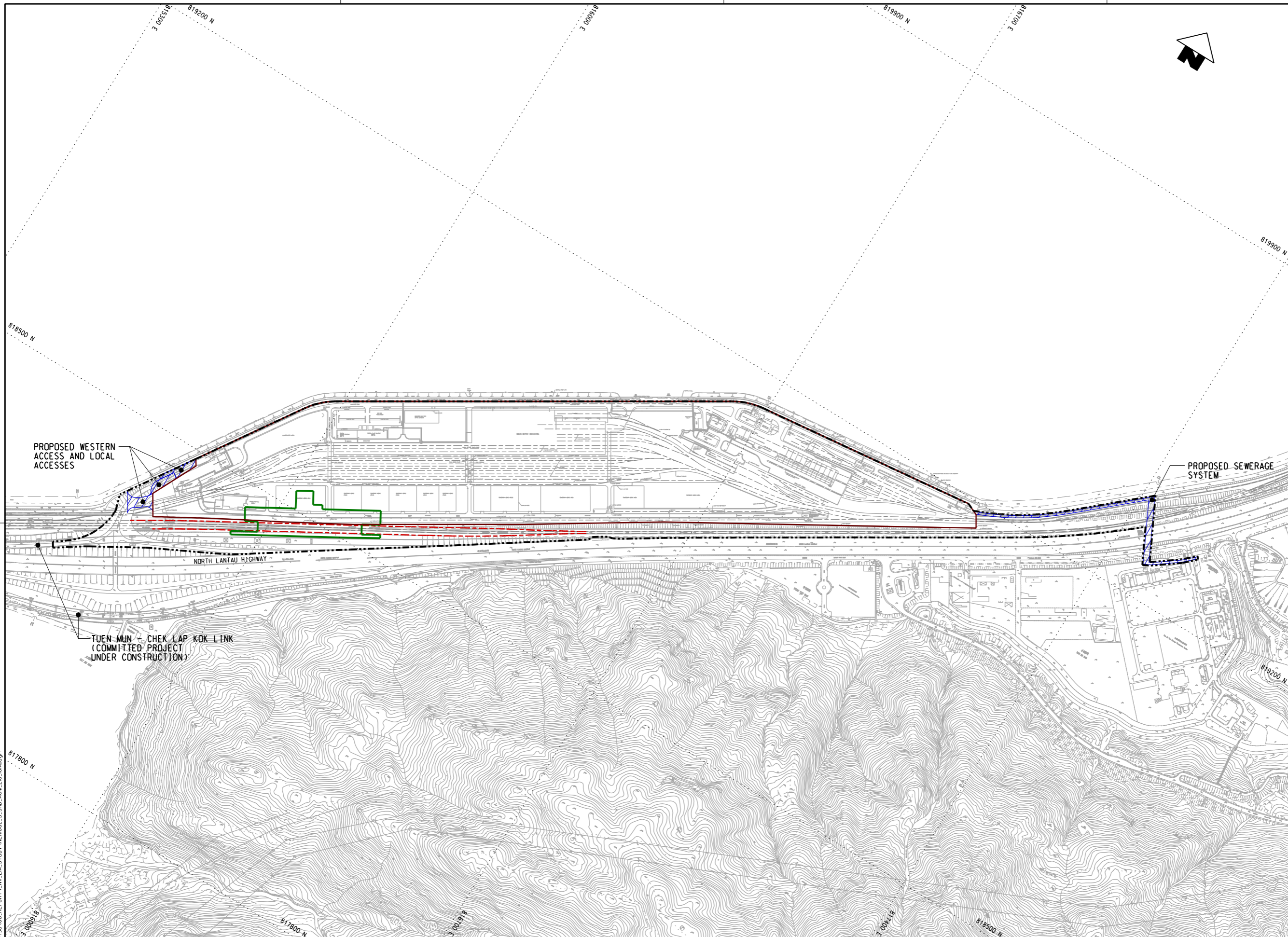
Note:

(1) A review of ambient conditions and background noise levels at the monitoring locations (CN1 to CN3) without construction noise generating activities (i.e. during public holiday) should be conducted by ET before population intake of the planned NSRs atop SHD. The purpose of review is to check the validity of baseline conditions according the baseline monitoring results at CNA and CNB.

**3.5 Applicability of Baseline Monitoring Data for Planned NSR**

3.5.1 As mentioned in **Table 3.1**, construction works of the Project would remain during the population intake at the proposed development atop SHD, therefore baseline monitoring at the designated monitoring locations (i.e. CN1 – CN3) without construction activities could not be conducted. Advance baseline monitoring is therefore proposed in order to obtain the ambient noise condition as future reference. Before population intake of the planned NSRs atop SHD, a review of ambient conditions and background noise levels at the monitoring locations (CN1 to CN3) without construction noise generating activities (i.e. during public holiday) should be conducted by ET. At least 2 days background noise measurement should be conducted to review the ambient condition. The review findings should be verified and agreed by IEC before submitting to EPD, prior to the commencement of impact monitoring at the planned NSRs..

# Figures



KEY PLAN  
(SCALE 1 : 50000)

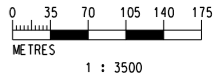
- LEGEND:**
- EXISTING/REPROVISIONED SHD BOUNDARY
  - SCHEME BOUNDARY
  - MODIFIED TCL/AEL ALIGNMENT
  - PROPOSED SHD (INDICATIVE)
  - SUPPORTING FACILITY

PROPOSED WESTERN ACCESS AND LOCAL ACCESSES

PROPOSED SEWERAGE SYSTEM

NORTH LANTAU HIGHWAY

TUEN MUN - CHEK LAP KOK LINK (COMMITTED PROJECT UNDER CONSTRUCTION)



P:\Projects\60493798\01\_CAD\_ADMIN\02\_UTILITY\01\_PLOT\_DRIVER\13\_BW\_COL\_SYSTEM.STD.PLT  
 PLOTTED BY: ZENKFA 2017/2/16 11:59:22  
 P:\Projects\60493798\06\_REPORT\NEW\ENL\STUDY\NEX1062\_S\_SHD\_ACM\_Z10\_101A.dgn

REV	DESCRIPTION	BY	DATE	APPROVED	REV	DESCRIPTION	BY	DATE	APPROVED
A	PRELIMINARY DESIGN REPORT ISSUE	SN	18AUG16	HL					

DRAWN	ZENG FU XIU
DESIGNED	ANTHEA FUNG
CHECKED	SAM NG
APPROVED	HL
DATE	18/AUG/2016

**MTR**

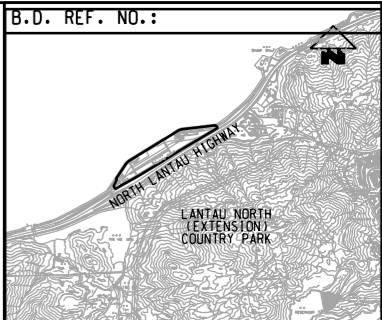
SIU HO WAN DEPOT

ORIGINATOR

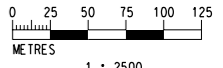
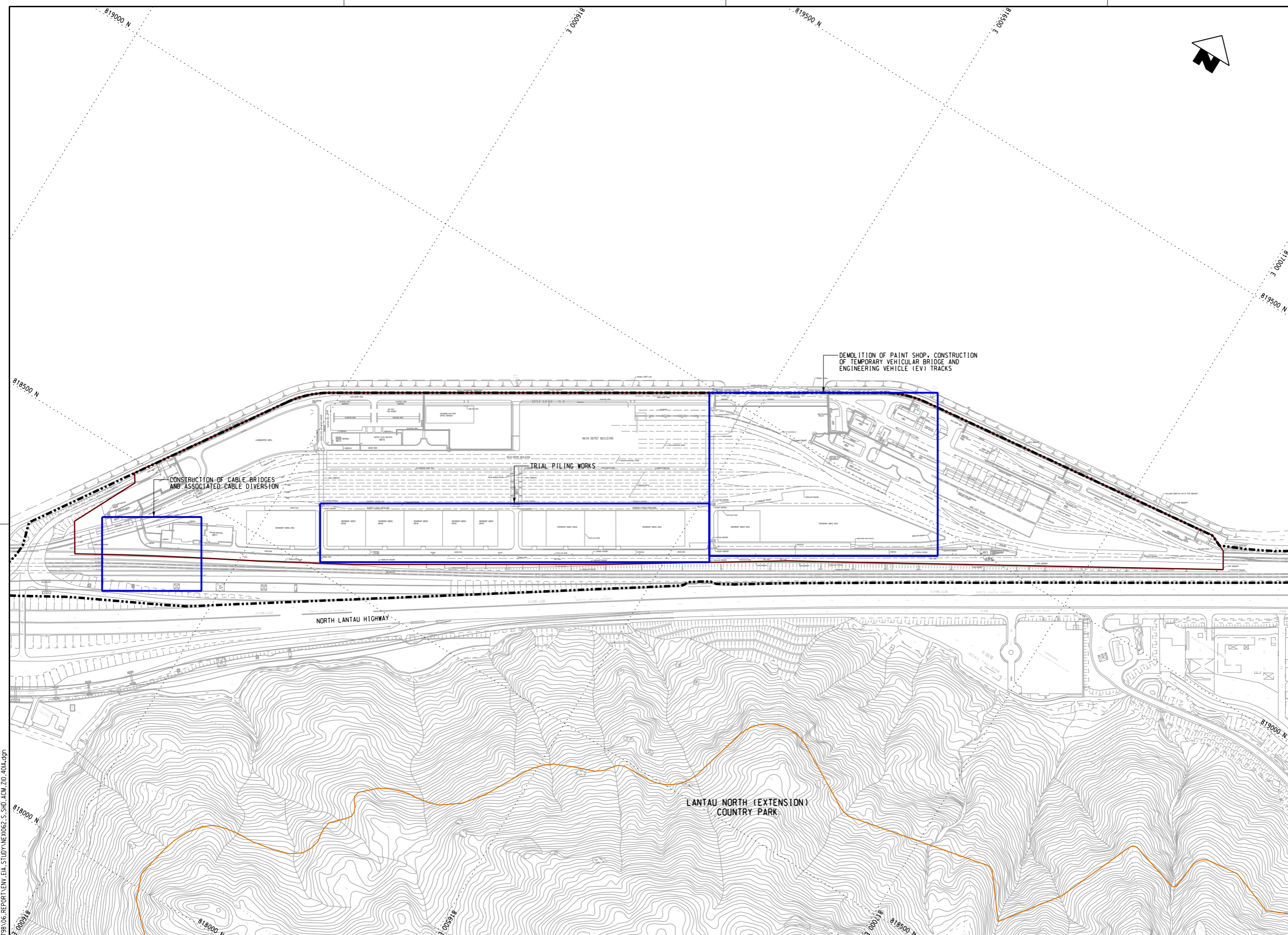
**AECOM** in association with **Aedas**

CADD REF. NEX1062\_S\_SHD\_ACM\_Z10\_101A.dgn

TITLE		SIU HO WAN STATION AND SIU HO WAN DEPOT REPLANNING WORKS	
SCOPE OF PROJECT		SCOPE OF PROJECT	
SCALE	DRAWING NO.	REV.	
1 : 3500 @ A1	NEX1062/S/SHD/ACM/Z10/101	A	



- KEY PLAN**  
(SCALE 1 : 50000)
- LEGEND:**
- SCHEME BOUNDARY
  - EXISTING/REPROVISIONED SHD BOUNDARY
  - LANTAU NORTH (EXTENSION) COUNTRY PARK
  - ADVANCE WORKS BOUNDARY (INDICATIVE)



P:\Projects\60493798\01\_CAD\_ADMIN\02\_JUSTIFICATION\_PLOT\_DRIVER\33\_BW\_COL\_SYSTEM\_STO.PLT  
 DefaulT PRINTED BY: LIP 2021/6/9 9:09:18  
 P:\Projects\60493798\06\_REPORT\ENV\ENL\STUDY\NE\062\_S\_SHD\_ACM\_Z10\_401A.dgn

REV	DESCRIPTION	BY	DATE	APPROVED	REV	DESCRIPTION	BY	DATE	APPROVED
A	PRELIMINARY DESIGN REPORT ISSUE	SN	13DEC16	HL					

DRAWN ZENG FU XIU  
 DESIGNED ANTHEA FUNG  
 CHECKED SAM NG  
 APPROVED HL  
 DATE 13/DEC/2016  
DO NOT SCALE DRAWINGS. ALL DIMENSIONS SHALL BE HEAVY-LINED ON SITE.  
 © MTR CORPORATION LIMITED 2008. COPYRIGHT IN RESPECT OF THIS DRAWING / DOCUMENT IS OWNED BY THE MTR CORPORATION LIMITED OF HONG KONG. NO REPRODUCTION OF THE DRAWING / DOCUMENT OR ANY PART BY WHATEVER MEANS IS PERMITTED WITHOUT THE PRIOR WRITTEN CONSENT OF THE MTR CORPORATION LIMITED.

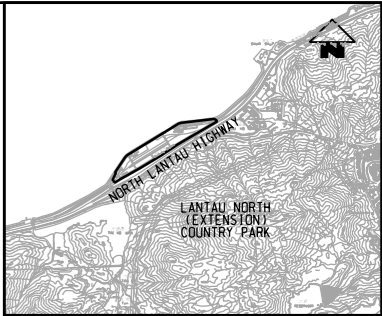
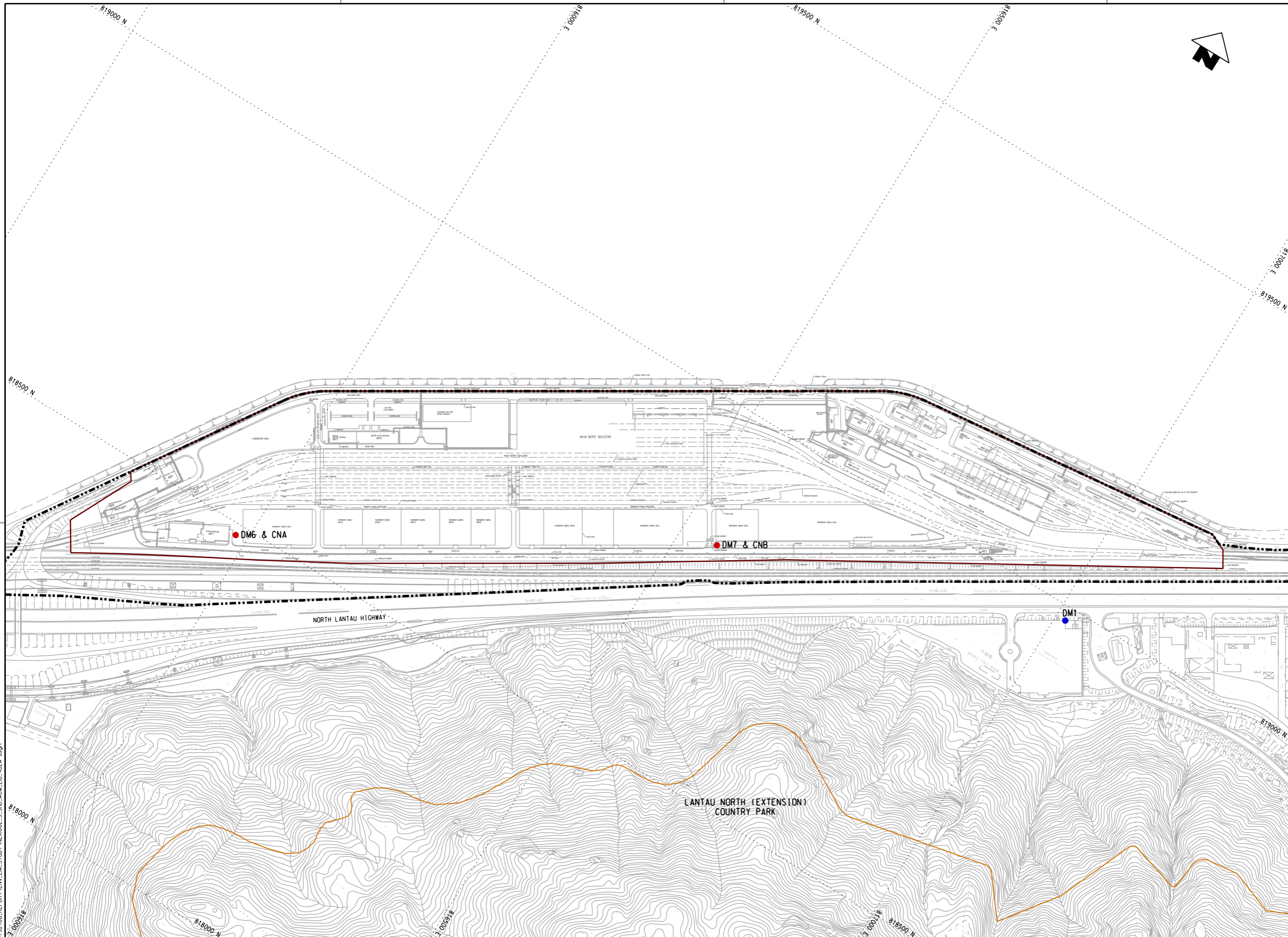
**MTR**

SIU HO WAN DEPOT

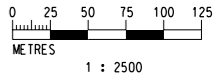
**AECOM** in association with Aedas

CADD REF. NEX1062\_S\_SHD\_ACM\_Z10\_401A.dgn

TITLE		SIU HO WAN STATION AND SIU HO WAN DEPOT REPLANNING WORKS	
LOCATIONS OF THE PROJECT AND ADVANCE CONSTRUCTION WORKS		SCALE	DRAWING NO.
		1 : 2500 @ A1	NEX1062/S/SHD/ACM/Z10/401
		REV.	A



- KEY PLAN**  
(SCALE 1 : 50000)
- LEGEND:**
- SCHEME BOUNDARY
  - EXISTING/REPROVISIONED SHD BOUNDARY
  - LANTAU NORTH (EXTENSION) COUNTRY PARK
  - PROPOSED BASELINE DUST MONITORING POINT
  - PROPOSED BASELINE NOISE AND DUST MONITORING POINT



P:\Projects\60493798\01\_CAD\_ADMIN\02\_JUSTIFICATION\_PLOT\_DRIVER\A3\_BW\_COLOUR\_SYSTEM\_STO.PLT  
 Default PLOTTER: HP DesignJet 5000 Series  
 P:\Projects\60493798\02\_REPORT\ENV\ENL\STUDY\NEX1062\_S\_SHD\_ACM\_Z10\_402A.dgn  
 13/12/2016 10:51:15  
 MODELNAME: NEX1062\_S\_SHD\_ACM\_Z10\_402A.dgn  
 FILENAME:

REV	DESCRIPTION	BY	DATE	APPROVED	REV	DESCRIPTION	BY	DATE	APPROVED
A	PRELIMINARY DESIGN REPORT ISSUE	SN	13DEC16	HL					

DRAWN	ZENG FU XIU
DESIGNED	ANTHEA FUNG
CHECKED	SAM NG
APPROVED	HL
DATE	13/DEC/2016

**MTR**

SIU HO WAN DEPOT

**AECOM** in association with  
Aedas

CADD REF. NEX1062\_S\_SHD\_ACM\_Z10\_402A .dgn

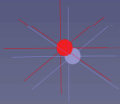
TITLE		SIU HO WAN STATION AND SIU HO WAN DEPOT REPLANNING WORKS LOCATIONS OF PROPOSED BASELINE NOISE AND DUST MONITORING POINT	
SCALE	DRAWING NO.	REV.	
1 : 2500 @ A1	NEX1062/S/SHD/ACM/Z10/402	A	

## **Appendix A**

### **Technical Specification of Sibata Digital Dust Monitor (Model No. LD-3B)**



# Laser particle photometer

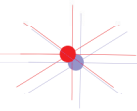


## LD-3B

An Aerosol is a group of particles suspended in air. Aerosols can be introduced into the body primarily through the respiratory system. Total dust measurements indicate concentrations that can enter the nose and mouth of a worker as well as that which can settle on the skin while the respirable fraction of dust is that portion which can reach the lower or gas exchange part of the respiratory system. This respirable fraction has been defined for sampling purposes all over the world.

