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# 62<sup>nd</sup> CONSOLIDATED MONTHLY EM&A REPORT

#### December 2021

Client : Civil Engineering and Development Department, HKSAR

**EP No.** : EP-337/2009 –

New Distributor Roads Serving the Planned Kai Tak

**Development Area** 

**Contract No.** : KLN/2016/05 -

Independent Environmental Checker for

Contract No. KL/2015/02 Kai Tak Development – Stage 5A Infrastructure at Former North Apron Area

**Report No.** : 0087/16/ED/1144

Prepared by : Toby Wan

Reviewed by : Calvin Leung

Certified by : Colin Yung

Independent Environmental Checker

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#### **EXECUTIVE SUMMARY**

- i. This is the 62<sup>nd</sup> Consolidated Monthly EM&A Report which summaries the EM&A works undertaken by respective contract under EP-337/2009 within the period between 1 December and 31 December 2021.
- ii. The construction activities undertaken in the reporting month are summarized as follow:

#### Contract No. KL/2014/01:

- Architectural features works at landscaped deck and ground floor open space
- Defect work of pedestrian streets
- E&M works
- Laying of paving blocks for footpath
- · Planting works along footpath and at deck level, and
- TTA implementation, minor works at Shing Fung Road and Wang Chiu Road / Kai Cheung Road

#### Contract No. KL/2015/02:

- Carry out backfilling works around Staircase ST1 at SKLR Playground
- Erect scaffolding and construct the top slab of lift shaft at SKLR playground
- Construct pillar box for electrical supply of SW6
- Excavate with ELS installation at PERE TTA Stage 4
- Remedial works for the defects identified by maintenance parties, e.g. DSD, HyD
- Landscaping works at Road L7 and Road D1
- Outstanding works for irrigation system at Road L7 and D1
- Construction of additional street furniture at Road D1 and L7
- Road marking at Road D1 and L7

#### Contract No. ED/2018/01:

- North Approach Ramp Construction of wall, roof slab, utilities trough
- Bridge D3 Construction of Bridge Deck and abutments
- North Depressed Road Construction of wall & top slab
- Underpass Construction of walls and roof slab
- South Approach Ramp Construction of Permanent Structure
- District Cooling System seawater intake box culvert Installation of precast units and backfilling works, reinstatement of the seawall and backfilling works
- Lift 3 –Construction of linking platform
- Lift 4 Construction of Wall and Roof Slab / Installation of Steelworks and Glass Panel
- South Depressed Road –Installation of ELS system / construction of permanent works
- Rising Main and Water Pipe Laying of sewage
- Landscaped Deck –Construction of pile caps and installation of columns
- Transformer Room –Installation of ELS system and construction of permanent structure
- Road D3 Junction –Road works
- Lift 1 &2 -Installation of ELS system

#### Contract No. ED/2018/05:

- Underground utility diversion works and pillar box relocation works at Sa Po Road
- Bored pile works for landscape elevated walkway LW-02
- Sheetpile installation at launching shaft for subway SB-01
- Drainage works for Pedestrian Street No. 1, No. 2 & No. 3
- Construction of Crowd Dispersal Route
- Twin rising mains diversion works

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

- iii. No Action / Limit Level exceedance was recorded for 24-hr TSP monitoring in the reporting month.
- iv. No Action / Limit Level exceedance was recorded for 1-hr TSP monitoring in the reporting month.
- v. No Action / Limit Level exceedance was recorded for noise monitoring in the reporting month.

#### Complaint, Notification of Summons and Successful Prosecution

- vi. No complaint, notification of summons or prosecution was received for Contract No. KL/2014/01, Contract No. KL/2015/02, and Contract No. ED/2018/05 in this reporting month.
- vii. One complaint was received for Contract No. ED/2018/01 in this reporting month. The complaint was received on 10 December 2021 and close-out in 5 January 2022.

#### **Reporting Changes**

viii. There was no reporting change in the reporting month.

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# **Future Key Issues**

ix. The potential environmental impacts for the coming month and the control measures are shown in **Table I**:

Table I Summary of Key Issues for the Coming Month and Control Measures

Major Impact	Control Measures			
Prediction Control Weasures  Contract No. KL/2014/01:				
Air quality impact (dust)	<ul> <li>Frequent watering of haul road and unpaved/exposed areas;</li> <li>Frequent watering or covering stockpiles with tarpaulin or similar means; and</li> <li>Watering of any earth moving activities.</li> </ul>			
Water quality impact (surface run-off)	<ul> <li>Diversion of the collected effluent to de-silting facilities for treatment prior to discharge to public storm water drains;</li> <li>Provision of adequate de-silting facilities for treating surface run-off and other collected effluents prior to discharge;</li> <li>Provision of perimeter protection such as sealing of hoarding footings to avoid run-off from entering the existing storm water drainage system via public road; and</li> <li>Provision of measures to prevent discharge into the stream.</li> </ul>			
Noise Impact	<ul> <li>Scheduling of noisy construction activities if necessary to avoid persistent noisy operation;</li> <li>Controlling the number of plants use on site;</li> <li>Regular maintenance of machines; and</li> <li>Use of acoustic barriers if necessary.</li> </ul>			
Waste/ Chemical Management	<ul> <li>Maintenance involving activities with potential for leakage and spillage should only be undertaken within the areas appropriately equipped to control these discharges.</li> <li>Chemical wastes should be hold by suitable containers with clear label and stored at a safe location.</li> </ul>			
Contract No. KL/2	<u>015/02:</u>			
Air quality impact (dust)	<ul> <li>Frequent watering of haul road and unpaved/exposed areas;</li> <li>Frequent watering or covering stockpiles with tarpaulin or similar means; and</li> <li>Watering of any earth moving activities.</li> </ul>			
Water quality impact (surface run-off)	<ul> <li>Diversion of the collected effluent to de-silting facilities for treatment prior to discharge to public storm water drains;</li> <li>Provision of adequate de-silting facilities for treating surface run-off and other collected effluents prior to discharge;</li> <li>Provision of perimeter protection such as sealing of hoarding footings to avoid run-off from entering the existing storm water drainage system via public road; and</li> <li>Provision of measures to prevent discharge into the stream.</li> </ul>			
Noise Impact	<ul> <li>Scheduling of noisy construction activities if necessary to avoid persistent noisy operation;</li> <li>Controlling the number of plants use on site;</li> <li>Regular maintenance of machines; and</li> <li>Use of acoustic barriers if necessary.</li> </ul>			
Contract No. ED/2	018/01:			
Air Quality, Construction Noise, Water Quality, Chemical and	<ul> <li>Sufficient watering of the works site with the active dust emitting activities,</li> <li>Limitation of the speed for vehicles on unpaved site roads,</li> <li>Properly cover the stockpiles,</li> <li>Good maintenance to the plant and equipment,</li> <li>Use of quieter plant and Quality Powered Mechanical Equipment (QPME),</li> </ul>			

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Major Impact Prediction	Control Measures
Waste Management, Landscape and Visual	<ul> <li>Provide movable noise barriers,</li> <li>Appropriate desilting/ sedimentation devices provided on site for treatment before discharge,</li> <li>Well maintain the drainage system to prevent the spillage of wastewater during heavy rainfall,</li> <li>Onsite waste sorting and implementation of trip ticket system,</li> <li>Good management and control on construction waste reduction,</li> <li>Erection of decorative screen hoarding,</li> <li>Strictly following the Environmental Permits and Licenses, and</li> <li>Provide sufficient mitigation measures as recommended in Approved EIA Reports.</li> </ul>
Contract No. ED/2	<u>:018/05:</u>
Air Quality, Construction Noise, Water Quality, Chemical and Waste Management, Landscape and Visual	<ul> <li>Sufficient watering of the works site with the active dust emitting activities,</li> <li>Limitation of the speed for vehicles on unpaved site roads,</li> <li>Properly cover the stockpiles,</li> <li>Good maintenance to the plant and equipment,</li> <li>Use of quieter plant and Quality Powered Mechanical Equipment (QPME),</li> <li>Provide movable noise barriers,</li> <li>Appropriate desilting/ sedimentation devices provided on site for treatment before discharge,</li> <li>Well maintain the drainage system to prevent the spillage of wastewater during heavy rainfall,</li> <li>Onsite waste sorting and implementation of trip ticket system,</li> <li>Good management and control on construction waste reduction,</li> <li>Erection of decorative screen hoarding,</li> <li>Strictly following the Environmental Permits and Licenses, and</li> <li>Provide sufficient mitigation measures as recommended in Approved EIA Reports.</li> </ul>

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#### 1. INTRODUCTION

# 1.1 Background

- 1.1.1 The Kai Tak Development 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.
- 1.1.2 A study of environmental impact assessment (EIA) was undertaken to consider the key issues of air quality, noise, water quality, waste, land contamination, cultural heritage and landscape and visual impact, and identify possible mitigation measures associated with the works. EIA Report (Register No. AEIAR-130/2009) was approved by the Environmental Protection Department (EPD) on 4 March 2009.
- 1.1.3 The EP-337/2009 was issued on 23 April 2009 for the new distributor roads serving the planned Kai Tak Development to the following scale and slope:
  - a) Road D1 a dual 2-lane carriageway of approximately 1.3 km long.
  - b) Road D2 a dual 3-lane carriageway of approximately 1.1 km long.
  - c) Road D3 a dual 2-lane carriageway of approximately 2.3 km long.
  - d) Road D4 a dual 2-lane carriageway of approximately 0.9 km long.
- 1.1.4 The Civil Engineering and Development Department HKSAR has appointed Fugro Technical Services Limited (FTS) to undertake the role of Independent Environmental Checker (IEC) for the Contract No. KL/2015/02.
- 1.1.5 This is the 62<sup>nd</sup> Consolidated Monthly EM&A Report which summaries the EM&A works undertaken by respective contract under EP-337/2009 within the period between 1 December and 31 December 2021.

#### 1.2 Summary of relevant Contract Information of Key Personnel

Party	Position	Name	Telephone	Fax	
Contract No. KL/2014/0	1:		•		
Project Proponent	Senior Engineer	Mr. Keith Chu	3579 2450	3579 4516	
(CEDD)	Engineer	Ms. Adonia Yung	3579 2124	3379 4316	
Engineer's Representative (AECOM)	CRE	Mr. Clive Cheng	3746 1801	2798 0783	
IEC (KSMC)	IEC	Dr. Douglas Wong	2618 2166	2120 7752	
	ET Leader	Mr. K.S Lee	2151 2091		
ET (Cinotech)	Audit Team Leader	Ms. Betty Choi	2151 2072	3107 1388	
Main Contractor (CCJV)	EO	Mr. Jack Lai	2960 1398	2960 1399	
Contract No. KL/2015/0	2:				
Project Proponent (CEDD)	Senior Engineer	Mr. Ricky Chan	2116 3753	2116 0714	
Engineer's Representative (AECOM)	SRE	Mr. Vincent Lee	2798 0771	2210 6110	
IEC (FTS)	IEC	Mr. Colin Yung	3565 4114	2450 8032	
	ET Leader	Mr. K.S Lee	2151 2091		
ET (Cinotech)	Audit Team Leader	Ms. Betty Choy	2151 2072	3107 1388	
Main Contractor	Site Agent	Mr. W. M. Wong	6386 3535	2398 8301	

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Party	Position	Name	Telephone	Fax
(PWHJV)				
Contract No. ED/2018/0	<u>)1:</u>			
Project Proponent	Senior Engineer	Mr. Alex Wong	3579 2452	2739 0076
(CEDD)	Engineer	Ms. Chan Ka Yan	3579 2458	2739 0076
Engineer's Representative (AECOM)	CRE	Mr. Clive Cheng	3911 4201	3911 4288
IEC (Ramboll)	IEC	Mr. Y H Hui	3465 2850	3465 2899
ET (Ka Shing)	ET Leader	Mr. Chan Pang	6082 2973	2120 7752
Main Contractor (Penta-Ocean)	EO	Mr. Lulu Mar	6845 0626	3465 8898
Contract No. ED/2018/0	<u>15:</u>			
Drainet Present	Senior Engineer	Mr. George Ng	3842 7107	2739 0076
Project Proponent (CEDD)	Engineer	Mr. Albert Tse	3842 7137	2739 0076
(CEDD)	Engineer	Mr. Perry Lo	3842 7143	2739 0076
Engineer's Representative (AECOM)	CRE	Mr. Leung Wai Kit	2412 3410	2798 0783
IEC (Acuity)	IEC	Mr. Kevin Li	2698 6833	2698 9383
ET (Ka Shing)	ET Leader	Ir. Chan Pang	2618 2166	2120 7752
Main Contractor (BK- STEC)	EO	Mr. Raymond Lam	9713 6817	3850 8508

#### 1.3 Summary of Construction Programme and Activities

- 1.3.1 The construction programme of each Contract is summarized in the appendices of the corresponding Monthly EM&A report.
- 1.3.2 The major construction activities undertaken in the reporting month are summarized as follow:

# Contract No. KL/2014/01:

- Architectural features works at landscaped deck and ground floor open space
- Defect work of pedestrian streets
- E&M works
- Laying of paving blocks for footpath
- · Planting works along footpath and at deck level, and
- TTA implementation, minor works at Shing Fung Road and Wang Chiu Road / Kai Cheung Road

#### Contract No. KL/2015/02:

- · Carry out backfilling works around Staircase ST1 at SKLR Playground
- Erect scaffolding and construct the top slab of lift shaft at SKLR playground
- Construct pillar box for electrical supply of SW6
- Excavate with ELS installation at PERE TTA Stage 4
- Remedial works for the defects identified by maintenance parties, e.g. DSD, HyD
- Landscaping works at Road L7 and Road D1
- Outstanding works for irrigation system at Road L7 and D1
- Construction of additional street furniture at Road D1 and L7
- Road marking at Road D1 and L7

#### Contract No. ED/2018/01:

North Approach Ramp – Construction of wall, roof slab, utilities trough

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- Bridge D3 Construction of Bridge Deck and abutments
- North Depressed Road Construction of wall & top slab
- Underpass Construction of walls and roof slab
- South Approach Ramp Construction of Permanent Structure
- District Cooling System seawater intake box culvert Installation of precast units and backfilling works, reinstatement of the seawall and backfilling works
- Lift 3 –Construction of linking platform
- Lift 4 –Construction of Wall and Roof Slab / Installation of Steelworks and Glass Panel
- South Depressed Road –Installation of ELS system / construction of permanent works
- Rising Main and Water Pipe Laying of sewage
- Landscaped Deck -Construction of pile caps and installation of columns
- Transformer Room –Installation of ELS system and construction of permanent structure
- Road D3 Junction –Road works
- Lift 1 &2 -Installation of ELS system

#### Contract No. ED/2018/05:

- Underground utility diversion works and pillar box relocation works at Sa Po Road
- Bored pile works for landscape elevated walkway LW-02
- Sheetpile installation at launching shaft for subway SB-01
- Drainage works for Pedestrian Street No. 1, No. 2 & No. 3
- Construction of Crowd Dispersal Route
- Twin rising mains diversion works

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# 1.4 Summary of Inter-relationship with the environmental protection/ mitigation measures with the construction programme

1.4.1 The summary of inter-relationship with environmental protection/mitigation measures are presented as follow:

Major Environmental Impact	Control Measures			
Contract No. KL/2014/01:				
Noise, dust impact, water quality and waste generation	<ul> <li>Sufficient watering of the works site with active dust emitting activities;</li> <li>Properly cover the stockpiles;</li> <li>On-site waste sorting and implementation of trip ticket system</li> <li>Appropriate desilting/sedimentation devices provided on site for treatment before discharge;</li> <li>Use of quiet plant and well-maintained construction plant;</li> <li>Well maintain the drainage system to prevent the spillage of wastewater during heavy rainfall;</li> <li>Provide mitigation measure to temporary use of chemicals;</li> <li>Provide sufficient mitigation measures as recommended in Approved EIA Report/Lease requirement.</li> </ul>			
Contract No. KL/2015/02:				
Noise, dust impact, water quality and waste generation	<ul> <li>Sufficient watering of the works site with active dust emitting activities;</li> <li>Properly cover the stockpiles;</li> <li>On-site waste sorting and implementation of trip ticket system</li> <li>Appropriate desilting/sedimentation devices provided on site for treatment before discharge;</li> <li>Use of quiet plant and well-maintained construction plant;</li> <li>Provide movable noise barrier;</li> <li>Well maintain the drainage system to prevent the spillage of wastewater during heavy rainfall;</li> <li>Provide sufficient mitigation measures as recommended in Approved EIA Report/Lease requirement.</li> </ul>			
Contract No. ED/2018/01:				
The mitigation measures for environmental impact including Air Quality, Construction Noise, Water Quality, Chemical and Waste Management, Landscape and Visual shall be implemented:	<ul> <li>Sufficient watering of the works site with the active dust emitting activities,</li> <li>Limitation of the speed for vehicles on unpaved site roads,</li> <li>Properly cover the stockpiles,</li> <li>Good maintenance to the plant and equipment,</li> <li>Use of quieter plant and Quality Powered Mechanical Equipment (QPME),</li> <li>Provide movable noise barriers,</li> <li>Appropriate desilting/ sedimentation devices provided on site for treatment before discharge,</li> <li>Well maintain the drainage system to prevent the spillage of wastewater during heavy rainfall,</li> <li>Onsite waste sorting and implementation of trip ticket system,</li> <li>Good management and control on construction waste reduction,</li> <li>Erection of decorative screen hoarding,</li> <li>Strictly following the Environmental Permits and Licenses,</li> </ul>			

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Major Environmental Impact	Control Measures
	<ul> <li>and</li> <li>Provide sufficient mitigation measures as recommended in Approved EIA Reports.</li> </ul>
Contract No. ED/2018/05:	
The mitigation measures for environmental impact including Air Quality, Construction Noise, Water Quality, Chemical and Waste Management, Landscape and Visual shall be implemented:	

# 1.5 Summary Status of Environmental Licences, Notifications and Permits

1.5.1 Detailed relevant environmental licenses, permits and/or notifications on environmental protection for this EP are presented in the appendices of the corresponding Monthly EM&A report.

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#### 2. ENVIRONMENTAL MONITORING AND AUDIT

#### 2.1 Results and Observations

# Air Quality

- 2.1.1 The schedule of air quality monitoring in reporting month is provided in the appendices of the corresponding Monthly EM&A report.
- 2.1.2 The weather conditions during the monitoring are provided in the appendices of the corresponding Monthly EM&A report.
- 2.1.3 The monitoring data of 24-hr TSP and 1 hour TSP are summarized in **Table 2.1**. Detailed monitoring data are presented in the appendices of the corresponding Monthly EM&A report.

Table 2.1 Summary of 24-hr and 1 hour TSP Monitoring Results

Parameter	Monitoring Station	Average (µg/m³)	Range (µg/ m³)	Action Level (µg/ m³)	Limit Level (µg/ m³)
Contract No.	KL/2014/01:				
N.A (No air qu	uality monitoring is re	quired for the Proje	ect)		
Contract No.	KL/2015/02:				
1-hr TSP	AM2	39.1	19.0 – 66.0	346	500
24-hr TSP	AM2(A)	84.6	44.1 – 125.6	157	260
Contract No.	ED/2018/01:				
	AM3	75	26 – 93	182	260
24-hr TSP	AM4(A)	70	22 – 90	187	
	AM7	80	24 – 109	181	
	AM3	56	21 – 82	297	
1-hr TSP	AM4(A)	58	26 – 73	326	500
	AM7	65	23 – 96	315	
Contract No. ED/2018/05:					
24-hr TSP	AM2(A)	72	25 – 104	175	000
	AM3	75	26 – 93	172	260
1-hr TSP	AM2(A)	54	20 – 88	302	F00
	AM3	56	21 – 82	301	500

- 2.1.4 No Action / Limit Level exceedance was recorded for 24-hr TSP monitoring in the reporting month.
- 2.1.5 No Action / Limit Level exceedance was recorded for 1-hr TSP monitoring in the reporting month.
- 2.1.6 The monitoring data of 24-hr TSP was compared with the EIA predictions are presented in the appendices of the corresponding Monthly EM&A report.
- 2.1.7 The Event and Action Plan for air quality is given in the appendices of the corresponding Monthly EM&A report.

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#### Noise

- 2.1.8 The schedule of noise monitoring in reporting month is provided in in the appendices of the corresponding Monthly EM&A report.
- 2.1.9 The noise monitoring data are summarized in **Table 2.2**. Detailed monitoring data are presented in the appendices of the corresponding Monthly EM&A report.

Table 2.2 Summary of Noise Impact Monitoring Results

Monitoring Stations	Construction Noise Level Leq <sub>(30min)</sub> dB(A) (Range)	Action Level	Limit Level dB (A)
Contract No. KL/2014/01:			
(No Construction noise m		NA	
Contract No. KL/2015/02:			
M3(A)	67.6 – 74.5 #	When one	75
M4	72.1 – 74.1 #		70*
M5(C)	73.1 – 74.8 #	documented complaint is	75
Contract No. ED/2018/01:	received.		
M11	67.1 – 68.1		75
M12	63.8 – 65.9		75
Contract No. ED/2018/05:			
M4(A)	69.4 – 71.0		75
M5(A)	72.2 – 74.5		75

<sup>(\*)</sup> Noise Limit Level is 65 dB(A) during school examination periods.

- 2.1.10 The noise monitoring data was compared with the EIA predictions are presented in the appendices of the corresponding Monthly EM&A report.
- 2.1.11 No Action / Limit Level exceedance was recorded for noise monitoring in the reporting month.
- 2.1.12 The Event and Action Plan for noise is given in in the appendices of the corresponding Monthly EM&A report.

#### Landscape and Visual

2.1.13 Site audits were carried out on a weekly basis to monitor and audit the landscape and visual mitigation measures within the site boundaries of this Project. Detailed of observations are presented in the appendices of the corresponding Monthly EM&A report.

<sup>(&</sup>lt;sup>#</sup>) Measured noise level ≤ background / baseline noise level, detailed data refer to the corresponding Monthly EM&A report.

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#### 3. SITE INSPECTION

# 3.1 Site Inspection

- 3.1.1 Site inspections were carried out weekly to monitor the implementation of proper environmental pollution control and mitigation measures for the Project.
- 3.1.2 Detailed of observation, recommendation of site inspections and summary of the mitigation measures implementation schedule is provided in the appendices of the corresponding Monthly EM&A Report.

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#### 4. ENVIRONMENTAL COMPLAINT AND NON-COMPLIANCE

# 4.1 Complaints, Notification of Summons and Prosecution

4.1.1 The summary of complaints, notification of summons and prosecution in the reporting month are shown as **Table 4.1**.

Table 4.1 Summary of Complaints, Notification of Summons and Prosecution

Event	No. of Event This Month	Remark
Contract No. KL/2014/01:		
Complaint received	0	NA
Notifications of any summons & prosecutions received	0	NA
Contract No. KL/2015/02:		
Complaint received	0	NA
Notifications of any summons & prosecutions received	0	NA
Contract No. ED/2018/01:		
Complaint received	1	Date of complaint received: 10 December 2021  Close-out date: 5 January 2022  Description of complaint: 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.
Notifications of any summons & prosecutions received	0	NA
Contract No. ED/2018/05:		
Complaint received	0	NA
Notifications of any summons & prosecutions received	0	NA

4.1.2 Detailed records are presented in the appendices of the corresponding Monthly EM&A report.

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#### 5. IMPLEMENTATION STATUS OF ENVIRONMENTAL MITIGATION MEASURES

# 5.1 Implementation Status

5.1.1 The Contractor has implemented environmental mitigation measures and requirements as stated in the EIA Reports, the EP and the EM&A Manuals. The implementation status of the mitigation measures during the reporting month are presented in the appendices of the corresponding Monthly EM&A report.

#### 5.2 Waste Management

5.2.1 The amount of wastes generated of this Project during the reporting month is shown in the appendices of the corresponding Monthly EM&A report.

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#### 6. FUTURE KEY ISSUES

#### 6.1 Construction Programme for the Next Two Months

6.1.1 The major site activities undertaken for the coming two months are summarized in follow:

#### Contract No. KL/2014/01:

- Architectural features works at landscaped deck and ground floor open space;
- Defect work of pedestrian streets:
- E&M works;
- · Laying of paving blocks for footpath;
- · Noise barrier modification
- · Planting works along footpath and at deck level, and;
- TTA implementation, minor works at Shing Fung Road and Wang Chiu Road / Kai Cheung Road.

#### Contract No. KL/2015/02:

- Carry out backfilling works around Staircase ST1 at SKLR Playground
- Install steel staircase cover at SKLR Playground
- Install lift glazing panel at SKLR Playground
- Carry out structural works of subway at PERE TTA Stages 3 & 4
- Preparation works for road-opening of Road D1 and L7
- Additional works as requested by maintenance parties
- Construction of additional street furniture at Road D1 and L7
- Construction of vehicle gates and chain-link fence

#### Contract No. ED/2018/01:

- North Approach Ramp Construction of utilities trough
- Bridge D3 Construction of Bridge Deck and abutments
- North Depressed Road Construction of wall & top slab
- Underpass Construction of walls and roof slab
- South Approach Ramp Construction of Permanent Structure
- District Cooling System seawater intake box culvert Installation of precast units and backfilling works, reinstatement of the seawall and backfilling works
- Lift 3 Construction of linking platform
- Lift 4 Construction of Wall and Roof Slab / Installation of Steelworks and Glass Panel
- South Depressed Road Installation of ELS system / construction of permanent works
- Rising Main and Water Pipe Laying of sewage
- Landscaped Deck Construction of pile caps and installation of columns
- Transformer Room Installation of wailing & strut for the cofferdam / Construction of Permanent Structure
- Road D3 Junction Road works Lift 1 &2- Installation of ELS system

#### Contract No. ED/2018/05:

- Advance works for traffic diversion at Sa Po Road
- Bored pile works for landscape elevated walkway
- Pre-drilling work for S14
- Drainage works for Pedestrian Street No. 1, No. 2 & No.3
- Construction of Crowd Dispersal Route
- Rising main construction
- Sheet pile installation for launching shaft of SB-01

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The potential environmental impacts arising from the above construction activities and the control measures are shown in Table 6.1:

Table 6.1 Summary of Key Issues for the Coming Month and Control Measures					
Major Impact Prediction	Control Measures				
Contract No. KL/2014/01:					
Air quality impact (dust)	<ul> <li>Frequent watering of haul road and unpaved/exposed areas;</li> <li>Frequent watering or covering stockpiles with tarpaulin or similar means; and</li> <li>Watering of any earth moving activities.</li> </ul>				
Water quality impact (surface run-off)	<ul> <li>Diversion of the collected effluent to de-silting facilities for treatment prior to discharge to public storm water drains;</li> <li>Provision of adequate de-silting facilities for treating surface run-off and other collected effluents prior to discharge;</li> <li>Provision of perimeter protection such as sealing of hoarding footings to avoid run-off from entering the existing storm water drainage system via public road; and</li> <li>Provision of measures to prevent discharge into the stream.</li> </ul>				
Noise Impact	<ul> <li>Scheduling of noisy construction activities if necessary to avoid persistent noisy operation;</li> <li>Controlling the number of plants use on site;</li> <li>Regular maintenance of machines; and</li> <li>Use of acoustic barriers if necessary.</li> </ul>				
Waste/ Chemical Management	<ul> <li>Maintenance involving activities with potential for leakage and spillage should only be undertaken within the areas appropriately equipped to control these discharges.</li> <li>Chemical wastes should be hold by suitable containers with clear label and stored at a safe location.</li> </ul>				
Contract No. KL/2	<u>015/02:</u>				
Air quality impact (dust)	<ul> <li>Frequent watering of haul road and unpaved/exposed areas;</li> <li>Frequent watering or covering stockpiles with tarpaulin or similar means; and</li> <li>Watering of any earth moving activities.</li> </ul>				
Water quality impact (surface run-off)	<ul> <li>Diversion of the collected effluent to de-silting facilities for treatment prior to discharge to public storm water drains;</li> <li>Provision of adequate de-silting facilities for treating surface run-off and other collected effluents prior to discharge;</li> <li>Provision of perimeter protection such as sealing of hoarding footings to avoid run-off from entering the existing storm water drainage system via public road; and</li> <li>Provision of measures to prevent discharge into the stream.</li> </ul>				
Noise Impact	<ul> <li>Scheduling of noisy construction activities if necessary to avoid persistent noisy operation;</li> <li>Controlling the number of plants use on site;</li> <li>Regular maintenance of machines; and</li> <li>Use of acoustic barriers if necessary.</li> </ul>				
Contract No. ED/2018/01:					
Air Quality, Construction Noise, Water Quality, Chemical and Waste Management, Landscape and	<ul> <li>Sufficient watering of the works site with the active dust emitting activities,</li> <li>Limitation of the speed for vehicles on unpaved site roads,</li> <li>Properly cover the stockpiles,</li> <li>Good maintenance to the plant and equipment,</li> <li>Use of quieter plant and Quality Powered Mechanical Equipment (QPME),</li> <li>Provide movable noise barriers,</li> <li>Appropriate desilting/ sedimentation devices provided on site for treatment before discharge,</li> </ul>				

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Major Impact Prediction	Control Measures		
Visual	<ul> <li>Well maintain the drainage system to prevent the spillage of wastewater during heavy rainfall,</li> <li>Onsite waste sorting and implementation of trip ticket system,</li> <li>Good management and control on construction waste reduction,</li> <li>Erection of decorative screen hoarding,</li> <li>Strictly following the Environmental Permits and Licenses, and</li> <li>Provide sufficient mitigation measures as recommended in Approved EIA Reports.</li> </ul>		
Contract No. ED/2	<u>018/05:</u>		
Air Quality, Construction Noise, Water Quality, Chemical and Waste Management, Landscape and Visual	<ul> <li>Sufficient watering of the works site with the active dust emitting activities,</li> <li>Limitation of the speed for vehicles on unpaved site roads,</li> <li>Properly cover the stockpiles,</li> <li>Good maintenance to the plant and equipment,</li> <li>Use of quieter plant and Quality Powered Mechanical Equipment (QPME),</li> <li>Provide movable noise barriers,</li> <li>Appropriate desilting/ sedimentation devices provided on site for treatment before discharge,</li> <li>Well maintain the drainage system to prevent the spillage of wastewater during heavy rainfall,</li> <li>Onsite waste sorting and implementation of trip ticket system,</li> <li>Good management and control on construction waste reduction,</li> <li>Erection of decorative screen hoarding,</li> <li>Strictly following the Environmental Permits and Licenses, and</li> <li>Provide sufficient mitigation measures as recommended in Approved EIA Reports.</li> </ul>		

# 6.2 Monitoring Schedules for the Next Three Months

6.2.1 The tentative schedules for environmental monitoring in the coming three months are provided in in the appendices of the corresponding Monthly EM&A.

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#### 7. CONCLUSIONS

- 7.1.1 No Action / Limit Level exceedance was recorded for 24-hr TSP monitoring in the reporting month.
- 7.1.2 No Action / Limit Level exceedance was recorded for 1-hr TSP monitoring in the reporting month.
- 7.1.3 No Action / Limit Level exceedance was recorded for noise monitoring in the reporting month.
- 7.1.4 No complaint, notification of summons or prosecution was received for Contract No. KL/2014/01, Contract No. KL/2015/02, and Contract No. ED/2018/05 in this reporting month.
- 7.1.5 One complaint was received for Contract No. ED/2018/01 in this reporting month. The complaint was received on 10 December 2021 and close-out in 5 January 2022.
- 7.1.6 The potential environmental impacts arising from the coming two months of major construction activities and the control measures are shown in **Table 6.1.**

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# Appendix A

Monthly EM&A Report
For
Contract No. KL/2014/01
Kai Tak Development - Stage 2 Infrastructure works for Developments at Southern Part of the Former Runway

# **Civil Engineering and Development Department**

# EP-337/2009 & EP-445/2013/A Contract No. KL/2014/01

# Kai Tak Development – Stage 2 Infrastructure works for Developments at Southern Part of the Former Runway

Monthly EM&A Report December 2021

(Version 1.0)

Approved By (Environmental Team Leader)

#### REMARKS:

The information supplied and contained within this report is, to the best of our knowledge, correct at the time of printing.

CINOTECH accepts no responsibility for changes made to this report by third parties

#### CINOTECH CONSULTANTS LTD

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# 嘉誠管理顧問有限公司







Our ref: 12-01-2022

12-01-2022

By email: clive.cheng@aecom-ktd.com and By hand

Supervising Officer Representative

Aecom Asia Co Ltd.

8/F Grand Central Plaza Tower 2

138 Shatin Rural Committee Road

Sha Tin, N.T. Hong Kong

(Attn: Mr. Cheng Chi Hung)

Dear Mr. Cheng,

Re: Contract No. KL/2014/01 (Environmental Permit Nos. EP-337/2009 and EP-445/2013/A)

Kai Tak Development -Stage 2 Infrastructure Works for Developments at Southern Part of the Former Runway

Monthly EM&A report for December 2021 (version 1.0)

Reference is made to the Environmental Team's submission of the draft Monthly EM&A Report (version 1.0) for December 2021 provided to Independent Environmental Checker (IEC) via email dated on 12-01-2022 for review and comment.

Please be informed that IEC has no adverse comment on the captioned submission. IEC writes to verify the captioned submission in accordance with Specific Condition 2.2 of the Environmental Permit No. 337/2009 and 445/2013/A.

Thank you very much for your attention and please feel free to contact the undersigned should you require further information.

Yours faithfully,

For and on behalf of

Ka Shing Management Consultant Limited

Ir. Dr. Douglas WONG

Independent Environmental Checker

c.c. CEDD Mr. Patrick Lee (By email: patricksllee@cedd.gov.hk)

AECOM Mr. Anthony Lok (By email: anthony.lok@aecom-ktd.com)

CEC-CCC Mr. Eric Fong (By email: eric-cs-fong@continental-engineering.com)

Cinotech Mr. K.S Lee (By email: ks.lee@cinotech.com.hk)

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#### **EXECUTIVE SUMMARY**

#### Introduction

- 1. This is the 69<sup>th</sup> Monthly Environmental Monitoring and Audit Report prepared by Cinotech Consultants Ltd. for "Contract No. KL/2014/01 Kai Tak Development Stage 2 Infrastructure Works for Developments at the Southern Part of the Former Runway" (Hereafter referred to as "the Project"). This contract work comprises two Schedule 2 designated projects (DP), namely the new distributor road D4 (part) and roads D3A & D4A serving the planned KTD. The DPs are part of the designated projects under Environmental Permits (EP) No.: EP-337/2009 ("New distributor roads serving the planned Kai Tak Development") and EP-445/2013/A ("Kai Tak Development Roads D3A & D4A") respectively. This report documents the findings of EM&A Works conducted in December 2021.
- 2. With reference to the same principle of EIA report of the Project, air quality monitoring station should be provided at the Air Sensitive Receivers (ASR) within 500 m from the boundary of this Project while construction noise monitoring station should be provided at the Noise Sensitive Receivers (NSR) within 300 m from the boundary of this Project. Since the opening of the Centre of Excellence in Paediatrics (Children's Hospital) on 18 December 2018, the hospital is considered as the only relevant monitoring location and therefore the monitoring is required.
- 3. The major site activities undertaken in the reporting month included:
  - Architectural features works at landscaped deck and ground floor open space;
  - Defect work of pedestrian streets;
  - E&M works:
  - Laying of paving blocks for footpath;
  - Planting works along footpath and at deck level, and;
  - TTA implementation, minor works at Shing Fung Road and Wang Chiu Road / Kai Cheung Road.

#### **Environmental Monitoring Works**

- 4. Environmental monitoring for the Project was performed in accordance with the EM&A Manual and the monitoring results were checked and reviewed. Site Inspections/Audits were conducted once per week. The implementation of the environmental mitigation measures, Event Action Plans and environmental complaint handling procedures were also checked.
- 5. Summary of the non-compliance in the reporting month for the Project is tabulated in **Table** I.

 Table I
 Non-compliance Recorded for the Project in the Reporting Month

Parameter	No. of Project-rela	Action Taken	
rarameter	Action Level	Limit Level	Action Taken
Noise	0	0	N/A

Environmental Monitoring for Air Quality and Construction Noise

6. No monitoring for air quality and construction noise is required. No Action/Limit Level exceedance was recorded.

#### **Environmental Licenses and Permits**

- 7. Licenses/Permits granted to the Project include the Environmental Permits (EP) for the Project, EP-337/2009 issued on 23 April 2009 and EP-445/2013 issued on 3 May 2013 (Amended Environmental Permit (No.: EP-445/2013/A) issued on 13 August 2014).
- 8. Billing Account for Disposal of Construction Waste (A/C No. 7024073)
- 9. Registration of Chemical Waste Producer (License: 5213-247-C4004-01).
- 10. Water Discharge License (License: WT00023634-2016).
- 11. Construction Noise Permits (Permit: GW-RE0442-20, GW-RE0639-20, GW-RE0045-21, GW-RE0717-21 & GW-RE0656-21)

#### **Key Information in the Reporting Month**

12. Summary of key information in the reporting month is tabulated in **Table II**.

Table II Summary Table for Key Information in the Reporting Month

Event	Event Details		Action Taken	Status	Remark
	Number	Nature			
Complaint received	0		N/A	N/A	
Reporting Changes	0		N/A	N/A	
Notifications of any summons & prosecutions received	0		N/A	N/A	

#### **Future Key Issues**

- 13. The future key environmental issues in the coming month include:
  - Architectural features works at landscaped deck and ground floor open space;
  - Defect work of pedestrian streets;
  - E&M works;
  - Laying of paving blocks for footpath;

- Noise barrier modification
- Planting works along footpath and at deck level, and;
- TTA implementation, minor works at Shing Fung Road and Wang Chiu Road / Kai Cheung Road.

#### **Reporting Changes**

14. Since the major parts of Works under Contract no. KL/2014/03 has been completed, the environmental monitoring works of EM&A monitoring station, KTD1a, was then handed over to the ET of Contract no. ED/2018/04 in August, 2020. In order to obtain the environmental impact monitoring data with higher representativeness based on several factors, such as distance between monitoring location and the sensitive receiver, non-project related interference, obstruction to the construction works on site and the power supply problem, the monitoring location KTD1a was relocated to the original location as proposed in the EM&A manual (AEIAR-174/2013), and renamed as KTD1 on 3 August 2020.

#### 1. INTRODUCTION

#### **Background**

- 1.1 The Kai Tak Development (KTD) is located in the south-eastern part of Kowloon Peninsula, 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. It covers a land area of about 328 hectares. Stage 2 Infrastructure Works for Developments for Southern Part of the Former Runway is one of the construction stages of KTD. It contains two Schedule 2 DPs including new distributor roads serving the planned KTD and KTD Roads D3A & D4A. The general layout of the Project is shown in **Figure 1.**
- 1.2 One Environmental Permit (EP) No.: EP-337/2009 was issued on 23 April 2009 for new distributor roads serving the planned KTD and one Environmental Permit No.: EP-445/2013 was issued on 3 May 2013 for Kai Tak Development Roads D3A & D4A to Civil Engineering and Development Department (CEDD) as the Permit Holder. Pursuant to Section 13 of the EIAO, the Director of Environmental Protection Department amended the Environmental Permit No.: EP-445/2013 based on the Application No. VEP-449/2014 and the Environmental Permit (No.: EP-445/2013/A) was issued on 13 August 2014.
- 1.3 A study of environmental impact assessment (EIA) was undertaken to consider the key issues of air quality, noise, water quality, waste, land contamination, cultural heritage and landscape and visual impact, and identify possible mitigation measures associated with the works. EIA Reports (Register No. AEIAR-130/2009 and AEIAR-170/2013) were approved by the Environmental Protection Department (EPD) on 4 March 2009 and 3 May 2013 respectively.
- 1.4 Cinotech Consultants Limited (Cinotech) was commissioned by Civil Engineering and Development Department (CEDD) to undertake the role of the Environmental Team (ET) for the Contract No. KL/2014/01 Stage 2 Infrastructure Works for Developments at the Southern Part of the Former Runway. The construction work under KL/2014/01 comprises the construction of part of the Road D4 under the EP (EP-337/2009) and the construction of Roads D3A & D4A under the EP (EP-445/2013/A).
- 1.5 Cinotech Consultants Limited was commissioned by Civil Engineering and Development Department (CEDD) to undertake the Environmental Monitoring and Audit (EM&A) works for the Project. The construction commencement of this Contract is on 13 April 2016. This is the 69<sup>th</sup> Monthly EM&A report summarizing the EM&A works for the Project in December 2021.
- 1.6 All project information since the commencement of work under EPs including Monthly EM&A Reports is made available to the public via internet access at the website: https://www.epd.gov.hk/eia/english/register/index8/vep4492014\_content.html

# **Project Organizations**

- 1.7 Different parties with different levels of involvement in the project organization include:
  - Project Proponent Civil Engineering and Development Department (CEDD).
  - The Supervising Officer and the Supervising Officer's Representative (SO) AECOM Asia Co. Ltd. (AECOM).
  - Environmental Team (ET) Cinotech Consultants Limited (CCL).
  - Independent Environmental Checker (IEC) Ka Shing Management Consultant Ltd. (KSMC).
  - Contractor Continental Engineering Corp. and Chit Cheung Construction Co. Ltd. Joint Venture (CCJV).
- 1.8 The key contacts of the Project are shown in **Table III.**

**Table III Key Project Contacts** 

Party	Role	Contact Person	Position	Phone No.	Fax No.
CEDD	Project	Mr. Keith Chu	Senior Engineer	3579 2450	3579 4516
	Proponent	Ms. Adonia Yung	Engineer	3579 2124	
AECOM	Supervising Officer	Mr. Clive Cheng	CRE	3746 1801	2798 0783
~	Environmental	Mr. K S Lee	Environmental Team Leader	2151 2091	3107 1388
Cinotech	Team	Ms. Betty Choi	y Choi Audit Team Leader 2	2151 2072	
KSMC	Independent Environmental Checker	Dr. Douglas Wong	IEC	2618 2166	2120 7752
CCJV	Contractor	Mr. Jack Lai	Environmental Officer	2960 1398	2960 1399

#### Construction Activities undertaken during the Reporting Month

- 1.9 The site activities undertaken in the reporting month included:
  - Architectural features works at landscaped deck and ground floor open space;
  - Defect work of pedestrian streets;
  - E&M works;
  - Laying of paying blocks for footpath;
  - Planting works along footpath and at deck level, and;
  - TTA implementation, minor works at Shing Fung Road and Wang Chiu Road / Kai Cheung Road.

1.10 The construction programme showing the inter-relationship with environmental protection/mitigation measures is presented in **Table IV**.

Table IV Construction Programme Showing the Inter-Relationship with Environmental Protection/Mitigation Measures

Construction Works	Major Environmental Impact	Control Measures
As mentioned in Section 1.8	Noise, dust impact, water quality and waste generation	Sufficient watering of the works site with active dust emitting activities; Properly cover the stockpiles; On-site waste sorting and implementation of trip ticket system; Appropriate desilting/sedimentation devices provided on site for treatment before discharge; Use of quiet plant and well-maintained construction plant; Well maintain the drainage system to prevent the spillage of wastewater during heavy rainfall; Provide mitigation measure to temporary use of chemicals; Provide sufficient mitigation measures as recommended in Approved EIA Report/Lease requirement.

#### **Summary of EM&A Requirements**

- 1.11 The EM&A programme requires construction noise monitoring, air quality monitoring, landscape and visual monitoring and environmental site audit. The EM&A requirements for each parameter are described in the following sections, including:
  - All monitoring parameters;
  - Action and Limit levels for all environmental parameters;
  - Event Action Plans;
  - Environmental requirements and mitigation measures, as recommended in the EM&A Manual under the EP.
- 1.12 The advice on the implementation status of environmental protection and pollution control/mitigation measures is summarized in Section 5 of this report.

#### 2. AIR QUALITY

#### **Monitoring Requirements**

- 2.1 With reference to the same principle of EIA report of the Project, air quality monitoring station should be provided at the Air Sensitive Receivers (ASR) within 500 m from the boundary of this Project. Since the opening of the Centre of Excellence in Paediatrics (Children's Hospital) on 18 December 2018, the hospital is considered as the only relevant monitoring location and therefore the monitoring is required.
- 2.2 As the monitoring works for the hospital is covered by the Contract KL/2014/03 (Kai Tak Development Stage 3 Infrastructure Works for Developments at the Southern Part of the Former Runway) at the monitoring station (KTD1), the corresponding monitoring results for December 2021 should be accessed in the EM&A report for the reporting month. Appendix A shows the established Action and Limit Levels for the environmental monitoring works.

#### **Observations**

- 2.3 No monitoring for air quality is required for this report. No Action/Limit Level exceedance at KTD1 was recorded. The summary of exceedance record in reporting month is shown in **Appendix B**.
- 2.4 Site audits were carried out on a weekly basis to monitor and audit the timely implementation of air quality mitigation measures within the site boundaries of this Project. The summaries of site audits are attached in **Appendix C.**

#### 3. NOISE

#### **Monitoring Requirements**

- 3.1 With reference to the same principle of EIA report of the Project, construction noise monitoring station should be provided at the Noise Sensitive Receivers (NSR) within 300 m from the boundary of this Project. Since the opening of the Centre of Excellence in Paediatrics (Children's Hospital) on 18 December 2018, the hospital is considered as the only relevant monitoring location and therefore the monitoring is required.
- 3.2 As the monitoring works for the hospital is covered by the Contract KL/2014/03 (Kai Tak Development Stage 3 Infrastructure Works for Developments at the Southern Part of the Former Runway) at the monitoring station (KTD1), the corresponding monitoring results for December 2021 should be accessed in the EM&A report for the reporting month. Appendix A shows the established Action and Limit Levels for the environmental monitoring works.

#### **Observations**

- 3.3 No monitoring for construction noise is required for this report. No Action/Limit Level exceedance at KTD1 was recorded. The summary of exceedance record in reporting month is shown in **Appendix B**.
- 3.4 Site audits were carried out on a weekly basis to monitor and audit the timely implementation of construction noise mitigation measures within the site boundaries of this Project. The summaries of site audits are attached in **Appendix C**.

#### 4. LANDSCAPE AND VISUAL

#### **Monitoring Requirements**

4.1 According to EM&A Manual of the Kai Tak Development EIA Study, ET shall monitor and audit the contractor's operation during the construction period on a weekly basis, and to report on the contractor's compliance.

#### **Results and Observations**

- 4.2 Site audits were carried out on a weekly basis to monitor and audit the timely implementation of landscape and visual mitigation measures within the site boundaries of this Project. The summaries of site audits are attached in **Appendix C**.
- 4.3 No non-compliance of the landscape and visual impact was recorded in the reporting month.
- 4.4 Should non-compliance of the landscape and visual impact occur, action in accordance with the action plan presented in **Appendix D** shall be performed.

Monthly EM&A Report – December 2021

#### 5. ENVIRONMENTAL AUDIT

#### **Site Audits**

- 5.1 Site audits were carried out on a weekly basis to monitor the timely implementation of proper environmental management practices and mitigation measures in the Project site. The summaries of site audits are attached in **Appendix C**.
- 5.2 Site audits were conducted by representatives of the Contractor, Supervising Officer and ET on 2, 9, 16, 22 & 30 December 2021 in the reporting month. IEC joint site inspection was conducted on 22<sup>nd</sup> December 2021. No non-compliance was observed during the site audits.

# **Status of Environmental Licensing and Permitting**

5.3 All permits/licenses obtained for the Project are summarized in **Table V**.

Table V Summary of Environmental Licensing and Permit Status

Downit No	Valid Period		Details	Status	
Permit No.	From	To	Details	Status	
Environmental Permit (EP)					
EP-337/2009	23/04/09	N/A	Construction of new distributor roads serving the planned Kai Tak development.	Valid	
EP-445/2013/A	13/08/14	N/A	Construction of Kai Tak Development roads D3A and D4A	Valid	
Effluent Discharge	License				
WT00023634- 2016	-1	31/03/21	Wastewater from the construction site including effluent treated by screen and sedimentation tank; There are no more need for the license after 31 March 2021 as the project is close to completion and no significant waste water is being generated from site.	Expired on 31 March 2021	
Registration of Che	emical Waste				
5213-247-C4004- 01		N/A	Chemical Waste Types: Surplus paint, waste contaminated by paint, diesel, waste contaminated by diesel, spent lubricating oil and waste, soil contaminated by lubricating oil.	Valid	
Construction Noise					
GW-RE0442-20	14/6/20	13/12/20	Construction Naise Power's fourth	Expired on 13 December 2020	
GW-RE0639-20	3/8/20	19/1/21	Construction Noise Permit for the use of powered mechanical equipment for carrying out construction work other than percussive pilling and performing	Expired on 19 February 2021	
GW-RE0045-21	20/1/21	19/7/21	prescribed construction work. Construction Noise Permit for the use of powered mechanical equipment for carrying out	Expired on 19 July 2021	
GW-RE0656-21	9/7/21	30/9/21	construction work other than percussive pilling and performing prescribed construction work.	Valid	
GW-RE0717-21	30/7/2021	19/1/2022		Valid	

### **Status of Waste Management**

- 5.4 The amount of wastes generated by the major site activities of this Project during the reporting month is shown in **Appendix G**.
- 5.5 In respect of the dump truck cover, the Contractor is reminded to take record photos and inspection to ensure that all dump trucks have fully covered the skip before leaving the site.

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

5.6 During site inspections in the reporting month, no non-conformance was identified. ET weekly site inspections were carried out during the reporting month and the observations and recommendations are summarized in **Table VI**.

Table VI Observations and Recommendations of Site Inspections

Parameters	Date	Observations and Recommendations	Follow-up
Water Quality			
Air Quality			
Noise			
Waste/ Chemical Management			
Landscape and Visual			
Permits/ Licenses			

### **Summary of Mitigation Measures Implemented**

5.7 An updated summary of the EMIS is provided in **Appendix E**.

### **Implementation Status of Event Action Plans**

5.8 The Event Action Plans for noise and landscape and visual are presented in **Appendix D**. No Event Action Plan for air quality is considered necessary.

#### **Construction Dust**

5.9 No Action/Limit Level exceedance was recorded in the reporting month.

#### **Construction Noise**

5.10 No Action/Limit Level exceedance was recorded in the reporting month.

### Landscape and visual

5.11 No non-compliance was recorded in the reporting month.

## Summary of Complaint, Warning, Notification of any Summons and Successful Prosecution

5.12 The summaries of environmental complaint, warning, summon and notification of successful prosecution for the Project is presented in **Appendix F**.

#### 6. FUTURE KEY ISSUES

- 6.1 Major site activities undertaken for the coming two months include:
  - Architectural features works at landscaped deck and ground floor open space;
  - Defect work of pedestrian streets;
  - E&M works;
  - Laying of paving blocks for footpath;
  - Noise barrier modification
  - Planting works along footpath and at deck level, and;
  - TTA implementation, minor works at Shing Fung Road and Wang Chiu Road / Kai Cheung Road.
- 6.2 Key environmental issues in the coming month include:
  - Wastewater and runoff discharge from site;
  - Silt, mud and sand along u-channels and sedimentation tanks;
  - Review and implementation of temporary drainage system for the surface runoff;
  - Noise from operation of the equipment, especially for rock-breaking activities, piling works and machinery on-site;
  - Dust generation from stockpiles of dusty materials, exposed site area, excavation works and rock breaking activities;
  - Dust generating activity and on haul road;
  - Storage of construction materials on site;
  - Storage of chemicals/fuel and chemical waste/waste oil on site;
  - Accumulation of general and construction waste on site

6.3 The tentative program of major site activities and the impact prediction and control measures for the coming two months, i.e. January and February 2022 are summarized as follows:

Construction Works	Major Impact Prediction	Control Measures
	Air quality impact (dust)	<ul> <li>a) Frequent watering of haul road and unpaved/exposed areas;</li> <li>b) Frequent watering or covering stockpiles with tarpaulin or similar means; and</li> <li>c) Watering of any earth moving activities.</li> </ul>
As mentioned in Section 6.1	Water quality impact (surface run-off)	<ul> <li>a) Diversion of the collected effluent to desilting facilities for treatment prior to discharge to public storm water drains;</li> <li>b) Provision of adequate de-silting facilities for treating surface run-off and other collected effluents prior to discharge;</li> <li>c) Provision of perimeter protection such as sealing of hoarding footings to avoid run-off from entering the existing storm water drainage system via public road; and</li> <li>d) Provision of measures to prevent discharge into the stream.</li> </ul>
	Noise Impact  Waste/	<ul> <li>a) Scheduling of noisy construction activities if necessary to avoid persistent noisy operation;</li> <li>b) Controlling the number of plants use on site;</li> <li>c) Regular maintenance of machines; and</li> <li>d) Use of acoustic barriers if necessary.</li> <li>a) Maintenance involving activities with</li> </ul>
	Chemical Management	<ul> <li>a) Maintenance involving activities with potential for leakage and spillage should only be undertaken within the areas appropriately equipped to control these discharges.</li> <li>b) Chemical wastes should be hold by suitable containers with clear label and stored at a safe location.</li> </ul>

#### 7. CONCLUSIONS AND RECOMMENDATIONS

#### **Conclusions**

7.1 The Environmental Monitoring and Audit (EM&A) Report presents the EM&A works undertaken in December 2021.

### Air Quality and Construction Noise

7.2 No regular monitoring air quality and noise monitoring is required for the Project. No Action/Limit Level exceedance was recorded.

#### Landscape and visual

7.3 No non-compliance was recorded in the reporting month.

#### Complaint and Prosecution

- 7.4 No environmental complaints and environmental prosecution were received in the reporting month.
- 7.5 The ET will keep track on the EM&A programme to ensure compliance of environmental requirements and the proper implementation of all necessary mitigation measures.

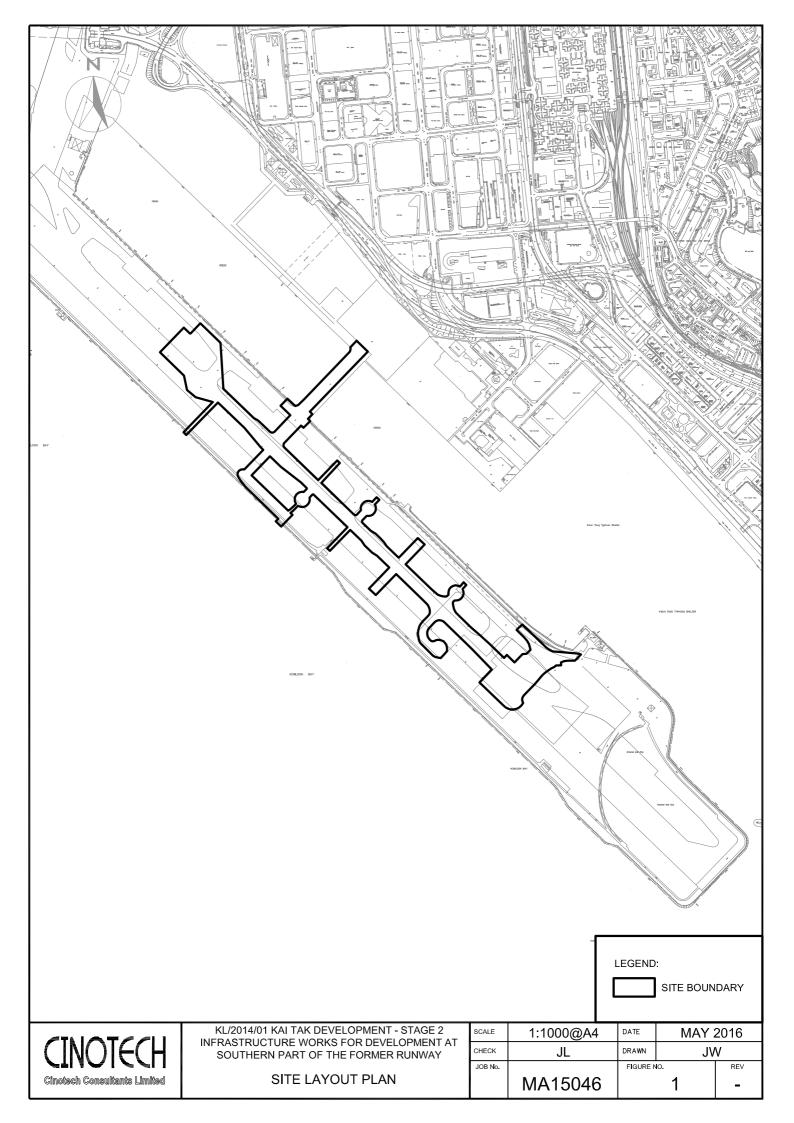
#### Recommendations

7.6 According to the environmental audit performed in the reporting month, the following recommendations were made:

Waste/ chemical management

• To avoid the accumulation of general refuse.

### **FIGURES**



## APPENDIX A ACTION AND LIMIT LEVELS

### **Appendix A - Action and Limit Levels**

**Table A-1** Action and Limit Levels for Air Quality Monitoring

Monitoring Station	Parameter	Action Level (μg/ m³)	Limit Level <sup>(1)(2)</sup> (μg/ m³)
KTD1	24-hr TSP	177	260
KTD1*	1-hr TSP	285	500

<sup>\* 1-</sup>hr TSP monitoring should be required in case of complaints.

**Table A-2** Action and Limit Levels for Construction Noise Monitoring

Time Period	Action Level	Limit Level <sup>(1)(2)</sup>
0700-1900 hrs on normal weekdays	When one documented complaint is received	75 dB(A) 70dB(A)/65dB(A)*

Remarks: (1) 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.

<sup>(2)</sup> No regular noise impact monitoring station for this Contract. It is subject to the noise sensitive receiver(s) and additional monitoring work.

<sup>(\*) 70</sup>dB(A) and 65dB(A) for schools during normal teaching periods and school examination periods respectively.

### APPENDIX B SUMMARY OF EXCEEDANCE

### Contract No. KL/2014/01 Kai Tak Development –Stage 2 Infrastructure Works for Developments at the Southern Part of the Former Runway

### Appendix B – Summary of Exceedance

Exceedance Record for Contract No. KL/2014/01

Reporting Month: <u>December 2021</u>

(A) Exceedance Record for Construction Dust

(NIL in the reporting month)

(B) Exceedance Record for Construction Noise

(NIL in the reporting month)

(C) Exceedance Record for Landscape and Visual

(NIL in the reporting month)

### APPENDIX C SITE AUDIT SUMMARY

# Kai Tak Development - Stage 2 Infrastructure Works for Developments at the Southern Part of the Former Runway

EP-337/2009 & EP-445/2013/A

Checklist Reference Number	211202
Date	2 Dec 2021 (Thursday)
Time	13:30 – 14:30

Ref. No.	Non Compliance	Related Item No.
Kel. No.	Non-Compliance	Item No.
	None identified	D-1-4- J
Ref. No.	Remarks/Observations	Related Item No.
	B. Water Quality	
	No environmental deficiency was identified during site inspection	
	C. Air Quality	
	No environmental deficiency was identified during site inspection.	
	D. Noise	
	No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	No environmental deficiency was identified during site inspection.	
	• F. Visual and Landscape	
	No environmental deficiency was identified during site inspection.	
	G. Permits /Licenses	
	No environmental deficiency was identified during site inspection.	
	H. Others	
	No follow-up items are required from the previous site inspection (ref no.: 211126).	

	Name	Signature	Date
Recorded by	Becky Tang	John	2 Dec 2021
Checked by	Colman Wong	Colman	3 Dec 2021

# Kai Tak Development - Stage 2 Infrastructure Works for Developments at the Southern Part of the Former Runway

EP-337/2009 & EP-445/2013/A

Checklist Reference Number	211209
Date	9 Dec 2021 (Thursday)
Time	13:30 – 14:30

D 6 M	N. G. W	Related
Ref. No.	Non-Compliance	Item No.
-	None identified	-
		Related
Ref. No.	Remarks/Observations	Item No.
	B. Water Quality	
	No environmental deficiency was identified during site inspection	
	C. Air Quality	
	No environmental deficiency was identified during site inspection.	
	D. Noise	
	No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	No environmental deficiency was identified during site inspection.	
	• F. Visual and Landscape	
	No environmental deficiency was identified during site inspection.	
	G. Permits /Licenses	
	No environmental deficiency was identified during site inspection.	
	H. Others	
	No follow-up items are required from the previous site inspection (ref no.: 211202).	

	Name	Signature	Date
Recorded by	Becky Tang	John	9 Dec 2021
Checked by	Colman Wong	Colman	10 Dec 2021

# Kai Tak Development - Stage 2 Infrastructure Works for Developments at the Southern Part of the Former Runway

EP-337/2009 & EP-445/2013/A

Checklist Reference Number	211216
Date	16 Dec 2021 (Thursday)
Time	13:30 – 14:30

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	B. Water Quality	
	No environmental deficiency was identified during site inspection	
	C. Air Quality	
	No environmental deficiency was identified during site inspection.	
	D. Noise	
	No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	No environmental deficiency was identified during site inspection.	
	• F. Visual and Landscape	
	No environmental deficiency was identified during site inspection.	
	G. Permits /Licenses	
	No environmental deficiency was identified during site inspection.	
	H. Others	
	No follow-up items are required from the previous site inspection (ref no.: 211209).	

	Name	Signature	Date
Recorded by	Becky Tang	Becky Tang 16 Dec 2021	
Checked by	Colman Wong	Colman	17 Dec 2021

# Kai Tak Development - Stage 2 Infrastructure Works for Developments at the Southern Part of the Former Runway

EP-337/2009 & EP-445/2013/A

Checklist Reference Number	211222
Date	22 Dec 2021 (Wednesday)
Time	13:30 – 14:30

Dof No	Non Compliance	Related Item No.
Ref. No.	Non-Compliance	Item No.
	None identified	D.1.4.1
Ref. No.	Remarks/Observations	Related Item No.
	B. Water Quality	
	No environmental deficiency was identified during site inspection	
	C. Air Quality	
	No environmental deficiency was identified during site inspection.	
	D. Noise	
	No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	No environmental deficiency was identified during site inspection.	
	• F. Visual and Landscape	
	No environmental deficiency was identified during site inspection.	
	G. Permits /Licenses	
	No environmental deficiency was identified during site inspection.	
	H. Others	
	No follow-up items are required from the previous site inspection (ref no.: 211216).	

	Name	Signature	Date
Recorded by	Becky Tang	John	22 Dec 2021
Checked by	Colman Wong	Colman	23 Dec 2021

# Kai Tak Development - Stage 2 Infrastructure Works for Developments at the Southern Part of the Former Runway

EP-337/2009 & EP-445/2013/A

Checklist Reference Number	211230
Date	30 Dec 2021 (Thursday)
Time	13:30 – 14:30

Dof No	Non Compliance	Related Item No.
Ref. No.	Non-Compliance None identified	Item No.
	None identified	D-1-4-1
Ref. No.	Remarks/Observations	Related Item No.
	B. Water Quality	
	No environmental deficiency was identified during site inspection	
	C. Air Quality	
	No environmental deficiency was identified during site inspection.	
	D. Noise	
	No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	No environmental deficiency was identified during site inspection.	
	F. Visual and Landscape	
	No environmental deficiency was identified during site inspection.	
	G. Permits /Licenses	
	No environmental deficiency was identified during site inspection.	
	H. Others	
	No follow-up items are required from the previous site inspection (ref no.: 211122).	

	Name	Signature	Date
Recorded by	Becky Tang	John	30 Dec 2021
Checked by	Colman Wong	Colman	31 Dec 2021

### APPENDIX D EVENT ACTION PLANS

### **Appendix D - Event Action Plans**

### Event/Action Plan for Construction Noise

EVENT		ACTIO	ON	
	ET	IEC	ER	CONTRACTOR
Action Level being exceeded	<ol> <li>Notify ER, IEC and Contractor;</li> <li>Carry out investigation;</li> <li>Report the results of investigation to the IEC, ER and Contractor;</li> <li>Discuss with the IEC and Contractor on remedial measures required;</li> <li>Increase monitoring frequency to check mitigation effectiveness.</li> <li>(The above actions should be taken within 2 working days after the exceedance is identified)</li> </ol>	Review the investigation results submitted by the ET;     Review the proposed remedial measures by the Contractor and advise the ER accordingly;     Advise the ER on the effectiveness of the proposed remedial measures.  (The above actions should be taken within 2 working days after the exceedance is identified)	Confirm receipt of notification of failure in writing;     Notify Contractor;     In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented;     Supervise the implementation of remedial measures.  (The above actions should be taken within 2 working days after the exceedance is identified)	Submit noise mitigation proposals to IEC and ER;     Implement noise mitigation proposals.     (The above actions should be taken within 2 working days after the exceedance is identified)
Limit Level being exceeded	<ol> <li>Inform IEC, ER, Contractor and EPD;</li> <li>Repeat measurements to confirm findings;</li> <li>Increase monitoring frequency;</li> <li>Identify source and investigate the cause of exceedance;</li> <li>Carry out analysis of Contractor's working procedures;</li> <li>Discuss with the IEC, Contractor and ER on remedial measures required;</li> <li>Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results;</li> <li>If exceedance stops, cease additional monitoring.</li> <li>(The above actions should be taken within 2 working days after the exceedance is identified)</li> </ol>	Discuss amongst ER, ET, and Contractor on the potential remedial actions;     Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly.     (The above actions should be taken within 2 working days after the exceedance is identified)	Confirm receipt of notification of failure in writing;     Notify Contractor;     In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented;     Supervise the implementation of remedial measures;     If exceedance continues, consider stopping the Contractor to continue working on that portion of work which causes the exceedance until the exceedance is abated.  (The above actions should be taken within 2 working days after the exceedance is identified)	<ol> <li>Take immediate action to avoid further exceedance;</li> <li>Submit proposals for remedial actions to IEC and ER within 3 working days of notification;</li> <li>Implement the agreed proposals;</li> <li>Submit further proposal if problem still not under control;</li> <li>Stop the relevant portion of works as instructed by the ER until the exceedance is abated.</li> <li>(The above actions should be taken within 2 working days after the exceedance is identified)</li> </ol>

### **Appendix D - Event Action Plans**

### Event/Action Plan for Landscape and Visual

EVENT ACTION	ACTION			
LEVEL	ET	IEC	ER	CONTRACTOR
Design Check	Check final design conforms to the requirements of EP and prepare report.	Check report.     Recommend remedial design if necessary	Undertake remedial design if necessary	
Non-conformity on one occasion	Identify     Source     Inform IEC     and ER     Discuss     remedial     actions with     IEC, ER and     Contractor     Monitor     remedial     actions until     rectification     has been     completed	Check report Check Contractor's working method Discuss with ET and Contractor on possible remedial measures Advise ER on effectiveness of proposed remedial measures. Check implementatio n of remedial measures.	Notify Contractor     Ensure remedial measures are properly implemented	Amend working methods     Rectify damage and undertake any necessary replacement
Repeated Non- conformity	Identify Source Inform IEC and ER Increase monitoring frequency Discuss remedial actions with IEC, ER and Contractor Monitor remedial actions until rectification has been completed If non- conformity stops, cease additional monitoring	Check monitoring report Check Contractor's working method Discuss with ET and Contractor on possible remedial measures Advise ER on effectiveness of proposed remedial measures Supervise implementatio n of remedial measures.	Notify     Contractor     Ensure     remedial     measures are     properly     implemented	Amend working methods     Rectify damage and undertake any necessary replacement

APPENDIX E ENVIRONMENTAL MITIGATION IMPLEMENTATION SCHEDULE (EMIS)

Appendix E - Summary of Implementation Schedule of Mitigation Measures for Construction Phase

EIA Ref.	Mitigation Measures	Status	
Construction Air Quality			
S3.2 (AEIAR-130/2009)	8 times daily watering of the work site with active dust emitting activities.	٨	
S4.8 (AEIAR-170/2013)	Control measures stipulated in the approved KTD Schedule 3 EIA Report should be strictly followed.	٨	
S3.2 (AEIAR-130/2009) and S4.8 (AEIAR-170/2013)	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	^	
(ALIMIC 170/2013)	<ul> <li>stockpring site(s) should be fined with imperincable sheeting and builded. Stockprice should be fully covered by impermeable sheeting to reduce dust emission.</li> <li>Misting for the dusty material should be carried out before being loaded into the vehicle.</li> <li>Any vehicle with an open load carrying area should have properly fitted side and tail</li> </ul>	^	
	<ul> <li>Any vehicle with an open load earlying area should have properly fitted side and tail boards.</li> <li>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.</li> </ul>		
	• 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. Onsite unpaved roads should be compacted and kept free of lose materials.	۸	
	Vehicle washing facilities should be provided at every vehicle exit point.	۸	

EIA Ref.	Mitigation Measures	Status
	<ul> <li>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.</li> <li>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.</li> <li>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; and</li> <li>Every vehicle should be washed to remove any dusty materials from its body and wheels before leaving the construction sites.</li> </ul>	
<b>Construction Noise</b>		
S3.3 (AEIAR-130/2009)	Use of quiet PME, movable barriers barrier 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 (AEIAR-130/2009)	Good Site Practice:	
(ALIAK-130/2009)	• 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.	٨
	<ul> <li>Mobile plant, if any, should be sited as far away from NSRs as possible.</li> </ul>	٨
	• 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.	۸
	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.	۸
	Material stockpiles and other structures should be effectively utilized, wherever	۸

EIA Ref.	Mitigation Measures	Status
	practicable, in screening noise from on-site construction activities.	
S3.3 (AEIAR-130/2009)	Scheduling of Construction Works during School Examination Period	N/A
S3.8 (AEIAR-170/2013)	Provision of a landscaped deck along Roads D3A & D4A.	N/A
S3.8 (AEIAR-170/2013)	<ul> <li>Provision of about 1090 m length of vertical noise barrier (connected to the deck) at Roads D3A &amp; D4A;</li> <li>Provision of about 60 m length of overhang vertical noise barrier (connected to the deck) at Road D4A; and</li> <li>Provision of staircases with noise barriers next to Sites 4A1 and 4B1</li> <li>It should be noted that the exact length of the mitigation measures would be subject to minor refinement during the detailed design stage.</li> </ul>	N/A N/A N/A
S3.8 (AEIAR-170/2013)	Non-noise sensitive use areas within Sites 4A1 and 4B1.	N/A
S3.8 (AEIAR-170/2013)	Avoid sensitive façade with openable window facing Road D3A.	N/A
<b>Construction Water</b>	Quality	•
S3.4 (AEIAR-130/2009) and S5.8 (AEIAR-170/2013)	Construction Runoff  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:  • use of sediment traps • adequate maintenance of drainage systems to prevent flooding and overflow	^ ^

EIA Ref.	Mitigation Measures	Status	
	Construction site should be provided with adequately designed perimeter channel and pretreatment 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.	^	
	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.	^	
S5.8 (AEIAR-170/2013)	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.	^	
	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.	^	
S3.4 (AEIAR-130/2009)	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	٨	

EIA Ref.	Mitigation Measures	Status	
	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 and particularly suited to applications where the influent is pumped.		
S3.4 (AEIAR-130/2009) and S5.8 (AEIAR-170/2013)	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.	٨	
()	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.	٨	
S3.4 (AEIAR-130/2009)	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.	٨	
	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.	٨	
S3.4 (AEIAR-130/2009) and S5.8 (AEIAR-170/2013)	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	٨	

EIA Ref.	Mitigation Measures	Status
	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.	
S5.8 (AEIAR-170/2013)	Boring and Drilling Water 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.	۸
	Acid Cleaning, Etching and Pickling Wastewater 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	^
S3.4 (AEIAR-130/2009)	Drainage  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.	٨
S3.4 (AEIAR-130/2009)	All temporary and permanent drainage pipes and culverts provided 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.	٨

EIA Ref.	Mitigation Measures	Status
S3.4 (AEIAR-130/2009)	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.	^
S5.8 (AEIAR-170/2013)	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.	^
S3.4 (AEIAR-130/2009) and S5.8 (AEIAR-170/2013)	Sewage Effluent  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.	٨
S5.8	Notices should be posted at conspicuous locations to remind the workers not to discharge	۸

EIA Ref.	Mitigation Measures	Status
(AEIAR-170/2013)	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.	
S3.4 (AEIAR-130/2009) and S5.8 (AEIAR-170/2013)	Stormwater Discharges  Minimum distances of 100 m should be maintained between the existing or planned stormwater discharges and the existing or planned seawater intakes.	٨
	Debris and Litter  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 and that disposal of any solid materials, litter or wastes to marine waters does not occur.	^
S5.8 (AEIAR-170/2013)	Accidental Spillage  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 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.	^

EIA Ref.	Mitigation Measures		Ref. Mitigation Measures Sta	
	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	^		
	<ul> <li>spillage during storage, handling and transport.</li> <li>Chemical waste containers should be suitably labelled, to notify and warn the personnel who are handling the wastes, to avoid accidents.</li> </ul>	^		
	• Storage area should be selected at a safe location on site and adequate space should be allocated to the storage area.	۸		
<b>Construction Waste</b>	Management			
S6.7 (AEIAR-170/2013)	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.	٨		
S3.5 (AEIAR-130/2009) and S6.7 (AEIAR-170/2013)	<ul> <li>Good Site Practices</li> <li>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:         <ul> <li>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</li> <li>Training of site personnel in proper waste management and chemical waste handling procedures</li> </ul> </li> </ul>	^		
	<ul> <li>Provision of sufficient waste disposal points and regular collection for disposal</li> </ul>	٨		

EIA Ref.	Mitigation Measures	Status
	Appropriate measures to minimise windblown litter and dust during transportation of	٨
	waste by either covering trucks or by transporting wastes in enclosed containers	
	• A recording system for the amount of wastes generated, recycled and disposed of (including the disposal sites)	^
	Regular cleaning and maintenance systems, sumps and oil interceptors	^
	Separation of chemical wastes for special handling and appropriate treatment	٨
	Waste Reduction Measures	
	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:	
	<ul> <li>Sort C&amp;D waste from demolition of the remaining structures to recover recyclable portions such as metals</li> </ul>	^
	<ul> <li>Segregation and storage of different types of waste in different containers, skips or</li> </ul>	٨
	stockpiles to enhance reuse or recycling of materials and their proper disposal	
	<ul> <li>Encourage collection of aluminium cans, PET bottles and paper by providing separate</li> </ul>	٨
	labelled bins to enable these wastes to be segregated from other general refuse generated by the work force	
	<ul> <li>Any unused chemicals or those with remaining functional capacity should be recycled</li> </ul>	٨
	<ul> <li>Proper storage and site practices to minimise the potential for damage or</li> </ul>	٨
	contamination of construction materials	
	Plan and stock construction materials carefully to minimize amount of waste generated and avoid unnecessary generation of waste  Output  Description in the construction materials carefully to minimize amount of waste	۸
	<ul> <li>Training should be provided to workers about the concepts of site cleanliness and appropriate waste management procedures, including waste reduction, reuse and recycle.</li> </ul>	۸

EIA Ref.	Mitigation Measures	Status
S3.5 (AEIAR-130/2009)	Construction and Demolition Materials  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:  • Where it is unavoidable to have transient stockpiles of C&D material within the Project work site pending collection for disposal, the transient stockpiles shall be located away from waterfront or storm drains as far as possible.	^
	• Open stockpiles of construction materials or construction wastes on-site should be covered with tarpaulin or similar fabric.	٨
	• Skip hoist for material transport should be totally enclosed by impervious sheeting.	٨
	• Every vehicle should be washed to remove any dusty materials from its body and wheels before leaving a construction site.	٨
	• 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.	٨
	• 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.	٨
	• All dusty materials should be sprayed with water prior to any loading, unloading or transfer operation so as to maintain the dusty materials wet.	٨
	• The height from which excavated materials are dropped should be controlled to a minimum practical height to limit fugitive dust generation from unloading.	٨
	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"	۸

EIA Ref.	Mitigation Measures	Status
	System for Disposal of Construction and Demolition Materials" should be included as one of the contractual requirement sand 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.	
S3.5 (AEIAR-130/2009)	General Refuse 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	٨
<b>Construction Lands</b>	cape and Visual	
S3.8.12	Minimized construction area and contractor's temporary works areas.	٨
(AEIAR-130/2009)	• All existing trees should be carefully protected during construction.	٨
and	• Trees unavoidably affected by the works should be transplanted where practical.	٨
S7.9 (AEIAR-170/2013)	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.	
	• Control of night-time lighting.	٨
	<ul> <li>Erection of decorative screen hoarding.</li> </ul>	٨
	Reduction of construction period to practical minimum.	٨
	• Limitation of / Ensuring no run-off into surrounding landscape and adjacent seawater areas.	٨
	• Temporary or advance landscape should be provided along the temporary access roads to the Cruise Terminal until such time as road D3 is open.	٨

Remarks:	EIA Report (AEIAR-130/2009) – Kai Tak Development			
	EIA Report (AEIAR-170/2013) – Kai Tak Development – Roads D3A & D4A			
	^ Compliance of mitigation measure; N/A Not Applicable at this stage;	X Non-compliance of mitigation measure;  Non-compliance but rectified by the		
	N/A(1) Not observed;	contractor;		
	* Recommendation was made during site audit	# Recommendation was made during site		
	but improved/rectified by the contractor.	audit but not yet improved/rectified by the contractor.		

APPENDIX F
SUMMARIES OF ENVIRONMENTAL
COMPLAINT, WARNING, SUMMON
AND NOTIFICATION OF SUCCESSFUL
PROSECUTION

# Kai Tak Development –Stage 2 Infrastructure Works for Developments at the Southern Part of the Former Runway

 $\label{eq:complaint} \textbf{Appendix} \ \textbf{F} - \textbf{Summary} \ \textbf{of} \ \textbf{environmental} \ \textbf{complaint}, \ \textbf{warning}, \ \textbf{summon} \ \textbf{and} \ \textbf{notification} \ \textbf{of} \ \textbf{successful} \ \textbf{prosecution}$ 

**Reporting Month**: December 2021

### Contract No. KL/2014/01

Log Ref.	Location	Received Date	Details of Complaint/warning/summon and prosecution	Investigation/Mitigation Action	Status
N/A	N/A	N/A	N/A	N/A	N/A

**Remarks**: No environmental complaint/warning/summon and prosecution were received in the reporting period.

## APPENDIX G WASTE GENERATED QUANTITY

## Appendix G. Monthly Summary Waste Flow Table

Name of Department:	CEDD	Contract No:	KL/2014/01
---------------------	------	--------------	------------

#### **Monthly Summary Waste Flow Table for 2021**

		Actual Qua	antities of Inert C&I	Materials Generate	ed Monthly		Actual Quantities of C&D Wastes Generated Monthly				
Month	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	Chemical Waste	Others, e.g. general refuse
	(in tonne)	(in tonne)	(in tonne)	(in tonne)	(in tonne)	(in tonne)	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in tonne)
Jan	35.46	0	0	0	35.46	0	0	0	0	0	212.30
Feb	5.63	0	0	0	5.63	0	0	0	0	0	4.18
Mar	0.00	0	0	0	0.00	0	0	0	0	0	2.50
Apr	0.00	0	0	0	0.00	0	0	0	0	0	9.65
May	0.00	0	0	0	0.00	0	0	0	0	0	17.89
June	0.00	0	0	0	0.00	0	0	0	0	0	13.55
Sub-total	41.09	0	0	0	41.09	0	0	0	0	0	260.07
July	0	0	0	0	0.00	0	0	0	0	0	11.6
Aug	8.16	0	0	0	0.00	0	0	0	0	0	8.16
Sept	12.60	0	0	0	0.00	0	0	0	0	0	12.6
Oct	15.69	0	0	0	0.00	0	0	0	0	0	15.69
Nov	23.26	0	0	0	0.00	0	0	0	0	0	23.26
Dec	34.36	0	0	0	0.00	0	0	0	0	0	34.36
Total	135.16	0	0	0	41.09	0	0	0	0	0	365.74

<sup>\*</sup> Transfer to alterative disposal ground at Lung Kwu Sheung Tan EPD approved recycler

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## Appendix B

Monthly EM&A Report
For
Contract No. KL/2015/02
Kai Tak Development - Stage 5A Infrastructure at Former North Apron Area

# **Civil Engineering and Development Department**

## EP-337/2009 - New Distributor Roads Serving the **Planned KTD**

Contract No. KLN/2016/04 **Environmental Monitoring Works for** Contract No. KL/2015/02 Kai Tak Development - Stage 5A Infrastructure at Former North Apron Area

> Monthly EM&A Report December 2021

> > (Version 1.1)

Certified By

(Environmental Team Leader)

#### REMARKS:

The information supplied and contained within this report is, to the best of our knowledge, correct at the time of printing.

CINOTECH accepts no responsibility for changes made to this report by third parties

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#### **FUGRO TECHNICAL SERVICES LIMITED**

Fugro Development Centre 5 Lok Yi Street, Tai Lam Tuen Mun, NT Hong Kong

Date

14 January 2022

Our Ref. MCL/ED/0027/2022/C

Cinotech Consultants Limited Rm 1710, Technology Park, 18 On Lai Street, Shatin, New Territories, Hong Kong

BY EMAIL

Attn.: Mr. K.S Lee

Dear Sir,

Contract No. KL/2015/02 Kai Tak Development -Stage 5A Infrastructure at Former North Apron Verification of Monthly EM&A Report for December 2021

We refer to your emails dated 11, 13 and 14 January 2022 for the captioned report prepared by the ET.

We have no further comment and hereby verify the Report in accordance with Clause 3.3 of Environmental Permit no. EP-337/2009.

Should you require further information, please do not hesitate to contact me on 3565 4114 or our Toby Wan on 3565 4450.

Assuring you of our best attention at all times.

Yours faithfully, For and on behalf of FUGRO TECHNICAL SERVICES LIMITED

Colin K. L. Yung

Independent Environmental Checker

CY/ws

CEDD -C.C.

Attn.: Mr. Ricky Chan

Attn.: Mr. Vincent Yip

AECOM -

Attn.: Mr. Vincent Lee

Attn.: Mr. Teddy Shih

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#### **EXECUTIVE SUMMARY**

#### Introduction

- 1. This is the 60<sup>th</sup> Monthly Environmental Monitoring and Audit Report prepared by Cinotech Consultants Ltd. for "Contract No. KL/2015/02 Kai Tak Development Stage 5A Infrastructure at Former North Apron Area" (Hereafter referred to as "the Project"). This contract comprises one Schedule 2 designated project (DP), namely the new distributor road D1 serving the planned KTD. The DP is part of the designated project under Environmental Permit (EP) No.: EP-337/2009 ("New distributor roads serving the planned Kai Tak Development") respectively. This report documents the findings of EM&A Works conducted during December 2021.
- 2. With reference to the same principle of EIA report of the Project, air quality monitoring stations within 500m and noise monitoring stations within 300m from the boundary of this Project are considered as relevant monitoring locations. In such regard, the relevant air quality and noise monitoring locations are tabulated in **Table I** (see **Figure 2 and 3** for their locations).

Table I – Air Quality and Noise Monitoring Stations for this Project

Locations	Monitoring Stations In accordance with EM&A Manual	Alternative Monitoring Stations
Air Quality Monitoring Stations		
	Yes (1-hour TSP)	
AM2 - Lee Kau Yan Memorial School	No (24-hour TSP)	AM2(A) – Ng Wah Catholic Secondary School
Noise Monitoring Stations		-
M3 - Cognitio College	No	M3(A) – The Bridge connecting The Latitude
M4 - Lee Kau Yan Memorial School	Yes	N/A
M5 – Nam Yuen	No	M5(C) – Mercy Grace's Home

- 3. The major site activities undertaken in the reporting month included:
  - Carry out backfilling works around Staircase ST1 at SKLR Playground
  - Erect scaffolding and construct the top slab of lift shaft at SKLR playground
  - Construct pillar box for electrical supply of SW6
  - Excavate with ELS installation at PERE TTA Stage 4
  - Remedial works for the defects identified by maintenance parties, e.g. DSD, HyD
  - Landscaping works at Road L7 and Road D1
  - Outstanding works for irrigation system at Road L7 and D1
  - Construction of additional street furniture at Road D1 and L7
  - Road marking at Road D1 and L7

## **Environmental Monitoring Works**

- 4. Environmental monitoring for the Project was performed in accordance with the EM&A Manual and the monitoring results were checked and reviewed. Site Inspections/Audits were conducted once per week. The implementation of the environmental mitigation measures, Event Action Plans and environmental complaint handling procedures were also checked.
- 5. Summary of the non-compliance in the reporting month for the Project is tabulated in **Table II**.

Table II Non-compliance Recorded for the Project in the Reporting Month

_	No. of Project-re		
Parameter	Action Level	Limit Level	Action Taken
1-hr TSP	0	0	N/A
24-hr TSP	0	0	N/A
Noise	0	0	N/A

1-hour & 24-hour TSP Monitoring

- 6. All 1-hour TSP monitoring was conducted as scheduled in the reporting month. No Action/Limit Level exceedance was recorded.
- 7. All 24-hour TSP monitoring was conducted as scheduled in the reporting month. No Action/Limit Level exceedance was recorded.

Construction Noise Monitoring

8. All construction noise monitoring was conducted as scheduled in the reporting month. No Action/Limit Level exceedance was recorded.

## **Environmental Licenses and Permits**

- 9. Licenses/Permits granted to the Project include the Environmental Permit (EP) for the Project, EP-337/2009 issued on 23 April 2009. All valid Licenses/Permits for this Project are shown in **Table 6.1**.
  - Billing Account for Construction Waste Disposal (A/C# 7026164).
  - Effluent Discharge License (WT00027495-2017).
  - Registration of Chemical Waste Producer (WPN5213-286-P3271-01).

## **Key Information in the Reporting Month**

10. Summary of key information in the reporting month is tabulated in **Table III**.

Table III Summary Table for Key Information in the Reporting Month

Event	Event	Details	Action Taken	Status	Domonic	
Event	Number	Nature	Action Taken	Status	Remark	
Complaint received			N/A	N/A		
Reporting Changes			N/A	N/A		
Notifications of any summons & prosecutions received			N/A	N/A		

## **Future Key Issues**

- 11. The future key environmental issues in the coming two months include:
  - -Dust generation from stockpiles of dusty materials, exposed site area, excavation
  - Works and rock breaking activities;
  - Water spraying for dust generating activity and on haul road;
  - -Proper storage of construction materials on site;
  - Storage of chemicals/fuel and chemical waste/waste oil on site;
  - Accumulation of general and construction waste on site;
  - Noise from operation of the equipment, especially for rock-breaking activities,
  - -Piling works and machinery on-site; and
  - Wastewater and runoff discharge from site.

#### 1 INTRODUCTION

## **Background**

- 1.1. The Kai Tak Development (KTD) is located in the south-eastern part of Kowloon Peninsula, 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. It covers a land area of about 328 hectares. Stage 5A Infrastructure at Former North Apron Area is one of the construction stages of KTD. It contains one Schedule 2 DP including new distributor roads serving the planned KTD. The general layout of the Project is shown in **Figure 1.**
- 1.2. An Environmental Permit (EP) No. EP-337/2009 was issued on 23 April 2009 for new distributor roads serving the planned KTD to Civil Engineering and Development Department as the Permit Holder.
- 1.3. A study of environmental impact assessment (EIA) was undertaken to consider the key issues of air quality, noise, water quality, waste, land contamination, cultural heritage and landscape and visual impact, and identify possible mitigation measures associated with the works. An EIA Report (Register No. AEIAR-130/2009) was approved by the Environmental Protection Department (EPD) on 4 April 2009.
- 1.4. Cinotech Consultants Limited (Cinotech) was commissioned by Civil Engineering and Development Department (CEDD) to undertake the role of the Environmental Team (ET) for the Contract No. KL/2015/02 Stage 5A Infrastructure at Former North Apron Area. The construction work under KL/2015/02 comprises the construction of part of the Road D1 under the EP (EP-337/2009).
- 1.5. Cinotech Consultants Limited was commissioned by Civil Engineering and Development Department (CEDD) to undertake the Environmental Monitoring and Audit (EM&A) works for the Project. The commencement date of construction of Road D1 (part) under this Contract was on 16 January 2017.

## **Project Organizations**

- 1.6. Different parties with different levels of involvement in the project organization include:
  - Project Proponent Civil Engineering and Development Department (CEDD).
  - The Engineer and the Engineer's Representative (ER) AECOM Asia Co. Ltd (AECOM).
  - Environmental Team (ET) Cinotech Consultants Limited (Cinotech).
  - Independent Environmental Checker (IEC) Fugro Technical Services Limited (FTS).
  - Contractor Peako Wo Hing Joint Venture (PWHJV).

1.7. The key contacts of the Project are shown in **Table 1.1**.

**Table 1.1 Key Project Contacts** 

Party	Role	<b>Contact Person</b>	Position	Phone No.	Fax No.	
CEDD	Project Proponent	Mr. CHAN Wai Kit, Ricky	Senior Engineer	2116 3753	2116 0714	
AECOM	Engineer's Representative	Mr. Vincent Lee	Senior Resident Engineer	2798 0771	2210 6110	
Cinotech	Environmental	Environmental Mr. K.S Lee		2151 2091	3107 1388	
Cinoteen	Team	Ms. Betty Choi	Audit Team Leader	2151 2072	3107 1300	
FTS	Independent Environmental Checker	Mr. Colin Yung	Independent Environmental Checker	3565 4114	2450 8032	
PWHJV	Contractor	Mr. W.M. Wong	Site Agent	6386 3535	2398 8301	

## Construction Activities undertaken during the Reporting Month

- 1.8. The site activities undertaken in the reporting month included:
  - -Carry out backfilling works around Staircase ST1 at SKLR Playground
  - -Erect scaffolding and construct the top slab of lift shaft at SKLR playground
  - -Construct pillar box for electrical supply of SW6
  - -Excavate with ELS installation at PERE TTA Stage 4
  - -Remedial works for the defects identified by maintenance parties, e.g. DSD, HyD
  - -Landscaping works at Road L7 and Road D1
  - -Outstanding works for irrigation system at Road L7 and D1
  - -Construction of additional street furniture at Road D1 and L7
  - -Road marking at Road D1 and L7
- 1.9. The construction programme for the Project is shown in **Appendix N**.
- 1.10. The construction programme showing the inter-relationship with environmental protection/mitigation measures are presented in **Table 1.2**.

Table 1.2 Construction Programme Showing the Inter-Relationship with Environmental Protection/Mitigation Measures

Construction Works	Major Environmental Impact	Control Measures
Refer to Section 1.8	Noise, dust impact, water quality and waste generation	<ul> <li>Sufficient watering of the works site with active dust emitting activities;</li> <li>Properly cover the stockpiles;</li> <li>On-site waste sorting and implementation of trip ticket system</li> <li>Appropriate desilting/sedimentation devices provided on site for treatment before discharge;</li> <li>Use of quiet plant and well-maintained construction plant;</li> <li>Provide movable noise barrier;</li> <li>Well maintain the drainage system to prevent the spillage of wastewater during heavy rainfall;</li> <li>Provide sufficient mitigation measures as recommended in Approved EIA Report/Lease requirement.</li> </ul>

## **Summary of EM&A Requirements**

- 1.11. The EM&A programme requires construction noise monitoring, air quality monitoring, landscape and visual monitoring and environmental site audit. The EM&A requirements for each parameter are described in the following sections, including:
  - All monitoring parameters;
  - Action and Limit levels for all environmental parameters;
  - Event Action Plans;
  - Environmental requirements and mitigation measures, as recommended in the EM&A Manual under the EP.
- 1.12. The advice on the implementation status of environmental protection and pollution control/mitigation measures is summarized in Section 6 of this report.
- 1.13. This report presents the monitoring results, observations, locations, equipment, period, methodology and QA/QC procedures of the required monitoring parameters, namely air quality and noise levels and audit works for the Project during the reporting month.

## 2 AIR QUALITY

## **Monitoring Requirements**

2.1. According to EM&A Manual under the EP, 1-hour and 24-hour TSP monitoring were conducted to monitor the air quality for this Project. For regular impact monitoring, a sampling frequency of at least once in every six days at all of the monitoring stations for 24-hour TSP monitoring. For 1-hour TSP monitoring, the sampling frequency of at least three times in every six days shall be undertaken when the highest dust impact occurs. **Appendix A** shows the established Action/Limit Levels for the environmental monitoring works.

### **Monitoring Locations**

- 2.2. 1-hour TSP impact dust monitoring was conducted at the air quality monitoring station, AM2 Lee Kau Yan Memorial School and 24-hour TSP impact dust monitoring were conducted at the air quality monitoring station, AM2(A) Ng Wah Catholic Secondary School in the reporting month. No Action/Limit Level exceedance was recorded.
- 2.3. **Table 2.1** describes the air quality monitoring locations, which are also depicted in **Figure 2**.

**Table 2.1** Locations for Air Quality Monitoring

<b>Monitoring Stations</b>	Locations	<b>Location of Measurement</b>	
AM2 (1-hour TSP)	Lee Kau Yan Memorial School	Rooftop (about 8/F) Area	
AM2(A) (24-hour TSP)	Ng Wah Catholic Secondary School	Rooftop (about 8/F) Area	

## **Monitoring Equipment**

2.4. **Table 2.2** summarizes the equipment used in the impact air monitoring programme. Copies of calibration certificates are attached in **Appendix B**.

**Table 2.2** Air Quality Monitoring Equipment

Equipment	Model and Make	Quantity
Calibrator	• TISCH TE-5025A	1
1-hour TSP Dust Meter	<ul> <li>Sibata Scientific Technology LD-5R</li> </ul>	1
HVS Sampler	• TE-5170 c/w of TSP sampling inlet	1
Wind Anemometer	<ul> <li>Davis Instruments 6152</li> </ul>	1

## Monitoring Parameters, Frequency and Duration

2.5. **Table 2.3** summarizes the monitoring parameters and frequencies of impact dust monitoring for the whole construction period. The air quality monitoring schedule for the reporting month is shown in **Appendix D**.

 Table 2.3
 Impact Dust Monitoring Parameters, Frequency and Duration

Parameters	Frequency
1-hr TSP	Three times / 6 days
24-hr TSP	Once / 6 days

## Monitoring Methodology and QA/QC Procedure

1-hour TSP Monitoring

## Measuring Procedures

2.6. The measuring procedures of the 1-hour dust meters were in accordance with the Manufacturer's Instruction Manual as follows:

(Equipment: Sibata Scientific Technology; Model no. LD-3B, LD-5R)

- The 1-hour dust meter is placed at least 1.3 meters above ground.
- Set POWER to "ON" and make sure that the battery level was not flash or in low level.
- Allow the instrument to stand for about 3 minutes and then the cap of the air sampling inlet has been released.
- Push the knob at MEASURE position.
- Set time/mode setting to [BG] by pushing the time setting switch. Then, start the background measurement by pushing the start/stop switch once. It will take 6 sec. to complete the background measurement.
- Push the time setting switch to change the time setting display to [MANUAL] at the bottom left of the liquid crystal display.
- Finally, push the start/stop switch to stop the measuring after 1 hour sampling.

• Information such as sampling date, time, count value and site condition were recorded during the monitoring period.

## Maintenance/Calibration

2.7. The following maintenance/calibration was required for the direct dust meters:

Check the meter at a 3-month interval and calibrate the meter at a 1-year interval throughout all stages of the air quality monitoring.

#### 24-hour TSP Monitoring

#### Instrumentation

2.8. High volume (HVS) samplers (Model TE-5170), completed 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). Moreover, the HVS also met all the requirements in section 2.5 of the updated EM&A Manual.

## Operating/Analytical Procedures

- 2.9. Operating/analytical procedures for the operation of HVS were as follows:
  - A horizontal platform was provided with appropriate support to secure the samplers against gusty wind.
  - No two samplers were placed less than 2 meters 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 2 meters of separation from walls, parapets and penthouses was required for rooftop samples.
  - A minimum of 2 meters separation from any supporting structure, measured horizontally was required.
  - No furnaces or incineration flues were nearby.
  - Airflow around the sampler was unrestricted.
  - The sampler was more than 20 meters from the drip line.
  - Any wire fence and gate, to protect the sampler, should not cause any obstruction during monitoring.
- 2.10. Prior to the commencement of the dust sampling, the flow rate of the high volume sampler was properly set (between 1.1 m3/min. and 1.4 m3/min.) in accordance with the manufacturer's instruction to within the range recommended in USEPA Standard Title 40, CFR Part 50.

- 2.11. For TSP sampling, fiberglass filters have a collection efficiency of > 99% for particles of 0.3µm diameter were used.
- 2.12. The power supply was checked to ensure the sampler worked properly. On sampling, the sampler was operated for 5 minutes to establish thermal equilibrium before placing any filter media at the designated air monitoring station.
- 2.13. The filter holding frame was then removed by loosening the four nuts and a weighted and conditioned filter was carefully centered with the stamped number upwards, on a supporting screen.
- 2.14. 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 should be sufficient to avoid air leakage at the edges.
- 2.15. The shelter lid was closed and secured with the aluminium strip.
- 2.16. The timer was then 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).
- 2.17. After sampling, the filter was removed and sent to the HOKLAS laboratory (High Precision Chemical Testing Ltd.) for weighing. The elapsed time was also recorded.
- 2.18. Before weighing, all filters were equilibrated in a conditioning environment for 24 hours. The conditioning environment temperature should be between 25°C and 30°C and not vary by more than  $\pm 3$ °C; the relative humidity (RH) should be < 50% and not vary by more than  $\pm 5$ %. A convenient working RH is 40%.

## Maintenance/Calibration

- 2.19. The following maintenance/calibration was required for the HVS:
  - The high volume motors 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 at bi-monthly intervals using TE-5025A Calibration Kit through\hout all stages of the air quality monitoring.

## **Results and Observations**

- 2.20. All 1-hour and 24-hour TSP monitoring was conducted as scheduled in the reporting month. No Action/Limit Level exceedance was recorded.
- 2.21. The weather information for the reporting month is summarized in **Appendix C.**
- 2.22. The monitoring data and graphical presentations of 1-hour and 24-hour TSP monitoring results are shown in **Appendices E and F** respectively.
- 2.23. The summary of exceedance record in reporting month is shown in **Appendix H**. No exceedance was recorded for the air quality monitoring.
- 2.24. According to our field observations during the monitoring, the major dust source identified at the two designated air quality monitoring stations are road traffic dust, exposed site area and open stockpiles, excavation works and site vehicle movements.
- 2.25. The summary of 1-hour and 24-hour TSP air quality monitoring results during the reporting month are shown in **Appendix E** and **Appendix F** respectively.

## 3 NOISE

## **Monitoring Requirements**

3.1. According to EM&A Manuals under the EP, construction noise monitoring was conducted to monitor the construction noise arising from the construction activities within KTD. The regular monitoring frequency for each monitoring station shall be on a weekly basis and conduct one set of measurements between 0700 and 1900 hours on normal weekdays. Appendix A shows the established Action and Limit Levels for the environmental monitoring works.

## **Monitoring Locations**

3.2. Three designated monitoring stations were selected for noise monitoring programme. Noise monitoring was conducted at three designated monitoring stations (M3(A), M4, and M5(C)). **Figure 3** shows the locations of these stations.

**Table 3.1 Noise Monitoring Stations** 

<b>Monitoring Stations</b>	Locations	<b>Location of Measurement</b>
M3(A)	The Bridge connecting The Latitide	In the middle of the foot bridge connecting The Latitude
M4	Lee Kau Yan Memorial School	Rooftop (about 7/F) Area
M5(C)	Mercy Grace's Home	Ground in front of the building entrance facing Prince Edward Road East (noise monitoring is not allowed on the rooftop from 27 February 2020, due to the coronavirus countermeasure in Mercy Grace's Home)

## **Monitoring Equipment**

3.3. **Table 3.2** summarizes the noise monitoring equipment. Copies of calibration certificates are provided in **Appendix B**.

**Table 3.2 Noise Monitoring Equipment** 

Equipment	Model and Make	Qty.
Integrating Sound Level Meter	• SVANTEK SVAN 957 / 979	3
Calibrator	Bruel & Kjaer B&K4231	1
Canorator	SOUNDTEK ST-120	1

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

3.4. **Table 3.3** summarizes the monitoring parameters, frequency and total duration of monitoring. The noise monitoring schedule is shown in **Appendix D**.

**Table 3.3** Noise Monitoring Parameters, Frequency and Duration

Monitoring Stations	Parameter	Period	Frequency	Measurement
M3(A)	$L_{10}(30 \text{ min.}) dB(A)$	0700-1900 hrs on	On so non	
M4	$L_{90}(30 \text{ min.}) dB(A)$		Once per	Façade
M5(C)	$L_{eq}(30 \text{ min.}) dB(A)$	normal weekdays	week	-

## Monitoring Methodology and QA/QC Procedures

- The Sound Level Meter was set on a tripod at a height of 1.2 m above the ground.
- The battery condition was checked to ensure the correct functioning of the meter.
- Parameters such as frequency weighting, the time weighting and the measurement time were set as follows:

frequency weighting
time weighting
time measurement
: A
: Fast
: 30 minutes

- Prior to and after each noise measurement, the meter was calibrated using a Calibrator for 94.0 dB at 1000 Hz. If the difference in the calibration level before and after measurement was more than 1.0 dB, the measurement would be considered invalid and repeat of noise measurement would be required after recalibration or repair of the equipment.
- The wind speed was frequently checked with the portable wind meter.
- At the end of the monitoring period, the L<sub>eq</sub>, L<sub>90</sub> and L<sub>10</sub> were recorded. In addition, site conditions and noise sources were recorded on a standard record sheet.
- Noise measurement was paused temporarily during periods of high intrusive noise if possible and observation was recorded when intrusive noise was not avoided.
- Noise monitoring was cancelled in the presence of fog, rain, and wind with a steady speed exceeding 5 m/s, or wind with gusts exceeding 10 m/s.

## **Maintenance and Calibration**

- 3.5. The microphone head of the sound level meter and calibrator were cleaned with a soft cloth at quarterly intervals.
- 3.6. The sound level meter and calibrator were checked and calibrated at yearly intervals.
- 3.7. Immediately prior to and following each noise measurement the accuracy of the sound level meter shall be checked using an acoustic calibrator generating a known sound pressure level at a known frequency. Measurements may be accepted as valid only if the calibration levels from before and after the noise measurement agree to within 1.0 dB.

#### **Results and Observations**

- 3.8. All construction noise monitoring was conducted as scheduled in the reporting month. No Action/Limit Level exceedance was recorded. The summary of exceedance record in reporting month is shown in **Appendix H**.
- 3.9. The baseline noise level and the Noise Limit Level at each designated noise monitoring station are presented in **Table 3.5**.
- 3.10. Noise monitoring results and graphical presentations are shown in **Appendix G**.
- 3.11. The major noise source identified at the designated noise monitoring stations are shown in **Table 3.4**.

Table 3.4 Major Noise Source identified at the Designated Noise Monitoring Stations

<b>Monitoring Stations</b>	Locations	Major Noise Source
M3(A)	The Bridge connecting The Latitude	Traffic Noise Site vehicle movement
M4	Lee Kau Yan Memorial School	Traffic Noise Site vehicle movement Excavation works Piling works Daily school activities
M5(C)	Mercy Grace's Home	Traffic Noise Site vehicle movement

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Table 3.5 Baseline Noise Level and Noise Limit Level for Monitoring Stations

Station	Baseline Noise Level, dB (A)	Noise Limit Level, dB (A)
	N/A <sup>(1)</sup>	75
M3(A)	(at 0700 – 1900 hrs on normal	(at 0700 – 1900 hrs on
	weekdays)	normal weekdays)
	76.7 <sup>(2)</sup>	70
M4	(at 0700 – 1900 hrs on normal	(at 0700 – 1900 hrs on
	weekdays)	normal weekdays)
	N/A <sup>(1)</sup>	75
M5(C)	(at 0700 – 1900 hrs on normal	(at 0700 – 1900 hrs on
	weekdays)	normal weekdays)

<sup>(\*)</sup> Noise Limit Level is 65 dB(A) during school examination periods.

 $CNL = 10 \log (10^{MNL/10} - 10^{BNL/10})$ 

Remarks: MNL = Measured Noise Level, BNL = Baseline Noise Level

Note (1): The background Noise Level was recorded during the Lunch Hour of Construction Site

<sup>(</sup>i.e. 12:00-13:00) and to be used as the referencing value for compliance checking for Noise Action and Limit Level.

Note (2): The noise level due to the construction work (CNL) was calculated by the following formula:

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

4.1. The EM&A data was compared with the EIA predictions as summarized in **Tables 4.1** to **4.3**.

Table 4.1 Comparison of 1-hr TSP data with EIA predictions

-	Predicted 1-l	nr TSP conc.		asured SP conc.
Station	Scenario1 (Mid Scenario2 (Mid 2009 to Mid- 2013 to Late		Reporting Month (December 2021), µg/m³	
	2013), $\mu g/m^3$	2016), μg/m <sup>3</sup>	Average	Range
AM2 – Lee Kau Yan Memorial School	290	312	39.1	19.0 – 66.0

Table 4.2 Comparison of 24-hr TSP data with EIA predictions

	Predicted 24-hr TSP conc.  Scenario1 (Mid 2009 to Mid-2013), Scenario2 (Mid 2013 to Late 2016)		Predicted 24-hr TSP conc.  Measur 24-hr TSP		
Station			Reporting Month (December 2021), μg/m <sup>2</sup>		
	μg/m <sup>3</sup>	Late 2016), μg/m³	Average	Range	
AM2(A) - Ng Wah					
Catholic Secondary School	145	169	84.6	44.1 – 125.6	

Table 4.3 Comparison of Noise Monitoring Data with EIA predictions

Stations	$\begin{array}{c} \textbf{Predicted Mitigated Construction} \\ \textbf{Noise Levels during Normal} \\ \textbf{Working Hour} \left( L_{eq  (30min)}  dB(A) \right) \end{array}$	Reporting Month (December 2021), $L_{eq~(30min)}~dB(A)$
M3(A) – The Bridge connecting The Latitude	Not predicted in EIA Report	67.6 - 74.5 <sup>(2)</sup>
M4 – Lee Kau Yan Memorial School	47 – 74	72.1 - 74.1 (1)
M5(C) – Mercy Grace's Home	Not predicted in EIA Report	73.1 - 74.8 (2)

#### Remarks:

<sup>(1)</sup> Since the baseline noise level was higher than those recorded during the construction period, the recorded noise levels were considered non-valid exceedance of Noise Limit Level.

<sup>(2)</sup> Since the background noise level was higher than those recorded during the construction period, the recorded noise levels were considered non-valid exceedance of Noise Limit Level.

- 4.2. The average 1-hour TSP concentrations at AM2 in the reporting month were below the prediction in the approved Environmental Impact Assessment (EIA) Report.
- 4.3. The average 24-hour TSP concentrations at AM2(A) in the reporting month were below the prediction in the approved EIA Report.
- 4.4. The noise monitoring results in the reporting month from M4 were slightly higher than the range of the predicted mitigated constriction noise levels in the EIA Report.
- 4.5. Construction noise levels at M3(A) and M5(C) were not predicted in EIA Report.

## 5 LANDSCAPE AND VISUAL

## **Monitoring Requirements**

5.1. According to EM&A Manual of the Kai Tak Development EIA Study, ET shall monitor and audit the contractor's operation during the construction period on a weekly basis, and to report on the contractor's compliance.

#### **Results and Observations**

- 5.2. Site audits were conducted on a weekly basis to monitor the timely implementation of landscape and visual mitigation measures within the site boundaries of this Project. The summaries of site audits are attached in **Appendix I**.
- 5.3. No non-compliance of the landscape and visual impact was recorded in the reporting month.
- 5.4. Should non-compliance of the landscape and visual impact occur, action in accordance with the action plan presented in **Appendix J** shall be performed.

## **6** ENVIRONMENTAL INSPECTION

## **Site Inspections**

- 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. The summaries of site inspections are attached in **Appendix I**.
- 6.2. Site inspections were conducted on 8, 13, 20 and 28 December 2021 in the reporting month. A joint site inspection with the representative of IEC, ER, the Contractor and the ET was conducted on 8 December 2021. The details of the observations during site inspection are summarized in **Table 6.2**.

### **Review of Environmental Monitoring Procedures**

6.3. The monitoring works conducted by the monitoring team were inspected regularly. The following observations have been recorded for the monitoring works:

### Air Quality Monitoring

- The monitoring team recorded all observations around the monitoring stations within and outside the construction site.
- The monitoring team recorded the temperature and weather conditions on the monitoring days.

## Noise Monitoring

- The monitoring team recorded all observations around the monitoring stations, which might affect the monitoring result.
- Major noise sources were identified and recorded. Other intrusive noise attributing to the result was trimmed off by pausing the monitoring temporarily.

#### **Status of Environmental Licensing and Permitting**

6.4. All permits/licenses obtained for the Project are summarized in **Table 6.1**.

Table 6.1 Summary of Environmental Licensing and Permit Status

<u> </u>	mentar Ereensing a				
December 1	Valid Period		Gt. 1		
Permit No.	From	To	Status		
Environmental Permit (EP)					
EP-337/2009	23 Apr 2009	N/A	Valid		
<b>Effluent Discharge License</b>					
WT00027495-2017	28 Mar 2017	31 Mar 2022	Valid		
Billing Account for Construction Wa	Billing Account for Construction Waste Disposal				
A/C# 7026164	20 Oct 2016	N/A	Valid		
Registration of Chemical Waste Producer					
WPN5213-229-P3271-01	14 Aug 2017	N/A	Valid		
<b>Construction Noise Permit (CNP)</b>	Construction Noise Permit (CNP)				
GW-RE0915-19	8 Nov 2019	4 May 2020	Expired		
GW-RE0984-19	15 Dec 2019	24 Feb 2020	Expired		
GW-RE0083-20	1 Mar 2020	1 June 2020	Expired		
GW-RE0266-20	2 May 2020	31 Jul 2020	Expired		
GW-RE0779-21	30 Jul 2021	30 Nov 2021	Expired		
GW-RE0858-21	31 Jul 2021	30 Aug 2021	Expired		

## **Status of Waste Management**

6.5. The amount of wastes generated by the major site activities of this Project during the reporting month is shown in **Appendix M**.

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

6.6. During site inspections in the reporting month, no non-conformance was identified. ET weekly site inspections were carried out during the reporting month and the observations and recommendations are summarized in **Table 6.2**.

Table 0.2 Object factoring and recommitted and the imprecious	Table 6.2	<b>Observations and Recommendations of Site Inspections</b>
---	-----------	---

Parameters	Date	Observations and Recommendations	Follow-up/Rectification
Water Quality	N/A	No environmental deficiency was identified in the reporting period.	N/A
1: 0 P	N/A	No environmental deficiency was identified in the reporting period.	N/A
Air Quality	N/A	No environmental deficiency was identified in the reporting period.	N/A
Noise	N/A	No environmental deficiency was identified in the reporting period.	N/A
Waste/ Chemical Management	N/A	No environmental deficiency was identified in the reporting period.	N/A
Landscape and Visual	N/A	No environmental deficiency was identified in the reporting period.	N/A
Permits/ Licenses	N/A	No environmental deficiency was identified in the reporting period.	N/A

## **Summary of Mitigation Measures Implemented**

6.7. An updated summary of the EMIS is provided in **Appendix K**.

## **Implementation Status of Event Action Plans**

6.8. The Event Action Plans for air quality, noise and landscape and visual are presented in **Appendix J**.

## 1-hr TSP Monitoring

6.9. No Action/Limit Level exceedance was recorded in the reporting month.

## 24-hr TSP Monitoring

6.10 No Action/Limit Level exceedance was recorded in the reporting month.

## **Construction Noise**

6.11. No Action/Limit Level exceedance was recorded in the reporting month.

## Landscape and visual

6.12. No non-compliance was recorded in the reporting month.

## Summary of Complaint, Warning, Notification of any Summons and Successful **Prosecution**

6.13. The summaries of environmental complaint, warning, summon and notification of successful prosecution for the Project is presented in **Appendix L**.

#### 7 FUTURE KEY ISSUES

- 7.1. Major site activities undertaken for the coming two months include:
  - Carry out backfilling works around Staircase ST1 at SKLR Playground
  - Install steel staircase cover at SKLR Playground
  - Install lift glazing panel at SKLR Playground
  - Carry out structural works of subway at PERE TTA Stages 3 & 4
  - Preparation works for road-opening of Road D1 and L7
  - Additional works as requested by maintenance parties
  - Construction of additional street furniture at Road D1 and L7
  - Construction of vehicle gates and chain-link fence
- 7.2. Key environmental issues in the coming month include:
  - Wastewater and runoff discharge from site;
  - Regular removal of silt, mud and sand along u-channels and sedimentation tanks:
  - Review and implementation of temporary drainage system for the surface runoff;
  - Noise from operation of the equipment, especially for rock-breaking activities, piling works and machinery on-site;
  - Dust generation from stockpiles of dusty materials, exposed site area, excavation works and rock breaking activities;
  - Water spraying for dust generating activity and on haul road;
  - Proper storage of construction materials on site;
  - Storage of chemicals/fuel and chemical waste/waste oil on site; and
  - Accumulation of general and construction waste on site.

7.3. The tentative major site activities is mentioned in Section 7.1 of this report. The impact prediction and control measures for the coming two months are summarized as follows:

## Air quality impact (dust)

- Frequent watering of haul road and unpaved/exposed areas;
- Frequent watering or covering stockpiles with tarpaulin or similar means; and
- Watering of any earth moving activities.

## Water quality impact (surface runoff)

- Diversion of the collected effluent to de-silting facilities for treatment prior to discharge to public storm water drains;
- Provision of adequate de-silting facilities for treating surface run-off and other collected effluents prior to discharge;
- Provision of perimeter protection such as sealing of hoarding footings to avoid runoff from entering the existing storm water drainage system via public road; and
- Provision of measures to prevent discharge into the stream.

## Noise Impact

- Scheduling of noisy construction activities if necessary to avoid persistent noisy operation;
- Controlling the number of plants use on site;
- Regular maintenance of machines; and
- Use of acoustic barriers if necessary.

## **Monitoring Schedule for Next Month**

7.4. The tentative environmental monitoring schedules for next month are shown in **Appendix D**.

## 8 CONCLUSIONS AND RECOMMENDATIONS

#### **Conclusions**

8.1. Environmental monitoring works were performed in the reporting month and all monitoring results were checked and reviewed.

## 1-hr TSP Monitoring

8.2. All 1-hr TSP monitoring was conducted as scheduled in the reporting month. No Action/Limit Level exceedance was recorded.

## 24-hr TSP Monitoring

8.3. All 24-hr TSP monitoring was conducted as scheduled in the reporting month. No Action/Limit Level exceedance was recorded.

## **Construction Noise Monitoring**

8.4. All construction noise monitoring was conducted as scheduled in the reporting month. No Action/Limit Level exceedance was recorded.

## Landscape and visual

8.5. No non-compliance was recorded in the reporting month.

## Complaint and Prosecution

8.6. No environmental complaint and environmental prosecution was received in the reporting month.

## Recommendations

8.7. According to the environmental audit performed in the reporting month, the following recommendations were made:

## Water Quality

• The public drainage gully within the construction site shall be bounded by sand bags.

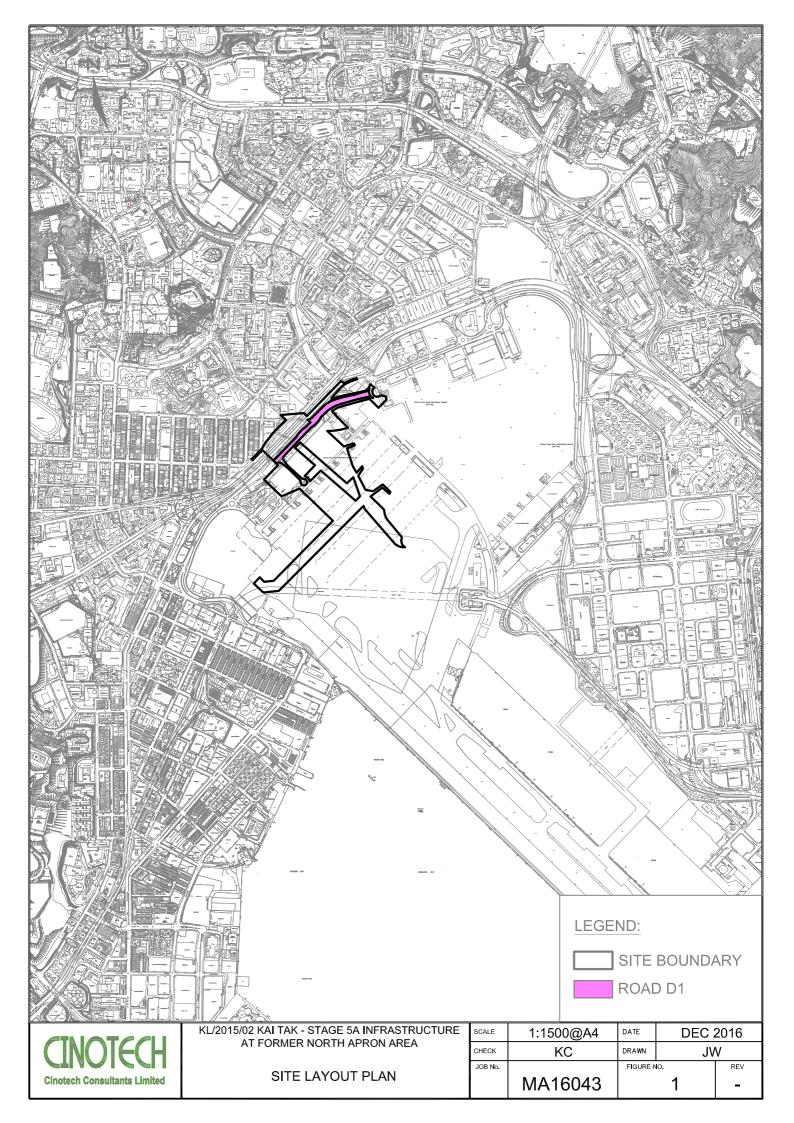
## Air Quality

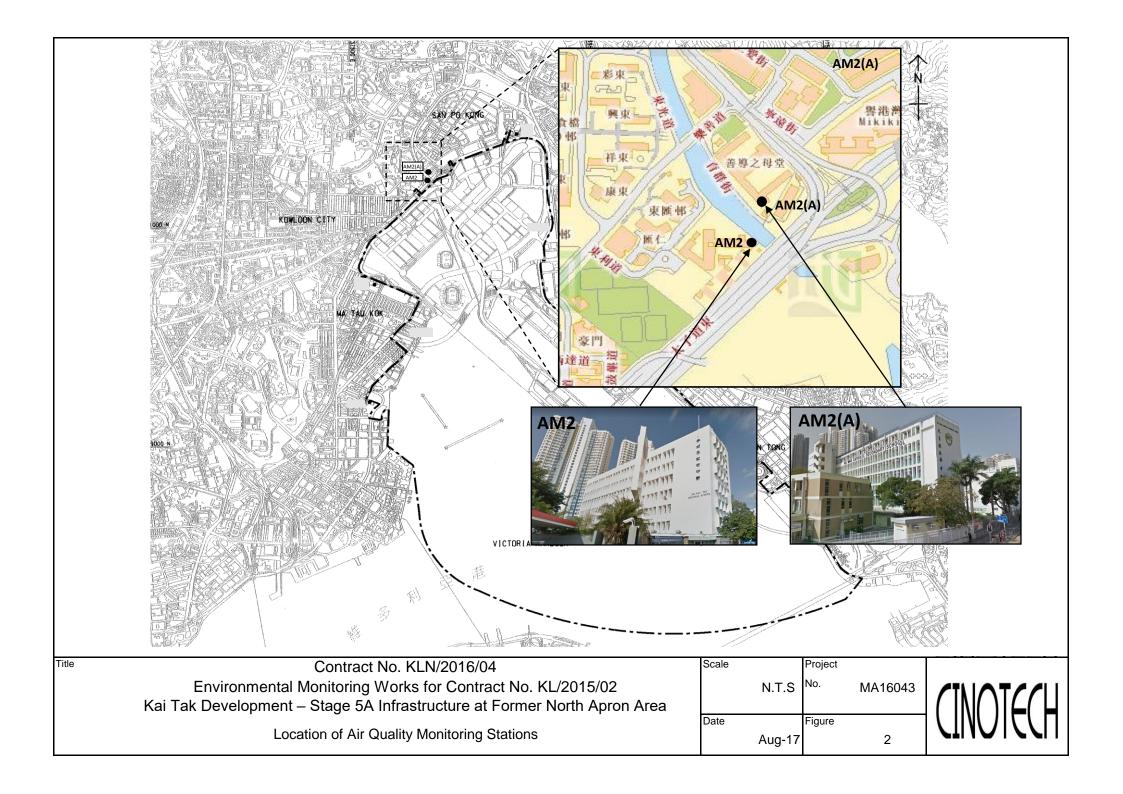
• The Contractor should cover the dusty material by dust screen.

