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70th CONSOLIDATED MONTHLY EM&A REPORT

August 2022

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/1167

Prepared by : Toby Wan

Reviewed by : Cyrus Lai

Certified by : Colin Yuna

Independent Environmental Checker

Fugro Technical Services Limited

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Kai Tak Development - Stage 5B infrastructure works at the former north apron area

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EXECUTIVE SUMMARY

- i. This is the 70th Consolidated Monthly EM&A Report which summaries the EM&A works undertaken by respective contract under EP-337/2009 within the period between 1 August and 31 August 2022.
- 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:

- Install lift inside the lift shaft of LT1 at SKLR Playground
- Carry out finishing works & E&M works inside subway
- Reinstate the road and drain at TTA stage 3 & Stage 4-3 of PERE
- Relocation of material storage yard and workshop

Contract No. ED/2018/01:

- North Approach Ramp Construction of utilities trough
- Bridge D3 Construction of Bridge Deck
- North Depressed Road Construction of wall & top slab
- Underpass Construction of upstand wall
- South Approach Ramp Construction of Permanent Structure
- District Cooling System seawater intake box culvert reinstatement of the seawall and backfilling works
- Lift 3 Modification works
- Lift 4 Construction of lift shaft
- South Depressed Road construction of permanent works
- Rising Main and Water Pipe Laying of sewage
- Landscaped Deck Installation of columns, construction of Landscaped Deck
- Transformer Room Construction of permanent structure
- Shing Kai Road Modification works, laying of storm water drainage pipes
- Lift 1 & 2 Installation of ELS system
- CLP substation Construction of wall & intermediate slab, permeant structure
- Noise Barrier Remaining works, Bus lay-by construction
- Seawater Intake Box Culvert of Saltwater Pumping Station –Installation of sheetpiles and ELS system

Contract No. ED/2018/05:

- Pile column construction for PC9, PC10 and PC11 for Elevated Walkway LW-02
- Erection of falseworks and working platform for decking of Elevated Walkway LW-02
- UU diversion at Sa Po Road under TTA Stage 2A
- Sheetpile installation at Sa Po Road under TTA Stage 2A
- RC construction at launching shaft for subway SB-01
- Construction works for Pedestrian Street No. 2
- Construction works for Road L16

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- Construction of DCS
- RC construction for Subway KS10 Lift and Staircase
- Renovation works for existing subways KS9 and KS32

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, Contract No. ED/2018/01 and Contract No. ED/2018/05 in this reporting month.

Reporting Changes

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

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Future Key Issues

viii. 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

	e I Summary of Key Issues for the Coming Month and Control Measures				
Major Impact Prediction	Control Measures				
Contract No. KL/2	Contract No. KL/2014/01:				
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 run-off)	 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 run-off 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. 				
Waste/ Chemical Management	 Maintenance involving activities with potential for leakage and spillage should only be undertaken within the areas appropriately equipped to control these discharges. Chemical wastes should be hold by suitable containers with clear label and stored at a safe location. 				
Contract No. KL/2	<u>015/02:</u>				
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 run-off)	 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 run-off 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. 				
Contract No. ED/2	Contract No. ED/2018/01:				
Air Quality, Construction Noise, Water Quality, Chemical and	 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), 				

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Major Impact Prediction	Control Measures
Waste Management, Landscape and Visual	 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.
Contract No. ED/2	018/05:
Air Quality, Construction Noise, Water Quality, Chemical and Waste Management, Landscape and Visual	 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.

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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 69th Consolidated Monthly EM&A Report which summaries the EM&A works undertaken by respective contract under EP-337/2009 within the period between 1 July and 31 July 2022.

1.2 Summary of relevant Contract Information of Key Personnel

Party	Position	Name	Telephone	Fax	
Contract No. KL/2014/0	<u>1:</u>				
Project Proponent (CEDD)	Engineer	Mr. Ricky Yu	3579 2124	3579 4516	
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. Pang Chan	6082 2973	2120 7752
Main Contractor (Penta-Ocean)	EO	Mr. Lulu Mar	6845 0626	3465 8898
Contract No. ED/2018/0	<u>5:</u>			
Project Proponent (CEDD)	Permit Holder	Mr. Lam Shing Tim	3842 7090	2739 0076
Engineer's Representative (AECOM)	Supervisor's Delegate	Mr. Vincent Lee	2798 0771	2798 0783
IEC (Acuity)	IEC	Mr. Kevin Li	9779 2247	2698 9383
ET (Ka Shing)	ET Leader	Mr. Pang Chan	6082 2973	2120 7752
Main Contractor (BK- STEC)	EO	Mr. Rex Lau	6282 5154	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:

- Install lift inside the lift shaft of LT1 at SKLR Playground
- Carry out finishing works & E&M works inside subway
- Reinstate the road and drain at TTA stage 3 & Stage 4-3 of PERE
- Relocation of material storage yard and workshop

Contract No. ED/2018/01:

- North Approach Ramp Construction of utilities trough
- Bridge D3 Construction of Bridge Deck
- North Depressed Road Construction of wall & top slab
- Underpass Construction of upstand wall
- South Approach Ramp Construction of Permanent Structure
- District Cooling System seawater intake box culvert reinstatement of the seawall and

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backfilling works

- Lift 3 Modification works
- Lift 4 Construction of lift shaft
- South Depressed Road construction of permanent works
- Rising Main and Water Pipe Laying of sewage
- Landscaped Deck Installation of columns, construction of Landscaped Deck
- Transformer Room Construction of permanent structure
- Shing Kai Road Modification works, laying of storm water drainage pipes
- Lift 1 & 2 Installation of ELS system
- CLP substation Construction of wall & intermediate slab, permeant structure
- Noise Barrier Remaining works, Bus lay-by construction
- Seawater Intake Box Culvert of Saltwater Pumping Station –Installation of sheetpiles and ELS system

Contract No. ED/2018/05:

- Pile column construction for PC9, PC10 and PC11 for Elevated Walkway LW-02
- Erection of falseworks and working platform for decking of Elevated Walkway LW-02
- UU diversion at Sa Po Road under TTA Stage 2A
- Sheetpile installation at Sa Po Road under TTA Stage 2A
- RC construction at launching shaft for subway SB-01
- Construction works for Pedestrian Street No. 2
- Construction works for Road L16
- Construction of DCS
- RC construction for Subway KS10 Lift and Staircase
- Renovation works for existing subways KS9 and KS32

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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	 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.
Contract No. KL/2015/02:	
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; Provide movable noise barrier; Well maintain the drainage system to prevent the spillage of wastewater during heavy rainfall; Provide sufficient mitigation measures as recommended in Approved EIA Report/Lease requirement.
Contract No. ED/2018/01:	Approved Environmental
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,

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Major Environmental Impact	Control Measures
	 and Provide sufficient mitigation measures as recommended in Approved EIA Reports.
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	42.1	23.1 – 66.0	346	500
24-hr TSP	AM2(A)	49.3	12.9 – 120.5	157	260
Contract No.	ED/2018/01:				
-	AM3	39	20 – 58	182	260
24-hr TSP	AM4(A)	47	33 – 69	187	
	AM7	41	28 – 73	181	
	AM3	38	30 – 55	297	500
1-hr TSP	AM4(A)	43	35 – 59	326	
	AM7	36	22 – 66	315	
Contract No. ED/2018/05:					
24-hr TSP	AM2(A)	33	21 – 43	175	200
	AM3	39	20 – 58	172	260
1 hr TCD	AM2(A)	31	18 – 41	302	F00
1-hr TSP	AM3	38	30 – 55	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.

<u>Noise</u>

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- 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 _(30min) 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)	59.7 – 75.1 #	10/11	75
M4	73.1 – 76.0 #	When one	70*
M5(C)	73.5 – 79.1 #	documented complaint is	75
Contract No. ED/2018/01:	received.		
M11	61.1 – 69.6		75
M12	59.9 – 68.3		75
Contract No. ED/2018/05:			
M4(A)	69.2 – 69.8		75
M5(A)	72.1 – 73.4		75

^(*) 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.

^(#) 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	0	NA
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 T&C at Lift LT4 at Road D1
- Carry out finishing works & E&M works inside subway
- Implement TTA stage 2 & Stage 4-2 of PERE
- Relocation of material storage yard and workshop
- · Reinstatement works at SKLR Playground

Contract No. ED/2018/01:

- North Approach Ramp Construction of end wall
- Bridge D3 Construction of Bridge
- North Depressed Road Construction of walls & top slab
- Underpass Construction of upstand wall
- South Approach Ramp Construction of Permanent Structure
- District Cooling System seawater intake box culvert reinstatement of the seawall and backfilling works
- Lift 3 Modification works
- Lift 4 Construction of lift shaft
- South Depressed Road construction of permanent works
- Rising Main and Water Pipe Laying of sewage
- Landscaped Deck Construction of pile caps and installation of columns
- · Transformer Room Construction of permanent structure
- Shing Kai Road Modification works, laying of storm water drainage pipes
- Lift 1 & 2 Installation of ELS system
- CLP substation Construction of wall & intermediate slab, permeant structure
- Noise Barrier Remaining works, Bus lay-by construction
- Seawater Intake Box Culvert of Saltwater Pumping Station Installation of sheetpiles and ELS system

Contract No. ED/2018/05:

- Pile column construction for PC9, PC10 and PC11 at Elevated Walkway LW-02
- Erection of falsework and working platform for decking of Elevated Walkway LW-02
- Construction of Crowd Dispersal Route
- Construction of Road L16
- · Construction of DCS
- · Construction works for Pedestrian Street No. 2
- · UU diversion works at Sa Po Road
- Sheetpile installation at Sa Po Road under TTA Stage 2A
- RC construction for launching shaft for subway SB-01

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- Renovation works for existing subway KS9 and KS32
- RC construction for Subway KS10 Lift and Staircase
- · Twin rising main connection works
- 6.1.2 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/20	014/01:
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 run-off)	 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 run-off 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.
Waste/ Chemical Management	 Maintenance involving activities with potential for leakage and spillage should only be undertaken within the areas appropriately equipped to control these discharges. Chemical wastes should be hold by suitable containers with clear label and stored at a safe location.
Contract No. KL/20	015/02:
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 run-off)	 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 run-off 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.
Contract No. ED/2	018/01 <u>:</u>
Air Quality, Construction Noise, Water Quality,	 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,

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Major Impact Prediction	Control Measures
Chemical and Waste Management, Landscape and Visual	 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.
Contract No. ED/2	018/05 <u>:</u>
Air Quality, Construction Noise, Water Quality, Chemical and Waste Management, Landscape and Visual	 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.

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 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, Contract No. ED/2018/01 and Contract No. ED/2018/05 in this reporting month.
- 7.1.5 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/B 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
August 2022

(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.

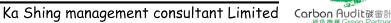
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CINOTECH CONSULTANTS LTD

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Email: info@cinotech.com.hk

嘉誠管理顧問有限公司







Our ref: 07-09-2022

07-09-2022

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 August 2022 (version 1.0)

Reference is made to the Environmental Team's submission of the draft Monthly EM&A Report (version 1.0) for August 2022 provided to Independent Environmental Checker (IEC) via email dated on 7-9-2022 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/B.

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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FS 681274 EMS 717625

OHS 717629

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EXECUTIVE SUMMARY

Introduction

- 1. This is the 77th 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/B ("Kai Tak Development Roads D3A & D4A") respectively. This report documents the findings of EM&A Works conducted in August 2022.
- 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; further amendment of Environmental Permit (No.: EP-445/2013/B) issued on 3 May 2022).
- 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. The Environmental Permit (No.: EP-445/2013/B) was further amended and the Environmental Permit (No.: EP-445/2013/B) was issued on 3 May 2022.
- 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/B).
- 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 77th Monthly EM&A report summarizing the EM&A works for the Project in August 2022.
- 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 Proponent	Mr. Ricky Yu	Engineer	3579 2124	3579 4516
AECOM	Supervising Officer	Mr. Clive Cheng	CRE	3746 1801	2798 0783
	Environmental Team	Mr. K S Lee	Environmental Team Leader	2151 2091	3107 1388
Cinotech		Ms. Betty Choi	Audit Team Leader	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 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.

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 August 2022 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 August 2022 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.

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 4, 12, 19, 26 & 31 August 2022 in the reporting month. IEC joint site inspection was conducted on 31 August 2022. 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

Permit No.	Valid Period		- Details	Status		
refinit No.	From	To	Details	Status		
Environmental Permit (EP)						
EP-337/2009	23 Apr 2009	N/A	Construction of new distributor roads serving the planned Kai Tak development.	Valid		
EP-445/2013/A	13 Aug 2014	N/A	Construction of Kai Tak Development roads D3A and D4A	Valid		
Effluent Discharge	License					
WT00023634- 2016		31 Mar 2021	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 Mar 2021		
Registration of Che	emical Waste	Producer				
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	Permit (CNI	P)				
GW-RE0442-20	14 Jun 2020	13 Dec 2020	Construction Noise Permit for the	Expired on 13 Dec 2020		
GW-RE0639-20	3 Aug 2020	19 Jan 2021	use of powered mechanical equipment for carrying out construction work other than	Expired on 19 Feb 2021		
GW-RE0045-21	20 Jan 2021	19 Jul 2021	percussive pilling and performing prescribed construction work. Construction Noise Permit for the use of powered mechanical	Expired on 19 Jul 2021		
GW-RE0656-21	9 Jul 2021	30 Sep 2021	equipment for carrying out construction work other than percussive pilling and performing prescribed construction work.	Expired on 30 Sep 2021		
GW-RE0717-21	30 Jul 2021	19 Jan 2022		Expired on 19 Jan 2022		

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. September and October 2022 are summarized as follows:

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

7. CONCLUSIONS AND RECOMMENDATIONS

Conclusions

7.1 The Environmental Monitoring and Audit (EM&A) Report presents the EM&A works undertaken in August 2022.

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.

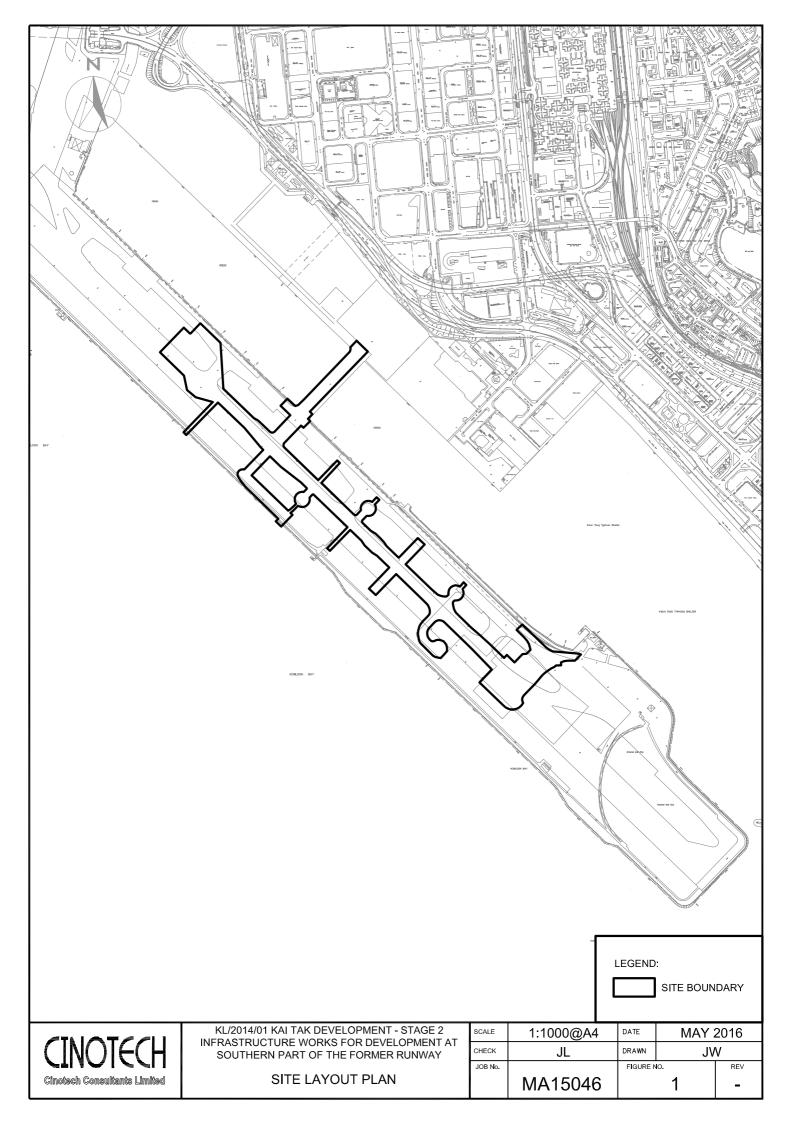
Recommendations

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 ⁽¹⁾⁽²⁾ (μg/ m³)
KTD1	24-hr TSP	177	260
KTD1*	1-hr TSP	285	500

^{* 1-}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 ⁽¹⁾⁽²⁾
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.

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

^{(*) 70}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: August 2022

(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/B

Weekly Site Inspection Record Summary Inspection Information

Checklist Reference Number	220804
Date	4 August 2022 (Thursday)
Time	14:30 – 15:30

Dof No	Non Complemen	Related
Ref. No.	Non-Compliance	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.: 220727).	

	Name	Signature	Date
Recorded by	Echo Hung	Leng	4 August 2022
Checked by	Colman Wong	Colman	5 August 2022

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

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

Weekly Site Inspection Record Summary Inspection Information

Checklist Reference Number	220812
Date	12 August 2022 (Friday)
Time	14:30 – 15:30

Dof No	Non Compliance	Related
Ref. No.	Non-Compliance	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.: 220804).	

	Name	Signature	Date
Recorded by	Echo Hung	Lelig	12 August 2022
Checked by	Colman Wong	Colman	15 August 2022

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

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

Weekly Site Inspection Record Summary Inspection Information

Checklist Reference Number	220819
Date	19 August 2022 (Friday)
Time	14:30 – 15:30

Dof No	Non Compliance	Related
Ref. No.	Non-Compliance	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.: 220812).	

	Name	Signature	Date
Recorded by Echo Hung		Leng	19 August 2022
Checked by	Colman Wong	Colman	22 August 2022

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

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

Weekly Site Inspection Record Summary Inspection Information

Checklist Reference Number	220826
Date	26 August 2022 (Friday)
Time	14:30 – 15:30

Dof No	Non Complemen	Related Item No.
Ref. 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.: 220819).	

	Name	Signature	Date
Recorded by	Echo Hung	Leng	26 August 2022
Checked by	Colman Wong	Colman	29 August 2022

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

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

Weekly Site Inspection Record Summary Inspection Information

Checklist Reference Number	220831
Date	31 August 2022 (Wednesday)
Time	14:30 – 15:30

Dof No	Non Compliance	Related
Ref. No.	Non-Compliance	Item No.
=	None identified	-
Dof No	Remarks/Observations	Related
Ref. No.		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.: 220826).	

	Name	Signature	Date
Recorded by	Echo Hung	Leng	31 August 2022
Checked by	Colman Wong	Colman	1 September 2022

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	 Notify ER, IEC and Contractor; Carry out investigation; Report the results of investigation to the IEC, ER and Contractor; Discuss with the IEC and Contractor on remedial measures required; Increase monitoring frequency to check mitigation effectiveness. (The above actions should be taken within 2 working days after the exceedance is identified) 	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	 Inform IEC, ER, Contractor and EPD; Repeat measurements to confirm findings; Increase monitoring frequency; Identify source and investigate the cause of exceedance; Carry out analysis of Contractor's working procedures; Discuss with the IEC, Contractor and ER on remedial measures required; Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; If exceedance stops, cease additional monitoring. (The above actions should be taken within 2 working days after the exceedance is identified) 	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)	 Take immediate action to avoid further exceedance; Submit proposals for remedial actions to IEC and ER within 3 working days of notification; Implement the agreed proposals; Submit further proposal if problem still not under control; Stop the relevant portion of works as instructed by the ER until the exceedance is abated. (The above actions should be taken within 2 working days after the exceedance is identified) 	

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 Qu	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)	 stockpring site(s) should be fined with imperincable sheeting and builded. Stockprice should be fully covered by impermeable sheeting to reduce dust emission. Misting for the dusty material should be carried out before being loaded into the vehicle. Any vehicle with an open load carrying area should have properly fitted side and tail 	^			
	 Any vehicle with an open load earlying area should have properly fitted side and tail boards. Material having the potential to create dust should not be loaded from a level higher than the side and tail boards and should be dampened and covered by a clean tarpaulin. 				
	• The tarpaulin should be properly secured and should extent at least 300 mm over the edges of the sides and tailboards. The material should also be dampened if necessary before transportation.	^			
	• The vehicles should be restricted to maximum speed of 10 km per hour and confined haulage and delivery vehicle to designated roadways insider the site. 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
	 The area where vehicle washing takes place and the section of the road between the washing facilities and the exit point should be paved with concrete, bituminous materials or hardcores. Every main haul road should be scaled with concrete and kept clear of dusty materials or sprayed with water so as to maintain the entire road surface wet. Every stock of more than 20 bags of cement should be covered entirely by impervious sheeting placed in an area sheltered on the top and the three sides; and Every vehicle should be washed to remove any dusty materials from its body and wheels before leaving the construction sites. 	
Construction Noise		
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
	 Mobile plant, if any, should be sited as far away from NSRs as possible. 	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)	 Provision of about 1090 m length of vertical noise barrier (connected to the deck) at Roads D3A & D4A; Provision of about 60 m length of overhang vertical noise barrier (connected to the deck) at Road D4A; and Provision of staircases with noise barriers next to Sites 4A1 and 4B1 It should be noted that the exact length of the mitigation measures would be subject to minor refinement during the detailed design stage. 	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
Construction Water	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 ³ 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 ³ 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.	٨
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		
	Disposal of chemical wastes should be carried out in compliance with the Waste Disposal Ordinance. The Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes published under the Waste Disposal Ordinance details the requirements to deal with chemical wastes. General requirements are given as follows: Suitable containers should be used to hold the chemical wastes to avoid leakage or	^	
	 spillage during storage, handling and transport. Chemical waste containers should be suitably labelled, to notify and warn the personnel who are handling the wastes, to avoid accidents. 	^	
	• Storage area should be selected at a safe location on site and adequate space should be allocated to the storage area.	۸	
Construction Waste	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)	 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: 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 Training of site personnel in proper waste management and chemical waste handling procedures 	^	
	 Provision of sufficient waste disposal points and regular collection for disposal 	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:	
	 Sort C&D waste from demolition of the remaining structures to recover recyclable portions such as metals 	^
	 Segregation and storage of different types of waste in different containers, skips or 	٨
	stockpiles to enhance reuse or recycling of materials and their proper disposal	
	 Encourage collection of aluminium cans, PET bottles and paper by providing separate 	٨
	labelled bins to enable these wastes to be segregated 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 	٨
	contamination of construction materials	
	Plan and stock construction materials carefully to minimize amount of waste generated and avoid unnecessary generation of waste generated and avoid unnecessary generation of waste	۸
	 Training should be provided to workers about the concepts of site cleanliness and appropriate waste management procedures, including waste reduction, reuse and recycle. 	۸

EIA Ref.	Mitigation Measures	Status
S3.5	Construction and Demolition Materials	
(AEIAR-130/2009)	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.	۸
	• 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.	۸
	• 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	۸
	tipping, a trip-ticket system as stipulated in the ETWB TCW No. 31/2004 "Trip Ticket	

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
Construction Lands	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
	 Erection of decorative screen hoarding. 	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: August 2022

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 2022

	Actual Quantities of Inert C&D Materials Generated 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	43.77	0	0	0	0.00	0	0	0	0	0	43.77
Feb	58.14	0	0	0	0.00	0	0	0	0	0	58.14
Mar	87.83	0	0	0	0.00	0	0	0	0	0	87.83
Apr	247.25	0	0	0	0.00	0	0	0	0	0	247.25
May	173.63	0	0	0	0.00	0	0	0	0	0	173.63
June	114.17	0	0	0	0.00	0	0	0	0	0	114.17
Sub-total	724.79	0	0	0	0.00	0	0	0	0	0	724.79
July	154.61	0	0	0	154.61	0	0	0	0	0	15.99
Aug	90.67	0	0	0	90.67	0	0	0	0	0	8.45
Sept		0	0	0		0	0	0	0	0	
Oct		0	0	0		0	0	0	0	0	
Nov		0	0	0		0	0	0	0	0	
Dec		0	0	0		0	0	0	0	0	
Total	970.07	0	0	0	245.28	0	0	0	0	0	749.23

^{*} 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
Augest 2022

(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

CINOTECH CONSULTANTS LTD

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Email: info@cinotech.com.hk



FUGRO TECHNICAL SERVICES LIMITED

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

Date 13 September 2022

Our Ref. MCL/ED/0339/2022/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 August 2022

We refer to your emails dated 13 September 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 Cyrus Lai on 3565 4442.

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/cl

c.c. CEDD – 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 68th 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 August 2022.
- 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	Air Quality Monitoring Stations					
	Yes (1-hour TSP)	N/A				
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:
 - Install lift inside the lift shaft of LT1 at SKLR Playground
 - Carry out finishing works & E&M works inside subway
 - Reinstate the road and drain at TTA stage 3 & Stage 4-3 of PERE
 - Relocation of material storage yard and workshop

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-rel		
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 (WT00041367-2022).
 - 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	Domoule	
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	Contact Person	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	Mr. K.S Lee	Environmental Team Leader	2151 2091	3107 1388
Chioteen	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:
 - -Install lift inside the lift shaft of LT1 at SKLR Playground
 - -Carry out finishing works & E&M works inside subway
 - -Reinstate the road and drain at TTA stage 3 & Stage 4-3 of PERE
 - -Relocation of material storage yard and workshop
- 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	 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; Provide movable noise barrier; Well maintain the drainage system to prevent the spillage of wastewater during heavy rainfall; 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 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

Monitoring Stations Locations		Location of Measurement
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	 Sibata Scientific Technology LD-5R 	1
HVS Sampler	• TE-5170 c/w of TSP sampling inlet	1
Wind Anemometer	 Davis Instruments 6152 	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 ±3°C; the relative humidity (RH) should be < 50% and not vary by more than ±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

Monitoring Stations	Locations	Location of Measurement
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	BSW Atech BSWA 308	3
Calibrator	SOUNDTEK ST-120	2

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
Fast
time measurement
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_{eq}, L₉₀ and L₁₀ 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

Monitoring Stations	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 ⁽¹⁾	75
M3(A)	(at 0700 – 1900 hrs on normal	(at 0700 – 1900 hrs on
	weekdays)	normal weekdays)
	76.7 ⁽²⁾	70 ^(*)
M4	(at 0700 – 1900 hrs on normal	(at 0700 – 1900 hrs on
	weekdays)	normal weekdays)
	N/A ⁽¹⁾	75
M5(C)	(at 0700 – 1900 hrs on normal	(at 0700 – 1900 hrs on
	weekdays)	normal weekdays)

^(*) 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

⁽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-hr TSP conc.		Measured 1-hr TSP conc.		
Station				eporting Month gust 2022), μg/m³	
	2013), $\mu g/m^3$	2016), μg/m ³	Average	Range	
AM2 – Lee Kau Yan Memorial School	290	312	42.1	23.1 – 66.0	

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

•	Predicted 24-hr TSP conc.		Measured 24-hr TSP conc.	
Station	Scenario1 (Mid 2013 to Mid-2013), Scenario2		Reportin (August 20	
	μg/m³	Late 2016), μg/m³	Average	Range
AM2(A) – Ng Wah Catholic Secondary School	145	169	49.3	12.9 – 120.5

Table 4.3 Comparison of Noise Monitoring Data with EIA predictions

Stations	Predicted Mitigated Construction Noise Levels during Normal Working Hour (Leq (30min) dB(A))	Reporting Month (August 2022), L _{eq (30min)} dB(A)
M3(A) – The Bridge connecting The Latitud	e Not predicted in EIA Report	59.7 - 75.1 ⁽²⁾
M4 – Lee Kau Yan Memorial School	47 – 74	73.1 - 76.0 (1)
M5(C) – Mercy Grace Home	Not predicted in EIA Report	73.5 - 79.1 (2)

Remarks:

⁽¹⁾ 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.

⁽²⁾ 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 2, 10, 16, 23 & 31 August 2022 in the reporting month. A joint site inspection with the representative of IEC, ER, the Contractor and the ET was conducted on 10 August 2022. 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

Tuble VII Summitty VI Environmental Electioning and I elimit States				
D 4 N.	Valid P	Valid Period		
Permit No.	From	То	Status	
Environmental Permit (EP)				
EP-337/2009	23 Apr 2009	N/A	Valid	
Effluent Discharge License				
WT00027495-2017	28 Mar 2017	31 Mar 2022	Expired	
WT00041367-2022	20 Jun 2022	31 Mar 2027	Valid	
Billing Account for Construction W	aste 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	
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**.

Parameters	Date	Observations and Recommendations	Follow-up/Rectification
Water Quality	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.

Monthly EM&A Report – August 2022

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 T&C at Lift LT4 at Road D1
 - Carry out finishing works & E&M works inside subway
 - Implement TTA stage 2 & Stage 4-2 of PERE
 - Relocation of material storage yard and workshop
 - Reinstatement works at SKLR Playground
- 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.

Monthly EM&A Report – August 2022

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.

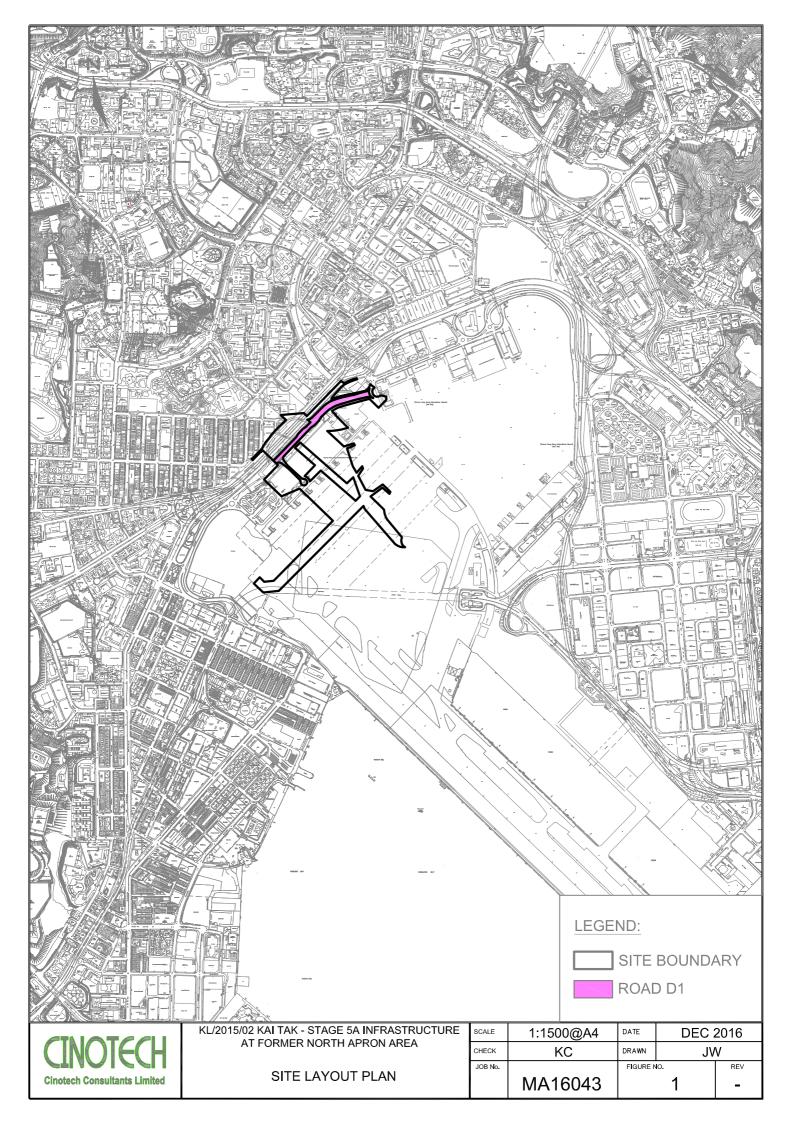
Air Quality

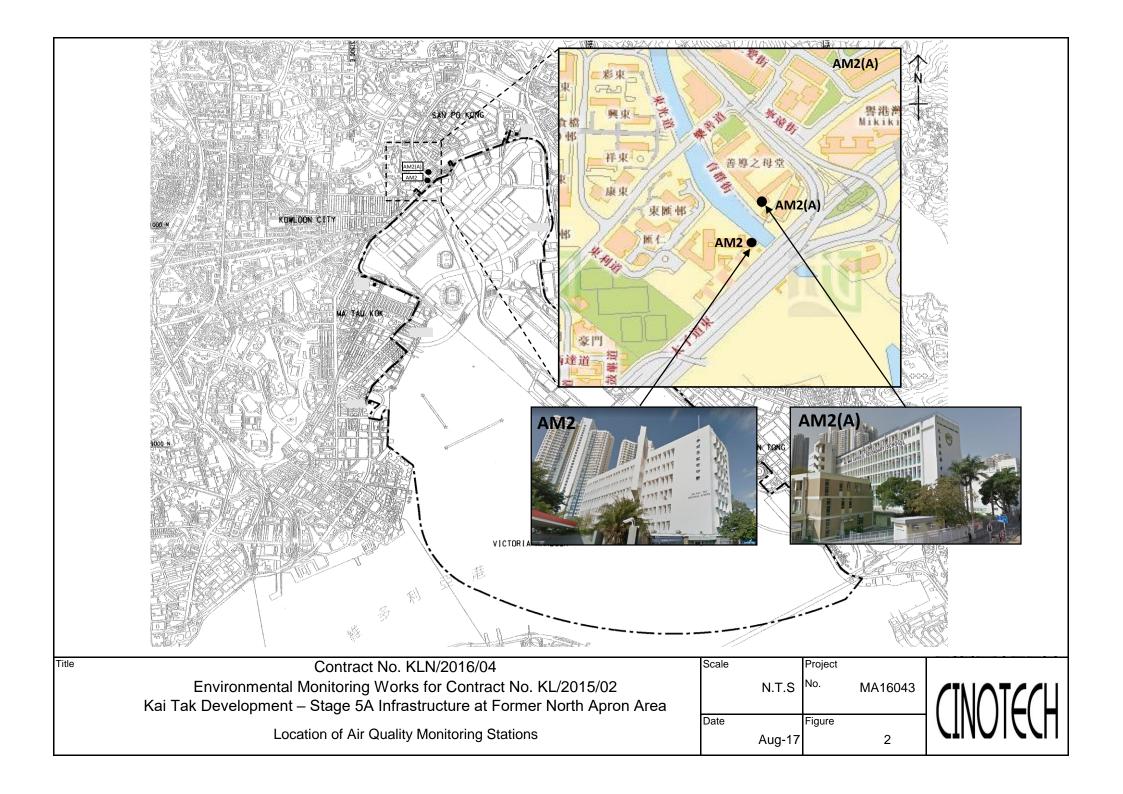
• The Contractor should cover the dusty material by dust screen.

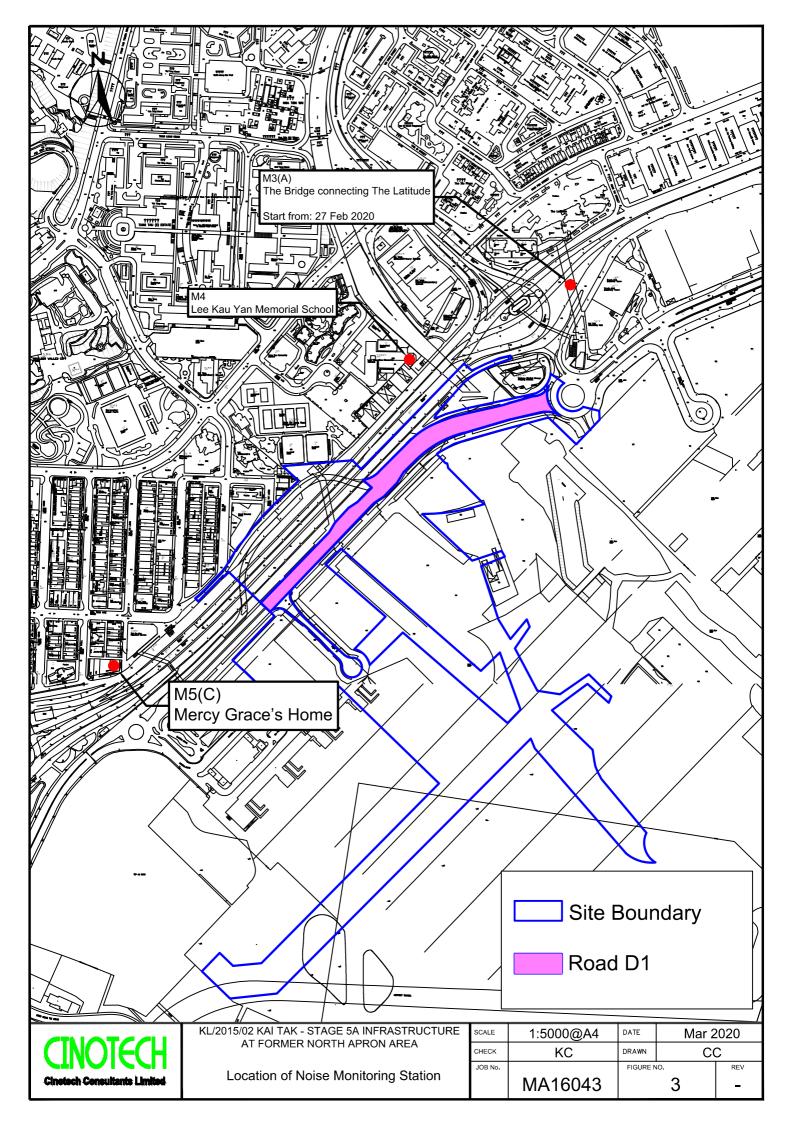
Waste/Chemical Management

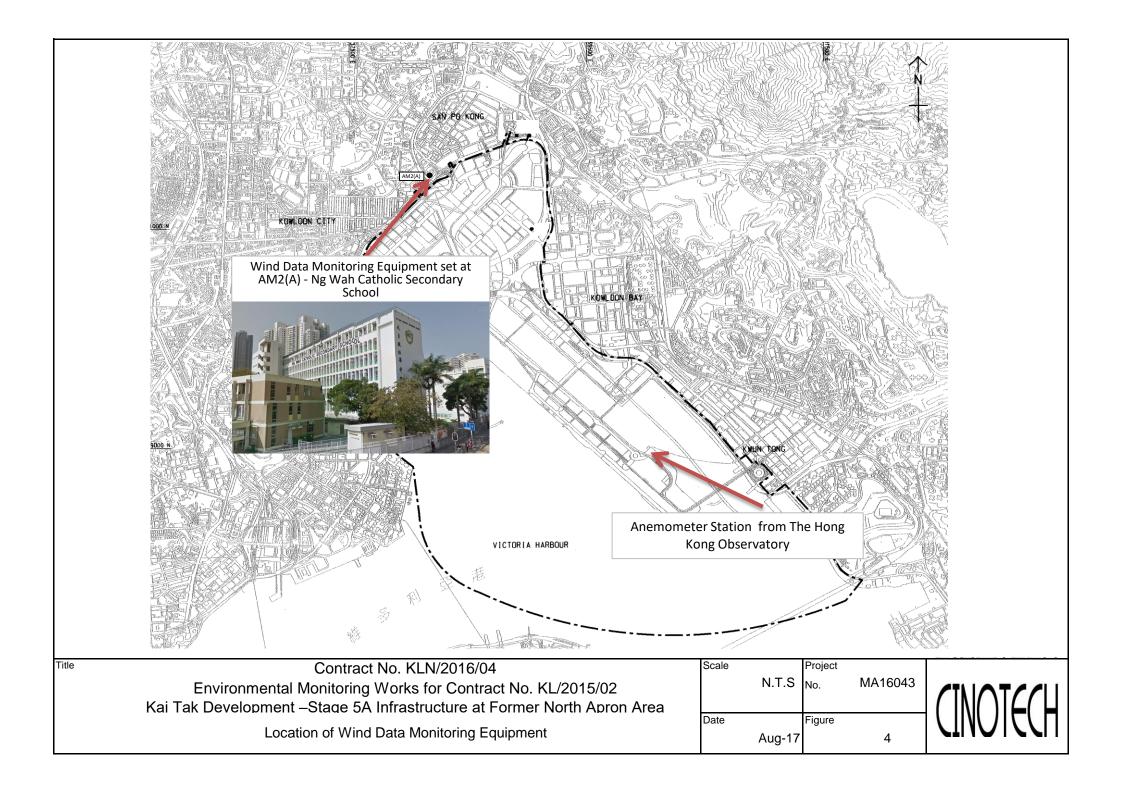
- The Contractor should store the construction/chemical material at the proper place.
- The Contractor was reminded to remove accumulated waste from the site.

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 ³	Limit Level, μg/m³
AM2	346	500

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

Location	Action Level, μg/m ³	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

Digital Dust Indicator



Date of Calibration 29-Jul-22

Certificate of Calibration

Description:

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

Manufacturer:	Sibata Scient	ific Technology LTD.	_	Validity of Caliba	ration Record	28-Sep-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 Sensitiv	vity Adjustment	739 CPM	
Tisch Calibration	n Orifice No.:	3864	After Sensitivi	ty Adjustment	739 CPM	
		Ca	libration of 1 h	r TSP		
Calibration		Laser Dust Monitor			HVS	
Point	M	lass Concentration (μg/	m3)	Mas	ss concentration (µ	ig/m ³)
1		X-axis			Y-axis	
2		72.0 64.0			161.0 145.0	
3		51.0			115.0	
Average		62.3			140.3	
Slope , mw = Correlation co	2.20 pefficient* =	0.9993		ept, bw =	3.0890	
		Se	t Correlation F	actor		
	-	High Volume Sampler ($(\mu g/m^3)$		140.3	
	-	Oust Meter (μg/m ³)		62.3		
Measureing time					60.0	
Set Correlation F SCF = [K=Higl		npler / Dust Meter, (μ	g/ m3)]	2.3		
The Dust Monitor Factor (CF) betw	or was compare veen the Dust I	o the instruction manual of with a calibrated High Monitor and High Voluted by HOKLAS laborated	gh Volume Samp me Sampler.		was used to gener	rate the Correlation
Calibrated by:		ng Shing Kwai)	_	Approved by:	Ct Manager (Henry	Leung)





RECALIBRATION DUE DATE:

January 31, 2023

Certificate of Calibration

Calibration Certification Information

Cal. Date: January 31, 2022

Rootsmeter S/N: 438320

Ta: 294 °K

Pa: 752.6

Operator: Jim Tisch

mm Hg

Calibration Model #:

TE-5025A

Calibrator S/N: 3864

	Vol. Init	Vol. Final	ΔVol.	ΔTime	ΔΡ	ΔН
Run	(m3)	(m3)	(m3)	(min)	(mm Hg)	(in H2O)
1	1	2	1	1.4490	3.2	2.00
2	3	4	1	1.0320	6.4	4.00
3	5	6	1	0.9160	7.9	5.00
4	7	8	1	0.8730	8.8	5.50
5	9	10	1	0.7230	12.7	8.00

	Data Tabulation						
Vstd	Qstd $\sqrt{\Delta H \left(\frac{Pa}{Pstd}\right) \left(\frac{Tstd}{Ta}\right)}$			Qa	√∆H(Ta/Pa)		
(m3)	(x-axis)	(y-axis)	Va	(x-axis)	(y-axis)		
0.9995	0.6898	1.4169	0.9957	0.6872	0.8839		
0.9952	0.9643	2.0037	0.9915	0.9608	1.2500		
0.9932	1.0843	2.2402	0.9895	1.0802	1.3976		
0.9920	1.1363	2.3496	0.9883	1.1321	1.4658		
0.9868	1.3649	2.8337	0.9831	1.3598	1.7678		
	m=	2.09281		m=	1.31048		
QSTD	b=	-0.02426	QA [b=	-0.01514		
	r=	0.99993	,	r=	0.99993		

	Calculatio	ns	
Vstd=	ΔVol((Pa-ΔP)/Pstd)(Tstd/Ta)	Va=	ΔVol((Pa-ΔP)/Pa)
Qstd=	Vstd/∆Time	Qa=	Va/ΔTime
	For subsequent flow ra	te calculatio	ns:
Qstd=	$1/m\left(\left(\sqrt{\Delta H\left(\frac{Pa}{Pstd}\right)\left(\frac{Tstd}{Ta}\right)}\right)-b\right)$	Qa=	$1/m\left(\left(\sqrt{\Delta H(Ta/Pa)}\right)-b\right)$

	Standard Conditions				
Tstd:	298.15 °K				
Pstd: 760 mm Hg					
	Key				
ΔH: calibrate	or 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. MA16043/13/0031

Project No.	AM2(A) - Ng V	Vah Catholic Sec	ondary School					
Date:	5-Jul-22		Next Due Date:	4-5	Sep-22	Operator:	SK	
Equipment No.:	Jo.: A-01-13		Model No.:	TE	2-5170	Serial No.	1352	
Ambient Condition								
Temperatur	re, Ta (K)	302	Pressure, Pa			753.2		
			ifice Transfer Star			ı		
Serial		3864	Slope, mc	0.05922	Intercept		-0.02420	
Last Calibra		31-Jan-22			$c = [\Delta H \times (Pa/760)]$			
Next Calibra	ation Date:	31-Jan-23		$Qstd = \{ [\Delta H x] \}$	(Pa/760) x (298/7	ra)] - bc} / me	2	
		•	Calibration of 7	FSP Sampler				
G 111 .		Oı	fice	191 Sampler		HVS		
Calibration Point	DH (orifice), in. of water		60) x (298/Ta)] ^{1/2}	Qstd (CFM) X - axis	DW (HVS), in. of water	[ΔW x (Pa/76	0) x (298/Ta)] ^{1/2} -axis	
1	12.8		3.54	60.15	10.7	3	3.23	
2	11.0		3.28	55.79	8.4	2	2.87	
3	8.1		2.81	47.93	5.8	2	2.38	
4	5.5		2.32	39.57	3.2	1	.77	
5	3.3		1.80	30.74	1.8	1	33	
By Linear Regro		X.						
Slope, mw =		_		Intercept, bw :	-0.732	.6		
	coefficient* =		.9974	ı				
*If Correlation C	.0emcient < 0.9	90, check and rec	canbrate.					
			Set Point Ca	alculation				
From the TSP Fi	eld Calibration (Curve, take Qstd						
From the Regress	sion Equation, t	he "Y" value acc	ording to					
				(D. 15(0)) (A)	20/57 >1/2			
		mw x C	$\mathbf{Qstd} + \mathbf{bw} = [\Delta \mathbf{W} \ \mathbf{x}]$	(Pa//60) x (2)	98/1a)]			
Therefore, Se	t Point; W = (n	nw x Qstd + bw)	² x (760 / Pa) x (7	Γa / 298) =	4.36			
D								
Remarks:								
				10	. 1			
Conducted by:	Wong Sl	ning Kwai	Signature:		<u></u> <u> </u>	Date:	5-Jul-22	
Checked by:	Henry	Leung	Signature:	\-lem	y day	Date:	5-Jul-22	



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-Apr-2022

Next Due Date 8-Oct-2022

1. Performance check of Wind Speed

Wind Sp	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	2.0	0.0
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

1. Performance check of anemometer

Air Veloc	ity, m/s	Difference D (m/s)
Instrument Reading (V1)	Reference Value (V1)	D = V1 - V2
2	2	0

2. Performance check of wind direction sensor

Wind Dir	ection (°)	Difference D (°)	
Instrument Reading (W1)	Reference Value (W2)	D = W1 - W2	
0	0	0	
45	45	0	
90.2	90	0.2	
135.3	135	0.3	
180	180	0	
225.1	225	0.1	
270.3	270	0.3	
315	315	0	
360	360	0	

APPENDIX B-2 COPIES OF CALIBRATION CERTIFCATES (NOISE)

Rm 1904, Technology Park 18 On Lai Street, Shatin

NT, Hong Kong

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



Report No. : 00152 Issue Date : 19 Nov 2021

Application No. : HP00034

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 Integrating Sound Level Meter.

Equipment No.: : N-12-01

Manufacturer: : BSWA Technology

Other information : N

Model No.	BSWA 308
Serial No.	570183
Microphone No.	570605

Date Received : 10 Nov 2021

Test Period : 10 Nov 2021 to 17 Nov 2021

Test Requested : Performance checking for Sound Level Meter

Test Method : The Sound Level 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

Rm 1904, Technology Park 18 On Lai Street, Shatin

NT, Hong Kong

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



Report No. : 00152 | Issue Date : 19 Nov 2021

Application No. : HP00034

Certificate of Calibration

Measuring equipment

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

Test Result :

Reference value, dB	Indication value, dB	Deviation, dB	Allowed deviation, dB
94.0	94.1	+0.1	± 1.5
114.0	114.0	0.0	± 1.5

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 -

Rm 1904, Technology Park 18 On Lai Street, Shatin

NT, Hong Kong

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



Report No. : 00145 Issue Date : 04 Nov 2021

Application No. : HP00029

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 Integrating Sound Level Meter.

Equipment No.: : N-12-03

Manufacturer: : BSWA Technology

Other information : Mo

Model No.	BSWA 308
Serial No.	570188
Microphone No.	570608

Date Received : 26 Oct 2021

Test Period : 26 Oct 2021 to 02 Nov 2021

Test Requested : Performance checking for Sound Level Meter

Test Method : The Sound Level 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

Rm 1904, Technology Park 18 On Lai Street, Shatin

NT, Hong Kong

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



Report No. : 00145 | Issue Date : 04 Nov 2021

Application No. : HP00029

Certificate of Calibration

Measuring equipment

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

Test Result

Reference value, dB	Indication value, dB	Deviation, dB	Allowed deviation, dB
94.0	93.9	-0.1	± 1.5
114.0	114.0	0.0	± 1.5

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 -

Rm 1904, Technology Park 18 On Lai Street, Shatin

NT, Hong Kong

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



Report No. : 00149 | Issue Date : 16 Nov 2021

Application No. : HP00031

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 Integrating Sound Level Meter.

Equipment No.: : N-12-04

Manufacturer: : BSWA Technology

Other information :

Model No.	BSWA 308
Serial No.	580238
Microphone No.	590073

Date Received : 05 Nov 2021

Test Period : 08 Nov 2021 to 12 Nov 2021

Test Requested : Performance checking for Sound Level Meter

Test Method : The Sound Level 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

Rm 1904, Technology Park 18 On Lai Street, Shatin

NT, Hong Kong

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



Report No. : 00149 | Issue Date : 16 Nov 2021

Application No. : HP00031

Certificate of Calibration

Measuring equipment

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

Test Result :

Reference value, dB	Indication value, dB	Deviation, dB	Allowed deviation, dB
94.0	93.7	-0.3	± 1.5
114.0	114.0	0.0	± 1.5

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 -

Rm 1904, Technology Park 18 On Lai Street, Shatin

NT, Hong Kong

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



Report No. : 00150 Issue Date : 16 Nov 2021

Application No. : HP00032

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-13-01

Manufacturer: : SOUNDTEK

Other information : Model No. ST-120

Serial No. 181001608

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

Rm 1904, Technology Park 18 On Lai Street, Shatin

NT, Hong Kong

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



Report No. : 00150 | Issue Date : 16 Nov 2021

Application No. : HP00032

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	94.1	+0.1	± 0.3
114.0	114.0	0.0	± 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 -

Rm 1904, Technology Park 18 On Lai Street, Shatin

NT, Hong Kong

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



Report No. : 00151 Issue Date : 16 Nov 2021

Application No. : HP00033

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-13-02

Manufacturer: : SOUNDTEK

Other information : Model No. ST-120

Serial No. 181001636

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

Rm 1904, Technology Park 18 On Lai Street, Shatin

NT, Hong Kong

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



Report No. : 00151 | Issue Date : 16 Nov 2021

Application No. : HP00033

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, dBIndication value, dBDeviation, dBAllowed deviation, dB94.094.00.0 ± 0.3 114.0114.1+0.1 ± 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

August 2022

		August 2022		
Date	Mean Pressure (hPa)	Air Temperature	Mean Relative Humidity (%)	Precipitation (mm)
		Mean (°C)		
1-Aug-22	1005.9	31.4	69	0
2-Aug-22	1007.1	31.1	70	0.2
3-Aug-22	1006.7	28.2	82	34.9
4-Aug-22	1004.5	27.1	86	14.9
5-Aug-22	1007.6	26.1	94	165.5
6-Aug-22	1007.6	27.9	89	5.5
7-Aug-22	1006.7	29.6	82	2.8
8-Aug-22	1006.3	28.3	87	33.3
9-Aug-22	1003.6	26.7	88	72
10-Aug-22	1004.1	27.4	90	49.7
11-Aug-22	1007.8	26.7	90	12.4
12-Aug-22	1008.8	26.1	93	76
13-Aug-22	1008.0	28.7	81	0
14-Aug-22	1007.2	29.5	78	0
15-Aug-22	1006.2	30.0	78	0
16-Aug-22	1005.6	29.4	82	9.1
17-Aug-22	1005.8	28.2	86	29.8
18-Aug-22	1005.5	28.1	87	22.1
19-Aug-22	1004.9	28.3	85	4.8
20-Aug-22	1007.5	28.2	83	8.4
21-Aug-22	1008.3	29.0	84	1.9
22-Aug-22	1006.9	30.1	77	0
23-Aug-22	1005.0	31.1	77	0
24-Aug-22	1002.3	30.8	73	5.5
25-Aug-22	1006.3	27.2	85	48.1
26-Aug-22	1010.6	29.4	80	0.1
27-Aug-22	1009.2	29.7	78	0
28-Aug-22	1008.4	30.5	80	0
29-Aug-22	1010.2	30.1	78	0
30-Aug-22	1008.8	29.5	80	13.1
31-Aug-22	1006.7	29.7	80	4.7

August 2022					
Т		nd Speed and Direction	15		
Date	Time	Wind Speed m/s	Direction		
1-Aug-22	0:00	1.3	W		
1-Aug-22	1:00	1.3	W		
1-Aug-22	2:00	0.9	NW		
1-Aug-22	3:00	1.3	NW		
1-Aug-22	4:00	0.9	NW		
1-Aug-22	5:00	0.9	NW		
1-Aug-22	6:00	0.4	NNW		
1-Aug-22	7:00	1.3	NW		
1-Aug-22	8:00	0.9	NW		
1-Aug-22	9:00	1.3	NW		
1-Aug-22	10:00	0.4	ESE		
1-Aug-22	11:00	0.4	ESE		
1-Aug-22	12:00	0.4	NNW		
1-Aug-22	13:00	0.4	N		
1-Aug-22	14:00	0.4	NW		
1-Aug-22	15:00	1.3	NW		
1-Aug-22	16:00	1.3	NW		
1-Aug-22	17:00	1.8	ESE		
1-Aug-22	18:00	1.3	NNW		
1-Aug-22	19:00	1.3	NW		
1-Aug-22	20:00	3.1	WNW		
1-Aug-22	21:00	2.2	NW		
1-Aug-22	22:00	1.8	ESE		
1-Aug-22	23:00	2.2	ESE		
2-Aug-22	0:00	2.2	NNW		
2-Aug-22	1:00	0.9	N		
2-Aug-22	2:00	1.8	NW		
2-Aug-22	3:00	1.8	NW		
2-Aug-22	4:00	1.3	NW		
2-Aug-22	5:00	1.3	ESE		
2-Aug-22	6:00	1.3	NNW		
2-Aug-22	7:00	1.8	NW		
2-Aug-22	8:00	0.4	WNW		
2-Aug-22	9:00	0.9	NW W		
2-Aug-22	10:00	0.9	W		
2-Aug-22 2-Aug-22	11:00 12:00	0.9	WNW		
	12.00	1.3			
2-Aug-22	13:00	1.3	W NW		
2-Aug-22	14:00	1.3	NW		
2-Aug-22	15:00		WNW		
2-Aug-22 2-Aug-22	16:00	1.8	WNW		
	17:00		-		
2-Aug-22	18:00	1.8	W		
2-Aug-22	19:00	1.3	WNW		
2-Aug-22	20:00	0.9	WNW		
2-Aug-22	21:00	1.3	WNW		
2-Aug-22	22:00	1.8	W		
2-Aug-22	23:00	1.8	WNW		

August 2022				
Table II: Wind Speed and Directions				
Date	Time	Wind Speed m/s	Direction	
3-Aug-22	0:00	1.3	WNW	
3-Aug-22	1:00	0.9	W	
3-Aug-22	2:00	0.9	WNW	
3-Aug-22	3:00	0.9	W	
3-Aug-22	4:00	0.9	W	
3-Aug-22	5:00	0.4	W	
3-Aug-22	6:00	0.9	NW	
3-Aug-22	7:00	0.9	NW	
3-Aug-22	8:00	0.4	SE	
3-Aug-22	9:00	0.9	NW	
3-Aug-22	10:00	0.9	W	
3-Aug-22	11:00	0.4	W	
3-Aug-22	12:00	0.9	W	
3-Aug-22	13:00	0.1	ENE	
3-Aug-22	14:00	0.4	ENE	
3-Aug-22	15:00	0.9	NW	
3-Aug-22	16:00	1.3	W	
3-Aug-22	17:00	0.9	W	
3-Aug-22	18:00	1.3	W	
3-Aug-22	19:00	1.3	WNW	
3-Aug-22	20:00	0.9	WNW	
3-Aug-22	21:00	1.3	W	
3-Aug-22	22:00	1.3	WNW	
3-Aug-22	23:00	0.9	W	
4-Aug-22	0:00	0.9	W	
4-Aug-22	1:00	0.9	W	
4-Aug-22	2:00	0.9	WNW	
4-Aug-22	3:00	0.9	W	
4-Aug-22	4:00	0.4	SE	
4-Aug-22	5:00	0.4	W	
4-Aug-22	6:00	0.9	ESE	
4-Aug-22	7:00	0.4	ESE	
4-Aug-22	8:00	0.4	W	
4-Aug-22	9:00	0.4	W	
4-Aug-22	10:00	0.9	Е	
4-Aug-22	11:00	0.4	WNW	
4-Aug-22	12:00	1.3	NW	
4-Aug-22	13:00	0.9	W	
4-Aug-22	14:00	1.3	W	
4-Aug-22	15:00	1.3	W	
4-Aug-22	16:00	1.3	NW	
4-Aug-22	17:00	0.9	NNW	
4-Aug-22	18:00	1.3	NW	
4-Aug-22	19:00	0.9	NW	
4-Aug-22	20:00	0.9	NW	
4-Aug-22	21:00	0.4	NW	
4-Aug-22	22:00	1.3	NW	
4-Aug-22	23:00	0.9	NW	

August 2022			
Т		nd Speed and Direction	ıs
Date	Time	Wind Speed m/s	Direction
5-Aug-22	0:00	1.3	NW
5-Aug-22	1:00	0.4	WNW
5-Aug-22	2:00	0.4	NNW
5-Aug-22	3:00	0.4	E
5-Aug-22	4:00	0.4	E
5-Aug-22	5:00	0.4	ENE
5-Aug-22	6:00	0.4	ENE
5-Aug-22	7:00	0.4	Е
5-Aug-22	8:00	0.4	WNW
5-Aug-22	9:00	0.9	WNW
5-Aug-22	10:00	0.9	NW
5-Aug-22	11:00	0.9	Е
5-Aug-22	12:00	1.3	W
5-Aug-22	13:00	1.3	W
5-Aug-22	14:00	1.8	NW
5-Aug-22	15:00	2.7	NW
5-Aug-22	16:00	3.6	NW
5-Aug-22	17:00	4.5	NW
5-Aug-22	18:00	3.1	NW
5-Aug-22	19:00	1.8	NW
5-Aug-22	20:00	0.9	NW
5-Aug-22	21:00	0.4	W
5-Aug-22	22:00	0.9	NW
5-Aug-22	23:00	1.8	NW
6-Aug-22	0:00	1.8	NW
6-Aug-22	1:00	1.3	NW
6-Aug-22	2:00	0.4	NW
6-Aug-22	3:00	0.4	W
6-Aug-22	4:00	0.4	ESE
6-Aug-22	5:00	0.4	ESE
6-Aug-22	6:00	0.9	NE
6-Aug-22	7:00	0.9	NNW NNW
6-Aug-22	8:00		
6-Aug-22	9:00 10:00	0.9	WNW ESE
6-Aug-22	11:00	0.9	SE
6-Aug-22 6-Aug-22	12:00	0.9	ESE
6-Aug-22	13:00	1.3	ESE
6-Aug-22	14:00	1.8	E
6-Aug-22	15:00	1.3	NW
6-Aug-22	16:00	2.2	NW
6-Aug-22	17:00	4.5	NW
6-Aug-22	18:00	1.3	NW
6-Aug-22	19:00	0.9	WNW
6-Aug-22	20:00	0.4	W
6-Aug-22	21:00	1.3	NW
6-Aug-22	22:00	0.9	NW
6-Aug-22	23:00	0.9	NW

August 2022				
Table II: Wind Speed and Directions				
Date	Time	Wind Speed m/s	Direction	
7-Aug-22	0:00	0.9	W	
7-Aug-22	1:00	0.9	NE	
7-Aug-22	2:00	1.3	NNW	
7-Aug-22	3:00	0.4	NE	
7-Aug-22	4:00	0.4	ENE	
7-Aug-22	5:00	0.4	Е	
7-Aug-22	6:00	0.9	Е	
7-Aug-22	7:00	0.9	W	
7-Aug-22	8:00	0.9	WNW	
7-Aug-22	9:00	1.3	NW	
7-Aug-22	10:00	1.8	WNW	
7-Aug-22	11:00	1.3	WNW	
7-Aug-22	12:00	1.3	WNW	
7-Aug-22	13:00	1.3	W	
7-Aug-22	14:00	2.2	NW	
7-Aug-22	15:00	4.5	NW	
7-Aug-22	16:00	4.9	NW	
7-Aug-22	17:00	4.5	NW	
7-Aug-22	18:00	4.9	NW	
7-Aug-22	19:00	3.6	NW	
7-Aug-22	20:00	2.7	NW	
7-Aug-22	21:00	2.7	NW	
7-Aug-22	22:00	1.8	NW	
7-Aug-22	23:00	1.3	NW	
8-Aug-22	0:00	1.8	NW	
8-Aug-22	1:00	0.9	NW	
8-Aug-22	2:00	0.4	SE	
8-Aug-22	3:00	1.9	ESE	
8-Aug-22	4:00	1.9	SE	
8-Aug-22	5:00	0.4	ESE	
8-Aug-22	6:00	1.9	ESE	
8-Aug-22	7:00	0.4	ESE	
8-Aug-22	8:00 9:00	0.9 0.9	SE SE	
8-Aug-22 8-Aug-22	10:00	1.8	ESE	
8-Aug-22	11:00	0.9	SE	
8-Aug-22	12:00	1.3	SE SE	
8-Aug-22	13:00	1.8	SE	
8-Aug-22	14:00	1.3	SE	
8-Aug-22	15:00	0.9	SE	
8-Aug-22	16:00	2.2	NW	
8-Aug-22	17:00	1.3	NW	
8-Aug-22	18:00	0.9	SE	
8-Aug-22	19:00	2.2	SE	
8-Aug-22	20:00	2.2	ESE	
8-Aug-22	21:00	2.2	SE	
8-Aug-22	22:00	1.8	ESE	
8-Aug-22	23:00	1.8	ESE	

August 2022				
Т	Table II: Wind Speed and Directions			
Date	Time	Wind Speed m/s	Direction	
		-		
9-Aug-22	0:00	0.9	SE SE	
9-Aug-22	1:00	0.9		
9-Aug-22	2:00	***	SE	
9-Aug-22	3:00	2.7	ESE	
9-Aug-22	4:00	3.1	SE	
9-Aug-22	5:00	3.1	ESE	
9-Aug-22	6:00	2.7	NW	
9-Aug-22	7:00	3.1	ESE	
9-Aug-22	8:00	3.1	SE	
9-Aug-22	9:00	2.7	ESE	
9-Aug-22	10:00	2.2	NNW	
9-Aug-22	11:00	1.3	ESE	
9-Aug-22	12:00	1.3	NNE	
9-Aug-22	13:00	1.3	SE	
9-Aug-22	14:00	1.3	NE	
9-Aug-22	15:00	1.3	NNE	
9-Aug-22	16:00	1.3	SE	
9-Aug-22	17:00	2.7	SE	
9-Aug-22	18:00	3.1	SE	
9-Aug-22	19:00	3.1	SE	
9-Aug-22	20:00	2.7	SE	
9-Aug-22	21:00	2.2	SE	
9-Aug-22	22:00	2.7	SE	
9-Aug-22	23:00	1.8	SE	
10-Aug-22	0:00	0.9	SE	
10-Aug-22	1:00	0.9	SE	
10-Aug-22	2:00	1.8	NW	
10-Aug-22	3:00	1.3	NNW	
10-Aug-22	4:00	2.2	SE	
10-Aug-22	5:00	2.7	ESE	
10-Aug-22	6:00	2.2	SE	
10-Aug-22	7:00	0.9	SE	
10-Aug-22	8:00	0.9	NNE	
10-Aug-22	9:00	0.9	NNE	
10-Aug-22	10:00	0.9	N	
10-Aug-22	11:00	1.8	SE	
10-Aug-22	12:00	1.3	SE	
10-Aug-22	13:00	2.2	SE	
10-Aug-22	14:00	1.3	NNE	
10-Aug-22	15:00	1.3	SE	
10-Aug-22	16:00	1.3	ESE	
10-Aug-22	17:00	1.3	NNE	
10-Aug-22	18:00	1.3	NW	
10-Aug-22	19:00	1.3	N	
10-Aug-22	20:00	1.3	NW	
10-Aug-22	21:00	1.3	NNE	
10-Aug-22	22:00	1.3	NNW	
10-Aug-22	23:00	0.9	NNW	

Table II: Wind Speed and Directions Date Time Wind Speed m/s Direct 11-Aug-22 0:00 1.3 N 11-Aug-22 1:00 0.9 N	ion
11-Aug-22 0:00 1.3 N	ion
11-Aug-22 2:00 1.3 N	
11-Aug-22 3:00 1.8 NNI	Ε
11-Aug-22 4:00 1.8 NW	7
11-Aug-22 5:00 1.8 NNV	V
11-Aug-22 6:00 1.8 NNI	Ε
11-Aug-22 7:00 1.3 NNV	V
11-Aug-22 8:00 0.9 ESF	
11-Aug-22 9:00 0.9 SE	
11-Aug-22 10:00 0.9 ESF	3
11-Aug-22 11:00 1.3 NNI	Ε
11-Aug-22 12:00 1.3 N	
11-Aug-22 13:00 1.3 SE	
11-Aug-22 14:00 1.3 N	
11-Aug-22 15:00 1.3 SE	
11-Aug-22 16:00 1.3 NNV	
11-Aug-22 17:00 1.3 ESF	
11-Aug-22 18:00 1.3 SE	
11-Aug-22 19:00 0.9 ESI	
11-Aug-22 20:00 0.9 SE	
11-Aug-22 21:00 1.3 ESF	
11-Aug-22 22:00 1.3 NNV	
11-Aug-22 23:00 0.9 NNV	
12-Aug-22 0:00 0.9 NNV	N
12-Aug-22 1:00 0.9 N	
12-Aug-22 2:00 0.9 NNV	
12-Aug-22 3:00 0.9 SE	
12-Aug-22 4:00 0.9 N	
12-Aug-22 5:00 0.9 N	
12-Aug-22 6:00 0.9 NE	
12-Aug-22 7:00 0.9 NNI	
12-Aug-22 8:00 0.9 N	
12-Aug-22 9:00 0.9 SE	
12-Aug-22 10:00 1.3 SE 12-Aug-22 11:00 2.2 SE	
12-Aug-22 12:00 2.7 SE	
12-Aug-22 13:00 3.1 SE	
12-Aug-22 14:00 3.1 SE 12-Aug-22 15:00 3.1 SE	
12-Aug-22 18:00 1.3 SE 12-Aug-22 19:00 0.9 SE	
12-Aug-22 20:00 1.3 SE 12-Aug-22 21:00 0.9 ESF	
12-Aug-22 21:00 0.9 ESF 12-Aug-22 22:00 0.9 ESF	
12-Aug-22 22:00 0.9 E31 12-Aug-22 23:00 0.9 N	

August 2022					
Т	Table II: Wind Speed and Directions				
	Date Time Wind Speed m/s Direction				
13-Aug-22	0:00	1.3	N NNW		
13-Aug-22	1:00	1.3 0.9	NNW		
13-Aug-22	2:00				
13-Aug-22	3:00	0.9	N		
13-Aug-22	4:00	0.9	NW		
13-Aug-22	5:00	0.9	NNW		
13-Aug-22 13-Aug-22	6:00 7:00	0.4	SE SE		
13-Aug-22	8:00	1.3	SE		
13-Aug-22	9:00	1.3	SE		
	10:00	1.8	SE		
13-Aug-22		1.8	ESE		
13-Aug-22 13-Aug-22	11:00 12:00	1.3	NNE		
13-Aug-22 13-Aug-22	13:00	2.2	SE		
13-Aug-22	14:00	1.3	SE		
13-Aug-22	15:00	1.3	NNE		
13-Aug-22	16:00	1.3	ESE		
13-Aug-22	17:00	1.3	ESE		
13-Aug-22	18:00	1.3	NW		
13-Aug-22	19:00	1.3	NNW		
13-Aug-22	20:00	1.3	N		
13-Aug-22	21:00	0.9	NNE		
13-Aug-22	22:00	1.3	NW		
13-Aug-22	23:00	0.9	SE		
14-Aug-22	0:00	1.3	NNW		
14-Aug-22	1:00	0.9	N		
14-Aug-22	2:00	0.9	NNE		
14-Aug-22	3:00	0.9	SE		
14-Aug-22	4:00	0.4	N		
14-Aug-22	5:00	1.8	NW		
14-Aug-22	6:00	0.1	W		
14-Aug-22	7:00	0.1	W		
14-Aug-22	8:00	0.4	SE		
14-Aug-22	9:00	0.9	SE		
14-Aug-22	10:00	0.9	SE		
14-Aug-22	11:00	1.3	SE		
14-Aug-22	12:00	1.3	SE		
14-Aug-22	13:00	1.8	SE		
14-Aug-22	14:00	1.8	SE		
14-Aug-22	15:00	2.2	SE		
14-Aug-22	16:00	1.8	SE		
14-Aug-22	17:00	1.3	ESE		
14-Aug-22	18:00	1.3	SE		
14-Aug-22	19:00	0.9	ESE		
14-Aug-22	20:00	0.9	SE		
14-Aug-22	21:00	0.9	NW		
14-Aug-22	22:00	0.9	N		
14-Aug-22	23:00	0.9	SE		

August 2022			
Table II: Wind Speed and Directions			
Date	Time	Wind Speed m/s	Direction
15-Aug-22	0:00	1.3	N
15-Aug-22	1:00	0.9	NNE
15-Aug-22	2:00	0.9	ESE
15-Aug-22	3:00	0.9	N
15-Aug-22	4:00	0.9	N
15-Aug-22	5:00	0.9	NW
15-Aug-22	6:00	0.4	NW
15-Aug-22	7:00	0.4	NW
15-Aug-22	8:00	0.9	ESE
15-Aug-22	9:00	1.8	SE
15-Aug-22	10:00	1.3	SE
15-Aug-22	11:00	1.8	SE
15-Aug-22	12:00	2.2	SE
15-Aug-22	13:00	1.8	SE
15-Aug-22	14:00	1.8	SE
15-Aug-22	15:00	1.3	NNE
15-Aug-22	16:00	1.8	N
15-Aug-22	17:00	1.8	N
15-Aug-22	18:00	1.3	Е
15-Aug-22	19:00	1.3	ESE
15-Aug-22	20:00	1.3	SE
15-Aug-22	21:00	1.3	SE
15-Aug-22	22:00	1.3	ESE
15-Aug-22	23:00	0.4	SE
16-Aug-22	0:00	0.9	N
16-Aug-22	1:00	1.3	SE
16-Aug-22	2:00	0.9	SE
16-Aug-22	3:00	0.9	SE
16-Aug-22	4:00	1.3	SE
16-Aug-22	5:00	1.3	SE
16-Aug-22	6:00	0.9	SE
16-Aug-22	7:00	0.4	ESE
16-Aug-22	8:00	1.3	SE
16-Aug-22	9:00	1.3	N
16-Aug-22	10:00	1.3	SE
16-Aug-22	11:00	1.3	N
16-Aug-22	12:00	1.3	SE
16-Aug-22	13:00	0.9	SE
16-Aug-22	14:00	0.9	SE
16-Aug-22	15:00	1.3	NW
16-Aug-22	16:00	0.9	NNE
16-Aug-22	17:00	0.9	SE
16-Aug-22	18:00	0.4	ESE
16-Aug-22 16-Aug-22	19:00	0.9 0.9	NNE N
16-Aug-22 16-Aug-22	20:00 21:00	0.9	NNW
16-Aug-22 16-Aug-22	22:00	1.3	NW
16-Aug-22	23:00	0.4	NW
10-Aug-22	23.00	U. 4	TAAA

August 2022						
Т	Table II: Wind Speed and Directions					
Date	Time	Wind Speed m/s	Direction			
17-Aug-22	0:00	0.4	NW			
17-Aug-22	1:00	0.1	NW			
17-Aug-22	2:00	0.1	NNW			
17-Aug-22	3:00	0.4	NW			
17-Aug-22	4:00	0.9	NW			
17-Aug-22	5:00	0.9	NW			
17-Aug-22	6:00	0.4	ESE			
17-Aug-22	7:00	0.9	ESE			
17-Aug-22	8:00	0.9	NNW			
17-Aug-22	9:00	1.3	N			
17-Aug-22	10:00	0.9	NW			
17-Aug-22	11:00	1.8	NW			
17-Aug-22	12:00	0.4	NW			
17-Aug-22	13:00	0.4	ESE			
17-Aug-22	14:00	0.4	NNW			
17-Aug-22	15:00	1.8	NW			
17-Aug-22	16:00	1.8	WNW			
17-Aug-22	17:00	0.9	NW			
17-Aug-22	18:00	0.9	SE			
17-Aug-22	19:00	0.9	NW			
17-Aug-22	20:00	0.9	NW			
17-Aug-22	21:00	1.3	NNW			
17-Aug-22	22:00	0.9	NW			
17-Aug-22	23:00	1.3	SE			
18-Aug-22	0:00	1.3	SE			
18-Aug-22	1:00	0.9	NW			
18-Aug-22	2:00	0.4	NW			
18-Aug-22	3:00	0.9	NW			
18-Aug-22	4:00	0.9	NW			
18-Aug-22	5:00	0.9	NNW			
18-Aug-22	6:00	0.9	NW			
18-Aug-22	7:00	1.3	NW			
18-Aug-22	8:00	1.3	NW			
18-Aug-22	9:00	0.9	ESE			
18-Aug-22	10:00	1.8	ESE			
18-Aug-22	11:00	1.3	NNW			
18-Aug-22	12:00	1.8	N			
18-Aug-22	13:00	1.3	NW			
18-Aug-22	14:00	1.3	NW			
18-Aug-22	15:00	1.8	NW			
18-Aug-22	16:00	1.3	ESE			
18-Aug-22	17:00	0.4	NNW			
18-Aug-22	18:00	0.1	NW			
18-Aug-22	19:00	0.4	WNW			
18-Aug-22	20:00	0.9	NW			
18-Aug-22	21:00	0.9	SE			
18-Aug-22	22:00	0.4	SE			
18-Aug-22	23:00	0.9	SE			

