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12 March 2025

AECOM Asia Company Limited  
12/F, Grand Central Plaza, Tower 2  
138 Shatin Rural Committee Road  
Shatin, Hong Kong

By Post and Email

Attention: Ms. Fanny Lau

Dear Madam,

**Re: Contract No. ED/2018/01 – Kai Tak Development  
Stage 4 Infrastructure at the Former Runway and South Apron**

**Monthly EM&A Report for February 2025**

Reference is made to the Environmental Team's submission of the Monthly EM&A Report for February 2025 (Version 1.1) certified by the ET Leader and provided to us via email on 12 March 2025.

Please be advised that we have no further comment on the captioned Monthly EM&A Report in accordance with Condition 3.3 of EP-337/2009 and Condition 3.2 of EP-445/2013/B.

Thank you for your attention. Please do not hesitate to contact the undersigned should you have any queries.

Yours faithfully,  
For and on behalf of  
Ramboll Hong Kong Limited



Y H Hui  
Independent Environmental Checker

c.c. CEDD  
Ka Shing  
Penta-Ocean

Attn.: Mr. Jason Wong  
Attn.: Mr. Chan Pang  
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**Environmental Monitoring and Audit Report**  
**for**  
**Contract No. ED/2018/01 –**  
**Kai Tak Development – Stage 4 infrastructure at the**  
**former runway and south apron**

**Contract No.: EDO 15/2018**

February 2025

(Version 1.1)

Certified By: \_\_\_\_\_



(Environmental Team Leader)

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## EXECUTIVE SUMMARY

This is the 62<sup>nd</sup> Monthly Environmental Monitoring & Audit (EM&A) report which summaries the findings of the EM&A Programme during the reporting period from 1 to 28 February 2025.

### **Breaches of Action and Limit Levels**

- 1) 1-hour TSP monitoring was conducted as scheduled in the reporting month. No Action/Limit Level exceedance was recorded.
- 2) 24-hour TSP monitoring was conducted as scheduled in the reporting month. No Action/Limit Level exceedance was recorded.
- 3) Construction noise monitoring was conducted as scheduled in the reporting month. No Action Level and Limit Level exceedance was recorded in the reporting month.
- 4) Summary of the non-compliance in the reporting month for the Project is tabulated in Table I.

*Table I Non-compliance Record in the Reporting Month*

Parameter	No. of Exceedance		Action Taken
	Action Level	Limit Level	
1-hr TSP	0	0	N/A
24-hr TSP	0	0	N/A
Construction noise	0	0	N/A

### **Complaint log**

- 5) No complaint was received in the reporting month. Summary of complaints in the reporting month is tabulated in Table II.

*Table II Summary of complaints in the Reporting Month*

Date of complaint received	Description of complaint	Investigation / Recommendations / Action taken	Close-out date / Status
NA	NA	NA	NA

Date of complaint received	Description of complaint	Investigation / Recommendations / Action taken	Close-out date / Status

**Notifications of summons and successful prosecutions**

- 6) No notification of summons and successful prosecutions was received in the reporting month. Summary of summons and successful prosecutions in the reporting month is tabulated in Table III.

*Table III Summary of summons and successful prosecutions in the Reporting Month*

Date of receiving notification of summons or prosecutions	Date of event	Description of event	Action take	Close-out date / Status
No notification of summons and successful prosecutions were received in the reporting month.	NA	NA	NA	NA

**Report changes**

- 7) There was no reporting change in the reporting month.

### **Key construction works in the reporting month**

8) Major construction activities undertaken during the reporting month included:

- Road L14d construction
- Remaining paving and planting works and noise barrier
- Outstanding works in saltwater pumping station
- Outstanding works of cold-water intake culvert
- Flow diversion of box culvert under section 8
- Water works along the deck channel of Kai Tak River
- Outstanding and defective make of Section 1B

### **Future key issues**

9) The future key issues and potential impact in the coming month are given in Table IV.

*Table IV Summary of future key issues and potential impact in the coming month*

Future key issues in the coming month	Potential impact
Road L14d construction	Noise, Air and Water Quality
Outstanding works in saltwater pumping station	Noise and Air Quality, Chemical and Waste Management
Outstanding works of saltwater intake culvert	Noise and Air Quality, Chemical and Waste Management
Flow diversion of box culvert under section 8	Noise and Air Quality, Chemical and Waste Management
Water works along the deck channel of Kai Tak River	Noise and Air Quality, Chemical and Waste Management
Outstanding and defective make of Section 1B	Noise and Air Quality, Chemical and Waste Management

# 1. INTRODUCTION

## Project Background

- 1.1 The Kai Tak Development (KTD) is located in the south-eastern part of Kowloon Peninsula of the HKSAR, comprising the apron and runway areas of the former Kai Tak Airport and existing waterfront areas at To Kwa Wan, Ma Tau Kok, Kowloon Bay, Kwun Tong and Cha Kwo Ling.
- 1.2 Contract No. ED/2018/01 - Kai Tak Development – stage 4 infrastructure at the former runway and south apron (The Project), comprises mainly the design and construction of a dual two-lane Road D3 (Metro Park Section), a single 2-lane Road L12d, a salt water pumping station, a sewage pumping station, landscaped deck and promenade above and adjoining Road D3 (Metro Park Section) respectively, some remaining road works at Road L14, noise barrier at Road D3A, and other associated works at the former runway and south apron. The proposed works are shown in Figure 1 and Figure 2. During the course of the Contract No. ED/2018/01, there may be modification of noise barriers in association with the construction of footbridges connecting to the landscaped deck of Road D3A by developers of adjacent lands (Figure 3). The proposed works and site boundary are shown in Figure 4.
- 1.3 The new road connecting Shing Fung Road & Shing Kai Road has been open for public vehicles since 31 December 2022. Detailed location referring to Figure 5.
- 1.4 Civil Engineering and Development Department (CEDD) had completed an Environmental Impact Assessment (EIA) and is the Permit Holder.
- 1.5 The construction work under ED/2018/01 comprises the EM&A Manuals (EIA Register Nos. AEIAR-130/2009 for Kai Tak Development and EIA Register Nos. AEIAR-170/2013 for Roads D3A and D4A) and Environmental Permit (EP) Nos. EP-337/2009 and Variation to the EP (VEP) No. EP-445/2013/B.
- 1.6 Air quality and noise monitoring has been proposed in the EM&A Manual with EIA Register Nos. AEIAR-130/2009 for Kai Tak Development while no air quality and noise monitoring are proposed in EM&A Manual with EIA Register Nos. AEIAR-170/2013 for Roads D3A and D4A.

## **Project Organization**

1.7 The project organization chart and with respect to the EM&A programme is shown in Appendix A. Information of key personnel contact names and telephone numbers are summarized in Table 1.1.

*Table 1.1 Contact Information of Key Personnel*

Party	Role	Contact Person	Position	Phone No.	Fax No.
Civil Engineering and Development Department (CEDD)	Project Proponent	Mr. Jason Wong	Senior Engineer	3579 2453	2739 0076
		Ms. Chan Ka Yan	Engineer	3579 2458	2739 0076
AECOM Asia Co. Ltd. (AECOM)	Supervisor (act as Engineers' Representative (ER) listed in EM&A Manual)	Ms. Fanny Lau	CRE	3911 4201	3911 4288
Ramboll Hong Kong Limited (Ramboll)	Independent Environmental Checker (IEC)	Mr. Y H Hui	IEC	3465 2850	3465 2899
Ka Shing Management Consultant Limited (Ka Shing)	Environmental Team (ET)	Mr. Chan Pang	ET Leader	6082 2973	2120 7752
Penta-Ocean Construction Co., Ltd. (Penta-Ocean)	Contractor	Mr. Tony Tang	Environmental Officer	9433 2628	3465 8898

## **Works Area and Construction Programme**

1.8 The construction works commenced on 20 January 2020. The construction programme of the Project is given in Appendix B.

### **Construction works undertaken during reporting month**

1.9 Major construction works of the Project in the reporting month are summarized in Table 1.2:

*Table 1.2 Major activities of the Project during reporting month*

Road L14d construction	Remaining paving and planting works and noise barrier
Outstanding works in saltwater pumping station	Outstanding works of cold-water intake culvert
Flow diversion of box culvert under section 8	Water works along the deck channel of Kai Tak River
Outstanding and defective make of Section 1B	

### **Submission Status under the Environmental Permits**

1.10 The status of required submission under Environmental Permit (EP) conditions under EP-337/2009 and Variation to the EP (VEP) No. EP-445/2013/B are summarized in Table 1.3.

*Table 1.3 Summary of Status of Required Submission of EPs*

EP Condition EP-337/2009	EP Condition EP-445/2013/B	Submission	Submission Date
Condition 1.11	Condition 1.12	Notification of Commencement Date of Construction of the Project	6 Jan 2020
Condition 2.3	Condition 2.3	Management Organization of Main Construction Companies	9 Sep 2019
Condition 2.3	Condition 2.3	Updated Management Organization of Main Construction Companies	17 Aug 2021
Condition 2.4	Condition 2.4	Design Drawings	6 Jan 2020
Condition 2.11	Condition 2.5	Landscape Mitigation Plans	13 Nov 2020
Condition 2.1	Condition 2.5	Landscape Mitigation Plans (Revision 2)	18 May 2021
NA	Condition 2.9	Detailed Design Plan of Traffic Noise Mitigation Measures	9 Dec 2022
Condition 3.2	NA	Baseline Monitoring Report	2 Jan 2020
Condition 3.2	NA	Revised Baseline Monitoring Report	28 Mar 2020
Condition 3.3	Condition 3.2	Monthly EM&A Report (January 2024)	12 Feb 2025

## 2. AIR QUALITY MONITORING

### Monitoring Requirements

2.1 In accordance with EM&A Manuals (EIA Register Nos. AEIAR-130/2009), impact air quality monitoring shall be carried out during the construction phase of the Project. For regular impact monitoring, a sampling frequency of at least once in every six days will be strictly observed at all of the monitoring stations for 24-hour TSP. For 1-hour TSP monitoring, the sampling frequency of at least three times in every six days will be undertaken when the highest dust impact occurs.

### Monitoring Locations

2.2 Three designated monitoring stations were selected for air quality monitoring programme. Impact air quality monitoring was conducted at three air quality monitoring stations in the reporting month. Table 2.1 describes the air quality monitoring locations, which are also depicted in Figure 6.

*Table 2.1 Locations of Air Quality Monitoring Stations*

Air Quality Monitoring Locations for the Project	Location of Measurement
AM3 - Sky Tower	Podium floor near T7
AM4(A) - The Hong Kong Society for the Blind's Factory cum Sheltered Workshop	Ground
AM7 – Hong Kong Children's Hospital	Rooftop

2.3 Due to the relocation of The Hong Kong Society for the Blind's Factory cum Sheltered Workshop (AM4(A)), the premises owner rejected ET to conduct impact monitoring since 1 Sept 2022. No 24-TSP monitoring was conducted at AM4(A) while 1-hr TSP monitoring at AM4(A) were conducted on the ground floor with orienting to the Project site.

2.4 ET approached the potential sensitive receivers for monitoring station relocation since May 2022. ET conducted site visit in nearby area and found that there was no property management company in most of the nearby premises and could not approach the residents regarding the environmental monitoring. No permission can be applied for environmental monitoring.

2.5 For those premises have property management company, ET sent the proposal to owner /

property management company and explained the purpose of environmental monitoring (refer to Appendix C – Apply permission for Environmental Monitoring). Figure 7 shows the proposed alternative monitoring locations. No permission of setup and entry is received until the reporting month.

2.6 Summary of the status of for proposed alternative monitoring locations for AM4(A) are given in Table 2.2.

*Table 2.2 Proposed alternative monitoring locations for AM4(A)*

Proposed alternative monitoring locations for M11	Status upto reporting month
A1 - The Lok Sin Tong Modular Social Housing Scheme	Rejected application on 13 Oct 2022
A2 - Freder Centre	No reply from building management office
A3 - New Port Centre	No reply from building management office
A4 - 112 - 138 To Kwa Wan Road	No property management company and could not apply the permission.
A5 - 2 - 26 Hok Ling Street	No property management company and could not apply the permission.
A6 - 1 - 27 Hok Ling Street	No property management company and could not apply the permission.
A7 - 2 - 28 Tsun Fat Street	No property management company and could not apply the permission.
A8 - 1 - 27 Tsun Fat Street	No property management company and could not apply the permission.
A9 - 2 - 28 Yin On Street	No property management company and could not apply the permission.
A10 - 1 - 27 Yin On Street	No property management company and could not apply the permission.
A11 - 2 - 28 Shim Luen Street	No property management company and could not apply the permission.
A12 - 1 - 27 Shim Luen Street	No property management company and could not apply the permission.
A13 - 2 - 28 Hung Wan Street	No property management company and could not apply the permission.
A14 - 1 - 27 Hung Wan Street	No property management company and could not apply the permission.
A15 - 2 - 28 Pang Ching Street	No property management company and could not apply the permission.
A16 - 1 - 27 Pang Ching Street	No property management company and could not apply the permission.
A17 - 2 - 28 Ying Yeung Street	No property management company and could not apply the permission.
A18 - 1 - 27 Ying Yeung Street	No property management company and could not apply the permission.
A19 - 2 - 28 Lun Cheung Street	No property management company and could not apply the permission.
A20 - 1 - 27 Lun Cheung Street	No property management company and could

Proposed alternative monitoring locations for M11	Status upto reporting month
	not apply the permission.
A21 - 2 - 28 Luk Ming Street	No property management company and could not apply the permission.
A22 - 1 - 27 Luk Ming Street	No property management company and could not apply the permission.
A23 - 2 - 28 Fung Yi Street	No property management company and could not apply the permission.

2.7 No update for the approval of monitoring relocation in the reporting month and ET will resume the impact monitoring once the alternative monitoring location for AM4(A) are confirmed.

### **Monitoring Parameters, Frequency and Duration**

2.8 The air quality monitoring locations and monitoring frequency are listed in Table 2.3.

*Table 2.3 Air Quality Monitoring Parameters, Frequency and Duration*

Air Monitoring Station	Location for Measurement	Parameter	Duration	Frequency
AM3 - Sky Tower	Podium floor near T7			
AM4(A) - The Hong Kong Society for the Blind's Factory cum Sheltered Workshop	Ground	- 24-hour average TSP	- 24 hours	- Once every 6 days
		- 1-hour average TSP	- 1 hour	- Three times every 6 days
AM7 - Hong Kong Children's Hospital	Rooftop			

2.9 The monitoring schedule for reporting month and next month is presented in Appendix D

2.10 Photographic records of the impact monitoring setup are shown in Appendix E.

### **Monitoring Equipment**

2.11 24-hour average TSP and 1-hour average TSP levels were measured for impact monitoring. 24-hour average TSP levels were measured by the High Volume Samplers (HVS) and 1-hour average TSP levels were measured by direct reading method to indicate short-term impacts. Wind data monitoring equipment was set up at conspicuous locations for logging wind speed

and wind direction near to the dust monitoring locations. Table 2.4 summarizes the equipment to be used in the air quality monitoring.

*Table 2.4 Air Quality Monitoring Equipment*

Equipment	Model	Quantity
HVS Sampler	TE-5170 X c/w of TSP sampling inlet	2
Calibrator	TISCH TE-5025A	1
1-hour TSP Dust Meter	TSI Model AM510 SidePak Personal Aerosol Monitor	2
Wind Anemometer	Davis Vantage Pro2 Weather Station	1

2.12 High volume samplers (HVS) (TE-5170 X c/w of TSP sampling inlet) comprising with appropriate sampling inlets were employed for 24-hour TSP monitoring. The sampler was composed of a motor, a filter holder, a flow controller and a sampling inlet and its performance specification complied with that required by USEPA Standard Title 40, Code of Federation Regulations Chapter 1 (Part 50).

2.13 Calibration certificates, catalogue of equipment are given in Appendix F.

### **Monitoring Methodology and QA/QC Procedure**

#### ***24-hour TSP Monitoring***

##### **Operating/Analytical Procedures**

2.14 Setup criteria of HVS are shown as follows:

- A horizontal platform with appropriate support to secure the samplers against gusty wind was provided.
- No two samplers were placed less than 2m apart.
- The distance between the sampler and an obstacle, such as buildings, was at least twice the height that the obstacle protrudes above the sampler.
- A minimum of 2m of separation from walls, parapets and penthouses was set for the rooftop samples.
- A minimum of 2m separation from any supporting structure, measured horizontally was set.
- No furnaces or incineration flues was nearby.
- Airflow around the sampler was unrestricted.
- Any wire fence and gate, to protect the samplers, was not caused any obstruction during

monitoring.

- Permission were obtained to setup the samplers and to obtain access to the monitoring stations.
- A secured supply of electricity was provided to operate the samplers.

2.15 Prior to the commencement of the dust sampling, the flow rate of the HVS was properly set (between 1.1 m<sup>3</sup>/min. and 1.7 m<sup>3</sup>/min.) in accordance with the manufacturer's instruction to within the range recommended in USEPA Standard Title 40, CFR Part 50.

2.16 For TSP sampling, Glass Fiber Filter Media 8" x 10" have a collection efficiency of > 99 % for particles of 0.3 µm diameter were used.

2.17 The power supply was checked to ensure the sampler worked properly and then placed any filter media at the designated air monitoring station.

2.18 The filter holding frame was removed by loosening the four nuts and a weighted and conditioned filter was carefully centered with the stamped number upwards, on a supporting screen.

2.19 The filter was aligned on the screen so that the gasket formed an airtight seal on the outer edges of the filter. Then the filter holding frame was tightened to the filter holder with swing bolts. The applied pressure was sufficient to avoid air leakage at the edges.

2.20 The shelter lid was closed and secured with the aluminium strip.

2.21 The timer was programmed. Information was recorded on the record sheet, which included the starting time, the weather condition and the filter number (the initial weight of the filter paper can be found out by using the filter number).

2.22 After sampling, the filter was removed from the HVS and put into a clean and labeled seal plastic bag to avoid cross contamination. The elapsed time was also be recorded. The sampled filters were sent to the HOKLAS accredited or other internationally accredited laboratory for weighting.

### Maintenance/Calibration

2.23 The following maintenance/calibration are required for the HVS:

- The HVS and their accessories were properly maintained. Appropriate maintenance such as routine motor brushes replacement and electrical wiring checking were made to ensure that the equipment and necessary power supply are in good working condition.
- High volume samplers were calibrated with at bi-monthly intervals using TE-5025A Calibration Kit throughout all stages of the air quality monitoring.

### ***1-hour TSP Monitoring***

#### Measurement Procedures

2.24 The measurement procedures of the 1-hour TSP were conducted in accordance with the Manufacturer's Instruction Manual as follows:

- Set up the dust meter on a tripod at 1.2m level.
- Turned on the dust meter and check the battery, if too low, change new ones. Pointed the meter to the source area or the planned measurement area.
- The zero calibration of the instrument was conducted before and after each sampling.
- TSP levels were recorded for 1-hour with 5-minute data logging interval.
- Recorded down the general meteorological conditions, Test ID no., start/end time, spot check reading at each sampling location for data processing.
- Recorded any activities that may generate dust during measurement period.

#### Maintenance/Calibration

2.25 The following maintenance/calibration are required for the direct dust meters:

- To validity the accuracy of dust meter, compare the results measured by dust meter and HVS by direct reading method every 12 months throughout all stages of the air quality monitoring.

### **Wind Data Monitoring**

2.26 Wind Anemometer was installed at the roof-top of AM7 - Hong Kong Children's Hospital with 10m above ground and clear of constructions or turbulence caused by the buildings.

2.27 The wind data was captured by a data logger and the data was downloaded at least once per month for analysis.

2.28 The wind data monitoring equipment will be re-calibrated at least once every six months.

2.29 Wind direction is divided into 16 sectors of 22.5 degrees each.

2.30 Details of weather information during the monitoring period are shown in Appendix G.

### **Action and Limit Levels**

2.31 The Action and Limit Levels of 24-hour average TSP and 1-hour average TSP are summarized in Table 2.5 and Table 2.6 respectively.

*Table 2.5 Action and Limit Levels of 24-hour average TSP for Construction Dust Monitoring*

Parameter	Air Monitoring Station	Action Level, $\mu\text{g}/\text{m}^3$	Limit Level, $\mu\text{g}/\text{m}^3$
24-hour average TSP	AM3	182	260
	AM4(A)	187	260
	AM7	181	260

*Table 2.6 Action and Limit Levels of 1-hour average TSP for Construction Dust Monitoring*

Parameter	Air Monitoring Station	Action Level, $\mu\text{g}/\text{m}^3$	Limit Level, $\mu\text{g}/\text{m}^3$
1-hour average TSP	AM3	297	500
	AM4(A)	326	500
	AM7	315	500

### **Impact Air Quality Monitoring results**

2.32 Impact monitoring results for 24-hour average TSP and 1-hour average TSP levels at the designed air quality monitoring stations are summarized in Table 2.7 and Table 2.8 respectively.

2.33 Due to the relocation of The Hong Kong Society for the Blind's Factory cum Sheltered Workshop (AM4(A)), the premises owner rejected ET to conduct impact monitoring since 1 Sept 2022. No 24-TSP monitoring was conducted at AM4(A) while 1-hr TSP monitoring at AM4(A) were conducted on the ground floor with orienting to the Project site. ET will resume the impact monitoring once the alternative monitoring location for AM4(A) is confirmed.

*Table 2.7 Summary of 24-hour average TSP Monitoring Data during the reporting month*

Air Monitoring Station	Average TSP Concentration, $\mu\text{g}/\text{m}^3$	Range, $\mu\text{g}/\text{m}^3$	Action Level, $\mu\text{g}/\text{m}^3$	Limit Level, $\mu\text{g}/\text{m}^3$
AM3	62	35 – 95	182	260
AM4(A)	/	/ – /	187	260
AM7	67	55 – 90	181	260

*Table 2.8 Summary of 1-hour average TSP Monitoring Data during the reporting month*

Air Monitoring Station	Average TSP Concentration, $\mu\text{g}/\text{m}^3$	Range, $\mu\text{g}/\text{m}^3$	Action Level, $\mu\text{g}/\text{m}^3$	Limit Level, $\mu\text{g}/\text{m}^3$
AM3	55	34 – 78	297	500
AM4(A)	67	48 – 92	326	500
AM7	63	44 – 83	315	500

2.34 There was no Action and Limit Level exceedance of 24-hour average TSP and 1-hour average TSP levels recorded during the reporting month.

2.35 Graphical presentation and detailed monitoring results of 24-hour average TSP and 1-hour average TSP levels are shown in Appendix H and Appendix I respectively.

2.36 The Event and Action Plan is provided in Appendix J.

2.37 Non-project related construction activities in the adjacent construction sites were observed during the reporting period and may affect the monitoring results.

### 3. NOISE MONITORING

#### Monitoring Requirements

- 3.1 In accordance with EM&A Manuals (EIA Register Nos. AEIAR-130/2009), impact noise monitoring shall be carried out during the construction phase of the Project.
- 3.2 Regular monitoring,  $L_{Aeq, 30\text{-minute}}$ , for each station will be on a weekly basis and conduct one set of measurements between 0700 – 1900 on normal weekdays.
- 3.3 If construction works are extended to include works during 1900 – 0700 as well as public holidays and Sundays, additional weekly impact monitoring will be carried out during the respective restricted hours periods.

#### Monitoring Locations

- 3.4 Two designated monitoring stations were selected for noise monitoring programme. Impact noise monitoring was conducted at two noise monitoring stations in the reporting month. Table 3.1 describes the noise monitoring locations, which are also depicted in Figure 8.

*Table 3.1 Locations of Noise Monitoring Stations*

Noise Monitoring Locations for the Project	Location of Measurement
M11 - The Hong Kong Society for the Blind's Factory cum Sheltered Workshop	Ground (Façade)
M12 - Hong Kong Children's Hospital	Rooftop (Façade)

- 3.5 Due to the relocation of The Hong Kong Society for the Blind's Factory cum Sheltered Workshop (M11), the premises owner rejected ET to conduct impact monitoring since 1 Sept 2022.
- 3.6 ET approached the potential sensitive receivers for monitoring station relocation since May 2022. ET conducted site visit in nearby area and found that there was no property management company in most of the nearby premises and could not approach the residents regarding the environmental monitoring. No permission can be applied for environmental monitoring.

3.7 For those premises have property management company, ET sent the proposal to owner / property management company and explained the purpose of environmental monitoring (refer to Appendix C – Apply permission for Environmental Monitoring). Figure 9 shows the proposed alternative monitoring locations. No permission of setup and entry is received until the reporting month.

3.8 Summary of the status of for proposed alternative monitoring locations for M11 are given in Table 3.2.

*Table 3.2 Proposed alternative monitoring locations for M11*

Proposed alternative monitoring locations for M11	Status upto reporting month
A1 - The Lok Sin Tong Modular Social Housing Scheme	Rejected application on 13 Oct 2022
A2 - Freder Centre	No reply from building management office
A3 - New Port Centre	No reply from building management office
A4 - 112 - 138 To Kwa Wan Road	No property management company and could not apply the permission.
A5 - 2 - 26 Hok Ling Street	No property management company and could not apply the permission.
A6 - 1 - 27 Hok Ling Street	No property management company and could not apply the permission.
A7 - 2 - 28 Tsun Fat Street	No property management company and could not apply the permission.
A8 - 1 - 27 Tsun Fat Street	No property management company and could not apply the permission.
A9 – 2 - 28 Yin On Street	No property management company and could not apply the permission.
A10 – 1 – 27 Yin On Street	No property management company and could not apply the permission.
A11 – 2 – 28 Shim Luen Street	No property management company and could not apply the permission.
A12 - 1 - 27 Shim Luen Street	No property management company and could not apply the permission.
A13 - 2 - 28 Hung Wan Street	No property management company and could not apply the permission.
A14 - 1 - 27 Hung Wan Street	No property management company and could not apply the permission.
A15 - 2 - 28 Pang Ching Street	No property management company and could not apply the permission.
A16 - 1 - 27 Pang Ching Street	No property management company and could not apply the permission.
A17 - 2 - 28 Ying Yeung Street	No property management company and could not apply the permission.
A18 - 1 - 27 Ying Yeung Street	No property management company and could not apply the permission.
A19 - 2 - 28 Lun Cheung Street	No property management company and could

Proposed alternative monitoring locations for M11	Status upto reporting month
	not apply the permission.
A20 - 1 - 27 Lun Cheung Street	No property management company and could not apply the permission.
A21 - 2 - 28 Luk Ming Street	No property management company and could not apply the permission.
A22 - 1 - 27 Luk Ming Street	No property management company and could not apply the permission.
A23 - 2 - 28 Fung Yi Street	No property management company and could not apply the permission.

3.9 No update for the approval of monitoring relocation in the reporting month and ET will resume the impact monitoring once the alternative monitoring location for M11 are confirmed.

### **Monitoring Parameters, Frequency and Duration**

3.10 The noise monitoring locations and monitoring frequency are listed in Table 3.3.

*Table 3.3 Noise Monitoring Parameters, Frequency and Duration*

Noise Monitoring Station	Location for Measurement	Parameter	Frequency and Duration
M11 - The Hong Kong Society for the Blind's Factory cum Sheltered Workshop*	Ground (Façade)	$L_{Aeq}$ , $L_{A10}$ and $L_{A90}$	30 - minutes measurement at each monitoring station between 0700 – 1900 hrs on normal weekdays (Monday to Saturday) at frequency of once per week.
M12 - Hong Kong Children's Hospital	Rooftop (Façade)		

\* Due to the relocation of The Hong Kong Society for the Blind's Factory cum Sheltered Workshop (M11), the premises owner rejected ET to conduct impact monitoring since 1 Sept 2022.

3.11 The monitoring schedule for reporting month and next month is presented in Appendix D.

3.12 Photographic records of the monitoring setup are shown in Appendix E.

### **Monitoring Equipment**

3.13 As referred to in the Technical Memorandum (TM) issued under the Noise Control Ordinance (NCO), sound level meters in compliance with the IEC 61672-1 (Type 1) standard [this

standard replaced the International Electrotechnical Commission Publications 60651:1979 (Type 1) and 60804:1985 (Type 1)] were used for noise monitoring. Table 3.4 summarizes the equipment to be used in the noise monitoring.

*Table 3.4 Noise Monitoring Equipment*

Equipment	Model	Quantity
Sound Level Meter	RION NL52	2
Sound Level Calibrator	RION NC 74	1
Sound Level Calibrator	RION NC 75	1
Air Flowmeter	TSI TA440 Air Velocity	1

3.14 Calibration certificates, catalogue of equipment are given in Appendix K.

### **Monitoring Methodology and QA/QC Procedure**

3.15 The noise level measurement was conducted at 1m from the exterior of the nearby noise sensitive receivers building façade and at 1.2m above the ground and facing to the source area or the planned measurement area.

3.16 No noise measurement was conducted in the presence of fog, rain, wind with a steady speed exceeding 5 m/s or wind with gusts exceeding 10 m/s. Air flow was measured by air flow meter.

3.17 Turned on the sound level meter and check the battery, if too low, change new ones.

3.18 Calibration was conducted immediately prior to and after each noise measurement, the accuracy of the sound level meters was checked by using sound calibrator generating 1,000 Hz with 94dB. Measurement data was found to be valid only if the calibration levels from before and after the noise measurement agreed to within 1.0 dB.

3.19 Noise level was recorded.

3.20 Recorded any activities that may generate noise during measurement period.

### **Maintenance and Calibration**

3.21 The microphone head of the sound level meter and calibrator was cleaned with a soft cloth at quarterly intervals.

3.22 The sound level meter and sound calibrator were calibrated annually.

3.23 Calibration for sound level meter was conducted immediately prior to and following each noise measurement by using sound calibrator generating a known sound pressure level at a known frequency (1,000 Hz with 94dB). Measurements may be accepted as valid only if the calibration levels from before and after the noise measurement agree to within 1.0 dB.

### **Action and Limit Levels**

3.24 The Baseline Noise Levels and Action and Limit Levels for construction noise is presented in Table 3.5.

*Table 3.5 Baseline Noise Level and Action and Limit Levels for Construction Noise Monitoring*

Time Period	Noise Monitoring Station	Baseline Noise Levels, dB (A)	Action Level	Limit Level <sup>^</sup>
0700 – 1900 on normal weekdays	M11	68.3	When one documented complaint is received.	75 dB(A)
	M12	61.9		

Note: ^ If works are to be carried out during restricted hours, the conditions stipulated in the Construction Noise Permit (CNP) issued by the Noise Control Authority have to be followed.

### **Impact Noise Monitoring results**

3.25 Impact noise monitoring results at the designed noise monitoring stations are summarized in Table 3.6 respectively.

3.26 Due to the relocation of The Hong Kong Society for the Blind's Factory cum Sheltered Workshop (M11), the premises owner rejected ET to conduct impact monitoring since 1 Sept 2022. 30-min noise monitoring at M11 were conducted on the ground floor with orienting to the Project site. ET will resume the impact monitoring once the alternative monitoring location for M11 is confirmed.

*Table 3.6 Summary of Noise Monitoring Data during the reporting month*

Noise Monitoring Station	Measured $L_{Aeq, 30\text{-min}}$ , Average, dB(A)	Measured $L_{Aeq, 30\text{-min}}$ , Range, dB(A)	Action Level	Limit Level <sup>^</sup>
M11	72.3	70.8 – 73.1	When one documented complaint is received	75 dB(A)
M12	63.3	60.5 – 65.9		

Note: <sup>^</sup> If works are to be carried out during restricted hours, the conditions stipulated in the Construction Noise Permit (CNP) issued by the Noise Control Authority have to be followed.

3.27 There were no Action Level exceedance of noise monitoring and Limit Level exceedance of  $L_{Aeq, 30\text{min}}$  recorded during the reporting month.

3.28 Graphical presentation and detailed monitoring results are shown in Appendix L.

3.29 The Event and Action Plan is provided in Appendix J.

3.30 Non-project related construction activities in the adjacent construction sites were observed during the reporting period and may affect the monitoring results.

## 4. COMPARISON OF EM&A RESULTS WITH EIA PREDICTIONS

4.1 The environmental impacts predictions were given in Agreement No. CE 35/2006(CE) Kai Tak Development Engineering Study cum Design and Construction of Advance Works - Investigation, Design and Construction - Kai Tak Development Environmental Impact Assessment Report, EIA Register Nos. AEIAR-130/2009 for Kai Tak Development (The EIA Report). The EM&A data was compared with the EIA predictions as summarized in Table 4.1 to Table 4.3.

*Table 4.1 Comparison of 24-hour average TSP Monitoring Data with EIA predictions*

Air Monitoring Station	ASR No. in EIA report	Predicted Cumulative Maximum 24-hour average TSP concentration		Measured 24-hr average TSP in Reporting Month (February 2025) $\mu\text{g}/\text{m}^3$
		Scenario 1 (Mid 2009 to Mid 2013), $\mu\text{g}/\text{m}^3$	Scenario 2 (Mid 2013 to Late 2016), $\mu\text{g}/\text{m}^3$	
AM3 - Sky Tower	A40 <sup>^</sup>	106	138	35 – 95
AM4(A) - The Hong Kong Society for the Blind's Factory cum Sheltered Workshop*	A43 <sup>^</sup>	123	195	/ – /
AM7 – Hong Kong Children's Hospital	PA60	NA	NA	55 – 90

Note:

<sup>^</sup> Prediction results are given in the Table 3.13 of the EIA report EIA Register Nos. AEIAR-130/2009 for Kai Tak Development.

\* Due to the relocation of The Hong Kong Society for the Blind's Factory cum Sheltered Workshop (AM4(A)), the premises owner rejected ET to conduct impact monitoring since 1 Sept 2022. No 24-TSP monitoring was conducted at AM4(A) because of the assess limitation in the reporting month.

*Table 4.2 Comparison of 1-hour average TSP Monitoring Data with EIA predictions*

Air Monitoring Station	ASR No. in EIA report	Predicted Cumulative Maximum 1-hour average TSP concentration		Measured 1-hr average TSP in Reporting Month (February 2025) $\mu\text{g}/\text{m}^3$
		Scenario 1 (Mid 2009 to Mid 2013), $\mu\text{g}/\text{m}^3$	Scenario 2 (Mid 2013 to Late 2016), $\mu\text{g}/\text{m}^3$	
AM3 - Sky Tower	A40	217 <sup>^</sup>	247 <sup>^</sup>	34 – 78
AM4(A) - The Hong Kong Society for the Blind's Factory cum Sheltered Workshop*	A43	283 <sup>^</sup>	409 <sup>^</sup>	48 – 92
AM7 – Hong Kong Children's Hospital	PA60	NA	NA	44 – 83

Note:

^ Prediction results are given in the Table 3.13 of the EIA report EIA Register Nos. AEIAR-130/2009 for Kai Tak Development.

\* Due to the relocation of The Hong Kong Society for the Blind's Factory cum Sheltered Workshop (AM4(A)), the premises owner rejected ET to conduct impact monitoring since 1 Sept 2022. 1-hour TSP monitoring was conducted on the ground floor outside AM4(A) with facing to the Project Site because of the access limitation in the reporting month.

*Table 4.3 Comparison of Noise Monitoring Data with EIA predictions*

Noise Monitoring Station	NSR No. in EIA report	Predicted Mitigated Construction Noise Levels during Normal Daytime Working Hour L <sub>Aeq, 30min</sub> , dB(A)	Measured Noise Level in Reporting Month (February 2025) L <sub>Aeq, 30min</sub> , dB(A)
M11 - The Hong Kong Society for the Blind's Factory cum Sheltered Workshop*	N18	50 – 76*	70.8– 73.1
M12 - Hong Kong Children's Hospital	PN83, PN84, PN84A	NA	60.5 – 65.9

Note:

\* Prediction results are given in the Table 3.20 of the EIA report EIA Register Nos. AEIAR-130/2009 for Kai Tak Development.

\*Due to the relocation of The Hong Kong Society for the Blind's Factory cum Sheltered Workshop (M11), the premises owner rejected ET to conduct impact monitoring since 1 Sept 2022. Construction noise monitoring was conducted on the ground floor outside M11 with facing to the Project Site because of the access limitation in the reporting month.

4.2 24-hr TSP monitoring result at AM3 were recorded lower than the prediction in the EIA

4.3 Report. Due to the relocation of The Hong Kong Society for the Blind's Factory cum Sheltered Workshop (AM4(A)), the premises owner rejected ET to conduct impact monitoring since 1 Sept 2022. No 24-TSP monitoring was conducted at AM4(A) because of the assess limitation in the reporting month. Non-project related construction activities in the adjacent construction sites were observed during the reporting period and may affect the monitoring results.

4.4 No prediction in the EIA Report for 24-hour TSP monitoring results at AM7.

4.5 1-hour TSP monitoring results at AM3 and AM4(A) were recorded lower than the prediction in the EIA Report. Due to the relocation of The Hong Kong Society for the Blind's Factory cum Sheltered Workshop (AM4(A)), the premises owner rejected ET to conduct impact monitoring since 1 Sept 2022. 1-hour TSP monitoring was conducted on the ground floor outside AM4(A) with facing to the Project Site because of the access limitation in the reporting month. Non-project related construction activities in the adjacent construction sites were observed during the reporting period and may affect the monitoring results.

4.6 No prediction in the EIA Report for 1-hour TSP monitoring results at AM7.

4.7 Noise monitoring results at M11 were recorded lower than the prediction in the EIA Report.

Due to the relocation of The Hong Kong Society for the Blind's Factory cum Sheltered Workshop (M11), the premises owner rejected ET to conduct impact monitoring since 1 Sept 2022. Construction noise monitoring was conducted on the ground floor outside M11 with facing to the Project Site because of the access limitation in the reporting month. Non-project related construction activities in the adjacent construction sites were observed during the reporting period and may affect the monitoring results.

4.8 No prediction in the EIA Report for noise monitoring results at M12.

## 5. LANDSCAPE AND VISUAL MONITORING

5.1 In accordance with EM&A Manuals (EIA Register Nos. AEIAR-130/2009 and AEIAR-170/2013), Landscape and Visual Monitoring shall be carried out during the construction phase of the Project. Regular impact monitoring will be conducted at least once per week.

### **Results and Observations**

5.2 Site inspections were carried out on a weekly basis to monitor the timely implementation of proper environmental management practices and mitigation measures in the Project site.

5.3 Site inspections were conducted on 6, 11, 20 and 27 February 2025 in the reporting month.

5.4 The summaries of site audits are attached in Table 5.1.

*Table 5.1 Summary of observations of Landscape and Visual impact during the reporting month*

Inspection Date	Key Observations	Recommendations / Actions	Close-out Date / Status
06 February 2025	No	NA	NA
11 February 2025	No	NA	NA
20 February 2025	No	NA	NA
27 February 2025	No	NA	NA

5.5 No non-compliance of the landscape and visual impact was recorded in the reporting month.

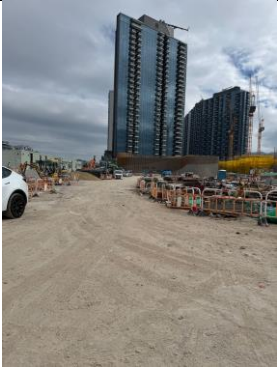

5.6 Should non-compliance of the landscape and visual impact occur, action in accordance with the action plan presented in Appendix N shall be performed.



## 6. ENVIRONMENTAL SITE INSPECTION AND AUDIT


### Site Inspection

- 6.1 Site inspections were carried out on a weekly basis to monitor the timely implementation of proper environmental management practices and mitigation measures in the Project site.
- 6.2 Site inspections were conducted on 6, 11, 20 and 27 February 2025 in the reporting month.
- 6.3 The summaries of site audits are attached in Table 6.1.

*Table 6.1 Summary of site inspections observations during the reporting month*

Inspection Date	Key Observations	Recommendations / Actions	Close-out Date / Status
06 February 2025	Reminder: The WPCO discharge licence has been expired on 30/9/2024. Please complete the renewal process asap, meanwhile ensure no improper discharge from the site.	Action Taken: The renewal process for the discharge license is in progress.	Pending
11 February 2025	 Observation: Main haul road outside the pumping station should be sprayed water regularly to suppress dust emission.	 Action Taken: Main haul road outside the pumping station have been sprayed water regularly to suppress dust emission.	Closed-out on 20 February 2025

Inspection Date	Key Observations	Recommendations / Actions	Close-out Date / Status
	 <p>Observation: NRMM label should be displayed on the crawler aerial working platform (diesel engine).</p>	 <p>Action Taken: NRMM label have been displayed on the crawler aerial working platform (diesel engine).</p>	Closed-out on 20 February 2025
	 <p>Observation: Unknow chemical should be removed.</p>	 <p>Action Taken: Unknow chemical has been removed.</p>	Closed-out on 20 February 2025
20 February 2025	 <p>Observation: The stagnant water should be properly collected at Park 4.</p>	 <p>Action Taken: The stagnant water has been properly collected at Park 4.</p>	Closed-out on 27 February 2025

Inspection Date	Key Observations	Recommendations / Actions	Close-out Date / Status
27 February 2025	 <p>Observation: The chemical should be removed.</p>	 <p>Action Taken: The chemical has been removed.</p>	Closed-out on 06 March 2025

### **Status of Waste Management**

- 6.4 The amount of wastes generated by the major site activities of the work contracts within the Project during the reporting month is shown in Appendix O.
- 6.5 The Contractor was registered as a chemical waste producer for the Project. The Contractor was reminded that chemical waste containers should be properly treated and stored temporarily in designated chemical waste storage area on site in accordance with the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes.

### **Status of Environmental Licenses, Notification and Permits**

- 6.6 A summary of the relevant permits, licenses and/or notifications on environmental protection for the Project is shown in Table 6.2.

*Table 6.2 Summary of Environmental Licenses, Notifications and Permits*

Environmental Licenses, Notifications and Permits	Ref. No.	Valid Form	Valid Till
Environmental Permit under EIAO	EP-337/2009	23 Apr 2009	N/A
	EP-445/2013/B	3 May 2022	N/A
Construction Dust Notification under APCO	445956	6 Jun 2019	N/A
Wastewater Discharge License under WPCO	WT00034610-2019	26 Sep 2019	30 Sep 2024
Waste Disposal Billing Account	7034450	28 Jun 2019	N/A
Registration as a Chemical Waste Producer	5218-286-P3182-03	18 Jul 2019	N/A
Construction Noise Permit	GW-RE0945-24	15 Aug 2024	14 Feb 2025

Environmental Licenses, Notifications and Permits	Ref. No.	Valid Form	Valid Till
	GW-RE0119-25	15 Feb 2025	14 Aug 2025
	GW-RE1319-24	10 Nov 2024	09 May 2025
	GW-RE1326-24	23 Oct 2024	20 Apr 2025
	GW-RE1682-24	05 Jan 2025	04 Jul 2025

### **Implementation Status of Environmental Mitigation Measures**

6.7 The Contractor has implemented environmental mitigation measures and requires as stated in the EIA reports, the EP and the EM&A Manuals. The implementation status of the mitigation measures during the reporting month is summarized in Appendix P.

6.8 In response to the site audit findings, the Contractor carried out corrective actions with summary given in Appendix P.

### **Environmental Complaint and Non-compliance**

6.9 No complaint was received in the reporting month. Summary of complaints in the reporting month is tabulated in Table 6.3.

*Table 6.3 Summary of complaints in the Reporting Month*

Date of complaint received	Description of complaint	Investigation / Recommendations / Action taken	Close-out date / Status
NA	NA	NA	NA

6.10 Complaint log and Complaint Investigation report are shown in Appendix Q.

### **Notifications of summons and successful prosecutions**

6.11 No notification of summons and successful prosecutions was received in the reporting month. Summary of summons and successful prosecutions in the reporting month is tabulated in Table 6.4.

*Table 6.4 Summary of summons and successful prosecutions in the Reporting Month*

Date of receiving notification of summons or prosecutions	Date of event	Description of event	Action taken	Close-out date / Status
No notification of summons and successful prosecutions were received in the reporting month.	NA	NA	NA	NA

6.12 The summaries of cumulative environmental complaint, warning, summon and notification of successful prosecution for the Project is presented in Appendix Q.

## **7. FUTURE KEY ISSUES**

### **Construction Programme in the coming month**

7.1 The major construction activities and potential impacts in the next reporting month as follow:

*Table 7.1 Summary of future key issues and potential impact in the coming month*

Future key issues in the coming month	Potential impact
Road L14d construction	Noise, Air and Water Quality
Outstanding works in saltwater pumping station	Noise and Air Quality, Chemical and Waste Management
Outstanding works of saltwater intake culvert	Noise and Air Quality, Chemical and Waste Management
Flow diversion of box culvert under section 8	Noise and Air Quality, Chemical and Waste Management
Water works along the deck channel of Kai Tak River	Noise and Air Quality, Chemical and Waste Management
Outstanding and defective make of Section 1B	Noise and Air Quality, Chemical and Waste Management
Road L14d construction	Noise and Air Quality, Chemical and Waste Management

7.2 The mitigation measures for environmental impact including Air Quality, Construction Noise, Water Quality, Chemical and Waste Management, Landscape and Visual shall be

implemented:

- Sufficient watering of the works site with the active dust emitting activities,
- Limitation of the speed for vehicles on unpaved site roads,
- Properly cover the stockpiles,
- Good maintenance to the plant and equipment,
- Use of quieter plant and Quality Powered Mechanical Equipment (QPME),
- Provide movable noise barriers,
- Appropriate desilting/ sedimentation devices provided on site for treatment before discharge,
- Well maintain the drainage system to prevent the spillage of wastewater during heavy rainfall,
- Onsite waste sorting and implementation of trip ticket system,
- Good management and control on construction waste reduction,
- Erection of decorative screen hoarding,
- Strictly following the Environmental Permits and Licenses, and
- Provide sufficient mitigation measures as recommended in Approved EIA Reports.

### **Environmental Site Inspection and Monitoring Schedule for next month**

7.3 The tentative schedule for weekly site inspection and air quality and noise monitoring in the next month is provided in Appendix D.

## 8. CONCLUSIONS

- 8.1 Environmental monitoring works were performed in the reporting month and all monitoring results were checked and reviewed.
- 8.2 1-hour TSP monitoring was conducted as scheduled in the reporting month. No Action/Limit Level exceedance was recorded. Due to the relocation of The Hong Kong Society for the Blind's Factory cum Sheltered Workshop (AM4(A)), the premises owner rejected ET to conduct impact monitoring since 1 Sept 2022. 1-hour TSP monitoring was conducted on the ground floor outside AM4(A) with facing to the Project Site because of the access limitation in the reporting month.
- 8.3 24-hour TSP monitoring was conducted as scheduled in the reporting month. No Action/Limit Level exceedance was recorded. Due to the relocation of The Hong Kong Society for the Blind's Factory cum Sheltered Workshop (AM4(A)), the premises owner rejected ET to conduct impact monitoring since 1 Sept 2022. No 24-hour TSP monitoring was conducted at AM4(A) because of the assess limitation in the reporting month.
- 8.4 Construction noise monitoring was conducted as scheduled in the reporting month. No Action/Limit Level exceedance was recorded. Due to the relocation of The Hong Kong Society for the Blind's Factory cum Sheltered Workshop (M11), the premises owner rejected ET to conduct impact monitoring since 1 Sept 2022. Impact monitoring was conducted on the ground floor outside M11 with facing to the Project Site because of the access limitation in the reporting month.
- 8.5 No complaint was received in the reporting month.
- 8.6 No notification of summons and successful prosecutions was received in the reporting month.

**Figure**

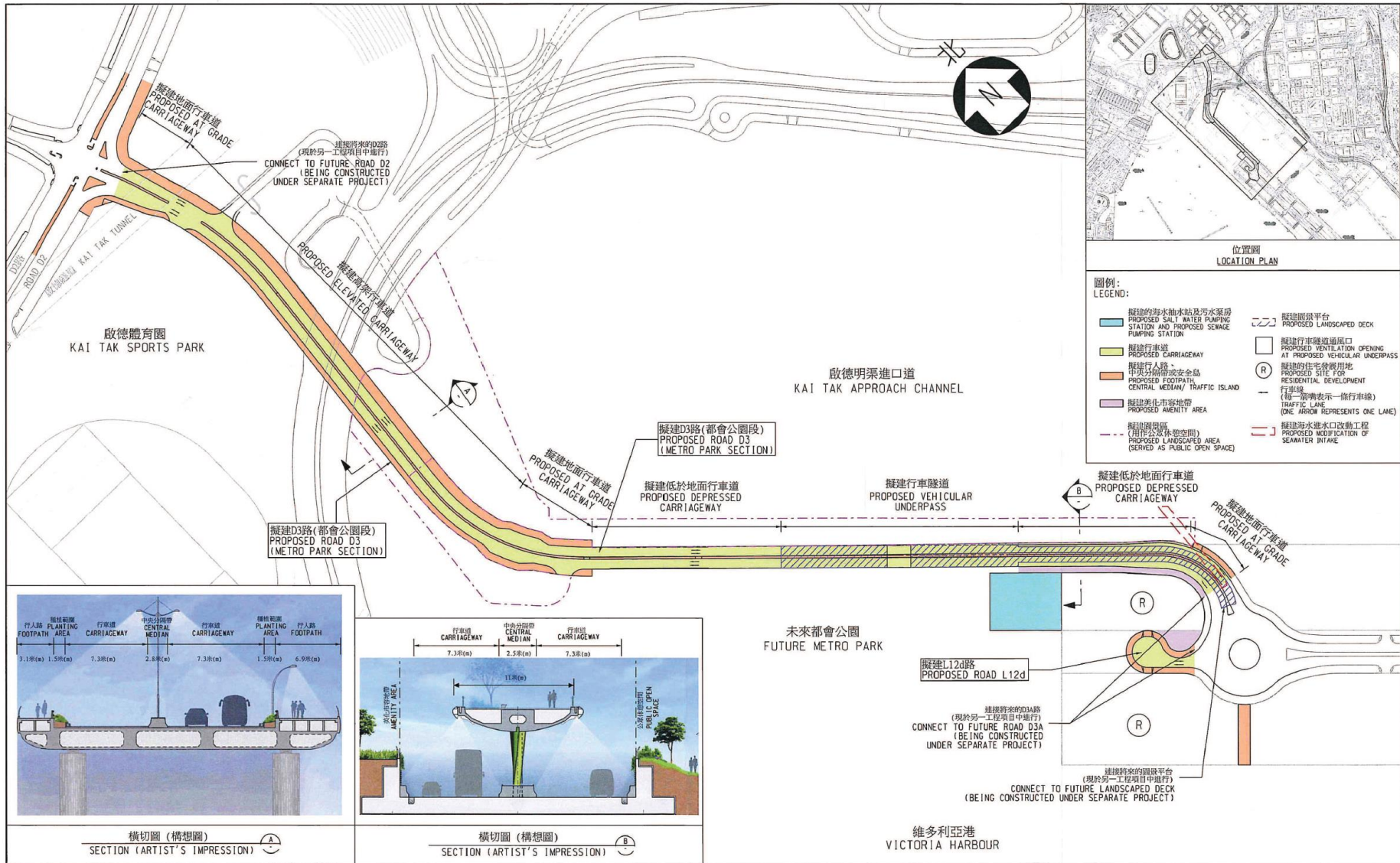


Figure 1 – Proposed works of Contract No. ED/2018/01

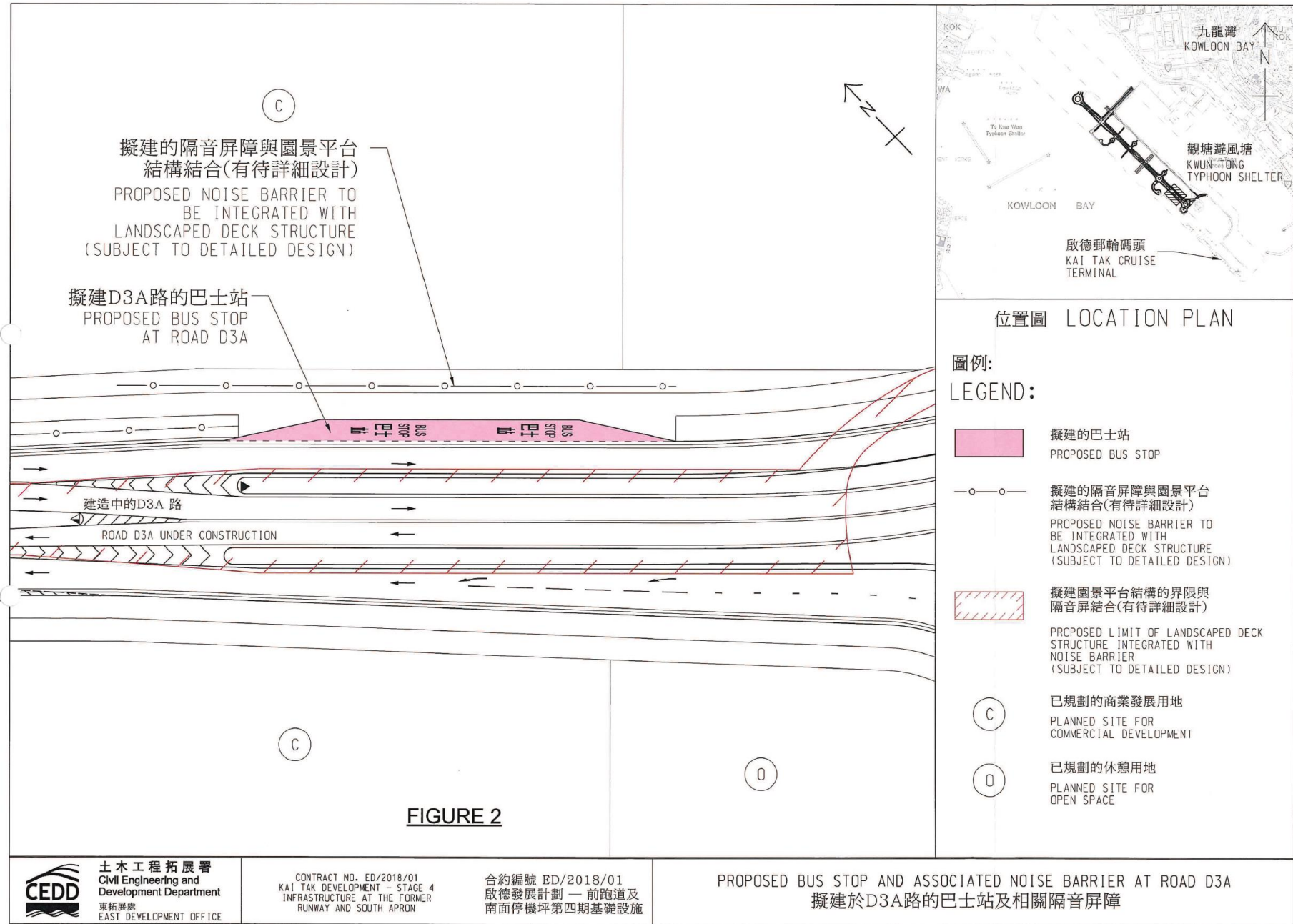
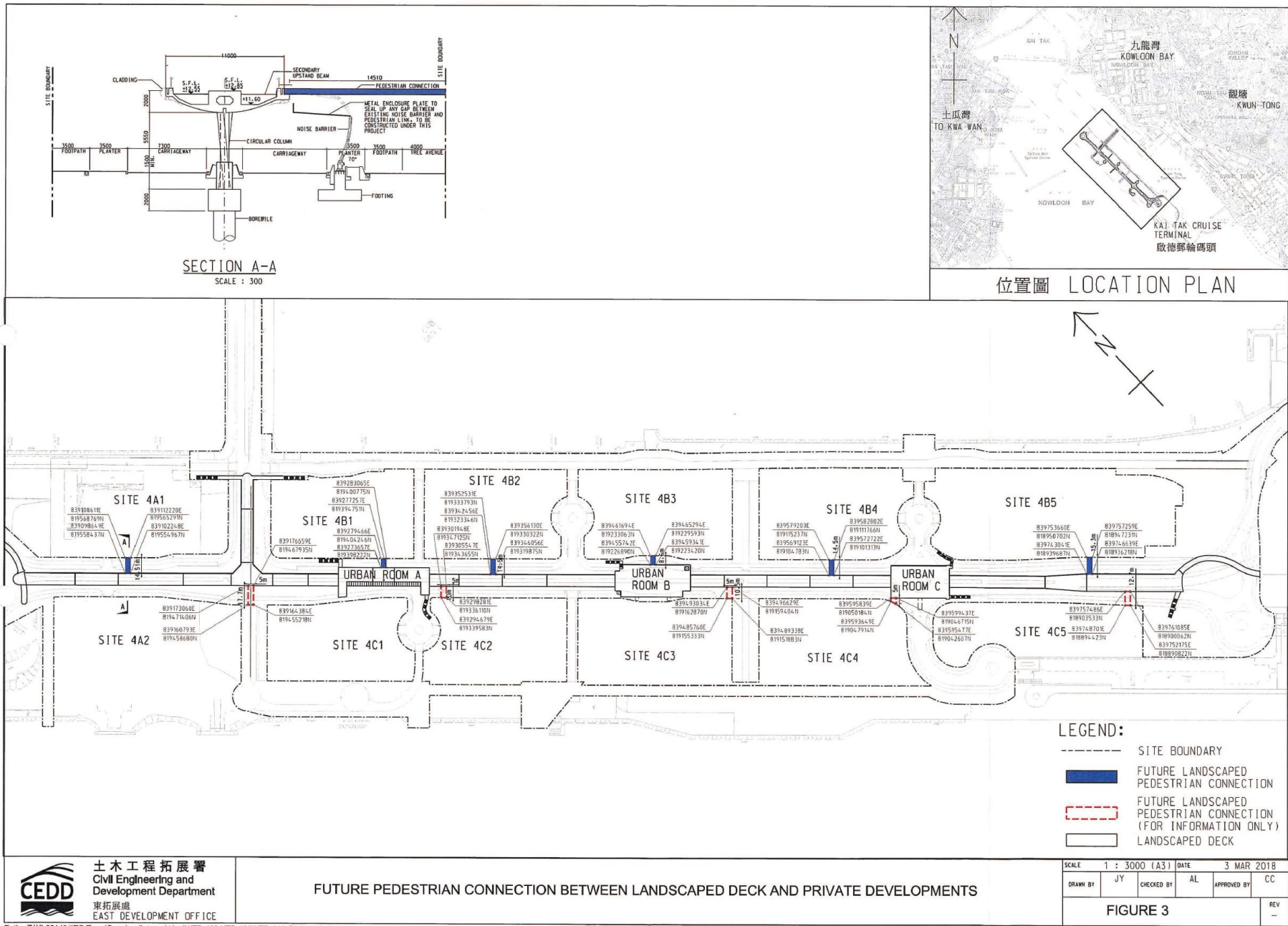


Figure 2 – Proposed Bus Stop And Associated Noise Barrier At Road D3A



Path : Z:\KL2014011TO Team\Drawing (Internal Use)\KTD-400-KTD-499\KTD-414 (PL Location).dgn

Print Date : 7/3/2019

Figure 3 – Future Pedestrian Connection Between Landscaped Deck And Private Developments

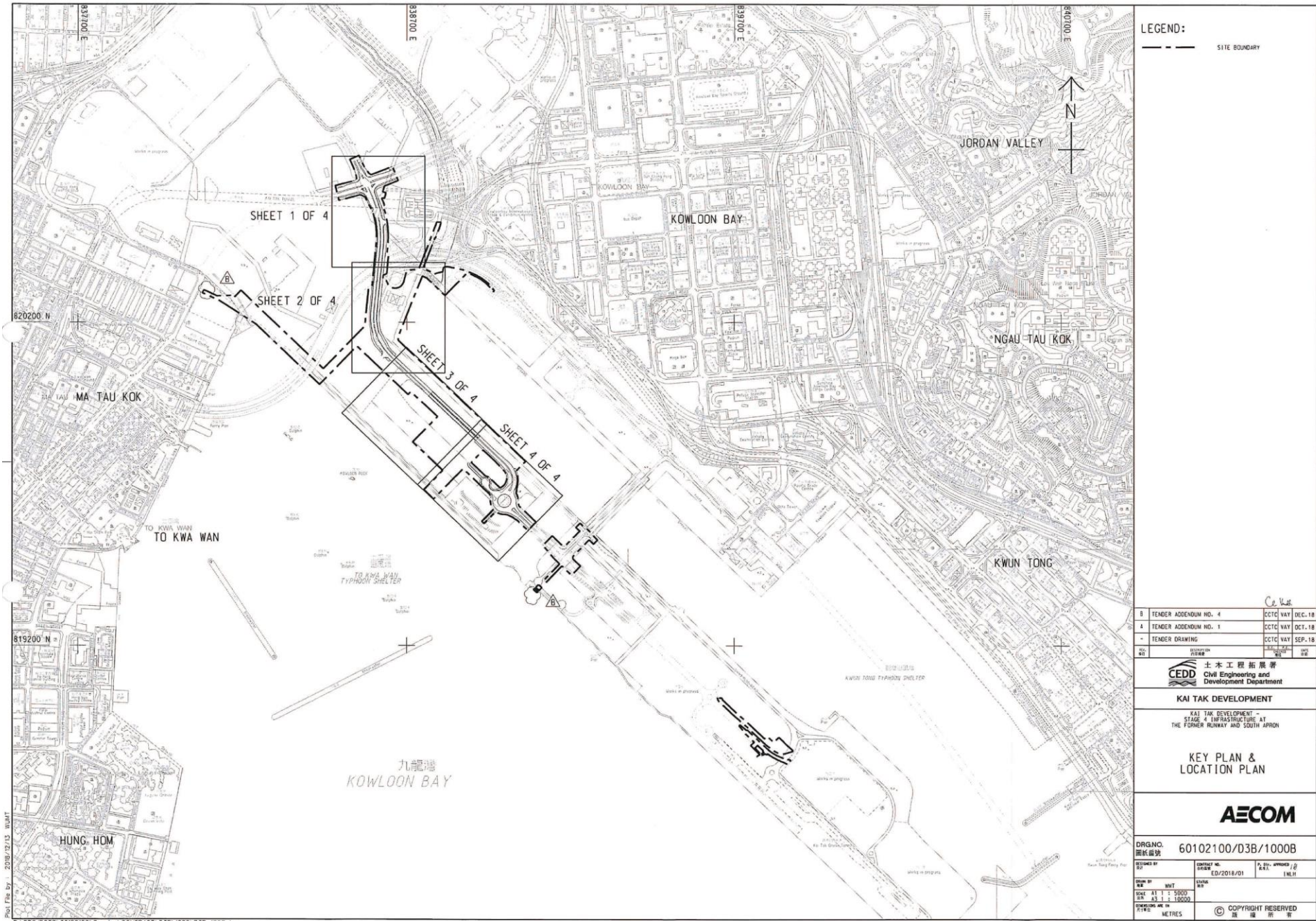


Figure 4 – Site Layout Plan

Special Traffic & Transport Arrangement

Notices on Clearways

Notices on Public Transports

Notices on Prohibited Zone

Notices on Temporary Speed Limits

Notices on Temporary Road Closure

Notices on Expressways

Other Notices

## TRAFFIC NOTICES

### TRANSPORT DEPARTMENT NOTICE

#### Temporary Traffic Arrangement on Newly Constructed Unnamed Road (Road D3 - (Metro Park Section)), Kowloon City

Notice is hereby given that the newly constructed unnamed road (Kai Tak Development - Road D3 (Metro Park Section)) connecting Shing Fung Road and Shing Kai Road/Muk Tai Street junction in Kowloon City District will be partially opened with effect from 2:00 p.m. on 31 December 2022.