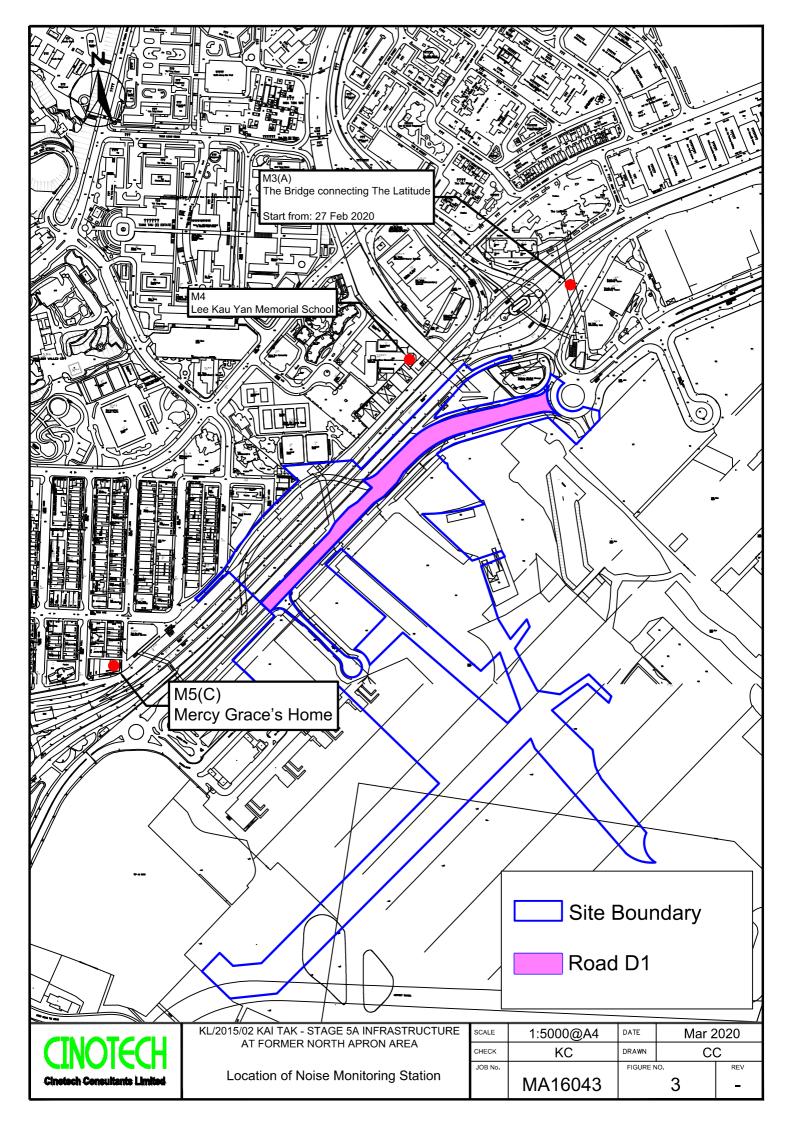
## Waste/Chemical Management

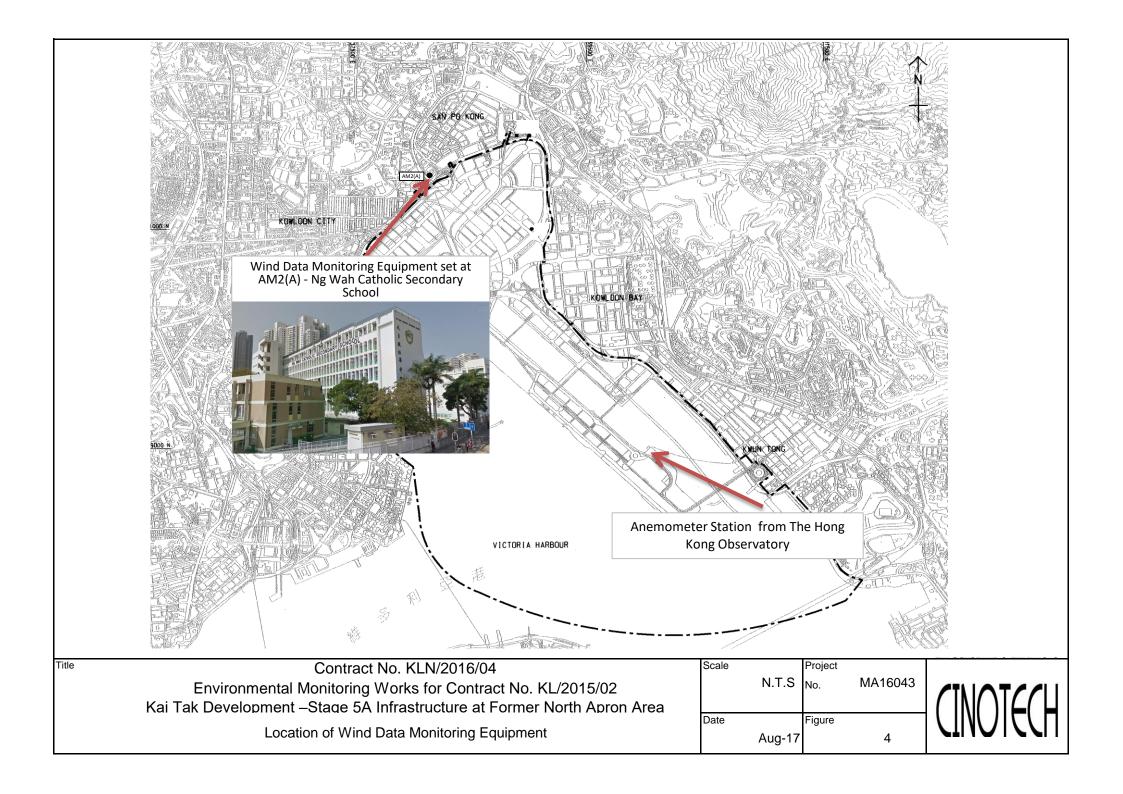
- The Contractor should store the construction/chemical material at the proper place.
- The Contractor was reminded to remove accumulated waste from the site.

## **FIGURES**









APPENDIX A
ACTION AND LIMIT LEVELS FOR AIR
QUALITY AND NOISE

# **Appendix A - Action and Limit Levels**

Table A-1 Action and Limit Levels for 1-Hour TSP

Location	Action Level, μg/m <sup>3</sup>	Limit Level, μg/m³
AM2	346	500

### Table A-2 Action and Limit Levels for 24-Hour TSP

Location	Action Level, μg/m <sup>3</sup>	Limit Level, μg/m³
AM2(A)	157	260

**Table A-3** Action and Limit Levels for Construction Noise

Time Period	Action Level	Limit Level
0700-1900 hrs on normal weekdays	When one documented complaint is received	75 dB(A) 70dB(A)/65dB(A)*

Remarks: 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. \*70dB(A) and 65dB(A) for schools during normal teaching periods and school examination periods, respectively.

APPENDIX B-1 COPIES OF CALIBRATION CERTIFCATES (AIR)

# **CINOTECH CONSULTANTS LIMITED**



# **Certificate of Calibration**

It is certified that the item under calibration has been calibrated by corresponding calibrated High Volume Sampler

Description:	Digital Dust Indicator			Date of Calibration 2-Dec-21		
Manufacturer:	Sibata Scienti	fic Technology LTD.	_	Validity of Calibr	ration Record	2-Feb-22
Model No.:	LD-5R					
Serial No.:	972780					
Equipment No.:	SA-01-09		Sensitivity	0.001 mg/m3		
High Volume Sa	mpler No.:	A-01-03	Before Sensit	ivity Adjustment	739 CPM	
Tisch Calibration	orifice No.:	3864	After Sensitiv	ity Adjustment	739 CPM	
		Ca	libration of 1 l	nr TSP		
Calibration		Laser Dust Monitor	•		HVS	
Point	М	ass Concentration (μg/ <b>X-axis</b>	m3)	Mas	s concentration (μ <b>Y-axis</b>	ug/m <sup>3</sup> )
1		64.0			123.8	
2		59.0			117.9	
3		51.0			109.0	
Average		58.0			116.9	
By Linear Regressions, mw = Correlation co	1.13	0.9999		cept, bw =	51.0093	_
D+:1-+- C			t Correlation I	Factor	116.0	
	•	High Volume Sampler ( Oust Meter (μg/m³)	μg/m )		116.9 58.0	
Measureing time	•	oust Weter (μg/III )		60.0		
Set Correlation F	•			<u> </u>	00.0	
		npler / Dust Meter, (μ	g/m3) ]	2.0		
The Dust Monitor Factor (CF) betw	or was compare veen the Dust N	o the instruction manual of with a calibrated High Monitor and High Voluted by HOKLAS laborated	gh Volume Sam me Sampler.	•	was used to gener	rate the Correlation
Calibrated by:		ng Shing Kwai)	_		t Manager (Henry	/ 1



RECALIBRATION **DUE DATE:** 

January 11, 2022

**Calibration Certification Information** 

January 11, 2021 Cal. Date:

Rootsmeter S/N: 438320

°K

Operator: Jim Tisch Ta: 297 Pa: 750.1

mm Hg

Calibration Model #: TE-5025A

Calibrator S/N: 3864

Γ		Vol. Init	Vol. Final	ΔVol.	ΔTime	ΔΡ	ΔΗ
	Run	(m3)	(m3)	(m3)	(min)	(mm Hg)	(in H2O)
Γ	1	1	2	1	1.4470	3.2	2.00
Γ	2	3	4	1	1.0210	6.4	4.00
	3	5	6	1	0.9140	8.0	5.00
Г	4	, 7	8	1	0.8670	8.8	5.50
	5	9	10	1	0.7140	12.9	8.00

	Data Tabulation						
Vstd	Qstd	$\sqrt{\Delta H \left(\frac{Pa}{Pstd}\right) \left(\frac{Tstd}{Ta}\right)}$		Qa	$\sqrt{\Delta H (Ta/Pa)}$		
(m3)	(x-axis)	(y-axis)	Va	(x-axis)	(y-axis)		
0.9860	0.6814	1.4073	0.9957	0.6881	0.8899		
0.9818	0.9616	1.9902	0.9915	0.9711	1.2585		
0.9797	1.0719	2.2251	0.9893	1.0824	1.4071		
0.9786	1.1288	2.3337	0.9883	1.1399	1.4757		
0.9732	1.3630	2.8146	0.9828	1.3765	1.7798		
	m= 2.06566			m=	1.29348		
QSTD	b=	0.00315	QA	b=	0.00199		
	r=	0.99996	,	r=	0.99996		

	Calculations					
Vstd=	ΔVol((Pa-ΔP)/Pstd)(Tstd/Ta)	Va=	ΔVol((Pa-ΔP)/Pa)			
<b>Qstd=</b> Vstd/ΔTime		Qa=	Va/∆Time			
	For subsequent flow rate calculations:					
Qstd=	$1/m\left(\left(\sqrt{\Delta H\left(\frac{Pa}{Pstd}\right)\left(\frac{Tstd}{Ta}\right)}\right)-b\right)$	Qa=	$1/m\left(\left(\sqrt{\Delta H\left(Ta/Pa\right)}\right)-b\right)$			

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

# **High-Volume TSP Sampler**

# 5-POINT CALIBRATION DATA SHEET



File No. MA16043/13/0026

Project No.	AM2(A) - Ng Wah Catholic Secondary School						
Date:	6-N	ov-21	Next Due Date:	6-Jan-22		Operator:	SK
Equipment No.:	A-(	01-13	Model No.:	: TE-5170		Serial No.	1352
			Ambient C		ı		
Temperatur	re, Ta (K)	299.4	Pressure, Pa	(mmHg)		757.5	
		0	·e Tr	1 17 6			
Serial	No	3864	Slope, mc	0.05846	Intercept	. hc	-0.00313
Last Calibra		11-Jan-21			$c = [\Delta H \times (Pa/760)]$		
Next Calibra		11-Jan-22			(Pa/760) x (298/		
			•				
			Calibration of	ΓSP Sampler			
Calibration		Oı	fice			HVS	
Point	DH (orifice), in. of water	[DH x (Pa/76	60) x (298/Ta)] <sup>1/2</sup>	Qstd (CFM) X - axis	DW (HVS), in. of water		(50) x (298/Ta)] <sup>1/2</sup> (-axis
1	13.0		3.59	61.48	10.4		3.21
2	10.9		3.29	56.30	8.4	<u>'</u>	2.89
3	8.0		2.81	48.12	5.6		2.36
4	5.4		2.31	39.65	3.4		1.84
5	3.3		1.81	31.00	1.9		1.37
By Linear Regro	ession of Y on	X					
Slope, mw =		_	]	Intercept, bw :	-0.544	2	
	coefficient* =		.9994	1 /			
*If Correlation C	coefficient < 0.9	90, check and red	calibrate.	•			
			Set Point Ca	alculation			
From the TSP Fi	eld Calibration	Curve, take Qstd	= 43 CFM				
From the Regress	sion Equation, t	the "Y" value acc	ording to				
			N / I / I / I / I / I / I / I / I / I /	(D. /5(0) (A)	00/75 \11/2		
		mw x (	$Qstd + bw = [\Delta W x]$	(Pa//60) x (2)	98/Ta)]		
Therefore, Se	t Point; W = ( r	nw x Qstd + bw)	<sup>2</sup> x ( 760 / Pa ) x ( 7	Γa / 298 ) =	4.32		
Remarks:							
•							
-							
Conducted by:	Wong S	hing Kwai	Signature:	<i>X</i> ?	<u> </u>	Date:	6-Nov-21
				\ 0	0/		
Checked by:	Henry	y Leung	Signature:	- tem	Just -	Date:	6-Nov-21



# **Certificate of Calibration - Wind Monitoring Station**

Description: Ng Wah Catholic Seconday School - Weather Stations

Manufacturer: <u>Davis Instruments</u>

Model No.: <u>Davis 6152, Vantage Pro2</u>

Serial No.: <u>BC180522050</u>

Equipment No.: SA-03-03

Date of Calibration 8-Oct-2021

Next Due Date 8-Apr-2022

### 1. Performance check of Wind Speed

Wind S <sub>I</sub>	peed, m/s	Difference D (m/s)
Wind Speed Reading (V1) Anemometer Value (V1)		D = V1 - V2
0.0	0.0	0.0
1.5	1.5	0.0
2.0	2.1	-0.1
3.3	3.4	-0.1

### 2. Performance check of Wind Direction

Wind Di	rection (°)	Difference D (°)
Wind Direction Reading (V1) Marine Compass Value (V1)		D = W1 - W2
0	0	0.0
90	90	0.0
180	180	0.0
270	270	0.0

#### **Test Specification:**

- 1. Performance Wind Speed Test The wind meter was on-site calibrated against the anemometer
- 2. Performance Wind Direction Test The wind meter was on-site calibrated against the marine compass at four direction

Calibrated by:

Wong Shing Kwai

Approved by:

Henry Leung

APPENDIX B-2 COPIES OF CALIBRATION CERTIFCATES (NOISE)



0025915

SVAN959 SLM Object 1: Customer: Cinotech Consultants Limited Serial No. /Ref. No. : 11275 / N-08-01 RM 1710, Technology Park, Object 2: Microphone Serial No. /Ref. No. : 18 On Lai Street, Shatin, N.T. 22452 Hong Kong **SVANTEK** Manufacturer: Customer Code: SVEC09005 Certificate No.: 0025915 Date of calibration: 22/01/2021 Date of the recommended re-calibration: 22/01/2022 Handle by: E0002

**Measuring results** 

	Reference value	Indication value	Deviation	Allowed deviation	Object
	94.0dB	93.9dB	-0.1dB	+/- 1.5dB	1
Γ	114.0dB	113.8dB	-0.2dB	+/- 1.5dB	1

### **Measuring equipment**

index		Calibrator / Master Traceability	
0.000	1 Master Sound Meter, SVAN949,sn:8571		IEC61672
	2	Sound Calibrator, SV30A sn:32580	IEC60942

### **Ambient conditions**

Temperature (20...26)°C

Humidity (20...60)%RH

### Measuring procedure

Calibrated by Type 1 Sound Calibrator with Master Sound Level Meter under 1kHz Frequency.

### **Uncertainty**

+/- 0.2 dB for probability not less than 95%.

### Conformity

- 1. The resulted values were those obtained at the time of test and applies only to the item calibrated.
- 2.The measurement uncertainty was calculated according to the regulations of GUM with the coverage factor k=2 and contains the uncertainty of the measuring procedure and the uncertainty of the measuring system.
- 3. The equipment being used in this calibration are regularly calibrated by laboratory according to ISO/IEC17025.
- 4.HKAS has accredited this laboratory (HOKLAS 267) for specific calibration activities as listed in the HOKLAS directory of accredited laboratories.
- 5. The calibrations certificate may not be reproduced.

Measured value(s)	within	the allowable deviation.
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Performed by

Approved by

Calibration Technician

Quality Manager



0025913

Customer: Cinotech Consultants Limited RM 1710, Technology Park, 18 On Lai Street, Shatin, N.T. Hong Kong		Object 1 : Serial No. /Ref. No. : Object 2 : Serial No. /Ref. No. :	Microphone
Customer Code: SVEC09005		Manufacturer: Svar	ntek
Date of calibration: Date of the recommended re-calibration:	22/01/2021 22/01/2022	Certificate No.: Handle by:	0025913 E0002

**Measuring results** 

Reference value	Indication value	Deviation	Allowed deviation	Object
94.0dB	93.5dB	-0.5dB	+/- 1.5dB	1
114.0dB	113.3dB	-0.7dB	+/- 1.5dB	1

### Measuring equipment

index		Calibrator / Master	Traceability
	1 Master Sound Meter, SVAN949,sn:8571		IEC61672
	2	Sound Calibrator, SV30A sn:32580	IEC60942

### **Ambient conditions**

Temperature (20...26)°C

Humidity (20...60)%RH

### Measuring procedure

Calibrated by Type 1 Sound Calibrator with Master Sound Level Meter under 1kHz Frequency.

### **Uncertainty**

+/- 0.2 dB for probability not less than 95%.

### Conformity

- 1. The resulted values were those obtained at the time of test and applies only to the item calibrated.
- 2. The measurement uncertainty was calculated according to the regulations of GUM with the coverage factor k=2 and contains the uncertainty of the measuring procedure and the uncertainty of the measuring system.
- 3. The equipment being used in this calibration are regularly calibrated by laboratory according to ISO/IEC17025.
- 4.HKAS has accredited this laboratory (HOKLAS 267) for specific calibration activities as listed in the HOKLAS directory of accredited laboratories.
- 5. The calibrations certificate may not be reproduced.

Measured <b>v</b>	value(s)	within	the	allowable	deviation.
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Performed by

Approved by

Calibration Technician

Quality Manager



0025914

Object 1: SVAN957 SLM Customer: Cinotech Consultants Limited Serial No. /Ref. No. : 23851 / N-08-12 RM 1710, Technology Park, Object 2: Microphone Serial No. /Ref. No. : 18 On Lai Street, Shatin, N.T. 43676 Hong Kong Customer Code: Manufacturer: SVEC09005 Svantek 0025914 Date of calibration: 22/01/2021 Certificate No.: Date of the recommended re-calibration: 22/01/2022 Handle by: E0002

Measuring results

Reference value	Indication value	Deviation	Allowed deviation	Object
94.0dB	93.6dB	-0.4dB	+/- 1.5dB	1
114.0dB	113.5dB	-0.5dB	+/- 1.5dB	1

### Measuring equipment

index		Calibrator / Master	Traceability
	1 Master Sound Meter, SVAN949,sn:8571		IEC61672
	2	Sound Calibrator, SV30A sn:32580	IEC60942

### **Ambient conditions**

Temperature (20...26)°C

Humidity (20...60)%RH

### Measuring procedure

Calibrated by Type 1 Sound Calibrator with Master Sound Level Meter under 1kHz Frequency.

### **Uncertainty**

+/- 0.2 dB for probability not less than 95%.

### **Conformity**

- 1.The resulted values were those obtained at the time of test and applies only to the item calibrated.
- 2. The measurement uncertainty was calculated according to the regulations of GUM with the coverage factor k=2 and contains the uncertainty of the measuring procedure and the uncertainty of the measuring system.
- 3. The equipment being used in this calibration are regularly calibrated by laboratory according to ISO/IEC17025.
- 4.HKAS has accredited this laboratory (HOKLAS 267) for specific calibration activities as listed in the HOKLAS directory of accredited laboratories.
- 5. The calibrations certificate may not be reproduced.

Measured value(s)	within	the allowable deviation.
-------------------	--------	--------------------------

Performed by

Approved by

Calibration Technician

Quality Manager

Appleone Calibration Laboratory Ltd.

Rm1309, 13/F, No.77 Wing Hong St, Kln, HKSAR

Tel: +852 2370 4437 Fax: +852 2114 0393



0025917

Customer: Cinotech Consultants Limited RM 1710, Technology Park, 18 On Lai Street, Shatin, N.T. Hong Kong		Object 1 : Serial No. /Ref. No. : Object 2 : Serial No. /Ref. No. :	B&K4231 sound calibrator 2326353 / N-02-01
Customer Code: SVEC09005		Manufacturer : Brue	el & Kjaer
Date of calibration: Date of the recommended re-calibration:	22/01/2021 22/01/2022	Certificate No.: Handle by:	0025917 E0002

**Measuring results** 

Reference val	ue Indication value	Deviation	Allowed deviation	Object
94.0dB	94.0dB	0.0dB	+/- 0.2dB	1
114.0dB	114.1dB	+0.1dB	+/- 0.2dB	1

### Measuring equipment

index		Calibrator / Master	Traceability
	1	Master Sound Meter, SVAN949,sn:8571	IEC61672
	2	Sound Calibrator, SV30A sn:32580	IEC60942

### **Ambient conditions**

Temperature (20...26)°C

Humidity (20...60)%RH

### Measuring procedure

Calibrated by Type 1 Sound Level Meter and 1kHz Sound Source .

### **Uncertainty**

+/- 0.2 dB for probability not less than 95%.

#### Conformity

- 1. The resulted values were those obtained at the time of test and applies only to the item calibrated.
- 2. The measurement uncertainty was calculated according to the regulations of GUM with the coverage factor k=2 and contains the uncertainty of the measuring procedure and the uncertainty of the measuring system.
- 3. The equipment being used in this calibration are regularly calibrated by laboratory according to ISO/IEC17025.
- 4.HKAS has accredited this laboratory (HOKLAS 267) for specific calibration activities as listed in the HOKLAS directory of accredited laboratories.
- 5. The calibrations certificate may not be reproduced.

Measured value(s)	within	the allowable	deviation.
` '	VV A CAAAAA		

Performed by

Approved by

Calibration Technician Quality Manager

Appleone Calibration Laboratory Ltd.

Rm1309, 13/F, No.77 Wing Hong St, Kln, HKSAR

Tel: +852 2370 4437 Fax: +852 2114 0393

### **High Precision Chemical Testing Ltd.**

Rm 1904, Technology Park 18 On Lai Street, Shatin

NT, Hong Kong

Tel: +852 3841 4388 Website: https://www.hpct.com.hk



Report No. : 00161 | Issue Date : 16 Nov 2021

Application No. : HP00041

**Certificate of Calibration** 

Applicant : Cinotech Consultants Limited

RM 1710, Technology Park,

18 On Lai Street,

Shatin, N.T., Hong Kong

Sample Description : Submitted equipment stated to be Sound Level Calibrator.

Equipment No.: : N-13-03

Manufacturer: : SOUNDTEK

Other information : Model No. ST-120

Serial No. 181001637

Date Received : 05 Nov 2021

Test Period : 08 Nov 2021 to 12 Nov 2021

Test Requested : Performance checking for Sound Level Calibrator

Test Method : The Sound Level Meter and Calibrator has been calibrated in accordance with

the documented procedures and using standard and instrument which are

recommended by the manufacturer, or equivalent.

Test conditions : Room Temperature: 22-25 degree Celsius

Relative Humidity: 35-70%

Test Result : Refer to the test result(s) on page 2.

Remark : 1. Information of the sample description provided by the Applicant.

2. The result(s) relate only to the items tested or calibrated.

For and on behalf of HIGH PRECISION CHEMICAL TESTING LIMITED

Lee Wai Kit Laboratory Manager

# **High Precision Chemical Testing Ltd.**

Rm 1904, Technology Park 18 On Lai Street, Shatin

NT, Hong Kong

Tel: +852 3841 4388 Website: https://www.hpct.com.hk



Report No. : 00161 | Issue Date : 16 Nov 2021

Application No. : HP00041

# **Certificate of Calibration**

Measuring equipment

Description	Sound Calibrator
Manufacturer	Brüel & Kjær
Model No.	TYPE 4231
Serial No.	2326353
Equipment No.	N-02-01

Description	Sound Meter
Manufacturer	BSWA Technology
Model No.	BSWA 308
Serial No.	570188
Microphone No.	570608
Equipment No.	N-12-03

Test Result

Reference value, dB	Indication value, dB	Deviation, dB	Allowed deviation, dB
94.0	94.2	+0.2	± 0.3
114.0	114.4	+0.4	± 0.5

### Note

- : 1. "Instrument Readings" presents the figures shown on item under calibration / checking regardless of equipment precision or significant figures.
  - 2. The indication value was obtained from the average of ten replicated measurement.

- End of report -

### APPENDIX C WEATHER INFORMATION

# December 2021

		December 2021		
Date	Mean Pressure (hPa)	Air Temperature  Mean (°C)	Mean Relative Humidity (%)	Precipitation (mm)
1-Dec-21	1021.5	17.3	40	0
2-Dec-21	1021.8	17.4	42	0
3-Dec-21	1021.5	18.0	35	0
4-Dec-21	1022.2	18.1	46	0
5-Dec-21	1021.2	19.1	55	0
6-Dec-21	1020.3	19.2	59	0
7-Dec-21	1020.9	19.9	65	0
8-Dec-21	1022.3	20.1	67	0
9-Dec-21	1022.3	20.2	72	0
10-Dec-21	1020.7	20.9	73	0
11-Dec-21	1020.8	21.4	74	0
12-Dec-21	1021.0	21.5	75	0
13-Dec-21	1021.6	19.4	67	0
14-Dec-21	1018.6	20.5	72	Trace
15-Dec-21	1016.1	21.5	78	0.2
16-Dec-21	1015.8	23.2	81	Trace
17-Dec-21	1018.9	21.7	69	0
18-Dec-21	1022.8	18.1	58	0
19-Dec-21	1021.8	17.9	51	0
20-Dec-21	1017.6	17.2	78	9.4
21-Dec-21	1013.5	17.3	88	2.4
22-Dec-21	1016.5	19.3	80	Trace
23-Dec-21	1016.8	19.9	77	0.8
24-Dec-21	1017.2	19.9	84	1.7
25-Dec-21	1021.2	19.6	75	Trace
26-Dec-21	1025.5	15.0	78	3.5
27-Dec-21	1027.1	12.0	81	1.3
28-Dec-21	1024.4	15.3	74	0.2
29-Dec-21	1023.2	18.4	74	0
30-Dec-21	1024.6	18.1	77	0
31-Dec-21	1025.0	18.0	78	Trace

December 2021					
T	Table II: Wind Speed and Directions				
Date	Time	Wind Speed m/s	Direction		
1-Dec-21	0:00	0.4	ESE		
1-Dec-21	1:00	0.4	NNW		
1-Dec-21	2:00	0.4	ESE		
1-Dec-21	3:00	0.4	SE		
1-Dec-21	4:00	0.4	SE		
1-Dec-21	5:00	0.4	SE		
1-Dec-21	6:00	0.4	SE		
1-Dec-21	7:00	1.3	ESE		
1-Dec-21	8:00	0.4	SE		
1-Dec-21	9:00	0.4	NW		
1-Dec-21	10:00	0.4	NW		
1-Dec-21	11:00	1.3	NNW		
1-Dec-21	12:00	0.9	NNW		
1-Dec-21	13:00	1.3	NNW		
1-Dec-21	14:00	1.3	NNW		
1-Dec-21	15:00	1.3	NNE		
1-Dec-21	16:00	1.3	NNE		
1-Dec-21	17:00	1.8	ENE		
1-Dec-21	18:00	1.3	SE		
1-Dec-21	19:00	1.3	NE		
1-Dec-21	20:00	1.8	NE		
1-Dec-21	21:00	1.8	SE		
1-Dec-21 1-Dec-21	22:00	2.2	SE		
2-Dec-21	23:00 0:00	0.9	N E		
2-Dec-21 2-Dec-21	1:00	1.3	ESE		
2-Dec-21	2:00	1.3	ESE		
2-Dec-21	3:00	1.3	E		
2-Dec-21	4:00	1.8	E		
2-Dec-21	5:00	1.3	E		
2-Dec-21	6:00	1.3	E		
2-Dec-21	7:00	1.8	ESE		
2-Dec-21	8:00	1.8	E		
2-Dec-21	9:00	2.2	E		
2-Dec-21	10:00	1.3	SE		
2-Dec-21	11:00	3.1	SE		
2-Dec-21	12:00	3.1	E		
2-Dec-21	13:00	3.6	ESE		
2-Dec-21	14:00	2.2	Е		
2-Dec-21	15:00	1.8	Е		
2-Dec-21	16:00	1.8	ESE		
2-Dec-21	17:00	1.8	ESE		
2-Dec-21	18:00	1.8	Е		
2-Dec-21	19:00	1.8	ESE		
2-Dec-21	20:00	1.8	Е		
2-Dec-21	21:00	1.3	W		
2-Dec-21	22:00	1.3	W		
2-Dec-21	23:00	1.3	W		

December 2021					
Table	Table II: Wind Speed and Directions				
Date	Time	Wind Speed m/s	Direction		
3-Dec-21	0:00	0.9	W		
3-Dec-21	1:00	0.9	W		
3-Dec-21	2:00	0.9	NNW		
3-Dec-21	3:00	0.9	ENE		
3-Dec-21	4:00	0.9	NW		
3-Dec-21	5:00	1.8	W		
3-Dec-21	6:00	1.3	W		
3-Dec-21	7:00	1.3	W		
3-Dec-21	8:00	1.3	NNW		
3-Dec-21	9:00	1.8	NW		
3-Dec-21	10:00	1.3	W		
3-Dec-21	11:00	1.8	NW		
3-Dec-21	12:00	1.3	NW		
3-Dec-21	13:00	0.9	W		
3-Dec-21	14:00	1.3	NW		
3-Dec-21	15:00	1.3	WNW		
3-Dec-21	16:00	2.2	NW		
3-Dec-21	17:00	1.8	WNW		
3-Dec-21	18:00	0.4	NW		
3-Dec-21	19:00	0.9	NW		
3-Dec-21	20:00	1.3	W		
3-Dec-21	21:00	1.3	W		
3-Dec-21	22:00	1.3	WNW		
3-Dec-21	23:00	0.9	SE		
4-Dec-21	0:00	0.9	SE		
4-Dec-21	1:00	0.9	Е		
4-Dec-21	2:00	0.9	ESE		
4-Dec-21	3:00	0.9	ESE		
4-Dec-21	4:00	1.8	Е		
4-Dec-21	5:00	1.3	ESE		
4-Dec-21	6:00	1.3	Е		
4-Dec-21	7:00	1.3	Е		
4-Dec-21	8:00	1.3	NNW		
4-Dec-21	9:00	1.3	E		
4-Dec-21	10:00	1.8	Е		
4-Dec-21	11:00	1.8	SE		
4-Dec-21	12:00	2.7	ESE		
4-Dec-21	13:00	1.8	ESE		
4-Dec-21	14:00	1.8	ESE		
4-Dec-21	15:00	1.8	W		
4-Dec-21	16:00	1.8	W		
4-Dec-21	17:00	1.8	W		
4-Dec-21	18:00	1.3	W		
4-Dec-21	19:00	1.3	W		
4-Dec-21	20:00	1.3	NNW		
4-Dec-21	21:00	1.3	ENE		
4-Dec-21	22:00	1.3	NW		
4-Dec-21	23:00	1.3	W		

December 2021					
Т	Table II: Wind Speed and Directions				
Date	Time	Wind Speed m/s	Direction		
5-Dec-21	0:00	0.9	W		
5-Dec-21	1:00	0.9	W		
5-Dec-21	2:00	0.9	NNW		
5-Dec-21	3:00	0.9	NW		
5-Dec-21	4:00	0.9	W		
5-Dec-21	5:00	1.8	NW		
5-Dec-21	6:00	1.3	NW		
5-Dec-21 5-Dec-21	7:00	1.3	W		
5-Dec-21	8:00	0.9	NW		
5-Dec-21	9:00	1.3	WNW		
5-Dec-21	10:00	0.9	NW		
		0.9	+		
5-Dec-21 5-Dec-21	11:00 12:00	0.9	WNW NW		
5-Dec-21	13:00 14:00	0.4	NW W		
5-Dec-21		0.9	W		
5-Dec-21	15:00				
5-Dec-21 5-Dec-21	16:00	0.4	WNW		
	17:00	0.4	WNW		
5-Dec-21	18:00	0.4	WNW		
5-Dec-21	19:00	0.9	WNW		
5-Dec-21	20:00	0.9	N		
5-Dec-21	21:00	1.3	Е		
5-Dec-21	22:00	1.8	ESE		
5-Dec-21	23:00	1.8 1.3	E		
6-Dec-21	0:00		ESE E		
6-Dec-21	1:00	1.8			
6-Dec-21	2:00	3.1	ESE		
6-Dec-21	3:00	3.6	E		
6-Dec-21	4:00	2.2	ESE		
6-Dec-21	5:00	3.1	E		
6-Dec-21	6:00	2.2	Е		
6-Dec-21	7:00	1.8	ESE		
6-Dec-21	8:00	2.2	E		
6-Dec-21	9:00	2.7	ESE		
6-Dec-21	10:00	1.8	E		
6-Dec-21	11:00	1.8	E		
6-Dec-21	12:00	2.2	ESE		
6-Dec-21	13:00	1.8	ESE		
6-Dec-21	14:00	1.3	ESE		
6-Dec-21	15:00	0.9	ESE		
6-Dec-21	16:00	0.9	ESE		
6-Dec-21	17:00	1.3	ESE		
6-Dec-21	18:00	0.9	SE		
6-Dec-21	19:00	1.3	NNW		
6-Dec-21	20:00	1.3	NNW		
6-Dec-21	21:00	1.3	WNW		
6-Dec-21	22:00	0.9	WNW		
6-Dec-21	23:00	0.9	NNW		

December 2021					
Table	Table II: Wind Speed and Directions				
Date	Time	Wind Speed m/s	Direction		
7-Dec-21	0:00	0.9	ESE		
7-Dec-21	1:00	0.9	ESE		
7-Dec-21	2:00	0.9	ESE		
7-Dec-21	3:00	1.8	ESE		
7-Dec-21	4:00	1.3	SE		
7-Dec-21	5:00	1.3	ESE		
7-Dec-21	6:00	1.3	ESE		
7-Dec-21	7:00	0.9	SE		
7-Dec-21	8:00	0.9	ESE		
7-Dec-21	9:00	1.3	ESE		
7-Dec-21	10:00	1.8	E		
7-Dec-21	11:00	1.8	ESE		
7-Dec-21	12:00	1.3	E		
7-Dec-21	13:00	1.3	WNW		
7-Dec-21	14:00	0.9	NW		
7-Dec-21	15:00	0.9	SE		
7-Dec-21	16:00	0.9	WNW		
7-Dec-21	17:00	0.9	W		
7-Dec-21	18:00	0.9	WNW		
7-Dec-21	19:00	0.9	NNW		
7-Dec-21	20:00	0.4	WNW		
7-Dec-21	21:00	0.4	NW		
7-Dec-21	22:00	0.4	WNW		
7-Dec-21	23:00	0.0	SE		
8-Dec-21	0:00	0.4	WNW		
8-Dec-21	1:00	0.9	WNW		
8-Dec-21	2:00	0.9	NW		
8-Dec-21	3:00	0.9	W		
8-Dec-21	4:00	0.4	WNW		
8-Dec-21	5:00	0.9	WNW		
8-Dec-21	6:00	0.9	WNW		
8-Dec-21	7:00	0.4	WNW		
8-Dec-21	8:00	0.4	WNW		
8-Dec-21	9:00	0.4	W		
8-Dec-21	10:00	0.9	W		
8-Dec-21	11:00	1.3	NNW		
8-Dec-21	12:00	0.9	NNW		
8-Dec-21	13:00	1.8	NNW		
8-Dec-21	14:00	3.1	NNW		
8-Dec-21	15:00	1.3	NNW		
8-Dec-21	16:00	1.3	NNW		
8-Dec-21	17:00	1.3	WNW		
8-Dec-21	18:00	0.9	NNW		
8-Dec-21	19:00	0.9	NNW		
8-Dec-21	20:00	0.9	W		
8-Dec-21	21:00	0.9	WNW		
8-Dec-21	22:00	0.9	WNW		
8-Dec-21	23:00	1.8	NW		

December 2021				
Table II: Wind Speed and Directions				
Date	Time	Wind Speed m/s	Direction	
9-Dec-21	0:00	1.3	W	
9-Dec-21	1:00	1.3	SE	
9-Dec-21	2:00	0.4	SSE	
9-Dec-21	3:00	0.4	SSE	
9-Dec-21	4:00	0.0	SSE	
9-Dec-21	5:00	0.4	SE	
9-Dec-21	6:00	0.9	ESE	
9-Dec-21	7:00	0.4	Е	
9-Dec-21	8:00	0.9	ESE	
9-Dec-21	9:00	1.8	ESE	
9-Dec-21	10:00	2.2	E	
9-Dec-21	11:00	1.8	ESE	
9-Dec-21	12:00	1.8	SE	
9-Dec-21	13:00	1.8	E	
9-Dec-21	14:00	1.3	ESE	
9-Dec-21	15:00	1.3	SSE	
9-Dec-21	16:00	0.9	SE	
9-Dec-21	17:00	0.9	ESE	
9-Dec-21	18:00	0.4	WNW	
9-Dec-21	19:00	0.9	ESE	
9-Dec-21	20:00	1.3	ESE	
9-Dec-21	21:00	1.3	ESE	
9-Dec-21	22:00	1.8	Е	
9-Dec-21	23:00	1.3	ESE	
10-Dec-21	0:00	1.8	ESE	
10-Dec-21	1:00	1.8	ESE	
10-Dec-21	2:00	1.8	W	
10-Dec-21	3:00	2.2		
10-Dec-21	4:00	1.8	W	
10-Dec-21	5:00	1.8		
10-Dec-21	6:00	1.3	W NINIW	
10-Dec-21	7:00	1.8	NNW	
10-Dec-21	8:00 9:00	1.8	ENE	
10-Dec-21 10-Dec-21	10:00	1.8 1.8	NW W	
10-Dec-21 10-Dec-21	11:00 12:00	1.8 1.8	W	
10-Dec-21 10-Dec-21	12:00	3.6	NNW	
10-Dec-21 10-Dec-21	14:00	4.0	NW	
10-Dec-21 10-Dec-21	15:00	4.5	W	
10-Dec-21 10-Dec-21		3.1	NW	
10-Dec-21 10-Dec-21	16:00 17:00	4.0	NW	
10-Dec-21	18:00	1.8	W	
10-Dec-21	19:00	0.9	NW	
10-Dec-21 10-Dec-21	20:00	0.9	WNW	
10-Dec-21	21:00	0.9	NW	
10-Dec-21 10-Dec-21	22:00	0.4	WNW	
10-Dec-21 10-Dec-21	23:00	0.4	NW	
10-Dec-21	25:00	0.4	IN VV	

December 2021					
Table	Table II: Wind Speed and Directions				
Date	Time	Wind Speed m/s	Direction		
11-Dec-21	0:00	0.9	NW		
11-Dec-21	1:00	1.8	W		
11-Dec-21	2:00	1.8	W		
11-Dec-21	3:00	2.2	WNW		
11-Dec-21	4:00	1.8	ESE		
11-Dec-21	5:00	1.8	E		
11-Dec-21	6:00	1.3	Е		
11-Dec-21	7:00	1.8	ESE		
11-Dec-21	8:00	1.8	SE		
11-Dec-21	9:00	1.8	SE		
11-Dec-21	10:00	1.8	ESE		
11-Dec-21	11:00	1.8	ESE		
11-Dec-21	12:00	1.8	NW		
11-Dec-21	13:00	3.6	NW		
11-Dec-21	14:00	4.0	NW		
11-Dec-21	15:00	4.5	NW		
11-Dec-21	16:00	3.1	NW		
11-Dec-21	17:00	4.0	NW		
11-Dec-21	18:00	1.8	NW		
11-Dec-21	19:00	0.9	NW		
11-Dec-21	20:00	0.9	W		
11-Dec-21	21:00	0.4	N		
11-Dec-21	22:00	0.4	NW		
11-Dec-21	23:00	0.4	WNW		
12-Dec-21	0:00	1.3	W		
12-Dec-21	1:00	1.3	W		
12-Dec-21	2:00	1.3	W		
12-Dec-21	3:00	0.9	W		
12-Dec-21	4:00	0.9	W		
12-Dec-21	5:00	0.9	W		
12-Dec-21	6:00	0.9	W		
12-Dec-21	7:00	0.9	W		
12-Dec-21	8:00	1.8	W		
12-Dec-21	9:00	1.3	NNW		
12-Dec-21	10:00	1.3	ENE		
12-Dec-21	11:00	1.8	NW		
12-Dec-21	12:00	1.3	W		
12-Dec-21	13:00	1.8	W		
12-Dec-21	14:00	1.3	W		
12-Dec-21	15:00	0.9	NNW		
12-Dec-21	16:00	1.3	NW		
12-Dec-21	17:00	0.9	W		
12-Dec-21	18:00	0.9	NW		
12-Dec-21	19:00	1.3	NW		
12-Dec-21	20:00	1.3	W		
12-Dec-21	21:00	0.9	NW		
12-Dec-21	22:00	1.3	WNW		
12-Dec-21	23:00	1.8	NW		
		<del></del>			

December 2021				
Т	Table II: Wind Speed and Directions			
Date Time Wind Speed and Direction				
13-Dec-21	0:00	1.8	WNW	
13-Dec-21	1:00	1.8	NW	
13-Dec-21		1.8	NW	
13-Dec-21	2:00	1.3	W	
13-Dec-21	3:00 4:00	0.9	W	
13-Dec-21	5:00	0.9	WNW	
13-Dec-21	6:00	0.9	ENE	
13-Dec-21	7:00	0.4	NW	
13-Dec-21	8:00	0.9	W	
13-Dec-21	9:00	1.3	W	
13-Dec-21	10:00	1.3	W	
13-Dec-21	11:00	1.3	W	
13-Dec-21	12:00	1.8	W	
13-Dec-21	13:00	1.3	WNW	
13-Dec-21	14:00	1.8	NW	
13-Dec-21	15:00	2.2	NW	
13-Dec-21	16:00	1.3	NW	
13-Dec-21	17:00	1.3	NW	
13-Dec-21	18:00	1.3	NW	
13-Dec-21	19:00	0.9	NW	
13-Dec-21	20:00	0.9	NW	
13-Dec-21	21:00	0.9	WNW	
13-Dec-21	22:00	0.9	WNW	
13-Dec-21	23:00	0.9	W	
14-Dec-21	0:00	1.8	WNW	
14-Dec-21	1:00	1.3	NW	
14-Dec-21	2:00	1.3	NW	
14-Dec-21	3:00	1.3	NW	
14-Dec-21	4:00	1.3	NW	
14-Dec-21	5:00	1.8	NW	
14-Dec-21	6:00	1.3	NW	
14-Dec-21	7:00	0.9	NW	
14-Dec-21	8:00	0.9	NW	
14-Dec-21	9:00	1.8	NW	
14-Dec-21	10:00	1.3	NW	
14-Dec-21	11:00	1.8	NW	
14-Dec-21	12:00	1.3	W	
14-Dec-21	13:00	1.8	W	
14-Dec-21	14:00	1.3	W	
14-Dec-21	15:00	1.8	NW	
14-Dec-21	16:00	4.0	NW	
14-Dec-21	17:00	3.6	NW	
14-Dec-21	18:00	3.6	NW	
14-Dec-21	19:00	1.3	NW	
14-Dec-21	20:00	1.3	NW	
14-Dec-21	21:00	1.3	NW	
14-Dec-21	22:00	0.9	W	
14-Dec-21	23:00	1.3	W	

December 2021					
Table II: Wind Speed and Directions					
Date	Time	Wind Speed m/s	Direction		
15-Dec-21	0:00	1.8	W		
15-Dec-21	1:00	1.3	W		
15-Dec-21	2:00	1.3	W		
15-Dec-21	3:00	0.9	W		
15-Dec-21	4:00	0.9	WNW		
15-Dec-21	5:00	0.9	W		
15-Dec-21	6:00	0.9	NW		
15-Dec-21	7:00	1.3	WNW		
15-Dec-21	8:00	1.3	W		
15-Dec-21	9:00	1.3	W		
15-Dec-21	10:00	1.3	NW		
15-Dec-21	11:00	1.3	NW		
15-Dec-21	12:00	1.3	NW		
15-Dec-21	13:00	0.9	NW		
15-Dec-21	14:00	1.3	NW		
15-Dec-21	15:00	1.3	W		
15-Dec-21	16:00	1.3	NW		
15-Dec-21	17:00	0.9	W		
15-Dec-21	18:00	0.9	NW		
15-Dec-21	19:00	0.9	NW		
15-Dec-21	20:00	0.9	NW		
15-Dec-21	21:00	0.9	NW		
15-Dec-21	22:00	1.8	NW		
15-Dec-21	23:00	1.3	NW		
16-Dec-21	0:00	1.3	NW		
16-Dec-21	1:00	1.8	NW		
16-Dec-21	2:00	1.3	NW		
16-Dec-21	3:00	0.9	WNW		
16-Dec-21	4:00	1.3	NW		
16-Dec-21	5:00	0.9	W		
16-Dec-21	6:00	1.3	W		
16-Dec-21	7:00	1.3	NW		
16-Dec-21	8:00	2.2	NW		
16-Dec-21	9:00	1.8	NW		
16-Dec-21	10:00	1.8	NW		
16-Dec-21	11:00	1.8	Е		
16-Dec-21	12:00	1.3	NW		
16-Dec-21	13:00	2.7	NW		
16-Dec-21	14:00	1.8	NW		
16-Dec-21	15:00	1.8	NW		
16-Dec-21	16:00	2.7	NW		
16-Dec-21	17:00	1.8	NW		
16-Dec-21	18:00	1.8	NW		
16-Dec-21	19:00	1.8	NW		
16-Dec-21	20:00	1.8	NW		
16-Dec-21	21:00	2.2	NW		
16-Dec-21	22:00	1.8	NW		
16-Dec-21	23:00	0.9	NW		

December 2021					
Table II: Wind Speed and Directions					
Date	Time	Wind Speed m/s	Direction		
		•			
17-Dec-21	0:00	1.3	NW		
17-Dec-21	1:00	0.9	NE		
17-Dec-21	2:00	0.4	NNE		
17-Dec-21	3:00	0.4 0.4	NE NW		
17-Dec-21	4:00	0.4	N		
17-Dec-21 17-Dec-21	5:00 6:00	0.9	NE		
17-Dec-21 17-Dec-21	7:00	0.9	NE NE		
17-Dec-21	8:00	0.9	NE NE		
17-Dec-21	9:00	0.9	NW NW		
17-Dec-21	10:00	0.9	NW		
	11:00	0.9	NW		
17-Dec-21 17-Dec-21	12:00	1.3	NW		
17-Dec-21	13:00	2.2	NW		
17-Dec-21	14:00	2.2	NW		
17-Dec-21	15:00	2.7	NW		
17-Dec-21	16:00	4.5	NW		
17-Dec-21	17:00	3.1	NW		
17-Dec-21	18:00	1.3	NW		
17-Dec-21	19:00	1.3	NW		
17-Dec-21	20:00	1.3	NW		
17-Dec-21	21:00	0.9	NW		
17-Dec-21	22:00	0.9	NE		
17-Dec-21	23:00	0.9	N		
18-Dec-21	0:00	0.9	N		
18-Dec-21	1:00	0.9	N		
18-Dec-21	2:00	1.8	N		
18-Dec-21	3:00	1.3	N		
18-Dec-21	4:00	1.3	N		
18-Dec-21	5:00	1.3	N		
18-Dec-21	6:00	1.3	N		
18-Dec-21	7:00	1.3	N		
18-Dec-21	8:00	0.9	NNW		
18-Dec-21	9:00	0.9	NNW		
18-Dec-21	10:00	0.9	NE		
18-Dec-21	11:00	0.9	NE		
18-Dec-21	12:00	0.9	NW		
18-Dec-21	13:00	1.8	NW		
18-Dec-21	14:00	1.3	NW		
18-Dec-21	15:00	1.3	NW		
18-Dec-21	16:00	2.2	NW		
18-Dec-21	17:00	1.3	W		
18-Dec-21	18:00	1.3	W		
18-Dec-21	19:00	1.8	NW		
18-Dec-21	20:00	1.3	W		
18-Dec-21	21:00	1.3	W		
18-Dec-21	22:00	1.3	W		
18-Dec-21	23:00	1.3	WNW		

December 2021						
Tabl	Table II: Wind Speed and Directions					
Date	Time	Wind Speed m/s	Direction			
19-Dec-21	0:00	1.3	W			
19-Dec-21	1:00	1.3	W			
19-Dec-21	2:00	1.3	WNW			
19-Dec-21	3:00	0.9	W			
19-Dec-21	4:00	0.9	W			
19-Dec-21	5:00	0.9	W			
19-Dec-21	6:00	0.9	W			
19-Dec-21	7:00	0.9	NW			
19-Dec-21	8:00	0.9	NW			
19-Dec-21	9:00	0.4	W			
19-Dec-21	10:00	0.4	W			
19-Dec-21	11:00	0.9	NW			
19-Dec-21	12:00	1.3	NW			
19-Dec-21	13:00	0.9	W			
19-Dec-21	14:00	0.9	WSW			
19-Dec-21	15:00	0.9	W			
19-Dec-21	16:00	0.9	NW			
19-Dec-21	17:00	0.9	W			
19-Dec-21	18:00	1.8	ESE			
19-Dec-21	19:00	1.8	ESE			
19-Dec-21	20:00	2.2	Е			
19-Dec-21	21:00	2.2	E			
19-Dec-21	22:00	1.3	ESE			
19-Dec-21	23:00	0.9	SE			
20-Dec-21	0:00	0.4	SE			
20-Dec-21	1:00	1.3	ESE			
20-Dec-21	2:00	0.9	ENE			
20-Dec-21	3:00	0.9	ESE			
20-Dec-21	4:00	1.3	E			
20-Dec-21	5:00	0.9	ESE			
20-Dec-21	6:00	0.9	ESE			
20-Dec-21	7:00	0.9	Е			
20-Dec-21	8:00	1.3	Е			
20-Dec-21	9:00	0.9	Е			
20-Dec-21	10:00	1.8	ESE			
20-Dec-21	11:00	1.8	NW			
20-Dec-21	12:00	1.8	NW			
20-Dec-21	13:00	2.7	NW			
20-Dec-21	14:00	3.6	NW			
20-Dec-21	15:00	2.7	NW			
20-Dec-21	16:00	4.0	NW			
20-Dec-21	17:00	2.7	NW			
20-Dec-21	18:00	1.3	NW			
20-Dec-21	19:00	1.3	W			
20-Dec-21	20:00	1.3	W			
20-Dec-21	21:00	0.9	W			
20-Dec-21	22:00	0.9	WNW			
20-Dec-21	23:00	0.9	SE			

	December 2021					
Г	Table II: Wind Speed and Directions					
Date	Time	Wind Speed m/s	Direction			
21-Dec-21	0:00	0.9	ESE			
21-Dec-21	1:00	0.9	ESE			
21-Dec-21	2:00	1.8	SE			
21-Dec-21	3:00	1.3	Е			
21-Dec-21	4:00	1.3	ESE			
21-Dec-21	5:00	1.3	ESE			
21-Dec-21	6:00	0.9	ESE			
21-Dec-21	7:00	0.9	ESE			
21-Dec-21	8:00	0.9	E			
21-Dec-21	9:00	0.4	ESE			
21-Dec-21	10:00	1.8	NW			
21-Dec-21	11:00	1.8	NW			
21-Dec-21	12:00	2.2	NW			
21-Dec-21	13:00	1.8	NW			
21-Dec-21	14:00	2.7	NW			
21-Dec-21	15:00	1.8	NW			
21-Dec-21	16:00	2.7	NW			
21-Dec-21	17:00	0.9	NE			
21-Dec-21	18:00	1.8	NW			
21-Dec-21	19:00	1.8	NW			
21-Dec-21	20:00	0.9	NW			
21-Dec-21	21:00	1.8	NW NW			
21-Dec-21 21-Dec-21	22:00 23:00	1.8	NW			
22-Dec-21	0:00	1.3	NW			
22-Dec-21 22-Dec-21	1:00	0.4	NW			
22-Dec-21	2:00	0.4	NW			
22-Dec-21	3:00	0.9	NW			
22-Dec-21	4:00	0.4	WNW			
22-Dec-21	5:00	0.4	WNW			
22-Dec-21	6:00	0.9	NW			
22-Dec-21	7:00	0.4	NW			
22-Dec-21	8:00	1.3	NW			
22-Dec-21	9:00	0.9	NW			
22-Dec-21	10:00	1.8	NW			
22-Dec-21	11:00	1.8	NW			
22-Dec-21	12:00	1.3	NW			
22-Dec-21	13:00	0.9	ESE			
22-Dec-21	14:00	0.9	NW			
22-Dec-21	15:00	0.9	NW			
22-Dec-21	16:00	2.2	NW			
22-Dec-21	17:00	1.8	NW			
22-Dec-21	18:00	1.3	NW			
22-Dec-21	19:00	0.4	NW			
22-Dec-21	20:00	0.9	NW			
22-Dec-21	21:00	1.3	NNW			
22-Dec-21	22:00	1.3	NW			
22-Dec-21	23:00	1.3	ESE			

December 2021					
Table II: Wind Speed and Directions					
Date	Time	Wind Speed m/s	Direction		
23-Dec-21	0:00	0.9	ESE		
23-Dec-21	1:00	0.9	ESE		
23-Dec-21	2:00	0.9	ESE		
23-Dec-21	3:00	0.9	ESE		
23-Dec-21	4:00	0.9	ESE		
23-Dec-21	5:00	1.8	NNW		
23-Dec-21	6:00	1.3	W		
23-Dec-21	7:00	1.3	NW		
23-Dec-21	8:00	1.3	NW		
23-Dec-21	9:00	1.3	W		
23-Dec-21	10:00	1.3	NW		
23-Dec-21	11:00	0.9	W		
23-Dec-21	12:00	1.3	NW		
23-Dec-21	13:00	1.8	NW		
23-Dec-21	14:00	1.3	NW		
23-Dec-21	15:00	1.3	W		
23-Dec-21	16:00	1.3	W		
23-Dec-21	17:00	1.3	W		
23-Dec-21	18:00	1.3	NW		
23-Dec-21	19:00	1.3	W		
23-Dec-21	20:00	1.3	NW		
23-Dec-21	21:00	0.9	W		
23-Dec-21	22:00	0.9	W		
23-Dec-21	23:00	1.3	W		
24-Dec-21	0:00	1.3	W		
24-Dec-21	1:00	0.9	W		
24-Dec-21	2:00	0.9	W		
24-Dec-21	3:00	0.9	W		
24-Dec-21	4:00	1.3	WNW		
24-Dec-21	5:00	0.4	W		
24-Dec-21	6:00	0.4	W		
24-Dec-21	7:00	0.4	W		
24-Dec-21	8:00	0.9	WNW		
24-Dec-21	9:00	1.3	NW		
24-Dec-21	10:00	0.9	W		
24-Dec-21	11:00	1.3	W		
24-Dec-21	12:00	1.8	NW		
24-Dec-21	13:00	3.1	NW		
24-Dec-21	14:00	4.9	NW		
24-Dec-21	15:00	3.1	NW		
24-Dec-21	16:00	3.1	NW		
24-Dec-21	17:00	1.8	NW		
24-Dec-21	18:00	1.3	NW		
24-Dec-21	19:00	1.8	NW		
24-Dec-21	20:00	0.9	NE		
24-Dec-21	21:00	0.9	NW		
24-Dec-21	22:00	1.3	NW		
24-Dec-21	23:00	1.3	NW		

December 2021					
Table II: Wind Speed and Directions					
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Date	Time	Wind Speed m/s	Direction		
25-Dec-21	0:00	1.3	NW		
25-Dec-21	1:00	1.3	NW		
25-Dec-21	2:00	0.9	E		
25-Dec-21	3:00	0.9	E E		
25-Dec-21	4:00	0.9	E		
25-Dec-21	5:00	0.9			
25-Dec-21	6:00	0.9	ESE ESE		
25-Dec-21	7:00	1.3			
25-Dec-21 25-Dec-21	8:00 9:00	1.3	ENE ENE		
25-Dec-21 25-Dec-21		1.3	NW		
	10:00	1.3			
25-Dec-21 25-Dec-21	11:00 12:00	1.3	NW NW		
25-Dec-21 25-Dec-21	13:00	1.8	NW		
25-Dec-21 25-Dec-21	14:00	0.9	ESE		
25-Dec-21 25-Dec-21	15:00	1.3	NW		
25-Dec-21	16:00	1.3	NNW		
25-Dec-21 25-Dec-21	17:00	1.3	ENE		
25-Dec-21	18:00	1.3	ESE		
25-Dec-21 25-Dec-21	19:00	1.8	ESE		
25-Dec-21	20:00	1.8	ESE		
25-Dec-21	21:00	2.7	SE		
25-Dec-21	22:00	2.2	E		
25-Dec-21	23:00	2.2	E		
26-Dec-21	0:00	1.8	E		
26-Dec-21	1:00	1.3	E		
26-Dec-21	2:00	1.3	E		
26-Dec-21	3:00	0.9	NW		
26-Dec-21	4:00	0.4	WNW		
26-Dec-21	5:00	0.9	WNW		
26-Dec-21	6:00	0.9	W		
26-Dec-21	7:00	0.9	W		
26-Dec-21	8:00	0.9	WNW		
26-Dec-21	9:00	0.4	ESE		
26-Dec-21	10:00	0.4	WNW		
26-Dec-21	11:00	0.9	W		
26-Dec-21	12:00	0.9	W		
26-Dec-21	13:00	0.9	W		
26-Dec-21	14:00	1.3	W		
26-Dec-21	15:00	0.9	W		
26-Dec-21	16:00	0.4	W		
26-Dec-21	17:00	0.4	ESE		
26-Dec-21	18:00	0.4	ENE		
26-Dec-21	19:00	0.9	W		
26-Dec-21	20:00	1.3	W		
26-Dec-21	21:00	1.3	W		
26-Dec-21	22:00	1.3	W		
26-Dec-21	23:00	0.9	NW		

December 2021						
Table	Table II: Wind Speed and Directions					
Date	Time	Wind Speed m/s	Direction			
27-Dec-21	0:00	1.3	Е			
27-Dec-21	1:00	1.3	NW			
27-Dec-21	2:00	4.9	NW			
27-Dec-21	3:00	3.1	NW			
27-Dec-21	4:00	3.1	NW			
27-Dec-21	5:00	1.3	NW			
27-Dec-21	6:00	0.4	W			
27-Dec-21	7:00	1.3	NW			
27-Dec-21	8:00	0.9	NW			
27-Dec-21	9:00	0.9	WNW			
27-Dec-21	10:00	0.4	W			
27-Dec-21	11:00	0.9	W			
27-Dec-21	12:00	0.4	W			
27-Dec-21	13:00	0.4	WNW			
27-Dec-21	14:00	0.4	W			
27-Dec-21	15:00	0.4	WNW			
27-Dec-21	16:00	0.4	WNW			
27-Dec-21	17:00	0.4	WNW			
27-Dec-21	18:00	0.4	WNW			
27-Dec-21	19:00	0.4	WNW			
27-Dec-21	20:00	0.4	WNW			
27-Dec-21	21:00	0.4	NW			
27-Dec-21	22:00	0.9	WNW			
27-Dec-21	23:00	0.9	WNW			
28-Dec-21	0:00	0.4	NW			
28-Dec-21	1:00	0.9	NW			
28-Dec-21	2:00	0.9	NW			
28-Dec-21	3:00	0.4	NW			
28-Dec-21	4:00	0.4	NW			
28-Dec-21	5:00	1.3	NW			
28-Dec-21	6:00	1.3 1.3	WNW			
28-Dec-21	7:00		NE NE			
28-Dec-21	8:00	0.9 0.9	NE NW			
28-Dec-21 28-Dec-21	9:00 10:00	0.9	NW NW			
28-Dec-21 28-Dec-21	11:00	0.9	NW			
28-Dec-21 28-Dec-21	12:00	0.9	NW			
28-Dec-21	13:00	1.8	NW			
28-Dec-21	14:00	1.3	NE			
28-Dec-21	15:00	1.3	NE NE			
28-Dec-21	16:00	0.4	NW			
28-Dec-21	17:00	0.0	WNW			
28-Dec-21	18:00	0.4	W			
28-Dec-21	19:00	0.0	W			
28-Dec-21	20:00	0.0	W			
28-Dec-21	21:00	0.4	WNW			
28-Dec-21	22:00	0.4	W			
28-Dec-21	23:00	1.3	WNW			

December 2021					
Table II: Wind Speed and Directions					
Date	Time	Wind Speed m/s	Direction		
29-Dec-21	0:00	1.3	WNW		
29-Dec-21	1:00	0.9	WNW		
29-Dec-21	2:00	0.9	WNW		
29-Dec-21	3:00	0.9	WNW		
29-Dec-21	4:00	1.3	WNW		
29-Dec-21	5:00	1.3	NW		
29-Dec-21	6:00	0.4	WNW		
29-Dec-21	7:00	1.3	WNW		
29-Dec-21	8:00	0.9	W		
29-Dec-21	9:00	1.8	W		
29-Dec-21	10:00	1.3	W		
29-Dec-21	11:00	0.9	W		
29-Dec-21	12:00	0.9	W		
29-Dec-21	13:00	0.4	NW		
29-Dec-21	14:00	0.9	NW		
29-Dec-21	15:00	1.3	NW		
29-Dec-21	16:00	1.3	NW		
29-Dec-21	17:00	1.3	NW		
29-Dec-21	18:00	0.9	NW		
29-Dec-21	19:00	0.0	NW		
29-Dec-21	20:00	0.0	NW		
29-Dec-21	21:00	0.0	NNW		
29-Dec-21	22:00	0.0	NNW		
29-Dec-21	23:00	0.4	NW		
30-Dec-21	0:00	1.3	NW		
30-Dec-21	1:00	2.2	NW		
30-Dec-21	2:00	4.0	NW		
30-Dec-21	3:00	4.9	NW		
30-Dec-21	4:00	4.0	NW		
30-Dec-21	5:00	3.1	NW		
30-Dec-21	6:00	1.3	NW		
30-Dec-21	7:00	1.3	NW		
30-Dec-21	8:00	1.3	NW		
30-Dec-21	9:00	0.9	NW		
30-Dec-21	10:00	0.9	NW		
30-Dec-21	11:00	0.9	NW		
30-Dec-21	12:00	0.9	NW		
30-Dec-21	13:00	0.9	NW		
30-Dec-21	14:00	1.8	NW		
30-Dec-21	15:00	1.3	WNW		
30-Dec-21	16:00	1.3	W		
30-Dec-21	17:00	0.9	W		
30-Dec-21	18:00	0.9	W		
30-Dec-21	19:00	0.9	WNW		
30-Dec-21	20:00	1.3	W		
30-Dec-21	21:00	1.8	WNW		
30-Dec-21	22:00	1.8	WNW		
30-Dec-21	23:00	0.9	WNW		

	December 2021					
Table	Table II: Wind Speed and Directions					
Date	Time	Wind Speed m/s	Direction			
31-Dec-21	0:00	1.3	WNW			
31-Dec-21	1:00	2.2	WNW			
31-Dec-21	2:00	1.3	WNW			
31-Dec-21	3:00	1.8	NW			
31-Dec-21	4:00	1.3	WNW			
31-Dec-21	5:00	1.3	WNW			
31-Dec-21	6:00	1.3	WNW			
31-Dec-21	7:00	1.3	WNW			
31-Dec-21	8:00	1.3	WNW			
31-Dec-21	9:00	0.9	N			
31-Dec-21	10:00	0.9	N			
31-Dec-21	11:00	0.9	WNW			
31-Dec-21	12:00	0.9	WNW			
31-Dec-21	13:00	0.9	WNW			
31-Dec-21	14:00	1.8	WNW			
31-Dec-21	15:00	1.3	WNW			
31-Dec-21	16:00	1.3	WNW			
31-Dec-21	17:00	0.9	WNW			
31-Dec-21	18:00	1.3	WNW			
31-Dec-21	19:00	1.3	WNW			
31-Dec-21	20:00	1.3	WNW			
31-Dec-21	21:00	0.9	NNE			
31-Dec-21	22:00	0.9	Е			
31-Dec-21	23:00	0.4	ENE			

### APPENDIX D ENVIRONMENTAL MONITORING SCHEDULES

### Contract No. KLN/2016/04

# Environmental Monitoring Works for Contract No. KL/2015/02 Kai Tak Development –Stage 5A Infrastructure at Former North Apron Area Impact Air and Noise Monitoring Schedule for December 2021

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1-Dec	2-Dec	3-Dec	4-Dec
				1-hr TSP x 3 [AM2]		
			<b>24-hr TSP [AM2(A)]</b>			
				Noise [M3(A), M4 &		
				M5(C)]	10.7	
5-Dec	6-Dec	7-Dec	8-Dec	9-Dec	10-Dec	11-Dec
		241 FCD (43/6/4)]	1-hr TSP x 3 [AM2]			
		24-hr TSP [AM2(A)]				
			Noise [M3(A), M4 &			
			= ' ' ' '			
12-Dec	13-Dec	14-Dec	M5(C)]	16-Dec	17-Dec	18-Dec
12-Dec	13-Dcc	1-hr TSP x 3 [AM2]	13-Dcc	10-DCC	1-hr TSP x 3 [AM2]	10-DCC
	24-hr TSP [AM2(A)]	1-m 151 x 5 [mil2]		24-hr TSP [AM2(A)]	1-m 191 x 3 [mm2]	
	24-m 191 [mm2(m)]			24-m 191 [/1012(/11)]		
		Noise [M3(A), M4 &				
		M5(C)]				
19-Dec	20-Dec	21-Dec	22-Dec	23-Dec	24-Dec	25-Dec
				1-hr TSP x 3 [AM2]		
			<b>24-hr TSP [AM2(A)]</b>			
				Noise [M3(A), M4 &		
				M5(C)]		
26-Dec	27-Dec	28-Dec	29-Dec	30-Dec	31-Dec	
		A41	1-hr TSP x 3 [AM2]		1-hr TSP x 3 [AM2]	
		24-hr TSP [AM2(A)]		24-hr TSP [AM2(A)]		
			Noise [M3(A), M4 &			
			M5(C)]			
			W15(C)]			

The schedule may be changed due to unforeseen circumstances (adverse weather, etc)

### **Air Quality Monitoring Station**

AM2 - Lee Kau Yan Memorial School AM2(A) - Ng Wah Catholic Secondary School

### **Noise Monitoring Station**

M3(A) - The Bridge connecting The Latitude

M4 - Lee Kau Yan Memorial School

M5(C) - Mercy Grace's Home

<sup>\*</sup> The noise level limit is 65dB(A) during the exam period

#### Contract No. KLN/2016/04

### Environmental Monitoring Works for Contract No. KL/2015/02 Kai Tak Development –Stage 5A Infrastructure at Former North Apron Area Temtative Impact Air and Noise Monitoring Schedule for January 2022

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
·	•	·	•	ž	•	1-Jan
2-Jan	3-Jan	4-Jan	5-Jan	6-Jan	7-Jan	8-Jan
2 0411	3 3411	1 3411	3 3411	1-hr TSP x 3 [AM2]	7 3411	o sun
			24-hr TSP [AM2(A)]			
				Noise [M3(A), M4 &		
				M5(C)]		
9-Jan	10-Jan	11-Jan	12-Jan	13-Jan	14-Jan	15-Jan
		1-hr TSP x 3 [AM2]				
	24-hr TSP [AM2(A)]					24-hr TSP [AM2(A)]
		Noise [M3(A), M4 &				
		M5(C)]				
16-Jan	17-Jan	18-Jan	19-Jan	20-Jan	21-Jan	22-Jan
	1-hr TSP x 3 [AM2]				1-hr TSP x 3 [AM2]	
				24-hr TSP [AM2(A)]		
	Noise [M3(A), M4 &					
	M5(C)]					
23-Jan	24-Jan	25-Jan	26-Jan	27-Jan	28-Jan	29-Jan
				1-hr TSP x 3 [AM2]		
			24-hr TSP [AM2(A)]			
				Noise [M3(A), M4 &		
30-Jan	31-Jan			M5(C)]		
50-Jan	31-Jan					
	24-hr TSP [AM2(A)]					
	- \ /•					

The schedule may be changed due to unforeseen circumstances (adverse weather, etc)

#### **Air Quality Monitoring Station**

Noise Monitoring Station

AM2 - Lee Kau Yan Memorial School AM2(A) - Ng Wah Catholic Secondary School M3(A) - The Bridge connecting The Latitude M4 - Lee Kau Yan Memorial School M5(C) - Mercy Grace's Home

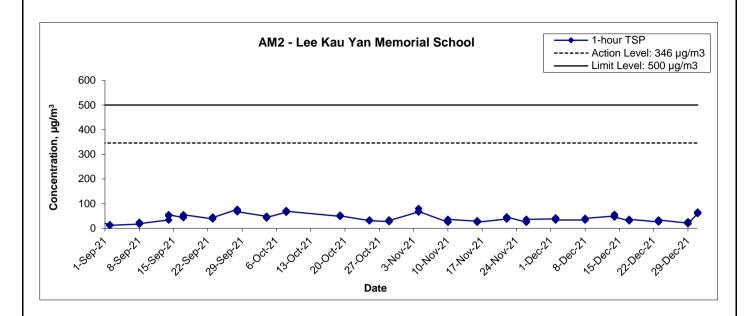
<sup>\*</sup> The noise level limit is 65dB(A) during the exam period

# APPENDIX E 1-HOUR TSP MONITORING RESULTS AND GRAPHICAL PRESENTATION

# **Appendix E - 1-hour TSP Monitoring Results**

Location AM2 - Lee Kau Yan Memorial School						
Date	Time	Weather	Particulate Concentration ( µg/m³)			
2-Dec-21	13:00	Sunny	38.0			
2-Dec-21	14:00	Sunny	42.0			
2-Dec-21	15:00	Sunny	34.0			
8-Dec-21	14:00	Fine	34.0			
8-Dec-21	15:00	Fine	38.0			
8-Dec-21	16:00	Fine	40.0			
14-Dec-21	10:00	Sunny	50.0			
14-Dec-21	11:00	Sunny	56.0			
14-Dec-21	12:00	Sunny	46.0			
17-Dec-21	14:00	Fine	30.4			
17-Dec-21	15:00	Fine	32.3			
17-Dec-21	16:00	Fine	36.1			
23-Dec-21	13:30	Sunny	26.0			
23-Dec-21	14:30	Sunny	28.0			
23-Dec-21	15:30	Sunny	34.0			
29-Dec-21	14:00	Sunny	20.9			
29-Dec-21	15:00	Sunny	26.6			
29-Dec-21	16:00	Sunny	19.0			
31-Dec-21	9:00	Sunny	60.0			
31-Dec-21	10:00	Sunny	64.0			
31-Dec-21	11:00	Sunny	66.0			
		Average	39.1			
		Maximum	66.0			
		Minimum	19.0			

### 1-hr TSP Concentration Levels



Contract No. KLN/2016/04
Environmental Monitoring Works for Contract No. KL/2015/02
Kai Tak Development –Stage 5A Infrastructure at Former North Apron Area
Graphical Presentation of 1-hour TSP Monitoring Results

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APPENDIX F 24-HOUR TSP MONITORING RESULTS AND GRAPHICAL PRESENTATION

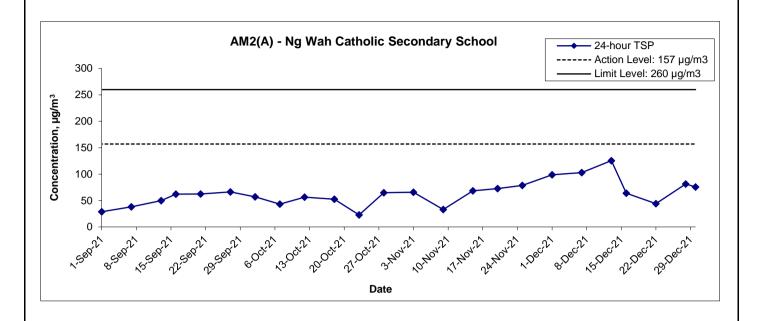
# **Appendix F - 24-hour TSP Monitoring Results**

# Location AM2(A) - Ng Wah Catholic Secondary School

Start Date	Weather	Air Temp.	Atmospheric	Filter Weight (g)		Particulate	Elapse Time		Sampling	Flow Rate (m <sup>3</sup> /min.)		Av. Flow	Total vol.	Conc.
	Condition	(K)	Pressure, Pa (mmHg)	Initial	Final	weight (g)	Initial	Final	Time (hrs.)	Initial	Final	(m3/min)	(m3)	(µg/m3)
1-Dec-21	Sunny	290.4	766.5	3.2936	3.4696	0.1760	8356.8	8380.8	24.0	1.24	1.24	1.24	1781.4	98.8
7-Dec-21	Sunny	293.0	766.5	3.3276	3.5102	0.1826	8380.8	8404.8	24.0	1.23	1.23	1.23	1775.7	102.8
13-Dec-21	Sunny	293.0	765.3	3.3709	3.5938	0.2229	8404.8	8428.8	24.0	1.23	1.23	1.23	1775.4	125.6
16-Dec-21	Sunny	295.5	763.3	3.2808	3.3939	0.1131	8428.8	8452.8	24.0	1.23	1.23	1.23	1766.9	64.0
22-Dec-21	Sunny	292.6	762.7	3.3179	3.3961	0.0782	8452.8	8476.8	24.0	1.23	1.23	1.23	1773.2	44.1
28-Dec-21	Sunny	292.6	762.7	3.7139	3.8579	0.1440	8476.8	8500.8	24.0	1.23	1.23	1.23	1772.5	81.3
30-Dec-21	Sunny	289.9	768.1	3.3349	3.4701	0.1352	8500.8	8524.8	24.0	1.24	1.24	1.24	1784.8	75.8
													Min	44.1
													Max	125.6
													Average	84.6

MA16043/App F - 24hr TSP

### 24-hr TSP Concentration Levels



Contract No. KLN/2016/04
Environmental Monitoring Works for Contract No. KL/2015/02
Kai Tak Development –Stage 5A Infrastructure at Former North Apron Area
Graphical Presentation of 24-hour TSP Monitoring Results

Title

Dec 21

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APPENDIX G NOISE MONITORING RESULTS AND GRAPHICAL PRESENTATION

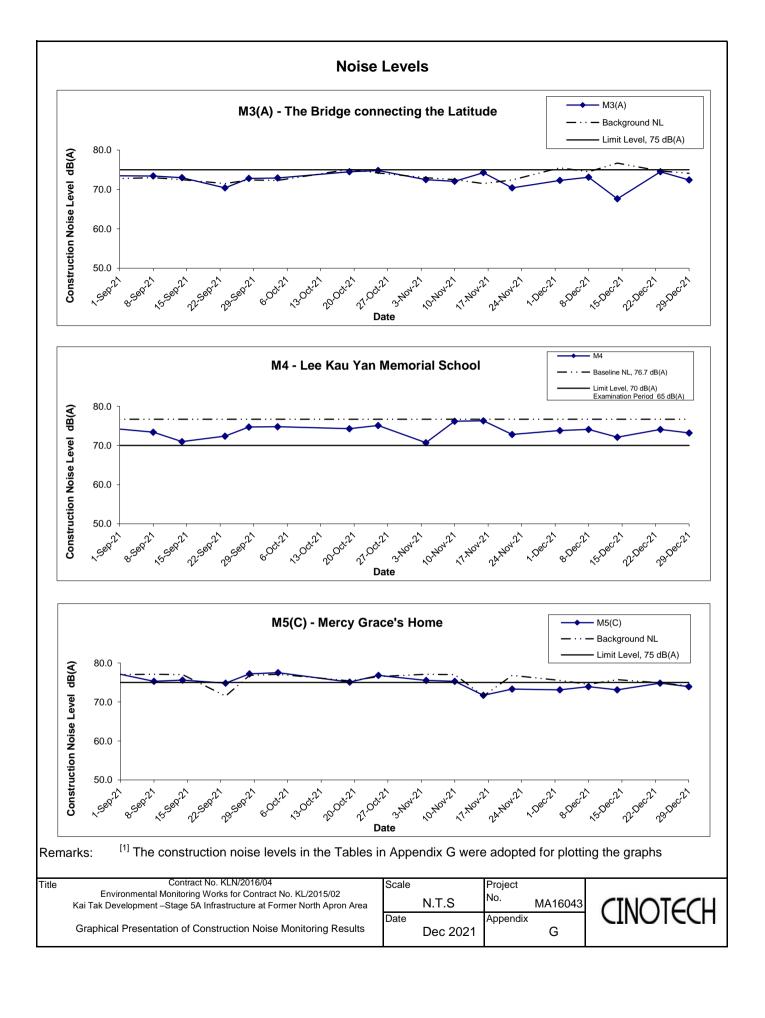
### **Appendix G - Noise Monitoring Results**

Location M3(A) - The Bridge connecting The Latitude									
				Unit: dB (A) (30-min)					
Date	Date Time	e Weather	Measured Noise Level		Background Noise	Construction Noise Level			
			L <sub>eq</sub>	L <sub>10</sub>	L 90	L <sub>eq</sub>		L <sub>eq</sub>	
2-Dec-21	13:00	Sunny	72.3	75.5	69.1	75.5	72.3	Measured ≦ Background	
8-Dec-21	11:30	Sunny	73.1	76.4	70.2	74.5	73.1	Measured ≦ Background	
14-Dec-21	10:40	Sunny	67.6	70.5	65.7	76.7	67.6	Measured ≦ Background	
23-Dec-21	11:30	Sunny	74.5	76.9	72.1	74.7	74.5	Measured ≦ Background	
29-Dec-21	11:30	Sunny	72.4	75.5	70.1	74.1	72.4	Measured ≦ Background	

Location M4 - Lee Kau Yan Memorial School									
				Unit: dB (A) (30-min)					
Date	Time Weath		Measured Noise Level		Baseline Level	Construction Noise Level			
			L <sub>eq</sub>	L <sub>10</sub>	L 90	L <sub>eq</sub>		L <sub>eq</sub>	
2-Dec-21	14:00	Sunny	73.8	76.7	70.6		73.8	Measured ≦ Baseline	
8-Dec-21	14:00	Sunny	74.1	76.9	72.0		74.1	Measured ≦ Baseline	
14-Dec-21	10:00	Sunny	72.1	74.3	68.4	76.7	72.1	Measured ≦ Baseline	
23-Dec-21	14:00	Sunny	74.1	75.6	72.1		74.1	Measured ≦ Baseline	
29-Dec-21	14:00	Sunny	73.2	76.6	70.1		73.2	Measured ≦ Baseline	

Location M5(				Unit: dB (A) (30-min)					
Date Time		Weather	Measured Noise Level		Background Noise	Construction Noise Level			
			L <sub>eq</sub>	L <sub>10</sub>	L 90	L <sub>eq</sub>		L <sub>eq</sub>	
2-Dec-21	15:00	Sunny	73.1	76.2	70.2	75.5	73.1	Measured ≦ Background	
8-Dec-21	16:00	Sunny	73.9	76.8	70.2	74.5	73.9	Measured ≦ Background	
14-Dec-21	15:00	Sunny	73.1	76.5	70.8	75.7	73.1	Measured ≦ Background	
23-Dec-21	13:00	Sunny	74.8	76.9	72.4	74.9	74.8	Measured ≦ Background	
29-Dec-21	15:00	Sunny	73.9	76.2	71.9	74.1	73.9	Measured ≦ Background	

MA16043/App G - Noise Cinotech



#### APPENDIX H SUMMARY OF EXCEEDANCE

### Appendix H – Summary of Exceedance

Exceedance Record for Contract No. KL/2015/02 Reporting Month: December 2021

- (A) Exceedance Record for Air Quality (NIL in the reporting month)
- (B) Exceedance Record for Construction Noise (NIL in the reporting month)
- (C) Exceedance Record for Landscape and Visual (NIL in the reporting month)

#### APPENDIX I SITE AUDIT SUMMARY

Checklist Reference Number	211208
Date	8 December 2021 (Wednesday)
Time	9:30 – 10:30

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	B. Water Quality	
	No environmental deficiency was identified during site inspection.	
	C. Air Quality	
	No environmental deficiency was identified during site inspection.	
	D. Noise	
	No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	No environmental deficiency was identified during site inspection	
	F. Visual and Landscape	
	No environmental deficiency was identified during site inspection	
	G. Permits /Licences	
	No environmental deficiency was identified during site inspection.	
	H. Others	
	No follow-up items are required from the previous site inspection (ref no.: 211129).	

	Name	Signature	Date
Recorded by	Echo Hung	Leng	8 December 2021
Checked by	Colman Wong	Colman	9 December 2021

Checklist Reference Number	211213
Date	13 December 2021 (Monday)
Time	14:00 – 15:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	B. Water Quality	
	No environmental deficiency was identified during site inspection.	
	C. Air Quality	
	No environmental deficiency was identified during site inspection.	
	D. Noise	
	No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	No environmental deficiency was identified during site inspection	
	F. Visual and Landscape	
	No environmental deficiency was identified during site inspection	
	G. Permits /Licences	
	No environmental deficiency was identified during site inspection.	
	H. Others	
	No follow-up items are required from the previous site inspection (ref no.: 211208).	

	Name	Signature	Date
Recorded by	Echo Hung	Leno	13 December 2021
Checked by	Colman Wong	Colman	14 December 2021

Checklist Reference Number	211220
Date	20 December 2021 (Monday)
Time	14:00 – 15:00

Ref. No.	Non-Compliance	Related Item No.
=	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	B. Water Quality	
	No environmental deficiency was identified during site inspection.	
	C. Air Quality	
	No environmental deficiency was identified during site inspection.	
	D. Noise	
	No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	No environmental deficiency was identified during site inspection	
	F. Visual and Landscape	
	No environmental deficiency was identified during site inspection	
	G. Permits /Licences	
	No environmental deficiency was identified during site inspection.	
	H. Others	
	No follow-up items are required from the previous site inspection (ref no.: 211213).	

	Name	Signature	Date
Recorded by	Echo Hung	Lelig	20 December 2021
Checked by	Colman Wong	Colman	21 December 2021

Checklist Reference Number	211228
Date	28 December 2021 (Tuesday)
Time	14:00 – 15:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	=
Ref. No.	Remarks/Observations	Related Item No.
	B. Water Quality	
	No environmental deficiency was identified during site inspection.	
	C. Air Quality	
	No environmental deficiency was identified during site inspection.	
	D. Noise	
	No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	No environmental deficiency was identified during site inspection	
	F. Visual and Landscape	
	No environmental deficiency was identified during site inspection	
	G. Permits /Licences	
	No environmental deficiency was identified during site inspection.	
	H. Others	
	No follow-up items are required from the previous site inspection (ref no.: 211220).	

	Name	Signature	Date
Recorded by	Echo Hung	Leng	28 December 2021
Checked by	Colman Wong	Colman	29 December 2021

#### APPENDIX J EVENT ACTION PLANS

# Event/Action Plan for Air Quality

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
Action Level being	Identify source and investigate the	Check monitoring data submitted	1. Notify Contractor.	Rectify any unacceptable practice;
exceeded by	causes of exceedance;	by ET;		2. Amend working methods if
one sampling	2. Inform Contactor, IEC and ER;	2. Check Contractor's working		appropriate.
	3. Repeat measurement to confirm finding.	method.		
Action Level being	Identify source and investigate the	Check monitoring data submitted	Confirm receipt of notification	1. Discuss with ET and IEC on proper
exceeded by	causes of exceedance;	by ET;	of exceedance in writing;	remedial actions;
two or more	2. Inform Contractor, IEC and ER;	2. Check Contractor's working	2. Notify Contractor;	2. Submit proposals for remedial
consecutive	3. Increase monitoring frequency to daily;	method;	3. In consolidation with the IEC,	actions to ER and IEC within three
sampling	4. Discuss with IEC and Contractor on	3. Discuss with ET and Contractor on	agree with the Contractor on the	working days of notification;
	remedial actions required;	possible remedial measures;	remedial measures to be	3. Implement the agreed proposals;
	5. Assess the effectiveness of	4. Advise the ER on the effectiveness	implemented;	4. Amend proposal if appropriate.
	Contractor's remedial actions;	of the proposed remedial measures.	4. Supervise implementation of	
	6. If exceedance continues, arrange		remedial measures;	
	meeting with IEC and ER;		5. Conduct meeting with ET and	
	7. If exceedance stops, cease additional		IEC if exceedance continues.	
	monitoring.			
Limit Level being	Identify source and investigate the	Check monitoring data submitted	Confirm receipt of notification	Take immediate action to avoid
exceeded by	causes of exceedance;	by ET;	of exceedance in writing;	further exceedance;
one sampling	2. Inform Contractor, IEC, ER, and EPD;	2. Check Contractor's working	2. Notify Contractor;	2. Discuss with ET and IEC on proper
	3. Repeat measurement to confirm finding;	method;	3. In consolidation with the IEC,	remedial actions;
	4. Assess effectiveness of	3. Discuss with ET and Contractor on	agree with the Contractor on the	3. Submit proposals for remedial
	Contractor's remedial actions and keep	possible remedial measures;	remedial measures to be	actions to ER and IEC within three

	EPD, IEC and ER informed of	4. Advise the ER on the	implemented;	working days of notification;
	the results.	effectiveness of the proposed	4. Supervise implementation of	4. Implement the agreed proposals.
		remedial measures.	remedial measures;	
			5. Conduct meeting with ET and	
			IEC if exceedance continues.	
Limit Level being	1. Notify IEC, ER, Contractor and	1. Check monitoring data submitted	Confirm receipt of notification	1. Take immediate action to avoid
exceeded by	EPD;	by ET;	of exceedance in writing;	further exceedance;
two or more	2. Repeat measurement to confirm	2. Check Contractor's working	2. Notify Contractor;	2. Discuss with ET, ER and IEC on
consecutive	findings;	method;	3. In consolidation with the IEC,	proper remedial actions;
sampling	3. Carry out analysis of Contractor's	3. Discuss amongst ER, ET, and	agree with the Contractor on the	3. Submit proposals for remedial
	working procedures to identify source and	Contractor on the potential remedial	remedial measures to be	actions to IEC within three working
	investigate the causes of exceedance;	actions;	implemented;	days of notification;
	4. Increase monitoring frequency to	4. Review Contractor's remedial	4. Supervise implementation of	4. Implement the agreed proposals;
	daily;	actions whenever necessary to	remedial measures;	5. Submit further remedial actions if
	5. Arrange meeting with IEC, ER	assure their effectiveness and	5. If exceedance continues,	problem still not under control;
	and Contractor to discuss the	advise the ER accordingly.	consider stopping the Contractor	6. Stop the relevant portion of works
	remedial actions to be taken;		to continue working on that	as instructed by the ER until the
	6. Assess effectiveness of		portion of work which causes the	exceedance is abated.
	Contractor's remedial actions and		exceedance until the	
	keep EPD, IEC and ER informed		exceedance is abated.	
	of the results;			
	7. If exceedance stops, cease additional			
	monitoring.			

### Event/Action Plan for Construction Noise

EVENT	ACTION					
	ET	IEC	ER	CONTRACTOR		
Action Level	Notify ER, IEC and Contractor;	Review the investigation	1. Confirm receipt of	1. Submit noise mitigation		
being	2. Carry out investigation;	results submitted by the ET;	notification of failure in	proposals to IEC and ER;		
exceeded	3. Report the results of investigation	2. Review the proposed remedial	writing;	2. Implement noise mitigation		
	to the IEC, ER and Contractor;	measures by the Contractor and	2. Notify Contractor;	proposals.		
	4. Discuss with the IEC and	advise the ER accordingly;	3. In consolidation with the	(The above actions should be		
	Contractor on remedial measures	3. Advise the ER on the	IEC, agree with the	taken within 2 working days after		
	required;	effectiveness of the proposed	Contractor on the remedial	the exceedance is identified)		
	5. Increase monitoring frequency to	remedial measures.	measures to be implemented;			
	check mitigation effectiveness.	(The above actions should be	4. Supervise the			
	(The above actions should be taken	taken within 2 working days after	implementation of remedial			
	within 2 working days after the	the exceedance is identified)	measures.			
	exceedance is identified)		(The above actions should be			
			taken within 2 working days			
			after the exceedance is			
			identified)			
Limit Level	1. Inform IEC, ER, Contractor and	1. Discuss amongst ER, ET, and	1. Confirm receipt of	1. Take immediate action to		
being	EPD;	Contractor on the potential	notification of failure in	avoid further exceedance;		
exceeded	2. Repeat measurements to confirm	remedial actions;	writing;	2. Submit proposals for remedial		
	findings;	2. Review Contractor's remedial	2. Notify Contractor;	actions to IEC and ER within 3		
	3. Increase monitoring frequency;	actions whenever necessary to	3. In consolidation with the	working days of notification;		
	4. Identify source and investigate the	assure their effectiveness and	IEC, agree with the	3. Implement the agreed		
	cause of exceedance;	advise the ER accordingly.	Contractor on the remedial	proposals;		

5. Carry out analysis of Contractor's	(The above actions should be	measures to be implemented;	4. Submit further proposal if
working procedures;	taken within 2 working days after	4. Supervise the	problem still not under control;
6. Discuss with the IEC, Contractor	the exceedance is identified)	implementation of remedial	5. Stop the relevant portion of
and ER on remedial measures		measures;	works as instructed by the ER
required;		5. If exceedance continues,	until the exceedance is abated.
7. Assess effectiveness of		consider stopping the	(The above actions should be
Contractor's remedial actions and		Contractor to continue	taken within 2 working days after
keep IEC, EPD and ER informed of		working on that portion of	the exceedance is identified)
the results;		work which causes the	
8. If exceedance stops, cease		exceedance until the	
additional monitoring.		exceedance is abated.	
(The above actions should be taken		(The above actions should be	
within 2 working days after the		taken within 2 working days	
exceedance is identified)		after the exceedance is	
		identified)	

# Event/Action Plan for Landscape and Visual

EVENT			ACTION	
ACTION LEVEL	ET	IEC	ER	CONTRACTOR
Design Check	1. Check final	1. Check report.	Undertake remedial design if necessary	
	design conforms to	2. Recommend		
	the requirements	remedial design if		
	of EP and prepare	necessary		
	report.			
Non-conformity on one occasion	1. Identify Source	1. Check report	Notify Contractor	Amend working methods
	2. Inform IEC and	2. Check Contractor's	2. Ensure remedial measures are properly	2. Rectify damage and
	ER	working method	implemented	undertake any necessary
	3. Discuss remedial	3. Discuss with ET and		replacement
	actions with IEC,	Contractor on possible		
	ER and Contractor	remedial measures		
	4. Monitor remedial	4. Advise ER on		
	actions until	effectiveness of		
	rectification has	proposed remedial		
	been completed	measures.		
		5. Check implementation		
		of remedial measures.		
Repeated Non-conformity	1. Identify Source	1. Check monitoring	1. Notify Contractor	Amend working methods
	Inform IEC and	report	2. Ensure remedial measures are properly	2. Rectify damage and

ER		2. Check Contractor's	implemented	undertake any necessary
2. Inci	crease	working method		replacement
monit	itoring	3. Discuss with ET and		
freque	uency	Contractor on possible		
3. Dis	scuss remedial	remedial measures		
action	ons with IEC,	4. Advise ER on		
ER a	and Contractor	effectiveness of		
4. Mo	onitor remedial	proposed remedial		
action	ons until	measures		
rectifi	fication has	5. Supervise		
been	n completed	implementation of		
5. If n	non-conformity	remedial measures.		
stops	s, cease			
additi	tional			
monit	itoring			

APPENDIX K ENVIRONMENTAL MITIGATION IMPLEMENTATION SCHEDULE (EMIS)

EIA Ref.	Recommended Mitigation Measures	Implementation
EIA Kei.	Recommended Mitigation Measures	Status
Constructi	ion Air Quality	
S6.5	8 times daily watering of the work site with active dust emitting activities.	۸
S6.8	Implementation of dust suppression measures stipulated in Air Pollution Control (Construction Dust) Regulation. The following mitigation	٨
	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	٨
	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	٨
	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	٨
	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	٨
	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	٨
	insider the site. Onsite unpaved roads should be compacted and kept free of lose materials.	
	Vehicle washing facilities should be provided at every vehicle exit point.	٨
	• 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	٨
	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	٨
	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	٨
	three sides.	
	Every vehicle should be washed to remove any dusty materials from its body and wheels before leaving the construction sites.	٨

S6.8	•	DWFI compound for JVBC:	N/A
		A DWFI compound is proposed at the downstream of JVC to contain pollution in drainage systems entering the KTAC and KTTS by	
		interception facilities until the ultimate removal of the pollution sources. Tidal barriers and desiliting facilities will form part of the	
		compounds to prevent any accumulation of sediment within the downstream section of JVBC and hence fully mitigate the potential odour	
		emissions from the headspace of JVBC near the existing discharge locations. The odour generating operations within the proposed desilting	
		compound will be fully enclosed and the odorous air will be collected and treated by high efficiency deodorizers before discharge to the	
		atmosphere.	
		Desilting compound for KTN:	N/A
		Two desilting compounds are proposed for KTN (at Site 1D6 and Site 1P1) to contain pollution in drainage systems entering the KTAC and	
		KTTS by interception facilities until the ultimate removal of the pollution sources. Tidal barriers and desiliting facilities will form part of the	
		compounds to prevent any accumulation of sediment within the downstream section of KTN and hence fully mitigate the potential odour	
		emissions from the headspace of KTN near the existing discharge locations. The odour generating operations within the proposed desilting	
		compound will be fully enclosed and the odorous air will be collected and treated by high efficiency deodorizers before discharge to the	
		atmosphere.	
		Decking or reconstruction of KTN within apron area:	N/A
		It is proposed to deck the KTN or reconstruct the KTN within the former Apron area into Kai Tak River from the south of Road D1 to the	
		north of Road D2 along the existing alignment of KTN. The Kai Tak River will compose of a number of channels flowing with nonodorous	
		fresh water and THEES effluent. The channel flowing with THEES effluent will be designed with the width of water surface of not more	
		than 16m.	
		Localised maintenance dredging:	N/A
		Localised maintenance dredging should be conducted to provide water depth of not less than 3.5m over the whole of KTAC and KTTS. With	
		reference to the water depth data recorded during the odour survey, only some of the areas in the northern part of KTAC (i.e. to the north of	
		taxiway bridge) including the area near the northern edge of KTAC, the area near western bank of KTAC, and the area near the JVC	
		discharge have water depths shallower than 3.5m. The area involved would be about 40% of the northern KTAC and the dredging depth	
		required would be from about 2.7m to less than 1m. The maintenance dredging to be carried out prior to the occupation of any new	
		development in the immediate vicinity of KTAC to avoid potential localized odour impacts at the future ASRs during the maintenance	

circulation in KTAC and KTTS:  the northern part of the former Kai Tak runway, the water circulation in KTAC and KTTS would be substantially in the improvement in water circulation, the DO level in KTAC and KTTS would also be increased.  The improvement in water circulation in KTAC and KTTS would also be increased.	N/A
ith the improvement in water circulation, the DO level in KTAC and KTTS would also be increased.	
ent by bioremediation:	
be applied to the entire KTAC and KTTS.	N/A
arriers barrier for Asphalt Paver, Breaker, Excavator and Hand-held breaker and full enclosure for Air Compressor, Bar	۸
erator and Water Pump.	
plant should be operated on-site and plant should be serviced regularly during the construction program.	٨
on construction equipment should be utilized and should be properly maintained during the construction program.	۸
hould be sited as far away from NSRs as possible.	
uch as trucks) that may be in intermittent use should be shut down between works periods or should be throttled down	۸
	٨
oise strongly in one direction should, wherever possible, be orientated so that the noise is directed away from the	
	٨
d other structures should be effectively utilized, wherever practicable, in screening noise from on-site construction	
	٨
Works during School Examination Period	٨
oise surfacing in a section of Road L2; and	N/A
ural fins	N/A
e façade of class room facing Road L2 and L4; and	N/A
oise surfacing in a section of Road I 2 & I 4	N/A
	de of class room facing Road L2 and L4; and urfacing in a section of Road L2 & L4

S7.8	(i)	Provision of low noise surfacing in a section of Road L4 before occupation of Site 111; and	N/A			
	(ii)	Setback of building about 5m from site boundary.	N/A			
S7.8	Setback	c of building about 35m to the northwest direction at 1L3 and 5m at Site 1L2.	N/A			
S7.8	(i)	avoid any sensitive façades with openable window facing the existing Kowloon City Road network; and Avoid the sensitive façade of	N/A			
		class room facing Road L2 and L4; and				
	(ii)	for the sensitive facades facing the To Kwa Wan direction, either setback the facades by about 5m to the northeast direction or do not	N/A			
		provide the facades with openable window.				
S7.8	(i)	avoid any sensitive facades with openable window facing the existing To Kwa Wan Road or	N/A			
	(ii)	provision of 17.5m high noise tolerant building fronting To Kwa Wan Road and restrict the height of the residential block(s) located at	N/A			
		less than 55m away from To Kwa Wan Road to no more than 25m above ground				
S7.8	(i)	avoid any sensitive facades with openable window facing the slip road connecting Prince Edward Road East and San Po Kong or other	٨			
		alternative mitigation measures and at-source mitigation measures for the surrounding new local roads to minimise the potential traffic				
		noise impacts from the slip road				
S7.8	All the	ventilation fans installed in the below will be provided with silencers or acoustics treatment.				
	(i)	SPS	N/A			
	(ii)	ESS	N/A			
	(iii)	Tunnel Ventilation Shaft	N/A			
	(iv)	EFTS depot	N/A			
S7.8	Installa	tion of retractable roof or other equivalent measures	N/A			
Constru	truction Water Quality					
S8.8	The fol	lowing mitigation measures are proposed to be incorporated in the design of the SPS at KTD, including:				
		Dual power supply or emergency generator should be provided at all the SPSs to secure electrical power supply;	N/A			
		Standby pumps should be provided at all SPSs to ensure smooth operation of the SPS during maintenance of the duty pumps;	N/A			
		An alarm should be installed to signal emergency high water level in the wet well at all SPSs; and				
		For all unmanned SPSs, a remote monitor system connecting SPSs with the control station through telemetry system should be provided	N/A			
		so that swift actions could be taken in case of malfunction of unmanned facilities	N/A			

S8.8	Construction Phase	
	Marine-based Construction	
	Capital and Maintenance Dredging for Cruise Terminal	
	Mitigation measures for construction of the proposed cruise terminal should follow those recommended in the approved EIA for CT Dredging.	N/A
S8.8	Fireboat Berth, Runway Opening and Road T2	
	Silt curtains should be deployed around the close grab dredger to minimize release of sediment and other contaminants for any dredging and filling	N/A
	activities in open water.	
S8.8	Dredging at and near the seawall area for construction of the public landing steps cum fireboat berth should be carried out at a maximum production	N/A
	rate of 1,000m³ per day using one grab dredger.	
S8.8	The proposed construction method for runway opening should adopt an approach where the existing seawall at the runway will not be removed until	N/A
	completion of all excavation and dredging works for demolition of the runway. Thus, excavation of bulk fill and majority of the dredging works will	
	be carried out behind the existing seawall, and the sediment plume can be effectively contained within the works area. As there is likely some	
	accumulation of sediments alongside the runway, there will be a need to dredge the existing seabed after completion of all the demolition works.	
	Dredging alongside the 600m opening should be carried out at a maximum production rate of 2,000m³ per day using one grab dredger.	
8.8	Dredging for Road T2 should be conducted at a maximum rate of 8,000m³ per day (using four grab dredgers) whereas the sand filling should be	N/A
	conducted at a maximum rate of 2,000m3 per day (using two grab dredgers).	
8.8	Silt screens shall be applied to seawater intakes at WSD seawater intake.	N/A

S8.8	Land-based Construction	
	Construction Runoff	
	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:	
	use of sediment traps	۸
	adequate maintenance of drainage systems to prevent flooding and overflow	۸
S8.8	Ideally, construction works should be programmed to minimise surface excavation works during the rainy season (April to September). All exposed	٨
	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.	
S8.8	Construction site should be provided with adequately designed perimeter channel and pre-treatment facilities and proper maintenance. The	٨
	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.	
S8.8	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	۸
	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 and particularly suited to applications where the influent is pumped.	
S8.8	Open stockpiles of construction materials (for examples, aggregates, sand and fill material) of more than 50 m³ should be covered with tarpaulin or	۸
	similar fabric during rainstorms. Measures should be taken to prevent the washing away of construction materials, soil, silt or debris into any	
	drainage system.	
S8.8	Manholes (including newly constructed ones) should always be adequately covered and temporarily sealed so as to prevent silt, construction	۸
	materials or debris being washed into the drainage system and storm runoff being directed into foul sewers.	
S8.8	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	۸
	be taken during or after rainstorms are summarized in Appendix A2 of ProPECC PN 1/94. Particular attention should be paid to the control of silty	

	surface runoff during storm events.	
S8.8	Oil interceptors should be provided in the drainage system and regularly cleaned to prevent the release of oils and grease into the storm water	N/A(1)
	drainage system after accidental spillages. The interceptor should have a bypass to prevent flushing during periods of heavy rain.	
S8.8	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	٨
	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.	
S8.8	Drainage	
	It is recommended that on-site drainage system should be installed prior to the commencement of other construction activities. Sediment traps	٨
	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	
S8.8	All temporary and permanent drainage pipes and culverts provided to facilitate runoff discharge should be adequately designed for the controlled	٨
	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.	
S8.8	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	٨
	storage capacity of the largest tank, to prevent spilled fuel oils from reaching the coastal waters of the Victoria Harbour WCZ.	
S8.8	Sewage Effluent	
	Construction work force sewage discharges on site are expected to be connected to the existing trunk sewer or sewage treatment facilities. The	۸
	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.	

Minimum distances of 100 m should be maintained between the existing or planned stormwater discharges and the existing or planned seawater intakes  S8.8 Debris and Litter  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 and that disposal of any solid materials, litter or wastes to marine waters does not occur  S8.8 Construction Works at or in Close Proximity of Storm Culvert or Seafront  The proposed works should preferably be carried out within the dry season where the flow in the drainage channel /storm culvert/ nullah is low.  A the use of less or smaller construction plants may be specified to reduce the disturbance to the bottom sediment at the drainage channel /storm culvert / mullah.  S8.8 Temporary storage of materials (e.g. equipment, filling materials, chemicals and fuel) and temporary stockpile of construction materials should be located well away from any water courses during carrying out of the construction works  S8.8 Stockpiling of construction materials and dusty materials should be covered and located away from any water courses.  A Construction debris and spoil should be covered up and/or disposed of as soon as possible to avoid being washed into the nearby water receivers.  A S8.8 Construction activities, which generate large amount of wastewater, should be carried out in a distance away from the waterfront, where practicable.  A Mitigation measures to control site runoff from entering the nearby water environment should be implemented to minimize water quality impacts.  A S8.8 Construction effluent, site run-off and sewage should be properly collected and/or treated.  A Nya works site inside the storm water courses should be temporarily isolated, such as by placing of sandbags or site curtains with lead edge at  N/A	S8.8	Stormwater Discharges	
intakes    Debris and Litter			
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 and that disposal of any solid materials, litter or wastes to marine waters does not occur  S8.8		Minimum distances of 100 m should be maintained between the existing or planned stormwater discharges and the existing or planned seawater	۸
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 and that disposal of any solid materials, litter or wastes to marine waters does not occur  S8.8   Construction Works at or in Close Proximity of Storm Culvert or Seafront  The proposed works should preferably be carried out within the dry season where the flow in the drainage channel /storm culvert/ nullah is low.  A  The use of less or smaller construction plants may be specified to reduce the disturbance to the bottom sediment at the drainage channel /storm culvert / nullah.  S8.8  Temporary storage of materials (e.g. equipment, filling materials, chemicals and fuel) and temporary stockpile of construction materials should be located well away from any water courses during carrying out of the construction works  S8.8  Stockpiling of construction materials and dusty materials should be covered and located away from any water courses.  A  Construction debris and spoil should be covered up and/or disposed of as soon as possible to avoid being washed into the nearby water receivers.  A  S8.8  Construction activities, which generate large amount of wastewater, should be carried out in a distance away from the waterfront, where practicable.  A  Mitigation measures to control site runoff from entering the nearby water environment should be implemented to minimize water quality impacts.  Surface channels should be provided along the edge of the waterfront within the work sites to intercept the runoff.  S8.8  Construction effluent, site run-off and sewage should be temporarily isolated, such as by placing of sandbags or silt curtains with lead edge at  N/A		intakes	
contract, to ensure that site management is optimised and that disposal of any solid materials, litter or wastes to marine waters does not occur  S8.8	S8.8	Debris and Litter	
contract, to ensure that site management is optimised and that disposal of any solid materials, litter or wastes to marine waters does not occur  S8.8			
The proposed works should preferably be carried out within the dry season where the flow in the drainage channel /storm culvert/ nullah is low.  The use of less or smaller construction plants may be specified to reduce the disturbance to the bottom sediment at the drainage channel /storm culvert / nullah.  S8.8 Temporary storage of materials (e.g. equipment, filling materials, chemicals and fuel) and temporary stockpile of construction materials should be located well away from any water courses during carrying out of the construction works  S8.8 Stockpiling of construction materials and dusty materials should be covered and located away from any water courses.  ^ S8.8 Construction debris and spoil should be covered up and/or disposed of as soon as possible to avoid being washed into the nearby water receivers.  \$ Construction activities, which generate large amount of wastewater, should be carried out in a distance away from the waterfront, where practicable.  \$ Mitigation measures to control site runoff from entering the nearby water environment should be implemented to minimize water quality impacts.  Surface channels should be provided along the edge of the waterfront within the work sites to intercept the runoff.  S Construction effluent, site run-off and sewage should be properly collected and/or treated.  A Ny works site inside the storm water courses should be temporarily isolated, such as by placing of sandbags or silt curtains with lead edge at  N/A		In order to maintain water quality in acceptable conditions with regard to aesthetic quality, contractors should be required, under conditions of	۸
The proposed works should preferably be carried out within the dry season where the flow in the drainage channel /storm culvert/ nullah is low.  S8.8 The use of less or smaller construction plants may be specified to reduce the disturbance to the bottom sediment at the drainage channel /storm culvert / nullah.  S8.8 Temporary storage of materials (e.g. equipment, filling materials, chemicals and fuel) and temporary stockpile of construction materials should be located well away from any water courses during carrying out of the construction works  S8.8 Stockpiling of construction materials and dusty materials should be covered and located away from any water courses.  ^ S8.8 Construction debris and spoil should be covered up and/or disposed of as soon as possible to avoid being washed into the nearby water receivers.  \$ Construction activities, which generate large amount of wastewater, should be carried out in a distance away from the waterfront, where practicable.  \$ Mitigation measures to control site runoff from entering the nearby water environment should be implemented to minimize water quality impacts.  \$ Surface channels should be provided along the edge of the waterfront within the work sites to intercept the runoff.  \$ Construction effluent, site run-off and sewage should be temporarily isolated, such as by placing of sandbags or silt curtains with lead edge at  N/A		contract, to ensure that site management is optimised and that disposal of any solid materials, litter or wastes to marine waters does not occur	
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S8.8 The use of less or smaller construction plants may be specified to reduce the disturbance to the bottom sediment at the drainage channel /storm culvert / nullah.  S8.8 Temporary storage of materials (e.g. equipment, filling materials, chemicals and fuel) and temporary stockpile of construction materials should be located well away from any water courses during carrying out of the construction works  S8.8 Stockpiling of construction materials and dusty materials should be covered and located away from any water courses.  S8.8 Construction debris and spoil should be covered up and/or disposed of as soon as possible to avoid being washed into the nearby water receivers.  S8.8 Construction activities, which generate large amount of wastewater, should be carried out in a distance away from the waterfront, where practicable.  S8.8 Mitigation measures to control site runoff from entering the nearby water environment should be implemented to minimize water quality impacts.  Surface channels should be provided along the edge of the waterfront within the work sites to intercept the runoff.  S8.8 Construction effluent, site run-off and sewage should be properly collected and/or treated.  Any works site inside the storm water courses should be temporarily isolated, such as by placing of sandbags or silt curtains with lead edge at  N/A			
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S8.8 Any works site inside the storm water courses should be temporarily isolated, such as by placing of sandbags or silt curtains with lead edge at N/A		Surface channels should be provided along the edge of the waterfront within the work sites to intercept the runoff.	
	S8.8	Construction effluent, site run-off and sewage should be properly collected and/or treated.	۸
hottom and managing symmetric manages to manage and the atoms region and the	S8.8	Any works site inside the storm water courses should be temporarily isolated, such as by placing of sandbags or silt curtains with lead edge at	N/A
bottom and property supported props to prevent adverse impact on the storm water quality.		bottom and properly supported props to prevent adverse impact on the storm water quality.	
S8.8 Silt curtain may be installed around the construction activities at the seafront to minimize the potential impacts due to accidental spillage of N/A	S8.8	Silt curtain may be installed around the construction activities at the seafront to minimize the potential impacts due to accidental spillage of	N/A
construction materials.		construction materials.	
S8.8 Proper shoring may need to be erected in order to prevent soil/mud from slipping into the storm culvert/drainage channel/sea.  N/A	S8.8	Proper shoring may need to be erected in order to prevent soil/mud from slipping into the storm culvert/drainage channel/sea.	N/A

S8.8	Supervisory staff should be assigned to station on site to closely supervise and monitor the works	۸
S8.8	Marine water quality monitoring and audit programme shall be implemented for the proposed sediment treatment operation.	N/A
Construc	ction Waste Management	
S9.5	Good Site Practices	
	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 the dredging activities include:	
	Nomination of an approved person, such as a site manager, be responsible for good site practices, arrangements for collection and effective	٨
	disposal to an appropriate facility, of all wastes generated at the site.	
	Training of site personnel in proper waste management and chemical waste handling procedures.	٨
	Provision of sufficient waste disposal points and regular collection for disposal.	٨
	Appropriate measure to minimize windblown litter and dust during transportation of waste by either covering trucks or by transporting	٨
	wastes in enclosed containers.	
	A recording system for the amount of wastes generated, recycled and disposed of (including the disposal sites).	۸
S9.5	Waste Reduction Measures	
	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:	
	Sort C&D waste from demolition of the remaining structures to recover recyclable portions such as metals	٨
	Segregation and storage of different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and	۸
	their proper disposal	
	Encourage collection of aluminium cans, PET bottles and paper by providing separate labelled bins to enable these wastes to be segregated.	۸
	from other general refuse generated by the work force	
	Any unused chemicals or those with remaining functional capacity should be recycled	٨
	Proper storage and site practices to minimise the potential for damage or contamination of construction materials	۸

S9.5	Dredged Marine Sediment	
	The basic requirements and procedures for dredged mud disposal are specified under the ETWB TCW No. 34/2002. The management of the	N/A
	dredging, use and disposal of marine mud is monitored by the MFC, while the licensing of marine dumping is required under the Dumping at Sea	
	Ordinance and is the responsibility of the Director of Environmental Protection (DEP)	
S9.5	The dredged marine sediments would be loaded onto barges and transported to the designated disposal sites allocated by the MFC depending on	N/A
	their level of contamination. Sediment classified as Category L would be suitable for Type 1 - Open Sea Disposal. Contaminated sediment would	
	require either Type 1 – Open Sea Disposal (Dedicated Sites), Type 2 - Confined Marine Disposal, or Type 3 – Special Treatment / Disposal and must	
	be dredged and transported with great care in accordance with ETWB TCW No. 34/2002. Subject to the final allocation of the disposal sites by	
	MFC, the dredged contaminated sediment must be effectively isolated from the environment and disposed properly at the designated disposal site	
S9.5	It will be the responsibility of the contractor to satisfy the appropriate authorities that the contamination levels of the marine sediment to be dredged	
	have been analysed and recorded. According to the ETWB TCW No. 34/2002, this will involve the submission of a formal Sediment Quality Report	
	to the DEP, prior to the dredging contract being tendered. The contractor for the dredging works should apply for allocation of marine disposal sites	
	and all necessary permits from relevant authorities for the disposal of dredged sediment. During transportation and disposal of the dredged marine	
	sediments requiring Type 1, Type 2, or Type 3 disposal, the following measures should be taken to minimise potential impacts on water quality:	
	Bottom opening of barges should be fitted with tight fitting seals to prevent leakage of material. Excess material should be cleaned from the	
	decks and exposed fittings of barges and hopper dredgers before the vessel is moved	N/A
	Monitoring of the barge loading should be conducted to ensure that loss of material does not take place during transportation. Transport	
	barges or vessels should be equipped with automatic selfmonitoring devices as required under the Dumping at Sea Ordinance and as	N/A
	specified by the DEP	
	Barges or hopper barges should not be filled to a level that would cause the overflow of materials or sediment laden water during loading or	
	transportation	N/A
S9.5	Construction and Demolition Material	
	Mitigation measures and good site practices should be incorporated into contract document to control potential environmental impact from handling	
	and transportation of C&D material. The mitigation measures include:	
	Where it is unavoidable to have transient stockpiles of C&D material within the Project work site pending collection for disposal, the	۸

transient stockpiles should be located away from waterfront or storm drains as far as possible	
Open stockpiles of construction materials or construction wastes on-site should be covered with tarpaulin or similar fabric	۸
Skip hoist for material transport should be totally enclosed by impervious sheeting	۸
• Every vehicle should be washed to remove any dusty materials from its body and wheels before leaving a construction site	٨
• 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	۸
concrete, bituminous materials or hardcores	
• The load of dusty materials carried by vehicle leaving a construction site should be covered entirely by clean impervious sheeting to ensure	۸
dust materials do not leak from the vehicle	
• All dusty materials should be sprayed with water prior to any loading, unloading or transfer operation so as to maintain the dusty materials	۸
wet	
• The height from which excavated materials are dropped should be controlled to a minimum practical height to limit fugitive dust generation	٨
from unloading	
When delivering inert C&D material to public fill reception facilities, the material should consist entirely of inert construction waste and of size less	٨
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.	
Chemical Waste	
After use, chemical wastes (for example, cleaning fluids, solvents, lubrication oil and fuel) should be handled according to the Code of Practice on	۸
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	
	<ul> <li>Skip hoist for material transport should be totally enclosed by impervious sheeting</li> <li>Every vehicle should be washed to remove any dusty materials from its body and wheels before leaving a construction site</li> <li>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</li> <li>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</li> <li>All dusty materials should be sprayed with water prior to any loading, unloading or transfer operation so as to maintain the dusty materials wet</li> <li>The height from which excavated materials are dropped should be controlled to a minimum practical height to limit fugitive dust generation from unloading</li> <li>When delivering inert C&amp;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&amp;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.</li> <li>Chemical Waste</li> </ul> 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

S9.5	General R	efuse	
	General re	efuse should be stored in enclosed bins or compaction units separate from C&D material. A licensed waste collector should be employed by	^
	the contra		
	and cover		
	or leachin		
Constructi	on Lands	cape and Visual	
S13.9	CM1	All existing trees should be carefully protected during construction.	٨
	CM2	Trees unavoidably affected by the works should be transplanted where practical. Detailed transplanting proposal will be submitted to	٨
		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.	
	СМЗ	Control of night-time lighting.	N/A(1)
	CM4	Erection of decorative screen hoarding.	٨

#### Remarks:

^	Compliance of mitigation measure
*	Recommendations were made during site audits but improved/rectified by the Contractor
#	Recommendations were made during site audits but has not yet been improved/rectified by the Contractor
•	Non-compliance but rectified by the Contractor
X	Non-compliance of mitigation measure
N/A	Not Applicable at this stage
N/A(1)	Not observed

APPENDIX L
SUMMARIES OF ENVIRONMENTAL
COMPLAINT, WARNING, SUMMON
AND NOTIFICATION OF SUCCESSFUL
PROSECUTION

### Appendix L – Summary of environmental complaint, warning, summon and notification of successful prosecution

**Complaint Log** 

EPD Complaint Ref No.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
17-34438	Dakota Drive and Olympic Avenue	23 October 2017	The complainant concerned about the dust emission when vehicle running on the dry surface outside Dakota Drive and Olympic Avenue. In addition, vehicles were not clear enough before leaving the construction site.	In accordance with the information gathered in the investigation, construction activities were conducted with proper mitigation measures to minimize the dust impact arise from the construction site to the vicinity of this Project.  Regular water spraying was provided to haul roads and unpaved areas within the site areas to reduce the dust impact arise from the construction site to the vicinity of this Project. The Contractor had also ensured vehicles and plants were wheel washed to be cleaned of mud and debris before leaving the construction site area. Therefore, the complaint is considered as non-project related.  The following recommendations were made to further enhance the mitigation measures:  • Where practicable, to provide sheltered area on the top and three sides for stockpiles of dusty materials, or perform frequent water spraying so as to maintain the entire surface wet;  • Frequent checking and repair the gaps or broken tarpaulin sheets; and  • To provide a hard-surfaced road between any cleaning facility and the public Road	Closed

Remarks: No complaint was received in the reporting month.

MA16043\App L

### Appendix L – Summary of environmental complaint, warning, summon and notification of successful prosecution

#### Warnings / Summons and Successful Prosecutions received

Log Ref.	Received Date	Details of Warning / Summons and Successful Prosecutions	Investigation/Mitigation Action	Status
N/A	N/A	N/A	N/A	N/A

Remarks: No warning/summon and prosecution was received in the reporting month.

MA16043\App L 2

APPENDIX M SUMMARY OF WASTE GENERATION AND DISPOSAL RECORDS Department: CEDD

Contract No.: KL/2015/02

Project: Kai Tak Development - Stage 5A Infrastructure at Former North Apron Area



#### **Monthly Summary Waste Flow Table for 2021**

As at 3 January 2022

	Quantities of Inert C & D Materials Generated Monthly							Quantities of C & D Wastes Generated Monthly					
Month	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 '000m³)	(in '000m³)	(in '000m³)	(in '000m³)	(in '000m³)	(in '000m³)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m³)		
Jan	0	0	0	0	0	0	0	0	0	0	0.07		
Feb	0	0	0	0	0	0	0	0	0	0	0.021		
Mar	0	0	0	0	0	0	0	0	0	0	0.014		
Apr	1.692	0	0	0	1.692	0	0	0	0	0	0.112		
May	0	0	0	0	0	0	0	0	0	0	0.042		
June	0	0	0	0	0	0	0	0	0	0	0.084		
Sub-total	66.537	0	0	0.406	66.537	0	0	0	0	0	2.569		
July	0	0	0	0	0	0	0	0	0	0	0.056		
Aug	0	0	0	0	0	0	0	0	0	0	0.014		
Sept	0	0	0	0	0	0	0	0	0	0	0.035		
Oct	0	0	0	0	0	0	0	0	0	0	0.007		
Nov	0	0	0	0	0	0	0	0	0	0	0.021		
Dec	0	0	0	0	0	0	0	0	0	0	0.014		
Total	66.537	0	0	0.406	66.537	0	0	0	0	0	2.716		

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 '000m³)	(in '000m³)	(in '000m³)	(in '000m³)	(in '000m³)	(in '000m³)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m³)
67	0	0	1	67	0	0	0	0	0	2.5

Notes:

- (1) The performance targets are given in PS clause 6(14).
- (2) The waste flow table shall also include C & D materials that are specified in the Contract to be imported for use at the Site.
- (3) Plastics refer to plastic bottles/ containers, plastic sheets/ foam from packaging material.
- (4) The Contractor shall also submit the latest forcast of the total amount of C&D materials exected to be generated from the Works, together with a braskdown of the nature where the total amount of C&D materials expected to be generated from the Works is equal to or excreeding 50,00 m<sup>3</sup>. (PS Cleuse 25.02A(7) refers).

