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67th CONSOLIDATED MONTHLY EM&A REPORT

May 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/1159

Prepared by	**:**	Cyrus Lai
Reviewed by	**:**	Calvin Leung
Certified by	**:**	Colin Yung Independent Environmental Checker Fugro Technical Services Limited

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EXECUTIVE SUMMARY

i. This is the 67th Consolidated Monthly EM&A Report which summaries the EM&A works undertaken by respective contract under EP-337/2009 within the period between 1 May and 31 May 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:

- Lift installation work of LT1 at SKLR Playground
- Excavating and laying cable ducts for E&M works at SKLR Playground
- Carry out water proofing works and backfilling works at TTA Stage 3 & 4 of PERE
- Install bulkhead lighting works at Subway

Contract No. ED/2018/01:

- North Approach Ramp – Construction of wall, roof slab, utilities trough
- Bridge D3 – Construction of Bridge Deck and abutments, Dismantle of portal frame
- North Depressed Road – Construction of wall & top slab
- Underpass – Construction of walls and roof slab
- South Approach Ramp – Construction of Permanent Structure
- District Cooling System seawater intake box culvert – reinstatement of the seawall and backfilling works
- Lift 3 – Modification works
- Lift 4 – Construction of linking platform
- South Depressed Road – Installation of ELS system / construction of permanent works
- Rising Main and Water Pipe – Laying of sewage
- Landscaped Deck – Construction of pile caps and installation of columns
- Transformer Room – Construction of permanent structure
- Shing Kai Road – Modification works
- Lift 1 & 2 – Installation of ELS system
- CLP substation – Construction of wall & intermediate slab
- 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 cap construction for PC9 and PC10 for Elevated Walkway LW-02
- Erection of temporary decking across existing Kai Tak River
- Road diversion works at Sa Po Road
- ELS and excavation at launching shaft for subway SB-01
- Construction works for Pedestrian Street No. 1, No. 2, No. 3 & No. 4
- Construction of Crowd Dispersal Route
- Construction works for Road L16

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- Construction of DCS
- ELS and excavation for Subway KS10 Lift and Staircase
- Demolition works to existing subway KS10 staircase and ramp
- 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.

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

Major Impact Prediction	Control Measures
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/2015/02:	
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/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/2018/05:	
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 67th Consolidated Monthly EM&A Report which summaries the EM&A works undertaken by respective contract under EP-337/2009 within the period between 1 May and 31 May 2022.

1.2 Summary of relevant Contract Information of Key Personnel

Party	Position	Name	Telephone	Fax
Contract No. KL/2014/01:				
Project Proponent (CEDD)	Senior Engineer	Mr. Keith Chu	3579 2450	3579 4516
	Engineer	Ms. Adonia Yung	3579 2124	
Engineer's Representative (AECOM)	CRE	Mr. Clive Cheng	3746 1801	2798 0783
IEC (KSMC)	IEC	Dr. Douglas Wong	2618 2166	2120 7752
ET (Cinotech)	ET Leader	Mr. K.S Lee	2151 2091	3107 1388
	Audit Team Leader	Ms. Betty Choi	2151 2072	
Main Contractor (CCJV)	EO	Mr. Jack Lai	2960 1398	2960 1399
Contract No. KL/2015/02:				
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 (Cinotech)	ET Leader	Mr. K.S Lee	2151 2091	3107 1388
	Audit Team Leader	Ms. Betty Choy	2151 2072	
Main Contractor	Site Agent	Mr. W. M. Wong	6386 3535	2398 8301

Party	Position	Name	Telephone	Fax
(PWHJV)				
Contract No. ED/2018/01:				
Project Proponent (CEDD)	Senior Engineer	Mr. Alex Wong	3579 2452	2739 0076
	Engineer	Ms. Chan Ka Yan	3579 2458	2739 0076
Engineer's Representative (AECOM)	CRE	Mr. Clive Cheng	3911 4201	3911 4288
IEC (Ramboll)	IEC	Mr. Y H Hui	3465 2850	3465 2899
ET (Ka Shing)	ET Leader	Mr. Chan Pang	6082 2973	2120 7752
Main Contractor (Penta-Ocean)	EO	Mr. Lulu Mar	6845 0626	3465 8898
Contract No. ED/2018/05:				
Project Proponent (CEDD)	Senior Engineer	Mr. George Ng	3842 7107	2739 0076
	Engineer	Mr. Albert Tse	3842 7137	2739 0076
	Engineer	Mr. Perry Lo	3842 7143	2739 0076
Engineer's Representative (AECOM)	SRE	Ms. Mavis Law	2798 0771	2798 0783
IEC (Acuity)	IEC	Mr. Kevin Li	2698 6833	2698 9383
ET (Ka Shing)	ET Leader	Ir. Chan Pang	2618 2166	2120 7752
Main Contractor (BK- STEC)	EO	Mr. Raymond Lam	9713 6817	3850 8508

1.3 Summary of Construction Programme and Activities

1.3.1 The construction programme of each Contract is summarized in the appendices of the corresponding Monthly EM&A report.

1.3.2 The major construction activities undertaken in the reporting month are summarized as follow:

Contract No. KL/2014/01:
- Architectural features works at landscaped deck and ground floor open space
- Defect work of pedestrian streets
- E&M works
- Laying of paving blocks for footpath
- Planting works along footpath and at deck level, and
- TTA implementation, minor works at Shing Fung Road and Wang Chiu Road / Kai Cheung Road

Contract No. KL/2015/02:
- Lift installation work of LT1 at SKLR Playground
- Excavating and laying cable ducts for E&M works at SKLR Playground
- Carry out water proofing works and backfilling works at TTA Stage 3 & 4 of PERE
- Install bulkhead lighting works at Subway

Contract No. ED/2018/01:
- North Approach Ramp – Construction of wall, roof slab, utilities trough
- Bridge D3 – Construction of Bridge Deck and abutments, Dismantle of portal frame
- North Depressed Road – Construction of wall & top slab
- Underpass – Construction of walls and roof slab
- South Approach Ramp – Construction of Permanent Structure

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- District Cooling System seawater intake box culvert – reinstatement of the seawall and backfilling works
- Lift 3 – Modification works
- Lift 4 – Construction of linking platform
- South Depressed Road – Installation of ELS system / construction of permanent works
- Rising Main and Water Pipe – Laying of sewage
- Landscaped Deck – Construction of pile caps and installation of columns
- Transformer Room – Construction of permanent structure
- Shing Kai Road – Modification works
- Lift 1 & 2 – Installation of ELS system
- CLP substation – Construction of wall & intermediate slab
- 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 cap construction for PC9 and PC10 for Elevated Walkway LW-02
- Erection of temporary decking across existing Kai Tak River
- Road diversion works at Sa Po Road
- ELS and excavation at launching shaft for subway SB-01
- Construction works for Pedestrian Street No. 1, No. 2, No. 3 & No. 4
- Construction of Crowd Dispersal Route
- Construction works for Road L16
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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:	
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,

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:	• 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.

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.

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/m^3)	Range (µg/ m^3)	Action Level (µg/ m^3)	Limit Level (µg/ m^3)
Contract No. KL/2014/01:					
N.A (No air quality monitoring is required for the Project)					
Contract No. KL/2015/02:					
1-hr TSP	AM2	48.7	12.6 – 99.0	346	500
24-hr TSP	AM2(A)	45.4	21.9 – 67.1	157	260
Contract No. ED/2018/01:					
24-hr TSP	AM3	61	25 – 117	182	260
	AM4(A)	71	44 – 112	187	
	AM7	51	21 – 114	181	
1-hr TSP	AM3	52	21 – 94	297	500
	AM4(A)	59	33 – 103	326	
	AM7	42	22 – 92	315	
Contract No. ED/2018/05:					
24-hr TSP	AM2(A)	51	26 – 71	175	260
	AM3	61	25 – 117	172	
1-hr TSP	AM2(A)	46	20 – 65	302	500
	AM3	52	21 – 94	301	

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 in the appendices of the corresponding Monthly EM&A report.

Noise

2.1.8 The schedule of noise monitoring in reporting month is provided in in the appendices of the corresponding Monthly EM&A report.

2.1.9 The noise monitoring data are summarized in **Table 2.2**. Detailed monitoring data are presented in the appendices of the corresponding Monthly EM&A report.

Table 2.2 Summary of Noise Impact Monitoring Results

Monitoring Stations	Construction Noise Level Leq $_{(30min)}$ dB(A) (Range)	Action Level	Limit Level dB (A)
Contract No. KL/2014/01:		When one documented complaint is received.	
N.A (No Construction noise monitoring is required for the Project.)			NA
Contract No. KL/2015/02:			
M3(A)	56.2 – 76.6 #		75
M4	72.3 – 76.3 #		70*
M5(C)	57.7 – 79.3 #		75
Contract No. ED/2018/01:			
M11	64.0 – 69.5		75
M12	64.7 – 67.8		75
Contract No. ED/2018/05:			
M4(A)	68.9 – 70.1		75
M5(A)	72.1 – 73.3		75

(*) Noise Limit Level is 65 dB(A) during school examination periods.
(#) Measured noise level ≤ background / baseline noise level, detailed data refer to the corresponding Monthly EM&A report.

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.

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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:

- Lift installation work of LT1 at SKLR Playground
- Electrical wiring along subway
- E&M works for subway
- Install steel staircase cover of ST1 at SKLR Playground
- Carry out finishing works at SW6, subway and staircase ST1
- V.E. panel installation along subway SW6
- E&M work for bulkhead lighting inside subway SW6
- Pump house platform installation works with removal of ELS
- Backfilling works with removal of ELS at TTA Stage 3 & 4 of PERE
- Modify supports of the traffic desks at PERE
- Adding an additional concrete surround to the existing 1500mm pipe

Contract No. ED/2018/01:

- North Approach Ramp – Construction of utilities trough
- Bridge D3 – Construction of Bridge Deck and abutments
- North Depressed Road – Construction of wall & top slab
- Underpass – Construction of walls and roof slab
- South Approach Ramp – Construction of Permanent Structure
- District Cooling System seawater intake box culvert – backfilling works, reinstatement of the seawall and backfilling works
- Lift 3 – Modification works
- Lift 4 – Construction of linking platform
- South Depressed Road – Installation of ELS system / construction of permanent works
- Rising Main and Water Pipe – Laying of sewage
- Landscaped Deck – Construction of pile caps and installation of columns
- Transformer Room – Construction of Permanent Structure
- Shing Kai Road – Modification works
- Lift 1 & 2 – Installation of ELS system
- CLP substation – Construction of Permanent 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 cap and column construction for Pier 9 and Pier 10 at Elevated Walkway LW-02
- Erection of temporary deck across existing Kai Tak River
- Construction of Crowd Dispersal Route

- Construction of Road L16
- Construction of DCS
- Construction of Pedestrian Street No. 1, No. 2, No.3 & No.4
- Road diversion works at Sa Po Road
- ELS installation for temporary retrieving shaft at Sa Po Road
- ELS and excavation for launching shaft for subway SB-01
- Renovation works for existing subway KS9 and KS32
- 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/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/2015/02:	
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.

Major Impact Prediction	Control Measures
Contract No. ED/2018/01:	
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.
Contract No. ED/2018/05:	
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.

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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Tuen Mun, N.T.,
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Fax : +852 2450 6138
E-mail : matlab@fugro.com
Website : www.fugro.com

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.**

FUGRO TECHNICAL SERVICES LIMITED

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Appendix A

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

Civil Engineering and Development Department

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

Contract No. KL/2014/01

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

Monthly EM&A Report
May 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.

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

CINOTECH CONSULTANTS LTD
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嘉誠管理顧問有限公司
Ka Shing management consultant Limited

Our ref: 08-06-2022

08-06-2022 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 May 2022 (version 1.0)

Reference is made to the Environmental Team's submission of the draft Monthly EM&A Report (version 1.0) for May 2022 provided to Independent Environmental Checker (IEC) via email dated on 8-6-2022 for review and comment.

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

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

Yours faithfully,
For and on behalf of
Ka Shing Management Consultant Limited

Ir. Dr. Douglas WONG
Independent Environmental Checker

c.c.	CEDD	Mr. Patrick Lee	(By email: patricksllee@cedd.gov.hk)
	AECOM	Mr. Anthony Lok	(By email: anthony.lok@aecom-ktd.com)
	CEC-CCC	Mr. Eric Fong	(By email: eric-cs-fong@continental-engineering.com)
	Cinotech	Mr. K.S Lee	(By email: ks.lee@cinotech.com.hk)

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EXECUTIVE SUMMARY

Introduction

1. This is the 74th Monthly Environmental Monitoring and Audit Report prepared by Cinotech Consultants Ltd. for "Contract No. KL/2014/01 - Kai Tak Development – Stage 2 Infrastructure Works for Developments at the Southern Part of the Former Runway" (Hereafter referred to as "the Project"). This contract work comprises two Schedule 2 designated projects (DP), namely the new distributor road D4 (part) and roads D3A & D4A serving the planned KTD. The DPs are part of the designated projects under Environmental Permits (EP) No.: EP-337/2009 ("New distributor roads serving the planned Kai Tak Development") and EP-445/2013/A ("Kai Tak Development – Roads D3A & D4A") respectively. This report documents the findings of EM&A Works conducted in May 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-related Exceedance		Action Taken
	Action Level	Limit Level	
Noise	0	0	N/A

Environmental Monitoring for Air Quality and Construction Noise

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

Environmental Licenses and Permits

7. Licenses/Permits granted to the Project include the Environmental Permits (EP) for the Project, EP-337/2009 issued on 23 April 2009 and EP-445/2013 issued on 3 May 2013 (Amended Environmental Permit (No.: EP-445/2013/A) issued on 13 August 2014).

8. Billing Account for Disposal of Construction Waste (A/C No. 7024073)

9. Registration of Chemical Waste Producer (License: 5213-247-C4004-01).

10. Water Discharge License (License: WT00023634-2016).

11. Construction Noise Permits (Permit: GW-RE0442-20, GW-RE0639-20, GW-RE0045-21, GW-RE0717-21 & GW-RE0656-21)

Key Information in the Reporting Month

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

Table II Summary Table for Key Information in the Reporting Month

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

Future Key Issues

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

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

Reporting Changes

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

1. INTRODUCTION

Background

1.1 The Kai Tak Development (KTD) is located in the south-eastern part of Kowloon Peninsula, comprising the apron and runway areas of the former Kai Tak Airport and existing waterfront areas at To Kwa Wan, Ma Tau Kok, Kowloon Bay, Kwun Tong and Cha Kwo Ling. It covers a land area of about 328 hectares. Stage 2 Infrastructure Works for Developments for Southern Part of the Former Runway is one of the construction stages of KTD. It contains two Schedule 2 DPs including new distributor roads serving the planned KTD and KTD Roads D3A & D4A. The general layout of the Project is shown in **Figure 1.**

1.2 One Environmental Permit (EP) No.: EP-337/2009 was issued on 23 April 2009 for new distributor roads serving the planned KTD and one Environmental Permit No.: EP-445/2013 was issued on 3 May 2013 for Kai Tak Development Roads D3A & D4A to Civil Engineering and Development Department (CEDD) as the Permit Holder. Pursuant to Section 13 of the EIAO, the Director of Environmental Protection Department amended the Environmental Permit No.: EP-445/2013 based on the Application No. VEP-449/2014 and the Environmental Permit (No.: EP-445/2013/A) was issued on 13 August 2014.

1.3 A study of environmental impact assessment (EIA) was undertaken to consider the key issues of air quality, noise, water quality, waste, land contamination, cultural heritage and landscape and visual impact, and identify possible mitigation measures associated with the works. EIA Reports (Register No. AEIAR-130/2009 and AEIAR-170/2013) were approved by the Environmental Protection Department (EPD) on 4 March 2009 and 3 May 2013 respectively.

1.4 Cinotech Consultants Limited (Cinotech) was commissioned by Civil Engineering and Development Department (CEDD) to undertake the role of the Environmental Team (ET) for the Contract No. KL/2014/01 – Stage 2 Infrastructure Works for Developments at the Southern Part of the Former Runway. The construction work under KL/2014/01 comprises the construction of part of the Road D4 under the EP (EP-337/2009) and the construction of Roads D3A & D4A under the EP (EP-445/2013/A).

1.5 Cinotech Consultants Limited was commissioned by Civil Engineering and Development Department (CEDD) to undertake the Environmental Monitoring and Audit (EM&A) works for the Project. The construction commencement of this Contract is on 13 April 2016. This is the 74th Monthly EM&A report summarizing the EM&A works for the Project in May 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. Keith Chu	Senior Engineer	3579 2450	3579 4516
		Ms. Adonia Yung	Engineer	3579 2124	
AECOM	Supervising Officer	Mr. Clive Cheng	CRE	3746 1801	2798 0783
Cinotech	Environmental Team	Mr. K S Lee	Environmental Team Leader	2151 2091	3107 1388
		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 May 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 May 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 5, 12, 19 & 25 May 2022 in the reporting month. IEC joint site inspection was conducted on 25th May 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
	From	To		
Environmental Permit (EP)				
EP-337/2009	23/04/09	N/A	Construction of new distributor roads serving the planned Kai Tak development.	Valid
EP-445/2013/A	13/08/14	N/A	Construction of Kai Tak Development roads D3A and D4A	Valid
Effluent Discharge License				
WT00023634-2016	--	31/03/21	Wastewater from the construction site including effluent treated by screen and sedimentation tank; There are no more need for the license after 31 March 2021 as the project is close to completion and no significant waste water is being generated from site.	Expired on 31 March 2021
Registration of Chemical 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 (CNP)				
GW-RE0442-20	14/6/20	13/12/20	Construction Noise Permit for the use of powered mechanical equipment for carrying out construction work other than percussive pilling and performing prescribed construction work. Construction Noise Permit for the use of powered mechanical equipment for carrying out construction work other than percussive pilling and performing prescribed construction work.	Expired on 13 December 2020
GW-RE0639-20	3/8/20	19/1/21		Expired on 19 February 2021
GW-RE0045-21	20/1/21	19/7/21		Expired on 19 July 2021
GW-RE0656-21	9/7/21	30/9/21		Valid
GW-RE0717-21	30/7/2021	19/1/2022		Valid

Status of Waste Management

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

5.5 In respect of the dump truck cover, the Contractor is reminded to take record photos and inspection to ensure that all dump trucks have fully covered the skip before leaving the site.

Implementation Status of Environmental Mitigation Measures

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

Table VI Observations and Recommendations of Site Inspections

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

Summary of Mitigation Measures Implemented

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

Implementation Status of Event Action Plans

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

Construction Dust

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

Construction Noise

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

Landscape and visual

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

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

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

6. FUTURE KEY ISSUES

6.1 Major site activities undertaken for the coming two months include:

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

6.2 Key environmental issues in the coming month include:

- Wastewater and runoff discharge from site;
- Silt, mud and sand along u-channels and sedimentation tanks;
- Review and implementation of temporary drainage system for the surface runoff;
- Noise from operation of the equipment, especially for rock-breaking activities, piling works and machinery on-site;
- Dust generation from stockpiles of dusty materials, exposed site area, excavation works and rock breaking activities;
- Dust generating activity and on haul road;
- Storage of construction materials on site;
- Storage of chemicals/fuel and chemical waste/waste oil on site;
- Accumulation of general and construction waste on site

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

Construction Works	**Major Impact Prediction**	**Control Measures**
As mentioned in Section 6.1	Air quality impact (dust)	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.
	Water quality impact (surface run-off)	a) Diversion of the collected effluent to de-silting 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) 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 May 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.

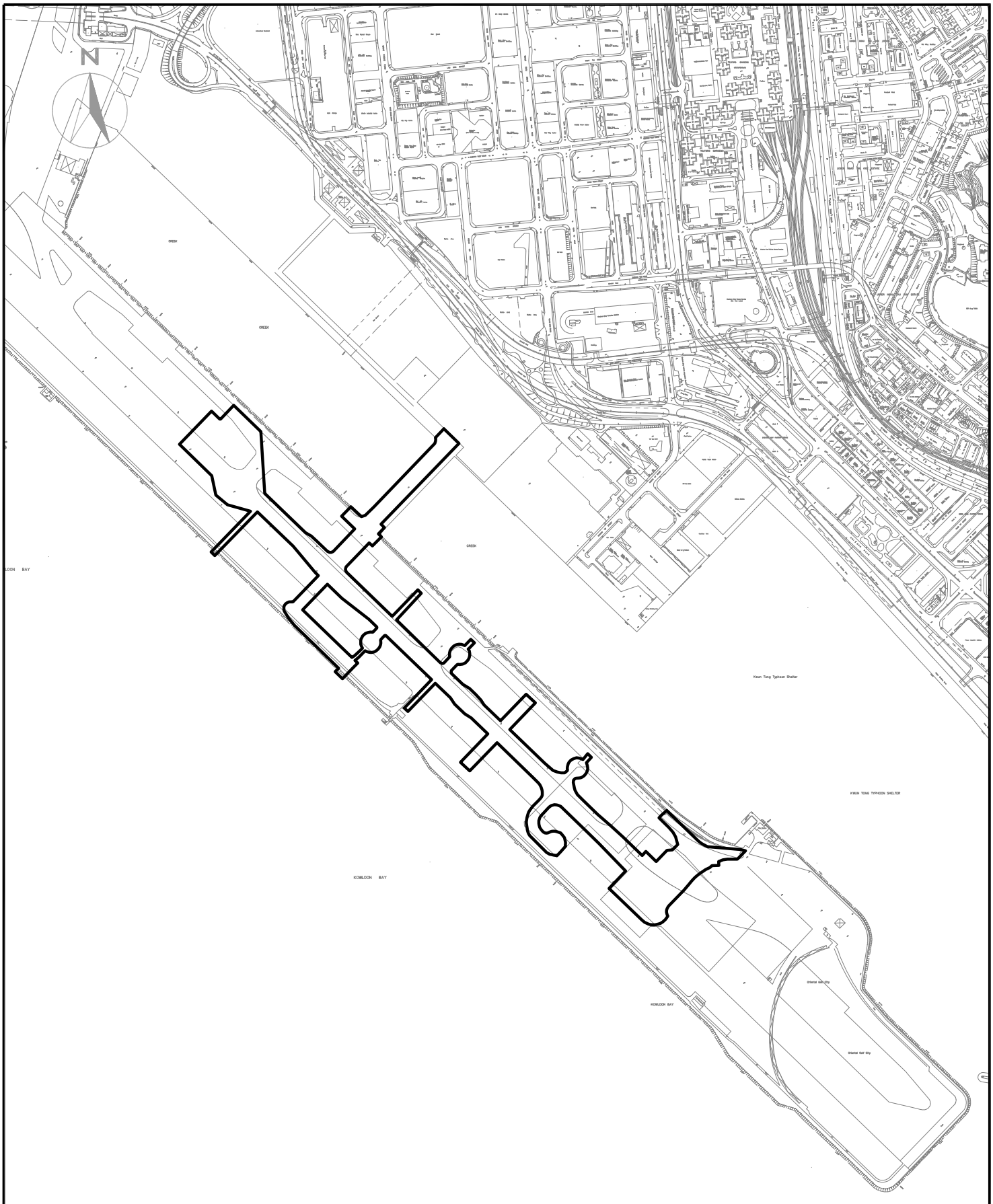
Recommendations

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



LEGEND:

SITE BOUNDARY

CINOTECH

Cinotech Consultants Limited

KL/2014/01 KAI TAK DEVELOPMENT - STAGE 2
INFRASTRUCTURE WORKS FOR DEVELOPMENT AT
SOUTHERN PART OF THE FORMER RUNWAY

SITE LAYOUT PLAN

SCALE	1:1000@A4	DATE	MAY 2016
CHECK	JL	DRAWN	JW
JOB No.	MA15046	FIGURE NO. 1	REV -

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 ($\mu g/ m^3$)	Limit Level[(1)(2)] ($\mu g/ m^3$)
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.

(*) 70dB(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: May 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

Weekly Site Inspection Record Summary
Inspection Information

Checklist Reference Number	220505
Date	5 May 2022 (Thursday)
Time	13:30 – 14:30

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Water Quality	
	• No environmental deficiency was identified during site inspection	
	C. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	D. Noise	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	• ***F. Visual and Landscape***	
	• No environmental deficiency was identified during site inspection.	
	G. Permits /Licenses	
	• No environmental deficiency was identified during site inspection.	
	H. Others	
	No follow-up items are required from the previous site inspection (ref no.: 220427).	

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	Name	Signature	Date
Recorded by	Becky Tang		5 May 2022
Checked by	Colman Wong		6 May 2022

Weekly Site Inspection Record Summary
Inspection Information

Checklist Reference Number	220512
Date	12 May 2022 (Thursday)
Time	13:30 – 14:30

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Water Quality	
	• No environmental deficiency was identified during site inspection	
	C. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	D. Noise	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	• ***F. Visual and Landscape***	
	• No environmental deficiency was identified during site inspection.	
	G. Permits /Licenses	
	• No environmental deficiency was identified during site inspection.	
	H. Others	
	No follow-up items are required from the previous site inspection (ref no.: 220505).	

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	Name	Signature	Date
Recorded by	Becky Tang		12 May 2022
Checked by	Colman Wong		13 May 2022

Weekly Site Inspection Record Summary
Inspection Information

Checklist Reference Number	220519
Date	19 May 2022 (Thursday)
Time	13:30 – 14:30

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Water Quality	
	• No environmental deficiency was identified during site inspection	
	C. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	D. Noise	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	• ***F. Visual and Landscape***	
	• No environmental deficiency was identified during site inspection.	
	G. Permits /Licenses	
	• No environmental deficiency was identified during site inspection.	
	H. Others	
	No follow-up items are required from the previous site inspection (ref no.: 220512).	

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	Name	Signature	Date
Recorded by	Becky Tang		19 May 2022
Checked by	Colman Wong		20 May 2022

Weekly Site Inspection Record Summary
Inspection Information

Checklist Reference Number	220525
Date	25 May 2022 (Wednesday)
Time	13:30 – 14:30

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Water Quality	
	• No environmental deficiency was identified during site inspection	
	C. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	D. Noise	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	• ***F. Visual and Landscape***	
	• No environmental deficiency was identified during site inspection.	
	G. Permits /Licenses	
	• No environmental deficiency was identified during site inspection.	
	H. Others	
	No follow-up items are required from the previous site inspection (ref no.: 220519).	

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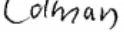
	Name	Signature	Date
Recorded by	Becky Tang		25 May 2022
Checked by	Colman Wong		26 May 2022

APPENDIX D
EVENT ACTION PLANS

Appendix D - Event Action Plans

Event/Action Plan for Construction Noise

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
Action Level being exceeded	4. Notify ER, IEC and Contractor; 5. Carry out investigation; 6. Report the results of investigation to the IEC, ER and Contractor; 7. Discuss with the IEC and Contractor on remedial measures required; 8. 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 by the Contractor and advise the ER accordingly; 3. 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)	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)	1. Submit noise mitigation proposals to IEC and ER; 2. 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, ER, Contractor and EPD; 2. Repeat measurements to confirm findings; 3. Increase monitoring frequency; 4. Identify source and investigate the cause of exceedance; 5. Carry out analysis of Contractor's working procedures; 6. Discuss with the IEC, Contractor and ER on remedial measures required; 7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; 8. If exceedance stops, cease additional monitoring. (The above actions should be taken within 2 working days after the exceedance is identified)	1. Discuss amongst ER, ET, and Contractor on the potential remedial actions; 2. 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)	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented; 4. Supervise the implementation of remedial measures; 5. If exceedance continues, consider stopping the Contractor to continue working on that portion of work which causes the exceedance until the exceedance is abated. (The above actions should be taken within 2 working days after the exceedance is identified)	1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IEC and ER within 3 working days of notification; 3. Implement the agreed proposals; 4. Submit further proposal if problem still not under control; 5. 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 LEVEL	ACTION			
	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 implementation 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 implementation of remedial measures.	• Notify Contractor • Ensure remedial measures are properly implemented	• Amend working methods • Rectify damage and undertake any necessary replacement

APPENDIX E
ENVIRONMENTAL MITIGATION IMPLEMENTATION SCHEDULE (EMIS)

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

EIA Ref.	Mitigation Measures	Status
Construction Air Quality		
S3.2 (AEIAR-130/2009)	8 times daily watering of the work site with active dust emitting activities.	^
S4.8 (AEIAR-170/2013)	Control measures stipulated in the approved KTD Schedule 3 EIA Report should be strictly followed.	^
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 should be fully covered by impermeable sheeting to reduce dust emission.	^
	● Misting for the dusty material should be carried out before being loaded into the vehicle.	^
	● Any vehicle with an open load carrying area should have properly fitted side and tail boards.	^
	● Material having the potential to create dust should not be loaded from a level higher than the side and tail boards and should be dampened and covered by a clean tarpaulin.	^
	● The tarpaulin should be properly secured and should extent at least 300 mm over the edges of the sides and tailboards. The material should also be dampened if necessary before transportation.	^
	● The vehicles should be restricted to maximum speed of 10 km per hour and confined haulage and delivery vehicle to designated roadways insider the site. Onsite unpaved roads should be compacted and kept free of lose materials.	^
	● Vehicle washing facilities should be provided at every vehicle exit point.	^

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: ● 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	^ ^ ^ ^ ^

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)	<u>Construction Runoff</u> Exposed soil areas should be minimised to reduce the potential for increased siltation, contamination of runoff, and erosion. Construction runoff related impacts associated with the above ground construction activities can be readily controlled through the use of appropriate mitigation measures which include: ● 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 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.	^
	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	^

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.	^
	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 (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.	^
	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.	^
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	^

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)	<u>Boring and Drilling Water</u> Water used in ground boring and drilling for site investigation or rock / soil anchoring should as far as practicable be re-circulated after sedimentation. When there is a need for final disposal, the wastewater should be discharged into storm drains via silt removal facilities.	^
	<u>Acid Cleaning, Etching and Pickling Wastewater</u> Acidic wastewater generated from acid cleaning, etching, pickling and similar activities should be neutralized to within the pH range of 6 to 10 before discharging into foul sewers	^
S3.4 (AEIAR-130/2009)	<u>Drainage</u> It is recommended that on-site drainage system should be installed prior to the commencement of other construction activities. Sediment traps should be installed in order to minimise the sediment loading of the effluent prior to discharge into foul sewers. There should be no direct discharge of effluent from the site into the sea.	^
S3.4 (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.	^

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)	<u>Sewage Effluent</u> 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.	^
S5.8	Notices should be posted at conspicuous locations to remind the workers not to discharge	^

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)	<u>Stormwater Discharges</u> Minimum distances of 100 m should be maintained between the existing or planned stormwater discharges and the existing or planned seawater intakes.	^
	<u>Debris and Litter</u> In order to maintain water quality in acceptable conditions with regard to aesthetic quality, contractors should be required, under conditions of contract, to ensure that site management is optimised and that disposal of any solid materials, litter or wastes to marine waters does not occur.	^
S5.8 (AEIAR-170/2013)	<u>Accidental Spillage</u> Contractor must register as a chemical waste producer if chemical wastes would be produced from the construction activities. The Waste Disposal Ordinance (Cap 354) and its subsidiary regulations in particular the Waste Disposal (Chemical Waste) (General) Regulation, should be observed and complied with for control of chemical wastes. Any service shop and maintenance facilities should be located on 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	Status
	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.	^ ^ ^ ^
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.	^
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	^ ^

EIA Ref.	Mitigation Measures	Status
	● Appropriate measures to minimise windblown litter and dust during transportation of 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	^ ^ ^ ^
	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 stockpiles to enhance reuse or recycling of materials and their proper disposal ● Encourage collection of aluminium cans, PET bottles and paper by providing separate labelled bins to enable these wastes to be segregated from other general refuse generated by the work force ● Any unused chemicals or those with remaining functional capacity should be recycled ● Proper storage and site practices to minimise the potential for damage or contamination of construction materials ● Plan and stock construction materials carefully to minimize amount of waste generated and avoid unnecessary generation of waste ● Training should be provided to workers about the concepts of site cleanliness and appropriate waste management procedures, including waste reduction, reuse and recycle.	 ^ ^ ^ ^ ^ ^

EIA Ref.	Mitigation Measures	Status
S3.5 (AEIAR-130/2009)	Construction and Demolition Materials Mitigation measures and good site practices should be incorporated in the contract document to control potential environmental impact from handling and transportation of C&D material. The mitigation measures include: ● Where it is unavoidable to have transient stockpiles of C&D material within the Project work site pending collection for disposal, the transient stockpiles shall be located away from waterfront or storm drains as far as possible. ● Open stockpiles of construction materials or construction wastes on-site should be covered with tarpaulin or similar fabric. ● 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	^ ^ ^ ^ ^ ^ ^ ^

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	^
Construction Landscape and Visual		
S3.8.12 (AEIAR-130/2009) and S7.9 (AEIAR-170/2013)	● Minimized construction area and contractor's temporary works areas. ● All existing trees should be carefully protected during construction. ● 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. ● Control of night-time lighting. ● Erection of decorative screen hoarding. ● Reduction of construction period to practical minimum. ● Limitation of / Ensuring no run-off into surrounding landscape and adjacent seawater areas. ● Temporary or advance landscape should be provided along the temporary access roads to the Cruise Terminal until such time as road D3 is open.	^ ^ ^ ^ ^ ^ ^ ^

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

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

Contract No. KL/2014/01

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

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

Reporting Month: May 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

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects *	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics	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		0	0	0		0	0	0	0	0	
Sub-total		0	0	0	0.00	0	0	0	0	0	
July		0	0	0		0	0	0	0	0	
Aug		0	0	0		0	0	0	0	0	
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	610.62	0	0	0	0.00	0	0	0	0	0	610.62

* Transfer to alterative disposal ground at Lung Kwu Sheung Tan EPD approved recycler

FUGRO TECHNICAL SERVICES LIMITED

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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

May 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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FUGRO TECHNICAL SERVICES LIMITED
Fugro Development Centre
5 Lok Yi Street, Tai Lam
Tuen Mun, NT
Hong Kong

Date 14 June 2022
Our Ref. MCL/ED/0221/2022/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 May 2022

We refer to your emails dated 14 June 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 65th 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 May 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		
AM2 - Lee Kau Yan Memorial School	Yes (1-hour TSP)	N/A
	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:

- Lift installation work of LT1 at SKLR Playground
- Excavating and laying cable ducts for E&M works at SKLR Playground
- Carry out water proofing works and backfilling works at TTA Stage 3 & 4 of PERE
- Install bulkhead lighting works at Subway

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

Parameter	No. of Project-related Exceedance		Action Taken
	Action Level	Limit Level	
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).
- 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	Remark
	Number	Nature			
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 Team	Mr. K.S Lee	Environmental Team Leader	2151 2091	3107 1388
		Ms. Betty Choi	Audit Team Leader	2151 2072	
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:

- Lift installation work of LT1 at SKLR Playground
- Excavating and laying cable ducts for E&M works at SKLR Playground
- Carry out water proofing works and backfilling works at TTA Stage 3 & 4 of PERE
- Install bulkhead lighting works at Subway

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) M4 M5(C)	L_{10}(30 min.) dB(A) L_{90}(30 min.) dB(A) L_{eq}(30 min.) dB(A)	0700-1900 hrs on normal weekdays	Once per week	Façade

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 : A
  - 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 re-calibration 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}, L_{90} and L_{10} 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

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

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

(*) Noise Limit Level is 65 dB(A) during school examination periods.

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:

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

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

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

Station	Predicted 1-hr TSP conc.		Measured 1-hr TSP conc.	
	Scenario1 (Mid 2009 to Mid-2013), µg/m³	Scenario2 (Mid 2013 to Late 2016), µg/m³	Reporting Month (May 2022), µg/m³	
			Average	Range
AM2 – Lee Kau Yan Memorial School	290	312	48.7	12.6 – 99.0

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

Station	Predicted 24-hr TSP conc.		Measured 24-hr TSP conc.	
	Scenario1 (Mid 2009 to Mid-2013), µg/m³	Scenario2 (Mid 2013 to Late 2016), µg/m³	Reporting Month (May 2022), µg/m³	
			Average	Range
AM2(A) – Ng Wah Catholic Secondary School	145	169	45.4	21.9 – 67.1

Table 4.3 Comparison of Noise Monitoring Data with EIA predictions

Stations	Predicted Mitigated Construction Noise Levels during Normal Working Hour ($L_{eq\ (30min)}$ dB(A))	Reporting Month (May 2022), $L_{eq\ (30min)}$ dB(A)
M3(A) – The Bridge connecting The Latitude	Not predicted in EIA Report	56.2 - 76.6 (2)
M4 – Lee Kau Yan Memorial School	47 – 74	72.3 - 76.3 (1)
M5(C) – Mercy Grace's Home	Not predicted in EIA Report	57.7 - 79.3 (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 3, 11, 18, 24 & 31 May 2022 in the reporting month. A joint site inspection with the representative of IEC, ER, the Contractor and the ET was conducted on 11 May 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

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

Status of Waste Management

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

Implementation Status of Environmental Mitigation Measures

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

Table 6.2 Observations and Recommendations of Site Inspections

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.

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:

- Lift installation work of LT1 at SKLR Playground
- Electrical wiring along subway
- E&M works for subway
- Install steel staircase cover of ST1 at SKLR Playground
- Carry out finishing works at SW6, subway and staircase ST1
- V.E. panel installation along subway SW6
- E&M work for bulkhead lighting inside subway SW6
- Pump house platform installation works with removal of ELS
- Backfilling works with removal of ELS at TTA Stage 3 & 4 of PERE
- Modify supports of the traffic desks at PERE
- Adding an additional concrete surround to the existing 1500mm pipe

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 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.

Monitoring Schedule for Next Month

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

8 CONCLUSIONS AND RECOMMENDATIONS

Conclusions

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

1-hr TSP Monitoring

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

24-hr TSP Monitoring

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

Construction Noise Monitoring

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

Landscape and visual

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

Complaint and Prosecution

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

Recommendations

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

Water Quality

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

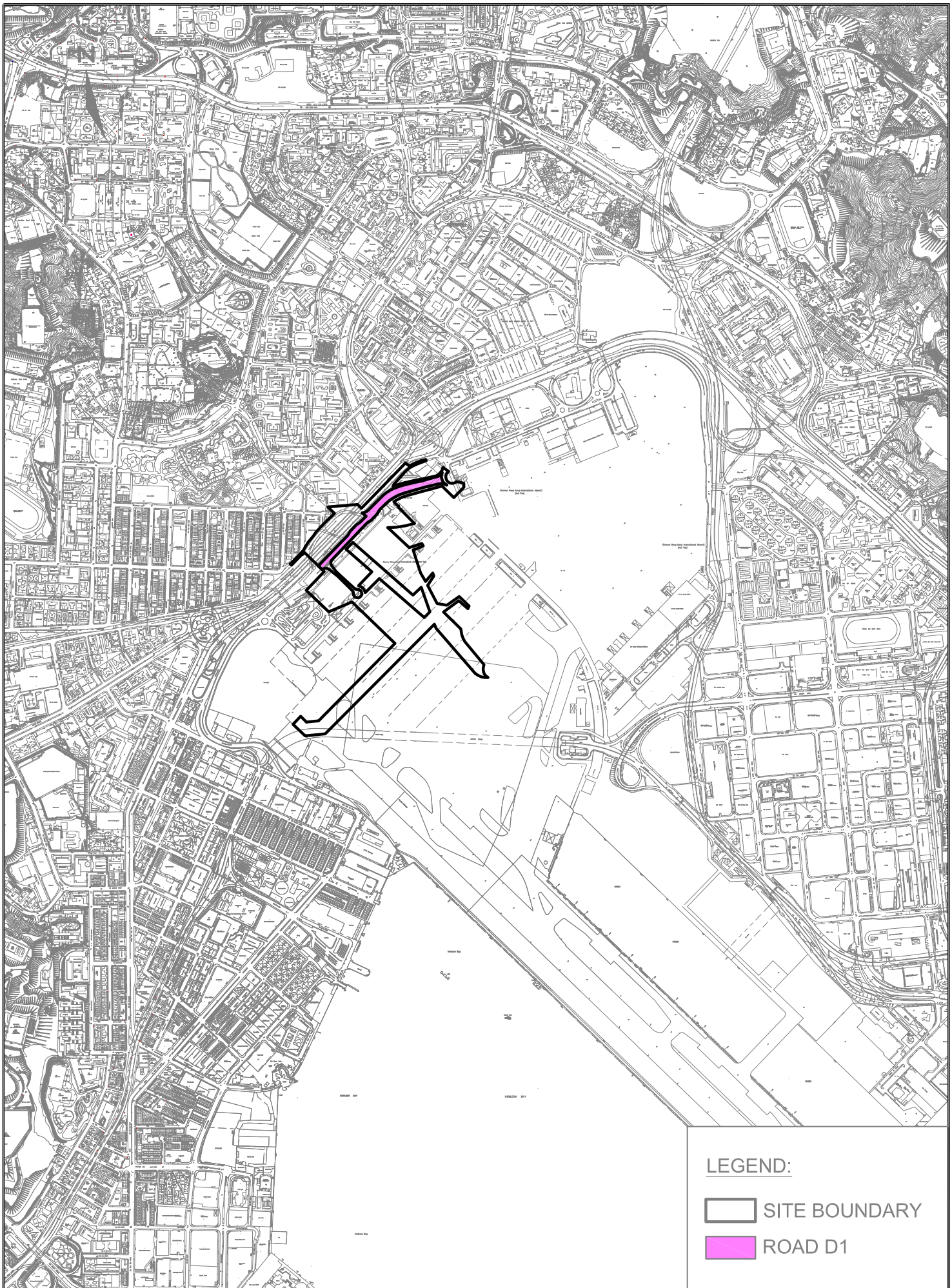
Air Quality

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

Waste/Chemical Management

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

FIGURES

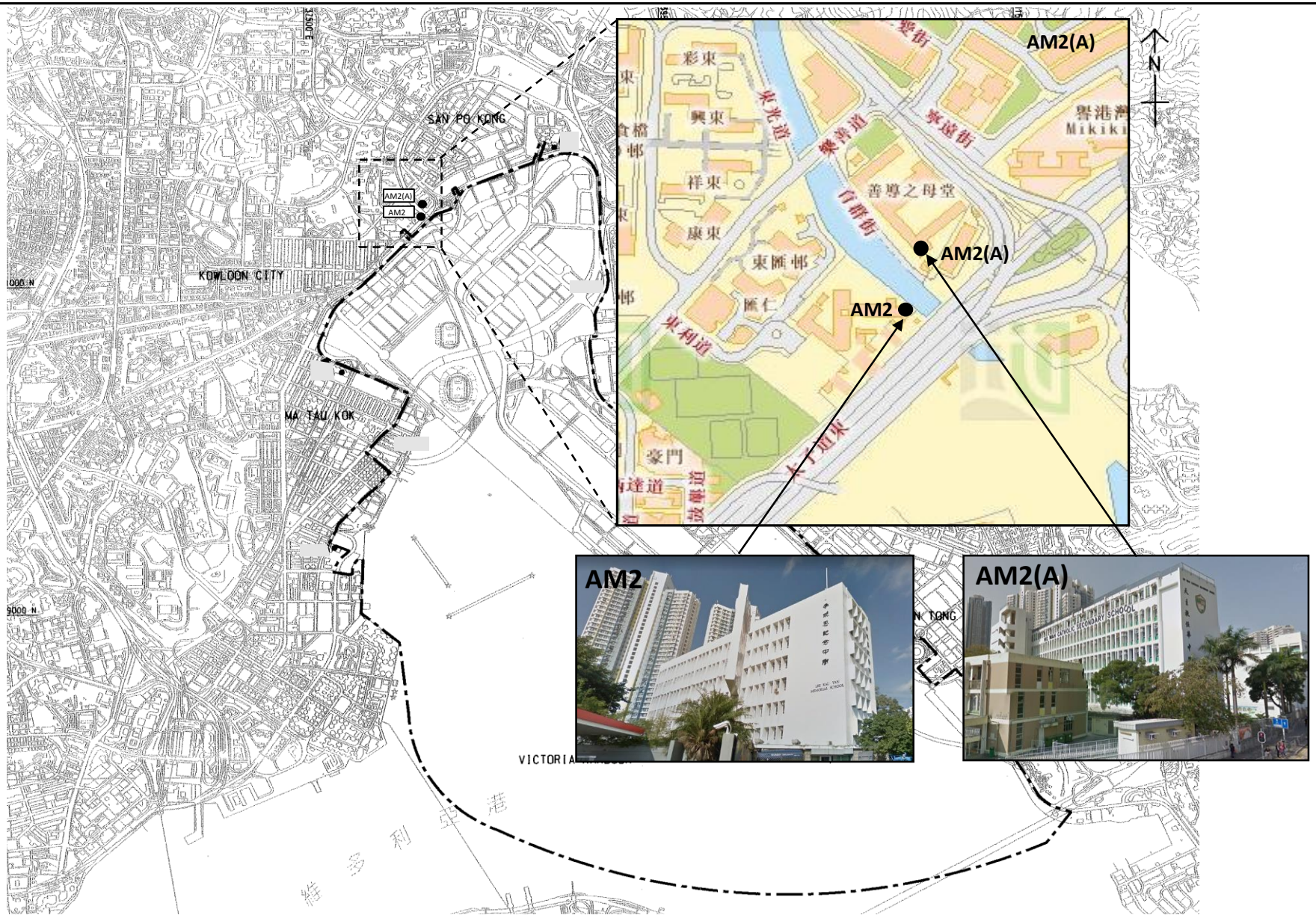


CINOTECH
Cinotech Consultants Limited

KL/2015/02 KAI TAK - STAGE 5A INFRASTRUCTURE AT FORMER NORTH APRON AREA

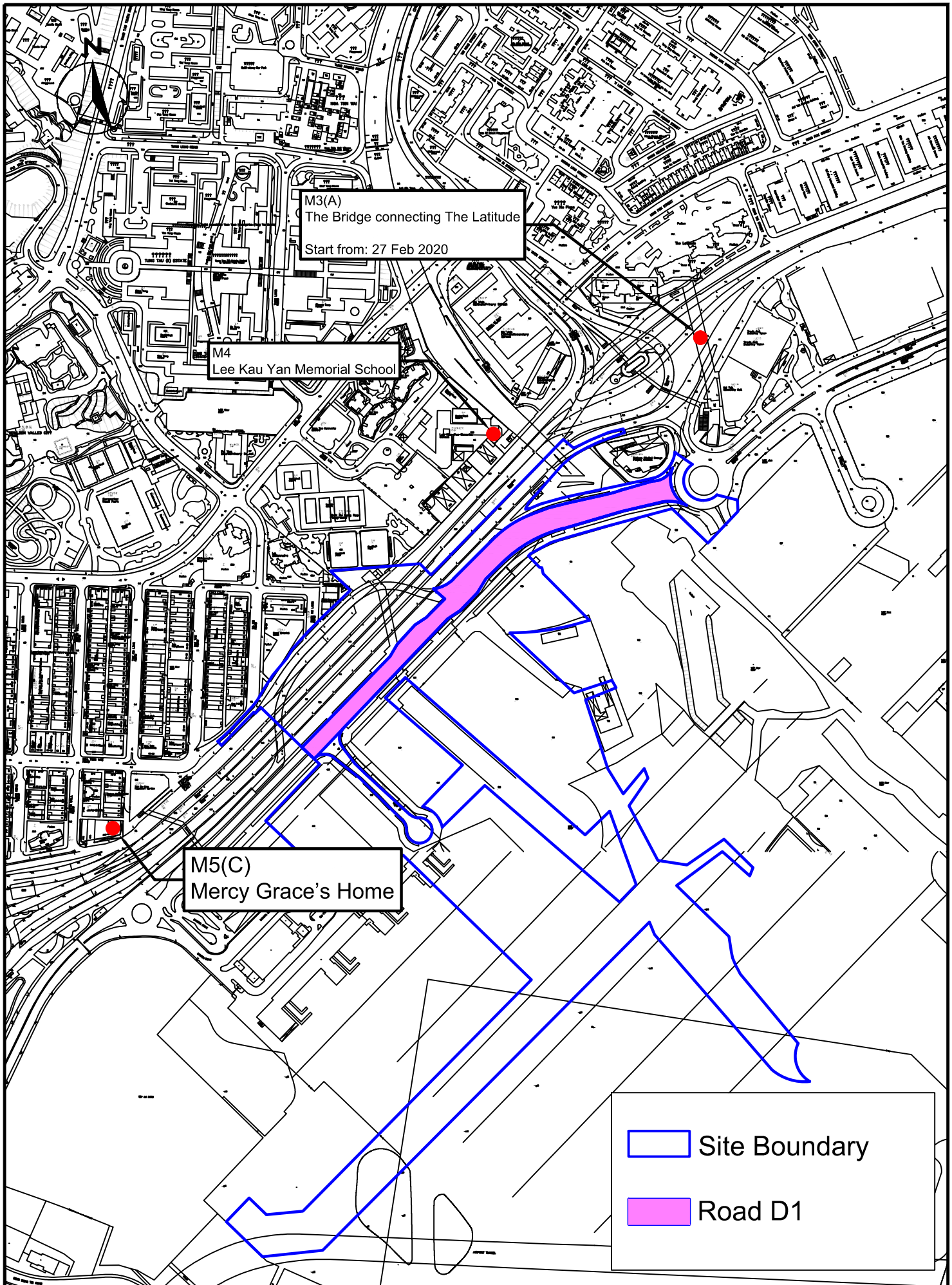
SITE LAYOUT PLAN

SCALE	1:1500@A4	DATE	DEC 2016
CHECK	KC	DRAWN	JW
JOB No.	MA16043	FIGURE NO. 1	REV -



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 Location of Air Quality Monitoring Stations	Scale: N.T.S Date: Aug-17	Project No.: MA16043 Figure: 2

CINOTECH

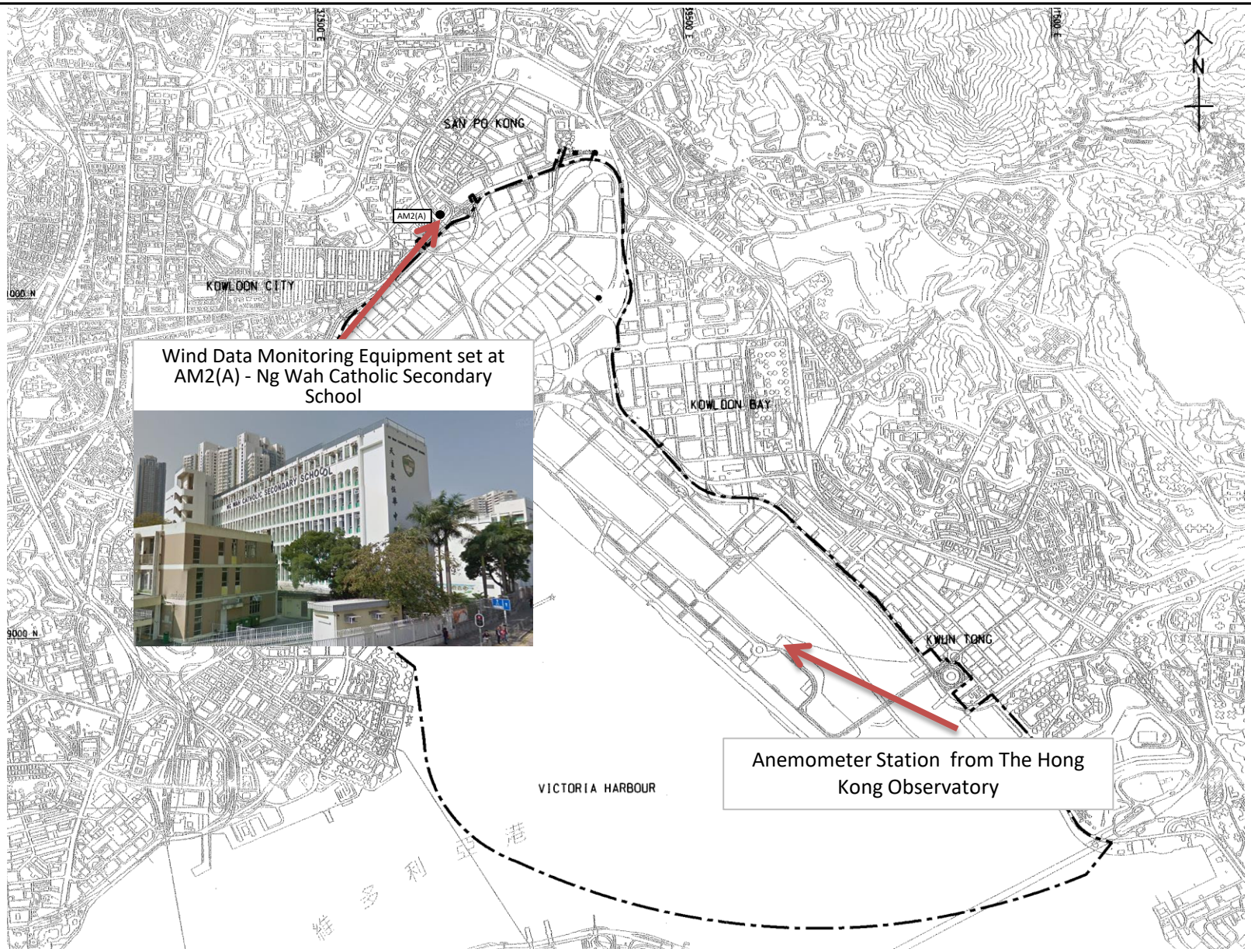


CINOTECH
Cinotech Consultants Limited

KL/2015/02 KAI TAK - STAGE 5A INFRASTRUCTURE AT FORMER NORTH APRON AREA

Location of Noise Monitoring Station

SCALE	1:5000@A4	DATE	Mar 2020
CHECK	KC	DRAWN	CC
JOB No.	MA16043	FIGURE NO. 3	REV -



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 Location of Wind Data Monitoring Equipment	Scale: N.T.S Date: Aug-17	Project No.: MA16043 Figure: 4

CINOTECH

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, $\mu g/m^3$	Limit Level, $\mu g/m^3$
AM2	346	500

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

Location	Action Level, $\mu g/m^3$	Limit Level, $\mu g/m^3$
AM2(A)	157	260

Table A-3 Action and Limit Levels for Construction Noise

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

Remarks: If works are to be carried out during restricted hours, the conditions stipulated in the Construction Noise Permit (CNP) issued by the Noise Control Authority have to be followed. *70dB(A) and 65dB(A) for schools during normal teaching periods and school examination periods, respectively.

APPENDIX B-1
COPIES OF CALIBRATION
CERTIFCATES (AIR)

CINOTECH CONSULTANTS LIMITED

Certificate of Calibration

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

Description: Digital Dust Indicator
Date of Calibration 29-Mar-22
Manufacturer: Sibata Scientific Technology LTD.
Validity of Calibration Record 29-May-22
Model No.: LD-5R
Serial No.: 972780
Equipment No.: SA-01-09
Sensitivity 0.001 mg/m3
High Volume Sampler No.: A-01-03
Before Sensitivity Adjustment 739 CPM
Tisch Calibration Orifice No.: 3864
After Sensitivity Adjustment 739 CPM

Calibration of 1 hr TSP		
Calibration Point	**Laser Dust Monitor**	**HVS**
	Mass Concentration (µg/m3) **X-axis**	Mass concentration (µg/m^3) **Y-axis**
1	69.0	152.0
2	61.0	133.0
3	53.0	109.0
Average	**61.0**	**131.3**

By Linear Regression of Y on X

Slope , mw = **2.6875** **Intercept, bw =** **-32.6042**

Correlation coefficient* = **0.9978**

Set Correlation Factor	
Particaulate Concentration by High Volume Sampler (µg/m^3)	131.3
Particaulate Concentration by Dust Meter (µg/m^3)	61.0
Measureing time, (min)	60.0

Set Correlation Factor , SCF

SCF = [K=High Volume Sampler / Dust Meter, (µg/m3)] **2.2**

In-house method in according to the instruction manual:

The Dust Monitor was compared with a calibrated High Volume Sampler and The result was used to generate the Correlation Factor (CF) between the Dust Monitor and High Volume Sampler.

Those filter papers are weighted by HOKLAS laboratory (HPCT Litimed)

Calibrated by: _____
Technical Officer (Wong Shing Kwai)

Approved by: _____
Project Manager (Henry Leung)

CINOTECH CONSULTANTS LIMITED

Certificate of Calibration

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

Description: Digital Dust Indicator — Date of Calibration 29-May-22

Manufacturer: Sibata Scientific Technology LTD. — Validity of Calibration Record 29-Jul-22

Model No.: LD-5R

Serial No.: 972780

Equipment No.: SA-01-09 — Sensitivity 0.001 mg/m3

High Volume Sampler No.: A-01-03 — Before Sensitivity Adjustment 739 CPM

Tisch Calibration Orifice No.: 3864 — After Sensitivity Adjustment 739 CPM

Calibration of 1 hr TSP		
Calibration Point	**Laser Dust Monitor**	**HVS**
	Mass Concentration (µg/m3) **X-axis**	Mass concentration (µg/m^3) **Y-axis**
1	73.0	163.0
2	65.5	147.0
3	52.0	117.0
Average	**63.5**	**142.3**

By Linear Regression of Y on X

Slope , mw = **2.1943** **Intercept, bw =** **2.9978**

Correlation coefficient* = **0.9999**

Set Correlation Factor	
Particaulate Concentration by High Volume Sampler (µg/m^3)	142.3
Particaulate Concentration by Dust Meter (µg/m^3)	63.5
Measureing time, (min)	60.0

Set Correlation Factor , SCF

SCF = [K=High Volume Sampler / Dust Meter, (µg/m3)] **2.2**

In-house method in according to the instruction manual:

The Dust Monitor was compared with a calibrated High Volume Sampler and The result was used to generate the Correlation Factor (CF) between the Dust Monitor and High Volume Sampler.

Those filter papers are weighted by HOKLAS laboratory (HPCT Litimed)

Calibrated by: _____

Technical Officer (Wong Shing Kwai)

Approved by: _____

Project Manager (Henry Leung)

TISCH Environmental

RECALIBRATION DUE DATE:
January 31, 2023

Certificate of Calibration

Calibration Certification Information				
Cal. Date:	January 31, 2022	**Rootsmeter S/N:** 438320	**Ta:** 294	°K
Operator:	Jim Tisch		**Pa:** 752.6	mm Hg
Calibration Model #:	TE-5025A	**Calibrator S/N:** **3864**		

Run	Vol. Init (m3)	Vol. Final (m3)	ΔVol. (m3)	ΔTime (min)	ΔP (mm Hg)	ΔH (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 (m3)	Qstd (x-axis)	$\sqrt{\Delta H\left(\frac{Pa}{Pstd}\right)\left(\frac{Tstd}{Ta}\right)}$ (y-axis)	Va	Qa (x-axis)	$\sqrt{\Delta H\left(Ta/Pa\right)}$ (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
QSTD	**m=**	**2.09281**	**QA**	**m=**	**1.31048**
	b=	**-0.02426**		**b=**	**-0.01514**
	r=	**0.99993**		**r=**	**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:			
Qstd=	$1/m\left(\left(\sqrt{\Delta H\left(\frac{Pa}{Pstd}\right)\left(\frac{Tstd}{Ta}\right)}\right)-b\right)$	**Qa=**	$1/m\left(\left(\sqrt{\Delta H\left(Ta/Pa\right)}\right)-b\right)$

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

RECALIBRATION

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

isch Environmental, Inc.
45 South Miami Avenue
illage of Cleves, OH 45002

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

High-Volume TSP Sampler

5-POINT CALIBRATION DATA SHEET

File No. MA16043/13/0029

Project No. AM2(A) - Ng Wah Catholic Secondary School

Date: 5-Mar-22 Next Due Date: 5-May-22 Operator: SK

Equipment No.: A-01-13 Model No.: TE-5170 Serial No. 1352

Ambient Condition			
Temperature, Ta (K)	293.6	Pressure, Pa (mmHg)	760

Orifice Transfer Standard Information					
Serial No.	3864	Slope, mc	0.05922	Intercept, bc	-0.02420
Last Calibration Date:	31-Jan-22	**mc x Qstd + bc = [ΔH x (Pa/760) x (298/Ta)]$^{1/2}$**			
Next Calibration Date:	31-Jan-23	**Qstd = {[ΔH x (Pa/760) x (298/Ta)]$^{1/2}$ -bc} / mc**			

.

Calibration of TSP Sampler					
Calibration Point	Orfice			HVS	
	DH (orifice), in. of water	[DH x (Pa/760) x (298/Ta)]$^{1/2}$	Qstd (CFM) **X - axis**	DW (HVS), in. of water	[ΔW x (Pa/760) x (298/Ta)]$^{1/2}$ **Y-axis**
1	12.8	3.60	61.27	10.4	3.25
2	10.9	3.33	56.57	8.4	2.92
3	8.0	2.84	48.41	5.8	2.43
4	5.4	2.34	39.94	3.4	1.86
5	3.2	1.80	30.84	1.8	1.35

By Linear Regression of Y on X

Slope , mw = **0.0625** **Intercept, bw =** **-0.6030**

Correlation coefficient* = **0.9994**

*If Correlation Coefficient < 0.990, check and recalibrate.

Set Point Calculation

From the TSP Field Calibration Curve, take Qstd = 43 CFM

From the Regression Equation, the "Y" value according to

mw x Qstd + bw = [ΔW x (Pa/760) x (298/Ta)]$^{1/2}$

Therefore, Set Point; W = (mw x Qstd + bw)^2 x (760 / Pa) x (Ta / 298) = **4.28**

Remarks:

Conducted by: Wong Shing Kwai Signature: Date: 5-Mar-22

Checked by: Henry Leung Signature: Date: 5-Mar-22

High-Volume TSP Sampler

5-POINT CALIBRATION DATA SHEET

File No. MA16043/13/0030

Project No. AM2(A) - Ng Wah Catholic Secondary School

Date: 5-May-22 Next Due Date: 5-Jul-22 Operator: SK

Equipment No.: A-01-13 Model No.: TE-5170 Serial No. 1352

Ambient Condition			
Temperature, Ta (K)	298.2	Pressure, Pa (mmHg)	759.3

Orifice Transfer Standard Information					
Serial No.	3864	Slope, mc	0.05922	Intercept, bc	-0.02420
Last Calibration Date:	31-Jan-22	**mc x Qstd + bc = [ΔH x (Pa/760) x (298/Ta)]$^{1/2}$**			
Next Calibration Date:	31-Jan-23	**Qstd = {[ΔH x (Pa/760) x (298/Ta)]$^{1/2}$ -bc} / mc**			

.

Calibration of TSP Sampler					
Calibration Point	Orfice			HVS	
	DH (orifice), in. of water	[DH x (Pa/760) x (298/Ta)]$^{1/2}$	Qstd (CFM) **X - axis**	DW (HVS), in. of water	[ΔW x (Pa/760) x (298/Ta)]$^{1/2}$ **Y-axis**
1	13.2	3.63	61.71	10.9	3.30
2	11.3	3.36	57.13	8.6	2.93
3	8.3	2.88	49.02	6.0	2.45
4	5.7	2.39	40.69	3.4	1.84
5	3.6	1.90	32.42	1.9	1.38

By Linear Regression of Y on X

Slope , mw = **0.0655** **Intercept, bw =** **-0.7792**

Correlation coefficient* = **0.9989**

*If Correlation Coefficient < 0.990, check and recalibrate.

Set Point Calculation

From the TSP Field Calibration Curve, take Qstd = 43 CFM

From the Regression Equation, the "Y" value according to

mw x Qstd + bw = [ΔW x (Pa/760) x (298/Ta)]$^{1/2}$

Therefore, Set Point; W = (mw x Qstd + bw)^2 x (760 / Pa) x (Ta / 298) = **4.16**

Remarks:

Conducted by: Wong Shing Kwai Signature: Date: 5-May-22

Checked by: Henry Leung Signature: Date: 5-May-22

Certificate of Calibration - Wind Monitoring Station

Description:	Ng Wah Catholic Seconday School - Weather Stations
Manufacturer:	Davis Instruments
Model No.:	Davis 6152, Vantage Pro2
Serial No.:	BC180522050
Equipment No.:	SA-03-03
Date of Calibration	8-Apr-2022
Next Due Date	8-Oct-2022

1. Performance check of Wind Speed

Wind Speed, 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 Direction (^{o})		Difference D (^{o})
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 Velocity, 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 Direction (^{o})		Difference D (^{o})
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)

High Precision Chemical Testing Ltd.
Rm 1904, Technology Park
18 On Lai Street, Shatin
NT, Hong Kong
Tel: +852 3841 4388 Website: https://www.hpct.com.hk

Report No. : 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 :

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

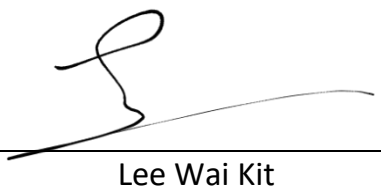
Test Method : The Sound Level Calibrator has been calibrated in accordance with the documented procedures and using standard and instrument which are recommended by the manufacturer, or equivalent.

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

High Precision Chemical Testing Ltd.
Rm 1904, Technology Park
18 On Lai Street, Shatin
NT, Hong Kong
Tel: +852 3841 4388 Website: https://www.hpct.com.hk

Report No. : 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 -

High Precision Chemical Testing Ltd.
Rm 1904, Technology Park
18 On Lai Street, Shatin
NT, Hong Kong
Tel: +852 3841 4388 Website: https://www.hpct.com.hk

Report No. : 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 :

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

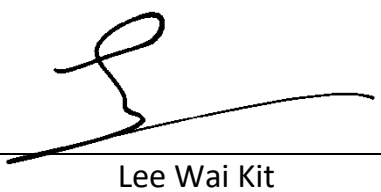
Test Method : The Sound Level Calibrator has been calibrated in accordance with the documented procedures and using standard and instrument which are recommended by the manufacturer, or equivalent.

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

High Precision Chemical Testing Ltd.
Rm 1904, Technology Park
18 On Lai Street, Shatin
NT, Hong Kong
Tel: +852 3841 4388 Website: https://www.hpct.com.hk

Report No. : 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 -

High Precision Chemical Testing Ltd.
Rm 1904, Technology Park
18 On Lai Street, Shatin
NT, Hong Kong
Tel: +852 3841 4388 Website: https://www.hpct.com.hk

Report No. : 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

High Precision Chemical Testing Ltd.
Rm 1904, Technology Park
18 On Lai Street, Shatin
NT, Hong Kong
Tel: +852 3841 4388 Website: https://www.hpct.com.hk

Report No. : 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 -

High Precision Chemical Testing Ltd.
Rm 1904, Technology Park
18 On Lai Street, Shatin
NT, Hong Kong
Tel: +852 3841 4388 Website: https://www.hpct.com.hk

Report No. : 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

High Precision Chemical Testing Ltd.
Rm 1904, Technology Park
18 On Lai Street, Shatin
NT, Hong Kong
Tel: +852 3841 4388 Website: https://www.hpct.com.hk

Report No. : 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 -

High Precision Chemical Testing Ltd.
Rm 1904, Technology Park
18 On Lai Street, Shatin
NT, Hong Kong
Tel: +852 3841 4388 Website: https://www.hpct.com.hk

Report No. : 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

High Precision Chemical Testing Ltd.
Rm 1904, Technology Park
18 On Lai Street, Shatin
NT, Hong Kong
Tel: +852 3841 4388 Website: https://www.hpct.com.hk

Report No. : 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, dB	Indication value, dB	Deviation, dB	Allowed deviation, dB
94.0	94.0	0.0	± 0.3
114.0	114.1	+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

May 2022

Date	Mean Pressure (hPa)	Air Temperature	Mean Relative Humidity (%)	Precipitation (mm)
		Mean (°C)		
1-May-22	1012.6	20.7	89	32.4
2-May-22	1014.6	18.5	84	23.4
3-May-22	1015.8	22.3	62	0
4-May-22	1014.3	24.6	63	0
5-May-22	1012.6	25.2	73	0
6-May-22	1012.4	25.5	76	0
7-May-22	1013.0	25.4	77	0.8
8-May-22	1013.2	25.0	70	Trace
9-May-22	1012.3	25.6	75	Trace
10-May-22	1009.7	25.7	88	1.4
11-May-22	1007.8	25.0	95	61.4
12-May-22	1006.0	25.8	91	123.5
13-May-22	1005.2	25.5	92	107.1
14-May-22	1008.2	24.6	93	5
15-May-22	1009.8	22.6	91	26.2
16-May-22	1012.4	20.0	85	4.7
17-May-22	1013.6	22.4	72	0
18-May-22	1013.8	23.9	52	0
19-May-22	1011.9	25.8	64	0
20-May-22	1009.2	26.9	76	0
21-May-22	1007.8	26.9	78	0
22-May-22	1007.3	25.0	83	0.6
23-May-22	1007.6	24.0	90	11.2
24-May-22	1009.2	24.4	93	10.3
25-May-22	1007.7	25.3	91	1.3
26-May-22	1004.7	26.7	88	2.4
27-May-22	1004.3	27.4	89	24.7
28-May-22	1005.5	28.7	81	Trace
29-May-22	1005.8	29.1	79	Trace
30-May-22	1005.9	29.2	78	Trace
31-May-22	1006.8	28.2	82	0.1

May 2022			
Table II: Wind Speed and Directions			
Date	**Time**	**Wind Speed m/s**	**Direction**
1-May-22	0:00	0.1	SW
1-May-22	1:00	1.3	SW
1-May-22	2:00	0.9	SW
1-May-22	3:00	0.9	SW
1-May-22	4:00	0.9	ENE
1-May-22	5:00	0.4	ENE
1-May-22	6:00	0.9	ENE
1-May-22	7:00	0.4	ENE
1-May-22	8:00	0.9	WSW
1-May-22	9:00	0.9	NNE
1-May-22	10:00	0.9	ENE
1-May-22	11:00	0.9	ENE
1-May-22	12:00	2.2	ENE
1-May-22	13:00	0.9	SE
1-May-22	14:00	0.4	ENE
1-May-22	15:00	1.8	NNE
1-May-22	16:00	2.2	NNE
1-May-22	17:00	0.9	ENE
1-May-22	18:00	1.3	ENE
1-May-22	19:00	0.4	ENE
1-May-22	20:00	0.4	ENE
1-May-22	21:00	0.9	ENE
1-May-22	22:00	0.4	NNE
1-May-22	23:00	0.4	NNE
2-May-22	0:00	0.9	NNE
2-May-22	1:00	0.4	SSW
2-May-22	2:00	0.9	SSW
2-May-22	3:00	0.9	SW
2-May-22	4:00	0.4	NE
2-May-22	5:00	0.4	S
2-May-22	6:00	0.9	SSW
2-May-22	7:00	0.9	NE
2-May-22	8:00	0.9	SW
2-May-22	9:00	0.4	NNE
2-May-22	10:00	1.3	NE
2-May-22	11:00	1.8	NE
2-May-22	12:00	2.2	NNE
2-May-22	13:00	1.8	ENE
2-May-22	14:00	1.3	ENE
2-May-22	15:00	1.3	NNE
2-May-22	16:00	1.3	NE
2-May-22	17:00	1.3	NNE
2-May-22	18:00	1.3	NE
2-May-22	19:00	0.9	SSW
2-May-22	20:00	0.9	SSE
2-May-22	21:00	0.4	SW
2-May-22	22:00	0.4	SSW
2-May-22	23:00	0.9	E

May 2022			
Table II: Wind Speed and Directions			
Date	**Time**	**Wind Speed m/s**	**Direction**
3-May-22	0:00	0.9	ENE
3-May-22	1:00	0.9	NE
3-May-22	2:00	1.3	NE
3-May-22	3:00	0.9	NNE
3-May-22	4:00	0.4	SSE
3-May-22	5:00	0.4	SE
3-May-22	6:00	0.4	NNE
3-May-22	7:00	0.9	NNE
3-May-22	8:00	0.9	NNE
3-May-22	9:00	0.4	SSW
3-May-22	10:00	0.4	NNE
3-May-22	11:00	0.9	SSW
3-May-22	12:00	0.9	NE
3-May-22	13:00	1.3	ENE
3-May-22	14:00	2.2	NNE
3-May-22	15:00	0.9	NNE
3-May-22	16:00	0.9	NNE
3-May-22	17:00	1.3	NNE
3-May-22	18:00	1.3	ENE
3-May-22	19:00	1.8	ENE
3-May-22	20:00	0.9	ENE
3-May-22	21:00	0.9	NNE
3-May-22	22:00	1.3	NE
3-May-22	23:00	1.3	NNE
4-May-22	0:00	0.9	NNE
4-May-22	1:00	1.3	NE
4-May-22	2:00	1.3	NNE
4-May-22	3:00	1.8	NE
4-May-22	4:00	1.8	NE
4-May-22	5:00	1.8	NNE
4-May-22	6:00	2.7	NE
4-May-22	7:00	2.2	NE
4-May-22	8:00	2.2	NE
4-May-22	9:00	1.8	NE
4-May-22	10:00	1.8	NNE
4-May-22	11:00	1.8	NE
4-May-22	12:00	1.3	NNE
4-May-22	13:00	1.3	NNE
4-May-22	14:00	1.3	ENE
4-May-22	15:00	1.3	ENE
4-May-22	16:00	1.8	ENE
4-May-22	17:00	0.9	ENE
4-May-22	18:00	0.9	WSW
4-May-22	19:00	1.3	NNE
4-May-22	20:00	0.9	ENE
4-May-22	21:00	1.3	ENE
4-May-22	22:00	1.3	ENE
4-May-22	23:00	0.9	SE

May 2022			
Table II: Wind Speed and Directions			
Date	**Time**	**Wind Speed m/s**	**Direction**
5-May-22	0:00	1.8	ENE
5-May-22	1:00	1.8	NNE
5-May-22	2:00	0.9	NNE
5-May-22	3:00	1.8	ENE
5-May-22	4:00	0.9	ENE
5-May-22	5:00	0.9	ENE
5-May-22	6:00	0.4	ENE
5-May-22	7:00	1.3	ENE
5-May-22	8:00	0.4	NNE
5-May-22	9:00	1.8	ENE
5-May-22	10:00	1.8	ENE
5-May-22	11:00	1.8	ENE
5-May-22	12:00	1.8	NNE
5-May-22	13:00	2.2	NE
5-May-22	14:00	1.8	ENE
5-May-22	15:00	1.8	ENE
5-May-22	16:00	1.3	NE
5-May-22	17:00	1.8	NNE
5-May-22	18:00	1.3	NE
5-May-22	19:00	1.3	NNE
5-May-22	20:00	1.3	NE
5-May-22	21:00	1.3	NNE
5-May-22	22:00	0.4	ENE
5-May-22	23:00	0.4	S
6-May-22	0:00	0.9	SW
6-May-22	1:00	0.4	SW
6-May-22	2:00	0.9	ENE
6-May-22	3:00	0.9	ENE
6-May-22	4:00	0.9	ENE
6-May-22	5:00	1.8	ENE
6-May-22	6:00	1.8	ENE
6-May-22	7:00	1.8	NNE
6-May-22	8:00	0.9	ENE
6-May-22	9:00	1.3	ENE
6-May-22	10:00	1.3	NNE
6-May-22	11:00	0.9	NNE
6-May-22	12:00	0.9	ESE
6-May-22	13:00	1.3	NNE
6-May-22	14:00	1.3	ENE
6-May-22	15:00	1.3	ENE
6-May-22	16:00	1.8	ENE
6-May-22	17:00	0.9	NE
6-May-22	18:00	1.3	ENE
6-May-22	19:00	1.3	E
6-May-22	20:00	1.8	ENE
6-May-22	21:00	0.9	ENE
6-May-22	22:00	2.2	NE
6-May-22	23:00	1.8	ENE

May 2022			
Table II: Wind Speed and Directions			
Date	**Time**	**Wind Speed m/s**	**Direction**
7-May-22	0:00	1.3	ENE
7-May-22	1:00	1.8	NNE
7-May-22	2:00	1.3	NNE
7-May-22	3:00	1.3	NNE
7-May-22	4:00	0.9	NNE
7-May-22	5:00	0.9	ESE
7-May-22	6:00	0.9	ENE
7-May-22	7:00	1.3	ENE
7-May-22	8:00	0.9	NNE
7-May-22	9:00	0.4	ENE
7-May-22	10:00	0.4	NE
7-May-22	11:00	0.4	NNE
7-May-22	12:00	0.9	ENE
7-May-22	13:00	0.9	NE
7-May-22	14:00	0.4	NE
7-May-22	15:00	0.4	NE
7-May-22	16:00	0.9	ENE
7-May-22	17:00	0.9	ENE
7-May-22	18:00	1.3	ENE
7-May-22	19:00	2.2	ENE
7-May-22	20:00	0.9	WSW
7-May-22	21:00	0.9	NNE
7-May-22	22:00	1.3	ENE
7-May-22	23:00	1.3	ENE
8-May-22	0:00	1.8	ENE
8-May-22	1:00	0.9	SE
8-May-22	2:00	1.8	ENE
8-May-22	3:00	1.3	NNE
8-May-22	4:00	0.9	NNE
8-May-22	5:00	0.9	ENE
8-May-22	6:00	0.9	ENE
8-May-22	7:00	0.4	ENE
8-May-22	8:00	0.9	ENE
8-May-22	9:00	1.3	ENE
8-May-22	10:00	2.2	NNE
8-May-22	11:00	1.3	NE
8-May-22	12:00	1.8	NE
8-May-22	13:00	1.3	NNE
8-May-22	14:00	0.4	SSW
8-May-22	15:00	0.9	SW
8-May-22	16:00	0.4	E
8-May-22	17:00	0.9	ENE
8-May-22	18:00	1.8	ENE
8-May-22	19:00	1.3	ENE
8-May-22	20:00	0.9	NNE
8-May-22	21:00	0.4	ENE
8-May-22	22:00	0.4	NNE
8-May-22	23:00	0.9	NNE

May 2022			
Table II: Wind Speed and Directions			
Date	**Time**	**Wind Speed m/s**	**Direction**
9-May-22	0:00	0.4	S
9-May-22	1:00	0.9	SSW
9-May-22	2:00	0.4	SE
9-May-22	3:00	0.4	SSE
9-May-22	4:00	0.0	SSE
9-May-22	5:00	0.4	NNE
9-May-22	6:00	0.4	S
9-May-22	7:00	0.4	ENE
9-May-22	8:00	0.4	NE
9-May-22	9:00	0.9	SSW
9-May-22	10:00	1.3	SSW
9-May-22	11:00	0.9	SSW
9-May-22	12:00	0.9	SSW
9-May-22	13:00	0.9	SSW
9-May-22	14:00	0.4	E
9-May-22	15:00	1.3	SW
9-May-22	16:00	0.4	SW
9-May-22	17:00	0.4	NE
9-May-22	18:00	0.9	ENE
9-May-22	19:00	0.9	ENE
9-May-22	20:00	1.3	NE
9-May-22	21:00	1.8	ENE
9-May-22	22:00	0.9	ENE
9-May-22	23:00	0.4	NE
10-May-22	0:00	0.4	NNE
10-May-22	1:00	0.4	NNE
10-May-22	2:00	0.4	NNE
10-May-22	3:00	0.9	ENE
10-May-22	4:00	0.4	NE
10-May-22	5:00	1.3	ENE
10-May-22	6:00	0.9	ENE
10-May-22	7:00	0.9	NE
10-May-22	8:00	1.8	ENE
10-May-22	9:00	1.3	ENE
10-May-22	10:00	2.2	ENE
10-May-22	11:00	4.5	ENE
10-May-22	12:00	3.6	ENE
10-May-22	13:00	2.7	ENE
10-May-22	14:00	2.7	ENE
10-May-22	15:00	4.5	ENE
10-May-22	16:00	3.6	ENE
10-May-22	17:00	3.6	ENE
10-May-22	18:00	2.7	ENE
10-May-22	19:00	1.8	ENE
10-May-22	20:00	0.9	ENE
10-May-22	21:00	0.9	ENE
10-May-22	22:00	0.4	E
10-May-22	23:00	0.9	ENE

May 2022			
Table II: Wind Speed and Directions			
Date	**Time**	**Wind Speed m/s**	**Direction**
11-May-22	0:00	0.4	E
11-May-22	1:00	0.0	ESE
11-May-22	2:00	0.0	ESE
11-May-22	3:00	0.0	ESE
11-May-22	4:00	0.4	NE
11-May-22	5:00	0.9	ENE
11-May-22	6:00	0.4	SSE
11-May-22	7:00	0.9	E
11-May-22	8:00	0.9	ENE
11-May-22	9:00	0.9	ENE
11-May-22	10:00	1.3	ENE
11-May-22	11:00	0.9	ENE
11-May-22	12:00	0.4	ENE
11-May-22	13:00	0.4	ENE
11-May-22	14:00	0.4	ENE
11-May-22	15:00	0.9	ENE
11-May-22	16:00	0.9	ENE
11-May-22	17:00	0.4	ENE
11-May-22	18:00	0.4	ENE
11-May-22	19:00	0.9	ENE
11-May-22	20:00	0.9	ENE
11-May-22	21:00	1.3	ENE
11-May-22	22:00	2.2	ENE
11-May-22	23:00	0.9	ENE
12-May-22	0:00	0.9	ENE
12-May-22	1:00	1.3	ENE
12-May-22	2:00	1.3	NE
12-May-22	3:00	1.8	ENE
12-May-22	4:00	0.9	NNE
12-May-22	5:00	0.4	NNE
12-May-22	6:00	0.4	NNE
12-May-22	7:00	0.4	ENE
12-May-22	8:00	0.9	NE
12-May-22	9:00	0.9	NNE
12-May-22	10:00	0.4	NE
12-May-22	11:00	0.4	NE
12-May-22	12:00	0.9	NNE
12-May-22	13:00	0.9	NNE
12-May-22	14:00	1.3	ENE
12-May-22	15:00	2.2	NNE
12-May-22	16:00	0.9	NNE
12-May-22	17:00	0.9	ENE
12-May-22	18:00	1.3	ENE
12-May-22	19:00	1.3	ENE
12-May-22	20:00	1.8	ENE
12-May-22	21:00	0.9	ENE
12-May-22	22:00	1.3	ENE
12-May-22	23:00	1.8	ENE

May 2022			
Table II: Wind Speed and Directions			
Date	**Time**	**Wind Speed m/s**	**Direction**
13-May-22	0:00	1.3	ENE
13-May-22	1:00	1.8	ENE
13-May-22	2:00	1.3	ENE
13-May-22	3:00	0.9	NNE
13-May-22	4:00	0.9	ENE
13-May-22	5:00	1.3	ENE
13-May-22	6:00	1.8	ENE
13-May-22	7:00	1.8	ENE
13-May-22	8:00	1.8	ENE
13-May-22	9:00	1.8	ENE
13-May-22	10:00	1.3	ENE
13-May-22	11:00	2.2	ENE
13-May-22	12:00	1.8	ENE
13-May-22	13:00	1.3	ENE
13-May-22	14:00	1.3	ENE
13-May-22	15:00	1.3	NE
13-May-22	16:00	1.3	ENE
13-May-22	17:00	0.9	NE
13-May-22	18:00	0.9	NE
13-May-22	19:00	1.3	ENE
13-May-22	20:00	1.3	ENE
13-May-22	21:00	0.9	ENE
13-May-22	22:00	1.3	ENE
13-May-22	23:00	0.4	ENE
14-May-22	0:00	0.9	ENE
14-May-22	1:00	0.4	ENE
14-May-22	2:00	1.3	ENE
14-May-22	3:00	0.4	ENE
14-May-22	4:00	0.4	ENE
14-May-22	5:00	1.3	ENE
14-May-22	6:00	0.4	ENE
14-May-22	7:00	0.9	E
14-May-22	8:00	1.3	ENE
14-May-22	9:00	0.9	ENE
14-May-22	10:00	2.7	ENE
14-May-22	11:00	1.8	ENE
14-May-22	12:00	2.2	ENE
14-May-22	13:00	1.8	ENE
14-May-22	14:00	2.7	ENE
14-May-22	15:00	2.2	ENE
14-May-22	16:00	2.2	ENE
14-May-22	17:00	2.2	ENE
14-May-22	18:00	1.8	ENE
14-May-22	19:00	2.2	ENE
14-May-22	20:00	2.2	ENE
14-May-22	21:00	1.8	ENE
14-May-22	22:00	1.3	ENE
14-May-22	23:00	1.3	ENE

May 2022			
Table II: Wind Speed and Directions			
Date	**Time**	**Wind Speed m/s**	**Direction**
15-May-22	0:00	1.3	ENE
15-May-22	1:00	0.9	ENE
15-May-22	2:00	1.3	E
15-May-22	3:00	0.4	E
15-May-22	4:00	0.4	ENE
15-May-22	5:00	0.0	ENE
15-May-22	6:00	0.9	ENE
15-May-22	7:00	0.4	ESE
15-May-22	8:00	1.3	ENE
15-May-22	9:00	2.2	ENE
15-May-22	10:00	3.1	ENE
15-May-22	11:00	3.1	ENE
15-May-22	12:00	0.9	ENE
15-May-22	13:00	0.9	ENE
15-May-22	14:00	0.9	ENE
15-May-22	15:00	1.3	ENE
15-May-22	16:00	0.9	ENE
15-May-22	17:00	0.4	ENE
15-May-22	18:00	0.4	ENE
15-May-22	19:00	0.4	ENE
15-May-22	20:00	0.9	ENE
15-May-22	21:00	0.9	ENE
15-May-22	22:00	0.4	ENE
15-May-22	23:00	0.4	NE
16-May-22	0:00	0.9	SW
16-May-22	1:00	0.9	ENE
16-May-22	2:00	1.3	SW
16-May-22	3:00	2.2	ESE
16-May-22	4:00	0.9	SSE
16-May-22	5:00	0.9	WSW
16-May-22	6:00	1.3	WSW
16-May-22	7:00	1.3	WSW
16-May-22	8:00	1.8	E
16-May-22	9:00	0.9	WSW
16-May-22	10:00	0.9	SSW
16-May-22	11:00	0.9	SE
16-May-22	12:00	1.3	ENE
16-May-22	13:00	1.3	ENE
16-May-22	14:00	1.8	ENE
16-May-22	15:00	1.3	ENE
16-May-22	16:00	1.3	WSW
16-May-22	17:00	1.3	NNE
16-May-22	18:00	1.3	ENE
16-May-22	19:00	1.3	ENE
16-May-22	20:00	1.3	ENE
16-May-22	21:00	0.9	SE
16-May-22	22:00	0.9	ENE
16-May-22	23:00	0.9	NNE

May 2022			
Table II: Wind Speed and Directions			
Date	**Time**	**Wind Speed m/s**	**Direction**
17-May-22	0:00	0.9	NNE
17-May-22	1:00	0.9	ENE
17-May-22	2:00	0.4	ENE
17-May-22	3:00	0.9	ENE
17-May-22	4:00	0.4	ENE
17-May-22	5:00	0.9	ENE
17-May-22	6:00	0.9	NNE
17-May-22	7:00	0.4	ESE
17-May-22	8:00	0.9	E
17-May-22	9:00	0.9	S
17-May-22	10:00	1.3	SW
17-May-22	11:00	1.3	ESE
17-May-22	12:00	1.8	E
17-May-22	13:00	1.3	SE
17-May-22	14:00	1.8	E
17-May-22	15:00	1.8	ENE
17-May-22	16:00	1.8	E
17-May-22	17:00	1.3	ESE
17-May-22	18:00	1.3	ENE
17-May-22	19:00	0.9	S
17-May-22	20:00	0.9	E
17-May-22	21:00	1.8	ENE
17-May-22	22:00	2.7	ENE
17-May-22	23:00	2.2	ENE
18-May-22	0:00	1.8	ENE
18-May-22	1:00	1.8	ENE
18-May-22	2:00	0.9	E
18-May-22	3:00	0.9	SE
18-May-22	4:00	0.9	E
18-May-22	5:00	0.4	E
18-May-22	6:00	0.9	SW
18-May-22	7:00	0.9	WSW
18-May-22	8:00	0.4	SE
18-May-22	9:00	0.9	SE
18-May-22	10:00	1.3	ESE
18-May-22	11:00	2.2	E
18-May-22	12:00	1.8	E
18-May-22	13:00	0.9	ESE
18-May-22	14:00	1.8	SE
18-May-22	15:00	1.3	E
18-May-22	16:00	1.3	ENE
18-May-22	17:00	1.3	ENE
18-May-22	18:00	0.9	E
18-May-22	19:00	0.9	ENE
18-May-22	20:00	1.8	ENE
18-May-22	21:00	2.7	ENE
18-May-22	22:00	1.8	ENE
18-May-22	23:00	2.2	ENE

May 2022			
Table II: Wind Speed and Directions			
Date	**Time**	**Wind Speed m/s**	**Direction**
19-May-22	0:00	2.2	WSW
19-May-22	1:00	2.2	NNE
19-May-22	2:00	1.3	ENE
19-May-22	3:00	1.8	ENE
19-May-22	4:00	1.3	ENE
19-May-22	5:00	2.7	SE
19-May-22	6:00	1.8	ENE
19-May-22	7:00	0.4	NNE
19-May-22	8:00	0.9	NNE
19-May-22	9:00	0.9	ENE
19-May-22	10:00	1.3	ENE
19-May-22	11:00	1.3	ENE
19-May-22	12:00	1.3	ENE
19-May-22	13:00	1.8	ENE
19-May-22	14:00	1.3	NNE
19-May-22	15:00	0.9	SE
19-May-22	16:00	1.3	SE
19-May-22	17:00	1.3	ESE
19-May-22	18:00	2.7	E
19-May-22	19:00	1.3	ENE
19-May-22	20:00	1.3	SW
19-May-22	21:00	1.3	ENE
19-May-22	22:00	0.9	ENE
19-May-22	23:00	1.8	ENE
20-May-22	0:00	1.3	E
20-May-22	1:00	1.8	ENE
20-May-22	2:00	0.4	NE
20-May-22	3:00	1.3	ENE
20-May-22	4:00	1.3	ENE
20-May-22	5:00	0.9	ENE
20-May-22	6:00	1.8	SW
20-May-22	7:00	1.3	SW
20-May-22	8:00	1.3	SE
20-May-22	9:00	1.3	ESE
20-May-22	10:00	1.8	WSW
20-May-22	11:00	1.3	WSW
20-May-22	12:00	2.7	WSW
20-May-22	13:00	1.3	E
20-May-22	14:00	2.2	SW
20-May-22	15:00	0.9	SW
20-May-22	16:00	1.8	ENE
20-May-22	17:00	1.8	ENE
20-May-22	18:00	1.3	ENE
20-May-22	19:00	0.9	ENE
20-May-22	20:00	0.9	ENE
20-May-22	21:00	0.4	ENE
20-May-22	22:00	0.4	ENE
20-May-22	23:00	1.3	S

May 2022			
Table II: Wind Speed and Directions			
Date	**Time**	**Wind Speed m/s**	**Direction**
21-May-22	0:00	0.9	SW
21-May-22	1:00	1.3	NNE
21-May-22	2:00	1.8	NE
21-May-22	3:00	1.3	NE
21-May-22	4:00	0.9	NNE
21-May-22	5:00	0.9	ENE
21-May-22	6:00	0.9	ENE
21-May-22	7:00	0.9	NE
21-May-22	8:00	0.9	E
21-May-22	9:00	0.9	ENE
21-May-22	10:00	1.8	NE
21-May-22	11:00	1.8	ENE
21-May-22	12:00	1.3	NE
21-May-22	13:00	1.3	NE
21-May-22	14:00	1.3	NE
21-May-22	15:00	1.3	ENE
21-May-22	16:00	1.3	ENE
21-May-22	17:00	1.3	ENE
21-May-22	18:00	1.3	NE
21-May-22	19:00	1.3	NE
21-May-22	20:00	0.9	ENE
21-May-22	21:00	1.3	ENE
21-May-22	22:00	0.9	ENE
21-May-22	23:00	1.3	ENE
22-May-22	0:00	1.8	ENE
22-May-22	1:00	1.3	ENE
22-May-22	2:00	1.8	ENE
22-May-22	3:00	0.9	ENE
22-May-22	4:00	0.4	E
22-May-22	5:00	0.9	SSW
22-May-22	6:00	1.3	ENE
22-May-22	7:00	1.8	ENE
22-May-22	8:00	1.8	ENE
22-May-22	9:00	2.2	ENE
22-May-22	10:00	1.8	ENE
22-May-22	11:00	1.3	NE
22-May-22	12:00	1.8	ENE
22-May-22	13:00	3.6	ENE
22-May-22	14:00	4.9	ENE
22-May-22	15:00	5.4	ENE
22-May-22	16:00	4.5	ENE
22-May-22	17:00	3.6	ENE
22-May-22	18:00	3.1	ENE
22-May-22	19:00	3.1	ENE
22-May-22	20:00	1.8	NE
22-May-22	21:00	0.4	ENE
22-May-22	22:00	0.4	NNE
22-May-22	23:00	0.4	NE

May 2022			
Table II: Wind Speed and Directions			
Date	**Time**	**Wind Speed m/s**	**Direction**
23-May-22	0:00	0.4	NE
23-May-22	1:00	0.4	ENE
23-May-22	2:00	0.4	NE
23-May-22	3:00	0.0	NNE
23-May-22	4:00	0.4	NNE
23-May-22	5:00	0.9	NNE
23-May-22	6:00	0.4	NE
23-May-22	7:00	0.9	ENE
23-May-22	8:00	0.9	ENE
23-May-22	9:00	0.9	ENE
23-May-22	10:00	0.9	ENE
23-May-22	11:00	0.9	WSW
23-May-22	12:00	0.9	NNE
23-May-22	13:00	0.9	ENE
23-May-22	14:00	1.8	ENE
23-May-22	15:00	0.9	ENE
23-May-22	16:00	1.3	SE
23-May-22	17:00	1.3	ENE
23-May-22	18:00	0.9	NNE
23-May-22	19:00	0.9	NNE
23-May-22	20:00	1.3	ENE
23-May-22	21:00	0.9	ENE
23-May-22	22:00	1.3	ENE
23-May-22	23:00	1.8	ENE
24-May-22	0:00	1.3	ENE
24-May-22	1:00	1.3	NNE
24-May-22	2:00	0.9	NNE
24-May-22	3:00	0.9	NE
24-May-22	4:00	1.3	NNE
24-May-22	5:00	0.9	NNE
24-May-22	6:00	0.9	NNE
24-May-22	7:00	0.4	SE
24-May-22	8:00	1.3	NNE
24-May-22	9:00	0.9	NNE
24-May-22	10:00	1.3	NE
24-May-22	11:00	1.3	ENE
24-May-22	12:00	0.9	ENE
24-May-22	13:00	1.3	ENE
24-May-22	14:00	1.3	ENE
24-May-22	15:00	1.3	NNE
24-May-22	16:00	1.3	NNE
24-May-22	17:00	1.3	ENE
24-May-22	18:00	0.9	NNE
24-May-22	19:00	0.9	NNE
24-May-22	20:00	1.8	NNE
24-May-22	21:00	1.3	NNE
24-May-22	22:00	1.3	NE
24-May-22	23:00	1.3	NE

May 2022			
Table II: Wind Speed and Directions			
Date	**Time**	**Wind Speed m/s**	**Direction**
25-May-22	0:00	0.9	ENE
25-May-22	1:00	0.9	NE
25-May-22	2:00	0.9	NE
25-May-22	3:00	0.9	NNE
25-May-22	4:00	0.4	NE
25-May-22	5:00	0.9	NNE
25-May-22	6:00	0.9	NE
25-May-22	7:00	0.9	NE
25-May-22	8:00	1.3	NE
25-May-22	9:00	0.9	NE
25-May-22	10:00	0.9	NE
25-May-22	11:00	0.9	NNE
25-May-22	12:00	0.9	NE
25-May-22	13:00	0.9	NNE
25-May-22	14:00	4.5	ENE
25-May-22	15:00	1.3	NNE
25-May-22	16:00	1.3	NNE
25-May-22	17:00	0.9	ENE
25-May-22	18:00	0.9	ENE
25-May-22	19:00	0.9	ENE
25-May-22	20:00	1.3	ENE
25-May-22	21:00	0.9	ENE
25-May-22	22:00	0.4	N
25-May-22	23:00	0.4	ENE
26-May-22	0:00	0.4	NNE
26-May-22	1:00	0.9	ENE
26-May-22	2:00	0.9	NNE
26-May-22	3:00	0.4	ENE
26-May-22	4:00	0.4	NE
26-May-22	5:00	0.9	NE
26-May-22	6:00	0.9	NE
26-May-22	7:00	1.3	ENE
26-May-22	8:00	2.2	NNE
26-May-22	9:00	0.9	ENE
26-May-22	10:00	0.9	ENE
26-May-22	11:00	1.3	ENE
26-May-22	12:00	1.3	ENE
26-May-22	13:00	1.8	WSW
26-May-22	14:00	0.9	NNE
26-May-22	15:00	0.9	ENE
26-May-22	16:00	0.9	ENE
26-May-22	17:00	1.3	ENE
26-May-22	18:00	0.9	SE
26-May-22	19:00	2.2	ENE
26-May-22	20:00	0.4	NNE
26-May-22	21:00	0.9	NNE
26-May-22	22:00	0.9	ENE
26-May-22	23:00	0.4	ENE

May 2022			
Table II: Wind Speed and Directions			
Date	**Time**	**Wind Speed m/s**	**Direction**
27-May-22	0:00	0.9	ENE
27-May-22	1:00	1.3	ENE
27-May-22	2:00	0.4	ENE
27-May-22	3:00	0.4	NNE
27-May-22	4:00	0.9	ENE
27-May-22	5:00	0.4	NNE
27-May-22	6:00	0.9	E
27-May-22	7:00	0.4	E
27-May-22	8:00	0.1	SW
27-May-22	9:00	1.3	ENE
27-May-22	10:00	1.3	WSW
27-May-22	11:00	0.4	SW
27-May-22	12:00	0.9	SW
27-May-22	13:00	0.4	SW
27-May-22	14:00	0.4	SW
27-May-22	15:00	0.4	S
27-May-22	16:00	0.9	SSW
27-May-22	17:00	0.4	SSW
27-May-22	18:00	0.4	SSW
27-May-22	19:00	0.4	SSE
27-May-22	20:00	0.4	SSE
27-May-22	21:00	0.4	ENE
27-May-22	22:00	0.9	ENE
27-May-22	23:00	0.9	ENE
28-May-22	0:00	0.9	ENE
28-May-22	1:00	0.1	E
28-May-22	2:00	0.4	E
28-May-22	3:00	0.4	E
28-May-22	4:00	0.4	SE
28-May-22	5:00	0.4	SE
28-May-22	6:00	0.1	SE
28-May-22	7:00	0.4	ESE
28-May-22	8:00	1.3	ENE
28-May-22	9:00	1.8	ENE
28-May-22	10:00	0.4	SW
28-May-22	11:00	1.8	SW
28-May-22	12:00	0.9	SW
28-May-22	13:00	0.9	SW
28-May-22	14:00	0.9	SW
28-May-22	15:00	0.4	SE
28-May-22	16:00	0.4	E
28-May-22	17:00	1.3	ENE
28-May-22	18:00	2.2	ENE
28-May-22	19:00	0.9	ESE
28-May-22	20:00	1.8	ENE
28-May-22	21:00	0.4	ENE
28-May-22	22:00	0.4	ENE
28-May-22	23:00	0.9	SE

May 2022			
Table II: Wind Speed and Directions			
Date	**Time**	**Wind Speed m/s**	**Direction**
29-May-22	0:00	1.3	ENE
29-May-22	1:00	1.8	ENE
29-May-22	2:00	0.9	NNE
29-May-22	3:00	0.9	NNE
29-May-22	4:00	0.9	NNE
29-May-22	5:00	0.9	NNE
29-May-22	6:00	1.3	NNE
29-May-22	7:00	1.8	NE
29-May-22	8:00	1.8	NNE
29-May-22	9:00	1.8	ENE
29-May-22	10:00	1.8	NNE
29-May-22	11:00	1.8	NE
29-May-22	12:00	1.3	NNE
29-May-22	13:00	1.8	NNE
29-May-22	14:00	1.3	NNE
29-May-22	15:00	1.3	ENE
29-May-22	16:00	1.8	ENE
29-May-22	17:00	0.9	NNE
29-May-22	18:00	1.3	NE
29-May-22	19:00	1.8	NE
29-May-22	20:00	1.3	NE
29-May-22	21:00	1.3	NE
29-May-22	22:00	0.9	E
29-May-22	23:00	1.8	NE
30-May-22	0:00	1.3	NNE
30-May-22	1:00	2.2	NNE
30-May-22	2:00	1.8	NE
30-May-22	3:00	1.8	NNE
30-May-22	4:00	0.9	ENE
30-May-22	5:00	0.9	E
30-May-22	6:00	0.9	ENE
30-May-22	7:00	1.3	NNE
30-May-22	8:00	1.3	NE
30-May-22	9:00	0.9	ENE
30-May-22	10:00	1.3	ENE
30-May-22	11:00	1.3	NNE
30-May-22	12:00	1.3	NE
30-May-22	13:00	1.3	NE
30-May-22	14:00	1.3	ENE
30-May-22	15:00	0.9	E
30-May-22	16:00	1.3	E
30-May-22	17:00	1.3	NE
30-May-22	18:00	1.3	ENE
30-May-22	19:00	0.9	ENE
30-May-22	20:00	0.9	NE
30-May-22	21:00	0.9	NE
30-May-22	22:00	0.9	NE
30-May-22	23:00	0.9	NNE

May 2022			
Table II: Wind Speed and Directions			
Date	**Time**	**Wind Speed m/s**	**Direction**
31-May-22	0:00	0.9	NNE
31-May-22	1:00	0.9	NNE
31-May-22	2:00	0.4	NNE
31-May-22	3:00	0.9	NNE
31-May-22	4:00	0.4	NE
31-May-22	5:00	0.9	NNE
31-May-22	6:00	0.4	NE
31-May-22	7:00	0.9	NNE
31-May-22	8:00	0.9	NNE
31-May-22	9:00	0.9	ENE
31-May-22	10:00	1.8	ENE
31-May-22	11:00	0.9	ENE
31-May-22	12:00	1.3	NE
31-May-22	13:00	1.8	ENE
31-May-22	14:00	1.3	ENE
31-May-22	15:00	1.3	ENE
31-May-22	16:00	1.3	SW
31-May-22	17:00	1.8	SW
31-May-22	18:00	0.9	SSW
31-May-22	19:00	0.9	SW
31-May-22	20:00	0.9	ENE
31-May-22	21:00	0.4	ENE
31-May-22	22:00	0.1	NE
31-May-22	23:00	0.1	NE

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 May 2022

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

The schedule may be changed due to unforeseen circumstances (adverse weather, etc)
* The noise level limit is 65dB(A) during the exam period

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

Contract No. KLN/2016/04
Environmental Monitoring Works for Contract No. KL/2015/02
Kai Tak Development –Stage 5A Infrastructure at Former North Apron Area
Temtative Impact Air and Noise Monitoring Schedule for June 2022

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1-Jun	2-Jun	**3-Jun**	4-Jun
			24-hr TSP [AM2(A)]	**1-hr TSP x 3 [AM2]**		
5-Jun	**6-Jun**	7-Jun	8-Jun	9-Jun	10-Jun	11-Jun
		24-hr TSP [AM2(A)]	**1-hr TSP x 3 [AM2]** **Noise [M3(A), M4 & M5(C)]**			
12-Jun	13-Jun	14-Jun	15-Jun	16-Jun	17-Jun	18-Jun
	24-hr TSP [AM2(A)]	**1-hr TSP x 3 [AM2]** **Noise [M3(A), M4 & M5(C)]**				**24-hr TSP [AM2(A)]**
19-Jun	20-Jun	21-Jun	22-Jun	23-Jun	24-Jun	25-Jun
	1-hr TSP x 3 [AM2] **Noise [M3(A), M4 & M5(C)]**			**24-hr TSP [AM2(A)]**	**1-hr TSP x 3 [AM2]**	
26-Jun	27-Jun	28-Jun	29-Jun	30-Jun		
		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)
* The noise level limit is 65dB(A) during the exam period

Air Quality Monitoring Station

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

Noise Monitoring Station

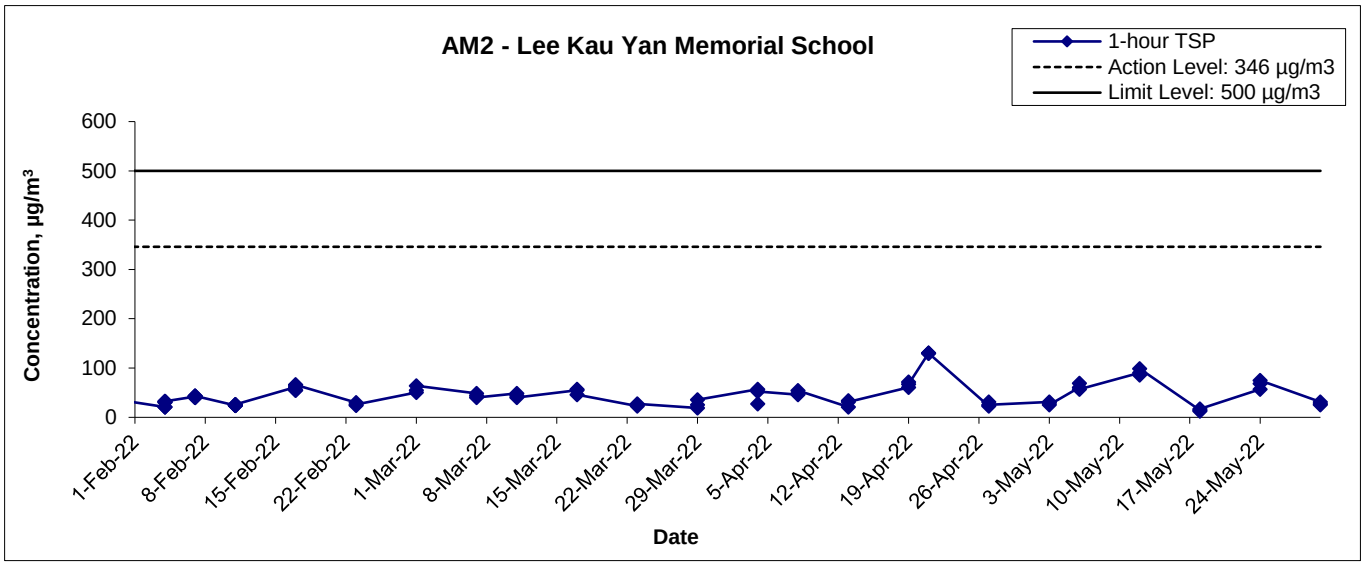
M3(A) - The Bridge connecting The Latitude
M4 - Lee Kau Yan Memorial School
M5(C) - Mercy Grace's Home

APPENDIX E
1-HOUR TSP MONITORING RESULTS AND GRAPHICAL PRESENTATION

Appendix E - 1-hour TSP Monitoring Results

Location AM2 - Lee Kau Yan Memorial School			
Date	Time	Weather	Particulate Concentration (µg/m^3)
3-May-22	12:00	Sunny	31.5
3-May-22	13:00	Sunny	29.4
3-May-22	14:00	Sunny	25.2
6-May-22	14:00	Sunny	60.9
6-May-22	15:00	Sunny	69.3
6-May-22	16:00	Sunny	56.7
12-May-22	13:00	Rainy	90.2
12-May-22	14:00	Rainy	85.8
12-May-22	15:00	Rainy	99.0
18-May-22	12:00	Sunny	14.7
18-May-22	13:00	Sunny	12.6
18-May-22	14:00	Sunny	16.8
24-May-22	9:00	Cloudy	57.2
24-May-22	10:00	Cloudy	68.2
24-May-22	11:00	Cloudy	74.8
30-May-22	13:00	Sunny	31.5
30-May-22	14:00	Sunny	27.3
30-May-22	15:00	Sunny	25.2
		Average	48.7
		Maximum	99.0
		Minimum	12.6

1-hr TSP Concentration Levels



Title: Graphical Presentation of 1-hour TSP Monitoring Results	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	Scale: N.T.S Date: May 22	Project No.: MA16043 Appendix: E

CINOTECH

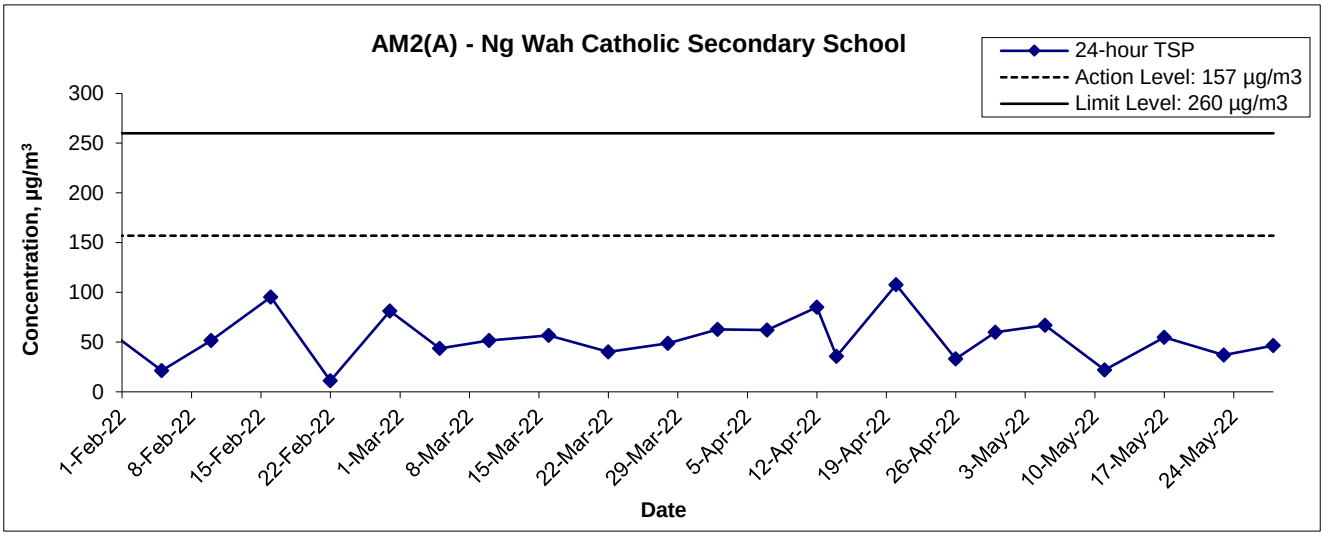
APPENDIX F
24-HOUR TSP MONITORING RESULTS AND GRAPHICAL PRESENTATION

Appendix F - 24-hour TSP Monitoring Results

Location AM2(A) - Ng Wah Catholic Secondary School

Start Date	Weather Condition	Air Temp. (K)	Atmospheric Pressure, Pa (mmHg)	Filter Weight (g)		Particulate weight (g)	Elapse Time		Sampling Time (hrs.)	Flow Rate (m^3/min.)		Av. Flow (m3/min)	Total vol. (m3)	Conc. (µg/m3)
				Initial	Final		Initial	Final		Initial	Final			
5-May-22	Sunny	298.4	760.4	3.3589	3.4758	0.1169	9130.8	9154.8	24.0	1.21	1.21	1.21	1742.4	67.1
11-May-22	Cloudy	298.4	756.2	3.3483	3.3865	0.0383	9154.8	9178.8	24.0	1.22	1.21	1.22	1749.7	21.9
17-May-22	Fine	296.2	761.3	3.3286	3.4251	0.0964	9178.8	9202.8	24.0	1.22	1.22	1.22	1758.8	54.8
23-May-22	Sunny	297.2	757.3	3.3350	3.3999	0.0650	9202.8	9226.8	24.0	1.22	1.22	1.22	1753.2	37.1
28-May-22	Sunny	301.9	755.2	3.3929	3.4738	0.0808	9226.8	9250.8	24.0	1.21	1.21	1.21	1741.6	46.4
													Min	21.9
													Max	67.1
													Average	45.4

24-hr TSP Concentration Levels



Title: Graphical Presentation of 24-hour TSP Monitoring Results	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	Scale: N.T.S Date: May 22	Project No.: MA16043 Appendix: F

CINOTECH

APPENDIX G
NOISE MONITORING RESULTS AND GRAPHICAL PRESENTATION

Appendix G - Noise Monitoring Results

Location M3(A) - The Bridge connecting The Latitude

Date	Time	Weather	Unit: dB (A) (30-min)					
			Measured Noise Level			Background Noise	Construction Noise Level	
			L_{eq}	L_{10}	L_{90}	L_{eq}	L_{eq}	
3-May-22	11:30	Sunny	76.6	78.8	74.2	76.6	76.6	Measured ≦ Background
12-May-22	11:30	Cloudy	72.6	74.2	70.3	72.5	56.2	
18-May-22	11:30	Sunny	76.6	78.7	73.5	76.4	63.1	
24-May-22	11:30	Cloudy	72.1	74.9	70.3	72.2	72.1	Measured ≦ Background
30-May-22	15:32	Sunny	75.0	76.8	72.5	75.2	75.0	Measured ≦ Background

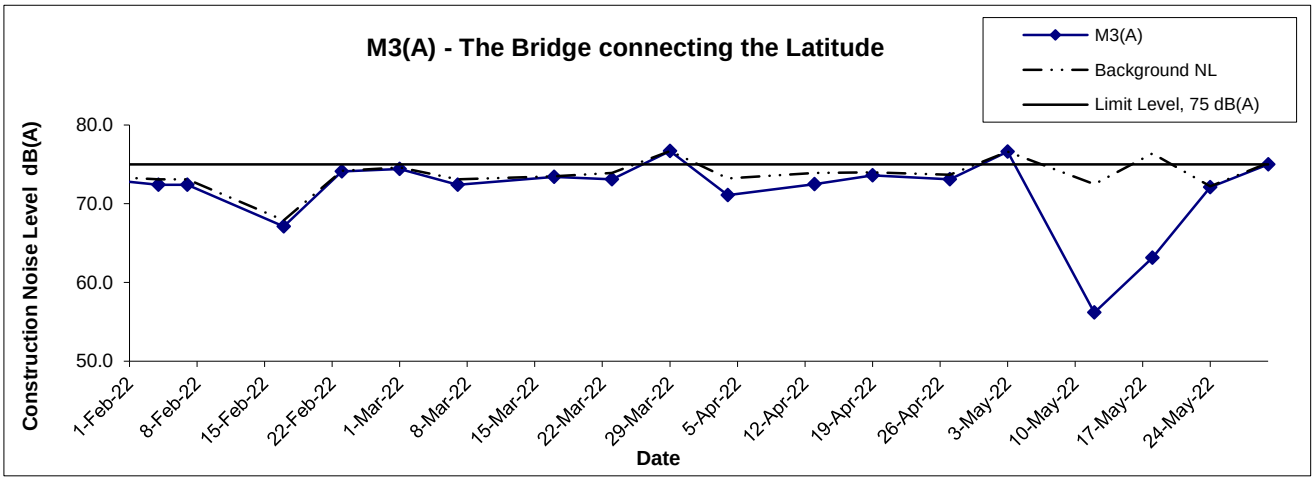
Location M4 - Lee Kau Yan Memorial School

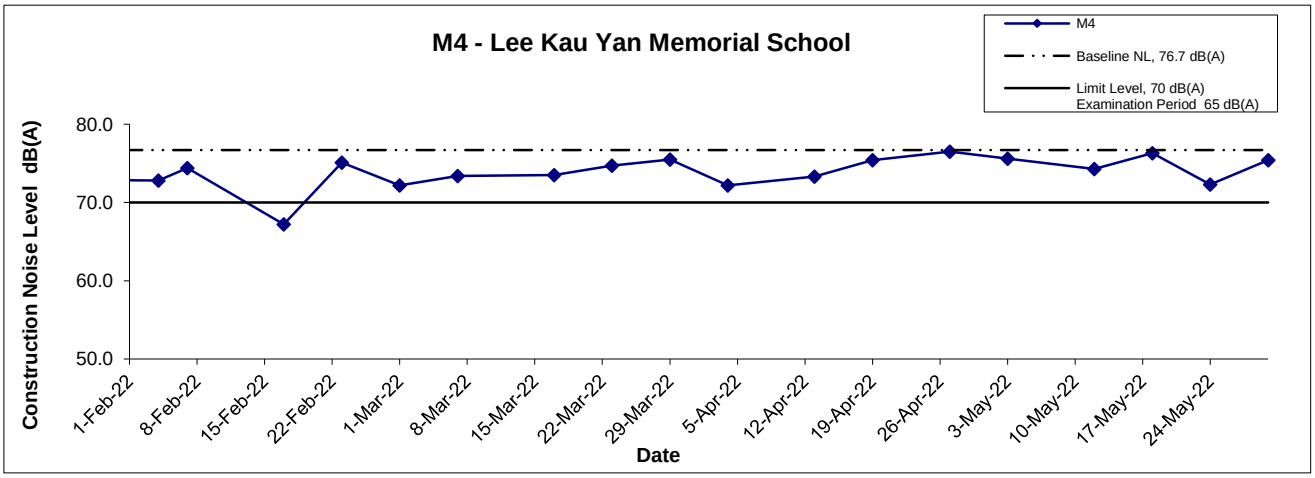
Date	Time	Weather	Unit: dB (A) (30-min)					
			Measured Noise Level			Baseline Level	Construction Noise Level	
			L_{eq}	L_{10}	L_{90}	L_{eq}	L_{eq}	
3-May-22	13:00	Sunny	75.6	76.9	73.8	76.7	75.6	Measured ≦ Baseline
12-May-22	14:00	Cloudy	74.3	76.4	72.2		74.3	Measured ≦ Baseline
18-May-22	15:00	Sunny	76.3	77.7	74.5		76.3	Measured ≦ Baseline
24-May-22	10:00	Cloudy	72.3	74.9	70.1		72.3	Measured ≦ Baseline
30-May-22	14:02	Sunny	75.4	76.8	73.5		75.4	Measured ≦ Baseline

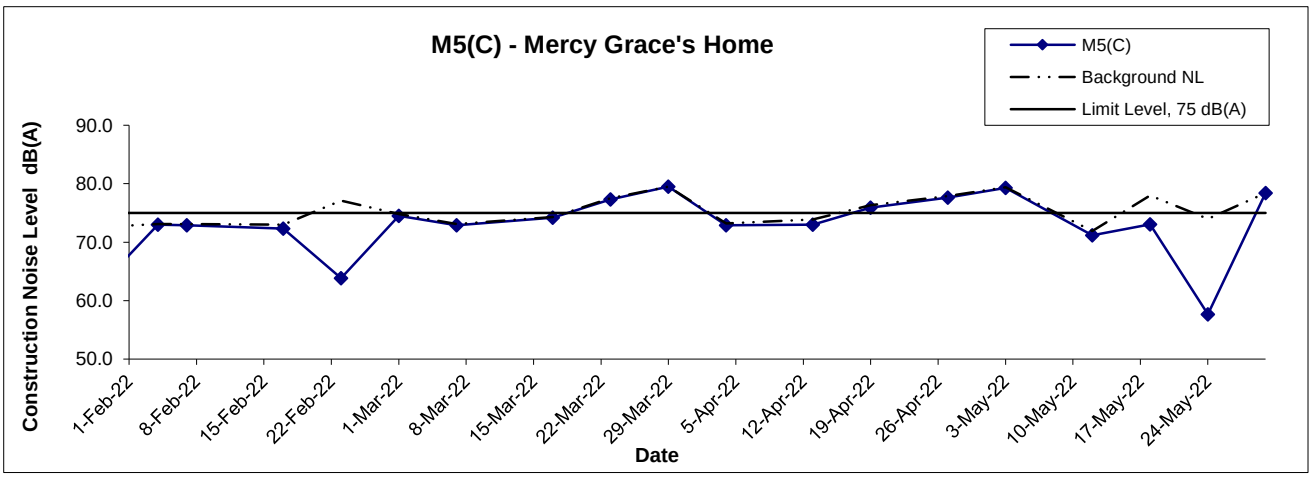
Location M5(C) - Mercy Grace's Home

Date	Time	Weather	Unit: dB (A) (30-min)					
			Measured Noise Level			Background Noise	Construction Noise Level	
			L_{eq}	L_{10}	L_{90}	L_{eq}	L_{eq}	
3-May-22	17:12	Sunny	79.3	81.5	75.7	79.4	79.3	Measured ≦ Background
12-May-22	16:00	Cloudy	71.2	73.9	69.7	71.9	71.2	Measured ≦ Background
18-May-22	13:00	Sunny	79.2	81.4	75.5	78.0	73.0	
24-May-22	13:00	Cloudy	74.1	76.7	72.6	74.0	57.7	
30-May-22	11:26	Sunny	78.4	80.8	74.2	78.4	78.4	Measured ≦ Background

Noise Levels







Remarks: [1] The construction noise levels in the Tables in Appendix G were adopted for plotting the graphs

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 Construction Noise Monitoring Results	Scale: N.T.S Date: May 2022	Project No.: MA16043 Appendix: G	CINOTECH

APPENDIX H
SUMMARY OF EXCEEDANCE

Appendix H – Summary of Exceedance

Exceedance Record for Contract No. KL/2015/02
Reporting Month: May 2022

(A) Exceedance Record for Air Quality
(NIL in the reporting month)

(B) Exceedance Record for Construction Noise
(NIL in the reporting month)

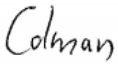
(C) Exceedance Record for Landscape and Visual
(NIL in the reporting month)

APPENDIX I
SITE AUDIT SUMMARY

Weekly Site Inspection Record Summary
Inspection Information

Checklist Reference Number	220503
Date	3 May 2022 (Tuesday)
Time	14:00 – 15:00

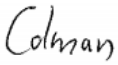
Ref. No.	**Non-Compliance**	**Related Item No.**
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	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.: 220425).	