**SIBATA SCIENTIFIC TECHNOLOGY LTD.**  
1-1-62, Nakane, Soka-City, Saitama 340-0005, Japan  
Phone: 81-48-933-1582  
Fax: 81-48-933-1591  
E-mail : [overseas@sibata.co.jp](mailto:overseas@sibata.co.jp)  
<http://www.sibata.co.jp/english/>

# Outlines and Features



## Outline

The LD-3B is an aerosol photometer designed to read the relative mass concentration of aerosol. It is factory-calibrated by Polystyrene latex particles (regulated standard by JIS). The LD-3B is designed to read  $\text{mg}/\text{m}^3$  directly, however it should be remembered that the calibration is strictly valid for the calibration particle. To measure the accurate mass concentration of the aerosol at hand, a comparison measurement using the gravimetric method will be needed to convert a conversion factor (so called the K factor) to the instrument.

Although the instrument has been upgraded with new functions, the operation principles remain the same as instruments such as the Sibata P-5, LD-1, and LD-3. If you have had experience with our former instruments, operation of this instrument should be a piece of cake.

## The K "factor"

You will find a calibration sheet ticket with your instrument. The K factor written on your ticket is only valid for the calibration of your instrument (To see that your instrument is reading the right count). As said in the above outline, you need a comparison measurement using the gravimetric method. After your comparison measurement you are able to calculate the K factor as follows.

$$K=C/R$$

K: K factor = concentration conversion factor ( $\text{mg}/\text{m}^3 \cdot \text{CPM}$ )

C: Concentration of the gravimetric sample ( $\text{mg}/\text{m}^3$ )

R: Count per minute on your LD-3B (CPM)

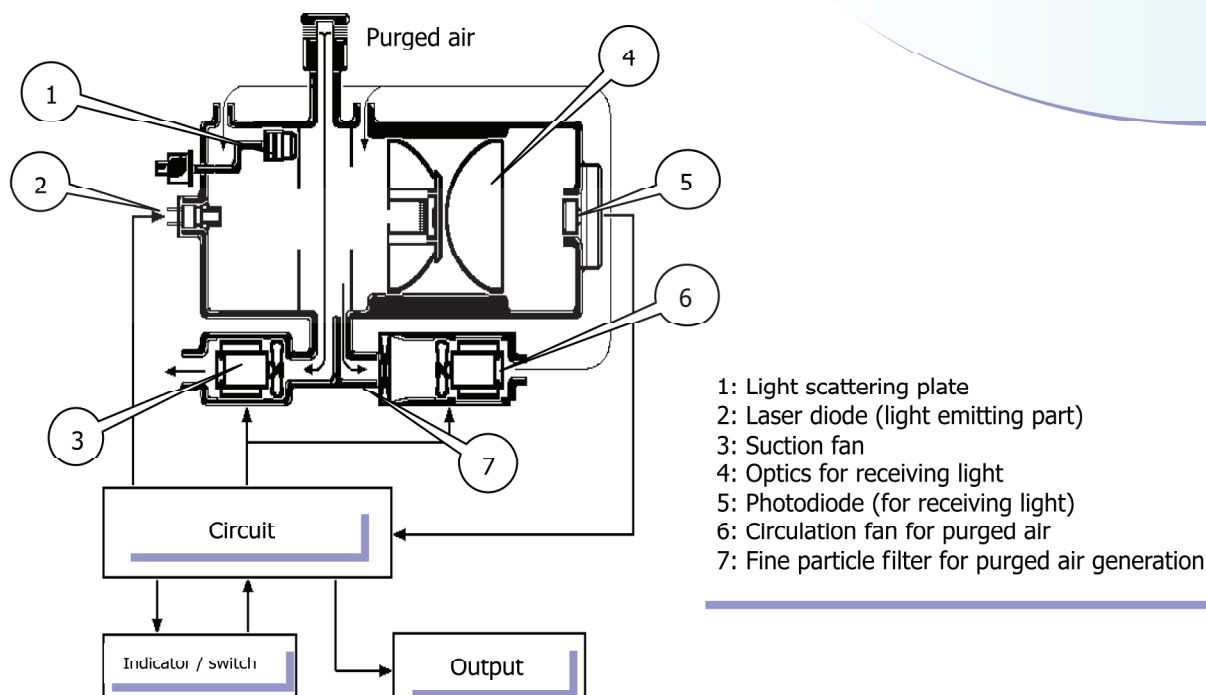
## Features

- \* Data is stored in the memory and downloadable right to your PC on Excel through a RS232C cable sold separately with Software.
- \* The K factor will automatically convert mass concentration to give you a more accurate measurement than any other photometer without this strategy.
- \* Calibration value is stored in the memory even after power off.

## Principle

The LD-3B utilizes the light scattering method to detect aerosol. Suspended particles are illuminated by a laser diode and the scattered light is detected by a photodiode. Purged clean air is circulated, creating an air curtain to protect the optical surfaces and to avoid zero drifts.

## Block diagram of the LD-3B



# Specifications



Code Number	080000-42
Measuring principle / source	Light scattering method / Laser diode
Calibration particle	Polystyrene latex particle
Measuring accuracy	+/- 10% for the calibration particles
Measuring range	0.001 – 10mg/m <sup>3</sup>
Operating temp. / humidity	0 – 10°C / 5- 90% RH (without dew)
Power supply	12V 8 x U3 batteries
Display	Graphic liquid crystal display with back light
Display indication	<ol style="list-style-type: none"> <li>1. Measurement time (Down timer)</li> <li>2. Measured value (00000-99999) 5 digits</li> <li>3. Measurement mode</li> <li>4. Battery power</li> <li>5. K value</li> <li>6. Graphic (by pushing switch during measurement)</li> </ol>
Measurement modes	<ol style="list-style-type: none"> <li>1. Measuring time (Down timer mode) To set measurement time by using equipped down timer. (Initial set time for measurement is 1 min in down timer mode.) The available measurement spans are 6 sec, 10 sec, 30 sec, 1 min, 2 min, 3 min, 5 min, and 10 min.</li> <li>2. Manual To manually operate the start and stop of measurement.</li> <li>3. LOG (Logging) The measurement data is stored in the memory during measurement. Able to set measurement time span.</li> <li>4. Span check Sensitivity adjustment is done by comparing actual measurement value with the memorized value of the light scattering calibration-plate measurement.</li> <li>5. BG (Back ground) Back ground value is measured and stored in the memory while filling the detector with purged air. When this is done, the air-sampling inlet must be closed.</li> </ol>
Dimensions / Weight	185(W) x 69 (D) x 105 (H)mm / Approx. 1.2 kg (discluding batteries)

# Spare parts & Options



Nickel-hydrogen battery pack



TRIPOD



Adaptor for air suction & exhaust



Code no. 080000-032 & 080000-033

Code no. 080160-3

Code no. 080000-002

## **Appendix B**

### **Equipment Calibration Record of Sibata Digital Dust Monitor (Model No. LD-3B)**

## EQUIPMENT CALIBRATION RECORD

Type: Laser Dust Monitor  
 Manufacturer/Brand: SIBATA  
 Model No.: LD-3B  
 Equipment No.: A.005.16a  
 Sensitivity Adjustment Scale Setting: 521 CPM

Operator: Mike Shek (MSKM)

### Standard Equipment

Equipment: High Volume Sampler  
 Venue: Fanling Government Secondary School  
 Model No.: TE-5170  
 Serial No.: 3154  
 Last Calibration Date: 23-Apr-21

### Calibration Result

Sensitivity Adjustment Scale Setting (Before Calibration): 521 CPM  
 Sensitivity Adjustment Scale Setting (After Calibration): 521 CPM

Hour	Date (dd/mm/yy)	Time	Ambient Condition		Concentration <sup>①</sup> (mg/m3) Y-axis	Total Count <sup>②</sup>	Count/ Minute <sup>③</sup> X-axis
			Temp (°C)	R.H.(%)			
1	30/04/21	9:30-10:30	28.0	78	0.04950	1860	31.00
2	30/04/21	10:30-11:30	28.0	78	0.05045	1955	32.58
3	30/04/21	11:30-12:30	28.0	78	0.05250	2062	34.37
4	30/04/21	12:30-13:30	28.0	78	0.05520	2163	36.05


Note: ① Monitoring data was measured by High Volume Sampler  
 ② Total Count was logged by Laser Dust Monitor  
 ③ Count/minute was calculated by (Total Count/60)

By Linear Regression of Y on X  
 Slope (K-factor): 0.0015  
 Correlation coefficient: 0.9997

Validity of Calibration Record: 30-Apr-22

Remarks:

QC Reviewer:



Signature:



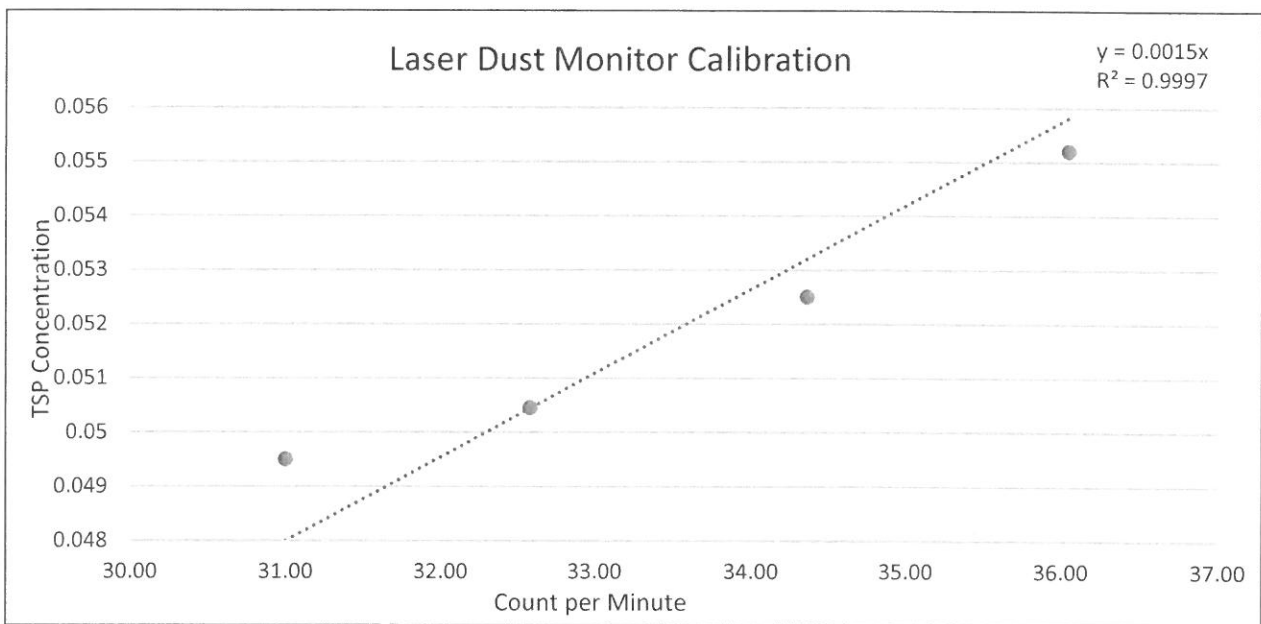
Date:

3 May 21

# Laser Dust Monitor Calibration

Type: Laser Dust Monitor  
Manufacturer/Brand: SIBATA  
Model No.: LD-3B  
Equipment No.: A.005.16a  
Sensitivity Adjustment  
Scale Setting: 521 CPM

Hour	Count/Minute X-axis	Concentration (mg/m3) Y-axis
1	31.00	0.0495
2	32.58	0.0505
3	34.37	0.0525
4	36.05	0.0552



Prepare by: Mike Shek (MSKM)  
Date: 30-Apr-21

---

**APPENDIX B**  
**Calibration Certificates of Monitoring Equipments**

---

## EQUIPMENT CALIBRATION RECORD

Type: Laser Dust Monitor  
 Manufacturer/Brand: SIBATA  
 Model No.: LD-3  
 Equipment No.: A.005.09a  
 Sensitivity Adjustment Scale Setting: 797 CPM

Operator: Mike Shek (MSKM)

### Standard Equipment

Equipment: High Volume Sampler  
 Venue: Fanling Government Secondary School  
 Model No.: TE-5170  
 Serial No.: 3154  
 Last Calibration Date: 23-Apr-21

### Calibration Result

Sensitivity Adjustment Scale Setting (Before Calibration): 797 CPM  
 Sensitivity Adjustment Scale Setting (After Calibration): 797 CPM

Hour	Date (dd/mm/yy)	Time	Ambient Condition		Concentration <sup>①</sup> (mg/m <sup>3</sup> ) Y-axis	Total Count <sup>②</sup>	Count/ Minute <sup>③</sup> X-axis
			Temp (°C)	R.H.(%)			
1	30/04/21	9:30-10:30	28.0	78	0.04950	1980	33.00
2	30/04/21	10:30-11:30	28.0	78	0.05045	2030	33.83
3	30/04/21	11:30-12:30	28.0	78	0.05250	2120	35.33
4	30/04/21	12:30-13:30	28.0	78	0.05520	2310	38.50

Note: ① Monitoring data was measured by High Volume Sampler  
 ② Total Count was logged by Laser Dust Monitor  
 ③ Count/minute was calculated by (Total Count/60)

By Linear Regression of Y on X  
 Slope (K-factor): 0.0015  
 Correlation coefficient: 0.9997

Validity of Calibration Record: 30-Apr-22

Remarks:

QC Reviewer:

Yw Fung

Signature:

Y

Date:

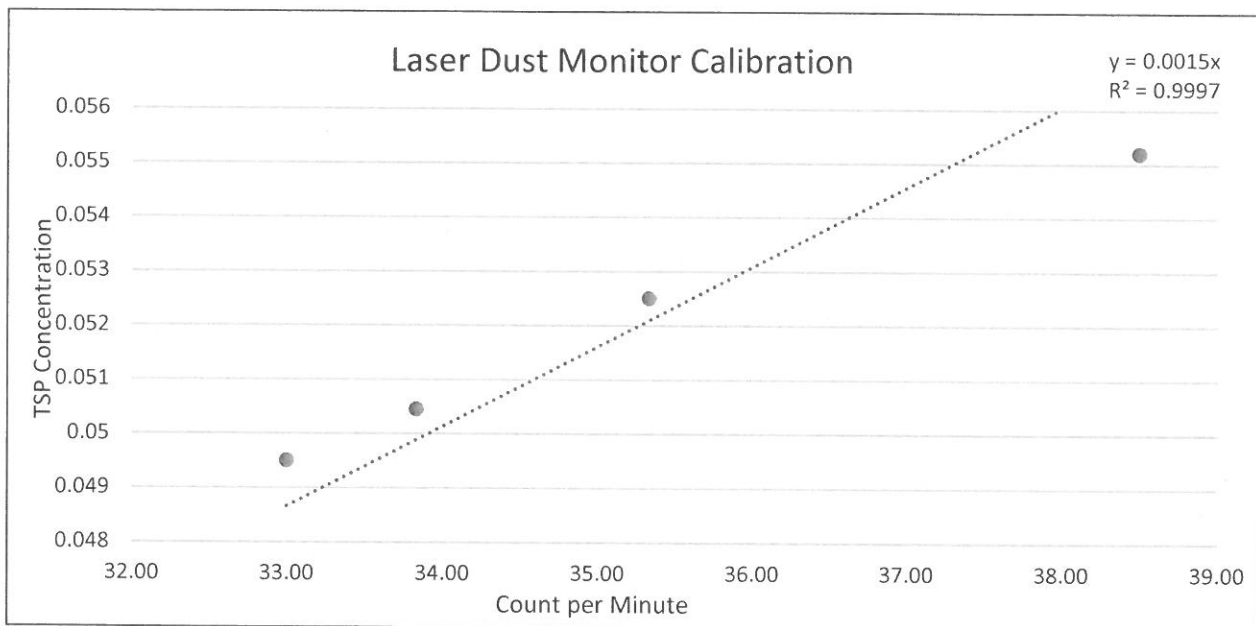
3-May-21



## Laser Dust Monitor Calibration

Type: Laser Dust Monitor  
Manufacturer/Brand: SIBATA  
Model No.: LD-3  
Equipment No.: A.005.09a  
Sensitivity Adjustment  
Scale Setting: 797 CPM

Hour	Count/Minute X-axis	Concentration (mg/m3) Y-axis
1	33.00	0.0495
2	33.83	0.0505
3	35.33	0.0525
4	38.50	0.0552



Prepare by: Mike Shek (MSKM)  
Date: 30-Apr-21

## EQUIPMENT CALIBRATION RECORD

Type: Laser Dust Monitor  
 Manufacturer/Brand: SIBATA  
 Model No.: LD-3  
 Equipment No.: A.005.11a  
 Sensitivity Adjustment Scale Setting: 799 CPM

Operator: Mike Shek (MSKM)

### Standard Equipment

Equipment: High Volume Sampler  
 Venue: Fanling Government Secondary School  
 Model No.: TE-5170  
 Serial No.: 3154  
 Last Calibration Date: 23-Apr-21

### Calibration Result

Sensitivity Adjustment Scale Setting (Before Calibration): 799 CPM  
 Sensitivity Adjustment Scale Setting (After Calibration): 799 CPM

Hour	Date (dd/mm/yy)	Time	Ambient Condition		Concentration <sup>①</sup> (mg/m <sup>3</sup> ) Y-axis	Total Count <sup>②</sup>	Count/ Minute <sup>③</sup> X-axis
			Temp (°C)	R.H.(%)			
1	30/04/21	9:30-10:30	28.0	78	0.04950	1902	31.70
2	30/04/21	10:30-11:30	28.0	78	0.05045	2002	33.37
3	30/04/21	11:30-12:30	28.0	78	0.05250	2122	35.37
4	30/04/21	12:30-13:30	28.0	78	0.05520	2284	38.07

Note: ① Monitoring data was measured by High Volume Sampler  
 ② Total Count was logged by Laser Dust Monitor  
 ③ Count/minute was calculated by (Total Count/60)

By Linear Regression of Y on X  
 Slope (K-factor): 0.0015  
 Correlation coefficient: 0.9993

Validity of Calibration Record: 30-Apr-22

Remarks:

QC Reviewer:

YWF

Signature:

[Signature]