Appropriate traffic signs will be erected on site to guide motorists.

LEE Sui-chun, Macella Commissioner for Transport (Acting)

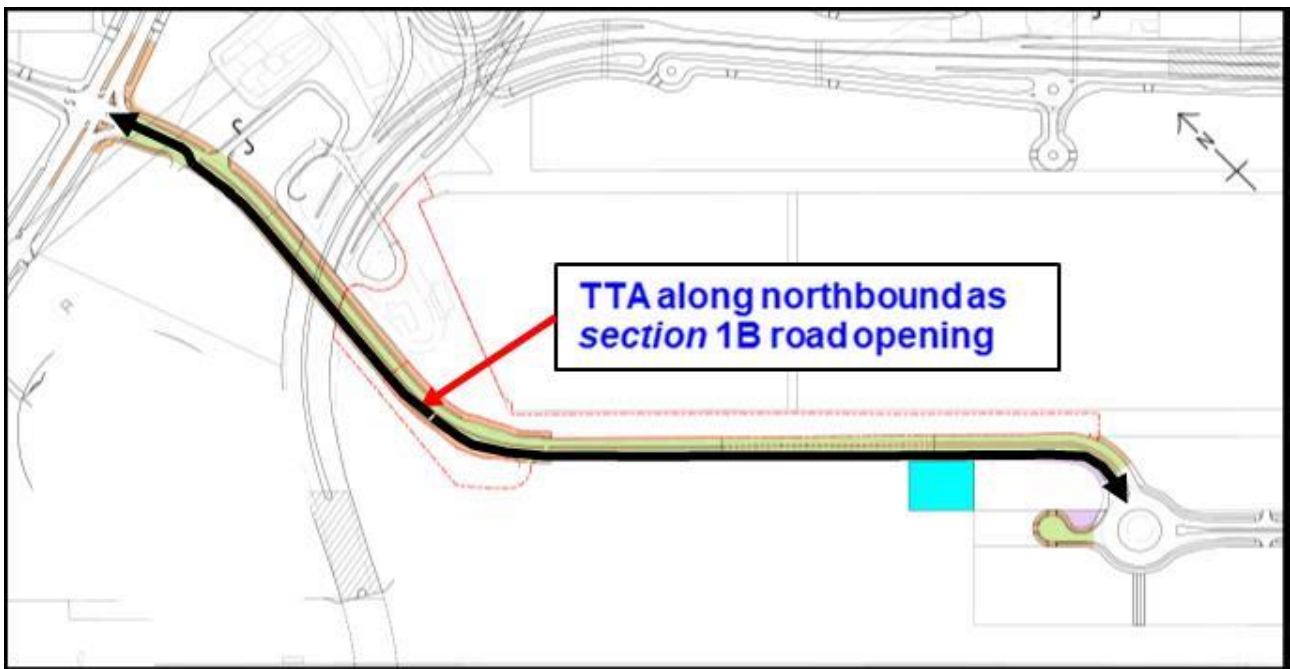


Figure 5 – New Opened Road on 31 December 2022

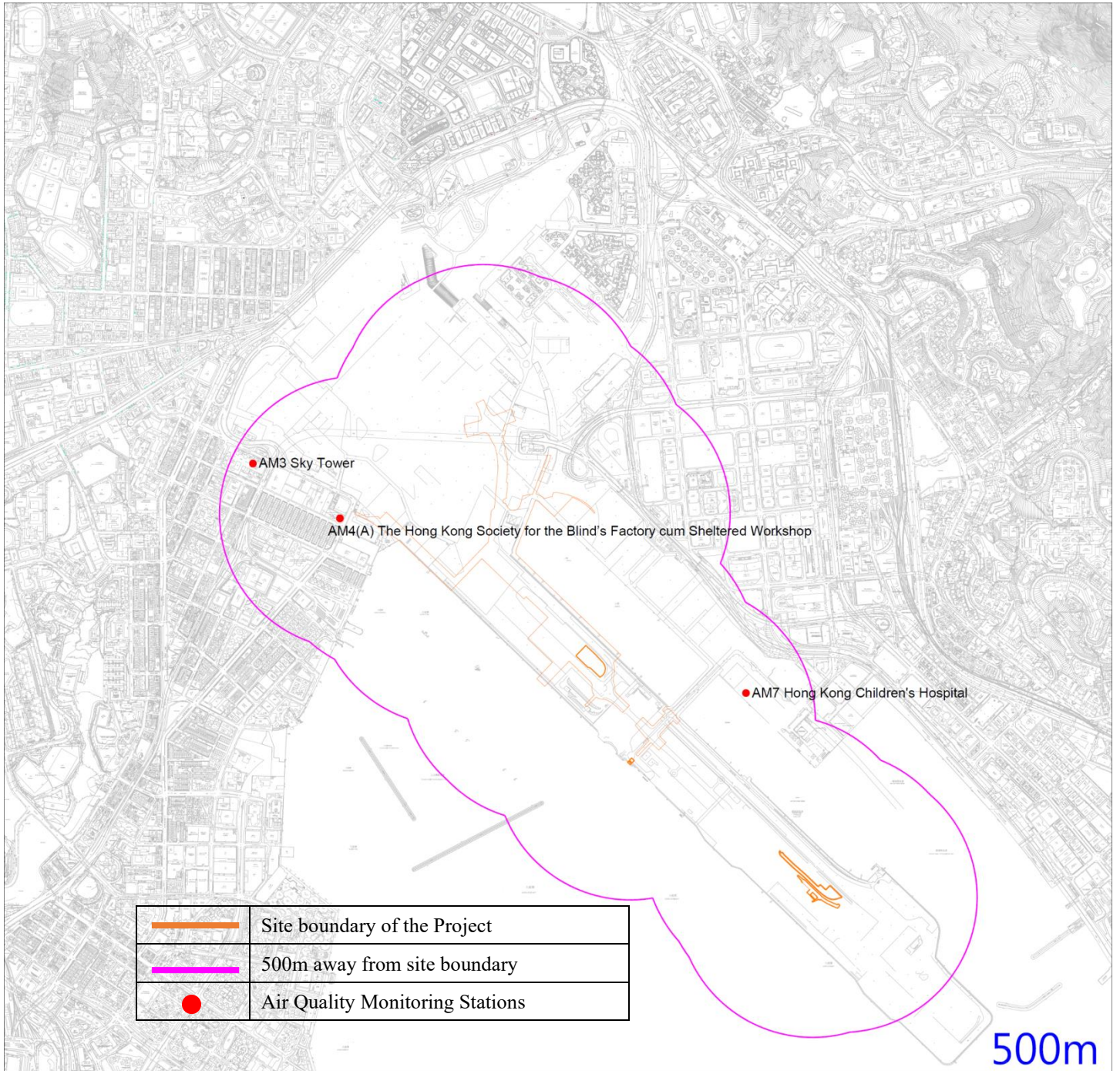


Figure 6 – Air Quality Monitoring Stations

\* Due to the relocation of The Hong Kong Society for the Blind's Factory cum Sheltered Workshop (M11), the premises owner rejected ET to conduct impact monitoring since 1 Sept 2022. Construction noise monitoring was conducted on the ground floor outside M11 with facing to the Project Site because of the access limitation in the reporting month.

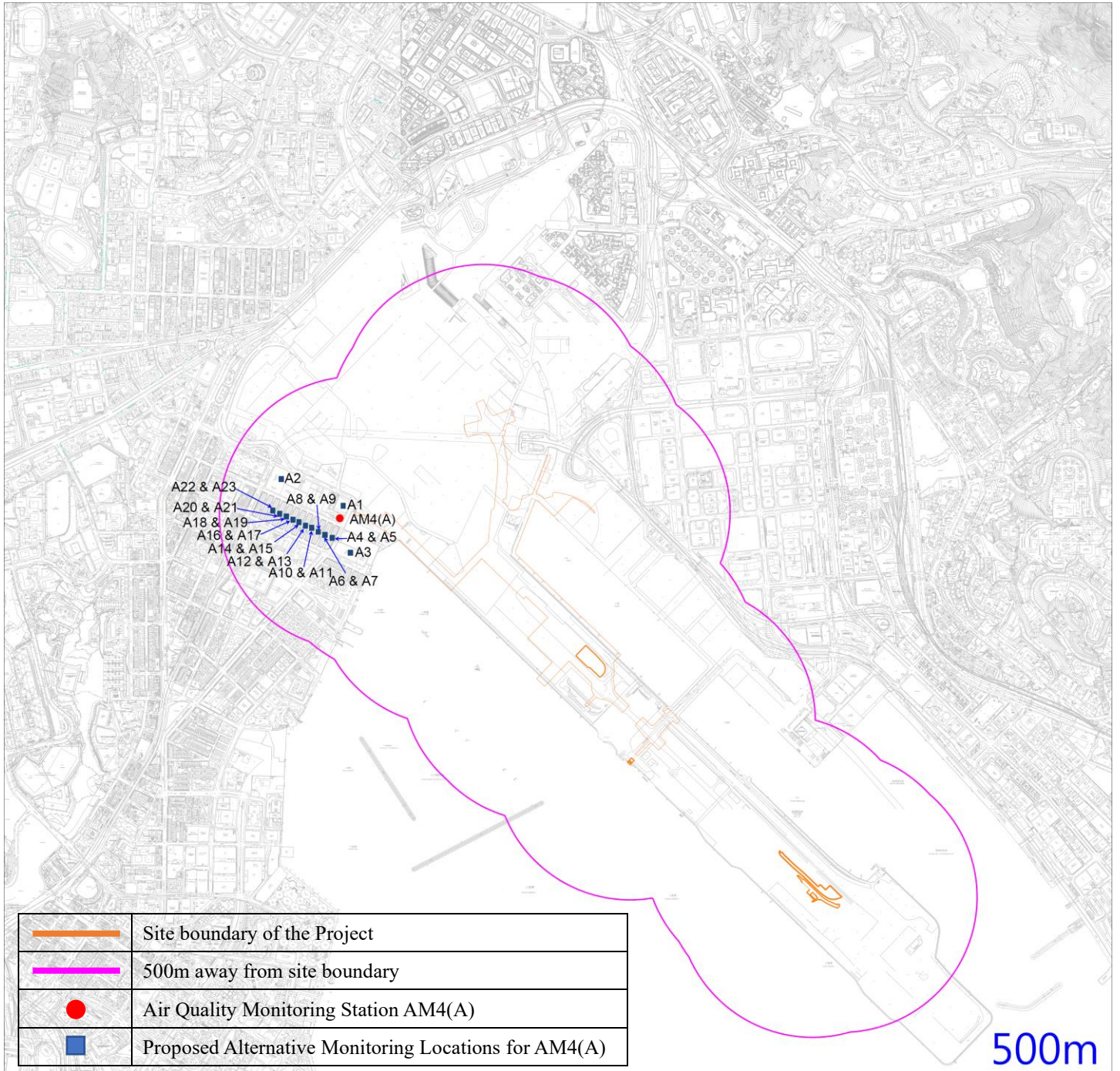


Figure 7 – Proposed Alternative Monitoring Locations for AM4(A)

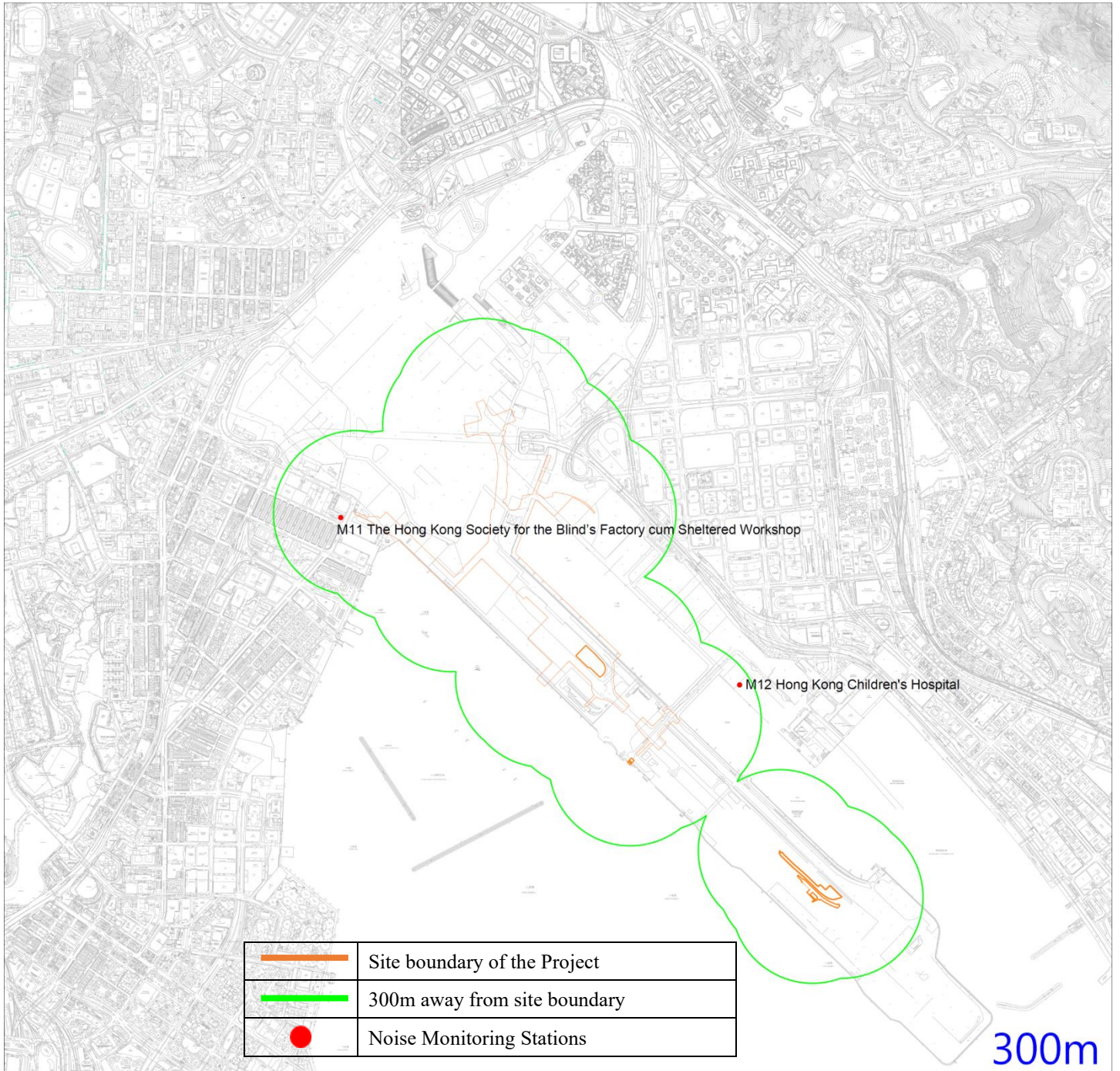


Figure 8 – Noise Monitoring Stations

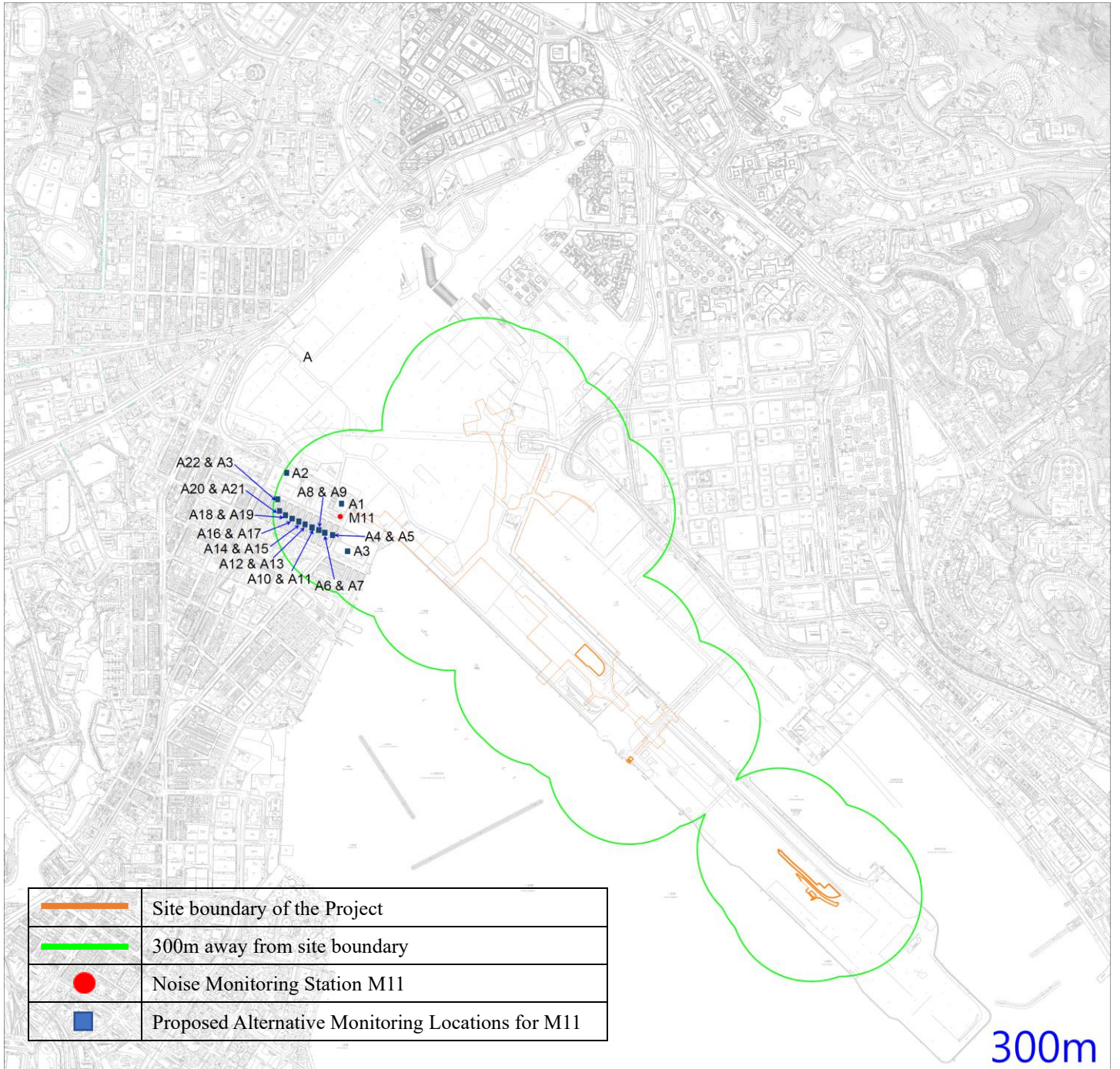
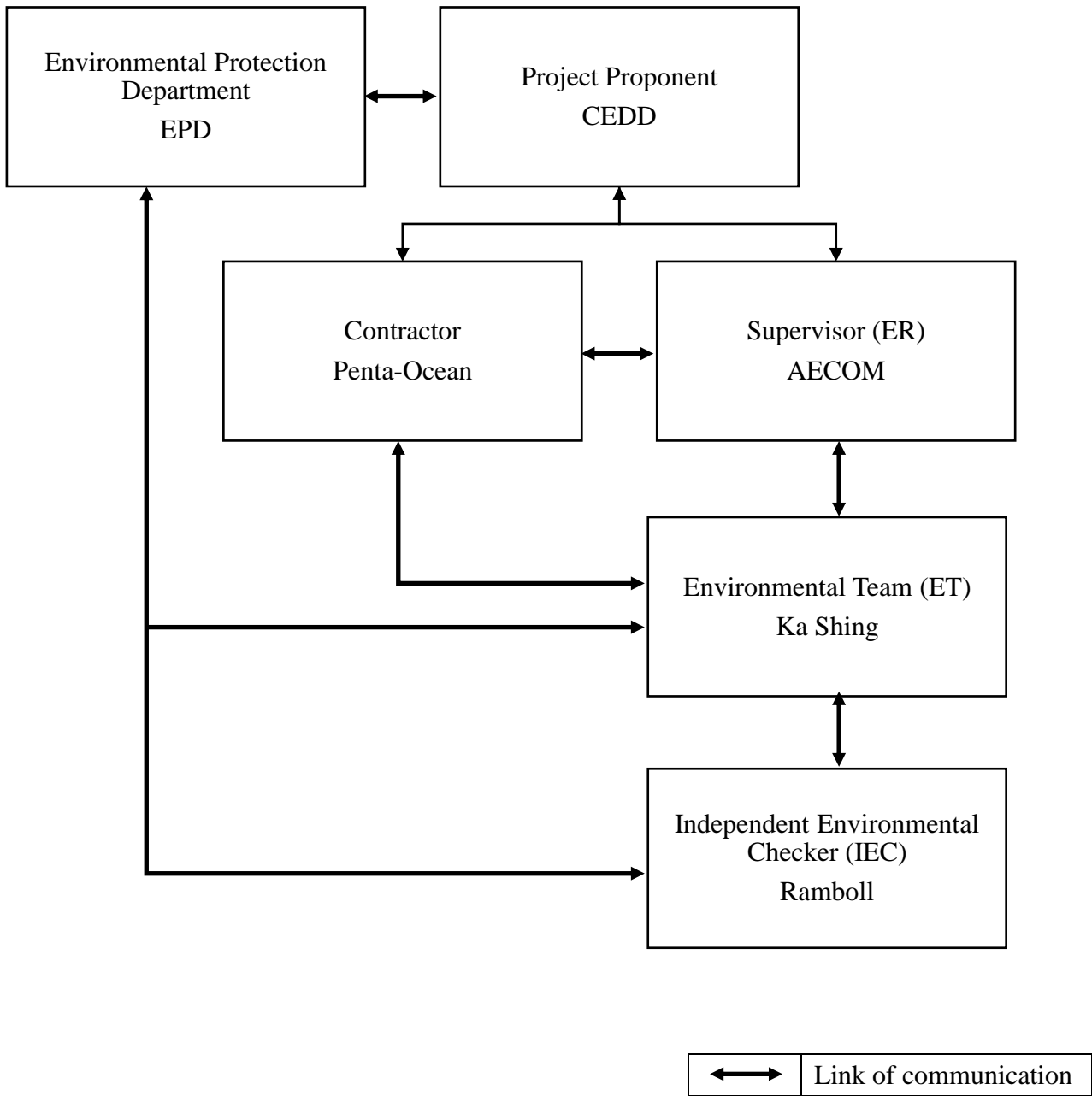


Figure 9 – Proposed Alternative Monitoring Locations for M11

**Appendix A – Organization Chart of EM&A Team**



# Appendix B – Construction Programme

ID	WBS	Task Name	Duration	Start	Finish	Predecessors	Successors	Task Calendar	
1	1	<b>Section 6D (under acceleration programme)</b>	<b>795 d</b>	<b>Thu 1/9/22</b>	<b>Fri 15/11/24</b>			<b>C2</b>	Section 6D (under acceleration programme)
2	1.1	Planned completion (15/11/24)	0 d	Fri 15/11/24	Fri 15/11/24	3,139,257,29		C2	15/11
3	1.2	<b>Area no.1</b>	<b>133 d</b>	<b>Fri 5/7/24</b>	<b>Thu 14/11/24</b>		<b>2</b>	<b>C2</b>	Area no.1
4	1.2.1	<b>EVA</b>	<b>79 d</b>	<b>Wed 28/8/24</b>	<b>Thu 14/11/24</b>			<b>C2</b>	EVA
5	1.2.1.1	<b>EVA no.1-1 (from the completed paving blocks towards the bridge over KT river)</b>	<b>28 d</b>	<b>Wed 25/9/24</b>	<b>Tue 22/10/24</b>			<b>C2</b>	EVA no.1-1 (from the completed paving blocks towards the bridge over KT river)
6	1.2.1.1.1	u-channel construction	10 d	Wed 25/9/24	Fri 4/10/24		7,60SS	C2	u-channel construction 4/10
7	1.2.1.1.2	formation	4 d	Sat 5/10/24	Tue 8/10/24	6	8	C2	formation 8/10
8	1.2.1.1.3	subbase and road base	4 d	Wed 9/10/24	Sat 12/10/24	7	9	C2	subbase and road base 12/10
9	1.2.1.1.4	paving blocks laying	10 d	Sun 13/10/24	Tue 22/10/24	8		C2	paving blocks laying 22/10
10	1.2.1.2	<b>EVA no.1-2</b>	<b>79 d</b>	<b>Wed 28/8/24</b>	<b>Thu 14/11/24</b>			<b>C2</b>	EVA no.1-2
11	1.2.1.2.1	Access Divert from CKR-KTE	0 d	Wed 28/8/24	Wed 28/8/24		36,18	C2	28/8
12	1.2.1.2.2	Remaining paving blocks laying	8 d	Sat 28/9/24	Sat 5/10/24		13FS+4 d	C2	Remaining paving blocks laying 5/10
13	1.2.1.2.3	6 nos. of lighting poles and 9 nos. of bollards installation	12 d	Thu 10/10/24	Mon 21/10/24	12FS+4 d	15	C2	6 nos. of lighting poles and 9 nos. of bollards installation 21/10
14	1.2.1.2.4	matching cover installation to drawpits (assume matching cover deliver to site mid Oct)	16 d	Wed 30/10/24	Thu 14/11/24			C2	matching cover installation to drawpits (assume matching cover deliver to site mid Oct) 14/11
15	1.2.1.2.5	irrigation; drinking fountain and cleansing pipes installation	8 d	Tue 22/10/24	Tue 29/10/24	13		C2	irrigation; drinking fountain and cleansing pipes installation 29/10
16	1.2.2	<b>Hard Landscape &amp; soft landscape</b>	<b>77 d</b>	<b>Fri 23/8/24</b>	<b>Thu 7/11/24</b>			<b>C2</b>	Hard Landscape & soft landscape
17	1.2.2.1	<b>Fitness Lawn</b>	<b>52 d</b>	<b>Wed 28/8/24</b>	<b>Fri 18/10/24</b>			<b>C2</b>	Fitness Lawn
18	1.2.2.1.1	formation	11 d	Wed 28/8/24	Sat 7/9/24	11	19FS+5 d,23	C2	formation 7/9
19	1.2.2.1.2	kerb laying	15 d	Fri 13/9/24	Fri 27/9/24	18FS+5 d	20FS-3 d,21	C2	kerb laying 27/9
20	1.2.2.1.3	Sub-soil Drain	3 d	Wed 25/9/24	Fri 27/9/24	19FS-3 d	21	C2	Sub-soil Drain 27/9
21	1.2.2.1.4	top soil filling	5 d	Sun 29/9/24	Thu 3/10/24	20,19,23	22	C2	top soil filling 3/10
22	1.2.2.1.5	planting	6 d	Fri 4/10/24	Wed 9/10/24	21	24	C2	planting 9/10
23	1.2.2.1.6	u-channel surround the fitness lawn	21 d	Sun 8/9/24	Sat 28/9/24	18	26FS+5 d,30SS,21	C2	u-channel surround the fitness lawn 28/9
24	1.2.2.1.7	7 nos. of bollard installation	9 d	Thu 10/10/24	Fri 18/10/24	22		C2	7 nos. of bollard installation 18/10
25	1.2.2.2	<b>30mm Granite Paving around Fitness Lawn</b>	<b>19 d</b>	<b>Fri 4/10/24</b>	<b>Tue 22/10/24</b>			<b>C2</b>	30mm Granite Paving around Fitness Lawn
26	1.2.2.2.1	Sub-base	5 d	Fri 4/10/24	Tue 8/10/24	23FS+5 d	27	C2	Sub-base 8/10
27	1.2.2.2.2	Granite Paving with Kerb	14 d	Wed 9/10/24	Tue 22/10/24	26		C2	Granite Paving with Kerb 22/10
28	1.2.2.3	<b>Slope Way btw Fitness Lawn and Event Deck</b>	<b>29 d</b>	<b>Sat 28/9/24</b>	<b>Sat 26/10/24</b>			<b>C2</b>	Slope Way btw Fitness Lawn and Event Deck
29	1.2.2.3.1	Formation	3 d	Sat 28/9/24	Mon 30/9/24	39FS+4 d	30	C2	Formation 30/9
30	1.2.2.3.2	Sub-base	3 d	Tue 1/10/24	Thu 3/10/24	23SS,29	32	C2	Sub-base 3/10
31	1.2.2.3.3	Granite Paving with Kerb	12 d	Fri 11/10/24	Tue 22/10/24	32	34SS+6 d	C2	Granite Paving with Kerb 22/10
32	1.2.2.3.4	Footing for Handrail	7 d	Fri 4/10/24	Thu 10/10/24	30	31,33	C2	Footing for Handrail 10/10
33	1.2.2.3.5	Handrail Installation	3 d	Fri 11/10/24	Sun 13/10/24	32		C2	Handrail Installation 13/10
34	1.2.2.3.6	13 nos. of bollard installation	10 d	Thu 17/10/24	Sat 26/10/24	31SS+6 d		C2	13 nos. of bollard installation 26/10
35	1.2.2.4	<b>Event Deck (no. 1)</b>	<b>53 d</b>	<b>Wed 28/8/24</b>	<b>Sat 19/10/24</b>			<b>C2</b>	Event Deck (no. 1)
36	1.2.2.4.1	Formation	2 d	Wed 28/8/24	Thu 29/8/24	11	37	C2	Formation 29/8
37	1.2.2.4.2	Blinding concrete	1 d	Fri 30/8/24	Fri 30/8/24	36	38	C2	Blinding concrete 30/8
38	1.2.2.4.3	Base RC Structure	5 d	Sat 31/8/24	Wed 4/9/24	37	39	C2	Base RC Structure 4/9
39	1.2.2.4.4	Wall RC Structure (include formwork dismantling)	19 d	Thu 5/9/24	Mon 23/9/24	38	40,29FS+4 d,45	C2	Wall RC Structure (include formwork dismantling) 23/9
40	1.2.2.4.5	Backfilling	7 d	Tue 24/9/24	Mon 30/9/24	39	41,43FS+3 d,46	C2	Backfilling 30/9
41	1.2.2.4.6	Sub-base	3 d	Tue 1/10/24	Thu 3/10/24	40	42FS+2 d	C2	Sub-base 3/10
42	1.2.2.4.7	50mm Granite Stone Paving	12 d	Sun 6/10/24	Thu 17/10/24	41FS+2 d		C2	50mm Granite Stone Paving 17/10
43	1.2.2.4.8	Glass Balustrade Installation	16 d	Fri 4/10/24	Sat 19/10/24	40FS+3 d		C2	Glass Balustrade Installation 19/10
44	1.2.2.5	<b>Rain Garden</b>	<b>33 d</b>	<b>Tue 24/9/24</b>	<b>Sat 26/10/24</b>			<b>C2</b>	Rain Garden
45	1.2.2.5.1	Excavation & Formation	3 d	Tue 24/9/24	Thu 26/9/24	39	50	C2	Excavation & Formation 26/9
46	1.2.2.5.2	Aggregate Filling	4 d	Tue 1/10/24	Fri 4/10/24	40	47	C2	Aggregate Filling 4/10
47	1.2.2.5.3	Coarse Sand Installation	4 d	Sat 5/10/24	Tue 8/10/24	46	48	C2	Coarse Sand Installation 8/10
48	1.2.2.5.4	Soil Mix Filling	8 d	Wed 9/10/24	Wed 16/10/24	47	49	C2	Soil Mix Filling 16/10
49	1.2.2.5.5	Planting	10 d	Thu 17/10/24	Sat 26/10/24	48		C2	Planting 26/10
50	1.2.2.5.6	Honed Concrete Seating (S2)	21 d	Fri 27/9/24	Thu 17/10/24	45	52SS+5 d,51SS+4 d	C2	Honed Concrete Seating (S2) 17/10
51	1.2.2.5.7	U-channel	14 d	Tue 1/10/24	Mon 14/10/24	45SS+4 d		C2	U-channel 14/10
52	1.2.2.5.8	Kerb Installation	12 d	Wed 2/10/24	Sun 13/10/24	45SS+5 d	53SS+2 d	C2	Kerb Installation 13/10
53	1.2.2.5.9	Granite Paving path	21 d	Fri 4/10/24	Thu 24/10/24	52SS+2 d	83SS+4 d	C2	Granite Paving path 24/10
54	1.2.2.6	<b>walkway construction (1st part upto amphitheatre)</b>	<b>66 d</b>	<b>Fri 23/8/24</b>	<b>Sun 27/10/24</b>			<b>C2</b>	walkway construction (1st part upto amphitheatre)

Acceleration Programme Rev 16C

Task █ Summary  Start-only  Critical  Progress █

Milestone ◆ Project Summary  Finish-only  Critical Split  Manual Progress █

ID	WBS	Task Name	Duration	Start	Finish	Predecessors	Successors	Task Calendar	
55	1.2.2.6.1	stainless steel channel for glass balstrade installation	13 d	Fri 23/8/24	Wed 4/9/24		77SS,56	C2	stainless steel channel for glass balstrade installation 4/9
56	1.2.2.6.2	Formation & Sub-base (Concrete)	21 d	Thu 5/9/24	Wed 25/9/24	55	57	C2	Formation & Sub-base (Concrete) 25/9
57	1.2.2.6.3	glass balstrade installation (include E&M)	21 d	Thu 26/9/24	Wed 16/10/24	56	58SS+8 d	C2	glass balstrade installation (include E&M) 16/10
58	1.2.2.6.4	Porcelain Tile Paving	24 d	Fri 4/10/24	Sun 27/10/24	57SS+8 d		C2	Porcelain Tile Paving 27/10
59	1.2.2.7	<b>Rain Shelters (3 nos) &amp; Bike Parking</b>	<b>30 d</b>	<b>Wed 25/9/24</b>	<b>Thu 24/10/24</b>			<b>C2</b>	<b>Rain Shelters (3 nos) &amp; Bike Parking</b>
60	1.2.2.7.1	Formation	3 d	Wed 25/9/24	Fri 27/9/24	6SS	61	C2	Formation 27/9
61	1.2.2.7.2	Blinding Concrete	1 d	Sat 28/9/24	Sat 28/9/24	60	62FS-2 d	C2	Blinding Concrete 28/9
62	1.2.2.7.3	RC Footing	7 d	Fri 27/9/24	Thu 3/10/24	61FS-2 d	63FS-3 d,85	C2	RC Footing 3/10
63	1.2.2.7.4	Steel Shelter Installation	14 d	Tue 1/10/24	Mon 14/10/24	62FS-3 d	64FS-3 d	C2	Steel Shelter Installation 14/10
64	1.2.2.7.5	Benches Installation	13 d	Sat 12/10/24	Thu 24/10/24	63FS-3 d		C2	Benches Installation 24/10
65	1.2.2.8	<b>Dry Fountain</b>	<b>57 d</b>	<b>Thu 12/9/24</b>	<b>Thu 7/11/24</b>			<b>C2</b>	<b>Dry Fountain</b>
66	1.2.2.8.1	Excavation & Formation	5 d	Thu 12/9/24	Mon 16/9/24		67	C2	Excavation & Formation 16/9
67	1.2.2.8.2	Blinding Concrete	1 d	Tue 17/9/24	Tue 17/9/24	66	68	C2	Blinding Concrete 17/9
68	1.2.2.8.3	RC Base Concrete	13 d	Wed 18/9/24	Mon 30/9/24	67	69,74	C2	RC Base Concrete 30/9
69	1.2.2.8.4	Plinths	6 d	Tue 1/10/24	Sun 6/10/24	68	70	C2	Plinths 6/10
70	1.2.2.8.5	Waterproofing	2 d	Mon 7/10/24	Tue 8/10/24	69	71	C2	Waterproofing 8/10
71	1.2.2.8.6	Fountain Equipment with LED Installation	30 d	Wed 9/10/24	Thu 7/11/24	70	72SS	C2	Fountain Equipment with LED Installation 7/11
72	1.2.2.8.7	Frame Support Beam Installation	8 d	Wed 9/10/24	Wed 16/10/24	71SS	73	C2	Frame Support Beam Installation 16/10
73	1.2.2.8.8	Frame & Granite Stone Paving	10 d	Thu 17/10/24	Sat 26/10/24	72		C2	Frame & Granite Stone Paving 26/10
74	1.2.2.8.9	U-channel around Dry Fountain	16 d	Tue 1/10/24	Wed 16/10/24	68	75	C2	U-channel around Dry Fountain 16/10
75	1.2.2.8.10	granite paving around dry fountain	8 d	Thu 17/10/24	Thu 24/10/24	74		C2	granite paving around dry fountain 24/10
76	1.2.2.9	<b>Seafront Lawn at North of Dry Fountain</b>	<b>58 d</b>	<b>Fri 23/8/24</b>	<b>Sat 19/10/24</b>			<b>C2</b>	<b>Seafront Lawn at North of Dry Fountain</b>
77	1.2.2.9.1	Formation & Blinding Concrete	8 d	Fri 23/8/24	Fri 30/8/24	55SS	78	C2	Formation & Blinding Concrete 30/8
78	1.2.2.9.2	RC Footing (S1)	9 d	Sat 31/8/24	Sun 8/9/24	77	80,79FS+7 d	C2	RC Footing (S1) 8/9
79	1.2.2.9.3	RC footing (S3)	12 d	Mon 16/9/24	Fri 27/9/24	78FS+7 d	81	C2	RC footing (S3) 27/9
80	1.2.2.9.4	Honed Concrete Seating (S1)	12 d	Mon 9/9/24	Fri 20/9/24	78		C2	Honed Concrete Seating (S1) 20/9
81	1.2.2.9.5	Honed Concrete Seating (S3)	8 d	Sat 28/9/24	Sat 5/10/24	79	82	C2	Honed Concrete Seating (S3) 5/10
82	1.2.2.9.6	5 nos. bollard installation	8 d	Sun 6/10/24	Sun 13/10/24	81		C2	5 nos. bollard installation 13/10
83	1.2.2.9.7	granite paving between lawn and rain garden	12 d	Tue 8/10/24	Sat 19/10/24	53SS+4 d		C2	granite paving between lawn and rain garden 19/10
84	1.2.2.10	<b>Planting Area at West side of EVA</b>	<b>32 d</b>	<b>Fri 4/10/24</b>	<b>Mon 4/11/24</b>			<b>C2</b>	<b>Planting Area at West side of EVA</b>
85	1.2.2.10.1	Formation	6 d	Fri 4/10/24	Wed 9/10/24	62	86	C2	Formation 9/10
86	1.2.2.10.2	Sub-soil Drain	6 d	Thu 10/10/24	Tue 15/10/24	85	87	C2	Sub-soil Drain 15/10
87	1.2.2.10.3	Soil Mix Filling	8 d	Wed 16/10/24	Wed 23/10/24	86	88	C2	Soil Mix Filling 23/10
88	1.2.2.10.4	Planting Trees	12 d	Thu 24/10/24	Mon 4/11/24	87		C2	Planting Trees 4/11
89	1.2.3	<b>E&amp;M works</b>	<b>38 d</b>	<b>Mon 30/9/24</b>	<b>Wed 6/11/24</b>			<b>C2</b>	<b>E&amp;M works</b>
90	1.2.3.1	<b>4 nos. of pillar boxes</b>	<b>38 d</b>	<b>Mon 30/9/24</b>	<b>Wed 6/11/24</b>			<b>C2</b>	<b>4 nos. of pillar boxes</b>
91	1.2.3.1.1	plinths construction	8 d	Mon 30/9/24	Mon 7/10/24		92	C2	plinths construction 7/10
92	1.2.3.1.2	pillar box installation	30 d	Tue 8/10/24	Wed 6/11/24	91		C2	pillar box installation 6/11
93	1.2.4	<b>Main Building</b>	<b>133 d</b>	<b>Fri 5/7/24</b>	<b>Thu 14/11/24</b>			<b>C2</b>	<b>Main Building</b>
94	1.2.4.1	<b>Observation Deck</b>	<b>123 d</b>	<b>Mon 15/7/24</b>	<b>Thu 14/11/24</b>			<b>C2</b>	<b>Observation Deck</b>
95	1.2.4.1.1	<b>ABWF works</b>	<b>30 d</b>	<b>Fri 20/9/24</b>	<b>Sat 19/10/24</b>			<b>C2</b>	<b>ABWF works</b>
96	1.2.4.1.1.1	Artificial granite tiles	30 d	Fri 20/9/24	Sat 19/10/24			C2	Artificial granite tiles 19/10
97	1.2.4.1.2	<b>E&amp;M</b>	<b>83 d</b>	<b>Mon 15/7/24</b>	<b>Sat 5/10/24</b>			<b>C2</b>	<b>E&amp;M</b>
98	1.2.4.1.2.1	Electrical works (lighting)	45 d	Mon 15/7/24	Wed 28/8/24			C2	Electrical works (lighting) 28/8
99	1.2.4.1.2.2	plumbing and drainage works (inside the kiosk)	10 d	Thu 26/9/24	Sat 5/10/24			C2	plumbing and drainage works (inside the kiosk) 5/10
100	1.2.4.1.3	<b>Lift no. 5 installation</b>	<b>50 d</b>	<b>Thu 26/9/24</b>	<b>Thu 14/11/24</b>			<b>C2</b>	<b>Lift no. 5 installation</b>
101	1.2.4.1.3.1	lift car installation	40 d	Thu 26/9/24	Mon 4/11/24		102	C2	lift car installation 4/11
102	1.2.4.1.3.2	LE5 submission and inspection by EMSD	10 d	Tue 5/11/24	Thu 14/11/24	101		C2	LE5 submission and inspection by EMSD 14/11
103	1.2.4.2	<b>Back of House</b>	<b>117 d</b>	<b>Fri 5/7/24</b>	<b>Tue 29/10/24</b>			<b>C2</b>	<b>Back of House</b>
104	1.2.4.2.1	<b>Building A</b>	<b>106 d</b>	<b>Fri 5/7/24</b>	<b>Fri 18/10/24</b>			<b>C2</b>	<b>Building A</b>
105	1.2.4.2.1.1	<b>ABWF</b>	<b>37 d</b>	<b>Thu 12/9/24</b>	<b>Fri 18/10/24</b>			<b>C2</b>	<b>ABWF</b>
106	1.2.4.2.1.1.1	Door leaf installation(remaining)	5 d	Thu 12/9/24	Mon 16/9/24			C2	Door leaf installation(remaining) 16/9
107	1.2.4.2.1.1.2	FRP Ceiling at E&M rooms	7 d	Mon 23/9/24	Sun 29/9/24			C2	FRP Ceiling at E&M rooms 29/9
108	1.2.4.2.1.1.3	Floor finish	10 d	Wed 2/10/24	Fri 11/10/24		109	C2	Floor finish 11/10
109	1.2.4.2.1.1.4	Touch Up works	7 d	Sat 12/10/24	Fri 18/10/24	108		C2	Touch Up works 18/10

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Task █ Summary  Start-only  Critical █ Progress █

Milestone ◆ Project Summary  Finish-only  Critical Split █ Manual Progress █

ID	WBS	Task Name	Duration	Start	Finish	Predecessors	Successors	Task Calendar	Gantt Chart (A, S, O, N, D)				
110	1.2.4.2.1.2	<b>E&amp;M</b>	88 d	Fri 5/7/24	Mon 30/9/24			C2	E&M 30/9				
111	1.2.4.2.1.2	Electrical works	88 d	Fri 5/7/24	Mon 30/9/24			C2	30/9				
112	1.2.4.2.1.2	MVAC works	88 d	Fri 5/7/24	Mon 30/9/24		113SS+24 d,114SS	C2	30/9				
113	1.2.4.2.1.2	Fire service works	64 d	Mon 29/7/24	Mon 30/9/24	112SS+24 d		C2	30/9				
114	1.2.4.2.1.2	plumbing and drainage works	68 d	Thu 25/7/24	Mon 30/9/24	112SS+20 d		C2	30/9				
115	1.2.4.2.2	<b>Building B</b>	35 d	Fri 13/9/24	Thu 17/10/24			C2	Building B				
116	1.2.4.2.2.1	<b>ABWF</b>	35 d	Fri 13/9/24	Thu 17/10/24			C2	ABWF				
117	1.2.4.2.2.1	Floor tile & wall tile at refuse chamber	14 d	Tue 1/10/24	Mon 14/10/24	118	121	C2	Floor tile & wall tile at refuse chamber 14/10				
118	1.2.4.2.2.1	install re-order door at refuse chamber	5 d	Thu 26/9/24	Mon 30/9/24		117	C2	install re-order door at refuse chamber 30/9				
119	1.2.4.2.2.1	install roller shutter	5 d	Fri 13/9/24	Tue 17/9/24		120	C2	install roller shutter 17/9				
120	1.2.4.2.2.1	floor finish (machinary store room)	7 d	Wed 18/9/24	Tue 24/9/24	119		C2	floor finish (machinary store room) 24/9				
121	1.2.4.2.2.1	Touch Up works	3 d	Tue 15/10/24	Thu 17/10/24	117	123	C2	Touch Up works 17/10				
122	1.2.4.2.3	<b>Footing for fence</b>	117 d	Fri 5/7/24	Tue 29/10/24			C2	Footing for fence				
123	1.2.4.2.3.1	footing for fence	12 d	Fri 18/10/24	Tue 29/10/24	121		C2	footing for fence 29/10				
124	1.2.4.2.3.2	<b>E&amp;M</b>	88 d	Fri 5/7/24	Mon 30/9/24			C2	E&M				
125	1.2.4.2.3.2	Electrical works	1 d	Mon 15/7/24	Mon 15/7/24			C2					
126	1.2.4.2.3.2	MVAC works	88 d	Fri 5/7/24	Mon 30/9/24			C2	30/9				
127	1.2.4.2.3.2	Fire service works	88 d	Fri 5/7/24	Mon 30/9/24			C2	30/9				
128	1.2.4.2.3.2	plumbing and drainage works	88 d	Fri 5/7/24	Mon 30/9/24			C2	30/9				
129	1.2.4.3	<b>Kiosk</b>	78 d	Sat 20/7/24	Sat 5/10/24			C2	Kiosk				
130	1.2.4.3.1	Construction after drainage works beside complete	45 d	Sat 20/7/24	Mon 2/9/24			C2	2/9				
131	1.2.4.3.2	install door & door frame	3 d	Mon 16/9/24	Wed 18/9/24		132	C2	install door & door frame 18/9				
132	1.2.4.3.3	floor screeding	3 d	Mon 23/9/24	Wed 25/9/24	131	134	C2	floor screeding 25/9				
133	1.2.4.3.4	floor paint	3 d	Thu 3/10/24	Sat 5/10/24	134		C2	floor paint 5/10				
134	1.2.4.3.5	wall finish	7 d	Thu 26/9/24	Wed 2/10/24	132	133	C2	wall finish 2/10				
135	1.2.5	<b>FS Inspection of POS</b>	14 d	Fri 4/10/24	Thu 17/10/24			C2	FS Inspection of POS				
136	1.2.5.1	Form 501 submission	0 d	Fri 4/10/24	Fri 4/10/24		137	C2	4/10				
137	1.2.5.2	Review document by FS department (assume 10 days)	14 d	Fri 4/10/24	Thu 17/10/24	136	138	C2	w document by FS department (assume 10 days) 17/10				
138	1.2.5.3	actual FS inspection	0 d	Thu 17/10/24	Thu 17/10/24	137		C2	17/10				
139	1.3	<b>Area no.2</b>	99 d	Thu 8/8/24	Thu 14/11/24		2	C2	Area no.2				
140	1.3.1	<b>EVA</b>	98 d	Fri 9/8/24	Thu 14/11/24			C2	EVA				
141	1.3.1.1	<b>EVA no. 2 (obstruct by observation deck)</b>	73 d	Tue 3/9/24	Thu 14/11/24			C2	EVA no. 2 (obstruct by observation)				
142	1.3.1.1.1	Duct and drawpits of this section of EVA	26 d	Tue 3/9/24	Sat 28/9/24		143	C2	its of this section of EVA 28/9				
143	1.3.1.1.2	Drainage works for rain garden	7 d	Sun 29/9/24	Sat 5/10/24	142	144FF	C2	Drainage works for rain garden 5/10				
144	1.3.1.1.3	irrigation; drinking fountain and cleansing pipes installation	4 d	Wed 2/10/24	Sat 5/10/24	143FF	145	C2	inking fountain and cleansing pipes installation 5/10				
145	1.3.1.1.4	Formation of the EVA	4 d	Sun 6/10/24	Wed 9/10/24	144	146	C2	Formation of the EVA 9/10				
146	1.3.1.1.5	Sub-base laying	3 d	Thu 10/10/24	Sat 12/10/24	145	147	C2	Sub-base laying 12/10				
147	1.3.1.1.6	Road Base	2 d	Sun 13/10/24	Mon 14/10/24	146	148,158	C2	Road Base 14/10				
148	1.3.1.1.7	Paving Blocks Construction	12 d	Tue 15/10/24	Sat 26/10/24	147	149SS+5 d	C2	Paving Blocks Construction 26/10				
149	1.3.1.1.8	6 nos. lighting poles installation	10 d	Sun 20/10/24	Tue 29/10/24	148SS+5 d		C2	6 nos. lighting poles installation 29/10				
150	1.3.1.1.9	matching cover installation to drawpits (assume matching cover deliver to site mid Oct)	16 d	Wed 30/10/24	Thu 14/11/24			C2	tallation to drawpits (assume matching cover deliver to site mid Oct) 14/11				
151	1.3.1.2	<b>EVA no.2 (beside toilet cum)</b>	98 d	Fri 9/8/24	Thu 14/11/24			C2	EVA no.2 (beside toilet cum)				
152	1.3.1.2.1	Duct and drawpits beside toilet cum	9 d	Fri 9/8/24	Sat 17/8/24		155	C2	cum 17/8				
153	1.3.1.2.2	Firemain Laying	8 d	Wed 14/8/24	Wed 21/8/24			C2	n Laying 21/8				
154	1.3.1.2.3	Sewer Pipe Installation (Crossing EVA)	10 d	Wed 14/8/24	Fri 23/8/24		155	C2	ing EVA) 23/8				
155	1.3.1.2.4	Formation of the EVA	7 d	Sat 24/8/24	Fri 30/8/24	152,154	156	C2	ation of the EVA 30/8				
156	1.3.1.2.5	Subbase laying	3 d	Sat 31/8/24	Mon 2/9/24	155	157	C2	Subbase laying 2/9				
157	1.3.1.2.6	Road Base	2 d	Tue 3/9/24	Wed 4/9/24	156	159FS+24 d	C2	Road Base 4/9				
158	1.3.1.2.7	paving blocks construction (after road base of EVA no. 2 obstruct by OD cast)	10 d	Tue 15/10/24	Thu 24/10/24	147	160SS+4 d,161	C2	uction (after road base of EVA no. 2 obstruct by OD cast) 24/10				
159	1.3.1.2.8	U-channel construction	10 d	Sun 29/9/24	Tue 8/10/24	157FS+24 d		C2	U-channel construction 8/10				
160	1.3.1.2.9	6 nos. of lighting installation	10 d	Sat 19/10/24	Mon 28/10/24	158SS+4 d		C2	6 nos. of lighting installation 28/10				
161	1.3.1.2.10	irrigation; drinking fountain and cleansing pipes installation	4 d	Fri 25/10/24	Mon 28/10/24	158		C2	irrigation; drinking fountain and cleansing pipes installation 28/10				
162	1.3.1.2.11	matching cover installation to drawpits (assume matching cover deliver to site mid Oct)	16 d	Wed 30/10/24	Thu 14/11/24			C2	tallation to drawpits (assume matching cover deliver to site mid Oct) 14/11				

