

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

June 2021

(Version 1.1)

Certified By: _____

(Environmental Team Leader)

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EXECUTIVE SUMMARY

1. This is the 18th Monthly Environmental Monitoring & Audit (EM&A) report which summaries the findings of the EM&A Programme during the reporting period from 1 to 30 June 2021.

Breaches of Action and Limit Levels

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

Table I Non-compliance Record in the Reporting Month

Parameter	No. of 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 complaint	Description of complaint	Investigation / Recommendations / Action take	Close-out date / Status
No complaint	NA	NA	NA	NA

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

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 take	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:

- North Approach Ramp – Construction of wall, intermediate slab and column
- Bridge D3 – Construction of pile cap and pier
- North Depressed Road – Construction of wall & top slab / dismantling of wailing & strut of cofferdam
- Underpass – Excavation, construction of base slab and backfilling, Construction of wall & top slab
- South Approach Ramp – Installation of sheet pile and excavation, construction of base slab and erection of formwork
- Landscaped Deck – Construction of bored piles
- District Cooling System seawater intake box culvert – Construction of cofferdam and box structure
- Noise barrier – Installation of steel structure and PMMA panel, backfilling of haul road
- Lift 3 – Construction of cofferdam for footing
- Lift 4 – Excavation for footing
- South Depressed Road – Excavation and Installation of Lateral Support works

Future key issues

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

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

Future key issues in the coming month	Potential impact
North Approach Ramp – Construction of wall, intermediate slab and column	Noise and Air Quality
Bridge D3 – Construction of pile cap and pier	Noise and Air Quality
North Depressed Road – Construction of wall & top slab / dismantling of wailing & strut of cofferdam and removal of sheet pile	Noise and Air Quality
Underpass – Excavation, construction of base slab and backfilling, Construction of wall & top slab	Noise and Air Quality
South Approach Ramp – Installation of sheet pile and excavation	Noise and Air Quality
Landscaped Deck – Construction of bored piles	Noise and Air Quality
District Cooling System seawater intake box culvert – Construction of cofferdam and box structure	Noise and Air Quality
Noise barrier – Installation of steel structure and PMMA panel	Noise and Air Quality
Lift 3 – Construction of cofferdam for footing	Noise and Air Quality
Lift 4 – Excavation for footing	Noise and Air Quality

Future key issues in the coming month	Potential impact
South Depressed Road – Excavation and Installation of Lateral Support works	Noise and Air Quality

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. Ronald Siu	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 wall, intermediate slab and column	Bridge D3 – Construction of pile cap and pier
North Depressed Road – Construction of wall & top slab / dismantling of wailing & strut of cofferdam	Underpass – Excavation, construction of base slab and backfilling, Construction of wall & top slab
South Approach Ramp – Installation of sheet pile and excavation, construction of base slab and erection of formwork	Landscaped Deck – Construction of bored piles
District Cooling System seawater intake box culvert – Construction of cofferdam and box structure	Noise barrier – Installation of steel structure and PMMA panel, backfilling of haul road
Lift 3 – Construction of cofferdam for footing	Lift 4 – Excavation for footing
South Depressed Road – Excavation and Installation of Lateral Support works	

Submission Status under the Environmental Permits

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

Table 1.3 Summary of Status of Required Submission of EPs

EP Condition EP-337/2009	EP Condition EP-445/2013	EP Condition EP-445/2013/A	Submission	Submission Date
Condition 1.11	Condition 1.12	Condition 1.12	Notification of Commencement Date of Construction of the Project	6 Jan 2020
Condition 2.3	Condition 2.3	Condition 2.3	Management Organization of Main Construction Companies	9 Sep 2019
Condition 2.3	Condition 2.3	Condition 2.3	Updated Management Organization of Main Construction Companies	7 June 2021
Condition 2.4	Condition 2.4	Condition 2.4	Design Drawings	6 Jan 2020
Condition 2.11	Condition 2.5	Condition 2.5	Landscape Mitigation Plans	13 Nov 2020
Condition 2.1	Condition 2.5	Condition 2.5	Landscape Mitigation	18 May 2021

EP Condition EP-337/2009	EP Condition EP-445/2013	EP Condition EP-445/2013/A	Submission	Submission Date
			Plans (Revision 2)	
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 (May 2021)	11 June 2021

2. AIR QUALITY MONITORING

Monitoring Requirements

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

Monitoring Locations

2.2 Three designated monitoring stations were selected for air quality monitoring programme. Impact air quality monitoring was conducted at three air quality monitoring stations in the reporting month. Table 2.1 describes the air quality monitoring locations, which are also depicted in Figure 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	- Once every 6 days
AM4(A) - The Hong Kong Society for the Blind's Factory cum Sheltered Workshop	Rooftop		- 1 hour	- Three times every 6 days
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 m³/min. and 1.7 m³/min.) in accordance with the manufacturer's instruction to within the range recommended in USEPA Standard Title 40, CFR Part 50.

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

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

- 2.13 The filter holding frame was removed by loosening the four nuts and a weighted and conditioned filter was carefully centered with the stamped number upwards, on a supporting screen.
- 2.14 The filter was aligned on the screen so that the gasket formed an airtight seal on the outer edges of the filter. Then the filter holding frame was tightened to the filter holder with swing bolts. The applied pressure was sufficient to avoid air leakage at the edges.
- 2.15 The shelter lid was closed and secured with the aluminium strip.
- 2.16 The timer was programmed. Information was recorded on the record sheet, which included the starting time, the weather condition and the filter number (the initial weight of the filter paper can be found out by using the filter number).
- 2.17 After sampling, the filter was removed from the HVS and put into a clean and labeled seal plastic bag to avoid cross contamination. The elapsed time was also be recorded. The sampled filters were sent to the HOKLAS accredited or other internationally accredited laboratory for weighting.

Maintenance/Calibration

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

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

1-hour TSP Monitoring

Measurement Procedures

- 2.19 The measurement procedures of the 1-hour TSP were conducted in accordance with the Manufacturer's Instruction Manual as follows:
- Set up the dust meter on a tripod at 1.2m level.
 - Turned on the dust meter and check the battery, if too low, change new ones. Pointed the meter to the source area or the planned measurement area.

- The zero calibration of the instrument was conducted before and after each sampling.
- TSP levels were recorded for 1-hour with 5-minute data logging interval.
- Recorded down the general meteorological conditions, Test ID no., start/end time, spot check reading at each sampling location for data processing.
- Recorded any activities that may generate dust during measurement period.

Maintenance/Calibration

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

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

Wind Data Monitoring

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

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

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

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

2.25 Details of weather information during the monitoring period are shown in Appendix F.

Action and Limit Levels

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

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

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

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

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

Impact Air Quality Monitoring results

2.27 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, $\mu\text{g}/\text{m}^3$	Range, $\mu\text{g}/\text{m}^3$	Action Level, $\mu\text{g}/\text{m}^3$	Limit Level, $\mu\text{g}/\text{m}^3$
AM3	50	36 – 59	182	260
AM4(A)	48	37 – 64	187	260
AM7	44	32 – 55	181	260

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

Air Monitoring Station	Average TSP Concentration, $\mu\text{g}/\text{m}^3$	Range, $\mu\text{g}/\text{m}^3$	Action Level, $\mu\text{g}/\text{m}^3$	Limit Level, $\mu\text{g}/\text{m}^3$
AM3	33	24 – 39	297	500
AM4(A)	35	27 – 45	326	500
AM7	30	23 – 40	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	2
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	69.6	67.1 – 72.6	When one documented complaint is received	75 dB(A)
M12	64.8	62.2 – 65.9		

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.

3.21 There were no action level exceedance of noise monitoring and limit level exceedance of $L_{Aeq, 30\text{min}}$ recorded during the reporting month.

3.22 Graphical presentation and detailed monitoring results are shown in Appendix K.

3.23 The Event and Action Plan is provided in Appendix L.

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

4. COMPARISON OF EM&A RESULTS WITH EIA PREDICTIONS

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

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

Air Monitoring Station	ASR No. in EIA report	Predicted Cumulative Maximum 24-hour average TSP concentration		Measured 24-hr average TSP in Reporting Month (June 2021) $\mu\text{g}/\text{m}^3$
		Scenario 1 (Mid 2009 to Mid 2013), $\mu\text{g}/\text{m}^3$	Scenario 2 (Mid 2013 to Late 2016), $\mu\text{g}/\text{m}^3$	
AM3 - Sky Tower	A40 [^]	106	138	36 – 59
AM4(A) - The Hong Kong Society for the Blind's Factory cum Sheltered Workshop	A43 [^]	123	195	37 – 64
AM7 – Hong Kong Children's Hospital	PA60	NA	NA	32 – 55

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 (June 2021) $\mu\text{g}/\text{m}^3$
		Scenario 1 (Mid 2009 to Mid 2013), $\mu\text{g}/\text{m}^3$	Scenario 2 (Mid 2013 to Late 2016), $\mu\text{g}/\text{m}^3$	
AM3 - Sky Tower	A40	217 [^]	247 [^]	24 – 39
AM4(A) - The Hong Kong Society for the Blind's Factory cum Sheltered Workshop	A43	283 [^]	409 [^]	27 – 45
AM7 – Hong Kong Children's Hospital	PA60	NA	NA	23 – 40

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 (June 2021) L _{Aeq, 30min} , dB(A)
M11 - The Hong Kong Society for the Blind's Factory cum Sheltered Workshop	N18	50 – 76*	67.1 – 72.6
M12 - Hong Kong Children's Hospital	PN83, PN84, PN84A	NA	62.2 – 65.9

Note:

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

4.2 24-hour TSP monitoring results at AM3 and AM4(A) were recorded lower than the prediction in the EIA Report.

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.

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.

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 3, 10, 17, 24 and 30 June 2021 in the reporting month.

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

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

Inspection Date	Key Observations	Recommendations / Actions	Close-out Date / Status
3 June 2021	No	NA	NA
10 June 2021	No	NA	NA
17 June 2021	No	NA	NA
24 June 2021	No	NA	NA
30 June 2021	No	NA	NA

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

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

6. ENVIRONMENTAL SITE INSPECTION AND AUDIT

Site Inspection

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

6.2 Site inspections were conducted on 3, 10, 17, 24 and 30 June 2021 in the reporting month.

6.3 The summaries of site audits are attached in Table 6.1.

Table 6.1 Summary of site inspections observations during the reporting month

Inspection Date	Key Observations	Recommendations / Actions	Close-out Date / Status
03 June 2021	NA	NA	NA
10 June 2021	NA	NA	NA
17 June 2021	 Observation: The stagnant water should be cleared regularly.	 Action Taken: The stagnant water has been cleared.	Closed-out 24 June 2021
24 June 2021	 Observation: The sediment control measures should be regularly inspected and maintained.	 Action Taken: The sediment control measures were maintained properly.	Closed-out 30 June 2021

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

Status of Waste Management

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

Status of Environmental Licenses, Notification and Permits

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

Table 6.2 Summary of Environmental Licenses, Notifications and Permits

Environmental Licenses, Notifications and Permits	Ref. No.	Valid Form	Valid Till
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
Construction Noise Permit	GW-RE1044-20	10 Dec 2020	01 Jun 2021
	GW-RE1074-20	18 Dec 2020	17 Jun 2021
	GW-RE0020-21	15 Jan 2021	11 Jun 2021
	GW-RE0021-21	15 Jan 2021	11 Jun 2021
	GW-RE0360-21	20 Apr 2021	13 Oct 2021
	GW-RE0388-21	28 Apr 2021	27 Oct 2021
	GW-RE0522-21	02 Jun 2021	01 Dec 2021
	GW-RE0528-21	11 Jun 2021	10 Dec 2021
	GW-RE0540-21	12 Jun 2021	11 Dec 2021
	GW-RE0549-21	17 Jun 2021	15 Dec 2021

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

6.12 The summaries of cumulative environmental complaint, warning, summon and notification of successful prosecution for the Project is presented in Appendix 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 wall, intermediate slab and column	Noise and Air Quality
Bridge D3 – Construction of pile cap and pier	Noise and Air Quality
North Depressed Road – Construction of wall & top slab / dismantling of wailing & strut of cofferdam and removal of sheet pile	Noise and Air Quality
Underpass – Excavation, construction of base slab and backfilling, Construction of wall & top slab	Noise and Air Quality
South Approach Ramp – Installation of sheet pile and excavation	Noise and Air Quality
Landscaped Deck – Construction of bored piles	Noise and Air Quality
District Cooling System seawater intake box culvert – Construction of cofferdam and box structure	Noise and Air Quality

Future key issues in the coming month	Potential impact
Noise barrier – Installation of steel structure and PMMA panel	Noise and Air Quality
Lift 3 – Construction of cofferdam for footing	Noise and Air Quality
Lift 4 – Excavation for footing	Noise and Air Quality
South Depressed Road – Excavation and Installation of Lateral Support 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.