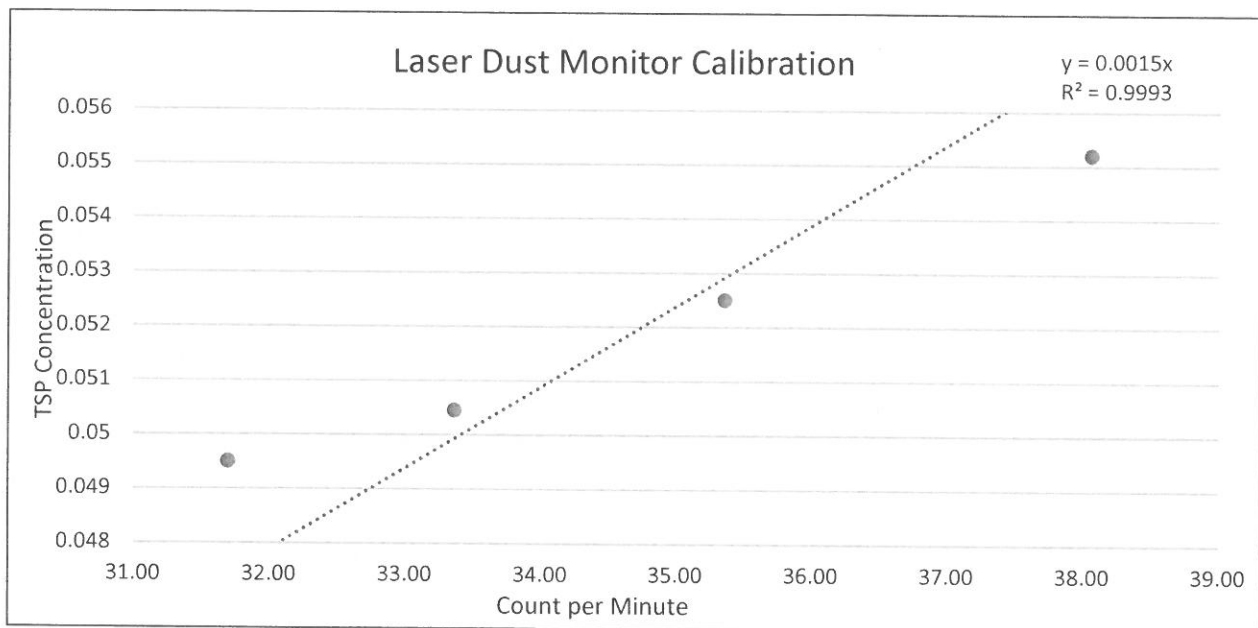
Date:

3 May 21

## Laser Dust Monitor Calibration

Type: Laser Dust Monitor  
Manufacturer/Brand: SIBATA  
Model No.: LD-3  
Equipment No.: A.005.11a  
Sensitivity Adjustment  
Scale Setting: 799 CPM

Hour	Count/Minute X-axis	Concentration (mg/m3) Y-axis
1	31.70	0.0495
2	33.37	0.0505
3	35.37	0.0525
4	38.07	0.0552



Prepare by: Mike Shek (MSKM)  
Date: 30-Apr-21

## EQUIPMENT CALIBRATION RECORD

Type: Laser Dust Monitor  
 Manufacturer/Brand: SIBATA  
 Model No.: LD-3B  
 Equipment No.: A.005.16a  
 Sensitivity Adjustment Scale Setting: 521 CPM

Operator: Mike Shek (MSKM)

### Standard Equipment

Equipment: High Volume Sampler  
 Venue: Fanling Government Secondary School  
 Model No.: TE-5170  
 Serial No.: 3154  
 Last Calibration Date: 23-Apr-21

### Calibration Result

Sensitivity Adjustment Scale Setting (Before Calibration): 521 CPM  
 Sensitivity Adjustment Scale Setting (After Calibration): 521 CPM

Hour	Date (dd/mm/yy)	Time	Ambient Condition		Concentration <sup>①</sup> (mg/m <sup>3</sup> ) Y-axis	Total Count <sup>②</sup>	Count/ Minute <sup>③</sup> X-axis
			Temp (°C)	R.H.(%)			
1	30/04/21	9:30-10:30	28.0	78	0.04950	1860	31.00
2	30/04/21	10:30-11:30	28.0	78	0.05045	1955	32.58
3	30/04/21	11:30-12:30	28.0	78	0.05250	2062	34.37
4	30/04/21	12:30-13:30	28.0	78	0.05520	2163	36.05

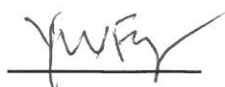
Note: ① Monitoring data was measured by High Volume Sampler  
 ② Total Count was logged by Laser Dust Monitor  
 ③ Count/minute was calculated by (Total Count/60)

By Linear Regression of Y on X  
 Slope (K-factor): 0.0015  
 Correlation coefficient: 0.9997

Validity of Calibration Record: 30-Apr-22

Remarks:

QC Reviewer:



Signature:



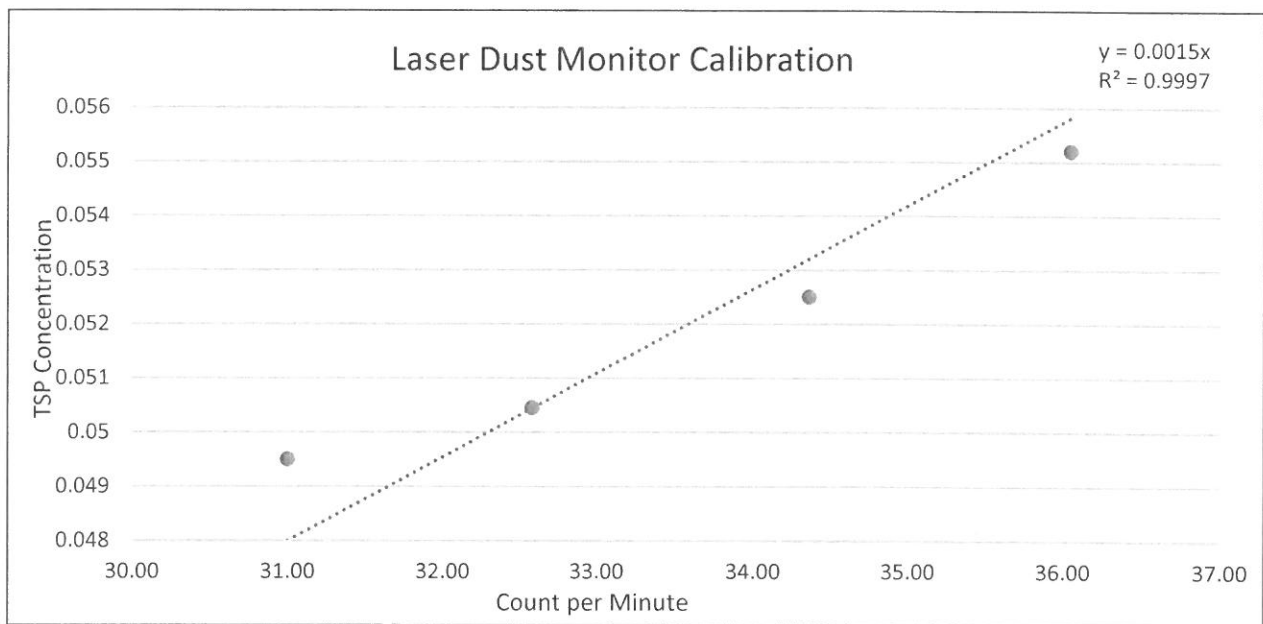
Date:

3 May 21

## Laser Dust Monitor Calibration

Type: Laser Dust Monitor  
Manufacturer/Brand: SIBATA  
Model No.: LD-3B  
Equipment No.: A.005.16a  
Sensitivity Adjustment  
Scale Setting: 521 CPM

Hour	Count/Minute X-axis	Concentration (mg/m3) Y-axis
1	31.00	0.0495
2	32.58	0.0505
3	34.37	0.0525
4	36.05	0.0552



Prepare by: Mike Shek (MSKM)  
Date: 30-Apr-21



## CERTIFICATE OF CALIBRATION

Certificate No.: 21CA0518 01-01 Page 1 of 2

### Item tested

Description:	Sound Level Meter (Type 1)	,	Microphone	Preamp
Manufacturer:	Nti	,	Nti Andio	Nti Andio
Type/Model No.:	XL2	,	MC230A	MA220
Serial/Equipment No.:	A2A-17440-EO	,	A18423	9087
Adaptors used:	-	,		

### Item submitted by

Customer Name: AECOM  
Address of Customer: -  
Request No.: -  
Date of receipt: 18-May-2021

Date of test: 21-May-2021

### Reference equipment used in the calibration

Description:	Model:	Serial No.	Expiry Date:	Traceable to:
Multi function sound calibrator	B&K 4226	2288444	23-Aug-2021	CIGISMEC
Signal generator	DS 360	61227	31-Dec-2020	CEPREI

### Ambient conditions

Temperature: 21 ± 1 °C  
Relative humidity: 55 ± 10 %  
Air pressure: 1005 ± 5 hPa

### Test specifications

- The Sound Level Meter has been calibrated in accordance with the requirements as specified in BS 7580: Part 1: 1997 and the lab calibration procedure SMTP004-CA-152.
- The electrical tests were performed using an electrical signal substituted for the microphone which was removed and replaced by an equivalent capacitance within a tolerance of ±20%.
- The acoustic calibration was performed using an B&K 4226 sound calibrator and corrections was applied for the difference between the free-field and pressure responsiveness of the Sound Level Meter.

### Test results

This is to certify that the Sound Level Meter conforms to BS 7580: Part 1: 1997 for the conditions under which the test was performed.

Details of the performed measurements are presented on page 2 of this certificate.

Actual Measurement data are documented on worksheets.

Approved Signatory:



Feng Junqi

Date: 22-May-2021

Company Chop:



Comments: The results reported in this certificate refer to the condition of the instrument on the date of calibration and carry no implication regarding the long-term stability of the instrument. The results apply to the item as received.



## CERTIFICATE OF CALIBRATION

(Continuation Page)

Certificate No.: 21CA0518 01-01

Page 2 of 2

### 1, Electrical Tests

The electrical tests were performed using an equivalent capacitance substituted for the microphone. The results are given in below with test status and the estimated uncertainties. The "Pass" means the result of the test is inside the tolerances stated in the test specifications. The "-" means the result of test is outside these tolerances.

Test:	Subtest:	Status:	Expanded Uncertainty (dB)	Coverage Factor
Self-generated noise	A	Pass	0.3	
	C	Pass	0.8	2.1
	Lin	Pass	1.6	2.2
Linearity range for Leq	At reference range, Step 5 dB at 4 kHz	Pass	0.3	
	Reference SPL on all other ranges	Pass	0.3	
	2 dB below upper limit of each range	Pass	0.3	
	2 dB above lower limit of each range	Pass	0.3	
Linearity range for SPL	At reference range, Step 5 dB at 4 kHz	Pass	0.3	
	A	Pass	0.3	
	C	Pass	0.3	
Frequency weightings	Lin	Pass	0.3	
	Single Burst Fast	Pass	0.3	
	Single Burst Slow	Pass	0.3	
Peak response	Single 100µs rectangular pulse	Pass	0.3	
	Crest factor of 3	Pass	0.3	
R.M.S. accuracy	Single burst 5 ms at 2000 Hz	Pass	0.3	
	Repeated at frequency of 100 Hz	Pass	0.3	
Time averaging	1 ms burst duty factor 1/10 <sup>3</sup> at 4kHz	Pass	0.3	
	1 ms burst duty factor 1/10 <sup>4</sup> at 4kHz	Pass	0.3	
Pulse range	Single burst 10 ms at 4 kHz	Pass	0.4	
	Single burst 10 ms at 4 kHz	Pass	0.4	
Sound exposure level	SPL	Pass	0.3	
	Leq	Pass	0.4	

### 2, Acoustic tests

The complete sound level meter was calibrated on the reference range using a B&K 4226 acoustic calibrator with 1000Hz and SPL 94 dB. The sensitivity of the sound level meter was adjusted. The test result at 125 Hz and 8000 Hz are given in below with test status and the estimated uncertainties.

Test:	Subtest	Status	Expanded Uncertainty (dB)	Coverage Factor
Acoustic response	Weighting A at 125 Hz	Pass	0.3	
	Weighting A at 8000 Hz	Pass	0.5	

### 3, Response to associated sound calibrator

N/A

The expanded uncertainties have been calculated in accordance with the ISO Publication "Guide to the expression of uncertainty in measurement", and gives an interval estimated to have a level of confidence of 95%. A coverage factor of 2 is assumed unless explicitly stated.

- End -

Calibrated by:

Date:

Fung Chi Yip  
21-May-2021

Checked by:

Date:

Chan Yuk Yiu  
22-May-2021

The standard(s) and equipment used in the calibration are traceable to national or international recognised standards and are calibrated on a schedule to maintain the required accuracy level.



## CERTIFICATE OF CALIBRATION

Certificate No.: 21CA0518 01-02 Page 1 of 2

### Item tested

Description:	Sound Level Meter (Type 1)	,	Microphone	Preamp
Manufacturer:	Nti	,	Nti Andio	Nti Andio
Type/Model No.:	XL2	,	MC230A	MA220
Serial/Equipment No.:	A2A-17788-EO	,	A18398	9065
Adaptors used:	-	,		

### Item submitted by

Customer Name: AECOM  
 Address of Customer: -  
 Request No.: -  
 Date of receipt: 18-May-2021

Date of test: 21-May-2021

### Reference equipment used in the calibration

Description:	Model:	Serial No.	Expiry Date:	Traceable to:
Multi function sound calibrator	B&K 4226	2288444	23-Aug-2021	CIGISMEC
Signal generator	DS 360	61227	31-Dec-2020	CEPREI

### Ambient conditions

Temperature: 21 ± 1 °C  
 Relative humidity: 55 ± 10 %  
 Air pressure: 1005 ± 5 hPa

### Test specifications

- The Sound Level Meter has been calibrated in accordance with the requirements as specified in BS 7580: Part 1: 1997 and the lab calibration procedure SMTP004-CA-152.
- The electrical tests were performed using an electrical signal substituted for the microphone which was removed and replaced by an equivalent capacitance within a tolerance of ±20%.
- The acoustic calibration was performed using an B&K 4226 sound calibrator and corrections was applied for the difference between the free-field and pressure responses of the Sound Level Meter.

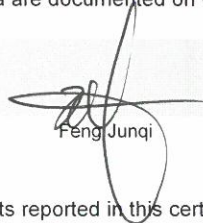
### Test results

This is to certify that the Sound Level Meter conforms to BS 7580: Part 1: 1997 for the conditions under which the test was performed.

Details of the performed measurements are presented on page 2 of this certificate.

Actual Measurement data are documented on worksheets.

Approved Signatory:



Feng Junqi

Date: 22-May-2021

Company Chop:



Comments: The results reported in this certificate refer to the condition of the instrument on the date of calibration and carry no implication regarding the long-term stability of the instrument. The results apply to the item as received.





## CERTIFICATE OF CALIBRATION

(Continuation Page)

Certificate No.: 21CA0518 01-02

Page 2 of 2

### 1, Electrical Tests

The electrical tests were performed using an equivalent capacitance substituted for the microphone. The results are given in below with test status and the estimated uncertainties. The "Pass" means the result of the test is inside the tolerances stated in the test specifications. The "-" means the result of test is outside these tolerances.

Test:	Subtest:	Status:	Expanded Uncertainty (dB)	Coverage Factor	
Self-generated noise	A	Pass	0.3	2.1	
	C	Pass	0.8		
	Lin	Pass	1.6		
Linearity range for Leq	At reference range, Step 5 dB at 4 kHz	Pass	0.3	2.2	
	Reference SPL on all other ranges	Pass	0.3		
	2 dB below upper limit of each range	Pass	0.3		
	2 dB above lower limit of each range	Pass	0.3		
Linearity range for SPL	At reference range, Step 5 dB at 4 kHz	Pass	0.3		
	Frequency weightings	A	Pass		0.3
	C	Pass	0.3		
Time weightings	Lin	Pass	0.3		
	Single Burst Fast	Pass	0.3		
	Single Burst Slow	Pass	0.3		
Peak response	Single 100µs rectangular pulse	Pass	0.3		
R.M.S. accuracy	Crest factor of 3	Pass	0.3		
Time weighting I	Single burst 5 ms at 2000 Hz	Pass	0.3		
	Repeated at frequency of 100 Hz	Pass	0.3		
Time averaging	1 ms burst duty factor 1/10 <sup>3</sup> at 4kHz	Pass	0.3		
	1 ms burst duty factor 1/10 <sup>4</sup> at 4kHz	Pass	0.3		
Pulse range	Single burst 10 ms at 4 kHz	Pass	0.4		
Sound exposure level	Single burst 10 ms at 4 kHz	Pass	0.4		
Overload indication	SPL	Pass	0.3		
	Leq	Pass	0.4		

### 2, Acoustic tests

The complete sound level meter was calibrated on the reference range using a B&K 4226 acoustic calibrator with 1000Hz and SPL 94 dB. The sensitivity of the sound level meter was adjusted. The test result at 125 Hz and 8000 Hz are given in below with test status and the estimated uncertainties.

Test:	Subtest	Status	Expanded Uncertainty (dB)	Coverage Factor
Acoustic response	Weighting A at 125 Hz	Pass	0.3	
	Weighting A at 8000 Hz	Pass	0.5	

### 3, Response to associated sound calibrator

N/A

The expanded uncertainties have been calculated in accordance with the ISO Publication "Guide to the expression of uncertainty in measurement", and gives an interval estimated to have a level of confidence of 95%. A coverage factor of 2 is assumed unless explicitly stated.

- End -

Calibrated by:

Date:

Fung Chi Yip  
21-May-2021

Checked by:

Date:

Chan Yuk Yiu  
22-May-2021

The standard(s) and equipment used in the calibration are traceable to national or international recognised standards and are calibrated on a schedule to maintain the required accuracy level.