	Name	Signature	Date
Recorded by	Echo Hung		3 May 2022
Checked by	Colman Wong		4 May 2022

Weekly Site Inspection Record Summary
Inspection Information

Checklist Reference Number	220511
Date	11 May 2022 (Wednesday)
Time	9:30 – 10:30

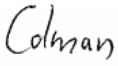
Ref. No.	**Non-Compliance**	**Related Item No.**
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	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.: 220503).	

	Name	Signature	Date
Recorded by	Echo Hung		11 May 2022
Checked by	Colman Wong		12 May 2022

Weekly Site Inspection Record Summary
Inspection Information

Checklist Reference Number	220518
Date	18 May 2022 (Wednesday)
Time	10:30 – 11:30

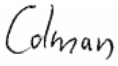
Ref. No.	**Non-Compliance**	**Related Item No.**
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	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.: 220511).	

	Name	Signature	Date
Recorded by	Echo Hung		18 May 2022
Checked by	Colman Wong		19 May 2022

Weekly Site Inspection Record Summary
Inspection Information

Checklist Reference Number	220524
Date	24 May 2022 (Tuesday)
Time	14:00 – 15:00

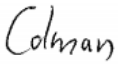
Ref. No.	**Non-Compliance**	**Related Item No.**
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	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.: 220518).	

	Name	Signature	Date
Recorded by	Echo Hung		24 May 2022
Checked by	Colman Wong		25 May 2022

Weekly Site Inspection Record Summary
Inspection Information

Checklist Reference Number	220531
Date	31 May 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.: 220524).	

	Name	Signature	Date
Recorded by	Echo Hung		31 May 2022
Checked by	Colman Wong		1 June 2022

APPENDIX J
EVENT ACTION PLANS

Appendix J - Event Action Plans

Event/Action Plan for Air Quality

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

	EPD, IEC and ER informed of the results.	4. Advise the ER 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.	working days of notification; 4. Implement the agreed proposals.
Limit Level being exceeded by two or more consecutive sampling	1. Notify IEC, ER, Contractor and EPD; 2. Repeat measurement to confirm findings; 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, ER and Contractor to discuss the remedial actions to be taken; 6. Assess effectiveness of Contractor's remedial actions and keep EPD, IEC and ER informed of the results; 7. If exceedance stops, cease additional monitoring.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss amongst ER, ET, and Contractor on the potential remedial actions; 4. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly.	1. Confirm receipt of notification of exceedance in writing; 2. Notify Contractor; 3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented; 4. Supervise implementation of remedial measures; 5. If exceedance continues, consider stopping the Contractor to continue working on that portion of work which causes the exceedance until the exceedance is abated.	1. Take immediate action to avoid further exceedance; 2. Discuss with ET, ER and IEC on proper remedial actions; 3. Submit proposals for remedial actions to 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 ER until the exceedance is abated.

Appendix J - Event Action Plans

Event/Action Plan for Construction Noise

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
Action Level being exceeded	1. Notify ER, IEC and Contractor; 2. Carry out investigation; 3. Report the results of investigation to the IEC, ER and Contractor; 4. Discuss with the IEC and Contractor on remedial measures required; 5. 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 by the Contractor and advise the ER accordingly; 3. 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)	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)	1. Submit noise mitigation proposals to IEC and ER; 2. 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, ER, Contractor and EPD; 2. Repeat measurements to confirm findings; 3. Increase monitoring frequency; 4. Identify source and investigate the cause of exceedance;	1. Discuss amongst ER, ET, and Contractor on the potential remedial actions; 2. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly.	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	1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IEC and ER within 3 working days of notification; 3. Implement the agreed proposals;

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

Event/Action Plan for Landscape and Visual

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

	ER 2. Increase monitoring frequency 3. Discuss remedial actions with IEC, ER and Contractor 4. Monitor remedial actions until rectification has been completed 5. If non-conformity stops, cease additional monitoring	2. Check Contractor's working method 3. Discuss with ET and Contractor on possible remedial measures 4. Advise ER on effectiveness of proposed remedial measures 5. Supervise implementation of remedial measures.	implemented	undertake any necessary replacement

APPENDIX K
ENVIRONMENTAL MITIGATION
IMPLEMENTATION SCHEDULE (EMIS)

Appendix K – Summary of Implementation Schedule of Mitigation Measures for Construction Phase

EIA Ref.	Recommended Mitigation Measures	Implementation Status
Construction Air Quality		
S6.5	8 times daily watering of the work site with active dust emitting activities.	^
S6.8	Implementation of dust suppression measures stipulated in Air Pollution Control (Construction Dust) Regulation. The following mitigation measures, good site practices and a comprehensive dust monitoring and audit programme are recommended to minimize cumulative dust impacts.	^
	• Stockpiling site(s) should be lined with impermeable sheeting and bunded. Stockpiles should be fully covered by impermeable sheeting to reduce dust emission.	^
	• Misting for the dusty material should be carried out before being loaded into the vehicle. Any vehicle with an open load carrying area should have properly fitted side and tail boards.	^
	• Material having the potential to create dust should not be loaded from a level higher than the side and tail boards and should be dampened and covered by a clean tarpaulin.	^
	• The tarpaulin should be properly secured and should extent at least 300 mm over the edges of the sides and tailboards. The material should also be dampened if necessary before transportation.	^
	• The vehicles should be restricted to maximum speed of 10 km per hour and confined haulage and delivery vehicle to designated roadways insider the site. Onsite unpaved roads should be compacted and kept free of lose materials.	^
	• Vehicle washing facilities should be provided at every vehicle exit point.	^
	• The area where vehicle washing takes place and the section of the road between the washing facilities and the exit point should be paved with concrete, bituminous materials or hardcores.	^
	• Every main haul road should be scaled with concrete and kept clear of dusty materials or sprayed with water so as to maintain the entire road surface wet.	^
	• Every stock of more than 20 bags of cement should be covered entirely by impervious sheeting placed in an area sheltered on the top and the three sides.	^
	• Every vehicle should be washed to remove any dusty materials from its body and wheels before leaving the construction sites.	^

S6.8	• DWFI compound for JVBC: 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.	N/A
	• Desilting compound for KTN: 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.	N/A
	• Decking or reconstruction of KTN within apron area: 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.	N/A
	• Localised maintenance dredging: 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	N/A

Appendix K – Summary of Implementation Schedule of Mitigation Measures for Construction Phase

	dredging operation. • Improvement of water circulation in KTAC and KTTS: 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 N/A
Construction 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 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. • 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.	 ^ ^ ^ ^ ^
S7.9	Scheduling of Construction Works during School Examination Period	^
S7.8	(i) Provision of low noise surfacing in a section of Road L2; and (ii) Provision of structural fins	N/A N/A
S7.8	(i) Avoid the sensitive façade of class room facing Road L2 and L4; and (ii) Provision of low noise surfacing in a section of Road L2 & L4	N/A N/A

S7.8	(i) Provision of low noise surfacing in a section of Road L4 before occupation of Site 1I1; 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 class room facing Road L2 and L4; and	N/A
	(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 provide the facades with openable window.	N/A
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 less than 55m away from To Kwa Wan Road to no more than 25m above ground	N/A
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 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
Construction 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 so that swift actions could be taken in case of malfunction of unmanned facilities	N/A

Appendix K – Summary of Implementation Schedule of Mitigation Measures for Construction Phase

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 activities in open water.	N/A
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 rate of 1,000m^3 per day using one grab dredger.	N/A
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 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 2,000m^3 per day using one grab dredger.	N/A
8.8	Dredging for Road T2 should be conducted at a maximum rate of 8,000m^3 per day (using four grab dredgers) whereas the sand filling should be conducted at a maximum rate of 2,000m3 per day (using two grab dredgers).	N/A
8.8	Silt screens shall be applied to seawater intakes at WSD seawater intake.	N/A

Appendix K – Summary of Implementation Schedule of Mitigation Measures for Construction Phase

S8.8	Land-based Construction *Construction Runoff* Exposed soil areas should be minimised to reduce the potential for increased siltation, contamination of runoff, and erosion. Construction runoff related impacts associated with the above ground construction activities can be readily controlled through the use of appropriate mitigation measures which include: • use of sediment traps • adequate maintenance of drainage systems to prevent flooding and overflow	 ^ ^
S8.8	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.	^
S8.8	Construction site should be provided with adequately designed perimeter channel and pre-treatment facilities and proper maintenance. The boundaries of critical areas of earthworks should be marked and surrounded by dykes or embankments for flood protection. Temporary ditches should be provided to facilitate runoff discharge into the appropriate watercourses, via a silt retention pond. Permanent drainage channels should incorporate sediment basins or traps and baffles to enhance deposition rates. The design of efficient silt removal facilities should be based on the guidelines in Appendix A1 of ProPECC PN 1/94.	^
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 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 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.	^
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 are summarized in Appendix A2 of ProPECC PN 1/94. Particular attention should be paid to the control of silty	^

Appendix K – Summary of Implementation Schedule of Mitigation Measures for Construction Phase

	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 drainage system after accidental spillages. The interceptor should have a bypass to prevent flushing during periods of heavy rain.	N/A(1)
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.	^
S8.8	*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	^
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.	^
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.	^
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.	^

Appendix K – Summary of Implementation Schedule of Mitigation Measures for Construction Phase

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	^
S8.8	*Debris and Litter* In order to maintain water quality in acceptable conditions with regard to aesthetic quality, contractors should be required, under conditions of contract, to ensure that site management is optimised and that disposal of any solid materials, litter or wastes to marine waters does not occur	^
S8.8	*Construction Works at or in Close Proximity of Storm Culvert or Seafront* The proposed works should preferably be carried out within the dry season where the flow in the drainage channel /storm culvert/ nullah is low.	^
S8.8	The use of less or smaller construction plants may be specified to reduce the disturbance to the bottom sediment at the drainage channel /storm culvert / nullah.	^
S8.8	Temporary storage of materials (e.g. equipment, filling materials, chemicals and fuel) and temporary stockpile of construction materials should be located well away from any water courses during carrying out of the construction works	^
S8.8	Stockpiling of construction materials and dusty materials should be covered and located away from any water courses.	^
S8.8	Construction debris and spoil should be covered up and/or disposed of as soon as possible to avoid being washed into the nearby water receivers.	^
S8.8	Construction activities, which generate large amount of wastewater, should be carried out in a distance away from the waterfront, where practicable.	^
S8.8	Mitigation measures to control site runoff from entering the nearby water environment should be implemented to minimize water quality impacts. Surface channels should be provided along the edge of the waterfront within the work sites to intercept the runoff.	^
S8.8	Construction effluent, site run-off and sewage should be properly collected and/or treated.	^
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.	N/A
S8.8	Silt curtain may be installed around the construction activities at the seafront to minimize the potential impacts due to accidental spillage of construction materials.	N/A
S8.8	Proper shoring may need to be erected in order to prevent soil/mud from slipping into the storm culvert/drainage channel/sea.	N/A

S8.8	Supervisory staff should be assigned to station on site to closely supervise and monitor the works	^
S8.8	Marine water quality monitoring and audit programme shall be implemented for the proposed sediment treatment operation.	N/A
Construction 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 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. • Appropriate measure to minimize windblown litter and dust during transportation of 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).	^ ^ ^ ^
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 • 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 • Encourage collection of aluminium cans, PET bottles and paper by providing separate labelled bins to enable these wastes to be segregated from other general refuse generated by the work force • Any unused chemicals or those with remaining functional capacity should be recycled • Proper storage and site practices to minimise the potential for damage or contamination of construction materials	^ ^ ^ ^ ^

Appendix K – Summary of Implementation Schedule of Mitigation Measures for Construction Phase

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 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)	N/A
S9.5	The dredged marine sediments would be loaded onto barges and transported to the designated disposal sites allocated by the MFC depending on 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	N/A
S9.5	It will be the responsibility of the contractor to satisfy the appropriate authorities that the contamination levels of the marine sediment to be dredged have been analysed and recorded. According to the ETWB TCW No. 34/2002, this will involve the submission of a formal Sediment Quality Report to the DEP, prior to the dredging contract being tendered. The contractor for the dredging works should apply for allocation of marine disposal sites and all necessary permits from relevant authorities for the disposal of dredged sediment. During transportation and disposal of the dredged marine sediments requiring Type 1, Type 2, or Type 3 disposal, the following measures should be taken to minimise potential impacts on water quality: • Bottom opening of barges should be fitted with tight fitting seals to prevent leakage of material. Excess material should be cleaned from the decks and exposed fittings of barges and hopper dredgers before the vessel is moved • Monitoring of the barge loading should be conducted to ensure that loss of material does not take place during transportation. Transport barges or vessels should be equipped with automatic selfmonitoring devices as required under the Dumping at Sea Ordinance and as specified by the DEP • Barges or hopper barges should not be filled to a level that would cause the overflow of materials or sediment laden water during loading or transportation	N/A N/A N/A
S9.5	Construction and Demolition Material Mitigation measures and good site practices should be incorporated into contract document to control potential environmental impact from handling and transportation of C&D material. The mitigation measures include: • Where it is unavoidable to have transient stockpiles of C&D material within the Project work site pending collection for disposal, the	^

	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 • 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.	^ ^ ^ ^ ^ ^ ^
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*	^

Appendix K – Summary of Implementation Schedule of Mitigation Measures for Construction Phase

S9.5	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		^
Construction Landscape and Visual			
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.	N/A(1)
	CM4	Erection of decorative screen hoarding.	^

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.

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.

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

Peako - Wo Hing Joint Venture

Monthly Summary Waste Flow Table for 2022

As at 1 Jun 2022

Month	Quantities of Inert C & D Materials Generated Monthly						Quantities of C & D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ Cardboard packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. general refuse
	(in '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											
Sub-total	68.229	0	0	0.406	68.229	0	0	0	0	0	2.744
July											
Aug											
Sept											
Oct											
Nov											
Dec											
Total	68.229	0	0	0.406	68.229	0	0	0	0	0	2.744

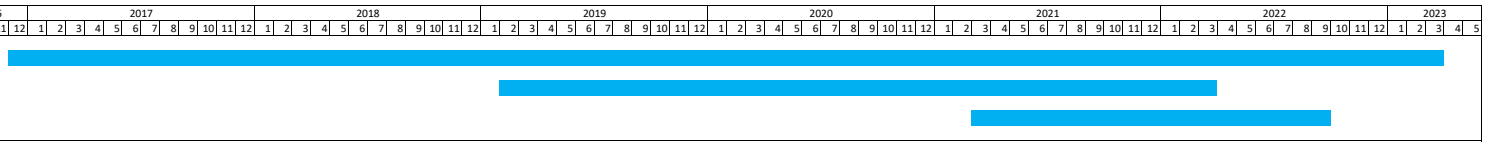
Forecast of Total Quantities of C&D Materials to be Generated from the Contract*										
Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ Cardboard packaging	Plastics (see Note 3)	Chemical 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

Works	Commence	Finish
Subways Construction	Dec-16	Mar-23
Road Works (D1 and L7)	Feb-19	Mar-22
Landscape	Mar-21	Sep-22



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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

May 2022

(Version 1.1)

Certified By:_____

(Environmental Team Leader)

RAMBOLL

Ref.: CEDKTDS4EM00_0_0232L.22

13 June 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 May 2022

Reference is made to the Environmental Team's submission of the Monthly EM&A Report for May 2022 (Version 1.1) certified by the ET Leader and provided to us via email on 11 June 2022.

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

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

Yours faithfully,

For and on behalf of

Ramboll Hong Kong Limited

Y H Hui

Independent Environmental Checker

c.c.	CEDD	Attn.: Mr. Alex Wong	Fax: 2739 0076
	Ka Shing	Attn.: Mr. Chan Pang	By email
	Penta-Ocean	Attn.: Mr. Daniel Ho	Fax: 2572 4080

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EXECUTIVE SUMMARY

This is the 29th Monthly Environmental Monitoring & Audit (EM&A) report which summaries the findings of the EM&A Programme during the reporting period from 1 to 31 May 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

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

Complaint log

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

Table II Summary of complaints in the Reporting Month

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

Report changes

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

Key construction works in the reporting month

8) Major construction activities undertake during the reporting month included:
   - North Approach Ramp – Construction of utilities trough
   - Bridge D3 – Construction of Bridge Deck and abutments, Dismantle of portal frame
   - North Depressed Road – Construction of wall & top slab
   - Underpass – Construction of walls and roof slab
   - South Approach Ramp – Construction of Permanent Structure
   - District Cooling System seawater intake box culvert - reinstatement of the seawall and backfilling works
   - Lift 3 – Modification works
   - Lift 4 – Construction of linking platform
   - South Depressed Road – Installation of ELS system / construction of permanent works
   - Rising Main and Water Pipe – Laying of sewage
   - Landscaped Deck – Construction of pile caps and installation of columns
   - Transformer Room - Construction of permanent structure
   - Shing Kai Road – Modification works
   - Lift 1 & 2 – Installation of ELS system
   - CLP substation – Construction of wall & intermediate slab
   - 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 and utilities trough	Noise and Air Quality, Chemical and Waste Management
Bridge D3 – Construction of Bridge Deck and abutments	Noise and Air Quality, Landscape and Visual
North Depressed Road – Construction of walls & top slab	Noise and Air Quality, Chemical and Waste Management
Underpass – Construction of walls and roof slab	Noise and Air Quality, Chemical and Waste Management
South Approach Ramp – Construction of Permanent Structure	Noise and Air Quality, Chemical and Waste Management
District Cooling System seawater intake box culvert – backfilling works, reinstatement of the seawall and backfilling	Noise, Air and Water Quality

Future key issues in the coming month	Potential impact
works	
Lift 3 – Modification works	Noise and Air Quality, Chemical and Waste Management
Lift 4 – Construction of linking platform	Noise and Air Quality, Chemical and Waste Management
South Depressed Road – Installation of ELS system / construction of permanent works	Noise and Air Quality, Chemical and Waste Management
Rising Main and Water Pipe – Laying of sewage	Noise, Air and Water Quality
Landscaped Deck – Construction of pile caps and installation of columns	Noise, Air and Water Quality
Transformer Room – Construction of permanent structure	Noise, Air and Water Quality
Shing Kai Road – Modification works	Noise, Air and Water Quality
Lift 1 & 2 – Installation of ELS system	Noise and Air Quality, Chemical and Waste Management
CLP substation – Construction of Permanent 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, EP-445/2013 and Variation to the EP (VEP) No. EP-445/2013/A.

1.5 Air quality and noise monitoring has been proposed in the EM&A Manual with EIA Register Nos. AEIAR-130/2009 for Kai Tak Development while no air quality and noise monitoring are proposed in EM&A Manual with EIA Register Nos. AEIAR-170/2013 for Roads D3A and D4A.

Project Organization

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

Table 1.1 Contact Information of Key Personnel

Party	Role	Contact Person	Position	Phone No.	Fax No.
Civil Engineering and Development Department (CEDD)	Project Proponent	Mr. Alex Wong	Senior Engineer	3579 2452	2739 0076
		Ms. Chan Ka Yan	Engineer	3579 2458	2739 0076
AECOM Asia Co. Ltd. (AECOM)	Supervisor (act as Engineers' Representative (ER) listed in EM&A Manual)	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 utilities trough	Bridge D3 – Construction of Bridge Deck and abutments, Dismantle of portal frame
North Depressed Road – Construction of walls & top slab	Underpass – Construction of walls and roof slab
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 linking platform	South Depressed Road – Installation of ELS system / construction of permanent works
Landscaped Deck – Construction of pile caps and installation of columns	Transformer Room – Construction of permanent structure
Shing Kai Road – Modification works	Lift 1 &2 – Installation of ELS system
CLP substation – Construction of wall & intermediate slab	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, EP-445/2013 and Variation to the EP (VEP) No. EP-445/2013/A are summarized in Table 1.3.

Table 1.3 Summary of Status of Required Submission of EPs

EP Condition EP-337/2009	EP Condition EP-445/2013	EP Condition EP-445/2013/A	Submission	Submission Date
Condition 1.11	Condition 1.12	Condition 1.12	Notification of Commencement Date of Construction of the Project	6 Jan 2020
Condition 2.3	Condition 2.3	Condition 2.3	Management Organization of Main Construction Companies	9 Sep 2019
Condition 2.3	Condition 2.3	Condition 2.3	Updated Management Organization of Main	17 Aug 2021

EP Condition EP-337/2009	EP Condition EP-445/2013	EP Condition EP-445/2013/A	Submission	Submission Date
			Construction Companies	
Condition 2.4	Condition 2.4	Condition 2.4	Design Drawings	6 Jan 2020
Condition 2.11	Condition 2.5	Condition 2.5	Landscape Mitigation Plans	13 Nov 2020
Condition 2.1	Condition 2.5	Condition 2.5	Landscape Mitigation Plans (Revision 2)	18 May 2021
Condition 3.2	NA	NA	Baseline Monitoring Report	2 Jan 2020
Condition 3.2	NA	NA	Revised Baseline Monitoring Report	28 Mar 2020
Condition 3.3	Condition 3.2	Condition 3.2	Monthly EM&A Report (April 2022)	13 May 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	- 24-hour average TSP - 1-hour average TSP	- 24 hours - 1 hour	- Once every 6 days - Three times every 6 days
AM4(A) - The Hong Kong Society for the Blind's Factory cum Sheltered Workshop	Rooftop			
AM7 - Hong Kong Children's Hospital	Rooftop			

2.4 The monitoring schedule for reporting month and next month is presented in Appendix C.

2.5 Photographic records of the impact monitoring setup are shown in Appendix D.

Monitoring Equipment

2.6 24-hour average TSP and 1-hour average TSP levels were measured for impact monitoring. 24-hour average TSP levels were measured by the High Volume Samplers (HVS) and 1-hour average TSP levels were measured by direct reading method to indicate short-term impacts. Wind data monitoring equipment was set up at conspicuous locations for logging wind speed and wind direction near to the dust monitoring locations. Table 2.3 summarizes the equipment to be used in the air quality monitoring.

Table 2.3 Air Quality Monitoring Equipment

Equipment	Model	Quantity
HVS Sampler	TE-5170 X c/w of TSP sampling inlet	3
Calibrator	TISCH TE-5025A	1
1-hour TSP Dust Meter	TSI Model AM510 SidePak Personal Aerosol Monitor	2
Wind Anemometer	Davis Vantage Pro2 Weather Station	1

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

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

Monitoring Methodology and QA/QC Procedure

24-hour TSP Monitoring

Operating/Analytical Procedures

2.9 Setup criteria of HVS are shown as follows:

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

2.10 Prior to the commencement of the dust sampling, the flow rate of the HVS was properly set (between 1.1 m^3/min. and 1.7 m^3/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, $\mu g/m^3$	Limit Level, $\mu g/m^3$
24-hour average TSP	AM3	182	260
	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, $\mu g/m^3$	Limit Level, $\mu g/m^3$
1-hour average TSP	AM3	297	500
	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, $\mu g/m^3$	Range, $\mu g/m^3$	Action Level, $\mu g/m^3$	Limit Level, $\mu g/m^3$
AM3	61	25 – 117	182	260
AM4(A)	71	44 – 112	187	260
AM7	51	21 – 114	181	260

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

Air Monitoring Station	Average TSP Concentration, $\mu g/m^3$	Range, $\mu g/m^3$	Action Level, $\mu g/m^3$	Limit Level, $\mu g/m^3$
AM3	52	21 – 94	297	500
AM4(A)	59	33 – 103	326	500
AM7	42	22 – 92	315	500

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

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

2.30 The Event and Action Plan is provided in Appendix I.

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

3. NOISE MONITORING

Monitoring Requirements

3.1 In accordance with EM&A Manuals (EIA Register Nos. AEIAR-130/2009), impact noise monitoring shall be carried out during the construction phase of the Project.

3.2 Regular monitoring, $L_{Aeq, 30\text{-minute}}$, for each station will be on a weekly basis and conduct one set of measurements between 0700 – 1900 on normal weekdays.

3.3 If construction works are extended to include works during 1900 – 0700 as well as public holidays and Sundays, additional weekly impact monitoring will be carried out during the respective restricted hours periods.

Monitoring Locations

3.4 Two designated monitoring stations were selected for noise monitoring programme. Impact noise monitoring was conducted at two noise monitoring stations in the reporting month. Table 3.1 describes the noise monitoring locations, which are also depicted in Figure 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	Rooftop (Façade)	L_{Aeq}, L_{A10} and L_{A90}	30 - minutes measurement at each monitoring station between 0700 – 1900 hrs on normal weekdays (Monday to Saturday) at frequency of once per week.
M12 - Hong Kong Children's Hospital	Rooftop (Façade)		

3.6 The monitoring schedule for reporting month and next month is presented in Appendix C.

3.7 Photographic records of the monitoring setup are shown in Appendix D.

Monitoring Equipment

3.8 As referred to in the Technical Memorandum (TM) issued under the Noise Control Ordinance (NCO), sound level meters in compliance with the IEC 61672-1 (Type 1) standard [this standard replaced the International Electrotechnical Commission Publications 60651:1979 (Type 1) and 60804:1985 (Type 1)] were used for noise monitoring. Table 3.3 summarizes the equipment to be used in the noise monitoring.

Table 3.3 Noise Monitoring Equipment

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

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

Monitoring Methodology and QA/QC Procedure

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

3.11 No noise measurement was conducted in the presence of fog, rain, wind with a steady speed

exceeding 5 m/s or wind with gusts exceeding 10 m/s. Air flow was measured by air flow meter.

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

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

3.14 Noise level was recorded.

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

Maintenance and Calibration

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

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

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

Action and Limit Levels

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

Table 3.4 Baseline Noise Level and Action and Limit Levels for Construction Noise Monitoring

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

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

Impact Noise Monitoring results

3.20 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 $L_{Aeq, 30\text{-}min}$, Average, dB(A)	Measured $L_{Aeq, 30\text{-}min}$, Range, dB(A)	Action Level	Limit Level ^
M11	68.2	64.0 – 69.5	When one documented complaint is received	75 dB(A)
M12	65.8	64.7 – 67.8		

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 $L_{Aeq, 30min}$ 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

Air Monitoring Station	ASR No. in EIA report	Predicted Cumulative Maximum 24-hour average TSP concentration		Measured 24-hr average TSP in Reporting Month (May 2022) $\mu g/m^3$
		Scenario 1 (Mid 2009 to Mid 2013), $\mu g/m^3$	Scenario 2 (Mid 2013 to Late 2016), $\mu g/m^3$	
AM3 - Sky Tower	A40^	106	138	25 – 117
AM4(A) - The Hong Kong Society for the Blind's Factory cum Sheltered Workshop	A43^	123	195	44 – 112
AM7 – Hong Kong Children's Hospital	PA60	NA	NA	21 – 114

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

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

Air Monitoring Station	ASR No. in EIA report	Predicted Cumulative Maximum 1-hour average TSP concentration		Measured 1-hr average TSP in Reporting Month (May 2022) $\mu g/m^3$
		Scenario 1 (Mid 2009 to Mid 2013), $\mu g/m^3$	Scenario 2 (Mid 2013 to Late 2016), $\mu g/m^3$	
AM3 - Sky Tower	A40	217^	247^	21 – 94
AM4(A) - The Hong Kong Society for the Blind's Factory cum Sheltered Workshop*	A43	283^	409^	33 – 103
AM7 – Hong Kong Children's Hospital	PA60	NA	NA	22 – 92

Note:
^ 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 $L_{Aeq, 30min}$, dB(A)	Measured Noise Level in Reporting Month (May 2022) $L_{Aeq, 30min}$, dB(A)
M11 - The Hong Kong Society for the Blind's Factory cum Sheltered Workshop	N18	50 – 76*	64.0 – 69.5
M12 - Hong Kong Children's Hospital	PN83, PN84, PN84A	NA	64.7 – 67.8

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

4.2 24-hour TSP monitoring results at AM3 were recorded higher than the Scenario 1 (Mid 2009 to Mid 2013) prediction but lower than the Scenario 2 (Mid 2013 to Late 2016) in the EIA Report. 24-hour TSP monitoring results at 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.

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 5, 12, 19 and 26 May 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
05 May 2022	No	NA	NA
12 May 2022	No	NA	NA
19 May 2022	No	NA	NA
26 May 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

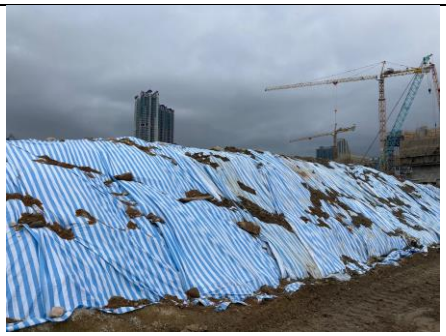
Site Inspection

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 5, 12, 19 and 26 May 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
05 May 2022	 Observation: The accumulated waste should be removed.	 Action Taken: The accumulated waste was cleared.	Closed-out on 12 May 2022
12 May 2022	N/A	N/A	N/A
19 May 2022	 Observation: Stockpiles should be fully covered by impermeable sheeting to reduce dust emission.	 Observation: The open stockpiles were covered.	Closed-out on 26 May 2022
26 May 2022	N/A	N/A	N/A

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
	EP-445/2013	3 May 2013	N/A
	EP-445/2013/A	13 Aug 2014	N/A
Construction Dust Notification under APCO	445956	6 June 2019	N/A
Wastewater Discharge License under WPCO	WT00034610-2019	26 Sep 2019	30 Sep 2024
Waste Disposal Billing Account	7034450	28 June 2019	N/A
Registration as a Chemical Waste Producer	5218-286-P3182-03	18 Jul 2019	N/A
	GW-RE1214-21	06 Dec 2021	01 Jun 2022
	GW-RE1262-21	30 Dec 2021	11 Jun 2022
	GW-RE1263-21	30 Dec 2021	17 Jun 2022
	GW-RE0206-22	20 Mar2022	19 Sep 2022
	GW-RE0268-22	07 Apr 2022	30 Jun 2022
	GW-RE0309-22	14 Apr 2022	13 Oct 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

Date of receiving notification of summons or prosecutions	Date of event	Description of event	Action take	Close-out date / Status
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 and utilities trough	Noise and Air Quality, Chemical and Waste Management
Bridge D3 – Construction of Bridge Deck and abutments	Noise and Air Quality, Landscape and Visual
North Depressed Road – Construction of walls & top slab	Noise and Air Quality, Chemical and Waste Management
Underpass – Construction of walls and roof slab	Noise and Air Quality, Chemical and Waste Management
South Approach Ramp – Construction of Permanent Structure	Noise and Air Quality, Chemical and Waste Management
District Cooling System seawater intake box culvert – backfilling works, 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	Noise and Air Quality, Chemical and Waste Management
South Depressed Road – Installation of ELS system / construction of permanent works	Noise and Air Quality, Chemical and Waste Management
Rising Main and Water Pipe – Laying of sewage	Noise, Air and Water Quality
Landscaped Deck – Construction of pile caps and installation of columns	Noise, Air and Water Quality
Transformer Room – Construction of permanent structure	Noise, Air and Water Quality
Shing Kai Road – Modification works	Noise, Air and Water Quality
Lift 1 & 2 – Installation of ELS system	Noise and Air Quality, Chemical and Waste Management
CLP substation – Construction of Permanent 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

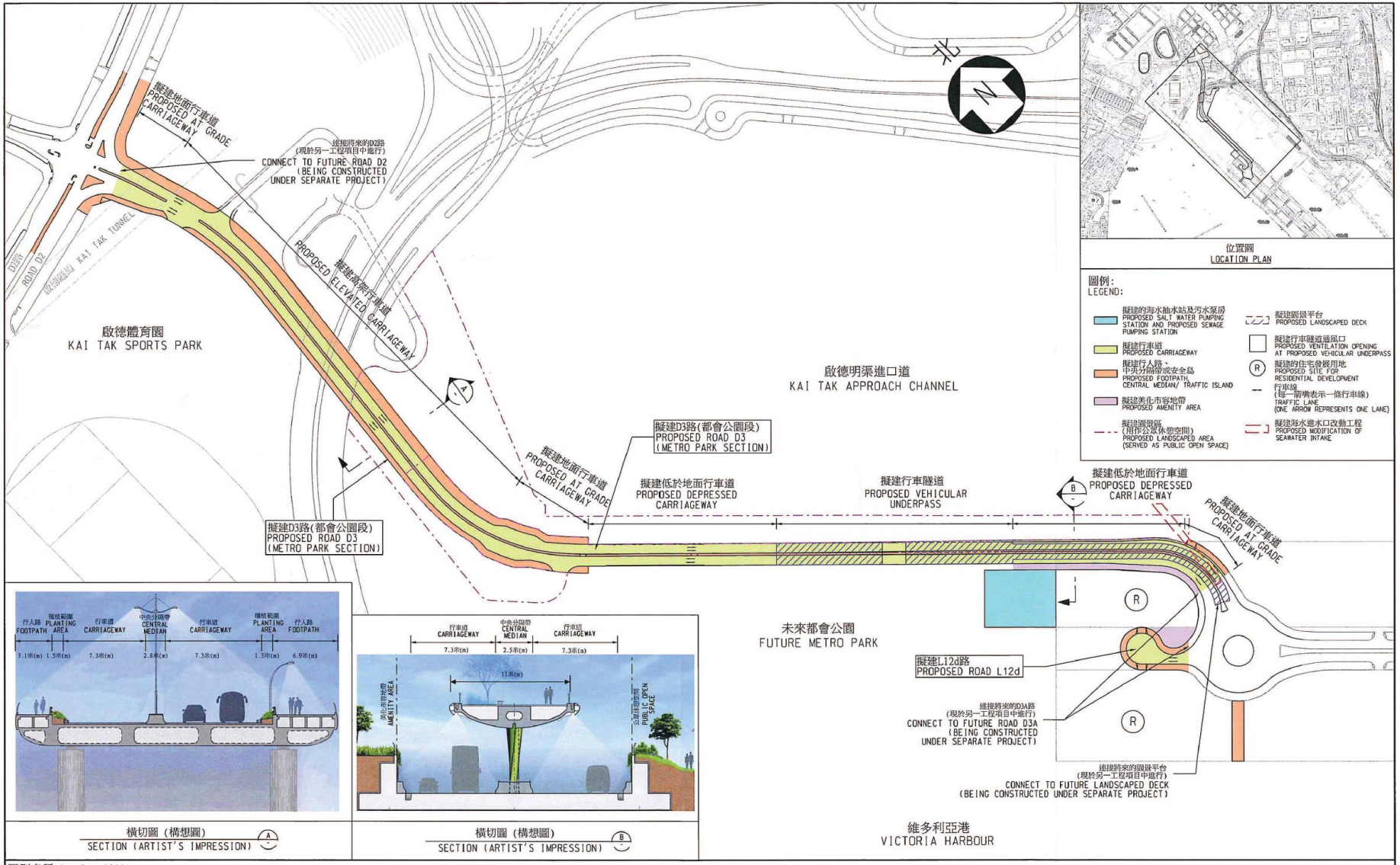


Figure 1 – Proposed works of Contract No. ED/2018/01

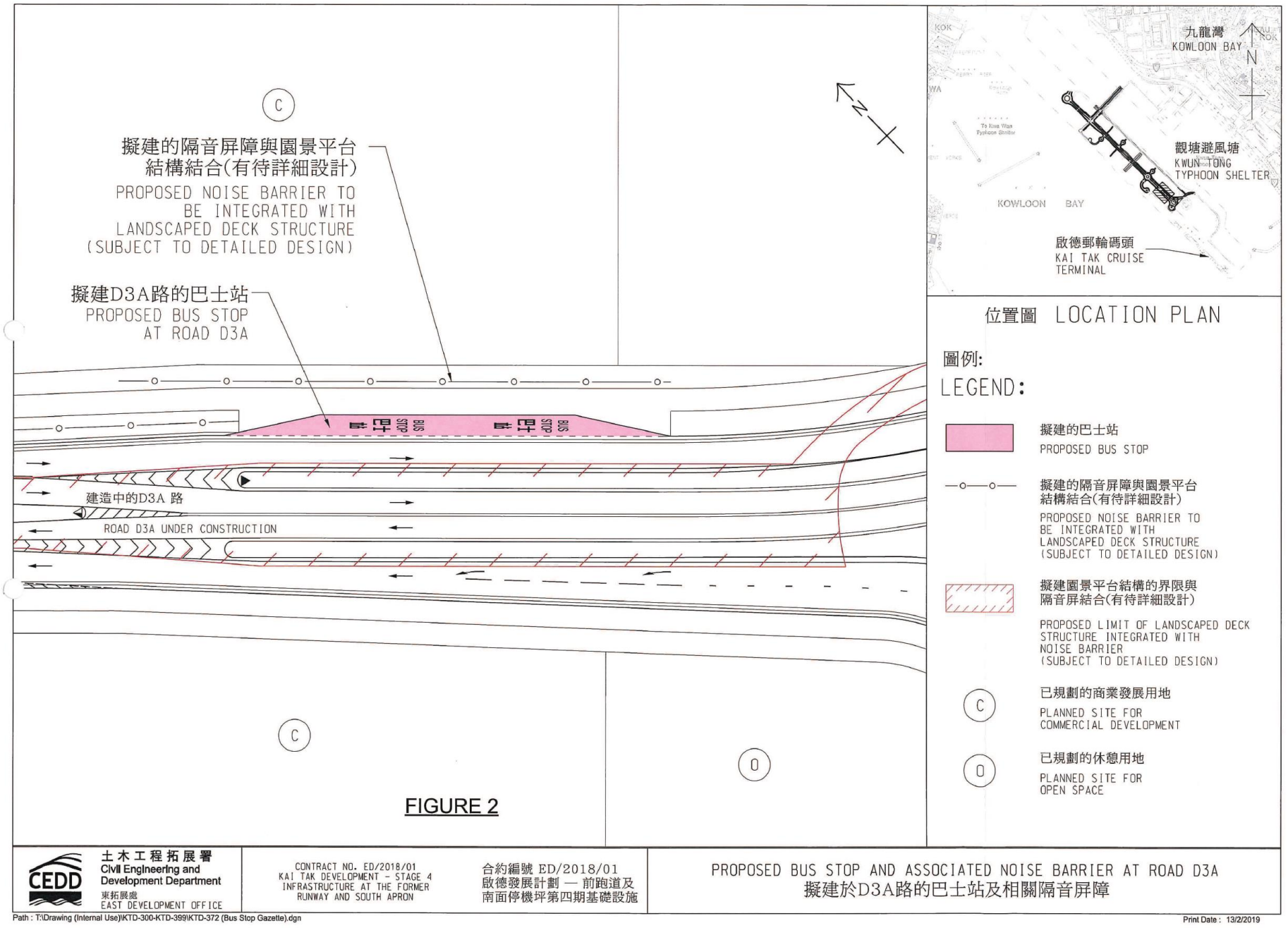


Figure 2 – Proposed Bus Stop And Associated Noise Barrier At Road D3A

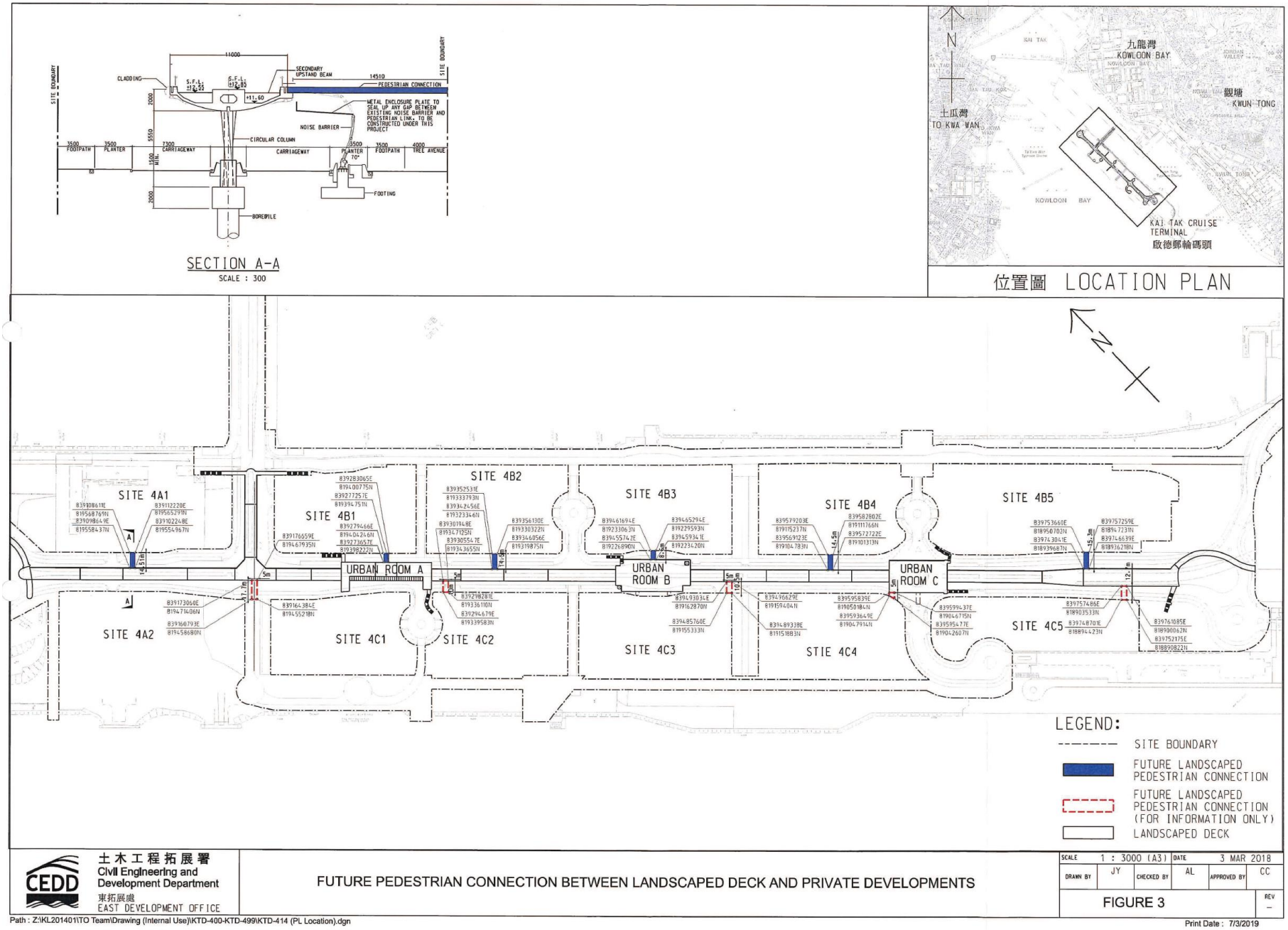


Figure 3 – Future Pedestrian Connection Between Landscaped Deck And Private Developments

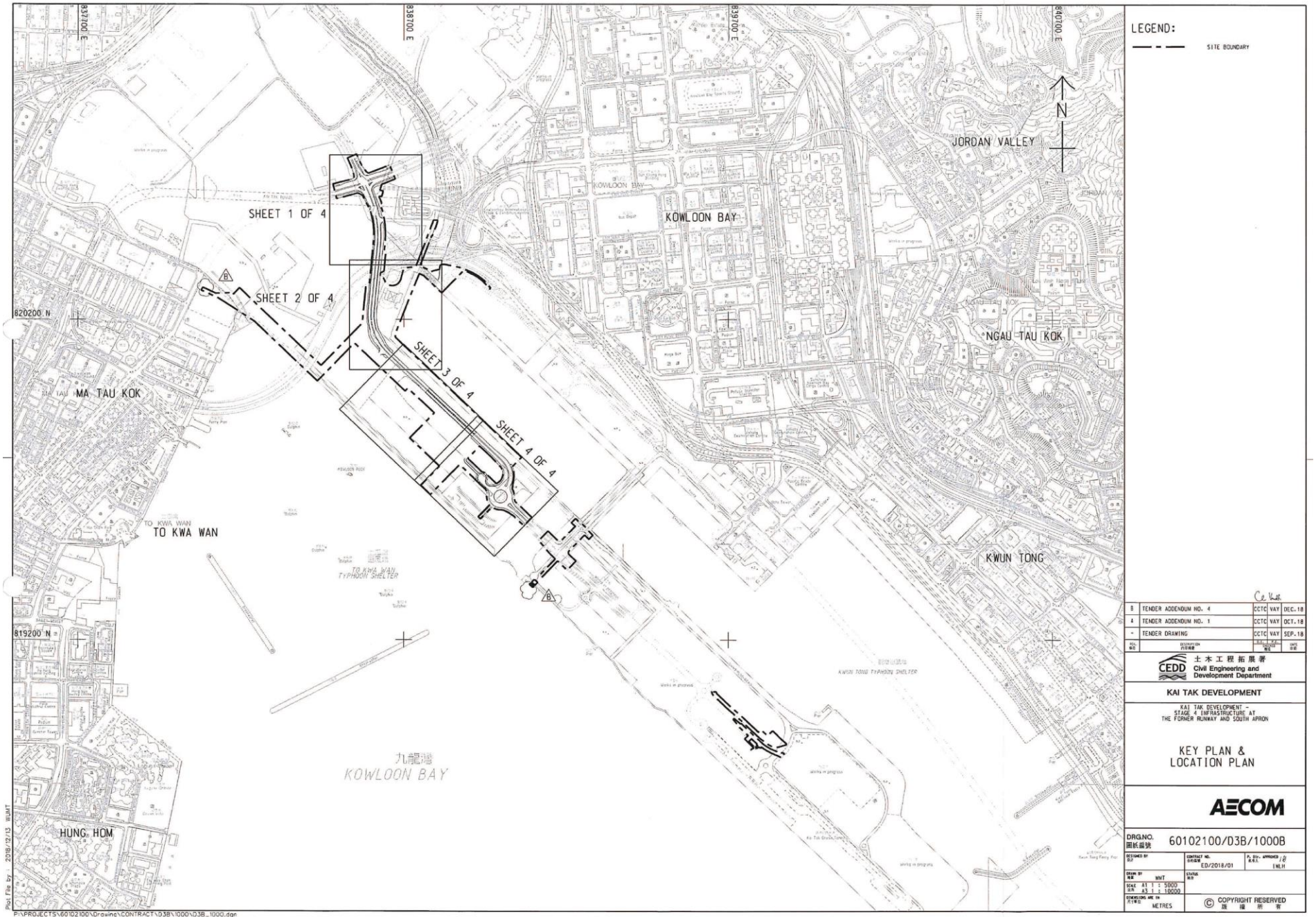


Figure 4 – Site Layout Plan

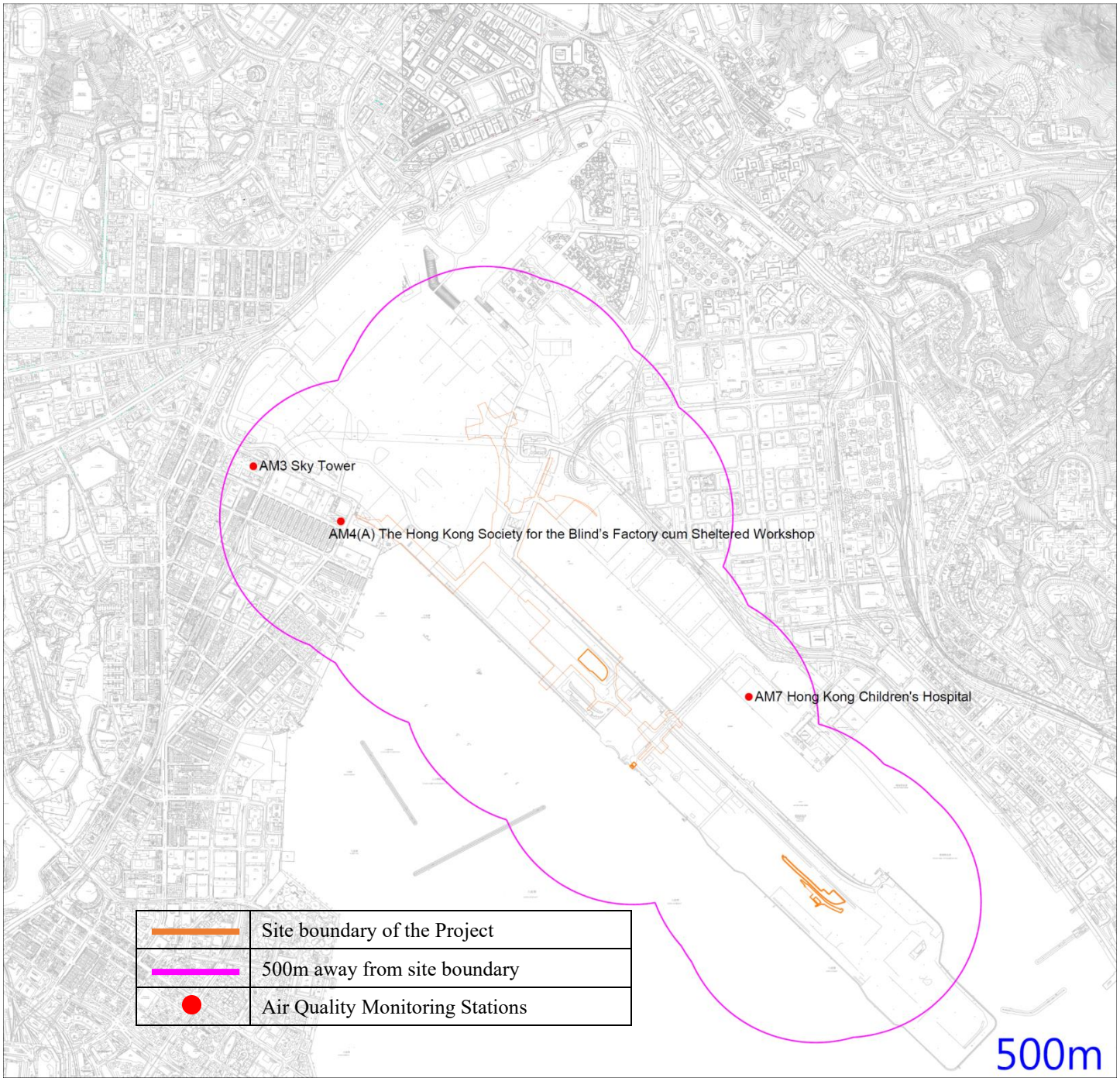


Figure 5 – Air Quality Monitoring Stations

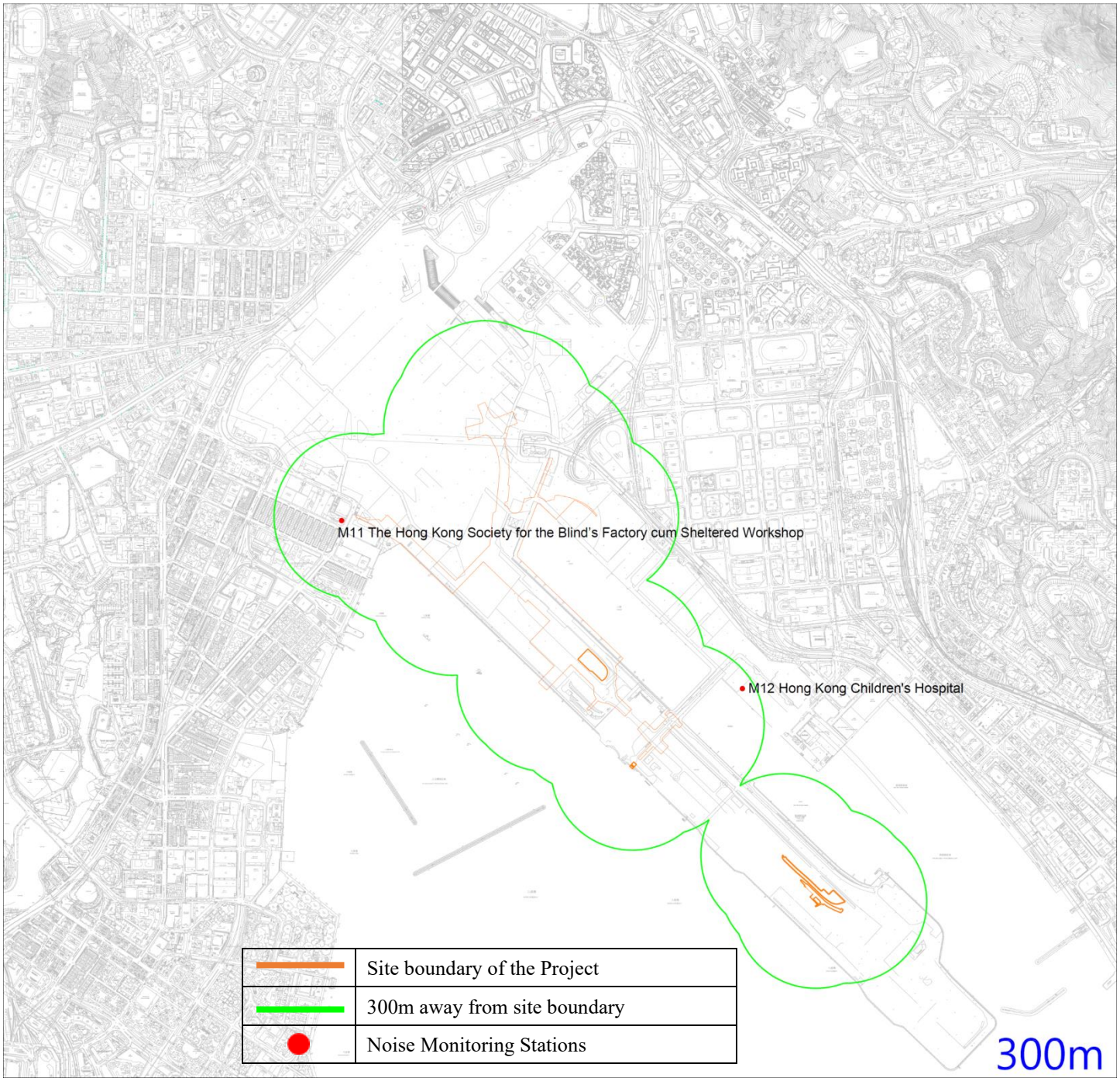
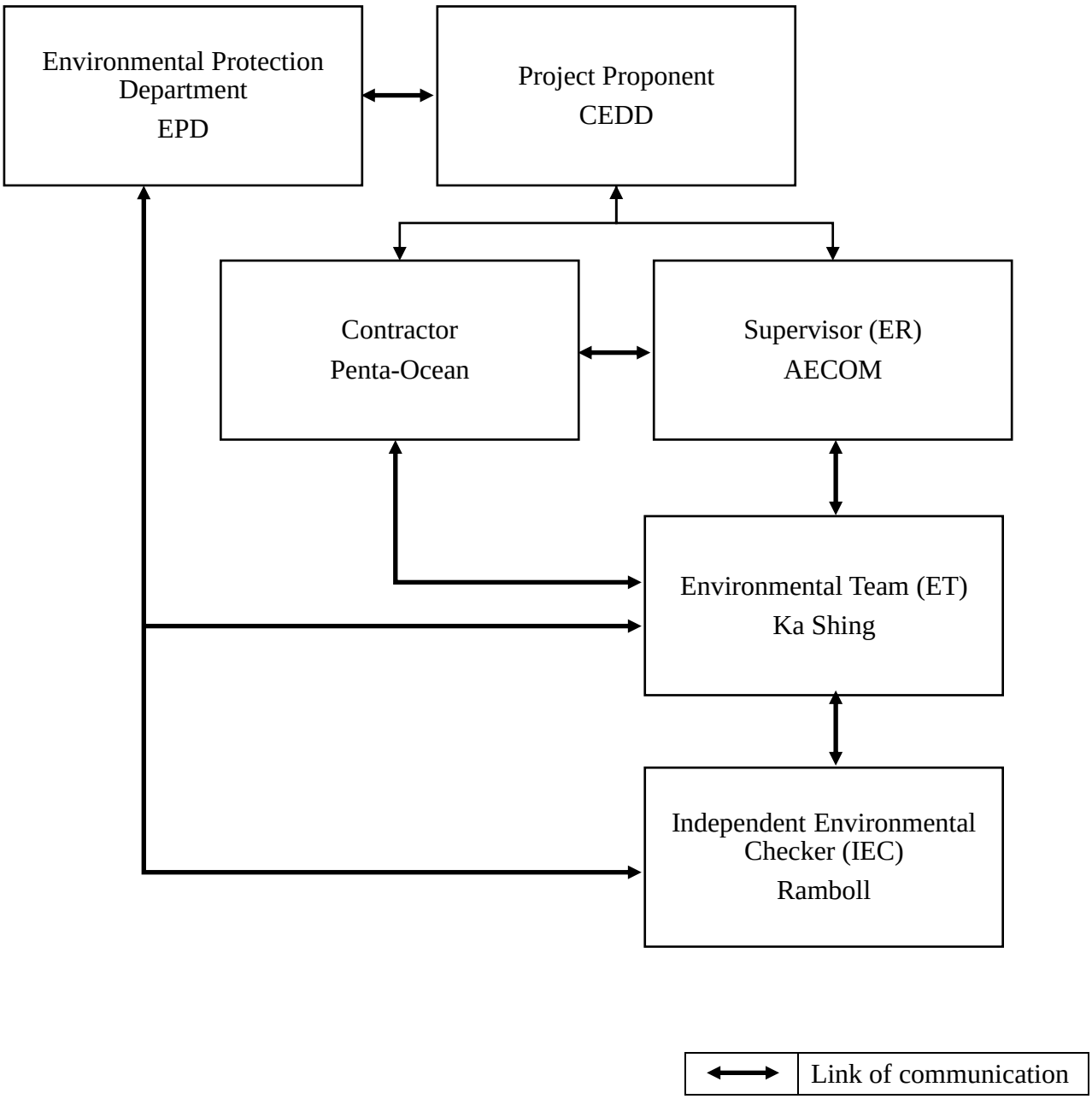


Figure 6 – Noise Monitoring Stations

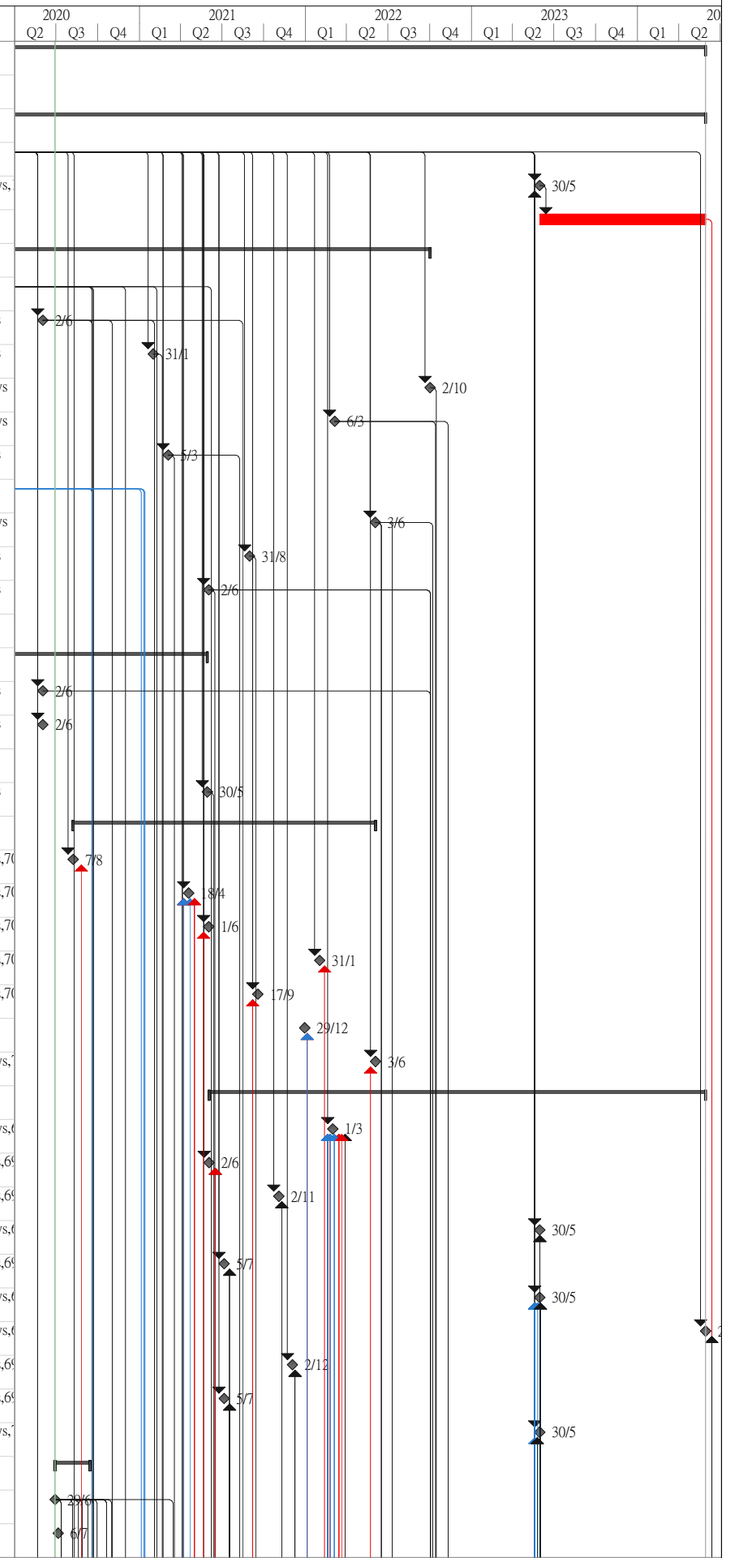
Appendix A – Organization Chart of EM&A Team


Environmental Protection Department
EPD
Project Proponent
CEDD
Contractor
Penta-Ocean
Supervisor (ER)
AECOM
Environmental Team (ET)
Ka Shing
Independent Environmental Checker (IEC)
Ramboll
Link of communication

Appendix B – Construction Programme

Contract No. ED/2018/01 KTD Project

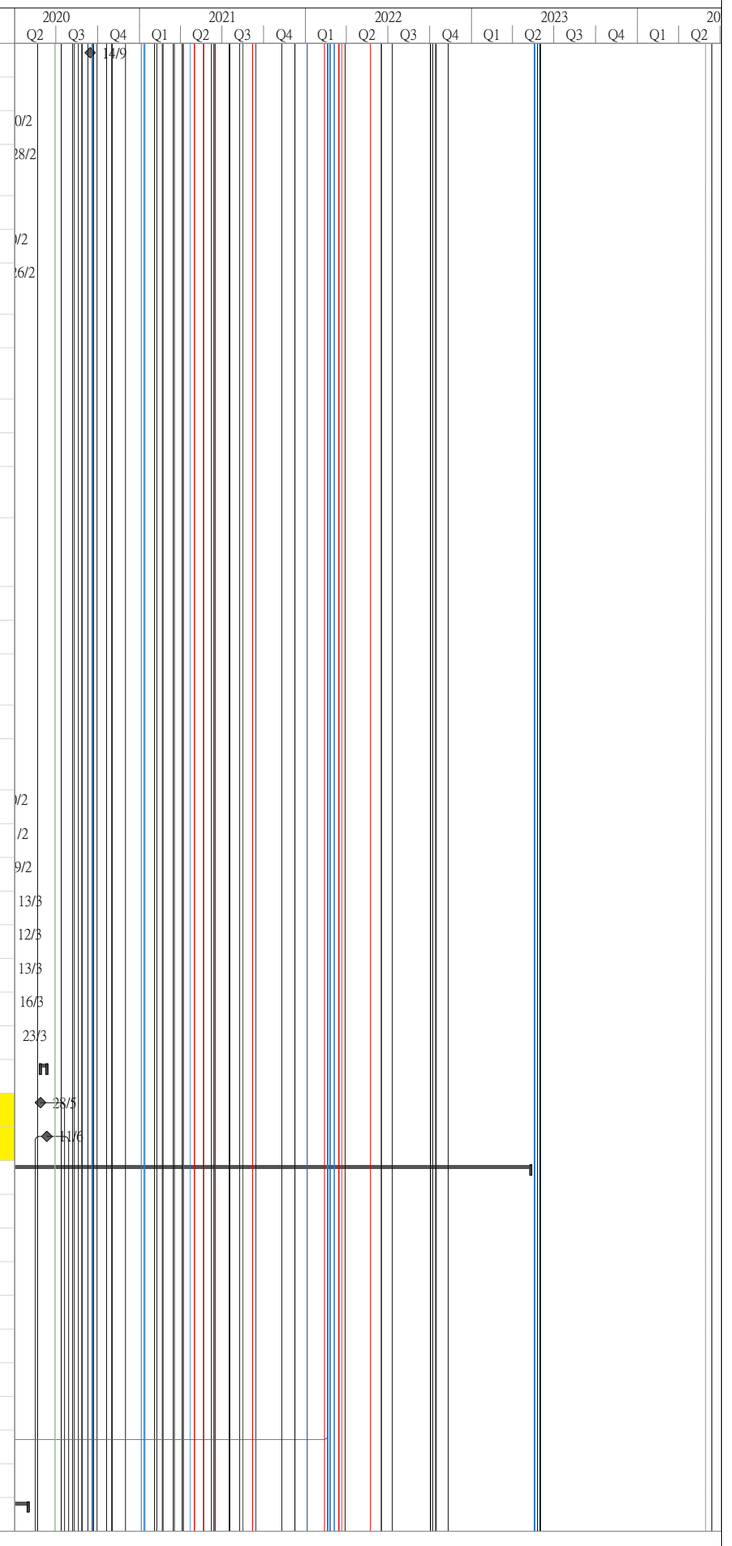
ID	Task Name	Duration	Actual Duration	Remaining Duration	Physical % Complete	Early Start	Early Finish	Actual Start	Actual Finish	Late Start	Late Finish	Total Slack	TRA	Predecessors
1	**Project Dates**	1841 days	5.03 days	1835.97 days	0%	Thu 16/5/19	Wed 29/5/24	Thu 16/5/19	NA	Thu 16/5/19	Wed 29/5/24	0 days	0 days	
2	Contract Date	0 days	0 days	0 days	0%	Thu 16/5/19	Thu 16/5/19	Thu 16/5/19	Thu 16/5/19	Thu 16/5/19	Thu 16/5/19	0 days	0 days	
3	Date of Commencement & Completion (CDP1: Item 3)	1827 days	0 days	1827 days	0%	Thu 30/5/19	Wed 29/5/24	Thu 30/5/19	NA	Thu 30/5/19	Wed 29/5/24	0 days	0 days	
4	Starting Date (CDPart1: Item 3)	0 days	0 days	0 days	100%	Thu 30/5/19	Thu 30/5/19	Thu 30/5/19	Thu 30/5/19	Thu 30/5/19	Thu 30/5/19	0 days	0 days	2FS+14 days
5	Completion Date	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	0 days	4FS+1461 days,
6	Establishment Work	365 days	0 days	365 days	0%	Wed 31/5/23	Wed 29/5/24	NA	NA	Wed 31/5/23	Wed 29/5/24	0 days	0 days	5
7	Schedule of Access Dates (CDP1: Item 3[TA No.1)	1221 days	1221 days	0 days	0%	Thu 30/5/19	Sun 2/10/22	Thu 30/5/19	NA	Thu 30/5/19	Sun 2/10/22	0 days	0 days	
8	Access Date - Part 1, 6A,6B,9A,9B	0 days	0 days	0 days	100%	Thu 30/5/19	Thu 30/5/19	Thu 30/5/19	Thu 30/5/19	Thu 30/5/19	Thu 30/5/19	0 days	0 days	4
9	Access Date - Part 2A,2C	0 days	0 days	0 days	0%	Tue 2/6/20	Tue 2/6/20	NA	NA	Tue 2/6/20	Tue 2/6/20	0 days	0 days	4FS+369 days
10	Access Date - Part 2B	0 days	0 days	0 days	0%	Sun 31/1/21	Sun 31/1/21	NA	NA	Sun 31/1/21	Sun 31/1/21	0 days	0 days	4FS+612 days
11	Access Date - Part 2E	0 days	0 days	0 days	0%	Sun 2/10/22	Sun 2/10/22	NA	NA	Sun 2/10/22	Sun 2/10/22	0 days	0 days	4FS+1221 days
12	Access Date - Part 3A	0 days	0 days	0 days	0%	Sun 6/3/22	Sun 6/3/22	NA	NA	Sun 6/3/22	Sun 6/3/22	0 days	0 days	4FS+1011 days
13	Access Date - Part 3B,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
14	Access Date - Part 3C,3D,3E,3G,3I	1 day	1 day	0 days	100%	Thu 31/10/19	Thu 31/10/19	Thu 31/10/19	Thu 31/10/19	Thu 31/10/19	Thu 31/10/19	0 days	0 days	
15	Access Date - Part 3F	0 days	0 days	0 days	0%	Fri 3/6/22	Fri 3/6/22	NA	NA	Fri 3/6/22	Fri 3/6/22	0 days	0 days	4FS+1100 days
16	Access Date - Part 3H,7A,7B,8,9 (TA No.1)	0 days	0 days	0 days	0%	Tue 31/8/21	Tue 31/8/21	NA	NA	Tue 31/8/21	Tue 31/8/21	0 days	0 days	4FS+824 days
17	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
18	Access Date - Area WA1	0 days	0 days	0 days	100%	Thu 30/5/19	Thu 30/5/19	Thu 30/5/19	Thu 30/5/19	Thu 30/5/19	Thu 30/5/19	0 days	0 days	4
19	Schedule of Time for Ordering (CDP1: Item Cl.B5)	695 days	0 days	695 days	0%	Fri 5/7/19	Sun 30/5/21	Fri 5/7/19	NA	Fri 5/7/19	Sun 30/5/21	0 days	0 days	
20	Time for Ordering "Section Subject to Excision" - Section 4	0 days	0 days	0 days	0%	Tue 2/6/20	Tue 2/6/20	NA	NA	Tue 2/6/20	Tue 2/6/20	0 days	0 days	4FS+368 days
21	Time for Ordering "Section Subject to Excision" - Section 8	0 days	0 days	0 days	0%	Tue 2/6/20	Tue 2/6/20	NA	NA	Tue 2/6/20	Tue 2/6/20	0 days	0 days	4FS+368 days
22	Time for Ordering "Section Subject to Excision" - Section 9	0 days	0 days	0 days	100%	Fri 5/7/19	Fri 5/7/19	Fri 5/7/19	Fri 5/7/19	Fri 5/7/19	Fri 5/7/19	0 days	0 days	4FS+35 days
23	Time for Ordering "Section Subject to Excision" - Section 10	0 days	0 days	0 days	0%	Sun 30/5/21	Sun 30/5/21	NA	NA	Sun 30/5/21	Sun 30/5/21	0 days	0 days	4FS+730 days
24	Schedule of Key Dates (CDP1: Item 3[TA No.1])	665 days	0 days	665 days	0%	Fri 7/8/20	Fri 3/6/22	NA	NA	Fri 7/8/20	Fri 3/6/22	0 days	0 days	
25	KD1	0 days	0 days	0 days	0%	Fri 7/8/20	Fri 7/8/20	NA	NA	Fri 7/8/20	Fri 7/8/20	-4 days	0 days	4FS+435 days,7
26	KD2	0 days	0 days	0 days	0%	Sun 18/4/21	Sun 18/4/21	NA	NA	Sun 18/4/21	Sun 18/4/21	0 days	0 days	4FS+689 days,7
27	KD3	0 days	0 days	0 days	0%	Tue 1/6/21	Tue 1/6/21	NA	NA	Tue 1/6/21	Tue 1/6/21	0 days	0 days	4FS+733 days,7
28	KD4	0 days	0 days	0 days	0%	Mon 31/1/22	Mon 31/1/22	NA	NA	Mon 31/1/22	Mon 31/1/22	0 days	0 days	4FS+977 days,7
29	KD5	0 days	0 days	0 days	0%	Fri 17/9/21	Fri 17/9/21	NA	NA	Fri 17/9/21	Fri 17/9/21	0 days	0 days	4FS+841 days,7
30	KD6	0 days	0 days	0 days	0%	Wed 29/12/21	Wed 29/12/21	NA	NA	Wed 29/12/21	Wed 29/12/21	0 days	0 days	706,883
31	KD7	0 days	0 days	0 days	0%	Fri 3/6/22	Fri 3/6/22	NA	NA	Fri 3/6/22	Fri 3/6/22	0 days	0 days	4FS+1100 days,7
32	Schedule of Section Completion (CDP1 Cl. X5)	1092 days	0 days	1092 days	0%	Wed 2/6/21	Wed 29/5/24	NA	NA	Wed 2/6/21	Wed 29/5/24	0 days	0 days	
33	Section Completion Date Section 1	0 days	0 days	0 days	0%	Tue 1/3/22	Tue 1/3/22	NA	NA	Tue 1/3/22	Tue 1/3/22	-13 days	0 days	4FS+1006 days,6
34	Section Completion Date Section 2	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,6
35	Section Completion Date Section 3	0 days	0 days	0 days	0%	Tue 2/11/21	Tue 2/11/21	NA	NA	Tue 2/11/21	Tue 2/11/21	0 days	0 days	4FS+887 days,6
36	Section Completion Date Section 4	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	0 days	4FS+1461 days,6
37	Section Completion Date Section 5	0 days	0 days	0 days	0%	Mon 5/7/21	Mon 5/7/21	NA	NA	Mon 5/7/21	Mon 5/7/21	0 days	0 days	4FS+767 days,6
38	Section Completion Date Section 6	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	0 days	4FS+1461 days,6
39	Section Completion Date 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	4FS+1826 days,6
40	Section Completion Date Section 8	0 days	0 days	0 days	0%	Thu 2/12/21	Thu 2/12/21	NA	NA	Thu 2/12/21	Thu 2/12/21	0 days	0 days	4FS+917 days,6
41	Section Completion Date Section 9	0 days	0 days	0 days	0%	Mon 5/7/21	Mon 5/7/21	NA	NA	Mon 5/7/21	Mon 5/7/21	0 days	0 days	4FS+767 days,6
42	Section Completion Date Section 10	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	0 days	4FS+1461 days,7
43	Pre-meeting of ACABAS	77 days	0 days	77 days	0%	Mon 29/6/20	Mon 14/9/20	NA	NA	Mon 6/7/20	Mon 14/9/20	0 days		
44	Pre-meeting of ACABAS	0 days	0 days	0 days	0%	Mon 29/6/20	Mon 29/6/20	NA	NA	Thu 23/7/20	Thu 23/7/20	24 days		
45	Task Force on Kai Tak Harbourfront Development Meeting	0 days	0 days	0 days	0%	Mon 6/7/20	Mon 6/7/20	NA	NA	Mon 6/7/20	Mon 6/7/20	0 days		



Title: Rev.11 Prog with Progress as of 22-May-20

Task	Summary	Inactive Milestone	Duration-only	Start-only	External Milestone	Critical Split	
Split	Project Summary	Inactive Summary	Manual Summary Rollup	Finish-only	Deadline	Progress	
Milestone	Inactive Task	Manual Task	Manual Summary	External Tasks	Critical	Manual Progress	

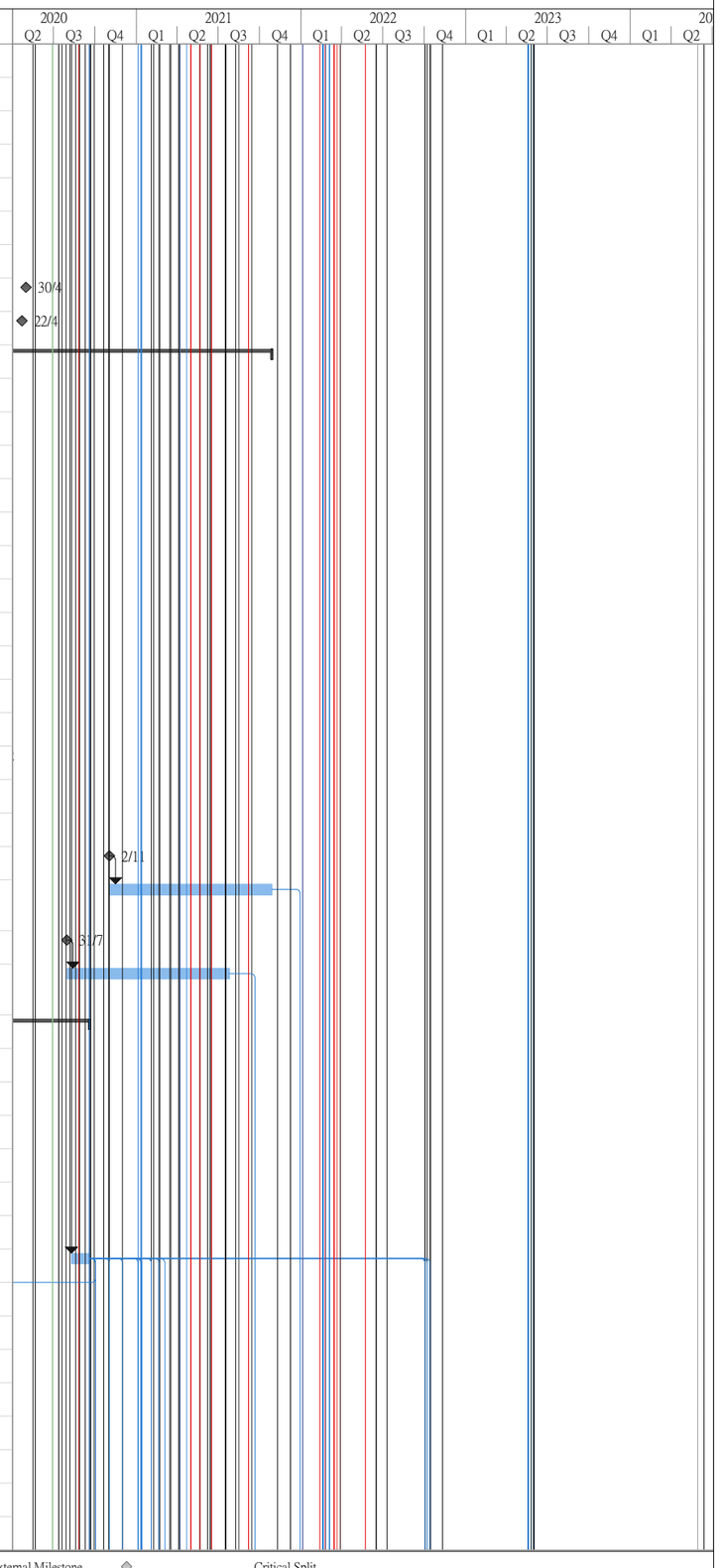
ID	Task Name	Duration	Actual Duration	Remaining Duration	Physical % Complete	Early Start	Early Finish	Actual Start	Actual Finish	Late Start	Late Finish	Total Slack	TRA	Predecessors
46	District Council Consultation	0 days	0 days	0 days	0%	Mon 14/9/20	Mon 14/9/20	NA	NA	Mon 14/9/20	Mon 14/9/20	0 days		
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		
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		
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		
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		
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		
57	EW No. 004: Late Commencement on Noise and Air Baseline Monitoring Delay the Northern Depressed Road CH1560 to 1720	0 days	0 days	0 days	100%	Mon 4/11/19	Mon 4/11/19	Mon 4/11/19	Mon 4/11/19	Mon 4/11/19	Mon 4/11/19	0 days		
58	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		
59	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		
61	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		
62	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		
63	EW No. 011: Additional Requirement for Special Arrangement for Design and Constructioon 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		
64	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		
65	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		
66	EW No. 016: Outbreak of Novel Coronavirus (Late Supply of Aggregate)	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		
67	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		
68	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		
69	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		
70	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		
71	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		
72	**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		
73	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		
74	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		
75	Project Submission	1457 days	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	
76	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
77	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		
78	Submit First Programme	20 days	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
79	Review and Comment by Project Manager	9 days	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
80	Revise and Resubmission of Works Programme	42 days	42 days	0 days	100%	Fri 14/6/19	Thu 25/7/19	Fri 14/6/19	Thu 25/7/19	Fri 14/6/19	Thu 25/7/19	0 days	0 days	79
81	Final Review and Acceptance of the First Programme by Project Manager	20 days	20 days	0 days	100%	Sat 27/7/19	Thu 15/8/19	Sat 27/7/19	Thu 15/8/19	Sat 27/7/19	Thu 15/8/19	0 days	0 days	80
82	Submit Health and Safety Management Plan (ACC Cl. D6(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 30/5/19	Tue 4/6/19	0 days	0.5 day	4
83	Submit Detailed Programme for Safety Risk (ER Part 7, Cl. 7.3.4)	34 days	34 days	0 days	100%	Mon 9/12/19	Sat 11/1/20	Mon 9/12/19	Sat 11/1/20	Mon 9/12/19	Sat 11/1/20	0 days	0.5 day	4
84	Submit Environmental Management Plan (ACC Cl. D20(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 30/5/19	Tue 4/6/19	0 days	0.5 day	4
85	Submit BIM Models Deliverables	262 days	262 days	0 days	0%	Tue 13/8/19	Thu 30/4/20	Tue 13/8/19	Thu 30/4/20	Tue 13/8/19	Thu 30/4/20	0 days		



Title: Rev.11 Prog with Progress as of 22-May-20

Task
Split
Milestone
Summary
Project Summary
Inactive Task
Inactive Milestone
Inactive Summary
Manual Task
Duration-only
Manual Summary Rollup
Manual Summary
Start-only
Finish-only
External Tasks
External Milestone
Deadline
Critical
Critical Split
Progress
Manual Progress

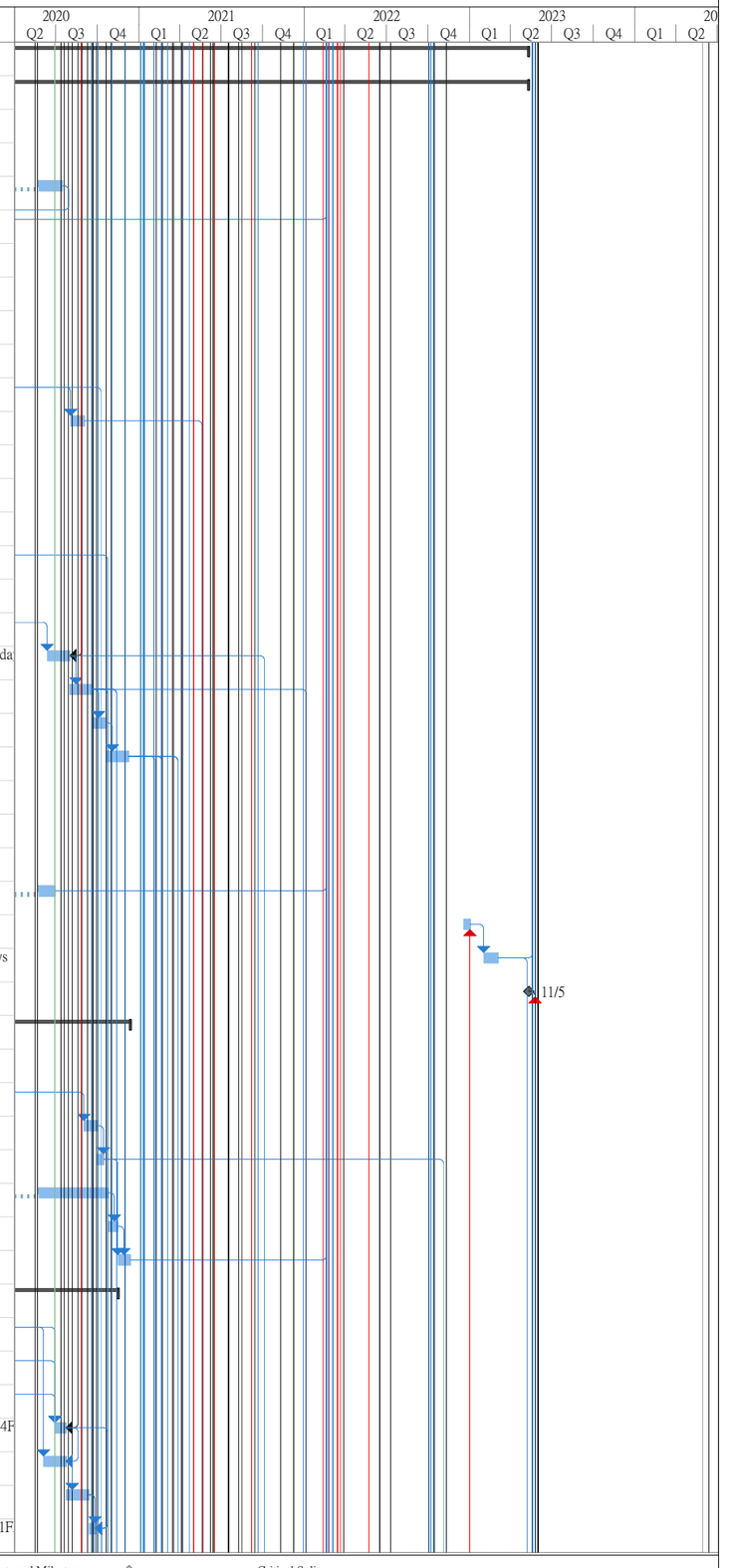
ID	Task Name	Duration	Actual Duration	Remaining Duration	Physical % Complete	Early Start	Early Finish	Actual Start	Actual Finish	Late Start	Late Finish	Total Slack	TRA	Predecessors
86	Existing Site Model (Topography)	46 days	46 days	0 days	100%	Tue 13/8/19	Fri 27/9/19	Tue 13/8/19	Fri 27/9/19	Tue 13/8/19	Fri 27/9/19	0 days	1 day	
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	Mon 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	Mon 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	Mon 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	Mon 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 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 30/4/20	Thu 30/4/20	0 days	1 day	
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	Wed 22/4/20	Wed 22/4/20	0 days	1 day	
95	BIM Deliverables Schedule	896 days	3.72 days	892.28 days	0%	Thu 16/5/19	Wed 27/10/21	Thu 16/5/19	NA	Thu 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 3/8/19	Sat 3/8/19	0 days	1 day	
97	BIM Execution Plan	0 days	0 days	0 days	100%	Sat 31/8/19	Sat 31/8/19	Sat 31/8/19	Sat 31/8/19	Sat 31/8/19	Sat 31/8/19	0 days	1 day	
98	BIM Submission Schedule	0 days	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	1 day	
99	BIM 360 License	0 days	0 days	0 days	100%	Sat 31/8/19	Sat 31/8/19	Sat 31/8/19	Sat 31/8/19	Sat 31/8/19	Sat 31/8/19	0 days	1 day	
100	BIM/Drawing Management Software System	0 days	0 days	0 days	100%	Sat 31/8/19	Sat 31/8/19	Sat 31/8/19	Sat 31/8/19	Sat 31/8/19	Sat 31/8/19	0 days	1 day	
101	CDE Setup	1 day	1 day	0 days	100%	Sat 31/8/19	Mon 9/9/19	Sat 31/8/19	Mon 9/9/19	Sat 31/8/19	Mon 9/9/19	0 days	1 day	
102	Clash Report Format	0 days	0 days	0 days	100%	Thu 12/9/19	Thu 12/9/19	Thu 12/9/19	Thu 12/9/19	Thu 12/9/19	Thu 12/9/19	0 days	1 day	
103	Monthly Report Format	0 days	0 days	0 days	100%	Thu 12/9/19	Thu 12/9/19	Thu 12/9/19	Thu 12/9/19	Thu 12/9/19	Thu 12/9/19	0 days	1 day	
104	Quality Assurance Plan for BIM	0 days	0 days	0 days	100%	Mon 30/9/19	Mon 30/9/19	Mon 30/9/19	Mon 30/9/19	Mon 30/9/19	Mon 30/9/19	0 days	1 day	
105	BIM Training Plan	0 days	0 days	0 days	100%	Thu 10/10/19	Thu 10/10/19	Thu 10/10/19	Thu 10/10/19	Thu 10/10/19	Thu 10/10/19	0 days	1 day	
106	BIM Training Schedule for CIC Training	0 days	0 days	0 days	100%	Mon 30/9/19	Mon 30/9/19	Mon 30/9/19	Mon 30/9/19	Mon 30/9/19	Mon 30/9/19	0 days	1 day	
107	Monthly BIM Progress Report	0 days	0 days	0 days	100%	Thu 16/5/19	Tue 31/12/19	Thu 16/5/19	Tue 31/12/19	Thu 16/5/19	Tue 31/12/19	0 days	1 day	
108	Monthly Clash Report	1 day	1 day	0 days	100%	Tue 31/3/20	Tue 31/3/20	Tue 31/3/20	Tue 31/3/20	Tue 31/3/20	Tue 31/3/20	0 days	1 day	
109	BIM Object Libraries	1 day	1 day	0 days	100%	Thu 12/9/19	Thu 12/9/19	Thu 12/9/19	Thu 12/9/19	Thu 12/9/19	Thu 12/9/19	0 days	1 day	
110	Trees Preservation and Removal Proposal (TPRP) for tress along promenade open space Submission	0 days	0 days	0 days	0%	Mon 2/11/20	Mon 2/11/20	NA	NA	Sun 17/1/21	Sun 17/1/21	63 days	1 day	
111	Trees Preservation and Removal Proposal (TPRP) for tress along promenade open space Submission Comment & Approval by Relevant Government Authories	360 days	0 days	360 days	0%	Mon 2/11/20	Wed 27/10/21	NA	NA	Sun 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	Wed 30/9/20	Wed 30/9/20	52 days	1 day	
113	Trees Preservation and Removal Proposal (TPRP) for tress along Sing Kai Road Submission Comment & Approval by Relevant Government Authories	360 days	0 days	360 days	0%	Fri 31/7/20	Sun 25/7/21	NA	NA	Wed 30/9/20	Fri 24/9/21	61 days	1 day	112
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	NA	Thu 30/5/19	Fri 25/9/20	7 days		
115	Submit Traffic Engineering Consultant and TTM Team Leader (PS1.16(3))	14 days	14 days	0 days	100%	Thu 30/5/19	Wed 12/6/19	Thu 30/5/19	Wed 12/6/19	Thu 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 30/5/19	Wed 5/6/19	0 days	1 day	4
117	Approve of EP Co-ordinator by Project Manager (PS Cl. 1.18N(2))	14 days	14 days	0 days	100%	Thu 6/6/19	Wed 19/6/19	Thu 6/6/19	Wed 19/6/19	Thu 6/6/19	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 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 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 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	Mon 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 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 30/5/19	Thu 4/7/19	0 days	0.5 days	4
124	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 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 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 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 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 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 30/5/19	Thu 18/7/19	0 days	0 days	4



Title: Rev.11 Prog with Progress as of 22-May-20

Task | Split | Milestone | Summary | Project Summary | Inactive Task | Inactive Milestone | Inactive Summary | Manual Task | Duration-only | Manual Summary Rollup | Manual Summary | Start-only | Finish-only | External Tasks | External Milestone | Deadline | Critical | Critical Split | Progress | Manual Progress

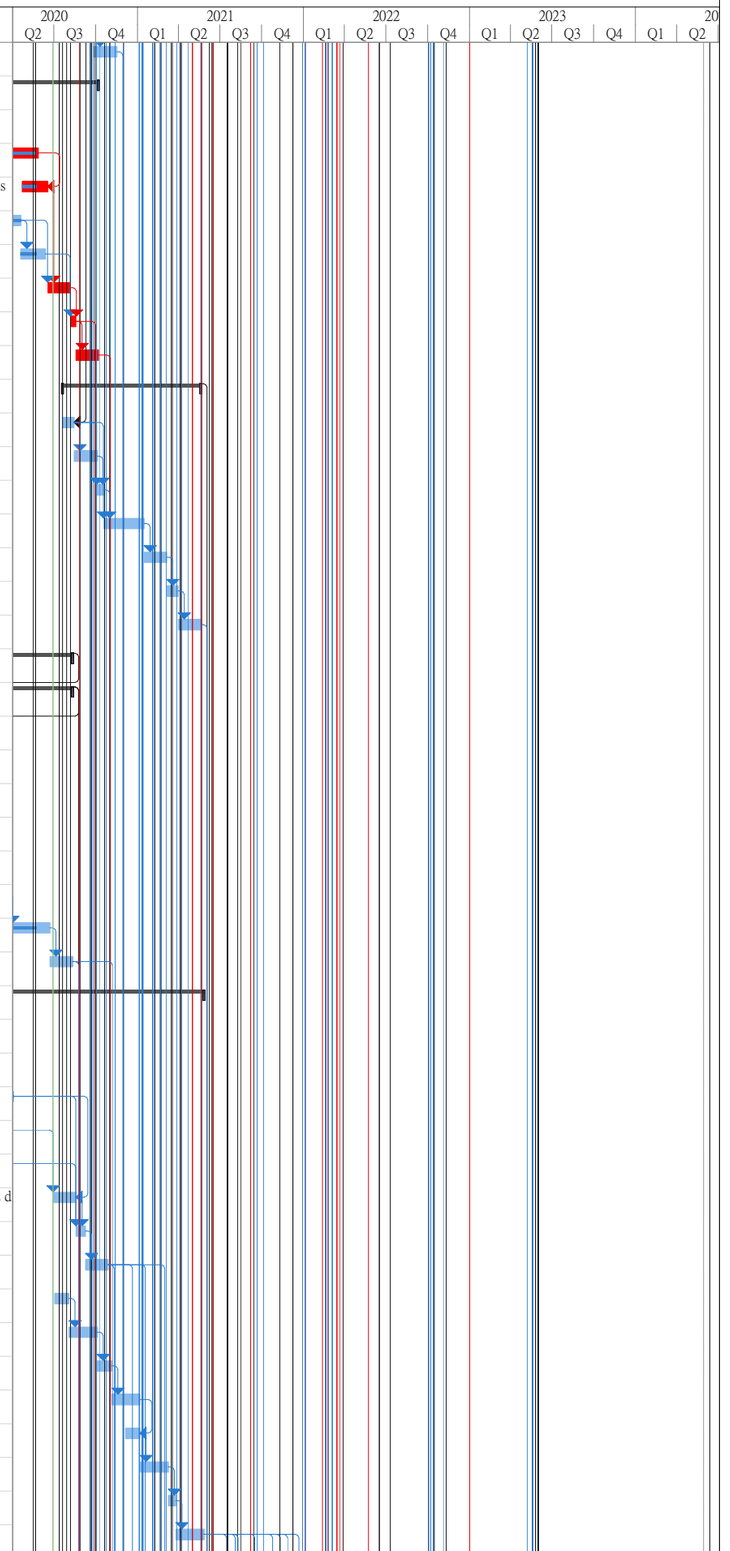
ID	Task Name	Duration	Actual Duration	Remaining Duration	Physical % Complete	Early Start	Early Finish	Actual Start	Actual Finish	Late Start	Late Finish	Total Slack	TRA	Predecessors
130	Permanent Works Design Submission	1457 days	373.08 days	1083.92 days	0%	Thu 16/5/19	Thu 11/5/23	Thu 16/5/19	NA	Thu 16/5/19	Thu 11/5/23	0 days		
131	General Design Submission	1443 days	955.46 days	487.54 days	0%	Thu 30/5/19	Thu 11/5/23	Thu 30/5/19	NA	Thu 30/5/19	Thu 11/5/23	0 days		4
132	Project Design Plan (Draft)	16 days	16 days	0 days	100%	Thu 30/5/19	Fri 14/6/19	Thu 30/5/19	Fri 14/6/19	Thu 30/5/19	Fri 14/6/19	0 days	1 day	4
133	Project Design Plan (Draft) Comment by PM	14 days	14 days	0 days	100%	Sat 15/6/19	Fri 28/6/19	Sat 15/6/19	Fri 28/6/19	Sat 15/6/19	Fri 28/6/19	0 days	1 day	
134	Address Comments	120 days	66 days	54 days	55%	Tue 2/7/19	Wed 15/7/20	Tue 2/7/19	NA	Tue 2/7/19	Thu 11/5/23	1030 d...	1 days	132
135	Project Design Plan (Final)	54 days	54 days	0 days	100%	Thu 5/9/19	Tue 29/10/19	Thu 5/9/19	Tue 29/10/19	Thu 5/9/19	Tue 29/10/19	0 days	1 days	134
136	Design Memorandum (include E&M Provision) (Draft)	26 days	26 days	0 days	100%	Tue 4/6/19	Sat 29/6/19	Tue 4/6/19	Sat 29/6/19	Tue 4/6/19	Sat 29/6/19	0 days	1 days	132
137	Address Comments	15 days	15 days	0 days	100%	Thu 1/8/19	Thu 15/8/19	Thu 1/8/19	Thu 15/8/19	Thu 1/8/19	Thu 15/8/19	0 days	1 days	136
138	Design Memorandum Include E&M Provision (Final)	59 days	59 days	0 days	100%	Tue 23/7/19	Sun 17/11/19	Tue 23/7/19	Sun 17/11/19	Tue 23/7/19	Sun 17/11/19	0 days	1 days	137
139	Traffic Impact Assessment(Draft)	62 days	62 days	0 days	100%	Wed 18/9/19	Mon 18/11/19	Wed 18/9/19	Mon 18/11/...	Wed 18/9/19	Mon 18/11/19	0 days	1 day	4
140	Address Comments	16 days	16 days	0 days	100%	Mon 18/11/19	Wed 4/12/19	Mon 18/11/19	Wed 4/12/19	Mon 18/11/19	Wed 4/12/19	0 days	0.5 days	139
141	Traffic Impact Assessment(Final)	30 days	0 days	30 days	0%	Mon 3/8/20	Tue 1/9/20	NA	NA	Sat 24/4/21	Sun 23/5/21	264 days	0.5 days	140
142	ACABAS (Draft)	69 days	69 days	0 days	100%	Thu 30/5/19	Tue 6/8/19	Thu 30/5/19	Tue 6/8/19	Thu 30/5/19	Tue 6/8/19	0 days	2 days	4
143	Address Committee's comments	30 days	30 days	0 days	100%	Wed 7/8/19	Thu 5/9/19	Wed 7/8/19	Thu 5/9/19	Wed 7/8/19	Thu 5/9/19	0 days	2 days	142
144	ACABAS Re-submission Preparation & Submission	61 days	61 days	0 days	100%	Fri 6/9/19	Tue 5/11/19	Fri 6/9/19	Tue 5/11/19	Fri 6/9/19	Tue 5/11/19	0 days	2 days	143
145	ACABAS Submission Approved	63 days	63 days	0 days	100%	Wed 6/11/19	Tue 7/1/20	Wed 6/11/19	Tue 7/1/20	Wed 6/11/19	Tue 7/1/20	0 days	2 days	144
146	VCAB and DAP Submission	22 days	22 days	0 days	100%	Mon 10/2/20	Mon 2/3/20	Mon 10/2/20	Mon 2/3/20	Mon 10/2/20	Mon 2/3/20	0 days	2 days	4
147	Comment by PM and Relevant Authorities	21 days	21 days	0 days	100%	Tue 3/3/20	Mon 23/3/20	Tue 3/3/20	Mon 23/3/20	Tue 3/3/20	Mon 23/3/20	0 days	2 days	146
148	Stage 1: VCAB and DAP Submission	50 days	0 days	50 days	0%	Fri 12/6/20	Fri 31/7/20	NA	NA	Sat 4/7/20	Sat 22/8/20	22 days	2 days	147,44FF+21 da
149	Comment by PM and Relevant Authorities	50 days	0 days	50 days	0%	Sat 1/8/20	Sat 19/9/20	NA	NA	Sun 23/8/20	Sun 11/10/20	22 days	2 days	148
150	Stage 2: VCAB and DAP Submission	30 days	0 days	30 days	0%	Sun 20/9/20	Mon 19/10/20	NA	NA	Fri 13/11/20	Sat 12/12/20	54 days		149
151	Comment by PM and Relevant Authorities	50 days	0 days	50 days	0%	Tue 20/10/20	Tue 8/12/20	NA	NA	Sun 13/12/20	Sun 31/1/21	54 days		150
152	Draft Utility Report Submission	19 days	19 days	0 days	100%	Mon 2/9/19	Fri 20/9/19	Mon 2/9/19	Fri 20/9/19	Mon 2/9/19	Fri 20/9/19	0 days	2 days	
153	Draft Utility Report Comment & Approval	17 days	17 days	0 days	100%	Sat 21/9/19	Mon 7/10/19	Sat 21/9/19	Mon 7/10/19	Sat 21/9/19	Mon 7/10/19	0 days	2 days	
154	Final Utility Report Submission	52 days	52 days	0 days	100%	Mon 2/12/19	Wed 22/1/20	Mon 2/12/19	Wed 22/1/20	Mon 2/12/19	Wed 22/1/20	0 days	2 days	
155	Final Utility Report Submission Comment & Approval	38 days	0 days	38 days	0%	Thu 30/1/20	Mon 29/6/20	Thu 30/1/20	NA	Thu 30/1/20	Tue 1/3/22	610 days	2 days	154
156	Operational and Maintenace Manual (Draft) Submission	14 days	0 days	14 days	0%	Mon 19/12/22	Sun 1/1/23	NA	NA	Sat 25/2/23	Fri 10/3/23	68 days	2 days	1556
157	Operational and Maintenace Manual (Final) Submission	32 days	0 days	32 days	0%	Wed 1/2/23	Sat 4/3/23	NA	NA	Mon 10/4/23	Thu 11/5/23	68 days	2 days	156FS+30 days
158	As-built and As-fabrication Drawing Submission	0 days	0 days	0 days	0%	Thu 11/5/23	Thu 11/5/23	NA	NA	Thu 11/5/23	Thu 11/5/23	0 days	2 days	1558
159	Site Investigation	561 days	167.98 days	393.02 days	0%	Sat 1/6/19	Sat 12/12/20	Sat 1/6/19	NA	Sat 1/6/19	Tue 1/3/22	444 days		
160	Ground Investigation Proposal (Draft)	56 days	56 days	0 days	100%	Sat 1/6/19	Fri 26/7/19	Sat 1/6/19	Fri 26/7/19	Sat 1/6/19	Fri 26/7/19	0 days	1 days	4
161	Submit & endorse by Gov. Depts and PM	6 days	6 days	0 days	100%	Sat 27/7/19	Thu 1/8/19	Sat 27/7/19	Thu 1/8/19	Sat 27/7/19	Thu 1/8/19	0 days	1 days	160
162	Ground Investigation Proposal (Final)	30 days	0 days	30 days	0%	Tue 1/9/20	Wed 30/9/20	NA	NA	Mon 20/12/21	Tue 18/1/22	475 days	1 days	161
163	Submit and endorse by Gov. Depts and PM	14 days	0 days	14 days	0%	Thu 1/10/20	Wed 14/10/20	NA	NA	Wed 19/1/22	Tue 1/2/22	475 days	1 days	162
164	Supervise the SI Carry Out on Site	199 days	44 days	155 days	22%	Sat 10/8/19	Sat 24/10/20	Sat 10/8/19	NA	Sat 10/8/19	Tue 11/1/22	444 days	4 days	161
165	Submit SI Report(Draft) for Comment	21 days	0 days	21 days	0%	Sun 25/10/20	Sat 14/11/20	NA	NA	Wed 12/1/22	Tue 1/2/22	444 days	1 days	164
166	Submit and endorse SI Report(Final) by Project Manager	28 days	0 days	28 days	0%	Sun 15/11/20	Sat 12/12/20	NA	NA	Wed 2/2/22	Tue 1/3/22	444 days	1 days	165,163
167	Lifts (LT3 & LT4),Staircase and Associated Works (Structure)	431 days	165.12 days	265.88 days	0%	Thu 12/9/19	Sun 15/11/20	Thu 12/9/19	NA	Thu 12/9/19	Thu 3/12/20	18 days		
168	Prepare AIP Submission with E&M provision (Draft)	75 days	75 days	0 days	100%	Thu 12/9/19	Mon 25/11/19	Thu 12/9/19	Mon 25/11/...	Thu 12/9/19	Mon 25/11/19	0 days	3 days	
169	Submit & endorse by PM and Statutory Authorities/Gov. Dept	21 days	21 days	0 days	100%	Tue 26/11/19	Mon 16/12/19	Tue 26/11/19	Mon 16/12/19	Tue 26/11/19	Mon 16/12/19	0 days	0.5 days	168
170	Submit & endorse by Statutory Authorities/Gov. Dept	22 days	22 days	0 days	100%	Fri 28/2/20	Fri 20/3/20	Fri 28/2/20	Fri 20/3/20	Fri 28/2/20	Fri 20/3/20	0 days	2 days	168
171	Prepare AIP and ICE certification (Final)	25 days	0 days	25 days	0%	Mon 29/6/20	Thu 23/7/20	NA	NA	Fri 10/7/20	Mon 3/8/20	11 days	0 days	168,169,170,44F
172	Prepare DDA and ICE certification (Draft)	50 days	0 days	50 days	0%	Thu 4/6/20	Thu 23/7/20	NA	NA	Mon 15/6/20	Mon 3/8/20	11 days	4 days	168,171FF
173	Submit & endorse by PM and Statutory Authorities/Gov. Dept	50 days	0 days	50 days	0%	Fri 24/7/20	Fri 11/9/20	NA	NA	Tue 4/8/20	Tue 22/9/20	11 days	3 days	172
174	Prepare DDA for and ICE certification (Final)	15 days	0 days	15 days	0%	Sat 12/9/20	Sat 26/9/20	NA	NA	Wed 30/9/20	Wed 14/10/20	18 days	1 days	173,145FF,171F



Title: Rev.11 Prog with Progress as of 22-May-20

Task
Split
Milestone
Summary
Project Summary
Inactive Task
Inactive Milestone
Inactive Summary
Manual Task
Duration-only
Manual Summary Rollup
Manual Summary
Start-only
Finish-only
External Tasks
External Milestone
Deadline
Critical
Critical Split
Progress
Manual Progress