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

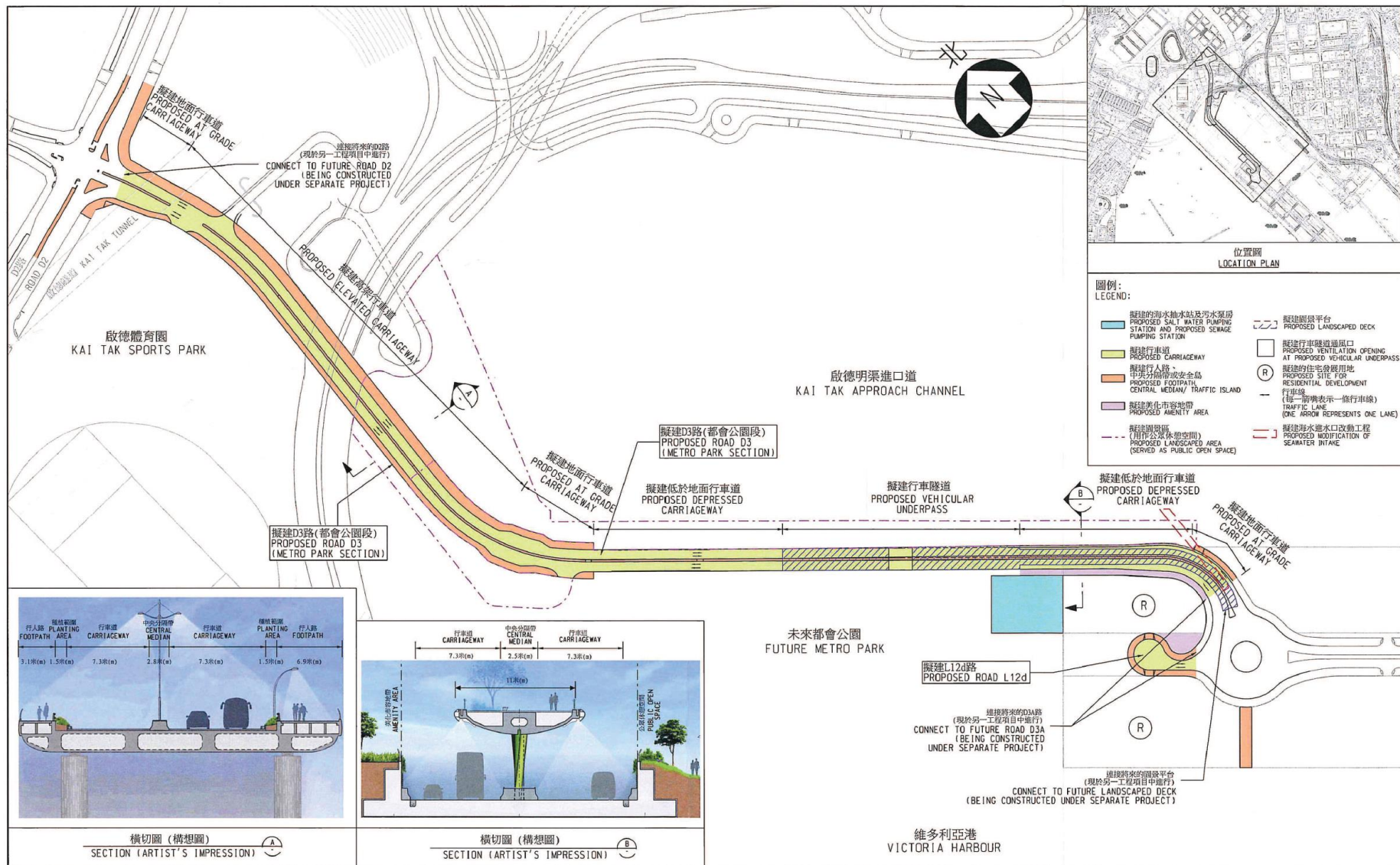


Figure 1 – Proposed works of Contract No. ED/2018/01

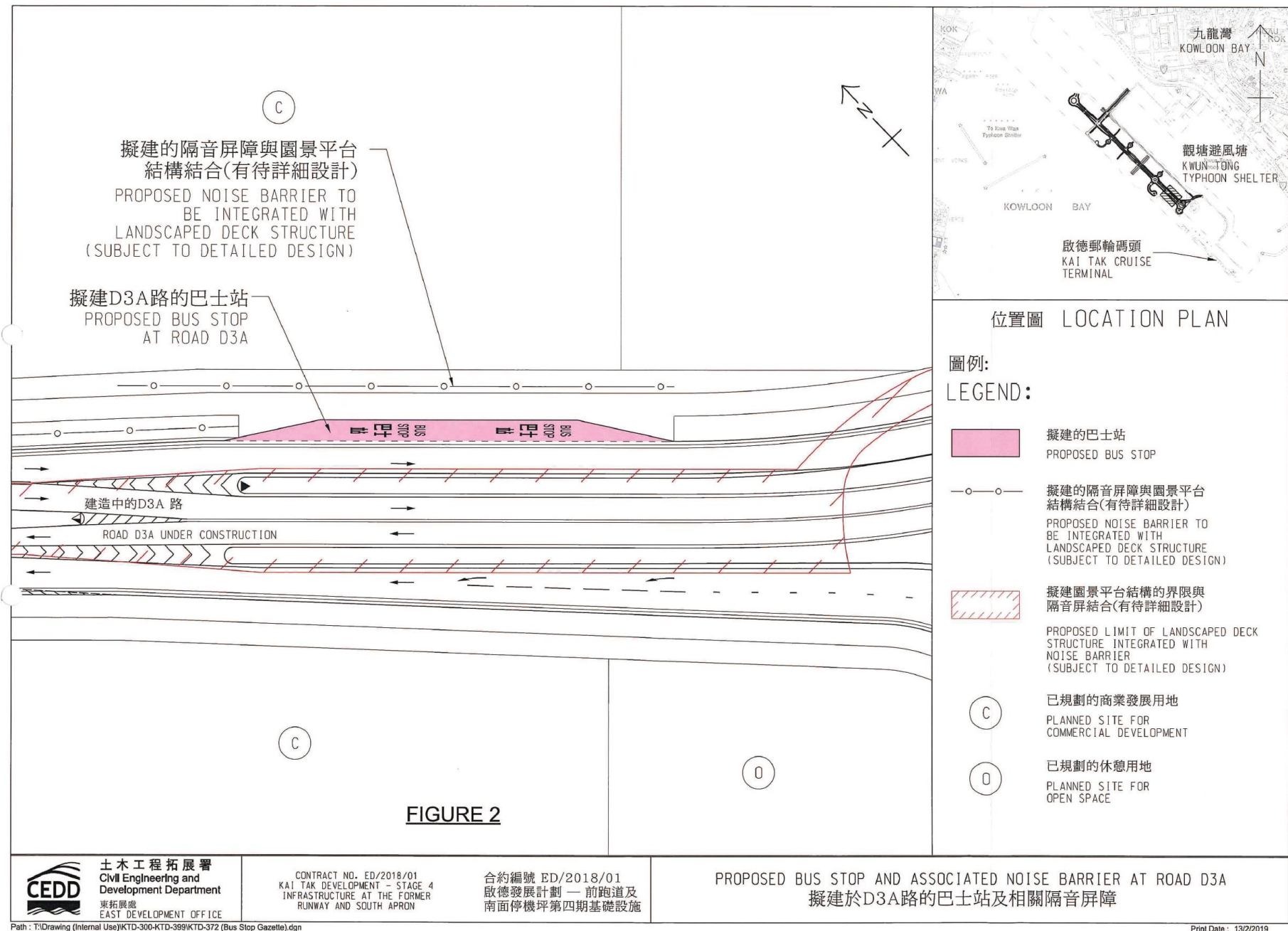


Figure 2 – Proposed Bus Stop And Associated Noise Barrier At Road D3A

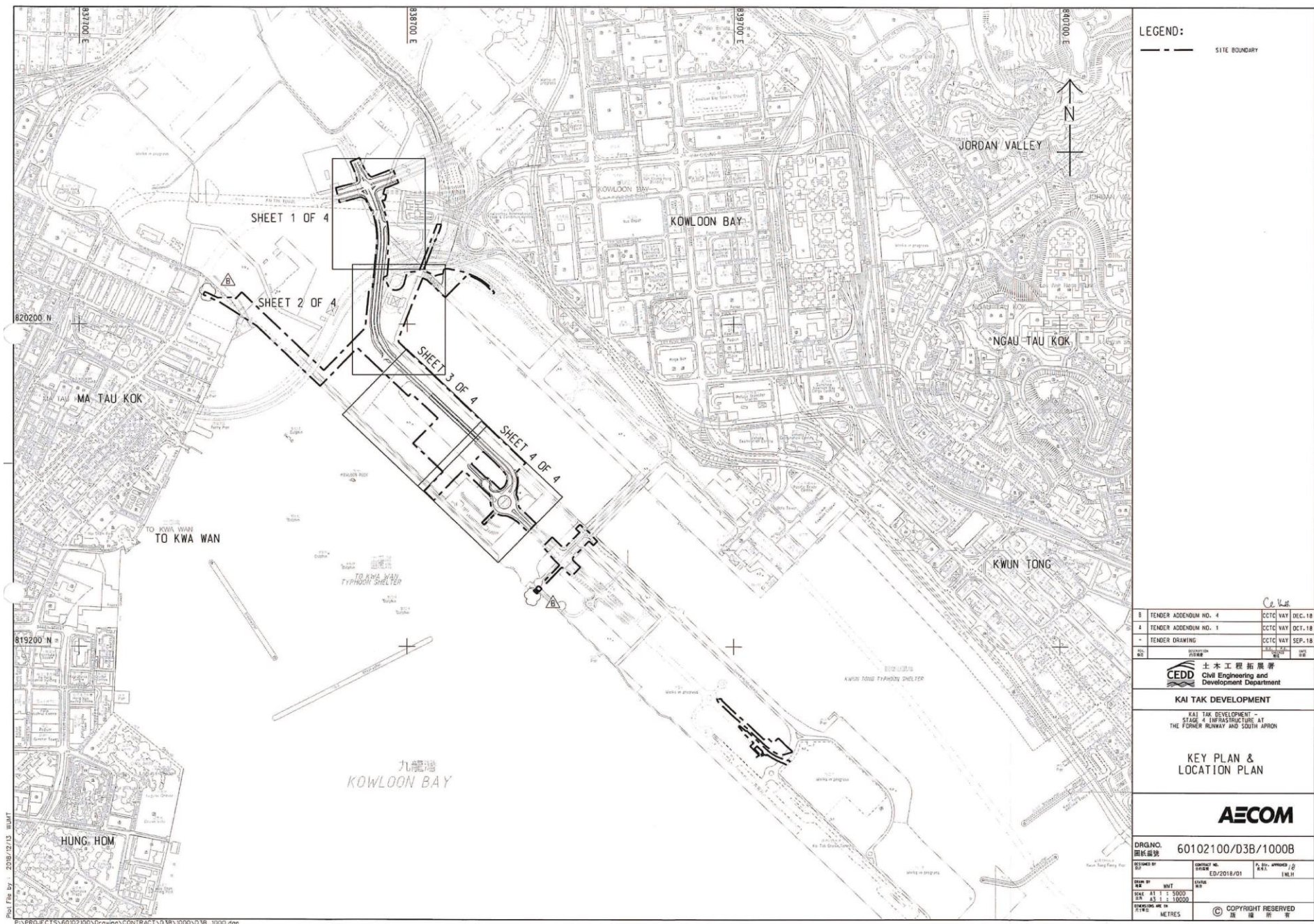


Figure 4 – Site Layout Plan

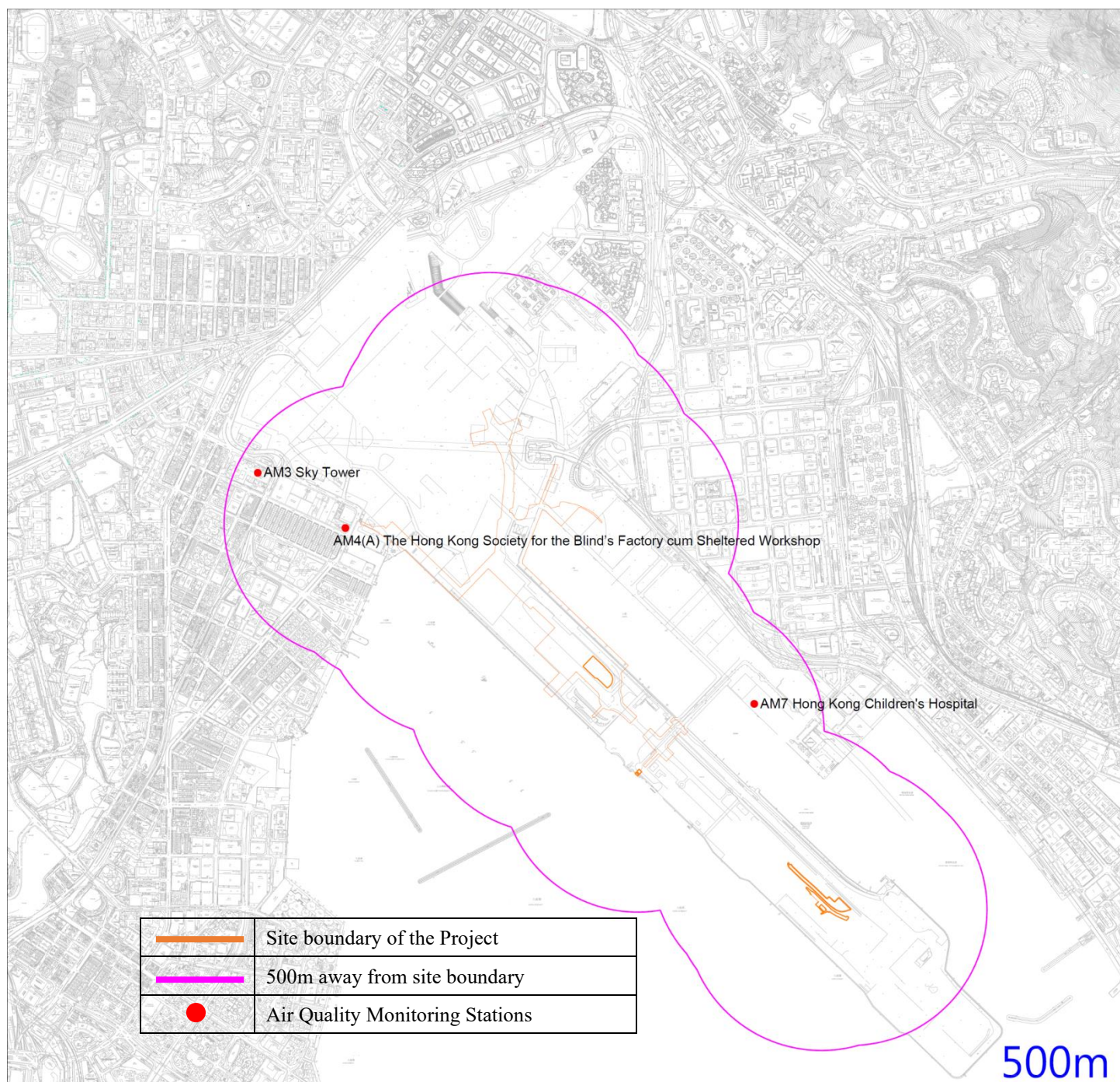


Figure 5 – Air Quality Monitoring Stations

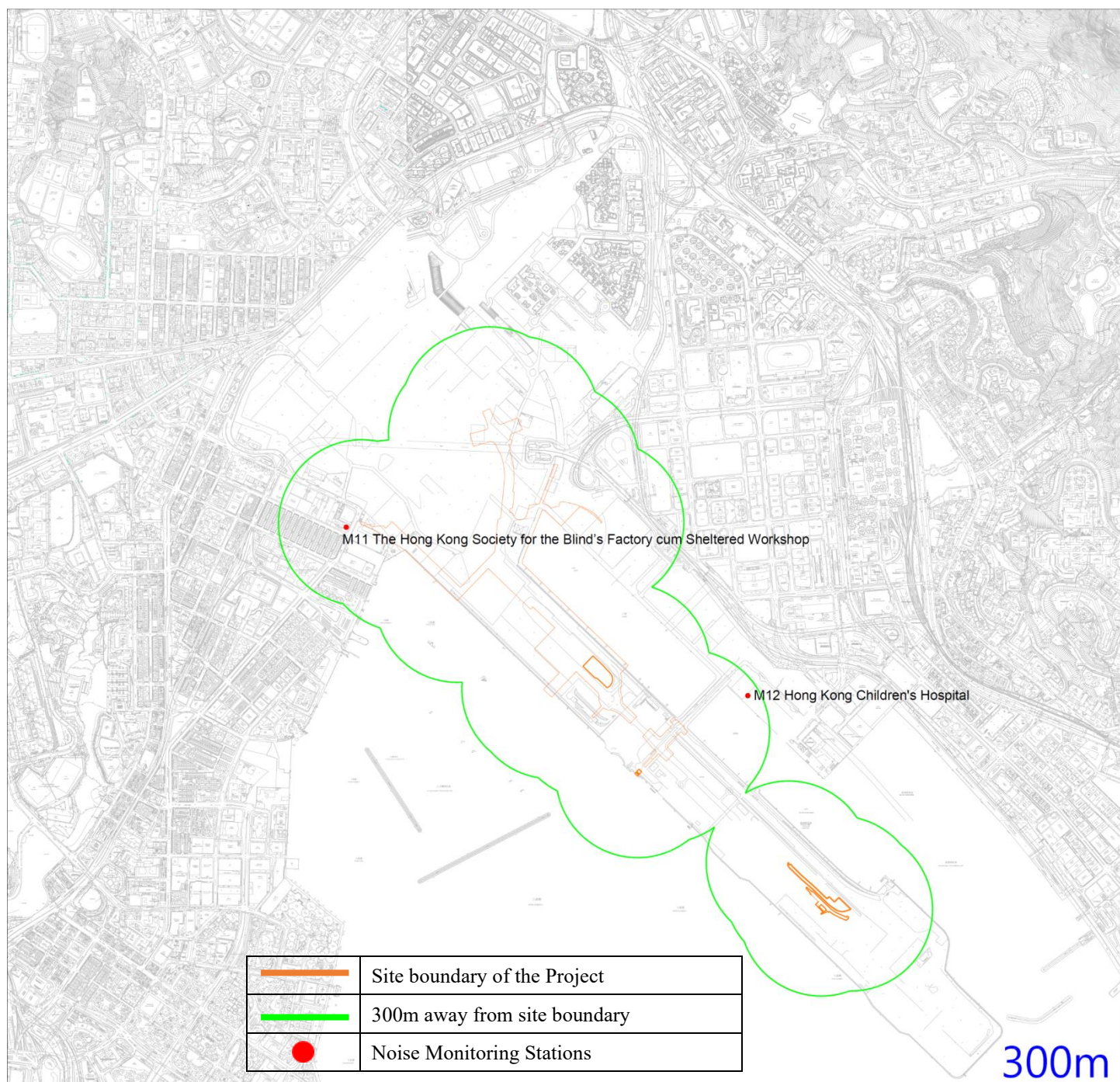
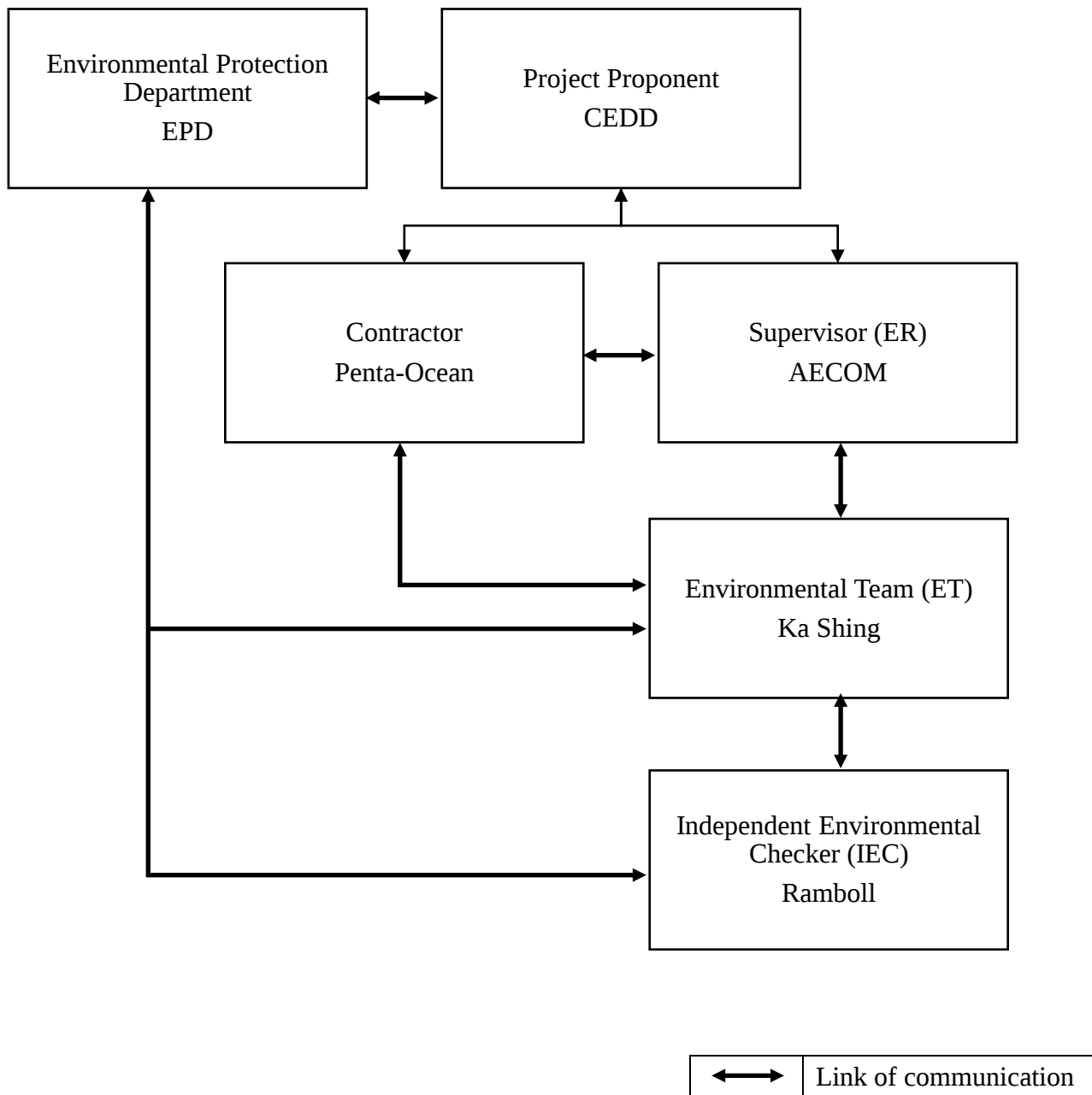
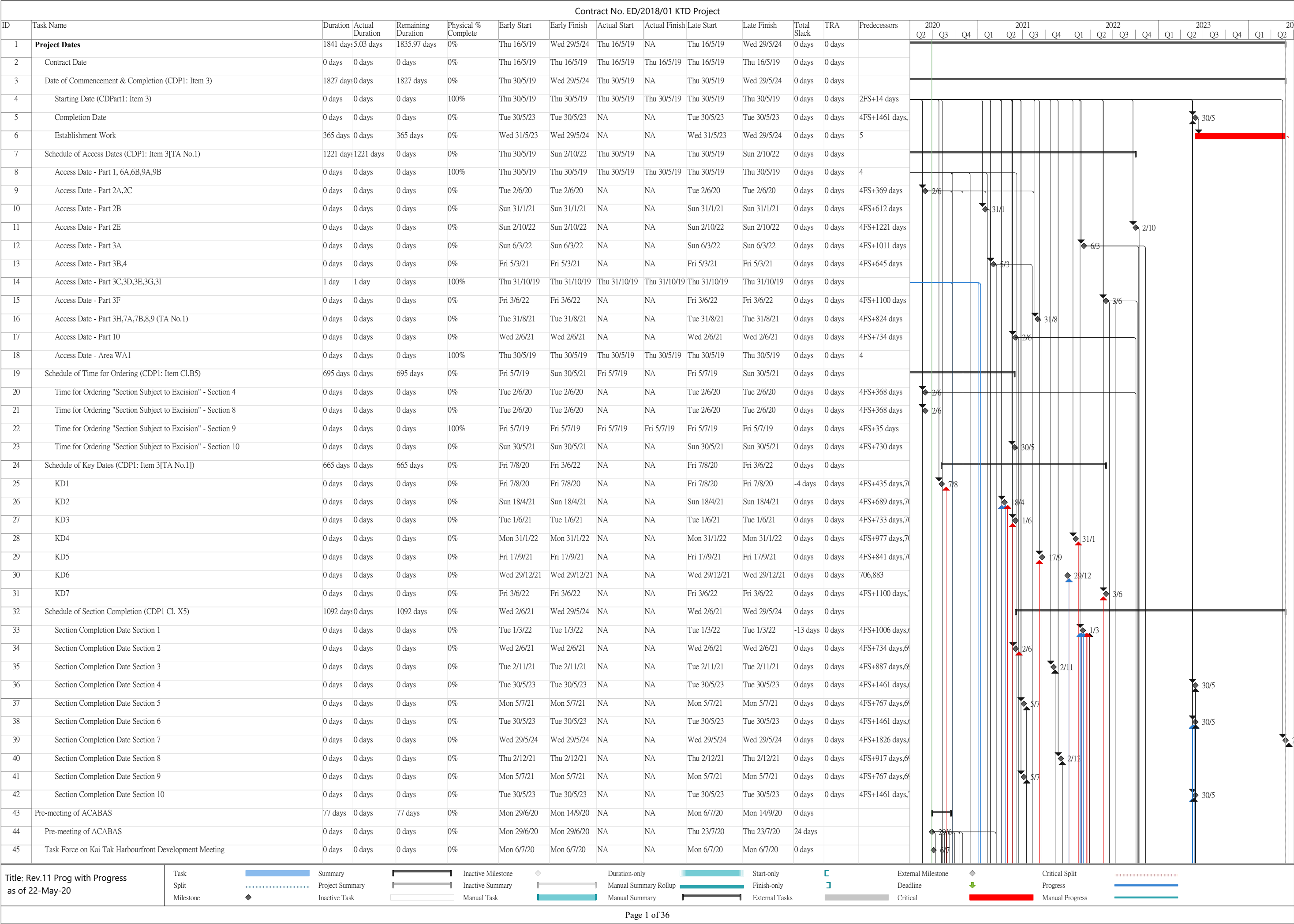