August 2022						
Table	Table II: Wind Speed and Directions					
Date	Time	Wind Speed m/s	Direction			
19-Aug-22	0:00	0.4	SE			
19-Aug-22	1:00	0.1	SE			
19-Aug-22	2:00	0.1	SE			
19-Aug-22	3:00	0.1	NW			
19-Aug-22	4:00	0.4	NW			
19-Aug-22	5:00	0.1	NW			
19-Aug-22	6:00	0.4	NW			
19-Aug-22	7:00	0.1	NNW			
19-Aug-22	8:00	0.4	NW			
19-Aug-22	9:00	0.9	NW			
19-Aug-22	10:00	0.9	NW			
19-Aug-22	11:00	1.3	ESE			
19-Aug-22	12:00	1.3	ESE			
19-Aug-22	13:00	2.2	NNW			
19-Aug-22	14:00	1.8	N			
19-Aug-22	15:00	2.7	NW			
19-Aug-22	16:00	2.2	NW			
19-Aug-22	17:00	2.7	NW			
19-Aug-22	18:00	3.1	ESE			
19-Aug-22	19:00	1.8	NNW			
19-Aug-22	20:00	1.3	NW			
19-Aug-22	21:00	0.4	WNW			
19-Aug-22	22:00	1.3	NW			
19-Aug-22	23:00	0.9	NW			
20-Aug-22	0:00	0.9	NW			
20-Aug-22	1:00	0.4	NW			
20-Aug-22	2:00	0.9	NW			
20-Aug-22	3:00	0.4	NE			
20-Aug-22	4:00	0.4	N			
20-Aug-22	5:00	0.4	N			
20-Aug-22	6:00	0.1	N			
20-Aug-22	7:00	0.4	NW			
20-Aug-22	8:00	0.9	NNW			
20-Aug-22	9:00	1.3	WNW			
20-Aug-22	10:00	0.9	W			
20-Aug-22	11:00	0.9	WNW			
20-Aug-22	12:00	1.3	WNW			
20-Aug-22	13:00	0.9	NW			
20-Aug-22	14:00	1.8	NW			
20-Aug-22	15:00	1.3	NW			
20-Aug-22	16:00	1.8	NW			
20-Aug-22	17:00	1.3	NNW			
20-Aug-22	18:00	1.3	NW			
20-Aug-22	19:00	0.9	NW			
20-Aug-22	20:00	0.9	NW			
20-Aug-22	21:00	0.4	ESE			
20-Aug-22	22:00	1.3	ESE			
20-Aug-22	23:00	0.9	NNW			

August 2022						
Т	Table II: Wind Speed and Directions					
Date	Time	Wind Speed m/s	Direction			
21-Aug-22	0:00	1.3	N			
21-Aug-22 21-Aug-22	1:00	0.9	NW			
21-Aug-22	2:00	0.4	NW			
21-Aug-22	3:00	0.4	NW			
21-Aug-22	4:00	2.2	ESE			
21-Aug-22	5:00	1.3	NNW			
21-Aug-22	6:00	0.4	NW			
21-Aug-22	7:00	0.9	WNW			
21-Aug-22	8:00	0.4	NW			
21-Aug-22	9:00	0.4	WNW			
21-Aug-22	10:00	0.9	W			
21-Aug-22	11:00	0.9	W			
21-Aug-22	12:00	1.3	NNW			
21-Aug-22	13:00	1.3	W			
21-Aug-22	14:00	0.9	W			
21-Aug-22	15:00	4.0	NW			
21-Aug-22	16:00	5.4	NW			
21-Aug-22	17:00	4.9	NW			
21-Aug-22	18:00	5.4	NW			
21-Aug-22	19:00	2.7	NNW			
21-Aug-22	20:00	0.9	WNW			
21-Aug-22	21:00	1.8	NW			
21-Aug-22	22:00	1.8	NW			
21-Aug-22	23:00	1.8	NW			
22-Aug-22	0:00	1.3	NW			
22-Aug-22	1:00	0.9	NW			
22-Aug-22	2:00	1.3	NW			
22-Aug-22	3:00	0.4	NNW			
22-Aug-22	4:00	0.9	WNW			
22-Aug-22	5:00	0.4	NW			
22-Aug-22	6:00	0.4	NW			
22-Aug-22	7:00	0.1	NW			
22-Aug-22	8:00	1.3	NW			
22-Aug-22	9:00	1.3	NW			
22-Aug-22	10:00	0.9	W			
22-Aug-22	11:00	1.8	NW			
22-Aug-22	12:00	1.8	NW			
22-Aug-22	13:00	3.1	NW			
22-Aug-22	14:00	3.1	NW			
22-Aug-22	15:00	2.7	NW			
22-Aug-22	16:00	3.1 2.7	NW			
22-Aug-22	17:00		NW			
22-Aug-22 22-Aug-22	18:00 19:00	3.1	NW NNW			
22-Aug-22 22-Aug-22	20:00	2.7	NW			
	21:00	1.3	NW			
22-Aug-22 22-Aug-22	22:00	0.4	NW			
22-Aug-22 22-Aug-22	23:00	0.4	ESE			
ZZ-Mug-ZZ	25.00	0.7	டலம்			

August 2022					
Table II: Wind Speed and Directions					
Date	Time	Wind Speed m/s	Direction		
23-Aug-22	0:00	0.4	ESE		
23-Aug-22	1:00	0.9	NNW		
23-Aug-22	2:00	0.1	N		
23-Aug-22	3:00	1.3	NW		
23-Aug-22	4:00	1.3	NW		
23-Aug-22	5:00	0.4	NW		
23-Aug-22	6:00	0.4	ESE		
23-Aug-22	7:00	0.9	NNW		
23-Aug-22	8:00	0.9	NW		
23-Aug-22	9:00	0.4	WNW		
23-Aug-22	10:00	0.9	NW		
23-Aug-22	11:00	1.3	Е		
23-Aug-22	12:00	0.9	ESE		
23-Aug-22	13:00	1.3	SE		
23-Aug-22	14:00	2.2	NW		
23-Aug-22	15:00	2.7	NW		
23-Aug-22	16:00	3.1	NW		
23-Aug-22	17:00	4.0	NW		
23-Aug-22	18:00	2.7	NW		
23-Aug-22	19:00	1.8	NNW		
23-Aug-22	20:00	0.9	NW		
23-Aug-22	21:00	2.2	NW		
23-Aug-22	22:00	2.7	NW		
23-Aug-22	23:00	3.1	NW		
24-Aug-22	0:00	4.0	NW		
24-Aug-22	1:00	2.7	ESE		
24-Aug-22	2:00	1.8	SE		
24-Aug-22	3:00	4.0	SE		
24-Aug-22	4:00	2.7	SE		
24-Aug-22	5:00	1.8	SE		
24-Aug-22	6:00	0.9	SE		
24-Aug-22	7:00	2.2	SE		
24-Aug-22	8:00	2.7	SE		
24-Aug-22	9:00	3.1 1.8	E SE		
24-Aug-22	10:00	0.9			
24-Aug-22	11:00		SE SE		
24-Aug-22	12:00	1.8			
24-Aug-22	13:00	2.2 1.3	SE SE		
24-Aug-22 24-Aug-22	14:00 15:00	1.3	SE SE		
24-Aug-22 24-Aug-22	16:00	1.8	SE SE		
24-Aug-22 24-Aug-22	17:00	1.3	SE		
24-Aug-22 24-Aug-22	18:00	1.3	SE		
24-Aug-22	19:00	1.8	SE		
24-Aug-22	20:00	1.3	SE		
24-Aug-22	21:00	2.2	ESE		
24-Aug-22	22:00	1.8	ESE		
24-Aug-22	23:00	2.7	SE		

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Table II: Wind Speed and Directions						
			1			
Date	Time	Wind Speed m/s	Direction			
25-Aug-22	0:00	2.7	Е			
25-Aug-22	1:00	2.7	N			
25-Aug-22	2:00	1.8	ESE			
25-Aug-22	3:00	1.8	SSE			
25-Aug-22	4:00	2.2	SSE			
25-Aug-22	5:00	1.8	SE			
25-Aug-22	6:00	2.2	SE			
25-Aug-22	7:00	2.2	SE			
25-Aug-22	8:00	2.7	ESE			
25-Aug-22	9:00	2.7	SE			
25-Aug-22	10:00	2.7	SE			
25-Aug-22	11:00	1.8	SE			
25-Aug-22	12:00	1.8	SE			
25-Aug-22	13:00	2.2	SE			
25-Aug-22	14:00	1.8	SE			
25-Aug-22	15:00	2.2	SE			
25-Aug-22	16:00	2.2	SE			
25-Aug-22	17:00	0.4	SE			
25-Aug-22	18:00	0.4	SSE			
25-Aug-22	19:00	0.4	SE			
25-Aug-22	20:00	0.9	WNW			
25-Aug-22	21:00	1.8	SE			
25-Aug-22	22:00	0.9	SE			
25-Aug-22	23:00	0.9	ESE			
26-Aug-22	0:00	0.4	SE			
26-Aug-22	1:00	0.9	SE			
26-Aug-22	2:00	0.1	SSE			
26-Aug-22	3:00	0.1	NNW			
26-Aug-22	4:00	0.4	NNW			
26-Aug-22	5:00	1.8	NNW			
26-Aug-22	6:00	0.9	NNW			
26-Aug-22	7:00	1.8	NNW			
26-Aug-22	8:00	0.9	NNW			
26-Aug-22	9:00	0.9	NNW			
26-Aug-22	10:00	0.9	ESE			
26-Aug-22	11:00	0.9	W			
26-Aug-22	12:00	0.9	SE			
26-Aug-22	13:00	0.4	NW			
26-Aug-22	14:00	0.4	SSE			
26-Aug-22	15:00	0.4	SE			
26-Aug-22	16:00	0.4	NNW			
26-Aug-22	17:00	0.4	NNW			
26-Aug-22	18:00	0.4	NNW			
26-Aug-22	19:00	0.4	NW			
26-Aug-22	20:00	0.4	NW			
26-Aug-22	21:00	0.4	NW			
26-Aug-22	22:00	0.1	NW			
26-Aug-22	23:00	0.1	NW			

August 2022							
Table	Table II: Wind Speed and Directions						
Date	Time	Wind Speed m/s	Direction				
27-Aug-22	0:00	0.1	NW				
27-Aug-22	1:00	0.1	NW				
27-Aug-22	2:00	0.4	Е				
27-Aug-22	3:00	0.9	ESE				
27-Aug-22	4:00	0.4	ESE				
27-Aug-22	5:00	0.9	ESE				
27-Aug-22	6:00	0.9	Е				
27-Aug-22	7:00	1.8	Е				
27-Aug-22	8:00	1.8	ESE				
27-Aug-22	9:00	1.3	ESE				
27-Aug-22	10:00	0.9	Е				
27-Aug-22	11:00	0.9	ESE				
27-Aug-22	12:00	1.8	NNW				
27-Aug-22	13:00	3.1	NNW				
27-Aug-22	14:00	1.3	NNW				
27-Aug-22	15:00	1.8	NNW				
27-Aug-22	16:00	1.3	NNW				
27-Aug-22	17:00	1.3	WNW				
27-Aug-22	18:00	2.2	WNW				
27-Aug-22	19:00	0.9	W				
27-Aug-22	20:00	2.7	WNW				
27-Aug-22	21:00	2.2	WNW				
27-Aug-22	22:00	2.7	WNW				
27-Aug-22	23:00	2.7	W				
28-Aug-22	0:00	2.7	WNW				
28-Aug-22	1:00	2.7	W				
28-Aug-22	2:00	1.8	WNW				
28-Aug-22	3:00	1.8	WNW				
28-Aug-22	4:00	2.2	WNW				
28-Aug-22	5:00	1.8	WNW				
28-Aug-22	6:00	2.2	WNW				
28-Aug-22	7:00	2.2	WNW				
28-Aug-22	8:00	2.2	WNW				
28-Aug-22	9:00	1.8	WNW				
28-Aug-22	10:00	1.8	WNW				
28-Aug-22	11:00	1.8	NNW				
28-Aug-22	12:00	0.9	WNW				
28-Aug-22	13:00	1.3	WNW				
28-Aug-22	14:00	0.9	WNW				
28-Aug-22	15:00	0.9	W				
28-Aug-22	16:00	0.9	WNW				
28-Aug-22	17:00	0.9	W				
28-Aug-22	18:00	0.9	WNW				
28-Aug-22	19:00	1.8	NW				
28-Aug-22	20:00	1.3	NW				
28-Aug-22	21:00	0.4	W				
28-Aug-22	22:00	0.9	NW				
28-Aug-22	23:00	0.4	WNW				

	August 2022					
Т	Table II: Wind Speed and Directions					
Date	Time	Wind Speed m/s	Direction			
29-Aug-22	0:00	0.4	NW			
29-Aug-22	1:00	0.4	NW			
29-Aug-22	2:00	0.9	WNW			
29-Aug-22	3:00	1.8	NNW			
29-Aug-22	4:00	0.9	NNW			
29-Aug-22	5:00	0.9	NW			
29-Aug-22	6:00	1.8	NW			
29-Aug-22	7:00	0.9	SE			
29-Aug-22	8:00	0.4	SE			
29-Aug-22	9:00	0.9	NW			
29-Aug-22	10:00	0.9	NW			
29-Aug-22	11:00	1.8	NW			
29-Aug-22	12:00	2.2	NW			
29-Aug-22	13:00	2.2	NW			
29-Aug-22	14:00	2.7	NNW			
29-Aug-22	15:00	1.3	NW			
29-Aug-22	16:00	2.2	NNW			
29-Aug-22	17:00	1.3	NNW			
29-Aug-22	18:00	0.9	NW			
29-Aug-22	19:00	0.4	W			
29-Aug-22	20:00	0.9	NNW			
29-Aug-22	21:00	0.4	NW			
29-Aug-22	22:00	0.9	W			
29-Aug-22	23:00	2.2	NNW			
30-Aug-22	0:00	1.3	NW			
30-Aug-22	1:00	0.4	SE			
30-Aug-22	2:00	0.4	ENE			
30-Aug-22	3:00	0.4	NE			
30-Aug-22	4:00	0.4	E			
30-Aug-22	5:00	1.3	NNW			
30-Aug-22	6:00	0.9	NNW			
30-Aug-22	7:00	1.3	NNW			
30-Aug-22	8:00	1.3	W			
30-Aug-22	9:00	0.9	W			
30-Aug-22	10:00	0.9	WNW			
30-Aug-22	11:00	1.8	WNW			
30-Aug-22	12:00	1.3	NW			
30-Aug-22	13:00	0.9	NW			
30-Aug-22	14:00	1.3	WNW			
30-Aug-22	15:00	1.3	WNW			
30-Aug-22	16:00	1.3	WNW			
30-Aug-22	17:00	1.8	W			
30-Aug-22	18:00	1.3	WNW			
30-Aug-22	19:00	1.3	WNW			
30-Aug-22	20:00	1.3	W			
30-Aug-22	21:00	1.3	W			
30-Aug-22	22:00	1.3	WNW			
30-Aug-22	23:00	0.9	W			

	August 2022					
Table II: Wind Speed and Directions						
Date	Time	Wind Speed m/s	Direction			
31-Aug-22	0:00	0.9	ESE			
31-Aug-22	1:00	0.9	ESE			
31-Aug-22	2:00	1.3	W			
31-Aug-22	3:00	1.3	Е			
31-Aug-22	4:00	0.9	ESE			
31-Aug-22	5:00	1.3	ESE			
31-Aug-22	6:00	1.3	E			
31-Aug-22	7:00	1.3	E			
31-Aug-22	8:00	1.3	E			
31-Aug-22	9:00	1.8	E			
31-Aug-22	10:00	2.7	W			
31-Aug-22	11:00	2.7	WNW			
31-Aug-22	12:00	2.7	WNW			
31-Aug-22	13:00	2.7	W			
31-Aug-22	14:00	2.2	W			
31-Aug-22	15:00	2.2	W			
31-Aug-22	16:00	2.7	WNW			
31-Aug-22	17:00	2.2	W			
31-Aug-22	18:00	2.7	WNW			
31-Aug-22	19:00	2.2	W			
31-Aug-22	20:00	0.4	SW			
31-Aug-22	21:00	0.4	SSW			
31-Aug-22	22:00	0.4	SSW			
31-Aug-22	23:00	0.9	SW			

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 August 2022

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

^{*} 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

Tentative Impact Air and Noise Monitoring Schedule for September 2022

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1-Sep	2-Sep	3-Sep
						24-hr TSP [AM2(A)]
4-Sep		6-Sep	7-Sep	8-Sep	9-Sep	10-Sep
	1-hr TSP x 3 [AM2]			24-hr TSP [AM2(A)]	1-hr TSP x 3 [AM2]	
	Noise [M3(A), M4 & M5(C)]				Noise [M3(A), M4 & M5(C)]	
11-Sep	12-Sep	13-Sep	14-Sep	15-Sep	16-Sep	17-Sep
			24-hr TSP [AM2(A)]	1-hr TSP x 3 [AM2]		
				Noise [M3(A), M4 & M5(C)]		
18-Sep	19-Sep	20-Sep		22-Sep	23-Sep	24-Sep
		24-hr TSP [AM2(A)]	1-hr TSP x 3 [AM2]			
			Noise [M3(A), M4 & M5(C)]			
25-Sep	26-Sep		28-Sep	29-Sep	30-Sep	
	24-hr TSP [AM2(A)]	1-hr TSP x 3 [AM2]			24-hr TSP [AM2(A)]	
		Noise [M3(A), M4 & M5(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

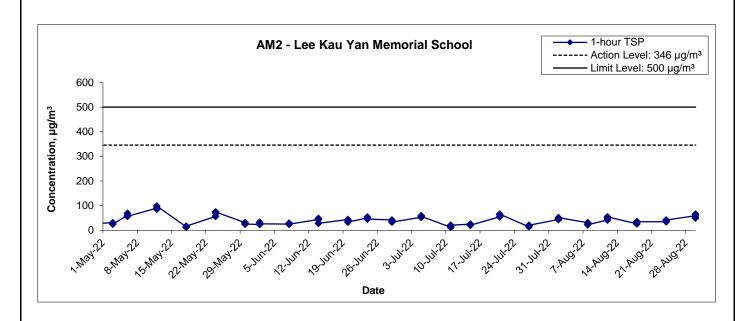
^{*} The noise level limit is 65dB(A) during the exam period

APPENDIX E 1-HOUR TSP MONITORING RESULTS AND GRAPHICAL PRESENTATION

Appendix E - 1-hour TSP Monitoring Results

Location AM2 -	Lee Kau Yaı	n Memorial Schoo	
Date	Time	Weather	Particulate Concentration (µg/m³)
2-Aug-22	14:00	Fine	44.0
2-Aug-22	15:00	Fine	46.0
2-Aug-22	16:00	Fine	52.0
8-Aug-22	13:00	Cloudy	31.5
8-Aug-22	14:00	Cloudy	25.2
8-Aug-22	15:00	Cloudy	23.1
12-Aug-22	16:00	Rainy	41.8
12-Aug-22	17:00	Rainy	50.6
12-Aug-22	18:00	Rainy	55.0
18-Aug-22	9:00	Fine	26.4
18-Aug-22	10:00	Fine	35.2
18-Aug-22	11:00	Fine	35.2
24-Aug-22	14:00	Sunny	35.2
24-Aug-22	15:00	Sunny	39.6
24-Aug-22	16:00	Sunny	41.8
30-Aug-22	13:00	Cloudy	59.4
30-Aug-22	14:00	Cloudy	50.6
30-Aug-22	15:00	Cloudy	66.0
-		Average	42.1
		Maximum	66.0
		Minimum	23.1

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

Title

Aug 22

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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

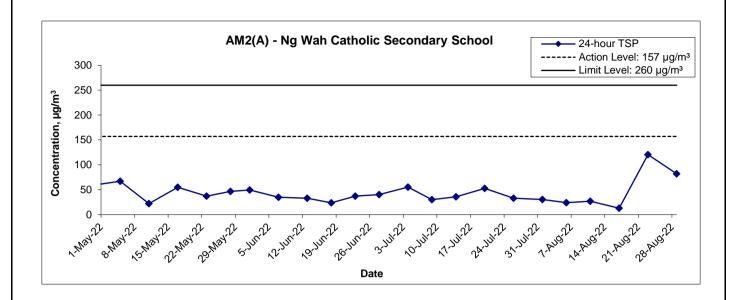
Start Date	Weather	Air Temp.	Atmospheric	Filter W	eight (g)	Particulate	Elapse	e Time	Sampling	Flow Rate	(m³/min.)	Av. Flow	Total vol.	Conc.
Start Date	Condition	(K)	Pressure, Pa (mmHg)	Initial	Final	weight (g)	Initial	Final	Time (hrs.)	Initial	Final	(m ³ /min)	(m^3)	$(\mu g/m^3)$
1-Aug-22	Sunny	304.3	755.9	3.3098	3.3628	0.0530	9514.8	9538.8	24.0	1.21	1.21	1.21	1748.7	30.3
6-Aug-22	Cloudy	301.8	756.4	3.3102	3.3502	0.0401	9538.8	9561.8	23.0	1.22	1.22	1.22	1681.3	23.8
11-Aug-22	Rainy	299.4	757.2	3.4062	3.4533	0.0471	9561.8	9585.8	24.0	1.22	1.22	1.22	1760.3	26.8
17-Aug-22	Fine	301.2	755.2	3.3684	3.3910	0.0225	9585.8	9609.8	24.0	1.22	1.22	1.22	1754.8	12.9
23-Aug-22	Sunny	304.0	753.7	3.2994	3.5099	0.2104	9609.8	9633.8	24.0	1.21	1.21	1.21	1746.8	120.5
29-Aug-22	Cloudy	302.8	758.1	3.3384	3.4819	0.1435	9633.8	9657.8	24.0	1.22	1.22	1.22	1753.7	81.8
													Min	12.9
													Max	120.5

Average

49.3

MA16043/App F - 24hr TSP

24-hr TSP Concentration Levels



Title 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

Scale		Project	
	N.T.S	No.	MA1604
Date		Appendix	(
	Aug 22		F



APPENDIX G NOISE MONITORING RESULTS AND GRAPHICAL PRESENTATION

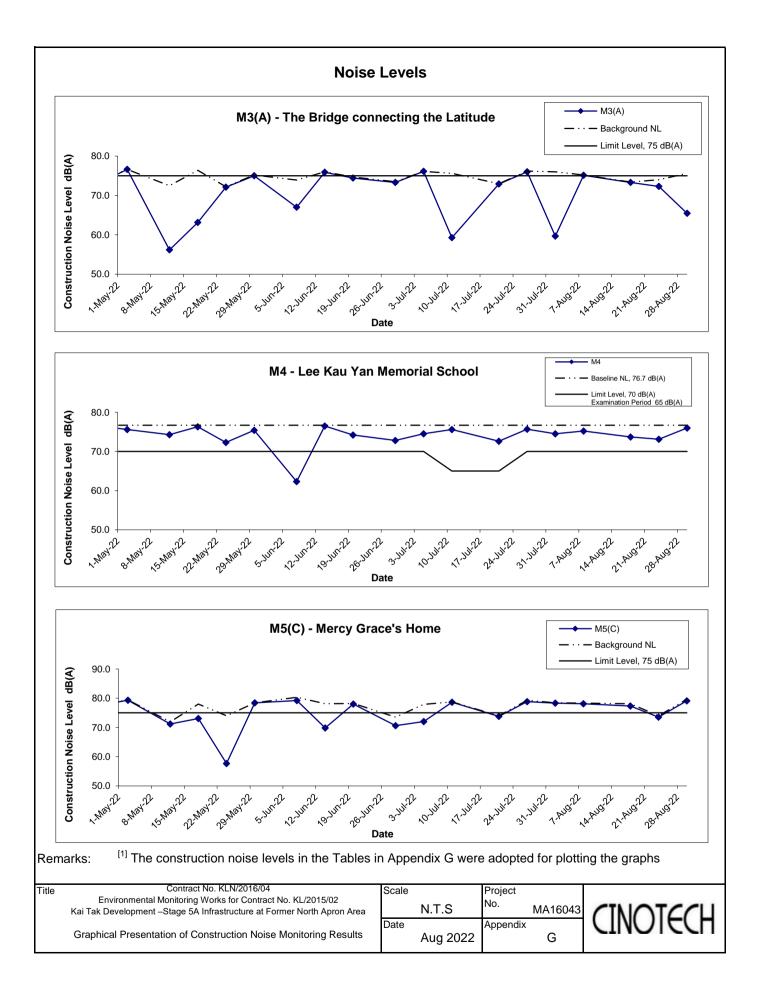
Appendix G - Noise Monitoring Results

Location M3(A) - The Bridge connecting The Latitude								
					L	Jnit: dB (A) (30-min)		
Date Tim	Time	Weather	Measured Noise Level		_evel	Background Noise	Construction Noise Level	
			L _{eq}	L ₁₀	L 90	L _{eq}		L _{eq}
2-Aug-22	11:30	Sunny	76.1	79.7	67.7	76.0	59.7	
8-Aug-22	15:40	Sunny	75.1	76.7	72.2	75.2	75.1	Measured ≦ Background
18-Aug-22	13:00	Sunny	73.3	75.3	70.9	73.4	73.3	Measured ≤ Background
24-Aug-22	11:30	Sunny	72.3	75.9	69.1	74.0	72.3	Measured ≤ Background
30-Aug-22	11:15	Cloudy	76.0	78.0	73.0	75.6	65.4	

Location M4 - Lee Kau Yan Memorial School								
					U	Init: dB (A) (30-min)		
Date	Time	Weather	Measured Noise Level			Baseline Level	Construction Noise Level	
			L _{eq}	L ₁₀	L 90	L _{eq}		L _{eq}
2-Aug-22	15:00	Sunny	74.5	75.8	72.8		74.5	Measured ≦ Baseline
8-Aug-22	14:09	Sunny	75.2	76.6	73.1		75.2	Measured ≦ Baseline
18-Aug-22	9:00	Sunny	73.7	74.9	71.8	76.7	73.7	Measured ≤ Baseline
24-Aug-22	14:00	Sunny	73.1	76.2	70.0		73.1	Measured ≤ Baseline
30-Aug-22	13:25	Cloudy	76.0	77.4	74.2		76.0	Measured ≦ Baseline

Location M5(0	Location M5(C) - Mercy Grace's Home							
					Ĺ	Jnit: dB (A) (30-min)		
Date	Time	me Weather	Measured Noise Level			Background Noise	Construction Noise Level	
			L _{eq}	L ₁₀	L 90	L _{eq}		L _{eq}
2-Aug-22	13:00	Sunny	78.3	80.7	74.4	78.4	78.3	Measured ≦ Background
8-Aug-22	11:30	Sunny	78.1	80.5	74.4	78.3	78.1	Measured ≦ Background
18-Aug-22	11:30	Sunny	77.3	79.7	73.4	78.1	77.3	Measured ≦ Background
24-Aug-22	17:21	Sunny	73.5	76.2	70.3	74.0	73.5	Measured ≤ Background
30-Aug-22	14:14	Cloudy	79.1	81.4	75.0	79.6	79.1	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: August 2022

- (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	220802
Date	2 August 2022 (Tuesday)
Time	14:00 – 15:00

Ref. No.	Non-Compliance	Related Item No.
ı	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.: 220726).	

	Name	Signature	Date
Recorded by	Echo Hung	Lelig	2 August 2022
Checked by	Colman Wong	Colman	3 August 2022

Checklist Reference Number	220810
Date	10 August 2022 (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.: 220802).	

	Name	Signature	Date
Recorded by	Echo Hung	Leng	10 August 2022
Checked by	Colman Wong	Colman	11 August 2022

Checklist Reference Number	220816
Date	16 August 2022 (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.: 220810).	

	Name	Signature	Date
Recorded by	Echo Hung	Lelig	16 August 2022
Checked by	Colman Wong	Colman	17 August 2022

Checklist Reference Number	220823
Date	23 August 2022 (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.: 220816).	

	Name	Signature	Date
Recorded by	Echo Hung	Leng	23 August 2022
Checked by	Colman Wong	Colman	24 August 2022

Checklist Reference Number	220831
Date	31 August 2022 (Wednesday)
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.: 220823).	

	Name		Date
Recorded by	Echo Hung	Lelig	31 August 2022
Checked by	Colman Wong	Colman	1 September 2022

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.	1. 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.
	the results.		·	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	Check monitoring data submitted	Confirm receipt of notification	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	1. Notify ER, IEC and Contractor;	1. 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 Status
Constructi	ion Air Quality	Status
S6.5	8 times daily watering of the work site with active dust emitting activities.	٨
S6.8	Implementation of dust suppression measures stipulated in Air Pollution Control (Construction Dust) Regulation. The following mitigation	^
50.0	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	۸
	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	۸
	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	۸
	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	۸
	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.	۸
	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.	
	• 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	۸
	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	۸
	three sides.	
	Every vehicle should be washed to remove any dusty materials from its body and wheels before leaving the construction sites.	۸

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	

	dredging operation.	
	Improvement of water circulation in KTAC and KTTS:	N/A
	600m gap opening at the northern part of the former Kai Tak runway, the water circulation in KTAC and KTTS would be substantially	
	improved. Together with the improvement in water circulation, the DO level in KTAC and KTTS would also be increased.	
	In-situ sediment treatment by bioremediation:	
	Bioremediation would be applied to the entire KTAC and KTTS.	N/A
Construct	tion Noise	
S7.8	Use of quiet PME, movable barriers barrier for Asphalt Paver, Breaker, Excavator and Hand-held breaker and full enclosure for Air Compressor, Bar	۸
	Bender, Concrete Pump, Generator and Water Pump.	
S7.9	Good Site Practice:	
	Only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction program.	۸
	Silencers or mufflers on construction equipment should be utilized and should be properly maintained during the construction program.	٨
	Mobile plant, if any, should be sited as far away from NSRs as possible.	
	Machines and plant (such as trucks) that may be in intermittent use should be shut down between works periods or should be throttled down	٨
	to a minimum.	
	Plant known to emit noise strongly in one direction should, wherever possible, be orientated so that the noise is directed away from the	٨
	nearby NSRs.	
	Material stockpiles and other structures should be effectively utilized, wherever practicable, in screening noise from on-site construction	٨
	activities.	
S7.9	Scheduling of Construction Works during School Examination Period	٨
S7.8	(i) Provision of low noise surfacing in a section of Road L2; and	N/A
	(ii) Provision of structural fins	N/A
S7.8	(i) Avoid the sensitive façade of class room facing Road L2 and L4; and	N/A
	(ii) Provision of low noise surfacing in a section of Road L2 & L4	N/A

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 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	۸
	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	Installation of retractable roof or other equivalent measures	N/A
Construc	ion Water Quality	
S8.8	The following 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	N/A
	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	

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	<u>Land-based Construction</u>	
	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	٨
	adequate maintenance of drainage systems to prevent flooding and overflow	٨
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 ³ capacity, are recommended as a	٨
	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	٨
	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	٨
	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.	

S8.8	Stormwater Discharges	
	Minimum distances of 100 m should be maintained between the existing or planned stormwater discharges and the existing or planned seawater	٨
	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	٨
	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.	٨
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	٨
	culvert / nullah.	
S8.8	Temporary storage of materials (e.g. equipment, filling materials, chemicals and fuel) and temporary stockpile of construction materials should be	٨
	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.	٨
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.	٨
S8.8	Construction activities, which generate large amount of wastewater, should be carried out in a distance away from the waterfront, where practicable.	٨
S8.8	Mitigation measures to control site runoff from entering the nearby water environment should be implemented to minimize water quality impacts.	٨
	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.	٨
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 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
	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	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	۸
	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.	۸
	Provision of sufficient waste disposal points and regular collection for disposal.	۸
	Appropriate measure to minimize windblown litter and dust during transportation of waste by either covering trucks or by transporting	۸
	wastes in enclosed containers.	
	A recording system for the amount of wastes generated, recycled and disposed of (including the disposal sites).	٨
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	۸
	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	۸
	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	N/A
	decks and exposed fittings of barges and hopper dredgers before the vessel is moved	
	Monitoring of the barge loading should be conducted to ensure that loss of material does not take place during transportation. Transport	N/A
	barges or vessels should be equipped with automatic selfmonitoring devices as required under the Dumping at Sea Ordinance and as	
	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	N/A
	transportation	
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

${\bf Appendix} \; K-Summary \; of \; Implementation \; Schedule \; of \; Mitigation \; Measures \; for \; Construction \; Phase$

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	^	
• 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	٨	
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	٨	
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	۸	
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	٨	
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		
	 Skip hoist for material transport should be totally enclosed by impervious sheeting Every vehicle should be washed to remove any dusty materials from its body and wheels before leaving a construction site 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 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 All dusty materials should be sprayed with water prior to any loading, unloading or transfer operation so as to maintain the dusty materials wet The height from which excavated materials are dropped should be controlled to a minimum practical height to limit fugitive dust generation 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 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 the Packaging, Labelling and Storage of Chemical Wastes. Spent chemicals should be collected by a licensed collector for	

${\bf Appendix} \; K-Summary \; of \; Implementation \; Schedule \; of \; Mitigation \; Measures \; for \; Construction \; Phase$

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	۸	
	the contra	ctor to remove general refuse from the site, separately from C&D material. Effective collection and storage methods (including enclosed		
	and cover	ed area) of site wastes would be required to prevent waste materials from being blown around by wind, wastewater discharge by flushing		
	or leachin	g into the marine environment, or creating odour nuisance or pest and vermin problem		
Construction Landscape and Visual				
S13.9	CM1	All existing trees should be carefully protected during construction.	۸	
	CM2	Trees unavoidably affected by the works should be transplanted where practical. Detailed transplanting proposal will be submitted to	۸	
		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.	۸	

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

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

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.

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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

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 2022

As at 1 Sep 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	0.014
Feb	0	0	0	0	0	0	0	0	0	0	0
Mar	0	0	0	0	0	0	0	0	0	0	0
Apr	0	0	0	0	0	0	0	0	0	0	0.007
May	0	0	0	0	0	0	0	0	0	0	0.007
June	0	0	0	0	0	0	0	0	0	0	0.007
Sub-total	68.229	0	0	0.406	68.229	0	0	0	0	0	2.751
July	0	0	0	0	0	0	0	0	0	0	0.014
Aug	0	0	0	0	0	0	0	0	0	0	0.007
Sept											
Oct											
Nov											
Dec											
Total	68.229	0	0	0.406	68.229	0	0	0	0	0	2.772

	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 m³. (PS Cleuse 25.02A(7) refers).

APPENDIX N CONSTRUCTION PROGRAMME

KL/2015/02 Construction Programme

			2016	2017	2018	2019	2020	2021	2022	2023
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	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
			1							
Subways Construction	Dec-16	Mar-23	3							
			1							
Road Works (D1 and L7)	Feb-19	Mar-22	2							
Landscape	Mar-21	Sep-22	2							

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

August 2022

(Version 1.1)

Certified By: (Environmental Team Leader)



Ref.: CEDKTDS4EM00_0_0247L.22

14 September 2022

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

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 August 2022

Reference is made to the Environmental Team's submission of the Monthly EM&A Report for August 2022 (Version 1.1) certified by the ET Leader and provided to us via email on 14 September 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/B.

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

Yours faithfully,

For and on behalf of

Ramboll Hong Kong Limited

Y H Hui

Independent Environmental Checker

c.c. CEDD 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 32nd Monthly Environmental Monitoring & Audit (EM&A) report which summaries the findings of the EM&A Programme during the reporting period from 1 to 31 August 2022.

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

Donomoton	No. of Ex	Action Tolton	
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) 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 complaint	Description of complaint	Investigation / Recommendations / Action take	Close-out date / Status
No complaint	N/A	N/A	N/A	N/A

Date of complaint received	Date of complaint	Description of complaint	Investigation / Recommendations / Action take	Close-out date / Status
was received in the reporting month.				

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	NA	NA	NA	NA
of summons				
and successful				
prosecutions				
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 utilities trough
 - Bridge D3 Construction of Bridge Deck
 - North Depressed Road Construction of wall & top slab
 - Underpass Construction of upstand wall
 - South Approach Ramp Construction of Permanent Structure
 - District Cooling System seawater intake box culvert reinstatement of the seawall and backfilling works
 - Lift 3 Modification works
 - Lift 4 Construction of lift shaft
 - South Depressed Road construction of permanent works
 - Rising Main and Water Pipe Laying of sewage
 - Landscaped Deck Installation of columns, construction of Landscaped Deck
 - Transformer Room Construction of permanent structure
 - Shing Kai Road Modification works, laying of storm water drainage pipes
 - Lift 1 & 2 Installation of ELS system
 - CLP substation Construction of wall & intermediate slab, permeant structure
 - Noise Barrier Remaining works, Bus lay-by construction
 - Seawater Intake Box Culvert of Saltwater Pumping Station –Installation of sheetpiles and 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

Future key issues in the coming month	Potential impact
North Approach Ramp – Construction of end wall	Noise and Air Quality, Chemical and Waste Management
Bridge D3 – Construction of Bridge	Noise and Air Quality, Landscape and Visual
North Depressed Road – Construction of walls & top slab	Noise and Air Quality, Chemical and Waste Management
Underpass – Construction of upstand wall	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 – reinstatement of the seawall and backfilling works	Noise, Air and Water Quality

Future key issues in the coming month	Potential impact
Lift 3 – Modification works	Noise and Air Quality, Chemical and Waste Management
Lift 4 – Construction of lift shaft	Noise and Air Quality, Chemical and Waste Management
South Depressed Road – 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 – Construction of permanent structure	Noise, Air and Water Quality
Shing Kai Road – Modification works, laying of storm water drainage pipes	Noise, Air and Water Quality
Lift 1 & 2 – Installation of ELS system	Noise and Air Quality, Chemical and Waste Management
CLP substation – Construction of wall & intermediate slab, permeant structure	Noise, Air and Water Quality
Noise Barrier – Remaining works, Bus lay-by construction	Noise, Air and Water Quality
Seawater Intake Box Culvert of Saltwater Pumping Station – Installation of sheetpiles and ELS system	Noise, Air and Water Quality

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 and Variation to the EP (VEP) No. EP-445/2013/B.
- 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 end wall	Bridge D3 – Construction of Bridge Deck and abutments		
North Depressed Road – Construction of walls & top slab	Underpass – Construction of upstand wall		
South Approach Ramp – Construction of Permanent Structure	District Cooling System seawater intake box culvert - reinstatement of the seawall and backfilling works		
Rising Main and Water Pipe – Laying of sewage	Lift 3 – Modification works		
Lift 4 – Construction of lift shaft	South Depressed Road – construction of permanent works		
Landscaped Deck – Construction of pile caps and installation of columns, construction of Landscaped Deck	Transformer Room – Construction of permanent structure		
Shing Kai Road – Modification works, laying of storm water drainage	Lift 1 &2 – Installation of ELS system		
CLP substation – Construction of wall & intermediate slab, permeant structure	Noise Barrier – Remaining works, Bus lay-by construction		
Seawater Intake Box Culvert of Saltwater Pumping Station – Installation of sheetpiles and ELS system			

Submission Status under the Environmental Permits

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

Table 1.3 Summary of Status of Required Submission of EPs

EP Condition EP-337/2009	EP Condition EP-445/2013/B	Submission	Submission Date
Condition 1.11	Condition 1.12	Notification of Commencement Date of Construction of the Project	6 Jan 2020
Condition 2.3	Condition 2.3	Management Organization of Main Construction Companies	9 Sep 2019
Condition 2.3	Condition 2.3	Updated Management Organization of Main Construction Companies	17 Aug 2021
Condition 2.4	Condition 2.4	Design Drawings	6 Jan 2020
Condition 2.11	Condition 2.5	Landscape Mitigation Plans	13 Nov 2020

EP Condition EP-337/2009	EP Condition EP-445/2013/B	Submission	Submission Date
Condition 2.1	Condition 2.5	Landscape Mitigation Plans (Revision 2)	18 May 2021
Condition 3.2	NA	Baseline Monitoring Report	2 Jan 2020
Condition 3.2	NA	Revised Baseline Monitoring Report	28 Mar 2020
Condition 3.3	Condition 3.2	Monthly EM&A Report (July 2022)	12 Aug 2022

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	- 24 hours - 1 hour	- Once every 6 days
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 m³/min. and 1.7 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, 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 Station	Action Level, μg/m ³	Limit Level, µg/m³
	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 ³	Limit Level, µg/m³
	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 ³	Range, µg/m ³	Action Level, μg/m ³	Limit Level, μg/m³
AM3	39	20 - 58	182	260
AM4(A)	47	33 - 69	187	260
AM7	41	28 - 73	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 ³	Range, μg/m ³	Action Level, μg/m ³	Limit Level, μg/m ³
AM3	38	30 - 55	297	500
AM4(A)	43	35 - 59	326	500
AM7	36	22 - 66	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 during the reporting period and may affect the monitoring results.	sites	were	observed

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		$L_{Aeq,}L_{A10}$ and L_{A90}	30 - minutes measurement at each monitoring station between 0700 – 1900 hrs on normal weekdays (Monday to Saturday) at
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	3
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 documented	75 dB(A)
normal weekdays	M12	61.9	complaint is received.	75 GD(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 _{Aeq, 30-min} , Average, dB(A)	Measured L _{Aeq, 30-min} , Range, dB(A)	Action Level	Limit Level ^
M11	68.1	61.1 – 69.6	When one documented	75
M12	65.4	59.9 – 68.3	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_{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

		Predicted Cumulative Maximum 24-hour average TSP concentration		Measured 24-hr average TSP in
Air Monitoring Station	ASR No. in EIA report	Scenario 1 (Mid 2009 to Mid 2013), µg/m ³	Scenario 2 (Mid 2013 to Late 2016), µg/m ³	Reporting Month (August 2022) µg/m ³
AM3 - Sky Tower	A40^	106	138	20 - 58
AM4(A) - The Hong Kong Society for the Blind's Factory cum Sheltered Workshop	A43^	123	195	33 – 69
AM7 – Hong Kong Children's Hospital	PA60	NA	NA	28 – 73

Note:

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

Air Monitoring Station	ASR No. in EIA report	Predicted Cumulative Maximum 1-hour average TSP concentration Scenario 1 Scenario 2		Measured 1-hr average TSP in Reporting Month
	LIA report	(Mid 2009 to Mid 2013), µg/m ³	(Mid 2013 to Late 2016), $\mu g/m^3$	(August 2022) µg/m ³
AM3 - Sky Tower	A40	217^	247^	30 - 55
AM4(A) - The Hong Kong Society for the Blind's Factory cum Sheltered Workshop*	A43	283^	409^	35 – 59
AM7 – Hong Kong Children's Hospital	PA60	NA	NA	22 – 66

Note:

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

 $^{^{\}wedge}$ 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 (August 2022) L _{Aeq, 30min} , dB(A)
M11 - The Hong Kong Society for the Blind's Factory cum Sheltered Workshop	N18	50 – 76*	61.1 – 69.6
M12 - Hong Kong Children's Hospital	PN83, PN84, PN84A	NA	59.9 – 68.3

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.

^{*} 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 4, 12, 18 and 25 August 2022 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
04 August 2022	No	NA	NA
12 August 2022	No	NA	NA
18 August 2022	No	NA	NA
25 August 2022	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 4, 12, 18 and 25 August 2022 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

<u>Table 6.1 Summary of site inspections observations during the reporting month</u>					
Inspection Date	Key Observations	Recommendations / Actions	Close-out Date / Status		
04 August 2022	N/A	N/A	N/A		
12 August 2022	N/A	N/A	N/A		
18 August 2022	N/A	N/A	N/A		
25 August 2022	Observation: All temporary and permanent drainage pipes and culverts should be regularly inspected and maintained to ensure proper and efficient operation.	Action Taken: All temporary and permanent drainage pipes and culverts were maintained properly to ensure proper and efficient operation.	Closed-out on 01 September 2022		
	Observation: Drip tray should be provided for the diesel drum to prevent soil	Action Taken: The diesel container was removed.	Closed-out on 01 September 2022		

Inspection Date	Key Observations	Recommendations / Actions	Close-out Date / Status
	contamination in D3 Bridge.		

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
Environmental Permit under EIAO	EP-337/2009	23 Apr 2009	N/A
Environmental Permit under EIAO	EP-445/2013/B	3 May 2022	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-RE0206-22	20 Mar 2022	19 Sep 2022
	GW-RE0309-22	14 Apr 2022	13 Oct 2022
	GW-RE0503-22	02 Jun 2022	01 Dec 2022
	GW-RE0539-22	11 Jun 2022	09 Dec 2022
	GW-RE0580-22	18 Jun 2022	16 Dec 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 No complaint was received in the reporting month. Summary of complaints in the reporting month is tabulated in Table 6.3.

Table 6.3 Summary of complaints in the Reporting Month

Date of complaint received	Date of complaint	Description of complaint	Investigation / Recommendations / Action take	Close-out date / Status
No complaint was received in the reporting month.	NA	NA	NA	NA

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 end wall	Noise and Air Quality, Chemical and Waste Management
Bridge D3 – Construction of Bridge Deck	Noise and Air Quality, Landscape and Visual
North Depressed Road – Construction of walls & top slab	Noise and Air Quality, Chemical and Waste Management
Underpass – Construction of upstand wall	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 – reinstatement of the seawall and backfilling works	Noise, Air and Water Quality
Lift 3 – Modification works	Noise and Air Quality, Chemical and Waste Management
Lift 4 – Construction of linking platform, Installation of glass	Noise and Air Quality, Chemical and Waste Management
South Depressed Road –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 – Construction of permanent structure	Noise, Air and Water Quality
Shing Kai Road – Modification works, laying of storm water drainage pipes	Noise, Air and Water Quality
Lift 1 & 2 – Installation of ELS system	Noise and Air Quality, Chemical and Waste Management
CLP substation – Construction of wall & intermediate slab, permeant structure	Noise, Air and Water Quality
Noise Barrier – Remaining works, Bus lay-by construction	Noise, Air and Water Quality
Seawater Intake Box Culvert of Saltwater Pumping Station – Installation of sheetpiles and ELS system	Noise, Air and Water 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.

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 No complaint was received in the reporting month.
- 8.6 No notification of summons and successful prosecutions was received in the reporting month.

Figure

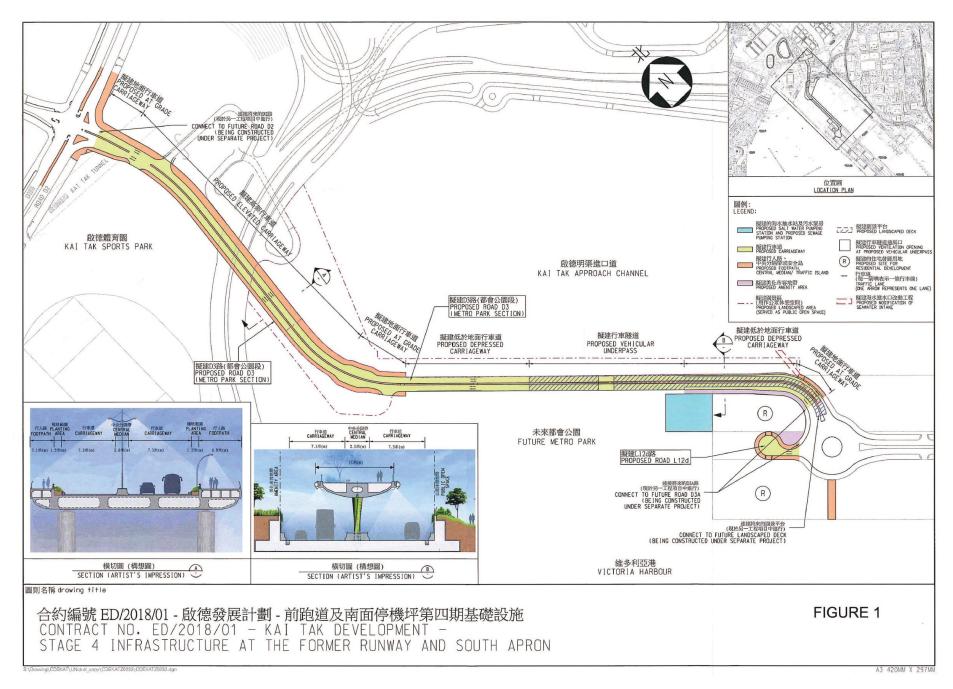


Figure 1 – Proposed works of Contract No. ED/2018/01

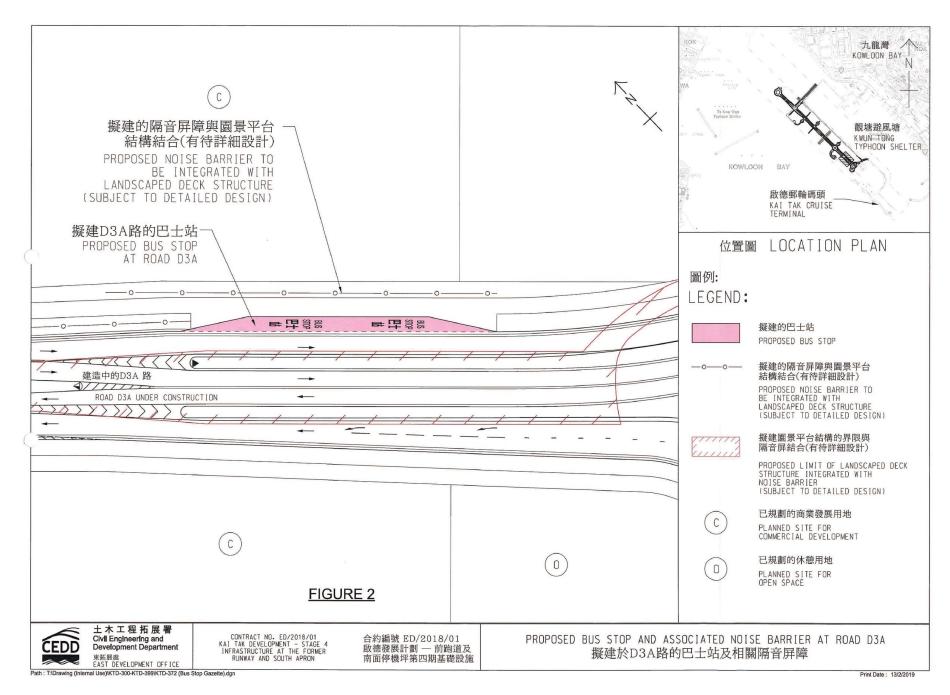


Figure 2 – Proposed Bus Stop And Associated Noise Barrier At Road D3A

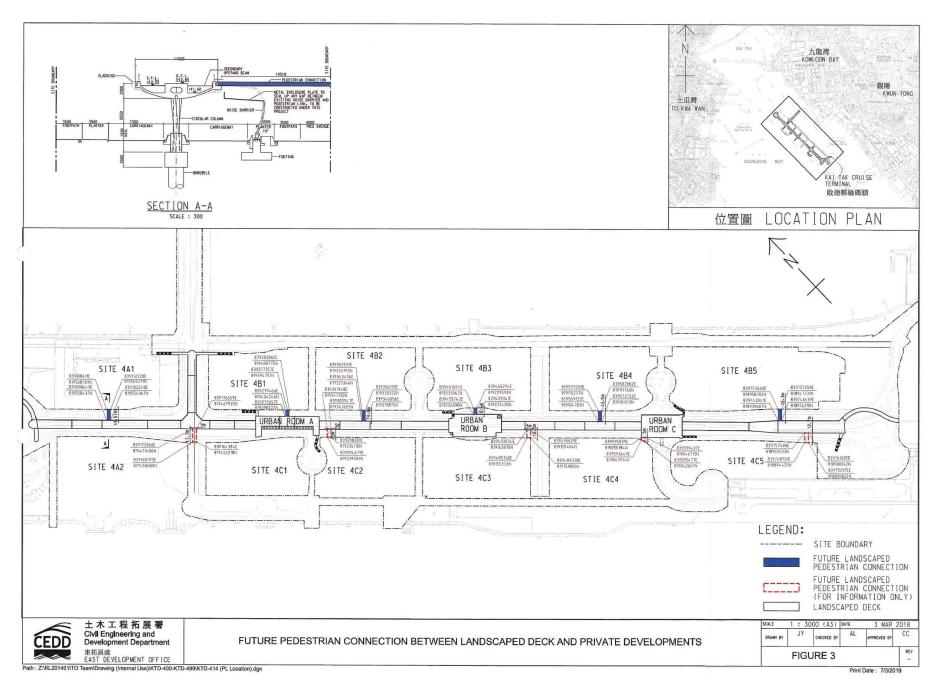


Figure 3 – Future Pedestrian Connection Between Landscaped Deck And Private Developments

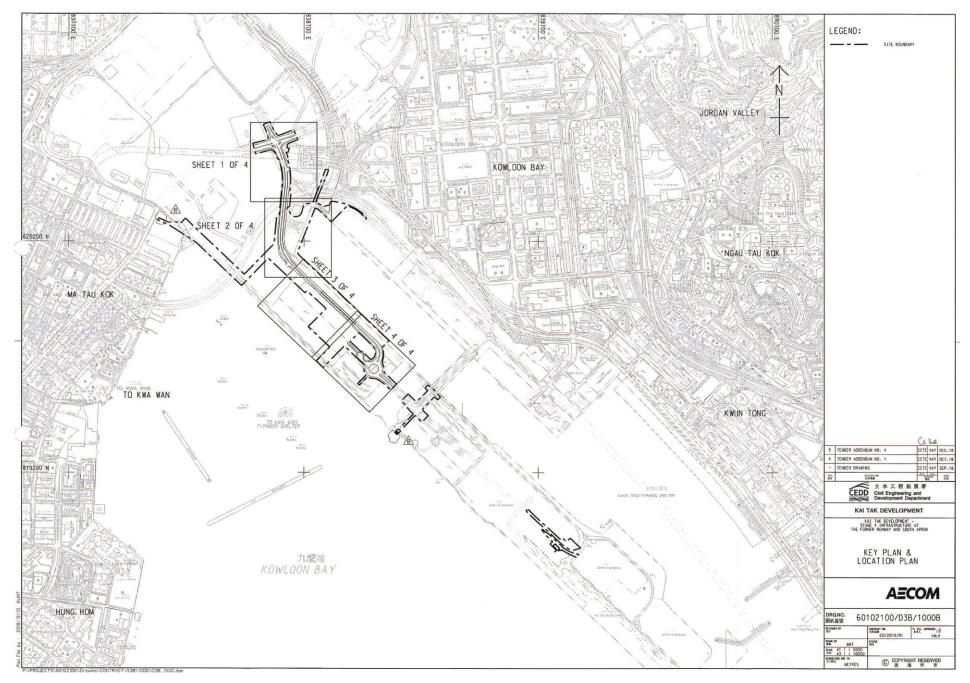


Figure 4 – Site Layout Plan

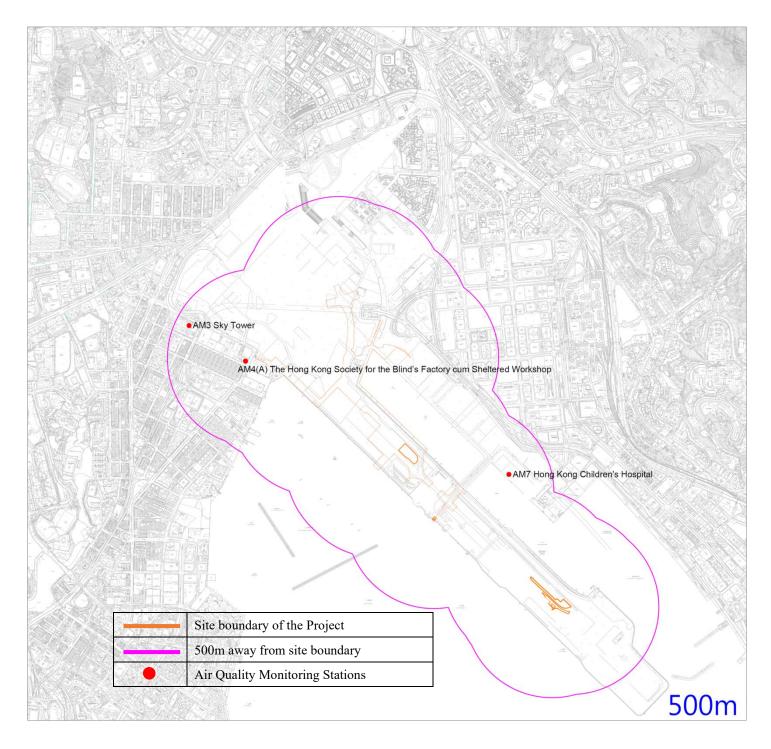


Figure 5 – Air Quality Monitoring Stations

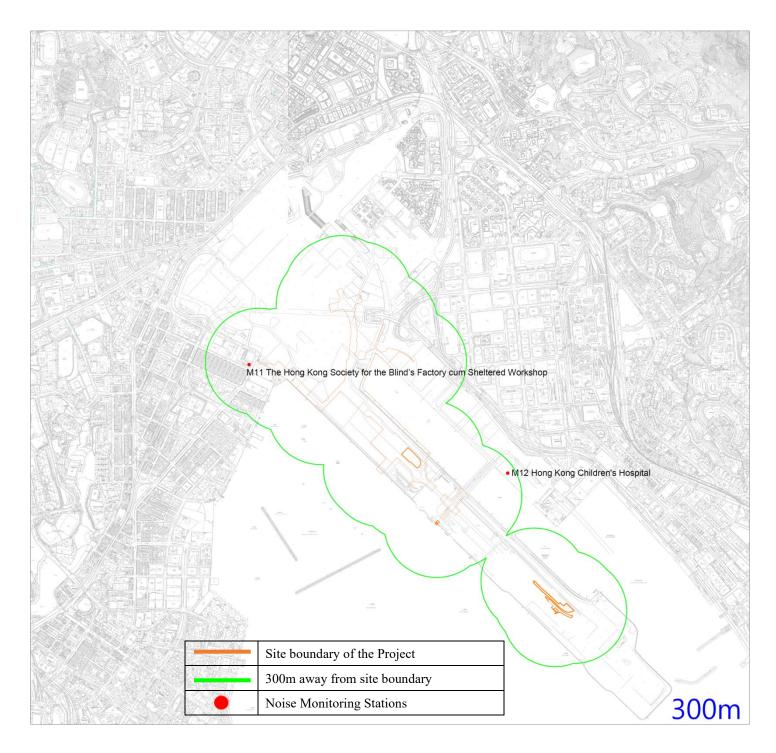
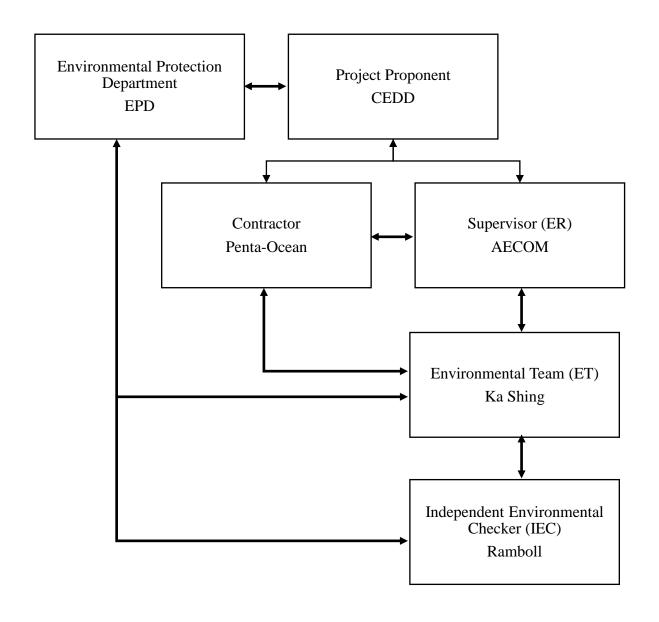


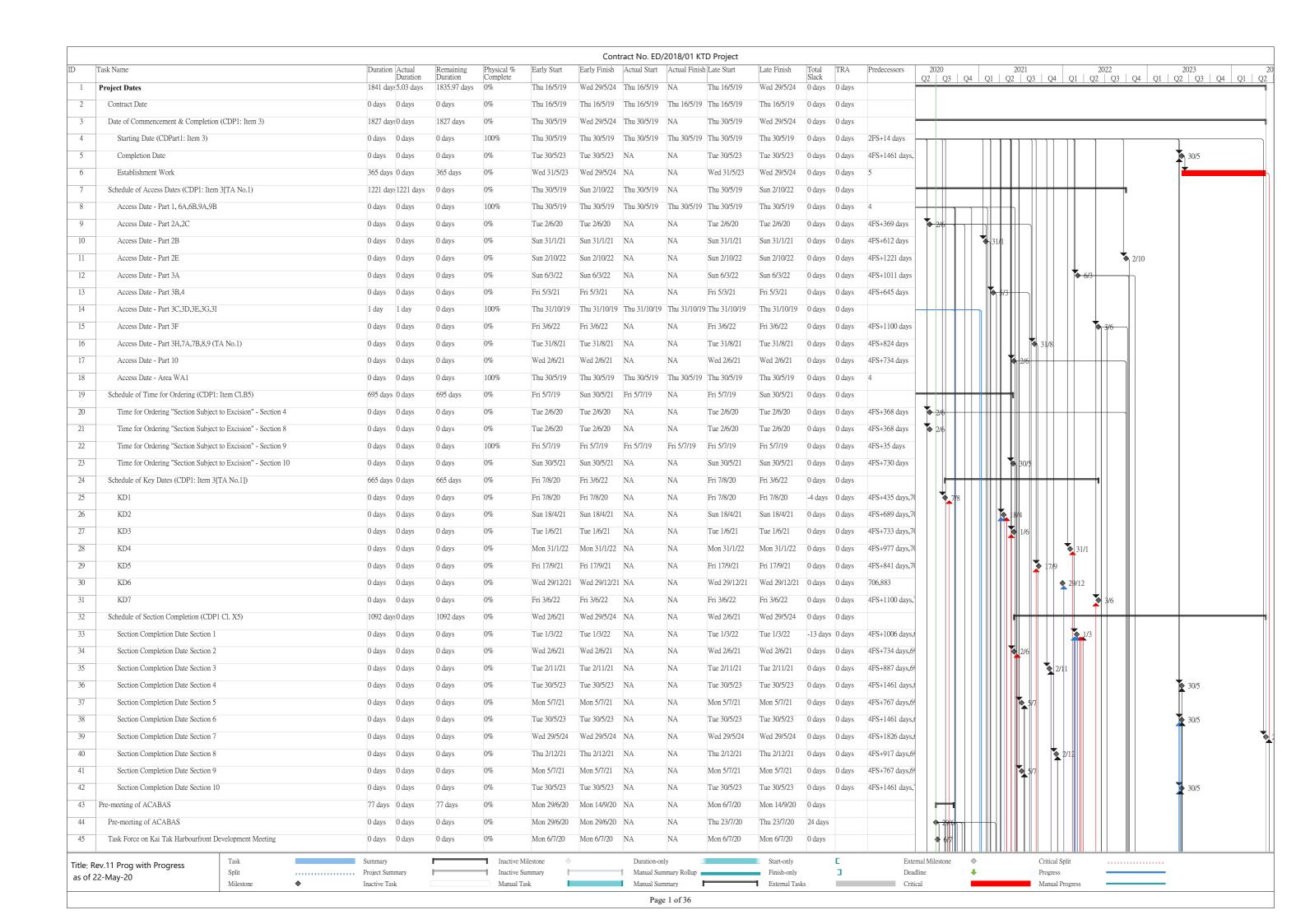
Figure 6 – Noise Monitoring Stations

Appendix A – Organization Chart of EM&A Team



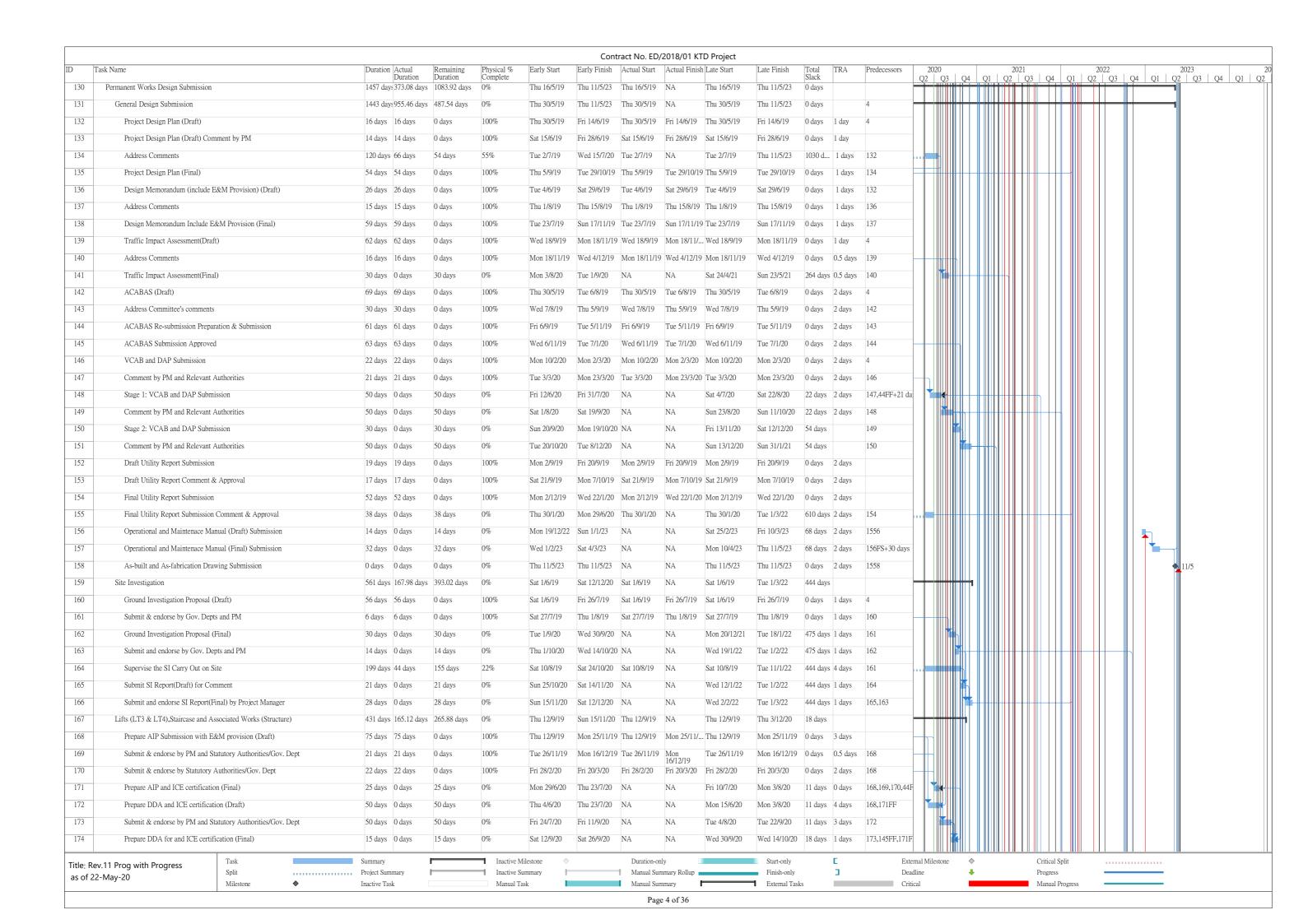
← Link of communication

Appendix B – Construction Programme



_							Cont	tract 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 Prede		2020 Q3 Q	4 01 0	2021	04 01	202	2023 Q1 Q2 Q	03 04 0
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			\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	14/					Q1 Q2	2 Q+ 0
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									
55	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									
7	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									
i8	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		13/3							
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		16/3							
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		•	-28 /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			◆ 1√6						
5	Project Submission	1457 day	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		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	-	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	Submit Environmental Management Plan (ACC Cl. D20(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								
15	Submit BIM Models Deliverables		262 days	0 days	0%	Tue 13/8/19		Tue 13/8/19				0 days	0.5 udy 4								
·lo·	Pay 11 Progress Task	Summary			Inactive M	ilestone \Diamond		Duration-on	ıly		Start-only		E	External N	filestone	*	Cı	ritical Split			
	22-May-20 Split	Project Sum			Inactive Su	mmary		Manual Sur	nmary Rollup 🕳		Finish-only		3	Deadline		‡	Pr	rogress		_	
	Milestone •	Inactive Tas	k		Manual Ta	sk		Manual Sur	nmary		External Tasl	ks		Critical			M	anual Progres	SS •		

							Con	tract No. ED	/2018/01 KTD P	Project													
	Task Name	Duration		Remaining	Physical %	Early Start	Early Finish	Actual Start	Actual Finish Lat	te Start	Late Finish		TRA	Predecessors	2020	2 04 6		2021	4 01 6	2022	24 01 0	2023	01
86	Existing Site Model (Topography)	46 days	Duration 46 days	Duration 0 days	Complete 100%	Tue 13/8/19	Fri 27/9/19	Tue 13/8/19	Fri 27/9/19 Tue	e 13/8/19	Fri 27/9/19	Slack 0 days	1 day		Q2 Q	3 Q4 Q	Q1 Q2	Q3 Q	4 Q1 Q	/2 Q3 C	Q4 Q1 Q	2 Q3 (24 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 Mo	on 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 Mo	on 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 Mo	on 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 Mo	on 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	u 31/10/19	Thu 31/10/19	0 days	1 day										
93	4D Model Linked Up with Programme	0 days	0 days	0 days	100%	Thu 30/4/20	Thu 30/4/20	Thu 30/4/20	Thu 30/4/20 Thu	u 30/4/20	Thu 30/4/20	0 days	1 day		♦ 30/4								
94	Construction Method Simulation (CMS) in 3D Model	0 days	0 days	0 days	100%	Wed 22/4/20	Wed 22/4/20	Wed 22/4/20	Wed 22/4/20 We	ed 22/4/20	Wed 22/4/20	0 days	1 day		♦ 22/4								
95	BIM Deliverables Schedule	896 days	3.72 days	892.28 days	0%	Thu 16/5/19	Wed 27/10/2	1 Thu 16/5/19	NA Thu	u 16/5/19	Tue 11/1/22	76 days											
96	Establish BIM Team	0 days	0 days	0 days	100%	Sat 3/8/19	Sat 3/8/19	Sat 3/8/19	Sat 3/8/19 Sat	t 3/8/19	Sat 3/8/19	0 days	1 day										
97	BIM Execution Plan	0 days		0 days	100%	Sat 31/8/19	Sat 31/8/19	Sat 31/8/19	Sat 31/8/19 Sat	1 31/8/19	Sat 31/8/19	0 days	1										
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	16/8/19	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	_		$-\parallel \parallel \parallel \parallel$								
100	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	100%	Thu 12/9/19			Thu 12/9/19 Thu		Thu 12/9/19	0 days	-										
103	Monthly Report Format	0 days		0 days	100%	Thu 12/9/19			Thu 12/9/19 Thu		Thu 12/9/19	0 days											
103	Quality Assurance Plan for BIM				100%	Mon 30/9/19			Mon 30/9/19 Mo		Mon 30/9/19												
104		0 days		0 days	100%																		
.06	BIM Training Plan	0 days		0 days	100%	Thu 10/10/19			Thu 10/10/19 Thu Mon 30/9/19 Mo		Thu 10/10/19		-										
	BIM Training Schedule for CIC Training	0 days		0 days		Mon 30/9/19					Mon 30/9/19		-										
.07	Monthly BIM Progress Report		0 days	0 days	100%	Thu 16/5/19			Tue 31/12/19 Thu		Tue 31/12/19		-										
108	Monthly Clash Report		1 day	0 days	100%	Tue 31/3/20	Tue 31/3/20				Tue 31/3/20	0 days											
109	BIM Object Libraries		1 day	0 days	100%	Thu 12/9/19			Thu 12/9/19 Thu			0 days	1										
110	Trees Preservation and Removal Proposal (TPRP) for tress along promenade open space Submission	-	-	0 days	0%	Mon 2/11/20	Mon 2/11/20			n 17/1/21	Sun 17/1/21	63 days				2/11							
111	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 Sur	n 17/1/21	Tue 11/1/22	76 days	1 day	110				-					
112	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 We	ed 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	360 days	0 days	360 days	0%	Fri 31/7/20	Sun 25/7/21	NA	NA We	ed 30/9/20	Fri 24/9/21	61 days	1 day	112									
	Submission Comment & Approval by Relevant Government Authories																						
114	Temporary Traffic Management	478 days	447.84 days	30.16 days	0%	Thu 30/5/19	Fri 18/9/20	Thu 30/5/19		u 30/5/19	Fri 25/9/20	7 days				TT							
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	u 30/5/19	Wed 12/6/19	0 days	1 day	4									
116	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	u 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		Thu 6/6/19	Wed 19/6/19 Thu		Wed 19/6/19	0 days	1 day	116									
118	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	u 30/5/19	Wed 5/6/19	0 days	1 day	4									
119	Submit & obtain approval: site office's location and layout plan (PS Cl. 1.45(11)) (7d submission + 14d approval)	47 days	47 days	0 days	100%	Thu 30/5/19	Fri 18/10/19	Thu 30/5/19	Fri 18/10/19 Thu	u 30/5/19	Fri 18/10/19	0 days	1 day	4									
120	Submit Site survey record (PS Cl.1.47(7))	34 days	34 days	0 days	100%	Thu 30/5/19	Tue 2/7/19	Thu 30/5/19	Tue 2/7/19 Thu	u 30/5/19	Tue 2/7/19	0 days	1 day	4									
121	Submit & obtain approval: fencing & hoarding plan (PS Cl. 1.48(10)	40 days	0 days	40 days	0%	Mon 10/8/20	Fri 18/9/20	NA	NA Mo	on 17/8/20	Fri 25/9/20	7 days	0.5 days	4						+++			
122	Submit site facilities (PS Cl. 1.50S)	65 days	65 days	0 days	100%	Thu 30/5/19	Fri 2/8/19	Thu 30/5/19	Fri 2/8/19 Thu	u 30/5/19	Fri 2/8/19	0 days	0.5 days	4									
123	Submit security system (PS Cl. 1.53A(5))	36 days	36 days	0 days	100%	Thu 30/5/19	Thu 4/7/19	Thu 30/5/19	Thu 4/7/19 Thu	u 30/5/19	Thu 4/7/19	0 days	0.5 days	4									
24	Submit Interface Management Plan (PS Cl. 1.89(2))	47 days	47 days	0 days	100%	Thu 30/5/19	Mon 15/7/19	Thu 30/5/19	Mon 15/7/19 Thu	u 30/5/19	Mon 15/7/19	0 days	0.5 days	4									
125	Submit Subcontractor Management Plan (ACC Cl. C5(1))	13 days	13 days	0 days	100%	Thu 30/5/19	Tue 11/6/19	Thu 30/5/19	Tue 11/6/19 Thu	u 30/5/19	Tue 11/6/19	0 days	0.5 days	4									
126	Submit Temporary Drainage and Sewerage Management Plan (PS Cl. 1.24A(1))	174 days	174 days	0 days	100%	Thu 30/5/19	Tue 19/11/19	Thu 30/5/19	Tue 19/11/19 Thu	u 30/5/19	Tue 19/11/19	0 days	1 day	4									
127	Submit EM&A Manual (ER Part 8, Cl. 8.2)	6 days	6 days	0 days	100%	Thu 30/5/19	Tue 4/6/19	Thu 30/5/19	Tue 4/6/19 Thu	u 30/5/19	Tue 4/6/19	0 days	0 days	4									
128	Submit Proposal of selection of suppliers of Plant and Materials (ACC Cl. C11(1)	80 days	80 days	0 days	100%	Thu 30/5/19	Sat 17/8/19	Thu 30/5/19	Sat 17/8/19 Thu	u 30/5/19	Sat 17/8/19	0 days	0 days	4									
129	Submit Contractor's Management Team (ACC Cl. D1(3))	50 days	50 days	0 days	100%	Thu 30/5/19	Thu 18/7/19	Thu 30/5/19	Thu 18/7/19 Thu	u 30/5/19	Thu 18/7/19	0 days	0 days	4	$\parallel \parallel \parallel$								
	Task	Summary			Inactive Mi	ilestone 🔷		Duration-o	nlv		Start-only		<u> </u>	Fv	temal Mileston	<u> </u>		Critic	al Split				
	ev. i i Prog with Progress	Project Sumn	nary	-	Inactive Su			Manual Su	mmary Rollup		Finish-only		3		adline	•		Progr					
	Milestone •	Inactive Task			Manual Tas	sk		Manual Su	mmary		External Tasl	CS		Cr	itical			Manu	al Progress				