Acceleration Programme Rev 16C

Task █ Summary  Start-only  Critical █ Progress

Milestone ◆ Project Summary  Finish-only  Critical Split ..... Manual Progress

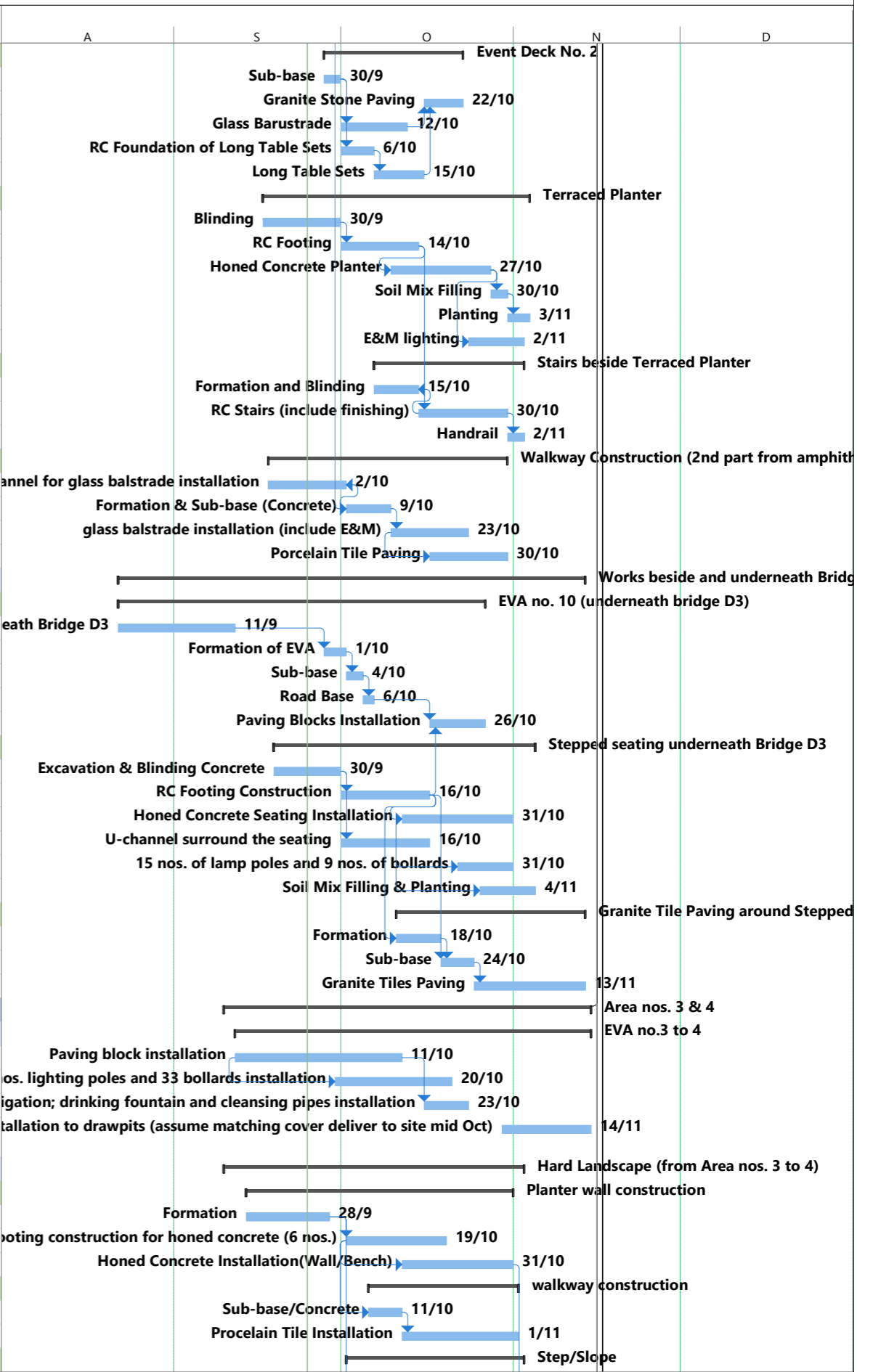
ID	WBS	Task Name	Duration	Start	Finish	Predecessors	Successors	Task Calendar	Gantt Chart	
163	1.3.1.3	<b>EVA no. 2 (from toilet cum to the current entrance)</b>	79 d	Wed 28/8/24	Thu 14/11/24			C2	EVA no. 2 (from toilet cum to the current entrance)	
164	1.3.1.3.1	Duct and drawpits	8 d	Wed 28/8/24	Wed 4/9/24		165SS	C2	Duct and drawpits 4/9	
165	1.3.1.3.2	fire main installation	10 d	Wed 28/8/24	Fri 6/9/24	164SS	166FS-3 d	C2	fire main installation 6/9	
166	1.3.1.3.3	u-channel construction	9 d	Wed 4/9/24	Thu 12/9/24	165FS-3 d	167	C2	u-channel construction 12/9	
167	1.3.1.3.4	formation of the EVA	12 d	Fri 13/9/24	Tue 24/9/24	166	168	C2	formation of the EVA 24/9	
168	1.3.1.3.5	subbase laying	6 d	Wed 25/9/24	Mon 30/9/24	167	169	C2	subbase laying 30/9	
169	1.3.1.3.6	Road Base	4 d	Tue 1/10/24	Fri 4/10/24	168	170FS+4 d	C2	Road Base 4/10	
170	1.3.1.3.7	paving blocks construction	14 d	Wed 9/10/24	Tue 22/10/24	169FS+4 d	171SS+8 d,172	C2	paving blocks construction 22/10	
171	1.3.1.3.8	6 Nos. lighting and bollard installation	14 d	Thu 17/10/24	Wed 30/10/24	170SS+8 d		C2	6 Nos. lighting and bollard installation 30/10	
172	1.3.1.3.9	irrigation; drinking fountain and cleansing pipes installation	3 d	Wed 23/10/24	Fri 25/10/24	170		C2	irrigation; drinking fountain and cleansing pipes installation 25/10	
173	1.3.1.3.10	matching cover installation to drawpits (assume matching cover deliver to site mid Oct)	16 d	Wed 30/10/24	Thu 14/11/24			C2	matching cover installation to drawpits (assume matching cover deliver to site mid Oct) 14/11	
174	1.3.2	<b>Toilet Cum</b>	99 d	Thu 8/8/24	Thu 14/11/24			C2	Toilet Cum	
175	1.3.2.1	<b>Ground Floor</b>	99 d	Thu 8/8/24	Thu 14/11/24			C2	Ground Floor	
176	1.3.2.1.1	<b>ABWF</b>	63 d	Fri 13/9/24	Thu 14/11/24			C2	ABWF	
177	1.3.2.1.1.1	install roller shutter	7 d	Fri 13/9/24	Thu 19/9/24		179	C2	install roller shutter 19/9	
178	1.3.2.1.1.2	wall compact board installation	14 d	Thu 19/9/24	Wed 2/10/24			C2	wall compact board installation 2/10	
179	1.3.2.1.1.3	paint on baffle ceiling frame	10 d	Fri 20/9/24	Sun 29/9/24	177		C2	paint on baffle ceiling frame 29/9	
180	1.3.2.1.1.4	baffle ceiling setting out for E&M work	2 d	Mon 7/10/24	Tue 8/10/24		190	C2	baffle ceiling setting out for E&M work 8/10	
181	1.3.2.1.1.5	baffle ceiling installation after E&M completion	14 d	Tue 29/10/24	Mon 11/11/24	190SS+20 d	182SS+7 d,183SS+	C2	baffle ceiling installation after E&M completion 11/11	
182	1.3.2.1.1.6	toilet cubicle installation	10 d	Tue 5/11/24	Thu 14/11/24	181SS+7 d		C2	toilet cubicle installation 14/11	
183	1.3.2.1.1.7	sanitary fitment installation	12 d	Fri 1/11/24	Tue 12/11/24	181SS+3 d		C2	sanitary fitment installation 12/11	
184	1.3.2.1.1.8	furniture(locker, bench)	14 d	Mon 14/10/24	Sun 27/10/24			C2	furniture(locker, bench) 27/10	
185	1.3.2.1.2	<b>E&amp;M</b>	92 d	Thu 8/8/24	Thu 7/11/24			C2	E&M	
186	1.3.2.1.2.1	MVAC works	47 d	Thu 8/8/24	Mon 23/9/24			C2	MVAC works 23/9	
187	1.3.2.1.2.2	Electrical works	47 d	Thu 8/8/24	Mon 23/9/24			C2	Electrical works 23/9	
188	1.3.2.1.2.3	Fire service works	35 d	Tue 20/8/24	Mon 23/9/24			C2	Fire service works 23/9	
189	1.3.2.1.2.4	Plumbing and drainage works	47 d	Thu 8/8/24	Mon 23/9/24			C2	Plumbing and drainage works 23/9	
190	1.3.2.1.2.5	Additional of FS down pipe and sprinkler head at ceiling level, relocation of flash light (FS) at ceiling level	30 d	Wed 9/10/24	Thu 7/11/24	180	181SS+20 d	C2	Additional of FS down pipe and sprinkler head at ceiling level, relocation of flash light (FS) at ceiling level 7/11	
191	1.3.2.2	<b>External works</b>	30 d	Tue 10/9/24	Wed 9/10/24			C2	External works	
192	1.3.2.2.1	Apply skimcoat	7 d	Tue 10/9/24	Mon 16/9/24		193	C2	Apply skimcoat 16/9	
193	1.3.2.2.2	Apply SKK paint	12 d	Tue 17/9/24	Sat 28/9/24	192	194SS+7 d	C2	Apply SKK paint 28/9	
194	1.3.2.2.3	Installation of vertical fins	16 d	Tue 24/9/24	Wed 9/10/24	193SS+7 d		C2	Installation of vertical fins 9/10	
195	1.3.3	<b>Hard Landscape &amp; soft landscape</b>	48 d	Tue 17/9/24	Sun 3/11/24			C2	Hard Landscape & soft landscape	
196	1.3.3.1	<b>Amphitheatre</b>	36 d	Thu 26/9/24	Thu 31/10/24			C2	Amphitheatre	
197	1.3.3.1.1	Water Treatment Plant Removal	3 d	Thu 26/9/24	Sat 28/9/24		198	C2	Water Treatment Plant Removal 28/9	
198	1.3.3.1.2	Excavation and Formation	6 d	Sun 29/9/24	Fri 4/10/24	197	199,236FS-3 d	C2	Excavation and Formation 4/10	
199	1.3.3.1.3	Sub-soil Drain Installation	5 d	Sat 5/10/24	Wed 9/10/24	198	200	C2	Sub-soil Drain Installation 9/10	
200	1.3.3.1.4	Soil Mix Filling	12 d	Thu 10/10/24	Mon 21/10/24	199	201FS-2 d,202SS+5C2	C2	Soil Mix Filling 21/10	
201	1.3.3.1.5	Planting	12 d	Sun 20/10/24	Thu 31/10/24	200FS-2 d		C2	Planting 31/10	
202	1.3.3.1.6	granite paving around the amphitheatre	14 d	Tue 15/10/24	Mon 28/10/24	200SS+5 d		C2	granite paving around the amphitheatre 28/10	
203	1.3.3.2	<b>Amphitheatre Seating (Honed Concrete)</b>	38 d	Tue 24/9/24	Thu 31/10/24			C2	Amphitheatre Seating (Honed Concrete)	
204	1.3.3.2.1	Formation and Blinding Concrete	7 d	Tue 24/9/24	Mon 30/9/24		205,214	C2	Formation and Blinding Concrete 30/9	
205	1.3.3.2.2	RC Footing	14 d	Tue 1/10/24	Mon 14/10/24	204	206FS-7 d,210,209C2	C2	RC Footing 14/10	
206	1.3.3.2.3	Honed Concrete Seating	20 d	Tue 8/10/24	Sun 27/10/24	205FS-7 d	207	C2	Honed Concrete Seating 27/10	
207	1.3.3.2.4	Round Side Tables	4 d	Mon 28/10/24	Thu 31/10/24	206		C2	Round Side Tables 31/10	
208	1.3.3.3	<b>Stairs beside Amphitheatre Seating</b>	33 d	Tue 1/10/24	Sat 2/11/24			C2	Stairs beside Amphitheatre Seating	
209	1.3.3.3.1	Formation and Blinding Concrete	4 d	Tue 1/10/24	Fri 4/10/24	205SS		C2	Formation and Blinding Concrete 4/10	
210	1.3.3.3.2	RC Stair Structures (include finishes)	14 d	Tue 15/10/24	Mon 28/10/24	205	211FS-4 d	C2	RC Stair Structures (include finishes) 28/10	
211	1.3.3.3.3	Handrail installation	4 d	Fri 25/10/24	Mon 28/10/24	210FS-4 d	212	C2	Handrail installation 28/10	
212	1.3.3.3.4	E&M lighting	5 d	Tue 29/10/24	Sat 2/11/24	211		C2	E&M lighting 2/11	
213	1.3.3.4	<b>Lawn beside toilet cum</b>	28 d	Tue 1/10/24	Mon 28/10/24			C2	Lawn beside toilet cum	
214	1.3.3.4.1	duct and drawpits	12 d	Tue 1/10/24	Sat 12/10/24	204	215	C2	duct and drawpits 12/10	
215	1.3.3.4.2	soil mixing and planting	16 d	Sun 13/10/24	Mon 28/10/24	214	216SS	C2	soil mixing and planting 28/10	
216	1.3.3.4.3	granite paving beside the lawn	16 d	Sun 13/10/24	Mon 28/10/24	215SS		C2	granite paving beside the lawn 28/10	

Acceleration Programme Rev 16C

Task █ Summary  Start-only  Critical  Progress

Milestone ◆ Project Summary  Finish-only  Critical Split  Manual Progress

ID	WBS	Task Name	Duration	Start	Finish	Predecessors	Successors	Task Calendar	
217	1.3.3.5	<b>Event Deck No. 2</b>	25 d	Sat 28/9/24	Tue 22/10/24			C2	
218	1.3.3.5.1	Sub-base	3 d	Sat 28/9/24	Mon 30/9/24		221,220	C2	
219	1.3.3.5.2	Granite Stone Paving	7 d	Wed 16/10/24	Tue 22/10/24	222,220		C2	
220	1.3.3.5.3	Glass Barustrade	12 d	Tue 1/10/24	Sat 12/10/24	218	219	C2	
221	1.3.3.5.4	RC Foundation of Long Table Sets	6 d	Tue 1/10/24	Sun 6/10/24	218	222	C2	
222	1.3.3.5.5	Long Table Sets	9 d	Mon 7/10/24	Tue 15/10/24	221	219	C2	
223	1.3.3.6	<b>Terraced Planter</b>	48 d	Tue 17/9/24	Sun 3/11/24			C2	
224	1.3.3.6.1	Blinding	14 d	Tue 17/9/24	Mon 30/9/24		225	C2	
225	1.3.3.6.2	RC Footing	14 d	Tue 1/10/24	Mon 14/10/24	224	226FS-5 d,232	C2	
226	1.3.3.6.3	Honed Concrete Planter	18 d	Thu 10/10/24	Sun 27/10/24	225FS-5 d	227,229FS-4 d	C2	
227	1.3.3.6.4	Soil Mix Filling	3 d	Mon 28/10/24	Wed 30/10/24	226	228	C2	
228	1.3.3.6.5	Planting	4 d	Thu 31/10/24	Sun 3/11/24	227		C2	
229	1.3.3.6.6	E&M lighting	10 d	Thu 24/10/24	Sat 2/11/24	226FS-4 d		C2	
230	1.3.3.7	<b>Stairs beside Terraced Planter</b>	27 d	Mon 7/10/24	Sat 2/11/24			C2	
231	1.3.3.7.1	Formation and Blinding	8 d	Mon 7/10/24	Tue 15/10/24	232SF		C2	
232	1.3.3.7.2	RC Stairs (include finishing)	16 d	Tue 15/10/24	Wed 30/10/24	225	231SF,233	C2	
233	1.3.3.7.3	Handrail	3 d	Thu 31/10/24	Sat 2/11/24	232		C2	
234	1.3.3.8	<b>Walkway Construction (2nd part from amphitheatre to harbor step)</b>	43 d	Wed 18/9/24	Wed 30/10/24			C2	
235	1.3.3.8.1	stainless steel channel for glass balstrade installation	14 d	Wed 18/9/24	Wed 2/10/24	236SF		C2	
236	1.3.3.8.2	Formation & Sub-base (Concrete)	8 d	Wed 2/10/24	Wed 9/10/24	198FS-3 d	235SF,237	C2	
237	1.3.3.8.3	glass balstrade installation (include E&M)	14 d	Thu 10/10/24	Wed 23/10/24	236	238SS+7 d	C2	
238	1.3.3.8.4	Porcelain Tile Paving	14 d	Thu 17/10/24	Wed 30/10/24	237SS+7 d		C2	
239	1.3.4	<b>Works beside and underneath Bridge D3</b>	84 d	Thu 22/8/24	Ned 13/11/24			C2	
240	1.3.4.1	<b>EVA no. 10 (underneath bridge D3)</b>	66 d	Thu 22/8/24	Sat 26/10/24			C2	
241	1.3.4.1.1	Duct and drawpits underneath Bridge D3	21 d	Thu 22/8/24	Wed 11/9/24		242FS+16 d	C2	
242	1.3.4.1.2	Formation of EVA	4 d	Sat 28/9/24	Tue 1/10/24	241FS+16 d	243	C2	
243	1.3.4.1.3	Sub-base	3 d	Wed 2/10/24	Fri 4/10/24	242	244	C2	
244	1.3.4.1.4	Road Base	2 d	Sat 5/10/24	Sun 6/10/24	243	245	C2	
245	1.3.4.1.5	Paving Blocks Installation	10 d	Thu 17/10/24	Sat 26/10/24	244,248		C2	
246	1.3.4.2	<b>Stepped seating underneath Bridge D3</b>	47 d	Thu 19/9/24	Mon 4/11/24			C2	
247	1.3.4.2.1	Excavation & Blinding Concrete	12 d	Thu 19/9/24	Mon 30/9/24		248,250	C2	
248	1.3.4.2.2	RC Footing Construction	16 d	Tue 1/10/24	Ned 16/10/24	247	245,249FS-5 d,255	C2	
249	1.3.4.2.3	Honed Concrete Seating Installation	20 d	Sat 12/10/24	Thu 31/10/24	248FS-5 d	252SS+14 d,251SS	C2	
250	1.3.4.2.4	U-channel surround the seating	16 d	Tue 1/10/24	Ned 16/10/24	247		C2	
251	1.3.4.2.5	15 nos. of lamp poles and 9 nos. of bollards	10 d	Tue 22/10/24	Thu 31/10/24	249SS+10 d		C2	
252	1.3.4.2.6	Soil Mix Filling & Planting	10 d	Sat 26/10/24	Mon 4/11/24	249SS+14 d		C2	
253	1.3.4.3	<b>Granite Tile Paving around Stepped Seating</b>	34 d	Fri 11/10/24	Ned 13/11/24			C2	
254	1.3.4.3.1	Formation	8 d	Fri 11/10/24	Fri 18/10/24	248FS-6 d	255	C2	
255	1.3.4.3.2	Sub-base	6 d	Sat 19/10/24	Thu 24/10/24	248,254	256	C2	
256	1.3.4.3.3	Granite Tiles Paving	20 d	Fri 25/10/24	Ned 13/11/24	255		C2	
257	1.4	<b>Area nos. 3 &amp; 4</b>	66 d	Tue 10/9/24	Thu 14/11/24		2	C2	
258	1.4.1	<b>EVA no.3 to 4</b>	64 d	Thu 12/9/24	Thu 14/11/24			C2	
259	1.4.1.1	Paving block installation	30 d	Thu 12/9/24	Fri 11/10/24		260SS+18 d,261FS	C2	
260	1.4.1.2	25 nos. lighting poles and 33 bollards installation	21 d	Mon 30/9/24	Sun 20/10/24	259SS+18 d		C2	
261	1.4.1.3	irrigation; drinking fountain and cleansing pipes installation	8 d	Ned 16/10/24	Ned 23/10/24	259FS+4 d		C2	
262	1.4.1.4	matching cover installation to drawpits (assume matching cover deliver to site mid Oct)	16 d	Wed 30/10/24	Thu 14/11/24			C2	
263	1.4.2	<b>Hard Landscape (from Area nos. 3 to 4)</b>	54 d	Tue 10/9/24	Sat 2/11/24			C2	
264	1.4.2.1	<b>Planter wall construction</b>	48 d	Sat 14/9/24	Thu 31/10/24			C2	
265	1.4.2.1.1	Formation	15 d	Sat 14/9/24	Sat 28/9/24		272FS+3 d,266FS+	C2	
266	1.4.2.1.2	Footing construction for honed concrete (6 nos.)	18 d	Wed 2/10/24	Sat 19/10/24	265FS+3 d	267SS+10 d,269SS	C2	
267	1.4.2.1.3	Honed Concrete Installation(Wall/Bench)	20 d	Sat 12/10/24	Thu 31/10/24	266SS+10 d	283	C2	
268	1.4.2.2	<b>walkway construction</b>	27 d	Sun 6/10/24	Fri 1/11/24			C2	
269	1.4.2.2.1	Sub-base/Concrete	6 d	Sun 6/10/24	Fri 11/10/24	266SS+4 d	270	C2	
270	1.4.2.2.2	Procelain Tile Installation	21 d	Sat 12/10/24	Fri 1/11/24	269		C2	
271	1.4.2.3	<b>Step/Slope</b>	32 d	Wed 2/10/24	Sat 2/11/24			C2	



Acceleration Programme Rev 16C

Task █ Summary    Start-only ┌ Critical █ Progress ▬

Milestone ◆ Project Summary    Finish-only └ Critical Split ..... Manual Progress ▬

ID	WBS	Task Name	Duration	Start	Finish	Predecessors	Successors	Task Calendar	
272	1.4.2.3.1	Temp Access Removal / Formation work	8 d	Wed 2/10/24	Wed 9/10/24	265FS+3 d	273	C2	Temp Access Removal / Formation work 9/10
273	1.4.2.3.2	Blinding Concrete	1 d	Thu 10/10/24	Thu 10/10/24	272	274	C2	Blinding Concrete 10/10
274	1.4.2.3.3	Step/Slope Construction (4 nos.include finishing)	18 d	Fri 11/10/24	Mon 28/10/24	273	275	C2	Step/Slope Construction (4 nos.include finishing) 28/10
275	1.4.2.3.4	Hand Rail Installation	5 d	Tue 29/10/24	Sat 2/11/24	274	276FF	C2	Hand Rail Installation 2/11
276	1.4.2.3.5	E&M lighting	7 d	Sun 27/10/24	Sat 2/11/24	275FF		C2	E&M lighting 2/11
277	1.4.2.4	<b>Rain Shelter</b>	<b>47 d</b>	<b>Tue 10/9/24</b>	<b>Sat 26/10/24</b>			<b>C2</b>	<b>Rain Shelter</b>
278	1.4.2.4.1	Excavation for 4 nos. of footing of rain shelter	6 d	Tue 10/9/24	Sun 15/9/24		279FS+3 d	C2	Excavation for 4 nos. of footing of rain shelter 15/9
279	1.4.2.4.2	Construction for 4 nos. footings of rain shelter	10 d	Thu 19/9/24	Sat 28/9/24	278FS+3 d	280FS+4 d	C2	Construction for 4 nos. footings of rain shelter 28/9
280	1.4.2.4.3	Frame Installation	14 d	Thu 3/10/24	Ned 16/10/24	279FS+4 d	281	C2	Frame Installation 16/10
281	1.4.2.4.4	Bench installation	10 d	Thu 17/10/24	Sat 26/10/24	280	284	C2	Bench installation 26/10
282	1.4.3	<b>Soft landscaping works</b>	<b>19 d</b>	<b>Sun 27/10/24</b>	<b>Thu 14/11/24</b>			<b>C2</b>	<b>Soft landscaping works</b>
283	1.4.3.1	soil mixing and planting works (river side)	14 d	Fri 1/11/24	Thu 14/11/24	267		C2	soil mixing and planting works (river side) 14/11
284	1.4.3.2	soil mixing and planting works (beside NDR)	14 d	Sun 27/10/24	Sat 9/11/24	281		C2	soil mixing and planting works (beside NDR) 9/11
285	1.4.4	<b>E&amp;M works</b>	<b>38 d</b>	<b>Mon 30/9/24</b>	<b>Wed 6/11/24</b>			<b>C2</b>	<b>E&amp;M works</b>
286	1.4.4.1	4 nos. of pillar boxes	38 d	Mon 30/9/24	Wed 6/11/24			C2	4 nos. of pillar boxes
287	1.4.4.1.1	plinths	8 d	Mon 30/9/24	Mon 7/10/24		288	C2	plinths 7/10
288	1.4.4.1.2	pillar box installation	30 d	Tue 8/10/24	Wed 6/11/24	287		C2	pillar box installation 6/11
289	1.5	<b>Area no. 4 to 5 (between NDR and Underpass)</b>	<b>44 d</b>	<b>Thu 3/10/24</b>	<b>Fri 15/11/24</b>		<b>2</b>	<b>C2</b>	<b>Area no. 4 to 5 (between NDR and Underpass)</b>
290	1.5.1	<b>1st half of EVA and soft landscaping works</b>	<b>28 d</b>	<b>Thu 3/10/24</b>	<b>Ned 30/10/24</b>			<b>C2</b>	<b>1st half of EVA and soft landscaping works</b>
291	1.5.1.1	EVA construction (after site clearance)	14 d	Thu 3/10/24	Ned 16/10/24		292SS+10 d,294	C2	EVA construction (after site clearance) 16/10
292	1.5.1.2	soft landscaping works	18 d	Sun 13/10/24	Ned 30/10/24	291SS+10 d	295	C2	soft landscaping works 30/10
293	1.5.2	<b>2nd half of EVA and soft landscaping works</b>	<b>30 d</b>	<b>Thu 17/10/24</b>	<b>Fri 15/11/24</b>			<b>C2</b>	<b>2nd half of EVA and soft landscaping works</b>
294	1.5.2.1	EVA construction	14 d	Thu 17/10/24	Ned 30/10/24	291	295	C2	EVA construction 30/10
295	1.5.2.2	soft landscaping works	16 d	Thu 31/10/24	Fri 15/11/24	292,294		C2	soft landscaping works 15/11
296	1.6	<b>Area no. 5</b>	<b>795 d</b>	<b>Thu 1/9/22</b>	<b>Fri 15/11/24</b>		<b>2</b>	<b>C2</b>	<b>Area no. 5</b>
297	1.6.1	<b>EVA</b>	<b>48 d</b>	<b>Sat 28/9/24</b>	<b>Thu 14/11/24</b>			<b>C2</b>	<b>EVA</b>
298	5/9/24	paving blocks construction	24 d	Sat 28/9/24	Mon 21/10/24		299SS+20 d,301	C2	paving blocks construction 21/10
299	1.6.1.2	14 nos. lighting and 35 nos. bollard installation	14 d	Fri 18/10/24	Thu 31/10/24	298SS+20 d		C2	14 nos. lighting and 35 nos. bollard installation 31/10
300	1.6.1.3	matching cover installation to drawpits (assume matching cover deliver to site mid Oct)	16 d	Wed 30/10/24	Thu 14/11/24			C2	matching cover installation to drawpits (assume matching cover deliver to site mid Oct) 14/11
301	1.6.1.4	irrigation; drinking fountain and cleansing pipes installation	4 d	Tue 22/10/24	Fri 25/10/24	298		C2	irrigation; drinking fountain and cleansing pipes installation 25/10
302	1.6.2	<b>Hard landscaping works</b>	<b>58 d</b>	<b>Thu 19/9/24</b>	<b>Fri 15/11/24</b>			<b>C2</b>	<b>Hard landscaping works</b>
303	1.6.2.1	<b>walkway construction (floating stage)</b>	<b>34 d</b>	<b>Sat 28/9/24</b>	<b>Thu 31/10/24</b>			<b>C2</b>	<b>walkway construction (floating stage)</b>
304	1.6.2.1.1	formation	6 d	Sat 28/9/24	Thu 3/10/24		305	C2	formation 3/10
305	1.6.2.1.2	subbase laying	4 d	Fri 4/10/24	Mon 7/10/24	304	306	C2	subbase laying 7/10
306	1.6.2.1.3	glass balstrade for floating stage installation	16 d	Tue 8/10/24	Ned 23/10/24	305	307SS+8 d	C2	glass balstrade for floating stage installation 23/10
307	1.6.2.1.4	porcelain Tile paving	16 d	Ned 16/10/24	Thu 31/10/24	306SS+8 d		C2	porcelain Tile paving 31/10
308	1.6.2.2	<b>Honed concrete DS2 &amp; 3 installation (floating stage)</b>	<b>41 d</b>	<b>Fri 20/9/24</b>	<b>Ned 30/10/24</b>			<b>C2</b>	<b>Honed concrete DS2 &amp; 3 installation (floating stage)</b>
309	1.6.2.2.1	Excavation of footing for honed concrete DS2 & 3	10 d	Fri 20/9/24	Sun 29/9/24		310,313FS+3 d	C2	Excavation of footing for honed concrete DS2 & 3 29/9
310	1.6.2.2.2	Footing construction for honed concrete DS2 & 3	14 d	Mon 30/9/24	Sun 13/10/24	309	311SS+10 d	C2	Footing construction for honed concrete DS2 & 3 13/10
311	1.6.2.2.3	Honed concrete DS2 & 3 installation	21 d	Thu 10/10/24	Ned 30/10/24	310SS+10 d	328	C2	Honed concrete DS2 & 3 installation 30/10
312	1.6.2.3	<b>Step/Slope</b>	<b>25 d</b>	<b>Thu 3/10/24</b>	<b>Sun 27/10/24</b>			<b>C2</b>	<b>Step/Slope</b>
313	1.6.2.3.1	Temp Access Removal / Formation work	6 d	Thu 3/10/24	Tue 8/10/24	309FS+3 d	314	C2	Temp Access Removal / Formation work 8/10
314	1.6.2.3.2	Blinding Concrete	1 d	Wed 9/10/24	Wed 9/10/24	313	315	C2	Blinding Concrete 9/10
315	1.6.2.3.3	Step/Slope Construction (3 nos. include finishing)	18 d	Thu 10/10/24	Sun 27/10/24	314	316FF	C2	Step/Slope Construction (3 nos. include finishing) 27/10
316	1.6.2.3.4	Hand Rail Installation	6 d	Tue 22/10/24	Sun 27/10/24	315FF	317FF	C2	Hand Rail Installation 27/10
317	1.6.2.3.5	E&M lighting	6 d	Tue 22/10/24	Sun 27/10/24	316FF		C2	E&M lighting 27/10
318	1.5.2.3	<b>Rain Shelter (4 nos)</b>	<b>40 d</b>	<b>Thu 19/9/24</b>	<b>Mon 28/10/24</b>			<b>C2</b>	<b>Rain Shelter (4 nos)</b>
319	1.5.2.3	Excavation	6 d	Thu 19/9/24	Tue 24/9/24		320SS+4 d	C2	Excavation 24/9
320	1.5.2.3	Footing Construction	12 d	Mon 23/9/24	Fri 4/10/24	319SS+4 d	321	C2	Footing Construction 4/10
321	1.5.2.3	Frame Installation	12 d	Sat 5/10/24	Ned 16/10/24	320	322	C2	Frame Installation 16/10
322	1.5.2.3	Bench installation	12 d	Thu 17/10/24	Mon 28/10/24	321		C2	Bench installation 28/10
323	1.6.2.5	<b>paving blocks beside TMO</b>	<b>24 d</b>	<b>Ned 23/10/24</b>	<b>Fri 15/11/24</b>			<b>C2</b>	<b>paving blocks beside TMO</b>
324	1.6.2.5.1	paving blocks beside TMO (1st half; 2nd half serve as access)	14 d	Ned 23/10/24	Tue 5/11/24		325FS-4 d,327SS	C2	paving blocks beside TMO (1st half; 2nd half serve as access) 5/11
325	1.6.2.5.2	paving blocks beside TMO (2nd half)	14 d	Sat 2/11/24	Fri 15/11/24	324FS-4 d		C2	paving blocks beside TMO (2nd half) 15/11
326	1.6.3	soft landscaping works	24 d	Ned 23/10/24	Fri 15/11/24			C2	soft landscaping works

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Task █ Summary ▬ Start-only ┆ Critical █ Progress ▬

Milestone ◆ Project Summary ▬ Finish-only ┆ Critical Split ..... Manual Progress ▬

ID	WBS	Task Name	Duration	Start	Finish	Predecessors	Successors	Task Calendar	Gantt Chart	
327	1.6.3.1	soil mixing and planting works (beside TMO)	14 d	Wed 23/10/24	Tue 5/11/24	324SS		C2	soil mixing and planting works (beside TMO)	5/11
328	1.6.3.2	soil mixing and planting works (beside DS2 & DS3)	16 d	Thu 31/10/24	Fri 15/11/24	311		C2	soil mixing and planting works (beside DS2 & DS3)	15/11
329	1.6.4	E&M works	38 d	Mon 30/9/24	Wed 6/11/24			C2	E&M works	
330	1.6.4.1	1 no. pillar box	38 d	Mon 30/9/24	Wed 6/11/24			C2	1 no. pillar box	
331	1.6.4.1.1	plinth	8 d	Mon 30/9/24	Mon 7/10/24		332	C2	plinth	7/10
332	1.6.4.1.2	pillar box installation	30 d	Tue 8/10/24	Wed 6/11/24	331		C2	pillar box installation	6/11
333	1.6.5	Temporary Management Office	794 d	Thu 1/9/22	Thu 14/11/24			C2	Temporary Management Office	
334	1.6.5.1	Toilet area	784 d	Thu 1/9/22	Mon 4/11/24			C2	Toilet area	
335	1.6.5.1.1	ABWF	784 d	Thu 1/9/22	Mon 4/11/24			C2	ABWF	
336	1.6.5.1.1.1	wall tiles and floor tiles laying	21 d	Thu 1/9/22	Wed 21/9/22			C2		
337	1.6.5.1.1.2	wall compact board installation	10 d	Mon 23/9/24	Wed 2/10/24		338	C2	wall compact board installation	2/10
338	1.6.5.1.1.3	toilet cubicle installation	14 d	Thu 3/10/24	Wed 16/10/24	337	339,347	C2	toilet cubicle installation	16/10
339	1.6.5.1.1.4	sanitary fitment installation	14 d	Thu 17/10/24	Wed 30/10/24	338	340	C2	sanitary fitment installation	30/10
340	1.6.5.1.1.5	Touch up work	5 d	Thu 31/10/24	Mon 4/11/24	339		C2	Touch up work	4/11
341	1.6.5.1.2	E&M	47 d	Thu 8/8/24	Mon 23/9/24			C2	E&M	
342	1.6.5.1.2.1	Electrical works	47 d	Thu 8/8/24	Mon 23/9/24			C2	Electrical works	23/9
343	1.6.5.1.2.2	MVAC works	47 d	Thu 8/8/24	Mon 23/9/24			C2	MVAC works	23/9
344	1.6.5.1.2.3	Plumbing and drainage works	47 d	Thu 8/8/24	Mon 23/9/24			C2	Plumbing and drainage works	23/9
345	1.6.5.2	Office area	99 d	Thu 8/8/24	Thu 14/11/24			C2	Office area	
346	1.6.5.2.1	ABWF	39 d	Mon 7/10/24	Thu 14/11/24			C2	ABWF	
347	1.6.5.2.1.1	sanitary fitment installation	3 d	Thu 17/10/24	Sat 19/10/24	338		C2	sanitary fitment installation	19/10
348	1.6.5.2.1.2	ceiling setting out for E&M work	2 d	Mon 7/10/24	Tue 8/10/24		349SS+10 d,357	C2	ceiling setting out for E&M work	8/10
349	1.6.5.2.1.3	ceiling installation office, waiting area and medical room after E&M work completion	12 d	Thu 17/10/24	Mon 28/10/24	348SS+10 d	350	C2	ceiling installation office, waiting area and medical room after E&M work completion	28/10
350	1.6.5.2.1.4	Vinyle sheet laying for office, waiting area and medical room after	12 d	Tue 29/10/24	Sat 9/11/24	349	351	C2	Vinyle sheet laying for office, waiting area and medical room after FSI	9/11
351	1.6.5.2.1.5	Touch up work	5 d	Sun 10/11/24	Thu 14/11/24	350		C2	Touch up work	14/11
352	1.6.5.2.2	E&M	83 d	Thu 8/8/24	Tue 29/10/24			C2	E&M	
353	1.6.5.2.2.1	Electrical works	47 d	Thu 8/8/24	Mon 23/9/24			C2	Electrical works	23/9
354	1.6.5.2.2.2	MVAC works	47 d	Thu 8/8/24	Mon 23/9/24			C2	MVAC works	23/9
355	1.6.5.2.2.3	Fire service works	47 d	Thu 8/8/24	Mon 23/9/24			C2	Fire service works	23/9
356	1.6.5.2.2.4	Plumbing and drainage works	47 d	Thu 8/8/24	Mon 23/9/24			C2	Plumbing and drainage works	23/9
357	1.6.5.2.2.5	Additional ceiling lights	21 d	Wed 9/10/24	Tue 29/10/24	348		C2	Additional ceiling lights	29/10
358	1.6.5.3	Remaining area (refuse collection chamber, horticultural machinery store room, etc)	136 d	Sat 1/6/24	Mon 14/10/24			C2	Remaining area (refuse collection chamber, horticultural m	
359	1.6.5.3.1	ABWF	8 d	Mon 7/10/24	Mon 14/10/24			C2	ABWF	
360	1.6.5.3.1.1	floor finish (machinary room)	5 d	Mon 7/10/24	Fri 11/10/24		361	C2	floor finish (machinary room)	11/10
361	1.6.5.3.1.2	Touch up work	3 d	Sat 12/10/24	Mon 14/10/24	360		C2	Touch up work	14/10
362	1.6.5.3.2	E&M	120 d	Sat 1/6/24	Sat 28/9/24			C2	E&M	
363	1.6.5.3.2.1	Electrical works	120 d	Sat 1/6/24	Sat 28/9/24			C2	Electrical works	28/9
364	1.6.5.3.2.2	MVAC works	120 d	Sat 1/6/24	Sat 28/9/24			C2	MVAC works	28/9
365	1.6.5.3.2.3	Fire service works	120 d	Sat 1/6/24	Sat 28/9/24			C2	Fire service works	28/9
366	1.6.5.3.2.4	Plumbing and drainage works	120 d	Sat 1/6/24	Sat 28/9/24			C2	Plumbing and drainage works	28/9
367	1.7	Area no. 6	62 d	Sat 14/9/24	Thu 14/11/24		2	C2	Area no. 6	
368	1.7.1	EVA no. 6	59 d	Tue 17/9/24	Thu 14/11/24			C2	EVA no. 6	
369	1.7.1.1	paving blocks installation	30 d	Tue 17/9/24	Wed 16/10/24		370SS+20 d,375SS	C2	paving blocks installation	16/10
370	1.7.1.2	14 nos. lighting poles and 31 nos. bollard installation	21 d	Mon 7/10/24	Sun 27/10/24	369SS+20 d		C2	14 nos. lighting poles and 31 nos. bollard installation	27/10
371	1.7.1.3	irrigation; drinking fountain and cleansing pipes installation	5 d	Thu 17/10/24	Mon 21/10/24	369		C2	irrigation; drinking fountain and cleansing pipes installation	21/10
372	1.7.1.4	matching cover installation to drawpits (assume matching cover deliver to site mid Oct)	16 d	Wed 30/10/24	Thu 14/11/24			C2	matching cover installation to drawpits (assume matching cover deliver to site mid Oct)	14/11
373	1.7.2	Hard landscaping works	50 d	Sat 14/9/24	Sat 2/11/24			C2	Hard landscaping works	
374	1.7.2.1	walkway construction	39 d	Sat 21/9/24	Tue 29/10/24			C2	walkway construction	
375	1.7.2.1.1	Honed Concrete Bench Installation (6 nos with footing.)	18 d	Sat 21/9/24	Tue 8/10/24	369SS	376	C2	Honed Concrete Bench Installation (6 nos with footing.)	8/10
376	1.7.2.1.2	walkway construction	21 d	Wed 9/10/24	Tue 29/10/24	375	378SS	C2	walkway construction	29/10
377	1.7.2.2	Step/Slope	23 d	Wed 9/10/24	Thu 31/10/24			C2	Step/Slope	
378	1.7.2.2.1	Temp Access Removal / Formation work	5 d	Wed 9/10/24	Sun 13/10/24	376SS	379	C2	Temp Access Removal / Formation work	13/10
379	1.7.2.2.2	Blinding Concrete	1 d	Mon 14/10/24	Mon 14/10/24	378	380	C2	Blinding Concrete	14/10

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Task Summary Start-only Critical Progress

Milestone Project Summary Finish-only Critical Split Manual Progress

ID	WBS	Task Name	Duration	Start	Finish	Predecessors	Successors	Task Calendar	
380	1.7.2.2.3	Step/Slope Construction (2 nos. include finishing)	14 d	Tue 15/10/24	Mon 28/10/24	379	381SS+10 d	C2	Step/Slope Construction (2 nos. include finishing) 28/10
381	1.7.2.2.4	Hand Rail Installation	7 d	Fri 25/10/24	Thu 31/10/24	380SS+10 d	382SS	C2	Hand Rail Installation 31/10
382	1.7.2.2.5	E&M lighting	7 d	Fri 25/10/24	Thu 31/10/24	381SS		C2	E&M lighting 31/10
383	1.6.2.3	Rain Shelter (2 nos)	45 d	Sat 14/9/24	Mon 28/10/24			C2	Rain Shelter (2 nos) 28/10
384	1.6.2.3.1	Excavation	5 d	Sat 14/9/24	Wed 18/9/24		385	C2	Excavation 18/9
385	1.6.2.3.2	Footing Construction	12 d	Thu 19/9/24	Mon 30/9/24	384	386	C2	Footing Construction 30/9
386	1.6.2.3.3	Frame Installation	16 d	Tue 1/10/24	Wed 16/10/24	385	387	C2	Frame Installation 16/10
387	1.6.2.3.4	Bench installation	12 d	Thu 17/10/24	Mon 28/10/24	386		C2	Bench installation 28/10
388	1.7.2.4	Honed concrete S24, S25 and the stepped staircase	32 d	Wed 2/10/24	Sat 2/11/24			C2	Honed concrete S24, S25 and the stepped staircase 19/10
389	1.7.2.4.1	Honed concrete S24, S25	18 d	Wed 2/10/24	Sat 19/10/24		392,390	C2	Honed concrete S24, S25 19/10
390	1.7.2.4.2	stepped staircase	14 d	Sun 20/10/24	Sat 2/11/24	389		C2	stepped staircase 2/11
391	1.7.3	Soft landscaping works	14 d	Sun 20/10/24	Sat 2/11/24			C2	Soft landscaping works 2/11
392	1.7.3.1	soil mixing and planting works	14 d	Sun 20/10/24	Sat 2/11/24	389		C2	soil mixing and planting works 2/11
393	1.7.4	E&M works	38 d	Mon 30/9/24	Wed 6/11/24			C2	E&M works 6/11
394	1.7.4.1	1 no. pillar box	38 d	Mon 30/9/24	Wed 6/11/24			C2	1 no. pillar box 6/11
395	1.7.4.1.1	plinth	8 d	Mon 30/9/24	Mon 7/10/24		396	C2	plinth 7/10
396	1.7.4.1.2	pillar box installation	30 d	Tue 8/10/24	Wed 6/11/24	395		C2	pillar box installation 6/11
397	1.7.5	Elevated Landscape deck	42 d	Thu 19/9/24	Ned 30/10/24			C2	Elevated Landscape deck 30/10
398	1.7.5.1	Landscaping works	42 d	Thu 19/9/24	Ned 30/10/24			C2	Landscaping works 28/9
399	1.7.5.1.1	planting works	10 d	Thu 19/9/24	Sat 28/9/24		400	C2	planting works 28/9
400	1.7.5.1.2	AGT installation (include subbase)	24 d	Sun 29/9/24	Tue 22/10/24	399	401FF,402FF,403SS	C2	AGT installation (include subbase) 22/10
401	1.7.5.1.3	seating bench installation	14 d	Wed 9/10/24	Tue 22/10/24	400FF		C2	seating bench installation 22/10
402	1.7.5.1.4	3 nos. of pillar boxes	21 d	Wed 2/10/24	Tue 22/10/24	400FF		C2	3 nos. of pillar boxes 22/10
403	1.7.5.1.5	bollard and lighting installation	16 d	Tue 15/10/24	Ned 30/10/24	400SS+16 d		C2	bollard and lighting installation 30/10
404	1.8	Area nos. 7 to 9	184 d	Thu 16/5/24	Fri 15/11/24		2	C2	Area nos. 7 to 9
405	1.8.1	EVA	136 d	Wed 12/6/24	Fri 25/10/24			C2	EVA
406	1.8.1.1	EVA no. 7	89 d	Wed 12/6/24	Sun 8/9/24			C2	EVA no. 7
407	1.8.1.1.1	Remaining utilities	45 d	Wed 12/6/24	Fri 26/7/24			C2	Remaining utilities
408	1.8.1.1.1.1	CLP 11KV cabling from EVA no. 7 into transformer room	45 d	Wed 12/6/24	Fri 26/7/24		410	C2	CLP 11KV cabling from EVA no. 7 into transformer room
409	1.8.1.1.2	Road works	44 d	Sat 27/7/24	Sun 8/9/24			C2	Road works
410	1.8.1.1.2.1	Formation of the EVA	18 d	Sat 27/7/24	Tue 13/8/24	408	411,412	C2	Formation of the EVA 13/8
411	1.8.1.1.2.2	subbase laying	9 d	Wed 14/8/24	Thu 22/8/24	410		C2	subbase laying 22/8
412	1.8.1.1.2.3	road base	5 d	Wed 14/8/24	Sun 18/8/24	410	413	C2	road base 18/8
413	1.8.1.1.2.4	Paving blocks	21 d	Mon 19/8/24	Sun 8/9/24	412		C2	Paving blocks 8/9
414	1.8.1.2	EVA no. 8	44 d	Thu 12/9/24	Fri 25/10/24			C2	EVA no. 8
415	1.8.1.2.1	Remaining underground service	10 d	Thu 12/9/24	Sat 21/9/24			C2	Remaining underground service
416	1.8.1.2.1.1	u-channel construction (after louvre and window installation of external wall of pumping station complete)	10 d	Thu 12/9/24	Sat 21/9/24		418	C2	u-channel construction (after louvre and window installation of external wall of pumping station complete) 21/9
417	1.8.1.2.2	Roadworks	34 d	Sun 22/9/24	Fri 25/10/24			C2	Roadworks
418	1.8.1.2.2.1	Temporary road construction for FSI	4 d	Sun 22/9/24	Wed 25/9/24	416		C2	Temporary road construction for FSI 25/9
419	1.8.1.2.2.2	permanent EVA	18 d	Tue 8/10/24	Fri 25/10/24			C2	permanent EVA
420	1.8.1.2.2.2.1	Formation	4 d	Tue 8/10/24	Fri 11/10/24		421	C2	Formation 11/10
421	1.8.1.2.2.2.2	subbase laying combine with the road base	4 d	Sat 12/10/24	Tue 15/10/24	420	422	C2	subbase laying combine with the road base 15/10
422	1.8.1.2.2.2.3	paving blocks	10 d	Ned 16/10/24	Fri 25/10/24	421		C2	paving blocks 25/10
423	1.8.1.3	EVA no. 9	22 d	Thu 19/9/24	Thu 10/10/24			C2	EVA no. 9
424	1.8.1.3.1	Roadworks	22 d	Thu 19/9/24	Thu 10/10/24			C2	Roadworks
425	1.8.1.3.1.1	formation of EVA	6 d	Thu 19/9/24	Tue 24/9/24		426	C2	formation of EVA 24/9
426	1.8.1.3.1.2	subbase laying combine with the road base	4 d	Wed 25/9/24	Sat 28/9/24	425	427	C2	subbase laying combine with the road base 28/9
427	1.8.1.3.1.3	paving blocks	12 d	Sun 29/9/24	Thu 10/10/24	426		C2	paving blocks 10/10
428	1.8.2	Pumping station	184 d	Thu 16/5/24	Fri 15/11/24			C2	Pumping station
429	1.8.2.1	Structure	184 d	Thu 16/5/24	Fri 15/11/24			C2	Structure
430	1.8.2.1.1	Basement to G/F	184 d	Thu 16/5/24	Fri 15/11/24			C2	Basement to G/F
431	1.8.2.1.1.1	Saltwater Pumping Station	184 d	Thu 16/5/24	Fri 15/11/24			C2	Saltwater Pumping Station
432	1.8.2.1.1.1.1	B/F (saltwater pumping station)	166 d	Sat 1/6/24	Ned 13/11/24			C2	B/F (saltwater pumping station)
433	1.8.2.1.1.1.1.1	ABWF	24 d	Mon 21/10/24	Ned 13/11/24			C2	ABWF
434	1.8.2.1.1.1.1.1.1	Apply floor finishes material	10 d	Mon 21/10/24	Ned 30/10/24		435,444	C2	Apply floor finishes material 30/10

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Task █ Summary   Start-only   Critical █ Progress █

Milestone ◆ Project Summary   Finish-only   Critical Split ..... Manual Progress █

ID	WBS	Task Name	Duration	Start	Finish	Predecessors	Successors	Task Calendar	Gantt Chart				
									A	S	O	N	D
435	1.8.2.1.1.1	Paint / plastering works touch up	14 d	Thu 31/10/24	Wed 13/11/24	434		C2	Paint / plastering works touch up 13/11				
436	1.8.2.1.1.1	<b>E&amp;M</b>	120 d	Sat 1/6/24	Sat 28/9/24			C2	E&M 28/9				
437	1.8.2.1.1.1	MVAC works	120 d	Sat 1/6/24	Sat 28/9/24			C2	28/9				
438	1.8.2.1.1.1	Electrical works	120 d	Sat 1/6/24	Sat 28/9/24			C2	28/9				
439	1.8.2.1.1.1	Fire service works	120 d	Sat 1/6/24	Sat 28/9/24			C2	28/9				
440	1.8.2.1.1.1	Mechanical works	120 d	Sat 1/6/24	Sat 28/9/24			C2	28/9				
441	1.8.2.1.1.1	Plumbing and drainage works	120 d	Sat 1/6/24	Sat 28/9/24			C2	28/9				
442	1.8.2.1.1.1	<b>G/F (saltwater pumping station)</b>	176 d	Fri 24/5/24	Fri 15/11/24			C2	G/F (saltwater pumping station)				
443	1.8.2.1.1.1	<b>ABWF</b>	40 d	Mon 7/10/24	Fri 15/11/24			C2	ABWF				
444	1.8.2.1.1.1	Apply floor finishes material	14 d	Thu 31/10/24	Wed 13/11/24	434	447SS+8 d	C2	Apply floor finishes material 13/11				
445	1.8.2.1.1.1	Toilet fitting out works(wall& floor tile)	5 d	Mon 7/10/24	Fri 11/10/24		446	C2	Toilet fitting out works(wall& floor tile) 11/10				
446	1.8.2.1.1.1	sanitary fitment	3 d	Sat 12/10/24	Mon 14/10/24	445		C2	sanitary fitment 14/10				
447	1.8.2.1.1.1	Paint / plastering works touch up	8 d	Fri 8/11/24	Fri 15/11/24	444SS+8 d		C2	Paint / plastering works touch up 15/11				
448	1.8.2.1.1.1	<b>E&amp;M</b>	151 d	Fri 24/5/24	Mon 21/10/24			C2	E&M				
449	1.8.2.1.1.1	MVAC works	128 d	Sat 1/6/24	Sun 6/10/24			C2	6/10				
450	1.8.2.1.1.1	Electrical works	128 d	Fri 24/5/24	Sat 28/9/24			C2	28/9				
451	1.8.2.1.1.1	Fire service works	128 d	Fri 24/5/24	Sat 28/9/24			C2	28/9				
452	1.8.2.1.1.1	Mechanical works	82 d	Thu 1/8/24	Mon 21/10/24			C2	21/10				
453	1.8.2.1.1.1	Plumbing and drainage works	120 d	Sat 1/6/24	Sat 28/9/24			C2	28/9				
454	1.8.2.1.1.1	LV switch room	120 d	Sat 1/6/24	Sat 28/9/24			C2	28/9				
455	1.8.2.1.1.1	T&C (for FSI)	15 d	Mon 16/9/24	Mon 30/9/24			C2	T&C (for FSI) 30/9				
456	1.8.2.1.1.1	<b>G/F Transformer Room</b>	103 d	Thu 16/5/24	Mon 26/8/24			C2	G/F Transformer Room				
457	1.8.2.1.1.1	<b>E&amp;M</b>	103 d	Thu 16/5/24	Mon 26/8/24			C2	E&M				
458	1.8.2.1.1.1	Handover to CLP (after water-proofing double slab certificate issued)	0 d	Thu 16/5/24	Thu 16/5/24		459	C2					
459	1.8.2.1.1.1	energization	103 d	Thu 16/5/24	Mon 26/8/24	458		C2	26/8				
460	1.8.2.1.1.1	<b>T&amp;C of the salt water pumping station</b>	66 d	Wed 11/9/24	Fri 15/11/24			C2	T&C of the salt water pumping station				
461	1.8.2.1.1.1	<b>civil works</b>	52 d	Wed 11/9/24	Fri 1/11/24			C2	civil works				
462	1.8.2.1.1.1	Rectify concrete defects remain from Richwell	30 d	Wed 11/9/24	Thu 10/10/24		464,466	C2	rectify concrete defects remain from Richwell 10/10				
463	1.8.2.1.1.1	3m x 3m x 7m mass concrete fill at the end of intake culvert (WSD's comment) (5 days working platform > 4 days formwork of 1st pour > 1 day concreting > 4 days formwork for 2nd pour > 1 day concreting)	18 d	Mon 16/9/24	Thu 3/10/24			C2	work for 2nd pour > 1 day concreting 3/10				
464	1.8.2.1.1.1	rc landing (formwork 7d > 1d concreting)	8 d	Fri 11/10/24	Fri 18/10/24	462	465	C2	rc landing (formwork 7d > 1d concreting) 18/10				
465	1.8.2.1.1.1	cat ladder	14 d	Sat 19/10/24	Fri 1/11/24	464	470	C2	cat ladder 1/11				
466	1.8.2.1.1.1	defects rectification	14 d	Fri 11/10/24	Thu 24/10/24	462		C2	defects rectification 24/10				
467	1.8.2.1.1.1	<b>E&amp;M works</b>	42 d	Sat 5/10/24	Fri 15/11/24			C2	E&M works				
468	1.8.2.1.1.1	4 pumps deliver to site	0 d	Sat 5/10/24	Sat 5/10/24		469	C2	5/10				
469	1.8.2.1.1.1	E&M works	30 d	Sat 5/10/24	Sun 3/11/24	468	470	C2	E&M works 3/11				
470	1.8.2.1.1.1	T&C	12 d	Mon 4/11/24	Fri 15/11/24	465,469		C2	T&C 15/11				
471	1.8.2.1.1.2	<b>Sewage Pumping Station</b>	176 d	Fri 24/5/24	Fri 15/11/24			C2	Sewage Pumping Station				
472	1.8.2.1.1.2	<b>B/F (sewage pumping station)</b>	164 d	Fri 24/5/24	Sun 3/11/24			C2	B/F (sewage pumping station)				
473	1.8.2.1.1.2	<b>ABWF</b>	14 d	Mon 21/10/24	Sun 3/11/24			C2	ABWF				
474	1.8.2.1.1.2	Apply floor finishes material	7 d	Mon 21/10/24	Sun 27/10/24		475,485	C2	Apply floor finishes material 27/10				
475	1.8.2.1.1.2	Paint / plastering works touch up	7 d	Mon 28/10/24	Sun 3/11/24	474		C2	Paint / plastering works touch up 3/11				
476	1.8.2.1.1.2	<b>E&amp;M</b>	151 d	Fri 24/5/24	Mon 21/10/24			C2	E&M				
477	1.8.2.1.1.2	MVAC works	128 d	Sat 1/6/24	Sun 6/10/24			C2	6/10				
478	1.8.2.1.1.2	Electrical works	128 d	Fri 24/5/24	Sat 28/9/24			C2	28/9				
479	1.8.2.1.1.2	Fire service works	128 d	Sat 1/6/24	Sun 6/10/24			C2	6/10				
480	1.8.2.1.1.2	Mechanical works	82 d	Thu 1/8/24	Mon 21/10/24			C2	21/10				
481	1.8.2.1.1.2	Plumbing and drainage works	120 d	Sat 1/6/24	Sat 28/9/24			C2	28/9				
482	1.8.2.1.1.2	T&C	15 d	Mon 16/9/24	Mon 30/9/24			C2	T&C 30/9				
483	1.8.2.1.1.2	<b>G/F (sewage pumping station)</b>	176 d	Fri 24/5/24	Fri 15/11/24			C2	G/F (sewage pumping station)				
484	1.8.2.1.1.2	<b>ABWF</b>	40 d	Mon 7/10/24	Fri 15/11/24			C2	ABWF				
485	1.8.2.1.1.2	apply floor finishes material	7 d	Mon 28/10/24	Sun 3/11/24	474	488SS+5 d	C2	apply floor finishes material 3/11				
486	1.8.2.1.1.2	Toilet fitting out works(wall& floor tile)	5 d	Mon 7/10/24	Fri 11/10/24		487	C2	Toilet fitting out works(wall& floor tile) 11/10				

ID	WBS	Task Name	Duration	Start	Finish	Predecessors	Successors	Task Calendar	Gantt Chart (A, S, O, N, D)			
487	1.8.2.1.1.2	sanitary fitment	3 d	Sat 12/10/24	Mon 14/10/24	486		C2	sanitary fitment 14/10			
488	1.8.2.1.1.2	Paint / plastering works touch up	14 d	Sat 2/11/24	Fri 15/11/24	485SS+5 d		C2	Paint / plastering works touch up 15/11			
489	1.8.2.1.1.2	<b>E&amp;M</b>	<b>151 d</b>	<b>Fri 24/5/24</b>	<b>Mon 21/10/24</b>			<b>C2</b>	<b>E&amp;M</b>			
490	1.8.2.1.1.2	MVAC works	128 d	Sat 1/6/24	Sun 6/10/24			C2	MVAC works 6/10			
491	1.8.2.1.1.2	Electrical works	128 d	Fri 24/5/24	Sat 28/9/24			C2	Electrical works 28/9			
492	1.8.2.1.1.2	Fire service works	128 d	Fri 24/5/24	Sat 28/9/24			C2	Fire service works 28/9			
493	1.8.2.1.1.2	Mechanical works	82 d	Thu 1/8/24	Mon 21/10/24			C2	Mechanical works 21/10			
494	1.8.2.1.1.2	Plumbing and drainage works	120 d	Sat 1/6/24	Sat 28/9/24			C2	Plumbing and drainage works 28/9			
495	1.8.2.1.1.2	LV switch room	120 d	Sat 1/6/24	Sat 28/9/24			C2	LV switch room 28/9			
496	1.8.2.1.1.2	T&C (for FSI)	15 d	Mon 16/9/24	Mon 30/9/24			C2	T&C (for FSI) 30/9			
497	1.8.2.1.1.2	<b>T&amp;C of the sewage pumping station</b>	<b>50 d</b>	<b>Wed 11/9/24</b>	<b>Ned 30/10/24</b>			<b>C2</b>	<b>T&amp;C of the sewage pumping station</b>			
498	1.8.2.1.1.2	<b>civil works</b>	<b>43 d</b>	<b>Wed 11/9/24</b>	<b>Ned 23/10/24</b>			<b>C2</b>	<b>civil works</b>			
499	1.8.2.1.1.2	cat ladder installation	10 d	Wed 11/9/24	Fri 20/9/24		500	C2	cat ladder installation 20/9			
500	1.8.2.1.1.2	working platform demolition	5 d	Sat 21/9/24	Wed 25/9/24	499	501	C2	working platform demolition 25/9			
501	1.8.2.1.1.2	epoxy paint on bottom of wet well	5 d	Thu 26/9/24	Mon 30/9/24	500	504SS	C2	epoxy paint on bottom of wet well 30/9			
502	1.8.2.1.1.2	water-tight test for wet well inlet chamber	21 d	Thu 3/10/24	Ned 23/10/24	504SS+7 d		C2	water-tight test for wet well inlet chamber 23/10			
503	1.8.2.1.1.2	<b>E&amp;M works</b>	<b>35 d</b>	<b>Thu 26/9/24</b>	<b>Ned 30/10/24</b>			<b>C2</b>	<b>E&amp;M works</b>			
504	1.8.2.1.1.2	E&M works	28 d	Thu 26/9/24	Ned 23/10/24	501SS	505,502SS+7 d	C2	E&M works 23/10			
505	1.8.2.1.1.2	T&C	7 d	Thu 24/10/24	Ned 30/10/24	504		C2	T&C 30/10			
506	1.8.2.1.2	<b>R/F</b>	<b>40 d</b>	<b>Mon 30/9/24</b>	<b>Fri 8/11/24</b>			<b>C2</b>	<b>R/F</b>			
507	1.8.2.1.2.1	<b>ABWF</b>	<b>40 d</b>	<b>Mon 30/9/24</b>	<b>Fri 8/11/24</b>			<b>C2</b>	<b>ABWF</b>			
508	1.8.2.1.2.1	water-proofing installation with protection screeding	2 d	Mon 30/9/24	Tue 1/10/24		509	C2	water-proofing installation with protection screeding 1/10			
509	1.8.2.1.2.1	Floor screeding, Surface Channel Installation	8 d	Wed 2/10/24	Wed 9/10/24	508	510	C2	Floor screeding, Surface Channel Installation 9/10			
510	1.8.2.1.2.1	Laying AGT at Roof Floor	30 d	Thu 10/10/24	Fri 8/11/24	509	512SS,513SS,514S	C2	Laying AGT at Roof Floor 8/11			
511	1.8.2.1.2.2	<b>E&amp;M works</b>	<b>30 d</b>	<b>Thu 10/10/24</b>	<b>Fri 8/11/24</b>			<b>C2</b>	<b>E&amp;M works</b>			
512	1.8.2.1.2.2	Electrical works (include PV panel)	20 d	Thu 10/10/24	Tue 29/10/24	510SS		C2	Electrical works (include PV panel) 29/10			
513	1.8.2.1.2.2	MVAC works	30 d	Thu 10/10/24	Fri 8/11/24	510SS		C2	MVAC works 8/11			
514	1.8.2.1.2.2	Plumbing and drainage works	20 d	Sat 12/10/24	Thu 31/10/24	510SS		C2	Plumbing and drainage works 31/10			
515	1.8.2.1.3	<b>FS Inspection of Pumping Station</b>	<b>14 d</b>	<b>Fri 13/9/24</b>	<b>Thu 26/9/24</b>			<b>C2</b>	<b>FS Inspection of Pumping Station</b>			
516	1.8.2.1.3.1	Form 501 submission	0 d	Fri 13/9/24	Fri 13/9/24		517	C2	Form 501 submission 13/9			
517	1.8.2.1.3.2	Review document by FS department (assume 10 days)	14 d	Fri 13/9/24	Thu 26/9/24	516	518	C2	Review document by FS department (assume 10 days) 26/9			
518	1.8.2.1.3.3	Actual FS inspection	0 d	Thu 26/9/24	Thu 26/9/24	517		C2	Actual FS inspection 26/9			
519	1.8.2.2	<b>External Façade Works</b>	<b>58 d</b>	<b>Thu 19/9/24</b>	<b>Fri 15/11/24</b>			<b>C2</b>	<b>External Façade Works</b>			
520	1.8.2.2.1	<b>ABWF</b>	<b>33 d</b>	<b>Thu 19/9/24</b>	<b>Mon 21/10/24</b>			<b>C2</b>	<b>ABWF</b>			
521	1.8.2.2.1.1	setting out for granite tile	4 d	Thu 19/9/24	Sun 22/9/24		522	C2	setting out for granite tile 22/9			
522	1.8.2.2.1.2	Artificial granite tiles	21 d	Mon 23/9/24	Sun 13/10/24	521		C2	Artificial granite tiles 13/10			
523	1.8.2.2.1.3	apply skimcoat	21 d	Tue 24/9/24	Mon 14/10/24		524SS+7 d	C2	apply skimcoat 14/10			
524	1.8.2.2.1.4	apply paint	21 d	Tue 1/10/24	Mon 21/10/24	523SS+7 d		C2	apply paint 21/10			
525	1.8.2.2.2	<b>Window and louvre</b>	<b>53 d</b>	<b>Tue 24/9/24</b>	<b>Fri 15/11/24</b>			<b>C2</b>	<b>Window and louvre</b>			
526	1.8.2.2.2.1	Installation of fins (EVA side)	28 d	Tue 24/9/24	Mon 21/10/24			C2	Installation of fins (EVA side) 21/10			
527	1.8.2.2.2.2	Installation of fins(garden side)	23 d	Thu 24/10/24	Fri 15/11/24	529		C2	Installation of fins(garden side) 15/11			
528	1.8.2.3	<b>Soft landscaping works</b>	<b>39 d</b>	<b>Tue 8/10/24</b>	<b>Fri 15/11/24</b>			<b>C2</b>	<b>Soft landscaping works</b>			
529	1.8.2.3.1	footpath construction within the garden area	16 d	Tue 8/10/24	Wed 23/10/24		527,530	C2	footpath construction within the garden area 23/10			
530	1.8.2.3.2	soil mixing and planting	23 d	Thu 24/10/24	Fri 15/11/24	529		C2	soil mixing and planting 15/11			
531	1.9	<b>Area no. 10</b>	<b>66 d</b>	<b>Wed 11/9/24</b>	<b>Fri 15/11/24</b>		<b>2</b>	<b>C2</b>	<b>Area no. 10</b>			
532	1.9.1	<b>EVA</b>	<b>65 d</b>	<b>Wed 11/9/24</b>	<b>Thu 14/11/24</b>			<b>C2</b>	<b>EVA</b>			
533	1.9.1.1	<b>EVA no. 10</b>	<b>65 d</b>	<b>Wed 11/9/24</b>	<b>Thu 14/11/24</b>			<b>C2</b>	<b>EVA no. 10</b>			
534	1.9.1.1.1	Remaining formation	21 d	Wed 11/9/24	Tue 1/10/24		535	C2	Remaining formation 1/10			
535	1.9.1.1.2	subbase laying	4 d	Wed 2/10/24	Sat 5/10/24	534	536	C2	subbase laying 5/10			
536	1.9.1.1.3	road base	2 d	Sun 6/10/24	Mon 7/10/24	535	537	C2	road base 7/10			
537	1.9.1.1.4	paving blocks installation	12 d	Tue 8/10/24	Sat 19/10/24	536	538	C2	paving blocks installation 19/10			
538	1.9.1.1.5	lamp poles and bollards	14 d	Sun 20/10/24	Sat 2/11/24	537		C2	lamp poles and bollards 2/11			
539	1.9.1.1.6	matching cover installation to drawpits (assume matching cover deliver to site mid Oct)	16 d	Wed 30/10/24	Thu 14/11/24			C2	matching cover installation to drawpits (assume matching cover deliver to site mid Oct) 14/11			
540	1.9.2	<b>E&amp;M</b>	<b>38 d</b>	<b>Mon 30/9/24</b>	<b>Wed 6/11/24</b>			<b>C2</b>	<b>E&amp;M</b>			
541	1.9.2.1	1 no. of pillar box	38 d	Mon 30/9/24	Wed 6/11/24			C2	1 no. of pillar box			