Figure 6 – Noise Monitoring Stations

Appendix A – Organization Chart of EM&A Team



Appendix B – Construction Programme



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	2020				2021				2022				2023				20
															Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q2	
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			0/2																
49	PMI No. 002 - Arrangement of Restricting Site Activities due to Spread of the Noval Coronavirus Between 29 January 2020 to 02 February 2020	0 days	0 days	0 days	100%	Fri 28/2/20	Fri 28/2/20	Fri 28/2/20	Fri 28/2/20	Fri 28/2/20	Fri 28/2/20	0 days			28/2																
50	Compensation Event	16 days	16 days	0 days	0%	Mon 10/2/20	Wed 26/2/20	Mon 10/2/20	Wed 26/2/20	Mon 10/2/20	Wed 26/2/20	0 days																			
51	CE/001: BIM Promenade Walk-through Video for Infrastructure in Kai Tak Stage 4	0 days	0 days	0 days	100%	Mon 10/2/20	Mon 10/2/20	Mon 10/2/20	Mon 10/2/20	Mon 10/2/20	Mon 10/2/20	0 days			/2																
52	CE/002 - Arrangement 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			6/2																
53	Early Warning	257 days	257 days	0 days	0%	Wed 10/7/19	Mon 23/3/20	Wed 10/7/19	Mon 23/3/20	Wed 10/7/19	Mon 23/3/20	0 days																			
54	EW No. 001: CLP's 11kV and 132kV Cable Routing across Utility Trough of Bridge D3 and Alongside Road D3 (Metro Park Section)	0 days	0 days	0 days	100%	Wed 10/7/19	Wed 10/7/19	Wed 10/7/19	Wed 10/7/19	Wed 10/7/19	Wed 10/7/19	0 days																			
55	EW No. 002: Deep Excavation Basement Construction Works from CKR-BEM Contract	0 days	0 days	0 days	100%	Thu 5/9/19	Thu 5/9/19	Thu 5/9/19	Thu 5/9/19	Thu 5/9/19	Thu 5/9/19	0 days																			
56	EW No. 003: Overhang Cables of CLP Delay the Northern Depressed Road	0 days	0 days	0 days	100%	Wed 11/9/19	Wed 11/9/19	Wed 11/9/19	Wed 11/9/19	Wed 11/9/19	Wed 11/9/19	0 days																			
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 16/12/19	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 Construction of Noise Barrier for 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			/2																
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			/2																
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			9/2																
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			13/3																
68	EW No. 021: Unforeseen Underground Water at North Approach Ramp Bay 6	0 days	0 days	0 days	100%	Thu 12/3/20	Thu 12/3/20	Thu 12/3/20	Thu 12/3/20	Thu 12/3/20	Thu 12/3/20	0 days			12/3																
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			13/3																
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			16/3																
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			23/3																
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																													
Page 2 of 36																															

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	2020				2021				2022				2023				20
															Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
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		◆ 30/4																
94	Construction Method Simulation (CMS) in 3D Model	0 days	0 days	0 days	100%	Wed 22/4/20	Wed 22/4/20	Wed 22/4/20	Wed 22/4/20	Wed 22/4/20	Wed 22/4/20	0 days	1 day		◆ 22/4																
95	BIM Deliverables Schedule	896 days	3.72 days	892.28 days	0%	Thu 16/5/19	Wed 27/10/21	Thu 16/5/19	NA	Thu 16/5/19	Tue 11/1/22	76 days			[Timeline bar from Q2 2020 to Q4 2021]																
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 Authorities	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 Authorities	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			[Timeline bar from Q2 2020 to Q3 2020]																
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		[Blue Bar]		Summary		[Grey Bar]		Inactive Milestone		◆		Duration-only		[Light Blue Bar]		Start-only		[Blue Box]		External Milestone		◆		Critical Split		[Dotted Line]					
Split		[Dotted Line]		Project Summary		[Grey Bar]		Inactive Summary		[Grey Bar]		Manual Summary Rollup		[Dark Blue Bar]		Finish-only		[Blue Box]		Deadline		↓		Progress		[Blue Bar]					
Milestone		◆		Inactive Task		[White Bar]		Manual Task		[Dark Blue Bar]		Manual Summary		[Dark Blue Bar]		External Tasks		[Grey Bar]		Critical		[Red Bar]		Manual Progress		[Blue Bar]					
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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	2020				2021				2022				2023				20			
															Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			
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		Summary		Inactive Milestone		Duration-only		Start-only		External Milestone		Critical Split		Progress		Manual Progress																
Split		Project Summary		Inactive Summary		Manual Summary Rollup		Manual Summary		Finish-only		Deadline		Progress		Manual Progress																		
Milestone		Inactive Task		Manual Task						External Tasks		Critical		Manual Progress																				
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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	2020 Q2	2020 Q3	2020 Q4	2021 Q1	2021 Q2	2021 Q3	2021 Q4	2022 Q1	2022 Q2	2022 Q3	2022 Q4	2023 Q1	2023 Q2	2023 Q3	2023 Q4	2024 Q1	2024 Q2	
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 Page 5 of 36																														

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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	2020 Q2	2020 Q3	2020 Q4	2021 Q1	2021 Q2	2021 Q3	2021 Q4	2022 Q1	2022 Q2	2022 Q3	2022 Q4	2023 Q1	2023 Q2	2023 Q3	2023 Q4	2024 Q1	2024 Q2
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 																
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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	2020		2021				2022				2023				20
															Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2		
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		Summary		Inactive Milestone		Duration-only		Start-only		External Milestone		Critical Split															
Split		Project Summary		Inactive Summary		Manual Summary Rollup		Manual Summary		Finish-only		Deadline		Progress															
Milestone		Inactive Task		Manual Task						External Tasks		Critical		Manual Progress															
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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	2020				2021				2022				2023				20
															Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
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 27/11/19	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,																	
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	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																				
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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	2020			2021				2022				2023				20
															Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
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		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																		
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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	2020 Q2	2020 Q3	2020 Q4	2021 Q1	2021 Q2	2021 Q3	2021 Q4	2022 Q1	2022 Q2	2022 Q3	2022 Q4	2023 Q1	2023 Q2	2023 Q3	2023 Q4	2024 Q1	2024 Q2
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<2)& Staircase include E&M Progvision: AIP and ICE Certification (Draft)	50 days	50 days	0 days	100%	Mon 7/10/19	Mon 25/11/19	Mon 7/10/19	Mon 25/11/19	Mon 7/10/19	Mon 25/11/19	0 days	3 days	44FF+12 days																	
581	Submit & endorse by PM	21 days	21 days	0 days	100%	Tue 26/11/19	Mon 16/12/19	Tue 26/11/19	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	580,581,582,44FF																	
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,6																	
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		Summary		Inactive Milestone		Duration-only		Start-only		Finish-only		External Milestone		Critical Split															
		Split		Project Summary		Inactive Summary		Manual Summary Rollup		Manual Summary		External Tasks		Deadline		Progress															
		Milestone		Inactive Task		Manual Task		Manual Summary		External Tasks		Critical		Manual Progress																	
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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	2020			2021				2022				2023				20
															Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			
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 Associated 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 Associated 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 Associated 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 Associated 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

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◆

Summary

Project Summary

Inactive Task

Inactive Milestone

Inactive Summary

Manual Task

◇

Duration-only

Manual Summary Rollup

Manual Summary

Start-only

Finish-only

External Tasks

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External Milestone

Deadline

Critical

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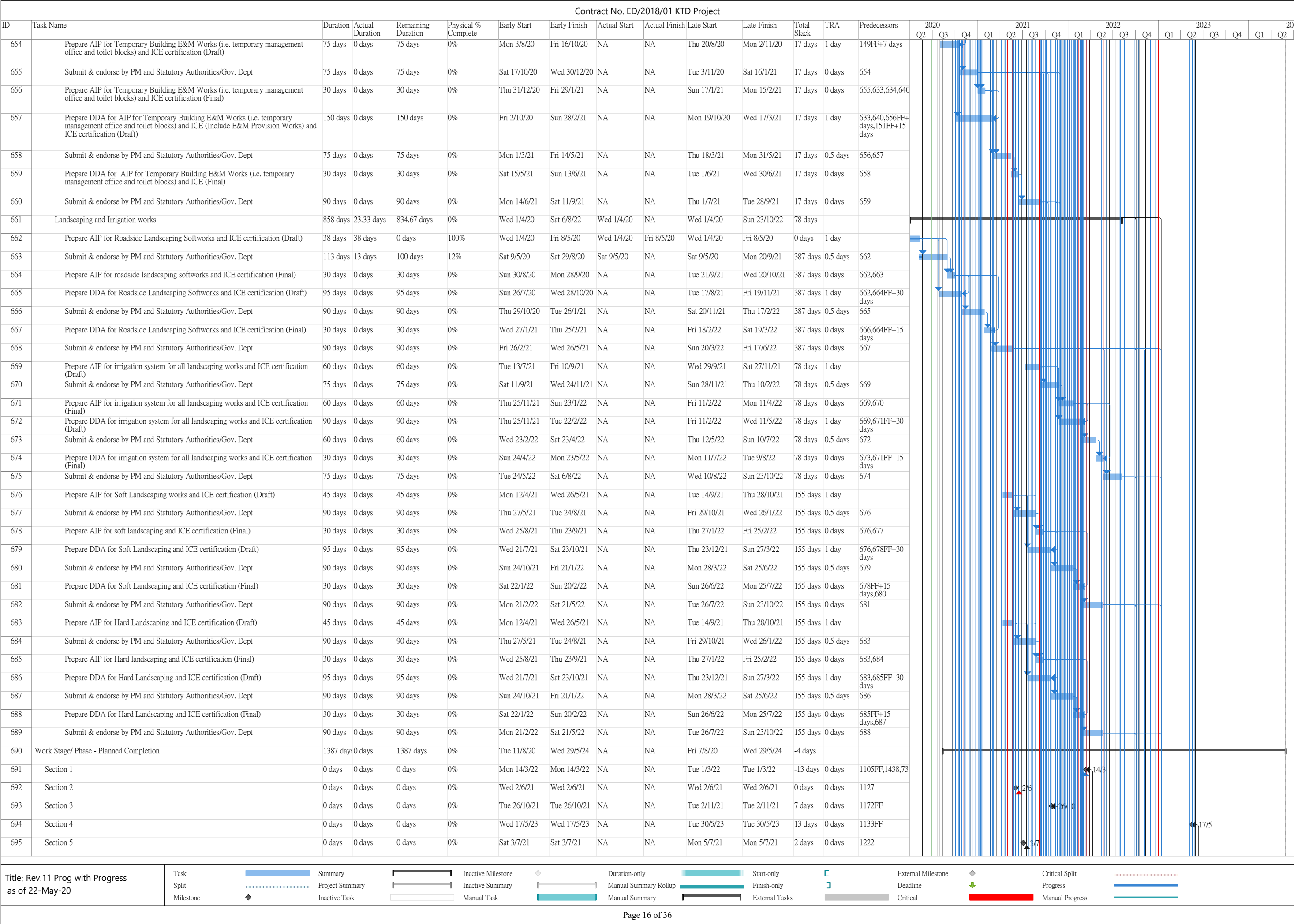
Critical Split

Progress

Manual Progress

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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	2020 Q2	2020 Q3	2020 Q4	2021 Q1	2021 Q2	2021 Q3	2021 Q4	2022 Q1	2022 Q2	2022 Q3	2022 Q4	2023 Q1	2023 Q2	2023 Q3	2023 Q4	2024 Q1	2024 Q2
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	Excavation with Shoring and Waling Installation with Rock Fill Replacement include Sand Raplacenmet 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 Raplacenmet 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 																
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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	2020 Q2	Q3	Q4	2021 Q1	Q2	Q3	Q4	2022 Q1	Q2	Q3	Q4	2023 Q1	Q2	Q3	Q4	2024 Q1	Q2
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,																	
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 Utilities Trough (6m per day per team) x 1 team	25 days	0 days	25 days	0%	Thu 27/5/21	Fri 25/6/21	NA	NA	Fri 22/10/21	Fri 19/11/21	122 days	1 day	811,236																	
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

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◆

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

.....