						Cont	tract No. ED/	/2018/01 KT	D Project												
	Task Name	Duration Actual	Remaining	Physical %	Early Start		Actual Start			Late Finish		TRA	Predecessors	2020			021	2022	1 04 5: 1	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	3 Q4	Q1 Q2	Q3 Q4	Q1 Q2 Q3	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										
77	Prepare AIP Submission (Draft)	38 days 38 days	0 days	100%	Mon 4/11/19		Mon 4/11/19			Wed 11/12/19	0 days	2 days									
78	Submit & endorse by PM and Statutory Authorities/Gov. Dept			97%	Thu 12/12/19				Thu 12/12/19	Wed 27/5/20		2 days	177								
		167 days 162 days	5 days								1 day										
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		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	Sat 18/4/20	Wed 1/4/20	Sat 18/4/20	0 days	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								
34	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	1 i							
35	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										
86	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		Щ						
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								
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								
0	Submit & endorse by PM and Statutory Authorities/Gov. Dept	50 days 0 days	50 days	0%	Fri 15/1/21		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	-							
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			Sun 11/4/21	Sun 30/5/21	11 days	1 day	191								
13	Road D3 Bridge & Approach Ramps	439 days 358.08 days		0%	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	80.92 days	0%	Thu 30/5/19	Mon 10/8/20	Thu 30/5/19	NA	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	-							
)3	DDA Approval Risk) D3 Bridge Superstructure	728 days 370.67 days	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									
)5	Submit & endorse by PM and Statutory Authorities/Gov. Dept	19 days 19 days		100%	Mon 9/9/19	Fri 27/9/19		Fri 27/9/19		Fri 27/9/19			204								
			0 days																		
)6	Prepare AIP and ICE certification (Final)	135 days 135 days	0 days	100%	Wed 20/11/19			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 T	P						
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								
11	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			+					
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									
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								
5	Submit & endorse by PM and Statutory Authorities/Gov. Dept	62 days 0 days	62 days	0%	Thu 5/11/20	Tue 5/1/21			Thu 31/12/20	Tue 2/3/21	56 days		214								
6	Prepare DDA (E&M works) and ICE certification (Draft)	32 days 0 days	32 days	0%	Sat 5/12/20		NA		Sat 30/1/21	Tue 2/3/21	56 days		215FF								
				0%										_		Щ					
17	Submit & endorse by PM and Statutory Authorities/Gov. Dept	62 days 0 days	62 days		Wed 6/1/21	Mon 8/3/21			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								
le: R	ev.11 Prog with Progress	Summary		Inactive Mi	ilestone \diamondsuit		Duration-or	nly		Start-only		С	Ex	temal Mileston	e		Critical Spli	t			
	2-May-20	Project Summary		Inactive Su				mmary Rollup		Finish-only		3		adline	•		Progress				
	Milestone ♦	Inactive Task		Manual Tas	SK.		Manual Sur	nmary		External Task	S		Cri	itical			Manual Pro	gress			

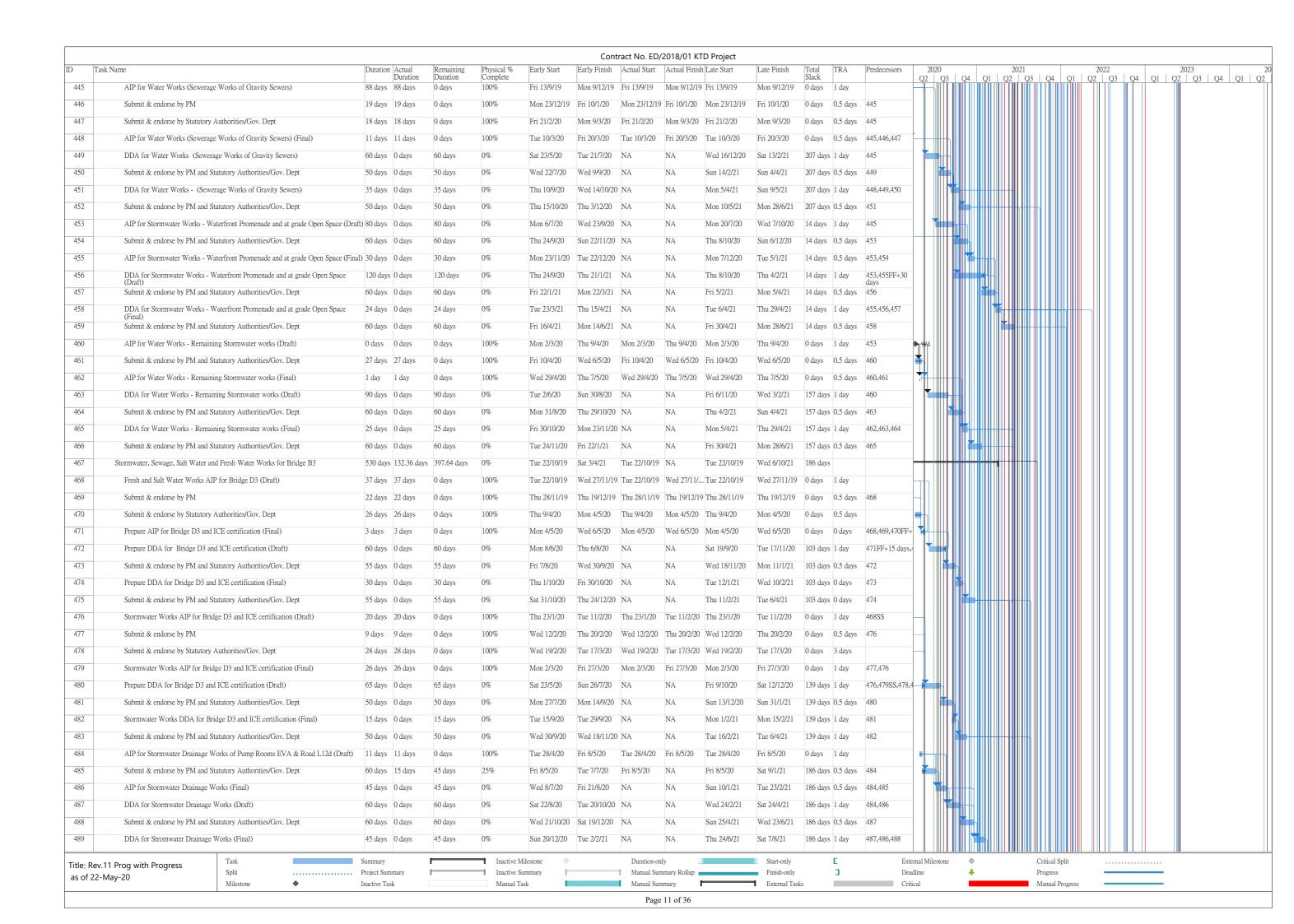
						Con	tract No. ED,	/2018/01 KT	TD Project															
-	Task Name	Duration Actual Duration	Remaining Duration	Physical % Complete	Early Start	Early Finish	Actual Start	Actual Finish	Late Start	Late Finish	Total Slack	TRA	Predecessors	2020	O3 (M . C	2	021	04	01 02	2022	04 01	2023 Q2 Q3	04 0
20	D3 North 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			Q2		24 Q.			Q4 (21 Q2	2 Q3	Q4 Q1	Q2 Q3	Q4 Q
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											
24	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											
25	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			ЦШ								
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			1										
29	Prepare AIP (E&M works) and ICE certification (Draft)	32 days 0 days	32 days	0%	Thu 2/7/20		NA	NA	Fri 27/11/20	Mon 28/12/20		2 davs												
30	Submit & endorse by PM and Statutory Authorities/Gov. Dept	62 days 0 days	62 days	0%	Mon 3/8/20		NA	NA	Tue 29/12/20	Sun 28/2/21	148 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	Mon 1/3/21	Thu 1/4/21	148 days		230		$\prod rac{1}{4}$									
32	Submit & endorse by PM and Statutory Authorities/Gov. Dept			0%	Thu 5/11/20		NA	NA	Fri 2/4/21	Wed 2/6/21		_	231											
33		62 days 0 days	62 days	0%					Sun 2/5/21		148 days													
	Prepare DDA (E&M works) and ICE certification (Draft)	32 days 0 days	32 days		Sat 5/12/20	Tue 5/1/21	NA	NA		Wed 2/6/21	148 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	Thu 3/6/21	Tue 3/8/21	148 days		233											
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	NA	Sat 21/8/21	Thu 21/10/21	148 days	2 days	235											
37	D3 South Approach Ramp	507 days 322.64 days	184.36 days	0%	Thu 30/5/19	Sat 17/10/20	Thu 30/5/19	NA	Thu 30/5/19	Tue 16/2/21	122 days													
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	Thu 30/5/19	Mon 2/9/19	0 days	3 days												
39	Submit & endorse by PM and Statutory Authorities/Gov. Dept	35 days 35 days	0 days	100%	Wed 25/9/19	Tue 29/10/19	Wed 25/9/19	Tue 29/10/19	Wed 25/9/19	Tue 29/10/19	0 days	1 day	238											
10	Prepare AIP Submission (Final)	76 days 76 days	0 days	100%	Fri 7/2/20	Mon 4/5/20	Fri 7/2/20	Mon 4/5/20	Fri 7/2/20	Mon 4/5/20	0 days	1 day	238,239	┋┩										
41	Prepare DDA and ICE certification (Draft)	50 days 50 days	0 days	100%	Wed 1/4/20	Wed 20/5/20	Wed 1/4/20	Wed 20/5/20	Wed 1/4/20	Wed 20/5/20	0 days	5 days	240FF+15 days											
42	Submit & endorse by PM and Statutory Authorities/Gov. Dept	60 days 2 days	58 days	3%	Thu 21/5/20	Sun 19/7/20	Thu 21/5/20	NA	Thu 21/5/20	Wed 18/11/20	122 days	1 day	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	NA	Thu 19/11/20	Fri 18/12/20	122 days	1 day	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	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	Fri 18/6/21	NA	NA	Wed 18/11/20	Tue 14/12/21	179 days							ı						
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	NA	Wed 18/11/20	Fri 18/12/20	179 days	1 day												
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	NA	Sat 19/12/20	Thu 4/3/21	179 days	1 day	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	1 day	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		249FF											
51	Submit & endorse by PM and Statutory Authorities/Gov. Dept	76 days 0 days	76 days	0%		Mon 8/3/21		NA	Sun 20/6/21	Fri 3/9/21	179 days		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		251											
53	Submit & endorse by PM and Statutory Authorities/Gov. Dept	76 days 0 days	76 days	0%	Sun 4/4/21		NA	NA	Thu 30/9/21	Tue 14/12/21	179 days		252											
54	Road D3 Underpass and Depressed Road	823 days 236.99 days		0%	Thu 30/5/19	Sun 29/8/21	Thu 30/5/19		Thu 30/5/19	Wed 11/1/23			232											
55	Underpass (Structure)	486 days 320.41 days		100%	Thu 30/5/19	Sat 26/9/20	Thu 30/5/19		Thu 30/5/19	Wed 2/12/20	67 days	2 d	4											
56	Prepare AIP and ICE certification (Draft)	96 days 96 days	0 days	100%	Thu 30/5/19		Thu 30/5/19			Mon 2/9/19	0 days	-	256											
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		Thu 19/9/19		Thu 19/9/19		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		Mon 6/4/20		Mon 6/4/20		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		Wed 5/2/20		3 days	256											
50	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		259											
51	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	1										
63	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							- 						
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		1										
	Task	Summary		Inactive M	filestone 🗅	1	Duration-or	nlv		Start-only			Fyt	temal Milest	one	♦	11111111	Crit	tical Split	1(11111				
	ev.11 Prog with Progress 2-May-20 Split	Project Summary		Inactive S				mmary Rollup		Finish-only		3		adline		•			gress					
	Milestone •	Inactive Task		Manual Ta	ask		Manual Sur	mmary I		External Tas	sks		Cri	tical				Ma	nual Prog	ress				

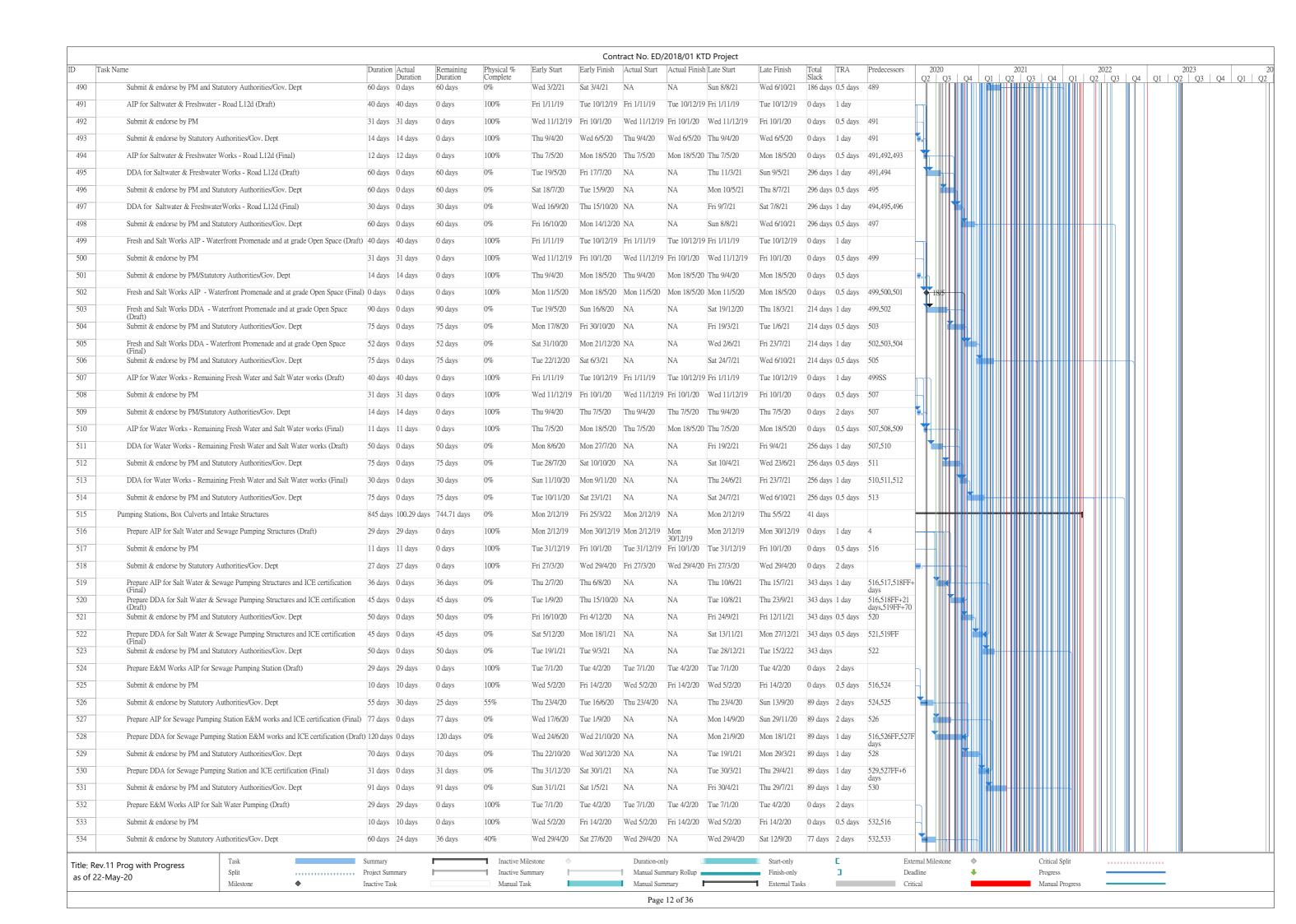
								tract No. ED/														
Task Na	ame	Duration	n Actual Duration	Remaining Duration	Physical % Complete	Early Start	Early Finish	Actual Start	Actual Finish	h Late Start	Late Finish	Total T Slack	RA Pred		2020 Q3	04 01)21 Q3 (04 01	202	2 Q3 Q4	Ω1
55	Submit & endorse by PM and Statutory Authorities/Gov. 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	36 days 2	days 264	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		7 1 1			Ž, Q1	Q2	2	1 41
66	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									
57	Submit & endorse by PM and Statutory Authorities/Gov. Dept	62 days	0 days	62 days	0%	Mon 8/2/21	Sat 10/4/21	NA	NA	Tue 16/3/21	Sun 16/5/21	36 days 2	days 266									
8	Prepare DDA (E&M works) and ICE certification (Draft)	32 days	0 days	32 days	0%	Wed 10/3/21	Sat 10/4/21	NA	NA	Thu 15/4/21	Sun 16/5/21	36 days 2	days 267F	F								
i9	Submit & endorse by PM and Statutory Authorities/Gov. Dept	62 days	0 days	62 days	0%	Sun 11/4/21	Fri 11/6/21	NA	NA	Mon 17/5/21	Sat 17/7/21	36 days 2	days 268									
0	Prepare DDA (E&M works) and ICE certification (Final)	17 days		17 days	0%	Sat 12/6/21	Mon 28/6/21	NA	NA	Sun 18/7/21	Tue 3/8/21	36 days 2										
1	Submit & endorse by PM and Statutory Authorities/Gov. Dept		0 days	62 days	0%	Tue 29/6/21	Sun 29/8/21		NA	Wed 4/8/21	Mon 4/10/21	36 days 2						$\downarrow \downarrow \downarrow \downarrow$				
2	Prepare AIP (E&M works) and Architectural Finishes of of Underpass (Road L14) and ICE certification (Draft)	31 days		31 days	0%	Mon 3/8/20	Wed 2/9/20		NA	Thu 31/3/22	Sat 30/4/22	605 days 1										
73	Submit & endorse by PM and Statutory Authorities/Gov. Dept		0 days	51 days	0%	Thu 3/9/20	Fri 23/10/20		NA	Sun 1/5/22	Mon 20/6/22	605 days 1				1						
4	Prepare AIP (E&M works)and Architectural Finishes of of Underpass (Road L14) and ICE certification (Final)	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									
5	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									
6	Prepare DDA (E&M works) and Architectural Finishes of of Underpass (Road L14) and ICE certification (Draft)	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 275F	F		 						
7	Submit & endorse by PM and Statutory Authorities/Gov. Dept	51 days	0 days	51 days	0%	Wed 20/1/21	Thu 11/3/21	NA	NA	Sat 17/9/22	Sun 6/11/22	605 days 1	day 276			Y						
8	Prepare DDA (E&M works) and Architectural Finishes of of Underpass (Road	15 days	0 days	15 days	0%	Fri 12/3/21	Fri 26/3/21	NA	NA	Mon 7/11/22	Mon 21/11/22	605 days 1	day 277				4					
9	L14) and ICE certification (Final) Submit & endorse by PM and Statutory Authorities/Gov. Dept	51 days	0 days	51 days	0%	Sat 27/3/21	Sun 16/5/21	NA	NA	Tue 22/11/22	Wed 11/1/23	605 days 1	day 278									٦
30	E&M Work for Pump House of Underpass D3	364 days	s 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										
1	Prepare AIP (E&M works) Submission (Draft)		11 days	0 days	0%	Mon 24/2/20	Thu 5/3/20			Mon 24/2/20	Thu 5/3/20	0 days 2	days			Ī						
12	Submit & endorse by PM and Statutory Authorities/Gov. Dept		s 78 days	82 days	49%	Fri 6/3/20	Wed 12/8/20		NA	Fri 6/3/20	Sat 15/8/20				ШП							
												-		(AFE, 10.1								
13	Prepare AIP (E&M works) and ICE certification (Final)		0 days	21 days	0%	Thu 13/8/20	Wed 2/9/20		NA	Sun 16/8/20	Sat 5/9/20	1		14FF+12 da;								
4	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									
5	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	NA	Sat 3/10/20	Sun 1/11/20	3 days 2	days 284F	F+7 days								
5	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									
7	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									
3	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				+					
9 [Depressed Road (North) Structure	463 days	s 335.18 days	127.82 days	0%	Thu 16/5/19	Thu 20/8/20	Thu 16/5/19	NA	Thu 16/5/19	Thu 11/5/23	994 days										
0	Prepare AIP and ICE certification (Draft)	65 days	65 days	0 days	100%	Thu 16/5/19	Fri 2/8/19	Thu 16/5/19	Fri 2/8/19	Thu 16/5/19	Fri 2/8/19	0 days 1	days 4									
1	Submit & endorse by PM and Statutory Authorities/Gov. Dept	33 days	33 days	0 days	100%	Sat 3/8/19	Wed 4/9/19	Sat 3/8/19	Wed 4/9/19	Sat 3/8/19	Wed 4/9/19	0 days 2	days 290									
2	Prepare AIP and ICE certification (Final)		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									
3	Prepare DDA and ICE certification (Draft)		57 days	0 days	100%	Tue 24/9/19		Tue 24/9/19			Tue 19/11/19	-	days 290									
												1										
14	Submit & endorse by PM		17 days	0 days	100%	Tue 19/11/19		Tue 19/11/19			Thu 5/12/19		day 293									
15	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	-	day 293									
16	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								
7	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									
8 I	Depressed Road (North) E&M Works	322 days	s 0 days	322 days	0%	Mon 21/9/20	Sun 8/8/21	NA	NA	Tue 17/11/20	Mon 4/10/21	57 days						+				
19	Prepare AIP (E&M works) and ICE certification (Draft)	31 days	0 days	31 days	0%	Mon 21/9/20	Wed 21/10/20	0 NA	NA	Tue 17/11/20	Thu 17/12/20	57 days 1	day			.						
00	Submit & endorse by PM and Statutory Authorities/Gov. Dept	61 days	0 days	61 days	0%	Thu 22/10/20	Mon 21/12/20	0 NA	NA	Fri 18/12/20	Tue 16/2/21	57 days 1	day 299									
)1	Prepare AIP (E&M works) and ICE certification (Final)	31 days	0 days	31 days	0%	Tue 22/12/20	Thu 21/1/21	NA	NA	Wed 17/2/21	Fri 19/3/21	57 days 1	day 300									
2	Submit & endorse by PM and Statutory Authorities/Gov. Dept	61 days	0 days	61 days	0%	Fri 22/1/21	Tue 23/3/21	NA	NA	Sat 20/3/21	Wed 19/5/21	57 days 1	day 301									
)3	Prepare DDA (E&M works) and ICE certification (Draft)	31 days		31 days	0%	Sun 21/2/21	Tue 23/3/21		NA	Mon 19/4/21	Wed 19/5/21	57 days 1		F								
14	Submit & endorse by PM and Statutory Authorities/Gov. Dept		0 days	61 days	0%	Wed 24/3/21	Sun 23/5/21		NA	Thu 20/5/21	Mon 19/7/21	57 days 1										
)5	Prepare DDA (E&M works) and ICE certification (Final)	16 days		16 days	0%	Mon 24/5/21	Tue 8/6/21		NA	Tue 20/7/21	Wed 4/8/21	57 days 1										
16	Submit & endorse by PM and Statutory Authorities/Gov. Dept		0 days	61 days	0%	Wed 9/6/21		NA	NA	Thu 5/8/21	Mon 4/10/21	57 days 1	day 305									
)7 I	Depressed Road (South) and Substructure of Elevated Landscape Deck	463 days	s 333.16 days	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										
18	Prepare AIP and ICE certification (Draft)	54 days	54 days	0 days	100%	Mon 10/6/19	Fri 2/8/19	Mon 10/6/19	Fri 2/8/19	Mon 10/6/19	Fri 2/8/19	0 days 1	days									
19	Submit & endorse by PM and Statutory Authorities/Gov. Dept	81 days	81 days	0 days	100%	Sat 3/8/19	Tue 22/10/19	Sat 3/8/19	Tue 22/10/19	9 Sat 3/8/19	Tue 22/10/19	0 days 2	days 308									
. D	Task	Summary	1		Inactive M	filestone		Duration-or	nly		Start-only	Г		External N	[ilestone	│ 	111111111111	Criti	tical Split	<u> </u>		Ш
e: Rev.11 P of 22-May	Prog with Progress Split	Project Sur	mmary		Inactive S				mmary Rollup		Finish-only		1	Deadline		•			gress			
VI CC-IVIDV	/-20 Milestone ♦	Inactive Ta	-1-		Manual Ta			Manual Sur			External Tas	alas III		Critical					nual Progre	ee -		

							Con	tract No. ED/	/2018/01 K	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 202		04 /	01 6	2021	3 04	01	1 01	2022	1 0	1 01	2	2023 Q3	_
10	Prepare AIP and ICE (certification (Final)	270 days	s 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 0 days	309,44FF+12 da		<u>Q4</u> (Q2			- Q1		Q5	
311	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													
312	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													
313	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 0.5 days	312	K												
314	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 0.5 days	313					$\parallel \parallel \parallel$								
315	South Depressed Road (E&M Works)	382 days	s 0 days	382 days	0%	Mon 7/9/20	Thu 23/9/21	NA	NA	Fri 18/9/20	Mon 4/10/21	11 days						-								
316	Prepare AIP (E&M works) and ICE certification (Draft)	31 days	0 days	31 days	0%	Mon 7/9/20	Wed 7/10/20	NA	NA	Fri 18/9/20	Sun 18/10/20	11 days 1 day														
317	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 19/10/20	Sat 2/1/21	11 days 1 day	316													
18	Prepare AIP (E&M works) and ICE certification (Final)	31 days	0 days	31 days	0%	Wed 23/12/20	Fri 22/1/21	NA	NA	Sun 3/1/21	Tue 2/2/21	11 days 1 day	317		•											
19	Submit & endorse by PM and Statutory Authorities/Gov. Dept	76 days		76 days	0%	Sat 23/1/21	Thu 8/4/21	NA	NA	Wed 3/2/21	Mon 19/4/21	11 days 1 day	318		 											
20	Prepare DDA (E&M works) and ICE certification (Draft)	31 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													
21	Submit & endorse by PM and Statutory Authorities/Gov. Dept	76 days		76 days	0%	Fri 9/4/21	Wed 23/6/21		NA	Tue 20/4/21	Sun 4/7/21	11 days 1 day	320													
			,																							
22	Prepare DDA (E&M works) and ICE certification (Final)	16 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													
23	Submit & endorse by PM and Statutory Authorities/Gov. Dept	76 days		76 days	0%	Sat 10/7/21	Thu 23/9/21		NA	Wed 21/7/21	Mon 4/10/21	11 days 1 day	322						1							
24	Road Works (Civil Works)	-		465.99 days	0%	Tue 13/8/19	Fri 4/6/21	Tue 13/8/19		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													
26	Submit & endorse by PM	21 days	21 days	0 days	100%	Wed 9/10/19	Tue 29/10/19	Wed 9/10/19	Tue 29/10/19	Wed 9/10/19	Tue 29/10/19	0 days 0.5 days	325													
27	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													
28	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 days,327,44FF+1													
29	Prepare DDA for At-grade Road D3 and ICE certification (Draft)	210 days	s 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 days	325FS+100													
30	Submit & endorse by PM and Statutory Authorities/Gov. Dept	75 days	0 days	75 days	0%	Sat 19/12/20	Wed 3/3/21	NA	NA	Wed 30/6/21	Sun 12/9/21	193 days 0.5 days	days,328FF+6 329			-										
31	Prepare DDA for At-grade Road D3 and ICE certification (Final)	16 days	0 days	16 days	0%	Thu 4/3/21	Fri 19/3/21	NA	NA	Mon 13/9/21	Tue 28/9/21	193 days 1 day	330													
32	Submit & endorse by PM and Statutory Authorities/Gov. Dept	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 days	331													
33	Remaining Road Works (E&M Works)	382 days		382 days	0%	Mon 5/10/20	Thu 21/10/21	NA	NA	Sat 13/2/21	Tue 1/3/22	131 days														
34	Prepare AIP (E&M works) and ICE certification (Draft)	31 days		31 days	0%	Mon 5/10/20	Wed 4/11/20		NA	Sat 13/2/21	Mon 15/3/21	131 days 1 day														
35	Submit & endorse by PM and Statutory Authorities/Gov. Dept	76 days		76 days	0%	Thu 5/11/20	Tue 19/1/21		NA	Tue 16/3/21	Sun 30/5/21	131 days 1 day	334		Į <u>. </u>											
36	Prepare AIP (E&M works) and ICE certification (Final)	31 days	1		0%	Wed 20/1/21	Fri 19/2/21		NA	Mon 31/5/21	Wed 30/6/21	131 days 1 day	335													
				31 days																						
37	Submit & endorse by PM and Statutory Authorities/Gov. Dept	76 days		76 days	0%	Sat 20/2/21		NA	NA	Thu 1/7/21	Tue 14/9/21	131 days 1 day	336													
38	Prepare DDA (E&M works) and ICE certification (Draft)	31 days		31 days	0%	Tue 6/4/21		NA	NA	Sun 15/8/21		131 days 1 day	337FF													
339	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													
40	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													
341	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													
342	Road L12d Works (Roadworks)	791 days	s 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						#1								
43	Prepare AIP for Road L12d Submission (Draft)	64 days	64 days	0 days	100%	Tue 6/8/19	Tue 8/10/19	Tue 6/8/19	Tue 8/10/19	Tue 6/8/19	Tue 8/10/19	0 days 1 day	325		+											
44	Submit & endorse by PM and Statutory Authorities/Gov. Dept	377 days	s 227 days	150 days	60%	Wed 9/10/19	Mon 19/10/20	0 Wed 9/10/19	NA	Wed 9/10/19	Tue 15/3/22	512 days														
45		120 days	s 0 days	120 days	0%	Tue 20/10/20	Tue 16/2/21	NA	NA	Wed 16/3/22	Wed 13/7/22	512 days 0 days	343,44FF+12			4										
46	(Final) Prepare DDA for Road L12d (Include E&M Provision Works) and ICE certification	120 days	s 0 days	120 days	0%	Thu 19/11/20	Thu 18/3/21	NA	NA	Fri 15/4/22	Fri 12/8/22	512 days 1 day	days,344 343FS+260		T											
347	(Draft) Submit & endorse by PM and Statutory Authorities/Gov. Dept	75 days	0 days	75 days	0%	Fri 19/3/21	Tue 1/6/21	NA	NA	Sat 13/8/22		512 days 0.5 days	days,345FF+30 346													
48	Prepare DDA for Road L12d (Include E&M Provision Works) and ICE certification			50 days	0%	Wed 2/6/21	Wed 21/7/21		NA	Thu 27/10/22		512 days 0 days	347,345FF													
49	(Final) Submit & endorse by PM and Statutory Authorities/Gov. Dept		0 days	75 days	0%	Thu 22/7/21	Mon 4/10/21		NA	Fri 16/12/22	Tue 28/2/23	512 days 0 days														
50	Road Lighting of Road D3 (E&M)			339.81 days	0%	Mon 6/1/20	Sun 18/4/21	Mon 6/1/20		Mon 6/1/20	Sun 1/8/21	105 days	J-10													
51	Prepare AIP (E&M works) Submission (Draft)		30 days	0 days	100%	Mon 6/1/20	Tue 4/2/20		Tue 4/2/20	Mon 6/1/20	Tue 4/2/20	0 days 2 days	251													
352	Submit & endorse by Statutory Authorities/Gov. Dept and PM		s 108 days	82 days	57%	Wed 5/2/20		Wed 5/2/20		Wed 5/2/20	Wed 25/11/20		351													
353	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	Thu 26/11/20	Sun 27/12/20	105 days 2 days	352													
354	Submit & endorse by PM and Statutory Authorities/Gov. Dept	60 days	0 days	60 days	0%	Mon 14/9/20	Thu 12/11/20	NA NA	NA	Mon 28/12/20	Thu 25/2/21	105 days 2 days	353													
tle. Rev 1	1 Prog with Progress	Summary			Inactive Mi	ilestone \Diamond		Duration-on	ıly		Start-only	Е	External Mile	stone	\langle		-m 1 III	Critical	Split							_
INCV. I	ay-20 Split	Project Sun	mmary		Inactive Su	mmary		Manual Sur	mmary Rollup 🛭		Finish-only	3	Deadline		•			Progress	śS		_			-		

Task								tract No. ED,													
Task	x 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	2020 Q2	Q3 Q4	Q1 Q	2021 2 Q3	Q4 O	202		2023 Q1 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			T III					
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			 		++++			
359	Road L12d Works (E&M Works)	329 days	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)	32 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									
363	Submit & endorse by PM and Statutory Authorities/Gov. Dept	62 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)	32 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	62 days		62 days	0%	Sun 11/4/21		NA	NA	Sun 8/8/21	Fri 8/10/21	119 days 2 days									
366	Prepare DDA (E&M works) and ICE certification (Final)	17 days		17 days	0%	Sat 12/6/21	Mon 28/6/21		NA	Sat 9/10/21	Mon 25/10/21										
367	Submit & endorse by PM and Statutory Authorities/Gov. Dept	62 days	_	62 days	0%	Tue 29/6/21	Sun 29/8/21		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	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	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	ys							
373	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								
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								
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 days	0 days	100%	Wed 4/3/20	Sat 18/4/20	Wed 4/3/20	Sat 18/4/20		Sat 18/4/20	0 days 0.5 days	\$								
378	Submit & endorse by PM and Statutory Authorities/Gov. Dept		33 days	49 days	40%	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									
380	DDA for Roadworks - EVA to Sewerage and Saltwater Pumping Station (Draft)	95 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	ys							
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	Thu 4/2/21	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	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	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									
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								
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		i i						
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	NA	NA	Tue 27/10/20	Sun 27/12/20	4 days 2 days	387	$-\parallel\parallel\parallel$		+					
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		23 days	0%	Wed 24/2/21	Thu 18/3/21		NA	Sun 28/2/21	Mon 22/3/21	4 days 2 days		$-\parallel\parallel\parallel$							
392	Submit & endorse by PM and Statutory Authorities/Gov. Dept	62 days		62 days	0%	Fri 19/3/21	Wed 19/5/21		NA	Tue 23/3/21	Sun 23/5/21	4 days 2 days		$-\parallel\parallel\parallel$							
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	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	20.1								
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								
396	Prepare AIP (E&M works) and ICE certification (Final)	31 days	0 days	31 days	0%	Fri 2/10/20	Sun 1/11/20	NA	NA	Tue 6/10/20	Thu 5/11/20	4 days 1 day	395								
397	Submit & endorse by PM and Statutory Authorities/Gov. Dept	61 days	0 days	61 days	0%	Mon 2/11/20	Fri 1/1/21	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)	31 days	0 days	31 days	0%	Wed 2/12/20	Fri 1/1/21	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								
:41- D -	1 Days with Days and Task	Summary	1		Inactive Mil	lestone \Diamond	1	Duration-or	ıly		Start-only	E	F	External Milesto	ne <	<u> </u>		ritical Split	11(1)		
itle: Rev.1 as of 22-N	1 Prog with Progress	Project Sun	nmary		Inactive Sur				mmary Rollup		Finish-only	3		Deadline	10 4			rogress			_
	Milestone •	Inactive Ta	sk		Manual Tas	k 📗		Manual Sur	nmary		External Tas	sks		Critical			M	anual Progra	ess		_

							Cont	tract No. ED/	/2018/01 KT	TD Project									
Task	Name	Duration	n Actual Duration	Remaining Duration	Physical % Complete	Early Start	Early Finish	Actual Start	Actual Finish	Late Start	Late Finish	Total TRA Slack	Predecessors)3 Q4	2021 Q1 Q2 Q3	04 01	2022 Q2 Q3	Q4 Q1
0	Prepare DDA (E&M works) and ICE certification (Final)	16 days	0 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 Q3	Q4 Q1
1	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						
2	DCS Seawater & Intake Box Culverts (approx 88m) (Section 2)	479 day	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							
3	Prepare AIP Subm with ICE certification (Draft)	165 day	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	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	90 days	0 days	100%	Fri 24/1/20	Mon 27/4/20	Fri 24/1/20	Mon 27/4/20	Fri 24/1/20	Mon 27/4/20	0 days 1 day	403						
6	Prepare AIP and ICE certification (Final)	0 days		0 days	100%	Thu 23/4/20			Mon 27/4/20		Mon 27/4/20	0 days 1 days	403,405,404	♦ 127/4					
7	Prepare DDA and ICE certification		0 days	80 days	0%	Sat 23/5/20	Mon 10/8/20		NA	Thu 21/1/21	Sat 10/4/21	243 days 5 days							
3				1										1					
	Submit & endorse by PM and Statutory Authorities/Gov. Dept		0 days	50 days	0%	Tue 11/8/20	Tue 29/9/20		NA	Sun 11/4/21	Sun 30/5/21	243 days 3 days							
)	Prepare DDA for and ICE certification (Final)		0 days	15 days	0%	Wed 30/9/20	Wed 14/10/20		NA	Mon 31/5/21	Mon 14/6/21	243 days 1 day	408						
0	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						
1	Seawater & Intake Box Culverts Diversion	248 day	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			· · · · · · · · · · · · · · · · · · ·				
2	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							
3	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		+				
4	Prepare AIP and ICE certification (Final)	15 days	0 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	412,413						
5	Prepare DDA and ICE certification	50 days	0 days	50 days	0%	Tue 23/6/20	Tue 11/8/20	NA	NA	Sun 25/4/21	Sun 13/6/21	306 days 5 days	412SS,413FF	+5(↓				
6	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	NA	Mon 14/6/21	Mon 2/8/21	306 days 3 days	415						
,	Prepare DDA for and ICE certification (Final)		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	$-\ \ \ \ \ \ $					
3	Submit & endorse by PM and Statutory Authorities/Gov. Dept		0 days	50 days	0%	Fri 16/10/20	Fri 4/12/20		NA	Wed 18/8/21	Wed 6/10/21	306 days 2 days		$-\parallel \parallel \parallel \parallel \parallel$					
	Rising Main (Sewerage Works)		s 134 days	268 days	0%	Thu 2/1/20	Sat 6/2/21		NA	Thu 2/1/20	Sun 7/3/21	29 days	,						
													4			·			
	Prepare AIP (Draft)		35 days	0 days	100%	Thu 2/1/20	Wed 5/2/20	Thu 2/1/20	Wed 5/2/20		Wed 5/2/20	0 days 3 days	4						
	Submit & endorse by PM		19 days	0 days	100%	Thu 6/2/20	Mon 24/2/20		Mon 24/2/20		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	■.					
	Prepare AIP and ICE certification (Final)	75 days	0 days	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	0 days	30 days	0%	Tue 15/9/20	Wed 14/10/20	NA NA	NA	Wed 14/10/20	Thu 12/11/20	29 days 4 days	420SS,423		→ [[
	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	Fri 13/11/20	Fri 1/1/21	29 days 3 days	424,420						
5	Prepare DDA and ICE certification (Final)	15 days	0 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	425						
7	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			_			
3	Stormwater, Sewage, Salt Water and Fresh Water Works for Underpass and Depress	ed 641 day	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							
)	Road Stormwater Drainage AIP for Underpass and Depressed Roads and ICE certificat	ion 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							
0	(Draft) 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	ys 429						
1	Submit & endorse by Statutory Authorities/Gov. Dept	139 day	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						
2	Prepare AIP and ICE certification (Final)		s 50 days	100 days	33%	Fri 3/4/20	Sun 30/8/20		NA	Fri 3/4/20		76 days	431FF+15 da	VS	4				
3	Prepare DDA and ICE certification (Draft)		s 0 days	150 days	0%	Sat 23/5/20	Mon 19/10/20		NA	Sat 18/7/20		56 days 1 day	429,432FF+3	_ ↓					
														, u					
4	Submit & endorse by PM and Statutory Authorities/Gov. Dept		0 days	90 days	0%	Tue 20/10/20	Sun 17/1/21		NA	Tue 15/12/20		56 days 0.5 day							
5	Prepare DDA and ICE certification (Final)		0 days	31 days	0%	Mon 18/1/21	Wed 17/2/21		NA	Mon 15/3/21		56 days 1 day	434						
6	Submit & endorse by PM and Statutory Authorities/Gov. Dept		0 days	75 days	0%	Thu 18/2/21	Mon 3/5/21		NA	Thu 15/4/21		56 days 5 days	435						
7	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							
8	Submit & endorse by PM	26 days	26 days	0 days	100%	Thu 28/11/19	Mon 23/12/19	Thu 28/11/19	Mon 23/12/	Thu 28/11/19	Mon 23/12/19	0 days 0.5 day	ys 437	<u> </u>					
)	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 IIII				
2	Submit & endorse by PM and Statutory Authorities/Gov. Dept	75 days	0 days	75 days	0%	Sat 15/8/20	Wed 28/10/20) NA	NA	Thu 31/12/20	Mon 15/3/21	138 days 0.5 day	ys 441	$-\parallel \parallel \parallel \parallel \parallel$					
3	Prepare DDA for Underpass, Depressed Road and ICE certification (Final)		0 days	30 days	0%		Fri 27/11/20		NA	Tue 16/3/21	Wed 14/4/21	138 days 0 days		$-\parallel \parallel \parallel \parallel \parallel$					
4	Submit & endorse by PM and Statutory Authorities/Gov. Dept		0 days	75 days	0%	Sat 28/11/20	Wed 10/2/21		NA	Thu 15/4/21	Mon 28/6/21	138 days 0 days		_					
<u> </u>	Securit & chaotic of FM and Statutory Futurorities/SOV. Dept	15 days	Gays	75 days	370	Sut 20/11/20		1111	1771	1110 13/7/21	111011 2010121	150 days 0 days	1 15						
e: Rev.11	1 Prog with Progress Task	Summary Project Sur	mmarr		Inactive Mi			Duration-or			Start-only	C 3		External Mileston	ne 🔷		Critical Split		
of 22-M	lay-20	Project Sur	mmary ask		Inactive Su Manual Tas			Manual Sur Manual Sur	mmary Rollup	_	Finish-only External Task		1	Deadline Critical	*		Progress Manual Progress		

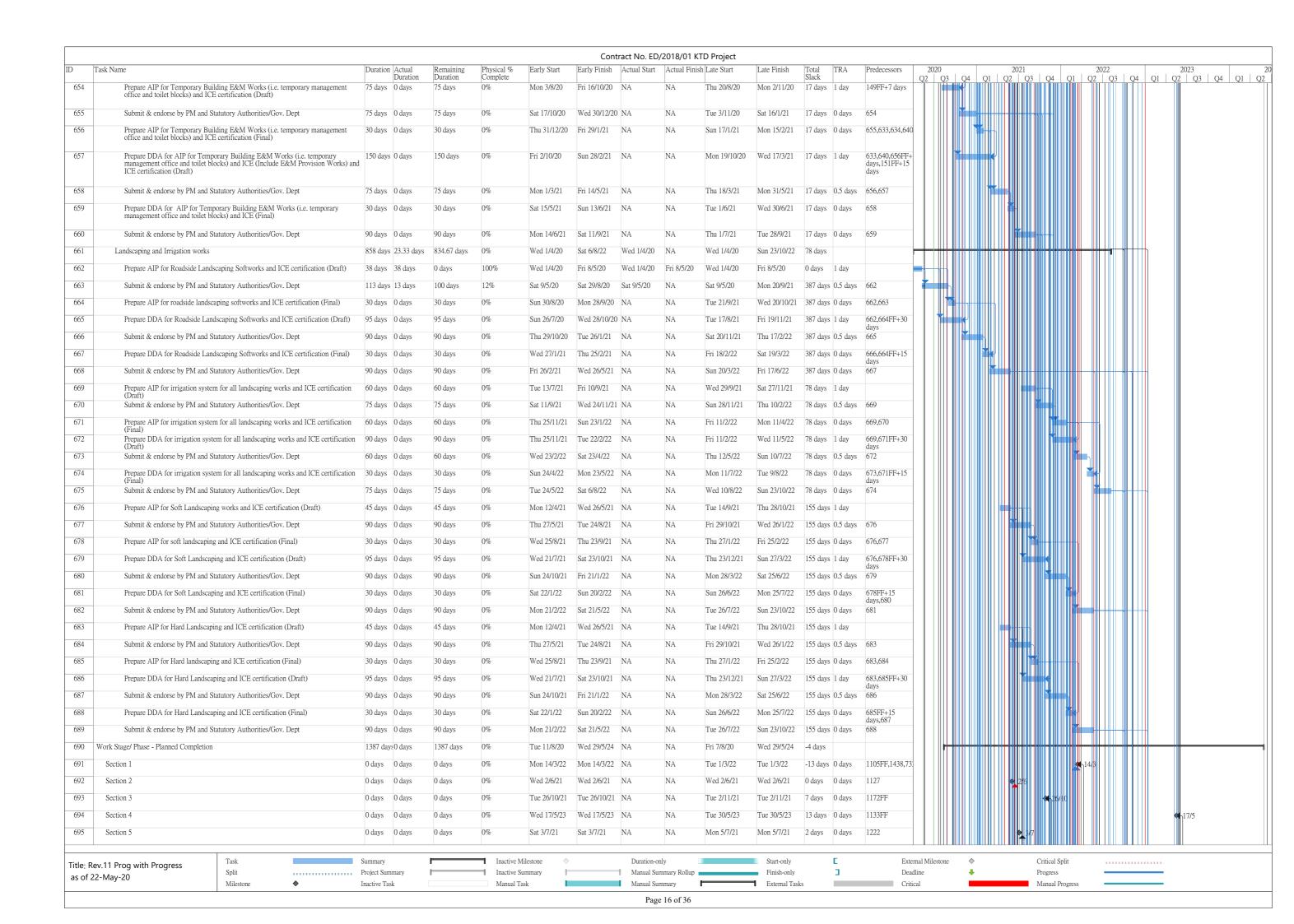




							Con	tract No. ED/	/2018/01 KT	TD Project													
Task	Name	Duration	Actual Duration	Remaining Duration	Physical % Complete	Early Start	Early Finish	Actual Start	Actual Finish	h Late Start	Late Finish	Total TRA Slack	Predecessors			01	2021 O2 O3	04	01 02	022	04 01	2023	
535	Prepare AIP for Salt Water 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 	ψυ Q ₄	· QI	Q2 Q3	Q4	Q1 Q2	Q3	Q4 QI	Q2 Q3	Q4
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	+30									
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			4							
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										
													4										
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+1	2			Tr-						
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										
51					0%	Mon 19/7/21	Sat 18/9/21		NA	Mon 16/8/21													
	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+3 days	U									
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							$+++\parallel$			
56	AIP for Landscaping works of Salt Water & Sewage Pumping and ICE certificatio (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	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	rs 556										
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											
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		$\parallel \parallel \parallel$				 					
	certification (Final)												days,560										
62	Submit & endorse by PM and Statutory Authorities/Gov. Dept	61 days	_	61 days	0%	Mon 24/1/22			NA	Sun 20/2/22	Thu 21/4/22	27 days 2 days	561										
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										
55	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	vs 563,565,564										
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										1									
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	/s 569										
71	Elevated Landscape Deck Staircase & Associated Work	714 days	268.49 days	445.51 days	0%	Thu 30/5/19		Thu 30/5/19		Thu 30/5/19	Mon 5/7/21	54 days											
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	s 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	s 155 days	100 days	61%	Wed 20/11/19	Fri 31/7/20	Wed 20/11/19	NA	Wed 20/11/19	Thu 26/11/20	118 days 0.5 day	vs 44FF+12 days	s =	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 da										
77	Submit & endorse by PM and Statutory Authorities/Gov. Dept	50 days		50 days	0%	Mon 31/8/20	Mon 19/10/20		NA	Sun 27/12/20	Sun 14/2/21	118 days 0.5 day											
578	Prepare DDA for and ICE certification (Final)		-	22 days	0%	Tue 20/10/20			NA	Mon 15/2/21	Mon 8/3/21	118 days 1 day		$\parallel \parallel \parallel$									
010	r repare DDA for and ICE certification (Final)	22 days	o uays	ZZ udys	070	1 uc 20/10/20	1 uc 10/11/20	IVA	IVA	1VIOII 1 <i>312</i> 121	101011 0/3/21	110 days 1 day	311										
	Task	Summary			Inactive M	ilestone 🔷		Duration-or	ılv		Start-only	г	Į.	External Miles	one	♦		Critical Spli	t				—
	Prog with Progress	Project Sun	nmary	·	Inactive Su				nmary Rollup 🍙		Finish-only	3		Deadline		+		Progress	•				
s of 22-M	ay-20 Milestone ◆	Inactive Ta			Manual Ta	sk		Manual Sur	nmary		External Tasl	75		Critical				Manual Pro	rrecc				

							Cont	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	Late Start	Late Finish	Total TRA Slack	Predecessors	2020	Q4 Q1 Q2 Q	3 Q4 Q1	200	22	01 0	2023
579	Submit & endorse by PM and Statutory Authorities/Gov. Dept	50 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		Q4 Q1 Q2 Q		1 Q2	Q3 Q4	Q1 Q2	2 Q3 1
580	Elevated Landscape Deck - Lift (LT1<2)& 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							
581	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	+						1
582	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							
583	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	580,581,582,44F	*****						1
584	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		¥					
585	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 da	ys 584							
586	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 da	ys 585,583FF+12 d		-					
587	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		*					1
588	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								1
589	Submit & endorse by PM	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 da	ys 588							1
590	Submit & endorse by Statutory Authorities/Gov. Dept	50 days		50 days	0%	Mon 6/7/20	Mon 24/8/20		NA	Mon 28/9/20		84 days 1 days								1
591	Prepare AIP and ICE certification (Final)	30 days		30 days	0%	Tue 25/8/20	Wed 23/9/20		NA	Tue 17/11/20		84 days 2 days								1
592	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							
593					0%	Sun 13/12/20				Sun 7/3/21	Sat 6/3/21 Sun 25/4/21	84 days 0.5 da								
	Submit & endorse by PM and Statutory Authorities/Gov. Dept	50 days		50 days			Sun 31/1/21		NA											
594	Prepare DDA for and ICE certification (Final)	21 days		21 days	0%	Mon 1/2/21	Sun 21/2/21	NA	NA	Mon 26/4/21	Sun 16/5/21	84 days 0 days								
595	Submit & endorse by PM and Statutory Authorities/Gov. Dept	50 days		50 days	0%	Mon 22/2/21	Mon 12/4/21		NA	Mon 17/5/21	Mon 5/7/21	84 days 0 days								
596	EVA for Open Space AIP Subm (Draft)	71 days		0 days	100%	Mon 10/2/20		Mon 10/2/20		Mon 10/2/20	Mon 20/4/20	0 days 3 days								
597	Submit & endorse by PM	2 days	2 days	0 days	100%	Tue 21/4/20	Mon 27/4/20	Tue 21/4/20	Mon 27/4/20	Tue 21/4/20	Mon 27/4/20	0 days 1 day	596							1
598	Submit & endorse by Statutory Authorities/Gov. Dept	50 days	0 days	50 days	0%	Mon 6/7/20	Mon 24/8/20	NA	NA	Sun 4/10/20	Sun 22/11/20	90 days 1 days	596							
599	Prepare AIP and ICE certification (Final)	30 days	0 days	30 days	0%	Tue 25/8/20	Wed 23/9/20	NA	NA	Mon 23/11/20	Tue 22/12/20	90 days 2 days	596,598,44FF+1							1
600	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							
601	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 da	ys 600							1
602	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							
603	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							
604	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	-			- hh				1
605	Prepare AIP for Observation Deck with Lift (LTS) 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	-							
606	Submit & endorse by PM and Statutory Authorities/Gov. Dept	14 days	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							
607	Prepare AIP for Observation Deck with Lift (LT5) and Staircase and ICE (Include E&M Provision Works) certification (Final)	31 days	0 days	31 days	0%	Wed 16/9/20	Fri 16/10/20	NA	NA	Thu 22/10/20	Sat 21/11/20	36 days 1 day	605,606,647FF,6							
608	Prepare DDA for Observation Deck with Lift and Staircase and ICE (Include E&N Provision Works) certification (Draft)	M 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	605,647,654,607							
609	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 da	ys 608,607							
610	Prepare DDA for Observation Deck with Lift and Staircase and ICE (Include E&N Provision Works) certification (Final)	M 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							
611	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							
612	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								
613	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 da	ys 612						.	
614	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							
615	Prepare DDA for Remaining Works at Waterfront Promenade and ICE (Include E&M Provision Works) certification (Draft)	75 days	0 days	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 days							
616	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						.	
617	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 days		Ĭ.					
618	Submit & endorse by PM and Statutory Authorities/Gov. Dept	60 days	0 days	60 days	0%	Sun 18/7/21	Wed 15/9/21	NA	NA	Sat 31/7/21	Tue 28/9/21	13 days 1 day	617							
619	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								
	Task	Summary			Inactive Mi	ilestone 🔷		Duration-or	ılv		Start-only	Г	Fytema	Milestone	*	Critical Split				
Title: Rev.11 as of 22-M	Prog with Progress	Project Sum	nmary		Inactive Su				mmary Rollup		Finish-only	3	Deadlin		•	Progress				
as UI 22-1VI	ay-20 Milestone ◆	Inactive Tas	sk		Manual Tas	sk		Manual Sur	mmary I		External Tas	ks	Critical			Manual Progre	ess			

							Con	tract No. ED,	/2018/01 K	TD Project											
Task	Name	Duration	1 Actual	Remaining	Physical %	Early Start	Early Finish	Actual Start	Actual Finis	sh Late Start	Late Finish	Total TRA	Predecesso			4 01	2021	04 -	20)22	
20	Submit & endorse by PM and Statutory Authorities/Gov. Dept	63 days	Duration 0 days	Duration 63 days	Complete 0%	Thu 20/8/20	Wed 21/10/20) NA	NA	Mon 21/9/20	Sun 22/11/20	Slack 32 days 3 da	ys 619	Q2	Q3 Q	4 Q1 C	Q2 Q3	Q4 Q1	Q2	Q3	Q4 (
21	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 da	ys 619,620								
22	DDA for Cladding Design of Landscape Deck, Lifts and associated Works (Draft)	61 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 da		+30							
23	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 da	days	130		⊥ĵ∏					
														(22							
-	DDA for Cladding Design of Landscape Deck, Lifts and associated Works (Final)	21 days		21 days	0%	Sat 13/3/21	Fri 2/4/21	NA	NA	Wed 14/4/21	Tue 4/5/21	32 days 1 da		,623							
5	Submit & endorse by PM and Statutory Authorities/Gov. Dept	62 days	0 days	62 days	0%	Sat 3/4/21	Thu 3/6/21	NA	NA	Wed 5/5/21	Mon 5/7/21	32 days 2 da	ys 624								
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 da	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 da	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	days 626,627								
	DDA for Balustrade and Railing of Promenade, Open Space and Assocated Works	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 da	y 626,628FF	+30		-					
	(Draft) 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 da	ys 629								
	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 da	y 628,629,63	30		 					
!	(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 da	ys 631								
3	Prepare AIP for Permanent Building Works (i.e. Ampitheater, Observation Tower,			60 days	0%	Wed 29/7/20	Sat 26/9/20		NA	Thu 20/8/20	Sun 18/10/20			lavs							(
	Triplet Block, Light Refreshment Kiosk, Refuse Collection Block, Back of House Building Blocks) and ICE certification (Draft)	oo uays	o uays	oo uays	0 70	11 Cu 27/ //20	oat 2017120	11/21	110	1114 20/0/20	Guii 10/1U/2U	LL uays I dd	j 1+71·Γ+/(
	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	days 633			4					
	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 da	ys 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	s 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 da	y 633,635FF days,151Ff days								
+	Submit & endorse by PM and Statutory Authorities/Gov. Dept	75 dave	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			30 days	0%	Fri 26/3/21	Sat 24/4/21		NA	Sun 2/5/21	Mon 31/5/21	37 days 0.5 da				¥					
	Building Blocks) nd ICE certification (Final)																				
	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	days 635,636,63	38							
	Prepare AIP 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 certification (Draft)	75 days	0 days	75 days	0%	Tue 14/7/20	Sat 26/9/20	NA	NA	Wed 5/8/20	Sun 18/10/20	22 days 1 da	y 149FF+7 c	lays							
	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	days 640			_					
	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 da	ys 640,641								
	Block, Light Refreshment Kiosk, Refuse Collection Block, Back of House Building Blocks) and ICE certification (Final)																				
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	s 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 da	y 640,642FF days,151Ff days								
4	Submit & endorse by PM and Statutory Authorities/Gov. Dept	60 days	0 days	60 days	0%	Mon 25/1/21	Thu 25/3/21	NA	NA	Tue 16/2/21	Fri 16/4/21	22 days 0.5 d	lays 642,643								
5	Prepare DDA for Permanent Building E&M Works (i.e. Ampitheater, Observation	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 da	ys 644								
	Tower, Toilet Block, Light Refreshment Kiosk, Refuse Collection Block, Back of House Building Blocks) nd ICE certification (Final)		0 223,2										,								
		00.1	0.1	00.1	n.er	0. 05/4/01	E : 00/E/01	NT.1	NT.4	17/5/01	0 . 1.4/0/01	22.1 0.5	1 (42 (42 (
	Submit & endorse by PM and Statutory Authorities/Gov. Dept		0 days	90 days	0%	Sun 25/4/21	Fri 23/7/21		NA	Mon 17/5/21	Sat 14/8/21		days 642,643,64								
	Prepare AIP for Temporary Building Works (i.e. temporary management office and toilet blocks) and ICE certification (Draft)	75 days	0 days	75 days	0%	Mon 3/8/20	Fri 16/10/20		NA	Thu 20/8/20	Mon 2/11/20	17 days 1 da	y 149FF+7 d	lays							
В	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 da	ys 647					+			[]]]
1	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 da	ys 633,634,64	18,640							
	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	s 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 da	y 633,640,64 days,151F days								
	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	days 649,650								
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 da	ys 651								
53	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 da	ys 652								
e: Rev.1	i Prog with Progress	Summary			Inactive N			Duration-or	-		Start-only	Е		External Milest	tone	♦		tical Split			
(0 0 1 4	ay-20 Split	Project Sur	nmary		Inactive S	Summary		■ Manual Su	mmary Rollup		Finish-only	3		Deadline		₩	Pro	gress			



								tract No. ED/																	
Ta	k 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	3 Q4	01	2021 Q2 Q3	O4	01 4	2022 Q2 Q3	3 04	Q1 Q2	2023)4
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,		J Q4			<u> </u>		22 Q3) Q4	Q1 Q2	18/5	<u>4 Q</u>
97	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					44 -2	24/11					
99	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				⊕ 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									44	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/R									
702	KD2		0 days	0 days	0%	Sat 17/4/21	Sat 17/4/21		NA	Sun 18/4/21	Sun 18/4/21		0 days	791,821,771,774				- myx							
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	1	822,821											
704																		20014							
	KD4		0 days	0 days	0%	Fri 28/1/22	Fri 28/1/22		NA	Mon 31/1/22	Mon 31/1/22	3 days	1	1255FF						41 128/1					
705	KD5		0 days	0 days	0%	Fri 25/6/21		NA	NA	Fri 17/9/21	Fri 17/9/21	84 days		1252FF				(4 125/ 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					1	21/12					
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				•	19/8						
08 Co	nstruction Works	1499 day	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?			1 111										
09	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			+										
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											
13	Lifts ((5 nos)	180 days	0 days	180 days	0%	Sun 18/10/20	Thu 15/4/21	NA	NA	Thu 29/10/20	Mon 26/4/21	11 days	30 days	712											
14	Pumps for Pump Room next to Underpass	150 days		150 days	0%	Sat 23/5/20	Thu 19/11/20	NA	NA	Wed 8/7/20	Tue 5/1/21	37 days													
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				0%	Tue 1/12/20	Thu 29/4/21			Wed 12/5/21															
		120 days		120 days					NA		Mon 4/10/21	129 days													
17	E & M equipment & fittings (for Open space & Promenade)	120 days		120 days	0%	Tue 6/4/21	Fri 27/8/21		NA	Mon 27/9/21	Tue 22/2/22	144 days													
18	Bridge Parapet Fabrication	120 days	0 days	120 days	0%	Mon 16/11/20			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													
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						-							
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		-	+ + + + + + + + + + + + + + + + + + + +										
26	GI Work	318 days	180 days	138 days	57%	Thu 12/9/19	Thu 5/11/20	Thu 12/9/19	NA	Thu 12/9/19	Sat 13/8/22	526 days	0.5 days	724											
27	Part 1 - Junction Modification Rd L6 & D2	414 days	0 days	414 days	0%	Mon 5/10/20	Fri 25/2/22	NA	NA	Mon 23/11/20	Tue 1/3/22	3 days													
28	XP Application for Junction Modification Rd L6 & D2	182 days	0 days	182 days	0%	Mon 5/10/20	Sun 4/4/21	NA	NA	Mon 23/11/20	Sun 23/5/21	49 days	1 day												
29	Stage 1: Trial Pit to locate the existing underground cables and utilities	14 days		14 days	0%	Thu 20/5/21		NA	NA	Mon 24/5/21	Tue 8/6/21		1 day	141,375,721,728				.							
30	Stage 2: Trial Pit to locate the existing underground cables and utilities	14 days			0%	Sat 5/6/21	Tue 22/6/21		NA	Wed 9/6/21	Fri 25/6/21		1 day	729											
				14 days																					
31	Stage 3: East Bound + Drop Kerb Modification + Road Marking	76 days		76 days	0%	Wed 23/6/21	Mon 20/9/21		NA	Sat 26/6/21	Fri 24/9/21		1 day	730											
32	Stage 4: TTA for Central Divider	76 days		76 days	0%	Tue 21/9/21	Tue 21/12/21		NA	Sat 25/9/21	Fri 24/12/21		1 day	731,113											
33	Stage 5: Construct 2 Dividers	51 days		51 days	0%		Fri 25/2/22		NA	Tue 28/12/21	Tue 1/3/22		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													
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	0 days	180 days	0%	Tue 11/8/20	Sat 6/2/21	NA	NA	Fri 9/10/20	Tue 6/4/21	59 days	30 days	194,220											
37	Sheetpile Driven along North, Sourth & East Side ELS Cofferdam (assume 169 long)	4 days	4 days	0 days	100%	Tue 14/1/20	Fri 17/1/20	Tue 14/1/20	Fri 17/1/20	Tue 14/1/20	Fri 17/1/20	0 days	0.5 day												
738	KTSP Completed Driven H-pile Installation	41 days	41 days	0 days	100%	Wed 25/12/19	Mon 3/2/20	Wed 25/12/19	Mon 3/2/20	Wed 25/12/19	Mon 3/2/20	0 days													
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	738											
la Por	11 Prog with Progress Task	Summary			Inactive M	ilestone 🔷		Duration-on	ıly		Start-only		С	Externa	al Milestor	e 🔷			Critical S	plit	111				
	May-20 Split	Project Sun			Inactive Su				nmary Rollup		Finish-only		3	Deadli		•			Progress		_				
	Milestone •	Inactive Tas	sk		Manual Ta	sk		Manual Sun	nmary		External Tas	ks		Critical	l				Manual P	rogress	_				

							Conf	tract No. ED,	/2018/01 KT	D Project												
Task Nam	ne	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	2021 O1 O2 O3	04 0	202	22 Q3 Q4	4 01	2023 Q2 Q
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	<u>~ Q4</u>	¥1 ¥2 ¥3	7, 0,	4 Q2		, Q1	
741	Excavattion with Shoring and Waling Installation with Rock Fill Replacement include Sand Raplacement 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 days	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				ı						
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	rs 🖷							
745	Bay No.3: Wall & Column with Soffit (upto +4.6mPD) (include Wall Forme	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 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								
48	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								
750	Bay No.2: Wall & Column with Soffit (upto +4.6mPD) (include Wall Form			17 days	25%	Sat 16/5/20	Thu 11/6/20		NA	Sat 16/5/20	Thu 11/6/20	-1 day	1 day	749								
751	(3)+(4)+(5) Bay No. 2: Wall & Column Casted and Formwork & Falsework upto Soffit	,		18 days	0%	Fri 12/6/20	Sat 4/7/20	NA	NA	Thu 11/6/20	Fri 3/7/20	-1 day	1 day	750								
752	Top Slab (6)+(7) Bay No. 2: Top Slab Construction with Formwork & Falsework Erection(8)			12 days	0%	Wed 8/7/20	Tue 21/7/20		NA	Sat 4/7/20	Fri 17/7/20		1 day	751,748FF+2								
753	• • • • • • • • • • • • • • • • • • • •				100%									days								
	Bay No.4 Base Slab with Blinding (1)+(2)		15 days	0 days		Wed 1/4/20	Wed 13/5/20		Wed 13/5/20		Wed 13/5/20	0 days	-	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		753,750SS+7 days								
755	Bay No. 4: Wall & Column Casted and Formwork & Falsework upto Soffit Top Slab (6)+(7)			20 days	0%	Wed 10/6/20		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		*						
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) 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							
761	Bay No.5: Wall & Column with Soffit (upto +4.6mPD) (include Wall Forme (3+4+5)	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		ľ						
762	Bay No. 5: Wall & Column Casted and Formwork & Falsework upto Soffit	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	1 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	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	rs H							
765	Bay No.6: Wall & Column with Soffit (upto +4.6mPD) (include Wall Former	er) 17 days	0 days	17 days	0%	Thu 10/9/20	Tue 29/9/20	NA	NA	Wed 7/10/20	Tue 27/10/20	21 days	1 day	764								
766	(3)+(4)+(5) Bay No. 6: Wall & Column Casted and Formwork & Falsework upto Soffit	of 27 days	0 days	27 days	0%	Wed 30/9/20	Tue 3/11/20	NA	NA	Wed 28/10/20	Fri 27/11/20	21 days	1 day	765	$-\parallel \parallel \parallel$	4						
767	Top Slab(6)+(7) Bay No. 6: Top Slab Construction with Formwork & Falsework Erection &	17 days	0 days	17 days	0%	Wed 4/11/20	Mon 23/11/20) NA	NA	Sat 28/11/20	Thu 17/12/20	21 days	1 day	765,766	-							
768	Removal (8) North Approach Ramp (Bays 7&8) (Next to BEM)		0 days	56 days	0%	Tue 26/1/21	Wed 7/4/21	NA	NA	Tue 26/1/21	Sat 17/4/21	0 days										
769	Bay 7: Blinding		0 days	1 day	0%	Tue 26/1/21	Tue 26/1/21		NA	Tue 26/1/21	Tue 26/1/21	0 days	0.5 days	816.767	_		Ţ					
770	Bay 7: Base slab				0%	Wed 27/1/21		NA	NA	Wed 27/1/21	Fri 5/2/21			816,769			‡					
771	•	9 days		9 days	0%	Sat 6/2/21				Wed 21/1/21 Wed 31/3/21	Sat 17/4/21	0 days										
	Bay 7: Wall		0 days	13 days			Wed 24/2/21		NA				1 day	819,770			‡					
772	Bay 8: Blinding		0 days	1 day	0%	Wed 27/1/21	Wed 27/1/21		NA	Fri 5/2/21	Fri 5/2/21		0.5 days									
773	Bay 8: Base slab		0 days	9 days	0%	Sat 6/2/21	Fri 19/2/21		NA	Sat 6/2/21	Fri 19/2/21	0 days		816,770,772								
774	Bay 8: Wall	13 days	0 days	13 days	0%	Sat 20/2/21		NA	NA	Sat 20/2/21	Sat 6/3/21	0 days	1 day	773,819								
775	Bays No.7&8: Backfilling	15 days	0 days	15 days	0%	Mon 8/3/21	Wed 24/3/21		NA	Thu 18/3/21	Wed 7/4/21	9 days	1 day	774,767								
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								
777	North Approach Ramp (Bays No.2,3,4) (Next to KTSP)	149 days	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										
778	Bay No.3 Base Slab with Blinding (1)+(2)	15 days	0 days	15 days	0%	Mon 24/8/20	Wed 9/9/20	NA	NA	Tue 1/9/20	Thu 17/9/20	7 days	1 day									
779	Bay No.3: Wall & Column with Soffit (upto +4.6mPD) (include Wall Forme (3)+(4)+(5)	er) 17 days	0 days	17 days	0%	Thu 10/9/20	Tue 29/9/20	NA	NA	Wed 7/10/20	Tue 27/10/20	21 days	1 day	778								
780	Bay No. 3: Wall & Column Casted and Formwork & Falsework upto Soffit Top Slab(6)+(7)	of 27 days	0 days	27 days	0%	Wed 30/9/20	Tue 3/11/20	NA	NA	Wed 28/10/20	Fri 27/11/20	21 days	1 day	779	$\parallel \parallel \parallel$							
781	Bay No. 3: Top Slab Construction with Formwork & Falsework Erection &	17 days	0 days	17 days	0%	Wed 4/11/20	Mon 23/11/20) NA	NA	Sat 28/11/20	Thu 17/12/20	21 days	1 day	779,780	$\parallel \parallel \parallel$							
782	Removal (8) Bay No.2 Base Slab with Blinding (1)+(2)	15 days	0 days	15 days	0%	Mon 17/8/20	Wed 2/9/20	NA	NA	Tue 25/8/20	Thu 10/9/20	7 days	1 day	778FS-21 day	s							
783	Bay No.2: Wall & Column with Soffit (upto +4.6mPD) (include Wall Former	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	$+ \ \ $	4						
	(3)+(4)+(5)														13.67			<u> </u>				
	og with Progress	Summary Project Sur	mmary		Inactive M Inactive Su			Duration-or Manual Sur	nly 📗 mmary Rollup 🕳		Start-only Finish-only]		xtemal Milestor eadline	ne 🔷		Critical Split Progress				ı
s of 22-May-	20 Milestone •	Inactive Ta		-	Manual Ta			Manual Sur			External Tasl	ks	-		ritical	Ť		Manual Progre	ress			

									2018/01 KT											
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 Q3 (04 01	2021	03 04 0	2022 Q1 Q2 Q3)3 Q4 Q
84	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		V- 1 V1				
85	Bay No. 2: Top Slab Construction with Formwork & Falsework Erection &	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		1				
36	Removal (8) 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						
87	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						
88	(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	7 days	1 day	787						
89	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			787,788		14				
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	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				1	7			
93	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,		1				
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	-		797		Ţ				
	(3)+(4)+(5)		-									-								
99	Bay No. 6: Wall & Column Casted and Formwork & Falsework upto Soffit of Top Slab(6)+(7)			27 days	0%	Mon 28/12/20			NA	Wed 6/1/21	Fri 5/2/21	-		798						
00	Bay No. 6: Top Slab Construction with Formwork & Falsework Erection & Removal (8)	17 days	0 days	17 days	0%	Fri 29/1/21	Sat 20/2/21	NA	NA	Sat 6/2/21	Mon 1/3/21	7 days	1 day	798,799						
)1	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						
)3 N	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						
5	Bay 8: Base slab		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		12 days	0%	Tue 23/2/21	Mon 8/3/21		NA	Mon 8/3/21	Sat 20/3/21	11 days		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	-		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		-	808,801,802						
	Furniture	77 days		77 days	0%	Mon 19/4/21	Wed 21/7/21	NA	NA	Thu 23/9/21	Tue 14/12/21	122 days		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	NA	Thu 23/9/21	Thu 21/10/21	130 days	2 day	809,776,821						
12	CH1087-1189: Central Median and Utilities 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 N	North Approach Ramp: Bay No. 1	135 days	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		83 days	0%	Fri 16/10/20	Mon 25/1/21	NA	NA	Fri 16/10/20	Mon 25/1/21		3 days	819						
	Part 3G - CH1189.4 to CH1229 North Abutment	180 days		180 days	0%	Tue 15/9/20	Mon 26/4/21		NA	Tue 15/9/20	Mon 26/4/21	-								
												-								
18	North Abutment	180 days		180 days	0%	Tue 15/9/20	Mon 26/4/21		NA	Tue 15/9/20	Mon 26/4/21	0 days		015						
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			815						
20	North Abutment Wall (3.85m thk)	37 days	0 days	37 days	0%	Tue 26/1/21	Fri 12/3/21		NA	Tue 26/1/21	Fri 12/3/21	0 days	1 day	816						
21	North Abutment Wall (0.5m thk) (KD2) (KD3)	28 days	0 days	28 days	0%	Sat 13/3/21	Sat 17/4/21	NA	NA	Sat 13/3/21	Sat 17/4/21	0 days	1 day	820						
2	Install bridge bearing	7 days	0 days	7 days	0%	Mon 19/4/21	Mon 26/4/21	NA	NA	Mon 19/4/21	Mon 26/4/21	0 days	0.5 days	821,736				H		
3 A	At Grade Road Works CH1000-2124	157 days	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							40	
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					4.	
5	CH1444.7-1560 At grade road works	45 days		45 days	0%		Fri 18/2/22		NA	Wed 5/1/22	Tue 1/3/22	9 days	-	1293,826,219				-		
26	Ch2050 to 2124: At grade road works	50 days		50 days	0%		Tue 21/12/21		NA	Thu 4/11/21	Tue 4/1/22			1438,219						
					0%								. any	130,217						
	ge D3 Bored Pile		17 days	0 days			Thu 5/12/19				Thu 5/12/19	0 days	0.5.1							
28 P	Pre-drilling Works	15 days	15 days	0 days	100%	Tue 19/11/19	Thu 5/12/19	1ue 19/11/19	Thu 5/12/19	Tue 19/11/19	Thu 5/12/19	0 days	u.5 day							
le: Rev.11 Prog v	vith Progress	Summary			Inactive M	ilestone \Diamond		Duration-on			Start-only				l Milestone	♦		Critical Split		
-9.	Split	Project Sur	nmary		Inactive Su	mmary		Manual Sun	nmary Rollup 🔳		Finish-only		3	Deadlin	e	4		Progress	_	