Acceleration Programme Rev 16C

Task: █ Summary:   Start-only:   Critical: █ Progress: █

Milestone: ◆ Project Summary:   Finish-only:   Critical Split: ..... Manual Progress: █

ID	WBS	Task Name	Duration	Start	Finish	Predecessors	Successors	Task Calendar	Gantt Chart (A, S, O, N, D)				
542	1.9.2.1.1	plinth	8 d	Mon 30/9/24	Mon 7/10/24		543	C2					
543	1.9.2.1.2	pillar box installation	30 d	Tue 8/10/24	Wed 6/11/24	542		C2					
544	1.9.3	<b>soft landscaping works</b>	<b>21 d</b>	<b>Sat 26/10/24</b>	<b>Fri 15/11/24</b>			<b>C2</b>					
545	1.9.3.1	soil mixing and planting works at the planter beside EVA no. 10	21 d	Sat 26/10/24	Fri 15/11/24			C2					
546	1.10	<b>Lift 1 and 2</b>	<b>568 d</b>	<b>Sun 16/4/23</b>	<b>Fri 15/11/24</b>		<b>2</b>	<b>C2</b>					
547	1.10.1	<b>Lift 1</b>	<b>124 d</b>	<b>Sat 13/7/24</b>	<b>Ned 13/11/24</b>			<b>C2</b>					
548	1.10.1.1	<b>Lift car works</b>	<b>119 d</b>	<b>Sat 13/7/24</b>	<b>Fri 8/11/24</b>			<b>C2</b>					
549	1.10.1.1.1	Installation of lift car by OTIS (+7 days after energized from Pillar)	38 d	Sat 13/7/24	Wed 6/11/24	564,581FF+1551,578,550		C2					
550	1.10.1.1.2	Submit LE-5 to EMSD by OTIS	1 d	Thu 7/11/24	Thu 7/11/24	549		C2					
551	1.10.1.1.3	Seal up works	2 d	Thu 7/11/24	Fri 8/11/24	549		C2					
552	1.10.1.1.4	<b>Underground Drainage works</b>	<b>40 d</b>	<b>Mon 26/8/24</b>	<b>Fri 4/10/24</b>			<b>C2</b>					
553	1.10.1.1.4	Provide drainage drawings at staircase by Mannings (due to revised pavement level under PMI additional bus stop, refer to email dated 8/8/24 and commence works after completed)	1 d	Tue 27/8/24	Tue 27/8/24		578	C2					
554	1.10.1.1.4	Construct surface channel and manhole at staircase by Yeung Kong	14 d	Mon 16/9/24	Sun 29/9/24		555	C2					
555	1.10.1.1.4	Connect drain pipe from sump pit to manhole by Yeung Kong	5 d	Mon 30/9/24	Fri 4/10/24	554	578	C2					
556	1.10.1.1.4	Provide drainage drawings at pavement between 4E1 and Lift LT1 by Mannings (due to revised pavement level under PMI additional bus stop, refer to email dated 8/8/24 and commence works after completed pavement works)	1 d	Mon 26/8/24	Mon 26/8/24		557	C2					
557	1.10.1.1.4	Carry out drainage works at pavement between 4E1/ Lift LT1 by JHL (upon provided drainage plan)	19 d	Tue 27/8/24	Sun 15/9/24	556		C2					
558	1.10.1.1.4	Carry out lighting box with cable ducts at pavement between 4E1/ Lift LT1 by JHL (not yet issue SIS)	13 d	Mon 2/9/24	Sat 14/9/24		588	C2					
559	1.10.1.2	<b>External Finishing</b>	<b>106 d</b>	<b>Wed 31/7/24</b>	<b>Ned 13/11/24</b>			<b>C2</b>					
560	1.10.1.2.1	<b>Architectural Works</b>	<b>73 d</b>	<b>Mon 2/9/24</b>	<b>Ned 13/11/24</b>			<b>C2</b>					
561	1.10.1.2.1	Installation of glass canopy at G/F & P/F by Kpa	7 d	Mon 23/9/24	Sun 29/9/24			C2					
562	1.10.1.2.1	Installation of metal fins by Kpa (upon completion of pavement works)	14 d	Mon 2/9/24	Sun 15/9/24	601,617,618,630		C2					
563	1.10.1.2.1	Submit shop drawing of stainless finish of lift door at G/F & P/F by Kpa	1 d	Mon 16/9/24	Mon 16/9/24		564	C2					
565	1.10.1.2.1	Modification works at r.c. curb of staircase by JHL	3 d	Tue 24/9/24	Thu 26/9/24		566	C2					
566	1.10.1.2.1	Setting out works at as-built holding down bolt for fabrication of curve staircase by Kpa	1 d	Fri 27/9/24	Fri 27/9/24	565	567	C2					
567	1.10.1.2.1	Fabrication of glass balustrade by Kpa	21 d	Sat 28/9/24	Fri 18/10/24	566	568	C2					
568	1.10.1.2.1	Installation of glass balustrade by Kpa	14 d	Sat 19/10/24	Fri 1/11/24	567	569	C2					
569	1.10.1.2.1	Installation of lighting of glass balustrade works by Wing Luen	7 d	Sat 2/11/24	Fri 8/11/24	568		C2					
570	1.10.1.2.1	Modification works at pillar box to match revised pavement level (due to revised pavement level under PMI additional bus stop, refer to email dated 8/8/24 and commence works after completed pavement works)	18 d	Mon 2/9/24	Thu 19/9/24		571	C2					
572	1.10.1.2.1	Re-construct Footing of 2 street lighting pillar boxes to match revised pavement level (due to revised pavement level under PMI additional bus stop, refer to email dated 8/8/24 and commence works after completed pavement works)	21 d	Mon 2/9/24	Sun 22/9/24		573	C2					
573	1.10.1.2.1	Install cover of street lighting pillar box	3 d	Mon 23/9/24	Wed 25/9/24	572	581	C2					
574	1.10.1.2.1	Installation of glass canopy at G/F & P/F by Kpa	7 d	Mon 16/9/24	Sun 22/9/24		575	C2					
575	1.10.1.2.1	Installation Lighting of glass canopy at G/F & P/F by Kpa	2 d	Mon 23/9/24	Tue 24/9/24	574		C2					
576	1.10.1.2.1	Installation of metal fins by Kpa (Upon completion of pavement works)	14 d	Tue 24/9/24	Mon 7/10/24		582	C2					
577	1.10.1.2.1	Submit shop drawings of stainless steel finish lift door by Kpa (issue SIS date 19/8/24)	7 d	Fri 13/9/24	Thu 19/9/24		578	C2					
578	1.10.1.2.1	Supply & Installation of stainless steel finish of lift door at G/F & P/F by Kpa	7 d	Thu 7/11/24	Ned 13/11/24	549,553,555,		C2					
579	1.10.1.2.1	Painting works for Column (Pending ADRG issue drawing and seeking supplier)	3 d	Mon 30/9/24	Wed 2/10/24			C2					
571	1.10.1.2.1	Supply and install stainless steel door for pillar box	5 d	Fri 20/9/24	Wed 25/9/24	570	634	C2					
564	1.10.1.2.1	Installation of stainless finish of lift door at G/F & P/F	7 d	Mon 28/10/24	Mon 4/11/24	563	549	C2					
580	1.10.1.2.2	<b>E&amp;M works</b>	<b>99 d</b>	<b>Wed 31/7/24</b>	<b>Wed 6/11/24</b>			<b>C2</b>					
581	1.10.1.2.2	Power supply to pillar box by CLP for Lift car, lighting & pump pit	7 d	Thu 26/9/24	Wed 2/10/24	573	549FF+14 d,587,586	C2					
582	1.10.1.2.2	Drainage works for lift & linking platform by Wing Luen	7 d	Tue 8/10/24	Mon 14/10/24	576	583,587,586	C2					
583	1.10.1.2.2	Installation of pumping system at pump pit by Wing Luen	6 d	Tue 15/10/24	Sun 20/10/24	582	587,586	C2					
584	1.10.1.2.2	Power cabling works by Wing Lun	7 d	Wed 31/7/24	Sat 28/9/24	627	586	C2					
585	1.10.1.2.2	Installation of lightning works by Wing Lun	7 d	Wed 25/9/24	Tue 1/10/24	627	586	C2					
586	1.10.1.2.2	T&C	1 d	Wed 6/11/24	Wed 6/11/24	581,582,583,		C2					

Acceleration Programme Rev 16C

Task █ Summary  Start-only  Critical █ Progress █

Milestone ◆ Project Summary  Finish-only  Critical Split █ Manual Progress █

ID	WBS	Task Name	Duration	Start	Finish	Predecessors	Successors	Task Calendar	
587	1.10.1.3	<b>Hard Landscape works</b>	<b>40 d</b>	<b>Fri 13/9/24</b>	<b>Tue 22/10/24</b>	<b>581,582,583</b>		<b>C2</b>	
588	1.10.1.3.1	Pavement Works between 4E1/ LT1 by On Woo	6 d	Tue 17/9/24	Sun 22/9/24	558		C2	
589	1.10.1.3.2	Revised Staircase drawing by Mainnings (due to revised pavement level under PMI additional bus stop, refer to email dated 8/8/24 and commence works after completed pavement works)	1 d	Fri 13/9/24	Fri 13/9/24		590	C2	
590	1.10.1.3.3	Carry out modification works for additional 2 nos. of step at staircase by Yeung Kong(due to revised pavement level under PMI additional bus stop, refer to email dated 8/8/24 and commence works after completed pavement works)	14 d	Sat 14/9/24	Fri 27/9/24	589	591	C2	
591	1.10.1.3.4	Screeding works	7 d	Mon 30/9/24	Sun 6/10/24	590	592	C2	
592	1.10.1.3.5	Pavement works	7 d	Wed 9/10/24	Tue 15/10/24	591	593	C2	
593	1.10.1.3.6	Tactile works	2 d	Mon 21/10/24	Tue 22/10/24	592		C2	
594	1.10.1.4	<b>Soft landscape at G/F</b>	<b>28 d</b>	<b>Fri 16/8/24</b>	<b>Thu 12/9/24</b>			<b>C2</b>	
595	1.10.1.4.1	Installation of sub-soil drainage	7 d	Fri 16/8/24	Thu 22/8/24		596	C2	
596	1.10.1.4.2	Installation of irrigation system	7 d	Fri 23/8/24	Thu 29/8/24	595	597	C2	
597	1.10.1.4.3	Backfilling work	7 d	Fri 30/8/24	Thu 5/9/24	596	598	C2	
598	1.10.1.4.4	Planting works	7 d	Fri 6/9/24	Thu 12/9/24	597		C2	
599	1.10.2	<b>Lift L2</b>	<b>568 d</b>	<b>Sun 16/4/23</b>	<b>Fri 15/11/24</b>			<b>C2</b>	
600	1.10.2.1	<b>RC Work</b>	<b>394 d</b>	<b>Sun 16/4/23</b>	<b>Sat 25/5/24</b>			<b>C2</b>	
607	1.10.2.2	<b>Lift car works</b>	<b>417 d</b>	<b>Thu 14/9/23</b>	<b>Fri 15/11/24</b>			<b>C2</b>	
608	1.10.2.2.1	Production of lift car by OTIS	137 d	Thu 14/9/23	Tue 27/2/24			C2	
609	1.10.2.2.2	Prepare works shop drawing and erect temporary hoarding works by	30 d	Thu 2/5/24	Fri 31/5/24	610SF		C2	
610	1.10.2.2.3	Installation of lift car by OTIS (+7 days after energized from Pillar)	74 d	Sat 13/7/24	Thu 7/11/24	629FF+14 d	609SF,613,624,611	C2	
611	1.10.2.2.4	Submit LE-5 to EMSD by OTIS	1 d	Fri 8/11/24	Fri 8/11/24	610	612	C2	
612	1.10.2.2.5	Site Inspection and issue of letter by EMSD	7 d	Sat 9/11/24	Fri 15/11/24	611		C2	
613	1.10.2.2.6	Seal up works	2 d	Fri 8/11/24	Sat 9/11/24	610		C2	
614	1.10.2.2.7	Supply and installation of cat ladder	14 d	Mon 29/7/24	Tue 13/8/24			C2	
615	1.10.2.3	<b>External Finishing</b>	<b>184 d</b>	<b>Thu 16/5/24</b>	<b>Fri 15/11/24</b>			<b>C2</b>	
616	1.10.2.3.1	<b>Architectural Works</b>	<b>184 d</b>	<b>Thu 16/5/24</b>	<b>Fri 15/11/24</b>			<b>C2</b>	
617	1.10.2.3.1	Painting work for external wall by SKK	7 d	Tue 11/6/24	Tue 18/6/24	601	562	C2	
618	1.10.2.3.1	Installation of glass panel by Kpa	14 d	Thu 16/5/24	Fri 31/5/24	601,605	562	C2	
619	1.10.2.3.1	Installation of metal louver by Kpa	14 d	Thu 16/5/24	Fri 31/5/24	605	562,632	C2	
620	1.10.2.3.1	Installation of glass canopy at G/F & P/F by Kpa	7 d	Mon 30/9/24	Sun 6/10/24		621	C2	
621	1.10.2.3.1	Installation Lighting of glass canopy at G/F & P/F by Kpa	2 d	Mon 7/10/24	Tue 8/10/24	620		C2	
622	1.10.2.3.1	Submit shop drawing of stainless finish of lift door at G/F & P/F by	1 d	Fri 13/9/24	Fri 13/9/24			C2	
623	1.10.2.3.1	Installation of metal fins by Kpa	37 d	Tue 24/9/24	Tue 5/11/24		637	C2	
624	1.10.2.3.1	Installation of stainless finish of lift door at G/F & P/F	8 d	Fri 8/11/24	Fri 15/11/24	610		C2	
625	1.10.2.3.1	Insallation of glass balustrade by Kpa	14 d	Wed 2/10/24	Tue 15/10/24		626	C2	
626	1.10.2.3.1	Installation of lighting of glass balustrade work	5 d	Wed 16/10/24	Sun 20/10/24	625		C2	
627	1.10.2.3.1	Supply and install stainless steel door for pillar box	7 d	Mon 16/9/24	Tue 24/9/24		584,585,633	C2	
628	1.10.2.3.2	<b>E&amp;M works</b>	<b>125 d</b>	<b>Sat 1/6/24</b>	<b>Thu 3/10/24</b>			<b>C2</b>	
629	1.10.2.3.2	Power supply to pillar box by CLP for Lift car, lighting & pump pit	7 d	Mon 16/9/24	Sun 22/9/24		610FF+14 d,635	C2	
630	1.10.2.3.2	Drainage works for lift & linking platform by Wing Lune	7 d	Mon 16/9/24	Sun 22/9/24	562	631,635	C2	
631	1.10.2.3.2	Installation of pumping system at pump pit by Wing Luen	7 d	Mon 23/9/24	Sun 29/9/24	630	635	C2	
632	1.10.2.3.2	Installation of ventilation fans works at lift car by Wing Lun	7 d	Sat 1/6/24	Sat 8/6/24	619	635	C2	
633	1.10.2.3.2	Power cabling works by Wing Lun	7 d	Wed 25/9/24	Tue 1/10/24	602,627	635	C2	
634	1.10.2.3.2	Installation of lightning works by Wing Lun	7 d	Thu 26/9/24	Wed 2/10/24	571,602	635	C2	
635	1.10.2.3.2	T&C	1 d	Thu 3/10/24	Thu 3/10/24	629,630,631,		C2	
636	1.10.2.4	<b>Hard Landscape works</b>	<b>8 d</b>	<b>Wed 6/11/24</b>	<b>Ned 13/11/24</b>			<b>C2</b>	
637	1.10.2.4.1	Screeding works (upon completion of external fins installation and dismantle scaffolding )	3 d	Wed 6/11/24	Fri 8/11/24	623	638	C2	
638	1.10.2.4.2	Pavement works	3 d	Sat 9/11/24	Mon 11/11/24	637	639	C2	
639	1.10.2.4.3	Tactile works	2 d	Tue 12/11/24	Ned 13/11/24	638		C2	

**Appendix C – Apply permission for Environmental Monitoring**

Propose alternative monitoring location: The Lok Sin Tong Modular Social Housing Scheme

Status: Rejected application

Email on: 10 May 2022

Subject **The Lok Sin Tong Benevolent Society Kowloon - Apply permission for Environmental Monitoring for Stage 4 of Kai Tak Development**



From [Redacted]  
To [Redacted]  
Bcc [Redacted]

Date 2022-05-10 15:48

- Figure 1 Impact dust measurement setup.jpg(~1.2 MB)
- Figure 2 Impact noise measurement setup.jpg(~979 KB)

Company: The Lok Sin Tong Benevolent Society Kowloon

By Email ([Redacted])

Dear Madam  
5 May 2022

Dear Sir/ Madam, [Redacted]

Re: Environmental Monitoring for Kai Tak Development - Stage 4 Infrastructure at the former runway and south apron

We, Ka Shing Management Consultant Limited (KS), is appointed by Civil Engineering and Development Department (CEDD), working as Environmental Team (ET) to conduct the monitoring and audit works as part of the EM&A programme of the Kai Tak Development - Stage 4 Infrastructure at the former runway and south apron (KTD Stage 4 Project) starting from July 2019 to May 2024.

KTD Stage 4 project is located in the south-eastern part of Kowloon Peninsular of the HKSAR, comprising the apron and runway areas of the former Kai Tak Airport and existing waterfront areas at To Kwa Wan, Ma Tau Kok, Kowloon Bay, Kwun Tong and Cha Kwo Ling. Your premise, Hong Kong Society for Blind Workshop and Hotels, is one of the proposed sensitive receivers.

We would like to obtain your kind permission for entering the premise to carry out baseline and impact monitoring, baseline dust monitoring (1-hour and 24-hour TSP monitoring) and baseline noise monitoring (30-minute) would need to conduct continuously for 14 days, our propose baseline monitoring date is June 2022.

After baseline monitoring, impact dust monitoring (1-hour and 24-hour TSP monitoring) and impact noise monitoring (30-minute) would take place between 08:00 hrs to 18:00 hrs in normal working days once every six days.

The monitoring location will be located on the roof top floor of The Lok Sin Tong Modular Social Housing Scheme at Junction of Sung Wong Toi Road and To Kwa Wan Road facing to Kai Tak Development area. 220V power supply is needed for 24-hour TSP monitor with size 0.5m (L) x 0.5m (W) x 1.4m (H). We will pay for the electricity. Similar setup photo records are shown in Figure 1 and Figure 2 for your kindly reference. Our technician will stay at the measurement point for 1-hour TSP and 30-minute noise measurement.

We hope to conduct site visit at 13:30 pm of 25 May 2022 (Wed).

Should you have any enquires regarding the measurement, please do not hesitate to contact [Redacted] at [Redacted]

Thank you for your kind attention and I look forward to receiving your favourable reply soon.

Yours Sincerely,

Lee Wing Hang  
Ka Shing Management Consultant Limited

Email on: 13 October 2022

Subject **The Lok Sin Tong Benevolent Society Kowloon - Reject to Apply permission for Environmental Monitoring for Stage 4 of Kai Tak Development**



From [Redacted]  
To [Redacted]  
Bcc [Redacted]

Date 2022-10-13 15:52

Company: The Lok Sin Tong Benevolent Society Kowloon

By Email [Redacted]

Dear Sir/ [Redacted]

Referring to the communication between your staff and me regarding the captioned work at 21 September 2022, the Lok Sin Tong Benevolent Society Kowloon was rejected the apply permission for Environmental Monitoring for Stage 4 of Kai Tak Development. Due to electricity supply and security concern in Modular House , Environmental monitoring at Modular House is not allowed open.

Should you have any enquires regarding the measurement, please do not hesitate to contact [Redacted] at [Redacted]

Thank you for your kind attention and I look forward to receiving your favourable reply soon.

Yours Sincerely,

Lee Wing Hang  
Ka Shing Management Consultant Limited

Propose alternative monitoring location: Freder Centre  
Status: No reply from building management office unit the reporting month

Email on: 19 July 2022

Subject **Freder Centre - Apply permission for Environmental Monitoring for Stage 4 of Kai Tak Development**



From [Redacted]  
To [Redacted]  
Bcc [Redacted]

Date 2022-07-19 13:33

- Figure 1 Impact dust measurement setup.jpg(~1.2 MB)
- Figure 2 Impact noise measurement setup.jpg(~979 KB)

Company: Freder Centre

By Email [Redacted]  
Dear Sir [Redacted]

Re: Environmental Monitoring for Kai Tak Development - Stage 4 Infrastructure at the former runway and south apron

We, Ka Shing Management Consultant Limited (KS), is appointed by Civil Engineering and Development Department (CEDD), working as Environmental Team (ET) to conduct the monitoring and audit works as part of the EM&A programme of the Kai Tak Development - Stage 4 Infrastructure at the former runway and south apron (KTD Stage 4 Project) starting from July 2019 to May 2024.

KTD Stage 4 project is located in the south-eastern part of Kowloon Peninsular of the HKSAR, comprising the apron and runway areas of the former Kai Tak Airport and existing waterfront areas at To Kwa Wan, Ma Tau Kok, Kowloon Bay, Kwun Tong and Cha Kwo Ling. Your premise, Hong Kong Society for Blind Workshop and Hotels, is one of the proposed sensitive receivers.

We would like to obtain your kind permission for entering the premise to carry out baseline and impact monitoring, baseline dust monitoring (1-hour and 24-hour TSP monitoring) and baseline noise monitoring (30-minute) would need to conduct continuously for 14 days, our propose baseline monitoring date is August 2022.

After baseline monitoring, impact dust monitoring (1-hour and 24-hour TSP monitoring) and impact noise monitoring (30-minute) would take place between 08:00 hrs to 18:00 hrs in normal working days once every six days.

The monitoring location will be located on the roof top floor of Freder Centre at Junction of Sung Wong Toi Road and To Kwa Wan Road facing to Kai Tak Development area. 220V power supply is needed for 24-hour TSP monitor with size 0.5m (L) x 0.5m (W) x 1.4m (H). We will pay for the electricity. Similar setup photo records are shown in Figure 1 and Figure 2 for your kindly reference. Our technician will stay at the measurement point for 1-hour TSP and 30-minute noise measurement.

We hope to conduct site visit at 15:30pm of 26 July 2022 (Tue).

Should you have any enquires regarding the measurement, please do not hesitate to contact [Redacted] at [Redacted]

Thank you for your kind attention and I look forward to receiving your favourable reply soon.

Yours Sincerely,

Lee Wing Hang  
Ka Shing Management Consultant Limited

Propose alternative monitoring location: New Port Centre  
Status: No reply from building management office unit the reporting month

Email on: 19 July 2022

Subject **New Port Centre - Apply permission for Environmental Monitoring for Stage 4 of Kai Tak Development**



From [Redacted]  
To [Redacted]  
Bcc [Redacted]

Date 2022-07-19 13:33

- Figure 1 Impact dust measurement setup.jpg(~1.2 MB)
- Figure 2 Impact noise measurement setup.jpg(~979 KB)

Company: New Port Centre & Synergis management services limited

By Email [Redacted]

Dear Sir,

Re: Environmental Monitoring for Kai Tak Development - Stage 4 Infrastructure at the former runway and south apron

We, Ka Shing Management Consultant Limited (KS), is appointed by Civil Engineering and Development Department (CEDD), working as Environmental Team (ET) to conduct the monitoring and audit works as part of the EM&A programme of the Kai Tak Development - Stage 4 Infrastructure at the former runway and south apron (KTD Stage 4 Project) starting from July 2019 to May 2024.

KTD Stage 4 project is located in the south-eastern part of Kowloon Peninsular of the HKSAR, comprising the apron and runway areas of the former Kai Tak Airport and existing waterfront areas at To Kwa Wan, Ma Tau Kok, Kowloon Bay, Kwun Tong and Cha Kwo Ling. Your premise, New Port Centre, is one of the proposed sensitive receivers.

We would like to obtain your kind permission for entering the premise to carry out baseline and impact monitoring, baseline dust monitoring (1-hour and 24-hour TSP monitoring) and baseline noise monitoring (30-minute) would need to conduct continuously for 14 days, our propose baseline monitoring date is August 2022.

After baseline monitoring, impact dust monitoring (1-hour and 24-hour TSP monitoring) and impact noise monitoring (30-minute) would take place between 08:00 hrs to 18:00 hrs in normal working days once every six days.

The monitoring location will be located on the roof top floor of New Port Centre at Junction of Sung Wong Toi Road and To Kwa Wan Road facing to Kai Tak Development area. 220V power supply is needed for 24-hour TSP monitor with size 0.5m (L) x 0.5m (W) x 1.4m (H). We will pay for the electricity. Similar setup photo records are shown in Figure 1 and Figure 2 for your kindly reference. Our technician will stay at the measurement point for 1-hour TSP and 30-minute noise measurement.

We hope to conduct site visit at 13:30pm of 26 July 2022 (Tue).

Should you have any enquires regarding the measurement, please do not hesitate to contact [Redacted] at [Redacted]

Thank you for your kind attention and I look forward to receiving your favourable reply soon.

Yours Sincerely,

Lee Wing Hang  
Ka Shing Management Consultant Limited

Email on: 17 August 2022

Subject **Kum Shing Group and Hong Kong Energy Infrastructure Limited - Apply permission for Environmental Monitoring for Stage 4 of Kai Tak Development**



From [Redacted]  
To [Redacted]  
Bcc [Redacted]

Date 2022-08-17 11:54

- Figure 1 Impact dust measurement setup.jpg(~1.2 MB)
- Figure 2 Impact noise measurement setup.jpg(~979 KB)
- plug 01.jpg(~2.6 MB)

Company: Kum Shing Group and Hong Kong Energy Infrastructure Limited

By Email [Redacted]

Dear Sir,

Re: Environmental Monitoring for Kai Tak Development - Stage 4 Infrastructure at the former runway and south apron

We, Ka Shing Management Consultant Limited (KS), is appointed by Civil Engineering and Development Department (CEDD), working as Environmental Team (ET) to conduct the monitoring and audit works as part of the EM&A programme of the Kai Tak Development - Stage 4 Infrastructure at the former runway and south apron (KTD Stage 4 Project) starting from July 2019 to May 2024.

KTD Stage 4 project is located in the south-eastern part of Kowloon Peninsular of the HKSAR, comprising the apron and runway areas of the former Kai Tak Airport and existing waterfront areas at To Kwa Wan, Ma Tau Kok, Kowloon Bay, Kwun Tong and Cha Kwo Ling. Your premise, New Port Centre, is one of the proposed sensitive receivers.

We would like to obtain your kind permission for entering the premise to carry out baseline and impact monitoring, baseline dust monitoring (1-hour and 24-hour TSP monitoring) and baseline noise monitoring (30-minute) would need to conduct continuously for 14 days, our propose baseline monitoring date is August 2022.

After baseline monitoring, impact dust monitoring (1-hour and 24-hour TSP monitoring) and impact noise monitoring (30-minute) would take place between 08:00 hrs to 18:00 hrs in normal working days once every six days.

The monitoring location will be located on the roof top floor of New Port Centre at Junction of Sung Wong Toi Road and To Kwa Wan Road facing to Kai Tak Development area. 220V power supply is needed for 24-hour TSP monitor with size 0.5m (L) x 0.5m (W) x 1.4m (H). We will pay for the electricity. Similar setup photo records are shown in Figure 1 and Figure 2 for your kindly reference. Our technician will stay at the measurement point for 1-hour TSP and 30-minute noise measurement.

We hope to loan the company on the roof top floor of Plug 01 for 24-hour TSP monitor of power supply.

Should you have any enquires regarding the measurement, please do not hesitate to contact [Redacted] at [Redacted]

Thank you for your kind attention and I look forward to receiving your favourable reply soon.

Yours Sincerely,

Lee Wing Hang  
Ka Shing Management Consultant Limited

Propose alternative monitoring location: New Port Centre  
Status: No reply from building management office unit the reporting month

Email on: 19 August 2022

Subject **RE: Kum Shing Group and Hong Kong Energy Infrastructure Limited - Apply permission for Environmental Monitoring for Stage 4 of Kai Tak Development**



From

To

Cc

Date 2022-08-19 08:36

Dear Mr. LEE,

As we do not have ownership to the roof, we'd suggest you to approach the management company of Newport Center for further discussion.

<https://www.synergis.com.hk/html/en/>

best,  
Paul Lee

Email on: 15 September 2022

Subject **New Port Centre - Apply permission for Environmental Monitoring for Stage 4 of Kai Tak Development**



From

To

Date 2022-09-15 15:35

- Figure 1 Impact dust measurement setup.jpg(~1.2 MB)
- Figure 2 Impact noise measurement setup.jpg(~979 KB)
- Figure 3 expect Impact dust measurement setup.png(~267 KB)
- Figure 4 power supply plug.jpg(~2.6 MB)

Company: New Port Centre & Synergis management services limited

By Email

Dear Sir,

Re: Environmental Monitoring for Kai Tak Development - Stage 4 Infrastructure at the former runway and south apron

We, Ka Shing Management Consultant Limited (KS), is appointed by Civil Engineering and Development Department (CEDD), working as Environmental Team (ET) to conduct the monitoring and audit works as part of the EM&A programme of the Kai Tak Development - Stage 4 Infrastructure at the former runway and south apron (KTD Stage 4 Project) starting from July 2019 to May 2024.

KTD Stage 4 project is located in the south-eastern part of Kowloon Peninsular of the HKSAR, comprising the apron and runway areas of the former Kai Tak Airport and existing waterfront areas at To Kwa Wan, Ma Tau Kok, Kowloon Bay, Kwun Tong and Cha Kwo Ling. Your premise, New Port Centre, is one of the proposed sensitive receivers.

We would like to obtain your kind permission for entering the premise to carry out baseline and impact monitoring, baseline dust monitoring (1-hour and 24-hour TSP monitoring) and baseline noise monitoring (30-minute) would need to conduct continuously for 14 days, our propose baseline monitoring date is August 2022.

After baseline monitoring, impact dust monitoring (1-hour and 24-hour TSP monitoring) and impact noise monitoring (30-minute) would take place between 08:00 hrs to 18:00 hrs in normal working days once every six days.

The monitoring location will be located on the roof top floor of New Port Centre at Junction of Sung Wong Toi Road and To Kwa Wan Road facing to Kai Tak Development area. 220V power supply is needed for 24-hour TSP monitor with size 0.5m (L) x 0.5m (W) x 1.4m (H). We will pay for the electricity. Similar setup photo records are shown in Figure 1 and Figure 2 for your kindly reference. The expect of impact dust measurement setup photo records are shown in Figure 3 and the power supply will come from the roof of the socket (Figure 4) for reference. Our technician will stay at the measurement point for 1-hour TSP and 30-minute noise measurement.

Should you have any enquires regarding the measurement, please do not hesitate to contact [redacted] at [redacted]

Thank you for your kind attention and I look forward to receiving your favourable reply soon.

Yours Sincerely,

Lee Wing Hang  
Ka Shing Management Consultant Limited

**Appendix D – Environmental monitoring schedules**

Contract No. EDO 15/2018 Environmental Monitoring at Kai Tak Development Stage 4 Infrastructure at the former runway and south apron  
Environmental Monitoring and Weekly Site Inspection Schedule for February 2025

February 2025

Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1
2	3 24-hr TSP: AM3, AM4(A), AM7 1-hr X3 TSP: AM3, AM4(A), AM7 30-min Noise: M11, M12	4	5	6 Weekly Site Inspection	7	8 24-hr TSP: AM3, AM4(A), AM7 1-hr X3 TSP: AM3, AM4(A), AM7
9	10	11 Weekly Site Inspection + SSMC meeting	12	13	14 24-hr TSP: AM3, AM4(A), AM7 1-hr X3 TSP: AM3, AM4(A), AM7 30-min Noise: M11, M12	15
16	17	18	19	20 Weekly Site Inspection 24-hr TSP: AM3, AM4(A), AM7 1-hr X3 TSP: AM3, AM4(A), AM7 30-min Noise: M11, M12	21	22
23	24	25	26 24-hr TSP: AM3, AM4(A), AM7 1-hr X3 TSP: AM3, AM4(A), AM7 30-min Noise: M11, M12	27 Weekly Site Inspection	28	

NOTE:

- 1) Site inspection schedule and Impact monitoring schedule may be changed due to unforeseen circumstance (e.g. adverse weather).

**Air Quality Monitoring Station**

AM3 - Sky Tower

AM4(A) - The Hong Kong Society for the Blind's Factory cum Sheltered Workshop

AM7 - Hong Kong Children's Hospital

**Noise Quality Monitoring Station**

M11 - The Hong Kong Society for the Blind's Factory cum Sheltered Workshop

M12 - Hong Kong Children's Hospital

Contract No. EDO 15/2018 Environmental Monitoring at Kai Tak Development Stage 4 Infrastructure at the former runway and south apron  
Tentative Environmental Monitoring and Weekly Site Inspection Schedule for March 2025

March 2025

Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1
2	3	4 24-hr TSP: AM3, AM4(A), AM7 1-hr X3 TSP: AM3, AM4(A), AM7 30-min Noise: M11, M12	5	6 Weekly Site Inspection	7	8
9	10 24-hr TSP: AM3, AM4(A), AM7 1-hr X3 TSP: AM3, AM4(A), AM7 30-min Noise: M11, M12	11 Weekly Site Inspection + SSMC meeting	12	13	14	15 24-hr TSP: AM3, AM4(A), AM7 1-hr X3 TSP: AM3, AM4(A), AM7
16	17	18	19	20 Weekly Site Inspection	21 24-hr TSP: AM3, AM4(A), AM7 1-hr X3 TSP: AM3, AM4(A), AM7 30-min Noise: M11, M12	22
23	24	25	26	27 Weekly Site Inspection 24-hr TSP: AM3, AM4(A), AM7 1-hr X3 TSP: AM3, AM4(A), AM7 30-min Noise: M11, M12	28	29
30	31					

NOTE:

- 1) Site inspection schedule and Impact monitoring schedule may be changed due to unforeseen circumstance (e.g. adverse weather).
- 2) Due to the relocation of The Hong Kong Society for the Blind's Factory cum Sheltered Workshop (AM4(A) and M11), the premises owner rejected ET to conduct impact monitoring starting from 1 Sept 2022. No 24-TSP monitoring will be conducted at AM4(A) while 1-hr TSP at AM4(A) and 30-min noise monitoring at M11 will be conducted on the ground floor with orienting to the Project site. ET will resume the impact monitoring once the alternative monitoring location for AM4(A) and M11 are confirmed.

**Air Quality Monitoring Station**

AM3 - Sky Tower  
AM4(A) - The Hong Kong Society for the Blind's Factory cum Sheltered Workshop  
AM7 - Hong Kong Children's Hospital

**Noise Quality Monitoring Station**

M11 - The Hong Kong Society for the Blind's Factory cum Sheltered Workshop  
M12 - Hong Kong Children's Hospital

**Appendix E – Photographic records**

## Impact TSP Monitoring



Measurement setup at AM3



Measurement setup at AM4(A)

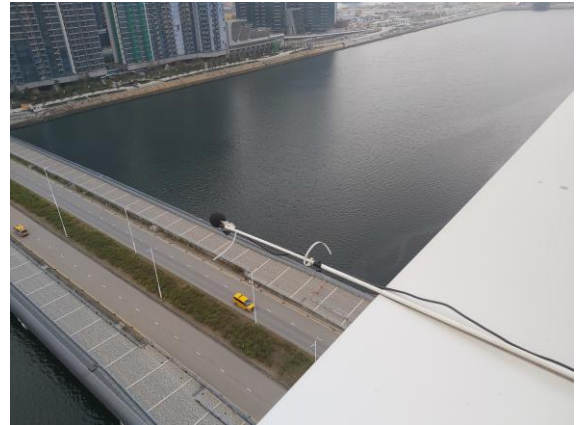


Measurement setup at AM7

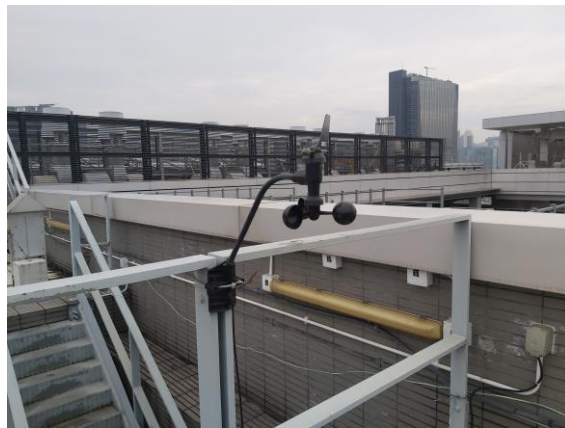
## Impact Noise Monitoring



Measurement setup at M11



Measurement setup at M12



Weather Station at the rooftop of Hong Kong Children's Hospital

**Appendix F – Calibration certificates, catalogue of air quality  
monitoring equipment**

## Catalogue of High Volume Sampler (HVS)



### TSP MFC

Total Suspended Particulate, Mass Flow Controlled



**MFC TSP**  
Ambient Air Sampler

The TE-5170 is a high volume ambient Total Suspended Particulate (TSP) air sampler featuring a mass flow controller (MFC) for accurate and consistent particulate sampling. The mass flow controller adjust the motor speed as the filter media collects particulate to maintain a constant flow rate throughout the entire sample duration. The system utilizes a stainless steel filter holder for use with standard 8" x 10" filter paper. The anodized aluminum shelter and robust electrical components allow the system to operate a continuous 24 hour sample.

**ABOUT US:** Tisch Environmental Inc. Tisch Environmental is the benchmark for high volume air sampling, particulate, metals, volatiles, and specialty monitoring equipment. Since the company's inception in 1953 as General Metal Works, our product line has expanded from the first high volume air sampler to include high-tech and custom samplers. Our clients are professionals from every sector of the regulatory and industrial markets.

- ✔ Meets EPA CFR, Appendix B to Part 50
- ✔ Total Suspended Particulate(TSP)
- ✔ Mass Flow Controlled
- ✔ 7-Day Mechanical Timer
- ✔ Elapsed Time Indicator
- ✔ Aluminum Outdoor Shelter
- ✔ Brush Style Motor
- ✔ Dickson Chart Recorder, 24 Hour
- ✔ Stainless Steel Filter Holder
- ✔ 36-60 CFM
- ✔ Made In USA

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www.tisch-env.com

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Cleveland, OH 45002  
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sales@tisch-env.com



## TSP MFC

MFC TSP Ambient Air Sampler

### General System Specifications

**Particulate Size:**Total Suspended Particulate (TSP)  
**EPA Designation:** CFR 40 Part 50 Appendix B  
**Flow Controller:** Mass Flow Controller  
**Motor Style:**Brush Style Motor Assembly  
**Pressure Recorder:**Dickson Chart Recorder, 24 hour  
**Timer:**7 Day Mechanical  
**Elapsed Time Indicator:**Mechanical, Hours and Tenths  
**Flow Range:**39-60CFM, 1.09M<sup>3</sup>M-1.68M<sup>3</sup>M  
**Housing:**Anodized Aluminum  
**Filter Holder:**Stainless Steel, 8" x 10"  
**4" Recorder Charts:** Box of 100  
**Filter Holder:** 8" x 10" Stainless Steel with hold down frame

### Applications

US EPA Reference Method Sampling, CFR Appendix J Part 50 Regulatory Compliance  
 Institutional Studies  
 Construction Sites  
 Bridge and Water Tower Painting Sites  
 Fence Line Monitoring  
 Industrial Monitoring  
 Landfill Monitoring  
 Public Health Applications

### Optional Equipment

TE-3000 Filter Holder Cartridge  
 TE-G653 8" x 10" Glass Fiber Filter Media  
 TE-33384 Motor Brush Set (110volt)  
 TE-33378 Motor Brush Set (220volt)  
 TE-116311 Replacement Motor (110volt)  
 TE-116312 Replacement Motor (220volt)  
 TE-106 Recorder Charts  
 TE-160 Recorder Pen Points  
 TE-5018 Gasket 8" x 10"

### Available Models

TE-5170 TSP MFC, 110 Volt 60 Hertz, 8 Amps  
 TE-5170X TSP MFC, 220 Volt 50 Hertz 4 Amps  
 TE-5170XZ TSP MFC, 220 Volts 60 Hertz, 4 Amps

### Calibration Equipment

TE-5028 -Variable Flow Calibration Kit  
 TE-HVC-V Xcalibrator HiVol Calibrator

### Physical Specifications

**Weight:** 75lbs, Shelter  
**Shipping Dimensions:** 46"W x 23"L x 20" H, Shelter  
 19"W x 19"L x 20"H, Lid  
**Assembled Dimensions:** 28"W x 28"L x 61"H

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## Calibration Certificate of HVS

### Air Sampler Calibration Curve Plotting & Calculation (Dickson recorder)

Calibration curve ref. No.: ATSPC-01-2025020101 Date of calibration: 01/02/2025

Location: Sky Tower Sampler: TE-5170X

**Calibration Data**

Ambient barometric pressure, Pa = 759.8 ( mmHg ) Ambient temperature, Ta = 294.55 ( deg K )

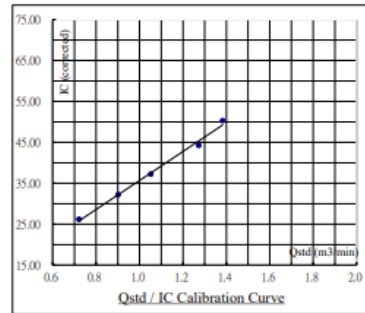
Qstd Slope, m = 2.03976 Qstd Intercept, b = -0.012990

**Calibration Curve**

Plate No.	H <sub>2</sub> O ( in )	Qstd ( m <sup>3</sup> / min )	I ( chart )	IC ( corrected )
18	7.80	1.383	50.0	50.29
13	6.60	1.273	44.0	44.25
10	4.50	1.052	37.0	37.21
7	3.30	0.902	32.0	32.18
5	2.10	0.721	26.0	26.15

**Subsequent calculation of sampler flow**

Method	Calibration equation	Slope, m	Intercept, b	Corr. coeff., r
Dickson recorder	$Qstd - 1 / m [ ( 1 ) ( \text{Sqrt} ( ( Pa / 760 ) ( 298 / Ta ) ) ) - b ]$	35.389	0.2845	0.9965



Calibration curve requirements: (A).  $r > 0.990$ ; (B). At least 3 Qstd numbers are in the TSP range ( 1.1 - 1.7 m<sup>3</sup> / min ).

Remark:  $Qstd ( m^3 / min ) = 1/m [ \text{Sqrt} ( H_2O ( Pa / 760 ) ( 298 / Ta ) ) - b ]$ .

$IC ( corrected ) = I [ \text{Sqrt} ( ( Pa / 760 ) ( 298 / Ta ) ) ]$ .

$FLOW ( corrected ) = \text{Sqrt} ( FLOW ( mano ) ( Pa / 760 ) ( 298 / Ta ) )$

Calibrated by:

Name: ( Poon Tsz Wing )

Checked by:

Name: ( Choy Ching Yee )

Form No. DNS-HVS-CAL-01 16/01/2020

### Air Sampler Calibration Curve Plotting & Calculation (Dickson recorder)

Calibration curve ref. No.: ATSPC-01-2025020103 Date of calibration: 01/02/2025

Location: Hong Kong Children's Hospital Sampler: TE-5170X

**Calibration Data**

Ambient barometric pressure, Pa = 759.8 ( mmHg ) Ambient temperature, Ta = 294.55 ( deg K )

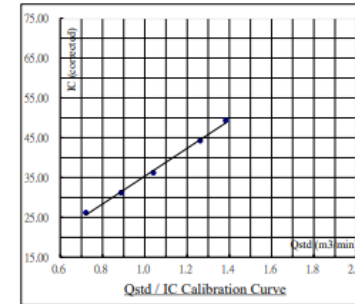
Qstd Slope, m = 2.03976 Qstd Intercept, b = -0.012990

**Calibration Curve**

Plate No.	H <sub>2</sub> O ( in )	Qstd ( m <sup>3</sup> / min )	I ( chart )	IC ( corrected )
18	7.80	1.383	49.0	49.28
13	6.50	1.263	44.0	44.25
10	4.40	1.041	36.0	36.21
7	3.20	0.888	31.0	31.18
5	2.10	0.721	26.0	26.15

**Subsequent calculation of sampler flow**

Method	Calibration equation	Slope, m	Intercept, b	Corr. coeff., r
Dickson recorder	$Qstd - 1 / m [ ( 1 ) ( \text{Sqrt} ( ( Pa / 760 ) ( 298 / Ta ) ) ) - b ]$	34.897	0.4514	0.9985



Calibration curve requirements: (A).  $r > 0.990$ ; (B). At least 3 Qstd numbers are in the TSP range ( 1.1 - 1.7 m<sup>3</sup> / min ).

Remark:  $Qstd ( m^3 / min ) = 1/m [ \text{Sqrt} ( H_2O ( Pa / 760 ) ( 298 / Ta ) ) - b ]$ .

$IC ( corrected ) = I [ \text{Sqrt} ( ( Pa / 760 ) ( 298 / Ta ) ) ]$ .

$FLOW ( corrected ) = \text{Sqrt} ( FLOW ( mano ) ( Pa / 760 ) ( 298 / Ta ) )$ .

Calibrated by:

Name: ( Poon Tsz Wing )

Checked by:

Name: ( Choy Ching Yee )

Form No. DNS-HVS-CAL-01 16/01/2020

## Calibration Certificate of HVS

### Air Sampler Calibration Curve Plotting & Calculation (Dickson recorder)

Calibration curve ref. No. : ATSPC-01-2024053001      Date of calibration : 30/05/2024

Model no : GS2310      Serial number : 10346

**Calibration Data**

Ambient barometric pressure, Pa = 753.9 (mmHg)      Ambient temperature, Ta = 298.65 (deg K)

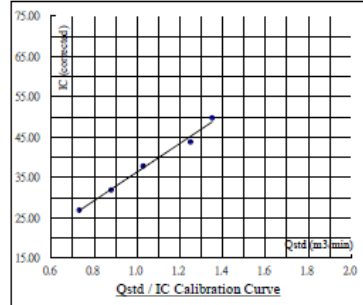
Qstd Slope, m = 2.03976      Qstd Intercept, b = -0.012990

**Calibration Curve**

Plate No.	H <sub>2</sub> O (in)	Qstd (m <sup>3</sup> / min)	I (chart)	IC (corrected)
18	7.60	1.351	50.0	49.74
13	6.50	1.250	44.0	43.77
10	4.40	1.029	38.0	37.81
7	3.20	0.879	32.0	31.84
5	2.20	0.730	27.0	26.86

**Subsequent calculation of sampler flow**

Method	Calibration equation	Slope, m	Intercept, b	Corr. coeff, r
Dickson recorder	$Qstd = 1 / m [ I ( \sqrt{ \Delta H ( Pa / 760 ) ( 298 / Ta ) } ) - b ]$	35.445	0.8648	0.9952



Calibration curve requirements : (A).  $r > 0.990$  ; (B). At least 3 Qstd numbers are in the TSP range ( 1.1 - 1.7 m<sup>3</sup> / min ).

Remark :  $Qstd ( m^3 / min ) = 1/m [ \text{Sqrt} ( H_2O ( Pa / 760 ) ( 298 / Ta ) ) - b ]$ .

$IC ( \text{corrected} ) = I [ \text{Sqrt} ( ( Pa / 760 ) ( 298 / Ta ) ) ]$ .

$FLOW ( \text{corrected} ) = \text{Sqrt} ( FLOW ( \text{mano} ) ( Pa / 760 ) ( 298 / Ta ) )$ .

Calibrated by : Poon Tsz Wing      Checked by : Choy Chung Yee

Name : ( Poon Tsz Wing )      Name : ( Choy Chung Yee )

Form No. DNS-HVS-CAL-04 16 01 2020

## Orifice Transfer Standard Certification Worksheet TE-5025A



<b>RECALIBRATION DUE DATE:</b>
<b>May 6, 2025</b>

## Certificate of Calibration

Calibration Certification Information			
Cal. Date: May 6, 2024	Rootsmer 5/N: 438320	Ta: 295 °K	
Operator: Jim Tisch		Pa: 748.5 mm Hg	
Calibration Model #: TE-5025A	Calibrator S/N: 0006		

Run	Vol. Init (m3)	Vol. Final (m3)	ΔVol. (m3)	ΔTime (min)	ΔP (mm Hg)	ΔH (in H2O)
1	1	2	1	1.4190	3.2	2.00
2	3	4	1	1.0030	6.4	4.00
3	5	6	1	0.8950	7.9	5.00
4	7	8	1	0.8520	8.8	5.50
5	9	10	1	0.7040	12.7	8.00

Data Tabulation						
Vstd (m3)	Qstd (x-axis)	$\sqrt{\Delta H ( Pa / Pstd ) ( Tstd / Ta )}$ (y-axis)	Va	Qa (x-axis)	$\sqrt{\Delta H ( Ta / Pa )}$ (y-axis)	
0.9907	0.6982	1.4106	0.9957	0.7017	0.8878	
0.9864	0.9835	1.9949	0.9914	0.9885	1.2556	
0.9844	1.0999	2.2304	0.9894	1.1055	1.4037	
0.9832	1.1540	2.3393	0.9882	1.1599	1.4723	
0.9781	1.3893	2.8213	0.9830	1.3964	1.7756	
<b>QSTD</b>			<b>QA</b>			
m= 2.03976			m= 1.27726			
b= -0.01299			b= -0.00818			
r= 1.00000			r= 1.00000			

Calculations			
$Vstd = \Delta Vol (( Pa - \Delta P ) / Pstd ) ( Tstd / Ta )$	$Va = \Delta Vol (( Pa - \Delta P ) / Pa )$		
$Qstd = Vstd / \Delta Time$	$Qa = Va / \Delta Time$		
For subsequent flow rate calculations:			
$Qstd = 1/m ( ( \sqrt{\Delta H ( Pa / Pstd ) ( Tstd / Ta ) } ) - b )$	$Qa = 1/m ( ( \sqrt{\Delta H ( Ta / Pa ) } ) - b )$		

Standard Conditions	
Tstd:	298.15 °K
Pstd:	760 mm Hg
Key	
ΔH:	calibrator manometer reading (in H2O)
ΔP:	rootsmeter manometer reading (mm Hg)
Ta:	actual absolute temperature (°K)
Pa:	actual barometric pressure (mm Hg)
b:	intercept
m:	slope

RECALIBRATION
US EPA recommends annual recalibration per 1998 40 Code of Federal Regulations Part 50 to 51, Appendix B to Part 50, Reference Method for the Determination of Suspended Particulate Matter in the Atmosphere, 9.2.17, page 30

Tisch Environmental, Inc.  
145 South Miami Avenue  
Village of Cleves, OH 45002

[www.tisch-env.com](http://www.tisch-env.com)  
TOLL FREE: (877)263-7610  
FAX: (513)467-9009

## Catalogue of Dust Meter (TSI Sidepak AM510)

The SidePak AM510 monitor's easy-to-read display shows your data as both real-time aerosol mass-concentration and 8-hour time-weighted average (TWA). With its convenient data logging and long battery life, the AMS10 is also ideal for extended sampling. The easy-to-use TrakPro Data Analysis Software lets you create effective graphs and reports.

### User Friendly

- + Small, lightweight and quiet to maximize worker acceptance
- + Rugged design with secure belt clip
- + Easy-to-understand user interface with only four keys
- + Lockable keypad prevents tampering while sampling
- + User-adjustable sample flow rate
- + Define, label and store multiple calibration constants
- + Easy-to-read LCD display
- + Convenient, threaded tripod socket accommodates area sampling

### Advanced Features

- + Smart Battery Management System provides precise run time information, maximizes battery capacity and speeds charging
- + Integrated pump allows use of size-selective aerosol inlet conditioners
- + Built-in impactors let you choose "none," 1.0, 2.5 or 10-micron cut off
- + 10-mm Dorr-Oliver cyclone for respirable sampling
- + Display shows real-time concentrations (mg/m<sup>3</sup>) and "on-the-fly" TWA as you data log
- + Display statistics: max, min and average readings, elapsed time and 8-hour TWA

### Quick and Easy Reports

- + Convenient preprogramming for occupational exposure sampling
- + Data log for long periods and store multiple tests
- + Analyze data, print graphs and create reports with TrakPro Data Analysis Software
- + USB port lets you conveniently connect to your computer

### Power to Spare

- + Long-lasting NiMH rechargeable battery packs eliminate "memory" issues
- + Choice of rechargeable NiMH smart battery packs or AA-cell pack

### Model AMS10

#### SidePak Personal Aerosol Monitor

#### Sensitivity

Sensor Type 90° light scattering, 670 nm laser diode  
 Aerosol Concentration Range 0.001 to 20 mg/m<sup>3</sup> (calibrated to respirable fraction of ISO 12103-1, A1 test dust)  
 Particle Size Range 0.1 to 10 micrometer (µm)  
 Minimum Resolution 0.001 mg/m<sup>3</sup>  
 Zero stability ±0.001 mg/m<sup>3</sup> over 24 hours using 10-second time-constant  
 Temperature Coefficient Approximately +0.0005 mg/m<sup>3</sup> per °C (for variations from temperature at which instrument was last zeroed)

#### Flow Rate

Range User-adjustable, 0.7 to 1.8 liters/min (L/min)

#### Temperature Range

Operating Range 32 to 120°F (0 to 50°C)  
 Storage Range -4 to 140°F (-20 to 60°C)

#### Operational Humidity

0 to 95% RH, non-condensing

#### Time Constant (LCD display)

Range User-adjustable, 1 to 60 seconds

#### Data Logging

Data Points Approx. 31,000  
 Logging Interval User-adjustable, 1 second to 1 hour

#### User-Select Calibration Factors

Factory Setting 1.0 (non-adjustable)  
 User-defined Settings 3, with user-defined labels  
 Range 0.1 to 10.0, user-adjustable

#### Physical

External Dimensions 4.2 x 3.7 x 2.8 in. (106 x 92 x 70 mm) with 801723, 801724, 801729 or 801743 battery  
 5.1 x 3.7 x 2.8 in. (130 x 92 x 70 mm) with 801708, 801722, 801728, 801735, or 801736 battery  
 Weight 16 oz (0.46 kg) with 801723, 801724, 801729 or 801743 battery  
 19 oz (0.54 kg) with 801708, 01722, 801728, 801735, or 801736 battery  
 Display 2 line x 12 character LCD  
 Tripod Socket 1/4"-20 female thread

#### Power Supply/Charger (P/N 2613210)

Input Voltage Range 100 to 240 VAC, 50 to 60 Hz  
 Output Voltage 9 VDC @ 1.0 A

### Maintenance

Factory Clean/Calibrate Recommended annually  
 User Zero Calibration Before each use  
 User Flow Calibration As needed

### Communications Interface

Type USB 1.1  
 Connector, Instrument USB Mini-B (socket)

### Minimum Computer Requirements for TrakPro™ Data Analysis Software

Communications Port Universal Serial Bus (USB) v 1.1 or higher  
 Operating System Microsoft Windows® XP, or 7 (32-bit or 64-bit) operating systems

### Battery Performance

Battery Options	Charge Time (hrs)*	Intrinsic Safety Rating	Run Time (hrs @ 1.7 L/min)
1600 mAh NiMH Pack, 4.8 V (P/N 801723)	3.0	No	7.1
1650 mAh NiMH Pack, 4.8V (P/N 801724, 801729 or 801743)	3.5	CSA**	7.5
2700 mAh NiMH Pack, 4.8 V (P/N 801722 or 801728)	5.5	No	12.0
2700 mAh NiMH Pack, 4.8 V (P/N 801735)	5.5	No	12.0
6-Cell AA-size Alkaline Pack*** (P/N 801708 or 801736 with six user-supplied AA cells)	N/A	No	22.5

\*Of a fully depleted battery  
 \*\*All dust plugs and dust gaskets must be installed.  
 \*\*\*Using Energizer AA-size, E91 alkaline batteries.