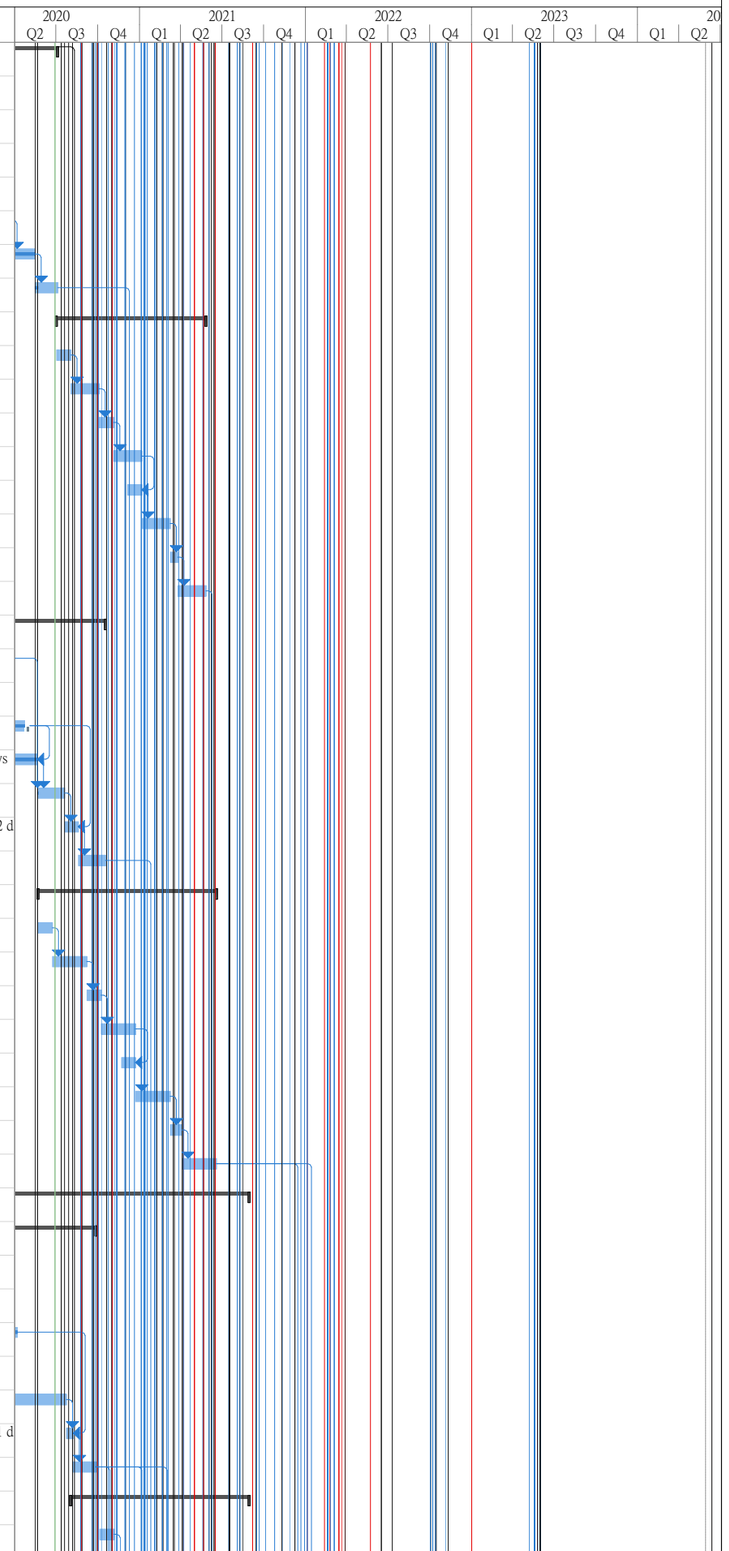
ID	Task Name	Duration	Actual Duration	Remaining Duration	Physical % Complete	Early Start	Early Finish	Actual Start	Actual Finish	Late Start	Late Finish	Total Slack	TRA	Predecessors
175	Submit & endorse by PM and Statutory Authorities/Gov. Dept	50 days	0 days	50 days	0%	Sun 27/9/20	Sun 15/11/20	NA	NA	Thu 15/10/20	Thu 3/12/20	18 days	3 days	174
176	Noise barrier fronting to 4B5 at Rd D3A & Bus Lay By (Section 5&9)	338 days	215.23 days	122.77 days	0%	Mon 4/11/19	Tue 6/10/20	Mon 4/11/19	NA	Mon 4/11/19	Wed 7/10/20	1 day		
177	Prepare AIP Submission (Draft)	38 days	38 days	0 days	100%	Mon 4/11/19	Wed 11/12/19	Mon 4/11/19	Wed 11/12/...	Mon 4/11/19	Wed 11/12/19	0 days	2 days	
178	Submit & endorse by PM and Statutory Authorities/Gov. Dept	167 days	162 days	5 days	97%	Thu 12/12/19	Tue 26/5/20	Thu 12/12/19	NA	Thu 12/12/19	Wed 27/5/20	1 day		177
179	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	NA	Wed 22/4/20	Wed 17/6/20	1 day		178FF+21 days
180	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	
181	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
182	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
183	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
184	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
185	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		
186	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
187	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
188	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
189	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
190	Submit & endorse by PM and Statutory Authorities/Gov. Dept	50 days	0 days	50 days	0%	Fri 15/1/21	Fri 5/3/21	NA	NA	Tue 26/1/21	Tue 16/3/21	11 days	0.5 days	189
191	Prepare DDA and ICE certification (Final)	25 days	0 days	25 days	0%	Sat 6/3/21	Tue 30/3/21	NA	NA	Wed 17/3/21	Sat 10/4/21	11 days	2 days	190
192	Submit & endorse by PM and Statutory Authorities/Gov. Dept	50 days	0 days	50 days	0%	Wed 31/3/21	Wed 19/5/21	NA	NA	Sun 11/4/21	Sun 30/5/21	11 days	1 day	191
193	Road D3 Bridge & Approach Ramps	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		4
194	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		
195	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
196	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
197	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
198	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
199	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
200	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
201	Prepare DDA for and ICE certification (Include P02-BP2 Remedial Pile) (Contractor Bear DDA Approval Risk)	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
202	Submit & endorse by PM and Statutory Authorities/Gov. Dept (Contractor Bear DDA Approval Risk)	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
203	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		
204	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	Sat 7/9/19	Thu 30/5/19	Sat 7/9/19	0 days	1 day	
205	Submit & endorse by PM and Statutory Authorities/Gov. Dept	19 days	19 days	0 days	100%	Mon 9/9/19	Fri 27/9/19	Mon 9/9/19	Fri 27/9/19	Mon 9/9/19	Fri 27/9/19	0 days	1 day	204
206	Prepare AIP and ICE certification (Final)	135 days	135 days	0 days	100%	Wed 20/11/19	Thu 2/4/20	Wed 20/11/19	Thu 2/4/20	Wed 20/11/19	Thu 2/4/20	0 days	3 days	205
207	Prepare DDA and ICE certification (Draft)	222 days	222 days	0 days	100%	Fri 19/7/19	Tue 25/2/20	Fri 19/7/19	Tue 25/2/20	Fri 19/7/19	Tue 25/2/20	0 days	3 days	205
208	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
209	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
210	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
211	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
212	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	
213	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
214	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
215	Submit & endorse by PM and Statutory Authorities/Gov. Dept	62 days	0 days	62 days	0%	Thu 5/11/20	Tue 5/1/21	NA	NA	Thu 31/12/20	Tue 2/3/21	56 days	2 days	214
216	Prepare DDA (E&M works) and ICE certification (Draft)	32 days	0 days	32 days	0%	Sat 5/12/20	Tue 5/1/21	NA	NA	Sat 30/1/21	Tue 2/3/21	56 days	2 days	215FF
217	Submit & endorse by PM and Statutory Authorities/Gov. Dept	62 days	0 days	62 days	0%	Wed 6/1/21	Mon 8/3/21	NA	NA	Wed 3/3/21	Mon 3/5/21	56 days	2 days	216
218	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	NA	Tue 4/5/21	Thu 20/5/21	56 days	2 days	217
219	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



Title: Rev.11 Prog with Progress as of 22-May-20

Task
Split
Milestone
Summary
Project Summary
Inactive Task
Inactive Milestone
Inactive Summary
Manual Task
Duration-only
Manual Summary Rollup
Manual Summary
Start-only
Finish-only
External Tasks
External Milestone
Deadline
Critical
Critical Split
Progress
Manual Progress

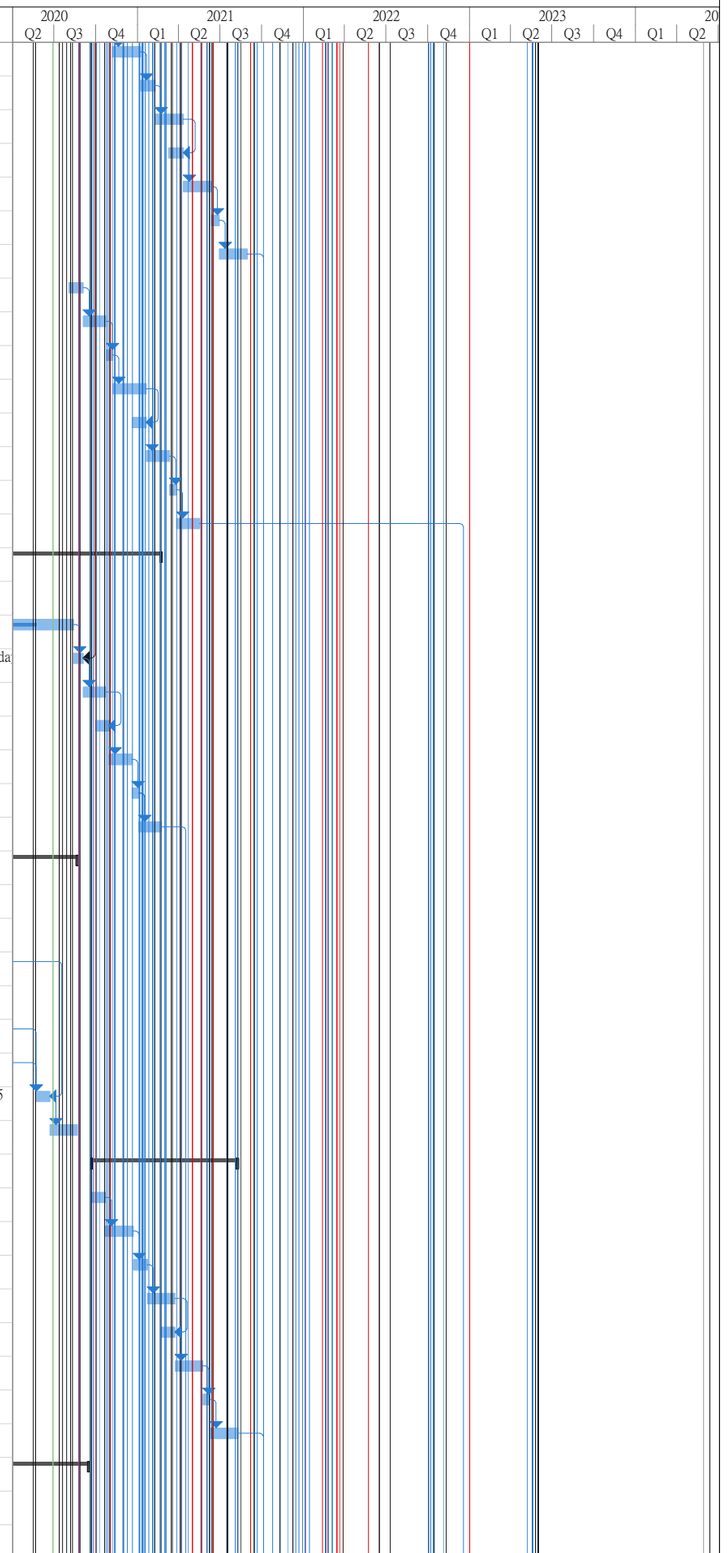
ID	Task Name	Duration	Actual Duration	Remaining Duration	Physical % Complete	Early Start	Early Finish	Actual Start	Actual Finish	Late Start	Late Finish	Total Slack	TRA	Predecessors
220	D3 North Approach Ramp (Structure)	398 days	348.95 days	49.05 days	0%	Mon 3/6/19	Sat 4/7/20	Mon 3/6/19	NA	Mon 3/6/19	Thu 8/10/20	96 days		
221	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
222	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
223	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	Tue 6/8/19	Thu 19/12/19	0 days	0 days	221,222
224	Prepare DDA (Draft) with ICE certification	66 days	66 days	0 days	100%	Fri 19/7/19	Thu 20/2/20	Fri 19/7/19	Thu 20/2/20	Fri 19/7/19	Thu 20/2/20	0 days	5 days	221,223FF
225	Submit & endorse by PM/Statutory Authorities/Gov. Dept	31 days	31 days	0 days	100%	Mon 20/1/20	Mon 23/3/20	Mon 20/1/20	Mon 23/3/20	Mon 20/1/20	Mon 23/3/20	0 days	3 days	224
226	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
227	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
228	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		
229	Prepare AIP (E&M works) and ICE certification (Draft)	32 days	0 days	32 days	0%	Thu 2/7/20	Sun 2/8/20	NA	NA	Fri 27/11/20	Mon 28/12/20	148 days	2 days	
230	Submit & endorse by PM and Statutory Authorities/Gov. Dept	62 days	0 days	62 days	0%	Mon 3/8/20	Sat 3/10/20	NA	NA	Tue 29/12/20	Sun 28/2/21	148 days	2 days	229
231	Prepare AIP (E&M works) and ICE certification (Final)	32 days	0 days	32 days	0%	Sun 4/10/20	Wed 4/11/20	NA	NA	Mon 1/3/21	Thu 1/4/21	148 days	2 days	230
232	Submit & endorse by PM and Statutory Authorities/Gov. Dept	62 days	0 days	62 days	0%	Thu 5/11/20	Tue 5/1/21	NA	NA	Fri 2/4/21	Wed 2/6/21	148 days	2 days	231
233	Prepare DDA (E&M works) and ICE certification (Draft)	32 days	0 days	32 days	0%	Sat 5/12/20	Tue 5/1/21	NA	NA	Sun 2/5/21	Wed 2/6/21	148 days	2 days	232FF
234	Submit & endorse by PM and Statutory Authorities/Gov. Dept	62 days	0 days	62 days	0%	Wed 6/1/21	Mon 8/3/21	NA	NA	Thu 3/6/21	Tue 3/8/21	148 days	2 days	233
235	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	NA	Wed 4/8/21	Fri 20/8/21	148 days	2 days	234
236	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
237	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		
238	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	
239	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
240	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
241	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
242	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
243	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
244	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
245	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		
246	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	
247	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
248	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
249	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
250	Prepare DDA (E&M works) and ICE certification (Draft)	31 days	0 days	31 days	0%	Sun 22/11/20	Tue 22/12/20	NA	NA	Thu 20/5/21	Sat 19/6/21	179 days	1 day	249FF
251	Submit & endorse by PM and Statutory Authorities/Gov. Dept	76 days	0 days	76 days	0%	Wed 23/12/20	Mon 8/3/21	NA	NA	Sun 20/6/21	Fri 3/9/21	179 days	1 day	250
252	Prepare DDA (E&M works) and ICE certification (Final)	26 days	0 days	26 days	0%	Tue 9/3/21	Sat 3/4/21	NA	NA	Sat 4/9/21	Wed 29/9/21	179 days	1 day	251
253	Submit & endorse by PM and Statutory Authorities/Gov. Dept	76 days	0 days	76 days	0%	Sun 4/4/21	Fri 18/6/21	NA	NA	Thu 30/9/21	Tue 14/12/21	179 days	1 day	252
254	Road D3 Underpass and Depressed Road	823 days	236.99 days	586.01 days	0%	Thu 30/5/19	Sun 29/8/21	Thu 30/5/19	NA	Thu 30/5/19	Wed 11/1/23	500 days		
255	Underpass (Structure)	486 days	320.41 days	165.59 days	0%	Thu 30/5/19	Sat 26/9/20	Thu 30/5/19	NA	Thu 30/5/19	Wed 2/12/20	67 days		
256	Prepare AIP and ICE certification (Draft)	96 days	96 days	0 days	100%	Thu 30/5/19	Mon 2/9/19	Thu 30/5/19	Mon 2/9/19	Thu 30/5/19	Mon 2/9/19	0 days	3 days	4
257	Submit & endorse by PM and Statutory Authorities/Gov. Dept	17 days	17 days	0 days	100%	Tue 3/9/19	Thu 19/9/19	Tue 3/9/19	Thu 19/9/19	Tue 3/9/19	Thu 19/9/19	0 days	1 days	256
258	Prepare AIP and ICE certification (Final)	84 days	84 days	0 days	100%	Tue 14/1/20	Mon 6/4/20	Tue 14/1/20	Mon 6/4/20	Tue 14/1/20	Mon 6/4/20	0 days	2 days	256,257
259	Prepare DDA (Draft) Preparation	156 days	156 days	0 days	100%	Tue 3/9/19	Wed 5/2/20	Tue 3/9/19	Wed 5/2/20	Tue 3/9/19	Wed 5/2/20	0 days	3 days	256
260	DDA (Draft) Submit & endorse by PM & Statutory Authorities/Gov. Dept	169 days	34 days	135 days	20%	Thu 6/2/20	Thu 23/7/20	Thu 6/2/20	NA	Thu 6/2/20	Mon 28/9/20	67 days	0.5 days	259
261	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
262	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
263	Underpass (E&M Works)	392 days	0 days	392 days	0%	Mon 3/8/20	Sun 29/8/21	NA	NA	Tue 10/11/20	Wed 11/1/23	99 days		
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	



Title: Rev.11 Prog with Progress as of 22-May-20

Task
Split
Milestone
Summary
Project Summary
Inactive Task
Inactive Milestone
Inactive Summary
Manual Task
Duration-only
Manual Summary Rollup
Manual Summary
Start-only
Finish-only
External Tasks
External Milestone
Deadline
Critical
Critical Split
Progress
Manual Progress

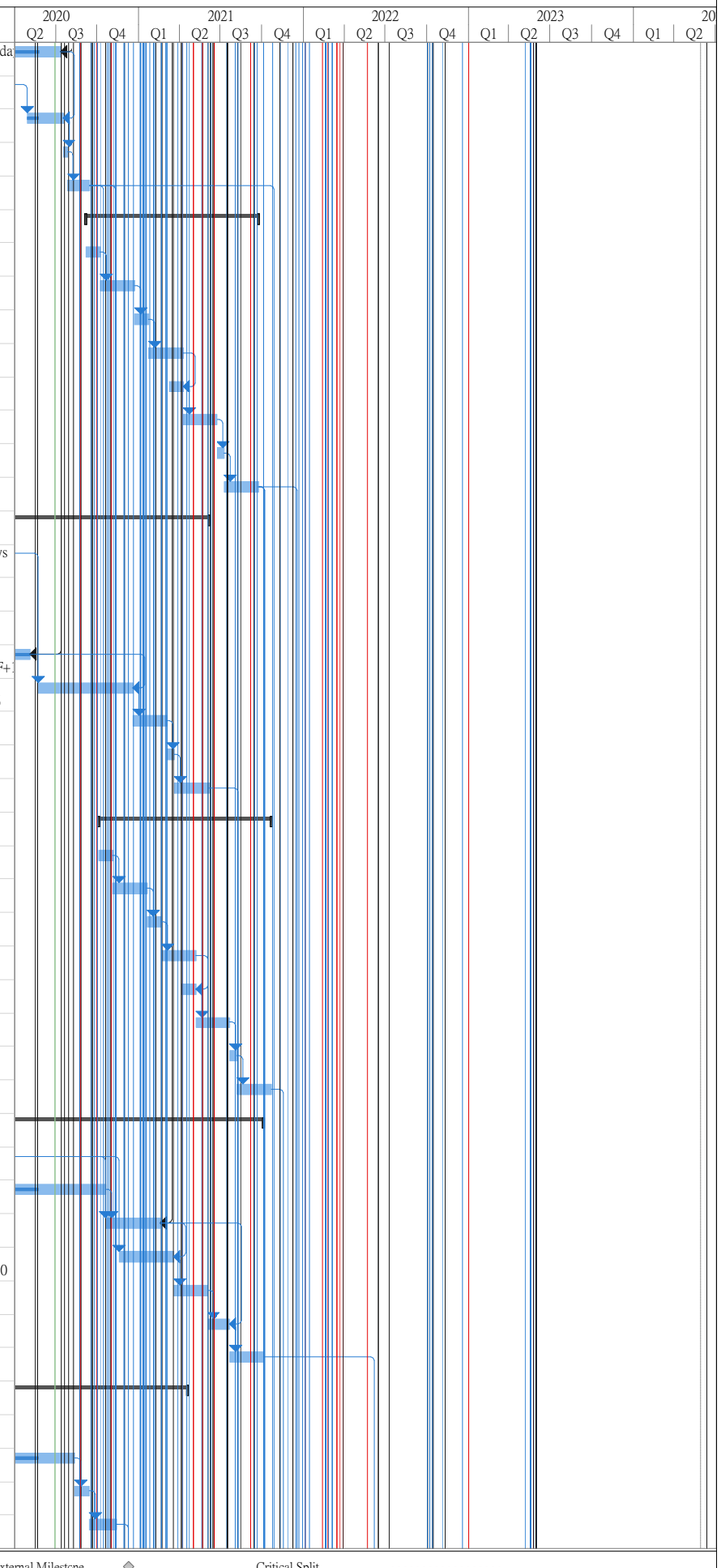
ID	Task Name	Duration	Actual Duration	Remaining Duration	Physical % Complete	Early Start	Early Finish	Actual Start	Actual Finish	Late Start	Late Finish	Total Slack	TRA	Predecessors
265	Submit & endorse by PM and Statutory Authorities/Gov. Dept	62 days	0 days	62 days	0%	Fri 6/11/20	Wed 6/1/21	NA	NA	Sat 12/12/20	Thu 11/2/21	36 days	2 days	264
266	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
267	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
268	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	267FF
269	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
270	Prepare DDA (E&M works) and ICE certification (Final)	17 days	0 days	17 days	0%	Sat 12/6/21	Mon 28/6/21	NA	NA	Sun 18/7/21	Tue 3/8/21	36 days	2 days	269
271	Submit & endorse by PM and Statutory Authorities/Gov. Dept	62 days	0 days	62 days	0%	Tue 29/6/21	Sun 29/8/21	NA	NA	Wed 4/8/21	Mon 4/10/21	36 days	2 days	270
272	Prepare AIP (E&M works) and Architectural Finishes of of Underpass (Road L14) and ICE certification (Draft)	31 days	0 days	31 days	0%	Mon 3/8/20	Wed 2/9/20	NA	NA	Thu 31/3/22	Sat 30/4/22	605 days	1 day	
273	Submit & endorse by PM and Statutory Authorities/Gov. Dept	51 days	0 days	51 days	0%	Thu 3/9/20	Fri 23/10/20	NA	NA	Sun 1/5/22	Mon 20/6/22	605 days	1 day	272
274	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
275	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
276	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	275FF
277	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
278	Prepare DDA (E&M works) and Architectural Finishes of of Underpass (Road L14) and ICE certification (Final)	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
279	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
280	E&M Work for Pump House of Underpass D3	364 days	83.71 days	280.29 days	0%	Mon 24/2/20	Sun 21/2/21	Mon 24/2/20	NA	Mon 24/2/20	Wed 18/8/21	178 days		
281	Prepare AIP (E&M works) Submission (Draft)	11 days	11 days	0 days	0%	Mon 24/2/20	Thu 5/3/20	Mon 24/2/20	Thu 5/3/20	Mon 24/2/20	Thu 5/3/20	0 days	2 days	
282	Submit & endorse by PM and Statutory Authorities/Gov. Dept	160 days	78 days	82 days	49%	Fri 6/3/20	Wed 12/8/20	Fri 6/3/20	NA	Fri 6/3/20	Sat 15/8/20	3 days	2 days	281
283	Prepare AIP (E&M works) and ICE certification (Final)	21 days	0 days	21 days	0%	Thu 13/8/20	Wed 2/9/20	NA	NA	Sun 16/8/20	Sat 5/9/20	3 days	2 days	282,44FF+12 da
284	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
285	Prepare DDA (E&M works) and ICE certification (Draft)	30 days	0 days	30 days	0%	Wed 30/9/20	Thu 29/10/20	NA	NA	Sat 3/10/20	Sun 1/11/20	3 days	2 days	284FF+7 days
286	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
287	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
288	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
289	Depressed Road (North) Structure	463 days	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		
290	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
291	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
292	Prepare AIP and ICE certification (Final)	44 days	44 days	0 days	100%	Mon 9/12/19	Tue 21/1/20	Mon 9/12/19	Tue 21/1/20	Mon 9/12/19	Tue 21/1/20	0 days	0 days	291
293	Prepare DDA and ICE certification (Draft)	57 days	57 days	0 days	100%	Tue 24/9/19	Tue 19/11/19	Tue 24/9/19	Tue 19/11/19	Tue 24/9/19	Tue 19/11/19	0 days	5 days	290
294	Submit & endorse by PM	17 days	17 days	0 days	100%	Tue 19/11/19	Thu 5/12/19	Tue 19/11/19	Thu 5/12/19	Tue 19/11/19	Thu 5/12/19	0 days	1 day	293
295	Submit & endorse by Statutory Authorities/Gov. Dept	20 days	20 days	0 days	100%	Wed 19/2/20	Mon 9/3/20	Wed 19/2/20	Mon 9/3/20	Wed 19/2/20	Mon 9/3/20	0 days	1 day	293
296	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
297	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
298	Depressed Road (North) E&M Works	322 days	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		
299	Prepare AIP (E&M works) and ICE certification (Draft)	31 days	0 days	31 days	0%	Mon 21/9/20	Wed 21/10/20	NA	NA	Tue 17/11/20	Thu 17/12/20	57 days	1 day	
300	Submit & endorse by PM and Statutory Authorities/Gov. Dept	61 days	0 days	61 days	0%	Thu 22/10/20	Mon 21/12/20	NA	NA	Fri 18/12/20	Tue 16/2/21	57 days	1 day	299
301	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
302	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
303	Prepare DDA (E&M works) and ICE certification (Draft)	31 days	0 days	31 days	0%	Sun 21/2/21	Tue 23/3/21	NA	NA	Mon 19/4/21	Wed 19/5/21	57 days	1 day	302FF
304	Submit & endorse by PM and Statutory Authorities/Gov. Dept	61 days	0 days	61 days	0%	Wed 24/3/21	Sun 23/5/21	NA	NA	Thu 20/5/21	Mon 19/7/21	57 days	1 day	303
305	Prepare DDA (E&M works) and ICE certification (Final)	16 days	0 days	16 days	0%	Mon 24/5/21	Tue 8/6/21	NA	NA	Tue 20/7/21	Wed 4/8/21	57 days	1 day	304
306	Submit & endorse by PM and Statutory Authorities/Gov. Dept	61 days	0 days	61 days	0%	Wed 9/6/21	Sun 8/8/21	NA	NA	Thu 5/8/21	Mon 4/10/21	57 days	1 day	305
307	Depressed Road (South) and Substructure of Elevated Landscape Deck	463 days	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		
308	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	
309	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	Sat 3/8/19	Tue 22/10/19	0 days	2 days	308



Title: Rev.11 Prog with Progress as of 22-May-20

Task
Split
Milestone
Summary
Project Summary
Inactive Task
Inactive Milestone
Inactive Summary
Manual Task
Duration-only
Manual Summary Rollup
Manual Summary
Start-only
Finish-only
External Tasks
External Milestone
Deadline
Critical
Critical Split
Progress
Manual Progress

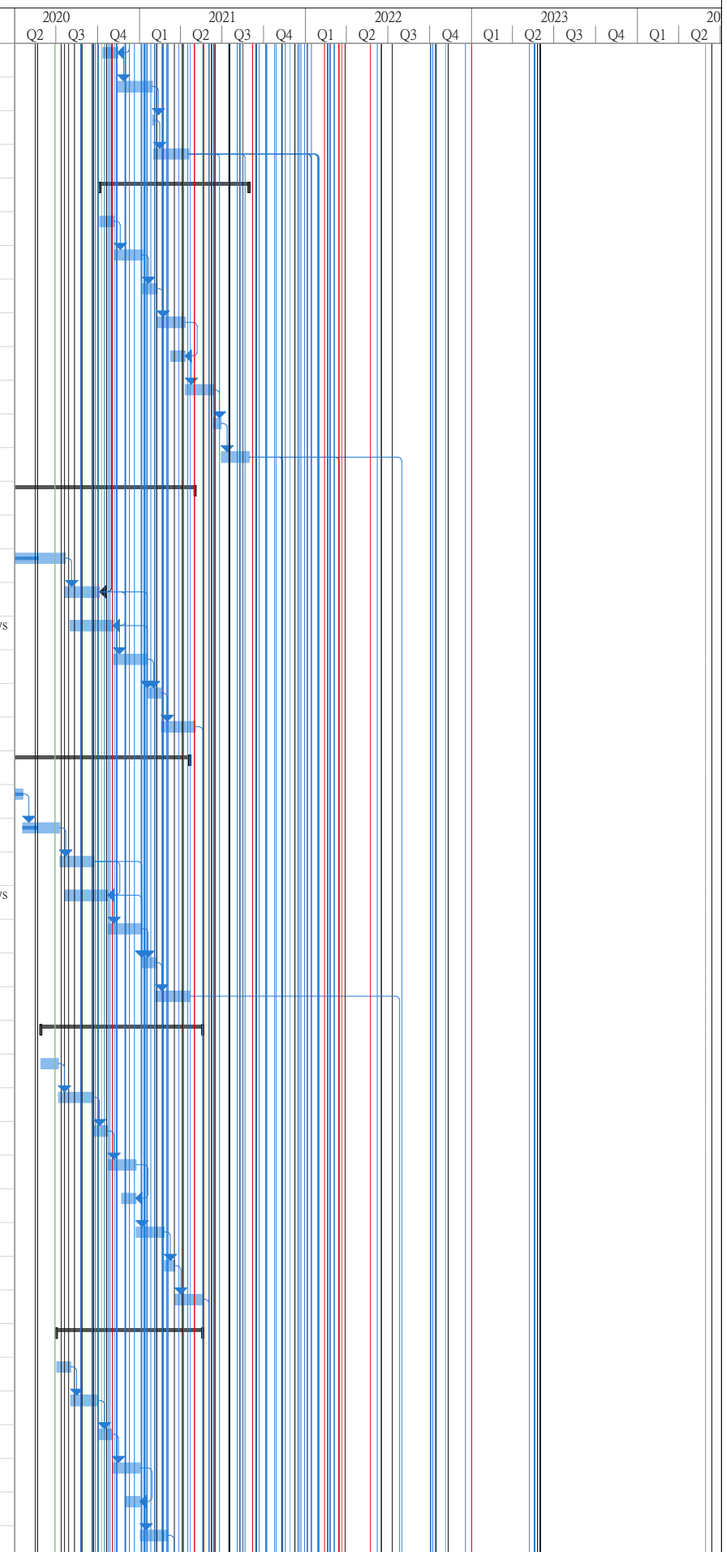
ID	Task Name	Duration	Actual Duration	Remaining Duration	Physical % Complete	Early Start	Early Finish	Actual Start	Actual Finish	Late Start	Late Finish	Total Slack	TRA	Predecessors
310	Prepare AIP and ICE (certification (Final)	270 days	222 days	48 days	82%	Tue 15/10/19	Fri 10/7/20	Tue 15/10/19	NA	Tue 15/10/19	Mon 10/8/20	31 days	0 days	309,44FF+12 da
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 days
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
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
315	South Depressed Road (E&M Works)	382 days	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
318	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
319	Submit & endorse by PM and Statutory Authorities/Gov. Dept	76 days	0 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
320	Prepare DDA (E&M works) and ICE certification (Draft)	31 days	0 days	31 days	0%	Tue 9/3/21	Thu 8/4/21	NA	NA	Sat 20/3/21	Mon 19/4/21	11 days	1 day	319FF
321	Submit & endorse by PM and Statutory Authorities/Gov. Dept	76 days	0 days	76 days	0%	Fri 9/4/21	Wed 23/6/21	NA	NA	Tue 20/4/21	Sun 4/7/21	11 days	1 day	320
322	Prepare DDA (E&M works) and ICE certification (Final)	16 days	0 days	16 days	0%	Thu 24/6/21	Fri 9/7/21	NA	NA	Mon 5/7/21	Tue 20/7/21	11 days	1 day	321
323	Submit & endorse by PM and Statutory Authorities/Gov. Dept	76 days	0 days	76 days	0%	Sat 10/7/21	Thu 23/9/21	NA	NA	Wed 21/7/21	Mon 4/10/21	11 days	1 day	322
324	Road Works (Civil Works)	662 days	196.01 days	465.99 days	0%	Tue 13/8/19	Fri 4/6/21	Tue 13/8/19	NA	Tue 13/8/19	Tue 14/12/21	193 days		
325	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
326	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
327	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
328	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+
329	Prepare DDA for At-grade Road D3 and ICE certification (Draft)	210 days	0 days	210 days	0%	Sat 23/5/20	Fri 18/12/20	NA	NA	Wed 2/12/20	Tue 29/6/21	193 days	5 days	325FS+100 days,328FF+6
330	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	329
331	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
332	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
333	Remaining Road Works (E&M Works)	382 days	0 days	382 days	0%	Mon 5/10/20	Thu 21/10/21	NA	NA	Sat 13/2/21	Tue 1/3/22	131 days		
334	Prepare AIP (E&M works) and ICE certification (Draft)	31 days	0 days	31 days	0%	Mon 5/10/20	Wed 4/11/20	NA	NA	Sat 13/2/21	Mon 15/3/21	131 days	1 day	
335	Submit & endorse by PM and Statutory Authorities/Gov. Dept	76 days	0 days	76 days	0%	Thu 5/11/20	Tue 19/1/21	NA	NA	Tue 16/3/21	Sun 30/5/21	131 days	1 day	334
336	Prepare AIP (E&M works) and ICE certification (Final)	31 days	0 days	31 days	0%	Wed 20/1/21	Fri 19/2/21	NA	NA	Mon 31/5/21	Wed 30/6/21	131 days	1 day	335
337	Submit & endorse by PM and Statutory Authorities/Gov. Dept	76 days	0 days	76 days	0%	Sat 20/2/21	Thu 6/5/21	NA	NA	Thu 1/7/21	Tue 14/9/21	131 days	1 day	336
338	Prepare DDA (E&M works) and ICE certification (Draft)	31 days	0 days	31 days	0%	Tue 6/4/21	Thu 6/5/21	NA	NA	Sun 15/8/21	Tue 14/9/21	131 days	1 day	337FF
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
340	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	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		
343	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
344	Submit & endorse by PM and Statutory Authorities/Gov. Dept	377 days	227 days	150 days	60%	Wed 9/10/19	Mon 19/10/20	Wed 9/10/19	NA	Wed 9/10/19	Tue 15/3/22	512 days		
345	Prepare AIP for Road L12d (Include E&M Provision Works) and ICE certification (Final)	120 days	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 days,344
346	Prepare DDA for Road L12d (Include E&M Provision Works) and ICE certification (Draft)	120 days	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	343FS+260 days,345FF+30
347	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	Wed 26/10/22	512 days	0.5 days	346
348	Prepare DDA for Road L12d (Include E&M Provision Works) and ICE certification (Final)	50 days	0 days	50 days	0%	Wed 2/6/21	Wed 21/7/21	NA	NA	Thu 27/10/22	Thu 15/12/22	512 days	0 days	347,345FF
349	Submit & endorse by PM and Statutory Authorities/Gov. Dept	75 days	0 days	75 days	0%	Thu 22/7/21	Mon 4/10/21	NA	NA	Fri 16/12/22	Tue 28/2/23	512 days	0 days	348
350	Road Lighting of Road D3 (E&M)	469 days	129.19 days	339.81 days	0%	Mon 6/1/20	Sun 18/4/21	Mon 6/1/20	NA	Mon 6/1/20	Sun 1/8/21	105 days		
351	Prepare AIP (E&M works) Submission (Draft)	30 days	30 days	0 days	100%	Mon 6/1/20	Tue 4/2/20	Mon 6/1/20	Tue 4/2/20	Mon 6/1/20	Tue 4/2/20	0 days	2 days	
352	Submit & endorse by Statutory Authorities/Gov. Dept and PM	190 days	108 days	82 days	57%	Wed 5/2/20	Wed 12/8/20	Wed 5/2/20	NA	Wed 5/2/20	Wed 25/11/20	105 days		351
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	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	Mon 28/12/20	Thu 25/2/21	105 days	2 days	353



Title: Rev.11 Prog with Progress as of 22-May-20

Task
Split
Milestone
Summary
Project Summary
Inactive Task
Inactive Milestone
Inactive Summary
Manual Task
Duration-only
Manual Summary Rollup
Manual Summary
Start-only
Finish-only
External Tasks
External Milestone
Deadline
Critical
Critical Split
Progress
Manual Progress

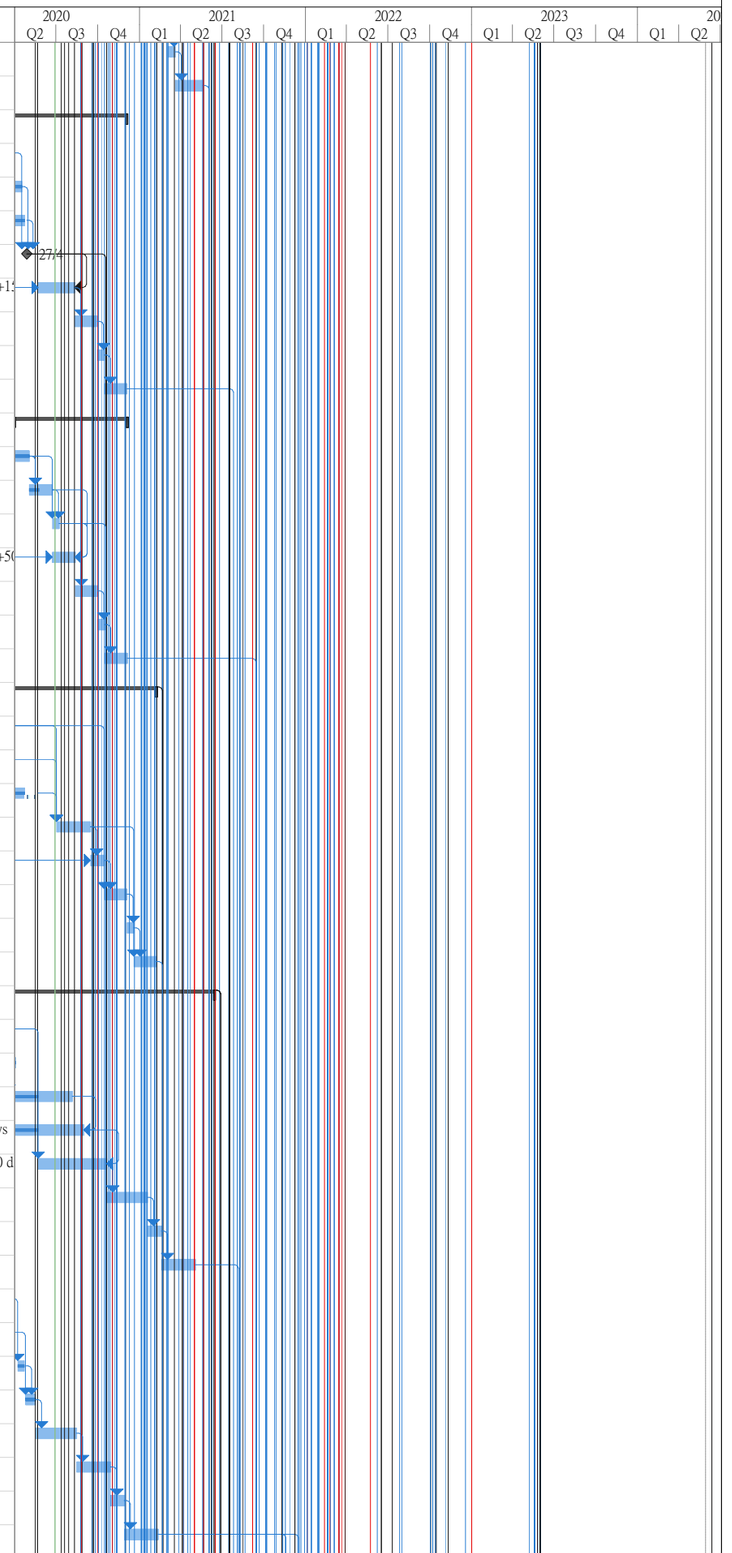
ID	Task Name	Duration	Actual Duration	Remaining Duration	Physical % Complete	Early Start	Early Finish	Actual Start	Actual Finish	Late Start	Late Finish	Total Slack	TRA	Predecessors
355	Prepare DDA (E&M works) and ICE certification (Draft)	32 days	0 days	32 days	0%	Mon 12/10/20	Thu 12/11/20	NA	NA	Mon 25/1/21	Thu 25/2/21	105 days	2 days	354FF
356	Submit & endorse by PM and Statutory Authorities/Gov. Dept	77 days	0 days	77 days	0%	Fri 13/11/20	Thu 28/1/21	NA	NA	Fri 26/2/21	Thu 13/5/21	105 days	2 days	355
357	Prepare DDA (E&M works) and ICE certification (Final)	3 days	0 days	3 days	0%	Fri 29/1/21	Sun 31/1/21	NA	NA	Fri 14/5/21	Sun 16/5/21	105 days	2 days	356
358	Submit & endorse by PM and Statutory Authorities/Gov. Dept	77 days	0 days	77 days	0%	Mon 1/2/21	Sun 18/4/21	NA	NA	Mon 17/5/21	Sun 1/8/21	105 days	2 days	357
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	0 days	32 days	0%	Thu 7/1/21	Sun 7/2/21	NA	NA	Thu 6/5/21	Sun 6/6/21	119 days	2 days	361
363	Submit & endorse by PM and Statutory Authorities/Gov. Dept	62 days	0 days	62 days	0%	Mon 8/2/21	Sat 10/4/21	NA	NA	Mon 7/6/21	Sat 7/8/21	119 days	2 days	362
364	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	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	0 days	62 days	0%	Sun 11/4/21	Fri 11/6/21	NA	NA	Sun 8/8/21	Fri 8/10/21	119 days	2 days	364
366	Prepare DDA (E&M works) and ICE certification (Final)	17 days	0 days	17 days	0%	Sat 12/6/21	Mon 28/6/21	NA	NA	Sat 9/10/21	Mon 25/10/21	119 days	2 days	365
367	Submit & endorse by PM and Statutory Authorities/Gov. Dept	62 days	0 days	62 days	0%	Tue 29/6/21	Sun 29/8/21	NA	NA	Tue 26/10/21	Sun 26/12/21	119 days	2 days	366
368	Roadworks other than at-grade Road D3 and Road L12d (Civil Works)	609 days	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	Mon 2/9/19	Mon 7/10/19	0 days	0.5 days	
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	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 days
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 days
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	372
374	DDA for Roadworks - Roadworks other than at-grade Road D3 and Road L12d (Final)	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	371,372,373
375	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	374
376	Roadworks - EVA to Sewerage and Saltwater Pumping Station (Civil Works)	413 days	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	46 days	0 days	100%	Wed 4/3/20	Sat 18/4/20	Wed 4/3/20	Sat 18/4/20	Wed 4/3/20	Sat 18/4/20	0 days	0.5 days	
378	Submit & endorse by PM and Statutory Authorities/Gov. Dept	82 days	33 days	49 days	40%	Sat 18/4/20	Wed 8/7/20	Sat 18/4/20	NA	Sat 18/4/20	Mon 23/5/22	684 days		377
379	AIP for Roadworks - EVA to Sewerage and Saltwater Pumping Station (Final)	75 days	0 days	75 days	0%	Thu 9/7/20	Mon 21/9/20	NA	NA	Tue 24/5/22	Sat 6/8/22	684 days	0.5 days	378
380	DDA for Roadworks - EVA to Sewerage and Saltwater Pumping Station (Draft)	95 days	0 days	95 days	0%	Mon 20/7/20	Thu 22/10/20	NA	NA	Thu 19/5/22	Sun 21/8/22	668 days	1 day	379FF+15 days
381	Submit & endorse by PM and Statutory Authorities/Gov. Dept	75 days	0 days	75 days	0%	Fri 23/10/20	Tue 5/1/21	NA	NA	Mon 22/8/22	Fri 4/11/22	668 days	0.5 days	380
382	DDA for Roadworks - EVA to Sewerage and Saltwater Pumping Station (Final)	30 days	0 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	379,380,381
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	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
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
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
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
391	Prepare DDA (E&M works) and ICE certification (Final)	23 days	0 days	23 days	0%	Wed 24/2/21	Thu 18/3/21	NA	NA	Sun 28/2/21	Mon 22/3/21	4 days	2 days	390
392	Submit & endorse by PM and Statutory Authorities/Gov. Dept	62 days	0 days	62 days	0%	Fri 19/3/21	Wed 19/5/21	NA	NA	Tue 23/3/21	Sun 23/5/21	4 days	2 days	391
393	Roadworks other than at-grade Road D3 and Road L12d (E&M Works)	322 days	0 days	322 days	0%	Thu 2/7/20	Wed 19/5/21	NA	NA	Mon 6/7/20	Sun 23/5/21	4 days		
394	Prepare AIP (E&M works) and ICE certification (Draft)	31 days	0 days	31 days	0%	Thu 2/7/20	Sat 1/8/20	NA	NA	Mon 6/7/20	Wed 5/8/20	4 days	1 day	
395	Submit & endorse by PM and Statutory Authorities/Gov. Dept	61 days	0 days	61 days	0%	Sun 2/8/20	Thu 1/10/20	NA	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



Title: Rev.11 Prog with Progress as of 22-May-20

Task
Split
Milestone
Summary
Project Summary
Inactive Task
Inactive Milestone
Inactive Summary
Manual Task
Duration-only
Manual Summary Rollup
Manual Summary
Start-only
Finish-only
External Tasks
External Milestone
Deadline
Critical
Critical Split
Progress
Manual Progress

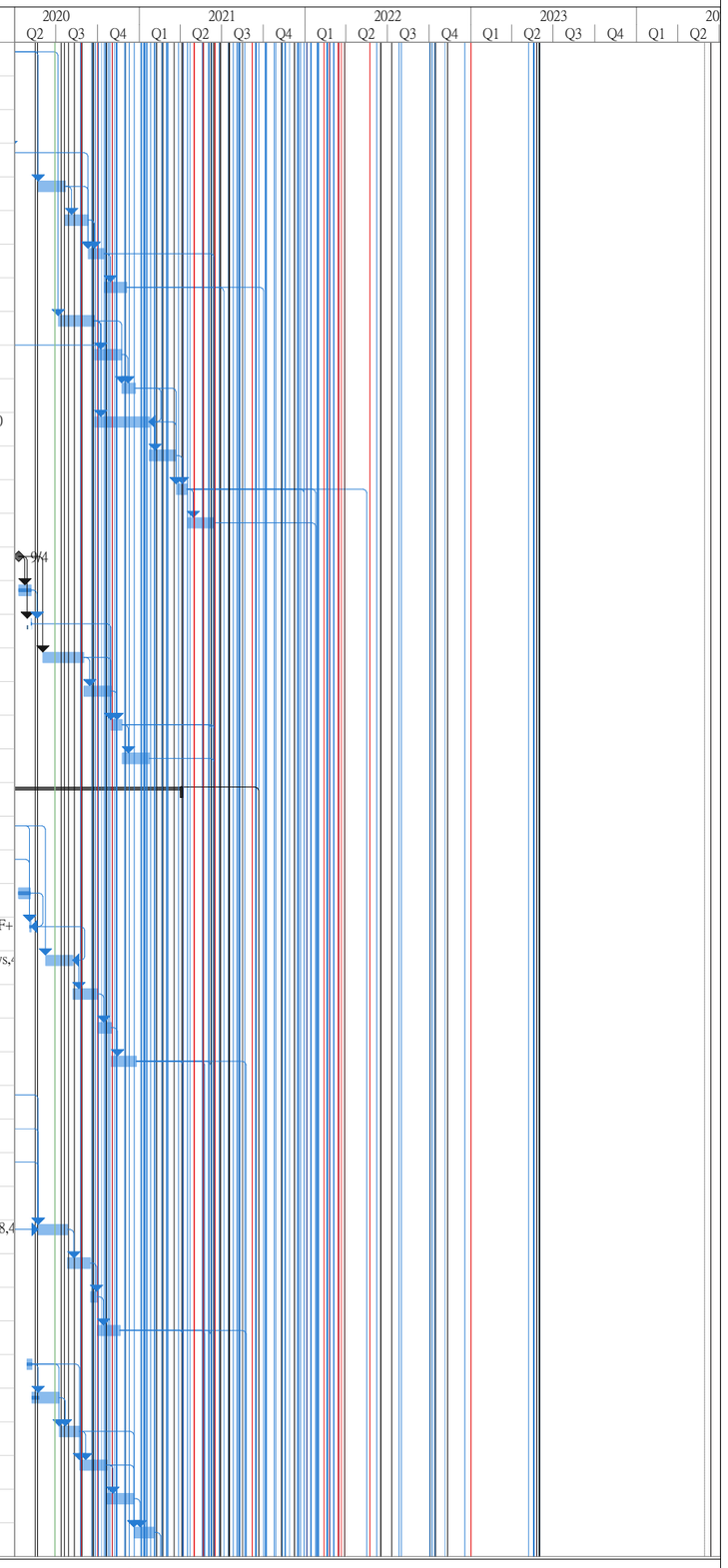
ID	Task Name	Duration	Actual Duration	Remaining Duration	Physical % Complete	Early Start	Early Finish	Actual Start	Actual Finish	Late Start	Late Finish	Total Slack	TRA	Predecessors
400	Prepare DDA (E&M works) and ICE certification (Final)	16 days	0 days	16 days	0%	Thu 4/3/21	Fri 19/3/21	NA	NA	Mon 8/3/21	Tue 23/3/21	4 days	1 day	399
401	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
402	DCS Seawater & Intake Box Culverts (approx 88m) (Section 2)	479 days	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		
403	Prepare AIP Subm with ICE certification (Draft)	165 days	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	
404	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
405	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
406	Prepare AIP and ICE certification (Final)	0 days	0 days	0 days	100%	Thu 23/4/20	Mon 27/4/20	Thu 23/4/20	Mon 27/4/20	Thu 23/4/20	Mon 27/4/20	0 days	1 days	403,405,404
407	Prepare DDA and ICE certification	80 days	0 days	80 days	0%	Sat 23/5/20	Mon 10/8/20	NA	NA	Thu 21/1/21	Sat 10/4/21	243 days	5 days	403SS,406FF+1
408	Submit & endorse by PM and Statutory Authorities/Gov. Dept	50 days	0 days	50 days	0%	Tue 11/8/20	Tue 29/9/20	NA	NA	Sun 11/4/21	Sun 30/5/21	243 days	3 days	407
409	Prepare DDA for and ICE certification (Final)	15 days	0 days	15 days	0%	Wed 30/9/20	Wed 14/10/20	NA	NA	Mon 31/5/21	Mon 14/6/21	243 days	1 day	408
410	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
411	Seawater & Intake Box Culverts Diversion	248 days	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		
412	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	
413	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
414	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
415	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
416	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
417	Prepare DDA for and ICE certification (Final)	15 days	0 days	15 days	0%	Thu 1/10/20	Thu 15/10/20	NA	NA	Tue 3/8/21	Tue 17/8/21	306 days	1 day	416
418	Submit & endorse by PM and Statutory Authorities/Gov. Dept	50 days	0 days	50 days	0%	Fri 16/10/20	Fri 4/12/20	NA	NA	Wed 18/8/21	Wed 6/10/21	306 days	2 days	417
419	Rising Main (Sewerage Works)	402 days	134 days	268 days	0%	Thu 2/1/20	Sat 6/2/21	Thu 2/1/20	NA	Thu 2/1/20	Sun 7/3/21	29 days		
420	Prepare AIP (Draft)	35 days	35 days	0 days	100%	Thu 2/1/20	Wed 5/2/20	Thu 2/1/20	Wed 5/2/20	Thu 2/1/20	Wed 5/2/20	0 days	3 days	4
421	Submit & endorse by PM	19 days	19 days	0 days	100%	Thu 6/2/20	Mon 24/2/20	Thu 6/2/20	Mon 24/2/20	Thu 6/2/20	Mon 24/2/20	0 days	1 day	
422	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
423	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
424	Prepare DDA and ICE certification (Draft)	30 days	0 days	30 days	0%	Tue 15/9/20	Wed 14/10/20	NA	NA	Wed 14/10/20	Thu 12/11/20	29 days	4 days	420SS,423
425	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
426	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
427	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
428	Stormwater, Sewage, Salt Water and Fresh Water Works for Underpass and Depressed Road	641 days	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		
429	Stormwater Drainage AIP for Underpass and Depressed Roads and ICE certification (Draft)	72 days	72 days	0 days	100%	Mon 2/12/19	Tue 11/2/20	Mon 2/12/19	Tue 11/2/20	Mon 2/12/19	Tue 11/2/20	0 days	1 day	
430	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 days	429
431	Submit & endorse by Statutory Authorities/Gov. Dept	139 days	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
432	Prepare AIP and ICE certification (Final)	150 days	50 days	100 days	33%	Fri 3/4/20	Sun 30/8/20	Fri 3/4/20	NA	Fri 3/4/20	Sat 14/11/20	76 days		431FF+15 days
433	Prepare DDA and ICE certification (Draft)	150 days	0 days	150 days	0%	Sat 23/5/20	Mon 19/10/20	NA	NA	Sat 18/7/20	Mon 14/12/20	56 days	1 day	429,432FF+30 d
434	Submit & endorse by PM and Statutory Authorities/Gov. Dept	90 days	0 days	90 days	0%	Tue 20/10/20	Sun 17/1/21	NA	NA	Tue 15/12/20	Sun 14/3/21	56 days	0.5 days	433
435	Prepare DDA and ICE certification (Final)	31 days	0 days	31 days	0%	Mon 18/1/21	Wed 17/2/21	NA	NA	Mon 15/3/21	Wed 14/4/21	56 days	1 day	434
436	Submit & endorse by PM and Statutory Authorities/Gov. Dept	75 days	0 days	75 days	0%	Thu 18/2/21	Mon 3/5/21	NA	NA	Thu 15/4/21	Mon 28/6/21	56 days	5 days	435
437	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	
438	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 days	437
439	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
440	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
441	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
442	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 days	441
443	Prepare DDA for Underpass, Depressed Road and ICE certification (Final)	30 days	0 days	30 days	0%	Thu 29/10/20	Fri 27/11/20	NA	NA	Tue 16/3/21	Wed 14/4/21	138 days	0 days	442
444	Submit & endorse by PM and Statutory Authorities/Gov. Dept	75 days	0 days	75 days	0%	Sat 28/11/20	Wed 10/2/21	NA	NA	Thu 15/4/21	Mon 28/6/21	138 days	0 days	443



Title: Rev.11 Prog with Progress as of 22-May-20

Task | Split | Milestone | Summary | Project Summary | Inactive Task | Inactive Milestone | Inactive Summary | Manual Task | Duration-only | Manual Summary Rollup | Manual Summary | Start-only | Finish-only | External Tasks | External Milestone | Deadline | Critical | Critical Split | Progress | Manual Progress

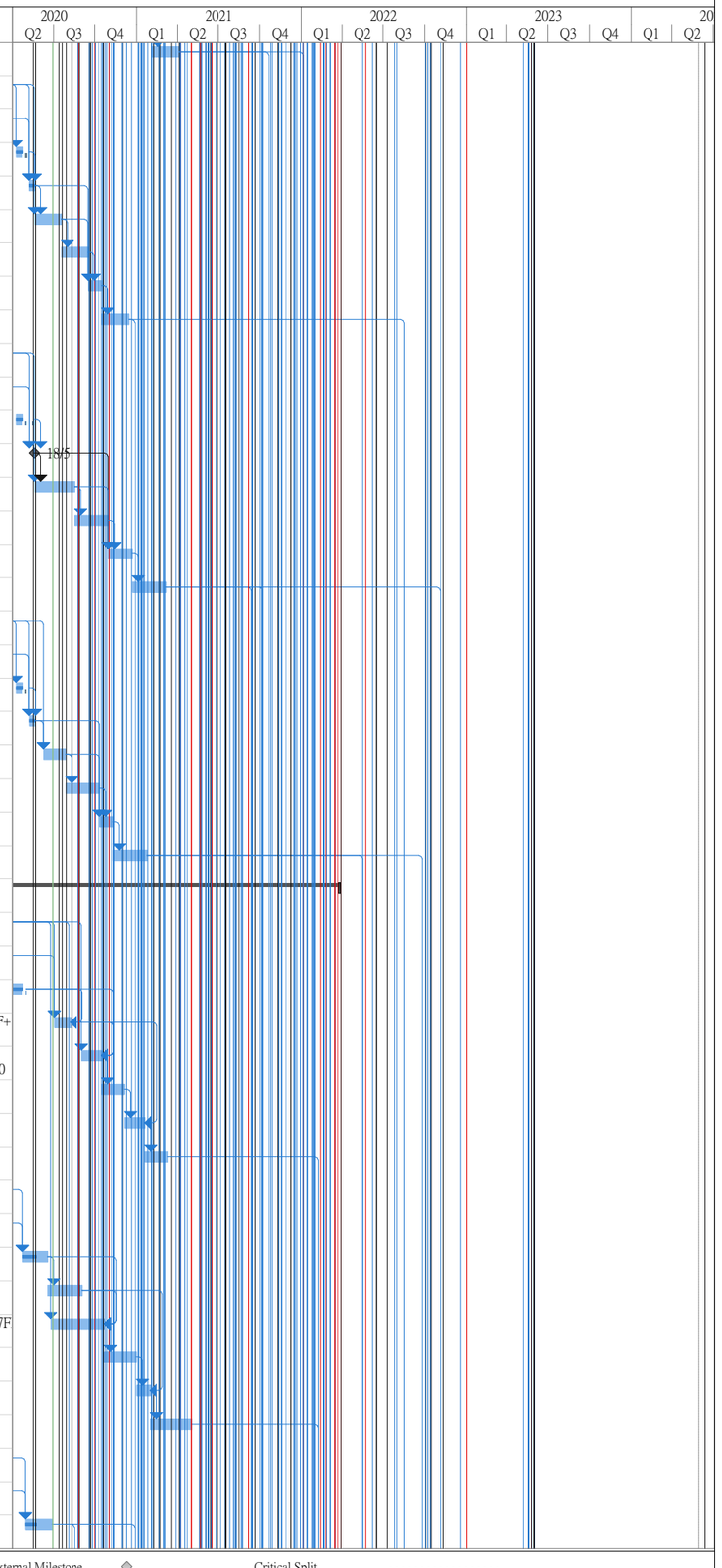
ID	Task Name	Duration	Actual Duration	Remaining Duration	Physical % Complete	Early Start	Early Finish	Actual Start	Actual Finish	Late Start	Late Finish	Total Slack	TRA	Predecessors
445	AIP for Water Works (Sewerage Works of Gravity Sewers)	88 days	88 days	0 days	100%	Fri 13/9/19	Mon 9/12/19	Fri 13/9/19	Mon 9/12/19	Fri 13/9/19	Mon 9/12/19	0 days	1 day	
446	Submit & endorse by PM	19 days	19 days	0 days	100%	Mon 23/12/19	Fri 10/1/20	Mon 23/12/19	Fri 10/1/20	Mon 23/12/19	Fri 10/1/20	0 days	0.5 days	445
447	Submit & endorse by Statutory Authorities/Gov. Dept	18 days	18 days	0 days	100%	Fri 21/2/20	Mon 9/3/20	Fri 21/2/20	Mon 9/3/20	Fri 21/2/20	Mon 9/3/20	0 days	0.5 days	445
448	AIP for Water Works (Sewerage Works of Gravity Sewers) (Final)	11 days	11 days	0 days	100%	Tue 10/3/20	Fri 20/3/20	Tue 10/3/20	Fri 20/3/20	Tue 10/3/20	Fri 20/3/20	0 days	0.5 days	445,446,447
449	DDA for Water Works (Sewerage Works of Gravity Sewers)	60 days	0 days	60 days	0%	Sat 23/5/20	Tue 21/7/20	NA	NA	Wed 16/12/20	Sat 13/2/21	207 days	1 day	445
450	Submit & endorse by PM and Statutory Authorities/Gov. Dept	50 days	0 days	50 days	0%	Wed 22/7/20	Wed 9/9/20	NA	NA	Sun 14/2/21	Sun 4/4/21	207 days	0.5 days	449
451	DDA for Water Works - (Sewerage Works of Gravity Sewers)	35 days	0 days	35 days	0%	Thu 10/9/20	Wed 14/10/20	NA	NA	Mon 5/4/21	Sun 9/5/21	207 days	1 day	448,449,450
452	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	Mon 10/5/21	Mon 28/6/21	207 days	0.5 days	451
453	AIP for Stormwater Works - Waterfront Promenade and at grade Open Space (Draft)	80 days	0 days	80 days	0%	Mon 6/7/20	Wed 23/9/20	NA	NA	Mon 20/7/20	Wed 7/10/20	14 days	1 day	445
454	Submit & endorse by PM and Statutory Authorities/Gov. Dept	60 days	0 days	60 days	0%	Thu 24/9/20	Sun 22/11/20	NA	NA	Thu 8/10/20	Sun 6/12/20	14 days	0.5 days	453
455	AIP for Stormwater Works - Waterfront Promenade and at grade Open Space (Final)	30 days	0 days	30 days	0%	Mon 23/11/20	Tue 22/12/20	NA	NA	Mon 7/12/20	Tue 5/1/21	14 days	0.5 days	453,454
456	DDA for Stormwater Works - Waterfront Promenade and at grade Open Space (Draft)	120 days	0 days	120 days	0%	Thu 24/9/20	Thu 21/1/21	NA	NA	Thu 8/10/20	Thu 4/2/21	14 days	1 day	453,455FF+30 days
457	Submit & endorse by PM and Statutory Authorities/Gov. Dept	60 days	0 days	60 days	0%	Fri 22/1/21	Mon 22/3/21	NA	NA	Fri 5/2/21	Mon 5/4/21	14 days	0.5 days	456
458	DDA for Stormwater Works - Waterfront Promenade and at grade Open Space (Final)	24 days	0 days	24 days	0%	Tue 23/3/21	Thu 15/4/21	NA	NA	Tue 6/4/21	Thu 29/4/21	14 days	1 day	455,456,457
459	Submit & endorse by PM and Statutory Authorities/Gov. Dept	60 days	0 days	60 days	0%	Fri 16/4/21	Mon 14/6/21	NA	NA	Fri 30/4/21	Mon 28/6/21	14 days	0.5 days	458
460	AIP for Water Works - Remaining Stormwater works (Draft)	0 days	0 days	0 days	100%	Mon 2/3/20	Thu 9/4/20	Mon 2/3/20	Thu 9/4/20	Mon 2/3/20	Thu 9/4/20	0 days	1 day	453
461	Submit & endorse by PM and Statutory Authorities/Gov. Dept	27 days	27 days	0 days	100%	Fri 10/4/20	Wed 6/5/20	Fri 10/4/20	Wed 6/5/20	Fri 10/4/20	Wed 6/5/20	0 days	0.5 days	460
462	AIP for Water Works - Remaining Stormwater works (Final)	1 day	1 day	0 days	100%	Wed 29/4/20	Thu 7/5/20	Wed 29/4/20	Thu 7/5/20	Wed 29/4/20	Thu 7/5/20	0 days	0.5 days	460,461
463	DDA for Water Works - Remaining Stormwater works (Draft)	90 days	0 days	90 days	0%	Tue 2/6/20	Sun 30/8/20	NA	NA	Fri 6/11/20	Wed 3/2/21	157 days	1 day	460
464	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 4/2/21	Sun 4/4/21	157 days	0.5 days	463
465	DDA for Water Works - Remaining Stormwater works (Final)	25 days	0 days	25 days	0%	Fri 30/10/20	Mon 23/11/20	NA	NA	Mon 5/4/21	Thu 29/4/21	157 days	1 day	462,463,464
466	Submit & endorse by PM and Statutory Authorities/Gov. Dept	60 days	0 days	60 days	0%	Tue 24/11/20	Fri 22/1/21	NA	NA	Fri 30/4/21	Mon 28/6/21	157 days	0.5 days	465
467	Stormwater, Sewage, Salt Water and Fresh Water Works for Bridge B3	530 days	132.36 days	397.64 days	0%	Tue 22/10/19	Sat 3/4/21	Tue 22/10/19	NA	Tue 22/10/19	Wed 6/10/21	186 days		
468	Fresh and Salt Water Works AIP for Bridge D3 (Draft)	37 days	37 days	0 days	100%	Tue 22/10/19	Wed 27/11/19	Tue 22/10/19	Wed 27/11/...	Tue 22/10/19	Wed 27/11/19	0 days	1 day	
469	Submit & endorse by PM	22 days	22 days	0 days	100%	Thu 28/11/19	Thu 19/12/19	Thu 28/11/19	Thu 19/12/19	Thu 28/11/19	Thu 19/12/19	0 days	0.5 days	468
470	Submit & endorse by Statutory Authorities/Gov. Dept	26 days	26 days	0 days	100%	Thu 9/4/20	Mon 4/5/20	Thu 9/4/20	Mon 4/5/20	Thu 9/4/20	Mon 4/5/20	0 days	0.5 days	
471	Prepare AIP for Bridge D3 and ICE certification (Final)	3 days	3 days	0 days	100%	Mon 4/5/20	Wed 6/5/20	Mon 4/5/20	Wed 6/5/20	Mon 4/5/20	Wed 6/5/20	0 days	0 days	468,469,470FF+
472	Prepare DDA for Bridge D3 and ICE certification (Draft)	60 days	0 days	60 days	0%	Mon 8/6/20	Thu 6/8/20	NA	NA	Sat 19/9/20	Tue 17/11/20	103 days	1 day	471FF+15 days,4
473	Submit & endorse by PM and Statutory Authorities/Gov. Dept	55 days	0 days	55 days	0%	Fri 7/8/20	Wed 30/9/20	NA	NA	Wed 18/11/20	Mon 11/1/21	103 days	0.5 days	472
474	Prepare DDA for Dridge D3 and ICE certification (Final)	30 days	0 days	30 days	0%	Thu 1/10/20	Fri 30/10/20	NA	NA	Tue 12/1/21	Wed 10/2/21	103 days	0 days	473
475	Submit & endorse by PM and Statutory Authorities/Gov. Dept	55 days	0 days	55 days	0%	Sat 31/10/20	Thu 24/12/20	NA	NA	Thu 11/2/21	Tue 6/4/21	103 days	0 days	474
476	Stormwater Works AIP for Bridge D3 and ICE certification (Draft)	20 days	20 days	0 days	100%	Thu 23/1/20	Tue 11/2/20	Thu 23/1/20	Tue 11/2/20	Thu 23/1/20	Tue 11/2/20	0 days	1 day	468SS
477	Submit & endorse by PM	9 days	9 days	0 days	100%	Wed 12/2/20	Thu 20/2/20	Wed 12/2/20	Thu 20/2/20	Wed 12/2/20	Thu 20/2/20	0 days	0.5 days	476
478	Submit & endorse by Statutory Authorities/Gov. Dept	28 days	28 days	0 days	100%	Wed 19/2/20	Tue 17/3/20	Wed 19/2/20	Tue 17/3/20	Wed 19/2/20	Tue 17/3/20	0 days	3 days	
479	Stormwater Works AIP for Bridge D3 and ICE certification (Final)	26 days	26 days	0 days	100%	Mon 2/3/20	Fri 27/3/20	Mon 2/3/20	Fri 27/3/20	Mon 2/3/20	Fri 27/3/20	0 days	1 day	477,476
480	Prepare DDA for Bridge D3 and ICE certification (Draft)	65 days	0 days	65 days	0%	Sat 23/5/20	Sun 26/7/20	NA	NA	Fri 9/10/20	Sat 12/12/20	139 days	1 day	476,479SS,478,4
481	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	Sun 13/12/20	Sun 31/1/21	139 days	0.5 days	480
482	Stormwater Works DDA for Bridge D3 and ICE certification (Final)	15 days	0 days	15 days	0%	Tue 15/9/20	Tue 29/9/20	NA	NA	Mon 1/2/21	Mon 15/2/21	139 days	1 day	481
483	Submit & endorse by PM and Statutory Authorities/Gov. Dept	50 days	0 days	50 days	0%	Wed 30/9/20	Wed 18/11/20	NA	NA	Tue 16/2/21	Tue 6/4/21	139 days	1 day	482
484	AIP for Stormwater Drainage Works of Pump Rooms EVA & Road L12d (Draft)	11 days	11 days	0 days	100%	Tue 28/4/20	Fri 8/5/20	Tue 28/4/20	Fri 8/5/20	Tue 28/4/20	Fri 8/5/20	0 days	1 day	
485	Submit & endorse by PM and Statutory Authorities/Gov. Dept	60 days	15 days	45 days	25%	Fri 8/5/20	Tue 7/7/20	Fri 8/5/20	NA	Fri 8/5/20	Sat 9/1/21	186 days	0.5 days	484
486	AIP for Stormwater Drainage Works (Final)	45 days	0 days	45 days	0%	Wed 8/7/20	Fri 21/8/20	NA	NA	Sun 10/1/21	Tue 23/2/21	186 days	0.5 days	484,485
487	DDA for Stormwater Drainage Works (Draft)	60 days	0 days	60 days	0%	Sat 22/8/20	Tue 20/10/20	NA	NA	Wed 24/2/21	Sat 24/4/21	186 days	1 day	484,486
488	Submit & endorse by PM and Statutory Authorities/Gov. Dept	60 days	0 days	60 days	0%	Wed 21/10/20	Sat 19/12/20	NA	NA	Sun 25/4/21	Wed 23/6/21	186 days	0.5 days	487
489	DDA for Stromwater Drainage Works (Final)	45 days	0 days	45 days	0%	Sun 20/12/20	Tue 2/2/21	NA	NA	Thu 24/6/21	Sat 7/8/21	186 days	1 day	487,486,488



Title: Rev.11 Prog with Progress as of 22-May-20

Task | Split | Milestone | Summary | Project Summary | Inactive Task | Inactive Milestone | Inactive Summary | Manual Task | Duration-only | Manual Summary Rollup | Manual Summary | Start-only | Finish-only | External Tasks | External Milestone | Deadline | Critical | Critical Split | Progress | Manual Progress

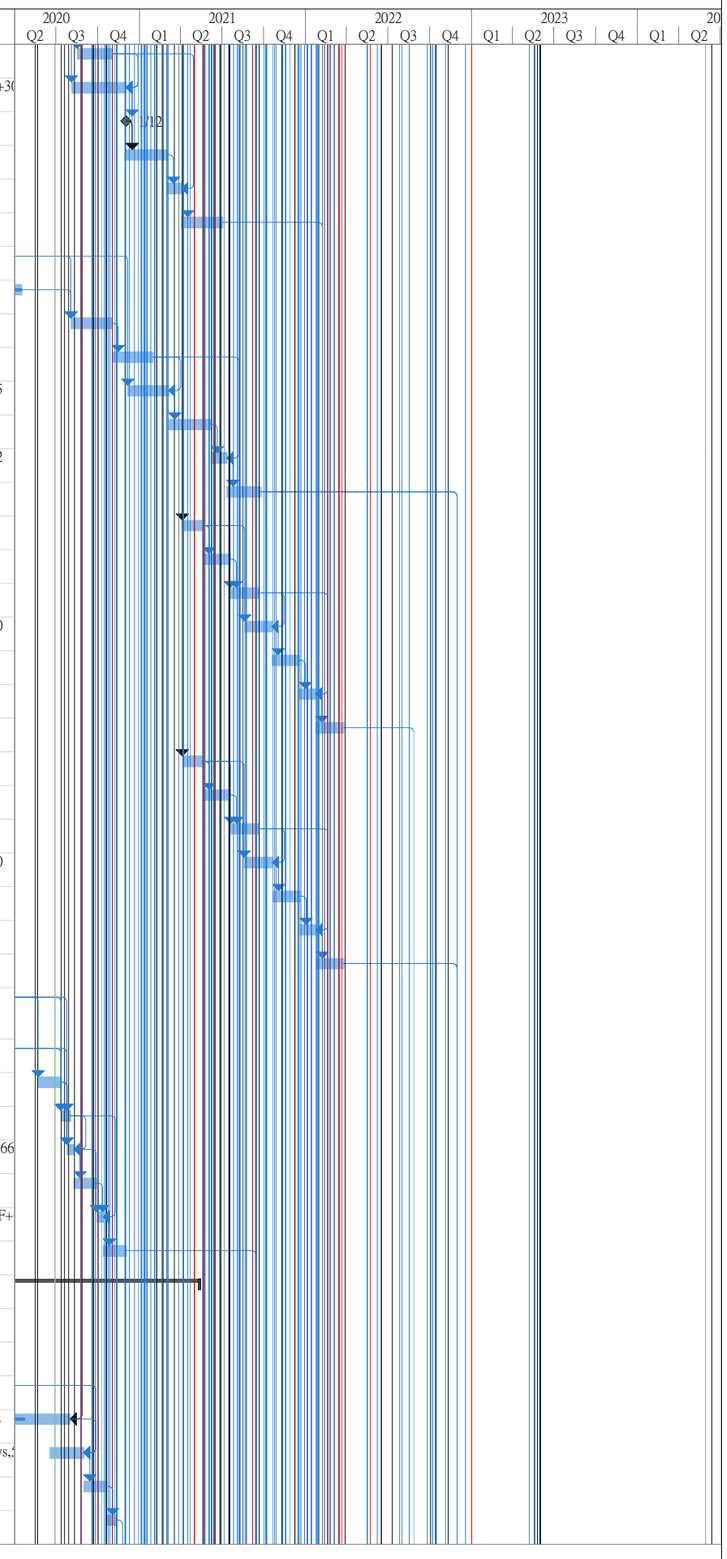
ID	Task Name	Duration	Actual Duration	Remaining Duration	Physical % Complete	Early Start	Early Finish	Actual Start	Actual Finish	Late Start	Late Finish	Total Slack	TRA	Predecessors
490	Submit & endorse by PM and Statutory Authorities/Gov. Dept	60 days	0 days	60 days	0%	Wed 3/2/21	Sat 3/4/21	NA	NA	Sun 8/8/21	Wed 6/10/21	186 days	0.5 days	489
491	AIP for Saltwater & Freshwater - Road L12d (Draft)	40 days	40 days	0 days	100%	Fri 1/11/19	Tue 10/12/19	Fri 1/11/19	Tue 10/12/19	Fri 1/11/19	Tue 10/12/19	0 days	1 day	
492	Submit & endorse by PM	31 days	31 days	0 days	100%	Wed 11/12/19	Fri 10/1/20	Wed 11/12/19	Fri 10/1/20	Wed 11/12/19	Fri 10/1/20	0 days	0.5 days	491
493	Submit & endorse by Statutory Authorities/Gov. Dept	14 days	14 days	0 days	100%	Thu 9/4/20	Wed 6/5/20	Thu 9/4/20	Wed 6/5/20	Thu 9/4/20	Wed 6/5/20	0 days	1 day	491
494	AIP for Saltwater & Freshwater Works - Road L12d (Final)	12 days	12 days	0 days	100%	Thu 7/5/20	Mon 18/5/20	Thu 7/5/20	Mon 18/5/20	Thu 7/5/20	Mon 18/5/20	0 days	0.5 days	491,492,493
495	DDA for Saltwater & Freshwater Works - Road L12d (Draft)	60 days	0 days	60 days	0%	Tue 19/5/20	Fri 17/7/20	NA	NA	Thu 11/3/21	Sun 9/5/21	296 days	1 day	491,494
496	Submit & endorse by PM and Statutory Authorities/Gov. Dept	60 days	0 days	60 days	0%	Sat 18/7/20	Tue 15/9/20	NA	NA	Mon 10/5/21	Thu 8/7/21	296 days	0.5 days	495
497	DDA for Saltwater & FreshwaterWorks - Road L12d (Final)	30 days	0 days	30 days	0%	Wed 16/9/20	Thu 15/10/20	NA	NA	Fri 9/7/21	Sat 7/8/21	296 days	1 day	494,495,496
498	Submit & endorse by PM and Statutory Authorities/Gov. Dept	60 days	0 days	60 days	0%	Fri 16/10/20	Mon 14/12/20	NA	NA	Sun 8/8/21	Wed 6/10/21	296 days	0.5 days	497
499	Fresh and Salt Works AIP - Waterfront Promenade and at grade Open Space (Draft)	40 days	40 days	0 days	100%	Fri 1/11/19	Tue 10/12/19	Fri 1/11/19	Tue 10/12/19	Fri 1/11/19	Tue 10/12/19	0 days	1 day	
500	Submit & endorse by PM	31 days	31 days	0 days	100%	Wed 11/12/19	Fri 10/1/20	Wed 11/12/19	Fri 10/1/20	Wed 11/12/19	Fri 10/1/20	0 days	0.5 days	499
501	Submit & endorse by PM/Statutory Authorities/Gov. Dept	14 days	14 days	0 days	100%	Thu 9/4/20	Mon 18/5/20	Thu 9/4/20	Mon 18/5/20	Thu 9/4/20	Mon 18/5/20	0 days	0.5 days	
502	Fresh and Salt Works AIP - Waterfront Promenade and at grade Open Space (Final)	0 days	0 days	0 days	100%	Mon 11/5/20	Mon 18/5/20	Mon 11/5/20	Mon 18/5/20	Mon 11/5/20	Mon 18/5/20	0 days	0.5 days	499,500,501
503	Fresh and Salt Works DDA - Waterfront Promenade and at grade Open Space (Draft)	90 days	0 days	90 days	0%	Tue 19/5/20	Sun 16/8/20	NA	NA	Sat 19/12/20	Thu 18/3/21	214 days	1 day	499,502
504	Submit & endorse by PM and Statutory Authorities/Gov. Dept	75 days	0 days	75 days	0%	Mon 17/8/20	Fri 30/10/20	NA	NA	Fri 19/3/21	Tue 1/6/21	214 days	0.5 days	503
505	Fresh and Salt Works DDA - Waterfront Promenade and at grade Open Space (Final)	52 days	0 days	52 days	0%	Sat 31/10/20	Mon 21/12/20	NA	NA	Wed 2/6/21	Fri 23/7/21	214 days	1 day	502,503,504
506	Submit & endorse by PM and Statutory Authorities/Gov. Dept	75 days	0 days	75 days	0%	Tue 22/12/20	Sat 6/3/21	NA	NA	Sat 24/7/21	Wed 6/10/21	214 days	0.5 days	505
507	AIP for Water Works - Remaining Fresh Water and Salt Water works (Draft)	40 days	40 days	0 days	100%	Fri 1/11/19	Tue 10/12/19	Fri 1/11/19	Tue 10/12/19	Fri 1/11/19	Tue 10/12/19	0 days	1 day	499SS
508	Submit & endorse by PM	31 days	31 days	0 days	100%	Wed 11/12/19	Fri 10/1/20	Wed 11/12/19	Fri 10/1/20	Wed 11/12/19	Fri 10/1/20	0 days	0.5 days	507
509	Submit & endorse by PM/Statutory Authorities/Gov. Dept	14 days	14 days	0 days	100%	Thu 9/4/20	Thu 7/5/20	Thu 9/4/20	Thu 7/5/20	Thu 9/4/20	Thu 7/5/20	0 days	2 days	507
510	AIP for Water Works - Remaining Fresh Water and Salt Water works (Final)	11 days	11 days	0 days	100%	Thu 7/5/20	Mon 18/5/20	Thu 7/5/20	Mon 18/5/20	Thu 7/5/20	Mon 18/5/20	0 days	0.5 days	507,508,509
511	DDA for Water Works - Remaining Fresh Water and Salt Water works (Draft)	50 days	0 days	50 days	0%	Mon 8/6/20	Mon 27/7/20	NA	NA	Fri 19/2/21	Fri 9/4/21	256 days	1 day	507,510
512	Submit & endorse by PM and Statutory Authorities/Gov. Dept	75 days	0 days	75 days	0%	Tue 28/7/20	Sat 10/10/20	NA	NA	Sat 10/4/21	Wed 23/6/21	256 days	0.5 days	511
513	DDA for Water Works - Remaining Fresh Water and Salt Water works (Final)	30 days	0 days	30 days	0%	Sun 11/10/20	Mon 9/11/20	NA	NA	Thu 24/6/21	Fri 23/7/21	256 days	1 day	510,511,512
514	Submit & endorse by PM and Statutory Authorities/Gov. Dept	75 days	0 days	75 days	0%	Tue 10/11/20	Sat 23/1/21	NA	NA	Sat 24/7/21	Wed 6/10/21	256 days	0.5 days	513
515	Pumping Stations, Box Culverts and Intake Structures	845 days	100.29 days	744.71 days	0%	Mon 2/12/19	Fri 25/3/22	Mon 2/12/19	NA	Mon 2/12/19	Thu 5/5/22	41 days		
516	Prepare AIP for Salt Water and Sewage Pumping Structures (Draft)	29 days	29 days	0 days	100%	Mon 2/12/19	Mon 30/12/19	Mon 2/12/19	Mon 30/12/19	Mon 2/12/19	Mon 30/12/19	0 days	1 day	4
517	Submit & endorse by PM	11 days	11 days	0 days	100%	Tue 31/12/19	Fri 10/1/20	Tue 31/12/19	Fri 10/1/20	Tue 31/12/19	Fri 10/1/20	0 days	0.5 days	516
518	Submit & endorse by Statutory Authorities/Gov. Dept	27 days	27 days	0 days	100%	Fri 27/3/20	Wed 29/4/20	Fri 27/3/20	Wed 29/4/20	Fri 27/3/20	Wed 29/4/20	0 days	2 days	
519	Prepare AIP for Salt Water & Sewage Pumping Structures and ICE certification (Final)	36 days	0 days	36 days	0%	Thu 2/7/20	Thu 6/8/20	NA	NA	Thu 10/6/21	Thu 15/7/21	343 days	1 day	516,517,518FF+ days
520	Prepare DDA for Salt Water & Sewage Pumping Structures and ICE certification (Draft)	45 days	0 days	45 days	0%	Tue 1/9/20	Thu 15/10/20	NA	NA	Tue 10/8/21	Thu 23/9/21	343 days	1 day	516,518FF+21 days,519FF+70
521	Submit & endorse by PM and Statutory Authorities/Gov. Dept	50 days	0 days	50 days	0%	Fri 16/10/20	Fri 4/12/20	NA	NA	Fri 24/9/21	Fri 12/11/21	343 days	0.5 days	520
522	Prepare DDA for Salt Water & Sewage Pumping Structures and ICE certification (Final)	45 days	0 days	45 days	0%	Sat 5/12/20	Mon 18/1/21	NA	NA	Sat 13/11/21	Mon 27/12/21	343 days	0.5 days	521,519FF
523	Submit & endorse by PM and Statutory Authorities/Gov. Dept	50 days	0 days	50 days	0%	Tue 19/1/21	Tue 9/3/21	NA	NA	Tue 28/12/21	Tue 15/2/22	343 days		522
524	Prepare E&M Works AIP for Sewage Pumping Station (Draft)	29 days	29 days	0 days	100%	Tue 7/1/20	Tue 4/2/20	Tue 7/1/20	Tue 4/2/20	Tue 7/1/20	Tue 4/2/20	0 days	2 days	
525	Submit & endorse by PM	10 days	10 days	0 days	100%	Wed 5/2/20	Fri 14/2/20	Wed 5/2/20	Fri 14/2/20	Wed 5/2/20	Fri 14/2/20	0 days	0.5 days	516,524
526	Submit & endorse by Statutory Authorities/Gov. Dept	55 days	30 days	25 days	55%	Thu 23/4/20	Tue 16/6/20	Thu 23/4/20	NA	Thu 23/4/20	Sun 13/9/20	89 days	2 days	524,525
527	Prepare AIP for Sewage Pumping Station E&M works and ICE certification (Final)	77 days	0 days	77 days	0%	Wed 17/6/20	Tue 1/9/20	NA	NA	Mon 14/9/20	Sun 29/11/20	89 days	2 days	526
528	Prepare DDA for Sewage Pumping Station E&M works and ICE certification (Draft)	120 days	0 days	120 days	0%	Wed 24/6/20	Wed 21/10/20	NA	NA	Mon 21/9/20	Mon 18/1/21	89 days	1 day	516,526FF,527F days
529	Submit & endorse by PM and Statutory Authorities/Gov. Dept	70 days	0 days	70 days	0%	Thu 22/10/20	Wed 30/12/20	NA	NA	Tue 19/1/21	Mon 29/3/21	89 days	1 day	528
530	Prepare DDA for Sewage Pumping Station and ICE certification (Final)	31 days	0 days	31 days	0%	Thu 31/12/20	Sat 30/1/21	NA	NA	Tue 30/3/21	Thu 29/4/21	89 days	1 day	529,527FF+6 days
531	Submit & endorse by PM and Statutory Authorities/Gov. Dept	91 days	0 days	91 days	0%	Sun 31/1/21	Sat 1/5/21	NA	NA	Fri 30/4/21	Thu 29/7/21	89 days	1 day	530
532	Prepare E&M Works AIP for Salt Water Pumping (Draft)	29 days	29 days	0 days	100%	Tue 7/1/20	Tue 4/2/20	Tue 7/1/20	Tue 4/2/20	Tue 7/1/20	Tue 4/2/20	0 days	2 days	
533	Submit & endorse by PM	10 days	10 days	0 days	100%	Wed 5/2/20	Fri 14/2/20	Wed 5/2/20	Fri 14/2/20	Wed 5/2/20	Fri 14/2/20	0 days	0.5 days	532,516
534	Submit & endorse by Statutory Authorities/Gov. Dept	60 days	24 days	36 days	40%	Wed 29/4/20	Sat 27/6/20	Wed 29/4/20	NA	Wed 29/4/20	Sat 12/9/20	77 days	2 days	532,533



Title: Rev.11 Prog with Progress as of 22-May-20

Task
Split
Milestone
Summary
Project Summary
Inactive Task
Inactive Milestone
Inactive Summary
Manual Task
Duration-only
Manual Summary Rollup
Manual Summary
Start-only
Finish-only
External Tasks
External Milestone
Deadline
Critical
Critical Split
Progress
Manual Progress

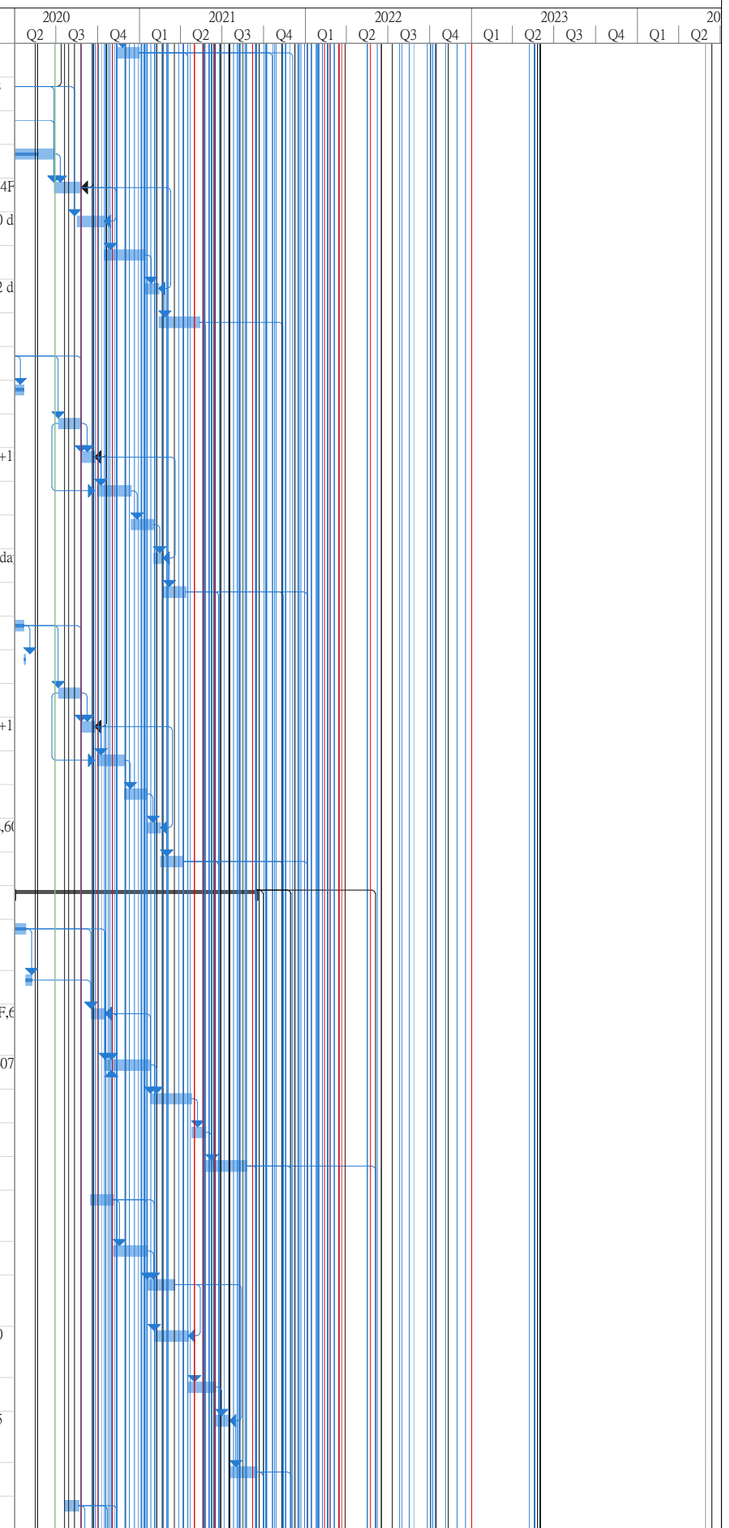
ID	Task Name	Duration	Actual Duration	Remaining Duration	Physical % Complete	Early Start	Early Finish	Actual Start	Actual Finish	Late Start	Late Finish	Total Slack	TRA	Predecessors
535	Prepare AIP for Salt Water Pumping Station E&M works and ICE certification (Final)	77 days	0 days	77 days	0%	Mon 17/8/20	Sun 1/11/20	NA	NA	Sun 13/9/20	Sat 28/11/20	27 days	2 days	534
536	Prepare DDA for Salt Water Pumping Station E&M works and ICE certification (Draft)	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 days,516
537	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	536
538	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
539	Prepare DDA for Salt Water Pumping Station and ICE certification (Final)	31 days	0 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 days,538
540	Submit & endorse by PM and Statutory Authorities/Gov. Dept	91 days	0 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	539
541	AIP for Remaining Works of Salt Water & Sewerage Pumping and ICE certification (Draft)	41 days	41 days	0 days	0%	Mon 17/2/20	Sat 28/3/20	Mon 17/2/20	Sat 28/3/20	Mon 17/2/20	Sat 28/3/20	0 days	1 day	4
542	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		
543	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 days	541,542
544	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
545	DDA for Remaining Works of Salt Water & Sewage Pumping and ICE certification (Draft)	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+35 days
546	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	545
547	DDA for Remaining Works of Salt Water & Sewage Pumping and ICE certification (Final)	35 days	0 days	35 days	0%	Mon 7/6/21	Sun 11/7/21	NA	NA	Sun 16/1/22	Sat 19/2/22	223 days	3 days	546,544FF+12 days
548	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	547
549	AIP for Architectural works of Salt Water & Sewage Pumping and ICE certification (Draft)	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
550	Submit & endorse by PM and Statutory Authorities/Gov. Dept	60 days	0 days	60 days	0%	Thu 20/5/21	Sun 18/7/21	NA	NA	Thu 17/6/21	Sun 15/8/21	28 days	0.5 days	549
551	AIP for Architectural works of Salt Water Pumping & Sewage and ICE certification (Final)	62 days	0 days	62 days	0%	Mon 19/7/21	Sat 18/9/21	NA	NA	Mon 16/8/21	Sat 16/10/21	28 days	2 days	549,550
552	DDA for Architectural works of Salt Water & Sewage Pumping and ICE certification (Draft)	60 days	0 days	60 days	0%	Fri 20/8/21	Mon 18/10/21	NA	NA	Fri 17/9/21	Mon 15/11/21	28 days	1 day	549,551FF+30 days
553	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 days	552
554	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
555	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
556	AIP for Landscaping works of Salt Water & Sewage Pumping and ICE certification (Draft)	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
557	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 days	556
558	AIP for Landscaping works of Salt Water Pumping & Sewage and ICE certification (Final)	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
559	DDA for Landscaping works of Salt Water & Sewage Pumping and ICE certification (Draft)	62 days	0 days	62 days	0%	Thu 19/8/21	Tue 19/10/21	NA	NA	Wed 15/9/21	Mon 15/11/21	27 days	2 days	556,558FF+30 days
560	Submit & endorse by PM and Statutory Authorities/Gov. Dept	61 days	0 days	61 days	0%	Wed 20/10/21	Sun 19/12/21	NA	NA	Tue 16/11/21	Sat 15/1/22	27 days	0.5 days	559
561	DDA for Landscaping works of Salt Water & Sewage Pumping and ICE certification (Final)	35 days	0 days	35 days	0%	Mon 20/12/21	Sun 23/1/22	NA	NA	Sun 16/1/22	Sat 19/2/22	27 days	2 days	558FF+12 days,560
562	Submit & endorse by PM and Statutory Authorities/Gov. Dept	61 days	0 days	61 days	0%	Mon 24/1/22	Fri 25/3/22	NA	NA	Sun 20/2/22	Thu 21/4/22	27 days	2 days	561
563	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	
564	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 days	563
565	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 days	563
566	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 days	563,565,564
567	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	563,565,564,566
568	Submit & endorse by PM and Statutory Authorities/Gov. Dept	50 days	0 days	50 days	0%	Sun 9/8/20	Sun 27/9/20	NA	NA	Mon 14/6/21	Mon 2/8/21	309 days	0.5 days	567
569	DDA for Seawater Intake and Box Culvert Structure (Final)	15 days	0 days	15 days	0%	Mon 28/9/20	Mon 12/10/20	NA	NA	Tue 3/8/21	Tue 17/8/21	309 days	1 day	567,568,566FF+
570	Submit & endorse by PM and Statutory Authorities/Gov. Dept	50 days	0 days	50 days	0%	Tue 13/10/20	Tue 1/12/20	NA	NA	Wed 18/8/21	Wed 6/10/21	309 days	0.5 days	569
571	Elevated Landscape Deck Staircase & Associated Work	714 days	268.49 days	445.51 days	0%	Thu 30/5/19	Wed 12/5/21	Thu 30/5/19	NA	Thu 30/5/19	Mon 5/7/21	54 days		
572	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
573	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
574	Submit & endorse by Statutory Authorities/Gov. Dept	162 days	162 days	0 days	0%	Tue 24/9/19	Tue 3/3/20	Tue 24/9/19	Tue 3/3/20	Tue 24/9/19	Tue 3/3/20	0 days	0.5 days	573
575	Prepare AIP and ICE certification (Final)	255 days	155 days	100 days	61%	Wed 20/11/19	Fri 31/7/20	Wed 20/11/19	NA	Wed 20/11/19	Thu 26/11/20	118 days	0.5 days	44FF+12 days
576	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 days,5
577	Submit & endorse by PM and Statutory Authorities/Gov. Dept	50 days	0 days	50 days	0%	Mon 31/8/20	Mon 19/10/20	NA	NA	Sun 27/12/20	Sun 14/2/21	118 days	0.5 days	576
578	Prepare DDA for and ICE certification (Final)	22 days	0 days	22 days	0%	Tue 20/10/20	Tue 10/11/20	NA	NA	Mon 15/2/21	Mon 8/3/21	118 days	1 day	577



Title: Rev.11 Prog with Progress as of 22-May-20

Task | Summary | Inactive Milestone | Duration-only | Start-only | External Milestone | Critical Split
Split | Project Summary | Inactive Summary | Manual Summary Rollup | Finish-only | Deadline | Progress
Milestone | Inactive Task | Manual Task | Manual Summary | External Tasks | Critical | Manual Progress

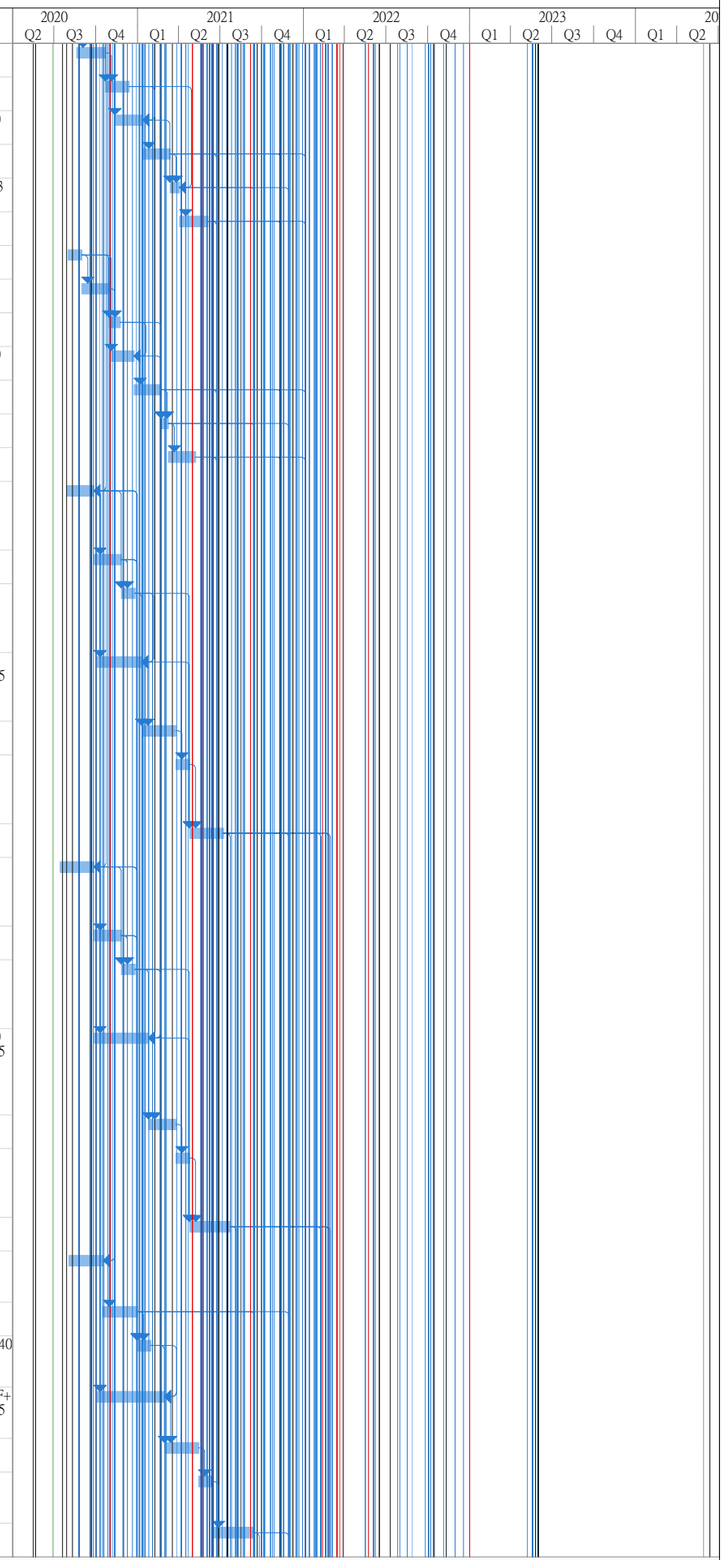
ID	Task Name	Duration	Actual Duration	Remaining Duration	Physical % Complete	Early Start	Early Finish	Actual Start	Actual Finish	Late Start	Late Finish	Total Slack	TRA	Predecessors
579	Submit & endorse by PM and Statutory Authorities/Gov. Dept	50 days	0 days	50 days	0%	Wed 11/11/20	Wed 30/12/20	NA	NA	Tue 9/3/21	Tue 27/4/21	118 days	1 day	578
580	Elevated Landscape Deck - Lift (LT1&LT2)& Staircase include E&M Progvision: AIP and ICE Certification (Draft)	50 days	50 days	0 days	100%	Mon 7/10/19	Mon 25/11/19	Mon 7/10/19	Mon 25/11/19	Mon 7/10/19	Mon 25/11/19	0 days	3 days	44FF+12 days
581	Submit & endorse by PM	21 days	21 days	0 days	100%	Tue 26/11/19	Mon 16/12/19	Tue 26/11/19	Mon 16/12/...	Tue 26/11/19	Mon 16/12/19	0 days	1 days	580
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
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 days	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 days	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
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	
589	Submit & endorse by PM	21 days	21 days	0 days	100%	Mon 30/3/20	Mon 20/4/20	Mon 30/3/20	Mon 20/4/20	Mon 30/3/20	Mon 20/4/20	0 days	0.5 days	588
590	Submit & endorse by Statutory Authorities/Gov. Dept	50 days	0 days	50 days	0%	Mon 6/7/20	Mon 24/8/20	NA	NA	Mon 28/9/20	Mon 16/11/20	84 days	1 days	588
591	Prepare AIP and ICE certification (Final)	30 days	0 days	30 days	0%	Tue 25/8/20	Wed 23/9/20	NA	NA	Tue 17/11/20	Wed 16/12/20	84 days	2 days	588,590,44FF+1
592	Prepare DDA and ICE certification (Draft)	75 days	0 days	75 days	0%	Thu 24/9/20	Sat 12/12/20	NA	NA	Thu 17/12/20	Sat 6/3/21	84 days	1 day	590SS,591
593	Submit & endorse by PM and Statutory Authorities/Gov. Dept	50 days	0 days	50 days	0%	Sun 13/12/20	Sun 31/1/21	NA	NA	Sun 7/3/21	Sun 25/4/21	84 days	0.5 days	592
594	Prepare DDA for and ICE certification (Final)	21 days	0 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	593,591FF+6 da
595	Submit & endorse by PM and Statutory Authorities/Gov. Dept	50 days	0 days	50 days	0%	Mon 22/2/21	Mon 12/4/21	NA	NA	Mon 17/5/21	Mon 5/7/21	84 days	0 days	594
596	EVA for Open Space AIP Subm (Draft)	71 days	71 days	0 days	100%	Mon 10/2/20	Mon 20/4/20	Mon 10/2/20	Mon 20/4/20	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
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
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 days	600
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		
605	Prepare AIP for Observation Deck with Lift (LT5) and Staircase and ICE (Include E&M Provision Works) certification (Draft)	24 days	24 days	0 days	100%	Wed 1/4/20	Fri 24/4/20	Wed 1/4/20	Fri 24/4/20	Wed 1/4/20	Fri 24/4/20	0 days	1 day	
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&M Provision Works) certification (Draft)	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 days	608,607
610	Prepare DDA for Observation Deck with Lift and Staircase and ICE (Include E&M Provision Works) certification (Final)	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 days	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
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	



Title: Rev.11 Prog with Progress as of 22-May-20

Task | Split | Milestone | Summary | Project Summary | Inactive Task | Inactive Milestone | Inactive Summary | Manual Task | Duration-only | Manual Summary Rollup | Manual Summary | Start-only | Finish-only | External Tasks | External Milestone | Deadline | Critical | Critical Split | Progress | Manual Progress

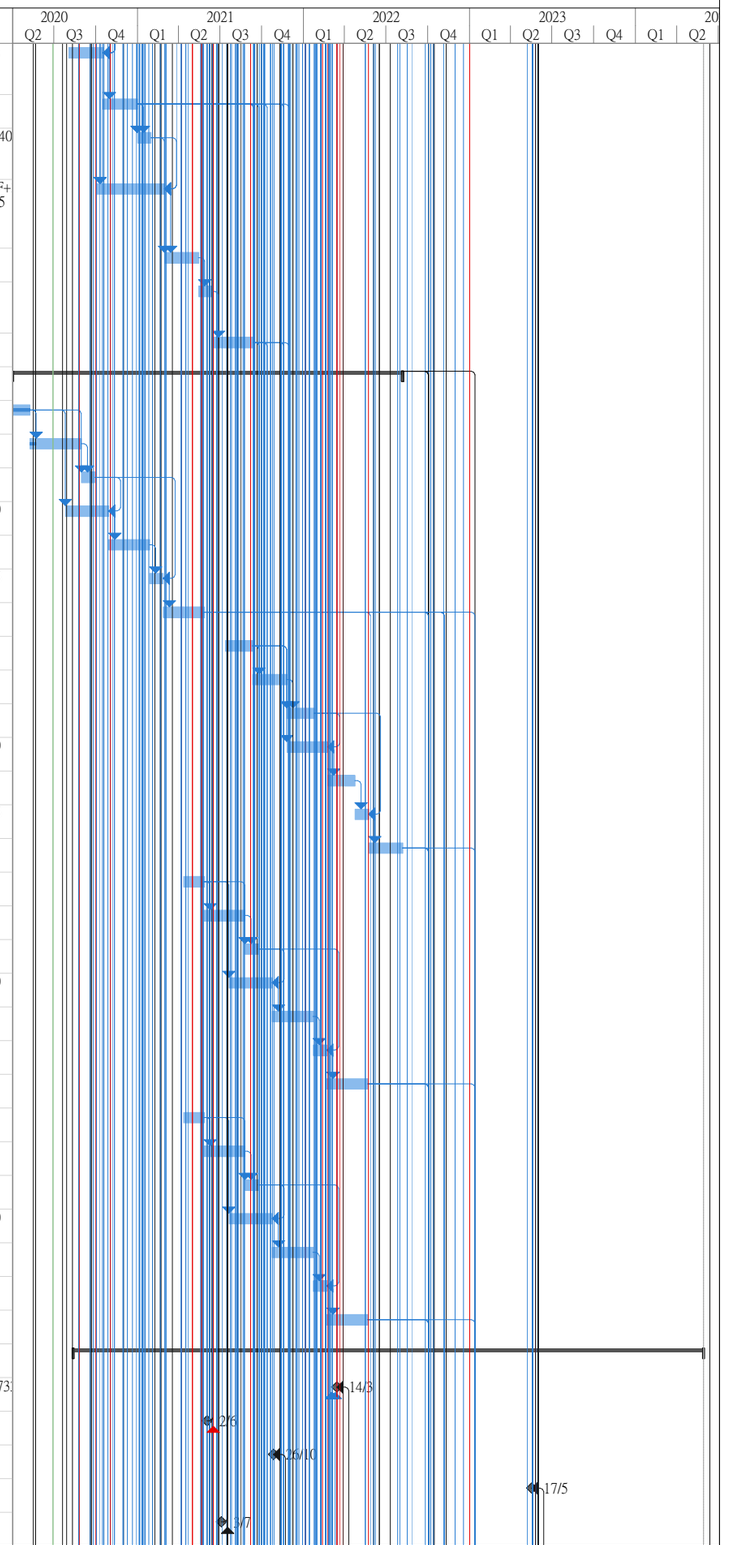
ID	Task Name	Duration	Actual Duration	Remaining Duration	Physical % Complete	Early Start	Early Finish	Actual Start	Actual Finish	Late Start	Late Finish	Total Slack	TRA	Predecessors
620	Submit & endorse by PM and Statutory Authorities/Gov. Dept	63 days	0 days	63 days	0%	Thu 20/8/20	Wed 21/10/20	NA	NA	Mon 21/9/20	Sun 22/11/20	32 days	3 days	619
621	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 days	619,620
622	DDA for Cladding Design of Landscape Deck, Lifts and associated Works (Draft)	61 days	0 days	61 days	0%	Thu 12/11/20	Mon 11/1/21	NA	NA	Mon 14/12/20	Fri 12/2/21	32 days	1 day	619,621FF+30 days
623	Submit & endorse by PM and Statutory Authorities/Gov. Dept	60 days	0 days	60 days	0%	Tue 12/1/21	Fri 12/3/21	NA	NA	Sat 13/2/21	Tue 13/4/21	32 days	1 day	622
624	DDA for Cladding Design of Landscape Deck, Lifts and associated Works (Final)	21 days	0 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 day	621FF,622,623
625	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 days	624
626	AIP for Balustrade and Railing of Promenade, Open Space and Assocated Works (Draft)	30 days	0 days	30 days	0%	Sat 1/8/20	Sun 30/8/20	NA	NA	Tue 29/9/20	Wed 28/10/20	59 days	1 day	
627	Submit & endorse by PM and Statutory Authorities/Gov. Dept	60 days	0 days	60 days	0%	Mon 31/8/20	Thu 29/10/20	NA	NA	Thu 29/10/20	Sun 27/12/20	59 days	1 day	626
628	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 days	626,627
629	DDA for Balustrade and Railing of Promenade, Open Space and Assocated Works (Draft)	50 days	0 days	50 days	0%	Wed 4/11/20	Wed 23/12/20	NA	NA	Sat 2/1/21	Sat 20/2/21	59 days	1 day	626,628FF+30 days
630	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 days	629
631	DDA for Balustrade and Railing of Promenade, Open Space and Assocated Works (Final)	15 days	0 days	15 days	0%	Mon 22/2/21	Mon 8/3/21	NA	NA	Thu 22/4/21	Thu 6/5/21	59 days	1 day	628,629,630
632	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 days	631
633	Prepare AIP for Permanent Building Works (i.e. Ampitheater, Observation Tower, Toilet Block, Light Refreshment Kiosk, Refuse Collection Block, Back of House Building Blocks) and ICE certification (Draft)	60 days	0 days	60 days	0%	Wed 29/7/20	Sat 26/9/20	NA	NA	Thu 20/8/20	Sun 18/10/20	22 days	1 day	149FF+7 days
634	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 days	633
635	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 days	633,634
636	Prepare DDA for Permanent Building Works (i.e. Ampitheater, Observation Tower, Toilet Block, Light Refreshment Kiosk, Refuse Collection Block, Back of House Building Blocks) and ICE certification (Draft)	100 days	0 days	100 days	0%	Fri 2/10/20	Sat 9/1/21	NA	NA	Sun 8/11/20	Mon 15/2/21	37 days	1 day	633,635FF+15 days,151FF+15 days
637	Submit & endorse by PM and Statutory Authorities/Gov. Dept	75 days	0 days	75 days	0%	Sun 10/1/21	Thu 25/3/21	NA	NA	Tue 16/2/21	Sat 1/5/21	37 days	0.5 days	635,636
638	Prepare DDA for Permanent Building Works (i.e. Ampitheater, Observation Tower, Toilet Block, Light Refreshment Kiosk, Refuse Collection Block, Back of House Building Blocks) nd ICE certification (Final)	30 days	0 days	30 days	0%	Fri 26/3/21	Sat 24/4/21	NA	NA	Sun 2/5/21	Mon 31/5/21	37 days	0 days	637
639	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 days	635,636,638
640	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 day	149FF+7 days
641	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 days	640
642	Prepare AIP for Permanent Building E&M Works (i.e. 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	Fri 18/12/20	Sat 16/1/21	22 days	0 days	640,641
643	Prepare DDA for Permanent Building E&M Works (i.e.Ampitheater, Observation Tower, Toilet Block, Light Refreshment Kiosk, Refuse Collection Block, Back of House Building Blocks) and ICE (Include E&M Provision Works) certification (Draft)	120 days	0 days	120 days	0%	Sun 27/9/20	Sun 24/1/21	NA	NA	Mon 19/10/20	Mon 15/2/21	22 days	1 day	640,642FF+30 days,151FF+15 days
644	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 days	642,643
645	Prepare DDA for Permanent Building E&M Works (i.e. Ampitheater, Observation Tower, Toilet Block, Light Refreshment Kiosk, Refuse Collection Block, Back of House Building Blocks) nd ICE certification (Final)	30 days	0 days	30 days	0%	Fri 26/3/21	Sat 24/4/21	NA	NA	Sat 17/4/21	Sun 16/5/21	22 days	0 days	644
646	Submit & endorse by PM and Statutory Authorities/Gov. Dept	90 days	0 days	90 days	0%	Sun 25/4/21	Fri 23/7/21	NA	NA	Mon 17/5/21	Sat 14/8/21	22 days	0.5 days	642,643,645
647	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	NA	Thu 20/8/20	Mon 2/11/20	17 days	1 day	149FF+7 days
648	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 days	647
649	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 days	633,634,648,640
650	Prepare DDA for AIP for Temporary Building Works (i.e. temporary management office and toilet blocks) and ICE (Include E&M Provision Works) and ICE certification (Draft)	150 days	0 days	150 days	0%	Fri 2/10/20	Sun 28/2/21	NA	NA	Mon 19/10/20	Wed 17/3/21	17 days	1 day	633,640,649FF+ days,151FF+15 days
651	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 days	649,650
652	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 days	651
653	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 days	652



Title: Rev.11 Prog with Progress as of 22-May-20

Task, Split, Milestone, Summary, Project Summary, Inactive Task, Inactive Milestone, Inactive Summary, Manual Task, Duration-only, Manual Summary Rollup, Manual Summary, Start-only, Finish-only, External Tasks, External Milestone, Deadline, Critical, Critical Split, Progress, Manual Progress