										D Project														
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 Q	23 Q4	01 0	2021 22 Q3	Q4	Q1 O2	2022 2 Q3	Q4		2023 Q3 Q
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												
330	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												
831	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	┤ ╁ ╢									
841	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	+ $+$ $+$									1
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			┤│┟╫									
843	-			17 days	0%	Wed 29/7/20	Mon 17/8/20		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	_		♦ 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	1	844										
846	Pilecap structure		0 days	24 days	0%	Tue 18/8/20	Mon 14/9/20		NA	Mon 28/9/20	Wed 28/10/20			845,843	 									
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										
848	Pier - Formwork Design and Method Statement Submission		0 days		0%	Mon 7/9/20	Mon 7/9/20		NA NA	Sat 10/10/20	Sat 10/10/20	33 days		010										
349	_			0 days	0%	Mon 7/9/20	Sun 11/10/20		NA NA	Sat 10/10/20 Sat 10/10/20	Fri 13/11/20		1	848										
	Pier - Formwork Design and Method Statement Comment & Appraoval		0 days	35 days								33 days												
350	Pier P01 @ CH1229		0 days	49 days	0%	Wed 28/10/20			NA	Sat 14/11/20	Wed 13/1/21	15 days	-	847,211,849										
351	CH1269: Pre-drilling Works		30 days	0 days	0%	Wed 20/11/19				Wed 20/11/19	Thu 19/12/19			835,836										
352	Abandon the Installed defected Bored pile (P02-BP2) @ CH1269	35 days	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 days	1 day?	0%	Thu 16/5/19	Thu 16/5/19	NA	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	NA	Tue 9/6/20	Sat 20/6/20	5 days	0.5 days	852										
355	Casing Extraction for Abandoned P02-BP2 Bored Pile	20 days	0 days	20 days	0%	Sat 20/6/20	Wed 15/7/20	NA	NA	Mon 22/6/20	Thu 16/7/20	1 day	1 day	854										
856	Bored pile (P02-BP2)(Remedial) @ CH1269	30 days	0 days	30 days	0%	Thu 16/7/20	Wed 19/8/20	NA	NA	Fri 17/7/20	Thu 20/8/20	1 day	2 days	855,854		h								
357	Bored pile (P02-BP1) @ CH1269 (Contractor Bear DDA Approval Risk) (Rig 2	26 days	26 days	0 days	100%	Fri 21/2/20	Sat 18/4/20	Fri 21/2/20	Sat 18/4/20	Fri 21/2/20	Sat 18/4/20	0 days	0.5 days	851	1. THE									
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	11 days	1 day	839,840,858		THE L								
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		1 29	9/6								
861	Pile Cap ELS - Temp. Works Design and Method Statement Comment &	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										
362	Appraoval 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	861,858,140,85	9	1								
364	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	$- \ \cdot \ \cdot \ $									
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		$\parallel \parallel \parallel \parallel$	♠ 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	$\parallel \parallel \parallel$									
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	$\left\{ \left[$									
368	Backfill and extract sheet pile		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		867	$\ \ \ $									
69	Pier - Temp. Works Design and Method Statement Submission		0 days	0 days	0%	Mon 7/9/20	Mon 7/9/20		NA	Thu 31/12/20	Thu 31/12/20				$\parallel \parallel \parallel$	7/9								
70	Pier - Temp. Works Design and Method Statement Comment & Appraoval		0 days	30 days	0%	Mon 7/9/20	Tue 6/10/20		NA	Thu 31/12/20	Fri 29/1/21	115 days		869	$\ \cdot\ $	411								
871	Pier P02 @ CH1270		0 days	49 days	0%	Mon 18/1/21	Thu 18/3/21		NA	Sat 30/1/21	Wed 31/3/21	11 days		868,211,870	-									
													1 uay	000,211,070										
872	Stage 1: Bridge deck between CH1229-1311		o days	340 days	0%	Mon 2/11/20			NA	Tue 19/1/21	Wed 29/12/21		1 d											
873	Bridge Deck - Temp. Works Design and Method Statement Submission	o days	0 days	0 days	0%	Mon 2/11/20	Mon 2/11/20	INA	NA	Tue 19/1/21	Tue 19/1/21	78 days	1 day			2/								
tle: Rev.11 F	Prog with Progress	Summary			Inactive Mi			Duration-or			Start-only		[temal Mileston				Critical Spli	t				
s of 22-May	Split	Project Sur Inactive Ta			Inactive Su Manual Tas			Manual Sur Manual Sur	mmary Rollup		Finish-only External Tas	1]		adline itical	4			Progress Manual Prog				_	

Task Name			_					_	_													
Task Nam		Duration	Actual Duration	Remaining Duration	Physical % Complete	Early Start	Early Finish	Actual Start	Actual Finis	sh Late Start	Late Finish	Total TR Slack	A Predecessors	2020 Q2 Q3	04 01	2021 02 0	3 Q4 (2022 2 Q3	04		023 Q3 Q4
874	Bridge Deck - Temp. Works Design and Method Statement Comment &	35 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 d	ay 873	Q2 Q3	4 (1 Q2	<u> </u>
875	Appraoval 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 d	ay 874,922									
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 d	ays 875,871									
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 d	ay 475,483,736,875			T						
878	CH1229-1311: Prestressing	18 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 877FS+14 days									
879	CH1229-1311: Falsework Under Main Deck Removal	12 days		12 days	0%	Fri 16/7/21	Thu 29/7/21		NA	Fri 16/7/21	Thu 29/7/21		day 878									
880	CH1229-1311: Utility Trough (0.67m per day per team) x 4 team				0%	Fri 16/7/21	Thu 7/10/21		NA	Thu 22/7/21	Wed 13/10/21		-									
		70 days		70 days																		
881	CH1229-1311: Central Median (6m per day per team) x 2 team	31 days		31 days	0%	Fri 16/7/21	Fri 20/8/21		NA	Sat 2/10/21	Mon 8/11/21	65 days 3 d										
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	Fri 15/10/21	Mon 8/11/21	5 days 3 d										
883	CH1229-1311: Removal of Falsework (KD6)	42 days	0 days	42 days	0%	Wed 3/11/21	Tue 21/12/21	NA	NA	Tue 9/11/21	Wed 29/12/21	5 days 6 d	ays 880,882,881									
884	CH1229-1311: Road Furniture	15 days	0 days	15 days	0%	Sat 21/8/21	Tue 7/9/21	NA	NA	Sat 27/11/21	Tue 14/12/21	81 days 1 d	ay 881,358				11	#				
885	Part 3D - CH1279 to CH1311	196 days	0 days	196 days	0%	Mon 7/6/21	Sat 29/1/22	NA	NA	Wed 16/6/21	Fri 11/2/22	7 days										
886	Stage 1: Bridge deck between CH1269-1311	196 days	0 days	196 days	0%	Mon 7/6/21	Sat 29/1/22	NA	NA	Wed 16/6/21	Fri 11/2/22	7 days										
887	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 d	ay 475,483,736,877									
888	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 d	ay 887FS+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 888,219									
390	CH1269-1311: Parapet (28m per day per team) x 1 team + 6 day	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 d	ays 889				*					
891	concreting CH1269-1311: Central Median (6m per day per team) x 1 team	15 days		15 days	0%	Thu 23/12/21	Wed 12/1/22	NΑ	NA	Wed 5/1/22	Fri 21/1/22	8 days 1 d	ay 889,890				<u> </u>					
892	CH1269-1311: Road Furniture	15 days		15 days	0%	Thu 13/1/22	Sat 29/1/22		NA	Sat 22/1/22	Fri 11/2/22	8 days 1 d						,				
													ay 091,330									
893	Stage2: Bridge deck between CH1189-1229	823 days		823 days?	0%	Thu 16/5/19	Sat 19/2/22		NA	Tue 27/4/21	Wed 29/5/24	579 da										
894	CH1189-1229: Deck Falsework erection	1 day?		1 day?	0%	Thu 16/5/19	Thu 16/5/19	NA	NA	Wed 29/5/24	Wed 29/5/24	1840 d										
895	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 d	ay 850,822									
396	CH1189-1229: Structure deck	27 days	0 days	27 days	0%	Tue 25/5/21	Fri 25/6/21	NA	NA	Tue 25/5/21	Fri 25/6/21	0 days 2 d	895,475,483									
897	CH1189-1229: Prestressing	18 days	0 days	18 days	0%	Wed 14/7/21	Tue 3/8/21	NA	NA	Wed 14/7/21	Tue 3/8/21	0 days 1 d	ay 896FS+14 days				ì					
898	CH1189-1229: Falsework Under Main Deck Removal	15 days	0 days	15 days	0%	Wed 4/8/21	Fri 20/8/21	NA	NA	Wed 4/8/21	Fri 20/8/21	0 days 3 d	ays 878,897				,					
399	CH1189-1229: Utility Trough (0.67m per day per team) x 2 team	63 days	0 days	63 days	0%	Wed 4/8/21	Tue 19/10/21	NA	NA	Wed 13/10/21	Tue 28/12/21	58 days 3 d	ays 219,897									
900	CH1189-1229 : Central Median (6m per day per team) x 1 team	16 days	0 days	16 days	0%	Sat 21/8/21	Wed 8/9/21	NA	NA	Fri 21/1/22	Fri 11/2/22	125 days 3 d	ay 897,881				1					
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	l NA	NA	Mon 17/1/22	Fri 11/2/22	61 days 5 d	ay 899,882				***					
902	CH1189-1229: Road Furniture	15 days	0 davs	15 days	0%	Mon 31/1/22	Sat 19/2/22	NA	NA	Sat 12/2/22	Tue 1/3/22	8 days 1 d	ay 900,892,358,901				11111111111111					
	Part 3E - CH1311 to CH1372		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										
904	Pre-drilling Works		31 days	0 days	0%			Tue 12/11/19			Tue 17/12/19		dou				1					
													-									
905	Bored pile (P03-BP1) @ CH1311 (Rig 2) (Contractor Bear DDA Design Risk)			0 days	100%	Tue 17/3/20	Fri 8/5/20	Tue 17/3/20		Tue 17/3/20	Fri 8/5/20	0 days 0.5	-									
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		Wed 22/4/20	Thu 4/6/20	0 days 3 d										
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 d	906FS+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 d	ays 907									
909	Pile Cap P03 @ CH1311	76 days	0 days	76 days	0%	Tue 7/7/20	Mon 5/10/20	NA	NA	Fri 31/7/20	Wed 29/5/24	21 days										
910	Pile Cap @ CH1311 by Open Cut	46 days	0 days	46 days	0%	Sat 1/8/20	Wed 23/9/20	NA	NA	Wed 28/10/20	Sat 19/12/20	72 days	908									
911	Pilecap Formwork Design and Method Statement Submission	0 days	0 days	0 days	0%	Tue 7/7/20	Tue 7/7/20	NA	NA	Tue 30/4/24	Tue 30/4/24	1393 1 d	ay	7,7								
912	Pilecap Formwork Design and Method Statement Comment & Appraoval	30 days	0 days	30 days	0%	Tue 7/7/20	Wed 5/8/20	NA	NA	Tue 30/4/24	Wed 29/5/24	1393 1 d	ay 911									
913	Excavation with Shoring Installation ~2600m3 Prod. Rate: 160m3/day/team	17 days	0 days	17 days	0%	Sat 1/8/20	Thu 20/8/20	NA	NA	Sat 1/8/20	Thu 20/8/20	days 0 days 1 d	ay 908									
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 d		1017								
915	Pilecap Formwork - Design and Method Statement Comment & Appraoval	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 d										
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 d										
917	Backfill	13 days		13 days	0%	Fri 18/9/20	Mon 5/10/20		NA	Fri 18/9/20	Mon 5/10/20	0 days 1 d										
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	0 NA	NA	Tue 6/10/20	Wed 21/10/20	0 days 0 d	ays 917		21/10							
itle: Rev 11 Pro	og with Progress	Summary	_		Inactive N	filestone \diamondsuit		Duration-or	ıly		Start-only	С	Exte	mal Milestone	♦		Critical Split	<u></u>				
ns of 22-May-2	Colit	Project Sun	nmary		Inactive S	ummary		Manual Sur	nmary Rollup		Finish-only	3	Dea	lline	•		Progress				_	

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Task Nar	me	Duration	Actual Duration	Remaining Duration	Physical % Complete	Early Start	Early Finish	Actual Start	Actual Finis	h Late Start	Late Finish	Total TRA Slack	Predecessors	2020 O2 C	03 Q4		2021 2 O3	04 0		2022 2 Q3	04	202 Q1 Q2	
919	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 0 days	917,918			- 1 X2							<u> </u>
920	Pier - Temp. Works Design and Method Statement Submission	0 days	0 days	0 days	0%	Mon 12/10/20	Mon 12/10/2	0 NA	NA	Mon 16/11/20	Mon 16/11/20	35 days 1 day			12/10								
921	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							[[]]			
922	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+										
923	Pre-drilling Works	15 days	15 days	0 days	100%	Wed 4/12/19	Wed 18/12/1	9 Wed 4/12/19	Wed 18/12/.	Wed 4/12/19	Wed 18/12/19	0 days 0.5 day	S										
924	Diversion of existing 150mm dia. Watermain (agreed)		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											
925	Bored pile (P04-BP2) @ CH1351 (Rig 2)	52 days		51 days	0%	Fri 22/5/20	Wed 21/10/2	0 Fri 22/5/20	NA	Fri 22/5/20	Tue 19/1/21	73 days 3 days	923,856										
926	Bored pile (P04-BP1) @ CH1351 (Rig 2)	53 days		53 days	0%	Tue 11/8/20	Tue 13/10/20		NA	Mon 16/11/20	Tue 19/1/21	80 days 3 days	202,924,923,925										
927	Pile Testing (14d curing & 14 test)	35 days		35 days	0%	Thu 22/10/20	Wed 2/12/20		NA	Wed 20/1/21	Thu 4/3/21	73 days 3 days	926,925										
928	Proof-drilling Works				0%		Tue 15/12/20		NA	Fri 5/3/21	Wed 17/3/21	73 days 2 days											
		11 days		11 days																			
929	Pile Cap P04 @ CH1351 with ELS	47 days		47 days	0%	Wed 16/12/20			NA	Thu 1/4/21	Mon 31/5/21	85 days	933SS,928										
930	Pile Cap @ CH1351	97 days	0 days	97 days	0%	Mon 2/11/20	Mon 1/3/21		NA	Tue 16/2/21	Mon 31/5/21	73 days											
931	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			2/11								
932	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										
933	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										
934	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										
935	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			1/	12							
936	Pilecap Formworks - Design and Method Statement Comment & Appraoval	30 days	0 days	30 days	0%	Tue 1/12/20	Wed 30/12/2	0 NA	NA	Thu 25/3/21	Fri 23/4/21	114 days 1 day	935										
937	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										
938	Backfill and extract sheet pile	11 days	0 days	11 days	0%	Wed 17/2/21	Mon 1/3/21	NA	NA	Tue 18/5/21	Mon 31/5/21	73 days 2 days	937										
939	Pier - Temporary Design and Method Statement Submission	0 days	0 days	0 days	0%	Mon 4/1/21	Mon 4/1/21	NA	NA	Sun 2/5/21	Sun 2/5/21	118 days 1 day				4/1							
940	Pier - Temporary Design and Method Statement Comment & Appraoval	30 days	0 days	30 days	0%	Mon 4/1/21	Tue 2/2/21	NA	NA	Sun 2/5/21	Mon 31/5/21	118 days 1 day	939			_							
941	Pier P04 @ CH1351	49 days		49 days	0%	Tue 2/3/21	Fri 30/4/21	NA	NA	Tue 1/6/21	Thu 29/7/21	73 days 1 day	938,922,211,940										
942	Stage 3: Bridge deck between CH1311-1351	145 days		145 days	0%	Fri 30/7/21	Fri 21/1/22		NA	Fri 30/7/21	Sat 29/1/22	0 days 1 day					,						
943	CH1311-1351: Deck Falsework erection	21 days		21 days	0%	Fri 30/7/21	Mon 23/8/21		NA	Fri 30/7/21	Mon 23/8/21	0 days 3 days	941,922,879					•					
944	CH1311-1351: Deck 1 alsework decident				0%	Tue 24/8/21	Tue 28/9/21		NA	Tue 24/8/21			475,483,736,896										
		30 days		30 days							Tue 28/9/21	0 days 5 days											
945	CH1311-1351: Prestressing	21 days		21 days	0%	Mon 18/10/21			NA	Mon 18/10/21		0 days 3 days		ă III									
946	CH1311-1351: Utility Trough (0.67m per day per team) x 4 team	30 days		30 days	0%	Thu 11/11/21			NA	Fri 26/11/21	Mon 3/1/22	13 days 0.5 day											
947	CH1311-1351: Central Median (6m per day per team) x 2 team	15 days		15 days	0%	Thu 11/11/21			NA	Wed 5/1/22	Fri 21/1/22	44 days 3 days											
948	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			NA	Tue 4/1/22	Fri 21/1/22	7 days 1 day	945,888,890,946										
949	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										
950	Part 1 - CH1372 to CH1386	149 days	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											
951	Bridge deck between CH1351-1386	149 days	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					-		/ 				
952	CH1351-1386: Deck Falsework erection	22 days	0 days	22 days	0%	Mon 23/8/21	Thu 16/9/21	NA	NA	Mon 23/8/21	Thu 16/9/21	0 days 4 days	941,922,898FS+										
953	CH1351-1386: Structure deck	30 days	0 days	30 days	0%	Fri 17/9/21	Mon 25/10/2	1 NA	NA	Fri 17/9/21	Mon 25/10/21	0 days 5 days	952,736,976										
954	CH1351-1386: Prestressing	14 days	0 days	14 days	0%	Thu 11/11/21	Fri 26/11/21	NA	NA	Thu 11/11/21	Fri 26/11/21	0 days 5 days	953FS+14 days,					11					
955	CH1351 - CH1386: Utility Trough (0.67m per day per team) x 4 team	30 days	0 days	30 days	0%	Sat 27/11/21	Tue 4/1/22	NA	NA	Sat 27/11/21	Tue 4/1/22	0 days 3 days	219,954										
956	CH1351 - CH1386: Central Median (6m per day per team) x 1 team	15 days	0 days	15 days	0%	Sat 27/11/21	Tue 14/12/21	NA	NA	Sat 27/11/21	Tue 14/12/21	0 days 3 days	954					I		[[]]			
957	CH1351 - CH1386: Parapet (28m per day per team) x 1 team + 6 day	20 days		20 days	0%	Wed 5/1/22	Thu 27/1/22	NA	NA	Wed 12/1/22	Mon 7/2/22	6 days 4 days	955										
958	concreting CH1351-1386 Falsework removal	19 days		19 days	0%	Fri 28/1/22	Tue 22/2/22		NA	Tue 8/2/22	Tue 1/3/22	6 days 1 day	955,957										
959	CH1351 - CH1386: Road Furniture (Section 1)	8 days		8 days	0%	Fri 28/1/22	Wed 9/2/22		NA	Mon 14/2/22	Tue 22/2/22	11 days 2 day	956,358,957										
960	Part 1 - CH1386 to CH1394 South Abutment	352 days		352 days	0%	Fri 3/7/20	Sat 4/9/21		NA	Sat 25/7/20	Thu 16/9/21	10 days	750,550,751										
													921E0 : 10 J										
961	Bored Pile (A02-BP2) @ CH1386 by Rig 1	42 days		42 days	0%	Fri 3/7/20	Thu 20/8/20		NA	Sat 25/7/20	Fri 11/9/20	19 days 3 days								[[]]			
962	Bored Pile (A02-BP1) @ CH1386 by Rig 1	63 days		63 days	0%	Tue 28/7/20	Sat 10/10/20		NA	Wed 19/8/20	Tue 3/11/20	19 days 3 days											
963	Pile Testing	35 days	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										
Title: Rev.11 P	rog with Progress	Summary			Inactive Mi	lestone \diamondsuit		Duration-or	nly		Start-only	Е	Exte	emal Mileston	ne 💠		Cı	ritical Split					
as of 22-May	Calit	Project Sun	nmary sk		Inactive Sur Manual Tas			Manual Sur Manual Sur	nmary Rollup		Finish-only External Task	3	Dea Criti	dline	•			rogress Ianual Progre				_	

								tract No. ED												
Task N	Name	Duration	Actual Duration	Remaining Duration	Physical % Complete	Early Start	Early Finish	Actual Start	Actual Finish	h Late Start	Late Finish	Total Slack	TRA		2020 Q3	04 01	2021 Q2 Q3	3 04 0	2022 1 Q2 Q3	Q4 Q1 Q2
964	Proof-drilling Works	11 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			, <u>v</u> . Q		. , , , , , ,	X 1 V1 V2
965	South Abutment	166 days	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						
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 days	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	11 days	0 days	11 days	0%	Wed 3/2/21	Thu 18/2/21	NA	NA	Thu 18/2/21	Tue 2/3/21	10 days	2 days	964,967,980						
969	Excavation ~1,344m3 & lateral support. Prod. Rate: 160m3/day/team	11 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		0 days		0%	Thu 4/3/21	Thu 4/3/21		NA	Wed 7/4/21	Wed 7/4/21	26 days		969						
		l day		1 day										909		•				
971	South Abutment Formwork- Design and Method Statement Submission			0 days	0%	Mon 21/12/20			NA	Tue 9/3/21	Tue 9/3/21	78 days				21/1	2			
072	South Abutment Formwork - Design and Method Statement Comment & Appraoval	30 days		30 days	0%	Mon 21/12/20			NA	Tue 9/3/21	Wed 7/4/21	78 days	-	971						
73	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						
977	South Approach Ramp - CH1394-1444.7 - Total 8 bays (4 bay/side)	259 days	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 days	0%	Mon 21/9/20	Mon 21/9/20	NA	NA	Sun 15/11/20	Sun 15/11/20	55 days	1 day			21/9				
979	Submission South Approach Ramp ELS - Temp. Works Design and Method Statement	30 days	0 days	30 days	0%	Mon 21/9/20	Tue 20/10/20) NA	NA	Sun 15/11/20	Mon 14/12/20) 55 days	1 day	978	$\ \ \ $					
980	Comment & Approval Drive sheetpile (~240m) Prod. Rate: 10m/d/team	26 days		26 days	0%	Mon 23/11/20			NA	Tue 15/12/20	Sat 16/1/21	19 days	-	979,962,963						
81	Excavation ~2,688m3 & lateral support. Prod. Rate: 160m3/day/team				0%	Wed 23/12/20				Mon 18/1/21	Mon 8/2/21			980						
		19 days		19 days					NA			19 days	_							
82	Rock Replacement	7 days		7 days	0%	Sun 17/1/21	Sat 23/1/21		NA	Tue 9/2/21	Mon 15/2/21	23 days		981						
83	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						
84	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			♠ 1/12				
985	South Approach Ramp Formworks Design and Method Statement Comment & Appraoval	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						
186	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				_		
18	Backfilling ~4,765.89m3 within approach ramp to formation level (160m3/day)	38 days	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	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) Terret		
90	CH1386-1444: Central Median and Utilities Trough (5m per day per team) x 1 team	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				The state of the s		
91	CH1386-1444: Parapet (10m per day per team) x 2 team + 2 team x 6 day concreting	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				T T		
92	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				Tr.		
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				T.		
94	2.6 Utility Laying	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	CH1087-1311 (224m): Utility Laying (by Others) (Agreed)	63 days		63 days	0%	Wed 29/12/21	Tue 1/3/22	NA	NA	Wed 29/12/21	Tue 1/3/22	0 days								
996	CLP (132kV)	63 days		63 days	0%	Wed 29/12/21			NA	Wed 29/12/21	Tue 1/3/22	'	1 day	899,955SS+32 d				L.N.		
97	CLP (11kV)	63 days		63 days	0%	Wed 29/12/21			NA	Wed 29/12/21	Tue 1/3/22			996SS						
													_							
98	HKCG	53 days		53 days	0%	Wed 29/12/21			NA	Sat 8/1/22	Tue 1/3/22	10 days	-	997SS				>		
999	CATV	23 days		23 days	0%	Wed 29/12/21			NA	Thu 3/2/22	Fri 25/2/22	36 days	-	998SS				> }_}-		
000	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				 		
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)		
004	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	18 days	0 days	18 days	0%	Wed 5/1/22	Sat 22/1/22	NA	NA	Sat 12/2/22	Tue 1/3/22	38 days	1 day	1004SS						
1006	Sat and Fresh Watermain (by POC)	18 days	0 days	18 days	0%	Wed 5/1/22	Sat 22/1/22	NA	NA	Sat 12/2/22	Tue 1/3/22	38 days	1 day	1005SS						
1007	Underpass and Depressed Road				0%	Tue 3/9/19		Tue 3/9/19		Tue 3/9/19	Tue 1/3/22	120 days			$\parallel \parallel \parallel$					
		227 days	anys								113122									
Ha. D.: 44	Drog with Drogress Task	Summary			Inactive M	filestone \Diamond		Duration-o	nly		Start-only		C	External M	lilestone	♦		Critical Split		
tle: Rev.11 s of 22-Ma	Prog with Progress	Project Sur	nmary		Inactive S				mmary Rollup		Finish-only]	Deadline		•		Progress		
5 UI ZZ-IVIC	Milestone ♦	Inactive Ta	sk		Manual Ta	ask		Manual Su	mmary I		External Ta	sks		Critical				Manual Progra	ess	

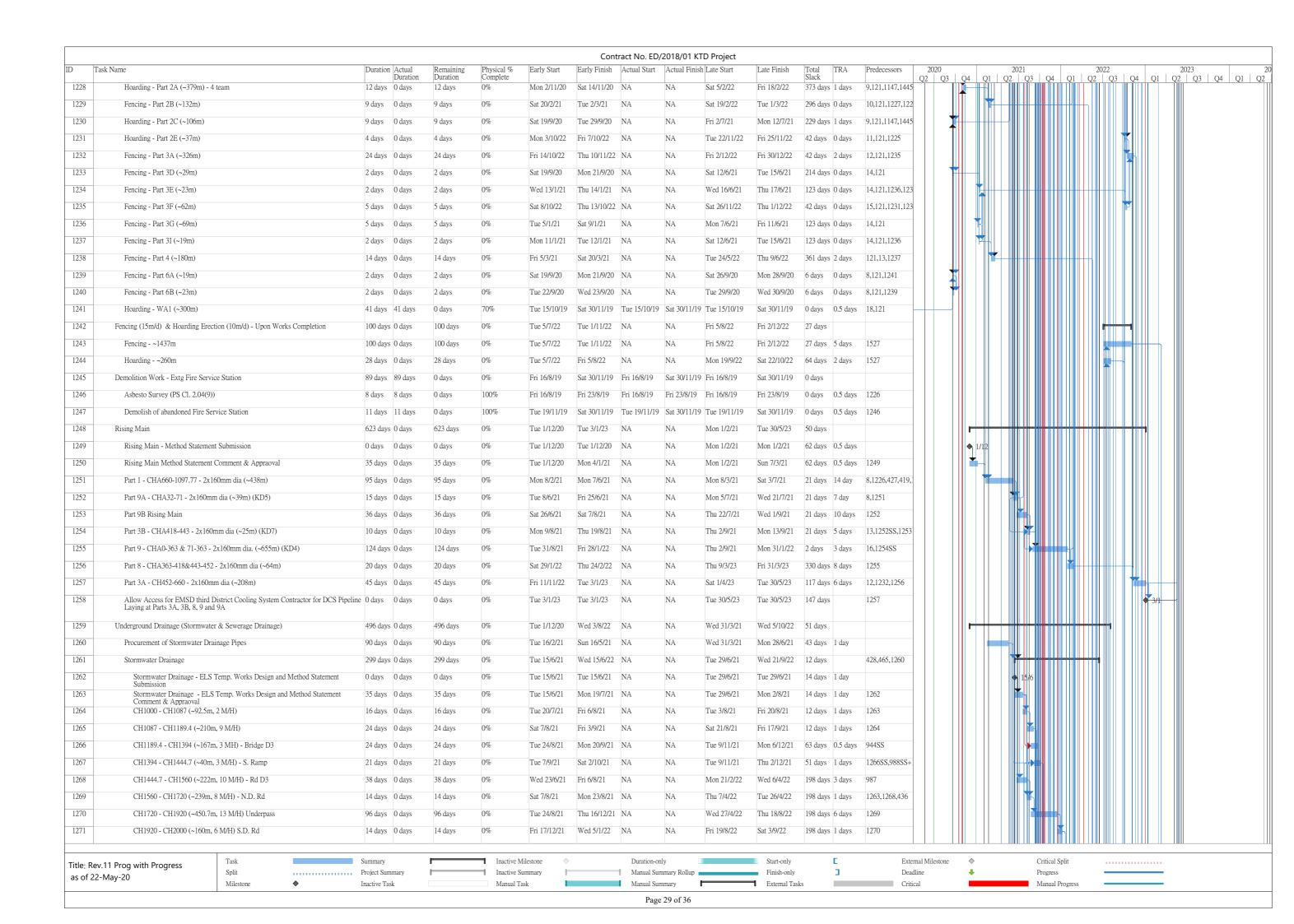
		_	1.	-				ract No. ED/																
Task N	Name	Duration	Actual Duration	Remaining Duration	Physical % Complete	Early Start	Early Finish	Actual Start	Actual Finish	Late Start	Late Finish	Total Slack		Predecessors	2020 Q2 Q3	Q4	Q1	2021 Q2 Ç	23 0	Q4 O	01 Q	2022 Q2 Ç		Q4
08	North Depressed Rd (CH1560-1720)	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											
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											
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										
16	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										
.7	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										
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		18 days	0%	Mon 7/9/20	Sat 26/9/20	NA	NA	Tue 25/8/20	Mon 14/9/20	-11 days		1020										
22	Wall Construction (between 3rd and 4th levels shoring) and Remaining Base			24 days	0%	Mon 28/9/20	Wed 28/10/20		NA	Tue 15/9/20	Wed 14/10/20			1021										
23	Slab Backfilling and 3rd Level Shoring Removal	18 days		18 days	0%	Thu 29/10/20			NA	Thu 15/10/20	Thu 5/11/20	-11 days		1022										
24					0%		Tue 15/12/20			Fri 6/11/20				1022										
	Structure Works Below 2nd & 3rd Levels Shoring	23 days		23 days					NA		Wed 2/12/20	-11 days												
25	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	0 days	30 days	0%	Sat 9/1/21	Tue 16/2/21	NA	NA	Thu 24/12/20	Sat 30/1/21	-11 days		1025										
27	Backfill & extract sheet pile (CH1560 to CH1720)	26 days	0 days	26 days	0%	Wed 17/2/21	Thu 18/3/21	NA	NA	Mon 1/2/21	Fri 5/3/21	-11 days	1 day	1026			Ĭ							
28	Emergency walkway & median barrier installation	20 days	0 days	20 days	0%	Tue 1/6/21	Thu 24/6/21	NA	NA	Mon 3/1/22	Tue 25/1/22	177 days	2 days	1027				M						
29	Parapet installation	27 days	0 days	27 days	0%	Fri 25/6/21	Tue 27/7/21	NA	NA	Wed 26/1/22	Tue 1/3/22	177 days	3 days	1028										
0	CH1720 - CH1850 (130m long) (2 x teams)	477 days	0 days	477 days	0%	Mon 15/6/20	Mon 4/10/21	NA	NA	Mon 15/6/20	Mon 4/10/21	0 days			I									
31	Drive sheet pile (approx. 17000m penetration depth, 380m/day)	46 days	0 days	46 days	0%	Mon 15/6/20	Sat 8/8/20	NA	NA	Mon 15/6/20	Sat 8/8/20	0 days	2 day											
2	Pumping Test	22 days	0 days	22 days	0%	Mon 10/8/20	Thu 3/9/20	NA	NA	Mon 10/8/20	Thu 3/9/20	0 days	1 days	1031,1045	🚁									
33	CH1720 - CH1850 (130m long) (2 x teams) Top Portion: Excavation with	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										
	Shoring Installation = 23,000 cu.m. (320m3/d/team x 2)																							
34	CH1720 - CH1850 (130m long) (2 x teams) Bottom Portion: Excavation with Shoring Installation = 23,876 cu.m. (250m3/d/team x 2)	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										
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		75 days	0%	Tue 6/4/21	Tue 6/7/21	NA	NA	Tue 6/4/21	Tue 6/7/21			1036										
38	Top Slab - 8 bays. Prod. Rate: 18d/team/bay, 4 teams	38 days		38 days	0%	Wed 7/7/21	Thu 19/8/21		NA	Wed 7/7/21	Thu 19/8/21			1037			Ī	TIII						
39	· · · · · · · · · · · · · · · · · · ·																							
	Falsework Removal	37 days		37 days	0%	Fri 20/8/21	Mon 4/10/21		NA	Fri 20/8/21	Mon 4/10/21		2 day	1038										
40	Sheetpile Extraction and Backfill	13 days		13 days	0%	Fri 20/8/21		NA	NA	Fri 17/9/21	Mon 4/10/21	24 days	1 day	1038										
41	Underground Plant Room next to Underpass	45 days		45 days	0%	Wed 6/1/21	Tue 2/3/21		NA	Wed 6/1/21	Tue 2/3/21	0 days												
42	Underground pump house structure	45 days		45 days	0%	Wed 6/1/21		NA	NA	Wed 6/1/21	Tue 2/3/21			714,1035,262,28										
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		h									
45	Pumping Test	80 days	29 days	51 days	36%	Fri 17/4/20	Thu 23/7/20	Fri 17/4/20	NA	Fri 17/4/20	Sat 8/8/20	14 days	2 days	1044		$\mathbb{H} \mathbb{I}$								
46	Underpass & South Depress Road (CH1850 to CH1950)	539 days	27.64 days	511.36 days	0%	Thu 23/4/20	Wed 13/10/21	Thu 23/4/20	NA	Thu 23/4/20	Tue 1/3/22	139 days	3		-									
17	Excavation with Shoring Installation (Upper Portion) - Prod. Rate: 270m3/d/team. 1	80 days	24 days	56 days	23%	Thu 23/4/20	Thu 30/7/20	Thu 23/4/20	NA	Thu 23/4/20	Fri 4/9/20	31 days	5 days	1045SS+6 days		$\mathbb{H} \ \ $								
48	team 16,000m3) Excavation with Shoring Installation (Lower Portion) - Prod. Rate: 270m3/d/team. 1	65 days	0 days	65 days	0%	Fri 31/7/20	Fri 16/10/20	NA	NA	Sat 5/9/20	Mon 23/11/20	31 days	5 day	1047,1045FF+12										
49	team 16,000m3) Rock fill - Prod. Rate: 160m3/d/team (1,745m3)	7 days	0 days	7 days	0%	Sat 17/10/20	Sat 24/10/20	NA	NA	Tue 24/11/20	Tue 1/12/20	31 days	1 day	days 1047,1048			$\parallel \parallel \parallel$							
50	Blinding		0 days	1 day	0%	Tue 27/10/20	Tue 27/10/20	NA	NA	Wed 2/12/20	Wed 2/12/20		0.5 days	1049										
																						ШШ		
e: Rev 11	Prog with Progress Task	Summary			Inactive M	ilestone \diamondsuit		Duration-or	nly		Start-only		С	Exte	emal Milestone	♦			Criti	tical Split				
	sy-20 Split	Project Sun	nmary		Inactive Su Manual Ta			Manual SurManual Sur	mmary Rollup 🛮		Finish-only External Task		3	Dea Criti	dline	•			Prog	gress nual Progre		_	_	

Tasl	AT.	ъ .	A . •	D	DI : 1	P 1 2				KTD Project	T . 151 1 1	m , 1 m- :	D 1	220		1	2022		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	11 Q3 Q4 Q1	2022 Q2 Q3 Q4		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		◆ 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
1053	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						1
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						1
.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						1
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						
1065																			
	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						
.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							1
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						1
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						1
1072	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			The last			
.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			<u> </u>			1
.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			¥			1
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			1
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							1
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						1
1082	Blinding	2 days		2 days	0%	Tue 26/10/21			NA	Tue 12/10/21		-11 days 0 days				y			1
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				2/0			1
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 Base Slab - 3 bays. Prod. Rate: 12d/team/bay include pipe laying. 2 teams				0%	Thu 28/10/21				Fri 15/10/21	Thu 28/10/21		1082,1084,314						1
1085		12 days		12 days					NA										
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						1
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			H			
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			│║┃│ ┢ ┤╢╢		•		
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						
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 Mi	lestone \diamondsuit		Critical Split		<u> </u>	Ш
itle: Rev.1 as of 22-N	r i 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 Progres	S		

							Con	tract No. El	D/2018/01 KT	D Project											
D Task	Name	Duration	Actual Duration	Remaining Duration	Physical % Complete	Early Start			Actual Finish		Late Finish	Total TRA Slack		2020	04	2021	72 04)22		2023
1096	HGC	15 days		15 days	0%	Fri 21/1/22	Fri 4/2/22	NA	NA	Tue 1/2/22	Tue 15/2/22	11 days 1 day	1095SS+7 days,	2 Q3	Q4 Q	1 Q2	Q3 Q4	Q1 Q2	1 Q5 Q4	Q1 Q2	2 Q3 C
1097	CATV	13 days	0 days	13 days	0%	Fri 28/1/22	Wed 9/2/22	NA	NA	Tue 8/2/22	Sun 20/2/22	11 days 1 day	1096SS+7 days				 				
1098	Towngas telecom	15 days	0 days	15 days	0%	Fri 4/2/22	Fri 18/2/22	NA	NA	Tue 15/2/22	Tue 1/3/22	11 days 1 day	1097SS+7 days				4				
1099	North & South Depress Raod and Underpass: Finishing and E&M Works	120 days	0 days	120 days	0%	Tue 5/10/21	Tue 1/3/22	NA	NA	Tue 5/10/21	Tue 1/3/22	0 days									
1100	Finishing & Fitting Out Work, and E&M Works Installation	120 days	0 days	120 days	0%	Tue 5/10/21	Tue 1/3/22	NA	NA	Tue 5/10/21	Tue 1/3/22	0 days 8 days	306,271,323,108								1
1101	Pump Room Next to Underpass: Finishing and E&M Works	158 days	0 days	158 days	0%	Sat 17/4/21	Tue 26/10/21	NA	NA	Thu 19/8/21	Tue 1/3/22	102 days									1
1102	Finishing Works and E&M installation	73 days	0 days	73 days	0%	Sat 17/4/21	Thu 15/7/21	NA	NA	Thu 19/8/21	Mon 15/11/21	102 days 3 days	1042FS+36 days			+					1
1103	Pump Installation	60 days	0 days	60 days	0%	Fri 16/7/21	Fri 24/9/21	NA	NA	Tue 16/11/21	Thu 27/1/22	102 days 2 days	1102								
1104	Testing and Commissioning	25 days	0 days	25 days	0%	Sat 25/9/21	Tue 26/10/21	NA	NA	Fri 28/1/22	Tue 1/3/22	102 days 1 days	1102,1103				<u> </u>				1
1105	Planned Completion for Section 1	0 days	0 days	0 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,					14/3			1
1106	Sections 2,4 and 8	824 days	0 days	824 days	0%	Mon 10/8/20	Wed 17/5/23	NA	NA	Mon 17/8/20	Wed 29/5/24	6 days		-							1
1107	Offsite 14 units of precast box culvert with outfall fabrication	100 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								1
1108	MDN application	45 days	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									1
1109	Demolition of Existing Seawall an Construction of Water Channel (Ch 0 to Ch30)	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			-	.					1
1110	Installation of Silt Curtain with Concrete Sinkers	6 days		6 days	0%		Wed 16/12/20		NA	Thu 23/5/24	Wed 29/5/24	1023 d 1 day	1108								
1111	Demolition of Existing Seawall	37 days		37 days	0%	Thu 10/12/20			NA	Wed 6/3/24		962 days 1 day	1108								
1112	Grade 200 rock filling and placing levelling stone	30 days		30 days	0%	Tue 26/1/21		NA	NA	Tue 23/4/24		962 days 1 day	1111								
1113	CH86 to CH70 ELS Works	136 days		136 days	0%	Mon 10/8/20			NA	Mon 17/8/20	Sat 27/2/21	6 days			 _						
1114	Temporary Works Design Preparation	25 days		25 days	0%	Mon 10/8/20			NA	Mon 17/8/20	Mon 14/9/20	6 days 1 days									
1115	Comment by PM	25 days		25 days	0%	Tue 8/9/20	Thu 8/10/20		NA NA	Tue 15/9/20	Thu 15/10/20	6 days 1 days	1114								
1116	Sheetpiling Installation with Grouting & Pumping Test (56m long on plan)	50 days		50 days	0%	Fri 16/10/20	Mon 14/12/20		NA NA	Fri 16/10/20		0 days 1 day	1420,1423,1115								
1117	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								
1117	Preparation of formation and laying of blinding layer	12 days		12 days 18 days	0%		Thu 21/1/21		NA NA	Thu 4/2/21	Sat 27/2/21	29 days 0.5 day	1117								
1118	CH70 to CH30 ELS Works				0%		Thu 21/1/21 Thu 7/1/21	NA NA		Mon 16/11/20	Thu 7/1/21		111/								
		43 days		43 days					NA NA			0 days	111600,05 1								
1120	Sheetpiling Installation (80m on plan) Excavation with Shoring Installation (4500 cu.m., 160 cu.m./d x 1 team) and	14 days		14 days	0%		Tue 1/12/20		NA	Mon 16/11/20	Tue 1/12/20	0 days 0.5 day									
1121	Excavation with Shoring Installation (4500 cu.m., 160 cu.m./d x 1 team) and Preparation of Formation and Laying of Blinding Layer	29 days	0 days	29 days	0%	wea 2/12/20	Thu 7/1/21	INA	NA	wed 2/12/20	111U //1/21	0 days 1 day	1120								
1122	DCS 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				t					
1123	Construction of Cast in-situ Box Culvert with feeder pipe installation with	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								
	Connection to Extisting Box Culvert(Bay 15, approx. 12m long)																				
1124	Precast 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	4400 (111				7				
1125	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								
1126	Installation of 14 precast units with feeder pipe installation (2.5 days per unit)	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								
1127	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	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								
1129	Section 4: Part 2E	225 days		225 days	0%	Mon 15/8/22			NA	Sat 10/9/22	Tue 30/5/23	10 days									
1130	Abandon Existing DCS - Temp. Works Design and Method Statement Submission		-	0 days	0%	Mon 15/8/22			NA	Sat 10/9/22	Sat 10/9/22	26 days 1 day							♦ 15/8		
1131	Abandon Existing DCS - Temp. Works Design and Method Statement Comment &		_	35 days	0%	Mon 15/8/22			NA	Sat 10/9/22	Fri 14/10/22	26 days 1 day	1130								
1132	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								
1133	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
1134	Section 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									113
1134	Diversion & Abandon of Existing DCS Box Culvert - Temp. Works Design and	0 days	-	0 days	0%	Thu 1/4/21	Thu 1/4/21	NA NA	NA NA	Fri 9/4/21	Fri 9/4/21	8 days 1 day				1,4					
1136	Diversion & Adamson of Existing DCS Box Culvert - Temp, works Design and 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 NA	Fri 9/4/21	Thu 29/4/21		1135			1/4					
1170	Diversion & Adamdon of Existing DCS Box Box Curvert - Temp. works Design and Method Statement Comment & Appraoval	ı 21 udys	ouays	Z1 uays	0 70	1110 1/4/21	w cu 21/4/21	IVA	INA	111 7/4/21	111u 27/4/21	8 days 1 day	1133								
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								
																				<u> </u>	
Title: Dr. 1	1 Programith Programs Task	Summary			Inactive N	filestone	>	Duration-	only		Start-only	Е	External	Milestone	♦		Critical Spli	it			
litle: Rev.1 as of 22-N	1 Prog with Progress Split	Project Sum			Inactive S	ummary		■ Manual S	ummary Rollup		Finish-only	3	Deadline		•		Progress				
	Milestone •	Inactive Tas	k		Manual Ta	ask		Manual S	ummary		External Tasl	CS	Critical				Manual Prog	gress			

								tract No. ED/																
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 Q3	04	01	2021 O2 C	73	04	Q1 Q2	2022	3 0	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	7 days	1 day	1137	Q2 Q3									
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										
40	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					h					
41	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										
42	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										
43	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										
44	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						2224/11				
	ection 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												
46	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												
17	Access Date - Part 2A.2C	0 days			0%	Tue 2/6/20		NA	NA	Tue 2/6/20	Tue 2/6/20	0 days	O dovo	4FS+369 days	2/6					'				
	,			0 days										4F3+309 days	2/0									
48	Mobilization of plant and materials	15 days		15 days	0%	Thu 16/5/19		NA	NA	Sat 4/7/20	Tue 21/7/20	337 days	-											
49	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										
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										
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 & Appraoval	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							.[]]]			
55	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										
56		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							
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										
58	Lift Tower - Temp. Works Design and Method Statement Submission	0 days	0 days	0 days	0%	Mon 2/11/20	Mon 2/11/20	NA	NA	Fri 1/1/21	Fri 1/1/21	60 days	1 day			2/1								
9	Lift Tower - 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	Fri 1/1/21	Thu 4/2/21	60 days	1 day	1158										
50	Lift Shaft Tower: 3 Lifts x 20 day/Lift, Falsework & Formwork Erection, Rebar	63 days		63 days	0%	Fri 29/1/21	Mon 19/4/21		NA	Fri 5/2/21	Mon 26/4/21		3 days	1156,1159,1157										
51	Fixing & Concreting Lift installation (LT3 & LT4)				0%	Tue 20/4/21		NA	NA	Tue 27/4/21	Fri 13/8/21			1160,713										
		90 days		90 days									5 days											
52	E & M installation	30 days		30 days	0%	Sat 7/8/21		NA	NA	Sat 14/8/21	Fri 17/9/21		3 days	1161					*					
53	Louvers and Glazing Installation	26 days		26 days	0%	Fri 21/5/21	Mon 21/6/21		NA	Sat 14/8/21	Mon 13/9/21	71 days		1160FS+25 days										
54	Parapet Installation and Finishing Works	40 days	0 days	40 days	0%	Tue 22/6/21		NA	NA	Tue 14/9/21	Tue 2/11/21	71 days		1163										
65	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				1/2							
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						
67	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			1	4/3						
68	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				29/2	-					
69	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										
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			i	4						
71	Open Space within Part 2C	94 days	0 days	94 days	0%	Tue 25/5/21	Mon 13/9/21	NA	NA	Tue 13/7/21	Tue 2/11/21	40 days	4 days	1170,1230										
72	Planned Completion for Section 3	0 days	0 days	0 days	0%	Tue 26/10/21	Tue 26/10/21	NA	NA	Tue 2/11/21	Tue 2/11/21	6 days	0 days	1171,1168,1169,						26/10				
73 S	ections 5 and 9: Noise Barrier Installation	380 days	6.83 days	373.17 days	0%	Fri 20/3/20	Sat 3/7/21	Fri 20/3/20	NA	Fri 20/3/20	Mon 5/7/21	1 day	1 day											
74	1.0 Noise Barrier Shop Drawing Preparation, Offsite Fabrication	141 days	20.86 days	120.14 days	0%	Mon 6/4/20	Thu 24/9/20	Mon 6/4/20	NA	Mon 6/4/20	Mon 7/12/20	60 days												
75	CNP and TTA available	0 days		0 days	0%	Wed 24/6/20	Wed 24/6/20	NA	NA	Thu 20/8/20	Thu 20/8/20	47 days	1 day		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		Mon 6/4/20	Tue 7/7/20	3 days			20									
77	Implement TTA	2 days			0%	Mon 13/7/20			NA	Wed 18/11/20	Thu 19/11/20		1											
78				2 days										1177							.[]]]			
	Expose the Extisting Noise Barrier Foundation under Existing Footpath	15 days	_	15 days	0%	Wed 15/7/20			NA	Fri 20/11/20	Mon 7/12/20	107 days		1177										
79	Carry out the Site Survey for Existing Holding Down Bolt at Existing Landscaped Deck	6 days		6 days	0%	Wed 24/6/20		NA	NA	Thu 20/8/20	Wed 26/8/20	47 days		1175										
80	Noise Barrier Shop Drawings Preparation	30 days	0 days	30 days	0%	Fri 31/7/20		NA	NA	Fri 21/8/20	Thu 24/9/20										.[]]] [
81	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							.[]]] [
82	PMAA Panel Material Sample Submission	0 days	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		♦ 2/5						.[]]] [
e. Roy 11	1 Prog with Progress	Summary	1		Inactive Mi	lestone \diamondsuit		Duration-or	ıly		Start-only		Е	Exter	mal Milestone	♦	1111	- ALU 1011	Crit	tical Split	<u>mt 11 </u>	<u> </u>		<u></u>
e: Rev. 1 of 22-M	ay-20 Split	Project Sun			Inactive Sur				mmary Rollup		Finish-only		3	Dead		+				gress		_		
-	Milestone •	Inactive Ta	sk		Manual Tas	k		Manual Sur	nmary		External Tas	sks		Critic	cal				Mai	nual Progre	ess	_	_	

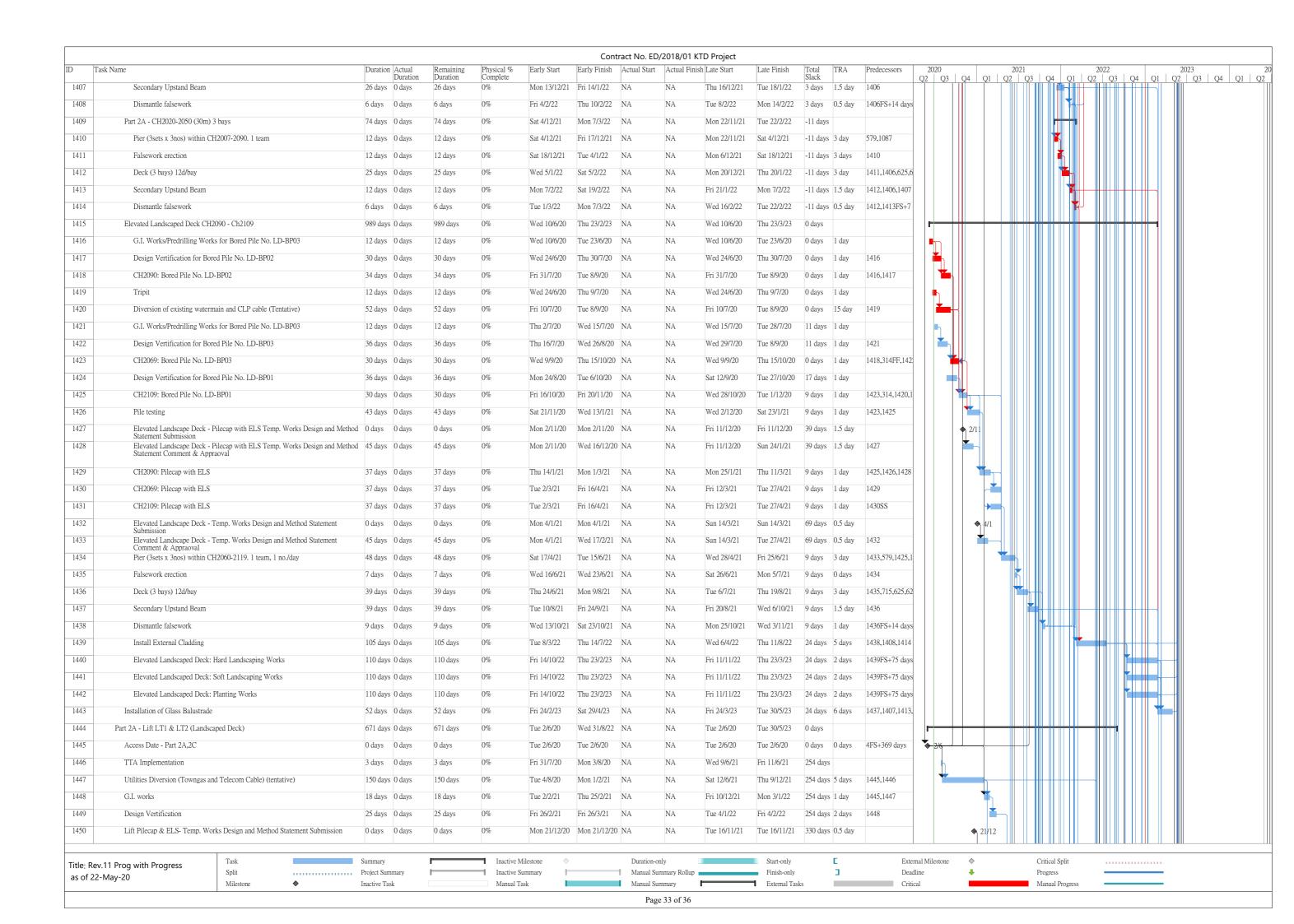
							Con	tract No. ED,	/2016/01 KI	TD Project														
Tasl	k Name	Duration	Actual Duration	Remaining Duration	Physical % Complete	Early Start	Early Finish	Actual Start	Actual Finish	h Late Start	Late Finish	Total Slack	TRA	Predecessors	2020 Q2 Q3	04	202	21 Q3 Q)4 01	202	22 Q3 Q4	4 01	202 Q2	
183	PMAA 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		74	. Q2	Z- (, Q1	1 Q2		, QI	1 42	
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		25/1								
193	Polymethyl Metharylate (PMMA) and Associated Aluminium Sub-frame	121 days	-	121 days	0%	Tue 16/6/20	Wed 14/10/2		NA	Sat 11/7/20	Sun 8/11/20	25 days		1185		20/1	-							
	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	-	106 days	0%	Sat 13/6/20	Mon 19/10/2		NA	Fri 19/6/20	Sat 24/10/20	5 days												
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		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		21 days	0%	Thu 12/11/20			NA	Fri 13/11/20	Mon 7/12/20	1 day	1 day	1209										
211	Modification of Remaining Colum Stud	50 days		50 days	0%	Mon 7/12/20		NA	NA	Tue 8/12/20	Sat 6/2/21	1 day	_	1207										
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		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										
215	Temporary Platform Delivery to Site	0 days		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		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	0%	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	0%	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				4						
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										
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										
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	/s 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	2 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		₩₩₩								
227	Fencing - Part 2A (~458m) - 4 team	12 days		12 days	0%	Wed 3/2/21	Fri 19/2/21	NA	NA	Sat 5/2/22	Fri 18/2/22	296 days	1 days	9,121,1147,1445		$\parallel \parallel \parallel \parallel$								
															11.6"	<u> 1</u>			<u> </u>					_
	I I Prog with Progress	Summary Project Sun	nmary		■ Inactive Mil ■ Inactive Sur	_		Duration-or Manual Sur	nly Ummary Rollup		Start-only Finish-only		C 3	Externa Deadlin	il Milestone ne	*		Criti Prog	cal Split ress					
s of 22-N	May-20 Milestone ◆	Inactive Ta			Manual Tasi			Manual Su			External Tas	alea	_	Critical		-			ual Progress				_	



							Con	tract No. ED,	/2018/01 K	TD Project												
Task Na	Vame	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	1 03 0	04		2022 2 Q3	04	O1
272	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 03	V1 VI	1 22					\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	Q1
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	NA	NA	Fri 3/12/21	Sat 18/12/21	51 days 1 days	1267									
'4	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						4	4 III II		
6	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				Th.			41111		
17	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								 		
278	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				4 2/	6					
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									
32	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,									
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	127 1,1200,1273,									4
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							Щ			
286	Fresh Watermain - Method Statement Submission	0 days		0 days	0%	Tue 1/6/21	Tue 1/6/21		NA NA	Sat 7/8/21	Sat 7/8/21	67 days 1 days				1 //	5			/ [*]		
287	Fresh Watermain - Ivietnod Statement Submission Fresh Watermain Method Statement Comment & Appraoval												1286				y					
88	**	35 days		35 days	0%	Tue 1/6/21	Mon 5/7/21		NA	Sat 7/8/21	Fri 10/9/21	67 days 1 days	1286									
	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									
89	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									
91	CH1189.4 - CH1394 (~409.2m) - Bridge D3	42 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		NA	NA	Mon 15/8/22	Thu 25/8/22	332 days 0 days	988SS+10 days,									
3	CH1444.7 - CH1560 (~165m) - Rd D3	30 days	0 days	30 days	0%	Mon 12/7/21	Sat 14/8/21		NA	Sat 27/11/21	Tue 4/1/22	116 days 0 days	988SS+15 days									
	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									
	CH2060 - CH2118.93 (~47m) - Rd D3	2 days	0 days	2 days	0%	Sat 16/10/21	Mon 18/10/21	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									
	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						#			
)	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						++			
)	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			+							1
)2	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				4 24/	15					
)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									
808	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				i III					
09	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									
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	Tue 25/1/22		NA	Thu 22/9/22	Fri 23/9/22	197 days 0 days	1294,1310									
13	CH100 - CH147 (~455m) - L12 Road	47 days		2 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	0%				NA NA				1313,498								$\ \ \ \ $	
		50 days				Wed 17/8/22	Mon 17/10/22			Wed 16/11/22	Fri 13/1/23	75 days 1 day	,									
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									
316	Saltwater main across Kai Tak River	51 days	U days	51 days	0%	Mon 26/9/22	Fn 25/11/22	NA	NA	Tue 15/11/22	Fri 13/1/23	41 days 1 day	1315,514									Ш
le: Rev.11	Prog with Progress	Summary			Inactive M			Duration-or	-		Start-only	<u> </u>		Milestone	♦			ical Split				
of 22-May	Colit	Project Sun	nmary		Inactive S	ummary 📗		Manual Sur	nmary Rollup		Finish-only	3	Deadline		4		Prog	gress				_

							Con	itract No. ED	/2018/01 K	TD Project											
Task N	Name	Duration	n Actual Duration	Remaining Duration	Physical % Complete	Early Start	Early Finish	Actual Start	Actual Fini	sh Late Start	Late Finish	Total TRA Slack	Predecessors 2020	04 0:	20′)21	04 0.)22	04	\1
17	Salt Watermain T&C	50 days	0 days	50 days	0%	Sat 26/11/22	Fri 27/1/23	NA	NA	Sat 14/1/23	Thu 16/3/23	41 days 1 day	Q2 Q3 1312,1315,1316,	Q4 Q1	Q2	Q3 (24 Q1	Q2	Q3	Q4 Q1	1 (
8	Irrigation System	535 days	s 0 days	535 days	0%	Tue 5/1/21	Sat 22/10/22	NA	NA	Wed 16/6/21	Thu 16/3/23	120 days								.	
19	Irrigation System - Method Statement Submission	0 days	0 days	0 days	0%	Sun 20/6/21	Sun 20/6/21	NA	NA	Thu 4/11/21	Thu 4/11/21	137 days 1 day				20/6					
20	Irrigation System Method Statement Comment & Appraoval	21 days	0 days	21 days	0%	Sun 20/6/21	Sat 10/7/21	NA	NA	Thu 4/11/21	Wed 24/11/21	137 days 1 day	1319								
1	Irrigation Pipe and System Procurement	150 days	s 0 days	150 days	0%	Tue 5/1/21	Thu 3/6/21	NA	NA	Wed 16/6/21	Fri 12/11/21	162 days 1 day									
22	CH1000 - CH1087 (~87m) Rd D3	5 days	0 days	5 days	0%	Fri 16/7/21	Wed 21/7/21	NA	NA	Mon 5/9/22	Fri 9/9/22	341 days 0 days	1305,1321		,						
3	CH1087 - CH1189.4 (~205m) - N. Ramp		0 days	10 days	0%	Mon 7/6/21	Fri 18/6/21	NA	NA	Sat 13/11/21	Wed 24/11/21	132 days 1 day	1321			,]					
4	CH1189.4 - CH1394 (~409.2m) - Bridge D3		0 days	7 days	0%	Sat 2/10/21	Sat 9/10/21	NA	NA	Thu 25/11/21	Thu 2/12/21	45 days 0 days	1307SS,1320,13								
5	CH1394 - CH1444.7 (~101.4m) - S. Ramp	3 days	0 days	3 days	0%	Thu 29/7/21	Sat 31/7/21	NA	NA	Wed 7/9/22	Fri 9/9/22	332 days 0 days	1308								
5	CH1444.7 - CH1560 (~175m) - Rd D3	4 days	0 days	4 days	0%	Mon 6/9/21			NA	Mon 12/9/22	Thu 15/9/22	302 days 0 days	1309,1322,1325								
7	CH1920 - CH2000 (~160m) S.D. Rd		0 days	5 days	0%	Thu 6/1/22	Tue 11/1/22		NA	Fri 16/9/22	Wed 21/9/22	207 days 1 day	1271,1326			. 1 '					
	· ´																				
28	CH2000 - CH2060 (~60m) - S.D. Rd		0 days	2 days	0%	Sat 22/1/22	Mon 24/1/22		NA	Thu 22/9/22	Fri 23/9/22	198 days 0 days	1272,1327								
29	CH2060 - CH2118.93 (~100m) - Rd D3	3 days	0 days	3 days	0%	Wed 26/1/22	Fri 28/1/22		NA	Sat 24/9/22	Tue 27/9/22	197 days 0 days	1312,1328								
30	CH100 - CH147 (~173m) - L12 Road	5 days	0 days	5 days	0%	Wed 17/8/22	Mon 22/8/22		NA	Wed 28/9/22	Wed 5/10/22	35 days 1 day	1313,1329								
31	Irrigation System T&C		0 days	50 days	0%	Tue 23/8/22	Sat 22/10/22		NA	Sat 14/1/23	Thu 16/3/23	120 days 1 day	1330								#
2	Salt Water and Sewage Pumping Station		s 0 days	637 days	0%	Sat 27/3/21	Thu 18/5/23		NA	Wed 28/7/21	Tue 30/5/23	8 days									
3	Salt Water Pumping Station - Temp. Works Design and Method Statement Submission	0 days	0 days	0 days	0%	Mon 2/8/21	Mon 2/8/21	NA	NA	Fri 10/9/21	Fri 10/9/21	39 days 1 day				2/8					
34	Salt Water Pumping Station - Temp. Works Design and Method Statement Comme & Appraoval	nt 35 days	0 days	35 days	0%	Mon 2/8/21	Sun 5/9/21	NA	NA	Fri 10/9/21	Thu 14/10/21		1333								
5	Utilities Diversion	65 days	0 days	65 days	0%	Mon 21/6/21	Sat 4/9/21	NA	NA	Wed 28/7/21	Wed 13/10/21	31 days 15 day									
6	Substructure	100 days	s 0 days	100 days	0%	Tue 5/10/21	Sat 5/2/22	NA	NA	Fri 15/10/21	Tue 15/2/22	8 days				, 					
7	Sheetpile Installation	25 days	0 days	25 days	0%	Tue 5/10/21	Wed 3/11/21	NA	NA	Fri 15/10/21	Fri 12/11/21	8 days 5 days	148,1334,1335,1								
8	Excavation and Shoring Installation	50 days	0 days	50 days	0%	Thu 4/11/21	Tue 4/1/22	NA	NA	Sat 13/11/21	Thu 13/1/22	8 days 5 days	1337			, 					
)	Base Slab Construction include blinding layer	25 days	0 days	25 days	0%	Wed 5/1/22	Sat 5/2/22	NA	NA	Fri 14/1/22	Tue 15/2/22	8 days 3 days	1338,149FS+120								
	Superstructure	460 days	s 0 days	460 days	0%	Fri 24/9/21	Wed 12/4/23	NA	NA	Wed 16/2/22	Mon 29/5/23	38 days						+++++			#1
	Coordination with CLP to plan for Layout and Details of Transformer Room	0 days	0 days	0 days	0%	Fri 24/9/21	Fri 24/9/21	NA	NA	Sat 4/6/22	Sat 4/6/22	253 days				→ 2	#/)	+			
	Scaflold, Falsework and Formwork Erection	28 days	0 days	28 days	0%	Mon 7/2/22	Thu 10/3/22	NA	NA	Wed 16/2/22	Sat 19/3/22	8 days 2 days	1339,719,531,54					 			
	Wall Rebar Fixing & Concreting	24 days	0 days	24 days	0%	Fri 11/3/22	Fri 8/4/22	NA	NA	Mon 21/3/22	Thu 21/4/22	8 days 1 day	1342								
4	Top Slab and Beam: Rebar Fixing and Formwork	36 days	0 days	36 days	0%	Sat 9/4/22	Tue 24/5/22	NA	NA	Fri 22/4/22	Thu 2/6/22	8 days 2 days	1343								
5	Formwork & Falsework Removal	28 days	0 days	28 days	0%	Wed 25/5/22	Mon 27/6/22	NA	NA	Sat 4/6/22	Thu 7/7/22	8 days 1 day	1344,1341								
16	Watertightnes Test	15 days	0 days	15 days	0%	Tue 28/6/22	Fri 15/7/22	NA	NA	Fri 19/8/22	Mon 5/9/22	44 days 1 day	1345								
47	Backfilling & Sheetpile Removal	24 days	0 days	24 days	0%	Tue 28/6/22	Tue 26/7/22	NA	NA	Tue 9/8/22	Mon 5/9/22	35 days 2 days	1345								
48	Water Chamber Construction		0 days	36 days	0%	Tue 28/6/22	Tue 9/8/22		NA	Fri 8/7/22	Thu 18/8/22	8 days 1 day	1345								
49	Watertightnes Test for Water Chamber		0 days	15 days	0%		Fri 26/8/22		NA	Fri 19/8/22	Mon 5/9/22	8 days 1 day	1348								
50	Drainage and Roadworks		0 days	80 days	0%	Wed 27/7/22	Mon 31/10/2		NA	Sat 18/2/23	Mon 29/5/23	170 days 5 days	1347,383								
51	Utilities Laying		s 0 days	105 days	0%	Wed 27/7/22	Tue 29/11/22		NA	Tue 6/9/22	Tue 10/1/23	35 days 5 days	1347							ШШ '	
52	Finishing work and fitting out	75 days		75 days	0%	Sat 27/8/22	Fri 25/11/22		NA	Tue 6/9/22	Mon 5/12/22	8 days 1 day	714,1345,555,13								
																					.]]
53	Tx Installation with T&C		0 days	60 days	0%	Tue 15/11/22			NA	Thu 24/11/22	Mon 6/2/23	8 days 1 day	1346,1352FF+50								
54	PCCW Installation	15 days		15 days	0%	Wed 30/11/22			NA	Fri 24/2/23		70 days 1 day	1351,1346								
55	Ironmongery work		0 days	24 days	0%	Sat 26/11/22			NA	Tue 14/2/23	Mon 13/3/23	64 days 0.5 days								<u> </u>	
56	E&M installation		s 0 days	100 days	0%	Thu 3/11/22	Fri 3/3/23		NA	Sat 12/11/22	Mon 13/3/23	8 days 5 days	1345,1353FF+30								1
7	Testing and Commissioning	30 days	0 days	30 days	0%	Sat 4/3/23	Wed 12/4/23	NA	NA	Tue 14/3/23	Fri 21/4/23	8 days 2 days	1356,1355,1351,								
8	WSD Form 46 Part I & II Submission	0 days	0 days	0 days	0%	Sat 27/3/21	Sat 27/3/21	NA	NA	Sat 22/4/23	Sat 22/4/23	615 days 0.5 days			♦ 27/3						
59	WSD Form 46 Part 46 Part IV Submission	0 days	0 days	0 days	0%	Tue 15/3/22	Tue 15/3/22	NA	NA	Sat 22/4/23	Sat 22/4/23	329 days 0.5 days	1358					15/3			#1
60	CLP Meter Installation	0 days	0 days	0 days	0%	Sun 19/6/22	Sun 19/6/22	NA	NA	Sat 22/4/23	Sat 22/4/23	251 days 0.5 days							19/6		#1
61	FSD Form 501 Submission for FS Inspection	0 days	0 days	0 days	0%	Wed 12/4/23	Wed 12/4/23	NA	NA	Sat 22/4/23	Sat 22/4/23	8 days 0.5 days	1359,1360,1357								*
o. Do: 11	Prograith Progress Task	Summary			Inactive M	lilestone 🔷		Duration-c	nly		Start-only	Е	External Milestone	**		Crit	ical Split		<u> </u>		
z; kev.11	Prog with Progress	Project Sur	nmary		Inactive Su				mmary Rollup		Finish-only	3	Deadline	•			gress				_

								tract No. ED,			-												
	k Name	Duration	Actual Duration	Remaining Duration	Physical % Complete	Early Start		Actual Start	Actual Finish	Late Start	Late Finish	Total Slack	TRA	Predecessors	2020 Q2 Q3 0	Q4 Q1	202 Q2	21 Q3	Q4	Q1 C	2022 Q2 Q3	3 Q4	Q1
2	FSD Inspection	0 days	0 days	0 days	0%	Sat 29/4/23	Sat 29/4/23	NA	NA	Thu 11/5/23	Thu 11/5/23	8 days	0.5 days	1361FS+15 days									
3	Issuance of FS Certificate	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	8 days	0.5 days	1362FS+15 days									
4	Salt Water and Sewage Pumping Station: Landscaping hardworks and softworks	110 days	s 0 days	110 days	0%	Wed 30/11/22	Sat 15/4/23	NA	NA	Wed 11/1/23	Mon 29/5/23	35 days	2 days	562,1351,548									
5	Salt Water and Sewage Pumping Station: Planting Works	110 days	s 0 days	110 days	0%	Wed 30/11/22	Sat 15/4/23	NA	NA	Wed 11/1/23	Mon 29/5/23	35 days	2 days	562,1351,548									+++
6	Section 6 Completion	0 days	0 days	0 days	0%	Tue 30/5/23	Tue 30/5/23	NA	NA	Tue 30/5/23	Tue 30/5/23	0 days		1350,1363,1364,									
7	Seawater Intake Box Culvert (~169m)	647 days	s 0 days	647 days	0%	Fri 5/3/21	Mon 8/5/23	NA	NA	Fri 5/3/21	Tue 30/5/23	0 days				-							+
8	Access Date - Part 4	0 days	0 days	0 days	0%	Fri 5/3/21	Fri 5/3/21	NA	NA	Fri 5/3/21	Fri 5/3/21	0 days	0 days	4FS+645 days		*	5/3						
9	Part 4 - CHA.0-79 (79m)	290 days	s 0 days	290 days	0%	Thu 19/5/22	Mon 8/5/23	NA	NA	Fri 10/6/22	Tue 30/5/23	18 days											+
0	CHA 0-24 Precast Section	34 days	0 days	34 days	0%	Thu 19/5/22	Tue 28/6/22	NA	NA	Fri 10/6/22	Wed 20/7/22	18 days											
1	Temporary ELS & Excavation and Shoring Installation	24 days	0 days	24 days	0%	Thu 19/5/22	Thu 16/6/22	NA	NA	Fri 10/6/22	Fri 8/7/22	18 days	1 days	1384,1386,1238,									
2	Install 3 nos. 8 m long precast units (2.5 days per unit)	10 days	0 days	10 days	0%	Fri 17/6/22	Tue 28/6/22	NA	NA	Sat 9/7/22	Wed 20/7/22	18 days	2.5 days	1371									
3	CHA 24-79 (75m) (5 units)	256 days	s 0 days	256 days	0%	Wed 29/6/22	Mon 8/5/23	NA	NA	Thu 21/7/22	Tue 30/5/23	18 days											##
1	Temporary ELS & Excavation		0 days	50 days	0%	Wed 29/6/22	Fri 26/8/22		NA	Thu 21/7/22	Sat 17/9/22	18 days	1 day	1372									
5	Unit 1 & 3 (41 days per unit)		0 days	44 days	0%	Sat 27/8/22	Thu 20/10/22		NA	Mon 19/9/22	Thu 10/11/22			1374									
6	Unit 2 & 4 (41 days per unit)		0 days	44 days	0%	Fri 21/10/22	Sat 10/12/22		NA	Fri 11/11/22	Mon 2/1/23			1375									$\parallel \parallel$
7	Unit 5 & 6 (41 days per unit)				0%	Mon 12/12/22		NA	NA	Tue 3/1/23	Sat 25/2/23			1376									
3			0 days	44 days								18 days											
	Remove struts and backfilling		0 days	24 days	0%	Mon 6/2/23	Sat 4/3/23	NA	NA	Mon 27/2/23	Sat 25/3/23	18 days		1376,1377									
9	Reinstate seawall		0 days	50 days	0%	Mon 6/3/23	Mon 8/5/23		NA	Mon 27/3/23	Tue 30/5/23		1 days	1378									
0	Part 10 - CHA79-89 (10m)		s 0 days	286 days	0%	Wed 2/6/21	Wed 18/5/22		NA	Wed 2/6/21	Thu 9/6/22	0 days									1		
	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 days	4FS+734 days,1'			2/	/6					
2	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							•	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 days	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 days	1384,1381,1391							ь		
	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 days	1392,1385							#		
	Part 1 - CH89-165 (76m) 6 Units	193 days	s 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									ا لا		
	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 days	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 days	1388,418,570					H				
)	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 days	1389					H	_			
	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 days	1390									
2	Remove struts and backfilling	36 days	0 days	36 days	0%	Fri 25/2/22	Fri 8/4/22	NA	NA	Thu 21/4/22	Wed 1/6/22	43 days	1 days	1390,1391							J 		
3	Elevated Landscape Deck CH1920 - 2090	1178 day	ys 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											##
4	Agree Interface Coordination Plan with KL/2014/01 Contractor		14 days	0 days	100%	Thu 16/5/19	Fri 31/5/19	Thu 16/5/19		Thu 16/5/19	Fri 31/5/19	0 days											
5	Ch1920-CH2060		0 days	1 day?	0%	Sat 23/5/20	Sat 23/5/20		NA	Wed 29/5/24	Wed 29/5/24	1467 d	-										
6	Part 1 - CH1919-2020 (70m) 4 bays		s 0 days	181 days	0%	Mon 5/7/21	Thu 10/2/22		NA	Wed 8/9/21	Mon 14/2/22	3 days								4111			
7	Pier Temporary Works Design and Method Statement Submission	0 days		0 days	0%	Mon 5/7/21	Mon 5/7/21		NA	Wed 8/9/21	Wed 8/9/21	65 days	1 day					s 5/7					
														1207									
9	Pier Temporary Works Design and Method Statement Comment & Approval	45 days		45 days	0%	Mon 5/7/21	Wed 18/8/21		NA	Wed 8/9/21	Fri 22/10/21	65 days		1397					-				
	CH1930 Pier (1set x 3nos.):		0 days	12 days	0%	Tue 5/10/21	Tue 19/10/21		NA	Fri 8/10/21	Fri 22/10/21	3 days		1075,1076,1066									
) I	CH1950-CH2020: Pier (3sets x 3nos) - 1 day/no 1 team		0 days	11 days	0%		Mon 1/11/21		NA	Sat 23/10/21	Thu 4/11/21	3 days		579,1398,1399									
	Falsework Temporary Works Design and Method Statement Submission		0 days	0 days	0%	Wed 1/9/21	Wed 1/9/21		NA	Tue 21/9/21	Tue 21/9/21	20 days						1/9	9				
	Falsework Temporary Works Design and Method Statement Comment & Approval	45 days	0 days	45 days	0%	Wed 1/9/21	Fri 15/10/21		NA	Tue 21/9/21	Thu 4/11/21	20 days	1 day	1401									
3	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					H				
	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					4 1/9	9				
5	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					411				
6	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					#	$\ \ \ $			
	Task	Summary			Inactive M	ilestone		Duration-or	nly		Start-only			Exten	nal Milestone	♦		(Crit	tical Spl	<u> </u>			<u> </u>
	11 Prog with Progress May-20 Split	Project Sur	mmary		Inactive Su				mmary Rollup		Finish-only		3	Deadl		•			gress				
۵۵-۱۱	Milestone •	Inactive Ta	ask		Manual Ta	sk		Manual Sui	mmary		External Tas	sks		Critica	al			Ma	nual Pro	ogress	_		_



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Task Naı	ne	Duration	n Actual Duration	Remaining Duration	Physical % Complete	Early Start	Early Finish	Actual Start	Actual Finish	h Late Start	Late Finish	Total TRA Slack	Predecessors	2020 O2 O3	O4 O1	2021 Q2 Q3	04 0	2022 1 Q2 C		Q1 Q2
451	Lift Pilecap and ELS - Temp. Works Foundation Design and Method Statement Comment & Appraoval	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	330 days 0.5 day	1450	<u>-</u>						
452	Intall Sheetpile, ELS, Excavation and Temp. Works Installation (Shoring, Drainage & Slope Protection)	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			$\dashv \parallel \parallel \parallel$				
453	Footing Construction	75 days	0 days	75 days	0%	Thu 13/5/21	Wed 11/8/21	NA	NA	Sat 5/2/22	Sat 7/5/22	218 days 2 days	1452,1449,587							
454	Sheepile Extraction & Backilling	25 days	0 days	25 days	0%	Thu 12/8/21	Thu 9/9/21	NA	NA	Mon 9/5/22	Tue 7/6/22	218 days 1 day	1453							
455	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 0.5 day				1/6				
456	Lift Structure - Temp, Works Design and Method Statement Comment & Appraova			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			1,,				
				-																
457	Lift Tower: Falsework & Formwork Erection, Rebar Fixing & Concreting		0 days	63 days	0%	Fri 10/9/21	Thu 11/11/21		NA	Wed 8/6/22	Tue 9/8/22	271 days 3 days	1454,1157,1456							
458	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							
159	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							.
160	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					-		
161	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							.
62	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							
463	CLP Meter Installation	0 days	0 days	0 days	0%	Mon 18/4/22	Mon 18/4/22		NA	Mon 18/4/22	Mon 18/4/22	0 days 0.5 day						♦ 18/4		
464					0%	Wed 15/6/22	Wed 15/6/22						1450 1460					1014		
	EMSD Submission Form 5 for Lift Inspection	0 days		0 days					NA	Tue 2/5/23	Tue 2/5/23	320 days 0.5 day							0/0	
465	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 0.5 day							29/6	
466	Issuance of Lift Use Permit	0 days	0 days	0 days	0%	Thu 14/7/22	Thu 14/7/22	NA	NA	Tue 30/5/23	Tue 30/5/23	320 days 0.5 day	1465FS+15 days						14/7	
67	Staircase ST1	100 day	s 0 days	100 days	0%	Fri 12/11/21	Tue 15/3/22	NA	NA	Fri 25/11/22	Sat 25/3/23	309 days 5 days	587,367,1457					 		
468	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							+
169	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				.			
170	L12d Roadworks and Pedestrian, with Light Pole	36 days	0 davs	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							
71	L12d Roadworks and Pedestrian		0 days	36 days	0%	Thu 21/7/22	Wed 31/8/22		NA	Mon 17/4/23	Tue 30/5/23	220 days 1 day	1470							
													1470							
	pen Space & Promenade		s 0 days	564 days	0%	Mon 28/6/21	Thu 18/5/23		NA	Sun 1/8/21	Tue 30/5/23	9 days								
173	Open Space & Promenade (From Northern End - CH1720)	564 day	s 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								
74	Observation Deck	358 day	s 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						 		╷═┼═┪║
75	Foundation - Temp. Works Design and Method Statement Submission	0 days	0 days	0 days	0%	Tue 1/3/22	Tue 1/3/22	NA	NA	Fri 6/5/22	Fri 6/5/22	66 days 0.5 day						1/3		
76	Foundation - Temp. Works Design and Method Statement Comment &	45 days	0 days	45 days	0%	Tue 1/3/22	Thu 14/4/22	NA	NA	Fri 6/5/22	Sun 19/6/22	66 days 0.5 day	1475,639,646							
.77	Appraoval G.I. works for LT5	12 days	0 days	12 days	0%	Sat 4/6/22	Fri 17/6/22	NA	NA	Mon 20/6/22	Mon 4/7/22	13 days 2 days	1447,611,604,15					#		
178	Design Vertification	25 days	0 days	25 days	0%	Sat 18/6/22	Mon 18/7/22	NA	NA	Tue 5/7/22	Tue 2/8/22	13 days 1 day	1477							.
179	Predrilling works for Socket H- pile	12 days	0 days	12 days	0%	Tue 19/7/22	Sat 30/7/22	NΔ	NA	Wed 3/8/22	Sun 14/8/22	15 days	1478							.
180	Socket H-pile Installation											12 days 2 days	367,1155,726,14							
	•		0 days	37 days	0%	Mon 1/8/22	Tue 13/9/22		NA	Mon 15/8/22	Tue 27/9/22									
481	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							
182	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						a 20	0/6	
483	Structure & Lift Core - Temp. Works Design and Method Statement Comment & Appraoval	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							.
184	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							
185	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							
186	Observation Deck: Substructure with Excavation/ELS works	36 days	0 days	36 days	0%	Sat 5/11/22	Fri 16/12/22	NA	NA	Sat 19/11/22	Sat 31/12/22	12 days 1 day	163,506,1483,14							
487	Observation Deck: Superstructure with Lift Core and Staircase work		0 days	72 days	0%	Sat 17/12/22	Sun 26/2/23		NA	Mon 2/1/23	Tue 14/3/23	16 days 1 day	1486							
488					0%															
	LTS: Lift installation with T&C and Statutory Inspection		0 days	60 days		Mon 27/2/23	Fri 12/5/23		NA	Wed 15/3/23	Tue 30/5/23	14 days 1 day	713,1487							
489	E&M and ABWF works, Landscaping and paving works	110 day	s 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							
490	Toilet	416 day	s 0 days	416 days	0%	Mon 28/6/21	Wed 16/11/2	2 NA	NA	Sun 15/8/21	Fri 24/2/23	41 days							 	
491	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				
492	Foundation - Temp. Works Design and Method Statement Comment &	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							
493	Appraoval 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							
494	Structure - Temp. Works Design and Method Statement Submission		0 days	0 days	0%	Mon 26/7/21	Mon 26/7/21		NA	Fri 3/9/21	Fri 3/9/21	39 days 0.5 days				♦ 26/7				
495	Structure - Temp. Works Design and Method Statement Comment &				0%	Mon 26/7/21	Fri 10/9/21		NA NA	Fri 3/9/21	Tue 19/10/21									
773	Appraoval	47 days	o days	47 days	0.70	1011 20/1/21	111 10/9/21	INA	INA	171 313121	1 uc 19/10/21	39 days 2 days	1474							
le: Rev.11 P	rog with Progress	Summary			Inactive N	_		Duration-c			Start-only	Е		mal Milestone	\$		ritical Split	-		
-	20 Split	Project Sur	mmary		Inactive S	ummary		Manual Su	mmary Rollup 🛮		Finish-only	3	Dead	lline	1	Pi	rogress	_		_

						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	ish Late Start	Late Finish	Total Slack	TRA	Predecessors	2020	04 01	2021	O4 O1	2022 Q2 Q3 Q	04 01 1	2023	04
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	Q4 Q1	Q2 Q3	Q4 Q1	<u> Q2 Q3 Q</u>	Q4 Q1 C	22 Q3	<u>Q4</u> <u>Q</u> .
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								
99	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								
01	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								
)5	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	1 day	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								
18	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,								
19	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								
.0	ABWF, E&M work and street furniture	75 days 0 days	75 days	0%		Mon 20/2/23		NA	Sat 25/2/23	Tue 30/5/23	79 days	-	1508,1509SS,15								
1	FSD Form 501 Submission for FS Inspection			0%									1510SS+50 days						тші і		
2		0 days 0 days	0 days		Mon 9/1/23		NA NA	NA	Mon 1/5/23	Mon 1/5/23	111 days								9/1		
	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	Fri 27/1/23	Tue 30/5/23	1	4 days	1509,668,1503,6							1	
5	Open Space & Promenade (From CH1720 - South End)	477 days 0 days	477 days	0%	Mon 12/7/21	Mon 13/2/23		NA	Sun 1/8/21	Tue 30/5/23	18 days								7		
5	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					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					<u> </u>			
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					$h \mid \mid \mid \mid \mid $			
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								
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								
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			4					
3	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					 			
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				•	5			
5	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,								
8	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								
.9	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					3	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		
1	FSD Inspection	0 days 0 days	0 days	0%	Thu 22/12/22			NA	Tue 16/5/23	Tue 16/5/23	144 days		1530FS+15 days						22/12		
2	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		
13	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								
4	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		1528,668,1243FI								
5	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 10/10/22	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			
39	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					1	.		
10	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		С		nal Milestone	♦		Critical Split				
	2-May-20 Split	Project Summary		Inactive S	ummary		Manual Su	mmary Rollup		Finish-only		3	Dead	line	1		Progress				

							Conf	ract No. ED/	2018/01 KT	D Project													
1	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	01 0	2021 2 Q3 Q4	1 01 02	2022 Q3 Q4	Q1 C	2023 02 Q3	O4 O1
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						<u> </u>			
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									
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							-		
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									
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	ı	
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					-					ı	
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>						
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					<u> </u>				
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						+	$\ $		
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						•			
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								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							4	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 August 2022

August 2022

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

Air Quality Monitoring Station

AM3 - Sky Tower

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

Noise Quality Monitoring Station

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

M12 - Hong Kong Children's Hospital

Contract No. EDO 15/2018 Environmental Monitoring at Kai Tak Development Stage 4 Infrastructure at the former runway and south apron Tentative Environmental Monitoring and Weekly Site Inspection Schedule for September 2022

September 2022

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

NOTE:

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

Air Quality Monitoring Station

AM3 - Sky Tower

 $\ensuremath{\mathsf{AM4}}(A)$ - 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

Appendix D – Photographic records

Impact Air Quality Monitoring



Measurement setup at AM3



Measurement setup at AM4(A)



Measurement setup at AM7

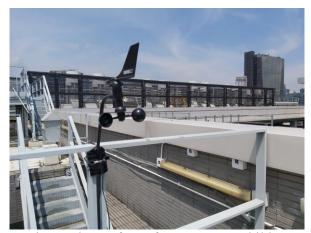
Impact Noise Monitoring



Measurement setup at M11



Measurement setup at M12



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

Appendix E – Calibration certificates, catalogue of air quality monitoring equipment

Catalogue of High Volume Sampler (HVS)



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.