# APPENDIX N CONSTRUCTION PROGRAMME

KL/2015/02 Construction Programme

			2016	2017	2018	2019	2020	2021	2022
Works	Commence	Finish	9 10 11 12	1 2 3 4 5 6 7 8 9 10 11 12 1	2 3 4 5 6 7 8 9 10 11 12 1 2	3 4 5 6 7 8 9 10 11 12	1 2 3 4 5 6 7 8 9 10 11 12 1	2 3 4 5 6 7 8 9 10 11 12	1 2 3 4 5 6 7 8 9 10 11 12
Subways Construction	Dec-16	Jun-22							
Road Works (D1 and L7)	Feb-19	Jun-21	_						
Landscape	May-21	Aug-21	_						

#### **FUGRO TECHNICAL SERVICES LIMITED**

Fugro Development Centre, 5 Lok Yi Street, Tai Lam, Tuen Mun, N.T., Hong Kong. Tel : +852 2450 8233
Fax : +852 2450 6138
E-mail : matlab@fugro.com
Website : www.fugro.com



# Appendix C

Monthly EM&A Report
For
Contract No. ED/2018/01
Kai Tak Development – Stage 4 infrastructure at the former runway and south apron

# **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

December 2021

(Version 1.0)

Certified By: (Environmental Team Leader)



Ref.: CEDKTDS4EM00\_0\_0206L.22

14 January 2022

By Post and Email

AECOM Asia Company Limited 8/F, Grand Central Plaza, Tower 2 138 Shatin Rural Committee Road Shatin, Hong Kong

Attention: Mr. Clive Cheng

Dear Sir,

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

#### **Monthly EM&A Report for December 2021**

Reference is made to the Environmental Team's submission of the Monthly EM&A Report for December 2021 (Version 1.0) certified by the ET Leader and provided to us via email on 14 January 2022.

Please be informed that we have no adverse comment on the captioned submission. We hereby verify the captioned submission in accordance with Condition 3.3 of EP-337/2009 and Condition 3.2 of EP-445/2013/A.

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

Attn.: Mr. Alex Wong

Fax: 2739 0076

Ka Shing

Attn.: Mr. Chan Pang

By email

Penta-Ocean

Attn.: Mr. Daniel Ho

Fax: 2572 4080

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# **EXECUTIVE SUMMARY**

This is the 24<sup>th</sup> Monthly Environmental Monitoring & Audit (EM&A) report which summaries the findings of the EM&A Programme during the reporting period from 1 to 31 December 2021.

#### **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/Limit Level exceedance was recorded.
- 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

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

#### **Complaint log**

5. One water discharge 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	Date of complaint	Description of complaint	Investigation / Recommendations / Action take	Close-out date / Status
10	A sewage	Complaint of muddy	Investigation	5 January
December	discharge	water being discharged	Joint site inspection	2022

Date of complaint received	Date of complaint	Description of complaint	Investigation / Recommendations / Action take	Close-out date / Status
received 2021	complaint was referred from the Contractor on 10 December 2021 through E-Mail regarding a complaint received by EPD (ref.: K19/RE/00029046-21) on 9 December 2021.	into the sea of To Kwa Wan Typhoon Shelter via a DSD outfall near the roundabout of Shing Fung Road.	was conducted by ER, IEC, ET and the contractor on 14 December 2021, no adverse observation against the water impact was recorded.  There was no muddy water discharge to DSD outfall near the roundabout of Shing Fung Road.  The sand bag with layers and filter were provided at the manholes.  Recommendations There was no direct evidence showing that the water nuisance was caused by the contractor at the complaint area.  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 sand bag and filter to ease the nuisance. The contractor is recommended to implement the following measures to minimize the impact for waste water:  Enhance the sand bag with several layers instead of one layer only and replace the filter frequently.	
			2. Modify the wheel	

Date of complaint received	Date of complaint	Description of complaint	Investigation / Recommendations / Action take	Close-out date / Status
			washing area such that the muddy water will be directly flow to the pit and then waste water treatment facility.  3. Take necessary measures to minimize the environmental nuisance arising from the construction site.	
			<ul> <li>Action taken</li> <li>Sand bags and filter were used to block the manholes.</li> <li>Manholes had been adequately covered and replace the filter frequently.</li> </ul>	

# 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	NA	NA	NA	NA
and successful				
prosecutions				

Date of receiving notification of summons or prosecutions	Date of event	Description of event	Action take	Close-out date / Status
were received in the reporting month.				

# Report changes

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

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

- 8. Major construction activities undertake during the reporting month included:
  - North Approach Ramp Construction of wall, roof slab, utilities trough
  - Bridge D3 Construction of Bridge Deck and abutments
  - North Depressed Road Construction of wall & top slab
  - Underpass Construction of walls and roof slab
  - South Approach Ramp Construction of Permanent Structure
  - District Cooling System seawater intake box culvert Installation of precast units and backfilling works, reinstatement of the seawall and backfilling works
  - Lift 3 –Construction of linking platform
  - Lift 4 –Construction of Wall and Roof Slab / Installation of Steelworks and Glass Panel
  - South Depressed Road –Installation of ELS system / construction of permanent works
  - Rising Main and Water Pipe Laying of sewage
  - Landscaped Deck –Construction of pile caps and installation of columns
  - Transformer Room –Installation of ELS system and construction of permanent structure
  - Road D3 Junction –Road works
  - Lift 1 &2 -Installation of ELS system

#### **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

Tuote 17 Summary of Jutare ney issues and potential impact in t	1		
Future key issues in the coming month	Potential impact		
North Approach Ramp –Construction of utilities trough	Noise and Air Quality, Chemical		
North Approach Kamp – Construction of utilities trough	and Waste Management		
Duidos D2 Construction of Duidos Dools and about conta	Noise and Air Quality, Landscape		
Bridge D3 –Construction of Bridge Deck and abutments	and Visual		
North Donness of Book Construction of well & ton old	Noise and Air Quality, Chemical		
North Depressed Road – Construction of wall & top slab	and Waste Management		
II. damage Construction of walls and modelsh	Noise and Air Quality, Chemical		
Underpass – Construction of walls and roof slab	and Waste Management		
Court Again al Donne Courtment of Donne and Structure	Noise and Air Quality, Chemical		
South Approach Ramp – Construction of Permanent Structure	and Waste Management		
District Cooling System seawater intake box culvert -			
Installation of precast units and backfilling works,	Noise, Air and Water Quality		
reinstatement of the seawall and backfilling works	,		
I if 2 Construction of linking whatfames	Noise and Air Quality, Chemical		
Lift 3 –Construction of linking platform	and Waste Management		
Lift 4 –Construction of Wall and Roof Slab / Installation of	Naisa Ain and Water Ovelita		
Steelworks and Glass Panel	Noise, Air and Water Quality		
South Depressed Road -Installation of ELS system /	Noise and Air Quality, Chemical		
construction of permanent works	and Waste Management		
Rising Main and Water Pipe – Laying of sewage	Noise, Air and Water Quality		
Landscaped Deck –Construction of pile caps and installation			
of columns	Noise, Air and Water Quality		
Transformer Room - Installation of ELS system and	N. A. IWA O II		
construction of permanent structure	Noise, Air and Water Quality		
Road D3 Junction –Road works	Noise, Air and Water Quality		
I : 0 1 0 2 Installation of ELC system	Noise and Air Quality, Chemical		
Lift 1 &2- Installation of ELS system	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 Civil Engineering and Development Department (CEDD) had completed an Environmental Impact Assessment (EIA) and is the Permit Holder.
- 1.4 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, EP-445/2013 and Variation to the EP (VEP) No. EP-445/2013/A.
- 1.5 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**

1.6 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	Project	Mr. Alex Wong	Senior Engineer	3579 2452	2739 0076
Development Department (CEDD)	Proponent	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)	Mr. Clive Cheng	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. Lulu Mar	Environmental Officer	6845 0626	3465 8898

#### **Works Area and Construction Programme**

1.7 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**

1.8 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

North Approach Ramp – Construction of	Bridge D3 – Construction of Bridge Deck and
utilities trough	abutments
North Depressed Road – Construction of wall	Underpass – Construction of walls and roof
& top slab	slab
	District Cooling System seawater intake box
South Approach Ramp – Construction of	culvert - Installation of precast units and
Permanent Structure	backfilling works, reinstatement of the seawall
	and backfilling works
Rising Main and Water Pipe – Laying of sewage	Lift 3 –Construction of linking platform
Lift 4 – Construction of Wall and Roof Slab /	South Depressed Road – Installation of ELS
Installation of Steelworks and Glass Panel	system / construction of permanent works
Landscaped Deck – Construction of pile caps	Transformer Room – Installation of ELS
and installation of columns	system and construction of permanent structure
Road D3 Junction – Road works	Lift 1 &2 - Installation of ELS system

# **Submission Status under the Environmental Permits**

1.9 The status of required submission under Environmental Permit (EP) conditions under EP-337/2009, EP-445/2013 and Variation to the EP (VEP) No. EP-445/2013/A 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	EP Condition EP-445/2013/A	Submission	Submission Date
Condition 1.11	Condition 1.12	Condition 1.12	Notification of Commencement Date of Construction of the Project	6 Jan 2020
Condition 2.3	Condition 2.3	Condition 2.3	Management Organization of Main Construction Companies	9 Sep 2019
Condition 2.3	Condition 2.3	Condition 2.3	Updated Management Organization of Main Construction Companies	17 Aug 2021
Condition 2.4	Condition 2.4	Condition 2.4	Design Drawings	6 Jan 2020
Condition 2.11	Condition 2.5	Condition 2.5	Landscape Mitigation Plans	13 Nov 2020
Condition 2.1	Condition 2.5	Condition 2.5	Landscape Mitigation Plans (Revision 2)	18 May 2021
Condition 3.2	NA	NA	Baseline Monitoring Report	2 Jan 2020
Condition 3.2	NA	NA	Revised Baseline Monitoring Report	28 Mar 2020

EP Condition	EP Condition	EP Condition	Submission	Submission
EP-337/2009	EP-445/2013	EP-445/2013/A		Date
Condition 3.3	Condition 3.2	Condition 3.2	Monthly EM&A Report (November 2021)	13 Dec 2021

# 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 says 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 5.

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	Rooftop
AM7 – Hong Kong Children's Hospital	Rooftop

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

2.3 The air quality monitoring locations and monitoring frequency are listed in Table 2.2.

Table 2.2 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	Rooftop	- 24-hour average TSP - 1-hour	- 24 hours - 1 hour	<ul><li>Once every 6 days</li><li>Three times</li></ul>
AM7 - Hong Kong Children's Hospital	Rooftop	average TSP		every 6 days

- 2.4 The monitoring schedule for reporting month and next month is presented in Appendix C.
- 2.5 Photographic records of the impact monitoring setup are shown in Appendix D.

#### **Monitoring Equipment**

2.6 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 2.3 summarizes the equipment to be used in the air quality monitoring.

Table 2.3 Air Quality Monitoring Equipment

Equipment	Model	Quantity
HVS Sampler	TE-5170 X c/w of TSP sampling inlet	3
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

- 2.7 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).
- 2.8 Calibration certificates, catalogue of equipment are given in Appendix E.

#### Monitoring Methodology and QA/QC Procedure

#### 24-hour TSP Monitoring

#### Operating/Analytical Procedures

- 2.9 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.
- 2.10 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.
- 2.11 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.
- 2.12 The power supply was checked to ensure the sampler worked properly and then placed any filter media at the designated air monitoring station.
- 2.13 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.

- 2.14 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.
- 2.15 The shelter lid was closed and secured with the aluminium strip.
- 2.16 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).
- 2.17 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

- 2.18 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

- 2.19 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

- 2.20 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**

- 2.21 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.
- 2.22 The wind data was captured by a data logger and the data was downloaded at least once per month for analysis.
- 2.23 The wind data monitoring equipment will be re-calibrated at least once every six months.
- 2.24 Wind direction is divided into 16 sectors of 22.5 degrees each.
- 2.25 Details of weather information during the monitoring period are shown in Appendix F.

#### **Action and Limit Levels**

2.26 The Action and Limit Levels of 24-hour average TSP and 1-hour average TSP are summarized in Table 2.4 and Table 2.5 respectively.

Table 2.4 Action and Limit Levels of 24-hour average TSP for Construction Dust Monitoring

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

Table 2.5 Action and Limit Levels of 1-hour average TSP for Construction Dust Monitoring

Parameter	Air Monitoring Station	Action Level, μg/m <sup>3</sup>	Limit Level, µg/m <sup>3</sup>
	AM3	297	500
1-hour average TSP	AM4(A)	326	500
	AM7	315	500

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

2.27 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 2.6 and Table 2.7 respectively.

Table 2.6 Summary of 24-hour average TSP Monitoring Data during the reporting month

Air Monitoring Station	Average TSP Concentration, µg/m <sup>3</sup>	Range, μg/m <sup>3</sup>	Action Level, μg/m <sup>3</sup>	Limit Level, μg/m <sup>3</sup>
AM3	75	26 – 93	182	260
AM4(A)	70	22 - 90	187	260
AM7	80	24 – 109	181	260

Table 2.7 Summary of 1-hour average TSP Monitoring Data during the reporting month

Air Monitoring Station	Average TSP Concentration, µg/m <sup>3</sup>	Range, μg/m <sup>3</sup>	Action Level, µg/m <sup>3</sup>	Limit Level, μg/m <sup>3</sup>
AM3	56	21 - 82	297	500
AM4(A)	58	26 - 73	326	500
AM7	65	23 - 96	315	500

- 2.28 There was no Action and Limit Level exceedance of 24-hour average TSP and 1-hour average TSP levels recorded during the reporting month.
- 2.29 Graphical presentation and detailed monitoring results of 24-hour average TSP and 1-hour average TSP levels are shown in Appendix G and Appendix H respectively.
- 2.30 The Event and Action Plan is provided in Appendix I.
- 2.31 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,  $L_{Aeq, 30-minute}$ , 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 6.

*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	Rooftop (Façade)
M12 - Hong Kong Children's Hospital	Rooftop (Façade)

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

3.5 The noise monitoring locations and monitoring frequency are listed in Table 3.2.

*Table 3.2 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	1	$L_{A eq}, L_{A10}$ and $L_{A90}$	30 - minutes measurement at each monitoring station between 0700 – 1900 hrs on normal weekdays
M12 - Hong Kong Children's Hospital	Rooftop (Façade)		(Monday to Saturday) at frequency of once per week.

- 3.6 The monitoring schedule for reporting month and next month is presented in Appendix C.
- 3.7 Photographic records of the monitoring setup are shown in Appendix D.

# **Monitoring Equipment**

3.8 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 3.3 summarizes the equipment to be used in the noise monitoring.

Table 3.3 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	2

3.9 Calibration certificates, catalogue of equipment are given in Appendix J.

#### Monitoring Methodology and QA/QC Procedure

- 3.10 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.
- 3.11 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.

- 3.12 Turned on the sound level meter and check the battery, if too low, change new ones.
- 3.13 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.
- 3.14 Noise level was recorded.
- 3.15 Recorded any activities that may generate noise during measurement period.

#### **Maintenance and Calibration**

- 3.16 The microphone head of the sound level meter and calibrator was cleaned with a soft cloth at quarterly intervals.
- 3.17 The sound level meter and sound calibrator were calibrated annually.
- 3.18 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**

3.19 The Baseline Noise Levels and Action and Limit Levels for construction noise is presented in Table 3.4.

Table 3.4 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 ^
0700 – 1900 on	M11	68.3	When one	75 JD(A)
normal weekdays	M12	61.9	documented complaint is received.	75 dB(A)

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**

3.20 Impact noise monitoring results at the designed noise monitoring stations are summarized in Table 3.5 respectively.

Table 3.5 Summary of Noise Monitoring Data during the reporting month

Noise Monitoring Station	Measured L <sub>Aeq, 30-</sub> min, Average, dB(A)	Measured L <sub>Aeq, 30</sub> - min, Range, dB(A)	Action Level	Limit Level ^
M11	67.8	67.1 – 68.1	When one documented	75
M12	65.0	63.8 – 65.9	complaint is received	dB(A)

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.

- 3.21 There were no action level exceedance of noise monitoring and limit level exceedance of  $L_{\text{Aeq}}$ ,  $_{30\text{min}}$  recorded during the reporting month.
- 3.22 Graphical presentation and detailed monitoring results are shown in Appendix K.
- 3.23 The Event and Action Plan is provided in Appendix L.
- 3.24 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

	ACDAY	Maximum 24-h	Cumulative our average TSP ntration	Measured 24-hr average TSP in
Air Monitoring Station	ASR No. in EIA report	Scenario 1 (Mid 2009 to	Scenario 2 (Mid 2013 to	Reporting Month (December 2021)
		Mid 2013), μg/m <sup>3</sup>	Late 2016), $\mu g/m^3$	$\mu g/m^3$
AM3 - Sky Tower	A40^	106	138	26 – 93
AM4(A) - The Hong Kong Society for the Blind's Factory cum Sheltered Workshop	A43^	123	195	22 – 90
AM7 – Hong Kong Children's Hospital	PA60	NA	NA	24 – 109

Note:

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

		Predicted Cumulative		
		Maximum 1-ho	our average TSP	Measured 1-hr
	ASR No. in	concer	tration	average TSP in
Air Monitoring Station	EIA report	Scenario 1	Scenario 2	Reporting Month
	LIA Teport	(Mid 2009 to	(Mid 2013 to	(December 2021)
		Mid 2013),	Late 2016),	$\mu g/m^3$
		$\mu g/m^3$	$\mu g/m^3$	
AM3 - Sky Tower	A40	217^	247^	21 - 82
AM4(A) - The Hong Kong Society for the Blind's Factory cum Sheltered Workshop	A43	283^	409^	26 – 73
AM7 – Hong Kong Children's Hospital	PA60	NA	NA	23 – 96

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.

<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.

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 LAeq, 30min, dB(A)	Measured Noise Level in Reporting Month (December 2021) L <sub>Aeq, 30min</sub> , dB(A)
M11 - The Hong Kong Society for the Blind's Factory cum Sheltered Workshop	N18	50 – 76*	67.1 – 68.1
M12 - Hong Kong Children's Hospital	PN83, PN84, PN84A	NA	63.8 – 65.9

Note:

- 4.2 24-hour TSP monitoring results at AM3 and AM4(A) were recorded lower than the prediction in the EIA Report. Non-project related construction activities in the adjacent construction sites were observed during the reporting period and may affect the monitoring results.
- 4.3 No prediction in the EIA Report for 24-hour TSP monitoring results at AM7.
- 4.4 1-hour TSP monitoring results at AM3 and AM4(A) were recorded lower than the prediction in the EIA Report. Non-project related construction activities in the adjacent construction sites were observed during the reporting period and may affect the monitoring results.
- 4.5 No prediction in the EIA Report for 1-hour TSP monitoring results at AM7.
- 4.6 Noise monitoring results at M11 were recorded lower than the prediction in the EIA Report.

  Non-project related construction activities in the adjacent construction sites were observed during the reporting period and may affect the monitoring results.
- 4.7 No prediction in the EIA Report for noise monitoring results at M12.

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

# 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 2, 9, 14, 23 and 30 December 2021 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
02 December 2021	No	NA	NA
09 December 2021	No	NA	NA
14 December 2021	No	NA	NA
23 December 2021	No	NA	NA
30 December 2021	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 M 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 2, 9, 14, 23 and 30 December 2021 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
02 December 2021	NA	NA	NA
09 December 2021	Observation: The accumulated waste should be removed	Action Taken: The accumulated waste was removed.	Closed-out on 14 December 2021
14 December 2021	Observation: The main haul road near the underpass area (NDR) should be kept water spraying to reduce dust emission.	Action Taken:  Dust suppression has been enforced main haul road to reduce dust nuisance.	Closed-out on 23 December 2021
23	NA NA	NA	NA

Inspection Date	Key Observations	Recommendations / Actions	Close-out Date / Status
December 2021			
30 December 2021	NA	NA	NA

# **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 N.
- 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
	EP-337/2009	23 Apr 2009	N/A
Environmental Permit under EIAO	EP-445/2013	3 May 2013	N/A
	EP-445/2013/A	13 Aug 2014	N/A
Construction Dust Notification under APCO	445956	6 June 2019	N/A
Wastewater Discharge License under WPCO	WT00034610-2019	26 Sep 2019	30 Sep 2024
Waste Disposal Billing Account	7034450	28 June 2019	N/A
Registration as a Chemical Waste Producer	5218-286-P3182- 03	18 Jul 2019	N/A
Construction Noise Permit	GW-RE0522-21	02 Jun 2021	01 Dec 2021
	GW-RE0528-21	11 Jun 2021	10 Dec 2021
	GW-RE0540-21	12 Jun 2021	11 Dec 2021
	GW-RE0893-21	24 Sep 2021	19 Mar 2022
	GW-RE0960-21	05 Oct 2021	03 Apr 2022
	GW-RE1054-21	27 Oct 2021	13 Apr 2022

Environmental Licenses, Notifications and Permits	Ref. No.	Valid Form	Valid Till
	GW-RE1214-21	06 Dec 2021	01 June 2022
	GW-RE1262-21	30 Dec 2021	11 Jun 2022
	GW-RE1263-21	30 Dec 2021	17 Jun 2022

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

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

6.9 One water discharge 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	Date of complaint	Description of complaint	Investigation / Recommendations / Action take	Close-out date / Status
10 December 2021	A sewage discharge complaint was referred from the Contractor on 10 December 2021 through E-Mail regarding a complaint received by EPD (ref.: K19/RE/00029046-21) on 9 December 2021.	via a DSD outfall near	Investigation Joint site inspection was conducted by ER, IEC, ET and the contractor on 14 December 2021, no adverse observation against the water impact was recorded There was no muddy water discharge to DSD outfall near the roundabout of Shing Fung Road The sand bag with layers and filter	5 January 2022

Date of complaint	Date of complaint	Description of complaint	Investigation / Recommendations /	Close-out date / Status
received		Complaint	Action take	date / Status
			were provided at	
			the manholes.	
			Recommendations	
			There was no direct	
			evidence showing that	
			the water nuisance was	
			caused by the	
			contractor at the	
			complaint area.	
			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 sand	
			bag and filter to ease	
			the nuisance. The	
			contractor is recommended to	
			implement the	
			following measures to	
			minimize the impact	
			for waste water:	
			1. Enhance the sand	
			bag with several	
			layers instead of	
			one layer only and replace the filter	
			frequently.	
			2. Modify the wheel	
			washing area such	
			that the muddy	
			water will be	
			directly flow to the	
			pit and then waste	
			water treatment facility.	
			3. Take necessary	
			measures to	
			minimize the	
			environmental	
			nuisance arising	
			from the	
			construction site.	

Date of complaint received	Date of complaint	Description of complaint	Investigation / Recommendations / Action take	Close-out date / Status
			Action taken  1. Sand bags and filter were used to block the manholes.  2. Manholes had been adequately covered and replace the filter frequently.	

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

#### 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 take	Close-out date / Status
No notification	NA	NA	NA	NA
of summons				
and				
successful				
prosecutions				
were				
received in				
the reporting				
month.				

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

# 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	
North Approach Ramp – Construction of utilities trough	Noise and Air Quality, Chemical and Waste Management	
Bridge D3 – Construction of Bridge Deck and abutments	Noise and Air Quality, Landscape and Visual	
North Depressed Road – Construction of wall & top slab	Noise and Air Quality, Chemical and Waste Management	
Underpass – Construction of walls and roof slab	Noise and Air Quality, Chemical and Waste Management	
South Approach Ramp – Construction of Permanent Structure	Noise and Air Quality, Chemical and Waste Management	
District Cooling System seawater intake box culvert - Installation of precast units and backfilling works, reinstatement of the seawall and backfilling works	Noise, Air and Water Quality	
Lift 3 – Construction of linking platform	Noise and Air Quality, Chemical and Waste Management	
Lift 4 – Construction of Wall and Roof Slab / Installation of Steelworks and Glass Panel	Noise, Air and Water Quality	
South Depressed Road – Installation of ELS system / construction of permanent works	Noise and Air Quality, Chemical and Waste Management	
Rising Main and Water Pipe – Laying of sewage	Noise, Air and Water Quality	
Landscaped Deck – Construction of pile caps and installation of columns	Noise, Air and Water Quality	
Transformer Room – Installation of ELS system and construction of permanent structure	Noise, Air and Water Quality	
Road D3 Junction – Road works	Noise, Air and Water Quality	
Lift 1 &2- Installation of ELS system	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 C.

#### 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.
- 8.3 24-hour TSP monitoring was conducted as scheduled in the reporting month. No Action/Limit Level exceedance was recorded.
- 8.4 Construction noise monitoring was conducted as scheduled in the reporting month. No Action/Limit Level exceedance was recorded.
- 8.5 One water discharge complaint was received in the reporting month.
- 8.6 No notification of summons and successful prosecutions was received in the reporting month.

## Figure

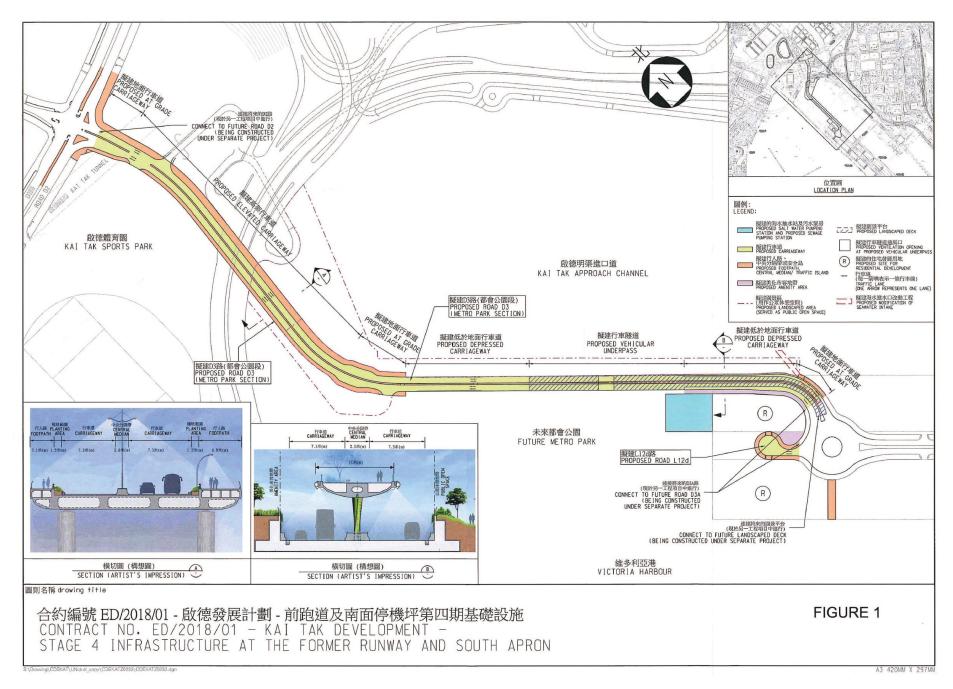


Figure 1 – Proposed works of Contract No. ED/2018/01

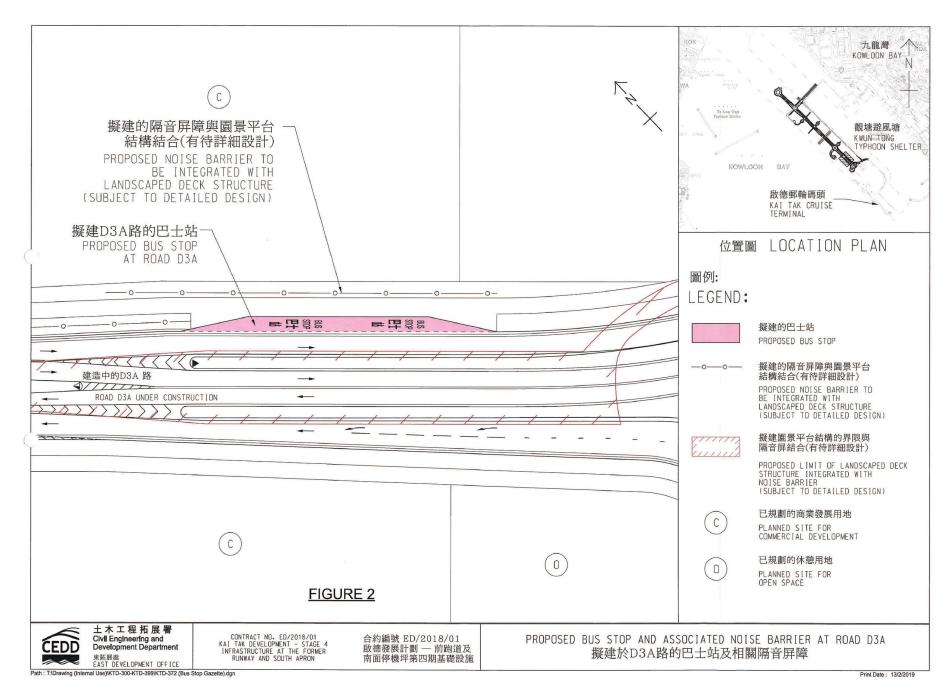


Figure 2 – Proposed Bus Stop And Associated Noise Barrier At Road D3A

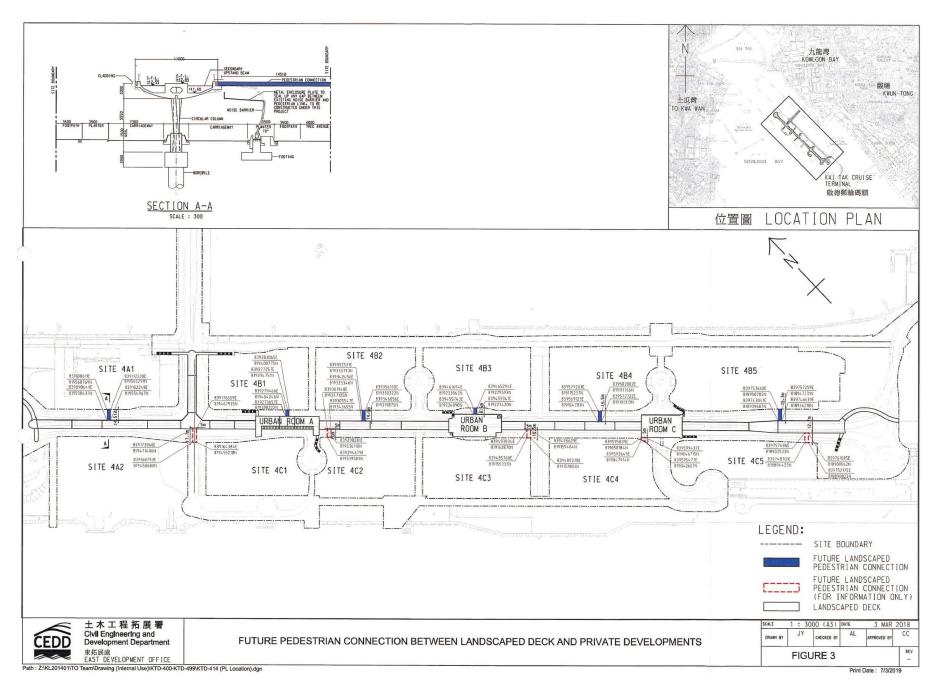


Figure 3 – Future Pedestrian Connection Between Landscaped Deck And Private Developments

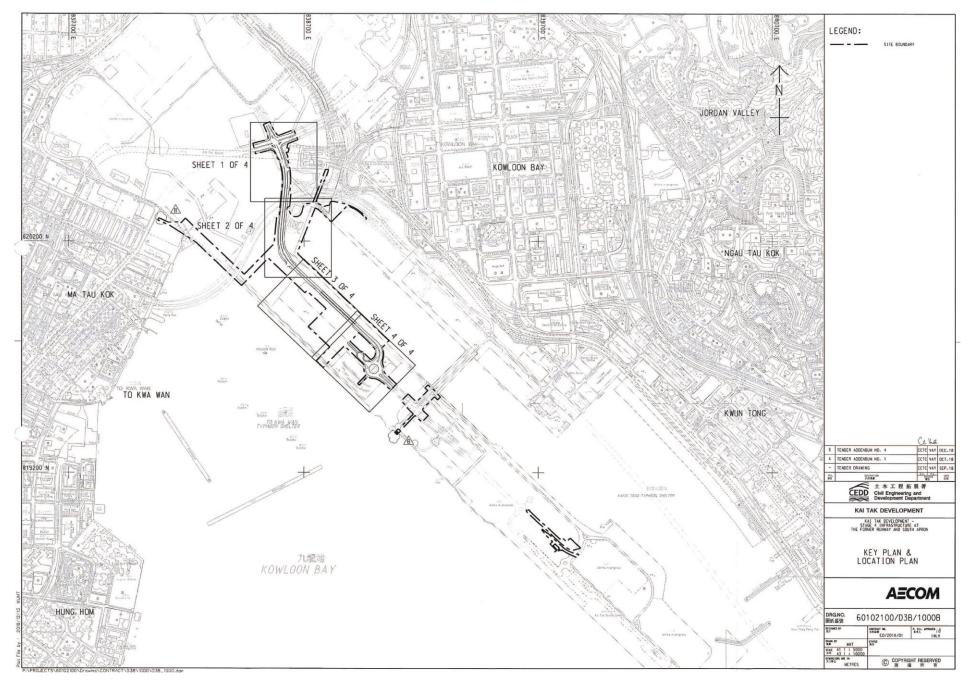


Figure 4 – Site Layout Plan

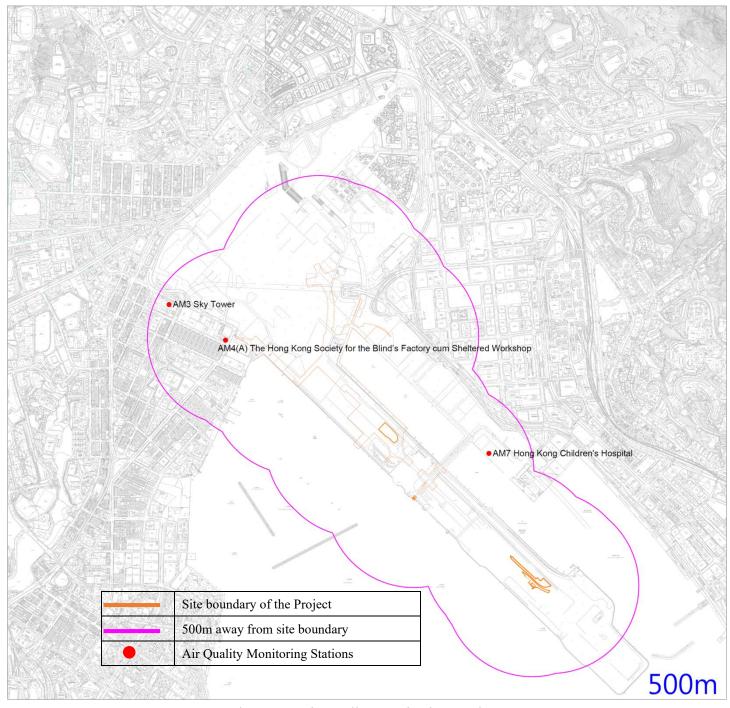


Figure 5 – Air Quality Monitoring Stations

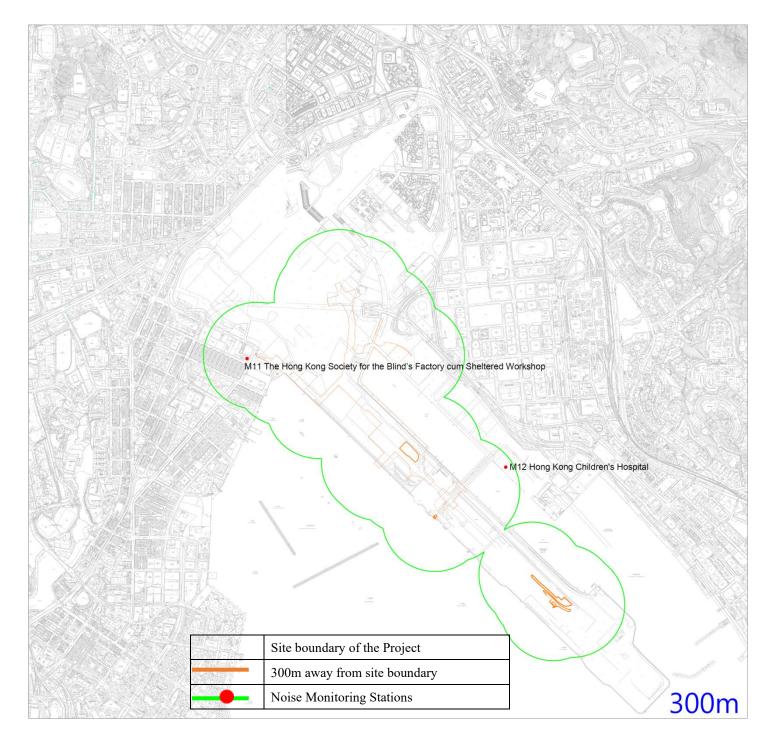
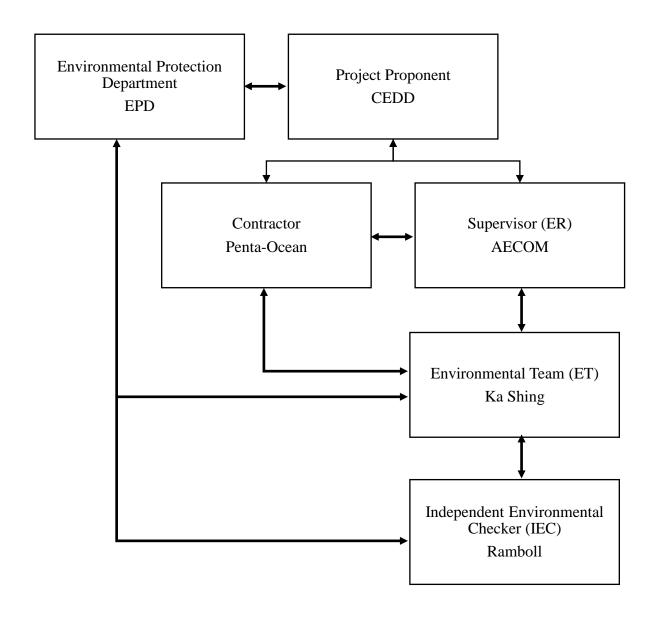


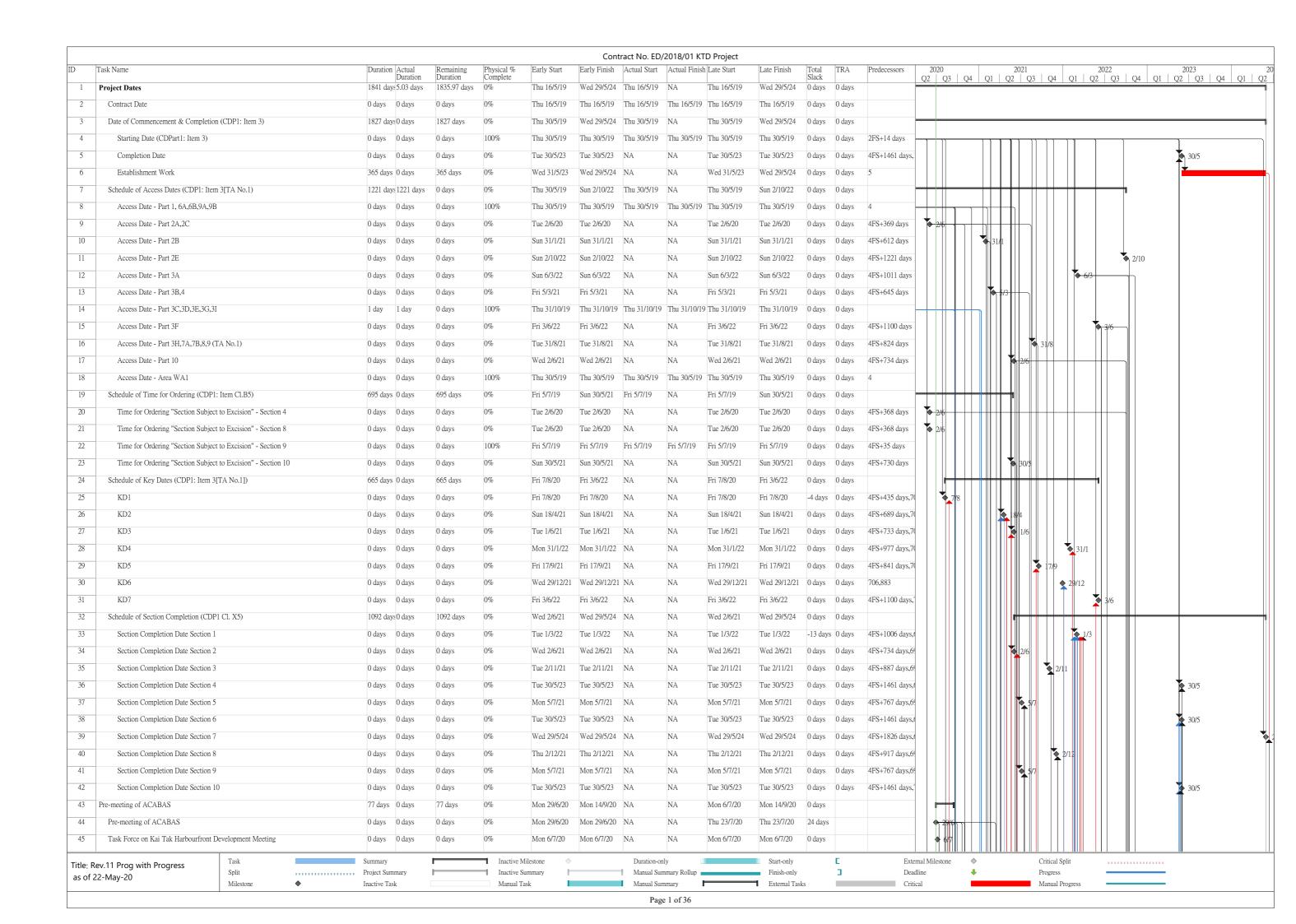
Figure 6 – Noise Monitoring Stations

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



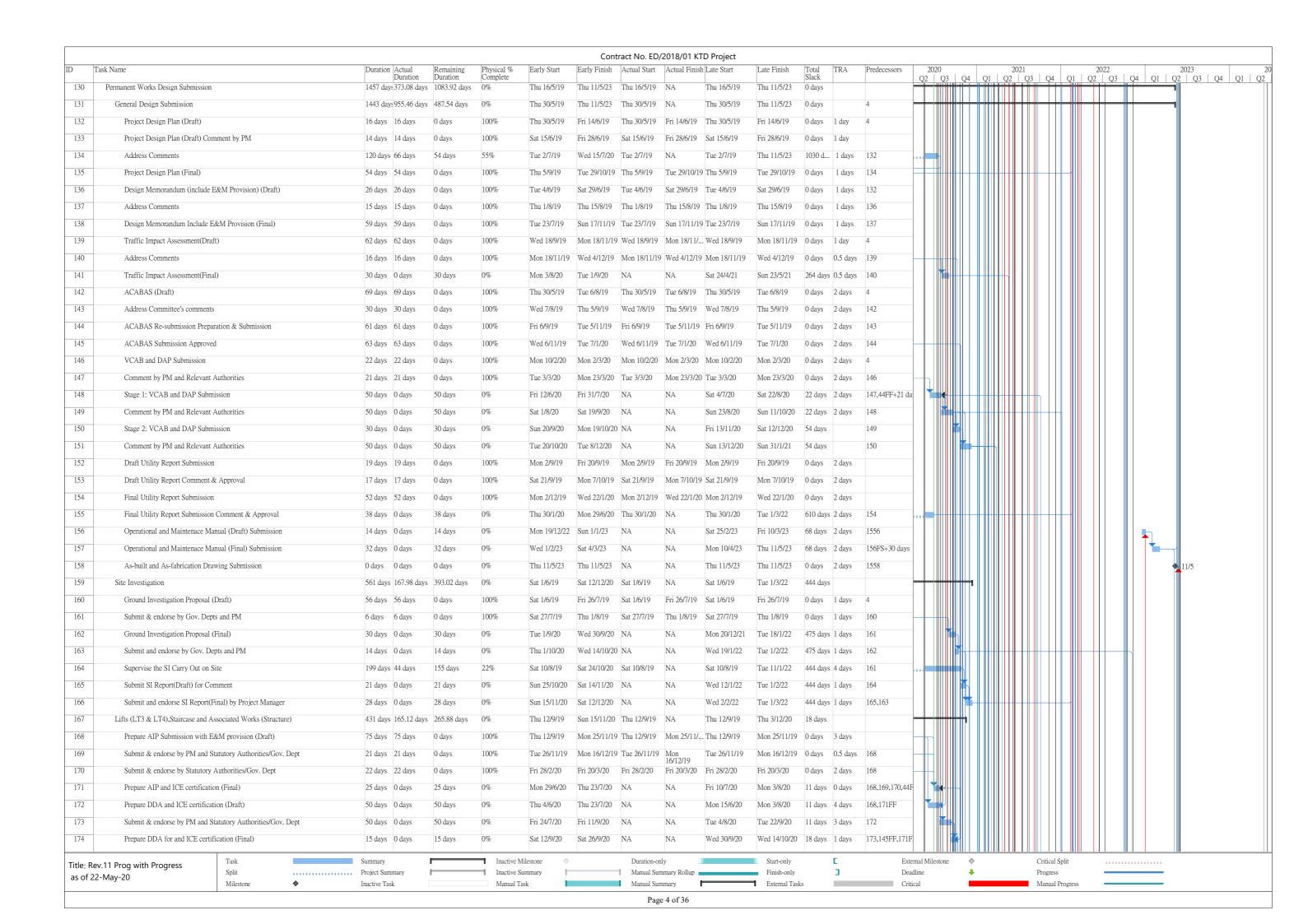
← Link of communication

# **Appendix B – Construction Programme**



							Cont	ract No. ED/	2018/01 KI	D Project												
)	Task Name	Duration	Actual Duration	Remaining Duration	Physical % Complete	Early Start	Early Finish	Actual Start	Actual Finish	Late Start	Late Finish	Total Slack	TRA Prede		2020   Q3   Q	4 01 0	2021	04 01		22		)23   Q3   Q4
46	District Council Consultation	0 days		0 days	0%	Mon 14/9/20	Mon 14/9/20	NA	NA	Mon 14/9/20	Mon 14/9/20	0 days		1	14	9				\(\sqrt{2}\)	Q1   Q2	<u> </u>
47	Project Manager's Instruction	8 days	8 days	0 days	0%	Thu 20/2/20	Fri 28/2/20	Thu 20/2/20	Fri 28/2/20	Thu 20/2/20	Fri 28/2/20	0 days										
48	PMI No. 001 - BIM Promenade Walk-through Video for Infrastructure in Kai Tak Stage 4	0 days	0 days	0 days	100%	Thu 20/2/20	Thu 20/2/20	Thu 20/2/20	Thu 20/2/20	Thu 20/2/20	Thu 20/2/20	0 days		0/2								
49	PMI No. 002 - Arranagement of Restricting Site Activities due to Spread of the Noval Coronavirus Between 29 January 2020 to 02 February 2020	0 days	0 days	0 days	100%	Fri 28/2/20	Fri 28/2/20	Fri 28/2/20	Fri 28/2/20	Fri 28/2/20	Fri 28/2/20	0 days		28/2								
50	Compensation Event	16 days	16 days	0 days	0%	Mon 10/2/20	Wed 26/2/20	Mon 10/2/20	Wed 26/2/20	Mon 10/2/20	Wed 26/2/20	0 days										
51	CE/001: BIM Promenade Walk-through Video for Infrastructure in Kai Tak Stage 4	0 days	0 days	0 days	100%	Mon 10/2/20	Mon 10/2/20	Mon 10/2/20	Mon 10/2/20	Mon 10/2/20	Mon 10/2/20	0 days		V2								
52	CE/002 - Arranagement of Restricting Site Activities due to Spread of the Noval Coronavirus Between 29 January 2020 to 02 February 2020	0 days	0 days	0 days	100%	Wed 26/2/20	Wed 26/2/20	Wed 26/2/20	Wed 26/2/20	Wed 26/2/20	Wed 26/2/20	0 days		16/2								
53	Early Warning	257 days	257 days	0 days	0%	Wed 10/7/19	Mon 23/3/20	Wed 10/7/19	Mon 23/3/20	Wed 10/7/19	Mon 23/3/20	0 days										
54	EW No. 001: CLP's 11kV and 132kV Cable Routing across Utility Trough of Bridge D3 and Alongside Road D3 (Metro Park Section)	0 days	0 days	0 days	100%	Wed 10/7/19	Wed 10/7/19	Wed 10/7/19	Wed 10/7/19	Wed 10/7/19	Wed 10/7/19	0 days										
5	EW No. 002: Deep Excavation Basement Construction Works from CKR-BEM Contract	0 days	0 days	0 days	100%	Thu 5/9/19	Thu 5/9/19	Thu 5/9/19	Thu 5/9/19	Thu 5/9/19	Thu 5/9/19	0 days										
56	EW No. 003: Overhang Cables of CLP Delay the Northern Depressed Road	0 days	0 days	0 days	100%	Wed 11/9/19	Wed 11/9/19	Wed 11/9/19	Wed 11/9/19	Wed 11/9/19	Wed 11/9/19	0 days										
57	EW No. 004: Late Commencement on Noise and Air Baseline Monitoring Delay the Northern Depressed Road CH1560 to 1720	0 days	0 days	0 days	100%	Mon 4/11/19	Mon 4/11/19	Mon 4/11/19	Mon 4/11/19	Mon 4/11/19	Mon 4/11/19	0 days										
8	EW No. 005: Maintain the SCL RoW which should have been diverted to the RoW Constructed by KTSP caused Disruption to the Construction of North Approach Ramp especially affect the KTD1	0 days	0 days	0 days	100%	Wed 13/11/19	Wed 13/11/19	Wed 13/11/19	Wed 13/11/19	Wed 13/11/19	Wed 13/11/19	0 days										
9	EW No. 006: Deferral of Design Deliverables	0 days	0 days	0 days	100%	Mon 16/12/19	Mon 16/12/19	Mon 16/12/19	Mon 16/12/	Mon 16/12/19	Mon 16/12/19	0 days										
60	EW No. 007: Delay on Driven H-piles by KTSP may affect the KD1	0 days	0 days	0 days	100%	Fri 20/12/19	Fri 20/12/19	Fri 20/12/19	Fri 20/12/19	Fri 20/12/19	Fri 20/12/19	0 days										
1	EW No. 008: Not Allow to Extract Sheetpiles of North Approach Ramp beside Kai Tak Sport Park as Discussed at the Interface Meeting	0 days	0 days	0 days	100%	Fri 27/12/19	Fri 27/12/19	Fri 27/12/19	Fri 27/12/19	Fri 27/12/19	Fri 27/12/19	0 days										
2	EW No. 010: Existing 150mm Fresh Water Pipe clashing with Bridge D3 and South Approach Ramp	0 days	0 days	0 days	100%	Wed 8/1/20	Wed 8/1/20	Wed 8/1/20	Wed 8/1/20	Wed 8/1/20	Wed 8/1/20	0 days										
3	EW No. 011: Additional Requirement for Special Arrangement for Design and Construction of Noise Barrier fir Future Connection of Footbridge FB10 from Development Site 4B5	0 days	0 days	0 days	100%	Tue 14/1/20	Tue 14/1/20	Tue 14/1/20	Tue 14/1/20	Tue 14/1/20	Tue 14/1/20	0 days										
4	EW No. 014: Planning of the Works in Revised Programme (Rev. 6)	0 days	0 days	0 days	100%	Mon 10/2/20	Mon 10/2/20	Mon 10/2/20	Mon 10/2/20	Mon 10/2/20	Mon 10/2/20	0 days		V2								
5	EW No. 015: Outbreak of Novel Coronavirus (Constraints on Working Time)	0 days	0 days	0 days	100%	Tue 11/2/20	Tue 11/2/20	Tue 11/2/20	Tue 11/2/20	Tue 11/2/20	Tue 11/2/20	0 days		/2								
5	EW No. 016: Outbreak of Novel Coronavirus (Late Supply of Agggregate)	0 days	0 days	0 days	100%	Wed 19/2/20	Wed 19/2/20	Wed 19/2/20	Wed 19/2/20	Wed 19/2/20	Wed 19/2/20	0 days		9/2								
7	EW No. 020: GEO Audit for Underpass D3	0 days	0 days	0 days	100%	Fri 13/3/20	Fri 13/3/20	Fri 13/3/20	Fri 13/3/20	Fri 13/3/20	Fri 13/3/20	0 days		13/3								
8	EW No. 021: Unforessen Underground Water at North Approach Ramp Bay 6	0 days	0 days	0 days	100%	Thu 12/3/20	Thu 12/3/20	Thu 12/3/20	Thu 12/3/20	Thu 12/3/20	Thu 12/3/20	0 days		12/3								
9	EW No. 022:Deferral of Interface Management Plan Submission for Noise Barrier Works	0 days	0 days	0 days	100%	Fri 13/3/20	Fri 13/3/20	Fri 13/3/20	Fri 13/3/20	Fri 13/3/20	Fri 13/3/20	0 days		13/								
0	EW No. 023:Disruption of the Works due to Stockpile was not allowed to dispose to the Proposed Disposal Ground	0 days	0 days	0 days	100%	Mon 16/3/20	Mon 16/3/20	Mon 16/3/20	Mon 16/3/20	Mon 16/3/20	Mon 16/3/20	0 days		16/								
1	EW No. 025: Broken Steel Casing for Bored Pile P02-BP2	0 days	0 days	0 days	100%	Mon 23/3/20	Mon 23/3/20	Mon 23/3/20	Mon 23/3/20	Mon 23/3/20	Mon 23/3/20	0 days		23/	3							
2	Contractor's Notification of Compensation Event	14 days	0 days	14 days	0%	Thu 28/5/20	Thu 11/6/20	NA	NA	Tue 9/6/20	Tue 7/7/20	12 days			1							
3	Compensation Event (CNCE) No. 009 - Inclement Weather in April 2020	0 days	0 days	0 days	0%	Thu 28/5/20	Thu 28/5/20	NA	NA	Tue 7/7/20	Tue 7/7/20	40 days			<del>- 28</del> /5							
4	Compensation Event - Inclement Weather in May 2020	0 days	0 days	0 days	0%	Thu 11/6/20	Thu 11/6/20	NA	NA	Tue 9/6/20	Tue 9/6/20	-2 days			<b>◆ 1</b> 1/6							
5	Project Submission	1457 day	s 401.03 days	1055.97 days	0%	Thu 16/5/19	Thu 11/5/23	Thu 16/5/19	NA	Thu 16/5/19	Thu 11/5/23	0 days	0 days									
5	Submit Third Parties Insurance	71 days	71 days	0 days	100%	Tue 18/6/19	Tue 27/8/19	Tue 18/6/19	Tue 27/8/19	Tue 18/6/19	Tue 27/8/19	0 days	0 days 4									
7	Works Programme	160 days	160 days	0 days	0%	Thu 16/5/19	Tue 22/10/19	Thu 16/5/19	Thu 15/8/19	Thu 16/5/19	Tue 22/10/19	0 days										
3	Submit First Programme	20 days		0 days	100%	Thu 16/5/19	Tue 4/6/19	Thu 16/5/19	Tue 4/6/19	Thu 16/5/19	Tue 4/6/19	0 days	0 days 2									
)	Review and Comment by Project Manager	9 days		0 days	100%	Wed 5/6/19	Thu 13/6/19	Wed 5/6/19	Thu 13/6/19	Wed 5/6/19	Thu 13/6/19	0 days	0 days 78									
)	Revise and Resubmission of Works Programme	42 days		0 days	100%	Fri 14/6/19			Thu 25/7/19				0 days 79									
_	Final Review and Acceptance of the First Programme by Project Manager	20 days		0 days	100%	Sat 27/7/19	Thu 15/8/19		Thu 15/8/19		Thu 15/8/19		0 days 80									
2	Submit Health and Safety Management Plan (ACC Cl. D6(2))	6 days		0 days	100%	Thu 30/5/19	Tue 4/6/19	Thu 30/5/19			Tue 4/6/19		0.5 day 4									
3	Submit Detailed Programme for Safety Risk (ER Part 7, Cl. 7.3.4)	34 days		0 days	100%	Mon 9/12/19	Sat 11/1/20		Sat 11/1/20		Sat 11/1/20		0.5 day 4									
4 5	Submit Environmental Management Plan (ACC Cl. D20(2))  Submit BIM Models Deliverables	6 days 262 days	6 days 262 days	0 days	100%	Thu 30/5/19 Tue 13/8/19	Tue 4/6/19 Thu 30/4/20	Thu 30/5/19 Tue 13/8/19			Tue 4/6/19 Thu 30/4/20	0 days	0.5 day 4									
	Rev.11 Prog with Progress Task Split	Summary Project Sum	mary		Inactive M Inactive Su			Duration-on  Manual Sun	ly 📗 nmary Rollup 🕳		Start-only Finish-only		C 3	External N Deadline	filestone	♦		ritical Split				
s of	22-May-20 Milestone	Inactive Tas		-	Manual Ta			Manual Sun			External Task		_	Critical		*		Ianual Progre	200			

							COI	itract No. ED	/2018/01 KTD Pi	roject													
,	Гask Name	Duration		Remaining Duration	Physical % Complete	Early Start	Early Finish	Actual Start	Actual Finish Late	e Start	Late Finish	Total Slack	TRA	Predecessors	2020	2   04   4		2021	N 01   1	2022	04 01 1	2023	04 01
86	Existing Site Model (Topography)	46 days	Duration 46 days	0 days	100%	Tue 13/8/19	Fri 27/9/19	Tue 13/8/19	Fri 27/9/19 Tue	13/8/19	Fri 27/9/19	0 days	1 day		Q2   Q	3 Q4 (	Q1 Q2	Q3   Q	24   Q1   0	22   Q3   C	Q4   Q1   0	Q2   Q3   	Q4   Q1
87	Existing Underground Utilities (UU) Model	33 days	33 days	0 days	100%	Mon 26/8/19	Fri 27/9/19	Mon 26/8/19	Fri 27/9/19 Mor	n 26/8/19	Fri 27/9/19	0 days	1 day										
88	3D Digital Survey For Existing Conditions	44 days	44 days	0 days	100%	Mon 2/9/19	Tue 15/10/19	Mon 2/9/19	Tue 15/10/19 Mor	n 2/9/19	Tue 15/10/19	0 days	1 day										
89	3D Photogrametry Model	46 days	46 days	0 days	100%	Mon 16/9/19	Thu 31/10/19	Mon 16/9/19	Thu 31/10/19 Mor	n 16/9/19	Thu 31/10/19	0 days	1 day										
90	AIP Model	16.92 day	16.92 days	0 days	100%	Fri 6/9/19	Sun 22/9/19	Fri 6/9/19	Sun 22/9/19 Fri	6/9/19	Sun 22/9/19	0 days	1 day										
91	Interfacing Contract Model	53 days	53 days	0 days	100%	Mon 9/9/19	Thu 31/10/19	Mon 9/9/19	Thu 31/10/19 Mor	n 9/9/19	Thu 31/10/19	0 days	1 day										
92	Monthly Updated BIM Model	1 day	1 day	0 days	100%	Thu 31/10/19	Thu 31/10/19	Thu 31/10/19	Thu 31/10/19 Thu	1 31/10/19	Thu 31/10/19	0 days	1 day										
93	4D Model Linked Up with Programme	0 days		0 days	100%	Thu 30/4/20			Thu 30/4/20 Thu			0 days			♦ 30/4								
94	Construction Method Simulation (CMS) in 3D Model	0 days		0 days	100%	Wed 22/4/20			Wed 22/4/20 Wed		Wed 22/4/20	0 days			<b>♦</b> 22/4								
95	BIM Deliverables Schedule	896 days		892.28 days	0%	Thu 16/5/19		1 Thu 16/5/19			Tue 11/1/22	76 days	- uu		- 22/1								
96	Establish BIM Team	0 days		0 days	100%	Sat 3/8/19	Sat 3/8/19	Sat 3/8/19		3/8/19	Sat 3/8/19	0 days	1 day					'					
97	BIM Execution Plan				100%	Sat 31/8/19	Sat 31/8/19	Sat 31/8/19	Sat 31/8/19 Sat		Sat 31/8/19												
		0 days		0 days								0 days											
98	BIM Submission Schedule	0 days		0 days	100%	Fri 16/8/19	Fri 16/8/19	Fri 16/8/19	Fri 16/8/19 Fri		Fri 16/8/19	0 days	_										
99	BIM 360 License	0 days		0 days	100%	Sat 31/8/19	Sat 31/8/19	Sat 31/8/19	Sat 31/8/19 Sat		Sat 31/8/19	0 days											
.00	BIM/Drawing Management Software System	0 days		0 days	100%	Sat 31/8/19	Sat 31/8/19	Sat 31/8/19	Sat 31/8/19 Sat		Sat 31/8/19	0 days											
101	CDE Setup		1 day	0 days	100%	Sat 31/8/19	Mon 9/9/19	Sat 31/8/19	Mon 9/9/19 Sat		Mon 9/9/19	0 days	_										
102	Clash Report Format	0 days	0 days	0 days	100%	Thu 12/9/19			Thu 12/9/19 Thu		Thu 12/9/19	0 days	1 day										
103	Monthly Report Format	0 days	0 days	0 days	100%	Thu 12/9/19	Thu 12/9/19	Thu 12/9/19	Thu 12/9/19 Thu	1 12/9/19	Thu 12/9/19	0 days	1 day										
.04	Quality Assurance Plan for BIM	0 days	0 days	0 days	100%	Mon 30/9/19	Mon 30/9/19	Mon 30/9/19	Mon 30/9/19 Mon	n 30/9/19	Mon 30/9/19	0 days	1 day										
105	BIM Training Plan	0 days	0 days	0 days	100%	Thu 10/10/19	Thu 10/10/19	Thu 10/10/19	Thu 10/10/19 Thu	10/10/19	Thu 10/10/19	0 days	1 day										
06	BIM Training Schedule for CIC Training	0 days	0 days	0 days	100%	Mon 30/9/19	Mon 30/9/19	Mon 30/9/19	Mon 30/9/19 Mon	n 30/9/19	Mon 30/9/19	0 days	1 day										
.07	Monthly BIM Progress Report	0 days	0 days	0 days	100%	Thu 16/5/19	Tue 31/12/19	Thu 16/5/19	Tue 31/12/19 Thu	16/5/19	Tue 31/12/19	0 days	1 day		,								
108	Monthly Clash Report	1 day	1 day	0 days	100%	Tue 31/3/20	Tue 31/3/20	Tue 31/3/20	Tue 31/3/20 Tue	31/3/20	Tue 31/3/20	0 days	1 day										
109	BIM Object Libraries	1 day	1 day	0 days	100%	Thu 12/9/19	Thu 12/9/19	Thu 12/9/19	Thu 12/9/19 Thu	12/9/19	Thu 12/9/19	0 days	1 day										
110	Trees Preservation and Removal Proposal (TPRP) for tress along promenade open space Submission	e 0 days	0 days	0 days	0%	Mon 2/11/20	Mon 2/11/20	NA	NA Sun	17/1/21	Sun 17/1/21	63 days	1 day			2/11							
11	Trees Preservation and Removal Proposal (TPRP) for tress along promenade open space Submission Comment & Approval by Relevant Government Authories	e 360 days	0 days	360 days	0%	Mon 2/11/20	Wed 27/10/2	1 NA	NA Sun	17/1/21	Tue 11/1/22	76 days	1 day	110									
12	Trees Preservation and Removal Proposal (TPRP) for tress along Sing Kai Submission	0 days	0 days	0 days	0%	Fri 31/7/20	Fri 31/7/20	NA	NA Wed	d 30/9/20	Wed 30/9/20	52 days	1 day			31/7							
113	Trees Preservation and Removal Proposal (TPRP) for tress along Sing Kai Road Submission Comment & Approval by Relevant Government Authories	360 days	0 days	360 days	0%	Fri 31/7/20	Sun 25/7/21	NA	NA Wed	d 30/9/20	Fri 24/9/21	61 days	1 day	112									
14	Temporary Traffic Management	478 days	447.84 days	30.16 days	0%	Thu 30/5/19	Fri 18/9/20	Thu 30/5/19	NA Thu	1 30/5/19	Fri 25/9/20	7 days				+							
115	Submit Traffic Engineering Consultant and TTM Team Leader (PS1.16(3))	14 days	14 days	0 days	100%	Thu 30/5/19	Wed 12/6/19	Thu 30/5/19	Wed 12/6/19 Thu	1 30/5/19	Wed 12/6/19	0 days	1 day	4									
16	Submit EP Mgt System Co-ordinator (PS Cl. 1.18N(2))	7 days	7 days	0 days	100%	Thu 30/5/19	Wed 5/6/19	Thu 30/5/19	Wed 5/6/19 Thu	1 30/5/19	Wed 5/6/19	0 days	1 day	4									
117	Approve of EP Co-ordinator by Project Manager (PS Cl. 1.18N(2))	14 days	14 days	0 days	100%	Thu 6/6/19	Wed 19/6/19	Thu 6/6/19	Wed 19/6/19 Thu	1 6/6/19	Wed 19/6/19	0 days	1 day	116									
18	Submit UU detection equipment for Supervisor approval (PS Cl. 1.25A(1))	7 days	7 days	0 days	100%	Thu 30/5/19	Wed 5/6/19	Thu 30/5/19	Wed 5/6/19 Thu	1 30/5/19	Wed 5/6/19	0 days	1 day	4									
19	Submit & obtain approval: site office's location and layout plan (PS Cl. 1.45(11)) (7d	47 days	47 days	0 days	100%	Thu 30/5/19	Fri 18/10/19	Thu 30/5/19	Fri 18/10/19 Thu	1 30/5/19	Fri 18/10/19	0 days	1 day	4									
.20	submission + 14d approval) Submit Site survey record (PS Cl.1.47(7))	34 days		0 days	100%	Thu 30/5/19	Tue 2/7/19	Thu 30/5/19	Tue 2/7/19 Thu		Tue 2/7/19		1 day	4									
21	Submit & obtain approval: fencing & hoarding plan (PS Cl. 1.48(10)	40 days		40 days	0%	Mon 10/8/20		NA			Fri 25/9/20		0.5 days	4									
22	Submit site facilities (PS Cl. 1.50S)	65 days		0 days	100%	Thu 30/5/19	Fri 2/8/19	Thu 30/5/19			Fri 2/8/19		0.5 days										
23	Submit security system (PS Cl. 1.53A(5))	36 days		0 days	100%	Thu 30/5/19	Thu 4/7/19		Thu 4/7/19 Thu		Thu 4/7/19		0.5 days	4									
24	Submit Interface Management Plan (PS Cl. 1.89(2))	47 days		0 days	100%	Thu 30/5/19			Mon 15/7/19 Thu		Mon 15/7/19		0.5 days	4	$\parallel \parallel \parallel$								
25	Submit Subcontractor Management Plan (ACC Cl. C5(1))	13 days		0 days	100%	Thu 30/5/19			Tue 11/6/19 Thu		Tue 11/6/19		0.5 days										
.25	Submit Temporary Drainage and Sewerage Management Plan (PS Cl. 1.24A(1))	174 days			100%	Thu 30/5/19			Tue 19/11/19 Thu		Tue 19/11/19			4									
				0 days										4									
127	Submit EM&A Manual (ER Part 8, Cl. 8.2)	6 days		0 days	100%	Thu 30/5/19	Tue 4/6/19		Tue 4/6/19 Thu		Tue 4/6/19	0 days		4									
128	Submit Proposal of selection of suppliers of Plant and Materials (ACC Cl. C11(1)  Submit Contractor's Management Team (ACC Cl. D1(3))	80 days 50 days		0 days	100%	Thu 30/5/19 Thu 30/5/19	Sat 17/8/19 Thu 18/7/19		Sat 17/8/19 Thu Thu 18/7/19 Thu		Sat 17/8/19 Thu 18/7/19	0 days 0 days		4									
							23,112)					,				<u>                                     </u>			10.5				
	ev.11 Prog with Progress Split	Summary Project Sumr	nary		Inactive Mi			Duration-o  Manual Su	nly mmary Rollup		Start-only Finish-only		]		ternal Milestor adline	ıe ♦ ♣		Critic Prog	cal Split ress				
ot 2 ہ	2-May-20	Inactive Task			Manual Ta			Manual Su			External Task	re			itical				ual Progress				



						Con	tract No. ED,	/2018/01 KT	D Project												
	Task Name	Duration Actual	Remaining	Physical %	Early Start		Actual Start			Late Finish		TRA	Predecessors	2020			2021	2022	2   61   51	2023	
75	Submit & endorse by PM and Statutory Authorities/Gov. Dept	Duration 50 days	Duration 50 days	Complete 0%	Sun 27/9/20	Sun 15/11/20	NA	NA	Thu 15/10/20	Thu 3/12/20	Slack 18 days	3 days	174	Q2 Q	Q4	Q1 Q2	Q3   Q4	Q1   Q2   Q	3 Q4 Q1	Q2   Q3	Q4   Q
76	Noise barrier fronting to 4B5 at Rd D3A & Bus Lay By (Section 5&9)	338 days 215.23 days		0%	Mon 4/11/19	Tue 6/10/20	Mon 4/11/19		Mon 4/11/19	Wed 7/10/20	1 day				<b></b>						
77	Prepare AIP Submission (Draft)	38 days 38 days	0 days	100%	Mon 4/11/19		9 Mon 4/11/19			Wed 11/12/19	0 days	2 days									
78	Submit & endorse by PM and Statutory Authorities/Gov. Dept	167 days 162 days	5 days	97%	Thu 12/12/19		Thu 12/12/19		Thu 12/12/19	Wed 27/5/20	1 day	2 days	177								
79	Prepare AIP and ICE certification (Final)	56 days 31 days	25 days	55%	Wed 22/4/20	Tue 16/6/20	Wed 22/4/20		Wed 22/4/20	Wed 17/6/20	1 day	0.5.1	178FF+21 days								
80	Prepare DDA Subm (Draft)	18 days 18 days	0 days	100%	Wed 1/4/20	Sat 18/4/20	Wed 1/4/20		Wed 1/4/20	Sat 18/4/20		0.5 days									
81	Submit & endorse by PM	55 days 35 days	20 days	64%	Sat 18/4/20	Thu 11/6/20	Sat 18/4/20	NA	Sat 18/4/20	Thu 6/8/20	56 days		180								
32	Submit & endorse by Statutory Authorities/Gov. Dept	50 days 0 days	50 days	0%	Wed 17/6/20	Wed 5/8/20	NA	NA	Thu 18/6/20	Thu 6/8/20	1 day		180,179								
33	Prepare DDA for and ICE certification (Final) (Original Contract Scope)	12 days 0 days	12 days	0%	Thu 6/8/20	Mon 17/8/20	NA	NA	Fri 7/8/20	Tue 18/8/20	1 day	1 days	181,182								
84	Submit & endorse by PM and Statutory Authorities/Gov. Dept	50 days 0 days	50 days	0%	Tue 18/8/20	Tue 6/10/20	NA	NA	Wed 19/8/20	Wed 7/10/20	1 day	1 days	183								
85	Decking for Underpass (Rd L14)	304 days 0 days	304 days	0%	Mon 20/7/20	Wed 19/5/21	NA	NA	Fri 31/7/20	Sun 30/5/21	11 days					+++++					
6	Structure Prepare AIP and ICE certification (Draft)	25 days 0 days	25 days	0%	Mon 20/7/20	Thu 13/8/20	NA	NA	Fri 31/7/20	Mon 24/8/20	11 days	3 days	44FF+12 days		4						
37	Submit & endorse by PM and Statutory Authorities/Gov. Dept	50 days 0 days	50 days	0%	Fri 14/8/20	Fri 2/10/20	NA	NA	Tue 25/8/20	Tue 13/10/20	11 days	0.5 days	186	-          i							
38	Prepare AIP and ICE certification (Final)	15 days 0 days	15 days	0%	Sat 3/10/20	Sat 17/10/20	NA	NA	Wed 14/10/20	Wed 28/10/20	11 days	1 day	186,187								
9	Prepare DDA and ICE certification (Draft)	89 days 0 days	89 days	0%	Sun 18/10/20	Thu 14/1/21	NA	NA	Thu 29/10/20	Mon 25/1/21	11 days	1 day	186,188								
10	Submit & endorse by PM and Statutory Authorities/Gov. Dept	50 days 0 days	50 days	0%	Fri 15/1/21	Fri 5/3/21	NA	NA	Tue 26/1/21	Tue 16/3/21		0.5 days									
1	Prepare DDA and ICE certification (Final)	25 days 0 days	25 days	0%	Sat 6/3/21	Tue 30/3/21		NA	Wed 17/3/21	Sat 10/4/21	11 days		190	$+\parallel\parallel\parallel$							
2	Submit & endorse by PM and Statutory Authorities/Gov. Dept	50 days 0 days	50 days	0%	Wed 31/3/21	Wed 19/5/21		NA	Sun 11/4/21	Sun 30/5/21			191	-							
				0%							11 days	1 uay	171 A								
3	Road D3 Bridge & Approach Ramps	439 days 358.08 days			Thu 30/5/19		Thu 30/5/19		Thu 30/5/19	Thu 8/10/20	59 days		4								
4	D3 Bridge Substructure	439 days 358.08 days	s 80.92 days	0%	Thu 30/5/19	Mon 10/8/20			Thu 30/5/19	Thu 8/10/20	59 days										
5	Prepare AIP and ICE certification (Draft)	66 days 66 days	0 days	100%	Thu 30/5/19	Sat 3/8/19	Thu 30/5/19	Sat 3/8/19	Thu 30/5/19	Sat 3/8/19	0 days	3 days	4								
6	Submit & endorse by PM and Statutory Authorities/Gov. Dept	15 days 15 days	0 days	100%	Mon 5/8/19	Mon 19/8/19	Mon 5/8/19	Mon 19/8/19	Mon 5/8/19	Mon 19/8/19	0 days	1 days	195,138								
7	Prepare AIP and ICE certification (Final)	30 days 30 days	0 days	100%	Mon 23/12/19	Tue 21/1/20	Mon 23/12/19	Tue 21/1/20	Mon 23/12/19	Tue 21/1/20	0 days	0 days	195,196								
8	Prepare DDA and ICE certification (Draft)	106 days 106 days	0 days	100%	Fri 19/7/19	Sun 17/11/19	Fri 19/7/19	Sun 17/11/19	Fri 19/7/19	Sun 17/11/19	0 days	5 days	195								
99	Submit & endorse by PM	17 days 17 days	0 days	100%	Wed 20/11/19	Fri 6/12/19	Wed 20/11/19	Fri 6/12/19	Wed 20/11/19	Fri 6/12/19	0 days	3 days	198								
0	Submit & endorse by Statutory Authorities/Gov. Dept	45 days 45 days	0 days	100%	Fri 24/1/20	Wed 18/3/20	Fri 24/1/20	Wed 18/3/20	Fri 24/1/20	Wed 18/3/20	0 days	1 days	198								
)1	Prepare DDA for and ICE certification (Include P02-BP2 Remedial Pile)	105 days 75 days	30 days	71%	Mon 9/3/20	Sun 21/6/20	Mon 9/3/20	NA	Mon 9/3/20	Wed 19/8/20	59 days	1 days	200								
)2	(Contractor Bear DDA Approval Risk)  Submit & endorse by PM and Statutory Authorities/Gov. Dept (Contractor Bear	50 days 0 days	50 days	0%	Mon 22/6/20	Mon 10/8/20	NA	NA	Thu 20/8/20	Thu 8/10/20	59 days	1 days	201	-	44						
03	DDA Approval Risk) D3 Bridge Superstructure	728 days 370.67 days	s 357.33 days	0%	Thu 30/5/19	Wed 26/5/21	Thu 30/5/19	NA	Thu 30/5/19	Wed 21/7/21	56 days										
)4	Prepare AIP and ICE certification (Draft)	101 days 101 days	0 days	100%	Thu 30/5/19	Sat 7/9/19	Thu 30/5/19		Thu 30/5/19	Sat 7/9/19	0 days	1 day									
05	Submit & endorse by PM and Statutory Authorities/Gov. Dept	19 days 19 days	0 days	100%	Mon 9/9/19	Fri 27/9/19		Fri 27/9/19		Fri 27/9/19			204								
)6	Prepare AIP and ICE certification (Final)	135 days 135 days	0 days	100%	Wed 20/11/19			7 Thu 2/4/20		Thu 2/4/20			205								
)7	Prepare DDA and ICE certification (Draft)	222 days 222 days	0 days	100%	Fri 19/7/19	Tue 25/2/20		Tue 25/2/20		Tue 25/2/20	0 days	3 days	205								
8	Submit & endorse by PM	23 days 23 days	0 days	100%	Wed 26/2/20	Thu 19/3/20	Wed 26/2/20	Thu 19/3/20	Wed 26/2/20	Thu 19/3/20	0 days	2 days	207								
)9	Submit & endorse by Statutory Authorities/Gov. Dept	50 days 0 days	50 days	0%	Mon 29/6/20	Mon 17/8/20	NA	NA	Thu 16/7/20	Thu 3/9/20	17 days	2 days	207,206FF+12	d							
10	Prepare DDA for and ICE certification (Final)	21 days 0 days	21 days	0%	Tue 18/8/20	Mon 7/9/20	NA	NA	Fri 4/9/20	Thu 24/9/20	17 days	1 days	208,206,209								
1	Submit & endorse by PM and Statutory Authorities/Gov. Dept	50 days 0 days	50 days	0%	Tue 8/9/20	Tue 27/10/20	NA	NA	Fri 25/9/20	Fri 13/11/20	17 days	2 days	210	1		$\  \  \ $					
12	Prepare AIP (E&M works) and ICE certification (Draft)	32 days 0 days	32 days	0%	Thu 2/7/20	Sun 2/8/20	NA	NA	Thu 27/8/20	Sun 27/9/20	56 days	2 days		1							
13	Submit & endorse by PM and Statutory Authorities/Gov. Dept	62 days 0 days	62 days	0%	Mon 3/8/20	Sat 3/10/20	NA	NA	Mon 28/9/20	Sat 28/11/20	56 days	2 days	212								
14	Prepare AIP (E&M works) and ICE certification (Final)	32 days 0 days	32 days	0%	Sun 4/10/20	Wed 4/11/20	NA	NA	Sun 29/11/20	Wed 30/12/20	56 days	2 days	213	$+\parallel \parallel \parallel$							
15	Submit & endorse by PM and Statutory Authorities/Gov. Dept	62 days 0 days	62 days	0%	Thu 5/11/20	Tue 5/1/21		NA	Thu 31/12/20	Tue 2/3/21	56 days		214	$+\parallel\parallel\parallel$							
16	Prepare DDA (E&M works) and ICE certification (Draft)	32 days 0 days	32 days	0%	Sat 5/12/20		NA	NA	Sat 30/1/21	Tue 2/3/21	56 days		215FF	$+\parallel\parallel\parallel$							
				0%																	
17	Submit & endorse by PM and Statutory Authorities/Gov. Dept	62 days 0 days	62 days		Wed 6/1/21	Mon 8/3/21		NA	Wed 3/3/21	Mon 3/5/21	56 days		216								
18	Prepare DDA (E&M works) and ICE certification (Final)	17 days 0 days	17 days	0%	Tue 9/3/21	Thu 25/3/21		NA	Tue 4/5/21	Thu 20/5/21	56 days		217								
19	Submit & endorse by PM and Statutory Authorities/Gov. Dept	62 days 0 days	62 days	0%	Fri 26/3/21	Wed 26/5/21	NA	NA	Fri 21/5/21	Wed 21/7/21	56 days	2 days	218								
و. Þ	Lev.11 Prog with Progress	Summary		Inactive M	lilestone $\Diamond$		Duration-or	nly		Start-only		С	Ex	ternal Milestor			Critical Sp	lit			
	22-May-20	Project Summary		Inactive Su				mmary Rollup		Finish-only		3		adline	<u>+</u>		Progress	_			
	Milestone ◆	Inactive Task		Manual Ta	ISK		Manual Su	mmary <b>F</b>		External Tasl	S		Cri	tical			Manual Pro	ogress			

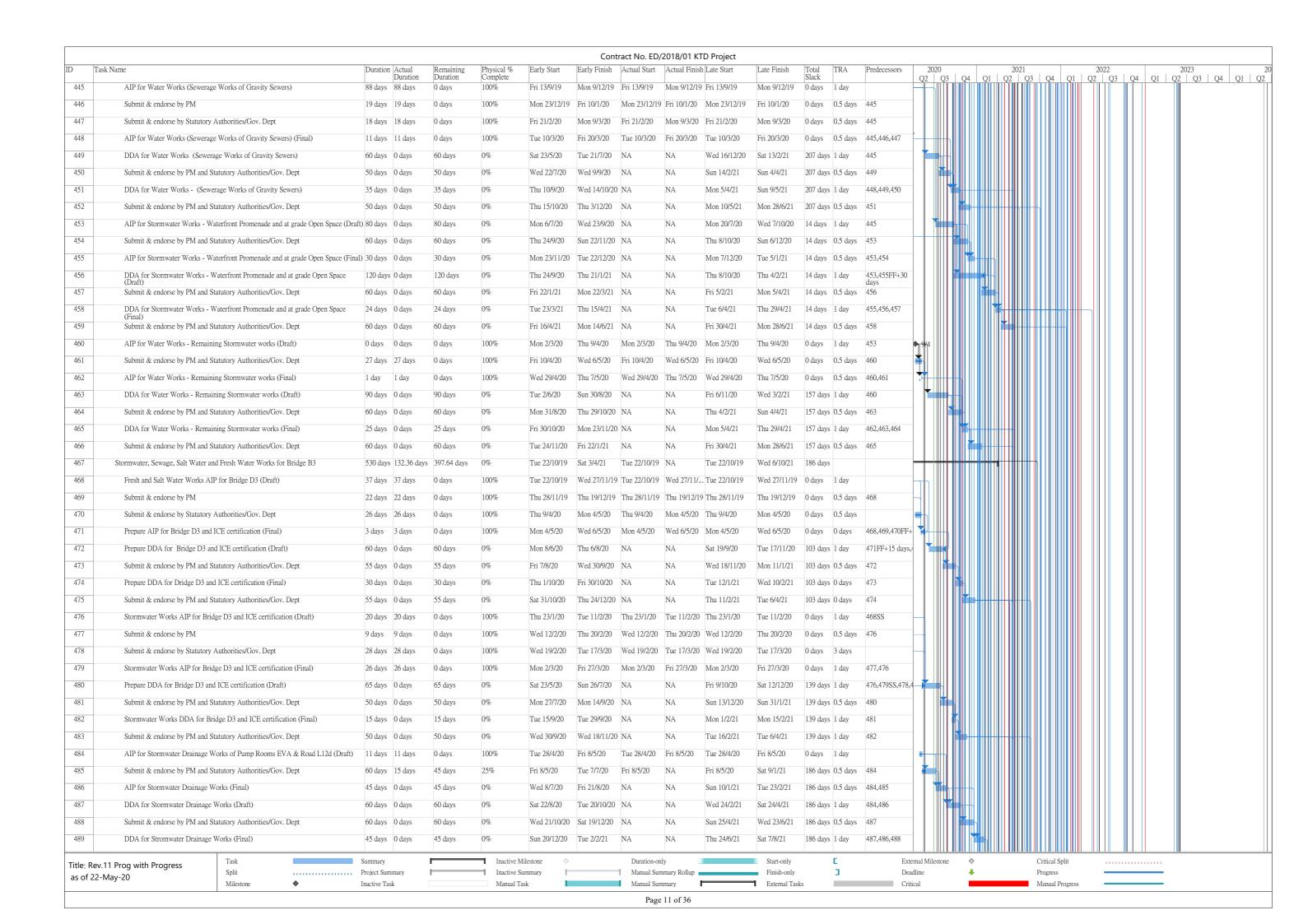
						Con	tract No. ED,	/2018/01 KT	TD Project																
-	Task Name	Duration Actual Duration	Remaining Duration	Physical % Complete	Early Start	Early Finish	Actual Start	Actual Finis	h Late Start	Late Finish	Total Slack	TRA	Predecessors	2020 Q2		M 0	2	021	04	21   2	2022	04 01	2023 Q2   Q3	04	
20	D3 North Approach Ramp (Structure)	398 days 348.95 days		0%	Mon 3/6/19	Sat 4/7/20	Mon 3/6/19	NA	Mon 3/6/19	Thu 8/10/20	96 days			QZ	δυ (	24   Q!	Q2	T Q3	<u>V</u> 4 (	Z1   Q.	2   Q3	V4 VI	Q2   Q3	Q4   (	<u>11</u>
21	Prepare AIP and ICE certification (Draft))	51 days 51 days	0 days	100%	Mon 3/6/19	Tue 23/7/19	Mon 3/6/19	Tue 23/7/19	Mon 3/6/19	Tue 23/7/19	0 days	3 days	4												
22	Submit & endorse by PM and Statutory Authorities/Gov. Dept	100 days 100 days	0 days	100%	Thu 25/7/19	Fri 1/11/19	Thu 25/7/19	Fri 1/11/19	Thu 25/7/19	Fri 1/11/19	0 days	1 days	221												
23	Prepare AIP and ICE certification (Final)	14 days 14 days	0 days	100%	Tue 6/8/19	Thu 19/12/19	Tue 6/8/19	Thu 19/12/19	9 Tue 6/8/19	Thu 19/12/19	0 days	0 days	221,222												
224	Prepare DDA (Draft) with ICE certification	66 days 66 days	0 days	100%	Fri 19/7/19	Thu 20/2/20	Fri 19/7/19	Thu 20/2/20	Fri 19/7/19	Thu 20/2/20	0 days	5 days	221,223FF												
225	Submit & endorse by PM/Statutory Authorities/Gov. Dept	31 days 31 days	0 days	100%	Mon 20/1/20	Mon 23/3/20	Mon 20/1/20	Mon 23/3/20	Mon 20/1/20	Mon 23/3/20	0 days	3 days	224												
26	Prepare DDA for and ICE certification (Final)	45 days 45 days	0 days	100%	Wed 1/4/20	Fri 15/5/20	Wed 1/4/20	Fri 15/5/20	Wed 1/4/20	Fri 15/5/20	0 days		225												
27	Submit & endorse by PM/Statutory Authorities/Gov. Dept	50 days 6 days	44 days	12%	Sat 16/5/20	Sat 4/7/20	Sat 16/5/20	NA	Sat 16/5/20	Thu 8/10/20	96 days	0.5 days	226			+									
28	D3 North Approach Ramp (E&M Works)	329 days 0 days	329 days	0%	Thu 2/7/20	Wed 26/5/21	NA	NA	Fri 27/11/20	Thu 21/10/21	148 days														
29	Prepare AIP (E&M works) and ICE certification (Draft)	32 days 0 days	32 days	0%	Thu 2/7/20	Sun 2/8/20	NA	NA	Fri 27/11/20	Mon 28/12/20	148 days	2 days			h III										
30	Submit & endorse by PM and Statutory Authorities/Gov. Dept	62 days 0 days	62 days	0%	Mon 3/8/20	Sat 3/10/20	NA	NA	Tue 29/12/20	Sun 28/2/21	148 days	2 days	229	-											
31	Prepare AIP (E&M works) and ICE certification (Final)	32 days 0 days	32 days	0%	Sun 4/10/20	Wed 4/11/20	NA	NA	Mon 1/3/21	Thu 1/4/21	148 days	2 days	230	-											
32	Submit & endorse by PM and Statutory Authorities/Gov. Dept	62 days 0 days	62 days	0%	Thu 5/11/20	Tue 5/1/21	NA	NA	Fri 2/4/21	Wed 2/6/21	148 days	2 days	231	-											
33	Prepare DDA (E&M works) and ICE certification (Draft)	32 days 0 days	32 days	0%	Sat 5/12/20	Tue 5/1/21	NA	NA	Sun 2/5/21	Wed 2/6/21	148 days	2 days	232FF	-											
34	Submit & endorse by PM and Statutory Authorities/Gov. Dept	62 days 0 days	62 days	0%	Wed 6/1/21	Mon 8/3/21	NA	NA	Thu 3/6/21	Tue 3/8/21	148 days	2 days	233	-			<b>.</b>								
35	Prepare DDA (E&M works) and ICE certification (Final)	17 days 0 days	17 days	0%	Tue 9/3/21	Thu 25/3/21		NA	Wed 4/8/21	Fri 20/8/21	148 days		234	-											
36	Submit & endorse by PM and Statutory Authorities/Gov. Dept	62 days 0 days	62 days	0%	Fri 26/3/21	Wed 26/5/21		NA	Sat 21/8/21	Thu 21/10/21	148 days		235	-											
37	D3 South Approach Ramp	507 days 322.64 days		0%	Thu 30/5/19		Thu 30/5/19		Thu 30/5/19	Tue 16/2/21	122 days	2 411) 5													
38	Prepare AIP and ICE certification (Draft)	96 days 96 days	0 days	100%	Thu 30/5/19	Mon 2/9/19	Thu 30/5/19			Mon 2/9/19	0 days	3 days													
39													220												
	Submit & endorse by PM and Statutory Authorities/Gov. Dept	35 days 35 days	0 days	100%	Wed 25/9/19		Wed 25/9/19			Tue 29/10/19	1	1 day	238	_											
10	Prepare AIP Submission (Final)	76 days 76 days	0 days	100%	Fri 7/2/20		Fri 7/2/20	Mon 4/5/20		Mon 4/5/20		1 day	238,239												
41	Prepare DDA and ICE certification (Draft)	50 days 50 days	0 days	100%	Wed 1/4/20		Wed 1/4/20	Wed 20/5/20		Wed 20/5/20	0 days	-	240FF+15 days												
242	Submit & endorse by PM and Statutory Authorities/Gov. Dept	60 days 2 days	58 days	3%	Thu 21/5/20		Thu 21/5/20		Thu 21/5/20	Wed 18/11/20	-		238,241												
43	Prepare DDA for and ICE certification (Final)	30 days 0 days	30 days	0%	Mon 20/7/20	Tue 18/8/20		NA	Thu 19/11/20	Fri 18/12/20	122 days		242,240FF+12	d											
44	Submit & endorse by PM and Statutory Authorities/Gov. Dept	60 days 0 days	60 days	0%	Wed 19/8/20	Sat 17/10/20		NA	Sat 19/12/20	Tue 16/2/21	122 days	1 day	243												
45	D3 South Approach Ramp (E&M Works)	392 days 0 days	392 days	0%	Sat 23/5/20		NA	NA	Wed 18/11/20		179 days														
46	Prepare AIP (E&M works) and ICE certification (Draft)	31 days 0 days	31 days	0%	Sat 23/5/20	Mon 22/6/20		NA	Wed 18/11/20		179 days	-													
47	Submit & endorse by PM and Statutory Authorities/Gov. Dept	76 days 0 days	76 days	0%	Tue 23/6/20	Sun 6/9/20		NA	Sat 19/12/20	Thu 4/3/21	179 days		246												
48	Prepare AIP (E&M works) and ICE certification (Final)	31 days 0 days	31 days	0%	Mon 7/9/20	Wed 7/10/20	NA	NA	Fri 5/3/21	Sun 4/4/21	179 days		247												
49	Submit & endorse by PM and Statutory Authorities/Gov. Dept	76 days 0 days	76 days	0%	Thu 8/10/20	Tue 22/12/20	NA	NA	Mon 5/4/21	Sat 19/6/21	179 days	1 day	248												
50	Prepare DDA (E&M works) and ICE certification (Draft)	31 days 0 days	31 days	0%	Sun 22/11/20	Tue 22/12/20	NA	NA	Thu 20/5/21	Sat 19/6/21	179 days	1 day	249FF												
51	Submit & endorse by PM and Statutory Authorities/Gov. Dept	76 days 0 days	76 days	0%	Wed 23/12/20	Mon 8/3/21	NA	NA	Sun 20/6/21	Fri 3/9/21	179 days	1 day	250												
52	Prepare DDA (E&M works) and ICE certification (Final)	26 days 0 days	26 days	0%	Tue 9/3/21	Sat 3/4/21	NA	NA	Sat 4/9/21	Wed 29/9/21	179 days	1 day	251												
53	Submit & endorse by PM and Statutory Authorities/Gov. Dept	76 days 0 days	76 days	0%	Sun 4/4/21	Fri 18/6/21	NA	NA	Thu 30/9/21	Tue 14/12/21	179 days	1 day	252						+						
54	Road D3 Underpass and Depressed Road	823 days 236.99 days	586.01 days	0%	Thu 30/5/19	Sun 29/8/21	Thu 30/5/19	NA	Thu 30/5/19	Wed 11/1/23	500 days							<del></del>							
55	Underpass (Structure)	486 days 320.41 days	165.59 days	0%	Thu 30/5/19	Sat 26/9/20	Thu 30/5/19	NA	Thu 30/5/19	Wed 2/12/20	67 days														
56	Prepare AIP and ICE certification (Draft)	96 days 96 days	0 days	100%	Thu 30/5/19	Mon 2/9/19	Thu 30/5/19	Mon 2/9/19	Thu 30/5/19	Mon 2/9/19	0 days	3 days	4												
57	Submit & endorse by PM and Statutory Authorities/Gov. Dept	17 days 17 days	0 days	100%	Tue 3/9/19	Thu 19/9/19	Tue 3/9/19	Thu 19/9/19	Tue 3/9/19	Thu 19/9/19	0 days	1 days	256												
58	Prepare AIP and ICE certification (Final)	84 days 84 days	0 days	100%	Tue 14/1/20	Mon 6/4/20	Tue 14/1/20	Mon 6/4/20	Tue 14/1/20	Mon 6/4/20	0 days	2 days	256,257		$\ \ $										
59	Prepare DDA (Draft) Preparation	156 days 156 days	0 days	100%	Tue 3/9/19	Wed 5/2/20	Tue 3/9/19	Wed 5/2/20	Tue 3/9/19	Wed 5/2/20	0 days	3 days	256	1											
60	DDA (Draft) Submit & endorse by PM & Statutory Authorities/Gov. Dept	169 days 34 days	135 days	20%	Thu 6/2/20	Thu 23/7/20	Thu 6/2/20	NA	Thu 6/2/20	Mon 28/9/20	67 days	0.5 days	259												
61	Prepare DDA for and ICE certification (Final)	15 days 0 days	15 days	0%	Fri 24/7/20	Fri 7/8/20	NA	NA	Tue 29/9/20	Tue 13/10/20	67 days	1 day	260,258FF+21	d											
62	Submit & endorse by PM and Statutory Authorities/Gov. Dept	50 days 0 days	50 days	0%	Sat 8/8/20	Sat 26/9/20	NA	NA	Wed 14/10/20	Wed 2/12/20	67 days	1 day	261	$+\parallel\parallel\parallel$											
263	Underpass (E&M Works)	392 days 0 days	392 days	0%	Mon 3/8/20	Sun 29/8/21	NA	NA	Tue 10/11/20	Wed 11/1/23	99 days			$+\parallel\parallel\parallel$				<del>                                      </del>							
264	Prepare AIP (E&M works) and ICE certification (Draft)	32 days 0 days	32 days	0%	Mon 5/10/20	Thu 5/11/20	NA	NA	Tue 10/11/20	Fri 11/12/20	36 days	2 days		$+\parallel\parallel\parallel$											
														1				<u>                                      </u>	<u> </u>						_
	ev.11 Prog with Progress  2 May 20 Split	Summary Project Summary		Inactive M			Duration-or  Manual Sur	nly mmary Rollup <b>•</b>		Start-only Finish-only		]		emal Milesto adline	one	<b>+</b>			tical Split gress						
of 2	2-May-20 Milestone	Inactive Task		Manual Ta			Manual Sur			External Tas				tical					nual Prog						

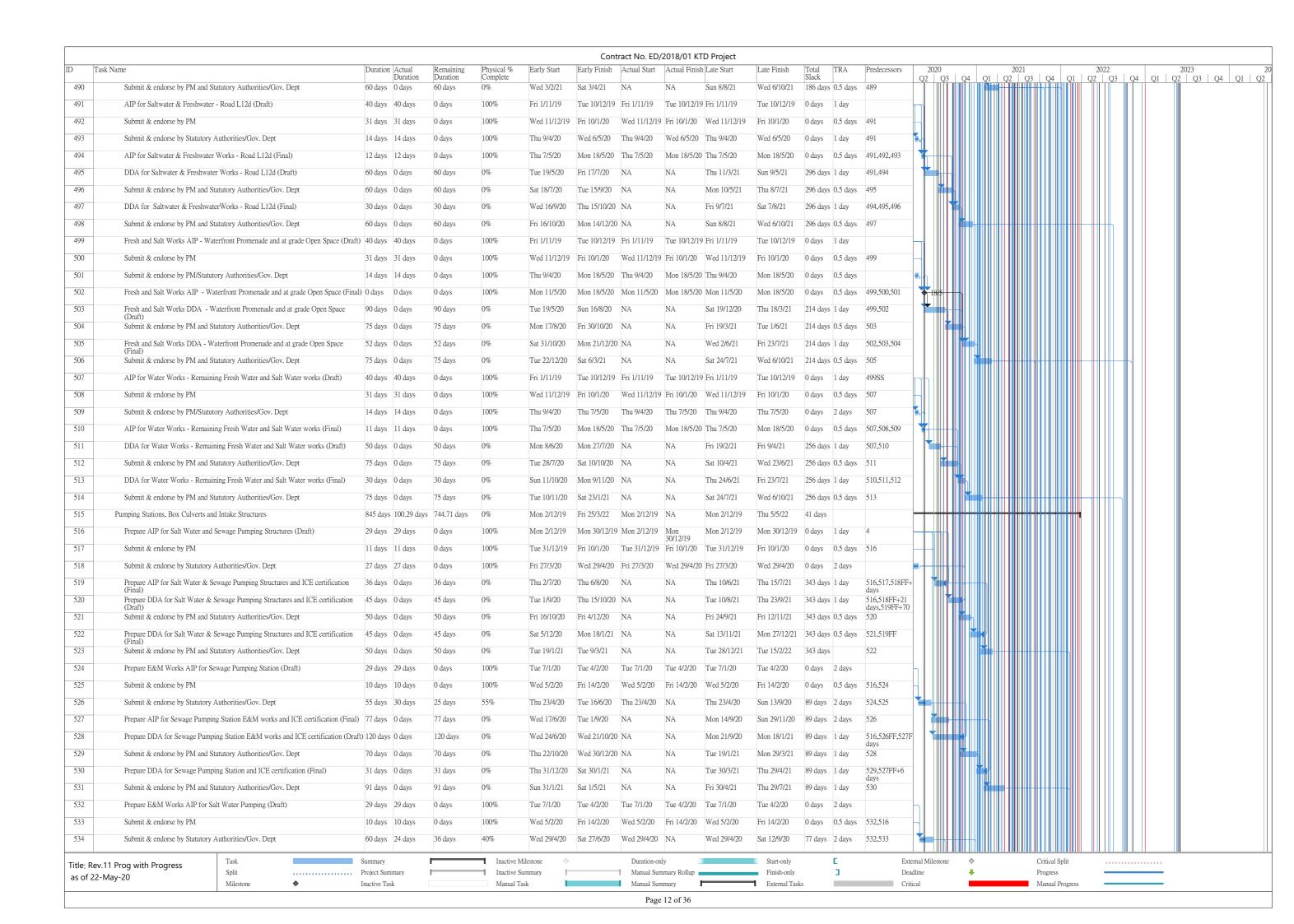
								TD Project														
ask Name	Duration Actual	Remaining Duration	Physical %	Early Start	Early Finish	Actual Start	Actual Finis	h Late Start	Late Finish		TRA	Predecessors	2020	2   04	01   6	2021	04 03	2022	02   04	20	)23	M C
Submit & endorse by PM and Statutory Authorities/Gov. Dept	62 days 0 days	62 days	0%	Fri 6/11/20	Wed 6/1/21	NA	NA	Sat 12/12/20	Thu 11/2/21		2 days	264	Q2   Q1	5 Q4	Q1   C	22   Q3	Q4	Q2   C	25 Q4	QI   Q2	Q3   Q4	4   Q
Prepare AIP (E&M works) and ICE certification (Final)	32 days 0 days	32 days	0%	Thu 7/1/21	Sun 7/2/21	NA	NA	Fri 12/2/21	Mon 15/3/21	36 days	2 days	265										
			0%		Sat 10/4/21	NA	NA	Tue 16/3/21	Sun 16/5/21			266			<b></b>							
Prepare DDA (E&M works) and ICE certification (Final)	17 days 0 days	17 days	0%	Sat 12/6/21	Mon 28/6/21	NA	NA	Sun 18///21	Tue 3/8/21	36 days	2 days	269										
Submit & endorse by PM and Statutory Authorities/Gov. Dept	62 days 0 days	62 days	0%	Tue 29/6/21	Sun 29/8/21	NA	NA	Wed 4/8/21	Mon 4/10/21	36 days	2 days	270										
Prepare AIP (E&M works) and Architectural Finishes of of Underpass (Road L14) and ICE certification (Draft)	31 days 0 days	31 days	0%	Mon 3/8/20	Wed 2/9/20	NA	NA	Thu 31/3/22	Sat 30/4/22	605 days	1 day			Ь								
Submit & endorse by PM and Statutory Authorities/Gov. Dept	51 days 0 days	51 days	0%	Thu 3/9/20	Fri 23/10/20	NA	NA	Sun 1/5/22	Mon 20/6/22	605 days	1 day	272										
Prepare AIP (E&M works ) and Architectural Finishes of of Underpass (Road	14 days 0 days	14 days	0%	Sat 24/10/20	Fri 6/11/20	NA	NA	Tue 21/6/22	Mon 4/7/22	605 days	2 days	273										
Submit & endorse by PM and Statutory Authorities/Gov. Dept	74 days 0 days	74 days	0%	Sat 7/11/20	Tue 19/1/21	NA	NA	Tue 5/7/22	Fri 16/9/22	605 days	1 day	274			_							
Prepare DDA (E&M works) and Architectural Finishes of of Underpass (Road	31 days 0 days	31 days	0%	Sun 20/12/20	Tue 19/1/21	NA	NA	Wed 17/8/22	Fri 16/9/22	605 days	1 day	275FF										
· · · · · · · · · · · · · · · · · · ·	51 days 0 days		0%	Wed 20/1/21	Thu 11/3/21	NA	NA	Sat 17/9/22	Sun 6/11/22			276										
L14) and ICE certification (Final)																						
· · · · · · · · · · · · · · · · · · ·										-	-	278										
E&M Work for Pump House of Underpass D3	364 days 83.71 days	280.29 days	0%	Mon 24/2/20	Sun 21/2/21	Mon 24/2/20	NA	Mon 24/2/20	Wed 18/8/21	178 days												
Prepare AIP (E&M works) Submission (Draft)	11 days 11 days	0 days	0%	Mon 24/2/20	Thu 5/3/20	Mon 24/2/20	Thu 5/3/20	Mon 24/2/20	Thu 5/3/20	0 days	2 days											
Submit & endorse by PM and Statutory Authorities/Gov. Dept	160 days 78 days	82 days	49%	Fri 6/3/20	Wed 12/8/20	Fri 6/3/20	NA	Fri 6/3/20	Sat 15/8/20	3 days	2 days	281										
Prepare AIP (E&M works) and ICE certification (Final)	21 days 0 days	21 days	0%	Thu 13/8/20	Wed 2/9/20	NA	NA	Sun 16/8/20	Sat 5/9/20	3 days	2 days	282,44FF+12 da										
Submit & endorse by PM and Statutory Authorities/Gov. Dept	50 days 0 days	50 days	0%	Thu 3/9/20	Thu 22/10/20	NA	NA	Sun 6/9/20	Sun 25/10/20	3 days	2 days	283										
Prepare DDA (E&M works) and ICE certification (Draft)	30 days 0 days	30 days	0%	Wed 30/9/20	Thu 29/10/20	NA	NA	Sat 3/10/20	Sun 1/11/20	3 days	2 days	284FF+7 days										
Submit & endorse by PM and Statutory Authorities/Gov. Dept	50 days 0 days	50 days	0%	Fri 30/10/20	Fri 18/12/20	NA	NA	Mon 2/11/20	Mon 21/12/20	3 days	2 days	285										
Prepare DDA (E&M works) and ICE certification (Final)	15 days 0 days	15 days	0%	Sat 19/12/20	Sat 2/1/21	NA	NA	Tue 22/12/20	Tue 5/1/21	3 days	2 days	286										
Submit & endorse by PM and Statutory Authorities/Gov. Dept	50 days 0 days	50 days	0%	Sun 3/1/21	Sun 21/2/21	NA	NA	Wed 30/6/21	Wed 18/8/21	178 days	2 days	287										
												207										
<u> </u>												4										
												4										
	33 days 33 days	0 days	100%						Wed 4/9/19	0 days	2 days	290										
Prepare AIP and ICE certification (Final)	44 days 44 days	0 days	100%	Mon 9/12/19	Tue 21/1/20	Mon 9/12/19	Tue 21/1/20	Mon 9/12/19	Tue 21/1/20	0 days	0 days	291										
Prepare DDA and ICE certification (Draft)	57 days 57 days	0 days	100%	Tue 24/9/19	Tue 19/11/19	Tue 24/9/19	Tue 19/11/1	9 Tue 24/9/19	Tue 19/11/19	0 days	5 days	290										
Submit & endorse by PM	17 days 17 days	0 days	100%	Tue 19/11/19	Thu 5/12/19	Tue 19/11/19	Thu 5/12/19	Tue 19/11/19	Thu 5/12/19	0 days	1 day	293										
Submit & endorse by Statutory Authorities/Gov. Dept	20 days 20 days	0 days	100%	Wed 19/2/20	Mon 9/3/20	Wed 19/2/20	Mon 9/3/20	Wed 19/2/20	Mon 9/3/20	0 days	1 day	293										
Prepare DDA for and ICE certification (Final)	30 days 0 days	30 days	0%	Sat 23/5/20	Sun 21/6/20	NA	NA	Sat 11/2/23	Sun 12/3/23	994 days	3 days	294,292FF,295										
Submit & endorse by PM and Statutory Authorities/Gov. Dept	60 days 0 days	60 days	0%	Mon 22/6/20	Thu 20/8/20	NA	NA	Mon 13/3/23	Thu 11/5/23	994 days	5 days	296										
Depressed Road (North) F&M Works		322 days	0%	Mon 21/9/20	Sun 8/8/21	NA	NA	Tue 17/11/20	Mon 4/10/21													
											1 day											
												200		Ţ								
		31 days										300										
Submit & endorse by PM and Statutory Authorities/Gov. Dept	61 days 0 days	61 days	0%	Fri 22/1/21			NA	Sat 20/3/21	Wed 19/5/21			301										
Prepare DDA (E&M works) and ICE certification (Draft)	31 days 0 days	31 days	0%	Sun 21/2/21	Tue 23/3/21	NA	NA	Mon 19/4/21	Wed 19/5/21	57 days	1 day	302FF										
Submit & endorse by PM and Statutory Authorities/Gov. Dept	61 days 0 days	61 days	0%	Wed 24/3/21	Sun 23/5/21	NA	NA	Thu 20/5/21	Mon 19/7/21	57 days	1 day	303				<u> </u>						
Prepare DDA (E&M works) and ICE certification (Final)	16 days 0 days	16 days	0%	Mon 24/5/21	Tue 8/6/21	NA	NA	Tue 20/7/21	Wed 4/8/21	57 days	1 day	304										
Submit & endorse by PM and Statutory Authorities/Gov. Dept	61 days 0 days	61 days	0%	Wed 9/6/21	Sun 8/8/21	NA	NA	Thu 5/8/21	Mon 4/10/21	57 days	1 day	305										
Depressed Road (South) and Substructure of Elevated Landscape Deck	463 days 333.16 days	s 129.84 days	0%	Mon 10/6/19	Mon 14/9/20	Mon 10/6/19	NA	Mon 10/6/19	Thu 15/10/20	31 days				$\mathbf{H}$								
			100%					Mon 10/6/19			1 days							<u> </u>				
												308										
Saonin & Graoise of Fri and Statutory Authorntes/OUV. Dept	or unys or unys	o unys	100 /0	Jan 3/0/17	1 uc 22/10/19	Dat 3/0/17	1 uc 22/10/1	) Dat 3/0/17	1 uc 22/10/19	o uays	2 days	500										
7.11 Prog with Progress	-								Start-only		E .			e <	>							
-May-20 Split	Project Summary		Inactive Su  Manual Ta			Manual Sur	mmary Rollup	_	Finish-only  External Tas		1	Dead Criti	aime	4	•		Progress	_		_		
	Submit & endorse by PM and Statutory Authorities/Gov. Dept Prepare AIP (E&M works) and ICE certification (Final) Submit & endorse by PM and Statutory Authorities/Gov. Dept Prepare DDA (E&M works) and ICE certification (Draft) Submit & endorse by PM and Statutory Authorities/Gov. Dept Prepare DDA (E&M works) and ICE certification (Final) Submit & endorse by PM and Statutory Authorities/Gov. Dept Prepare AIP (E&M works) and Architectural Finishes of of Underpass (Road L14) and ICE certification (Draft) Submit & endorse by PM and Statutory Authorities/Gov. Dept Prepare AIP (E&M works) and Architectural Finishes of of Underpass (Road L14) and ICE certification (Draft) Submit & endorse by PM and Statutory Authorities/Gov. Dept Prepare DDA (E&M works) and Architectural Finishes of of Underpass (Road L14) and ICE certification (Draft) Submit & endorse by PM and Statutory Authorities/Gov. Dept Prepare DDA (E&M works) and Architectural Finishes of of Underpass (Road L14) and ICE certification (Final) Submit & endorse by PM and Statutory Authorities/Gov. Dept Prepare AIP (E&M works) Submission (Draft) Submit & endorse by PM and Statutory Authorities/Gov. Dept Prepare AIP (E&M works) Submission (Draft) Submit & endorse by PM and Statutory Authorities/Gov. Dept Prepare AIP (E&M works) and ICE certification (Final) Submit & endorse by PM and Statutory Authorities/Gov. Dept Prepare DDA (E&M works) and ICE certification (Final) Submit & endorse by PM and Statutory Authorities/Gov. Dept Prepare DDA (E&M works) and ICE certification (Final) Submit & endorse by PM and Statutory Authorities/Gov. Dept Prepare DDA (E&M works) and ICE certification (Final) Prepare DDA (E&M works) and ICE certification (Final) Submit & endorse by PM and Statutory Authorities/Gov. Dept Prepare DDA (E&M works) and ICE certification (Final) Submit & endorse by PM and Statutory Authorities/Gov. Dept Prepare DDA (E&M works) and ICE certification (Final) Submit & endorse by PM and Statutory Authorities/Gov. Dept Prepare DDA (E&M works) and ICE certificatio	Submit & endonce by PM and Statutory Authorities/Gov. Dept	Submit & endorse by PM and Statatory Authorities/Gov. Dept   62 days   0 days   22 days	Submit & enclare by PM and Statutery Authentities/Gov. Dept   62 days   0.days   62 days   0.0	Seberal R. endome by PM and Settinery Authorities/Rev. Dept	Submit & costone by PM and Summory Authorises/Son, Dept	Selecti & encores by 150 and Statistics Authoritics/Cor. Dept   24 days   26 days   26 days   150 mil 1702   50	Schemic & makere by PM and Security Authorized Size. Detay   0.5 app.   0.6 app.   0.6 app.   0.6 pp.   0.6 pp.	Second Accesses for Plant and Secondary Assertation (Section 1997)   Colors   Propert APP CASA Missers and Information Section   Colors   Colors   Propert APP CASA Missers and Information Section   Colors   Colors   Colors   Propert CASA CASA Missers and Information Section   Colors   Col	Schemic Andrew by FM and framework (International Conference on Confer	Semina Semina Control   Private   Private   Semina Semina Control   Private   Private   Semina Semina Control   Private   Semina Semina Control   Private   Private   Semina Semina Semina Control   Private   Private   Semina	Second   Company   Compa	Section   Sect	Part   Part	Profess   Profess   Section   Profess   Prof	Column   C	Property   Control of the Control	Property   Property	Part	Part   Part	Part   Part	Process

						Con	tract No. ED/	/2018/01 K	TD Project																
Т	ask Name	Duration Actual Duration	Remaining Duration	Physical % Complete	Early Start	Early Finish	Actual Start	Actual Finis	h Late Start	Late Finish	Total Slack	RA	Predecessors	2020 O2 O3	3   04	O1	20	)21	04	01   0	2022	O4 C	$\frac{2}{01 + 02}$	2023   Q3   Q	M (
0	Prepare AIP and ICE (certification (Final)	270 days 222 days	48 days	82%	Tue 15/10/19	Fri 10/7/20	Tue 15/10/19	NA	Tue 15/10/19	Mon 10/8/20	31 days (	days	309,44FF+12 d		, Q4	I QI			Z+	Ži Š	<u></u>	¥+ V	21   QZ	1 K2   C	<u> </u>
	Prepare DDA certification (Draft)	27 days 27 days	0 days	100%	Mon 10/2/20	Sat 7/3/20	Mon 10/2/20	Sat 7/3/20	Mon 10/2/20	Sat 7/3/20	0 days 5	days	308	$+ \  \  \ $											
2	Submit & endorse by PM and Statutory Authorities/Gov. Dept	75 days 24 days	51 days	32%	Wed 29/4/20	Thu 16/7/20	Wed 29/4/20	NA	Wed 29/4/20	Sun 16/8/20	31 days 1	days	311,310FF+6												
3	Prepare DDA for and ICE certification (Final)	10 days 0 days	10 days	0%	Fri 17/7/20	Sun 26/7/20	NA	NA	Mon 17/8/20	Wed 26/8/20	31 days (	.5 days	days 312												
4	Submit & endorse by PM and Statutory Authorities/Gov. Dept	50 days 0 days	50 days	0%	Mon 27/7/20	Mon 14/9/20	NA	NA	Thu 27/8/20	Thu 15/10/20	31 days (	).5 days	313	-					$\downarrow \downarrow \downarrow \downarrow \downarrow \downarrow$						
5	South Depressed Road (E&M Works)	382 days 0 days	382 days	0%	Mon 7/9/20	Thu 23/9/21		NA	Fri 18/9/20	Mon 4/10/21	11 days			-											
6	,	31 days 0 days	31 days	0%	Mon 7/9/20	Wed 7/10/20		NA	Fri 18/9/20	Sun 18/10/20	11 days 1	day													
7	Submit & endorse by PM and Statutory Authorities/Gov. Dept			0%	Thu 8/10/20	Tue 22/12/20		NA	Mon 19/10/20	Sat 2/1/21		_	216	_	ŢŢ										
		76 days 0 days	76 days								11 days 1		316												
8		31 days 0 days	31 days	0%	Wed 23/12/20		NA	NA	Sun 3/1/21	Tue 2/2/21	11 days 1		317												
9	Submit & endorse by PM and Statutory Authorities/Gov. Dept	76 days 0 days	76 days	0%	Sat 23/1/21		NA	NA	Wed 3/2/21	Mon 19/4/21	11 days 1		318												
)	Prepare DDA (E&M works) and ICE certification (Draft)	31 days 0 days	31 days	0%	Tue 9/3/21	Thu 8/4/21	NA	NA	Sat 20/3/21	Mon 19/4/21	11 days 1	day	319FF												
l	Submit & endorse by PM and Statutory Authorities/Gov. Dept	76 days 0 days	76 days	0%	Fri 9/4/21	Wed 23/6/21	NA	NA	Tue 20/4/21	Sun 4/7/21	11 days 1	day	320												
2	Prepare DDA (E&M works) and ICE certification (Final)	16 days 0 days	16 days	0%	Thu 24/6/21	Fri 9/7/21	NA	NA	Mon 5/7/21	Tue 20/7/21	11 days 1	day	321												
3	Submit & endorse by PM and Statutory Authorities/Gov. Dept	76 days 0 days	76 days	0%	Sat 10/7/21	Thu 23/9/21	NA	NA	Wed 21/7/21	Mon 4/10/21	11 days 1	day	322						+						
1	Road Works (Civil Works)	662 days 196.01 days	465.99 days	0%	Tue 13/8/19	Fri 4/6/21	Tue 13/8/19	NA	Tue 13/8/19	Tue 14/12/21	193 days														
25	Prepare AIP for At-grade Road D3 and ICE certification (Draft)	57 days 57 days	0 days	100%	Tue 13/8/19	Tue 8/10/19	Tue 13/8/19	Tue 8/10/19	Tue 13/8/19	Tue 8/10/19	0 days 1	day	293SS+75 days	<del>,</del>											
6	Submit & endorse by PM	21 days 21 days	0 days	100%	Wed 9/10/19	Tue 29/10/19	Wed 9/10/19	Tue 29/10/1	9 Wed 9/10/19	Tue 29/10/19	0 days	.5 days	325												
7	Submit & endorse by Statutory Authorities/Gov. Dept	24 days 24 days	0 days	100%	Wed 30/10/19	Fri 22/11/19	Wed 30/10/19	Fri 22/11/19	Wed 30/10/19	Fri 22/11/19	0 days 1	day	325												
8	Prepare AIP for At-grade Road D3 and ICE certification (Final)	57 days 57 days	0 days	100%	Thu 5/3/20	Mon 4/5/20	Thu 5/3/20	Mon 4/5/20	Thu 5/3/20	Mon 4/5/20	0 days 0	) days	326FS+12												
9		210 days 0 days	210 days	0%	Sat 23/5/20	Fri 18/12/20	NA	NA	Wed 2/12/20	Tue 29/6/21	193 days 5	davs	days,327,44FF- 325FS+100	- + -											
)		75 days 0 days	75 days	0%	Sat 19/12/20	Wed 3/3/21		NA	Wed 30/6/21	Sun 12/9/21	193 days (		days,328FF+6 329			Щ									
				0%	Thu 4/3/21		NA		Mon 13/9/21	Tue 28/9/21	193 days 1	_	330	_											
		16 days 0 days	16 days					NA																	
2		77 days 0 days	77 days	0%	Sat 20/3/21	Fri 4/6/21	NA	NA	Wed 29/9/21	Tue 14/12/21	193 days 2	aays	331												
33		382 days 0 days	382 days	0%	Mon 5/10/20	Thu 21/10/21		NA	Sat 13/2/21	Tue 1/3/22	131 days								1						
4	Prepare AIP (E&M works) and ICE certification (Draft)	31 days 0 days	31 days	0%	Mon 5/10/20	Wed 4/11/20	NA	NA	Sat 13/2/21	Mon 15/3/21	131 days 1	day													
5	Submit & endorse by PM and Statutory Authorities/Gov. Dept	76 days 0 days	76 days	0%	Thu 5/11/20	Tue 19/1/21	NA	NA	Tue 16/3/21	Sun 30/5/21	131 days 1	day	334												
5	Prepare AIP (E&M works) and ICE certification (Final)	31 days 0 days	31 days	0%	Wed 20/1/21	Fri 19/2/21	NA	NA	Mon 31/5/21	Wed 30/6/21	131 days 1	day	335												
7	Submit & endorse by PM and Statutory Authorities/Gov. Dept	76 days 0 days	76 days	0%	Sat 20/2/21	Thu 6/5/21	NA	NA	Thu 1/7/21	Tue 14/9/21	131 days 1	day	336												
3	Prepare DDA (E&M works) and ICE certification (Draft)	31 days 0 days	31 days	0%	Tue 6/4/21	Thu 6/5/21	NA	NA	Sun 15/8/21	Tue 14/9/21	131 days 1	day	337FF												
9	Submit & endorse by PM and Statutory Authorities/Gov. Dept	76 days 0 days	76 days	0%	Fri 7/5/21	Wed 21/7/21	NA	NA	Wed 15/9/21	Mon 29/11/21	131 days 1	day	338					$\blacksquare$							
0	Prepare DDA (E&M works) and ICE certification (Final)	16 days 0 days	16 days	0%	Thu 22/7/21	Fri 6/8/21	NA	NA	Tue 30/11/21	Wed 15/12/21	131 days 1	day	339												
1	Submit & endorse by PM and Statutory Authorities/Gov. Dept	76 days 0 days	76 days	0%	Sat 7/8/21	Thu 21/10/21	NA	NA	Thu 16/12/21	Tue 1/3/22	131 days 1	day	340												
12	Road L12d Works (Roadworks)	791 days 261.27 days	529.73 days	0%	Tue 6/8/19	Mon 4/10/21	Tue 6/8/19	NA	Tue 6/8/19	Tue 28/2/23	512 days														
3		64 days 64 days	0 days	100%	Tue 6/8/19	Tue 8/10/19		Tue 8/10/19		Tue 8/10/19	0 days 1	dav	325	_											
4		377 days 227 days	150 days	60%	Wed 9/10/19		) Wed 9/10/19		Wed 9/10/19		512 days														
5		120 days 0 days	120 days	0%	Tue 20/10/20	Tue 16/2/21		NA	Wed 16/3/22	Wed 13/7/22	512 days (	dove	343,44FF+12												
	(Final)											-	days,344												
6	Prepare DDA for Road L12d (Include E&M Provision Works) and ICE certification (Draft)		120 days	0%	Thu 19/11/20			NA	Fri 15/4/22	Fri 12/8/22	512 days 1	-	343FS+260 days,345FF+30												
7		75 days 0 days	75 days	0%	Fri 19/3/21	Tue 1/6/21		NA	Sat 13/8/22	Wed 26/10/22															
8	Prepare DDA for Road L12d (Include E&M Provision Works) and ICE certification (Final)	50 days 0 days	50 days	0%	Wed 2/6/21	Wed 21/7/21	NA	NA	Thu 27/10/22	Thu 15/12/22		-	347,345FF												
)	Submit & endorse by PM and Statutory Authorities/Gov. Dept	75 days 0 days	75 days	0%	Thu 22/7/21	Mon 4/10/21	NA	NA	Fri 16/12/22	Tue 28/2/23	512 days (	) days	348												
	Road Lighting of Road D3 (E&M)	469 days 129.19 days	339.81 days	0%	Mon 6/1/20	Sun 18/4/21	Mon 6/1/20	NA	Mon 6/1/20	Sun 1/8/21	105 days						+								
	Prepare AIP (E&M works) Submission (Draft)	30 days 30 days	0 days	100%	Mon 6/1/20	Tue 4/2/20	Mon 6/1/20	Tue 4/2/20	Mon 6/1/20	Tue 4/2/20	0 days 2	days													
2	Submit & endorse by Statutory Authorities/Gov. Dept and PM	190 days 108 days	82 days	57%	Wed 5/2/20	Wed 12/8/20	Wed 5/2/20	NA	Wed 5/2/20	Wed 25/11/20	105 days		351												
53	Prepare AIP (E&M works) and ICE certification (Final)	32 days 0 days	32 days	0%	Thu 13/8/20	Sun 13/9/20	NA	NA	Thu 26/11/20	Sun 27/12/20	105 days 2	days	352	-											
54		60 days 0 days	60 days	0%	Mon 14/9/20	Thu 12/11/20	NA	NA	Mon 28/12/20	Thu 25/2/21	105 days 2	-	353	$\parallel \parallel \parallel \parallel$											
																					Ш				
	V.11 Prog with Progress	Summary Project Summary		Inactive M Inactive Su			Duration-on  Manual Sur	nly nmary Rollup		Start-only Finish-only	[	1		ternal Mileston adline	e .	<b>♦</b> <b>B</b>			ritical Spli ogress	.t	11111117				
of 27	2-May-20	nactive Task	-	Manual Ta			Manual Sun			External Tasl		_	Cr			-			anual Prog				_		