---

**APPENDIX C**

**Baseline Dust Monitoring Results**

---

60493798

AECOM Asia Company Limited  
1-hour TSP Dust Monitoring - Data Record Sheet

Project Name: Baseline Monitoring for Siu Ho Wan Station and Siu Ho Wan Depot Replanning Works - Advance Construction Works  
Equipment: Sibata LD-1 & LD-3 Dust Meter

Monitoring Location		DM1			DM6			DM7					
Details of Location													
Equipment Number		A-005-07a / A-005-09a / A-005-10a / A-005-11a / A-005-13a / A-005-14a / A005-16a			A-005-07a / A-005-09a / A-005-10a / A-005-11a / A-005-13a / A-005-14a / A005-16a			A-005-07a / A-005-09a / A-005-10a / A-005-11a / A-005-13a / A-005-14a / A005-16a			A-005-07a / A-005-09a / A-005-10a / A-005-11a / A-005-13a / A-005-14a / A005-16a		
Date of Monitoring		20/9			20/9			20/9					
Time of Monitoring		11:35			10:46			10:58					
Weather Condition		Sunny / Fine / Cloudy / Rainy			Sunny / Fine / Cloudy / Rainy			Sunny / Fine / Cloudy / Rainy			Sunny / Fine / Cloudy / Rainy		
No. of Measurement Set		1st Hour	2nd Hour	3rd Hour	1st Hour	2nd Hour	3rd Hour	1st Hour	2nd Hour	3rd Hour	1st Hour	2nd Hour	3rd Hour
Monitoring Results	Count Value	2438	2654	2582	1706	1728	1563	1816	1774	1839			
	Mass Conc. (mg/m3)	0.061	0.066	0.065	0.042	0.043	0.039	0.045	0.044	0.046			
Site Condition		<input checked="" type="checkbox"/> Normal Operation <input type="checkbox"/> Breaker / Excavator / Backhoe <input checked="" type="checkbox"/> Traffic Emission <input type="checkbox"/> Dust from other activities <input type="checkbox"/> Others			<input checked="" type="checkbox"/> Normal Operation <input type="checkbox"/> Breaker / Excavator / Backhoe <input type="checkbox"/> Traffic Emission <input type="checkbox"/> Dust from other activities <input type="checkbox"/> Others			<input checked="" type="checkbox"/> Normal Operation <input type="checkbox"/> Breaker / Excavator / Backhoe <input type="checkbox"/> Traffic Emission <input type="checkbox"/> Dust from other activities <input type="checkbox"/> Others			<input type="checkbox"/> Normal Operation <input type="checkbox"/> Breaker / Excavator / Backhoe <input type="checkbox"/> Traffic Emission <input type="checkbox"/> Dust from other activities <input type="checkbox"/> Others		
Remarks													

Note \* Mass Concentration = K Factor x (Count Value / 60 mins)

Equipment Number	A-005-07a	A-005-09a	A-005-10a	A-005-11a	A-005-13a	A-005-14a
K-Factor	0.0015	0.0015	0.0015	0.0015	0.0015	0.0014
Equipment Number	A-005-16a					
K-Factor	0.0015					

	Name	Signature	Date
Recorded by	Vanessa	K	20/9/21
Checked by	Vanessa	AO	20/9/21

60493798

AECOM Asia Company Limited  
1-hour TSP Dust Monitoring - Data Record Sheet

Project Name: Baseline Monitoring for Siu Ho Wan Station and Siu Ho Wan Depot Replanning Works - Advance Construction Works  
Equipment: Sibata LD-1 & LD-3 Dust Meter

Monitoring Location		DM1			DM6			DM7					
Details of Location													
Equipment Number		A-005-07a / A-005-09a / A-005-10a / A-005-11a / A-005-13a / A-005-14a / A005-16a			A-005-07a / A-005-09a / A-005-10a / A-005-11a / A-005-13a / A-005-14a / A005-16a			A-005-07a / A-005-09a / A-005-10a / A-005-11a / A-005-13a / A-005-14a / A005-16a			A-005-07a / A-005-09a / A-005-10a / A-005-11a / A-005-13a / A-005-14a / A005-16a		
Date of Monitoring		21/9			21/9			21/9					
Time of Monitoring		16:04			15:27			15:32					
Weather Condition		Sunny / Fine / Cloudy / Rainy			Sunny / Fine / Cloudy / Rainy			Sunny / Fine / Cloudy / Rainy			Sunny / Fine / Cloudy / Rainy		
No. of Measurement Set		1st Hour	2nd Hour	3rd Hour	1st Hour	2nd Hour	3rd Hour	1st Hour	2nd Hour	3rd Hour	1st Hour	2nd Hour	3rd Hour
Monitoring Results	Count Value	2410	2423	2429	2024	2160	2260	1621	1683	1807			
	Mass Conc. (mg/m3)	0.060	0.061	0.061	0.051	0.054	0.057	0.041	0.042	0.045			
Site Condition		<input checked="" type="checkbox"/> Normal Operation <input type="checkbox"/> Breaker / Excavator / Backhoe <input checked="" type="checkbox"/> Traffic Emission <input type="checkbox"/> Dust from other activities <input type="checkbox"/> Others			<input checked="" type="checkbox"/> Normal Operation <input type="checkbox"/> Breaker / Excavator / Backhoe <input type="checkbox"/> Traffic Emission <input type="checkbox"/> Dust from other activities <input type="checkbox"/> Others			<input checked="" type="checkbox"/> Normal Operation <input type="checkbox"/> Breaker / Excavator / Backhoe <input type="checkbox"/> Traffic Emission <input type="checkbox"/> Dust from other activities <input type="checkbox"/> Others			<input type="checkbox"/> Normal Operation <input type="checkbox"/> Breaker / Excavator / Backhoe <input type="checkbox"/> Traffic Emission <input type="checkbox"/> Dust from other activities <input type="checkbox"/> Others		
Remarks													

Note \* Mass Concentration = K Factor x (Count Value / 60 mins)

Equipment Number	A-005-07a	A-005-09a	A-005-10a	A-005-11a	A-005-13a	A-005-14a
K-Factor	0.0015	0.0015	0.0015	0.0015	0.0015	0.0014
Equipment Number	A-005-16a					
K-Factor	0.0015					

	Name	Signature	Date
Recorded by	Vanessa	K	21/9/21
Checked by	Vanessa	AO	21/9/21

60493798

AECOM Asia Company Limited  
1-hour TSP Dust Monitoring - Data Record Sheet

Project Name: Baseline Monitoring for Siu Ho Wan Station and Siu Ho Wan Depot Replanning Works - Advance Construction Works  
Equipment: Sibata LD-1 & LD-3 Dust Meter

Monitoring Location		DM1			DM6			DM7					
Details of Location													
Equipment Number		A-005-07a / <u>A-005-09a</u> / A-005-10a / A-005-11a / A-005-13a / A-005-14a / A005-16a			A-005-07a / A-005-09a / A-005-10a / <u>A-005-11a</u> / A-005-13a / A-005-14a / A005-16a			A-005-07a / A-005-09a / A-005-10a / A-005-11a / A-005-13a / A-005-14a / <u>A005-16a</u>			A-005-07a / A-005-09a / A-005-10a / A-005-11a / A-005-13a / A-005-14a / A005-16a		
Date of Monitoring		22/19			22/19			22/19					
Time of Monitoring		13:04			12:27			12:32					
Weather Condition		<u>Sunny</u> / Fine / Cloudy / Rainy			<u>Sunny</u> / Fine / Cloudy / Rainy			<u>Sunny</u> / Fine / Cloudy / Rainy			Sunny / Fine / Cloudy / Rainy		
No. of Measurement Set		1st Hour	2nd Hour	3rd Hour	1st Hour	2nd Hour	3rd Hour	1st Hour	2nd Hour	3rd Hour	1st Hour	2nd Hour	3rd Hour
Monitoring Results	Count Value	2462	2465	2452	1909	1619	1566	1523	1548	1556			
	Mass Conc. (mg/m3)	0.062	0.062	0.061	0.048	0.040	0.039	0.038	0.039	0.039			
Site Condition		<input checked="" type="checkbox"/> Normal Operation <input type="checkbox"/> Breaker / Excavator / Backhoe <input checked="" type="checkbox"/> Traffic Emission <input type="checkbox"/> Dust from other activities <input type="checkbox"/> Others			<input checked="" type="checkbox"/> Normal Operation <input type="checkbox"/> Breaker / Excavator / Backhoe <input type="checkbox"/> Traffic Emission <input type="checkbox"/> Dust from other activities <input type="checkbox"/> Others			<input checked="" type="checkbox"/> Normal Operation <input type="checkbox"/> Breaker / Excavator / Backhoe <input type="checkbox"/> Traffic Emission <input type="checkbox"/> Dust from other activities <input type="checkbox"/> Others			<input type="checkbox"/> Normal Operation <input type="checkbox"/> Breaker / Excavator / Backhoe <input type="checkbox"/> Traffic Emission <input type="checkbox"/> Dust from other activities <input type="checkbox"/> Others		
Remarks													

Note \* Mass Concentration = K Factor x (Count Value / 60 mins)

Equipment Number	A-005-07a	A-005-09a	A-005-10a	A-005-11a	A-005-13a	A-005-14a
K-Factor	0.0015	0.0015	0.0015	0.0015	0.0015	0.0014
Equipment Number	A-005-16a					
K-Factor	0.0015					

	Name	Signature	Date
Recorded by	Yu	K	22/9/21
Checked by	Vanessa	A	22/9/21

60493798

AECOM Asia Company Limited  
1-hour TSP Dust Monitoring - Data Record Sheet

Project Name: Baseline Monitoring for Siu Ho Wan Station and Siu Ho Wan Depot Replanning Works - Advance Construction Works  
Equipment: Sibata LD-1 & LD-3 Dust Meter

Monitoring Location		DM1			DM6			DM7					
Details of Location													
Equipment Number		A-005-07a / <u>A-005-09a</u> / A-005-10a / A-005-11a / A-005-13a / A-005-14a / A005-16a			A-005-07a / A-005-09a / A-005-10a / <u>A-005-11a</u> / A-005-13a / A-005-14a / A005-16a			A-005-07a / A-005-09a / A-005-10a / A-005-11a / A-005-13a / A-005-14a / <u>A005-16a</u>			A-005-07a / A-005-09a / A-005-10a / A-005-11a / A-005-13a / A-005-14a / A005-16a		
Date of Monitoring		23/19			23/19			23/19					
Time of Monitoring		12:43			11:01			11:04					
Weather Condition		Sunny / Fine / <u>Cloudy</u> / Rainy			Sunny / Fine / <u>Cloudy</u> / Rainy			Sunny / Fine / <u>Cloudy</u> / Rainy			Sunny / Fine / Cloudy / Rainy		
No. of Measurement Set		1st Hour	2nd Hour	3rd Hour	1st Hour	2nd Hour	3rd Hour	1st Hour	2nd Hour	3rd Hour	1st Hour	2nd Hour	3rd Hour
Monitoring Results	Count Value	2821	2842	2749	1811	1919	1896	1976	2069	2046			
	Mass Conc. (mg/m3)	0.071	0.071	0.069	0.045	0.048	0.047	0.049	0.052	0.051			
Site Condition		<input checked="" type="checkbox"/> Normal Operation <input type="checkbox"/> Breaker / Excavator / Backhoe <input checked="" type="checkbox"/> Traffic Emission <input type="checkbox"/> Dust from other activities <input type="checkbox"/> Others			<input checked="" type="checkbox"/> Normal Operation <input type="checkbox"/> Breaker / Excavator / Backhoe <input type="checkbox"/> Traffic Emission <input type="checkbox"/> Dust from other activities <input type="checkbox"/> Others			<input checked="" type="checkbox"/> Normal Operation <input type="checkbox"/> Breaker / Excavator / Backhoe <input type="checkbox"/> Traffic Emission <input type="checkbox"/> Dust from other activities <input type="checkbox"/> Others			<input type="checkbox"/> Normal Operation <input type="checkbox"/> Breaker / Excavator / Backhoe <input type="checkbox"/> Traffic Emission <input type="checkbox"/> Dust from other activities <input type="checkbox"/> Others		
Remarks													

Note \* Mass Concentration = K Factor x (Count Value / 60 mins)

Equipment Number	A-005-07a	A-005-09a	A-005-10a	A-005-11a	A-005-13a	A-005-14a
K-Factor	0.0015	0.0015	0.0015	0.0015	0.0015	0.0014
Equipment Number	A-005-16a					
K-Factor	0.0015					

	Name	Signature	Date
Recorded by	Yu	K	23/9/21
Checked by	Vanessa	A	22/9/21

60493798

AECOM Asia Company Limited  
1-hour TSP Dust Monitoring - Data Record Sheet

Project Name: Baseline Monitoring for Siu Ho Wan Station and Siu Ho Wan Depot Replanning Works - Advance Construction Works  
Equipment: Sibata LD-1 & LD-3 Dust Meter

Monitoring Location		DM1			DM6			DM7					
Details of Location													
Equipment Number		A-005-07a / A-005-09a / A-005-10a / A-005-11a / A-005-13a / A-005-14a / A005-16a			A-005-07a / A-005-09a / A-005-10a / A-005-11a / A-005-13a / A-005-14a / A005-16a			A-005-07a / A-005-09a / A-005-10a / A-005-11a / A-005-13a / A-005-14a / A005-16a			A-005-07a / A-005-09a / A-005-10a / A-005-11a / A-005-13a / A-005-14a / A005-16a		
Date of Monitoring		24/9			24/9			24/9					
Time of Monitoring		12:41			11:33			11:45					
Weather Condition		Sunny / Fine / Cloudy / Rainy			Sunny / Fine / Cloudy / Rainy			Sunny / Fine / Cloudy / Rainy			Sunny / Fine / Cloudy / Rainy		
No. of Measurement Set		1st Hour	2nd Hour	3rd Hour	1st Hour	2nd Hour	3rd Hour	1st Hour	2nd Hour	3rd Hour	1st Hour	2nd Hour	3rd Hour
Monitoring Results	Count Value	3095	3146	3292	1676	1698	1533	1967	1915	2008			
	Mass Conc. (mg/m3)	0.077	0.079	0.082	0.042	0.043	0.038	0.049	0.048	0.050			
Site Condition		<input checked="" type="checkbox"/> Normal Operation <input type="checkbox"/> Breaker / Excavator / Backhoe <input checked="" type="checkbox"/> Traffic Emission <input type="checkbox"/> Dust from other activities <input type="checkbox"/> Others			<input checked="" type="checkbox"/> Normal Operation <input type="checkbox"/> Breaker / Excavator / Backhoe <input type="checkbox"/> Traffic Emission <input type="checkbox"/> Dust from other activities <input type="checkbox"/> Others			<input checked="" type="checkbox"/> Normal Operation <input type="checkbox"/> Breaker / Excavator / Backhoe <input type="checkbox"/> Traffic Emission <input type="checkbox"/> Dust from other activities <input type="checkbox"/> Others			<input type="checkbox"/> Normal Operation <input type="checkbox"/> Breaker / Excavator / Backhoe <input type="checkbox"/> Traffic Emission <input type="checkbox"/> Dust from other activities <input type="checkbox"/> Others		
Remarks													

Note \* Mass Concentration = K Factor x (Count Value / 60 mins)

Equipment Number	A-005-07a	A-005-09a	A-005-10a	A-005-11a	A-005-13a	A-005-14a
K-Factor	0.0015	0.0015	0.0015	0.0015	0.0015	0.0014
Equipment Number	A-005-16a					
K-Factor	0.0015					

	Name	Signature	Date
Recorded by	Vanessa	[Signature]	24/9/21
Checked by		[Signature]	24/9/21

60493798

AECOM Asia Company Limited  
1-hour TSP Dust Monitoring - Data Record Sheet

Project Name: Baseline Monitoring for Siu Ho Wan Station and Siu Ho Wan Depot Replanning Works - Advance Construction Works  
Equipment: Sibata LD-1 & LD-3 Dust Meter

Monitoring Location		DM1			DM6			DM7					
Details of Location													
Equipment Number		A-005-07a / A-005-09a / A-005-10a / A-005-11a / A-005-13a / A-005-14a / A005-16a			A-005-07a / A-005-09a / A-005-10a / A-005-11a / A-005-13a / A-005-14a / A005-16a			A-005-07a / A-005-09a / A-005-10a / A-005-11a / A-005-13a / A-005-14a / A005-16a			A-005-07a / A-005-09a / A-005-10a / A-005-11a / A-005-13a / A-005-14a / A005-16a		
Date of Monitoring		25/9			25/9			25/9					
Time of Monitoring		14:40			15:11			15:20					
Weather Condition		Sunny / Fine / Cloudy / Rainy			Sunny / Fine / Cloudy / Rainy			Sunny / Fine / Cloudy / Rainy			Sunny / Fine / Cloudy / Rainy		
No. of Measurement Set		1st Hour	2nd Hour	3rd Hour	1st Hour	2nd Hour	3rd Hour	1st Hour	2nd Hour	3rd Hour	1st Hour	2nd Hour	3rd Hour
Monitoring Results	Count Value	2786	2650	2666	2083	1890	1948	2013	1977	2491			
	Mass Conc. (mg/m3)	0.069	0.066	0.067	0.052	0.047	0.049	0.050	0.049	0.055			
Site Condition		<input checked="" type="checkbox"/> Normal Operation <input type="checkbox"/> Breaker / Excavator / Backhoe <input checked="" type="checkbox"/> Traffic Emission <input type="checkbox"/> Dust from other activities <input type="checkbox"/> Others			<input checked="" type="checkbox"/> Normal Operation <input type="checkbox"/> Breaker / Excavator / Backhoe <input type="checkbox"/> Traffic Emission <input type="checkbox"/> Dust from other activities <input type="checkbox"/> Others			<input checked="" type="checkbox"/> Normal Operation <input type="checkbox"/> Breaker / Excavator / Backhoe <input type="checkbox"/> Traffic Emission <input type="checkbox"/> Dust from other activities <input type="checkbox"/> Others			<input type="checkbox"/> Normal Operation <input type="checkbox"/> Breaker / Excavator / Backhoe <input type="checkbox"/> Traffic Emission <input type="checkbox"/> Dust from other activities <input type="checkbox"/> Others		
Remarks													

Note \* Mass Concentration = K Factor x (Count Value / 60 mins)

Equipment Number	A-005-07a	A-005-09a	A-005-10a	A-005-11a	A-005-13a	A-005-14a
K-Factor	0.0015	0.0015	0.0015	0.0015	0.0015	0.0014
Equipment Number	A-005-16a					
K-Factor	0.0015					

	Name	Signature	Date
Recorded by	Vanessa	[Signature]	25/9/21
Checked by		[Signature]	25/9/21

60493798

AECOM Asia Company Limited

1-hour TSP Dust Monitoring - Data Record Sheet

Project Name: Baseline Monitoring for Siu Ho Wan Station and Siu Ho Wan Depot Replanning Works - Advance Construction Works  
 Equipment: Sibata LD-1 & LD-3 Dust Meter

Monitoring Location		DM1			DM6			DM7					
Details of Location													
Equipment Number		A-005-07a / <u>A-005-09a</u> / A-005-10a / A-005-11a / A-005-13a / A-005-14a / A005-16a			A-005-07a / A-005-09a / A-005-10a / <u>A-005-11a</u> / A-005-13a / A-005-14a / A005-16a			A-005-07a / A-005-09a / A-005-10a / A-005-11a / A-005-13a / A-005-14a / <u>A005-16a</u>			A-005-07a / A-005-09a / A-005-10a / A-005-11a / A-005-13a / A-005-14a / A005-16a		
Date of Monitoring		26/9			26/9			26/9					
Time of Monitoring		11:40			12:11			12:20					
Weather Condition		<u>Sunny</u> / Fine / Cloudy / Rainy			<u>Sunny</u> / Fine / Cloudy / Rainy			<u>Sunny</u> / Fine / Cloudy / Rainy			Sunny / Fine / Cloudy / Rainy		
No. of Measurement Set		1st Hour	2nd Hour	3rd Hour	1st Hour	2nd Hour	3rd Hour	1st Hour	2nd Hour	3rd Hour	1st Hour	2nd Hour	3rd Hour
Monitoring Results	Count Value	3233	3201	2862	1819	1877	1757	2467	2324	2188			
	Mass Conc. (mg/m3)	0.081	0.080	0.074	0.046	0.047	0.044	0.062	0.058	0.055			
Site Condition		<input checked="" type="checkbox"/> Normal Operation <input type="checkbox"/> Breaker / Excavator / Backhoe <input type="checkbox"/> Traffic Emission <input type="checkbox"/> Dust from other activities <input type="checkbox"/> Others			<input checked="" type="checkbox"/> Normal Operation <input type="checkbox"/> Breaker / Excavator / Backhoe <input type="checkbox"/> Traffic Emission <input type="checkbox"/> Dust from other activities <input type="checkbox"/> Others			<input checked="" type="checkbox"/> Normal Operation <input type="checkbox"/> Breaker / Excavator / Backhoe <input type="checkbox"/> Traffic Emission <input type="checkbox"/> Dust from other activities <input type="checkbox"/> Others			<input type="checkbox"/> Normal Operation <input type="checkbox"/> Breaker / Excavator / Backhoe <input type="checkbox"/> Traffic Emission <input type="checkbox"/> Dust from other activities <input type="checkbox"/> Others		
Remarks													