TISCH 🕡

www.tisch-env.com

Brush Style Motor

36-60 CFM

Made In USA

Dickson Chart Recorder, 24 Hour

Stainless Steel Filter Holder



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, 1.09M³M-1.68M³M

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

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"

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



Air Sampler Calibration Curve Plotting & Calculation (Dickson recorder)

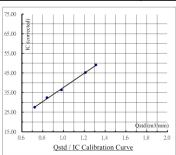
Calibration curve ref. No. :	ATSPC-01-2022062901	Date of calibration :	29/06/2022
Location :	Sky Tower	Sampler :	TE-5170X
Calibration Data			
Ambient barometric pressure	, Pa = 751.6 (mmHg)	Ambient temperature, Ta =	305.65 (deg K)
Qstd Slope, m = 2.064	18	Qstd Intercept, b = -0.03	35930

Calibration Curve

Plate No.	H ₂ O	Qstd	I	IC
Plate No.	(in)	(m ³ / min)	(chart)	(corrected)
18	7.40	1.311	50.0	49.10
13	6.30	1.211	46.0	45.17
10	4.10	0.981	37.0	36.33
7	3.00	0.841	33.0	32.40
5	2.20	0.723	28.0	27.49

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]	36.223	1.3899	0.9989



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

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)).



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

Air Sampler Calibration Curve Plotting & Calculation (Dickson recorder)

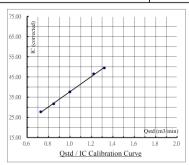
Calibration curve ref. No. :	ATSPC-01-202	22082601	Date of calibration :	26/08/2022	
Location:	Sky Tower		Sampler :	TE-5170X	
Calibration Data					
Ambient barometric pressure	, Pa = 757.6	(mmHg)	Ambient temperature, Ta =	303.45	(deg K)
Qstd Slope, m = 2.0641	8		Qstd Intercept, b = -0.03	35930	

Calibration Curve

Plate No.	H ₂ O	Qstd	I	IC
Plate No.	(in)	(m ³ / min)	(chart)	(corrected)
18	7.40	1.321	50.0	49.47
13	6.30	1.221	47.0	46.50
10	4.20	1.000	38.0	37.60
7	3.00	0.848	32.0	31.66
5	2.20	0.728	28.0	27.70

Subsequent calculation of sampler flow

Method	Calibration equation	Slope, m	Intercept, b	Corr. coeff., r	ı
Dickson recorder	Qstd = 1 / m1 [(1) (Sqrt ((Pav / 760) (298 / Tav))) - b1]	37.600	0.0989	0.9993	ĺ



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

Qstd $(m^3 / min) = 1/m$ [Sqrt $(H_2O(Pa / 760)(298 / Ta)) - b$]. Remark: IC (corrected) = I [Sqrt ((Pa / 760) (298 / Ta))]. FLOW (corrected) = Sqrt (FLOW (mano) (Pa / 760) (298 / Ta)).

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

Air Sampler Calibration Curve Plotting & Calculation (Dickson recorder)

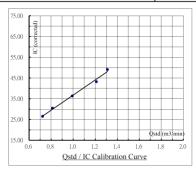
Calibration co	urve ref. No. : ATS	SPC-01-202	22062902	Date of calibration:	29/06/2022	
Location :	The Hong Kong Soo Factory cum She			Sampler :	TE-5170X	
Calibration 1	<u>Data</u>					
Ambient bard	metric pressure, Pa =	751.6	(mmHg)	Ambient temperature, Ta	= 305.65	(deg K)
Octd Slope n	2.06419			Oatd Intercent h =	0.025020	

Calibration Curve

Plate No.	H ₂ O	Qstd	I	IC
Flate No.	(in)	(m ³ / min)	(chart)	(corrected)
18	7.40	1.311	50.0	49.10
13	6.30	1.211	44.0	43.21
10	4.20	0.992	37.0	36.33
7	2.80	0.813	31.0	30.44
5	2.20	0.723	27.0	26.51

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]	36.456	0.2973	0.9958



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: Checked by: Checked by: Wong Yin Tong

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)

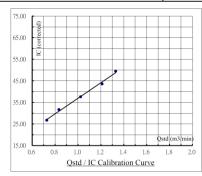
Calibration curve ref. No. : ATS		ATSPC-01-202	TSPC-01-2022082602 Date of calibration :		26/08/2022	
The Hong Kong Society for the Blind's Location: Factory cum Sheltered Workshop		Sampler :	TE-5170X			
Calibration D	<u>ata</u>					
Ambient baro	metric pressure, Pa	757.6	(mmHg)	Ambient temperature, Ta	= 303.45	(deg K)
Ostd Slope, m	= 2.06418			Ostd Intercept, b =	-0.035930	

Calibration Curve

Plate No.	H ₂ O (in)	Qstd (m³/min)	I (chart)	IC (corrected)
18	7.50	1.330	50.0	49.47
13	6.20	1.211	44.0	43.53
10	4.40	1.023	38.0	37.60
7	2.90	0.834	32.0	31.66
5	2.20	0.728	27.0	26.71

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]	36.034	0.8516	0.9968



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_{2}O \ (\ Pa \ / \ 760 \) \ (\ 298 \ / \ Ta \) \) - b \].$

IC (corrected) = I [Sqrt ((Pa/760) (298 / Ta))]. FLOW (corrected) = Sqrt (FLOW (mano) (Pa/760) (298 / Ta)).

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

Air Sampler Calibration Curve Plotting & Calculation (Dickson recorder)

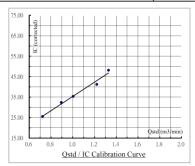
Calibration curve ref. No. : ATSPC-01-2022062903			Date of calibration :	29/06/2022		
Location : Hong Kong Children's Hospital			Sampler :	TE-5170X		
Calibration Da	<u>ta</u>					
Ambient barom	etric pressure,	Pa = 751.6	(mmHg)	Ambient temperature, Ta =	305.65	(deg K)
Qstd Slope, m =	2.06418	3		Qstd Intercept, b = -0.0	35930	

Calibration Curve

Dista No	H ₂ O	Qstd	I	IC
Plate No.	(in)	(m ³ / min)	(chart)	(corrected)
18	7.60	1.329	49.0	48.12
13	6.40	1.221	42.0	41.24
10	4.30	1.004	36.0	35,35
7	3.40	0.895	33.0	32.40
5	2.20	0.723	26.0	25.53

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]	34.864	0.4644	0.9906



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: Checked by: Checked by: Wong Yin Tong)

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

Air Sampler Calibration Curve Plotting & Calculation (Dickson recorder)

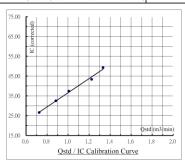
Calibration curve ref. No. : ATSP		ATSPC-01-2022082603		Date of calibration :	26/08/2022	
Location : Hong Kong Children's Hospital			Sampler :	TE-5170X		
Calibration Data						
Ambient barometr	ic pressure, Pa	a = 750.9	(mmHg)	Ambient temperature, Ta =	303.45	(deg K)
Qstd Slope, m =	2.06418			Qstd Intercept, b = -0.6	035930	

Calibration Curve

Plate No.	H_2O	Qstd	I	IC
Plate No.	(in)	(m ³ / min)	(chart)	(corrected)
18	7.60	1.333	50.0	49.25
13	6.40	1.225	44.0	43.34
10	4.30	1.007	38.0	37.43
7	3.30	0.884	33.0	32.51
5	2.20	0.725	27.0	26.60

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]	35.757	0.8242	0.9958



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 : Checked by : Checked by : Wong Yin Tong)

Air Sampler Calibration Curve Plotting & Calculation

(Dickson recorder)

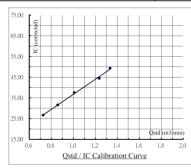
Calibration curve ref. No. :	ATSPC-01-2022062001	Date of calibration :	20/06/2022	
Model no :	GS2310	Serial number :	10346	
Calibration Data				
Ambient barometric pressure,	Pa = 753.1 (mmHg)	Ambient temperature, Ta =	303.35 (deg K)	
Qstd Slope, m = 2.0641	8	Qstd Intercept, b =0.035930		

Calibration Curve

Plate No.	H ₂ O	Qstd	I	IC		
Plate No.	(in)	(m ³ / min)	(chart)	(corrected)		
18	7.60	1.335	50.0	49.33		
13	6.50	1.236	45.0	44.40		
10	4.30	1.009	38.0	37.49		
7	3.10	0.859	32.0	31.57		
5	2.20	0.726	27.0	26.64		

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]	36.268	0.4215	0.9982



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 \].$

IC (corrected) = I [Sqrt ((Pa / 760) (298 / Ta))].

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

Orifice Transfer Standard Certification Worksheet TE-5025A RECALIBRATION DUE DATE: May 16, 2023 **Calibration Certification Information** Rootsmeter S/N: 438320 Cal. Date: May 16, 2022 Ta: 296 Operator: Jim Tisch Pa: 746.8 mm Hg Calibration Model #: TE-5025A Calibrator S/N: 0006 Vol. Init Vol. Final ΔVol. ΔTime ΔΡ ΔH (m3) (m3) (m3)(min) (mm Hg) (in H2O) 1.4050 2.00 3.2 1.0020 4.00 0.8930 5.00 0.8550 5.50 0.7030 12.8 8.00 **Data Tabulation** √∆H(Pa)(Tstd) ΔH(Ta/Pa Vstd Qstd Qa (y-axis) (m3) (x-axis) Va (x-axis) (y-axis) 0.7087 0.8904 0.9850 0.7011 1.4066 0.9957 0.9807 0.9788 1.9892 0.9914 0.9895 0.9788 1.0960 2.2240 0.9894 1.1080 1.4078 0.977 1.1435 2.3325 0.9883 1.1560 1.4765 2.8131 1.7807 0.972 1.3830 0.9829 1.3981 2.06418 1.29255 -0.03593 -0.02274 **QSTD** b= QA b= 0.99993 0.99993 Calculations Vstd= ΔVol((Pa-ΔP)/Pstd)(Tstd/Ta) Va= ΔVol((Pa-ΔP)/Pa) Qstd= Vstd/ΔTime Qa= Va/ΔTime For subsequent flow rate calculations: Qa= $1/m((\sqrt{\Delta H(Ta/Pa)})-b)$ Standard Conditions 298.15 °K RECALIBRATION Pstd: 760 mm Hg US EPA recommends annual recalibration per 1998 Key ΔH: calibrator manometer reading (in H2O) 40 Code of Federal Regulations Part 50 to 51, ΔP: rootsmeter manometer reading (mm Hg) Appendix B to Part 50, Reference Method for the Ta: actual absolute temperature (°K) Determination of Suspended Particulate Matter in Pa: actual barometric pressure (mm Hg) the Atmosphere, 9.2.17, page 30 b: intercept m: slope Tisch Environmental, Inc. www.tisch-env.com TOLL FREE: (877)263-7610 145 South Miami Avenue FAX: (513)467-9009 Village of Cleves, OH 45002

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/m³ 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/m³

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

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

Approx. 31,000 Data Points

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

Display Tripod Socket 2 line x 12 character LCD 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 @ 1.0 A

Maintenance

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

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

(32-bit or 64-bit) operating systems

Battery Performance

Operating System

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

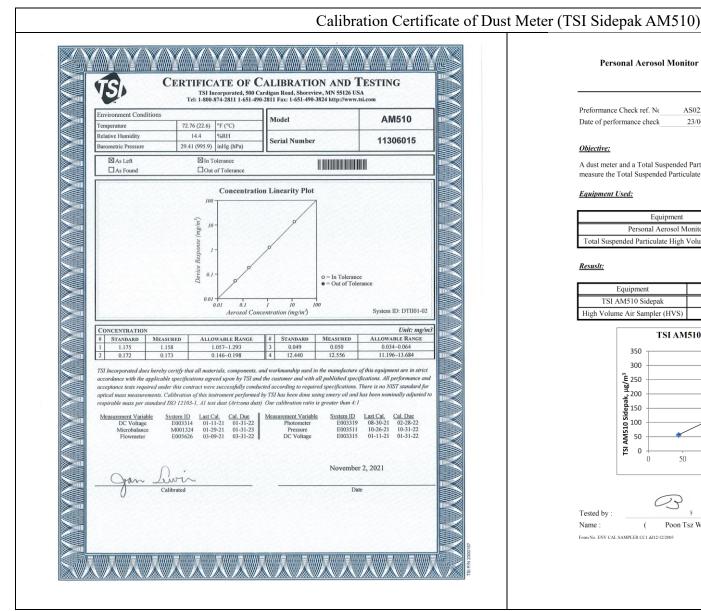
**All dust plugs and dust gaskets must be installed.

***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	AS0220624-3	Report Issue Date	24/06/2022	
Date of performance check	23/06/2022			

Objective:

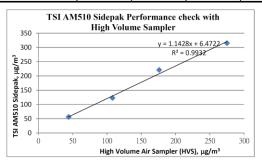
A dust meter and a Total Suspended Particulate High Volume Air Sampler (HVS) were placed together to measure the Total Suspended Particulate (TSP) concentrations simultaneously to check the performance.

Equipment Used:

Equipment	Manufacturer and Model	Serial Number
Personal Aerosol Monitor	TSI AM510 Sidepak	11306015
Total Suspended Particulate High Volume Air Sampler	GS2310	10346

Resustt:

Equipment	Measurement Result, μg/m ³			
TSI AM510 Sidepak	56 123 221 315			
High Volume Air Sampler (HVS)	44	108	176	275





Calibration Certificate of Dust Meter (TSI Sidepak AM510) CERTIFICATE OF CALIBRATION AND TESTING TSI Incorporated, 500 Cardigan Road, Shoreview, MN 55126 USA Tel: 1-800-874-2811 1-651-490-2811 Fax: 1-651-490-3824 http://www.tsi.com Environment Conditions AM510 Model 75.26 (24.0) °F (°C) Relative Humidity 21.5 %RH 11108001 Serial Number 29.25 (990.5) inHg (hPa) rometric Pressure ⊠ As Left ☑ In Tolerance ☐ As Found Out of Tolerance Concentration Linearity Plot o = In Tolerance • = Out of Tolerance System ID: DTII01-02 CONCENTRATION Unit: mg/m3 # STANDARD MEASURED ALLOWABLE RANGE ALLOWABLE RANGE STANDARD MEASURED 4.199 4.027 3.779-4.619 0.161 0.549 0.462~0.624 13.855 14.276 12.469~15.241 0.543 TSI Incorporated does hereby certify that all materials, components, and workmanship used in the manufacture of this equipment are in strict accordance with the applicable specifications agreed upon by TSI and the customer and with all published specifications. All performance and acceptance tests required under this contract were successfully conducted according to required specifications. There is no NIST standard for optical mass measurements. Calibration of this instrument performed by TSI has been done using emery oil and has been nominally adjusted to respirable mass per standard ISO 12103-1, A1 test dust (Arizona dust). Our calibration ratio is greater than 4:1 System ID Last Cal. Cal. Due E003319 08-30-21 02-28-22 E003511 10-26-21 10-31-22 E003315 01-11-21 01-31-22 Measurement Variable DC Voltage <u>System ID</u> <u>Last Cal.</u> <u>Cal. Due</u> E003314 01-11-21 01-31-22 Measurement Variable Photometer Flowmeter E005626 03-09-21 03-31-22 DC Voltage December 17, 2021

Personal Aerosol Monitor Performance check with High Volume Sampler

Preformance Check ref. No	AS0220624-2	Report Issue Date	24/06/2022	
Date of performance check	23/06/2022			

Objective:

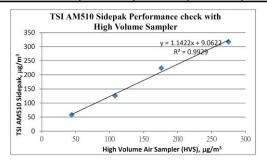
A dust meter and a Total Suspended Particulate High Volume Air Sampler (HVS) were placed together to measure the Total Suspended Particulate (TSP) concentrations simultaneously to check the performance.

Equipment Used:

Equipment	Manufacturer and Model	Serial Number
Personal Aerosol Monitor	TSI AM510 Sidepak	11108001
Total Suspended Particulate High Volume Air Sampler	GS2310	10346

Resustt:

Equipment	Measurement Result, μg/m ³			
TSI AM510 Sidepak	58	126	224	317
High Volume Air Sampler (HVS)	44	108	176	275



Tested by Checked by: Name: Poon Tsz Wing Wong Yin Tong

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

Catalogue of Weather Station

Cabled Vantage Pro2™ & Vantage Pro2 Plus™ Stations



6152C 6162C

Vantage Pro2™

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

Integrated Sensor Suite (ISS)

Operating Temperature	-40° to +150°F (-40° to +65°C)
Non-operating Temperature	-40° to +158°F (-40° to +70°C)
	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)

Historical Graph Data Hourly Average, Daily, Monthly Highs

Wind

Wind Chill (Calculated)

Source...... United States National Weather Service (NWS)/NOAA

Alarm High Threshold from Instant Calculation

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

Update Interval 2.5 to 3 seconds

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

Atr. ... - . , car - 10 Mar 2022



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.: CC0012203

Customer Information

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

Equipment Identification

Equipment Description	Manufacturer	Model No.	Serial No.	Assigned equipment No.:	
Weather Station	Davis Vantage PRO 2	6152CFU	AZ170710016	N/A	

Certificate Information

1 March 2022 Calibration Condition: 24.8°C, 55%RH, 1006hPa Date of Receipt: N/A 16 March 2022 Adjustment: Date of Calibration: Good Due Date of Calibration: N/A Appearance: Calibration Procedure: JJF 1183-2007, JJF 1076-2001, Remark: N/A SOP-116

Reference Equipment Identification

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	

notes: In the estimated expanded uncertainties have been calculated in Evaluation and expression of uncertainty in measurement, and pure an incremal examines to of confidence of 95%. According factor of 25 is according to 25 in a schedule to maintain the accuracy and good condition.

Note3: The result reported in this certificate refer to the condition of the instrument on the date of calibration and carry no implication regarding the long term stability of the

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

Approved By:



Rex Tse

Certificate Issue Date: 18 March 2022

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

CC0012203 Page 1 of 2

Appendix F – Weather information

General Information

Date	Absolute Daily Min Temperature (°C)	Absolute Daily Max Temperature (°C)	Total Rainfall (mm)
01/08/2022	29.1	35.7	0
02/08/2022	28	35.2	0.2
03/08/2022	25.6	30.8	34.9
04/08/2022	25.9	28.4	14.9
05/08/2022	24.5	28.6	165.5
06/08/2022	26.1	30.9	5.5
07/08/2022	27.6	32.6	2.8
08/08/2022	26.2	30.9	33.3
09/08/2022	25.4	28.5	72
10/08/2022	25.8	29.6	49.7
11/08/2022	25.5	28.8	12.4
12/08/2022	24.9	27.1	76
13/08/2022	25.8	32.6	0
14/08/2022	26.9	33.3	0
15/08/2022	28.1	33.6	0
16/08/2022	26.2	33.2	9.1
17/08/2022	26.2	32.3	29.8
18/08/2022	26.2	30.4	22.1
19/08/2022	26.4	32	4.8
20/08/2022	26.5	31.9	8.4
21/08/2022	26.6	32.9	1.9
22/08/2022	28.2	32.9	0
23/08/2022	28.6	34.5	0
24/08/2022	26.4	34.9	5.5
25/08/2022	25	29.8	48.1
26/08/2022	27.5	32.9	0.1
27/08/2022	27.4	33	0
28/08/2022	28.3	34.4	0
29/08/2022	28.6	34.6	0
30/08/2022	27.9	32.3	13.1
31/08/2022	28.1	31.7	4.7

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

NOTE2: Trace means rainfall less than 0.05 mm

 $\underline{https://www.hko.gov.hk/en/cis/dailyExtract.htm?y=2022\&m=08}$

Date	Time	Wind Speed (m/s)	Wind Direction												
01/08/2022	0:00	0.4	247.5	02/08/2022	0:00	0.4	270	03/08/2022	0:00	2.2	67.5	04/08/2022	0:00	2.7	90
01/08/2022	1:00	0.4	270	02/08/2022	1:00	0.4	247.5	03/08/2022	1:00	2.2	67.5	04/08/2022	1:00	2.7	157.5
01/08/2022	2:00	0.4	247.5	02/08/2022	2:00	0.4	315	03/08/2022	2:00	2.2	67.5	04/08/2022	2:00	3.1	270
01/08/2022	3:00	0.9	247.5	02/08/2022	3:00	0.9	135	03/08/2022	3:00	1.8	45	04/08/2022	3:00	2.7	90
01/08/2022	4:00	0.4	247.5	02/08/2022	4:00	1.3	135	03/08/2022	4:00	1.3	67.5	04/08/2022	4:00	3.1	247.5
01/08/2022	5:00	0.9	247.5	02/08/2022	5:00	1.3	157.5	03/08/2022	5:00	1.8	45	04/08/2022	5:00	3.1	112.5
01/08/2022	6:00	0.9	247.5	02/08/2022	6:00	1.8	202.5	03/08/2022	6:00	2.2	67.5	04/08/2022	6:00	2.7	270
01/08/2022	7:00	0.4	270	02/08/2022	7:00	0.9	292.5	03/08/2022	7:00	1.8	67.5	04/08/2022	7:00	3.1	157.5
01/08/2022	8:00	0.4	247.5	02/08/2022	8:00	0.9	270	03/08/2022	8:00	1.8	67.5	04/08/2022	8:00	2.7	112.5
01/08/2022	9:00	0.4	270	02/08/2022	9:00	0.9	270	03/08/2022	9:00	2.2	90	04/08/2022	9:00	3.1	270
01/08/2022	10:00	0.4	270	02/08/2022	10:00	0.9	225	03/08/2022	10:00	2.2	112.5	04/08/2022	10:00	3.6	247.5
01/08/2022	11:00	0.4	270	02/08/2022	11:00	0.4	247.5	03/08/2022	11:00	2.2	90	04/08/2022	11:00	2.7	247.5
01/08/2022	12:00	0.9	270	02/08/2022	12:00	0.4	225	03/08/2022	12:00	2.7	67.5	04/08/2022	12:00	3.1	225
01/08/2022	13:00	0.4	247.5	02/08/2022	13:00	0.4	247.5	03/08/2022	13:00	2.2	67.5	04/08/2022	13:00	3.1	112.5
01/08/2022	14:00	0.4	247.5	02/08/2022	14:00	0.9	247.5	03/08/2022	14:00	1.8	67.5	04/08/2022	14:00	3.6	112.5
01/08/2022	15:00	0.9	247.5	02/08/2022	15:00	0.4	247.5	03/08/2022	15:00	2.2	45	04/08/2022	15:00	2.7	90
01/08/2022	16:00	0.9	247.5	02/08/2022	16:00	0.4	270	03/08/2022	16:00	1.8	112.5	04/08/2022	16:00	3.6	90
01/08/2022	17:00	0.9	247.5	02/08/2022	17:00	0.9	247.5	03/08/2022	17:00	1.3	135	04/08/2022	17:00	3.6	112.5
01/08/2022	18:00	0.9	270	02/08/2022	18:00	1.3	247.5	03/08/2022	18:00	1.3	157.5	04/08/2022	18:00	2.2	90
01/08/2022	19:00	0.9	247.5	02/08/2022	19:00	0.9	67.5	03/08/2022	19:00	1.3	90	04/08/2022	19:00	3.6	112.5
01/08/2022	20:00	0.9	270	02/08/2022	20:00	0.4	112.5	03/08/2022	20:00	0.9	135	04/08/2022	20:00	2.7	90
01/08/2022	21:00	1.3	270	02/08/2022	21:00	1.3	135	03/08/2022	21:00	1.3	112.5	04/08/2022	21:00	2.7	67.5
01/08/2022	22:00	1.3	90	02/08/2022	22:00	1.3	112.5	03/08/2022	22:00	1.3	247.5	04/08/2022	22:00	2.7	135
01/08/2022	23:00	0.4	90	02/08/2022	23:00	0.9	247.5	03/08/2022	23:00	1.3	247.5	04/08/2022	23:00	3.1	112.5

Date	Time	Wind Speed (m/s)	Wind Direction												
05/08/2022	0:00	3.6	112.5	06/08/2022	0:00	3.1	247.5	07/08/2022	0:00	1.8	90	08/08/2022	0:00	0.4	90
05/08/2022	1:00	2.7	135	06/08/2022	1:00	3.6	270	07/08/2022	1:00	2.2	45	08/08/2022	1:00	0.9	90
05/08/2022	2:00	2.2	90	06/08/2022	2:00	2.7	247.5	07/08/2022	2:00	2.2	225	08/08/2022	2:00	0.9	112.5
05/08/2022	3:00	3.1	67.5	06/08/2022	3:00	3.1	247.5	07/08/2022	3:00	2.2	112.5	08/08/2022	3:00	1.3	90
05/08/2022	4:00	2.2	90	06/08/2022	4:00	3.6	247.5	07/08/2022	4:00	2.2	67.5	08/08/2022	4:00	1.3	90
05/08/2022	5:00	2.7	112.5	06/08/2022	5:00	3.1	90	07/08/2022	5:00	1.8	225	08/08/2022	5:00	1.3	112.5
05/08/2022	6:00	2.2	67.5	06/08/2022	6:00	3.1	45	07/08/2022	6:00	2.2	225	08/08/2022	6:00	1.3	135
05/08/2022	7:00	1.8	112.5	06/08/2022	7:00	3.1	225	07/08/2022	7:00	2.2	247.5	08/08/2022	7:00	1.3	112.5
05/08/2022	8:00	2.7	90	06/08/2022	8:00	3.6	90	07/08/2022	8:00	1.8	247.5	08/08/2022	8:00	0.4	112.5
05/08/2022	9:00	4	112.5	06/08/2022	9:00	3.1	112.5	07/08/2022	9:00	2.2	247.5	08/08/2022	9:00	0.4	135
05/08/2022	10:00	5.4	112.5	06/08/2022	10:00	3.6	90	07/08/2022	10:00	2.2	247.5	08/08/2022	10:00	0.9	135
05/08/2022	11:00	3.6	90	06/08/2022	11:00	4.9	112.5	07/08/2022	11:00	2.2	270	08/08/2022	11:00	0.9	112.5
05/08/2022	12:00	4	90	06/08/2022	12:00	3.1	67.5	07/08/2022	12:00	2.2	247.5	08/08/2022	12:00	1.3	90
05/08/2022	13:00	3.1	67.5	06/08/2022	13:00	3.1	112.5	07/08/2022	13:00	1.3	247.5	08/08/2022	13:00	0.9	135
05/08/2022	14:00	3.6	45	06/08/2022	14:00	4	90	07/08/2022	14:00	0.9	225	08/08/2022	14:00	0.9	135
05/08/2022	15:00	4.5	90	06/08/2022	15:00	4	67.5	07/08/2022	15:00	0.9	202.5	08/08/2022	15:00	0.9	112.5
05/08/2022	16:00	4.9	67.5	06/08/2022	16:00	3.1	67.5	07/08/2022	16:00	1.3	225	08/08/2022	16:00	0.4	112.5
05/08/2022	17:00	4.5	90	06/08/2022	17:00	3.1	67.5	07/08/2022	17:00	1.3	247.5	08/08/2022	17:00	0.9	112.5
05/08/2022	18:00	3.6	157.5	06/08/2022	18:00	3.6	90	07/08/2022	18:00	1.3	225	08/08/2022	18:00	0.4	112.5
05/08/2022	19:00	3.6	270	06/08/2022	19:00	3.1	90	07/08/2022	19:00	1.3	225	08/08/2022	19:00	0.4	112.5
05/08/2022	20:00	3.6	90	06/08/2022	20:00	4	90	07/08/2022	20:00	1.3	112.5	08/08/2022	20:00	0.9	90
05/08/2022	21:00	3.6	247.5	06/08/2022	21:00	2.2	112.5	07/08/2022	21:00	1.3	90	08/08/2022	21:00	0.4	90
05/08/2022	22:00	3.1	112.5	06/08/2022	22:00	2.7	112.5	07/08/2022	22:00	1.3	112.5	08/08/2022	22:00	0.9	112.5
05/08/2022	23:00	5.4	270	06/08/2022	23:00	3.6	90	07/08/2022	23:00	0.9	112.5	08/08/2022	23:00	1.3	112.5

Date	Time	Wind Speed (m/s)	Wind Direction	Date Date	Time	Wind Speed (m/s)	Wind Direction	Date	Time	Wind Speed (m/s)	Wind Direction	Date	Time	Wind Speed (m/s)	Wind Direction
09/08/2022	0:00	1.8	112.5	10/08/2022	0:00	0.9	247.5	11/08/2022	0:00	1.3	90	12/08/2022	0:00	1.8	90
09/08/2022	1:00	0.9	135	10/08/2022	1:00	1.8	247.5	11/08/2022	1:00	0.9	90	12/08/2022	1:00	1.8	67.5
09/08/2022	2:00	1.3	112.5	10/08/2022	2:00	1.8	247.5	11/08/2022	2:00	0.9	112.5	12/08/2022	2:00	1.8	90
09/08/2022	3:00	0.9	90	10/08/2022	3:00	1.3	270	11/08/2022	3:00	0.9	135	12/08/2022	3:00	2.7	135
09/08/2022	4:00	1.3	135	10/08/2022	4:00	1.3	247.5	11/08/2022	4:00	1.3	112.5	12/08/2022	4:00	2.2	112.5
09/08/2022	5:00	1.8	90	10/08/2022	5:00	1.8	247.5	11/08/2022	5:00	1.3	112.5	12/08/2022	5:00	2.7	247.5
09/08/2022	6:00	2.2	90	10/08/2022	6:00	1.3	247.5	11/08/2022	6:00	1.3	112.5	12/08/2022	6:00	3.1	247.5
09/08/2022	7:00	1.8	112.5	10/08/2022	7:00	1.8	247.5	11/08/2022	7:00	1.3	112.5	12/08/2022	7:00	3.6	67.5
09/08/2022	8:00	1.3	112.5	10/08/2022	8:00	1.3	270	11/08/2022	8:00	1.3	135	12/08/2022	8:00	1.8	22.5
09/08/2022	9:00	1.8	112.5	10/08/2022	9:00	1.8	112.5	11/08/2022	9:00	1.3	135	12/08/2022	9:00	2.7	135
09/08/2022	10:00	2.2	112.5	10/08/2022	10:00	2.2	270	11/08/2022	10:00	1.3	247.5	12/08/2022	10:00	0.4	180
09/08/2022	11:00	1.3	90	10/08/2022	11:00	1.3	45	11/08/2022	11:00	1.3	247.5	12/08/2022	11:00	0.9	337.5
09/08/2022	12:00	1.8	90	10/08/2022	12:00	1.3	270	11/08/2022	12:00	1.8	270	12/08/2022	12:00	1.3	22.5
09/08/2022	13:00	1.8	112.5	10/08/2022	13:00	0.9	225	11/08/2022	13:00	2.7	247.5	12/08/2022	13:00	1.3	67.5
09/08/2022	14:00	1.8	112.5	10/08/2022	14:00	1.8	270	11/08/2022	14:00	0.9	247.5	12/08/2022	14:00	1.3	337.5
09/08/2022	15:00	1.8	112.5	10/08/2022	15:00	0.9	270	11/08/2022	15:00	1.8	247.5	12/08/2022	15:00	0.9	22.5
09/08/2022	16:00	1.3	112.5	10/08/2022	16:00	0.9	112.5	11/08/2022	16:00	1.3	225	12/08/2022	16:00	2.2	22.5
09/08/2022	17:00	1.3	112.5	10/08/2022	17:00	1.3	112.5	11/08/2022	17:00	1.8	247.5	12/08/2022	17:00	2.2	315
09/08/2022	18:00	1.8	90	10/08/2022	18:00	1.3	135	11/08/2022	18:00	1.8	135	12/08/2022	18:00	1.8	90
09/08/2022	19:00	2.2	112.5	10/08/2022	19:00	1.8	135	11/08/2022	19:00	1.3	90	12/08/2022	19:00	1.8	112.5
09/08/2022	20:00	2.2	112.5	10/08/2022	20:00	1.3	112.5	11/08/2022	20:00	1.8	292.5	12/08/2022	20:00	2.2	112.5
09/08/2022	21:00	2.2	112.5	10/08/2022	21:00	1.8	90	11/08/2022	21:00	1.3	292.5	12/08/2022	21:00	1.3	112.5
09/08/2022	22:00	1.8	90	10/08/2022	22:00	1.3	135	11/08/2022	22:00	2.7	292.5	12/08/2022	22:00	1.8	135
09/08/2022	23:00	1.3	112.5	10/08/2022	23:00	1.3	112.5	11/08/2022	23:00	1.3	135	12/08/2022	23:00	2.2	135

Date	Time	Wind Speed (m/s)	Wind Direction	Date Date	Time	Wind Speed (m/s)	Wind Direction	Date	Time	Wind Speed (m/s)	Wind Direction	Date	Time	Wind Speed (m/s)	Wind Direction
13/08/2022	0:00	1.3	90	14/08/2022	0:00	0.9	112.5	15/08/2022	0:00	0.9	135	16/08/2022	0:00	0.4	135
13/08/2022	1:00	1.3	90	14/08/2022	1:00	1.3	90	15/08/2022	1:00	0.9	135	16/08/2022	1:00	0.4	112.5
13/08/2022	2:00	0.4	225	14/08/2022	2:00	0.9	270	15/08/2022	2:00	0.9	112.5	16/08/2022	2:00	0.4	112.5
13/08/2022	3:00	0.9	225	14/08/2022	3:00	0.9	135	15/08/2022	3:00	0.9	90	16/08/2022	3:00	0.4	67.5
13/08/2022	4:00	0.4	270	14/08/2022	4:00	0.9	135	15/08/2022	4:00	0.4	112.5	16/08/2022	4:00	0.4	45
13/08/2022	5:00	0.9	292.5	14/08/2022	5:00	0.9	112.5	15/08/2022	5:00	0.4	135	16/08/2022	5:00	0.4	67.5
13/08/2022	6:00	0.9	270	14/08/2022	6:00	1.3	247.5	15/08/2022	6:00	0.4	270	16/08/2022	6:00	0.9	45
13/08/2022	7:00	0.9	292.5	14/08/2022	7:00	0.9	202.5	15/08/2022	7:00	0.4	270	16/08/2022	7:00	0.4	67.5
13/08/2022	8:00	0.4	270	14/08/2022	8:00	1.3	112.5	15/08/2022	8:00	0.4	270	16/08/2022	8:00	0.4	67.5
13/08/2022	9:00	0.9	270	14/08/2022	9:00	1.3	135	15/08/2022	9:00	0.9	225	16/08/2022	9:00	0.4	67.5
13/08/2022	10:00	0.9	90	14/08/2022	10:00	0.9	112.5	15/08/2022	10:00	0.9	225	16/08/2022	10:00	0.9	90
13/08/2022	11:00	1.3	112.5	14/08/2022	11:00	0.9	112.5	15/08/2022	11:00	1.3	202.5	16/08/2022	11:00	0.9	112.5
13/08/2022	12:00	0.9	270	14/08/2022	12:00	0.9	112.5	15/08/2022	12:00	1.3	247.5	16/08/2022	12:00	1.3	90
13/08/2022	13:00	0.4	112.5	14/08/2022	13:00	0.9	337.5	15/08/2022	13:00	1.3	270	16/08/2022	13:00	1.3	67.5
13/08/2022	14:00	0	135	14/08/2022	14:00	0.9	22.5	15/08/2022	14:00	1.3	247.5	16/08/2022	14:00	0.4	67.5
13/08/2022	15:00	0	135	14/08/2022	15:00	0.9	315	15/08/2022	15:00	0.4	247.5	16/08/2022	15:00	0.4	67.5
13/08/2022	16:00	0.4	112.5	14/08/2022	16:00	1.3	112.5	15/08/2022	16:00	0.9	247.5	16/08/2022	16:00	0.4	45
13/08/2022	17:00	0.9	112.5	14/08/2022	17:00	0.9	67.5	15/08/2022	17:00	0.4	225	16/08/2022	17:00	1.3	112.5
13/08/2022	18:00	0.9	112.5	14/08/2022	18:00	0.9	292.5	15/08/2022	18:00	0.9	22.5	16/08/2022	18:00	1.3	112.5
13/08/2022	19:00	0	135	14/08/2022	19:00	1.3	247.5	15/08/2022	19:00	1.3	67.5	16/08/2022	19:00	1.3	90
13/08/2022	20:00	0.4	112.5	14/08/2022	20:00	1.8	247.5	15/08/2022	20:00	1.8	135	16/08/2022	20:00	1.3	45
13/08/2022	21:00	0.4	112.5	14/08/2022	21:00	1.3	225	15/08/2022	21:00	1.3	112.5	16/08/2022	21:00	1.8	112.5
13/08/2022	22:00	0.4	90	14/08/2022	22:00	1.8	247.5	15/08/2022	22:00	1.3	112.5	16/08/2022	22:00	2.7	270
13/08/2022	23:00	0.4	135	14/08/2022	23:00	1.3	225	15/08/2022	23:00	1.3	112.5	16/08/2022	23:00	0.9	315

Date	Time	Wind Speed (m/s)	Wind Direction												
17/08/2022	0:00	0.4	112.5	18/08/2022	0:00	1.3	270	19/08/2022	0:00	1.3	337.5	20/08/2022	0:00	1.8	67.5
17/08/2022	1:00	0.4	180	18/08/2022	1:00	1.3	315	19/08/2022	1:00	1.3	22.5	20/08/2022	1:00	0.9	247.5
17/08/2022	2:00	0.9	135	18/08/2022	2:00	1.3	45	19/08/2022	2:00	1.3	315	20/08/2022	2:00	2.2	247.5
17/08/2022	3:00	0.9	112.5	18/08/2022	3:00	1.3	270	19/08/2022	3:00	1.3	112.5	20/08/2022	3:00	0.9	90
17/08/2022	4:00	1.3	135	18/08/2022	4:00	1.3	247.5	19/08/2022	4:00	1.3	67.5	20/08/2022	4:00	0.9	90
17/08/2022	5:00	0.9	135	18/08/2022	5:00	1.3	247.5	19/08/2022	5:00	0.9	292.5	20/08/2022	5:00	0.4	135
17/08/2022	6:00	0.9	112.5	18/08/2022	6:00	0.9	270	19/08/2022	6:00	0.9	112.5	20/08/2022	6:00	0.4	135
17/08/2022	7:00	0.9	135	18/08/2022	7:00	0.9	247.5	19/08/2022	7:00	0.9	292.5	20/08/2022	7:00	0.9	112.5
17/08/2022	8:00	1.3	157.5	18/08/2022	8:00	0.9	247.5	19/08/2022	8:00	0.9	45	20/08/2022	8:00	0.9	112.5
17/08/2022	9:00	1.3	90	18/08/2022	9:00	0.9	270	19/08/2022	9:00	0.4	67.5	20/08/2022	9:00	0.4	112.5
17/08/2022	10:00	0.9	135	18/08/2022	10:00	1.3	90	19/08/2022	10:00	0.9	22.5	20/08/2022	10:00	0.9	90
17/08/2022	11:00	1.8	112.5	18/08/2022	11:00	0.9	67.5	19/08/2022	11:00	0.9	157.5	20/08/2022	11:00	0.9	112.5
17/08/2022	12:00	1.3	90	18/08/2022	12:00	1.3	90	19/08/2022	12:00	0.9	67.5	20/08/2022	12:00	0.9	90
17/08/2022	13:00	1.3	90	18/08/2022	13:00	0.9	90	19/08/2022	13:00	0.4	135	20/08/2022	13:00	0.9	112.5
17/08/2022	14:00	0.9	135	18/08/2022	14:00	2.7	90	19/08/2022	14:00	0.9	90	20/08/2022	14:00	0.9	180
17/08/2022	15:00	1.3	90	18/08/2022	15:00	2.2	90	19/08/2022	15:00	0.9	157.5	20/08/2022	15:00	0.9	247.5
17/08/2022	16:00	0.9	135	18/08/2022	16:00	1.8	67.5	19/08/2022	16:00	0.9	157.5	20/08/2022	16:00	0.9	225
17/08/2022	17:00	1.3	90	18/08/2022	17:00	1.3	90	19/08/2022	17:00	0.4	135	20/08/2022	17:00	1.3	225
17/08/2022	18:00	1.8	90	18/08/2022	18:00	1.8	112.5	19/08/2022	18:00	0.4	90	20/08/2022	18:00	0.4	247.5
17/08/2022	19:00	1.3	90	18/08/2022	19:00	1.3	67.5	19/08/2022	19:00	0.9	135	20/08/2022	19:00	0.4	247.5
17/08/2022	20:00	1.3	90	18/08/2022	20:00	1.3	112.5	19/08/2022	20:00	0.9	112.5	20/08/2022	20:00	0.4	247.5
17/08/2022	21:00	1.3	67.5	18/08/2022	21:00	0.9	90	19/08/2022	21:00	0.9	157.5	20/08/2022	21:00	0.4	315
17/08/2022	22:00	1.3	67.5	18/08/2022	22:00	0.9	112.5	19/08/2022	22:00	0.4	270	20/08/2022	22:00	1.8	270
17/08/2022	23:00	0.9	90	18/08/2022	23:00	0.9	112.5	19/08/2022	23:00	0.4	112.5	20/08/2022	23:00	1.8	270

Date	Time	Wind Speed (m/s)	Wind Direction												
21/08/2022	0:00	1.8	112.5	22/08/2022	0:00	0.9	90	23/08/2022	0:00	0.9	135	24/08/2022	0:00	2.2	270
21/08/2022	1:00	1.3	112.5	22/08/2022	1:00	0.4	247.5	23/08/2022	1:00	1.3	135	24/08/2022	1:00	1.8	135
21/08/2022	2:00	0.4	112.5	22/08/2022	2:00	0.9	225	23/08/2022	2:00	0.9	337.5	24/08/2022	2:00	1.8	135
21/08/2022	3:00	0.4	112.5	22/08/2022	3:00	0.4	225	23/08/2022	3:00	0.9	292.5	24/08/2022	3:00	0.9	225
21/08/2022	4:00	0.4	135	22/08/2022	4:00	0.9	247.5	23/08/2022	4:00	0.9	292.5	24/08/2022	4:00	0.4	225
21/08/2022	5:00	0.9	112.5	22/08/2022	5:00	0.9	247.5	23/08/2022	5:00	1.3	270	24/08/2022	5:00	0.4	270
21/08/2022	6:00	0.9	90	22/08/2022	6:00	0.4	225	23/08/2022	6:00	0.9	270	24/08/2022	6:00	0.9	225
21/08/2022	7:00	0.9	135	22/08/2022	7:00	0.4	225	23/08/2022	7:00	1.8	292.5	24/08/2022	7:00	0.9	247.5
21/08/2022	8:00	1.3	112.5	22/08/2022	8:00	0.4	292.5	23/08/2022	8:00	1.8	247.5	24/08/2022	8:00	0.9	247.5
21/08/2022	9:00	1.3	112.5	22/08/2022	9:00	0.4	112.5	23/08/2022	9:00	0.4	247.5	24/08/2022	9:00	0.9	247.5
21/08/2022	10:00	0.9	112.5	22/08/2022	10:00	0.4	135	23/08/2022	10:00	0.4	247.5	24/08/2022	10:00	0.9	225
21/08/2022	11:00	1.3	112.5	22/08/2022	11:00	0.9	135	23/08/2022	11:00	0.4	202.5	24/08/2022	11:00	0.9	225
21/08/2022	12:00	0.9	67.5	22/08/2022	12:00	0.9	247.5	23/08/2022	12:00	1.3	247.5	24/08/2022	12:00	1.3	247.5
21/08/2022	13:00	0.9	90	22/08/2022	13:00	0.9	270	23/08/2022	13:00	0.9	247.5	24/08/2022	13:00	1.8	247.5
21/08/2022	14:00	1.3	135	22/08/2022	14:00	0.9	292.5	23/08/2022	14:00	0.9	247.5	24/08/2022	14:00	1.8	247.5
21/08/2022	15:00	0.4	135	22/08/2022	15:00	0.4	292.5	23/08/2022	15:00	0.4	270	24/08/2022	15:00	1.3	247.5
21/08/2022	16:00	0.4	135	22/08/2022	16:00	1.8	292.5	23/08/2022	16:00	0.4	157.5	24/08/2022	16:00	1.3	225
21/08/2022	17:00	0.9	135	22/08/2022	17:00	2.2	225	23/08/2022	17:00	0.9	90	24/08/2022	17:00	1.3	247.5
21/08/2022	18:00	0.4	135	22/08/2022	18:00	2.2	270	23/08/2022	18:00	0.9	270	24/08/2022	18:00	1.3	112.5
21/08/2022	19:00	0.9	135	22/08/2022	19:00	1.8	90	23/08/2022	19:00	0.4	270	24/08/2022	19:00	1.3	112.5
21/08/2022	20:00	0.4	135	22/08/2022	20:00	1.3	112.5	23/08/2022	20:00	0.9	247.5	24/08/2022	20:00	1.3	112.5
21/08/2022	21:00	0.4	135	22/08/2022	21:00	0.9	292.5	23/08/2022	21:00	0.4	270	24/08/2022	21:00	0.9	337.5
21/08/2022	22:00	0.4	247.5	22/08/2022	22:00	0.4	270	23/08/2022	22:00	1.3	157.5	24/08/2022	22:00	0.4	22.5
21/08/2022	23:00	0.4	202.5	22/08/2022	23:00	0.4	270	23/08/2022	23:00	0.9	67.5	24/08/2022	23:00	0.4	315

Date	Time	Wind Speed (m/s)	Wind Direction												
25/08/2022	0:00	0.4	112.5	26/08/2022	0:00	1.3	135	27/08/2022	0:00	2.2	112.5	28/08/2022	0:00	0.9	112.5
25/08/2022	1:00	0.4	135	26/08/2022	1:00	0.4	135	27/08/2022	1:00	1.3	247.5	28/08/2022	1:00	1.3	67.5
25/08/2022	2:00	1.8	112.5	26/08/2022	2:00	0.9	135	27/08/2022	2:00	1.8	225	28/08/2022	2:00	0.9	292.5
25/08/2022	3:00	1.8	112.5	26/08/2022	3:00	0.9	90	27/08/2022	3:00	2.2	202.5	28/08/2022	3:00	0.9	112.5
25/08/2022	4:00	1.3	225	26/08/2022	4:00	0.4	90	27/08/2022	4:00	2.2	90	28/08/2022	4:00	0.9	135
25/08/2022	5:00	1.8	247.5	26/08/2022	5:00	0.4	22.5	27/08/2022	5:00	1.8	22.5	28/08/2022	5:00	0.9	112.5
25/08/2022	6:00	2.2	247.5	26/08/2022	6:00	0.4	247.5	27/08/2022	6:00	1.8	90	28/08/2022	6:00	0.9	135
25/08/2022	7:00	2.2	225	26/08/2022	7:00	0.9	270	27/08/2022	7:00	2.2	225	28/08/2022	7:00	0.9	112.5
25/08/2022	8:00	2.2	247.5	26/08/2022	8:00	0.9	67.5	27/08/2022	8:00	2.2	247.5	28/08/2022	8:00	0.9	90
25/08/2022	9:00	2.2	270	26/08/2022	9:00	0.9	225	27/08/2022	9:00	2.2	247.5	28/08/2022	9:00	0.4	135
25/08/2022	10:00	2.2	157.5	26/08/2022	10:00	0.9	225	27/08/2022	10:00	1.8	112.5	28/08/2022	10:00	0.4	90
25/08/2022	11:00	1.8	225	26/08/2022	11:00	0.9	225	27/08/2022	11:00	1.8	45	28/08/2022	11:00	0.9	135
25/08/2022	12:00	2.2	225	26/08/2022	12:00	0.9	202.5	27/08/2022	12:00	0.9	90	28/08/2022	12:00	0.9	90
25/08/2022	13:00	1.8	22.5	26/08/2022	13:00	0.4	270	27/08/2022	13:00	0.9	202.5	28/08/2022	13:00	0.4	135
25/08/2022	14:00	1.3	225	26/08/2022	14:00	0.4	247.5	27/08/2022	14:00	0.4	225	28/08/2022	14:00	0.9	90
25/08/2022	15:00	2.2	225	26/08/2022	15:00	0.4	225	27/08/2022	15:00	0.9	247.5	28/08/2022	15:00	0.9	90
25/08/2022	16:00	1.8	225	26/08/2022	16:00	0.4	225	27/08/2022	16:00	0.9	270	28/08/2022	16:00	0.9	292.5
25/08/2022	17:00	2.2	247.5	26/08/2022	17:00	0.9	247.5	27/08/2022	17:00	1.3	292.5	28/08/2022	17:00	0.9	112.5
25/08/2022	18:00	1.8	225	26/08/2022	18:00	0.4	225	27/08/2022	18:00	0.9	270	28/08/2022	18:00	0.9	112.5
25/08/2022	19:00	1.3	225	26/08/2022	19:00	0.9	225	27/08/2022	19:00	0.4	247.5	28/08/2022	19:00	0.9	112.5
25/08/2022	20:00	1.3	135	26/08/2022	20:00	0.9	247.5	27/08/2022	20:00	0.9	112.5	28/08/2022	20:00	0.9	112.5
25/08/2022	21:00	1.3	225	26/08/2022	21:00	0.9	225	27/08/2022	21:00	0.9	112.5	28/08/2022	21:00	0.9	112.5
25/08/2022	22:00	1.3	225	26/08/2022	22:00	1.8	247.5	27/08/2022	22:00	0.4	247.5	28/08/2022	22:00	0.9	135
25/08/2022	23:00	0.4	247.5	26/08/2022	23:00	1.3	247.5	27/08/2022	23:00	0.9	247.5	28/08/2022	23:00	1.3	112.5

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
29/08/2022	0:00	2.2	247.5	30/08/2022	0:00	0.9	90	31/08/2022	0:00	0.4	270				
29/08/2022	1:00	1.3	247.5	30/08/2022	1:00	0.9	90	31/08/2022	1:00	0.9	270				
29/08/2022	2:00	1.8	270	30/08/2022	2:00	0.4	135	31/08/2022	2:00	0.4	112.5				
29/08/2022	3:00	1.8	270	30/08/2022	3:00	0.4	112.5	31/08/2022	3:00	0.4	247.5				
29/08/2022	4:00	1.3	270	30/08/2022	4:00	0.4	112.5	31/08/2022	4:00	0.9	225				
29/08/2022	5:00	0.9	247.5	30/08/2022	5:00	1.3	90	31/08/2022	5:00	0.4	247.5				
29/08/2022	6:00	0.9	337.5	30/08/2022	6:00	1.3	135	31/08/2022	6:00	0.4	247.5				
29/08/2022	7:00	0.4	225	30/08/2022	7:00	0.9	112.5	31/08/2022	7:00	0.4	112.5				
29/08/2022	8:00	0.4	270	30/08/2022	8:00	1.3	112.5	31/08/2022	8:00	0.9	112.5				
29/08/2022	9:00	0.9	225	30/08/2022	9:00	1.3	112.5	31/08/2022	9:00	0.9	135				
29/08/2022	10:00	0.4	247.5	30/08/2022	10:00	1.3	90	31/08/2022	10:00	0.9	112.5				
29/08/2022	11:00	0.4	225	30/08/2022	11:00	1.3	90	31/08/2022	11:00	0.9	112.5				
29/08/2022	12:00	0.9	247.5	30/08/2022	12:00	0.9	90	31/08/2022	12:00	0.9	112.5				
29/08/2022	13:00	0.9	225	30/08/2022	13:00	0.9	135	31/08/2022	13:00	0.9	112.5				
29/08/2022	14:00	0.9	90	30/08/2022	14:00	0.9	135	31/08/2022	14:00	0.9	112.5				
29/08/2022	15:00	0.4	112.5	30/08/2022	15:00	0.9	22.5	31/08/2022	15:00	0.9	112.5				
29/08/2022	16:00	0.9	225	30/08/2022	16:00	0.4	157.5	31/08/2022	16:00	0.9	112.5				
29/08/2022	17:00	0.9	247.5	30/08/2022	17:00	0.4	67.5	31/08/2022	17:00	0.4	112.5				
29/08/2025	18:00	0.9	112.5	30/08/2022	18:00	1.3	112.5	31/08/2022	18:00	0.9	135				
29/08/2022	19:00	0.4	67.5	30/08/2022	19:00	1.3	112.5	31/08/2022	19:00	1.3	112.5	_			
29/08/2022	20:00	0.9	202.5	30/08/2022	20:00	1.3	90	31/08/2022	20:00	1.3	135				
29/08/2022	21:00	0.4	270	30/08/2022	21:00	1.8	90	31/08/2022	21:00	1.3	135				
29/08/2022	22:00	0.4	112.5	30/08/2022	22:00	0.9	135	31/08/2022	22:00	1.3	135				
29/08/2022	23:00	0.4	90	30/08/2022	23:00	0.4	45	31/08/2022	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 w	eight (g)	Particulate	Elapse	Time	Sampling Time	Flow (cf		Av. Flow	Total vol.	Conc.
		(°C)	(hPa)	Initial	Final	weight (g)	Initial	Final	(min)	Initial	Final	(m³/min)	(m^3)	$(\mu g/m^3)$
02/08/2022	Sunny	35.8	1007.1	18.1004	18.1902	0.0898	2022/8/2 9:11	2022/8/3 9:11	1440	50	50	1.31	1891	47
08/08/2022	Cloudy	25.8	1006.3	18.0228	18.0926	0.0698	2022/8/8 13:30	2022/8/9 13:30	1440	50	50	1.34	1923	36
13/08/2022	Sunny	30.8	1008	14.7346	14.7969	0.0623	2022/8/13 13:14	2022/8/14 13:14	1440	50	50	1.33	1908	33
19/08/2022	Cloudy	27.7	1004.9	17.7123	17.785	0.0727	2022/8/19 9:18	2022/8/20 9:18	1440	50	50	1.33	1915	38
25/08/2022	Cloudy	30.0	1006.3	14.7855	14.8867	0.1012	2022/8/25 11:17	2022/8/26 11:17	1440	46	46	1.22	1752	58
31/08/2022	Cloudy	33.3	1006.7	17.8203	17.8549	0.0346	2022/8/31 9:25	2022/9/1 9:25	1440	46	46	1.20	1728	20

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

Start Date	Weather	Air Temp.	Atmospheric Pressure	Filter we	eight (g)	Particulate	Elapse	Time	Sampling Time	Flow (cf	Rate m)	Av. Flow	Total vol.	Conc.
		(°C)	(hPa)	Initial	Final	weight (g)	Initial	Final	(min)	Initial	Final	(m ³ /min)	(m^3)	$(\mu g/m^3)$
02/08/2022	Sunny	35.8	1007.1	18.8657	18.9419	0.0762	4208.86	4232.87	1441	46	46	1.23	1768	43
08/08/2022	Cloudy	25.8	1006.3	17.8932	17.9527	0.0595	4233.65	4257.67	1441	46	46	1.25	1798	33
13/08/2022	Sunny	30.8	1008	17.8683	17.9912	0.1229	4257.85	4281.86	1441	46	46	1.24	1784	69
19/08/2022	Cloudy	27.7	1004.9	18.2324	18.3225	0.0901	4282.65	4306.67	1441	46	46	1.24	1791	50
25/08/2022	Cloudy	30.0	1006.3	18.0483	18.1263	0.078	4307.61	4331.62	1441	46	46	1.24	1785	44
31/08/2022	Cloudy	33.3	1006.7	18.0939	18.1704	0.0765	4332.24	4356.25	1441	46	46	1.23	1774	43

 Maximum
 69

 Minimum
 33

 Average
 47

 Action Level
 187

 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	Rate m)	Av. Flow	Total vol.	Conc.
		(°C)	(hPa)	Initial	Final	weight (g)	Initial	Final	(min)	Initial	Final	(m ³ /min)	(m^3)	$(\mu g/m^3)$
02/08/2022	Sunny	35.8	1007.1	17.9824	18.0559	0.0735	9382.39	9406.41	1441	50	50	1.39	2005	37
08/08/2022	Cloudy	25.8	1006.3	18.0377	18.1149	0.0772	9406.91	9430.93	1441	50	50	1.41	2038	38
13/08/2022	Sunny	30.8	1008	17.8032	17.8908	0.0876	9431.09	9455.11	1441	50	50	1.40	2022	43
19/08/2022	Cloudy	27.7	1004.9	14.9254	14.9813	0.0559	9455.65	9479.67	1441	50	50	1.41	2030	28
25/08/2022	Cloudy	30.0	1006.3	15.1184	15.1817	0.0633	9480.72	9504.73	1441	52	52	1.46	2104	30
31/08/2022	Cloudy	33.3	1006.7	14.9513	15.0986	0.1473	9505.21	9529.23	1441	52	52	1.41	2027	73
		•		•	•	•	•				·	Maxin	nıım	73

 Maximum
 73

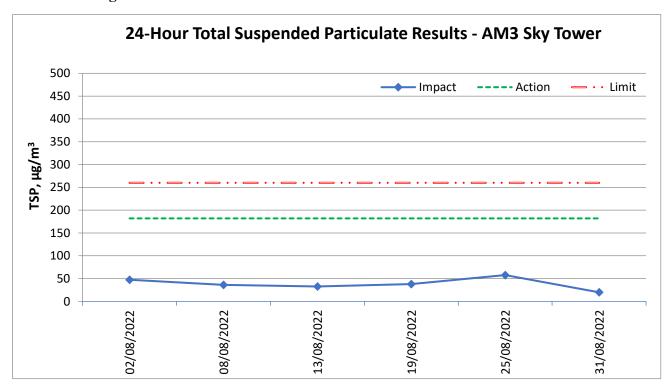
 Minimum
 28

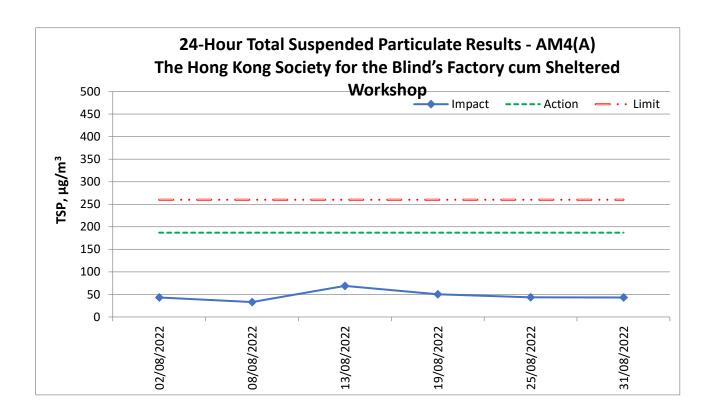
 Average
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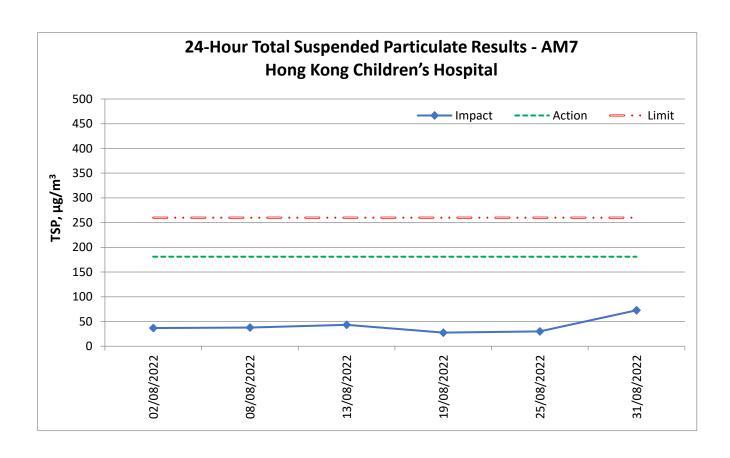
 Action Level
 181

 Limit Level
 260

24-hour average TSP







Appendix H – 1-hr	TSP monitoring resu	ılts and graphical presentation	n

Location:
AM3 Sky Tower

Date	Measurement Period		nt Period	1-hr TSP concentration, μg/m ³	Weather
	9:00	1	10:00	35	
02/08/2022	10:00	-	11:00	37	Sunny
	11:00	-	12:00	38	
	13:00	-	14:00	32	
08/08/2022	14:00	-	15:00	36	Cloudy
	15:00	-	16:00	36	
	13:00	ı	14:00	30	
13/08/2022	14:00	-	15:00	33	Sunny
	15:00	-	16:00	37	
	9:00	-	10:00	36	
19/08/2022	10:00	-	11:00	36	Cloudy
	11:00	-	12:00	40	
	11:00	-	12:00	50	
25/08/2022	13:00	-	14:00	53	Cloudy
	14:00	-	15:00	55	
	9:00	-	10:00	31	
31/08/2022	10:00	-	11:00	33	Cloudy
	11:00	-	12:00	30	
Maximum				55	
Minimum		30			
Average				38	
Ac	tion Level			297	
Li	mit Level			500	

Location:

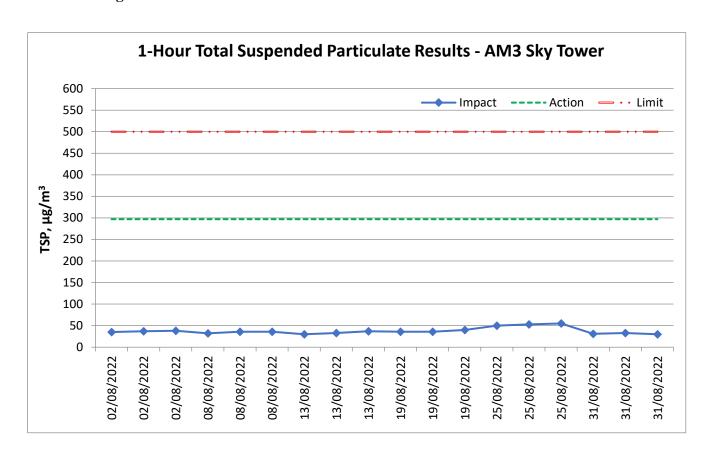
AM4(A)
The Hong Kong
Society for the
Blind's Factory
cum Sheltered
Workshop

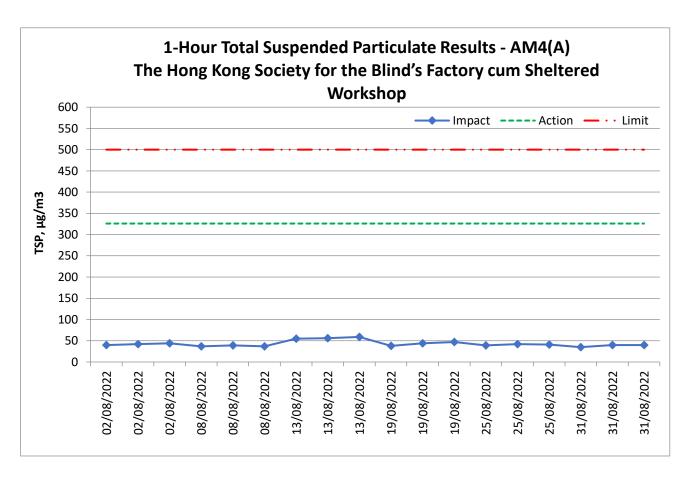
Date	Measurement Period		nt Period	1-hr TSP concentration, μg/m ³	Weather
	9:00	-	10:00	40	
02/08/2022	10:00	-	11:00	42	Sunny
	11:00	-	12:00	44	
	13:00	-	14:00	37	
08/08/2022	14:00	-	15:00	39	Cloudy
	15:00	-	16:00	37	
	9:00	-	10:00	55	
13/08/2022	10:00	-	11:00	56	Sunny
	11:00	-	12:00	59	
	9:00	-	10:00	38	
19/08/2022	10:00	-	11:00	44	Cloudy
	11:00	-	12:00	47	
	13:00	-	14:00	39	
25/08/2022	14:00	-	15:00	42	Cloudy
	15:00	-	16:00	41	
	13:00	-	14:00	35	
31/08/2022	14:00	-	15:00	40	Cloudy
	15:00	-	16:00	40	
Maximum				59	
Minimum				35	
Average				43	
Ac	tion Level			326	
Li	mit Level			500	

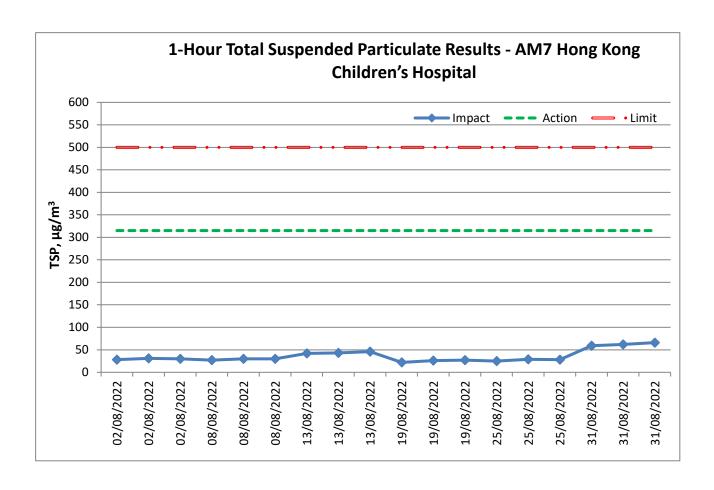
Location:
AM7 Hong Kong
Children's
Hospital

Date	Measurement Period			1-hr TSP concentration, μg/m ³	Weather
	13:00	-	14:00	28	
02/08/2022	14:00	-	15:00	31	Sunny
	15:00	1	16:00	30	
	9:00	-	10:00	27	
08/08/2022	10:00	-	11:00	30	Cloudy
	11:00	-	12:00	30	
	13:00	-	14:00	42	
13/08/2022	14:00	-	15:00	43	Sunny
	15:00	-	16:00	46	-
	13:00	1	14:00	22	
19/08/2022	14:00	-	15:00	26	Cloudy
	15:00	-	16:00	27	
	11:00	1	12:00	25	
25/08/2022	16:00	1	17:00	29	Cloudy
	17:00	1	18:00	28	
	9:00	-	10:00	59	
31/08/2022	10:00	1	11:00	62	Cloudy
	11:00	-	12:00	66	
Maximum		66			
N	Minimum		22		
I	Average			36	
Ac	tion Level			315	
Li	mit Level			500	

1-hour average TSP







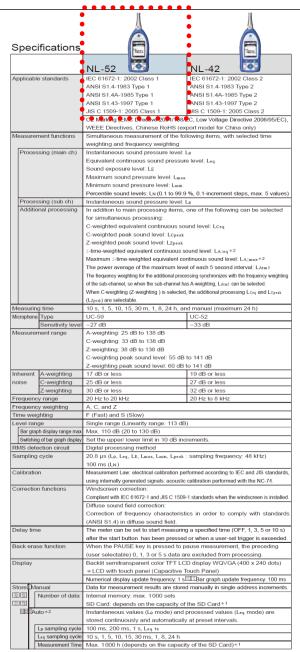
Appendix I – Event and Action Plan for air quality

T		Ac	tion	
Event	ET	IEC	Supervisor / ER	Contractor
Action Level being exceeded by one sampling	 Identify source and investigate the causes of exceedance; Inform Contractor, IEC and Supervisor /ER; Repeat measurement to confirm finding. 	 Check monitoring data submitted by ET; Check Contractor's working method. 	1. Notify Contractor.	 Rectify any unacceptable practice; Amend working methods if appropriate.
Action Level being exceeded by two or more consecutive sampling	 Identify source and investigate the causes of exceedance; Inform Contractor, IEC and Supervisor /ER; 	 Check monitoring data submitted by ET; Check Contractor's working method; Discuss with ET and 	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
	 Increase monitoring frequency to daily; Discuss with IEC and Contractor on remedial actions required; 	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;
	 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 additional monitoring. 	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}	 Confirm receipt of notification of exceedance in writing; Notify Contractor; In consolidation with the IEC, agree with the Contractor on the remedial 	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.	 implemented; Supervise implementation of remedial measures; Conduct meeting with ET and IEC if exceedance continues. 	within three working days of notification; 4. Implement the agreed proposals.	
Limit Level being exceeded by two or more consecutive sampling	 Notify IEC, Supervisor /ER, Contractor and EPD; Repeat measurement to confirm findings; Carry out analysis of Contractor's working procedures to identify source and investigate the causes of exceedance; Increase monitoring frequency to daily; Arrange meeting with IEC, Supervisor /ER and Contractor to discuss the remedial action to be taken; Assess effectiveness of Contractor's remedial actions and keep EPD, IEC and Supervisor /ER informed of the results; If exceedance stop, cease 	 Check monitoring data submitted by ET; Check Contractor's working method; Discuss with Supervisor /ER, ET, and Contractor on the potential remedial actions; Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the Supervisor /ER accordingly. 	 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 implemented; Supervise 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. 	 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 within three working days of notification; Implement the agreed proposals; Submit further remedial actions if problem still not under control; Stop the relevant portion of works as instructed by the Supervisor /ER until the exceedance is abated. 	