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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	2020 Q2	2020 Q3	2020 Q4	2021 Q1	2021 Q2	2021 Q3	2021 Q4	2022 Q1	2022 Q2	2022 Q3	2022 Q4	2023 Q1	2023 Q2	2023 Q3	2023 Q4	2024 Q1	2024 Q2
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 																
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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	2020 Q2	2020 Q3	2020 Q4	2021 Q1	2021 Q2	2021 Q3	2021 Q4	2022 Q1	2022 Q2	2022 Q3	2022 Q4	2023 Q1	2023 Q2	2023 Q3	2023 Q4	2024 Q1	2024 Q2
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 																
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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	2020 Q2	2020 Q3	2020 Q4	2021 Q1	2021 Q2	2021 Q3	2021 Q4	2022 Q1	2022 Q2	2022 Q3	2022 Q4	2023 Q1	2023 Q2	2023 Q3	2023 Q4	2024 Q1	2024 Q2
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,4																	
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,5																	
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

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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

◆

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Critical Split

Progress

Manual Progress

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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	2020 Q2	Q3	Q4	2021 Q1	Q2	Q3	Q4	2022 Q1	Q2	Q3	Q4	2023 Q1	Q2	Q3	Q4	2024 Q1	Q2
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															Summary																
Split															Project Summary																
Milestone															Inactive Task																
Inactive Milestone															Inactive Summary																
Manual Task															Manual Summary																
Duration-only															Manual Summary Rollup																
Start-only															Finish-only																
External Milestone															Critical																
Deadline															Critical Split																
Progress															Manual Progress																

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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	2020				2021				2022				2023				2024	
															Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
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	1047,1045FP+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																	
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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	2020		2021				2022				2023				20																																																									
															Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2																																																							
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 12/1/21	-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) : Utliity 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									
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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	2020 Q2	2020 Q3	2020 Q4	2021 Q1	2021 Q2	2021 Q3	2021 Q4	2022 Q1	2022 Q2	2022 Q3	2022 Q4	2023 Q1	2023 Q2	2023 Q3	2023 Q4	2024 Q1	2024 Q2
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 filing 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

Split

Milestone

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◆

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

◆

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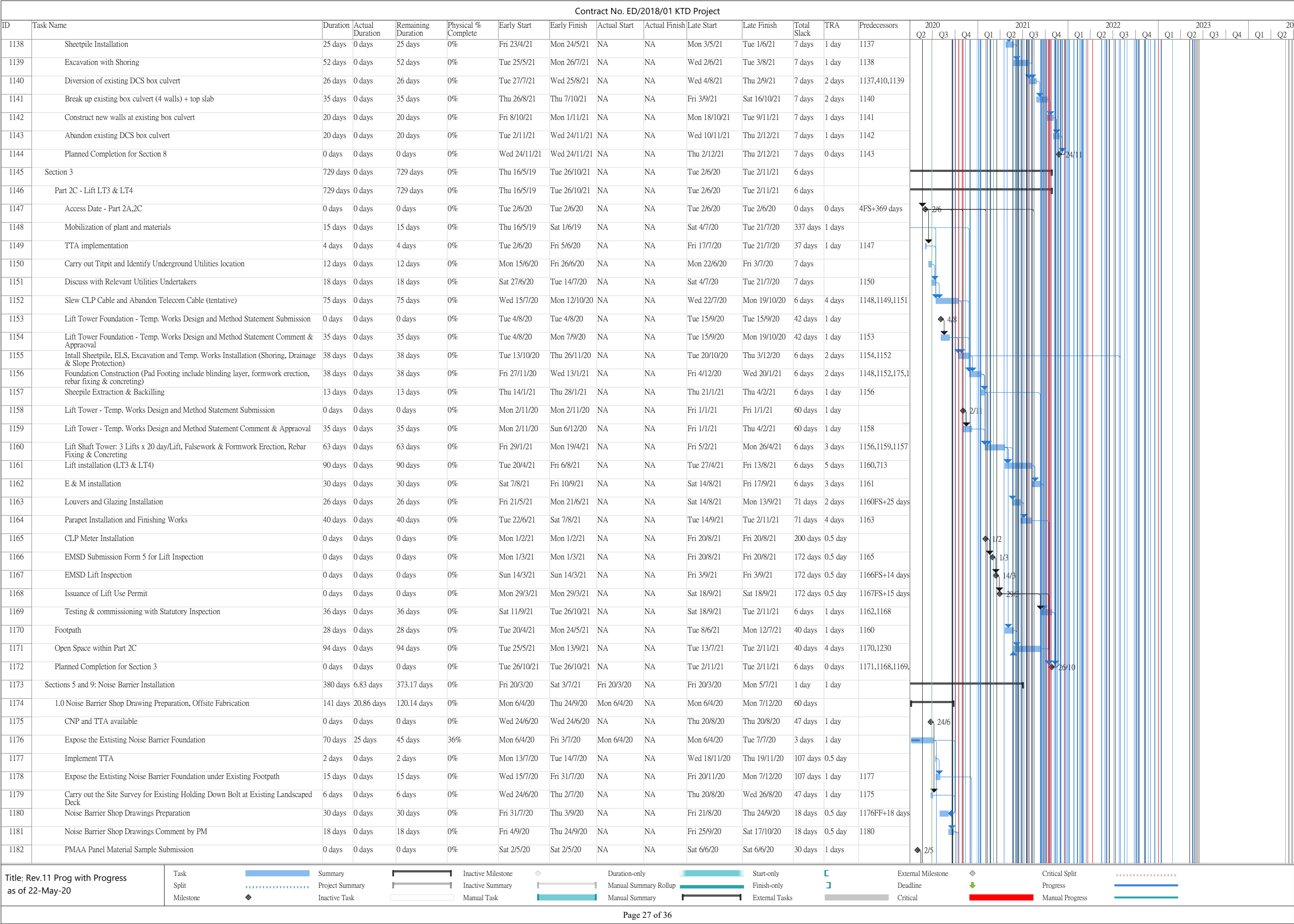
Critical Split

Progress

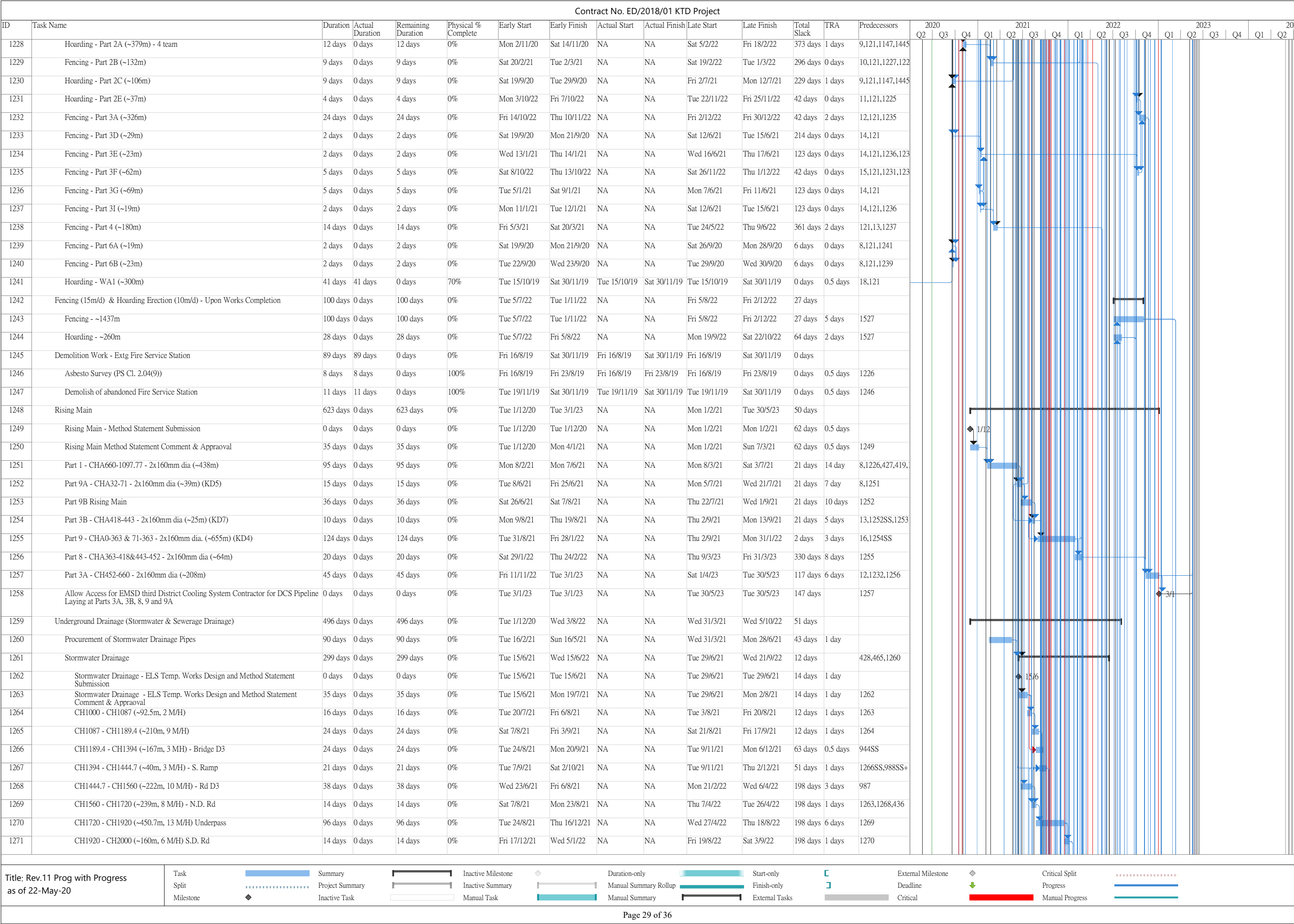
Manual Progress

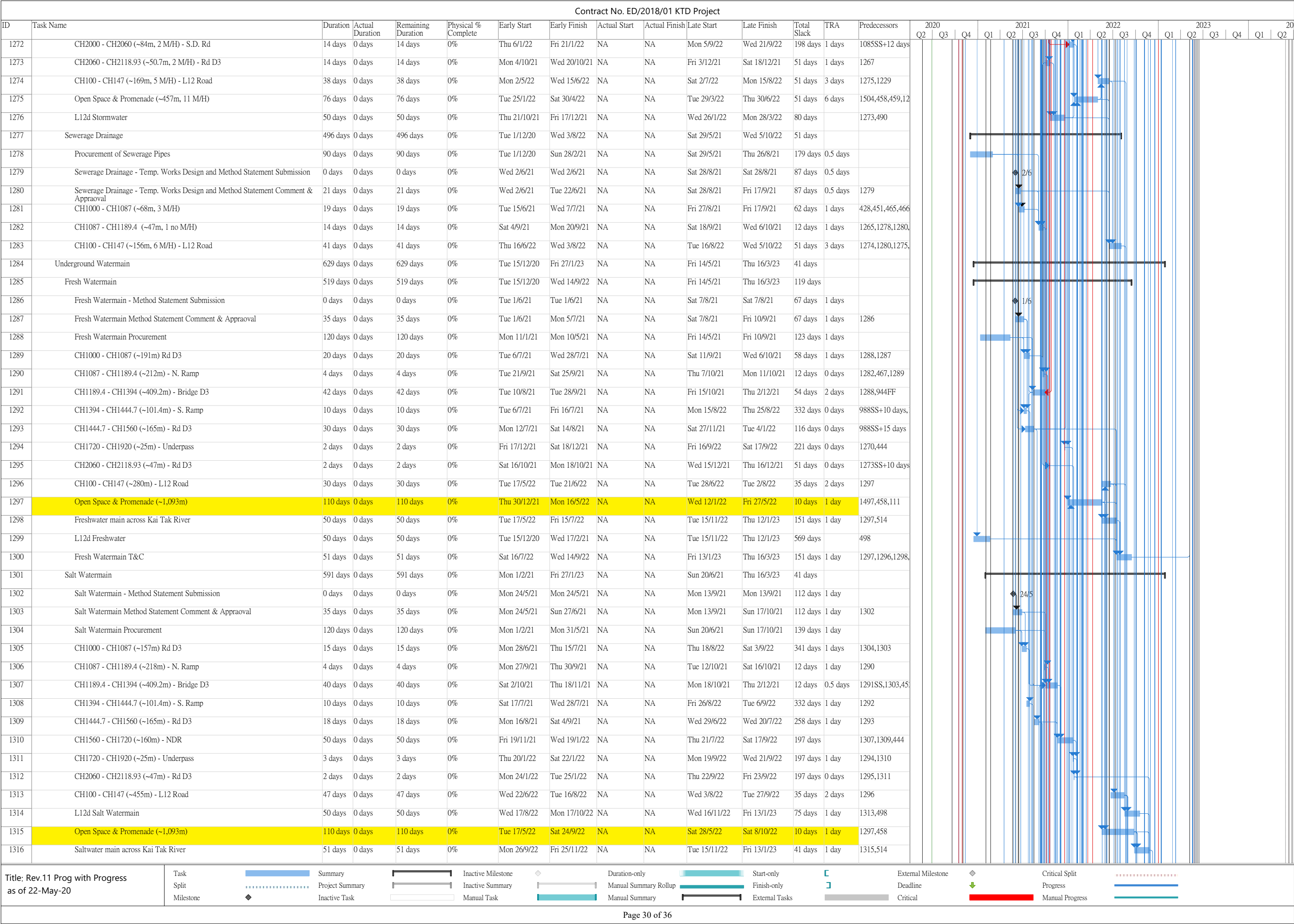
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Contract No. ED/2018/01 KTD Project																															
ID	Task Name	Duration	Actual Duration	Remaining Duration	Physical % Complete	Early Start	Early Finish	Actual Start	Actual Finish	Late Start	Late Finish	Total Slack	TRA	Predecessors	2020			2021				2022				2023				20	
															Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
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	Footing 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 Footing 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	1188,1204,184F																	
1207	Bay 2 & 4 Footing 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 Footing 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 Footing 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	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																	
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																
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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	2020 Q2	2020 Q3	2020 Q4	2021 Q1	2021 Q2	2021 Q3	2021 Q4	2022 Q1	2022 Q2	2022 Q3	2022 Q4	2023 Q1	2023 Q2	2023 Q3	2023 Q4	2024 Q1	2024 Q2
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+120																	
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	Scaffold, 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+50																	
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+30																	
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

Split

Milestone

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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