Note \* Mass Concentration = K Factor x (Count Value / 60 mins)

Equipment Number	A-005-07a	A-005-09a	A-005-10a	A-005-11a	A-005-13a	A-005-14a
K-Factor	0.0015	0.0015	0.0015	0.0015	0.0015	0.0014
Equipment Number	A-005-16a					
K-Factor	0.0015					

	Name	Signature	Date
Recorded by	Yue Vanessa	K	26/9/21
Checked by		A	26/9/21

60493798

AECOM Asia Company Limited

1-hour TSP Dust Monitoring - Data Record Sheet

Project Name: Baseline Monitoring for Siu Ho Wan Station and Siu Ho Wan Depot Replanning Works - Advance Construction Works  
 Equipment: Sibata LD-1 & LD-3 Dust Meter

Monitoring Location		DM1			DM6			DM7					
Details of Location													
Equipment Number		A-005-07a / <u>A-005-09a</u> / A-005-10a / A-005-11a / A-005-13a / A-005-14a / A005-16a			A-005-07a / A-005-09a / A-005-10a / <u>A-005-11a</u> / A-005-13a / A-005-14a / A005-16a			A-005-07a / A-005-09a / A-005-10a / A-005-11a / A-005-13a / A-005-14a / <u>A005-16a</u>			A-005-07a / A-005-09a / A-005-10a / A-005-11a / A-005-13a / A-005-14a / A005-16a		
Date of Monitoring		27/9			27/9			27/9					
Time of Monitoring		11:38			10:53			10:59					
Weather Condition		<u>Sunny</u> / Fine / Cloudy / Rainy			<u>Sunny</u> / Fine / Cloudy / Rainy			<u>Sunny</u> / Fine / Cloudy / Rainy			Sunny / Fine / Cloudy / Rainy		
No. of Measurement Set		1st Hour	2nd Hour	3rd Hour	1st Hour	2nd Hour	3rd Hour	1st Hour	2nd Hour	3rd Hour	1st Hour	2nd Hour	3rd Hour
Monitoring Results	Count Value	1891	2210	2240	1635	1648	1481	1509	1499	1638			
	Mass Conc. (mg/m3)	0.047	0.055	0.056	0.041	0.041	0.037	0.038	0.038	0.041			
Site Condition		<input checked="" type="checkbox"/> Normal Operation <input type="checkbox"/> Breaker / Excavator / Backhoe <input checked="" type="checkbox"/> Traffic Emission <input type="checkbox"/> Dust from other activities <input type="checkbox"/> Others			<input checked="" type="checkbox"/> Normal Operation <input type="checkbox"/> Breaker / Excavator / Backhoe <input type="checkbox"/> Traffic Emission <input type="checkbox"/> Dust from other activities <input type="checkbox"/> Others			<input checked="" type="checkbox"/> Normal Operation <input type="checkbox"/> Breaker / Excavator / Backhoe <input type="checkbox"/> Traffic Emission <input type="checkbox"/> Dust from other activities <input type="checkbox"/> Others			<input type="checkbox"/> Normal Operation <input type="checkbox"/> Breaker / Excavator / Backhoe <input type="checkbox"/> Traffic Emission <input type="checkbox"/> Dust from other activities <input type="checkbox"/> Others		
Remarks													

Note \* Mass Concentration = K Factor x (Count Value / 60 mins)

Equipment Number	A-005-07a	A-005-09a	A-005-10a	A-005-11a	A-005-13a	A-005-14a
K-Factor	0.0015	0.0015	0.0015	0.0015	0.0015	0.0014
Equipment Number	A-005-16a					
K-Factor	0.0015					

	Name	Signature	Date
Recorded by	Yue Vanessa	K	27/9/21
Checked by		A	27/9/21

60493798

AECOM Asia Company Limited  
1-hour TSP Dust Monitoring - Data Record Sheet

Project Name: Baseline Monitoring for Siu Ho Wan Station and Siu Ho Wan Depot Replanning Works - Advance Construction Works

Equipment: Sibata LD-1 & LD-3 Dust Meter

Monitoring Location		DM1			DM6			DM7					
Details of Location													
Equipment Number		A-005-07a / A-005-09a / A-005-10a / A-005-11a / A-005-13a / A-005-14a / A005-16a			A-005-07a / A-005-09a / A-005-10a / A-005-11a / A-005-13a / A-005-14a / A005-16a			A-005-07a / A-005-09a / A-005-10a / A-005-11a / A-005-13a / A-005-14a / A005-16a			A-005-07a / A-005-09a / A-005-10a / A-005-11a / A-005-13a / A-005-14a / A005-16a		
Date of Monitoring		28/19			28/19			28/19					
Time of Monitoring		12:22			11:48			11:56					
Weather Condition		Sunny / Fine / Cloudy / Rainy			Sunny / Fine / Cloudy / Rainy			Sunny / Fine / Cloudy / Rainy			Sunny / Fine / Cloudy / Rainy		
No. of Measurement Set		1st Hour	2nd Hour	3rd Hour	1st Hour	2nd Hour	3rd Hour	1st Hour	2nd Hour	3rd Hour	1st Hour	2nd Hour	3rd Hour
Monitoring Results	Count Value	4133	3850	2847	2623	2669	2240	2777	3049	2829			
	Mass Conc. (mg/m3)	0.103	0.096	0.071	0.066	0.067	0.056	0.069	0.076	0.073			
Site Condition		<input checked="" type="checkbox"/> Normal Operation <input type="checkbox"/> Breaker / Excavator / Backhoe <input checked="" type="checkbox"/> Traffic Emission <input type="checkbox"/> Dust from other activities <input type="checkbox"/> Others			<input checked="" type="checkbox"/> Normal Operation <input type="checkbox"/> Breaker / Excavator / Backhoe <input type="checkbox"/> Traffic Emission <input type="checkbox"/> Dust from other activities <input type="checkbox"/> Others			<input checked="" type="checkbox"/> Normal Operation <input type="checkbox"/> Breaker / Excavator / Backhoe <input type="checkbox"/> Traffic Emission <input type="checkbox"/> Dust from other activities <input type="checkbox"/> Others			<input type="checkbox"/> Normal Operation <input type="checkbox"/> Breaker / Excavator / Backhoe <input type="checkbox"/> Traffic Emission <input type="checkbox"/> Dust from other activities <input type="checkbox"/> Others		
Remarks													

Note \* Mass Concentration = K Factor x (Count Value / 60 mins)

Equipment Number	A-005-07a	A-005-09a	A-005-10a	A-005-11a	A-005-13a	A-005-14a
K-Factor	0.0015	0.0015	0.0015	0.0015	0.0015	0.0014
Equipment Number	A-005-16a					
K-Factor	0.0015					

	Name	Signature	Date
Recorded by	Yue Vanessa	K	28/19/21
Checked by		AP	28/19/21

60493798

AECOM Asia Company Limited  
1-hour TSP Dust Monitoring - Data Record Sheet

Project Name: Baseline Monitoring for Siu Ho Wan Station and Siu Ho Wan Depot Replanning Works - Advance Construction Works

Equipment: Sibata LD-1 & LD-3 Dust Meter

Monitoring Location		DM1			DM6			DM7					
Details of Location													
Equipment Number		A-005-07a / A-005-09a / A-005-10a / A-005-11a / A-005-13a / A-005-14a / A005-16a			A-005-07a / A-005-09a / A-005-10a / A-005-11a / A-005-13a / A-005-14a / A005-16a			A-005-07a / A-005-09a / A-005-10a / A-005-11a / A-005-13a / A-005-14a / A005-16a			A-005-07a / A-005-09a / A-005-10a / A-005-11a / A-005-13a / A-005-14a / A005-16a		
Date of Monitoring		28/19			28/19			28/19					
Time of Monitoring		11:52			11:18			11:26					
Weather Condition		Sunny / Fine / Cloudy / Rainy			Sunny / Fine / Cloudy / Rainy			Sunny / Fine / Cloudy / Rainy			Sunny / Fine / Cloudy / Rainy		
No. of Measurement Set		1st Hour	2nd Hour	3rd Hour	1st Hour	2nd Hour	3rd Hour	1st Hour	2nd Hour	3rd Hour	1st Hour	2nd Hour	3rd Hour
Monitoring Results	Count Value	2879	2749	2488	2383	2530	2142	2176	2125	2019			
	Mass Conc. (mg/m3)	0.072	0.069	0.062	0.060	0.063	0.054	0.054	0.053	0.051			
Site Condition		<input checked="" type="checkbox"/> Normal Operation <input type="checkbox"/> Breaker / Excavator / Backhoe <input checked="" type="checkbox"/> Traffic Emission <input type="checkbox"/> Dust from other activities <input type="checkbox"/> Others			<input checked="" type="checkbox"/> Normal Operation <input type="checkbox"/> Breaker / Excavator / Backhoe <input type="checkbox"/> Traffic Emission <input type="checkbox"/> Dust from other activities <input type="checkbox"/> Others			<input checked="" type="checkbox"/> Normal Operation <input type="checkbox"/> Breaker / Excavator / Backhoe <input type="checkbox"/> Traffic Emission <input type="checkbox"/> Dust from other activities <input type="checkbox"/> Others			<input type="checkbox"/> Normal Operation <input type="checkbox"/> Breaker / Excavator / Backhoe <input type="checkbox"/> Traffic Emission <input type="checkbox"/> Dust from other activities <input type="checkbox"/> Others		
Remarks													

Note \* Mass Concentration = K Factor x (Count Value / 60 mins)

Equipment Number	A-005-07a	A-005-09a	A-005-10a	A-005-11a	A-005-13a	A-005-14a
K-Factor	0.0015	0.0015	0.0015	0.0015	0.0015	0.0014
Equipment Number	A-005-16a					
K-Factor	0.0015					

	Name	Signature	Date
Recorded by	Yue Vanessa	K	29/19/21
Checked by		AP	29/19/21

60493798

AECOM Asia Company Limited  
1-hour TSP Dust Monitoring - Data Record Sheet

Project Name: Baseline Monitoring for Siu Ho Wan Station and Siu Ho Wan Depot Replanning Works - Advance Construction Works  
Equipment: Sibata LD-1 & LD-3 Dust Meter

Monitoring Location		DM1			DM6			DM7					
Details of Location													
Equipment Number		A-005-07a / A-005-09a / A-005-10a / A-005-11a / A-005-13a / A-005-14a / A005-16a			A-005-07a / A-005-09a / A-005-10a / A-005-11a / A-005-13a / A-005-14a / A005-16a			A-005-07a / A-005-09a / A-005-10a / A-005-11a / A-005-13a / A-005-14a / A005-16a			A-005-07a / A-005-09a / A-005-10a / A-005-11a / A-005-13a / A-005-14a / A005-16a		
Date of Monitoring		3/19			3/19			3/19					
Time of Monitoring		13:31			13:36			11:45					
Weather Condition		Sunny / Fine / Cloudy / Rainy			Sunny / Fine / Cloudy / Rainy			Sunny / Fine / Cloudy / Rainy			Sunny / Fine / Cloudy / Rainy		
No. of Measurement Set		1st Hour	2nd Hour	3rd Hour	1st Hour	2nd Hour	3rd Hour	1st Hour	2nd Hour	3rd Hour	1st Hour	2nd Hour	3rd Hour
Monitoring Results	Count Value	3832	3852	3798	1649	1597	2159	2828	3267	3674			
	Mass Conc. (mg/m3)	0.096	0.096	0.095	0.041	0.040	0.054	0.071	0.082	0.092			
Site Condition		<input checked="" type="checkbox"/> Normal Operation <input type="checkbox"/> Breaker / Excavator / Backhoe <input checked="" type="checkbox"/> Traffic Emission <input type="checkbox"/> Dust from other activities <input type="checkbox"/> Others			<input checked="" type="checkbox"/> Normal Operation <input type="checkbox"/> Breaker / Excavator / Backhoe <input type="checkbox"/> Traffic Emission <input type="checkbox"/> Dust from other activities <input type="checkbox"/> Others			<input checked="" type="checkbox"/> Normal Operation <input type="checkbox"/> Breaker / Excavator / Backhoe <input type="checkbox"/> Traffic Emission <input type="checkbox"/> Dust from other activities <input type="checkbox"/> Others			<input type="checkbox"/> Normal Operation <input type="checkbox"/> Breaker / Excavator / Backhoe <input type="checkbox"/> Traffic Emission <input type="checkbox"/> Dust from other activities <input type="checkbox"/> Others		
Remarks													

Note \* Mass Concentration = K Factor x (Count Value / 60 mins)

Equipment Number	A-005-07a	A-005-09a	A-005-10a	A-005-11a	A-005-13a	A-005-14a
K-Factor	0.0015	0.0015	0.0015	0.0015	0.0015	0.0014
Equipment Number	A-005-16a					
K-Factor	0.0015					

	Name	Signature	Date
Recorded by	<i>Vanessa</i>	<i>[Signature]</i>	30/9/21
Checked by	<i>Vanessa</i>	<i>[Signature]</i>	30/9/21

60493798

AECOM Asia Company Limited  
1-hour TSP Dust Monitoring - Data Record Sheet

Project Name: Baseline Monitoring for Siu Ho Wan Station and Siu Ho Wan Depot Replanning Works - Advance Construction Works  
Equipment: Sibata LD-1 & LD-3 Dust Meter

Monitoring Location		DM1			DM6			DM7					
Details of Location													
Equipment Number		A-005-07a / A-005-09a / A-005-10a / A-005-11a / A-005-13a / A-005-14a / A005-16a			A-005-07a / A-005-09a / A-005-10a / A-005-11a / A-005-13a / A-005-14a / A005-16a			A-005-07a / A-005-09a / A-005-10a / A-005-11a / A-005-13a / A-005-14a / A005-16a			A-005-07a / A-005-09a / A-005-10a / A-005-11a / A-005-13a / A-005-14a / A005-16a		
Date of Monitoring		1/10			1/10			1/10					
Time of Monitoring		9:31			8:36			8:45					
Weather Condition		Sunny / Fine / Cloudy / Rainy			Sunny / Fine / Cloudy / Rainy			Sunny / Fine / Cloudy / Rainy			Sunny / Fine / Cloudy / Rainy		
No. of Measurement Set		1st Hour	2nd Hour	3rd Hour	1st Hour	2nd Hour	3rd Hour	1st Hour	2nd Hour	3rd Hour	1st Hour	2nd Hour	3rd Hour
Monitoring Results	Count Value	3320	2729	2433	1791	1715	1900	2885	2468	2356			
	Mass Conc. (mg/m3)	0.083	0.068	0.061	0.045	0.043	0.048	0.072	0.062	0.059			
Site Condition		<input checked="" type="checkbox"/> Normal Operation <input type="checkbox"/> Breaker / Excavator / Backhoe <input checked="" type="checkbox"/> Traffic Emission <input type="checkbox"/> Dust from other activities <input type="checkbox"/> Others			<input checked="" type="checkbox"/> Normal Operation <input type="checkbox"/> Breaker / Excavator / Backhoe <input type="checkbox"/> Traffic Emission <input type="checkbox"/> Dust from other activities <input type="checkbox"/> Others			<input checked="" type="checkbox"/> Normal Operation <input type="checkbox"/> Breaker / Excavator / Backhoe <input type="checkbox"/> Traffic Emission <input type="checkbox"/> Dust from other activities <input type="checkbox"/> Others			<input type="checkbox"/> Normal Operation <input type="checkbox"/> Breaker / Excavator / Backhoe <input type="checkbox"/> Traffic Emission <input type="checkbox"/> Dust from other activities <input type="checkbox"/> Others		
Remarks													

Note \* Mass Concentration = K Factor x (Count Value / 60 mins)

Equipment Number	A-005-07a	A-005-09a	A-005-10a	A-005-11a	A-005-13a	A-005-14a
K-Factor	0.0015	0.0015	0.0015	0.0015	0.0015	0.0014
Equipment Number	A-005-16a					
K-Factor	0.0015					

	Name	Signature	Date
Recorded by	<i>Vanessa</i>	<i>[Signature]</i>	1/10/21
Checked by	<i>Vanessa</i>	<i>[Signature]</i>	1/10/21



60493798

AECOM Asia Company Limited  
1-hour TSP Dust Monitoring - Data Record Sheet

Project Name: Baseline Monitoring for Siu Ho Wan Station and Siu Ho Wan Depot Replanning Works - Advance Construction Works  
Equipment: Sibata LD-1 & LD-3 Dust Meter

Monitoring Location		DM1			DM6			DM7					
Details of Location													
Equipment Number		A-005-07a / <u>A-005-09a</u> / A-005-10a / A-005-11a / A-005-13a / A-005-14a / A005-16a			A-005-07a / A-005-09a / A-005-10a / <u>A-005-11a</u> / A-005-13a / A-005-14a / A005-16a			A-005-07a / A-005-09a / A-005-10a / A-005-11a / A-005-13a / A-005-14a / <u>A005-16a</u>			A-005-07a / A-005-09a / A-005-10a / A-005-11a / A-005-13a / A-005-14a / A005-16a		
Date of Monitoring		2/10			2/10			2/10					
Time of Monitoring		12:05			11:29			11:39					
Weather Condition		<u>Sunny</u> / Fine / Cloudy / Rainy			<u>Sunny</u> / Fine / Cloudy / Rainy			<u>Sunny</u> / Fine / Cloudy / Rainy			Sunny / Fine / Cloudy / Rainy		
No. of Measurement Set		1st Hour	2nd Hour	3rd Hour	1st Hour	2nd Hour	3rd Hour	1st Hour	2nd Hour	3rd Hour	1st Hour	2nd Hour	3rd Hour
Monitoring Results	Count Value	2853	2660	2333	1990	1828	1697	2546	2164	1768			
	Mass Conc. (mg/m3)	0.071	0.067	0.058	0.050	0.046	0.042	0.064	0.054	0.044			
Site Condition		<input checked="" type="checkbox"/> Normal Operation <input type="checkbox"/> Breaker / Excavator / Backhoe <input checked="" type="checkbox"/> Traffic Emission <input type="checkbox"/> Dust from other activities <input type="checkbox"/> Others			<input checked="" type="checkbox"/> Normal Operation <input type="checkbox"/> Breaker / Excavator / Backhoe <input type="checkbox"/> Traffic Emission <input type="checkbox"/> Dust from other activities <input type="checkbox"/> Others			<input checked="" type="checkbox"/> Normal Operation <input type="checkbox"/> Breaker / Excavator / Backhoe <input type="checkbox"/> Traffic Emission <input type="checkbox"/> Dust from other activities <input type="checkbox"/> Others			<input checked="" type="checkbox"/> Normal Operation <input type="checkbox"/> Breaker / Excavator / Backhoe <input type="checkbox"/> Traffic Emission <input type="checkbox"/> Dust from other activities <input type="checkbox"/> Others		
Remarks													