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

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 recall					
	,	Start up via file settings previously stored on SD card possible					
Waveform 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						
	AC output	Output AC signals using a frequency weighting characteristic selected by processing or by A, C, Z-weighting.					
	Output voltage	1 V (rms values) at bar graph display full scale					
	Comparator	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 dis					
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						
	oe of Instantaneous value	Lp					
dat	1 10000000 14140	Leq, Lmax, Lmin, Lpeak					
Ou	tput 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

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: 2HB21001749-0004 Certificate No.



委托单位: _ Client	Castco Testing Centre Limited					
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.		00921213				
管理号: _ Asset No.		AAST-SLM-04				
接收日期: _	2021-08-05	校准日期:	2021-08-16			
Rec. Date 签发日期:	2021-08-17	Cal. Date 建议校准周期:	12个月(12 months)			
App. Date	新校准项	Reference Cal. Peri 目合格(Passed at Calibra				

印章:

Stamp

Email: cal@ceprei.com

Website: www.ceprei-cal.com

Approved by

结论:

Conclusion

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 阿比: www.ceprei-cal.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

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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 Hz~20kHz).
- · SEALEJ:
 · 详细内答语查看CNAS网络中注册编号为L1334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 resultis/conclusions are based are outside the exope of accreditation.)

名称	证书号/有效期/溯源单位 (Certificate No./Due Date/Traceability to)	技术指标 (Specification)	测量范围 (Measuring Range)
(Description) 数字多用表	(Certificate No./Due Date/Traceability to) 4GC20000467-0001/2021-11-26/賽宝(广州)	(Specification) DCV: ±0.0035%; ACV: ± 0.06%; DCI: ±0.05%; ACI : ±0.1%; R: ±0.01%; f: ±0.001%	DCV:(0~1000)V: ACV
正弦信号发生器	4GC20000427-0010/2021-11-04/賽宝(广州)	Distortion: <-70dB	f: 0.001Hz~200kHz; <i>l</i> : 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)	频率:Urel=0.001%,k=2;电压: Urel=0.04%,k=2	頻率:0.001Hz~51.2kHz, 电压:(1×10 ⁻⁵ ~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)	頻率响应: ±1dB, 失真度 : ≤0.2%	20Hz~20kHz
步进衰减器		±3dB	(0~110) dB/10dB ste @(DC~1GHz)
声校准器	4GC20000502-0050/2021-12-21/賽宝(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

环境条件(Environmental conditions): 温度(Temperature): 23.9°C 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","NA"代表"不适用或技术指标暂时无法确认等"。本证书报告的结论仅供参考,使用人员应结合实际测量的要求合理使用,如考虑测量结果测量不确定度的影响等。

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

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A A C.L. brother belief A TV	7 1 1 d et					
4 A计权特性(A-W 頻率	yeignting Cha 实测值	racteristic) 理论值	39 46	A 16 18 46	64.18	12.0
(Frequency)	失何但 (Actual)	理比组 (Theoretical value)	误差	允许误差	结论	U
(Hz)	(dB)	(dB)	(Error)	(Limit)	(Pass/Fail)	(k=2
20	-50.5	-50.5	(dB)	(dB)	(P/F)	(dB
25	-30.3	-30.3 -44.7	0.0	±2.0	P	0.5
31.5	-39.7	-39.4	-0.3	+2.0 ~ -1.5	P	0.5
40	-34.5	-34.6	0.1	±1.5	P	0.5
50	-34.3	-30.2	0.0	±1.0	P	0.5
63	-26.1	-30.2	0.0	±1.0	P	0.5
80	-22.4	-20.2	0.1	±1.0	P	0.5
100	-19.1	-19.1	0.0	±1.0	P	0.5
125	-16.0	-16.1	0.0	±1.0	P	0.5
160	-12.9	-13.4	0.5	±1.0	P	0.5
200	-10.7	-10.9	0.2	±1.0	P	0.5
250	-8.5	-8.6	0.1	±1.0 ±1.0	P P	0.5
315	-6.6	-6.6	0.0			0.5
400	-4.6	-4.8	0.0	±1.0	P	0.4
500	-3.1	-3.2	0.1	±1.0	P P	0.4
630	-1.8	-1.9	0.1	±1.0		0.4
800	-0.7	-0.8	0.1	±1.0	P	0.4
1000(Ref.)	0.0	0.0	0.0	±1.0	P	0.4
1250	0.6	0.6		±0.7	P	0.4
1600	1.0	1.0	0.0	±1.0	P	0.6
2000	1.1	1.2	-0.1	±1.0	P	0.6
2500	1.1	1.3		±1.0	P	0.6
3150	1.0	1.2	-0.2 -0.2	±1.0	P	0.6
4000	0.7	1.0	-0.2	±1.0 ±1.0	P P	0.6
5000	0.4	0.5	-0.3			0.6
6300	-0.2	-0.1	-0.1	±1.5 +1.5 ~ -2.0	P	0.6
8000	-0.9	-1.1	0.2	+1.5 ~ -2.5	P	0.6
10000	-2.3	-2.5	0.2	+1.5 ~ -2.5	P	0.6
12500	-4.3	-4.3	0.0	+2.0 ~ -5.0	P	0.6
16000	-8.5	-6.6	-1.9	+2.0 ~ -3.0	P P	1.0
20000	-18.4	-9.3	-9.1	+3.0 ~ -∞		1.0
2000	-10.4	-9.3	-9.1	+3,0 ~ -∞	P	1.0

Calibration Certificate of Sound Level Meter CEPREI 证书编号(Certificate No.): 2HB21001749-0004 证书编号(Certificate No.): 2HB21001749-0004 6 自生噪声 (Autogenous noise) 5 C计权特性(C-Weighting Characteristic) 结论 U计权 实测值 允许误差 频率 实测值 理论值 误差 (Weighting) (Actual) (Pass/Fail) (k=2)(Limit) (Actual) (Theoretical value) (Error) (Frequency) (dB) (dB) (dB) (dB) (P/F) (dB) (dB) (Hz) 18.1 0.5 -0.1 ±2.0 20 -6.3 -6.2 +2.0 ~ -1.5 0.5 25 -4.6 -4.4 -0.2 以下空白/No data hereafter 0.5 -0.1 ± 1.5 31.5 -3.1 -3.0 0.5 ±1.0 0.0 40 -2.0 -2.0 ± 1.0 0.5 0.0 50 -1.3 -1.3 ±1.0 0.5 63 -0.7 -0.8 0.1 0.5 0.0 ± 1.0 -0.5 80 -0.5 0.1 ± 1.0 0.5 -0.2 -0.3 100 ±1.0 0.5 0.1 125 -0.1 -0.2 0.5 0.1 ± 1.0 -0.1 160 0.0 0.5 0.0 ±1.0 200 0.0 0.0 0.5 0.1 ±1.0 0.0 250 0.1 0.1 ±1.0 0.4 315 0.1 0.0 0.4 0.1 0.0 0.1 ± 1.0 400 0.4 0.0 0.1 ± 1.0 0.1 500 0.1 ±1.0 0.4 0.1 0.0 630 0.4 0.1 ±1.0 800 0.1 0.0 0.4 0.0 0.0 ±0.7 0.0 1000(Ref.) 0.6 -0.1 0.0 -0.1 ± 1.0 1250 0.6 ±1.0 -0.2 -0.1 -0.1 1600 0.6 -0.3 -0.2 -0.1 ±1.0 2000 0.6 -0.5 -0.3 -0.2 ± 1.0 2500 0.6 ±1.0 -0.2 3150 -0.7 -0.5 0.6 -0.3 ± 1.0 -1.1 -0.8 4000 0.6 -0.2 ±1.5 5000 -1.5 -1.3 -0.1 0.6 +1.5 ~ -2.0 -2.1 -2.0 6300 0.6 -3.0 0.0 +1.5 ~ -2.5 8000 -3.0 0.6 0.2 +2.0 ~ -3.0 -4.4 10000 -4.2 0.0 +2.0 ~ -5.0 1.0 -6.2 12500 -6.2 1.0 -1.9 +2.5 ~ -16.0 16000 -10.4 -8.5 1.0 +3.0 ~ -00 -11.2 -9.2 20000 -20.4 第 8 页,共 8 页 Page of 数据页(Data sheet) ID: 071305 第 7 页,共 8 页 数据页(Data sheet) ID: 071305 Page of



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: 2HB22001076-0002 Certificate No.



委托单位: _ Client	Ca	stco Testing Centre Limit	ed
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	2022-07-21	_ 校准日期: _ Cal. Date	2022-08-03
签发日期: App. Date	2022-08-03	建议校准周期: _ Reference Cal. Perio	12个月(12 months)
结论: Conclusion	所校准项	目合格(Passed at Calibrat	tion Items)

Calibrated by 走文红

印章: Stamp

Website: www.ceprei-cal.com

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 同址: www.ceprei-cal.com

CEPREI Calibration and Testing Centre HO 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

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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

112~20k112)。 华撰用容清连菱CNAS网络中注屏编号为1.13344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诱动不在认可 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): 证书是有效期間通過位 技术投标 测量范

名 称	业 中写/有效期/溯源平亚	1又小1日小	(2) 115 (15)
(Description)	(Certificate No./Due Date/Traceability to)	(Specification)	(Measuring Range)
声校准器	4GC21000572-0101/2022-12-07/賽宝(广州)		31.5Hz~16kHz
PULSE分析系统	4GC22000014-0140/2023-01-15/賽宝(广州)	频率:Ure=0.001%,k=2;电压: Ure=0.04%,k=2	频率:0.001Hz~51.2kHz, 电压:(1×10 ⁻⁵ ~30)V
数字多用表	4GC21000526-0026/2022-11-30/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	4GC21000496-0024/2022-11-01/賽宝(广州)	f: ±1mHz; 失真度 Distortion: <-70dB	f: 0.001Hz~200kHz; <i>U</i> : 100µV~5Vrms
标准传声器	GFJGJL1001220311961/2023-03-27/航空 304所	U=(0.05~0.20)dB (k=2)	10Hz~20kHz
前置放大器	GFJGJL1001220311960/2023-03-27/航空 304所	U=0.3dB (k=2)	(10~50000) Hz
步进衰减器	4GC22000181-0032/2023-04-18/賽宝(广州)	±3dB	(0~110) dB/10dB step @(DC~1GHz)

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): 23.2°C 相对湿度(Relative Humidity): 58%

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。

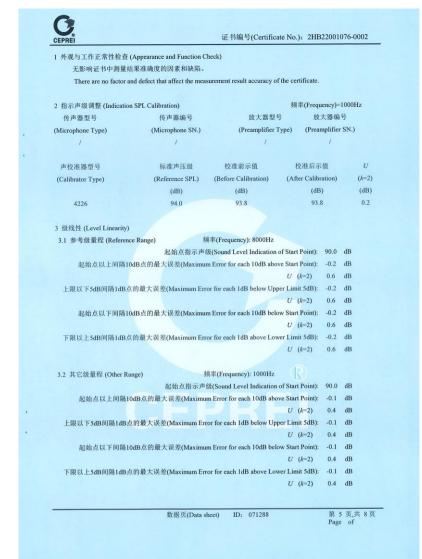
The extended uncertainty given in this certificate is evaluated according to JJF1059,1-2012 "Evaluation and Expression of Uncertainty in Measurement", and is calculated by multiplying the combined standard uncertainty by the coverage factor k which corresponding to the coverage probability about 95%.

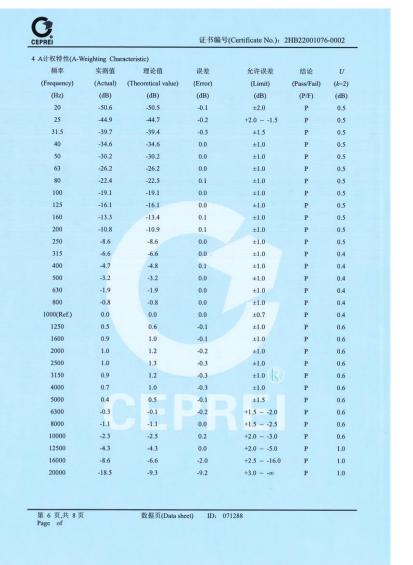
7. 证书中"P"、"合格"代表"测量结果在允许范围内", "F"、"不合格"代表"测量结果不在允许范围内", "N/A"代表" 不适用或技术指标暂时无法确认等"。本证书报告的结论仅供参考,使用人员应结合实际测量的要求合理使用,如考虑测量结果测量不确定度的影响等。

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

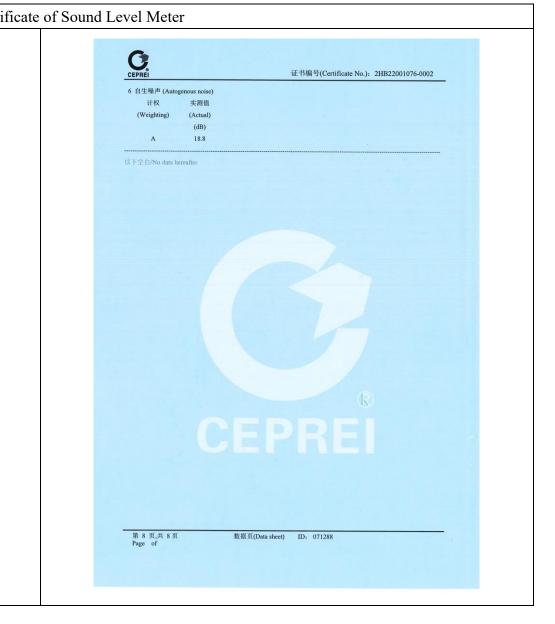
8. 建议校准周期是本实验室依据本证书报告的技术依据和仪器设备常规使用条件给出的建议,供委 托方参考。委托方可以根据实际使用情况自行决定样品的校准周期。

第 3 页,共 8 页





	CEPRÉI			证书编号	(Certificate No.): 2	HB22001076	5-0002
-	5 C计权特性(C-V	Veighting Cha	racteristic)				
	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	-6.4	-6.2	-0.2	±2.0	P	0.5
	25	-4.5	-4.4	-0.1	+2.0 ~ -1.5	P	0.5
	31.5	-3.0	-3.0	0.0	±1.5	P	0.5
	40	-2.1	-2.0	-0.1	±1.0	P	0.5
	50	-1.3	-1.3	0.0	±1.0	P	0.5
	63	-0.8	-0.8	0.0	±1.0	P	0.5
	80	-0.4	-0.5	0.1	±1.0	P	0.5
	100	-0.3	-0.3	0.0	±1.0	P	0.5
	125	-0.1	-0.2	0.1	±1.0	P	0.5
	160	0.0	-0.1	0.1	±1.0	P	0.5
	200	0.0	0.0	0.0	±1.0	P	0.5
	250	0.0	0.0	0.0	±1.0	P	0.5
	315	0.0	0.0	0.0	±1.0	P	0.4
	400	0.0	0.0	0.0	±1.0	P	0.4
	500	0.0	0.0	0.0	±1.0	P	0.4
	630	0.0	0.0	0.0	±1.0	P	0.4
	800	0.0	0.0	0.0	±1.0	P	0.4
	1000(Ref.)	0.0	0.0	0.0	±0.7	P	0.4
	1250	-0.1	0.0	-0.1	±1.0	P	0.6
	1600	-0.2	-0.1	-0.1	±1.0	P	0.6
	2000	-0.5	-0.2	-0.3	±1.0	P	0.6
	2500	-0.5	-0.3	-0.2	±1.0	P	0.6
	3150	-0.8	-0.5	-0.3	±1.0	P	0.6
	4000	-1.1	-0.8	-0.3	±1.0	P	0.6
	5000	-1.5	-1.3	-0.2	±1.5	P	0.6
	6300	-2.1	-2.0	-0.1	+1.5 ~ -2.0	P	0.6
	8000	-2.9	-3.0	0.1	+1.5 ~ -2.5	P	0.6
	10000	-4.3	-4.4	0.1	+2.0 ~ -3.0	P	0.6
	12500	-6.4	-6.2	-0.2	+2.0 ~ -5.0	P	1.0
	16000	-10.5	-8.5	-2.0	+2.5 ~ -16.0	P	1.0
	20000	-20.4	-11.2	-9.2	+3.0 ~ -∞	P	1.0
			数据页(Data s		071288		页,共 8 页





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: 2HB22001076-0003 Certificate No.



委托单位: _ Client	Castco Testing Centre Limited				
仪器名称: Description	Sound Level Meter				
型号规格: Model/Type	NL-52				
制造商: Manufacturer		RION			
見身号: _ Berial No.	00976204				
章理号: _ Asset No.		AAST-SLM-11			
接收日期: _ tec. Date	2022-07-21	校准日期: Cal. Date	2022-08-03		
签发日期: _	2022-08-04	建议校准周期:	12个月(12 months)		
吉论:	所校准项	目合格(Passed at Calibra	tion Items)		

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

國計: www.ceprei-cal.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 188-2017 声级计检定规程: Sound pressure level: (20~130)dB; Frequency Weighting: (20~130)dB@(10 Hz~20kHz).

は自然を持た。 ・洋田内容清査費(NAS)阿治中注層編号为L13344的ほ书附件、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 one 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	测量范围
(Description)	(Certificate No./Due Date/Traceability to)	(Specification)	(Measuring Range)
步进衰减器	4GC22000181-0032/2023-04-18/賽宝(广州)	±3dB	(0~110) dB/10dB step @(DC~1GHz)
声校准器		1級 First Level	31.5Hz~16kHz
PULSE分析系统		頻率:Ure=0.001%,k=2;电压: Ure=0.04%,k=2	频率:0.001Hz~51.2kHz, 电压:(1×10 ⁻⁵ ~30)V
數字多用表	4GC21000526-0026/2022-11-30/賽宝(广州)	DCV: ±0.0035%; ACV: ± 0.06%; DCI: ±0.05%; ACI : ±0.1%; R: ±0.01%; f: ±0.001%	
正弦信号发生器	4GC21000496-0024/2022-11-01/賽宝(广州)	f: ±lmHz; 失真度 Distortion: <-70dB	f: 0.001Hz~200kHz; U : 100µV~5Vms
标准传声器	GFJGJL1001220311961/2023-03-27/航空 304所	U=(0.05~0.20)dB (k=2)	10Hz~20kHz
前置放大器	GFJGJL1001220311960/2023-03-27/航空	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): 23.2℃ 相对湿度(Relative Humidity): 58%

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。

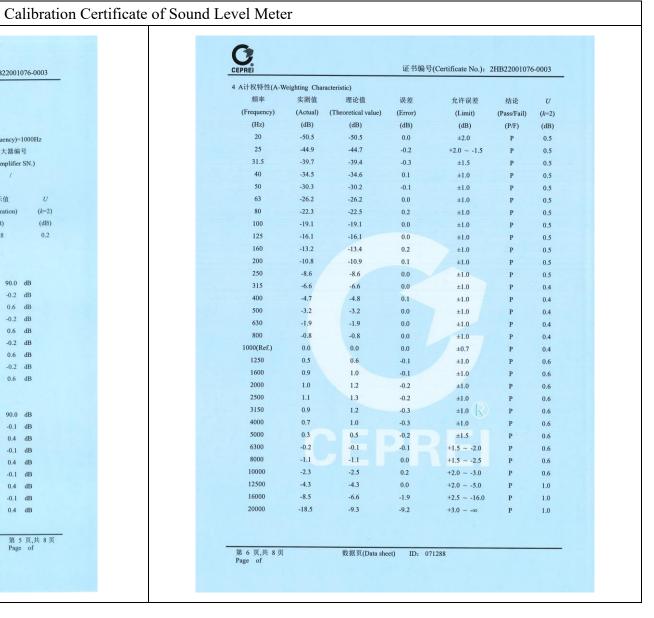
"P" and "Pass" in this certificate stand for "Low Limit the measured value Shigh Limit", "F" and "Fail" stand for "the measured value < Low Limit or the measured value > High Limit", "N/A" stands for "Not Applicable or The technical specification has not been confirmed etc". The conclusions of this certificate 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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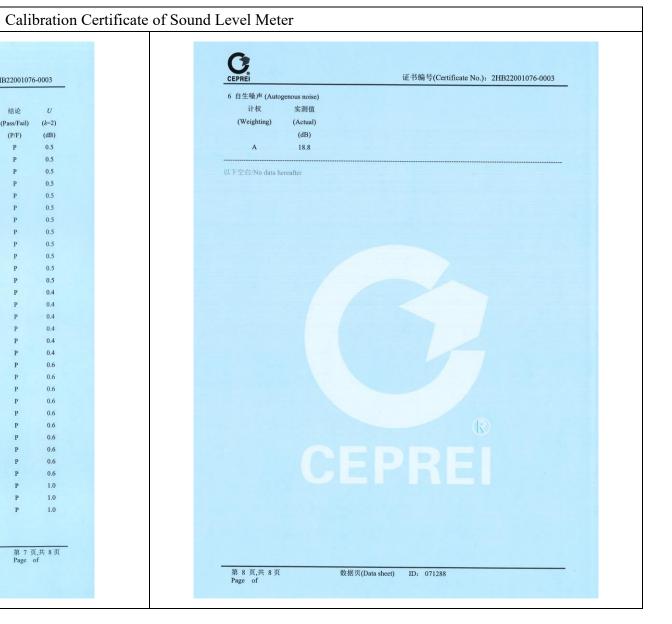
证书编号(Certificate No.): 2HB22001076-0003 1 外观与工作正常性检查 (Appearance and Function Check) 无影响证书中测量结果准确度的因素和缺陷。 There are no factor and defect that affect the measurement result accuracy of the certificate. 頻率(Frequency)=1000Hz 2 指示声级调整 (Indication SPL Calibration) 放大器编号 传声器型号 放大器型号 (Microphone SN.) (Preamplifier Type) (Preamplifier SN.) (Microphone Type) 标准声压级 校准前示值 校准后示值 U声校准器型号 (After Calibration) (k=2)(Before Calibration) (Calibrator Type) (Reference SPL) (dB) (dB) (dB) (dB) 93.8 93.8 0.2 4226 94.0 3 级线性 (Level Linearity) 3.1 参考级量程 (Reference Range) 频率(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 U (k=2) 0.6 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) 0.6 dB 下限以上5dB间隔1dB点的最大误差(Maximum Error for each 1dB above Lower Limit 5dB): -0.2 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) 0.4 dB 上限以下5dB间隔1dB点的最大误差(Maximum Error for each 1dB below Upper Limit 5dB): -0.1 dB U (k=2) 0.4 dB 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 U (k=2) 0.4 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

数据页(Data sheet) ID: 071288



第 5 页,共 8 页

证书编号(Certificate No.): 2HB22001076-0003 5 C计权特性(C-Weighting Characteristic) 实测值 理论值 误差 允许误差 频率 (Limit) (k=2)(Frequency) (Actual) (Theoretical value) (Error) (dB) (dB) 0.5 ±2.0 -6.6 -6.2 -0.4 0.5 25 -4.7 -4.4 -0.3 +2.0 ~ -1.5 ±1.5 0.5 -3.0 -3.0 0.0 31.5 0.5 ±1.0 -2.0 -2.0 ±1.0 0.5 0.0 -1.3 -1.3 0.5 -0.8 -0.8 0.0 ±1.0 ±1.0 0.5 -0.4 -0.5 0.1 -0.2 -0.3 0.1 ±1.0 0.5 125 -0.1 -0.2 0.1 ±1.0 0.1 ±1.0 0.5 0.0 -0.1 ±1.0 0.5 200 0.0 0.0 ±1.0 0.5 0.0 0.0 250 0.4 0.0 0.0 315 0.4 0.0 0.0 ±1.0 0.0 ±1.0 0.0 0.0 500 0.4 630 0.0 0.0 ±1.0 0.0 ±1.0 0.0 0.0 800 ±0.7 0.4 1000(Ref.) 0.0 0.0 -0.1 ±1.0 -0.1 -0.2 -0.1 0.6 1600 0.6 -0.3 -0.2 -0.1 ±1.0 -0.5 -0.3 2500 0.6 ±1.0 3150 -0.8 -0.5 -0.3 -0.3 ±1.0 -1.1 -0.8 4000 0.6 -1.5 -1.3 ±1.5 5000 -2.0 -0.1 +1.5 ~ -2.0 6300 -2.1 +1.5 ~ -2.5 0.6 -3.0 -3.0 0.0 8000 -4.4 0.2 +2.0 ~ -3.0 0.6 10000 -4.2 1.0 -6.2 12500 -6.2 1.0 +2.5 ~ -16.0 -8.5 -1.9 16000 -10.4 20000 -20.4 -11.2 -9.2 1.0 第 7 页,共 8 页 Page of 数据页(Data sheet) ID: 071288



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.
- Ocnforming 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)



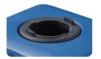
Catalogue of Sound Calibrator



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.



ations (under	standard ambient conditions*)	Strap
ole standards	IEC 60942: 2017 class1, ANSI/ASA S1.40-2006 class1, JIS C 1515: 2004 class 1, CE marking, WEEE directive, Chinese RoHS	
ed ones	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)	
ound pressure level	94 dB	
ssure level tolerance	Max. ±0.20 dB	
frequency	1 000 Hz	
cy tolerance	Max. ±0.1%	Securely carry the unit wi
ioise	Max. 1.0 % (22.4 Hz to 22.4 kHz)	the supplied hand strap
ons and weight	Approx. 42 mm (H) x 77 mm (W) x 70 mm (D), approx. 200 g	
upply	IEC LR6 (size AA) alkaline battery x 2	8
	IEC LR6 (size AA) nickel-hydride rechargeable battery (*eneloop pro* supported) x 2	
ide	50 hours or more (using two alkaline batteries, continuous use)	1
	50 hours or more (using two nickel-hydride rechargeable	PISTONPHON







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



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

batteries [eneloop pro], continuous use)
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

RION CO., LTD.

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.

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



Using the 1/2-inch adapte

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



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-52 UC-52 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) alkaline 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



委托单位:

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

Castco Testing Centre Limited

CALIBRATION CERTIFICATE

证书编号: 2HB21001749-0002 Certificate No.





Client						
仪器名称:	Sound Level Calibrator					
Description						
型号规格:	NC-75					
Model/Type						
制造商:		RION				
Manufacturer						
机身号:	34280310					
Serial No.						
管理号:		AAST-SLC-07				
Asset No.						
接收日期: _	2021-08-05	校准日期:	2021-08-17			
Rec. Date		Cal. Date				
签发日期:	2021-08-18	建议校准周期:	12个月(12 months)			
App. Date	Reference Cal. Period					

Approved by

结论: Conclusion

印章: Stamp

Website: www.ceprei-cal.com

所校准项目合格(Passed at Calibration Items)

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西78号 客服电话: 020-87237633 传真: 020-87236189 投诉电话: 020-87236896

同址: www.ceprei-cal.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

第 1 页,共 5 页 Page of

Calibration Certificate of Sound Calibrator

GE 1848 12 (Complicate Na.) 211R21001749-0002

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. (13Hz~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):

 2. 称 读书号有效期漂源单位 技术指标 测量范围

(Description)	(Certificate No./Due Date/Traceability to)	(Specification)	(Measuring Range)
标准传声器			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 ⁻⁵ ~30)V
前期 拉士 果	LSsv2021-13000/2022-04-19/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 & 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≤the measured value ≤High Limit", "F" and "Fail" stand for "the measured value <Low Limit or 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

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.)

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)(Limit) (Prescribed Fre.) (Measured Fre.) (Absolute value of Fre.) (%) (%) (%) (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

第5页,共5页

Page of

数据页(Data sheet) ID: 013393

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

CALIBRATION CERTIFICATE

证书编号: 2HB21002020-0005 Certificate No.



委托单位:	Ca	stco Testing Centre Limi	ted			
仪器名称: Description		Sound Level Calibrator				
型号规格: Model/Type		NC-74				
制造商: Manufacturer		RION				
机身号: Serial No.		34678556				
管理号: Asset No.		AAST-SLC-06				
接收日期: Rec. Date	2021-09-09	校准日期: Cal. Date	2021-09-18			
签发日期: App. Date	2021-09-18	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)					

Conclusion

印章:

Stamp



签发: Approved by

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

网址: www.ceprei-cal.com

CEPREI Calibration and Testing Centre HO 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

第1页共5页 Page of

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.

- 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
- NILLO: 详细内容请在實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,其结果培论所依据的含格评定适动不在认可范围内。(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): 证书号/有效期/溯源单位 技术指标 (Certificate No/Due Date/Traceability to) (Specification) (Measuring Range) 4GC21000026-0375/2022-01-21/賽宝(J⁺州) 频率:Urel=0.001%,k=2;电压: 频率:0.001Hz~51.2kHz, (Measuring Range) (Description) PULSE分析系统 电压:(1×10⁻⁵~30)V

4. 校准地点(The calibration place):

前置放大器

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

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.)

第 3 页,共 5 页 Page of

Calibration Certificate of Sound Calibrator 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. 2 声压级 (Sound Pressure Level) 允许范围 结论 U测量声压级 声压级差的绝对值 (k-2)(Pass/Fail) (Prescribed SPL) (Measured SPL) (Absolute value of SPL) (Limit) (dB) (dB) (dB) 0.10 ≤0.40 94 94.29 0.29 3 频率 (Frequency) 结论 Uset 规定频率 频率误差的绝对值 允许范围 (k=2) (Prescribed Fre.) (Measured Fre.) (Absolute value of Fre.) (Limit) (Pass/Fail) (%) (%) (Hz) ≤1.00 0.10 1000 1002.1 0.21 4 总失真 (Distortion) 規定声压级 规定频率 总失真 允许范围 结论 Utel (k-2)(Prescribed SPL) (Measured Fre.) (%) (%) (dB) ≤3.00 5.0 94 1000 1.34 以下空白/No data hereafter 数据页(Data sheet) ID: 013393 第5页,共5页

Catalogue of Air Flow Meter (TSI TA440)

SPECIFICATIONS

MODELS TA410, TA430 AND TA440

Velocity

Range (TA410) Range (TA430, TA440) Accuracy (TA410)162

0 to 20 m/s (0 to 4,000 ft/min) 0 to 30 m/s (0 to 6,000 ft/min)

Accuracy (TA430, TA440)¹⁶² ±3% of reading or ±0.015 m/s (±3 ft/min), whichever is greater Resolution 0.01 m/s (1 ft/min)

Duct Size (TA430, TA440)

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

Volumetric Flow Rate (TA430, TA440)

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

Temperature

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

Relative Humidity (TA440 only)

Range 5 to 95% RH Accuracy⁴ ±3% RH Resolution 0.1% RH

Wet Bulb Temperature (TA440 only) Range

5 to 60°C (40 to 140°F) Resolution

Dew Point (TA440 only)

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

Instrument Temperature Range Operating (Electronics) 5 to 45°C (40 to 113°F)

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

Data Storage Capabilities (TA430, TA440)

Range 12,700+ samples and 100 test IDs

Logging Interval (TA430, TA440)

1 second to 1 hour



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		+	+
Review data		+	+
LogDat2 downloading software		+	+
Free Certificate of Calibration	+	+	+

The accuracy statement begins at 30 ft/min through 4000 ft/min (0.15 m/s through 20 m/s) for the Model TA40, and 30 ft/min through 5,000 ft/min (0.15 m/s through 30 m/s) for Models TA430 and TA440.

Nodes 1A430 and 1A440.

3 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.

4 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 196 hypoteresis.

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 Z980548 Rev D (A4) ©Z014 TSI Incorporated

Calibration Certificate of Air Flow Meter



Cal Lab Limited 校正實驗室有限公司

Room 2103, Technology Plaza, 29-35 Sha Tsui Road,

Tsuen Wan, NT, Hong Kong

Model

9535

Tel: +852 25680106 Email: info@callab.com.hk Fax: +852 30116194 Website: www.callab.com.hk



Expiration Date

11 July 2022

Calibration Certificate No.: CC0322201

Customer Information

Castco Testing Centre Limited Customer:

Address: 33 On Kui Street, Fanling, N.T., Hong Kong

quipment	Identification
----------	----------------

Equipment Identification	Manufacturer	Model No.	Serial No.	Assigned equipment No.:
Air Velocity Meter	TSI	TA440	TA4401232005	AAST-FLOW-02

Date of Receipt:	21 January 2022	Calibration Condition:	24.3°C, 53%RH, 1008hP
Date of Calibration:	25 January 2022	Adjustment:	N/A
Due Date of Calibration:	N/A	Appearance:	Good
Calibration Procedure:	SOP-116	Remark:	N/A

Serial No.

T95351316004

Hot Wire Anemometer **Result of Calibration**

Equipment Description

Reference Reading (m/s)	Measured Reading (m/s)	Error (%)	Uncertainty (%FS)	Technical Requirement	Technical Reference Doc
0.00	0.00	N/A	3.6	± 3%	Mfr's Spec.
0.51	0.50	-2.0	3.6	± 3%	Mfr's Spec.
5.02	4.89	-2.6	3.6	± 3%	Mfr's Spec.
10.03	9.74	-2.9	3.6	± 3%	Mfr's Spec.

The estimated expanded uncertainties have been calculated in "Evaluation and expression of uncertainty in measurement" and give an internal estimated to have a level

The standard (s) and instrument used in the calibration are traceable to national or international recognized standard and are calibrated on a schedule to maintain the

accuracy and good condition.

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

Note4: The result shows in this calibration certificate relate only to the item calibrated, and the result only applies to the calibration item as received

Calibrated By:

Checked and Approved By:

Certificate Issue Date: 25 January 2022

*** End of Certificate ***

1. The certificate shall not be reproduced except in full, without written approval of Cal Lab Calibration

CC0322201

CT-BEG-03

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

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.: CC0332201

Customer Information

Customer: Castco Testing Centre Limited

33 On Kui Street, Fanling, N.T., Hong Kong

Equipment Identification Assigned equipment No.: Serial No. Manufacturer Model No. **Equipment Description** AAST-FLOW-03 TA440 TA4401706003 Air Velocity Meter TSI

Certificate Information

Calibration Condition: 24.3°C, 53%RH, 1008hPa Date of Receipt: 21 January 2022 Date of Calibration: 25 January 2022 Adjustment: N/A Due Date of Calibration: N/A Appearance: Good

N/A Calibration Procedure: SOP-116 Remark:

Reference Equipment Identification Serial No. **Expiration Date** Model **Equipment Description** 11 July 2022 Hot Wire Anemometer 9535 T95351316004

Result of Calibration

Reference Reading (m/s)	Measured Reading (m/s)	Error (%)	Uncertainty (%FS)	Technical Requirement	Technical Reference Doc
0.00	0.00	N/A	3.6	± 3%	Mfr's Spec.
0.51	0.50	-2.0	3.6	± 3%	Mfr's Spec.
5.02	4.89	-2.6	3.6	± 3%	Mfr's Spec.
10.03	10.05	2.0	3.6	± 3%	Mfr's Spec.
10.03	10.05	2.0	3.0	1 370	IVIII 3 3k

Note: The estimated expanded uncertainties have been calculated in "Evaluation and expression of uncertainty in measurement" and give an internal estimated to have a level of confidence of 59%. A coverage factor of 2 is assumed unless explicitly stated.

Note2: The standard type is a successful to the confidence of 50% and the standard and are calibrated on a schedule to maintain the material or international recognized standard and are calibrated on a schedule to maintain the accuracy and good condition.

Note3: The result reported in this certificate refer to the condition of the instrument on the date of calibration and carry no implication regarding the long term stability of the instrument.

Note4: The result shows in this calibration certificate relate only to the item calibrated, and the result only applies to the calibration item as re-

Calibrated By:

Checked and Approved By:

Company Chop:

Certificate Issue Date: 25 January 2022

*** 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

CC0332201 Page 1 of 1

Appendix K – Noise i	monitoring results and	graphical presentation

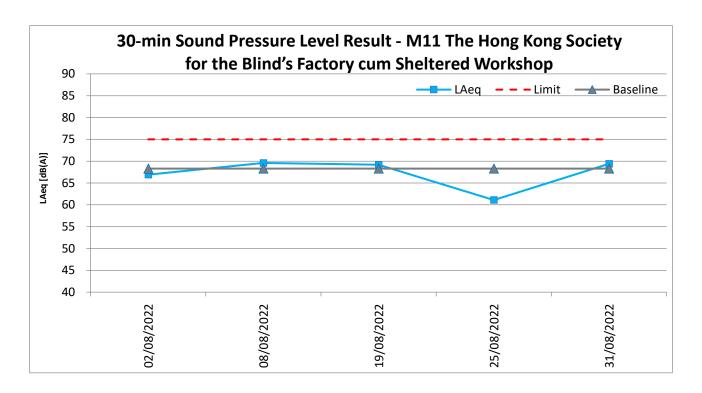
M11 - The Hong Kong Society for the Blind's Factory cum Sheltered Workshop

Б.	Temp	XX / .1	Measured Noise Level at M11, dB(A)							
Date	(°C)	Weather	,	Γiı	me	Baseline	\mathcal{L}_{Aeq}	L_{A10}	L_{A90}	Limit
02/08/2022	35.8	Sunny	11:30	-	12:00	68.3	66.9	70.5	59.5	75
08/08/2022	25.8	Cloudy	14:14	-	14:44	68.3	69.6	73.0	63.0	75
19/08/2022	27.7	Cloudy	10:03	-	10:33	68.3	69.2	71.9	63.3	75
25/08/2022	30.0	Cloudy	15:23	-	15:53	68.3	61.1	63.2	56.8	75
31/08/2022	33.3	Cloudy	14:53	-	15:23	68.3	69.4	71.6	61.3	75
			Maximum			69.6				
				Minimum			61.1			
					Average		68.1			

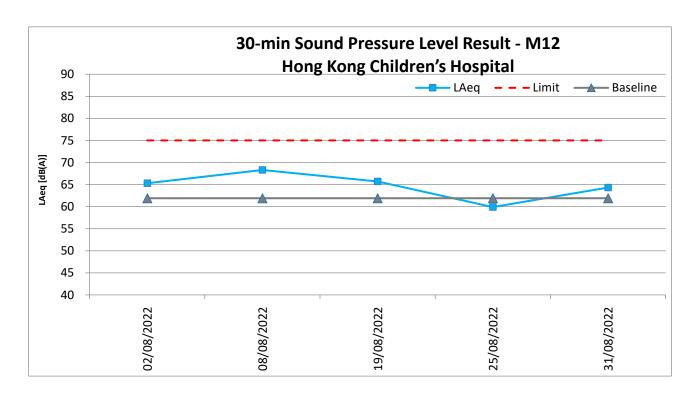
M12 - Hong Kong Children's Hospital

	0 0									
	Temp Wastles		Measured Noise Level at M12, dB(A)							·
Date	(°C)	Weather	,	Γiı	ne	Baseline	\mathcal{L}_{Aeq}	L_{A10}	L_{A90}	Limit
02/08/2022	35.8	Sunny	14:14	-	14:44	61.9	65.3	66.8	63.2	75
08/08/2022	25.8	Cloudy	9:36	-	10:06	61.9	68.3	71.2	60.8	75
19/08/2022	27.7	Cloudy	13:21	-	13:51	61.9	65.7	67.8	63.0	75
25/08/2022	30.0	Cloudy	17:13	-	17:43	61.9	59.9	61.0	58.8	75
31/08/2022	33.3	Cloudy	10:21	-	10:51	61.9	64.3	66.3	61.7	75
			Maximum			68.3				
				Minimum			59.9			
					Average		65.4]		

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



LAeq, 30-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	 Notify Supervisor / ER, IEC and Contractor; Carry out investigation; Report the results of investigation to the IEC, Supervisor / ER and Contractor; Discuss with the IEC and Contractor on remedial measures required; Increase monitoring frequency to check mitigation effectiveness. (The above actions should be taken within 2 working days after the exceedance is 	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.)	 Submit noise mitigation proposal to IEC and Supervisor / ER; Implement noise mitigation proposals. (The above actions should be taken within 2 working days after the exceedance is identified.)
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	 Take immediate action to avoid further exceedance; Submit proposals for remedial actions to IEC and Supervisor /ER within 3 working days of notification; Implement the agreed proposal; Submit further proposal if problem still not under control; Stop the relevant portion of works as instructed by the Supervisor /ER until the exceedance is abated. (The above actions should be

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	 Identify Source. Inform IEC and Supervisor /ER. Discuss remedial actions with IEC, Supervisor /ER and Contractor. Monitor remedial actions until rectification has been completed. 	working method. 3. Discuss with ET and Contractor on possible 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 Supervisor /ER. Increase monitoring frequency. Discuss remedial actions with IEC, Supervisor /ER and Contractor. Monitor remedial actions until rectification has been completed. If non-conformity stops, cease additional monitoring. 	method. 3. Discuss with ET and Contractor on possible remedial measures. 4. Advise Supervisor /ER on effectiveness of proposed remedial measures.	 Notify Contractor. Ensure remedial measures are properly implemented. 	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 August 2022

	Wonting Summary Was							IUI Au	gust zuzz			
	Ac	tual Quantitie	s of Inert C&D	Materials Gene	rated Month	ly		Δ	Actual Quantities	s of C&D Waste	s Generated M	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 M	etals	Paper / cardboard packaging	Plastics (see Note 3)	Chemical Wa	Others, e.g. general refuse
	(in '000m³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m³)	(in '000m		000 kg)	(in '000kg)	(in '000kg)	(in '000kg	(in '000m³)
Jan	0.832				0.832				0.100			0.144
Feb	0.749		0.450		0.299							0.124
Mar	0.768				0.768							0.154
Apr	0.488				0.488							0.167
May	2.374				2.374							0.190
Jun	2.555		0.442		1.857	0.256	3					0.174
Sub-total	7.766		0.892		6.618	0.256	5		0.100			0.953
July	3.255				3.255							0.158
Aug	4.764				4.614	0.15			0.118			0.283
Sep												
Oct												
Nov												
Dec												
Total	15.785		0.892		14.487	0.406			0.218			1.394
	Forecast of Total Quantities of C&D Materials to be Generated from the Contract*											
Total Quantity Generate		oken Reus		sed in Dispos Projects Publi		orted Fill	Metals		Paper / cardboard packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. general refuse
(in '000m	³) (in '000i	m³) (in '00	0m³) (in '0	00m³) (in '00	00m³) (in '	000m³)	(in '000 k	g)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m³)
195.01	2.103	3 10	.2 1	40 19.	81	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
 - Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material and water barrier
 - 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)
 - Assume inert C&D materials density and non-inert C&D materials are 1.9 m³/ton and 1.5 m³/ton

Appendix O – Environmental Mitigation Implementation Schedule (EMIS)

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	^
		activities.	
S3.2	S4.8	Implementation of dust suppression measures stipulated in Air	^
		Pollution Control (Construction Dust) Regulation. The following	
		mitigation measures, good site practices and a comprehensive dust	
		monitoring and audit programme are recommended to minimize	
		cumulative dust impacts.	
		- Stockpiling site(s) should be lined with impermeable sheeting	^
		and bunded. Stockpiles should be fully covered by	
		impermeable sheeting to reduce dust emission.	
		- Misting for the dusty material should be carried out before	٨
		being loaded into the vehicle.	
		- Any vehicle with an open load carrying area should have	^
		properly fitted side and tail boards.	
		- Material having the potential to create dust should not be loaded	^
		from a level higher than the side and tail boards and should be	
		dampened and covered by a clean tarpaulin.	
		- The tarpaulin should be properly secured and should extent at	^
		least 300 mm over the edges of the sides and tailboards. The	
		material should also be dampened if necessary, before	
		transportation.	
		- The vehicles should be restricted to maximum speed of 10 km	^
		per hour and confined haulage and delivery vehicle to	
		designated roadways insider the site. On- site unpaved roads	
		should be compacted and kept free of lose materials.	
		- Vehicle washing facilities should be provided at every vehicle	^
		exit point.	
		- The area where vehicle washing takes place and the section of	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	٨
		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	٨
		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	٨
		from its body and wheels before leaving the construction sites.	

Implementatio	n Schedule for 1	Noise Measures	
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,	^
		Excavator and Hand-held breaker and full enclosure for Air	
		Compressor, Bar Bender, Concrete Pump, Generator and Water	
		Pump.	
S3.3		Good Site Practice:	
S3.3		- Only well-maintained plant should be operated on-site and	^
		plant should be serviced regularly during the construction	
		program.	
		- Silencers or mufflers on construction equipment should be	^
		utilized and should be properly maintained during the	
		construction program.	
		- Mobile plant, if any, should be sited as far away from NSRs as	^
		possible.	
		- Machines and plant (such as trucks) that may be in intermittent	^
		use should be shut down between works periods or should be	
		throttled down to a minimum.	
		- Plant known to emit noise strongly in one direction should,	^
		wherever possible, be orientated so that the noise is directed	
		away from the nearby NSRs.	
		- Material stockpiles and other structures should be effectively	^
		utilized, wherever practicable, in screening noise from on-site	
		construction activities.	
		- Scheduling of Construction Works during School	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.	٨				
S3.4		- adequate maintenance of drainage systems to prevent flooding	٨				
		and overflow.					

EIA for KTD Development Ref.	EIA for KTD - Roads D3A & D4A Ref.		Environmental Protection Measures / Mitigation Measures	Status
	S5.8	-	Surface run-off from construction sites should be discharged	^
			into storm drains via adequately designed sand/silt removal	
			facilities such as sand traps, silt traps and sedimentation basins.	
	S5.8	-	Channels or earth bunds or sand bag barriers should be provided	^
			on site to properly direct stormwater to such silt removal	
			facilities. Perimeter channels should be provided on site	
			boundaries where necessary to intercept storm run-off from	
			outside the site so that it will not wash across the site. Catchpits	
			and perimeter channels should be constructed in advance of site	
			formation works and earthworks.	
	S5.8	-	Silt removal facilities, channels and manholes should be	^
			maintained and the deposited silt and grit should be removed	
			regularly, at the onset of and after each rainstorm to prevent	
			local flooding. Any practical options for the diversion and	
			re-alignment of drainage should comply with both engineering	
			and environmental requirements in order to provide adequate	
			hydraulic capacity of all drains. Minimum distance of 100 m	
			should be maintained between the discharge points of	
			construction site run-off and the existing saltwater intakes.	
	S5.8	-	Earthworks final surfaces should be well compacted and the	^
			subsequent permanent work or surface protection should be	
			carried out immediately after the final surfaces are formed to	
			prevent erosion caused by rainstorms. Appropriate drainage like	
			intercepting channels should be provided where necessary.	
	S5.8	-	Measures should be taken to minimize the ingress of rainwater	^
			into trenches. If excavation of trenches in wet seasons is	
			necessary, they should be dug and backfilled in short sections.	
			Rainwater pumped out from trenches or foundation excavations	
			should be discharged into storm drains via silt removal facilities.	
	S5.8	-	Open stockpiles of construction materials (e.g. aggregates,	^
			sand and fill material) on sites should be covered with tarpaulin	
			or similar fabric during rainstorms.	
	S5.8	-	Manholes (including newly constructed ones) should always be	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
RCI.	tt D-111 Rei.	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	^
		individual cells of approximately 6 to 8 m ³ 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	

Implementatio	on Schedule for	Water Quality Measures	
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,	^
		sand and fill material) of more than 50 m ³ should be covered with	
		tarpaulin or similar fabric during rainstorms. Measures should be	
		taken to prevent the washing away of construction materials, soil,	
		silt or debris into any drainage system.	
S3.4		Manholes (including newly constructed ones) should always be	^
		adequately covered and temporarily sealed so as to prevent silt,	
		construction materials or debris being washed into the drainage	
		system and storm runoff being directed into foul sewers.	
S3.4		Precautions to be taken at any time of year when rainstorms are	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	^
		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		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.	
S3.4		All temporary and permanent drainage pipes and culverts provided	^*
ا .دد		An emporary and permanent dramage pipes and curvens provided	

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.	
	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.	
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.	
	Stormwater Discharges	^
	Minimum distances of 100 m should be maintained between the	
	existing or planned stormwater discharges and the existing or	
	planned seawater intakes	
	Debris and Litter	^
	35.8	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. 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. 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. 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. Stormwater Discharges Minimum distances of 100 m should be maintained between the existing or planned stormwater discharges and the existing or planned seawater intakes

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	^
		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	^
		There is a need to apply to EPD for a discharge licence for discharge	
		of effluent from the construction site under the WPCO. The	
		discharge quality must meet the requirements specified in the	
		discharge licence. All the runoff and wastewater generated from the	
		works areas should be treated so that it satisfies all the standards	
		listed in the TM-DSS. Minimum distance of 100 m should be	
		maintained between the discharge points of construction site effluent	
		and the existing seawater intakes and the planned WSR mentioned in	
		S5.3.1 as appropriate. The beneficial uses of the treated effluent for	
		other on-site activities such as dust suppression, wheel washing and	
		general cleaning etc., can minimise water consumption and reduce	
		the effluent discharge volume. If monitoring of the treated	
		effluent quality from the works areas is required during the	
		construction phase of the Project, the monitoring should be carried	
		out in accordance with the relevant WPCO licence which is under	
	~~	the ambit of regional office (RO) of EPD.	
	S5.8	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	

Implementatio	n 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 with the Waste Disposal Ordinance. The Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes published under the Waste Disposal Ordinance details the requirements to deal with chemical wastes. General requirements are given as follows: - Suitable containers should be used to hold the chemical wastes to avoid leakage or spillage during storage, handling and transport.	^
	S5.8	- Chemical waste containers should be suitably labelled, to notify and warn the personnel who are handling the wastes, to avoid accidents.	٨
	S5.8	- Storage area should be selected at a safe location on site and adequate space should be allocated to the storage area.	^

Implementatio	n Schedule for	Waste Management Measures	
EIA for KTD Development Ref.			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	۸
		be responsible for good site practices, arrangements for	
		collection and effective disposal to an appropriate facility, of all	
		wastes generated at the site.	
	S6.7	- Prepare a Waste Management Plan, which becomes a part of the	٨
		Environmental Management Plan, in accordance with the	
		requirements stipulated in ETWB TC(W) No. 19/2005,	
		approved by the Engineer/Supervising Officer of the Project	
		based on current practices on construction sites.	
S3.5	S6.7	- Training of site personnel in proper waste management and	۸
		chemical waste handling procedures.	

EIA for KTD Development Ref.	EIA for KTD - Roads D3A & D4A Ref.	Environmental Protection Measures / Mitigation Measures	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,	٨
		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	٨
		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	٨
		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	^
		capacity should be recycled.	
S3.5	S6.7	- Proper storage and site practices to minimise the potential for	^
		damage or contamination of construction materials.	
S3.5		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.	ds 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	^
		wastes on-site should be covered with tarpaulin or similar	
		fabric.	
S3.5		- Skip hoist for material transport should be totally enclosed by	^
		impervious sheeting.	
S3.5		- Every vehicle should be washed to remove any dusty materials	^
		from its body and wheels before leaving a construction site.	
S3.5		- The area where vehicle washing takes place and the section of	^
		the road between the washing facilities and the exit point should	
		be paved with concrete, bituminous materials or hardcores.	
S3.5		- The load of dusty materials carried by vehicle leaving a	٨
		construction site should be covered entirely by clean	
		impervious sheeting to ensure dust materials do not leak from	
		the vehicle.	
S3.5		- All dusty materials should be sprayed with water prior to any	^
		loading, unloading or transfer operation so as to maintain the	
		dusty materials wet.	
S3.5		- The height from which excavated materials are dropped should	^
		be controlled to a minimum practical height to limit fugitive	
		dust generation from unloading.	
S3.5		- When delivering inert C&D material to public fill reception	^
		facilities, the material should consist entirely of inert	
		construction waste and of size less than 250mm or other sizes	
		as agreed with the Secretary of the Public Fill Committee. In	
		order to monitor the disposal of the surplus C&D material at	
		the designed public fill reception facility and to control fly	
		tipping, a trip-ticket system as stipulated in the ETWB TCW	
		No. 31/2004 "Trip Ticket System for Disposal of Construction	
		and Demolition Materials" should be included as one of the	
		contractual requirements and implemented by an	
		Environmental Team undertaking the Environmental	
		Monitoring and Audit work. An Independent Environmental	
		Checker should be responsible for auditing the results of the	
		system.	
	S6.7	- Plan and stock construction materials carefully to minimize	٨
		amount of waste generated and avoid unnecessary generation	

Implementatio	on Schedule for V	Waste Management Measures	
EIA for KTD Development Roads D3A Ref. Environmental Protection Measures / Mitigat		Environmental Protection Measures / Mitigation Measures	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	٨
		treatment.	
S3.5		General Refuse	۸
		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.	

Implementatio	on Schedule for l	Landscape and Visual Measures	
EIA for KTD Development Ref.	EIA for KTD - Roads D3A & D4A Ref.	Environmental Protection Measures / Mitigation Measures	Status
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.	
S3.8.12		Control of night-time lighting.	٨
S3.8.12		Erection of decorative screen hoarding.	٨
	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.	^
L		- CM3 - Erection of decorative mesh screens or construction	^

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

Remarks	Remarks:		
^	^ Compliance of mitigation measure.		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 04 August 2022 Date: Date: 11 August 2022 Provided domestic garbage Equipment with QPME Mitigation Mitigation label was used. Measures: bins for waste storage. Measures: Date: 25 August 2022 25 August 2022 Date: Mitigation The portable toilets were Mitigation Manholes have been Measures: provided in the construction Measures: adequately covered and site.

temporarily sealed.

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

Reporting Month: August 2022

Contract No.	Record of Complaint (Yes/No)	Record of Warning (Yes/No)	Notification of Summons and Successful Prosecutions (Yes/No)
ED/2018/01	No	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.	 The water spraying system was not operated in proper time. Stockpile was not covered properly. Haul road was not wetted. Materials transported on trucks were not provided with mechanical covers. 	1. Based on the information provided by the Contractor on 22 October 2020, the water sprinklers system was sprayed every 15	- Closed-out on 5 Nov 2020 - No further complaint was received.

Complaint l	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 referred from the	Complaint of dust problem at the pavement of Muk Tai Street near Sports Park.	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 As per contractor, part of the complaint area was	- Closed-out on 4 Oct
	Contractor on 8 September 2021 through E-Mail regarding a complaint received by EPD (EPD ref.: K19/RE/00021205-21) on 7 September 2021.		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	2021 - No further complaint was received.
			covered by the impermeable tarpaulin sheet.	
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.

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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

August 2022

(Version 1.1)

Certified By:____

(Environmental Team Leader)





Date: 14 September 2022

Your ref:

Our ref: PL-202209031

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

Attn.: Mr. Mavis Law, SRE

Dear Ms. Law,

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 (August 2022)

Reference is made to the Monthly EM&A Report (August 2022) (Version 1.1) issued by the Environmental Team on 13 September 2022.

Please be informed that we have no adverse comment on the captioned submission. We hereby verify the Monthly EM&A Report (August 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

CEDD Attn.: Mr. Albert Tse By email c.c. Ka Shing Attn.: Mr. Chan Pang (ETL) By email

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EXECUTIVE SUMMARY

1. This is the 19th Monthly Environmental Monitoring & Audit (EM&A) report which summarises the findings of the EM&A Programme during the reporting period from 1 to 31 August 2022.

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

Donomoton	No. of Ex	A ation Talson	
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 taken	Close-out date / Status
No complaint was received in the reporting month.	NA	NA	NA	NA

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	NA	NA	NA	NA
of summons				
and				
successful				
prosecutions				
were				
received in				
the reporting				
month.				

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:
 - Pile column construction for PC9, PC10 and PC11 for Elevated Walkway LW-02
 - Erection of falseworks and working platform for decking of Elevated Walkway LW-02
 - UU diversion at Sa Po Road under TTA Stage 2A
 - Sheetpile installation at Sa Po Road under TTA Stage 2A
 - RC construction at launching shaft for subway SB-01

- Construction works for Pedestrian Street No. 2
- Construction works for Road L16
- Construction of DCS
- RC construction for Subway KS10 Lift and Staircase
- Renovation works for existing subways KS9 and KS32

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
Pile column construction for PC9, PC10 and PC11 at Elevated Walkway LW-02	Noise and Air Quality
Erection of falsework and working platform for decking of Elevated Walkway LW-02	Noise and Air Quality
Construction of Crowd Dispersal Route	Noise and Air Quality
Construction of Road L16	Noise and Air Quality
Construction of DCS	Noise and Air Quality
Construction works for Pedestrian Street No. 2	Noise and Air Quality
UU diversion works at Sa Po Road	Noise and Air Quality
Sheetpile installation at Sa Po Road under TTA Stage 2A	Noise and Air Quality
RC construction for launching shaft for subway SB-01	Noise and Air Quality
Renovation works for existing subway KS9 and KS32	Noise and Air Quality
RC construction for Subway KS10 Lift and Staircase	Noise and Air Quality
Twin rising main connection works	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 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.	E-mail
Civil Engineering and Development Department (CEDD)	Project Proponent	Mr. Lam Shing Tim	Permit Holder	3842 7090	st_lam@cedd.gov.hk
AECOM Asia Co. Ltd. (AECOM)	Supervisor (act as Engineers' Representative (ER) listed in EM&A Manual)	Mr. Vincent Lee	Supervisor's Delegate	2798 0771	sre2@ktd-stage5.com
Acuity Sustainability Consulting Limited (Acuity)	Independent Environmental Checker (IEC)	Mr. Kevin Li	IEC	9779 2247	kli@acuityhk.com
Ka Shing Management Consultant Limited (Ka Shing)	Environmental Team (ET)	Mr. Pang Chan	ET Leader	6082 2973	stage5b@ka-shing.net
Build King – STEC Joint Venture (BK-STEC)	Contractor	Mr. Rex Lau	Contractor's Representative	6282 5154	rex.lau@buildking.hk

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

Pile column construction for PC9, PC10 and PC11 for Elevated Walkway LW-02	Construction works for Pedestrian Street No. 2
Erection of falseworks and working platform for decking of Elevated Walkway LW-02	Construction works for Road L16
UU diversion at Sa Po Road under TTA Stage 2A	Construction of DCS
Sheetpile installation at Sa Po Road under TTA	RC construction for Subway KS10 Lift and
Stage 2A	Staircase
RC construction at launching shaft for subway	Renovation works for existing subways KS9 and
SB-01	KS32

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	Condition 1.11 Notification of Commencement Date of Construction of the Project	
Condition 2.3	Management Organization of Main Construction Companies	21 Sep 2020
Condition 2.3	Updated Management Organization of Main Construction Companies	4 July 2022
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 3.3	Monthly EM&A Report (July 2022)	10 August 2022

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	2	2 months
HVS Calibrator	TISCH TE-5025A	1	1 year
1-hour TSP Dust Meter	TSI Model AM510 SidePak Personal Aerosol Monitor	2	1 year
Weather Station	Davis Vantage Pro2 Weather Station	2	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 m³/min. and 1.7 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, Glass Fiber Filter Media 8" x 10" having 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 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 ³	Limit Level, µg/m³
24 h 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 ³	Limit Level, µg/m³
1 1 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 designated air quality monitoring stations are summarized in Table 2.6 and Table 2.7 respectively.

<u>Table 2.6 Summary of 24-hour average TSP Monitoring Data during the reporting month</u>

Air Monitoring Station	Average TSP Concentration, µg/m ³	Range, μg/m ³	Action Level, μg/m ³	Limit Level, μg/m ³
AM2(A)	33	21 – 43	175	260
AM3	39	20 - 58	172	260

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

Air Monitoring Station	Average TSP Concentration, µg/m ³	Range, μg/m ³	Action Level, µg/m³	Limit Level, μg/m ³
AM2(A)	31	18 – 41	302	500
AM3	38	30 - 55	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. Table3.1 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)	$L_{ m Aeq}, L_{ m A10}$ and $L_{ m A90}$	- 1900 hrs on normal weekdays (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 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/NC 74	2	1 year
Air Flowmeter	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 documented	75 ID(A)
on normal weekdays	M5(A)	72.5	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 _{Aeq, 30-min} , Average, dB(A)	Measured L _{Aeq, 30-min} , Range, dB(A)	Action Level	Limit Level ^
M4(A)	69.5	69.2 – 69.8	When one documented	75
M5(A)	72.8	72.1 – 73.4	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	24-hour av	lative Maximum verage TSP ntration Scenario 2 (Mid 2013 to Late 2016), µg/m³	Measured 24-hr average TSP in Reporting Month (August 2022) µg/m ³
AM2(A) - Ng Wah Catholic Secondary School	NA	NA	NA	21 – 43
AM3 - Sky Tower	A40^	106^	138^	20 - 58

Note:

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

Air Monitoring Station	ASR No. in EIA report	Predicted Cumu 1-hour ave concent Scenario 1 (Mid 2009 to Mid 2013), µg/m³	erage TSP	Measured 1-hr average TSP in Reporting Month (August 2022) µg/m³
AM2(A) - Ng Wah Catholic Secondary School	NA	NA	NA	18 – 41
AM3 - Sky Tower	A40^	217^	247^	30 - 55

Note:

[^] Prediction results are given in the Table 3.13 of the EIA report EIA Register No. AEIAR-130/2009 for Kai Tak Development.

[^] 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 (August 2022) L _{Aeq, 30min} , dB(A)
M4(A) – Le Billionnaire	NA	NA	69.2 – 69.8
M5(A) – Prince Ritz	NA	NA	72.1 - 73.4

- 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. Non-project related construction activities in the adjacent construction sites were observed during the reporting period and may affect the monitoring results.
- 4.4 No prediction in the EIA Report for 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. Non-project related construction activities in the adjacent construction sites were observed during the reporting period and may affect the monitoring results.
- 4.6 No prediction in the EIA Report for 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 4, 11, 18 and 26 August 2022 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
4 August 2022	No	NA	NA
11 August 2022	No	NA	NA
18 August 2022	No	NA	NA
26 August 2022	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 4, 11, 18 and 26 August 2022 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
4 August 2022	Observation: Vehicle should be restricted to maximum speed of 10 km per hour in SB01.	Action Taken: Vehicle has been restricted to maximum speed of 8 km per hour in LW02.	Closed out on 11 August 2022
11 August 2022	Observation: The QPME label for the generator is missing.	Action Taken: The QPME label has been display for the generator.	Closed out on 18 August 2022

Inspection Date	Key Observations	Recommendations / Actions	Close-out Date / Status
18 August 2022	Observation: 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 three sides.	Action taken: Cement bags have been fully covered by impervious sheeting.	Closed out on 26 August 2022
26 August 2022	Observation: Secondary container shall be provided for the plastic diesel engine oil container to prevent soil contamination.	Action Taken: Plastic diesel engine oil container has been removed.	Closed out on 1 September 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 Form	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
Westerseten Diechenes Lieuwe von den	WT00037618-2021	29 Mar 2021	31 Mar 2026
Wastewater Discharge License under WPCO	WT00037370-2021	29 War 2021	31 Mar 2020
WICO	WT00038562-2021	15 Jul 2021	31 Jul 2026
	GW-RE0605-22	21 Jun 2022	20 Oct 2022
Construction Noise Permit	GW-RE0614-22	22 Jun 2022	19 Dec 2022
	GW-RE0615-22	22 Jun 2022	19 Dec 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 complaint received	Date of compliant	Description of complaint	Recommendations / Action taken	Close-out date / Status
No complaint was received in the reporting month.	NA	NA	NA	NA

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 notification	NA	NA	NA	NA
of summons				
and				
successful				
prosecutions				
were				
received in				
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 are 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
Pile column construction for PC9, PC10 and PC11 at Elevated	Noise and Air Quality
Walkway LW-02	
Erection of falsework and working platform for decking of	Noise and Air Quality
Elevated Walkway LW-02	
Construction of Crowd Dispersal Route	Noise and Air Quality
Construction of Road L16	Noise and Air Quality
Construction of DCS	Noise and Air Quality
Construction works for Pedestrian Street No. 2	Noise and Air Quality
UU diversion works at Sa Po Road	Noise and Air Quality
Sheetpile installation at Sa Po Road under TTA Stage 2A	Noise and Air Quality
RC construction for launching shaft for subway SB-01	Noise and Air Quality
Renovation works for existing subway KS9 and KS32	Noise and Air Quality
RC construction for Subway KS10 Lift and Staircase	Noise and Air Quality
Twin rising main connection works	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.