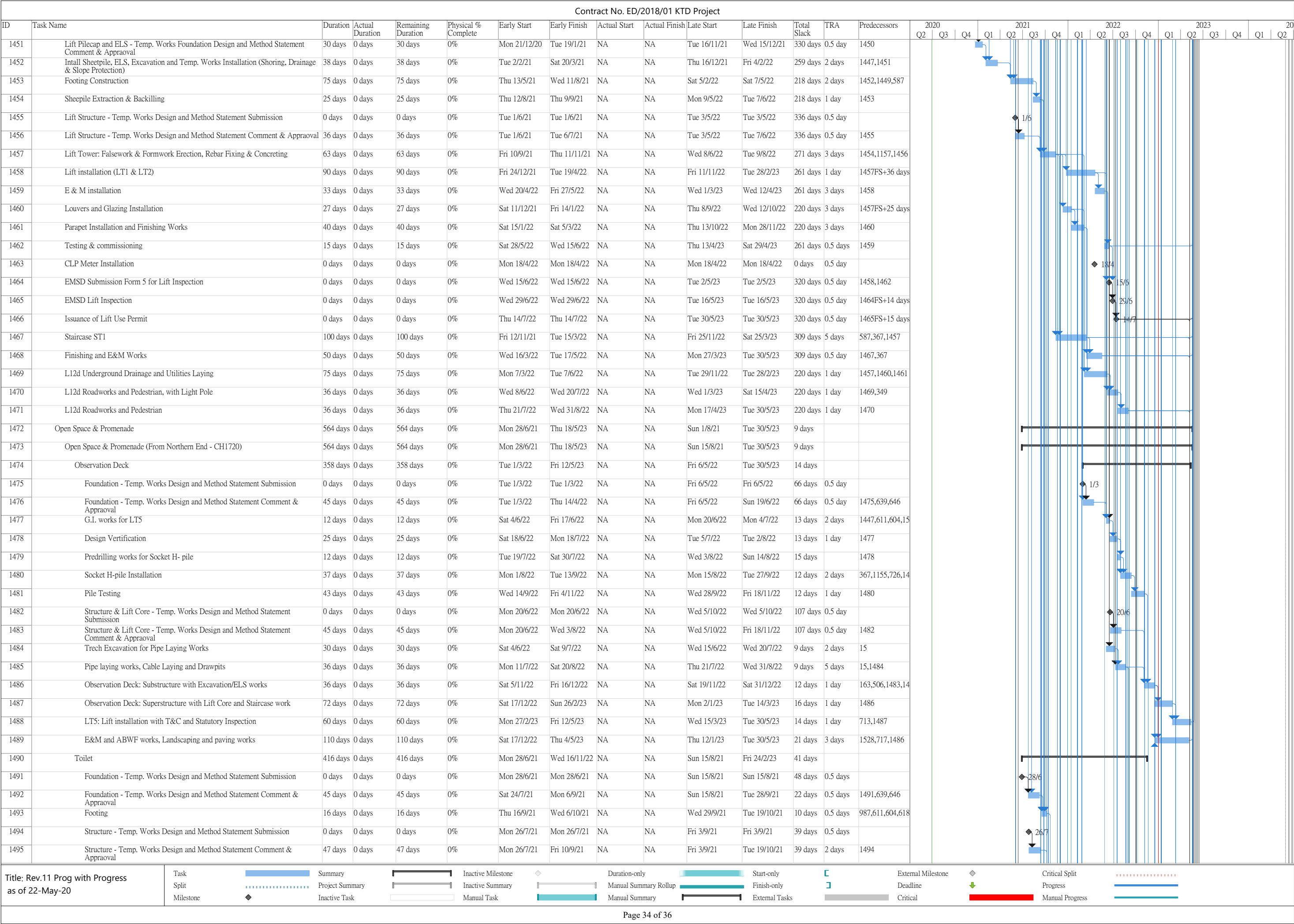
Progress

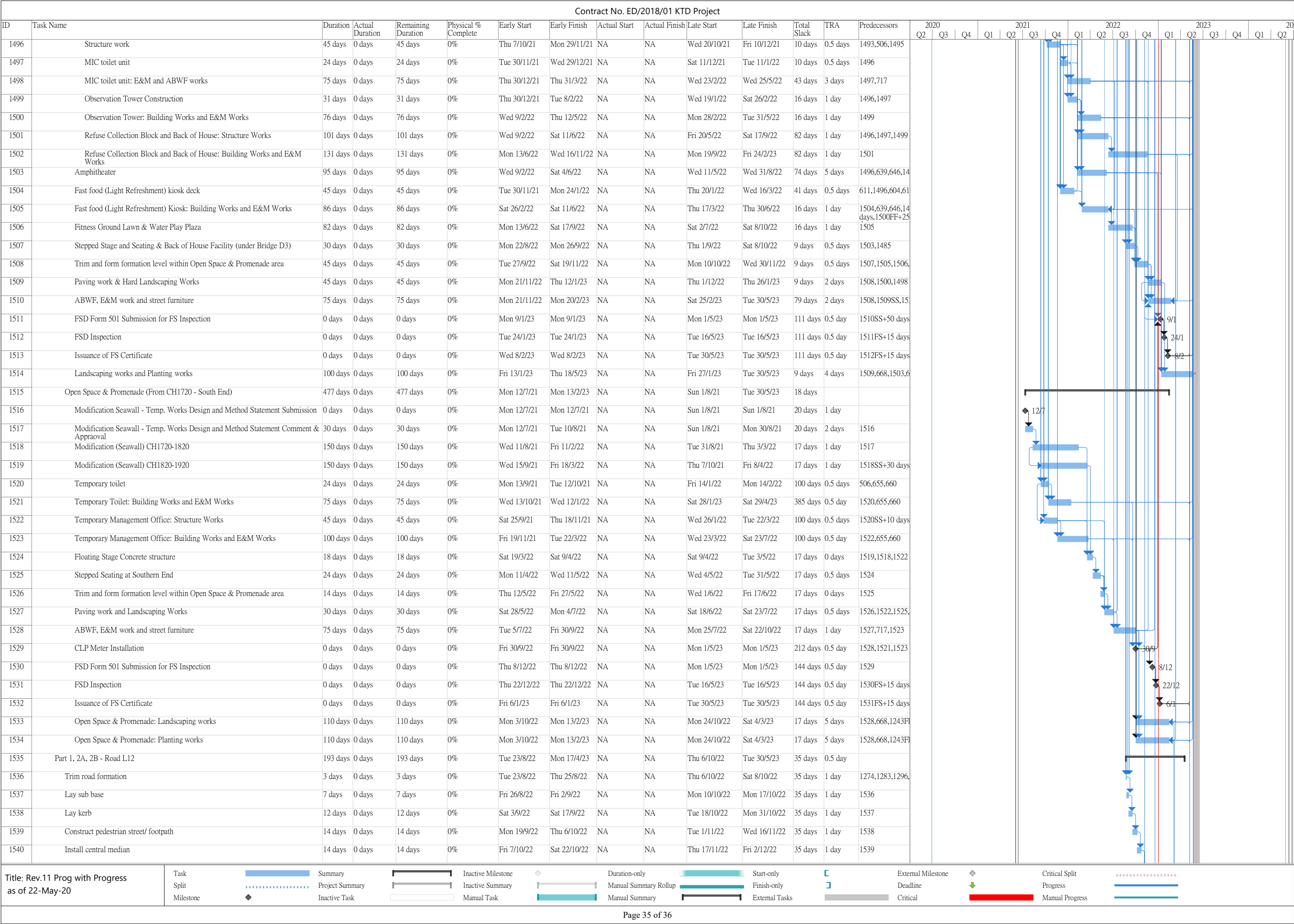
Manual Progress

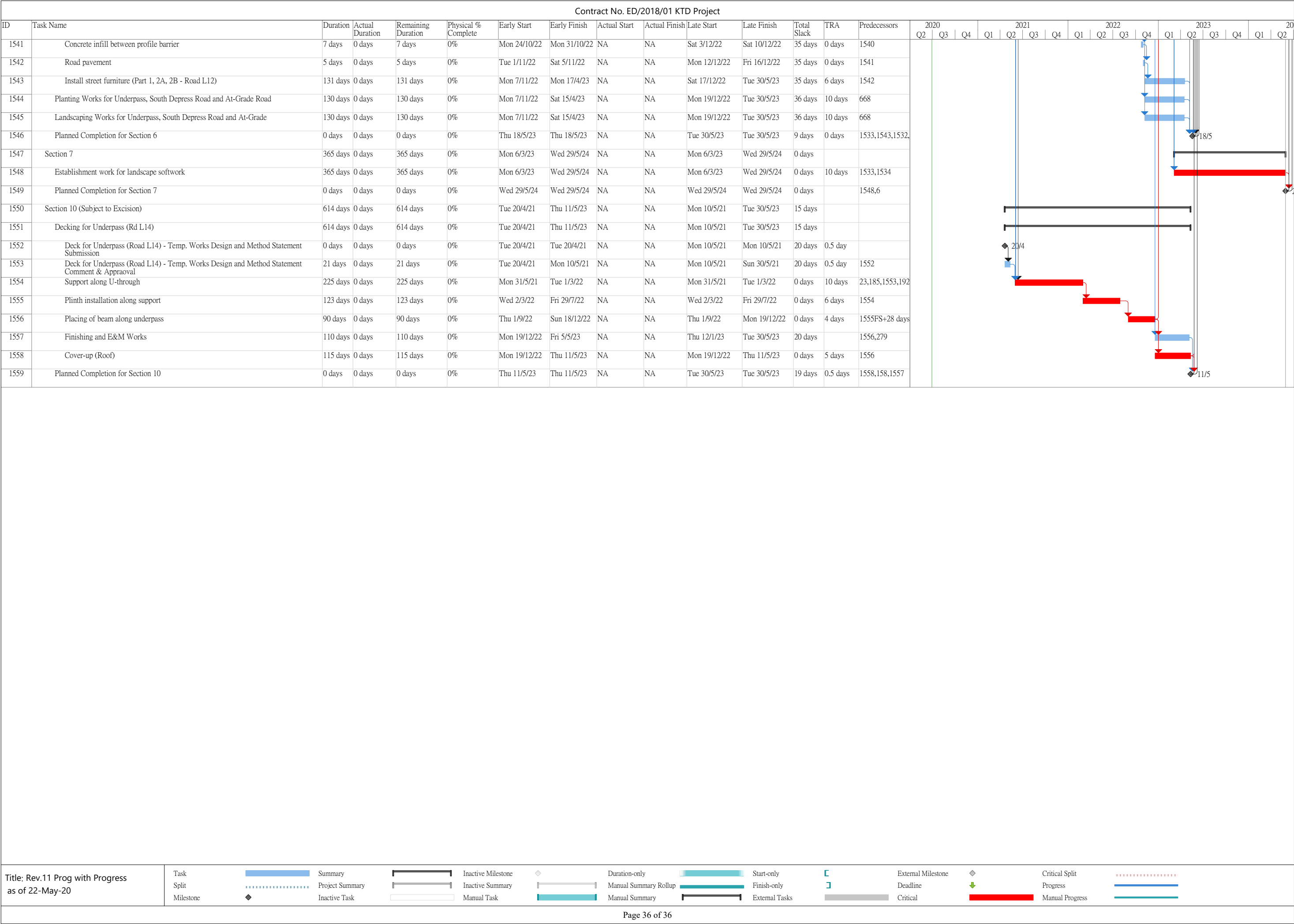
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Contract No. ED/2018/01 KTD Project																													
ID	Task Name	Duration	Actual Duration	Remaining Duration	Physical % Complete	Early Start	Early Finish	Actual Start	Actual Finish	Late Start	Late Finish	Total Slack	TRA	Predecessors	2020	2020	2020	2021	2021	2021	2021	2022	2022	2022	2022	2023	2023	2023	2023
															Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
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														
															Split														
															Milestone														
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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	2020 Q2	2020 Q3	2020 Q4	2021 Q1	2021 Q2	2021 Q3	2021 Q4	2022 Q1	2022 Q2	2022 Q3	2022 Q4	2023 Q1	2023 Q2	2023 Q3	2023 Q4	2024 Q1	2024 Q2
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 Verification 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 Verification 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 Verification 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 Verification	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 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																													
Page 33 of 36																															







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 June 2021

June 2021

Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1	2	3 Weekly Site Inspection	4 24-hr TSP: AM3, AM4(A), AM7 1-hr X3 TSP: AM3, AM4(A), AM7 30-min Noise: M11, M12	5
6	7	8	9	10 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	11	12
13	14	15	16 24-hr TSP: AM3, AM4(A), AM7 1-hr X3 TSP: AM3, AM4(A), AM7 30-min Noise: M11, M12	17 Weekly Site Inspection	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	24 Weekly Site Inspection	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			

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
Propose Environmental Monitoring and Weekly Site Inspection Schedule for July 2021

July 2021

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

NOTE:

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

Air Quality Monitoring Station

AM3 - Sky Tower

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

AM7 - Hong Kong Children's Hospital

Noise Quality Monitoring Station

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

M12 - Hong Kong Children's Hospital

Appendix D – Photographic records

Impact Air Quality Monitoring



Measurement setup at AM3



Measurement setup at AM4(A)

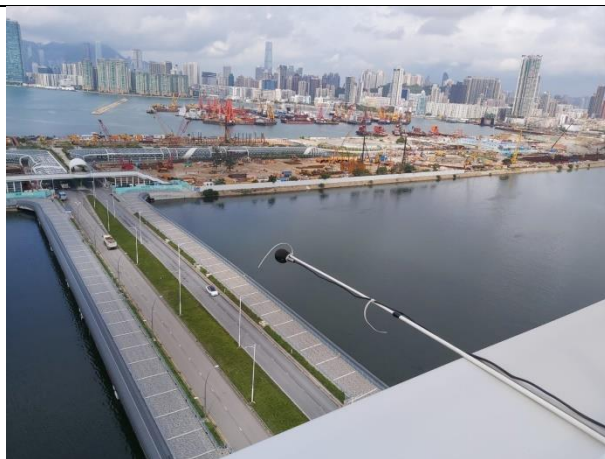


Measurement setup at AM7

Impact Noise Monitoring



Measurement setup at M11



Measurement setup at M12



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

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

Catalogue of High Volume Sampler (HVS)



TSP MFC

Total Suspended Particulate, Mass Flow Controlled



MFC TSP

Ambient Air Sampler

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

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

Meets EPA CFR, Appendix B to Part 50

Total Suspended Particulate(TSP)

Mass Flow Controlled

7-Day Mechanical Timer

Elapsed Time Indicator

Aluminum Outdoor Shelter

Brush Style Motor

Dickson Chart Recorder, 24 Hour

Stainless Steel Filter Holder

36-60 CFM

Made In USA

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www.tischinternational.com



www.tisch-env.com

Tisch Environmental
145 S. Miami Ave
Cleveland, OH 44115
513-467-9000
sales@tisch-env.com



TSP MFC

MFC TSP Ambient Air Sampler

General System Specifications

Particulate Size:Total Suspended Particulate (TSP)

EPA Designation: CFR 40 Part 50 Appendix B

Flow Controller: Mass Flow Controller

Motor Style:Brush Style Motor Assembly

Pressure Recorder:Dickson Chart Recorder, 24 hour

Timer:7 Day Mechanical

Elapsed Time Indicator:Mechanical, Hours and Tenths

Flow Range:39-60CFM, 1.09M³M-1.68M³M

Housing:Anodized Aluminum

Filter Holder:Stainless Steel, 8" x 10"

4" Recorder Charts: Box of 100

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

Applications

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

Optional Equipment

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

Available Models

TE-5170 TSP MFC, 110 Volt 60 Hertz, 8 Amps

TE-5170X TSP MFC, 220 Volt 50 Hertz 4 Amps

TE-5170XZ TSP MFC, 220 Volts 60 Hertz, 4 Amps

Calibration Equipment

TE-5028 -Variable Flow Calibration Kit

TE-HVC-V Xcalibrator HiVol Calibrator

Physical Specifications

Weight: 75lbs, Shelter

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

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

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Calibration Certificate of HVS

Air Sampler Calibration Curve Plotting & Calculation (Dickson recorder)

Calibration curve ref. No. : ATSPC-01-2021052801 Date of calibration : 28/05/2021
 The Hong Kong Society for the Blind's
 Location : Factory cum Sheltered Workshop Sampler : TE-5170X

Calibration Data

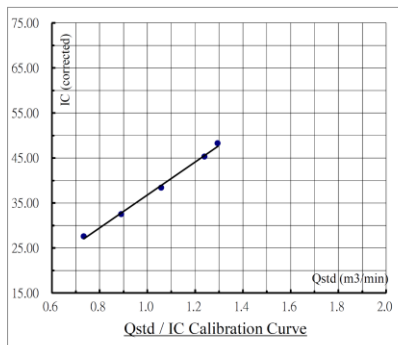
Ambient barometric pressure, Pa = 756.9 (mmHg) Ambient temperature, Ta = 306.35 (deg K)
 Qstd Slope, m = 2.04882 Qstd Intercept, b = -0.011270

Calibration Curve

Plate No.	H ₂ O (in)	Qstd (m ³ / min)	I (chart)	IC (corrected)
18	7.20	1.295	49.0	48.23
13	6.60	1.240	46.0	45.27
10	4.80	1.058	39.0	38.39
7	3.40	0.891	33.0	32.48
5	2.30	0.734	28.0	27.56

Subsequent calculation of sampler flow

Method	Calibration equation	Slope, m	Intercept, b	Corr. coeff., r
Dickson recorder	$Qstd = 1 / m [(I) (\text{Sqrt} ((Pa / 760) (298 / Ta))) - b]$	36.540	0.2525	0.9981



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

Calibrated by :  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-01-2021052802 Date of calibration : 28/05/2021
 Location : Sky Tower Sampler : TE-5170X

Calibration Data

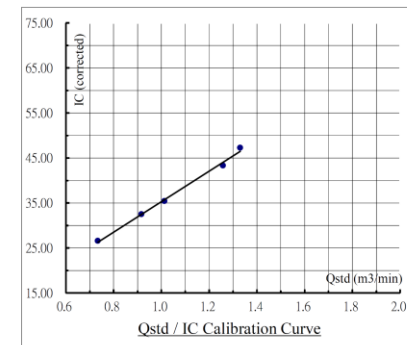
Ambient barometric pressure, Pa = 756.9 (mmHg) Ambient temperature, Ta = 306.35 (deg K)
 Qstd Slope, m = 2.04882 Qstd Intercept, b = -0.011270

Calibration Curve

Plate No.	H ₂ O (in)	Qstd (m ³ / min)	I (chart)	IC (corrected)
18	7.60	1.330	48.0	47.24
13	6.80	1.258	44.0	43.31
10	4.40	1.013	36.0	35.43
7	3.60	0.917	33.0	32.48
5	2.30	0.734	27.0	26.57