### Battery Level Indicator

The Smart Battery Management System™ technology utilizes a built-in "gauge" in the SidePak™ battery packs. The gauge monitors battery capacity and calculates run time information by dividing capacity of the battery (mAh) by the instantaneous current consumed by the instrument (mA). This calculation is correct for current operating conditions and can change due to current (mA) consumption or changes in battery capacity.



# Calibration Certificate of Dust Meter (TSI Sidepak AM510)



**Cal Lab Limited 校正實驗室有限公司**  
 Room 2103, Technology Plaza, 29-35 Sha Tsui Road,  
 Tsuen Wan, NT, Hong Kong  
 Tel: +852 25680106 Email: info@callab.com.hk  
 Fax: +852 30116194 Website: www.callab.com.hk



**Calibration Certificate No.: CC0012408**

**Information provided by customer**

Customer: Castco Testing Centre Limited  
 Address: 33, On Kui Street, Fanling, N.T.

**Equipment Identification provided by customer**

Equipment Description	Manufacturer	Model No.	Serial No.	Assigned equipment No.
Aerosol Monitor	TSI	SidePak AM510	11208032	AAST-RSP-01

**Certificate Information**

Date of Receipt:	1 August 2024	Calibration Condition:	24.3°C, 57%RH, 999hPa
Date of Calibration:	16 August 2024	Adjustment:	N/A
Due Date of Calibration:	N/A	Appearance:	Good
Calibration Procedure:	ISO 21501-4:2018	Remark:	N/A

**Reference Equipment Identification**

Equipment Description	Model	Serial No.	Expiration Date
Aerosol Monitor	8534	8534182605	24 November 2024

**Result of Calibration**

Gas	Reference Setting (mg/m <sup>3</sup> )	Measured reading (mg/m <sup>3</sup> )	Error (%)	Uncertainty (%)	Technical Requirement	Technical Reference Doc.
Dust - PM10	0.102	0.100	-2.0	17.0	± 10%	Mfr's Spec
Dust - PM10	0.198	0.199	0.5	17.0	± 10%	Mfr's Spec
Dust - PM10	0.304	0.305	0.3	17.0	± 10%	Mfr's Spec

- Note1: The estimated expanded uncertainties have been calculated in "Evaluation and expression of uncertainty in measurement" and give an internal estimated to have a level of confidence of 95%. A coverage factor of 2 is assumed unless explicitly stated.  
 Note2: The standard (s) and instrument used in the calibration are traceable to national or international recognized standard and are calibrated on a schedule to maintain the accuracy and good condition.  
 Note3: The result 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.  
 Note4: The result shown in this calibration certificate relate only to the item calibrated, and the result only applies to the calibration item as received.  
 Note5: Calibration item/parameter marked with \* is out of scope of Cal Lab Limited (A21A 3815.01).

Calibrated By:

*Wing Cheng*  
 Wing Cheng

Checked and Approved By:

*Warren Yeung*  
 Warren Yeung

Company Chop:



Certificate Issue Date: 19 August 2024

\*\*\* End of Certificate \*\*\*

1. The certificate shall not be reproduced except in full, without written approval of Cal Lab Limited  
 2. The certificate is issued subject to the latest Terms and Conditions, available at our web site

CC0012408  
 Page 1 of 1

## Personal Aerosol Monitor Performance check with High Volume Sampler

Performance Check ref. No. AS0240523-1 Report Issue Date 23/05/2024  
 Date of performance check 23/05/2024

**Objective:**

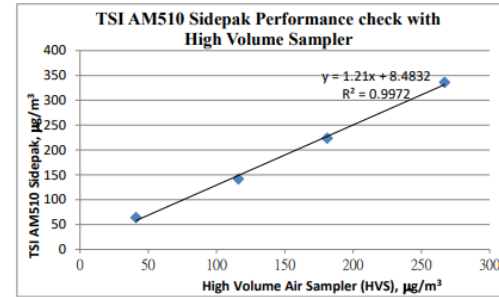
A dust meter and a Total Suspended Particulate High Volume Air Sampler (HVS) were placed together to measure the Total Suspended Particulate (TSP) concentrations simultaneously to check the performance.

**Equipment Used:**

Equipment	Manufacturer and Model	Serial Number
Personal Aerosol Monitor	TSI AM510 Sidepak	11208032
Total Suspended Particulate High Volume Air Sampler	GS2310	10346

**Result:**

Equipment	Measurement Result, µg/m <sup>3</sup>			
TSI AM510 Sidepak	64	142	224	336
High Volume Air Sampler (HVS)	41	116	181	267



Tested by:

Name: ( Poon Tsz Wing )

Checked by:

Name: ( Choy Ching Yee )

Form No. ENV-CAL-SAMPLER-CC1 4/12/2003

# Calibration Certificate of Dust Meter (TSI Sidepak AM510)



**Cal Lab Limited 校正實驗室有限公司**  
 Room 2103, Technology Plaza, 29-35 Sha Tsui Road,  
 Tsuen Wan, NT, Hong Kong  
 Tel: +852 25680106 Email: info@callab.com.hk  
 Fax: +852 30116194 Website: www.callab.com.hk



**Calibration Certificate No.: CC0022408**

**Information provided by customer**

Customer: Casco Testing Centre Limited  
 Address: 33, On Kui Street, Fanling, N.T.

**Equipment Identification provided by customer**

Equipment Description	Manufacturer	Model No.	Serial No.	Assigned equipment No.
Aerosol Monitor	TSI	SidePak AM510	11506014	AAST-RSP-09

**Certificate Information**

Date of Receipt:	1 August 2024	Calibration Condition:	24.3°C, 57%RH, 999hPa
Date of Calibration:	16 August 2024	Adjustment:	N/A
Due Date of Calibration:	N/A	Appearance:	Good
Calibration Procedure:	ISO 21501-4:2018	Remark:	N/A

**Reference Equipment Identification**

Equipment Description	Model	Serial No.	Expiration Date
Aerosol Monitor	8534	8534182605	24 November 2024

**Result of Calibration**

Gas	Reference Setting (mg/m <sup>3</sup> )	Measured reading (mg/m <sup>3</sup> )	Error (%)	Uncertainty (%)	Technical Requirement	Technical Reference Doc.
Dust - PM10	0.102	0.097	-5.0	17.0	± 10%	Mfr's Spec
Dust - PM10	0.198	0.194	-2.0	17.0	± 10%	Mfr's Spec
Dust - PM10	0.304	0.298	-2.0	17.0	± 10%	Mfr's Spec

CF-GAS-01

- Note1:** The estimated expanded uncertainties have been calculated in "Evaluation and expression of uncertainty in measurement" and give an internal estimated to have a level of confidence of 95%. A coverage factor of 2 is assumed unless explicitly stated.
- Note2:** The standard (s) and instrument used in the calibration are traceable to national or international recognized standard and are calibrated on a schedule to maintain the accuracy and good condition.
- Note3:** The result 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.
- Note4:** The result shown in this calibration certificate relate only to the item calibrated, and the result only applies to the calibration item as received.
- Note5:** Calibration item/ parameter marked with \* is out of scope of Cal Lab Limited (A2LA 3815.D1).

Calibrated By:

Wing Cheng

Checked and Approved By:

Warren Yeung

Company Chop:



Certificate Issue Date: 19 August 2024

CF-REG-04

\*\*\* End of Certificate \*\*\*

1. The certificate shall not be reproduced except in full, without written approval of Cal Lab Limited  
 2. The certificate is issued subject to the latest Terms and Conditions, available at our web site

CC0022408  
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## Personal Aerosol Monitor Performance check with High Volume Sampler

Performance Check ref. No. AS0240523-4 Report Issue Date 23/05/2024  
 Date of performance check 23/05/2024

**Objective:**

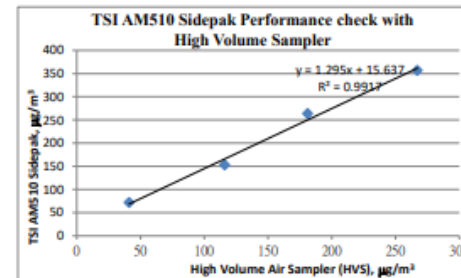
A dust meter and a Total Suspended Particulate High Volume Air Sampler (HVS) were placed together to measure the Total Suspended Particulate (TSP) concentrations simultaneously to check the performance.

**Equipment Used:**

Equipment	Manufacturer and Model	Serial Number
Personal Aerosol Monitor	TSI AM510 Sidepak	11506014
Total Suspended Particulate High Volume Air Sampler	GS2310	10346

**Result:**

Equipment	Measurement Result, µg/m <sup>3</sup>			
TSI AM510 Sidepak	72	153	264	357
High Volume Air Sampler (HVS)	41	116	181	267



Tested by: Poon Tsz Wing  
 Name: ( Poon Tsz Wing )

Checked by: Choy Ching Yee  
 Name: ( Choy Ching Yee )

Form No. ENV CAL SAMPLER CCI 4012/12/2003

# Catalogue of Weather Station

## Cabled Vantage Pro2™ & Vantage Pro2 Plus™ Stations



**6152C  
6162C**  
**Vantage Pro2™**

The Vantage Pro2™ (# 6152C) and Vantage Pro2™ Plus (# 6162C) cabled weather stations include two components: the Integrated Sensor Suite (ISS) and the console. The ISS contains the sensor interface module (SIM), rain collector, an anemometer, and a passive radiation shield. The Vantage Pro2 console provides the user interface, data display, and calculations. The Vantage Pro2 Plus weather station includes two additional sensors that are optional on the Vantage Pro2 and purchased separately: the UV Sensor and the Solar Radiation Sensor. The console and ISS are powered by an AC-power adapter connected to the console. Batteries can be installed in the console to provide a backup power supply. Use WeatherLink® to let your weather station interface with a computer, log data, and upload weather information to the Internet. The 6152C and 6162C models rely on passive shielding to reduce solar-radiation induced temperature errors in the outside temperature sensor readings.

### Integrated Sensor Suite (ISS)

Operating Temperature	-40° to +150°F (-40° to +65°C)
Non-operating Temperature	-40° to +158°F (-40° to +70°C)
Current Draw	5 mA (average) at 4 to 6 VDC for ISS only. 10 mA average for both console and ISS
Connectors, Sensor	Modular RJ-11
Cable Type	4-conductor, 26 AWG
Cable Length, Anemometer	40' (12 m) (included); 240' (73 m) (maximum recommended)

Note: Maximum displayable wind decreases as the length of cable increases. At 140' (42 m) of cable, the maximum wind speed displayed is 135 mph (61 m/s); at 240' (73 m), the maximum wind speed displayed is 100 mph (34 m/s).

Wind Speed Sensor	Solid state magnetic sensor
Wind Direction Sensor	Wind vane with potentiometer
Rain Collector Type	Tipping bucket, 0.01" per tip (0.2 mm with metric rain adapter), 33.2 in <sup>2</sup> (214 cm <sup>2</sup> ) collection area
Temperature Sensor Type	PN Junction Silicon Diode
Relative Humidity Sensor Type	Film capacitor element
Housing Material	UV-resistant ABS, polypropylene
Sensor Inputs	
RF Filtering	RC low-pass filter on each signal line

ISS Dimensions(not including anemometer or bird spikes):

Vantage Pro2 with Standard Rad Shield	14.0" x 9.4" x 14.5" (356 mm x 239 mm x 368 mm)
Vantage Pro2 with Fan-Aspirated Rad Shield	20.8" x 9.4" x 16.0" (528 mm x 239 mm x 406 mm)
Vantage Pro2 Plus with Standard Rad Shield	14.3" x 9.7" x 14.5" (363 mm x 246 mm x 368 mm)
Vantage Pro2 Plus with Fan-Aspirated Rad Shield	21.1" x 9.7" x 16.0" (536 mm x 246 mm x 406 mm)

**DAVIS** **® Davis Instruments** 3465 Diablo Ave., Hayward, CA 94545-2778 USA  
(510) 732-9229 • FAX (510) 670-0589 • sales@davisinstruments.com • www.davisinstruments.com

DS6152C, 6162C Rev. W 12/7/18

1

**7**  
**Vantage Pro2™**

### Ultra Violet (UV) Radiation Index (requires UV sensor)

Resolution and Units	0.1 Index
Range	0 to 16 Index
Accuracy	±5% of full scale (Reference: Yankee UVB-1 at UV index 10 (Extremely High))
Cosine Response	±4% FS (0° to 90° zenith angle)
Update Interval	50 seconds to 1 minute (5 minutes when dark)
Current Graph Data	Instant Reading and Hourly Average; Daily, Monthly High
Historical Graph Data	Hourly Average, Daily, Monthly Highs
Alarm	High Threshold from Instant Calculation

### Wind

Wind Chill (Calculated)	
Resolution and Units	1°F or 1°C (user-selectable); °C is converted from °F and rounded to the nearest 1°C
Range	-110° to +135°F (-79° to +57°C)
Accuracy	±2°F (±1°C) (typical)
Update Interval	10 to 12 seconds
Source	United States National Weather Service (NWS)/NOAA
Equation Used	Osczevski (1995) (adopted by US NWS in 2001)
Variables Used	Instant Outside Temperature and 10-min. Avg. Wind Speed
Current Display Data	Instant Calculation
Current Graph Data	Instant Calculation; Hourly, Daily and Monthly Low
Historical Graph Data	Hourly, Daily and Monthly Lows
Alarm	Low Threshold from Instant Calculation

### Wind Direction

Range	1 - 360°
Display Resolution	16 points (22.5°) on compass rose, 1° in numeric display
Accuracy	±3°
Update Interval	2.5 to 3 seconds
Current Graph Data	Instant Reading (user adjustable); 10-min. Dominant; Hourly, Daily, Monthly Dominant
Historical Graph Data	Past 6 10-min. Dominants on compass rose only; Hourly, Daily, Monthly Dominants

### Wind Speed

Resolution and Units	1 mph, 1 km/h, 0.4 m/s, or 1 knot (user-selectable) Measured in mph; other units are converted from mph and rounded to nearest 1 km/hr, 0.1 m/s, or 1 knot.
Range	0 to 200 mph, 0 to 173 knots, 0 to 89 m/s, 0 to 322 km/h
Update Interval	Instant Reading: 2.5 to 3 seconds, 10-minute Average: 1 minute
Accuracy	±2 mph (2 kts, 3.2 km/h, 0.9 m/s) or ±5%, whichever is greater
Maximum Cable Length	540' (165 m) (Note that maximum wind speed reading decreases as length of cable from anemometer to ISS increases.)
Current Display Data	Instant
Current Graph Data	Instant Reading; 10-minute and Hourly Average; Hourly High; Daily, Monthly and Yearly High with Direction of High
Historical Graph Data	10-min. and Hourly Averages; Hourly Highs; Daily, Monthly and Yearly Highs with Direction of Highs
Alarms	High Thresholds from Instant Reading and 10-minute Average

# Calibration Certificate of Weather Station



**Cal Lab Limited 校正實驗室有限公司**  
 Room 2103, Technology Plaza, 29-35 Sha Tsui Road,  
 Tsuen Wan, NT, Hong Kong  
 Tel: +852 25680106 Email: info@callab.com.hk  
 Fax: +852 30116194 Website: www.callab.com.hk

**Calibration Certificate No.: CC0272412**

**Information provided by customer**

Customer: Castco Testing Centre Limited  
 Address: 1/F, Sun Ling Plaza, On Lok Tsuen, 30 On Kui Street, Fanling, Hong Kong

**Equipment Identification provided by customer**

Equipment Description	Manufacturer	Model No.	Serial No.	Assigned equipment No.:
Weather Station	Davis	Vantage PRO 2	AY170606003/	AAS-T-WS-01/

**Certificate Information**

Date of Receipt:	11 December 2024	Calibration Condition:	24.2°C, 54%RH, 1008hPa
Date of Calibration:	30 December 2024	Adjustment:	N/A
Recommended Next Cal. Date:	N/A	Appearance:	Good
Calibration Procedure:	JJF 1183-2007, JJF 1076-2020, SOP-116	Remark:	N/A

**Reference Equipment Identification**

Equipment Description	Model	Serial No.	Expiration Date
Platinum resistance thermometer	KPPRHT-A-1	KCI I-1095, KCI P-1095	6 November 2026
Humidity sensor	KPPRHT-A-1	KCI I-1095, KCI P-1095	6 November 2026
Hot Wire Anemometer	405-V1	41576231	17 July 2026

Note1: The estimated expanded uncertainties have been calculated in "Evaluation and expression of uncertainty in measurement" and give an internal estimated to have a level of confidence of 95%. A coverage factor of 2 is assumed unless explicitly stated.  
 Note2: The standard [s] and instrument used in the calibration are traceable to national or international recognized standard and are calibrated on a schedule to maintain the accuracy and good condition.  
 Note3: The result 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.  
 Note4: The result shown in this calibration certificate relate only to the item calibrated, and the result only applies to the calibration item as received.

Approved By:

  
 Sherry Cheung

Company Chop:



Certificate Issue Date: 31 December 2024

CS-BEG-04

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 2. The certificate is issued subject to the latest Terms and Conditions, available at our web site

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**Appendix G – Weather information**

## General Information

Date	Absolute Daily Min Temperature (°C)	Absolute Daily Max Temperature (°C)	Total Rainfall (mm)
01/02/2025	17.2	21.9	1.7
02/02/2025	17.5	20.1	Trace
03/02/2025	13.1	17.8	0.1
04/02/2025	12.2	18.6	0
05/02/2025	13.6	18.5	0
06/02/2025	15.9	20.1	0
07/02/2025	12.7	17.7	0
08/02/2025	11.5	17.2	0
09/02/2025	11.8	17.4	0
10/02/2025	12.8	19.1	0
11/02/2025	15.2	19.9	Trace
12/02/2025	17.2	20.3	23.8
13/02/2025	16.9	19.6	Trace
14/02/2025	15.5	18.2	0.2
15/02/2025	16.7	22.3	Trace
16/02/2025	17.8	25.1	0
17/02/2025	17.3	21.9	0
18/02/2025	16.7	20.4	0
19/02/2025	16.1	18.7	0
20/02/2025	16.6	19.8	0
21/02/2025	16.3	19.4	Trace
22/02/2025	15.5	18.1	Trace
23/02/2025	15.4	18.8	Trace
24/02/2025	13	19.5	0
25/02/2025	14.4	19.6	Trace
26/02/2025	16.1	20.7	0.3
27/02/2025	16.1	22.2	0
28/02/2025	18.1	25.4	0

NOTE1: The above weather information was obtained from manned weather station of Hong Kong Observatory.

NOTE2: race means rainfall less than 0.05 mm

<https://www.hko.gov.hk/en/cis/dailyExtract.htm?y=2025&m=2>

Mean Wind Speed and Wind Direction recorded by the weather station setup at the rooftop of Hong Kong Children's Hospital

Date	Time	Wind Speed (m/s)	Wind Direction	Date	Time	Wind Speed (m/s)	Wind Direction	Date	Time	Wind Speed (m/s)	Wind Direction	Date	Time	Wind Speed (m/s)	Wind Direction
01/02/2025	0:00	1.3	157.5	02/02/2025	0:00	0.4	112.5	03/02/2025	0:00	0.9	45	04/02/2025	0:00	0.4	67.5
01/02/2025	1:00	1.3	270	02/02/2025	1:00	0.4	90	03/02/2025	1:00	1.8	45	04/02/2025	1:00	0.4	292.5
01/02/2025	2:00	1.8	225	02/02/2025	2:00	0.4	45	03/02/2025	2:00	1.8	135	04/02/2025	2:00	0.9	22.5
01/02/2025	3:00	1.8	225	02/02/2025	3:00	1.3	45	03/02/2025	3:00	0.9	90	04/02/2025	3:00	0.9	22.5
01/02/2025	4:00	2.2	180	02/02/2025	4:00	1.3	112.5	03/02/2025	4:00	1.3	45	04/02/2025	4:00	0.4	22.5
01/02/2025	5:00	1.8	180	02/02/2025	5:00	1.3	112.5	03/02/2025	5:00	0.9	67.5	04/02/2025	5:00	0.4	22.5
01/02/2025	6:00	1.8	157.5	02/02/2025	6:00	1.8	90	03/02/2025	6:00	0.4	112.5	04/02/2025	6:00	0.9	22.5
01/02/2025	7:00	1.8	157.5	02/02/2025	7:00	1.8	90	03/02/2025	7:00	0.9	90	04/02/2025	7:00	0.4	135
01/02/2025	8:00	1.3	135	02/02/2025	8:00	1.3	112.5	03/02/2025	8:00	1.3	112.5	04/02/2025	8:00	0.9	135
01/02/2025	9:00	0.9	112.5	02/02/2025	9:00	1.8	45	03/02/2025	9:00	0.9	135	04/02/2025	9:00	0.9	90
01/02/2025	10:00	0.9	112.5	02/02/2025	10:00	0.9	90	03/02/2025	10:00	0.4	337.5	04/02/2025	10:00	0.9	270
01/02/2025	11:00	0.4	135	02/02/2025	11:00	0.4	112.5	03/02/2025	11:00	0.4	90	04/02/2025	11:00	0.4	247.5
01/02/2025	12:00	0.9	315	02/02/2025	12:00	0.9	112.5	03/02/2025	12:00	0.4	22.5	04/02/2025	12:00	0.4	112.5
01/02/2025	13:00	0.4	315	02/02/2025	13:00	0.4	90	03/02/2025	13:00	0.4	112.5	04/02/2025	13:00	0.9	45
01/02/2025	14:00	0.9	90	02/02/2025	14:00	0.9	90	03/02/2025	14:00	0.9	135	04/02/2025	14:00	0.9	90
01/02/2025	15:00	0.9	270	02/02/2025	15:00	0.4	90	03/02/2025	15:00	0.9	22.5	04/02/2025	15:00	0.9	67.5
01/02/2025	16:00	0.4	112.5	02/02/2025	16:00	0.4	112.5	03/02/2025	16:00	0.9	90	04/02/2025	16:00	0.9	247.5
01/02/2025	17:00	1.3	45	02/02/2025	17:00	0.9	45	03/02/2025	17:00	0.9	157.5	04/02/2025	17:00	0.9	45
01/02/2025	18:00	0.9	90	02/02/2025	18:00	0.9	45	03/02/2025	18:00	0.9	135	04/02/2025	18:00	0.4	67.5
01/02/2025	19:00	0.9	90	02/02/2025	19:00	0.9	67.5	03/02/2025	19:00	1.3	270	04/02/2025	19:00	0.9	315
01/02/2025	20:00	0.4	67.5	02/02/2025	20:00	0.9	90	03/02/2025	20:00	0.9	67.5	04/02/2025	20:00	1.3	315
01/02/2025	21:00	0.4	90	02/02/2025	21:00	0.4	337.5	03/02/2025	21:00	0.4	112.5	04/02/2025	21:00	0.4	45
01/02/2025	22:00	0.9	45	02/02/2025	22:00	0.9	90	03/02/2025	22:00	0.4	112.5	04/02/2025	22:00	0.9	90
01/02/2025	23:00	0.4	270	02/02/2025	23:00	0.4	225	03/02/2025	23:00	0.4	90	04/02/2025	23:00	0.4	67.5

Mean Wind Speed and Wind Direction recorded by the weather station setup at the rooftop of Hong Kong Children's Hospital

Date	Time	Wind Speed (m/s)	Wind Direction	Date	Time	Wind Speed (m/s)	Wind Direction	Date	Time	Wind Speed (m/s)	Wind Direction	Date	Time	Wind Speed (m/s)	Wind Direction
05/02/2025	0:00	0.9	45	06/02/2025	0:00	0.4	247.5	07/02/2025	0:00	0.9	135	08/02/2025	0:00	0.9	90
05/02/2025	1:00	0.9	90	06/02/2025	1:00	1.3	247.5	07/02/2025	1:00	0.9	22.5	08/02/2025	1:00	0.4	90
05/02/2025	2:00	0.9	337.5	06/02/2025	2:00	0.9	292.5	07/02/2025	2:00	0.4	112.5	08/02/2025	2:00	0.4	270
05/02/2025	3:00	0.4	337.5	06/02/2025	3:00	0.9	22.5	07/02/2025	3:00	0.4	45	08/02/2025	3:00	0.9	247.5
05/02/2025	4:00	0.4	22.5	06/02/2025	4:00	1.3	270	07/02/2025	4:00	0.4	45	08/02/2025	4:00	0.9	247.5
05/02/2025	5:00	0.9	22.5	06/02/2025	5:00	0.4	135	07/02/2025	5:00	0.9	45	08/02/2025	5:00	0.9	247.5
05/02/2025	6:00	0.4	22.5	06/02/2025	6:00	0.4	135	07/02/2025	6:00	0.4	90	08/02/2025	6:00	0.9	247.5
05/02/2025	7:00	0.4	0	06/02/2025	7:00	0.4	45	07/02/2025	7:00	0.4	337.5	08/02/2025	7:00	0.4	45
05/02/2025	8:00	0.4	0	06/02/2025	8:00	0.4	22.5	07/02/2025	8:00	0.4	45	08/02/2025	8:00	0	22.5
05/02/2025	9:00	0.4	202.5	06/02/2025	9:00	0.4	45	07/02/2025	9:00	0.4	90	08/02/2025	9:00	0	90
05/02/2025	10:00	0.4	315	06/02/2025	10:00	0.9	67.5	07/02/2025	10:00	0.9	112.5	08/02/2025	10:00	0.9	22.5
05/02/2025	11:00	0.4	270	06/02/2025	11:00	0.9	22.5	07/02/2025	11:00	0.4	112.5	08/02/2025	11:00	0.9	90
05/02/2025	12:00	0.4	315	06/02/2025	12:00	0.9	67.5	07/02/2025	12:00	0.4	67.5	08/02/2025	12:00	0.4	112.5
05/02/2025	13:00	0.4	112.5	06/02/2025	13:00	0.4	292.5	07/02/2025	13:00	0	90	08/02/2025	13:00	0.4	45
05/02/2025	14:00	0.4	180	06/02/2025	14:00	0.9	180	07/02/2025	14:00	0	90	08/02/2025	14:00	0.4	45
05/02/2025	15:00	0.4	67.5	06/02/2025	15:00	0.9	337.5	07/02/2025	15:00	0	90	08/02/2025	15:00	0.4	90
05/02/2025	16:00	0.4	180	06/02/2025	16:00	1.3	112.5	07/02/2025	16:00	0.9	45	08/02/2025	16:00	0.4	90
05/02/2025	17:00	0.9	22.5	06/02/2025	17:00	1.3	292.5	07/02/2025	17:00	0.9	45	08/09/2026	17:00	0.4	45
05/02/2025	18:00	0.4	90	06/02/2025	18:00	0.9	112.5	07/02/2025	18:00	0.9	247.5	08/02/2025	18:00	0.4	337.5
05/02/2025	19:00	0	135	06/02/2025	19:00	0.9	112.5	07/02/2025	19:00	0.9	135	08/02/2025	19:00	0.4	270
05/02/2025	20:00	0.4	337.5	06/02/2025	20:00	1.3	112.5	07/02/2025	20:00	0.9	22.5	08/02/2025	20:00	0.9	247.5
05/02/2025	21:00	0.4	225	06/02/2025	21:00	1.8	112.5	07/02/2025	21:00	1.3	22.5	08/02/2025	21:00	0.9	247.5
05/02/2025	22:00	0.9	315	06/02/2025	22:00	1.3	90	07/02/2025	22:00	1.3	112.5	08/02/2025	22:00	1.3	247.5
05/02/2025	23:00	0.9	112.5	06/02/2025	23:00	0.9	90	07/02/2025	23:00	1.3	112.5	08/02/2025	23:00	0.9	247.5

Mean Wind Speed and Wind Direction recorded by the weather station setup at the rooftop of Hong Kong Children's Hospital

Date	Time	Wind Speed (m/s)	Wind Direction	Date	Time	Wind Speed (m/s)	Wind Direction	Date	Time	Wind Speed (m/s)	Wind Direction	Date	Time	Wind Speed (m/s)	Wind Direction
09/02/2025	0:00	0.9	90	10/02/2025	0:00	0.4	112.5	11/02/2025	0:00	0.9	225	12/02/2025	0:00	1.3	112.5
09/02/2025	1:00	0.9	90	10/02/2025	1:00	0.4	112.5	11/02/2025	1:00	1.3	22.5	12/02/2025	1:00	2.2	90
09/02/2025	2:00	0.9	67.5	10/02/2025	2:00	0.9	45	11/02/2025	2:00	0.4	112.5	12/02/2025	2:00	1.8	112.5
09/02/2025	3:00	0.4	112.5	10/02/2025	3:00	0.9	157.5	11/02/2025	3:00	0.4	135	12/02/2025	3:00	1.8	112.5
09/02/2025	4:00	0.4	135	10/02/2025	4:00	0.9	90	11/09/2028	4:00	1.3	135	12/02/2025	4:00	1.8	112.5
09/02/2025	5:00	0.4	112.5	10/02/2025	5:00	0.4	67.5	11/02/2025	5:00	1.3	135	12/02/2025	5:00	1.3	112.5
09/02/2025	6:00	0.9	112.5	10/02/2025	6:00	0.9	112.5	11/02/2025	6:00	1.3	247.5	12/02/2025	6:00	1.8	135
09/02/2025	7:00	0.9	112.5	10/02/2025	7:00	1.3	90	11/02/2025	7:00	0.9	157.5	12/02/2025	7:00	1.8	135
09/02/2025	8:00	0.9	90	10/10/2224	8:00	0.9	112.5	11/02/2025	8:00	1.3	157.5	12/02/2025	8:00	1.3	112.5
09/02/2025	9:00	1.3	90	10/02/2025	9:00	0.9	90	11/02/2025	9:00	1.3	157.5	12/02/2025	9:00	0.9	135
09/02/2025	10:00	0.9	45	10/02/2025	10:00	0.9	90	11/02/2025	10:00	1.3	180	12/02/2025	10:00	1.3	112.5
09/02/2025	11:00	0.9	337.5	10/02/2025	11:00	0.9	67.5	11/09/2026	11:00	1.3	225	12/02/2025	11:00	1.3	90
09/02/2025	12:00	0.9	112.5	10/02/2025	12:00	0.4	112.5	11/02/2025	12:00	0.4	225	12/02/2025	12:00	1.3	135
09/02/2025	13:00	0.4	112.5	10/02/2025	13:00	0.4	135	11/02/2025	13:00	0.9	270	12/02/2025	13:00	1.3	112.5
09/02/2025	14:00	1.3	112.5	10/02/2025	14:00	0.4	112.5	11/02/2025	14:00	0.4	292.5	12/02/2025	14:00	2.2	90
09/02/2025	15:00	0.9	112.5	10/02/2025	15:00	0.9	112.5	11/02/2025	15:00	0.9	270	12/02/2025	15:00	2.2	22.5
09/02/2025	16:00	1.3	67.5	10/02/2025	16:00	1.3	112.5	11/02/2025	16:00	1.3	292.5	12/02/2025	16:00	2.2	22.5
09/02/2025	17:00	1.3	135	10/02/2025	17:00	0.9	112.5	11/02/2025	17:00	1.8	270	12/02/2025	17:00	2.2	135
09/02/2025	18:00	0.9	90	10/02/2025	18:00	1.3	337.5	11/02/2025	18:00	1.3	270	12/02/2025	18:00	1.8	135
09/02/2025	19:00	0.9	135	10/02/2025	19:00	0.9	45	11/02/2025	19:00	1.3	90	12/02/2025	19:00	1.8	112.5
09/02/2025	20:00	0.9	112.5	10/02/2025	20:00	0.9	337.5	11/02/2025	20:00	1.3	22.5	12/02/2025	20:00	1.8	135
09/02/2025	21:00	0.9	90	10/02/2025	21:00	0.9	112.5	11/02/2025	21:00	0.9	270	12/02/2025	21:00	1.8	135
09/02/2025	22:00	0.9	67.5	10/02/2025	22:00	1.3	270	11/02/2025	22:00	0.9	180	12/02/2025	22:00	2.2	135
09/02/2025	23:00	1.3	135	10/02/2025	23:00	1.3	292.5	11/02/2025	23:00	0.9	247.5	12/02/2025	23:00	1.8	112.5

Mean Wind Speed and Wind Direction recorded by the weather station setup at the rooftop of Hong Kong Children's Hospital

Date	Time	Wind Speed (m/s)	Wind Direction	Date	Time	Wind Speed (m/s)	Wind Direction	Date	Time	Wind Speed (m/s)	Wind Direction	Date	Time	Wind Speed (m/s)	Wind Direction
13/02/2025	0:00	1.3	247.5	14/02/2025	0:00	0.9	270	15/02/2025	0:00	0.9	337.5	16/02/2025	0:00	0.9	157.5
13/02/2025	1:00	1.3	270	14/02/2025	1:00	0.4	180	15/02/2025	1:00	0.9	22.5	16/02/2025	1:00	0.9	247.5
13/02/2025	2:00	0.9	270	14/02/2025	2:00	0.9	135	15/02/2025	2:00	0.4	292.5	16/02/2025	2:00	1.3	270
13/02/2025	3:00	0.9	292.5	14/02/2025	3:00	0.9	270	15/02/2025	3:00	0.4	292.5	16/02/2025	3:00	1.8	247.5
13/02/2025	4:00	0.9	270	14/02/2025	4:00	0.9	247.5	15/02/2025	4:00	0.9	337.5	16/02/2025	4:00	0.9	247.5
13/02/2025	5:00	0.4	180	14/02/2025	5:00	0.9	247.5	15/02/2025	5:00	0.4	292.5	16/02/2025	5:00	1.3	202.5
13/02/2025	6:00	0.9	135	14/02/2025	6:00	0.9	67.5	15/02/2025	6:00	0.4	292.5	16/02/2025	6:00	1.3	247.5
13/02/2025	7:00	0.9	270	14/02/2025	7:00	0.4	135	15/02/2025	7:00	1.3	270	16/02/2025	7:00	2.2	292.5
13/02/2025	8:00	0.9	247.5	14/02/2025	8:00	0.9	90	15/02/2025	8:00	0.4	270	16/02/2025	8:00	1.3	270
13/02/2025	9:00	0.9	247.5	14/02/2025	9:00	0.9	157.5	15/02/2025	9:00	0.4	292.5	16/02/2025	9:00	0.9	202.5
13/02/2025	10:00	0.9	67.5	14/02/2025	10:00	0.9	157.5	15/02/2025	10:00	0.4	247.5	16/02/2025	10:00	0.9	247.5
13/02/2025	11:00	0.4	135	14/02/2025	11:00	0.9	135	15/02/2025	11:00	0.4	247.5	16/02/2025	11:00	1.3	270
13/02/2025	12:00	0.9	90	14/02/2025	12:00	0.4	90	15/02/2025	12:00	0.4	247.5	16/02/2025	12:00	1.3	315
13/02/2025	13:00	0.9	157.5	14/02/2025	13:00	0.9	90	15/02/2025	13:00	0.4	202.5	16/02/2025	13:00	0.4	292.5
13/02/2025	14:00	0.9	157.5	14/02/2025	14:00	1.3	135	15/02/2025	14:00	0.9	247.5	16/02/2025	14:00	0.4	292.5
13/02/2025	15:00	0.9	90	14/02/2025	15:00	0.4	90	15/02/2025	15:00	0.4	247.5	16/02/2025	15:00	0.4	22.5
13/02/2025	16:00	0.9	157.5	14/02/2025	16:00	0.4	315	15/02/2025	16:00	0.9	247.5	16/02/2025	16:00	0.4	67.5
13/02/2025	17:00	0.4	135	14/02/2025	17:00	0.4	270	15/02/2025	17:00	0.4	270	16/02/2025	17:00	0.9	157.5
13/02/2025	18:00	0.4	112.5	14/02/2025	18:00	0.4	67.5	15/02/2025	18:00	0.9	90	16/02/2025	18:00	1.3	90
13/02/2025	19:00	0.9	135	14/02/2025	19:00	0.9	180	15/02/2025	19:00	0.9	112.5	16/02/2025	19:00	0.4	315
13/02/2025	20:00	0.9	112.5	14/02/2025	20:00	1.8	67.5	15/02/2025	20:00	0.9	135	16/02/2025	20:00	1.3	270
13/02/2025	21:00	0.9	90	14/02/2025	21:00	1.3	22.5	15/02/2025	21:00	0.9	90	16/02/2025	21:00	1.3	270
13/02/2025	22:00	0.9	135	14/02/2025	22:00	1.8	270	15/02/2025	22:00	0.4	67.5	16/02/2025	22:00	1.3	225
13/02/2025	23:00	0.9	90	14/02/2025	23:00	1.8	180	15/02/2025	23:00	0.9	112.5	16/02/2025	23:00	0.9	135

Mean Wind Speed and Wind Direction recorded by the weather station setup at the rooftop of Hong Kong Children's Hospital

Date	Time	Wind Speed (m/s)	Wind Direction	Date	Time	Wind Speed (m/s)	Wind Direction	Date	Time	Wind Speed (m/s)	Wind Direction	Date	Time	Wind Speed (m/s)	Wind Direction
17/02/2025	0:00	1.3	135	18/02/2025	0:00	0.4	135	19/02/2025	0:00	1.8	90	20/02/2025	0:00	0.4	247.5
17/02/2025	1:00	0.4	90	18/02/2025	1:00	0.9	135	19/02/2025	1:00	1.8	135	20/02/2025	1:00	0.9	247.5
17/02/2025	2:00	0.4	315	18/02/2025	2:00	0.9	112.5	19/02/2025	2:00	1.3	112.5	20/02/2025	2:00	1.8	247.5
17/02/2025	3:00	0.4	270	18/02/2025	3:00	0.4	135	19/02/2025	3:00	1.3	135	20/02/2025	3:00	1.8	225
17/02/2025	4:00	0.4	67.5	18/02/2025	4:00	0.4	90	19/02/2025	4:00	0.4	135	20/02/2025	4:00	1.3	247.5
17/02/2025	5:00	0.9	180	18/02/2025	5:00	0.4	112.5	19/02/2025	5:00	0.9	180	20/02/2025	5:00	1.3	247.5
17/02/2025	6:00	0.9	90	18/02/2025	6:00	0.4	135	19/02/2025	6:00	0.4	247.5	20/02/2025	6:00	1.3	112.5
17/02/2025	7:00	0.4	90	18/02/2025	7:00	0.4	135	19/02/2025	7:00	0.4	270	20/02/2025	7:00	0.9	135
17/02/2025	8:00	0.4	90	18/02/2025	8:00	0.4	135	19/02/2025	8:00	0.4	270	20/02/2025	8:00	0.9	247.5
17/02/2025	9:00	1.3	67.5	18/02/2025	9:00	0.9	112.5	19/02/2025	9:00	0.4	247.5	20/02/2025	9:00	0.9	270
17/02/2025	10:00	1.3	112.5	18/02/2025	10:00	0.4	135	19/02/2025	10:00	0.9	247.5	20/02/2025	10:00	0.4	315
17/02/2025	11:00	2.2	22.5	18/02/2025	11:00	0.9	135	19/02/2025	11:00	1.3	270	20/02/2025	11:00	0.4	247.5
17/02/2025	12:00	1.3	270	18/02/2025	12:00	0.4	112.5	19/02/2025	12:00	0.9	270	20/02/2025	12:00	0.4	270
17/02/2025	13:00	1.3	270	18/02/2025	13:00	0.4	112.5	19/02/2025	13:00	0.9	247.5	20/02/2025	13:00	0.9	270
17/02/2025	14:00	0.4	337.5	18/02/2025	14:00	0.4	247.5	19/02/2025	14:00	0.4	247.5	20/02/2025	14:00	0.9	247.5
17/02/2025	15:00	1.3	270	18/02/2025	15:00	0.9	292.5	19/02/2025	15:00	0.9	247.5	20/02/2025	15:00	0.9	270
17/02/2025	16:00	0.9	247.5	18/02/2025	16:00	0.4	180	19/02/2025	16:00	1.3	247.5	20/02/2025	16:00	0.9	90
17/02/2025	17:00	0.4	225	18/02/2025	17:00	0.4	225	19/02/2025	17:00	0.9	270	20/02/2025	17:00	0.9	135
17/02/2025	18:00	0.4	180	18/02/2025	18:00	0.4	225	19/02/2025	18:00	0.9	247.5	20/02/2025	18:00	0.4	112.5
17/02/2025	19:00	0.4	180	18/02/2025	19:00	0.4	247.5	19/02/2025	19:00	0.9	247.5	20/02/2025	19:00	0.9	157.5
17/02/2025	20:00	0.4	225	18/02/2025	20:00	0.4	247.5	19/02/2025	20:00	1.8	270	20/02/2025	20:00	0.9	135
17/02/2025	21:00	0.4	202.5	18/02/2025	21:00	0.9	247.5	19/02/2025	21:00	1.3	247.5	20/02/2025	21:00	0.9	135
17/02/2025	22:00	0.9	180	18/02/2025	22:00	0.4	202.5	19/02/2025	22:00	0.9	247.5	20/02/2025	22:00	1.3	270
17/02/2025	23:00	1.3	202.5	18/02/2025	23:00	0.4	180	19/02/2025	23:00	0.9	202.5	20/02/2025	23:00	1.3	22.5

Mean Wind Speed and Wind Direction recorded by the weather station setup at the rooftop of Hong Kong Children's Hospital

Date	Time	Wind Speed (m/s)	Wind Direction	Date	Time	Wind Speed (m/s)	Wind Direction	Date	Time	Wind Speed (m/s)	Wind Direction	Date	Time	Wind Speed (m/s)	Wind Direction
21/02/2025	0:00	0.4	292.5	22/02/2025	0:00	0.4	225	23/02/2025	0:00	0.4	202.5	24/02/2025	0:00	1.3	270
21/02/2025	1:00	0.4	292.5	22/02/2025	1:00	1.3	247.5	23/02/2025	1:00	0.4	202.5	24/02/2025	1:00	1.3	315
21/02/2025	2:00	0.9	337.5	22/02/2025	2:00	1.3	247.5	23/02/2025	2:00	0.4	135	24/02/2025	2:00	0.4	292.5
21/02/2025	3:00	0.4	292.5	22/02/2025	3:00	1.8	225	23/02/2025	3:00	0.4	112.5	24/02/2025	3:00	0.4	292.5
21/02/2025	4:00	0.4	292.5	22/02/2025	4:00	1.3	225	23/02/2025	4:00	0.4	112.5	24/02/2025	4:00	0.4	22.5
21/02/2025	5:00	1.3	270	22/02/2025	5:00	0.9	292.5	23/02/2025	5:00	0.9	112.5	24/02/2025	5:00	0.4	67.5
21/02/2025	6:00	0.4	270	22/02/2025	6:00	1.3	112.5	23/02/2025	6:00	0.9	135	24/02/2025	6:00	0.4	45
21/02/2025	7:00	0.4	292.5	22/02/2025	7:00	1.8	135	23/02/2025	7:00	0.9	45	24/02/2025	7:00	0.4	270
21/02/2025	8:00	0.4	247.5	22/02/2025	8:00	0.9	135	23/02/2025	8:00	0.9	337.5	24/02/2025	8:00	0.4	225
21/02/2025	9:00	0.4	247.5	22/02/2025	9:00	1.3	247.5	23/02/2025	9:00	0.9	247.5	24/02/2025	9:00	0.4	270
21/02/2025	10:00	0.4	247.5	22/02/2025	10:00	0.4	270	23/02/2025	10:00	0.4	247.5	24/02/2025	10:00	0.4	247.5
21/02/2025	11:00	0.4	202.5	22/02/2025	11:00	0.9	292.5	23/02/2025	11:00	0.4	247.5	24/02/2025	11:00	0.4	225
21/02/2025	12:00	0.9	247.5	22/02/2025	12:00	0.9	292.5	23/02/2025	12:00	0.4	247.5	24/02/2025	12:00	0.4	270
21/02/2025	13:00	0.4	247.5	22/02/2025	13:00	0.4	292.5	23/02/2025	13:00	0.4	202.5	24/02/2025	13:00	0.9	270
21/02/2025	14:00	0.9	247.5	22/02/2025	14:00	0.4	67.5	23/02/2025	14:00	0.9	247.5	24/02/2025	14:00	0.9	67.5
21/02/2025	15:00	0.4	270	22/02/2025	15:00	0.9	112.5	23/02/2025	15:00	0.4	247.5	24/02/2025	15:00	1.3	67.5
21/02/2025	16:00	0.4	157.5	22/02/2025	16:00	0.9	90	23/02/2025	16:00	0.9	247.5	24/02/2025	16:00	1.8	90
21/02/2025	17:00	0.4	90	22/02/2025	17:00	0.9	247.5	23/02/2025	17:00	0.4	270	24/02/2025	17:00	0.9	247.5
21/02/2025	18:00	0.4	270	22/02/2025	18:00	0.9	247.5	23/02/2025	18:00	0.4	157.5	24/02/2025	18:00	1.3	247.5
21/02/2025	19:00	0.4	112.5	22/02/2025	19:00	0.9	292.5	23/02/2025	19:00	0.4	90	24/02/2025	19:00	1.3	225
21/02/2025	20:00	1.3	112.5	22/02/2025	20:00	1.3	22.5	23/02/2025	20:00	0.4	270	24/02/2025	20:00	1.8	225
21/02/2025	21:00	0.9	112.5	22/02/2025	21:00	0.9	270	23/02/2025	21:00	0.4	270	24/02/2025	21:00	0.9	225
21/02/2025	22:00	0.4	315	22/02/2025	22:00	0.9	180	23/02/2025	22:00	0.4	247.5	24/02/2025	22:00	1.3	247.5
21/02/2025	23:00	0.4	67.5	22/02/2025	23:00	0.9	247.5	23/02/2025	23:00	0.4	112.5	24/02/2025	23:00	0.4	112.5

Mean Wind Speed and Wind Direction recorded by the weather station setup at the rooftop of Hong Kong Children's Hospital

Date	Time	Wind Speed (m/s)	Wind Direction	Date	Time	Wind Speed (m/s)	Wind Direction	Date	Time	Wind Speed (m/s)	Wind Direction	Date	Time	Wind Speed (m/s)	Wind Direction
25/02/2025	0:00	0.4	112.5	26/02/2025	0:00	0.9	112.5	27/02/2025	0:00	0.4	90	28/02/2025	0:00	0.4	112.5
25/02/2025	1:00	0.4	90	26/02/2025	1:00	0.9	90	27/02/2025	1:00	0.4	112.5	28/02/2025	1:00	0.4	135
25/02/2025	2:00	0.4	45	26/02/2025	2:00	0.9	270	27/02/2025	2:00	0.4	112.5	28/02/2025	2:00	0.4	112.5
25/02/2025	3:00	0.4	112.5	26/02/2025	3:00	0.4	112.5	27/02/2025	3:00	1.3	225	28/02/2025	3:00	0.4	135
25/02/2025	4:00	1.3	90	26/02/2025	4:00	0.4	112.5	27/02/2025	4:00	0.9	180	28/02/2025	4:00	0.4	112.5
25/02/2025	5:00	0.9	112.5	26/02/2025	5:00	0.9	112.5	27/02/2025	5:00	0.9	202.5	28/02/2025	5:00	0.4	112.5
25/02/2025	6:00	0.4	22.5	26/02/2025	6:00	0.4	90	27/02/2025	6:00	0.4	270	28/02/2025	6:00	0.9	135
25/02/2025	7:00	0.4	112.5	26/02/2025	7:00	0.4	135	27/02/2025	7:00	0.4	247.5	28/02/2025	7:00	0.4	90
25/02/2025	8:00	0.9	112.5	26/02/2025	8:00	0.4	135	27/02/2025	8:00	0.4	247.5	28/02/2025	8:00	0.4	112.5
25/02/2025	9:00	1.3	135	26/02/2025	9:00	0.4	112.5	27/02/2025	9:00	1.3	247.5	28/02/2025	9:00	0.4	112.5
25/02/2025	10:00	1.8	112.5	26/02/2025	10:00	0.9	112.5	27/02/2025	10:00	1.3	135	28/02/2025	10:00	0.4	135
25/02/2025	11:00	1.3	90	26/02/2025	11:00	0.4	112.5	27/02/2025	11:00	1.3	135	28/02/2025	11:00	0.9	112.5
25/02/2025	12:00	1.3	112.5	26/02/2025	12:00	0.4	112.5	27/02/2025	12:00	0.9	135	28/02/2025	12:00	0.9	90
25/02/2025	13:00	1.3	90	26/02/2025	13:00	0.9	90	27/02/2025	13:00	0.4	112.5	28/02/2025	13:00	0.9	90
25/02/2025	14:00	1.8	112.5	26/02/2025	14:00	1.3	90	27/02/2025	14:00	1.8	112.5	28/02/2025	14:00	0.9	45
25/02/2025	15:00	1.8	112.5	26/02/2025	15:00	0.4	90	27/02/2025	15:00	0.9	135	28/02/2025	15:00	0.9	112.5
25/02/2025	16:00	1.3	112.5	26/02/2025	16:00	0.4	112.5	27/02/2025	16:00	0.4	135	28/02/2025	16:00	0.9	90
25/02/2025	17:00	0.9	45	26/02/2025	17:00	0.4	135	27/02/2025	17:00	0.4	135	28/02/2025	17:00	0.4	90
25/02/2025	18:00	0.4	270	26/02/2025	18:00	0.9	112.5	27/02/2025	18:00	0.4	112.5	28/02/2025	18:00	0.9	90
25/02/2025	19:00	0.4	247.5	26/02/2025	19:00	0.4	90	27/02/2025	19:00	0.4	112.5	28/02/2025	19:00	1.3	135
25/02/2025	20:00	0.4	247.5	26/02/2025	20:00	0.9	112.5	27/02/2025	20:00	0.4	112.5	28/02/2025	20:00	1.8	135
25/02/2025	21:00	0.4	292.5	26/02/2025	21:00	0.9	90	27/02/2025	21:00	0.9	135	28/02/2025	21:00	1.3	112.5
25/02/2025	22:00	0.9	225	26/02/2025	22:00	0.9	90	27/02/2025	22:00	1.8	135	28/02/2025	22:00	1.3	90
25/02/2025	23:00	0.9	247.5	26/02/2025	23:00	0.4	90	27/02/2025	23:00	1.3	112.5	28/02/2025	23:00	1.3	90

# **Appendix H – 24-hr TSP monitoring results and graphical presentation**

Location: AM3 – Sky Tower

Start Date	Weather	Air Temp. p. (°C)	Atmospheric Pressure (hPa)	Filter weight (g)		Particulate weight (g)	Elapse Time		Sampling Time (min)	Flow Rate (cfm)		Av. Flow (m <sup>3</sup> /min)	Total vol. (m <sup>3</sup> )	Conc. (µg/m <sup>3</sup> )
				Initial	Final		Initial	Final		Initial	Final			
03/02/2025	Sunny	17.8	1019.6	15.0063	15.0802	0.0739	2025/2/3 9:34	2025/2/4 9:34	1440.0	52	52	1.48	2137	35
08/02/2025	Sunny	17.5	1024.6	18.2632	18.4144	0.1512	2025/2/8 13:23	2025/2/9 13:23	1440.0	50	50	1.43	2060	73
14/02/2025	Cloudy	16.3	1017.9	18.4311	18.5272	0.0961	2025/2/14 13:36	2025/2/15 13:36	1440.0	50	50	1.43	2058	47
20/02/2025	Sunny	18.6	1021.2	18.3206	18.4425	0.1219	2025/2/20 9:41	2025/2/21 9:41	1440.0	50	50	1.43	2053	59
26/02/2025	Cloudy	18.3	1022.9	15.0575	15.2528	0.1953	2025/2/26 13:39	2025/2/27 13:39	1440.0	50	50	1.43	2056	95
													Sunny	95
													Minimum	35
													Average	62
													Action Level	182
													Limit Level	260

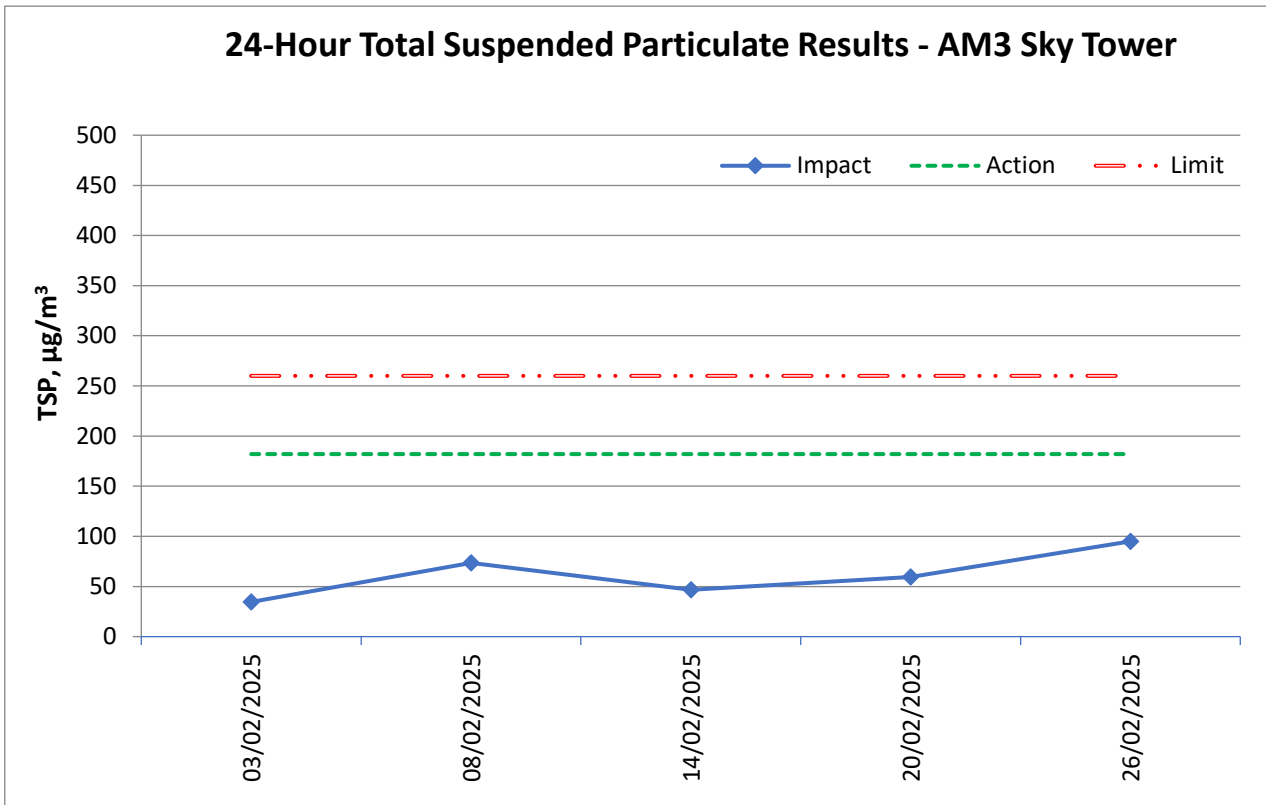
Location: AM4(A) - The Hong Kong Society for the Blind's Factory cum Sheltered Workshop

Due to the relocation of The Hong Kong Society for the Blind's Factory cum Sheltered Workshop (AM4(A)), the premises owner rejected ET to conduct impact monitoring since 1 Sept 2022. No 24-TSP monitoring was conducted at AM4(A) ET will resume the impact monitoring once the alternative monitoring location for AM4(A) is confirmed.

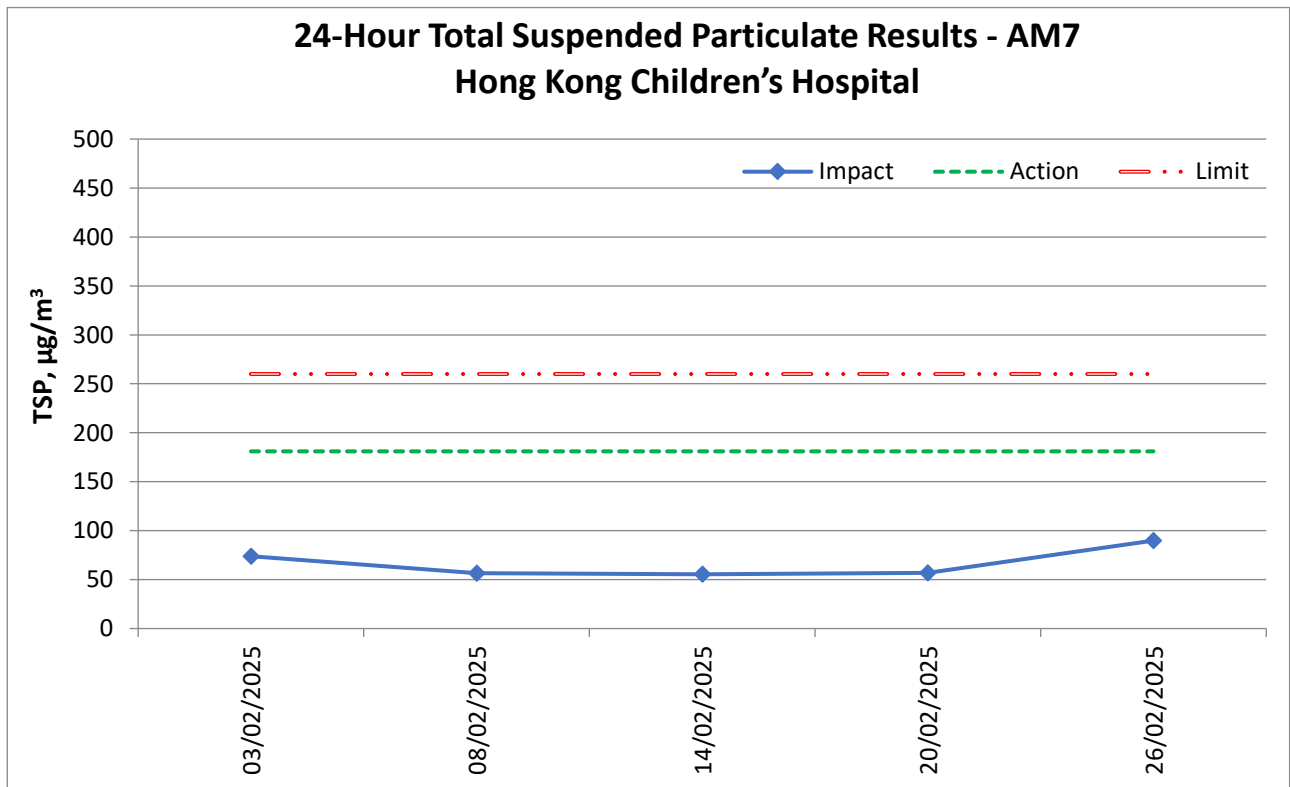
Location: AM7 – Hong Kong Children’s Hospital

Start Date	Weather	Air Temp. (°C)	Atmospheric Pressure (hPa)	Filter weight (g)		Particulate weight (g)	Elapse Time		Sampling Time (min)	Flow Rate (cfm)		Av. Flow (m <sup>3</sup> /min)	Total vol. (m <sup>3</sup> )	Conc. (µg/m <sup>3</sup> )
				Initial	Final		Initial	Final		Initial	Final			
03/02/2025	Sunny	17.8	1019.6	18.3806	18.5247	0.1441	2025/2/3 13:19	2025/2/4 13:19	1440.0	47	47	1.35	1951	74
08/02/2025	Sunny	17.5	1024.6	15.4236	15.5342	0.1106	2025/2/8 13:27	2025/2/9 13:27	1440.0	47	47	1.36	1957	57
14/02/2025	Cloudy	16.3	1017.9	18.4952	18.6012	0.106	2025/2/14 9:26	2025/2/15 9:26	1440.0	46	46	1.33	1912	55
20/02/2025	Sunny	18.6	1021.2	18.0218	18.1401	0.1183	2025/2/20 13:28	2025/2/21 13:28	1440.0	50	50	1.44	2075	57
26/02/2025	Cloudy	18.3	1022.9	18.2695	18.4562	0.1867	2025/2/26 9:48	2025/2/27 9:48	1440.0	50	50	1.44	2078	90
													Sunny	90
													Minimum	55
													Average	67
													Action Level	181
													Limit Level	260

**24-hour average TSP**



Note: Due to the relocation of The Hong Kong Society for the Blind's Factory cum Sheltered Workshop (AM4(A)), the premises owner rejected ET to conduct impact monitoring since 1 Sept 2022. No 24-TSP monitoring was conducted at AM4(A). ET will resume the impact monitoring once the alternative monitoring location for AM4(A) is confirmed.