Figure

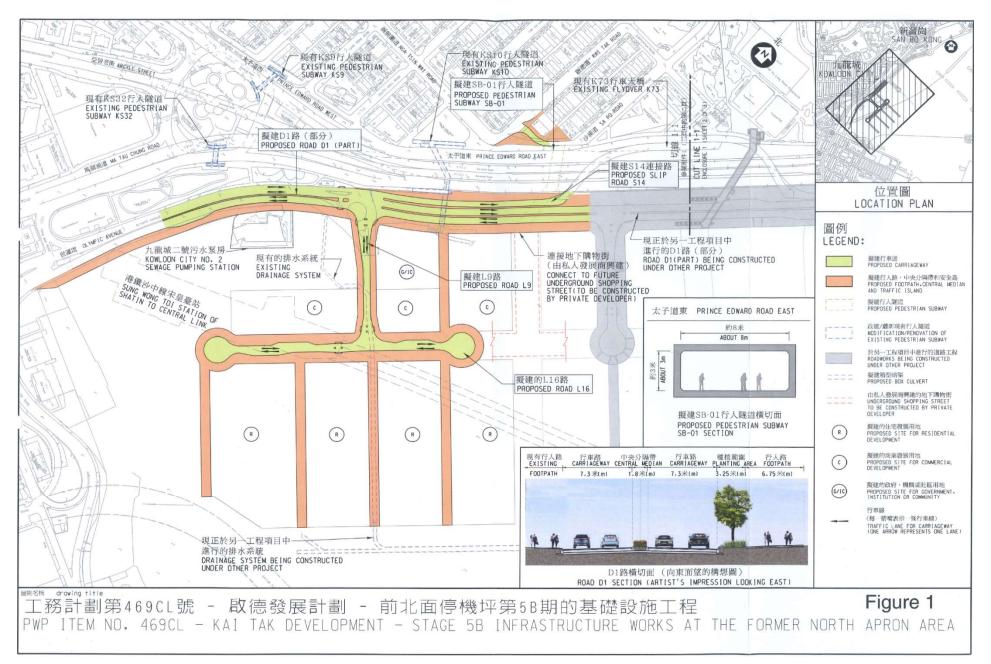


Figure 1 – Proposed works of Contract No. ED/2018/05

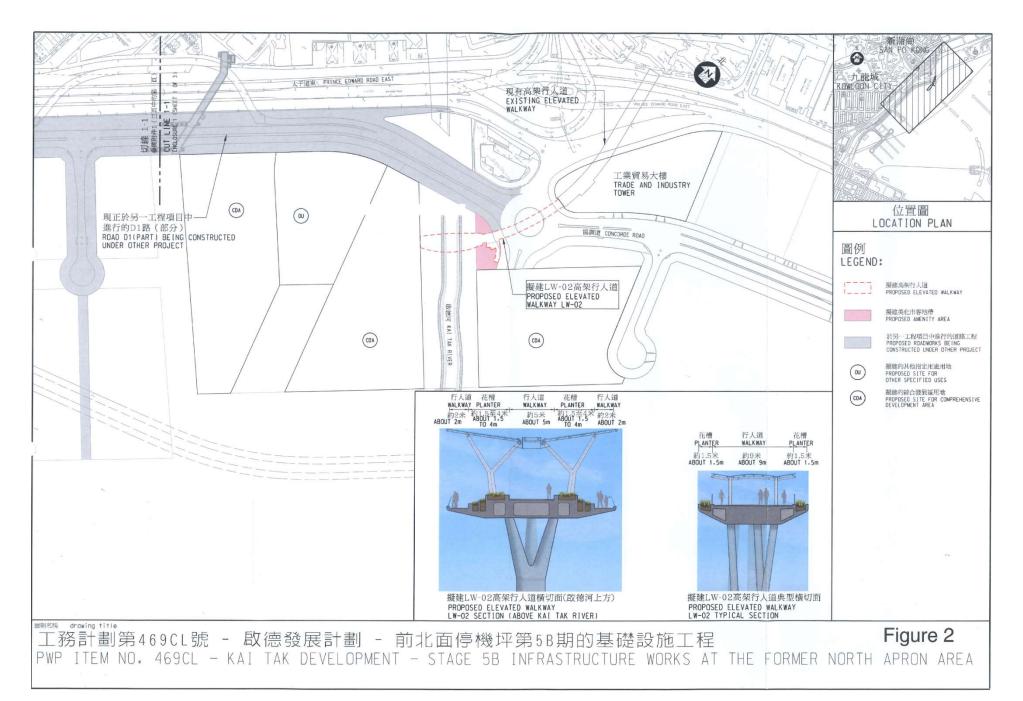


Figure 2 – Proposed works of Contract No. ED/2018/05

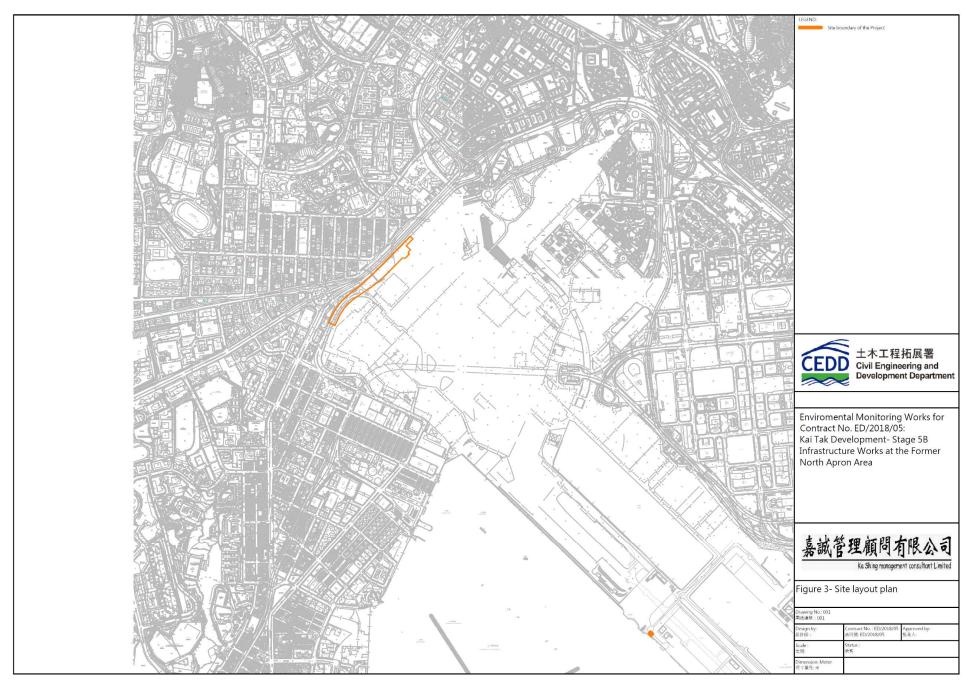


Figure 3 – D1 Road Site Layout Plan

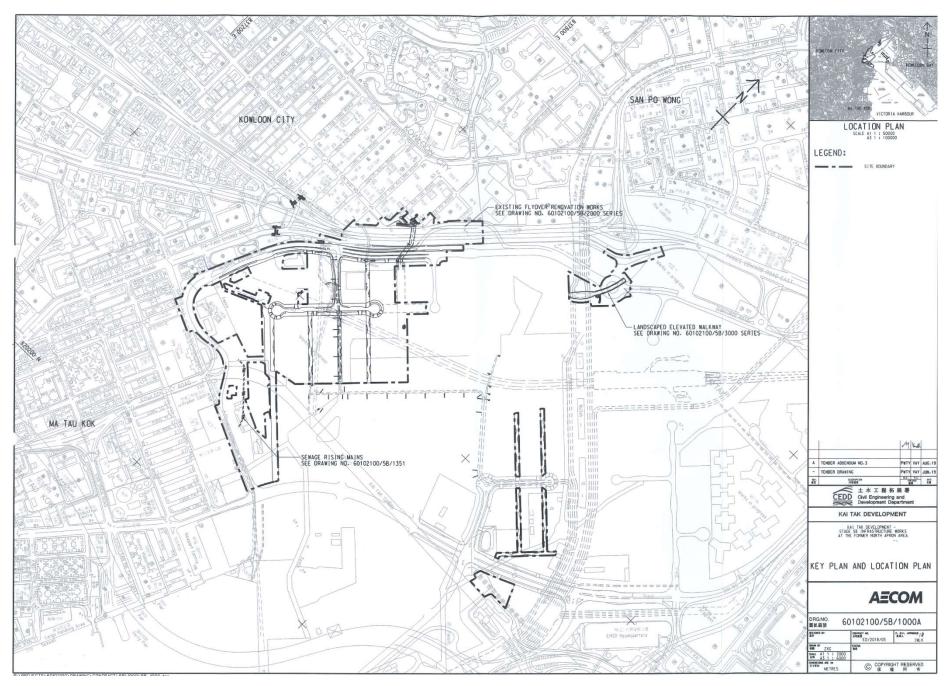


Figure 4 – Site Layout Plan

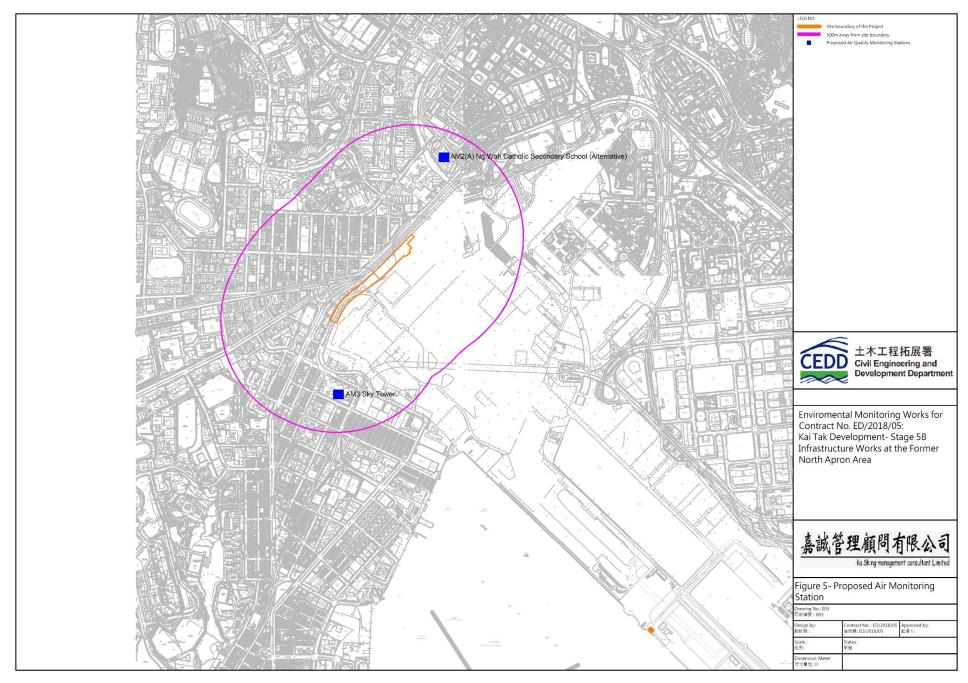


Figure 5 – Air Quality Monitoring Stations

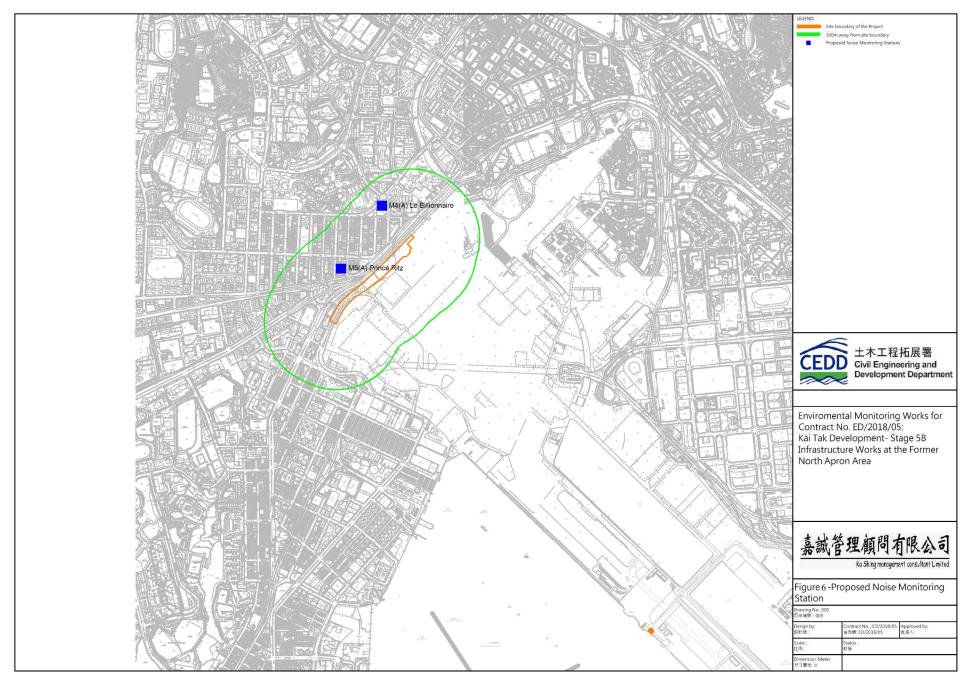
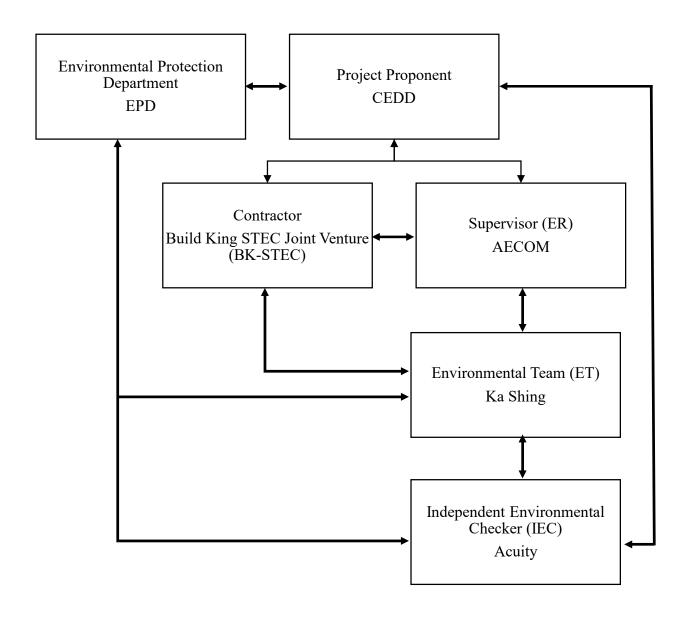
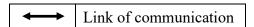


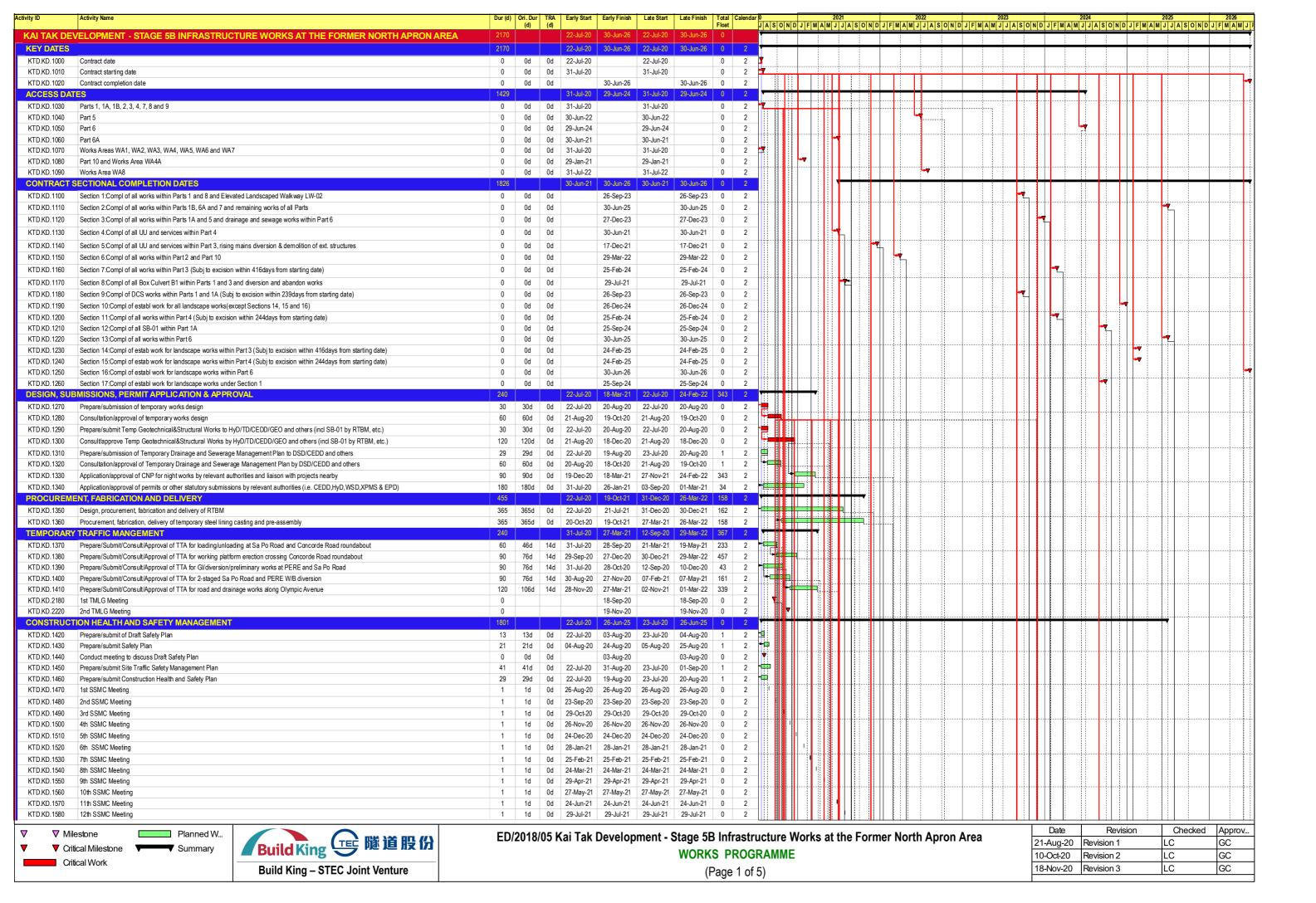
Figure 6 – Noise Monitoring Stations

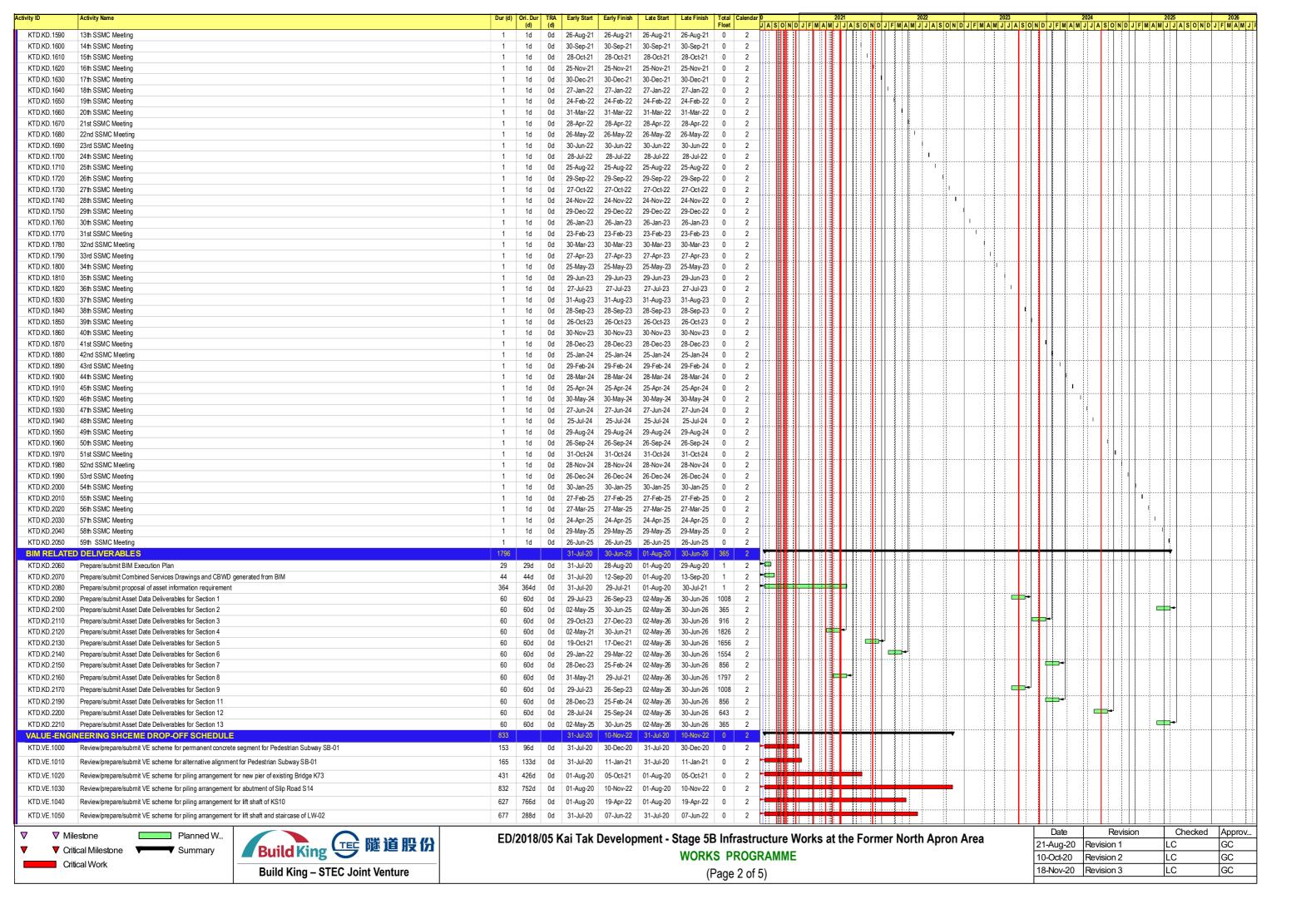
Appendix A – Organization Chart of EM&A Team

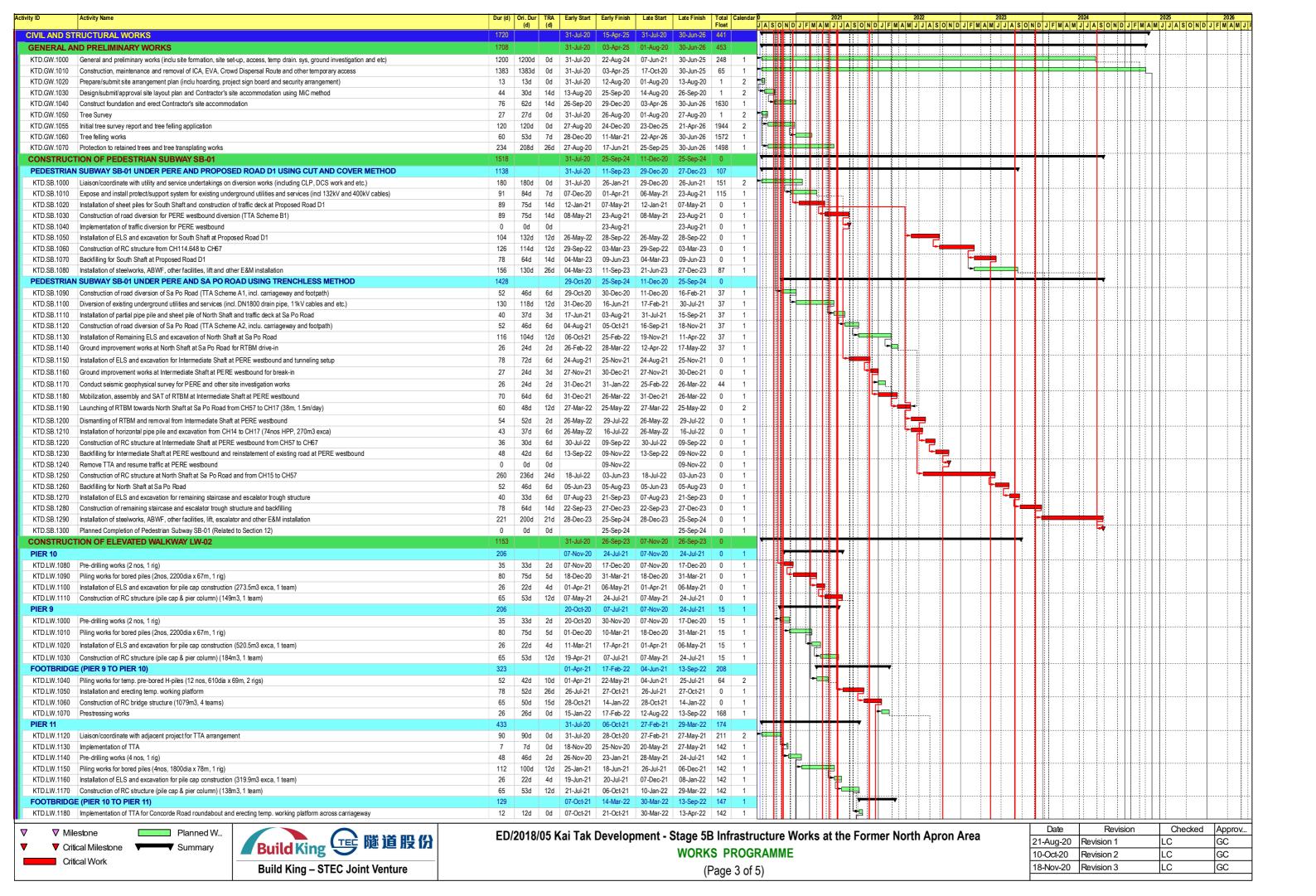


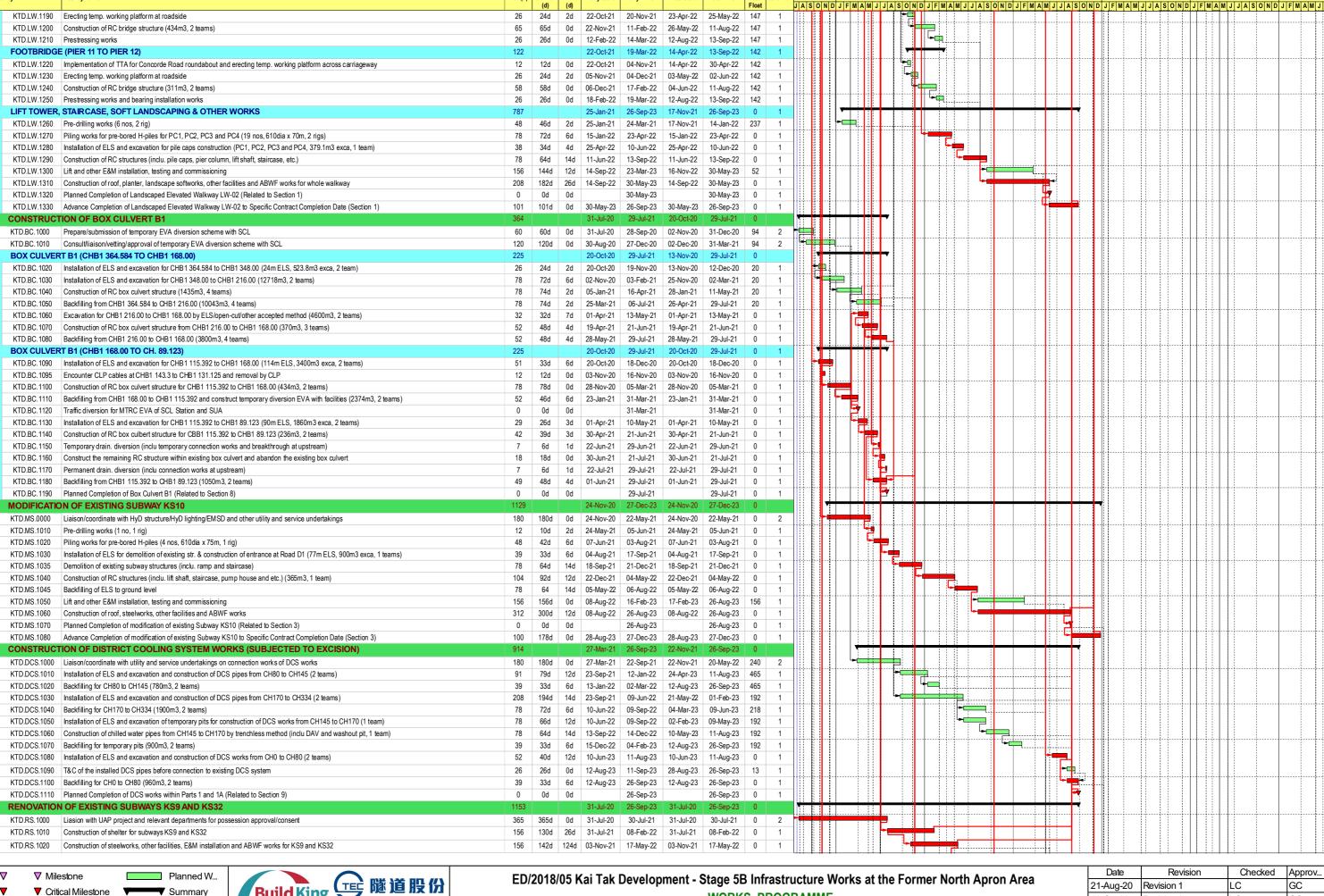


Appendix B – Construction Programme







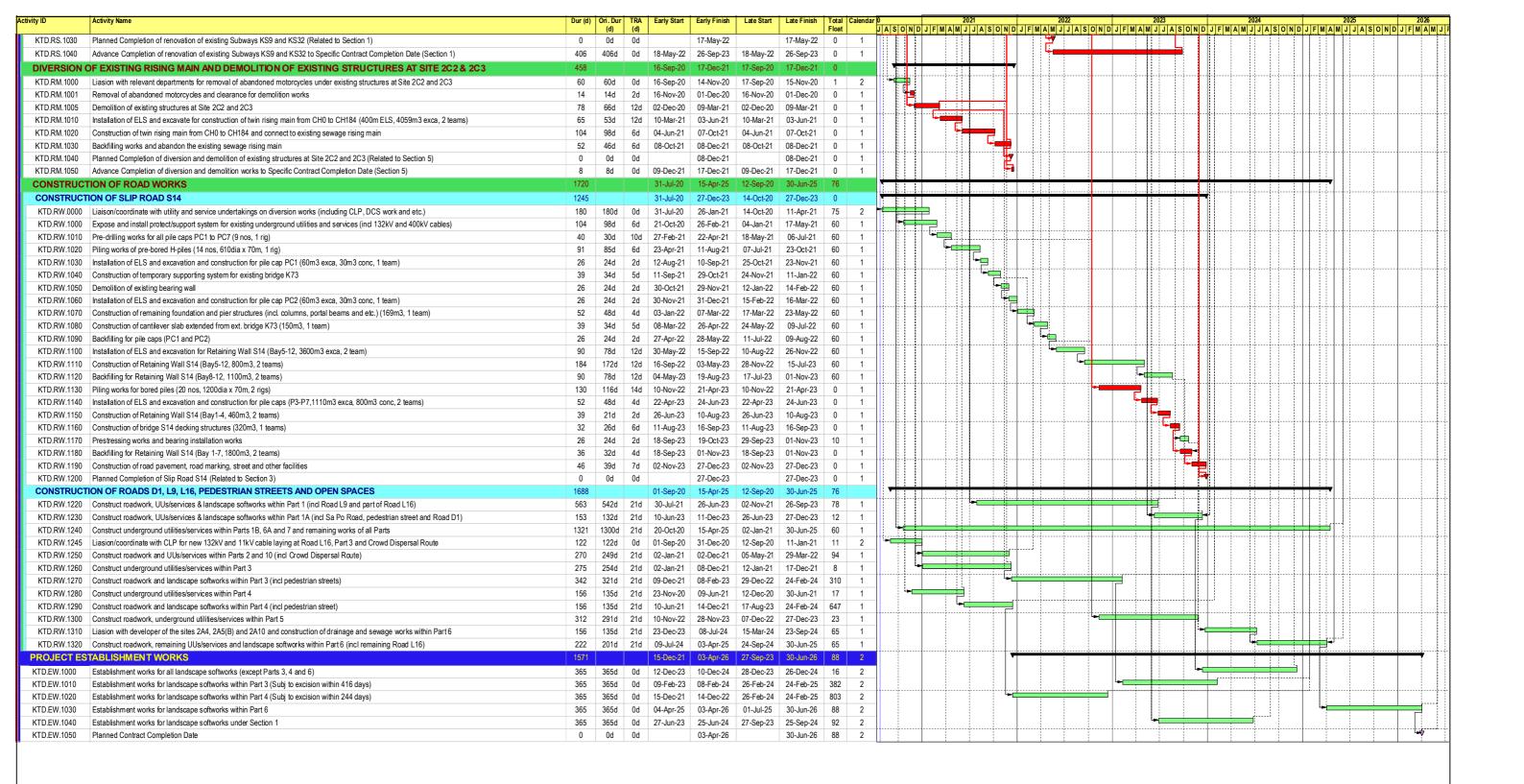


Critical Milestone Critical Work



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 August 2022

August 2022

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2 24-hr TSP and 1-hrX3 TSP: AM2(A), AM3 30-min Noise: M4(A), M5(A)	3	4 Weekly Site Inspection	5	6
7	8 24-hr TSP and 1-hrX3 TSP: AM2(A), AM3 30-min Noise: M4(A), M5(A)	9	10	11 Weekly Site Inspection	12	13 24-hr TSP and 1-hrX3 TSP: AM2(A), AM3
14	15	16	17	18 Weekly Site Inspection	19 24-hr TSP and 1-hrX3 TSP: AM2(A), AM3 30-min Noise: M4(A), M5(A)	20
21	22	23	24	25 24-hr TSP and 1-hrX3 TSP: AM2(A), AM3 30-min Noise: M4(A), M5(A)	26 Weekly Site Inspection + SSMC meeting	27
28	29	30	31 24-hr TSP and 1-hrX3 TSP: AM2(A), AM3 30-min Noise: M4(A), M5(A)			

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 Tentative Environmental Monitoring and Weekly Site Inspection Schedule for September 2022

September 2022

Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1 Weekly Site Inspection	2	3
4	5 24-hr TSP and 1-hrX3 TSP: AM2(A), AM3 30-min Noise: M4(A), M5(A)	6	7	8 Weekly Site Inspection	9	10 24-hr TSP and 1-hrX3 TSP: AM2(A), AM3
11	12	13	14	15 Weekly Site Inspection	16 24-hr TSP and 1-hrX3 TSP: AM2(A), AM3 30-min Noise: M4(A), M5(A)	17
18	19	20	21	Weekly Site Inspection 24-hr TSP and 1-hrX3 TSP: AM2(A), AM3 30-min Noise: M4(A), M5(A)	23	24
25	26	27	28 24-hr TSP and 1-hrX3 TSP: AM2(A), AM3 30-min Noise: M4(A), M5(A)	29 Weekly Site Inspection + SSMC meeting	30	

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 M4(A)



Measurement setup at M5(A)

Appendix E – Calibration certificates, catalogue of air quality monitoring equipment

Catalogue of High Volume Sampler (HVS)





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, 1.09M³M-1.68M³M

Housing: Anodized Aluminum

Filter Holder: Stainless Steel, 8" x 10"

4" Recorder Charts: Box of 100

Filter Holder: 8" x 10" Stainless Steel with hold down frame

Applications

US EPA Reference Method Sampling, CFR Appendix J Part 50 Regulatory Compliance

Institutional Studies
Construction Sites

Bridge and Water Tower Painting Sites

Fence Line Monitoring
Industrial Monitoring

Landfill Monitoring

Public Health Applications

TE-3000 Filter Holder Cartridge
TE-G653 8" x 10" Glass Fiber Filter Media
TE-33384 Motor Brush Set (110volt)

TE-33378 Motor Brush Set (220volt)
TE-116311 Replacement Motor (110volt)

TE-116312 Replacement Motor (220volt) TE-106 Recorder Charts

TE-160 Recorder Pen Points TE-5018 Gasket 8" x 10"

Available Models

TE-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

Physical Specifications

Weight: 75lbs, Shelter

Shipping Dimensions: 46"W x 23"L x 20" H, Shelter 19"W x 19"L x 20"H, Lid

Assembled Dimensions: 28"W x 28"L x 61"H

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Calibration Certificate of HVS

Air Sampler Calibration Curve Plotting & Calculation (Dickson recorder)

Calibration curve ref. No. :	ATSPC-01-2022062901	Date of calibration :	29/06/2022
Location:	Sky Tower	Sampler :	TE-5170X
		Serial Number :	4687

Calibration Data

Ambient barometric pressure, Pa = 751.6 (mmHg) Ambient temperature, Ta = 305.65 (deg K)

Calibration Orifice

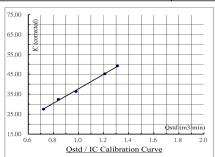
Model = TE-5025A	Qstd Slope, $m = 2.06418$	
Serial No. = 0006	Qstd Intercept, b = -0.03593	
Calibration Due Date: 16/05/2023	Ostd Corr coeff r = 0 99993	

Calibration Curve

Plate No.	H ₂ O	Qstd	I	IC
Plate No.	(in)	(m ³ / min)	(chart)	(corrected)
18	7.40	1.311	50.0	49.10
13	6.30	1.211	46.0	45.17
10	4.10	0.981	37.0	36.33
7	3.00	0.841	33.0	32.40
5	2.20	0.723	28.0	27.49

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]	36.223	1.3899	0.9989



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:	03	29/06/2022	Checked by:	1	29/06/2022
Name: (Ben Poon)	Name: (Tommy Wong)

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

Air Sampler Calibration Curve Plotting & Calculation

(Dickson recorder)

Calibration cu	rve ref. No. : AT	SPC-01-2022	2062904	Date of calibration:	29/06/2022	
Location:	Ng Wah Catholic	Secondary So	chool	Sampler:	TE-5170X	
				Serial Number:	4360	
Calibration D Ambient baron	metric pressure, Pa =	751.6	(mmHg)	Ambient temperature, Ta	= 305.65	(deg K)
Calibration O	<u>rifice</u>					
Model = T	TE-5025A			Qstd Slope, m = 2.064	18	
Serial No. =	0006			Ostd Intercept, b =	-0.03593	

Calibration Curve

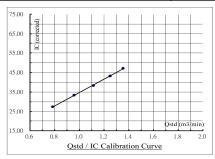
Calibration Due Date: 16/05/2023

Plate No.	H ₂ O	Qstd	I	IC
Flate No.	(in)	(m ³ / min)	(chart)	(corrected)
18	7.90	1.354	48.0	47.13
13	6.70	1.249	44.0	43.21
10	5.30	1.113	39.0	38.30
7	3.90	0.957	34.0	33.39
5	2.60	0.784	28.0	27.49

Qstd Corr. coeff., r = 0.99993

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]	34.211	0.5666	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).

 Calibrated by :
 29/06/2022
 Checked by :
 29/06/2022

 Name :
 (
 Ben Poon
)
 Name :
 (
 Tommy Wong
)

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-01-2022082601	Date of calibration:	26/08/2022
Model no :	Sky Tower	Sampler :	TE-5170X
		Serial Number:	4687

Calibration Data

Ambient barometric pressure, Pa = 757.6 (mmHg) Ambient temperature, Ta = 303.45 (deg K)

Calibration Orifice

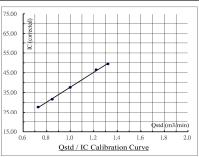
Model = TE-5025A	Qstd Slope, $m = 2.06418$		
Serial No. = 0006	Qstd Intercept, b =	-0.03593	
Calibration Due Date: 16/05/2023	Ostd Corr coeff r=	0 99993	

Calibration Curve

Plate No.	H ₂ O	Qstd	I	IC
Trate No.	(in)	(m ³ / min)	(chart)	(corrected)
18	7.40	1.321	50.0	49.47
13	6.30	1.221	47.0	46.50
10	4.20	1.000	38.0	37.60
7	3.00	0.848	32.0	31.66
5	2.20	0.728	28.0	27.70

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]	37.600	0.0989	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).

 $Remark: \qquad \qquad 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 b	oy:	03	26/08/2022	Checked by :	1	26/08/2022
Name:	(Ben Poon)	Name: (Tommy Wong)
Form No. INS-HVS	S-CAL dd 16 01	2020				

Air Sampler Calibration Curve Plotting & Calculation

(Dickson recorder)

Calibration cu	rve ref. No. :	ATSPC-01-202	2082604	Date of calibration :	26/08/2022	
Model no:	Ng Wah Ca	tholic Secondary S	School	Sampler : Serial Number :	TE-5170X 4360	
Calibration De Ambient baron	ata metric pressure,	Pa = 757.6	(mmHg)	Ambient temperature, Ta =		(deg K)

Calibration Orifice

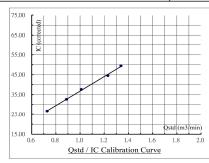
Model = TE-5025A	Qstd Slope, $m = 2.06418$
Serial No. = 0006	Qstd Intercept, b = -0.03593
Calibration Due Date: 16/05/2023	Ostd Corr. coeff., $r = 0.99993$

Calibration Curve

Plate No.	H ₂ O	Qstd	I	IC
	(in)	(m ³ / min)	(chart)	(corrected)
18	7.60	1.339	50.0	49.47
13	6.40	1.230	45.0	44.52
10	4.30	1.011	38.0	37.60
7	3.30	0.888	33.0	32.65
5	2.20	0.728	27.0	26.71

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]	36.535	0.2228	0.9989



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 :
 26/08/2022
 Checked by :
 26/08/2022

 Name :
 (
 Ben Poon
)
 Name :
 (
 Tommy Wong
)

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

Calibration Certificate of HVS used for performance check of Dust Meter

Air Sampler Calibration Curve Plotting & Calculation

(Dickson recorder)

Calibration curve ref. No. :	ATSPC-01-2022061301	Date of calibration :	20/06/2022	
Model no :	GS2310	Serial number :	10346	
Calibration Data				

Cuntilum Data

Ambient barometric pressure, Pa = 753.1 (mmHg) Ambient temperature, Ta = 303.35 (deg K)

Calibration Orifice

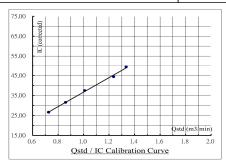
$Model = \underline{TE-5025A}$	Qstd Slope, m = 2.06	5418
Serial No. = 0006	Qstd Intercept, b =	-0.03593
Calibration Due Date: 16/05/2023	Ostd Corr coeff r=	0 99993

Calibration Curve

Plate No.	H ₂ O	Qstd	I	IC
Plate No.	(in)	(m ³ / min)	(chart)	(corrected)
18	7.60	1.335	50.0	49.33
13	6.50	1.236	45.0	44.40
10	4.30	1.009	38.0	37.49
7	3.10	0.859	32.0	31.57
5	2.20	0.726	27.0	26.64

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]	36.268	0.4215	0.9982



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 :
 20/06/2022
 Checked by :
 20/06/2022

 Name :
 (
 Ben Poon
)
 Name :
 (
 Tommy Wong
)

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

Orifice Transfer Standard Certification Worksheet TE-5025A



RECALIBRATION DUE DATE: May 16, 2023

Certificate of Calibration

	C	alibration Certification Information	on	
Cal. Date:	May 16, 2022	Rootsmeter S/N: 438320	Ta: 296	°K
Operator:	Jim Tisch		Pa: 746.8	mm Hg
Calibration	Madel # TE FOREA	Calibrator S/Nr. 0006		

Run	Vol. Init (m3)	Vol. Final (m3)	ΔVol. (m3)	ΔTime (min)	ΔP (mm Hg)	ΔH (in H2O)
1	1	2	1	1.4050	3.2	2.00
2	3	4	1	1.0020	6.4	4.00
3	5	6	1	0.8930	7.9	5.00
4	7	8	1	0.8550	8.7	5.50
5	9	10	1	0.7030	12.8	8.00

	Data Tabulation				
Vstd	Qstd	$\sqrt{\Delta H \left(\frac{Pa}{Pstd}\right) \left(\frac{Tstd}{Ta}\right)}$		Qa	√∆H(Ta/Pa)
(m3)	(x-axis)	(y-axis)	Va	(x-axis)	(y-axis)
0.9850	0.7011	1.4066	0.9957	0.7087	0.8904
0.9807	0.9788	1.9892	0.9914	0.9895	1.2592
0.9788	1.0960	2.2240	0.9894	1.1080	1.4078
0.9777	1.1435	2.3325	0.9883	1.1560	1.4765
0.9723	1.3830	2.8131	0.9829	1.3981	1.7807
	m=	2.06418		m=	1.29255
QSTD	b=	-0.03593	QA	b=	-0.02274
	r=	0.99993	-4.	r=	0.99993

Calculation	ns	
Vstd= ΔVol((Pa-ΔP)/Pstd)(Tstd/Ta)	Va=	ΔVol((Pa-ΔP)/Pa)
Qstd= Vstd/ΔTime	Qa= Va/ΔTime	
For subsequent flow rate	te calculatio	ns:
Qstd= $1/m \left(\sqrt{\Delta H \left(\frac{Pa}{Pstd} \right) \left(\frac{Tstd}{Ta} \right)} - b \right)$	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: rootsmete	er manometer reading (mm Hg)
Ta: actual abs	olute temperature (°K)
Pa: actual bar	ometric pressure (mm Hg)
b: intercept	
m: slope	

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 Petermination of Supported Particulate Matter in

RECALIBRATION

Determination of Suspended Particulate Matter in the Atmosphere, 9.2.17, page 30

Tisch Environmental, Inc. 145 South Miami Avenue Village of Cleves, OH 45002 www.tisch-env.com

TOLL FREE: (877)263-7610 FAX: (513)467-9009

Catalogue of Dust Meter (TSI Sidepak AM510)

The SidePak AMS10 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

- 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-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

Sensor Type 90° light scattering, 670 nm laser diode Aerosol 0.001 to 20 mg/m3 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 mg/m3

±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 at which instrument was last zeroed)

Flow Rate

Zero stability

User-adjustable, 0.7 to 1.8 Range

liters/min (L/min)

Temperature Range

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

Operational Humidity

0 to 95% RH, non-condensing

Time Constant (LCD display)

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

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

Display Tripod Socket 2 line x 12 character LCD 1/4-20 female thread

Power Supply/Charger (P/N 2613210) Input Voltage Range 100 to 240 VAC. 50 to 60 Hz

Input Voltage Range Output Voltage 9 VDC@10 A Maintenance

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

Communications Interface

USB 1.1

Type Connector, Instrument USB Mini-B (socket)

Minimum Computer Requirements for

TrakPro™ Data Analysis Software Communications Port

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

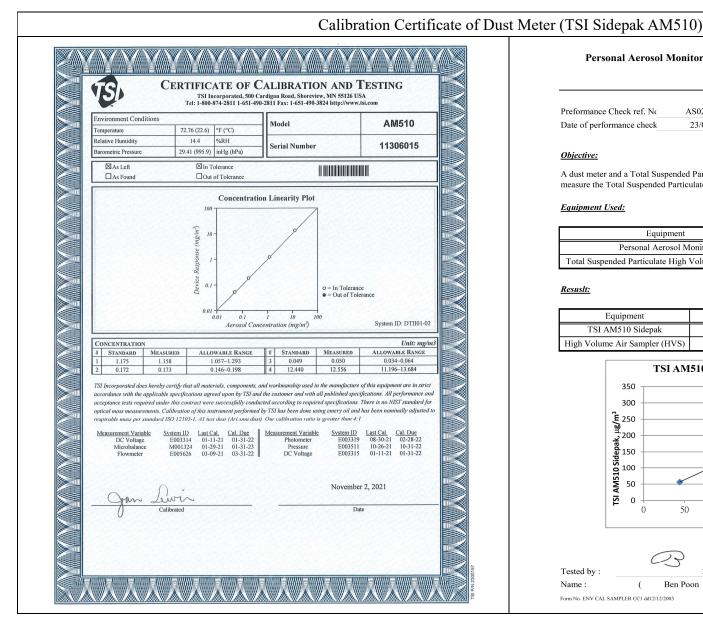
**All dust plugs and dust gaskets must be installed.

***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	AS0220624-1	Report Issue Date	24/06/2022	
Date of performance check	23/06/2022			

Objective:

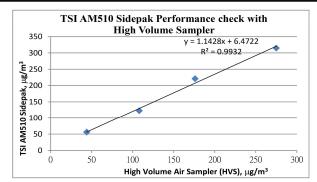
A dust meter and a Total Suspended Particulate High Volume Air Sampler (HVS) were placed together to measure the Total Suspended Particulate (TSP) concentrations simultaneously to check the performance.

Equipment Used:

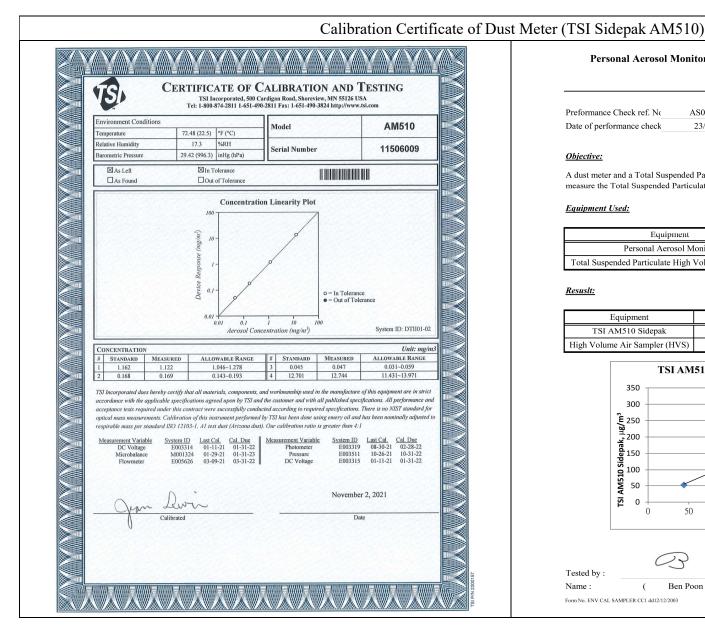
Eq	Equipment		Serial Number
Personal A	Aerosol Monitor	TSI AM510 Sidepak	11306015
Total Suspended Particul	ate High Volume Air Sampler	GS2310	10346

Resustt:

Equipment	Measurement Result, μg/m ³			
TSI AM510 Sidepak	56	123	221	315
High Volume Air Sampler (HVS)	44	108	176	275







Personal Aerosol Monitor Performance check with High Volume Sampler

Preformance Check ref. No	AS0220624-1	Report Issue Date	24/06/2022	
Date of performance check	23/06/2022			

Objective:

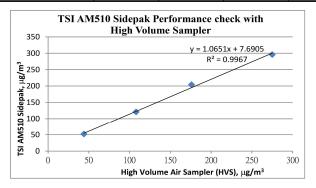
A dust meter and a Total Suspended Particulate High Volume Air Sampler (HVS) were placed together to measure the Total Suspended Particulate (TSP) concentrations simultaneously to check the performance.

Equipment Used:

Equipment	Manufacturer and Model	Serial Number
Personal Aerosol Monitor	TSI AM510 Sidepak	11506009
Total Suspended Particulate High Volume Air Sampler	GS2310	10346

Resustt:

Equipment	Measurement Result, μg/m ³			
TSI AM510 Sidepak	52	121	204	296
High Volume Air Sampler (HVS)	44	108	176	275



Tested by :	(3	24/06/2022	Checked by .	1	24/06/2022	
Name:	(Ben Poon)	Name:	(Tommy Wong	_)
Form No. ENV CAL SAM	PLER CC1 dd1	2/12/2003					

Catalogue of Weather Station

Cabled Vantage Pro2™ & Vantage Pro2 Plus™ Stations



6152C 6162C

Vantage Pro2™

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

Integrated Sensor Suite (ISS)

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

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 (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 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 (requi	res UV sensor)
Resolution and Units	0.1 Index
Range	0 to 16 Index
Accuracy	±5% of full scale (Reference: Yankee UVB-1 at UV index 10 (Extremely High))
Cosine Response	±4% FS (0° to 90° zenith angle)
Update Interval	. 50 seconds to 1 minute (5 minutes when dark)
Current Graph Data	Instant Reading and Hourly Average; Daily, Monthly High
Historical Graph Data	Hourly Average, Daily, Monthly Highs
Alarm	High Threshold from Instant Calculation
Wind	
Wind Chill (Calculated)	
Resolution and Units	1°F or 1°C (user-selectable); °C is converted from °F and rounded to the nearest 1°C
Range	-110° to +135°F (-79° to +57°C)
Accuracy	
Update Interval	
Equation Used	United States National Weather Service (NWS)/NOAA
	Instant Outside Temperature and 10-min. Avg. Wind Speed
Current Display Data	
Current Graph Data	Instant Calculation; Hourly, Daily and Monthly Low
Historical Graph Data	Hourly, Daily and Monthly Lows
Alarm	Low Threshold from Instant Calculation
Wind Direction	
Range	
	. 16 points (22.5°) on compass rose, 1° in numeric display
Accuracy	
Update Interval	
Current Graph Data	Instant Reading (user adjustable); 10-min. Dominant; Hourly, Daily, Monthly Dominant
Historical Graph Data.	Past 6 10-min. Dominants on compass rose only; Hourly, Daily, Monthly Dominants
Wind Speed	
Resolution and Units	.1 mph, 1 km/h, 0.4 m/s, or 1 knot (user-selectable) Measured in mph; other units are converted from mph and rounded to nearest 1 km/hr, 0.1 m/s, or 1 knot.
	0 to 200 mph, 0 to 173 knots, 0 to 89 m/s, 0 to 322 km/h
	Instant Reading: 2.5 to 3 seconds, 10-minute Average: 1 minute
	±2 mph (2 kts, 3.2 km/h, 0.9 m/s) or ±5%, whichever is greater
	540' (165 m) (Note that maximum wind speed reading decreases as length of cable from anemometer to ISS increases.)
Current Display Data	Instant

Current Graph Data Instant Reading; 10-minute and Hourly Average; Hourly High; Daily,

Highs with Direction of Highs

Monthly and Yearly High with Direction of High

Calibration Certificate of Weather Station



AAST-WS-04, Cal: 15 Feb 2022 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

JJF 1183-2007, JJF 1076-2001,

Tel: +852 25680106 Email: info@callab.com.hk
Fax: +852 30116194 Website: www.callab.com.hk

Calibration Certificate No.: CC0012202

Customer Information

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

Equipment Identification

Calibration Procedure:

Equipment Description	Manufacturer	would no.	Serial NO.	Assigned equipment No
Weather Station	Davis Vantage PRO 2	6152CUK	BD181101023	N/A
Certificate Information				
Date of Receipt:	10 February 2022		Calibration Condition:	23.6°C, 53%RH, 1008hPa
Date of Calibration:	15 February 2022		Adjustment:	N/A
Due Date of Calibration:	N/A		Annearance:	Good

Reference Equipment Identification

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

Note1: The estimated expanded uncertainties have been calculated in "Evaluation and expression of uncertainty in measurement" and give an internal estimated to have a level of confidence of 95%. A coverage factor of 28 assumed unless explicitly stated.

Note2: The standard of 39 and intrument used in the calibration are traceable to unational or international recognized standard and are calibrated on a schedule to maintain the

Note:

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

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

Approved By:

Wing Cheng

Company Chop:

Certificate Issue Date: 16 February 2022

N/A

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

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

m		

Reference reading (°C)	Reading (°C)	Error (°C)	Uncertainty (°C)			
15.0	15	0.0	0.3			
20.0	20	0.0	0.3			
25.0	25	0.0	0.3			
30.0	30	0.0	0.3			

Relative Humidity							
Reference reading (%RH)	Reading (%RH)	Error (%RH)	Uncertainty (%RH)				
40.0	43	3.0	1.9				
50.0	53	3.0	1.9				
70.0	72	3.0	1.9				

Wind Speed

willa speca				
	Reference reading (m/s)	Measured reading (m/s)	Error (%)	Uncertainty (%)
	0.0	0.0	N/A	3.6
	2.0	2.1	5.0	3.6
	5.0	5.3	6.0	3.6
	8.0	8.2	2.5	3.6

Wind Direction

Reference reading Measured reading		Error	Uncertainty
0°	0°	0°	5°
45°	45°	0°	5°
90°	90°	0°	5°
135°	135°	0°	5°
180°	180°	0°	5°
225°	225°	0°	5°
270°	270°	0°	5°
315°	315°	0°	5°

^{***} End of Certificate ***

1. The certificate shall not be reproduced except in full, without written approval of Cal Lab Calibration

CC0012202

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

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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.: CC0162207

Customer Information

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

Equipment Identification

Equipment Description Manufacturer Model No. Serial No. Assigned equipment No.: Davis Vantage PRO 2 6312CEU AY170606003

Certificate Information

Date of Receipt: 19 July 2022 Calibration Condition: 24.6°C, 52%RH, 1001hPa Date of Calibration 5 August 2022 Adjustment: Due Date of Calibration: Appearance: Good Calibration Procedure: JJF 1183-2007, JJF 1076-2001, Remark: N/A SOP-116

Reference Equipment Identification

P	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	3 March 2023	
	Hot Wire Anemometer	9535	T95351316004	10 July 2023	

Note: The estimated expanded uncertainties have been calculated in "Evaluation and expression of uncertainty in measurement" and give an internal estimated to have a level of confidence of 95%. A coverage factor of 21 as

accuracy and good condition.

Note3: The result reported in this certificate refer to the condition of the instrument on the date of calibration and carry no implication regarding the long term stability of the

Certificate Issue Date: 24 August 2022

1. The certificate shall not be reproduced except in full, without written approval of Cal Lab Calibration

CC0162207 Page 1 of 2

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

CALIBRATION

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)	Uncertainty (°C)
15.0	15	0.0	0.3
20.0	20	0.0	0.3
25.0	25	0.0	0.3
30.0	31	1.0	0.3

Reference reading (%RH)	Reading (%RH)	Error (%RH)	Uncertainty (%RH)
40.0	42	2.0	1.9
50.0	52	2.0	1.9
70.0	60	0.1	1.0

2 () () (1. 1. 1. ()	F (0/)	11
Reference reading (m/s)	Measured reading (m/s)	Error (%)	Uncertainty (%)
0.0	0.0	N/A	3.6
2.0	1.9	-5.0	3.6
5.0	5.2	4.0	3.6
8.0	8.2	2.5	3.6

Reference reading	Measured reading	Error	Uncertainty
0°	0°	0°	5°
45°	45°	0°	5°
90°	90°	0°	5°
135°	135°	0°	5°
180°	180°	0°	5°
225°	225°	0°	5°
270°	270°	0°	5°
315°	315°	0°	5°

*** End of Certificate ***

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CC0162207

Appendix F – Weather information

General Information

Date	Absolute Daily Min Temperature (°C)	Absolute Daily Max Temperature (°C)	Total Rainfall (mm)	Mean Relative Humidity (%)
01/08/2022	29.1	35.7	0	69
02/08/2022	28	35.2	0.2	70
03/08/2022	25.6	30.8	34.9	82
04/08/2022	25.9	28.4	14.9	86
05/08/2022	24.5	28.6	165.5	94
06/08/2022	26.1	30.9	5.5	89
07/08/2022	27.6	32.6	2.8	82
08/08/2022	26.2	30.9	33.3	87
09/08/2022	25.4	28.5	72	88
10/08/2022	25.8	29.6	49.7	90
11/08/2022	25.5	28.8	12.4	90
12/08/2022	24.9	27.1	76	93
13/08/2022	25.8	32.6	0	81
14/08/2022	26.9	33.3	0	78
15/08/2022	28.1	33.6	0	78
16/08/2022	26.2	33.2	9.1	82
17/08/2022	26.2	32.3	29.8	86
18/08/2022	26.2	30.4	22.1	87
19/08/2022	26.4	32	4.8	85
20/08/2022	26.5	31.9	8.4	83
21/08/2022	26.6	32.9	1.9	84
22/08/2022	28.2	32.9	0	77
23/08/2022	28.6	34.5	0	77
24/08/2022	26.4	34.9	5.5	73
25/08/2022	25	29.8	48.1	85
26/08/2022	27.5	32.9	0.1	80
27/08/2022	27.4	33	0	78
28/08/2022	28.3	34.4	0	80
29/08/2022	28.6	34.6	0	78
30/08/2022	27.9	32.3	13.1	80
31/08/2022	28.1	31.7	4.7	80

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

NOTE2: Trace means rainfall less than 0.08 mm

https://www.hko.gov.hk/en/cis/dailyExtract.htm?y=2022&m=08

Kai Tak Runway Park Information

Date	Absolute Daily Min Temperature (°C)	Absolute Daily Max Temperature (°C)
01/08/2022	28.6	35.0
02/08/2022	25.7	35.8
03/08/2022	24.6	31.5
04/08/2022	25.9	28.5
05/08/2022	24.1	30.9
06/08/2022	25.9	31.5
07/08/2022	27.7	32.5
08/08/2022	26.1	30.6
09/08/2022	25.0	28.6
10/08/2022	25.3	29.5
11/08/2022	25.6	30.2
12/08/2022	24.8	28.1
13/08/2022	25.7	30.8
14/08/2022	26.8	32.7
15/08/2022	27.8	32.7
16/08/2022	25.8	32.7
17/08/2022	26.4	31.3
18/08/2022	26.4	31.5
19/08/2022	26.6	32.3
20/08/2022	26.0	30.7
21/08/2022	27.8	31.4
22/08/2022	27.9	33.8
23/08/2022	28.7	34.7
24/08/2022	25.9	35.0
25/08/2022	24.5	30.0
26/08/2022	27.4	30.3
27/08/2022	27.1	33.7
28/08/2022	28.3	33.2
29/08/2022	28.2	31.5
30/08/2022	26.7	33.4
31/08/2022	28.0	33.3

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=2022-08-01&chart_type=DG_TEMP

Date	Time	Wind Speed (m/s)	Wind Direction												
01/08/2022	0:00	0.4	112.5	02/08/2022	0:00	0.4	90	03/08/2022	0:00	1.3	90	04/08/2022	0:00	0.9	135
01/08/2022	1:00	0.9	90	02/08/2022	1:00	0.4	67.5	03/08/2022	1:00	1.3	90	04/08/2022	1:00	0.9	112.5
01/08/2022	2:00	0.9	90	02/08/2022	2:00	0.9	90	03/08/2022	2:00	1.3	90	04/08/2022	2:00	0.4	90
01/08/2022	3:00	0.4	247.5	02/08/2022	3:00	1.3	135	03/08/2022	3:00	1.3	112.5	04/08/2022	3:00	0.4	90
01/08/2022	4:00	0.4	202.5	02/08/2022	4:00	0.9	67.5	03/08/2022	4:00	0.9	112.5	04/08/2022	4:00	0.9	0
01/08/2022	5:00	0.9	90	02/08/2022	5:00	1.3	90	03/08/2022	5:00	0.4	225	04/08/2022	5:00	0.4	45
01/08/2022	6:00	0.9	112.5	02/08/2022	6:00	1.3	90	03/08/2022	6:00	1.3	67.5	04/08/2022	6:00	0.4	67.5
01/08/2022	7:00	0.4	112.5	02/08/2022	7:00	0.9	90	03/08/2022	7:00	0.9	225	04/08/2022	7:00	0.9	112.5
01/08/2022	8:00	0.9	135	02/08/2022	8:00	0.4	90	03/08/2022	8:00	0.9	112.4	04/08/2022	8:00	0.9	135
01/08/2022	9:00	0.4	112.5	02/08/2022	9:00	0.9	45	03/08/2022	9:00	1.3	112.5	04/08/2022	9:00	0.4	112.5
01/08/2022	10:00	0.9	112.5	02/08/2022	10:00	0.4	135	03/08/2022	10:00	0.4	90	04/08/2022	10:00	0.4	292.5
01/08/2022	11:00	0.9	112.5	02/08/2022	11:00	0.4	135	03/08/2022	11:00	0.9	45	04/08/2022	11:00	0.9	112.5
01/08/2022	12:00	1.3	112.5	02/08/2022	12:00	0.4	112.5	03/08/2022	12:00	1.3	90	04/08/2022	12:00	0.4	225
01/08/2022	13:00	0.4	90	02/08/2022	13:00	0.9	22.5	03/08/2022	13:00	1.3	90	04/08/2022	13:00	0.4	315
01/08/2022	14:00	0.4	112.5	02/08/2022	14:00	0.9	90	03/08/2022	14:00	1.3	90	04/08/2022	14:00	0.4	112.5
01/08/2022	15:00	0.4	45	02/08/2022	15:00	0.4	225	03/08/2022	15:00	1.3	90	04/08/2022	15:00	0.4	112.5
01/08/2022	16:00	0.9	135	02/08/2022	16:00	0.4	67.5	03/08/2022	16:00	1.3	90	04/08/2022	16:00	0.9	45
01/08/2022	17:00	0.9	135	02/08/2022	17:00	0.4	135	03/08/2022	17:00	1.3	112.5	04/08/2022	17:00	0.4	67.5
01/08/2022	18:00	0.4	22.5	02/08/2022	18:00	1.3	112.5	03/08/2022	18:00	0.9	112.5	04/08/2022	18:00	0.9	67.5
01/08/2022	19:00	1.3	45	02/08/2022	19:00	0.4	202.5	03/08/2022	19:00	0.4	225	04/08/2022	19:00	0.9	90
01/08/2022	20:00	1.3	45	02/08/2022	20:00	0.9	67.5	03/08/2022	20:00	1.3	67.5	04/08/2022	20:00	0.9	67.5
01/08/2022	21:00	1.3	45	02/08/2022	21:00	0.9	247.5	03/08/2022	21:00	0.9	225	04/08/2022	21:00	0.9	67.5
01/08/2022	22:00	1.3	90	02/08/2022	22:00	1.8	202.5	03/08/2022	22:00	0.9	112.4	04/08/2022	22:00	0.9	135
01/08/2022	23:00	1.3	45	02/08/2022	23:00	0.4	225	03/08/2022	23:00	1.3	112.5	04/08/2022	23:00	0.9	112.5

Date	Time	Wind Speed (m/s)	Wind Direction												
05/08/2022	0:00	0.4	157.5	06/08/2022	0:00	0.9	225	07/08/2022	0:00	0.4	135	08/08/2022	0:00	0.9	112.5
05/08/2022	1:00	0.9	112.5	06/08/2022	1:00	0.9	202.5	07/08/2022	1:00	1.3	135	08/08/2022	1:00	0.9	112.5
05/08/2022	2:00	0.4	112.5	06/08/2022	2:00	0.9	112.5	07/08/2022	2:00	0.4	135	08/08/2022	2:00	0.4	112.5
05/08/2022	3:00	0.9	90	06/08/2022	3:00	0.9	225	07/08/2022	3:00	0.9	247.5	08/08/2022	3:00	0.4	112.5
05/08/2022	4:00	1.3	90	06/08/2022	4:00	0.4	202.5	07/08/2022	4:00	0.9	202.5	08/08/2022	4:00	0.9	112.5
05/08/2022	5:00	1.3	112.5	06/08/2022	5:00	0.4	157.5	07/08/2022	5:00	0.9	45	08/08/2022	5:00	0.9	112.5
05/08/2022	6:00	1.8	67.5	06/08/2022	6:00	0.4	90	07/08/2022	6:00	0.4	90	08/08/2022	6:00	0.9	22.5
05/08/2022	7:00	1.8	112.5	06/08/2022	7:00	0.4	90	07/08/2022	7:00	0.4	112.5	08/08/2022	7:00	0.4	67.5
05/08/2022	8:00	0.4	112.5	06/08/2022	8:00	0.4	112.5	07/08/2022	8:00	0.9	112.5	08/08/2022	8:00	1.3	337.5
05/08/2022	9:00	0.9	112.5	06/08/2022	9:00	0.9	225	07/08/2022	9:00	0.9	112.5	08/08/2022	9:00	0.9	112.5
05/08/2022	10:00	0.9	112.5	06/08/2022	10:00	0.9	202.5	07/08/2022	10:00	0.9	112.5	08/08/2022	10:00	0.9	112.5
05/08/2022	11:00	0.9	112.5	06/08/2022	11:00	0.9	112.5	07/08/2022	11:00	0.9	157.5	08/08/2022	11:00	0.4	112.5
05/08/2022	12:00	0.4	157.5	06/08/2022	12:00	0.9	135	07/08/2022	12:00	0.9	157.5	08/08/2022	12:00	1.3	67.5
05/08/2022	13:00	0.4	135	06/08/2022	13:00	0.9	90	07/08/2022	13:00	0.9	180	08/08/2022	13:00	1.3	112.5
05/08/2022	14:00	0.4	135	06/08/2022	14:00	1.3	90	07/08/2022	14:00	0.9	112.5	08/08/2022	14:00	1.3	90
05/08/2022	15:00	0.4	112.5	06/08/2022	15:00	1.8	112.	07/08/2022	15:00	0.9	112.5	08/08/2022	15:00	0.4	112.5
05/08/2022	16:00	0.9	135	06/08/2022	16:00	0.9	90	07/08/2022	16:00	0.4	112.5	08/08/2022	16:00	0.4	112.5
05/08/2022	17:00	0.9	112.5	06/08/2022	17:00	0.4	112.5	07/08/2022	17:00	0.4	112.5	08/08/2022	17:00	0.4	135
05/08/2022	18:00	0.9	112.5	06/08/2022	18:00	0.9	135	07/08/2022	18:00	0.9	112.5	08/08/2022	18:00	0.4	135
05/08/2022	19:00	0.4	135	06/08/2022	19:00	0.4	135	07/08/2022	19:00	0.9	112.5	08/08/2022	19:00	0.4	112.5
05/08/2022	20:00	0.4	337.5	06/08/2022	20:00	0.4	135	07/08/2022	20:00	0.9	22.5	08/08/2022	20:00	0.4	135
05/08/2022	21:00	0.4	112.5	06/08/2022	21:00	0.4	157.5	07/08/2022	21:00	0.4	67.5	08/08/2022	21:00	0.9	135
05/08/2022	22:00	0.9	112.5	06/08/2022	22:00	1.3	90	07/08/2022	22:00	1.3	337.5	08/08/2022	22:00	0.4	112.5
05/08/2022	23:00	0.9	112.5	06/08/2022	23:00	0.9	90	07/08/2022	23:00	0.9	112.5	08/08/2022	23:00	1.3	67.5

Date	Time	Wind Speed (m/s)	Wind Direction												
09/08/2022	0:00	2.2	112.5	10/08/2022	0:00	1.3	90	11/08/2022	0:00	0.9	112.5	12/08/2022	0:00	1.3	112.5
09/08/2022	1:00	1.8	45	10/08/2022	1:00	1.8	112.5	11/08/2022	1:00	1.8	112.5	12/08/2022	1:00	0.9	135
09/08/2022	2:00	2.2	90	10/08/2022	2:00	0.9	67.5	11/08/2022	2:00	0.9	90	12/08/2022	2:00	0.9	67.5
09/08/2022	3:00	2.2	90	10/08/2022	3:00	0.9	112.5	11/08/2022	3:00	0.9	112.5	12/08/2022	3:00	0.9	45
09/08/2022	4:00	1.3	67.5	10/08/2022	4:00	0.9	112.5	11/08/2022	4:00	0.9	90	12/08/2022	4:00	0.9	90
09/08/2022	5:00	1.8	45	10/08/2022	5:00	0.4	90	11/08/2022	5:00	1.3	112.5	12/08/2022	5:00	1.8	45
09/08/2022	6:00	1.3	112.5	10/08/2022	6:00	0.9	90	11/08/2022	6:00	1.3	112.5	12/08/2022	6:00	1.8	112.5
09/08/2022	7:00	0.9	112.5	10/08/2022	7:00	0.9	112.5	11/08/2022	7:00	1.3	90	12/08/2022	7:00	1.3	112.5
09/08/2022	8:00	0.4	112.5	10/08/2022	8:00	0.9	225	11/08/2022	8:00	1.3	112.5	12/08/2022	8:00	1.3	112.5
09/08/2022	9:00	0.4	112.5	10/08/2022	9:00	1.8	112.5	11/08/2022	9:00	1.8	112.5	12/08/2022	9:00	1.3	135
09/08/2022	10:00	2.2	112.5	10/08/2022	10:00	1.3	45	11/08/2022	10:00	1.3	112.5	12/08/2022	10:00	1.3	112.5
09/08/2022	11:00	1.8	45	10/08/2022	11:00	1.3	112.5	11/08/2022	11:00	1.8	112.5	12/08/2022	11:00	0.9	135
09/08/2022	12:00	2.2	90	10/08/2022	12:00	1.3	90	11/08/2022	12:00	1.3	112.5	12/08/2022	12:00	0.9	67.5
09/08/2022	13:00	2.2	112.5	10/08/2022	13:00	1.8	112.5	11/08/2022	13:00	1.8	45	12/08/2022	13:00	0.9	45
09/08/2022	14:00	1.8	45	10/08/2022	14:00	1.3	247.5	11/08/2022	14:00	1.3	337.5	12/08/2022	14:00	1.3	247.5
09/08/2022	15:00	2.2	90	10/08/2022	15:00	0.9	247.5	11/08/2022	15:00	0.9	112.5	12/08/2022	15:00	0.9	247.5
09/08/2022	16:00	2.2	90	10/08/2022	16:00	1.3	247.5	11/08/2022	16:00	1.3	112.5	12/08/2022	16:00	1.3	247.5
09/08/2022	17:00	1.3	67.5	10/08/2022	17:00	1.3	247.5	11/08/2022	17:00	1.3	112.5	12/08/2022	17:00	1.3	247.5
09/08/2022	18:00	1.8	45	10/08/2022	18:00	1.8	247.5	11/08/2022	18:00	1.3	67.5	12/08/2022	18:00	1.8	247.5
09/08/2022	19:00	1.3	112.5	10/08/2022	19:00	1.3	112.5	11/08/2022	19:00	0.9	135	12/08/2022	19:00	1.3	112.5
09/08/2022	20:00	0.9	112.5	10/08/2022	20:00	1.3	112.5	11/08/2022	20:00	1.3	112.5	12/08/2022	20:00	1.3	112.5
09/08/2022	21:00	0.4	112.5	10/08/2022	21:00	0.4	112.5	11/08/2022	21:00	0.9	90	12/08/2022	21:00	0.4	112.5
09/08/2022	22:00	0.4	112.5	10/08/2022	22:00	0.4	112.5	11/08/2022	22:00	1.3	90	12/08/2022	22:00	0.4	112.5
09/08/2022	23:00	2.2	112.5	10/08/2022	23:00	0.9	90	11/08/2022	23:00	1.8	45	12/08/2022	23:00	0.9	90

Date	Time	Wind Speed (m/s)	Wind Direction												
13/08/2022	0:00	1.3	90	14/08/2022	0:00	0.9	135	15/08/2022	0:00	1.3	90	16/08/2022	0:00	0.4	112.5
13/08/2022	1:00	0.9	112.5	14/08/2022	1:00	1.3	90	15/08/2022	1:00	0.9	90	16/08/2022	1:00	0.4	112.5
13/08/2022	2:00	0.4	112.5	14/08/2022	2:00	0.4	90	15/08/2022	2:00	1.3	45	16/08/2022	2:00	0.9	112.5
13/08/2022	3:00	0.4	112.5	14/08/2022	3:00	1.3	135	15/08/2022	3:00	1.3	135	16/08/2022	3:00	0.4	90
13/08/2022	4:00	1.3	90	14/08/2022	4:00	0.9	135	15/08/2022	4:00	1.3	135	16/08/2022	4:00	0.4	112.5
13/08/2022	5:00	0.9	135	14/08/2022	5:00	0.4	135	15/08/2022	5:00	1.8	90	16/08/2022	5:00	0.4	112.5
13/08/2022	6:00	0.9	90	14/08/2022	6:00	0.4	90	15/08/2022	6:00	1.8	135	16/08/2022	6:00	0.4	90
13/08/2022	7:00	0.9	45	14/08/2022	7:00	1.3	135	15/08/2022	7:00	1.3	135	16/08/2022	7:00	0.9	90
13/08/2022	8:00	0.4	112.5	14/08/2022	8:00	1.3	135	15/08/2022	8:00	1.8	67.5	16/08/2022	8:00	0.9	112.5
13/08/2022	9:00	0.4	157.5	14/08/2022	9:00	0.4	135	15/08/2022	9:00	0.9	90	16/08/2022	9:00	0.4	135
13/08/2022	10:00	0.4	67.5	14/08/2022	10:00	0.9	45	15/08/2022	10:00	1.8	225	16/08/2022	10:00	0.4	135
13/08/2022	11:00	0.4	157.5	14/08/2022	11:00	1.3	45	15/08/2022	11:00	1.3	67.5	16/08/2022	11:00	0.4	112.5
13/08/2022	12:00	0.4	112.5	14/08/2022	12:00	1.3	292.5	15/08/2022	12:00	0.9	22.5	16/08/2022	12:00	0.4	112.5
13/08/2022	13:00	0.9	67.5	14/08/2022	13:00	0.4	292.5	15/08/2022	13:00	0.4	292.5	16/08/2022	13:00	0.4	112.5
13/08/2022	14:00	1.3	90	14/08/2022	14:00	1.3	112.5	15/08/2022	14:00	0	90	16/08/2022	14:00	0.9	90
13/08/2022	15:00	0.9	112.5	14/08/2022	15:00	0.9	90	15/08/2022	15:00	0.4	112.5	16/08/2022	15:00	0.9	90
13/08/2022	16:00	1.3	112.5	14/08/2022	16:00	0.9	135	15/08/2022	16:00	0.9	112.5	16/08/2022	16:00	0.9	67.5
13/08/2022	17:00	1.3	67.5	14/08/2022	17:00	0.9	112.5	15/08/2022	17:00	0.9	135	16/08/2022	17:00	0.9	67.5
13/08/2022	18:00	1.3	90	14/08/2022	18:00	0.9	112.5	15/08/2022	18:00	0.9	90	16/08/2022	18:00	0.4	135
13/08/2022	19:00	1.8	112.5	14/08/2022	19:00	0.4	112.5	15/08/2022	19:00	0.9	45	16/08/2022	19:00	0.9	90
13/08/2022	20:00	1.8	67.5	14/08/2022	20:00	0.9	67.5	15/08/2022	20:00	0.9	45	16/08/2022	20:00	0.9	112.5
13/08/2022	21:00	1.3	22.5	14/08/2022	21:00	1.3	45	15/08/2022	21:00	0.4	135	16/08/2022	21:00	0.9	135
13/08/2022	22:00	0.4	135	14/08/2022	22:00	1.3	22.5	15/08/2022	22:00	0.9	135	16/08/2022	22:00	0.4	112.5
13/08/2022	23:00	0.9	22.5	14/08/2022	23:00	1.3	90	15/08/2022	23:00	0.4	112.5	16/08/2022	23:00	0.4	135

Date	Time	Wind Speed (m/s)	Wind Direction												
17/08/2022	0:00	1.3	45	18/08/2022	0:00	0.4	22.5	19/08/2022	0:00	1.3	90	20/08/2022	0:00	0.9	270
17/08/2022	1:00	1.3	135	18/08/2022	1:00	0.9	67.5	19/08/2022	1:00	1.3	45	20/08/2022	1:00	0.4	225
17/08/2022	2:00	0.9	90	18/08/2022	2:00	0.9	67.5	19/08/2022	2:00	0.4	135	20/08/2022	2:00	0.9	225
17/08/2022	3:00	0.9	45	18/08/2022	3:00	0.9	45	19/08/2022	3:00	0.4	67.5	20/08/2022	3:00	0.9	292.5
17/08/2022	4:00	1.3	67.5	18/08/2022	4:00	1.3	67.5	19/08/2022	4:00	0.9	90	20/08/2022	4:00	0.9	247.5
17/08/2022	5:00	0.9	112.5	18/08/2022	5:00	0.4	45	19/08/2022	5:00	1.3	90	20/08/2022	5:00	0.9	270
17/08/2022	6:00	0.9	90	18/08/2022	6:00	0.9	135	19/08/2022	6:00	1.3	90	20/08/2022	6:00	0.9	270
17/08/2022	7:00	1.3	112.5	18/08/2022	7:00	0.9	135	19/08/2022	7:00	1.3	112.5	20/08/2022	7:00	0.9	67.5
17/08/2022	8:00	1.8	135	18/08/2022	8:00	0.4	22.5	19/08/2022	8:00	1.3	135	20/08/2022	8:00	0.9	67.5
17/08/2022	9:00	1.8	337.5	18/08/2022	9:00	1.3	45	19/08/2022	9:00	0.9	90	20/08/2022	9:00	0.9	112.5
17/08/2022	10:00	1.3	90	18/08/2022	10:00	0.4	22.5	19/08/2022	10:00	0.9	112.5	20/08/2022	10:00	0.9	90
17/08/2022	11:00	1.3	22.5	18/08/2022	11:00	0.9	67.5	19/08/2022	11:00	0.9	90	20/08/2022	11:00	0.9	270
17/08/2022	12:00	1.3	45	18/08/2022	12:00	0.9	67.5	19/08/2022	12:00	1.3	90	20/08/2022	12:00	0.4	225
17/08/2022	13:00	0.9	45	18/08/2022	13:00	0.9	337.5	19/08/2022	13:00	0.9	247.5	20/08/2022	13:00	1.3	45
17/08/2022	14:00	0.9	45	18/08/2022	14:00	0.4	337.5	19/08/2022	14:00	1.3	112.5	20/08/2022	14:00	1.3	45
17/08/2022	15:00	1.3	45	18/08/2022	15:00	0.4	22.5	19/08/2022	15:00	0.9	45	20/08/2022	15:00	1.3	225
17/08/2022	16:00	0.4	45	18/08/2022	16:00	0.9	22.5	19/08/2022	16:00	0.9	67.5	20/08/2022	16:00	1.3	270
17/08/2022	17:00	0.9	247.5	18/08/2022	17:00	0.4	22.5	19/08/2022	17:00	0.4	67.5	20/08/2022	17:00	0.9	112.5
17/08/2022	18:00	0.9	22.5	18/08/2022	18:00	0.4	0	19/08/2022	18:00	0.4	67.5	20/08/2022	18:00	0.9	112.5
17/08/2022	19:00	1.3	22.5	18/08/2022	19:00	0.4	0	19/08/2022	19:00	0.9	67.5	20/08/2022	19:00	1.3	112.5
17/08/2022	20:00	1.3	45	18/08/2022	20:00	0.4	202.5	19/08/2022	20:00	0.9	112.5	20/08/2022	20:00	1.3	112.5
17/08/2022	21:00	0.4	67.5	18/08/2022	21:00	0.4	315	19/08/2022	21:00	0.4	112.5	20/08/2022	21:00	1.3	112.5
17/08/2022	22:00	0.4	135	18/08/2022	22:00	0.4	270	19/08/2022	22:00	0.4	90	20/08/2022	22:00	0.9	112.5
17/08/2022	23:00	0.4	202.5	18/08/2022	23:00	0.9	337.5	19/08/2022	23:00	0.9	247.5	20/08/2022	23:00	0.9	112.5