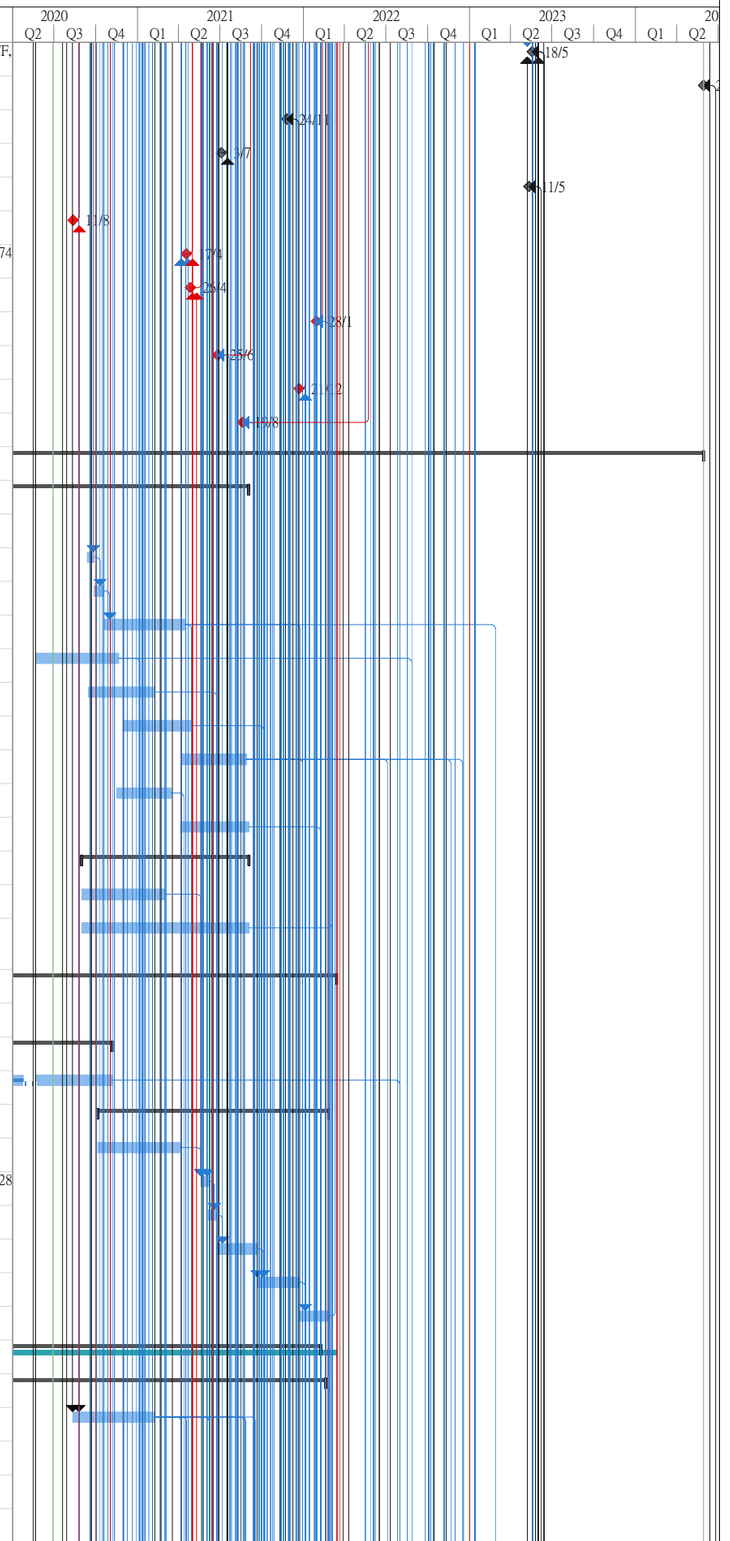
ID	Task Name	Duration	Actual Duration	Remaining Duration	Physical % Complete	Early Start	Early Finish	Actual Start	Actual Finish	Late Start	Late Finish	Total Slack	TRA	Predecessors
654	Prepare AIP for Temporary Building E&M Works (i.e. temporary management office and toilet blocks) and ICE certification (Draft)	75 days	0 days	75 days	0%	Mon 3/8/20	Fri 16/10/20	NA	NA	Thu 20/8/20	Mon 2/11/20	17 days	1 day	149FF+7 days
655	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 days	654
656	Prepare AIP for Temporary Building E&M 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 days	655,633,634,640
657	Prepare DDA for AIP for Temporary Building E&M Works (i.e. temporary management office and toilet blocks) and ICE (Include E&M Provision Works) and ICE certification (Draft)	150 days	0 days	150 days	0%	Fri 2/10/20	Sun 28/2/21	NA	NA	Mon 19/10/20	Wed 17/3/21	17 days	1 day	633,640,656FF+ days,151FF+15 days
658	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 days	656,657
659	Prepare DDA for AIP for Temporary Building E&M 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 days	658
660	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 days	659
661	Landscaping and Irrigation works	858 days	23.33 days	834.67 days	0%	Wed 1/4/20	Sat 6/8/22	Wed 1/4/20	NA	Wed 1/4/20	Sun 23/10/22	78 days		
662	Prepare AIP for Roadside Landscaping Softworks and ICE certification (Draft)	38 days	38 days	0 days	100%	Wed 1/4/20	Fri 8/5/20	Wed 1/4/20	Fri 8/5/20	Wed 1/4/20	Fri 8/5/20	0 days	1 day	
663	Submit & endorse by PM and Statutory Authorities/Gov. Dept	113 days	13 days	100 days	12%	Sat 9/5/20	Sat 29/8/20	Sat 9/5/20	NA	Sat 9/5/20	Mon 20/9/21	387 days	0.5 days	662
664	Prepare AIP for roadside landscaping softworks and ICE certification (Final)	30 days	0 days	30 days	0%	Sun 30/8/20	Mon 28/9/20	NA	NA	Tue 21/9/21	Wed 20/10/21	387 days	0 days	662,663
665	Prepare DDA for Roadside Landscaping Softworks and ICE certification (Draft)	95 days	0 days	95 days	0%	Sun 26/7/20	Wed 28/10/20	NA	NA	Tue 17/8/21	Fri 19/11/21	387 days	1 day	662,664FF+30 days
666	Submit & endorse by PM and Statutory Authorities/Gov. Dept	90 days	0 days	90 days	0%	Thu 29/10/20	Tue 26/1/21	NA	NA	Sat 20/11/21	Thu 17/2/22	387 days	0.5 days	665
667	Prepare DDA for Roadside Landscaping Softworks and ICE certification (Final)	30 days	0 days	30 days	0%	Wed 27/1/21	Thu 25/2/21	NA	NA	Fri 18/2/22	Sat 19/3/22	387 days	0 days	666,664FF+15 days
668	Submit & endorse by PM and Statutory Authorities/Gov. Dept	90 days	0 days	90 days	0%	Fri 26/2/21	Wed 26/5/21	NA	NA	Sun 20/3/22	Fri 17/6/22	387 days	0 days	667
669	Prepare AIP for irrigation system for all landscaping works and ICE certification (Draft)	60 days	0 days	60 days	0%	Tue 13/7/21	Fri 10/9/21	NA	NA	Wed 29/9/21	Sat 27/11/21	78 days	1 day	
670	Submit & endorse by PM and Statutory Authorities/Gov. Dept	75 days	0 days	75 days	0%	Sat 11/9/21	Wed 24/11/21	NA	NA	Sun 28/11/21	Thu 10/2/22	78 days	0.5 days	669
671	Prepare AIP for irrigation system for all landscaping works and ICE certification (Final)	60 days	0 days	60 days	0%	Thu 25/11/21	Sun 23/1/22	NA	NA	Fri 11/2/22	Mon 11/4/22	78 days	0 days	669,670
672	Prepare DDA for irrigation system for all landscaping works and ICE certification (Draft)	90 days	0 days	90 days	0%	Thu 25/11/21	Tue 22/2/22	NA	NA	Fri 11/2/22	Wed 11/5/22	78 days	1 day	669,671FF+30 days
673	Submit & endorse by PM and Statutory Authorities/Gov. Dept	60 days	0 days	60 days	0%	Wed 23/2/22	Sat 23/4/22	NA	NA	Thu 12/5/22	Sun 10/7/22	78 days	0.5 days	672
674	Prepare DDA for irrigation system for all landscaping works and ICE certification (Final)	30 days	0 days	30 days	0%	Sun 24/4/22	Mon 23/5/22	NA	NA	Mon 11/7/22	Tue 9/8/22	78 days	0 days	673,671FF+15 days
675	Submit & endorse by PM and Statutory Authorities/Gov. Dept	75 days	0 days	75 days	0%	Tue 24/5/22	Sat 6/8/22	NA	NA	Wed 10/8/22	Sun 23/10/22	78 days	0 days	674
676	Prepare AIP for Soft Landscaping works and ICE certification (Draft)	45 days	0 days	45 days	0%	Mon 12/4/21	Wed 26/5/21	NA	NA	Tue 14/9/21	Thu 28/10/21	155 days	1 day	
677	Submit & endorse by PM and Statutory Authorities/Gov. Dept	90 days	0 days	90 days	0%	Thu 27/5/21	Tue 24/8/21	NA	NA	Fri 29/10/21	Wed 26/1/22	155 days	0.5 days	676
678	Prepare AIP for soft landscaping and ICE certification (Final)	30 days	0 days	30 days	0%	Wed 25/8/21	Thu 23/9/21	NA	NA	Thu 27/1/22	Fri 25/2/22	155 days	0 days	676,677
679	Prepare DDA for Soft Landscaping and ICE certification (Draft)	95 days	0 days	95 days	0%	Wed 21/7/21	Sat 23/10/21	NA	NA	Thu 23/12/21	Sun 27/3/22	155 days	1 day	676,678FF+30 days
680	Submit & endorse by PM and Statutory Authorities/Gov. Dept	90 days	0 days	90 days	0%	Sun 24/10/21	Fri 21/1/22	NA	NA	Mon 28/3/22	Sat 25/6/22	155 days	0.5 days	679
681	Prepare DDA for Soft Landscaping and ICE certification (Final)	30 days	0 days	30 days	0%	Sat 22/1/22	Sun 20/2/22	NA	NA	Sun 26/6/22	Mon 25/7/22	155 days	0 days	678FF+15 days,680
682	Submit & endorse by PM and Statutory Authorities/Gov. Dept	90 days	0 days	90 days	0%	Mon 21/2/22	Sat 21/5/22	NA	NA	Tue 26/7/22	Sun 23/10/22	155 days	0 days	681
683	Prepare AIP for Hard Landscaping and ICE certification (Draft)	45 days	0 days	45 days	0%	Mon 12/4/21	Wed 26/5/21	NA	NA	Tue 14/9/21	Thu 28/10/21	155 days	1 day	
684	Submit & endorse by PM and Statutory Authorities/Gov. Dept	90 days	0 days	90 days	0%	Thu 27/5/21	Tue 24/8/21	NA	NA	Fri 29/10/21	Wed 26/1/22	155 days	0.5 days	683
685	Prepare AIP for Hard landscaping and ICE certification (Final)	30 days	0 days	30 days	0%	Wed 25/8/21	Thu 23/9/21	NA	NA	Thu 27/1/22	Fri 25/2/22	155 days	0 days	683,684
686	Prepare DDA for Hard Landscaping and ICE certification (Draft)	95 days	0 days	95 days	0%	Wed 21/7/21	Sat 23/10/21	NA	NA	Thu 23/12/21	Sun 27/3/22	155 days	1 day	683,685FF+30 days
687	Submit & endorse by PM and Statutory Authorities/Gov. Dept	90 days	0 days	90 days	0%	Sun 24/10/21	Fri 21/1/22	NA	NA	Mon 28/3/22	Sat 25/6/22	155 days	0.5 days	686
688	Prepare DDA for Hard Landscaping and ICE certification (Final)	30 days	0 days	30 days	0%	Sat 22/1/22	Sun 20/2/22	NA	NA	Sun 26/6/22	Mon 25/7/22	155 days	0 days	685FF+15 days,687
689	Submit & endorse by PM and Statutory Authorities/Gov. Dept	90 days	0 days	90 days	0%	Mon 21/2/22	Sat 21/5/22	NA	NA	Tue 26/7/22	Sun 23/10/22	155 days	0 days	688
690	Work Stage/ Phase - Planned Completion	1387 days	0 days	1387 days	0%	Tue 11/8/20	Wed 29/5/24	NA	NA	Fri 7/8/20	Wed 29/5/24	-4 days		
691	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	0 days	1105FF,1438,73
692	Section 2	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	1127
693	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	7 days	0 days	1172FF
694	Section 4	0 days	0 days	0 days	0%	Wed 17/5/23	Wed 17/5/23	NA	NA	Tue 30/5/23	Tue 30/5/23	13 days	0 days	1133FF
695	Section 5	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



Title: Rev.11 Prog with Progress as of 22-May-20

Task | Split | Milestone | Summary | Project Summary | Inactive Task | Inactive Milestone | Inactive Summary | Manual Task | Duration-only | Manual Summary Rollup | Manual Summary | Start-only | Finish-only | External Tasks | External Milestone | Deadline | Critical | Critical Split | Progress | Manual Progress

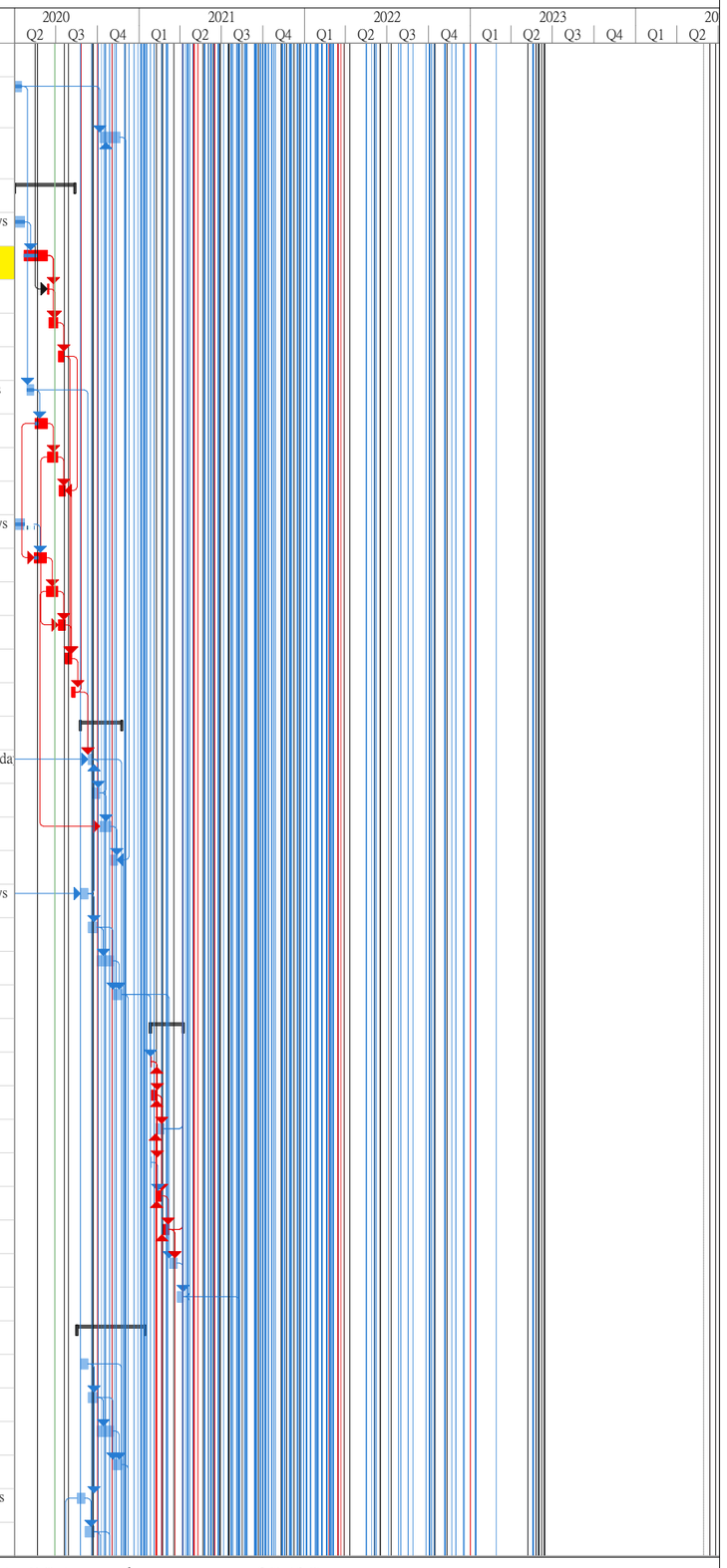
ID	Task Name	Duration	Actual Duration	Remaining Duration	Physical % Complete	Early Start	Early Finish	Actual Start	Actual Finish	Late Start	Late Finish	Total Slack	TRA	Predecessors
696	Section 6	0 days	0 days	0 days	0%	Thu 18/5/23	Thu 18/5/23	NA	NA	Tue 30/5/23	Tue 30/5/23	12 days	0 days	1357FF,1546FF,
697	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
698	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
699	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
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
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
702	KD2	0 days	0 days	0 days	0%	Sat 17/4/21	Sat 17/4/21	NA	NA	Sun 18/4/21	Sun 18/4/21	1 day	0 days	791,821,771,774
703	KD3	0 days	0 days	0 days	0%	Mon 26/4/21	Mon 26/4/21	NA	NA	Tue 1/6/21	Tue 1/6/21	36 days	0 days	822,821
704	KD4	0 days	0 days	0 days	0%	Fri 28/1/22	Fri 28/1/22	NA	NA	Mon 31/1/22	Mon 31/1/22	3 days	0 days	1255FF
705	KD5	0 days	0 days	0 days	0%	Fri 25/6/21	Fri 25/6/21	NA	NA	Fri 17/9/21	Fri 17/9/21	84 days	0 days	1252FF
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
707	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
708	Construction Works	1499 days	75.67 days	1423.33 days?	0%	Thu 16/5/19	Wed 29/5/24	Thu 16/5/19	NA	Thu 16/5/19	Wed 29/5/24	0 days?		
709	Procurement of Materials and Equipments	615 days	12.7 days	602.3 days	0%	Thu 8/8/19	Wed 1/9/21	Thu 8/8/19	NA	Thu 8/8/19	Tue 22/2/22	140 days		
710	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
712	Lift Comment & Approval	21 days	0 days	21 days	0%	Sun 27/9/20	Sat 17/10/20	NA	NA	Thu 8/10/20	Wed 28/10/20	11 days	0.5 days	711
713	Lifts ((5 nos)	180 days	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
714	Pumps for Pump Room next to Underpass	150 days	0 days	150 days	0%	Sat 23/5/20	Thu 19/11/20	NA	NA	Wed 8/7/20	Tue 5/1/21	37 days	30 days	
715	Elevated landscape deck soffit panels	120 days	0 days	120 days	0%	Mon 14/9/20	Sat 6/2/21	NA	NA	Thu 4/2/21	Mon 5/7/21	117 days	30 days	
716	Underpass & Depressed Rd - facades	120 days	0 days	120 days	0%	Tue 1/12/20	Thu 29/4/21	NA	NA	Wed 12/5/21	Mon 4/10/21	129 days	30 days	
717	E & M equipment & fittings (for Open space & Promenade)	120 days	0 days	120 days	0%	Tue 6/4/21	Fri 27/8/21	NA	NA	Mon 27/9/21	Tue 22/2/22	144 days	30 days	
718	Bridge Parapet Fabrication	120 days	0 days	120 days	0%	Mon 16/11/20	Mon 15/3/21	NA	NA	Wed 26/5/21	Wed 22/9/21	191 days	30 days	
719	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	
720	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	
722	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	
723	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		
724	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
725	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		
726	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
727	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		
728	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	
729	Stage 1: Trial Pit to locate the existing underground cables and utilities	14 days	0 days	14 days	0%	Thu 20/5/21	Fri 4/6/21	NA	NA	Mon 24/5/21	Tue 8/6/21	3 days	1 day	141,375,721,728
730	Stage 2: Trial Pit to locate the existing underground cables and utilities	14 days	0 days	14 days	0%	Sat 5/6/21	Tue 22/6/21	NA	NA	Wed 9/6/21	Fri 25/6/21	3 days	1 day	729
731	Stage 3: East Bound + Drop Kerb Modification + Road Marking	76 days	0 days	76 days	0%	Wed 23/6/21	Mon 20/9/21	NA	NA	Sat 26/6/21	Fri 24/9/21	3 days	1 day	730
732	Stage 4: TTA for Central Divider	76 days	0 days	76 days	0%	Tue 21/9/21	Tue 21/12/21	NA	NA	Sat 25/9/21	Fri 24/12/21	3 days	1 day	731,113
733	Stage 5: Construct 2 Dividers	51 days	0 days	51 days	0%	Wed 22/12/21	Fri 25/2/22	NA	NA	Tue 28/12/21	Tue 1/3/22	3 days	1 day	732
734	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		
735	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		
736	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
737	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



Title: Rev.11 Prog with Progress as of 22-May-20

Task	Summary	Inactive Milestone	Duration-only	Start-only	External Milestone	Critical Split	
Split	Project Summary	Inactive Summary	Manual Summary Rollup	Finish-only	Deadline	Progress	
Milestone	Inactive Task	Manual Task	Manual Summary	External Tasks	Critical	Manual Progress	

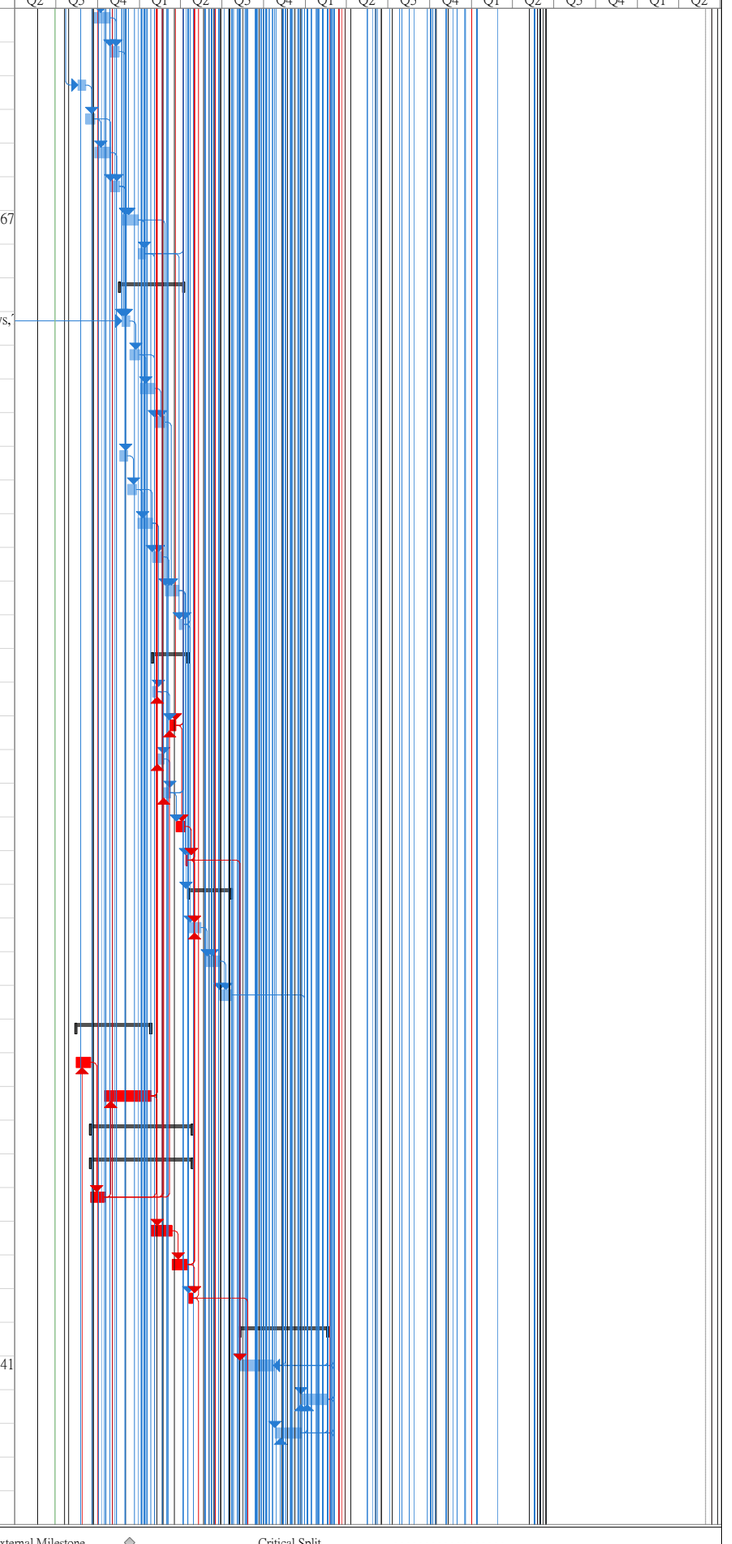
ID	Task Name	Duration	Actual Duration	Remaining Duration	Physical % Complete	Early Start	Early Finish	Actual Start	Actual Finish	Late Start	Late Finish	Total Slack	TRA	Predecessors
740	Sheetpile Driven along Western ELS Cofferdam (assume 105m long)	8 days	8 days	0 days	100%	Tue 11/2/20	Wed 19/2/20	Tue 11/2/20	Wed 19/2/20	Tue 11/2/20	Wed 19/2/20	0 days	0.5 day	737,739
741	Excavattion with Shoring and Waling Installation with Rock Fill Replacement include Sand Raplacemnet Test with PWRL for KD1	44 days	44 days	0 days	100%	Thu 20/2/20	Wed 15/4/20	Thu 20/2/20	Wed 15/4/20	Thu 20/2/20	Wed 15/4/20	0 days	1 day	
742	Remaining Excavation with Shoring and Waling Installation with Rock Fill Replacement include Sand Raplacemnet 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	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		
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 days
745	Bay No.3: Wall & Column with Soffit (upto +4.6mPD) (include Wall Former)	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
747	Bay No. 3: Wall & Column Casted and Formwork & Falsework upto Soffit of Top Slab(6)+(7)	15 days	0 days	15 days	0%	Tue 16/6/20	Sat 4/7/20	NA	NA	Fri 12/6/20	Tue 30/6/20	-3 days	1 day	745,746
748	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 Former) (3)+(4)+(5)	23 days	6 days	17 days	25%	Sat 16/5/20	Thu 11/6/20	Sat 16/5/20	NA	Sat 16/5/20	Thu 11/6/20	-1 day	1 day	749
751	Bay No. 2: Wall & Column Casted and Formwork & Falsework upto Soffit of Top Slab (6)+(7)	18 days	0 days	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	Bay No. 2: Top Slab Construction with Formwork & Falsework Erection(8)	12 days	0 days	12 days	0%	Wed 8/7/20	Tue 21/7/20	NA	NA	Sat 4/7/20	Fri 17/7/20	-3 days	1 day	751,748FF+2 days
753	Bay No.4 Base Slab with Blinding (1)+(2)	15 days	15 days	0 days	100%	Wed 1/4/20	Wed 13/5/20	Wed 1/4/20	Wed 13/5/20	Wed 1/4/20	Wed 13/5/20	0 days	1 day	741SS+35 days
754	Bay No.4: Wall & Column with Soffit (upto +4.6mPD) (include Wall Former) (3)+(4)+(5)	22 days	8 days	14 days	36%	Thu 14/5/20	Tue 9/6/20	Thu 14/5/20	NA	Thu 14/5/20	Tue 9/6/20	-3 days	1 day	753,750SS+7 days
755	Bay No. 4: Wall & Column Casted and Formwork & Falsework upto Soffit of Top Slab (6)+(7)	20 days	0 days	20 days	0%	Wed 10/6/20	Sat 4/7/20	NA	NA	Sat 6/6/20	Tue 30/6/20	-3 days	1 day	754
756	Bay No. 4: Top Slab Construction with Formwork & Falsework Erection (8)	14 days	0 days	14 days	0%	Mon 6/7/20	Tue 21/7/20	NA	NA	Thu 2/7/20	Fri 17/7/20	-3 days	1 day	755,751SS+4 days
757	Backfill (9)	12 days	0 days	12 days	0%	Wed 22/7/20	Tue 4/8/20	NA	NA	Sat 18/7/20	Fri 31/7/20	-3 days	0.5 days	756,752,748
758	Sheetpile Extraction and Road Reinstatement (10) (KD1)	6 days	0 days	6 days	0%	Wed 5/8/20	Tue 11/8/20	NA	NA	Sat 1/8/20	Fri 7/8/20	-3 days	0.5 days	757
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 Former) (3+4+5)	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
762	Bay No. 5: Wall & Column Casted and Formwork & Falsework upto Soffit of Top Slab (6)+(7)	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 days
763	Bay No. 5: Top Slab Construction with Formwork & Falsework Erection & Removal (8)	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	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 days
765	Bay No.6: Wall & Column with Soffit (upto +4.6mPD) (include Wall Former) (3)+(4)+(5)	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	Bay No. 6: Wall & Column Casted and Formwork & Falsework upto Soffit of Top Slab(6)+(7)	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
767	Bay No. 6: Top Slab Construction with Formwork & Falsework Erection & Removal (8)	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	North Approach Ramp (Bays 7&8) (Next to BEM)	56 days	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	1 day	0 days	1 day	0%	Tue 26/1/21	Tue 26/1/21	NA	NA	Tue 26/1/21	Tue 26/1/21	0 days	0.5 days	816,767
770	Bay 7: Base slab	9 days	0 days	9 days	0%	Wed 27/1/21	Fri 5/2/21	NA	NA	Wed 27/1/21	Fri 5/2/21	0 days	1 day	816,769
771	Bay 7: Wall	13 days	0 days	13 days	0%	Sat 6/2/21	Wed 24/2/21	NA	NA	Wed 31/3/21	Sat 17/4/21	42 days	1 day	819,770
772	Bay 8: Blinding	1 day	0 days	1 day	0%	Wed 27/1/21	Wed 27/1/21	NA	NA	Fri 5/2/21	Fri 5/2/21	8 days	0.5 days	769
773	Bay 8: Base slab	9 days	0 days	9 days	0%	Sat 6/2/21	Fri 19/2/21	NA	NA	Sat 6/2/21	Fri 19/2/21	0 days	1 day	816,770,772
774	Bay 8: Wall	13 days	0 days	13 days	0%	Sat 20/2/21	Sat 6/3/21	NA	NA	Sat 20/2/21	Sat 6/3/21	0 days	1 day	773,819
775	Bays No.7&8: Backfilling	15 days	0 days	15 days	0%	Mon 8/3/21	Wed 24/3/21	NA	NA	Thu 18/3/21	Wed 7/4/21	9 days	1 day	774,767
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	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 Former) (3)+(4)+(5)	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 of Top Slab(6)+(7)	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
781	Bay No. 3: Top Slab Construction with Formwork & Falsework Erection & Removal (8)	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
782	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 days
783	Bay No.2: Wall & Column with Soffit (upto +4.6mPD) (include Wall Former) (3)+(4)+(5)	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



Title: Rev.11 Prog with Progress as of 22-May-20

Task
Split
Milestone
Summary
Project Summary
Inactive Task
Inactive Milestone
Inactive Summary
Manual Task
Duration-only
Manual Summary Rollup
Manual Summary
Start-only
Finish-only
External Tasks
External Milestone
Deadline
Critical
Critical Split
Progress
Manual Progress

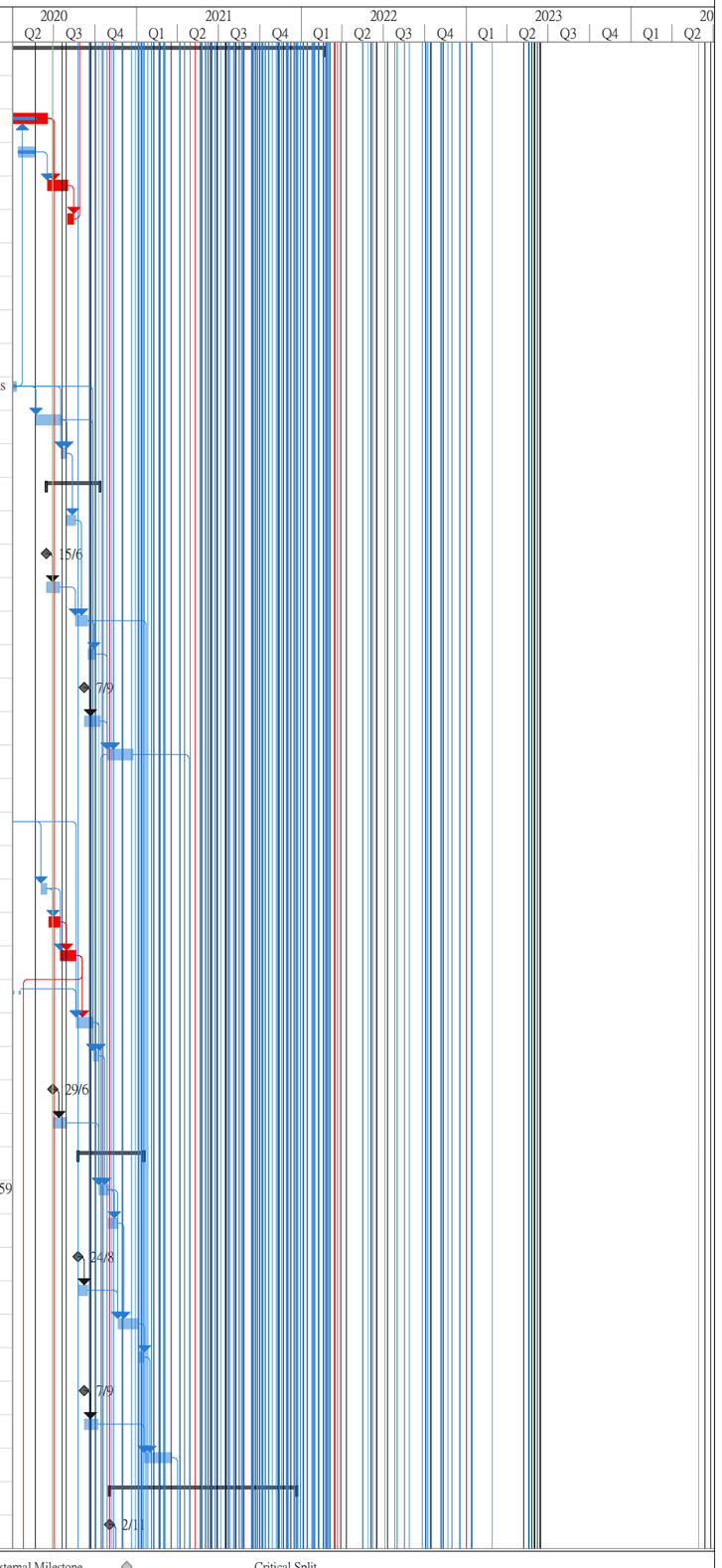
ID	Task Name	Duration	Actual Duration	Remaining Duration	Physical % Complete	Early Start	Early Finish	Actual Start	Actual Finish	Late Start	Late Finish	Total Slack	TRA	Predecessors
784	Bay No. 2: Wall & Column Casted and Formwork & Falsework upto Soffit of Top Slab(6)+(7)	27 days	0 days	27 days	0%	Wed 23/9/20	Tue 27/10/20	NA	NA	Wed 28/10/20	Fri 27/11/20	27 days	1 day	783
785	Bay No. 2: Top Slab Construction with Formwork & Falsework Erection & Removal (8)	17 days	0 days	17 days	0%	Wed 28/10/20	Mon 16/11/20	NA	NA	Sat 28/11/20	Thu 17/12/20	27 days	1 day	783,784
786	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
787	Bay No.4: Wall & Column with Soffit (upto +4.6mPD) (include Wall Former) (3)+(4)+(5)	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
788	Bay No. 4: Wall & Column Casted and Formwork & Falsework upto Soffit of Top Slab(6)+(7)	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
789	Bay No. 4: Top Slab Construction with Formwork & Falsework Erection & Removal (8)	17 days	0 days	17 days	0%	Thu 29/10/20	Tue 17/11/20	NA	NA	Fri 6/11/20	Wed 25/11/20	7 days	1 day	787,788
790	Bay No.2,3&4: Backfilling upto +3.0mPD	28 days	0 days	28 days	0%	Tue 24/11/20	Mon 28/12/20	NA	NA	Fri 18/12/20	Fri 22/1/21	21 days	1 day	789,785,781,767
791	Bay No.4: Sheetpile Extraction (KD2)	12 days	0 days	12 days	0%	Tue 29/12/20	Tue 12/1/21	NA	NA	Sat 23/1/21	Fri 5/2/21	21 days	0.5 days	790
792	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		
793	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,7
794	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
795	Bay No. 5: Wall & Column Casted and Formwork & Falsework upto Soffit of Top Slab(6)+(7)	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
796	Bay No. 5: Top Slab Construction with Formwork & Falsework Erection & Removal (8)	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
797	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
798	Bay No.6: Wall & Column with Soffit (upto +4.6mPD) (include Wall Former) (3)+(4)+(5)	17 days	0 days	17 days	0%	Sat 5/12/20	Thu 24/12/20	NA	NA	Mon 14/12/20	Tue 5/1/21	7 days	1 day	797
799	Bay No. 6: Wall & Column Casted and Formwork & Falsework upto Soffit of Top Slab(6)+(7)	27 days	0 days	27 days	0%	Mon 28/12/20	Thu 28/1/21	NA	NA	Wed 6/1/21	Fri 5/2/21	7 days	1 day	798
800	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
801	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
802	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
803	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		
804	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
805	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
806	Bay 8: Base slab	9 days	0 days	9 days	0%	Tue 9/2/21	Mon 22/2/21	NA	NA	Thu 25/2/21	Sat 6/3/21	11 days	0.5 days	804,816
807	Bay 8: Wall	12 days	0 days	12 days	0%	Tue 23/2/21	Mon 8/3/21	NA	NA	Mon 8/3/21	Sat 20/3/21	11 days	1 day	806,819
808	Bays No.7&8: Backfilling	15 days	0 days	15 days	0%	Mon 22/3/21	Sat 10/4/21	NA	NA	Mon 22/3/21	Sat 10/4/21	0 days	1 day	807,805
809	Bays No.7&8: Extract Sheetpile	6 days	0 days	6 days	0%	Mon 12/4/21	Sat 17/4/21	NA	NA	Mon 12/4/21	Sat 17/4/21	0 days	1 day	808,801,802
810	CH1087-1189 (100m): North Approach Ramp: Parapet, Central Median & Furniture	77 days	0 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
811	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
812	CH1087-1189: Central Median and Utilties Trough (6m per day per team) x 1 team	25 days	0 days	25 days	0%	Thu 27/5/21	Fri 25/6/21	NA	NA	Fri 22/10/21	Fri 19/11/21	122 days	1 day	811,236
813	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
814	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		
815	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
816	Bay 1: Wall	83 days	0 days	83 days	0%	Fri 16/10/20	Mon 25/1/21	NA	NA	Fri 16/10/20	Mon 25/1/21	0 days	3 days	819
817	Part 3G - CH1189.4 to CH1229 North Abutment	180 days	0 days	180 days	0%	Tue 15/9/20	Mon 26/4/21	NA	NA	Tue 15/9/20	Mon 26/4/21	0 days		
818	North Abutment	180 days	0 days	180 days	0%	Tue 15/9/20	Mon 26/4/21	NA	NA	Tue 15/9/20	Mon 26/4/21	0 days		
819	North Abutment - Base Slab	25 days	0 days	25 days	0%	Tue 15/9/20	Thu 15/10/20	NA	NA	Tue 15/9/20	Thu 15/10/20	0 days	1 day	815
820	North Abutment Wall (3.85m thk)	37 days	0 days	37 days	0%	Tue 26/1/21	Fri 12/3/21	NA	NA	Tue 26/1/21	Fri 12/3/21	0 days	1 day	816
821	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
822	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
823	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		
824	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
825	CH1444.7-1560 At grade road works	45 days	0 days	45 days	0%	Wed 22/12/21	Fri 18/2/22	NA	NA	Wed 5/1/22	Tue 1/3/22	9 days	1 day	1293,826,219
826	Ch2050 to 2124: At grade road works	50 days	0 days	50 days	0%	Mon 25/10/21	Tue 21/12/21	NA	NA	Thu 4/11/21	Tue 4/1/22	9 days	1 day	1438,219
827	Bridge D3 Bored Pile	17 days	17 days	0 days	0%	Tue 19/11/19	Thu 5/12/19	Tue 19/11/19	Thu 5/12/19	Tue 19/11/19	Thu 5/12/19	0 days		
828	Pre-drilling Works	15 days	15 days	0 days	100%	Tue 19/11/19	Thu 5/12/19	Tue 19/11/19	Thu 5/12/19	Tue 19/11/19	Thu 5/12/19	0 days	0.5 day	



Title: Rev.11 Prog with Progress as of 22-May-20

Task
Split
Milestone
Summary
Project Summary
Inactive Task
Inactive Milestone
Inactive Summary
Manual Task
Duration-only
Manual Summary Rollup
Manual Summary
Start-only
Finish-only
External Tasks
External Milestone
Deadline
Critical
Critical Split
Progress
Manual Progress

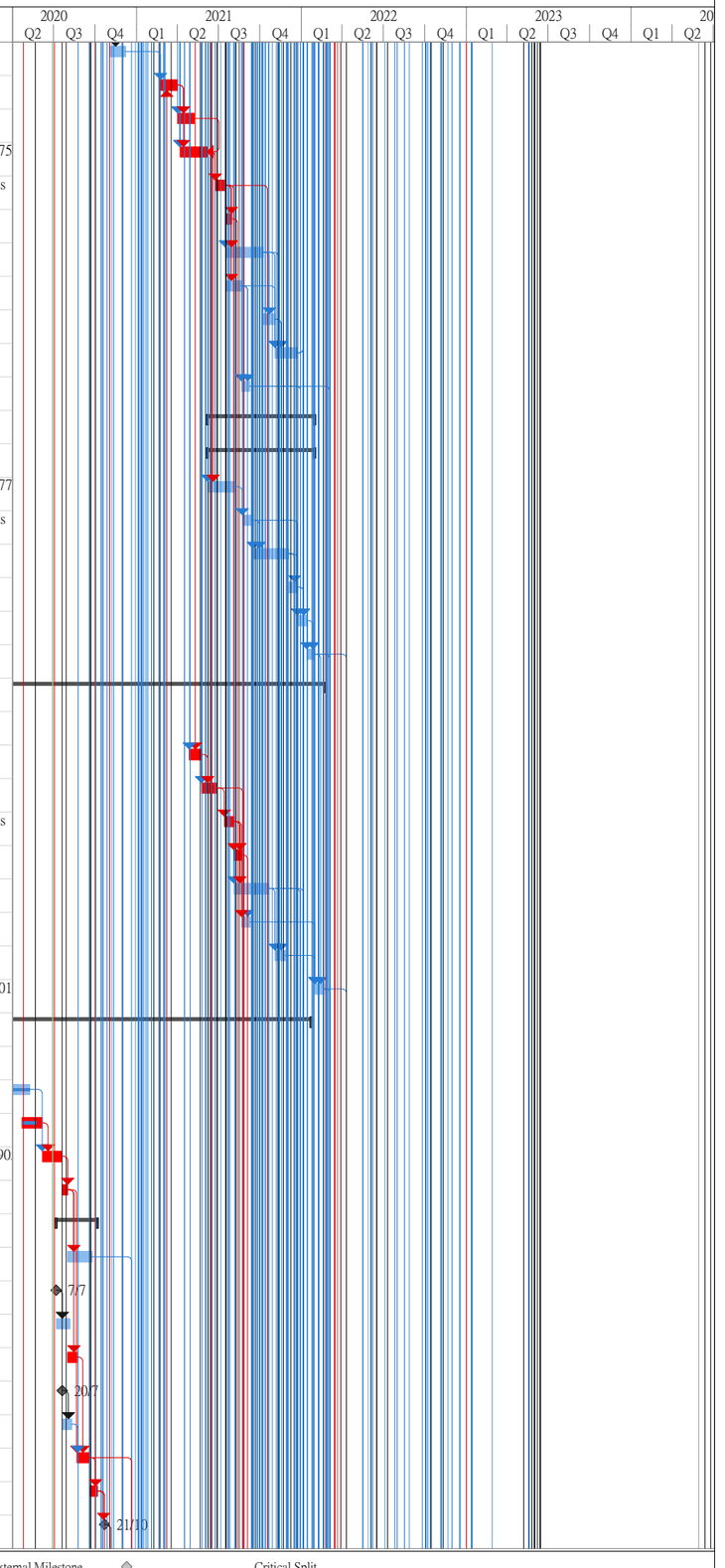
ID	Task Name	Duration	Actual Duration	Remaining Duration	Physical % Complete	Early Start	Early Finish	Actual Start	Actual Finish	Late Start	Late Finish	Total Slack	TRA	Predecessors
829	Part 3C - CH1229 to CH1279	823 days?	137.51 days	685.49 days?	0%	Thu 16/5/19	Sat 19/2/22	Thu 16/5/19	NA	Mon 11/11/19	Wed 29/5/24	676 da...		
830	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	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
836	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	
837	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...		
838	Bored pile (P01-BP2) @ CH1229 by Rig 1 (Contractor Bear DDA Approval Risk)	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	
839	Bored pile (P01-BP1) @ CH1229 by Rig 1 (Contractor Bear DDA Approval Risk)	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
840	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
842	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	Excavation with Shoring Installation ~2600m3 Prod. Rate: 160m3/day/team	17 days	0 days	17 days	0%	Wed 29/7/20	Mon 17/8/20	NA	NA	Tue 8/9/20	Sat 26/9/20	35 days	1 day	841
844	Pilecap - Formwork Design and Method Statement Submission	0 days	0 days	0 days	0%	Mon 15/6/20	Mon 15/6/20	NA	NA	Sat 29/8/20	Sat 29/8/20	75 days	1 day	
845	Pilecap - Formwork Design and Method Statement Comment & Appraoval	30 days	0 days	30 days	0%	Mon 15/6/20	Tue 14/7/20	NA	NA	Sat 29/8/20	Sun 27/9/20	75 days	2 days	844
846	Pilecap structure	24 days	0 days	24 days	0%	Tue 18/8/20	Mon 14/9/20	NA	NA	Mon 28/9/20	Wed 28/10/20	35 days	1 day	845,843
847	Backfill	14 days	0 days	14 days	0%	Tue 15/9/20	Wed 30/9/20	NA	NA	Thu 29/10/20	Fri 13/11/20	35 days	2 days	846
848	Pier - Formwork Design and Method Statement Submission	0 days	0 days	0 days	0%	Mon 7/9/20	Mon 7/9/20	NA	NA	Sat 10/10/20	Sat 10/10/20	33 days	1 day	
849	Pier - Formwork Design and Method Statement Comment & Appraoval	35 days	0 days	35 days	0%	Mon 7/9/20	Sun 11/10/20	NA	NA	Sat 10/10/20	Fri 13/11/20	33 days	1 day	848
850	Pier P01 @ CH1229	49 days	0 days	49 days	0%	Wed 28/10/20	Wed 23/12/20	NA	NA	Sat 14/11/20	Wed 13/1/21	15 days	2 days	847,211,849
851	CH1269: Pre-drilling Works	30 days	30 days	0 days	0%	Wed 20/11/19	Thu 19/12/19	Wed 20/11/19	Thu 19/12/19	Wed 20/11/19	Thu 19/12/19	0 days	0.5 days	835,836
852	Abandon the Installed defected Bored pile (P02-BP2) @ CH1269	35 days	35 days	0 days	100%	Tue 11/2/20	Sun 22/3/20	Tue 11/2/20	Sun 22/3/20	Tue 11/2/20	Sun 22/3/20	0 days	0.5 days	851
853	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...		
854	Predrilling works for Bored pile (P02-BP2)(Abandoned) @ CH1269	11 days	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
855	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
857	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
858	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
859	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
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	
861	Pile Cap ELS - Temp. Works Design and Method Statement Comment & Appraoval	30 days	0 days	30 days	0%	Mon 29/6/20	Tue 28/7/20	NA	NA	Tue 22/9/20	Wed 21/10/20	85 days	1 day	860
862	Pile Cap P02 @ CH1270	120 days	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		
863	Drive sheetpile (~75m). Prod. Rate: 5m/day/side/team	17 days	0 days	17 days	0%	Fri 9/10/20	Thu 29/10/20	NA	NA	Thu 22/10/20	Wed 11/11/20	11 days	2 days	861,858,140,859
864	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
865	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	
866	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
867	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
868	Backfill and extract sheet pile	11 days	0 days	11 days	0%	Tue 5/1/21	Sat 16/1/21	NA	NA	Mon 18/1/21	Fri 29/1/21	11 days	2 day	867
869	Pier - Temp. Works Design and Method Statement Submission	0 days	0 days	0 days	0%	Mon 7/9/20	Mon 7/9/20	NA	NA	Thu 31/12/20	Thu 31/12/20	115 days	1 day	
870	Pier - Temp. Works Design and Method Statement Comment & Appraoval	30 days	0 days	30 days	0%	Mon 7/9/20	Tue 6/10/20	NA	NA	Thu 31/12/20	Fri 29/1/21	115 days	1 day	869
871	Pier P02 @ CH1270	49 days	0 days	49 days	0%	Mon 18/1/21	Thu 18/3/21	NA	NA	Sat 30/1/21	Wed 31/3/21	11 days	1 day	868,211,870
872	Stage 1: Bridge deck between CH1229-1311	340 days	0 days	340 days	0%	Mon 2/11/20	Tue 21/12/21	NA	NA	Tue 19/1/21	Wed 29/12/21	5 days		
873	Bridge Deck - Temp. Works Design and Method Statement Submission	0 days	0 days	0 days	0%	Mon 2/11/20	Mon 2/11/20	NA	NA	Tue 19/1/21	Tue 19/1/21	78 days	1 day	



Title: Rev.11 Prog with Progress as of 22-May-20

Task
Split
Milestone
Summary
Project Summary
Inactive Task
Inactive Milestone
Inactive Summary
Manual Task
Duration-only
Manual Summary Rollup
Manual Summary
Start-only
Finish-only
External Tasks
External Milestone
Deadline
Critical
Critical Split
Progress
Manual Progress

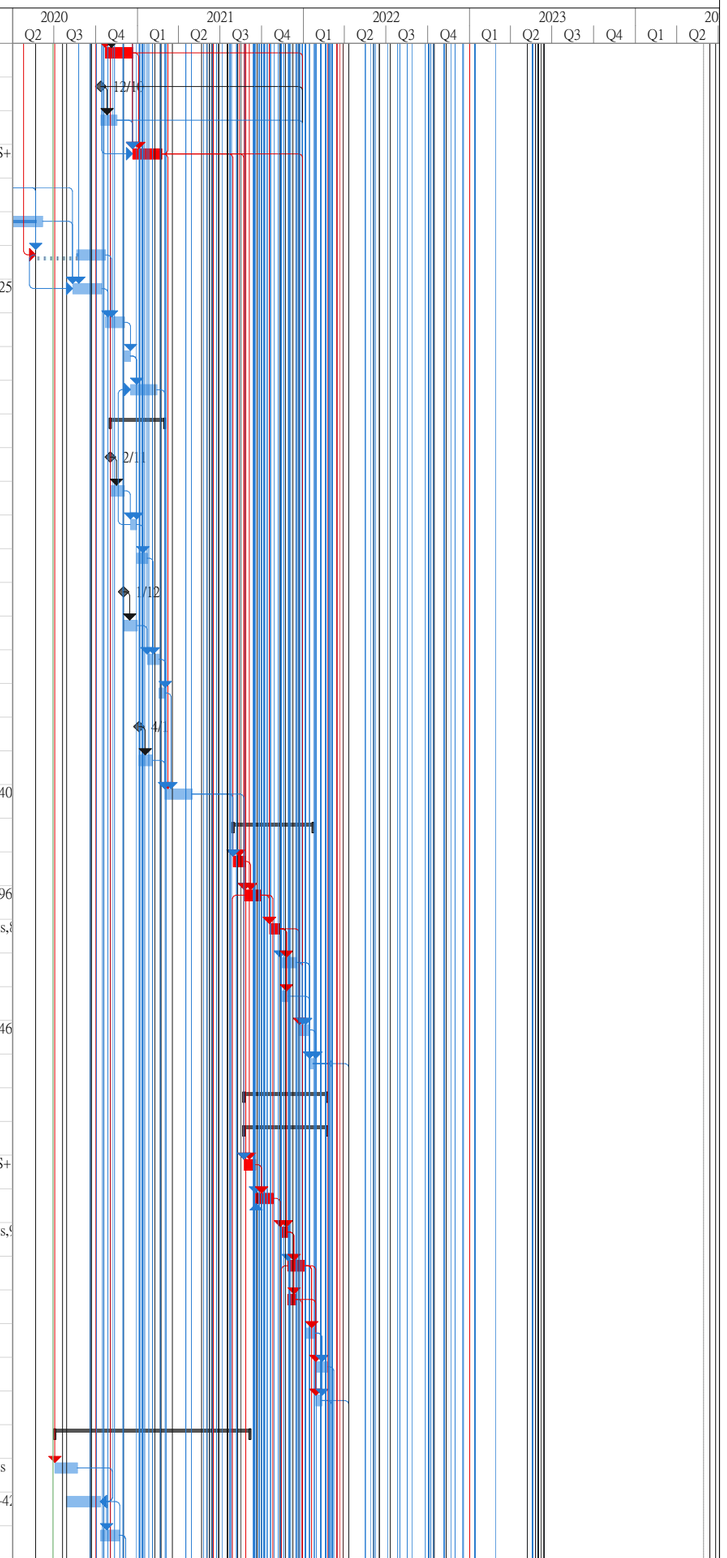
ID	Task Name	Duration	Actual Duration	Remaining Duration	Physical % Complete	Early Start	Early Finish	Actual Start	Actual Finish	Late Start	Late Finish	Total Slack	TRA	Predecessors
874	Bridge Deck - Temp. Works Design and Method Statement Comment & Appraoval	35 days	0 days	35 days	0%	Mon 2/11/20	Sun 6/12/20	NA	NA	Tue 19/1/21	Mon 22/2/21	78 days	1 day	873
875	CH1229-1311: Deck Falsework erection Part 1	32 days	0 days	32 days	0%	Tue 23/2/21	Wed 31/3/21	NA	NA	Tue 23/2/21	Wed 31/3/21	0 days	1 day	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 days	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 day	475,483,736,875
878	CH1229-1311: Prestressing	18 days	0 days	18 days	0%	Thu 24/6/21	Thu 15/7/21	NA	NA	Thu 24/6/21	Thu 15/7/21	0 days	0.5 day	877FS+14 days
879	CH1229-1311: Falsework Under Main Deck Removal	12 days	0 days	12 days	0%	Fri 16/7/21	Thu 29/7/21	NA	NA	Fri 16/7/21	Thu 29/7/21	0 days	0.5 day	878
880	CH1229-1311: Utility Trough (0.67m per day per team) x 4 team	70 days	0 days	70 days	0%	Fri 16/7/21	Thu 7/10/21	NA	NA	Thu 22/7/21	Wed 13/10/21	5 days	9 days	219,878
881	CH1229-1311: Central Median (6m per day per team) x 2 team	31 days	0 days	31 days	0%	Fri 16/7/21	Fri 20/8/21	NA	NA	Sat 2/10/21	Mon 8/11/21	65 days	3 days	878
882	CH1229-1311: Parapet (28m per day per team) x 2 team + 6x2 day concreting	21 days	0 days	21 days	0%	Fri 8/10/21	Tue 2/11/21	NA	NA	Fri 15/10/21	Mon 8/11/21	5 days	3 days	880
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 days	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 day	881,358
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 day	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 day	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
890	CH1269-1311 : Parapet (28m per day per team) x 1 team + 6 day concreting	17 days	0 days	17 days	0%	Fri 3/12/21	Wed 22/12/21	NA	NA	Sat 11/12/21	Mon 3/1/22	7 days	3 days	889
891	CH1269-1311 : Central Median (6m per day per team) x 1 team	15 days	0 days	15 days	0%	Thu 23/12/21	Wed 12/1/22	NA	NA	Wed 5/1/22	Fri 21/1/22	8 days	1 day	889,890
892	CH1269-1311 : Road Furniture	15 days	0 days	15 days	0%	Thu 13/1/22	Sat 29/1/22	NA	NA	Sat 22/1/22	Fri 11/2/22	8 days	1 day	891,358
893	Stage2: Bridge deck between CH1189-1229	823 days?	0 days	823 days?	0%	Thu 16/5/19	Sat 19/2/22	NA	NA	Tue 27/4/21	Wed 29/5/24	579 da...		
894	CH1189-1229: Deck Falsework erection	1 day?	0 days	1 day?	0%	Thu 16/5/19	Thu 16/5/19	NA	NA	Wed 29/5/24	Wed 29/5/24	1840 d...		
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 day	850,822
896	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 day	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 day	896FS+14 days
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 days	878,897
899	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 days	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 day	897,881
901	CH1189-1229 : Parapet (28m per day per team) x 1 team + 6 day concreting	20 days	0 days	20 days	0%	Wed 3/11/21	Thu 25/11/21	NA	NA	Mon 17/1/22	Fri 11/2/22	61 days	5 day	899,882
902	CH1189-1229 : Road Furniture	15 days	0 days	15 days	0%	Mon 31/1/22	Sat 19/2/22	NA	NA	Sat 12/2/22	Tue 1/3/22	8 days	1 day	900,892,358,901
903	Part 3E - CH1311 to CH1372	652 days	94.1 days	557.9 days	0%	Tue 12/11/19	Fri 21/1/22	Tue 12/11/19	NA	Tue 12/11/19	Wed 29/5/24	698 days		
904	Pre-drilling Works	31 days	31 days	0 days	0%	Tue 12/11/19	Tue 17/12/19	Tue 12/11/19	Tue 17/12/19	Tue 12/11/19	Tue 17/12/19	0 days	0.5 day	
905	Bored pile (P03-BP1) @ CH1311 (Rig 2) (Contractor Bear DDA Design Risk)	40 days	40 days	0 days	100%	Tue 17/3/20	Fri 8/5/20	Tue 17/3/20	Fri 8/5/20	Tue 17/3/20	Fri 8/5/20	0 days	0.5 day	904
906	Bored pile (P03-BP2) @ CH1311 (Contractor Bear DDA Design Risk) (Rig 2)	36 days	25 days	11 days	69%	Wed 22/4/20	Thu 4/6/20	Wed 22/4/20	NA	Wed 22/4/20	Thu 4/6/20	0 days	3 day	
907	Pile Testing (18 curing & 14 test)	35 days	0 days	35 days	0%	Sat 6/6/20	Sat 18/7/20	NA	NA	Sat 6/6/20	Sat 18/7/20	0 days	3 day	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 days	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 days	1 day	
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 days	1 day	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	0 days	1 day	908
914	Pilecap Formwork - design and Method Statement Submission	0 days	0 days	0 days	0%	Mon 20/7/20	Mon 20/7/20	NA	NA	Fri 31/7/20	Fri 31/7/20	11 days	1 day	
915	Pilecap Formwork - Design and Method Statement Comment & Appraoval	21 days	0 days	21 days	0%	Mon 20/7/20	Sun 9/8/20	NA	NA	Fri 31/7/20	Thu 20/8/20	11 days	1 day	914
916	Pilecap structure	24 days	0 days	24 days	0%	Fri 21/8/20	Thu 17/9/20	NA	NA	Fri 21/8/20	Thu 17/9/20	0 days	1 day	915,908,913
917	Backfill	13 days	0 days	13 days	0%	Fri 18/9/20	Mon 5/10/20	NA	NA	Fri 18/9/20	Mon 5/10/20	0 days	1 day	916
918	Agree Interface Coordination Plan with CKP-KTW (HY/2014/07)	14 days	0 days	14 days	0%	Tue 6/10/20	Wed 21/10/20	NA	NA	Tue 6/10/20	Wed 21/10/20	0 days	0 days	917



Title: Rev.11 Prog with Progress as of 22-May-20

Task
Split
Milestone
Summary
Project Summary
Inactive Task
Inactive Milestone
Inactive Summary
Manual Task
Duration-only
Manual Summary Rollup
Manual Summary
Start-only
Finish-only
External Tasks
External Milestone
Deadline
Critical
Critical Split
Progress
Manual Progress

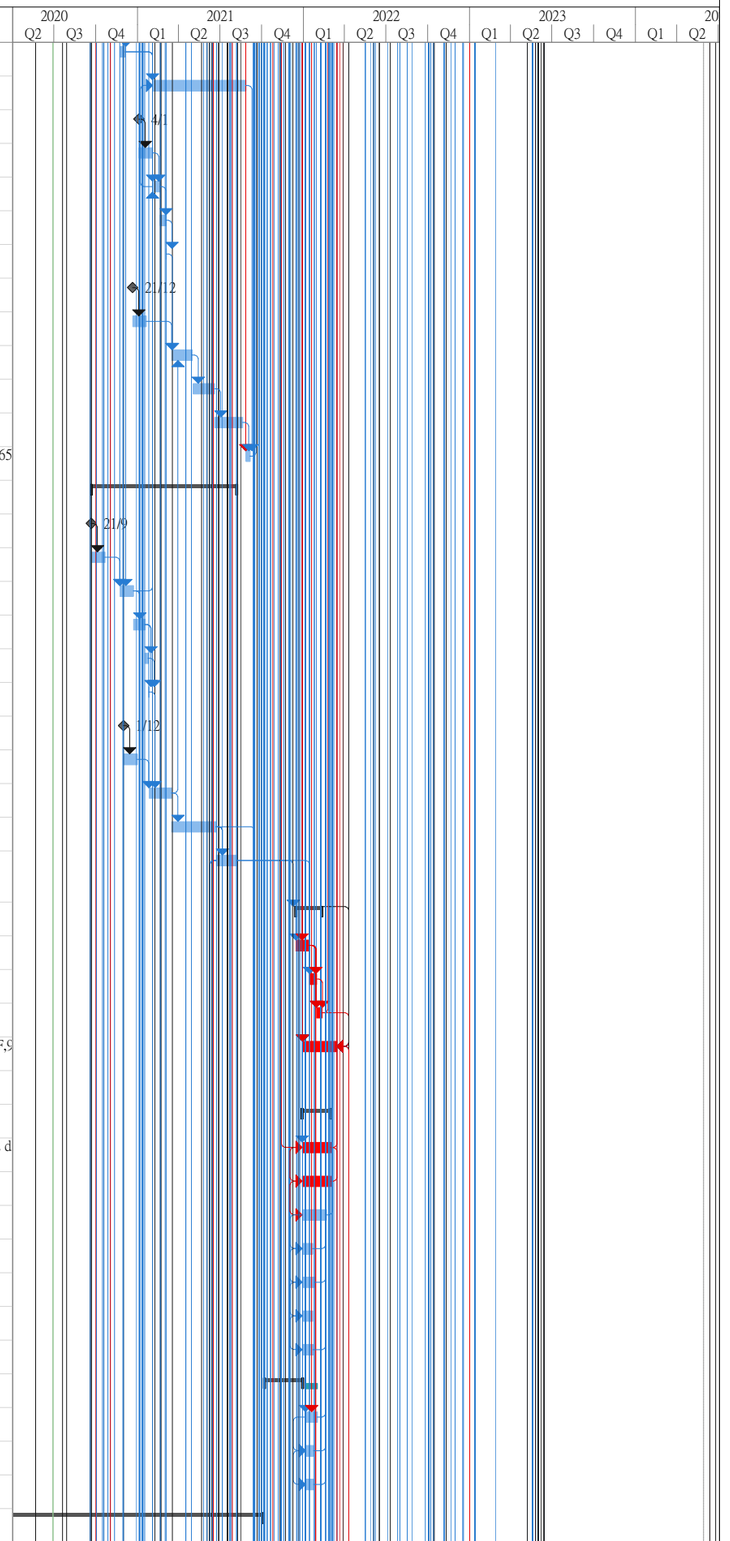
ID	Task Name	Duration	Actual Duration	Remaining Duration	Physical % Complete	Early Start	Early Finish	Actual Start	Actual Finish	Late Start	Late Finish	Total Slack	TRA	Predecessors
919	Allow access to CKR-KTW contractor for sheet pile wall installation. PS App.1.18 2.7(A)(c)	60 days	0 days	60 days	0%	Thu 22/10/20	Sun 20/12/20	NA	NA	Thu 22/10/20	Sun 20/12/20	0 days	0 days	917,918
920	Pier - Temp. Works Design and Method Statement Submission	0 days	0 days	0 days	0%	Mon 12/10/20	Mon 12/10/20	NA	NA	Mon 16/11/20	Mon 16/11/20	35 days	1 day	
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 18/12/19	Wed 4/12/19	Wed 18/12/...	Wed 4/12/19	Wed 18/12/19	0 days	0.5 days	
924	Diversion of existing 150mm dia. Watermain (agreed)	54 days	42 days	12 days	78%	Sat 28/3/20	Fri 5/6/20	Sat 28/3/20	NA	Sat 28/3/20	Sat 14/11/20	134 days	2 days	
925	Bored pile (P04-BP2) @ CH1351 (Rig 2)	52 days	1 day	51 days	0%	Fri 22/5/20	Wed 21/10/20	Fri 22/5/20	NA	Fri 22/5/20	Tue 19/1/21	73 days	3 days	923,856
926	Bored pile (P04-BP1) @ CH1351 (Rig 2)	53 days	0 days	53 days	0%	Tue 11/8/20	Tue 13/10/20	NA	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	0 days	35 days	0%	Thu 22/10/20	Wed 2/12/20	NA	NA	Wed 20/1/21	Thu 4/3/21	73 days	3 days	926,925
928	Proof-drilling Works	11 days	0 days	11 days	0%	Thu 3/12/20	Tue 15/12/20	NA	NA	Fri 5/3/21	Wed 17/3/21	73 days	2 days	927
929	Pile Cap P04 @ CH1351 with ELS	47 days	0 days	47 days	0%	Wed 16/12/20	Thu 11/2/21	NA	NA	Thu 1/4/21	Mon 31/5/21	85 days		933SS,928
930	Pile Cap @ CH1351	97 days	0 days	97 days	0%	Mon 2/11/20	Mon 1/3/21	NA	NA	Tue 16/2/21	Mon 31/5/21	73 days		
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	
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	
936	Pilecap Formworks - Design and Method Statement Comment & Appraoval	30 days	0 days	30 days	0%	Tue 1/12/20	Wed 30/12/20	NA	NA	Thu 25/3/21	Fri 23/4/21	114 days	1 day	935
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	
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	0 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	0 days	145 days	0%	Fri 30/7/21	Fri 21/1/22	NA	NA	Fri 30/7/21	Sat 29/1/22	0 days	1 day	
943	CH1311-1351: Deck Falsework erection	21 days	0 days	21 days	0%	Fri 30/7/21	Mon 23/8/21	NA	NA	Fri 30/7/21	Mon 23/8/21	0 days	3 days	941,922,879
944	CH1311-1351: Structure deck	30 days	0 days	30 days	0%	Tue 24/8/21	Tue 28/9/21	NA	NA	Tue 24/8/21	Tue 28/9/21	0 days	5 days	475,483,736,896
945	CH1311-1351: Prestressing	21 days	0 days	21 days	0%	Mon 18/10/21	Wed 10/11/21	NA	NA	Mon 18/10/21	Wed 10/11/21	0 days	3 days	944FS+14 days,8
946	CH1311-1351: Utility Trough (0.67m per day per team) x 4 team	30 days	0 days	30 days	0%	Thu 11/11/21	Wed 15/12/21	NA	NA	Fri 26/11/21	Mon 3/1/22	13 days	0.5 day	219,880,945
947	CH1311-1351: Central Median (6m per day per team) x 2 team	15 days	0 days	15 days	0%	Thu 11/11/21	Sat 27/11/21	NA	NA	Wed 5/1/22	Fri 21/1/22	44 days	3 days	945
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	Thu 13/1/22	NA	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 25/10/21	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,9
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
957	CH1351 - CH1386: Parapet (28m per day per team) x 1 team + 6 day concreting	20 days	0 days	20 days	0%	Wed 5/1/22	Thu 27/1/22	NA	NA	Wed 12/1/22	Mon 7/2/22	6 days	4 days	955
958	CH1351-1386 Falsework removal	19 days	0 days	19 days	0%	Fri 28/1/22	Tue 22/2/22	NA	NA	Tue 8/2/22	Tue 1/3/22	6 days	1 day	955,957
959	CH1351 - CH1386: Road Furniture (Section 1)	8 days	0 days	8 days	0%	Fri 28/1/22	Wed 9/2/22	NA	NA	Mon 14/2/22	Tue 22/2/22	11 days	2 day	956,358,957
960	Part 1 - CH1386 to CH1394 South Abutment	352 days	0 days	352 days	0%	Fri 3/7/20	Sat 4/9/21	NA	NA	Sat 25/7/20	Thu 16/9/21	10 days		
961	Bored Pile (A02-BP2) @ CH1386 by Rig 1	42 days	0 days	42 days	0%	Fri 3/7/20	Thu 20/8/20	NA	NA	Sat 25/7/20	Fri 11/9/20	19 days	3 days	831FS+12 days
962	Bored Pile (A02-BP1) @ CH1386 by Rig 1	63 days	0 days	63 days	0%	Tue 28/7/20	Sat 10/10/20	NA	NA	Wed 19/8/20	Tue 3/11/20	19 days	3 days	202FF,961FF+42
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 Prog with Progress as of 22-May-20

Task
Split
Milestone
Summary
Project Summary
Inactive Task
Inactive Milestone
Inactive Summary
Manual Task
Duration-only
Manual Summary Rollup
Manual Summary
Start-only
Finish-only
External Tasks
External Milestone
Deadline
Critical
Critical Split
Progress
Manual Progress

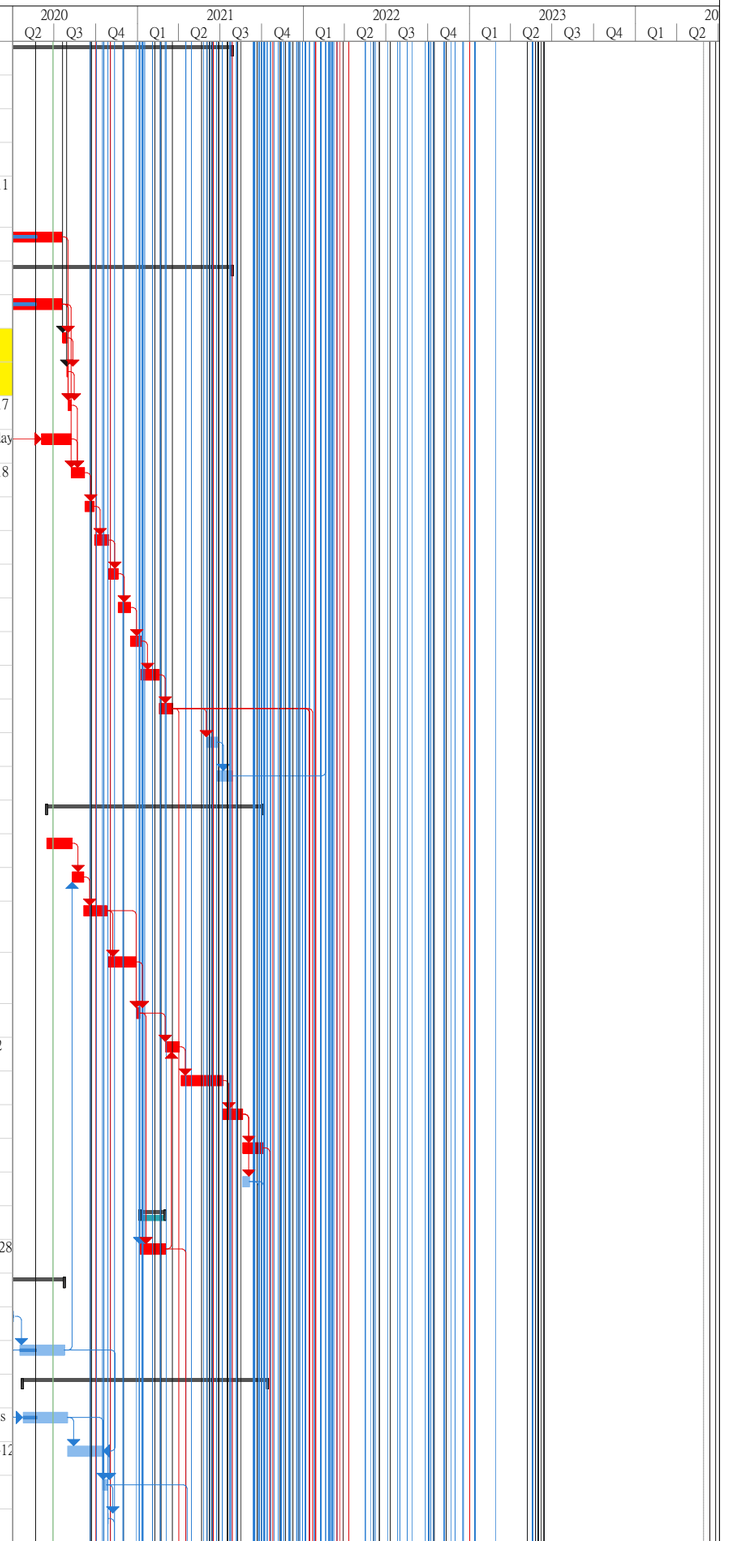
ID	Task Name	Duration	Actual Duration	Remaining Duration	Physical % Complete	Early Start	Early Finish	Actual Start	Actual Finish	Late Start	Late Finish	Total Slack	TRA	Predecessors
964	Proof-drilling Works	11 days	0 days	11 days	0%	Mon 23/11/20	Fri 4/12/20	NA	NA	Tue 2/2/21	Wed 17/2/21	58 days	2 days	963
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	
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	0 days	11 days	0%	Fri 19/2/21	Wed 3/3/21	NA	NA	Mon 22/3/21	Tue 6/4/21	26 days	2 days	968
970	Blinding layer	1 day	0 days	1 day	0%	Thu 4/3/21	Thu 4/3/21	NA	NA	Wed 7/4/21	Wed 7/4/21	26 days	0 days	969
971	South Abutment Formwork- Design and Method Statement Submission	0 days	0 days	0 days	0%	Mon 21/12/20	Mon 21/12/20	NA	NA	Tue 9/3/21	Tue 9/3/21	78 days	1 day	
972	South Abutment Formwork - Design and Method Statement Comment & Appraoval	30 days	0 days	30 days	0%	Mon 21/12/20	Tue 19/1/21	NA	NA	Tue 9/3/21	Wed 7/4/21	78 days	1 day	971
973	Base Slab	36 days	0 days	36 days	0%	Wed 17/3/21	Fri 30/4/21	NA	NA	Thu 8/4/21	Fri 21/5/21	16 days	2 days	970,972,986
974	Wall (3.85m thk). Prod. Rate: 18d/bay/team	39 days	0 days	39 days	0%	Mon 3/5/21	Fri 18/6/21	NA	NA	Sat 22/5/21	Thu 8/7/21	16 days	3 days	973
975	Wall (0.5m thk)	52 days	0 days	52 days	0%	Sat 19/6/21	Thu 19/8/21	NA	NA	Fri 9/7/21	Tue 7/9/21	16 days	2 days	974
976	Install bridge bearing	8 days	0 days	8 days	0%	Fri 27/8/21	Sat 4/9/21	NA	NA	Wed 8/9/21	Thu 16/9/21	10 days	1 day	975,736,822,965
977	South Approach Ramp - CH1394-1444.7 - Total 8 bays (4 bay/side)	259 days	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 Submission	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	
979	South Approach Ramp ELS - Temp. Works Design and Method Statement Comment & Approval	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	Drive sheetpile (~240m) Prod. Rate: 10m/d/team	26 days	0 days	26 days	0%	Mon 23/11/20	Tue 22/12/20	NA	NA	Tue 15/12/20	Sat 16/1/21	19 days	2 days	979,962,963
981	Excavation ~2,688m3 & lateral support. Prod. Rate: 160m3/day/team	19 days	0 days	19 days	0%	Wed 23/12/20	Sat 16/1/21	NA	NA	Mon 18/1/21	Mon 8/2/21	19 days	2 days	980
982	Rock Replacement	7 days	0 days	7 days	0%	Sun 17/1/21	Sat 23/1/21	NA	NA	Tue 9/2/21	Mon 15/2/21	23 days	1 day	981
983	Blinding layer. Prod. Rate: 2bays/day	1 day	0 days	1 day	0%	Mon 25/1/21	Mon 25/1/21	NA	NA	Tue 16/2/21	Tue 16/2/21	16 days	1 day	981,982
984	Sourth Approach - Formworks Design and Method Statement Submission	0 days	0 days	0 days	0%	Tue 1/12/20	Tue 1/12/20	NA	NA	Mon 18/1/21	Mon 18/1/21	48 days	1 day	
985	South Approach Ramp Formworks Design and Method Statement Comment & Appraoval	30 days	0 days	30 days	0%	Tue 1/12/20	Wed 30/12/20	NA	NA	Mon 18/1/21	Tue 16/2/21	48 days	1 day	984
986	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
987	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
988	Backfilling ~4,765.89m3 within approach ramp to formation level (160m3/day) +12d shoring removal x 2 (considered time for SRT)	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
989	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
990	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
991	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
992	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
993	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
994	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...		
995	CH1087-1311 (224m): Utility Laying (by Others) (Agreed)	63 days	0 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	0 days	63 days	0%	Wed 29/12/21	Tue 1/3/22	NA	NA	Wed 29/12/21	Tue 1/3/22	0 days	1 day	899,955SS+32 d
997	CLP (11kV)	63 days	0 days	63 days	0%	Wed 29/12/21	Tue 1/3/22	NA	NA	Wed 29/12/21	Tue 1/3/22	0 days	1 day	996SS
998	HKCG	53 days	0 days	53 days	0%	Wed 29/12/21	Sat 19/2/22	NA	NA	Sat 8/1/22	Tue 1/3/22	10 days	1 day	997SS
999	CATV	23 days	0 days	23 days	0%	Wed 29/12/21	Thu 20/1/22	NA	NA	Thu 3/2/22	Fri 25/2/22	36 days	1 day	998SS
1000	Towngas telecom	27 days	0 days	27 days	0%	Wed 29/12/21	Mon 24/1/22	NA	NA	Thu 3/2/22	Tue 1/3/22	36 days	1 day	999SS
1001	PCCW-HKT	23 days	0 days	23 days	0%	Wed 29/12/21	Thu 20/1/22	NA	NA	Sun 6/2/22	Mon 28/2/22	39 days	1 day	1000SS
1002	Fresh and Salt Watermains (by POC)	24 days	0 days	24 days	0%	Wed 29/12/21	Fri 21/1/22	NA	NA	Sun 6/2/22	Tue 1/3/22	39 days	1 day	1001SS
1003	CH1311-1396 (85m): Utility Laying (by Others) (Agreed)	84 days	0 days	84 days	0%	Thu 7/10/21	Wed 29/12/21	NA	NA	Fri 4/2/22	Tue 1/3/22	62 days		
1004	CLP (11kV)	26 days	0 days	26 days	0%	Wed 5/1/22	Sun 30/1/22	NA	NA	Fri 4/2/22	Tue 1/3/22	30 days	1 day	899,955
1005	PCCW-HKT	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	619 days	142.15 days	476.85 days	0%	Tue 3/9/19	Mon 4/10/21	Tue 3/9/19	NA	Tue 3/9/19	Tue 1/3/22	120 days		



Title: Rev.11 Prog with Progress as of 22-May-20

Task | Split | Milestone | Summary | Project Summary | Inactive Task | Inactive Milestone | Inactive Summary | Manual Task | Duration-only | Manual Summary Rollup | Manual Summary | Start-only | Finish-only | External Tasks | External Milestone | Deadline | Critical | Critical Split | Progress | Manual Progress

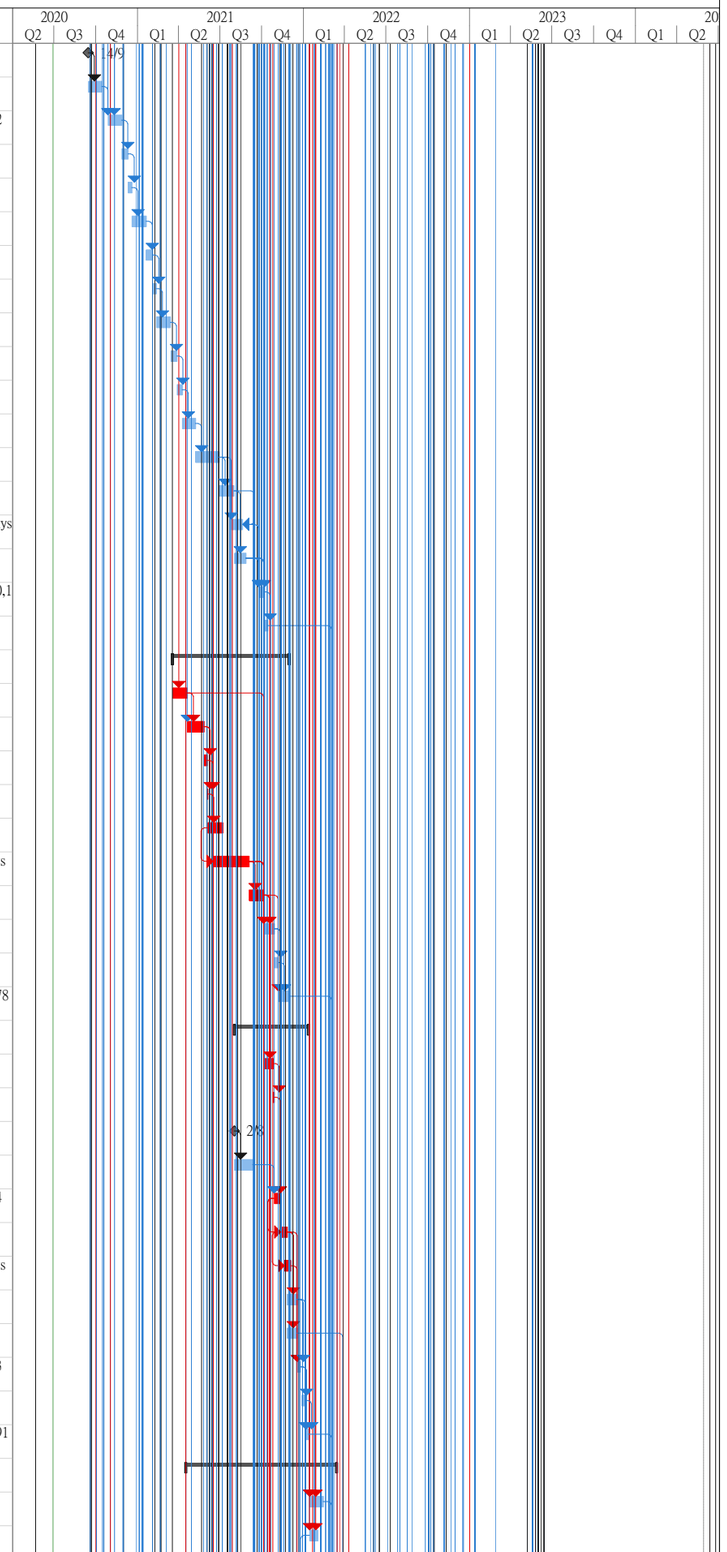
ID	Task Name	Duration	Actual Duration	Remaining Duration	Physical % Complete	Early Start	Early Finish	Actual Start	Actual Finish	Late Start	Late Finish	Total Slack	TRA	Predecessors
1008	North Depressed Rd (CH1560-1720)	562 days	211.42 days	350.58 days	0%	Tue 3/9/19	Tue 27/7/21	Tue 3/9/19	NA	Tue 3/9/19	Tue 1/3/22	177 days		
1009	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	
1010	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	
1011	Complete the Diveration of Existing Overhang Cable along the North Depressed Rd	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	
1012	Drive Sheet Pile (380m, 15,000m penetration depth) Prod. Rate by 2 teams (around 125m penetration depth per day per team)	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
1013	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
1014	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		
1015	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
1016	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
1017	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
1018	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
1019	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
1020	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
1021	Backfilling and 4th Level Shoring Removal	18 days	0 days	18 days	0%	Mon 7/9/20	Sat 26/9/20	NA	NA	Tue 25/8/20	Mon 14/9/20	-11 days		1020
1022	Wall Construction (between 3rd and 4th levels shoring) and Remaining Base Slab	24 days	0 days	24 days	0%	Mon 28/9/20	Wed 28/10/20	NA	NA	Tue 15/9/20	Wed 14/10/20	-11 days		1021
1023	Backfilling and 3rd Level Shoring Removal	18 days	0 days	18 days	0%	Thu 29/10/20	Wed 18/11/20	NA	NA	Thu 15/10/20	Thu 5/11/20	-11 days		1022
1024	Structure Works Below 2nd & 3rd Levels Shoring	23 days	0 days	23 days	0%	Thu 19/11/20	Tue 15/12/20	NA	NA	Fri 6/11/20	Wed 2/12/20	-11 days		1023
1025	Backfilling and 2nd Level Shoring Removal	18 days	0 days	18 days	0%	Wed 16/12/20	Fri 8/1/21	NA	NA	Thu 3/12/20	Wed 23/12/20	-11 days		1024
1026	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
1027	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
1028	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
1029	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
1030	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		
1031	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	
1032	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
1033	CH1720 - CH1850 (130m long) (2 x teams) Top Portion: Excavation with Shoring Installation = 23,000 cu.m. (320m3/d/team x 2)	42 days	0 days	42 days	0%	Fri 4/9/20	Sat 24/10/20	NA	NA	Fri 4/9/20	Sat 24/10/20	0 days	2 day	1032
1034	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
1035	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
1036	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
1037	Wall - 8 bays. Prod. Rate: 3 level of shoring 12d/bay/level/team. 4 teams	75 days	0 days	75 days	0%	Tue 6/4/21	Tue 6/7/21	NA	NA	Tue 6/4/21	Tue 6/7/21	0 days	3 days	1036
1038	Top Slab - 8 bays. Prod. Rate: 18d/team/bay, 4 teams	38 days	0 days	38 days	0%	Wed 7/7/21	Thu 19/8/21	NA	NA	Wed 7/7/21	Thu 19/8/21	0 days	2 day	1037
1039	Falsework Removal	37 days	0 days	37 days	0%	Fri 20/8/21	Mon 4/10/21	NA	NA	Fri 20/8/21	Mon 4/10/21	0 days	2 day	1038
1040	Sheetpile Extraction and Backfill	13 days	0 days	13 days	0%	Fri 20/8/21	Fri 3/9/21	NA	NA	Fri 17/9/21	Mon 4/10/21	24 days	1 day	1038
1041	Underground Plant Room next to Underpass	45 days	0 days	45 days	0%	Wed 6/1/21	Tue 2/3/21	NA	NA	Wed 6/1/21	Tue 2/3/21	0 days		
1042	Underground pump house structure	45 days	0 days	45 days	0%	Wed 6/1/21	Tue 2/3/21	NA	NA	Wed 6/1/21	Tue 2/3/21	0 days	3 day	714,1035,262,28
1043	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		
1044	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	
1045	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
1046	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		
1047	Excavation with Shoring Installation (Upper Portion) - Prod. Rate: 270m3/d/team. 1 team 16,000m3)	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
1048	Excavation with Shoring Installation (Lower Portion) - Prod. Rate: 270m3/d/team. 1 team 16,000m3)	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 days
1049	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	1047,1048
1050	Blinding	1 day	0 days	1 day	0%	Tue 27/10/20	Tue 27/10/20	NA	NA	Wed 2/12/20	Wed 2/12/20	31 days	0.5 days	1049



Title: Rev.11 Prog with Progress as of 22-May-20

Task
Split
Milestone
Summary
Project Summary
Inactive Task
Inactive Milestone
Inactive Summary
Manual Task
Duration-only
Manual Summary Rollup
Manual Summary
Start-only
Finish-only
External Tasks
External Milestone
Deadline
Critical
Critical Split
Progress
Manual Progress

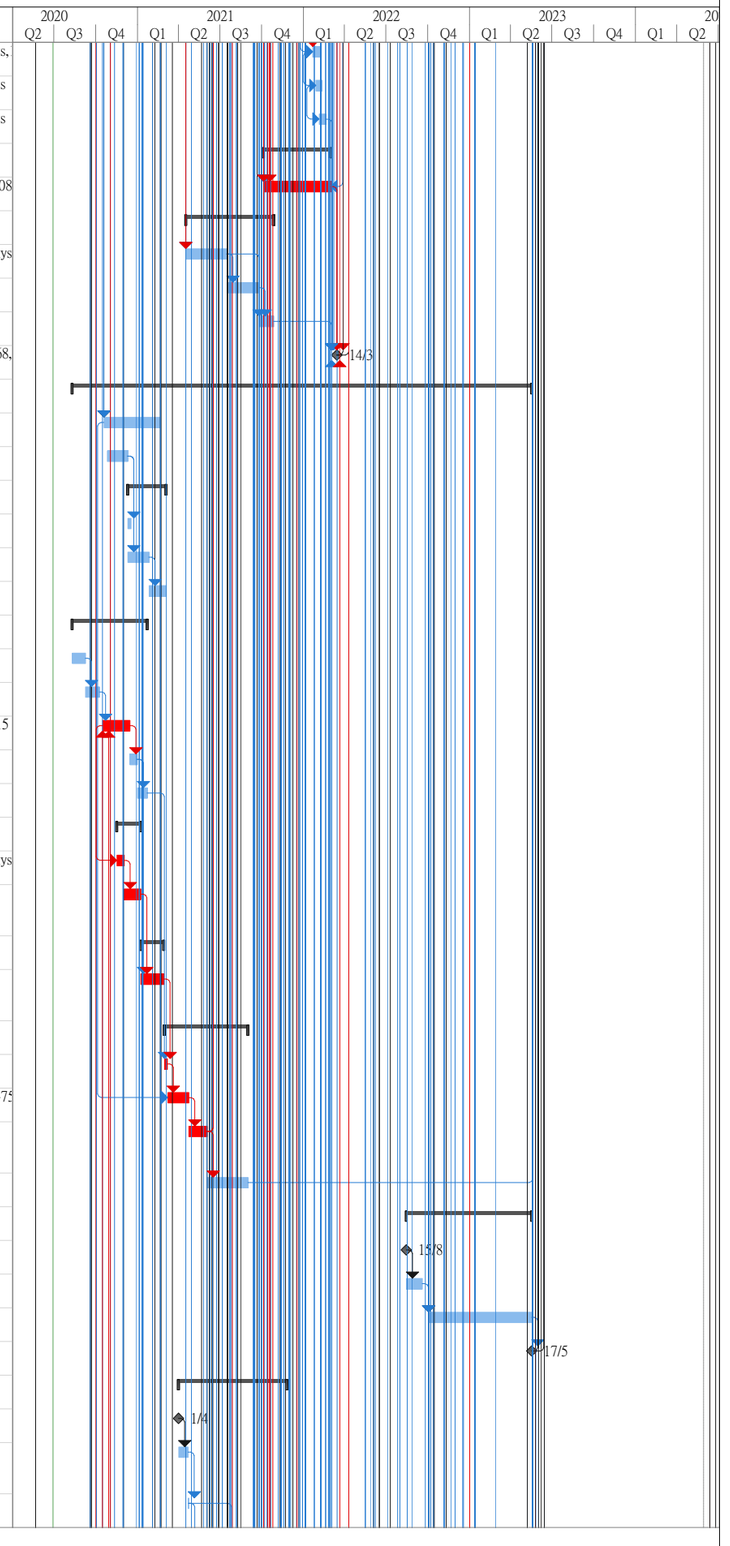
ID	Task Name	Duration	Actual Duration	Remaining Duration	Physical % Complete	Early Start	Early Finish	Actual Start	Actual Finish	Late Start	Late Finish	Total Slack	TRA	Predecessors
1051	Underpass Formworks Design and Method Statement Submission	0 days	0 days	0 days	0%	Mon 14/9/20	Mon 14/9/20	NA	NA	Tue 3/11/20	Tue 3/11/20	50 days	1 day	
1052	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
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
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
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
1058	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
1059	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
1060	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
1061	S1 Shoring ELS Removal + North/South End Re-propping	7 days	0 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
1062	Scaffold erection for roof slab	24 days	0 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
1063	Roof slab construction (18d/bay/team x 3) (6 bays)	42 days	0 days	42 days	0%	Sat 8/5/21	Mon 28/6/21	NA	NA	Wed 16/6/21	Wed 4/8/21	31 days	4 days	1062
1064	Waterproofing & Backfilling upto tunnel top	28 days	0 days	28 days	0%	Tue 29/6/21	Sat 31/7/21	NA	NA	Thu 5/8/21	Mon 6/9/21	31 days	2 day	1063
1065	Scaffold removal after 28 days from casting	22 days	0 days	22 days	0%	Mon 26/7/21	Thu 19/8/21	NA	NA	Thu 13/1/22	Thu 10/2/22	141 days	1 day	1063FS+22 days
1066	Sheetpile extraction (Ch1851-CH1950)	22 days	0 days	22 days	0%	Mon 2/8/21	Thu 26/8/21	NA	NA	Tue 7/9/21	Mon 4/10/21	31 days	1 day	1064
1067	Emergency walkway & median barrier installation	9 days	0 days	9 days	0%	Fri 24/9/21	Tue 5/10/21	NA	NA	Fri 11/2/22	Mon 21/2/22	112 days	1 day	323,1066,1040,1
1068	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
1069	CH1950 - CH2020 (70m long) (2 x teams) 4 bays x 17.5m long - Average 3 layers of shoring	209 days	0 days	209 days	0%	Fri 19/3/21	Mon 29/11/21	NA	NA	Sat 6/3/21	Tue 1/3/22	-11 days		
1070	Drive sheet pile (approx. 8,800m embedded length sheetpile), 380m/team/day	24 days	0 days	24 days	0%	Fri 19/3/21	Mon 19/4/21	NA	NA	Sat 6/3/21	Tue 6/4/21	-11 days	1 day	1027
1071	Excavation with Shoring Installation - Prod. Rate: 2 teams x 250m3/d/team. (14,500m3)	30 days	0 days	30 days	0%	Tue 20/4/21	Wed 26/5/21	NA	NA	Wed 7/4/21	Wed 12/5/21	-11 days	1 day	1049,1070
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	1071
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	1071,1072
1074	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
1075	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
1076	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
1077	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
1078	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
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
1080	South Depressed Road CH2020-2050 (40m long) (2 x teams) 5 bays x 13.5m long - Average 2 layers of shoring	134 days	0 days	134 days	0%	Mon 2/8/21	Tue 11/1/22	NA	NA	Sun 5/9/21	Tue 1/3/22	30 days		
1081	Open Excavation	17 days	0 days	17 days	0%	Tue 5/10/21	Mon 25/10/21	NA	NA	Mon 20/9/21	Mon 11/10/21	-11 days	3 days	1076
1082	Blinding	2 days	0 days	2 days	0%	Tue 26/10/21	Wed 27/10/21	NA	NA	Tue 12/10/21	Wed 13/10/21	-11 days	0 days	1081
1083	South Depress Road - Formworks Design and Method Statement Submission	0 days	0 days	0 days	0%	Mon 2/8/21	Mon 2/8/21	NA	NA	Sun 5/9/21	Sun 5/9/21	34 days	1 day	
1084	South Depress Road - Formworks Design and Method Statement Comment & Appraoval	40 days	0 days	40 days	0%	Mon 2/8/21	Fri 10/9/21	NA	NA	Sun 5/9/21	Thu 14/10/21	34 days	1 day	1083
1085	Base Slab - 3 bays. Prod. Rate: 12d/team/bay include pipe laying. 2 teams	12 days	0 days	12 days	0%	Thu 28/10/21	Wed 10/11/21	NA	NA	Fri 15/10/21	Thu 28/10/21	-11 days	2 day	1082,1084,314
1086	Wall - 3 bays. Prod. Rate: 2 level of shoring 12d/bay/level/team. 2 teams	12 days	0 days	12 days	0%	Fri 12/11/21	Thu 25/11/21	NA	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	0 days	12 days	0%	Sat 20/11/21	Fri 3/12/21	NA	NA	Mon 8/11/21	Sat 20/11/21	-11 days	0.5day	1086SS+7 days
1088	Backfill & extract sheet pile	19 days	0 days	19 days	0%	Fri 26/11/21	Fri 17/12/21	NA	NA	Fri 14/1/22	Tue 8/2/22	39 days	1 day	1086
1089	Curing and Formwork Ramoval	19 days	0 days	19 days	0%	Fri 26/11/21	Fri 17/12/21	NA	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
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	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



Title: Rev.11 Prog with Progress as of 22-May-20

Task, Split, Milestone, Summary, Project Summary, Inactive Task, Inactive Milestone, Inactive Summary, Manual Task, Duration-only, Manual Summary Rollup, Manual Summary, Start-only, Finish-only, External Tasks, External Milestone, Deadline, Critical, Critical Split, Progress, Manual Progress

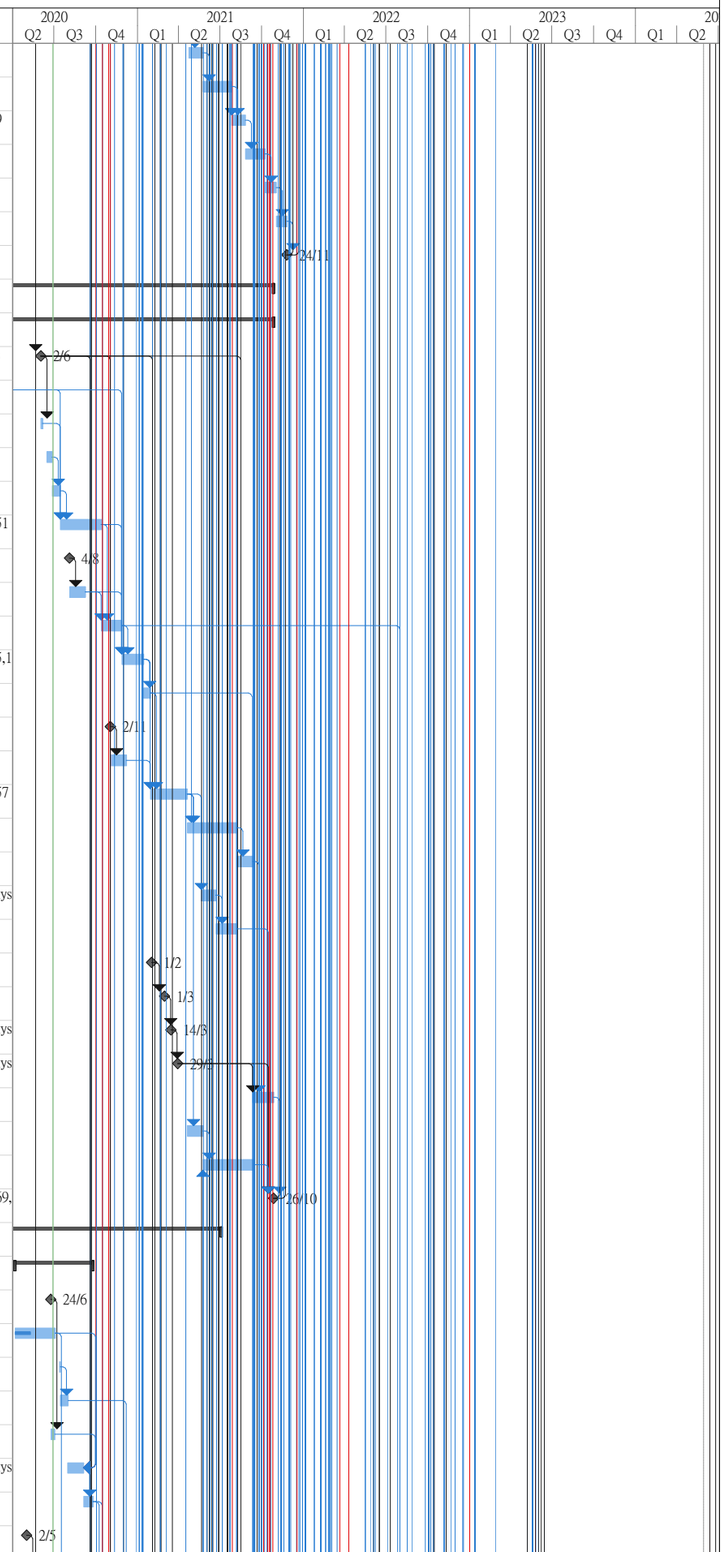
ID	Task Name	Duration	Actual Duration	Remaining Duration	Physical % Complete	Early Start	Early Finish	Actual Start	Actual Finish	Late Start	Late Finish	Total Slack	TRA	Predecessors
1096	HGC	15 days	0 days	15 days	0%	Fri 21/1/22	Fri 4/2/22	NA	NA	Tue 1/2/22	Tue 15/2/22	11 days	1 day	1095SS+7 days,
1097	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
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
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		
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
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
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,
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		
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
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	
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		
1110	Installation of Silt Curtain with Concrete Sinkers	6 days	0 days	6 days	0%	Thu 10/12/20	Wed 16/12/20	NA	NA	Thu 23/5/24	Wed 29/5/24	1023 d...	1 day	1108
1111	Demolition of Existing Seawall	37 days	0 days	37 days	0%	Thu 10/12/20	Mon 25/1/21	NA	NA	Wed 6/3/24	Mon 22/4/24	962 days	1 day	1108
1112	Grade 200 rock filiing and placing levelling stone	30 days	0 days	30 days	0%	Tue 26/1/21	Thu 4/3/21	NA	NA	Tue 23/4/24	Wed 29/5/24	962 days	1 day	1111
1113	CH86 to CH70 ELS Works	136 days	0 days	136 days	0%	Mon 10/8/20	Thu 21/1/21	NA	NA	Mon 17/8/20	Sat 27/2/21	6 days		
1114	Temporary Works Design Preparation	25 days	0 days	25 days	0%	Mon 10/8/20	Mon 7/9/20	NA	NA	Mon 17/8/20	Mon 14/9/20	6 days	1 days	
1115	Comment by PM	25 days	0 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	0 days	50 days	0%	Fri 16/10/20	Mon 14/12/20	NA	NA	Fri 16/10/20	Mon 14/12/20	0 days	1 day	1420,1423,1115
1117	Excavation with Shoring Installation (1350 cu.m., 150 cu.m./d)	12 days	0 days	12 days	0%	Tue 15/12/20	Wed 30/12/20	NA	NA	Tue 22/12/20	Thu 7/1/21	6 days	3 day	1116
1118	Preparation of formation and laying of blinding layer	18 days	0 days	18 days	0%	Thu 31/12/20	Thu 21/1/21	NA	NA	Thu 4/2/21	Sat 27/2/21	29 days	0.5 day	1117
1119	CH70 to CH30 ELS Works	43 days	0 days	43 days	0%	Mon 16/11/20	Thu 7/1/21	NA	NA	Mon 16/11/20	Thu 7/1/21	0 days		
1120	Sheetpiling Installation (80m on plan)	14 days	0 days	14 days	0%	Mon 16/11/20	Tue 1/12/20	NA	NA	Mon 16/11/20	Tue 1/12/20	0 days	0.5 day	1116SS+25 days
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%	Wed 2/12/20	Thu 7/1/21	NA	NA	Wed 2/12/20	Thu 7/1/21	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	
1123	Construction of Cast in-situ Box Culvert with feeder pipe installation with Connection to Extisting Box Culvert(Bay 15, approx. 12m long)	41 days	0 days	41 days	0%	Fri 8/1/21	Sat 27/2/21	NA	NA	Fri 8/1/21	Sat 27/2/21	0 days	1 day	1117,1121
1124	Precast Units Installation	151 days	0 days	151 days	0%	Mon 1/3/21	Tue 31/8/21	NA	NA	Mon 1/3/21	Tue 30/5/23	0 days		
1125	Preparation for Connecting Precast Units and Cast In-situ Bay 15	6 days	0 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	0 days	37 days	0%	Mon 8/3/21	Thu 22/4/21	NA	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	0 days	225 days	0%	Mon 15/8/22	Wed 17/5/23	NA	NA	Sat 10/9/22	Tue 30/5/23	10 days		
1130	Abandon Existing DCS - Temp. Works Design and Method Statement Submission	0 days	0 days	0 days	0%	Mon 15/8/22	Mon 15/8/22	NA	NA	Sat 10/9/22	Sat 10/9/22	26 days	1 day	
1131	Abandon Existing DCS - Temp. Works Design and Method Statement Comment & Appraoval	35 days	0 days	35 days	0%	Mon 15/8/22	Sun 18/9/22	NA	NA	Sat 10/9/22	Fri 14/10/22	26 days	1 day	1130
1132	Part 2E - Abandon of existing DCS	185 days	0 days	185 days	0%	Mon 3/10/22	Wed 17/5/23	NA	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 days	0%	Wed 17/5/23	Wed 17/5/23	NA	NA	Tue 30/5/23	Tue 30/5/23	10 days		1132
1134	Section 8: Part 2A - Diversion & abandon of extg DCS box culvert	194 days	0 days	194 days	0%	Thu 1/4/21	Wed 24/11/21	NA	NA	Fri 9/4/21	Thu 2/12/21	4 days		
1135	Diversion & Abandon of Existing DCS Box Culvert - Temp. Works Design and Method Statement Submission	0 days	0 days	0 days	0%	Thu 1/4/21	Thu 1/4/21	NA	NA	Fri 9/4/21	Fri 9/4/21	8 days	1 day	
1136	Diversion & Abandon of Existing DCS Box Box Culvert - Temp. Works Design and Method Statement Comment & Appraoval	21 days	0 days	21 days	0%	Thu 1/4/21	Wed 21/4/21	NA	NA	Fri 9/4/21	Thu 29/4/21	8 days	1 day	1135
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



Title: Rev.11 Prog with Progress as of 22-May-20

Task		Summary		Inactive Milestone		Duration-only		Start-only		External Milestone		Critical Split					
Split		Project Summary		Inactive Summary		Manual Summary Rollup		Finish-only		Deadline		Progress					
Milestone		Inactive Task		Manual Task		Manual Summary		External Tasks		Critical		Manual Progress					

ID	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
1138	Sheetpile Installation	25 days	0 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
1139	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
1140	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
1141	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
1142	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
1143	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
1144	Planned Completion for 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	7 days	0 days	1143
1145	Section 3	729 days	0 days	729 days	0%	Thu 16/5/19	Tue 26/10/21	NA	NA	Tue 2/6/20	Tue 2/11/21	6 days		
1146	Part 2C - Lift LT3 & LT4	729 days	0 days	729 days	0%	Thu 16/5/19	Tue 26/10/21	NA	NA	Tue 2/6/20	Tue 2/11/21	6 days		
1147	Access Date - Part 2A,2C	0 days	0 days	0 days	0%	Tue 2/6/20	Tue 2/6/20	NA	NA	Tue 2/6/20	Tue 2/6/20	0 days	0 days	4FS+369 days
1148	Mobilization of plant and materials	15 days	0 days	15 days	0%	Thu 16/5/19	Sat 1/6/19	NA	NA	Sat 4/7/20	Tue 21/7/20	337 days	1 days	
1149	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
1150	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		
1151	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
1152	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
1153	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	
1154	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
1155	Intall Sheetpile, ELS, Excavation and Temp. Works Installation (Shoring, Drainage & Slope Protection)	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
1156	Foundation Construction (Pad Footing include blinding layer, formwork erection, rebar fixing & concreting)	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
1157	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
1158	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	
1159	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
1160	Lift Shaft Tower: 3 Lifts x 20 day/Lift, Falsework & Formwork Erection, Rebar Fixing & Concreting	63 days	0 days	63 days	0%	Fri 29/1/21	Mon 19/4/21	NA	NA	Fri 5/2/21	Mon 26/4/21	6 days	3 days	1156,1159,1157
1161	Lift installation (LT3 & LT4)	90 days	0 days	90 days	0%	Tue 20/4/21	Fri 6/8/21	NA	NA	Tue 27/4/21	Fri 13/8/21	6 days	5 days	1160,713
1162	E & M installation	30 days	0 days	30 days	0%	Sat 7/8/21	Fri 10/9/21	NA	NA	Sat 14/8/21	Fri 17/9/21	6 days	3 days	1161
1163	Louvers and Glazing Installation	26 days	0 days	26 days	0%	Fri 21/5/21	Mon 21/6/21	NA	NA	Sat 14/8/21	Mon 13/9/21	71 days	2 days	1160FS+25 days
1164	Parapet Installation and Finishing Works	40 days	0 days	40 days	0%	Tue 22/6/21	Sat 7/8/21	NA	NA	Tue 14/9/21	Tue 2/11/21	71 days	4 days	1163
1165	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	
1166	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
1167	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
1168	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
1169	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
1170	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
1171	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
1172	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,
1173	Sections 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	
1174	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		
1175	CNP and TTA available	0 days	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	
1176	Expose the Extisting Noise Barrier Foundation	70 days	25 days	45 days	36%	Mon 6/4/20	Fri 3/7/20	Mon 6/4/20	NA	Mon 6/4/20	Tue 7/7/20	3 days	1 day	
1177	Implement TTA	2 days	0 days	2 days	0%	Mon 13/7/20	Tue 14/7/20	NA	NA	Wed 18/11/20	Thu 19/11/20	107 days	0.5 day	
1178	Expose the Extisting Noise Barrier Foundation under Existing Footpath	15 days	0 days	15 days	0%	Wed 15/7/20	Fri 31/7/20	NA	NA	Fri 20/11/20	Mon 7/12/20	107 days	1 day	1177
1179	Carry out the Site Survey for Existing Holding Down Bolt at Existing Landscaped Deck	6 days	0 days	6 days	0%	Wed 24/6/20	Thu 2/7/20	NA	NA	Thu 20/8/20	Wed 26/8/20	47 days	1 day	1175
1180	Noise Barrier Shop Drawings Preparation	30 days	0 days	30 days	0%	Fri 31/7/20	Thu 3/9/20	NA	NA	Fri 21/8/20	Thu 24/9/20	18 days	0.5 day	1176FF+18 days
1181	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
1182	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	



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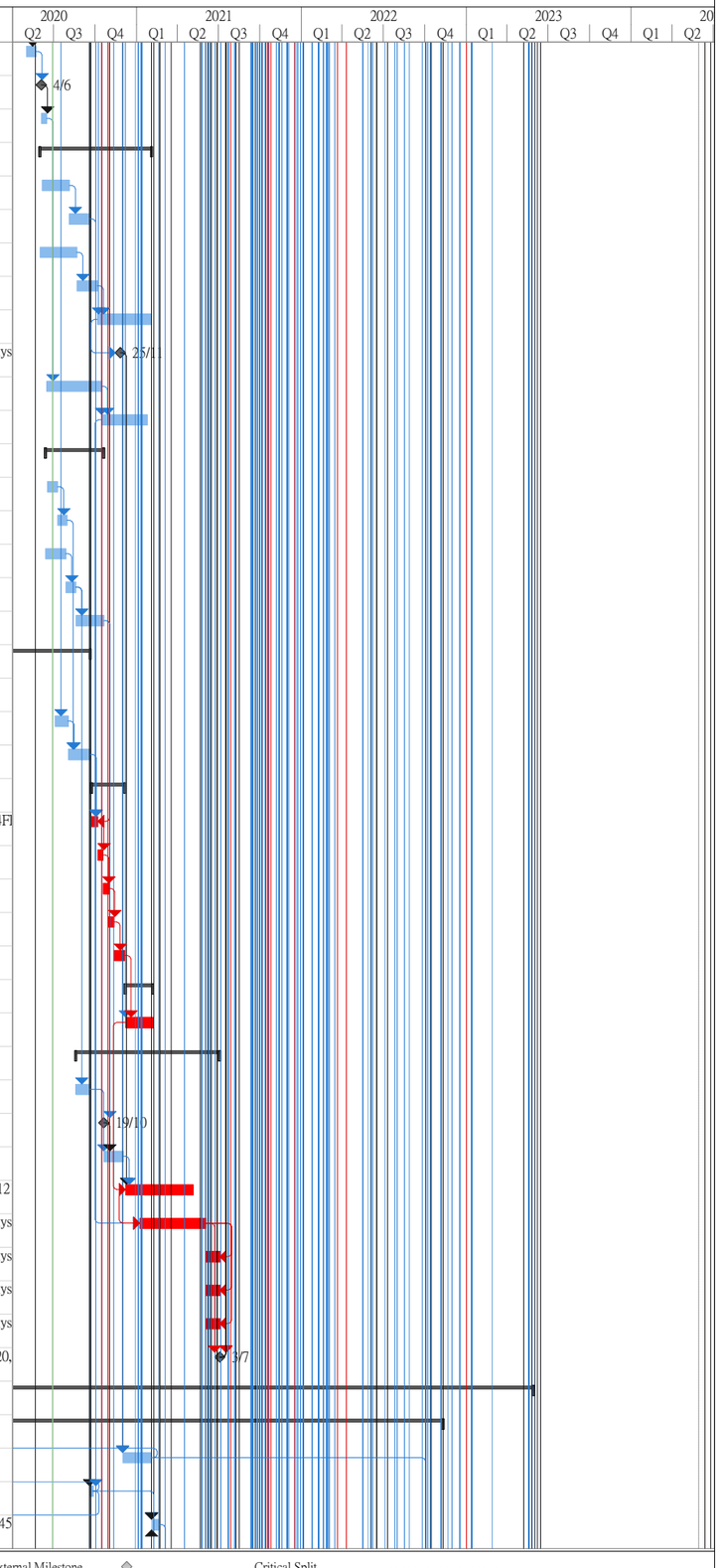
Task, Split, Milestone, Summary, Project Summary, Inactive Task, Inactive Milestone, Inactive Summary, Manual Task, Duration-only, Manual Summary Rollup, Manual Summary, Start-only, Finish-only, External Tasks, External Milestone, Deadline, Critical, Critical Split, Progress, Manual Progress

ID	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
1183	PMAA Panel Material Comment and Approval by PM	18 days	0 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
1184	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
1185	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
1186	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		
1187	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	
1188	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
1189	Structural Steelwork Procurement	81 days	0 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	
1190	Structural Steel Frame Material Testing	46 days	0 days	46 days	0%	Fri 21/8/20	Mon 5/10/20	NA	NA	Wed 2/9/20	Sat 17/10/20	12 days	1 day	1189
1191	Structural Steel Frame Fabrication and Delivery	120 days	0 days	120 days	0%	Tue 6/10/20	Tue 2/2/21	NA	NA	Sun 18/10/20	Sun 14/2/21	12 days	1 day	1181,1190
1192	Structural Steel Frame Start Delivery to Stie	0 days	0 days	0 days	0%	Wed 25/11/20	Wed 25/11/20	NA	NA	Tue 8/12/20	Tue 8/12/20	12 days	1 day	1191SS+51 days
1193	Polymethyl Metharylate (PMMA) and Associated Aluminium Sub-frame Procurement	121 days	0 days	121 days	0%	Tue 16/6/20	Wed 14/10/20	NA	NA	Sat 11/7/20	Sun 8/11/20	25 days	1 day	1185
1194	Polymethyl Metharylate (PMMA) panel fabrication and delivery	101 days	0 days	101 days	0%	Thu 15/10/20	Sat 23/1/21	NA	NA	Mon 9/11/20	Wed 17/2/21	25 days	30 days	1193,1181
1195	Temp Works Design for Noise Barrier	106 days	0 days	106 days	0%	Sat 13/6/20	Mon 19/10/20	NA	NA	Fri 19/6/20	Sat 24/10/20	5 days		
1196	ELS Design Preparation for Noise Barrier with ICE	18 days	0 days	18 days	0%	Wed 17/6/20	Thu 9/7/20	NA	NA	Tue 23/6/20	Wed 15/7/20	5 days	1 day	
1197	ELS Design for Noise Barrier Comment by AECOM	21 days	0 days	21 days	0%	Fri 10/7/20	Thu 30/7/20	NA	NA	Thu 16/7/20	Wed 5/8/20	6 days	1 day	1196
1198	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	
1199	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
1200	Temporary Working Platform Fabrication	51 days	0 days	51 days	0%	Wed 19/8/20	Mon 19/10/20	NA	NA	Tue 25/8/20	Sat 24/10/20	5 days	1 day	1199
1201	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		
1202	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		
1203	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
1204	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
1205	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		
1206	Bay 1 & 3 Fooing with Column Stud and Modification of Existing Column Stud along Bay 1 & 3	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
1207	Bay 2 & 4 Fooing with Column Stud and Modification of Existing Column along Bay 2&4	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
1208	Bay 5 & 7 Fooing with Column Stud, Modification of Existing Stud along Bay 5&7	10 days	0 days	10 days	0%	Mon 19/10/20	Fri 30/10/20	NA	NA	Tue 20/10/20	Sat 31/10/20	1 day	1 day	1207
1209	Bay 6 Fooing with Column Stud, Modification of Existing Stud along Bay 6	10 days	0 days	10 days	0%	Sat 31/10/20	Wed 11/11/20	NA	NA	Mon 2/11/20	Thu 12/11/20	1 day	1 day	1208
1210	Backfill and extract sheet pile	21 days	0 days	21 days	0%	Thu 12/11/20	Sat 5/12/20	NA	NA	Fri 13/11/20	Mon 7/12/20	1 day	1 day	1209
1211	Modification of Remaining Colum Stud	50 days	0 days	50 days	0%	Mon 7/12/20	Fri 5/2/21	NA	NA	Tue 8/12/20	Sat 6/2/21	1 day	1 day	
1212	Modification of Remaining Column Stud	50 days	0 days	50 days	0%	Mon 7/12/20	Fri 5/2/21	NA	NA	Tue 8/12/20	Sat 6/2/21	1 day	1 day	1210,1178
1213	Noise Barrier Installation	258 days	0 days	258 days	0%	Wed 19/8/20	Sat 3/7/21	NA	NA	Sat 26/9/20	Mon 5/7/21	1 day	1 day	
1214	CNP Application	31 days	0 days	31 days	0%	Wed 19/8/20	Fri 18/9/20	NA	NA	Sat 26/9/20	Mon 26/10/20	38 days	1 day	1199
1215	Temporary Platform Delivery to Site	0 days	0 days	0 days	0%	Mon 19/10/20	Mon 19/10/20	NA	NA	Tue 27/10/20	Tue 27/10/20	5 days	0.5 day	1200
1216	Temporary Platform On-site Assembly (Night Time)	36 days	0 days	36 days	0%	Tue 20/10/20	Tue 1/12/20	NA	NA	Tue 27/10/20	Mon 7/12/20	5 days	0.5 day	1214,1215
1217	Structural Steel Frame Installation	119 days	0 days	119 days	0%	Mon 7/12/20	Wed 5/5/21	NA	NA	Tue 8/12/20	Thu 6/5/21	1 day	1 day	1192,1212SS,12
1218	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
1219	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
1220	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
1221	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
1222	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,
1223	Section 6	1201 days	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...		
1224	Fencing (15m/d) & Hoarding Erection (10m/d)	915 days	185.72 days	729.28 days	0%	Tue 15/10/19	Thu 10/11/22	Tue 15/10/19	NA	Tue 15/10/19	Fri 30/12/22	42 days		
1225	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
1226	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
1227	Fencing - Part 2A (~458m) - 4 team	12 days	0 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