Task										TD Project									 		
Task	Name	Duration	n Actual Duration	Remaining Duration	Physical % Complete	Early Start	Early Finish	Actual Start	Actual Finis	h Late Start	Late Finish	Total TRA Slack	Predecessors	2020 Q2 (	)3   Q4	Q1   Q	2021 02   Q3	Q4 (	2022   Q3   Q	)4 Q1 Q	2023 Q2   Q3
355	Prepare DDA (E&M works) and ICE certification (Draft)	32 days		32 days	0%	Mon 12/10/20	Thu 12/11/20	NA	NA	Mon 25/1/21	Thu 25/2/21	105 days 2 days	354FF								
356	Submit & endorse by PM and Statutory Authorities/Gov. Dept	77 days	0 days	77 days	0%	Fri 13/11/20	Thu 28/1/21	NA	NA	Fri 26/2/21	Thu 13/5/21	105 days 2 days	355								
357	Prepare DDA (E&M works) and ICE certification (Final)	3 days	0 days	3 days	0%	Fri 29/1/21	Sun 31/1/21	NA	NA	Fri 14/5/21	Sun 16/5/21	105 days 2 days	356								
358	Submit & endorse by PM and Statutory Authorities/Gov. Dept	77 days	0 days	77 days	0%	Mon 1/2/21	Sun 18/4/21	NA	NA	Mon 17/5/21	Sun 1/8/21	105 days 2 days	357					Ш			
359	Road L12d Works (E&M Works)	329 days	s 0 days	329 days	0%	Mon 5/10/20	Sun 29/8/21	NA	NA	Mon 1/2/21	Sun 26/12/21	119 days									
360	Prepare AIP (E&M works) and ICE certification (Draft)	32 days	0 days	32 days	0%	Mon 5/10/20	Thu 5/11/20	NA	NA	Mon 1/2/21	Thu 4/3/21	119 days 2 days									
361	Submit & endorse by PM and Statutory Authorities/Gov. Dept	62 days	0 days	62 days	0%	Fri 6/11/20	Wed 6/1/21	NA	NA	Fri 5/3/21	Wed 5/5/21	119 days 2 days	360								
362	Prepare AIP (E&M works) and ICE certification (Final)		0 days	32 days	0%	Thu 7/1/21	Sun 7/2/21	NA	NA	Thu 6/5/21	Sun 6/6/21	119 days 2 days	361								
363	Submit & endorse by PM and Statutory Authorities/Gov. Dept		0 days	62 days	0%	Mon 8/2/21	Sat 10/4/21		NA	Mon 7/6/21	Sat 7/8/21	119 days 2 days									
364	Prepare DDA (E&M works) and ICE certification (Draft)		0 days	32 days	0%	Wed 10/3/21		NA	NA	Wed 7/7/21	Sat 7/8/21	119 days 2 days	363FF								
365																					
	Submit & endorse by PM and Statutory Authorities/Gov. Dept		0 days	62 days	0%	Sun 11/4/21		NA	NA	Sun 8/8/21	Fri 8/10/21	119 days 2 days	364								
366	Prepare DDA (E&M works) and ICE certification (Final)		0 days	17 days	0%	Sat 12/6/21	Mon 28/6/21		NA	Sat 9/10/21	Mon 25/10/21		365								
367	Submit & endorse by PM and Statutory Authorities/Gov. Dept	62 days	0 days	62 days	0%	Tue 29/6/21	Sun 29/8/21	NA	NA	Tue 26/10/21	Sun 26/12/21	119 days 2 days	366						╗		
368	Roadworks other than at-grade Road D3 and Road L12d (Civil Works)	609 days	s 238.54 days	370.46 days	0%	Mon 2/9/19	Sun 2/5/21	Mon 2/9/19	NA	Mon 2/9/19	Sun 23/5/21	21 days									
369	AIP for Roadworks - Roadworks other than at-grade Road D3 and Road L12d (Draft)	36 days	36 days	0 days	100%	Mon 2/9/19	Mon 7/10/19	Mon 2/9/19	Mon 7/10/19	9 Mon 2/9/19	Mon 7/10/19	0 days 0.5 days	S								
370	Submit & endorse by PM and Statutory Authorities/Gov. Dept	288 days	s 228 days	60 days	79%	Tue 8/10/19	Tue 21/7/20	Tue 8/10/19	NA	Tue 8/10/19	Tue 11/8/20	21 days 0.5 days	s 369								
371	AIP for Roadworks - Roadworks other than at-grade Road D3 and Road L12d (Final)	75 days	0 days	75 days	0%	Wed 22/7/20	Sun 4/10/20	NA	NA	Wed 12/8/20	Sun 25/10/20	21 days 0.5 days	370,44FF+12								
372	DDA for Roadworks - Roadworks other than at-grade Road D3 and Road L12d (Draft)	95 days	0 days	95 days	0%	Sat 1/8/20	Tue 3/11/20	NA	NA	Sat 22/8/20	Tue 24/11/20	21 days 1 day	371FF+30 day	s							
373	(Drait) Submit & endorse by PM and Statutory Authorities/Gov. Dept	75 days	0 days	75 days	0%	Wed 4/11/20	Sun 17/1/21	NA	NA	Wed 25/11/20	Sun 7/2/21	21 days 0.5 days	s 372	$\parallel \parallel \parallel$							
374	DDA for Roadworks - Roadworks other than at-grade Road D3 and Road L12d	30 days	0 days	30 days	0%	Mon 18/1/21	Tue 16/2/21	NA	NA	Mon 8/2/21	Tue 9/3/21	21 days 0.5 days	s 371,372,373	$\parallel \parallel \parallel$							
375	(Final) Submit & endorse by PM and Statutory Authorities/Gov. Dept	75 days	0 days	75 days	0%	Wed 17/2/21	Sun 2/5/21	NA	NA	Wed 10/3/21	Sun 23/5/21	21 days 0.5 days	s 374								
376	Roadworks - EVA to Sewerage and Saltwater Pumping Station (Civil Works)	413 days	s 68.26 days	344.74 days	0%	Wed 4/3/20	Tue 20/4/21	Wed 4/3/20	NA	Wed 4/3/20	Fri 17/2/23	668 days									
377	AIP for Roadworks - EVA to Sewerage and Saltwater Pumping Station (Draft)	46 davs	46 days	0 days	100%	Wed 4/3/20	Sat 18/4/20	Wed 4/3/20	Sat 18/4/20	Wed 4/3/20	Sat 18/4/20	0 days 0.5 days	S								
378	Submit & endorse by PM and Statutory Authorities/Gov. Dept		33 days	49 days	40%	Sat 18/4/20		Sat 18/4/20	NA	Sat 18/4/20	Mon 23/5/22	684 days	377								
379	AIP for Roadworks - EVA to Sewerage and Saltwater Pumping Station (Final)	75 days		75 days	0%	Thu 9/7/20	Mon 21/9/20		NA	Tue 24/5/22	Sat 6/8/22	684 days 0.5 days		1	ШШ						
380	DDA for Roadworks - EVA to Sewerage and Saltwater Pumping Station (Draft)		0 days	95 days	0%	Mon 20/7/20	Thu 22/10/20		NA	Thu 19/5/22	Sun 21/8/22	668 days 1 day	379FF+15 day	S							
381	Submit & endorse by PM and Statutory Authorities/Gov. Dept	75 days		75 days	0%	Fri 23/10/20	Tue 5/1/21		NA	Mon 22/8/22	Fri 4/11/22	668 days 0.5 days									
382	DDA for Roadworks - EVA to Sewerage and Saltwater Pumping Station (Final)	30 days		30 days	0%	Wed 6/1/21		NA	NA	Sat 5/11/22	Sun 4/12/22	668 days 0.5 days									
383	Submit & endorse by PM and Statutory Authorities/Gov. Dept	75 days	0 days	75 days	0%	Fri 5/2/21	Tue 20/4/21		NA	Mon 5/12/22	Fri 17/2/23	668 days 0.5 days	s 382								
384	Road Lighting of Road other than Road D3 (E&M)	356 days	s 0 days	356 days	0%	Fri 29/5/20	Wed 19/5/21	NA	NA	Tue 2/6/20	Sun 23/5/21	4 days					1				
385	Prepare AIP (E&M works) and ICE certification (Draft)	38 days	0 days	38 days	0%	Fri 29/5/20	Sun 5/7/20	NA	NA	Tue 2/6/20	Thu 9/7/20	4 days 2 days									
386	Submit & endorse by PM and Statutory Authorities/Gov. Dept	77 days	0 days	77 days	0%	Mon 6/7/20	Sun 20/9/20	NA	NA	Fri 10/7/20	Thu 24/9/20	4 days 2 days	385	7							
387	Prepare AIP (E&M works) and ICE certification (Final)	32 days	0 days	32 days	0%	Mon 21/9/20	Thu 22/10/20	NA	NA	Fri 25/9/20	Mon 26/10/20	4 days 2 days	386								
388	Submit & endorse by PM and Statutory Authorities/Gov. Dept	62 days	0 days	62 days	0%	Fri 23/10/20	Wed 23/12/20	0 NA	NA	Tue 27/10/20	Sun 27/12/20	4 days 2 days	387								
389	Prepare DDA (E&M works) and ICE certification (Draft)	32 days	0 days	32 days	0%	Sun 22/11/20	Wed 23/12/20	) NA	NA	Thu 26/11/20	Sun 27/12/20	4 days 2 days	388FF	$\parallel \parallel \parallel$							
390	Submit & endorse by PM and Statutory Authorities/Gov. Dept	62 days	0 days	62 days	0%	Thu 24/12/20	Tue 23/2/21	NA	NA	Mon 28/12/20	Sat 27/2/21	4 days 2 days	389	$\parallel \parallel \parallel$							
391	Prepare DDA (E&M works) and ICE certification (Final)	23 days	0 days	23 days	0%	Wed 24/2/21	Thu 18/3/21	NA	NA	Sun 28/2/21	Mon 22/3/21	4 days 2 days	390	$\parallel \parallel \parallel$							
392	Submit & endorse by PM and Statutory Authorities/Gov. Dept		0 days	62 days	0%	Fri 19/3/21	Wed 19/5/21	NA	NA	Tue 23/3/21	Sun 23/5/21	4 days 2 days	391	$+\parallel\parallel\parallel$							
393	Roadworks other than at-grade Road D3 and Road L12d (E&M Works)	322 days		322 days	0%	Thu 2/7/20	Wed 19/5/21	NA	NA	Mon 6/7/20	Sun 23/5/21	4 days					╣╢╢╢				
394	Prepare AIP (E&M works) and ICE certification (Draft)	31 days		31 days	0%	Thu 2/7/20		NA	NA	Mon 6/7/20	Wed 5/8/20	4 days 1 day									
395	Submit & endorse by PM and Statutory Authorities/Gov. Dept	61 days		61 days	0%	Sun 2/8/20	Thu 1/10/20		NA	Thu 6/8/20	Mon 5/10/20	4 days 1 day	394	$\parallel \parallel \parallel$							
396					0%	Fri 2/10/20	Sun 1/11/20		NA NA	Tue 6/10/20	Thu 5/11/20			_							
	Prepare AIP (E&M works) and ICE certification (Final)		0 days	31 days								4 days 1 day	395								
397	Submit & endorse by PM and Statutory Authorities/Gov. Dept	61 days		61 days	0%	Mon 2/11/20		NA	NA	Fri 6/11/20	Tue 5/1/21	4 days 1 day	396								
398	Prepare DDA (E&M works) and ICE certification (Draft)		0 days	31 days	0%	Wed 2/12/20		NA	NA	Sun 6/12/20	Tue 5/1/21	4 days 1 day	397FF								
399	Submit & endorse by PM and Statutory Authorities/Gov. Dept	61 days	0 days	61 days	0%	Sat 2/1/21	Wed 3/3/21	NA	NA	Wed 6/1/21	Sun 7/3/21	4 days 1 day	398								
itle· Rev 1	1 Prog with Progress	Summary			Inactive Mi	ilestone $\diamondsuit$		Duration-o	nly		Start-only	С	E	temal Milesto	ne 💠	41811	(	Critical Split	 		
	lay-20 Split	Project Sur	mmary		Inactive Su  Manual Tas	mmary		Manual Su	mmary Rollup		Finish-only	3	D	eadline	4		I	rogress			

							Con	tract No. ED,	/2018/01 K	ID Project												
Task	Name	Duration	n Actual Duration	Remaining Duration	Physical % Complete	Early Start	Early Finish	Actual Start	Actual Finis	h Late Start	Late Finish	Total TRA Slack	Predecessors		03   04	01   02	021   O3   O4	01   (	2022 Q2   Q3	3 04	Q1   Q	2023
00	Prepare DDA (E&M works) and ICE certification (Final)	16 days		16 days	0%	Thu 4/3/21	Fri 19/3/21	NA	NA	Mon 8/3/21	Tue 23/3/21	4 days 1 day	399	Q2	25   Q4	Q1 Q2	Q3   Q4		22   Q3	, Q4	QI	
01	Submit & endorse by PM and Statutory Authorities/Gov. Dept	61 days	0 days	61 days	0%	Sat 20/3/21	Wed 19/5/21	NA	NA	Wed 24/3/21	Sun 23/5/21	4 days 1 day	400									1
12	DCS Seawater & Intake Box Culverts (approx 88m) (Section 2)	479 days	s 304.41 days	174.59 days	0%	Tue 13/8/19	Thu 3/12/20	Tue 13/8/19	NA	Tue 13/8/19	Tue 3/8/21	243 days										1
3	Prepare AIP Subm with ICE certification (Draft)	165 days	s 165 days	0 days	100%	Tue 13/8/19	Fri 24/1/20	Tue 13/8/19	Fri 24/1/20	Tue 13/8/19	Fri 24/1/20	0 days 3 days										
4	Submit & endorse by PM		85 days	0 days	100%	Thu 23/1/20	Thu 16/4/20	Thu 23/1/20	Thu 16/4/20	Thu 23/1/20	Thu 16/4/20	0 days 1 day	403									
5	Submit & endorse by Statutory Authorities/Gov. Dept		90 days	0 days	100%	Fri 24/1/20	Mon 27/4/20			) Fri 24/1/20	Mon 27/4/20	0 days 1 day	403	[]								
7	Prepare AIP and ICE certification (Final)	0 days	-	0 days	100%	Thu 23/4/20		Thu 23/4/20			Mon 27/4/20	0 days 1 days	403,405,404	<u>♦ 27/4</u>								
	Prepare DDA and ICE certification	80 days	0 days	80 days	0%	Sat 23/5/20	Mon 10/8/20	NA	NA	Thu 21/1/21	Sat 10/4/21	243 days 5 days		7+1:								
	Submit & endorse by PM and Statutory Authorities/Gov. Dept	50 days	0 days	50 days	0%	Tue 11/8/20	Tue 29/9/20	NA	NA	Sun 11/4/21	Sun 30/5/21	243 days 3 days	407									
	Prepare DDA for and ICE certification (Final)	15 days	0 days	15 days	0%	Wed 30/9/20	Wed 14/10/20	) NA	NA	Mon 31/5/21	Mon 14/6/21	243 days 1 day	408									
	Submit & endorse by PM and Statutory Authorities/Gov. Dept	50 days	0 days	50 days	0%	Thu 15/10/20	Thu 3/12/20	NA	NA	Tue 15/6/21	Tue 3/8/21	243 days 2 days	409				H					
	Seawater & Intake Box Culverts Diversion	248 days	s 49.98 days	198.02 days	0%	Wed 1/4/20	Fri 4/12/20	Wed 1/4/20	NA	Wed 1/4/20	Wed 6/10/21	306 days										
	Prepare AIP Subm (Draft)	32 days	32 days	0 days	100%	Wed 1/4/20	Sat 2/5/20	Wed 1/4/20	Sat 2/5/20	Wed 1/4/20	Sat 2/5/20	0 days 3 days										
	Submit & endorse by PM and Statutory Authorities/Gov. Dept	51 days	21 days	30 days	41%	Sat 2/5/20	Mon 22/6/20	Sat 2/5/20	NA	Sat 2/5/20	Tue 17/11/20	148 days 3 days	412									
	Prepare AIP and ICE certification (Final)	15 days		15 days	0%	Tue 23/6/20	Tue 7/7/20	NA	NA	Wed 18/11/20	Wed 2/12/20	148 days 1 days										
5	Prepare DDA and ICE certification				0%	Tue 23/6/20	Tue 11/8/20		NA NA	Sun 25/4/21	Sun 13/6/21		412SS,413F	3.5(								
		50 days		50 days								306 days 5 days		TJ								
	Submit & endorse by PM and Statutory Authorities/Gov. Dept	50 days	0 days	50 days	0%	Wed 12/8/20	Wed 30/9/20		NA	Mon 14/6/21	Mon 2/8/21	306 days 3 days	415									
	Prepare DDA for and ICE certification (Final)	15 days	0 days	15 days	0%	Thu 1/10/20	Thu 15/10/20	NA	NA	Tue 3/8/21	Tue 17/8/21	306 days 1 day	416									1
	Submit & endorse by PM and Statutory Authorities/Gov. Dept	50 days	0 days	50 days	0%	Fri 16/10/20	Fri 4/12/20	NA	NA	Wed 18/8/21	Wed 6/10/21	306 days 2 days	417									1
	Rising Main (Sewerage Works)	402 days	s 134 days	268 days	0%	Thu 2/1/20	Sat 6/2/21	Thu 2/1/20	NA	Thu 2/1/20	Sun 7/3/21	29 days				<del></del>						
	Prepare AIP (Draft)	35 days	35 days	0 days	100%	Thu 2/1/20	Wed 5/2/20	Thu 2/1/20	Wed 5/2/20	Thu 2/1/20	Wed 5/2/20	0 days 3 days	4									1
	Submit & endorse by PM	19 days	19 days	0 days	100%	Thu 6/2/20	Mon 24/2/20	Thu 6/2/20	Mon 24/2/20	Thu 6/2/20	Mon 24/2/20	0 days 1 day										
	Submit & endorse by PM and Statutory Authorities/Gov. Dept	56 days	56 days	0 days	100%	Thu 27/2/20	Fri 22/5/20	Thu 27/2/20	Fri 22/5/20	Thu 27/2/20	Fri 22/5/20	0 days 2 days	420	<b></b>  -								
_	Prepare AIP and ICE certification (Final)	75 days	0 davs	75 days	0%	Thu 2/7/20	Mon 14/9/20	NA	NA	Fri 31/7/20	Tue 13/10/20	29 days 0 days	420,422,421	_   \								
	Prepare DDA and ICE certification (Draft)	30 days		30 days	0%	Tue 15/9/20	Wed 14/10/20		NA	Wed 14/10/20	Thu 12/11/20		420SS,423									
			-																			
	Submit & endorse by PM and Statutory Authorities/Gov. Dept	50 days		50 days	0%	Thu 15/10/20			NA	Fri 13/11/20	Fri 1/1/21	29 days 3 days	424,420									
	Prepare DDA and ICE certification (Final)	15 days	-	15 days	0%	Fri 4/12/20	Fri 18/12/20	NA	NA	Sat 2/1/21	Sat 16/1/21	29 days 0 days										
	Submit & endorse by PM and Statutory Authorities/Gov. Dept	50 days	0 days	50 days	0%	Sat 19/12/20	Sat 6/2/21	NA	NA	Sun 17/1/21	Sun 7/3/21	29 days 3 days	426,423			7						1
	Stormwater, Sewage, Salt Water and Fresh Water Works for Underpass and Depressed Road	641 days	s 151.9 days	489.1 days	0%	Fri 13/9/19	Mon 14/6/21	Fri 13/9/19	NA	Fri 13/9/19	Mon 28/6/21	14 days										1
	Stormwater Drainage AIP for Underpass and Depressed Roads and ICE certification (Draft)	72 days	72 days	0 days	100%	Mon 2/12/19	Tue 11/2/20	Mon 2/12/19	Tue 11/2/20	Mon 2/12/19	Tue 11/2/20	0 days 1 day										1
	Submit & endorse by PM	51 days	51 days	0 days	30%	Wed 12/2/20	Thu 2/4/20	Wed 12/2/20	Thu 2/4/20	Wed 12/2/20	Thu 2/4/20	0 days 0.5 day	s 429									
	Submit & endorse by Statutory Authorities/Gov. Dept	139 days	s 64 days	75 days	46%	Fri 20/3/20	Wed 5/8/20	Fri 20/3/20	NA	Fri 20/3/20	Fri 30/10/20	86 days	429									1
2	Prepare AIP and ICE certification (Final)	150 days	s 50 days	100 days	33%	Fri 3/4/20	Sun 30/8/20	Fri 3/4/20	NA	Fri 3/4/20	Sat 14/11/20	76 days	431FF+15 d	ays								1
3	Prepare DDA and ICE certification (Draft)	150 days		150 days	0%	Sat 23/5/20	Mon 19/10/20		NA	Sat 18/7/20		56 days 1 day	429,432FF+									
	Submit & endorse by PM and Statutory Authorities/Gov. Dept	90 days		90 days	0%	Tue 20/10/20	Sun 17/1/21		NA	Tue 15/12/20		56 days 0.5 day										
	Prepare DDA and ICE certification (Final)	31 days		31 days	0%	Mon 18/1/21	Wed 17/2/21		NA	Mon 15/3/21	Wed 14/4/21	56 days 1 day	434									
	Submit & endorse by PM and Statutory Authorities/Gov. Dept	75 days		75 days	0%	Thu 18/2/21	Mon 3/5/21		NA	Thu 15/4/21	Mon 28/6/21		435									
	Fresh and Salt Water Works AIP for Underpass, Depressed Road and ICE certification (Draft)	51 days	51 days	0 days	100%	Tue 8/10/19	Wed 27/11/19	Tue 8/10/19	Wed 27/11/19	Tue 8/10/19	Wed 27/11/19	0 days 1 day										
	Submit & endorse by PM	26 days	26 days	0 days	100%	Thu 28/11/19	Mon 23/12/19	Thu 28/11/19		Thu 28/11/19	Mon 23/12/19	0 days 0.5 day	s 437									
	Submit & endorse by Statutory Authorities/Gov. Dept	14 days	14 days	0 days	100%	Wed 8/4/20	Fri 24/4/20	Wed 8/4/20	Fri 24/4/20	Wed 8/4/20	Fri 24/4/20	0 days 3 days	437									
	Prepare AIP for Underpass, Depressed Road and ICE certification (Final)	22 days	22 days	0 days	100%	Sat 25/4/20	Sat 16/5/20	Sat 25/4/20	Sat 16/5/20	Sat 25/4/20	Sat 16/5/20	0 days 0 days	438,439									
-	Prepare DDA for Underpass, Depressed Road and ICE certification (Draft)	90 days	0 days	90 days	0%	Sun 17/5/20	Fri 14/8/20	NA	NA	Fri 2/10/20	Wed 30/12/20	138 days 1 day	440		h III							
	Submit & endorse by PM and Statutory Authorities/Gov. Dept	75 days		75 days	0%	Sat 15/8/20	Wed 28/10/20		NA	Thu 31/12/20	Mon 15/3/21	138 days 0.5 day										
	Prepare DDA for Underpass, Depressed Road and ICE certification (Final)	30 days		30 days	0%	Thu 29/10/20			NA	Tue 16/3/21	Wed 14/4/21	138 days 0 days										
13																						
44	Submit & endorse by PM and Statutory Authorities/Gov. Dept	75 days	U days	75 days	0%	Sat 28/11/20	Wed 10/2/21	NA	NA	Thu 15/4/21	Mon 28/6/21	138 days 0 days	443									Ш
e: Rev.1	I Prog with Progress	Summary			Inactive M	ilestone 🔷		Duration-or	-		Start-only	Е		External Milesto	one $\diamondsuit$		Critical S <sub>I</sub>	plit				
	ay-20 Split	roject Sur	nmary		Inactive Su	ımmary 📗		Manual Su	mmary Rollup		Finish-only	3		Deadline	4		Progress		_			

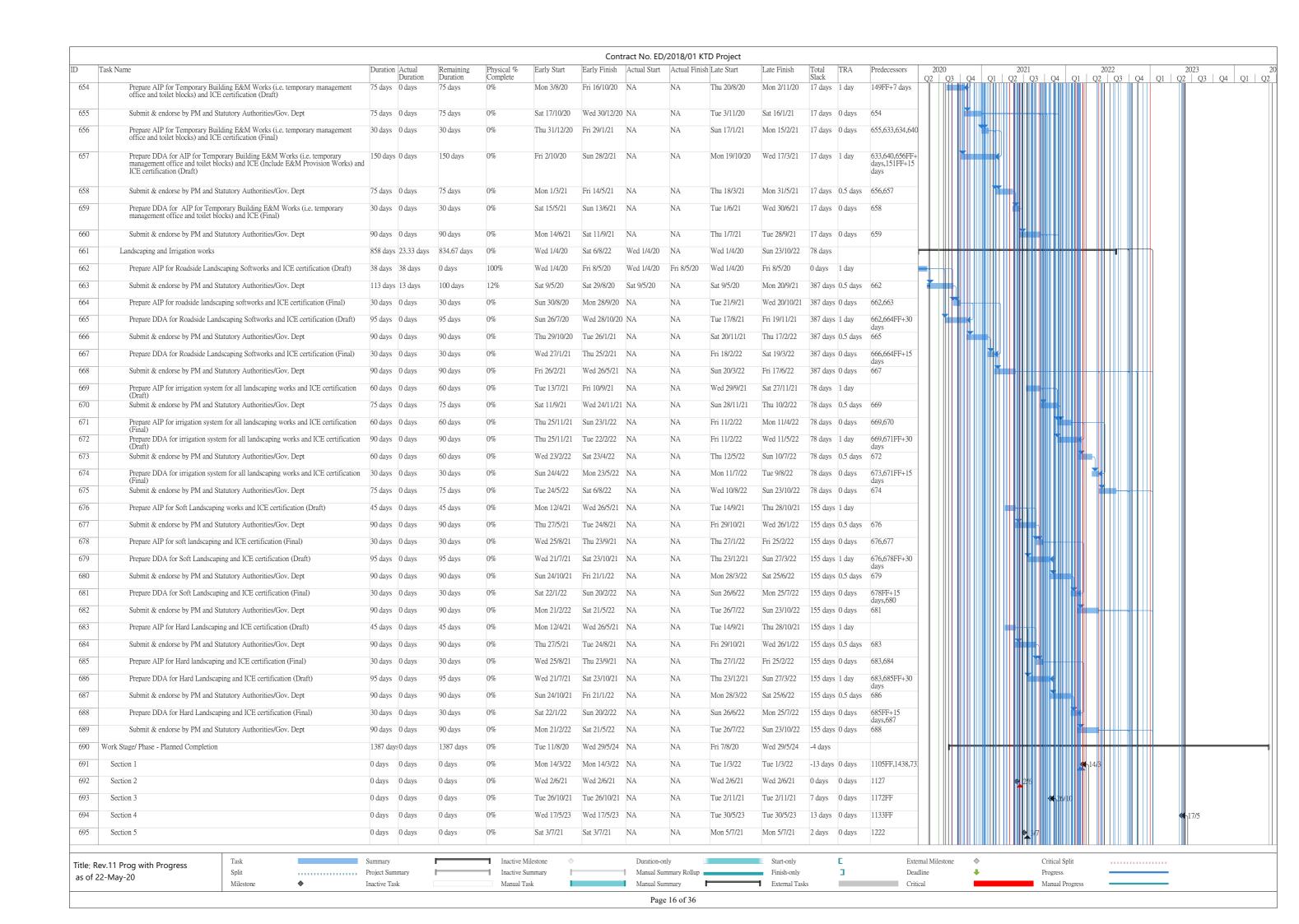




							Con	tract No. ED/	/2018/01 KT	TD Project												
Task	Name	Duration	Actual Duration	Remaining Duration	Physical % Complete	Early Start	Early Finish	Actual Start	Actual Finish	h Late Start	Late Finish	Total TRA Slack	Predecessors	2020		01	2021 O2   O3	04 01	2022	03   04	2023	12   04
535	Prepare AIP for Salt Water Pumping Station E&M works and ICE certification	77 days		77 days	0%	Mon 17/8/20	Sun 1/11/20	NA	NA	Sun 13/9/20	Sat 28/11/20	27 days 2 days	534	Q2   	ψο Q4	QI	Q2   Q3	Q4   Q1	1   Q2	Q3   Q4	Q1   Q2   Q	<u>ع   Q</u> 4
36	(Final) Prepare DDA for Salt Water Pumping Station E&M works and ICE certification	120 days	0 days	120 days	0%	Tue 4/8/20	Tue 1/12/20	NA	NA	Mon 31/8/20	Mon 28/12/20	27 days 1 day	534FF,535FF	+3(								
37	(Draft) Submit to WSD for Plumbing and Irrigation Works for approval	0 days	0 days	0 days	0%	Tue 1/12/20	Tue 1/12/20	NA	NA	Tue 29/12/20	Tue 29/12/20	27 days 1 day	days,516 536			1/12						
38	Submit & endorse by PM and Statutory Authorities/Gov. Dept	91 days	0 days	91 days	0%	Wed 2/12/20	Tue 2/3/21	NA	NA	Tue 29/12/20	Mon 29/3/21	27 days 1 day	536,537			<b>+</b>						
39	Prepare DDA for Salt Water Pumping Station and ICE certification (Final)	31 days		31 days	0%	Wed 3/3/21	Fri 2/4/21	NA	NA	Tue 30/3/21	Thu 29/4/21	27 days 1 day	535FF+6									
40	Submit & endorse by PM and Statutory Authorities/Gov. Dept	91 days		91 days	0%	Sat 3/4/21	Fri 2/7/21	NA	NA	Fri 30/4/21	Thu 29/7/21	27 days 1 day	days,538 539									
													339									
541	AIP for Remaining Works of Salt Water & Sewerage Pumping and ICE certification (Draft)			0 days	0%	Mon 17/2/20	Sat 28/3/20			Mon 17/2/20	Sat 28/3/20	0 days 1 day	4									
42	Submit & endorse by PM	18 days	18 days	0 days	100%	Mon 30/3/20	Thu 16/4/20	Mon 30/3/20	Thu 16/4/20	Mon 30/3/20	Thu 16/4/20	0 days										
13	Submit & endorse by Statutory Authorities/Gov. Dept	90 days	0 days	90 days	0%	Mon 3/8/20	Sat 31/10/20	NA	NA	Sun 14/3/21	Fri 11/6/21	223 days 0.5 day	s 541,542									
14	AIP for Remaining Works of Salt Water Pumping & Sewage and ICE certification (Final)	90 days	0 days	90 days	0%	Sun 1/11/20	Fri 29/1/21	NA	NA	Sat 12/6/21	Thu 9/9/21	223 days 3 days	543									
45	DDA for Remaining Works of Salt Water & Sewage Pumping and ICE certification (Draft)	n 90 days	0 days	90 days	0%	Sun 6/12/20	Fri 5/3/21	NA	NA	Sat 17/7/21	Thu 14/10/21	223 days 1 day	541,544FF+3:	5								
16	Submit & endorse by PM and Statutory Authorities/Gov. Dept	93 days	0 days	93 days	0%	Sat 6/3/21	Sun 6/6/21	NA	NA	Fri 15/10/21	Sat 15/1/22	223 days 3 days										
17	DDA for Remaining Works of Salt Water & Sewage Pumping and ICE certification	on 35 days	0 days	35 days	0%	Mon 7/6/21	Sun 11/7/21	NA	NA	Sun 16/1/22	Sat 19/2/22	223 days 3 days	546,544FF+12	$2 \parallel \parallel \parallel$			T.					
48	(Final) Submit & endorse by PM and Statutory Authorities/Gov. Dept	75 days	0 days	75 days	0%	Mon 12/7/21	Fri 24/9/21	NA	NA	Sun 20/2/22	Thu 5/5/22	223 days 2 days	days 547	$-\parallel \parallel \parallel$								
49	AIP for Architectural works of Salt Water & Sewage Pumping and ICE certification	on 45 days	0 days	45 days	0%	Mon 5/4/21	Wed 19/5/21	NA	NA	Mon 3/5/21	Wed 16/6/21	28 days 1 day	4	$-\parallel \parallel \parallel$								
50	(Draft)  Submit & endorse by PM and Statutory Authorities/Gov. Dept	60 days		60 days	0%	Thu 20/5/21	Sun 18/7/21		NA	Thu 17/6/21	Sun 15/8/21	28 days 0.5 day	s 549	$-\parallel \parallel \parallel$								
51					0%	Mon 19/7/21	Sat 18/9/21		NA	Mon 16/8/21				$\parallel \parallel \parallel$								
	AIP for Architectural works of Salt Water Pumping & Sewage and ICE certification (Final)			62 days							Sat 16/10/21	28 days 2 days										
52	DDA for Architectural works of Salt Water & Sewage Pumping and ICE certification (Draft)	60 days		60 days	0%	Fri 20/8/21	Mon 18/10/21		NA	Fri 17/9/21		28 days 1 day	549,551FF+30 days									
53	Submit & endorse by PM and Statutory Authorities/Gov. Dept	60 days	0 days	60 days	0%	Tue 19/10/21	Fri 17/12/21	NA	NA	Tue 16/11/21	Fri 14/1/22	28 days 0.5 day	s 552									
54	DDA for Architectural works of Salt Water & Sewage Pumping and ICE certification (Final)	36 days	0 days	36 days	0%	Sat 18/12/21	Sat 22/1/22	NA	NA	Sat 15/1/22	Sat 19/2/22	28 days 2 days	551FF+12 days,553									
55	Submit & endorse by PM and Statutory Authorities/Gov. Dept	62 days	0 days	62 days	0%	Sun 23/1/22	Fri 25/3/22	NA	NA	Sun 20/2/22	Fri 22/4/22	28 days 2 days	554					H		$+\parallel\parallel\parallel\parallel\parallel\parallel$		
56	AIP for Landscaping works of Salt Water & Sewage Pumping and ICE certification (Draft)	n 45 days	0 days	45 days	0%	Mon 5/4/21	Wed 19/5/21	NA	NA	Sun 2/5/21	Tue 15/6/21	27 days 1 day	4									
57	(Draft) Submit & endorse by PM and Statutory Authorities/Gov. Dept	61 days	0 days	61 days	0%	Thu 20/5/21	Mon 19/7/21	NA	NA	Wed 16/6/21	Sun 15/8/21	27 days 0.5 day	s 556	$\parallel \parallel \parallel$								
58	AIP for Landscaping works of Salt Water Pumping & Sewage and ICE certification	n 62 days	0 days	62 days	0%	Tue 20/7/21	Sun 19/9/21	NA	NA	Mon 16/8/21	Sat 16/10/21	27 days 2 days	556,557	$-\parallel \parallel \parallel$								
59	(Final)  DDA for Landscaping works of Salt Water & Sewage Pumping and ICE	62 days	0 days	62 days	0%	Thu 19/8/21	Tue 19/10/21	NA	NA	Wed 15/9/21	Mon 15/11/21	27 days 2 days	556,558FF+30									
50	certification (Draft) Submit & endorse by PM and Statutory Authorities/Gov. Dept	61 days		61 days	0%	Wed 20/10/21			NA	Tue 16/11/21	Sat 15/1/22	27 days 0.5 day	days	$-\parallel \parallel \parallel$								
51	DDA for Landscaping works of Salt Water & Sewage Pumping and ICE	35 days		35 days	0%		Sun 23/1/22		NA	Sun 16/1/22	Sat 19/2/22	27 days 2 days		$\parallel \parallel \parallel$				<b>[</b> ]				
62	certification (Final)				0%				NA	Sun 20/2/22			days,560									
	Submit & endorse by PM and Statutory Authorities/Gov. Dept	61 days		61 days		Mon 24/1/22					Thu 21/4/22	27 days 2 days	301									
i3	AIP for Seawater Intake and Box Culvert Structures for Pumping Station (approx. 160m) (Section 6) Submission (Draft)	58 days	58 days	0 days	100%	Tue 10/12/19	Wed 5/2/20	Tue 10/12/19	Wed 5/2/20	Tue 10/12/19	Wed 5/2/20	0 days 1 day										
64	Submit & endorse by PM	25 days	25 days	0 days	33%	Wed 5/2/20	Thu 5/3/20	Wed 5/2/20	Thu 5/3/20	Wed 5/2/20	Thu 5/3/20	0 days 0.5 day	s 563									
65	Submit & endorse by Statutory Authorities/Gov. Dept	50 days	0 days	50 days	0%	Sat 23/5/20	Sat 11/7/20	NA	NA	Sun 28/3/21	Sun 16/5/21	309 days 0.5 day	s 563									
66	AIP for Seawater Intake and Box Culvert Structure (Final)	21 days	0 days	21 days	0%	Sun 12/7/20	Sat 1/8/20	NA	NA	Mon 17/5/21	Sun 6/6/21	309 days 0.5 day	s 563,565,564	$-\parallel \parallel \parallel$								
67	DDA for Seawater Intake and Box Culvert Structure (Draft)	15 days	0 days	15 days	0%	Sat 25/7/20	Sat 8/8/20	NA	NA	Sun 30/5/21	Sun 13/6/21	309 days 1 day	563,565,564,5	566								
58	Submit & endorse by PM and Statutory Authorities/Gov. Dept	50 days		50 days	0%	Sun 9/8/20	Sun 27/9/20		NA	Mon 14/6/21	Mon 2/8/21	309 days 0.5 day		$-\parallel \parallel \parallel$								
59	DDA for Seawater Intake and Box Culvert Structure (Final)	15 days		15 days	0%	Mon 28/9/20	Mon 12/10/20		NA	Tue 3/8/21	Tue 17/8/21	309 days 1 day	567,568,566F	E.								
				1										<u> </u>								
70	Submit & endorse by PM and Statutory Authorities/Gov. Dept	50 days		50 days	0%	Tue 13/10/20	Tue 1/12/20		NA	Wed 18/8/21	Wed 6/10/21	309 days 0.5 day	8 209									
71	Elevated Landscape Deck Staircase & Associated Work			445.51 days	0%	Thu 30/5/19		Thu 30/5/19		Thu 30/5/19	Mon 5/7/21	54 days					7					
72	Elevated Landscape Deck Superstructure AIP and ICE certification (Draft)	96 days	96 days	0 days	100%	Thu 30/5/19	Mon 2/9/19	Thu 30/5/19	Mon 2/9/19	Thu 30/5/19	Mon 2/9/19	0 days 3 days	4									
73	Submit & endorse by PM	15 days	15 days	0 days	100%	Tue 3/9/19	Tue 17/9/19	Tue 3/9/19	Tue 17/9/19	Tue 3/9/19	Tue 17/9/19	0 days 1 days	572									
74	Submit & endorse by Statutory Authorities/Gov. Dept	162 days	162 days	0 days	0%	Tue 24/9/19	Tue 3/3/20	Tue 24/9/19	Tue 3/3/20	Tue 24/9/19	Tue 3/3/20	0 days 0.5 day	s 573									
75	Prepare AIP and ICE certification (Final)	255 days	155 days	100 days	61%	Wed 20/11/19	Fri 31/7/20	Wed 20/11/19	NA NA	Wed 20/11/19	Thu 26/11/20	118 days 0.5 day	s 44FF+12 days	3 -	4-							
76	Prepare DDA and ICE certification (Draft)	75 days	0 days	75 days	0%	Fri 12/6/20	Sun 30/8/20	NA	NA	Thu 8/10/20	Sat 26/12/20	118 days 1 day	574FF+30 day	ys,:								
77	Submit & endorse by PM and Statutory Authorities/Gov. Dept	50 days	0 days	50 days	0%	Mon 31/8/20	Mon 19/10/20	) NA	NA	Sun 27/12/20	Sun 14/2/21	118 days 0.5 day	s 576	$-\parallel \parallel \parallel$								
578	Prepare DDA for and ICE certification (Final)	22 days		22 days	0%	Tue 20/10/20			NA	Mon 15/2/21	Mon 8/3/21	118 days 1 day		$-\parallel \parallel \parallel$								
	. Topace DD11 for and TCD continuation (1 mar)	22 days	o unyo	LL days	370	1 40 20/10/20	140 10/11/20	1111	1771	11011 1314141	111011 01 11 21	110 days 1 day	511									
41. D. C.	Dang with Danger	Summary			Inactive M	ilestone $\Diamond$		Duration-or	ıly		Start-only	Е	F	External Milest	one	<b>\$</b>		Critical Split				
le: Rev.1' of 22-M	Prog with Progress	Project Sum	nmary		Inactive Su				nmary Rollup		Finish-only	3		Deadline		<b>₽</b>		rogress	-		_	
141	Milestone •	Inactive Tas	sk		Manual Ta	sk		Manual Sur	nmarv		External Tasl	cs		Critical				Manual Progre	ess			

								tract No. ED/													
Task l	Name	Duration	Actual Duration	Remaining Duration	Physical % Complete	Early Start	Early Finish	Actual Start	Actual Finish	Late Start	Late Finish	Total TRA Slack	Predecessors	2020 Q2	Q3   Q4	Q1 (	2021 Q2   Q3	Q4 O1		)22   Q3	Q4 O
9	Submit & endorse by PM and Statutory Authorities/Gov. Dept	50 days	0 days	50 days	0%	Wed 11/11/20	Wed 30/12/20	NA	NA	Tue 9/3/21	Tue 27/4/21	118 days 1 day	578								
)	Elevated Landscape Deck - Lift (LT1&LT2)& Staircase include E&M Progvision: AIP and ICE Certification (Draft)	50 days	50 days	0 days	100%	Mon 7/10/19	Mon 25/11/19	Mon 7/10/19	Mon 25/11/19	Mon 7/10/19	Mon 25/11/19	0 days 3 days	44FF+12 days								
1	Submit & endorse by PM	21 days	21 days	0 days	100%	Tue 26/11/19	Mon 16/12/19	Tue 26/11/19		. Tue 26/11/19	Mon 16/12/19	0 days 1 days	580								
2	Submit & endorse by Statutory Authorities/Gov. Dept	120 days	85 days	35 days	71%	Fri 28/2/20	Fri 26/6/20	Fri 28/2/20	NA	Fri 28/2/20	Thu 13/8/20	48 days 1 days	580								
3	Prepare AIP and ICE certification (Final)	60 days	0 days	60 days	0%	Sat 27/6/20	Tue 25/8/20	NA	NA	Fri 14/8/20	Mon 12/10/20	48 days 0 days	580,581,582,44	F T	4						
34	Prepare DDA and ICE certification (Draft)	60 days	0 days	60 days	0%	Tue 11/8/20	Wed 14/10/20	) NA	NA	Mon 28/9/20	Tue 1/12/20	48 days 1 day	580,583FF+50	d							
35	Submit & endorse by PM and Statutory Authorities/Gov. Dept	90 days	0 days	90 days	0%	Thu 15/10/20	Tue 12/1/21	NA	NA	Wed 2/12/20	Mon 1/3/21	48 days 0.5 days	s 584								
36	Prepare DDA for and ICE certification (Final)	30 days	0 days	30 days	0%	Wed 13/1/21	Thu 11/2/21	NA	NA	Tue 2/3/21	Wed 31/3/21	48 days 0.5 days	s 585,583FF+12	d		<b>M</b>					
37	Submit & endorse by PM and Statutory Authorities/Gov. Dept	90 days	0 days	90 days	0%	Fri 12/2/21	Wed 12/5/21	NA	NA	Thu 1/4/21	Tue 29/6/21	48 days 2 days	586					_			
38	Elevated Landscape Deck - Open Space AIP Subm (Draft)	50 days	50 days	0 days	100%	Mon 10/2/20	Mon 30/3/20	Mon 10/2/20	Mon 30/3/20	Mon 10/2/20	Mon 30/3/20	0 days 3 days			-						
39	Submit & endorse by PM	21 days	21 days	0 days	100%	Mon 30/3/20	Mon 20/4/20	Mon 30/3/20	Mon 20/4/20	Mon 30/3/20	Mon 20/4/20	0 days 0.5 days	s 588								
90	Submit & endorse by Statutory Authorities/Gov. Dept	50 days	0 days	50 days	0%	Mon 6/7/20	Mon 24/8/20	NA	NA	Mon 28/9/20	Mon 16/11/20	84 days 1 days	588	-							
01	Prepare AIP and ICE certification (Final)	30 days		30 days	0%	Tue 25/8/20	Wed 23/9/20	NA	NA	Tue 17/11/20		84 days 2 days	588,590,44FF+	1	4						
)2	Prepare DDA and ICE certification (Draft)	75 days		75 days	0%	Thu 24/9/20	Sat 12/12/20		NA	Thu 17/12/20	Sat 6/3/21	84 days 1 day	590SS,591	$\parallel \parallel \parallel$							
03	Submit & endorse by PM and Statutory Authorities/Gov. Dept	50 days		50 days	0%	Sun 13/12/20	Sun 31/1/21		NA	Sun 7/3/21	Sun 25/4/21	84 days 0.5 days		$\parallel \parallel \parallel$							
94	Prepare DDA for and ICE certification (Final)	21 days		21 days	0%	Mon 1/2/21	Sun 21/2/21		NA	Mon 26/4/21	Sun 16/5/21	84 days 0.3 days	593,591FF+6 d								
05	Submit & endorse by PM and Statutory Authorities/Gov. Dept			50 days	0%	Mon 22/2/21	Mon 12/4/21		NA	Mon 17/5/21	Mon 5/7/21			ia,							
		50 days										84 days 0 days	394								
96	EVA for Open Space AIP Subm (Draft)		71 days	0 days	100%	Mon 10/2/20		Mon 10/2/20			Mon 20/4/20	0 days 3 days	506								
7	Submit & endorse by PM		2 days	0 days	100%	Tue 21/4/20		Tue 21/4/20	Mon 27/4/20		Mon 27/4/20	0 days 1 day	596	<b>」'┃ ↓</b> ┃							
18	Submit & endorse by Statutory Authorities/Gov. Dept	50 days		50 days	0%	Mon 6/7/20	Mon 24/8/20		NA	Sun 4/10/20	Sun 22/11/20		596								
)	Prepare AIP and ICE certification (Final)	30 days		30 days	0%	Tue 25/8/20	Wed 23/9/20		NA	Mon 23/11/20	Tue 22/12/20	90 days 2 days	596,598,44FF+	-11							
)	Prepare DDA and ICE certification (Draft)	60 days	0 days	60 days	0%	Thu 24/9/20	Fri 27/11/20	NA	NA	Wed 23/12/20	Thu 25/2/21	90 days 1 day	598SS,599								
l l	Submit & endorse by PM and Statutory Authorities/Gov. Dept	50 days	0 days	50 days	0%	Sat 28/11/20	Sat 16/1/21	NA	NA	Fri 26/2/21	Fri 16/4/21	90 days 0.5 days	s 600								
2	Prepare DDA for and ICE certification (Final)	30 days	0 days	30 days	0%	Sun 17/1/21	Mon 15/2/21	NA	NA	Sat 17/4/21	Sun 16/5/21	90 days 0 days	599FF+6 days,	60							
3	Submit & endorse by PM and Statutory Authorities/Gov. Dept	50 days	0 days	50 days	0%	Tue 16/2/21	Tue 6/4/21	NA	NA	Mon 17/5/21	Mon 5/7/21	90 days 0 days	602								
1	Waterfront Promenade and At-grade Open Space	533 days	5.98 days	527.02 days	0%	Wed 1/4/20	Wed 15/9/21	Wed 1/4/20	NA	Wed 1/4/20	Tue 28/9/21	13 days									
	Prepare AIP for Observation Deck with Lift (LT5) and Staircase and ICE (Include E&M Provision Works) certification (Draft)	24 days	24 days	0 days	100%	Wed 1/4/20	Fri 24/4/20	Wed 1/4/20	Fri 24/4/20	Wed 1/4/20	Fri 24/4/20	0 days 1 day		-	+						
6	Submit & endorse by PM and Statutory Authorities/Gov. Dept	14 dove	14 days	0 days	0%	Fri 24/4/20	Fri 8/5/20	Fri 24/4/20	Fri 8/5/20	Fri 24/4/20	Fri 8/5/20	0 days 1 day	605								
7	Prepare AIP for Observation Deck with Lift (LT5) and Staircase and ICE (Include				0%	Wed 16/9/20	Fri 16/10/20		NA	Thu 22/10/20	Sat 21/11/20	36 days 1 day	605,606,647FF								
<b>'</b>	E&M Provision Works) certification (Final)	31 days	0 days	31 days	0%	wed 10/9/20	FII 10/10/20	INA	NA	111u 22/10/20	Sat 21/11/20	30 days 1 day	003,000,047FF	,0							
8	Prepare DDA for Observation Deck with Lift and Staircase and ICE (Include E&M	I 100 days	0 days	100 days	0%	Sat 17/10/20	Sun 24/1/21	NA	NA	Sun 22/11/20	Mon 1/3/21	36 days 1 day	605,647,654,60	)7							
9	Provision Works) certification (Draft) Submit & endorse by PM and Statutory Authorities/Gov. Dept	90 days	0 days	90 days	0%	Mon 25/1/21	Sat 24/4/21	NA	NA	Tue 2/3/21	Sun 30/5/21	36 days 0.5 days	s 608,607	$\parallel \parallel \parallel$							
0	Prepare DDA for Observation Deck with Lift and Staircase and ICE (Include E&M	I 31 days	0 days	31 days	0%	Sun 25/4/21	Tue 25/5/21	NA	NA	Mon 31/5/21	Wed 30/6/21	36 days 1 day	609	$\parallel \parallel \parallel$							
1	Provision Works) certification (Final)  Submit & endorse by PM and Statutory Authorities/Gov. Dept	90 days	0 days	90 days	0%	Wed 26/5/21	Mon 23/8/21	NA	NA	Thu 1/7/21	Tue 28/9/21	36 days 2 days	610	$\parallel \parallel \parallel$							
2	Prepare AIP for Remaining Works at Waterfront Promenade and ICE (Include E&M Provision Works) certification (Draft)	51 days	0 days	51 days	0%	Mon 14/9/20	Tue 3/11/20	NA	NA	Sun 27/9/20	Mon 16/11/20	13 days 2 days		$\parallel \parallel \parallel$							
	E&M Provision Works) certification (Draft)																				
.3	Submit & endorse by PM and Statutory Authorities/Gov. Dept	75 days	0 days	75 days	0%	Wed 4/11/20	Sun 17/1/21	NA	NA	Tue 17/11/20	Sat 30/1/21	13 days 0.5 days	612								
4	Prepare AIP for Remaining Works at Waterfront Promenade and ICE (Include E&M Provision Works) certification (Final)	60 days	0 days	60 days	0%	Mon 18/1/21	Thu 18/3/21	NA	NA	Sun 31/1/21	Wed 31/3/21	13 days 2 days	612,613								
5	, , ,	75 days	0 dave	75 days	0%	Tue 2/2/21	Sat 17/4/21	NA	NA	Mon 15/2/21	Fri 30/4/21	13 days 1 day	612,614FF+30	$\parallel \parallel \parallel$							
	Prepare DDA for Remaining Works at Waterfront Promenade and ICE (Include E&M Provision Works) certification (Draft)	, J days	o days	, o days	0 70	1 00 212121	Out 11/4/21	1111	1111	171011 1314141	111 50/4/21	15 days 1 day	days								
5	Submit & endorse by PM and Statutory Authorities/Gov. Dept	60 days	0 days	60 days	0%	Sun 18/4/21	Wed 16/6/21	NA	NA	Sat 1/5/21	Tue 29/6/21	13 days 1 day	615	$\parallel \parallel \parallel$							
7	Prepare DDA for Remaining Works at Waterfront Promenade and ICE (Include E&M Provision Works) certification (Final)	31 days	0 days	31 days	0%	Thu 17/6/21	Sat 17/7/21	NA	NA	Wed 30/6/21	Fri 30/7/21	13 days 1 day	616,614FF+15	$\parallel \parallel \parallel$			iż				
													days								
.8	Submit & endorse by PM and Statutory Authorities/Gov. Dept	60 days	1	60 days	0%	Sun 18/7/21	Wed 15/9/21		NA	Sat 31/7/21	Tue 28/9/21	13 days 1 day	617								
.9	AIP for Cladding Design of Landscape Deck, Lifts and associated Works (Draft)	31 days	0 days	31 days	0%	Mon 20/7/20	Wed 19/8/20	NA	NA	Fri 21/8/20	Sun 20/9/20	32 days 1 day									
-				·													2000111001110		1111		
e· Rev 11	Prog with Progress Task	Summary			Inactive Mi	lestone $\Diamond$		Duration-or	nly		Start-only	С	Ex	ternal Milesto	ne <	<b>&gt;</b>	C	ritical Split			
		Project Sun	nmary		Inactive Sur	mmary		Manual Sur	nmary Rollup 🛮		Finish-only	3	De	adline	4		Pi	rogress			

							Cont	ract No. ED	/2018/01 K	TD Project										
Task	Name	Duration	Actual Duration	Remaining Duration	Physical % Complete	Early Start	Early Finish	Actual Start	Actual Finis	h Late Start	Late Finish	Total TRA Slack	Predecessors			01   02	2021		2022	02   5
)	Submit & endorse by PM and Statutory Authorities/Gov. Dept	63 days		63 days	0%	Thu 20/8/20	Wed 21/10/20	NA	NA	Mon 21/9/20	Sun 22/11/20	32 days 3 day	ys 619	Q2   C	Q3 Q4	Q1   Q2	Q3 Q4	Q1	Q2   (	Q3 Q4
l l	AIP for Cladding Design of Landscape Deck, Lifts and associated Works (Final)	52 days	0 days	52 days	0%	Thu 22/10/20	Sat 12/12/20	NA	NA	Mon 23/11/20	Wed 13/1/21	32 days 2 day	ys 619,620							
2	DDA for Cladding Design of Landscape Deck, Lifts and associated Works (Draft)	61 days	0 days	61 days	0%	Thu 12/11/20	Mon 11/1/21	NA	NA	Mon 14/12/20	Fri 12/2/21	32 days 1 day	v 619,621FF+	30		444				
3	Submit & endorse by PM and Statutory Authorities/Gov. Dept	60 days	_	60 days	0%	Tue 12/1/21	Fri 12/3/21		NA	Sat 13/2/21	Tue 13/4/21	32 days 1 day	days							
1														22						
	DDA for Cladding Design of Landscape Deck, Lifts and associated Works (Final)	21 days	-	21 days	0%	Sat 13/3/21		NA	NA	Wed 14/4/21	Tue 4/5/21	32 days 1 day		023						
5	Submit & endorse by PM and Statutory Authorities/Gov. Dept	62 days	0 days	62 days	0%	Sat 3/4/21		NA	NA	Wed 5/5/21	Mon 5/7/21	32 days 2 day								
5	AIP for Balustrade and Railing of Promenade, Open Space and Assocated Works (Draft)	30 days	0 days	30 days	0%	Sat 1/8/20	Sun 30/8/20	NA	NA	Tue 29/9/20	Wed 28/10/20	59 days 1 day	У							
7	Submit & endorse by PM and Statutory Authorities/Gov. Dept	60 days	0 days	60 days	0%	Mon 31/8/20	Thu 29/10/20	NA	NA	Thu 29/10/20	Sun 27/12/20	59 days 1 day	y 626							
3	AIP for Balustrade and Railing of Promenade, Open Space and Assocated Works (Final)	25 days	0 days	25 days	0%	Fri 30/10/20	Mon 23/11/20	NA	NA	Mon 28/12/20	Thu 21/1/21	59 days 0.5 d	lays 626,627							
)	DDA for Balustrade and Railing of Promenade, Open Space and Assocated Works (Draft)	50 days	0 days	50 days	0%	Wed 4/11/20	Wed 23/12/20	NA	NA	Sat 2/1/21	Sat 20/2/21	59 days 1 day	626,628FF+	30		<b>-</b>				
)	Submit & endorse by PM and Statutory Authorities/Gov. Dept	60 days	0 days	60 days	0%	Thu 24/12/20	Sun 21/2/21	NA	NA	Sun 21/2/21	Wed 21/4/21	59 days 0 day	ys 629			<b>*</b>				
I	DDA for Balustrade and Railing of Promenade, Open Space and Assocated Works	15 days	0 days	15 days	0%	Mon 22/2/21	Mon 8/3/21	NA	NA	Thu 22/4/21	Thu 6/5/21	59 days 1 day	y 628,629,630			<u> </u>				
2	(Final) Submit & endorse by PM and Statutory Authorities/Gov. Dept	60 days	0 days	60 days	0%	Tue 9/3/21	Fri 7/5/21	NA	NA	Fri 7/5/21	Mon 5/7/21	59 days 0 day	ys 631			<b>-</b>		,		
3	Prepare AIP for Permanent Building Works (i.e. Ampitheater, Observation Tower,	60 days	0 days	60 days	0%	Wed 29/7/20	Sat 26/9/20	NA	NA	Thu 20/8/20	Sun 18/10/20	22 days 1 day		ys						
	Toilet Block, Light Refreshment Kiosk, Refuse Collection Block, Back of House Building Blocks) and ICE certification (Draft)	, 3																		
	Submit & endorse by PM and Statutory Authorities/Gov. Dept	60 days	0 days	60 days	0%	Sun 27/9/20	Wed 25/11/20	NA	NA	Tue 3/11/20	Fri 1/1/21	37 days 0.5 d	lays 633			-				
	Prepare AIP for Permanent Building Works (i.e.Ampitheater, Observation Tower, Toilet Block, Light Refreshment Kiosk, Refuse Collection Block, Back of House Building Blocks) and ICE certification (Final)	30 days	0 days	30 days	0%	Thu 26/11/20	Fri 25/12/20	NA	NA	Sat 2/1/21	Sun 31/1/21	37 days 0 day	633,634							
	Prepare DDA for Permanent Building Works (i.e. Ampitheater, Observation Tower Toilet Block, Light Refreshment Kiosk, Refuse Collection Block, Back of House Building Blocks) and ICE certification (Draft)	, 100 days	0 days	100 days	0%	Fri 2/10/20	Sat 9/1/21	NA	NA	Sun 8/11/20	Mon 15/2/21	37 days 1 day	y 633,635FF+ days,151FF- days		*	<u> </u>				
	Submit & endorse by PM and Statutory Authorities/Gov. Dept	75 days	0 days	75 days	0%	Sun 10/1/21	Thu 25/3/21	NA	NA	Tue 16/2/21	Sat 1/5/21	37 days 0.5 d	lays 635,636							
	Prepare DDA for Permanent Building Works (i.e. Ampitheater, Observation Tower Toilet Block, Light Refreshment Kiosk, Refuse Collection Block, Back of House Building Blocks) nd ICE certification (Final)			30 days	0%	Fri 26/3/21	Sat 24/4/21		NA	Sun 2/5/21	Mon 31/5/21	37 days 0 day				X				
)	Submit & endorse by PM and Statutory Authorities/Gov. Dept	75 days	0 days	75 days	0%	Sun 25/4/21	Thu 8/7/21	NA	NA	Tue 1/6/21	Sat 14/8/21	37 days 0.5 d	lays 635,636,638							
)	Prepare AIP for Permanent Building E&M Works (i.e. Ampitheater, Observation	75 days			0%	Tue 14/7/20	Sat 26/9/20		NA	Wed 5/8/20	Sun 18/10/20	22 days 1 day			ЩШ					
	Tower, Toilet Block, Light Refreshment Kiosk, Refuse Collection Block, Back of House Building Blocks) and ICE certification (Draft)	75 days	0 days	75 days	076	Tue 14/1/20	Sat 20/9/20	NA	INA	Wed 3/6/20	Sull 16/10/20	zz days T day	y 149FF+7 ua	ys						
	Submit & endorse by PM and Statutory Authorities/Gov. Dept	60 days	0 days	60 days	0%	Sun 27/9/20	Wed 25/11/20	NA	NA	Mon 19/10/20	Thu 17/12/20	22 days 0.5 d	lays 640		<b>           </b>	~				
	Prepare AIP for Permanent Building E&M Works (i.e. Observation Tower, Toilet		0 days	30 days	0%	Thu 26/11/20	Fri 25/12/20	NA	NA	Fri 18/12/20	Sat 16/1/21	22 days 0 day	ys 640,641							
	Block, Light Refreshment Kiosk, Refuse Collection Block, Back of House Building Blocks) and ICE certification (Final)	3																		
3	Prepare DDA for Permanent Building E&M Works (i.e. Ampitheater, Observation Tower, Toilet Block, Light Refreshment Kiosk, Refuse Collection Block, Back of House Building Blocks) and ICE (Include E&M Provision Works) certification (Draft)	120 days	0 days	120 days	0%	Sun 27/9/20	Sun 24/1/21	NA	NA	Mon 19/10/20	Mon 15/2/21	22 days 1 day	640,642FF+ days,151FF- days		•	<u> </u>				
1	Submit & endorse by PM and Statutory Authorities/Gov. Dept	60 days		60 days	0%	Mon 25/1/21	Thu 25/3/21		NA	Tue 16/2/21	Fri 16/4/21	22 days 0.5 d								
	Prepare DDA for Permanent Building E&M Works (i.e. Ampitheater, Observation Tower, Toilet Block, Light Refreshment Kiosk, Refuse Collection Block, Back of House Building Blocks) nd ICE certification (Final)	30 days	0 days	30 days	0%	Fri 26/3/21	Sat 24/4/21	NA	NA	Sat 17/4/21	Sun 16/5/21	22 days 0 day	ys 644							
	Submit & endorse by PM and Statutory Authorities/Gov. Dept	90 days	0 days	90 days	0%	Sun 25/4/21	Fri 23/7/21	NA	NA	Mon 17/5/21	Sat 14/8/21	22 days 0.5 d	lays 642,643,645	$-\parallel \parallel \parallel \parallel$						
	Prepare AIP for Temporary Building Works (i.e. temporary management office and			75 days	0%	Mon 3/8/20	Fri 16/10/20		NA	Thu 20/8/20	Mon 2/11/20	17 days 1 day								
	toilet blocks) and ICE certification (Draft)	, o days	- aujo	, o aujo		1.1011 5/0/20	11.10/10/20	1		20/0/20	11201 24 1 1/20	i, aujo i daj	, 1171117 Ua	~						
	Submit & endorse by PM and Statutory Authorities/Gov. Dept	75 days	0 days	75 days	0%	Sat 17/10/20	Wed 30/12/20	NA	NA	Tue 3/11/20	Sat 16/1/21	17 days 0 day	ys 647							
	Prepare AIP for Temporary Building Works (i.e. temporary management office and toilet blocks) and ICE certification (Final)	30 days	0 days	30 days	0%	Thu 31/12/20	Fri 29/1/21	NA	NA	Sun 17/1/21	Mon 15/2/21	17 days 0 day	ys 633,634,648	,640						
	Prepare DDA for AIP for Temporary Building Works (i.e. temporary management office and toilet blocks) and ICE (Include E&M Provision Works) and ICE certification (Draft)	150 days	0 days	150 days	0%	Fri 2/10/20	Sun 28/2/21	NA	NA	Mon 19/10/20	Wed 17/3/21	17 days 1 day	633,640,649 days,151FF-							
	Submit & endorse by PM and Statutory Authorities/Gov. Dept	75 days	0 days	75 days	0%	Mon 1/3/21	Fri 14/5/21	NA	NA	Thu 18/3/21	Mon 31/5/21	17 days 0.5 d								
2	Prepare DDA for AIP for Temporary Building Works (i.e. temporary management office and toilet blocks) and ICE (Final)	30 days	0 days	30 days	0%	Sat 15/5/21	Sun 13/6/21	NA	NA	Tue 1/6/21	Wed 30/6/21	17 days 0 day	ys 651							
3	Submit & endorse by PM and Statutory Authorities/Gov. Dept	90 days	0 days	90 days	0%	Mon 14/6/21	Sat 11/9/21	NA	NA	Thu 1/7/21	Tue 28/9/21	17 days 0 day	ys 652							
e: Rev.11	i Prog with Progress	Summary			Inactive N			Duration-or	-		Start-only	Е		External Milesto	one <	·	Critical	-		
of 22-M	Split	Project Sur	nmary		Inactive S	ummary		Manual Su	mmary Rollup		Finish-only	3		Deadline	4	•	Progres	ess al Progress	_	



								ract No. ED/																		
Та	sk Name	Duration	Actual Duration	Remaining Duration	Physical % Complete	Early Start	Early Finish	Actual Start	Actual Finish	Late Start	Late Finish	Total Slack	TRA	Predecessors	2020 Q2   C	)3   Q4	Q1	2021 Q2   0		04 0		2022 2 Q3	3   Q4	O1	2023   Q2   Q	Q3   Q4
96	Section 6	0 days	0 days	0 days	0%	Thu 18/5/23	Thu 18/5/23	NA	NA	Tue 30/5/23	Tue 30/5/23	12 days	0 days	1357FF,1546FF,											18/5	<u> </u>
597	Section 7	0 days	0 days	0 days	0%	Wed 29/5/24	Wed 29/5/24	NA	NA	Wed 29/5/24	Wed 29/5/24	0 days	0 days	1549FF												
98	Section 8	0 days	0 days	0 days	0%	Wed 24/11/21	Wed 24/11/21	NA	NA	Thu 2/12/21	Thu 2/12/21	8 days	0 days	1144FF						<b>≪</b> -24/1 I						
599	Section 9	0 days	0 days	0 days	0%	Sat 3/7/21	Sat 3/7/21	NA	NA	Mon 5/7/21	Mon 5/7/21	2 days	0 days	1222				e i	3/7							
700	Section 10	0 days	0 days	0 days	0%	Thu 11/5/23	Thu 11/5/23	NA	NA	Tue 30/5/23	Tue 30/5/23	19 days	0 days	1559FF											11/5	
701	KD1	0 days	0 days	0 days	0%	Tue 11/8/20	Tue 11/8/20	NA	NA	Fri 7/8/20	Fri 7/8/20	-4 days	0 days	758		11/8										
702	KD2		0 days	0 days	0%	Sat 17/4/21	Sat 17/4/21	NA	NA	Sun 18/4/21	Sun 18/4/21		0 days	791,821,771,774				1794								
703	KD3		0 days	0 days	0%	Mon 26/4/21	Mon 26/4/21		NA	Tue 1/6/21	Tue 1/6/21	36 days		822,821												
704	KD4						Fri 28/1/22			Mon 31/1/22				1255FF				2014			200					
			0 days	0 days	0%	Fri 28/1/22			NA		Mon 31/1/22	3 days								1	28/1					
705	KD5		0 days	0 days	0%	Fri 25/6/21		NA	NA	Fri 17/9/21	Fri 17/9/21	84 days		1252FF				(4 <del>12</del>	<del>3/</del> 6							
706	KD6	0 days	0 days	0 days	0%	Tue 21/12/21	Tue 21/12/21	NA	NA	Wed 29/12/21	Wed 29/12/21	8 days	0 days	883						21	2					
07	KD7	0 days	0 days	0 days	0%	Thu 19/8/21	Thu 19/8/21	NA	NA	Fri 3/6/22	Fri 3/6/22	288 days	0 days	1254FF					<b>44 19/8</b>							
08 C	onstruction Works	1499 day	s 75.67 days	1423.33 days?	0%	Thu 16/5/19	Wed 29/5/24	Thu 16/5/19	NA	Thu 16/5/19	Wed 29/5/24	0 days?														
709	Procurement of Materials and Equipments	615 days	12.7 days	602.3 days	0%	Thu 8/8/19	Wed 1/9/21	Thu 8/8/19	NA	Thu 8/8/19	Tue 22/2/22	140 days	3						7							
10	Office Accommodation	21 days	21 days	0 days	100%	Thu 8/8/19	Fri 20/12/19	Thu 8/8/19	Fri 20/12/19	Thu 8/8/19	Fri 20/12/19	0 days	1 day													
711	Lift Submission Preparation	15 days	0 days	15 days	0%	Sat 12/9/20	Sat 26/9/20	NA	NA	Wed 23/9/20	Wed 7/10/20	11 days	0.5 days	173												
12	Lift Comment & Approval	21 days	0 days	21 days	0%	Sun 27/9/20	Sat 17/10/20	NA	NA	Thu 8/10/20	Wed 28/10/20	11 days	0.5 days	711												
713	Lifts ((5 nos)	180 days		180 days	0%	Sun 18/10/20	Thu 15/4/21	NA	NA	Thu 29/10/20	Mon 26/4/21		30 days													
714	Pumps for Pump Room next to Underpass	150 days		150 days	0%	Sat 23/5/20	Thu 19/11/20		NA	Wed 8/7/20	Tue 5/1/21	37 days		112												
15	Elevated landscape deck soffit panels	120 days		120 days	0%	Mon 14/9/20		NA	NA	Thu 4/2/21	Mon 5/7/21	117 days														
16	Underpass & Depressed Rd - facades	120 days	0 days	120 days	0%	Tue 1/12/20	Thu 29/4/21	NA	NA	Wed 12/5/21	Mon 4/10/21	129 days	30 days													
17	E & M equipment & fittings (for Open space & Promenade)	120 days	0 days	120 days	0%	Tue 6/4/21	Fri 27/8/21	NA	NA	Mon 27/9/21	Tue 22/2/22	144 days	30 days													
718	Bridge Parapet Fabrication	120 days	0 days	120 days	0%	Mon 16/11/20	Mon 15/3/21	NA	NA	Wed 26/5/21	Wed 22/9/21	191 days	30 days													
19	Pumps for Salt and Sewage Pumping Stations	150 days	0 days	150 days	0%	Mon 5/4/21	Wed 1/9/21	NA	NA	Sun 19/9/21	Tue 15/2/22	167 days	30 days						-							
20	Excavation Permit	300 days	0 days	300 days	0%	Mon 31/8/20	Thu 2/9/21	NA	NA	Mon 23/11/20	Tue 1/3/22	69 days							7							
721	TTA Application for Junction Modification Rd L6 & D2	182 days	0 days	182 days	0%	Tue 1/9/20	Mon 1/3/21	NA	NA	Mon 23/11/20	Sun 23/5/21	83 days	2 days													
22	Interfaced DCS 3 x DN150mm chilled water pipes under contract no. 2852EM17A and 4 nos. of signaling cable along North Approach Ramp and Gate 3B (Agreed)	368 days	0 days	368 days	0%	Mon 31/8/20	Thu 2/9/21	NA	NA	Sat 27/2/21	Tue 1/3/22	180 days	3 day													
23	Section 1	842 days	107.17 days	734.83 days	0%	Thu 16/5/19	Mon 14/3/22	Thu 16/5/19	NA	Thu 16/5/19	Wed 29/5/24	657 days	3													
24	Agree Interface Coordination Plan with CKR & KTSP	14 days	14 days	0 days	100%	Tue 27/8/19	Wed 11/9/19	Tue 27/8/19	Wed 11/9/19	Tue 27/8/19	Wed 11/9/19	0 days	0 days	1225,1226												
25	Ground Investigation	341 days	193.02 days	147.98 days	0%	Thu 12/9/19	Thu 5/11/20	Thu 12/9/19	NA	Thu 12/9/19	Sat 13/8/22	526 days	3	_												
26	GI Work		180 days	138 days	57%	Thu 12/9/19		Thu 12/9/19		Thu 12/9/19	Sat 13/8/22		0.5 days	724												
27	Part 1 - Junction Modification Rd L6 & D2	414 days		414 days	0%	Mon 5/10/20	Fri 25/2/22		NA	Mon 23/11/20		3 days	ois days	,2,												
			_										1 1													
28	XP Application for Junction Modification Rd L6 & D2	182 days		182 days	0%	Mon 5/10/20		NA	NA	Mon 23/11/20		49 days														
29	Stage 1: Trial Pit to locate the existing underground cables and utilities	14 days	0 days	14 days	0%	Thu 20/5/21	Fri 4/6/21	NA	NA	Mon 24/5/21	Tue 8/6/21	3 days	1 day	141,375,721,728												
30	Stage 2: Trial Pit to locate the existing underground cables and utilities	14 days	0 days	14 days	0%	Sat 5/6/21	Tue 22/6/21	NA	NA	Wed 9/6/21	Fri 25/6/21	3 days	1 day	729				1								
31	Stage 3: East Bound + Drop Kerb Modification + Road Marking	76 days	0 days	76 days	0%	Wed 23/6/21	Mon 20/9/21	NA	NA	Sat 26/6/21	Fri 24/9/21	3 days	1 day	730												
32	Stage 4: TTA for Central Divider	76 days	0 days	76 days	0%	Tue 21/9/21	Tue 21/12/21	NA	NA	Sat 25/9/21	Fri 24/12/21	3 days	1 day	731,113												
733	Stage 5: Construct 2 Dividers	51 days	0 days	51 days	0%	Wed 22/12/21	Fri 25/2/22	NA	NA	Tue 28/12/21	Tue 1/3/22	3 days	1 day	732												
34	Bridge D3 (Approach Ramp and Bridge) CH1087-1444.7	812 days	91.74 days	720.26 days	0%	Thu 16/5/19	Mon 7/2/22	Thu 16/5/19	NA	Mon 11/11/19	Wed 29/5/24	687 days	3								411 17					
35	North Approach Ramp	636 days	66.85 days	569.15 days	0%	Wed 25/12/19	Fri 18/2/22	Wed 25/12/19	NA	Wed 25/12/19	Tue 1/3/22	9 days		_	+ + + + + + + + + + + + + + + + + + +											
36	Procurement of Movement Joints for Bridge Works	180 days		180 days	0%	Tue 11/8/20	Sat 6/2/21	NA	NA	Fri 9/10/20	Tue 6/4/21		30 days	194,220		-										
37	Sheetpile Driven along North, Sourth & East Side ELS Cofferdam (assume 169	4 days		0 days	100%	Tue 14/1/20	Fri 17/1/20	Tue 14/1/20		Tue 14/1/20	Fri 17/1/20	0 days														
738	long)  KTSP Completed Driven H-pile Installation				100%					Wed 25/12/19			- Luy													
			41 days	0 days		Wed 25/12/19					Mon 3/2/20	0 days	0.5.1	720												
739	Hoarding Removal along KTSP Site	5 days	5 days	0 days	100%	Tue 4/2/20	Sat 8/2/20	Tue 4/2/20	Sat 8/2/20	Tue 4/2/20	Sat 8/2/20	0 days	0.5 day	/58												
	T. 1	C			<b>-</b>	Glasta C		ъ	1		0			-	1110					10 "						
	.11 Prog with Progress	Summary Project Sum	ımary		Inactive M Inactive Su			Duration-on  Manual Sun	ly 📗 nmary Rollup 🕳		Start-only Finish-only		]	Externa Deadlia	al Milestoi ne	ne 🔷				cal Split ress						
s of 22-	May-20 Milestone ◆	Inactive Tas			Manual Ta			Manual Sun			External Tas	alen.		Critica		_				ual Progre						

							Con	tract No. ED,	/2018/01 KT	D Project										 	
Task Nam	2	Duration	n Actual Duration	Remaining Duration	Physical % Complete	Early Start	Early Finish	Actual Start	Actual Finish	Late Start	Late Finish	Total Slack	TRA	Predecessors	2020	Q3   Q4	2021 O1   O2   O3   O	04 01	2022 Q2   Q3	 Q1   Q2	2023
740	Sheetpile Driven along Western ELS Cofferdam (assume 105m long)	8 days	8 days	0 days	100%	Tue 11/2/20	Wed 19/2/20	Tue 11/2/20	Wed 19/2/20	Tue 11/2/20	Wed 19/2/20	0 days	0.5 day	737,739	1 1	2 24		( VI	¥± 1 Q3	V1   V2	
741	Excavattion with Shoring and Waling Installation with Rock Fill Replacement include Sand Raplacemnet Test with PWRL for KD1	44 days	44 days	0 days	100%	Thu 20/2/20	Wed 15/4/20	Thu 20/2/20	Wed 15/4/20	Thu 20/2/20	Wed 15/4/20	0 days	1 day			,					
742	Remaining Excavation with Shoring and Waling Installation with Rock Fill Replacement include Sand Raplacement Test with PWRL	37 days	0 days	37 days	0%	Tue 6/10/20	Wed 18/11/20	) NA	NA	Tue 13/10/20	Wed 25/11/20	6 days	2 days	741,761							
743	North Approach Ramp (Bays No.2,3,4&5) (Next to BEM) (KD1)	106 day	s 34.01 days	71.99 days	0%	Wed 1/4/20	Tue 11/8/20	Wed 1/4/20	NA	Wed 1/4/20	Fri 7/8/20	-3 days			<del></del>	ı					ĺ
744	Bay No.3 Base Slab with Blinding (1)+(2)	15 days	15 days	0 days	100%	Wed 1/4/20	Wed 22/4/20	Wed 1/4/20	Wed 22/4/20	Wed 1/4/20	Wed 22/4/20	0 days	0.5 days	741SS+35 day	'S						
745	Bay No.3: Wall & Column with Soffit (upto +4.6mPD) (include Wall Former	er) 42 days	22 days	20 days	45%	Wed 22/4/20	Thu 11/6/20	Wed 22/4/20	NA	Wed 22/4/20	Thu 11/6/20	-3 days		744							
746	May 2020 Inclement Weather	3 days	0 days	3 days	0%	Fri 12/6/20	Mon 15/6/20	NA	NA	Tue 9/6/20	Thu 11/6/20	-3 days		745,74SS	-						
47	Bay No. 3: Wall & Column Casted and Formwork & Falsework upto Soffit of	of 15 days	0 days	15 days	0%	Tue 16/6/20	Sat 4/7/20	NA	NA	Fri 12/6/20	Tue 30/6/20	-3 days	1 day	745,746							
748	Top Slab(6)+(7)  Bay No. 3: Top Slab Construction with Formwork & Falsework Erection(8)	12 days	0 days	12 days	0%	Mon 6/7/20	Sat 18/7/20	NA	NA	Thu 2/7/20	Wed 15/7/20	-3 days	1 day	747							
749	Bay No.2 Base Slab with Blinding (1)+(2)	11 days	11 days	0 days	100%	Tue 28/4/20	Tue 12/5/20	Tue 28/4/20	Tue 12/5/20	Tue 28/4/20	Tue 12/5/20	0 days	1 day	741FS+2 days	$- \frac{1}{4} $						
750	Bay No.2: Wall & Column with Soffit (upto +4.6mPD) (include Wall Forme			17 days	25%	Sat 16/5/20		Sat 16/5/20	NA	Sat 16/5/20	Thu 11/6/20	-1 day	1 day	749							ı
751	(3)+(4)+(5)  Bay No. 2: Wall & Column Casted and Formwork & Falsework upto Soffit of	,		18 days	0%	Fri 12/6/20	Sat 4/7/20	NA	NA	Thu 11/6/20	Fri 3/7/20	-1 day		750							ı
752	Top Slab (6)+(7)  Bay No. 2: Top Slab Construction with Formwork & Falsework Erection(8)				0%	Wed 8/7/20	Tue 21/7/20		NA NA	Sat 4/7/20			1 day	751,748FF+2							
	, , , , , , , , , , , , , , , , , , ,			12 days							Fri 17/7/20	-3 days		days							
753	Bay No.4 Base Slab with Blinding (1)+(2)		15 days	0 days	100%	Wed 1/4/20	Wed 13/5/20		Wed 13/5/20		Wed 13/5/20	0 days	1 day	741SS+35 day							
754	Bay No.4: Wall & Column with Soffit (upto +4.6mPD) (include Wall Forme (3)+(4)+(5)			14 days	36%	Thu 14/5/20	Tue 9/6/20	Thu 14/5/20		Thu 14/5/20	Tue 9/6/20	-3 days	1 day	753,750SS+7 days							
755	Bay No. 4: Wall & Column Casted and Formwork & Falsework upto Soffit of Top Slab (6)+(7)	of 20 days	0 days	20 days	0%	Wed 10/6/20	Sat 4/7/20	NA	NA	Sat 6/6/20	Tue 30/6/20	-3 days	1 day	754							
756	Bay No. 4: Top Slab Construction with Formwork & Falsework Erection (8)	14 days	0 days	14 days	0%	Mon 6/7/20	Tue 21/7/20	NA	NA	Thu 2/7/20	Fri 17/7/20	-3 days	1 day	755,751SS+4 days							
757	Backfill (9)	12 days	0 days	12 days	0%	Wed 22/7/20	Tue 4/8/20	NA	NA	Sat 18/7/20	Fri 31/7/20	-3 days	0.5 days	756,752,748							
758	Sheetpile Extraction and Road Reinstatement (10) (KD1)	6 days	0 days	6 days	0%	Wed 5/8/20	Tue 11/8/20	NA	NA	Sat 1/8/20	Fri 7/8/20	-3 days	0.5 days	757		*					ĺ
759	North Approach Ramp (Bays No.5 & 6) (Next to BEM)	92 days	0 days	92 days	0%	Mon 24/8/20	Mon 23/11/20	0 NA	NA	Thu 27/8/20	Thu 17/12/20	3 days									
760	Bay No.5 Base Slab with Blinding (1+2)	8 days	0 days	8 days	0%	Thu 10/9/20	Fri 18/9/20	NA	NA	Mon 14/9/20	Tue 22/9/20	3 days	1 day	749,753SS+4	da	-					1
761	Bay No.5: Wall & Column with Soffit (upto +4.6mPD) (include Wall Former	er) 12 days	0 days	12 days	0%	Sat 19/9/20	Mon 5/10/20	NA	NA	Wed 23/9/20	Thu 8/10/20	3 days	1 day	760		K					ı
762	(3+4+5)  Bay No. 5: Wall & Column Casted and Formwork & Falsework upto Soffit of	of 20 days	0 days	20 days	0%	Tue 6/10/20	Thu 29/10/20	NA	NA	Fri 9/10/20	Mon 2/11/20	3 days	1 day	761,755SS+4							
763	Top Slab (6)+(7)  Bay No. 5: Top Slab Construction with Formwork & Falsework Erection &	12 days	0 days	12 days	0%	Fri 30/10/20	Thu 12/11/20	NA	NA	Tue 3/11/20	Mon 16/11/20	3 days	1 day	days 762,227FF							
764	Removal (8)  Bay No.6 Base Slab with Blinding (1)+(2)	15 days	0 days	15 days	0%	Mon 24/8/20	Wed 9/9/20	NA	NA	Thu 27/8/20	Sat 12/9/20	3 days	1 day	741SS+35 day	'S						ĺ
765	Bay No.6: Wall & Column with Soffit (upto +4.6mPD) (include Wall Forme			17 days	0%	Thu 10/9/20	Tue 29/9/20		NA	Wed 7/10/20	Tue 27/10/20	1		764	_						1
766	(3)+(4)+(5)  Bay No. 6: Wall & Column Casted and Formwork & Falsework upto Soffit of			27 days	0%	Wed 30/9/20	Tue 3/11/20		NA	Wed 28/10/20	Fri 27/11/20	21 days		765							1
767	Top Slab(6)+(7)						Mon 23/11/20														
	Bay No. 6: Top Slab Construction with Formwork & Falsework Erection & Removal (8)			17 days	0%	Wed 4/11/20			NA	Sat 28/11/20	Thu 17/12/20		1 day	765,766							1
768	North Approach Ramp (Bays 7&8) (Next to BEM)		0 days	56 days	0%	Tue 26/1/21	Wed 7/4/21		NA	Tue 26/1/21	Sat 17/4/21	0 days									1
769	Bay 7: Blinding	1 day	0 days	1 day	0%	Tue 26/1/21	Tue 26/1/21	NA	NA	Tue 26/1/21	Tue 26/1/21	0 days	0.5 days	816,767			<u> </u>				
770	Bay 7: Base slab	9 days	0 days	9 days	0%	Wed 27/1/21		NA	NA	Wed 27/1/21	Fri 5/2/21	0 days	1 day	816,769							
771	Bay 7: Wall	13 days	0 days	13 days	0%	Sat 6/2/21	Wed 24/2/21	NA	NA	Wed 31/3/21	Sat 17/4/21	42 days	1 day	819,770							
772	Bay 8: Blinding	1 day	0 days	1 day	0%	Wed 27/1/21	Wed 27/1/21	NA	NA	Fri 5/2/21	Fri 5/2/21	8 days	0.5 days	769							
773	Bay 8: Base slab	9 days	0 days	9 days	0%	Sat 6/2/21	Fri 19/2/21	NA	NA	Sat 6/2/21	Fri 19/2/21	0 days	1 day	816,770,772			<b>K</b>				
774	Bay 8: Wall	13 days	0 days	13 days	0%	Sat 20/2/21	Sat 6/3/21	NA	NA	Sat 20/2/21	Sat 6/3/21	0 days	1 day	773,819	$\parallel \parallel \parallel$						
775	Bays No.7&8: Backfilling	15 days	0 days	15 days	0%	Mon 8/3/21	Wed 24/3/21	NA	NA	Thu 18/3/21	Wed 7/4/21	9 days	1 day	774,767	$\parallel \parallel \parallel$						
776	Bays No.7&8: Extract Sheetpile	9 days	0 days	9 days	0%	Thu 25/3/21	Wed 7/4/21	NA	NA	Thu 8/4/21	Sat 17/4/21	9 days	0.5 days	775	$\parallel \parallel \parallel$						
777	North Approach Ramp (Bays No.2,3,4) (Next to KTSP)	149 day	s 0 days	149 days	0%	Mon 17/8/20	Tue 12/1/21	NA	NA	Tue 25/8/20	Fri 5/2/21	8 days			$\parallel \parallel \parallel$						
778	Bay No.3 Base Slab with Blinding (1)+(2)		0 days	15 days	0%	Mon 24/8/20	Wed 9/9/20		NA	Tue 1/9/20	Thu 17/9/20	7 days	1 day		$\parallel \parallel \parallel$						
779	Bay No.3: Wall & Column with Soffit (upto +4.6mPD) (include Wall Forme			17 days	0%	Thu 10/9/20	Tue 29/9/20		NA	Wed 7/10/20	Tue 27/10/20	21 days		778	$\parallel \parallel \parallel$						
780	(3)+(4)+(5)  Bay No. 3: Wall & Column Casted and Formwork & Falsework upto Soffit of			27 days	0%	Wed 30/9/20	Tue 3/11/20		NA	Wed 7/10/20 Wed 28/10/20		21 days		779	$\parallel \parallel \parallel$						
	Top Slab(6)+(7)																				
781	Bay No. 3: Top Slab Construction with Formwork & Falsework Erection & Removal (8)			17 days	0%	Wed 4/11/20	Mon 23/11/20		NA	Sat 28/11/20	Thu 17/12/20			779,780							
782	Bay No.2 Base Slab with Blinding (1)+(2)		0 days	15 days	0%	Mon 17/8/20	Wed 2/9/20		NA	Tue 25/8/20		7 days		778FS-21 days							
783	Bay No.2: Wall & Column with Soffit (upto +4.6mPD) (include Wall Forme (3)+(4)+(5)	er) 17 days	0 days	17 days	0%	Thu 3/9/20	Tue 22/9/20	NA	NA	Wed 7/10/20	Tue 27/10/20	27 days	1 day	782							
itle: Rev.11 Pro	og with Progress	Summary			Inactive M	ilestone $\Diamond$		Duration-or			Start-only		Е		xternal Milesto			ical Split	1111	 	
s of 22-May-2	Split	Project Sur	mmary		Inactive Su	ımmary 🏻		Manual Sur	mmary Rollup 🔳		Finish-only		3	D	eadline	1	Prog	gress	_	 _	

									/2018/01 KT											
Task Name		Duration	n Actual Duration	Remaining Duration	Physical % Complete	Early Start	Early Finish	Actual Start	Actual Finish	Late Start	Late Finish	Total Slack	TRA	Predecessors	2020 Q2   Q3	04 01	2021   Q2   Q	3   04   0	2022 1   Q2   Q3	Q4 Q1
34	Bay No. 2: Wall & Column Casted and Formwork & Falsework upto Soffit of Top Slab(6)+(7)	27 days		27 days	0%	Wed 23/9/20	Tue 27/10/20	NA	NA	Wed 28/10/20	Fri 27/11/20	27 days	1 day	783	X. 1 X.	Z-   Q1			¥2   V3	
35	Bay No. 2: Top Slab Construction with Formwork & Falsework Erection & Removal (8)	17 days	0 days	17 days	0%	Wed 28/10/20	Mon 16/11/20	NA	NA	Sat 28/11/20	Thu 17/12/20	27 days	1 day	783,784						
36	Bay No.4 Base Slab with Blinding (1)+(2)	15 days	0 days	15 days	0%	Tue 18/8/20	Thu 3/9/20	NA	NA	Wed 26/8/20	Fri 11/9/20	7 days	1 day	782SS+1 day						
37	Bay No.4: Wall & Column with Soffit (upto +4.6mPD) (include Wall Former	) 17 days	0 days	17 days	0%	Fri 4/9/20	Wed 23/9/20	NA	NA	Sat 12/9/20	Sat 3/10/20	7 days	1 day	786						
38	(3)+(4)+(5) Bay No. 4: Wall & Column Casted and Formwork & Falsework upto Soffit of	27 days	0 days	27 days	0%	Thu 24/9/20	Wed 28/10/20	NA	NA	Mon 5/10/20	Thu 5/11/20		1 day	787						
39	Top Slab(6)+(7) Bay No. 4: Top Slab Construction with Formwork & Falsework Erection &			17 days	0%	Thu 29/10/20			NA	Fri 6/11/20	Wed 25/11/20		1 day	787,788						
90	Removal (8)												-	, , , , , , , , , , , , , , , , , , ,						
	Bay No.2,3&4: Backfilling upto +3.0mPD	28 days	-	28 days	0%	Tue 24/11/20	Mon 28/12/20		NA	Fri 18/12/20	Fri 22/1/21	21 days		789,785,781,767						
91	Bay No.4: Sheetpile Extraction (KD2)	12 days	0 days	12 days	0%	Tue 29/12/20			NA	Sat 23/1/21	Fri 5/2/21	21 days	0.5 days	790						
	North Approach Ramp (Bays No.5,6) (Next to KTSP)	141 days	s 0 days	141 days	0%	Wed 18/11/20	Wed 7/4/21	NA	NA	Thu 26/11/20	Sat 10/4/21	3 days					<del>-</del> 1			
13	Bay No.5 Base Slab with Blinding (1)+(2)	15 days	0 days	15 days	0%	Mon 23/11/20	Wed 9/12/20	NA	NA	Thu 26/11/20	Sat 12/12/20	3 days	1 day	741SS+35 days,		14				
94	Bay No.5: Wall & Column with Soffit (upto +4.6mPD) (include Wall Former (3)+(4)+(5)	17 days	0 days	17 days	0%	Thu 10/12/20	Thu 31/12/20	NA	NA	Mon 14/12/20	Tue 5/1/21	3 days	1 day	793						
95	Bay No. 5: Wall & Column Casted and Formwork & Falsework upto Soffit of	27 days	0 days	27 days	0%	Sat 2/1/21	Tue 2/2/21	NA	NA	Wed 6/1/21	Fri 5/2/21	3 days	1 day	794						
96	Top Slab(6)+(7) Bay No. 5: Top Slab Construction with Formwork & Falsework Erection &	17 days	0 days	17 days	0%	Wed 3/2/21	Thu 25/2/21	NA	NA	Sat 6/2/21	Mon 1/3/21	3 days	1 day	794,795,791						
97	Removal (8) Bay No.6 Base Slab with Blinding (1)+(2)	15 days	0 days	15 days	0%	Wed 18/11/20	Fri 4/12/20	NA	NA	Thu 26/11/20	Sat 12/12/20	7 days	1 day	789						
98	Bay No.6: Wall & Column with Soffit (upto +4.6mPD) (include Wall Former			17 days	0%	Sat 5/12/20	Thu 24/12/20		NA	Mon 14/12/20	Tue 5/1/21		1 day	797						
99	(3)+(4)+(5)  Bay No. 6: Wall & Column Casted and Formwork & Falsework upto Soffit of		-	27 days	0%	Mon 28/12/20			NA	Wed 6/1/21	Fri 5/2/21		1 day	798						
	Top Slab(6)+(7)																			
00	Bay No. 6: Top Slab Construction with Formwork & Falsework Erection & Removal (8)		-	17 days	0%	Fri 29/1/21	Sat 20/2/21		NA	Sat 6/2/21	Mon 1/3/21		1 day	798,799						
01	Bay No.5&6: Backfilling upto +3.0mPD	26 days	0 days	26 days	0%	Fri 26/2/21	Sat 27/3/21	NA	NA	Tue 2/3/21	Wed 31/3/21	3 days	1 day	790,800,796						
)2	Bay No.5&6: Sheetpile Extraction (KD2)	6 days	0 days	6 days	0%	Mon 29/3/21	Wed 7/4/21	NA	NA	Thu 1/4/21	Sat 10/4/21	3 days	0.5 days	801,791			4			
)3	North Approach Ramp (Bays 7&8) (Next to KTSP)	79 days	0 days	79 days	0%	Fri 29/1/21	Sat 17/4/21	NA	NA	Thu 11/2/21	Sat 17/4/21	0 days								
)4	Bay 7: Base slab	9 days	0 days	9 days	0%	Fri 29/1/21	Mon 8/2/21	NA	NA	Thu 11/2/21	Wed 24/2/21	11 days	0.5 days	816,799						
)5	Bay 7: Wall	12 days	0 days	12 days	0%	Mon 8/3/21	Sat 20/3/21	NA	NA	Mon 8/3/21	Sat 20/3/21	0 days	1 day	804,819,774			<b>F</b>			
5	Bay 8: Base slab	9 days	0 days	9 days	0%	Tue 9/2/21	Mon 22/2/21	NA	NA	Thu 25/2/21	Sat 6/3/21	11 days	0.5 days	804,816						
7	Bay 8: Wall	12 days	0 days	12 days	0%	Tue 23/2/21	Mon 8/3/21	NA	NA	Mon 8/3/21	Sat 20/3/21	11 days	1 day	806,819						
3	Bays No.7&8: Backfilling	15 days		15 days	0%	Mon 22/3/21		NA	NA	Mon 22/3/21	Sat 10/4/21		1 day	807,805						
9													-							
	Bays No.7&8: Extract Sheetpile		0 days	6 days	0%	Mon 12/4/21	Sat 17/4/21		NA	Mon 12/4/21	Sat 17/4/21		1 day	808,801,802						
	Furniture	77 days		77 days	0%	Mon 19/4/21	Wed 21/7/21		NA	Thu 23/9/21	Tue 14/12/21			718						
.1	CH1087-1189: Parapet (28m per day per team) x 1 team + 6 day concreting	23 days	0 days	23 days	0%	Mon 19/4/21	Sat 15/5/21		NA	Thu 23/9/21	Thu 21/10/21	130 days	2 day	809,776,821			1			
12	CH1087-1189: Central Median and Utilties Trough (6m per day per team) x 1 team	25 days	0 days	25 days	0%	Thu 27/5/21	Fri 25/6/21	NA	NA	Fri 22/10/21	Fri 19/11/21	122 days	1 day	811,236						
13	CH1087-1189: Road Furniture	21 days	0 days	21 days	0%	Sat 26/6/21	Wed 21/7/21	NA	NA	Sat 20/11/21	Tue 14/12/21	122 days	3 days	812,358						
14	North Approach Ramp: Bay No. 1	135 days	s 0 days	135 days	0%	Fri 14/8/20	Mon 25/1/21	NA	NA	Fri 14/8/20	Mon 25/1/21	0 days								
15	Bay 1: Base slab	27 days	0 days	27 days	0%	Fri 14/8/20	Mon 14/9/20	NA	NA	Fri 14/8/20	Mon 14/9/20	0 days	0.5 days	834						
16	Bay 1: Wall	83 days	0 days	83 days	0%	Fri 16/10/20	Mon 25/1/21	NA	NA	Fri 16/10/20	Mon 25/1/21	0 days	3 days	819	$  \cdot   \cdot   \top   \cdot  $					
17	Part 3G - CH1189.4 to CH1229 North Abutment	180 days	s 0 days	180 days	0%	Tue 15/9/20	Mon 26/4/21	NA	NA	Tue 15/9/20	Mon 26/4/21	0 days								
18	North Abutment	180 days		180 days	0%	Tue 15/9/20	Mon 26/4/21	NA	NA	Tue 15/9/20	Mon 26/4/21	0 days								
19	North Abutment - Base Slab	25 days		25 days	0%	Tue 15/9/20	Thu 15/10/20		NA	Tue 15/9/20	Thu 15/10/20		1 day	815						
20																III L				
	North Abutment Wall (3.85m thk)	37 days		37 days	0%	Tue 26/1/21	Fri 12/3/21		NA	Tue 26/1/21	Fri 12/3/21		-	816						
21	North Abutment Wall (0.5m thk) (KD2) (KD3)	28 days		28 days	0%	Sat 13/3/21	Sat 17/4/21		NA	Sat 13/3/21	Sat 17/4/21			820			<b>-</b> [1]			
22	Install bridge bearing	7 days	0 days	7 days	0%	Mon 19/4/21	Mon 26/4/21		NA	Mon 19/4/21	Mon 26/4/21	0 days	0.5 days	821,736						
23	At Grade Road Works CH1000-2124	157 days	s 0 days	157 days	0%	Tue 10/8/21	Fri 18/2/22	NA	NA	Thu 4/11/21	Tue 1/3/22	9 days								
4	CH1000-1087 At grade road works	60 days	0 days	60 days	0%	Tue 10/8/21	Thu 21/10/21	NA	NA	Wed 15/12/21	Tue 1/3/22	106 days	1 day	776,809,332,341						
5	CH1444.7-1560 At grade road works	45 days	0 days	45 days	0%	Wed 22/12/21	Fri 18/2/22	NA	NA	Wed 5/1/22	Tue 1/3/22	9 days	1 day	1293,826,219						
26	Ch2050 to 2124: At grade road works	50 days	0 days	50 days	0%	Mon 25/10/21	Tue 21/12/21	NA	NA	Thu 4/11/21	Tue 4/1/22	9 days	1 day	1438,219						
27 Brid	lge D3 Bored Pile	17 days	17 days	0 days	0%	Tue 19/11/19	Thu 5/12/19	Tue 19/11/19	Thu 5/12/19	Tue 19/11/19	Thu 5/12/19	0 days								
28	Pre-drilling Works		15 days	0 days	100%	Tue 19/11/19	Thu 5/12/19	Tue 19/11/19	Thu 5/12/19	Tue 19/11/19	Thu 5/12/19	0 days	0.5 day							
	-		-													<u> </u>			<u> </u>	
e: Rev.11 Prog	with Progress	Summary Project Sur	nmarv		Inactive M Inactive Su	_		Duration-on  Manual Sun	lly nmary Rollup <b>=</b>		Start-only Finish-only		[ ]	Extern Deadli	al Milestone ne	•		Critical Split Progress		
of 22-May-20		Inactive Ta		-	Manual Ta			Manual Sun			External Tasi		_	Critica		<u> </u>		Manual Progre		

								tract No. ED/															
Task Na	ame	Duration	n Actual Duration	Remaining Duration	Physical % Complete	Early Start	Early Finish	Actual Start	Actual Finish	Late Start	Late Finish	Total Slack	TRA	Predecessors	2020 Q2   Q3	04	202 1   Q2		01	2022 Q2   C	03   04	01   (	2023 Q2   Q3
29	Part 3C - CH1229 to CH1279	823 day	s? 137.51 days	685.49 days?	0%	Thu 16/5/19	Sat 19/2/22	Thu 16/5/19	NA	Mon 11/11/19	Wed 29/5/24	676 da											
30	Abutment A01 Piling	0 days	0 days	0 days	0%	Thu 16/5/19	Thu 16/5/19	NA	NA	Wed 29/5/24	Wed 29/5/24	1841 d											
331	CH1189: Bored Pile (A01-BP1) by Rig 1(Contractor Bear DDA Approval Risk)	61 days	40 days	21 days	66%	Tue 31/3/20	Tue 16/6/20	Tue 31/3/20	NA	Tue 31/3/20	Tue 16/6/20	0 days	1 day	839									
832	CH1189: Bored Pile (A01-BP2) by Rig 1 (Contractor Bear DDA Approval Risk	29 days	29 days	0 days	100%	Mon 13/4/20	Tue 19/5/20	Mon 13/4/20	Tue 19/5/20	Mon 13/4/20	Tue 19/5/20	0 days	1 day										
833	Abutment A01: Pile Testing (28d curing & 14 test) - 1 full-core to be carried out	t 37 days	0 days	37 days	0%	Wed 17/6/20	Fri 31/7/20	NA	NA	Wed 17/6/20	Fri 31/7/20	0 days	5 days	831,832									
834	Abutment A01: Proof-drilling Works	11 days	0 days	11 days	0%	Sat 1/8/20	Thu 13/8/20	NA	NA	Sat 1/8/20	Thu 13/8/20	0 days	2 day	833									
835	Mobilization of plant and material	6 days	6 days	0 days	100%	Mon 11/11/19	Sat 16/11/19	Mon 11/11/19	Sat 16/11/19	Mon 11/11/19	Sat 16/11/19	0 days	1 days	14,194,193									
336	CH1229: Pre-drilling Works	21 days	21 days	0 days	100%	Tue 19/11/19	Thu 12/12/19	Tue 19/11/19	Thu 12/12/19	Tue 19/11/19	Thu 12/12/19	0 days	0.5 days										
337	Pier P01 Piling, Pilecap & Pier	0 days	0 days	0 days	0%	Thu 16/5/19	Thu 16/5/19	NA	NA	Wed 29/5/24	Wed 29/5/24	1841 d											
338	Bored pile (P01-BP2) @ CH1229 by Rig 1 (Contractor Bear DDA Approval	44 days	44 days	0 days	100%	Fri 17/1/20	Wed 11/3/20	Fri 17/1/20	Wed 11/3/20	Fri 17/1/20	Wed 11/3/20	0 days	0.5 days										
339	Risk) Bored pile (P01-BP1) @ CH1229 by Rig 1 (Contractor Bear DDA Approval	38 days	38 days	0 days	100%	Mon 24/2/20	Wed 8/4/20	Mon 24/2/20	Wed 8/4/20	Mon 24/2/20	Wed 8/4/20	0 days	0.5 days	838SS+30 days		_							
40	Risk) Pier P01: Pile Testing (18d curing & 14 test)	45 days	0 days	45 days	0%	Sat 23/5/20	Thu 16/7/20	NA	NA	Mon 6/7/20	Wed 26/8/20	35 days	3 days	839		_							
341	Pier P01: Proof-drilling Works	10 days	0 days	10 days	0%	Fri 17/7/20	Tue 28/7/20	NA	NA	Thu 27/8/20	Mon 7/9/20	35 days	1 day	839,840									
342	Pile Cap P01 @ CH1229	98 days	0 days	98 days	0%	Mon 15/6/20	Sun 11/10/20	NA	NA	Sat 29/8/20	Fri 13/11/20	28 days				-							
343	Excavation with Shoring Installation ~2600m3 Prod. Rate: 160m3/day/team	17 days	0 days	17 days	0%	Wed 29/7/20	Mon 17/8/20	NA	NA	Tue 8/9/20	Sat 26/9/20	35 days	1 day	841									
844	Pilecap - Formwork Design and Method Statement Submission		0 days	0 days	0%	Mon 15/6/20	Mon 15/6/20		NA	Sat 29/8/20	Sat 29/8/20	75 days	-		<b>♦</b> 15/6								
845	Pilecap - Formwork Design and Method Statement Comment & Appraoval		0 days	30 days	0%	Mon 15/6/20	Tue 14/7/20		NA	Sat 29/8/20	Sun 27/9/20	75 days		844									
846	Pilecap structure		0 days	24 days	0%	Tue 18/8/20	Mon 14/9/20			Mon 28/9/20	Wed 28/10/20			845,843		z							
347	Backfill		0 days	14 days	0%	Tue 15/9/20	Wed 30/9/20		NA	Thu 29/10/20	Fri 13/11/20	35 days	-	846									
348	Pier - Formwork Design and Method Statement Submission		0 days	0 days	0%	Mon 7/9/20	Mon 7/9/20		NA NA	Sat 10/10/20	Sat 10/10/20	33 days	-			7/0							
349	Pier - Formwork Design and Method Statement Comment & Appraoval	35 days		35 days	0%	Mon 7/9/20	Sun 11/10/20		NA	Sat 10/10/20	Fri 13/11/20	33 days	-	848		111							
50	Pier P01 @ CH1229			49 days	0%	Wed 28/10/20			NA NA	Sat 14/11/20	Wed 13/1/21	15 days		847,211,849									
351	CH1269: Pre-drilling Works		0 days	_	0%	Wed 20/11/19				Wed 20/11/19	Thu 19/12/19			835,836									
352			30 days	0 days										ŕ									
	Abandon the Installed defected Bored pile (P02-BP2) @ CH1269		35 days	0 days	100%	Tue 11/2/20		Tue 11/2/20			Sun 22/3/20		0.5 days	851									
353	Pier P02 Piling, Pilecap & Pier			1 day?	0%	Thu 16/5/19	Thu 16/5/19		NA	Wed 29/5/24	Wed 29/5/24	1840 d											
354	Predrilling works for Bored pile (P02-BP2)(Abandoned) @ CH1269		0 days	11 days	0%	Wed 3/6/20	Mon 15/6/20		NA	Tue 9/6/20	Sat 20/6/20		0.5 days										
355	Casing Extraction for Abandoned P02-BP2 Bored Pile		0 days	20 days	0%	Sat 20/6/20	Wed 15/7/20		NA	Mon 22/6/20	Thu 16/7/20		•	854									
356	Bored pile (P02-BP2)(Remedial) @ CH1269		0 days	30 days	0%	Thu 16/7/20	Wed 19/8/20		NA	Fri 17/7/20	Thu 20/8/20			855,854									
357	Bored pile (P02-BP1) @ CH1269 (Contractor Bear DDA Approval Risk) (Rig 2	2) 26 days	26 days	0 days	100%	Fri 21/2/20	Sat 18/4/20			Fri 21/2/20	Sat 18/4/20		0.5 days										
358	Pile Testing (18d curing & 14 test)	32 days	0 days	32 days	0%	Thu 20/8/20	Fri 25/9/20	NA	NA	Wed 2/9/20	Sat 10/10/20	11 days	0.5 days	852,857,856									
359	Proof-drilling Works	9 days	0 days	9 days	0%	Sat 26/9/20	Thu 8/10/20	NA	NA	Mon 12/10/20	Wed 21/10/20			839,840,858									
860	Pile Cap ELS - Temp. Works Design and Method Statement Submission	0 days	0 days	0 days	0%	Mon 29/6/20	Mon 29/6/20	NA	NA	Tue 22/9/20	Tue 22/9/20	85 days	1 day		<b>♦</b> 29	6							
861	Pile Cap ELS - Temp. Works Design and Method Statement Comment & Appraoval	30 days	0 days	30 days	0%	Mon 29/6/20	Tue 28/7/20	NA	NA	Tue 22/9/20	Wed 21/10/20	85 days	1 day	860		<del></del>							
362	Pile Cap P02 @ CH1270	120 day	s 0 days	120 days	0%	Mon 24/8/20	Sat 16/1/21	NA	NA	Thu 22/10/20	Fri 29/1/21	11 days											
363	Drive sheetpile (~75m). Prod. Rate: 5m/day/side/team	17 days	0 days	17 days	0%	Fri 9/10/20	Thu 29/10/20	NA	NA	Thu 22/10/20	Wed 11/11/20	11 days	2 days	861,858,140,859	j								
64	Excavation ~1677m3 & lateral support. Prod. Rate: 100m3/day/team	18 days	0 days	18 days	0%	Fri 30/10/20	Thu 19/11/20	NA	NA	Thu 12/11/20	Wed 2/12/20	11 days	1 days	863									
365	Pilecap Formwork Design and Method Statement Submission	0 days	0 days	0 days	0%	Mon 24/8/20	Mon 24/8/20	NA	NA	Thu 12/11/20	Thu 12/11/20	80 days	1 day			24/8							
366	Pilecap Formwork - Design and Method Statement Comment & Appraoval	21 days	0 days	21 days	0%	Mon 24/8/20	Sun 13/9/20	NA	NA	Thu 12/11/20	Wed 2/12/20	80 days	1 day	865									
367	Pilecap structure	36 days	0 days	36 days	0%	Fri 20/11/20	Mon 4/1/21	NA	NA	Thu 3/12/20	Sat 16/1/21	11 days	1 day	866,864,863		<b>*</b>							
368	Backfill and extract sheet pile	11 days	0 days	11 days	0%	Tue 5/1/21	Sat 16/1/21	NA	NA	Mon 18/1/21	Fri 29/1/21	11 days	2 day	867									
369	Pier - Temp. Works Design and Method Statement Submission	0 days	0 days	0 days	0%	Mon 7/9/20	Mon 7/9/20	NA	NA	Thu 31/12/20	Thu 31/12/20	115 days	1 day			7/9							
370	Pier - Temp. Works Design and Method Statement Comment & Appraoval	30 days	0 days	30 days	0%	Mon 7/9/20	Tue 6/10/20	NA	NA	Thu 31/12/20	Fri 29/1/21	115 days	1 day	869		<b>*</b>							
371	Pier P02 @ CH1270	49 days	0 days	49 days	0%	Mon 18/1/21	Thu 18/3/21	NA	NA	Sat 30/1/21	Wed 31/3/21	11 days	1 day	868,211,870									
872	Stage 1: Bridge deck between CH1229-1311	340 day	s 0 days	340 days	0%	Mon 2/11/20	Tue 21/12/21	NA	NA	Tue 19/1/21	Wed 29/12/21	5 days							-				
873	Bridge Deck - Temp. Works Design and Method Statement Submission		0 days	0 days	0%	Mon 2/11/20	Mon 2/11/20		NA	Tue 19/1/21	Tue 19/1/21	78 days	1 day			<b>4</b> 2/11							
				<u> </u>																			<u>II</u>
	Prog with Progress Task Split	Summary Project Sur	mmary		Inactive Mi Inactive Sur			Duration-on  Manual Sur	nly IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII		Start-only Finish-only	ا	[ ]		ernal Milestono dline	: ♦ <b>↓</b>		Critical Progres		-			
s of 22-May	y-20 Milestone ◆	Inactive Ta			Manual Tas			Manual Sur			External Tas			Crit					l Progress	_			

Task Name		ъ .	A . •	ъ	D1 1 1 1 1	n	n	4 . 10	A	1 7 . 0	T . TO	m . 1	D.4	1	020				$\overline{}$		000			2025	
Task Name		Duration	Actual Duration	Remaining Duration	Physical % Complete	Early Start	Early Finish	Actual Start	Actual Finis	h Late Start	Late Finish	Total T Slack	RA P		020   Q3   Q	4 Q1	202   Q2	l Q3   Q4	4 O1		2022   Q3	Q4	Q1   (	2023 Q2   Q3	Q4
74	Bridge Deck - Temp. Works Design and Method Statement Comment & Appraoval	35 days	0 days	35 days	0%	Mon 2/11/20	Sun 6/12/20	NA	NA	Tue 19/1/21	Mon 22/2/21	78 days 1	day 8'												
375	CH1229-1311: Deck Falsework erection Part 1	32 days	0 days	32 days	0%	Tue 23/2/21	Wed 31/3/21	NA	NA	Tue 23/2/21	Wed 31/3/21	0 days 1	day 8	74,922			<b>         </b>								
876	CH1229-1311: Deck Falsework erection Part 2	28 days	0 days	28 days	0%	Thu 1/4/21	Fri 7/5/21	NA	NA	Thu 1/4/21	Fri 7/5/21	0 days 3	days 8	75,871			<b>***</b>								
877	CH1229-1311: Structure deck	50 days	0 days	50 days	0%	Wed 7/4/21	Sat 5/6/21	NA	NA	Wed 7/4/21	Sat 5/6/21	0 days 2	day 4	75,483,736,875											
878	CH1229-1311: Prestressing	18 days	0 days	18 days	0%	Thu 24/6/21	Thu 15/7/21	NA	NA	Thu 24/6/21	Thu 15/7/21	0 days 0.	5 day 8'	77FS+14 days											
879	CH1229-1311: Falsework Under Main Deck Removal	12 days	0 days	12 days	0%	Fri 16/7/21	Thu 29/7/21	NA	NA	Fri 16/7/21	Thu 29/7/21	0 days 0.	5 day 8'	78											
880	CH1229-1311: Utility Trough (0.67m per day per team) x 4 team	70 days	0 days	70 days	0%	Fri 16/7/21	Thu 7/10/21	NA	NA	Thu 22/7/21	Wed 13/10/21	5 days 9	days 2	19,878											
381	CH1229-1311: Central Median (6m per day per team) x 2 team	31 days	0 days	31 days	0%	Fri 16/7/21	Fri 20/8/21	NA	NA	Sat 2/10/21	Mon 8/11/21	65 days 3	days 8'	78										1	
382	CH1229-1311: Parapet (28m per day per team) x 2 team + 6x2 day concreting			21 days	0%	Fri 8/10/21	Tue 2/11/21	NA	NA	Fri 15/10/21	Mon 8/11/21	5 days 3	days 8	80				H.						1	
83	CH1229-1311: Removal of Falsework (KD6)	42 days		42 days	0%	Wed 3/11/21	Tue 21/12/21		NA	Tue 9/11/21	Wed 29/12/21		•	80,882,881										1	
384	CH1229-1311: Road Furniture	15 days		15 days	0%	Sat 21/8/21		NA	NA	Sat 27/11/21	Tue 14/12/21	81 days 1		81,358										1	
													uay o	51,536										1	
385	Part 3D - CH1279 to CH1311	196 days		196 days	0%	Mon 7/6/21	Sat 29/1/22		NA	Wed 16/6/21	Fri 11/2/22	7 days												1	
386	Stage 1: Bridge deck between CH1269-1311	196 days		196 days	0%	Mon 7/6/21	Sat 29/1/22		NA	Wed 16/6/21	Fri 11/2/22	7 days												1	
387	CH1269-1311: Structure deck	50 days	0 days	50 days	0%	Mon 7/6/21	Thu 5/8/21	NA	NA	Wed 16/6/21	Fri 13/8/21	7 days 2		75,483,736,877											
388	Prestressing CH1269 - 1311 Bridge Spans	21 days	0 days	21 days	0%	Mon 23/8/21	Wed 15/9/21	NA	NA	Tue 31/8/21	Fri 24/9/21	7 days 3	day 8	87FS+14 days											
889	CH1269-1311: Utility Trough (0.67m per day per team) x 2 team	64 days	0 days	64 days	0%	Thu 16/9/21	Thu 2/12/21	NA	NA	Sat 25/9/21	Fri 10/12/21	7 days 0.	5 day 8	88,219											
90	CH1269-1311: Parapet (28m per day per team) x 1 team + 6 day concreting	17 days	0 days	17 days	0%	Fri 3/12/21	Wed 22/12/2	1 NA	NA	Sat 11/12/21	Mon 3/1/22	7 days 3	days 8	89											
91	CH1269-1311 : Central Median (6m per day per team) x 1 team	15 days	0 days	15 days	0%	Thu 23/12/21	Wed 12/1/22	NA	NA	Wed 5/1/22	Fri 21/1/22	8 days 1	day 8	89,890											
392	CH1269-1311: Road Furniture	15 days	0 days	15 days	0%	Thu 13/1/22	Sat 29/1/22	NA	NA	Sat 22/1/22	Fri 11/2/22	8 days 1	day 89	91,358						#					
393	Stage2: Bridge deck between CH1189-1229	823 days	?0 days	823 days?	0%	Thu 16/5/19	Sat 19/2/22	NA	NA	Tue 27/4/21	Wed 29/5/24	579 da		<del></del>											
394	CH1189-1229: Deck Falsework erection	1 day?	0 days	1 day?	0%	Thu 16/5/19	Thu 16/5/19	NA	NA	Wed 29/5/24	Wed 29/5/24	1840 d													
95	CH1189-1229: Deck Falsework erection	22 days	0 days	22 days	0%	Tue 27/4/21	Mon 24/5/21	NA	NA	Tue 27/4/21	Mon 24/5/21	0 days 1	day 8:	50,822											
396	CH1189-1229: Structure deck	27 days		27 days	0%	Tue 25/5/21	Fri 25/6/21		NA	Tue 25/5/21	Fri 25/6/21	0 days 2	-	95,475,483											
397	CH1189-1229: Prestressing	18 days		18 days	0%	Wed 14/7/21		NA	NA	Wed 14/7/21	Tue 3/8/21			96FS+14 days											
98	CH1189-1229: Falsework Under Main Deck Removal				0%																				
		15 days		15 days		Wed 4/8/21	Fri 20/8/21		NA	Wed 4/8/21	Fri 20/8/21	-		78,897											
399	CH1189-1229: Utility Trough (0.67m per day per team) x 2 team	63 days	_	63 days	0%	Wed 4/8/21	Tue 19/10/21		NA	Wed 13/10/21	Tue 28/12/21	58 days 3		19,897											
00	CH1189-1229: Central Median (6m per day per team) x 1 team	16 days		16 days	0%	Sat 21/8/21	Wed 8/9/21		NA	Fri 21/1/22	Fri 11/2/22	125 days 3		97,881											
901	CH1189-1229 : Parapet (28m per day per team) x 1 team + 6 day concreting	20 days	0 days	20 days	0%	Wed 3/11/21	Thu 25/11/21		NA	Mon 17/1/22	Fri 11/2/22	61 days 5	-	99,882				П						1	
902	CH1189-1229: Road Furniture	15 days	0 days	15 days	0%	Mon 31/1/22	Sat 19/2/22	NA	NA	Sat 12/2/22	Tue 1/3/22	8 days 1	day 9	00,892,358,901					111-					1	
903 Pa	rt 3E - CH1311 to CH1372	652 days	94.1 days	557.9 days	0%	Tue 12/11/19	Fri 21/1/22	Tue 12/11/19	NA	Tue 12/11/19	Wed 29/5/24	698 days												1	
904	Pre-drilling Works	31 days	31 days	0 days	0%	Tue 12/11/19	Tue 17/12/19	Tue 12/11/19	Tue 17/12/19	9 Tue 12/11/19	Tue 17/12/19	0 days 0.	5 day											1	
905	Bored pile (P03-BP1) @ CH1311 (Rig 2) (Contractor Bear DDA Design Risk)	40 days	40 days	0 days	100%	Tue 17/3/20	Fri 8/5/20	Tue 17/3/20	Fri 8/5/20	Tue 17/3/20	Fri 8/5/20	0 days 0.	5 day 9	04											
906	Bored pile (P03-BP2) @ CH1311 (Contractor Bear DDA Design Risk) (Rig 2)	36 days	25 days	11 days	69%	Wed 22/4/20	Thu 4/6/20	Wed 22/4/20	NA	Wed 22/4/20	Thu 4/6/20	0 days 3	day												
907	Pile Testing (18 curing & 14 test)	35 days	0 days	35 days	0%	Sat 6/6/20	Sat 18/7/20	NA	NA	Sat 6/6/20	Sat 18/7/20	0 days 3	day 9	06FS+1 day,90.											
908	Proof-drilling Works	11 days	0 days	11 days	0%	Mon 20/7/20	Fri 31/7/20	NA	NA	Mon 20/7/20	Fri 31/7/20	0 days 2	days 9	07											
909	Pile Cap P03 @ CH1311	76 days		76 days	0%	Tue 7/7/20	Mon 5/10/20	NA	NA	Fri 31/7/20	Wed 29/5/24	21 days			<b> </b>										
910	Pile Cap @ CH1311 by Open Cut	46 days		46 days	0%	Sat 1/8/20	Wed 23/9/20	NA	NA	Wed 28/10/20	Sat 19/12/20	72 days	9(	08											
911	Pilecap Formwork Design and Method Statement Submission	0 days		0 days	0%	Tue 7/7/20	Tue 7/7/20		NA	Tue 30/4/24	Tue 30/4/24		day		777										
912	Pilecap Formwork Design and Method Statement Comment & Appraoval	30 days		30 days	0%	Tue 7/7/20	Wed 5/8/20		NA	Tue 30/4/24	Wed 29/5/24	days		11											
913		17 days	_		0%	Sat 1/8/20	Thu 20/8/20		NA	Sat 1/8/20	Thu 20/8/20	days													
				17 days										00											
914	Pilecap Formwork - design and Method Statement Submission	0 days		0 days	0%	Mon 20/7/20	Mon 20/7/20		NA	Fri 31/7/20	Fri 31/7/20	11 days 1			2017										
915		21 days		21 days	0%	Mon 20/7/20	Sun 9/8/20		NA	Fri 31/7/20	Thu 20/8/20	11 days 1		14											
916	Pilecap structure	24 days		24 days	0%	Fri 21/8/20	Thu 17/9/20		NA	Fri 21/8/20	Thu 17/9/20	0 days 1	day 9	15,908,913											
917	Backfill	13 days	0 days	13 days	0%	Fri 18/9/20	Mon 5/10/20	NA	NA	Fri 18/9/20	Mon 5/10/20	0 days 1	day 9	16											
918	Agree Interface Coordination Plan with CKP-KTW (HY/2014/07)	14 days	0 days	14 days	0%	Tue 6/10/20	Wed 21/10/20	) NA	NA	Tue 6/10/20	Wed 21/10/20	0 days 0	days 9	17		21/10									
	Task S	Summary			Inactive N	filestone $\Diamond$	-	Duration-on	ly		Start-only	Е		External M	ilestone	*	1 1 1 1 1 1 1 1 1	Critica	cal Split	шттіш	<u></u>			11111	
10. Roy 11 Dros						_		- 11	D 11			_		- ·				D							
tle: Rev.11 Prog s of 22-May-20	Split Split	Project Sum Inactive Tas			Inactive S  Manual Ta			Manual Sun  Manual Sun	nmary Rollup		Finish-only  External Task	]	l	Deadline Critical		*		Progre	ress 1al Progress						