Subsequent calculation of sampler flow

Method	Calibration equation	Slope, m	Intercept, b	Corr. coeff., r
Dickson recorder	$Qstd = 1 / m [(I) (\text{Sqrt} ((Pa / 760) (298 / Ta))) - b]$	33.814	1.4881	0.9977



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

Calibrated by :  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-01-2021052803 Date of calibration : 28/05/2021

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

Calibration Data

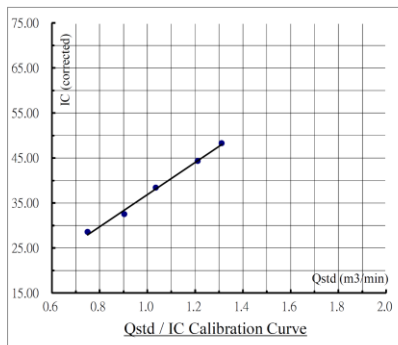
Ambient barometric pressure, Pa = 756.9 (mmHg) Ambient temperature, Ta = 306.35 (deg K)
Qstd Slope, m = 2.04882 Qstd Intercept, b = -0.011270

Calibration Curve

Plate No.	H ₂ O (in)	Qstd (m ³ / min)	I (chart)	IC (corrected)
18	7.40	1.312	49.0	48.23
13	6.30	1.211	45.0	44.29
10	4.60	1.036	39.0	38.39
7	3.50	0.904	33.0	32.48
5	2.40	0.750	29.0	28.54

Subsequent calculation of sampler flow

Method	Calibration equation	Slope, m	Intercept, b	Corr. coeff., r
Dickson recorder	$Qstd = 1 / m [(I) (\text{Sqrt} ((Pa / 760) (298 / Ta))) - b]$	35.693	1.1727	0.9973



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

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

Form No. INS-HVS-CAL.d4 16 01 2020

Calibration Certificate of HVS

Air Sampler Calibration Curve Plotting & Calculation (Dickson recorder)

Calibration curve ref. No. : ATSPC-01-2021011201 Date of calibration : 12/01/2021

Model no : GS2310 Serial number : 10346

Calibration Data

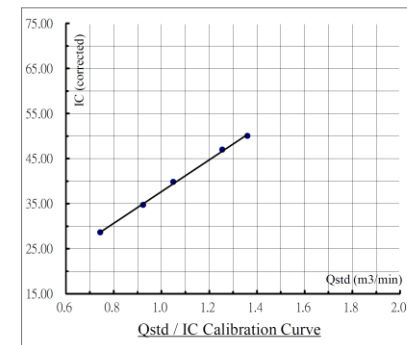
Ambient barometric pressure, Pa = 767.4 (mmHg) Ambient temperature, Ta = 288.85 (deg K)
Qstd Slope, m = 2.04882 Qstd Intercept, b = -0.011270

Calibration Curve

Plate No.	H ₂ O (in)	Qstd (m ³ / min)	I (chart)	IC (corrected)
18	7.40	1.361	49.0	50.01
13	6.30	1.256	46.0	46.95
10	4.40	1.050	39.0	39.80
7	3.40	0.924	34.0	34.70
5	2.20	0.744	28.0	28.58

Subsequent calculation of sampler flow

Method	Calibration equation	Slope, m	Intercept, b	Corr. coeff., r
Dickson recorder	$Qstd = 1 / m [(I) (\text{Sqrt} ((Pa / 760) (298 / Ta))) - b]$	35.217	2.4316	0.9993



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

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

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

Form No. INS-HVS-CAL.d4 16 01 2020

Calibration Certificate for Calibrator



RECALIBRATION DUE DATE: July 17, 2021

Certificate of Calibration

Calibration Certification Information			
Cal. Date: July 17, 2020	Rootsmeter S/N: 438320	Ta: 296 °K	
Operator: Jim Tisch		Pa: 753.4 mm Hg	
Calibration Model #: TE-S025A	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	1.4300	3.2	2.00
2	3	4	1	1.0100	6.4	4.00
3	5	6	1	0.9010	7.9	5.00
4	7	8	1	0.8570	8.8	5.50
5	9	10	1	0.7090	12.8	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 (x-axis)	Qa (x-axis)	$\sqrt{\Delta H \left(\frac{Ta}{Pa} \right)}$ (y-axis)
0.9937	0.6949	1.4128	0.9958	0.6963	0.8865
0.9895	0.9797	1.9980	0.9915	0.9817	1.2536
0.9875	1.0960	2.2338	0.9895	1.0982	1.4016
0.9863	1.1509	2.3428	0.9883	1.1532	1.4700
0.9810	1.3837	2.8255	0.9830	1.3865	1.7729
QSTD		m= 2.04882	QA		m= 1.28293
		b= -0.01127			b= -0.00707
		r= 0.99999			r= 0.99999

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

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

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

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

Catalogue of Dust Meter (TSI Sidepak AM510)

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

User Friendly

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

Advanced Features

- + Smart Battery Management System provides precise run time information, maximizes battery capacity and speeds charging
- + Integrated pump allows use of size-selective aerosol inlet conditioners
- + Built-in impactors let you choose "none," 1.0, 2.5 or 10-micron cut off
- + 10-mm Dorr-Oliver cyclone for respirable sampling
- + Display shows real-time concentrations (mg/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/m ³ (calibrated to respirable fraction of ISO 12103-1, A1 test dust)
Particle Size Range	0.1 to 10 micrometer (µm)
Minimum Resolution	0.001 mg/m ³
Zero stability	±0.001 mg/m ³ over 24 hours using 10-second time-constant
Temperature Coefficient	Approximately +0.0005 mg/m ³ 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 <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>Temperature</td> <td>73.30 (22.9)</td> <td>°F (°C)</td> </tr> <tr> <td>Relative Humidity</td> <td>29.8</td> <td>%RH</td> </tr> <tr> <td>Barometric Pressure</td> <td>28.57 (967.5)</td> <td>inHg (hPa)</td> </tr> </table>				Temperature	73.30 (22.9)	°F (°C)	Relative Humidity	29.8	%RH	Barometric Pressure	28.57 (967.5)	inHg (hPa)	Model AM510																										
Temperature	73.30 (22.9)	°F (°C)																																					
Relative Humidity	29.8	%RH																																					
Barometric Pressure	28.57 (967.5)	inHg (hPa)																																					
☒ As Left ☒ In Tolerance ☐ As Found ☐ Out of Tolerance				Serial Number 11404005																																			
Concentration Linearity Plot 																																							
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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, AI test dust (Arizona dust). Our calibration ratio is greater than 4:1																																							
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 Calibrated				March 24, 2021 Date																																			

Personal Aerosol Monitor Performance check with High Volume Sampler

Performance Check ref. No. AS0210201-7 Report Issue Date 01/02/2021
 Date of performance check 25/01/2021

Objective:

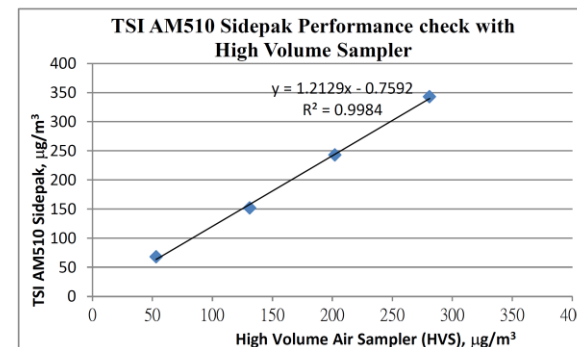
A dust meter and a Total Suspended Particulate High Volume Air Sampler (HVS) were placed together to measure the Total Suspended Particulate (TSP) concentrations simultaneously to check the performance.

Equipment Used:

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

Results:

Equipment	Measurement Result, $\mu\text{g}/\text{m}^3$			
TSI AM510 Sidepak	68	152	243	343
High Volume Air Sampler (HVS)	53	131	202	281



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

Form No. ENV CAL SAMPLER CC1 d012/12/2003

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 <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>Temperature</td> <td>73.79 (23.2)</td> <td>°F (°C)</td> </tr> <tr> <td>Relative Humidity</td> <td>45.5</td> <td>%RH</td> </tr> <tr> <td>Barometric Pressure</td> <td>28.97 (981.0)</td> <td>inHg (hPa)</td> </tr> </table>		Temperature	73.79 (23.2)	°F (°C)	Relative Humidity	45.5	%RH	Barometric Pressure	28.97 (981.0)	inHg (hPa)	Model AM510																								
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Personal Aerosol Monitor Performance check with High Volume Sampler

Performance Check ref. No. : AS0210201-3 Report Issue Date: 1/2/2021
Date of performance check : 25/1/2021

Objective:

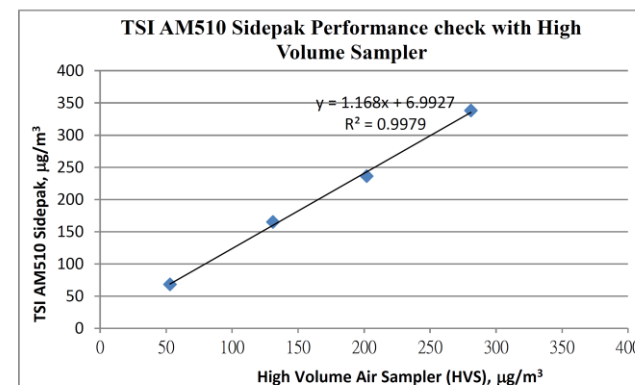
A dust meter and a Total Suspended Particulate High Volume Air Sampler (HVS) were placed together to measure the Total Suspended Particulate (TSP) concentrations simultaneously to check the performance.

Equipment Used:

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

Results:

Equipment	Measurement Result, µg/m³			
TSI AM510 Sidepak	68	165	236	338
High Volume Air Sampler (HVS)	53	131	202	281



Tested by : P
Name : (Poon Tsz Wing)

Checked by : M
Name : (Wong Yin Tong)

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

Catalogue of Weather Station

Cabled Vantage Pro2™ & Vantage Pro2 Plus™ Stations



**6152C
6162C**

Vantage Pro2™

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

Integrated Sensor Suite (ISS)

Operating Temperature	-40° to +150°F (-40° to +65°C)
Non-operating Temperature	-40° to +158°F (-40° to +70°C)
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-Aspirated Rad Shield	20.8" x 9.4" x 16.0" (528 mm x 239 mm x 406 mm)
Vantage Pro2 Plus with Standard Rad Shield	14.3" x 9.7" x 14.5" (363 mm x 246 mm x 368 mm)
Vantage Pro2 Plus with Fan-Aspirated Rad Shield	21.1" x 9.7" x 16.0" (536 mm x 246 mm x 406 mm)

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

DS6152C, 6162C Rev. W 12/7/18
1

7
Vantage Pro2™

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

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

Wind

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

Wind Direction

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

Wind Speed

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

Calibration Certificate of Weather Station



Calibration Certificate

Certificate No.: CC0152104

1. Description

Calibration item :	a) Temperature b) Relative Humidity c) Wind Speed d) Wind Direction
Equipment description :	Weather Station
Manufacturer :	Davis Vantage Pro 2
Type / Model No. :	6152CEU
Serial No. :	AZ170710016
Assigned equipment no. :	N/A
Adjustment :	N/A
Remark :	Received with good condition

2. Customer information

Customer :	Castco Testing Centre Limited
Address :	33, On Kui Street, Fanling, N.T.
Date of receipt :	24 March 2021

3. Date of performance of the calibration

Date of calibration :	2 April 2021
-----------------------	--------------

Approved Signatory
Warren Yeung

Company Chop:
Certificate issue date: 8 April 2021



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

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

CT-BEG-02
Page 1 of 4
cc0152104



4. Result of Calibration

a) Temperature

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

Estimated expanded uncertainty: 1.0 °C

Technical Requirement: N/A

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

CT-001-04

b) Relative Humidity

Temperature setting of humidity chamber : 23 °C

Reference reading ; % RH	Reading ; % RH	Error of indication ; % RH
40.0	43	3.0
50.0	53	3.0
70.0	72	2.0

Estimated expanded uncertainty: 3 %RH

Technical Requirement: N/A

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

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CT-002-04
Page 2 of 4
cc0152104

Calibration Certificate of Weather Station



c) Wind Speed

Reference reading ; m/s	Measured reading ; m/s	Error of indication ; %
0.0	0.0	N/A
2.0	2.1	10.0
5.0	4.9	-2.0
8.0	7.9	-1.3

Estimated expanded uncertainty: 0.5 m/s

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

a) Wind direction

Reference reading	Measured reading	Error of indication
0°	0°	0°
45°	45°	0°
90°	90°	0°
135°	135°	0°
180°	180°	0°
225°	225°	0°
270°	270°	0°
315°	315°	0°

Estimated expanded uncertainty: 5°

Technical Requirement: N/A

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

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Page 3 of 4
cc0152104

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



5. Reference method for calibration

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

6. Environment condition of calibration

Temperature ; °C	23.9 °C
Relative humidity ; %RH	58 %RH

7. Reference equipment used in the calibration

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

- 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.

*** End of Certificate ***

CT-END-02

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

Page 4 of 4
cc0152104

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

Appendix F – Weather information

General Information

Date	Absolute Daily Min Temperature (°C)	Absolute Daily Max Temperature (°C)	Total Rainfall (mm)
01/06/2021	24.1	29.3	45.8
02/06/2021	25	31.3	2.4
03/06/2021	27.9	34	0
04/06/2021	26.7	29.8	7.5
05/06/2021	25.6	29.2	Trace
06/06/2021	26.4	31.4	Trace
07/06/2021	26.6	32.2	Trace
08/06/2021	26.5	33.5	0.9
09/06/2021	26.4	29.9	48.6
10/06/2021	25.5	32.8	29.4
11/06/2021	26.7	32.9	31.2
12/06/2021	26.2	29.5	30.3
13/06/2021	26	32	2.8
14/06/2021	27.8	31.1	0.3
15/06/2021	27.2	31.8	6.2
16/06/2021	29.1	33.3	0
17/06/2021	27.7	32.8	9.6
18/06/2021	29	32.8	3.9
19/06/2021	29.5	33	Trace
20/06/2021	29.4	32.8	0
21/06/2021	29.4	32.4	1.2
22/06/2021	24.7	30.2	75.3
23/06/2021	25.1	29	66.4
24/06/2021	25.1	26.7	20.8
25/06/2021	26	29	6.8
26/06/2021	25.9	29.9	61.3
27/06/2021	28.4	30	5.8
28/06/2021	24	29.6	166.5
29/06/2021	28.8	30.7	4.6
30/06/2021	29	32.6	0.4

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=2021&m=6>

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
01/06/2021	0:00	0.4	90	02/06/2021	0:00	1.3	45	03/06/2021	0:00	1.3	112.5	04/06/2021	0:00	0.9	67.5
01/06/2021	1:00	0.9	90	02/06/2021	1:00	0.9	270	03/06/2021	1:00	0.9	112.5	04/06/2021	1:00	0.9	90
01/06/2021	2:00	0.9	112.5	02/06/2021	2:00	0.9	247.5	03/06/2021	2:00	0.9	112.5	04/06/2021	2:00	0.9	112.5
01/06/2021	3:00	1.3	112.5	02/06/2021	3:00	0.9	45	03/06/2021	3:00	1.3	90	04/06/2021	3:00	1.3	112.5
01/06/2021	4:00	1.3	22.5	02/06/2021	4:00	0.9	247.5	03/06/2021	4:00	1.3	90	04/06/2021	4:00	1.3	90
01/06/2021	5:00	1.8	90	02/06/2021	5:00	1.3	270	03/06/2021	5:00	1.3	112.5	04/06/2021	5:00	1.3	112.5
01/06/2021	6:00	1.3	112.5	02/06/2021	6:00	1.3	270	03/06/2021	6:00	0.9	112.5	04/06/2021	6:00	1.3	22.5
01/06/2021	7:00	1.3	90	02/06/2021	7:00	0.9	247.5	03/06/2021	7:00	1.3	135	04/06/2021	7:00	1.3	22.5
01/06/2021	8:00	0.9	90	02/06/2021	8:00	1.3	247.5	03/06/2021	8:00	1.3	112.5	04/06/2021	8:00	0.9	45
01/06/2021	9:00	1.8	90	02/06/2021	9:00	2.2	270	03/06/2021	9:00	1.3	90	04/06/2021	9:00	0.9	45
01/06/2021	10:00	1.8	90	02/06/2021	10:00	2.7	247.5	03/06/2021	10:00	1.3	90	04/06/2021	10:00	0.9	22.5
01/06/2021	11:00	0.9	247.5	02/06/2021	11:00	1.8	270	03/06/2021	11:00	1.3	112.5	04/06/2021	11:00	0.9	45
01/06/2021	12:00	0.9	22.5	02/06/2021	12:00	2.7	270	03/06/2021	12:00	1.3	22.5	04/06/2021	12:00	0.9	45
01/06/2021	13:00	0.9	45	02/06/2021	13:00	2.2	270	03/06/2021	13:00	0.9	135	04/06/2021	13:00	0.9	45
01/06/2021	14:00	0.9	45	02/06/2021	14:00	0.9	270	03/06/2021	14:00	1.3	112.5	04/06/2021	14:00	0.9	45
01/06/2021	15:00	0.9	67.5	02/06/2021	15:00	1.8	270	03/06/2021	15:00	0.9	90	04/06/2021	15:00	1.3	45
01/06/2021	16:00	1.8	45	02/06/2021	16:00	1.3	270	03/06/2021	16:00	0.9	112.5	04/06/2021	16:00	1.8	270
01/06/2021	17:00	1.8	90	02/06/2021	17:00	1.3	247.5	03/06/2021	17:00	0.9	112.5	04/06/2021	17:00	1.3	45
01/06/2021	18:00	1.8	22.5	02/06/2021	18:00	1.3	270	03/06/2021	18:00	0.9	112.5	04/06/2021	18:00	0.9	45
01/06/2021	19:00	0.9	45	02/06/2021	19:00	1.8	247.5	03/06/2021	19:00	0.9	22.5	04/06/2021	19:00	1.3	22.5
01/06/2021	20:00	0.9	22.5	02/06/2021	20:00	1.8	247.5	03/06/2021	20:00	1.3	112.5	04/06/2021	20:00	1.3	45
01/06/2021	21:00	0.9	45	02/06/2021	21:00	0.9	292.5	03/06/2021	21:00	1.3	135	04/06/2021	21:00	1.3	22.5
01/06/2021	22:00	0.9	45	02/06/2021	22:00	1.3	247.5	03/06/2021	22:00	1.3	112.5	04/06/2021	22:00	1.3	22.5
01/06/2021	23:00	1.8	45	02/06/2021	23:00	0.	247.5	03/06/2021	23:00	1.3	112.5	04/06/2021	23:00	1.8	45