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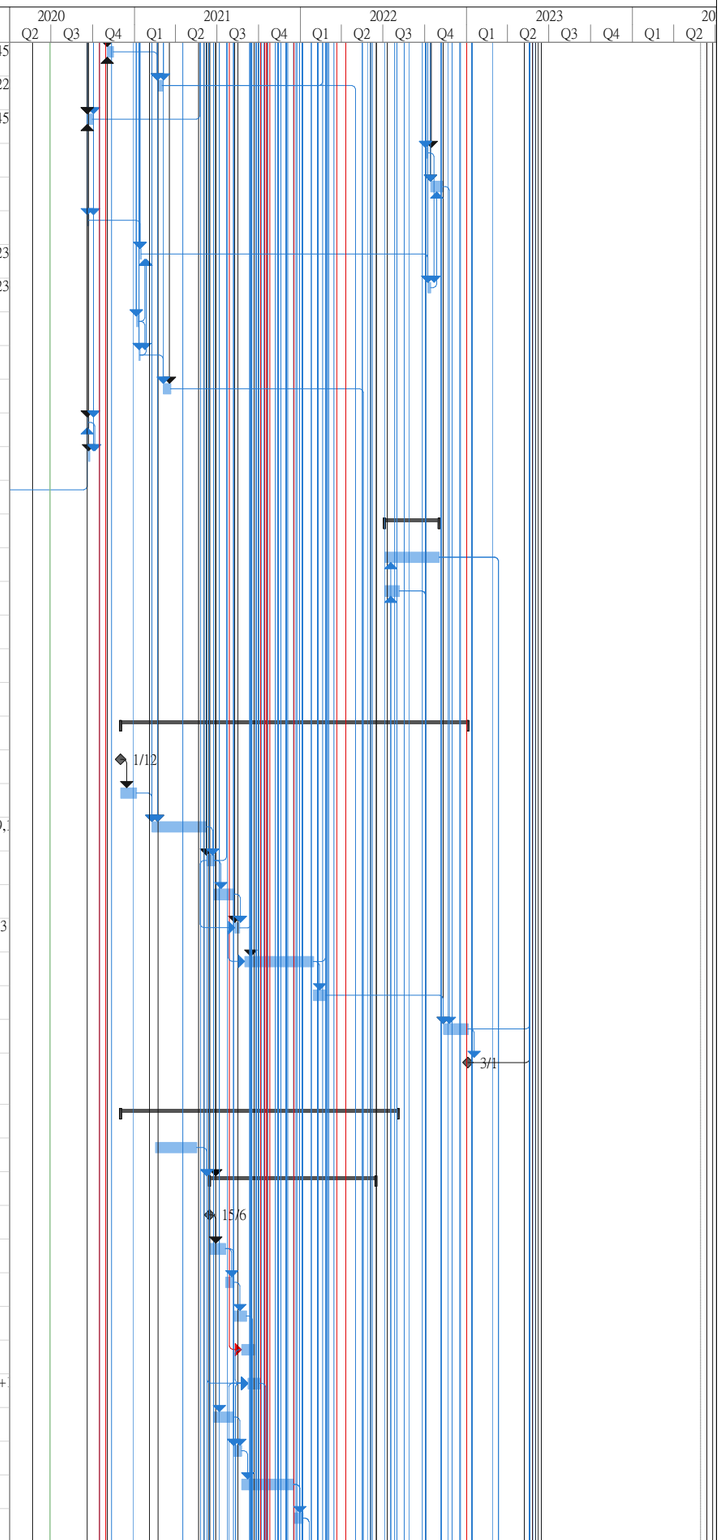
Task
Split
Milestone
Summary
Project Summary
Inactive Task
Inactive Milestone
Inactive Summary
Manual Task
Duration-only
Manual Summary Rollup
Manual Summary
Start-only
Finish-only
External Tasks
External Milestone
Deadline
Critical
Critical Split
Progress
Manual Progress

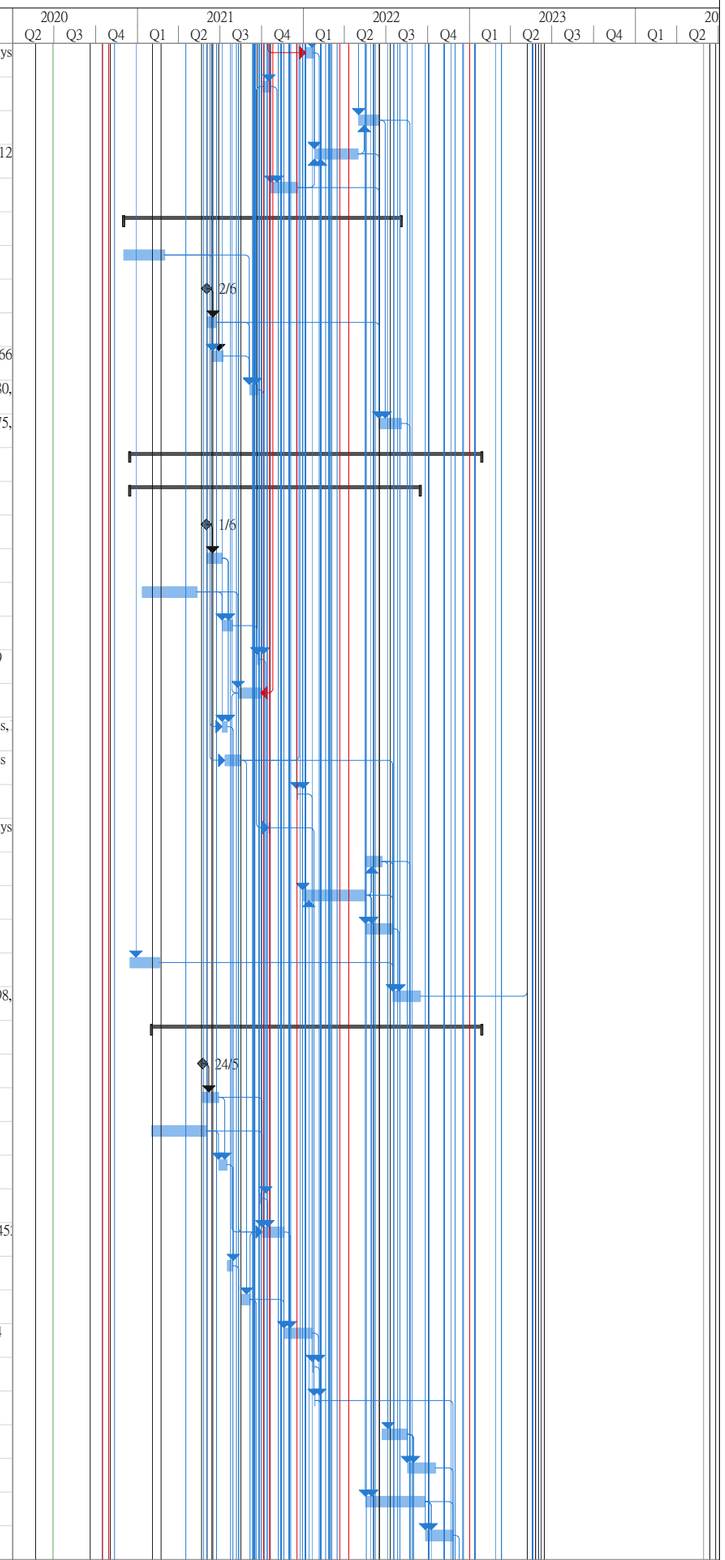
ID	Task Name	Duration	Actual Duration	Remaining Duration	Physical % Complete	Early Start	Early Finish	Actual Start	Actual Finish	Late Start	Late Finish	Total Slack	TRA	Predecessors
1228	Hoarding - Part 2A (~379m) - 4 team	12 days	0 days	12 days	0%	Mon 2/11/20	Sat 14/11/20	NA	NA	Sat 5/2/22	Fri 18/2/22	373 days	1 days	9,121,1147,1445
1229	Fencing - Part 2B (~132m)	9 days	0 days	9 days	0%	Sat 20/2/21	Tue 2/3/21	NA	NA	Sat 19/2/22	Tue 1/3/22	296 days	0 days	10,121,1227,122
1230	Hoarding - Part 2C (~106m)	9 days	0 days	9 days	0%	Sat 19/9/20	Tue 29/9/20	NA	NA	Fri 2/7/21	Mon 12/7/21	229 days	1 days	9,121,1147,1445
1231	Hoarding - Part 2E (~37m)	4 days	0 days	4 days	0%	Mon 3/10/22	Fri 7/10/22	NA	NA	Tue 22/11/22	Fri 25/11/22	42 days	0 days	11,121,1225
1232	Fencing - Part 3A (~326m)	24 days	0 days	24 days	0%	Fri 14/10/22	Thu 10/11/22	NA	NA	Fri 2/12/22	Fri 30/12/22	42 days	2 days	12,121,1235
1233	Fencing - Part 3D (~29m)	2 days	0 days	2 days	0%	Sat 19/9/20	Mon 21/9/20	NA	NA	Sat 12/6/21	Tue 15/6/21	214 days	0 days	14,121
1234	Fencing - Part 3E (~23m)	2 days	0 days	2 days	0%	Wed 13/1/21	Thu 14/1/21	NA	NA	Wed 16/6/21	Thu 17/6/21	123 days	0 days	14,121,1236,123
1235	Fencing - Part 3F (~62m)	5 days	0 days	5 days	0%	Sat 8/10/22	Thu 13/10/22	NA	NA	Sat 26/11/22	Thu 1/12/22	42 days	0 days	15,121,1231,123
1236	Fencing - Part 3G (~69m)	5 days	0 days	5 days	0%	Tue 5/1/21	Sat 9/1/21	NA	NA	Mon 7/6/21	Fri 11/6/21	123 days	0 days	14,121
1237	Fencing - Part 3I (~19m)	2 days	0 days	2 days	0%	Mon 11/1/21	Tue 12/1/21	NA	NA	Sat 12/6/21	Tue 15/6/21	123 days	0 days	14,121,1236
1238	Fencing - Part 4 (~180m)	14 days	0 days	14 days	0%	Fri 5/3/21	Sat 20/3/21	NA	NA	Tue 24/5/22	Thu 9/6/22	361 days	2 days	121,13,1237
1239	Fencing - Part 6A (~19m)	2 days	0 days	2 days	0%	Sat 19/9/20	Mon 21/9/20	NA	NA	Sat 26/9/20	Mon 28/9/20	6 days	0 days	8,121,1241
1240	Fencing - Part 6B (~23m)	2 days	0 days	2 days	0%	Tue 22/9/20	Wed 23/9/20	NA	NA	Tue 29/9/20	Wed 30/9/20	6 days	0 days	8,121,1239
1241	Hoarding - WA1 (~300m)	41 days	41 days	0 days	70%	Tue 15/10/19	Sat 30/11/19	Tue 15/10/19	Sat 30/11/19	Tue 15/10/19	Sat 30/11/19	0 days	0.5 days	18,121
1242	Fencing (15m/d) & Hoarding Erection (10m/d) - Upon Works Completion	100 days	0 days	100 days	0%	Tue 5/7/22	Tue 1/11/22	NA	NA	Fri 5/8/22	Fri 2/12/22	27 days		
1243	Fencing - ~1437m	100 days	0 days	100 days	0%	Tue 5/7/22	Tue 1/11/22	NA	NA	Fri 5/8/22	Fri 2/12/22	27 days	5 days	1527
1244	Hoarding - ~260m	28 days	0 days	28 days	0%	Tue 5/7/22	Fri 5/8/22	NA	NA	Mon 19/9/22	Sat 22/10/22	64 days	2 days	1527
1245	Demolition Work - Extg Fire Service Station	89 days	89 days	0 days	0%	Fri 16/8/19	Sat 30/11/19	Fri 16/8/19	Sat 30/11/19	Fri 16/8/19	Sat 30/11/19	0 days		
1246	Asbesto Survey (PS Cl. 2.04(9))	8 days	8 days	0 days	100%	Fri 16/8/19	Fri 23/8/19	Fri 16/8/19	Fri 23/8/19	Fri 16/8/19	Fri 23/8/19	0 days	0.5 days	1226
1247	Demolish of abandoned Fire Service Station	11 days	11 days	0 days	100%	Tue 19/11/19	Sat 30/11/19	Tue 19/11/19	Sat 30/11/19	Tue 19/11/19	Sat 30/11/19	0 days	0.5 days	1246
1248	Rising Main	623 days	0 days	623 days	0%	Tue 1/12/20	Tue 3/1/23	NA	NA	Mon 1/2/21	Tue 30/5/23	50 days		
1249	Rising Main - Method Statement Submission	0 days	0 days	0 days	0%	Tue 1/12/20	Tue 1/12/20	NA	NA	Mon 1/2/21	Mon 1/2/21	62 days	0.5 days	
1250	Rising Main Method Statement Comment & Appraoval	35 days	0 days	35 days	0%	Tue 1/12/20	Mon 4/1/21	NA	NA	Mon 1/2/21	Sun 7/3/21	62 days	0.5 days	1249
1251	Part 1 - CHA660-1097.77 - 2x160mm dia (~438m)	95 days	0 days	95 days	0%	Mon 8/2/21	Mon 7/6/21	NA	NA	Mon 8/3/21	Sat 3/7/21	21 days	14 day	8,1226,427,419,
1252	Part 9A - CHA32-71 - 2x160mm dia (~39m) (KD5)	15 days	0 days	15 days	0%	Tue 8/6/21	Fri 25/6/21	NA	NA	Mon 5/7/21	Wed 21/7/21	21 days	7 day	8,1251
1253	Part 9B Rising Main	36 days	0 days	36 days	0%	Sat 26/6/21	Sat 7/8/21	NA	NA	Thu 22/7/21	Wed 1/9/21	21 days	10 days	1252
1254	Part 3B - CHA418-443 - 2x160mm dia (~25m) (KD7)	10 days	0 days	10 days	0%	Mon 9/8/21	Thu 19/8/21	NA	NA	Thu 2/9/21	Mon 13/9/21	21 days	5 days	13,1252SS,1253
1255	Part 9 - CHA0-363 & 71-363 - 2x160mm dia. (~655m) (KD4)	124 days	0 days	124 days	0%	Tue 31/8/21	Fri 28/1/22	NA	NA	Thu 2/9/21	Mon 31/1/22	2 days	3 days	16,1254SS
1256	Part 8 - CHA363-418&443-452 - 2x160mm dia (~64m)	20 days	0 days	20 days	0%	Sat 29/1/22	Thu 24/2/22	NA	NA	Thu 9/3/23	Fri 31/3/23	330 days	8 days	1255
1257	Part 3A - CH452-660 - 2x160mm dia (~208m)	45 days	0 days	45 days	0%	Fri 11/11/22	Tue 3/1/23	NA	NA	Sat 1/4/23	Tue 30/5/23	117 days	6 days	12,1232,1256
1258	Allow Access for EMSD third District Cooling System Contractor for DCS Pipeline Laying at Parts 3A, 3B, 8, 9 and 9A	0 days	0 days	0 days	0%	Tue 3/1/23	Tue 3/1/23	NA	NA	Tue 30/5/23	Tue 30/5/23	147 days		1257
1259	Underground Drainage (Stormwater & Sewerage Drainage)	496 days	0 days	496 days	0%	Tue 1/12/20	Wed 3/8/22	NA	NA	Wed 31/3/21	Wed 5/10/22	51 days		
1260	Procurement of Stormwater Drainage Pipes	90 days	0 days	90 days	0%	Tue 16/2/21	Sun 16/5/21	NA	NA	Wed 31/3/21	Mon 28/6/21	43 days	1 day	
1261	Stormwater Drainage	299 days	0 days	299 days	0%	Tue 15/6/21	Wed 15/6/22	NA	NA	Tue 29/6/21	Wed 21/9/22	12 days		428,465,1260
1262	Stormwater Drainage - ELS Temp. Works Design and Method Statement Submission	0 days	0 days	0 days	0%	Tue 15/6/21	Tue 15/6/21	NA	NA	Tue 29/6/21	Tue 29/6/21	14 days	1 day	
1263	Stormwater Drainage - ELS Temp. Works Design and Method Statement Comment & Appraoval	35 days	0 days	35 days	0%	Tue 15/6/21	Mon 19/7/21	NA	NA	Tue 29/6/21	Mon 2/8/21	14 days	1 day	1262
1264	CH1000 - CH1087 (~92.5m, 2 M/H)	16 days	0 days	16 days	0%	Tue 20/7/21	Fri 6/8/21	NA	NA	Tue 3/8/21	Fri 20/8/21	12 days	1 days	1263
1265	CH1087 - CH1189.4 (~210m, 9 M/H)	24 days	0 days	24 days	0%	Sat 7/8/21	Fri 3/9/21	NA	NA	Sat 21/8/21	Fri 17/9/21	12 days	1 days	1264
1266	CH1189.4 - CH1394 (~167m, 3 MH) - Bridge D3	24 days	0 days	24 days	0%	Tue 24/8/21	Mon 20/9/21	NA	NA	Tue 9/11/21	Mon 6/12/21	63 days	0.5 days	944SS
1267	CH1394 - CH1444.7 (~40m, 3 M/H) - S. Ramp	21 days	0 days	21 days	0%	Tue 7/9/21	Sat 2/10/21	NA	NA	Tue 9/11/21	Thu 2/12/21	51 days	1 days	1266SS,988SS+
1268	CH1444.7 - CH1560 (~222m, 10 M/H) - Rd D3	38 days	0 days	38 days	0%	Wed 23/6/21	Fri 6/8/21	NA	NA	Mon 21/2/22	Wed 6/4/22	198 days	3 days	987
1269	CH1560 - CH1720 (~239m, 8 M/H) - N.D. Rd	14 days	0 days	14 days	0%	Sat 7/8/21	Mon 23/8/21	NA	NA	Thu 7/4/22	Tue 26/4/22	198 days	1 days	1263,1268,436
1270	CH1720 - CH1920 (~450.7m, 13 M/H) Underpass	96 days	0 days	96 days	0%	Tue 24/8/21	Thu 16/12/21	NA	NA	Wed 27/4/22	Thu 18/8/22	198 days	6 days	1269
1271	CH1920 - CH2000 (~160m, 6 M/H) S.D. Rd	14 days	0 days	14 days	0%	Fri 17/12/21	Wed 5/1/22	NA	NA	Fri 19/8/22	Sat 3/9/22	198 days	1 days	1270



Title: Rev.11 Prog with Progress as of 22-May-20

Task | Split | Milestone | Summary | Project Summary | Inactive Task | Inactive Milestone | Inactive Summary | Manual Task | Duration-only | Manual Summary Rollup | Manual Summary | Start-only | Finish-only | External Tasks | External Milestone | Deadline | Critical | Critical Split | Progress | Manual Progress

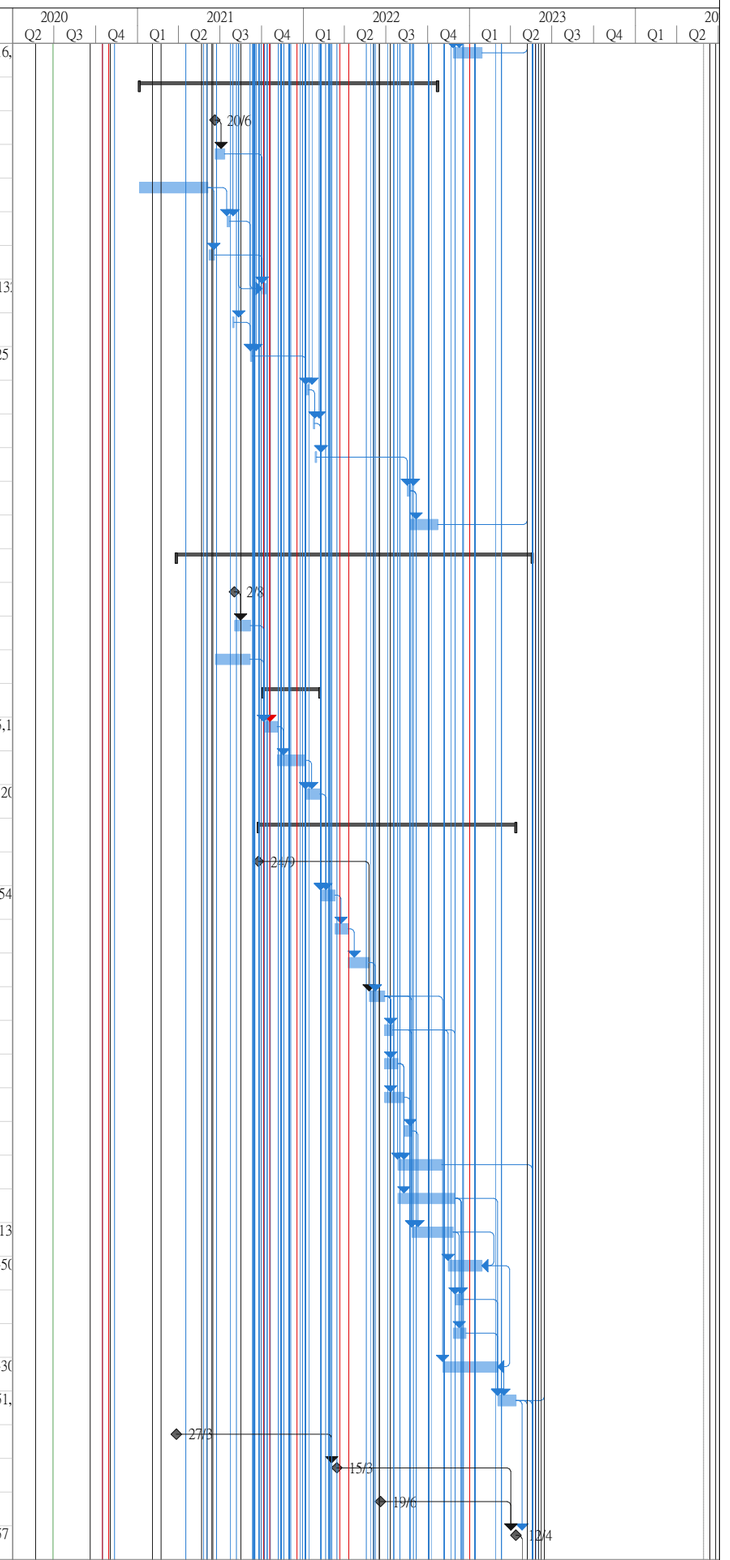
ID	Task Name	Duration	Actual Duration	Remaining Duration	Physical % Complete	Early Start	Early Finish	Actual Start	Actual Finish	Late Start	Late Finish	Total Slack	TRA	Predecessors
1272	CH2000 - CH2060 (~84m, 2 M/H) - S.D. Rd	14 days	0 days	14 days	0%	Thu 6/1/22	Fri 21/1/22	NA	NA	Mon 5/9/22	Wed 21/9/22	198 days	1 days	1085SS+12 days
1273	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
1274	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
1275	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
1276	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
1277	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		
1278	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	
1279	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	
1280	Sewerage Drainage - Temp. Works Design and Method Statement Comment & Appraoval	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
1281	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
1282	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,
1283	CH100 - CH147 (~156m, 6 M/H) - L12 Road	41 days	0 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,
1284	Underground Watermain	629 days	0 days	629 days	0%	Tue 15/12/20	Fri 27/1/23	NA	NA	Fri 14/5/21	Thu 16/3/23	41 days		
1285	Fresh Watermain	519 days	0 days	519 days	0%	Tue 15/12/20	Wed 14/9/22	NA	NA	Fri 14/5/21	Thu 16/3/23	119 days		
1286	Fresh Watermain - Method Statement Submission	0 days	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	
1287	Fresh Watermain Method Statement Comment & Appraoval	35 days	0 days	35 days	0%	Tue 1/6/21	Mon 5/7/21	NA	NA	Sat 7/8/21	Fri 10/9/21	67 days	1 days	1286
1288	Fresh Watermain Procurement	120 days	0 days	120 days	0%	Mon 11/1/21	Mon 10/5/21	NA	NA	Fri 14/5/21	Fri 10/9/21	123 days	1 days	
1289	CH1000 - CH1087 (~191m) Rd D3	20 days	0 days	20 days	0%	Tue 6/7/21	Wed 28/7/21	NA	NA	Sat 11/9/21	Wed 6/10/21	58 days	1 days	1288,1287
1290	CH1087 - CH1189.4 (~212m) - N. Ramp	4 days	0 days	4 days	0%	Tue 21/9/21	Sat 25/9/21	NA	NA	Thu 7/10/21	Mon 11/10/21	12 days	0 days	1282,467,1289
1291	CH1189.4 - CH1394 (~409.2m) - Bridge D3	42 days	0 days	42 days	0%	Tue 10/8/21	Tue 28/9/21	NA	NA	Fri 15/10/21	Thu 2/12/21	54 days	2 days	1288,944FF
1292	CH1394 - CH1444.7 (~101.4m) - S. Ramp	10 days	0 days	10 days	0%	Tue 6/7/21	Fri 16/7/21	NA	NA	Mon 15/8/22	Thu 25/8/22	332 days	0 days	988SS+10 days,
1293	CH1444.7 - CH1560 (~165m) - Rd D3	30 days	0 days	30 days	0%	Mon 12/7/21	Sat 14/8/21	NA	NA	Sat 27/11/21	Tue 4/1/22	116 days	0 days	988SS+15 days
1294	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
1295	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
1296	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
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
1298	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
1299	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
1300	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,
1301	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		
1302	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	
1303	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
1304	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	
1305	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
1306	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
1307	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
1308	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
1309	CH1444.7 - CH1560 (~165m) - Rd D3	18 days	0 days	18 days	0%	Mon 16/8/21	Sat 4/9/21	NA	NA	Wed 29/6/22	Wed 20/7/22	258 days	1 day	1293
1310	CH1560 - CH1720 (~160m) - NDR	50 days	0 days	50 days	0%	Fri 19/11/21	Wed 19/1/22	NA	NA	Thu 21/7/22	Sat 17/9/22	197 days		1307,1309,444
1311	CH1720 - CH1920 (~25m) - Underpass	3 days	0 days	3 days	0%	Thu 20/1/22	Sat 22/1/22	NA	NA	Mon 19/9/22	Wed 21/9/22	197 days	1 day	1294,1310
1312	CH2060 - CH2118.93 (~47m) - Rd D3	2 days	0 days	2 days	0%	Mon 24/1/22	Tue 25/1/22	NA	NA	Thu 22/9/22	Fri 23/9/22	197 days	0 days	1295,1311
1313	CH100 - CH147 (~455m) - L12 Road	47 days	0 days	47 days	0%	Wed 22/6/22	Tue 16/8/22	NA	NA	Wed 3/8/22	Tue 27/9/22	35 days	2 days	1296
1314	L12d Salt Watermain	50 days	0 days	50 days	0%	Wed 17/8/22	Mon 17/10/22	NA	NA	Wed 16/11/22	Fri 13/1/23	75 days	1 day	1313,498
1315	Open Space & Promenade (~1,093m)	110 days	0 days	110 days	0%	Tue 17/5/22	Sat 24/9/22	NA	NA	Sat 28/5/22	Sat 8/10/22	10 days	1 day	1297,458
1316	Saltwater main across Kai Tak River	51 days	0 days	51 days	0%	Mon 26/9/22	Fri 25/11/22	NA	NA	Tue 15/11/22	Fri 13/1/23	41 days	1 day	1315,514



Title: Rev.11 Prog with Progress as of 22-May-20

Task, Split, Milestone, Summary, Project Summary, Inactive Task, Inactive Milestone, Inactive Summary, Manual Task, Duration-only, Manual Summary Rollup, Manual Summary, Start-only, Finish-only, External Tasks, External Milestone, Deadline, Critical, Critical Split, Progress, Manual Progress

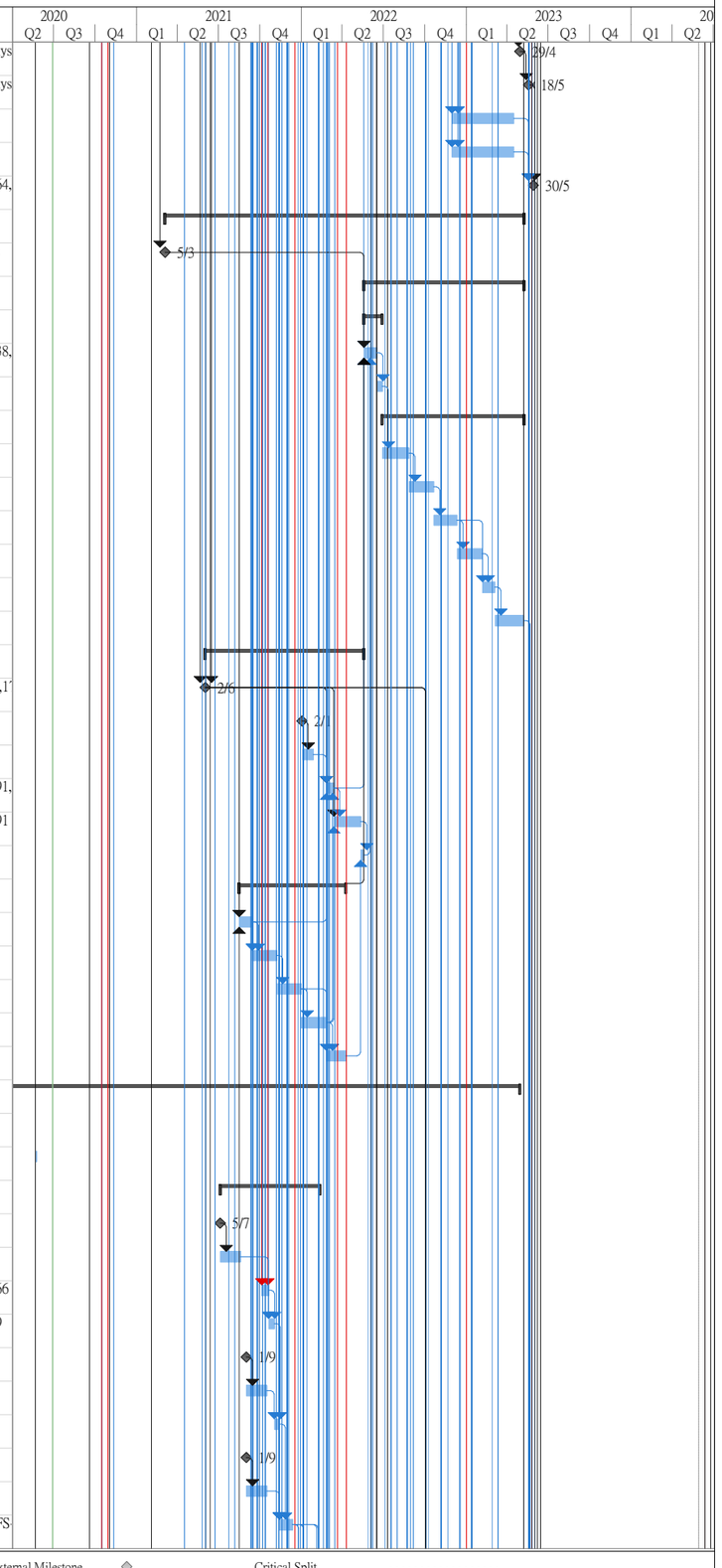
ID	Task Name	Duration	Actual Duration	Remaining Duration	Physical % Complete	Early Start	Early Finish	Actual Start	Actual Finish	Late Start	Late Finish	Total Slack	TRA	Predecessors
1317	Salt Watermain T&C	50 days	0 days	50 days	0%	Sat 26/11/22	Fri 27/1/23	NA	NA	Sat 14/1/23	Thu 16/3/23	41 days	1 day	1312,1315,1316,
1318	Irrigation System	535 days	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		
1319	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	
1320	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
1321	Irrigation Pipe and System Procurement	150 days	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	
1322	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
1323	CH1087 - CH1189.4 (~205m) - N. Ramp	10 days	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
1324	CH1189.4 - CH1394 (~409.2m) - Bridge D3	7 days	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
1325	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
1326	CH1444.7 - CH1560 (~175m) - Rd D3	4 days	0 days	4 days	0%	Mon 6/9/21	Thu 9/9/21	NA	NA	Mon 12/9/22	Thu 15/9/22	302 days	0 days	1309,1322,1325
1327	CH1920 - CH2000 (~160m) S.D. Rd	5 days	0 days	5 days	0%	Thu 6/1/22	Tue 11/1/22	NA	NA	Fri 16/9/22	Wed 21/9/22	207 days	1 day	1271,1326
1328	CH2000 - CH2060 (~60m) - S.D. Rd	2 days	0 days	2 days	0%	Sat 22/1/22	Mon 24/1/22	NA	NA	Thu 22/9/22	Fri 23/9/22	198 days	0 days	1272,1327
1329	CH2060 - CH2118.93 (~100m) - Rd D3	3 days	0 days	3 days	0%	Wed 26/1/22	Fri 28/1/22	NA	NA	Sat 24/9/22	Tue 27/9/22	197 days	0 days	1312,1328
1330	CH100 - CH147 (~173m) - L12 Road	5 days	0 days	5 days	0%	Wed 17/8/22	Mon 22/8/22	NA	NA	Wed 28/9/22	Wed 5/10/22	35 days	1 day	1313,1329
1331	Irrigation System T&C	50 days	0 days	50 days	0%	Tue 23/8/22	Sat 22/10/22	NA	NA	Sat 14/1/23	Thu 16/3/23	120 days	1 day	1330
1332	Salt Water and Sewage Pumping Station	637 days	0 days	637 days	0%	Sat 27/3/21	Thu 18/5/23	NA	NA	Wed 28/7/21	Tue 30/5/23	8 days		
1333	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	
1334	Salt Water Pumping Station - Temp. Works Design and Method Statement Comment & Appraoval	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	39 days	1 day	1333
1335	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	
1336	Substructure	100 days	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		
1337	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
1338	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
1339	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+12(
1340	Superstructure	460 days	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		
1341	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		
1342	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
1343	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
1344	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
1345	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
1346	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
1347	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
1348	Water Chamber Construction	36 days	0 days	36 days	0%	Tue 28/6/22	Tue 9/8/22	NA	NA	Fri 8/7/22	Thu 18/8/22	8 days	1 day	1345
1349	Watertightnes Test for Water Chamber	15 days	0 days	15 days	0%	Wed 10/8/22	Fri 26/8/22	NA	NA	Fri 19/8/22	Mon 5/9/22	8 days	1 day	1348
1350	Drainage and Roadworks	80 days	0 days	80 days	0%	Wed 27/7/22	Mon 31/10/22	NA	NA	Sat 18/2/23	Mon 29/5/23	170 days	5 days	1347,383
1351	Utilities Laying	105 days	0 days	105 days	0%	Wed 27/7/22	Tue 29/11/22	NA	NA	Tue 6/9/22	Tue 10/1/23	35 days	5 days	1347
1352	Finishing work and fitting out	75 days	0 days	75 days	0%	Sat 27/8/22	Fri 25/11/22	NA	NA	Tue 6/9/22	Mon 5/12/22	8 days	1 day	714,1345,555,13
1353	Tx Installation with T&C	60 days	0 days	60 days	0%	Tue 15/11/22	Fri 27/1/23	NA	NA	Thu 24/11/22	Mon 6/2/23	8 days	1 day	1346,1352FF+5(
1354	PCCW Installation	15 days	0 days	15 days	0%	Wed 30/11/22	Fri 16/12/22	NA	NA	Fri 24/2/23	Mon 13/3/23	70 days	1 day	1351,1346
1355	Ironmongery work	24 days	0 days	24 days	0%	Sat 26/11/22	Fri 23/12/22	NA	NA	Tue 14/2/23	Mon 13/3/23	64 days	0.5 days	1352
1356	E&M installation	100 days	0 days	100 days	0%	Thu 3/11/22	Fri 3/3/23	NA	NA	Sat 12/11/22	Mon 13/3/23	8 days	5 days	1345,1353FF+3(
1357	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,
1358	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	
1359	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
1360	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	
1361	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



Title: Rev.11 Prog with Progress as of 22-May-20

Task	Summary	Inactive Milestone	Duration-only	Start-only	External Milestone	Critical Split
Split	Project Summary	Inactive Summary	Manual Summary Rollup	Finish-only	Deadline	Progress
Milestone	Inactive Task	Manual Task	Manual Summary	External Tasks	Critical	Manual Progress

ID	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
1362	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
1363	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
1364	Salt Water and Sewage Pumping Station: Landscaping hardworks and softworks	110 days	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
1365	Salt Water and Sewage Pumping Station: Planting Works	110 days	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
1366	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,
1367	Seawater Intake Box Culvert (~169m)	647 days	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		
1368	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
1369	Part 4 - CHA.0-79 (79m)	290 days	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		
1370	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		
1371	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,
1372	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
1373	CHA 24-79 (75m) (5 units)	256 days	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		
1374	Temporary ELS & Excavation	50 days	0 days	50 days	0%	Wed 29/6/22	Fri 26/8/22	NA	NA	Thu 21/7/22	Sat 17/9/22	18 days	1 day	1372
1375	Unit 1 & 3 (41 days per unit)	44 days	0 days	44 days	0%	Sat 27/8/22	Thu 20/10/22	NA	NA	Mon 19/9/22	Thu 10/11/22	18 days	3 days	1374
1376	Unit 2 & 4 (41 days per unit)	44 days	0 days	44 days	0%	Fri 21/10/22	Sat 10/12/22	NA	NA	Fri 11/11/22	Mon 2/1/23	18 days	3 days	1375
1377	Unit 5 & 6 (41 days per unit)	44 days	0 days	44 days	0%	Mon 12/12/22	Sat 4/2/23	NA	NA	Tue 3/1/23	Sat 25/2/23	18 days	3 days	1376
1378	Remove struts and backfilling	24 days	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	1 days	1376,1377
1379	Reinstate seawall	50 days	0 days	50 days	0%	Mon 6/3/23	Mon 8/5/23	NA	NA	Mon 27/3/23	Tue 30/5/23	18 days	1 days	1378
1380	Part 10 - CHA79-89 (10m)	286 days	0 days	286 days	0%	Wed 2/6/21	Wed 18/5/22	NA	NA	Wed 2/6/21	Thu 9/6/22	0 days		
1381	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
1382	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		
1383	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
1384	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,
1385	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
1386	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
1387	Part 1 - CH89-165 (76m) 6 Units	193 days	0 days	193 days	0%	Mon 16/8/21	Fri 8/4/22	NA	NA	Mon 6/9/21	Wed 1/6/22	18 days		
1388	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
1389	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
1390	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
1391	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
1392	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
1393	Elevated Landscape Deck CH1920 - 2090	1178 days	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...		
1394	Agree Interface Coordination Plan with KL/2014/01 Contractor	14 days	14 days	0 days	100%	Thu 16/5/19	Fri 31/5/19	Thu 16/5/19	Fri 31/5/19	Thu 16/5/19	Fri 31/5/19	0 days	0 days	
1395	Ch1920-CH2060	1 day?	0 days	1 day?	0%	Sat 23/5/20	Sat 23/5/20	NA	NA	Wed 29/5/24	Wed 29/5/24	1467 d...		
1396	Part 1 - CH1919-2020 (70m) 4 bays	181 days	0 days	181 days	0%	Mon 5/7/21	Thu 10/2/22	NA	NA	Wed 8/9/21	Mon 14/2/22	3 days		
1397	Pier Temporary Works Design and Method Statement Submission	0 days	0 days	0 days	0%	Mon 5/7/21	Mon 5/7/21	NA	NA	Wed 8/9/21	Wed 8/9/21	65 days	1 day	
1398	Pier Temporary Works Design and Method Statement Comment & Approval	45 days	0 days	45 days	0%	Mon 5/7/21	Wed 18/8/21	NA	NA	Wed 8/9/21	Fri 22/10/21	65 days	1 day	1397
1399	CH1930 Pier (1set x 3nos.):	12 days	0 days	12 days	0%	Tue 5/10/21	Tue 19/10/21	NA	NA	Fri 8/10/21	Fri 22/10/21	3 days		1075,1076,1066
1400	CH1950-CH2020: Pier (3sets x 3nos) - 1 day/no.. 1 team	11 days	0 days	11 days	0%	Wed 20/10/21	Mon 1/11/21	NA	NA	Sat 23/10/21	Thu 4/11/21	3 days	2 day	579,1398,1399
1401	Falsework Temporary Works Design and Method Statement Submission	0 days	0 days	0 days	0%	Wed 1/9/21	Wed 1/9/21	NA	NA	Tue 21/9/21	Tue 21/9/21	20 days	1 day	
1402	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	NA	Tue 21/9/21	Thu 4/11/21	20 days	1 day	1401
1403	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
1404	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	
1405	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
1406	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

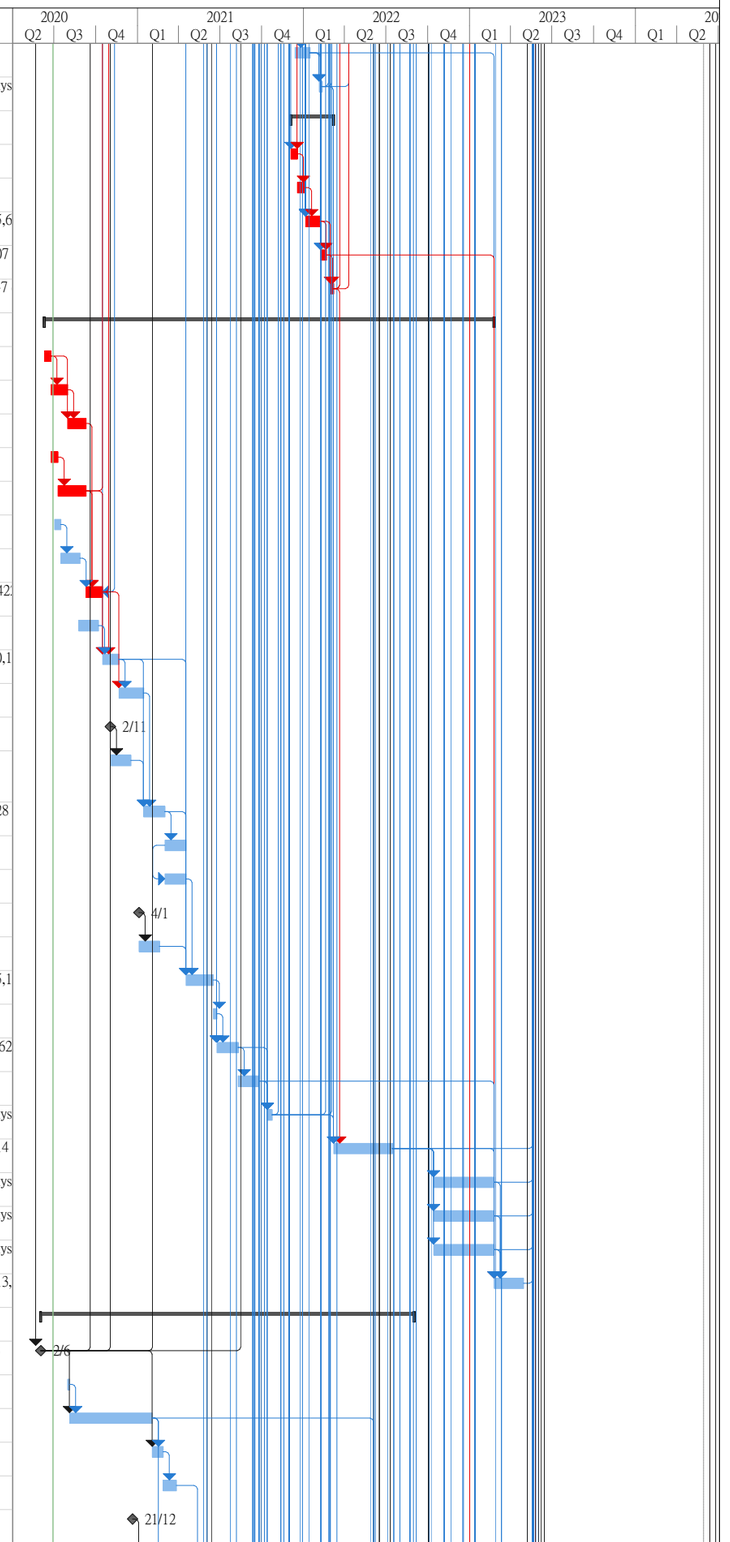


Title: Rev.11 Prog with Progress as of 22-May-20

Task | Summary | Inactive Milestone | Duration-only | Start-only | External Milestone | Critical Split
Split | Project Summary | Inactive Summary | Manual Summary Rollup | Finish-only | Deadline | Progress
Milestone | Inactive Task | Manual Task | Manual Summary | External Tasks | Critical | Manual Progress

Contract No. ED/2018/01 KTD Project

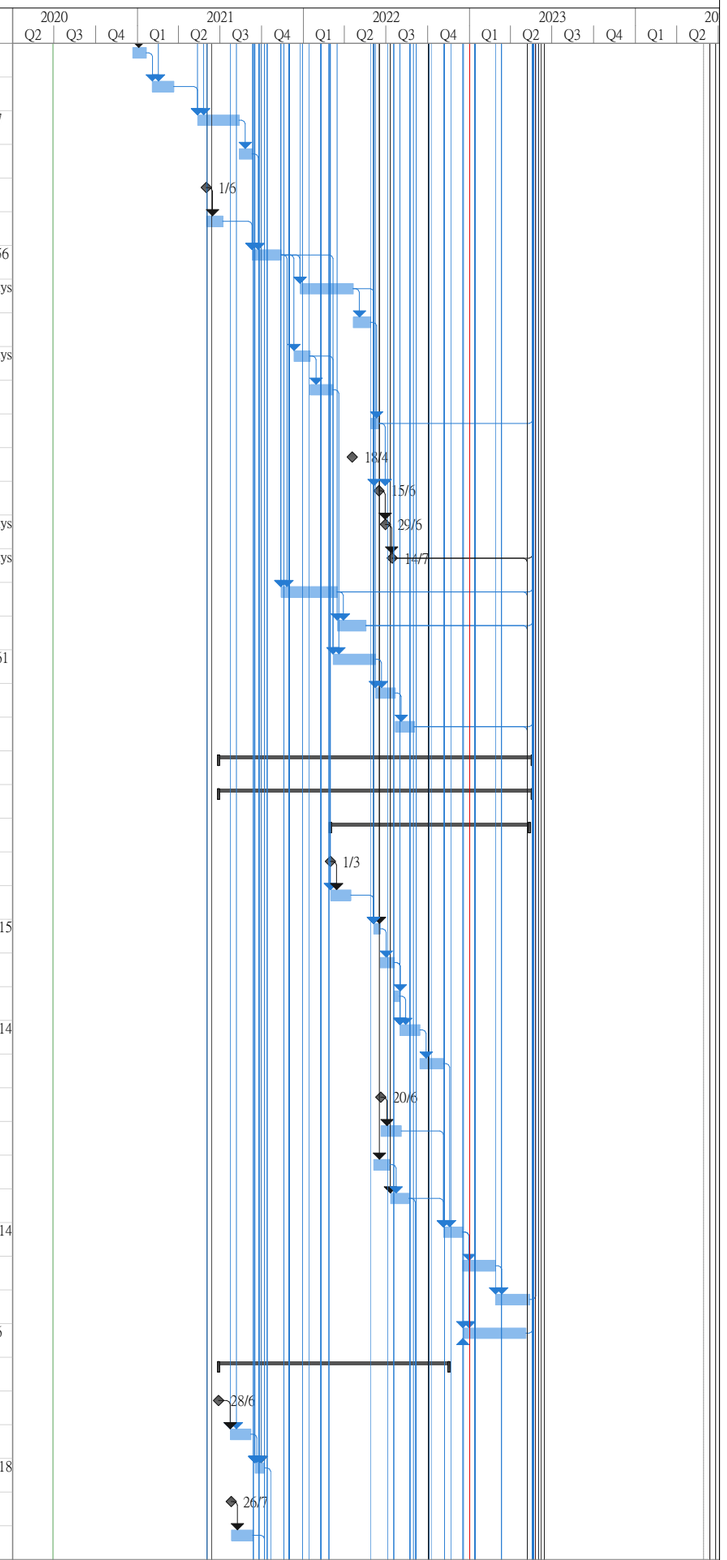
ID	Task Name	Duration	Actual Duration	Remaining Duration	Physical % Complete	Early Start	Early Finish	Actual Start	Actual Finish	Late Start	Late Finish	Total Slack	TRA	Predecessors
1407	Secondary Upstand Beam	26 days	0 days	26 days	0%	Mon 13/12/21	Fri 14/1/22	NA	NA	Thu 16/12/21	Tue 18/1/22	3 days	1.5 day	1406
1408	Dismantle falsework	6 days	0 days	6 days	0%	Fri 4/2/22	Thu 10/2/22	NA	NA	Tue 8/2/22	Mon 14/2/22	3 days	0.5 day	1406FS+14 days
1409	Part 2A - CH2020-2050 (30m) 3 bays	74 days	0 days	74 days	0%	Sat 4/12/21	Mon 7/3/22	NA	NA	Mon 22/11/21	Tue 22/2/22	-11 days		
1410	Pier (3sets x 3nos) within CH2007-2090. 1 team	12 days	0 days	12 days	0%	Sat 4/12/21	Fri 17/12/21	NA	NA	Mon 22/11/21	Sat 4/12/21	-11 days	3 day	579,1087
1411	Falsework erection	12 days	0 days	12 days	0%	Sat 18/12/21	Tue 4/1/22	NA	NA	Mon 6/12/21	Sat 18/12/21	-11 days	3 days	1410
1412	Deck (3 bays) 12d/bay	25 days	0 days	25 days	0%	Wed 5/1/22	Sat 5/2/22	NA	NA	Mon 20/12/21	Thu 20/1/22	-11 days	3 day	1411,1406,625,6
1413	Secondary Upstand Beam	12 days	0 days	12 days	0%	Mon 7/2/22	Sat 19/2/22	NA	NA	Fri 21/1/22	Mon 7/2/22	-11 days	1.5 day	1412,1406,1407
1414	Dismantle falsework	6 days	0 days	6 days	0%	Tue 1/3/22	Mon 7/3/22	NA	NA	Wed 16/2/22	Tue 22/2/22	-11 days	0.5 day	1412,1413FS+7
1415	Elevated Landscaped Deck CH2090 - Ch2109	989 days	0 days	989 days	0%	Wed 10/6/20	Thu 23/2/23	NA	NA	Wed 10/6/20	Thu 23/3/23	0 days		
1416	G.I. Works/Predrilling Works for Bored Pile No. LD-BP03	12 days	0 days	12 days	0%	Wed 10/6/20	Tue 23/6/20	NA	NA	Wed 10/6/20	Tue 23/6/20	0 days	1 day	
1417	Design Vertification for Bored Pile No. LD-BP02	30 days	0 days	30 days	0%	Wed 24/6/20	Thu 30/7/20	NA	NA	Wed 24/6/20	Thu 30/7/20	0 days	1 day	1416
1418	CH2090: Bored Pile No. LD-BP02	34 days	0 days	34 days	0%	Fri 31/7/20	Tue 8/9/20	NA	NA	Fri 31/7/20	Tue 8/9/20	0 days	1 day	1416,1417
1419	Tripit	12 days	0 days	12 days	0%	Wed 24/6/20	Thu 9/7/20	NA	NA	Wed 24/6/20	Thu 9/7/20	0 days	1 day	
1420	Diversion of existing watermain and CLP cable (Tentative)	52 days	0 days	52 days	0%	Fri 10/7/20	Tue 8/9/20	NA	NA	Fri 10/7/20	Tue 8/9/20	0 days	15 day	1419
1421	G.I. Works/Predrilling Works for Bored Pile No. LD-BP03	12 days	0 days	12 days	0%	Thu 2/7/20	Wed 15/7/20	NA	NA	Wed 15/7/20	Tue 28/7/20	11 days	1 day	
1422	Design Vertification for Bored Pile No. LD-BP03	36 days	0 days	36 days	0%	Thu 16/7/20	Wed 26/8/20	NA	NA	Wed 29/7/20	Tue 8/9/20	11 days	1 day	1421
1423	CH2069: Bored Pile No. LD-BP03	30 days	0 days	30 days	0%	Wed 9/9/20	Thu 15/10/20	NA	NA	Wed 9/9/20	Thu 15/10/20	0 days	1 day	1418,314FF,142
1424	Design Vertification for Bored Pile No. LD-BP01	36 days	0 days	36 days	0%	Mon 24/8/20	Tue 6/10/20	NA	NA	Sat 12/9/20	Tue 27/10/20	17 days	1 day	
1425	CH2109: Bored Pile No. LD-BP01	30 days	0 days	30 days	0%	Fri 16/10/20	Fri 20/11/20	NA	NA	Wed 28/10/20	Tue 1/12/20	9 days	1 day	1423,314,1420,1
1426	Pile testing	43 days	0 days	43 days	0%	Sat 21/11/20	Wed 13/1/21	NA	NA	Wed 2/12/20	Sat 23/1/21	9 days	1 day	1423,1425
1427	Elevated Landscape Deck - Pilecap with ELS 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 11/12/20	Fri 11/12/20	39 days	1.5 day	
1428	Elevated Landscape Deck - Pilecap with ELS Temp. Works Design and Method Statement Comment & Appraoval	45 days	0 days	45 days	0%	Mon 2/11/20	Wed 16/12/20	NA	NA	Fri 11/12/20	Sun 24/1/21	39 days	1.5 day	1427
1429	CH2090: Pilecap with ELS	37 days	0 days	37 days	0%	Thu 14/1/21	Mon 1/3/21	NA	NA	Mon 25/1/21	Thu 11/3/21	9 days	1 day	1425,1426,1428
1430	CH2069: Pilecap with ELS	37 days	0 days	37 days	0%	Tue 2/3/21	Fri 16/4/21	NA	NA	Fri 12/3/21	Tue 27/4/21	9 days	1 day	1429
1431	CH2109: Pilecap with ELS	37 days	0 days	37 days	0%	Tue 2/3/21	Fri 16/4/21	NA	NA	Fri 12/3/21	Tue 27/4/21	9 days	1 day	1430SS
1432	Elevated Landscape Deck - Temp. Works Design and Method Statement Submission	0 days	0 days	0 days	0%	Mon 4/1/21	Mon 4/1/21	NA	NA	Sun 14/3/21	Sun 14/3/21	69 days	0.5 day	
1433	Elevated Landscape Deck - Temp. Works Design and Method Statement Comment & Appraoval	45 days	0 days	45 days	0%	Mon 4/1/21	Wed 17/2/21	NA	NA	Sun 14/3/21	Tue 27/4/21	69 days	0.5 day	1432
1434	Pier (3sets x 3nos) within CH2060-2119. 1 team, 1 no./day	48 days	0 days	48 days	0%	Sat 17/4/21	Tue 15/6/21	NA	NA	Wed 28/4/21	Fri 25/6/21	9 days	3 day	1433,579,1425,1
1435	Falsework erection	7 days	0 days	7 days	0%	Wed 16/6/21	Wed 23/6/21	NA	NA	Sat 26/6/21	Mon 5/7/21	9 days	0 days	1434
1436	Deck (3 bays) 12d/bay	39 days	0 days	39 days	0%	Thu 24/6/21	Mon 9/8/21	NA	NA	Tue 6/7/21	Thu 19/8/21	9 days	3 day	1435,715,625,62
1437	Secondary Upstand Beam	39 days	0 days	39 days	0%	Tue 10/8/21	Fri 24/9/21	NA	NA	Fri 20/8/21	Wed 6/10/21	9 days	1.5 day	1436
1438	Dismantle falsework	9 days	0 days	9 days	0%	Wed 13/10/21	Sat 23/10/21	NA	NA	Mon 25/10/21	Wed 3/11/21	9 days	1 day	1436FS+14 days
1439	Install External Cladding	105 days	0 days	105 days	0%	Tue 8/3/22	Thu 14/7/22	NA	NA	Wed 6/4/22	Thu 11/8/22	24 days	5 days	1438,1408,1414
1440	Elevated Landscaped Deck: Hard Landscaping Works	110 days	0 days	110 days	0%	Fri 14/10/22	Thu 23/2/23	NA	NA	Fri 11/11/22	Thu 23/3/23	24 days	2 days	1439FS+75 days
1441	Elevated Landscaped Deck: Soft Landscaping Works	110 days	0 days	110 days	0%	Fri 14/10/22	Thu 23/2/23	NA	NA	Fri 11/11/22	Thu 23/3/23	24 days	2 days	1439FS+75 days
1442	Elevated Landscaped Deck: Planting Works	110 days	0 days	110 days	0%	Fri 14/10/22	Thu 23/2/23	NA	NA	Fri 11/11/22	Thu 23/3/23	24 days	2 days	1439FS+75 days
1443	Installation of Glass Balustrade	52 days	0 days	52 days	0%	Fri 24/2/23	Sat 29/4/23	NA	NA	Fri 24/3/23	Tue 30/5/23	24 days	6 days	1437,1407,1413,
1444	Part 2A - Lift LT1 & LT2 (Landscaped Deck)	671 days	0 days	671 days	0%	Tue 2/6/20	Wed 31/8/22	NA	NA	Tue 2/6/20	Tue 30/5/23	0 days		
1445	Access Date - Part 2A,2C	0 days	0 days	0 days	0%	Tue 2/6/20	Tue 2/6/20	NA	NA	Tue 2/6/20	Tue 2/6/20	0 days	0 days	4FS+369 days
1446	TTA Implementation	3 days	0 days	3 days	0%	Fri 31/7/20	Mon 3/8/20	NA	NA	Wed 9/6/21	Fri 11/6/21	254 days		
1447	Utilities Diversion (Towngas and Telecom Cable) (tentative)	150 days	0 days	150 days	0%	Tue 4/8/20	Mon 1/2/21	NA	NA	Sat 12/6/21	Thu 9/12/21	254 days	5 days	1445,1446
1448	G.I. works	18 days	0 days	18 days	0%	Tue 2/2/21	Thu 25/2/21	NA	NA	Fri 10/12/21	Mon 3/1/22	254 days	1 day	1445,1447
1449	Design Vertification	25 days	0 days	25 days	0%	Fri 26/2/21	Fri 26/3/21	NA	NA	Tue 4/1/22	Fri 4/2/22	254 days	2 days	1448
1450	Lift Pilecap & ELS- Temp. Works Design and Method Statement Submission	0 days	0 days	0 days	0%	Mon 21/12/20	Mon 21/12/20	NA	NA	Tue 16/11/21	Tue 16/11/21	330 days	0.5 day	



Title: Rev.11 Prog with Progress as of 22-May-20

Task	Summary	Inactive Milestone	Duration-only	Start-only	External Milestone	Critical Split
Split	Project Summary	Inactive Summary	Manual Summary Rollup	Finish-only	Deadline	Progress
Milestone	Inactive Task	Manual Task	Manual Summary	External Tasks	Critical	Manual Progress

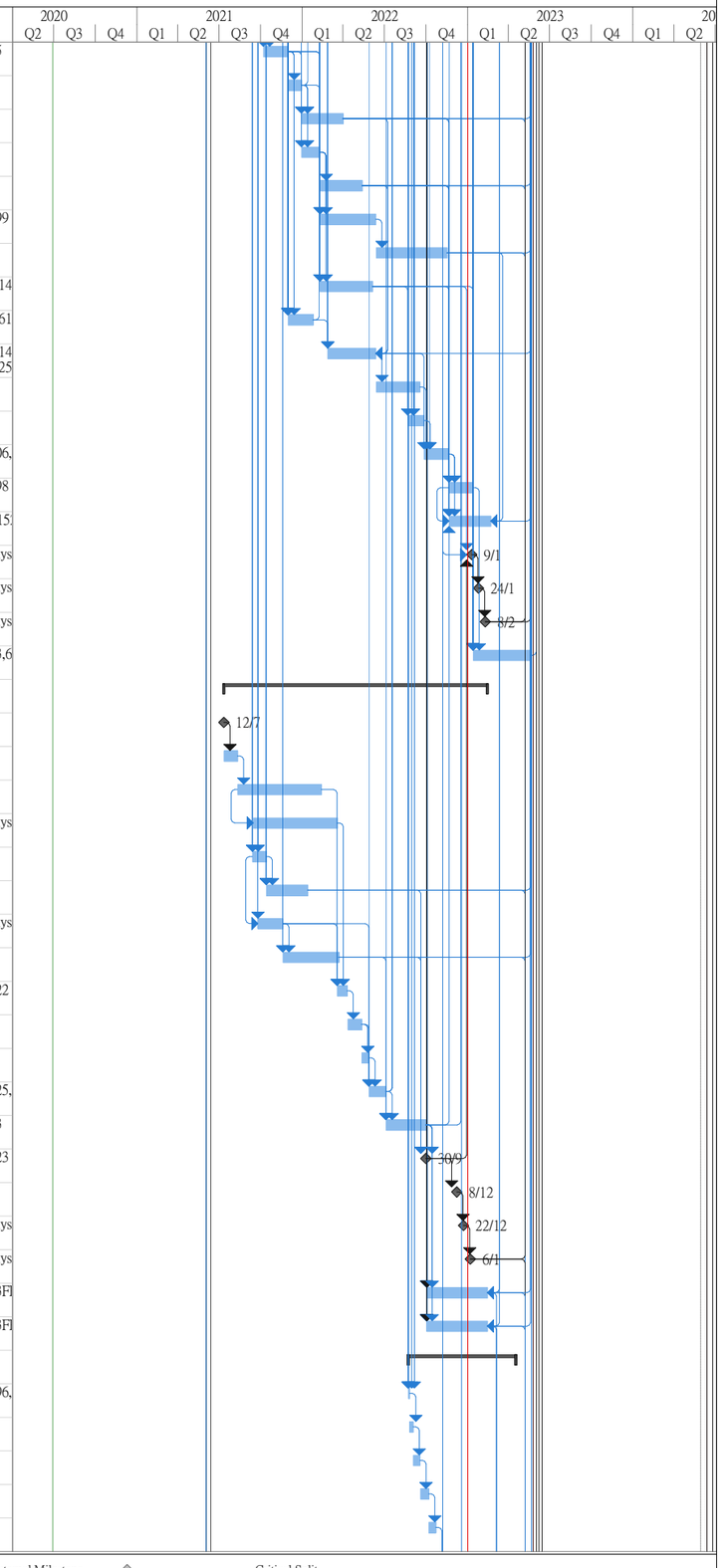
ID	Task Name	Duration	Actual Duration	Remaining Duration	Physical % Complete	Early Start	Early Finish	Actual Start	Actual Finish	Late Start	Late Finish	Total Slack	TRA	Predecessors
1451	Lift Pilecap and ELS - Temp. Works Foundation Design and Method Statement Comment & Appraoval	30 days	0 days	30 days	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
1452	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
1453	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
1454	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
1455	Lift Structure - Temp. Works Design and Method Statement Submission	0 days	0 days	0 days	0%	Tue 1/6/21	Tue 1/6/21	NA	NA	Tue 3/5/22	Tue 3/5/22	336 days	0.5 day	
1456	Lift Structure - Temp. Works Design and Method Statement Comment & Appraoval	36 days	0 days	36 days	0%	Tue 1/6/21	Tue 6/7/21	NA	NA	Tue 3/5/22	Tue 7/6/22	336 days	0.5 day	1455
1457	Lift Tower: Falsework & Formwork Erection, Rebar Fixing & Concreting	63 days	0 days	63 days	0%	Fri 10/9/21	Thu 11/11/21	NA	NA	Wed 8/6/22	Tue 9/8/22	271 days	3 days	1454,1157,1456
1458	Lift installation (LT1 & LT2)	90 days	0 days	90 days	0%	Fri 24/12/21	Tue 19/4/22	NA	NA	Fri 11/11/22	Tue 28/2/23	261 days	1 day	1457FS+36 days
1459	E & M installation	33 days	0 days	33 days	0%	Wed 20/4/22	Fri 27/5/22	NA	NA	Wed 1/3/23	Wed 12/4/23	261 days	3 days	1458
1460	Louvers and Glazing Installation	27 days	0 days	27 days	0%	Sat 11/12/21	Fri 14/1/22	NA	NA	Thu 8/9/22	Wed 12/10/22	220 days	3 days	1457FS+25 days
1461	Parapet Installation and Finishing Works	40 days	0 days	40 days	0%	Sat 15/1/22	Sat 5/3/22	NA	NA	Thu 13/10/22	Mon 28/11/22	220 days	3 days	1460
1462	Testing & commissioning	15 days	0 days	15 days	0%	Sat 28/5/22	Wed 15/6/22	NA	NA	Thu 13/4/23	Sat 29/4/23	261 days	0.5 days	1459
1463	CLP Meter Installation	0 days	0 days	0 days	0%	Mon 18/4/22	Mon 18/4/22	NA	NA	Mon 18/4/22	Mon 18/4/22	0 days	0.5 day	
1464	EMSD Submission Form 5 for Lift Inspection	0 days	0 days	0 days	0%	Wed 15/6/22	Wed 15/6/22	NA	NA	Tue 2/5/23	Tue 2/5/23	320 days	0.5 day	1458,1462
1465	EMSD Lift Inspection	0 days	0 days	0 days	0%	Wed 29/6/22	Wed 29/6/22	NA	NA	Tue 16/5/23	Tue 16/5/23	320 days	0.5 day	1464FS+14 days
1466	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
1467	Staircase ST1	100 days	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
1468	Finishing and E&M Works	50 days	0 days	50 days	0%	Wed 16/3/22	Tue 17/5/22	NA	NA	Mon 27/3/23	Tue 30/5/23	309 days	0.5 day	1467,367
1469	L12d Underground Drainage and Utilities Laying	75 days	0 days	75 days	0%	Mon 7/3/22	Tue 7/6/22	NA	NA	Tue 29/11/22	Tue 28/2/23	220 days	1 day	1457,1460,1461
1470	L12d Roadworks and Pedestrian, with Light Pole	36 days	0 days	36 days	0%	Wed 8/6/22	Wed 20/7/22	NA	NA	Wed 1/3/23	Sat 15/4/23	220 days	1 day	1469,349
1471	L12d Roadworks and Pedestrian	36 days	0 days	36 days	0%	Thu 21/7/22	Wed 31/8/22	NA	NA	Mon 17/4/23	Tue 30/5/23	220 days	1 day	1470
1472	Open Space & Promenade	564 days	0 days	564 days	0%	Mon 28/6/21	Thu 18/5/23	NA	NA	Sun 1/8/21	Tue 30/5/23	9 days		
1473	Open Space & Promenade (From Northern End - CH1720)	564 days	0 days	564 days	0%	Mon 28/6/21	Thu 18/5/23	NA	NA	Sun 15/8/21	Tue 30/5/23	9 days		
1474	Observation Deck	358 days	0 days	358 days	0%	Tue 1/3/22	Fri 12/5/23	NA	NA	Fri 6/5/22	Tue 30/5/23	14 days		
1475	Foundation - Temp. Works Design and Method Statement Submission	0 days	0 days	0 days	0%	Tue 1/3/22	Tue 1/3/22	NA	NA	Fri 6/5/22	Fri 6/5/22	66 days	0.5 day	
1476	Foundation - Temp. Works Design and Method Statement Comment & Appraoval	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
1477	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
1478	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
1479	Predrilling works for Socket H- pile	12 days	0 days	12 days	0%	Tue 19/7/22	Sat 30/7/22	NA	NA	Wed 3/8/22	Sun 14/8/22	15 days		1478
1480	Socket H-pile Installation	37 days	0 days	37 days	0%	Mon 1/8/22	Tue 13/9/22	NA	NA	Mon 15/8/22	Tue 27/9/22	12 days	2 days	367,1155,726,14
1481	Pile Testing	43 days	0 days	43 days	0%	Wed 14/9/22	Fri 4/11/22	NA	NA	Wed 28/9/22	Fri 18/11/22	12 days	1 day	1480
1482	Structure & Lift Core - Temp. Works Design and Method Statement Submission	0 days	0 days	0 days	0%	Mon 20/6/22	Mon 20/6/22	NA	NA	Wed 5/10/22	Wed 5/10/22	107 days	0.5 day	
1483	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
1484	Trech Excavation for Pipe Laying Works	30 days	0 days	30 days	0%	Sat 4/6/22	Sat 9/7/22	NA	NA	Wed 15/6/22	Wed 20/7/22	9 days	2 days	15
1485	Pipe laying works, Cable Laying and Drawpits	36 days	0 days	36 days	0%	Mon 11/7/22	Sat 20/8/22	NA	NA	Thu 21/7/22	Wed 31/8/22	9 days	5 days	15,1484
1486	Observation Deck: Substructure with Excavation/ELS works	36 days	0 days	36 days	0%	Sat 5/11/22	Fri 16/12/22	NA	NA	Sat 19/11/22	Sat 31/12/22	12 days	1 day	163,506,1483,14
1487	Observation Deck: Superstructure with Lift Core and Staircase work	72 days	0 days	72 days	0%	Sat 17/12/22	Sun 26/2/23	NA	NA	Mon 2/1/23	Tue 14/3/23	16 days	1 day	1486
1488	LT5: Lift installation with T&C and Statutory Inspection	60 days	0 days	60 days	0%	Mon 27/2/23	Fri 12/5/23	NA	NA	Wed 15/3/23	Tue 30/5/23	14 days	1 day	713,1487
1489	E&M and ABWF works, Landscaping and paving works	110 days	0 days	110 days	0%	Sat 17/12/22	Thu 4/5/23	NA	NA	Thu 12/1/23	Tue 30/5/23	21 days	3 days	1528,717,1486
1490	Toilet	416 days	0 days	416 days	0%	Mon 28/6/21	Wed 16/11/22	NA	NA	Sun 15/8/21	Fri 24/2/23	41 days		
1491	Foundation - Temp. Works Design and Method Statement Submission	0 days	0 days	0 days	0%	Mon 28/6/21	Mon 28/6/21	NA	NA	Sun 15/8/21	Sun 15/8/21	48 days	0.5 days	
1492	Foundation - Temp. Works Design and Method Statement Comment & Appraoval	45 days	0 days	45 days	0%	Sat 24/7/21	Mon 6/9/21	NA	NA	Sun 15/8/21	Tue 28/9/21	22 days	0.5 days	1491,639,646
1493	Footing	16 days	0 days	16 days	0%	Thu 16/9/21	Wed 6/10/21	NA	NA	Wed 29/9/21	Tue 19/10/21	10 days	0.5 days	987,611,604,618
1494	Structure - Temp. Works Design and Method Statement Submission	0 days	0 days	0 days	0%	Mon 26/7/21	Mon 26/7/21	NA	NA	Fri 3/9/21	Fri 3/9/21	39 days	0.5 days	
1495	Structure - Temp. Works Design and Method Statement Comment & Appraoval	47 days	0 days	47 days	0%	Mon 26/7/21	Fri 10/9/21	NA	NA	Fri 3/9/21	Tue 19/10/21	39 days	2 days	1494



Title: Rev.11 Prog with Progress as of 22-May-20

Task, Split, Milestone, Summary, Project Summary, Inactive Task, Inactive Milestone, Inactive Summary, Manual Task, Duration-only, Manual Summary Rollup, Manual Summary, Start-only, Finish-only, External Tasks, External Milestone, Deadline, Critical, Critical Split, Progress, Manual Progress

ID	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
1496	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
1497	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
1498	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
1499	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
1500	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
1501	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
1502	Refuse Collection Block and Back of House: Building Works and E&M Works	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
1503	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
1504	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
1505	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 days,1500FF+25
1506	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	1505
1507	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	NA	Thu 1/9/22	Sat 8/10/22	9 days	0.5 days	1503,1485
1508	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	NA	Mon 10/10/22	Wed 30/11/22	9 days	0.5 days	1507,1505,1506,
1509	Paving work & Hard Landscaping Works	45 days	0 days	45 days	0%	Mon 21/11/22	Thu 12/1/23	NA	NA	Thu 1/12/22	Thu 26/1/23	9 days	2 days	1508,1500,1498
1510	ABWF, E&M work and street furniture	75 days	0 days	75 days	0%	Mon 21/11/22	Mon 20/2/23	NA	NA	Sat 25/2/23	Tue 30/5/23	79 days	2 days	1508,1509SS,15
1511	FSD Form 501 Submission for FS Inspection	0 days	0 days	0 days	0%	Mon 9/1/23	Mon 9/1/23	NA	NA	Mon 1/5/23	Mon 1/5/23	111 days	0.5 day	1510SS+50 days
1512	FSD Inspection	0 days	0 days	0 days	0%	Tue 24/1/23	Tue 24/1/23	NA	NA	Tue 16/5/23	Tue 16/5/23	111 days	0.5 day	1511FS+15 days
1513	Issuance of FS Certificate	0 days	0 days	0 days	0%	Wed 8/2/23	Wed 8/2/23	NA	NA	Tue 30/5/23	Tue 30/5/23	111 days	0.5 day	1512FS+15 days
1514	Landscaping works and Planting works	100 days	0 days	100 days	0%	Fri 13/1/23	Thu 18/5/23	NA	NA	Fri 27/1/23	Tue 30/5/23	9 days	4 days	1509,668,1503,6
1515	Open Space & Promenade (From CH1720 - South End)	477 days	0 days	477 days	0%	Mon 12/7/21	Mon 13/2/23	NA	NA	Sun 1/8/21	Tue 30/5/23	18 days		
1516	Modification Seawall - Temp. Works Design and Method Statement Submission	0 days	0 days	0 days	0%	Mon 12/7/21	Mon 12/7/21	NA	NA	Sun 1/8/21	Sun 1/8/21	20 days	1 day	
1517	Modification Seawall - Temp. Works Design and Method Statement Comment & Appraoval	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
1518	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
1519	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
1520	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
1521	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
1522	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
1523	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
1524	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
1525	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
1526	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
1527	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,
1528	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
1529	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
1530	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
1531	FSD Inspection	0 days	0 days	0 days	0%	Thu 22/12/22	Thu 22/12/22	NA	NA	Tue 16/5/23	Tue 16/5/23	144 days	0.5 day	1530FS+15 days
1532	Issuance of FS Certificate	0 days	0 days	0 days	0%	Fri 6/1/23	Fri 6/1/23	NA	NA	Tue 30/5/23	Tue 30/5/23	144 days	0.5 day	1531FS+15 days
1533	Open Space & Promenade: Landscaping works	110 days	0 days	110 days	0%	Mon 3/10/22	Mon 13/2/23	NA	NA	Mon 24/10/22	Sat 4/3/23	17 days	5 days	1528,668,1243FI
1534	Open Space & Promenade: Planting works	110 days	0 days	110 days	0%	Mon 3/10/22	Mon 13/2/23	NA	NA	Mon 24/10/22	Sat 4/3/23	17 days	5 days	1528,668,1243FI
1535	Part 1, 2A, 2B - Road L12	193 days	0 days	193 days	0%	Tue 23/8/22	Mon 17/4/23	NA	NA	Thu 6/10/22	Tue 30/5/23	35 days	0.5 day	
1536	Trim road formation	3 days	0 days	3 days	0%	Tue 23/8/22	Thu 25/8/22	NA	NA	Thu 6/10/22	Sat 8/10/22	35 days	1 day	1274,1283,1296,
1537	Lay sub base	7 days	0 days	7 days	0%	Fri 26/8/22	Fri 2/9/22	NA	NA	Mon 10/10/22	Mon 17/10/22	35 days	1 day	1536
1538	Lay kerb	12 days	0 days	12 days	0%	Sat 3/9/22	Sat 17/9/22	NA	NA	Tue 18/10/22	Mon 31/10/22	35 days	1 day	1537
1539	Construct pedestrian street/ footpath	14 days	0 days	14 days	0%	Mon 19/9/22	Thu 6/10/22	NA	NA	Tue 1/11/22	Wed 16/11/22	35 days	1 day	1538
1540	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



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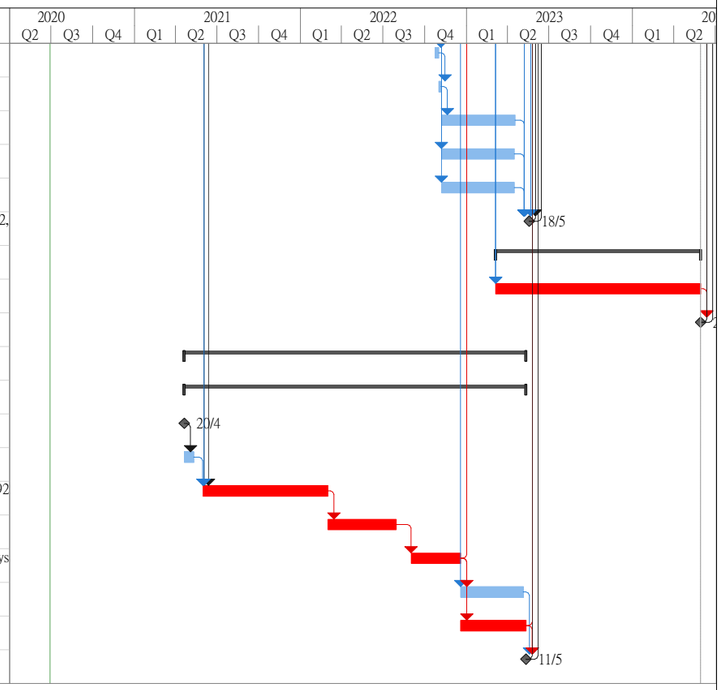
Task, Split, Milestone, Summary, Project Summary, Inactive Task, Inactive Milestone, Inactive Summary, Manual Task, Duration-only, Manual Summary Rollup, Manual Summary, Start-only, Finish-only, External Tasks, External Milestone, Deadline, Critical, Critical Split, Progress, Manual Progress

Contract No. ED/2018/01 KTD Project

ID	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
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
1542	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
1543	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
1544	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
1545	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
1546	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,
1547	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		
1548	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
1549	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
1550	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		
1551	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		
1552	Deck for Underpass (Road L14) - Temp. Works Design and Method Statement Submission	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	
1553	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
1554	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
1555	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
1556	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
1557	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
1558	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
1559	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



Title: Rev.11 Prog with Progress as of 22-May-20

Task	Summary	Inactive Milestone	Duration-only	Start-only	External Milestone	Critical Split
Split	Project Summary	Inactive Summary	Manual Summary Rollup	Finish-only	Deadline	Progress
Milestone	Inactive Task	Manual Task	Manual Summary	External Tasks	Critical	Manual Progress

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 May 2022

May 2022

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

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 June 2022

June 2022

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

NOTE:

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

Air Quality Monitoring Station

AM3 - Sky Tower

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

AM7 - Hong Kong Children's Hospital

Noise Quality Monitoring Station

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

M12 - Hong Kong Children's Hospital

Appendix D – Photographic records

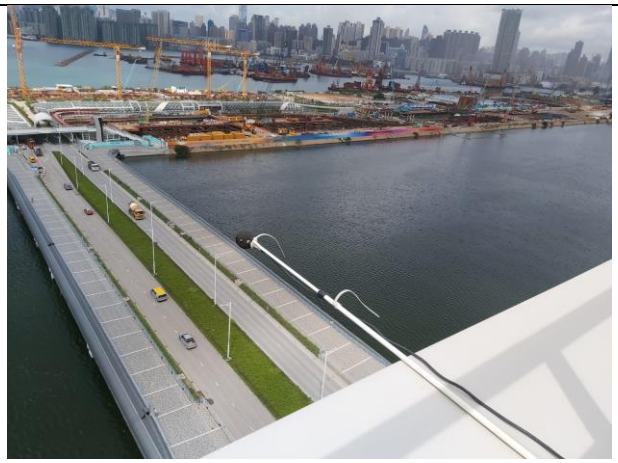
Measurement setup at AM3

Measurement setup at AM4(A)

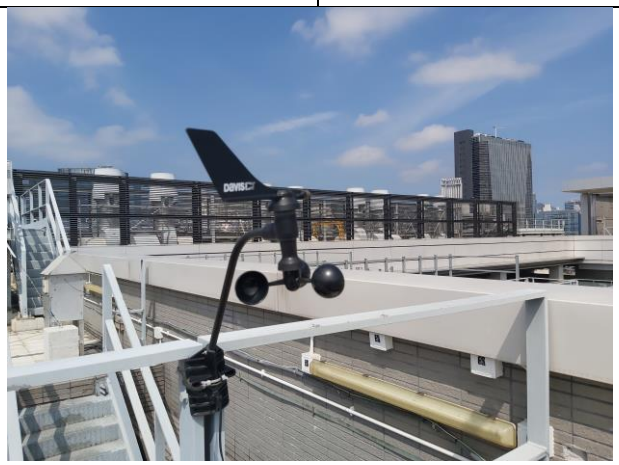
Measurement setup at AM7

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

TISCH Environmental

TSP MFC

Total Suspended Particulate, Mass Flow Controlled

MFC **TSP**

Ambient Air Sampler

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

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

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

TISCH Environmental

www.tisch-env.com

Tisch Environmental
145 S. Miami Ave
Cleves, OH 45002
513-467-9000
sales@tisch-env.com

TISCH Environmental

TSP MFC

MFC TSP Ambient Air Sampler

General System Specifications

Particulate Size: Total Suspended Particulate (TSP)
EPA Designation: CFR 40 Part 50 Appendix B
Flow Controller: Mass Flow Controller
Motor Style: Brush Style Motor Assembly
Pressure Recorder: Dickson Chart Recorder, 24 hour
Timer: 7 Day Mechanical
Elapsed Time Indicator: Mechanical, Hours and Tenths
Flow Range: 39-60CFM, 1.09M^3M-1.68M^3M
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

Available Models

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

Optional Equipment

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

Calibration Equipment

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

Physical Specifications

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

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

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TISCH Environmental

Calibration Certificate of HVS

Air Sampler Calibration Curve Plotting & Calculation

(Dickson recorder)

Calibration curve ref. No. : ATSPC-01-2022050401 Date of calibration : 04/05/2022

Location : Sky Tower Sampler : TE-5170X

Calibration Data

Ambient barometric pressure, Pa = 760.6 (mmHg) Ambient temperature, Ta = 299.45 (deg K)

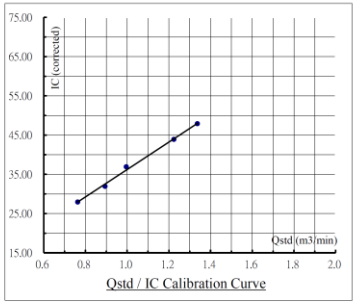
Qstd Slope, m = 2.03518 Qstd Intercept, b = -0.005890

Calibration Curve

Plate No.	H_2O (in)	Qstd (m^3 / min)	I (chart)	IC (corrected)
18	7.40	1.337	48.0	47.90
13	6.20	1.224	44.0	43.91
10	4.10	0.996	37.0	36.92
7	3.30	0.894	32.0	31.93
5	2.40	0.763	28.0	27.94

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]	34.918	1.3076	0.9980



Qstd / IC Calibration Curve

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 :

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

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

Air Sampler Calibration Curve Plotting & Calculation

(Dickson recorder)

Calibration curve ref. No. : ATSPC-01-2022050402 Date of calibration : 04/05/2022

Location : The Hong Kong Society for the Blind's Factory cum Sheltered Workshop Sampler : TE-5170X

Calibration Data

Ambient barometric pressure, Pa = 760.6 (mmHg) Ambient temperature, Ta = 299.45 (deg K)

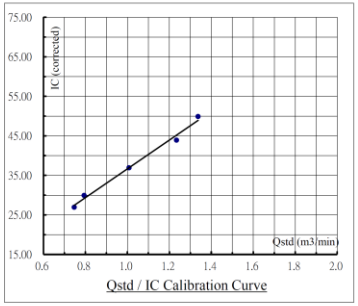
Qstd Slope, m = 2.03518 Qstd Intercept, b = -0.005890

Calibration Curve

Plate No.	H_2O (in)	Qstd (m^3 / min)	I (chart)	IC (corrected)
18	7.40	1.337	50.0	49.90
13	6.30	1.234	44.0	43.91
10	4.20	1.008	37.0	36.92
7	2.60	0.794	30.0	29.94
5	2.30	0.747	27.0	26.94

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]	36.405	0.2432	0.9953



Qstd / IC Calibration Curve

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 :

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

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

Calibration Certificate of HVS

Air Sampler Calibration Curve Plotting & Calculation

(Dickson recorder)

Calibration curve ref. No. : ATSPC-01-2022050403 Date of calibration : 04/05/2022

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

Calibration Data

Ambient barometric pressure, Pa = 760.6 (mmHg) Ambient temperature, Ta = 299.45 (deg K)

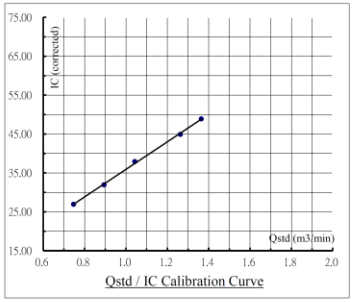
Qstd Slope, m = 2.03518 Qstd Intercept, b = -0.005890

Calibration Curve

Plate No.	H_2O (in)	Qstd (m^3 / min)	I (chart)	IC (corrected)
18	7.70	1.364	49.0	48.90
13	6.60	1.263	45.0	44.91
10	4.50	1.043	38.0	37.92
7	3.30	0.894	32.0	31.93
5	2.30	0.747	27.0	26.94

Subsequent calculation of sampler flow

Method	Calibration equation	Slope, m	Intercept, b	Corr. coeff., r
Dickson recorder	Qstd = 1 / m1 [(I) (Sqrt ((Pav / 760) (298 / Tav))) - b1]	35.410	0.5079	0.9994



Qstd / IC Calibration Curve

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 :

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

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

Air Sampler Calibration Curve Plotting & Calculation

(Dickson recorder)

Calibration curve ref. No. : ATSPC-01-2021072001 Date of calibration : 20/07/2021

Model no : GS2310 Serial number : 10346

Calibration Data

Ambient barometric pressure, Pa = 767.4 (mmHg) Ambient temperature, Ta = 300.25 (deg K)

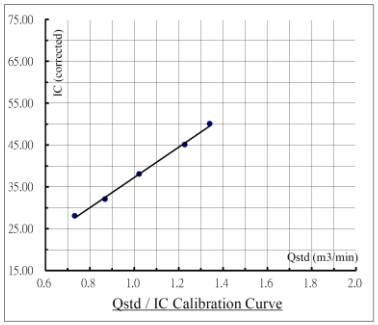
Qstd Slope, m = 2.03518 Qstd Intercept, b = -0.005890

Calibration Curve

Plate No.	H_2O (in)	Qstd (m^3 / min)	I (chart)	IC (corrected)
18	7.40	1.341	50.0	50.05
13	6.20	1.228	45.0	45.05
10	4.30	1.023	38.0	38.04
7	3.10	0.869	32.0	32.03
5	2.20	0.732	28.0	28.03

Subsequent calculation of sampler flow

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



Qstd / IC Calibration Curve

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 :

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

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

TISCH Environmental

RECALIBRATION DUE DATE:
June 1, 2022

Certificate of Calibration

Calibration Certification Information					
Cal. Date:	June 1, 2021	Rootsmeter S/N: 438320	Ta: 292	°K	
Operator:	Jim Tisch		Pa: 754.9	mm Hg	
Calibration Model #:	TE-5025A	Calibrator S/N: 0006			

Run	Vol. Init (m3)	Vol. Final (m3)	ΔVol. (m3)	ΔTime (min)	ΔP (mm Hg)	ΔH (in H2O)
1	1	2	1	1.4370	3.2	2.00
2	3	4	1	1.0130	6.4	4.00
3	5	6	1	0.9060	8.0	5.00
4	7	8	1	0.8590	8.9	5.50
5	9	10	1	0.7110	12.9	8.00

Data Tabulation

Vstd (m3)	Qstd (x-axis)	$\sqrt{\Delta H\left(\frac{Pa}{Pstd}\right)\left(\frac{Tstd}{Ta}\right)}$ (y-axis)	Va	Qa (x-axis)	$\sqrt{\Delta H(Ta/Pa)}$ (y-axis)
1.0094	0.7024	1.4239	0.9958	0.6929	0.8796
1.0051	0.9922	2.0136	0.9915	0.9788	1.2439
1.0029	1.1070	2.2513	0.9894	1.0921	1.3907
1.0017	1.1662	2.3612	0.9882	1.1504	1.4586
0.9964	1.4014	2.8477	0.9829	1.3824	1.7591
QSTD	m=	2.03518	QA	m=	1.27440
	b=	-0.00589		b=	-0.00364
	r=	0.99997		r=	0.99997

Calculations

Vstd=	ΔVol((Pa-ΔP)/Pstd)(Tstd/Ta)	Va=	ΔVol((Pa-ΔP)/Pa)
Qstd=	Vstd/ΔTime	Qa=	Va/ΔTime

For subsequent flow rate calculations:

Qstd= $1/m\left(\left(\sqrt{\Delta H\left(\frac{Pa}{Pstd}\right)\left(\frac{Tstd}{Ta}\right)}\right)-b\right)$

Qa= $1/m\left(\left(\sqrt{\Delta H(Ta/Pa)}\right)-b\right)$

Standard Conditions	
Tstd:	298.15 °K
Pstd:	760 mm Hg

Key

- ΔH: calibrator manometer reading (in H2O)
- ΔP: rootsmeter manometer reading (mm Hg)
- Ta: actual absolute temperature (°K)
- Pa: actual barometric pressure (mm Hg)
- b: intercept
- m: slope

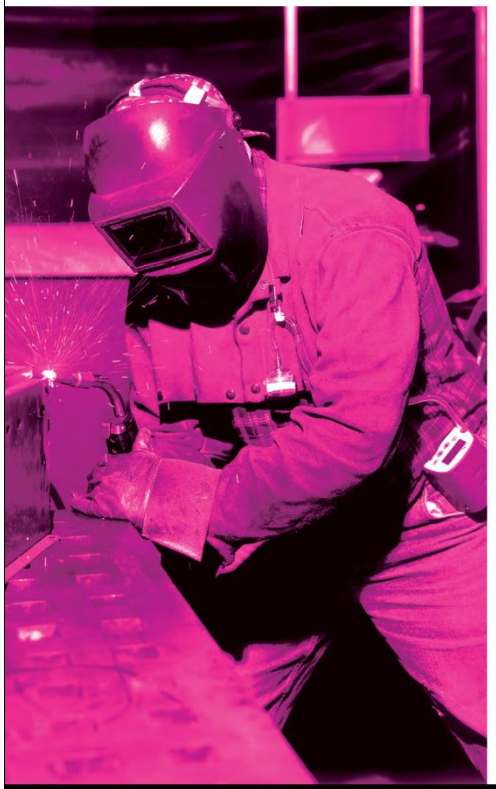
RECALIBRATION

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

ɔch Environmental, Inc.
·5 South Miami Avenue
llage of Cleves, OH 45002

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

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 "memory" issues
+ 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 Concentration Range	0.001 to 20 mg/m³ (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

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

Temperature Range

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

Operational Humidity
0 to 95% RH, non-condensing

Time Constant (LCD display)

Range	User-adjustable, 1 to 60 seconds

Data Logging

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

User-Select Calibration Factors

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

Physical

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

Power Supply/Charger (P/N 2613210)

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

Maintenance

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

Communications Interface

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

Minimum Computer Requirements for TrakPro™ Data Analysis Software

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

Battery Performance

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

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

Battery Level Indicator

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

Calibration Certificate of Dust Meter (TSI Sidepak AM510)

TSI P/N 2001157

CERTIFICATE OF CALIBRATION AND TESTING

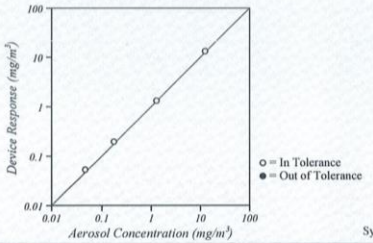
TSI Incorporated, 500 Cardigan Road, Shoreview, MN 55126 USA
Tel: 1-800-874-2811 1-651-490-2811 Fax: 1-651-490-3824 http://www.tsi.com

Environment Conditions		
Temperature	73.83 (23.2)	°F (°C)
Relative Humidity	26.8	%RH
Barometric Pressure	28.49 (964.8)	inHg (hPa)

Model	AM510
Serial Number	11404005

☒ As Left ☐ As Found
☒ In Tolerance ☐ Out of Tolerance

Concentration Linearity Plot



System ID: DTI101-02

CONCENTRATION *Unit: mg/m3*

#	STANDARD	MEASURED	ALLOWABLE RANGE	#	STANDARD	MEASURED	ALLOWABLE RANGE
1	1.261	1.239	1.135–1.387	3	0.046	0.050	0.032–0.060
2	0.173	0.184	0.147–0.199	4	12.363	12.493	11.127–13.599

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

Measurement Variable	System ID	Last Cal.	Cal. Due	Measurement Variable	System ID	Last Cal.	Cal. Due
DC Voltage	E003314	01-11-22	01-31-23	Photometer	E003319	02-22-22	08-31-22
Microbalance	M001324	01-29-21	01-31-23	Pressure	E003511	10-26-21	10-31-22
Flowmeter	E005626	03-04-22	03-31-23	DC Voltage	E003315	01-11-22	01-31-23

David Arnold
Calibrated

April 14, 2022
Date

Personal Aerosol Monitor Performance check with High Volume Sampler

Preformance Check ref. No AS0220427-1 Report Issue Date 27/04/2022
Date of performance check 26/04/2022

Objective:

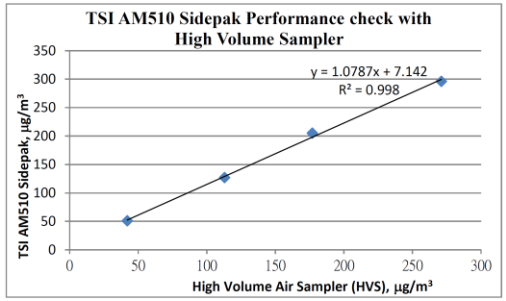
A dust meter and a Total Suspended Particulate High Volume Air Sampler (HVS) were placed together to measure the Total Suspended Particulate (TSP) concentrations simultaneously to check the performance.

Equipment Used:

Equipment	Manufacturer and Model	Serial Number
Personal Aerosol Monitor	TSI AM510 Sidepak	11404005
Total Suspended Particulate High Volume Air Sampler	GS2310	10346

Resuslt:

Equipment	Measurement Result, μg/m³			
TSI AM510 Sidepak	51	127	205	296
High Volume Air Sampler (HVS)	42	113	177	271



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

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

Calibration Certificate of Dust Meter (TSI Sidepak AM510)

CERTIFICATE OF CALIBRATION AND TESTING

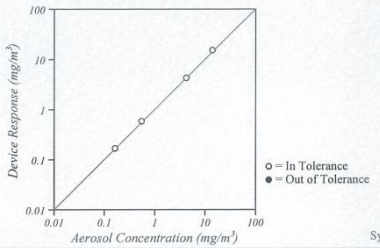
TSI Incorporated, 500 Cardigan Road, Shoreview, MN 55126 USA
Tel: 1-800-874-2811 1-651-490-2811 Fax: 1-651-490-3824 http://www.tsi.com

Environment Conditions		
Temperature	75.26 (24.0)	°F (°C)
Relative Humidity	21.5	%RH
Barometric Pressure	29.25 (990.5)	inHg (hPa)

Model	AM510
Serial Number	11108001

☒ As Left ☐ As Found ☒ In Tolerance ☐ Out of Tolerance

Concentration Linearity Plot



System ID: DTII01-02

CONCENTRATION *Unit: mg/m3*

#	STANDARD	MEASURED	ALLOWABLE RANGE	#	STANDARD	MEASURED	ALLOWABLE RANGE
1	4.199	4.027	3.779~4.619	3	0.161	0.158	0.113~0.209
2	0.543	0.549	0.462~0.624	4	13.855	14.276	12.469~15.241

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

Measurement Variable	System ID	Last Cal.	Cal. Due	Measurement Variable	System ID	Last Cal.	Cal. Due
DC Voltage	E003314	01-11-21	01-31-22	Photometer	E003319	08-30-21	02-28-22
Microbalance	M001324	01-29-21	01-31-23	Pressure	E003511	10-26-21	10-31-22
Flowmeter	E005626	03-09-21	03-31-22	DC Voltage	E003315	01-11-21	01-31-22

Calibrated

December 17, 2021
Date

TSI P/N 2300157

Personal Aerosol Monitor Performance check with High Volume Sampler

Preformance Check ref. No AS0220408-2 Report Issue Date 08/04/2022
Date of performance check 06/04/2022

Objective:

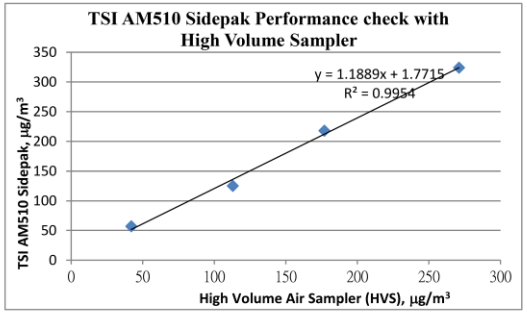
A dust meter and a Total Suspended Particulate High Volume Air Sampler (HVS) were placed together to measure the Total Suspended Particulate (TSP) concentrations simultaneously to check the performance.

Equipment Used:

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

Resuslt:

Equipment	Measurement Result, μg/m³			
TSI AM510 Sidepak	57	125	218	324
High Volume Air Sampler (HVS)	42	113	177	271



Tested by : (Poon Tsz Wing)
Name :

Checked by : (Wong Yin Tong)
Name :

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

Cabled Vantage Pro2™ & Vantage Pro2 Plus™ Stations

6152C
6162C

Vantage Pro2™

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

Integrated Sensor Suite (ISS)

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

Note: Maximum displayable wind decreases as the length of cable increases. at 140' (42 m) of cable, the maximum wind speed displayed is 135 mph (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
Rain Collector Type	Tipping bucket, 0.01" per tip (0.2 mm with metric rain adapter), 33.2 in^2 (214 cm^2) collection area
Temperature Sensor Type	PN Junction Silicon Diode
Relative Humidity Sensor Type	Film capacitor element
Housing Material	UV-resistant ABS, polypropylene
Sensor Inputs	
RF Filtering	RC low-pass filter on each signal line

ISS Dimensions(not including anemometer or bird spikes):

Vantage Pro2 with Standard Rad Shield	14.0" x 9.4" x 14.5" (356 mm x 239 mm x 368 mm)
Vantage Pro2 with Fan-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

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

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

Wind

Wind Chill (Calculated)

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

Wind Direction

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

Wind Speed

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

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.: CC0202201

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.:
Weather Station	Davis Vantage PRO 2	6312CEU	AY170606003	N/A

Certificate Information

Date of Receipt:	11 January 2022	Calibration Condition:	23.4C, 54%RH, 1010hPa
Date of Calibration:	20 January 2022	Adjustment:	N/A
Due Date of Calibration:	N/A	Appearance:	Good
Calibration Procedure:	JJF 1183-2007, JJF 1076-2001, SOP-116	Remark:	N/A

Reference Equipment Identification

Equipment Description	Model	Serial No.	Expiration Date
Platinum resistance thermometer	KPPRHT-A-1	KCI I-1095, KCI P-1095	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 2 is assumed unless explicitly stated.
Note2: The standard (s) and instrument used in the calibration are traceable to national or international recognized standard and are calibrated on a schedule to maintain the accuracy and good condition.
Note3: The result reported in this certificate refer to the condition of the instrument on the date of calibration and carry no implication regarding the long term stability of the instrument.
Note4: The result shows in this calibration certificate relate only to the item calibrated, and the result only applies to the calibration item as received.