									/2018/01 KT											
Task Nam	е	Duration	n Actual Duration	Remaining Duration	Physical % Complete	Early Start	Early Finish	Actual Start	Actual Finish	Late Start	Late Finish	Total Slack	TRA	Predecessors	2020	)3   Q4   Q1	2021	Q3   Q4	Q1   Q2   Q	
19	Allow access to CKR-KTW contractor for sheet pile wall installation. PS App.1.18 2.7(A)(c)	60 days		60 days	0%	Thu 22/10/20	Sun 20/12/20	NA	NA	Thu 22/10/20	Sun 20/12/20		0 days	917,918						
20	Pier - Temp. Works Design and Method Statement Submission	0 days	0 days	0 days	0%	Mon 12/10/20	Mon 12/10/20	NA	NA	Mon 16/11/20	Mon 16/11/20	35 days	1 day			<b>♦</b> 12/16				
1	Pier - Temp. Works Design and Method Statement Comment & Approval	35 days	0 days	35 days	0%	Mon 12/10/20	Sun 15/11/20	NA	NA	Mon 16/11/20	Sun 20/12/20	35 days	1 day	920						
22	Pier P03 @ CH1311	49 days	0 days	49 days	0%	Mon 21/12/20	Mon 22/2/21	NA	NA	Mon 21/12/20	Mon 22/2/21	0 days	1 day	916,919,850SS+				11		
23	Pre-drilling Works	15 days	15 days	0 days	100%	Wed 4/12/19	Wed 18/12/19	Wed 4/12/19	Wed 18/12/	. Wed 4/12/19	Wed 18/12/19	0 days	0.5 days		1111					
24	Diversion of existing 150mm dia. Watermain (agreed)	54 days	42 days	12 days	78%	Sat 28/3/20	Fri 5/6/20	Sat 28/3/20	NA	Sat 28/3/20	Sat 14/11/20	134 days	2 days							
25	Bored pile (P04-BP2) @ CH1351 (Rig 2)	52 days		51 days	0%	Fri 22/5/20	Wed 21/10/20	Fri 22/5/20	NA	Fri 22/5/20	Tue 19/1/21	73 days		923,856						
26	Bored pile (P04-BP1) @ CH1351 (Rig 2)		0 days	53 days	0%	Tue 11/8/20	Tue 13/10/20		NA	Mon 16/11/20	Tue 19/1/21	80 days		202,924,923,925						
7											Thu 4/3/21			926,925						
18	Pile Testing (14d curing & 14 test)		0 days	35 days	0%	Thu 22/10/20			NA	Wed 20/1/21		73 days	1	· 1						
	Proof-drilling Works	11 days		11 days	0%	Thu 3/12/20	Tue 15/12/20		NA	Fri 5/3/21	Wed 17/3/21	73 days	2 days	927						
29	Pile Cap P04 @ CH1351 with ELS	47 days	0 days	47 days	0%	Wed 16/12/20	Thu 11/2/21	NA	NA	Thu 1/4/21	Mon 31/5/21	85 days		933SS,928						
80	Pile Cap @ CH1351	97 days	0 days	97 days	0%	Mon 2/11/20	Mon 1/3/21	NA	NA	Tue 16/2/21	Mon 31/5/21	73 days								
31	Pilecap ELS- Design and Method Statement Submission	0 days	0 days	0 days	0%	Mon 2/11/20	Mon 2/11/20	NA	NA	Tue 16/2/21	Tue 16/2/21	106 days	1 day			<b>◆</b> 2/11				
32	Pilecap ELS - Design and Method Statement Comment & Appraoval	30 days	0 days	30 days	0%	Mon 2/11/20	Tue 1/12/20	NA	NA	Tue 16/2/21	Wed 17/3/21	106 days	1 day	931						
33	Drive sheetpile (~75m). Prod. Rate: 10m/day/side/team	10 days	0 days	10 days	0%	Wed 16/12/20	Tue 29/12/20	NA	NA	Thu 18/3/21	Mon 29/3/21	73 days	2 days	932,928						
34	Excavation with Shoring Installation ~2600m3 Prod. Rate: 160m3/day/team	19 days	0 days	19 days	0%	Wed 30/12/20	Thu 21/1/21	NA	NA	Tue 30/3/21	Fri 23/4/21	73 days	2 day	933						
35	Pilecap Formwork- Design and Method Statement Submission	0 days	0 days	0 days	0%	Tue 1/12/20	Tue 1/12/20	NA	NA	Thu 25/3/21	Thu 25/3/21	114 days	1 day			<b>♦</b> 1/12				
6	Pilecap Formworks - Design and Method Statement Comment & Appraoval	30 days	0 days	30 days	0%	Tue 1/12/20	Wed 30/12/20	NA	NA	Thu 25/3/21	Fri 23/4/21	114 days	1 day	935						
7	Pile Cap structure	19 days	0 days	19 days	0%	Fri 22/1/21	Tue 16/2/21	NA	NA	Sat 24/4/21	Mon 17/5/21	73 days	1 day	846,936,934						
8	Backfill and extract sheet pile	11 days		11 days	0%	Wed 17/2/21	Mon 1/3/21		NA	Tue 18/5/21	Mon 31/5/21	73 days		937						
9	Pier - Temporary Design and Method Statement Submission		0 days	0 days	0%	Mon 4/1/21	Mon 4/1/21		NA	Sun 2/5/21	Sun 2/5/21	118 days	-	)31						
0														020						
	Pier - Temporary Design and Method Statement Comment & Appraoval	30 days		30 days	0%	Mon 4/1/21		NA	NA	Sun 2/5/21	Mon 31/5/21	118 days	-	939						
	Pier P04 @ CH1351		0 days	49 days	0%	Tue 2/3/21		NA	NA	Tue 1/6/21	Thu 29/7/21	73 days		938,922,211,940				÷-		
	Stage 3: Bridge deck between CH1311-1351	145 days	s 0 days	145 days	0%	Fri 30/7/21	Fri 21/1/22	NA	NA	Fri 30/7/21	Sat 29/1/22	0 days	1 day					D	**1	
	CH1311-1351: Deck Falsework erection	21 days	0 days	21 days	0%	Fri 30/7/21	Mon 23/8/21	NA	NA	Fri 30/7/21	Mon 23/8/21	0 days	3 days	941,922,879				4		
	CH1311-1351: Structure deck	30 days	0 days	30 days	0%	Tue 24/8/21	Tue 28/9/21	NA	NA	Tue 24/8/21	Tue 28/9/21	0 days	5 days	475,483,736,896						
	CH1311-1351: Prestressing	21 days	0 days	21 days	0%	Mon 18/10/21	Wed 10/11/21	NA	NA	Mon 18/10/21	Wed 10/11/21	0 days	3 days	944FS+14 days,8				<b>  T</b>		
6	CH1311-1351: Utility Trough (0.67m per day per team) x 4 team	30 days	0 days	30 days	0%	Thu 11/11/21	Wed 15/12/21	NA	NA	Fri 26/11/21	Mon 3/1/22	13 days	0.5 day	219,880,945				1		
7	CH1311-1351: Central Median (6m per day per team) x 2 team	15 days	0 days	15 days	0%	Thu 11/11/21	Sat 27/11/21	NA	NA	Wed 5/1/22	Fri 21/1/22	44 days	3 days	945				<b>.</b>	<b>-</b> ,	
8	CH1311-1351: Parapet (28m per day per team) x 2 team + 6 day concreting	16 days	0 days	16 days	0%	Thu 23/12/21	Thu 13/1/22	NA	NA	Tue 4/1/22	Fri 21/1/22	7 days	1 day	945,888,890,946						
19	CH1311-1351: Road Furniture	7 days	0 days	7 days	0%	Fri 14/1/22	Fri 21/1/22	NA	NA	Sat 22/1/22	Sat 29/1/22	7 days	1 day	947,358,948						
50	Part 1 - CH1372 to CH1386	149 days	s 0 days	149 days	0%	Mon 23/8/21	Tue 22/2/22	NA	NA	Mon 23/8/21	Tue 1/3/22	0 days								
51	Bridge deck between CH1351-1386	149 day:		149 days	0%	Mon 23/8/21	Tue 22/2/22	NA	NA	Mon 23/8/21	Tue 1/3/22	0 days								
52	CH1351-1386: Deck Falsework erection	22 days		22 days	0%	Mon 23/8/21	Thu 16/9/21		NA	Mon 23/8/21	Thu 16/9/21	0 days	4 days	941,922,898FS+						
53	CH1351-1366: Structure deck	30 days		30 days	0%	Fri 17/9/21	Mon 25/10/21		NA	Fri 17/9/21	Mon 25/10/21	-		952,736,976						
5	CH1351-1386: Prestressing	14 days		14 days	0%		Fri 26/11/21		NA	Thu 11/11/21	Fri 26/11/21	0 days		953FS+14 days,9						
	CH1351 - CH1386: Utility Trough (0.67m per day per team) x 4 team		0 days	30 days	0%	Sat 27/11/21	Tue 4/1/22		NA	Sat 27/11/21	Tue 4/1/22	-	_	219,954						
56	CH1351 - CH1386: Central Median (6m per day per team) x 1 team		0 days	15 days	0%	Sat 27/11/21	Tue 14/12/21		NA	Sat 27/11/21	Tue 14/12/21			954						
57	CH1351 - CH1386: Parapet (28m per day per team) x 1 team + 6 day concreting	20 days	0 days	20 days	0%	Wed 5/1/22	Thu 27/1/22		NA	Wed 12/1/22	Mon 7/2/22	6 days	4 days	955						
8	CH1351-1386 Falsework removal	19 days	0 days	19 days	0%	Fri 28/1/22	Tue 22/2/22	NA	NA	Tue 8/2/22	Tue 1/3/22	6 days	1 day	955,957						
9	CH1351 - CH1386: Road Furniture (Section 1)	8 days	0 days	8 days	0%	Fri 28/1/22	Wed 9/2/22	NA	NA	Mon 14/2/22	Tue 22/2/22	11 days	2 day	956,358,957						
60	Part 1 - CH1386 to CH1394 South Abutment	352 days	s 0 days	352 days	0%	Fri 3/7/20	Sat 4/9/21	NA	NA	Sat 25/7/20	Thu 16/9/21	10 days						-		
51	Bored Pile (A02-BP2) @ CH1386 by Rig 1	42 days	0 days	42 days	0%	Fri 3/7/20	Thu 20/8/20	NA	NA	Sat 25/7/20	Fri 11/9/20	19 days	3 days	831FS+12 days						
52	Bored Pile (A02-BP1) @ CH1386 by Rig 1	63 days	0 days	63 days	0%	Tue 28/7/20	Sat 10/10/20	NA	NA	Wed 19/8/20	Tue 3/11/20	19 days	3 days	202FF,961FF+42						
53	Pile Testing		0 days	35 days	0%	Mon 12/10/20	Sat 21/11/20	NA	NA	Wed 4/11/20	Mon 14/12/20	19 days	4 days	962						
	-																			<u> </u>
	og with Progress Split	Summary Project Sur	nmarv		Inactive M	_		Duration-or  Manual Sur	nly    mmary Rollup		Start-only Finish-only		C 3	Exter Dead	nal Milesto line	ne 🔷		Critical S Progress		
of 22-May-2	20 Milestone ◆	Inactive Ta		-	Manual Ta			Manual Sur			External Task	l <sub>ro</sub>	-	Critic				Manual F		

								tract No. ED													
Task N	Name	Duration	n Actual Duration	Remaining Duration	Physical % Complete	Early Start	Early Finish	Actual Start	Actual Finisl	Late Start	Late Finish	Total Slack	TRA		2020   Q3	04 01	2021   Q2   Q	3 04	2022 Q1   Q2   Q3	Q4   Q1   Q2	2023
964	Proof-drilling Works	11 days	0 days	11 days	0%	Mon 23/11/20	Fri 4/12/20	NA	NA	Tue 2/2/21	Wed 17/2/21	58 days	2 days	963	1 (3)	Z+   Q1	Q2	J Q4	Q1   Q2   Q3	V+ Q1 Q2	<u> </u>
965	South Abutment	166 day	s 0 days	166 days	0%	Wed 3/2/21	Thu 26/8/21	NA	NA	Thu 18/2/21	Tue 7/9/21	10 days		968SS,964		<b>3</b>		h			
966	South Abutment ELS- Design and Method Statement Submission	0 days	0 days	0 days	0%	Mon 4/1/21	Mon 4/1/21	NA	NA	Tue 19/1/21	Tue 19/1/21	15 days	1 day			4/1					
967	South Abutment ELS - Design and Method Statement Comment & Appraoval	30 davs	0 days	30 days	0%	Mon 4/1/21	Tue 2/2/21	NA	NA	Tue 19/1/21	Wed 17/2/21	15 days	1 day	966							
968	Drive sheetpile (~900m) Prod. Rate: 10m/d/team		0 days	11 days	0%	Wed 3/2/21	Thu 18/2/21		NA	Thu 18/2/21	Tue 2/3/21	10 days		964,967,980							
																	.				
969	Excavation ~1,344m3 & lateral support. Prod. Rate: 160m3/day/team	11 days	0 days	11 days	0%	Fri 19/2/21	Wed 3/3/21		NA	Mon 22/3/21	Tue 6/4/21	26 days		968							
970	Blinding layer	1 day	0 days	1 day	0%	Thu 4/3/21	Thu 4/3/21		NA	Wed 7/4/21	Wed 7/4/21	26 days	0 days	969							
971	South Abutment Formwork- Design and Method Statement Submission	0 days	0 days	0 days	0%	Mon 21/12/20	Mon 21/12/2	0 NA	NA	Tue 9/3/21	Tue 9/3/21	78 days	1 day			<b>◆</b> 21/1	2				
972	South Abutment Formwork - Design and Method Statement Comment & Appraoval	30 days	0 days	30 days	0%	Mon 21/12/20	Tue 19/1/21	NA	NA	Tue 9/3/21	Wed 7/4/21	78 days	1 day	971							
973	Base Slab	36 days	0 days	36 days	0%	Wed 17/3/21	Fri 30/4/21	NA	NA	Thu 8/4/21	Fri 21/5/21	16 days	2 days	970,972,986							
974	Wall (3.85m thk). Prod. Rate: 18d/bay/team	39 days	0 days	39 days	0%	Mon 3/5/21	Fri 18/6/21	NA	NA	Sat 22/5/21	Thu 8/7/21	16 days	3 days	973							
975	Wall (0.5m thk)	52 days	0 days	52 days	0%	Sat 19/6/21	Thu 19/8/21	NA	NA	Fri 9/7/21	Tue 7/9/21	16 days	2 days	974							
976	Install bridge bearing	8 days	0 days	8 days	0%	Fri 27/8/21	Sat 4/9/21	NA	NA	Wed 8/9/21	Thu 16/9/21	10 days	1 day	975,736,822,965				4			
977	South Approach Ramp - CH1394-1444.7 - Total 8 bays (4 bay/side)	259 day	s 0 days	259 days	0%	Mon 21/9/20	Fri 6/8/21	NA	NA	Sun 15/11/20	Sat 4/12/21	45 days									
978	South Approach Ramp ELS - Temp. Works Design and Method Statement		0 days	0 days	0%	Mon 21/9/20	Mon 21/9/20		NA	Sun 15/11/20	Sun 15/11/20		1 dav			21/9					
979	Submission  South Approach Ramp ELS - Temp. Works Design and Method Statement		0 days	30 days	0%	Mon 21/9/20	Tue 20/10/20		NA	Sun 15/11/20	Mon 14/12/20			978							
	Comment & Approval																				
980	Drive sheetpile (~240m) Prod. Rate: 10m/d/team		0 days	26 days	0%	Mon 23/11/20			NA	Tue 15/12/20	Sat 16/1/21	19 days		979,962,963							
981	Excavation ~2,688m3 & lateral support. Prod. Rate: 160m3/day/team	19 days	0 days	19 days	0%	Wed 23/12/20			NA	Mon 18/1/21	Mon 8/2/21	19 days		980							
82	Rock Replacement	7 days	0 days	7 days	0%	Sun 17/1/21	Sat 23/1/21	NA	NA	Tue 9/2/21	Mon 15/2/21	23 days	1 day	981							
983	Blinding layer. Prod. Rate: 2bays/day	1 day	0 days	1 day	0%	Mon 25/1/21	Mon 25/1/21	NA	NA	Tue 16/2/21	Tue 16/2/21	16 days	1 day	981,982							
984	Sourth Approach - Formworks Design and Method Statement Submission	0 days	0 days	0 days	0%	Tue 1/12/20	Tue 1/12/20	NA	NA	Mon 18/1/21	Mon 18/1/21	48 days	1 day			<b>♦</b> 1/12					
985	South Approach Ramp Formworks Design and Method Statement Comment &	30 days	0 days	30 days	0%	Tue 1/12/20	Wed 30/12/2	0 NA	NA	Mon 18/1/21	Tue 16/2/21	48 days	1 day	984							
86	Appraoval 6 x Base Slab Prod. Rate: 12d/bay/team x 2 teams	40 days	0 days	40 days	0%	Tue 26/1/21	Tue 16/3/21	NA	NA	Wed 17/2/21	Wed 7/4/21	16 days	4 days	983,985,244			K				
87	6 x Wall. Prod. Rate: 12d/bay/team x 3 level x 2 teams	78 days	0 days	78 days	0%	Wed 17/3/21	Tue 22/6/21	NA	NA	Mon 28/6/21	Tue 28/9/21	82 days	6 days	986				_			
88	Backfilling ~4,765.89m3 within approach ramp to formation level (160m3/day)	) 38 davs	0 days	38 days	0%	Wed 23/6/21	Fri 6/8/21	NA	NA	Fri 22/10/21	Sat 4/12/21	100 days	2 days	987							
	+12d shoring removal x 2 (considered time for SRT)																				
89	CH1386-1444: South Approach Ramp (50m): Parapet, Central Median & Furniture	e 43 days	0 days	43 days	0%	Wed 15/12/21	Wed 9/2/22	NA	NA	Wed 15/12/21	Wed 9/2/22	0 days		988				17	<b>-1</b>		
90	CH1386-1444: Central Median and Utilities Trough (5m per day per team) x 1	23 days	0 days	23 days	0%	Wed 15/12/21	Thu 13/1/22	NA	NA	Wed 15/12/21	Thu 13/1/22	0 days	2 days	253,956				1			
91	CH1386-1444: Parapet (10m per day per team) x 2 team + 2 team x 6 day	13 days	0 days	13 days	0%	Fri 14/1/22	Fri 28/1/22	NA	NA	Fri 14/1/22	Fri 28/1/22	0 days	2 days	988,253,990							
92	concreting CH1386-1444: Road Furniture	7 days	0 days	7 days	0%	Sat 29/1/22	Wed 9/2/22	NA	NA	Sat 29/1/22	Wed 9/2/22	0 days	1 day	990,358,991							
93	CH1087 - 1444: Bitumen Paving and Lighting	60 days	0 days	60 days	0%	Thu 30/12/21	Mon 14/3/22	NA	NA	Wed 15/12/21	Tue 1/3/22	-11 days	1 day	813,884,892FF,9				<b>.</b>			
94	2.6 Utility Laying	1 day?		1 day?	0%		Thu 16/5/19		NA	Wed 29/5/24	Wed 29/5/24	1840 d									
995	CH1087-1311 (224m): Utility Laying (by Others) (Agreed)		0 days	63 days	0%	Wed 29/12/21			NA	Wed 29/12/21	Tue 1/3/22	0 days									
												-	1 1	000 05500 . 22 .1				,			
996	CLP (132kV)		0 days	63 days	0%	Wed 29/12/21			NA	Wed 29/12/21	Tue 1/3/22		1 day	899,955SS+32 d				<b>—————————————————————————————————————</b>			
997	CLP (11kV)		0 days	63 days	0%	Wed 29/12/21			NA	Wed 29/12/21	Tue 1/3/22	0 days	1 day	996SS				<b>&gt;}••••</b>			
998	HKCG	53 days	0 days	53 days	0%	Wed 29/12/21	Sat 19/2/22	NA	NA	Sat 8/1/22	Tue 1/3/22	10 days	1 day	997SS				<b>→</b> 1			
999	CATV	23 days	0 days	23 days	0%	Wed 29/12/21	Thu 20/1/22	NA	NA	Thu 3/2/22	Fri 25/2/22	36 days	1 day	998SS				**			
1000	Towngas telecom	27 days	0 days	27 days	0%	Wed 29/12/21	Mon 24/1/22	NA	NA	Thu 3/2/22	Tue 1/3/22	36 days	1 day	999SS				*			
1001	PCCW-HKT	23 days	0 days	23 days	0%	Wed 29/12/21	Thu 20/1/22	NA	NA	Sun 6/2/22	Mon 28/2/22	39 days	1 day	1000SS				*			
1002	Fresh and Salt Watermains (by POC)	24 days	0 days	24 days	0%	Wed 29/12/21	Fri 21/1/22	NA	NA	Sun 6/2/22	Tue 1/3/22	39 days	1 day	1001SS				<b>)</b>			
1003	CH1311-1396 (85m): Utility Laying (by Others) (Agreed)	84 days	0 days	84 days	0%	Thu 7/10/21	Wed 29/12/2	1 NA	NA	Fri 4/2/22	Tue 1/3/22	62 days						}			
1004	CLP (11kV)	26 days	0 days	26 days	0%	Wed 5/1/22	Sun 30/1/22	NA	NA	Fri 4/2/22	Tue 1/3/22	30 days	1 day	899,955							
1005	PCCW-HKT		0 days	18 days	0%	Wed 5/1/22	Sat 22/1/22		NA	Sat 12/2/22	Tue 1/3/22	38 days	-	1004SS							
1006	Sat and Fresh Watermain (by POC)		0 days		0%	Wed 5/1/22	Sat 22/1/22		NA NA	Sat 12/2/22	Tue 1/3/22	38 days		100433 1005SS							
				18 days										100200							
1007	Underpass and Depressed Road	619 day	s 142.15 days	476.85 days	0%	Tue 3/9/19	Mon 4/10/21	Tue 3/9/19	NA	Tue 3/9/19	Tue 1/3/22	120 days									
	T-,1	C			To the second	Glaston		D. of	mls:		04.4.1		Г	p	ilost-	_		Cuid -10 **			
	Prog with Progress Task Split	Summary Project Sur	mmary		Inactive N Inactive S			Duration-o	nly mmary Rollup <b>•</b>		Start-only Finish-only		]	External M Deadline	mesione	<ul><li>*</li></ul>		Critical Spli Progress			
is of 22-Ma	ay-20 Milestone ◆	Inactive Ta			Manual Ta			Manual Su			External Tas	_	_	Critical				Manual Pro			

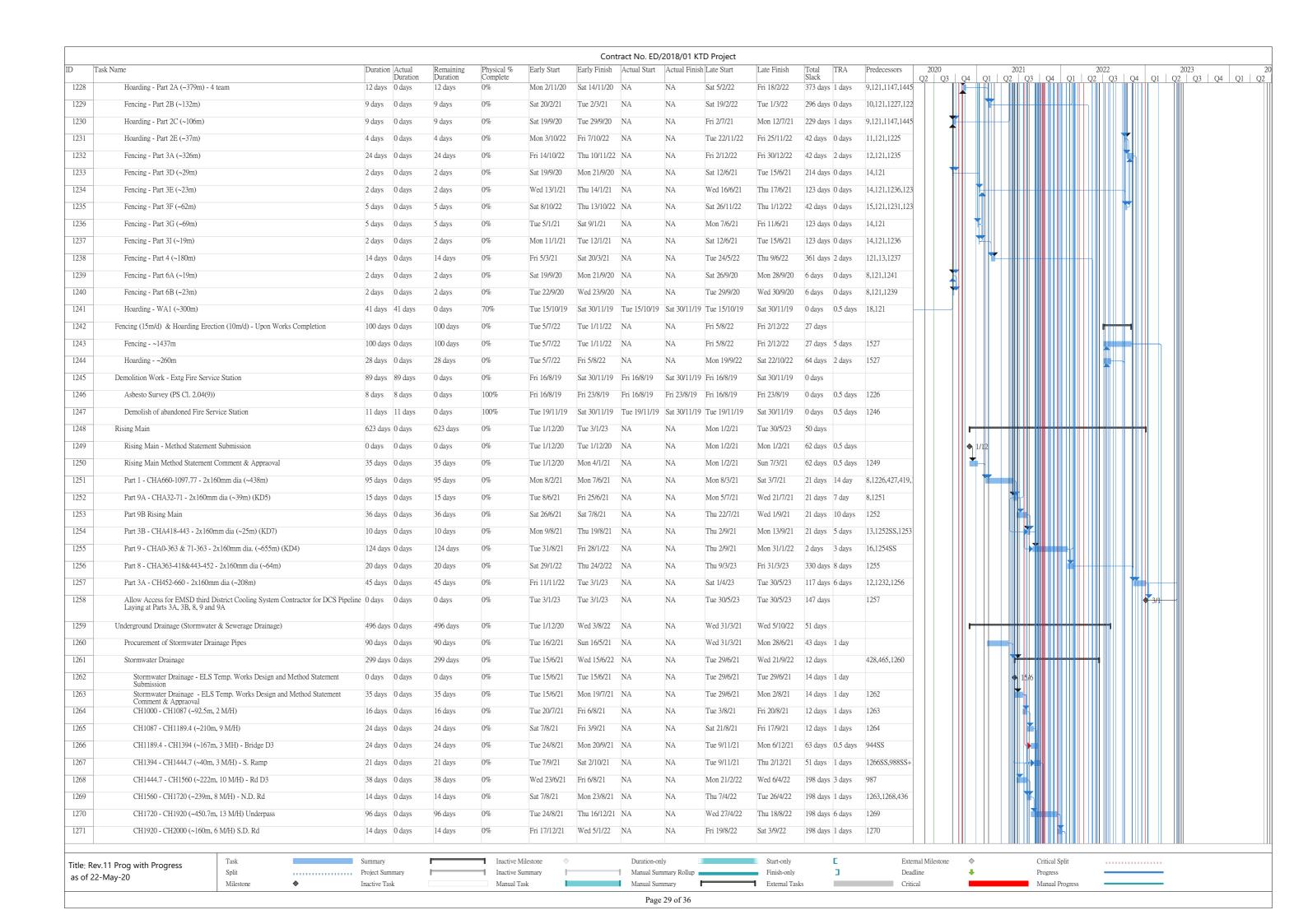
		_	1.	-				tract No. ED/					-									 
Task l	Name	Duration	Actual Duration	Remaining Duration	Physical % Complete	Early Start	Early Finish	Actual Start	Actual Finish	Late Start	Late Finish	Total Slack		Predecessors	2020 Q2   Q3	Q4	Q1	2021 Q2   Q3	3   Q4	Q1	2022 Q2   0	Q4
08	North Depressed Rd (CH1560-1720)	562 days	211.42 days	350.58 days	0%	Tue 3/9/19	Tue 27/7/21	Tue 3/9/19	NA	Tue 3/9/19	Tue 1/3/22	177 days	3									$\prod$
09	Ground Monitoring Works	17 days	17 days	0 days	100%	Tue 3/9/19	Thu 19/9/19	Tue 3/9/19	Thu 19/9/19	Tue 3/9/19	Thu 19/9/19	0 days	2 days		1							
10	Mobilization	7 days	7 days	0 days	100%	Fri 1/11/19	Fri 8/11/19	Fri 1/11/19	Fri 8/11/19	Fri 1/11/19	Fri 8/11/19	0 days	0 days									
11	Complete the Diveration of Existing Overhang Cable along the North Depressed	1 day	1 day	0 days	100%	Sat 26/10/19	Sat 26/10/19	Sat 26/10/19	Sat 26/10/19	Sat 26/10/19	Sat 26/10/19	0 days	0.5 days									
2	Drive Sheet Pile (380m, 15,000m penetration depth) Prod. Rate by 2 teams	39 days	39 days	0 days	100%	Fri 22/11/19	Thu 9/1/20	Fri 22/11/19	Thu 9/1/20	Fri 22/11/19	Thu 9/1/20	0 days	0.5 days	1009,1010,1011								
	(around 125m penetration depth per day per team)																					
.3	Pumping Test	120 days	75 days	45 days	0%	Thu 20/2/20	Fri 17/7/20	Thu 20/2/20	NA	Thu 20/2/20	Sat 18/7/20	1 day	0.5 days	1012								
.4	CH1560 - CH1720 North Depress Road	449 days	98.66 days	350.34 days	0%	Mon 20/1/20	Tue 27/7/21	Mon 20/1/20	NA	Mon 20/1/20	Tue 1/3/22	177 days	3				##					
15	Excavation with Shoring Installation - Prod Rate: 270m3/d/team. (~36,611m3). 1 team	145 days	98 days	47 days	0%	Mon 20/1/20	Sat 18/7/20	Mon 20/1/20	NA	Mon 20/1/20	Sat 18/7/20	-11 days	1 day	1012								
6	CNCE No. 73 - April 2020 Inclement Weather	8 days	0 days	8 days	0%	Mon 20/7/20	Tue 28/7/20	NA	NA	Tue 7/7/20	Wed 15/7/20	-11 days		1015,73								
17	May 2020 - Inclement Weather	3 days	0 days	3 days	0%	Wed 29/7/20	Fri 31/7/20	NA	NA	Thu 16/7/20	Sat 18/7/20	-11 days		1016,74								
18	Rock Fill Replacement (Final Level)	6 days	0 days	6 days	0%	Sat 1/8/20	Fri 7/8/20	NA	NA	Mon 20/7/20	Sat 25/7/20	-11 days		1013,1015,1017	🔻							
19	6 Bay Base Slabs + 3 Levels Wall Both Sides	55 days	0 days	55 days	0%	Wed 3/6/20	Fri 7/8/20	NA	NA	Thu 21/5/20	Sat 25/7/20	-11 days	;	1015SS+107 day	y <b>==</b>							
20	Base Slab and Wall Below 4th Level Shoring	25 days	0 days	25 days	0%	Sat 8/8/20	Sat 5/9/20	NA	NA	Mon 27/7/20	Mon 24/8/20	-11 days	0.5 days	1019,1015,1018	🛓							
21	Backfilling and 4th Level Shoring Removal	18 days	0 days	18 days	0%	Mon 7/9/20	Sat 26/9/20	NA	NA	Tue 25/8/20	Mon 14/9/20	-11 days		1020		<b> </b>						
22	Wall Construction (between 3rd and 4th levels shoring) and Remaining Base	24 days	0 days	24 days	0%	Mon 28/9/20	Wed 28/10/20	) NA	NA	Tue 15/9/20	Wed 14/10/20	-11 days		1021								
23	Slab Backfilling and 3rd Level Shoring Removal	18 days	0 days	18 days	0%	Thu 29/10/20	Wed 18/11/20	) NA	NA	Thu 15/10/20	Thu 5/11/20	-11 days	1	1022								
14	Structure Works Below 2nd & 3rd Levels Shoring	23 days		23 days	0%	Thu 19/11/20	Tue 15/12/20	NA	NA	Fri 6/11/20	Wed 2/12/20	-11 days		1023								
15	Backfilling and 2nd Level Shoring Removal	18 days		18 days	0%	Wed 16/12/20		NA	NA	Thu 3/12/20	Wed 23/12/20			1024	-							
26	Remaining Wall Construction	30 days		30 days	0%	Sat 9/1/21	Tue 16/2/21		NA	Thu 24/12/20	Sat 30/1/21	-11 days		1025								
27	Backfill & extract sheet pile (CH1560 to CH1720)	26 days		26 days	0%	Wed 17/2/21	Thu 18/3/21		NA	Mon 1/2/21	Fri 5/3/21	-11 days		1026								
					0%													Ų II				
28	Emergency walkway & median barrier installation	20 days		20 days		Tue 1/6/21	Thu 24/6/21		NA	Mon 3/1/22	Tue 25/1/22	177 days		1027								
29	Parapet installation	27 days		27 days	0%	Fri 25/6/21	Tue 27/7/21		NA	Wed 26/1/22	Tue 1/3/22		3 days	1028								
0	CH1720 - CH1850 (130m long) (2 x teams)	477 days		477 days	0%	Mon 15/6/20	Mon 4/10/21		NA	Mon 15/6/20	Mon 4/10/21	0 days	2.									
31	Drive sheet pile (approx. 17000m penetration depth, 380m/day)	46 days		46 days	0%	Mon 15/6/20		NA	NA	Mon 15/6/20	Sat 8/8/20	0 days										
32	Pumping Test	22 days		22 days	0%	Mon 10/8/20	Thu 3/9/20		NA	Mon 10/8/20	Thu 3/9/20	0 days		1031,1045		1						
13	CH1720 - CH1850 (130m long) (2 x teams) Top Portion: Excavation with Shoring Installation = 23,000 cu.m. (320m3/d/team x 2)	42 days	0 days	42 days	0%	Fri 4/9/20	Sat 24/10/20	NA	NA	Fri 4/9/20	Sat 24/10/20	0 days	2 day	1032								
34	CH1720 - CH1850 (130m long) (2 x teams) Bottom Portion: Excavation with	52 days	0 days	52 days	0%	Tue 27/10/20	Mon 28/12/20	) NA	NA	Tue 27/10/20	Mon 28/12/20	0 days	1 day	1033								
	Shoring Installation = 23,876 cu.m. (250m3/d/team x 2)																					
35	Rock fill - Prod. Rate: (3,469m3) (160m3/d/team. 2 team)	6 days	0 days	6 days	0%	Tue 29/12/20	Tue 5/1/21	NA	NA	Tue 29/12/20	Tue 5/1/21	0 days	1 day	1033,1034								
36	Base Slab - 8 bays. Prod. Rate: 12d/team/bay include pipe laying. 4 teams	26 days	0 days	26 days	0%	Wed 3/3/21	Thu 1/4/21	NA	NA	Wed 3/3/21	Thu 1/4/21	0 days	2 day	1035,1042,262								
37	Wall - 8 bays. Prod. Rate: 3 level of shoring 12d/bay/level/team. 4 teams	75 days	0 days	75 days	0%	Tue 6/4/21	Tue 6/7/21	NA	NA	Tue 6/4/21	Tue 6/7/21	0 days	3 days	1036								
38	Top Slab - 8 bays. Prod. Rate: 18d/team/bay, 4 teams	38 days	0 days	38 days	0%	Wed 7/7/21	Thu 19/8/21	NA	NA	Wed 7/7/21	Thu 19/8/21	0 days	2 day	1037					اااا ر			
39	Falsework Removal	37 days	0 days	37 days	0%	Fri 20/8/21	Mon 4/10/21	NA	NA	Fri 20/8/21	Mon 4/10/21	0 days	2 day	1038	1							
40	Sheetpile Extraction and Backfill	13 days	0 days	13 days	0%	Fri 20/8/21	Fri 3/9/21	NA	NA	Fri 17/9/21	Mon 4/10/21	24 days	1 day	1038	1				<b>+</b>			
41	Underground Plant Room next to Underpass	45 days	0 days	45 days	0%	Wed 6/1/21	Tue 2/3/21	NA	NA	Wed 6/1/21	Tue 2/3/21	0 days			1							
42	Underground pump house structure	45 days	0 days	45 days	0%	Wed 6/1/21	Tue 2/3/21	NA	NA	Wed 6/1/21	Tue 2/3/21	0 days	3 day	714,1035,262,28	3							
43	Underpass & South Depressed Road CH1850-1950 - (100m long) 8 bays x 13.5m long	120 days	65.36 days	54.64 days	0%	Wed 26/2/20	Thu 23/7/20	Wed 26/2/20	NA	Wed 26/2/20	Sat 8/8/20	14 days										
14	Drive sheet pile (12,530m embedded length sheetpile) Prod. Rate 380m/team/day	32 days	32 days	0 days	100%	Wed 26/2/20	Mon 6/4/20	Wed 26/2/20	Mon 6/4/20	Wed 26/2/20	Mon 6/4/20	0 days	5 days									
45	Pumping Test		29 days	51 days	36%	Fri 17/4/20		Fri 17/4/20		Fri 17/4/20	Sat 8/8/20			1044								
46	Underpass & South Depress Road (CH1850 to CH1950)			511.36 days	0%	Thu 23/4/20		Thu 23/4/20		Thu 23/4/20	Tue 1/3/22	139 days										
7	Excavation with Shoring Installation (Upper Portion) - Prod. Rate: 270m3/d/team. 1			56 days	23%	Thu 23/4/20		Thu 23/4/20		Thu 23/4/20	Fri 4/9/20	31 days		1045SS+6 days								
48	Excavation with Shoring Installation (Opper Portion) - Prod. Rate: 270m3/d/team. 1 team 16,000m3)  Excavation with Shoring Installation (Lower Portion) - Prod. Rate: 270m3/d/team. 1				0%	Fri 31/7/20	Fri 16/10/20		NA	Sat 5/9/20	Mon 23/11/20			104535+6 days								
48	Excavation with shoring installation (Lower Portion) - Prod. Rate: 2/0m/s/d/team. I team 16,000m/3)  Rock fill - Prod. Rate: 160m/s/d/team (1,745m/3)			65 days										days								
	· · · · ·		0 days	7 days	0%	Sat 17/10/20	Sat 24/10/20		NA	Tue 24/11/20	Tue 1/12/20	31 days		1047,1048								
50	Blinding	1 day	0 days	1 day	0%	Tue 27/10/20	Tue 27/10/20	NA	NA	Wed 2/12/20	Wed 2/12/20	31 days	0.5 days	1049								
o. D-: 44	Drog with Progress Task	Summary		<b>—</b>	Inactive M	ilestone $\Diamond$		Duration-on	ıly		Start-only		С	Exte	ernal Milestone				Critical	Split		 
e: Rev.11 of 22-M	av-20 Split	Project Sun			Inactive Su	mmary 🏻		Manual Sur	mmary Rollup <b>•</b>		Finish-only		3	Dea	dline	•			Progress	S	-	
1710	Milestone •	Inactive Ta	sk		Manual Ta	sk		Manual Sur	nmary		External Tas	ks		Crit	ical				Manual	Progress	_	

Tasl	LAT	F :		D	D1	E 1 0				KTD Project	T . TO	m . 1 :	D 1	220		\1			2022
Tasl	k Name	Duration	Actual Duration	Remaining Duration	Physical % Complete	Early Start	Early Finish	Actual Start	Actual Fin	ish Late Start	Late Finish	Total TRA Slack		020   Q3   Q4	Q1   Q2		2022 1   Q2   Q3   Q4	4 Q1 Q2	2023 2 Q3
051	Underpass Formworks Design and Method Statement Submission	0 days	0 days	0 days	0%	Mon 14/9/20	Mon 14/9/20	NA	NA	Tue 3/11/20	Tue 3/11/20	50 days 1 day		<b>◆</b> 14/9					
052	Underpass Formworks Design and Method Statement Comment & Appraoval	30 days	0 days	30 days	0%	Mon 14/9/20	Tue 13/10/20	NA	NA	Tue 3/11/20	Wed 2/12/20	50 days 1 day	1051						1
.053	Casting base slab (12d/bay/team x 3) (6 bays)	26 days	0 days	26 days	0%	Wed 28/10/20	Thu 26/11/20	NA	NA	Thu 3/12/20	Tue 5/1/21	31 days 2 day	1050,1052,262						
1054	Waterproofing & Bacfilling before S3 Shoring Removal	12 days	0 days	12 days	0%	Fri 27/11/20	Thu 10/12/20	NA	NA	Wed 6/1/21	Tue 19/1/21	31 days 1 day	1053						
1055	S3 Shoring ELS Removal + North/South End Re-propping	7 days	0 days	7 days	0%	Fri 11/12/20	Fri 18/12/20	NA	NA	Wed 20/1/21	Wed 27/1/21	31 days 1 day	1054						
1056	Wall Construction up to soffit of S2 Shoring (12d/bay/team x 3) (6 bays)	24 days	0 days	24 days	0%	Sat 19/12/20	Tue 19/1/21	NA	NA	Thu 28/1/21	Sat 27/2/21	31 days 2 day	1055		h				
1057	Waterproofing & Bacfilling before S2 Shoring Removal	12 days	0 days	12 days	0%	Wed 20/1/21	Tue 2/2/21	NA	NA	Mon 1/3/21	Sat 13/3/21	31 days 1 day	1056						
058	S2 Shoring ELS Removal + North/South End Re-propping	7 days	0 days	7 days	0%	Wed 3/2/21	Wed 10/2/21	NA	NA	Mon 15/3/21	Mon 22/3/21	31 days 1 day	1057		Ř				
059	Wall Construction up to soffit of S1 Shoring (12d/bay/team x 3) (6 bays)	24 days	0 days	24 days	0%	Thu 11/2/21	Sat 13/3/21	NA	NA	Tue 23/3/21	Thu 22/4/21	31 days 2 day	1058						
060	Waterproofing & Bacfilling before S1 Shoring Removal	12 days	0 days	12 days	0%	Mon 15/3/21	Sat 27/3/21	NA	NA	Fri 23/4/21	Fri 7/5/21	31 days 1 day	1059						
061	S1 Shoring ELS Removal + North/South End Re-propping	7 days		7 days	0%	Mon 29/3/21	Thu 8/4/21	NA	NA	Sat 8/5/21	Sat 15/5/21	31 days 1 day	1060						
.062	Scaffold erection for roof slab	24 days		24 days	0%	Fri 9/4/21	Fri 7/5/21	NA	NA	Mon 17/5/21	Tue 15/6/21	31 days 2 day	1061						
063	Roof slab construction (18d/bay/team x 3) (6 bays)	42 days		42 days	0%	Sat 8/5/21	Mon 28/6/21		NA	Wed 16/6/21	Wed 4/8/21	31 days 4 days	1062						
.064	Waterproofing & Backfilling upto tunnel top	42 days		28 days	0%	Tue 29/6/21	Sat 31/7/21		NA	Thu 5/8/21	Mon 6/9/21	31 days 4 days	1063						
.065																			
	Scaffold removal after 28 days from casting	22 days		22 days	0%	Mon 26/7/21	Thu 19/8/21		NA	Thu 13/1/22	Thu 10/2/22	141 days 1 day	1063FS+22 days						
1066	Sheetpile extraction (Ch1851-CH1950)	22 days		22 days	0%	Mon 2/8/21	Thu 26/8/21		NA	Tue 7/9/21	Mon 4/10/21	31 days 1 day	1064						
067	Emergency walkway & median barrier installation		0 days	9 days	0%	Fri 24/9/21	Tue 5/10/21		NA	Fri 11/2/22	Mon 21/2/22	112 days 1 day	323,1066,1040,1						
068	Parapet installation	7 days	0 days	7 days	0%	Wed 6/10/21	Wed 13/10/21	NA	NA	Tue 22/2/22	Tue 1/3/22	112 days 1 day	1067			1 1 1 1 1 1 1 1			
069	CH1950 - CH2020 (70m long) (2 x teams) 4 bays x 17.5m long - Average 3 layers of shoring	f 209 days	s 0 days	209 days	0%	Fri 19/3/21	Mon 29/11/21	NA	NA	Sat 6/3/21	Tue 1/3/22	-11 days							
1070	Drive sheet pile (approx. 8,800m embedded length sheetpile), 380m/team/day	24 days	0 days	24 days	0%	Fri 19/3/21	Mon 19/4/21	NA	NA	Sat 6/3/21	Tue 6/4/21	-11 days 1 day	1027						
1071	Excavation with Shoring Installation - Prod. Rate: 2 teams x 250m3/d/team. (14.500m3)	30 days	0 days	30 days	0%	Tue 20/4/21	Wed 26/5/21	NA	NA	Wed 7/4/21	Wed 12/5/21	-11 days 1 day	1049,1070						
.072	Rock Fill Replacement	6 days	0 days	6 days	0%	Thu 27/5/21	Wed 2/6/21	NA	NA	Thu 13/5/21	Thu 20/5/21	-11 days 0.5 days	s 1071		HIII K				
1073	Blinding	1 day	0 days	1 day	0%	Thu 3/6/21	Thu 3/6/21	NA	NA	Fri 21/5/21	Fri 21/5/21	-11 days 0.5 days	s 1071,1072						
074	Base Slab - 4 bays. Prod. Rate: 12d/team/bay include pipe laying. 2 team	26 days	0 days	26 days	0%	Fri 4/6/21	Tue 6/7/21	NA	NA	Sat 22/5/21	Tue 22/6/21	-11 days 2 days	1073						
075	Wall - 4 bays. Prod. Rate: 3 level of shoring 12d/bay/level/team. 2 teams	67 days	0 days	67 days	0%	Wed 16/6/21	Thu 2/9/21	NA	NA	Wed 2/6/21	Fri 20/8/21	-11 days 6 days	1074SS+9 days			· ·			
076	Backfill & extract sheet pile (CH1950 to CH2020)	25 days	0 days	25 days	0%	Fri 3/9/21	Mon 4/10/21	NA	NA	Sat 21/8/21	Sat 18/9/21	-11 days 2 days	1075			<b>T</b>			
077	CH1950 to CH2020: Emergency walkway & median barrier installation	20 days	0 days	20 days	0%	Tue 5/10/21	Thu 28/10/21	NA	NA	Mon 3/1/22	Tue 25/1/22	73 days 2 days	1075,1076			11-			
078	CH1950 to CH2020: Pavement work	7 days	0 days	7 days	0%	Fri 29/10/21	Fri 5/11/21	NA	NA	Wed 26/1/22	Sat 5/2/22	73 days 1 day	1077			T			
1079	CH1950 to CH2020: Parapet installation	20 days	0 days	20 days	0%	Sat 6/11/21	Mon 29/11/21	NA	NA	Mon 7/2/22	Tue 1/3/22	73 days 2 day	1076,1077,1078			N#			
1080	South Depressed Road CH2020-2050 (40m long) (2 x teams) 5 bays x 13.5m long -	134 days	s 0 days	134 days	0%	Mon 2/8/21	Tue 11/1/22	NA	NA	Sun 5/9/21	Tue 1/3/22	30 days							
1081	Average 2 layers of shoring Open Excavation	17 days		17 days	0%	Tue 5/10/21	Mon 25/10/21	NA	NA	Mon 20/9/21	Mon 11/10/21	-11 days 3 days	1076						
1082	Blinding	2 days		2 days	0%	Tue 26/10/21			NA	Tue 12/10/21		-11 days 0 days				<b>.</b>			
1083	South Depress Road - Formworks Design and Method Statement Submission	0 days		0 days	0%	Mon 2/8/21	Mon 2/8/21		NA	Sun 5/9/21	Sun 5/9/21	34 days 1 day				<b>△</b> 2/8			
1084	South Depress Road - Formworks Design and Method Statement Comment &	40 days		40 days	0%	Mon 2/8/21	Fri 10/9/21		NA	Sun 5/9/21	Thu 14/10/21		1083						
	Appraoval												1083						
085	Base Slab - 3 bays. Prod. Rate: 12d/team/bay include pipe laying. 2 teams	12 days		12 days	0%	Thu 28/10/21			NA	Fri 15/10/21	Thu 28/10/21								
1086	Wall - 3 bays. Prod. Rate: 2 level of shoring 12d/bay/level/team. 2 teams	12 days		12 days	0%	Fri 12/11/21	Thu 25/11/21		NA	Sat 30/10/21	Fri 12/11/21	-11 days 0.5day	1085SS+13 days						
1087	Wall - 3 bays. Prod. Rate: 2 level of shoring 12d/bay/level/team. 2 teams	12 days		12 days	0%	Sat 20/11/21	Fri 3/12/21		NA	Mon 8/11/21	Sat 20/11/21	-11 days 0.5day	1086SS+7 days						
1088	Backfill & extract sheet pile	19 days		19 days	0%	Fri 26/11/21	Fri 17/12/21		NA	Fri 14/1/22	Tue 8/2/22	39 days 1 day	1086						
1089	Curing and Formwork Ramoval	19 days		19 days	0%	Fri 26/11/21	Fri 17/12/21		NA	Thu 30/12/21	Fri 21/1/22	27 days 1 day	1086						
1090	Emergency walkway & median barrier installation	6 days	0 days	6 days	0%	Sat 18/12/21	Fri 24/12/21	NA	NA	Wed 9/2/22	Tue 15/2/22	39 days 2 days	1086,1088,323			14			
1091	Pavement work	6 days	0 days	6 days	0%	Tue 28/12/21	Tue 4/1/22	NA	NA	Wed 16/2/22	Tue 22/2/22	39 days 1 day	1090						
1092	Parapet installation	6 days	0 days	6 days	0%	Wed 5/1/22	Tue 11/1/22	NA	NA	Wed 23/2/22	Tue 1/3/22	39 days 1 day	1090,1088,1091						
1093	5.0 CH1386-1950 (564m): Utlity Laying Team 2 (by Others)	332 days	s 0 days	332 days	0%	Sat 17/4/21	Mon 14/3/22	NA	NA	Thu 19/8/21	Tue 1/3/22	-13 days			│║┃│ <del></del> ┢ <del>┤╢╢</del>				
1094	CLP (132kV)	30 days	0 days	30 days	0%	Fri 14/1/22	Sat 12/2/22	NA	NA	Mon 31/1/22	Tue 1/3/22	17 days 1 day	946,990,1027				<u> </u>		
1095	HKCG	18 days	0 days	18 days	0%	Fri 14/1/22	Mon 31/1/22	NA	NA	Tue 25/1/22	Fri 11/2/22	11 days 1 day	946,990,1027						
	11 Drog with Drogress Task	Summary			Inactive N	filestone 🔷		Duration-or	ılv		Start-only	Е	External M	lestone $\diamondsuit$		Critical Split			<u>III</u>
itle: Rev.1 as of 22-N	11 Prog with Progress		nmary		Inactive S				mmary Rollup		Finish-only	3	Deadline			Progress			
	Milestone •	Inactive Ta	ısk		Manual Ta	ask		Manual Sur	nmary		External Tas	ks	Critical			Manual Progre	èss		

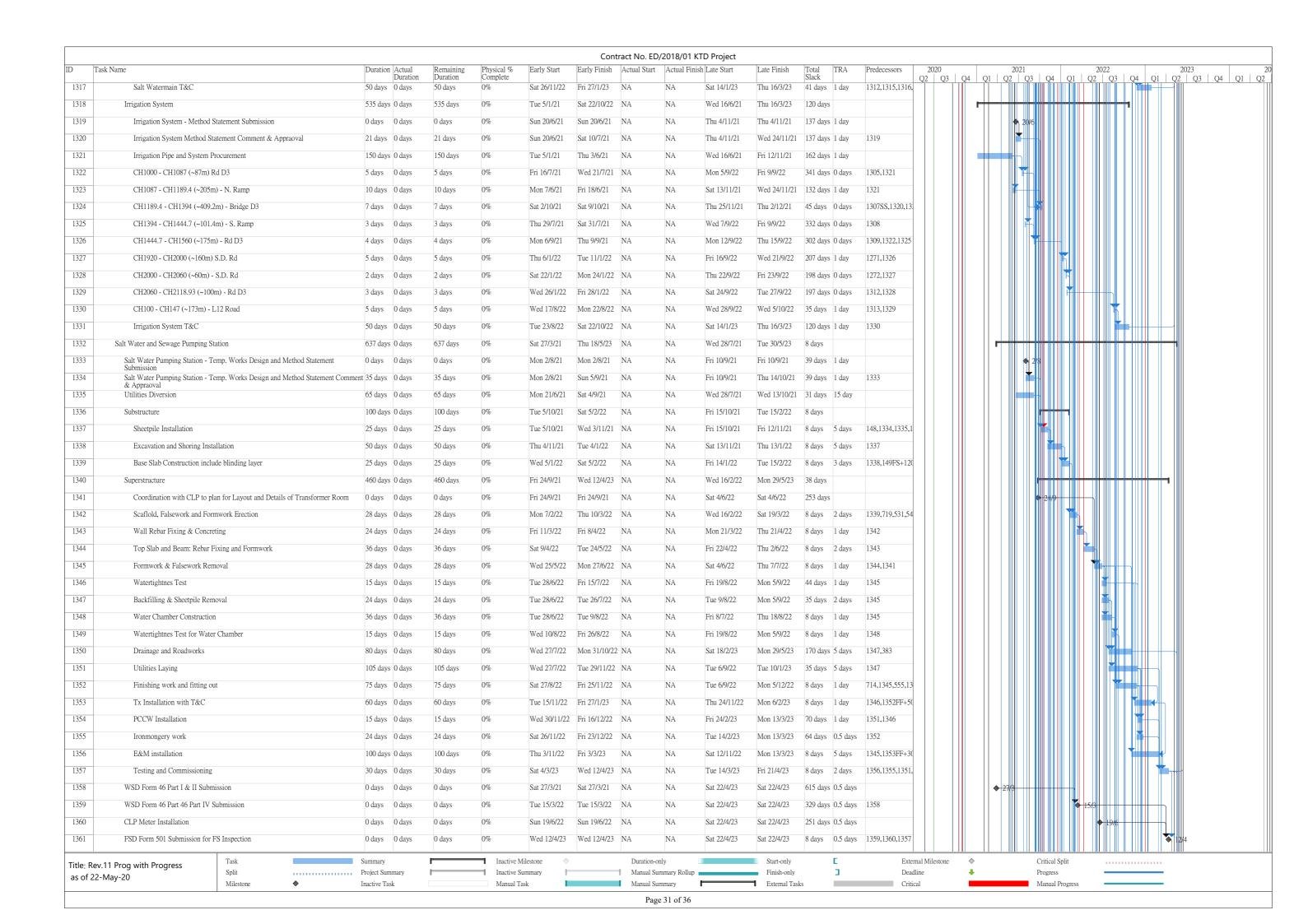
1097	CATV  Towngas telecom  North & South Depress Raod and Underpass: Finishing and E&M Works Finishing & Fitting Out Work, and E&M Works Installation  Pump Room Next to Underpass: Finishing and E&M Works Finishing Works and E&M installation  Pump Installation  Testing and Commissioning  Planned Completion for Section 1  ons 2,4 and 8  Fisite 14 units of precast box culvert with outfall fabrication  DN application  emolition of Existing Seawall an Construction of Water Channel (Ch 0 to Ch30)  Installation of Silt Curtain with Concrete Sinkers  Demolition of Existing Seawall	Duration  15 days  13 days  15 days  120 days  120 days  158 days  60 days  25 days  0 days  824 days  45 days	Duration 0 days 0 days 0 days 0 days s 0 days s 0 days	Remaining Duration  15 days  13 days  15 days  120 days  120 days  158 days  60 days  25 days  0 days	Physical % Complete 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%	Early Start  Fri 21/1/22  Fri 28/1/22  Fri 4/2/22  Tue 5/10/21  Tue 5/10/21  Sat 17/4/21  Sat 17/4/21  Fri 16/7/21	Early Finish Fri 4/2/22	NA NA NA NA NA NA NA NA	D/2018/01 KT t Actual Finish NA NA NA NA NA NA NA		Late Finish Tue 15/2/22 Sun 20/2/22 Tue 1/3/22	Total Slack 11 days 1 day 11 days 1 day 11 days 1 day		020   Q3   Q	Q4 Q1	2021   Q2   Q		Q1	2022 Q2 Q	03 Q4	ļ Q1	2023   Q2   Q	
1097	Towngas telecom  North & South Depress Raod and Underpass: Finishing and E&M Works  Finishing & Fitting Out Work, and E&M Works Installation  Pump Room Next to Underpass: Finishing and E&M Works  Finishing Works and E&M installation  Pump Installation  Testing and Commissioning  Planned Completion for Section 1  ons 2,4 and 8  Fisite 14 units of precast box culvert with outfall fabrication  DN application  emolition of Existing Seawall an Construction of Water Channel (Ch 0 to Ch30)  Installation of Silt Curtain with Concrete Sinkers  Demolition of Existing Seawall	13 days 15 days 120 days 120 days 158 days 60 days 25 days 0 days 824 days	0 days 0 days 0 days 0 days s 0 days s 0 days	15 days 13 days 15 days 120 days 120 days 158 days 73 days 60 days 25 days	0% 0% 0% 0% 0% 0%	Fri 28/1/22 Fri 4/2/22 Tue 5/10/21 Tue 5/10/21 Sat 17/4/21 Sat 17/4/21	Wed 9/2/22 Fri 18/2/22 Tue 1/3/22 Tue 1/3/22 Tue 26/10/21	NA NA NA	NA NA NA	Tue 8/2/22 Tue 15/2/22	Sun 20/2/22	11 days 1 day 11 days 1 day	1095SS+7 days, 1096SS+7 days	\Q	r+   QI	Q2	ψ3 <u></u>	Q1	<u> </u>	23   Q4	+ QI	<u>  Q2   </u>	<u>√</u> 2   (
1098	Towngas telecom  North & South Depress Raod and Underpass: Finishing and E&M Works  Finishing & Fitting Out Work, and E&M Works Installation  Pump Room Next to Underpass: Finishing and E&M Works  Finishing Works and E&M installation  Pump Installation  Testing and Commissioning  Planned Completion for Section 1  ons 2,4 and 8  Fisite 14 units of precast box culvert with outfall fabrication  DN application  emolition of Existing Seawall an Construction of Water Channel (Ch 0 to Ch30)  Installation of Silt Curtain with Concrete Sinkers  Demolition of Existing Seawall	15 days 120 days 120 days 158 days 73 days 60 days 25 days 0 days 824 days	O days	15 days 120 days 120 days 158 days 73 days 60 days	0% 0% 0% 0% 0%	Fri 4/2/22 Tue 5/10/21 Tue 5/10/21 Tue 5/10/21 Sat 17/4/21 Sat 17/4/21	Fri 18/2/22 Tue 1/3/22 Tue 1/3/22 Tue 26/10/21	NA NA NA	NA NA	Tue 15/2/22								<b>*</b>					
1099	North & South Depress Raod and Underpass: Finishing and E&M Works  Finishing & Fitting Out Work, and E&M Works Installation  Pump Room Next to Underpass: Finishing and E&M Works  Finishing Works and E&M installation  Pump Installation  Testing and Commissioning  Planned Completion for Section 1  ons 2,4 and 8  Fisite 14 units of precast box culvert with outfall fabrication  DN application  emolition of Existing Seawall an Construction of Water Channel (Ch 0 to Ch30)  Installation of Silt Curtain with Concrete Sinkers  Demolition of Existing Seawall	120 days 120 days 158 days 73 days 60 days 25 days 0 days 824 days	s 0 days s 0 days s 0 days	120 days 120 days 158 days 73 days 60 days 25 days	0% 0% 0% 0%	Tue 5/10/21 Tue 5/10/21 Sat 17/4/21 Sat 17/4/21	Tue 1/3/22  Tue 1/3/22  Tue 26/10/21	NA NA	NA		Tue 1/3/22	11 days 1 day	1097SS+7 days			1	41 IIIII III	414					
1100   F   1110   F	Finishing & Fitting Out Work, and E&M Works Installation  Pump Room Next to Underpass: Finishing and E&M Works  Finishing Works and E&M installation  Pump Installation  Testing and Commissioning  Planned Completion for Section 1  ons 2,4 and 8  Fisite 14 units of precast box culvert with outfall fabrication  DN application  emolition of Existing Seawall an Construction of Water Channel (Ch 0 to Ch30)  Installation of Silt Curtain with Concrete Sinkers  Demolition of Existing Seawall	120 days 158 days 73 days 60 days 25 days 0 days 824 days	s 0 days s 0 days	120 days 158 days 73 days 60 days 25 days	0% 0% 0% 0%	Tue 5/10/21 Sat 17/4/21 Sat 17/4/21	Tue 1/3/22 Tue 26/10/21	NA		Tue 5/10/21			-07,001, augo				/II IIII III			y III III	'		
1101	Pump Room Next to Underpass: Finishing and E&M Works  Finishing Works and E&M installation  Pump Installation  Testing and Commissioning  Planned Completion for Section 1  ons 2,4 and 8  ffsite 14 units of precast box culvert with outfall fabrication  DN application  emolition of Existing Seawall an Construction of Water Channel (Ch 0 to Ch30)  Installation of Silt Curtain with Concrete Sinkers  Demolition of Existing Seawall	158 days 73 days 60 days 25 days 0 days 824 days 100 days	o days	158 days 73 days 60 days 25 days	0% 0%	Sat 17/4/21 Sat 17/4/21	Tue 26/10/21		NA		Tue 1/3/22	0 days											
1102 1103 1104 1105 F 1106 Section 1107 Offs 1108 MD 1109 Den 1110 I 1111 I 1111 CH8 11114 T 11115 C 11116 S 11117 F 11118 F 11119 CH7	Finishing Works and E&M installation  Pump Installation  Testing and Commissioning  Planned Completion for Section 1  ons 2,4 and 8  Fisite 14 units of precast box culvert with outfall fabrication  DN application  emolition of Existing Seawall an Construction of Water Channel (Ch 0 to Ch30)  Installation of Silt Curtain with Concrete Sinkers  Demolition of Existing Seawall	73 days 60 days 25 days 0 days 824 days	0 days 0 days 0 days 0 days 0 days 0 days	73 days 60 days 25 days	0%	Sat 17/4/21		NA		Tue 5/10/21	Tue 1/3/22	0 days 8 days	306,271,323,108				<b>T</b>						
1103 1104 1105 F 1106 Section 1107 Offs 1108 MD 1109 Den 1110 I 1111 I 1111 C 1111 C 1111 S 1	Pump Installation  Testing and Commissioning  Planned Completion for Section 1  ons 2,4 and 8  ifsite 14 units of precast box culvert with outfall fabrication  DN application  emolition of Existing Seawall an Construction of Water Channel (Ch 0 to Ch30)  Installation of Silt Curtain with Concrete Sinkers  Demolition of Existing Seawall	60 days 25 days 0 days 824 days	0 days 0 days 0 days 0 days	60 days 25 days	0%		Thu 15/7/21		NA	Thu 19/8/21	Tue 1/3/22	102 days											
1104  1105 F 1106 Section  1107 Offs  1108 MD  1109 Den  1110 I  1111 I  1111 CH8  1112 CH8  111	Testing and Commissioning  Planned Completion for Section 1 ons 2,4 and 8  Fisite 14 units of precast box culvert with outfall fabrication  DN application  emolition of Existing Seawall an Construction of Water Channel (Ch 0 to Ch30)  Installation of Silt Curtain with Concrete Sinkers  Demolition of Existing Seawall	25 days 0 days 824 days 100 days	0 days 0 days s 0 days	25 days		Fri 16/7/21		NA	NA	Thu 19/8/21	Mon 15/11/21	102 days 3 days	1042FS+36 days			+							
1105 F 1106 Section 1107 Offs 1108 MD 1109 Den 1110 I 1111 I 1111 C 1111 C 1111 S 111 S 1111	Planned Completion for Section 1 ons 2,4 and 8  Fisite 14 units of precast box culvert with outfall fabrication  DN application  emolition of Existing Seawall an Construction of Water Channel (Ch 0 to Ch30)  Installation of Silt Curtain with Concrete Sinkers  Demolition of Existing Seawall	0 days 824 days 100 days	0 days		0%		Fri 24/9/21	NA	NA	Tue 16/11/21	Thu 27/1/22	102 days 2 days	1102										
1106 Section 1107 Offs 1108 MD 1109 Den 1110 I 1111 I 11112 C 11113 CH8 1114 T 1115 C 1116 S 1117 E 1118 F 1119 CH7	ons 2,4 and 8  Fisite 14 units of precast box culvert with outfall fabrication  DN application  emolition of Existing Seawall an Construction of Water Channel (Ch 0 to Ch30)  Installation of Silt Curtain with Concrete Sinkers  Demolition of Existing Seawall	824 days	o days	0 days		Sat 25/9/21	Tue 26/10/21	NA	NA	Fri 28/1/22	Tue 1/3/22	102 days 1 days	1102,1103										
1107 Offs 1108 MD 1109 Den 1110 I 1111 I 1111 CH8 11115 CS 11116 SS 11117 E 11118 F 11119 CH7	Tristie 14 units of precast box culvert with outfall fabrication  DN application  emolition of Existing Seawall an Construction of Water Channel (Ch 0 to Ch30)  Installation of Silt Curtain with Concrete Sinkers  Demolition of Existing Seawall	100 days			0%	Mon 14/3/22	Mon 14/3/22	NA	NA	Tue 1/3/22	Tue 1/3/22	-13 days	1408,1414,1068,					1	14/3				
1108 MD 1109 Den 1110 I 1111 I 11112 C 11113 CH8 11114 T 11115 C 11116 S 11117 E 11118 F 11119 CH7	DN application  emolition of Existing Seawall an Construction of Water Channel (Ch 0 to Ch30)  Installation of Silt Curtain with Concrete Sinkers  Demolition of Existing Seawall		0.1	824 days	0%	Mon 10/8/20	Wed 17/5/23	NA	NA	Mon 17/8/20	Wed 29/5/24	6 days		<b></b>							#		
Den	emolition of Existing Seawall an Construction of Water Channel (Ch 0 to Ch30)  Installation of Silt Curtain with Concrete Sinkers  Demolition of Existing Seawall	45 days	0 days	100 days	0%	Mon 19/10/20	Fri 19/2/21	NA	NA	Thu 3/12/20	Thu 8/4/21	38 days 30 days	406,414										
1110 I 1111 I 11112 C 11113 CH8 11114 I 1115 C 11116 S 11117 E 11118 F 11119 CH7	Installation of Silt Curtain with Concrete Sinkers  Demolition of Existing Seawall		0 days	45 days	0%	Mon 26/10/20	Wed 9/12/20	NA	NA	Sun 21/1/24	Tue 5/3/24	1182 d 1 days											
1111	Demolition of Existing Seawall	67 days	0 days	67 days	0%	Thu 10/12/20	Thu 4/3/21	NA	NA	Wed 6/3/24	Wed 29/5/24	962 days											
1111	Demolition of Existing Seawall	6 days		6 days	0%	Thu 10/12/20	Wed 16/12/20	0 NA	NA	Thu 23/5/24	Wed 29/5/24	1023 d 1 day	1108										
1112 CH8 1113 CH8 1114 T 1115 C 1116 S 1117 E 1118 F 1119 CH7		37 days		37 days	0%	Thu 10/12/20	Mon 25/1/21	NA	NA	Wed 6/3/24	Mon 22/4/24	962 days 1 day	1108										
CH8 1113 CH8 1114 T 1115 C 1116 S 1117 E 1118 F 1119 CH7		30 days		30 days	0%	Tue 26/1/21		NA	NA	Tue 23/4/24		962 days 1 day	1111										
1114 T 1115 C 1116 S 1117 E 1118 F 1119 CH7	H86 to CH70 ELS Works	136 days		136 days	0%	Mon 10/8/20	Thu 21/1/21	NA	NA	Mon 17/8/20	Sat 27/2/21	6 days											
1115 C 1116 S 1117 E 1118 F 1119 CH7	Temporary Works Design Preparation	25 days		25 days	0%	Mon 10/8/20	Mon 7/9/20		NA	Mon 17/8/20		6 days 1 days											
1116 S 1117 F 1118 F 1119 CH7	Comment by PM	25 days		25 days	0%	Tue 8/9/20	Thu 8/10/20		NA	Tue 15/9/20		6 days 1 days	1114										
1117 E 1118 F 1119 CH7	Sheetpiling Installation with Grouting & Pumping Test (56m long on plan)	50 days		50 days	0%	Fri 16/10/20	Mon 14/12/20		NA	Fri 16/10/20		0 days 1 day	1420,1423,1115										
1118 F 1119 CH7 1120 S	Excavation with Shoring Installation (1350 cu.m., 150 cu.m./d)	12 days		12 days	0%	Tue 15/12/20			NA	Tue 22/12/20	Thu 7/1/21	6 days 3 day	1116										
1119 CH7	Preparation of formation and laying of blinding layer	18 days		18 days	0%		Thu 21/1/21		NA	Thu 4/2/21	Sat 27/2/21		1117										
1120 S	170 to CH30 ELS Works	43 days		43 days	0%		Thu 21/1/21  Thu 7/1/21	NA	NA	Mon 16/11/20		0 days	1117										
	Sheetpiling Installation (80m on plan)			14 days	0%		Tue 1/12/20		NA	Mon 16/11/20	Tue 1/12/20		1116SS+25 days										
1121 T	Excavation with Shoring Installation (4500 cu.m., 160 cu.m./d x 1 team) and	14 days			0%		Thu 7/1/21		NA NA			0 days 0.5 day											
1121 F	Preparation of Formation and Laying of Blinding Layer	29 uays	0 days	29 days	070	W Ed 2/12/20	111u //1/21	INA	IVA	W Cu 2/12/20	111u //1/21	0 days 1 day	1120										
1122 DCS	CS Seawater Intake (Insitu Section Bay 15)	41 days	0 days	41 days	0%	Fri 8/1/21	Sat 27/2/21	NA	NA	Fri 8/1/21	Sat 27/2/21	0 days 1 days			11								
1123	Construction of Cast in-situ Box Culvert with feeder pipe installation with Connection to Extisting Box Culvert(Bay 15, approx. 12m long)	41 days	0 days	41 days	0%	Fri 8/1/21	Sat 27/2/21	NA	NA	Fri 8/1/21	Sat 27/2/21	0 days 1 day	1117,1121										
		151 1	0.1	151.1	n.er	1 1 10 10 1	T 21/0/21	N. 1	N. 1	3.5 1/0/01	T 20/5/22	0.1											
	ecast Units Installation	151 days		151 days	0%	Mon 1/3/21	Tue 31/8/21		NA	Mon 1/3/21	Tue 30/5/23	0 days	1100 1110				ГШ						
	Preparation for Connecting Precast Units and Cast In-situ Bay 15	6 days		6 days	0%	Mon 1/3/21	Sat 6/3/21	NA	NA	Mon 1/3/21	Sat 6/3/21	0 days 1 days	1123,1118										
		37 days		37 days	0%	Mon 8/3/21	Thu 22/4/21		NA	Mon 8/3/21	Thu 22/4/21	0 days 2 days	1125,1107SS+75 days										
I127 I	Inspection Shaft Construction and Backfilling Upto +2.0mPD + Feeder Pipe Laying + Backfilling upto Final Formation Level	33 days	0 days	33 days	0%	Fri 23/4/21	Wed 2/6/21	NA	NA	Fri 23/4/21	Wed 2/6/21	0 days 0.5 day	1126										
1128 S	Seawall Reinstatement	75 days	0 days	75 days	0%	Thu 3/6/21	Tue 31/8/21	NA	NA	Sat 25/2/23	Tue 30/5/23	518 days 2 days	1127				<b></b>				$\mathbb{H}$		
1129 Sect	ction 4: Part 2E	225 days	0 days	225 days	0%	Mon 15/8/22	Wed 17/5/23	NA	NA	Sat 10/9/22	Tue 30/5/23	10 days									+		
1130 A	Abandon Existing DCS - Temp. Works Design and Method Statement Submission	0 days	0 days	0 days	0%	Mon 15/8/22	Mon 15/8/22	NA	NA	Sat 10/9/22	Sat 10/9/22	26 days 1 day								11/8			
	Abandon Existing DCS - Temp. Works Design and Method Statement Comment &	35 days	0 days	35 days	0%	Mon 15/8/22	Sun 18/9/22	NA	NA	Sat 10/9/22	Fri 14/10/22	26 days 1 day	1130										
	Appraoval Part 2E - Abandon of existing DCS	185 days	-	185 days	0%	Mon 3/10/22			NA	Sat 15/10/22	Tue 30/5/23	10 days 9 days	20,1131										
	Planned Completion for Section 4	0 days		0 days	0%	Wed 17/5/23			NA	Tue 30/5/23	Tue 30/5/23	10 days	1132									17/5	į
	ction 8: Part 2A - Diversion & abandon of extg DCS box culvert	194 days		194 days	0%	Thu 1/4/21	Wed 24/11/2		NA	Fri 9/4/21	Thu 2/12/21	4 days											
		0 days		0 days	0%	Thu 1/4/21	Thu 1/4/21	NA NA	NA	Fri 9/4/21	Fri 9/4/21	8 days 1 day											
N	Method Statement Submission  Diversion & Abandon of Existing DCS Box Box Culvert - Temp. Works Design and			21 days	0%	Thu 1/4/21	Wed 21/4/21		NA	Fri 9/4/21	Thu 29/4/21	8 days 1 day	1135										
N	Method Statement Comment & Appraoval	. Li days	Ganys	21 days	070	1.1u 1/4/21	04 21/4/21	11/1	11/1	111 /17121	1110 2717121	J duy 1 day	1155										
1137	TTA Implementation	1 day	0 days	1 day	0%	Thu 22/4/21	Thu 22/4/21	NA	NA	Fri 30/4/21	Fri 30/4/21	7 days 0.5 day	1136										
			1															(11111111111111111111111111111111111111			Ш		
tle. Pov 11 D=-		Summary			Inactive	Milestone 🔷	,	Duration-	-only		Start-only	Е	External Mi	lestone	<b>♦</b>		Critical	l Split					
itle: Rev.11 Pro is of 22-May-20	og with Progress	Project Sum	nmary sk			Summary I			Summary Rollup		Finish-only	3					Progress						

									/2018/01 KT															
Task	Name	Duration	Actual Duration	Remaining Duration	Physical % Complete	Early Start	Early Finish	Actual Start	Actual Finisl	Late Start	Late Finish	Total Slack	TRA	Predecessors	2020 Q2   Q3	04	01	2021 O2 C	)3	04 01	2 21   Q2	2022	04	4 Q
38	Sheetpile Installation	25 days		25 days	0%	Fri 23/4/21	Mon 24/5/21	NA	NA	Mon 3/5/21	Tue 1/6/21		1 day	1137	Q2 Q3		Q1							
39	Excavation with Shoring	52 days	0 days	52 days	0%	Tue 25/5/21	Mon 26/7/21	NA	NA	Wed 2/6/21	Tue 3/8/21	7 days	1 day	1138										Ш
10	Diversion of existing DCS box culvert	26 days	0 days	26 days	0%	Tue 27/7/21	Wed 25/8/21	NA	NA	Wed 4/8/21	Thu 2/9/21	7 days	2 days	1137,410,1139					in l					Ш
1	Break up existing box culvert (4 walls) + top slab	35 days	0 days	35 days	0%	Thu 26/8/21	Thu 7/10/21	NA	NA	Fri 3/9/21	Sat 16/10/21	7 days	2 days	1140										Ш
12	Construct new walls at existing box culvert	20 days	0 days	20 days	0%	Fri 8/10/21	Mon 1/11/21	NA	NA	Mon 18/10/21	Tue 9/11/21	7 days	1 days	1141										Ш
13	Abandon existing DCS box culvert	20 days	0 days	20 days	0%	Tue 2/11/21	Wed 24/11/21	NA	NA	Wed 10/11/21	Thu 2/12/21	7 days	1 days	1142										Ш
14	Planned Completion for Section 8	0 days		0 days	0%	Wed 24/11/21	Wed 24/11/21	NA	NA	Thu 2/12/21	Thu 2/12/21	7 days	0 days	1143						2274/11				Ш
	Section 3	729 days		729 days	0%	Thu 16/5/19	Tue 26/10/21		NA	Tue 2/6/20	Tue 2/11/21	6 days	o day o							1 2 2 1 1				Ш
16	Part 2C - Lift LT3 & LT4	729 days		729 days	0%	Thu 16/5/19	Tue 26/10/21		NA	Tue 2/6/20	Tue 2/11/21	6 days												Ш
17												-	0 3	4EC : 260 J	4 2/6									Ш
	Access Date - Part 2A,2C	0 days		0 days	0%	Tue 2/6/20		NA	NA	Tue 2/6/20	Tue 2/6/20	0 days		4FS+369 days	2/6									Ш
18	Mobilization of plant and materials	15 days	0 days	15 days	0%	Thu 16/5/19		NA	NA	Sat 4/7/20	Tue 21/7/20	337 days	-											Ш
19	TTA implementation	4 days	0 days	4 days	0%	Tue 2/6/20	Fri 5/6/20	NA	NA	Fri 17/7/20	Tue 21/7/20	37 days	1 day	1147	Ť									Ш
50	Carry out Titpit and Identify Underground Utilities location	12 days	0 days	12 days	0%	Mon 15/6/20	Fri 26/6/20	NA	NA	Mon 22/6/20	Fri 3/7/20	7 days												
51	Discuss with Relevant Utilities Undertakers	18 days	0 days	18 days	0%	Sat 27/6/20	Tue 14/7/20	NA	NA	Sat 4/7/20	Tue 21/7/20	7 days		1150										Ш
52	Slew CLP Cable and Abandon Telecom Cable (tentative)	75 days	0 days	75 days	0%	Wed 15/7/20	Mon 12/10/20	) NA	NA	Wed 22/7/20	Mon 19/10/20	6 days	4 days	1148,1149,1151										
53	Lift Tower Foundation - Temp. Works Design and Method Statement Submission	0 days	0 days	0 days	0%	Tue 4/8/20	Tue 4/8/20	NA	NA	Tue 15/9/20	Tue 15/9/20	42 days	1 day		• 4	.8								
54	Lift Tower Foundation - Temp. Works Design and Method Statement Comment &	35 days	0 days	35 days	0%	Tue 4/8/20	Mon 7/9/20	NA	NA	Tue 15/9/20	Mon 19/10/20	42 days	1 day	1153										Ш
55	Appraoval Intall Sheetpile, ELS, Excavation and Temp. Works Installation (Shoring, Drainage	38 days	0 days	38 days	0%	Tue 13/10/20	Thu 26/11/20	NA	NA	Tue 20/10/20	Thu 3/12/20	6 days	2 days	1154,1152								#		Ш
6	& Slope Protection)  Foundation Construction (Pad Footing include blinding layer, formwork erection,	38 days	0 days	38 days	0%	Fri 27/11/20	Wed 13/1/21	NA	NA	Fri 4/12/20	Wed 20/1/21	6 days	2 days	1148,1152,175,1			ЫШ							Ш
57	rebar fixing & concreting)  Sheepile Extraction & Backilling	13 days	0 days	13 days	0%	Thu 14/1/21	Thu 28/1/21	NA	NA	Thu 21/1/21	Thu 4/2/21	6 days	1 day	1156										Ш
58	Lift Tower - Temp. Works Design and Method Statement Submission	0 days	-	0 days	0%	Mon 2/11/20	Mon 2/11/20		NA	Fri 1/1/21	Fri 1/1/21	60 days	_			2/1								Ш
9				-	0%		Sun 6/12/20		NA	Fri 1/1/21	Thu 4/2/21			1158			•							Ш
	Lift Tower - Temp. Works Design and Method Statement Comment & Appraoval	35 days	-	35 days		Mon 2/11/20							-											Ш
0	Lift Shaft Tower: 3 Lifts x 20 day/Lift, Falsework & Formwork Erection, Rebar Fixing & Concreting	63 days		63 days	0%	Fri 29/1/21	Mon 19/4/21		NA	Fri 5/2/21	Mon 26/4/21			1156,1159,1157										Ш
Į.	Lift installation (LT3 & LT4)	90 days	0 days	90 days	0%	Tue 20/4/21	Fri 6/8/21	NA	NA	Tue 27/4/21	Fri 13/8/21	6 days	5 days	1160,713										Ш
2	E & M installation	30 days	0 days	30 days	0%	Sat 7/8/21	Fri 10/9/21	NA	NA	Sat 14/8/21	Fri 17/9/21	6 days	3 days	1161										Ш
53	Louvers and Glazing Installation	26 days	0 days	26 days	0%	Fri 21/5/21	Mon 21/6/21	NA	NA	Sat 14/8/21	Mon 13/9/21	71 days	2 days	1160FS+25 days										Ш
4	Parapet Installation and Finishing Works	40 days	0 days	40 days	0%	Tue 22/6/21	Sat 7/8/21	NA	NA	Tue 14/9/21	Tue 2/11/21	71 days	4 days	1163										Ш
55	CLP Meter Installation	0 days	0 days	0 days	0%	Mon 1/2/21	Mon 1/2/21	NA	NA	Fri 20/8/21	Fri 20/8/21	200 days	0.5 day				<b>4</b> 1/2							Ш
66	EMSD Submission Form 5 for Lift Inspection	0 days	0 days	0 days	0%	Mon 1/3/21	Mon 1/3/21	NA	NA	Fri 20/8/21	Fri 20/8/21	172 days	0.5 day	1165			1/	3						Ш
57	EMSD Lift Inspection	0 days	0 days	0 days	0%	Sun 14/3/21	Sun 14/3/21	NA	NA	Fri 3/9/21	Fri 3/9/21	172 days	0.5 day	1166FS+14 days			<b>4</b> 1	4/3						Ш
58	Issuance of Lift Use Permit	0 days	0 days	0 days	0%	Mon 29/3/21	Mon 29/3/21	NA	NA	Sat 18/9/21	Sat 18/9/21	172 days	0.5 day	1167FS+15 days			\$	29/1						Ш
59	Testing & commissioning with Statutory Inspection	36 days	0 days	36 days	0%	Sat 11/9/21	Tue 26/10/21	NA	NA	Sat 18/9/21	Tue 2/11/21	6 days	1 days	1162,1168					4					Ш
70	Footpath	28 days	0 days	28 days	0%	Tue 20/4/21	Mon 24/5/21	NA	NA	Tue 8/6/21	Mon 12/7/21	40 days	1 days	1160				4.]						Ш
71	Open Space within Part 2C	94 days	-	94 days	0%	Tue 25/5/21	Mon 13/9/21		NA	Tue 13/7/21	Tue 2/11/21	40 days	-	1170,1230				411						Ш
72	Planned Completion for Section 3	0 days		0 days	0%	Tue 26/10/21	Tue 26/10/21		NA	Tue 2/11/21	Tue 2/11/21			1171,1168,1169,						30400				Ш
	Sections 5 and 9: Noise Barrier Installation				0%			Fri 20/3/20		Fri 20/3/20	Mon 5/7/21		-	1171,1100,1109,						7.20/10				Ш
			6.83 days	-		Fri 20/3/20						1 day	1 uay											Ш
74	1.0 Noise Barrier Shop Drawing Preparation, Offsite Fabrication		s 20.86 days		0%	Mon 6/4/20		Mon 6/4/20		Mon 6/4/20	Mon 7/12/20	60 days												Ш
75	CNP and TTA available	0 days		0 days	0%	Wed 24/6/20	Wed 24/6/20		NA	Thu 20/8/20	Thu 20/8/20	47 days			4 24/6									
76	Expose the Extisting Noise Barrier Foundation		25 days	45 days	36%	Mon 6/4/20	Fri 3/7/20	Mon 6/4/20	NA	Mon 6/4/20	Tue 7/7/20	3 days	1 day			$\  \  \ $								
17	Implement TTA	2 days	0 days	2 days	0%	Mon 13/7/20	Tue 14/7/20	NA	NA	Wed 18/11/20	Thu 19/11/20	107 days	0.5 day											
78	Expose the Extisting Noise Barrier Foundation under Existing Footpath	15 days	0 days	15 days	0%	Wed 15/7/20	Fri 31/7/20	NA	NA	Fri 20/11/20	Mon 7/12/20	107 days	1 day	1177										
79	Carry out the Site Survey for Existing Holding Down Bolt at Existing Landscaped	6 days	0 days	6 days	0%	Wed 24/6/20	Thu 2/7/20	NA	NA	Thu 20/8/20	Wed 26/8/20	47 days	1 day	1175	-	$\ \ \ $								
80	Noise Barrier Shop Drawings Preparation	30 days	0 days	30 days	0%	Fri 31/7/20	Thu 3/9/20	NA	NA	Fri 21/8/20	Thu 24/9/20	18 days	0.5 day	1176FF+18 days										
31	Noise Barrier Shop Drawings Comment by PM	18 days	0 days	18 days	0%	Fri 4/9/20	Thu 24/9/20	NA	NA	Fri 25/9/20	Sat 17/10/20	18 days	0.5 day	1180										
32	PMAA Panel Material Sample Submission	0 days		0 days	0%	Sat 2/5/20	Sat 2/5/20	NA	NA	Sat 6/6/20	Sat 6/6/20	30 days	1 days		<b>♦</b> 2/5									Ш
				<u></u>																<u>                                     </u>				Щ
	i Prog with Progress	Summary Project Sun	nmary		Inactive Mi			Duration-on  Manual Sur	nly Unmary Rollup		Start-only Finish-only		[ ]	Exter Dead	nal Milestone ine	•				ical Split gress				
of 22-M	lay-20 Milestone	Inactive Ta		-	Manual Ta			Manual Sur			External Tas	1.	_	Critic		_				nual Progre				

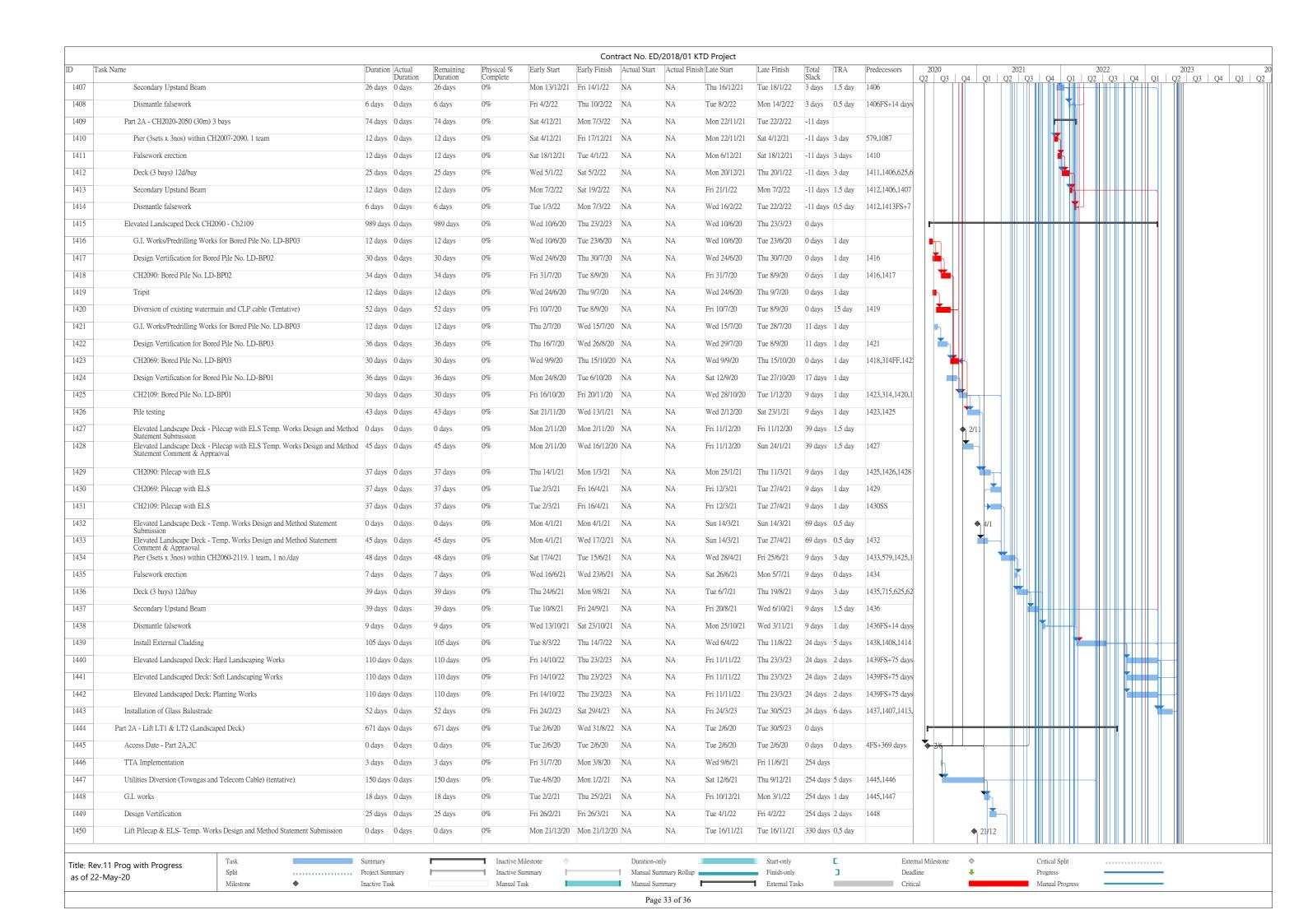
								tract No. ED,	/2010/01 KI	Project														
Tas	k Name	Duration	Actual Duration	Remaining Duration	Physical % Complete	Early Start	Early Finish	Actual Start	Actual Finisl	Late Start	Late Finish	Total Slack	TRA	Predecessors	2020 Q2   Q3	04	202	Q3   C	)4 ()1	2022	2 Q3   Q4	4 01	2023   Q2	
183	PMAA Panel Material Comment and Approval by PM	18 days		18 days	0%	Sat 2/5/20	Fri 22/5/20	NA	NA	Sat 6/6/20	Sat 27/6/20	30 days	1 days	1182		7		\(\frac{1}{2}\)		1 22	25   Q4		1 72	<u>V</u> .
184	PMAA Panel Material Coloring Sample Submission	0 days	0 days	0 days	0%	Thu 4/6/20	Thu 4/6/20	NA	NA	Mon 29/6/20	Mon 29/6/20	20 days	1 days	1183	4/6									
185	PMAA Panel Material Coloring Sample Comment and Approval by PM	10 days	0 days	10 days	0%	Thu 4/6/20	Mon 15/6/20	NA	NA	Mon 29/6/20	Fri 10/7/20	20 days	1 days	1184										
186	Material Testing and Offsite Fabrication	247 days	0 days	247 days	0%	Mon 1/6/20	Tue 2/2/21	NA	NA	Wed 10/6/20	Wed 17/2/21	9 days												
187	Holding Down Bolt Procurement	61 days	0 days	61 days	0%	Fri 5/6/20	Tue 4/8/20	NA	NA	Wed 10/6/20	Sun 9/8/20	5 days	1 days											
188	Holding Down Bolt Testing	45 days	0 days	45 days	0%	Wed 5/8/20	Fri 18/9/20	NA	NA	Mon 10/8/20	Wed 23/9/20	5 days	1 day	1187										
189	Structural Steelwork Procurement	81 days		81 days	0%	Mon 1/6/20	Thu 20/8/20	NA	NA	Sat 13/6/20	Tue 1/9/20	12 days	1 day											
190	Structural Steel Frame Material Testing	46 days	_	46 days	0%	Fri 21/8/20	Mon 5/10/20		NA	Wed 2/9/20	Sat 17/10/20	12 days		1189										
191	Structural Steel Frame Fabrication and Delivery	120 days		120 days	0%	Tue 6/10/20	Tue 2/2/21		NA	Sun 18/10/20	Sun 14/2/21	12 days		1181,1190										
192	Structural Steel Frame Start Delivery to Stie	0 days		0 days	0%	Wed 25/11/20			NA	Tue 8/12/20	Tue 8/12/20	12 days		1191SS+51 days		25/								
193	Polymethyl Metharylate (PMMA) and Associated Aluminium Sub-frame	121 days			0%	Tue 16/6/20	Wed 14/10/2		NA	Sat 11/7/20	Sun 8/11/20	25 days		1185	<b>1</b>	40/	†							
	Procurement																							
194	Polymethyl Metharylate (PMMA) panel fabrication and delivery	101 days		101 days	0%	Thu 15/10/20			NA	Mon 9/11/20	Wed 17/2/21	25 days	30 days	1193,1181										
195	Temp Works Design for Noise Barrier	106 days	_		0%	Sat 13/6/20	Mon 19/10/2		NA	Fri 19/6/20	Sat 24/10/20	5 days				TT•								
196	ELS Design Preparation for Noise Barrier with ICE	18 days		18 days	0%	Wed 17/6/20	Thu 9/7/20		NA	Tue 23/6/20	Wed 15/7/20	5 days												
197	ELS Design for Noise Barrier Comment by AECOM	21 days	0 days	21 days	0%	Fri 10/7/20	Thu 30/7/20		NA	Thu 16/7/20	Wed 5/8/20	6 days	1 day	1196										
198	Temporary Works Platform Design Preparation	36 days	0 days	36 days	0%	Sat 13/6/20	Mon 27/7/20	NA	NA	Fri 19/6/20	Sat 1/8/20	5 days	1 day											
199	Temporary Working Platform Design Submit for AECOM Comment	19 days	0 days	19 days	0%	Tue 28/7/20	Tue 18/8/20	NA	NA	Mon 3/8/20	Mon 24/8/20	5 days	1 day	1198										
200	Temporary Working Platform Fabrication	51 days	0 days	51 days	0%	Wed 19/8/20	Mon 19/10/2	0 NA	NA	Tue 25/8/20	Sat 24/10/20	5 days	1 day	1199										
201	2.0 Noise Barrier Footing and Modification Existing Column Stud	184 days	2.71 days	181.29 days	0%	Fri 20/3/20	Sat 19/9/20	Fri 20/3/20	NA	Fri 20/3/20	Wed 23/9/20	4 days		_		1								
202	Take up the Works Area	1 day	1 day	0 days	0%	Fri 20/3/20	Fri 20/3/20	Fri 20/3/20	Fri 20/3/20	Fri 20/3/20	Fri 20/3/20	0 days												
203	Ground Investigation Works	25 days	0 days	25 days	0%	Sat 4/7/20	Sat 1/8/20	NA	NA	Wed 8/7/20	Wed 5/8/20	3 days	1 day	1176										
204	Diversion of Existing Utilities and ELS Construction	42 days	0 days	42 days	0%	Mon 3/8/20	Sat 19/9/20	NA	NA	Thu 6/8/20	Wed 23/9/20	3 days	1 day	1197,1203										
205	Fooing with Column Stud Construction	61 days	0 days	61 days	0%	Wed 23/9/20	Sat 5/12/20	NA	NA	Thu 24/9/20	Mon 7/12/20	1 day												
206	Bay 1 & 3 Fooing with Column Stud and Modification of Existing Column Stud	10 days	0 days	10 days	0%	Wed 23/9/20	Tue 6/10/20	NA	NA	Thu 24/9/20	Wed 7/10/20	1 day	1 day	1188,1204,184FI										
207	along Bay 1 & 3  Bay 2 & 4 Fooing with Column Stud and Modification of Existing Column along	10 days	0 days	10 days	0%	Wed 7/10/20	Sat 17/10/20	NA	NA	Thu 8/10/20	Mon 19/10/20	1 day	1 day	1206										
208	Bay 2&4  Bay 5 & 7 Fooing with Column Stud, Modification of Existing Stud along Bay 5&7			10 days	0%		Fri 30/10/20		NA	Tue 20/10/20	Sat 31/10/20		1 day	1207										
209	Bay 6 Fooing with Column Stud, Modification of Existing Stud along Bay 6	10 days			0%	Sat 31/10/20	Wed 11/11/2		NA	Mon 2/11/20	Thu 12/11/20		1 day	1208										
210	Backfill and extract sheet pile	21 days			0%	Thu 12/11/20			NA	Fri 13/11/20	Mon 7/12/20		1 day	1209										
211	Modification of Remaining Colum Stud	50 days		50 days		Mon 7/12/20		NA	NA	Tue 8/12/20	Sat 6/2/21	1 day	1	.207										
212	Modification of Remaining Column Stud	50 days		50 days	0%	Mon 7/12/20		NA NA	NA NA	Tue 8/12/20	Sat 6/2/21		1 day	1210,1178										
						Wed 19/8/20								1210,1170										
213	Noise Barrier Installation	258 days			0%			NA	NA	Sat 26/9/20	Mon 5/7/21	1	1 day	1100	]									
214	CNP Application	31 days		31 days	0%	Wed 19/8/20			NA	Sat 26/9/20	Mon 26/10/20			1199		<b>1</b>								
215	Temporary Platform Delivery to Site	0 days		,	0%		Mon 19/10/2		NA	Tue 27/10/20	Tue 27/10/20		0.5 day			19/10								
216	Temporary Platform On-site Assembly (Night Time)	36 days			0%		Tue 1/12/20		NA	Tue 27/10/20	Mon 7/12/20	5 days		1214,1215										
217	Structural Steel Frame Installation	119 days		119 days		Mon 7/12/20	Wed 5/5/21		NA	Tue 8/12/20	Thu 6/5/21		1 day	1192,1212SS,12										
218	PMMA and Associated Aluminum Sub-frame Installation	117 days	0 days	117 days		Fri 8/1/21	Wed 2/6/21	NA	NA	Sat 9/1/21	Thu 3/6/21	1 day	1 day	1194SS+50 days										
219	Lighting Installation	25 days	0 days	25 days	0%	Thu 3/6/21	Sat 3/7/21	NA	NA	Fri 4/6/21	Mon 5/7/21	1 day	1 day	1218FF+25 days										
220	Rainwater downpipe	25 days	0 days	25 days	0%	Thu 3/6/21	Sat 3/7/21	NA	NA	Fri 4/6/21	Mon 5/7/21	1 day	1 day	1218FF+25 days				4						
221	Bus Lay-by	25 days	0 days	25 days	0%	Thu 3/6/21	Sat 3/7/21	NA	NA	Fri 4/6/21	Mon 5/7/21	1 day		1218FF+25 days				4						
222	Planned Completion for Section 5 & Section 9	0 days	0 days	0 days	0%	Sat 3/7/21	Sat 3/7/21	NA	NA	Mon 5/7/21	Mon 5/7/21	1 day	0 days	1218,1219,1220,				3/7						
223	Section 6	1201 day	8.73 days	1192.27 days?	0%	Thu 16/5/19	Tue 30/5/23	Thu 16/5/19	NA	Thu 16/5/19	Wed 29/5/24	298 da		_								+++		
224	Fencing (15m/d) & Hoarding Erection (10m/d)	915 days	185.72 days	729.28 days	0%	Tue 15/10/19	Thu 10/11/22	Tue 15/10/19	NA	Tue 15/10/19	Fri 30/12/22	42 days		_	+									
225	Hoarding - Part 1 (~57m)	51 days	0 days	51 days	0%	Tue 1/12/20	Mon 1/2/21	NA	NA	Wed 21/9/22	Mon 21/11/22	536 days	1 day	121,8		╢╅								
226	Fencing - Part 1 (758m)	6 days	0 days	6 days	0%	Sat 19/9/20	Fri 25/9/20	NA	NA	Mon 1/3/21	Sat 6/3/21	130 days	0 days	121,8		$\parallel \parallel \parallel$								
227	Fencing - Part 2A (~458m) - 4 team	12 days			0%	Wed 3/2/21	Fri 19/2/21		NA	Sat 5/2/22	Fri 18/2/22	296 days	1	9,121,1147,1445		$\ \cdot\ $								
																	1				<u> </u>	Щ		_
	11 Prog with Progress	Summary Project Sun	ımarv		Inactive Mile Inactive Sun			Duration-or	nly Ummary Rollup		Start-only Finish-only		[ ]	Externa Deadlin	l Milestone e	•		Critic Prog	cal Split ress					
s of 22-1	May-20 Milestone ◆	Inactive Ta		-	Manual Task			Manual Su			External Tas	1.	_	Critical		_			al Progress					



							Con	tract No. ED	/2018/01 K	TD Project												
Task N	Name	Duration	Actual Duration	Remaining Duration	Physical % Complete	Early Start	Early Finish	Actual Start	Actual Finis	h Late Start	Late Finish	Total TRA Slack		2020	Q4 Q1	2021	03   0	04 01		2022   Q3	04	O1
72	CH2000 - CH2060 (~84m, 2 M/H) - S.D. Rd	14 days		14 days	0%	Thu 6/1/22	Fri 21/1/22	NA	NA	Mon 5/9/22	Wed 21/9/22	198 days 1 days	1085SS+12 days	2 23	V+ VI	1 22			. 1 22		Ť	QI I
73	CH2060 - CH2118.93 (~50.7m, 2 M/H) - Rd D3	14 days	0 days	14 days	0%	Mon 4/10/21	Wed 20/10/21	1 NA	NA	Fri 3/12/21	Sat 18/12/21	51 days 1 days	1267									
74	CH100 - CH147 (~169m, 5 M/H) - L12 Road	38 days	0 days	38 days	0%	Mon 2/5/22	Wed 15/6/22	NA	NA	Sat 2/7/22	Mon 15/8/22	51 days 3 days	1275,1229						∥¥			
75	Open Space & Promenade (~457m, 11 M/H)	76 days	0 days	76 days	0%	Tue 25/1/22	Sat 30/4/22	NA	NA	Tue 29/3/22	Thu 30/6/22	51 days 6 days	1504,458,459,12						###	<u> </u>		
76	L12d Stormwater	50 days	0 days	50 days	0%	Thu 21/10/21	Fri 17/12/21	NA	NA	Wed 26/1/22	Mon 28/3/22	80 days	1273,490							<u> </u>		
77	Sewerage Drainage	496 days	0 days	496 days	0%	Tue 1/12/20	Wed 3/8/22	NA	NA	Sat 29/5/21	Wed 5/10/22	51 days							₩₩	<del>,</del>		
78	Procurement of Sewerage Pipes	90 days	0 days	90 days	0%	Tue 1/12/20	Sun 28/2/21	NA	NA	Sat 29/5/21	Thu 26/8/21	179 days 0.5 days										
79	Sewerage Drainage - Temp. Works Design and Method Statement Submission	0 days	0 days	0 days	0%	Wed 2/6/21	Wed 2/6/21	NA	NA	Sat 28/8/21	Sat 28/8/21	87 days 0.5 days				<b>4</b> 2/	5					
80	Sewerage Drainage - Temp. Works Design and Method Statement Comment &	21 days	0 days	21 days	0%	Wed 2/6/21	Tue 22/6/21	NA	NA	Sat 28/8/21	Fri 17/9/21	87 days 0.5 days	1279									
1	Appraoval CH1000 - CH1087 (~68m, 3 M/H)	19 days	0 days	19 days	0%	Tue 15/6/21	Wed 7/7/21	NA	NA	Fri 27/8/21	Fri 17/9/21	62 days 1 days	428,451,465,466									
2	CH1087 - CH1189.4 (~47m, 1 no M/H)	14 days	0 days	14 days	0%	Sat 4/9/21	Mon 20/9/21	NA	NA	Sat 18/9/21	Wed 6/10/21	12 days 1 days	1265,1278,1280,				4					
83	CH100 - CH147 (~156m, 6 M/H) - L12 Road	41 days		41 days	0%	Thu 16/6/22	Wed 3/8/22	NA	NA	Tue 16/8/22	Wed 5/10/22	51 days 3 days	1274,1280,1275,									
	Underground Watermain	629 days		629 days	0%	Tue 15/12/20	Fri 27/1/23		NA	Fri 14/5/21	Thu 16/3/23	41 days							Щ			
285	Fresh Watermain	519 days		519 days	0%	Tue 15/12/20	Wed 14/9/22		NA	Fri 14/5/21	Thu 16/3/23	119 days								الللل	,	.
286	Fresh Watermain - Method Statement Submission	0 days		0 days	0%	Tue 1/6/21	Tue 1/6/21		NA	Sat 7/8/21	Sat 7/8/21	67 days 1 days				1/	5			/        <b> </b>		$\  \cdot \ $
287	Fresh Watermain - Ivietnou Statement Submission  Fresh Watermain Method Statement Comment & Appraoval				0%	Tue 1/6/21	Mon 5/7/21			Sat 7/8/21	Fri 10/9/21		1286									
87	**	35 days		35 days					NA			67 days 1 days	1286									$\  \cdot \ $
	Fresh Watermain Procurement	120 days		120 days	0%	Mon 11/1/21	Mon 10/5/21		NA	Fri 14/5/21	Fri 10/9/21	123 days 1 days	1200 1207									$\  \cdot \ $
39	CH1000 - CH1087 (~191m) Rd D3	20 days		20 days	0%	Tue 6/7/21	Wed 28/7/21		NA	Sat 11/9/21	Wed 6/10/21	58 days 1 days	1288,1287									
90	CH1087 - CH1189.4 (~212m) - N. Ramp	4 days		4 days	0%	Tue 21/9/21	Sat 25/9/21		NA	Thu 7/10/21	Mon 11/10/21		1282,467,1289									
1	CH1189.4 - CH1394 (~409.2m) - Bridge D3	42 days	0 days	42 days	0%	Tue 10/8/21	Tue 28/9/21		NA	Fri 15/10/21	Thu 2/12/21	54 days 2 days	1288,944FF									
2	CH1394 - CH1444.7 (~101.4m) - S. Ramp	10 days	0 days	10 days	0%	Tue 6/7/21	Fri 16/7/21	NA	NA	Mon 15/8/22	Thu 25/8/22	332 days 0 days	988SS+10 days,									
93	CH1444.7 - CH1560 (~165m) - Rd D3	30 days	0 days	30 days	0%	Mon 12/7/21	Sat 14/8/21	NA	NA	Sat 27/11/21	Tue 4/1/22	116 days 0 days	988SS+15 days									
1	CH1720 - CH1920 (~25m) - Underpass	2 days	0 days	2 days	0%	Fri 17/12/21	Sat 18/12/21	NA	NA	Fri 16/9/22	Sat 17/9/22	221 days 0 days	1270,444									
5	CH2060 - CH2118.93 (~47m) - Rd D3	2 days	0 days	2 days	0%	Sat 16/10/21	Mon 18/10/21	1 NA	NA	Wed 15/12/21	Thu 16/12/21	51 days 0 days	1273SS+10 days									
,	CH100 - CH147 (~280m) - L12 Road	30 days	0 days	30 days	0%	Tue 17/5/22	Tue 21/6/22	NA	NA	Tue 28/6/22	Tue 2/8/22	35 days 2 days	1297									
7	Open Space & Promenade (~1,093m)	110 days	0 days	110 days	0%	Thu 30/12/21	Mon 16/5/22	NA	NA	Wed 12/1/22	Fri 27/5/22	10 days 1 day	1497,458,111									
	Freshwater main across Kai Tak River	50 days	0 days	50 days	0%	Tue 17/5/22	Fri 15/7/22	NA	NA	Tue 15/11/22	Thu 12/1/23	151 days 1 day	1297,514						111 1			
)	L12d Freshwater	50 days	0 days	50 days	0%	Tue 15/12/20	Wed 17/2/21	NA	NA	Tue 15/11/22	Thu 12/1/23	569 days	498							$+ \  \ $		
0	Fresh Watermain T&C	51 days	0 days	51 days	0%	Sat 16/7/22	Wed 14/9/22	NA	NA	Fri 13/1/23	Thu 16/3/23	151 days 1 day	1297,1296,1298,									+
1	Salt Watermain	591 days	0 days	591 days	0%	Mon 1/2/21	Fri 27/1/23	NA	NA	Sun 20/6/21	Thu 16/3/23	41 days			+				HH			1
12	Salt Watermain - Method Statement Submission	0 days	0 days	0 days	0%	Mon 24/5/21	Mon 24/5/21	NA	NA	Mon 13/9/21	Mon 13/9/21	112 days 1 day				<b>4</b> 24,	'5					
)3	Salt Watermain Method Statement Comment & Appraoval	35 days	0 days	35 days	0%	Mon 24/5/21	Sun 27/6/21	NA	NA	Mon 13/9/21	Sun 17/10/21	112 days 1 day	1302									
04	Salt Watermain Procurement	120 days	0 days	120 days	0%	Mon 1/2/21	Mon 31/5/21	NA	NA	Sun 20/6/21	Sun 17/10/21	139 days 1 day										
)5	CH1000 - CH1087 (~157m) Rd D3	15 days	0 days	15 days	0%	Mon 28/6/21	Thu 15/7/21	NA	NA	Thu 18/8/22	Sat 3/9/22	341 days 1 days	1304,1303									
06	CH1087 - CH1189.4 (~218m) - N. Ramp	4 days	0 days	4 days	0%	Mon 27/9/21	Thu 30/9/21	NA	NA	Tue 12/10/21	Sat 16/10/21	12 days 1 day	1290									
07	CH1189.4 - CH1394 (~409.2m) - Bridge D3	40 days	0 days	40 days	0%	Sat 2/10/21	Thu 18/11/21	NA	NA	Mon 18/10/21	Thu 2/12/21	12 days 0.5 days	1291SS,1303,45									
08	CH1394 - CH1444.7 (~101.4m) - S. Ramp	10 days	0 days	10 days	0%	Sat 17/7/21	Wed 28/7/21	NA	NA	Fri 26/8/22	Tue 6/9/22	332 days 1 day	1292									
809	CH1444.7 - CH1560 (~165m) - Rd D3	18 days		18 days	0%	Mon 16/8/21	Sat 4/9/21		NA	Wed 29/6/22	Wed 20/7/22	258 days 1 day	1293									$\  \cdot \ $
10	CH1560 - CH1720 (~160m) - NDR	50 days		50 days	0%	Fri 19/11/21	Wed 19/1/22		NA	Thu 21/7/22	Sat 17/9/22	197 days	1307,1309,444									
1	CH1720 - CH1920 (~25m) - Underpass	3 days		3 days	0%	Thu 20/1/22	Sat 22/1/22		NA	Mon 19/9/22	Wed 21/9/22	197 days 1 day	1294,1310									
2	CH2060 - CH2118.93 (~47m) - Rd D3	2 days		2 days	0%	Mon 24/1/22			NA	Thu 22/9/22	Fri 23/9/22	197 days 0 days	1294,1310									
.3	CH100 - CH147 (~455m) - L12 Road	47 days		47 days	0%		Tue 16/8/22		NA	Wed 3/8/22	Tue 27/9/22	35 days 2 days	1295,1311									
14	L12d Salt Watermain	50 days		50 days	0%	Wed 22/0/22 Wed 17/8/22	Mon 17/10/22		NA	Wed 3/6/22 Wed 16/11/22	Fri 13/1/23	75 days 1 day	1313,498									
				1									,									
315	Open Space & Promenade (~1,093m)	110 days		110 days	0%	Tue 17/5/22	Sat 24/9/22		NA	Sat 28/5/22	Sat 8/10/22	10 days 1 day	1297,458									$\  \cdot \ $
316	Saltwater main across Kai Tak River	51 days	o days	51 days	0%	Ivion 26/9/22	Fri 25/11/22	NA	NA	Tue 15/11/22	Fri 13/1/23	41 days 1 day	1315,514									
le: Rev.11	Prog with Progress	Summary			Inactive N			Duration-o	-		Start-only	<u> </u>	External	Milestone	<b>♦</b>			cal Split				
	sy-20 Split	Project Sun	nmary		Inactive S	ummary		Manual Su	mmary Rollup		Finish-only	3	Deadline		₩.		Prog	ress				