Note \* Mass Concentration = K Factor x (Count Value / 60 mins)

Equipment Number	A-005-07a	A-005-09a	A-005-10a	A-005-11a	A-005-13a	A-005-14a
K-Factor	0.0015	0.0015	0.0015	0.0015	0.0015	0.0014
Equipment Number	A-005-16a					
K-Factor	0.0015					

	Name	Signature	Date
Recorded by	<i>Vanessa</i>	<i>K</i>	2/10/21
Checked by	<i>Vanessa</i>	<i>H</i>	2/10/21

60493798

AECOM Asia Company Limited  
1-hour TSP Dust Monitoring - Data Record Sheet

Project Name: Baseline Monitoring for Siu Ho Wan Station and Siu Ho Wan Depot Replanning Works - Advance Construction Works  
Equipment: Sibata LD-1 & LD-3 Dust Meter

Monitoring Location		DM1			DM6			DM7					
Details of Location													
Equipment Number		A-005-07a / <u>A-005-09a</u> / A-005-10a / A-005-11a / A-005-13a / A-005-14a / A005-16a			A-005-07a / A-005-09a / A-005-10a / <u>A-005-11a</u> / A-005-13a / A-005-14a / A005-16a			A-005-07a / A-005-09a / A-005-10a / A-005-11a / A-005-13a / A-005-14a / <u>A005-16a</u>			A-005-07a / A-005-09a / A-005-10a / A-005-11a / A-005-13a / A-005-14a / A005-16a		
Date of Monitoring		3/10			3/10			3/10					
Time of Monitoring		9:05			8:29			8:39					
Weather Condition		<u>Sunny</u> / Fine / Cloudy / Rainy			<u>Sunny</u> / Fine / Cloudy / Rainy			<u>Sunny</u> / Fine / Cloudy / Rainy			Sunny / Fine / Cloudy / Rainy		
No. of Measurement Set		1st Hour	2nd Hour	3rd Hour	1st Hour	2nd Hour	3rd Hour	1st Hour	2nd Hour	3rd Hour	1st Hour	2nd Hour	3rd Hour
Monitoring Results	Count Value	2385	2272	2339	2097	1910	1674	1982	1658	1702			
	Mass Conc. (mg/m3)	0.060	0.057	0.059	0.052	0.048	0.042	0.050	0.041	0.043			
Site Condition		<input checked="" type="checkbox"/> Normal Operation <input type="checkbox"/> Breaker / Excavator / Backhoe <input checked="" type="checkbox"/> Traffic Emission <input type="checkbox"/> Dust from other activities <input type="checkbox"/> Others			<input checked="" type="checkbox"/> Normal Operation <input type="checkbox"/> Breaker / Excavator / Backhoe <input type="checkbox"/> Traffic Emission <input type="checkbox"/> Dust from other activities <input type="checkbox"/> Others			<input checked="" type="checkbox"/> Normal Operation <input type="checkbox"/> Breaker / Excavator / Backhoe <input type="checkbox"/> Traffic Emission <input type="checkbox"/> Dust from other activities <input type="checkbox"/> Others			<input checked="" type="checkbox"/> Normal Operation <input type="checkbox"/> Breaker / Excavator / Backhoe <input type="checkbox"/> Traffic Emission <input type="checkbox"/> Dust from other activities <input type="checkbox"/> Others		
Remarks													

Note \* Mass Concentration = K Factor x (Count Value / 60 mins)

Equipment Number	A-005-07a	A-005-09a	A-005-10a	A-005-11a	A-005-13a	A-005-14a
K-Factor	0.0015	0.0015	0.0015	0.0015	0.0015	0.0014
Equipment Number	A-005-16a					
K-Factor	0.0015					

	Name	Signature	Date
Recorded by	<i>Vanessa</i>	<i>K</i>	3/10/21
Checked by	<i>Vanessa</i>	<i>H</i>	3/10/21

60493798

AECOM Asia Company Limited  
1-hour TSP Dust Monitoring - Data Record Sheet

Project Name: Baseline Monitoring for Siu Ho Wan Station and Siu Ho Wan Depot Replanning Works - Advance Construction Works  
Equipment: Sibata LD-1 & LD-3 Dust Meter

Monitoring Location		DM1			DM6			DM7					
Details of Location													
Equipment Number		A-005-07a / A-005-09a / A-005-10a / A-005-11a / A-005-13a / A-005-14a / A005-16a			A-005-07a / A-005-09a / A-005-10a / A-005-11a / A-005-13a / A-005-14a / A005-16a			A-005-07a / A-005-09a / A-005-10a / A-005-11a / A-005-13a / A-005-14a / A005-16a			A-005-07a / A-005-09a / A-005-10a / A-005-11a / A-005-13a / A-005-14a / A005-16a		
Date of Monitoring		4/10			4/10			4/10					
Time of Monitoring		13:15			11:36			11:44					
Weather Condition		Sunny / Fine / Cloudy / Rainy			Sunny / Fine / Cloudy / Rainy			Sunny / Fine / Cloudy / Rainy			Sunny / Fine / Cloudy / Rainy		
No. of Measurement Set		1st Hour	2nd Hour	3rd Hour	1st Hour	2nd Hour	3rd Hour	1st Hour	2nd Hour	3rd Hour	1st Hour	2nd Hour	3rd Hour
Monitoring Results	Count Value	2572	2501	2286	2074	1886	1835	1999	1895	1873			
	Mass Conc. (mg/m3)	0.064	0.063	0.056	0.052	0.047	0.046	0.050	0.047	0.047			
Site Condition		<input checked="" type="checkbox"/> Normal Operation <input type="checkbox"/> Breaker / Excavator / Backhoe <input checked="" type="checkbox"/> Traffic Emission <input type="checkbox"/> Dust from other activities <input type="checkbox"/> Others			<input checked="" type="checkbox"/> Normal Operation <input type="checkbox"/> Breaker / Excavator / Backhoe <input type="checkbox"/> Traffic Emission <input type="checkbox"/> Dust from other activities <input type="checkbox"/> Others			<input checked="" type="checkbox"/> Normal Operation <input type="checkbox"/> Breaker / Excavator / Backhoe <input type="checkbox"/> Traffic Emission <input type="checkbox"/> Dust from other activities <input type="checkbox"/> Others			<input type="checkbox"/> Normal Operation <input type="checkbox"/> Breaker / Excavator / Backhoe <input type="checkbox"/> Traffic Emission <input type="checkbox"/> Dust from other activities <input type="checkbox"/> Others		
Remarks													

Note \* Mass Concentration = K Factor x (Count Value / 60 mins)

Equipment Number	A-005-07a	A-005-09a	A-005-10a	A-005-11a	A-005-13a	A-005-14a
K-Factor	0.0015	0.0015	0.0015	0.0015	0.0015	0.0014
Equipment Number	A-005-16a					
K-Factor	0.0015					

	Name	Signature	Date
Recorded by	Vanessa	K/A	4/10/21
Checked by	Vanessa	K/A	4/10/21

60493798

AECOM Asia Company Limited  
1-hour TSP Dust Monitoring - Data Record Sheet

Project Name: Baseline Monitoring for Siu Ho Wan Station and Siu Ho Wan Depot Replanning Works - Advance Construction Works  
Equipment: Sibata LD-1 & LD-3 Dust Meter

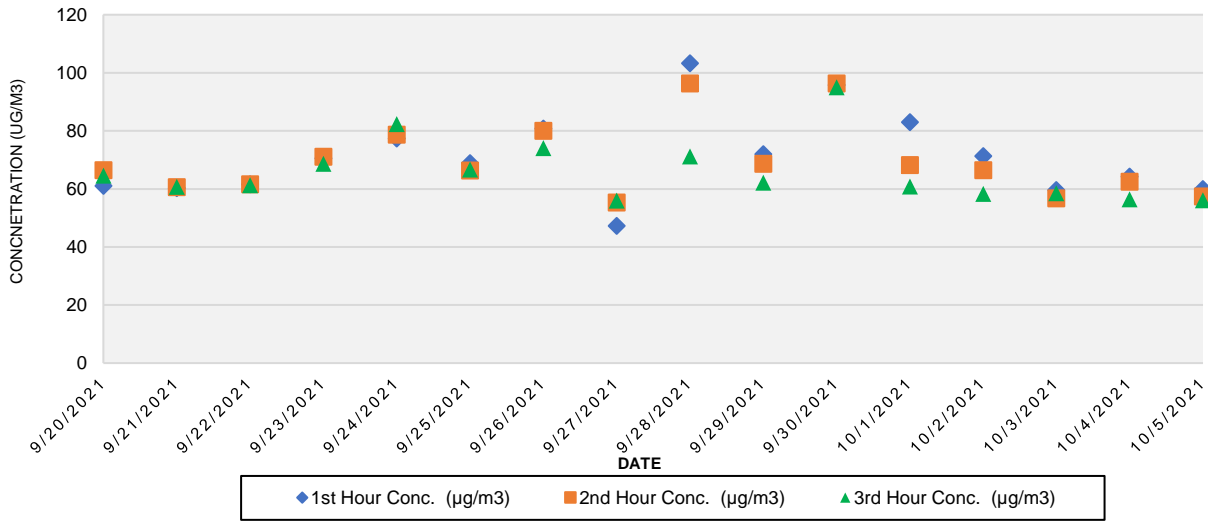
Monitoring Location		DM1			DM6			DM7					
Details of Location													
Equipment Number		A-005-07a / A-005-09a / A-005-10a / A-005-11a / A-005-13a / A-005-14a / A005-16a			A-005-07a / A-005-09a / A-005-10a / A-005-11a / A-005-13a / A-005-14a / A005-16a			A-005-07a / A-005-09a / A-005-10a / A-005-11a / A-005-13a / A-005-14a / A005-16a			A-005-07a / A-005-09a / A-005-10a / A-005-11a / A-005-13a / A-005-14a / A005-16a		
Date of Monitoring		5/10			5/10			5/10					
Time of Monitoring		10:15			8:36			8:44					
Weather Condition		Sunny / Fine / Cloudy / Rainy			Sunny / Fine / Cloudy / Rainy			Sunny / Fine / Cloudy / Rainy			Sunny / Fine / Cloudy / Rainy		
No. of Measurement Set		1st Hour	2nd Hour	3rd Hour	1st Hour	2nd Hour	3rd Hour	1st Hour	2nd Hour	3rd Hour	1st Hour	2nd Hour	3rd Hour
Monitoring Results	Count Value	2398	2296	2245	2579	2194	2213	2275	2180	1452			
	Mass Conc. (mg/m3)	0.060	0.057	0.056	0.060	0.055	0.055	0.057	0.055	0.036			
Site Condition		<input checked="" type="checkbox"/> Normal Operation <input type="checkbox"/> Breaker / Excavator / Backhoe <input checked="" type="checkbox"/> Traffic Emission <input type="checkbox"/> Dust from other activities <input type="checkbox"/> Others			<input checked="" type="checkbox"/> Normal Operation <input type="checkbox"/> Breaker / Excavator / Backhoe <input type="checkbox"/> Traffic Emission <input type="checkbox"/> Dust from other activities <input type="checkbox"/> Others			<input checked="" type="checkbox"/> Normal Operation <input type="checkbox"/> Breaker / Excavator / Backhoe <input type="checkbox"/> Traffic Emission <input type="checkbox"/> Dust from other activities <input type="checkbox"/> Others			<input type="checkbox"/> Normal Operation <input type="checkbox"/> Breaker / Excavator / Backhoe <input type="checkbox"/> Traffic Emission <input type="checkbox"/> Dust from other activities <input type="checkbox"/> Others		
Remarks													

Note \* Mass Concentration = K Factor x (Count Value / 60 mins)

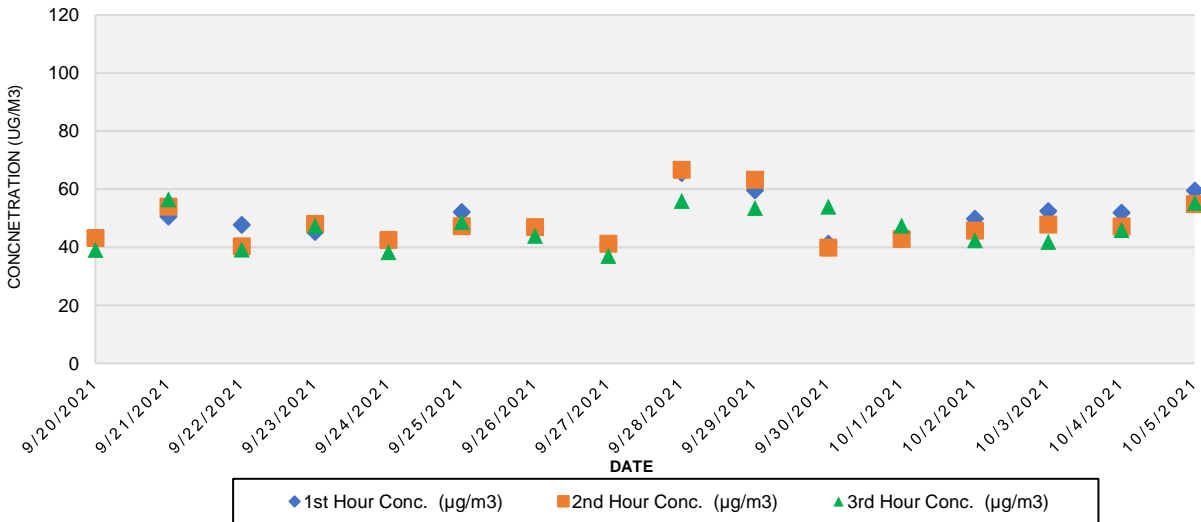
Equipment Number	A-005-07a	A-005-09a	A-005-10a	A-005-11a	A-005-13a	A-005-14a
K-Factor	0.0015	0.0015	0.0015	0.0015	0.0015	0.0014
Equipment Number	A-005-16a					
K-Factor	0.0015					

	Name	Signature	Date
Recorded by	Vanessa	K/A	5/10/21
Checked by	Vanessa	K/A	5/10/21

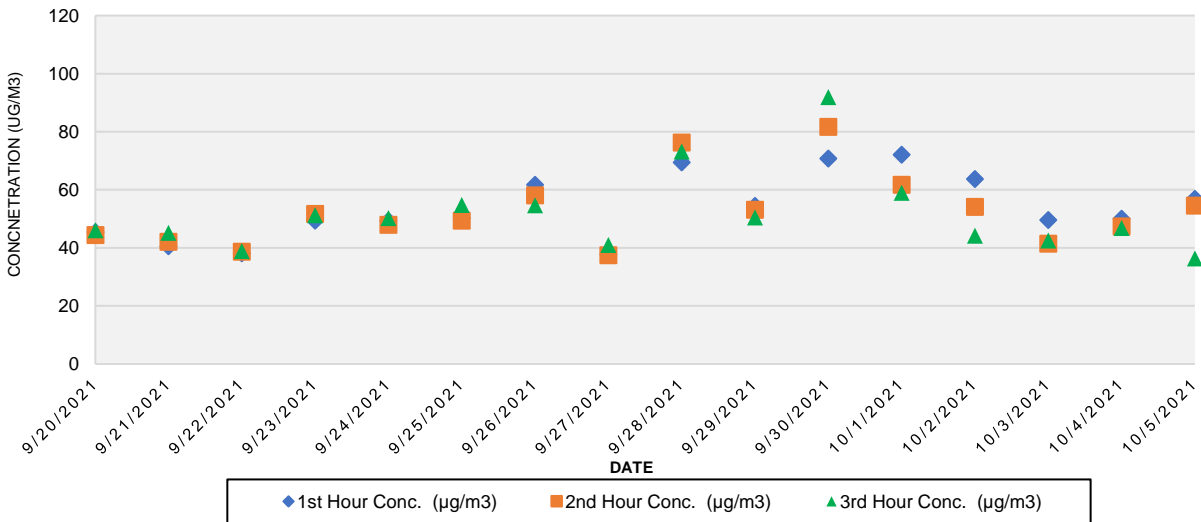
### 1-HOUR TSP MONITORING RESULT AT STATION ID : DM1



### 1-HOUR TSP MONITORING RESULT AT STATION ID : DM6



### 1-HOUR TSP MONITORING RESULT AT STATION ID : DM7



---

**APPENDIX D**

**Baseline Noise Monitoring Results**

---

## Baseline Noise Monitoring Result

**Location:** CNA

**Baseline**

**monitoring period:** 9/20/2021-10/5/2021

**Site Observation:** No construction works were conducted in the vicinity during the monitoring period.

**Weather condition:** Trace rainfall was observed throughout the monitoring period. Scattered showers were found on 21 Sept and 23 Sept. Data recorded in these periods were discarded.