Approved By: Company Chop:

Wing Cheng

Certificate Issue Date: 20 January 2022

CT-BEG-03

Appendix F – Weather information

General Information

Date	Absolute Daily Min Temperature (°C)	Absolute Daily Max Temperature (°C)	Total Rainfall (mm)
01/05/2022	17.1	24.6	32.4
02/05/2022	16.4	21.3	23.4
03/05/2022	18.8	26.6	0
04/05/2022	21.6	28.5	0
05/05/2022	23.2	29.3	0
06/05/2022	23.4	28.9	0
07/05/2022	23.6	29.7	0.8
08/05/2022	23.4	27.5	Trace
09/05/2022	24.3	29	Trace
10/05/2022	24.4	27.7	1.4
11/05/2022	24.2	25.9	61.4
12/05/2022	24.6	27	123.5
13/05/2022	24.3	26.9	107.1
14/05/2022	23.5	26.5	5
15/05/2022	20.8	24.9	26.2
16/05/2022	18.8	20.8	4.7
17/05/2022	19.6	26.3	0
18/05/2022	21.9	27.1	0
19/05/2022	23.5	30	0
20/05/2022	24.5	30.9	0
21/05/2022	24.6	30.7	0
22/05/2022	24.1	27.2	0.6
23/05/2022	23.1	24.8	11.2
24/05/2022	23.7	25	10.3
25/05/2022	23.8	27.4	1.3
26/05/2022	25.1	28.6	2.4
27/05/2022	26.1	28.5	24.7
28/05/2022	27.1	31.3	Trace
29/05/2022	27.8	32.2	Trace
30/05/2022	27.4	32.7	Trace
31/05/2022	27.4	30.7	0.1

NOTE1: The above weather information was obtained from manned weather station of Hong Kong Observatory.
NOTE2: Trace means rainfall less than 0.05 mm

https://www.hko.gov.hk/en/cis/dailyExtract.htm?y=2022&m=05

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

Date	Time	Wind Speed (m/s)	Wind Direction	Date	Time	Wind Speed (m/s)	Wind Direction	Date	Time	Wind Speed (m/s)	Wind Direction	Date	Time	Wind Speed (m/s)	Wind Direction
01/05/2022	0:00	1.3	180	02/05/2022	0:00	0.9	90	03/05/2022	0:00	1.3	247.5	04/05/2022	0:00	0.4	67.5
01/05/2022	1:00	0.9	90	02/05/2022	1:00	0.9	67.5	03/05/2022	1:00	0.9	270	04/05/2022	1:00	0.4	292.5
01/05/2022	2:00	0.9	90	02/05/2022	2:00	0.9	22.5	03/05/2022	2:00	0.9	337.5	04/05/2022	2:00	0.4	45
01/05/2022	3:00	1.3	90	02/05/2022	3:00	0.9	202.5	03/05/2022	3:00	0.9	337.5	04/05/2022	3:00	0.4	45
01/05/2022	4:00	1.3	270	02/05/2022	4:00	0.9	135	03/05/2022	4:00	0.9	202.5	04/05/2022	4:00	0.4	45
01/05/2022	5:00	2.2	90	02/05/2022	5:00	0.9	45	03/05/2022	5:00	1.3	337.5	04/05/2022	5:00	0.9	337.5
01/05/2022	6:00	2.7	90	02/05/2022	6:00	0.4	45	03/05/2022	6:00	0.9	67.5	04/05/2022	6:00	0.9	22.5
01/05/2022	7:00	2.7	112.5	02/05/2022	7:00	0.4	22.5	03/05/2022	7:00	1.8	292.5	04/05/2022	7:00	1.3	90
01/05/2022	8:00	2.2	67.5	02/05/2022	8:00	0.9	22.5	03/05/2022	8:00	1.3	45	04/05/2022	8:00	0.4	90
01/05/2022	9:00	2.7	90	02/05/2022	9:00	0.9	22.5	03/05/2022	9:00	0.9	45	04/05/2022	9:00	0.9	292.5
01/05/2022	10:00	2.7	90	02/05/2022	10:00	0.4	67.5	03/05/2022	10:00	0.4	45	04/05/2022	10:00	0.9	247.5
01/05/2022	11:00	1.8	112.5	02/05/2022	11:00	0.4	22.5	03/05/2022	11:00	1.3	337.5	04/05/2022	11:00	1.3	337.5
01/05/2022	12:00	3.1	67.5	02/05/2022	12:00	0.4	315	03/05/2022	12:00	0.9	22.5	04/05/2022	12:00	0.4	270
01/05/2022	13:00	3.1	45	02/05/2022	13:00	0.9	22.5	03/05/2022	13:00	0.9	90	04/05/2022	13:00	0.4	315
01/05/2022	14:00	2.7	90	02/05/2022	14:00	0.9	22.5	03/05/2022	14:00	0.9	90	04/05/2022	14:00	0.9	315
01/05/2022	15:00	2.2	45	02/05/2022	15:00	0.4	45	03/05/2022	15:00	0.4	292.5	04/05/2022	15:00	0.9	315
01/05/2022	16:00	1.8	90	02/05/2022	16:00	0.4	247.5	03/05/2022	16:00	0.9	180	04/05/2022	16:00	0.9	45
01/05/2022	17:00	2.7	67.5	02/05/2022	17:00	0.9	270	03/05/2022	17:00	0.9	157.5	04/05/2022	17:00	1.3	22.5
01/05/2022	18:00	0.9	22.5	02/05/2022	18:00	0.4	247.5	03/05/2022	18:00	0.9	292.5	04/05/2022	18:00	1.8	45
01/05/2022	19:00	1.3	112.5	02/05/2022	19:00	0.4	247.5	03/05/2022	19:00	0.4	22.5	04/05/2022	19:00	1.8	315
01/05/2022	20:00	1.3	22.5	02/05/2022	20:00	1.3	45	03/05/2022	20:00	0.9	22.5	04/05/2022	20:00	0.9	90
01/05/2022	21:00	0.9	45	02/05/2022	21:00	0.9	270	03/05/2022	21:00	0.4	45	04/05/2022	21:00	1.3	45
01/05/2022	22:00	1.3	67.5	02/05/2022	22:00	1.3	270	03/05/2022	22:00	0.4	45	04/05/2022	22:00	1.8	270
01/05/2022	23:00	0.4	67.5	02/05/2022	23:00	1.3	112.5	03/05/2022	23:00	0.4	22.5	04/05/2022	23:00	1.8	22.5

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

Date	Time	Wind Speed (m/s)	Wind Direction	Date	Time	Wind Speed (m/s)	Wind Direction	Date	Time	Wind Speed (m/s)	Wind Direction	Date	Time	Wind Speed (m/s)	Wind Direction
05/05/2022	0:00	0.9	67.5	06/05/2022	0:00	0.4	247.5	07/05/2022	0:00	1.3	112.5	08/05/2022	0:00	0.9	22.5
05/05/2022	1:00	1.3	22.5	06/05/2022	1:00	0.9	315	07/05/2022	1:00	1.3	202.5	08/05/2022	1:00	1.3	22.5
05/05/2022	2:00	1.3	45	06/05/2022	2:00	1.3	292.5	07/05/2022	2:00	0.9	90	08/05/2022	2:00	1.3	315
05/05/2022	3:00	0.9	90	06/05/2022	3:00	0.4	45	07/05/2022	3:00	0.4	112.5	08/05/2022	3:00	1.3	135
05/05/2022	4:00	1.8	112.5	06/05/2022	4:00	0.4	45	07/05/2022	4:00	0.4	45	08/05/2022	4:00	0.9	45
05/05/2022	5:00	1.3	90	06/05/2022	5:00	0.4	67.5	07/05/2022	5:00	0.4	45	08/05/2022	5:00	0.9	135
05/05/2022	6:00	0.9	67.5	06/05/2022	6:00	0.9	90	07/05/2022	6:00	0.4	67.5	08/05/2022	6:00	0.9	90
05/05/2022	7:00	0.9	270	06/05/2022	7:00	0.4	135	07/05/2022	7:00	0.4	135	08/05/2022	7:00	0.4	292.5
05/05/2022	8:00	0.9	112.5	06/05/2022	8:00	0.9	90	07/05/2022	8:00	0.4	112.5	08/05/2022	8:00	0.9	90
05/05/2022	9:00	1.8	90	06/05/2022	9:00	0.4	112.5	07/05/2022	9:00	1.8	45	08/05/2022	9:00	0.4	112.5
05/05/2022	10:00	1.8	90	06/05/2022	10:00	0.9	135	07/05/2022	10:00	2.2	112.5	08/05/2022	10:00	0.9	90
05/05/2022	11:00	0.9	45	06/05/2022	11:00	1.3	112.5	07/05/2022	11:00	2.2	90	08/05/2022	11:00	0.4	135
05/05/2022	12:00	0.9	22.5	06/05/2022	12:00	1.3	112.5	07/05/2022	12:00	2.2	112.5	08/05/2022	12:00	0.4	45
05/05/2022	13:00	1.3	22.5	06/05/2022	13:00	0.9	157.5	07/05/2022	13:00	1.3	90	08/05/2022	13:00	0.9	337.5
05/05/2022	14:00	1.3	90	06/05/2022	14:00	1.3	90	07/05/2022	14:00	1.3	135	08/05/2022	14:00	0.4	157.5
05/05/2022	15:00	0.9	112.5	06/05/2022	15:00	1.3	112.5	07/05/2022	15:00	1.8	112.5	08/05/2022	15:00	0.4	90
05/05/2022	16:00	1.3	45	06/05/2022	16:00	1.3	90	07/05/2022	16:00	1.8	22.5	08/05/2022	16:00	1.8	45
05/05/2022	17:00	1.3	67.5	06/05/2022	17:00	1.3	67.5	07/05/2022	17:00	1.8	45	08/05/2022	17:00	0.9	247.5
05/05/2022	18:00	0.9	90	06/05/2022	18:00	1.8	90	07/05/2022	18:00	1.3	225	08/05/2022	18:00	0.9	135
05/05/2022	19:00	0.9	90	06/05/2022	19:00	2.2	112.5	07/05/2022	19:00	1.3	90	08/05/2022	19:00	0.4	90
05/05/2022	20:00	1.3	225	06/05/2022	20:00	1.8	135	07/05/2022	20:00	0.4	67.5	08/05/2022	20:00	1.8	90
05/05/2022	21:00	1.8	315	06/05/2022	21:00	2.2	45	07/05/2022	21:00	0.4	67.5	08/05/2022	21:00	1.3	90
05/05/2022	22:00	1.3	202.5	06/05/2022	22:00	1.8	90	07/05/2022	22:00	0.4	45	08/05/2022	22:00	0.9	45
05/05/2022	23:00	1.8	67.5	06/05/2022	23:00	1.8	67.5	07/05/2022	23:00	0.4	67.5	08/05/2022	23:00	0.9	90

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

Date	Time	Wind Speed (m/s)	Wind Direction	Date	Time	Wind Speed (m/s)	Wind Direction	Date	Time	Wind Speed (m/s)	Wind Direction	Date	Time	Wind Speed (m/s)	Wind Direction
09/05/2022	0:00	1.3	315	10/05/2022	0:00	1.8	45	11/05/2022	0:00	0.4	112.5	12/05/2022	0:00	0.4	90
09/05/2022	1:00	0.9	112.5	10/05/2022	1:00	1.3	112.5	11/05/2022	1:00	0.4	135	12/05/2022	1:00	0.4	67.5
09/05/2022	2:00	0.4	112.5	10/05/2022	2:00	0.9	112.5	11/05/2022	2:00	0.4	90	12/05/2022	2:00	0.4	22.5
09/05/2022	3:00	0.4	135	10/05/2022	3:00	0.4	90	11/05/2022	3:00	0.4	135	12/05/2022	3:00	0.4	202.5
09/05/2022	4:00	0.4	90	10/05/2022	4:00	0.4	90	11/05/2022	4:00	0.4	135	12/05/2022	4:00	0.4	225
09/05/2022	5:00	0.9	112.5	10/05/2022	5:00	0.9	90	11/05/2022	5:00	0.9	90	12/05/2022	5:00	0.4	270
09/05/2022	6:00	0.9	90	10/05/2022	6:00	0.4	112.5	11/05/2022	6:00	0.9	135	12/05/2022	6:00	0.9	247.5
09/05/2022	7:00	1.3	90	10/05/2022	7:00	0.4	90	11/05/2022	7:00	1.3	90	12/05/2022	7:00	0.4	270
09/05/2022	8:00	1.3	135	10/05/2022	8:00	0.9	112.5	11/05/2022	8:00	1.3	22.5	12/05/2022	8:00	0.9	270
09/05/2022	9:00	0.9	112.5	10/05/2022	9:00	0.9	90	11/05/2022	9:00	1.3	112.5	12/05/2022	9:00	1.3	247.5
09/05/2022	10:00	1.3	112.5	10/05/2022	10:00	1.3	90	11/05/2022	10:00	0.9	90	12/05/2022	10:00	0.9	247.5
09/05/2022	11:00	1.3	112.5	10/05/2022	11:00	1.3	90	11/05/2022	11:00	1.3	112.5	12/05/2022	11:00	0.9	337.5
09/05/2022	12:00	1.3	90	10/05/2022	12:00	0.9	112.5	11/05/2022	12:00	2.2	112.5	12/05/2022	12:00	0.9	225
09/05/2022	13:00	1.3	112.5	10/05/2022	13:00	0.4	180	11/05/2022	13:00	2.2	112.5	12/05/2022	13:00	1.3	157.5
09/05/2022	14:00	1.3	22.5	10/05/2022	14:00	0.9	90	11/05/2022	14:00	1.8	112.5	12/05/2022	14:00	1.3	45
09/05/2022	15:00	1.3	90	10/05/2022	15:00	0.4	90	11/05/2022	15:00	0.9	90	12/05/2022	15:00	0.9	270
09/05/2022	16:00	1.3	112.5	10/05/2022	16:00	1.3	112.5	11/05/2022	16:00	0.4	112.5	12/05/2022	16:00	0.4	225
09/05/2022	17:00	0.9	112.5	10/05/2022	17:00	1.8	112.5	11/05/2022	17:00	0.9	90	12/05/2022	17:00	0.9	225
09/05/2022	18:00	0.4	90	10/05/2022	18:00	1.3	67.5	11/05/2022	18:00	1.3	90	12/05/2022	18:00	0.9	270
09/05/2022	19:00	1.3	112.5	10/05/2022	19:00	1.8	112.5	11/05/2022	19:00	1.3	112.5	12/05/2022	19:00	2.2	247.5
09/05/2022	20:00	0.9	112.5	10/05/2022	20:00	1.3	90	11/05/2022	20:00	0.9	112.5	12/05/2022	20:00	1.3	270
09/05/2022	21:00	0.9	157.5	10/05/2022	21:00	1.8	112.5	11/05/2022	21:00	0	135	12/05/2022	21:00	1.3	247.5
09/05/2022	22:00	1.3	135	10/05/2022	22:00	1.8	112.5	11/05/2022	22:00	0	90	12/05/2022	22:00	0.9	247.5
09/05/2022	23:00	0.9	315	10/05/2022	23:00	1.3	112.5	11/05/2022	23:00	0.4	112.5	12/05/2022	23:00	1.3	112.5

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

Date	Time	Wind Speed (m/s)	Wind Direction	Date	Time	Wind Speed (m/s)	Wind Direction	Date	Time	Wind Speed (m/s)	Wind Direction	Date	Time	Wind Speed (m/s)	Wind Direction
13/05/2022	0:00	0.9	225	14/05/2022	0:00	1.3	135	15/05/2022	0:00	0.9	135	16/05/2022	0:00	0.9	22.5
13/05/2022	1:00	0.4	225	14/05/2022	1:00	0.9	112.5	15/05/2022	1:00	0.4	112.5	16/05/2022	1:00	0.9	22.5
13/05/2022	2:00	0.4	337.5	14/05/2022	2:00	1.3	135	15/05/2022	2:00	0.4	90	16/05/2022	2:00	0.4	45
13/05/2022	3:00	0.4	225	14/05/2022	3:00	0.9	112.5	15/05/2022	3:00	0.4	90	16/05/2022	3:00	0	45
13/05/2022	4:00	0.9	247.5	14/05/2022	4:00	0.4	112.5	15/05/2022	4:00	0.9	22.5	16/05/2022	4:00	0.4	45
13/05/2022	5:00	2.7	247.5	14/05/2022	5:00	0.4	337.5	15/05/2022	5:00	0.9	45	16/05/2022	5:00	0.4	337.5
13/05/2022	6:00	1.3	247.5	14/05/2022	6:00	0.9	45	15/05/2022	6:00	0.9	67.5	16/05/2022	6:00	0	337.5
13/05/2022	7:00	2.2	270	14/05/2022	7:00	0.9	22.5	15/05/2022	7:00	0.9	112.5	16/05/2022	7:00	0.4	315
13/05/2022	8:00	0.4	247.5	14/05/2022	8:00	0.9	337.5	15/05/2022	8:00	1.3	112.5	16/05/2022	8:00	0.4	315
13/05/2022	9:00	0.9	247.5	14/05/2022	9:00	0.9	247.5	15/05/2022	9:00	0.4	90	16/05/2022	9:00	0.4	337.5
13/05/2022	10:00	0.9	247.5	14/05/2022	10:00	0.9	247.5	15/05/2022	10:00	1.3	90	16/05/2022	10:00	0	337.5
13/05/2022	11:00	1.3	270	14/05/2022	11:00	0.9	247.5	15/05/2022	11:00	0.9	90	16/05/2022	11:00	0.4	270
13/05/2022	12:00	0.4	270	14/05/2022	12:00	0.4	247.5	15/05/2022	12:00	0.9	135	16/05/2022	12:00	0.4	22.5
13/05/2022	13:00	0.4	225	14/05/2022	13:00	0.4	247.5	15/05/2022	13:00	0.9	112.5	16/05/2022	13:00	0.9	292.5
13/05/2022	14:00	0.4	202.5	14/05/2022	14:00	0.9	270	15/05/2022	14:00	0.4	135	16/05/2022	14:00	0.9	292.5
13/05/2022	15:00	0.9	225	14/05/2022	15:00	0.9	270	15/05/2022	15:00	0.9	135	16/05/2022	15:00	0.4	270
13/05/2022	16:00	0.4	247.5	14/05/2022	16:00	0.9	225	15/05/2022	16:00	0.9	112.5	16/05/2022	16:00	0.4	292.5
13/05/2022	17:00	0.4	247.5	14/05/2022	17:00	1.3	202.5	15/05/2022	17:00	1.3	112.5	16/05/2022	17:00	0.4	270
13/05/2022	18:00	1.3	225	14/05/2022	18:00	0.9	225	15/05/2022	18:00	1.8	90	16/05/2022	18:00	0	225
13/05/2022	19:00	0.4	112.5	14/05/2022	19:00	0.4	247.5	15/05/2022	19:00	1.8	112.5	16/05/2022	19:00	0.4	247.5
13/05/2022	20:00	0.9	225	14/05/2022	20:00	0.4	135	15/05/2022	20:00	1.3	90	16/05/2022	20:00	0.4	247.5
13/05/2022	21:00	0.9	247.5	14/05/2022	21:00	0.4	112.5	15/05/2022	21:00	1.8	112.5	16/05/2022	21:00	0.4	202.5
13/05/2022	22:00	0.9	225	14/05/2022	22:00	1.3	112.5	15/05/2022	22:00	1.8	112.5	16/05/2022	22:00	0.4	270
13/05/2022	23:00	0.4	247.5	14/05/2022	23:00	0.4	112.5	15/05/2022	23:00	1.3	112.5	16/05/2022	23:00	0.4	135

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

Date	Time	Wind Speed (m/s)	Wind Direction	Date	Time	Wind Speed (m/s)	Wind Direction	Date	Time	Wind Speed (m/s)	Wind Direction	Date	Time	Wind Speed (m/s)	Wind Direction
17/05/2022	0:00	0.4	22.5	18/05/2022	0:00	1.3	112.5	19/05/2022	0:00	0.9	90	20/05/2022	0:00	0.4	90
17/05/2022	1:00	0.4	112.5	18/05/2022	1:00	1.8	90	19/05/2022	1:00	1.3	90	20/05/2022	1:00	0.4	90
17/05/2022	2:00	0.9	22.5	18/05/2022	2:00	1.8	67.5	19/05/2022	2:00	1.3	112.5	20/05/2022	2:00	0.9	270
17/05/2022	3:00	0.4	22.5	18/05/2022	3:00	1.3	90	19/05/2022	3:00	1.3	112.5	20/05/2022	3:00	0.4	247.5
17/05/2022	4:00	0.4	270	18/05/2022	4:00	1.8	135	19/05/2022	4:00	0.4	90	20/05/2022	4:00	0.9	112.5
17/05/2022	5:00	0.9	45	18/05/2022	5:00	1.3	90	19/05/2022	5:00	1.3	112.5	20/05/2022	5:00	0.4	90
17/05/2022	6:00	0.9	157.5	18/05/2022	6:00	1.8	90	19/05/2022	6:00	1.3	90	20/05/2022	6:00	0.9	112.5
17/05/2022	7:00	0.4	67.5	18/05/2022	7:00	2.2	67.5	19/05/2022	7:00	1.3	45	20/05/2022	7:00	0.4	135
17/05/2022	8:00	0.9	67.5	18/05/2022	8:00	1.3	67.5	19/05/2022	8:00	1.3	90	20/05/2022	8:00	0.4	112.5
17/05/2022	9:00	0.9	22.5	18/05/2022	9:00	2.2	337.5	19/05/2022	9:00	1.3	135	20/05/2022	9:00	0.9	135
17/05/2022	10:00	0.9	67.5	18/05/2022	10:00	1.3	45	19/05/2022	10:00	0.9	22.5	20/05/2022	10:00	1.8	135
17/05/2022	11:00	0.4	112.5	18/05/2022	11:00	1.3	22.5	19/05/2022	11:00	0.9	22.5	20/05/2022	11:00	1.3	112.5
17/05/2022	12:00	0.9	292.5	18/05/2022	12:00	1.3	112.5	19/05/2022	12:00	0.9	112.5	20/05/2022	12:00	1.3	135
17/05/2022	13:00	0.4	112.5	18/05/2022	13:00	1.8	67.5	19/05/2022	13:00	1.3	112.5	20/05/2022	13:00	1.8	135
17/05/2022	14:00	0.4	135	18/05/2022	14:00	0.9	112.5	19/05/2022	14:00	2.7	112.5	20/05/2022	14:00	1.3	135
17/05/2022	15:00	0.9	270	18/05/2022	15:00	0.9	90	19/05/2022	15:00	2.2	90	20/05/2022	15:00	0.9	90
17/05/2022	16:00	0.9	225	18/05/2022	16:00	0.9	180	19/05/2022	16:00	1.8	90	20/05/2022	16:00	1.3	112.5
17/05/2022	17:00	1.8	135	18/05/2022	17:00	0.9	112.5	19/05/2022	17:00	1.8	90	20/05/2022	17:00	0.9	90
17/05/2022	18:00	0.9	157.5	18/05/2022	18:00	0.9	90	19/05/2022	18:00	1.8	112.5	20/05/2022	18:00	1.3	112.5
17/05/2022	19:00	0.9	135	18/05/2022	19:00	1.3	135	19/05/2022	19:00	1.3	45	20/05/2022	19:00	0.4	112.5
17/05/2022	20:00	0.9	135	18/05/2022	20:00	1.3	22.5	19/05/2022	20:00	1.3	22.5	20/05/2022	20:00	1.3	112.5
17/05/2022	21:00	0.9	135	18/05/2022	21:00	0.4	270	19/05/2022	21:00	1.3	67.5	20/05/2022	21:00	0.9	112.5
17/05/2022	22:00	0.9	112.5	18/05/2022	22:00	0.4	135	19/05/2022	22:00	0.4	67.5	20/05/2022	22:00	0.9	135
17/05/2022	23:00	0.4	112.5	18/05/2022	23:00	0.9	112.5	19/05/2022	23:00	0.4	112.5	20/05/2022	23:00	0.4	135

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

Date	Time	Wind Speed (m/s)	Wind Direction	Date	Time	Wind Speed (m/s)	Wind Direction	Date	Time	Wind Speed (m/s)	Wind Direction	Date	Time	Wind Speed (m/s)	Wind Direction
21/05/2022	0:00	0.4	202.5	22/05/2022	0:00	1.3	67.5	23/05/2022	0:00	2.2	67.5	24/05/2022	0:00	0.9	157.5
21/05/2022	1:00	0.4	202.5	22/05/2022	1:00	1.3	337.5	23/05/2022	1:00	1.8	45	24/05/2022	1:00	0.4	45
21/05/2022	2:00	0.4	225	22/05/2022	2:00	1.8	90	23/05/2022	2:00	1.3	90	24/05/2022	2:00	0.9	45
21/05/2022	3:00	0.9	202.5	22/05/2022	3:00	1.3	112.5	23/05/2022	3:00	0.9	112.5	24/05/2022	3:00	0.9	112.5
21/05/2022	4:00	0.9	247.5	22/05/2022	4:00	0.9	112.5	23/05/2022	4:00	1.8	90	24/05/2022	4:00	1.3	90
21/05/2022	5:00	0.9	247.5	22/05/2022	5:00	1.3	67.5	23/05/2022	5:00	1.8	67.5	24/05/2022	5:00	1.8	45
21/05/2022	6:00	0.4	247.5	22/05/2022	6:00	1.3	90	23/05/2022	6:00	1.3	67.5	24/05/2022	6:00	1.8	90
21/05/2022	7:00	0.4	157.5	22/05/2022	7:00	0.9	90	23/05/2022	7:00	2.2	90	24/05/2022	7:00	1.3	90
21/05/2022	8:00	0.4	225	22/05/2022	8:00	1.3	45	23/05/2022	8:00	1.3	112.5	24/05/2022	8:00	0.9	22.5
21/05/2022	9:00	0.4	225	22/05/2022	9:00	1.3	135	23/05/2022	9:00	1.8	67.5	24/05/2022	9:00	1.3	67.5
21/05/2022	10:00	2.2	157.5	22/05/2022	10:00	1.3	135	23/05/2022	10:00	1.8	90	24/05/2022	10:00	1.3	225
21/05/2022	11:00	2.2	135	22/05/2022	11:00	1.8	90	23/05/2022	11:00	1.8	67.5	24/05/2022	11:00	0.9	90
21/05/2022	12:00	1.8	135	22/05/2022	12:00	1.8	135	23/05/2022	12:00	1.3	90	24/05/2022	12:00	1.8	112.5
21/05/2022	13:00	1.8	337.5	22/05/2022	13:00	1.3	135	23/05/2022	13:00	1.8	90	24/05/2022	13:00	1.8	90
21/05/2022	14:00	1.8	112.5	22/05/2022	14:00	1.8	67.5	23/05/2022	14:00	1.3	45	24/05/2022	14:00	0.9	112.5
21/05/2022	15:00	1.3	112.5	22/05/2022	15:00	0.9	90	23/05/2022	15:00	1.3	90	24/05/2022	15:00	0.9	22.5
21/05/2022	16:00	1.3	90	22/05/2022	16:00	1.8	225	23/05/2022	16:00	1.3	45	24/05/2022	16:00	1.3	90
21/05/2022	17:00	0.9	90	22/05/2022	17:00	1.3	67.5	23/05/2022	17:00	1.8	67.5	24/05/2022	17:00	0.9	112.5
21/05/2022	18:00	0.9	112.5	22/05/2022	18:00	0.9	22.5	23/05/2022	18:00	1.3	90	24/05/2022	18:00	0.9	112.5
21/05/2022	19:00	1.3	112.5	22/05/2022	19:00	1.3	90	23/05/2022	19:00	1.8	112.5	24/05/2022	19:00	0.9	67.5
21/05/2022	20:00	1.3	90	22/05/2022	20:00	1.3	45	23/05/2022	20:00	1.8	90	24/05/2022	20:00	0.9	90
21/05/2022	21:00	0.9	90	22/05/2022	21:00	1.3	22.5	23/05/2022	21:00	1.8	67.5	24/05/2022	21:00	0.9	112.5
21/05/2022	22:00	0.9	112.5	22/05/2022	22:00	1.3	135	23/05/2022	22:00	1.3	135	24/05/2022	22:00	1.3	90
21/05/2022	23:00	0.9	112.5	22/05/2022	23:00	1.8	315	23/05/2022	23:00	1.3	157.5	24/05/2022	23:00	0.9	67.5

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

Date	Time	Wind Speed (m/s)	Wind Direction	Date	Time	Wind Speed (m/s)	Wind Direction	Date	Time	Wind Speed (m/s)	Wind Direction	Date	Time	Wind Speed (m/s)	Wind Direction
25/05/2022	0:00	0.9	112.5	26/05/2022	0:00	0.9	112.5	27/05/2022	0:00	0.9	22.5	28/05/2022	0:00	1.3	112.5
25/05/2022	1:00	0.4	112.5	26/05/2022	1:00	0.9	135	27/05/2022	1:00	0.4	247.5	28/05/2022	1:00	1.3	90
25/05/2022	2:00	1.3	135	26/05/2022	2:00	0.9	22.5	27/05/2022	2:00	0.4	247.5	28/05/2022	2:00	1.3	90
25/05/2022	3:00	0.9	90	26/05/2022	3:00	0.4	247.5	27/05/2022	3:00	0.4	22.5	28/05/2022	3:00	1.8	112.5
25/05/2022	4:00	0.9	112.5	26/05/2022	4:00	0.9	157.5	27/05/2022	4:00	0	135	28/05/2022	4:00	0.9	112.5
25/05/2022	5:00	0.9	112.5	26/05/2022	5:00	0.9	112.5	27/05/2022	5:00	0.4	292.5	28/05/2022	5:00	0.9	135
25/05/2022	6:00	0.9	112.5	26/05/2022	6:00	0.9	135	27/05/2022	6:00	0	90	28/05/2022	6:00	0.9	112.5
25/05/2022	7:00	0.9	90	26/05/2022	7:00	0.9	135	27/05/2022	7:00	0.4	112.5	28/05/2022	7:00	0.9	135
25/05/2022	8:00	1.3	112.5	26/05/2022	8:00	1.3	45	27/05/2022	8:00	0.9	112.5	28/05/2022	8:00	0.9	135
25/05/2022	9:00	0.9	90	26/05/2022	9:00	1.8	90	27/05/2022	9:00	0.9	135	28/05/2022	9:00	0.9	112.5
25/05/2022	10:00	0.9	90	26/05/2022	10:00	1.3	90	27/05/2022	10:00	0.9	90	28/05/2022	10:00	0.4	112.5
25/05/2022	11:00	0.9	180	26/05/2022	11:00	0.9	112.5	27/05/2022	11:00	0.9	45	28/05/2022	11:00	0.9	90
25/05/2022	12:00	0.9	180	26/05/2022	12:00	0.9	112.5	27/05/2022	12:00	0.9	45	28/05/2022	12:00	0.4	112.5
25/05/2022	13:00	0.4	112.5	26/05/2022	13:00	1.3	112.5	27/05/2022	13:00	0.4	135	28/05/2022	13:00	0.9	157.5
25/05/2022	14:00	0.4	112.5	26/05/2022	14:00	1.8	112.5	27/05/2022	14:00	0.9	135	28/05/2022	14:00	0.9	337.5
25/05/2022	15:00	0.4	247.5	26/05/2022	15:00	1.8	135	27/05/2022	15:00	0.4	112.5	28/05/2022	15:00	0.9	180
25/05/2022	16:00	0.9	157.5	26/05/2022	16:00	1.8	135	27/05/2022	16:00	0.9	112.5	28/05/2022	16:00	0.9	90
25/05/2022	17:00	0.4	135	26/05/2022	17:00	1.8	112.5	27/05/2022	17:00	0.4	90	28/05/2022	17:00	0.9	135
25/05/2022	18:00	0.4	180	26/05/2022	18:00	0.9	112.5	27/05/2022	18:00	0.9	45	28/05/2022	18:00	1.3	135
25/05/2022	19:00	0.4	112.5	26/05/2022	19:00	0.9	112.5	27/05/2022	19:00	0.4	45	28/05/2022	19:00	0.9	112.5
25/05/2022	20:00	0.9	112.5	26/05/2022	20:00	0.9	90	27/05/2022	20:00	0.9	135	28/05/2022	20:00	1.3	90
25/05/2022	21:00	0.4	112.5	26/05/2022	21:00	0.9	90	27/05/2022	21:00	0.9	135	28/05/2022	21:00	0.9	112.5
25/05/2022	22:00	0.4	135	26/05/2022	22:00	0.9	90	27/05/2022	22:00	0.9	112.5	28/05/2022	22:00	0.9	112.5
25/05/2022	23:00	0.9	135	26/05/2022	23:00	0.4	90	27/05/2022	23:00	0.9	90	28/05/2022	23:00	1.3	112.5

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

Date	Time	Wind Speed (m/s)	Wind Direction	Date	Time	Wind Speed (m/s)	Wind Direction	Date	Time	Wind Speed (m/s)	Wind Direction	Date	Time	Wind Speed (m/s)	Wind Direction
29/05/2022	0:00	0.9	135	30/05/2022	0:00	1.3	112.5	31/05/2022	0:00	0.9	90				
29/05/2022	1:00	0.9	157.5	30/05/2022	1:00	0.9	112.5	31/05/2022	1:00	0.9	135				
29/05/2022	2:00	0.9	112.5	30/05/2022	2:00	0.4	90	31/05/2022	2:00	0.9	112.5				
29/05/2022	3:00	0.4	135	30/05/2022	3:00	0.4	112.5	31/05/2022	3:00	1.3	112.5				
29/05/2022	4:00	0.9	135	30/05/2022	4:00	0.4	112.5	31/05/2022	4:00	1.3	112.5				
29/05/2022	5:00	0.4	112.5	30/05/2022	5:00	0.4	112.5	31/05/2022	5:00	1.3	135				
29/05/2022	6:00	0.9	90	30/05/2022	6:00	0.9	112.5	31/05/2022	6:00	1.3	112.5				
29/05/2022	7:00	0.9	90	30/05/2022	7:00	0.4	90	31/05/2022	7:00	1.3	112.5				
29/05/2022	8:00	0.9	67.5	30/05/2022	8:00	0.4	112.5	31/05/2022	8:00	0.9	135				
29/05/2022	9:00	0.9	67.5	30/05/2022	9:00	0.4	112.5	31/05/2022	9:00	0.9	112.5				
29/05/2022	10:00	0.4	135	30/05/2022	10:00	0.4	90	31/05/2022	10:00	1.3	112.5				
29/05/2022	11:00	0.9	90	30/05/2022	11:00	0.9	90	31/05/2022	11:00	0.9	135				
29/05/2022	12:00	0.9	112.5	30/05/2022	12:00	0.9	112.5	31/05/2022	12:00	0.9	90				
29/05/2022	13:00	0.9	135	30/05/2022	13:00	0.4	135	31/05/2022	13:00	1.3	112.5				
29/05/2022	14:00	0.4	112.5	30/05/2022	14:00	0.4	135	31/05/2022	14:00	1.3	112.5				
29/05/2022	15:00	0.4	135	30/05/2022	15:00	0.4	112.5	31/05/2022	15:00	1.3	135				
29/05/2022	16:00	0.9	112.5	30/05/2022	16:00	0.4	90	31/05/2022	16:00	1.8	135				
29/05/2022	17:00	0.9	112.5	30/05/2022	17:00	0.9	135	31/05/2022	17:00	2.2	112.5				
29/05/2025	18:00	0.9	225	30/05/2022	18:00	1.3	135	31/05/2022	18:00	0.9	90				
29/05/2022	19:00	0.9	247.5	30/05/2022	19:00	1.3	112.5	31/05/2022	19:00	0.9	90				
29/05/2022	20:00	1.3	180	30/05/2022	20:00	1.8	135	31/05/2022	20:00	0.4	112.5				
29/05/2022	21:00	1.3	225	30/05/2022	21:00	1.3	90	31/05/2022	21:00	0.4	112.5				
29/05/2022	22:00	1.3	270	30/05/2022	22:00	1.3	157.5	31/05/2022	22:00	0.4	112.5				
29/05/2022	23:00	1.3	112.5	30/05/2022	23:00	1.3	112.5	31/05/2022	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 (hPa)	Filter weight (g)		Particulate weight (g)	Elapse Time		Sampling Time (min)	Flow Rate (cfm)		Av. Flow (m^3/min)	Total vol. (m^3)	Conc. (μg/m^3)
				Initial	Final		Initial	Final		Initial	Final			
06/05/2022	Sunny	26.5	1012.4	14.9952	15.2492	0.2540	4511.67	4535.69	1441	54	54	1.50	2168	117
12/05/2022	Cloudy	26.6	1006	18.2091	18.2852	0.0761	4535.85	4559.87	1441	54	54	1.50	2161	35
18/05/2022	Sunny	25.9	1013.8	15.2246	15.4269	0.2023	4559.96	4583.98	1441	54	54	1.51	2172	93
24/05/2022	Cloudy	23.6	1009.2	18.3269	18.3776	0.0507	4584.07	4608.08	1441	50	50	1.39	2010	25
30/05/2022	Cloudy	29.2	1005.9	15.0369	15.1099	0.0730	4608.18	4632.19	1441	52	52	1.44	2069	35
												Maximum		117
												Minimum		25
												Average		61
												Action Level		182
												Limit Level		260

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

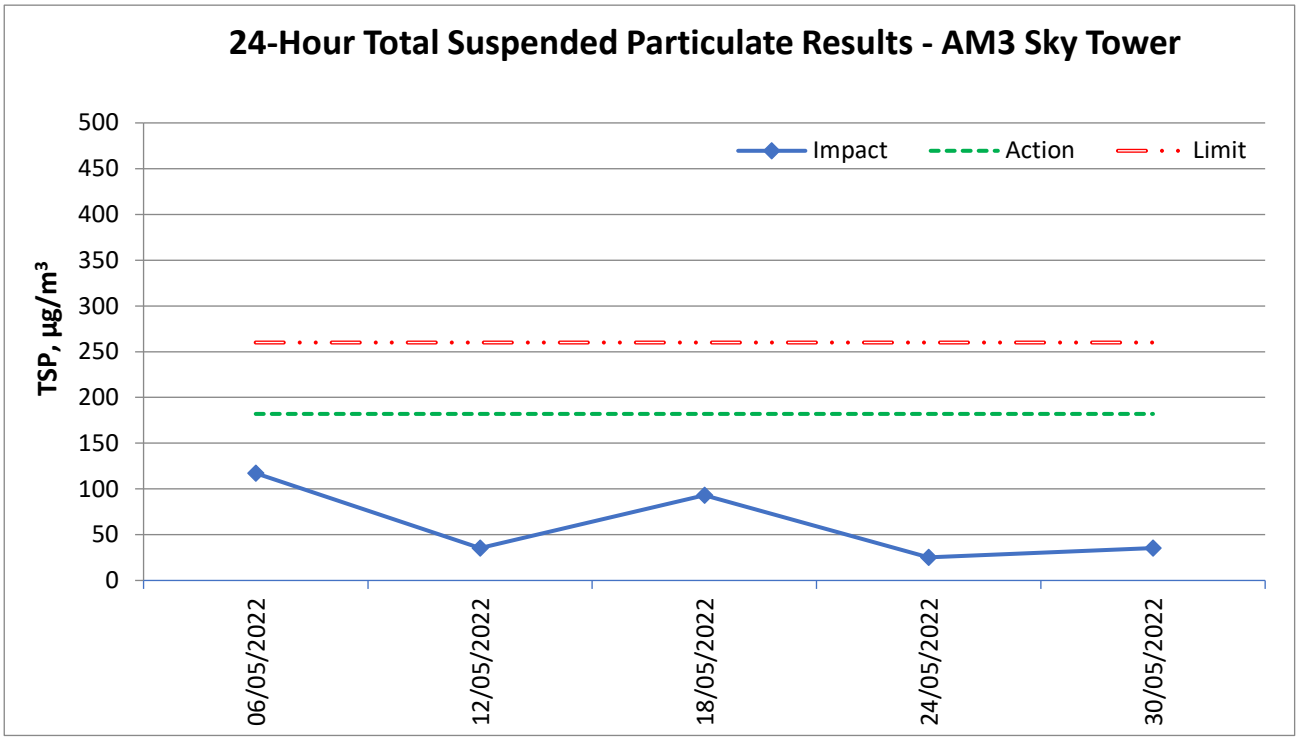
Start Date	Weather	Air Temp. (℃)	Atmospheric Pressure (hPa)	Filter weight (g)		Particulate weight (g)	Elapse Time		Sampling Time (min)	Flow Rate (cfm)		Av. Flow (m^3/min)	Total vol. (m^3)	Conc. (μg/m^3)
				Initial	Final		Initial	Final		Initial	Final			
06/05/2022	Sunny	26.5	1012.4	14.9987	15.2371	0.2384	3809.73	3833.75	1441	54	54	1.47	2122	112
12/05/2022	Cloudy	26.6	1006	18.3463	18.4861	0.1398	3833.91	3857.93	1441	54	54	1.47	2115	66
18/05/2022	Sunny	25.9	1013.8	15.0102	15.1934	0.1832	3858.61	3882.63	1441	54	54	1.47	2125	86
24/05/2022	Cloudy	23.6	1009.2	18.3026	18.3919	0.0893	3883.12	3907.13	1441	52	52	1.42	2049	44
30/05/2022	Cloudy	29.2	1005.9	15.4081	15.4965	0.0884	3907.37	3931.39	1441	50	50	1.35	1949	45
												Maximum		112
												Minimum		44
												Average		71
												Action Level		187
												Limit Level		260

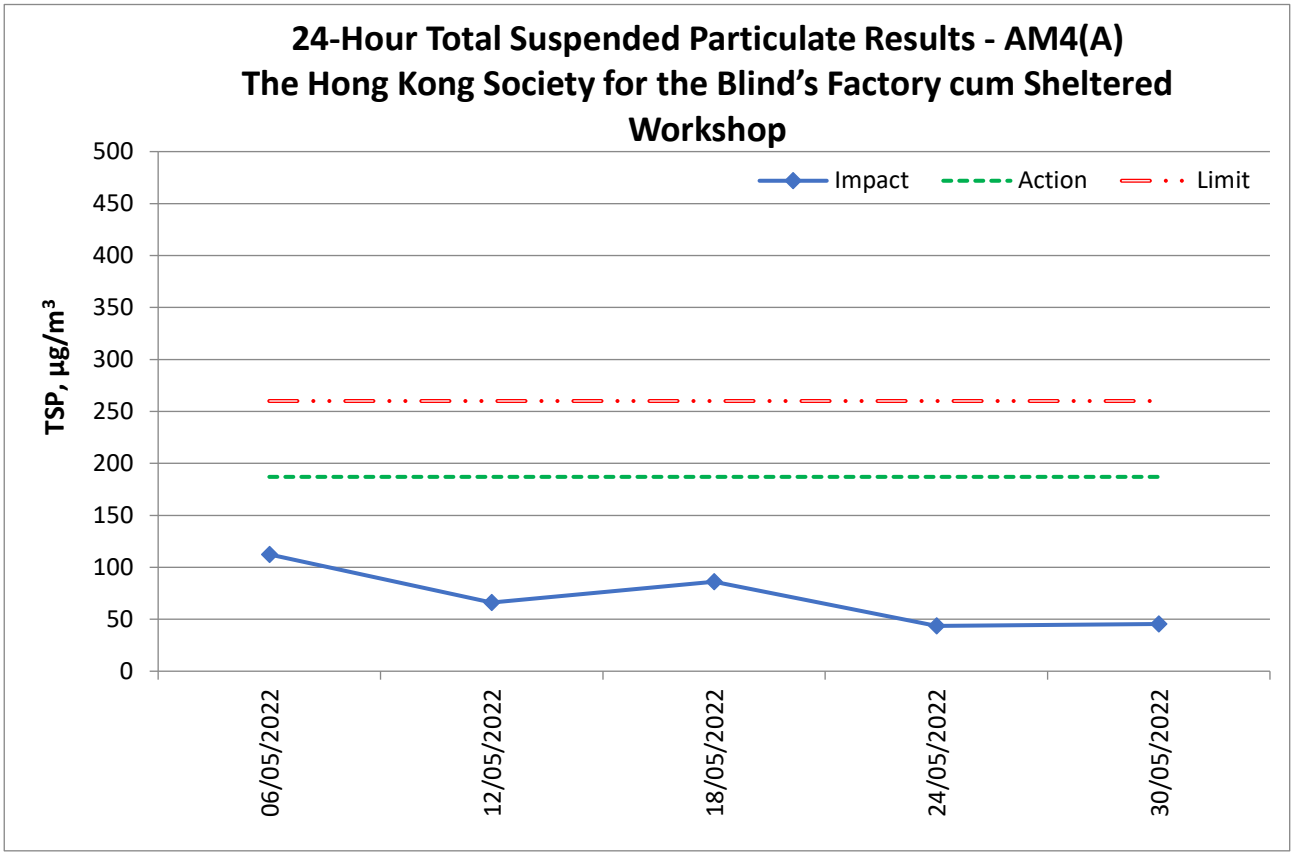
Location: AM7 – Hong Kong Children's Hospital

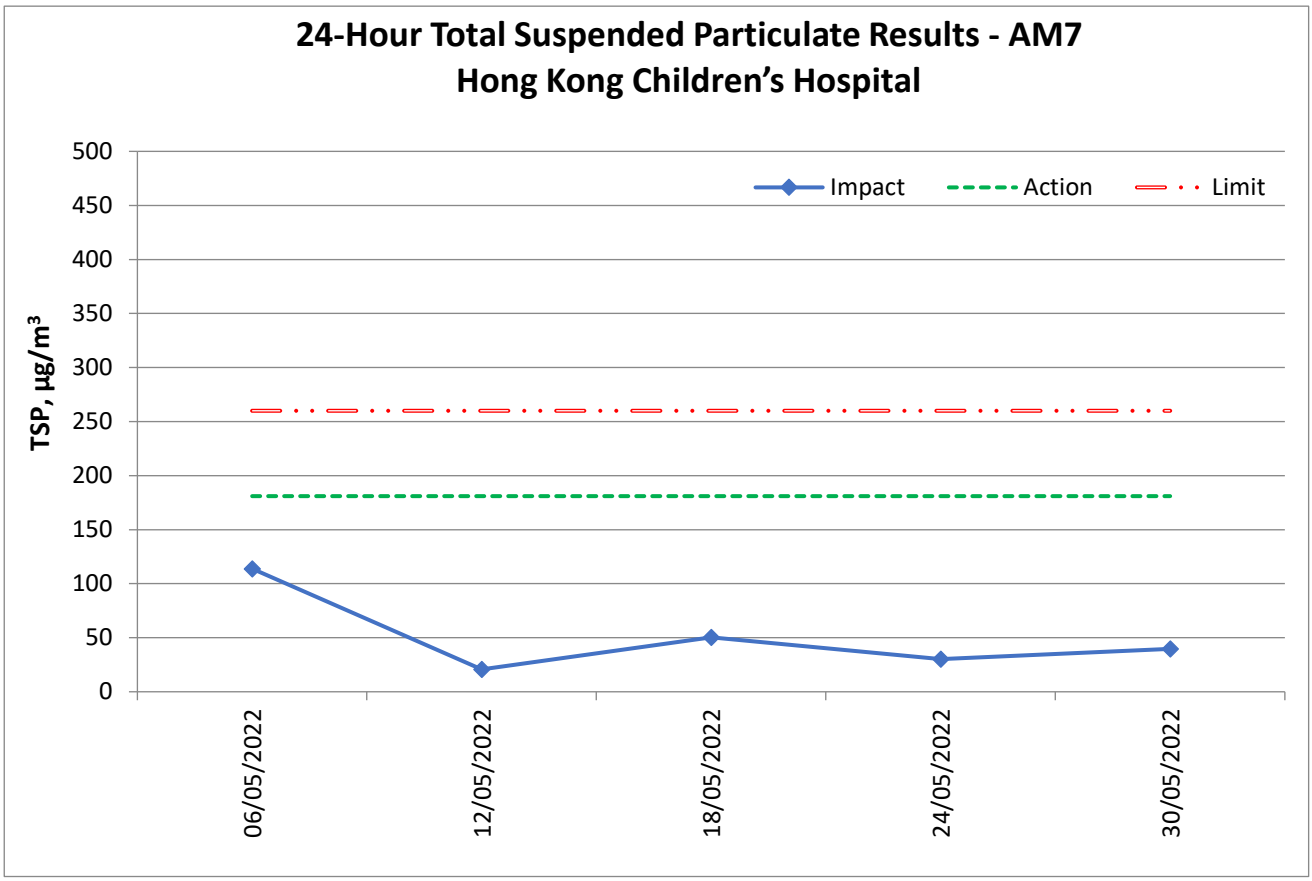
Start Date	Weather	Air Temp. (℃)	Atmospheric Pressure (hPa)	Filter weight (g)		Particulate weight (g)	Elapse Time		Sampling Time (min)	Flow Rate (cfm)		Av. Flow (m^3/min)	Total vol. (m^3)	Conc. ($\mu g/m^3$)
				Initial	Final		Initial	Final		Initial	Final			
06/05/2022	Sunny	26.5	1012.4	15.1039	15.3511	0.2472	9014.12	9038.14	1441	54	54	1.51	2171	114
12/05/2022	Cloudy	26.6	1006	15.0194	15.0642	0.0448	9039.61	9063.63	1441	54	54	1.50	2163	21
18/05/2022	Sunny	25.9	1013.8	15.1023	15.2034	0.1011	9063.89	9087.91	1441	50	50	1.40	2012	50
24/05/2022	Cloudy	23.6	1009.2	14.9853	15.0463	0.0610	9088.13	9112.15	1441	50	50	1.40	2015	30
30/05/2022	Cloudy	29.2	1005.9	15.2184	15.2973	0.0789	9112.81	9136.81	1440	50	50	1.38	1991	40

Maximum	114
Minimum	21
Average	51
Action Level	181
Limit Level	260

24-hour average TSP






24-Hour Total Suspended Particulate Results - AM7
Hong Kong Children's Hospital
TSP, µg/m³
500
450
400
350
300
250
200
150
100
50
0
Impact
Action
Limit
06/05/2022
12/05/2022
18/05/2022
24/05/2022
30/05/2022

Appendix H – 1-hr TSP monitoring results and graphical presentation

Location:
AM3 -
Sky Tower

Date	Measurement Period			1-hr TSP concentration, $\mu g/m^3$	Weather
06/05/2022	9:00	-	10:00	87	Sunny
	10:00	-	11:00	89	
	11:00	-	12:00	94	
12/05/2022	13:00	-	14:00	31	Cloudy
	14:00	-	15:00	36	
	15:00	-	16:00	35	
18/05/2022	9:00	-	10:00	79	Sunny
	10:00	-	11:00	80	
	11:00	-	12:00	85	
24/05/2022	13:00	-	14:00	26	Cloudy
	14:00	-	15:00	32	
	15:00	-	16:00	32	
30/05/2022	9:00	-	10:00	21	Cloudy
	10:00	-	11:00	23	
	11:00	-	12:00	26	
Maximum				94	
Minimum				21	
Average				52	
Action Level				297	
Limit Level				500	

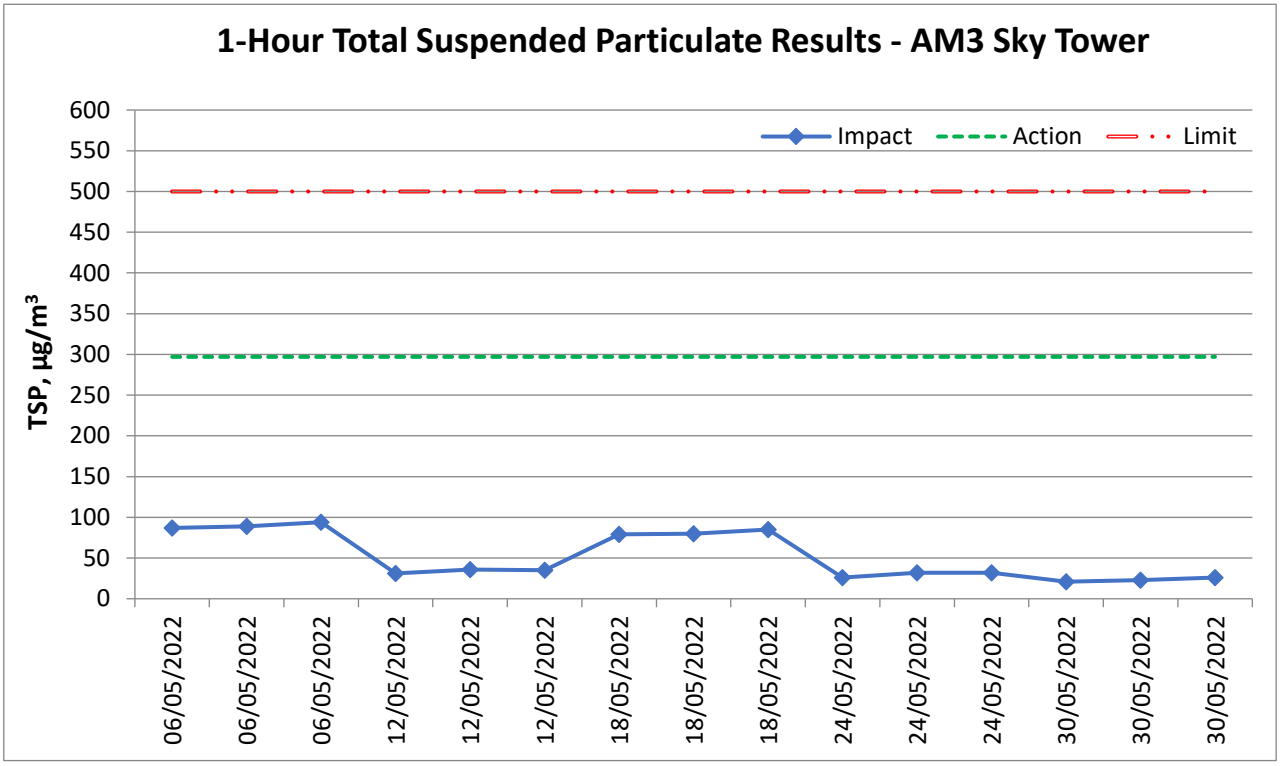
Location:
AM4(A) - The Hong Kong Society for the Blind's Factory cum Sheltered Workshop

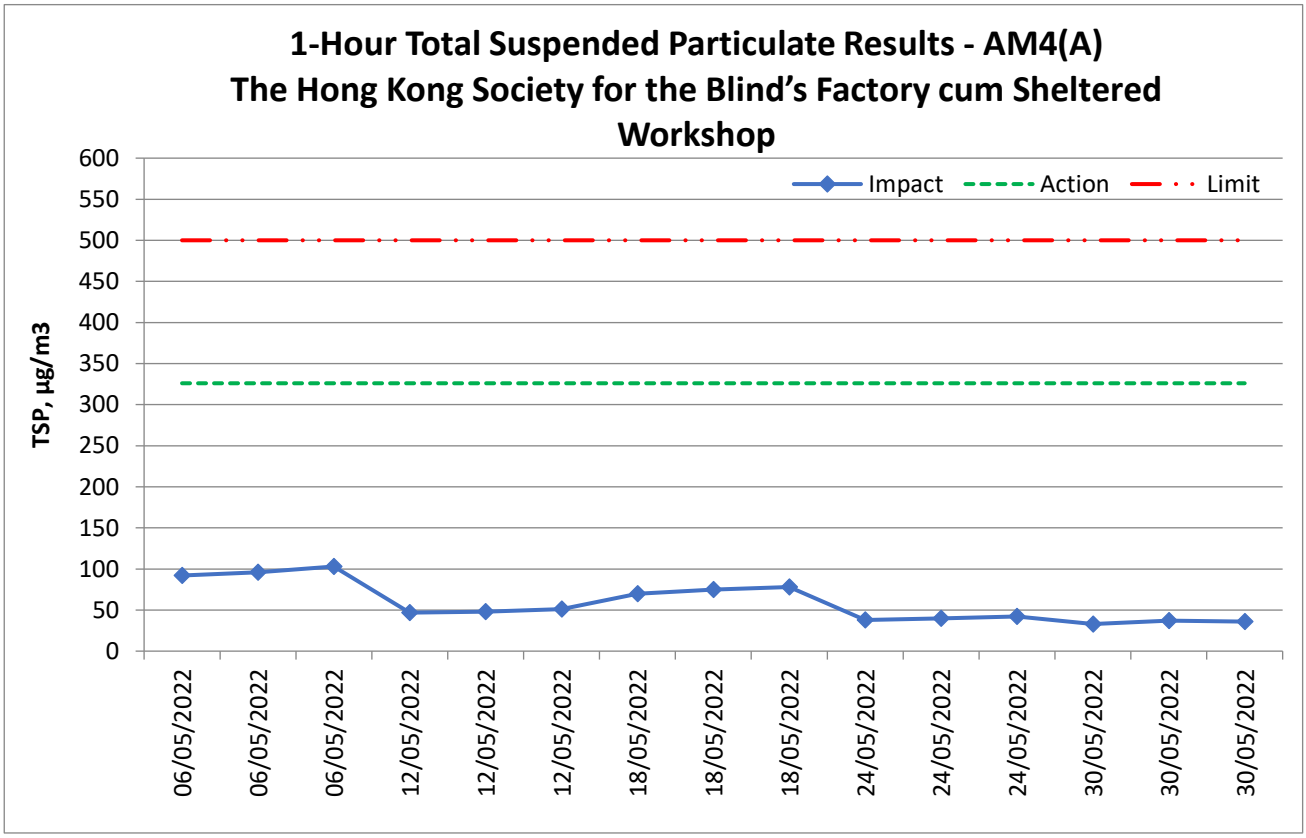
Date	Measurement Period			1-hr TSP concentration, $\mu g/m^3$	Weather
06/05/2022	13:00	-	14:00	92	Sunny
	14:00	-	15:00	96	
	15:00	-	16:00	103	
12/05/2022	13:00	-	14:00	47	Cloudy
	14:00	-	15:00	48	
	15:00	-	16:00	51	
18/05/2022	9:00	-	10:00	70	Sunny
	10:00	-	11:00	75	
	11:00	-	12:00	78	
24/05/2022	9:00	-	10:00	38	Cloudy
	10:00	-	11:00	40	
	11:00	-	12:00	42	
30/05/2022	13:00	-	14:00	33	Cloudy
	14:00	-	15:00	37	
	15:00	-	16:00	36	
Maximum				103	
Minimum				33	
Average				59	
Action Level				326	
Limit Level				500	

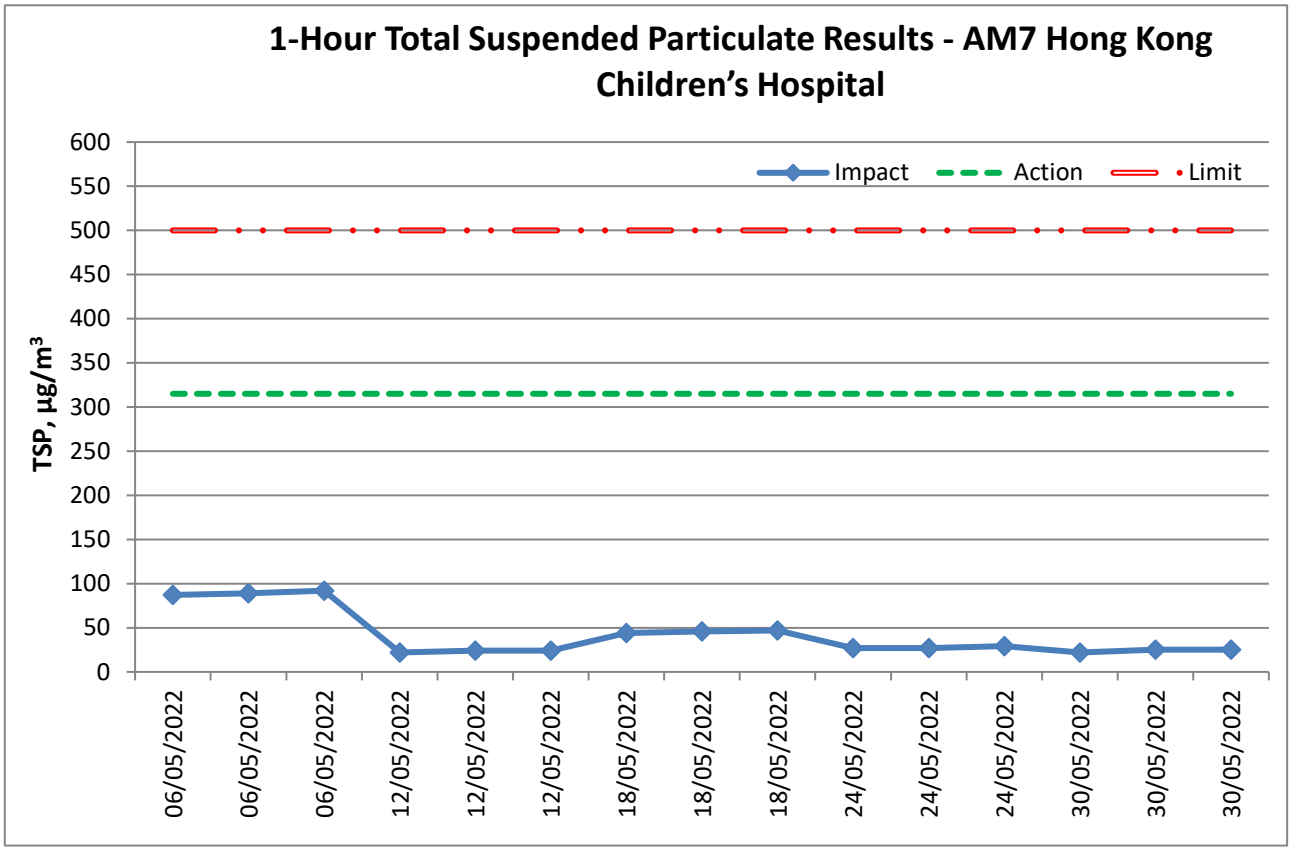
Location:
AM7 - Hong Kong Children's Hospital

Date	Measurement Period			1-hr TSP concentration, $\mu g/m^3$	Weather
06/05/2022	9:00	-	10:00	87	Sunny
	10:00	-	11:00	89	
	11:00	-	12:00	92	
12/05/2022	9:30	-	10:30	22	Cloudy
	10:30	-	11:30	24	
	16:30	-	17:30	24	
18/05/2022	13:00	-	14:00	44	Sunny
	14:00	-	15:00	46	
	15:00	-	16:00	47	
24/05/2022	13:00	-	14:00	27	Cloudy
	14:00	-	15:00	27	
	15:00	-	16:00	29	
30/05/2022	9:00	-	10:00	22	Cloudy
	10:00	-	11:00	25	
	11:00	-	12:00	25	
Maximum				92	
Minimum				22	
Average				42	
Action Level				315	
Limit Level				500	

1-hour average TSP






1-Hour Total Suspended Particulate Results - AM7 Hong Kong Children's Hospital
TSP, µg/m³
600
550
500
450
400
350
300
250
200
150
100
50
0
Impact
Action
Limit
06/05/2022
06/05/2022
06/05/2022
12/05/2022
12/05/2022
12/05/2022
18/05/2022
18/05/2022
18/05/2022
24/05/2022
24/05/2022
24/05/2022
30/05/2022
30/05/2022
30/05/2022

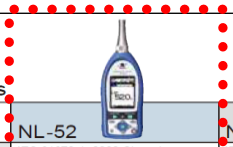
Appendix I – Event and Action Plan for air quality

Event	Action			
	ET	**IEC**	**Supervisor / ER**	**Contractor**
Action Level being exceeded by one sampling	1. Identify source and investigate the causes of exceedance; 2. Inform Contractor, IEC and Supervisor /ER; 3. Repeat measurement to confirm finding.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method.	1. Notify Contractor.	1. Rectify any unacceptable practice; 2. 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 additional monitoring.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with ET and Contractor on possible remedial measures; 4. Advise the Supervisor /ER on the effectiveness of the proposed remedial measures.	1. Confirm receipt of notification of exceedance in writing; 2. Notify Contractor; 3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented; 4. Supervise implementation of remedial measures; 5. Conduct meeting with ET and IEC if exceedance continues.	1. Discuss with ET and IEC on proper remedial actions; 2. Submit proposals for remedial actions to Supervisor /ER and IEC within three working day of notification; 3. Implement the agreed proposals; 4. Amend proposal if appropriate.
Limit Level being exceeded by one sampling	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	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss possible remedial measures with ET and Contractor; 4. Advise the Supervisor /ER	1. Confirm receipt of notification of exceedance in writing; 2. Notify Contractor; 3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be	1. Take immediate action to avoid further exceedance; 2. Discuss with ET and IEC on proper remedial actions; 3. Submit proposal for remedial actions to Supervisor /ER and IEC

Event	Action			
	ET	IEC	Supervisor / ER	Contractor
	Contractor's remedial actions and keep EPD, IEC and Supervisor /ER informed of the results.	on the effectiveness of the proposed remedial measures.	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	1. Notify IEC, Supervisor /ER, Contractor and EPD; 2. Repeat measurement to confirm findings; 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.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with Supervisor /ER, ET, and Contractor on the potential remedial actions; 4. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the Supervisor /ER accordingly.	1. Confirm receipt of notification of exceedance in writing; 2. Notify Contractor; 3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented; 4. Supervise implementation of remedial measures; 5. If exceedance continues, consider stopping the Contractor to continue working on that portion of work which causes the exceedance until the exceedance is abated.	1. Take immediate action to avoid further exceedance; 2. Discuss with ET and IEC on proper remedial 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.

Appendix J – Calibration certificates, catalogue of noise monitoring equipment

Specifications



	NL-52	NL-42
Applicable standards	IEC 61672-1: 2002 Class 1 ANSI S1.4-1983 Type 1 ANSI S1.4A-1985 Type 1 ANSI S1.43-1997 Type 1 JIS C 1509-1: 2005 Class 1	IEC 61672-1: 2002 Class 2 ANSI S1.4-1983 Type 2 ANSI S1.4A-1985 Type 2 ANSI S1.43-1997 Type 2 JIS C 1509-1: 2005 Class 2
	CE Marking (EMC Directive 2004/108/EC, Low Voltage Directive 2006/95/EC), WEEE Directives, Chinese RoHS (export model for China only)	
Measurement functions	Simultaneous measurement of the following items, with selected time weighting and frequency weighting	
Processing (main ch)	Instantaneous sound pressure level: L_p Equivalent continuous sound pressure level: L_{eq} Sound exposure level: L_E Maximum sound pressure level: L_{max} Minimum sound pressure level: L_{min} Percentile sound levels: L_N (0.1 to 99.9 %, 0.1-increment steps, max. 5 values)	
Processing (sub ch)	Instantaneous sound pressure level: L_p	
Additional processing	In addition to main processing items, one of the following can be selected for simultaneous processing: C-weighted equivalent continuous sound level: L_{Ceq} C-weighted peak sound level: L_{Cpeak} Z-weighted peak sound level: L_{Zpeak} Δ-time-weighted equivalent continuous sound level: $L_{A\Delta eq}$ ＊2 Maximum Δ-time-weighted equivalent continuous sound level: $L_{A\Delta max}$ ＊2 The power average of the maximum level of each 5 second interval: L_{ATm5} The frequency weighting for the additional processing synchronizes with the frequency weighting of the sub-channel, so when the sub-channel has A-weighting, L_{ATm5} can be selected. When C-weighting (Z-weighting) is selected, the additional processing L_{Ceq} and L_{Cpeak} (L_{Zpeak}) are selectable.	
Measuring time	10 s, 1, 5, 10, 15, 30 m, 1, 8, 24 h, and manual (maximum 24 h)	
Microphone Type	UC-59	UC-52
Microphone Sensitivity level	−27 dB	−33 dB
Measurement range	A-weighting: 25 dB to 138 dB C-weighting: 33 dB to 138 dB Z-weighting: 38 dB to 138 dB C-weighting peak sound level: 55 dB to 141 dB Z-weighting peak sound level: 60 dB to 141 dB	
Inherent noise A-weighting	17 dB or less	19 dB or less
Inherent noise C-weighting	25 dB or less	27 dB or less
Inherent noise Z-weighting	30 dB or less	32 dB or less
Frequency range	20 Hz to 20 kHz	20 Hz to 8 kHz
Frequency weighting	A, C, and Z	
Time weighting	F (Fast) and S (Slow)	
Level range	Single range (Linearity range: 113 dB)	
Bar graph display range max	Max. 110 dB (20 to 130 dB)	
Switching of bar graph display	Set the upper/ lower limit in 10 dB increments.	
RMS detection circuit	Digital processing method	
Sampling cycle	20.8 μs (L_p, L_{eq}, L_E, L_{max}, L_{min}, L_{peak} : sampling frequency: 48 kHz) 100 ms (L_N)	
Calibration	Measurement Law: electrical calibration performed according to IEC and JIS standards, using internally generated signals: acoustic calibration performed with the NC-74.	
Correction functions	Windscreen correction: Compliant with IEC 61672-1 and JIS C 1509-1 standards when the windscreen is installed.	
	Diffuse sound field correction: Correction of frequency characteristics in order to comply with standards (ANSI S1.4) in diffuse sound field.	
Delay time	The meter can be set to start measuring a specified time (OFF, 1, 3, 5 or 10 s) after the start button has been pressed or when a user-set trigger is exceeded.	
Back erase function	When the PAUSE key is pressed to pause measurement, the preceding (user selectable) 0, 1, 3 or 5 s data are excluded from processing.	
Display	Backlit semitransparent color TFT LCD display WQVGA (400 x 240 dots) ＊LCD with touch panel (Capacitive Touch Panel)	
	Numerical display update frequency: 1 s／Bar graph update frequency: 100 ms	
Store Manual	Data for measurement results are stored manually in single address increments.	
Number of data	Internal memory: max. 1000 sets SD Card: depends on the capacity of the SD Card＊1	
Auto＊2	Instantaneous values (L_p mode) and processed values (L_{eq} mode) are stored continuously and automatically at preset intervals.	
L_p sampling cycle	100 ms, 200 ms, 1 s, L_{eq} 1s	
L_{eq} sampling cycle	10 s, 1, 5, 10, 15, 30 ms, 1, 8, 24 h	
Measurement Time	Max. 1000 h (depends on the capacity of the SD Card)＊1	

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

Options

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

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

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

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

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

Distributed by:

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

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 leaflet is printed with environmentally friendly vegetable-based ink on recycled paper.

1011-4 1212.PD

Calibration Certificate of Sound Level Meter

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

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

校 准 证 书
CALIBRATION CERTIFICATE

证书编号: 2HB21001383-0001
Certificate No.

中国认可 国际互认 校准 CALIBRATION CNAS L13344

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.	00976203
管理号: Asset No.	AAST-SLM-10
接收日期: Rec. Date	2021-07-08
校准日期: Cal. Date	2021-07-19
签发日期: App. Date	2021-07-19
建议校准周期: Reference Cal. Period	12个月(12 months)
结论: Conclusion	所校准项目合格(Passed at Calibration Items)

校准: Calibrated by 陈卓辉
核验: Inspected by 张毅
签发: Approved by 郑木为
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
网址：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
Website: www.ceprei-cal.com

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 188-2017 声级计检定规程；Sound pressure level：(20～130)dB；Frequency Weighting：(20～130)dB@(10 Hz～20kHz)。
★ 详细内容请查看CNAS网站中注册编号为L13344的证书附件，超出范围的内容未被认可，其结果/结论所依据的合格评定活动不在认可范围内。(Please see the attachment of certificate No. L13344 at CNAS website for details, beyond which is not accredited, the conformity assessment activities on which the results/conclusions are based are outside the scope of accreditation.)。

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

名 称 (Description)	证书号/有效期/溯源单位 (Certificate No./Due Date/Traceability to)	技术指标 (Specification)	测量范围 (Measuring Range)
正弦信号发生器	4GC20000427-0010/2021-11-04/赛宝(广州)	f：±1mHz；失真度 Distortion：<-70dB	f：0.001Hz～200kHz；U：100μV～5Vrms
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；f:3Hz～300kHz
步进衰减器	4GC21000155-0024/2022-04-29/赛宝(广州)	±3dB	（0～110）dB/10dB step @(DC～1GHz)
PULSE分析系统	GFJGJL10012102027 25/2022-03-03/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

5. 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 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。

Calibration Certificate of Sound Level Meter

CEPREI

证书编号(Certificate No.)：2HB21001383-0001

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

无影响证书中测量结果准确度的因素和缺陷。

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

2 指示声级调整 (Indication SPL Calibration)

频率(Frequency)=1000Hz

传声器型号 (Microphone Type)	传声器编号 (Microphone SN.)	放大器型号 (Preamplifier Type)	放大器编号 (Preamplifier SN.)
UC-59	15764	NH-25	76321

声校准器型号 (Calibrator Type)	标准声压级 (Reference SPL) (dB)	校准前示值 (Before Calibration) (dB)	校准后示值 (After Calibration) (dB)	U (k=2) (dB)
4226	94.0	94.1	94.1	0.2

3 级线性 (Level Linearity)

3.1 参考级量程 (Reference Range) 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

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

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

CEPREI

证书编号(Certificate No.)：2HB21001383-0001

4 A计权特性(A-Weighting Characteristic)

频率 (Frequency) (Hz)	实测值 (Actual) (dB)	理论值 (Theoretical value) (dB)	误差 (Error) (dB)	允许误差 (Limit) (dB)	结论 (Pass/Fail) (P/F)	U (k=2) (dB)
20	-49.2	-50.5	1.3	±2.0	P	0.5
25	-44.2	-44.7	0.5	+2.0 ~ -1.5	P	0.5
31.5	-39.4	-39.4	0.0	±1.5	P	0.5
40	-34.4	-34.6	0.2	±1.0	P	0.5
50	-30.3	-30.2	-0.1	±1.0	P	0.5
63	-26.0	-26.2	0.2	±1.0	P	0.5
80	-22.4	-22.5	0.1	±1.0	P	0.5
100	-19.1	-19.1	0.0	±1.0	P	0.5
125	-16.0	-16.1	0.1	±1.0	P	0.5
160	-13.2	-13.4	0.2	±1.0	P	0.5
200	-10.8	-10.9	0.1	±1.0	P	0.5
250	-8.6	-8.6	0.0	±1.0	P	0.5
315	-6.6	-6.6	0.0	±1.0	P	0.4
400	-4.7	-4.8	0.1	±1.0	P	0.4
500	-3.3	-3.2	-0.1	±1.0	P	0.4
630	-1.9	-1.9	0.0	±1.0	P	0.4
800	-0.8	-0.8	0.0	±1.0	P	0.4
1000(Ref.)	0.0	0.0	0.0	±0.7	P	0.4
1250	0.5	0.6	-0.1	±1.0	P	0.6
1600	0.9	1.0	-0.1	±1.0	P	0.6
2000	1.1	1.2	-0.1	±1.0	P	0.6
2500	1.0	1.3	-0.3	±1.0	P	0.6
3150	0.9	1.2	-0.3	±1.0	P	0.6
4000	1.2	1.0	0.2	±1.0	P	0.6
5000	0.3	0.5	-0.2	±1.5	P	0.6
6300	-0.3	-0.1	-0.2	+1.5 ~ -2.0	P	0.6
8000	-0.6	-1.1	0.5	+1.5 ~ -2.5	P	0.6
10000	-2.4	-2.5	0.1	+2.0 ~ -3.0	P	0.6
12500	-4.3	-4.3	0.0	+2.0 ~ -5.0	P	1.0
16000	-8.5	-6.6	-1.9	+2.5 ~ -16.0	P	1.0
20000	-18.5	-9.3	-9.2	+3.0 ~ -∞	P	1.0

CEPREI

证书编号(Certificate No.)：2HB21001383-0001

5 C计权特性(C-Weighting Characteristic)

频率 (Frequency) (Hz)	实测值 (Actual) (dB)	理论值 (Theoretical value) (dB)	误差 (Error) (dB)	允许误差 (Limit) (dB)	结论 (Pass/Fail) (P/F)	U (k=2) (dB)
20	-6.6	-6.2	-0.4	±2.0	P	0.5
25	-4.5	-4.4	-0.1	+2.0 ~ -1.5	P	0.5
31.5	-2.9	-3.0	0.1	±1.5	P	0.5
40	-1.9	-2.0	0.1	±1.0	P	0.5
50	-1.3	-1.3	0.0	±1.0	P	0.5
63	-0.7	-0.8	0.1	±1.0	P	0.5
80	-0.5	-0.5	0.0	±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
160	-0.1	-0.1	0.0	±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	0.1	0.0	0.1	±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	-0.3	-0.2	-0.1	±1.0	P	0.6
2500	-0.6	-0.3	-0.3	±1.0	P	0.6
3150	-0.8	-0.5	-0.3	±1.0	P	0.6
4000	-0.6	-0.8	0.2	±1.0	P	0.6
5000	-1.6	-1.3	-0.3	±1.5	P	0.6
6300	-2.1	-2.0	-0.1	+1.5 ~ -2.0	P	0.6
8000	-2.5	-3.0	0.5	+1.5 ~ -2.5	P	0.6
10000	-4.3	-4.4	0.1	+2.0 ~ -3.0	P	0.6
12500	-6.3	-6.2	-0.1	+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

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证书编号(Certificate No.)：2HB21001383-0001

6 自生噪声 (Autogenous noise)

计权 (Weighting)	实测值 (Actual) (dB)
A	15.3

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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: 2HB21001370-0002
Certificate No.

CNAS 中国认可 国际互认 校准 CALIBRATION CNAS L13344

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.	00976204
管理号: Asset No.	AAST-SLM-11
接收日期: Rec. Date	2021-07-08
校准日期: Cal. Date	2021-07-19
签发日期: App. Date	2021-07-19
建议校准周期: Reference Cal. Period	12个月(12 months)
结论: Conclusion	所校准项目合格(Passed at Calibration Items)

校准: Calibrated by 陈卓辉
核验: Inspected by 张毅
签发: Approved by 郑木为
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
网址：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
Website: www.ceprei-cal.com

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 188-2017 声级计检定规程：Sound pressure level：(20～130)dB；Frequency Weighting：(20～130)dB@(10 Hz～20kHz)。
* 详细内容请查看CNAS网站中注册编号为L13344的证书附件，超出范围的内容未被认可，其结果/结论所依据的合格评定活动不在认可范围内。(Please see the attachment of certificate No. L13344 at CNAS website for details, beyond which is not accredited, the conformity assessment activities on which the results/conclusions are based are outside the scope of accreditation.)。

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

名 称 (Description)	证书号/有效期/溯源单位 (Certificate No./Due Date/Traceability to)	技术指标 (Specification)	测量范围 (Measuring Range)
正弦信号发生器	4GC20000427-0010/2021-11-04/赛宝(广州)	f：±1mHz；失真度 Distortion：<-70dB	f：0.001Hz～200kHz；U：100μV～5Vrms
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；f:3Hz～300kHz
步进衰减器	4GC21000155-0024/2022-04-29/赛宝(广州)	±3dB	（0～110）dB/10dB step @(DC～1GHz)
PULSE分析系统	GFJGJL1001210202725/2022-03-03/航空304所	频率:U_{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

5. 环境条件(Environmental conditions)：
温度(Temperature)：23.4℃ 相对湿度(Relative Humidity)：55.8%

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

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

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。

Calibration Certificate of Sound Level Meter

CEPREI

证书编号(Certificate No.)：2HB20001172-0004

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

传声器型号 (Microphone Type)	传声器编号 (Microphone SN.)	放大器型号 (Preamplifier Type)	放大器编号 (Preamplifier SN.)
UC-59	12133	NH-25	76321

声校准器型号 (Calibrator Type)	标准声压级 (Reference SPL) (dB)	校准前示值 (Before Calibration) (dB)	校准后示值 (After Calibration) (dB)	U (k=2) (dB)
4231	94.0	93.9	94.0	0.2

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):	-0.1	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):	-0.1	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):	-0.1	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):	-0.1	dB
U (k=2)	0.6	dB

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

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)	0.4	dB
上限以下5dB间隔1dB点的最大误差(Maximum Error for each 1dB below Upper Limit 5dB):	-0.2	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

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证书编号(Certificate No.)：2HB20001302-0001

4 A计权特性(A-Weighting Characteristic)

频率 (Frequency) (Hz)	实测值 (Actual) (dB)	理论值 (Theoretical value) (dB)	误差 (Error) (dB)	允许误差 (Limit) (dB)	结论 (Pass/Fail) (P/F)	U (k=2) (dB)
20	-48.8	-50.5	1.7	±2.0	P	0.5
25	-44.1	-44.7	0.6	+2.0 ~ -1.5	P	0.5
31.5	-39.3	-39.4	0.1	±1.5	P	0.5
40	-34.4	-34.6	0.2	±1.0	P	0.5
50	-30.2	-30.2	0.0	±1.0	P	0.5
63	-26.2	-26.2	0.0	±1.0	P	0.5
80	-22.4	-22.5	0.1	±1.0	P	0.5
100	-19.1	-19.1	0.0	±1.0	P	0.5
125	-16.2	-16.1	-0.1	±1.0	P	0.5
160	-13.2	-13.4	0.2	±1.0	P	0.5
200	-10.8	-10.9	0.1	±1.0	P	0.5
250	-8.7	-8.6	-0.1	±1.0	P	0.5
315	-6.6	-6.6	0.0	±1.0	P	0.4
400	-4.8	-4.8	0.0	±1.0	P	0.4
500	-3.2	-3.2	0.0	±1.0	P	0.4
630	-1.9	-1.9	0.0	±1.0	P	0.4
800	-0.8	-0.8	0.0	±1.0	P	0.4
1000(Ref.)	0.0	0.0	0.0	±0.7	P	0.4
1250	0.6	0.6	0.0	±1.0	P	0.6
1600	1.0	1.0	0.0	±1.0	P	0.6
2000	1.2	1.2	0.0	±1.0	P	0.6
2500	1.3	1.3	0.0	±1.0	P	0.6
3150	1.2	1.2	0.0	±1.0	P	0.6
4000	1.0	1.0	0.0	±1.0	P	0.6
5000	0.6	0.5	0.1	±1.5	P	0.6
6300	0.0	-0.1	0.1	+1.5 ~ -2.0	P	0.6
8000	-1.0	-1.1	0.1	+1.5 ~ -2.5	P	0.6
10000	-2.4	-2.5	0.1	+2.0 ~ -3.0	P	0.6
12500	-4.4	-4.3	-0.1	+2.0 ~ -5.0	P	1.0
16000	-8.0	-6.6	-1.4	+2.5 ~ -16.0	P	1.0
20000	-14.2	-9.3	-4.9	+3.0 ~ -∞	P	1.0

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证书编号(Certificate No.)：2HB20001302-0001

5 C计权特性(C-Weighting Characteristic)

频率 (Frequency) (Hz)	实测值 (Actual) (dB)	理论值 (Theoretical value) (dB)	误差 (Error) (dB)	允许误差 (Limit) (dB)	结论 (Pass/Fail) (P/F)	U (k=2) (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	-3.2	-3.0	-0.2	±1.5	P	0.5
40	-2.0	-2.0	0.0	±1.0	P	0.5
50	-1.4	-1.3	-0.1	±1.0	P	0.5
63	-0.8	-0.8	0.0	±1.0	P	0.5
80	-0.5	-0.5	0.0	±1.0	P	0.5
100	-0.3	-0.3	0.0	±1.0	P	0.5
125	-0.2	-0.2	0.0	±1.0	P	0.5
160	-0.1	-0.1	0.0	±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	0.0	0.0	0.0	±1.0	P	0.6
1600	-0.1	-0.1	0.0	±1.0	P	0.6
2000	-0.2	-0.2	0.0	±1.0	P	0.6
2500	-0.3	-0.3	0.0	±1.0	P	0.6
3150	-0.5	-0.5	0.0	±1.0	P	0.6
4000	-0.8	-0.8	0.0	±1.0	P	0.6
5000	-1.2	-1.3	0.1	±1.5	P	0.6
6300	-1.9	-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	-9.9	-8.5	-1.4	+2.5 ~ -16.0	P	1.0
20000	-16.2	-11.2	-5.0	+3.0 ~ -∞	P	1.0

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证书编号(Certificate No.)：2HB20001302-0001

6 自生噪声 (Autogenous noise)

计权 (Weighting)	实测值 (Actual) (dB)
A	18.3

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Sound Calibrator NC-75

GREEN

CE

RION

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

Sound Calibrator
NC-75

Patent pending

- Integrated newly developed reference microphone enables feedback control that completely eliminates the need for atmospheric pressure and coupler volume correction, resulting in highly accurate and reliable calibration.
- Effective coupler sound insulation (30 dB or higher*) permits calibration also in relatively noisy environments.
  *A-weighed sound level insulation performance measured with pink noise
- Each product comes standard with a JCSS Calibration Certificate, demonstrating high quality.

- Conforming with IEC 60942: 2017 class 1 and JIS C 1515: 2004 (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)

JCSS Calibration Certificate

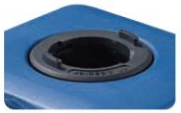
JCSS Calibration Results

Usage example

How to use the adapter

1-inch microphones

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



1/2-inch microphones

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

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

1/4-inch microphones

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

Specifications (under standard ambient conditions*)

Applicable standards	IEC 60942: 2017 class1, ANSI/ASA S1.40-2006 class1, JIS C 1515: 2004 class 1, CE marking, WEEE directive, Chinese RoHS
Supported microphones	Microphones made by RION and microphones made by other manufacturers that meet the IEC 61094-4 size specifications 1-inch microphones 1/2-inch microphones (with supplied adapter) 1/4-inch microphones (with optional adapter)
Nominal sound pressure level	94 dB
Sound pressure level tolerance	Max. ±0.20 dB
Nominal frequency	1 000 Hz
Frequency tolerance	Max. ±0.1%
THD + noise	Max. 1.0 % (22.4 Hz to 22.4 kHz)
Dimensions and weight	Approx. 42 mm (H) x 77 mm (W) x 70 mm (D), approx. 200 g
Power supply	IEC LR6 (size AA) alkaline battery x 2 IEC LR6 (size AA) nickel-hydride rechargeable battery ("eneloop pro" supported) x 2
Battery life	50 hours or more (using two alkaline batteries, continuous use) 50 hours or more (using two nickel-hydride rechargeable batteries [eneloop pro], continuous use)
Supplied accessories	Soft case x 1, 1/2-inch microphone adapter x 1, IEC LR6 (size AA) alkaline battery x 2, hand strap x 1, JCSS Calibration Certificate x 1

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

Optional accessories	1/4-inch microphone adapter NC-75-S11

Strap

Securely carry the unit with the supplied hand strap

Soft case

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

PISTONPHONE NC-72A

Specifications (under standard ambient conditions*)

Applicable standards	IEC 60942: 2017 class LS/M, class 1/M, JIS C 1515: 2004 class LS/C, class 1/C
Nominal sound pressure level	114 dB, Sound pressure level tolerance ±0.10 dB

JCSS 0197

RION CO., LTD. is recognized by the JCSS which uses ISO/IEC 17025 as an accreditation standard and bases its accreditation scheme on ISO/IEC 17011. JCSS is operated by the accreditation body (IA Japan) which is a signatory to the Asia Pacific Accreditation Cooperation (APAC) as well as the International Laboratory Accreditation Cooperation (ILAC). The Quality Assurance Section of RION CO., LTD. is an international MRA compliant JCSS operator with the accreditation number JCSS 0197.

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

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

Distributed by:

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https://rion-sv.com/
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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 leaflet is printed with environmentally friendly UV ink.

1709-5 1910.P.D

Catalogue of Sound Calibrator	Calibration Certificate of Sound Calibrator

For microphone calibration **NC-74**

How to use

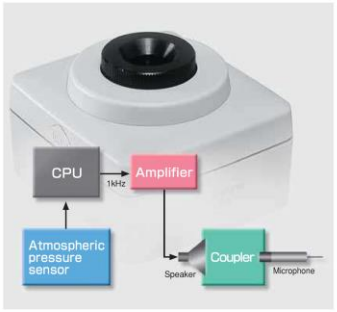
Carefully insert the microphone all the way into the coupler of the NC-74. Then simply turn the power on to apply a constant sound pressure level to the diaphragm of the microphone.

Usage example (NL series)

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

Atmospheric pressure compensation principle

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



Using the 1/2-inch adapter

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

Specifications

Applicable standards	IEC 60942:2003 Class 1 JIS C1515:2004 Class 1	
Suitable microphones	1-inch microphones	IEC 61094-1 Type LS1P UC-27 UC-25 UC-34
	1/2-inch microphones	IEC 61094-1 Type LS2aP UC-59 UC-57 UC-53A UC-52 UC-26 UC-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 × 2	
Dimensions, mass	Approx. 49 (H) × 80 (W) × 74 (D) mm Approx. 200 g (including batteries)	
Supplied accessories	Case × 1 IEC LR6 (size AA) alkaline battery × 2 1/2-inch microphone adapter NC-74-002 × 1	

* Specification subject to change without notice.

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

RION CO., LTD.
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/

Distributed by:

Printed in Japan 0510-1 0807,P,MP

CEPREI

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

校 准 证 书
CALIBRATION CERTIFICATE

证书编号：2HB21001749-0002
Certificate No.

CNAS 中国认可 国际互认 校准 CALIBRATION CNAS L13344

委托单位：Client	Castco Testing Centre Limited
仪器名称：Description	Sound Level Calibrator
型号规格：Model/Type	NC-75
制造商：Manufacturer	RION
机身号：Serial No.	34280310
管理号：Asset No.	AAST-SLC-07
接收日期：Rec. Date	2021-08-05
校准日期：Cal. Date	2021-08-17
签发日期：App. Date	2021-08-18
建议校准周期：Reference Cal. Period	12个月(12 months)
结论：Conclusion	所校准项目合格(Passed at Calibration Items)

校准：Calibrated by 赵文钰
核验：Inspected by 张毅
签发：Approved by 郑木为
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
网址：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
Website: www.ceprei-cal.com

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～20kHz)。
* 详细内容请查看CNAS网站中注册编号为L13344的证书附件，超出范围的内容未被认可，其结果/结论所依据的合格评定活动不在认可范围内。(Please see the attachment of certificate No. L13344 at CNAS website for details, beyond which is not accredited, the conformity assessment activities on which the results/conclusions are based are outside the scope of accreditation.)。

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

名　称 (Description)	证书号/有效期/溯源单位 (Certificate No./Due Date/Traceability to)	技术指标 (Specification)	测量范围 (Measuring Range)
标准传声器	LSsx2021-13180/2022-04-24/中国计量院	U=(0.05–0.20)dB（k=2）	10Hz～20kHz
PULSE分析系统	4GC21000026-0375/2022-01-21/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
前置放大器	LSsx2021-13000/2022-04-19/中国计量院	U=0.3dB（k=2）	（10～50000）Hz

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

5. 环境条件(Environmental conditions)：
温度(Temperature)：22.9℃　　相对湿度(Relative Humidity)：59.5%

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

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

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.

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)

规定声压级 (Prescribed SPL) (dB)	测量声压级 (Measured SPL) (dB)	声压级差的绝对值 (Absolute value of SPL) (dB)	允许范围 (Limit) (dB)	结论 (Pass/Fail)	U (k=2) (dB)
94	94.12	0.12	≤0.40	P	0.10

3 频率 (Frequency)

规定频率 (Prescribed Fre.) (Hz)	测量频率 (Measured Fre.) (Hz)	频率误差的绝对值 (Absolute value of Fre.) (%)	允许范围 (Limit) (%)	结论 (Pass/Fail)	U_{rel} (k=2) (%)
1000	1000.0	0.00	≤1.00	P	0.10

4 总失真 (Distortion)

规定声压级 (Prescribed SPL) (dB)	规定频率 (Measured Fre.) (Hz)	总失真 (Distortion) (%)	允许范围 (Limit) (%)	结论 (Pass/Fail)	U_{rel} (k=2) (%)
94	1000	0.15	≤3.00	P	5.0

以下空白/No data hereafter

Calibration Certificate of Sound Calibrator

AAST-SLC-05
Cal Cert: 2021/07/19

中 国 赛 宝 实 验 室 计 量 检 测 中 心
(工业和信息化部电子第五研究所计量检测中心)
CHINA CEPREI LABORATORY CALIBRATION & TESTING CENTRE

CEPREI

校 准 证 书
CALIBRATION CERTIFICATE

证书编号：2HB21001370-0004
Certificate No.

CNAS 中国认可 国际互认 校准 CALIBRATION CNAS L13344

委托单位：Client	Castco Testing Centre Limited		
仪器名称：Description	Sound Level Calibrator		
型号规格：Model/Type	NC-74		
制造商：Manufacturer	RION		
机身号：Serial No.	34178129		
管理号：Asset No.	AAST-SLC-05		
接收日期：Rec. Date	2021-07-08	校准日期：Cal. Date	2021-07-19
签发日期：App. Date	2021-07-19	建议校准周期：Reference Cal. Period	12个月(12 months)
结论：Conclusion	所校准项目合格(Passed at Calibration Items)		

校准：Calibrated by 陈卓辉
核验：Inspected by 张毅
签发：Approved by 郑木为
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
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

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～20kHz)。
* 详细内容请查看CNAS网站中注册编号为L13344的证书附件，超出范围的内容未被认可，其结果/结论所依据的合格评定活动不在认可范围内。(Please see the attachment of certificate No. L13344 at CNAS website for details, beyond which is not accredited, the conformity assessment activities on which the results/conclusions are based are outside the scope of accreditation.)

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

名 称 (Description)	证书号/有效期/溯源单位 (Certificate No./Due Date/Traceability to)	技术指标 (Specification)	测量范围 (Measuring Range)
PULSE分析系统	4GC21000026-0375/2022-01-21/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
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

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

5. 环境条件(Environmental conditions)：
温度(Temperature)：23.3℃ 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 ≤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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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.

Calibration Certificate of Sound Calibrator	Catalogue of Air Flow Meter (TSI TA440)

CEPREI

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)

规定声压级 (Prescribed SPL) (dB)	测量声压级 (Measured SPL) (dB)	声压级差的绝对值 (Absolute value of SPL) (dB)	允许范围 (Limit) (dB)	结论 (Pass/Fail)	U (k=2) (dB)
94	94.29	0.29	≤0.40	P	0.10

3 频率 (Frequency)

规定频率 (Prescribed Fre.) (Hz)	测量频率 (Measured Fre.) (Hz)	频率误差的绝对值 (Absolute value of Fre.) (%)	允许范围 (Limit) (%)	结论 (Pass/Fail)	U_{rel} (k=2) (%)
1000	1002.1	0.21	≤1.00	P	0.10

4 总失真 (Distortion)

规定声压级 (Prescribed SPL) (dB)	规定频率 (Measured Fre.) (Hz)	总失真 (Distortion) (%)	允许范围 (Limit) (%)	结论 (Pass/Fail)	U_{rel} (k=2) (%)
94	1000	1.34	≤3.00	P	5.0

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CEPREI

数据页(Data sheet) ID：013393 第 5 页,共 5 页 Page of

SPECIFICATIONS

THERMAL ANEMOMETERS
MODELS TA410, TA430 AND TA440

Velocity

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

Duct Size (TA430, TA440)

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

Volumetric Flow Rate (TA430, TA440)

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

Temperature

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

Relative Humidity (TA440 only)

Range	5 to 95% RH
Accuracy[4]	±3% RH
Resolution	0.1% RH

Wet Bulb Temperature (TA440 only)

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

Dew Point (TA440 only)

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

Instrument Temperature Range

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

Data Storage Capabilities (TA430, TA440)

Range	12,700+ samples and 100 test IDs

Logging Interval (TA430, TA440)
1 second to 1 hour

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	+	+	+

[1] Temperature compensated over an air temperature range of 5 to 65°C (40 to 150°F).
[2] The accuracy statement begins at 30 ft/min through 4000 ft/min (0.15 m/s through 20 m/s) for the Model TA410, and 30 ft/min through 6,000 ft/min (0.15 m/s through 30 m/s) for Models TA430 and TA440.
[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 1% hysteresis.

AIRFLOW INSTRUMENTS

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

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

P/N 2980548 Rev D (A4)

Calibration Certificate of Air Flow Meter

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

ACCREDITED Certificate #3815.01

Calibration Certificate No.: CC0322201

Customer Information

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

Equipment Identification

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

Certificate Information

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

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 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.

CT-AFR-01

Note1: The estimated expanded uncertainties have been calculated in "Evaluation and expression of uncertainty in measurement" and give an internal estimated to have a level of confidence of 95%. A coverage factor of 2 is assumed unless explicitly stated.
Note2: The standard (s) and instrument used in the calibration are traceable to national or international recognized standard and are calibrated on a schedule to maintain the accuracy and good condition.
Note3: The result reported in this certificate refer to the condition of the instrument on the date of calibration and carry no implication regarding the long term stability of the instrument.
Note4: The result shows in this calibration certificate relate only to the item calibrated, and the result only applies to the calibration item as received.

Calibrated By: Rex Tse
Checked and Approved By: Warren Yeung
Company Chop:
Certificate Issue Date: 25 January 2022

CT-BEG-03

*** End of Certificate ***

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

ACCREDITED Certificate #3815.01

Calibration Certificate No.: CC0332201

Customer Information

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

Equipment Identification

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

Certificate Information

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

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 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.

CT-AFR-01

Note1: The estimated expanded uncertainties have been calculated in "Evaluation and expression of uncertainty in measurement" and give an internal estimated to have a level of confidence of 95%. A coverage factor of 2 is assumed unless explicitly stated.
Note2: The standard (s) and instrument used in the calibration are traceable to national or international recognized standard and are calibrated on a schedule to maintain the accuracy and good condition.
Note3: The result reported in this certificate refer to the condition of the instrument on the date of calibration and carry no implication regarding the long term stability of the instrument.
Note4: The result shows in this calibration certificate relate only to the item calibrated, and the result only applies to the calibration item as received.

Calibrated By: Rex Tse
Checked and Approved By: Warren Yeung
Company Chop:
Certificate Issue Date: 25 January 2022

CT-BEG-03

*** End of Certificate ***

Appendix K – Noise monitoring results and graphical presentation

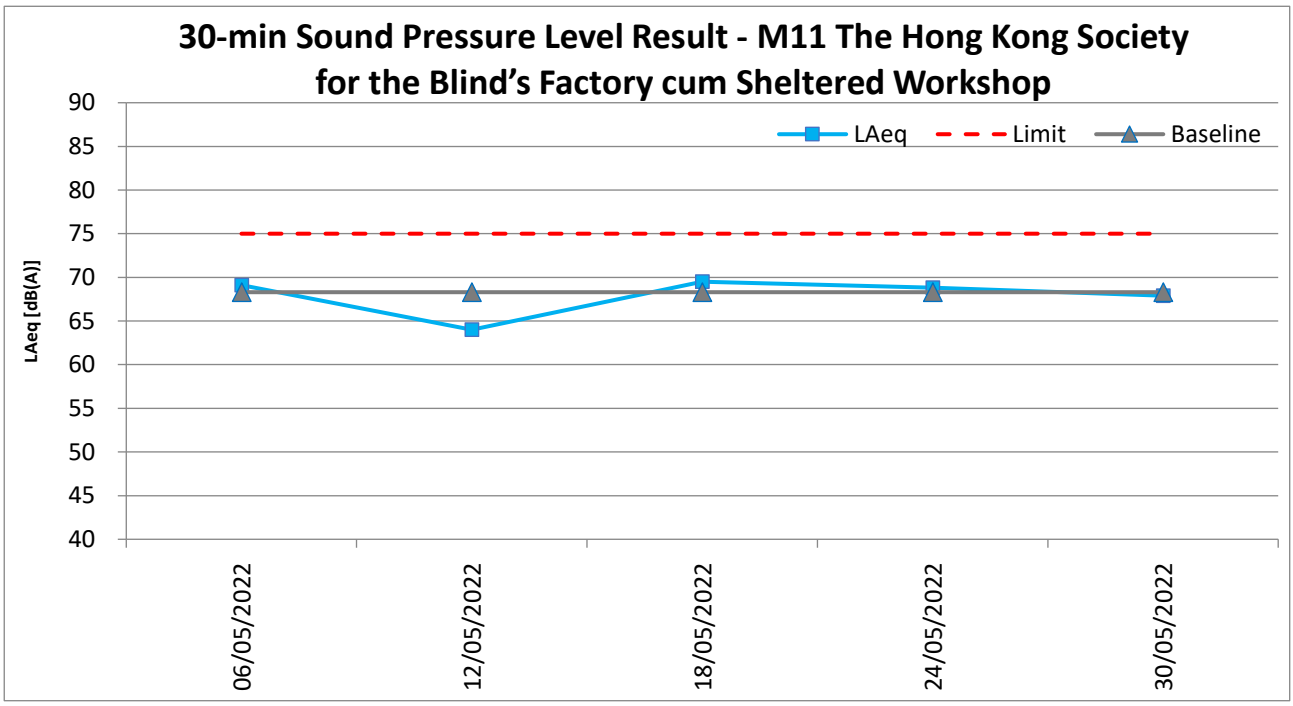
M11 - The Hong Kong Society for the Blind's Factory cum Sheltered Workshop

Date	Temp (°C)	Weather	Measured Noise Level at M11, dB(A)							Limit
			Time			Baseline	L_{Aeq}	L_{A10}	L_{A90}	
06/05/2022	26.5	Sunny	15:20	-	15:50	68.3	69.1	72.6	62.5	75
12/05/2022	26.6	Cloudy	14:21	-	14:51	68.3	64.0	65.4	62.0	75
18/05/2022	25.9	Sunny	11:13	-	11:43	68.3	69.5	71.9	65.8	75
24/05/2022	23.6	Cloudy	10:05	-	10:35	68.3	68.8	71.3	65.0	75
30/05/2022	29.2	Cloudy	14:04	-	14:34	68.3	67.9	70.8	63.4	75
			Maximum				69.5			
			Minimum				64.0			
			Average				68.2			

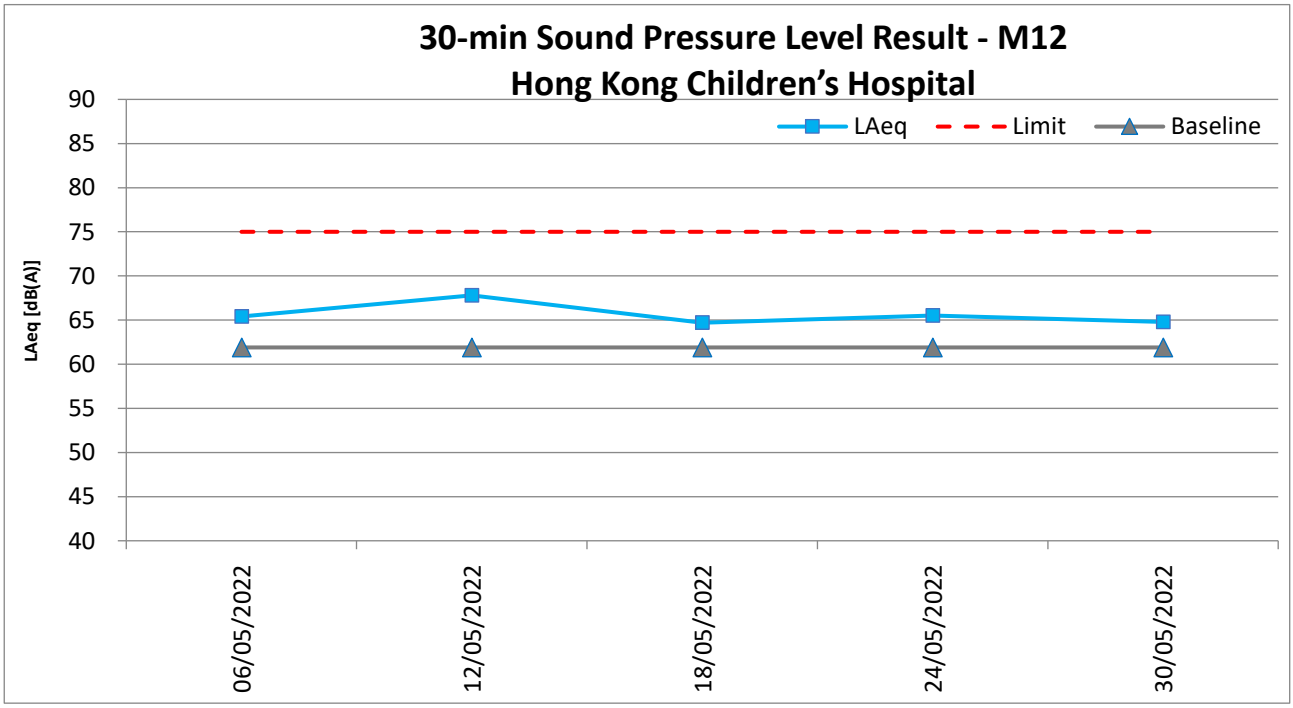
M12 - Hong Kong Children's Hospital

Date	Temp (°C)	Weather	Measured Noise Level at M12, dB(A)							Limit
			Time			Baseline	L_{Aeq}	L_{A10}	L_{A90}	
06/05/2022	26.5	Sunny	11:01	-	11:31	61.9	65.4	67.3	63.0	75
12/05/2022	26.6	Cloudy	16:32	-	17:02	61.9	67.8	70.8	62.2	75
18/05/2022	25.9	Sunny	15:08	-	15:38	61.9	64.7	66.6	61.9	75
24/05/2022	23.6	Cloudy	14:02	-	14:32	61.9	65.5	68.5	61.4	75
30/05/2022	29.2	Cloudy	9:58	-	10:28	61.9	64.8	66.5	62.7	75
			Maximum				67.8			
			Minimum				64.7			
			Average				65.8			

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



$L_{Aeq, 30\text{-}min}$ graphical results of M12 - Hong Kong Children's Hospital



Appendix L – Event and Action Plan for noise

Event	Action			
	ET	**IEC**	**Supervisor / ER**	**Contractor**
Action Level being exceeded	1. Notify Supervisor / ER, IEC and Contractor; 2. Carry out investigation; 3. Report the results of investigation to the IEC, Supervisor / ER and Contractor; 4. Discuss with the IEC and Contractor on remedial measures required; 5. 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.)	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.)	1. Submit noise mitigation proposal to IEC and Supervisor / ER; 2. 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.)	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented; 4. Supervise the implementation of remedial measures; 5. If exceedance continues, consider stopping the Contractor to continue working on that portion of work which causes the	1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IEC and Supervisor /ER within 3 working days of notification; 3. Implement the agreed proposal; 4. Submit further proposal if problem still not under control; 5. Stop the relevant portion of works as instructed by the Supervisor /ER until the exceedance is abated. (The above actions should be

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

Appendix M – Event and Action Plan for Landscape and Visual Impact

Event	Action			
	ET	**IEC**	**Supervisor / ER**	**Contractor**
Design Check	1. Check final design conforms to the requirements of EP and prepare report.	1. Check report. 2. Recommend remedial design if necessary.	1. Undertake remedial design if necessary.	
Non-conformity on one occasion	1. Identify Source. 2. Inform IEC and Supervisor /ER. 3. Discuss remedial actions with IEC, Supervisor /ER and Contractor. 4. Monitor remedial actions until rectification has been completed.	1. Check report. 2. Check Contractor's working method. 3. Discuss with ET and Contractor on possible remedial measures. 4. Advise Supervisor /ER on effectiveness of proposed remedial measures. 5. Check implementation of remedial measures.	1. Notify Contractor. 2. Ensure remedial measures are properly implemented.	1. Amend working methods. 2. Rectify damage and undertake any necessary replacement.
Repeated Non-conformity	1. Identify Source. 2. Inform IEC and Supervisor /ER. 3. Increase monitoring frequency. 4. Discuss remedial actions with IEC, Supervisor /ER and Contractor. 5. Monitor remedial actions until rectification has been completed. 6. If non-conformity stops, cease additional monitoring.	1. Check monitoring report. 2. Check Contractor's working method. 3. Discuss with ET and Contractor on possible remedial measures. 4. Advise Supervisor /ER on effectiveness of proposed remedial measures. 5. Supervise implementation of remedial measures.	1. Notify Contractor. 2. Ensure remedial measures are properly implemented.	1. Amend working methods. 2. 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 May 2022

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper / cardboard packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. general refuse
	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m^3)
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											
Sub-total	5.211	--	0.450	--	4.761	--	--	0.100	--	--	0.779
July											
Aug											
Sep											
Oct											
Nov											
Dec											
Total	5.211	--	0.450	--	4.761	--	--	0.100	--	--	0.779

Forecast of Total Quantities of C&D Materials to be Generated from the Contract*

Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper / cardboard packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. general refuse
(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m^3)
195.01	**2.103**	**10.2**	**140**	**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
(3) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material and water barrier
(4) The Contractor shall also submit the latest forecast of the total amount of C&D materials expected to be generated from the works, together with a breakdown of the nature where the total amount of C&D materials expected to be generated from the Works is equal to or exceeding 50,000m^3 (**ER Part 8 Clause 8.7.5(d)**(ii) refers)
(5) Assume inert C&D materials density and non-inert C&D materials are 1.9 m^3/ton and 1.5 m^3/ton

Appendix O – Environmental Mitigation Implementation Schedule (EMIS)

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

Implementation Schedule for 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 Examination Period	N/A

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		<u>Construction Runoff</u> Exposed soil areas should be minimised to reduce the potential for increased siltation, contamination of runoff, and erosion. Construction runoff related impacts associated with the above ground construction activities can be readily controlled through the use of appropriate mitigation measures which include:	^
S3.4		- use of sediment traps.	^
S3.4		- adequate maintenance of drainage systems to prevent flooding and overflow.	^

Implementation Schedule for Water Quality Measures			
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 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	^

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

Implementation 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 likely, actions to be taken when a rainstorm is imminent or forecast, and actions to be taken during or after rainstorms are summarised in Appendix A2 of ProPECC PN 1/94. Particular attention should be paid to the control of silty surface runoff during storm events.	^
S3.4		Oil interceptors should be provided in the drainage system and regularly cleaned to prevent the release of oils and grease into the storm water drainage system after accidental spillages. The interceptor should have a bypass to prevent flushing during periods of heavy rain.	NA
S3.4	S5.8	<u>Wheel Washing Water</u> All vehicles and plant should be cleaned before leaving a construction site to ensure no earth, mud, debris and the like is deposited by them on roads. An adequately designed and located wheel washing bay should be provided at every site exit, and wash-water should have sand and silt settled out and removed at least on a weekly basis to ensure the continued efficiency of the process. The section of access road leading to, and exiting from, the wheel-wash bay to the public road should be paved with sufficient backfall toward the wheel-wash bay to prevent vehicle tracking of soil and silty water to public roads and drains.	^
S3.4		<u>Drainage</u> It is recommended that on-site drainage system should be installed prior to the commencement of other construction activities. Sediment traps should be installed in order to minimise the sediment loading of the effluent prior to discharge into foul sewers. There should be no direct discharge of effluent from the site into the sea.	^
S3.4		All temporary and permanent drainage pipes and culverts provided	^

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

Implementation Schedule for Water Quality Measures			
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 Acidic wastewater generated from acid cleaning, etching, pickling and similar activities should be neutralized to within the pH range of 6 to 10 before discharging into foul sewers.	NA
	S5.8	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	^

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

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

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

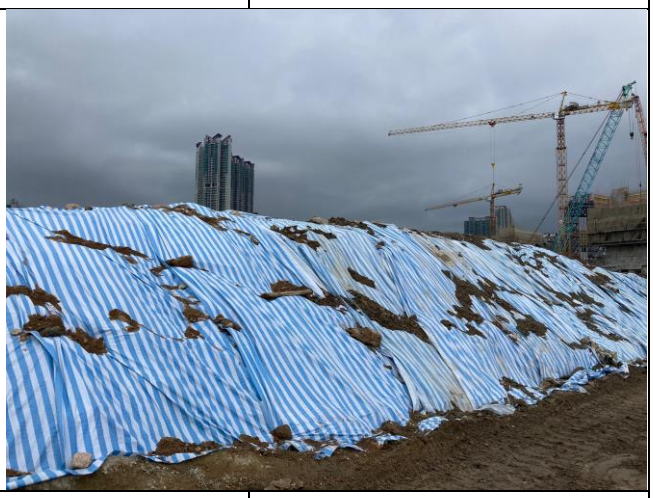
Implementation Schedule for Waste Management Measures			
EIA for KTD Development Ref.	**EIA for KTD – Roads D3A & D4A Ref.**	**Environmental Protection Measures / Mitigation Measures**	**Status**
		disposal, the transient stockpiles shall be located away from waterfront or storm drains as far as possible.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

Implementation Schedule for Waste Management Measures			
EIA for KTD Development Ref.	**EIA for KTD – Roads D3A & D4A Ref.**	**Environmental Protection Measures / Mitigation Measures**	**Status**
		of waste.	
S3.5		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.	^
	S6.7	Separation of chemical wastes for special handling and appropriate treatment.	^
S3.5		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.	^

Implementation Schedule for Landscape and Visual Measures			
EIA for KTD Development Ref.	**EIA for KTD – Roads D3A & D4A Ref.**	**Environmental Protection Measures / Mitigation Measures**	**Status**
S3.8.12		All existing trees should be carefully protected during construction.	^
S3.8.12		Trees unavoidably affected by the works should be transplanted where practical. Detailed transplanting proposal will be submitted to relevant government departments for approval in accordance with ETWBC 2/2004 and 3/2006. Final locations of transplanted trees should be agreed prior to commencement of the work.	NA
S3.8.12		Control of night-time lighting.	^
S3.8.12		Erection of decorative screen hoarding.	^
	S7.9	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.	^
		- CM3 - Erection of decorative mesh screens or construction	^

Implementation Schedule for Landscape and Visual Measures			
EIA for KTD Development Ref.	**EIA for KTD – Roads D3A & D4A Ref.**	**Environmental Protection Measures / Mitigation Measures**	**Status**
		hoardings around works areas in visually unobtrusive colours.	
		- CM4 - Reduction of construction period to practical minimum.	^
		- 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:			
^	Compliance of mitigation measure.	X	Non-compliance of mitigation measure.
N/A N/A (1)	Not Applicable at this stage. Not observed.	●	Non-compliance but rectified by the contractor.
*	Recommendation was made during site audit but improved/rectified by the contractor.	#	Recommendation was made during audit and to be improved/ rectified by the contractor.

Mitigation Measures undertaken by the Contractor for site inspections			
			
Date:	05 May 2022	Date:	12 May 2022
Mitigation Measures:	The vehicles are restricted to maximum speed of 10 km per hour inside the site.	Mitigation Measures:	Equipment with QPME label was used.
			
Date:	26 May 2022	Date:	26 May 2022
Mitigation Measures:	Using drip tray to dispatch the diesel container.	Mitigation Measures:	The open stockpiles of construction materials on sites were covered.

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

Reporting Month: May 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.	1. The water spraying system was not operated in proper time. 2. Stockpile was not covered properly. 3. Haul road was not wetted. 4. Materials transported on trucks were not provided with mechanical covers.	<u>Investigation</u> 1. Based on the information provided by the Contractor on 22 October 2020, the water sprinklers system was sprayed every 15 minutes with 70 seconds interval automatically. For the area that water sprinklers system was not covered, manual water spraying was provided. Dump trucks were covered with mechanical cover after loading the materials. The stockpile area was covered by the tarpaulin during night time. 2. Based on the monitoring results on 16 October 2020, the 1-hour and 24-hour TSP results were below the Action Levels and Limit Levels. 3. Regular site inspection was conducted by ET on 22 October 2020, no adverse observation against the dust impact was recorded. <u>Recommendations</u> To minimize the impact for air quality, mitigation measures should be enhanced specially in dry seasons are recommended: 1. Increase the frequency and duration for automatic water spraying system. 2. Main haul road and the area that water sprinklers system was not covered in the construction site should be wetted by water trucks or manually in regular basis. 3. Ensure stockpiling sites should be lined with impermeable sheeting and bunded. Stockpiles should be fully covered by impermeable sheeting at all time except during working process. <u>Action taken</u>	- Closed-out on 5 Nov 2020 - No further complaint was received.

Complaint Log for ED/2018/01				
Complaint Ref. No.	Date of Complaint	Description of Complaint	Investigation / Recommendations / Actions	Close-Out Date / Status
			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.	
C0002	A dust complaint was referred from the Contractor on 8 September 2021 through E-Mail regarding a complaint received by EPD (EPD ref.: K19/RE/00021205-21) on 7 September 2021.	Complaint of dust problem at the pavement of Muk Tai Street near Sports Park.	Investigation As per contractor, part of the complaint area was within the site boundary of the project. - Manual water spraying was provided. - The exposed surface and stockpile areas were covered by the impermeable tarpaulin sheet. Recommendations There was no direct evidence showing that the dust nuisance was caused by the contractor at the complaint area, however the contractor is recommended to implement the following measures to minimize the impact for air quality: 1. Ensure stockpiling sites should be lined with impermeable sheeting and bunded. 2. Stockpiles should be fully covered by impermeable sheeting at all time except during working process. 3. Ensure the work fulfill the relevant statutory requirements on control of air pollution. 4. Take necessary measures to minimize the environmental nuisance arising from the construction site. Action taken The exposed surface and stockpile area was covered by the impermeable tarpaulin sheet.	- Closed-out on 4 Oct 2021 - No further complaint was received.
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 Log for ED/2018/01				
Complaint Ref. No.	Date of Complaint	Description of Complaint	Investigation / Recommendations / Actions	Close-Out Date / Status
	10 December 2021 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. <u>Recommendations</u> 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. <u>Action taken</u> - Sand bags and filter were used to block the manholes. - Manholes had been adequately covered and replace the filter frequently.	- 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

May 2022

(Version 1.1)

Certified By: 

(Environmental Team Leader)

Member of the Aurecon Group

Date: 13 June 2022
Your ref:
Our ref: PL-202206006

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 (May 2022)

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

Please be informed that we have no adverse comment on the captioned submission. We hereby verify the Monthly EM&A Report (May 2022) in accordance with Condition 3.3 of Environmental Permit No. EP-337/2009.

Thank you for your attention.

Yours sincerely,
For and on behalf of
Acuity Sustainability Consulting Limited

Kevin Li
Independent Environmental Checker

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

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EXECUTIVE SUMMARY

1. This is the 16th Monthly Environmental Monitoring & Audit (EM&A) report which summarises the findings of the EM&A Programme during the reporting period from 1 to 31 May 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

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

Complaint log

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

Report changes

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

Key construction works in the reporting month

9. Major construction activities undertake during the reporting month included:
   - Pile cap construction for PC9 and PC10 for Elevated Walkway LW-02
   - Erection of temporary decking across existing Kai Tak River
   - Road diversion works at Sa Po Road
   - ELS and excavation at launching shaft for subway SB-01
   - Construction works for Pedestrian Street No. 1, No. 2, No. 3 & No. 4

- Construction of Crowd Dispersal Route
- Construction works for Road L16
- Construction of DCS
- ELS and excavation for Subway KS10 Lift and Staircase
- Demolition works to existing subway KS10 staircase and ramp
- 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 cap and column construction for Pier 9 and Pier 10 at Elevated Walkway LW-02	Noise and Air Quality
Erection of temporary deck across existing Kai Tak River	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. 1, No. 2, No.3 & No.4	Noise and Air Quality
Road diversion works at Sa Po Road	Noise and Air Quality
ELS installation for temporary retrieving shaft at Sa Po Road	Noise and Air Quality
ELS and excavation for launching shaft for subway SB-01	Noise and Air Quality
Renovation works for existing subway KS9 and KS32	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.	Fax No.
Civil Engineering and Development Department (CEDD)	Project Proponent	Mr. George Ng	Senior Engineer	3842 7107	2739 0076
		Mr. Albert Tse	Engineer	3842 7137	2739 0076
		Mr. Perry Lo	Engineer	3842 7143	2739 0076
AECOM Asia Co. Ltd. (AECOM)	Supervisor (act as Engineers' Representative (ER) listed in EM&A Manual)	Ms. Mavis Law	SRE	2798 0771	2798 0783
Acuity Sustainability Consulting Limited (Acuity)	Independent Environmental Checker (IEC)	Mr. Kevin Li	IEC	2698 6833	2698 9383
Ka Shing Management Consultant Limited (Ka Shing)	Environmental Team (ET)	Ir. Chan Pang	ET Leader	2618 2166	2120 7752
Build King – STEC Joint Venture (BK-STEC)	Contractor	Mr. Raymond Lam	Environmental Officer	9713 6817	3850 8508

Works Area and Construction Programme

1.7 The construction works commenced on 16 February 2021.The construction programme of the Project is given in Appendix B.

Construction works undertaken during reporting month

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

Table 1.2 Major activities of the Project during reporting month

Pile cap construction for PC9 and PC10 for Elevated Walkway LW-02	Construction works for Road L16
Erection of temporary decking across existing Kai Tak River	Construction of DCS
Road diversion works at Sa Po Road	ELS and excavation for Subway KS10 Lift and Staircase
ELS and excavation at launching shaft for subway SB-01	Demolition works to existing subway KS10 staircase and ramp
Construction works for Pedestrian Street No. 1, No. 2, No. 3 & No. 4	Renovation works for existing subways KS9 and KS32
Construction of Crowd Dispersal Route	

Submission Status under the Environmental Permits

1.9 The status of required submission under Environmental Permit (EP) conditions under EP-337/2009 are summarized in Table 1.3.

Table 1.3 Summary of Status of Required Submission of EPs

EP Condition EP-337/2009	Submission	Submission Date
Condition 1.11	Notification of Commencement Date of Construction of the Project	12 Jan 2021
Condition 2.3	Management Organization of Main Construction Companies	21 Sep 2020
Condition 2.4	Design Drawings	12 Jan 2021
Condition 2.11	Landscape Mitigation Plans	17 Dec 2020
Condition 3.2	Baseline Monitoring Report	12 Jan 2021
Condition 3.3	Monthly EM&A Report (April 2022)	12 May 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	1	6 months

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

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

Monitoring Methodology and QA/QC Procedure

24-hour TSP Monitoring

Operating/Analytical Procedures

2.9 Setup criteria of HVS are shown as follows:

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

2.10 Prior to the commencement of the dust sampling, the flow rate of the HVS was properly set (between 1.1 m^3/min. and 1.7 m^3/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, $\mu g/m^3$	Limit Level, $\mu g/m^3$
24-hour average TSP	AM2(A)	175	260
	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, $\mu g/m^3$	Limit Level, $\mu g/m^3$
1-hour average TSP	AM2(A)	302	500
	AM3	301	500

Impact Air Quality Monitoring results

1

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, $\mu g/m^3$	Range, $\mu g/m^3$	Action Level, $\mu g/m^3$	Limit Level, $\mu g/m^3$
AM2(A)	51	26-71	175	260
AM3	61	25-117	172	260

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

Air Monitoring Station	Average TSP Concentration, $\mu g/m^3$	Range, $\mu g/m^3$	Action Level, $\mu g/m^3$	Limit Level, $\mu g/m^3$
AM2(A)	46	20-65	302	500
AM3	52	21-94	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, $L_{Aeq, 30\text{-minute}}$, for each station will be on a weekly basis and conduct one set of measurements between 0700 – 1900 hrs on normal weekdays.

3.3 If construction works are extended to include works during 1900 – 0700 hrs as well as public holidays and Sundays, additional weekly impact monitoring will be carried out during the respective restricted hours periods.

Monitoring Locations

3.4 Two designated monitoring stations were selected for noise monitoring programme. Impact noise monitoring was conducted at two noise monitoring stations in the reporting month. Table 3.1 describes the noise monitoring locations, which are also depicted in Figure 6.

Table 3.1 Locations of Noise Monitoring Stations

Noise Monitoring Locations for the Project	Location of Measurement
M4(A) – Le Billionnaire	Podium (Façade)
M5(A) – Prince Ritz	Podium (Façade)

Monitoring Parameters, Frequency and Duration

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

Table 3.2 Noise Monitoring Parameters, Frequency and Duration

Noise Monitoring Station	Location for Measurement	Parameter	Frequency and Duration
M4(A) – Le Billionnaire	Podium (Façade)	L_{Aeq}, L_{A10} and L_{A90}	30-minute measurement at each monitoring station between 0700 – 1900 hrs on normal weekdays (Monday to Saturday) at frequency of once per week.
M5(A) – Prince Ritz	Podium (Façade)		

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	1	1 year
Sound Level Calibrator	RION NC 75	1	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 on normal weekdays	M4(A)	69.5	When one documented complaint is received.	75 dB(A)
	M5(A)	72.5		

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 $L_{Aeq, 30\text{-}min}$, Average, dB(A)	Measured $L_{Aeq, 30\text{-}min}$, Range, dB(A)	Action Level	Limit Level ^
M4(A)	69.4	68.9 – 70.1	When one documented complaint is received	75 dB(A)
M5(A)	72.7	72.1 – 73.3		

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 $L_{Aeq, 30\text{-}min}$ 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.