Sec	FSD Inspection  Issuance of FS Certificate  Salt Water and Sewage Pumping Station: Landscaping hardworks and softworks  Salt Water and Sewage Pumping Station: Planting Works  ection 6 Completion  eawater Intake Box Culvert (~169m)  Access Date - Part 4  Part 4 - CHA.0-79 (79m)  CHA 0-24 Precast Section  Temporary ELS & Excavation and Shoring Installation  Install 3 nos. 8 m long precast units (2.5 days per unit)  CHA 24-79 (75m) (5 units)  Temporary ELS & Excavation  Unit 1 & 3 (41 days per unit)  Unit 2 & 4 (41 days per unit)  Unit 5 & 6 (41 days per unit)  Remove struts and backfilling  Reinstate seawall	0 days 110 days 110 days 110 days 0 days 647 days 290 days 24 days 10 days 256 days 44 days 44 days	Duration 0 days	Duration 0 days 0 days 110 days 110 days 0 days 647 days 0 days 290 days 34 days 24 days 10 days	Physical % Complete 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%		Sat 29/4/23 Thu 18/5/23 Sat 15/4/23 Sat 15/4/23 Tue 30/5/23 Mon 8/5/23	NA NA NA NA	NA NA NA NA NA NA NA NA NA	Late Start  Thu 11/5/23  Tue 30/5/23  Wed 11/1/23  Wed 11/1/23  Tue 30/5/23  Fri 5/3/21  Fri 5/3/21	Tue 30/5/23 Tue 30/5/23	Total Slack 8 days 0.5 da 8 days 0.5 da 35 days 2 day 35 days 2 day 0 days 0 days	ys 1362FS+15 days 562,1351,548	2020 Q2   Q3   Q	04 Q1   1	2021 Q2   Q3	Q4	Q1	2022 Q2 Q	Q3 Q4	Q1
Se	Issuance of FS Certificate  Salt Water and Sewage Pumping Station: Landscaping hardworks and softworks  Salt Water and Sewage Pumping Station: Planting Works  ection 6 Completion  leawater Intake Box Culvert (~169m)  Access Date - Part 4  Part 4 - CHA.0-79 (79m)  CHA 0-24 Precast Section  Temporary ELS & Excavation and Shoring Installation  Install 3 nos. 8 m long precast units (2.5 days per unit)  CHA 24-79 (75m) (5 units)  Temporary ELS & Excavation  Unit 1 & 3 (41 days per unit)  Unit 2 & 4 (41 days per unit)  Unit 5 & 6 (41 days per unit)  Remove struts and backfilling	0 days 110 days 110 days 110 days 0 days 647 days 290 days 24 days 10 days 256 days 44 days 44 days	0 days	0 days 110 days 110 days 0 days 647 days 0 days 290 days 34 days 24 days 10 days	0% 0% 0% 0% 0% 0% 0% 0% 0% 0%	Thu 18/5/23 Wed 30/11/22 Wed 30/11/22 Tue 30/5/23 Fri 5/3/21 Fri 5/3/21 Thu 19/5/22 Thu 19/5/22	Thu 18/5/23 Sat 15/4/23 Sat 15/4/23 Tue 30/5/23 Mon 8/5/23 Fri 5/3/21 Mon 8/5/23	NA NA NA NA NA NA NA NA	NA NA NA NA NA NA NA NA	Tue 30/5/23 Wed 11/1/23 Wed 11/1/23 Tue 30/5/23 Fri 5/3/21	Tue 30/5/23 Mon 29/5/23 Mon 29/5/23 Tue 30/5/23 Tue 30/5/23	8 days 0.5 da 35 days 2 day 35 days 2 day 0 days	ys 1362FS+15 days 562,1351,548 562,1351,548							1	
Se Se	Salt Water and Sewage Pumping Station: Landscaping hardworks and softworks  Salt Water and Sewage Pumping Station: Planting Works  ection 6 Completion  eawater Intake Box Culvert (~169m)  Access Date - Part 4  Part 4 - CHA.0-79 (79m)  CHA 0-24 Precast Section  Temporary ELS & Excavation and Shoring Installation  Install 3 nos. 8 m long precast units (2.5 days per unit)  CHA 24-79 (75m) (5 units)  Temporary ELS & Excavation  Unit 1 & 3 (41 days per unit)  Unit 2 & 4 (41 days per unit)  Unit 5 & 6 (41 days per unit)  Remove struts and backfilling	110 days 110 days 0 days 647 days 0 days 290 days 34 days 10 days 256 days 44 days 44 days 44 days	0 days	110 days 110 days 0 days 647 days 0 days 290 days 24 days 10 days	0% 0% 0% 0% 0% 0% 0%	Wed 30/11/22 Wed 30/11/22 Tue 30/5/23 Fri 5/3/21 Fri 5/3/21 Thu 19/5/22 Thu 19/5/22	Sat 15/4/23 Sat 15/4/23 Tue 30/5/23 Mon 8/5/23 Fri 5/3/21 Mon 8/5/23	NA NA NA NA	NA NA NA NA	Wed 11/1/23 Wed 11/1/23 Tue 30/5/23 Fri 5/3/21	Mon 29/5/23 Mon 29/5/23 Tue 30/5/23	35 days 2 day 35 days 2 day 0 days	562,1351,548 562,1351,548								
Se	Salt Water and Sewage Pumping Station: Planting Works section 6 Completion seawater Intake Box Culvert (~169m) Access Date - Part 4 Part 4 - CHA.0-79 (79m) CHA 0-24 Precast Section Temporary ELS & Excavation and Shoring Installation Install 3 nos. 8 m long precast units (2.5 days per unit) CHA 24-79 (75m) (5 units) Temporary ELS & Excavation Unit 1 & 3 (41 days per unit) Unit 2 & 4 (41 days per unit) Unit 5 & 6 (41 days per unit) Remove struts and backfilling	110 days 0 days 647 days 0 days 290 days 34 days 24 days 10 days 256 days 44 days 44 days	0 days	110 days 0 days 647 days 0 days 290 days 34 days 24 days 10 days	0% 0% 0% 0% 0% 0%	Wed 30/11/22 Tue 30/5/23 Fri 5/3/21 Fri 5/3/21 Thu 19/5/22 Thu 19/5/22	Sat 15/4/23 Tue 30/5/23 Mon 8/5/23 Fri 5/3/21 Mon 8/5/23	NA NA NA	NA NA NA	Wed 11/1/23 Tue 30/5/23 Fri 5/3/21	Mon 29/5/23  Tue 30/5/23  Tue 30/5/23	35 days 2 day 0 days	562,1351,548								
See See	eawater Intake Box Culvert (~169m)  Access Date - Part 4  Part 4 - CHA.0-79 (79m)  CHA 0-24 Precast Section  Temporary ELS & Excavation and Shoring Installation  Install 3 nos. 8 m long precast units (2.5 days per unit)  CHA 24-79 (75m) (5 units)  Temporary ELS & Excavation  Unit 1 & 3 (41 days per unit)  Unit 2 & 4 (41 days per unit)  Unit 5 & 6 (41 days per unit)  Remove struts and backfilling	0 days 647 days 0 days 290 days 34 days 24 days 10 days 256 days 44 days 44 days	0 days	0 days 647 days 0 days 290 days 34 days 24 days 10 days	0% 0% 0% 0% 0%	Tue 30/5/23 Fri 5/3/21 Fri 5/3/21 Thu 19/5/22 Thu 19/5/22	Tue 30/5/23 Mon 8/5/23 Fri 5/3/21 Mon 8/5/23	NA NA NA	NA NA NA	Tue 30/5/23 Fri 5/3/21	Tue 30/5/23 Tue 30/5/23	0 days									
Sec	Part 4 - CHA.0-79 (79m)  CHA 0-24 Precast Section  Temporary ELS & Excavation and Shoring Installation  Install 3 nos. 8 m long precast units (2.5 days per unit)  CHA 24-79 (75m) (5 units)  Temporary ELS & Excavation  Unit 1 & 3 (41 days per unit)  Unit 2 & 4 (41 days per unit)  Unit 5 & 6 (41 days per unit)  Remove struts and backfilling	647 days 0 days 290 days 34 days 24 days 10 days 50 days 44 days 44 days	0 days	647 days 0 days 290 days 34 days 24 days 10 days	0% 0% 0% 0%	Fri 5/3/21 Fri 5/3/21 Thu 19/5/22 Thu 19/5/22	Mon 8/5/23 Fri 5/3/21 Mon 8/5/23	NA NA	NA NA	Fri 5/3/21	Tue 30/5/23		1350,1363,1364,								!
	Access Date - Part 4  Part 4 - CHA.0-79 (79m)  CHA 0-24 Precast Section  Temporary ELS & Excavation and Shoring Installation  Install 3 nos. 8 m long precast units (2.5 days per unit)  CHA 24-79 (75m) (5 units)  Temporary ELS & Excavation  Unit 1 & 3 (41 days per unit)  Unit 2 & 4 (41 days per unit)  Unit 5 & 6 (41 days per unit)  Remove struts and backfilling	0 days 290 days 34 days 24 days 10 days 256 days 50 days 44 days 44 days	0 days	0 days 290 days 34 days 24 days 10 days	0% 0% 0%	Fri 5/3/21 Thu 19/5/22 Thu 19/5/22	Fri 5/3/21 Mon 8/5/23	NA	NA			0 days								111 11 11 1	at III
	Part 4 - CHA.0-79 (79m)  CHA 0-24 Precast Section  Temporary ELS & Excavation and Shoring Installation  Install 3 nos. 8 m long precast units (2.5 days per unit)  CHA 24-79 (75m) (5 units)  Temporary ELS & Excavation  Unit 1 & 3 (41 days per unit)  Unit 2 & 4 (41 days per unit)  Unit 5 & 6 (41 days per unit)  Remove struts and backfilling	290 days 34 days 24 days 10 days 256 days 50 days 44 days 44 days	0 days	290 days 34 days 24 days 10 days 256 days	0% 0%	Thu 19/5/22 Thu 19/5/22	Mon 8/5/23			Fri 5/3/21	n						.mm 10 11 12	.11			++
	CHA 0-24 Precast Section  Temporary ELS & Excavation and Shoring Installation  Install 3 nos. 8 m long precast units (2.5 days per unit)  CHA 24-79 (75m) (5 units)  Temporary ELS & Excavation  Unit 1 & 3 (41 days per unit)  Unit 2 & 4 (41 days per unit)  Unit 5 & 6 (41 days per unit)  Remove struts and backfilling	34 days 24 days 10 days 256 days 50 days 44 days 44 days	0 days 0 days 0 days 0 days 0 days	34 days 24 days 10 days 256 days	0%	Thu 19/5/22		NA			Fri 5/3/21	0 days 0 day	4FS+645 days		<del>♦ 5/.</del>	3			$\neg \  \ $		
	Temporary ELS & Excavation and Shoring Installation  Install 3 nos. 8 m long precast units (2.5 days per unit)  CHA 24-79 (75m) (5 units)  Temporary ELS & Excavation  Unit 1 & 3 (41 days per unit)  Unit 2 & 4 (41 days per unit)  Unit 5 & 6 (41 days per unit)  Remove struts and backfilling	24 days 10 days 256 days 50 days 44 days 44 days	0 days 0 days 0 days 0 days	24 days 10 days 256 days	0%		Tue 28/6/22		NA	Fri 10/6/22	Tue 30/5/23	18 days							-		+-
	Install 3 nos. 8 m long precast units (2.5 days per unit)  CHA 24-79 (75m) (5 units)  Temporary ELS & Excavation  Unit 1 & 3 (41 days per unit)  Unit 2 & 4 (41 days per unit)  Unit 5 & 6 (41 days per unit)  Remove struts and backfilling	10 days 256 days 50 days 44 days 44 days	0 days 0 days 0 days	10 days 256 days		Thu 19/5/22		NA	NA	Fri 10/6/22	Wed 20/7/22	18 days							-		
	CHA 24-79 (75m) (5 units)  Temporary ELS & Excavation  Unit 1 & 3 (41 days per unit)  Unit 2 & 4 (41 days per unit)  Unit 5 & 6 (41 days per unit)  Remove struts and backfilling	256 days 50 days 44 days 44 days 44 days	0 days	256 days	0%		Thu 16/6/22	NA	NA	Fri 10/6/22	Fri 8/7/22	18 days 1 day	1384,1386,1238,								
	Temporary ELS & Excavation  Unit 1 & 3 (41 days per unit)  Unit 2 & 4 (41 days per unit)  Unit 5 & 6 (41 days per unit)  Remove struts and backfilling	50 days 44 days 44 days 44 days	0 days			Fri 17/6/22	Tue 28/6/22	NA	NA	Sat 9/7/22	Wed 20/7/22	18 days 2.5 da	ys 1371								
	Temporary ELS & Excavation  Unit 1 & 3 (41 days per unit)  Unit 2 & 4 (41 days per unit)  Unit 5 & 6 (41 days per unit)  Remove struts and backfilling	50 days 44 days 44 days 44 days	0 days		0%	Wed 29/6/22	Mon 8/5/23	NA	NA	Thu 21/7/22	Tue 30/5/23	18 days									+
	Unit 1 & 3 (41 days per unit)  Unit 2 & 4 (41 days per unit)  Unit 5 & 6 (41 days per unit)  Remove struts and backfilling	44 days 44 days 44 days		unjo	0%	Wed 29/6/22	Fri 26/8/22		NA	Thu 21/7/22	Sat 17/9/22	18 days 1 day	1372								
	Unit 2 & 4 (41 days per unit)  Unit 5 & 6 (41 days per unit)  Remove struts and backfilling	44 days 44 days	,		0%	Sat 27/8/22	Thu 20/10/22		NA	Mon 19/9/22		18 days 3 day									
	Unit 5 & 6 (41 days per unit)  Remove struts and backfilling	44 days	0 days		0%	Fri 21/10/22	Sat 10/12/22		NA	Fri 11/11/22	Mon 2/1/23	18 days 3 day									Щ
	Remove struts and backfilling				0%	Mon 12/12/22		NA	NA	Tue 3/1/23	Sat 25/2/23										
												18 days 3 day									
	Reinstate seawall	24 days			0%	Mon 6/2/23		NA	NA	Mon 27/2/23	Sat 25/3/23	18 days 1 day									
		50 days			0%	Mon 6/3/23	Mon 8/5/23		NA	Mon 27/3/23	Tue 30/5/23	18 days 1 day	1378								
	Part 10 - CHA79-89 (10m)	286 days			0%	Wed 2/6/21	Wed 18/5/22		NA	Wed 2/6/21	Thu 9/6/22	0 days							7		
	Access Date - Part 10	0 days	0 days	0 days	0%	Wed 2/6/21	Wed 2/6/21	NA	NA	Wed 2/6/21	Wed 2/6/21	0 days 0 day	4FS+734 days,1'			2/6					
	Tempoary Works Design and Method Statement Submission	0 days	0 days	0 days	0%	Sun 2/1/22	Sun 2/1/22	NA	NA	Tue 22/2/22	Tue 22/2/22	40 days					1	<b>♦</b> 2/1.			
	Tempoary Works Design and Method Statement Comment by PM	21 days	0 days	21 days	0%	Mon 3/1/22	Wed 26/1/22	NA	NA	Tue 22/2/22	Thu 17/3/22	40 days	1382								
	Temporary ELS & Excavation	14 days	0 days	14 days	0%	Fri 25/2/22	Sat 12/3/22	NA	NA	Fri 18/3/22	Sat 2/4/22	18 days 0 day	1388,1381,1391,						$-\ \ \ $		
	Box Culvert with Feeder Installation	47 days	0 days	47 days	0%	Mon 14/3/22	Wed 11/5/22	NA	NA	Mon 4/4/22	Wed 1/6/22	18 days 6 day	1384,1381,1391						4		
	Remove struts and backfilling	6 days	0 days	6 days	0%	Thu 12/5/22	Wed 18/5/22	NA	NA	Thu 2/6/22	Thu 9/6/22	18 days 1 day	1392,1385								
	Part 1 - CH89-165 (76m) 6 Units	193 days	0 days	193 days	0%	Mon 16/8/21	Fri 8/4/22	NA	NA	Mon 6/9/21	Wed 1/6/22	18 days									
	Temporary ELS & Excavation	25 days	0 days	25 days	0%	Mon 16/8/21	Mon 13/9/21	NA	NA	Mon 6/9/21	Wed 6/10/21	18 days 0.5 da	ys 9,1147,1445								
	Unit 1 & 3 (41 days per unit)	44 days	0 days	44 days	0%	Tue 14/9/21	Sat 6/11/21	NA	NA	Thu 7/10/21	Sat 27/11/21	18 days 4 day	1388,418,570								
	Unit 2 & 4 (41 days per unit)	44 days	0 days	44 days	0%	Mon 8/11/21	Thu 30/12/21	NA	NA	Mon 29/11/21	Fri 21/1/22	18 days 4 day	1389								
	Unit 5 & 6 (41 days per unit)	44 days	0 days	44 days	0%	Fri 31/12/21	Thu 24/2/22	NA	NA	Sat 22/1/22	Thu 17/3/22	18 days 4 day	1390								
	Remove struts and backfilling	36 days	0 days		0%	Fri 25/2/22	Fri 8/4/22	NA	NA	Thu 21/4/22	Wed 1/6/22	43 days 1 day	1390,1391								
El	Elevated Landscape Deck CH1920 - 2090	1178 day	s 11.27 days	1166.74 days?	0%	Thu 16/5/19	Sat 29/4/23	Thu 16/5/19	NA	Thu 16/5/19	Wed 29/5/24	321 da							_##		$\coprod$
	Agree Interface Coordination Plan with KL/2014/01 Contractor		14 days		100%	Thu 16/5/19	Fri 31/5/19	Thu 16/5/19		Thu 16/5/19	Fri 31/5/19	0 days 0 day									
	Ch1920-CH2060	1 day?		-	0%	Sat 23/5/20	Sat 23/5/20		NA	Wed 29/5/24		1467 d									
	Part 1 - CH1919-2020 (70m) 4 bays	181 days		-	0%	Mon 5/7/21	Thu 10/2/22		NA	Wed 8/9/21		3 days									
	Pier Temporary Works Design and Method Statement Submission	0 days			0%	Mon 5/7/21	Mon 5/7/21		NA	Wed 8/9/21		65 days 1 day				<b>♦</b> 5/7					
	Pier Temporary Works Design and Method Statement Comment & Approval				0%	Mon 5/7/21	Wed 18/8/21		NA	Wed 8/9/21											
		45 days		1								65 days 1 day									
	CH1930 Pier (1set x 3nos.):	12 days			0%	Tue 5/10/21	Tue 19/10/21		NA	Fri 8/10/21		3 days	1075,1076,1066								
	CH1950-CH2020: Pier (3sets x 3nos) - 1 day/no 1 team	11 days			0%		Mon 1/11/21		NA	Sat 23/10/21	Thu 4/11/21	3 days 2 day	579,1398,1399								
	Falsework Temporary Works Design and Method Statement Submission	0 days		-	0%	Wed 1/9/21	Wed 1/9/21		NA	Tue 21/9/21		20 days 1 day					1/9				
	Falsework Temporary Works Design and Method Statement Comment & Approval	45 days	0 days	-	0%	Wed 1/9/21	Fri 15/10/21		NA	Tue 21/9/21	Thu 4/11/21	20 days 1 day									
	Falsework erection	10 days	0 days	10 days	0%	Tue 2/11/21	Fri 12/11/21	NA	NA	Fri 5/11/21	Tue 16/11/21	3 days 1 day	1400,1402								
	Deck & Secondary Upstand Beam Temporary Works Design and Method Statement Submission	0 days	0 days	0 days	0%	Wed 1/9/21	Wed 1/9/21	NA	NA	Sun 3/10/21	Sun 3/10/21	32 days 1 day					1/9				
	Deck & Secondary Upstand Beam Temporary Works Design and Method Statement Comment & Approval	45 days	0 days	45 days	0%	Wed 1/9/21	Fri 15/10/21	NA	NA	Sun 3/10/21	Tue 16/11/21	32 days 1 day	1404								
	Deck (4 bays) 12d/bay & link bridge (12d/bay)	25 days	0 days	25 days	0%	Sat 13/11/21	Sat 11/12/21	NA	NA	Wed 17/11/21	Wed 15/12/21	3 days 1 day	1403,625,623FS								
D. 415	Task	Summary			Inactive Mi	ilestone $\Diamond$		Duration-on	ıly		Start-only	Е	Exter	nal Milestone	<b>♦</b>		Critical S	Split			<u> </u>
Rev.11 Pr f 22-May-	rog with Progress	Project Sun	nmary		Inactive Su	_		Manual Sun			Finish-only	_	23,001					_			



						Con	tract No. ED	)/2018/01 i	CTD Project													
Та	ask Name	Duration Actual Duration	Remaining Duration	Physical % Complete	Early Start	Early Finish				Late Finish	Total Slack	TRA	Predecessors 2020	2   04   6:	2021		04	2022			2023	
1451	Lift Pilecap and ELS - Temp. Works Foundation Design and Method Statement	30 days 0 days	30 days	0%	Mon 21/12/20	Tue 19/1/21	NA	NA	Tue 16/11/21	Wed 15/12/21		0.5 day	1450 Q2 Q	3 Q4 Q1	Q2   	Q3	Q4 (	21   Q2	Q3   Q4	Q1   Q2	Q3	_Q4
1452	Comment & Appraoval Intall Sheetpile, ELS, Excavation and Temp. Works Installation (Shoring, Drainage	38 days 0 days	38 days	0%	Tue 2/2/21	Sat 20/3/21	NA	NA	Thu 16/12/21	Fri 4/2/22	259 days	2 days	1447,1451	#								
1453	& Slope Protection) Footing Construction	75 days 0 days	75 days	0%	Thu 13/5/21	Wed 11/8/21		NA	Sat 5/2/22	Sat 7/5/22	218 days		1452,1449,587		#							
1454	Sheepile Extraction & Backilling	25 days 0 days	25 days	0%	Thu 12/8/21	Thu 9/9/21		NA	Mon 9/5/22	Tue 7/6/22	218 days		1453									
													1433									
1455	Lift Structure - Temp. Works Design and Method Statement Submission	0 days 0 days	0 days	0%	Tue 1/6/21	Tue 1/6/21	NA	NA	Tue 3/5/22	Tue 3/5/22	336 days				1/	6						
1456	Lift Structure - Temp. Works Design and Method Statement Comment & Appraova	l 36 days 0 days	36 days	0%	Tue 1/6/21	Tue 6/7/21	NA	NA	Tue 3/5/22	Tue 7/6/22	336 days	0.5 day	1455									
1457	Lift Tower: Falsework & Formwork Erection, Rebar Fixing & Concreting	63 days 0 days	63 days	0%	Fri 10/9/21	Thu 11/11/21	NA	NA	Wed 8/6/22	Tue 9/8/22	271 days	3 days	1454,1157,1456									
1458	Lift installation (LT1 & LT2)	90 days 0 days	90 days	0%	Fri 24/12/21	Tue 19/4/22	NA	NA	Fri 11/11/22	Tue 28/2/23	261 days	1 day	1457FS+36 days									
1459	E & M installation	33 days 0 days	33 days	0%	Wed 20/4/22	Fri 27/5/22	NA	NA	Wed 1/3/23	Wed 12/4/23	261 days	3 days	1458									
1460	Louvers and Glazing Installation	27 days 0 days	27 days	0%	Sat 11/12/21	Fri 14/1/22	NA	NA	Thu 8/9/22	Wed 12/10/22	220 days	3 days	1457FS+25 days					$\mathbb{H}$				
1461	Parapet Installation and Finishing Works	40 days 0 days	40 days	0%	Sat 15/1/22	Sat 5/3/22	NA	NA	Thu 13/10/22	Mon 28/11/22	220 days	3 days	1460									
1462	Testing & commissioning	15 days 0 days	15 days	0%	Sat 28/5/22	Wed 15/6/22	NA	NA	Thu 13/4/23	Sat 29/4/23	261 days	0.5 days	1459									
1463	CLP Meter Installation	0 days 0 days	0 days	0%	Mon 18/4/22	Mon 18/4/22	NA	NA	Mon 18/4/22	Mon 18/4/22	0 days	0.5 day						<b>♦</b> 18/4				
1464	EMSD Submission Form 5 for Lift Inspection	0 days 0 days	0 days	0%	Wed 15/6/22	Wed 15/6/22		NA	Tue 2/5/23	Tue 2/5/23		0.5 day	1458,1462						5/6			
1465	EMSD Lift Inspection	0 days 0 days	0 days	0%	Wed 29/6/22	Wed 29/6/22		NA	Tue 16/5/23	Tue 16/5/23	320 days		1464FS+14 days						20/6			
																			, UK7			
1466	Issuance of Lift Use Permit	0 days 0 days	0 days	0%	Thu 14/7/22	Thu 14/7/22		NA	Tue 30/5/23	Tue 30/5/23		0.5 day	1465FS+15 days						14//			
1467	Staircase ST1	100 days 0 days	100 days	0%	Fri 12/11/21	Tue 15/3/22		NA	Fri 25/11/22	Sat 25/3/23	309 days		587,367,1457									
1468	Finishing and E&M Works	50 days 0 days	50 days	0%	Wed 16/3/22	Tue 17/5/22	NA	NA	Mon 27/3/23	Tue 30/5/23	309 days	0.5 day	1467,367									
1469	L12d Underground Drainage and Utilities Laying	75 days 0 days	75 days	0%	Mon 7/3/22	Tue 7/6/22	NA	NA	Tue 29/11/22	Tue 28/2/23	220 days	1 day	1457,1460,1461									
1470	L12d Roadworks and Pedestrian, with Light Pole	36 days 0 days	36 days	0%	Wed 8/6/22	Wed 20/7/22	NA	NA	Wed 1/3/23	Sat 15/4/23	220 days	1 day	1469,349						$\left\{ \left\  \cdot \right\  \right\  \left\  \cdot \right\  \right\ $			
1471	L12d Roadworks and Pedestrian	36 days 0 days	36 days	0%	Thu 21/7/22	Wed 31/8/22	NA	NA	Mon 17/4/23	Tue 30/5/23	220 days	1 day	1470									
1472	Open Space & Promenade	564 days 0 days	564 days	0%	Mon 28/6/21	Thu 18/5/23	NA	NA	Sun 1/8/21	Tue 30/5/23	9 days				-							
1473	Open Space & Promenade (From Northern End - CH1720)	564 days 0 days	564 days	0%	Mon 28/6/21	Thu 18/5/23	NA	NA	Sun 15/8/21	Tue 30/5/23	9 days				-							
1474	Observation Deck	358 days 0 days	358 days	0%	Tue 1/3/22	Fri 12/5/23	NA	NA	Fri 6/5/22	Tue 30/5/23	14 days											
1475	Foundation - Temp. Works Design and Method Statement Submission	0 days 0 days	0 days	0%	Tue 1/3/22		NA	NA	Fri 6/5/22	Fri 6/5/22	66 days	0.5 day						1/3				
1475	Foundation - Temp. Works Design and Method Statement Submission  Foundation - Temp. Works Design and Method Statement Comment &		45 days	0%	Tue 1/3/22	Thu 14/4/22		NA	Fri 6/5/22	Sun 19/6/22	66 days		1475,639,646					11.3				
	Appraoval	45 days 0 days									1											
1477	G.I. works for LT5	12 days 0 days	12 days	0%	Sat 4/6/22	Fri 17/6/22		NA	Mon 20/6/22	Mon 4/7/22	13 days		1447,611,604,15									
1478	Design Vertification	25 days 0 days	25 days	0%	Sat 18/6/22	Mon 18/7/22		NA	Tue 5/7/22	Tue 2/8/22	13 days	1 day	1477						1			
1479	Predrilling works for Socket H- pile	12 days 0 days	12 days	0%	Tue 19/7/22	Sat 30/7/22	NA	NA	Wed 3/8/22	Sun 14/8/22	15 days		1478									
1480	Socket H-pile Installation	37 days 0 days	37 days	0%	Mon 1/8/22	Tue 13/9/22	NA	NA	Mon 15/8/22	Tue 27/9/22	12 days	2 days	367,1155,726,14									
1481	Pile Testing	43 days 0 days	43 days	0%	Wed 14/9/22	Fri 4/11/22	NA	NA	Wed 28/9/22	Fri 18/11/22	12 days	1 day	1480									
1482	Structure & Lift Core - Temp. Works Design and Method Statement Submission	0 days 0 days	0 days	0%	Mon 20/6/22	Mon 20/6/22	NA	NA	Wed 5/10/22	Wed 5/10/22	107 days	0.5 day						<b>♠</b> 2	20/6			
1483	Structure & Lift Core - Temp. Works Design and Method Statement	45 days 0 days	45 days	0%	Mon 20/6/22	Wed 3/8/22	NA	NA	Wed 5/10/22	Fri 18/11/22	107 days	0.5 day	1482									
1484	Comment & Appraoval Trech Excavation for Pipe Laying Works	30 days 0 days	30 days	0%	Sat 4/6/22	Sat 9/7/22	NA	NA	Wed 15/6/22	Wed 20/7/22	9 days	2 days	15									
1485	Pipe laying works, Cable Laying and Drawpits	36 days 0 days	36 days	0%	Mon 11/7/22	Sat 20/8/22	NA	NA	Thu 21/7/22	Wed 31/8/22	9 days	5 days	15,1484									
1486	Observation Deck: Substructure with Excavation/ELS works	36 days 0 days	36 days	0%	Sat 5/11/22	Fri 16/12/22		NA	Sat 19/11/22	Sat 31/12/22	12 days	_	163,506,1483,14									
1487	Observation Deck: Superstructure with Lift Core and Staircase work	72 days 0 days	72 days	0%	Sat 17/12/22	Sun 26/2/23		NA	Mon 2/1/23	Tue 14/3/23	16 days		1486									
1488	LT5: Lift installation with T&C and Statutory Inspection	60 days 0 days	60 days	0%	Mon 27/2/23	Fri 12/5/23		NA	Wed 15/3/23	Tue 30/5/23	14 days		713,1487									
1489	E&M and ABWF works, Landscaping and paving works	110 days 0 days	110 days	0%	Sat 17/12/22	Thu 4/5/23		NA	Thu 12/1/23	Tue 30/5/23	21 days	3 days	1528,717,1486									
1490	Toilet	416 days 0 days	416 days	0%	Mon 28/6/21	Wed 16/11/22	2 NA	NA	Sun 15/8/21	Fri 24/2/23	41 days						$\square$					
1491	Foundation - Temp. Works Design and Method Statement Submission	0 days 0 days	0 days	0%	Mon 28/6/21	Mon 28/6/21	NA	NA	Sun 15/8/21	Sun 15/8/21	48 days	0.5 days				28/6						
1492	Foundation - Temp. Works Design and Method Statement Comment & Appraoval	45 days 0 days	45 days	0%	Sat 24/7/21	Mon 6/9/21	NA	NA	Sun 15/8/21	Tue 28/9/21	22 days	0.5 days	1491,639,646		1							
1493	Footing	16 days 0 days	16 days	0%	Thu 16/9/21	Wed 6/10/21	NA	NA	Wed 29/9/21	Tue 19/10/21	10 days	0.5 days	987,611,604,618									
1494	Structure - Temp. Works Design and Method Statement Submission	0 days 0 days	0 days	0%	Mon 26/7/21	Mon 26/7/21	NA	NA	Fri 3/9/21	Fri 3/9/21	39 days	0.5 days				<b>♠</b> 26/7						
1495	Structure - Temp. Works Design and Method Statement Comment &	47 days 0 days	47 days	0%	Mon 26/7/21	Fri 10/9/21	NA	NA	Fri 3/9/21	Tue 19/10/21	39 days	2 days	1494									
	Appraoval															111						
	7.11 Prog with Progress	Summary Project Summary		Inactive M Inactive Su			Duration-c	only ımmary Rollup		Start-only Finish-only		C 3	External Milestor Deadline	ie ♦ ♣			itical Split ogress	-				
as of 22	-May-20	Inactive Task	-	Manual Ta			Manual Su			External Tas	1.	_	Critical				anual Prog					

						Cont	Iact No. ED	/2018/01 K	TD Project												
Γ	Task Name	Duration Actual Duration	Remaining Duration	Physical % Complete	Early Start	Early Finish	Actual Start	Actual Finis	sh Late Start	Late Finish	Total Slack	TRA	Predecessors	2020	M 01 1	2021	04 01	2022   Q2   Q3   0	04   01   1	2023	04 6
96	Structure work	45 days 0 days	45 days	0%	Thu 7/10/21	Mon 29/11/21	NA	NA	Wed 20/10/21	Fri 10/12/21	10 days	0.5 days	1493,506,1495	Q2 Q3 C	24   Q1   C	Q2   Q3	Q4 Q1	Q2 Q3 V	Q4 Q1 (	22   Q3	Q4   Q
97	MIC toilet unit	24 days 0 days	24 days	0%	Tue 30/11/21	Wed 29/12/21	NA	NA	Sat 11/12/21	Tue 11/1/22	10 days	0.5 days	1496								
98	MIC toilet unit: E&M and ABWF works	75 days 0 days	75 days	0%	Thu 30/12/21	Thu 31/3/22	NA	NA	Wed 23/2/22	Wed 25/5/22	43 days	3 days	1497,717							H	
199	Observation Tower Construction	31 days 0 days	31 days	0%	Thu 30/12/21	Tue 8/2/22	NA	NA	Wed 19/1/22	Sat 26/2/22	16 days	1 day	1496,1497								
500	Observation Tower: Building Works and E&M Works	76 days 0 days	76 days	0%	Wed 9/2/22	Thu 12/5/22	NA	NA	Mon 28/2/22	Tue 31/5/22	16 days	1 day	1499								
501	Refuse Collection Block and Back of House: Structure Works	101 days 0 days	101 days	0%	Wed 9/2/22	Sat 11/6/22	NA	NA	Fri 20/5/22	Sat 17/9/22	82 days	1 day	1496,1497,1499				#_				
502	Refuse Collection Block and Back of House: Building Works and E&M	131 days 0 days	131 days	0%	Mon 13/6/22	Wed 16/11/22	NA	NA	Mon 19/9/22	Fri 24/2/23	82 days	1 day	1501								
03	Works Amphitheater	95 days 0 days	95 days	0%	Wed 9/2/22	Sat 4/6/22	NA	NA	Wed 11/5/22	Wed 31/8/22	74 days	5 days	1496,639,646,14				#_				
04	Fast food (Light Refreshment) kiosk deck	45 days 0 days	45 days	0%	Tue 30/11/21	Mon 24/1/22	NA	NA	Thu 20/1/22	Wed 16/3/22	41 days	0.5 days	611,1496,604,61								
05	Fast food (Light Refreshment) Kiosk: Building Works and E&M Works	86 days 0 days	86 days	0%	Sat 26/2/22	Sat 11/6/22	NA	NA	Thu 17/3/22	Thu 30/6/22	16 days	1 day	1504,639,646,14								
)6	Fitness Ground Lawn & Water Play Plaza	82 days 0 days	82 days	0%	Mon 13/6/22	Sat 17/9/22	NA	NA	Sat 2/7/22	Sat 8/10/22	16 days		days,1500FF+25 1505								
)7	Stepped Stage and Seating & Back of House Facility (under Bridge D3)	30 days 0 days	30 days	0%	Mon 22/8/22	Mon 26/9/22		NA	Thu 1/9/22	Sat 8/10/22	9 days		1503,1485								
)8	Trim and form formation level within Open Space & Promenade area	45 days 0 days	45 days	0%	Tue 27/9/22	Sat 19/11/22		NA	Mon 10/10/22	Wed 30/11/22	1		1507,1505,1506,						4		
)9	Paving work & Hard Landscaping Works	45 days 0 days	45 days	0%		Thu 12/1/23		NA	Thu 1/12/22	Thu 26/1/23		2 days	1508,1500,1498								
10											1	-									
	ABWF, E&M work and street furniture	75 days 0 days	75 days	0%		Mon 20/2/23		NA NA	Sat 25/2/23	Tue 30/5/23	79 days		1508,1509SS,15								
11	FSD Form 501 Submission for FS Inspection	0 days 0 days	0 days	0%	Mon 9/1/23		NA	NA	Mon 1/5/23	Mon 1/5/23	111 days		1510SS+50 days						9/1		
2	FSD Inspection	0 days 0 days	0 days	0%	Tue 24/1/23	Tue 24/1/23		NA	Tue 16/5/23	Tue 16/5/23	111 days		1511FS+15 days						24/1		
.3	Issuance of FS Certificate	0 days 0 days	0 days	0%	Wed 8/2/23	Wed 8/2/23		NA	Tue 30/5/23	Tue 30/5/23	111 days		1512FS+15 days						₩ 8/2		
4	Landscaping works and Planting works	100 days 0 days	100 days	0%	Fri 13/1/23	Thu 18/5/23	NA	NA	Fri 27/1/23	Tue 30/5/23	1	4 days	1509,668,1503,6								
5	Open Space & Promenade (From CH1720 - South End)	477 days 0 days	477 days	0%	Mon 12/7/21	Mon 13/2/23	NA	NA	Sun 1/8/21	Tue 30/5/23	18 days										
6	Modification Seawall - Temp. Works Design and Method Statement Submission	0 days 0 days	0 days	0%	Mon 12/7/21	Mon 12/7/21	NA	NA	Sun 1/8/21	Sun 1/8/21	20 days	1 day				12/7					
7	Modification Seawall - Temp. Works Design and Method Statement Comment & Appraoval	k 30 days 0 days	30 days	0%	Mon 12/7/21	Tue 10/8/21	NA	NA	Sun 1/8/21	Mon 30/8/21	20 days	2 days	1516								
.8	Modification (Seawall) CH1720-1820	150 days 0 days	150 days	0%	Wed 11/8/21	Fri 11/2/22	NA	NA	Tue 31/8/21	Thu 3/3/22	17 days	1 day	1517								
9	Modification (Seawall) CH1820-1920	150 days 0 days	150 days	0%	Wed 15/9/21	Fri 18/3/22	NA	NA	Thu 7/10/21	Fri 8/4/22	17 days	1 day	1518SS+30 days								
0	Temporary toilet	24 days 0 days	24 days	0%	Mon 13/9/21	Tue 12/10/21	NA	NA	Fri 14/1/22	Mon 14/2/22	100 days	0.5 days	506,655,660				$h \mid l'$				
1	Temporary Toilet: Building Works and E&M Works	75 days 0 days	75 days	0%	Wed 13/10/21	Wed 12/1/22	NA	NA	Sat 28/1/23	Sat 29/4/23	385 days	0.5 day	1520,655,660							H	
2	Temporary Management Office: Structure Works	45 days 0 days	45 days	0%	Sat 25/9/21	Thu 18/11/21	NA	NA	Wed 26/1/22	Tue 22/3/22	100 days	0.5 days	1520SS+10 days			N N					
13	Temporary Management Office: Building Works and E&M Works	100 days 0 days	100 days	0%	Fri 19/11/21	Tue 22/3/22	NA	NA	Wed 23/3/22	Sat 23/7/22	100 days	0.5 day	1522,655,660				+			H	
4	Floating Stage Concrete structure	18 days 0 days	18 days	0%	Sat 19/3/22	Sat 9/4/22	NA	NA	Sat 9/4/22	Tue 3/5/22	17 days	0 days	1519,1518,1522				+	<u> </u>			
25	Stepped Seating at Southern End	24 days 0 days	24 days	0%	Mon 11/4/22	Wed 11/5/22	NA	NA	Wed 4/5/22	Tue 31/5/22	17 days	0.5 days	1524								
6	Trim and form formation level within Open Space & Promenade area	14 days 0 days	14 days	0%	Thu 12/5/22	Fri 27/5/22	NA	NA	Wed 1/6/22	Fri 17/6/22	17 days	0 days	1525								
.7	Paving work and Landscaping Works	30 days 0 days	30 days	0%	Sat 28/5/22	Mon 4/7/22	NA	NA	Sat 18/6/22	Sat 23/7/22	17 days	0.5 days	1526,1522,1525,								
28	ABWF, E&M work and street furniture	75 days 0 days	75 days	0%	Tue 5/7/22	Fri 30/9/22	NA	NA	Mon 25/7/22	Sat 22/10/22	17 days	1 day	1527,717,1523					+			
29	CLP Meter Installation	0 days 0 days	0 days	0%	Fri 30/9/22	Fri 30/9/22	NA	NA	Mon 1/5/23	Mon 1/5/23	212 days	0.5 day	1528,1521,1523						30/9		
80	FSD Form 501 Submission for FS Inspection	0 days 0 days	0 days	0%	Thu 8/12/22	Thu 8/12/22	NA	NA	Mon 1/5/23	Mon 1/5/23	144 days	0.5 day	1529						8/12		
31	FSD Inspection	0 days 0 days	0 days	0%	Thu 22/12/22	Thu 22/12/22	NA	NA	Tue 16/5/23	Tue 16/5/23	144 days		1530FS+15 days						22/12		
32	Issuance of FS Certificate	0 days 0 days	0 days	0%	Fri 6/1/23	Fri 6/1/23		NA	Tue 30/5/23	Tue 30/5/23	144 days	-	1531FS+15 days						6/1	<b>   </b>	
33	Open Space & Promenade: Landscaping works	110 days 0 days	110 days	0%	Mon 3/10/22	Mon 13/2/23		NA	Mon 24/10/22	Sat 4/3/23	17 days	-	1528,668,1243Fl					\			
34	Open Space & Promenade: Planting works	110 days 0 days	110 days	0%	Mon 3/10/22	Mon 13/2/23		NA	Mon 24/10/22	Sat 4/3/23	17 days		1528,668,1243Fl								
15	Part 1, 2A, 2B - Road L12	193 days 0 days	193 days	0%	Tue 23/8/22	Mon 17/4/23		NA	Thu 6/10/22	Tue 30/5/23	35 days		1020,000,124011								
6	Part 1, 2A, 2B - Road L12  Trim road formation			0%		Thu 25/8/22		NA NA					1274,1283,1296,					₩			
		3 days 0 days	3 days		Tue 23/8/22				Thu 6/10/22	Sat 8/10/22	35 days	-									
37	Lay sub base	7 days 0 days	7 days	0%	Fri 26/8/22	Fri 2/9/22		NA		Mon 17/10/22			1536								
38	Lay kerb	12 days 0 days	12 days	0%	Sat 3/9/22	Sat 17/9/22		NA	Tue 18/10/22	Mon 31/10/22		-	1537					1			
539	Construct pedestrian street/ footpath	14 days 0 days	14 days	0%	Mon 19/9/22	Thu 6/10/22		NA	Tue 1/11/22	Wed 16/11/22		-	1538								
40	Install central median	14 days 0 days	14 days	0%	Fri 7/10/22	Sat 22/10/22	NA	NA	Thu 17/11/22	Fri 2/12/22	35 days	1 day	1539								
e: Re	ev. I I Prod with Progress	Summary		Inactive M			Duration-o			Start-only		[		nal Milestone	\$		Critical Split				
	2-May-20 Split	Project Summary		Inactive S	ummary		Manual Su	mmary Rollup		Finish-only		]	Dead	line	1	P	rogress				

							Conf	ract No. ED/	2018/01 KT	D Project													
	Task Name	Duration	Actual Duration	Remaining Duration	Physical % Complete	Early Start	Early Finish	Actual Start	Actual Finish	Late Start	Late Finish	Total Slack	TRA	Predecessors	2020 Q2   Q	03   Q4	O1   C	2021 02   Q3   Q	4 01 0	2022 22   Q3   Q4	4 Q1	2023 Q2   Q3	Q4 Q1
1541	Concrete infill between profile barrier	7 days	0 days	7 days	0%	Mon 24/10/22	Mon 31/10/22	NA	NA	Sat 3/12/22	Sat 10/12/22	35 days	0 days	1540						F			
542	Road pavement	5 days	0 days	5 days	0%	Tue 1/11/22	Sat 5/11/22	NA	NA	Mon 12/12/22	Fri 16/12/22	35 days	0 days	1541						5			
543	Install street furniture (Part 1, 2A, 2B - Road L12)	131 days	0 days	131 days	0%	Mon 7/11/22	Mon 17/4/23	NA	NA	Sat 17/12/22	Tue 30/5/23	35 days	6 days	1542								1	
544	Planting Works for Underpass, South Depress Road and At-Grade Road	130 days	0 days	130 days	0%	Mon 7/11/22	Sat 15/4/23	NA	NA	Mon 19/12/22	Tue 30/5/23	36 days	10 days	668						1		1	
545	Landscaping Works for Underpass, South Depress Road and At-Grade	130 days	0 days	130 days	0%	Mon 7/11/22	Sat 15/4/23	NA	NA	Mon 19/12/22	Tue 30/5/23	36 days	10 days	668						+		1	
546	Planned Completion for Section 6	0 days	0 days	0 days	0%	Thu 18/5/23	Thu 18/5/23	NA	NA	Tue 30/5/23	Tue 30/5/23	9 days	0 days	1533,1543,1532,								18/5	
547	Section 7	365 days	0 days	365 days	0%	Mon 6/3/23	Wed 29/5/24	NA	NA	Mon 6/3/23	Wed 29/5/24	0 days									-		
548	Establishment work for landscape softwork	365 days	0 days	365 days	0%	Mon 6/3/23	Wed 29/5/24	NA	NA	Mon 6/3/23	Wed 29/5/24	0 days	10 days	1533,1534									
549	Planned Completion for Section 7	0 days	0 days	0 days	0%	Wed 29/5/24	Wed 29/5/24	NA	NA	Wed 29/5/24	Wed 29/5/24	0 days		1548,6									
550	Section 10 (Subject to Excision)	614 days	0 days	614 days	0%	Tue 20/4/21	Thu 11/5/23	NA	NA	Mon 10/5/21	Tue 30/5/23	15 days					-					1	
551	Decking for Underpass (Rd L14)	614 days	0 days	614 days	0%	Tue 20/4/21	Thu 11/5/23	NA	NA	Mon 10/5/21	Tue 30/5/23	15 days					-					1	
552	Deck for Underpass (Road L14) - Temp. Works Design and Method Statement	0 days	0 days	0 days	0%	Tue 20/4/21	Tue 20/4/21	NA	NA	Mon 10/5/21	Mon 10/5/21	20 days	0.5 day				•	20/4					
553	Deck for Underpass (Road L14) - Temp. Works Design and Method Statement Comment & Appraoval	21 days	0 days	21 days	0%	Tue 20/4/21	Mon 10/5/21	NA	NA	Mon 10/5/21	Sun 30/5/21	20 days	0.5 day	1552			<u> </u>	4					
554	Support along U-through	225 days	0 days	225 days	0%	Mon 31/5/21	Tue 1/3/22	NA	NA	Mon 31/5/21	Tue 1/3/22	0 days	10 days	23,185,1553,192									
555	Plinth installation along support	123 days	0 days	123 days	0%	Wed 2/3/22	Fri 29/7/22	NA	NA	Wed 2/3/22	Fri 29/7/22	0 days	6 days	1554					*				
556	Placing of beam along underpass	90 days	0 days	90 days	0%	Thu 1/9/22	Sun 18/12/22	NA	NA	Thu 1/9/22	Mon 19/12/22	0 days	4 days	1555FS+28 days						<b>—</b>			
557	Finishing and E&M Works	110 days	0 days	110 days	0%	Mon 19/12/22	Fri 5/5/23	NA	NA	Thu 12/1/23	Tue 30/5/23	20 days		1556,279								Ь	
558	Cover-up (Roof)	115 days	0 days	115 days	0%	Mon 19/12/22	Thu 11/5/23	NA	NA	Mon 19/12/22	Thu 11/5/23	0 days	5 days	1556							<u> </u>	H	
559	Planned Completion for Section 10	0 days	0 days	0 days	0%	Thu 11/5/23	Thu 11/5/23	NA	NA	Tue 30/5/23	Tue 30/5/23	19 days	0.5 days	1558,158,1557								11/5	

## **Appendix C – 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 December 2021

#### December 2021

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

#### 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

 $\ensuremath{\mathsf{AM4}}(A)$  - 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 Propose Environmental Monitoring and Weekly Site Inspection Schedule for January 2022

#### January 2022

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

#### 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

## **Appendix D – Photographic records**

## Impact Air Quality 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

 $\begin{tabular}{lll} Appendix & E & - & Calibration & certificates, & catalogue & of & air & quality \\ monitoring equipment & & & & \\ \end{tabular}$ 

### Catalogue of High Volume Sampler (HVS)



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.

- Total Suspended Particulate(TSP)
- Mass Flow Controlled
- 7-Day Mechanical Timer
- Flapsed Time Indicator
- Aluminum Outdoor Shelter
- Brush Style Motor
- Dickson Chart Recorder, 24 Hour
- Stainless Steel Filter Holder
- 36-60 CFM
- Made In USA

www.tisch-env.com



## TSP MFC

MFC TSP Ambient Air Sampler

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

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

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"

TE-5028 -Variable Flow Calibration Kit

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

TE-HVC-V Xcalibrator HiVol Calibrator

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





#### Calibration Certificate of HVS

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

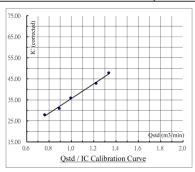
Calibration curve ref. No.:	ATSPC-01-202	1111801	Date of calibration:	18/11/2021	
Location:	Sky Tower		Sampler :	TE-5170X	
Calibration Data					
Ambient barometric pressure	e, Pa = 760.6	( mmHg )	Ambient temperature, Ta =	300.45	( deg K )
Octd Slone m = 2 025	10		Octd Intercent h = 0.0	005800	

#### Calibration Curve

Plate No.	$H_2O$	Qstd	I	IC
Plate No.	( in )	( m <sup>3</sup> / min )	( chart )	( corrected )
18	7.40	1.335	48.0	47.82
13	6.20	1.222	43.0	42.84
10	4.10	0.994	36.0	35.87
7	3.30	0.892	31.0	30.89
5	2.40	0.761	28.0	27.90

Subsequent calculation of sampler flow

Method	Calibration equation	Slope, m	Intercept, b	Corr. coeff., r
Dickson recorder	Qstd = 1 / m1 [ ( I ) ( Sqrt ( ( Pav / 760 ) ( 298 / Tav ) ) ) - b1 ]	34.907	0.7324	0.9962



Calibration curve requirements : (A). r > 0.990; (B). At least 3 Qstd numbers are in the TSP range (1.1 - 1.7 m3 / min).

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

$$\begin{split} & IC\ (\ corrected\ ) = I\ [\ Sqrt\ (\ (\ Pa\ /\ 760\ )\ (\ 298\ /\ Ta\ )\ )\ ]. \end{split}$$
 FLOW ( corrected ) = Sqrt ( FLOW ( mano ) ( Pa\ /\ 760\ ) ( 298\ /\ Ta\ ) ).

Calibrated by:

Name: (Poon Tsz Wing)

Name: (Wong Yin Tong

Form No. INS-HVS-CAL dd 16 01 2020

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

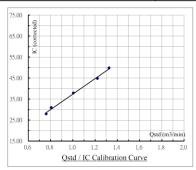
Calibration cu	rve ref. No. :	ATSPC-01-20	21111802	Date of calibration:	18/11/2021	
Location :	The Hong Kong Factory cum	Society for the Sheltered Wor		Sampler :	TE-5170X	
Calibration D	ata					
Ambient baro	metric pressure, Pa	= 760.6	( mmHg )	Ambient temperature, Ta =	300.45	( deg K )
Qstd Slope, m	= 2.03518			Qstd Intercept, b = -0.0	005890	

#### Calibration Curve

Plate No.	$H_2O$	Qstd	I	IC
riate No.	( in )	( m <sup>3</sup> / min )	( chart )	( corrected )
18	7.30	1.326	50.0	49.81
13	6.20	1.222	45.0	44.83
10	4.20	1.006	38.0	37.86
7	2.70	0.807	31.0	30.89
5	2,40	0.761	28.0	27.90

Subsequent calculation of sampler flow

Method Calibration equation		Slope, m	Intercept, b	Corr. coeff., r
Dickson recorder	Qstd = 1 / m1 [ ( I ) ( Sqrt ( ( Pav / 760 ) ( 298 / Tav ) ) ) - b1 ]	36.925	0.4318	0.9976



Calibration curve requirements : (A). r > 0.990; (B). At least 3 Qstd numbers are in the TSP range (1.1 - 1.7 m3 / min).

 $\begin{array}{lll} Remark: & Qstd \, (\,m^3/\,min\,) = I/m \, [\, Sqrt \, (\, H_2O \, (\, Pa\,/\,760\,) \, (\, 298\,/\,Ta\,)\,) \, \cdot b\, ]. \\ \\ IC \, (\, corrected\,) = I \, [\, Sqrt \, (\, (\, Pa\,/\,760\,) \, (\, 298\,/\,Ta\,)\,) \, ]. \\ \\ FLOW \, (\, corrected\,) = \, Sqrt \, (\, FLOW \, (\, mano\,) \, (\, Pa\,/\,760\,) \, (\, 298\,/\,Ta\,)\,). \end{array}$ 

Calibrated by :		03		Checked by		1	
Name:	(	Poon Tsz Wing	)	Name :	(	Wong Yin Tong	)

Form No. INS-HVS-CAL dd 16 01 2020

#### Calibration Certificate of HVS

### Air Sampler Calibration Curve Plotting & Calculation

(Dickson recorder)

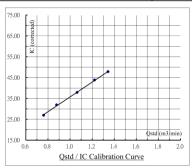
Calibration curve ref. No. : ATSPC-01-2021111803  Location : Hong Kong Children's Hospital				Date of calibration :	18/11/2021	
Location:	Hong Kon	g Children's Hos	pital	Sampler :	TE-5170X	
Calibration Da	<u>ata</u>					
Ambient baron	netric pressure, P	a = 760.6	( mmHg )	Ambient temperature, Ta =	300.45	( deg K )
Ostd Slope, m =	= 2.03518			Ostd Intercept, b = -0.6	005890	

#### Calibration Curve

	Cumpranton Curve				
Plate No.		$H_2O$	Qstd	I	IC
	riate No.	( in )	( m <sup>3</sup> / min )	( chart )	( corrected )
	18	7.50	1.344	48.0	47.82
	13	6.20	1.222	44.0	43.84
	10	4.70	1.064	38.0	37.86
	7	3.20	0.879	32.0	31.88
	5	2.40	0.761	27.0	26.90

Subsequent calculation of sampler flow

Method	Calibration equation	Slope, m	Intercept, b	Corr. coeff., r
Dickson recorder	Qstd = 1 / m1 [ ( I ) ( Sqrt ( ( Pav / 760 ) ( 298 / Tav ) ) ) - b1 ]	35.609	0.1282	0.9993



Calibration curve requirements : (A). r > 0.990; (B). At least 3 Qstd numbers are in the TSP range (1.1 - 1.7 m3 / min).

 $\begin{array}{ll} Remark: & Qstd \ (\ m^3 \ / \ min \ ) = 1/m \ [\ Sqrt \ (\ H_2O \ (\ Pa \ / \ 760 \ ) \ (\ 298 \ / \ Ta \ )) - b \ ]. \\ \\ IC \ (\ corrected \ ) = I \ [\ Sqrt \ (\ (\ Pa \ / \ 760 \ ) \ (\ 298 \ / \ Ta \ )) \ ]. \end{array}$ 

FLOW (corrected) = Sqrt (FLOW (mano) (Pa / 760) (298 / Ta)).

Calibrated by : Checked by : Name : ( Poon Tsz Wing ) Name : ( Wong Yin Tong )

Form No. INS-HVS-CAL dd 16 01 2020

#### Air Sampler Calibration Curve Plotting & Calculation

(Dickson recorder)

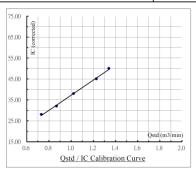
Calibration curve ref. No. :	ATSPC-01-2021072001	Date of calibration :	20/07/2021
Model no :	GS2310	Serial number :	10346
Calibration Data			
Ambient barometric pressure,	Pa =767.4 ( mmHg )	Ambient temperature, Ta =	300.25 ( deg K )
Qstd Slope, m = 2.03518		Qstd Intercept, b = -0.6	005890

Calibration Curve

Plate No.	H <sub>2</sub> O	Qstd	I	IC
Flate No.	( in )	( m <sup>3</sup> / min )	( chart )	( corrected )
18	7.40	1.341	50.0	50.05
13	6.20	1.228	45.0	45.05
10	4.30	1.023	38.0	38.04
7	3.10	0.869	32.0	32.03
5	2.20	0.732	28.0	28.03

Subsequent calculation of sampler flow

Method	Calibration equation	Slope, m	Intercept, b	Corr. coeff., r
Dickson recorder	Qstd = 1 / m1 [ (1) ( Sqrt (( Pav / 760 ) ( 298 / Tav ) ) ) - b1 ]	36.144	1.1009	0.9987



Calibration curve requirements: (A). r > 0.990; (B). At least 3 Qstd numbers are in the TSP range (1.1 - 1.7 m3 / min).

 $\begin{array}{ll} Remark: & Qstd \ (\ m^3 \ / \ min \ ) = 1/m \ [\ Sqrt \ (\ H_2O \ (\ Pa \ / \ 760 \ ) \ (\ 298 \ / \ Ta \ ) \ ) - b \ ]. \\ \\ IC \ (\ corrected \ ) = I \ [\ Sqrt \ (\ (\ Pa \ / \ 760 \ ) \ (\ 298 \ / \ Ta \ ) \ ]. \\ \end{array}$ 

FLOW (corrected) = Sqrt (FLOW (mano) (Pa / 760) (298 / Ta)).

Calibrated by: Checked by: Wong Yin Tong

Name: ( Poon Tsz Wing ) Name: ( Wong Yin Tong )

Form No. INS-HVS-CAL dd 16 01 2020

#### Calibration Certificate for Calibrator Environmental Certificate of Calibration RECALIBRATION DUE DATE: June 1, 2022 Calibration Certification Information Cal. Date: June 1, 2021 Rootsmeter S/N: 438320 Ta: 292 Operator: Jim Tisch Pa: 754.9 mm Hg Calibration Model #: TE-5025A Calibrator S/N: 0006 Vol. Init Vol. Final ΔTime ΔP ΔН (in H2O) (m3) (m3) (m3)(min) (mm Hg) 4.00 8.9 0.7110 Data Tabulation $\sqrt{\Delta H \left(\frac{Pa}{Pstd}\right) \left(\frac{Tstd}{Ta}\right)}$ ΔH(Ta/Pa) Vstd Qstd Qa (m3) (x-axis) (y-axis) (y-axis) (x-axis) 1.0094 0.7024 1.4239 0.9958 0.6929 0.9922 2.0136 0.9788 1.0051 0.9894 1.3907 2.3612 1.4586 0.9882 1.1504 1.4014 2.8477 2.03518 1.27440 m= m= QA QSTD -0.00589 -0.00364 0.99997 0.99997 r= r= Vstd= ΔVol((Pa-ΔP)/Pstd)(Tstd/Ta) Va= ΔVol((Pa-ΔP)/Pa) Qstd= Vstd/∆Time Qa= Va/\DeltaTime For subsequent flow rate calculations Qa= 1/m(( √ΔH(Ta/Pa)) Standard Conditions RECALIBRATION Pstd: 760 mm Hg US EPA recommends annual recalibration per 1998 Key 40 Code of Federal Regulations Part 50 to 51, ΔH: calibrator manometer reading (in H2O) ΔP: rootsmeter manometer reading (mm Hg) Appendix B to Part 50, Reference Method for the Ta: actual absolute temperature (°K)

m: slope sch Environmental, Inc.

Pa: actual barometric pressure (mm Hg

5 South Miami Avenue

lage of Cleves, OH 45002

Determination of Suspended Particulate Matter in

the Atmosphere, 9.2.17, page 30

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 AM510 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/m3) 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
- + Choice of rechargeable NiMH smart battery packs or AA-cell pack

#### Model AM510 SidePak Personal Aerosol Monitor

#### Sensitivity

90° light scattering, Sensor Type 670 nm laser diode 0.001 to 20 mg/m<sup>3</sup> Aerosol Concentration Range (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/m3 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

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

**Temperature 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)

Jser-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

Weight

4.2 x 3.7 x 2.8 in. (106 x 92 x 70 mm) with 801723, 801724, 801729 or External Dimensions

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

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 2 line x 12 character LCD

Display Tripod Socket 1/4-20 female thread

### Power Supply/Charger (P/N 2613210) Input Voltage Range 100 to 240 VAC. S0 to 60 Hz

Input Voltage Range Output Voltage 9 VDC@10 A

#### Maintenance

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

#### Communications Interface

Type 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

Microsoft Windows® XP, or 7 Operating System

(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

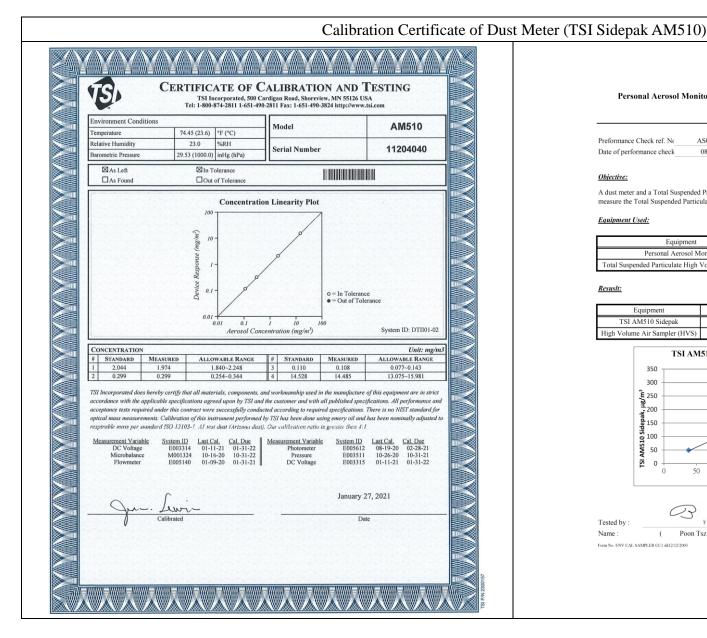
\*\*All dust plugs and dust gaskets must be installed.

\*\*\*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.





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

Preformance Check ref. No	AS0210410-2	Report Issue Date	10/04/2021	
Date of performance check	08/04/2021			

#### Objective:

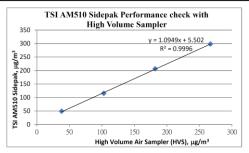
A dust meter and a Total Suspended Particulate High Volume Air Sampler (HVS) were placed together to measure the Total Suspended Particulate (TSP) concentrations simultaneously to check the performance.

#### Equipment Used:

Equipment	Manufacturer and Model	Serial Number
Personal Aerosol Monitor	TSI AM510 Sidepak	11204040
Total Suspended Particulate High Volume Air Sampler	GS2310	10346

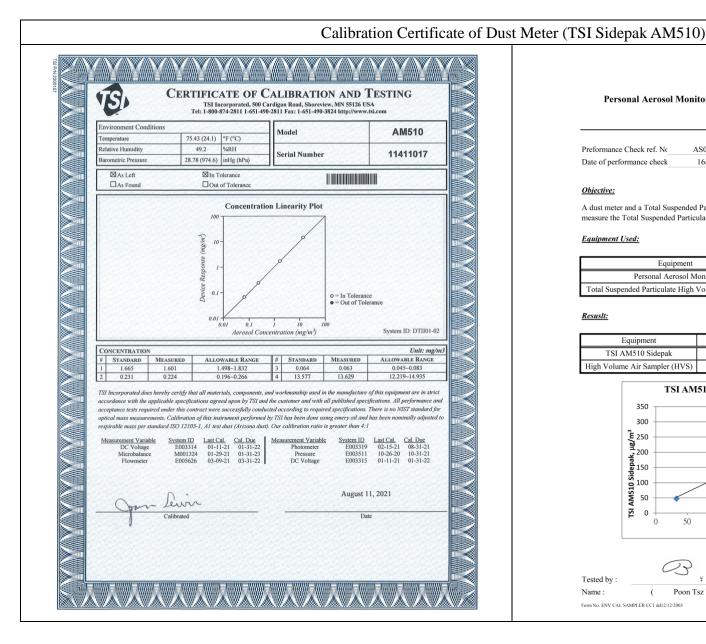
#### Resustt:

Equipment	Measurement Result, μg/m <sup>3</sup>			
TSI AM510 Sidepak	49	115	206	298
High Volume Air Sampler (HVS)	38	103	182	267



Tested by Checked by Poon Tsz Wing Name: Name

Form No. ENV CAL SAMPLER CC1 dd12/12/2003



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

Preformance Check ref. No	AS0210818-1	Report Issue Date	18/08/2021
Date of performance check	16/08/2021		

#### Objective:

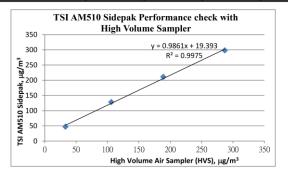
A dust meter and a Total Suspended Particulate High Volume Air Sampler (HVS) were placed together to measure the Total Suspended Particulate (TSP) concentrations simultaneously to check the performance.

#### Equipment Used:

Equipment	Manufacturer and Model	Serial Number
Personal Aerosol Monitor	TSI AM510 Sidepak	11411017
Total Suspended Particulate High Volume Air Sampler	GS2310	10346

#### Resustt:

Equipment	Measurement Result, μg/m <sup>3</sup>			
TSI AM510 Sidepak	47	128	211	298
High Volume Air Sampler (HVS)	33	106	189	287



Name: ( Poon Tsz Wing ) Name: ( Wong Yin Tong	Tested by :	(	₩ 	Checked by:		10	
		(	Poon Tsz Wing	)	-	(	Wong Yin Tong

### Catalogue of Weather Station

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



6152C 6162C

Vantage Pro2™

The Vantage Pro2<sup>™</sup> (# 6152C) and Vantage Pro2<sup>™</sup> 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<sup>®</sup> 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)

Non-operating Temperature . . . . . . . . . . . . . . . -40° to +158°F (-40° to +70°C) console and ISS 

Maximum displayable wind decreases as the length of cable increases, at 140' (42 m) of cable, the maximum wind speed displayed is 135 mph (60 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 (214 cm2) collection area Temperature Sensor Type...... PN Junction Silicon Diode Relative Humidity Sensor Type . . . . . . . . . . . . Film capacitor element Sensor Inputs 

ISS Dimensions(not including anemometer or bird spikes):

Vantage Pro2 with Fan-Asprated 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

Vantage Pro2

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

Historical Graph Data . . . . . . . . . . . . Hourly Average, Daily, Monthly Highs Alarm . . . . . . High Threshold from Instant Calculation

#### Wind

#### Wind Chill (Calculated)

Range . . . . . . -110° to +135°F (-79° to +57°C)

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

Monthly Dominant

Monthly Dominants

Wind Speed

other units are converted from mph and rounded to nearest 1 km/hr, 0.1

m/s or 1 knot

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

Highs with Direction of Highs

High Thresholds from Instant Reading and 10-minute Average

### Calibration Certificate of Weather Station



### **Calibration Certificate**

#### Certificate No.: CC0062109

Calibration item :	a) Temperature b) Relative Humidity c) Wind Speed d) Wind Direction
Equipment description :	Weather Station
Manufacturer :	Davis Vantage PRO 2
Type / Model No. :	6152CUK
Serial No. :	BD181101023
Assigned equipment no. :	N/A
Adjustment :	N/A
Remark :	Received with good condition

#### 2. Customer information

Customer:	Castco Testing Centre Limited	
Address :	33, On Kui Street, Fanling, N.T.	
Date of receipt :	6 September 2021	

3. Date of performance of the calibration

6 September 2021 Date of calibration :

Page 1 of 4

Company Chop: Certificate issue date: 7 September 2021

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



#### Result of Calibration

Reference reading ; °C	Reading; °C	Error of indication; °C
15.0	15	0.0
20.0	20	0.0
25.0	25	0.0
30.0	30	0.0

Estimated expanded uncertainty: 1.0 °C

Technical Requirement: N/A

Note: The technical requirement is refer to JJF 1183-2007

CT-001-04

b) Relative Humidity

Temperature setting of humidity chamber: 23 °C

Reference reading ; % RH	Reading; % RH	Error of indication; % RH
40.0	42	5.0
50.0	54	8.0
70.0	73	4.3

Estimated expanded uncertainty: 3 %RH

Technical Requirement: N/A

Note: The technical requirement is refer to JJG 1076-2001

CT-002-04

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Page 2 of 4 cc0062109

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Tel: (852)25680106 Fax(852)30116194 Email: info@callab.com.hk Website:callab.com.hk

#### Calibration Certificate of Weather Station



#### c) Wind Speed

Reference reading ; m/s	Measured reading; m/s	Error of indication; %
0.0	0.0	N/A
2.0	2.1	5.0
5.0	5.2	4.0
8.0	8.4	5.0

Estimated expanded uncertainty: 0.5 m/s

Technical Requirement: +/-5% or 1 m/s

#### a) Wind direction

Reference reading	Measured reading	Error of indication
O°	O <sub>0</sub>	0°
45°	45°	0°
90°	90°	O <sub>o</sub>
135°	135°	Oo
180°	180°	O°
225°	225°	O <sub>o</sub>
270°	270°	0°
315°	315°	O°

Estimated expanded uncertainty: 5°

Technical Requirement: N/A

Note: The arrow head was adjusted to the magnetic north before performing calibration.

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Page 3 of 4 cc0062109

2. The certificate is issued subject to the latest Term and Condition, available assessable at our web site

Cal Lab Limited

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Tel: (852)25680106 Fax(852)30116194 Email: info@callab.com.hk Website:callab.com.hk



#### 5. Reference method for calibration

Temperature	JJF 1183-2007	
Relative humidity	JJG 1076-2001	
Wind Speed	SOP-251	
Wind Direction	SOP-252	

#### 6. Environment condition of calibration

Temperature	23.5 °C	
Relative humidity	54 %RH	

#### 7. Reference equipment used in the calibration

Item	Model	Serial No.	Expiry date	Traceable to
Platinum resistance thermometer	KPPRHT-A-1	KCI I-1095, KCI P-1095	4 Mar 2022	SMQ
Humidity sensor	KPPRHT-A-1	KCI I-1095, KCI P-1095	4 Mar 2022	SMQ
Reference Anemometer	405-V1	41543692	1 Jan 2022	SMQ

The estimated expanded uncertainties have been calculated in "Evaluation and expression of uncertainty in Note1: measurement" and give an internal estimated to have a level of confidence of 95%. A coverage factor of 2 is assumed unless explicitly stated.

The standard (s) and instrument used in the calibration are traceable to national or international recognized Note2: standard and are calibrated on a schedule to maintain the accuracy and good condition.

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. The result shows in this calibration certificate relate only to the item calibrated, and the result only applies to the calibration item as received.

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

CT-END-02

1. The certificate shall not reproduced except in full without the written approval of CAL LAB LTD 2. The certificate is issued subject to the latest Term and Condition, available assessable at our web site Page 4 of 4

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## Appendix F – Weather information

### **General Information**

Date	Absolute Daily Min Temperature (°C)	Absolute Daily Max Temperature (°C)	Total Rainfall (mm)
01/12/2021	14.8	20.1	0
02/12/2021	14.6	20.4	0
03/12/2021	14.7	21.3	0
04/12/2021	15.3	20.6	0
05/12/2021	16.7	22.2	0
06/12/2021	16.4	22.2	0
07/12/2021	17.1	22.5	0
08/12/2021	18.4	22.2	0
09/12/2021	18.7	22.9	0
10/12/2021	18.6	23.7	0
11/12/2021	20	24.4	0
12/12/2021	19.2	24.7	0
13/12/2021	17.4	21.5	0
14/12/2021	18.7	23.6	Trace
15/12/2021	19.9	23	0.2
16/12/2021	21.7	25.8	Trace
17/12/2021	18.9	23.8	0
18/12/2021	16.3	20	0
19/12/2021	16	19.7	0
20/12/2021	15.7	19.3	9.4
21/12/2021	16	19	2.4
22/12/2021	17.1	21.7	Trace
23/12/2021	18.7	21.9	0.8
24/12/2021	18.2	21.8	1.7
25/12/2021	17.9	21.5	Trace
26/12/2021	11.7	18.5	3.5
27/12/2021	9.9	14.6	1.3
28/12/2021	12.2	17.5	0.2
29/12/2021	16.6	20.6	0
30/12/2021	16.2	21.4	0
31/12/2021	17.1	19.9	Trace

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

NOTE2: Trace means rainfall less than 0.05 mm

 $\underline{https://www.hko.gov.hk/en/cis/dailyExtract.htm?y=2021\&m=12}$ 

Date	Time	Wind Speed (m/s)	Wind Direction												
01/12/2021	0:00	1.3	22.5	02/12/2021	0:00	0.9	22.5	03/12/2021	0:00	0.9	22.5	04/12/2021	0:00	0.9	67.5
01/12/2021	1:00	0.4	22.5	02/12/2021	1:00	0.9	225	03/12/2021	1:00	0.9	225	04/12/2021	1:00	0.9	67.5
01/12/2021	2:00	0.9	315	02/12/2021	2:00	0.9	247.5	03/12/2021	2:00	0.4	247.5	04/12/2021	2:00	0.9	90
01/12/2021	3:00	0.9	90	02/12/2021	3:00	1.3	247.5	03/12/2021	3:00	0.9	247.5	04/12/2021	3:00	1.3	112.5
01/12/2021	4:00	0.9	247.5	02/12/2021	4:00	0.9	270	03/12/2021	4:00	0.9	270	04/12/2021	4:00	2.2	67.5
01/12/2021	5:00	0.4	90	02/12/2021	5:00	1.3	112.5	03/12/2021	5:00	0.9	112.5	04/12/2021	5:00	1.8	90
01/12/2021	6:00	0.9	315	02/12/2021	6:00	0.4	270	03/12/2021	6:00	0.4	270	04/12/2021	6:00	1.8	90
01/12/2021	7:00	0.9	22.5	02/12/2021	7:00	0.4	45	03/12/2021	7:00	0.4	270	04/12/2021	7:00	1.8	67.5
01/12/2021	8:00	0.9	315	02/12/2021	8:00	0.4	315	03/12/2021	8:00	0.4	45	04/12/2021	8:00	0.9	67.5
01/12/2021	9:00	0.9	67.5	02/12/2021	9:00	0.4	67.5	03/12/2021	9:00	0.4	315	04/12/2021	9:00	1.8	67.5
01/12/2021	10:00	0.4	315	02/12/2021	10:00	0.4	112.5	03/12/2021	10:00	0.4	67.5	04/12/2021	10:00	2.7	67.5
01/12/2021	11:00	0.4	337.5	02/12/2021	11:00	0.9	135	03/12/2021	11:00	0.9	112.5	04/12/2021	11:00	2.7	45
01/12/2021	12:00	0.4	45	02/12/2021	12:00	0.4	90	03/12/2021	12:00	0.4	22.5	04/12/2021	12:00	1.3	67.5
01/12/2021	13:00	0.4	22.5	02/12/2021	13:00	0.4	247.5	03/12/2021	13:00	0.9	315	04/12/2021	13:00	1.3	45
01/12/2021	14:00	0.9	22.5	02/12/2021	14:00	0.9	67.5	03/12/2021	14:00	0.9	67.5	04/12/2021	14:00	1.3	45
01/12/2021	15:00	0.9	67.5	02/12/2021	15:00	0.4	247.5	03/12/2021	15:00	0.9	22.5	04/12/2021	15:00	0.9	67.5
01/12/2021	16:00	0.9	45	02/12/2021	16:00	0.4	112.5	03/12/2021	16:00	0.9	270	04/12/2021	16:00	1.3	112.5
01/12/2021	17:00	0.9	45	02/12/2021	17:00	0.4	337.5	03/12/2021	17:00	0.4	157.5	04/12/2021	17:00	0.9	135
01/12/2021	18:00	1.3	22.5	02/12/2021	18:00	0.4	337.5	03/12/2021	18:00	0.4	247.5	04/12/2021	18:00	1.3	112.5
01/12/2021	19:00	0.9	22.5	02/12/2021	19:00	0.9	135	03/12/2021	19:00	0.4	337.5	04/12/2021	19:00	1.3	112.5
01/12/2021	20:00	1.3	337.5	02/12/2021	20:00	0.9	45	03/12/2021	20:00	0.4	112.5	04/12/2021	20:00	1.3	112.5
01/12/2021	21:00	0.4	337.5	02/12/2021	21:00	0.9	90	03/12/2021	21:00	0.4	135	04/12/2021	21:00	1.3	67.5
01/12/2021	22:00	0.4	337.5	02/12/2021	22:00	0.4	45	03/12/2021	22:00	0.9	112.5	04/12/2021	22:00	0.9	135
01/12/2021	23:00	0.4	157.5	02/12/2021	23:00	0.4	45	03/12/2021	23:00	0.4	112.5	04/12/2021	23:00	1.3	112.5

Date	Time	Wind Speed (m/s)	Wind Direction												
05/12/2021	0:00	0.4	135	06/12/2021	0:00	0.9	157.5	07/12/2021	0:00	0.4	112.5	08/12/2021	0:00	0.9	90
05/12/2021	1:00	0.4	90	06/12/2021	1:00	0.9	22.5	07/12/2021	1:00	1.3	112.5	08/12/2021	1:00	1.3	112.5
05/12/2021	2:00	0.9	112.5	06/12/2021	2:00	0.4	22.5	07/12/2021	2:00	0.9	135	08/12/2021	2:00	0.9	90
05/12/2021	3:00	2.2	67.5	06/12/2021	3:00	0.4	45	07/12/2021	3:00	0.9	135	08/12/2021	3:00	0.9	67.5
05/12/2021	4:00	1.8	90	06/12/2021	4:00	0.9	135	07/12/2021	4:00	1.3	112.5	08/12/2021	4:00	0.9	292.5
05/12/2021	5:00	1.8	90	06/12/2021	5:00	0.9	112.5	07/12/2021	5:00	1.3	112.5	08/12/2021	5:00	0.9	67.5
05/12/2021	6:00	1.8	112.5	06/12/2021	6:00	1.3	135	07/12/2021	6:00	0.9	90	08/12/2021	6:00	0.9	45
05/12/2021	7:00	1.3	90	06/12/2021	7:00	1.3	135	07/12/2021	7:00	0.9	112.5	08/12/2021	7:00	0.4	135
05/12/2021	8:00	1.3	112.5	06/12/2021	8:00	0.9	22.5	07/12/2021	8:00	0.4	90	08/12/2021	8:00	0.9	112.5
05/12/2021	9:00	1.3	90	06/12/2021	9:00	0.4	112.5	07/12/2021	9:00	0.4	90	08/12/2021	9:00	0.9	90
05/12/2021	10:00	0.9	90	06/12/2021	10:00	0.4	112.5	07/12/2021	10:00	1.3	67.5	08/12/2021	10:00	0.9	90
05/12/2021	11:00	1.3	112.5	06/12/2021	11:00	1.3	112.5	07/12/2021	11:00	0.9	157.5	08/12/2021	11:00	0.9	112.5
05/12/2021	12:00	0.9	112.5	06/12/2021	12:00	0.9	112.5	07/12/2021	12:00	0.4	337.5	08/12/2021	12:00	0.4	112.5
05/12/2021	13:00	1.3	67.5	06/12/2021	13:00	0.4	315	07/12/2021	13:00	0.9	22.5	08/12/2021	13:00	0.4	112.5
05/12/2021	14:00	1.3	90	06/12/2021	14:00	0.4	67.5	07/12/2021	14:00	0.9	22.5	08/12/2021	14:00	0.4	112.5
05/12/2021	15:00	1.3	112.5	06/12/2021	15:00	1.3	112.5	07/12/2021	15:00	0.9	22.5	08/12/2021	15:00	0.4	112.5
05/12/2021	16:00	1.3	90	06/12/2021	16:00	0.9	135	07/12/2021	16:00	0.4	315	08/12/2021	16:00	0.4	67.5
05/12/2021	17:00	0.9	90	06/12/2021	17:00	0.4	112.5	07/12/2021	17:00	0.4	90	08/12/2021	17:00	0.9	67.5
05/12/2021	18:00	1.3	112.5	06/12/2021	18:00	0.9	112.5	07/12/2021	18:00	0.4	90	08/12/2021	18:00	1.3	292.5
05/12/2021	19:00	0.9	90	06/12/2021	19:00	0.9	90	07/12/2021	19:00	0.4	90	08/12/2021	19:00	1.3	337.5
05/12/2021	20:00	1.3	112.5	06/12/2021	20:00	0.9	292.5	07/12/2021	20:00	0.9	247.5	08/12/2021	20:00	1.3	315
05/12/2021	21:00	0.9	112.5	06/12/2021	21:00	0.9	112.5	07/12/2021	21:00	0.4	180	08/12/2021	21:00	0.9	22.5
05/12/2021	22:00	1.3	67.5	06/12/2021	22:00	0.9	337.5	07/12/2021	22:00	0.4	337.5	08/12/2021	22:00	0.9	67.5
05/12/2021	23:00	0.9	67.5	06/12/2021	23:00	0.4	247.5	07/12/2021	23:00	0.4	337.5	08/12/2021	23:00	0.9	90

Date	Time	Wind Speed (m/s)	Wind Direction												
09/12/2021	0:00	0.4	22.5	10/12/2021	0:00	0.4	90	11/12/2021	0:00	1.8	337.5	12/12/2021	0:00	0.9	112.5
09/12/2021	1:00	0.9	112.5	10/12/2021	1:00	0.9	22.5	11/12/2021	1:00	2.2	67.5	12/12/2021	1:00	0.9	112.5
09/12/2021	2:00	0.4	22.5	10/12/2021	2:00	0.4	135	11/12/2021	2:00	2.7	67.5	12/12/2021	2:00	0.4	67.5
09/12/2021	3:00	0.9	22.5	10/12/2021	3:00	0.4	90	11/12/2021	3:00	3.1	112.5	12/12/2021	3:00	1.3	112.5
09/12/2021	4:00	1.3	45	10/12/2021	4:00	0.9	135	11/12/2021	4:00	2.2	45	12/12/2021	4:00	0.9	90
09/12/2021	5:00	0.9	22.5	10/12/2021	5:00	0.4	112.5	11/12/2021	5:00	1.8	45	12/12/2021	5:00	0.9	90
09/12/2021	6:00	0.4	22.5	10/12/2021	6:00	0.4	180	11/12/2021	6:00	1.3	135	12/12/2021	6:00	1.3	45
09/12/2021	7:00	0.4	45	10/12/2021	7:00	0.4	135	11/12/2021	7:00	1.3	90	12/12/2021	7:00	1.3	90
09/12/2021	8:00	0.4	45	10/12/2021	8:00	0.9	112.5	11/12/2021	8:00	1.3	90	12/12/2021	8:00	0.9	67.5
09/12/2021	9:00	0.4	45	10/12/2021	9:00	1.3	157.5	11/12/2021	9:00	1.3	67.5	12/12/2021	9:00	0.9	90
09/12/2021	10:00	0.4	0	10/12/2021	10:00	1.3	22.5	11/12/2021	10:00	1.3	90	12/12/2021	10:00	0.4	112.5
09/12/2021	11:00	0.4	22.5	10/12/2021	11:00	1.3	22.5	11/12/2021	11:00	1.3	90	12/12/2021	11:00	0.4	67.5
09/12/2021	12:00	0.4	67.5	10/12/2021	12:00	1.8	90	11/12/2021	12:00	2.7	112.5	12/12/2021	12:00	1.3	67.5
09/12/2021	13:00	0.4	22.5	10/12/2021	13:00	1.3	45	11/12/2021	13:00	2.2	90	12/12/2021	13:00	0.9	135
09/12/2021	14:00	0.4	45	10/12/2021	14:00	1.3	45	11/12/2021	14:00	1.3	90	12/12/2021	14:00	0.4	135
09/12/2021	15:00	1.3	90	10/12/2021	15:00	1.8	90	11/12/2021	15:00	1.3	112.5	12/12/2021	15:00	0.9	112.5
09/12/2021	16:00	1.8	337.5	10/12/2021	16:00	1.3	45	11/12/2021	16:00	1.3	112.5	12/12/2021	16:00	0.9	135
09/12/2021	17:00	2.7	315	10/12/2021	17:00	1.8	22.5	11/12/2021	17:00	0.9	90	12/12/2021	17:00	0.9	135
09/12/2021	18:00	2.2	22.5	10/12/2021	18:00	0.9	67.5	11/12/2021	18:00	1.3	112.5	12/12/2021	18:00	0.9	22.5
09/12/2021	19:00	2.2	22.5	10/12/2021	19:00	1.3	22.5	11/12/2021	19:00	0.9	90	12/12/2021	19:00	0.9	112.5
09/12/2021	20:00	2.2	22.5	10/12/2021	20:00	0.9	45	11/12/2021	20:00	1.3	112.5	12/12/2021	20:00	0.4	112.5
09/12/2021	21:00	2.2	22.5	10/12/2021	21:00	0.9	90	11/12/2021	21:00	1.3	90	12/12/2021	21:00	0.4	112.5
09/12/2021	22:00	1.8	67.5	10/12/2021	22:00	0.9	90	11/12/2021	22:00	1.3	90	12/12/2021	22:00	1.3	112.5
09/12/2021	23:00	1.8	0	10/12/2021	23:00	0.4	337.5	11/12/2021	23:00	1.3	112.5	12/12/2021	23:00	0.9	315

Date	Time	Wind Speed (m/s)	Wind Direction												
13/12/2021	0:00	1.3	45	14/12/2021	0:00	1.3	22.5	15/12/2021	0:00	0.9	112.5	16/12/2021	0:00	1.8	67.5
13/12/2021	1:00	1.3	202.5	14/12/2021	1:00	0.9	135	15/12/2021	1:00	0.4	67.5	16/12/2021	1:00	1.3	90
13/12/2021	2:00	0.9	90	14/12/2021	2:00	0.9	337.5	15/12/2021	2:00	1.3	90	16/12/2021	2:00	1.3	45
13/12/2021	3:00	0.9	315	14/12/2021	3:00	1.3	22.5	15/12/2021	3:00	0.9	292.5	16/12/2021	3:00	1.3	90
13/12/2021	4:00	0.9	337.5	14/12/2021	4:00	1.8	22.5	15/12/2021	4:00	0.4	90	16/12/2021	4:00	1.3	135
13/12/2021	5:00	1.3	337.5	14/12/2021	5:00	1.3	22.5	15/12/2021	5:00	0.4	112.5	16/12/2021	5:00	0.9	67.5
13/12/2021	6:00	0.9	270	14/12/2021	6:00	1.8	45	15/12/2021	6:00	0.4	90	16/12/2021	6:00	0.9	90
13/12/2021	7:00	0.4	315	14/12/2021	7:00	1.3	22.5	15/12/2021	7:00	0.4	337.5	16/12/2021	7:00	0.9	90
13/12/2021	8:00	0	337.5	14/12/2021	8:00	1.3	337.5	15/12/2021	8:00	1.3	22.5	16/12/2021	8:00	0.9	67.5
13/12/2021	9:00	0.4	22.5	14/12/2021	9:00	1.3	22.5	15/12/2021	9:00	1.3	112.5	16/12/2021	9:00	0.9	67.5
13/12/2021	10:00	0	22.5	14/12/2021	10:00	0.9	90	15/12/2021	10:00	0.9	22.5	16/12/2021	10:00	0.9	112.5
13/12/2021	11:00	0	22.5	14/12/2021	11:00	0.4	90	15/12/2021	11:00	0.4	45	16/12/2021	11:00	0.9	67.5
13/12/2021	12:00	0	22.5	14/12/2021	12:00	0.4	45	15/12/2021	12:00	0.9	112.5	16/12/2021	12:00	0.9	135
13/12/2021	13:00	0.4	22.5	14/12/2021	13:00	0.4	292.5	15/12/2021	13:00	0.4	112.5	16/12/2021	13:00	0.9	45
13/12/2021	14:00	0.4	45	14/12/2021	14:00	0.4	90	15/12/2021	14:00	0.4	112.5	16/12/2021	14:00	1.3	90
13/12/2021	15:00	0.9	337.5	14/12/2021	15:00	0.4	45	15/12/2021	15:00	0.9	337.5	16/12/2021	15:00	1.3	67.5
13/12/2021	16:00	0.4	22.5	14/12/2021	16:00	0.9	90	15/12/2021	16:00	0.9	112.5	16/12/2021	16:00	0.4	67.5
13/12/2021	17:00	0.4	157.5	14/12/2021	17:00	0.9	337.5	15/12/2021	17:00	1.3	45	16/12/2021	17:00	0.4	112.5
13/12/2021	18:00	0.9	112.5	14/12/2021	18:00	0.4	337.5	15/12/2021	18:00	1.3	90	16/12/2021	18:00	0.4	67.5
13/12/2021	19:00	0.4	112.5	14/12/2021	19:00	0.9	135	15/12/2021	19:00	0.4	90	16/12/2021	19:00	0.4	135
13/12/2021	20:00	0.4	135	14/12/2021	20:00	0.4	270	15/12/2021	20:00	0.9	112.5	16/12/2021	20:00	0.4	45
13/12/2021	21:00	0.4	90	14/12/2021	21:00	0.9	270	15/12/2021	21:00	1.3	90	16/12/2021	21:00	0.4	90
13/12/2021	22:00	0.9	135	14/12/2021	22:00	1.3	112.5	15/12/2021	22:00	1.3	90	16/12/2021	22:00	0.4	67.5
13/12/2021	23:00	1.3	112.5	14/12/2021	23:00	1.3	135	15/12/2021	23:00	1.8	112.5	16/12/2021	23:00	0.4	112.5

Date	Time	Wind Speed (m/s)	Wind Direction												
17/12/2021	0:00	1.3	90	18/12/2021	0:00	0.4	157.5	19/12/2021	0:00	0.9	67.5	20/12/2021	0:00	0.9	90
17/12/2021	1:00	1.3	157.5	18/12/2021	1:00	0.4	135	19/12/2021	1:00	1.3	270	20/12/2021	1:00	0.9	67.5
17/12/2021	2:00	0.9	135	18/12/2021	2:00	0.4	112.5	19/12/2021	2:00	0.9	135	20/12/2021	2:00	0.9	90
17/12/2021	3:00	0.4	90	18/12/2021	3:00	0.4	112.5	19/12/2021	3:00	1.3	337.5	20/12/2021	3:00	1.3	112.5
17/12/2021	4:00	1.3	135	18/12/2021	4:00	0.4	112.5	19/12/2021	4:00	0.4	67.5	20/12/2021	4:00	1.3	90
17/12/2021	5:00	1.8	112.5	18/12/2021	5:00	0.4	90	19/12/2021	5:00	0.4	202.5	20/12/2021	5:00	0.9	112.5
17/12/2021	6:00	0.9	270	18/12/2021	6:00	0.4	67.5	19/12/2021	6:00	0.4	67.5	20/12/2021	6:00	1.3	112.5
17/12/2021	7:00	0.9	315	18/12/2021	7:00	0.4	337.5	19/12/2021	7:00	0.4	112.5	20/12/2021	7:00	1.3	90
17/12/2021	8:00	1.3	315	18/12/2021	8:00	0.9	22.5	19/12/2021	8:00	1.8	45	20/12/2021	8:00	1.8	67.5
17/12/2021	9:00	1.3	22.5	18/12/2021	9:00	0.4	90	19/12/2021	9:00	0.9	90	20/12/2021	9:00	1.8	90
17/12/2021	10:00	0.9	22.5	18/12/2021	10:00	0.4	67.5	19/12/2021	10:00	0.9	67.5	20/12/2021	10:00	1.3	90
17/12/2021	11:00	0.9	22.5	18/12/2021	11:00	0.4	202.5	19/12/2021	11:00	1.3	22.5	20/12/2021	11:00	0.9	157.5
17/12/2021	12:00	1.3	225	18/12/2021	12:00	0.4	90	19/12/2021	12:00	0.9	135	20/12/2021	12:00	0.4	45
17/12/2021	13:00	1.3	45	18/12/2021	13:00	0.4	180	19/12/2021	13:00	0.4	135	20/12/2021	13:00	0.9	67.5
17/12/2021	14:00	1.8	22.5	18/12/2021	14:00	0.4	45	19/12/2021	14:00	0.4	112.5	20/12/2021	14:00	0.9	22.5
17/12/2021	15:00	1.3	67.5	18/12/2021	15:00	0.9	202.5	19/12/2021	15:00	0.9	22.5	20/12/2021	15:00	1.3	22.5
17/12/2021	16:00	1.3	135	18/12/2021	16:00	1.3	247.5	19/12/2021	16:00	0.9	45	20/12/2021	16:00	1.8	22.5
17/12/2021	17:00	1.8	67.5	18/12/2021	17:00	1.3	90	19/12/2021	17:00	0.4	337.5	20/12/2021	17:00	1.3	45
17/12/2021	18:00	0.9	270	18/12/2021	18:00	0.9	337.5	19/12/2021	18:00	1.3	45	20/12/2021	18:00	1.3	90
17/12/2021	19:00	0.9	0	18/12/2021	19:00	0.9	45	19/12/2021	19:00	0.9	45	20/12/2021	19:00	1.3	90
17/12/2021	20:00	0.4	315	18/12/2021	20:00	0.9	270	19/12/2021	20:00	0.9	112.5	20/12/2021	20:00	0.9	112.5
17/12/2021	21:00	0.4	22.5	18/12/2021	21:00	1.3	67.5	19/12/2021	21:00	0.9	67.5	20/12/2021	21:00	1.3	112.5
17/12/2021	22:00	0.4	22.5	18/12/2021	22:00	1.3	270	19/12/2021	22:00	0.4	22.5	20/12/2021	22:00	0.9	112.5
17/12/2021	23:00	1.3	67.5	18/12/2021	23:00	1.3	337.5	19/12/2021	23:00	0.9	112.5	20/12/2021	23:00	0.9	90

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												
21/12/2021	0:00	1.8	247.5	22/12/2021	0:00	0.9	337.5	23/12/2021	0:00	0.9	337.5	24/12/2021	0:00	1.3	112.5
21/12/2021	1:00	1.8	90	22/12/2021	1:00	0.9	247.5	23/12/2021	1:00	0.4	90	24/12/2021	1:00	0.4	67.5
21/12/2021	2:00	1.3	337.5	22/12/2021	2:00	0.4	247.5	23/12/2021	2:00	0.4	22.5	24/12/2021	2:00	0.4	67.5
21/12/2021	3:00	1.3	135	22/12/2021	3:00	0.4	247.5	23/12/2021	3:00	0.4	22.5	24/12/2021	3:00	0	67.5
21/12/2021	4:00	1.8	337.5	22/12/2021	4:00	0.4	225	23/12/2021	4:00	0.9	157.5	24/12/2021	4:00	0.4	67.5
21/12/2021	5:00	2.2	90	22/12/2021	5:00	0.4	247.5	23/12/2021	5:00	0.4	157.5	24/12/2021	5:00	0.4	67.5
21/12/2021	6:00	1.3	90	22/12/2021	6:00	0.4	247.5	23/12/2021	6:00	0.4	45	24/12/2021	6:00	0.4	90
21/12/2021	7:00	1.3	90	22/12/2021	7:00	0.4	247.5	23/12/2021	7:00	0.4	90	24/12/2021	7:00	0.4	135
21/12/2021	8:00	1.8	45	22/12/2021	8:00	0.9	157.5	23/12/2021	8:00	0.9	135	24/12/2021	8:00	0	22.5
21/12/2021	9:00	1.8	112.5	22/12/2021	9:00	0.9	157.5	23/12/2021	9:00	0.9	112.5	24/12/2021	9:00	0	67.5
21/12/2021	10:00	1.8	90	22/12/2021	10:00	0.9	315	23/12/2021	10:00	0.4	337.5	24/12/2021	10:00	0	67.5
21/12/2021	11:00	2.2	112.5	22/12/2021	11:00	0.4	315	23/12/2021	11:00	0.4	270	24/12/2021	11:00	1.8	0
21/12/2021	12:00	2.2	67.5	22/12/2021	12:00	0.9	315	23/12/2021	12:00	0.4	225	24/12/2021	12:00	1.8	247.5
21/12/2021	13:00	1.8	292.5	22/12/2021	13:00	0.9	247.5	23/12/2021	13:00	0.4	112.5	24/12/2021	13:00	0.9	247.5
21/12/2021	14:00	1.3	67.5	22/12/2021	14:00	0.4	247.5	23/12/2021	14:00	0.9	112.5	24/12/2021	14:00	1.3	315
21/12/2021	15:00	0.9	112.5	22/12/2021	15:00	0.9	22.5	23/12/2021	15:00	0.9	67.5	24/12/2021	15:00	1.3	0
21/12/2021	16:00	0.9	157.5	22/12/2021	16:00	0.4	45	23/12/2021	16:00	0.9	45	24/12/2021	16:00	0.9	315
21/12/2021	17:00	0.9	67.5	22/12/2021	17:00	0.4	45	23/12/2021	17:00	0.4	112.5	24/12/2021	17:00	0.9	0
21/12/2021	18:00	1.3	112.5	22/12/2021	18:00	0.9	22.5	23/12/2021	18:00	0.4	135	24/12/2021	18:00	1.3	0
21/12/2021	19:00	0.9	202.5	22/12/2021	19:00	0.9	247.5	23/12/2021	19:00	0.9	112.5	24/12/2021	19:00	1.3	0
21/12/2021	20:00	0.9	67.5	22/12/2021	20:00	0.9	270	23/12/2021	20:00	0.9	135	24/12/2021	20:00	0.9	292.5
21/12/2021	21:00	0.4	225	22/12/2021	21:00	0.9	247.5	23/12/2021	21:00	0.9	135	24/12/2021	21:00	1.3	292.5
21/12/2021	22:00	0.4	247.5	22/12/2021	22:00	0.9	270	23/12/2021	22:00	0.4	135	24/12/2021	22:00	1.3	67.5
21/12/2021	23:00	0.9	247.5	22/12/2021	23:00	0.4	247.5	23/12/2021	23:00	0.4	135	24/12/2021	23:00	0.9	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												
25/12/2021	0:00	0.9	247.5	26/12/2021	0:00	0.9	247.5	27/12/2021	0:00	0.4	135	28/12/2021	0:00	0.4	22.5
25/12/2021	1:00	0.9	90	26/12/2021	1:00	0.9	22.5	27/12/2021	1:00	0.4	112.5	28/12/2021	1:00	0.4	90
25/12/2021	2:00	0.9	157.5	26/12/2021	2:00	1.3	45	27/12/2021	2:00	1.8	112.5	28/12/2021	2:00	0.4	22.5
25/12/2021	3:00	0.9	67.5	26/12/2021	3:00	0.9	22.5	27/12/2021	3:00	0.9	112.5	28/12/2021	3:00	0.4	112.5
25/12/2021	4:00	0.9	67.5	26/12/2021	4:00	0.9	22.5	27/12/2021	4:00	0.4	45	28/12/2021	4:00	0.4	22.5
25/12/2021	5:00	0.9	112.5	26/12/2021	5:00	0.9	45	27/12/2021	5:00	0.4	247.5	28/12/2021	5:00	0.4	112.5
25/12/2021	6:00	0.9	67.5	26/12/2021	6:00	1.3	90	27/12/2021	6:00	0.4	247.5	28/12/2021	6:00	0.4	22.5
25/12/2021	7:00	0.9	337.5	26/12/2021	7:00	0.9	225	27/12/2021	7:00	0.9	180	28/12/2021	7:00	0.4	247.5
25/12/2021	8:00	0.9	90	26/12/2021	8:00	1.3	112.5	27/12/2021	8:00	0.4	90	28/12/2021	8:00	0.9	270
25/12/2021	9:00	0.4	90	26/12/2021	9:00	1.8	337.5	27/12/2021	9:00	0.4	247.5	28/12/2021	9:00	0.9	45
25/12/2021	10:00	0.4	90	26/12/2021	10:00	1.3	337.5	27/12/2021	10:00	0.4	225	28/12/2021	10:00	0.9	90
25/12/2021	11:00	0.4	112.5	26/12/2021	11:00	1.8	45	27/12/2021	11:00	0.4	225	28/12/2021	11:00	1.3	67.5
25/12/2021	12:00	0.4	135	26/12/2021	12:00	1.3	45	27/12/2021	12:00	1.3	180	28/12/2021	12:00	1.3	247.5
25/12/2021	13:00	0.4	135	26/12/2021	13:00	1.8	337.5	27/12/2021	13:00	0.4	270	28/12/2021	13:00	0.4	247.5
25/12/2021	14:00	0.9	112.5	26/12/2021	14:00	1.3	247.5	27/12/2021	14:00	0.9	202.5	28/12/2021	14:00	0.9	247.5
25/12/2021	15:00	0.9	22.5	26/12/2021	15:00	1.3	22.5	27/12/2021	15:00	0.4	202.5	28/12/2021	15:00	0.9	225
25/12/2021	16:00	0.9	22.5	26/12/2021	16:00	1.3	337.5	27/12/2021	16:00	0.9	247.5	28/12/2021	16:00	0.9	225
25/12/2021	17:00	0.9	22.5	26/12/2021	17:00	0.4	22.5	27/12/2021	17:00	0.9	247.5	28/12/2021	17:00	0.4	45
25/12/2021	18:00	1.3	67.5	26/12/2021	18:00	0.9	22.5	27/12/2021	18:00	0.4	225	28/12/2021	18:00	0.9	270
25/12/2021	19:00	1.8	90	26/12/2021	19:00	1.3	67.5	27/12/2021	19:00	0.9	157.5	28/12/2021	19:00	0.9	22.5
25/12/2021	20:00	0.9	270	26/12/2021	20:00	1.8	45	27/12/2021	20:00	0.9	135	28/12/2021	20:00	0.9	67.5
25/12/2021	21:00	0.9	270	26/12/2021	21:00	1.8	90	27/12/2021	21:00	0.9	135	28/12/2021	21:00	0.4	90
25/12/2021	22:00	0.9	135	26/12/2021	22:00	1.8	292.5	27/12/2021	22:00	1.3	337.5	28/12/2021	22:00	0.4	135
25/12/2021	23:00	0.9	22.5	26/12/2021	23:00	1.8	112.5	27/12/2021	23:00	0.9	225	28/12/2021	23:00	0	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
29/12/2021	0:00	0.4	90	30/12/2021	0:00	0.9	225	31/12/2021	0:00	0.4	22.5				
29/12/2021	1:00	0.4	0	30/12/2021	1:00	0.4	247.5	31/12/2021	1:00	0.4	90				
29/12/2021	2:00	0.4	0	30/12/2021	2:00	0.9	292.5	31/12/2021	2:00	0.9	67.5				
29/12/2021	3:00	0.9	22.5	30/12/2021	3:00	0.4	247.5	31/12/2021	3:00	0.9	45				
29/12/2021	4:00	0.9	112.5	30/12/2021	4:00	0.4	247.5	31/12/2021	4:00	0.4	45				
29/12/2021	5:00	0.4	22.5	30/12/2021	5:00	0.9	225	31/12/2021	5:00	0.4	22.5				
29/12/2021	6:00	0.4	270	30/12/2021	6:00	0.9	247.5	31/12/2021	6:00	0.9	90				
29/12/2021	7:00	0.4	270	30/12/2021	7:00	0.4	225	31/12/2021	7:00	0.9	45				
29/12/2021	8:00	0.4	270	30/12/2021	8:00	0.4	225	31/12/2021	8:00	0.9	22.5				
29/12/2021	9:00	0.4	247.5	30/12/2021	9:00	0.4	247.5	31/12/2021	9:00	1.3	45				
29/12/2021	10:00	0.4	202.5	30/12/2021	10:00	0.4	225	31/12/2021	10:00	1.8	22.5				
29/12/2021	11:00	0.9	247.5	30/12/2021	11:00	0.4	180	31/12/2021	11:00	1.8	22.5				
29/12/2021	12:00	0.4	180	30/12/2021	12:00	0.4	247.5	31/12/2021	12:00	1.8	315				
29/12/2021	13:00	0.4	135	30/12/2021	13:00	0.4	225	31/12/2021	13:00	1.8	67.5				
29/12/2021	14:00	0.4	135	30/12/2021	14:00	0.4	225	31/12/2021	14:00	1.8	112.5				
29/12/2021	15:00	0.4	112.5	30/12/2021	15:00	0.9	202.5	31/12/2021	15:00	1.3	112.5				
29/12/2021	16:00	0.4	112.5	30/12/2021	16:00	0.4	180	31/12/2021	16:00	1.3	112.5				
29/12/2021	17:00	0.4	225	30/12/2021	17:00	0.4	225	31/12/2021	17:00	1.8	112.5				
29/12/2021	18:00	0.9	225	30/12/2021	18:00	1.3	157.5	31/12/2021	18:00	0.9	112.5				
29/12/2021	19:00	0.9	225	30/12/2021	19:00	0.9	157.5	31/12/2021	19:00	1.3	90				
29/12/2021	20:00	0.9	247.5	30/12/2021	20:00	0.4	157.5	31/12/2021	20:00	0.9	135				
29/12/2021	21:00	0.4	67.5	30/12/2021	21:00	0.9	157.5	31/12/2021	21:00	0.4	90				
29/12/2021	22:00	0.4	157.5	30/12/2021	22:00	0.4	157.5	31/12/2021	22:00	0.4	90				
29/12/2021	23:00	0.4	45	30/12/2021	23:00	0.4	112.5	31/12/2021	23:00	0.9	112.5				

Appendix G-24-hr TSP monitoring results and graphical presentation

Location: AM3 – Sky Tower

Start Date	Weather	Air Temp.	Atmospheric Pressure	Filter we	eight (g)	Particulate	Elapse	e Time	Sampling Time	Flow (cf		Av. Flow	Total vol.	Conc.
		$(^{\circ}\mathbb{C})$	(hPa)	Initial	Final	weight (g)	Initial	Final	(min)	Initial	Final	(m <sup>3</sup> /min)	$(m^3)$	(µg/m³)
02/12/2021	Sunny	22.3	1021.8	14.9987	15.1613	0.1626	3805.07	3829.09	1441.2	54	54	1.54	2219	73
08/12/2021	Sunny	21.8	1022.3	18.3744	18.5243	0.1499	3830.24	3854.26	1441.2	46	46	1.31	1888	79
14/12/2021	Sunny	18.0	1018.6	18.3034	18.4651	0.1617	3855.09	3879.11	1441.2	46	46	1.32	1897	85
20/12/2021	Cloudy	19.6	1017.6	14.9824	15.0357	0.0533	3880.52	3904.55	1441.8	50	50	1.43	2058	26
24/12/2021	Sunny	24.0	1017.2	17.5981	17.7878	0.1897	3905.81	3929.83	1441.2	50	50	1.42	2042	93
30/12/2021	Sunny	16.0	1024.6	15.4292	15.6127	0.1835	3930.19	3954.21	1441.2	48	48	1.38	1993	92
												Maxir	num	93
												Minin	num	26
												Aver	age	75
												Action	Level	182

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

eather	Air Temp.	Atmospheric Pressure	Filter we	eight (g)	Particulate	Elapse	Time	Sampling Time	Flow (cf:		Av. Flow	Total vol.	Conc.
	$(^{\circ}\mathbb{C})$	(hPa)	Initial	Final	weight (g)	Initial	Final	(min)	Initial	Final	(m <sup>3</sup> /min)	$(m^3)$	(µg/m³)
unny	22.3	1021.8	15.2677	15.4426	0.1749	3437.45	3461.47	1441.2	50	50	1.35	1952	90
unny	21.8	1022.3	18.4416	18.5954	0.1538	3461.81	3485.83	1441.2	50	50	1.36	1954	79
unny	18.0	1018.6	15.4352	15.5982	0.163	3486.22	3510.24	1441.2	48	48	1.31	1884	87
oudy	19.6	1017.6	18.3177	18.3594	0.0417	3511.36	3535.38	1441.2	48	48	1.30	1878	22
unny	24.0	1017.2	17.9325	18.0559	0.1234	3536.58	3560.61	1441.8	48	48	1.29	1864	66
unny	16.0	1024.6	18.1964	18.3529	0.1565	3561.02	3585.04	1441.2	50	50	1.37	1976	79
ui ui ui	nny nny nny oudy nny	(°C) nny 22.3 nny 21.8 nny 18.0 oudy 19.6 nny 24.0	(°C)         (hPa)           nnny         22.3         1021.8           nny         21.8         1022.3           nny         18.0         1018.6           oudy         19.6         1017.6           nny         24.0         1017.2	ather         1emp.         Pressure           (°C)         (hPa)         Initial           nny         22.3         1021.8         15.2677           nny         21.8         1022.3         18.4416           nny         18.0         1018.6         15.4352           oudy         19.6         1017.6         18.3177           nny         24.0         1017.2         17.9325	ather         1emp.         Pressure           (°C)         (hPa)         Initial         Final           nny         22.3         1021.8         15.2677         15.4426           nny         21.8         1022.3         18.4416         18.5954           nny         18.0         1018.6         15.4352         15.5982           oudy         19.6         1017.6         18.3177         18.3594           nny         24.0         1017.2         17.9325         18.0559	ather         1emp. (°C)         Pressure (hPa)         Initial         Final         weight (g)           nny         22.3         1021.8         15.2677         15.4426         0.1749           nny         21.8         1022.3         18.4416         18.5954         0.1538           nny         18.0         1018.6         15.4352         15.5982         0.163           oudy         19.6         1017.6         18.3177         18.3594         0.0417           nny         24.0         1017.2         17.9325         18.0559         0.1234	ather (°C)         (hPa)         Initial         Final         weight (g)         Initial           nny         22.3         1021.8         15.2677         15.4426         0.1749         3437.45           nny         21.8         1022.3         18.4416         18.5954         0.1538         3461.81           nny         18.0         1018.6         15.4352         15.5982         0.163         3486.22           oudy         19.6         1017.6         18.3177         18.3594         0.0417         3511.36           nny         24.0         1017.2         17.9325         18.0559         0.1234         3536.58	ather (°C)         Pressure (hPa)         Initial         Final         weight (g)         Initial         Final           nny         22.3         1021.8         15.2677         15.4426         0.1749         3437.45         3461.47           nny         21.8         1022.3         18.4416         18.5954         0.1538         3461.81         3485.83           nny         18.0         1018.6         15.4352         15.5982         0.163         3486.22         3510.24           oudy         19.6         1017.6         18.3177         18.3594         0.0417         3511.36         3535.38           nny         24.0         1017.2         17.9325         18.0559         0.1234         3536.58         3560.61	ather (°C)         Pressure (hPa)         Initial         Final         weight (g)         Initial         Final (min)           nny         22.3         1021.8         15.2677         15.4426         0.1749         3437.45         3461.47         1441.2           nny         21.8         1022.3         18.4416         18.5954         0.1538         3461.81         3485.83         1441.2           nny         18.0         1018.6         15.4352         15.5982         0.163         3486.22         3510.24         1441.2           oudy         19.6         1017.6         18.3177         18.3594         0.0417         3511.36         3535.38         1441.2           nny         24.0         1017.2         17.9325         18.0559         0.1234         3536.58         3560.61         1441.8	ather (°C)         (hPa)         Initial         Final         weight (g)         Initial         Final         Initial         Final (min)         Initial           nny         22.3         1021.8         15.2677         15.4426         0.1749         3437.45         3461.47         1441.2         50           nny         21.8         1022.3         18.4416         18.5954         0.1538         3461.81         3485.83         1441.2         50           nny         18.0         1018.6         15.4352         15.5982         0.163         3486.22         3510.24         1441.2         48           oudy         19.6         1017.6         18.3177         18.3594         0.0417         3511.36         3535.38         1441.2         48           nny         24.0         1017.2         17.9325         18.0559         0.1234         3536.58         3560.61         1441.8         48	ather (°C)         (hPa)         Initial         Final         weight (g)         Initial         Final         (min)         Initial         Final           nny         22.3         1021.8         15.2677         15.4426         0.1749         3437.45         3461.47         1441.2         50         50           nny         21.8         1022.3         18.4416         18.5954         0.1538         3461.81         3485.83         1441.2         50         50           nny         18.0         1018.6         15.4352         15.5982         0.163         3486.22         3510.24         1441.2         48         48           oudy         19.6         1017.6         18.3177         18.3594         0.0417         3511.36         3535.38         1441.2         48         48           nny         24.0         1017.2         17.9325         18.0559         0.1234         3536.58         3560.61         1441.8         48	ather (°C)         (hPa)         Initial         Final         weight (g)         Initial         Final (min)         Initial         Final (m³/min)           nny         22.3         1021.8         15.2677         15.4426         0.1749         3437.45         3461.47         1441.2         50         50         1.35           nny         21.8         1022.3         18.4416         18.5954         0.1538         3461.81         3485.83         1441.2         50         50         1.36           nny         18.0         1018.6         15.4352         15.5982         0.163         3486.22         3510.24         1441.2         48         48         1.31           oudy         19.6         1017.6         18.3177         18.3594         0.0417         3511.36         3535.38         1441.2         48         48         1.30           nny         24.0         1017.2         17.9325         18.0559         0.1234         3536.58         3560.61         1441.8         48         48         1.29           nny         16.0         1024.6         18.1964         18.3529         0.1565         3561.02         3585.04         1441.2         50         50         50         1.37	ather (°C)         (hPa)         Initial         Final         weight (g)         Initial         Final         Initial         Final (min)         Initial         Final (m³/min)         Vol. (m³/min)           nny         22.3         1021.8         15.2677         15.4426         0.1749         3437.45         3461.47         1441.2         50         50         1.35         1952           nny         21.8         1022.3         18.4416         18.5954         0.1538         3461.81         3485.83         1441.2         50         50         1.36         1954           nny         18.0         1018.6         15.4352         15.5982         0.163         3486.22         3510.24         1441.2         48         48         1.31         1884           oudy         19.6         1017.6         18.3177         18.3594         0.0417         3511.36         3535.38         1441.2         48         48         1.30         1878           nny         24.0         1017.2         17.9325         18.0559         0.1234         3536.58         3560.61         1441.8         48         48         1.29         1864

 Maximum
 90

 Minimum
 22

 Average
 70

 Action Level
 187

 Limit Level
 260

Limit Level

260

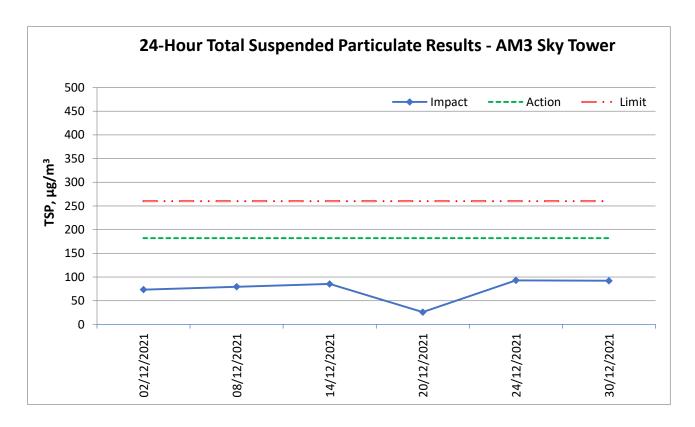
# Location: AM7 – Hong Kong Children's Hospital

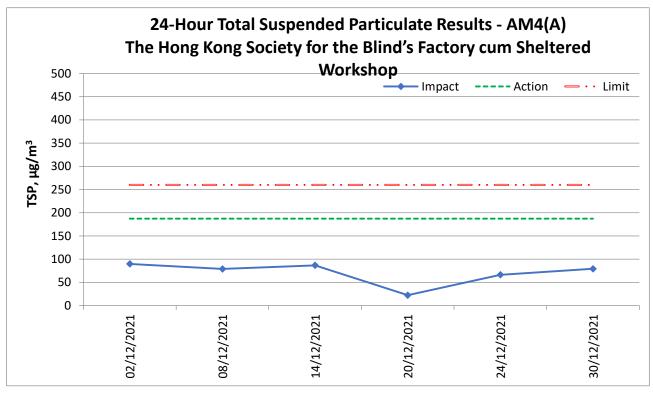
Start Date	Weather	Air Temp.	Atmospheric Pressure	Filter we	eight (g)	Particulate	Elapse	e Time	Sampling Time	Flow (cf		Av. Flow	Total vol.	Conc.
		$(^{\circ}\mathbb{C})$	(hPa)	Initial	Final	weight (g)	Initial	Final	(min)	Initial	Final	(m <sup>3</sup> /min)	$(m^3)$	$(\mu g/m^3)$
02/12/2021	Sunny	22.3	1021.8	15.0808	15.2423	0.1615	8327.97	8351.99	1441.2	50	50	1.41	2036	79
08/12/2021	Sunny	21.8	1022.3	15.3032	15.4601	0.1569	8352.43	8376.45	1441.2	48	48	1.36	1957	80
14/12/2021	Sunny	18.0	1018.6	15.6849	15.8441	0.1592	8377.41	8401.43	1441.2	48	48	1.36	1966	81
20/12/2021	Cloudy	19.6	1017.6	15.6013	15.6486	0.0473	8402.56	8426.59	1441.8	48	48	1.36	1960	24
24/12/2021	Sunny	24.0	1017.2	14.2782	14.4987	0.2205	8426.93	8450.96	1441.8	50	50	1.41	2027	109
30/12/2021	Sunny	16.0	1024.6	14.1384	14.3629	0.2245	8451.21	8475.23	1441.2	50	50	1.43	2061	109
												Maxin	num	109
												Minim	num	24
												Avera	age	80
												Action 1	Level	181

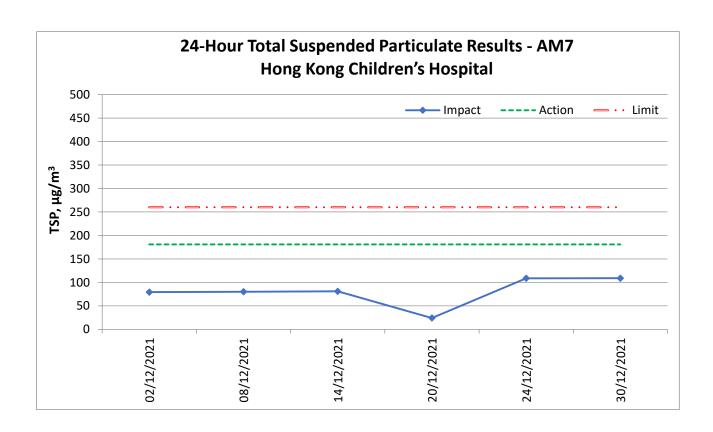
Limit Level

260

# 24-hour average TSP







$\label{eq:Appendix H-1-hr} \textbf{Appendix H-1-hr TSP monitoring results and graphical presentation}$

Location:
AM3 Sky Tower

Date	Measure	emei	nt Period	1-hr TSP concentration, μg/m <sup>3</sup>	Weather			
	9:00	-	10:00	45				
02/12/2021	10:00	-	11:00	46	Sunny			
	11:00	-	12:00	49				
	13:00	-	14:00	53				
08/12/2021	14:00	-	15:00	53	Sunny			
	15:00	-	16:00	56				
	9:00 - 10:0			61				
14/12/2021	14/12/2021 10:00		11:00	64	Sunny			
	11:00		12:00	60				
	13:00	-	14:00	21				
20/12/2021	14:00	-	15:00	23	Cloudy			
	15:00	-	16:00	24				
	13:00	-	14:00	68				
24/12/2021	14:00	-	15:00	75	Sunny			
	15:00	-	16:00	76				
	9:00	-	10:00	72				
30/12/2021	10:00	-	11:00	80	Sunny			
	11:00 - 12:00			82				
Maximum				82				
N	Iinimum			21				
F	Average			56				
Action Level				297				
Li	mit Level			500				

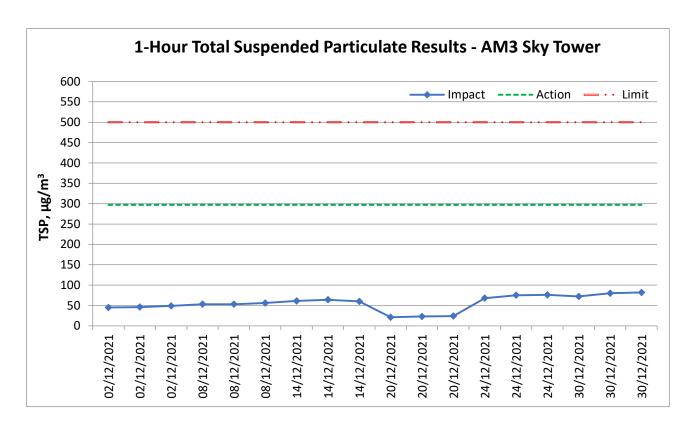
Location:
AM4(A) The Hong Kong
Society for the
Blind's Factory
cum Sheltered
Workshop

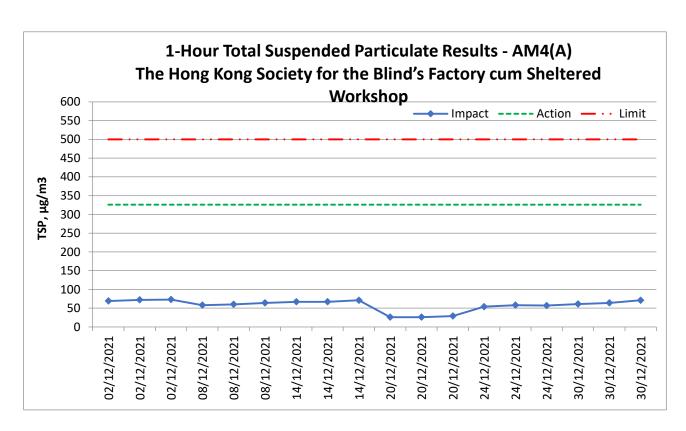
Date	Measure	emei	nt Period	1-hr TSP concentration, μg/m <sup>3</sup>	Weather			
	13:00	-	14:00	69				
02/12/2021	14:00	-	15:00	72	Sunny			
	15:00	-	16:00	73	-			
	9:00	-	10:00	58				
08/12/2021	10:00	-	11:00	60	Sunny			
	11:00	-	12:00	64				
	9:00	-	10:00	67				
14/12/2021	10:00	-	11:00	67	Sunny			
	11:00	-	12:00	71				
	13:00	-	14:00	26				
20/12/2021	14:00	-	15:00	26	Cloudy			
	15:00	-	16:00	29				
	13:00	1	14:00	54				
24/12/2021	14:00	-	15:00	58	Sunny			
	15:00	-	16:00	57				
	9:00	-	10:00	61				
30/12/2021	10:00	-	11:00	64	Sunny			
	11:00 - 12:00			71				
M	Maximum			73				
M	Minimum			26				
A	Average			58				
Ac	tion Level	L		326				
Li	Limit Level			500				

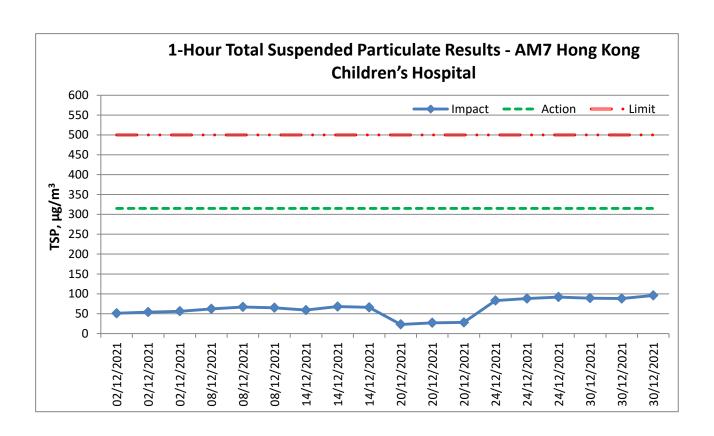
Location:
AM7 Hong Kong
Children's
Hospital

Date		sure erio	ment od	1-hr TSP concentration, μg/m <sup>3</sup>	Weather			
	13:00	-	14:00	51				
02/12/2021	14:00	-	15:00	54	Sunny			
	15:00	-	16:00	56				
	9:00	1	10:00	62				
08/12/2021	10:00	-	11:00	67	Sunny			
	11:00	-	12:00	65				
	13:00	-	14:00	59				
14/12/2021	14:00	-	15:00	68	Sunny			
	15:00	-	16:00	66				
	9:00	-	10:00	23				
20/12/2021	10:00	-	11:00	27	Cloudy			
	11:00	-	12:00	28				
	9:00	-	10:00	83				
24/12/2021	10:00	-	11:00	88	Sunny			
	11:00	-	12:00	92				
	13:00	-	14:00	89				
30/12/2021	14:00	-	15:00	88	Sunny			
	15:00 - 16:00		16:00	96				
Maximum				96				
M	Minimum			23				
	Average			65				
Act	tion Level			315				
Li	mit Level			500				

# 1-hour average TSP







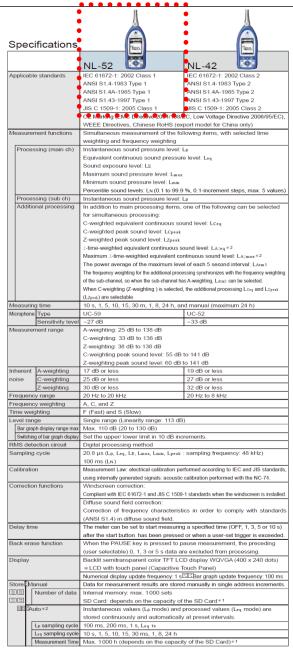
# Appendix I – Event and Action Plan for air quality

T		Ac	tion	
Event	ET	IEC	Supervisor / ER	Contractor
Action Level being exceeded by one sampling	<ol> <li>Identify source and investigate the causes of exceedance;</li> <li>Inform Contractor, IEC and Supervisor /ER;</li> <li>Repeat measurement to confirm finding.</li> </ol>	<ol> <li>Check monitoring data submitted by ET;</li> <li>Check Contractor's working method.</li> </ol>	1. Notify Contractor.	<ol> <li>Rectify any unacceptable practice;</li> <li>Amend working methods if appropriate.</li> </ol>
Action Level being exceeded by two or more consecutive sampling	<ol> <li>Identify source and investigate the causes of exceedance;</li> <li>Inform Contractor, IEC and Supervisor /ER;</li> </ol>	<ol> <li>Check monitoring data submitted by ET;</li> <li>Check Contractor's working method;</li> <li>Discuss with ET and</li> </ol>	Confirm receipt of notification of exceedance in writing;     Notify Contractor;     In consolidation with the	Discuss with ET and IEC on proper remedial actions;     Submit proposals for remedial actions to
	<ol> <li>Increase monitoring frequency to daily;</li> <li>Discuss with IEC and Contractor on remedial actions required;</li> </ol>	Contractor on possible remedial measures; 4. Advise the Supervisor /ER on the effectiveness of the proposed remedial	IEC, agree with the Contractor on the remedial measures to be implemented; 4. Supervise implementation	Supervisor /ER and IEC within three working day of notification; 3. Implement the agreed proposals;
	<ul> <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> </ul>	measures.	of remedial measures; 5. Conduct meeting with ET and IEC if exceedance continues.	4. Amend proposal if appropriate.
Limit Level being exceeded by one sampling	Č	$\mathcal{E}$	<ol> <li>Confirm receipt of notification of exceedance in writing;</li> <li>Notify Contractor;</li> <li>In consolidation with the IEC, agree with the Contractor on the remedial</li> </ol>	Take immediate action to avoid further exceedance;     Discuss with ET and IEC on proper remedial actions;     Submit proposal for remedial actions to
	4. Assess effectiveness of	<u>'</u>	measures to be	Supervisor /ER and IEC

T. 4		Act	ion	
Event	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.	<ul> <li>implemented;</li> <li>Supervise implementation of remedial measures;</li> <li>Conduct meeting with ET and IEC if exceedance continues.</li> </ul>	within three working days of notification; 4. Implement the agreed proposals.
Limit Level being exceeded by two or more consecutive sampling	<ol> <li>Notify IEC, Supervisor /ER, Contractor and EPD;</li> <li>Repeat measurement to confirm findings;</li> <li>Carry out analysis of Contractor's working procedures to identify source and investigate the causes of exceedance;</li> <li>Increase monitoring frequency to daily;</li> <li>Arrange meeting with IEC, Supervisor /ER and Contractor to discuss the remedial action to be taken;</li> <li>Assess effectiveness of Contractor's remedial actions and keep EPD, IEC and Supervisor /ER informed of the results;</li> <li>If exceedance stop, cease</li> </ol>	<ol> <li>Check monitoring data submitted by ET;</li> <li>Check Contractor's working method;</li> <li>Discuss with Supervisor /ER, ET, and Contractor on the potential remedial actions;</li> <li>Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the Supervisor /ER accordingly.</li> </ol>	<ol> <li>Confirm receipt of notification of exceedance in writing;</li> <li>Notify Contractor;</li> <li>In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented;</li> <li>Supervise implementation of remedial measures;</li> <li>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> <li>Take immediate action to avoid further exceedance;</li> <li>Discuss with ET and IEC on proper remedial actions;</li> <li>Submit proposal for remedial actions to Supervisor /ER and IEC within three working days of notification;</li> <li>Implement the agreed proposals;</li> <li>Submit further remedial actions if problem still not under control;</li> <li>Stop the relevant portion of works as instructed by the Supervisor /ER until the exceedance is abated.</li> </ol>

 $\label{eq:continuous} \begin{tabular}{ll} Appendix J-Calibration certificates, catalogue of noise monitoring \\ equipment \end{tabular}$ 

# Catalogue of Sound Level Meter



Data recall		Allows viewing of stored data		
Setup	memory	Up to five setup configurations can be saved in internal memory, for later recal		
		Start up via file settings previously stored on SD card possible		
Wavefo	orm recording *3			
File	format	Uncompressed waveform WAVE file		
Sampling frequency		Select 48 kHz, 24 kHz or 12 kHz		
Dat	ta 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 ∨ (rms values) at bar graph display full scale		
	Comparator	Turns on when the open-collector output exceeds the set value		
	output*2	(max. applied voltage 24 V, max. current 60 mA, allowable dissipation 300 mW)		
USB	18	Allows USB to be connected to a computer and recognized as a removable dis		
10 to 10		Allows USB to be controlled via communication commands		
RS-232C communication		Allows for RS-232C communication via use of a dedicated cable		
Data c	ontinuous output*2			
Тур	e of Instantaneous value	Lp		
dat	a Processed value	Leq, Lmax, Lmin, Lpeak		
Out	tput interval	100 ms		
Print o	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		
Bat	tery 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)		
Ext	emal power voltage	5 to 7 V (rated voltage: 6 V)		
Cui	rrent consumption	Approximately 90 mA (normal operation, rated voltage)		
Ambie	nt Temperature	−10 to +50 °C		
conditi	ons Humidity	10 to 90 % RH (non-condensing)		
Dustpr	oof / water-resistant	IP code: IP54 (except for microphone)		
perforr	mance *4	See precautions regarding waterproofing		
Dimen	sions, weight	Approx. 250 (H) x 76 (W) x 33 mm(D), approx. 400 g (with batteries)		
Suppli	ed 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×1 (NX-42EX		
		preinstalled model only)		

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-60∨M
Waveform analysis software	CAT-WAVE
SD Card 512 MB	SD-512M
SD Card 2 GB	SD-2G
AC adapter (100 ∨ to 240 ∨)	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

\*4 Protection against harmful dust and water splashing from any direction.