**Note:** -

Parameter: Leq

Time Slot Averaged Baselines

### 1) Weekdays Daytime Noise Level, dB(A)

Time slot	Leq, 30 min	L10	L90
07:00-07:30	64.6	62.8	54.4
07:30-08:00	64.9	64.3	55.3
08:00-08:30	64.6	63.1	55.4
08:30-09:00	64.9	62.9	57.0
09:00-09:30	64.8	63.1	56.8
09:30-10:00	64.8	64.3	56.5
10:00-10:30	64.9	63.8	55.9
10:30-11:00	64.5	64.2	56.6
11:00-11:30	64.7	65.0	56.8
11:30-12:00	65.5	65.3	57.3
12:00-12:30	63.8	62.0	54.6
12:30-13:00	63.5	61.8	54.4
13:00-13:30	64.1	63.8	54.7
13:30-14:00	64.3	64.6	56.1
14:00-14:30	65.4	66.6	56.9
14:30-15:00	65.0	65.6	56.6
15:00-15:30	64.9	64.9	56.8
15:30-16:00	65.0	64.9	56.5
16:00-16:30	64.9	63.6	56.8
16:30-17:00	65.2	63.4	56.7
17:00-17:30	65.4	63.7	56.4
17:30-18:00	65.9	63.9	56.2
18:00-18:30	65.8	64.1	56.6
18:30-19:00	65.9	64.2	55.8
Average	64.9	64.2	56.2
Max	65.9	66.6	57.3
Min	63.5	61.8	54.4

**Noise Control Period Averaged Baselines**

**2) Weekdays Evening Noise Level, dB(A)**

Time Slot	Leq, 5min	L10	L90
19:00-19:15	66.2	65.8	54.5
	65.3	63.1	54.5
	64.8	62.6	54.1
19:15-19:30	64.5	62.8	54.4
	64.6	62.8	54.1
	66.1	65.4	54.5
19:30-19:45	65.1	63.9	54.2
	64.8	63.0	54.2
	64.6	63.6	54.1
19:45-20:00	65.1	63.6	54.1
	66.1	65.9	53.8
	66.0	67.0	54.1
20:00-20:15	65.7	63.5	53.9
	65.7	63.7	53.9
	64.6	62.3	54.2
20:15-20:30	64.0	61.1	53.8
	65.1	61.8	53.9
	65.0	64.8	54.0
20:30-20:45	65.1	64.1	53.4
	64.0	61.6	53.3
	64.8	63.4	53.5
20:45-21:00	62.9	61.7	53.6
	64.8	63.4	53.7
	65.2	65.1	53.5
21:00-21:15	65.0	63.6	53.4
	64.0	61.8	53.7
	64.2	62.1	53.7
21:15-21:30	63.5	60.8	53.3
	63.5	61.9	52.7
	64.9	63.6	53.4
21:30-21:45	64.5	62.8	53.4
	63.9	61.8	53.3
	63.7	62.2	53.5
21:45-22:00	64.3	63.5	53.8
	64.5	61.4	53.7
	64.1	63.4	53.4
22:00-22:15	64.4	63.3	53.9
	64.1	63.7	54.1
	63.6	62.5	54.3
22:15-22:30	62.4	60.7	54.2
	64.3	62.2	54.0
	64.0	62.9	54.1
22:30-22:45	64.5	61.9	54.1
	63.2	63.2	54.5
	63.3	60.1	53.8
22:45-23:00	62.0	60.8	53.7
	63.4	61.1	53.8
	64.3	64.0	53.8
Average	64.9	63.2	53.9
Max	66.2	67.0	54.5
Min	62.0	60.1	52.7

**3) General Holidays (including Sundays) (0700-2300) Noise Level, dB(A)**

Time Slot	Leq, 5min	L10	L90
07:00-07:15	64.8	61.3	52.5
	63.4	61.4	52.8
	64.8	60.2	52.4
07:15-07:30	60.4	57.9	52.8
	63.7	61.8	52.8
	63.1	63.1	53.6
07:30-07:45	65.2	62.6	54.0
	63.4	64.1	53.1
	63.3	61.6	53.1
07:45-08:00	63.4	60.7	53.0
	62.8	61.2	52.8
	63.0	60.4	52.7
08:00-08:15	64.8	60.3	52.9
	63.7	59.9	52.8
	63.4	59.8	52.5
08:15-08:30	62.0	59.4	51.8
	61.9	59.6	52.1
	63.6	61.2	52.1
08:30-08:45	65.1	62.8	52.1
	62.7	59.3	52.2
	62.4	59.5	52.7
08:45-09:00	63.3	60.5	53.3
	63.7	63.5	53.3
	63.9	60.2	52.8
09:00-09:15	64.3	61.6	52.6
	65.3	63.4	53.1
	62.4	60.6	53.0
09:15-09:30	63.8	63.1	55.4
	64.6	64.5	55.1
	64.4	64.3	53.1
09:30-09:45	64.8	62.6	52.9
	62.8	60.7	52.0
	63.7	62.3	52.2
09:45-10:00	63.1	61.5	52.8
	62.1	61.2	52.6
	65.3	62.5	53.1
10:00-10:15	66.5	67.2	52.7
	65.8	67.1	52.5
	62.7	58.9	52.7
10:15-10:30	64.1	61.7	52.9
	63.4	61.8	53.4
	64.6	65.2	53.5
10:30-10:45	65.5	63.5	52.8
	64.5	65.4	52.7
	64.4	61.2	53.7
10:45-11:00	62.2	59.0	52.7
	64.0	60.2	52.5
	64.4	65.9	53.2
11:00-11:15	66.3	64.9	52.2
	64.6	61.4	52.4
	64.6	64.5	52.5
11:15-11:30	63.0	62.2	51.9
	64.2	63.0	52.2
	64.4	61.0	51.9
11:30-11:45	65.7	63.1	52.3

	64.2	60.8	52.7
	64.0	60.2	52.4
11:45-12:00	62.7	59.8	52.4
	64.1	62.3	52.4
	63.8	60.8	53.1
12:00-12:15	65.1	64.6	52.1
	64.8	60.0	51.9
	62.2	59.3	52.3
12:15-12:30	64.9	59.4	51.6
	63.0	61.6	52.0
	63.8	60.9	52.0
12:30-12:45	65.7	63.0	52.6
	64.5	60.9	52.9
	63.1	60.1	52.8
12:45-13:00	63.7	61.1	52.1
	63.7	62.0	52.1
	64.8	61.6	52.2
13:00-13:15	63.9	62.2	52.6
	64.3	61.3	51.8
	64.0	61.3	52.5
13:15-13:30	63.3	60.4	52.6
	64.9	60.4	52.0
	64.6	63.6	53.0
13:30-13:45	65.9	62.7	52.6
	64.0	63.1	52.4
	64.6	61.0	53.6
13:45-14:00	63.8	61.3	53.5
	64.1	60.4	52.9
	64.9	62.0	53.2
14:00-14:15	66.2	63.1	53.3
	64.2	62.3	52.8
	62.6	61.4	52.0
14:15-14:30	65.6	63.1	52.9
	63.6	60.6	52.8
	63.7	60.6	52.4
14:30-14:45	65.8	62.8	52.5
	64.3	63.3	53.0
	64.1	60.3	53.3
14:45-15:00	62.7	60.0	53.0
	64.4	60.7	52.6
	64.7	61.5	52.4
15:00-15:15	64.5	59.9	52.0
	64.8	60.2	52.9
	63.3	58.6	52.6
15:15-15:30	63.6	60.2	53.0
	64.4	62.0	52.9
	65.7	64.7	53.8
15:30-15:45	64.4	60.2	53.0
	63.8	62.7	52.7
	65.3	65.8	53.3
15:45-16:00	63.7	61.7	53.5
	63.9	59.5	53.3
	64.2	62.9	53.8
16:00-16:15	64.1	61.6	53.4
	63.8	59.6	53.5
	63.2	60.0	53.4
16:15-16:30	65.2	60.9	53.5
	63.5	59.2	53.8



	64.0	59.8	54.1
16:30-16:45	65.5	64.1	54.1
	63.6	59.9	53.6
	63.5	60.5	53.9
16:45-17:00	63.2	61.6	53.6
	64.7	60.1	53.1
	65.3	63.8	53.4
17:00-17:15	65.8	65.0	54.3
	63.3	60.4	52.9
	64.4	60.6	53.2
17:15-17:30	64.0	60.5	53.8
	65.3	64.5	53.5
	65.0	61.5	53.6
17:30-17:45	65.2	62.2	53.2
	63.8	59.7	52.7
	65.6	65.5	53.4
17:45-18:00	64.9	63.2	53.5
	63.9	61.9	53.2
	65.7	63.6	53.9
18:00-18:15	65.7	62.9	53.6
	64.0	59.6	52.8
	62.7	60.0	53.1
18:15-18:30	64.8	61.0	53.5
	64.6	60.4	53.8
	65.7	64.5	53.7
18:30-18:45	66.0	62.4	53.5
	64.0	61.9	52.6
	64.7	60.4	52.4
18:45-19:00	64.7	62.9	53.3
	64.3	61.0	52.6
	65.4	61.2	52.7
19:00-19:15	65.7	61.4	53.0
	64.3	60.2	53.0
	64.0	65.2	53.0
19:15-19:30	65.4	63.3	52.8
	63.7	61.1	53.5
	65.3	63.4	52.7
19:30-19:45	66.6	64.2	53.0
	64.0	60.8	53.3
	65.4	61.2	52.9
19:45-20:00	64.2	62.7	53.2
	64.7	62.1	52.9
	64.6	61.8	53.3
20:00-20:15	66.1	61.5	53.0
	65.3	63.5	53.4
	63.6	62.0	53.0
20:15-20:30	64.3	63.2	53.2
	64.9	61.8	53.7
	64.6	64.0	53.4
20:30-20:45	65.6	64.5	53.6
	65.5	62.1	53.2
	65.2	60.5	52.4
20:45-21:00	63.6	63.3	53.5
	64.0	59.2	52.5
	64.2	63.1	53.3
21:00-21:15	65.9	62.8	53.8
	63.1	60.0	52.7
	63.4	60.5	53.7

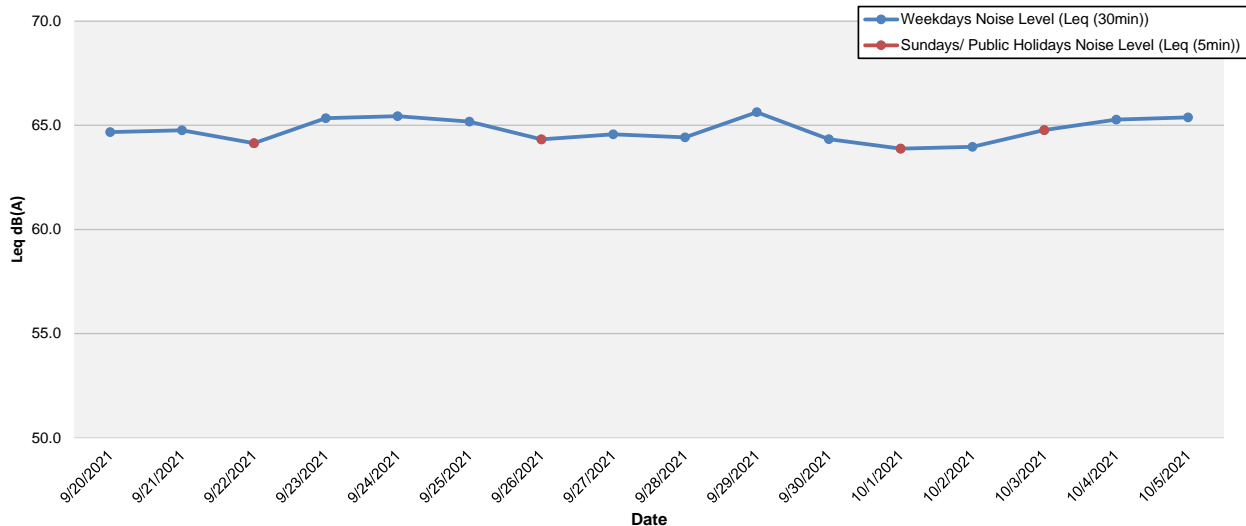
21:15-21:30	64.3	60.7	53.1
	62.0	59.1	53.0
	65.4	65.1	53.6
21:30-21:45	66.0	65.6	53.4
	64.7	64.9	53.9
	65.6	61.0	52.7
21:45-22:00	63.3	60.0	53.2
	63.1	62.2	53.6
	65.0	64.3	53.6
22:00-22:15	64.9	62.8	53.5
	64.5	64.1	53.5
	65.2	61.6	53.2
22:15-22:30	63.5	64.3	53.6
	63.9	61.7	53.0
	64.0	62.6	53.4
22:30-22:45	65.3	61.3	53.1
	63.2	62.4	53.2
	62.4	60.4	53.0
22:45-23:00	61.6	59.4	52.5
	64.4	61.3	52.6
	64.2	61.8	52.9
Average	64.4	62.2	53.0
Max	66.6	67.2	55.4
Min	60.4	57.9	51.6

**4) Night-time (for all days) Noise Level, dB(A)**

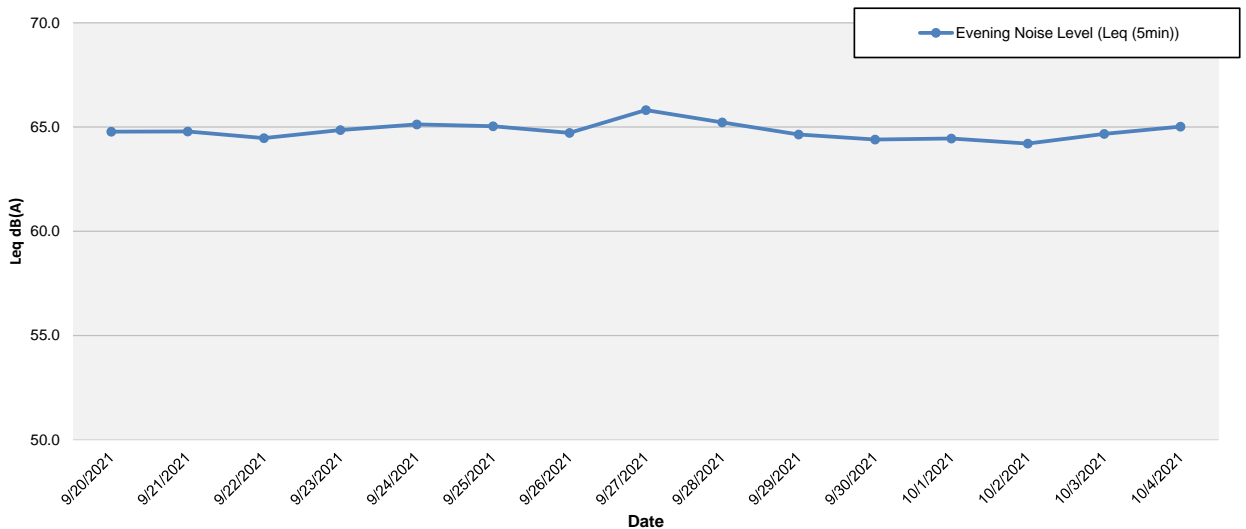
Time Slot	Leq, 5min	L10	L90
23:00-23:15	64.1	62.3	53.5
	62.3	59.5	53.1
	63.6	60.7	52.9
23:15-23:30	63.0	61.5	52.9
	64.7	62.8	52.9
	63.4	60.9	52.9
23:30-23:45	64.3	61.7	52.4
	63.9	61.3	52.8
	64.3	62.8	52.6
23:45-00:00	62.1	61.7	52.7
	63.8	61.7	52.2
	62.2	61.0	52.0
00:00-00:15	64.8	62.4	52.0
	63.8	61.0	51.8
	63.1	62.5	52.2
00:15-00:30	65.6	64.7	52.4
	62.0	60.4	52.3
	65.5	63.7	52.5
00:30-00:45	63.5	62.1	52.3
	64.7	61.3	51.9
	63.4	61.2	51.7
00:45-01:00	63.1	60.9	52.0
	63.5	60.7	52.0
	64.0	60.9	51.6
01:00-01:15	62.7	59.7	51.8
	60.9	60.6	51.3
	62.5	61.3	51.8
01:15-01:30	61.0	59.7	51.3
	60.8	59.2	51.6
	57.9	59.0	51.7
01:30-01:45	56.5	58.5	52.0
	57.5	59.3	52.2
	56.0	58.5	52.2
01:45-02:00	55.8	58.7	51.6
	57.9	59.4	51.4
	57.8	59.1	51.6
02:00-02:15	57.5	59.8	51.7
	56.5	59.2	51.4
	56.8	58.6	51.1
02:15-02:30	55.5	58.1	51.4
	55.2	58.0	51.1
	55.9	58.3	50.9
02:30-02:45	57.4	59.1	51.2
	56.7	58.6	50.7
	56.6	59.0	51.2
02:45-03:00	54.9	57.2	50.7
	55.2	57.8	50.5
	54.3	57.0	50.5
03:00-03:15	54.2	57.0	50.5
	55.4	57.8	50.7
	55.5	58.0	51.1
03:15-03:30	56.8	58.7	50.7
	57.3	58.9	52.9
	55.8	57.6	50.3
03:30-03:45	55.1	57.2	50.4

	55.4	58.4	50.5
	55.3	57.4	50.1
03:45-04:00	55.2	58.3	50.1
	55.7	59.1	50.5
	56.4	59.7	50.1
04:00-04:15	56.2	58.6	50.0
	54.3	56.8	50.5
	55.9	58.6	50.5
04:15-04:30	55.7	58.5	50.1
	54.8	57.7	50.2
	56.9	59.5	50.7
04:30-04:45	55.5	58.0	50.6
	55.0	58.1	50.2
	56.2	58.9	50.9
04:45-05:00	55.6	57.2	50.4
	54.4	57.0	50.5
	54.2	56.8	50.2
05:00-05:15	54.3	56.8	50.6
	54.0	56.7	50.1
	55.0	58.2	50.1
05:15-05:30	55.6	58.7	50.7
	55.7	58.8	50.7
	55.0	57.9	50.3
05:30-05:45	54.5	57.4	50.5
	54.5	56.8	50.9
	55.7	58.3	51.6
05:45-06:00	55.9	58.4	51.7
	56.3	59.1	51.6
	57.2	59.0	50.9
06:00-06:15	59.1	59.4	51.3
	61.3	58.9	51.8
	63.4	60.6	52.0
06:15-06:30	62.6	59.5	51.8
	60.9	58.0	51.7
	60.5	58.7	52.1
06:30-06:45	63.9	59.9	52.4
	62.5	62.0	52.5
	65.4	61.9	52.7
06:45-07:00	63.1	62.0	52.6
	64.3	59.8	52.9
	63.6	60.0	53.1
Average	60.6	59.8	51.6
Max	65.6	64.7	53.5
Min	54.0	56.7	50.0

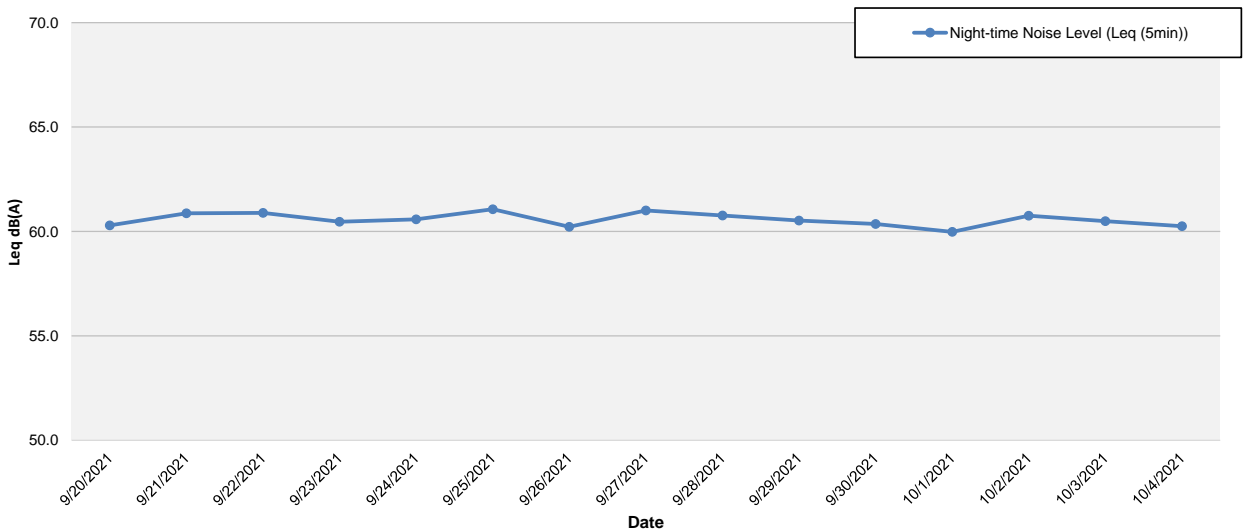
**Average Leq (30min) at CNA during Daytime (0700-1900)**



**Average Leq (5min) at CNA during Evening (1900-2300) for All Days**



**Average Leq (5min) at CNA during Night-time (2300-0700) for All Days**



## Baseline Noise Monitoring Result

**Location:** CNB

**Baseline**

**monitoring period:** 9/20/2021-10/5/2021

**Site Observation:** No construction works were conducted in the vicinity during the monitoring period.

**Weather condition:** Trace rainfall was observed throughout the monitoring period. Scattered showers were found on 21 Sept and 23 Sept. Data recorded in these periods were discarded.