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	Predicted Cumulative Maximum 24-hour average TSP concentration		Measured 24-hr average TSP in Reporting Month (May 2022) $\mu g/m^3$
		Scenario 1 (Mid 2009 to Mid 2013), $\mu g/m^3$	Scenario 2 (Mid 2013 to Late 2016), $\mu g/m^3$	
AM2(A) - Ng Wah Catholic Secondary School	NA	NA	NA	26 – 71
AM3 - Sky Tower	A40^	106^	138^	25 – 117

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

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

Air Monitoring Station	ASR No. in EIA report	Predicted Cumulative Maximum 1-hour average TSP concentration		Measured 1-hr average TSP in Reporting Month (May 2022) $\mu g/m^3$
		Scenario 1 (Mid 2009 to Mid 2013), $\mu g/m^3$	Scenario 2 (Mid 2013 to Late 2016), $\mu g/m^3$	
AM2(A) - Ng Wah Catholic Secondary School	NA	NA	NA	20 – 65
AM3 - Sky Tower	A40^	217^	247^	21 – 94

Note:
^ 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 $L_{Aeq, 30min}$, dB(A)	Measured Noise Level in Reporting Month (May 2022) $L_{Aeq, 30min}$, dB(A)
M4(A) – Le Billionnaire	NA	NA	68.9 – 70.1
M5(A) – Prince Ritz	NA	NA	72.1 – 73.3

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 higher than the prediction in Scenario 1 (Mid 2009 to Mid 2013) of 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 5, 12, 19 and 26 May 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
5 May 2022	No	NA	NA
12 May 2022	No	NA	NA
19 May 2022	No	NA	NA
26 May 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 5, 12, 19 and 26 May 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
5 May 2022	 Observation: Secondary container shall be provided for the diesel drum to prevent soil contamination in LW02.	 Action Taken: Diesel drum has been removed.	Closed out on 12 May 2022
12 May 2022	 Observation: Secondary container shall be provided for the plastic diesel engine oil to prevent soil contamination in LW02.	 Action Taken: Plastic diesel engine oil has been removed.	Closed out on 19 May 2022

Inspection Date	Key Observations	Recommendations / Actions	Close-out Date / Status
19 May 2022	 Observation: Stagnant water was observed on the I-beam in LW02.	 Action taken: Stagnant water has been removed.	Closed out on 26 May 2022
26 May 2022	 Observation: The QPME label for the generator was missed. Please ensure the label is properly demonstrated.	 Action Taken: The QPME label has been shown on the generator.	Closed out on 2 June 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
Wastewater Discharge License under WPCO	WT00037618-2021	29 Mar 2021	31 Mar 2026
	WT00037370-2021		
	WT00038562-2021	15 July 2021	31 July 2026
Construction Noise Permit	GW-RE1261-21	22 Dec 2021	19 June 2022
	GW-RE1275-21	30 Dec 2021	19 June 2022
	GW-RE0291-22	6 Apr 2022	20 Jun 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 of summons and successful prosecutions were received in the reporting month.	NA	NA	NA	NA

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 cap and column construction for Pier 9 and Pier 10 at Elevated Walkway LW-02	Noise and Air Quality
Erection of temporary deck across existing Kai Tak River	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. 1, No. 2, No.3 & No.4	Noise and Air Quality
Road diversion works at Sa Po Road	Noise and Air Quality
ELS installation for temporary retrieving shaft at Sa Po Road	Noise and Air Quality
ELS and excavation for launching shaft for subway SB-01	Noise and Air Quality
Renovation works for existing subway KS9 and KS32	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

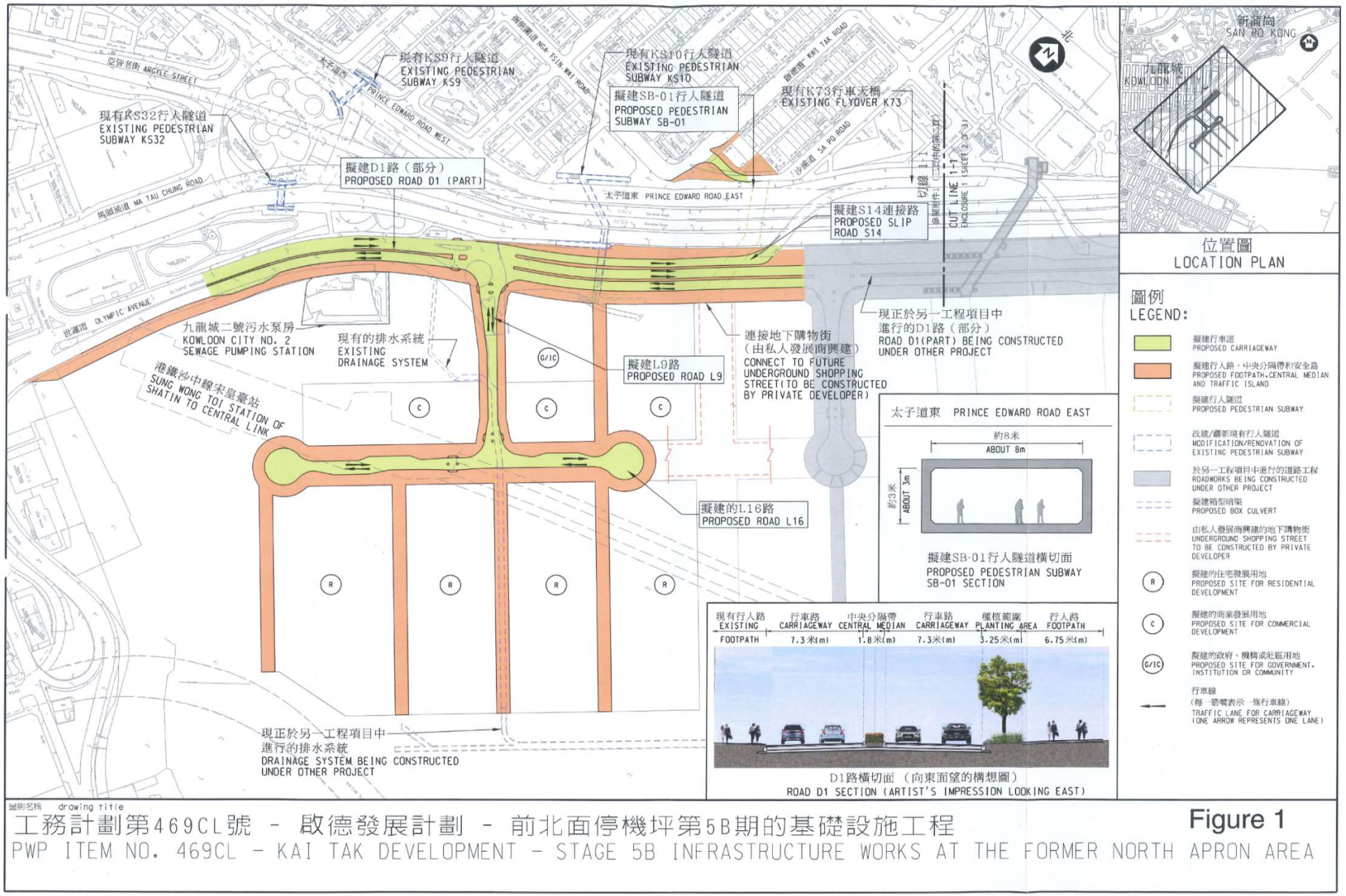


Figure 1 – Proposed works of Contract No. ED/2018/05

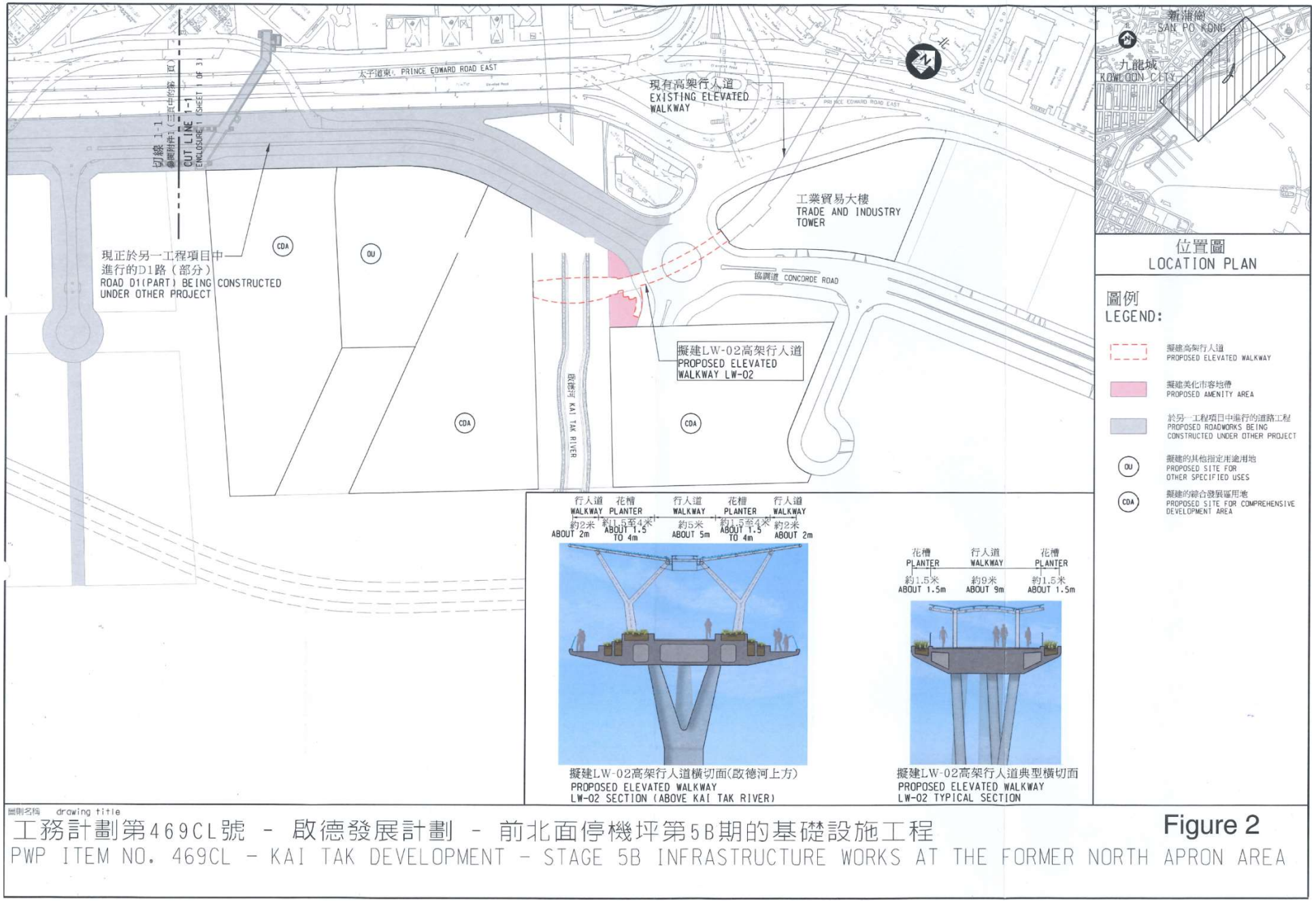


Figure 2 – Proposed works of Contract No. ED/2018/05

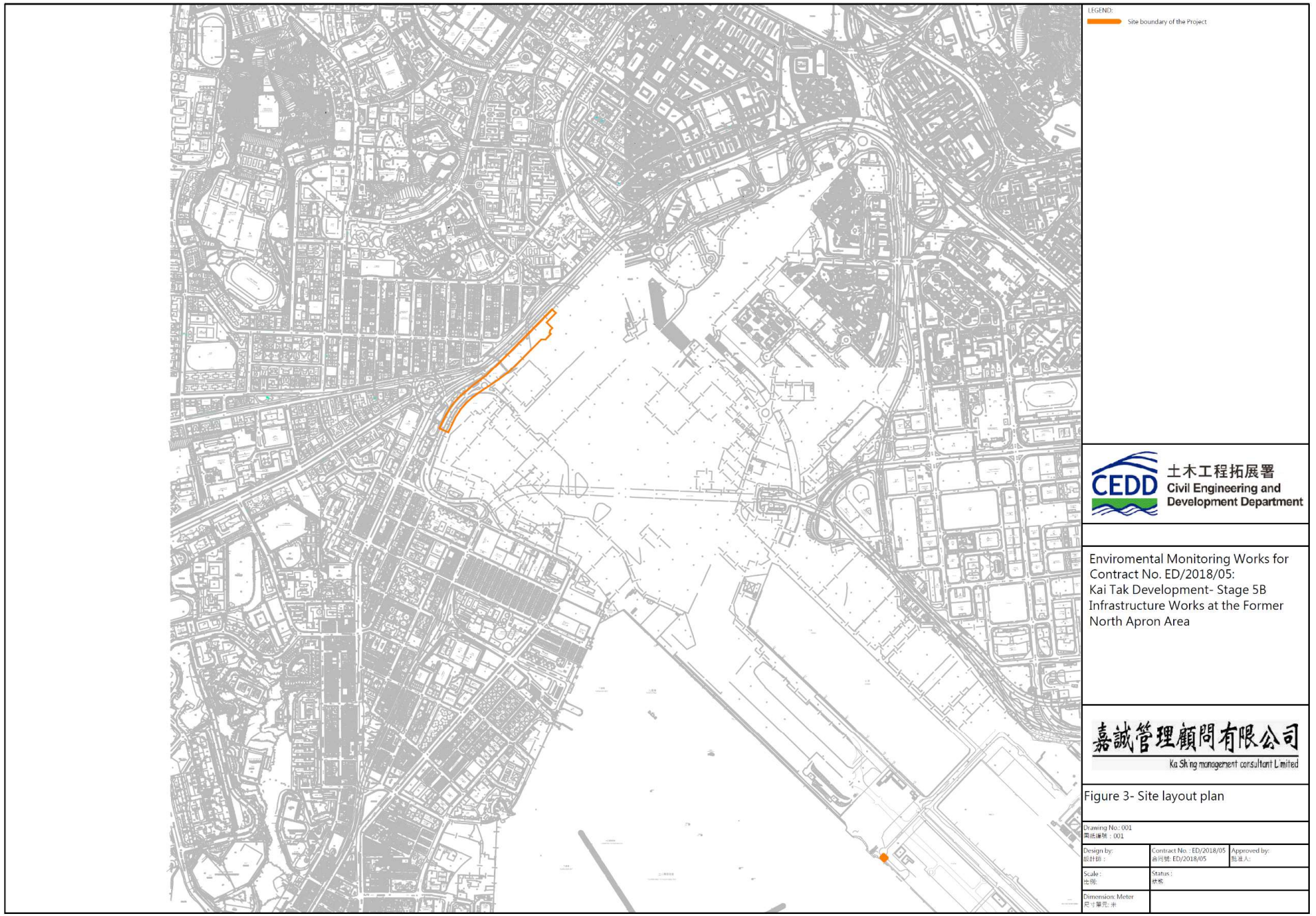


Figure 3 – D1 Road Site Layout Plan

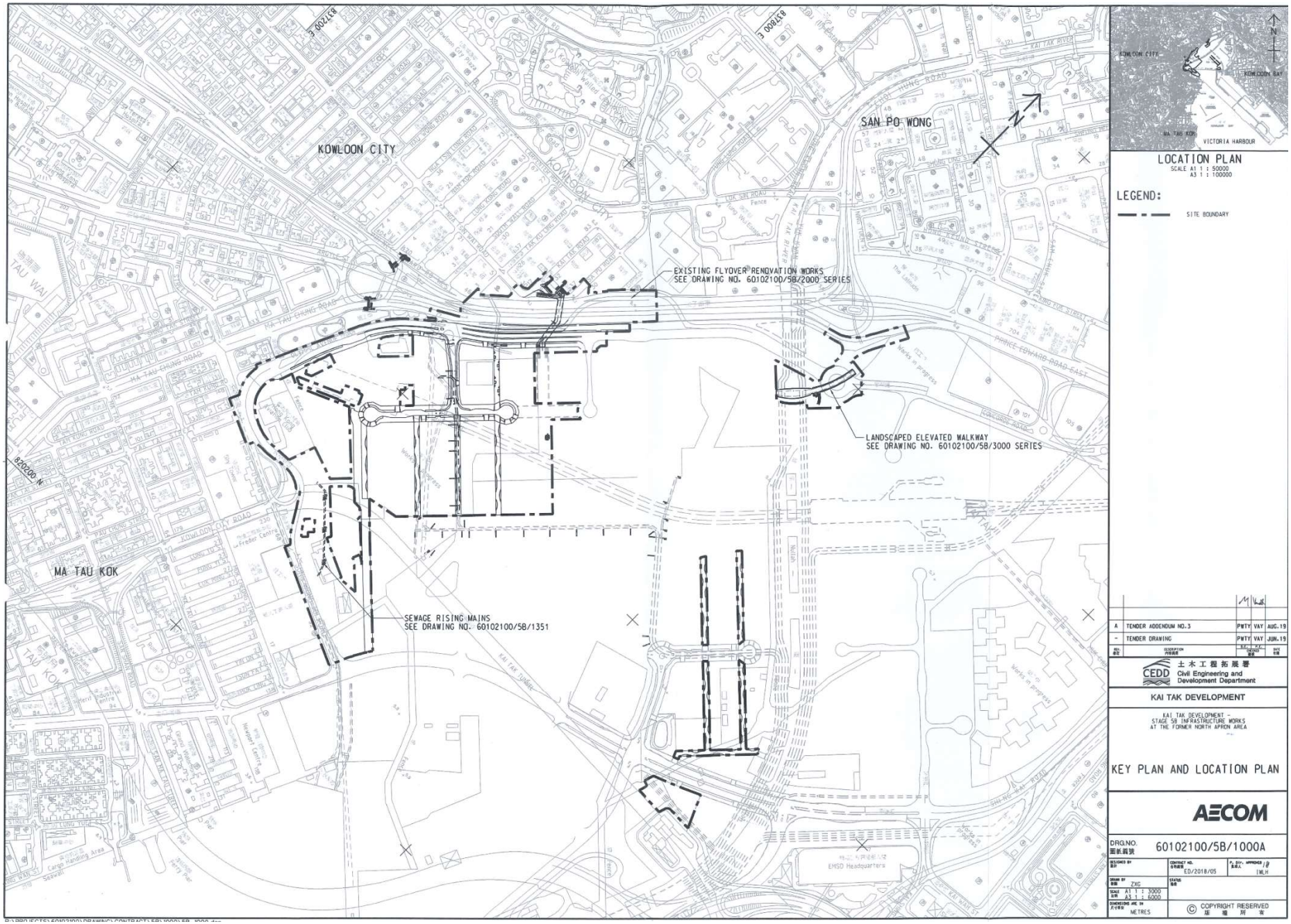


Figure 4 – Site Layout Plan

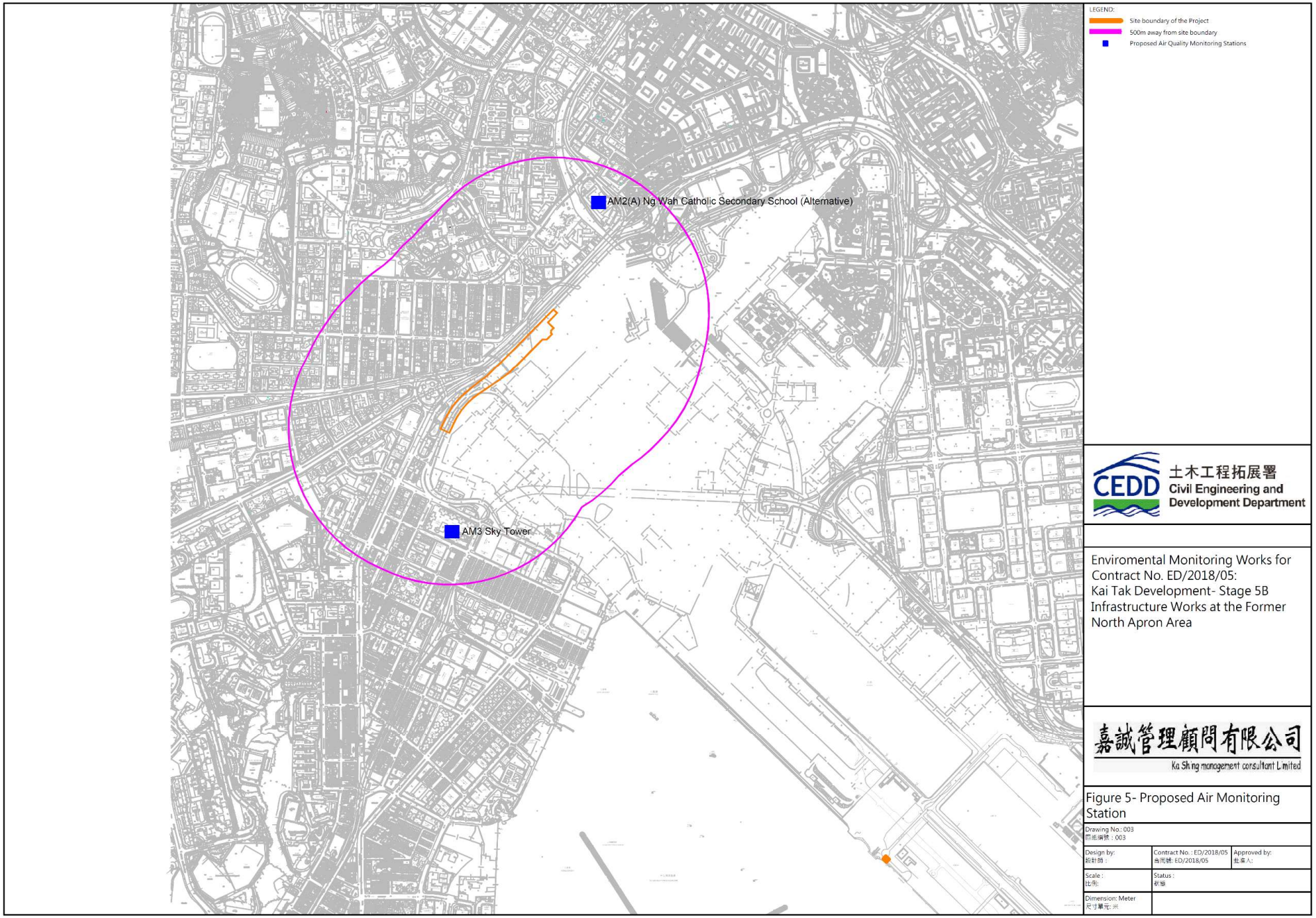


Figure 5 – Air Quality Monitoring Stations

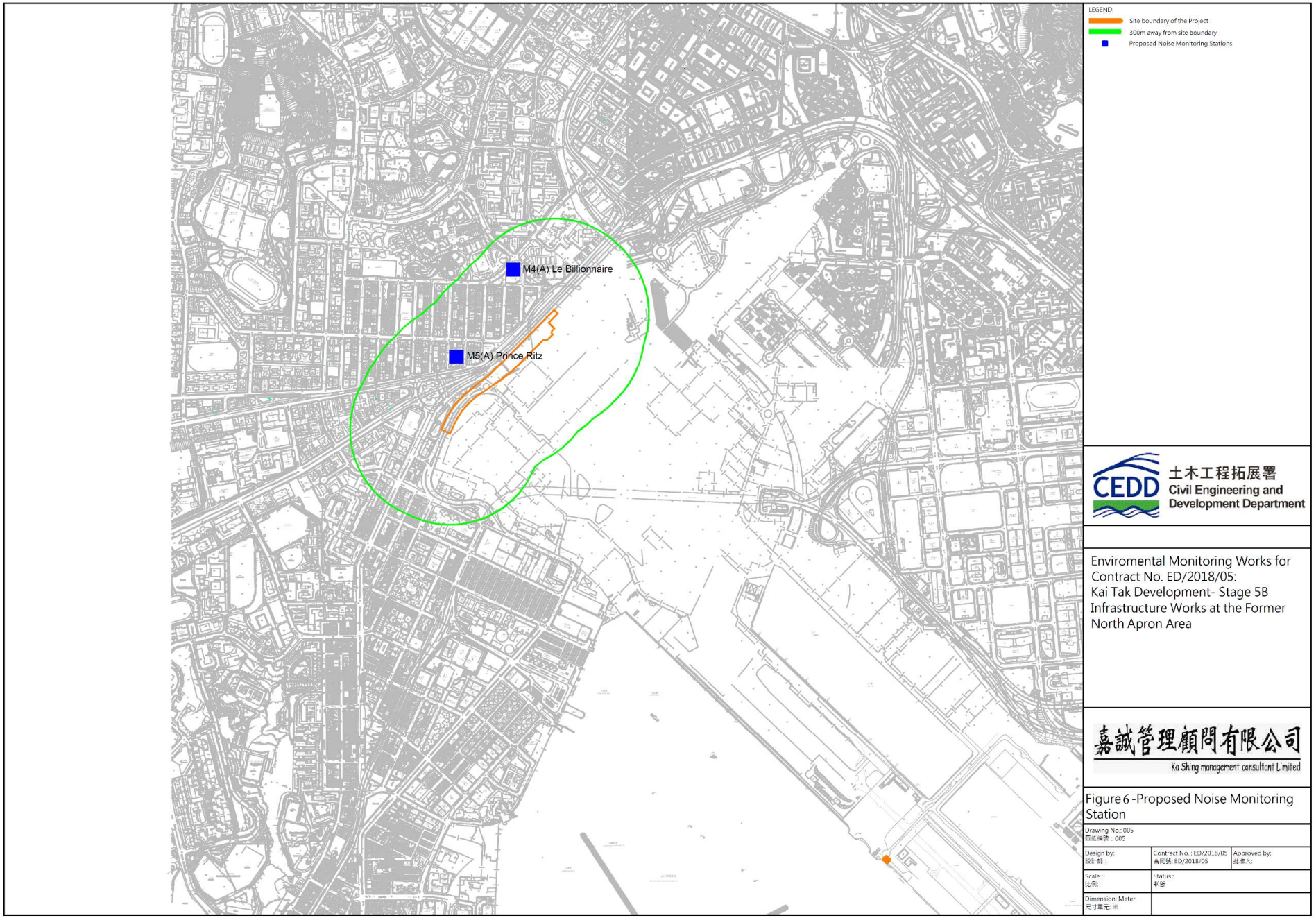
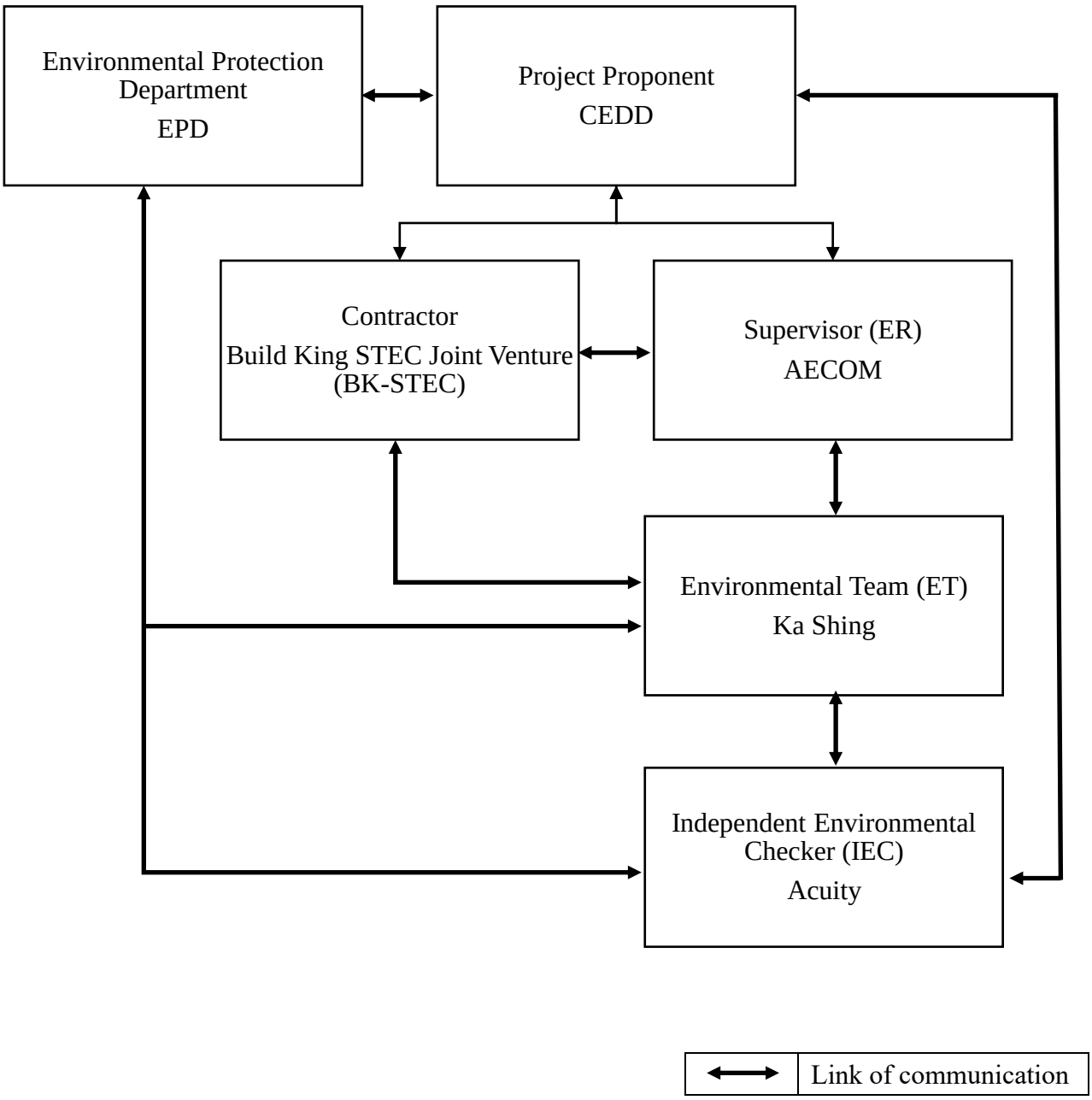


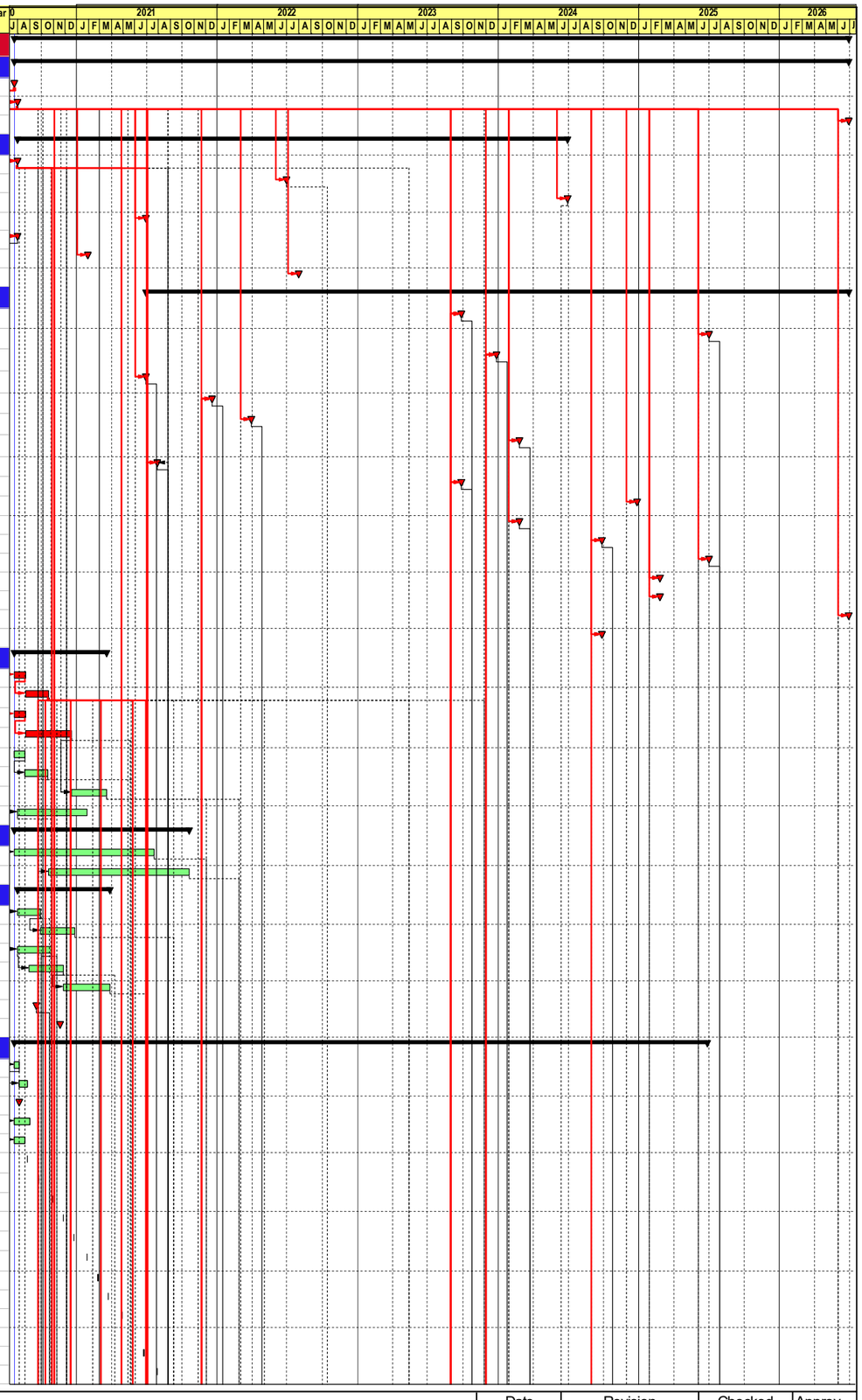
Figure 6 – Noise Monitoring Stations

Appendix A – Organization Chart of EM&A Team


Environmental Protection Department
EPD
Project Proponent
CEDD
Contractor
Build King STEC Joint Venture (BK-STEC)
Supervisor (ER)
AECOM
Environmental Team (ET)
Ka Shing
Independent Environmental Checker (IEC)
Acuity
Link of communication

Appendix B – Construction Programme

Activity ID	Activity Name	Dur (d)	Ori. Dur (d)	TRA (d)	Early Start	Early Finish	Late Start	Late Finish	Total Float	Calendar
KAI TAK DEVELOPMENT - STAGE 5B INFRASTRUCTURE WORKS AT THE FORMER NORTH APRON AREA		2170			22-Jul-20	30-Jun-26	22-Jul-20	30-Jun-26	0	
KEY DATES		2170			22-Jul-20	30-Jun-26	22-Jul-20	30-Jun-26	0	2
KTD.KD.1000	Contract date	0	0d	0d	22-Jul-20		22-Jul-20		0	2
KTD.KD.1010	Contract starting date	0	0d	0d	31-Jul-20		31-Jul-20		0	2
KTD.KD.1020	Contract completion date	0	0d	0d		30-Jun-26		30-Jun-26	0	2
ACCESS DATES		1429			31-Jul-20	29-Jun-24	31-Jul-20	29-Jun-24	0	2
KTD.KD.1030	Parts 1, 1A, 1B, 2, 3, 4, 7, 8 and 9	0	0d	0d	31-Jul-20		31-Jul-20		0	2
KTD.KD.1040	Part 5	0	0d	0d	30-Jun-22		30-Jun-22		0	2
KTD.KD.1050	Part 6	0	0d	0d	29-Jun-24		29-Jun-24		0	2
KTD.KD.1060	Part 6A	0	0d	0d	30-Jun-21		30-Jun-21		0	2
KTD.KD.1070	Works Areas WA1, WA2, WA3, WA4, WA5, WA6 and WA7	0	0d	0d	31-Jul-20		31-Jul-20		0	2
KTD.KD.1080	Part 10 and Works Area WA4A	0	0d	0d	29-Jan-21		29-Jan-21		0	2
KTD.KD.1090	Works Area WA8	0	0d	0d	31-Jul-22		31-Jul-22		0	2
CONTRACT SECTIONAL COMPLETION DATES		1826			30-Jun-21	30-Jun-26	30-Jun-21	30-Jun-26	0	2
KTD.KD.1100	Section 1:Compl of all works within Parts 1 and 8 and Elevated Landscaped Walkway LW-02	0	0d	0d		26-Sep-23		26-Sep-23	0	2
KTD.KD.1110	Section 2:Compl of all works within Parts 1B, 6A and 7 and remaining works of all Parts	0	0d	0d		30-Jun-25		30-Jun-25	0	2
KTD.KD.1120	Section 3:Compl of all works within Parts 1A and 5 and drainage and sewage works within Part 6	0	0d	0d		27-Dec-23		27-Dec-23	0	2
KTD.KD.1130	Section 4:Compl of all UU and services within Part 4	0	0d	0d		30-Jun-21		30-Jun-21	0	2
KTD.KD.1140	Section 5:Compl of all UU and services within Part 3, rising mains diversion & demolition of ext. structures	0	0d	0d		17-Dec-21		17-Dec-21	0	2
KTD.KD.1150	Section 6:Compl of all works within Part 2 and Part 10	0	0d	0d		29-Mar-22		29-Mar-22	0	2
KTD.KD.1160	Section 7:Compl of all works within Part 3 (Subj to excision within 416days from starting date)	0	0d	0d		25-Feb-24		25-Feb-24	0	2
KTD.KD.1170	Section 8:Compl of all Box Culvert B1 within Parts 1 and 3 and diversion and abandon works	0	0d	0d		29-Jul-21		29-Jul-21	0	2
KTD.KD.1180	Section 9:Compl of DCS works within Parts 1 and 1A (Subj to excision within 239days from starting date)	0	0d	0d		26-Sep-23		26-Sep-23	0	2
KTD.KD.1190	Section 10:Compl of establ work for all landscape works(except Sections 14, 15 and 16)	0	0d	0d		26-Dec-24		26-Dec-24	0	2
KTD.KD.1200	Section 11:Compl of all works within Part 4 (Subj to excision within 244days from starting date)	0	0d	0d		25-Feb-24		25-Feb-24	0	2
KTD.KD.1210	Section 12:Compl of all SB-01 within Part 1A	0	0d	0d		25-Sep-24		25-Sep-24	0	2
KTD.KD.1220	Section 13:Compl of all works within Part 6	0	0d	0d		30-Jun-25		30-Jun-25	0	2
KTD.KD.1230	Section 14:Compl of estab work for landscape works within Part 3 (Subj to excision within 416days from starting date)	0	0d	0d		24-Feb-25		24-Feb-25	0	2
KTD.KD.1240	Section 15:Compl of estab work for landscape works within Part 4 (Subj to excision within 244days from starting date)	0	0d	0d		24-Feb-25		24-Feb-25	0	2
KTD.KD.1250	Section 16:Compl of establ work for landscape works within Part 6	0	0d	0d		30-Jun-26		30-Jun-26	0	2
KTD.KD.1260	Section 17:Compl of establ work for landscape works under Section 1	0	0d	0d		25-Sep-24		25-Sep-24	0	2
DESIGN, SUBMISSIONS, PERMIT APPLICATION & APPROVAL		240			22-Jul-20	18-Mar-21	22-Jul-20	24-Feb-22	343	2
KTD.KD.1270	Prepare/submission of temporary works design	30	30d	0d	22-Jul-20	20-Aug-20	22-Jul-20	20-Aug-20	0	2
KTD.KD.1280	Consultation/approval of temporary works design	60	60d	0d	21-Aug-20	19-Oct-20	21-Aug-20	19-Oct-20	0	2
KTD.KD.1290	Prepare/submit Temp Geotechnical&Structural Works to HyD/TD/CEDD/GEO and others (incl SB-01 by RTBM, etc.)	30	30d	0d	22-Jul-20	20-Aug-20	22-Jul-20	20-Aug-20	0	2
KTD.KD.1300	Consult/approve Temp Geotechnical&Structural Works by HyD/TD/CEDD/GEO and others (incl SB-01 by RTBM, etc.)	120	120d	0d	21-Aug-20	18-Dec-20	21-Aug-20	18-Dec-20	0	2
KTD.KD.1310	Prepare/submission of Temporary Drainage and Sewerage Management Plan to DSD/CEDD and others	29	29d	0d	22-Jul-20	19-Aug-20	23-Jul-20	20-Aug-20	1	2
KTD.KD.1320	Consultation/approval of Temporary Drainage and Sewerage Management Plan by DSD/CEDD and others	60	60d	0d	20-Aug-20	18-Oct-20	21-Aug-20	19-Oct-20	1	2
KTD.KD.1330	Application/approval of CNP for night works by relevant authorities and liaison with projects nearby	90	90d	0d	19-Dec-20	18-Mar-21	27-Nov-21	24-Feb-22	343	2
KTD.KD.1340	Application/approval of permits or other statutory submissions by relevant authorities (i.e. CEDD,HyD,WSD,XPMS & EPD)	180	180d	0d	31-Jul-20	26-Jan-21	03-Sep-20	01-Mar-21	34	2
PROCUREMENT, FABRICATION AND DELIVERY		455			22-Jul-20	19-Oct-21	31-Dec-20	26-Mar-22	158	2
KTD.KD.1350	Design, procurement, fabrication and delivery of RTBM	365	365d	0d	22-Jul-20	21-Jul-21	31-Dec-20	30-Dec-21	162	2
KTD.KD.1360	Procurement, fabrication, delivery of temporary steel lining casting and pre-assembly	365	365d	0d	20-Oct-20	19-Oct-21	27-Mar-21	26-Mar-22	158	2
TEMPORARY TRAFFIC MANGEMENT		240			31-Jul-20	27-Mar-21	12-Sep-20	29-Mar-22	367	2
KTD.KD.1370	Prepare/Submit/Consult/Approval of TTA for loading/unloading at Sa Po Road and Concorde Road roundabout	60	46d	14d	31-Jul-20	28-Sep-20	21-Mar-21	19-May-21	233	2
KTD.KD.1380	Prepare/Submit/Consult/Approval of TTA for working platform erection crossing Concorde Road roundabout	90	76d	14d	29-Sep-20	27-Dec-20	30-Dec-21	29-Mar-22	457	2
KTD.KD.1390	Prepare/Submit/Consult/Approval of TTA for GI/diversion/preliminary works at PERE and Sa Po Road	90	76d	14d	31-Jul-20	28-Oct-20	12-Sep-20	10-Dec-20	43	2
KTD.KD.1400	Prepare/Submit/Consult/Approval of TTA for 2-staged Sa Po Road and PERE W/B diversion	90	76d	14d	30-Aug-20	27-Nov-20	07-Feb-21	07-May-21	161	2
KTD.KD.1410	Prepare/Submit/Consult/Approval of TTA for road and drainage works along Olympic Avenue	120	106d	14d	28-Nov-20	27-Mar-21	02-Nov-21	01-Mar-22	339	2
KTD.KD.2180	1st TMLG Meeting	0				18-Sep-20		18-Sep-20	0	2
KTD.KD.2220	2nd TMLG Meeting	0				19-Nov-20		19-Nov-20	0	2
CONSTRUCTION HEALTH AND SAFETY MANAGEMENT		1801			22-Jul-20	26-Jun-25	23-Jul-20	26-Jun-25	0	2
KTD.KD.1420	Prepare/submit of Draft Safety Plan	13	13d	0d	22-Jul-20	03-Aug-20	23-Jul-20	04-Aug-20	1	2
KTD.KD.1430	Prepare/submit Safety Plan	21	21d	0d	04-Aug-20	24-Aug-20	05-Aug-20	25-Aug-20	1	2
KTD.KD.1440	Conduct meeting to discuss Draft Safety Plan	0	0d	0d		03-Aug-20		03-Aug-20	0	2
KTD.KD.1450	Prepare/submit Site Traffic Safety Management Plan	41	41d	0d	22-Jul-20	31-Aug-20	23-Jul-20	01-Sep-20	1	2
KTD.KD.1460	Prepare/submit Construction Health and Safety Plan	29	29d	0d	22-Jul-20	19-Aug-20	23-Jul-20	20-Aug-20	1	2
KTD.KD.1470	1st SSMC Meeting	1	1d	0d	26-Aug-20	26-Aug-20	26-Aug-20	26-Aug-20	0	2
KTD.KD.1480	2nd SSMC Meeting	1	1d	0d	23-Sep-20	23-Sep-20	23-Sep-20	23-Sep-20	0	2
KTD.KD.1490	3rd SSMC Meeting	1	1d	0d	29-Oct-20	29-Oct-20	29-Oct-20	29-Oct-20	0	2
KTD.KD.1500	4th SSMC Meeting	1	1d	0d	26-Nov-20	26-Nov-20	26-Nov-20	26-Nov-20	0	2
KTD.KD.1510	5th SSMC Meeting	1	1d	0d	24-Dec-20	24-Dec-20	24-Dec-20	24-Dec-20	0	2
KTD.KD.1520	6th SSMC Meeting	1	1d	0d	28-Jan-21	28-Jan-21	28-Jan-21	28-Jan-21	0	2
KTD.KD.1530	7th SSMC Meeting	1	1d	0d	25-Feb-21	25-Feb-21	25-Feb-21	25-Feb-21	0	2
KTD.KD.1540	8th SSMC Meeting	1	1d	0d	24-Mar-21	24-Mar-21	24-Mar-21	24-Mar-21	0	2
KTD.KD.1550	9th SSMC Meeting	1	1d	0d	29-Apr-21	29-Apr-21	29-Apr-21	29-Apr-21	0	2
KTD.KD.1560	10th SSMC Meeting	1	1d	0d	27-May-21	27-May-21	27-May-21	27-May-21	0	2
KTD.KD.1570	11th SSMC Meeting	1	1d	0d	24-Jun-21	24-Jun-21	24-Jun-21	24-Jun-21	0	2
KTD.KD.1580	12th SSMC Meeting	1	1d	0d	29-Jul-21	29-Jul-21	29-Jul-21	29-Jul-21	0	2



▽ Milestone
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Critical Work
Planned W...
Summary

Build King – STEC Joint Venture

ED/2018/05 Kai Tak Development - Stage 5B Infrastructure Works at the Former North Apron Area

WORKS PROGRAMME

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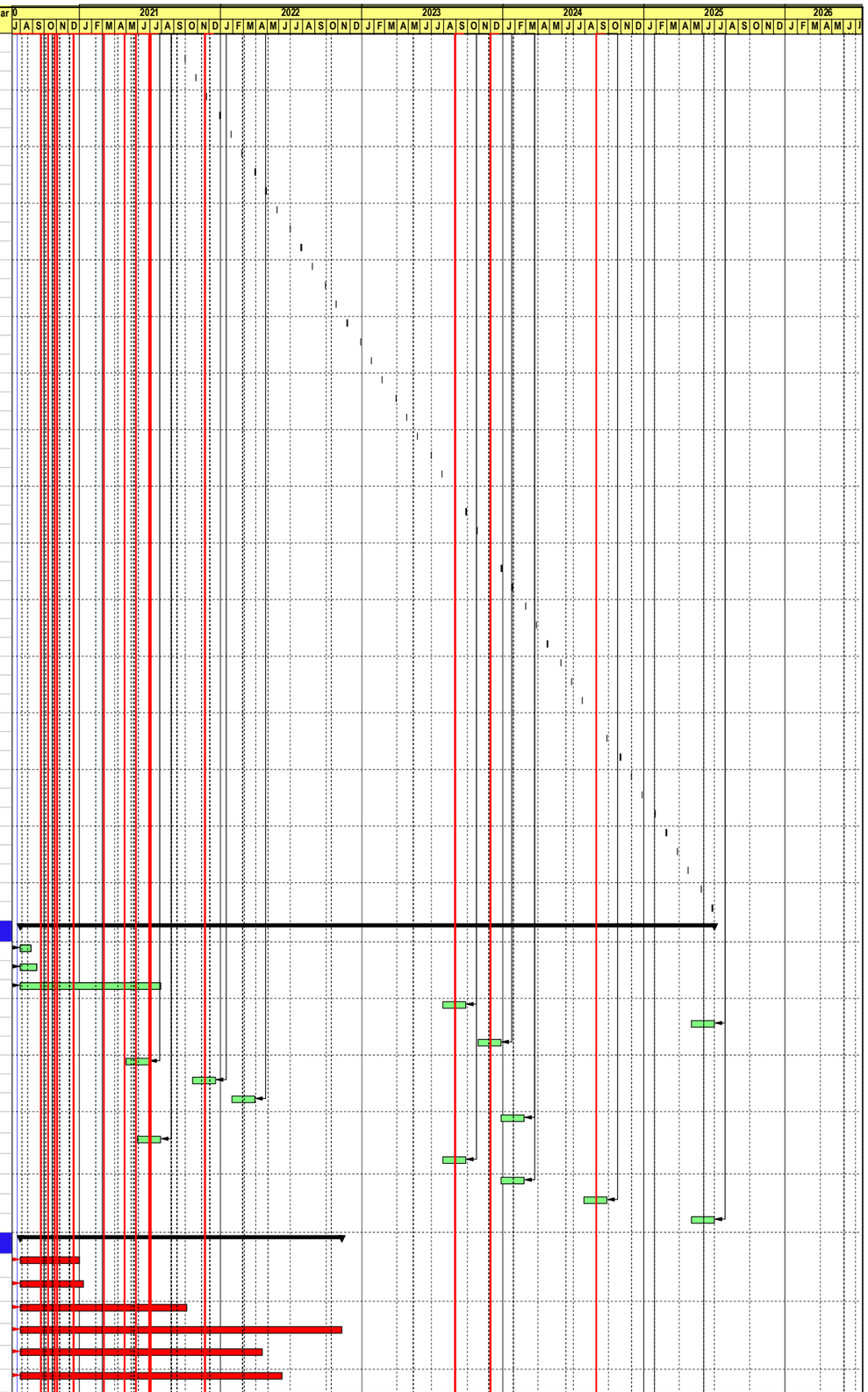
10-Oct-20	Revision 2	LC	GC
18-Nov-20	Revision 3	LC	GC

Activity ID	Activity Name	Dur (d)	Ori. Dur (d)	TRA (d)	Early Start	Early Finish	Late Start	Late Finish	Total Float	Calendar
KTD.KD.1590	13th SSMC Meeting	1	1d	0d	26-Aug-21	26-Aug-21	26-Aug-21	26-Aug-21	0	2
KTD.KD.1600	14th SSMC Meeting	1	1d	0d	30-Sep-21	30-Sep-21	30-Sep-21	30-Sep-21	0	2
KTD.KD.1610	15th SSMC Meeting	1	1d	0d	28-Oct-21	28-Oct-21	28-Oct-21	28-Oct-21	0	2
KTD.KD.1620	16th SSMC Meeting	1	1d	0d	25-Nov-21	25-Nov-21	25-Nov-21	25-Nov-21	0	2
KTD.KD.1630	17th SSMC Meeting	1	1d	0d	30-Dec-21	30-Dec-21	30-Dec-21	30-Dec-21	0	2
KTD.KD.1640	18th SSMC Meeting	1	1d	0d	27-Jan-22	27-Jan-22	27-Jan-22	27-Jan-22	0	2
KTD.KD.1650	19th SSMC Meeting	1	1d	0d	24-Feb-22	24-Feb-22	24-Feb-22	24-Feb-22	0	2
KTD.KD.1660	20th SSMC Meeting	1	1d	0d	31-Mar-22	31-Mar-22	31-Mar-22	31-Mar-22	0	2
KTD.KD.1670	21st SSMC Meeting	1	1d	0d	28-Apr-22	28-Apr-22	28-Apr-22	28-Apr-22	0	2
KTD.KD.1680	22nd SSMC Meeting	1	1d	0d	26-May-22	26-May-22	26-May-22	26-May-22	0	2
KTD.KD.1690	23rd SSMC Meeting	1	1d	0d	30-Jun-22	30-Jun-22	30-Jun-22	30-Jun-22	0	2
KTD.KD.1700	24th SSMC Meeting	1	1d	0d	28-Jul-22	28-Jul-22	28-Jul-22	28-Jul-22	0	2
KTD.KD.1710	25th SSMC Meeting	1	1d	0d	25-Aug-22	25-Aug-22	25-Aug-22	25-Aug-22	0	2
KTD.KD.1720	26th SSMC Meeting	1	1d	0d	29-Sep-22	29-Sep-22	29-Sep-22	29-Sep-22	0	2
KTD.KD.1730	27th SSMC Meeting	1	1d	0d	27-Oct-22	27-Oct-22	27-Oct-22	27-Oct-22	0	2
KTD.KD.1740	28th SSMC Meeting	1	1d	0d	24-Nov-22	24-Nov-22	24-Nov-22	24-Nov-22	0	2
KTD.KD.1750	29th SSMC Meeting	1	1d	0d	29-Dec-22	29-Dec-22	29-Dec-22	29-Dec-22	0	2
KTD.KD.1760	30th SSMC Meeting	1	1d	0d	26-Jan-23	26-Jan-23	26-Jan-23	26-Jan-23	0	2
KTD.KD.1770	31st SSMC Meeting	1	1d	0d	23-Feb-23	23-Feb-23	23-Feb-23	23-Feb-23	0	2
KTD.KD.1780	32nd SSMC Meeting	1	1d	0d	30-Mar-23	30-Mar-23	30-Mar-23	30-Mar-23	0	2
KTD.KD.1790	33rd SSMC Meeting	1	1d	0d	27-Apr-23	27-Apr-23	27-Apr-23	27-Apr-23	0	2
KTD.KD.1800	34th SSMC Meeting	1	1d	0d	25-May-23	25-May-23	25-May-23	25-May-23	0	2
KTD.KD.1810	35th SSMC Meeting	1	1d	0d	29-Jun-23	29-Jun-23	29-Jun-23	29-Jun-23	0	2
KTD.KD.1820	36th SSMC Meeting	1	1d	0d	27-Jul-23	27-Jul-23	27-Jul-23	27-Jul-23	0	2
KTD.KD.1830	37th SSMC Meeting	1	1d	0d	31-Aug-23	31-Aug-23	31-Aug-23	31-Aug-23	0	2
KTD.KD.1840	38th SSMC Meeting	1	1d	0d	28-Sep-23	28-Sep-23	28-Sep-23	28-Sep-23	0	2
KTD.KD.1850	39th SSMC Meeting	1	1d	0d	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	0	2
KTD.KD.1860	40th SSMC Meeting	1	1d	0d	30-Nov-23	30-Nov-23	30-Nov-23	30-Nov-23	0	2
KTD.KD.1870	41st SSMC Meeting	1	1d	0d	28-Dec-23	28-Dec-23	28-Dec-23	28-Dec-23	0	2
KTD.KD.1880	42nd SSMC Meeting	1	1d	0d	25-Jan-24	25-Jan-24	25-Jan-24	25-Jan-24	0	2
KTD.KD.1890	43rd SSMC Meeting	1	1d	0d	29-Feb-24	29-Feb-24	29-Feb-24	29-Feb-24	0	2
KTD.KD.1900	44th SSMC Meeting	1	1d	0d	28-Mar-24	28-Mar-24	28-Mar-24	28-Mar-24	0	2
KTD.KD.1910	45th SSMC Meeting	1	1d	0d	25-Apr-24	25-Apr-24	25-Apr-24	25-Apr-24	0	2
KTD.KD.1920	46th SSMC Meeting	1	1d	0d	30-May-24	30-May-24	30-May-24	30-May-24	0	2
KTD.KD.1930	47th SSMC Meeting	1	1d	0d	27-Jun-24	27-Jun-24	27-Jun-24	27-Jun-24	0	2
KTD.KD.1940	48th SSMC Meeting	1	1d	0d	25-Jul-24	25-Jul-24	25-Jul-24	25-Jul-24	0	2
KTD.KD.1950	49th SSMC Meeting	1	1d	0d	29-Aug-24	29-Aug-24	29-Aug-24	29-Aug-24	0	2
KTD.KD.1960	50th SSMC Meeting	1	1d	0d	26-Sep-24	26-Sep-24	26-Sep-24	26-Sep-24	0	2
KTD.KD.1970	51st SSMC Meeting	1	1d	0d	31-Oct-24	31-Oct-24	31-Oct-24	31-Oct-24	0	2
KTD.KD.1980	52nd SSMC Meeting	1	1d	0d	28-Nov-24	28-Nov-24	28-Nov-24	28-Nov-24	0	2
KTD.KD.1990	53rd SSMC Meeting	1	1d	0d	26-Dec-24	26-Dec-24	26-Dec-24	26-Dec-24	0	2
KTD.KD.2000	54th SSMC Meeting	1	1d	0d	30-Jan-25	30-Jan-25	30-Jan-25	30-Jan-25	0	2
KTD.KD.2010	55th SSMC Meeting	1	1d	0d	27-Feb-25	27-Feb-25	27-Feb-25	27-Feb-25	0	2
KTD.KD.2020	56th SSMC Meeting	1	1d	0d	27-Mar-25	27-Mar-25	27-Mar-25	27-Mar-25	0	2
KTD.KD.2030	57th SSMC Meeting	1	1d	0d	24-Apr-25	24-Apr-25	24-Apr-25	24-Apr-25	0	2
KTD.KD.2040	58th SSMC Meeting	1	1d	0d	29-May-25	29-May-25	29-May-25	29-May-25	0	2
KTD.KD.2050	59th SSMC Meeting	1	1d	0d	26-Jun-25	26-Jun-25	26-Jun-25	26-Jun-25	0	2
BIM RELATED DELIVERABLES		1796			31-Jul-20	30-Jun-25	01-Aug-20	30-Jun-26	365	2
KTD.KD.2060	Prepare/submit BIM Execution Plan	29	29d	0d	31-Jul-20	28-Aug-20	01-Aug-20	29-Aug-20	1	2
KTD.KD.2070	Prepare/submit Combined Services Drawings and CBWD generated from BIM	44	44d	0d	31-Jul-20	12-Sep-20	01-Aug-20	13-Sep-20	1	2
KTD.KD.2080	Prepare/submit proposal of asset information requirement	364	364d	0d	31-Jul-20	29-Jul-21	01-Aug-20	30-Jul-21	1	2
KTD.KD.2090	Prepare/submit Asset Data Deliverables for Section 1	60	60d	0d	29-Jul-23	26-Sep-23	02-May-26	30-Jun-26	1008	2
KTD.KD.2100	Prepare/submit Asset Date Deliverables for Section 2	60	60d	0d	02-May-25	30-Jun-25	02-May-26	30-Jun-26	365	2
KTD.KD.2110	Prepare/submit Asset Date Deliverables for Section 3	60	60d	0d	29-Oct-23	27-Dec-23	02-May-26	30-Jun-26	916	2
KTD.KD.2120	Prepare/submit Asset Date Deliverables for Section 4	60	60d	0d	02-May-21	30-Jun-21	02-May-26	30-Jun-26	1826	2
KTD.KD.2130	Prepare/submit Asset Date Deliverables for Section 5	60	60d	0d	19-Oct-21	17-Dec-21	02-May-26	30-Jun-26	1656	2
KTD.KD.2140	Prepare/submit Asset Date Deliverables for Section 6	60	60d	0d	29-Jan-22	29-Mar-22	02-May-26	30-Jun-26	1554	2
KTD.KD.2150	Prepare/submit Asset Date Deliverables for Section 7	60	60d	0d	28-Dec-23	25-Feb-24	02-May-26	30-Jun-26	856	2
KTD.KD.2160	Prepare/submit Asset Date Deliverables for Section 8	60	60d	0d	31-May-21	29-Jul-21	02-May-26	30-Jun-26	1797	2
KTD.KD.2170	Prepare/submit Asset Date Deliverables for Section 9	60	60d	0d	29-Jul-23	26-Sep-23	02-May-26	30-Jun-26	1008	2
KTD.KD.2190	Prepare/submit Asset Date Deliverables for Section 11	60	60d	0d	28-Dec-23	25-Feb-24	02-May-26	30-Jun-26	856	2
KTD.KD.2200	Prepare/submit Asset Date Deliverables for Section 12	60	60d	0d	28-Jul-24	25-Sep-24	02-May-26	30-Jun-26	643	2
KTD.KD.2210	Prepare/submit Asset Date Deliverables for Section 13	60	60d	0d	02-May-25	30-Jun-25	02-May-26	30-Jun-26	365	2
VALUE-ENGINEERING SHCEME DROP-OFF SCHEDULE		833			31-Jul-20	10-Nov-22	31-Jul-20	10-Nov-22	0	2
KTD.VE.1000	Review/prepare/submit VE scheme for permanent concrete segment for Pedestrian Subway SB-01	153	96d	0d	31-Jul-20	30-Dec-20	31-Jul-20	30-Dec-20	0	2
KTD.VE.1010	Review/prepare/submit VE scheme for alternative alignment for Pedestrian Subway SB-01	165	133d	0d	31-Jul-20	11-Jan-21	31-Jul-20	11-Jan-21	0	2
KTD.VE.1020	Review/prepare/submit VE scheme for piling arrangement for new pier of existing Bridge K73	431	426d	0d	01-Aug-20	05-Oct-21	01-Aug-20	05-Oct-21	0	2
KTD.VE.1030	Review/prepare/submit VE scheme for piling arrangement for abutment of Slip Road S14	832	752d	0d	01-Aug-20	10-Nov-22	01-Aug-20	10-Nov-22	0	2
KTD.VE.1040	Review/prepare/submit VE scheme for piling arrangement for lift shaft of KS10	627	766d	0d	01-Aug-20	19-Apr-22	01-Aug-20	19-Apr-22	0	2
KTD.VE.1050	Review/prepare/submit VE scheme for piling arrangement for lift shaft and staircase of LW-02	677	288d	0d	31-Jul-20	07-Jun-22	31-Jul-20	07-Jun-22	0	2



Milestone
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Build King – STEC Joint Venture

ED/2018/05 Kai Tak Development - Stage 5B Infrastructure Works at the Former North Apron Area

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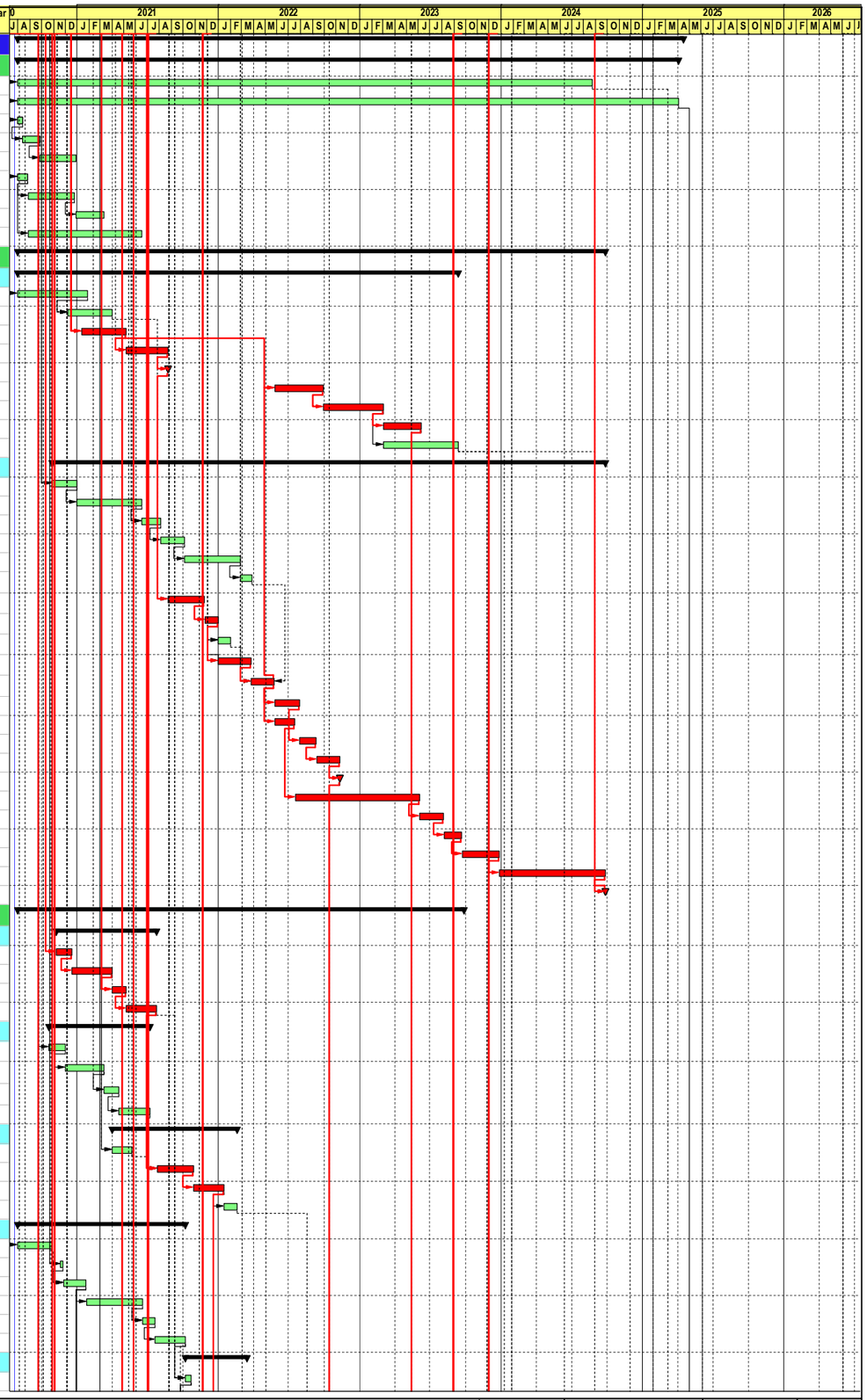
18-Nov-20	Revision 3	LC	GC

Activity ID	Activity Name	Dur (d)	Ori. Dur (d)	TRA (d)	Early Start	Early Finish	Late Start	Late Finish	Total Float	Calendar
CIVIL AND STRUCTURAL WORKS		1720			31-Jul-20	15-Apr-25	31-Jul-20	30-Jun-26	441	
GENERAL AND PRELIMINARY WORKS		1708			31-Jul-20	03-Apr-25	01-Aug-20	30-Jun-26	453	
KTD.GW.1000	General and preliminary works (inclu site formation, site set-up, access, temp drain. sys, ground investigation and etc)	1200	1200d	0d	31-Jul-20	22-Aug-24	07-Jun-21	30-Jun-25	248	1
KTD.GW.1010	Construction, maintenance and removal of ICA, EVA, Crowd Dispersal Route and other temporary access	1383	1383d	0d	31-Jul-20	03-Apr-25	17-Oct-20	30-Jun-25	65	1
KTD.GW.1020	Prepare/submit site arrangement plan (inclu hoarding, project sign board and security arrangement)	13	13d	0d	31-Jul-20	12-Aug-20	01-Aug-20	13-Aug-20	1	2
KTD.GW.1030	Design/submit/approval site layout plan and Contractor's site accommodation using MiC method	44	30d	14d	13-Aug-20	25-Sep-20	14-Aug-20	26-Sep-20	1	2
KTD.GW.1040	Construct foundation and erect Contractor's site accommodation	76	62d	14d	26-Sep-20	29-Dec-20	03-Apr-26	30-Jun-26	1630	1
KTD.GW.1050	Tree Survey	27	27d	0d	31-Jul-20	26-Aug-20	01-Aug-20	27-Aug-20	1	2
KTD.GW.1055	Initial tree survey report and tree felling application	120	120d	0d	27-Aug-20	24-Dec-20	23-Dec-25	21-Apr-26	1944	2
KTD.GW.1060	Tree felling works	60	53d	7d	28-Dec-20	11-Mar-21	22-Apr-26	30-Jun-26	1572	1
KTD.GW.1070	Protection to retained trees and tree transplating works	234	208d	26d	27-Aug-20	17-Jun-21	25-Sep-25	30-Jun-26	1498	1
CONSTRUCTION OF PEDESTRIAN SUBWAY SB-01		1518			31-Jul-20	25-Sep-24	11-Dec-20	25-Sep-24	0	
PEDESTRIAN SUBWAY SB-01 UNDER PERE AND PROPOSED ROAD D1 USING CUT AND COVER METHOD		1138			31-Jul-20	11-Sep-23	29-Dec-20	27-Dec-23	107	
KTD.SB.1000	Liaison/coordinate with utility and service undertakings on diversion works (including CLP, DCS work and etc.)	180	180d	0d	31-Jul-20	26-Jan-21	29-Dec-20	26-Jun-21	151	2
KTD.SB.1010	Expose and install protect/support system for existing underground utilities and services (incl 132kV and 400kV cables)	91	84d	7d	07-Dec-20	01-Apr-21	06-May-21	23-Aug-21	115	1
KTD.SB.1020	Installation of sheet piles for South Shaft and construction of traffic deck at Proposed Road D1	89	75d	14d	12-Jan-21	07-May-21	12-Jan-21	07-May-21	0	1
KTD.SB.1030	Construction of road diversion for PERE westbound diversion (TTA Scheme B1)	89	75d	14d	08-May-21	23-Aug-21	08-May-21	23-Aug-21	0	1
KTD.SB.1040	Implementation of traffic diversion for PERE westbound	0	0d	0d		23-Aug-21		23-Aug-21	0	1
KTD.SB.1050	Installation of ELS and excavation for South Shaft at Proposed Road D1	104	132d	12d	26-May-22	28-Sep-22	26-May-22	28-Sep-22	0	1
KTD.SB.1060	Construction of RC structure from CH114.648 to CH67	126	114d	12d	29-Sep-22	03-Mar-23	29-Sep-22	03-Mar-23	0	1
KTD.SB.1070	Backfilling for South Shaft at Proposed Road D1	78	64d	14d	04-Mar-23	09-Jun-23	04-Mar-23	09-Jun-23	0	1
KTD.SB.1080	Installation of steelworks, ABWF, other facilities, lift and other E&M installation	156	130d	26d	04-Mar-23	11-Sep-23	21-Jun-23	27-Dec-23	87	1
PEDESTRIAN SUBWAY SB-01 UNDER PERE AND SA PO ROAD USING TRENCHLESS METHOD		1428			29-Oct-20	25-Sep-24	11-Dec-20	25-Sep-24	0	
KTD.SB.1090	Construction of road diversion of Sa Po Road (TTA Scheme A1, incl. carriageway and footpath)	52	46d	6d	29-Oct-20	30-Dec-20	11-Dec-20	16-Feb-21	37	1
KTD.SB.1100	Diversion of existing underground utilities and services (incl. DN1800 drain pipe, 11kV cables and etc.)	130	118d	12d	31-Dec-20	16-Jun-21	17-Feb-21	30-Jul-21	37	1
KTD.SB.1110	Installation of partial pipe pile and sheet pile of North Shaft and traffic deck at Sa Po Road	40	37d	3d	17-Jun-21	03-Aug-21	31-Jul-21	15-Sep-21	37	1
KTD.SB.1120	Construction of road diversion of Sa Po Road (TTA Scheme A2, inclu. carriageway and footpath)	52	46d	6d	04-Aug-21	05-Oct-21	16-Sep-21	18-Nov-21	37	1
KTD.SB.1130	Installation of Remaining ELS and excavation of North Shaft at Sa Po Road	116	104d	12d	06-Oct-21	25-Feb-22	19-Nov-21	11-Apr-22	37	1
KTD.SB.1140	Ground improvement works at North Shaft at Sa Po Road for RTBM drive-in	26	24d	2d	26-Feb-22	28-Mar-22	12-Apr-22	17-May-22	37	1
KTD.SB.1150	Installation of ELS and excavation for Intermediate Shaft at PERE westbound and tunneling setup	78	72d	6d	24-Aug-21	25-Nov-21	24-Aug-21	25-Nov-21	0	1
KTD.SB.1160	Ground improvement works at Intermediate Shaft at PERE westbound for break-in	27	24d	3d	27-Nov-21	30-Dec-21	27-Nov-21	30-Dec-21	0	1
KTD.SB.1170	Conduct seismic geophysical survey for PERE and other site investigation works	26	24d	2d	31-Dec-21	31-Jan-22	25-Feb-22	26-Mar-22	44	1
KTD.SB.1180	Mobilization, assembly and SAT of RTBM at Intermediate Shaft at PERE westbound	70	64d	6d	31-Dec-21	26-Mar-22	31-Dec-21	26-Mar-22	0	1
KTD.SB.1190	Launching of RTBM towards North Shaft at Sa Po Road from CH57 to CH17 (38m, 1.5m/day)	60	48d	12d	27-Mar-22	25-May-22	27-Mar-22	25-May-22	0	2
KTD.SB.1200	Dismantling of RTBM and removal from Intermediate Shaft at PERE westbound	54	52d	2d	26-May-22	29-Jul-22	26-May-22	29-Jul-22	0	1
KTD.SB.1210	Installation of horizontal pipe pile and excavation from CH14 to CH17 (74nos HPP, 270m3 exca)	43	37d	6d	26-May-22	16-Jul-22	26-May-22	16-Jul-22	0	1
KTD.SB.1220	Construction of RC structure at Intermediate Shaft at PERE westbound from CH57 to CH67	36	30d	6d	30-Jul-22	09-Sep-22	30-Jul-22	09-Sep-22	0	1
KTD.SB.1230	Backfilling for Intermediate Shaft at PERE westbound and reinstatement of existing road at PERE westbound	48	42d	6d	13-Sep-22	09-Nov-22	13-Sep-22	09-Nov-22	0	1
KTD.SB.1240	Remove TTA and resume traffic at PERE westbound	0	0d	0d		09-Nov-22		09-Nov-22	0	1
KTD.SB.1250	Construction of RC structure at North Shaft at Sa Po Road and from CH15 to CH57	260	236d	24d	18-Jul-22	03-Jun-23	18-Jul-22	03-Jun-23	0	1
KTD.SB.1260	Backfilling for North Shaft at Sa Po Road	52	46d	6d	05-Jun-23	05-Aug-23	05-Jun-23	05-Aug-23	0	1
KTD.SB.1270	Installation of ELS and excavation for remaining staircase and escalator trough structure	40	33d	6d	07-Aug-23	21-Sep-23	07-Aug-23	21-Sep-23	0	1
KTD.SB.1280	Construction of remaining staircase and escalator trough structure and backfilling	78	64d	14d	22-Sep-23	27-Dec-23	22-Sep-23	27-Dec-23	0	1
KTD.SB.1290	Installation of steelworks, ABWF, other facilities, lift, escalator and other E&M installation	221	200d	21d	28-Dec-23	25-Sep-24	28-Dec-23	25-Sep-24	0	1
KTD.SB.1300	Planned Completion of Pedestrian Subway SB-01 (Related to Section 12)	0	0d	0d		25-Sep-24		25-Sep-24	0	1
CONSTRUCTION OF ELEVATED WALKWAY LW-02		1153			31-Jul-20	26-Sep-23	07-Nov-20	26-Sep-23	0	
PIER 10		206			07-Nov-20	24-Jul-21	07-Nov-20	24-Jul-21	0	1
KTD.LW.1080	Pre-drilling works (2 nos, 1 rig)	35	33d	2d	07-Nov-20	17-Dec-20	07-Nov-20	17-Dec-20	0	1
KTD.LW.1090	Piling works for bored piles (2nos, 2200dia x 67m, 1 rig)	80	75d	5d	18-Dec-20	31-Mar-21	18-Dec-20	31-Mar-21	0	1
KTD.LW.1100	Installation of ELS and excavation for pile cap construction (273.5m3 exca, 1 team)	26	22d	4d	01-Apr-21	06-May-21	01-Apr-21	06-May-21	0	1
KTD.LW.1110	Construction of RC structure (pile cap & pier column) (149m3, 1 team)	65	53d	12d	07-May-21	24-Jul-21	07-May-21	24-Jul-21	0	1
PIER 9		206			20-Oct-20	07-Jul-21	07-Nov-20	24-Jul-21	15	1
KTD.LW.1000	Pre-drilling works (2 nos, 1 rig)	35	33d	2d	20-Oct-20	30-Nov-20	07-Nov-20	17-Dec-20	15	1
KTD.LW.1010	Piling works for bored piles (2nos, 2200dia x 67m, 1 rig)	80	75d	5d	01-Dec-20	10-Mar-21	18-Dec-20	31-Mar-21	15	1
KTD.LW.1020	Installation of ELS and excavation for pile cap construction (520.5m3 exca, 1 team)	26	22d	4d	11-Mar-21	17-Apr-21	01-Apr-21	06-May-21	15	1
KTD.LW.1030	Construction of RC structure (pile cap & pier column) (184m3, 1 team)	65	53d	12d	19-Apr-21	07-Jul-21	07-May-21	24-Jul-21	15	1
FOOTBRIDGE (PIER 9 TO PIER 10)		323			01-Apr-21	17-Feb-22	04-Jun-21	13-Sep-22	208	
KTD.LW.1040	Piling works for temp. pre-bored H-piles (12 nos, 610dia x 69m, 2 rigs)	52	42d	10d	01-Apr-21	22-May-21	04-Jun-21	25-Jul-21	64	2
KTD.LW.1050	Installation and erecting temp. working platform	78	52d	26d	26-Jul-21	27-Oct-21	26-Jul-21	27-Oct-21	0	1
KTD.LW.1060	Construction of RC bridge structure (1079m3, 4 teams)	65	50d	15d	28-Oct-21	14-Jan-22	28-Oct-21	14-Jan-22	0	1
KTD.LW.1070	Prestressing works	26	26d	0d	15-Jan-22	17-Feb-22	12-Aug-22	13-Sep-22	168	1
PIER 11		433			31-Jul-20	06-Oct-21	27-Feb-21	29-Mar-22	174	
KTD.LW.1120	Liaison/coordinate with adjacent project for TTA arrangement	90	90d	0d	31-Jul-20	28-Oct-20	27-Feb-21	27-May-21	211	2
KTD.LW.1130	Implementation of TTA	7	7d	0d	18-Nov-20	25-Nov-20	20-May-21	27-May-21	142	1
KTD.LW.1140	Pre-drilling works (4 nos, 1 rig)	48	46d	2d	26-Nov-20	23-Jan-21	28-May-21	24-Jul-21	142	1
KTD.LW.1150	Piling works for bored piles (4nos, 1800dia x 78m, 1 rig)	112	100d	12d	25-Jan-21	18-Jun-21	26-Jul-21	06-Dec-21	142	1
KTD.LW.1160	Installation of ELS and excavation for pile cap construction (319.9m3 exca, 1 team)	26	22d	4d	19-Jun-21	20-Jul-21	07-Dec-21	08-Jan-22	142	1
KTD.LW.1170	Construction of RC structure (pile cap & pier column) (138m3, 1 team)	65	53d	12d	21-Jul-21	06-Oct-21	10-Jan-22	29-Mar-22	142	1
FOOTBRIDGE (PIER 10 TO PIER 11)		129			07-Oct-21	14-Mar-22	30-Mar-22	13-Sep-22	147	1
KTD.LW.1180	Implementation of TTA for Concorde Road roundabout and erecting temp. working platform across carriageway	12	12d	0d	07-Oct-21	21-Oct-21	30-Mar-22	13-Apr-22	142	1



Milestone | Critical Milestone | Critical Work | Planned W... | Summary

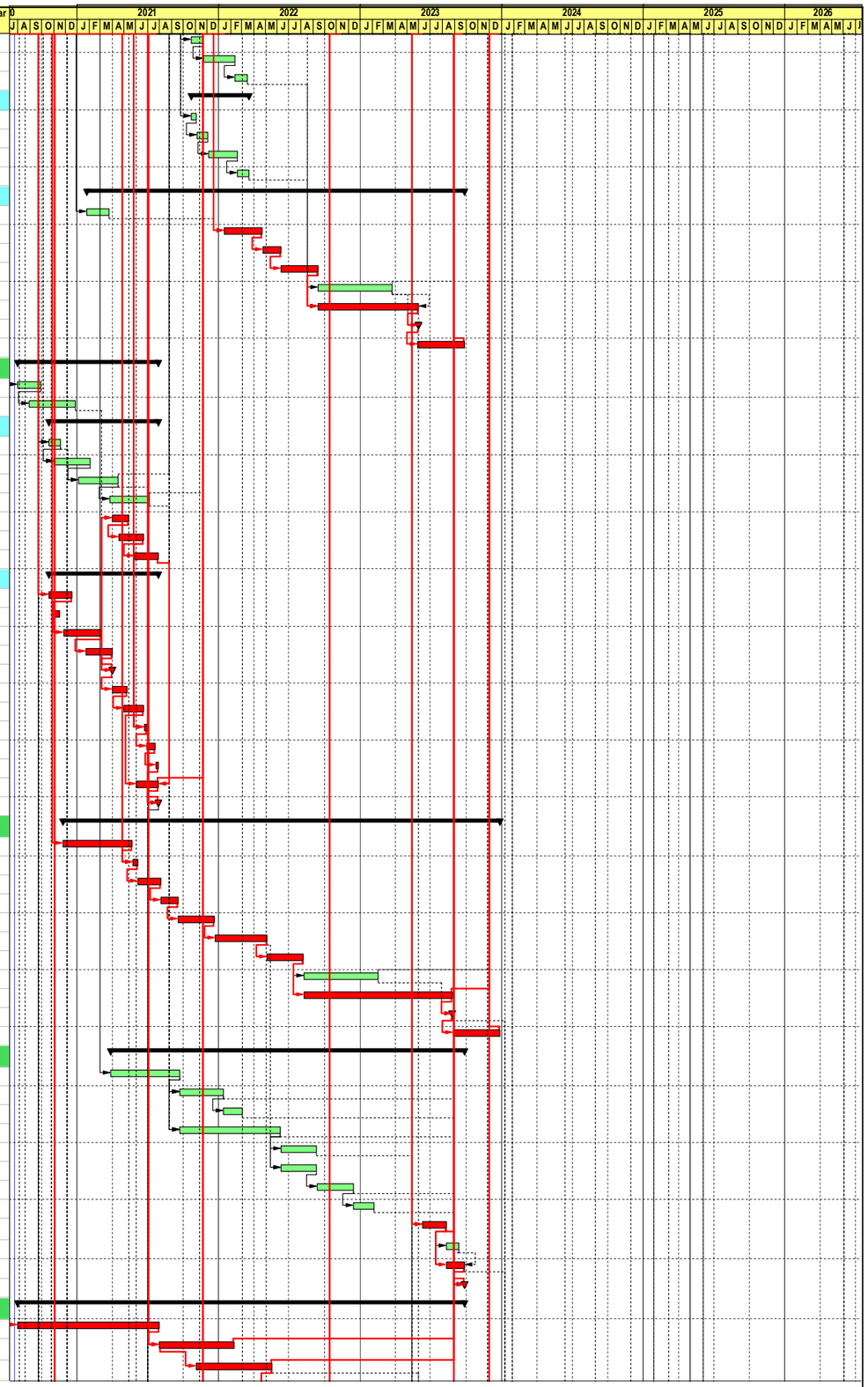
Build King – STEC Joint Venture

ED/2018/05 Kai Tak Development - Stage 5B Infrastructure Works at the Former North Apron Area

WORKS PROGRAMME

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

Activity ID	Activity Name	Dur (d)	Ori. Dur (d)	TRA (d)	Early Start	Early Finish	Late Start	Late Finish	Total Float	Calendar
KTD.LW.1190	Erecting temp. working platform at roadside	26	24d	2d	22-Oct-21	20-Nov-21	23-Apr-22	25-May-22	147	1
KTD.LW.1200	Construction of RC bridge structure (434m3, 2 teams)	65	65d	0d	22-Nov-21	11-Feb-22	26-May-22	11-Aug-22	147	1
KTD.LW.1210	Prestressing works	26	26d	0d	12-Feb-22	14-Mar-22	12-Aug-22	13-Sep-22	147	1
FOOTBRIDGE (PIER 11 TO PIER 12)		122			22-Oct-21	19-Mar-22	14-Apr-22	13-Sep-22	142	1
KTD.LW.1220	Implementation of TTA for Concorde Road roundabout and erecting temp. working platform across carriageway	12	12d	0d	22-Oct-21	04-Nov-21	14-Apr-22	30-Apr-22	142	1
KTD.LW.1230	Erecting temp. working platform at roadside	26	24d	2d	05-Nov-21	04-Dec-21	03-May-22	02-Jun-22	142	1
KTD.LW.1240	Construction of RC bridge structure (311m3, 2 teams)	58	58d	0d	06-Dec-21	17-Feb-22	04-Jun-22	11-Aug-22	142	1
KTD.LW.1250	Prestressing works and bearing installation works	26	26d	0d	18-Feb-22	19-Mar-22	12-Aug-22	13-Sep-22	142	1
LIFT TOWER, STAIRCASE, SOFT LANDSCAPING & OTHER WORKS		787			25-Jan-21	26-Sep-23	17-Nov-21	26-Sep-23	0	1
KTD.LW.1260	Pre-drilling works (6 nos, 2 rig)	48	46d	2d	25-Jan-21	24-Mar-21	17-Nov-21	14-Jan-22	237	1
KTD.LW.1270	Piling works for pre-bored H-piles for PC1, PC2, PC3 and PC4 (19 nos, 610dia x 70m, 2 rigs)	78	72d	6d	15-Jan-22	23-Apr-22	15-Jan-22	23-Apr-22	0	1
KTD.LW.1280	Installation of ELS and excavation for pile caps construction (PC1, PC2, PC3 and PC4, 379.1m3 exca, 1 team)	38	34d	4d	25-Apr-22	10-Jun-22	25-Apr-22	10-Jun-22	0	1
KTD.LW.1290	Construction of RC structures (inclu. pile caps, pier column, lift shaft, staircase, etc.)	78	64d	14d	11-Jun-22	13-Sep-22	11-Jun-22	13-Sep-22	0	1
KTD.LW.1300	Lift and other E&M installation, testing and commissioning	156	144d	12d	14-Sep-22	23-Mar-23	16-Nov-22	30-May-23	52	1
KTD.LW.1310	Construction of roof, planter, landscape softworks, other facilities and ABWF works for whole walkway	208	182d	26d	14-Sep-22	30-May-23	14-Sep-22	30-May-23	0	1
KTD.LW.1320	Planned Completion of Landscaped Elevated Walkway LW-02 (Related to Section 1)	0	0d	0d		30-May-23		30-May-23	0	1
KTD.LW.1330	Advance Completion of Landscaped Elevated Walkway LW-02 to Specific Contract Completion Date (Section 1)	101	101d	0d	30-May-23	26-Sep-23	30-May-23	26-Sep-23	0	1
CONSTRUCTION OF BOX CULVERT B1		364			31-Jul-20	29-Jul-21	20-Oct-20	29-Jul-21	0	
KTD.BC.1000	Prepare/submission of temporary EVA diversion scheme with SCL	60	60d	0d	31-Jul-20	28-Sep-20	02-Nov-20	31-Dec-20	94	2
KTD.BC.1010	Consult/liaison/vetting/approval of temporary EVA diversion scheme with SCL	120	120d	0d	30-Aug-20	27-Dec-20	02-Dec-20	31-Mar-21	94	2
BOX CULVERT B1 (CHB1 364.584 TO CHB1 168.00)		225			20-Oct-20	29-Jul-21	13-Nov-20	29-Jul-21	0	
KTD.BC.1020	Installation of ELS and excavation for CHB1 364.584 to CHB1 348.00 (24m ELS, 523.8m3 exca, 2 team)	26	24d	2d	20-Oct-20	19-Nov-20	13-Nov-20	12-Dec-20	20	1
KTD.BC.1030	Installation of ELS and excavation for CHB1 348.00 to CHB1 216.00 (12718m3, 2 teams)	78	72d	6d	02-Nov-20	03-Feb-21	25-Nov-20	02-Mar-21	20	1
KTD.BC.1040	Construction of RC box culvert structure (1435m3, 4 teams)	78	74d	2d	05-Jan-21	16-Apr-21	28-Jan-21	11-May-21	20	1
KTD.BC.1050	Backfilling from CHB1 364.584 to CHB1 216.00 (10043m3, 4 teams)	78	74d	2d	25-Mar-21	06-Jul-21	26-Apr-21	29-Jul-21	20	1
KTD.BC.1060	Excavation for CHB1 216.00 to CHB1 168.00 by ELS/open-cut/other accepted method (4600m3, 2 teams)	32	32d	7d	01-Apr-21	13-May-21	01-Apr-21	13-May-21	0	1
KTD.BC.1070	Construction of RC box culvert structure from CHB1 216.00 to CHB1 168.00 (370m3, 3 teams)	52	48d	4d	19-Apr-21	21-Jun-21	19-Apr-21	21-Jun-21	0	1
KTD.BC.1080	Backfilling from CHB1 216.00 to CHB1 168.00 (3800m3, 4 teams)	52	48d	4d	28-May-21	29-Jul-21	28-May-21	29-Jul-21	0	1
BOX CULVERT B1 (CHB1 168.00 TO CH. 89.123)		225			20-Oct-20	29-Jul-21	20-Oct-20	29-Jul-21	0	1
KTD.BC.1090	Installation of ELS and excavation for CHB1 115.392 to CHB1 168.00 (114m ELS, 3400m3 exca, 2 teams)	51	33d	6d	20-Oct-20	18-Dec-20	20-Oct-20	18-Dec-20	0	1
KTD.BC.1095	Encounter CLP cables at CHB1 143.3 to CHB1 131.125 and removal by CLP	12	12d	0d	03-Nov-20	16-Nov-20	03-Nov-20	16-Nov-20	0	1
KTD.BC.1100	Construction of RC box culvert structure for CHB1 115.392 to CHB1 168.00 (434m3, 2 teams)	78	78d	0d	28-Nov-20	05-Mar-21	28-Nov-20	05-Mar-21	0	1
KTD.BC.1110	Backfilling from CHB1 168.00 to CHB1 115.392 and construct temporary diversion EVA with facilities (2374m3, 2 teams)	52	46d	6d	23-Jan-21	31-Mar-21	23-Jan-21	31-Mar-21	0	1
KTD.BC.1120	Traffic diversion for MTRC EVA of SCL Station and SUA	0	0d	0d		31-Mar-21		31-Mar-21	0	1
KTD.BC.1130	Installation of ELS and excavation for CHB1 115.392 to CHB1 89.123 (90m ELS, 1860m3 exca, 2 teams)	29	26d	3d	01-Apr-21	10-May-21	01-Apr-21	10-May-21	0	1
KTD.BC.1140	Construction of RC box culbert structure for CBB1 115.392 to CHB1 89.123 (236m3, 2 teams)	42	39d	3d	30-Apr-21	21-Jun-21	30-Apr-21	21-Jun-21	0	1
KTD.BC.1150	Temporary drain. diversion (inclu temporary connection works and breakthrough at upstream)	7	6d	1d	22-Jun-21	29-Jun-21	22-Jun-21	29-Jun-21	0	1
KTD.BC.1160	Construct the remaining RC structure within existing box culvert and abandon the existing box culvert	18	18d	0d	30-Jun-21	21-Jul-21	30-Jun-21	21-Jul-21	0	1
KTD.BC.1170	Permanent drain. diversion (inclu connection works at upstream)	7	6d	1d	22-Jul-21	29-Jul-21	22-Jul-21	29-Jul-21	0	1
KTD.BC.1180	Backfilling from CHB1 115.392 to CHB1 89.123 (1050m3, 2 teams)	49	48d	4d	01-Jun-21	29-Jul-21	01-Jun-21	29-Jul-21	0	1
KTD.BC.1190	Planned Completion of Box Culvert B1 (Related to Section 8)	0	0d	0d		29-Jul-21		29-Jul-21	0	1
MODIFICATION OF EXISTING SUBWAY KS10		1129			24-Nov-20	27-Dec-23	24-Nov-20	27-Dec-23	0	
KTD.MS.0000	Liaison/coordinate with HyD structure/HyD lighting/EMSD and other utility and service undertakings	180	180d	0d	24-Nov-20	22-May-21	24-Nov-20	22-May-21	0	2
KTD.MS.1010	Pre-drilling works (1 no, 1 rig)	12	10d	2d	24-May-21	05-Jun-21	24-May-21	05-Jun-21	0	1
KTD.MS.1020	Piling works for pre-bored H-piles (4 nos, 610dia x 75m, 1 rig)	48	42d	6d	07-Jun-21	03-Aug-21	07-Jun-21	03-Aug-21	0	1
KTD.MS.1030	Installation of ELS for demolition of existing str. & construction of entrance at Road D1 (77m ELS, 900m3 exca, 1 teams)	39	33d	6d	04-Aug-21	17-Sep-21	04-Aug-21	17-Sep-21	0	1
KTD.MS.1035	Demolition of existing subway structures (inclu. ramp and staircase)	78	64d	14d	18-Sep-21	21-Dec-21	18-Sep-21	21-Dec-21	0	1
KTD.MS.1040	Construction of RC structures (inclu. lift shaft, staircase, pump house and etc.) (365m3, 1 team)	104	92d	12d	22-Dec-21	04-May-22	22-Dec-21	04-May-22	0	1
KTD.MS.1045	Backfilling of ELS to ground level	78	64	14d	05-May-22	06-Aug-22	05-May-22	06-Aug-22	0	1
KTD.MS.1050	Lift and other E&M installation, testing and commissioning	156	156d	0d	08-Aug-22	16-Feb-23	17-Feb-23	26-Aug-23	156	1
KTD.MS.1060	Construction of roof, steelworks, other facilities and ABWF works	312	300d	12d	08-Aug-22	26-Aug-23	08-Aug-22	26-Aug-23	0	1
KTD.MS.1070	Planned Completion of modification of existing Subway KS10 (Related to Section 3)	0	0d	0d		26-Aug-23		26-Aug-23	0	1
KTD.MS.1080	Advance Completion of modification of existing Subway KS10 to Specific Contract Completion Date (Section 3)	100	178d	0d	28-Aug-23	27-Dec-23	28-Aug-23	27-Dec-23	0	1
CONSTRUCTION OF DISTRICT COOLING SYSTEM WORKS (SUBJECTED TO EXCISION)		914			27-Mar-21	26-Sep-23	22-Nov-21	26-Sep-23	0	
KTD.DCS.1000	Liaison/coordinate with utility and service undertakings on connection works of DCS works	180	180d	0d	27-Mar-21	22-Sep-21	22-Nov-21	20-May-22	240	2
KTD.DCS.1010	Installation of ELS and excavation and construction of DCS pipes from CH80 to CH145 (2 teams)	91	79d	12d	23-Sep-21	12-Jan-22	24-Apr-23	11-Aug-23	465	1
KTD.DCS.1020	Backfilling for CH80 to CH145 (780m3, 2 teams)	39	33d	6d	13-Jan-22	02-Mar-22	12-Aug-23	26-Sep-23	465	1
KTD.DCS.1030	Installation of ELS and excavation and construction of DCS pipes from CH170 to CH334 (2 teams)	208	194d	14d	23-Sep-21	09-Jun-22	21-May-22	01-Feb-23	192	1
KTD.DCS.1040	Backfilling for CH170 to CH334 (1900m3, 2 teams)	78	72d	6d	10-Jun-22	09-Sep-22	04-Mar-23	09-Jun-23	218	1
KTD.DCS.1050	Installation of ELS and excavation of temporary pits for construction of DCS works from CH145 to CH170 (1 team)	78	66d	12d	10-Jun-22	09-Sep-22	02-Feb-23	09-May-23	192	1
KTD.DCS.1060	Construction of chilled water pipes from CH145 to CH170 by trenchless method (inclu DAV and washout pit, 1 team)	78	64d	14d	13-Sep-22	14-Dec-22	10-May-23	11-Aug-23	192	1
KTD.DCS.1070	Backfilling for temporary pits (900m3, 2 teams)	39	33d	6d	15-Dec-22	04-Feb-23	12-Aug-23	26-Sep-23	192	1
KTD.DCS.1080	Installation of ELS and excavation and construction of DCS works from CH0 to CH80 (2 teams)	52	40d	12d	10-Jun-23	11-Aug-23	10-Jun-23	11-Aug-23	0	1
KTD.DCS.1090	T&C of the installed DCS pipes before connection to existing DCS system	26	26d	0d	12-Aug-23	11-Sep-23	28-Aug-23	26-Sep-23	13	1
KTD.DCS.1100	Backfilling for CH0 to CH80 (960m3, 2 teams)	39	33d	6d	12-Aug-23	26-Sep-23	12-Aug-23	26-Sep-23	0	1
KTD.DCS.1110	Planned Completion of DCS works within Parts 1 and 1A (Related to Section 9)	0	0d	0d		26-Sep-23		26-Sep-23	0	1
RENOVATION OF EXISTING SUBWAYS KS9 AND KS32		1153			31-Jul-20	26-Sep-23	31-Jul-20	26-Sep-23	0	
KTD.RS.1000	Liasion with UAP project and relevant departments for possession approval/consent	365	365d	0d	31-Jul-20	30-Jul-21	31-Jul-20	30-Jul-21	0	2
KTD.RS.1010	Construction of shelter for subways KS9 and KS32	156	130d	26d	31-Jul-21	08-Feb-22	31-Jul-21	08-Feb-22	0	1
KTD.RS.1020	Construction of steelworks, other facilities, E&M installation and ABWF works for KS9 and KS32	156	142d	124d	03-Nov-21	17-May-22	03-Nov-21	17-May-22	0	1



Milestone
Critical Milestone
Critical Work
Planned W...
Summary

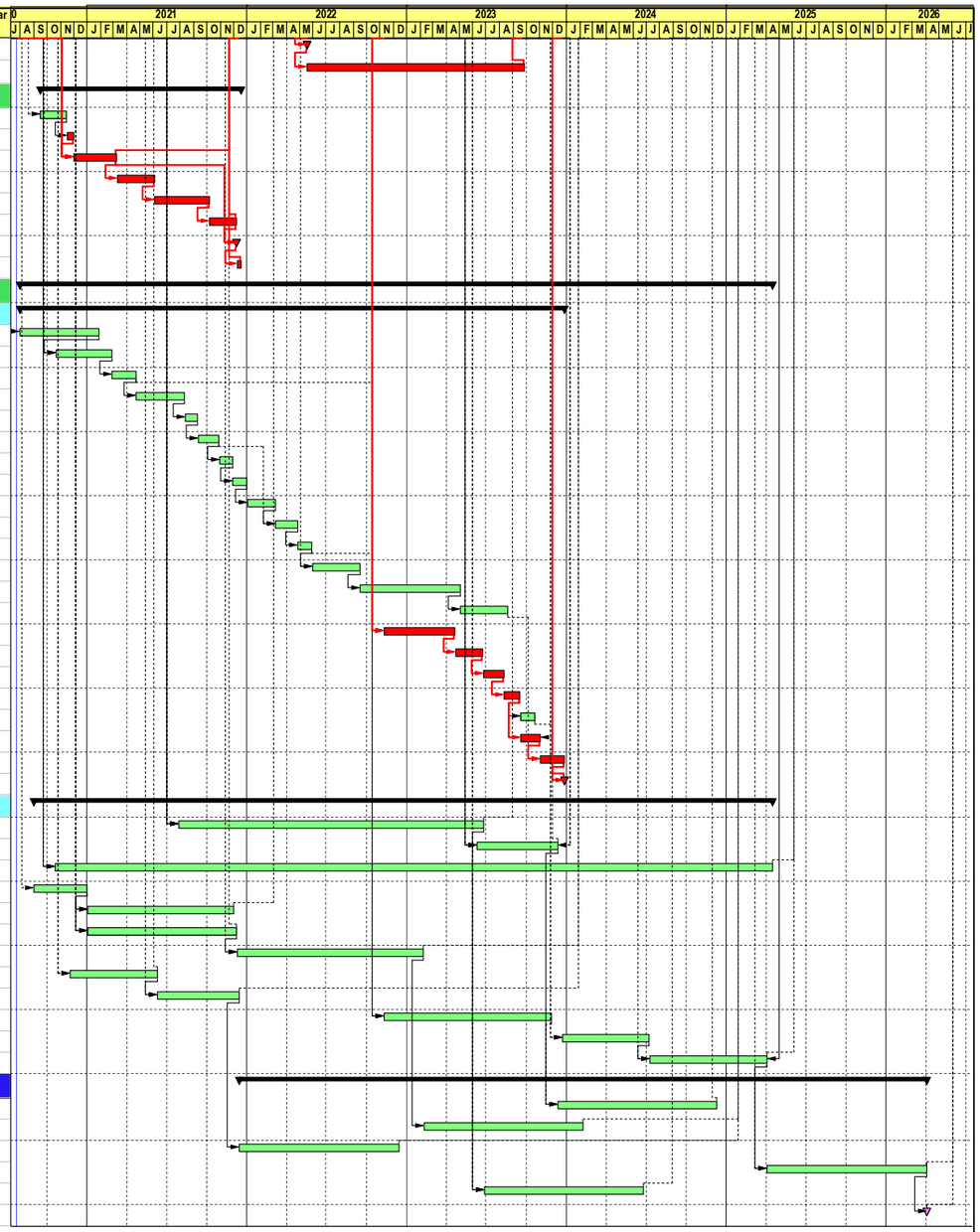
Build King – STEC Joint Venture

ED/2018/05 Kai Tak Development - Stage 5B Infrastructure Works at the Former North Apron Area

WORKS PROGRAMME

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

Activity ID	Activity Name	Dur (d)	Ori. Dur (d)	TRA (d)	Early Start	Early Finish	Late Start	Late Finish	Total Float	Calendar
KTD.RS.1030	Planned Completion of renovation of existing Subways KS9 and KS32 (Related to Section 1)	0	0d	0d		17-May-22		17-May-22	0	1
KTD.RS.1040	Advance Completion of renovation of existing Subways KS9 and KS32 to Specific Contract Completion Date (Section 1)	406	406d	0d	18-May-22	26-Sep-23	18-May-22	26-Sep-23	0	1
DIVERSION OF EXISTING RISING MAIN AND DEMOLITION OF EXISTING STRUCTURES AT SITE 2C2 & 2C3		458			16-Sep-20	17-Dec-21	17-Sep-20	17-Dec-21	0	
KTD.RM.1000	Liasion with relevant departments for removal of abandoned motorcycles under existing structures at Site 2C2 and 2C3	60	60d	0d	16-Sep-20	14-Nov-20	17-Sep-20	15-Nov-20	1	2
KTD.RM.1001	Removal of abandoned motorcycles and clearance for demolition works	14	14d	2d	16-Nov-20	01-Dec-20	16-Nov-20	01-Dec-20	0	1
KTD.RM.1005	Demolition of existing structures at Site 2C2 and 2C3	78	66d	12d	02-Dec-20	09-Mar-21	02-Dec-20	09-Mar-21	0	1
KTD.RM.1010	Installation of ELS and excavate for construction of twin rising main from CH0 to CH184 (400m ELS, 4059m3 exca, 2 teams)	65	53d	12d	10-Mar-21	03-Jun-21	10-Mar-21	03-Jun-21	0	1
KTD.RM.1020	Construction of twin rising main from CH0 to CH184 and connect to existing sewage rising main	104	98d	6d	04-Jun-21	07-Oct-21	04-Jun-21	07-Oct-21	0	1
KTD.RM.1030	Backfilling works and abandon the existing sewage rising main	52	46d	6d	08-Oct-21	08-Dec-21	08-Oct-21	08-Dec-21	0	1
KTD.RM.1040	Planned Completion of diversion and demolition of existing structures at Site 2C2 and 2C3 (Related to Section 5)	0	0d	0d		08-Dec-21		08-Dec-21	0	1
KTD.RM.1050	Advance Completion of diversion and demolition works to Specific Contract Completion Date (Section 5)	8	8d	0d	09-Dec-21	17-Dec-21	09-Dec-21	17-Dec-21	0	1
CONSTRUCTION OF ROAD WORKS		1720			31-Jul-20	15-Apr-25	12-Sep-20	30-Jun-25	76	
CONSTRUCTION OF SLIP ROAD S14		1245			31-Jul-20	27-Dec-23	14-Oct-20	27-Dec-23	0	
KTD.RW.0000	Liaison/coordinate with utility and service undertakings on diversion works (including CLP, DCS work and etc.)	180	180d	0d	31-Jul-20	26-Jan-21	14-Oct-20	11-Apr-21	75	2
KTD.RW.1000	Expose and install protect/support system for existing underground utilities and services (incl 132kV and 400kV cables)	104	98d	6d	21-Oct-20	26-Feb-21	04-Jan-21	17-May-21	60	1
KTD.RW.1010	Pre-drilling works for all pile caps PC1 to PC7 (9 nos, 1 rig)	40	30d	10d	27-Feb-21	22-Apr-21	18-May-21	06-Jul-21	60	1
KTD.RW.1020	Piling works of pre-bored H-piles (14 nos, 610dia x 70m, 1 rig)	91	85d	6d	23-Apr-21	11-Aug-21	07-Jul-21	23-Oct-21	60	1
KTD.RW.1030	Installation of ELS and excavation and construction for pile cap PC1 (60m3 exca, 30m3 conc, 1 team)	26	24d	2d	12-Aug-21	10-Sep-21	25-Oct-21	23-Nov-21	60	1
KTD.RW.1040	Construction of temporary supporting system for existing bridge K73	39	34d	5d	11-Sep-21	29-Oct-21	24-Nov-21	11-Jan-22	60	1
KTD.RW.1050	Demolition of existing bearing wall	26	24d	2d	30-Oct-21	29-Nov-21	12-Jan-22	14-Feb-22	60	1
KTD.RW.1060	Installation of ELS and excavation and construction for pile cap PC2 (60m3 exca, 30m3 conc, 1 team)	26	24d	2d	30-Nov-21	31-Dec-21	15-Feb-22	16-Mar-22	60	1
KTD.RW.1070	Construction of remaining foundation and pier structures (incl. columns, portal beams and etc.) (169m3, 1 team)	52	48d	4d	03-Jan-22	07-Mar-22	17-Mar-22	23-May-22	60	1
KTD.RW.1080	Construction of cantilever slab extended from ext. bridge K73 (150m3, 1 team)	39	34d	5d	08-Mar-22	26-Apr-22	24-May-22	09-Jul-22	60	1
KTD.RW.1090	Backfilling for pile caps (PC1 and PC2)	26	24d	2d	27-Apr-22	28-May-22	11-Jul-22	09-Aug-22	60	1
KTD.RW.1100	Installation of ELS and excavation for Retaining Wall S14 (Bay5-12, 3600m3 exca, 2 team)	90	78d	12d	30-May-22	15-Sep-22	10-Aug-22	26-Nov-22	60	1
KTD.RW.1110	Construction of Retaining Wall S14 (Bay5-12, 800m3, 2 teams)	184	172d	12d	16-Sep-22	03-May-23	28-Nov-22	15-Jul-23	60	1
KTD.RW.1120	Backfilling for Retaining Wall S14 (Bay8-12, 1100m3, 2 teams)	90	78d	12d	04-May-23	19-Aug-23	17-Jul-23	01-Nov-23	60	1
KTD.RW.1130	Piling works for bored piles (20 nos, 1200dia x 70m, 2 rigs)	130	116d	14d	10-Nov-22	21-Apr-23	10-Nov-22	21-Apr-23	0	1
KTD.RW.1140	Installation of ELS and excavation and construction for pile caps (P3-P7,1110m3 exca, 800m3 conc, 2 teams)	52	48d	4d	22-Apr-23	24-Jun-23	22-Apr-23	24-Jun-23	0	1
KTD.RW.1150	Construction of Retaining Wall S14 (Bay1-4, 460m3, 2 teams)	39	21d	2d	26-Jun-23	10-Aug-23	26-Jun-23	10-Aug-23	0	1
KTD.RW.1160	Construction of bridge S14 decking structures (320m3, 1 teams)	32	26d	6d	11-Aug-23	16-Sep-23	11-Aug-23	16-Sep-23	0	1
KTD.RW.1170	Prestressing works and bearing installation works	26	24d	2d	18-Sep-23	19-Oct-23	29-Sep-23	01-Nov-23	10	1
KTD.RW.1180	Backfilling for Retaining Wall S14 (Bay 1-7, 1800m3, 2 teams)	36	32d	4d	18-Sep-23	01-Nov-23	18-Sep-23	01-Nov-23	0	1
KTD.RW.1190	Construction of road pavement, road marking, street and other facilities	46	39d	7d	02-Nov-23	27-Dec-23	02-Nov-23	27-Dec-23	0	1
KTD.RW.1200	Planned Completion of Slip Road S14 (Related to Section 3)	0	0d	0d		27-Dec-23		27-Dec-23	0	1
CONSTRUCTION OF ROADS D1, L9, L16, PEDESTRIAN STREETS AND OPEN SPACES		1688			01-Sep-20	15-Apr-25	12-Sep-20	30-Jun-25	76	
KTD.RW.1220	Construct roadwork, UUs/services & landscape softworks within Part 1 (incl Road L9 and part of Road L16)	563	542d	21d	30-Jul-21	26-Jun-23	02-Nov-21	26-Sep-23	78	1
KTD.RW.1230	Construct roadwork, UUs/services & landscape softworks within Part 1A (incl Sa Po Road, pedestrian street and Road D1)	153	132d	21d	10-Jun-23	11-Dec-23	26-Jun-23	27-Dec-23	12	1
KTD.RW.1240	Construct underground utilities/services within Parts 1B, 6A and 7 and remaining works of all Parts	1321	1300d	21d	20-Oct-20	15-Apr-25	02-Jan-21	30-Jun-25	60	1
KTD.RW.1245	Liasion/coordinate with CLP for new 132kV and 11kV cable laying at Road L16, Part 3 and Crowd Dispersal Route	122	122d	0d	01-Sep-20	31-Dec-20	12-Sep-20	11-Jan-21	11	2
KTD.RW.1250	Construct roadwork and UUs/services within Parts 2 and 10 (incl Crowd Dispersal Route)	270	249d	21d	02-Jan-21	02-Dec-21	05-May-21	29-Mar-22	94	1
KTD.RW.1260	Construct underground utilities/services within Part 3	275	254d	21d	02-Jan-21	08-Dec-21	12-Jan-21	17-Dec-21	8	1
KTD.RW.1270	Construct roadwork and landscape softworks within Part 3 (incl pedestrian streets)	342	321d	21d	09-Dec-21	08-Feb-23	29-Dec-22	24-Feb-24	310	1
KTD.RW.1280	Construct underground utilities/services within Part 4	156	135d	21d	23-Nov-20	09-Jun-21	12-Dec-20	30-Jun-21	17	1
KTD.RW.1290	Construct roadwork and landscape softworks within Part 4 (incl pedestrian street)	156	135d	21d	10-Jun-21	14-Dec-21	17-Aug-23	24-Feb-24	647	1
KTD.RW.1300	Construct roadwork, underground utilities/services within Part 5	312	291d	21d	10-Nov-22	28-Nov-23	07-Dec-22	27-Dec-23	23	1
KTD.RW.1310	Liasion with developer of the sites 2A4, 2A5(B) and 2A10 and construction of drainage and sewage works within Part 6	156	135d	21d	23-Dec-23	08-Jul-24	15-Mar-24	23-Sep-24	65	1
KTD.RW.1320	Construct roadwork, remaining UUs/services and landscape softworks within Part 6 (incl remaining Road L16)	222	201d	21d	09-Jul-24	03-Apr-25	24-Sep-24	30-Jun-25	65	1
PROJECT ESTABLISHMENT WORKS		1571			15-Dec-21	03-Apr-26	27-Sep-23	30-Jun-26	88	2
KTD.EW.1000	Establishment works for all landscape softworks (except Parts 3, 4 and 6)	365	365d	0d	12-Dec-23	10-Dec-24	28-Dec-23	26-Dec-24	16	2
KTD.EW.1010	Establishment works for landscape softworks within Part 3 (Subj to excision within 416 days)	365	365d	0d	09-Feb-23	08-Feb-24	26-Feb-24	24-Feb-25	382	2
KTD.EW.1020	Establishment works for landscape softworks within Part 4 (Subj to excision within 244 days)	365	365d	0d	15-Dec-21	14-Dec-22	26-Feb-24	24-Feb-25	803	2
KTD.EW.1030	Establishment works for landscape softworks within Part 6	365	365d	0d	04-Apr-25	03-Apr-26	01-Jul-25	30-Jun-26	88	2
KTD.EW.1040	Establishment works for landscape softworks under Section 1	365	365d	0d	27-Jun-23	25-Jun-24	27-Sep-23	25-Sep-24	92	2
KTD.EW.1050	Planned Contract Completion Date	0	0d	0d		03-Apr-26		30-Jun-26	88	2



Milestone
Critical Milestone
Critical Work
Planned W...
Summary

Build King – STEC Joint Venture

ED/2018/05 Kai Tak Development - Stage 5B Infrastructure Works at the Former North Apron Area

WORKS PROGRAMME

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 schedule

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 May 2022

May 2022

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

Air Quality Monitoring Station
AM2(A) Ng Wah Catholic Secondary School
AM3 - Sky Tower

Noise Quality Monitoring Station
M4(A) - Le Billionnaire
M5(A) - Prince Ritz

Contract No. EDO 2/2020 Environmental Monitoring at Kai Tak Development – Stage 5B infrastructure works at the former north apron area

Tentative Environmental Monitoring and Weekly Site Inspection Schedule for June 2022

June 2022

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

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

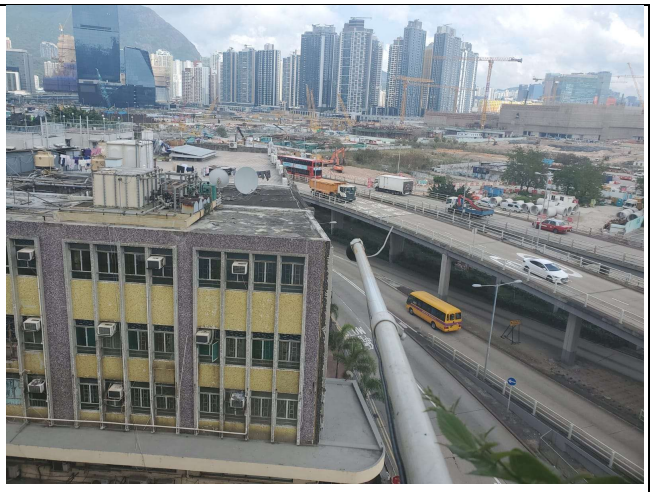
Appendix D – Photographic records

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

TISCH Environmental

TSP MFC

Total Suspended Particulate, Mass Flow Controlled

MFC **TSP**

Ambient Air Sampler

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

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

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

TISCH Environmental

www.tisch-env.com

Tisch Environmental
145 S. Miami Ave
Cleves, OH 45002
513-467-9000
sales@tisch-env.com

TISCH Environmental

TSP MFC

MFC TSP Ambient Air Sampler

General System Specifications

Particulate Size: Total Suspended Particulate (TSP)
EPA Designation: CFR 40 Part 50 Appendix B
Flow Controller: Mass Flow Controller
Motor Style: Brush Style Motor Assembly
Pressure Recorder: Dickson Chart Recorder, 24 hour
Timer: 7 Day Mechanical
Elapsed Time Indicator: Mechanical, Hours and Tenths
Flow Range: 39-60CFM, 1.09M^3M-1.68M^3M
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

Available Models

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

Optional Equipment

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

Calibration Equipment

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

Physical Specifications

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

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

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TISCH Environmental

Calibration Certificate of HVS

Air Sampler Calibration Curve Plotting & Calculation

(Dickson recorder)

Calibration curve ref. No. : ATSPC-01-2022050401 Date of calibration : 04/05/2022

Location : Sky Tower Sampler : TE-5170X

Calibration Data

Serial Number : 4687

Ambient barometric pressure, Pa = 760.6 (mmHg) Ambient temperature, Ta = 299.45 (deg K)

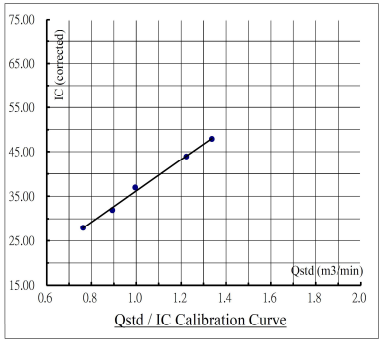
Qstd Slope, m = 2.03518 Qstd Intercept, b = -0.005890

Calibration Curve

Plate No.	H_2O (in)	Qstd (m^3 / min)	I (chart)	IC (corrected)
18	7.40	1.337	48.0	47.90
13	6.20	1.224	44.0	43.91
10	4.10	0.996	37.0	36.92
7	3.30	0.894	32.0	31.93
5	2.40	0.763	28.0	27.94

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]	34.918	1.3076	0.9980



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 : 04/05/2022 Checked by : 04/05/2022

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

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

Air Sampler Calibration Curve Plotting & Calculation

(Dickson recorder)

Calibration curve ref. No. : ATSPC-01-2022050404 Date of calibration : 04/05/2022

Location : Ng Wah Catholic Secondary School Sampler : TE-5170X

Calibration Data

Serial Number : 4360

Ambient barometric pressure, Pa = 760.6 (mmHg) Ambient temperature, Ta = 299.45 (deg K)

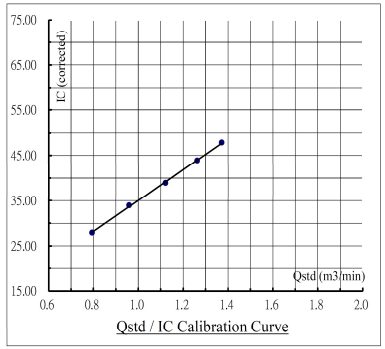
Qstd Slope, m = 2.03518 Qstd Intercept, b = 0.005890

Calibration Curve

Plate No.	H_2O (in)	Qstd (m^3 / min)	I (chart)	IC (corrected)
18	7.80	1.372	48.0	47.90
13	6.60	1.263	44.0	43.91
10	5.20	1.121	39.0	38.92
7	3.80	0.959	34.0	33.93
5	2.60	0.794	28.0	27.94

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]	34.141	0.9038	0.9996



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

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

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

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

Calibrated by : 04/05/2022 Checked by : 04/05/2022

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

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

TISCH Environmental

RECALIBRATION DUE DATE:
June 1, 2022

Certificate of Calibration

Calibration Certification Information				
Cal. Date:	June 1, 2021	**Rootsmeter S/N:** 438320	**Ta:** 292	°K
Operator:	Jim Tisch		**Pa:** 754.9	mm Hg
Calibration Model #:	TE-5025A	**Calibrator S/N:** 0006		

Run	Vol. Init (m3)	Vol. Final (m3)	ΔVol. (m3)	ΔTime (min)	ΔP (mm Hg)	ΔH (in H2O)
1	1	2	1	1.4370	3.2	2.00
2	3	4	1	1.0130	6.4	4.00
3	5	6	1	0.9060	8.0	5.00
4	7	8	1	0.8590	8.9	5.50
5	9	10	1	0.7110	12.9	8.00

Data Tabulation

Vstd (m3)	Qstd (x-axis)	$\sqrt{\Delta H\left(\frac{Pa}{Pstd}\right)\left(\frac{Tstd}{Ta}\right)}$ (y-axis)		Va	Qa (x-axis)	$\sqrt{\Delta H(Ta/Pa)}$ (y-axis)
1.0094	0.7024	1.4239		0.9958	0.6929	0.8796
1.0051	0.9922	2.0136		0.9915	0.9788	1.2439
1.0029	1.1070	2.2513		0.9894	1.0921	1.3907
1.0017	1.1662	2.3612		0.9882	1.1504	1.4586
0.9964	1.4014	2.8477		0.9829	1.3824	1.7591
QSTD	**m=**	**2.03518**	**QA**		**m=**	**1.27440**
	b=	**-0.00589**			**b=**	**-0.00364**
	r=	**0.99997**			**r=**	**0.99997**

Calculations

Vstd=	ΔVol((Pa-ΔP)/Pstd)(Tstd/Ta)	**Va=**	ΔVol((Pa-ΔP)/Pa)
Qstd=	Vstd/ΔTime	**Qa=**	Va/ΔTime

For subsequent flow rate calculations:

Qstd= $1/m\left(\left(\sqrt{\Delta H\left(\frac{Pa}{Pstd}\right)\left(\frac{Tstd}{Ta}\right)}\right)-b\right)$ **Qa=** $1/m\left(\left(\sqrt{\Delta H(Ta/Pa)}\right)-b\right)$

Standard Conditions	
Tstd:	298.15 °K
Pstd:	760 mm Hg

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

RECALIBRATION

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

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15 South Miami Avenue
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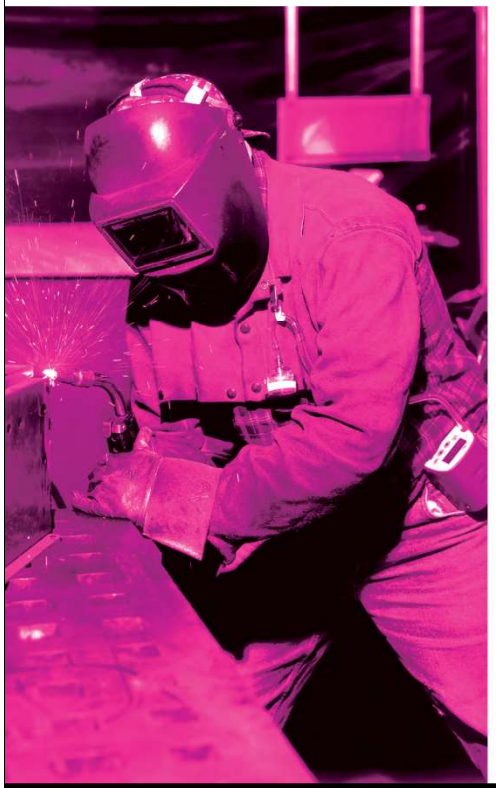
www.tisch-env.com
TOLL FREE: (877)263-7610
FAX: (513)467-9009

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 "memory" issues
+ 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 Concentration Range	0.001 to 20 mg/m³ (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

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

Temperature Range

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

Operational Humidity
0 to 95% RH, non-condensing

Time Constant (LCD display)

Range	User-adjustable, 1 to 60 seconds

Data Logging

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

User-Select Calibration Factors

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

Physical

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

Power Supply/Charger (P/N 2613210)

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

Maintenance

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

Communications Interface

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

Minimum Computer Requirements for TrakPro™ Data Analysis Software

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

Battery Performance

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

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

Battery Level Indicator

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

Calibration Certificate of Dust Meter (TSI Sidepak AM510)

CERTIFICATE OF CALIBRATION AND TESTING

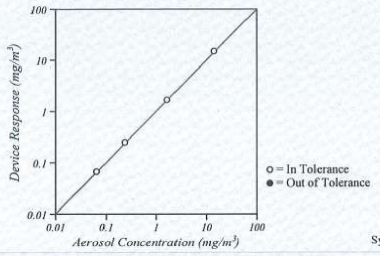
TSI Incorporated, 500 Cardigan Road, Shoreview, MN 55126 USA
Tel: 1-800-874-2811 1-651-490-2811 Fax: 1-651-490-3824 http://www.tsi.com

Environment Conditions		
Temperature	75.69 (24.3)	°F (°C)
Relative Humidity	49.8	%RH
Barometric Pressure	28.78 (974.6)	inHg (hPa)

Model	AM510
Serial Number	11208032

☒ As Left ☐ As Found
☒ In Tolerance ☐ Out of Tolerance

Concentration Linearity Plot



System ID: DTI101-02

CONCENTRATION — Unit: mg/m³

#	Standard	Measured	Allowable Range	#	Standard	Measured	Allowable Range
1	1.625	1.584	1.462~1.788	3	0.064	0.063	0.045~0.083
2	0.234	0.235	0.199~0.269	4	13.990	13.985	12.591~15.389

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

Measurement Variable	System ID	Last Cal.	Cal. Due
DC Voltage	E003314	01-11-21	01-31-22
Microbalance	M001324	01-29-21	01-31-23
Flowmeter	E005626	03-09-21	03-31-22

Measurement Variable	System ID	Last Cal.	Cal. Due
Photometer	E003319	02-15-21	08-31-21
Pressure	E003511	10-26-20	10-31-21
DC Voltage	E003315	01-11-21	01-31-22

August 11, 2021

Calibrated — Date

Personal Aerosol Monitor Performance check with High Volume Sampler

Preformance Check ref. No: AS0210827-1 Report Issue Date: 27/08/2021
Date of performance check: 25/08/2021

Objective:

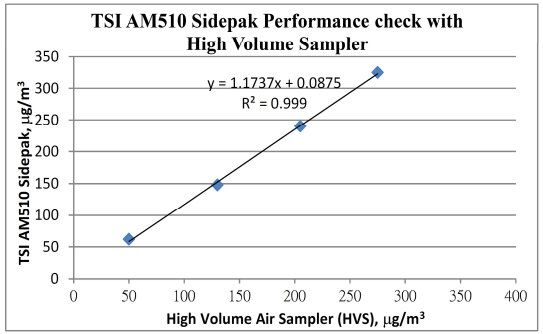
A dust meter and a Total Suspended Particulate High Volume Air Sampler (HVS) were placed together to measure the Total Suspended Particulate (TSP) concentrations simultaneously to check the performance.