Date	Time	Wind Speed (m/s)	Wind Direction												
21/08/2022	0:00	1.3	112.5	22/08/2022	0:00	0.4	67.5	23/08/2022	0:00	1.8	67.5	24/08/2022	0:00	1.3	45
21/08/2022	1:00	1.3	90	22/08/2022	1:00	0.4	45	23/08/2022	1:00	1.8	45	24/08/2022	1:00	1.3	67.5
21/08/2022	2:00	1.8	112.5	22/08/2022	2:00	0.4	112.5	23/08/2022	2:00	1.3	45	24/08/2022	2:00	1.8	45
21/08/2022	3:00	1.3	112.5	22/08/2022	3:00	0.4	180	23/08/2022	3:00	1.3	67.5	24/08/2022	3:00	1.3	45
21/08/2022	4:00	1.3	112.5	22/08/2022	4:00	0.4	270	23/08/2022	4:00	1.8	157.5	24/08/2022	4:00	1.3	67.5
21/08/2022	5:00	0.4	112.5	22/08/2022	5:00	0.4	45	23/08/2022	5:00	1.8	67.5	24/08/2022	5:00	1.3	45
21/08/2022	6:00	0.4	112.5	22/08/2022	6:00	0.9	45	23/08/2022	6:00	1.8	67.5	24/08/2022	6:00	1.3	45
21/08/2022	7:00	0.4	112.5	22/08/2022	7:00	0.9	90	23/08/2022	7:00	1.8	90	24/08/2022	7:00	1.3	225
21/08/2022	8:00	0.4	112.5	22/08/2022	8:00	0.4	45	23/08/2022	8:00	1.3	112.5	24/08/2022	8:00	1.3	270
21/08/2022	9:00	0.4	112.5	22/08/2022	9:00	0.4	135	23/08/2022	9:00	0.4	90	24/08/2022	9:00	0.9	112.5
21/08/2022	10:00	0.9	112.5	22/08/2022	10:00	0.9	247.5	23/08/2022	10:00	1.8	67.5	24/08/2022	10:00	0.9	112.5
21/08/2022	11:00	0.9	112.5	22/08/2022	11:00	0.4	67.5	23/08/2022	11:00	1.8	45	24/08/2022	11:00	1.3	112.5
21/08/2022	12:00	1.3	112.5	22/08/2022	12:00	0.9	90	23/08/2022	12:00	1.3	45	24/08/2022	12:00	1.3	112.5
21/08/2022	13:00	1.3	90	22/08/2022	13:00	1.3	90	23/08/2022	13:00	1.3	67.5	24/08/2022	13:00	1.3	45
21/08/2022	14:00	1.8	112.5	22/08/2022	14:00	0.9	112.5	23/08/2022	14:00	1.3	112.5	24/08/2022	14:00	1.3	45
21/08/2022	15:00	0.9	90	22/08/2022	15:00	0.9	22.5	23/08/2022	15:00	1.3	90	24/08/2022	15:00	1.3	67.5
21/08/2022	16:00	0.9	67.5	22/08/2022	16:00	1.3	112.5	23/08/2022	16:00	1.3	67.5	24/08/2022	16:00	1.8	45
21/08/2022	17:00	0.9	90	22/08/2022	17:00	1.3	135	23/08/2022	17:00	1.3	112.5	24/08/2022	17:00	1.3	45
21/08/2022	18:00	0.9	22.5	22/08/2022	18:00	1.3	112.5	23/08/2022	18:00	1.8	67.5	24/08/2022	18:00	1.3	67.5
21/08/2022	19:00	0.4	90	22/08/2022	19:00	1.3	112.5	23/08/2022	19:00	1.3	67.5	24/08/2022	19:00	1.3	45
21/08/2022	20:00	0.4	67.5	22/08/2022	20:00	0.9	135	23/08/2022	20:00	0.9	67.5	24/08/2022	20:00	1.3	45
21/08/2022	21:00	0.4	90	22/08/2022	21:00	1.3	90	23/08/2022	21:00	0.9	67.5	24/08/2022	21:00	1.3	225
21/08/2022	22:00	0.4	112.5	22/08/2022	22:00	1.3	112.5	23/08/2022	22:00	1.8	22.5	24/08/2022	22:00	1.3	270
21/08/2022	23:00	0.9	45	22/08/2022	23:00	1.3	112.5	23/08/2022	23:00	1.3	112.5	24/08/2022	23:00	0.9	112.5

Date	Time	Wind Speed (m/s)	Wind Direction												
25/08/2022	0:00	2.2	1125	26/08/2022	0:00	0.4	112.5	27/08/2022	0:00	1.3	67.5	28/08/2022	0:00	0.9	112.5
25/08/2022	1:00	2.2	90	26/08/2022	1:00	0.9	270	27/08/2022	1:00	0.9	112.5	28/08/2022	1:00	0.4	112.5
25/08/2022	2:00	2.7	112.5	26/08/2022	2:00	0.4	157.5	27/08/2022	2:00	0.9	135	28/08/2022	2:00	0.9	112.5
25/08/2022	3:00	2.7	90	26/08/2022	3:00	0.9	157.5	27/08/2022	3:00	0.9	315	28/08/2022	3:00	0.9	112.5
25/08/2022	4:00	2.7	90	26/08/2022	4:00	1.3	90	27/08/2022	4:00	0.9	135	28/08/2022	4:00	0.4	112.5
25/08/2022	5:00	2.2	90	26/08/2022	5:00	1.3	45	27/08/2022	5:00	1.3	90	28/08/2022	5:00	0.4	112.5
25/08/2022	6:00	1.8	112.5	26/08/2022	6:00	1.8	67.5	27/08/2022	6:00	0.9	67.5	28/08/2022	6:00	0.4	135
25/08/2022	7:00	2.2	67.5	26/08/2022	7:00	1.8	202.5	27/08/2022	7:00	1.3	90	28/08/2022	7:00	0.9	112.5
25/08/2022	8:00	2.7	292.5	26/08/2022	8:00	0.9	45	27/08/2022	8:00	1.3	112.5	28/08/2022	8:00	0.4	135
25/08/2022	9:00	1.3	112.5	26/08/2022	9:00	1.3	112.5	27/08/2022	9:00	0.9	90	28/08/2022	9:00	0.9	135
25/08/2022	10:00	1.3	90	26/08/2022	10:00	0.9	135	27/08/2022	10:00	1.3	112.5	28/08/2022	10:00	0.4	135
25/08/2022	11:00	1.8	112.5	26/08/2022	11:00	0.9	90	27/08/2022	11:00	0.9	90	28/08/2022	11:00	0.9	112.5
25/08/2022	12:00	1.3	90	26/08/2022	12:00	1.3	45	27/08/2022	12:00	1.3	67.5	28/08/2022	12:00	0.4	112.5
25/08/2022	13:00	2.7	90	26/08/2022	13:00	1.3	90	27/08/2022	13:00	0.9	112.5	28/08/2022	13:00	0.9	112.5
25/08/2022	14:00	0.9	135	26/08/2022	14:00	1.8	22.5	27/08/2022	14:00	1.3	0	28/08/2022	14:00	1.8	45
25/08/2022	15:00	0.9	112.5	26/08/2022	15:00	1.8	315	27/08/2022	15:00	0.9	22.5	28/08/2022	15:00	1.3	67.5
25/08/2022	16:00	0.9	112.5	26/08/2022	16:00	1.3	90	27/08/2022	16:00	0.4	337.5	28/08/2022	16:00	1.3	67.5
25/08/2022	17:00	1.3	135	26/08/2022	17:00	1.3	90	27/08/2022	17:00	1.3	22.5	28/08/2022	17:00	1.3	67.5
25/08/2022	18:00	0.9	135	26/08/2022	18:00	0.9	112.5	27/08/2022	18:00	0.4	22.5	28/08/2022	18:00	1.8	45
25/08/2022	19:00	0.9	112.5	26/08/2022	19:00	0.4	112.5	27/08/2022	19:00	0.4	292.5	28/08/2022	19:00	1.3	67.5
25/08/2022	20:00	0.9	135	26/08/2022	20:00	1.3	45	27/08/2022	20:00	0.4	0	28/08/2022	20:00	0.9	112.5
25/08/2022	21:00	0.9	112.5	26/08/2022	21:00	1.3	0	27/08/2022	21:00	0.4	337.5	28/08/2022	21:00	0.4	135
25/08/2022	22:00	2.2	112.5	26/08/2022	22:00	0.4	22.5	27/08/2022	22:00	0.4	337.5	28/08/2022	22:00	0.9	135
25/08/2022	23:00	1.3	90	26/08/2022	23:00	1.3	67.5	27/08/2022	23:00	0.4	247.5	28/08/2022	23:00	0.4	135

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
29/08/2022	0:00	0.9	90	30/08/2022	0:00	0.9	67.5	31/08/2022	0:00	0.4	112.5				
29/08/2022	1:00	1.3	90	30/08/2022	1:00	0.9	90	31/08/2022	1:00	0.4	157.5				
29/08/2022	2:00	1.3	45	30/08/2022	2:00	0.4	90	31/08/2022	2:00	0.4	112.5				
29/08/2022	3:00	1.3	0	30/08/2022	3:00	0.4	157.5	31/08/2022	3:00	0.4	112.5				
29/08/2022	4:00	0.9	22.5	30/08/2022	4:00	0.9	112.5	31/08/2022	4:00	0.4	180				
29/08/2022	5:00	0.9	0	30/08/2022	5:00	0.4	112.5	31/08/2022	5:00	0.4	112.5				
29/08/2022	6:00	0.9	22.5	30/08/2022	6:00	0.4	90	31/08/2022	6:00	0.4	270				
29/08/2022	7:00	0.9	22.5	30/08/2022	7:00	0.4	112.5	31/08/2022	7:00	0.9	112.5				
29/08/2022	8:00	0.4	315	30/08/2022	8:00	0.9	135	31/08/2022	8:00	0.4	112.5				
29/08/2022	9:00	0.9	112.5	30/08/2022	9:00	1.3	157.5	31/08/2022	9:00	0.9	90				
29/08/2022	10:00	1.8	90	30/08/2022	10:00	1.3	112.5	31/08/2022	10:00	0.9	90				
29/08/2022	11:00	1.8	135	30/08/2022	11:00	1.3	112.5	31/08/2022	11:00	0.4	90				
29/08/2022	12:00	0.9	67.5	30/08/2022	12:00	1.3	157.5	31/08/2022	12:00	0.9	67.5				
29/08/2022	13:00	0.9	90	30/08/2022	13:00	0.9	67.5	31/08/2022	13:00	0.4	112.5				
29/08/2022	14:00	0.4	90	30/08/2022	14:00	0.9	90	31/08/2022	14:00	0.4	90				
29/08/2022	15:00	0.4	157.5	30/08/2022	15:00	0.4	90	31/08/2022	15:00	0.9	90				
29/08/2022	16:00	0.9	112.5	30/08/2022	16:00	0.4	157.5	31/08/2022	16:00	0.4	90				
29/08/2022	17:00	0.4	112.5	30/08/2022	17:00	0.9	112.5	31/08/2022	17:00	0.4	112.5				
29/08/2022	18:00	0.4	90	30/08/2022	18:00	0.4	112.5	31/08/2022	18:00	0.9	90				
29/08/2022	19:00	0.4	112.5	30/08/2022	19:00	0.4	90	31/08/2022	19:00	0.4	90				
29/08/2022	20:00	0.9	135	30/08/2022	20:00	0.4	112.5	31/08/2022	20:00	0.4	90				
29/08/2022	21:00	1.3	157.5	30/08/2022	21:00	0.9	135	31/08/2022	21:00	0.4	90				
29/08/2022	22:00	1.3	112.5	30/08/2022	22:00	1.3	157.5	31/08/2022	22:00	0.9	67.5				
29/08/2022	23:00	1.3	112.5	30/08/2022	23:00	1.3	112.5	31/08/2022	23:00	0.4	90				

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

Location: AM2(A) – Ng Wah Catholic Secondary School

Start Date	Weather	Air Temp.	Atmospheric Pressure	Filter we	eight (g)	Particulate	Elapse	e Time	Sampling Time	Flow (cf		Av. Flow	Total vol.	Conc.
		(℃)	(hPa)	Initial	Final	weight (g)	Initial	Final	(min)	Initial	Final	(m ³ /min)	(m^3)	$(\mu g/m^3)$
02/08/2022	Sunny	35.8	1007.1	17.9683	18.0119	0.0436	2022/8/2 13:05	2022/8/3 13:05	1440	50	50	1.41	2037	21
08/08/2022	Cloudy	25.8	1006.3	15.2118	15.2695	0.0577	2022/8/8 13:10	2022/8/9 13:10	1440	50	50	1.44	2071	28
13/08/2022	Sunny	30.8	1008	17.9394	18.0287	0.0893	2022/8/13 9:00	2022/8/14 9:00	1440	50	50	1.43	2055	43
19/08/2022	Cloudy	27.7	1004.9	15.0041	15.0597	0.0556	2022/8/19 9:05	2022/8/20 9:05	1440	50	50	1.43	2063	27
25/08/2022	Cloudy	30.0	1006.3	15.0145	15.0976	0.0831	2022/8/25 13:05	2022/8/26 13:05	1440	50	50	1.43	2056	40
31/08/2022	Cloudy	33.3	1006.7	15.0942	15.1722	0.0780	2022/8/31 9:05	2022/9/1 9:05	1440	50	50	1.34	1929	40
												Maxim	um	43
												Minim	um	21
												Avera	ge	33
												Action I	Level	175

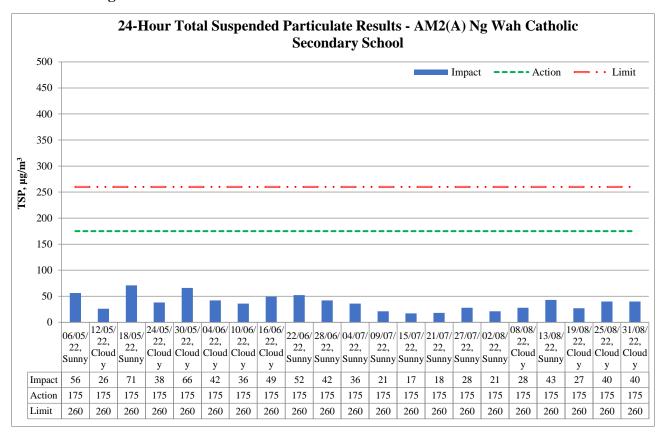
Limit Level

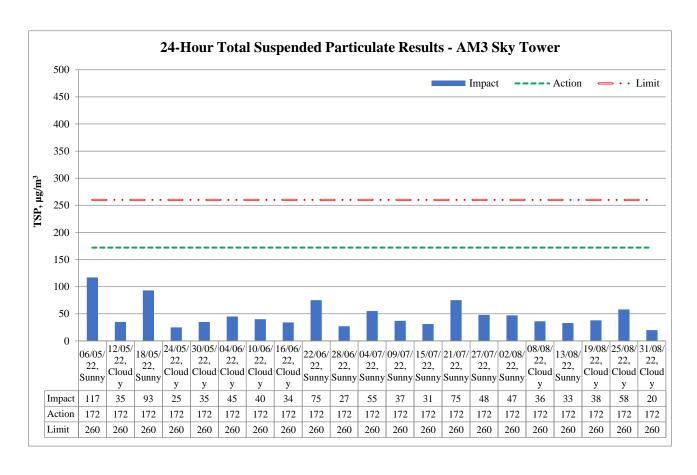
260

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.
		(℃)	(hPa)	Initial	Final	weight (g)	Initial	Final	(min)	Initial	Final	(m ³ /min)	(m^3)	$(\mu g/m^3)$
02/08/2022	Sunny	35.8	1007.1	18.1004	18.1902	0.0898	2022/8/2 9:11	2022/8/3 9:11	1440	50	50	1.31	1891	47
08/08/2022	Cloudy	25.8	1006.3	18.0228	18.0926	0.0698	2022/8/8 13:30	2022/8/9 13:30	1440	50	50	1.34	1923	36
13/08/2022	Sunny	30.8	1008	14.7346	14.7969	0.0623	2022/8/13 13:14	2022/8/14 13:14	1440	50	50	1.33	1908	33
19/08/2022	Cloudy	27.7	1004.9	17.7123	17.7850	0.0727	2022/8/19 9:18	2022/8/20 9:18	1440	50	50	1.33	1915	38
25/08/2022	Cloudy	30.0	1006.3	14.7855	14.8867	0.1012	2022/8/25 11:17	2022/8/26 11:17	1440	46	46	1.22	1752	58
31/08/2022	Cloudy	33.3	1006.7	17.8203	17.8549	0.0346	2022/8/31 9:25	2022/9/1 9:25	1440	46	46	1.20	1728	20
												Maxim	um	58
												Minim	um	20
												Avera	ge	39
												Action I	Level	175
												Limit L	evel	260

24-hour average TSP





		Reportin	g Period	
Major Construction Activities	May 2022	June 2022	July 2022	August 2022
Construction of Crowd Dispersal Route	2022	2022	2022	2022
Construction of DCS	√	✓	√	✓
Construction works for Road L16	✓	√	√	√
Renovation works for existing subways KS9 and KS32	√	√	✓	
Pile cap construction for PC9 and PC10 for Elevated Walkway LW-02	√			
Pile column construction for PC9 and PC10 for Elevated Walkway LW-02		√	✓	
Pile column construction for PC9, PC10 and PC11 for Elevated Walkway LW-02				✓
Construction works for Pedestrian Street No. 1, No. 2, No. 3 & No. 4	✓			
Erection of temporary decking across existing Kai Tak River	✓	✓	✓	
ELS and excavation for Subway KS10 Lift and Staircase	✓	✓	✓	
Demolition works to existing subway KS10 staircase and ramp	✓			
Road diversion works at Sa Po Road	✓			
ELS and excavation at launching shaft for subway SB-01	✓			
ELS and excavation for PC11 for Elevated Walkway LW-02		✓	✓	
Trial pit excavation and UU diversion at Sa Po Road under TTA Stage 2		✓	✓	
ELS, excavation and RC construction at launching shaft for subway SB-01		✓	✓	
Construction works for Pedestrian Street No. 2 & No. 4		✓	✓	
RC construction at Launching Shaft for SB-01			✓	
Twin rising main connection works			✓	
Erection of falseworks and working platform for decking of Elevated Walkway LW-02				✓
UU diversion at Sa Po Road under TTA Stage 2A				✓
Sheetpile installation at Sa Po Road under TTA Stage 2A				✓
RC construction at launching shaft for subway SB-01				✓
Construction works for Pedestrian Street No. 2				✓
RC construction for Subway KS10 Lift and Staircase				✓
Renovation works for existing subways KS9 and KS32				✓

		Reporting Period						
Factors might affect the monitoring results	May	June	July	August				
	2022	2022	2022	2022				
Non-project related construction activities in the adjacent construction sites were observed.	√	√	✓	√				

Appendix H – 1-hr	TSP monitoring resu	ılts and graphical presentation	n

Location:

AM2(A)
Ng Wah Catholic

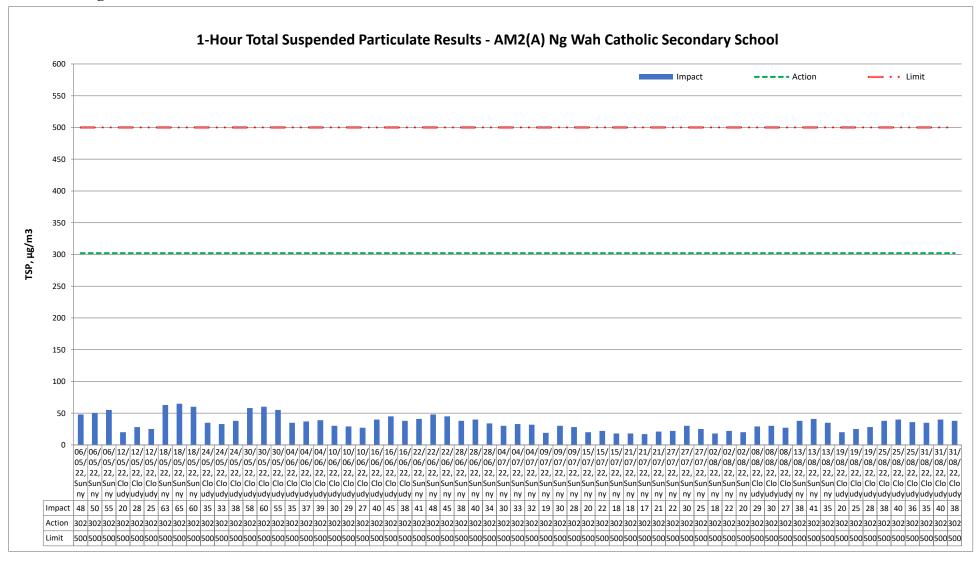
Secondary School

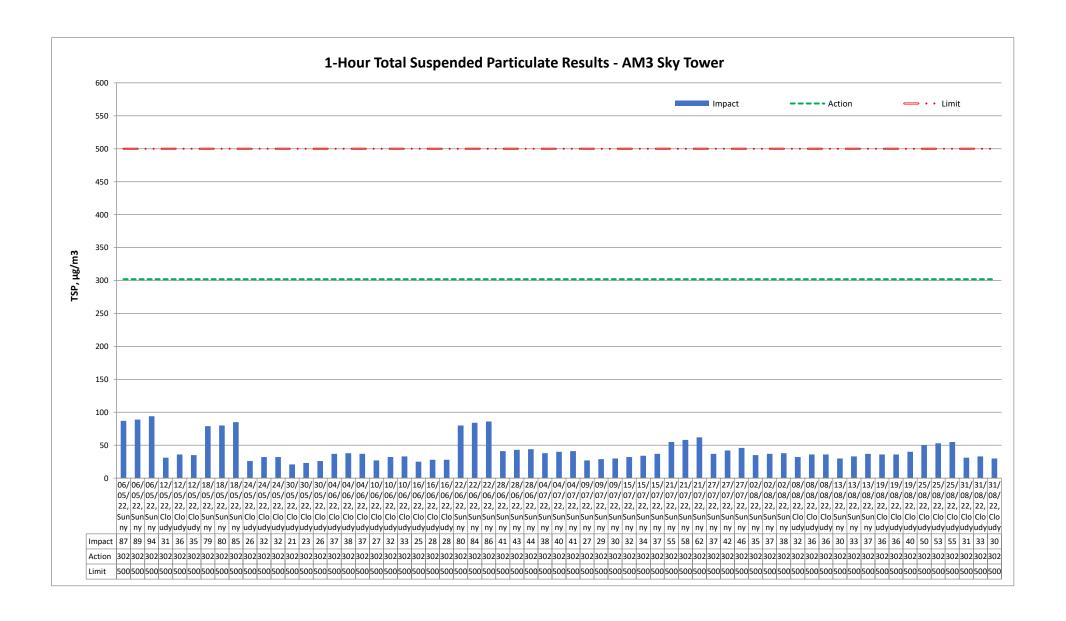
Date	Measure	Measurement Period		1-hr TSP concentration, μg/m ³	Weather	
	13:00	1	14:00	18		
02/08/2022	14:00	1	15:00	22	Sunny	
	15:00	-	16:00	20		
	13:00	ı	14:00	29		
08/08/2022	14:00	1	15:00	30	Cloudy	
	15:00	1	16:00	27		
	9:00	1	10:00	38		
13/08/2022	10:00	-	11:00	41	Sunny	
	11:00	1	12:00	35		
	9:00	ı	10:00	20		
19/08/2022	10:00	1	11:00	25	Cloudy	
	11:00	1	12:00	28		
	13:00	ı	14:00	38		
25/08/2022	14:00	-	15:00	40	Cloudy	
	15:00	1	16:00	36		
	9:00	-	10:00	35		
31/08/2022	10:00	-	11:00	40	Cloudy	
	11:00	-	12:00	38		
Maximum				41		
Minimum				18		
Average				31		
Ac	tion Level			301		
Lin	mit Level			500		

Location:
AM3 Sky Tower

Date	Measure	emei	nt Period	1-hr TSP concentration, μg/m ³	Weather	
	9:00	-	10:00	35		
02/08/2022	10:00	-	11:00	37	Sunny	
	11:00	-	12:00	38		
	13:00	-	14:00	32		
08/08/2022	14:00	-	15:00	36	Cloudy	
	15:00	-	16:00	36		
	13:00	-	14:00	30		
13/08/2022	14:00	-	15:00	33	Sunny	
	15:00	-	16:00	37		
	9:00	-	10:00	36		
19/08/2022	10:00	-	11:00	36	Cloudy	
	11:00	-	12:00	40		
	11:00	-	12:00	50		
25/08/2022	13:00	-	14:00	53	Cloudy	
	14:00	-	15:00	55		
	9:00	-	10:00	31		
31/08/2022	10:00	-	11:00	33	Cloudy	
	11:00	-	12:00	30		
Maximum				55		
Minimum				30		
Average				38		
Ac	tion Level			301		
Li	mit Level			500		

1-hour average TSP





	Reporting Period					
Major Construction Activities	May 2022	June 2022	July 2022	August 2022		
Construction of Crowd Dispersal Route	✓					
Construction of DCS	✓	✓	✓	✓		
Construction works for Road L16	✓	✓	✓	✓		
Renovation works for existing subways KS9 and KS32	✓	✓	✓			
Pile cap construction for PC9 and PC10 for Elevated Walkway LW-02	✓					
Pile column construction for PC9 and PC10 for Elevated Walkway LW-02		✓	✓			
Pile column construction for PC9, PC10 and PC11 for Elevated Walkway LW-02				✓		
Construction works for Pedestrian Street No. 1, No. 2, No. 3 & No. 4	✓					
Erection of temporary decking across existing Kai Tak River	✓	✓	✓			
ELS and excavation for Subway KS10 Lift and Staircase	✓	✓	✓			
Demolition works to existing subway KS10 staircase and ramp	✓					
Road diversion works at Sa Po Road	✓					
ELS and excavation at launching shaft for subway SB-01	✓					
ELS and excavation for PC11 for Elevated Walkway LW-02		✓	✓			
Trial pit excavation and UU diversion at Sa Po Road under TTA Stage 2		✓	✓			
ELS, excavation and RC construction at launching shaft for subway SB-01		✓	✓			
Construction works for Pedestrian Street No. 2 & No. 4		✓	✓			
RC construction at Launching Shaft for SB-01			✓			
Twin rising main connection works			✓			
Erection of falseworks and working platform for decking of Elevated Walkway LW-02				✓		
UU diversion at Sa Po Road under TTA Stage 2A				✓		
Sheetpile installation at Sa Po Road under TTA Stage 2A				✓		
RC construction at launching shaft for subway SB-01				✓		
Construction works for Pedestrian Street No. 2				✓		
RC construction for Subway KS10 Lift and Staircase				✓		
Renovation works for existing subways KS9 and KS32				✓		

Factors might affect the monitoring results	May 2022	June 2022	July 2022	August 2022
Non-project related construction activities in the adjacent construction sites were observed.	✓	✓	✓	✓

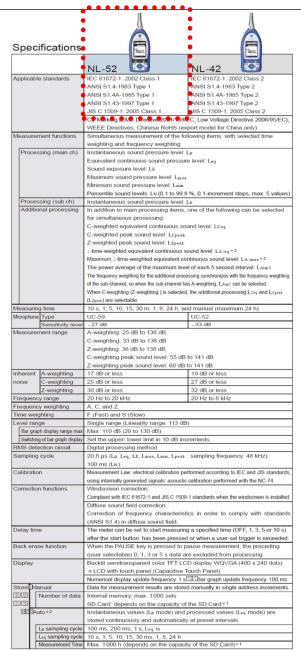
Appendix I – Event and Action Plan for air quality

F 4		Ac	tion	
Event	ET	IEC	Supervisor / ER	Contractor
Action Level being exceeded by one sampling	Identify source and investigate the causes of exceedance; Inform Contractor, IEC and Supervisor /ER; Repeat measurement to confirm finding.	Check monitoring data submitted by ET; Check Contractor's working method.	1. Notify Contractor.	 Rectify any unacceptable practice; Amend working methods if appropriate.
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	 Check monitoring data submitted by ET; Check Contractor's working method; Discuss with ET and Contractor on possible remedial measures; Advise the Supervisor /ER on the effectiveness of the proposed remedial measures. 	 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 implemented; Supervise implementation of remedial measures; Conduct meeting with ET and IEC if exceedance continues. 	 Discuss with ET and IEC on proper remedial actions; Submit proposals for remedial actions to Supervisor /ER and IEC within three working day of notification; Implement the agreed proposals; Amend proposal if appropriate.
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	 Check monitoring data submitted by ET; Check Contractor's working method; Discuss possible remedial measures with ET and Contractor; Advise the Supervisor /ER 	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

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

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

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					
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		Allows USB to be connected to a computer and recognized as a removable dis					
10 10 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	continuous output*2						
Typ	oe of Instantaneous value	Lp					
dat	a Processed value	Leq, Lmax, Lmin, Lpeak					
Ou	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	ttery 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	ions Humidity	10 to 90 % RH (non-condensing)					
Dustpr	roof / water-resistant	IP code: IP54 (except for microphone)					
perform	mance * 4	See precautions regarding waterproofing					
Dimen	imensions, 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)					

Options

Product name	Product number
Extended function program (Inst.on 512 MB SD card)	NX-42EX
Waveform recording program * 2 (Inst.on 2 GB SD card)	NX-42WR
Octave, 1/3 octave real-time analysis program *2 (Inst.on 512 MB SD card)	NX-42RT
FFT analysis program *2 (Inst.on 512 MB SD card)	NX-42FT
Data management software for environmental measurement	AS-60
Data management software for environmental measurement (Includes the octave and 1/3 octave data management software)	AS-60RT
Data management software for environmental measurement (Includes the vibration level data management software)	AS-60VM
Waveform analysis software	CAT-WAVE
SD Card 512 MB	SD-512M
SD Card 2 GB	SD-2G
AC adapter (100 ∨ 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 cost).

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

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

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 cerffied to an International Protection rating of IPS4 (dust protected and resistant to splashing we This leaflet is printed with environmentally friendly vegetable-based ink on recycled pape.



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: 2HB21001749-0004 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	A	RION	
机身号: Serial No.		00921213	
管理号: Asset No.		AAST-SLM-04	
接收日期: Rec. Date	2021-08-05	校准日期: Cal. Date	2021-08-16
签发日期: _ App. Date	2021-08-17	建议校准周期: Reference Cal. Peri	12个月(12 months) od
4生16.	所校准项	目合格(Passed at Calibra	tion Items)

Calibrated by

Conclusion

印章:

Stamp

Website: www.ceprei-cal.com



签发: Approved by

网址: www.ceprei-cal.com

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 HO 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

> 第 1 页,共 8 页 Page of

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).
- TIZ JORIGI) · 详细介容语言看CNA网络中注册编号为L13344的证书附件,超出范围的介容未被认可,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 certificiae 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	测量范围
(Description)	(Certificate No./Due Date/Traceability to)		(Measuring Range)
正弦信号发生器	4GC20000427-0010/2021-11-04/赛宝(广州)	Distortion: <-70dB	f: $0.001 Hz \sim 200 kHz$; <i>U</i> : $100 \mu V \sim 5 V rms$
数字多用表	4GC20000358-0060/2021-09-09/赛宝(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
步进衰减器	4GC21000155-0024/2022-04-29/赛宝(广州)	±3dB	; f:3Hz~300kHz (0~110) dB/10dB step @(DC~1GHz)
PULSE分析系统	GFJGJL1001210202725/2022-03-03/航空 304所	频率:U _{rel} =0.001%,k=2;电压: U _{rel} =0.04%,k=2	频率:0.001Hz~51.2kHz, 电压:(1×10 ⁻⁵ ~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/赛宝(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

环境条件(Environmental conditions): 温度(Temperature): 23.4°C 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。

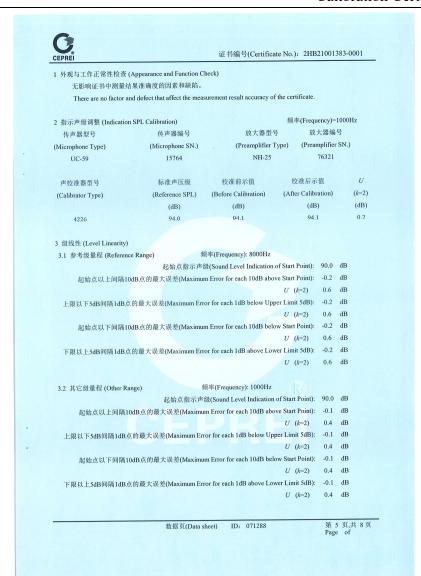
The extended uncertainty given in this certificate is evaluated according to JJF1059.1-2012 "Evaluation and Expression of Uncertainty in Measurement", and is calculated by multiplying the combined standard uncertainty by the coverage factor k which corresponding to the coverage probability about 95%.

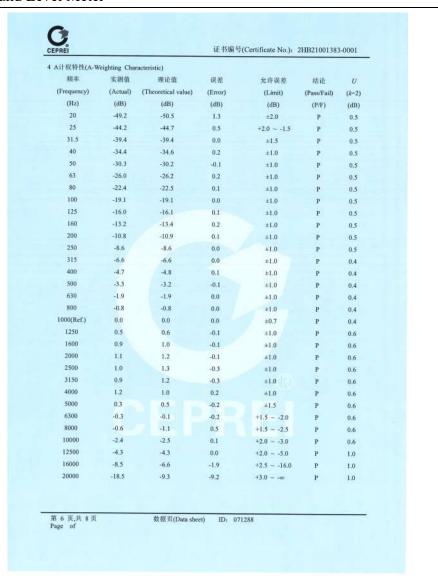
7. 证书中"P"、"合格"代表"测量结果在允许范围内", "F"、"不合格"代表"测量结果不在允许范围内", "N/A"代表"不适用或技术指标暂时无法确认等"。本证书报告的结论仅供参考,使用人员应结合实际测量的要求合理使用,如考虑测量结果测量不确定度的影响等。

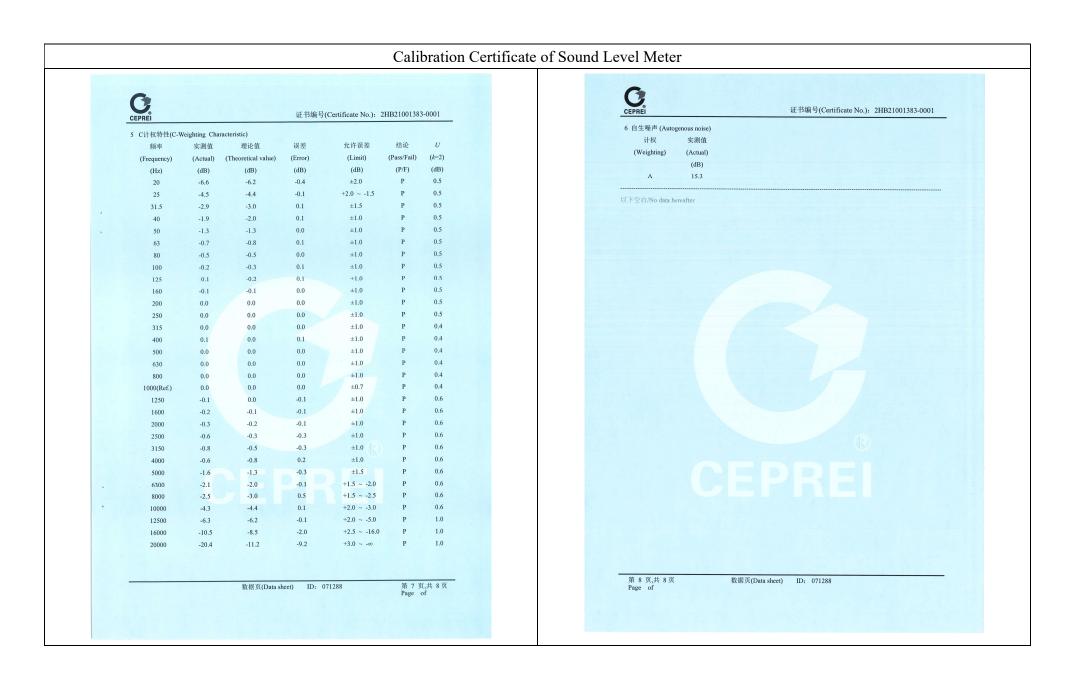
"P" and "Pass" in this certificate stand for "Low Limit≤the measured value ≤High Limit", "F" and "Fail" stand for "the measured value <Low Limit or the measured value >High Limit", "N/A" stands for "Not Applicable or The technical specification has not been confirmed etc". The conclusions of this certificate 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。

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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

校准证书 CALIBRATION CERTIFICATE

证书编号: 2HB22001076-0004 Certificate No.



委托单位: _	Ca	stco Testing Centre Limi	ted
义器名称: Description		Sound Level Meter	
型号规格: Model/Type		NL-52	
制造商: Manufacturer		RION	
机身号: Gerial No.		01287681	
管理号: _ Asset No.		AAST-SLM-12	
接收日期: _ Rec. Date	2022-07-21	校准日期: Cal. Date	2022-08-03
签发日期: _ App. Date	2022-08-04	建议校准周期: Reference Cal. Peri	12个月(12 months) od

所校准项目合格(Passed at Calibration Items)

印章:

Stamp

Email: cal@ceprei.com

Website: www.ceprei-cal.com

CEPRI

校准:

结论:

Conclusion

赵文红

签发: Approved by ねり木わ

和中不力

察宝计量检测中心 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@cceprei.com 饲址: www.ceprei-cal.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

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5E 4593 V-(Cartificate No.), 2HB22001076-0004

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 188-2017 声级计检定规程: Sound pressure level: (20~130)dB: Frequency Weighting: (20~130)dB@(10
- 11.6 《PARLES]。 · 详细内容请查查们ASP内站中注册编号为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 result/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):

十八人とは一川といいは	TX MANAGE (THE HIGH HEGGER SHEET)		1011 805 -644 FTT
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	4GC21000496-0024/2022-11-01/赛宝(广州)	f: ±1mHz: 失真度 Distortion: <-70dB	f: 0.001Hz~200kHz; U : 100μV~5Vrms
标准传声器	GFJGJL1001220311961/2023-03-27/航空 304所	U=(0.05~0.20)dB (k=2)	10Hz~20kHz
前置放大器	GFJGJL1001220311960/2023-03-27/航空 304所	U=0.3dB (k=2)	(10~50000) Hz
步进衰减器	4GC22000181-0032/2023-04-18/赛宝(广州)	±3dB	(0~110) dB/10dB step @(DC~1GHz)
声校准器	4GC21000572-0101/2022-12-07/赛宝(广州)	1級 First Level	31.5Hz~16kHz
PULSE分析系统	4GC22000014-0140/2023-01-15/赛宝(广州)	频率:U _{rel} =0.001%,k=2;电压: U _{rel} =0.04%,k=2	频率:0.001Hz~51.2kHz, 电压:(1×10 ⁻⁵ ~30)V
数字多用表	4GC21000526-0026/2022-11-30/賽宝(广州)	DCV: ±0.0035%; ACV: ± 0.06%; DCI: ±0.05%; ACI : ±0.1%; R: ±0.01%; f:	
		±0.001%	: ACI:(0~3)A@(3Hz~ 5kHz); R:(0~100)MΩ : f:3Hz~300kHz

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

Hz~20kHz).

环境条件(Environmental conditions):
 温度(Temperature): 23.2℃ 相对湿度(Relative Humidity): 58%

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。

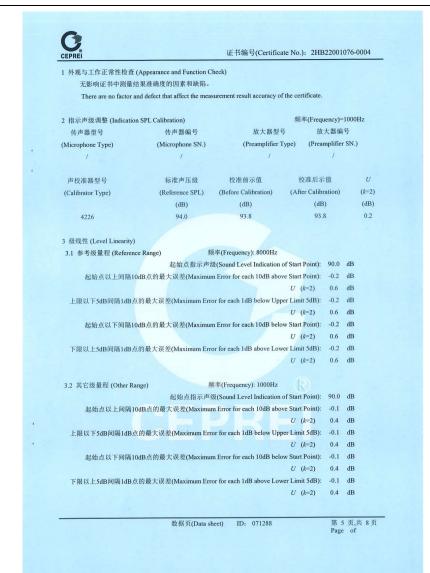
The extended uncertainty given in this certificate is evaluated according to JJF1059.1-2012 "Evaluation and Expression of Uncertainty in Measurement", and is calculated by multiplying the combined standard uncertainty by the coverage factor k which corresponding to the coverage probability about 95%.

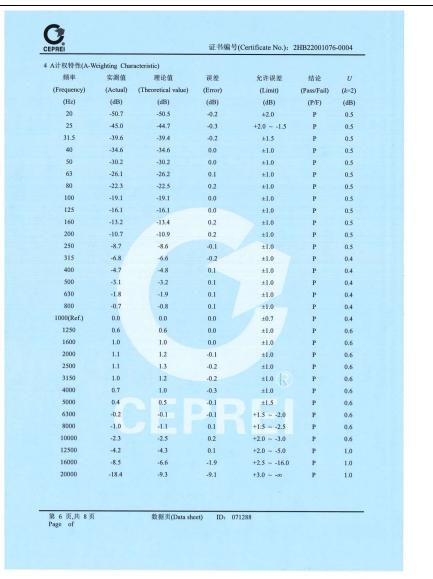
7. 证书中"P"、"合格"代表"测量结果在允许范围内","F"、"不合格"代表"测量结果不在允许范围内","N/A"代表"不适用或技术指标暂时无法确认等"。本证书报告的结论仅供参考,使用人员应结合实际测量的要求合理使用,如考虑测量结果测量不确定度的影响等。

"P" and "Pass" in this certificate stand for "Low Limits" the measured value stigh Limit", "F" and "Fail" stand for "the measured value < Low Limit or 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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S CiPRE 近接線で(Certificate No.): ZHB22001076-0004 S CiPRE 大器値 現途値 送差 允许误差 結论 U (Frequency) (Actual) (Theoretical value) (Error) (Limit) (PassFail) (k-2) (Hz) (dB) (dB) (dB) (dB) (dB) (dB) (P/F) (dB) 20		Calib	ration	Certifica	te of S	ound Leve	el Me	ter
5 Ci								d alga
5 Ci		G						
5 Ci		CEPREI			证书编号	군(Certificate No.): 2	HB2200107	6-0004
(Frequency) (Actual) (Theoretical value) (Error) (Limit) (Pass/Fail) (k=2) (Hz) (dB) (dB) (dB) (dB) (PF) (dB) 20 -6.3 -6.2 -0.1 ±2.0 P 0.5 25 -4.5 -4.4 -0.1 +2.0 ~ -1.5 P 0.5 31.5 -3.0 -3.0 0.0 ±1.5 P 0.5 40 -2.0 -2.0 0.0 ±1.0 P 0.5 50 -1.2 -1.3 0.1 ±1.0 P 0.5 63 -0.7 -0.8 0.1 ±1.0 P 0.5 80 -0.4 -0.5 0.1 ±1.0 P 0.5 100 -0.2 -0.3 0.1 ±1.0 P 0.5 125 -0.1 -0.2 0.1 ±1.0 P 0.5 250 0.0 0.0 0.0 ±1.0 P 0.5<			Weighting Ch	aracteristic)				
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25								
31.5								
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$\begin{array}{cccccccccccccccccccccccccccccccccccc$					-0.2	±1.0	P	0.6
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		3150	-0.8	-0.5	-0.3	±1.0	P	0.6
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		4000	-1.1	-0.8	-0.3	±1.0	P	0.6
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		5000	-1.5	-1.3				
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	- 1	6300	-2.1					
12500 -6.2 -6.2 0.0 +2.0 \sim -5.0 P 1.0 16000 -10.4 -8.5 -1.9 +2.5 \sim -16.0 P 1.0 20000 -20.4 -11.2 -9.2 +3.0 \sim - ∞ P 1.0		8000						
16000 -10.4 -8.5 -1.9 +2.5 ~ -16.0 P 1.0 20000 -20.4 -11.2 -9.2 +3.0 ~ -∞ P 1.0	*							
20000 -20.4 -11.2 -9.2 +3.0 ~ -∞ P 1.0								
		20000	-20.4	-11.2	-9.2	+3.0 ~ -∞	P	1.0
数据页(Data sheet) ID: 071288 第 7 页,共 8 页 Page of				数据页(Data s	heet) ID:	071288	第 7 页	页,共 8 页

Calibration Certificate of Sound Calibrator

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. $*\mbox{\sc A-weighed}$ 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.



■ 1/4-inch microphones

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



Specifications (under	standard ambient conditions*)
Applicable standards	IEC 60942: 2017 class1, ANSI/ASA S1.40-2006 class1,
	JIS C 1515: 2020 class 1, CE marking, WEEE directive,
	Chinese RoHS
Supported	Microphones made by RION and microphones made by other
microphones	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	
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 *RION standard ambient conditions: static pressure 101:325 kPs ambient temperature 23 °C, relative humidity 50 %

Securely carry the unit with the supplied hand strap



PISTONPHONE NC-72A Specifications (under standard ambient conditions*)

IEC 60942: 2017 class LS/M, class 1/M, JIS C 1515; 2020 class LS/M, class 1/M Nominal sound pressure level 114 dB, Sound pressure level tolerance ±0.10 dB





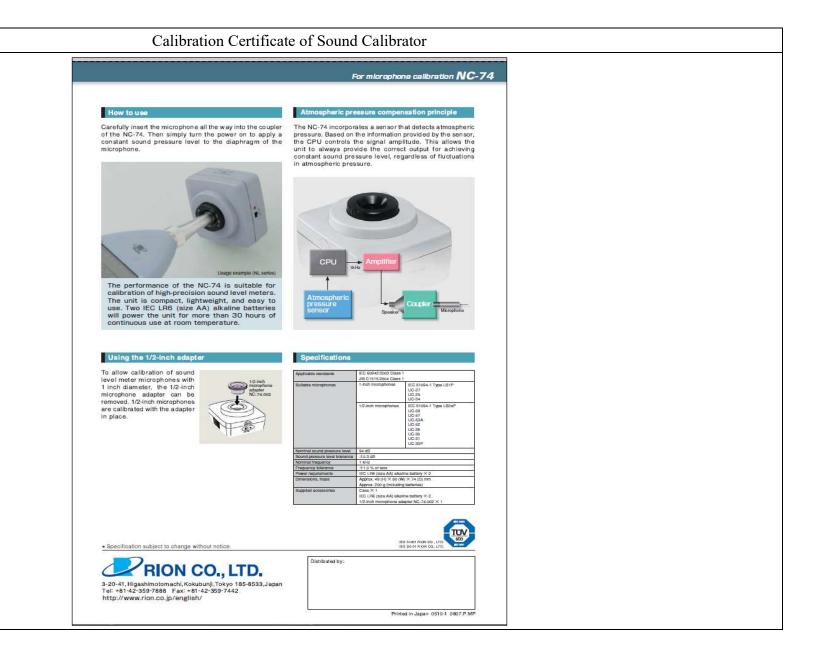
* Windows is a trademark of Microsoft Corporation. * Specifications subject to change without notice

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



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

CALIBRATION CERTIFICATE

证书编号: 2HB21001749-0002 Certificate No.



委托单位: Client	Ca	astco Testing Centre Limi	ted
仪器名称: _ Description		Sound Level Calibrator	
型号规格: Model/Type	1	NC-75	
制造商:		RION	
机身号: _ Serial No.		34280310	
管理号: _ Asset No.		AAST-SLC-07	
妾收日期: _ 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)
性心·	所校准项	目合格(Passed at Calibra	

校准: Calibrated by 签发:

Approved by

Conclusion

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两78号 客服电话: 020-87237633 传真: 020-87236189 投诉电话: 020-87236896 MM: cal@ceprei.com

网址: www.ceprei-cal.com

Website: www.ceprei-cal.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

> 第 1 页,共 5 页 Page of

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.

- 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(63H2~8kHz); 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 a 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): 测量范围 证书号/有效期/溯源单位 技术指标 (Description) (Certificate No./Due Date/Traceability to) (Specification) (Measuring Range) LSsx2021-13180/2022-04-24/中国计量院 U=(0.05-0.20)dB (k=2) 10Hz ~ 20 kHz 4GC21000026-0375/2022-01-21/賽宝(广州) 频率: $U_{\rm rel}=0.001\%$ k=2:电压: 频率:0.001Hz ~ 51.2 kHz. 标准传声器 PULSE分析系统 Upd=0.04%,k=2 (10~50000) Hz LSsx2021-13000/2022-04-19/中国计量院 U=0.3dB(k=2) 前置放大器

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 Limits' the measured value SHigh Limit," "F" and "Fail" stand for "the measured value SLow Limit or the Market 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.

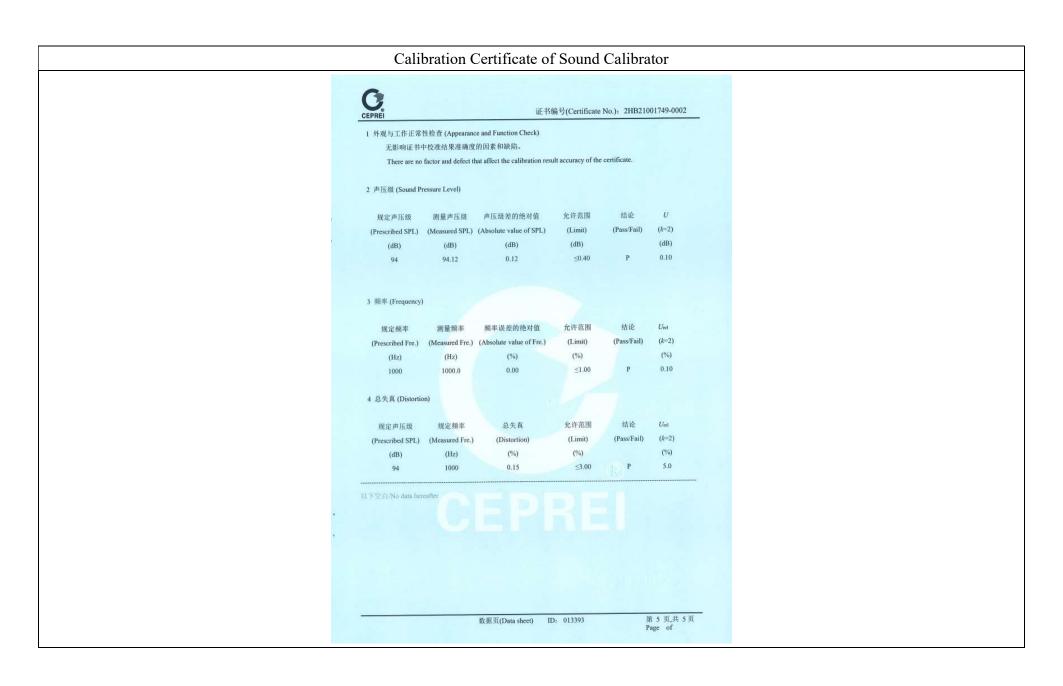
8. 建议校准周期是本实验室依据本证书报告的技术依据和仪器设备常规使用条件给出的建议,供委 托方参考。委托方可以根据实际使用情况自行决定样品的校准周期。

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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Calibration Certificate of Sound Calibrator

AAST-SLC-DJ, Cal 2022/08/04



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: 2HB22001076-0001 Certificate No.



委托单位:	Ca	stco Testing Centre Limit	ted
Client 仪器名称:		Sound Level Calibrator	
Description		Sound Porter Cambrator	
型号规格: Model/Type		NC-74	
制造商:	7 ARM	RION	
Manufacturer		34178129	
机身号: Serial No.		34176129	
管理号:	100000	AAST-SLC-05	
Asset No. 接收日期:	2022-07-21	校准日期:	2022-08-04
Rec. Date	2022 08 08	Cal. Date	12个月(12 months)
签发日期: App. Date	2022-08-08	_ 建议校准周期: _ Reference Cal. Perio	
结论:	所校准项	目合格(Passed at Calibra	tion Items)

CEPREI

校准: Calibrated by 弘

Conclusion

核验: Inspected by 钟灏

签发: Approved by

网址: www.ceprei-cal.com

印章: Stamp

Website: www.ceprei-cal.com

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 客账电话: 020-87237633 传真: 020-87236189 技吃话: 020-87236896 邮件: cal@ceprei.com CEPREI Calibration and Testing Centre HQ Addr: No.78,Zhucun Avenue West,Zengeheng District,Guangzhou,China Service Tel. CQ8-8727633 Fast: 202-87236189 Complaint Tel: 020-87236896 Email: Califecperic com

> 第 1 页,共 5 页 Page of

证书编号(Certificate No.): 2HB22001076-0001

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):
 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
- 5. 详细内容请查看CNAS网站中往房编号为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):
 calibration):
 编量范围

 4
 (Description)
 (Entificate No. Due Date Traceability to)
 (Specification)
 (Measuring Range)

 6
 (Eligible Processed of the part of the part

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): 23.1°C 相对湿度(Relative Humidity): 65%

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/将到。

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

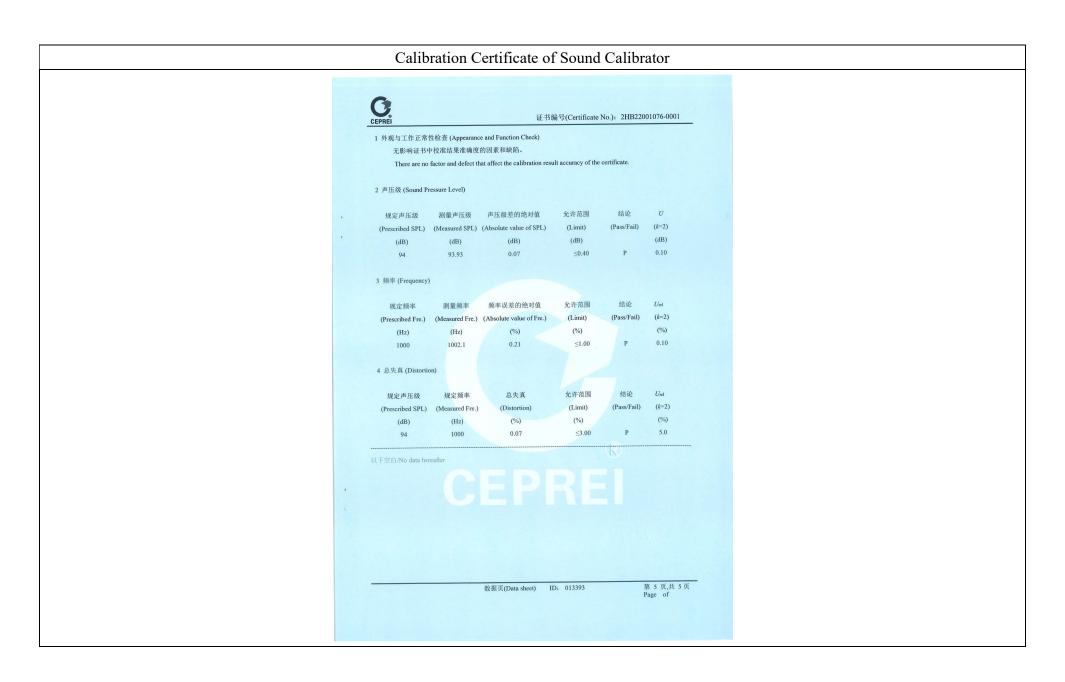
"P" and "Pass" in this certificate stand for "Low Limit (the measured value ≤High Limit", "F" and "Fail" stand for "the measured value <Low Limit or the measured value <High Limit", "Not Applicable or The technical specification has not been confirmed ete." The conclusions of this certificate are for 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

- 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.)
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Catalogue of Air Flow Meter (TSI TA440)

Time Constant (TA430, TA440)

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

Articulating Probe Dimensions

101.6 cm (40 in.)

7.0 mm (0.28 in.)

13.0 mm (0.51 in.)

19.7 cm (7.8 in.)

+

Straight or

TA410

Straight

² The accuracy statement begins at 30 ft/min through 4000 ft/min (0.15 m/s through 30 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 ZS°C (77°F), add uncertainty of 0.03°C/°C (0.05°F/°F) for change in instrument temperature.

*Accuracy with probe at ZS°C (77°F). Add uncertainty of 0.2% RH/°C (0.1% RH/°F) for change in probe temperature. Includes 19% hysteresis.

Meter Probe Dimensions

Probe Diameter of Tip

Articulating Section Length

Diameter of Articulating Knuckle

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)

Humidity, wet bulb,

Temperature

dew point

Variable time

data logging

Review data

LogDat2 downloading

Free Certificate of Calibration

Statistics

Flow

Probe

Power Requirements Four AA-size batteries or AC adapter

Probe Diameter of Base

Hser selectable

0.27 kg (0.6 lbs.)

Probe Length

SPECIFICATIONS

Velocity

0 to 20 m/s (0 to 4 000 ft/min) Range (TA410) 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)182

Accuracy (TA430, TA440)16 ±3% of reading or ±0.015 m/s (±3 ft/min), whichever is greater Resolution 0.01 m/s (1 ft/min)

Duct Size (TA430, TA440)

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

Volumetric Flow Rate (TA430, TA440)

Actual range is a function of velocity, and duct size

Temperature

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

Relative Humidity (TA440 only)

5 to 95% RH Range Accuracy⁶ Resolution 0.1% RH

Wet Bulb Temperature (TA440 only)

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

Dew Point (TA440 only)

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

Instrument Temperature Range

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

-20 to 60°C (-4 to 140°F) Storage

Data Storage Capabilities (TA430, TA440) 12,700+ samples and 100 test IDs

Logging Interval (TA430, TA440)

1 second to 1 hour



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

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

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

Calibration Certificate of Air Flow Meter

AAST-FLOW-03, Cal=25 Jan 2022



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.: CC0332201

Customer Information

Customer: Castco Testing Centre Limited

33 On Kui Street, Fanling, N.T., Hong Kong

Equipment Identification

Equipment D	escribtion	ivianulacturer	Model No.	Serial No.	Assigned equipment ito:	٠.
Air Velocity M		TSI	TA440	TA4401706003	AAST-FLOW-03	
Certificate In		24 January 2022		Calibration Condition:	24.3°C 53%RH 1008hPa	

Adjustment: N/A Date of Calibration: 25 January 2022 Good Appearance: Due Date of Calibration: N/A N/A Calibration Procedure: SOP-116 Remark:

Reference Equipment Identification							
Equipment Description	Model	Serial No.	Expiration Date				
Hot Wire Anemometer	9535	T95351316004	11 July 2022				

Result of Calibration

Air Flow Rate								
Reference	Measured	= (0()	Uncertainty	Technical	Technical			
Reading (m/s)	Reading (m/s)	Error (%)	(%FS)	Requirement	Reference Doc.			
0.00	0.00	N/A	3.6	± 3%	Mfr's Spec.			
0.51	0.50	-2.0	3.6	± 3%	Mfr's Spec.			
5.02	4.89	-2.6	3.6	± 3%	Mfr's Spec.			
10.03	10.05	2.0	3.6	± 3%	Mfr's Spec.			
25/65 T AFR 01								

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

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

accuracy and good condition.

Note3: The result reported in this certificate refer to the condition of the instrument on the date of calibration and carry no implication regarding the long term stability of the

Note4: The result shows in this calibration certificate relate only to the item calibrated, and the result only applies to the calibration item as rec

Calibrated By:

Rex Tse

Checked and Approved By:

Komew Warren Yeung Company Chop:

Certificate Issue Date: 25 January 2022

*** 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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CT-BEG-03

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Appendix K – Noise monitoring results a	nd graphical presentation

M4(A) – Le Billionnaire

D.	Temp W.		Measured Noise Level at M4(A), dB(A)								
Date	(°C)	Weather	7	Γiı	ne	Baseline	\mathcal{L}_{Aeq}	L_{A10}	L_{A90}	Limit	
02/08/2022	35.8	Sunny	13:05	-	13:35	69.5	69.3	70.4	68.1	75	
08/08/2022	25.8	Cloudy	9:00	-	9:30	69.5	69.6	70.7	68.3	75	
19/08/2022	27.7	Cloudy	13:10	-	13:40	69.5	69.8	71.1	68.5	75	
25/08/2022	30.0	Cloudy	9:30		10:00	69.5	69.4	70.9	67.8	75	
31/08/2022	33.3	Cloudy	13:25	-	13:55	69.5	69.2	70.1	67.9	75	
				Maximum							

 Maximum
 69.8

 Minimum
 69.2

 Average
 69.5

M5(A) – Prince Ritz

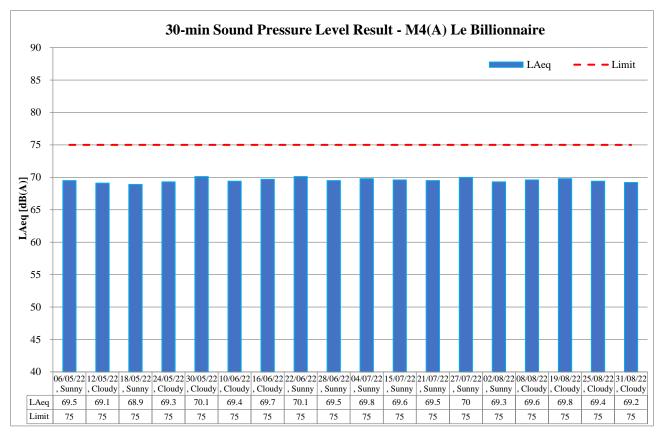
ъ.	Temp	Measured Noise Level at M5(A), dB(A)							*	
Date	(°C)	Weather	Time		ne	Baseline	$L_{ ext{Aeq}}$	L_{A10}	L_{A90}	Limit
02/08/2022	35.8	Sunny	14:05	-	14:35	72.5	72.4	73.8	69.7	75
08/08/2022	25.8	Cloudy	10:05	-	10:35	72.5	73.4	74.7	71.9	75
19/08/2022	27.7	Cloudy	14:15	-	14:45	72.5	73.1	74.2	71.5	75
25/08/2022	30.0	Cloudy	10:30	-	11:00	72.5	72.7	74.1	70.1	75
31/08/2022	33.3	Cloudy	14:30	-	15:00	72.5	72.1	73.4	69.3	75

 Maximum
 73.4

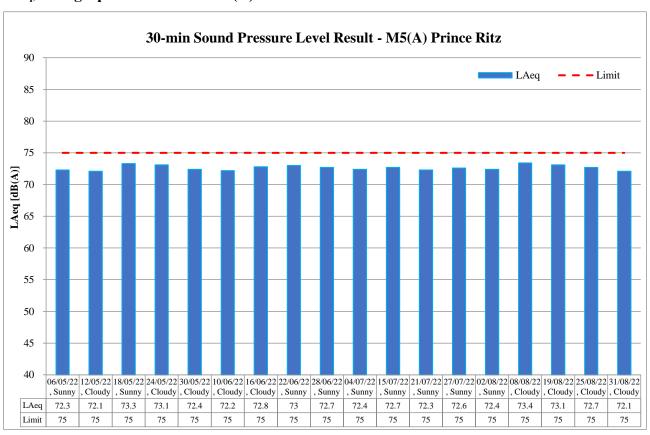
 Minimum
 72.1

 Average
 72.8

LAeq, 30-min graphical results of M4(A) – Le Billionnaire



L_{Aeq, 30-min} graphical results of M5(A) – Prince Ritz



		Reportin	g Period	
Major Construction Activities	May	June	July	August
	2022	2022	2022	2022
Construction of Crowd Dispersal Route	✓			
Construction of DCS	✓	✓	✓	✓
Construction works for Road L16	✓	✓	✓	✓
Renovation works for existing subways KS9 and KS32	✓	✓	✓	
Pile cap construction for PC9 and PC10 for Elevated Walkway LW-02	✓			
Pile column construction for PC9 and PC10 for Elevated Walkway LW-02		✓	✓	
Pile column construction for PC9, PC10 and PC11 for Elevated Walkway LW-02				✓
Construction works for Pedestrian Street No. 1, No. 2, No. 3 & No. 4	✓			
Erection of temporary decking across existing Kai Tak River	✓	✓	✓	
ELS and excavation for Subway KS10 Lift and Staircase	✓	✓	✓	
Demolition works to existing subway KS10 staircase and ramp	✓			
Road diversion works at Sa Po Road	✓			
ELS and excavation at launching shaft for subway SB-01	✓			
ELS and excavation for PC11 for Elevated Walkway LW-02		✓	✓	
Trial pit excavation and UU diversion at Sa Po Road under TTA Stage 2		✓	✓	
ELS, excavation and RC construction at launching shaft for subway SB-01		✓	✓	
Construction works for Pedestrian Street No. 2 & No. 4		✓	✓	
RC construction at Launching Shaft for SB-01			✓	
Twin rising main connection works			✓	
Erection of falseworks and working platform for decking of Elevated Walkway				✓
LW-02				
UU diversion at Sa Po Road under TTA Stage 2A				√
Sheetpile installation at Sa Po Road under TTA Stage 2A				✓
RC construction at launching shaft for subway SB-01				√
Construction works for Pedestrian Street No. 2				√
RC construction for Subway KS10 Lift and Staircase				√
Renovation works for existing subways KS9 and KS32				✓

	Reporting Period					
Factors might affect the monitoring results		June	July	August		
	2022	2022	2022	2022		
Non-project related construction activities in the adjacent construction sites were observed.	✓	√	✓	✓		

Appendix L – Event and Action Plan for noise

E4		Acı	tion	
Event	ET	IEC	Supervisor / ER	Contractor
Action Level being exceeded	 Notify Supervisor / ER, IEC and Contractor; Carry out investigation; Report the results of investigation to the IEC, Supervisor / ER and Contractor; Discuss with the IEC and Contractor on remedial measures required; Increase monitoring frequency to check mitigation effectiveness. (The above actions should be taken within 2 working days after the exceedance is identified.) 	1. Review the investigation results submitted by the ET; 2. Review the proposed remedial measures submitted by the Contractor and advise the ER accordingly; 3. Advise the Supervisor / ER on the proposed remedial measures. (The above actions should be taken within 2 working days after the exceedance is identified.)	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;	 Submit noise mitigation proposal to IEC and Supervisor / ER; Implement noise mitigation proposals. (The above actions should be taken within 2 working days after the exceedance is identified.)
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.)	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	 Take immediate action to avoid further exceedance; Submit proposals for remedial actions to IEC and Supervisor /ER within 3 working days of notification; Implement the agreed proposal; Submit further proposal if problem still not under control; Stop the relevant portion of works as instructed by the Supervisor /ER until the exceedance is abated. (The above actions should be

Event		Act	tion				
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 Act	tion Plan for I	Landscape and	d 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.	Check report. Recommend remedial design if necessary.	Undertake remedial design if necessary.	
Non-conformity on one occasion	 Identify Source. Inform IEC and Supervisor /ER. Discuss remedial actions with IEC, Supervisor /ER and Contractor. Monitor remedial actions until rectification has been completed. 	working method.	 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 Supervisor /ER. Increase monitoring frequency. Discuss remedial actions with IEC, Supervisor /ER and Contractor. Monitor remedial actions until rectification has been completed. If non-conformity stops, cease additional monitoring. 	method. 3. Discuss with ET and Contractor on possible remedial measures.	 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 ______ (YEAR)

	Actual Quantities of Inert C&D Materials Generated Monthly Actual Quantities of C&D Wastes Generated Monthly									onthly			
Month	Total Quantity Generated A+B	Broken Concrete Generated A	General fill Generated B	Broken Concrete Reused in the Contract	General Fill 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 ³]	[in '000m ³]	[in '000m ³]	[in '000m ³]	[in '000m ³]	[in '000m ³]	[in '000m ³]	[in '000m ³]	[in '000kg]	[in '000kg]	[in '000kg]	[in '000kg]	[in '000m ³]
JAN	1.91	0.00	1.91	0.00	1.20	0.00	0.71	0.00	0.00	0.00	0.00	0.00	0.01
FEB	0.66	0.03	0.63	0.00	0.30	0.00	0.33	0.00	0.00	0.00	0.00	0.00	0.00
MAR	0.97	0.00	0.97	0.00	0.25	0.00	0.72	0.00	0.00	0.00	0.00	0.00	0.01
APR	0.97	0.00	0.97	0.00	0.30	0.00	0.67	0.00	0.00	0.00	0.00	0.00	0.01
MAY	0.37	0.01	0.36	0.00	0.22	0.00	0.14	0.00	0.00	0.00	0.00	0.00	0.01
JUNE	0.47	0.00	0.47	0.00	0.22	0.00	0.25	0.00	0.00	0.00	0.00	0.00	0.01
SUB- TOTAL	5.35	0.04	5.31	0.00	2.49	0.00	2.82	0.00	0.00	0.00	0.00	0.00	0.05
JULY	1.88	0.00	1.88	0.00	0.35	0.00	1.53	0.00	0.00	0.00	0.00	0.00	0.01
AUG	1.73	0.00	1.73	0.00	0.28	0.00	1.45	0.00	0.00	0.00	0.00	0.00	0.01
SEPT													
OCT													
NOV													
DEC													
TOTAL	8.96	0.04	8.92	0.00	3.12	0.00	5.80	0.00	0.00	0.00	0.00	0.00	0.07

Appendix O – Environmental Mitigation Implementation Schedule (EMIS)

EIA Ref	Recommended Mitigation Measures	In	npleme	entatio	 on
Part B	Water Quality	Not Observed	Yes	No	Remark
S8.8	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 and adequate maintenance of drainage systems to prevent flooding and overflow	V			
S8.8	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.	V			
S8.8	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.	Ø			
S8.8	Sediment tanks of sufficient capacity, constructed from pre-formed individual cells of approximately 6 to 8 m³ 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 and particularly suited to applications where the influent is pumped.	I			
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 similar fabric during rainstorms. Measures should be taken to prevent the washing away of construction materials, soil, silt or debris into any drainage system.	V			
S8.8	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.				
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 be taken during or after rainstorms. Particular attention should be paid to the control of silty surface runoff during storm events.	\square			
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 drainage system after accidental spillages. The interceptor should have a bypass to prevent flushing during periods of heavy rain.	V			
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 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.		V		
S8.8	Drainage 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.	Ø			
S8.8	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.	Ø			
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 storage capacity of the largest tank, to prevent spilled fuel oils from reaching the coastal waters of the Victoria Harbour WCZ	V			
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 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.	Ø			
S8.8	Stormwater Discharges Minimum distances of 100 m should be maintained between the existing or planned stormwater discharges and the existing or planned seawater intakes	1			
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	\square			

EIA Ref	Recommended Mitigation Measures	Implementation				
	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.	V				
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.	\square				
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.	Ø				
S8.8	Stockpiling of construction materials and dusty materials should be covered and located away from any water courses.		V			
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		V			
S8.8	Construction activities, which generate large amount of wastewater, should be carried out in a distance away from the waterfront, where practicable.	$\overline{\checkmark}$				
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.	V				
S8.8	Construction effluent, site run-off and sewage should be properly collected and/or treated.	V				
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 bottom and properly supported props to prevent adverse impact on the storm water quality.	\square				
S8.8	Silt curtain may be installed around the construction activities at the seafront to minimize the potential impacts due to accidental spillage of construction materials.	V				
S8.8	Proper shoring may need to be erected in order to prevent soil/mud from slipping into the storm culvert/drainage channel/sea.	V				
S8.8	Supervisory staff should be assigned to station on site to closely supervise and monitor the works		V			
Part C C	onstruction Noise Impact	Not Observed	Yes	No	Remark	
S7.8	Use of quiet PME, movable barriers for Asphalt Paver, Breaker, Excavator and Hand-held breaker and full enclosure for Air Compressor, Bar Bender, Concrete Pump, Generator and Water Pump		V			
S7.9	Only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction program. Silencers or mufflers on construction equipment should be utilized and should be properly maintained during the construction program. Mobile plant, if any, should be sited as far away from NSRs as possible.		V			
	Machines and plant (such as trucks) that may be in intermittent use should be shut down between works periods or should be throttled down to a minimum. Plant known to emit noise strongly in one direction should, wherever possible, be orientated so that the noise is directed away from the nearby NSRs.	V				
	Material stockpiles and other structures should be effectively utilized, wherever practicable, in screening noise from on-site construction activities.	Ø				
Part D W	/aste / Chemical Management	Not Observed	Yes	No	Remark	
S5.2	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		V			
	Training of site personnel in site cleanliness, proper waste management and chemical waste handling procedures		V			
	Provision of sufficient waste disposal points and regular collection for waste. Appropriate measures to minimise windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers	V				
	Regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors. Separation of chemical wastes for special handling and appropriate treatment	$\overline{\checkmark}$				
S9.5	1)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 2)Training of site personnel in proper waste management and chemical waste handling procedures		$\overline{\mathbf{V}}$			
	3)Provision of sufficient waste disposal points and regular collection for disposal					
	4)Appropriate measures to minimise windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers					
	5)A recording system for the amount of wastes generated, recycled and disposed of (including the disposal sites)					

EIA Ref	Recommended Mitigation Measures	lm	pleme	entatio	n
S9.5	Waste Reduction Measures 1) Sort C&D waste from demolition of the remaining structures to recover recyclable portions such as metals 2) Segregation and storage of different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal	Ø			
	3) Encourage collection of aluminum cans, PET bottles and paper by providing separate labelled bins to enable these wastes to be segregated from other general refuse generated by the work force				
	 Any unused chemicals or those with remaining functional capacity should be recycled Proper storage and site practices to minimize the potential for damage or contamination of construction materials 				
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: 1) Where it is unavoidable to have transient stockpiles of C&D material within the Project work site pending collection for disposal, the transient stockpiles should be located away from		$\overline{\mathbf{V}}$		
	waterfront or storm drains as far as possible 2) Open stockpiles of construction materials or construction wastes on-site should be covered with tarpaulin or similar fabric 3) Skip hoist for material transport should be totally enclosed by impervious sheeting				
	4) Every vehicle should be washed to remove any dusty materials from its body and wheels before leaving a construction site5) 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 6) 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 7) All dusty materials should be sprayed with water prior to any loading, unloading or transfer				
	operation so as to maintain the dusty materials wet				
S9.5	When delivering inert C&D material to public fill reception facilities, the material should consist entirely of inert construction waste and of size less than 250mm or other sizes as agreed with the Secretary of the Public Fill Committee. In order to monitor the disposal of the surplus C&D material at the designed public fill reception facility and to control fly tipping, a trip-ticket system as stipulated in the ETWB TCW No. 31/2004 "Trip Ticket System for Disposal of Construction"	Ø			
S9.5	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 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	V			
Part E L	andscape & Visual	Not Observed	Yes	No	Remark
S13.9	CM1 - All existing trees should be carefully protected during construction. CM2 - 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. CM3 - Control of night-time lighting. CM4 - Erection of decorative screen hoarding.				
Part F A	ir Quality	Not Observed	Yes	No	Remark
S6.8	Stockpiling site(s) should be lined with impermeable sheeting and bunded. Stockpiles should be fully covered by impermeable sheeting to reduce dust emission.		V		
S6.8	Misting for the dusty material should be carried out before being loaded into the vehicle.	V			
S6.8	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.	<u> </u>			
S6.8	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	V			
S6.8	The vehicles should be restricted to maximum speed of 10 km per hour and confined haulage and delivery vehicle to designated roadways insider the site. On-site unpaved roads should be compacted and kept free of lose materials		V		
S6.8	Vehicle washing facilities should be provided at every vehicle exit point	V			
S6.8	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.		V		
S6.8	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.		V		

EIA Ref	Recommended Mitigation Measures		Implementation			
S6.8	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.		V			
S6.8	Every vehicle should be washed to remove any dusty materials from its body and wheels before leaving the construction sites.		V			
S6.5	8 times daily watering of the work site with active dust emitting activities.		V			

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

Reporting Month: August 2022

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

upto reporting month

Contract No.	Record of Complaint	Record of Warning	Notification of Summons and Successful Prosecutions
ED/2018/05	1	0	0