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
05/06/2021	0:00	1.3	45	06/06/2021	0:00	0.9	135	07/06/2021	0:00	0.9	45	08/06/2021	0:00	0.4	112.5
05/06/2021	1:00	1.3	67.5	06/06/2021	1:00	1.3	180	07/06/2021	1:00	1.3	90	08/06/2021	1:00	0.4	67.5
05/06/2021	2:00	1.3	45	06/06/2021	2:00	1.3	135	07/06/2021	2:00	1.3	22.5	08/06/2021	2:00	0.4	247.5
05/06/2021	3:00	1.3	45	06/06/2021	3:00	0.9	112.5	07/06/2021	3:00	1.3	45	08/06/2021	3:00	0.4	270
05/06/2021	4:00	1.3	45	06/06/2021	4:00	0.9	225	07/06/2021	4:00	0.9	90	08/06/2021	4:00	0.9	67.5
05/06/2021	5:00	1.3	45	06/06/2021	5:00	1.3	157.5	07/06/2021	5:00	1.8	45	08/06/2021	5:00	0.9	45
05/06/2021	6:00	0.9	45	06/06/2021	6:00	1.3	112.5	07/06/2021	6:00	1.8	22.5	08/06/2021	6:00	0.9	45
05/06/2021	7:00	0.9	22.5	06/06/2021	7:00	1.3	112.5	07/06/2021	7:00	0.4	22.5	08/06/2021	7:00	0.4	45
05/06/2021	8:00	0.9	247.5	06/06/2021	8:00	1.3	112.5	07/06/2021	8:00	0.9	45	08/06/2021	8:00	0.4	247.5
05/06/2021	9:00	1.3	22.5	06/06/2021	9:00	1.3	112.5	07/06/2021	9:00	0.9	90	08/06/2021	9:00	0.9	337.5
05/06/2021	10:00	0.9	22.5	06/06/2021	10:00	1.8	112.5	07/06/2021	10:00	1.3	112.5	08/06/2021	10:00	1.3	112.5
05/06/2021	11:00	0.9	225	06/06/2021	11:00	0.4	112.5	07/06/2021	11:00	0.9	45	08/06/2021	11:00	1.3	135
05/06/2021	12:00	0.9	270	06/06/2021	12:00	0.4	112.5	07/06/2021	12:00	0.4	67.5	08/06/2021	12:00	1.3	22.5
05/06/2021	13:00	1.3	270	06/06/2021	13:00	0.4	90	07/06/2021	13:00	0.9	45	08/06/2021	13:00	0.4	45
05/06/2021	14:00	0.9	270	06/06/2021	14:00	0.4	90	07/06/2021	14:00	0.4	67.5	08/06/2021	14:00	0.9	135
05/06/2021	15:00	0.9	270	06/06/2021	15:00	0.4	112.5	07/06/2021	15:00	0.9	67.5	08/06/2021	15:00	1.3	67.5
05/06/2021	16:00	0.9	247.5	06/06/2021	16:00	0.9	112.5	07/06/2021	16:00	0.9	112.5	08/06/2021	16:00	1.3	90
05/06/2021	17:00	0.9	22.5	06/06/2021	17:00	0.9	90	07/06/2021	17:00	0.4	112.5	08/06/2021	17:00	1.3	292.5
05/06/2021	18:00	0.9	247.5	06/06/2021	18:00	0.9	112.5	07/06/2021	18:00	0.4	112.5	08/06/2021	18:00	1.3	112.5
05/06/2021	19:00	0.9	247.5	06/06/2021	19:00	0.9	112.5	07/06/2021	19:00	0.4	90	08/06/2021	19:00	1.3	22.5
05/06/2021	20:00	0.9	247.5	06/06/2021	20:00	0.9	112.5	07/06/2021	20:00	0.9	112.5	08/06/2021	20:00	1.3	135
05/06/2021	21:00	0.9	247.5	06/06/2021	21:00	0.9	112.5	07/06/2021	21:00	0.9	135	08/06/2021	21:00	1.8	22.5
05/06/2021	22:00	0.9	67.5	06/06/2021	22:00	0.9	90	07/06/2021	22:00	2.7	135	08/06/2021	22:00	1.3	90
05/06/2021	23:00	0.9	67.5	06/06/2021	23:00	0.9	112.5	07/06/2021	23:00	0.4	112.5	08/06/2021	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
09/06/2021	0:00	0.9	67.5	10/06/2021	0:00	0.9	135	11/06/2021	0:00	1.3	112.5	12/06/2021	0:00	1.3	45
09/06/2021	1:00	0.4	90	10/06/2021	1:00	0.9	112.5	11/06/2021	1:00	0.4	90	12/06/2021	1:00	1.8	90
09/06/2021	2:00	1.3	292.5	10/06/2021	2:00	0.9	112.5	11/06/2021	2:00	0.9	112.5	12/06/2021	2:00	1.8	112.5
09/06/2021	3:00	1.8	67.5	10/06/2021	3:00	1.3	135	11/06/2021	3:00	2.2	90	12/06/2021	3:00	2.2	67.5
09/06/2021	4:00	1.3	90	10/06/2021	4:00	0.9	135	11/06/2021	4:00	1.8	135	12/06/2021	4:00	1.8	45
09/06/2021	5:00	1.3	157.5	10/06/2021	5:00	0.9	112.5	11/06/2021	5:00	1.8	67.5	12/06/2021	5:00	1.3	67.5
09/06/2021	6:00	0.9	112.5	10/06/2021	6:00	0.4	112.5	11/06/2021	6:00	2.2	90	12/06/2021	6:00	2.2	112.5
09/06/2021	7:00	1.3	112.5	10/06/2021	7:00	0.4	45	11/06/2021	7:00	1.8	135	12/06/2021	7:00	2.7	337.5
09/06/2021	8:00	1.3	112.5	10/06/2021	8:00	0.9	112.5	11/06/2021	8:00	1.3	135	12/06/2021	8:00	2.7	67.5
09/06/2021	9:00	0.9	135	10/06/2021	9:00	0.9	157.5	11/06/2021	9:00	1.8	90	12/06/2021	9:00	3.1	67.5
09/06/2021	10:00	0.9	337.5	10/06/2021	10:00	0.9	292.5	11/06/2021	10:00	0.9	112.5	12/06/2021	10:00	3.1	90
09/06/2021	11:00	0.9	90	10/06/2021	11:00	0.4	112.5	11/06/2021	11:00	1.8	337.5	12/06/2021	11:00	3.6	67.5
09/06/2021	12:00	1.3	67.5	10/06/2021	12:00	0.4	247.5	11/06/2021	12:00	1.3	112.5	12/06/2021	12:00	1.3	67.5
09/06/2021	13:00	1.3	90	10/06/2021	13:00	0.9	315	11/06/2021	13:00	1.3	90	12/06/2021	13:00	1.3	90
09/06/2021	14:00	0.9	292.5	10/06/2021	14:00	0.4	315	11/06/2021	14:00	1.3	112.5	12/06/2021	14:00	2.2	90
09/06/2021	15:00	0.9	90	10/06/2021	15:00	0.4	135	11/06/2021	15:00	0.9	112.5	12/06/2021	15:00	2.2	112.5
09/06/2021	16:00	0.9	135	10/06/2021	16:00	0.9	112.5	11/06/2021	16:00	1.3	112.5	12/06/2021	16:00	2.2	90
09/06/2021	17:00	0.9	90	10/06/2021	17:00	1.3	67.5	11/06/2021	17:00	1.3	112.5	12/06/2021	17:00	1.8	90
09/06/2021	18:00	0.9	112.5	10/06/2021	18:00	0.9	247.5	11/06/2021	18:00	1.8	135	12/06/2021	18:00	0.9	67.5
09/06/2021	19:00	1.3	67.5	10/06/2021	19:00	0.9	22.5	11/06/2021	19:00	1.3	90	12/06/2021	19:00	1.8	112.5
09/06/2021	20:00	0.9	112.5	10/06/2021	20:00	0.9	112.5	11/06/2021	20:00	1.8	112.5	12/06/2021	20:00	2.7	90
09/06/2021	21:00	0.9	45	10/06/2021	21:00	0.4	135	11/06/2021	21:00	1.8	112.5	12/06/2021	21:00	2.2	90
09/06/2021	22:00	0.9	22.5	10/06/2021	22:00	0.4	112.5	11/06/2021	22:00	2.7	112.5	12/06/2021	22:00	2.2	90
09/06/2021	23:00	1.8	90	10/06/2021	23:00	0.4	112.5	11/06/2021	23:00	2.2	112.5	12/06/2021	23:00	2.2	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
13/06/2021	0:00	0.9	22.5	14/06/2021	0:00	1.3	112.5	15/06/2021	0:00	0.4	112.5	16/06/2021	0:00	1.3	45
13/06/2021	1:00	0.9	315	14/06/2021	1:00	1.3	90	15/06/2021	1:00	0.4	112.5	16/06/2021	1:00	1.3	247.5
13/06/2021	2:00	0.9	90	14/06/2021	2:00	0.9	112.5	15/06/2021	2:00	0.4	90	16/06/2021	2:00	1.3	22.5
13/06/2021	3:00	0.9	112.5	14/06/2021	3:00	1.3	67.5	15/06/2021	3:00	0.4	112.5	16/06/2021	3:00	0.9	225
13/06/2021	4:00	0.4	45	14/06/2021	4:00	0.9	112.5	15/06/2021	4:00	0.4	112.5	16/06/2021	4:00	0.9	67.5
13/06/2021	5:00	0.9	90	14/06/2021	5:00	1.3	135	15/06/2021	5:00	0.4	112.5	16/06/2021	5:00	0.9	22.5
13/06/2021	6:00	0.9	90	14/06/2021	6:00	0.9	90	15/06/2021	6:00	0.4	135	16/06/2021	6:00	1.3	157.5
13/06/2021	7:00	0.9	90	14/06/2021	7:00	0.9	112.5	15/06/2021	7:00	0.4	112.5	16/06/2021	7:00	0.9	135
13/06/2021	8:00	0.9	90	14/06/2021	8:00	0.4	112.5	15/06/2021	8:00	0.4	112.5	16/06/2021	8:00	1.3	67.5
13/06/2021	9:00	0.4	90	14/06/2021	9:00	0.9	112.5	15/06/2021	9:00	0.4	67.5	16/06/2021	9:00	1.3	247.5
13/06/2021	10:00	0.9	112.5	14/06/2021	10:00	0.9	135	15/06/2021	10:00	1.8	157.5	16/06/2021	10:00	1.3	225
13/06/2021	11:00	1.3	90	14/06/2021	11:00	1.3	112.5	15/06/2021	11:00	1.8	112.5	16/06/2021	11:00	1.3	45
13/06/2021	12:00	2.2	112.5	14/06/2021	12:00	1.3	157.5	15/06/2021	12:00	2.7	180	16/06/2021	12:00	1.3	45
13/06/2021	13:00	2.2	112.5	14/06/2021	13:00	0.9	112.5	15/06/2021	13:00	1.3	112.5	16/06/2021	13:00	1.8	45
13/06/2021	14:00	2.2	112.5	14/06/2021	14:00	0.9	90	15/06/2021	14:00	1.3	90	16/06/2021	14:00	1.3	45
13/06/2021	15:00	2.7	135	14/06/2021	15:00	0.9	112.5	15/06/2021	15:00	1.3	135	16/06/2021	15:00	1.8	67.5
13/06/2021	16:00	1.3	135	14/06/2021	16:00	0.9	67.5	15/06/2021	16:00	1.3	112.5	16/06/2021	16:00	0.9	22.5
13/06/2021	17:00	1.3	135	14/06/2021	17:00	0.9	67.5	15/06/2021	17:00	1.8	135	16/06/2021	17:00	0.9	45
13/06/2021	18:00	1.8	90	14/06/2021	18:00	0.9	45	15/06/2021	18:00	1.3	135	16/06/2021	18:00	0.9	67.5
13/06/2021	19:00	0.9	135	14/06/2021	19:00	0.9	90	15/06/2021	19:00	0.9	135	16/06/2021	19:00	1.3	67.5
13/06/2021	20:00	1.3	112.5	14/06/2021	20:00	1.3	90	15/06/2021	20:00	0.9	157.5	16/06/2021	20:00	0.9	45
13/06/2021	21:00	0.9	112.5	14/06/2021	21:00	0.9	67.5	15/06/2021	21:00	0.9	135	16/06/2021	21:00	0.9	67.5
13/06/2021	22:00	0.9	112.5	14/06/2021	22:00	0.9	112.5	15/06/2021	22:00	0.9	112.5	16/06/2021	22:00	1.3	112.5
13/06/2021	23:00	1.3	112.5	14/06/2021	23:00	0.9	90	15/06/2021	23:00	0.9	270	16/06/2021	23:00	0.9	45

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
17/06/2021	0:00	0.4	315	18/06/2021	0:00	1.3	45	19/06/2021	0:00	0.9	45	20/06/2021	0:00	1.3	247.5
17/06/2021	1:00	0.4	67.5	18/06/2021	1:00	1.3	45	19/06/2021	1:00	0.9	45	20/06/2021	1:00	0.9	270
17/06/2021	2:00	0.9	112.5	18/06/2021	2:00	2.7	45	19/06/2021	2:00	0.9	45	20/06/2021	2:00	0.4	247.5
17/06/2021	3:00	0.4	270	18/06/2021	3:00	1.8	45	19/06/2021	3:00	0.9	45	20/06/2021	3:00	0.4	247.5
17/06/2021	4:00	0.9	45	18/06/2021	4:00	1.3	22.5	19/06/2021	4:00	0.9	22.5	20/06/2021	4:00	0.9	247.5
17/06/2021	5:00	0.4	67.5	18/06/2021	5:00	1.3	45	19/06/2021	5:00	0.9	247.5	20/06/2021	5:00	0.9	270
17/06/2021	6:00	0.4	247.5	18/06/2021	6:00	1.8	45	19/06/2021	6:00	0.9	22.5	20/06/2021	6:00	2.7	247.5
17/06/2021	7:00	0.4	225	18/06/2021	7:00	2.2	270	19/06/2021	7:00	0.9	22.5	20/06/2021	7:00	0.9	270
17/06/2021	8:00	0.4	270	18/06/2021	8:00	1.3	22.5	19/06/2021	8:00	1.3	270	20/06/2021	8:00	0.9	247.5
17/06/2021	9:00	0.4	225	18/06/2021	9:00	2.2	45	19/06/2021	9:00	1.3	247.5	20/06/2021	9:00	0.9	225
17/06/2021	10:00	0.9	45	18/06/2021	10:00	0.4	247.5	19/06/2021	10:00	1.3	270	20/06/2021	10:00	1.3	247.5
17/06/2021	11:00	0.9	67.5	18/06/2021	11:00	0.9	270	19/06/2021	11:00	1.3	247.5	20/06/2021	11:00	0.9	247.5
17/06/2021	12:00	0.9	270	18/06/2021	12:00	1.3	270	19/06/2021	12:00	1.3	270	20/06/2021	12:00	0.9	247.5
17/06/2021	13:00	0.4	247.5	18/06/2021	13:00	1.3	247.5	19/06/2021	13:00	0.9	247.5	20/06/2021	13:00	0.9	225
17/06/2021	14:00	0.9	90	18/06/2021	14:00	1.3	247.5	19/06/2021	14:00	0.9	247.5	20/06/2021	14:00	0.9	270
17/06/2021	15:00	0.9	90	18/06/2021	15:00	1.3	247.5	19/06/2021	15:00	0.9	45	20/06/2021	15:00	0.9	45
17/06/2021	16:00	0.9	292.5	18/06/2021	16:00	1.3	247.5	19/06/2021	16:00	0.9	45	20/06/2021	16:00	0.9	45
17/06/2021	17:00	0.9	247.5	18/06/2021	17:00	1.3	247.5	19/06/2021	17:00	0.9	22.5	20/06/2021	17:00	1.3	45
17/06/2021	18:00	1.8	247.5	18/06/2021	18:00	1.3	247.5	19/06/2021	18:00	0.9	22.5	20/06/2021	18:00	1.3	22.5
17/06/2021	19:00	0.9	45	18/06/2021	19:00	0.9	270	19/06/2021	19:00	0.9	45	20/06/2021	19:00	1.3	67.5
17/06/2021	20:00	0.9	45	18/06/2021	20:00	1.3	45	19/06/2021	20:00	0.9	45	20/06/2021	20:00	0.9	45
17/06/2021	21:00	0.9	45	18/06/2021	21:00	1.3	67.5	19/06/2021	21:00	0.9	22.5	20/06/2021	21:00	0.9	22.5
17/06/2021	22:00	0.9	22.5	18/06/2021	22:00	1.3	45	19/06/2021	22:00	1.3	22.5	20/06/2021	22:00	0.9	22.5
17/06/2021	23:00	1.3	45	18/06/2021	23:00	0.9	247.5	19/06/2021	23:00	1.3	247.5	20/06/2021	23:00	0.9	45