**Note:** Noise monitoring was suspended due to shortage of battery from 09:25am to 11:15am on 23 Sep 2021

Parameter: Leq

Time Slot Averaged Baselines

### 1) Weekdays Daytime Noise Level, dB(A)

Time slot	Leq, 30 min	L10	L90
07:00-07:30	59.7	59.9	51.8
07:30-08:00	60.3	61.3	52.6
08:00-08:30	59.9	60.6	52.6
08:30-09:00	60.0	60.6	53.0
09:00-09:30	60.6	62.0	52.9
09:30-10:00	60.2	62.1	52.3
10:00-10:30	59.8	61.0	51.9
10:30-11:00	59.8	61.5	51.4
11:00-11:30	65.4	65.4	52.8
11:30-12:00	65.1	64.8	55.0
12:00-12:30	62.5	62.9	51.7
12:30-13:00	62.2	62.7	51.6
13:00-13:30	61.2	61.0	51.8
13:30-14:00	61.4	61.8	53.0
14:00-14:30	60.0	60.7	52.9
14:30-15:00	59.8	60.2	52.6
15:00-15:30	60.8	61.1	52.4
15:30-16:00	59.9	60.1	52.0
16:00-16:30	59.6	60.5	52.3
16:30-17:00	59.6	60.0	52.3
17:00-17:30	60.0	60.6	52.9
17:30-18:00	61.3	62.7	53.7
18:00-18:30	60.9	62.0	54.0
18:30-19:00	60.9	61.9	52.9
Average	61.2	61.8	52.7
Max	65.4	65.4	55.0
Min	59.6	59.9	51.4

**Noise Control Period Averaged Baselines**

**2) Weekdays Evening Noise Level, dB(A)**

Time Slot	Leq, 5min	L10	L90
19:00-19:15	60.4	59.7	52.0
	59.6	61.1	52.1
	59.8	60.2	51.9
19:15-19:30	59.4	58.6	52.1
	59.5	61.2	51.9
	60.7	62.6	51.9
19:30-19:45	59.8	61.2	52.0
	59.6	60.5	51.6
	60.4	61.6	52.0
19:45-20:00	60.7	62.1	52.0
	61.5	63.9	52.1
	61.7	62.8	52.6
20:00-20:15	58.5	58.5	52.4
	60.0	62.7	53.1
	61.0	63.1	53.8
20:15-20:30	58.9	60.0	53.7
	59.5	59.5	54.0
	61.0	62.3	53.6
20:30-20:45	59.8	61.3	52.0
	58.5	59.6	52.1
	59.5	60.1	52.1
20:45-21:00	59.0	60.3	52.3
	59.4	60.2	52.3
	59.6	61.2	51.3
21:00-21:15	60.5	60.9	51.2
	59.3	60.7	51.7
	59.2	60.9	53.1
21:15-21:30	63.0	65.9	53.4
	61.0	63.0	53.7
	60.2	61.8	53.3
21:30-21:45	59.8	60.3	53.1
	58.6	60.1	53.3
	60.4	61.6	53.1
21:45-22:00	59.2	60.9	53.4
	59.1	61.3	52.7
	61.7	64.9	52.7
22:00-22:15	59.7	63.9	53.5
	60.2	61.5	53.5
	57.9	59.9	53.1
22:15-22:30	59.8	60.3	51.9
	57.1	59.6	51.0
	60.2	60.9	51.2
22:30-22:45	57.7	59.4	51.1
	57.7	57.1	51.0
	57.7	58.0	50.9
22:45-23:00	59.0	57.5	51.0
	56.9	59.3	51.1
	60.5	61.3	50.9
Average	60.2	61.3	52.4
Max	63.0	65.9	54.0
Min	56.9	57.1	50.9

**3) General Holidays (including Sundays) (0700-2300) Noise Level, dB(A)**

Time Slot	Leq, 5min	L10	L90
07:00-07:15	59.2	58.7	49.3
	58.9	56.6	48.7
	55.9	54.4	48.4
07:15-07:30	58.5	58.1	48.3
	57.0	60.2	49.4
	59.9	58.7	49.4
07:30-07:45	58.7	62.3	50.0
	57.9	58.4	49.5
	56.6	57.3	49.8
07:45-08:00	59.2	59.0	49.5
	58.2	57.1	49.9
	58.9	57.4	49.4
08:00-08:15	58.8	58.2	48.1
	58.5	56.8	47.7
	58.5	55.6	48.4
08:15-08:30	56.5	57.5	48.6
	58.0	57.9	48.9
	59.6	58.4	48.4
08:30-08:45	57.4	55.2	48.5
	58.2	57.7	47.8
	58.5	57.3	49.1
08:45-09:00	57.3	57.4	48.0
	58.6	58.6	48.4
	59.4	60.0	47.4
09:00-09:15	59.0	60.6	47.5
	57.9	59.6	49.2
	58.8	59.6	48.5
09:15-09:30	59.5	58.6	49.1
	62.3	63.0	49.5
	60.0	60.1	49.0
09:30-09:45	58.8	59.1	48.5
	58.8	58.9	48.7
	59.0	60.3	48.7
09:45-10:00	63.4	66.7	49.5
	59.6	60.8	50.1
	65.2	62.7	49.7
10:00-10:15	65.1	63.0	49.5
	58.9	58.8	49.7
	61.0	62.6	49.3
10:15-10:30	58.3	58.7	50.5
	60.0	62.2	50.3
	61.0	62.5	50.8
10:30-10:45	61.9	63.4	49.3
	59.2	60.1	50.7
	59.3	57.3	49.8
10:45-11:00	58.4	59.0	49.3
	64.8	60.9	49.5
	61.2	60.7	49.7
11:00-11:15	62.3	65.1	49.4
	60.5	63.5	48.6
	59.0	61.0	49.1
11:15-11:30	59.9	62.1	49.4
	57.2	57.8	49.1
	59.7	58.8	48.9
11:30-11:45	59.8	59.4	48.6



	58.8	57.3	48.7
	55.5	55.3	49.2
11:45-12:00	58.3	57.4	48.6
	59.0	60.0	48.5
	59.2	61.8	49.1
12:00-12:15	59.3	57.3	48.0
	58.3	57.3	48.1
	57.9	55.5	48.0
12:15-12:30	57.1	58.4	49.0
	58.8	58.4	48.3
	60.5	60.7	49.0
12:30-12:45	56.5	57.5	48.5
	58.8	59.7	49.1
	59.9	60.4	48.7
12:45-13:00	58.0	59.9	49.5
	59.4	59.3	48.5
	59.1	58.3	48.9
13:00-13:15	59.4	59.2	49.0
	63.4	66.2	49.3
	63.4	66.3	49.6
13:15-13:30	58.6	56.8	49.3
	57.5	57.5	49.9
	64.0	66.6	49.1
13:30-13:45	60.8	61.8	49.1
	58.3	58.2	50.4
	58.8	60.0	50.2
13:45-14:00	58.8	58.2	50.1
	62.0	60.0	50.6
	60.0	59.6	50.3
14:00-14:15	59.7	60.9	50.3
	59.9	59.9	50.8
	60.9	61.6	49.5
14:15-14:30	56.4	56.2	49.7
	60.3	57.9	49.7
	59.9	58.8	49.4
14:30-14:45	59.0	60.2	49.8
	58.2	57.4	50.0
	58.8	57.0	50.2
14:45-15:00	59.8	57.7	50.4
	57.6	57.3	49.1
	59.9	59.1	49.0
15:00-15:15	59.2	57.1	49.6
	56.4	55.9	50.2
	59.3	57.7	50.5
15:15-15:30	60.0	60.5	50.4
	59.2	60.6	50.4
	59.9	59.7	50.8
15:30-15:45	59.0	58.0	50.3
	62.0	64.6	50.7
	57.5	58.7	50.3
15:45-16:00	58.7	60.0	50.3
	59.6	58.8	50.9
	58.9	59.2	50.5
16:00-16:15	59.1	57.3	50.9
	58.9	58.1	50.9
	58.5	57.3	50.8
16:15-16:30	57.6	56.8	50.9
	58.1	57.2	50.8

	60.5	60.1	51.0
16:30-16:45	57.0	58.1	50.3
	57.9	58.0	51.2
	59.8	59.3	51.5
16:45-17:00	58.0	56.7	50.8
	59.7	60.4	50.6
	60.9	63.4	51.3
17:00-17:15	59.2	58.6	50.3
	58.2	57.4	50.9
	59.3	57.1	50.7
17:15-17:30	59.7	58.6	50.8
	60.0	62.1	51.2
	60.0	59.8	51.4
17:30-17:45	58.7	55.8	50.3
	59.8	59.9	50.5
	61.3	62.9	51.1
17:45-18:00	58.3	59.1	50.4
	60.4	61.1	51.1
	60.6	61.4	51.0
18:00-18:15	58.8	59.0	50.7
	58.6	56.9	50.6
	60.2	59.6	51.3
18:15-18:30	58.3	57.6	51.3
	60.0	62.1	51.0
	60.9	60.2	50.9
18:30-18:45	58.3	58.8	50.6
	59.2	60.5	50.5
	60.5	61.4	51.3
18:45-19:00	59.2	58.9	51.0
	58.3	60.2	50.6
	60.5	59.8	51.2
19:00-19:15	60.2	58.5	51.8
	58.8	62.2	50.1
	59.0	57.6	50.7
19:15-19:30	61.7	63.8	51.4
	59.8	61.8	51.3
	60.2	59.5	50.9
19:30-19:45	60.7	62.1	51.2
	60.5	60.8	50.8
	58.3	61.0	51.4
19:45-20:00	60.2	62.1	51.1
	60.3	59.8	51.4
	63.1	65.9	51.8
20:00-20:15	64.8	66.9	52.8
	60.8	62.7	51.6
	59.4	61.1	53.1
20:15-20:30	59.8	59.3	51.4
	61.8	63.7	53.2
	60.0	62.7	50.8
20:30-20:45	60.6	61.6	51.6
	59.1	60.8	50.8
	59.8	62.5	51.5
20:45-21:00	58.9	56.3	51.0
	58.3	61.3	51.3
	60.3	60.5	51.2
21:00-21:15	57.7	57.7	50.7
	59.5	59.2	51.0
	58.8	59.4	51.3

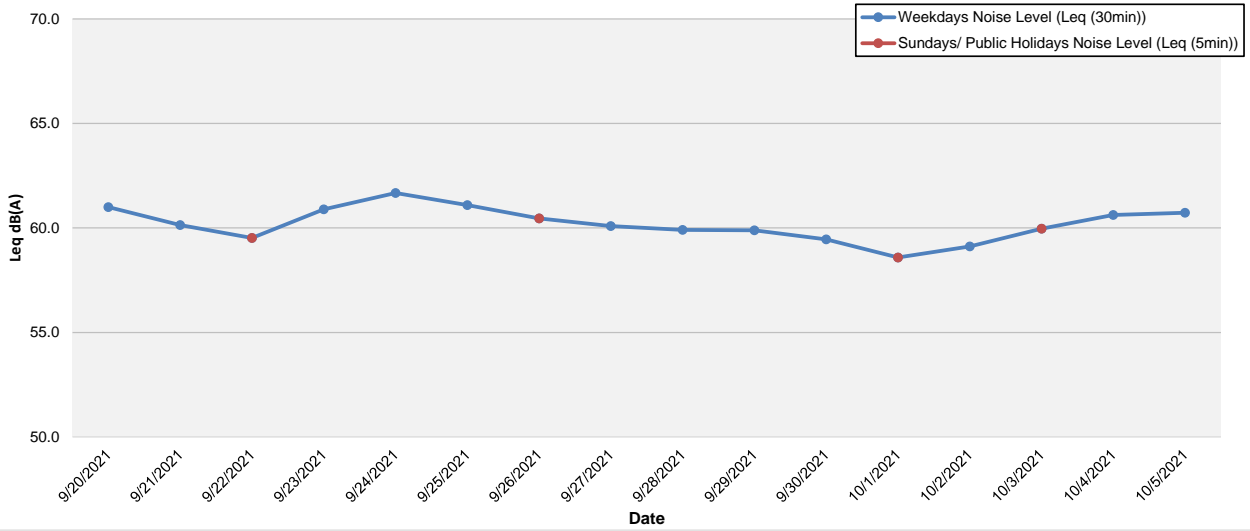
21:15-21:30	59.4	57.2	52.5
	62.9	66.1	54.2
	62.5	66.6	54.1
21:30-21:45	61.7	63.3	54.1
	60.2	60.6	53.8
	59.2	59.8	54.2
21:45-22:00	59.6	61.4	51.5
	58.8	61.8	51.4
	64.5	67.2	51.5
22:00-22:15	63.3	66.5	51.5
	59.5	61.1	50.8
	58.8	61.7	51.6
22:15-22:30	60.8	62.4	51.1
	58.6	60.6	51.2
	59.7	58.6	51.3
22:30-22:45	58.8	60.0	51.1
	59.9	59.6	51.1
	56.8	59.6	50.2
22:45-23:00	59.3	59.2	50.7
	57.2	59.0	50.8
	61.2	63.5	50.4
Average	59.9	60.7	50.4
Max	65.2	67.2	54.2
Min	55.5	54.4	47.4

**4) Night-time (for all days) Noise Level, dB(A)**

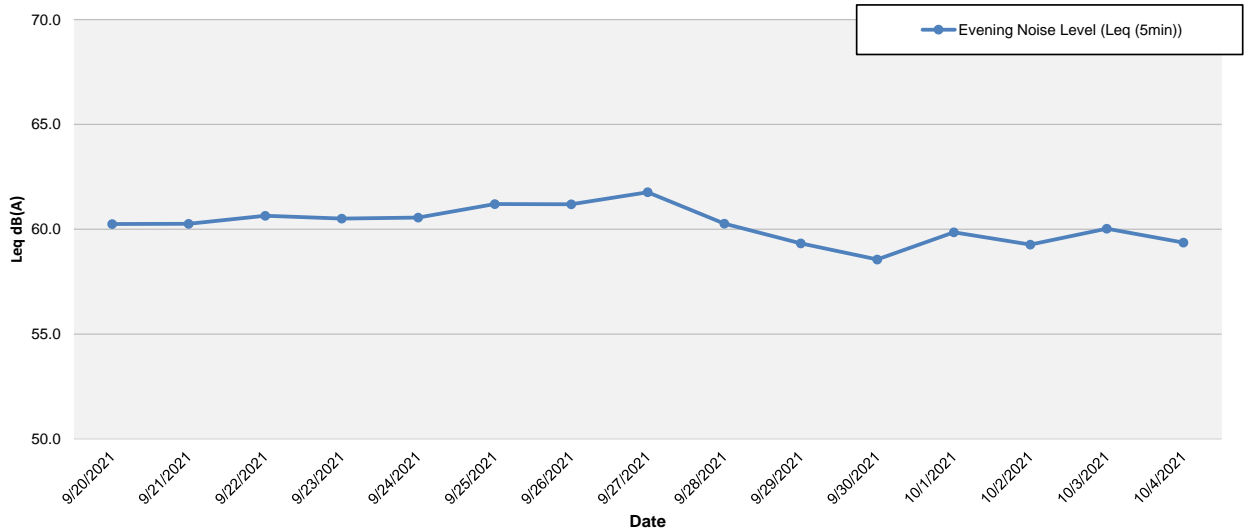
Time Slot	Leq, 5min	L10	L90
23:00-23:15	55.8	56.6	50.6
	59.0	57.6	50.2
	57.4	59.7	50.0
23:15-23:30	59.6	58.8	50.4
	59.4	59.3	50.6
	60.0	59.3	52.1
23:30-23:45	57.6	59.5	52.8
	61.6	63.4	52.3
	59.1	62.8	52.7
23:45-00:00	59.8	60.0	52.0
	57.4	59.2	51.7
	58.0	58.9	50.9
00:00-00:15	60.0	59.8	50.3
	56.7	58.7	50.2
	60.8	63.0	51.3
00:15-00:30	58.2	59.9	53.0
	60.1	61.1	53.1
	60.2	61.3	53.2
00:30-00:45	59.4	60.3	53.0
	59.8	59.9	52.0
	57.5	59.6	53.1
00:45-01:00	59.0	59.8	52.6
	58.5	58.8	52.6
	58.6	59.1	52.5
01:00-01:15	55.8	57.6	52.4
	57.2	60.6	51.6
	55.7	58.3	52.1
01:15-01:30	55.5	57.1	51.7
	54.8	57.1	51.6
	54.8	57.1	51.4
01:30-01:45	54.3	55.7	51.1
	54.2	56.2	50.9
	54.1	56.5	51.0
01:45-02:00	57.7	59.9	51.0
	59.8	57.5	51.6
	57.7	56.5	48.0
02:00-02:15	54.2	58.0	47.8
	54.9	55.7	48.1
	55.3	56.8	49.1
02:15-02:30	54.3	57.1	50.9
	55.9	57.7	51.6
	57.5	56.3	51.5
02:30-02:45	56.7	56.9	51.5
	57.0	56.5	50.8
	56.3	55.9	49.3
02:45-03:00	56.2	56.3	51.0
	54.5	54.5	50.2
	53.7	56.1	48.9
03:00-03:15	52.6	54.4	49.5
	56.6	56.0	50.8
	56.5	56.7	51.8
03:15-03:30	56.7	58.7	53.2
	56.9	57.9	52.8
	56.6	56.6	53.2
03:30-03:45	57.0	58.1	53.3

	56.3	58.2	52.9
	56.2	58.5	52.8
03:45-04:00	57.6	58.6	53.0
	58.6	58.8	52.8
	58.4	57.6	51.6
04:00-04:15	55.0	55.9	50.8
	55.3	57.3	50.7
	56.0	58.3	51.8
04:15-04:30	56.5	57.8	52.5
	56.5	59.1	53.1
	57.2	58.5	53.4
04:30-04:45	56.4	57.0	53.7
	56.6	59.7	52.5
	57.3	57.7	49.6
04:45-05:00	53.0	55.7	49.0
	52.2	53.8	48.5
	52.4	54.5	49.2
05:00-05:15	52.7	55.2	48.6
	52.7	55.5	47.5
	53.7	57.0	49.2
05:15-05:30	53.2	55.8	49.2
	53.5	56.2	48.9
	52.9	55.7	47.0
05:30-05:45	52.8	55.0	48.0
	55.1	57.8	50.7
	55.2	57.8	51.1
05:45-06:00	55.4	58.0	51.9
	56.9	59.3	49.9
	56.1	56.7	49.6
06:00-06:15	58.1	58.3	49.7
	60.6	57.7	49.7
	63.8	59.5	48.9
06:15-06:30	57.0	55.9	49.1
	57.7	55.8	49.2
	57.7	56.7	49.4
06:30-06:45	61.2	59.1	49.7
	62.6	59.6	49.7
	60.1	58.6	50.1
06:45-07:00	58.3	56.1	50.0
	57.9	57.2	50.4
	58.7	57.6	50.5
Average	57.6	58.3	51.2
Max	63.8	63.4	53.7
Min	52.2	53.8	47.0

**Average Leq (30min) at CNB during Daytime (0700-1900)**



**Average Leq (5min) at CNB during Evening (1900-2300) for All Days**



**Average Leq (5min) at CNB during Night-time (2300-0700) for All Days**