**Appendix I – 1-hr TSP monitoring results and graphical presentation**

Location:  
**AM3 -  
 Sky Tower**

Date	Measurement Period			1-hr TSP concentration, $\mu\text{g}/\text{m}^3$	Weather
03/02/2025	9:00	-	10:00	34	Sunny
	10:00	-	11:00	37	
	11:00	-	12:00	37	
08/02/2025	13:00	-	14:00	67	Sunny
	14:00	-	15:00	70	
	15:00	-	16:00	68	
14/02/2025	13:00	-	14:00	40	Cloudy
	14:00	-	15:00	45	
	15:00	-	16:00	46	
20/02/2025	9:00	-	10:00	49	Sunny
	10:00	-	11:00	51	
	11:00	-	12:00	53	
26/02/2025	13:00	-	14:00	72	Cloudy
	14:00	-	15:00	72	
	15:00	-	16:00	78	
Maximum				78	
Minimum				34	
Average				55	
Action Level				297	
Limit Level				500	

Location:  
**AM4(A) -  
The Hong Kong  
Society for the  
Blind's Factory  
cum Sheltered  
Workshop**

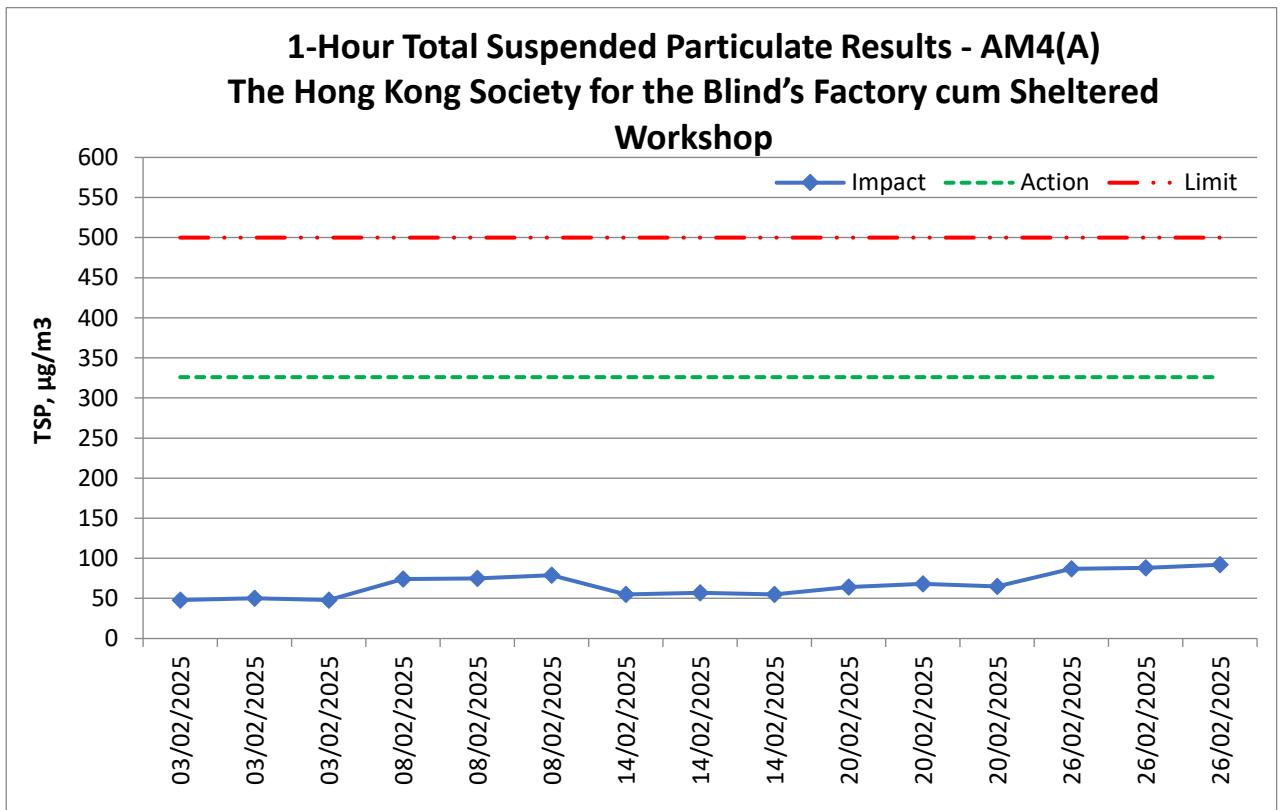
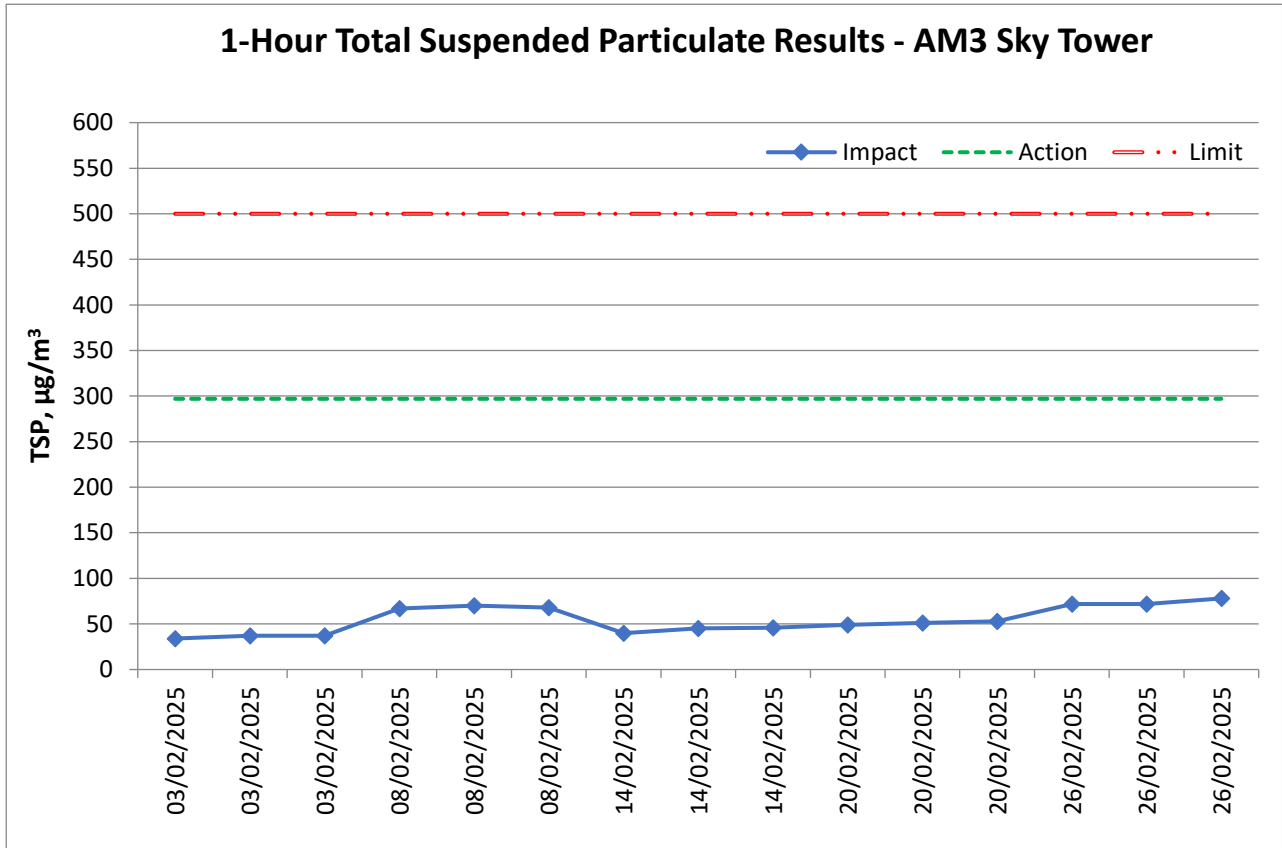
Date	Measurement Period			1-hr TSP concentration, $\mu\text{g}/\text{m}^3$	Weather
03/02/2025	9:00	-	10:00	48	Sunny
	10:00	-	11:00	50	
	11:00	-	12:00	48	
08/02/2025	9:00	-	10:00	74	Sunny
	10:00	-	11:00	75	
	11:00	-	12:00	79	
14/02/2025	13:00	-	14:00	55	Cloudy
	14:00	-	15:00	57	
	15:00	-	16:00	55	
20/02/2025	9:00	-	10:00	64	Sunny
	10:00	-	11:00	68	
	11:00	-	12:00	65	
26/02/2025	13:00	-	14:00	87	Cloudy
	14:00	-	15:00	88	
	15:00	-	16:00	92	
Maximum				92	
Minimum				48	
Average				67	
Action Level				326	
Limit Level				500	

NOTE: Due to the relocation of The Hong Kong Society for the Blind's Factory cum Sheltered Workshop (AM4(A)), the premises owner rejected ET to conduct impact monitoring since 1 Sept 2022. 1-hr TSP monitoring at AM4(A) were conducted on the ground floor with orienting to the Project site. ET will resume the impact monitoring once the alternative monitoring location for AM4(A) is confirmed.

Location:  
**AM7 -  
 Hong Kong  
 Children's  
 Hospital**

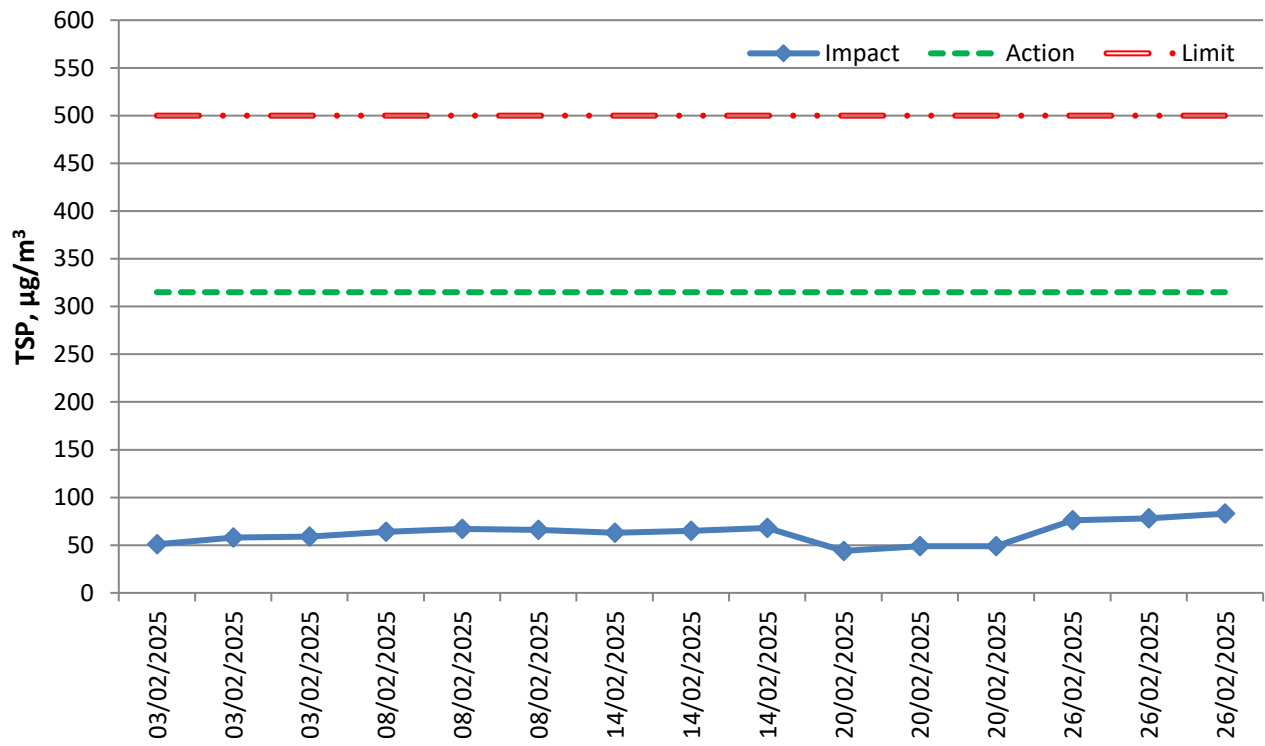
Date	Measurement Period			1-hr TSP concentration, $\mu\text{g}/\text{m}^3$	Weather
03/02/2025	13:00	-	14:00	51	Sunny
	14:00	-	15:00	58	
	15:00	-	16:00	59	
08/02/2025	13:00	-	14:00	64	Sunny
	14:00	-	15:00	67	
	15:00	-	16:00	66	
14/02/2025	9:00	-	10:00	63	Cloudy
	10:00	-	11:00	65	
	11:00	-	12:00	68	
20/02/2025	13:00	-	14:00	44	Sunny
	14:00	-	15:00	49	
	15:00	-	16:00	49	
26/02/2025	9:00	-	10:00	76	Cloudy
	10:00	-	11:00	78	
	11:00	-	12:00	83	
Maximum				83	
Minimum				44	
Average				63	
Action Level				315	
Limit Level				500	

**1-hour average TSP**



NOTE: Due to the relocation of The Hong Kong Society for the Blind's Factory cum Sheltered Workshop (AM4(A)), the premises owner rejected ET to conduct impact monitoring since 1 Sept 2022. 1-hr TSP monitoring at AM4(A) were conducted on the ground floor with orienting to the Project site. ET will resume the impact monitoring once the alternative monitoring location for AM4(A) is confirmed.

### 1-Hour Total Suspended Particulate Results - AM7 Hong Kong Children's Hospital



**Appendix J – Event and Action Plan for air quality**

Event	Action			
	ET	IEC	Supervisor / ER	Contractor
Action Level being exceeded by one sampling	<ol style="list-style-type: none"> <li>1. Identify source and investigate the causes of exceedance;</li> <li>2. Inform Contractor, IEC and Supervisor /ER;</li> <li>3. Repeat measurement to confirm finding.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by ET;</li> <li>2. Check Contractor's working method.</li> </ol>	<ol style="list-style-type: none"> <li>1. Notify Contractor.</li> </ol>	<ol style="list-style-type: none"> <li>1. Rectify any unacceptable practice;</li> <li>2. Amend working methods if appropriate.</li> </ol>
Action Level being exceeded by two or more consecutive sampling	<ol style="list-style-type: none"> <li>1. Identify source and investigate the causes of exceedance;</li> <li>2. Inform Contractor, IEC and Supervisor /ER;</li> <li>3. Increase monitoring frequency to daily;</li> <li>4. Discuss with IEC and Contractor on remedial actions required;</li> <li>5. Assess the effectiveness of Contractor's remedial actions;</li> <li>6. If exceedance continues, arrange meeting with IEC and Supervisor /ER;</li> <li>7. If exceedance stops, cease additional monitoring.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by ET;</li> <li>2. Check Contractor's working method;</li> <li>3. Discuss with ET and Contractor on possible remedial measures;</li> <li>4. Advise the Supervisor /ER on the effectiveness of the proposed remedial measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of exceedance in writing;</li> <li>2. Notify Contractor;</li> <li>3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented;</li> <li>4. Supervise implementation of remedial measures;</li> <li>5. Conduct meeting with ET and IEC if exceedance continues.</li> </ol>	<ol style="list-style-type: none"> <li>1. Discuss with ET and IEC on proper remedial actions;</li> <li>2. Submit proposals for remedial actions to Supervisor /ER and IEC within three working day of notification;</li> <li>3. Implement the agreed proposals;</li> <li>4. Amend proposal if appropriate.</li> </ol>
Limit Level being exceeded by one sampling	<ol style="list-style-type: none"> <li>1. Identify source and investigate the causes of exceedance;</li> <li>2. Inform Contractor, IEC, Supervisor /ER, and EPD;</li> <li>3. Repeat measurement to confirm finding;</li> <li>4. Assess effectiveness of</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by ET;</li> <li>2. Check Contractor's working method;</li> <li>3. Discuss possible remedial measures with ET and Contractor;</li> <li>4. Advise the Supervisor /ER</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of exceedance in writing;</li> <li>2. Notify Contractor;</li> <li>3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be</li> </ol>	<ol style="list-style-type: none"> <li>1. Take immediate action to avoid further exceedance;</li> <li>2. Discuss with ET and IEC on proper remedial actions;</li> <li>3. Submit proposal for remedial actions to Supervisor /ER and IEC</li> </ol>

Event	Action			
	ET	IEC	Supervisor / ER	Contractor
	Contractor's remedial actions and keep EPD, IEC and Supervisor /ER informed of the results.	on the effectiveness of the proposed remedial measures.	4. Supervise implementation of remedial measures; 5. Conduct meeting with ET and IEC if exceedance continues.	within three working days of notification; 4. Implement the agreed proposals.
Limit Level being exceeded by two or more consecutive sampling	<ol style="list-style-type: none"> <li>1. Notify IEC, Supervisor /ER, Contractor and EPD;</li> <li>2. Repeat measurement to confirm findings;</li> <li>3. Carry out analysis of Contractor's working procedures to identify source and investigate the causes of exceedance;</li> <li>4. Increase monitoring frequency to daily;</li> <li>5. Arrange meeting with IEC, Supervisor /ER and Contractor to discuss the remedial action to be taken;</li> <li>6. Assess effectiveness of Contractor's remedial actions and keep EPD, IEC and Supervisor /ER informed of the results;</li> <li>7. If exceedance stop, cease additional monitoring.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by ET;</li> <li>2. Check Contractor's working method;</li> <li>3. Discuss with Supervisor /ER, ET, and Contractor on the potential remedial actions;</li> <li>4. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the Supervisor /ER accordingly.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of exceedance in writing;</li> <li>2. Notify Contractor;</li> <li>3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented;</li> <li>4. Supervise implementation of remedial measures;</li> <li>5. If exceedance continues, consider stopping the Contractor to continue working on that portion of work which causes the exceedance until the exceedance is abated.</li> </ol>	<ol style="list-style-type: none"> <li>1. Take immediate action to avoid further exceedance;</li> <li>2. Discuss with ET and IEC on proper remedial actions;</li> <li>3. Submit proposal for remedial actions to Supervisor /ER and IEC within three working days of notification;</li> <li>4. Implement the agreed proposals;</li> <li>5. Submit further remedial actions if problem still not under control;</li> <li>6. Stop the relevant portion of works as instructed by the Supervisor /ER until the exceedance is abated.</li> </ol>

# **Appendix K – Calibration certificates, catalogue of noise monitoring equipment**

# Catalogue of Sound Level Meter

## Specifications

	NL-52	NL-42
Applicable standards	IEC 61672-1: 2002 Class 1 ANSI S1.4-1983 Type 1 ANSI S1.4A-1985 Type 1 ANSI S1.43-1997 Type 1 JIS C 1509-1: 2005 Class 1	IEC 61672-1: 2002 Class 2 ANSI S1.4-1983 Type 2 ANSI S1.4A-1985 Type 2 ANSI S1.43-1997 Type 2 JIS C 1509-1: 2005 Class 2
Measurement functions	Simultaneous measurement of the following items, with selected time weighting and frequency weighting WEEE Directives, Chinese RoHS (export model for China only)	
Processing (main ch)	Instantaneous sound pressure level: $L_p$ Equivalent continuous sound pressure level: $L_{eq}$ Sound exposure level: $L_E$ Maximum sound pressure level: $L_{max}$ Minimum sound pressure level: $L_{min}$ Percentile sound levels: $L_N$ (0.1 to 99.9 %, 0.1-increment steps, max. 5 values)	
Processing (sub ch)	Instantaneous sound pressure level: $L_p$	
Additional processing	In addition to main processing items, one of the following can be selected for simultaneous processing: C-weighted equivalent continuous sound level: $L_{Ceq}$ C-weighted peak sound level: $L_{Cpeak}$ Z-weighted peak sound level: $L_{Zpeak}$ 1-time-weighted equivalent continuous sound level: $L_{A1eq}^{*2}$ Maximum 1-time-weighted equivalent continuous sound level: $L_{A1max}^{*2}$ The power average of the maximum level of each 5 second interval: $L_{A1a5}$ The frequency weighting for the additional processing synchronizes with the frequency weighting of the sub-channel, so when the sub-channel has A-weighting, $L_{A1a5}$ can be selected. When C-weighting (Z-weighting) is selected, the additional processing $L_{Ceq}$ and $L_{Cpeak}$ ( $L_{Zpeak}$ ) are selectable.	
Measuring time	10 s, 1, 5, 10, 15, 30 m, 1, 8, 24 h, and manual (maximum 24 h)	
Microphone	Type UC-59 UC-52 Sensitivity level -27 dB -33 dB	
Measurement range	A-weighting: 25 dB to 138 dB C-weighting: 33 dB to 138 dB Z-weighting: 38 dB to 138 dB C-weighting peak sound level: 55 dB to 141 dB Z-weighting peak sound level: 60 dB to 141 dB	
Inherent noise	A-weighting 17 dB or less C-weighting 25 dB or less Z-weighting 30 dB or less	19 dB or less 27 dB or less 32 dB or less
Frequency range	20 Hz to 20 kHz	20 Hz to 8 kHz
Frequency weighting	A, C, and Z	
Time weighting	F (Fast) and S (Slow)	
Level range	Single range (Linearity range: 113 dB) Bar graph display range max. Max. 110 dB (20 to 130 dB) Switching of bar graph display Set the upper/lower limit in 10 dB increments.	
RMS detection circuit	Digital processing method	
Sampling cycle	20.8 $\mu$ s ( $L_p$ , $L_{eq}$ , $L_E$ , $L_{max}$ , $L_{min}$ , $L_{peak}$ : sampling frequency: 48 kHz) 100 ms ( $L_N$ )	
Calibration	Measurement Law: electrical calibration performed according to IEC and JIS standards, using internally generated signals; acoustic calibration performed with the NC-74.	
Correction functions	Windscreen correction: Compliant with IEC 61672-1 and JIS C 1509-1 standards when the windscreen is installed. Diffuse sound field correction: Correction of frequency characteristics in order to comply with standards (ANSI S1.4) in diffuse sound field.	
Delay time	The meter can be set to start measuring a specified time (OFF, 1, 3, 5 or 10 s) after the start button has been pressed or when a user-set trigger is exceeded.	
Back erase function	When the PAUSE key is pressed to pause measurement, the preceding (user selectable) 0, 1, 3 or 5 s data are excluded from processing.	
Display	Backlit semitransparent color TFT LCD display WQVGA (400 x 240 dots) * LCD with touch panel (Capacitive Touch Panel) Numerical display update frequency: 1 s * Bar graph update frequency: 100 ms	
Store	Manual Number of data Internal memory: max. 1000 sets SD Card: depends on the capacity of the SD Card *1	Auto *2 Instantaneous values ( $L_p$ mode) and processed values ( $L_{eq}$ mode) are stored continuously and automatically at preset intervals. $L_p$ sampling cycle 100 ms, 200 ms, 1 s, $L_{eq}$ 1s $L_{eq}$ sampling cycle 10 s, 1, 5, 10, 15, 30 ms, 1, 8, 24 h Measurement Time Max. 1000 h (depends on the capacity of the SD Card) *1

\* Windows is a trademark of Microsoft Corporation.  
\* Specifications subject to change without notice.

Distributed by:

This product is environment-friendly. It does not include toxic chemicals on our policy.  
This product is certified as an International Protection rating of IP54 (dust protected and resistant to splashing water).  
This leaflet is printed with environmentally friendly vegetable-based ink on recycled paper.

1011-4 212 P.D

Data recall	Allows viewing of stored data
Setup memory	Up to five setup configurations can be saved in internal memory, for later recall Start up via file settings previously stored on SD card possible
Waveform recording *3	
File format	Uncompressed waveform WAVE file
Sampling frequency	Select 48 kHz, 24 kHz or 12 kHz
Data length	Select 24 bit or 16 bit
Outputs	
DC output	Output DC signals using a frequency weighting characteristic selected by processing
Output voltage	2.5 V, 25 mV / dB at bar graph display full scale
AC output	Output AC signals using a frequency weighting characteristic selected by processing or by A, C, Z-weighting.
Output voltage	1 V (rms values) at bar graph display full scale
Comparator output *2	Turns on when the open-collector output exceeds the set value (max. applied voltage 24 V, max. current 60 mA, allowable dissipation 300 mW).
USB *3	Allows USB to be connected to a computer and recognized as a removable disk Allows USB to be controlled via communication commands
RS-232C communication	Allows for RS-232C communication via use of a dedicated cable
Data continuous output *2	
Type of data	Instantaneous value $L_p$ Processed value $L_{eq}$ , $L_{max}$ , $L_{min}$ , $L_{peak}$
Output interval	100 ms
Print out	Printing of measurement results on dedicated printer DPU-414
Power requirements	Four IEC R6 (size AA) batteries (alkaline or rechargeable batteries) or external power supply
Battery life (23 °C)	Alkaline battery LR6 (AA): 26 h NI-MH secondary battery: 25 h At the maximum: * Depends on the setting
AC adapter	NC-98C (NC-34 for previous models cannot be used)
External power voltage	5 to 7 V (rated voltage: 6 V)
Current consumption	Approximately 90 mA (normal operation, rated voltage)
Ambient conditions	Temperature: -10 to +50 °C Humidity: 10 to 90 % RH (non-condensing)
Dustproof / water-resistant performance *4	IP code: IP54 (except for microphone) See precautions regarding waterproofing
Dimensions, weight	Approx. 250 (H) x 76 (W) x 33 mm (D), approx. 400 g (with batteries)
Supplied accessories	Storage case x 1, Windscreen WS-10 x 1, Windscreen fall prevention rubber x 1, Hand strap x 1, LR6 (AA) alkaline batteries x 4, SD card 512 MB x 1 (NX-42EX preinstalled model only)

## Options

	Product name	Product number
Extended function program (Inst. on 512 MB SD card)		NX-42EX
Waveform recording program *2 (Inst. on 2 GB SD card)		NX-42WR
Octave, 1/3 octave real-time analysis program *2 (Inst. on 512 MB SD card)		NX-42RT
FFT analysis program *2 (Inst. on 512 MB SD card)		NX-42FT
Data management software for environmental measurement		AS-60
Data management software for environmental measurement (Includes the octave and 1/3 octave data management software)		AS-60RT
Data management software for environmental measurement (Includes the vibration level data management software)		AS-60VM
Waveform analysis software		CAT-WAVE
SD Card 512 MB		SD-512M
SD Card 2 GB		SD-2G
AC adapter (100 V to 240 V)		NC-98C
Battery pack		BP-21
Microphone extension cables		EC-04 (from 2 m)
BNC-Pin output code		CC-24
Comparator output cable		CC-42C
Printer		DPU-414
Printer cable		CC-42P
RS 232C serial I/O cable		CC-42R
USB cable		—
Sound calibrator		NC-74
All-weather windscreen		WS-15
Windscreen mounting adapter		WS-15006
Rain-protection windscreen		WS-16
Sound level meter tripod		ST-80
All-weather windscreen tripod		ST-81

\*1 Use Rion fully guaranteed products. \*2 NX-42EX required (sold separately). \*3 NX-42WR required (sold separately).  
\*4 Protection against harmful dust and water splashing from any direction.

### Precautions regarding waterproofing

Before use, verify that the rubber bottom cover and the battery compartment lid are firmly closed.  
To maintain the water and dust proof rating, internal packing replacement is required every two years (at cost).



**RION CO., LTD.**  
http://www.rion.co.jp/english/

3-20-41, Higashimotomachi, Kokubunji, Tokyo 185-8533, Japan  
Tel: +81-42-359-7888 Fax: +81-42-359-7442


# Calibration Certificate of Sound Level Meter



AAST-SLM-10  
cal Date: 29 July 2024

**中国赛宝实验室计量检测中心**  
(工业和信息化部电子第五研究所计量检测中心)  
CHINA CEPREI LABORATORY CALIBRATION & TESTING CENTRE

## 校准证书

### CALIBRATION CERTIFICATE

证书编号: 2HB24001410-0001  
Certificate No. 

  中国认可  
国际互认  
校准  
CALIBRATION  
CNAS L13344

委托单位: Castco Testing Centre Limited  
Client

仪器名称: Sound Level Meter  
Description

型号规格: NL-S2  
Model/Type

制造商: Rion  
Manufacturer

机身号: 00976203  
Serial No.


管理号: AAST-SLM-10  
Asset No.


接收日期: 2024-07-18 校准日期: 2024-07-29  
Rec. Date Cal. Date

签发日期: 2024-07-30 建议校准周期: 12个月(12 months)  
App. Date Reference Cal. Period

结论: 所校准项目符合技术要求(The calibrated items meet the technical requirements)  
Conclusion

校准: 赵文钰 赵文钰 核验: 钟灏 钟灏  
Calibrated by Inspected by

签发: 郑木力 郑木力 印章:   
Approved by Stamp

  
扫一扫查真伪

赛宝计量检测中心  
总部地址: 广州市增城区朱村街米村大道西78号  
实验室地址: 广州市增城区朱村街米村大道西78号  
客服热线: 020-87237633 传真: 020-87236189  
投诉电话: 020-87236896  
邮件: cal@ceprei.com  
网址: www.ceprei-cal.com

CEPREI Calibration and Testing Centre  
HQ Add: No.78,Zhuocun Avenue West,Zengcheng District,Guangzhou,China  
Add. of the Lab: No.78,Zhuocun Avenue West,Zengcheng District,Guangzhou,China  
Service Tel: 020-87237633 Fax: 020-87236189  
Complaint Tel: 020-87236896  
Email: cal@ceprei.com  
Website: www.ceprei-cal.com

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证书编号(Certificate No.): 2HB24001410-0001

## 说明

### DIRECTIONS

- 本机构是国家市场监督管理总局授权建立的法定计量检定机构;“国家环境综合试验设备计量站”,国家国防科工局授权建立的“国防科技工业4412二级计量站”,本机构质量管理体系符合ISO/IEC 17025:2017标准的要求。  
This laboratory is the legal metrological institute authorized by the State Administration for Market Regulation. It is the "Nation Metrology Station of Combined Environmental Testing Equipment". It is the "No. 4412 Class 2 Metrology Station of Science, Technology and Industry for National Defense" authorized by the State Administration of Science, Technology and Industry for National Defense. The quality management system of this laboratory is in accordance with the ISO/IEC 17025:2017.
- 本证书中的数据可溯源到国际单位制(SI)单位和/或社会公用计量标准。  
The data of the certificate is traceable to the International system of Units (SI) and/or the public metrological standards.
- 本次校准的技术依据及CNAS认可范围(Reference documents and CNAS accredited scopes):  
• JJG 188-2017 声级计检定规程: Sound pressure level: (20~130)dB; Frequency Weighting: (20~130)dB, (10 Hz~20kHz)  
• 详细内容请查看CNAS网站中注册编号为L13344的证书附件,超出范围的内容未被认可,其结果/结论所依据的合格评定活动不在认可范围内。(Please see the attachment of certificate No. L13344 at CNAS website for details, beyond which is not accredited, the conformity assessment activities on which the results/conclusions are based are outside the scope of accreditation.)
- 本次校准所使用的主要测量标准及溯源性声明(The main measurement standards used during the calibration and traceability declaration):

名称 (Description)	证书号/有效期/溯源单位 (Certificate No./Due Date/Traceability to)	技术指标 (Specification)	测量范围 (Measuring Range)
前置放大器(2239842)	LSs2024-02588/2025-03-12/中国计量院	频率响应: ±0.1dB	10Hz~50kHz
声校准器(2218291)	4GC23001017-0005/2025-01-29/赛宝(广州)	1级	94dB, 124dB@(1000 Hz)
数字多用表(3146A63487)	4GC23000695-0001/2024-10-25/赛宝(广州)	直流电压: ±0.01%; 直流电 流: ±0.01%; 交流电压: ± 0.1%; 电阻: ±0.01%; 频 率: ±0.01%	10mV~100V (10Hz~200 kHz)
功率放大器(2536312)	4GC23000907-0001/2024-12-14/赛宝(广州)	失真度: ≤0.2%; 频率响应 ±0.2dB	20Hz~50kHz
PULSE分析系统(3160-1 00186)	GFJGJL1001231007106/2024-10-24/航空 304所	频率: U <sub>10</sub> =0.001%,k=2;电压: U <sub>10</sub> =0.10%,k=2	频率:0.001Hz~51.2kHz, 电压:(1~10 <sup>5</sup> ~30V)
正弦信号发生器(243165 6)	SXE202301878/2024-11-21/广东计量院	频率响应MPE±0.1dB	10Hz~50kHz
信号发生器(389052)	4GC24000402-0001/2025-05-13/赛宝(广州)	1.衰减器: 10dB改变量± 0.05dB, 1dB改变量±0.02dB ±0.1dB改变量±0.01dB; 2. 频率响应±0.1dB; 3.失真度 ≤0.1%; 4.频率±0.25%; 5. 猝发音, 持续时间±1% 失真度: <2%, 偶合端一致 性: ±0.3dB, 短期漂移: < 0.5dB, 工作有效声压级: ≥ 80dB	1.衰减器: (0~80) dB ±0.05dB; 2.频率响应: 10Hz~ 20kHz, 3.频率: 10Hz~ 20kHz, 4.猝发音, 持续 时间(0.25~2000) ms
耦合腔(3081703)	SXE202483019/2026-02-04/广东计量院	频率: ±0.3dB, 短期漂移: < 0.5dB, 工作有效声压级: ≥ 80dB	10Hz~20kHz
实验室标准传声器(2246 093)	GFJGJL1001240306537/2025-03-17/航空 304所	LS级	10Hz~25kHz

计量溯源性声明(Metrological Traceability Declaration):

被校准器具 Instrument	设备名称 Standard Name	外部机构/溯源证书编号 Institute/Certificate No.
Sound Level Meter	前置放大器	中国计量院/LSs2024-02588
	声校准器	航空304所/GFJGJL1001230304185
	数字多用表	广东计量院/DBN202260767
	功率放大器	航空304所/GFJGJL1001231007106
	PULSE分析系统	航空304所/GFJGJL1001231007106
	正弦信号发生器	广东计量院/SXE202301878
信号发生器	航天514所/GFJGJL1004240400235	
耦合腔	广东计量院/SXE202483019	

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# Calibration Certificate of Sound Level Meter

Sound Level Meter      实验室标准传声器      航空304所/GFJGIL1001240306537

5. 校准地点(The calibration place):  
广州市增城区朱村街朱村大道西78号9栋110室

6. 环境条件(Environmental conditions):  
温度(Temperature): 23.3°C    相对湿度(Relative Humidity): 66%    其它(Other): /

7. 本证书中给出的扩展不确定度依据JJF1059.1-2012《测量不确定度评定与表示》评定, 由合成标准不确定度乘以包含概率约为95%时对应的包含因子 $k$ 得到。  
The extended uncertainty given in this certificate is evaluated according to JJF1059.1-2012 "Evaluation and Expression of Uncertainty in Measurement", and is calculated by multiplying the combined standard uncertainty by the coverage factor  $k$  which corresponding to the coverage probability about 95%.

8. 证书中“P”、“合格”代表“测量结果在允许范围内”, “F”、“不合格”代表“测量结果不在允许范围内”, “N/A”代表“不适用或技术指标暂时无法确认等”。本证书报告的结论仅供参考, 使用人员应结合实际测量的要求合理使用, 如考虑测量结果测量不确定度的影响等。  
“P” and “Pass” in this certificate stand for “Low Limit≤the measured value ≤High Limit”. “F” and “Fail” stand for “the measured value <Low Limit or the measured value >High Limit”. “N/A” stands for “Not Applicable or The technical specification has not been confirmed etc”. The conclusions of this certificate are for reference only. Users should use them reasonably according to the actual measurement requirements, such as considering the impact of measurement uncertainty, etc.

9. 建议校准周期是本实验室依据本证书报告的技术依据和仪器设备常规使用条件给出的建议, 供委托方参考。委托方可以根据实际使用情况自行决定样品的校准周期。  
The reference calibration period is based on the reference documents and normal operating conditions of the calibrated instrument. It is only for reference. The client may decide the calibration period of the instrument according to the actual use.

注: 1.本证书未经本机构书面授权, 不得部分复制。(The certificate shall not be partly reproduced without written approval of the laboratory.)

2.本次校准结果仅与被校物有关。(The results are only related to the items calibrated.)

3.“委托方”、“委托方联络信息”由委托方提供, “制造商”、“型号规格”、“出厂编号”以及“设备编号”为仪器上标注, 委托方对上面内容如有异议, 须在收到证书后二十个工作日内提出。

The information Client and Contact Information are provided by client, and the Manufacturer, Model/Type, Serial No. and Equipment No. are marked on the items. Client shall submit any objection within 20 working days after receiving the certificate for the information above.



证书编号(Certificate No.): 2HB24001410-0001

1 外观与工作正常性检查 (Appearance and Function Check)

无影响证书中测量结果准确度的因素和缺陷。

There are no factor and defect that affect the measurement result accuracy of the certificate.

2 指示声级调整 (Indication SPL Calibration)

传声器型号 (Microphone Type)	传声器编号 (Microphone SN.)	放大器型号 (Preamplifier Type)	频率(Frequency)=1000Hz 放大器编号 (Preamplifier SN.)
/	/	/	/

声校准器型号 (Calibrator Type)	标准声压级 (Reference SPL) (dB)	调整前示值 (Before Adjust) (dB)	调整后示值 (After Adjust) (dB)
4231	94.0	94.0	94.0

3 级线性 (Level Linearity)

3.1 参考级量程 (Reference Range)

标准声级 (Standard) (dB)	指示声级 (Indication) (dB)	误差 (Error) (dB)	允许误差 (Limit) (dB)	结论 (Pass/Fail) (P/F)	U (dB)
130.0	130.1	0.1	±0.8	P	0.3
129.0	129.1	0.1	±0.8	P	0.3
128.0	128.1	0.1	±0.8	P	0.3
127.0	127.1	0.1	±0.8	P	0.3
126.0	126.0	0.0	±0.8	P	0.3
125.0	125.0	0.0	±0.8	P	0.3
120.0	119.9	-0.1	±0.8	P	0.3
110.0	110.0	0.0	±0.8	P	0.3
100.0	100.0	0.0	±0.8	P	0.3
90.0	90.0	0.0	±0.8	P	0.3
80.0	80.0	0.0	±0.8	P	0.3
70.0	70.0	0.0	±0.8	P	0.3
60.0	60.0	0.0	±0.8	P	0.3
50.0	50.0	0.0	±0.8	P	0.3
40.0	40.0	0.0	±0.8	P	0.3
35.0	35.2	0.2	±0.8	P	0.3
34.0	34.2	0.2	±0.8	P	0.3
33.0	33.2	0.2	±0.8	P	0.3
32.0	32.2	0.2	±0.8	P	0.3
31.0	31.2	0.2	±0.8	P	0.3
30.0	30.2	0.2	±0.8	P	0.3

# Calibration Certificate of Sound Level Meter



证书编号(Certificate No.): 2HB24001410-0001

### 3.2 其它级量程 (Other Range)

频率(Frequency): 1000Hz

标准声级 (Standard) (dB)	指示声级 (Indication) (dB)	误差 (Error) (dB)	允许误差 (Limit) (dB)	结论 (Pass/Fail) (P/F)	U (k=2) (dB)
130.0	130.1	0.1	±0.8	P	0.3
129.0	129.1	0.1	±0.8	P	0.3
128.0	128.1	0.1	±0.8	P	0.3
127.0	127.1	0.1	±0.8	P	0.3
126.0	126.0	0.0	±0.8	P	0.3
125.0	125.0	0.0	±0.8	P	0.3
120.0	119.9	-0.1	±0.8	P	0.3
110.0	110.0	0.0	±0.8	P	0.3
100.0	99.9	-0.1	±0.8	P	0.3
90.0	90.0	0.0	±0.8	P	0.3
80.0	80.0	0.0	±0.8	P	0.3
70.0	70.0	0.0	±0.8	P	0.3
60.0	60.0	0.0	±0.8	P	0.3
50.0	50.0	0.0	±0.8	P	0.3
40.0	39.9	-0.1	±0.8	P	0.3
35.0	35.1	0.1	±0.8	P	0.3
34.0	34.1	0.1	±0.8	P	0.3
33.0	33.1	0.1	±0.8	P	0.3
32.0	32.1	0.1	±0.8	P	0.3
31.0	31.1	0.1	±0.8	P	0.3
30.0	30.1	0.1	±0.8	P	0.3

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证书编号(Certificate No.): 2HB24001410-0001

### 4 A计权特性(A-Weighting Characteristic)

频率 (Frequency) (Hz)	实测值 (Actual) (dB)	理论值 (Theoretical value) (dB)	误差 (Error) (dB)	允许误差 (Limit) (dB)	结论 (Pass/Fail) (P/F)	U (dB)
10	-70.8	-70.4	-0.4	-∞ ~ 3.0	P	0.5
16	-57.0	-56.7	-0.3	-4.0 ~ 2.0	P	0.5
31.5	-39.7	-39.4	-0.3	±1.5	P	0.5
63	-26.1	-26.2	0.1	±1.0	P	0.5
125	-16.1	-16.1	0.0	±1.0	P	0.5
250	-8.9	-8.6	-0.3	±1.0	P	0.5
500	-3.4	-3.2	-0.2	±1.0	P	0.4
1000(Ref.)	0.0	0.0	0.0	±0.7	P	0.4
2000	1.1	1.2	-0.1	±1.0	P	0.6
4000	0.7	1.0	-0.3	±1.0	P	0.6
8000	-1.0	-1.1	0.1	-2.5 ~ 1.5	P	0.6
16000	-7.6	-6.6	-1.0	-16.0 ~ 2.5	P	1.0
20000	-14.4	-9.3	-5.1	-∞ ~ 3.0	P	1.0

### 5 C计权特性(C-Weighting Characteristic)

频率 (Frequency) (Hz)	实测值 (Actual) (dB)	理论值 (Theoretical value) (dB)	误差 (Error) (dB)	允许误差 (Limit) (dB)	结论 (Pass/Fail) (P/F)	U (dB)
10	-14.8	-14.3	-0.5	-∞ ~ 3.0	P	0.5
16	-8.9	-8.5	-0.4	-4.0 ~ 2.0	P	0.5
31.5	-3.2	-3.0	-0.2	±1.5	P	0.5
63	-1.1	-0.8	-0.3	±1.0	P	0.5
125	-0.2	-0.2	0.0	±1.0	P	0.5
250	0.0	0.0	0.0	±1.0	P	0.5
500	0.0	0.0	0.0	±1.0	P	0.4
1000(Ref.)	0.0	0.0	0.0	±0.7	P	0.4
2000	-0.3	-0.2	-0.1	±1.0	P	0.6
4000	-0.8	-0.8	0.0	±1.0	P	0.6
8000	-2.9	-3.0	0.1	-2.5 ~ 1.5	P	0.6
16000	-10.0	-8.5	-1.5	-16.0 ~ 2.5	P	1.0
20000	-16.4	-11.2	-5.2	-∞ ~ 3.0	P	1.0

### 6 自生噪声 (Autogenous noise)

计权 (Weighting)	实测值 (Actual) (dB)
A	19.6

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# Calibration Certificate of Sound Level Meter



中国赛宝实验室计量检测中心  
(工业和信息化部电子第五研究所计量检测中心)  
CHINA CEPREI LABORATORY CALIBRATION & TESTING CENTRE

## 校准证书 CALIBRATION CERTIFICATE

证书编号: 2HB24001410-0002  
Certificate No.



委托单位: Castco Testing Centre Limited  
Client

仪器名称: Sound Level Meter  
Description

型号规格: NL-52  
Model/Type

制造商: Rion  
Manufacturer

机身号: 00976204  
Serial No.

管理号: AAST-SLM-11  
Asset No.

接收日期: 2024-07-18 校准日期: 2024-07-29  
Rec. Date Cal. Date

签发日期: 2024-07-30 建议校准周期: 12个月(12 months)  
App. Date Reference Cal. Period

结论: 所校准项目符合技术要求(The calibrated items meet the technical requirements)  
Conclusion

校准: 赵文钰 赵文钰  
Calibrated by Inspected by

签发: 郑木力 郑木力  
Approved by

检验: 钟灏 钟灏  
Inspected by

印章: Stamp



赛宝计量检测中心  
总部地址: 广州市增城区朱村街东村大道西78号  
实验室地址: 广州市增城区朱村街东村大道西78号  
客服热线: 020-87237633 传真: 020-87236189  
投诉电话: 020-87236896  
邮件: cal@ceprei.com  
网址: www.ceprei-cal.com

CEPREI Calibration and Testing Centre  
HQ Addr: No.78,Zhuacun Avenue West,Zengcheng District,Guangzhou,China  
Add of the Lab: No.78,Zhuacun Avenue West,Zengcheng District,Guangzhou,China  
Service Tel: 020-87237633 Fax: 020-87236189  
Complaint Tel: 020-87236896  
Email: cal@ceprei.com  
Website: www.ceprei-cal.com

证书编号(Certificate No.): 2HB24001410-0002

## 说明 DIRECTIONS

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This laboratory is the legal metrological institute authorized by the State Administration for Market Regulation. It is the "Nation Metrology Station of Combined Environmental Testing Equipment". It is the "No. 4412 Class 2 Metrology Station of Science, Technology and Industry for National Defense" authorized by the State Administration of Science, Technology and Industry for National Defense. The quality management system of this laboratory is in accordance with the ISO/IEC 17025:2017.
- 本证书中的数据可溯源到国际单位制(SI)单位和/或社会公用计量标准。  
The data of the certificate is traceable to the International system of Units (SI) and/or the public metrological standards.
- 本次校准的技术依据及CNAS认可范围(Reference documents and CNAS accredited scopes):  
• JJG 188-2017 声级计检定规程: Sound pressure level: (20~130)dB; Frequency Weighting: (20~130)dB, (10 Hz~20kHz)  
• 详细内容请查看CNAS网站中注册编号为L13344的证书附件,超出范围的内容未被认可,其结果/结论所依据的合格评定活动不在认可范围内。(Please see the attachment of certificate No. L13344 at CNAS website for details, beyond which is not accredited, the conformity assessment activities on which the results/conclusions are based are outside the scope of accreditation.)
- 本次校准所使用的主要测量标准及溯源性声明(The main measurement standards used during the calibration and traceability declaration):

名称 (Description)	证书号/有效期/溯源单位 (Certificate No./Due Date/Traceability to)	技术指标 (Specification)	测量范围 (Measuring Range)
前置放大器(2219842)	LSSx2024-02588/2025-03-12/中国计量院	频率响应: $\pm 0.1$ dB	10Hz~50kHz
声校准器(2218291)	4GC23001017-0005/2025-01-29/赛宝(广州)	1级	94dB, 124dB@ (1000 Hz)
数字多用表(3146A63487)	4GC23000695-0001/2024-10-25/赛宝(广州)	直流电压: $\pm 0.01\%$ ; 直流电流: $\pm 0.01\%$ ; 交流电压: $\pm 0.1\%$ ; 电阻: $\pm 0.01\%$ ; 频率: $\pm 0.01\%$	10mV~100V (10Hz~200 kHz)
功率放大器(2536312)	4GC23000907-0001/2024-12-14/赛宝(广州)	失真度: $\leq 0.2\%$ ; 频率响应: $\pm 0.2$ dB	20Hz~50kHz
PULSE分析系统(3160-100186)	GFJGJL1001231007106/2024-10-24/航空304所	频率: $U_{err} \leq 0.001\%$ , $k=2$ ; 电压: $U_{err} \leq 0.10\%$ , $k=2$	频率: 0.001Hz~51.2kHz, 电压: $(1 \times 10^{-1}) \sim 30$ V
正弦信号发生器(2431656)	SXE202301878/2024-11-21/广东计量院	频率响应MPE $\pm 0.1$ dB	10Hz~50kHz
信号发生器(389052)	4GC24000402-0001/2025-05-13/赛宝(广州)	1.衰减器: 10dB改变量 $\pm 0.05$ dB, 1dB改变量 $\pm 0.02$ dB; 0.1dB改变量 $\pm 0.01$ dB; 2. 频率响应: 10Hz~100kHz, 3.频率: 10Hz~20kHz, 4.频率精度: $\pm 0.1\%$ ; 5. 失真度: $\leq 0.25\%$ ; 6. 持续时间: (0.25~2000) ms	1.衰减器: (0~80) dB, 2.频率响应: 10Hz~100kHz, 3.频率: 10Hz~20kHz, 4.频率精度: $\pm 0.1\%$ ; 5. 失真度: $\leq 0.25\%$ ; 6. 持续时间: (0.25~2000) ms
耦合腔(3081703)	SXE202483019/2026-02-04/广东计量院	失真度: $< 2\%$ , 耦合端一致性: $\pm 0.3$ dB, 短期漂移: $< 0.5$ dB, 工作有效声压级: $\geq 80$ dB	10Hz~20kHz
实验室标准声源(2246093)	GFJGJL1001240306537/2025-03-17/航空304所	LSS级	10Hz~25kHz

### 计量溯源性声明(Metrological Traceability Declaration):

被校准器具 Instrument	设备名称 Standard Name	外部机构/溯源证书编号 Institute/Certificate No.
Sound Level Meter	前置放大器	中国计量院/LSSx2024-02588
	声校准器	航空304所/GFJGJL1001230304185
	数字多用表	广东计量院/DBN202260767
	功率放大器	航空304所/GFJGJL1001231007106
	PULSE分析系统	航空304所/GFJGJL1001231007106
	正弦信号发生器	广东计量院/SXE202301878
信号发生器	航天514所/GFJGJL1004240400235	
耦合腔	广东计量院/SXE202483019	

# Calibration Certificate of Sound Level Meter

Sound Level Meter      实验室标准传声器      航空304所/GFJGJL1001240306537

5. 校准地点(The calibration place):  
广州市增城区朱村街朱村大道西78号9栋110室

6. 环境条件(Environmental conditions):  
温度(Temperature): 23.3°C      相对湿度(Relative Humidity): 66%      其它(Other): /

7. 本证书中给出的扩展不确定度依据JJF1059.1-2012《测量不确定度评定与表示》评定,由合成标准不确定度乘以包含概率约为95%时对应的包含因子k得到。  
The extended uncertainty given in this certificate is evaluated according to JJF1059.1-2012 "Evaluation and Expression of Uncertainty in Measurement", and is calculated by multiplying the combined standard uncertainty by the coverage factor k which corresponding to the coverage probability about 95%.

8. 证书中“P”、“合格”代表“测量结果在允许范围内”,“F”、“不合格”代表“测量结果不在允许范围内”,“N/A”代表“不适用或技术指标暂时无法确认等”。本证书报告的结论仅供参考,使用人员应结合实际测量的要求合理使用,如考虑测量结果测量不确定度的影响等。  
“P” and “Pass” in this certificate stand for “Low Limit≤the measured value ≤High Limit”, “F” and “Fail” stand for “the measured value <Low Limit or the measured value >High Limit”, “N/A” stands for “Not Applicable or The technical specification has not been confirmed etc”. The conclusions of this certificate are for reference only. Users should use them reasonably according to the actual measurement requirements, such as considering the impact of measurement uncertainty, etc.

9. 建议校准周期是本实验室依据本证书报告的技术依据和仪器设备常规使用条件给出的建议,供委托方参考。委托方可以根据实际使用情况自行决定样品的校准周期。  
The reference calibration period is based on the reference documents and normal operating conditions of the calibrated instrument. It is only for reference. The client may decide the calibration period of the instrument according to the actual use.

注: 1. 本证书未经本机构书面授权,不得部分复制。(The certificate shall not be partly reproduced without written approval of the laboratory.)

2. 本次校准结果仅与被校物有关。(The results are only related to the items calibrated.)

3. “委托方”、“委托方联络信息”由委托方提供,“制造商”、“型号规格”、“出厂编号”以及“设备编号”为仪器上标注,委托方对上面内容如有异议,须在收到证书后二十个工作日内提出。

The information Client and Contact Information are provided by client, and the Manufacturer, Model/Type, Serial No. and Equipment No. are marked on the items. Client shall submit any objection within 20 working days after receiving the certificate for the information above.



证书编号(Certificate No.): 2HB24001410-0002

1 外观与工作正常性检查 (Appearance and Function Check)  
无影响证书中测量结果准确度的因素和缺陷。

There are no factor and defect that affect the measurement result accuracy of the certificate.

2 指示声级调整 (Indication SPL Calibration)      频率(Frequency)=1000Hz

传声器型号 (Microphone Type)	传声器编号 (Microphone SN.)	放大器型号 (Preamplifier Type)	放大器编号 (Preamplifier SN.)
/	/	/	/


声校准器型号 (Calibrator Type)	标准声压级 (Reference SPL) (dB)	调整前示值 (Before Adjust) (dB)	调整后示值 (After Adjust) (dB)
4231	94.0	94.4	94.0

3 级线性 (Level Linearity)

3.1 参考级量程 (Reference Range)      频率(Frequency): 8000Hz

标准声级 (Standard) (dB)	指示声级 (Indication) (dB)	误差 (Error) (dB)	允许误差 (Limit) (dB)	结论 (Pass/Fail) (P/F)	U (k=2) (dB)
130.0	129.9	-0.1	±0.8	P	0.3
129.0	128.9	-0.1	±0.8	P	0.3
128.0	127.9	-0.1	±0.8	P	0.3
127.0	126.9	-0.1	±0.8	P	0.3
126.0	125.9	-0.1	±0.8	P	0.3
125.0	124.9	-0.1	±0.8	P	0.3
120.0	119.9	-0.1	±0.8	P	0.3
110.0	110.0	0.0	±0.8	P	0.3
100.0	100.0	0.0	±0.8	P	0.3
90.0	90.0	0.0	±0.8	P	0.3
80.0	79.9	-0.1	±0.8	P	0.3
70.0	69.9	-0.1	±0.8	P	0.3
60.0	60.0	0.0	±0.8	P	0.3
50.0	49.9	-0.1	±0.8	P	0.3
40.0	39.9	-0.1	±0.8	P	0.3
35.0	34.8	-0.2	±0.8	P	0.3
34.0	33.8	-0.2	±0.8	P	0.3
33.0	32.9	-0.1	±0.8	P	0.3
32.0	31.8	-0.2	±0.8	P	0.3
31.0	30.8	-0.2	±0.8	P	0.3
30.0	29.8	-0.2	±0.8	P	0.3


# Calibration Certificate of Sound Level Meter


证书编号(Certificate No.): 2HB24001410-0002

3.2 其它级量程 (Other Range) 频率(Frequency): 1000Hz

标准声级 (Standard) (dB)	指示声级 (Indication) (dB)	误差 (Error) (dB)	允许误差 (Limit) (dB)	结论 (Pass/Fail) (P/F)	<i>U</i> (k=2) (dB)
130.0	129.9	-0.1	±0.8	P	0.3
129.0	128.9	-0.1	±0.8	P	0.3
128.0	127.9	-0.1	±0.8	P	0.3
127.0	126.9	-0.1	±0.8	P	0.3
126.0	125.9	-0.1	±0.8	P	0.3
125.0	124.9	-0.1	±0.8	P	0.3
120.0	119.9	-0.1	±0.8	P	0.3
110.0	110.0	0.0	±0.8	P	0.3
100.0	100.0	0.0	±0.8	P	0.3
90.0	90.0	0.0	±0.8	P	0.3
80.0	80.0	0.0	±0.8	P	0.3
70.0	70.0	0.0	±0.8	P	0.3
60.0	60.0	0.0	±0.8	P	0.3
50.0	50.0	0.0	±0.8	P	0.3
40.0	40.0	0.0	±0.8	P	0.3
35.0	34.9	-0.1	±0.8	P	0.3
34.0	33.9	-0.1	±0.8	P	0.3
33.0	32.8	-0.2	±0.8	P	0.3
32.0	31.8	-0.2	±0.8	P	0.3
31.0	30.8	-0.2	±0.8	P	0.3
30.0	29.8	-0.2	±0.8	P	0.3

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Page of


证书编号(Certificate No.): 2HB24001410-0002

4 A计权特性(A-Weighting Characteristic)

频率 (Frequency) (Hz)	实测值 (Actual) (dB)	理论值 (Theoretical value) (dB)	误差 (Error) (dB)	允许误差 (Limit) (dB)	结论 (Pass/Fail) (P/F)	<i>U</i> (k=2) (dB)
10	-70.8	-70.4	-0.4	-∞ ~ 3.0	P	0.5
16	-57.0	-56.7	-0.3	-4.0 ~ 2.0	P	0.5
31.5	-39.5	-39.4	-0.1	±1.5	P	0.5
63	-26.3	-26.2	-0.1	±1.0	P	0.5
125	-16.2	-16.1	-0.1	±1.0	P	0.5
250	-8.8	-8.6	-0.2	±1.0	P	0.5
500	-3.4	-3.2	-0.2	±1.0	P	0.4
1000(Ref.)	0.0	0.0	0.0	±0.7	P	0.4
2000	1.1	1.2	-0.1	±1.0	P	0.6
4000	0.7	1.0	-0.3	±1.0	P	0.6
8000	-1.0	-1.1	0.1	-2.5 ~ 1.5	P	0.6
16000	-8.7	-6.6	-2.1	-16.0 ~ 2.5	P	1.0
20000	-18.6	-9.3	-9.3	-∞ ~ 3.0	P	1.0

5 C计权特性(C-Weighting Characteristic)

频率 (Frequency) (Hz)	实测值 (Actual) (dB)	理论值 (Theoretical value) (dB)	误差 (Error) (dB)	允许误差 (Limit) (dB)	结论 (Pass/Fail) (P/F)	<i>U</i> (k=2) (dB)
10	-14.8	-14.3	-0.5	-∞ ~ 3.0	P	0.5
16	-8.9	-8.5	-0.4	-4.0 ~ 2.0	P	0.5
31.5	-3.2	-3.0	-0.2	±1.5	P	0.5
63	-0.9	-0.8	-0.1	±1.0	P	0.5
125	-0.2	-0.2	0.0	±1.0	P	0.5
250	-0.1	0.0	-0.1	±1.0	P	0.5
500	0.0	0.0	0.0	±1.0	P	0.4
1000(Ref.)	0.0	0.0	0.0	±0.7	P	0.4
2000	-0.3	-0.2	-0.1	±1.0	P	0.6
4000	-0.8	-0.8	0.0	±1.0	P	0.6
8000	-2.9	-3.0	0.1	-2.5 ~ 1.5	P	0.6
16000	-10.6	-8.5	-2.1	-16.0 ~ 2.5	P	1.0
20000	-20.5	-11.2	-9.3	-∞ ~ 3.0	P	1.0

6 自生噪声 (Autogenous noise)

加权 (Weighting)	实测值 (Actual) (dB)
A	19.7

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# Catalogue of Sound Calibrator

## For microphone calibration NC-74

### How to use

Carefully insert the microphone all the way into the coupler of the NC-74. Then simply turn the power on to apply a constant sound pressure level to the diaphragm of the microphone.