Equipment Used:

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

Resuslt:

Equipment	Measurement Result, μg/m³			
TSI AM510 Sidepak	62	148	240	325
High Volume Air Sampler (HVS)	50	130	205	275



Tested by : 27/08/2021 Checked by : 27/08/2021
Name : (Ben Poon) Name : (Tommy Wong)

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

Calibration Certificate of Dust Meter (TSI Sidepak AM510)

CERTIFICATE OF CALIBRATION AND TESTING

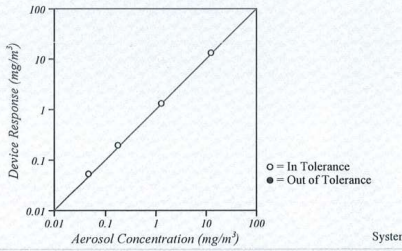
TSI Incorporated, 500 Cardigan Road, Shoreview, MN 55126 USA
Tel: 1-800-874-2811 1-651-490-2811 Fax: 1-651-490-3824 http://www.tsi.com

Environment Conditions		
Temperature	73.83 (23.2)	°F (°C)
Relative Humidity	26.8	%RH
Barometric Pressure	28.49 (964.8)	inHg (hPa)

Model	AM510
Serial Number	11404005

☒As Left ☒In Tolerance
☐As Found ☐Out of Tolerance

Concentration Linearity Plot



System ID: DTII01-02

CONCENTRATION *Unit: mg/m3*

#	STANDARD	MEASURED	ALLOWABLE RANGE	#	STANDARD	MEASURED	ALLOWABLE RANGE
1	1.261	1.239	1.135~1.387	3	0.046	0.050	0.032~0.060
2	0.173	0.184	0.147~0.199	4	12.363	12.493	11.127~13.599

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

Measurement Variable	System ID	Last Cal.	Cal. Due	Measurement Variable	System ID	Last Cal.	Cal. Due
DC Voltage	E003314	01-11-22	01-31-23	Photometer	E003319	02-22-22	08-31-22
Microbalance	M001324	01-29-21	01-31-23	Pressure	E003511	10-26-21	10-31-22
Flowmeter	E005626	03-04-22	03-31-23	DC Voltage	E003315	01-11-22	01-31-23

April 14, 2022

Calibrated — Date

Personal Aerosol Monitor Performance check with High Volume Sampler

Preformance Check ref. No: AS0220427-1 Report Issue Date: 27/04/2022
Date of performance check: 26/04/2022

Objective:

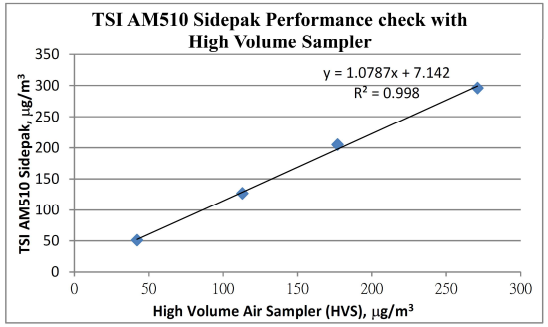
A dust meter and a Total Suspended Particulate High Volume Air Sampler (HVS) were placed together to measure the Total Suspended Particulate (TSP) concentrations simultaneously to check the performance.

Equipment Used:

Equipment	Manufacturer and Model	Serial Number
Personal Aerosol Monitor	TSI AM510 Sidepak	11404005
Total Suspended Particulate High Volume Air Sampler	GS2310	10346

Resuslt:

Equipment	Measurement Result, μg/m³			
TSI AM510 Sidepak	51	127	205	296
High Volume Air Sampler (HVS)	42	113	177	271



Tested by : 27/04/2022 Checked by : 27/04/2022
Name : (Ben Poon) Name : (Tommy Wong)

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

Cabled Vantage Pro2™ & Vantage Pro2 Plus™ Stations

6152C
6162C

Vantage Pro2™

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

Integrated Sensor Suite (ISS)

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

Note: Maximum displayable wind decreases as the length of cable increases. at 140' (42 m) of cable, the maximum wind speed displayed is 135 mph (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
Rain Collector Type	Tipping bucket, 0.01" per tip (0.2 mm with metric rain adapter), 33.2 in^2 (214 cm^2) collection area
Temperature Sensor Type	PN Junction Silicon Diode
Relative Humidity Sensor Type	Film capacitor element
Housing Material	UV-resistant ABS, polypropylene
Sensor Inputs	
RF Filtering	RC low-pass filter on each signal line

ISS Dimensions(not including anemometer or bird spikes):

Vantage Pro2 with Standard Rad Shield	14.0" x 9.4" x 14.5" (356 mm x 239 mm x 368 mm)
Vantage Pro2 with Fan-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

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

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

Wind

Wind Chill (Calculated)

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

Wind Direction

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

Wind Speed

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

Calibration Certificate of Weather Station

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
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

Equipment Description	Manufacturer	Model 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	Appearance:	Good
Calibration Procedure:	JJF 1183-2007, JJF 1076-2001, SOP-116	Remark:	N/A

Reference Equipment Identification

Equipment Description	Model	Serial No.	Expiration Date
Platinum resistance thermometer	KPPRHT-A-1	KCI I-1095, KCI P-1095	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 2 is assumed unless explicitly stated.
Note2: The standard (s) and instrument used in the calibration are traceable to national or international recognized standard and are calibrated on a schedule to maintain the accuracy and good condition.
Note3: The result reported in this certificate refer to the condition of the instrument on the date of calibration and carry no implication regarding the long term stability of the instrument.
Note4: The result shows in this calibration certificate relate only to the item calibrated, and the result only applies to the calibration item as received.

Approved By:

Wing Cheng

Company Chop:

Cal Lab Limited 校正實驗室有限公司

Certificate Issue Date: 16 February 2022

CT-BEG-03

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

Temperature

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	2.0	1.9

Wind Speed

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

Appendix F – Weather information

General Information

Date	Absolute Daily Min Temperature (°C)	Absolute Daily Max Temperature (°C)	Total Rainfall (mm)	Mean Relative Humidity (%)
01/05/2022	17.1	24.6	32.4	89
02/05/2022	16.4	21.3	23.4	84
03/05/2022	18.8	26.6	0.0	62
04/05/2022	21.6	28.5	0.0	63
05/05/2022	23.2	29.3	0.0	73
06/05/2022	23.4	28.9	0.0	76
07/05/2022	23.6	29.7	0.8	77
08/05/2022	23.4	27.5	Trace	70
09/05/2022	24.3	29.0	Trace	75
10/05/2022	24.4	27.7	1.4	88
11/05/2022	24.2	25.9	61.4	95
12/05/2022	24.6	27.0	123.5	91
13/05/2022	24.3	26.9	107.1	92
14/05/2022	23.5	26.5	5.0	93
15/05/2022	20.8	24.9	26.2	91
16/05/2022	18.8	20.8	4.7	85
17/05/2022	19.6	26.3	0.0	72
18/05/2022	21.9	27.1	0.0	52
19/05/2022	23.5	30.0	0.0	64
20/05/2022	24.5	30.9	0.0	76
21/05/2022	24.6	30.7	0.0	78
22/05/2022	24.1	27.2	0.6	83
23/05/2022	23.1	24.8	11.2	90
24/05/2022	23.7	25.0	10.3	93
25/05/2022	23.8	27.4	1.3	91
26/05/2022	25.1	28.6	2.4	88
27/05/2022	26.1	28.5	24.7	89
28/05/2022	27.1	31.3	Trace	81
29/05/2022	27.8	32.2	Trace	79
30/05/2022	27.4	32.7	Trace	78
31/05/2022	27.4	30.7	0.1	82

NOTE1: The above weather information was obtained from manned weather station of Hong Kong Observatory.
NOTE2: Trace means rainfall less than 0.05 mm

https://www.hko.gov.hk/en/cis/dailyExtract.htm?y=2022&m=05

Kai Tak Runway Park Information

Date	Absolute Daily Min Temperature (°C)	Absolute Daily Max Temperature (°C)
01/05/2022	17.4	24.1
02/05/2022	16.5	21.5
03/05/2022	19.2	24.7
04/05/2022	22.2	26.3
05/05/2022	23.1	26.6
06/05/2022	23.2	26.5
07/05/2022	23.6	27.5
08/05/2022	23.6	26.9
09/05/2022	24.2	27.7
10/05/2022	23.9	26.1
11/05/2022	24.2	25.6
12/05/2022	24.3	26.6
13/05/2022	23.9	28.3
14/05/2022	23.2	26.2
15/05/2022	20.9	24.2
16/05/2022	18.8	21.1
17/05/2022	19.7	27.1
18/05/2022	22.2	25.9
19/05/2022	23.5	28.1
20/05/2022	24.2	29.1
21/05/2022	24.4	29.2
22/05/2022	24.0	25.7
23/05/2022	23.1	25.1
24/05/2022	23.6	24.9
25/05/2022	23.6	26.9
26/05/2022	24.9	28.1
27/05/2022	25.6	28.5
28/05/2022	26.2	31.6
29/05/2022	27.2	32.1
30/05/2022	27.0	30.5
31/05/2022	26.6	29.9

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=2022-05-01&chart_type=DG_TEMP

Mean Wind Speed and Wind Direction recorded by the weather station setup at the rooftop of Ng Wah Catholic Secondary School

Date	Time	Wind Speed (m/s)	Wind Direction	Date	Time	Wind Speed (m/s)	Wind Direction	Date	Time	Wind Speed (m/s)	Wind Direction	Date	Time	Wind Speed (m/s)	Wind Direction
01/05/2022	0:00	0.9	90	02/05/2022	0:00	0.4	315	03/05/2022	0:00	0.4	112.5	04/05/2022	0:00	0.9	112.5
01/05/2022	1:00	0.4	135	02/05/2022	1:00	0.4	112.5	03/05/2022	1:00	0.9	90	04/05/2022	1:00	0.9	112.5
01/05/2022	2:00	0.4	112.5	02/05/2022	2:00	0.4	45	03/05/2022	2:00	0.4	90	04/05/2022	2:00	1.3	0
01/05/2022	3:00	0.9	112.5	02/05/2022	3:00	0.9	112.5	03/05/2022	3:00	0.4	22.5	04/05/2022	3:00	0.9	135
01/05/2022	4:00	0.9	45	02/05/2022	4:00	0.9	112.5	03/05/2022	4:00	0.9	22.5	04/05/2022	4:00	0.4	112.5
01/05/2022	5:00	1.3	45	02/05/2022	5:00	0.4	22.5	03/05/2022	5:00	0.4	112.5	04/05/2022	5:00	0.9	337.5
01/05/2022	6:00	1.3	67.5	02/05/2022	6:00	0.9	45	03/05/2022	6:00	0.4	112.5	04/05/2022	6:00	0.4	90
01/05/2022	7:00	1.3	90	02/05/2022	7:00	0.9	225	03/05/2022	7:00	0.9	112.5	04/05/2022	7:00	0.9	90
01/05/2022	8:00	1.3	0	02/05/2022	8:00	0.4	45	03/05/2022	8:00	1.3	270	04/05/2022	8:00	1.3	90
01/05/2022	9:00	1.8	112.5	02/05/2022	9:00	1.3	90	03/05/2022	9:00	0.4	45	04/05/2022	9:00	1.8	90
01/05/2022	10:00	1.8	22.5	02/05/2022	10:00	1.3	90	03/05/2022	10:00	0.9	67.5	04/05/2022	10:00	1.3	90
01/05/2022	11:00	0.9	112.5	02/05/2022	11:00	1.8	90	03/05/2022	11:00	0.9	112.5	04/05/2022	11:00	1.3	90
01/05/2022	12:00	1.3	135	02/05/2022	12:00	1.3	112.5	03/05/2022	12:00	0.9	270	04/05/2022	12:00	0.9	22.5
01/05/2022	13:00	1.3	112.5	02/05/2022	13:00	1.3	90	03/05/2022	13:00	0.9	67.5	04/05/2022	13:00	0.9	112.5
01/05/2022	14:00	1.8	90	02/05/2022	14:00	0.4	112.5	03/05/2022	14:00	1.3	22.5	04/05/2022	14:00	1.3	90
01/05/2022	15:00	1.3	112.5	02/05/2022	15:00	1.3	112.5	03/05/2022	15:00	1.3	22.5	04/05/2022	15:00	0.9	112.5
01/05/2022	16:00	1.3	112.5	02/05/2022	16:00	0.9	90	03/05/2022	16:00	0.9	112.5	04/05/2022	16:00	1.3	45
01/05/2022	17:00	0.9	112.5	02/05/2022	17:00	1.3	112.5	03/05/2022	17:00	0.9	22.5	04/05/2022	17:00	0.9	135
01/05/2022	18:00	0.4	112.5	02/05/2022	18:00	0.4	90	03/05/2022	18:00	0.9	112.5	04/05/2022	18:00	1.3	337.5
01/05/2022	19:00	0.4	270	02/05/2022	19:00	0.9	135	03/05/2022	19:00	1.3	112.5	04/05/2022	19:00	0.9	67.5
01/05/2022	20:00	0.4	112.5	02/05/2022	20:00	0.4	270	03/05/2022	20:00	0.9	135	04/05/2022	20:00	1.3	67.5
01/05/2022	21:00	0.4	112.5	02/05/2022	21:00	0.9	315	03/05/2022	21:00	1.3	270	04/05/2022	21:00	0.9	112.5
01/05/2022	22:00	0.9	90	02/05/2022	22:00	0.9	112.5	03/05/2022	22:00	0.4	45	04/05/2022	22:00	0.4	112.5
01/05/2022	23:00	0.4	112.5	02/05/2022	23:00	0.9	112.5	03/05/2022	23:00	0.9	67.5	04/05/2022	23:00	0.4	90

Mean Wind Speed and Wind Direction recorded by the weather station setup at the rooftop of Ng Wah Catholic Secondary School

Date	Time	Wind Speed (m/s)	Wind Direction	Date	Time	Wind Speed (m/s)	Wind Direction	Date	Time	Wind Speed (m/s)	Wind Direction	Date	Time	Wind Speed (m/s)	Wind Direction
05/05/2022	0:00	0.4	112.5	06/05/2022	0:00	1.3	112.5	07/05/2022	0:00	1.8	22.5	08/05/2022	0:00	0.4	45
05/05/2022	1:00	1.3	90	06/05/2022	1:00	1.3	90	07/05/2022	1:00	1.3	112.5	08/05/2022	1:00	0.9	112.5
05/05/2022	2:00	0.9	90	06/05/2022	2:00	0.9	90	07/05/2022	2:00	0.9	112.5	08/05/2022	2:00	1.3	315
05/05/2022	3:00	0.4	112.5	06/05/2022	3:00	0.9	112.5	07/05/2022	3:00	1.8	45	08/05/2022	3:00	0.9	90
05/05/2022	4:00	0.9	12.5	06/05/2022	4:00	0.9	112.5	07/05/2022	4:00	1.3	315	08/05/2022	4:00	0.9	90
05/05/2022	5:00	0.9	112.5	06/05/2022	5:00	0.9	112.5	07/05/2022	5:00	0.4	112.5	08/05/2022	5:00	0.4	157.5
05/05/2022	6:00	0.4	90	06/05/2022	6:00	0.9	112.5	07/05/2022	6:00	1.3	247.5	08/05/2022	6:00	0.4	90
05/05/2022	7:00	0.4	90	06/05/2022	7:00	1.3	67.5	07/05/2022	7:00	2.2	45	08/05/2022	7:00	1.3	45
05/05/2022	8:00	0.4	112.5	06/05/2022	8:00	1.3	112.5	07/05/2022	8:00	1.8	90	08/05/2022	8:00	0.9	45
05/05/2022	9:00	0.9	112.5	06/05/2022	9:00	1.3	112.5	07/05/2022	9:00	1.3	90	08/05/2022	9:00	1.3	67.5
05/05/2022	10:00	0.9	112.5	06/05/2022	10:00	0.9	22.5	07/05/2022	10:00	1.3	22.5	08/05/2022	10:00	0.9	112.5
05/05/2022	11:00	0.9	90	06/05/2022	11:00	0.9	45	07/05/2022	11:00	0.9	112.5	08/05/2022	11:00	1.3	45
05/05/2022	12:00	0.9	112.5	06/05/2022	12:00	0.9	315	07/05/2022	12:00	0.4	112.5	08/05/2022	12:00	1.3	112.5
05/05/2022	13:00	0.9	112.5	06/05/2022	13:00	0.9	112.5	07/05/2022	13:00	0.9	112.5	08/05/2022	13:00	0.9	112.5
05/05/2022	14:00	1.8	112.5	06/05/2022	14:00	0.9	112.5	07/05/2022	14:00	0.9	90	08/05/2022	14:00	1.3	90
05/05/2022	15:00	1.8	22.5	06/05/2022	15:00	0.9	90	07/05/2022	15:00	0.4	22.5	08/05/2022	15:00	1.3	135
05/05/2022	16:00	1.3	112.5	06/05/2022	16:00	0.9	112.5	07/05/2022	16:00	0.4	22.5	08/05/2022	16:00	90	112.5
05/05/2022	17:00	0.9	90	06/05/2022	17:00	0.9	112.5	07/05/2022	17:00	0.4	45	08/05/2022	17:00	0.4	112.5
05/05/2022	18:00	0.9	135	06/05/2022	18:00	1.8	112.5	07/05/2022	18:00	0.4	67.5	08/05/2022	18:00	0.9	90
05/05/2022	19:00	1.3	112.5	06/05/2022	19:00	1.8	22.5	07/05/2022	19:00	0.4	337.5	08/05/2022	19:00	1.3	45
05/05/2022	20:00	0.4	90	06/05/2022	20:00	1.3	112.5	07/05/2022	20:00	0.9	292.5	08/05/2022	20:00	0.9	45
05/05/2022	21:00	0.4	112.5	06/05/2022	21:00	0.9	90	07/05/2022	21:00	0.4	315	08/05/2022	21:00	1.3	112.5
05/05/2022	22:00	0.9	112.5	06/05/2022	22:00	0.9	135	07/05/2022	22:00	0.9	337.5	08/05/2022	22:00	1.3	135
05/05/2022	23:00	0.9	112.5	06/05/2022	23:00	1.3	112.5	07/05/2022	23:00	0.9	90	08/05/2022	23:00	0.4	90

Mean Wind Speed and Wind Direction recorded by the weather station setup at the rooftop of Ng Wah Catholic Secondary School

Date	Time	Wind Speed (m/s)	Wind Direction	Date	Time	Wind Speed (m/s)	Wind Direction	Date	Time	Wind Speed (m/s)	Wind Direction	Date	Time	Wind Speed (m/s)	Wind Direction
09/05/2022	0:00	0.9	112.5	10/05/2022	0:00	0.4	315	11/05/2022	0:00	1.3	90	12/05/2022	0:00	0.4	112.5
09/05/2022	1:00	0.9	45	10/05/2022	1:00	0.4	90	11/05/2022	1:00	1.3	135	12/05/2022	1:00	0.4	112.5
09/05/2022	2:00	1.3	112.5	10/05/2022	2:00	0.9	112.5	11/05/2022	2:00	1.3	135	12/05/2022	2:00	1.3	112.5
09/05/2022	3:00	0.4	112.5	10/05/2022	3:00	0.4	90	11/05/2022	3:00	1.3	112.5	12/05/2022	3:00	1.8	112.5
09/05/2022	4:00	0.9	45	10/05/2022	4:00	1.3	112.5	11/05/2022	4:00	1.8	112.5	12/05/2022	4:00	1.8	112.5
09/05/2022	5:00	0.9	90	10/05/2022	5:00	0.4	112.5	11/05/2022	5:00	1.3	45	12/05/2022	5:00	1.3	135
09/05/2022	6:00	1.3	112.5	10/05/2022	6:00	0.4	90	11/05/2022	6:00	1.3	45	12/05/2022	6:00	1.3	135
09/05/2022	7:00	0.9	135	10/05/2022	7:00	0.4	135	11/05/2022	7:00	1.3	67.5	12/05/2022	7:00	1.8	112.5
09/05/2022	8:00	0.9	90	10/05/2022	8:00	1.3	112.5	11/05/2022	8:00	0.9	112.5	12/05/2022	8:00	1.3	157.5
09/05/2022	9:00	0.9	112.5	10/05/2022	9:00	0.9	90	11/05/2022	9:00	0.9	67.5	12/05/2022	9:00	1.3	112.5
09/05/2022	10:00	1.3	90	10/05/2022	10:00	0.4	112.5	11/05/2022	10:00	0.4	112.5	12/05/2022	10:00	1.3	112.5
09/05/2022	11:00	1.3	67.5	10/05/2022	11:00	0.9	112.5	11/05/2022	11:00	1.3	90	12/05/2022	11:00	0.9	135
09/05/2022	12:00	0.9	112.5	10/05/2022	12:00	0.9	135	11/05/2022	12:00	1.3	135	12/05/2022	12:00	0.4	112.5
09/05/2022	13:00	1.3	112.5	10/05/2022	13:00	1.3	135	11/05/2022	13:00	1.3	135	12/05/2022	13:00	0.4	112.5
09/05/2022	14:00	1.3	90	10/05/2022	14:00	0.9	112.5	11/05/2022	14:00	0.4	67.5	12/05/2022	14:00	0.4	112.5
09/05/2022	15:00	1.3	90	10/05/2022	15:00	1.3	112.5	11/05/2022	15:00	0.9	112.5	12/05/2022	15:00	0.4	112.5
09/05/2022	16:00	0.4	45	10/05/2022	16:00	0.3	112.5	11/05/2022	16:00	0.9	225	12/05/2022	16:00	0.9	112.5
09/05/2022	17:00	1.3	112.5	10/05/2022	17:00	1.3	90	11/05/2022	17:00	1.3	90	12/05/2022	17:00	0.4	112.5
09/05/2022	18:00	0.9	90	10/05/2022	18:00	1.3	45	11/05/2022	18:00	0.9	112.5	12/05/2022	18:00	0.9	135
09/05/2022	19:00	0.9	90	10/05/2022	19:00	0.4	67.5	11/05/2022	19:00	0.9	67.5	12/05/2022	19:00	0.4	112.5
09/05/2022	20:00	1.3	45	10/05/2022	20:00	0.4	67.5	11/05/2022	20:00	1.3	90	12/05/2022	20:00	0.9	112.5
09/05/2022	21:00	0.9	112.5	10/05/2022	21:00	0.9	67.5	11/05/2022	21:00	0.4	67.5	12/05/2022	21:00	0.9	112.5
09/05/2022	22:00	1.3	112.5	10/05/2022	22:00	0.9	22.5	11/05/2022	22:00	0.9	112.5	12/05/2022	22:00	1.3	112.5
09/05/2022	23:00	0.4	45	10/05/2022	23:00	0.9	0	11/05/2022	23:00	0.9	225	12/05/2022	23:00	0.4	112.5

Mean Wind Speed and Wind Direction recorded by the weather station setup at the rooftop of Ng Wah Catholic Secondary School

Date	Time	Wind Speed (m/s)	Wind Direction	Date	Time	Wind Speed (m/s)	Wind Direction	Date	Time	Wind Speed (m/s)	Wind Direction	Date	Time	Wind Speed (m/s)	Wind Direction
13/05/2022	0:00	1.8	135	14/05/2022	0:00	1.3	112.5	15/05/2022	0:00	0.9	112.5	16/05/2022	0:00	0.4	22.5
13/05/2022	1:00	0.9	90	14/05/2022	1:00	0.9	112.5	15/05/2022	1:00	0.4	112.5	16/05/2022	1:00	0.4	22.5
13/05/2022	2:00	0.9	112.5	14/05/2022	2:00	1.3	90	15/05/2022	2:00	0.4	45	16/05/2022	2:00	0.9	337.5
13/05/2022	3:00	1.3	45	14/05/2022	3:00	1.3	112.5	15/05/2022	3:00	0.4	90	16/05/2022	3:00	0.9	22.5
13/05/2022	4:00	0.9	112.5	14/05/2022	4:00	1.8	135	15/05/2022	4:00	0.4	112.5	16/05/2022	4:00	0	315
13/05/2022	5:00	1.3	112.5	14/05/2022	5:00	1.3	112.5	15/05/2022	5:00	0.4	315	16/05/2022	5:00	0.4	0
13/05/2022	6:00	1.3	67.5	14/05/2022	6:00	1.8	90	15/05/2022	6:00	0.9	247.5	16/05/2022	6:00	0.4	22.5
13/05/2022	7:00	1.3	112.5	14/05/2022	7:00	1.8	135	15/05/2022	7:00	1.3	180	16/05/2022	7:00	0.4	22.5
13/05/2022	8:00	0.9	90	14/05/2022	8:00	0.4	112.5	15/05/2022	8:00	0.9	22.5	16/05/2022	8:00	0.4	337.5
13/05/2022	9:00	1.8	135	14/05/2022	9:00	0.9	90	15/05/2022	9:00	0.9	247.5	16/05/2022	9:00	0.4	202.5
13/05/2022	10:00	0.9	112.5	14/05/2022	10:00	0.9	135	15/05/2022	10:00	1.3	247.5	16/05/2022	10:00	0.9	292.5
13/05/2022	11:00	0.4	112.5	14/05/2022	11:00	0.9	90	15/05/2022	11:00	0.9	157.5	16/05/2022	11:00	0.4	292.5
13/05/2022	12:00	0.4	45	14/05/2022	12:00	0.9	135	15/05/2022	12:00	0.9	112.5	16/05/2022	12:00	0.4	247.5
13/05/2022	13:00	0.4	90	14/05/2022	13:00	0.4	135	15/05/2022	13:00	0.9	112.5	16/05/2022	13:00	0.9	135
13/05/2022	14:00	0	112.5	14/05/2022	14:00	0.9	112.5	15/05/2022	14:00	0.9	135	16/05/2022	14:00	0.4	22.5
13/05/2022	15:00	0.4	315	14/05/2022	15:00	0.4	112.5	15/05/2022	15:00	0.9	135	16/05/2022	15:00	0.4	135
13/05/2022	16:00	0.9	247.5	14/05/2022	16:00	0.4	112.5	15/05/2022	16:00	0.4	135	16/05/2022	16:00	0.9	180
13/05/2022	17:00	1.3	180	14/05/2022	17:00	0.4	337.5	15/05/2022	17:00	0.4	135	16/05/2022	17:00	0.4	292.5
13/05/2022	18:00	0.9	22.5	14/05/2022	18:00	1.3	22.5	15/05/2022	18:00	0.4	112.5	16/05/2022	18:00	0.4	22.5
13/05/2022	19:00	0.9	247.5	14/05/2022	19:00	1.3	315	15/05/2022	19:00	0.4	112.5	16/05/2022	19:00	0.4	337.5
13/05/2022	20:00	1.3	247.5	14/05/2022	20:00	1.3	22.5	15/05/2022	20:00	1.3	112.5	16/05/2022	20:00	1.3	67.5
13/05/2022	21:00	0.9	157.5	14/05/2022	21:00	0.9	225	15/05/2022	21:00	1.8	112.5	16/05/2022	21:00	0.4	45
13/05/2022	22:00	0.9	112.5	14/05/2022	22:00	0.9	180	15/05/2022	22:00	0.9	135	16/05/2022	22:00	0.9	45
13/05/2022	23:00	0.9	112.5	14/05/2022	23:00	1.3	247.5	15/05/2022	23:00	0.9	135	16/05/2022	23:00	0.9	45

Mean Wind Speed and Wind Direction recorded by the weather station setup at the rooftop of Ng Wah Catholic Secondary School

Date	Time	Wind Speed (m/s)	Wind Direction	Date	Time	Wind Speed (m/s)	Wind Direction	Date	Time	Wind Speed (m/s)	Wind Direction	Date	Time	Wind Speed (m/s)	Wind Direction
17/05/2022	0:00	0.4	0	18/05/2022	0:00	1.3	67.5	19/05/2022	0:00	0.4	22.5	20/05/2022	0:00	0.9	180
17/05/2022	1:00	0	22.5	18/05/2022	1:00	1.3	67.5	19/05/2022	1:00	0.4	90	20/05/2022	1:00	0.4	22.5
17/05/2022	2:00	0.4	22.5	18/05/2022	2:00	0.9	67.5	19/05/2022	2:00	0.4	90	20/05/2022	2:00	0.9	135
17/05/2022	3:00	0.4	112.5	18/05/2022	3:00	1.8	45	19/05/2022	3:00	0.9	112.5	20/05/2022	3:00	0.9	90
17/05/2022	4:00	0.4	112.5	18/05/2022	4:00	1.8	67.5	19/05/2022	4:00	1.3	22.5	20/05/2022	4:00	0.9	90
17/05/2022	5:00	0.9	315	18/05/2022	5:00	1.8	90	19/05/2022	5:00	1.3	135	20/05/2022	5:00	1.3	135
17/05/2022	6:00	0.9	0	18/05/2022	6:00	1.3	67.5	19/05/2022	6:00	1.8	112.5	20/05/2022	6:00	0.9	67.5
17/05/2022	7:00	0.4	337.5	18/05/2022	7:00	1.3	90	19/05/2022	7:00	1.8	112.5	20/05/2022	7:00	1.3	45
17/05/2022	8:00	0.9	337.5	18/05/2022	8:00	1.3	90	19/05/2022	8:00	1.3	112.5	20/05/2022	8:00	1.3	45
17/05/2022	9:00	0.9	112.5	18/05/2022	9:00	1.8	67.5	19/05/2022	9:00	1.8	112.5	20/05/2022	9:00	0.9	67.5
17/05/2022	10:00	0.9	135	18/05/2022	10:00	1.8	45	19/05/2022	10:00	1.3	135	20/05/2022	10:00	0.4	45
17/05/2022	11:00	0.4	135	18/05/2022	11:00	1.8	90	19/05/2022	11:00	0.9	135	20/05/2022	11:00	1.3	67.5
17/05/2022	12:00	1.3	112.5	18/05/2022	12:00	0.9	67.5	19/05/2022	12:00	1.3	135	20/05/2022	12:00	1.3	67.5
17/05/2022	13:00	1.3	90	18/05/2022	13:00	1.3	90	19/05/2022	13:00	0.4	22.5	20/05/2022	13:00	0.9	45
17/05/2022	14:00	0.4	112.5	18/05/2022	14:00	1.8	90	19/05/2022	14:00	0.9	90	20/05/2022	14:00	0.9	112.5
17/05/2022	15:00	1.3	112.5	18/05/2022	15:00	1.3	67.5	19/05/2022	15:00	0.4	90	20/05/2022	15:00	0.4	135
17/05/2022	16:00	0.4	90	18/05/2022	16:00	1.3	67.5	19/05/2022	16:00	0.4	90	20/05/2022	16:00	0.9	135
17/05/2022	17:00	0.9	90	18/05/2022	17:00	1.3	67.5	19/05/2022	17:00	1.3	112.5	20/05/2022	17:00	0.9	135
17/05/2022	18:00	0.4	180	18/05/2022	18:00	0.4	270	19/05/2022	18:00	1.3	90	20/05/2022	18:00	1.3	157.5
17/05/2022	19:00	0.9	112.5	18/05/2022	19:00	0.9	270	19/05/2022	19:00	1.3	112.5	20/05/2022	19:00	0.9	337.5
17/05/2022	20:00	0.9	90	18/05/2022	20:00	0.4	247.5	19/05/2022	20:00	1.3	90	20/05/2022	20:00	0.4	135
17/05/2022	21:00	0.4	315	18/05/2022	21:00	0.9	225	19/05/2022	21:00	1.8	112.5	20/05/2022	21:00	1.3	337.5
17/05/2022	22:00	0.4	112.5	18/05/2022	22:00	0.4	225	19/05/2022	22:00	1.8	135	20/05/2022	22:00	0.9	45
17/05/2022	23:00	0.9	90	18/05/2022	23:00	0.4	270	19/05/2022	23:00	1.8	112.5	20/05/2022	23:00	1.3	225

Mean Wind Speed and Wind Direction recorded by the weather station setup at the rooftop of Ng Wah Catholic Secondary School

Date	Time	Wind Speed (m/s)	Wind Direction	Date	Time	Wind Speed (m/s)	Wind Direction	Date	Time	Wind Speed (m/s)	Wind Direction	Date	Time	Wind Speed (m/s)	Wind Direction
21/05/2022	0:00	0.4	247.5	22/05/2022	0:00	1.3	337.5	23/05/2022	0:00	0.9	45	24/05/2022	0:00	0.9	45
21/05/2022	1:00	0.9	202.5	22/05/2022	1:00	0.9	45	23/05/2022	1:00	0.9	90	24/05/2022	1:00	0.9	67.5
21/05/2022	2:00	0.4	247.5	22/05/2022	2:00	0.9	45	23/05/2022	2:00	0.9	337.5	24/05/2022	2:00	0.4	67.5
21/05/2022	3:00	0.4	112.5	22/05/2022	3:00	1.3	45	23/05/2022	3:00	0.4	337.5	24/05/2022	3:00	0.4	67.5
21/05/2022	4:00	0.9	90	22/05/2022	4:00	0.4	45	23/05/2022	4:00	0.4	22.5	24/05/2022	4:00	0.9	67.5
21/05/2022	5:00	0.4	90	22/05/2022	5:00	0.9	247.5	23/05/2022	5:00	0.9	22.5	24/05/2022	5:00	0.9	112.5
21/05/2022	6:00	0.4	112.5	22/05/2022	6:00	0.9	22.5	23/05/2022	6:00	0.4	22.5	24/05/2022	6:00	0.4	112.5
21/05/2022	7:00	0.4	247.5	22/05/2022	7:00	1.3	22.5	23/05/2022	7:00	0.4	0	24/05/2022	7:00	0.4	90
21/05/2022	8:00	0.9	157.5	22/05/2022	8:00	1.3	45	23/05/2022	8:00	0.4	0	24/05/2022	8:00	0.9	22.5
21/05/2022	9:00	0.9	135	22/05/2022	9:00	0.4	67.5	23/05/2022	9:00	0.4	202.5	24/05/2022	9:00	0.4	22.5
21/05/2022	10:00	1.3	135	22/05/2022	10:00	0.4	135	23/05/2022	10:00	0.4	315	24/05/2022	10:00	1.3	315
21/05/2022	11:00	1.3	112.5	22/05/2022	11:00	0.4	202.5	23/05/2022	11:00	0.4	270	24/05/2022	11:00	0.9	112.5
21/05/2022	12:00	0.9	90	22/05/2022	12:00	0.4	45	23/05/2022	12:00	0.4	315	24/05/2022	12:00	0.9	45
21/05/2022	13:00	0.4	112.5	22/05/2022	13:00	0.4	315	23/05/2022	13:00	0.4	112.5	24/05/2022	13:00	0.9	67.5
21/05/2022	14:00	0.4	90	22/05/2022	14:00	1.3	22.5	23/05/2022	14:00	0.4	180	24/05/2022	14:00	0.9	112.5
21/05/2022	15:00	1.3	135	22/05/2022	15:00	1.3	112.5	23/05/2022	15:00	0.4	67.5	24/05/2022	15:00	1.3	67.5
21/05/2022	16:00	0.4	112.5	22/05/2022	16:00	1.3	135	23/05/2022	16:00	0.4	67.5	24/05/2022	16:00	1.3	135
21/05/2022	17:00	0.9	112.5	22/05/2022	17:00	0.4	135	23/05/2022	17:00	0.9	90	24/05/2022	17:00	0.9	90
21/05/2022	18:00	0.9	90	22/05/2022	18:00	0.4	90	23/05/2022	18:00	1.3	90	24/05/2022	18:00	0.9	135
21/05/2022	19:00	0.4	337.5	22/05/2022	19:00	0.4	90	23/05/2022	19:00	1.3	90	24/05/2022	19:00	0.9	112.5
21/05/2022	20:00	1.3	90	22/05/2022	20:00	0.9	135	23/05/2022	20:00	1.3	112.5	24/05/2022	20:00	0.9	90
21/05/2022	21:00	1.9	90	22/05/2022	21:00	0.9	135	23/05/2022	21:00	1.3	135	24/05/2022	21:00	0.9	67.5
21/05/2022	22:00	1.3	112.5	22/05/2022	22:00	0.4	112.5	23/05/2022	22:00	0.9	90	24/05/2022	22:00	1.3	135
21/05/2022	23:00	1.3	90	22/05/2022	23:00	0.4	90	23/05/2022	23:00	0.9	112.5	24/05/2022	23:00	0.9	135

Mean Wind Speed and Wind Direction recorded by the weather station setup at the rooftop of Ng Wah Catholic Secondary School

Date	Time	Wind Speed (m/s)	Wind Direction	Date	Time	Wind Speed (m/s)	Wind Direction	Date	Time	Wind Speed (m/s)	Wind Direction	Date	Time	Wind Speed (m/s)	Wind Direction
25/05/2022	0:00	1.3	112.5	26/05/2022	0:00	0.9	337.5	27/05/2022	0:00	0.4	22.5	28/05/2022	0:00	1.3	112.5
25/05/2022	1:00	1.3	112.5	26/05/2022	1:00	1.3	22.5	27/05/2022	1:00	0.9	157.5	28/05/2022	1:00	1.3	112.5
25/05/2022	2:00	0.9	90	26/05/2022	2:00	1.8	22.5	27/05/2022	2:00	0.4	157.5	28/05/2022	2:00	0.9	135
25/05/2022	3:00	0.9	112.5	26/05/2022	3:00	1.3	22.5	27/05/2022	3:00	0.4	45	28/05/2022	3:00	0.4	112.5
25/05/2022	4:00	0.4	90	26/05/2022	4:00	1.8	45	27/05/2022	4:00	0.4	90	28/05/2022	4:00	0.4	180
25/05/2022	5:00	0.4	90	26/05/2022	5:00	1.3	22.5	27/05/2022	5:00	0.9	135	28/05/2022	5:00	0.9	90
25/05/2022	6:00	1.3	67.5	26/05/2022	6:00	1.3	337.5	27/05/2022	6:00	0.9	112.5	28/05/2022	6:00	0.4	112.5
25/05/2022	7:00	0.9	157.5	26/05/2022	7:00	1.3	22.5	27/05/2022	7:00	0.4	337.5	28/05/2022	7:00	0.9	135
25/05/2022	8:00	0.4	337.5	26/05/2022	8:00	0.9	90	27/05/2022	8:00	0.4	270	28/05/2022	8:00	0.9	90
25/05/2022	9:00	0.9	22.5	26/05/2022	9:00	0.4	90	27/05/2022	9:00	0.4	225	28/05/2022	9:00	0.9	135
25/05/2022	10:00	0.9	22.5	26/05/2022	10:00	0.4	45	27/05/2022	10:00	0.4	112.5	28/05/2022	10:00	1.3	22.5
25/05/2022	11:00	0.9	22.5	26/05/2022	11:00	0.4	292.5	27/05/2022	11:00	0.9	112.5	28/05/2022	11:00	1.3	112.5
25/05/2022	12:00	0.4	315	26/05/2022	12:00	0.4	90	27/05/2022	12:00	0.9	67.5	28/05/2022	12:00	1.3	247.5
25/05/2022	13:00	0.4	180	26/05/2022	13:00	0.4	90	27/05/2022	13:00	0.4	22.5	28/05/2022	13:00	1.3	337.5
25/05/2022	14:00	0.4	135	26/05/2022	14:00	1.3	135	27/05/2022	14:00	0.4	247.5	28/05/2022	14:00	0.9	135
25/05/2022	15:00	0.9	112.5	26/05/2022	15:00	1.8	112.5	27/05/2022	15:00	0.9	270	28/05/2022	15:00	1.3	90
25/05/2022	16:00	1.3	157.5	26/05/2022	16:00	0.9	270	27/05/2022	16:00	0.9	45	28/05/2022	16:00	1.3	135
25/05/2022	17:00	1.3	22.5	26/05/2022	17:00	0.9	315	27/05/2022	17:00	0.9	90	28/05/2022	17:00	0.9	112.5
25/05/2022	18:00	1.3	22.5	26/05/2022	18:00	1.3	315	27/05/2022	18:00	1.3	67.5	28/05/2022	18:00	0.9	90
25/05/2022	19:00	1.8	90	26/05/2022	19:00	1.3	22.5	27/05/2022	19:00	1.3	247.5	28/05/2022	19:00	0.9	135
25/05/2022	20:00	1.3	45	26/05/2022	20:00	0.9	22.5	27/05/2022	20:00	0.4	247.5	28/05/2022	20:00	1.3	90
25/05/2022	21:00	1.3	45	26/05/2022	21:00	0.9	22.5	27/05/2022	21:00	0.9	247.5	28/05/2022	21:00	1.3	90
25/05/2022	22:00	1.8	90	26/05/2022	22:00	1.3	225	27/05/2022	22:00	0.9	225	28/05/2022	22:00	1.3	112.5
25/05/2022	23:00	1.3	45	26/05/2022	23:00	1.3	45	27/05/2022	23:00	0.9	225	28/05/2022	23:00	1.3	90

Mean Wind Speed and Wind Direction recorded by the weather station setup at the rooftop of Ng Wah Catholic Secondary School

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
29/05/2022	0:00	1.3	135	30/05/2022	0:00	0.4	112.5	31/05/2022	0:00	0.9	247.5				
29/05/2022	1:00	0.9	135	30/05/2022	1:00	0.4	135	31/05/2022	1:00	0.9	270				
29/05/2022	2:00	0.4	90	30/05/2022	2:00	0.9	90	31/05/2022	2:00	0.4	135				
29/05/2022	3:00	0.9	247.5	30/05/2022	3:00	0.9	112.5	31/05/2022	3:00	1.3	202.5				
29/05/2022	4:00	0.4	135	30/05/2022	4:00	0.9	112.5	31/05/2022	4:00	1.3	247.5				
29/05/2022	5:00	0.9	90	30/05/2022	5:00	0.9	112.5	31/05/2022	5:00	0.9	247.5				
29/05/2022	6:00	0.4	157.5	30/05/2022	6:00	0.9	90	31/05/2022	6:00	0.9	225				
29/05/2022	7:00	0.4	90	30/05/2022	7:00	0.9	112.5	31/05/2022	7:00	0.9	247.5				
29/05/2022	8:00	0.9	135	30/05/2022	8:00	0.4	112.5	31/05/2022	8:00	0.9	225				
29/05/2022	9:00	0.9	247.5	30/05/2022	9:00	0.4	67.5	31/05/2022	9:00	1.3	225				
29/05/2022	10:00	0.9	112.5	30/05/2022	10:00	0.4	112.5	31/05/2022	10:00	0.9	247.5				
29/05/2022	11:00	0.4	90	30/05/2022	11:00	0.4	90	31/05/2022	11:00	0.9	270				
29/05/2022	12:00	0.4	112.5	30/05/2022	12:00	0.4	112.5	31/05/2022	12:00	0.4	135				
29/05/2022	13:00	0.9	112.5	30/05/2022	13:00	0.4	180	31/05/2022	13:00	0.9	315				
29/05/2022	14:00	0.4	112.5	30/05/2022	14:00	0.4	180	31/05/2022	14:00	0.9	67.5				
29/05/2022	15:00	0.4	157.5	30/05/2022	15:00	0.4	135	31/05/2022	15:00	0.9	225				
29/05/2022	16:00	0.9	157.5	30/05/2022	16:00	0.4	225	31/05/2022	16:00	0.9	180				
29/05/2022	17:00	0.4	112.5	30/05/2022	17:00	0.9	225	31/05/2022	17:00	0.9	67.5				
29/05/2022	18:00	0.4	90	30/05/2022	18:00	0.4	225	31/05/2022	18:00	1.3	67.5				
29/05/2022	19:00	0.9	90	30/05/2022	19:00	0.9	247.5	31/05/2022	19:00	1.3	90				
29/05/2022	20:00	0.4	112.5	30/05/2022	20:00	0.9	247.5	31/05/2022	20:00	1.3	90				
29/05/2022	21:00	0.4	112.5	30/05/2022	21:00	0.9	67.5	31/05/2022	21:00	0.9	112.5				
29/05/2022	22:00	0.9	112.5	30/05/2022	22:00	1.3	180	31/05/2022	22:00	0.9	315				
29/05/2022	23:00	0.4	112.5	30/05/2022	23:00	0.9	135	31/05/2022	23:00	0.9	67.5				

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

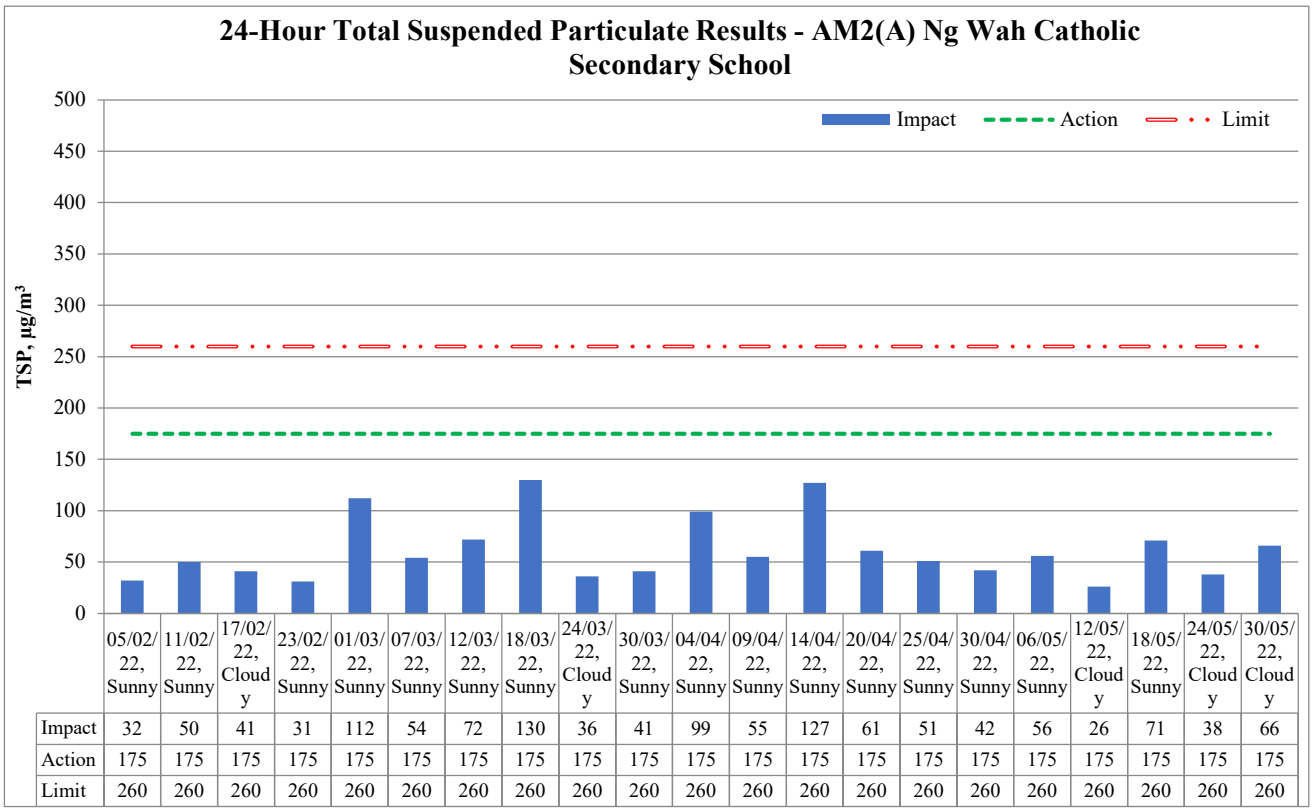
Location: AM2(A) – Ng Wah Catholic Secondary School

Start Date	Weather	Air Temp. (℃)	Atmospheric Pressure (hPa)	Filter weight (g)		Particulate weight (g)	Elapse Time		Sampling Time (min)	Flow Rate (cfm)		Av. Flow (m^3/min)	Total vol. (m^3)	Conc. (μg/m^3)
				Initial	Final		Initial	Final		Initial	Final			
06/05/2022	Sunny	26.5	1012.4	15.2375	15.3529	0.1154	7061.05	7085.05	1440	50	50	1.43	2065	56
12/05/2022	Cloudy	26.6	1006.0	15.2035	15.2562	0.0527	7085.21	7109.21	1440	50	50	1.43	2058	26
18/05/2022	Sunny	25.9	1013.8	18.9117	19.0591	0.1474	7109.41	7133.41	1440	50	50	1.44	2068	71
24/05/2022	Cloudy	23.6	1009.2	18.9743	19.0562	0.0819	7133.73	7157.73	1440	52	52	1.50	2156	38
30/05/2022	Cloudy	29.2	1005.9	15.3292	15.4652	0.1360	7157.9	7181.9	1440	50	50	1.42	2048	66
												Maximum		71
												Minimum		26
												Average		51
												Action Level		175
												Limit Level		260

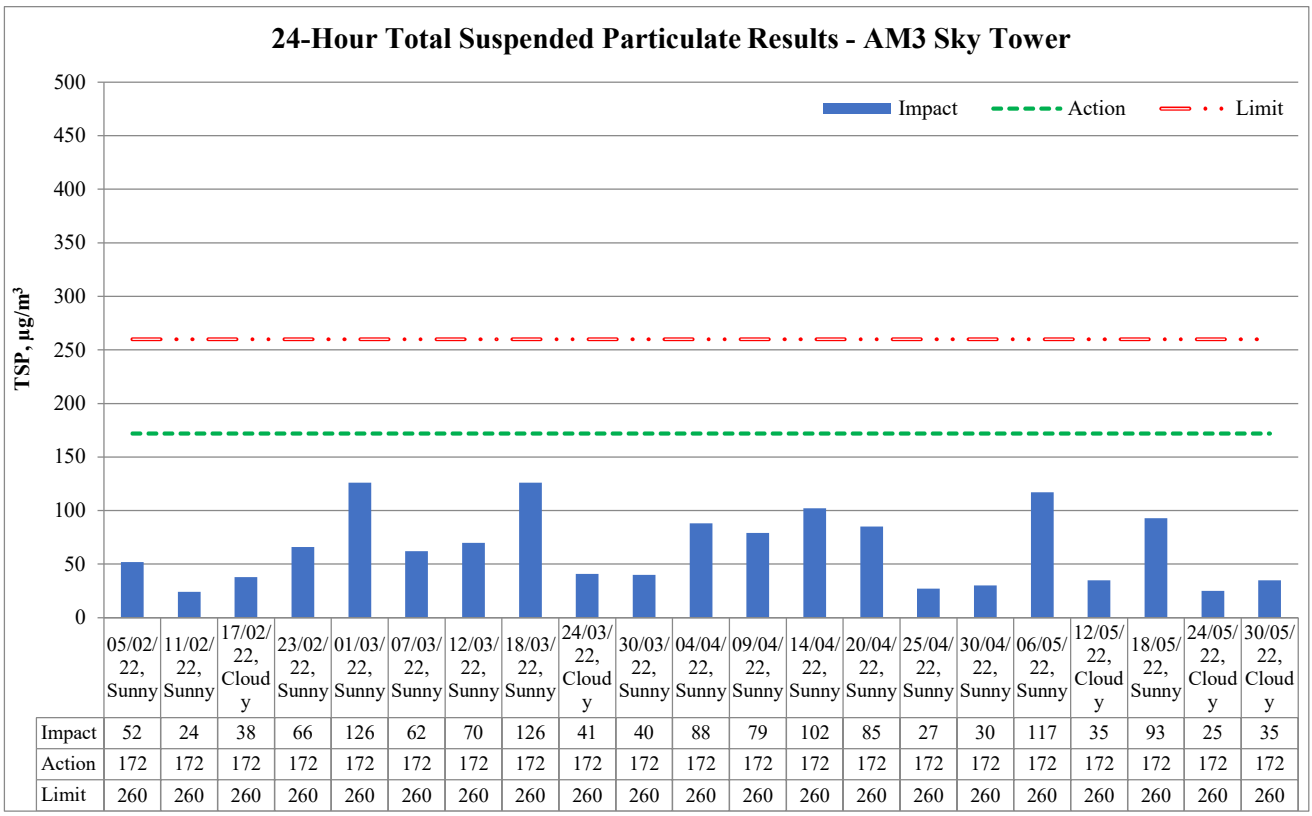
Location: AM3 – Sky Tower

Start Date	Weather	Air Temp. (℃)	Atmospheric Pressure (hPa)	Filter weight (g)		Particulate weight (g)	Elapse Time		Sampling Time (min)	Flow Rate (cfm)		Av. Flow (m^3/min)	Total vol. (m^3)	Conc. (μg/m^3)
				Initial	Final		Initial	Final		Initial	Final			
06/05/2022	Sunny	26.5	1012.4	14.9952	15.2492	0.2540	4511.67	4535.69	1441	54	54	1.50	2168	117
12/05/2022	Cloudy	26.6	1006.0	18.2091	18.2852	0.0761	4535.85	4559.87	1441	54	54	1.50	2161	35
18/05/2022	Sunny	25.9	1013.8	15.2246	15.4269	0.2023	4559.96	4583.98	1441	54	54	1.51	2172	93
24/05/2022	Cloudy	23.6	1009.2	18.3269	18.3776	0.0507	4584.07	4608.08	1441	50	50	1.39	2010	25
30/05/2022	Cloudy	29.2	1005.9	15.0369	15.1099	0.0730	4608.18	4632.19	1441	52	52	1.44	2069	35
												Maximum		117
												Minimum		25
												Average		61
												Action Level		172
												Limit Level		260

24-hour average TSP



	05/02/22, Sunny	11/02/22, Sunny	17/02/22, Cloudy	23/02/22, Sunny	01/03/22, Sunny	07/03/22, Sunny	12/03/22, Sunny	18/03/22, Sunny	24/03/22, Cloudy	30/03/22, Sunny	04/04/22, Sunny	09/04/22, Sunny	14/04/22, Sunny	20/04/22, Sunny	25/04/22, Sunny	30/04/22, Sunny	06/05/22, Sunny	12/05/22, Cloudy	18/05/22, Sunny	24/05/22, Cloudy	30/05/22, Cloudy
Impact	32	50	41	31	112	54	72	130	36	41	99	55	127	61	51	42	56	26	71	38	66
Action	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175
Limit	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260



	05/02/22, Sunny	11/02/22, Sunny	17/02/22, Cloudy	23/02/22, Sunny	01/03/22, Sunny	07/03/22, Sunny	12/03/22, Sunny	18/03/22, Sunny	24/03/22, Cloudy	30/03/22, Sunny	04/04/22, Sunny	09/04/22, Sunny	14/04/22, Sunny	20/04/22, Sunny	25/04/22, Sunny	30/04/22, Sunny	06/05/22, Sunny	12/05/22, Cloudy	18/05/22, Sunny	24/05/22, Cloudy	30/05/22, Cloudy
Impact	52	24	38	66	126	62	70	126	41	40	88	79	102	85	27	30	117	35	93	25	35
Action	172	172	172	172	172	172	172	172	172	172	172	172	172	172	172	172	172	172	172	172	172
Limit	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260

Major Construction Activities	Reporting Period			
	Feb 2022	March 2022	April 2022	May 2022
Bored pile works for landscape elevated walkway	✓			
Construction of Crowd Dispersal Route	✓	✓	✓	✓
ELS and excavation at Pier 9 and Pier 10 for Elevated Walkway LW-02	✓			
ELS and excavation at Pier 9 for Elevated Walkway LW-02			✓	
Underground utility diversion works at Sa Po Road	✓	✓	✓	
ELS and excavation at launching shaft for subway SB-01	✓	✓	✓	
Drainage works for Pedestrian Street No.1, No,2 No.3 & No.4	✓			
Construction of DCS	✓	✓	✓	✓
Construction works for Road L16	✓	✓	✓	✓
Pre-bored socket H-piles construction for Subway KS10	✓	✓		
Twin rising mains diversion works	✓			
Renovation works for existing subways KS9 and KS32	✓	✓	✓	✓
Post-pilling tests for PC11 for Elevated Walkway LW-02		✓		
ELS and excavation at Pier 9 for Elevated Walkway LW-02		✓		
Pile cap construction for PC9 and PC10 for Elevated Walkway LW-02		✓	✓	✓
Construction works for Pedestrian Street No. 1, No. 2, No. 3 & No. 4		✓	✓	✓
Post-pilling tests for H-piles at Subway KS10		✓	✓	
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				✓

Factors might affect the monitoring results	Reporting Period			
	Feb 2022	March 2022	April 2022	May 2022
Non-project related construction activities in the adjacent construction sites were observed.	✓	✓	✓	✓

Appendix H – 1-hr TSP monitoring results and graphical presentation

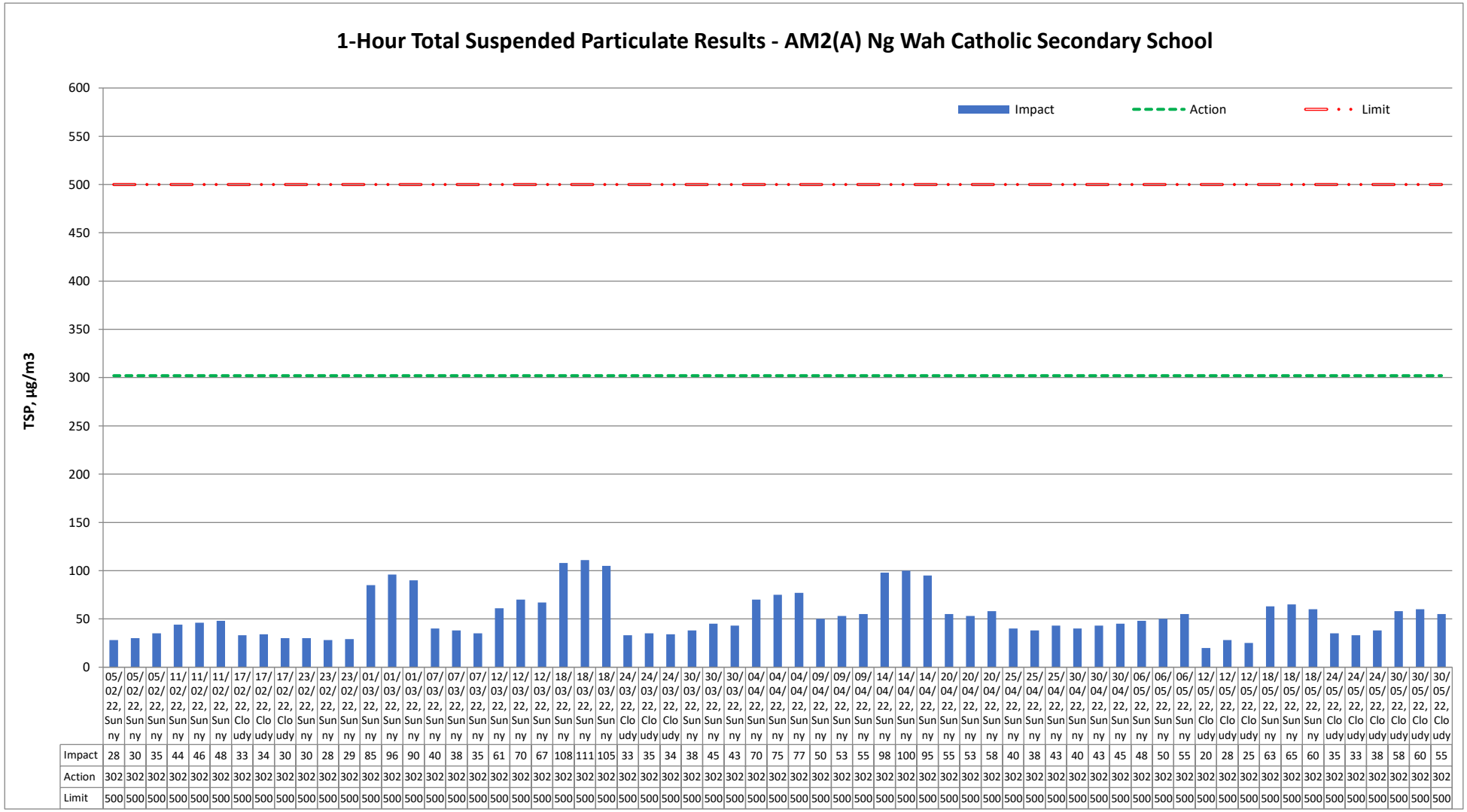
Location:
AM2(A) – Ng Wah Catholic Secondary School

Date	Measurement Period			1-hr TSP concentration, $\mu g/m^3$	Weather
06/05/2022	13:00	-	14:00	48	Sunny
	14:00	-	15:00	50	
	15:00	-	16:00	55	
12/05/2022	9:00	-	10:00	20	Cloudy
	10:00	-	11:00	28	
	11:00	-	12:00	25	
18/05/2022	13:00	-	14:00	63	Sunny
	14:00	-	15:00	65	
	15:00	-	16:00	60	
24/05/2022	9:00	-	10:00	35	Cloudy
	10:00	-	11:00	33	
	11:00	-	12:00	38	
30/05/2022	13:00	-	14:00	58	Cloudy
	14:00	-	15:00	60	
	15:00	-	16:00	55	
Maximum				65	
Minimum				20	
Average				46	
Action Level				302	
Limit Level				500	

Location:
AM3 -
Sky Tower

Date	Measurement Period			1-hr TSP concentration, $\mu g/m^3$	Weather
06/05/2022	9:00	-	10:00	87	Sunny
	10:00	-	11:00	89	
	11:00	-	12:00	94	
12/05/2022	13:00	-	14:00	31	Cloudy
	14:00	-	15:00	36	
	15:00	-	16:00	35	
18/05/2022	9:00	-	10:00	79	Sunny
	10:00	-	11:00	80	
	11:00	-	12:00	85	
24/05/2022	13:00	-	14:00	26	Cloudy
	14:00	-	15:00	32	
	15:00	-	16:00	32	
30/05/2022	9:00	-	10:00	21	Cloudy
	10:00	-	11:00	23	
	11:00	-	12:00	26	
Maximum				94	
Minimum				21	
Average				52	
Action Level				301	
Limit Level				500	

1-hour average TSP



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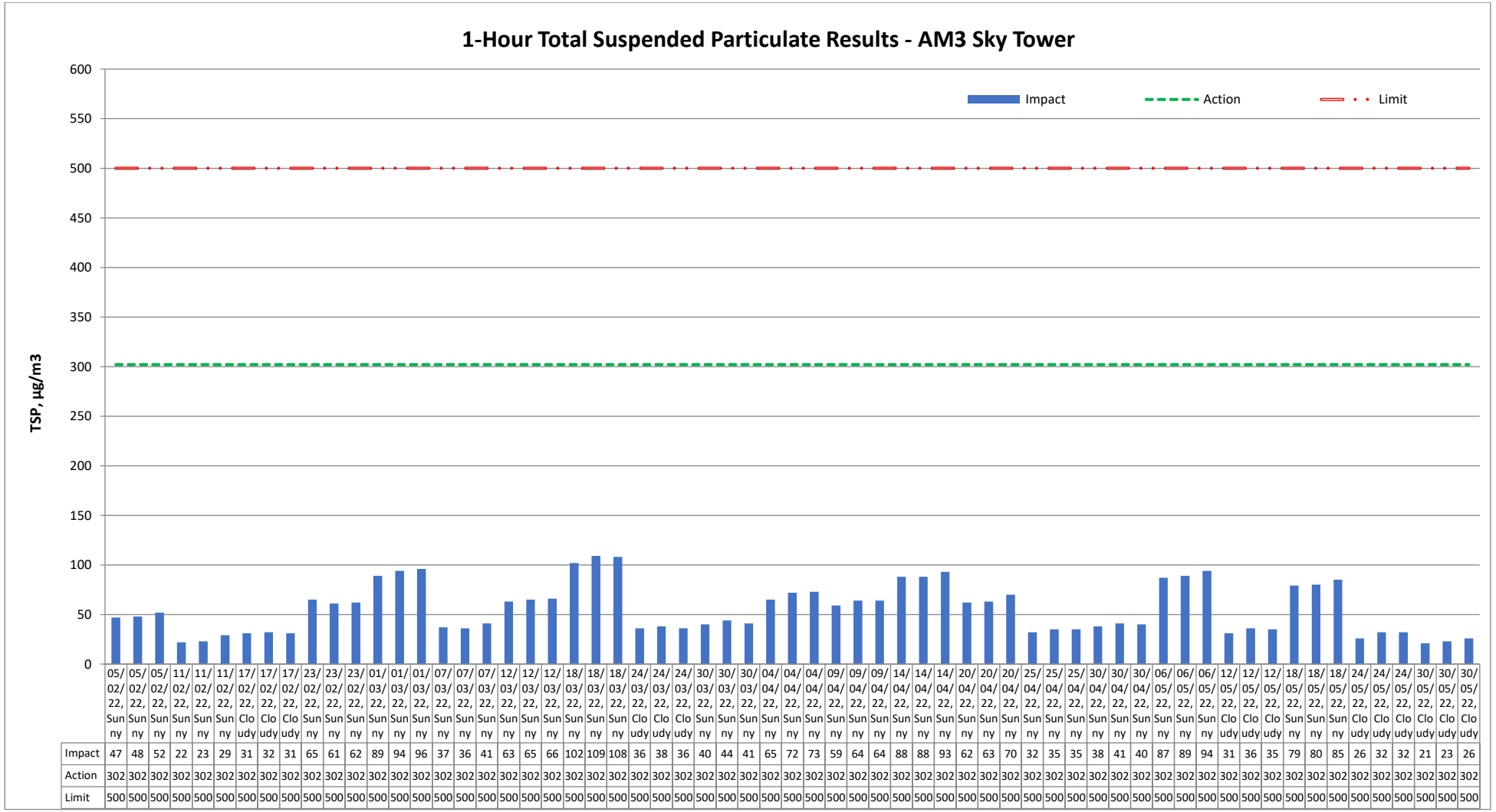
Impact	28	30	35	44	46	48	33	34	30	30	28	29	85	96	90	40	38	35	61	70	67	108	111	105	33	35	34	38	45	43	70	75	77	50	53	55	98	100	95	55	53	58	40	38	43	40	43	45	48	50	55	20	28	25	63	65	60	35	33	38	58	60	55
Action	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302
Limit	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500



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Impact	47	48	52	22	23	29	31	32	31	65	61	62	89	94	96	37	36	41	63	65	66
Action	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302
Limit	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500

	18/03/22, Sunny	18/03/22, Sunny	18/03/22, Sunny	24/03/22, Cloudy	24/03/22, Cloudy	24/03/22, Cloudy	30/03/22, Sunny	30/03/22, Sunny	30/03/22, Sunny	04/04/22, Sunny	04/04/22, Sunny	04/04/22, Sunny	09/04/22, Sunny	09/04/22, Sunny	09/04/22, Sunny	14/04/22, Sunny	14/04/22, Sunny	14/04/22, Sunny	20/04/22, Sunny	20/04/22, Sunny	20/04/22, Sunny
Impact	102	109	108	36	38	36	40	44	41	65	72	73	59	64	64	88	88	93	62	63	70
Action	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302
Limit	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500

	25/04/22, Sunny	25/04/22, Sunny	25/04/22, Sunny	30/04/22, Sunny	30/04/22, Sunny	30/04/22, Sunny	06/05/22, Sunny	06/05/22, Sunny	06/05/22, Sunny	12/05/22, Cloudy	12/05/22, Cloudy	12/05/22, Cloudy	18/05/22, Sunny	18/05/22, Sunny	18/05/22, Sunny	24/05/22, Cloudy	24/05/22, Cloudy	24/05/22, Cloudy	30/05/22, Cloudy	30/05/22, Cloudy	30/05/22, Cloudy
Impact	32	35	35	38	41	40	87	89	94	31	36	35	79	80	85	26	32	32	21	23	26
Action	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302
Limit	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500

Major Construction Activities	Reporting Period			
	Feb 2022	March 2022	April 2022	May 2022
Bored pile works for landscape elevated walkway	✓			
Construction of Crowd Dispersal Route	✓	✓	✓	✓
ELS and excavation at Pier 9 and Pier 10 for Elevated Walkway LW-02	✓			
ELS and excavation at Pier 9 for Elevated Walkway LW-02			✓	
Underground utility diversion works at Sa Po Road	✓	✓	✓	
ELS and excavation at launching shaft for subway SB-01	✓	✓	✓	
Drainage works for Pedestrian Street No.1, No,2 No.3 & No.4	✓			
Construction of DCS	✓	✓	✓	✓
Construction works for Road L16	✓	✓	✓	✓
Pre-bored socket H-piles construction for Subway KS10	✓	✓		
Twin rising mains diversion works	✓			
Renovation works for existing subways KS9 and KS32	✓	✓	✓	✓
Post-pilling tests for PC11 for Elevated Walkway LW-02		✓		
ELS and excavation at Pier 9 for Elevated Walkway LW-02		✓		
Pile cap construction for PC9 and PC10 for Elevated Walkway LW-02		✓	✓	✓
Construction works for Pedestrian Street No. 1, No. 2, No. 3 & No. 4		✓	✓	✓
Post-pilling tests for H-piles at Subway KS10		✓	✓	
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				✓

Factors might affect the monitoring results	Reporting Period			
	Feb 2022	March 2022	April 2022	May 2022
Non-project related construction activities in the adjacent construction sites were observed.	✓	✓	✓	✓

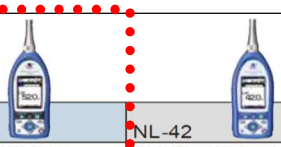
Appendix I – Event and Action Plan for air quality

Event	Action			
	ET	IEC	Supervisor / ER	Contractor
Action Level being exceeded by one sampling	1. Identify source and investigate the causes of exceedance; 2. Inform Contractor, IEC and Supervisor /ER; 3. Repeat measurement to confirm finding.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method.	1. Notify Contractor.	1. Rectify any unacceptable practice; 2. 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 additional monitoring.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with ET and Contractor on possible remedial measures; 4. Advise the Supervisor /ER on the effectiveness of the proposed remedial measures.	1. Confirm receipt of notification of exceedance in writing; 2. Notify Contractor; 3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented; 4. Supervise implementation of remedial measures; 5. Conduct meeting with ET and IEC if exceedance continues.	1. Discuss with ET and IEC on proper remedial actions; 2. Submit proposals for remedial actions to Supervisor /ER and IEC within three working day of notification; 3. Implement the agreed proposals; 4. Amend proposal if appropriate.
Limit Level being exceeded by one sampling	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	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss possible remedial measures with ET and Contractor; 4. Advise the Supervisor /ER	1. Confirm receipt of notification of exceedance in writing; 2. Notify Contractor; 3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be	1. Take immediate action to avoid further exceedance; 2. Discuss with ET and IEC on proper remedial actions; 3. Submit proposal for remedial actions to Supervisor /ER and IEC

Event	Action			
	ET	IEC	Supervisor / ER	Contractor
	Contractor's remedial actions and keep EPD, IEC and Supervisor /ER informed of the results.	on the effectiveness of the proposed remedial measures.	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	1. Notify IEC, Supervisor /ER, Contractor and EPD; 2. Repeat measurement to confirm findings; 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.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with Supervisor /ER, ET, and Contractor on the potential remedial actions; 4. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the Supervisor /ER accordingly.	1. Confirm receipt of notification of exceedance in writing; 2. Notify Contractor; 3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented; 4. Supervise implementation of remedial measures; 5. If exceedance continues, consider stopping the Contractor to continue working on that portion of work which causes the exceedance until the exceedance is abated.	1. Take immediate action to avoid further exceedance; 2. Discuss with ET and IEC on proper remedial 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.

Appendix J – Calibration certificates, catalogue of noise monitoring equipment

Specifications



	NL-52	NL-42
Applicable standards	IEC 61672-1: 2002 Class 1 ANSI S1.4-1983 Type 1 ANSI S1.4A-1985 Type 1 ANSI S1.43-1997 Type 1 JIS C 1509-1: 2005 Class 1	IEC 61672-1: 2002 Class 2 ANSI S1.4-1983 Type 2 ANSI S1.4A-1985 Type 2 ANSI S1.43-1997 Type 2 JIS C 1509-1: 2005 Class 2
	CE Marking (EMC Directive 2004/108/EC, Low Voltage Directive 2006/95/EC), WEEE Directives, Chinese RoHS (export model for China only)	
Measurement functions	Simultaneous measurement of the following items, with selected time weighting and frequency weighting	
Processing (main ch)	Instantaneous sound pressure level: L_p Equivalent continuous sound pressure level: L_{eq} Sound exposure level: L_E Maximum sound pressure level: L_{max} Minimum sound pressure level: L_{min} Percentile sound levels: L_N (0.1 to 99.9 %, 0.1-increment steps, max. 5 values)	
Processing (sub ch)	Instantaneous sound pressure level: L_p	
Additional processing	In addition to main processing items, one of the following can be selected for simultaneous processing: C-weighted equivalent continuous sound level: L_{Ceq} C-weighted peak sound level: L_{Cpeak} Z-weighted peak sound level: L_{Zpeak} L_{Aeq}-time-weighted equivalent continuous sound level: L_{Aeq} *2 Maximum L_{Aeq}-time-weighted equivalent continuous sound level: L_{Amax} *2 The power average of the maximum level of each 5 second interval: L_{Atm5} The frequency weighting for the additional processing synchronizes with the frequency weighting of the sub-channel, so when the sub-channel has A-weighting, L_{Atm5} can be selected. When C-weighting (Z-weighting) is selected, the additional processing L_{Ceq} and L_{Cpeak} (L_{Zpeak}) are selectable.	
Measuring time	10 s, 1, 5, 10, 15, 30 m, 1, 8, 24 h, and manual (maximum 24 h)	
Microphone Type	UC-59	UC-52
Microphone Sensitivity level	−27 dB	−33 dB
Measurement range	A-weighting: 25 dB to 138 dB C-weighting: 33 dB to 138 dB Z-weighting: 38 dB to 138 dB C-weighting peak sound level: 55 dB to 141 dB Z-weighting peak sound level: 60 dB to 141 dB	
Inherent noise A-weighting	17 dB or less	19 dB or less
Inherent noise C-weighting	25 dB or less	27 dB or less
Inherent noise Z-weighting	30 dB or less	32 dB or less
Frequency range	20 Hz to 20 kHz	20 Hz to 8 kHz
Frequency weighting	A, C, and Z	
Time weighting	F (Fast) and S (Slow)	
Level range	Single range (Linearity range: 113 dB)	
Bar graph display range max	Max. 110 dB (20 to 130 dB)	
Switching of bar graph display	Set the upper/ lower limit in 10 dB increments.	
RMS detection circuit	Digital processing method	
Sampling cycle	20.8 µs (L_p, L_{eq}, L_E, L_{max}, L_{min}, L_{peak} : sampling frequency: 48 kHz) 100 ms (L_N)	
Calibration	Measurement Law: electrical calibration performed according to IEC and JIS standards, using internally generated signals: acoustic calibration performed with the NC-74.	
Correction functions	Windscreen correction: Compliant with IEC 61672-1 and JIS C 1509-1 standards when the windscreen is installed.	
	Diffuse sound field correction: Correction of frequency characteristics in order to comply with standards (ANSI S1.4) in diffuse sound field.	
Delay time	The meter can be set to start measuring a specified time (OFF, 1, 3, 5 or 10 s) after the start button has been pressed or when a user-set trigger is exceeded.	
Back erase function	When the PAUSE key is pressed to pause measurement, the preceding (user selectable) 0, 1, 3 or 5 s data are excluded from processing.	
Display	Backlit semitransparent color TFT LCD display WQVGA (400 x 240 dots) *LCD with touch panel (Capacitive Touch Panel)	
	Numerical display update frequency: 1 s Bar graph update frequency: 100 ms	
Store Manual	Data for measurement results are stored manually in single address increments.	
Number of data	Internal memory: max. 1000 sets SD Card: depends on the capacity of the SD Card *1	
Auto *2	Instantaneous values (L_p mode) and processed values (L_{eq} mode) are stored continuously and automatically at preset intervals.	
L_p sampling cycle	100 ms, 200 ms, 1 s, L_{eq} 1s	
L_{eq} sampling cycle	10 s, 1, 5, 10, 15, 30 ms, 1, 8, 24 h	
Measurement Time	Max. 1000 h (depends on the capacity of the SD Card) *1	

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

Options

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

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

Precautions regarding waterproofing

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

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

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

Distributed by:

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

This product is environment-friendly. It does not include toxic chemicals on our policy.
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1011-4 1212.P.D

AAST-SLM-10
Cal Cert 2021/7/19

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

校 准 证 书
CALIBRATION CERTIFICATE

证书编号: 2HB21001383-0001
Certificate No.

CNAS 中国认可 国际互认 校准 CALIBRATION CNAS L13344

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.	00976203		
管理号: Asset No.	AAST-SLM-10		
接收日期: Rec. Date	2021-07-08	校准日期: Cal. Date	2021-07-19
签发日期: App. Date	2021-07-19	建议校准周期: Reference Cal. Period	12个月(12 months)
结论: Conclusion	所校准项目合格(Passed at Calibration Items)		

校准: Calibrated by 陈卓辉
核验: Inspected by 张毅
签发: Approved by 郭木为
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
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

证书编号(Certificate No.): 2HB21001383-0001

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 188-2017 声级计检定规程；Sound pressure level：(20～130)dB；Frequency Weighting：(20～130)dB@(10 Hz～20kHz)。
- 详细内容请查看CNAS网站中注册编号为L13344的证书附件，超出范围的内容未被认可，其结果/结论所依据的合格评定活动不在认可范围内。(Please see the attachment of certificate No. L13344 at CNAS website for details, beyond which is not accredited, the conformity assessment activities on which the results/conclusions are based are outside the scope of accreditation.)

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

名 称 (Description)	证书号/有效期/溯源单位 (Certificate No./Due Date/Traceability to)	技术指标 (Specification)	测量范围 (Measuring Range)
正弦信号发生器	4GC20000427-0010/2021-11-04/赛宝(广州)	f_0 ±1mHz；失真度 Distortion：<-70dB	f_0 0.001Hz～200kHz；U ：100μV～5Vrms
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 ±0.001%	DCV:(0～1000)V；ACV:(0.001～750)V@(3Hz～300kHz)；DCI:(0～3)A；ACI:(0～3)A@(3Hz～5kHz)；R:(0～100)MΩ；f:3Hz～300kHz
步进衰减器	4GC21000155-0024/2022-04-29/赛宝(广州)	±3dB	（0～110）dB/10dB step @(DC～1GHz)
PULSE分析系统	GFJGJL1001210202725/2022-03-03/航空304所	频率:U_{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

5. 环境条件(Environmental conditions)：
温度(Temperature)：23.4℃ 相对湿度(Relative Humidity)：55.8%

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

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

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。

Calibration Certificate of Sound Level Meter

CEPREI

证书编号(Certificate No.): 2HB21001383-0001

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

无影响证书中测量结果准确度的因素和缺陷。

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

2 指示声级调整 (Indication SPL Calibration)

频率(Frequency)=1000Hz

传声器型号 (Microphone Type)	传声器编号 (Microphone SN.)	放大器型号 (Preamplifier Type)	放大器编号 (Preamplifier SN.)
UC-59	15764	NH-25	76321

声校准器型号 (Calibrator Type)	标准声压级 (Reference SPL) (dB)	校准前示值 (Before Calibration) (dB)	校准后示值 (After Calibration) (dB)	U (k=2) (dB)
4226	94.0	94.1	94.1	0.2

3 级线性 (Level Linearity)

3.1 参考级量程 (Reference Range) 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

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

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

CEPREI

证书编号(Certificate No.): 2HB21001383-0001

4 A计权特性(A-Weighting Characteristic)

频率 (Frequency) (Hz)	实测值 (Actual) (dB)	理论值 (Theoretical value) (dB)	误差 (Error) (dB)	允许误差 (Limit) (dB)	结论 (Pass/Fail) (P/F)	U (k=2) (dB)
20	-49.2	-50.5	1.3	±2.0	P	0.5
25	-44.2	-44.7	0.5	+2.0 ~ -1.5	P	0.5
31.5	-39.4	-39.4	0.0	±1.5	P	0.5
40	-34.4	-34.6	0.2	±1.0	P	0.5
50	-30.3	-30.2	-0.1	±1.0	P	0.5
63	-26.0	-26.2	0.2	±1.0	P	0.5
80	-22.4	-22.5	0.1	±1.0	P	0.5
100	-19.1	-19.1	0.0	±1.0	P	0.5
125	-16.0	-16.1	0.1	±1.0	P	0.5
160	-13.2	-13.4	0.2	±1.0	P	0.5
200	-10.8	-10.9	0.1	±1.0	P	0.5
250	-8.6	-8.6	0.0	±1.0	P	0.5
315	-6.6	-6.6	0.0	±1.0	P	0.4
400	-4.7	-4.8	0.1	±1.0	P	0.4
500	-3.3	-3.2	-0.1	±1.0	P	0.4
630	-1.9	-1.9	0.0	±1.0	P	0.4
800	-0.8	-0.8	0.0	±1.0	P	0.4
1000(Ref.)	0.0	0.0	0.0	±0.7	P	0.4
1250	0.5	0.6	-0.1	±1.0	P	0.6
1600	0.9	1.0	-0.1	±1.0	P	0.6
2000	1.1	1.2	-0.1	±1.0	P	0.6
2500	1.0	1.3	-0.3	±1.0	P	0.6
3150	0.9	1.2	-0.3	±1.0	P	0.6
4000	1.2	1.0	0.2	±1.0	P	0.6
5000	0.3	0.5	-0.2	±1.5	P	0.6
6300	-0.3	-0.1	-0.2	+1.5 ~ -2.0	P	0.6
8000	-0.6	-1.1	0.5	+1.5 ~ -2.5	P	0.6
10000	-2.4	-2.5	0.1	+2.0 ~ -3.0	P	0.6
12500	-4.3	-4.3	0.0	+2.0 ~ -5.0	P	1.0
16000	-8.5	-6.6	-1.9	+2.5 ~ -16.0	P	1.0
20000	-18.5	-9.3	-9.2	+3.0 ~ -∞	P	1.0

5 C计权特性(C-Weighting Characteristic)

频率 (Frequency) (Hz)	实测值 (Actual) (dB)	理论值 (Theoretical value) (dB)	误差 (Error) (dB)	允许误差 (Limit) (dB)	结论 (Pass/Fail) (P/F)	U (k=2) (dB)
20	-6.6	-6.2	-0.4	±2.0	P	0.5
25	-4.5	-4.4	-0.1	+2.0 ~ -1.5	P	0.5
31.5	-2.9	-3.0	0.1	±1.5	P	0.5
40	-1.9	-2.0	0.1	±1.0	P	0.5
50	-1.3	-1.3	0.0	±1.0	P	0.5
63	-0.7	-0.8	0.1	±1.0	P	0.5
80	-0.5	-0.5	0.0	±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
160	-0.1	-0.1	0.0	±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	0.1	0.0	0.1	±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	-0.3	-0.2	-0.1	±1.0	P	0.6
2500	-0.6	-0.3	-0.3	±1.0	P	0.6
3150	-0.8	-0.5	-0.3	±1.0	P	0.6
4000	-0.6	-0.8	0.2	±1.0	P	0.6
5000	-1.6	-1.3	-0.3	±1.5	P	0.6
6300	-2.1	-2.0	-0.1	+1.5 ~ -2.0	P	0.6
8000	-2.5	-3.0	0.5	+1.5 ~ -2.5	P	0.6
10000	-4.3	-4.4	0.1	+2.0 ~ -3.0	P	0.6
12500	-6.3	-6.2	-0.1	+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

6 自生噪声 (Autogenous noise)

计权 (Weighting)	实测值 (Actual) (dB)
A	15.3

以下空白/No data hereafter

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 188-2017 声级计检定规程：Sound pressure level：(20～130)dB；Frequency Weighting：(20～130)dB@(10 Hz～20kHz)。
- 详细内容请查看CNAS网站中注册编号为L13344的证书附件，超出范围的内容未被认可，其结果/结论所依据的合格评定活动不在认可范围内。(Please see the attachment of certificate No. L13344 at CNAS website for details, beyond which is not accredited, the conformity assessment activities on which the results/conclusions are based are outside the scope of accreditation.)。

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

名　称 (Description)	证书号/有效期/溯源单位 (Certificate No./Due Date/Traceability to)	技术指标 (Specification)	测量范围 (Measuring Range)
数字多用表	4GC20000467-0001/2021-11-26/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；f:3Hz～300kHz
正弦信号发生器	4GC20000427-0010/2021-11-04/赛宝(广州)	f：±1mHz；失真度Distortion：<-70dB	f：0.001Hz～200kHz；U：100μV～5Vrms
标准传声器	LSsx2021-13180/2022-04-24/中国计量院	U=(0.05~0.20)dB（k=2）	20Hz～20kHz
前置放大器	LSsx2021-13000/2022-04-19/中国计量院	U=0.3dB（k=2）	（10～50000）Hz
PULSE分析系统	4GC21000026-0375/2022-01-21/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
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/赛宝(广州)	频率响应：±1dB，失真度：≤0.2%	20Hz～20kHz
步进衰减器	4GC21000155-0024/2022-04-29/赛宝(广州)	±3dB	（0～110）dB/10dB step @(DC～1GHz)
声校准器	4GC20000502-0050/2021-12-21/赛宝(广州)	1级 First Level	31.5Hz～16kHz

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

5. **环境条件**(Environmental conditions)：
温度(Temperature)：23.9℃　　相对湿度(Relative Humidity)：55.8%

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

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

Sound Calibrator NC-75

GREEN

CE

RION

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

Sound Calibrator
NC-75

Patent pending

- Integrated newly developed reference microphone enables feedback control that completely eliminates the need for atmospheric pressure and coupler volume correction, resulting in highly accurate and reliable calibration.
- Effective coupler sound insulation (30 dB or higher*) permits calibration also in relatively noisy environments.
  *A-weighed sound level insulation performance measured with pink noise
- Each product comes standard with a JCSS Calibration Certificate, demonstrating high quality.

- Conforming with IEC 60942: 2017 class 1 and JIS C 1515: 2020
- Supports calibration of RION sound level meters compliant with IEC 61672-1: 2013, JIS C 1509-1: 2017 and JIS C 1516: 2014.
- Supports calibration of RION microphones and microphones of other manufacturers meeting the size specifications of IEC 61094-4.
- Supports 1-inch, 1/2-inch, and 1/4-inch microphones (1/4 inch with optional adapter)

JCSS Calibration Certificate

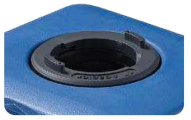
JCSS Calibration Results

Usage example

How to use the adapter

1-inch microphones

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



1/2-inch microphones

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

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

1/4-inch microphones

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

Specifications (under standard ambient conditions*)

Applicable standards	IEC 60942: 2017 class1, ANSI/ASA S1.40-2006 class1, JIS C 1515: 2020 class 1, CE marking, WEEE directive, Chinese RoHS
Supported microphones	Microphones made by RION and microphones made by other manufacturers that meet the IEC 61094-4 size specifications 1-inch microphones 1/2-inch microphones (with supplied adapter) 1/4-inch microphones (with optional adapter)
Nominal sound pressure level	94 dB
Sound pressure level tolerance	Max. ±0.20 dB
Nominal frequency	1 000 Hz
Frequency tolerance	Max. ±0.1%
THD + noise	Max. 1.0 % (22.4 Hz to 22.4 kHz)
Dimensions and weight	Approx. 42 mm (H) x 77 mm (W) x 70 mm (D), approx. 200 g
Power supply	IEC LR6 (size AA) alkaline battery x 2 IEC LR6 (size AA) nickel-hydride rechargeable battery ("eneloop pro" supported) x 2
Battery life	50 hours or more (using two alkaline batteries, continuous use) 50 hours or more (using two nickel-hydride rechargeable batteries [eneloop pro], continuous use)
Supplied accessories	Soft case x 1, 1/2-inch microphone adapter x 1, IEC LR6 (size AA) alkaline battery x 2, hand strap x 1, JCSS Calibration Certificate x 1

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

Optional accessories	1/4-inch microphone adapter NC-75-S11

Strap

Securely carry the unit with the supplied hand strap

Soft case

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

PISTONPHONE NC-72A

Specifications (under standard ambient conditions*)

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

IA Japan JCSS JCSS 0197

RION CO., LTD. is recognized by the JCSS which uses ISO/IEC 17025 as an accreditation standard and bases its accreditation scheme on ISO/IEC 17011. JCSS is operated by the accreditation body (IA Japan) which is a signatory to the Asia Pacific Accreditation Cooperation (APAC) as well as the International Laboratory Accreditation Cooperation (ILAC). The Quality Assurance Section of RION CO., LTD. is an international MRA compliant JCSS operator with the accreditation number JCSS 0197.

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

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

Distributed by:

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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：2HB21001749-0002
Certificate No.

CNAS 中国认可 国际互认 校准 CALIBRATION CNAS L13344

委托单位：Client	Castco Testing Centre Limited
仪器名称：Description	Sound Level Calibrator
型号规格：Model/Type	NC-75
制造商：Manufacturer	RION
机身号：Serial No.	34280310
管理号：Asset No.	AAST-SLC-07
接收日期：Rec. Date	2021-08-05
校准日期：Cal. Date	2021-08-17
签发日期：App. Date	2021-08-18
建议校准周期：Reference Cal. Period	12个月(12 months)
结论：Conclusion	所校准项目合格(Passed at Calibration Items)

校准：Calibrated by 赵文钰
核验：Inspected by 张毅
签发：Approved by 郑木为
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
网址：www.ceprei-cal.com

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Service Tel: 020-87237633 Fax: 020-87236189
Complaint Tel: 020-87236896
Email: cal@ceprei.com
Website: www.ceprei-cal.com

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～20kHz)。
* 详细内容请查看CNAS网站中注册编号为L13344的证书附件，超出范围的内容未被认可，其结果/结论所依据的合格评定活动不在认可范围内。(Please see the attachment of certificate No. L13344 at CNAS website for details, beyond which is not accredited, the conformity assessment activities on which the results/conclusions are based are outside the scope of accreditation.)。

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

名 称 (Description)	证书号/有效期/溯源单位 (Certificate No./Due Date/Traceability to)	技术指标 (Specification)	测量范围 (Measuring Range)
标准传声器	LSsx2021-13180/2022-04-24/中国计量院	U=(0.05~0.20)dB（k=2）	10Hz～20kHz
PULSE分析系统	4GC21000026-0375/2022-01-21/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^{-3}~30)V
前置放大器	LSsx2021-13000/2022-04-19/中国计量院	U=0.3dB（k=2）	（10～50000）Hz

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

5. 环境条件(Environmental conditions)：
温度(Temperature)：22.9℃ 相对湿度(Relative Humidity)：59.5%

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

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

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.

CEPREI

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)

规定声压级 (Prescribed SPL.) (dB)	测量声压级 (Measured SPL.) (dB)	声压级差的绝对值 (Absolute value of SPL.) (dB)	允许范围 (Limit) (dB)	结论 (Pass/Fail)	U (k=2) (dB)
94	94.12	0.12	≤0.40	P	0.10

3 频率 (Frequency)

规定频率 (Prescribed Fre.) (Hz)	测量频率 (Measured Fre.) (Hz)	频率误差的绝对值 (Absolute value of Fre.) (%)	允许范围 (Limit) (%)	结论 (Pass/Fail)	U_{rel} (k=2) (%)
1000	1000.0	0.00	≤1.00	P	0.10

4 总失真 (Distortion)

规定声压级 (Prescribed SPL) (dB)	规定频率 (Measured Fre.) (Hz)	总失真 (Distortion) (%)	允许范围 (Limit) (%)	结论 (Pass/Fail)	U_{rel} (k=2) (%)
94	1000	0.15	≤3.00	P	5.0

以下空白/No data hereafter

Catalogue of Air Flow Meter (TSI TA440)

SPECIFICATIONS

THERMAL ANEMOMETERS
MODELS TA410, TA430 AND TA440

Velocity

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

Duct Size (TA430, TA440)

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

Volumetric Flow Rate (TA430, TA440)

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

Temperature

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

Relative Humidity (TA440 only)

Range	5 to 95% RH
Accuracy[4]	±3% RH
Resolution	0.1% RH

Wet Bulb Temperature (TA440 only)

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

Dew Point (TA440 only)

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

Instrument Temperature Range

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

Data Storage Capabilities (TA430, TA440)

Range	12,700+ samples and 100 test IDs

Logging Interval (TA430, TA440)
1 second to 1 hour

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	+	+	+

[1] Temperature compensated over an air temperature range of 5 to 65°C (40 to 150°F).
[2] The accuracy statement begins at 30 ft/min through 4000 ft/min (0.15 m/s through 20 m/s) for the Model TA410, and 30 ft/min through 6,000 ft/min (0.15 m/s through 30 m/s) for Models TA430 and TA440.
[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 1% hysteresis.

Specifications subject to change without notice.

AIRFLOW INSTRUMENTS

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

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

P/N 2980548 Rev D (A4)

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

ACCREDITED Certificate #3815.01

Calibration Certificate No.: CC0332201

Customer Information

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

Equipment Identification

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

Certificate Information

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

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 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.

CT-AFR-01

Note1: The estimated expanded uncertainties have been calculated in "Evaluation and expression of uncertainty in measurement" and give an internal estimated to have a level of confidence of 95%. A coverage factor of 2 is assumed unless explicitly stated.
Note2: The standard (s) and instrument used in the calibration are traceable to national or international recognized standard and are calibrated on a schedule to maintain the accuracy and good condition.
Note3: The result reported in this certificate refer to the condition of the instrument on the date of calibration and carry no implication regarding the long term stability of the instrument.
Note4: The result shows in this calibration certificate relate only to the item calibrated, and the result only applies to the calibration item as received.

Calibrated By: Rex Tse

Checked and Approved By: Warren Yeung

Company Chop: Cal Lab Limited 校正實驗室有限公司

Certificate Issue Date: 25 January 2022

CT-BEG-03

*** 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

Appendix K – Noise monitoring results and graphical presentation

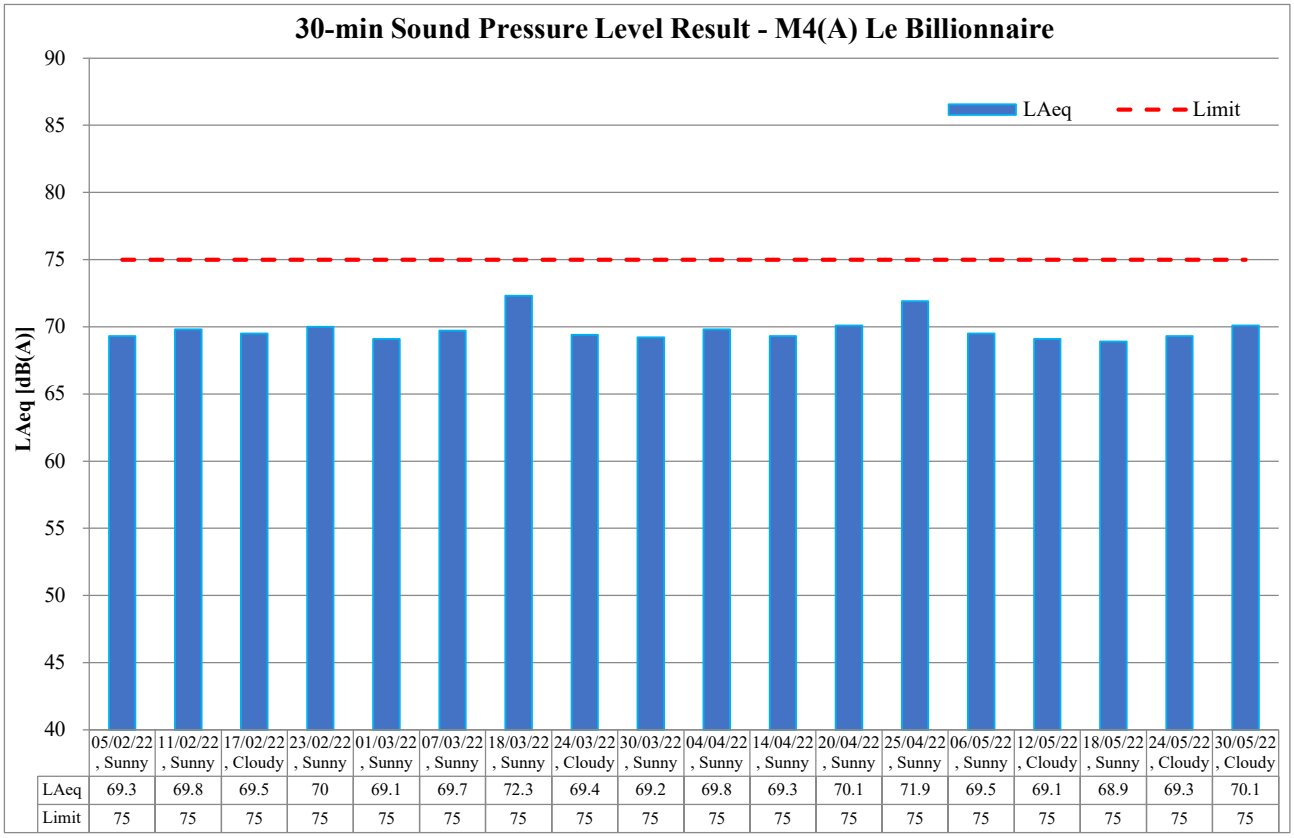
M4(A) – Le Billionnaire

Date	Temp (°C)	Weather	Measured Noise Level at M4(A), dB(A)							Limit
			Time			Baseline	L_{Aeq}	L_{A10}	L_{A90}	
06/05/2022	26.5	Sunny	13:15	-	13:45	69.5	69.5	70.8	68.1	75
12/05/2022	26.6	Cloudy	9:15	-	9:45	69.5	69.1	69.9	67.3	75
18/05/2022	25.9	Sunny	13:05	-	13:35	69.5	68.9	69.5	66.8	75
24/05/2022	23.6	Cloudy	9:05	-	9:35	69.5	69.3	70.4	67.7	75
30/05/2022	29.2	Cloudy	13:10	-	13:40	69.5	70.1	72.4	68.2	75
			Maximum				70.1			
			Minimum				68.9			
			Average				69.4			

M5(A) – Prince Ritz

Date	Temp (°C)	Weather	Measured Noise Level at M5(A), dB(A)							Limit
			Time			Baseline	L_{Aeq}	L_{A10}	L_{A90}	
06/05/2022	26.5	Sunny	14:20	-	14:50	72.5	72.3	73.5	69.5	75
12/05/2022	26.6	Cloudy	10:20	-	10:50	72.5	72.1	73.3	69.1	75
18/05/2022	25.9	Sunny	14:15	-	14:45	72.5	73.3	75.3	70.4	75
24/05/2022	23.6	Cloudy	10:24	-	10:54	72.5	73.1	74.9	70.8	75
30/05/2022	29.2	Cloudy	14:10	-	14:40	72.5	72.4	73.7	69.4	75
			Maximum				73.3			
			Minimum				72.1			
			Average				72.7			

$L_{Aeq, 30\text{-}min}$ graphical results of M4(A) – Le Billionnaire



	05/02/22, Sunny	11/02/22, Sunny	17/02/22, Cloudy	23/02/22, Sunny	01/03/22, Sunny	07/03/22, Sunny	18/03/22, Sunny	24/03/22, Cloudy	30/03/22, Sunny	04/04/22, Sunny	14/04/22, Sunny	20/04/22, Sunny	25/04/22, Sunny	06/05/22, Sunny	12/05/22, Cloudy	18/05/22, Sunny	24/05/22, Cloudy	30/05/22, Cloudy
LAeq	69.3	69.8	69.5	70	69.1	69.7	72.3	69.4	69.2	69.8	69.3	70.1	71.9	69.5	69.1	68.9	69.3	70.1
Limit	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75

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

	05/02/22, Sunny	11/02/22, Sunny	17/02/22, Cloudy	23/02/22, Sunny	01/03/22, Sunny	07/03/22, Sunny	18/03/22, Sunny	24/03/22, Cloudy	30/03/22, Sunny	04/04/22, Sunny	14/04/22, Sunny	20/04/22, Sunny	25/04/22, Sunny	06/05/22, Sunny	12/05/22, Cloudy	18/05/22, Sunny	24/05/22, Cloudy	30/05/22, Cloudy
LAeq	72.2	72.8	72.4	73	72.6	72.3	72.9	72.1	72.4	72.9	72.4	72.2	73.8	72.3	72.1	73.3	73.1	72.4
Limit	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75

Major Construction Activities	Reporting Period			
	Feb 2022	March 2022	April 2022	May 2022
Bored pile works for landscape elevated walkway	✓			
Construction of Crowd Dispersal Route	✓	✓	✓	✓
ELS and excavation at Pier 9 and Pier 10 for Elevated Walkway LW-02	✓			
ELS and excavation at Pier 9 for Elevated Walkway LW-02			✓	
Underground utility diversion works at Sa Po Road	✓	✓	✓	
ELS and excavation at launching shaft for subway SB-01	✓	✓	✓	
Drainage works for Pedestrian Street No.1, No,2 No.3 & No.4	✓			
Construction of DCS	✓	✓	✓	✓
Construction works for Road L16	✓	✓	✓	✓
Pre-bored socket H-piles construction for Subway KS10	✓	✓		
Twin rising mains diversion works	✓			
Renovation works for existing subways KS9 and KS32	✓	✓	✓	✓
Post-pilling tests for PC11 for Elevated Walkway LW-02		✓		
ELS and excavation at Pier 9 for Elevated Walkway LW-02		✓		
Pile cap construction for PC9 and PC10 for Elevated Walkway LW-02		✓	✓	✓
Construction works for Pedestrian Street No. 1, No. 2, No. 3 & No. 4		✓	✓	✓
Post-pilling tests for H-piles at Subway KS10		✓	✓	
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				✓

Factors might affect the monitoring results	Reporting Period			
	Feb 2022	March 2022	April 2022	May 2022
Non-project related construction activities in the adjacent construction sites were observed.	✓	✓	✓	✓

Appendix L – Event and Action Plan for noise

Event	Action			
	ET	**IEC**	**Supervisor / ER**	**Contractor**
Action Level being exceeded	1. Notify Supervisor / ER, IEC and Contractor; 2. Carry out investigation; 3. Report the results of investigation to the IEC, Supervisor / ER and Contractor; 4. Discuss with the IEC and Contractor on remedial measures required; 5. 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.)	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.)	1. Submit noise mitigation proposal to IEC and Supervisor / ER; 2. 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.)	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented; 4. Supervise the implementation of remedial measures; 5. If exceedance continues, consider stopping the Contractor to continue working on that portion of work which causes the	1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IEC and Supervisor /ER within 3 working days of notification; 3. Implement the agreed proposal; 4. Submit further proposal if problem still not under control; 5. Stop the relevant portion of works as instructed by the Supervisor /ER until the exceedance is abated. (The above actions should be

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

Appendix M – Event and Action Plan for Landscape and Visual Impact

Event	Action			
	ET	**IEC**	**Supervisor / ER**	**Contractor**
Design Check	1. Check final design conforms to the requirements of EP and prepare report.	1. Check report. 2. Recommend remedial design if necessary.	1. Undertake remedial design if necessary.	
Non-conformity on one occasion	1. Identify Source. 2. Inform IEC and Supervisor /ER. 3. Discuss remedial actions with IEC, Supervisor /ER and Contractor. 4. Monitor remedial actions until rectification has been completed.	1. Check report. 2. Check Contractor's working method. 3. Discuss with ET and Contractor on possible remedial measures. 4. Advise Supervisor /ER on effectiveness of proposed remedial measures. 5. Check implementation of remedial measures.	1. Notify Contractor. 2. Ensure remedial measures are properly implemented.	1. Amend working methods. 2. Rectify damage and undertake any necessary replacement.
Repeated Non-conformity	1. Identify Source. 2. Inform IEC and Supervisor /ER. 3. Increase monitoring frequency. 4. Discuss remedial actions with IEC, Supervisor /ER and Contractor. 5. Monitor remedial actions until rectification has been completed. 6. If non-conformity stops, cease additional monitoring.	1. Check monitoring report. 2. Check Contractor's working method. 3. Discuss with ET and Contractor on possible remedial measures. 4. Advise Supervisor /ER on effectiveness of proposed remedial measures. 5. Supervise implementation of remedial measures.	1. Notify Contractor. 2. Ensure remedial measures are properly implemented.	1. Amend working methods. 2. Rectify damage and undertake any necessary replacement.

Appendix N – Waste Flow Table

MONTHLY SUMMARY WASTE FLOW TABLE FOR ___2022___ (YEAR)

Month	Actual Quantities of Inert C&D Materials Generated Monthly								Actual Quantities of C&D Wastes Generated Monthly				
	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													
SUB-TOTAL	4.88	0.04	4.84	0.00	2.27	0.00	2.57	0.00	0.00	0.00	0.00	0.00	0.04
JULY													
AUG													
SEPT													
OCT													
NOV													
DEC													
TOTAL	4.88	0.04	4.84	0.00	0.00	0.00	2.57	0.00	0.00	0.00	0.00	0.00	0.04

Appendix O – Environmental Mitigation Implementation Schedule (EMIS)

EIA Ref	Recommended Mitigation Measures	Implementation			
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~~	☑	☐	☐	
S8.8	Construction site should be provided with adequately designed perimeter channel and pre-treatment facilities and proper maintenance. ~~The boundaries of critical areas of earthworks should be marked and surrounded by dykes or embankments for flood protection. Temporary ditches should be provided to facilitate runoff discharge into the appropriate watercourses, via a silt retention pond. Permanent drainage channels should incorporate sediment basins or traps and baffles to enhance deposition rates. The design of efficient silt removal facilities should be based on the guidelines in Appendix A1 of ProPECC PN 1/94.~~	☑	☐	☐	
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.	☑	☐	☐	
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 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 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 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.	☑	☐	☐	
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.	☑	☐	☐	
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.~~	☐	☑	☐	
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.	☑	☐	☐	
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.	☑	☐	☐	
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	☑	☐	☐	
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.	☑	☐	☐	
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	☑	☐	☐	
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	☑	☐	☐	

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.	☑	☐	☐	
S8.8	The use of less or smaller construction plants may be specified to reduce the disturbance to the bottom sediment at the drainage channel /storm culvert / nullah.	☑	☐	☐	
S8.8	Temporary storage of materials (e.g. equipment, filling materials, chemicals and fuel) and temporary stockpile of construction materials should be located well away from any water courses during carrying out of the construction works.	☑	☐	☐	
S8.8	Stockpiling of construction materials and dusty materials should be covered and located away from any water courses.	☐	☑	☐	
S8.8	Construction debris and spoil should be covered up and/~~or disposed~~ of as soon as possible to avoid being washed into the nearby water receivers	☐	☑	☐	
S8.8	Construction activities, which generate large amount of wastewater, should be carried out in a distance away from the waterfront, where practicable.	☑	☐	☐	
S8.8	Mitigation measures to control site runoff from entering the nearby water environment should be implemented to minimize water quality impacts. Surface channels should be provided along the edge of the waterfront within the work sites to intercept the runoff.	☑	☐	☐	
S8.8	Construction effluent, site run-off and sewage should be properly collected and/or treated.	☑	☐	☐	
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.	☑	☐	☐	
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.	☑	☐	☐	
S8.8	Proper shoring may need to be erected in order to prevent soil/mud from slipping into the storm culvert/drainage channel/sea.	☑	☐	☐	
S8.8	Supervisory staff should be assigned to station on site to closely supervise and monitor the works	☐	☑	☐	
Part C Construction 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	☐	☑	☐	
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~~.	☐	☑	☐	
	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.	☑	☐	☐	
Part D Waste / 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	☐	☑	☐	
	Training of site personnel in site cleanliness, proper waste management and chemical waste handling procedures	☐	☑	☐	
	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	☑	☐	☐	
	Regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors. Separation of chemical wastes for special handling and appropriate treatment	☑	☐	☐	
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~~ ~~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	Implementation			
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 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 4) Any unused chemicals or those with remaining functional capacity should be recycled 5) 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 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 site 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 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	☑	☐	☐	
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*	☑	☐	☐	
Part E Landscape & 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 Air 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.	☐	☑	☐	
S6.8	Misting for the dusty material should be carried out before being loaded into the vehicle.	☑	☐	☐	
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.	☑	☐	☐	
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	☑	☐	☐	
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	☐	☑	☐	
S6.8	Vehicle washing facilities should be provided at every vehicle exit point	☐	☑	☐	
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.	☐	☑	☐	
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.	☐	☑	☐	

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.	☑	☐	☐	
S6.8	Every vehicle should be washed to remove any dusty materials from its body and wheels before leaving the construction sites.	☐	☑	☐	
S6.5	8 times daily watering of the work site with active dust emitting activities.	☐	☑	☐	

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

Reporting Month: May 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