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



RION CO., LTD.

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

This product is environment-friendly. It does not include toxic chemicals on our policy.

This product is certified to an International Protection rating of IP54 (dust protected and resistant to splashing water).
This leaffet is printed with environmentally friendly vegetable-based ink on recycled paper.

1011-4 E 212.P.D

AAST-SLM-10 Cal Cost: 2021/7/19



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 CEPREL LABORATORY CALIBRATION & TESTING CENTRE

# CALIBRATION CERTIFICATE

证书编号: 2HB21001383-0001 Certificate No.



委托单位: _ Client	Ca	stco Testing Centre Limi	ted
仪器名称: Description		Sound Level Meter	
型号规格: Model/Type		NL-52	
制造商: Manufacturer	-	RION	
机身号: Serial No.	00976203		
管理号: Asset No.		AAST-SLM-10	
接收日期:	2021-07-08	校准日期:	2021-07-19
Rec. Date 答发日期:	2021-07-19	Cal. Date 建议校准周期:	12个月(12 months)
App. Date	所校准项	Reference Cal. Peri 目合格(Passed at Calibra	

Approved by

Conclusion

賽宝计量检测中心 广州总部地址: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: cal@ceprei.com 周址: www.ceprei-cal.com

印章:

Stamp

CEPREI Calibration and Testing Centre HO Addr: No.78 Zhucun Avenue West Zenechene District Guanezhou, 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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31.5Hz~16kHz

# DIRECTIONS

1. 本机构质量管理体系符合ISO/IEC 17025:2017标准的要求,获得中国合格评定国家认可委员会( CNAS) 认可, 认可证书号为: CNAS L13344。

This laboratory quality management system meets the ISO/IEC 17025:2017 and is accredited by the China National Accreditation Service for Conformity Assessment, No. CNAS L13344.

2. 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).

TILE - CANALE/S · 详细内容请查看CNAS网络中注册编号为113344的证书别件,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 expery of accreditation.).

3 木次检准所使用的主要测量标准(The main measurement standards used during the calibration):

名称	证书号/有效期/溯源单位	技术指标	测量范围
(Description)	(Certificate No./Due Date/Traceability to)	(Specification)	(Measuring Range)
正弦信号发生器	4GC20000427-0010/2021-11-04/赛宝(广州)	f: ±1mHz: 失真度 Distortion: <-70dB	f: 0.001Hz~200kHz: <i>U</i> : 100µV~5Vrms
数字多用表	4GC20000358-0060/2021-09-09/賽宝(广州)	DCV: ±0.0035%; ACV: ± 0.06%; DCI: ±0.05%; ACI : ±0.1%; R: ±0.01%; f: ±0.001%	DCV:(0~1000)V; ACV (0.001~750)V@(3Hz~ 300kHz); DCI:(0~3)A ; ACI:(0~3)A@(3Hz~ 5kHz); R:(0~100)MΩ ; f:3Hz~300kHz
步进衰减器	4GC21000155-0024/2022-04-29/赛宝(广州)	±3dB	(0~110) dB/10dB step @(DC~1GHz)
PULSE分析系统	GFJGJL1001210202725/2022-03-03/航空 304所	频率:U <sub>rel</sub> =0.001%,k=2;电压: U <sub>rel</sub> =0.04%,k=2	頻率:0.001Hz~51.2kHz, 电压:(1×10 <sup>5</sup> ~30)V
标准传声器	LSsx2021-13180/2022-04-24/中国计量院	U=(0.05~0.20)dB (k=2)	20Hz~20kHz
前置放大器	LSsx2021-11346/2022-03-07/中国计量院	U=0.3dB (k=2)	(10~20000) Hz
功率放大器	4GC20000457-0065/2021-11-17/赛宝(广州)	频率响应: ±ldB, 失真度	20Hz~20kHz

4. 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

环境条件(Environmental conditions): 温度(Temperature): 23.4°C 相对湿度(Relative Humidity): 55.8%

多功能声学校准器 4EC20000091-0005/2021-11-05/赛宝(广州) 1级

6. 本证书中给出的扩展不确定度依据JJF1059.1-2012《测量不确定度的评定与表示》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。

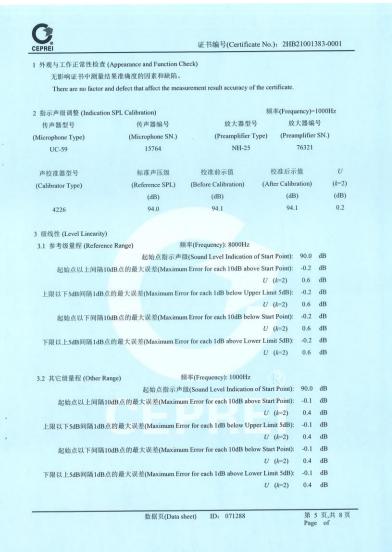
The extended uncertainty given in this certificate is evaluated according to JJF1059.1-2012 "Evaluation and Expression of Uncertainty in Measurement", and is calculated by multiplying the combined standard uncertainty by the coverage factor k which corresponding to the coverage probability about 95%.

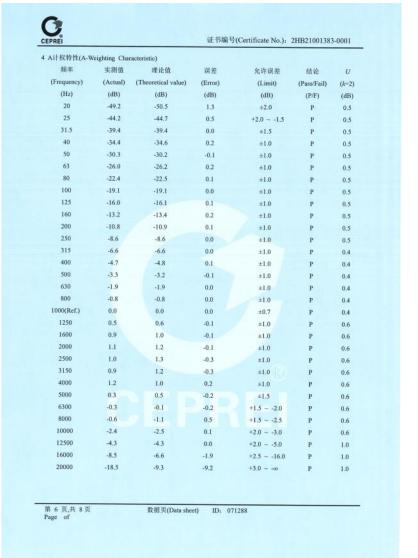
7. 证书中"P"、"合格"代表"测量结果在允许范围内", "F"、"不合格"代表"测量结果不在允许范围内", "N/A"代表"不适用或技术指标暂时无法确认等"。本证书报告的结论仅供参考,使用人员应结合实际测量的要求合理使用,如考虑测量结果测量不确定度的影响等。

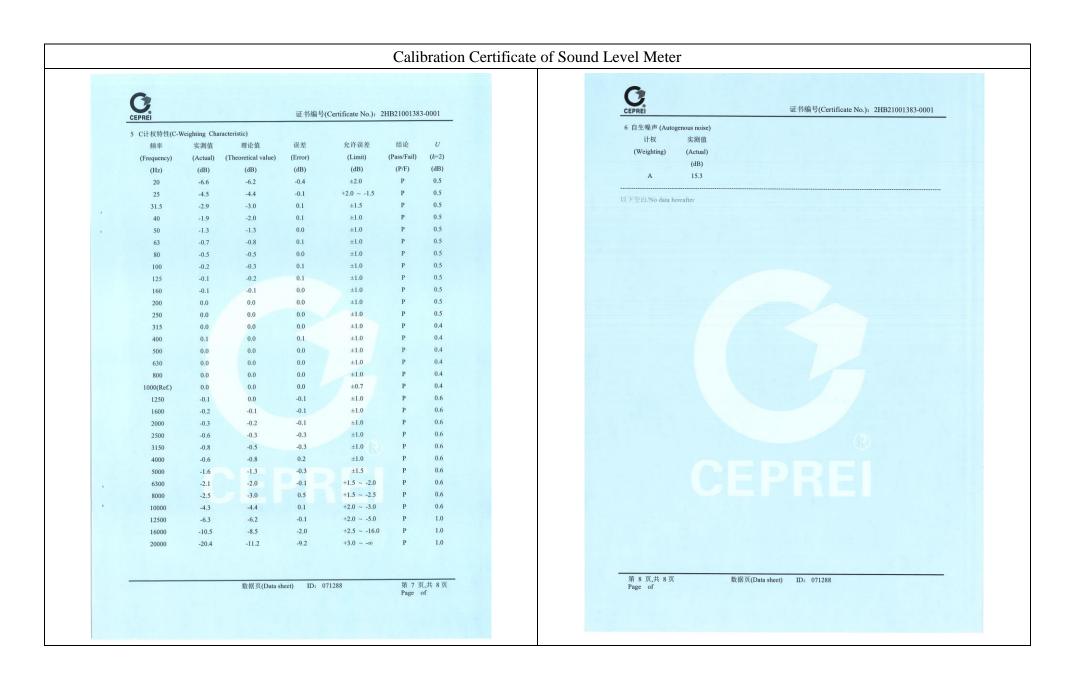
"P" and "Pass" in this certificate stand for "Low Limit's the measured value SHigh Limit", "F" and "Fail" stand for "the measured value Low Limit or the measured value High Limit", "N/A" stands for "Not Applicable or The technical specification has not been confirmed etc". The conclusions of this certificate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

8. 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。

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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

# CALIBRATION CERTIFICATE

证书编号: 2HB21001370-0002 Certificate No.



委托单位:	Castco Testing Centre Limited	
仪器名称:	Sound Level Meter	
Description 型号规格: Model/Type	NL-52	
制造商:	RION	
机身号:	00976204	

管理号: Asset No.

接收日期: Rec. Date 签发日期:

Serial No.

App. Date 结论: Conclusion 2021-07-08 2021-07-19

校准日期: Cal. Date

AAST-SLM-11

建议校准周期:

12个月(12 months)

2021-07-19

Reference Cal. Period

所校准项目合格(Passed at Calibration Items)



Approved by



寨宝计量检测中心 广州总部地址: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: cal@ceprei.com

网址: www.ceprei-cal.com

Stamp CEPREI Calibration and Testing Centre

印章:

HQ Addr: No.78,Zhucun 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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# DIRECTIONS

1. 本机构质量管理体系符合ISO/IEC 17025:2017标准的要求,获得中国合格评定国家认可委员会( CNAS) 认可, 认可证书号为: CNAS L13344。

This laboratory quality management system meets the ISO/IEC 17025:2017 and is accredited by the China National Accreditation Service for Conformity Assessment, No. CNAS L13344.

2. 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

AND 4-29

- 第個內容清查看CNAS阿站中注册编号为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.).

3. 本次校准所使用的主要测量标准(The main measurement standards used during the calibration):

3.	名称	证书号/有效期/溯源单位	技术指标	测量范围
	(Description)	(Certificate No./Due Date/Traceability to)	(Specification)	(Measuring Range)
	正弦信号发生器	4GC20000427-0010/2021-11-04/賽宝(广州)	Distortion: <-70dB	f: 0.001Hz~200kHz: <i>U</i> : 100μV~5Vrms
	数字多用表	4GC20000358-0060/2021-09-09/賽宝(广州)	DCV: ±0.0035%; ACV: ± 0.06%; DCI: ±0.05%; ACI : ±0.1%; R: ±0.01%; f: ±0.001%	
	步进衰减器	4GC21000155-0024/2022-04-29/赛宝(广州)	±3dB	(0~110) dB/10dB step @(DC~1GHz)
	PULSE分析系统	GFJGJL1001210202725/2022-03-03/航空 304所	频率: U <sub>rel</sub> =0.001%,k=2;电压: U <sub>rel</sub> =0.04%,k=2	频率:0.001Hz~51.2kHz, 电压:(1×10 <sup>-5</sup> ~30)V
	标准传声器	LSsx2021-13180/2022-04-24/中国计量院	U=(0.05~0.20)dB (k=2)	20Hz~20kHz
	前置放大器	LSsx2021-11346/2022-03-07/中国计量院	U=0.3dB (k=2)	(10~20000) Hz
	功率放大器	4GC20000457-0065/2021-11-17/赛宝(广州)	频率响应: ±1dB, 失真度: ≤0.2%	20Hz~20kHz
	多功能声学校准器	4EC20000091-0005/2021-11-05/賽宝(广州)	1级	31.5Hz~16kHz

4. 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 5. 环境条件(Environmental conditions):

温度(Temperature): 23.4℃ 相对湿度(Relative Humidity): 55.8% 6. 本证书中给出的扩展不确定度依据JJF1059.1-2012《测量不确定度的评定与表示》评定,由合成标

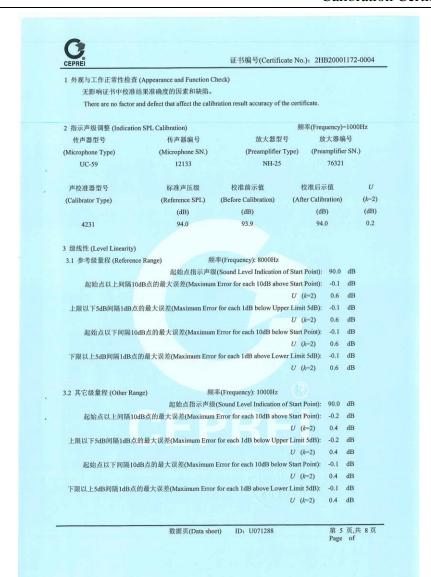
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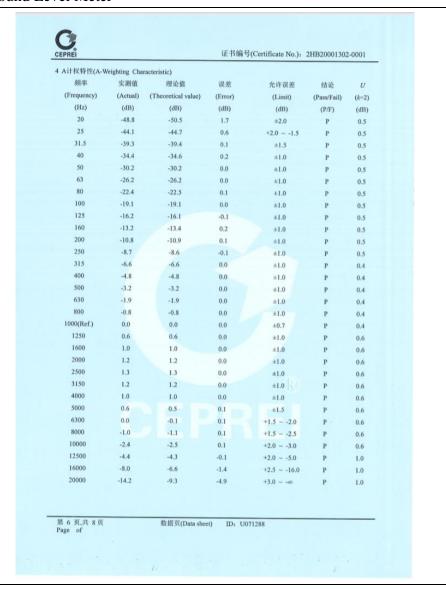
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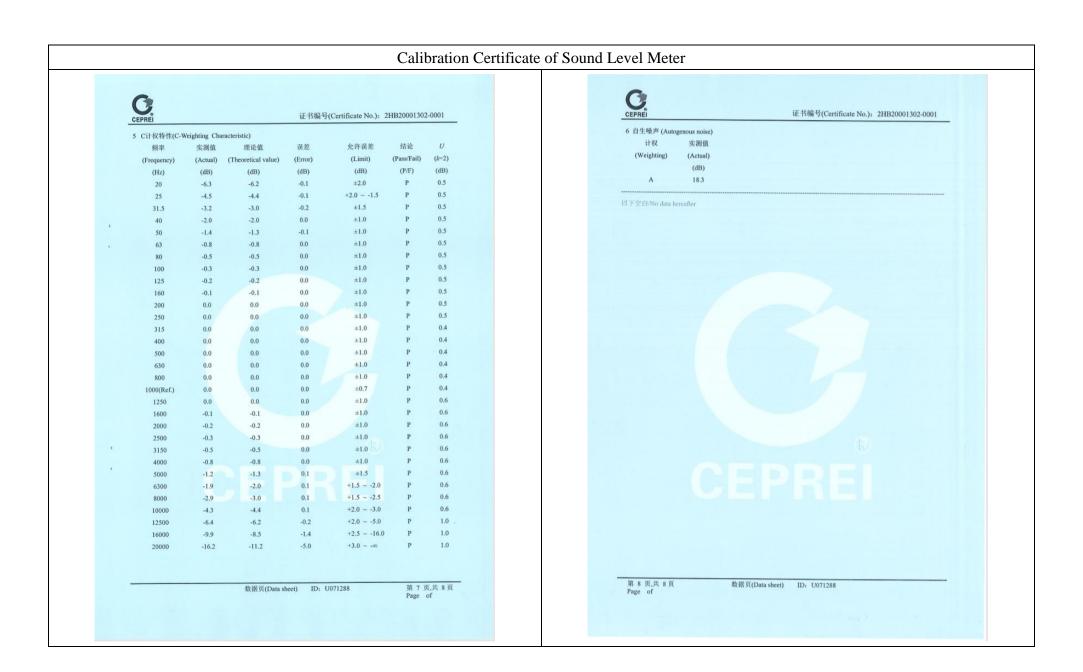
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> 第 3 页,共 8 页 Page of







# Catalogue of Sound Calibrator

Sound Calibrator NC-75





Compact and lightweight sound calibrator allows highly reliable and accurate measurement anywhere

# Sound Calibrator



- Integrated newly developed reference microphone enables feedback control that completely eliminates the need for atmospheric pressure and coupler volume correction, resulting in highly accurate and reliable calibration.
- Effective coupler sound insulation (30 dB or higher\*) permits calibration also in relatively noisy environments. \*A-weighed sound level insulation performance measured with pink noise
- Each product comes standard with a JCSS Calibration Certificate, demonstrating high quality.
- Conforming with IEC 60942: 2017 class 1 and
- (Also complies with IEC 60942 Version 4 currently under revision) Supports calibration of RION sound level meters compliant with IEC 61672-1: 2013, JIS C 1509-1: 2017 and JIS C 1516: 2014.
- Supports calibration of RION microphones and microphones of
- other manufacturers meeting the size specifications of IEC 61094-4.

  Supports 1-inch, 1/2-inch, and 1/4-inch microphones (1/4 inch with optional adapter)



# Catalogue of Sound Calibrator



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.



 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.

ecifications (under	standard ambient conditions*)	Strap
plicable standards	IEC 60942: 2017 class1, ANSI/ASA S1.40-2006 class1, JIS C 1515: 2004 class 1, CE marking, WEEE directive, Chinese RoHS	
pported prophones	Microphones made by RION and microphones made by other manufacturers that meet the IEC 61094-4 size specifications 1-inch microphones (with supplied adapter) 1/2-inch microphones (with optional adapter)	
ninal sound pressure level	94 dB	1
nd pressure level tolerance	Max. ±0.20 dB	
minal frequency	1 000 Hz	
quency tolerance	Max. ±0.1%	Securely car
D + noise	Max. 1.0 % (22.4 Hz to 22.4 kHz)	the supplied
nensions and weight	Approx. 42 mm (H) x 77 mm (W) x 70 mm (D), approx. 200 g	
wer supply	IEC LR6 (size AA) alkaline battery x 2 IEC LR6 (size AA) nickel-hydride rechargeable battery ("eneloop pro" supported) x 2	
tery life	50 hours or more (using two alkaline batteries, continuous use)	
	50 hours or more (using two nickel-hydride rechargeable batteries [eneloop pro], continuous use)	PISTO
nation assessment	Coft sees v. 1. 1/0 inch missenhous adentes v. 1. IEC I DR	NC-72





IEC 60942: 2017 class LS/M, class 1/M, JIS C 1515: 2004 class LS/C, class 1/C





(size AA) alkaline battery x 2, hand strap x 1, JCSS Calibration Certificate x 1



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

# 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.



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.

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 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 C1515:2004 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-53A UC-52 UC-26 UC-26 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) alkal	ine battery X 2	
Dimensions, mass	Approx. 49 (H) × 80 (W) × 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.



3-20-41,Higashimotomachi,Kokubunji,Tokyo 185-8533,Japan Tel: +81-42-359-7888 Fax: +81-42-359-7442 http://www.rion.co.jp/english/



# Calibration Certificate of Sound Calibrator



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: 2HB21001749-0002 Certificate No.





終托单位: _ lient	Castco Testing Centre Limited			
以器名称: _ Description		Sound Level Calibrator		
U号规格:  odel/Type		NC-75		
月造商: Ianufacturer		RION		
L身号: _ erial No.	34280310			
理号: sset No.		AAST-SLC-07		
後收日期: ec. Date	2021-08-05	校准日期: Cal. Date	2021-08-17	
发日期: _ pp. Date	2021-08-18	建议校准周期: Reference Cal. Perio	12个月(12 months) od	
论: onclusion	所校准项	目合格(Passed at Calibra	tion Items)	

GEPRE

校准: Calibrated b

Approved by

赵文红

為中木も

Inspected by

Stamp

賽宝计量檢測中心 广州总部地址: 广州市增城区朱村街朱村大道两78号 客服电话: 020-87237633 传真: 020-87236189 投诉电话: 020-87236896

邮件: cal@ceprei.com 同址: www.ceprei-cal.com CEPREI Calibration and Testing Centre

CEPREI Calibration and Testing Centre
HQ Addr. No.78\_Ducum Avenue West.Zengcheng District,Guangzhou,China
Service Tel: 020-87237633 Fax: 020-87236189
Complaint Tel: 020-87237693
Email: cali@ceprei.com

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## Calibration Certificate of Sound Calibrator

TE 1848 E (Costi Scotte No. 3 - 21/R21001749-0002

# 说 明 DIRECTIONS

1. 本机构质量管理体系符合ISO/IEC 17025:2017标准的要求,获得中国合格评定国家认可委员会(CNAS)认可,认可证书号为: CNAS L13344。

This laboratory quality management system meets the ISO/IEC 17025:2017 and is accredited by the China National Accreditation Service for Conformity Assessment, No. CNAS L13344.

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

  "JIG 176-2005 声校准器检定规程: Sound Pressure Level: 94dB. 104dB. 114dB. 124dB(63Hz~8kHz): 94dB. 104dB. 114dB. 114dB(31.5Hz~16kHz): Frequency: 31.5Hz~16kHz: Harmonic Distortion: 0~10%. (20Hz~20
- KHZ)。 详细内容请查看CNAS网络中连师编号为L13344的证书册件,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 范围号,(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.)
- 3. 本次校准所使用的主要测量标准(The main measurement standards used during the calibration):
  名称
  证书号/有效期/测源单位
  技术指标
  测量范围

(Description)	(Certificate No./Due Date/Traceability to	(Specification)	(Measuring Range)
标准传声器	LSsx2021-13180/2022-04-24/中国计量院		10Hz~20kHz
PULSE分析系统	4GC21000026-0375/2022-01-21/赛宝(广州)	頻率:Urei=0.001%,k=2;电压: Urei=0.04%,k=2	频率:0.001Hz~51.2kHz, 电压:(1×10 <sup>-5</sup> ~30)V
前置放大器	LSsx2021-13000/2022-04-19/中国计量院	U=0.3dB (k=2)	(10~50000) Hz

4. 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

- 5. 环境条件(Environmental conditions):
- 温度(Temperature): 22.9°C 相对湿度(Relative Humidity): 59.5%
- 6. 本证书中给出的扩展不确定度依据JJF1059.1-2012《测量不确定度的评定与表示》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。

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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

- 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.)

第 3 页,共 5 页 Page of

证书编号(Certificate No.): 2HB21001749-0002 1 外观与工作正常性检查 (Appearance and Function Check) 无影响证书中校准结果准确度的因素和缺陷。 There are no factor and defect that affect the calibration result accuracy of the certificate. 2 声压级 (Sound Pressure Level) 允许范围 结论 规定声压级 测量声压级 声压级差的绝对值 (Pass/Fail) (k=2)(Prescribed SPL) (Measured SPL) (Absolute value of SPL) (Limit) (dB) (dB) (dB) (dB) (dB) 0.10 94.12 0.12 ≤0.40 94 3 頻率 (Frequency)  $U_{\rm rel}$ 结论 规定频率 测量频率 频率误差的绝对值 允许范围 (Pass/Fail) (k=2)(Prescribed Fre.) (Measured Fre.) (Absolute value of Fre.) (Limit) (%) (%) (%) (Hz) (Hz) 0.10 ≤1.00 1000.0 0.00 1000 4 总失真 (Distortion) 结论 Urel 规定声压级 规定频率 总失真 允许范围 (k=2)(Pass/Fail) (Prescribed SPL) (Measured Fre.) (Distortion) (Limit) (%) (%) (Hz) (%) 5.0 ≤3.00 1000 0.15 数据页(Data sheet) ID: 013393 第5页,共5页 Page of

# Calibration Certificate of Sound Calibrator

AAST-SLC-05 Cal Cert: 2021/07/19 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 CALIBRATION CERTIFICATE 证书编号: 2HB21001370-0004 Certificate No. Castco Testing Centre Limited 委托单位: Sound Level Calibrator 仪器名称: Description NC-74 型号规格: Model/Type RION 制造商: Manufacturer 34178129 机身号: Serial No. AAST-SLC-05 管理号: Asset No. 2021-07-08 2021-07-19 接收日期: 校准日期: Cal. Date Rec Date 12个月(12 months) 建议校准周期: 签发日期: Reference Cal. Period App. Date 所校准项目合格(Passed at Calibration Items) 结论: Conclusion 签发: 印章: Approved by Stamp 赛宝计量检测中心 CEPREI Calibration and Testing Centre 广州总部地址:广州市增城区朱村街朱村大道西78号 HQ Addr: No.78, Zhucun Avenue West, Zengcheng District, Guangzhou, China Service Tel: 020-87237633 Fax: 020-87236189 客服电话: 020-87237633 传真: 020-87236189 投诉电话: 020-87236896 Complaint Tel: 020-87236896

Email: cal@ceprei.con

Website: www.ceprei-cal.com

邮件: cal@ceprei.com

网址: www.ceprei-cal.com

iii 1888 85 (Corrificate No.) - 2HB21001370-0004

# 说 明 DIRECTIONS

 本机构质量管理体系符合ISO/IEC 17025:2017标准的要求,获得中国合格评定国家认可委员会( CNAS)认可,认可证书号为; CNAS L13344。

This laboratory quality management system meets the ISO/IEC 17025:2017 and is accredited by the China National Accreditation Service for Conformity Assessment, No. CNAS L13344.

- 本次校准的技术依据及CNAS认可范围(Reference documents and CNAS accredited scopes):
   JJG 176-2005 声枝准器检定规程: Sound Pressure Level: 94dB、104dB、114dB、124dB(63Hz~8kHz): 94dB、104dB、114dB、31.5Hz~16kHz): Frequency: 31.5Hz~16kHz; Harmonic Distortion: 0~10%. (20Hz~20
- \* 详由作容清查看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.)-
- 3. 本次校准所使用的主要测量标准(The main measurement standards used during the calibration);

   名
   事
   证书与/有效期/测源单位
   技术指标
   (Magazing Range)

   PULS启分析系统
   4GC21000026-0375/2022-01-21/率宝(厂州)
   频率±U<sub>n</sub>=0.001%<sub>n</sub>-2-1 些 版单、0018x-51.2kHz。
   频率0.01Hx-51.2kHz。

   标准作声器
   LSsx2021-131802/022-04-19/中国计量版
   U=0.05-0.2018 (A=2)
   201x2-20kHz

   前置放大器
   LSsx2021-13000/2022-04-19/中国计量版
   U=0.05-0.2018 (A=2)
   1(10-50000)
- 4. 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

5. 环境条件(Environmental conditions):

温度(Temperature): 23.3°C 相对湿度(Relative Humidity): 59.6%

6. 本证书中给出的扩展不确定度依据JJF1059.1-2012《测量不确定度的评定与表示》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 & which corresponding to the coverage probability about 95%.

7. 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's 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 ete". 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.

8. 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.)

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第1页共5页

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#### Calibration Certificate of Sound Calibrator **SPECIFICATIONS** 证书编号(Certificate No.): 2HB21001370-0004 1 外观与工作正常性检查 (Appearance and Function Check) 无影响证书中校准结果准确度的因素和缺陷。 There are no factor and defect that affect the calibration result accuracy of the certificate. Velocity Range (TA410) Range (TA430, TA440) 2 声压级 (Sound Pressure Level) Accuracy (TA410)192 Accuracy (TA430, TA440)<sup>162</sup> ±3% of reading or ±0.015 m/s (±3 ft/min), whichever is greater 允许范围 结论 U测量声压级 声压级差的绝对值 Resolution (k-2)(Pass/Fail) (Prescribed SPL) (Measured SPL) (Absolute value of SPL) (Limit) Duct Size (TA430, TA440) (dB) (dB) (dB) Dimensions 0.10 ≤0.40 94 94.29 0.29 Range 3 频率 (Frequency) Temperature Range (TA410, TA430) Range (TA440) 结论 Uset 规定频率 频率误差的绝对值 允许范围 Resolution (k=2) (Prescribed Fre.) (Measured Fre.) (Absolute value of Fre.) (Limit) (Pass/Fail) (%) (%) (Hz) Range ≤1.00 0.10 1000 1002.1 0.21 Accuracy4 Resolution 4 总失真 (Distortion) Range Resolution 規定声压级 规定频率 总失真 允许范围 结论 Utel Dew Point (TA440 only) Range (k-2)(Prescribed SPL) (Measured Fre.) Resolution (%) (%) (dB) ≤3.00 5.0 94 1000 1.34 Operating (Electronics) Model TA410, TA430 Model TA440 以下空白/No data hereafter Operating (Probe) Storage Range 1 second to 1 hour 数据页(Data sheet) ID: 013393 第5页,共5页

# Catalogue of Air Flow Meter (TSI TA440)

MODELS TA410, TA430 AND TA440

0 to 20 m/s (0 to 4,000 ft/min) 0 to 30 m/s (0 to 6,000 ft/min) ±5% of reading or ±0.025 m/s (±5 ft/min), whichever is greater

0.01 m/s (1 ft/min)

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)

Actual range is a function of velocity, and duct size

-18 to 93°C (0 to 200°F) -10 to 60°C (14 to 140°F) ±0.3°C (±0.5°F) 0.1°C (0.1°F)

#### Relative Humidity (TA440 only)

5 to 95% RH ±3% RH 0.1% RH

#### Wet Bulb Temperature (TA440 only)

5 to 60°C (40 to 140°F)

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

#### Instrument Temperature Range

-18 to 93°C (0 to 200°F) -10 to 60°C (14 to 140°F) -20 to 60°C (-4 to 140°F)

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

12,700+ samples and 100 test IDs

5 to 45°C (40 to 113°F)

#### Logging Interval (TA430, TA440)



#### 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 Length 19.7 cm (7.8 in.) 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 -A articulated	Straight or -A articulated
Variable time constant		+	+
Manual data logging		+	+
Auto save data logging			+
Statistics		+	141
Review data		+	+
LogDat2 downloading software		+	+
Free Certificate of Calibration	+	+	141

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.

\*Accuracy with instrument case at 25°C (77°F), add uncertainty of 0.03°C/°C (0.05°F/°F)

for change in instrument temperature.

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.

Airflow Instruments, TSI Instruments Ltd.
Visit our website at www.airflowinstruments.co.uk for more information

UK Tel: +44 149 4 459200 Germany Tel: +49 241 523030 France Tel: +33 491 11 87 64

P/N 2980548 Rev D (A4) ©2014 TSI Incorporated

#### Calibration Certificate of Air Flow Meter AAST-FLOW-03, Gal Cent 2021/2/26 深圳市东华计量检测技术有限公司 CALIBRATION CERTIFICATE 证书编号: DH21AA002160001 Certificate No. 委托方名称: Castco Testing Centre Limited Client name 委托方地址: 33, On Kui Street, Fanling, N.T. Add.of Client 计量器具名称: 风速计 Name of Instrument 型号/规格: TA440 Type/Specification 制造单位: AIRFLOW Manufacturer 器具编号: AAST-FLOW-03/TA4401706003 Serial No. 接收日期: 02 Month 23 校准日期: Date of calibration Year Month 批准人: 签发日期: 2021 年 02 月 26 日 Approved by Date of issue Year Month 张吉庆 核验员: 张吉庆 Checked by (证书专用章) 校准员: Calibrated by 扫码查证书信息 (真伪) 计量校准机构备案号: 粤校备2017B010 Register No: 粤校备2017B010 地址:深圳市龙华区大浪街道同胜社区浦华科技园厂房 Add: 1st Floor, Building A1, Puhua Science and Technology Park, Tongsheng Community, Dalang Street, Longhua District, Shenzhen, Guangdong, China 电话: 0755-28161768/28162768/28166778 Tel: 0755-28161768/28162768/28166778 传真: 0755-21004376 邮编: 518109 Fax: 0755-21004376 Zip Code: 518109 http://www.szdhjl.com E-mail: szdhjl@163.com 第 1 页 . 共 3 页 page



Certificate No.

DH21AA002160001

## 证书说明

Certificate Statement

- 1、本校准证书包含的数据和信息仅对本次被校准的计量器具负责。 The calibration certificate contains data and information applies only to the calibrated instrument.
- 2、本公司仅对加盖我司的"证书专用章"的完整证书负责。
- The company only Division I stamped "certificate special seal" is responsible for the full certificate. 3、未经本公司书面授权,不得部分复印证书。
- The certificate shall not be photocopied without the written authorization of the company.
- 4、本次校准依据的技术文件:

Reference Documents for the Calibration:

JJG(建设)0001-1992 热球式风速仪计量检定规程

JJG(建设)0001-1992 Metrological Verification Regulation of Hot Ball shaped Anemmeter

5、本次校准所使用的主要计量标准器具: Major standards of measurement used in the calibration:

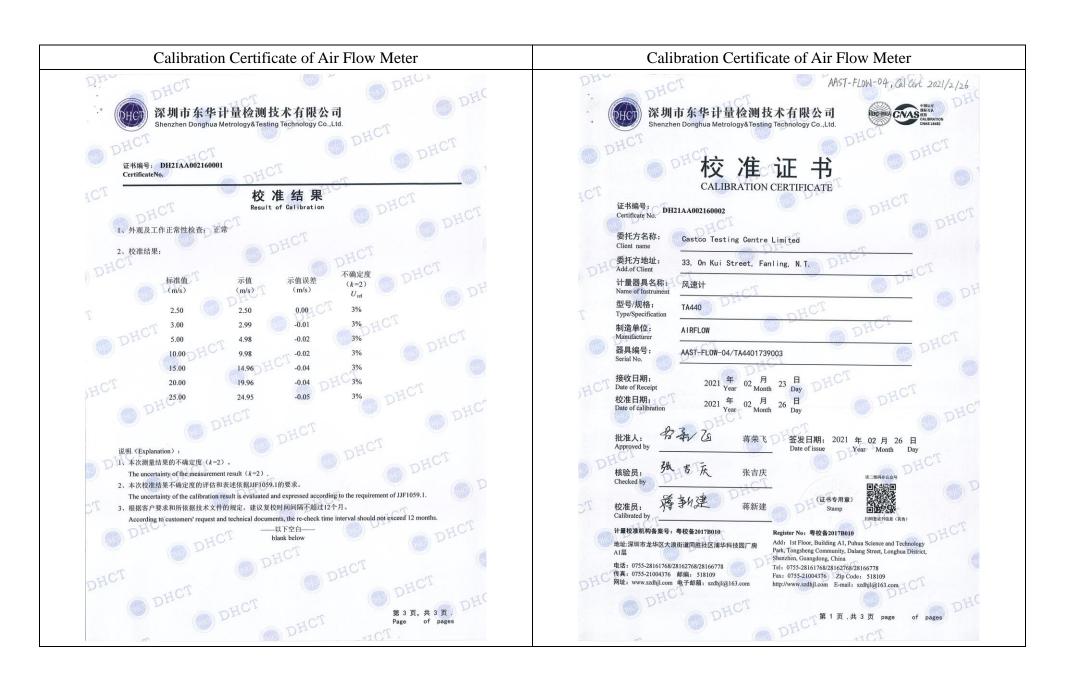
设备名称 Equipment Name	测量范围 Measuring Range	不确定度/准确度等级 /最大允许误差 Uncertainty/AccuracyClass/ Maximum permissible Error	设备编号 Equipment No.	溯源机构/ 证书编号 Traceability to/ Certificate No.	溯源有效期 Traceability Due Date
补偿式微压计	(-2500~2500) Pa	DE ICI	SM1926	上海市计量测试技术研究院 2018E21-20- 2637951001	2022-07-28
皮托管	(0~30) m/s	•	SM326	中国计量科学研究院 RGfv2019-0007	2024-01-20
机械式温湿度计	温度: (-20~80) ℃; 湿度: (0~ 100) %RH	MPE:温度;±2℃,湿 度;± (5~7)%	85926	深圳市计量质量检测研究院 205605616	2021-05-10
空盒气压表	(800~1060)hPa	U=0.6hPa, k=2	15033115	深圳市计量质量检测研 究院 204373348	2021-08-17
标准水银温度计	(0~50)°e C	U=0.03℃, k=2	2-204	深圳市计量质量检测研 究院 205502058	2022-03-09

- 6、校准地点: 本公司力学实验室 Operation Location
- 7、环境条件: Operation Environment

温度 21.7 °C Temperature

相对湿度

1010.0 hPa



## Calibration Certificate of Air Flow Meter



# 深圳市东华计量检测技术有限公司

Shenzhen Donghua Metrology&Testing Technology Co.,Ltd.

证书编号: Certificate No.

DH21AA002160002

### 证书说明

Certificate Statement

1、本校准证书包含的数据和信息仅对本次被校准的计量器具负责。

The calibration certificate contains data and information applies only to the calibrated instrument.

2、本公司仅对加盖我司的"证书专用章"的完整证书负责。

The company only Division I stamped "certificate special seal" is responsible for the full certificate.

3、未经本公司书面授权,不得部分复印证书。

The certificate shall not be photocopied without the written authorization of the company.

4、本次校准依据的技术文件:

Reference Documents for the Calibration ;

JJG(建设)0001-1992 热球式风速仪计量检定规程

JJG(建设)0001-1992 Metrological Verification Regulation of Hot Ball shaped Anemmeter

5、本次校准所使用的主要计量标准器具:

Major standards of measurement used in the calibration:

设备名称 Equipment Name	测量范围 Measuring Range	不确定度/准确度等级 /最大允许误差 Uncertainty/AccuracyClass/ Maximum permissible Error	设备编号 Equipment No.	溯源机构/ 证书编号 Traceability to/ Certificate No.	溯源有效期 Traceability Due Date
补偿式微压计	(-2500~2500) Pa	=# DE	SM1926	上海市计量测试技术研究院 2018E21-20- 2637951001	2022-07-28
皮托管	(0~30) m/s		SM326	中国计量科学研究院 RGfv2019-0007	2024-01-20
机械式温湿度计	温度: (-20~80) C: 湿度: (0~ 100) %RH	MPE:温度: ±2℃,湿 度:± (5~7)%	85926	深圳市计量质量检测研究院 205605616	2021-05-10
空盒气压表	(800~1060)hPa	U=0.6hPa, k=2	15033115	深圳市计量质量检测研究院 204373348	2021-08-17
标准水银温度计	(0~50)°C C	U=0.03°C, k=2	2-204	深圳市计量质量检测研 究院 205502058	2022-03-09

6、校准地点: 本公司力学实验室 Operation Location

7、环境条件: Operation Environment 温度 21.7 C

相对湿度

60 %

大气压 1010.0 hPa

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### 深圳市东华计量检测技术有限公司 Shenzhen Donghua Metrology&Testing Technology Co.,Ltd.

证书编号: DH21AA002160002 CertificateNo.

### 校准结果 Result of Calibration

1、外观及工作正常性检查; 正常

2、校准结果:

2				0-
	标准值 (m/s)	示值 (m/s)	示值误差 (m/s)	不确定度 (k=2) U <sub>rel</sub>
	2.50	2.50	0.00 CT	3%
OT	3.00	3.00	0.00	3%
HO.	5.00	4.99	-0.01	3%
	10.00 HC	9.98	-0.02	3%
	15.00	14.96	-0.04	3%
	20.00	19.95	-0.05	3%
	25.00	24.95	-0.05	3%

说明 (Explanation):

1、本次测量结果的不确定度(k=2)。 The uncertainty of the measurement result (k=2).

2、本次校准结果不确定度的评估和表述依据JJF1059.1的要求。

The uncertainty of the calibration result is evaluated and expressed according to the requirement of JJF1059.1.

3、根据客户要求和所依据技术文件的规定,建议复校时间间隔不超过12个月。

According to customers' request and technical documents, the re-check time interval should not exceed 12 months.

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$\label{eq:Appendix K-Noise monitoring results and graphical presentation} Appendix \ K-Noise monitoring results and graphical presentation$

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

Date	Temp (°C)	Weather	Measured Noise Level at M11, dB(A)							
			Time			Baseline	$\mathcal{L}_{Aeq}$	$L_{A10}$	$L_{A90}$	Limit
02/12/2021	22.3	Sunny	14:12	-	14:42	68.3	67.9	70.7	61.9	75
08/12/2021	21.8	Sunny	10:30	-	11:00	68.3	67.6	70.4	62.4	75
14/12/2021	18.0	Sunny	10:05	-	10:35	68.3	67.1	70.4	60.5	75
20/12/2021	19.6	Cloudy	14:25	-	14:55	68.3	68.1	70.7	63.1	75
30/12/2021	16.0	Sunny	9:27	-	9:57	68.3	68.0	71.1	62.5	75
			Maximum				68.1			
			Minimum				67.1			
			Average				67.8			

# M12 - Hong Kong Children's Hospital

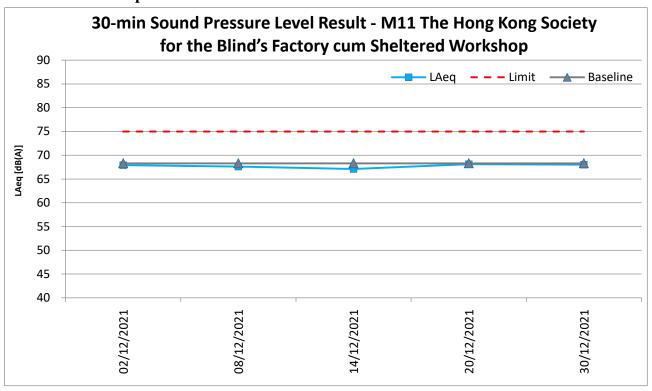
	0									
Date	Temp	Weather	Measured Noise Level at M12, dB(A)							
	(°C)						$L_{A90}$	Limit		
02/12/2021	22.3	Sunny	13:49	-	14:19	61.9	63.8	65.4	62.1	75
08/12/2021	21.8	Sunny	11:02	-	11:32	61.9	64.8	67.0	61.9	75
14/12/2021	18.0	Sunny	14:17	-	14:47	61.9	64.9	66.6	62.4	75
20/12/2021	19.6	Cloudy	10:54	ı	11:24	61.9	65.1	67.2	62.3	75
30/12/2021	16.0	Sunny	13:22	-	13:52	61.9	65.9	68.1	62.9	75
			Maximum			65.9				

 Maximum
 65.9

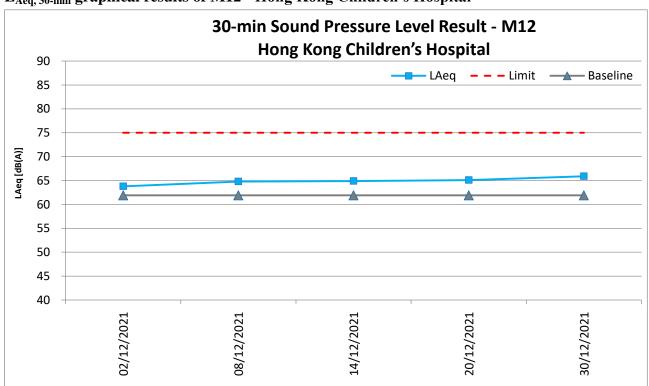
 Minimum
 63.8

 Average
 65.0

 $L_{\text{Aeq, }30\text{-min}}$  graphical results of M11 - The Hong Kong Society for the Blind's Factory cum Sheltered Workshop



 $L_{\text{Aeq, }30\text{-min}}$  graphical results of M12 - Hong Kong Children's Hospital



# Appendix L – Event and Action Plan for noise

E4		Acı	tion	
Event	ET	IEC	Supervisor / ER	Contractor
Action Level being exceeded	<ol> <li>Notify Supervisor / ER, IEC and Contractor;</li> <li>Carry out investigation;</li> <li>Report the results of investigation to the IEC, Supervisor / ER and Contractor;</li> <li>Discuss with the IEC and Contractor on remedial measures required;</li> <li>Increase monitoring frequency to check mitigation effectiveness.</li> <li>(The above actions should be taken within 2 working days after the exceedance is</li> </ol>	results submitted by the ET;	1. Confirm receipt of notification of failure in writing;  2. Notify Contractor;  3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented;  4. Supervise the implementation of remedial measures.  (The above actions should be taken within 2 working days after the exceedance is identified.)	<ol> <li>Submit noise mitigation proposal to IEC and Supervisor / ER;</li> <li>Implement noise mitigation proposals.</li> <li>(The above actions should be taken within 2 working days after the exceedance is identified.)</li> </ol>
Limit Level being exceeded	identified.)  1. Inform IEC, Supervisor /ER, Contractor and EPD;  2. Repeat measurement to confirm findings;  3. Increase monitoring frequency;  4. Identify source and investigate the cause of exceedance;  5. Carry out analysis of Contract's working procedure;  6. Discuss remedial measures required with the IEC, Contractor and Supervisor /ER;  7. Assess effectiveness of	1. Discuss the potential remedial actions with Supervisor /ER, ET and Contractor;  2. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the Supervisor /ER accordingly.  (The above actions should be taken within 2 working days after the exceedance is identified.)	Confirm receipt of notification of failure in writing;     Notify Contractor;     In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented;     Supervise the implementation of remedial measures;     If exceedance continues, consider stopping the Contractor to continue working on that portion of work which causes the	<ol> <li>Take immediate action to avoid further exceedance;</li> <li>Submit proposals for remedial actions to IEC and Supervisor /ER within 3 working days of notification;</li> <li>Implement the agreed proposal;</li> <li>Submit further proposal if problem still not under control;</li> <li>Stop the relevant portion of works as instructed by the Supervisor /ER until the exceedance is abated.</li> <li>(The above actions should be</li> </ol>

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

Appendix M – Event and Action Plan for Landscape and Visual Impact

Event		Act	ion	
Event	ET	IEC	Supervisor / ER	Contractor
Design Check	1. Check final design conforms to the requirements of EP and prepare report.	2. Recommend remedial	Undertake remedial design if necessary.	
Non-conformity on one occasion	<ol> <li>Identify Source.</li> <li>Inform IEC and Supervisor /ER.</li> <li>Discuss remedial actions with IEC, Supervisor /ER and Contractor.</li> <li>Monitor remedial actions until rectification has been completed.</li> </ol>	working method.  3. Discuss with ET and Contractor on possible remedial measures.	<ol> <li>Notify Contractor.</li> <li>Ensure remedial measures are properly implemented.</li> </ol>	Amend working methods.     Rectify damage and undertake any necessary replacement.
Repeated Non-conformity	<ol> <li>Identify Source.</li> <li>Inform IEC and Supervisor /ER.</li> <li>Increase monitoring frequency.</li> <li>Discuss remedial actions with IEC, Supervisor /ER and Contractor.</li> <li>Monitor remedial actions until rectification has been completed.</li> <li>If non-conformity stops, cease additional monitoring.</li> </ol>	method.  3. Discuss with ET and Contractor on possible remedial measures.  4. Advise Supervisor /ER on effectiveness of proposed remedial measures.	<ol> <li>Notify Contractor.</li> <li>Ensure remedial measures are properly implemented.</li> </ol>	Amend working methods.     Rectify damage and undertake any necessary replacement.

## Appendix N – Waste Flow Table



#### Appendix F - Monthly Summary Waste Flow Table

Name of Department: CEDD Contract No.: \_ED/2018/01

Monthly Summary Waste Flow Table for December 2021

				Worthing Oc	illillially vve	1310 1 101	V TUDIC TO	DCCC	TITIDEI ZUZ I			
	Ac	tual Quantitie	s of Inert C&D	Materials Gene	rated Month	ly		Ac	tual Quantities	of C&D Waste	s Generated Mo	onthly
Month	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Importe Fill	ed Meta	als	Paper / cardboard packaging	Plastics (see Note 3	Chemical Waste	Others, e.g. general refuse
	(in '000m <sup>3</sup> )	(in '000m³)	(in '000m³)	(in '000m³)	(in '000m³)	(in '000m	(in '00	0 kg)	(in '000kg)	(in '000kg	) (in '000kg)	(in '000m <sup>3</sup> )
Jan	9.107	0.177		7.885	1.045							0.091
Feb	5.637	0.127	1.660	2.261	1.589							0.106
Mar	4.780		2.580		1.530	0.670						0.101
Apr	4.320		1.350		2.970							0.120
May	12.813		1.225	9.693	1.895							0.138
Jun	10.791		0.680	9.411	0.700							0.140
Sub-total	47.448	0.304	7.495	29.25	9.729	0.670						0.696
July	0.474			0.255	0.219							0.119
Aug	1.81			0.435	1.375				0.107			0.174
Sep	9.707	1.673	2.573	4.702	0.431	0.328	0.00	02	0.050	0.005		0.128
Oct	3.441		0.380	2.150	0.911					3.680		0.169
Nov	3.390			2.831	0.559		0.00	02	0.041	0.007		0.196
Dec	4.803		0.866	3.442	0.285	0.210	)					0.168
Total	71.073	1.977	11.314	43.065	13.509	1.208	0.00	04	0.198	3.692		1.65
			Forecast	of Total Quantit	ies of C&D I	Materials	to be Gener	ated fi	rom the Contra	ct*		
Total Quantity Generate		oken   Reus		sed in Dispos Projects Public		rted Fill	Metals	- 1	Paper / cardboard packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. general refuse
(in '000m				00m <sup>3</sup> ) (in '00		000m <sup>3</sup> )	(in '000 kg)		(in '000kg)	(in '000kg)	(in '000kg)	(in '000m³)
195.01	2.103	3 10	.2 14	40 19.8	31	25	200		0.8	0.1		3.4

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 50,000m³ (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 m³/ton and 1.5 m³/ton

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

Implementatio	n Schedule for A	Air Quality Measures	
EIA for KTD Development Ref.	EIA for KTD - Roads D3A & D4A Ref.	Environmental Protection Measures / Mitigation Measures	Status
S3.2		8 times daily watering of the work site with active dust emitting	۸
		activities.	
S3.2	S4.8	Implementation of dust suppression measures stipulated in Air	۸
		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	٨
		and bunded. Stockpiles should be fully covered by	
		impermeable sheeting to reduce dust emission.	
		- Misting for the dusty material should be carried out before	٨
		being loaded into the vehicle.	
		- Any vehicle with an open load carrying area should have	۸
		properly fitted side and tail boards.	
		- Material having the potential to create dust should not be loaded	۸
		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	٨
		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	٨
		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	٨
		exit point.	
		- The area where vehicle washing takes place and the section of	٨
		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	۸*
		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	۸
		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	۸
		from its body and wheels before leaving the construction sites.	

EIA for KTD Development Ref.	EIA for KTD - Roads D3A & D4A Ref.	Environmental Protection Measures / Mitigation Measures	Status
S3.3		Use of quiet PME, movable barriers for Asphalt Paver, Breaker,	۸
		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	٨
		plant should be serviced regularly during the construction	
		program.	
		- Silencers or mufflers on construction equipment should be	٨
		utilized and should be properly maintained during the	
		construction program.	
		- Mobile plant, if any, should be sited as far away from NSRs as	۸
		possible.	
		- Machines and plant (such as trucks) that may be in intermittent	٨
		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,	٨
		wherever possible, be orientated so that the noise is directed	
		away from the nearby NSRs.	
		- Material stockpiles and other structures should be effectively	۸
		utilized, wherever practicable, in screening noise from on-site	
		construction activities.	
		- Scheduling of Construction Works during School	N/A
		Examination Period	

Implementatio	Implementation Schedule for Water Quality Measures					
EIA for KTD Development Ref.	EIA for KTD - Roads D3A & D4A Ref.	Environmental Protection Measures / Mitigation Measures	Status			
S3.4		Construction Runoff  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.	۸			
S3.4		- adequate maintenance of drainage systems to prevent flooding and overflow.	۸			

EIA for KTD Development Ref.	EIA for KTD – Roads D3A & D4A Ref.		<b>Environmental Protection Measures / Mitigation Measures</b>	Status
	S5.8	-	Surface run-off from construction sites should be discharged	٨
			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	۸
			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	۸
			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	۸
			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	۸
			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,	٨
			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	٨
			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	

EIA for KTD Development Ref.	EIA for KTD - Roads D3A & D4A Ref.	Environmental Protection Measures / Mitigation Measures	Status
		sewerage system.	
	S5.8	- Good site practices should be adopted to remove rubbish and	٨
		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	٨
		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	٨
		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	

		Water Quality Measures	T
EIA for KTD Development Ref.	EIA for KTD - Roads D3A & D4A Ref.	Environmental Protection Measures / Mitigation Measures	Status
		and particularly suited to applications where the influent is pumped.	
S3.4		Open stockpiles of construction materials (for examples, aggregates,	۸
		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	۸
		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	٨
		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	NA
		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.	
S3.4	S5.8	Wheel Washing Water	٨
		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>	٨
		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	٨

Implementation	on Schedule for	Water Quality Measures	
EIA for KTD Development Ref.	EIA for KTD - Roads D3A & D4A Ref.	Environmental Protection Measures / Mitigation Measures	Status
		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	٨
		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	Sewage Effluent	٨
		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.	
		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.	
S3.4		Stormwater Discharges	٨
33.4		Minimum distances of 100 m should be maintained between the	
		existing or planned stormwater discharges and the existing or	
S2 /		planned seawater intakes  Debris and Litter	٨
S3.4		Debris and Litter  In order to maintain water quality in accontable conditions with	.`
		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	

EIA for KTD Development Ref.	EIA for KTD - Roads D3A & D4A Ref.	Environmental Protection Measures / Mitigation Measures	Status
		and that disposal of any solid materials, litter or wastes to marine	
		waters does not occur.	
	S5.8	Boring and Drilling Water	٨
		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	Acid Cleaning, Etching and Pickling Wastewater	NA
		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.	
	S5.8	Effluent Discharge	٨
		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.	
	05.0	-	^
	S5.8	Accidental Spillage  Contractor must register as a chamical wester producer if chamical	
		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	

Implementation Schedule for Water Quality Measures					
EIA for KTD Development Ref. EIA for KTD - Roads D3A & D4A Ref.		Environmental Protection Measures / Mitigation Measures	Status		
		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	۸		
		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	٨		
		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	٨		
		adequate space should be allocated to the storage area.			

Implementation	Implementation Schedule for Waste Management Measures					
EIA for KTD Development Ref.	EIA for KTD - Roads D3A & D4A Ref.	Environmental Protection Measures / Mitigation Measures	Status			
S3.5		Good Site Practices  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.	۸			
	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.	۸			
S3.5	S6.7	- Training of site personnel in proper waste management and chemical waste handling procedures.	۸			

Implementation Schedule for Waste Management Measures  EIA for KTD   EIA for KTD   Environmental Protection Measures / Mitigation Measures   Status				
Development Ref.	- Roads D3A & D4A Ref.	Environmental Protection Weasures / Wildgation Weasures	Status	
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	٨	
		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,	۸	
		recycled and disposed of (including the disposal sites).		
	S6.7	- Regular cleaning and maintenance programme for drainage	٨	
		systems, sumps and oil interceptors.		
	S6.7	- Training should be provided to workers about the concepts of	۸	
		site cleanliness and appropriate waste management procedures,		
		including waste reduction, reuse and recycle.		
S3.5		Waste Reduction Measures	٨	
		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	NA	
		recover recyclable portions such as metals.		
S3.5	S6.7	- Segregation and storage of different types of waste in different	۸	
		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	٨	
		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	۸	
		capacity should be recycled.		
S3.5	S6.7	- Proper storage and site practices to minimise the potential for	٨	
		damage or contamination of construction materials.		
S3.5		Construction and Demolition Materials		
		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		

EIA for KTD Development Ref.  EIA for KTD - Roads D3A & D4A Ref.		t   - Roads D3A	
		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	۸
		wastes on-site should be covered with tarpaulin or similar	
		fabric.	
S3.5		- Skip hoist for material transport should be totally enclosed by	۸
		impervious sheeting.	
S3.5		- Every vehicle should be washed to remove any dusty materials	۸
		from its body and wheels before leaving a construction site.	
S3.5		- The area where vehicle washing takes place and the section of	۸
		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	۸
		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	٨
		loading, unloading or transfer operation so as to maintain the	
		dusty materials wet.	
S3.5		- The height from which excavated materials are dropped should	٨
		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	٨
		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	٨
		amount of waste generated and avoid unnecessary generation	

Implementation Schedule for Waste Management Measures				
EIA for KTD Development Ref.	evelopment - Roads D3A		Status	
		of waste.		
S3.5		Chemical Waste	٨	
		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	۸	
		treatment.		
S3.5		General Refuse	٨	
		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.		

Implementation Schedule for Landscape and Visual Measures					
EIA for KTD Development Ref.					
S3.8.12		All existing trees should be carefully protected during construction.	٨		
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.	٨		
S3.8.12		Erection of decorative screen hoarding.	۸		
	S7.9	Construction Site Control  - CM1 - Minimized construction area and contractor's temporary works areas.	^		
		- CM2- Control of night-time lighting and glare by hooding all lights.	۸		
		- CM3 - Erection of decorative mesh screens or construction	٨		

Implementation Schedule for Landscape and Visual Measures				
EIA for KTD Development Ref.	EIA for KTD - Roads D3A & D4A Ref.	Environmental Protection Measures / Mitigation Measures	Status	
		hoardings around works areas in visually unobtrusive colours.		
		- CM4 - Reduction of construction period to practical minimum.	۸	
		- CM5 - Limitation of / Ensuring no run-off into surrounding landscape and adjacent seawater areas.	۸	
		- 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	

Remarks:			
^	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	#	Recommendation was made during audit and to be
	but improved/rectified by the contractor.		improved/ rectified by the contractor.

## Mitigation Measures undertaken by the Contractor for site inspections





Date:	e: 02 December 2021 Date:		09 December 2021	
Mitigation Measures:	Quiet PME was used.	Mitigation Measures:	The open stockpiles of	
			construction materials on	
			sites were covered	





Date:	23 December 2021	Date:	30 December 2021
Mitigation Measures:	Haul road was sprayed	Mitigation Measures:	Manholes have been
	with water to maintain		adequately covered and
	the entire road surface		temporarily sealed.
	wet.		

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

**Reporting Month: December 2021** 

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

Cumulative Statistics on Complaints, Notification of Summons and Successful Prosecutions

upto reporting month

Contract No.	Record of Complaint	Record of Warning	Notification of Summons and Successful Prosecutions
ED/2018/01	3	0	0

Complaint	Log for ED/2018/01			
Complaint Ref. No.	Date of Complaint	Description of Complaint	Investigation / Recommendations / Actions	Close-Out Date / Status
C0001	A dust complaint was referred from the Contractor on 21 October 2020 regarding a pubic complaint via 1823 hotline (Case no. 3-6518939602) on 20 October 2020.	<ol> <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>	1. Based on the information provided by the Contractor on 22 October 2020, the water sprinklers system was sprayed every 15	<ul> <li>Closed-out on 5 Nov 2020</li> <li>No further complaint was received.</li> </ul>

Complaint 1	Complaint Log for ED/2018/01				
Complaint Ref. No.	Date of Complaint	Description of Complaint	Investigation / Recommendations / Actions	Close-Out Date / Status	
C0002	A dust complaint was	Complaint of dust problem at the pavement of Muk	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.  Investigation	- Closed-out	
	referred from the Contractor on 8 September 2021 through E-Mail regarding a complaint received by EPD (EPD ref.: K19/RE/00021205-21) on 7 September 2021.	Tai Street near Sports Park.	As per contractor, part of the complaint area was within the site boundary of the project.  - Manual water spraying was provided.  - The exposed surface and stockpile areas were covered by the impermeable tarpaulin sheet.  Recommendations 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:  1. Ensure stockpiling sites should be lined with impermeable sheeting and bunded.  2. Stockpiles should be fully covered by impermeable sheeting at all time except during working process.  3. Ensure the work fulfill the relevant statutory requirements on control of air pollution.  4. Take necessary measures to minimize the environmental nuisance arising from the construction site.  Action taken The exposed surface and stockpile area was	on 4 Oct 2021  No further complaint was received.	
G000 <b>3</b>	4		covered by the impermeable tarpaulin sheet.	C1 1	
C0003	A water discharge complaint was referred from the Contractor on	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.	Investigation Joint site inspection was conducted by ER, IEC, ET and the contractor on 14 December 2021, no	- Closed-out on 5 Jan 2022	

Complaint 1	Log for ED/2018/01			
Complaint Ref. No.	Date of Complaint	Description of Complaint	Investigation / Recommendations / Actions	Close-Out Date / Status
	through E-Mail regarding a complaint received by EPD (ref.: K19/RE/00029046-21) on 9 December 2021.		adverse observation against the water impact was recorded.  There was no muddy water discharge to DSD outfall near the roundabout of Shing Fung Road.  The sand bag with layers and filter were provided at the manholes.  Recommendations There was no direct evidence showing that the water nuisance was caused by the contractor at the complaint area.  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 sand bag and filter to ease the nuisance. The contractor is recommended to implement the following measures to minimize the impact for waste water:  Enhance the sand bag with several layers instead of one layer only and replace the filter frequently.  Modify the wheel washing area such that the muddy water will be directly flow to the pit and then waste water treatment facility.  Take necessary measures to minimize the environmental nuisance arising from the construction site.  Action taken  Sand bags and filter were used to block the manholes.  Manholes had been adequately covered and	- No further complaint was received.

#### **FUGRO TECHNICAL SERVICES LIMITED**

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#### Appendix D

Monthly EM&A Report
For
Contract No. ED/2018/05
Kai Tak Development – Stage 5B infrastructure works at the former north apron area

# **Environmental Monitoring and Audit Report for**

Contract No. ED/2018/05 –

Kai Tak Development – Stage 5B infrastructure works at the former north apron area

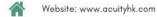
Contract No.: EDO 2/2020

December 2021

(Version 1.1)

Certified By:

(Environmental Team Leader)









Unit E, 12/F., Ford Glory Plaza, Nos. 37-39 Wing Hong Street, Cheung Sha Wan, Kowloon

Tel. : (852) 2698 6833 Fax.: (852) 2698 9383

Date: 14 January 2022

Your ref:

Our ref: PL-202201029

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

Attn.: Mr. LEUNG Wai Kit, CRE

Dear Mr. Leung,

Re: Agreement No. EDO 6/2019

Independent Environmental Checker for Contract No. ED/2018/05 Kai Tak Development – Stage 5B Infrastructure works at the Former North Apron Area Verification of Monthly EM&A Report (December 2021)

Reference is made to the Monthly EM&A Report (December 2021) (Version 1.1) provided by the Environmental Team on 14 January 2022.

Please be informed that we have no adverse comment on the captioned submission. We hereby verify the Monthly EM&A Report (December 2022) in accordance with Condition 3.3 of Environmental Permit No. EP-337/2009.

Thank you for your attention.

Yours sincerely, For and on behalf of Acuity Sustainability Consulting Limited

Kevin Li

Independent Environmental Checker

c.c. CEDD Attn.: Mr. Kinox Wong By email Ka Shing Attn.: Mr. Chan Pang (ETL) By email

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#### **EXECUTIVE SUMMARY**

1. This is the 11<sup>th</sup> Monthly Environmental Monitoring & Audit (EM&A) report which summaries the findings of the EM&A Programme during the reporting period from 1 to 31 December 2021.

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

- 2. 1-hour TSP monitoring was conducted as scheduled in the reporting month. No Action/Limit Level exceedance was recorded.
- 3. 24-hour TSP monitoring was conducted as scheduled in the reporting month. No Action/Limit Level exceedance was recorded.
- 4. Construction noise monitoring was conducted as scheduled in the reporting month. No Action/Limit Level exceedance was recorded.
- 5. 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 Ex	Action Taken	
Parameter	Action Level	Limit Level	Action Taken
1-hr TSP	0	0	N/A
24-hr TSP	0	0	N/A
Construction noise	0	0	N/A

#### **Complaint log**

6. 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	Date of compliant	Description of complaint	Recommendations / Action take	Close-out date / Status
N/A	N/A	N/A	N/A	N/A

#### Notifications of summons and successful prosecutions

7. 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 taken	Close-out date / Status
No notification of summons and successful prosecutions were received in the reporting month.	NA	NA	NA	NA

#### **Report changes**

8. There was no reporting change in the reporting month.

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

- 9. Major construction activities undertake during the reporting month included:
  - Underground utility diversion works and pillar box relocation works at Sa Po Road
  - Bored pile works for landscape elevated walkway LW-02
  - Sheetpile installation at launching shaft for subway SB-01
  - Drainage works for Pedestrian Street No. 1, No. 2 & No. 3
  - Construction of Crowd Dispersal Route
  - Twin rising mains diversion works

### **Future key issues**

10. 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
Advance works for traffic diversion at Sa Po Road	Noise and Air Quality
Bored pile works for landscape elevated walkway	Noise and Air Quality
Pre-drilling work for S14	Noise and Air Quality
Drainage works for Pedestrian Street No. 1, No. 2 & No.3	Noise and Air Quality
Construction of Crowd Dispersal Route	Noise and Air Quality
Rising main construction	Noise and Air Quality
Sheetpile installation for launching shaft of SB-01	Noise and Air Quality

## 1. INTRODUCTION

## **Project Background**

- 1.1 The Kai Tak Development (KTD) is located in the southern 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/2018/05 Kai Tak Development stage 5B infrastructure works at the former north apron area (The Project), comprises mainly the design and construction of a section of dual two-lane Road D1; single two-lane Road L9 and Road L16; a single-lane slip road S14; a pedestrian subway SB-01; an elevated walkway LW-02; renovation of the existing pedestrian subways KS9, KS10 and KS32, as well as modification of the southern end of the existing pedestrian subway KS10; associated footpaths, street lighting, traffic aids, drainage, sewerage, water mains, landscaping, electrical and mechanical works, and ancillary works. The proposed works are shown in Figure 1 and Figure 2. The proposed works and site boundary are shown in Figure 3 and Figure 4. Civil Engineering and Development Department (CEDD) had completed an Environmental Impact Assessment (EIA) and is the Permit Holder.
- 1.3 In accordance with the approved EIA Reports, Environmental Monitoring and Audit (EM&A) programmes are recommended to ensure compliance with the EIA study recommendations. The project proponent was the Civil Engineering and Development Department (CEDD). AECOM Asia Co. Ltd. (AECOM) was commissioned by CEDD as Supervisor (act as Engineers' Representative (ER) listed in EM&A Manual). Acuity Sustainability Consulting Limited (Acuity) was commissioned as the Independent Environmental Checker (IEC). Build King STEC Joint Venture (Build King) was appointed as the main Contractor for the construction works of Contract No. ED/2018/05. Ka Shing was commissioned by CEDD to undertake the role of the Environmental Team (ET) to implement the EM&A programme for The Project.
- 1.4 The construction work under ED/2018/05 comprises the EM&A Manual (EIA Register No. AEIAR-130/2009 for Kai Tak Development) and Environmental Permit No. EP- 337/2009.
- 1.5 Air quality and noise monitoring has been proposed in the EM&A Manual with EIA Register No. AEIAR-130/2009 for Kai Tak Development.

## **Project Organization**

1.6 The project organization chart and with respect to the EM&A programme is shown in AppendixA. Information of key personnel contact names and telephone numbers are summarized in Table1.1.

Table 1.1 Contact Information of Key Personnel

Party	Role	Contact Person	Position	Phone No.	Fax No.
Civil Engineering and	Project	Mr. George Ng	Senior Engineer	3842 7107	2739 0076
Development	Proponent	Mr. Albert Tse	Engineer	3842 7137	2739 0076
Department (CEDD)	•	Mr. Perry Lo	Engineer	3842 7143	2739 0076
AECOM Asia Co. Ltd. (AECOM)	Supervisor (act as Engineers' Representative (ER) listed in EM&A Manual)	Mr. Leung Wai Kit	CRE	2412 3410	2798 0783
Acuity Sustainability Consulting Limited (Acuity)	Independent Environmental Checker (IEC)	Mr. Kevin Li	IEC	2698 6833	2698 9383
Ka Shing Management Consultant Limited (Ka Shing)	Environmental Team (ET)	Ir. Chan Pang	ET Leader	2618 2166	2120 7752
Build King – STEC Joint Venture (BK- STEC)	Contractor	Mr. Raymond Lam	Environmental Officer	9713 6817	3850 8508

## **Works Area and Construction Programme**

1.7 The construction works commenced on 16 February 2021. The construction programme of the Project is given in Appendix B.

## Construction works undertaken during reporting month

1.8 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

Underground utility diversion works and pillar box	Twin rising mains diversion works
relocation works at Sa Po Road	
Bored pile works for landscape elevated walkway LW-02	
Sheetpile installation at launching shaft for subway SB-01	
Drainage works for Pedestrian Street No. 1, No. 2 & No. 3	
Construction of Crowd Dispersal Route	

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

1.9 The status of required submission under Environmental Permit (EP) conditions under EP-337/2009 are summarized in Table 1.3.

Table 1.3 Summary of Status of Required Submission of EPs

EP Condition EP-337/2009	Submission	Submission Date
Condition 1.11	Notification of Commencement Date of Construction of the Project	12 Jan 2021
Condition 2.3	Management Organization of Main Construction Companies	21 Sep 2020
Condition 2.4	Design Drawings	12 Jan 2021
Condition 2.11	Landscape Mitigation Plans	17 Dec 2020
Condition 3.2	Baseline Monitoring Report	12 Jan 2021
Condition 3.2	Monthly EM&A Report	14 December 2021

## 2. AIR QUALITY MONITORING

## **Monitoring Requirements**

2.1 In accordance with EM&A Manual (EIA Register No. 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 Two designated monitoring stations were selected for air quality monitoring programme. Impact air quality monitoring was conducted at two air quality monitoring stations in the reporting month. Table 2.1 describes the air quality monitoring locations, which are also depicted in Figure 5.

Table 2.1 Locations of Air Quality Monitoring Stations

Air Quality Monitoring Locations for the Project	Location of Measurement	
AM2(A) – Ng Wah Catholic Secondary School	Rooftop	
AM3 – Sky Tower	Podium floor near T7	

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

2.3 The air quality monitoring locations and monitoring frequency are listed in Table 2.2.

Table 2.2 Air Quality Monitoring Parameters, Frequency and Duration

Air Monitoring Station	Location for Measurement	Parameter	Duration	Frequency
AM2(A) – Ng Wah Catholic Secondary School	Rooftop	- 24-hour average TSP	- 24 hours	- Once every 6 days
AM3 – Sky Tower	Podium Floor near Tower 7	- 1-hour average TSP	- 1 hour	- Three times every 6 days

- 2.4 The monitoring schedule for reporting month and next month is presented in Appendix C.
- 2.5 Photographic records of the impact monitoring setup are shown in Appendix D.

#### **Monitoring Equipment**

2.6 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 2.3 summarizes the equipment to be used in the air quality monitoring.

Table 2.3 Air Quality Monitoring Equipment

Equipment	Model	Quantity	Calibration Interval
HVS Sampler TE-5170 X c/w of TSP sampling inlet		4	2 months
HVS Calibrator	TISCH TE-5025A	1	1 year
1-hour TSP Dust TSI Model AM510 SidePak Personal Aerosol Meter Monitor		2	1 year
Weather Station	Davis Vantage Pro2 Weather Station	1	6 months

- 2.7 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).
- 2.8 Calibration certificates, catalogue of equipment are given in Appendix E.

#### Monitoring Methodology and QA/QC Procedure

### 24-hour TSP Monitoring

#### Operating/Analytical Procedures

2.9 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.
- 2.10 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.
- 2.11 For TSP sampling, Glass Fiber Filter Media 8" x 10" having a collection efficiency of > 99 % for particles of 0.3  $\mu$ m diameter were used.
- 2.12 The power supply was checked to ensure the sampler worked properly and then placed any filter media at the designated air monitoring station.
- 2.13 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.
- 2.14 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.
- 2.15 The shelter lid was closed and secured with the aluminium strip.
- 2.16 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).

2.17 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

- 2.18 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

- 2.19 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

- 2.20 The following maintenance/calibration are required for the direct dust meters:
  - To validate the accuracy of dust meter, compare the results measured by dust meter and HVS every 12 months throughout all stages of the air quality monitoring.

## **Wind Data Monitoring**

- 2.21 Wind Anemometer was installed at the roof-top of AM2(A) Ng Wah Catholic Secondary School with 10m above ground and clear of constructions or turbulence caused by the buildings.
- 2.22 The wind data was captured by a data logger and the data was downloaded at least once per month for analysis.
- 2.23 The wind data monitoring equipment will be re-calibrated at least once every six months.
- 2.24 Wind direction is divided into 16 sectors of 22.5 degrees each.
- 2.25 Details of weather information during the monitoring period are shown in Appendix F.

## **Action and Limit Levels**

2.26 The Action and Limit Levels of 24-hour average TSP and 1-hour average TSP are summarized in Table 2.4 and Table 2.5 respectively.

Table 2.4 Action and Limit Levels of 24-hour average TSP for Construction Dust Monitoring

Parameter	Air Monitoring Station	Action Level, μg/m <sup>3</sup>	Limit Level, µg/m³
24 hour overe so TCD	AM2(A)	175	260
24-hour average TSP	AM3	172	260

*Table 2.5 Action and Limit Levels of 1-hour average TSP for Construction Dust Monitoring* 

Parameter	Air Monitoring Station	Action Level, µg/m <sup>3</sup>	Limit Level, µg/m³
1 hour overes TCD	AM2(A)	302	500
1-hour average TSP	AM3	301	500

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

2.27 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 2.6 and Table 2.7 respectively.

Table 2.6 Summary of 24-hour average TSP Monitoring Data during the reporting month

Air Monitoring Station	Average TSP Concentration, µg/m <sup>3</sup>	Range, µg/m <sup>3</sup>	Action Level, μg/m <sup>3</sup>	Limit Level, μg/m <sup>3</sup>
AM2(A)	72	25-104	175	260
AM3	75	26-93	172	260

<u>Table 2.7 Summary of 1-hour average TSP Monitoring Data during the reporting month</u>

Air Monitoring Station	Average TSP Concentration, µg/m <sup>3</sup>	Range, µg/m <sup>3</sup>	Action Level, μg/m <sup>3</sup>	Limit Level, μg/m <sup>3</sup>
AM2(A)	54	20-88	302	500
AM3	56	21-82	301	500

- 2.28 There was no Action and Limit Level exceedance of 24-hour average TSP and 1-hour average TSP levels recorded during the reporting month.
- 2.29 Graphical presentation and detailed monitoring results of 24-hour average TSP and 1-hour average TSP levels are shown in Appendix G and Appendix H respectively.
- 2.30 The Event and Action Plan is provided in Appendix I.
- 2.31 Non-project related construction activities in the adjacent construction sites were observed during the reporting period and may affect the monitoring results.
- 2.32 Weather conditions during the monitoring periods were generally fine and did not affect the monitoring results.

## 3. NOISE MONITORING

## **Monitoring Requirements**

- 3.1 In accordance with EM&A Manual (EIA Register No. AEIAR-130/2009), impact noise monitoring shall be carried out during the construction phase of the Project.
- 3.2 Regular monitoring,  $L_{Aeq, 30-minute}$ , for each station will be on a weekly basis and conduct one set of measurements between 0700 1900 hrs on normal weekdays.
- 3.3 If construction works are extended to include works during 1900 0700 hrs 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 6.

*Table 3.1 Locations of Noise Monitoring Stations* 

Noise Monitoring Locations for the Project	Location of Measurement
M4(A) – Le Billionnaire	Podium (Façade)
M5(A) – Prince Ritz	Podium (Façade)

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

3.5 The noise monitoring locations and monitoring frequency are listed in Table 3.2.

Table 3.2 Noise Monitoring Parameters, Frequency and Duration

Noise Monitoring Station	Location for Measurement	Parameter	Frequency and Duration
M4(A) – Le Billionnaire	Podium (Façade)	I I and	30-minute measurement at each monitoring station between 0700
M5(A) – Prince Ritz	Podium (Façade)	$L_{Aeq}$ , $L_{A10}$ and $L_{A90}$	<ul> <li>1900 hrs on normal weekdays</li> <li>(Monday to Saturday) at frequency of once per week.</li> </ul>

- 3.6 The monitoring schedule for reporting month and next month is presented in Appendix C.
- 3.7 Photographic records of the monitoring setup are shown in Appendix D.

## **Monitoring Equipment**

3.8 As referred to 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 3.3 summarizes the equipment to be used in the noise monitoring.

Table 3.3 Noise Monitoring Equipment

Equipment	Model	Quantity	Calibration Interval
Sound Level Meter	RION NL52	2	1 year
Sound Level Calibrator	RION NC 75	1	1 year
Air Flow meter	TSI TA440 Air Velocity	1	1 year

3.9 Calibration certificates, catalogue of equipment are given in Appendix J.

## Monitoring Methodology and QA/QC Procedure

3.10 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.

- 3.11 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.
- 3.12 Turned on the sound level meter and check the battery, if too low, change new ones.
- 3.13 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.
- 3.14 Noise level was recorded.
- 3.15 Recorded any activities that may generate noise during measurement period.

#### **Maintenance and Calibration**

- 3.16 The microphone of the sound level meter and calibrator were cleaned with a soft cloth at quarterly intervals.
- 3.17 The sound level meter and sound calibrator were calibrated annually.
- 3.18 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**

3.19 The Baseline Noise Levels and Action and Limit Levels for construction noise is presented in Table 3.4.

Table 3.4 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 ^
0700 – 1900 hrs	M4(A)	69.5	When one	75 ID(A)
on normal weekdays	M5(A)	72.5	documented complaint is received.	75 dB(A)

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**

3.20 Impact noise monitoring results at the designated noise monitoring stations are summarized in Table 3.5 respectively.

Table 3.5 Summary of Noise Monitoring Data during the reporting month

Noise Monitoring Station	Measured L <sub>Aeq, 30-</sub> min, Average, dB(A)	$\begin{array}{c} \text{Measured $L_{Aeq,30$-}$} \\ \text{min,} \\ \text{Range, $dB(A)$} \end{array}$	Action Level	Limit Level ^
M4(A)	70.0	69.4 – 71.0	When one documented	75
M5(A)	73.0	72.2 – 74.5	complaint is received	dB(A)

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.

- 3.21 There was no Action and Limit Level exceedance of  $L_{Aeq, 30-min}$  recorded during the reporting month.
- 3.22 Graphical presentation and detailed monitoring results are shown in Appendix K.
- 3.23 The Event and Action Plan is provided in Appendix L.
- 3.24 Non-project related construction activities in the adjacent construction sites were observed during the reporting period and may affect the monitoring results.
- 3.25 Weather conditions during the monitoring periods were generally fine and did not 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 No. 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	Maximum 24-h	Cumulative our average TSP stration  Scenario 2  (Mid 2013 to Late 2016), µg/m³	Measured 24-hr average TSP in Reporting Month (Dec 2021) µg/m <sup>3</sup>
AM2(A) - Ng Wah Catholic Secondary School	NA	NA	NA	25-104
AM3 - Sky Tower	A40^	106^	138^	26-93

Note:

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

Air Monitoring Station	ASR No. in EIA report		Cumulative our average TSP etration Scenario 2 (Mid 2013 to Late 2016), µg/m³	Measured 1-hr average TSP in Reporting Month (Dec 2021) µg/m³
AM2(A) - Ng Wah Catholic Secondary School	NA	NA	NA	20-88
AM3 - Sky Tower	A40^	217^	247^	21-82

Note:

<sup>^</sup> Prediction results are given in the Table 3.13 of the EIA report EIA Register No. AEIAR-130/2009 for Kai Tak Development.

<sup>^</sup> Prediction results are given in the Table 3.13 of the EIA report EIA Register No. AEIAR-130/2009 for Kai Tak Development.

*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 LAeq, 30min, dB(A)	Measured Noise Level in Reporting Month (Dec 2021) L <sub>Aeq, 30min</sub> , dB(A)
M4(A) – Le Billionnaire	NA	NA	69.4 – 71.0
M5(A) – Prince Ritz	NA	NA	72.2 – 74.5

- 4.2 No prediction in the EIA Report for 24-hour TSP monitoring results at AM2(A).
- 4.3 24-hour TSP monitoring results at AM3 was recorded lower than the prediction in the EIA Report.
- 4.4 No prediction in the EIA Report for 1-hour TSP monitoring results at AM2(A).
- 4.5 1-hour TSP monitoring results at AM3 was recorded lower than the prediction in the EIA Report.
- 4.6 No prediction in the EIA Report for noise monitoring results at M4(A) and M5(A).

## 5. LANDSCAPE AND VISUAL MONITORING

5.1 In accordance with EM&A Manual (EIA Register No. AEIAR-130/2009), 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 2, 9, 17, 23 and 30 December 2021 in the reporting month.
- 5.4 The summary of site audits is 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
2 December 2021	No	NA	NA
9 December 2021	No	NA	NA
17 December 2021	No	NA	NA
23 December 2021	No	NA	NA
30 December 2021	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 M 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 2, 9, 17, 23 and 30 December 2021 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

Tuble 0.1 Summa	table 0.1 Summary of site inspections observations auring the reporting month					
Inspection Date	Key Observations	Recommendations / Actions	Close-out Date / Status			
2 December 2021	Observation: Stockpiles should be fully covered by impermeable sheeting to reduce dust emission.	Action Taken: Stockpiles has been removed.	Closed out on 9 December 2021			
9 December 2021	Observation: Stockpiles should be fully covered by impermeable sheeting to reduce dust emission.	Action Taken: Stockpiles has been removed	Closed out on 17 December 2021			

Inspection Date	Key Observations	Recommendations / Actions	Close-out Date / Status
9 December	Observation: Secondary container shall be provided for the plastic diesel drum to prevent soil contamination in rising main.	Observation: Plastic diesel drum has been removed.	Closed out on 17 December 2021
2021	Observation: Chemical label was missed.	Observation: Plastic diesel drum has been removed.	Closed out on 17 December 2021
17 December 2021	Observation: Stockpiles should be fully covered by impermeable sheeting to reduce dust emission.	Action Taken: Stockpiles has been removed.	Closed out on 23 December 2021
	Tipe Tipe Tipe Tipe Tipe Tipe Tipe Tipe	The state of the s	Closed out on 30 December 2021

Inspection Date	Key Observations	Recommendations / Actions	Close-out Date / Status
17 December 2021	Observation: An expired QPME label of the generator was observed in LW02.	Action Taken: An expired QPME label of the generator was observed in LW02.	
23 December	Observation: An expired QPME label of the generator was observed in LW02.	Action Taken:  An expired QPME label of the generator was observed in LW02.	Closed out on 30 December 2021
2021	Observation: Secondary container shall be provided for the diesel drum to prevent soil contamination in LW02.	Action Taken: Diesel drum has been removed.	Closed out on 30 December 2021
30 December 2021	Observation: Water spraying at the non-hard pave road at bored piles area shall be implemented at regular time interval.	Action Taken: Water spraying at the non-hard pave road at bored piles area had been implemented at regular time.	Closed out on 6 January 2022

## **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 N.
- 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 From	Valid Till
Environmental Permit under EIAO	EP-337/2009	23 Apr 2009	N/A
Construction Dust Notification under APCO	HA/1826/1	29 Dec 2020	N/A
Waste Disposal Billing Account	7038086	21 Aug 2020	N/A
Registration as a Chemical Waste Producer	5111-286-B2596-01	15 Sep 2020	N/A
Westerveter Discharge License under	WT00037618-2021	29 March 2021	31 March 2026
Wastewater Discharge License under WPCO	WT00037370-2021	29 March 2021	31 March 2026
WFCO	WT00038562-2021	15 July 2021	31 July 2026
	GW-RE0973-21	12 Oct 2021	10 Dec 2021
Construction Noise Permit	GW-RE1233-21	21 Dec 2021	10 March 2022
	GW-RE1262-21	22 Dec 2021	19 June 2022
	GW-RE1275-21	30 Dec 2021	19 June 2022

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

6.7 The Contractor has implemented environmental mitigation measures and requires as stated in the EIA report, the EP and the EM&A Manual. The implementation status of the mitigation measures is summarized in Appendix O.

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

6.8 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 complain	Date of compliant	Description of	Recommendations	Close-out
received	Date of compliant	complaint	/ Action taken	date / Status
N/A	N/A	N/A	N/A	N/A

6.9 Complaint log is shown in Appendix P.

## Notifications of summons and successful prosecutions

6.10 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	NA	NA	NA	NA
notification of summons				
and				
successful				
prosecutions				
were				
received in				

Date of receiving notification of summons or	Date of event	Description of event	Action taken	Close-out date / Status
prosecutions				
the reporting				
month.				

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

## 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 follows:

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

Future key issues in the coming month	Potential impact	
Advance works for traffic diversion at Sa Po Road	Noise and Air Quality	
Bored pile works for landscape elevated walkway	Noise and Air Quality	
Pre-drilling work for S14	Noise and Air Quality	
Drainage works for Pedestrian Street No. 1, No. 2 & No.3	Noise and Air Quality	
Construction of Crowd Dispersal Route	Noise and Air Quality	
Rising main construction	Noise and Air Quality	
Sheetpile installation for launching shaft of SB-01	Noise and Air Quality	

- 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.
- 7.3 The recommended environmental measures proposed in the EM&A Manual (EIA Register No. AEIAR-130/2009) shall be effectively implemented to minimize the potential environmental impacts. The Contractor is reminded to implement the mitigation measures properly.

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

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

## 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.
- 8.3 24-hour TSP monitoring was conducted as scheduled in the reporting month. No Action/Limit Level exceedance was recorded.
- 8.4 Construction noise monitoring was conducted as scheduled in the reporting month. No Action/Limit Level exceedance was recorded.
- 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.
- 8.7 Based on the site inspection and audits, impact air quality and noise monitoring results, it was considered that the mitigation measures were effective to control the potential environmental impacts from the Project during the reporting period.

# **Figures**

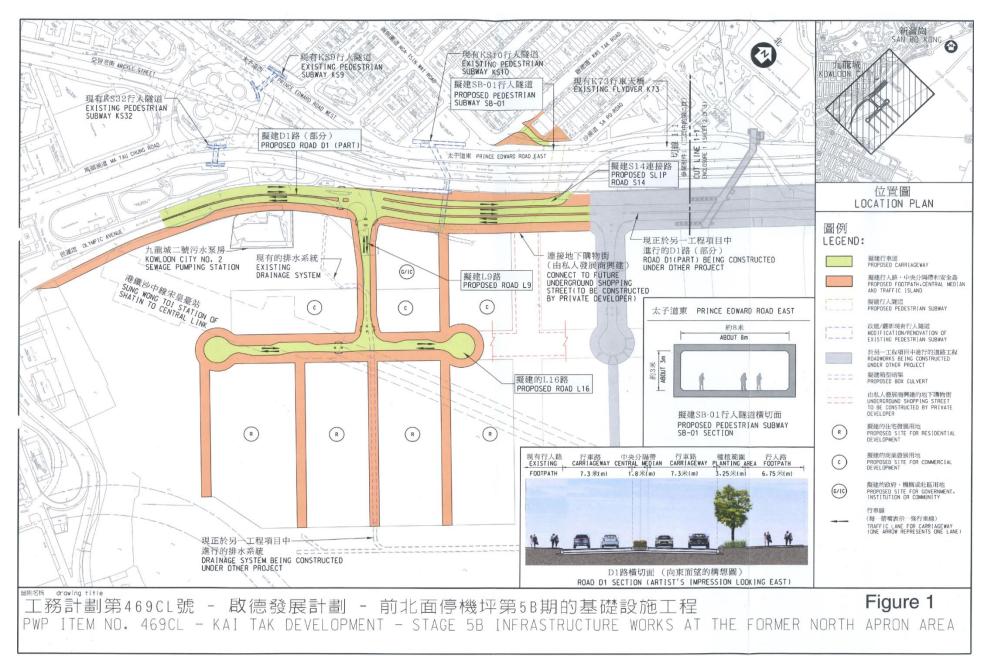


Figure 1 – Proposed works of Contract No. ED/2018/05

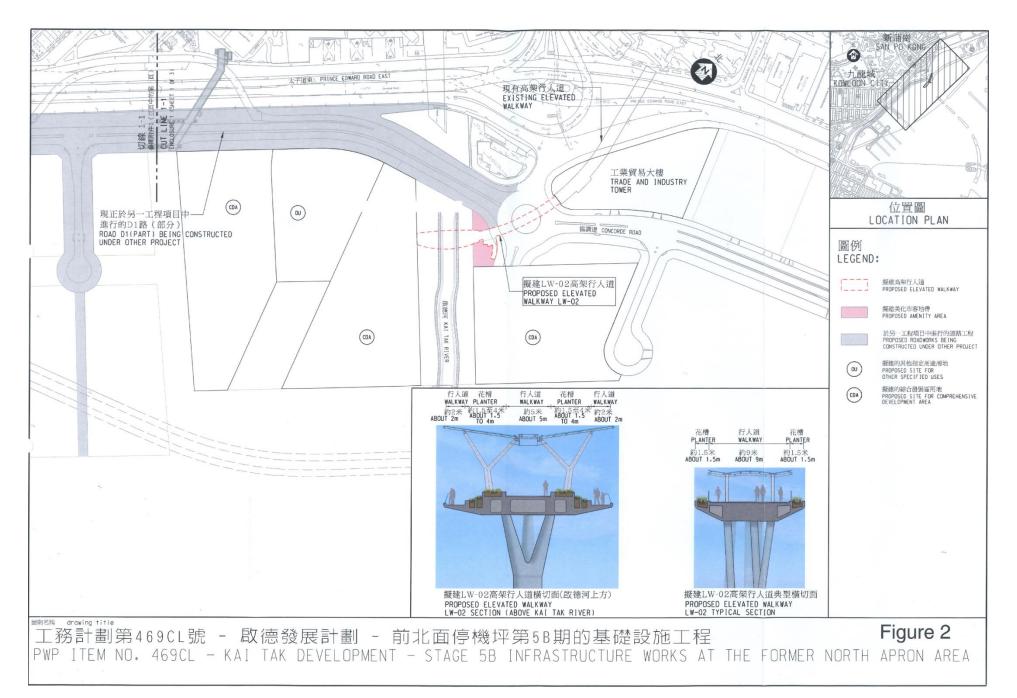


Figure 2 – Proposed works of Contract No. ED/2018/05

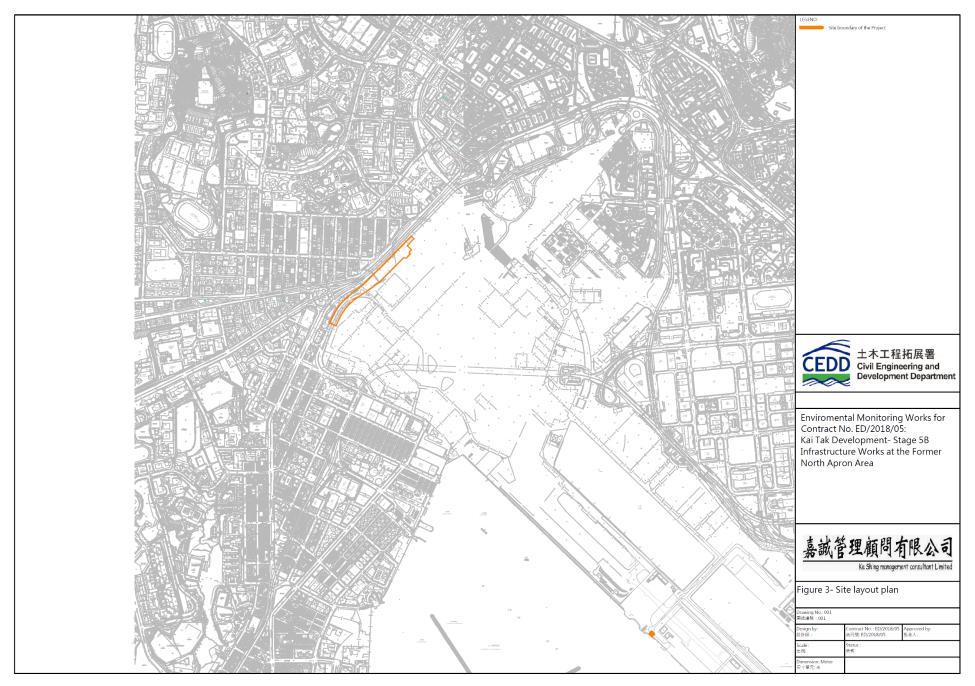


Figure 3 – D1 Road Site Layout Plan

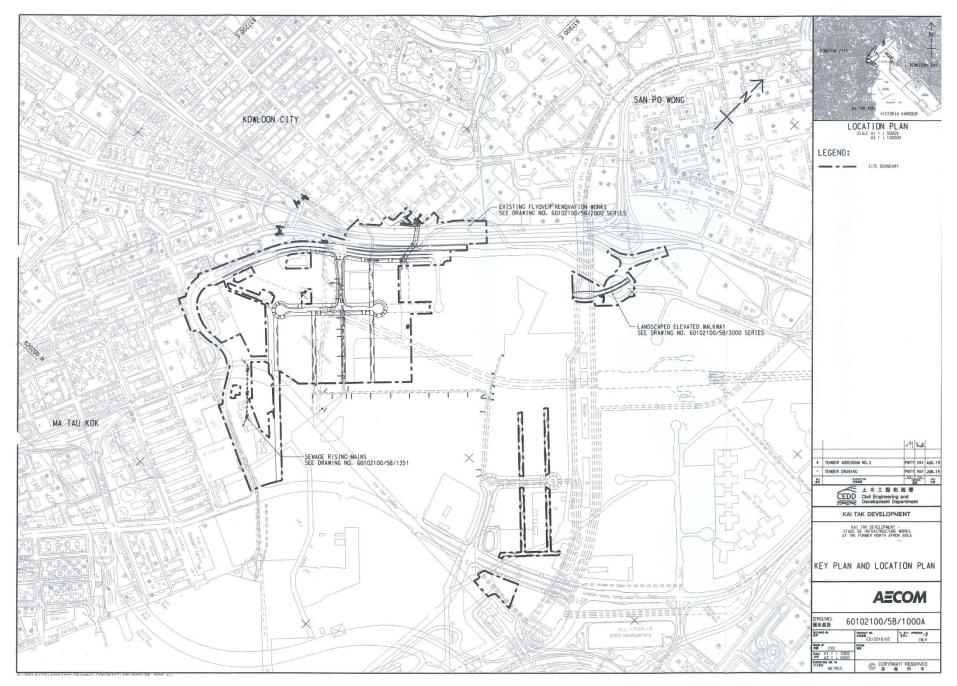


Figure 4 – Site Layout Plan

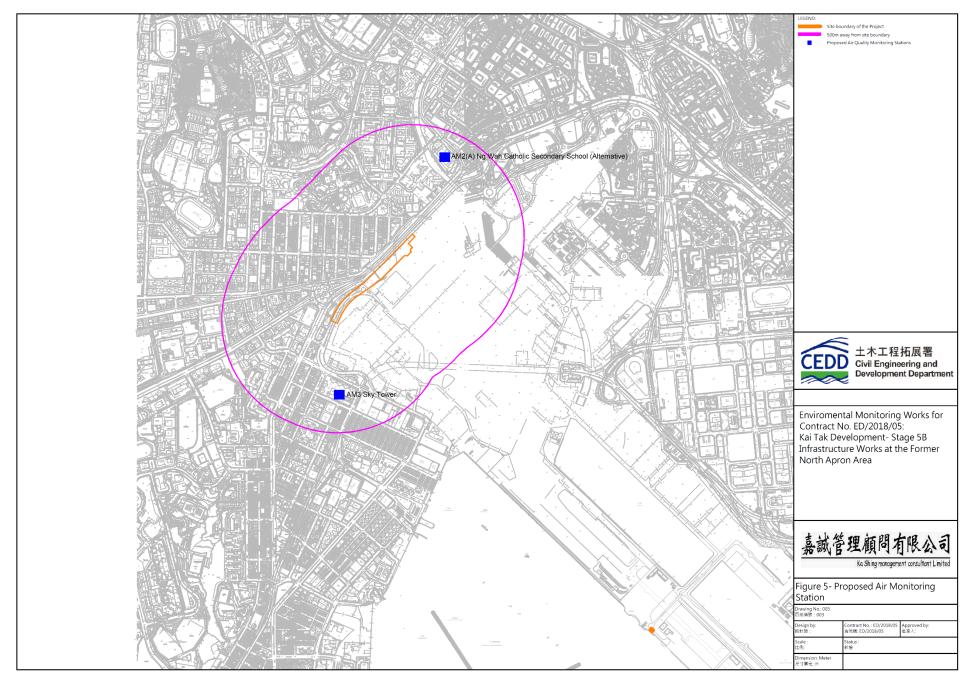


Figure 5 – Air Quality Monitoring Stations

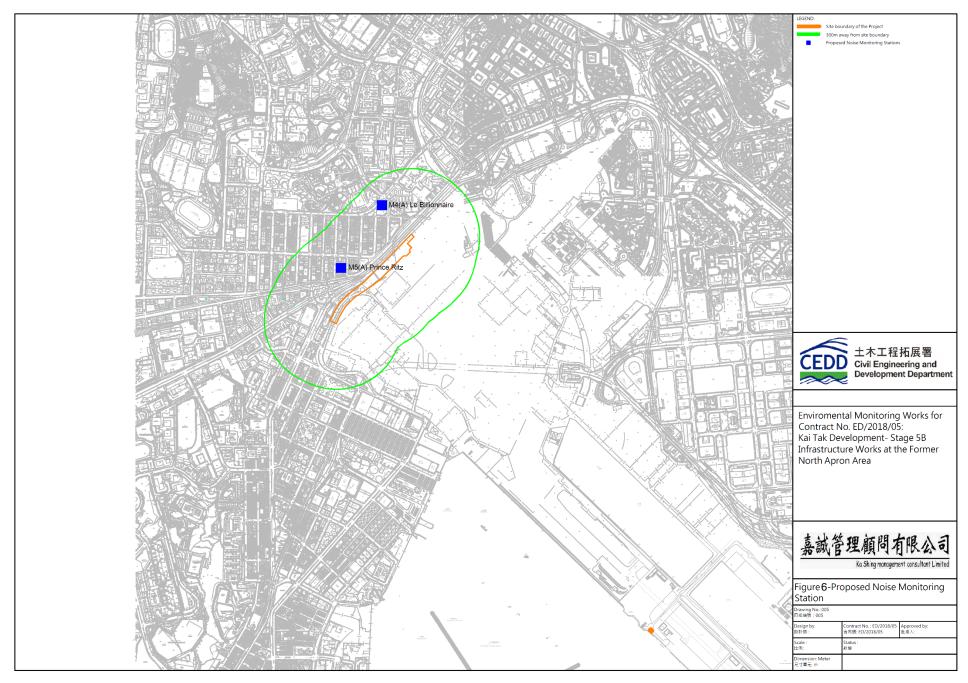
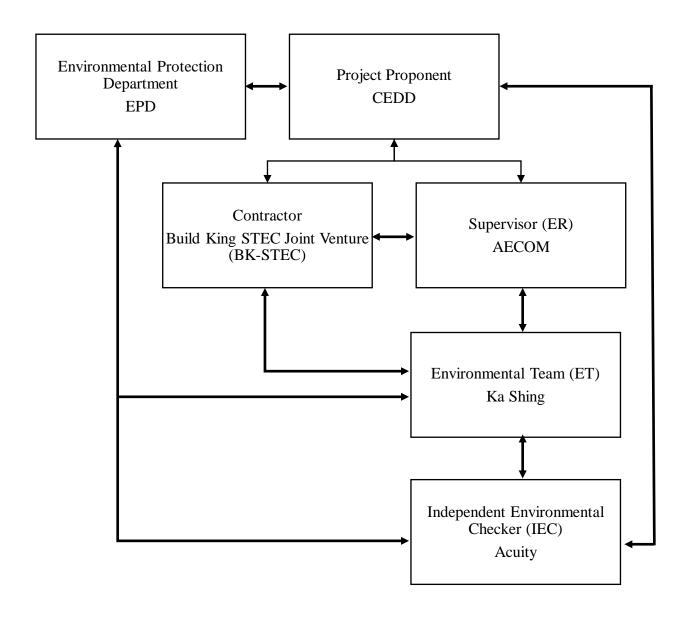


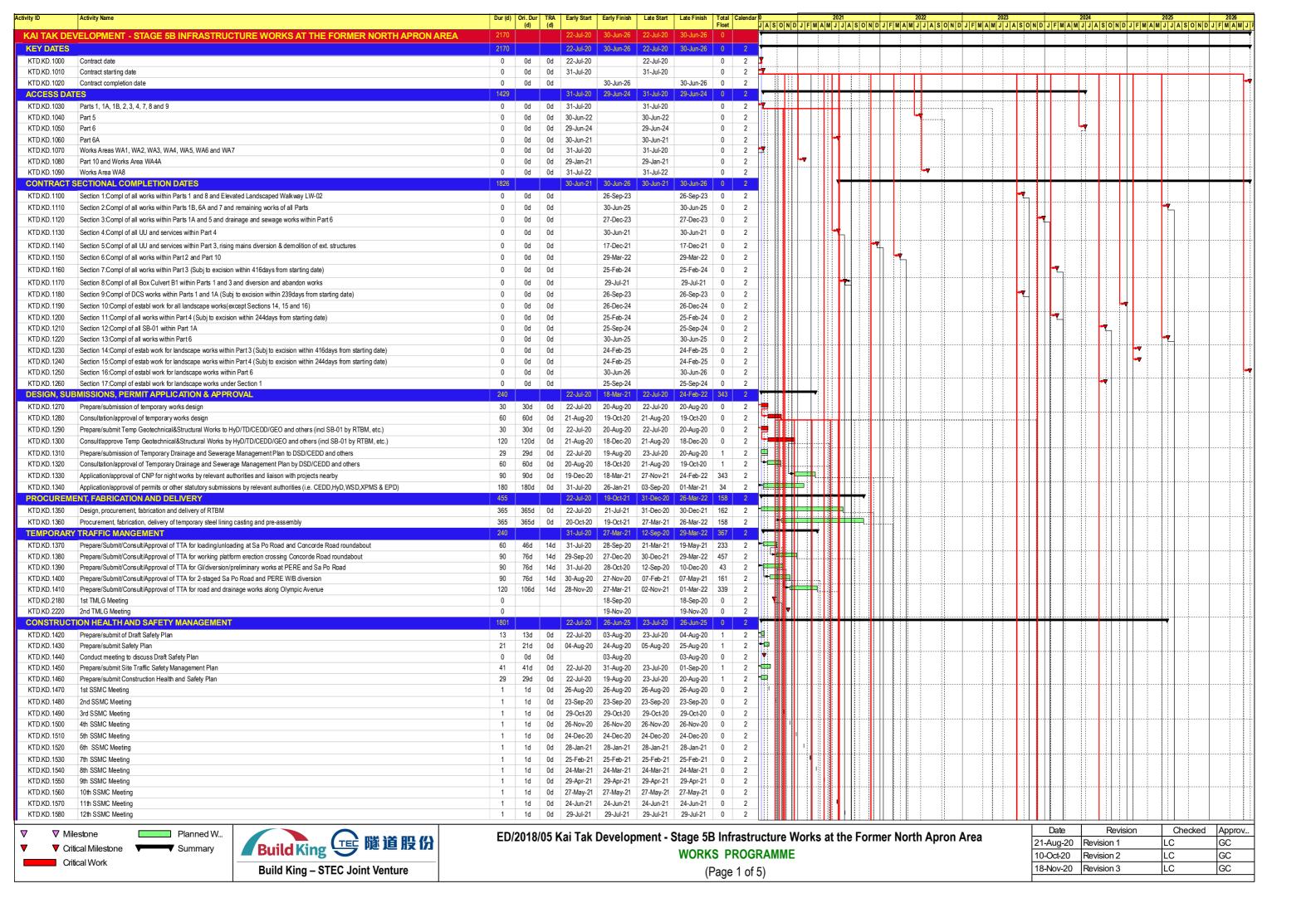
Figure 6 – Noise Monitoring Stations

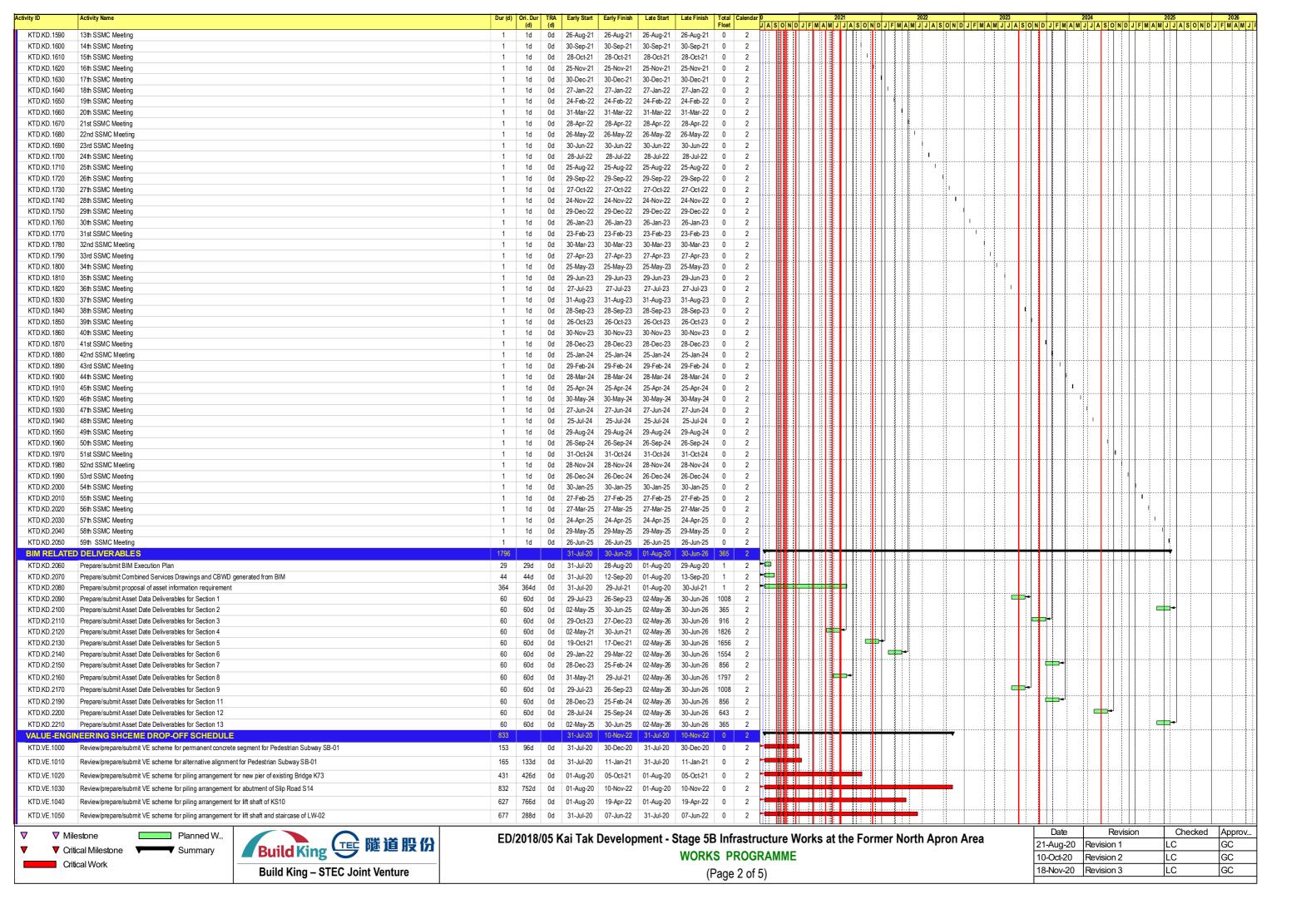
# Appendix A – Organization Chart of EM&A Team

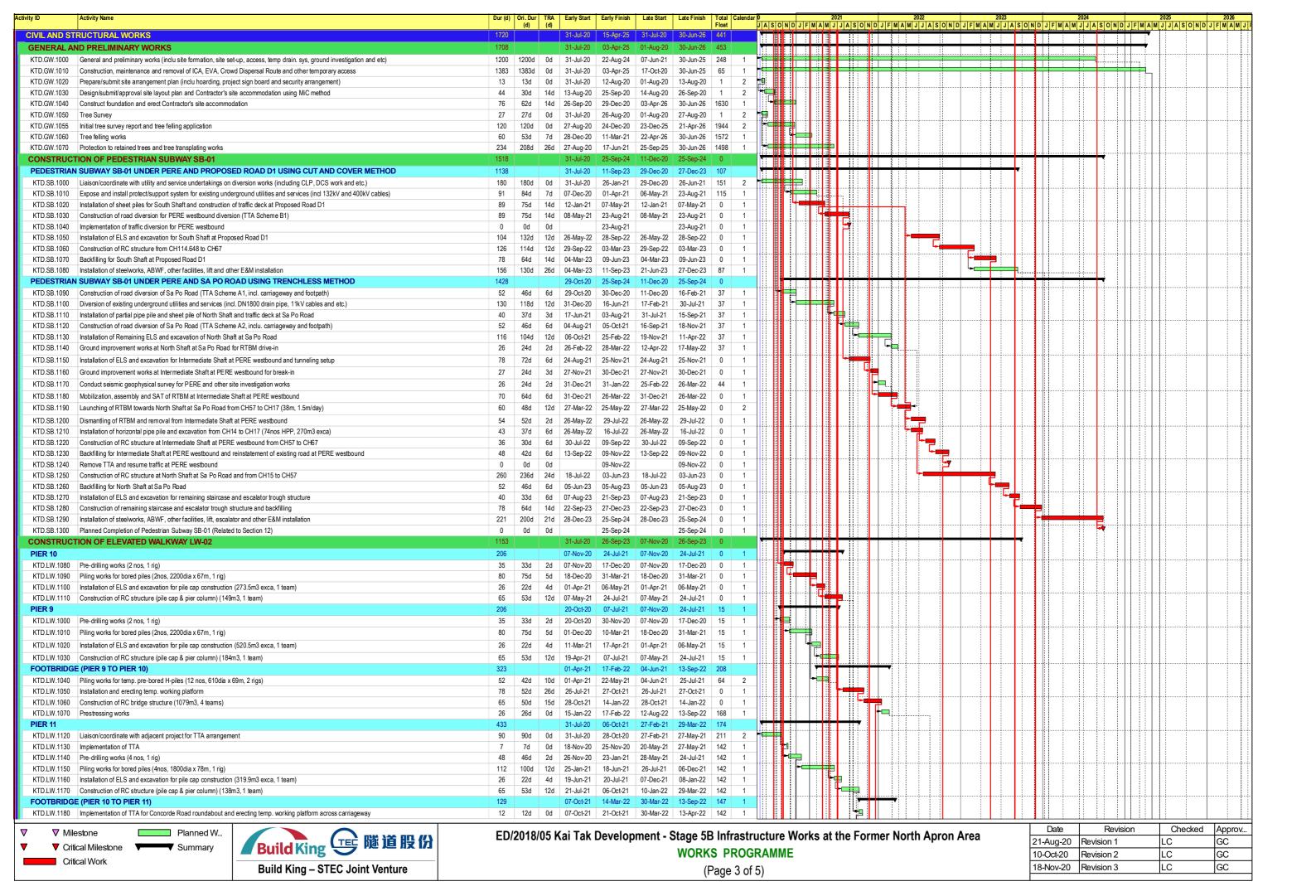


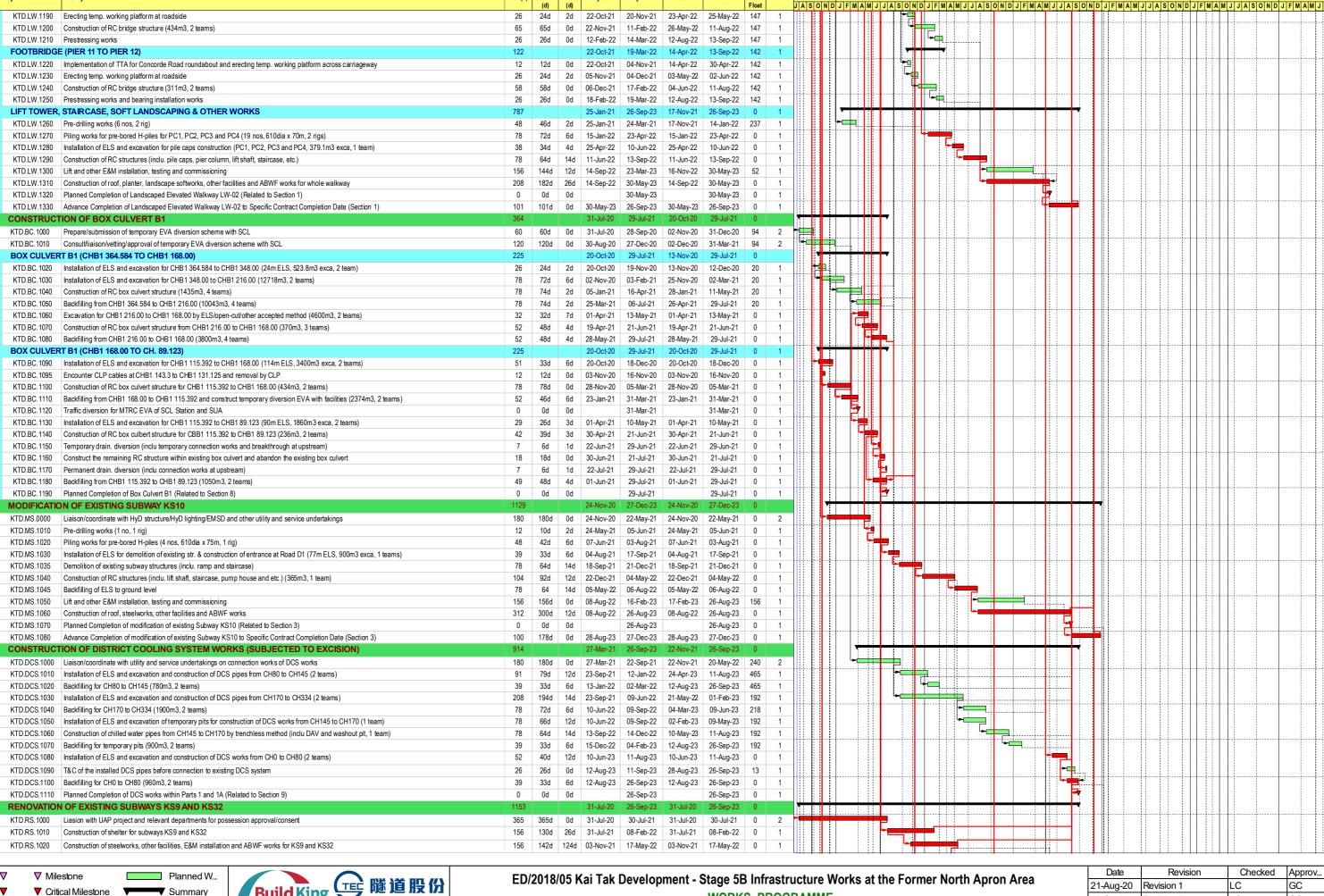
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# **Appendix B – Construction Programme**







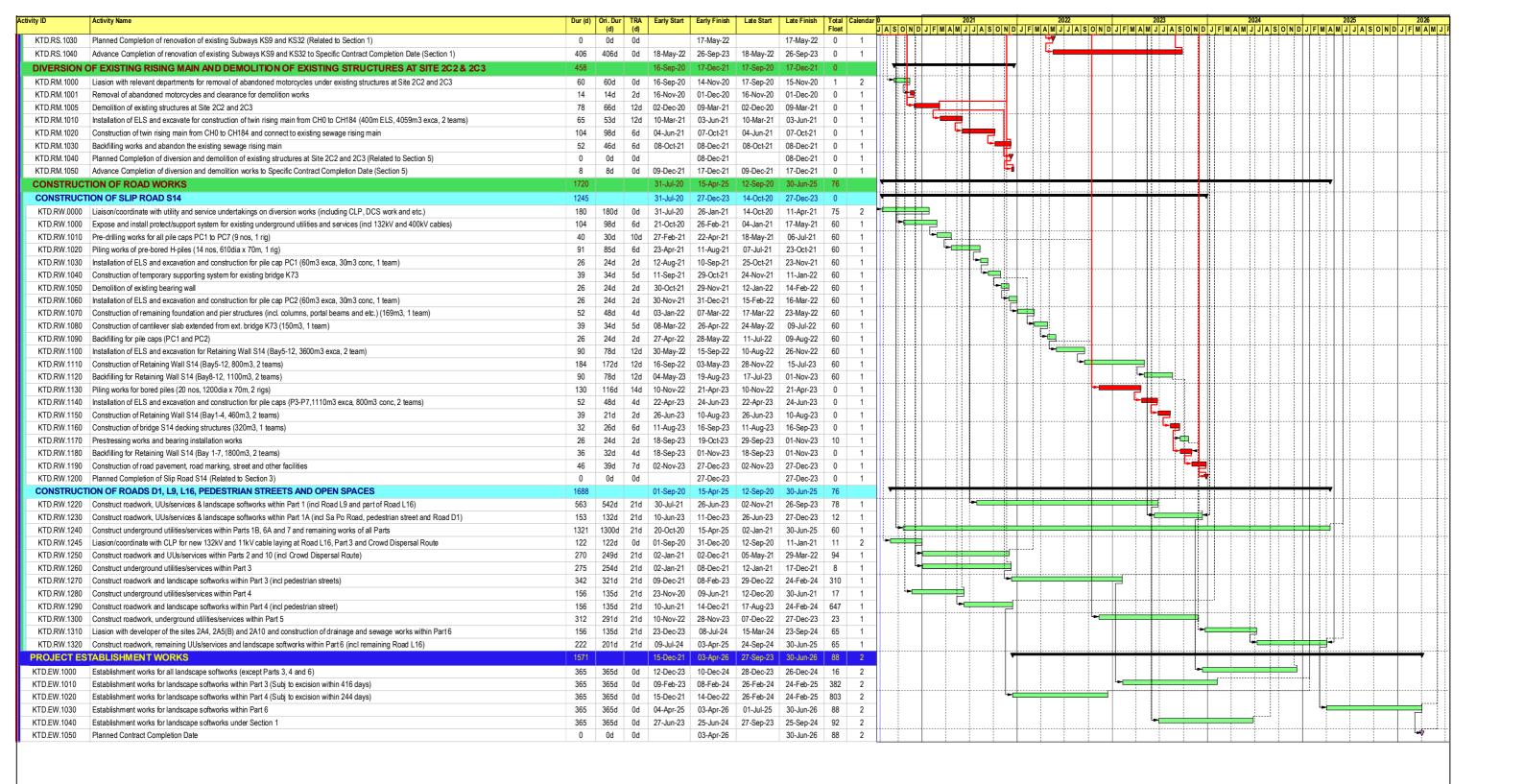


Critical Milestone Critical Work



**WORKS PROGRAMME** (Page 4 of 5)

Date	Revision	Checked	Approv
21-Aug-20	Revision 1	LC	GC
10-Oct-20	Revision 2	LC	GC
18-Nov-20	Revision 3	LC	GC







Critical Work





ED/2018/05 Kai Tak Development - Stage 5B Infrastructure Works at the Former North Apron Area
WORKS PROGRAMME
(Page 5 of 5)

Date	Revision	Checked	Approv
21-Aug-20	Revision 1	LC	GC
10-Oct-20	Revision 2	LC	GC
18-Nov-20	Revision 3	LC	GC

# Appendix C – Environmental monitoring schedules

Contract No. EDO 2/2020 Environmental Monitoring at Kai Tak Development Stage 5B infrastructure works at the former north apron area

## Environmental Monitoring and Weekly Site Inspection Schedule for December 2021

## December 2021

Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1	Weekly Site Inspection 24-hr TSP and 1-hrX3 TSP: AM2(A), AM3 30-min Noise: M4(A), M5(A)	3	4
5	6	7	8 24-hr TSP and 1-hrX3 TSP: AM2(A), AM3 30-min Noise: M4(A), M5(A)	9 Weekly Site Inspection	10	11
12	13	14 24-hr TSP and 1-hrX3 TSP: AM2(A), AM3 30-min Noise: M4(A), M5(A)	15	16	17 Weekly Site Inspection	18
19	20 24-hr TSP and 1-hrX3 TSP: AM2(A), AM3 30-min Noise: M4(A), M5(A)	21	22	23 Weekly Site Inspection	24 24-hr TSP and 1-hrX3 TSP: AM2(A), AM3	25
26	27	28	29	30 Weekly Site Inspection + SSMC meeting 24-hr TSP and 1-hrX3 TSP: AM2(A), AM3 30-min Noise: M4(A), M5(A)	31	

**Air Quality Monitoring Station**AM2(A) Ng Wah Catholic Secondary School
AM3 - Sky Tower

**Noise Quality Monitoring Station** M4(A) - Le Billionnaire

M5(A) - Prince Ritz

Contract No. EDO 2/2020 Environmental Monitoring at Kai Tak Development Stage 5B infrastructure works at the former north apron area

## Environmental Monitoring and Weekly Site Inspection Schedule for January 2022

### January 2022

Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1
2	3	4	5 24-hr TSP and 1-hrX3 TSP: AM2(A), AM3 30-min Noise: M4(A), M5(A)	6 Weekly Site Inspection	7	8
9	10	11 24-hr TSP and 1-hrX3 TSP: AM2(A), AM3 30-min Noise: M4(A), M5(A)	12	13 Weekly Site Inspection	14	15
16	17 24-hr TSP and 1-hrX3 TSP: AM2(A), AM3 30-min Noise: M4(A), M5(A)	18	19	20 Weekly Site Inspection	21	22 24-hr TSP and 1-hrX3 TSP: AM2(A), AM3
23	24	25	26 24-hr TSP and 1-hrX3 TSP: AM2(A), AM3 30-min Noise: M4(A), M5(A)	27 Weekly Site Inspection + SSMC meeting	28	29
30	31 24-hr TSP and 1-hrX3 TSP: AM2(A), AM3 30-min Noise: M4(A), M5(A)					

NOTE:

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

**Air Quality Monitoring Station** 

 $AM2(A)\ Ng$  Wah Catholic Secondary School AM3 - Sky Tower

**Noise Quality Monitoring Station** 

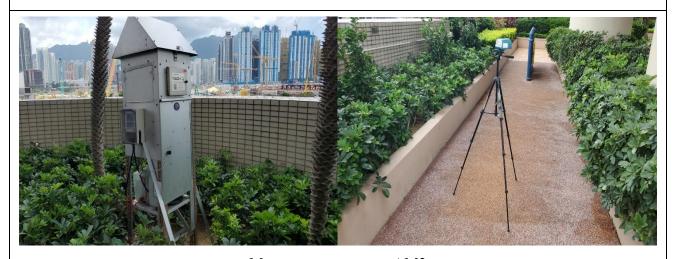
M4(A) - Le Billionnaire M5(A) - Prince Ritz

# **Appendix D – Photographic records**

Impact Air Quality Monitoring



Measurement setup at AM2(A)

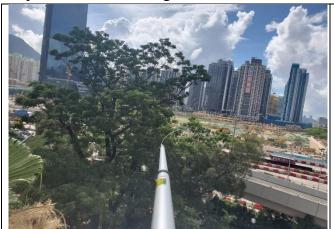


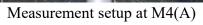
Measurement setup at AM3



Weather Station at the rooftop of Ng Wah Catholic Secondary School

## Impact Noise Monitoring







Measurement setup at M5(A)

Appendix E – Calibration certificates, catalogue of air quality monitoring equipment

### Catalogue of High Volume Sampler (HVS)



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.