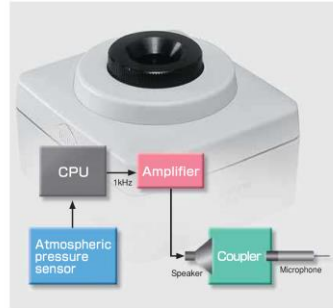


Usage example (NL series)

The performance of the NC-74 is suitable for calibration of high-precision sound level meters. The unit is compact, lightweight, and easy to use. Two IEC LR6 (size AA) alkaline batteries will power the unit for more than 30 hours of continuous use at room temperature.

### Atmospheric pressure compensation principle

The NC-74 incorporates a sensor that detects atmospheric pressure. Based on the information provided by the sensor, the CPU controls the signal amplitude. This allows the unit to always provide the correct output for achieving constant sound pressure level, regardless of fluctuations in atmospheric pressure.



### Using the 1/2-inch adapter

To allow calibration of sound level meter microphones with 1 inch diameter, the 1/2-inch microphone adapter can be removed. 1/2-inch microphones are calibrated with the adapter in place.



### Specifications

Applicable standards	IEC 60942:2003 Class 1 JIS C 1515:2004 Class 1	
Suitable microphones	1-inch microphones	IEC 61094-1 Type LS1P UC-27 UC-25 UC-34
	1/2-inch microphones	IEC 61094-1 Type LS2AP UC-59 UC-57 UC-58A UC-56 UC-30 UC-31 UC-33P
Nominal sound pressure level	94 dB	
Sound pressure level tolerance	±0.3 dB	
Nominal frequency	1 kHz	
Frequency tolerance	±1.0 % or less	
Power requirements	IEC LR6 (size AA) alkaline battery X 2	
Dimensions, mass	Approx. 49 (H) X 80 (W) X 74 (D) mm Approx. 200 g (including batteries)	
Supplied accessories	Case X 1	
	IEC LR6 (size AA) alkaline battery X 2 1/2-inch microphone adapter NC-74-002 X 1	

\* Specification subject to change without notice.

**RION CO., LTD.**  
3-20-41, Higashimotomachi, Kokubunji, Tokyo 185-8533, Japan  
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<http://www.rion.co.jp/english/>

Distributed by:



Printed in Japan 0510-1 0807.P.MP



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ISO 9001 RION CO., LTD.

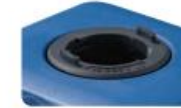


Usage example

### How to use the adapter

#### 1-inch microphones

To use the sound calibrator with 1-inch diameter microphones, remove the 1/2-inch microphone adapter.



#### 1/2-inch microphones

To use the sound calibrator with 1/2-inch diameter microphones, the supplied 1/2-inch microphone adapter must be in place.



Make sure the 1/2-inch adapter is locked.

#### 1/4-inch microphones

To use the sound calibrator with 1/4-inch diameter microphones, use the supplied 1/2-inch microphone adapter together with the optional 1/4-inch adapter.



### Specifications (under standard ambient conditions\*)

Applicable standards	IEC 60942:2017 class 1, ANSI/ASA S1.40-2008 class 1, JIS C 1515:2004 class 1, CE marking, WESEE directive, <b>Chrome Plating</b>
Supported microphones	Microphones made by RION and microphones made by other manufacturers that meet the IEC 61094-4 size specifications 1-inch microphones 1/2-inch microphones (with supplied adapter) 1/4-inch microphones (with optional adapter)
Nominal sound pressure level	94 dB
Sound pressure level tolerance	Max. ±0.30 dB
Operational frequency	1 000 Hz
Frequency tolerance	Max. ±0.5%
THD + noise	Max. 1.0 % (22.4 Hz to 22.4 kHz)
Dimensions and weight	Approx. 49 mm (H) x 77 mm (W) x 70 mm (D), approx. 200 g
Power supply	IEC LR6 (size AA) alkaline battery x 2
Battery life	IEC LR6 (size AA) nickel-hydrate rechargeable battery (1 "envelop type" supported) x 2 60 hours or more (using two alkaline batteries, continuous use) 50 hours or more (using two nickel-hydrate rechargeable batteries (envelop type), continuous use)
Supplied accessories	Soft case x 1, 1/2-inch microphone adapter x 1, IEC LR6 (size AA) alkaline battery x 2, hand strap x 1, JCSS Calibration Certificate x 1
Optional accessories	1/4-inch microphone adapter NC-75-011

\* RION standard ambient conditions: static pressure 101.325 kPa, ambient temperature 23°C, relative humidity 50 %

### Strap



Securely carry the unit with the supplied hand strap.

### Soft case



Calibration can be performed with the calibrator inserted in the soft case.

### PISTONPHONE NC-72A



### Specifications (under standard ambient conditions\*)

Applicable standards	IEC 60942:2017 class LS/M, class 1/M, JIS C 1515:2004 class L/S/C, class 1/C
Nominal sound pressure level	114.05, Sound pressure level tolerance ±0.10 dB



ISO 9001 RION CO., LTD.  
ISO 14001 RION CO., LTD.

RION CO., LTD. is recognized by the JCSS which uses ISO/IEC 17025 as an accreditation standard and issues its accreditation scheme an ISO/IEC 17025. JCSS is operated by the accreditation body (in Japan) which is a regulatory body (in the Asia Pacific region) of the International Cooperation (IAPAC) as well as the International Calibration Accreditation Cooperation (IAPAC). The Quality Assurance Section of RION CO., LTD. is an International Mutual Recognition Agreement (MRA) participant with the accreditation number JCSS 0197.

\* Windows is a trademark of Microsoft Corporation. \* Specifications subject to change without notice.



This product is environment-friendly. It does not include toxic chemicals on our policy.  
This wallet is printed with environmentally friendly UV ink.

**RION CO., LTD.**  
<https://rion-sv.com/>

3-20-41, Higashimotomachi, Kokubunji, Tokyo 185-8533, Japan  
Tel: +81-42-359-7888 Fax: +81-42-359-7442



ISO 14001 RION CO., LTD.  
ISO 9001 RION CO., LTD.

1709-E (01/07/20)

# Calibration Certificate of Sound Calibrator

AAST-SLC-05  
Cal Date: 30 July 2024



**中国赛宝实验室计量检测中心**  
(工业和信息化部电子第五研究所计量检测中心)  
CHINA CEPREI LABORATORY CALIBRATION & TESTING CENTRE

## 校准证书 CALIBRATION CERTIFICATE

证书编号: 2HB24001410-0003  
Certificate No.



委托单位: Client	Castco Testing Centre Limited		
仪器名称: Description	Sound Level Calibrator		
型号规格: Model/Type	NC-74		
制造商: Manufacturer	Rion		
机身号: Serial No.	34178129		
管理号: Asset No.	AAST-SLC-05		
接收日期: Rec. Date	2024-07-18	校准日期: Cal. Date	2024-07-30
签发日期: App. Date	2024-07-31	建议校准周期: Reference Cal. Period	12个月(12 months)
结论: Conclusion	所校准项目符合技术要求(The calibrated items meet the technical requirements)		

校准: Calibrated by	赵文钰 ZHAO WENYU	核检: Inspected by	钟灏 ZHONG HAO
签发: Approved by	郑木力 ZHENG MOLI	印章: Stamp	

扫一扫查真伪

赛宝计量检测中心 总部地址: 广州市增城区朱村街朱村大道西78号 实验室地址: 广州市增城区朱村街朱村大道西78号 客服电话: 020-87237633 传真: 020-87236189 投诉电话: 020-87236896 邮件: ca@ceprei.com 网址: www.ceprei-cal.com	CEPREI Calibration and Testing Centre HQ Addr: No.78,Zhuocun Avenue West,Zengcheng District,Guangzhou,China Add. of the Lab: No.78,Zhuocun Avenue West,Zengcheng District,Guangzhou,China Service Tel: 020-87237633 Fax: 020-87236189 Complaint Tel: 020-87236896 Email: ca@ceprei.com Website: www.ceprei-cal.com
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证书编号(Certificate No.): 2HB24001410-0003

## 说明 DIRECTIONS

1. 本机构是国家市场监督管理总局授权建立的法定计量检定机构;“国家环境综合试验设备计量站”,国家国防科工局授权建立的“国防科技工业4412二级计量站”,本机构质量管理体系符合ISO/IEC 17025:2017标准的要求。  
This laboratory is the legal metrological institute authorized by the State Administration for Market Regulation. It is the “Nation Metrology Station of Combined Environmental Testing Equipment”. It is the “No. 4412 Class 2 Metrology Station of Science, Technology and Industry for National Defense” authorized by the State Administration of Science, Technology and Industry for National Defense. The quality management system of this laboratory is in accordance with the ISO/IEC 17025:2017.
2. 本证书中的数据可溯源到国际单位制(SI)单位和/或社会公用计量标准。  
The data of the certificate is traceable to the International system of Units (SI) and/or the public metrological standards.
3. 本次校准的技术依据及CNAS认可范围(Reference documents and CNAS accredited scopes):  
\* JJG 176-2022 声校准器检定规程: Sound Pressure Level: 94dB, 104dB, 114dB, 124dB(63Hz~8kHz); 94dB, 104dB, 114dB, 124dB(31.5Hz~16kHz); Frequency: 31.5Hz~16kHz; Harmonic Distortion: 0.1%~10%, (20Hz~20kHz)  
\* 详细内容请查看CNAS网站中注册编号为L13344的证书附件,超出范围的内容未能认可,其结果/结论所依据的合格评定活动不在认可范围内。(Please see the attachment of certificate No. L13344 at CNAS website for details, beyond which is not accredited, the conformity assessment activities on which the results/conclusions are based are outside the scope of accreditation.)

4. 本次校准所使用的主要测量标准及溯源性声明(The main measurement standards used during the calibration and traceability declaration):


名称 (Description)	证书号/有效期/溯源单位 (Certificate No./Due Date/Traceability to)	技术指标 (Specification)	测量范围 (Measuring Range)
实验室标准传声器(2246 093)	GFJGJL1001240306537/2025-03-17/航空 304所	LS级	10Hz~25kHz
前置放大器(2239842)	LSs2024-02588/2025-03-12/中国计量院	频率响应: ±0.1dB	10Hz~50kHz
PULSE分析系统(3160-1 00186)	GFJGJL1001231007106/2024-10-24/航空 304所	频率: $f_{me}=0.001\%$ , $k=2$ ; 电压: $U_{me}=0.10\%$ , $k=2$	频率: 0.001Hz~51.2kHz, 电压: $(1 \times 10^{-3} \sim 30)V$
数字多用表(3146A63487 4G)	C23000695-0001/2024-10-25/赛宝(广州)	直流电压: ±0.01%; 交流电压: ±0.1%; 电阻: ±0.01%; 频率: ±0.01%	直流电压: 10mV~100V (<10Hz~200 kHz)

计量溯源性声明(Metrological Traceability Declaration):

被校准器具 Instrument	设备名称 Standard Name	外部机构/溯源证书编号 Institute/Certificate No.
Sound Level Calibrator	实验室标准传声器	航空304所/GFJGJL1001240306537
	前置放大器	中国计量院/LSs2024-02588
	PULSE分析系统	航空304所/GFJGJL1001231007106
	数字多用表	广东计量院/DBN202260767

5. 校准地点(The calibration place):  
广州市增城区朱村街朱村大道西78号9栋110室
6. 环境条件(Environmental conditions):  
温度(Temperature): 24.2°C 相对湿度(Relative Humidity): 62% 其它(Other): /
7. 本证书中给出的扩展不确定度依据JJF1059.1-2012《测量不确定度评定与表示》评定,由合成标准不确定度乘以包含概率约为95%时对应的包含因子k得到。  
The extended uncertainty given in this certificate is evaluated according to JJF1059.1-2012 “Evaluation and Expression of Uncertainty in Measurement”, and is calculated by multiplying the combined standard uncertainty by the coverage factor k which corresponding to the coverage probability about 95%.

# Calibration Certificate of Sound Calibrator



证书编号(Certificate No.): 2HB24001410-0003

1 外观与工作正常性检查 (Appearance and Function Check)  
无影响证书中测量结果准确度的因素和缺陷。  
There are no factor and defect that affect the measurement result accuracy of the certificate.

2 声压级 (Sound Pressure Level)

规定声压级 (Prescribed SPL)	测量声压级 (Measured SPL)	声压级差的绝对值 (Absolute value of SPL)	接受限 (Limit)	结论 (Pass/Fail)	$U$ (k=2)
(dB)	(dB)	(dB)	(dB)		(dB)
94	94.06	0.06	≤0.25	P	0.10

3 频率 (Frequency)

规定频率 (Prescribed Fre.)	测量频率 (Measured Fre.)	频率误差的绝对值 (Absolute value of Fre.)	接受限 (Limit)	结论 (Pass/Fail)	$U_{rel}$ (k=2)
(Hz)	(Hz)	(%)	(%)		(%)
1000	1002.1	0.21	≤0.70	P	0.10

4 总失真+噪声 (Distortion and noise)

规定声压级 (Prescribed SPL)	规定频率 (Measured Fre.)	总失真+噪声 (Distortion and noise)	接受限 (Limit)	结论 (Pass/Fail)	$U_{rel}$ (k=2)
(dB)	(Hz)	(%)	(%)		(%)
94	1000	0.68	≤2.50	P	5.0

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数据页(Data sheet) ID: 013393

AAST-SLC-07  
Cal Date: 20 Sep 24



中国赛宝实验室计量检测中心  
(工业和信息化部电子第五研究所计量检测中心)  
CHINA CEPREI LABORATORY CALIBRATION & TESTING CENTRE

## 校准证书 CALIBRATION CERTIFICATE

证书编号: 2HB24001796-0002  
Certificate No.




委托单位: Client	Castco Testing Centre Limited
仪器名称: Description	Sound Level Calibrator
型号规格: Model/Type	NC-75
制造商: Manufacturer	Rion
机身号: Serial No.	34280310
管理号: Asset No.	AAST-SLC-07
接收日期: Rec. Date	2024-09-03
校准日期: Cal. Date	2024-09-20
签发日期: App. Date	2024-09-20
建议校准周期: Reference Cal. Period	12个月(12 months)

结论: 所校准项目符合技术要求(The calibrated items meet the technical requirements)

校准:  
Calibrated by

签发:  
Approved by

赵文钰

郑木力

赵文钰

郑木力

核验:  
Inspected by

印章:  
Stamp

张毅





扫一扫查真伪

赛宝计量检测中心  
总部地址: 广州番禺区东村南村大道西78号  
实验基地: 广州市番禺区东村南村大道西78号  
客服电话: 020-87237633 传真: 020-87236189  
投诉电话: 020-87236896  
邮件: ca@ceprei.com  
网址: www.ceprei-cal.com

CEPREI Calibration and Testing Centre  
HQ Add: No.78,Zhucau Avenue West,Zengcheng District,Guangzhou,China  
Add of the Lab: No.78 Zhucau Avenue West,Zengcheng District,Guangzhou,China  
Service Tel: 020-87237633 Fax: 020-87236189  
Complain Tel: 020-87236896  
Email: cal@ceprei.com  
Website: www.ceprei-cal.com

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# Calibration Certificate of Sound Calibrator

证书编号(Certificate No.): 2023001706-0002

## 说明 DIRECTIONS

1. 本机构是国家市场监督管理总局授权建立的法定计量检定机构：“国家环境综合试验设备计量站”，国家国防科工局授权建立的“国防科技工业4412二级计量站”，本机构质量管理体系符合ISO/IEC 17025:2017标准的要求。

This laboratory is the legal metrological institute authorized by the State Administration for Market Regulation. It is the "Nation Metrology Station of Combined Environmental Testing Equipment". It is the "No. 4412 Class 2 Metrology Station of Science, Technology and Industry for National Defense" authorized by the State Administration of Science, Technology and Industry for National Defense. The quality management system of this laboratory is in accordance with the ISO/IEC 17025:2017.

2. 本证书中的数据可溯源到国际单位制(SI)单位和/或社会公用计量标准。

The data of the certificate is traceable to the International system of Units (SI) and/or the public metrological standards.

3. 本次校准的技术依据及CNAS认可范围(Reference documents and CNAS accredited scopes):

\* JJG 176-2022 声校准器检定规程; Sound Pressure Level: 94dB, 104dB, 114dB, 124dB, (63Hz~16kHz); Frequency: 31.5Hz~16kHz; Distortion: 0.01%~30%

• 详细信息请查看CNAS网站中注册编号为L13344的证书附件。超出范围内容未被认可。其结果/结论所依据的合格评定活动不在认可范围内。(Please see the attachments of certificate No. L13344 at CNAS website for details, beyond which is not accredited, the conformity assessment activities on which the result/conclusions are based are outside the scope of accreditation.)

4. 本次校准所使用的主要测量标准及溯源性声明(The main measurement standards used during the calibration and traceability declaration):

名称 (Description)	证书号/有效期/溯源单位 (Certificate No./Valid Date/Traceability to)	技术指标 (Specification)	测量范围 (Measuring Range)
数字多用表(MY4505167-4)	GFJGJL1004240400234/2025-03-11(航天514所)	直流电压: $\pm 1 \times 10^4$ 直流电流: $\pm 1 \times 10^3$ 交流电压: $\pm 0.1\%$ 交流电流: $4 \times 0.1\%$ 电阻: $\pm 1 \times 10^4$	直流电压: $\pm 10mV \sim 4$ 1000V; 直流电流: $\pm 10$ $\mu A \sim 1A$ ; 交流电压: (10mV~200V) @ (1 Hz~1MHz); 交流电 流: (3mA~1A) @ (1 0Hz~10kHz); 电阻 电阻: 10 $\Omega$ ~10M $\Omega$ 10Hz~25kHz
实验室标准传声器(2246-093)	LSax2024-04498/2025-04-18/中国计量院	LS版	
前置放大器(2239843-6)	LSax2024-04011/2025-04-20/中国计量院	频率响应 $\pm 0.1dB$	(10~50000) Hz
Pulse分析仪(3160-10018-6)	4GC24000729-0003/2025-07-29/肇庆(广州)	频率: $\pm 0.001\%$ 电压: $\pm 2$ ( $1e-0.10\%$ ) $\pm 2$	频率: 0.001Hz~51.3kHz 电压: $1 \times 10^{-3} \sim 300V$

计量溯源性声明(Metrological Traceability Declaration):

被校准器具 Instrument	设备名称 Standard Name	外部机构/溯源证书编号 Institute/Certificate No.
Sound Level Calibrator	数字多用表	航天514所/GFJGJL1004240400234
	实验室标准传声器	中国计量院/LSax2024-04498
	前置放大器	中国计量院/LSax2024-04011
	Pulse分析仪	广东计量院/SXE202301878

5. 校准地点(The calibration place):

广州市增城区东村街东村大道西78号9栋110室

6. 环境条件(Environmental conditions):

温度(Temperature): 23.7°C 相对湿度(Relative Humidity): 63% 其它(Other): /

7. 本证书中给出的扩展不确定度依据JJF1059.1-2012《测量不确定度评定与表示》评定,由合成标准不确定度乘以包含概率约为95%时对应的包含因子k得到。

The extended uncertainty given in this certificate is evaluated according to JJF1059.1-2012 "Evaluation and Expression of Uncertainty in Measurement", and is calculated by multiplying the combined standard uncertainty by the coverage factor k which corresponding to the coverage probability about 95%.

8. 证书中“P”、“合格”代表“测量结果在允许范围内”,“F”、“不合格”代表“测量结果不在允许范围内”,“N/A”代表“不适用或技术指标暂时无法确认等”。本证书报告的结论仅供参考,使用人员应结合实际测量的要求合理使用,如考虑测量结果测量不确定度的影响等。

"P" and "Pass" in this certificate stand for "Low Limit<the measured value <High Limit", "F" and "Fail" stand for "the measured value >Low Limit or the measured value >High Limit", "N/A" stands for "Not Applicable or The technical specification has not been confirmed etc". The conclusions of this certificate are for reference only. Users should use them reasonably according to the actual measurement requirements, such as considering the impact of measurement uncertainty, etc.

9. 建议校准周期是本实验室依据本证书报告的技术依据和仪器设备常规使用条件给出的建议,供委托方参考。委托方可以根据实际使用情况自行决定样品的校准周期。

The reference calibration period is based on the reference documents and normal operating conditions of the calibrated instrument. It is only for reference. The client may decide the calibration period of the instrument according to the actual use.

注:1.本证书未经本机构书面授权,不得部分复制。(The certificate shall not be partly reproduced without written approval of the laboratory.)

2.本次校准结果仅与被校物有关。(The results are only related to the items calibrated.)

3.“委托方”、“委托方联络信息”由委托方提供,“制造商”、“型号规格”、“出厂编号”以及“设备编号”为仪器上标注,委托方对上述内容如有异议,须在收到证书后二十个工作日内提出。

The information Client and Contact Information are provided by client, and the Manufacturer, Model/Type, Serial No. and Equipment No. are marked on the items. Client shall submit any objection within 20 working days after receiving the certificate for the information above.



## Calibration Certificate of Sound Calibrator



证书编号(Certificate No.): ZHB24001796-0002

### 1 外观与工作正常性检查 (Appearance and Function Check)

无影响证书中测量结果准确度的因素和缺陷。

There are no factor and defect that affect the measurement result accuracy of the certificate.

### 2 声压级 (Sound Pressure Level)

规定声压级 (Prescribed SPL) (dB)	测量声压级 (Measured SPL) (dB)	声压级差的绝对值 (Absolute value of SPL) (dB)	接受限 (Limit) (dB)	结论 (Pass/Fail)	U (k=2) (dB)
94	94.07	0.07	≤0.25	P	0.10

### 3 频率 (Frequency)

规定频率 (Prescribed Fre.) (Hz)	测量频率 (Measured Fre.) (Hz)	频率误差的绝对值 (Absolute value of Fre.) (%)	接受限 (Limit) (%)	结论 (Pass/Fail)	U <sub>rel</sub> (k=2) (%)
1000	1000.0	0.00	≤0.70	P	0.10

### 4 总失真+噪声 (Distortion and noise)

规定声压级 (Prescribed SPL) (dB)	规定频率 (Measured Fre.) (Hz)	总失真+噪声 (Distortion and noise) (%)	接受限 (Limit) (%)	结论 (Pass/Fail)	U <sub>rel</sub> (k=2) (%)
94	1000	0.68	≤2.50	P	5.0

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# Catalogue of Air Flow Meter (TSI TA440)

## SPECIFICATIONS

### THERMAL ANEMOMETERS MODELS TA410, TA430 AND TA440

#### Velocity

Range (TA410) 0 to 20 m/s (0 to 4,000 ft/min)  
 Range (TA430, TA440) 0 to 30 m/s (0 to 6,000 ft/min)  
 Accuracy (TA410)<sup>1,2</sup> ±5% of reading or ±0.025 m/s (±5 ft/min), whichever is greater  
 Accuracy (TA430, TA440)<sup>1,2</sup> ±3% of reading or ±0.015 m/s (±3 ft/min), whichever is greater  
 Resolution 0.01 m/s (1 ft/min)

#### Duct Size (TA430, TA440)

Dimensions 1 to 635 cm in increments of 0.1 cm (1 to 250 inches in increments of 0.1 in.)

#### Volumetric Flow Rate (TA430, TA440)

Range Actual range is a function of velocity, and duct size

#### Temperature

Range (TA410, TA430) -18 to 93°C (0 to 200°F)  
 Range (TA440) -10 to 60°C (14 to 140°F)  
 Accuracy<sup>3</sup> ±0.3°C (±0.5°F)  
 Resolution 0.1°C (0.1°F)

#### Relative Humidity (TA440 only)

Range 5 to 95% RH  
 Accuracy<sup>4</sup> ±3% RH  
 Resolution 0.1% RH

#### Wet Bulb Temperature (TA440 only)

Range 5 to 60°C (40 to 140°F)  
 Resolution 0.1°C (0.1°F)

#### Dew Point (TA440 only)

Range -15 to 49°C (5 to 120°F)  
 Resolution 0.1°C (0.1°F)

#### Instrument Temperature Range

Operating (Electronics) 5 to 45°C (40 to 113°F)  
 Model TA410, TA430 Operating (Probe) -18 to 93°C (0 to 200°F)  
 Model TA440 Operating (Probe) -10 to 60°C (14 to 140°F)  
 Storage -20 to 60°C (-4 to 140°F)

#### Data Storage Capabilities (TA430, TA440)

Range 12,700+ samples and 100 test IDs

#### Logging Interval (TA430, TA440)

1 second to 1 hour

Specifications subject to change without notice.

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Airflow Instruments, TSI Instruments Ltd.  
 Visit our website at [www.airflowinstruments.co.uk](http://www.airflowinstruments.co.uk) for more information.

UK Tel: +44 149 4 452020 Germany Tel: +49 241 523030  
 France Tel: +33 491 11 87 64

P/N 298054B Rev D (A4) ©2014 TSI Incorporated

#### Time Constant (TA430, TA440)

User selectable

#### External Meter Dimensions

8.4 cm x 17.8 cm x 4.4 cm (3.3 in. x 7.0 in. x 1.8 in.)

#### Meter Weight with Batteries

0.27 kg (0.6 lbs.)

#### Meter Probe Dimensions

Probe Length 101.6 cm (40 in.)  
 Probe Diameter of Tip 7.0 mm (0.28 in.)  
 Probe Diameter of Base 13.0 mm (0.51 in.)

#### Articulating Probe Dimensions

Articulating Section 19.7 cm (7.8 in.)  
 Length  
 Diameter of Articulating Knuckle 9.5 mm (0.38 in.)

#### Power Requirements

Four AA-size batteries or AC adapter

	TA410	TA430, TA430-A	TA440, TA440-A
Velocity range 0 to 20.00 m/s (0 to 4000 ft/min)	+		
Velocity range 0 to 30.00 m/s (0 to 6000 ft/min)		+	+
Temperature	+	+	+
Flow		+	+
Humidity, wet bulb, dew point			+
Probe	Straight	Straight or Articulated	Straight or Articulated
Variable time constant		+	+
Manual data logging		+	+
Auto save data logging			+
Statistics		+	+
Review data		+	+
LogDat2 downloading software		+	+
Free Certificate of Calibration	+	+	+

<sup>1</sup> Temperature compensated over an air temperature range of 5 to 65°C (40 to 150°F).  
<sup>2</sup> The accuracy statement begins at 30 ft/min through 4000 ft/min (0.15 m/s through 20 m/s) for the Model TA410, and 30 ft/min through 6,000 ft/min (0.15 m/s through 30 m/s) for Models TA430 and TA440.  
<sup>3</sup> Accuracy with instrument case at 25°C (77°F), add uncertainty of 0.03°C (0.05°F) for change in instrument temperature.  
<sup>4</sup> Accuracy with probe at 25°C (77°F). Add uncertainty of 0.2% RH/°C (0.1% RH/°F) for change in probe temperature. Includes 1% hysteresis.

# Calibration Certificate of Air Flow Meter



Cal Lab Limited 校正實驗室有限公司

Room 2103, Technology Plaza, 29-35 Sha Tsui Road,  
 Tsuen Wan, NT, Hong Kong  
 Tel: +852 25680106 Email: info@callab.com.hk  
 Fax: +852 30116194 Website: www.callab.com.hk



Calibration Certificate No.: CC0262412

Information provided by customer

Customer: Castco Testing Centre Limited  
 Address: 1/F, Sun Ling Plaza, On Lok Tsuen, 30 On Kui Street, Fanling, Hong Kong

Equipment Identification provided by customer

Equipment Description	Manufacturer	Model No.	Serial No.	Assigned equipment No.
Air Velocity Monitor	TSI	AIRFLOW TA440	TA4401232005 /	AAST-FLOW-02 /

Certificate Information

Date of Receipt:	11 December 2024	Calibration Condition:	23.9°C, 52%RH, 1011hPa
Date of Calibration:	17 December 2024	Adjustment:	N/A
Recommended Next Cal. Date:	N/A	Appearance:	Good
Calibration Procedure:	SOP-112	Remark:	N/A

Reference Equipment Identification

Equipment Description	Model	Serial No.	Expiration Date
Hot Wire Anemometer	405-V1	41576231	17 July 2026

Result of Calibration

Reference Reading (m/s)	Measured Reading (m/s)	Error (m/s)	Uncertainty (%)	Technical Requirement	Technical Reference Doc.
0.99	1.02	0.03	3.6	± 5 %	Mfr's Spec.
2.01	2.04	0.03	3.6	± 5 %	Mfr's Spec.
5.03	5.07	0.04	3.6	± 5 %	Mfr's Spec.
7.99	8.03	0.04	3.6	± 5 %	Mfr's Spec.

CT-AFR-01

Note 1: The estimated expanded uncertainties have been calculated in "Evaluation and expression of uncertainty in measurement" and give an internal estimated to have a level of confidence of 95%. A coverage factor of 2 is assumed unless explicitly stated.  
 Note 2: The standard (s) and instrument used in the calibration are traceable to national or international recognized standard and are calibrated on a schedule to maintain the accuracy and good condition.  
 Note 3: The result 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.  
 Note 4: The result shown in this calibration certificate relate only to the item calibrated, and the result only applies to the calibration item as received.  
 Note 5: Calibration item/ parameter marked with \* is out of scope of Cal Lab Limited (A2LA 3815.01).

Calibrated By:

Wing Cheng

Checked and Approved By:

Warren Yeung

Company Chop:



Certificate Issue Date: 20 December 2024

CT-REG-04

\*\*\* End of Certificate \*\*\*

1. The certificate shall not be reproduced except in full, without written approval of Cal Lab Limited  
 2. The certificate is issued subject to the latest Terms and Conditions, available at our website

CC0262412

Page 1 of 1

**Appendix L – Noise monitoring results and graphical presentation**

### M11 - The Hong Kong Society for the Blind's Factory cum Sheltered Workshop

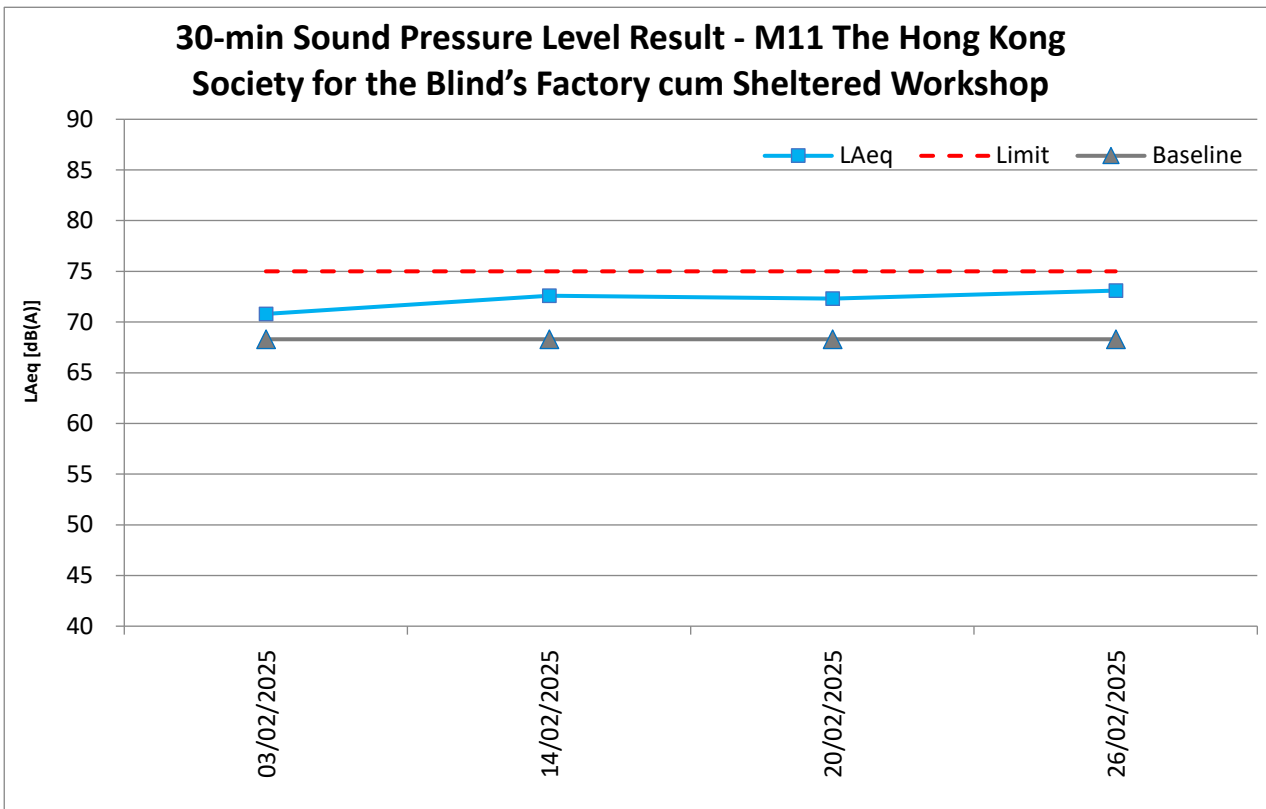
Date	Temp (°C)	Weather	Measured Noise Level at M11, dB(A)						Limit	
			Time		Baseline	L <sub>Aeq</sub>	L <sub>A10</sub>	L <sub>A90</sub>		
03/02/2025	17.8	Sunny	10:14	-	10:44	68.3	70.8	73.1	63.8	75
14/02/2025	16.3	Cloudy	14:26	-	14:56	68.3	72.6	75.4	66.3	75
20/02/2025	18.6	Sunny	10:08	-	10:38	68.3	72.3	76.5	67.0	75
26/02/2025	18.3	Cloudy	14:17	-	14:47	68.3	73.1	76.4	68.6	75
Maximum							73.1			
Minimum							70.8			
Average							72.3			

NOTE: Due to the relocation of The Hong Kong Society for the Blind's Factory cum Sheltered Workshop (M11), the premises owner rejected ET to conduct impact monitoring since 1 Sept 2022. 30-min noise monitoring at M11 were conducted on the ground floor with orienting to the Project site. ET will resume the impact monitoring once the alternative monitoring location for M11 is confirmed.

### M12 - Hong Kong Children's Hospital

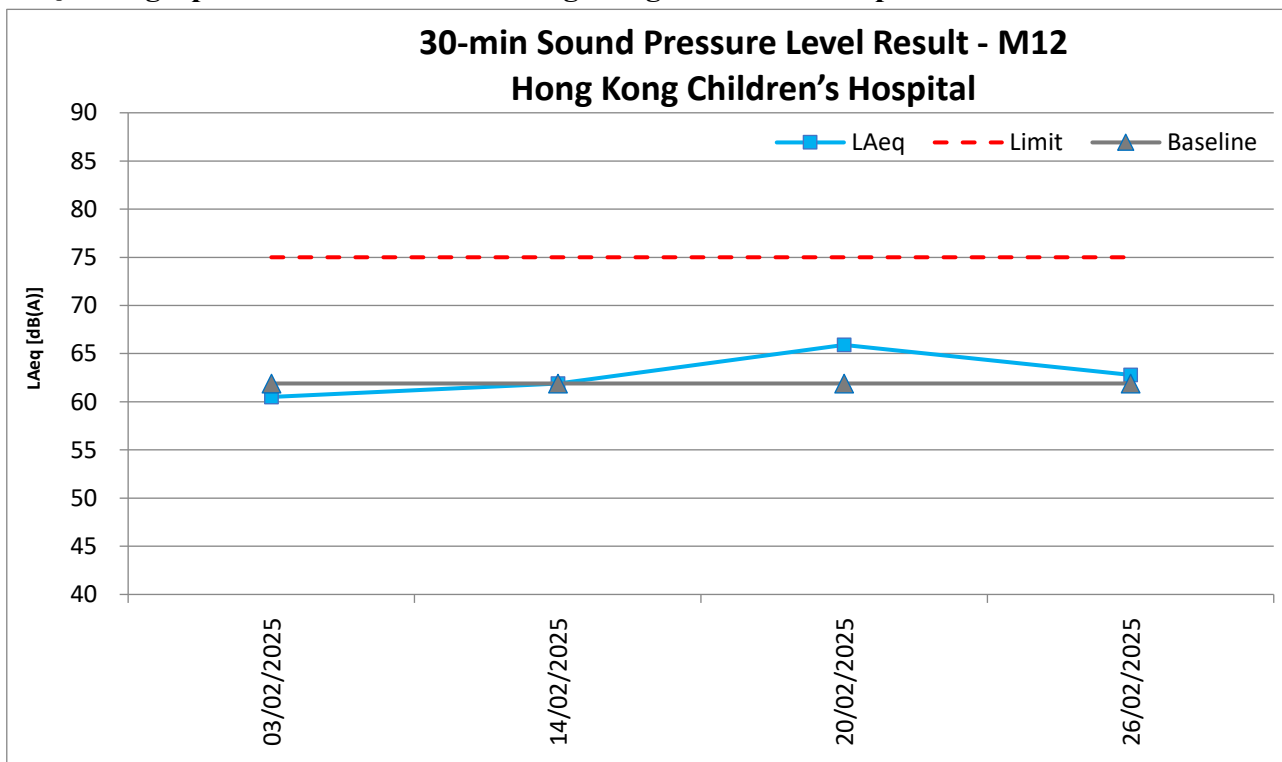
Date	Temp (°C)	Weather	Measured Noise Level at M12, dB(A)						Limit	
			Time		Baseline	L <sub>Aeq</sub>	L <sub>A10</sub>	L <sub>A90</sub>		
03/02/2025	17.8	Sunny	14:02	-	14:32	61.9	60.5	63.7	57.4	75
14/02/2025	16.3	Cloudy	10:17	-	10:47	61.9	61.9	64.2	58.8	75
20/02/2025	18.6	Sunny	13:58	-	14:28	61.9	65.9	68.0	59.8	75
26/02/2025	18.3	Cloudy	10:13	-	10:43	61.9	62.8	64.9	59.7	75
Maximum							65.9			
Minimum							60.5			
Average							63.3			

**L<sub>Aeq</sub>, 30-min graphical results of M11 - The Hong Kong Society for the Blind's Factory cum Sheltered Workshop**



NOTE: Due to the relocation of The Hong Kong Society for the Blind's Factory cum Sheltered Workshop (M11), the premises owner rejected ET to conduct impact monitoring since 1 Sept 2022. 30-min noise monitoring at M11 were conducted on the ground floor with orienting to the Project site. ET will resume the impact monitoring once the alternative monitoring location for M11 is confirmed.

**L<sub>Aeq</sub>, 30-min graphical results of M12 - Hong Kong Children's Hospital**



**Appendix M – Event and Action Plan for noise**

Event	Action			
	ET	IEC	Supervisor / ER	Contractor
Action Level being exceeded	<ol style="list-style-type: none"> <li>1. Notify Supervisor / ER, IEC and Contractor;</li> <li>2. Carry out investigation;</li> <li>3. Report the results of investigation to the IEC, Supervisor / ER and Contractor;</li> <li>4. Discuss with the IEC and Contractor on remedial measures required;</li> <li>5. Increase monitoring frequency to check mitigation effectiveness.</li> </ol> <p>(The above actions should be taken within 2 working days after the exceedance is identified.)</p>	<ol style="list-style-type: none"> <li>1. Review the investigation results submitted by the ET;</li> <li>2. Review the proposed remedial measures submitted by the Contractor and advise the ER accordingly;</li> <li>3. Advise the Supervisor / ER on the proposed remedial measures.</li> </ol> <p>(The above actions should be taken within 2 working days after the exceedance is identified.)</p>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of failure in writing;</li> <li>2. Notify Contractor;</li> <li>3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented;</li> <li>4. Supervise the implementation of remedial measures.</li> </ol> <p>(The above actions should be taken within 2 working days after the exceedance is identified.)</p>	<ol style="list-style-type: none"> <li>1. Submit noise mitigation proposal to IEC and Supervisor / ER;</li> <li>2. Implement noise mitigation proposals.</li> </ol> <p>(The above actions should be taken within 2 working days after the exceedance is identified.)</p>
Limit Level being exceeded	<ol style="list-style-type: none"> <li>1. Inform IEC, Supervisor /ER, Contractor and EPD;</li> <li>2. Repeat measurement to confirm findings;</li> <li>3. Increase monitoring frequency;</li> <li>4. Identify source and investigate the cause of exceedance;</li> <li>5. Carry out analysis of Contract's working procedure;</li> <li>6. Discuss remedial measures required with the IEC, Contractor and Supervisor /ER;</li> <li>7. Assess effectiveness of</li> </ol>	<ol style="list-style-type: none"> <li>1. Discuss the potential remedial actions with Supervisor /ER, ET and Contractor;</li> <li>2. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the Supervisor /ER accordingly.</li> </ol> <p>(The above actions should be taken within 2 working days after the exceedance is identified.)</p>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of failure in writing;</li> <li>2. Notify Contractor;</li> <li>3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented;</li> <li>4. Supervise the implementation of remedial measures;</li> <li>5. If exceedance continues, consider stopping the Contractor to continue working on that portion of work which causes the</li> </ol>	<ol style="list-style-type: none"> <li>1. Take immediate action to avoid further exceedance;</li> <li>2. Submit proposals for remedial actions to IEC and Supervisor /ER within 3 working days of notification;</li> <li>3. Implement the agreed proposal;</li> <li>4. Submit further proposal if problem still not under control;</li> <li>5. Stop the relevant portion of works as instructed by the Supervisor /ER until the exceedance is abated.</li> </ol> <p>(The above actions should be</p>

Event	Action			
	ET	IEC	Supervisor / ER	Contractor
	<p>Contractor's remedial actions and keep IEC, EPD, and Supervisor /ER informed of the results;</p> <p>8. If exceedance stops, cease additional monitoring. (The above actions should be taken within 2 working days after the exceedance is identified.)</p>		<p>exceedance until the exceedance is abated. (The above actions should be taken within 2 working days after the exceedance is identified.)</p>	<p>taken within 2 working days after the exceedance is identified.)</p>

**Appendix N – Event and Action Plan for Landscape and Visual Impact**

Event	Action			
	ET	IEC	Supervisor / ER	Contractor
Design Check	<ol style="list-style-type: none"> <li>1. Check final design conforms to the requirements of EP and prepare report.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check report.</li> <li>2. Recommend remedial design if necessary.</li> </ol>	<ol style="list-style-type: none"> <li>1. Undertake remedial design if necessary.</li> </ol>	
Non-conformity on one occasion	<ol style="list-style-type: none"> <li>1. Identify Source.</li> <li>2. Inform IEC and Supervisor /ER.</li> <li>3. Discuss remedial actions with IEC, Supervisor /ER and Contractor.</li> <li>4. Monitor remedial actions until rectification has been completed.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check report.</li> <li>2. Check Contractor's working method.</li> <li>3. Discuss with ET and Contractor on possible remedial measures.</li> <li>4. Advise Supervisor /ER on effectiveness of proposed remedial measures.</li> <li>5. Check implementation of remedial measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Notify Contractor.</li> <li>2. Ensure remedial measures are properly implemented.</li> </ol>	<ol style="list-style-type: none"> <li>1. Amend working methods.</li> <li>2. Rectify damage and undertake any necessary replacement.</li> </ol>
Repeated Non-conformity	<ol style="list-style-type: none"> <li>1. Identify Source.</li> <li>2. Inform IEC and Supervisor /ER.</li> <li>3. Increase monitoring frequency.</li> <li>4. Discuss remedial actions with IEC, Supervisor /ER and Contractor.</li> <li>5. Monitor remedial actions until rectification has been completed.</li> <li>6. If non-conformity stops, cease additional monitoring.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring report.</li> <li>2. Check Contractor's working method.</li> <li>3. Discuss with ET and Contractor on possible remedial measures.</li> <li>4. Advise Supervisor /ER on effectiveness of proposed remedial measures.</li> <li>5. Supervise implementation of remedial measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Notify Contractor.</li> <li>2. Ensure remedial measures are properly implemented.</li> </ol>	<ol style="list-style-type: none"> <li>1. Amend working methods.</li> <li>2. Rectify damage and undertake any necessary replacement.</li> </ol>

**Appendix O – Waste Flow Table**

## Monthly Summary Waste Flow Table for February 2025

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper / cardboard packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. general refuse
	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m <sup>3</sup> )
Jan	0.417	0.145	--	--	0.284	0.212	--	--	--	--	0.278
Feb	0.259	0.0321	--	--	0.259	0	--	--	--	--	0.261
Mar											
Apr											
May											
Jun											
Sub-total	0.676	0.1771	--	--	0.543	0.212	--	--	--	--	0.539
July											
Aug											
Sep											
Oct											
Nov											
Dec											
Total	0.676	0.1771	0	0	0.543	0.212	0	0	0	0	0.539
Forecast of Total Quantities of C&D Materials to be Generated from the Contract*											
Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper / cardboard packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. general refuse	
(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m <sup>3</sup> )	
309.000	9.918	18.000	40.938	309.000	63.000	112.000	2.000	4.000	0.800	10.600	

- Notes:
- (1) The performance targets are given in **ER Appendix 8I Clause 14** and the EM&A Manual
  - (2) The waste flow table shall also include C&D materials to be imported for use at the Site
  - (3) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material and water barrier
  - (4) The Contractor shall also submit the latest forecast of the total amount of C&D materials expected to be generated from the works, together with a breakdown of the nature where the total amount of C&D materials expected to be generated from the Works is equal to or exceeding 50,000m<sup>3</sup> (**ER Part 8 Clause 8.7.5(d)(ii)** refers)
  - (5) Assume inert C&D materials density and non-inert C&D materials are 1.9 ton/m<sup>3</sup> and 1.5 ton/m<sup>3</sup>

**Appendix P – Environmental Mitigation Implementation Schedule  
(EMIS)**

<b>Implementation Schedule for Air Quality Measures</b>			
<b>EIA for KTD Development Ref.</b>	<b>EIA for KTD – Roads D3A &amp; D4A Ref.</b>	<b>Environmental Protection Measures / Mitigation Measures</b>	<b>Status</b>
S3.2		8 times daily watering of the work site with active dust emitting activities.	^
S3.2	S4.8	Implementation of dust suppression measures stipulated in Air Pollution Control (Construction Dust) Regulation. The following mitigation measures, good site practices and a comprehensive dust monitoring and audit programme are recommended to minimize cumulative dust impacts.	^
		- Stockpiling site(s) should be lined with impermeable sheeting and bunded. Stockpiles should be fully covered by impermeable sheeting to reduce dust emission.	^
		- Misting for the dusty material should be carried out before being loaded into the vehicle.	^
		- Any vehicle with an open load carrying area should have properly fitted side and tail boards.	^
		- Material having the potential to create dust should not be loaded from a level higher than the side and tail boards and should be dampened and covered by a clean tarpaulin.	^
		- The tarpaulin should be properly secured and should extent at least 300 mm over the edges of the sides and tailboards. The material should also be dampened if necessary, before transportation.	^
		- The vehicles should be restricted to maximum speed of 10 km per hour and confined haulage and delivery vehicle to designated roadways insider the site. On- site unpaved roads should be compacted and kept free of lose materials.	^
		- Vehicle washing facilities should be provided at every vehicle exit point.	^
		- The area where vehicle washing takes place and the section of the road between the washing facilities and the exit point should be paved with concrete, bituminous materials or hardcores.	^
		- Every main haul road should be scaled with concrete and kept clear of dusty materials or sprayed with water so as to maintain the entire road surface wet.	^*
		- Every stock of more than 20 bags of cement should be covered entirely by impervious sheeting placed in an area sheltered on the top and the three sides.	^
		- Every vehicle should be washed to remove any dusty materials from its body and wheels before leaving the construction sites.	^

<b>Implementation Schedule for Noise Measures</b>			
<b>EIA for KTD Development Ref.</b>	<b>EIA for KTD – Roads D3A &amp; D4A Ref.</b>	<b>Environmental Protection Measures / Mitigation Measures</b>	<b>Status</b>
S3.3		Use of quiet PME, movable barriers for Asphalt Paver, Breaker, Excavator and Hand-held breaker and full enclosure for Air Compressor, Bar Bender, Concrete Pump, Generator and Water Pump.	^
S3.3		Good Site Practice:	
S3.3		- Only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction program.	^*
		- Silencers or mufflers on construction equipment should be utilized and should be properly maintained during the construction program.	^
		- Mobile plant, if any, should be sited as far away from NSRs as possible.	^
		- Machines and plant (such as trucks) that may be in intermittent use should be shut down between works periods or should be throttled down to a minimum.	^
		- Plant known to emit noise strongly in one direction should, wherever possible, be orientated so that the noise is directed away from the nearby NSRs.	^
		- Material stockpiles and other structures should be effectively utilized, wherever practicable, in screening noise from on-site construction activities.	^
		- Scheduling of Construction Works during School Examination Period	N/A

<b>Implementation Schedule for Water Quality Measures</b>			
<b>EIA for KTD Development Ref.</b>	<b>EIA for KTD – Roads D3A &amp; D4A Ref.</b>	<b>Environmental Protection Measures / Mitigation Measures</b>	<b>Status</b>
S3.4		<u>Construction Runoff</u> Exposed soil areas should be minimised to reduce the potential for increased siltation, contamination of runoff, and erosion. Construction runoff related impacts associated with the above ground construction activities can be readily controlled through the use of appropriate mitigation measures which include:	^*
S3.4		- use of sediment traps.	^
S3.4		- adequate maintenance of drainage systems to prevent flooding and overflow.	^

<b>Implementation Schedule for Water Quality Measures</b>			
<b>EIA for KTD Development Ref.</b>	<b>EIA for KTD – Roads D3A &amp; D4A Ref.</b>	<b>Environmental Protection Measures / Mitigation Measures</b>	<b>Status</b>
	S5.8	- Surface run-off from construction sites should be discharged into storm drains via adequately designed sand/silt removal facilities such as sand traps, silt traps and sedimentation basins.	^
	S5.8	- Channels or earth bunds or sand bag barriers should be provided on site to properly direct stormwater to such silt removal facilities. Perimeter channels should be provided on site boundaries where necessary to intercept storm run-off from outside the site so that it will not wash across the site. Catchpits and perimeter channels should be constructed in advance of site formation works and earthworks.	^
	S5.8	- Silt removal facilities, channels and manholes should be maintained and the deposited silt and grit should be removed regularly, at the onset of and after each rainstorm to prevent local flooding. Any practical options for the diversion and re-alignment of drainage should comply with both engineering and environmental requirements in order to provide adequate hydraulic capacity of all drains. Minimum distance of 100 m should be maintained between the discharge points of construction site run-off and the existing saltwater intakes.	^
	S5.8	- Earthworks final surfaces should be well compacted and the subsequent permanent work or surface protection should be carried out immediately after the final surfaces are formed to prevent erosion caused by rainstorms. Appropriate drainage like intercepting channels should be provided where necessary.	^
	S5.8	- Measures should be taken to minimize the ingress of rainwater into trenches. If excavation of trenches in wet seasons is necessary, they should be dug and backfilled in short sections. Rainwater pumped out from trenches or foundation excavations should be discharged into storm drains via silt removal facilities.	^
	S5.8	- Open stockpiles of construction materials (e.g. aggregates, sand and fill material) on sites should be covered with tarpaulin or similar fabric during rainstorms.	^
	S5.8	- Manholes (including newly constructed ones) should always be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris from getting into the drainage system, and to prevent storm run-off from getting into foul sewers. Discharge of surface run-off into foul sewers must always be prevented in order not to unduly overload the foul	^

<b>Implementation Schedule for Water Quality Measures</b>			
<b>EIA for KTD Development Ref.</b>	<b>EIA for KTD – Roads D3A &amp; D4A Ref.</b>	<b>Environmental Protection Measures / Mitigation Measures</b>	<b>Status</b>
		sewerage system.	
	S5.8	- Good site practices should be adopted to remove rubbish and litter from construction sites so as to prevent the rubbish and litter from spreading from the site area. It is recommended to clean the construction sites on a regular basis.	^
S3.4		Construction site should be provided with adequately designed perimeter channel and pre-treatment facilities and proper maintenance. The boundaries of critical areas of earthworks should be marked and surrounded by dykes or embankments for flood protection. Temporary ditches should be provided to facilitate runoff discharge into the appropriate watercourses, via a silt retention pond. Permanent drainage channels should incorporate sediment basins or traps and baffles to enhance deposition rates. The design of efficient silt removal facilities should be based on the guidelines in Appendix A1 of ProPECC PN 1/94.	^
S3.4	S5.8	Ideally, construction works should be programmed to minimise surface excavation works during the rainy season (April to September). All exposed earth areas should be completed as soon as possible after earthworks have been completed, or alternatively, within 14 days of the cessation of earthworks where practicable.  If excavation of soil cannot be avoided during the rainy season, or at any time of year when rainstorms are likely, exposed slope surfaces should be covered by tarpaulin or other means.  If excavation in soil cannot be avoided in these months or at any time of year when rainstorms are likely, for the purpose of preventing soil erosion, temporary exposed slope surfaces should be covered e.g. by tarpaulin, and temporary access roads should be protected by crushed stone or gravel, as excavation proceeds. Intercepting channels should be provided (e.g. along the crest / edge of excavation) to prevent storm runoff from washing across exposed soil surfaces. Arrangements should always be in place in such a way that adequate surface protection measures can be safely carried out well before the arrival of a rainstorm.	^
S3.4		Sediment tanks of sufficient capacity, constructed from pre-formed individual cells of approximately 6 to 8 m <sup>3</sup> capacity, are recommended as a general mitigation measure which can be used for settling surface runoff prior to disposal. The system capacity is flexible and able to handle multiple inputs from a variety of sources	^

<b>Implementation Schedule for Water Quality Measures</b>			
<b>EIA for KTD Development Ref.</b>	<b>EIA for KTD – Roads D3A &amp; D4A Ref.</b>	<b>Environmental Protection Measures / Mitigation Measures</b>	<b>Status</b>
		and particularly suited to applications where the influent is pumped.	
S3.4		Open stockpiles of construction materials (for examples, aggregates, sand and fill material) of more than 50 m <sup>3</sup> should be covered with tarpaulin or similar fabric during rainstorms. Measures should be taken to prevent the washing away of construction materials, soil, silt or debris into any drainage system.	^
S3.4		Manholes (including newly constructed ones) should always be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris being washed into the drainage system and storm runoff being directed into foul sewers.	^
S3.4		Precautions to be taken at any time of year when rainstorms are likely, actions to be taken when a rainstorm is imminent or forecast, and actions to be taken during or after rainstorms are summarised in Appendix A2 of ProPECC PN 1/94. Particular attention should be paid to the control of silty surface runoff during storm events.	^
S3.4		Oil interceptors should be provided in the drainage system and regularly cleaned to prevent the release of oils and grease into the storm water drainage system after accidental spillages. The interceptor should have a bypass to prevent flushing during periods of heavy rain.	NA
S3.4	S5.8	<u>Wheel Washing Water</u> All vehicles and plant should be cleaned before leaving a construction site to ensure no earth, mud, debris and the like is deposited by them on roads. An adequately designed and located wheel washing bay should be provided at every site exit, and wash-water should have sand and silt settled out and removed at least on a weekly basis to ensure the continued efficiency of the process. The section of access road leading to, and exiting from, the wheel-wash bay to the public road should be paved with sufficient backfall toward the wheel-wash bay to prevent vehicle tracking of soil and silty water to public roads and drains.	^
S3.4		<u>Drainage</u> It is recommended that on-site drainage system should be installed prior to the commencement of other construction activities. Sediment traps should be installed in order to minimise the sediment loading of the effluent prior to discharge into foul sewers. There should be no direct discharge of effluent from the site into the sea.	^
S3.4		All temporary and permanent drainage pipes and culverts provided	^

<b>Implementation Schedule for Water Quality Measures</b>			
<b>EIA for KTD Development Ref.</b>	<b>EIA for KTD – Roads D3A &amp; D4A Ref.</b>	<b>Environmental Protection Measures / Mitigation Measures</b>	<b>Status</b>
		to facilitate runoff discharge should be adequately designed for the controlled release of storm flows. All sediment control measures should be regularly inspected and maintained to ensure proper and efficient operation at all times and particularly following rain storms. The temporarily diverted drainage should be reinstated to its original condition when the construction work has finished or the temporary diversion is no longer required.	
S3.4		All fuel tanks and storage areas should be provided with locks and be located on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank, to prevent spilled fuel oils from reaching the coastal waters of the Victoria Harbour WCZ.	^
S3.4	S5.8	<p><u>Sewage Effluent</u></p> <p>Construction work force sewage discharges on site are expected to be connected to the existing trunk sewer or sewage treatment facilities. The construction sewage may need to be handled by portable chemical toilets prior to the commission of the on-site sewer system. Appropriate numbers of portable toilets should be provided by a licensed contractor to serve the large number of construction workers over the construction site. The Contractor should also be responsible for waste disposal and maintenance practices.</p> <p>Notices should be posted at conspicuous locations to remind the workers not to discharge any sewage or wastewater into the surrounding environment. Regular environmental audit of the construction site will provide an effective control of any malpractices and can encourage continual improvement of environmental performance on site. It is anticipated that sewage generation during the construction phase of the project would not cause water pollution problem after undertaking all required measures.</p>	^
S3.4		<p><u>Stormwater Discharges</u></p> <p>Minimum distances of 100 m should be maintained between the existing or planned stormwater discharges and the existing or planned seawater intakes</p>	^
S3.4		<p><u>Debris and Litter</u></p> <p>In order to maintain water quality in acceptable conditions with regard to aesthetic quality, contractors should be required, under conditions of contract, to ensure that site management is optimised</p>	^