- → 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

ntal Ave



## 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

#### Application:

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 Equipmen

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"

#### Calibration Equipment

TE-5028 -Variable Flow Calibration Kit

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

TE-HVC-V Xcalibrator HiVol Calibrator

#### Dhyeical 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)

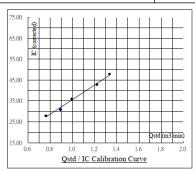
Calibration curve ref. No. :	ATSPC-01	-2021111801	Date of calibration :	18/11/2021	
Location :	Sky Tower		Sampler :	TE-5170X	
Calibration Data			Serial Number :	4687	
Ambient barometric pressure	, Pa = 760	6 (mmHg)	Ambient temperature, Ta =	300.45	(deg K)
Ostd Slope m = 2 035	8		Ostd Intercept b = -0	005890	

#### Calibration Curve

Cultoration Curve				
District.	H <sub>2</sub> O	Qstd	I	IC
Plate No.	(in)	$(m^3/min)$	( chart )	( corrected )
18	7.40	1.335	48.0	47.82
13	6.20	1.222	43.0	42.84
10	4.10	0.994	36.0	35.87
7	3.30	0.892	31.0	30.89
5	2.40	0.761	28.0	27.90

#### Subsequent calculation of sampler flow

Method	Calibration equation	Slope, m	Intercept, b	Corr. coeff., r
Dickson recorder	Qstd = 1 / m1 [ (I) (Sqrt ((Pav / 760) (298 / Tav))) - b1 ]	34.907	0.7324	0.9962



Calibration curve requirements: (A). r > 0.990; (B). At least 3 Qstd numbers are in the TSP range (1.1 - 1.7 m3 / min).

FLOW (corrected) = Sqrt (FLOW (mano) (Pa / 760) (298 / Ta)).

Calibrated by : 18/11/2021 Checked by : 18/11/2021
Name : ( Ben Poon ) Name : ( Tommy Wong )

Form No. INS-HVS-CAL dd 16 01 2020

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

 Calibration curve ref. No.:
 ATSPC-01-2021111804
 Date of calibration:
 18/11/2021

 Location:
 Ng Wah Catholic Secondary School
 Sampler:
 TE-5170X

 Calibration Data
 Serial Numbers:
 4360

 Ambient barometric pressure, Pa = 760.6 (mmHg)
 Ambient temperature, Ta = 300.45 (deg K)

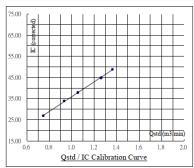
 Qstd Slope, m = 2.03518
 Qstd Intercept, b = -0.005890

#### Calibration Curve

Plate No.	H <sub>2</sub> O	Qstd	I	IC
Plate No.	( in )	( m <sup>3</sup> / min )	( chart )	( corrected )
18	7.70	1.361	49.0	48.82
13	6.60	1.261	45.0	44.83
10	4.60	1.053	38.0	37.86
7	3.60	0.932	34.0	33.87
5	2.30	0.745	27.0	26.90

Subsequent calculation of sampler flow

Method	Calibration equation	Slope, m	Intercept, b	Corr. coeff., r
Dickson recorder	Qstd = 1 / m1 [ (I) ( Sqrt ( ( Pav / 760 ) ( 298 / Tav ) ) ) - b1 ]	35.073	0.9142	0.9996



Calibration curve requirements : (A). r > 0.990; (B). At least 3 Qstd numbers are in the TSP range (1.1 - 1.7 m3 / min).

Remark: Qstd  $(m^3 / min) = 1/m [ Sqrt (H_2O (Pa / 760) (298 / Ta)) - b ].$ IC (corrected) = I [ Sqrt ((Pa / 760) (298 / Ta)) ]. FLOW (corrected) = Sqrt (FLOW (mano) (Pa / 760) (298 / Ta)).

 Calibrated by:
 18/11/2021
 Checked by:
 18/11/2021

 Name:
 (
 Ben Poon
 )
 Name:
 (
 Tommy Wong
 )

Form No. INS-HVS-CAL dd 16 01 2020



RECALIBRATION DUE DATE: June 1, 2022

C	Calibration Certification Information					
Cal. Date: June 1, 2021	Rootsmeter S/N: 438320	Ta: 292	°K			
Operator: Jim Tisch		Pa: 754.9	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	1.4370	3.2	2.00
2	3	4	1	1.0130	6.4	4.00
3	5	6	1	0.9060	8.0	5.00
4	7	8	1	0.8590	8.9	5.50
5	9	10	1	0.7110	12.9	8.00

		Data Tabula	tion		
Vstd	Qstd	$\sqrt{\Delta H(\frac{Pa}{Pstd})(\frac{Tstd}{Ta})}$	e	Qa	√∆H(Ta/Pa)
(m3)	(x-axis)	(y-axis)	Va	(x-axis)	(y-axis)
1.0094	0.7024	1.4239	0.9958	0.6929	0.8796
1.0051	0.9922	2.0136	0.9915	0.9788	1.2439
1.0029	1.1070	2.2513	0.9894	1.0921	1.3907
1.0017	1.1662	2.3612	0.9882	1.1504	1.4586
0.9964	1.4014	2.8477	0.9829	1.3824	1.7591
	m=	2.03518		m=	1.27440
QSTD	b=	-0.00589	QA	b=	-0.00364
-	r=	0.99997		r=	0.99997

	Calculation	ns			
Vstd=	Vstd= ΔVol((Pa-ΔP)/Pstd)(Tstd/Ta)		d= ΔVol((Pa-ΔP)/Pstd)(Tstd/Ta)		ΔVol((Pa-ΔP)/Pa)
Qstd=	Vstd/ΔTime	Qa=	Va/ΔTime		
	For subsequent flow rat	e calculatio	ns:		
Qstd=	$1/m\left(\left(\sqrt{\Delta H\left(\frac{Pa}{Pstd}\right)\left(\frac{Tstd}{Ta}\right)}\right)-b\right)$	Qa=	$1/m\left(\left(\sqrt{\Delta H\left(Ta/Pa\right)}\right)-b\right)$		

Tstd:	298.15 °K
Pstd:	760 mm Hg
	Key
ΔH: calibrator	manometer reading (in H2O)
ΔP: rootsmete	er manometer reading (mm Hg)
Ta: actual abs	olute temperature (°K)
Pa: actual bar	ometric pressure (mm Hg)
b: intercept	
m: slope	
Ta: actual abs Pa: actual bar b: intercept	olute temperature (°K)

Standard Conditions

#### 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

ch Environmental, Inc.

South Miami Avenue age of Cleves, OH 45002 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 AM510 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/m³) 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

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

#### Model AM510 SidePak Personal Aerosol Monitor

Sensitivity

90° light scattering, Sensor Type 670 nm laser diode Aerosol 0.001 to 20 mg/m<sup>3</sup> Concentration Range (calibrated to respirable

fraction of ISO 12103-1.

A1 test dust) 0.1 to 10 micrometer (um) Particle Size Range Minimum Resolution  $0.001 \text{ mg/m}^3$ Zero stability ±0.001 mg/m³ over 24 hours

using 10-second time-constant Temperature Coefficient Approximately +0.0005 mg/m3 per °C (for variations from temperature

Flow Rate

User-adjustable, 0.7 to 1.8 Range

liters/min (L/min)

at which instrument was last zeroed)

**Temperature Range** 

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

Operational Humidity

0 to 95% RH, non-condensing

Time Constant (LCD display)

Jser-adjustable, 1 to 60 seconds

**Data Logging** 

Approx. 31,000 Data Points Logging Interval

User-adjustable, 1 second to 1 hour

**User-Select Calibration Factors** 

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

Physical

Weight

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 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 Tripod Socket 2 line x 12 character LCD 1/4-20 female thread

Power Supply/Charger (P/N 2613210)

100 to 240 VAC, 50 to 60 Hz Input Voltage Range

Output Voltage 9 VDC @ 1.0 A Maintenance

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

**Communications Interface** 

Connector, Instrument USB Mini-B (socket)

Minimum Computer Requirements for TrakPro™ Data Analysis Software

Communications Port Universal Serial Bus (USB)

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

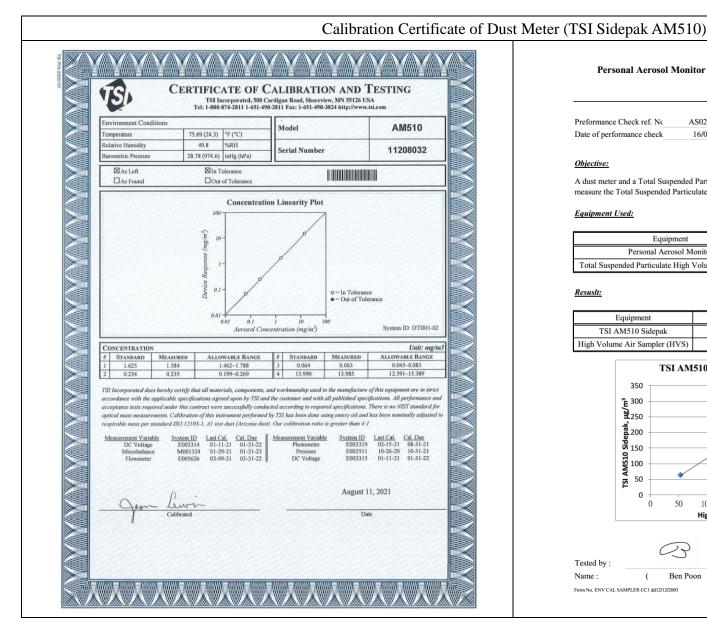
\*\*All dust plugs and dust gaskets must be installed.

\*\*\*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.





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

Preformance Check ref. No	AS0210818-4	Report Issue Date	18/08/2021	
Date of performance check	16/08/2021			

#### Objective:

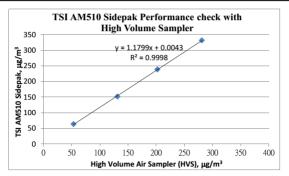
A dust meter and a Total Suspended Particulate High Volume Air Sampler (HVS) were placed together to measure the Total Suspended Particulate (TSP) concentrations simultaneously to check the performance.

#### Equipment Used:

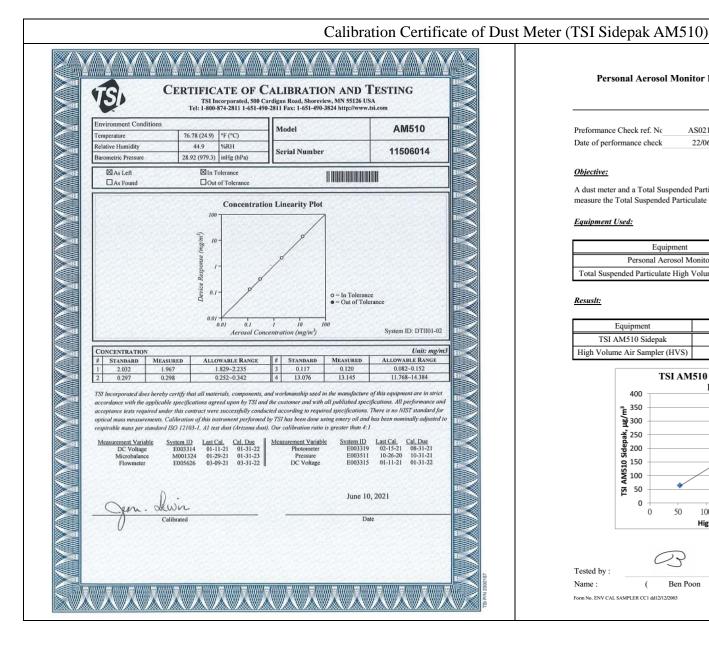
Equipment	Manufacturer and Model	Serial Number
Personal Aerosol Monitor	TSI AM510 Sidepak	11208032
Total Suspended Particulate High Volume Air Sampler	GS2310	10346

#### Resustt:

Equipment		Measurement		
TSI AM510 Sidepak 64		152	239	332
High Volume Air Sampler (HVS)	53	131	202	281







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

Preformance Check ref. No	AS0210625-1	Report Issue Date	25/06/2021	
Date of performance check	22/06/2021			

#### Objective:

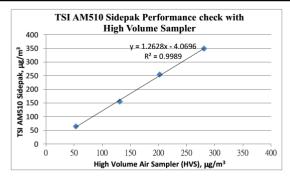
A dust meter and a Total Suspended Particulate High Volume Air Sampler (HVS) were placed together to measure the Total Suspended Particulate (TSP) concentrations simultaneously to check the performance.

#### Equipment Used:

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

#### Resustt:

Equipment		Measurement	Result, μg/m <sup>3</sup>	
TSI AM510 Sidepak	65	156	255	350
High Volume Air Sampler (HVS)	53	131	202	281



	(	~~			/	
Tested by:			25/06/2021	Checked by:		25/06/2021
Name:	(	Ben Poon	)	Name:	(	Tommy Wong
Form No. ENV CAL SAMI	PLER CC1 dd12	2/12/2003				

### Catalogue of Weather Station

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



6152C 6162C

Vantage Pro2™

The Vantage Pro2<sup>™</sup> (# 6152C) and Vantage Pro2<sup>™</sup> 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)
	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)

Maximum displayable wind decreases as the length of cable increases, at 140' (42 m) of cable, the maximum wind speed displayed is 135 mph (60 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 (214 cm2) collection area Temperature Sensor Type...... PN Junction Silicon Diode Relative Humidity Sensor Type . . . . . . . . . . . . Film capacitor element Sensor Inputs 

ISS Dimensions(not including anemometer or bird spikes):

Vantage Pro2 with Fan-Asprated 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

Vantage Pro2

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

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)

Range . . . . . . -110° to +135°F (-79° to +57°C) 

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

Current Graph Data . . . . . . . . . . . . . . . . . Instant Reading (user adjustable); 10-min. Dominant; Hourly, Daily,

Monthly Dominant

Monthly Dominants

Wind Speed

other units are converted from mph and rounded to nearest 1 km/hr, 0.1

m/s or 1 knot

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

Highs with Direction of Highs

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.: CC0262109

Customer Information

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

#### **Equipment Identification**

Equipment Description Manufacturer Model No. Serial No. Assigned equipment No.: Weather Station Davis Vantage PRO 2 6152CUK AZ170710016

#### Certificate Information

Date of Receipt: Date of Calibration: 29 September 2021 30 September 2021

SOP-116, SOP-252

Calibration Condition: Adjustment:

24.5°C, 54%RH, 1001hPa The arrow head was adjusted to the magnetic north before performing calibration.

AAST-WS-03, 30/9/2021

Due Date of Calibration: Calibration Procedure:

Appearance: JJF 1183-2007, JJG 1076-2001, Remark:

Good N/A

Equipment Description	Model	Serial No.	Expiration Date	
Platinum resistance thermometer	KPPRHT-A-1	KCI I-1095, KCI P-1095	28 June 2023	
Humidity sensor	KPPRHT-A-1	KCI I-1095, KCI P-1095	4 March 2022	
Hot Wire Anemometer	9535	T95351316004	11 July 2022	

Note: The estimated expanded uncertainties have been calculated in Trahlattion 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 seplicitly stated.

Note: The stated of 3 oil assument used in the californion are traceable to maintain the accuracy and good condition.

Note: The stated proposed in this carefulcase either the condition of the instrument on the date of californion and curry no implication regarding the long term stability of the

Wanas Warren Yeung

Certificate Issue Date: 4 October 2021

CT-BEG-03

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

CC0262109 Page 1 of 2



#### 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

#### **Result of Calibration**

Reference reading (°C)	Reading (°C)	Error (°C)
15.0	15	0.0
20.0	20	0.0
25.0	25	0.0
30.0	30	0.0

Reference reading (%RH)	Reading (%RH)	Error (%RH)
40.0	41	1
50.0	52	2
70.0	77	2

Reference reading (m/s)	Measured reading (m/s)	Error (%)
0.0	0.0	N/A
2.0	2.1	5.0
5.0	5.2	4.0
8.0	8.2	2.5

Reference reading	Measured reading	Error
0°	00	00
45°	45°	0°
90°	90°	On
135°	135°	Oo
180°	180°	00
225°	225°	0°
270°	270°	0°
315°	315°	Oo

<sup>\*\*\*</sup> End of Certificate \*\*\*

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

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# Appendix F – Weather information

### **General Information**

Date	Absolute Daily Min Temperature (°C)	Absolute Daily Max Temperature (°C)	Total Rainfall (mm)	Mean Relative Humidity (%)		
01/12/2021	14.8	20.1	0.0	40		
02/12/2021	14.6	20.4	0.0	42		
03/12/2021	14.7	21.3	0.0	35		
04/12/2021	15.3	20.6	0.0	46		
05/12/2021	16.7	22.2	0.0	55		
06/12/2021	16.4	22.2	0.0	59		
07/12/2021	17.1	22.5	0.0	65		
08/12/2021	18.4	22.2	0.0	67		
09/12/2021	18.7	22.9	0.0	72		
10/12/2021	18.6	23.7	0.0	73		
11/12/2021	20.0	24.4	0.0	74		
12/12/2021	19.2	24.7	0.0	75		
13/12/2021	17.4	21.5	0.0	67		
14/12/2021	18.7	23.6	Trace	72		
15/12/2021	19.9	23.0	0.2	78		
16/12/2021	21.7	25.8	Trace	81		
17/12/2021	18.9	23.8	0.0	69		
18/12/2021	16.3	20.0	0.0	58		
19/12/2021	16.0	19.7	0.0	51		
20/12/2021	15.7	19.3	9.4	78		
21/12/2021	16.0	19.0	2.4	88		
22/12/2021	17.1	21.7	Trace	80		
23/12/2021	18.7	21.9	0.8	77		
24/12/2021	18.2	21.8	1.7	84		
25/12/2021	17.9	21.5	Trace	75		
26/12/2021	11.7	18.5	3.5	78		
27/12/2021	9.9	14.6	1.3	81		
28/12/2021	12.2	17.5	0.2	74		
29/12/2021	16.6	20.6	0.0	74		
30/12/2021	16.2	21.4	0.0	77		
31/12/2021	17.1	19.9	Trace	78		

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

NOTE2: Trace means rainfall less than 0.05 mm

 $\underline{https://www.hko.gov.hk/en/cis/dailyExtract.htm?y=2021\&m=12}$ 

Kai Tak Runway Park Information

Date	Absolute Daily Min Temperature (°C)	Absolute Daily Max Temperature (°C)
01/12/2021	14.6	21.3
02/12/2021	14.0	22.3
03/12/2021	14.4	23.0
04/12/2021	14.8	20.4
05/12/2021	16.5	22.4
06/12/2021	15.6	23.3
07/12/2021	16.5	22.5
08/12/2021	18.7	21.8
09/12/2021	18.8	22.4
10/12/2021	18.4	23.5
11/12/2021	20.0	23.9
12/12/2021	19.3	25.9
13/12/2021	17.0	22.2
14/12/2021	18.6	25.3
15/12/2021	18.8	22.9
16/12/2021	21.3	25.2
17/12/2021	18.5	23.7
18/12/2021	16.0	21.3
19/12/2021	19.6	19.6
20/12/2021	14.8	19.6
21/12/2021	16.4	19.9
22/12/2021	16.7	23.4
23/12/2021	18.9	21.7
24/12/2021	18.4	24.0
25/12/2021	16.8	21.2
26/12/2021	12.2	18.0
27/12/2021	10.0	15.6
28/12/2021	12.2	18.3
29/12/2021	16.8	23.2
30/12/2021	16.0	22.2
31/12/2021	17.0	19.2

NOTE1: The above weather information was obtained from manned weather station of Kai Tak Runway Park.

https://i-lens.hk/hkweather/history\_chart.php?date=2021-12-01&chart\_type=DG\_TEMP

Date	Time	Wind Speed (m/s)	Wind Direction												
01/12/2021	0:00	0.4	135	02/12/2021	0:00	0.9	112.5	03/12/2021	0:00	0.4	157.5	04/12/2021	0:00	1.3	112.5
01/12/2021	1:00	0.4	135	02/12/2021	1:00	1.3	90	03/12/2021	1:00	0.9	135	04/12/2021	1:00	1.3	112.5
01/12/2021	2:00	0.4	112.5	02/12/2021	2:00	0.9	67.5	03/12/2021	2:00	0.4	247.5	04/12/2021	2:00	0.9	112.5
01/12/2021	3:00	0.4	112.5	02/12/2021	3:00	0.9	112.5	03/12/2021	3:00	0.4	247.5	04/12/2021	3:00	0.4	112.5
01/12/2021	4:00	0.4	112.5	02/12/2021	4:00	0.9	90	03/12/2021	4:00	0.9	225	04/12/2021	4:00	0.4	22.5
01/12/2021	5:00	0.4	112.5	02/12/2021	5:00	0.9	112.5	03/12/2021	5:00	0.9	225	04/12/2021	5:00	0.4	67.5
01/12/2021	6:00	0.4	112.5	02/12/2021	6:00	1.3	90	03/12/2021	6:00	0.9	112.5	04/12/2021	6:00	0.9	112.5
01/12/2021	7:00	1.3	112.5	02/12/2021	7:00	1.3	202.5	03/12/2021	7:00	0.9	112.5	04/12/2021	7:00	0.9	90
01/12/2021	8:00	1.3	135	02/12/2021	8:00	0.9	22.5	03/12/2021	8:00	0.4	112.5	04/12/2021	8:00	0.9	67.5
01/12/2021	9:00	0.9	225	02/12/2021	9:00	0.9	180	03/12/2021	9:00	0.4	112.5	04/12/2021	9:00	0.4	112.5
01/12/2021	10:00	0.4	225	02/12/2021	10:00	0.9	270	03/12/2021	10:00	0.9	135	04/12/2021	10:00	0.9	90
01/12/2021	11:00	0.4	202.5	02/12/2021	11:00	0.9	292.5	03/12/2021	11:00	0.4	135	04/12/2021	11:00	0.4	337.5
01/12/2021	12:00	1.3	247.5	02/12/2021	12:00	0.4	270	03/12/2021	12:00	0.4	247.5	04/12/2021	12:00	0.9	247.5
01/12/2021	13:00	1.3	247.5	02/12/2021	13:00	0.9	112.5	03/12/2021	13:00	0.9	315	04/12/2021	13:00	0.9	22.5
01/12/2021	14:00	0.9	225	02/12/2021	14:00	0.4	180	03/12/2021	14:00	0	22.5	04/12/2021	14:00	0.4	225
01/12/2021	15:00	1.3	247.5	02/12/2021	15:00	0.9	112.5	03/12/2021	15:00	1.3	112.5	04/12/2021	15:00	0.9	112.5
01/12/2021	16:00	1.3	247.5	02/12/2021	16:00	1.3	112.5	03/12/2021	16:00	2.2	67.5	04/12/2021	16:00	0.4	67.5
01/12/2021	17:00	0.4	135	02/12/2021	17:00	1.3	112.5	03/12/2021	17:00	1.8	22.5	04/12/2021	17:00	0.9	22.5
01/12/2021	18:00	0.4	135	02/12/2021	18:00	0.9	112.5	03/12/2021	18:00	1.8	67.5	04/12/2021	18:00	1.3	45
01/12/2021	19:00	0.4	112.5	02/12/2021	19:00	0.9	135	03/12/2021	19:00	0.9	315	04/12/2021	19:00	1.3	22.5
01/12/2021	20:00	0.9	112.5	02/12/2021	20:00	0.9	135	03/12/2021	20:00	1.3	270	04/12/2021	20:00	0.4	337.5
01/12/2021	21:00	0.9	112.5	02/12/2021	21:00	0.9	247.5	03/12/2021	21:00	1.3	315	04/12/2021	21:00	0.4	225
01/12/2021	22:00	0.9	202.5	02/12/2021	22:00	0.4	225	03/12/2021	22:00	1.3	135	04/12/2021	22:00	1.3	292.5
01/12/2021	23:00	0.9	202.5	02/12/2021	23:00	0.4	180	03/12/2021	23:00	1.3	135	04/12/2021	23:00	0.4	337.5

Date	Time	Wind Speed (m/s)	Wind Direction												
05/12/2021	0:00	0.9	270	06/12/2021	0:00	0.9	45	07/12/2021	0:00	1.8	112.5	08/12/2021	0:00	1.3	112.5
05/12/2021	1:00	0.9	22.5	06/12/2021	1:00	0.9	45	07/12/2021	1:00	0.9	337.5	08/12/2021	1:00	1.3	112.5
05/12/2021	2:00	0.9	112.5	06/12/2021	2:00	0.9	45	07/12/2021	2:00	1.3	22.5	08/12/2021	2:00	1.3	112.5
05/12/2021	3:00	0.9	22.5	06/12/2021	3:00	0.4	90	07/12/2021	3:00	0.9	112.5	08/12/2021	3:00	0.9	112.5
05/12/2021	4:00	0.9	247.5	06/12/2021	4:00	0.4	45	07/12/2021	4:00	0.9	67.5	08/12/2021	4:00	0.9	112.5
05/12/2021	5:00	0.9	112.5	06/12/2021	5:00	0.4	90	07/12/2021	5:00	1.3	90	08/12/2021	5:00	0.9	90
05/12/2021	6:00	1.8	337.5	06/12/2021	6:00	0.9	202.5	07/12/2021	6:00	0.9	22.5	08/12/2021	6:00	0.9	90
05/12/2021	7:00	1.8	45	06/12/2021	7:00	0.9	337.5	07/12/2021	7:00	0.9	67.5	08/12/2021	7:00	1.3	112.5
05/12/2021	8:00	1.8	45	06/12/2021	8:00	0.4	112.5	07/12/2021	8:00	0.4	112.5	08/12/2021	8:00	1.3	112.5
05/12/2021	9:00	1.8	45	06/12/2021	9:00	0.4	112.5	07/12/2021	9:00	0.9	45	08/12/2021	9:00	0.9	135
05/12/2021	10:00	2.2	67.5	06/12/2021	10:00	0.9	112.5	07/12/2021	10:00	0.9	112.5	08/12/2021	10:00	0.9	112.5
05/12/2021	11:00	0.9	270	06/12/2021	11:00	0.9	45	07/12/2021	11:00	0.4	292.5	08/12/2021	11:00	0.4	112.5
05/12/2021	12:00	0.9	45	06/12/2021	12:00	0.9	45	07/12/2021	12:00	0.9	112.5	08/12/2021	12:00	0.9	112.5
05/12/2021	13:00	0.9	90	06/12/2021	13:00	0.9	45	07/12/2021	13:00	1.3	90	08/12/2021	13:00	1.3	247.5
05/12/2021	14:00	1.3	67.5	06/12/2021	14:00	1.3	225	07/12/2021	14:00	1.8	90	08/12/2021	14:00	1.3	247.5
05/12/2021	15:00	0.9	67.5	06/12/2021	15:00	1.3	247.5	07/12/2021	15:00	1.8	45	08/12/2021	15:00	0.9	247.5
05/12/2021	16:00	0.4	45	06/12/2021	16:00	0.9	202.5	07/12/2021	16:00	2.2	67.5	08/12/2021	16:00	0.9	247.5
05/12/2021	17:00	0.9	112.5	06/12/2021	17:00	0.9	202.5	07/12/2021	17:00	2.2	90	08/12/2021	17:00	0.9	247.5
05/12/2021	18:00	0.9	67.5	06/12/2021	18:00	0.4	247.5	07/12/2021	18:00	2.2	67.5	08/12/2021	18:00	1.3	247.5
05/12/2021	19:00	0.4	67.5	06/12/2021	19:00	0.4	247.5	07/12/2021	19:00	1.8	67.5	08/12/2021	19:00	1.8	247.5
05/12/2021	20:00	0.9	337.5	06/12/2021	20:00	0.4	247.5	07/12/2021	20:00	2.2	112.5	08/12/2021	20:00	1.8	270
05/12/2021	21:00	0.9	90	06/12/2021	21:00	0.4	225	07/12/2021	21:00	2.2	90	08/12/2021	21:00	1.8	225
05/12/2021	22:00	1.3	45	06/12/2021	22:00	0.4	202.5	07/12/2021	22:00	0.9	112.5	08/12/2021	22:00	0.9	247.5
05/12/2021	23:00	0.9	67.5	06/12/2021	23:00	0.4	225	07/12/2021	23:00	1.3	67.5	08/12/2021	23:00	1.3	247.5

Date	Time	Wind Speed (m/s)	Wind Direction												
09/12/2021	0:00	0.9	112.5	10/12/2021	0:00	1.8	90	11/12/2021	0:00	0.9	292.5	12/12/2021	0:00	1.3	247.5
09/12/2021	1:00	1.8	247.5	10/12/2021	1:00	0.9	112.5	11/12/2021	1:00	0.9	292.5	12/12/2021	1:00	1.3	292.5
09/12/2021	2:00	1.8	90	10/12/2021	2:00	1.8	67.5	11/12/2021	2:00	1.3	292.5	12/12/2021	2:00	0.9	157.5
09/12/2021	3:00	0.9	112.5	10/12/2021	3:00	1.3	112.5	11/12/2021	3:00	0.9	225	12/12/2021	3:00	0.9	247.5
09/12/2021	4:00	1.8	67.5	10/12/2021	4:00	0.4	112.5	11/12/2021	4:00	0.9	247.5	12/12/2021	4:00	1.3	225
09/12/2021	5:00	1.3	112.5	10/12/2021	5:00	1.3	90	11/12/2021	5:00	0.9	270	12/12/2021	5:00	1.3	45
09/12/2021	6:00	0.4	112.5	10/12/2021	6:00	1.8	90	11/12/2021	6:00	0.9	112.5	12/12/2021	6:00	1.8	337.5
09/12/2021	7:00	1.3	90	10/12/2021	7:00	1.3	112.5	11/12/2021	7:00	0.9	22.5	12/12/2021	7:00	1.3	247.5
09/12/2021	8:00	1.8	90	10/12/2021	8:00	1.8	225	11/12/2021	8:00	0.9	202.5	12/12/2021	8:00	1.3	247.5
09/12/2021	9:00	1.3	112.5	10/12/2021	9:00	1.3	135	11/12/2021	9:00	0.9	45	12/12/2021	9:00	1.3	247.5
09/12/2021	10:00	1.8	225	10/12/2021	10:00	1.8	90	11/12/2021	10:00	0.4	67.5	12/12/2021	10:00	1.3	225
09/12/2021	11:00	1.3	135	10/12/2021	11:00	1.3	270	11/12/2021	11:00	0.9	45	12/12/2021	11:00	1.3	270
09/12/2021	12:00	1.3	112.5	10/12/2021	12:00	1.3	90	11/12/2021	12:00	0.4	337.5	12/12/2021	12:00	1.3	247.5
09/12/2021	13:00	1.3	135	10/12/2021	13:00	1.3	45	11/12/2021	13:00	0.9	315	12/12/2021	13:00	1.3	292.5
09/12/2021	14:00	1.8	67.5	10/12/2021	14:00	1.3	45	11/12/2021	14:00	0.4	112.5	12/12/2021	14:00	1.3	112.5
09/12/2021	15:00	0.9	45	10/12/2021	15:00	1.8	45	11/12/2021	15:00	0.4	90	12/12/2021	15:00	1.3	112.5
09/12/2021	16:00	0.9	45	10/12/2021	16:00	1.8	45	11/12/2021	16:00	0.4	135	12/12/2021	16:00	0.9	157.5
09/12/2021	17:00	1.8	90	10/12/2021	17:00	1.3	270	11/12/2021	17:00	0.4	67.5	12/12/2021	17:00	0.9	135
09/12/2021	18:00	1.8	67.5	10/12/2021	18:00	1.3	90	11/12/2021	18:00	0.9	112.5	12/12/2021	18:00	0.9	90
09/12/2021	19:00	1.3	67.5	10/12/2021	19:00	1.3	45	11/12/2021	19:00	0.9	112.5	12/12/2021	19:00	1.3	112.5
09/12/2021	20:00	1.3	90	10/12/2021	20:00	1.3	45	11/12/2021	20:00	1.3	135	12/12/2021	20:00	1.3	112.5
09/12/2021	21:00	0.9	67.5	10/12/2021	21:00	1.8	45	11/12/2021	21:00	1.3	90	12/12/2021	21:00	0.9	112.5
09/12/2021	22:00	0.9	67.5	10/12/2021	22:00	1.8	45	11/12/2021	22:00	1.3	112.5	12/12/2021	22:00	0.9	90
09/12/2021	23:00	0.9	90	10/12/2021	23:00	1.3	270	11/12/2021	23:00	1.3	112.5	12/12/2021	23:00	1.3	112.5

Date	Time	Wind Speed (m/s)	Wind Direction												
13/12/2021	0:00	1.8	90	14/12/2021	0:00	0.9	90	15/12/2021	0:00	0.9	90	16/12/2021	0:00	0.9	45
13/12/2021	1:00	1.3	337.5	14/12/2021	1:00	0.9	112.5	15/12/2021	1:00	0.9	90	16/12/2021	1:00	0.4	225
13/12/2021	2:00	1.8	135	14/12/2021	2:00	0.9	112.5	15/12/2021	2:00	0.9	90	16/12/2021	2:00	0.4	292.5
13/12/2021	3:00	1.8	67.5	14/12/2021	3:00	0.9	112.5	15/12/2021	3:00	0.4	112.5	16/12/2021	3:00	0.4	180
13/12/2021	4:00	1.3	135	14/12/2021	4:00	0.9	112.5	15/12/2021	4:00	0.4	112.5	16/12/2021	4:00	0.4	157.5
13/12/2021	5:00	0.9	292.5	14/12/2021	5:00	1.3	112.5	15/12/2021	5:00	0.9	112.5	16/12/2021	5:00	0.4	135
13/12/2021	6:00	0.9	247.5	14/12/2021	6:00	0.9	135	15/12/2021	6:00	0.9	112.5	16/12/2021	6:00	0.4	135
13/12/2021	7:00	0.9	45	14/12/2021	7:00	0.4	112.5	15/12/2021	7:00	0.4	90	16/12/2021	7:00	1.3	135
13/12/2021	8:00	0.9	247.5	14/12/2021	8:00	0.9	135	15/12/2021	8:00	0.9	90	16/12/2021	8:00	0.4	135
13/12/2021	9:00	1.3	337.5	14/12/2021	9:00	0.9	135	15/12/2021	9:00	1.8	112.5	16/12/2021	9:00	0.9	247.5
13/12/2021	10:00	0.9	45	14/12/2021	10:00	0.4	135	15/12/2021	10:00	1.8	112.5	16/12/2021	10:00	0.9	202.5
13/12/2021	11:00	1.8	90	14/12/2021	11:00	0.9	135	15/12/2021	11:00	2.2	112.5	16/12/2021	11:00	0.9	45
13/12/2021	12:00	1.3	337.5	14/12/2021	12:00	0.9	247.5	15/12/2021	12:00	1.8	90	16/12/2021	12:00	0.4	90
13/12/2021	13:00	1.8	135	14/12/2021	13:00	1.3	247.5	15/12/2021	13:00	0.9	67.5	16/12/2021	13:00	0.4	112.5
13/12/2021	14:00	1.8	67.5	14/12/2021	14:00	0.9	247.5	15/12/2021	14:00	0.9	157.5	16/12/2021	14:00	0.9	112.5
13/12/2021	15:00	0.9	112.5	14/12/2021	15:00	0.9	112.5	15/12/2021	15:00	0.9	22.5	16/12/2021	15:00	0.9	112.5
13/12/2021	16:00	1.8	90	14/12/2021	16:00	0.9	90	15/12/2021	16:00	1.3	135	16/12/2021	16:00	0.9	112.5
13/12/2021	17:00	1.3	112.5	14/12/2021	17:00	0.9	90	15/12/2021	17:00	1.3	90	16/12/2021	17:00	0.9	157.5
13/12/2021	18:00	0.4	135	14/12/2021	18:00	1.8	112.5	15/12/2021	18:00	1.8	247.5	16/12/2021	18:00	0.9	157.5
13/12/2021	19:00	1.3	135	14/12/2021	19:00	1.8	112.5	15/12/2021	19:00	1.3	22.5	16/12/2021	19:00	0.9	180
13/12/2021	20:00	1.3	112.5	14/12/2021	20:00	1.3	112.5	15/12/2021	20:00	0.9	90	16/12/2021	20:00	0.4	180
13/12/2021	21:00	1.8	90	14/12/2021	21:00	1.3	90	15/12/2021	21:00	1.3	22.5	16/12/2021	21:00	0.9	247.5
13/12/2021	22:00	0.9	112.5	14/12/2021	22:00	0.4	112.5	15/12/2021	22:00	0.9	315	16/12/2021	22:00	0.4	247.5
13/12/2021	23:00	0.9	67.5	14/12/2021	23:00	0.9	112.5	15/12/2021	23:00	0.9	90	16/12/2021	23:00	0.4	67.5

Date	Time	Wind Speed (m/s)	Wind Direction												
17/12/2021	0:00	0.9	112.5	18/12/2021	0:00	0.4	112.5	19/12/2021	0:00	1.3	247.5	20/12/2021	0:00	0.9	112.5
17/12/2021	1:00	0.4	112.5	18/12/2021	1:00	0.4	112.5	19/12/2021	1:00	0.9	247.5	20/12/2021	1:00	0.9	157.5
17/12/2021	2:00	0.9	112.5	18/12/2021	2:00	0.4	112.5	19/12/2021	2:00	1.3	247.5	20/12/2021	2:00	0.9	135
17/12/2021	3:00	0.9	90	18/12/2021	3:00	0.4	90	19/12/2021	3:00	1.3	157.5	20/12/2021	3:00	1.3	135
17/12/2021	4:00	0.9	112.5	18/12/2021	4:00	1.3	22.5	19/12/2021	4:00	1.3	180	20/12/2021	4:00	0.9	112.5
17/12/2021	5:00	0.9	112.5	18/12/2021	5:00	1.3	22.5	19/12/2021	5:00	0.9	225	20/12/2021	5:00	0.9	112.5
17/12/2021	6:00	1.3	112.5	18/12/2021	6:00	1.8	270	19/12/2021	6:00	0.9	225	20/12/2021	6:00	0.9	112.5
17/12/2021	7:00	1.3	135	18/12/2021	7:00	1.8	135	19/12/2021	7:00	1.3	225	20/12/2021	7:00	0.9	112.5
17/12/2021	8:00	0.9	112.5	18/12/2021	8:00	1.8	22.5	19/12/2021	8:00	0.9	202.5	20/12/2021	8:00	0.4	112.5
17/12/2021	9:00	1.3	90	18/12/2021	9:00	0.9	292.5	19/12/2021	9:00	0.4	180	20/12/2021	9:00	0.4	112.5
17/12/2021	10:00	0.9	112.5	18/12/2021	10:00	0.9	90	19/12/2021	10:00	0.4	247.5	20/12/2021	10:00	0.9	112.5
17/12/2021	11:00	1.3	112.5	18/12/2021	11:00	1.8	22.5	19/12/2021	11:00	0.4	247.5	20/12/2021	11:00	0.9	112.5
17/12/2021	12:00	0.9	112.5	18/12/2021	12:00	0.4	112.5	19/12/2021	12:00	0.9	112.5	20/12/2021	12:00	0.9	22.5
17/12/2021	13:00	0.9	112.5	18/12/2021	13:00	1.3	112.5	19/12/2021	13:00	0.9	90	20/12/2021	13:00	0.4	67.5
17/12/2021	14:00	1.3	112.5	18/12/2021	14:00	1.8	112.5	19/12/2021	14:00	0.9	247.5	20/12/2021	14:00	1.3	337.5
17/12/2021	15:00	1.3	135	18/12/2021	15:00	2.2	135	19/12/2021	15:00	1.3	247.5	20/12/2021	15:00	1.8	22.5
17/12/2021	16:00	0.9	112.5	18/12/2021	16:00	1.3	157.5	19/12/2021	16:00	1.3	157.5	20/12/2021	16:00	0.9	112.5
17/12/2021	17:00	0.9	112.5	18/12/2021	17:00	1.8	112.5	19/12/2021	17:00	1.8	135	20/12/2021	17:00	1.3	135
17/12/2021	18:00	0.9	112.5	18/12/2021	18:00	1.3	135	19/12/2021	18:00	1.3	135	20/12/2021	18:00	0.9	112.5
17/12/2021	19:00	0.4	112.5	18/12/2021	19:00	1.8	112.5	19/12/2021	19:00	1.3	135	20/12/2021	19:00	1.3	112.5
17/12/2021	20:00	0.4	112.5	18/12/2021	20:00	1.3	90	19/12/2021	20:00	0.9	112.5	20/12/2021	20:00	1.3	112.5
17/12/2021	21:00	0.4	112.5	18/12/2021	21:00	1.3	90	19/12/2021	21:00	0.9	90	20/12/2021	21:00	1.8	112.5
17/12/2021	22:00	0.9	112.5	18/12/2021	22:00	1.3	112.5	19/12/2021	22:00	0.9	247.5	20/12/2021	22:00	1.3	90
17/12/2021	23:00	0.9	112.5	18/12/2021	23:00	0.4	112.5	19/12/2021	23:00	1.3	247.5	20/12/2021	23:00	0.9	112.5

Date	Time	Wind Speed (m/s)	Wind Direction												
21/12/2021	0:00	0.4	90	22/12/2021	0:00	1.3	112.5	23/12/2021	0:00	0.9	112.5	24/12/2021	0:00	0.4	112.5
21/12/2021	1:00	0.4	112.5	22/12/2021	1:00	1.3	135	23/12/2021	1:00	0.9	112.5	24/12/2021	1:00	0.4	112.5
21/12/2021	2:00	0.4	112.5	22/12/2021	2:00	0.9	157.5	23/12/2021	2:00	0.9	270	24/12/2021	2:00	0.4	135
21/12/2021	3:00	0.9	112.5	22/12/2021	3:00	0.9	135	23/12/2021	3:00	1.3	270	24/12/2021	3:00	0.9	112.5
21/12/2021	4:00	0.9	112.5	22/12/2021	4:00	0.9	135	23/12/2021	4:00	0.9	135	24/12/2021	4:00	0.9	67.5
21/12/2021	5:00	0.9	90	22/12/2021	5:00	0.9	90	23/12/2021	5:00	0.9	112.5	24/12/2021	5:00	0.9	112.5
21/12/2021	6:00	1.3	112.5	22/12/2021	6:00	1.3	90	23/12/2021	6:00	1.3	112.5	24/12/2021	6:00	0.9	112.5
21/12/2021	7:00	0.9	135	22/12/2021	7:00	0.9	135	23/12/2021	7:00	1.8	90	24/12/2021	7:00	0.9	90
21/12/2021	8:00	0.9	135	22/12/2021	8:00	1.8	247.5	23/12/2021	8:00	1.8	112.5	24/12/2021	8:00	0.9	90
21/12/2021	9:00	1.3	157.5	22/12/2021	9:00	1.3	247.5	23/12/2021	9:00	1.3	112.5	24/12/2021	9:00	1.3	67.5
21/12/2021	10:00	0.4	90	22/12/2021	10:00	1.3	112.5	23/12/2021	10:00	1.3	135	24/12/2021	10:00	1.3	112.5
21/12/2021	11:00	0.4	112.5	22/12/2021	11:00	0.4	135	23/12/2021	11:00	0.9	112.5	24/12/2021	11:00	1.3	90
21/12/2021	12:00	0.9	270	22/12/2021	12:00	0.4	225	23/12/2021	12:00	0.4	315	24/12/2021	12:00	0.4	112.5
21/12/2021	13:00	0.9	225	22/12/2021	13:00	0.9	225	23/12/2021	13:00	0.4	270	24/12/2021	13:00	0.4	112.5
21/12/2021	14:00	0.9	45	22/12/2021	14:00	0.4	225	23/12/2021	14:00	0.9	112.5	24/12/2021	14:00	0.4	135
21/12/2021	15:00	0.4	112.5	22/12/2021	15:00	0.9	247.5	23/12/2021	15:00	0.9	292.5	24/12/2021	15:00	0.4	135
21/12/2021	16:00	0.4	90	22/12/2021	16:00	0.9	247.5	23/12/2021	16:00	1.8	22.5	24/12/2021	16:00	0.4	112.5
21/12/2021	17:00	0.9	112.5	22/12/2021	17:00	0.9	67.5	23/12/2021	17:00	1.3	90	24/12/2021	17:00	0.4	135
21/12/2021	18:00	0.9	90	22/12/2021	18:00	1.3	180	23/12/2021	18:00	0.4	315	24/12/2021	18:00	0.9	135
21/12/2021	19:00	0.9	112.5	22/12/2021	19:00	0.9	135	23/12/2021	19:00	0.4	270	24/12/2021	19:00	0.4	112.5
21/12/2021	20:00	0.9	90	22/12/2021	20:00	0.9	112.5	23/12/2021	20:00	0.4	292.5	24/12/2021	20:00	0.4	135
21/12/2021	21:00	0.9	112.5	22/12/2021	21:00	0.4	135	23/12/2021	21:00	0.4	247.5	24/12/2021	21:00	0.9	112.5
21/12/2021	22:00	0.9	270	22/12/2021	22:00	0.4	225	23/12/2021	22:00	0.4	225	24/12/2021	22:00	0.9	112.5
21/12/2021	23:00	0.9	225	22/12/2021	23:00	0.9	225	23/12/2021	23:00	0.4	90	24/12/2021	23:00	0.4	135

Date	Time	Wind Speed (m/s)	Wind Direction												
25/12/2021	0:00	0.9	112.5	26/12/2021	0:00	1.3	67.5	27/12/2021	0:00	0.4	112.5	28/12/2021	0:00	0.9	247.5
25/12/2021	1:00	1.3	112.5	26/12/2021	1:00	1.8	45	27/12/2021	1:00	0.4	112.5	28/12/2021	1:00	0.9	225
25/12/2021	2:00	1.3	112.5	26/12/2021	2:00	1.3	112.5	27/12/2021	2:00	0.4	112.5	28/12/2021	2:00	0.9	247.5
25/12/2021	3:00	1.3	112.5	26/12/2021	3:00	1.3	112.5	27/12/2021	3:00	0.9	135	28/12/2021	3:00	0.9	225
25/12/2021	4:00	1.3	112.5	26/12/2021	4:00	1.3	135	27/12/2021	4:00	0.9	135	28/12/2021	4:00	0.9	247.5
25/12/2021	5:00	1.3	112.5	26/12/2021	5:00	1.3	112.5	27/12/2021	5:00	1.3	112.5	28/12/2021	5:00	0.9	270
25/12/2021	6:00	1.3	112.5	26/12/2021	6:00	2.2	112.5	27/12/2021	6:00	0.9	112.5	28/12/2021	6:00	0.9	270
25/12/2021	7:00	0.9	112.5	26/12/2021	7:00	1.8	45	27/12/2021	7:00	0.9	112.5	28/12/2021	7:00	0.9	270
25/12/2021	8:00	0.9	112.5	26/12/2021	8:00	2.2	90	27/12/2021	8:00	1.8	112.5	28/12/2021	8:00	0.9	247.5
25/12/2021	9:00	1.3	90	26/12/2021	9:00	2.2	90	27/12/2021	9:00	1.8	112.5	28/12/2021	9:00	0.9	225
25/12/2021	10:00	0.4	112.5	26/12/2021	10:00	1.3	67.5	27/12/2021	10:00	0.4	112.5	28/12/2021	10:00	0.9	247.5
25/12/2021	11:00	1.3	112.5	26/12/2021	11:00	1.8	45	27/12/2021	11:00	0.4	112.5	28/12/2021	11:00	0.4	225
25/12/2021	12:00	0.9	112.5	26/12/2021	12:00	1.3	112.5	27/12/2021	12:00	0.4	315	28/12/2021	12:00	0.9	225
25/12/2021	13:00	1.3	90	26/12/2021	13:00	0.9	112.5	27/12/2021	13:00	0.4	22.5	28/12/2021	13:00	0.9	225
25/12/2021	14:00	1.3	90	26/12/2021	14:00	0.4	112.5	27/12/2021	14:00	0.4	90	28/12/2021	14:00	0.4	225
25/12/2021	15:00	1.3	90	26/12/2021	15:00	0.4	112.5	27/12/2021	15:00	0.9	67.5	28/12/2021	15:00	0.4	247.5
25/12/2021	16:00	1.3	112.5	26/12/2021	16:00	0.9	112.5	27/12/2021	16:00	1.3	247.5	28/12/2021	16:00	1.8	270
25/12/2021	17:00	1.3	135	26/12/2021	17:00	1.3	112.5	27/12/2021	17:00	1.8	90	28/12/2021	17:00	0.4	247.5
25/12/2021	18:00	1.8	112.5	26/12/2021	18:00	1.3	112.5	27/12/2021	18:00	1.8	112.5	28/12/2021	18:00	0.4	247.5
25/12/2021	19:00	1.3	112.5	26/12/2021	19:00	0.9	90	27/12/2021	19:00	1.3	90	28/12/2021	19:00	0.9	247.5
25/12/2021	20:00	0.9	112.5	26/12/2021	20:00	0.9	112.5	27/12/2021	20:00	1.3	112.5	28/12/2021	20:00	0.4	225
25/12/2021	21:00	0.9	135	26/12/2021	21:00	1.8	135	27/12/2021	21:00	1.3	112.5	28/12/2021	21:00	0.9	112.5
25/12/2021	22:00	1.8	112.5	26/12/2021	22:00	1.3	90	27/12/2021	22:00	1.3	247.5	28/12/2021	22:00	0.4	135
25/12/2021	23:00	1.3	90	26/12/2021	23:00	1.8	90	27/12/2021	23:00	1.3	247.5	28/12/2021	23:00	0.9	45

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
29/12/2021	0:00	1.3	45	30/12/2021	0:00	0.9	112.5	31/12/2021	0:00	0.9	90				
29/12/2021	1:00	1.3	45	30/12/2021	1:00	0.4	90	31/12/2021	1:00	0.4	67.5				
29/12/2021	2:00	1.3	45	30/12/2021	2:00	0.9	90	31/12/2021	2:00	0.4	45				
29/12/2021	3:00	1.3	45	30/12/2021	3:00	1.3	90	31/12/2021	3:00	0.4	112.5				
29/12/2021	4:00	0.9	45	30/12/2021	4:00	1.8	90	31/12/2021	4:00	0.4	180				
29/12/2021	5:00	0.9	22.5	30/12/2021	5:00	1.3	135	31/12/2021	5:00	0.4	270				
29/12/2021	6:00	0.9	247.5	30/12/2021	6:00	0.9	67.5	31/12/2021	6:00	0.4	45				
29/12/2021	7:00	1.3	22.5	30/12/2021	7:00	0.9	45	31/12/2021	7:00	0.9	45				
29/12/2021	8:00	0.9	22.5	30/12/2021	8:00	0.4	67.5	31/12/2021	8:00	0.9	90				
29/12/2021	9:00	0.9	225	30/12/2021	9:00	0.9	112.5	31/12/2021	9:00	0.4	45				
29/12/2021	10:00	1.3	45	30/12/2021	10:00	0.4	135	31/12/2021	10:00	0.4	135				
29/12/2021	11:00	1.3	45	30/12/2021	11:00	0.4	90	31/12/2021	11:00	0.9	247.5				
29/12/2021	12:00	0.4	225	30/12/2021	12:00	0.4	112.5	31/12/2021	12:00	1.3	90				
29/12/2021	13:00	0.4	270	30/12/2021	13:00	0.4	90	31/12/2021	13:00	1.3	112.5				
29/12/2021	14:00	0.4	247.5	30/12/2021	14:00	0.4	67.5	31/12/2021	14:00	1.3	112.5				
29/12/2021	15:00	0.4	247.5	30/12/2021	15:00	0.4	90	31/12/2021	15:00	1.3	112.5				
29/12/2021	16:00	0.9	180	30/12/2021	16:00	0.4	90	31/12/2021	16:00	1.3	112.5				
29/12/2021	17:00	0.9	157.5	30/12/2021	17:00	0.4	135	31/12/2021	17:00	2.2	112.5				
29/12/2021	18:00	0.4	112.5	30/12/2021	18:00	0.9	135	31/12/2021	18:00	1.8	112.5				
29/12/2021	19:00	0.4	135	30/12/2021	19:00	0.9	135	31/12/2021	19:00	1.8	112.5				
29/12/2021	20:00	1.3	135	30/12/2021	20:00	1.3	112.5	31/12/2021	20:00	1.8	112.5				
29/12/2021	21:00	1.3	67.5	30/12/2021	21:00	1.3	112.5	31/12/2021	21:00	0.9	67.5				
29/12/2021	22:00	1.3	45	30/12/2021	22:00	0.4	112.5	31/12/2021	22:00	1.3	90				
29/12/2021	23:00	0.9	247.5	30/12/2021	23:00	0.4	112.5	31/12/2021	23:00	1.3	112.5				

Appendix $G-24$ -hr TSP monitoring results and graphical presentation	l

Location: AM2(A) – Ng Wah Catholic Secondary School

Start Date Weather		Air Temp.	Atmospheric Pressure	Filter we	Titter weight (g)		Elapse	Time	Sampling Time	Flow Rate (cfm)		Av. Flow	Total vol.	Conc.
		$(^{\circ}\mathbb{C})$	(hPa)	Initial	Final	weight (g)	Initial	Final	(min)	Initial	Final	(m <sup>3</sup> /min)	$(m^3)$	$(\mu g/m^3)$
2/12/2021	Sunny	22.3	1021.8	15.3602	15.5202	0.1600	6337.1	6361.1	1440	50	50	1.41	2033	79
8/12/2021	Sunny	21.8	1022.3	15.3784	15.5808	0.2024	6361.91	6385.92	1441	50	50	1.41	2036	99
14/12/2021	Sunny	18.0	1018.6	15.4902	15.6016	0.1114	6386.65	6410.66	1441	50	50	1.42	2046	54
20/12/2021	Cloudy	19.6	1017.6	17.8311	17.8817	0.0506	6410.92	6434.92	1440	50	50	1.42	2039	25
24/12/2021	Sunny	24.0	1017.2	15.2038	15.3503	0.1465	6436.17	6460.18	1441	50	50	1.40	2024	72
30/12/2021	Sunny	16.0	1024.6	15.5423	15.7562	0.2139	6461.26	6485.26	1440	50	50	1.43	2059	104
												Maxim	num	104
												Minim	um	25

Maximum104Minimum25Average72Action Level175Limit Level260

Location: AM3 – Sky Tower

Start Date Weather		Air Temp.			Filter weight (g)		Elapse Time		Sampling Flow Cff			Av. Flow	Total vol.	Conc.
		(℃)	(hPa)	Initial	Final	weight (g)	Initial	Final	(min)	Initial	Final	(m³/min)	$(m^3)$	$(\mu g/m^3)$
2/12/2021	Sunny	22.3	1021.8	14.9987	15.1613	0.1626	3805.07	3829.09	1441	54	54	1.54	2219	73
8/12/2021	Sunny	21.8	1022.3	18.3744	18.5243	0.1499	3830.24	3854.26	1441	46	46	1.31	1888	79
14/12/2021	Sunny	18.0	1018.6	18.3034	18.4651	0.1617	3855.09	3879.11	1441	46	46	1.32	1897	85
20/12/2021	Cloudy	19.6	1017.6	14.9824	15.0357	0.0533	3880.52	3904.55	1442	50	50	1.43	2058	26
24/12/2021	Sunny	24.0	1017.2	17.5981	17.7878	0.1897	3905.81	3929.83	1441	50	50	1.42	2042	93
30/12/2021	Sunny	16.0	1024.6	15.4292	15.6127	0.1835	3930.19	3954.21	1441	48	48	1.38	1993	92
												3.4		0.2

 Maximum
 93

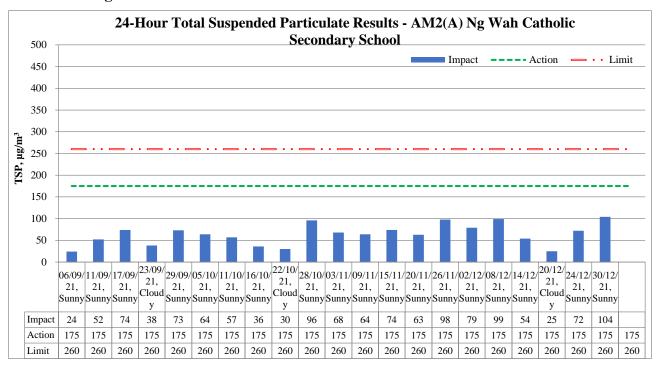
 Minimum
 26

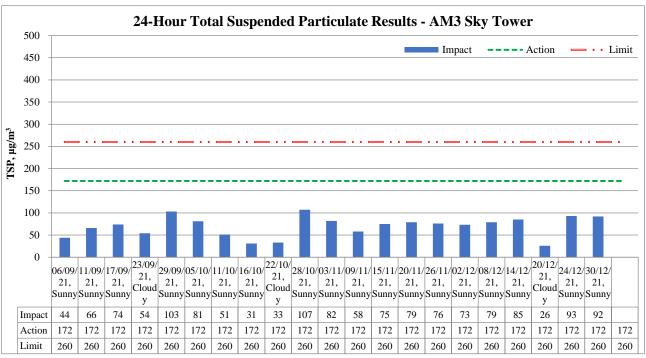
 Average
 75

 Action Level
 172

 Limit Level
 260

### 24-hour average TSP





		Reportin	g Period	
Major Construction Activities	Sept	Oct	Nov	Dec
	2021	2021	2021	2021
Construction of box culvert	✓	✓	✓	
Bored pile works for landscape elevated walkway	✓	✓	✓	✓
Demolition of existing structure and cottage	✓			
Construction of project signboard	✓			
Pre-drilling works and trial pit excavation	✓	✓	✓	
Drainage works	✓			
Temporary road diversion at Sa Po Road		✓	✓	
Demolition of existing structure at SB-01		✓		
Pre-drilling work for S14 and KS10		✓		
Drainage works for Pedestrian Street No.1 & No.2		✓	✓	
Drainage works for Crowd Dispersal Route		✓	✓	
Instrumentation installation at SB-01			✓	<b>✓</b>
Pre-drilling work for S14			✓	✓
Removal existing piles at Road D1			✓	✓
Rising main construction			✓	<b>✓</b>
Trial pit excavation				✓
Advance works for traffic diversion at Sa Po Road				✓
Drainage works for Pedestrian Street No.1, No,2 & No.3				✓
Construction of Crowd Dispersal Route				<b>√</b>

	Reporting Period					
Factors might affect the monitoring results	Sept	Oct	Nov	Dec		
	2021	2021	2021	2021		
Non-project related construction activities in the adjacent construction sites were observed.	✓	✓	✓	<b>✓</b>		

Appendix H – 1-hr TSP monitoring results and graphical pre	esentation

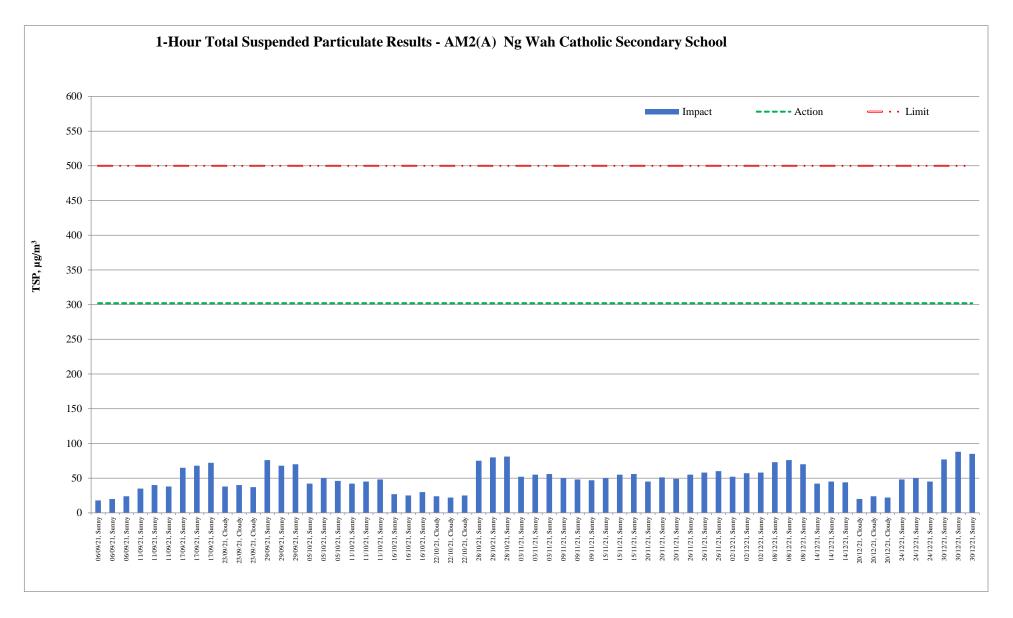
Location:
AM2(A) Ng Wah Catholic
Secondary School

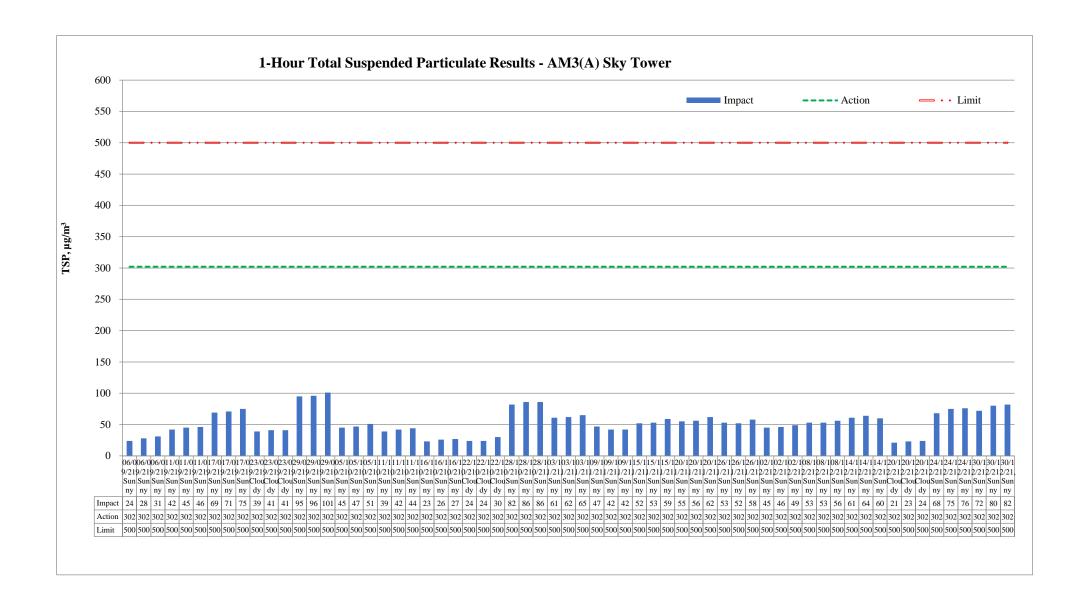
Date		sure eric	ment od	1-hr TSP concentration, μg/m <sup>3</sup>	Weather			
	13:00	-	14:00	52				
03/12/2021	14:00	-	15:00	57	Sunny			
	15:00	-	16:00	58				
	09:00	-	10:00	73				
08/12/2021	10:00	-	11:00	76	Sunny			
	11:00	-	12:00	70				
	13:00	-	14:00	42				
14/12/2021	14:00	-	15:00	45	Sunny			
	15:00	-	16:00	44				
	09:00	-	10:00	20				
20/12/2021	10:00	-	11:00	24	Cloudy			
	11:00	-	12:00	22				
	13:00	-	14:00	48				
24/12/2021	14:00	-	15:00	50	Sunny			
	15:00	-	16:00	45				
	09:00	-	10:00	77				
30/12/2021	30/12/2021 10:00			88	Sunny			
11:00			12:00	85				
M	laximum			88				
N	Iinimum			20				
. A	Average			54				
Act	tion Level	l		302				
Li	mit Level			500				

Location:
AM3 Sky Tower

Date		sure eric	ment	1-hr TSP concentration, μg/m <sup>3</sup>	Weather			
	09:00	-	10:00	45				
03/12/2021	10:00	-	11:00	46	Sunny			
	11:00	-	12:00	49				
	13:00	-	14:00	53				
08/12/2021	14:00	-	15:00	53	Sunny			
	15:00	-	16:00	56				
	09:00	-	10:00	61				
14/12/2021	10:00	-	11:00	64	Sunny			
	11:00	-	12:00	60				
	13:00	-	14:00	21				
20/12/2021	14:00	-	15:00	23	Cloudy			
	15:00	-	16:00	24				
	13:00	-	14:00	68				
24/12/2021	14:00	-	15:00	75	Sunny			
	15:00	-	16:00	76				
	09:00	-	10:00	72				
30/12/2021 10:00 -			11:00	80	Sunny			
11:00			12:00	82				
N	laximum			82				
N	Iinimum			21				
	Average			56				
Ac	tion Level	1		301				
Li	mit Level			500				

## 1-hour average TSP





Maior Construction Activities		Reportir	ng Period	
Major Construction Activities	Sept 2021	Oct 2021	Nov 2021	Dec 2021
Construction of box culvert	✓	✓	✓	
Bored pile works for landscape elevated walkway	✓	✓	✓	✓
Demolition of existing structure and cottage	✓			
Construction of project signboard	✓			
Pre-drilling works and trial pit excavation	✓	✓	✓	
Drainage works	✓			
Temporary road diversion at Sa Po Road		✓	✓	
Demolition of existing structure at SB-01		✓		
Pre-drilling work for S14 and KS10		✓		
Drainage works for Pedestrian Street No.1 & No.2		✓	✓	
Drainage works for Crowd Dispersal Route		✓	✓	
Instrumentation installation at SB-01			✓	✓
Pre-drilling work for S14			✓	✓
Removal existing piles at Road D1			✓	✓
Rising main construction			✓	✓
Trial pit excavation				✓
Advance works for traffic diversion at Sa Po Road				<b>√</b>
Drainage works for Pedestrian Street No.1, No,2 & No.3				✓
Construction of Crowd Dispersal Route				<b>√</b>

Factors might affect the monitoring results	Reporting Period			
	Sept 2021	Oct 2021	Nov 2021	Dec 2021
Non-project related construction activities in the adjacent construction sites were observed.	✓	✓	✓	✓

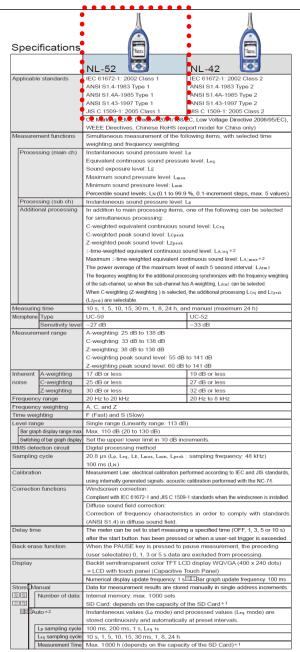
# Appendix I – Event and Action Plan for air quality

T- 4	Action			
Event	ET	IEC	Supervisor / ER	Contractor
Action Level being exceeded by one sampling	<ol> <li>Identify source and investigate the causes of exceedance;</li> <li>Inform Contractor, IEC and Supervisor /ER;</li> <li>Repeat measurement to confirm finding.</li> </ol>	<ol> <li>Check monitoring data submitted by ET;</li> <li>Check Contractor's working method.</li> </ol>	1. Notify Contractor.	<ol> <li>Rectify any unacceptable practice;</li> <li>Amend working methods if appropriate.</li> </ol>
Action Level being exceeded by two or more consecutive sampling	1. Identify source and investigate the causes of exceedance;  2. Inform Contractor, IEC and Supervisor /ER;  3. Increase monitoring frequency to daily;  4. Discuss with IEC and Contractor on remedial actions required;  5. Assess the effectiveness of Contractor's remedial actions;  6. If exceedance continues, arrange meeting with IEC and Supervisor /ER;  7. If exceedance stops, cease	remedial measures; 4. Advise the Supervisor /ER on the effectiveness of the proposed remedial	<ol> <li>Confirm receipt of notification of exceedance in writing;</li> <li>Notify Contractor;</li> <li>In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented;</li> <li>Supervise implementation of remedial measures;</li> <li>Conduct meeting with ET and IEC if exceedance continues.</li> </ol>	<ol> <li>Discuss with ET and IEC on proper remedial actions;</li> <li>Submit proposals for remedial actions to Supervisor /ER and IEC within three working day of notification;</li> <li>Implement the agreed proposals;</li> <li>Amend proposal if appropriate.</li> </ol>
Limit Level being exceeded by one sampling	additional monitoring.  1. Identify source and investigate the causes of exceedance;  2. Inform Contractor, IEC, Supervisor /ER, and EPD;  3. Repeat measurement to confirm finding;  4. Assess effectiveness of	<ol> <li>Check monitoring data submitted by ET;</li> <li>Check Contractor's working method;</li> <li>Discuss possible remedial measures with ET and Contractor;</li> <li>Advise the Supervisor /ER</li> </ol>	Confirm receipt of notification of exceedance in writing;     Notify Contractor;     In consolidation with the IEC, agree with the Contractor on the remedial measures to be	Take immediate action to avoid further exceedance;     Discuss with ET and IEC on proper remedial actions;     Submit proposal for remedial actions to Supervisor /ER and IEC

T. 4	Action			
Event	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.	<ul> <li>implemented;</li> <li>4. Supervise implementation of remedial measures;</li> <li>5. Conduct meeting with ET and IEC if exceedance continues.</li> </ul>	within three working days of notification; 4. Implement the agreed proposals.
Limit Level being exceeded by two or more consecutive sampling	<ol> <li>Notify IEC, Supervisor /ER, Contractor and EPD;</li> <li>Repeat measurement to confirm findings;</li> <li>Carry out analysis of Contractor's working procedures to identify source and investigate the causes of exceedance;</li> <li>Increase monitoring frequency to daily;</li> <li>Arrange meeting with IEC, Supervisor /ER and Contractor to discuss the remedial action to be taken;</li> <li>Assess effectiveness of Contractor's remedial actions and keep EPD, IEC and Supervisor /ER informed of the results;</li> <li>If exceedance stop, cease</li> </ol>	submitted by ET; 2. Check Contractor's working method;	<ol> <li>Confirm receipt of notification of exceedance in writing;</li> <li>Notify Contractor;</li> <li>In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented;</li> <li>Supervise implementation of remedial measures;</li> <li>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> <li>Take immediate action to avoid further exceedance;</li> <li>Discuss with ET and IEC on proper remedial actions;</li> <li>Submit proposal for remedial actions to Supervisor /ER and IEC within three working days of notification;</li> <li>Implement the agreed proposals;</li> <li>Submit further remedial actions if problem still not under control;</li> <li>Stop the relevant portion of works as instructed by the Supervisor /ER until the exceedance is abated.</li> </ol>

 $\label{eq:continuous} \begin{tabular}{ll} Appendix J-Calibration certificates, catalogue of noise monitoring \\ equipment \end{tabular}$ 

### Catalogue of Sound Level Meter



Data r	ecall	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
Wavefe	orm recording *3	Start up the me column provinces y stored on the start possible
_	format	Uncompressed waveform WAVE file
	mpling frequency	Select 48 kHz, 24 kHz or 12 kHz
_	ta length	Select 24 bit or 16 bit
	DC output	Output DC signals using a frequency weighting characteristic selected by processing
Outputs	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
	AC output	processing or by A, C, Z-weighting.
	Output voltage	1 V (rms values) at bar graph display full scale
	Comparator	Turns on when the open-collector output exceeds the set value
	output*2	(max. applied voltage 24 V. max. current 60 mA, allowable dissipation 300 mW).
USB		
		Allows USB to be connected to a computer and recognized as a removable disl
50 50 5		Allows USB to be controlled via communication commands
	32C communication	Allows for RS-232C communication via use of a dedicated cable
_	continuous output*2	
Type of Instantaneous value		
dat	1 10000000 14140	Leq, Lmax, Lmin, Lpeak
Output interval		100 ms
Print o	out	Printing of measurement results on dedicated printer DPU-414
Powe	r requirements	Four IEC R6 (size AA) batteries (alkaline or rechargeable batteries) or external power supply
Ba	ttery life (23 ℃)	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)
Ext	emal power voltage	5 to 7 V (rated voltage: 6 V)
Cu	rrent consumption	Approximately 90 mA (normal operation, rated voltage)
Ambie	nt Temperature	−10 to +50 °C
condit	ions Humidity	10 to 90 % RH (non-condensing)
Dustpi	roof / water-resistant	IP code: IP54 (except for microphone)
perfor	mance *4	See precautions regarding waterproofing
Dimer	nsions, weight	Approx. 250 (H) x 76 (W) x 33 mm(D), approx. 400 g (with batteries)
	ied 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×1 (NX-42EX
		preinstalled model only)

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-60∨M
Waveform analysis software	CAT-WAVE
SD Card 512 MB	SD-512M
SD Card 2 GB	SD-2G
AC adapter (100 ∨ to 240 ∨)	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

\*4 Protection against harmful dust and water splashing from any direction.

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



**RION CO., LTD.** 

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

This product is environment-friendly. It does not include toxic chemicals on our policy.

This product is certified to an International Protection rating of IP54 (dust protected and resistant to splashing water).
This leaffet is printed with environmentally friendly vegetable-based ink on recycled paper.

1011-4 E 212.P.D

### Calibration Certificate of Sound Level Meter



AAST-SLM-10 Cel Cest: 2021/7/19

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

证书编号: 2HB21001383-0001 Certificate No.

广州总部地址:广州市增域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

网拉: www.ceprei-cal.com

部件: cal@ceprei.com





on he as sh	0	astco Testing Centre Limi	ted
委托单位: Client		asico resting Centre Linti	100
仪器名称: Description	-	Sound Level Meter	
型号规格: Model/Type		NL-52	
制造商: Manufacturer	-	RION	
机身号: Serial No.		00976203	
管理号: Asset No.		AAST-SLM-10	
接收日期: Rec. Date	2021-07-08	校准日期: Cal. Date	2021-07-19
签发日期: App. Date	2021-07-19	建议校准周期: Reference Cal. Perio	12个月(12 months) od
结论: Conclusion	所校准项	目合格(Passed at Calibra	tion Items)
校准: Calibrated by	陈卓辉	核验: Inspected by	张超
签发: Approved by	弥平野茶が大力	印章: Stamp	

CEPREI Calibration and Testing Centre

Complaint Tel: 020-87236896

Website: www.ceprei-cal.com

Email: cal@ceprei.com

Service Tel: 020-87237633 Fax: 020-87236189

HQ Addr: No.78,Zhucun Avenue West,Zengcheng District,Gnangzhou,China

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# Hand Certificate No.1: 2HH2101

### 说 明 DIRECTIONS

本机构质量管理体系符合ISO/IEC 17025;2017标准的要求,获得中国合格评定国家认可委员会(CNAS)认可,认可证书号为; CNAS L13344。

This laboratory quality management system meets the ISO/IEC 17025:2017 and is accredited by the China National Accreditation Service for Conformity Assessment, No. CNAS L13344.

- 2. 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 Ha~20kHz).
- \*\*E. co/RLIG/\*\*
  \*产学程内等请查量\*NAS网站中注释编号为L13344的证书符件。超出高限的内容来被认可。其结果/结论所依据的合格评定活动不在认可高周角。(Please see the attachment of certificate No. L13344 at CNAS website for details, beyond which is not accredited, the conformity ausescential activities on which the results/concelsions are based are estated the ecopy of accreditation.).
- 3. 本次校准所使用的主要测量标准(The main measurement standards used during the calibration):

名 称 (Description)	证书号/有效期/溯源单位 (Certificate No./Due Date/Traceability to)	技术指标 (Specification)	(Measuring Range)
正弦信号发生器	4GC20000427-0010/2021-11-04/赛宝(广州)		f: 0.001Hz-200kHz; U : 100µV-5Vrms
数字多用表	4GC20000358-0060/2021-09-09/賽宝(广州)	DCV: ±0.0035%; ACV: ± 0.06%; DCI: ±0.05%; ACI ; ±0.1%; R: ±0.01%; f: ±0.001%	DCV <sub>3</sub> (0~1000)V <sub>1</sub> ACV (0.001~750)V@(3Hz~ 300kHz) <sub>1</sub> DCI <sub>2</sub> (0~3)A : ACI <sub>2</sub> (0~3)A@(3Hz~ 5kHz) <sub>1</sub> R <sub>2</sub> (0~100)MΩ : f.3Hz~300kHz
步进衰减器	4GC21000155-0024/2022-04-29/賽宝(广州)	±3dB	(0~110) dB/10dB step @(DC~1GHz)
PULSE分析系统	GFJGJL1001210202725/2022-03-03/航空 304所	频率:U <sub>sel</sub> =0.001%,k=2;电压: U <sub>tol</sub> =0.04%,k=2	頻率:0.001Hz~51.2kHz, 电压:(1=10 <sup>3</sup> -30)V
标准传声器	LSsx2021-13180/2022-04-24/中国计量院	U=(0.05-0.20)dB (k=2)	20Hz-20kHz
前置放大器	LSsx2021-11346/2022-03-07/中国计量院	U=0.3dB (k=2)	(10~20000) Hz
功率放大器	4GC20000457-0065/2021-11-17/賽宝(广州)	類率响应: ±1dB, 失真度: ≤0.2%	20Hz-20kHz
多功能声学校准器	4EC20000091-0005/2021-11-05/賽宝(广州)	1級	31.5Hz-16kHz

- 4. 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
- 5. 环境条件(Environmental conditions):
  - 温度(Temperature): 23.4℃ 相对湿度(Relative Humidity): 55.8%
- 6. 本证书中给出的扩展不确定度依据JJF1059.1-2012《测量不确定度的评定与表示》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%.

- 7. 证书中"P"、"合格"代表"溺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,使用人员应社会社会证别专的证明令的。
- 结合实际测量的要求合理使用,如多虑测量结果测量不确定接的影响等。
  "P" and "Pass" in this certificate stand for "Low Limit:the measured value = High Limit", "F" and "Fail" stand for "the measured value = High Limit", "NA" stands for "Not Applicable or The technical specification has not been confirmed ete". 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.
- 8. 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。

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### Calibration Certificate of Sound Level Meter



证书编号(Certificate No.): 2HB21001383-0001

频率(Frequency)=1000Hz

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.

C. C.
前号
er SN.)
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2

声校准器型号	标准声压级	校准前示值	校准后示值	U
(Calibrator Type)	(Reference SPL)	(Before Calibration)	(After Calibration)	(k=2)
	(dB)	(dB)	(dB)	(dB)
4226	94.0	94.1	94.1	0.2

3 级线性 (Level Linearity)

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

起始点指示声级(Sound Level Indication of Start Point): 90.0 dB 起始点以上间隔10dB点的最大误差(Maximum Error for each 10dB above Start Point): -0.2 dB

U (k=2) 0.6 dB

上限以下5dB间隔1dB点的最大误差(Maximum Error for each 1dB below Upper Limit 5dB): -0.2 dB

起始点以下间隔10dB点的最大误差(Maximum Error for each 10dB below Start Point): -0.2 dB U (k-2)

下限以上5dB间隔1dB点的最大误差(Maximum Error for each 1dB above Lower Limit 5dB): -0.2 dB

U (k=2) 0.6 dB

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

起始点指示声级(Sound Level Indication of Start Point): 90.0 dB

起始点以上间隔10dB点的最大误差(Maximum Error for each 10dB above Start Point): -0.1 dB U (k=2)

上限以下5dB间隔1dB点的最大误差(Maximum Error for each 1dB below Upper Limit 5dB): -0.1 dB

U (k-2)

起始点以下间隔10dB点的最大误差(Maximum Error for each 10dB below Start Point): -0.1 dB

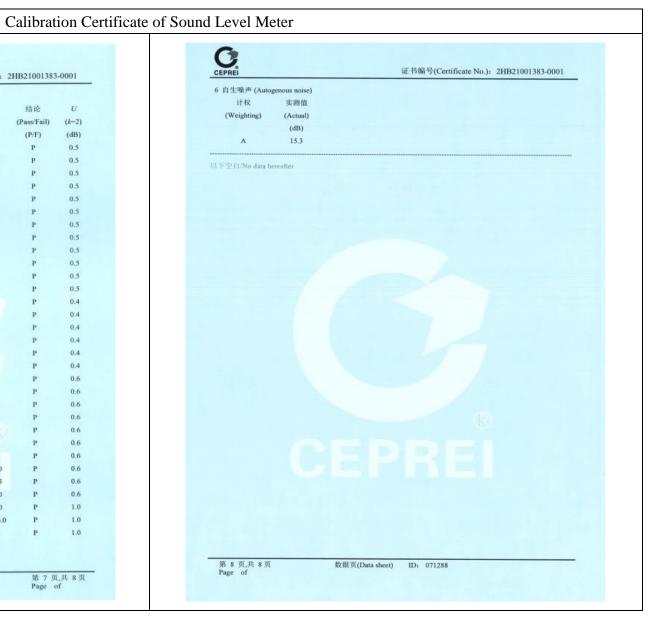
下限以上5dB间隔1dB点的最大误差(Maximum Error for each 1dB above Lower Limit 5dB): -0.1 dB

U (k=2) 0.4 dB

第5页,共8页 数据页(Data sheet)

G 证书编号(Certificate No.): 2HB21001383-0001 CEPREI 4 A计权特性(A-Weighting Characteristic) 頻率 实测值 理论值 误差 允许误差 结论 U(Frequency) (Actual) (Theoretical value) (Error) (Limit) (Pass/Fail) (k-2)(Hz) (dB) (dB) (dB) (dB) (P/F) (dB) 20 -49.2 -50.5 1.3 ±2.0 0.5 25 -44.2 -44.7 0.5 +2.0 ~ -1.5 0.5 31.5 -39.4 -39.4 0.0 ±1.5 0.5 40 -34.4 -34.6 0.2 ±1.0 0.5 50 -30.3 -30.2 -0.1 ±1.0 0.5 63 -26.0 -26.2 0.2 ±1.0 0.5 80 -22.4 -22.5 0.1 ±1.0 0.5 100 -19.1 -19.1 ±1.0 0.5 125 -16.0-16.1 0.1 ±1.0 0.5 160 -13.2 -13.40.2 ±1.0 0.5 200 -10.8 -10.90.1 ±1.0 0.5 250 -8.6 -8.6 0.0 ±1.0 0.5 315 -6.6 -6.6 0.0 ±1.0 0.4 400 -4.7 -4.8 0.1 ±1.0 -3.3 -3.2 -0.1 ±1.0 0.4 630 -1.9 -1.9 0.0 ±1.0 0.4 800 -0.8 -0.8 0.0 ±1.0 0.4 1000(Ref.) 0.0 0.0 0.0 ±0.7 0.4 1250 0.5 -0.1 ±1.0 0.6 1600 0.9 1.0 -0.1 ±1.0 0.6 2000 1.1 1.2 -0.1±1.0 0.6 2500 1.0 1.3 -0.3 ±1.0 0.6 3150 0.9 1.2 -0.3 ±1.0 0.6 4000 1.2 1.0 0.2  $\pm 1.0$ 0.6 5000 0.3 -0.2 0.5 ±1.5 6300 -0.3 -0.1 -0.2 +1.5 ~ -2.0 8000 -0.6 +1.1 0.5 +1.5 ~ -2.5 0.6 10000 -2.4 -2.5 0.1 +2.0 ~ -3.0 0.6 12500 -4.3 -4.3 0.0 +2.0 ~ -5.0 1.0 16000 -8.5 -6.6 -1.9 +2.5 ~ -16.0 1.0 20000 -18.5-9.3 -9.2 +3.0 ~ -00 1.0 第6页,共8页 数据页(Data sheet) ID: 071288 Page of

#### 证书编号(Certificate No.): 2HB21001383-0001 5 C计权特性(C-Weighting Characteristic) 结论 U頻率 实测值 理论值 误差 允许误差 (Limit) (Pass/Fail) (k-2)(Frequency) (Actual) (Theoretical value) (Error) (dB) (dB) (dB) (dB) (P/F) (Hz) (dB) -0.4 ±2.0 0.5 20 -6.6 -6.2 -4.4 -0.1 +2.0 ~ -1.5 0.5 25 -4.5 0.1 ±1.5 0.5 31.5 -2.9 -3.0 0.5 40 -1.9 -2.0 0.1 ±1.0 50 -1.3 -1.3 0.0 ±1.0 0.5 0.1 ±1.0 0.5 63 -0.7-0.80.5 -0.5 0.0 $\pm 1.0$ 80 -0.5 0.1 ±1.0 0.5 100 -0.2 -0.3-0.2 0.1 ±1.0 0.5 125 -0.10.0 ±1.0 0.5 160 -0.1-0.10.5 200 0.0 0.0 0.0 $\pm 1.0$ 0.5 250 0.0 0.0 0.0 ±1.0 0.0 0.0 ±1.0 0.4 315 0.0 0.4 0.0 0.1 #1.0 400 0.1 0.0 ±1.0 0.4 0.0 0.0 500 0.0 $\pm 1.0$ 0.4 630 0.0 0.0 0.0 0.0 ±1.0 0.4 800 0.0 0.0 0.4 1000(Ref.) 0.0 0.0 $\pm 0.7$ 0.6 1250 -0.1 0.0 -0.1 ±1.0 -0.1 $\pm 1.0$ 0.6 1600 -0.2 -0.10.6 -0.1 ±1.0 -0.3 -0.2 2000 -0.3 ±1.0 0.6 -0.6 -0.32500 -0.8 -0.5 -0.3 ±1.0 0.6 3150 0.6 -0.8 0.2 ±1.0 4000 -0.6 0.6 5000 -1.6 -1.3 -0.3 ±1.5 -0.1 0.6 6300 -2.1 -2.0+1.5 ~ -2.0 -3.0 0.5 +1.5 ~ -2.5 0.6 8000 -2.5 0.6 0.1 +2.0 - -3.0 -4.3 -4.4 10000 -6.2 -0.1 +2.0 - -5.0 1.0 12500 -6.3 -10.5 -8.5 -2.0 +2.5 - -16.0 1.0 16000 -9.2 +3.0 ~ +00 1.0 -20.4 -11.2 20000 第7页,共8页 数据页(Data sheet) ID: 071288 Page of



### 说 明 DIRECTIONS

 本机构质量管理体系符合ISO/IEC 17025:2017标准的要求,获得中国合格评定国家认可委员会( CNAS)认可,认可证书号为: CNAS L13344。

This laboratory quality management system meets the ISO/IEC 17025:2017 and is accredited by the China National Accreditation Service for Conformity Assessment, No. CNAS L13344.

- 2. 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).
- tite \_constail。 详细内容请查看CNAS网站中往册稿号为L1334的证书所件,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 one suttled the scope of accreditation.)
- 3. 本次校准所使用的主要测量标准(The main measurement standards used during the calibration):

名 称 (Description)	主要测量标准(The main measurement s 证书号/有效期/溯源单位 (Certificate No./Due Date/Traceability to)	技术指标 (Specification)	測量范围 (Measuring Range)
数字多用表	4GC20000467-0001/2021-11-26/賽宝(广州)	DCV: ±0.0035%; ACV: ± 0.06%; DCI: ±0.05%; ACI : ±0.1%; R: ±0.01%; f: ±0.001%	DCV:(0~1000)V; ACV :(0.001~750)V@(3Hz~ 300kHz); DCI:(0~3)A ; ACI:(0~3)A@(3Hz~ 5kHz); R:(0~100)MΩ ; f:3Hz~300kHz
正弦信号发生器	4GC20000427-0010/2021-11-04/賽宝(广州)	f: ±lmHz; 失真度 Distortion: <-70dB	f: 0.001Hz~200kHz; U : 100μV~5Vrms
标准传声器	LSsx2021-13180/2022-04-24/中国计量院	U=(0.05~0.20)dB (k=2)	20Hz~20kHz
前置放大器	LSsx2021-13000/2022-04-19/中国计量院	U=0.3dB (k=2)	(10~50000) Hz
PULSE分析系统	4GC21000026-0375/2022-01-21/賽宝(广州)	頻率:U <sub>ref</sub> =0.001%,k=2;电压: U <sub>ref</sub> =0.04%,k=2	頻率:0.001Hz~51.2kHz, 电压:(1×10 <sup>5</sup> ~30)V
声级校准器	LSsx2021-11345/2022-03-07/中国计量院	1级	94dB,114dB@ (1000Hz
功率放大器	4GC20000457-0065A/2021-11-17/賽宝(广州)	频率响应: ±1dB, 失真度 : ≤0.2%	20Hz~20kHz
步进衰减器		±3dB	(0~110) dB/10dB step @(DC~1GHz)
声校准器	4GC20000502-0050/2021-12-21/赛宝(广州)	1级 First Level	31.5Hz~16kHz

4. 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

5. 环境条件(Environmental conditions):

温度(Temperature): 23.9℃ 相对湿度(Relative Humidity): 55.8%

6. 本证书中给出的扩展不确定度依据JJF1059.1-2012《测量不确定度的评定与表示》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%.

7. 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's the measured value \( \le \) High Limit", "F" and "Fail" stand for "the measured value \( \le \) Low Limit or the measured value \( \le \) 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.

第 3 页,共 8 页 Page of Sound Calibrator NC-75





Compact and lightweight sound calibrator allows highly reliable and accurate measurement anywhere

# Sound Calibrator **NC-75**



- Integrated newly developed reference microphone enables feedback control that completely eliminates the need for atmospheric pressure and coupler volume correction, resulting in highly accurate and reliable calibration.
- Effective coupler sound insulation (30 dB or higher\*) permits calibration also in relatively noisy environments.

  \*A-weighed sound level insulation performance measured with pink noise
- Each product comes standard with a JCSS Calibration Certificate, demonstrating high quality.
- Conforming with IEC 60942: 2017 class 1 and JIS C 1515: 2020
- Supports calibration of RION sound level meters compliant with IEC 61672-1: 2013, JIS C 1509-1: 2017 and JIS C 1516: 2014.
- Supports calibration of RION microphones and microphones of other manufacturers meeting the size specifications of IEC 61094-4.
- Supports 1-inch, 1/2-inch, and 1/4-inch microphones (1/4 inch with optional adapter)





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.



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.



Jsage example

Applicable standards	IEC 60942: 2017 class1, ANSI/ASA S1.40-2006 class1, JIS C 1515: 2020 class 1, CE marking, WEEE directive, Chinese RoHS
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. ±0.20 dB
Nominal frequency	1 000 Hz
Frequency tolerance	Max. ±0.1%
THD + noise	Max. 1.0 % (22.4 Hz to 22.4 kHz)
Dimensions and weight	Approx. 42 mm (H) x 77 mm (W) x 70 mm (D), approx. 200 g
Power supply	IEC LR6 (size AA) alkaline battery x 2 IEC LR6 (size AA) nickel-hydride rechargeable battery ("eneloop pro" supported) x 2
Battery life	50 hours or more (using two alkaline batteries, continuous use)
	50 hours or more (using two nickel-hydride rechargeable batteries [eneloop pro], 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

Securely carry the unit with the supplied hand strap

the state of the s

PISTONPHONE NC-72A

Specifications (under standard ambient conditions\*)

Applicable standards IEC 60942: 2017 class LSIM, class 1/M, US C 1515: 2020 class LSIM, class 1/M, Nominal sound pressure level tolards. JIS C 1515: 2020 class LSIM, class 1/M (14 d), Sound pressure level tolerance a0.10 dB

JCSS B197 JCSS RION CO., LTD. is accreditation surface. (LAC), The Quality accreditation rules.

This leaflet is printed with environmentally friendly LIV ink

N CO, LTD, is recognized by the JCSS which uses ISO/IEC 17025 as an accreditation standard and bases if redistation scheme on ISO/IEC 17011, JCSS is operated by the accreditation body (IA Japan) which is a signator of Asia Pacific Asians (IAS) and accreditation Cooperation (APAC) as well as the international Laboratory Accreditation Cooperation



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



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) CEPREI CHINA CEPREI LABORATORY CALIBRATION & TESTING CENTRE

# CALIBRATION CERTIFICATE

证书编号: 2HB21001749-0002 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	2021-08-05	_ 校准日期: _ Cal. Date	2021-08-17					
签发日期: _ App. Date	2021-08-18	建议校准周期: Reference Cal. Peri	12个月(12 months)					
结论:	所校准项目合格(Passed at Calibration Items)							

Calibrated by

Conclusion

签发: Approved by

阅址: www.ceprei-cal.com

印章: Stamp

赛宝计量检测中心 广州总部地址: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: cal@ceprei.com

CEPREI Calibration and Testing Centre HQ Addr: No.78, Zhucun 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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# DIRECTIONS

1. 本机构质量管理体系符合ISO/IEC 17025:2017标准的要求,获得中国合格评定国家认可委员会( CNAS) 认可, 认可证书号为: CNAS L13344。

This laboratory quality management system meets the ISO/IEC 17025:2017 and is accredited by the China National Accreditation Service for Conformity Assessment, No. CNAS L13344.

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

- JJG 176-2005 声校准器检定规程: Sound Pressure Level: 94dB、104dB、114dB、124dB(63Hz~8kHz): 94dB . 104dB. 114dB,(31.5Hz~16kHz); Frequency: 31.5Hz~16kHz; Harmonic Distortion: 0~10%, (20Hz~20
- · 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话动不在认可范围内。(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.).

3. 本次校准所使用的主要测量标准(The main measurement standards used during the calibration):

名称	证书号/有效期/溯源单位	技术指标	測量范围
(Description)	(Certificate No./Due Date/Traceability to)	(Specification)	(Measuring Range)
标准传声器		U=(0.05~0.20)dB (k=2)	10Hz~20kHz
PULSE分析系统	4GC21000026-0375/2022-01-21/賽宝(广州)	频率:Urel=0.001%,k=2;电压: Urel=0.04%,k=2	頻率:0.001Hz-51.2kHz, 电压:(1×10 <sup>-5</sup> ~30)V
前置放大器	LSsx2021-13000/2022-04-19/中国计量院	U=0.3dB (k=2)	(10~50000) Hz

4. 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

5. 环境条件(Environmental conditions):

温度(Temperature): 22.9℃ 相对湿度(Relative Humidity): 59.5%

6. 本证书中给出的扩展不确定度依据JJF1059.1-2012《测量不确定度的评定与表示》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%.

7. 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。

"" 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

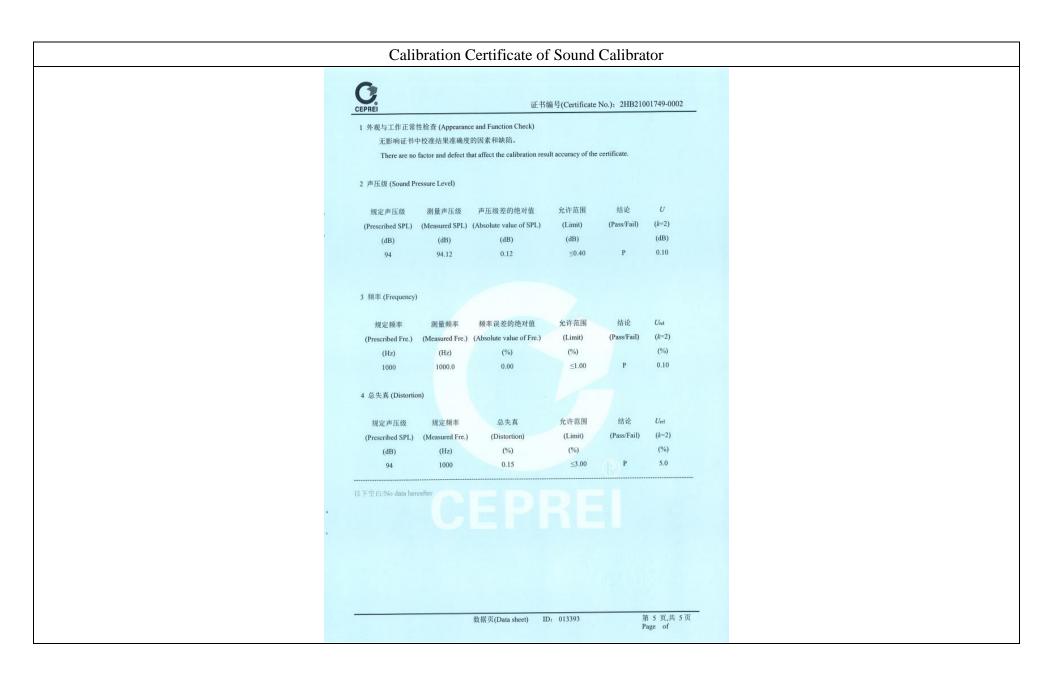
8. 建议校准周期是本实验室依据本证书报告的技术依据和仪器设备常规使用条件给出的建议,供委 托方参考。委托方可以根据实际使用情况自行决定样品的校准周期。

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

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.)

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#### Catalogue of Air Flow Meter (TSI TA440) Calibration Certificate of Air Flow Meter AAST-FLOW-03, Cal Best 2021/2/26 **SPECIFICATIONS** 深圳市东华计量检测技术有限公司 Time Constant (TA430, TA440) Velocity 0 to 20 m/s (0 to 4 000 ft/min) Range (TA410) User selectable CALIBRATION CERTIFICATE Range (TA430, TA440) 0 to 30 m/s (0 to 6,000 ft/min) ±5% of reading or ±0.025 m/s (±5 ft/min), whichever is greater Accuracy (TA410)162 **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.) Accuracy (TA430, TA440)<sup>162</sup> ±3% of reading or ±0.015 m/s (±3 ft/min), whichever is greater DH21AA002160001 Certificate No. Meter Weight with Batteries Resolution 0.01 m/s (1 ft/min) 0.27 kg (0.6 lbs.) 委托方名称: Duct Size (TA430, TA440) Meter Probe Dimensions Castco Testing Centre Limited Dimensions 1 to 635 cm in increments of 0.1 cm (1 to 250 inches in increments of 0.1 in.) Client name Probe Length 101.6 cm (40 in.) Probe Diameter of Tip 7.0 mm (0.28 in.) 委托方地址: 33, On Kui Street, Fanling, N.T. Prohe Diameter of Base 13.0 mm (0.51 in.) Volumetric Flow Rate (TA430, TA440) Add.of Client Actual range is a function of velocity, and duct size 计量器具名称: Articulating Section Length 19.7 cm (7.8 in.) 风速计 Name of Instrument Temperature Diameter of Articulating Knuckle Range (TA410, TA430) -18 to 93°C (0 to 200°F) 型号/规格: TA440 -10 to 60°C (14 to 140°F) Range (TA440) Type/Specification Accuracy<sup>3</sup> ±0.3°C (±0.5°F) **Power Requirements** Four AA-size batteries or AC adapter Resolution 0.1°C (0.1°F) 制造单位: AIRFLOW Manufacturer Relative Humidity (TA440 only) TA410 5 to 95% RH Range 器具编号: AAST-FLOW-03/TA4401706003 Velocity range 0 to 20.00 m/s (0 to 4000 ft/min) Accuracy<sup>4</sup> Serial No. Resolution 0.1% RH Velocity range 0 to 30.00 m/s (0 to 6000 ft/min) Wet Bulb Temperature (TA440 only) 接收日期: 月 02 Month 23 5 to 60°C (40 to 140°F) Range Date of Receipt Year Temperature Resolution 0.1°C (0.1°F) 校准日期: 年 Flow 02 Dew Point (TA440 only) Date of calibration Year Month Humidity, wet bulb, -15 to 49°C (5 to 120°F) Range dew point Resolution 0.1°C (0.1°F) Probe Straight articulated Instrument Temperature Range 批准人: 签发日期: 2021 年 02 月 26 日 Operating (Electronics) 5 to 45°C (40 to 113°F) Approved by Manual data logging Date of issue Year Month Day Model TA410, TA430 -18 to 93°C (0 to 200°F) -10 to 60°C (14 to 140°F) Model TA440 data logging 核验员: 张吉庆 -20 to 60°C (-4 to 140°F) Statistics 该二维码非公众号 Storage Checked by Data Storage Capabilities (TA430, TA440) LogDat2 downloading (证书专用章) 校准员: 蒋新建 Stamp Logging Interval (TA430, TA440) Free Certificate of Calibration Calibrated by 扫码查证书信息(真伪) 1 second to 1 hour 计量校准机构备案号: 粤校备2017B010 Register No: 粤校备2017B010 an air temperature range of 5 to 65°C (40 to 150°F). Add: 1st Floor, Building A1, Puhua Science and Technology 地址:深圳市龙华区大浪街道同胜社区浦华科技园厂房 Park, Tongsheng Community, Dalang Street, Longhua District, Shenzhen, Guangdong, China 电话: 0755-28161768/28162768/28166778 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. Tel: 0755-28161768/28162768/28166778 传真: 0755-21004376 邮编: 518109 Fax: 0755-21004376 Zip Code: 518109 网址: www.szdhjl.com 电子邮箱: szdhjl@163.com http://www.szdhjl.com E-mail: szdhjl@163.com

DHCT第1页,共3页 page

Visit our website at www.airflowinstruments.co.uk for more information.

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Tel: +44 149 4 459200 Germany Tel: +49 241 523030 Tel: +33 491 11 87 64

### Calibration Certificate of Air Flow Meter



### 深圳市东华计量检测技术有限公司

Shenzhen Donghua Metrology&Testing Technology Co., Ltd.

Certificate No.

DH21AA002160001

### 证书说明

Certificate Statement

1、本校准证书包含的数据和信息仅对本次被校准的计量器具负责。

The calibration certificate contains data and information applies only to the calibrated instrument.

2、本公司仅对加盖我司的"证书专用章"的完整证书负责。

The company only Division I stamped "certificate special seal" is responsible for the full certificate.

3、未经本公司书面授权,不得部分复印证书。

The certificate shall not be photocopied without the written authorization of the company.

4、本次校准依据的技术文件:

Reference Documents for the Calibration:

JJG(建设)0001-1992 热球式风速仪计量检定规程

JJG(建设)0001-1992 Metrological Verification Regulation of Hot Ball shaped Anemmeter

5、本次校准所使用的主要计量标准器具:

Major standards of measurement used in the calibration:

设备名称 Equipment Name	测量范围 Measuring Range	不确定度/准确度等级 /最大允许误差 Uncertainty/AccuracyClass/ Maximum permissible Error	设备编号 Equipment No.	溯源机构/ 证书编号 Traceability to/ Certificate No.	溯源有效期 Traceability Due Date
补偿式微压计	(-2500~2500) Pa	=# DE	SM1926	上海市计量测试技术研究院 2018E21-20- 2637951001	2022-07-28
皮托管	(0~30) m/s		SM326	中国计量科学研究院 RGfv2019-0007	2024-01-20
机械式温湿度计	温度: (-20~80) C; 湿度: (0~ 100) %RH	MPE:温度: ±2°C, 湿 度:± (5~7) %	85926	深圳市计量质量检测研究院 205605616	2021-05-10
空盒气压表	(800~1060)hPa	U=0.6hPa, k=2	15033115	深圳市计量质量检测研 究院 204373348	2021-08-17
标准水银温度计	(0~50)*e C	U=0.03℃, k=2	2-204	深圳市计量质量检测研究院 205502058	2022-03-09

6、校准地点: 本公司力学实验室 Operation Location

7、环境条件:

Operation Environment

Temperature

温度 21.7 ℃

相对湿度



### 深圳市东华计量检测技术有限公司

证书编号: DH21AA002160001

CertificateNo.

### 校准结果

Result of Calibration

1、外观及工作正常性检查: 正常

2、校准结果:

-				
	标准值 (m/s)	示值 (m/s)	示值误差 (m/s)	不确定的 (k=2) U <sub>rel</sub>
	2.50	2.50	0.00 C	3%
AT	3.00	2.99	-0.01	3%
HO	5.00	4.98	-0.02	3%
	10.00 HC	9.98	-0.02	3%
	15.00	14.96	-0.04	3%
	20.00	19.96	-0.04	HC 3%
	25.00	24.95	-0.05	3%

说明 (Explanation):

1、本次测量结果的不确定度(k=2)。

The uncertainty of the measurement result (k=2).

2、本次校准结果不确定度的评估和表述依据JJF1059.1的要求。 The uncertainty of the calibration result is evaluated and expressed according to the requirement of JJF1059.1.

3、根据客户要求和所依据技术文件的规定,建议复校时间间隔不超过12个月。

According to customers' request and technical documents, the re-check time interval should not exceed 12 months

Page of pages

$\label{eq:Appendix K-Noise monitoring results and graphical presentation} Appendix \ K-Noise monitoring results and graphical presentation$	

### M4(A) – Le Billionnaire

D.	Measured Noise Level at M4(A), dB(A)						T			
Date	Temp (°C)	Weather	7	Γir	ne	Baseline	$\mathcal{L}_{Aeq}$	$L_{A10}$	$L_{A90}$	Limit
2/12/2021	22.3	Sunny	13:25	-	13:55	69.5	70.1	71.5	68.8	75
8/12/2021	21.8	Sunny	09:25	-	09:55	69.5	69.4	70.8	68.3	75
14/12/2021	18.0	Sunny	09:14	-	09:44	69.5	71.0	72.2	69.4	75
20/12/2021	19.6	Cloudy	13:20	-	13:50	69.5	69.8	71.4	68.1	75
30/12/2021	16.0	Sunny	09:35		10:05	69.5	69.5	71.1	68.6	75
					Maximum	•	71.0			
					3.60		CO 1			

 Maximum
 71.0

 Minimum
 69.4

 Average
 70.0

## M5(A) – Prince Ritz

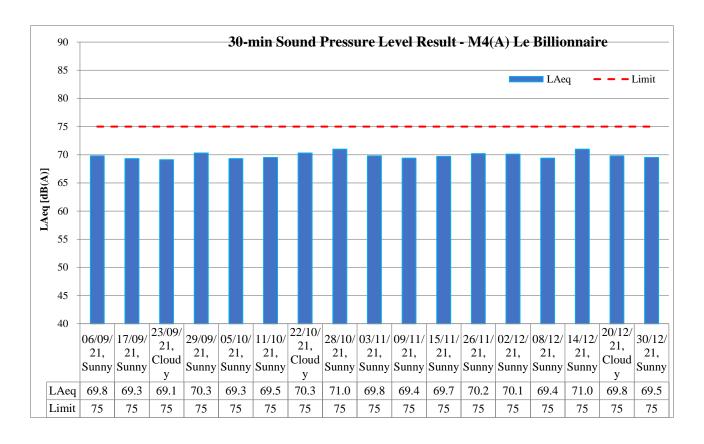
Temp w		XX7 .1	Measured Noise Level at M5(A), dB(A)						<b>.</b>	
Date	(°C)	Weather	7	Γir	ne	Baseline	$\mathcal{L}_{Aeq}$	$L_{A10}$	L <sub>A90</sub>	Limit
2/12/2021	22.3	Sunny	14:30	-	15:00	72.5	72.4	73.6	70.2	75
8/12/2021	21.8	Sunny	10:35	-	11:05	72.5	73.1	74.5	71.6	75
14/12/2021	18.0	Sunny	10:44	-	11:14	72.5	74.5	76.0	72.4	75
20/12/2021	19.6	Cloudy	14:25	-	14:55	72.5	72.2	73.1	70.5	75
30/12/2021	16.0	Sunny	10:40	-	11:10	72.5	72.6	73.8	70.7	75

 Maximum
 74.5

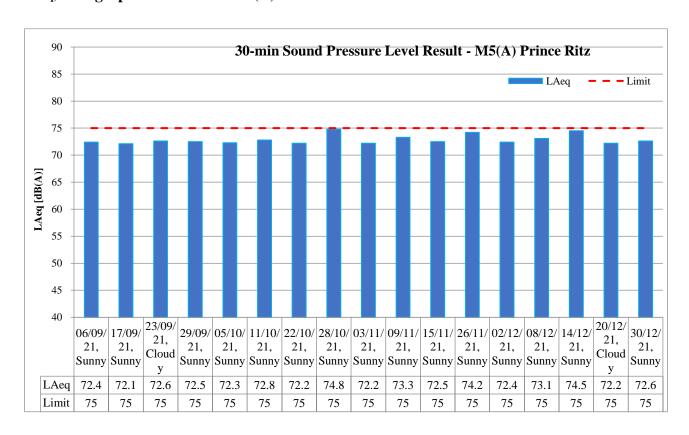
 Minimum
 72.2

 Average
 73.0

### $L_{Aeq, 30-min}$ graphical results of M4(A) – Le Billionnaire



### L<sub>Aeq</sub>, 30-min graphical results of M5(A) – Prince Ritz



		Reportin	g Period	
Major Construction Activities	Sept	Oct	Nov	Dec
	2021	2021	2021	2021
Construction of box culvert	✓	✓	✓	
Bored pile works for landscape elevated walkway	✓	✓	✓	✓
Demolition of existing structure and cottage	✓			
Construction of project signboard	✓			
Pre-drilling works and trial pit excavation	✓	✓	✓	
Drainage works	✓			
Temporary road diversion at Sa Po Road		✓	✓	
Demolition of existing structure at SB-01		✓		
Pre-drilling work for S14 and KS10		✓		
Drainage works for Pedestrian Street No.1 & No.2		✓	✓	
Drainage works for Crowd Dispersal Route		✓	✓	
Instrumentation installation at SB-01			✓	✓
Pre-drilling work for S14			✓	✓
Removal existing piles at Road D1			✓	✓
Rising main construction			✓	✓
Trial pit excavation				✓
Advance works for traffic diversion at Sa Po Road				<b>√</b>
Drainage works for Pedestrian Street No.1, No,2 & No.3				✓
Construction of Crowd Dispersal Route				<b>√</b>

	Reporting Period					
Factors might affect the monitoring results	Sept 2021	Oct 2021	Nov 2021	Dec 2021		
Non-project related construction activities in the adjacent construction sites were observed.		✓	✓	✓		

# Appendix L – Event and Action Plan for noise

E4				
Event	ET	IEC	Supervisor / ER	Contractor
Action Level being exceeded	<ol> <li>Notify Supervisor / ER, IEC and Contractor;</li> <li>Carry out investigation;</li> <li>Report the results of investigation to the IEC, Supervisor / ER and Contractor;</li> <li>Discuss with the IEC and Contractor on remedial measures required;</li> <li>Increase monitoring frequency to check mitigation effectiveness.</li> <li>(The above actions should be taken within 2 working days after the exceedance is identified.)</li> </ol>	results submitted by the ET;	<ol> <li>Confirm receipt of notification of failure in writing;</li> <li>Notify Contractor;</li> <li>In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented;</li> <li>Supervise the implementation of remedial measures.</li> <li>(The above actions should be taken within 2 working days after the exceedance is identified.)</li> </ol>	<ol> <li>Submit noise mitigation proposal to IEC and Supervisor / ER;</li> <li>Implement noise mitigation proposals.</li> <li>(The above actions should be taken within 2 working days after the exceedance is identified.)</li> </ol>
Limit Level being exceeded	1. Inform IEC, Supervisor /ER, Contractor and EPD; 2. Repeat measurement to confirm findings; 3. Increase monitoring frequency; 4. Identify source and investigate the cause of exceedance; 5. Carry out analysis of Contract's working procedure; 6. Discuss remedial measures required with the IEC, Contractor and Supervisor /ER; 7. Assess effectiveness of	1. Discuss the potential remedial actions with Supervisor /ER, ET and Contractor;  2. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the Supervisor /ER accordingly.  (The above actions should be taken within 2 working days after the exceedance is identified.)	1. Confirm receipt of notification of failure in writing;  2. Notify Contractor;  3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented;  4. Supervise the implementation of remedial measures;  5. If exceedance continues, consider stopping the Contractor to continue working on that portion of work which causes the	<ol> <li>Take immediate action to avoid further exceedance;</li> <li>Submit proposals for remedial actions to IEC and Supervisor /ER within 3 working days of notification;</li> <li>Implement the agreed proposal;</li> <li>Submit further proposal if problem still not under control;</li> <li>Stop the relevant portion of works as instructed by the Supervisor /ER until the exceedance is abated.</li> <li>(The above actions should be</li> </ol>

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

Appendix M	– Event and A	Action Plan fo	or Landscape :	and Visual Impact

Event	Action						
Event	ET	IEC	Supervisor / ER	Contractor			
Design Check	1. Check final design conforms to the requirements of EP and prepare report.	Check report.     Recommend remedial design if necessary.	Undertake remedial design if necessary.				
Non-conformity on one occasion	<ol> <li>Identify Source.</li> <li>Inform IEC and Supervisor /ER.</li> <li>Discuss remedial actions with IEC, Supervisor /ER and Contractor.</li> <li>Monitor remedial actions until rectification has been completed.</li> </ol>	<ol> <li>Check report.</li> <li>Check Contractor's working method.</li> <li>Discuss with ET and Contractor on possible remedial measures.</li> <li>Advise Supervisor /ER on effectiveness of proposed remedial measures.</li> <li>Check implementation of remedial measures.</li> </ol>	Notify Contractor.     Ensure remedial measures are properly implemented.	Amend working methods.     Rectify damage and undertake any necessary replacement.			
Repeated Non-conformity	<ol> <li>Identify Source.</li> <li>Inform IEC and Supervisor /ER.</li> <li>Increase monitoring frequency.</li> <li>Discuss remedial actions with IEC, Supervisor /ER and Contractor.</li> <li>Monitor remedial actions until rectification has been completed.</li> <li>If non-conformity stops, cease additional monitoring.</li> </ol>	<ol> <li>Check monitoring report.</li> <li>Check Contractor's working method.</li> <li>Discuss with ET and Contractor on possible remedial measures.</li> <li>Advise Supervisor /ER on effectiveness of proposed remedial measures.</li> <li>Supervise implementation of remedial measures.</li> </ol>	Notify Contractor.     Ensure remedial measures are properly implemented.	Amend working methods.     Rectify damage and undertake any necessary replacement.			

## Appendix N – Waste Flow Table

## MONTHLY SUMMARY WASTE FLOW TABLE FOR 2021 (YEAR)

	A	ctual Quantiti	es of Inert C&I	kD Materials Generated Monthly			Actual Quantities of C&D Wastes Generated Monthly				
Month	Total Quantity Generated	Borken Concrete (4)	Reused in the Contract	Reused in other Projects	Disposal as Public Fill	Import Fill	Metals	Paper / Cardboard Packaging	Plastics (3)	Chemical Waste	Other, 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 '000kg]	[in '000kg]	[in '000kg]	[in '000kg]	[in '000m <sup>3</sup> ]
JAN	0.191597506	0.028739612	0	0	0.162857895	0	0	0	0	0	0.007013333
FEB	1.108290924	0.166243555	0	0	0.942047368	0	0	0	0	0	0.011833333
MAR	0.416297177	0.062444545	0	0	0.353852632	0	0	0	0	0	0.017520000
APR	0.020390091	0.003058512	0	0	0.017331579	0	0	0	0	0	0.002420000
MAY	0.230390073	0.034558494	0	0	0.195831579	0	0	0	0	0	0.189360000
JUNE	0.299331150	0.194899576	0	0	1.104431579	0	0	0	0	0	0.006900000
SUB- TOTAL	2.266296921	0.489944294	0	0	2.776352632	0	0	0	0	0	0.235046666
JULY	0.992681027	0.14890208	0	0	0.843778947	0	0	0	0	0	0.009193333
AUG	0.800414791	0.120062159	0	0	0.680352632	0	0	0	0	0	0.008226667
SEPT	0.192557259	0.028883574	0	0	0.163673684	0	0	0	0	0	0.007060000
OCT	0.146749213	0.022012371	0	0	0.124736842	0	0	0	0	0	0.001333333
NOV	0.095975223	0.014396276	0	0	0.081578947	0	0	0	0	0	0.003706667
DEC	0.156656333	0.023498438	0	0	0.133157895	0	0	0	0	0	0.009086667
TOTAL	4.651330767	0.847699192	0	0	4.803631579	0	0	0	0	0	0.273653333

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

**Reporting Month: December 2021** 

Contract No.	Record of Complaint (Yes/No)	Record of Warning (Yes/No)	Notification of Summons and Successful Prosecutions (Yes/No)
ED/2018/05	No	No	No

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

Contract No.	Record of Complaint	Record of Warning	Notification of Summons and Successful Prosecutions
ED/2018/05	1	0	0

Complaint Log for ED/2018/05							
Complaint Ref. No.  Date of Complaint		Description of Complaint	Description of Complaint Investigation / Recommendations / Actions				