<b>Implementation Schedule for Water Quality Measures</b>			
<b>EIA for KTD Development Ref.</b>	<b>EIA for KTD – Roads D3A &amp; D4A Ref.</b>	<b>Environmental Protection Measures / Mitigation Measures</b>	<b>Status</b>
		and that disposal of any solid materials, litter or wastes to marine waters does not occur.	
	S5.8	<u>Boring and Drilling Water</u> Water used in ground boring and drilling for site investigation or rock / soil anchoring should as far as practicable be re-circulated after sedimentation. When there is a need for final disposal, the wastewater should be discharged into storm drains via silt removal facilities.	^
	S5.8	<u>Acid Cleaning, Etching and Pickling Wastewater</u> Acidic wastewater generated from acid cleaning, etching, pickling and similar activities should be neutralized to within the pH range of 6 to 10 before discharging into foul sewers.	NA
	S5.8	<u>Effluent Discharge</u> There is a need to apply to EPD for a discharge licence for discharge of effluent from the construction site under the WPCO. The discharge quality must meet the requirements specified in the discharge licence. All the runoff and wastewater generated from the works areas should be treated so that it satisfies all the standards listed in the TM-DSS. Minimum distance of 100 m should be maintained between the discharge points of construction site effluent and the existing seawater intakes and the planned WSR mentioned in S5.3.1 as appropriate. The beneficial uses of the treated effluent for other on-site activities such as dust suppression, wheel washing and general cleaning etc., can minimise water consumption and reduce the effluent discharge volume. If monitoring of the treated effluent quality from the works areas is required during the construction phase of the Project, the monitoring should be carried out in accordance with the relevant WPCO licence which is under the ambit of regional office (RO) of EPD.	^
	S5.8	<u>Accidental Spillage</u> Contractor must register as a chemical waste producer if chemical wastes would be produced from the construction activities. The Waste Disposal Ordinance (Cap 354) and its subsidiary regulations in particular the Waste Disposal (Chemical Waste) (General) Regulation, should be observed and complied with for control of chemical wastes. Any service shop and maintenance facilities should be located on	^

<b>Implementation Schedule for Water Quality Measures</b>			
<b>EIA for KTD Development Ref.</b>	<b>EIA for KTD – Roads D3A &amp; D4A Ref.</b>	<b>Environmental Protection Measures / Mitigation Measures</b>	<b>Status</b>
		hard standings within a bunded area, and sumps and oil interceptors should be provided. Maintenance of vehicles and equipment involving activities with potential for leakage and spillage should only be undertaken within the areas appropriately equipped to control these discharges.	
	S5.8	Disposal of chemical wastes should be carried out in compliance with the Waste Disposal Ordinance. The Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes published under the Waste Disposal Ordinance details the requirements to deal with chemical wastes. General requirements are given as follows: - Suitable containers should be used to hold the chemical wastes to avoid leakage or spillage during storage, handling and transport.	^
	S5.8	- Chemical waste containers should be suitably labelled, to notify and warn the personnel who are handling the wastes, to avoid accidents.	^
	S5.8	- Storage area should be selected at a safe location on site and adequate space should be allocated to the storage area.	^

<b>Implementation Schedule for Waste Management Measures</b>			
<b>EIA for KTD Development Ref.</b>	<b>EIA for KTD – Roads D3A &amp; D4A Ref.</b>	<b>Environmental Protection Measures / Mitigation Measures</b>	<b>Status</b>
S3.5		<u>Good Site Practices</u> It is not anticipated that adverse waste management related impacts would arise, provided that good site practices are adhered to. Recommendations for good site practices during construction activities include:	
S3.5		- Nomination of an approved person, such as a site manager, to be responsible for good site practices, arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site.	^
	S6.7	- Prepare a Waste Management Plan, which becomes a part of the Environmental Management Plan, in accordance with the requirements stipulated in ETWB TC(W) No. 19/2005, approved by the Engineer/Supervising Officer of the Project based on current practices on construction sites.	^
S3.5	S6.7	- Training of site personnel in proper waste management and chemical waste handling procedures.	^

<b>Implementation Schedule for Waste Management Measures</b>			
<b>EIA for KTD Development Ref.</b>	<b>EIA for KTD – Roads D3A &amp; D4A Ref.</b>	<b>Environmental Protection Measures / Mitigation Measures</b>	<b>Status</b>
S3.5	S6.7	- Provision of sufficient waste disposal points and regular collection for disposal.	^
S3.5	S6.7	- Appropriate measures to minimise windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers.	^
S3.5		- A recording system for the amount of wastes generated, recycled and disposed of (including the disposal sites).	^
	S6.7	- Regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors.	^
	S6.7	- Training should be provided to workers about the concepts of site cleanliness and appropriate waste management procedures, including waste reduction, reuse and recycle.	^
S3.5		<u>Waste Reduction Measures</u> Good management and control can prevent the generation of a significant amount of waste. Waste reduction is best achieved at the planning and design stage, as well as by ensuring the implementation of good site practices. Recommendations to achieve waste reduction include:	
S3.5	S6.7	- Sort C&D waste from demolition of the remaining structures to recover recyclable portions such as metals.	NA
S3.5	S6.7	- Segregation and storage of different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal.	^
S3.5	S6.7	- Encourage collection of aluminium cans, PET bottles and paper by providing separate labelled bins to enable these wastes to be segregated from other general refuse generated by the work force.	^
S3.5		- Any unused chemicals or those with remaining functional capacity should be recycled.	^
S3.5	S6.7	- Proper storage and site practices to minimise the potential for damage or contamination of construction materials.	^
S3.5		<u>Construction and Demolition Materials</u> Mitigation measures and good site practices should be incorporated in the contract document to control potential environmental impact from handling and transportation of C&D material. The mitigation measures include:	
S3.5		- Where it is unavoidable to have transient stockpiles of C&D material within the Project work site pending collection for	^

<b>Implementation Schedule for Waste Management Measures</b>			
<b>EIA for KTD Development Ref.</b>	<b>EIA for KTD – Roads D3A &amp; D4A Ref.</b>	<b>Environmental Protection Measures / Mitigation Measures</b>	<b>Status</b>
		disposal, the transient stockpiles shall be located away from waterfront or storm drains as far as possible.	
S3.5		- Open stockpiles of construction materials or construction wastes on-site should be covered with tarpaulin or similar fabric.	^
S3.5		- Skip hoist for material transport should be totally enclosed by impervious sheeting.	^
S3.5		- Every vehicle should be washed to remove any dusty materials from its body and wheels before leaving a construction site.	^
S3.5		- The area where vehicle washing takes place and the section of the road between the washing facilities and the exit point should be paved with concrete, bituminous materials or hardcores.	^
S3.5		- The load of dusty materials carried by vehicle leaving a construction site should be covered entirely by clean impervious sheeting to ensure dust materials do not leak from the vehicle.	^
S3.5		- All dusty materials should be sprayed with water prior to any loading, unloading or transfer operation so as to maintain the dusty materials wet.	^
S3.5		- The height from which excavated materials are dropped should be controlled to a minimum practical height to limit fugitive dust generation from unloading.	^
S3.5		- When delivering inert C&D material to public fill reception facilities, the material should consist entirely of inert construction waste and of size less than 250mm or other sizes as agreed with the Secretary of the Public Fill Committee. In order to monitor the disposal of the surplus C&D material at the designed public fill reception facility and to control fly tipping, a trip-ticket system as stipulated in the ETWB TCW No. 31/2004 “Trip Ticket System for Disposal of Construction and Demolition Materials” should be included as one of the contractual requirements and implemented by an Environmental Team undertaking the Environmental Monitoring and Audit work. An Independent Environmental Checker should be responsible for auditing the results of the system.	^
	S6.7	- Plan and stock construction materials carefully to minimize amount of waste generated and avoid unnecessary generation	^

<b>Implementation Schedule for Waste Management Measures</b>			
<b>EIA for KTD Development Ref.</b>	<b>EIA for KTD – Roads D3A &amp; D4A Ref.</b>	<b>Environmental Protection Measures / Mitigation Measures</b>	<b>Status</b>
		of waste.	
S3.5		<u>Chemical Waste</u> After use, chemical wastes (for example, cleaning fluids, solvents, lubrication oil and fuel) should be handled according to the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes. Spent chemicals should be collected by a licensed collector for disposal at the CWTF or other licensed facility, in accordance with the Waste Disposal (Chemical Waste) (General) Regulation.	^*
	S6.7	Separation of chemical wastes for special handling and appropriate treatment.	^
S3.5		<u>General Refuse</u> General refuse should be stored in enclosed bins or compaction units separate from C&D material. A licensed waste collector should be employed by the contractor to remove general refuse from the site, separately from C&D material. Effective collection and storage methods (including enclosed and covered area) of site wastes would be required to prevent waste materials from being blown around by wind, wastewater discharge by flushing or leaching into the marine environment, or creating odour nuisance or pest and vermin problem.	^

<b>Implementation Schedule for Landscape and Visual Measures</b>			
<b>EIA for KTD Development Ref.</b>	<b>EIA for KTD – Roads D3A &amp; D4A Ref.</b>	<b>Environmental Protection Measures / Mitigation Measures</b>	<b>Status</b>
S3.8.12		All existing trees should be carefully protected during construction.	^
S3.8.12		Trees unavoidably affected by the works should be transplanted where practical. Detailed transplanting proposal will be submitted to relevant government departments for approval in accordance with ETWBC 2/2004 and 3/2006. Final locations of transplanted trees should be agreed prior to commencement of the work.	NA
S3.8.12		Control of night-time lighting.	^
S3.8.12		Erection of decorative screen hoarding.	^
	S7.9	<u>Construction Site Control</u> - CM1 - Minimized construction area and contractor's temporary works areas.	^
		- CM2- Control of night-time lighting and glare by hooding all lights.	^
		- CM3 - Erection of decorative mesh screens or construction	^

<b>Implementation Schedule for Landscape and Visual Measures</b>			
<b>EIA for KTD Development Ref.</b>	<b>EIA for KTD – Roads D3A &amp; D4A Ref.</b>	<b>Environmental Protection Measures / Mitigation Measures</b>	<b>Status</b>
		hoardings around works areas in visually unobtrusive colours.	
		- CM4 - Reduction of construction period to practical minimum.	^
		- CM5 - Limitation of / Ensuring no run-off into surrounding landscape and adjacent seawater areas.	^
		- CM6 - Temporary or advance landscape should be provided along the temporary access roads to the Cruise Terminal until such time as road D3 is open.	NA

<b>Remarks:</b>			
^	Compliance of mitigation measure.	X	Non-compliance of mitigation measure.
N/A	Not Applicable at this stage.	●	Non-compliance but rectified by the contractor.
N/A (1)	Not observed.		
*	Recommendation was made during site audit but improved/rectified by the contractor.	#	Recommendation was made during audit and to be improved/ rectified by the contractor.

**Mitigation Measures undertaken by the Contractor for site inspections**



Date: 06 February 2025  
 Mitigation Measures: Provided domestic garbage bins for waste storage.

Date: 11 February 2025  
 Mitigation Measures: The portable toilets were provided in the construction site.



Date: 20 February 2025  
 Mitigation Measures: Every stock of more than 20 bags of cement should be covered entirely by impervious sheeting placed in an area sheltered on the top and the three sides.

Date: 20 February 2025  
 Mitigation Measures: Equipment with NRMM label was used.

**Appendix Q – Summaries of Environmental Complaint, Warning,  
Summon and Notification of Successful Prosecution**

**Reporting Month: Febreuary 2025**

<b>Contract No.</b>	<b>Record of Complaint (Yes/No)</b>	<b>Record of Warning (Yes/No)</b>	<b>Notification of Summons and Successful Prosecutions (Yes/No)</b>
ED/2018/01	No	No	No

**Cumulative Statistics on Complaints, Notification of Summons and Successful Prosecutions up to reporting month**

<b>Contract No.</b>	<b>Record of Complaint</b>	<b>Record of Warning</b>	<b>Notification of Summons and Successful Prosecutions</b>
ED/2018/01	17	0	0

Complaint Log for ED/2018/01				
Complaint Ref. No.	Date of Complaint	Description of Complaint	Investigation / Actions taken / Recommendations	Close-Out Date / Status
C0001	A dust complaint was referred from the Contractor on 21 Oct 2020 regarding a public complaint via 1823 hotline (Case no. 3-6518939602) on 20 Oct 2020.	<ol style="list-style-type: none"> <li>The water spraying system was not operated in proper time.</li> <li>Stockpile was not covered properly.</li> <li>Haul road was not wetted.</li> <li>Materials transported on trucks were not provided with mechanical covers.</li> </ol>	<p><u>Investigation</u></p> <ol style="list-style-type: none"> <li>Based on the information provided by the Contractor on 22 Oct 2020, the water sprinklers system was sprayed every 15 minutes with 70 seconds interval automatically. For the area that water sprinklers system was not covered, manual water spraying was provided. Dump trucks were covered with mechanical cover after loading the materials. The stockpile area was covered by the tarpaulin during night time.</li> <li>Based on the monitoring results on 16 Oct 2020, the 1-hour and 24-hour TSP results were below the Action Levels and Limit Levels.</li> <li>Regular site inspection was conducted by ET on 22 Oct 2020, no adverse observation against the dust impact was recorded.</li> </ol> <p><u>Action taken</u></p> <p>As per the Contractor, the water sprinkler are now adjusted to start at 8:00am and end at 6:00pm for Monday to Saturday while from 8:00am to 5:00pm on Sunday. Water spraying are set with 5-minute time interval with duration 30-60 seconds.</p> <p><u>Recommendations</u></p> <p>To minimize the impact for air quality, mitigation measures should be enhanced specially in dry seasons are recommended:</p> <ol style="list-style-type: none"> <li>Increase the frequency and duration for automatic water spraying system.</li> <li>Main haul road and the area that water sprinklers system was not covered in the construction site should be wetted by water trucks or manually in regular basis.</li> <li>Ensure stockpiling sites should be lined with impermeable sheeting and banded. Stockpiles should be fully covered by impermeable sheeting at all time except during working process.</li> </ol>	<ul style="list-style-type: none"> <li>- Closed-out on 5 Nov 2020.</li> <li>- No further complaint was received.</li> </ul>
C0002	A dust complaint was referred from the Contractor on 8 Sep 2021 through E-Mail regarding a complaint	Complaint of dust problem at the pavement of Muk Tai Street near Sports	<p><u>Investigation</u></p> <p>As per contractor, part of the complaint area was within the site boundary of the project.</p> <ol style="list-style-type: none"> <li>Manual water spraying was provided.</li> <li>The exposed surface and stockpile areas were covered by the impermeable</li> </ol>	<ul style="list-style-type: none"> <li>- Closed-out on 4 Oct 2021.</li> <li>- No further complaint was received.</li> </ul>

Complaint Log for ED/2018/01				
Complaint Ref. No.	Date of Complaint	Description of Complaint	Investigation / Actions taken / Recommendations	Close-Out Date / Status
	received by EPD (EPD ref.: K19/RE/00021205-21) on 7 Sep 2021.	Park.	<p>tarpaulin sheet.</p> <p><u>Action taken</u> The exposed surface and stockpile area was covered by the impermeable tarpaulin sheet.</p> <p><u>Recommendations</u> There was no direct evidence showing that the dust nuisance was caused by the contractor at the complaint area, however the contractor is recommended to implement the following measures to minimize the impact for air quality:</p> <ol style="list-style-type: none"> <li>1. Ensure stockpiling sites should be lined with impermeable sheeting and bunded.</li> <li>2. Stockpiles should be fully covered by impermeable sheeting at all time except during working process.</li> <li>3. Ensure the work fulfill the relevant statutory requirements on control of air pollution.</li> <li>4. Take necessary measures to minimize the environmental nuisance arising from the construction site.</li> </ol>	
C0003	A water discharge complaint was referred from the Contractor on 10 Dec 2021 through E-Mail regarding a complaint received by EPD (ref.: K19/RE/00029046-21) on 9 Dec 2021.	Complaint of muddy water being discharged into the sea of To Kwa Wan Typhoon Shelter via a DSD outfall near the roundabout of Shing Fung Road.	<p><u>Investigation</u> Joint site inspection was conducted by ER, IEC, ET and the contractor on 14 Dec 2021, no adverse observation against the water impact was recorded.</p> <ol style="list-style-type: none"> <li>1. There was no muddy water discharge to DSD outfall near the roundabout of Shing Fung Road.</li> <li>2. The sandbag with layers and filter were provided at the manholes.</li> </ol> <p><u>Action taken</u></p> <ul style="list-style-type: none"> <li>- Sandbags and filter were used to block the manholes.</li> <li>- Manholes had been adequately covered and replace the filter frequently.</li> </ul> <p><u>Recommendations</u> There was no direct evidence showing that the water nuisance was caused by the contractor at the complaint area.</p>	<p>- Closed-out on 5 Jan 2022.</p> <p>- No further complaint was received.</p>

Complaint Log for ED/2018/01				
Complaint Ref. No.	Date of Complaint	Description of Complaint	Investigation / Actions taken / Recommendations	Close-Out Date / Status
			<p>Some of muddy water generated from wheel washing might be flow to the outfall inside the site boundary, however the contractor had taken the mitigation measure by using sandbag and filter to ease the nuisance. The contractor is recommended to implement the following measures to minimize the impact for waste water:</p> <ol style="list-style-type: none"> <li>1. Enhance the sandbag with several layers instead of one layer only and replace the filter frequently.</li> <li>2. Modify the wheel washing area such that the muddy water will be directly flow to the pit and then waste water treatment facility.</li> <li>3. Take necessary measures to minimize the environmental nuisance arising from the construction site.</li> </ol>	
C0004	<p>A dust complaint was received by EPD on 16 Dec 2022.</p> <p>Contractor received Notification of Environmental Complaints from EPD (ref.: K19/RE/00029136-22) by E-Mail on 22 Dec 2021.</p>	<p>Complaint of mud/ silt being brought out by vehicles from the project site casing mud/silt accumulation on Shing Fung Road.</p>	<p><u>Investigation</u> Regular site inspection was conducted by ET on 29 Dec 2022.</p> <ol style="list-style-type: none"> <li>1. As per the Contractor, mud / slit generated from nearby construction sites might be brought to Shing Fung Road roundabout.</li> <li>2. No adverse observation against the dust impact was recorded during site inspection.</li> </ol> <p><u>Action taken</u></p> <ol style="list-style-type: none"> <li>1. Watering manually frequently.</li> <li>2. Haul Road surfaces were wetted by water truck.</li> <li>3. Wheel washing for the trucks and vehicles before leaving the project site.</li> </ol> <p><u>Recommendations</u> To minimize the impact for air quality, mitigation measures should be enhanced specially in dry seasons are recommended:</p> <ol style="list-style-type: none"> <li>1. Increase the frequency and duration for automatic water spraying system.</li> <li>2. Main haul road and the area that water sprinklers system was not covered in the construction site should be wetted by water trucks or manually in regular basis.</li> <li>3. Regular wash and clean the share haul road and roundabout in Shing Fung Road.</li> </ol>	<p>- Closed-out on 13 Jan 2023.</p> <p>- No further complaint was received.</p>

Complaint Log for ED/2018/01													
Complaint Ref. No.	Date of Complaint	Description of Complaint	Investigation / Actions taken / Recommendations	Close-Out Date / Status									
			4. Wheel washing for the trucks and vehicles before leaving the project site. The muddy water after the wheel washing should be directed to sedimentation tank and wastewater treatment facility before discharging to gully. 5. Ensure stockpiling sites should be lined with impermeable sheeting and banded. Stockpiles should be fully covered by impermeable sheeting at all time except during working process. 6. Dusty materials transported on truck shall be covered.										
C0005	<p>A noise complaint was received by EPD on 21 Dec 2022.</p> <p>Contractor received Notification of Environmental Complaints from EPD (EPD ref.: K19/RE/00029422-22) on 22 Dec 2022.</p> <p>IEC received the notification on 22 Dec 2022 from EPD and forwarded the notification to CEDD, Contractor, ER and ET on same day.</p>	<p>Complaint of construction noise arising from the project site near Shing Kai Road and Muk Tai Street continued to 01:30 am on 21 Dec 2022.</p>	<p><u>Investigation</u></p> <p>Regular site inspection was conducted by ET and the Contractor on 29 Dec 2022</p> <ol style="list-style-type: none"> <li>The complaint was project-related as construction noise arose from the project site near Shing Kai Road and Muk Tai Street.</li> <li>Status of CNPs in the work area near Shing Kai Road and Muk Tai Street were checked and all of them were valid. However, the CNPs only cover the period up to 2300.</li> </ol> <table border="1"> <thead> <tr> <th>Construction Noise Permit</th> <th>Valid Form</th> <th>Valid Till</th> </tr> </thead> <tbody> <tr> <td>GW-RE1297-22</td> <td>10 Dec 2022</td> <td>08 Jun 2023</td> </tr> <tr> <td>GW-RE1299-22</td> <td>17 Dec 2022</td> <td>15 Jun 2023</td> </tr> </tbody> </table> <p><u>Actions taken</u></p> <ol style="list-style-type: none"> <li>Refresher training about CNP was provided to the labour on 22 Dec 2022.</li> <li>No construction activities were allowed in the restricted hours for those areas without valid CNP.</li> </ol> <p><u>Recommendations</u></p> <p>To minimize the impact of construction noise, the following mitigation measures are recommended:</p> <ol style="list-style-type: none"> <li>Provide regular training about CNP and other environmental issues to staff.</li> <li>Regularly check the status of ALL CNP and other environmental permits.</li> </ol>	Construction Noise Permit	Valid Form	Valid Till	GW-RE1297-22	10 Dec 2022	08 Jun 2023	GW-RE1299-22	17 Dec 2022	15 Jun 2023	<ul style="list-style-type: none"> <li>- After six months of receiving the complaint, there was no further action from EPD.</li> <li>- Closed-out on 29 Jun 2024.</li> </ul>
Construction Noise Permit	Valid Form	Valid Till											
GW-RE1297-22	10 Dec 2022	08 Jun 2023											
GW-RE1299-22	17 Dec 2022	15 Jun 2023											
C0006	<p>A dust complaint was received by EPD on 6</p>	<p>Complaint of construction</p>	<p><u>Investigation</u></p> <p>Site inspections were conducted by ET on 26 Jan 2023 and joint site inspection</p>	<ul style="list-style-type: none"> <li>- Closed-out on 16 Mar 2023.</li> </ul>									

Complaint Log for ED/2018/01				
Complaint Ref. No.	Date of Complaint	Description of Complaint	Investigation / Actions taken / Recommendations	Close-Out Date / Status
	<p>Dec 2022.</p> <p>Contractor (POC) received Notification of Environmental Complaints from EPD (ref.: K19/RE/00027862-22) by E-Mail on 7 Dec 2022.</p> <p>IEC received the notification on 19 Jan 2023 and forwarded the notification to CEDD, ER and ET on same day.</p>	<p>dust arising from construction sites along Shing Fung Road.</p>	<p>was conducted by Contractor (POC), ER, ET and IEC on 8 Feb 2023.</p> <ol style="list-style-type: none"> <li>1. The concerned area (roundabout) is the common road for public vehicles. In addition, construction vehicles from several nearby construction sites also use the concerned road, especially a lots of dump trucks.</li> <li>2. Construction vehicles from Contractor (POC) project site are not allowed leaving the site to Shing Fung Road directly as the exit was blocked by barriers since 21 Jan 2023.</li> <li>3. Worker of sub-contractor from Contractor (POC) wetted the part of the concerned road surface during the site inspection on 8 Feb 2023 to suppress dust emission.</li> <li>4. No construction works was observed on 26 Jan 2023 and no adverse observation against the dust impact were found during the site inspection on both dates.</li> </ol> <p><u>Action taken</u></p> <ol style="list-style-type: none"> <li>1. Haul Road surfaces were wetted manually and washed the dusty water barrier regularly.</li> <li>2. Wheel washing for the trucks and vehicles before leaving the project site directly through Shing Fung Road exit.</li> <li>3. Construction vehicles from Contractor (POC) are not allowed leaving the site to Shing Fung Road directly as the exit was blocked by barriers since 21 Jan 2023.</li> </ol> <p><u>Recommendations</u></p> <p>There was no direct evidence showing that the dust nuisance was caused by the contractor at the complaint area, however Contractor (POC) is recommended to implement the following measures to minimize the impact for air quality:</p> <ol style="list-style-type: none"> <li>1. Main haul road and the area that water sprinklers system was not covered in the construction site should be wetted manually in regular basis.</li> <li>2. Regular wash the share haul road and roundabout in Shing Fung Road.</li> <li>3. Wheel washing for the trucks and vehicles before leaving the project site. The muddy water after the wheel washing should be directed to sedimentation tank and wastewater treatment facility before discharging to</li> </ol>	

Complaint Log for ED/2018/01				
Complaint Ref. No.	Date of Complaint	Description of Complaint	Investigation / Actions taken / Recommendations	Close-Out Date / Status
			gully. 4. Dusty materials transported on truck shall be covered.	
C0007	A dust complaint was received by EPD on 19 Jan 2023.  Contractor (POC) received Notification of Environmental Complaints from EPD (ref.: K19/RE/00001988-23) by E-Mail on 2 Feb 2023.  IEC received the notification on 2 Feb 2023 and forwarded the notification to CEDD, ER and ET on the same day.	Complaint of dusty environment at the new road connecting Shing Fung Road and Shing Kai Road caused by vehicles from construction sites nearby.	<u>Investigation</u> Joint site inspection was conducted by Contractor (POC), ER, ET and IEC on 8 Feb 2023. 1. The concerned area (new road connecting Shing Fung Road & Shing Kai Road) has been open for public vehicles (not only project related vehicles) since 31 Dec 2022. 2. Construction vehicles from POC are not allowed leaving the site to Shing Fung Road directly with barriers blocked since 21 Jan 2023. 3. Contractor (POC) has restricted the construction vehicles from nearby construction site (Gammon site) using this site entrance for any construction activities since 4 Feb 2023. 4. Worker of sub-contractor from Contractor (POC) wetted the part of the concerned road surface during the site inspection on 8 Feb 2023 to suppress dust emission. 5. No adverse observation against the dust impact were found during the site inspection along the new road.  <u>Action taken</u> 1. Haul Road surfaces were wetted manually and washed the dusty water barrier regularly. 2. Wheel washing for the trucks and vehicles before leaving the project site. 3. Contractor (POC) has restricted the construction vehicles from nearby construction site (Gammon site) using this site entrance for any construction activities since 4 Feb 2023.  <u>Recommendations</u> There was no direct evidence showing that the dust nuisance was caused by the contractor at the complaint area, however Contractor (POC) is recommended to implement the following measures to minimize the impact for air quality: 1. Main haul road and the area that water sprinklers system was not covered in	- Closed-out on 16 Mar 2023.

Complaint Log for ED/2018/01				
Complaint Ref. No.	Date of Complaint	Description of Complaint	Investigation / Actions taken / Recommendations	Close-Out Date / Status
			<p>the construction site should be wetted by water trucks or manually in regular basis.</p> <ol style="list-style-type: none"> <li>2. Regular wash the share haul road in Shing Fung Road.</li> <li>3. Wheel washing for the trucks and vehicles before leaving the project site. The muddy water after the wheel washing should be directed to sedimentation tank and wastewater treatment facility before discharging to gully.</li> <li>4. Dusty materials transported on truck shall be covered.</li> </ol>	
C0008	<p>A dust complaint was received by EPD on 13 Feb 2023.</p> <p>Contractor (POC) received the Notification of Environmental Complaints from EPD (ref.: K19/RE/00003909-23) by E-Mail on 17 Feb 2023 and forwarded the E-mail to ER, ET and IEC on same day.</p>	<p>Complaint of silt / mud accumulation on the new road connecting Shing Fung Road and Shing Kai Road caused by vehicles from construction sites nearby.</p>	<p><u>Investigation</u></p> <p>Joint site inspection was conducted by Contractor (POC), ER, ET and IEC on 23 Feb 2023 and regular site inspection was conducted by Contractor (POC), ER and ET on 2 Mar 2023.</p> <ol style="list-style-type: none"> <li>1. The concerned area (new road connecting Shing Fung Road &amp; Shing Kai Road) has been open for public vehicles (not only project related vehicles) since 31 Dec 2022. Vehicles from nearby construction sites also used the concerned road. Those are the possible sources of dust nuisance.</li> <li>2. Construction vehicles from POC are not allowed leaving the site to Shing Fung Road directly with barriers blocked since 21 Jan 2023.</li> <li>3. Contractor (POC) has restricted the construction vehicles from nearby construction site (Gammon site) using this site entrance for any construction activities since 4 Feb 2023.</li> <li>4. As per Contractor (POC), EPD conducted site visit on 16 Feb 2023.</li> <li>5. No adverse observation against the dust / muddy water impact were found during the site inspection on both dates.</li> </ol> <p><u>Action taken</u></p> <ol style="list-style-type: none"> <li>1. Construction vehicles from Contractor (POC) are not allowed leaving the site to Shing Fung Road directly as the exit was blocked by barriers since 21 Jan 2023.</li> <li>2. Contractor (POC) has restricted the construction vehicles from nearby construction site (Gammon site) using this site entrance for any construction activities since 4 Feb 2023.</li> </ol>	- Closed-out on 29 Mar 2023.

Complaint Log for ED/2018/01														
Complaint Ref. No.	Date of Complaint	Description of Complaint	Investigation / Actions taken / Recommendations	Close-Out Date / Status										
			<p>3. Haul Road surfaces were wetted manually and washed the dusty water barrier regularly.</p> <p>4. Wheel washing for the trucks and vehicles before leaving the project site.</p> <p>5. As per instruction from CEDD and AECOM, road washing along the new road (connecting Shing Fung Road and Shing Kai Road) and Shing Fung Road by water truck was conducted once a week as follow:</p> <table border="1"> <thead> <tr> <th>Date</th> <th>Road Washing by</th> </tr> </thead> <tbody> <tr> <td>8 Mar 2023</td> <td>Sweeper truck with water spraying truck</td> </tr> <tr> <td>9 Mar 2023</td> <td>Sweeper truck with water spraying truck</td> </tr> <tr> <td>14 Mar 2023</td> <td>Sweeper truck with water spraying truck</td> </tr> <tr> <td>22 Mar 2023</td> <td>Sweeper truck with water spraying truck</td> </tr> </tbody> </table> <p>6. During the two site inspections, mitigation measures implemented by the Contractor (POC) were found properly based on existing site condition and resources.</p> <p><u>Recommendations</u>  There was no direct evidence showing that the dust nuisance was caused by the contractor at the complaint area, however Contractor (POC) is recommended to implement the following measures to minimize the impact for air quality:</p> <ol style="list-style-type: none"> <li>1. Main haul road and the area that water sprinklers system was not covered in the construction site should be wetted by water trucks or manually in regular basis.</li> <li>2. Regular wash the share haul road in Shing Fung Road.</li> <li>3. Dusty materials transported on truck shall be covered.</li> </ol>	Date	Road Washing by	8 Mar 2023	Sweeper truck with water spraying truck	9 Mar 2023	Sweeper truck with water spraying truck	14 Mar 2023	Sweeper truck with water spraying truck	22 Mar 2023	Sweeper truck with water spraying truck	
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C0009	A dust complaint was received by EPD on 15 Feb 2023.  Contractor (POC) received the Notification of Environmental	Complaint of mud / silt being brought out by vehicles from construction site at Shing Fung Road roundabout	<p><u>Investigation</u>  Joint site inspection was conducted by Contractor (POC), ER, ET and IEC on 23 Feb 2023 and regular site inspection was conducted by Contractor (POC), ER and ET on 2 Mar 2023.</p> <ol style="list-style-type: none"> <li>1. The concerned area (new road connecting Shing Fung Road &amp; Shing Kai Road) has been open for public vehicles (not only project related vehicles) since 31 Dec 2022. Vehicles from nearby construction sites also used the concerned road. Those are the possible sources of dust nuisance.</li> </ol>	- Closed-out on 29 Mar 2023.										

Complaint Log for ED/2018/01														
Complaint Ref. No.	Date of Complaint	Description of Complaint	Investigation / Actions taken / Recommendations	Close-Out Date / Status										
	Complaints from EPD (ref.: K19/RE/00004280-23) by E-Mail on 22 Feb 2023 and forwarded the E-mail to ER, ET and IEC on same day.	(near Lamp Post DF4831) causing mud / silt accumulation along Shing Fung Road.	<ol style="list-style-type: none"> <li>Construction vehicles from POC are not allowed leaving the site to Shing Fung Road directly with barriers blocked since 21 Jan 2023.</li> <li>Contractor (POC) has restricted the construction vehicles from nearby construction site (Gammon site) using this site entrance for any construction activities since 4 Feb 2023.</li> <li>As per Contractor (POC), EPD conducted site visit on 16 Feb 2023.</li> <li>No adverse observation against the dust impact were found during the site inspection on both dates.</li> </ol> <p><u>Action taken</u></p> <ol style="list-style-type: none"> <li>Construction vehicles from Contractor (POC) are not allowed leaving the site to Shing Fung Road directly as the exit was blocked by barriers since 21 Jan 2023.</li> <li>Contractor (POC) has restricted the construction vehicles from nearby construction site (Gammon site) using this site entrance for any construction activities since 4 Feb 2023.</li> <li>Haul Road surfaces were wetted manually and washed the dusty water barrier regularly.</li> <li>Wheel washing for the trucks and vehicles before leaving the project site.</li> <li>As per instruction from CEDD and AECOM, road washing along the new road (connecting Shing Fung Road and Shing Kai Road) and Shing Fung Road by water truck was conducted once a week as follow:</li> </ol> <table border="1"> <thead> <tr> <th>Date</th> <th>Road Washing by</th> </tr> </thead> <tbody> <tr> <td>8 Mar 2023</td> <td>Sweeper truck with water spraying truck</td> </tr> <tr> <td>9 Mar 2023</td> <td>Sweeper truck with water spraying truck</td> </tr> <tr> <td>14 Mar 2023</td> <td>Sweeper truck with water spraying truck</td> </tr> <tr> <td>22 Mar 2023</td> <td>Sweeper truck with water spraying truck</td> </tr> </tbody> </table> <ol style="list-style-type: none"> <li>During the two site inspections, mitigation measures implemented by the Contractor (POC) were found properly based on existing site condition and resources.</li> </ol> <p><u>Recommendations</u></p> <p>There was no direct evidence showing that the dust nuisance was caused by the</p>	Date	Road Washing by	8 Mar 2023	Sweeper truck with water spraying truck	9 Mar 2023	Sweeper truck with water spraying truck	14 Mar 2023	Sweeper truck with water spraying truck	22 Mar 2023	Sweeper truck with water spraying truck	
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Complaint Log for ED/2018/01				
Complaint Ref. No.	Date of Complaint	Description of Complaint	Investigation / Actions taken / Recommendations	Close-Out Date / Status
			<p>contractor at the complaint area, however Contractor (POC) is recommended to implement the following measures to minimize the impact for air quality:</p> <ol style="list-style-type: none"> <li>1. Main haul road and the area that water sprinklers system was not covered in the construction site should be wetted by water trucks or manually in regular basis.</li> <li>2. Regular wash the share haul road in Shing Fung Road.</li> <li>3. Dusty materials transported on truck shall be covered.</li> </ol>	
C0010	<p>A dust and muddy water complaint was received by Hotline 1823 on 9 Mar 2023.</p> <p>ER received the transfer from the Hotline 1823 on 9 Mar 2023 and forwarded the E-mail to Contractor (POC), ET and IEC on same day.</p>	<p>Complaint of dusty environment at the new road (connecting Shing Fung Road and Shing Kai Road) and Shing Fung Road roundabout.</p> <p>Worker wetted the road surface and might cause mud / silt problem.</p>	<p><u>Investigation</u></p> <p>Joint site inspection was conducted by Contractor (POC), ER, and ET on 16 Mar 2023 and 23 Mar 2023.</p> <ol style="list-style-type: none"> <li>1. The concerned area (new road connecting Shing Fung Road &amp; Shing Kai Road) has been open for public vehicles (not only project related vehicles) since 31 Dec 2022. Vehicles from nearby construction sites also used the concerned road. Those are the possible sources of dust nuisance.</li> <li>2. Construction vehicles from POC are not allowed leaving the site to Shing Fung Road directly with barriers blocked since 21 Jan 2023.</li> <li>3. Contractor (POC) has restricted the construction vehicles from nearby construction site (Gammon site) using this site entrance for any construction activities since 4 Feb 2023.</li> <li>4. The sandbags were provided around the manholes.</li> <li>5. No adverse observation against the dust / muddy water impact were found during the site inspection on both dates.</li> </ol> <p><u>Action taken</u></p> <ol style="list-style-type: none"> <li>1. Construction vehicles from Contractor (POC) are not allowed leaving the site to Shing Fung Road directly as the exit was blocked by barriers since 21 Jan 2023.</li> <li>2. Contractor (POC) has restricted the construction vehicles from nearby construction site (Gammon site) using this site entrance for any construction activities since 4 Feb 2023.</li> <li>3. Haul Road surfaces were wetted manually and washed the dusty water barrier regularly.</li> <li>4. Wheel washing for the trucks and vehicles before leaving the project site.</li> </ol>	- Closed-out on 6 Apr 2023.

Complaint Log for ED/2018/01														
Complaint Ref. No.	Date of Complaint	Description of Complaint	Investigation / Actions taken / Recommendations	Close-Out Date / Status										
			<p>5. As per instruction from CEDD and AECOM, road washing along the new road (connecting Shing Fung Road and Shing Kai Road) and Shing Fung Road by water truck was conducted once a week as follow:</p> <table border="1"> <thead> <tr> <th>Date</th> <th>Road Washing by</th> </tr> </thead> <tbody> <tr> <td>8 Mar 2023</td> <td>Sweeper truck with water spraying truck</td> </tr> <tr> <td>9 Mar 2023</td> <td>Sweeper truck with water spraying truck</td> </tr> <tr> <td>14 Mar 2023</td> <td>Sweeper truck with water spraying truck</td> </tr> <tr> <td>22 Mar 2023</td> <td>Sweeper truck with water spraying truck</td> </tr> </tbody> </table> <p>6. The sandbags were provided around the manholes.</p> <p>7. During the two site inspections, mitigation measures implemented by the Contractor (POC) were found properly based on existing site condition and resources.</p> <p><u>Recommendations</u>  There was no direct evidence showing that the dust nuisance was caused by the contractor at the complaint area, however Contractor (POC) is recommended to implement the following measures to minimize the impact for air and water quality:</p> <ol style="list-style-type: none"> <li>1. Dusty materials transported on truck shall be covered.</li> <li>2. Enhance the sandbags with several layers of filters and replace the filter frequently.</li> </ol>	Date	Road Washing by	8 Mar 2023	Sweeper truck with water spraying truck	9 Mar 2023	Sweeper truck with water spraying truck	14 Mar 2023	Sweeper truck with water spraying truck	22 Mar 2023	Sweeper truck with water spraying truck	
Date	Road Washing by													
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9 Mar 2023	Sweeper truck with water spraying truck													
14 Mar 2023	Sweeper truck with water spraying truck													
22 Mar 2023	Sweeper truck with water spraying truck													
C0011	A muddy water complaint was received by EPD on 9 Mar 2023.  Contractor (POC) received the Notification of Environmental Complaints from EPD (ref.: K19/RE/00004280-23)	Complaint of water being sprayed onto vehicles passing by and mud / silt being washed into roadside gully near Shing Fung Road roundabout.	<p><u>Investigation</u>  Joint site inspection was conducted by Contractor (POC), ER and ET on 23 Mar 2023.</p> <ol style="list-style-type: none"> <li>1. The concerned area (new road connecting Shing Fung Road &amp; Shing Kai Road) has been open for public vehicles (not only project related vehicles) since 31 Dec 2022. Vehicles from nearby construction sites also used the concerned road. Those are the possible sources of dust / mud / silt nuisance.</li> <li>2. The sandbags were provided around the manholes.</li> <li>3. No adverse observation against the muddy water impact were found during the site inspection on both dates.</li> </ol>	- Closed-out on 6 Apr 2023.										

Complaint Log for ED/2018/01														
Complaint Ref. No.	Date of Complaint	Description of Complaint	Investigation / Actions taken / Recommendations	Close-Out Date / Status										
	by E-Mail on 22 Feb 2023 and forwarded the E-mail to ER, ET and IEC on same day.		<p><u>Action taken</u></p> <ol style="list-style-type: none"> <li>As per Contractor (POC), no manually road surfaces watering on Shing Fung Road after receiving complaint (16 Mar 2023).</li> <li>As per instruction from CEDD and AECOM, road washing along the new road (connecting Shing Fung Road and Shing Kai Road) and Shing Fung Road by water truck was conducted once a week as follow: <table border="1"> <thead> <tr> <th>Date</th> <th>Road Washing by</th> </tr> </thead> <tbody> <tr> <td>8 Mar 2023</td> <td>Sweeper truck with water spraying truck</td> </tr> <tr> <td>9 Mar 2023</td> <td>Sweeper truck with water spraying truck</td> </tr> <tr> <td>14 Mar 2023</td> <td>Sweeper truck with water spraying truck</td> </tr> <tr> <td>22 Mar 2023</td> <td>Sweeper truck with water spraying truck</td> </tr> </tbody> </table> </li> <li>The sandbags were provided around the manholes.</li> </ol> <p><u>Recommendations</u></p> <p>There was no direct evidence showing that the muddy water nuisance was caused by the contractor at the complaint area, however Contractor (POC) is recommended to implement the following measures to minimize the impact for air and water quality:</p> <ol style="list-style-type: none"> <li>Enhance the sandbags with several layers of filters and replace the filter frequently.</li> </ol>	Date	Road Washing by	8 Mar 2023	Sweeper truck with water spraying truck	9 Mar 2023	Sweeper truck with water spraying truck	14 Mar 2023	Sweeper truck with water spraying truck	22 Mar 2023	Sweeper truck with water spraying truck	
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22 Mar 2023	Sweeper truck with water spraying truck													
C0012	A dust complaint was received by EPD on 31 May 2023.  Contractor (POC) received the Notification of Environmental Complaints from EPD (ref.: K19/RE/00013488-23) by E-Mail on 6 June	Complaint of silt / mud accumulation on the new road connecting Shing Fung Road and Shing Kai Road caused by vehicles from construction site nearby.	<p><u>Investigation</u></p> <p>Joint site inspection was conducted by Contractor (POC), ER and ET on 8 June 2023.</p> <ol style="list-style-type: none"> <li>As per Mr. Tony Tang from POC, the concerned area was the section of Shing Fung Road at the entrance of Gammon site accommodation.</li> <li>The new road connecting Shing Fung Road &amp; Shing Kai Road) has been open for public vehicles (not only project related vehicles) since 31 December 2022. Vehicles from nearby construction sites also used the concerned road. Those are the possible sources of dust / silt nuisance.</li> <li>As per Mr. Tony Tang from POC, recycled water was used in wheel washing machine near the entrance of Gammon site. Those are the possible sources of mud nuisance.</li> </ol>	- Closed-out on 19 June 2023.										

Complaint Log for ED/2018/01																						
Complaint Ref. No.	Date of Complaint	Description of Complaint	Investigation / Actions taken / Recommendations	Close-Out Date / Status																		
	2023 and forwarded the E-mail to ER, ET and IEC on same day.		<p>4. No adverse observation against the dust impact were found during the site inspection.</p> <p><u>Action taken</u></p> <p>1. As per instruction from CEDD and AECOM, road washing along the new road (connecting Shing Fung Road and Shing Kai Road) and Shing Fung Road by water truck was conducted twice a week start from 11 May 2023.</p> <table border="1"> <thead> <tr> <th>Date</th> <th>Road Washing by</th> </tr> </thead> <tbody> <tr> <td>19 May 2023</td> <td>Sweeper truck with water spraying truck</td> </tr> <tr> <td>23 May 2023</td> <td>Sweeper truck with water spraying truck</td> </tr> <tr> <td>25 May 2023</td> <td>Sweeper truck with water spraying truck</td> </tr> <tr> <td>30 May 2023</td> <td>Sweeper truck with water spraying truck</td> </tr> <tr> <td>2 June 2023</td> <td>Sweeper truck with water spraying truck</td> </tr> <tr> <td>6 June 2023</td> <td>Sweeper truck with water spraying truck</td> </tr> <tr> <td>9 June 2023</td> <td>Sweeper truck with water spraying truck</td> </tr> <tr> <td>13 June 2023</td> <td>Sweeper truck with water spraying truck</td> </tr> </tbody> </table> <p>2. Wheel washing for the vehicles before leaving the construction site.</p> <p><u>Recommendations</u></p> <p>There was no direct evidence showing that the dust nuisance was caused by the contractor at the complaint area, however Contractor (POC) is recommended to implement the following measures to minimize the impact for air quality:</p> <ol style="list-style-type: none"> <li>1. Regular wash the share haul road in Shing Fung Road and Shing Kai Road.</li> <li>2. Dusty materials transported on truck should be covered.</li> </ol>	Date	Road Washing by	19 May 2023	Sweeper truck with water spraying truck	23 May 2023	Sweeper truck with water spraying truck	25 May 2023	Sweeper truck with water spraying truck	30 May 2023	Sweeper truck with water spraying truck	2 June 2023	Sweeper truck with water spraying truck	6 June 2023	Sweeper truck with water spraying truck	9 June 2023	Sweeper truck with water spraying truck	13 June 2023	Sweeper truck with water spraying truck	
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C0013	A water complaint was received by EPD on 19 June 2023.  Contractor (POC) received the Notification of Environmental	- Complaint of muddy water being discharged into Kai Tak Approach Channel on 18 Jun	<p><u>Investigation</u></p> <p>Joint site inspection was conducted by Contractor (POC), ER and ET on 6 Jul 2023.</p> <ol style="list-style-type: none"> <li>1. As per Mr. Tony Tang from POC, the concerned area was the section of Shing Fung Road at the nearby channel.</li> <li>2. Heavy raining was recorded on 18 Jun 2023. The recorded rainfall was 35.8mm (sourced from manned weather station of Hong Kong Observatory at <a href="https://www.hko.gov.hk/en/cis/dailyExtract.htm?y=2023&amp;m=6">https://www.hko.gov.hk/en/cis/dailyExtract.htm?y=2023&amp;m=6</a>). The</li> </ol>	- Closed-out on 2 Aug 2023.																		

Complaint Log for ED/2018/01				
Complain t Ref. No.	Date of Complaint	Description of Complaint	Investigation / Actions taken / Recommendations	Close-Out Date / Status
	Complaints from EPD (ref.: K19/RE/00014944-23) by E-Mail on 29 June 2023 and forwarded the E-mail to ER, ET and IEC on 4 July 2023.	2023. - Complaint of construction work being conducted on the Sunday of 18 Jun 2023.	<p>implication of heavy rainfall storm runoff might wash across the exposed soil surfaces which was direct muddy water discharge. This is the possible source of water nuisance.</p> <p>3. As per Mr. Tony Tang from POC, no construction work was conducted on 18 Jun 2023. Based on the attendance record, 6 employees including 4 watchman, labourer and driver, were on site on 18 Jun 2023 and they were not involved in the construction work. In the joint site inspection, no construction work was conducted on the nearby channel.</p> <p>4. No adverse observation against the muddy water impact were found during the site inspection on 14 and 20 June 2023, and 6 July 2023. The sedimentation tank and wastewater treatment plant are operating efficiently during the site inspection.</p> <p><u>Action taken</u></p> <ol style="list-style-type: none"> <li>1. The ditch is maintained regularly and excavated deeper by workers.</li> <li>2. Pumps are placed at the ditch to prevent flooding and overflow.</li> <li>3. Enhanced training for site workers to prevent flushing during heavy rain by placing pumps in the ditch to prevent flooding and overflow during periods of heavy rain during Tool- Box-Talk training.</li> </ol> <p><u>Recommendations</u></p> <p>There was no direct evidence showing that the muddy water nuisance was caused by the contractor at the complaint area, however Contractor (POC) is recommended to implement the following measures to minimize the impact for water quality:</p> <ol style="list-style-type: none"> <li>1. Regular cleaning and maintenance drainage systems at the nearby Kai Tak Approach Channel.</li> </ol>	

Complaint Log for ED/2018/01				
Complaint Ref. No.	Date of Complaint	Description of Complaint	Investigation / Actions taken / Recommendations	Close-Out Date / Status
C0014	A polluting discharge complaint was received by EPD on 16 October 2023. Contractor (POC) received the Notification of Environmental Complaints from EPD (ref.: K19/RE/00024581-23 ) by E-Mail on 19 October 2023 and forwarded the E-mail to ER, ET and IEC on 21 October 2023.	- Complaint of polluting discharge from the construction site of Stage 4 Infrastructure at the Former Runway and South Apron, Kowloon City (“illegal discharge from kai tak 6577 construction site the main contractor should be hip hing)	<p><u>Investigation</u></p> <p>Joint site inspection was conducted by Contractor (POC), ER and ET on 26 October 2023.</p> <ol style="list-style-type: none"> <li>1. The concerned area is near at Former Runway and South Apron, Kowloon City. Those are the possible sources should be illegal discharge from Kai Tak 6577 construction site which the main contractor should be hip hing. The possible source of polluting discharge does not come from the Contractor (POC).</li> <li>2. No adverse observation against the muddy water impact were found during the site inspection on dates. No surface runoff is observed, and the sedimentation tank and wastewater treatment plant were implemented normally.</li> </ol> <p><u>Action taken</u></p> <ol style="list-style-type: none"> <li>1. As per Contractor (POC), no wastewater generated at concerned area and ensure fulfil the conditions stipulated in the valid WPCO licence after receiving complaint (16 October 2023). The effluent discharge has been implemented properly.</li> <li>2. The silt curtain has been installed around the construction activities at the concerned area. (referring to Photo 2) The sedimentation tank and wastewater treatment has been implemented properly.</li> <li>3. The pump has been installed and collected sewage at the channel which can minimize water quality impacts and prevent overload the foul sewage system. (referring to Photo 3) The channel and ditches have been clear after receiving complaint.</li> </ol> <p><u>Recommendations</u></p> <p>There was no direct evidence showing that the muddy water nuisance was caused by the contractor at the complaint area, however Contractor (POC) is recommended to implement the following measures to minimize the impact for water quality:</p>	- Closed-out on 15 November 2023.

<b>Complaint Log for ED/2018/01</b>				
<b>Complaint Ref. No.</b>	<b>Date of Complaint</b>	<b>Description of Complaint</b>	<b>Investigation / Actions taken / Recommendations</b>	<b>Close-Out Date / Status</b>
			<ol style="list-style-type: none"> <li>1. The silt removal facilities, channels and manholes should be maintained regularly.</li> <li>2. The silt curtain and equipment should be properly maintained.</li> </ol>	

Complaint Log for ED/2018/01					
Complaint Ref. No.	Date of Complaint	Description of Complaint	Investigation / Actions taken / Recommendations		Close-Out Date / Status
C0015	A dust complaint was received by EPD on 12 December 2023. Contractor (POC) received the Notification of Environmental Complaints from EPD (ref.: K19/RE/00030287-23) by E-Mail on 19 December 2023 and forwarded the E-mail to ER, ET and IEC on 20 December 2023.	- Complaint of construction dust nuisance on Shing Fung Road.	<p><u>Investigation</u></p> <p>Joint site inspection was conducted by Contractor (POC), ER, and ET on 21 December 2023.</p> <ol style="list-style-type: none"> <li>1. As per the email clarified by Mr. Tony Tang from POC on 20 December 2023, the concerned area (section of Shing Fung Road) was the junction of Road D3 and gate 2A&amp; 2B.</li> <li>2. The new road connecting Shing Fung Road &amp; Shing Kai Road) has been open for public vehicles (not only project related vehicles) since 31 December 2022. Vehicles from nearby construction sites also used the concerned road. Those are the possible sources of dust / silt nuisance. The non-project of stockpiles is founded near the concerned road during the site inspection.</li> <li>3. 3. As per Mr. Tony Tang from POC, recycled water was used in wheel washing machine near the entrance of Gammon site. The washing facilities and regular road watering are implemented.</li> <li>4. No adverse observation against the dust impact were found during the site inspection. The washing facilities and dust control measures are implemented properly. <u>Action taken</u></li> </ol> <ol style="list-style-type: none"> <li>1. As per instruction from CEDD and AECOM, road washing along the new road (connecting Shing Fung Road and Shing Kai Road) and Shing Fung Road by water truck was conducted once per week in December 2023.</li> </ol>		- 17 January 2024
			Date	Road Washing by	

Complaint Log for ED/2018/01					
Complaint Ref. No.	Date of Complaint	Description of Complaint	Investigation / Actions taken / Recommendations		Close-Out Date / Status
			07 December 2023	Sweeper truck with water spraying truck	
			16 December 2023	Sweeper truck with water spraying truck	
			21 December 2023	Sweeper truck with water spraying truck	
			29 December 2023	Sweeper truck with water spraying truck	
			<p>2. Wheel washing for the vehicles before leaving the construction site.</p> <p><u>Recommendations</u></p> <p>There was no direct evidence showing that the dust nuisance was caused by the contractor at the complaint area, however Contractor (POC) is recommended to implement the following measures to minimize the impact for air quality:</p> <ol style="list-style-type: none"> <li>1. Regular wash the share haul road in Shing Fung Road and Shing Kai Road.</li> <li>2. Dusty materials transported on truck should be covered.</li> </ol>		

Complaint Log for ED/2018/01																											
Complaint Ref. No.	Date of Complaint	Description of Complaint	Investigation / Actions taken / Recommendations				Close-Out Date / Status																				
C0016	A dust complaint was received by Hotline 1823 on 20 May 2024. ER (AECOM) and Contractor (POC) received the transferred from Hotline 1823 (Case No. 3-8226038234) on 20 May 2024 and forwarded the E-mail to ET, and IEC on same day.	- The dust emission generated from a excavator near EVA No. 10 which affecting the surrounding residents. The complainant also expressed doubt the effectiveness of implementation of environmental management system.	<p><u>Investigation</u> Joint site inspection was conducted by Contractor (POC), ER, and ET on 23 May 2024.</p> <ol style="list-style-type: none"> <li>1. The complaint is not directly project-related since C&amp;D stockpiling works from nearby construction sites. (locations referring to Attachment 2) Those are the possible sources of dust nuisance.</li> <li>2. As per the email reply by Mr. Tony Tang from POC on 21 May 2024, the concerned area (section of Shing Fung Road) was near EVA No. 10. The POC proposed to implement measures for mitigate the dust nuisance.</li> <li>3. The nearest surrounding resident to the concerned area is 580.23m (locations referring to Attachment 1)</li> <li>4. As per Mr. Tony Tang from POC, POC will provide a worker starting from 22 May 2024 to spray water at the concerned location (Near EVA No. 10) within office hour to suppress dust emission no matter there is any loading or unloading of dusty materials site activities. (locations referring to Attachment 3)</li> <li>5. Based on the monitoring results on 20 May 2024, 1-hour and 24-hour TSP results were below the Action Levels and Limit as shown as below.</li> </ol> <table border="1"> <thead> <tr> <th rowspan="2"></th> <th colspan="2">AM3</th> <th colspan="2">AM4(A)</th> <th colspan="2">AM7</th> </tr> <tr> <th>1-hour TSP</th> <th>24-hour TSP</th> <th>1-hour TSP</th> <th>24-hour TSP</th> <th>1-hour TSP</th> <th>24-hour TSP</th> </tr> </thead> <tbody> <tr> <td>Measured result (µg/m<sup>3</sup>)</td> <td>44 -48</td> <td>42</td> <td>56-63</td> <td>/</td> <td>53 – 57</td> <td>54</td> </tr> </tbody> </table>					AM3		AM4(A)		AM7		1-hour TSP	24-hour TSP	1-hour TSP	24-hour TSP	1-hour TSP	24-hour TSP	Measured result (µg/m <sup>3</sup> )	44 -48	42	56-63	/	53 – 57	54	- Closed-out on 04 June 2024
	AM3		AM4(A)		AM7																						
	1-hour TSP	24-hour TSP	1-hour TSP	24-hour TSP	1-hour TSP	24-hour TSP																					
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Complaint Log for ED/2018/01										
Complaint Ref. No.	Date of Complaint	Description of Complaint	Investigation / Actions taken / Recommendations							Close-Out Date / Status
			Action Level (µg/m³)	297	182	326	187	315	181	
			Limit Level (µg/m³)	500	260	500	260	500	260	
			<p>6. The effectiveness of the environmental management system implemented has been reviewed.</p> <p>7. No adverse observation against the dust impact were found during the site inspection. The dust control measures are implemented properly. (referring to Attachment 4)</p> <p><u>Action taken</u></p> <ol style="list-style-type: none"> <li>1. Regularly monitor all the Powered Mechanical Equipment (PME) to ensure no dark smoke emission. (refer to Attachment 3).</li> <li>2. Arrange to cover the stockpile with tarpaulin sheet to prevent dust emission. (refer to Attachment 3)</li> <li>3. Arrange resources to spray water during excavator loading and unloading of dusty material which have including fill material and sub-base. (refer to Attachment 3)</li> </ol> <p><u>Recommendations</u></p> <p>There was no direct evidence showing that the dust nuisance was caused by the contractor at the complaint area, however Contractor (POC) is recommended to implement the following measures to minimize the impact for air quality:</p>							

<b>Complaint Log for ED/2018/01</b>				
<b>Complaint Ref. No.</b>	<b>Date of Complaint</b>	<b>Description of Complaint</b>	<b>Investigation / Actions taken / Recommendations</b>	<b>Close-Out Date / Status</b>
			<ol style="list-style-type: none"> <li>1. The share haul road in Shing Fung Road should be washed regularly.</li> <li>2. Dust mitigation control should be done at the work site 8 times per day.</li> <li>3. Stockpiling sites should be lined with impermeable sheeting and banded.</li> <li>4. Stockpiles should be fully covered by impermeable sheeting to reduce dust emission.</li> </ol>	

Complaint Log for ED/2018/01				
Complaint Ref. No.	Date of Complaint	Description of Complaint	Investigation / Actions taken / Recommendations	Close-Out Date / Status
C0017	A waste management complaint was received by Hotline 1823 on 25 May 2024. The public complaint is received via 1823 (Case No.: 3-8234938050) on 25 May 2024 and forwarded by CEDD on 27 May 2024, and forwarded to ER, Contractor, ET and IEC.	- Rodent problem at the junction of Shing Kai Road & Shing Fung Road	<p><u>Investigation</u></p> <p>Joint site inspection was conducted by Contractor (POC), ER, IEC and ET on 30 May 2024.</p> <ol style="list-style-type: none"> <li>1. Accumulation of waste was found in the concerned area, the grade road (Shing Kai Road to NSR) and the junction of Road D3 (Shing Kai Road Junction). (refer to Photo Record 7 of Attachment 3)</li> <li>2. No trace of rats was found during inspection but flies were present. (refer to Photo Record 6 of Attachment 3)</li> <li>3. Waste management measures were not implemented properly. There were no sufficient waste disposal points and regular dispose of waste at the concerned area (refer to Photo Record 8 of Attachment 3).</li> <li>4. The complaint was project-related as improper disposal of waste could lead to occurrence of rats.</li> </ol> <p><u>Action taken</u></p> <ol style="list-style-type: none"> <li>1. Poisonous rat bait was placed within the site boundary (refer to Photo Record 2,3,4 of Attachment 3).</li> <li>2. Workers received regular briefing about proper waste management (refer to Photo Record 5 of Attachment 3).</li> <li>3. The general waste was collected and removed after site inspection on 30 May 2024. (refer to Photo Record 9 and 10 of Attachment 3).</li> </ol> <p><u>Recommendations</u></p> <p>There was related evidence showing that the waste nuisance at the concerned area was caused by the Contractor (POC). However, it is recommended to</p>	- Closed-out on 04 June 2024

<b>Complaint Log for ED/2018/01</b>				
<b>Complaint Ref. No.</b>	<b>Date of Complaint</b>	<b>Description of Complaint</b>	<b>Investigation / Actions taken / Recommendations</b>	<b>Close-Out Date / Status</b>
			implement the following measures to minimize the impact of waste accumulation <ol style="list-style-type: none"> <li>1. Multiple waste disposal points should be set up for proper waste storage.</li> <li>2. Frequency of waste cleaning and collection should be increased to prevent waste accumulation.</li> <li>3. Training should be provided to workers about the concepts of site cleanliness and appropriate waste management procedures, including waste reduction, reuse and recycle.</li> </ol>	