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
21/06/2021	0:00	0.9	45	22/06/2021	0:00	0.4	112.5	23/06/2021	0:00	1.3	247.5	24/06/2021	0:00	0.9	135
21/06/2021	1:00	0.4	67.5	22/06/2021	1:00	0.4	67.5	23/06/2021	1:00	0.9	247.5	24/06/2021	1:00	1.3	135
21/06/2021	2:00	1.3	45	22/06/2021	2:00	0.9	135	23/06/2021	2:00	0.4	247.5	24/06/2021	2:00	1.3	135
21/06/2021	3:00	0.9	45	22/06/2021	3:00	0.9	225	23/06/2021	3:00	0.4	112.5	24/06/2021	3:00	0.9	112.5
21/06/2021	4:00	0.9	247.5	22/06/2021	4:00	0.9	45	23/06/2021	4:00	0.4	180	24/06/2021	4:00	1.3	112.5
21/06/2021	5:00	0.4	270	22/06/2021	5:00	0.9	45	23/06/2021	5:00	0.9	225	24/06/2021	5:00	0.9	112.5
21/06/2021	6:00	0.9	202.5	22/06/2021	6:00	0.4	270	23/06/2021	6:00	0.9	247.5	24/06/2021	6:00	1.3	67.5
21/06/2021	7:00	0.9	45	22/06/2021	7:00	0.4	247.5	23/06/2021	7:00	0.9	247.5	24/06/2021	7:00	1.3	45
21/06/2021	8:00	0.9	225	22/06/2021	8:00	0.4	225	23/06/2021	8:00	0.4	225	24/06/2021	8:00	1.3	337.5
21/06/2021	9:00	0.9	247.5	22/06/2021	9:00	0.4	270	23/06/2021	9:00	0.4	247.5	24/06/2021	9:00	0.9	67.5
21/06/2021	10:00	0.9	247.5	22/06/2021	10:00	0.4	247.5	23/06/2021	10:00	0.4	292.5	24/06/2021	10:00	0.4	45
21/06/2021	11:00	0.4	247.5	22/06/2021	11:00	0.4	247.5	23/06/2021	11:00	0.9	225	24/06/2021	11:00	0.4	112.5
21/06/2021	12:00	1.8	225	22/06/2021	12:00	0.9	180	23/06/2021	12:00	0.9	247.5	24/06/2021	12:00	0.4	112.5
21/06/2021	13:00	0.9	247.5	22/06/2021	13:00	0.9	157.5	23/06/2021	13:00	0.4	247.5	24/06/2021	13:00	0.4	112.5
21/06/2021	14:00	0.9	135	22/06/2021	14:00	0.4	112.5	23/06/2021	14:00	0.4	157.5	24/06/2021	14:00	0.9	112.5
21/06/2021	15:00	0.9	225	22/06/2021	15:00	0.4	135	23/06/2021	15:00	0.9	112.5	24/06/2021	15:00	1.8	112.5
21/06/2021	16:00	0.9	157.5	22/06/2021	16:00	1.3	135	23/06/2021	16:00	0.9	157.5	24/06/2021	16:00	0.4	247.5
21/06/2021	17:00	1.8	112.5	22/06/2021	17:00	0.9	135	23/06/2021	17:00	0.4	157.5	24/06/2021	17:00	0.4	247.5
21/06/2021	18:00	0.9	135	22/06/2021	18:00	1.8	90	23/06/2021	18:00	0.9	247.5	24/06/2021	18:00	0.4	112.5
21/06/2021	19:00	0.9	247.5	22/06/2021	19:00	0.9	180	23/06/2021	19:00	0.9	112.5	24/06/2021	19:00	0.9	112.5
21/06/2021	20:00	0.9	135	22/06/2021	20:00	1.8	225	23/06/2021	20:00	0.4	247.5	24/06/2021	20:00	0.9	135
21/06/2021	21:00	0.4	270	22/06/2021	21:00	0.9	90	23/06/2021	21:00	0.4	247.5	24/06/2021	21:00	0.9	90
21/06/2021	22:00	0.9	112.5	22/06/2021	22:00	0.9	225	23/06/2021	22:00	0.9	112.5	24/06/2021	22:00	1.3	90
21/06/2021	23:00	0.9	135	22/06/2021	23:00	1.3	225	23/06/2021	23:00	0.4	112.5	24/06/2021	23:00	1.3	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
25/06/2021	0:00	1.3	112.5	26/06/2021	0:00	0.9	112.5	27/06/2021	0:00	0.4	135	28/06/2021	0:00	0.9	112.5
25/06/2021	1:00	0.9	112.5	26/06/2021	1:00	0.9	112.5	27/06/2021	1:00	0.9	90	28/06/2021	1:00	1.3	112.5
25/06/2021	2:00	0.4	112.5	26/06/2021	2:00	0.9	112.5	27/06/2021	2:00	0.9	180	28/06/2021	2:00	0.9	112.5
25/06/2021	3:00	0.4	135	26/06/2021	3:00	0.9	112.5	27/06/2021	3:00	0.9	90	28/06/2021	3:00	0.9	112.5
25/06/2021	4:00	0.9	135	26/06/2021	4:00	0.4	112.5	27/06/2021	4:00	1.3	112.5	28/06/2021	4:00	1.3	202.5
25/06/2021	5:00	0.4	135	26/06/2021	5:00	0.4	112.5	27/06/2021	5:00	0.9	67.5	28/06/2021	5:00	0.4	90
25/06/2021	6:00	0.4	112.5	26/06/2021	6:00	0.9	112.5	27/06/2021	6:00	0.9	67.5	28/06/2021	6:00	0.9	112.5
25/06/2021	7:00	0.4	112.5	26/06/2021	7:00	0.9	135	27/06/2021	7:00	0.9	90	28/06/2021	7:00	0.4	90
25/06/2021	8:00	0.9	112.5	26/06/2021	8:00	0.4	112.5	27/06/2021	8:00	0.9	67.5	28/06/2021	8:00	0.9	90
25/06/2021	9:00	0.4	112.5	26/06/2021	9:00	0.4	112.5	27/06/2021	9:00	0.9	67.5	28/06/2021	9:00	1.3	90
25/06/2021	10:00	0.4	112.5	26/06/2021	10:00	0.9	22.5	27/06/2021	10:00	0.9	67.5	28/06/2021	10:00	1.8	90
25/06/2021	11:00	0.4	135	26/06/2021	11:00	0.4	45	27/06/2021	11:00	0.9	45	28/06/2021	11:00	1.3	135
25/06/2021	12:00	0.9	135	26/06/2021	12:00	0.4	45	27/06/2021	12:00	0.9	67.5	28/06/2021	12:00	0.9	67.5
25/06/2021	13:00	0.9	112.5	26/06/2021	13:00	1.3	45	27/06/2021	13:00	1.3	225	28/06/2021	13:00	0.9	45
25/06/2021	14:00	0.9	112.5	26/06/2021	14:00	0.9	112.5	27/06/2021	14:00	1.8	247.5	28/06/2021	14:00	0.4	67.5
25/06/2021	15:00	1.3	225	26/06/2021	15:00	0.4	22.5	27/06/2021	15:00	1.3	247.5	28/06/2021	15:00	0.4	157.5
25/06/2021	16:00	1.3	202.5	26/06/2021	16:00	0.9	247.5	27/06/2021	16:00	1.3	90	28/06/2021	16:00	0.4	180
25/06/2021	17:00	0.9	135	26/06/2021	17:00	0.4	112.5	27/06/2021	17:00	1.3	45	28/06/2021	17:00	0.9	45
25/06/2021	18:00	1.8	112.5	26/06/2021	18:00	0.4	112.5	27/06/2021	18:00	1.3	247.5	28/06/2021	18:00	1.3	112.5
25/06/2021	19:00	0.4	67.5	26/06/2021	19:00	1.3	225	27/06/2021	19:00	1.3	112.5	28/06/2021	19:00	1.3	112.5
25/06/2021	20:00	0.4	67.5	26/06/2021	20:00	1.3	45	27/06/2021	20:00	1.3	112.5	28/06/2021	20:00	0.9	112.5
25/06/2021	21:00	0.9	90	26/06/2021	21:00	0.9	112.5	27/06/2021	21:00	0.9	90	28/06/2021	21:00	0.9	112.5
25/06/2021	22:00	0.4	157.5	26/06/2021	22:00	0.9	247.5	27/06/2021	22:00	0.9	225	28/06/2021	22:00	0.9	112.5
25/06/2021	23:00	0.4	135	26/06/2021	23:00	0.4	247.5	27/06/2021	23:00	0.9	202.5	28/06/2021	23:00	0.9	90

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

Date	Time	Wind Speed (m/s)	Wind Direction	Date	Time	Wind Speed (m/s)	Wind Direction	Date	Time	Wind Speed (m/s)	Wind Direction	Date	Time	Wind Speed (m/s)	Wind Direction
29/06/2021	0:00	0.4	67.5	30/06/2021	0:00	0.4	225								
29/06/2021	1:00	0.9	45	30/06/2021	1:00	0.9	90								
29/06/2021	2:00	0.9	45	30/06/2021	2:00	0.4	112.5								
29/06/2021	3:00	1.3	45	30/06/2021	3:00	0.9	90								
29/06/2021	4:00	1.3	45	30/06/2021	4:00	0.4	90								
29/06/2021	5:00	1.3	67.5	30/06/2021	5:00	0.4	90								
29/06/2021	6:00	0.9	67.5	30/06/2021	6:00	0.9	90								
29/06/2021	7:00	1.3	67.5	30/06/2021	7:00	0.9	90								
29/06/2021	8:00	1.3	67.5	30/06/2021	8:00	0.9	112.5								
29/06/2021	9:00	1.3	67.5	30/06/2021	9:00	0.9	112.5								
29/06/2021	10:00	1.3	67.5	30/06/2021	10:00	0.9	90								
29/06/2021	11:00	1.8	45	30/06/2021	11:00	0.9	90								
29/06/2021	12:00	1.8	90	30/06/2021	12:00	0.4	112.5								
29/06/2021	13:00	1.3	67.5	30/06/2021	13:00	0.4	67.5								
29/06/2021	14:00	1.3	45	30/06/2021	14:00	0.4	90								
29/06/2021	15:00	1.3	67.5	30/06/2021	15:00	0.9	67.5								
29/06/2021	16:00	1.3	67.5	30/06/2021	16:00	0.9	67.5								
29/06/2021	17:00	1.3	45	30/06/2021	17:00	0.4	90								
29/06/2021	18:00	1.8	135	30/06/2021	18:00	0.9	67.5								
29/06/2021	19:00	1.8	90	30/06/2021	19:00	0.9	67.5								
29/06/2021	20:00	1.3	112.5	30/06/2021	20:00	0.9	67.5								
29/06/2021	21:00	1.3	112.5	30/06/2021	21:00	1.3	67.5								
29/06/2021	22:00	1.3	112.5	30/06/2021	22:00	0.9	90								
29/06/2021	23:00	0.9	90	30/06/2021	23:00	1.3	90								

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

Location: AM3 – Sky Tower

Start Date	Weather	Air Temp. (°C)	Atmospheric Pressure (hPa)	Filter weight (g)		Particulate weight (g)	Elapse Time		Sampling Time (min)	Flow Rate (cfm)		Av. Flow (m³/min)	Total vol. (m³)	Conc. (µg/m³)
				Initial	Final		Initial	Final		Initial	Final			
04/06/2021	Cloudy	28.9	1004.7	11.7047	11.8021	0.0974	3024.54	3048.56	1441	52	52	1.48	2129	46
10/06/2021	Cloudy	28.8	1005.6	11.6004	11.7195	0.1191	3049.63	3073.65	1441	52	52	1.48	2130	56
16/06/2021	Sunny	31.7	1006.3	18.6983	18.7741	0.0758	3074.07	3098.09	1441	52	52	1.47	2121	36
22/06/2021	Cloudy	29.2	1005.1	14.8653	14.9741	0.1088	3099.15	3123.17	1441	52	52	1.48	2128	51
28/06/2021	Cloudy	26.2	1005.2	15.1921	15.3173	0.1252	3124.11	3148.13	1441	52	52	1.48	2140	59
												Maximum		59
												Minimum		36
												Average		50
												Action Level		182
												Limit Level		260

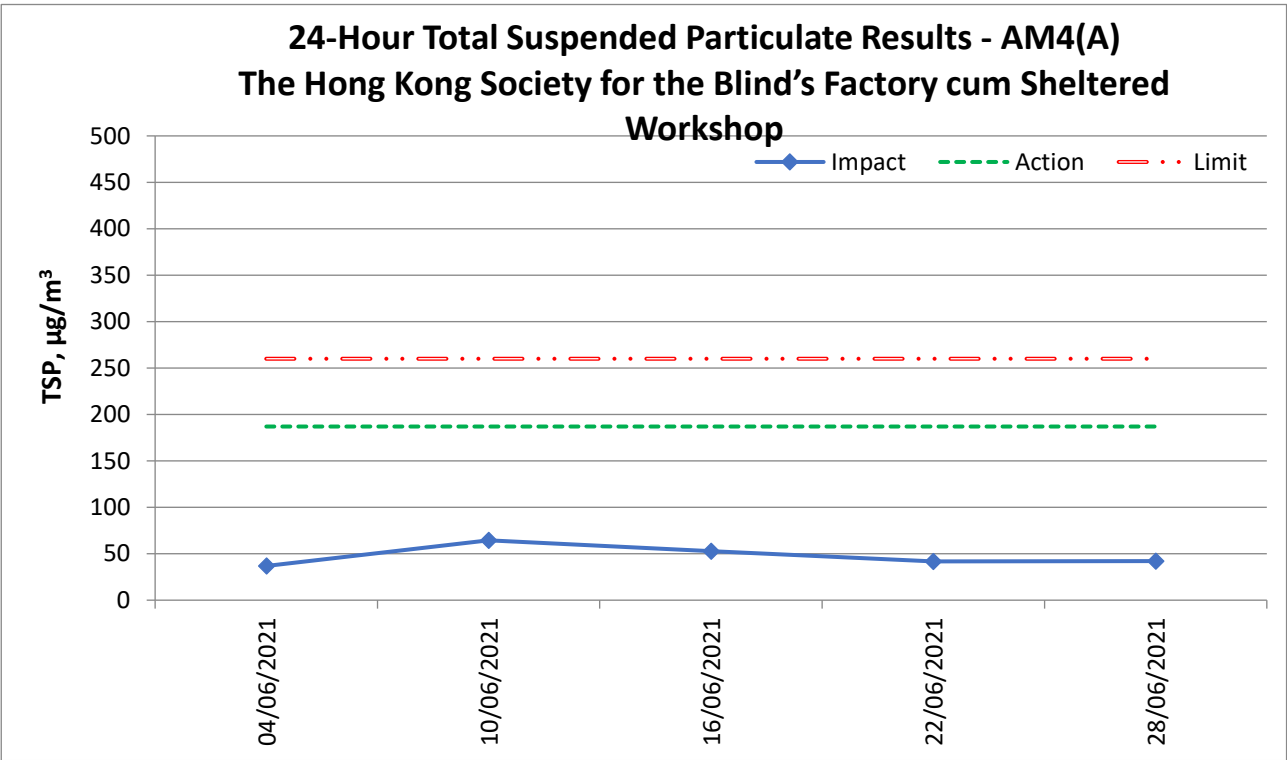
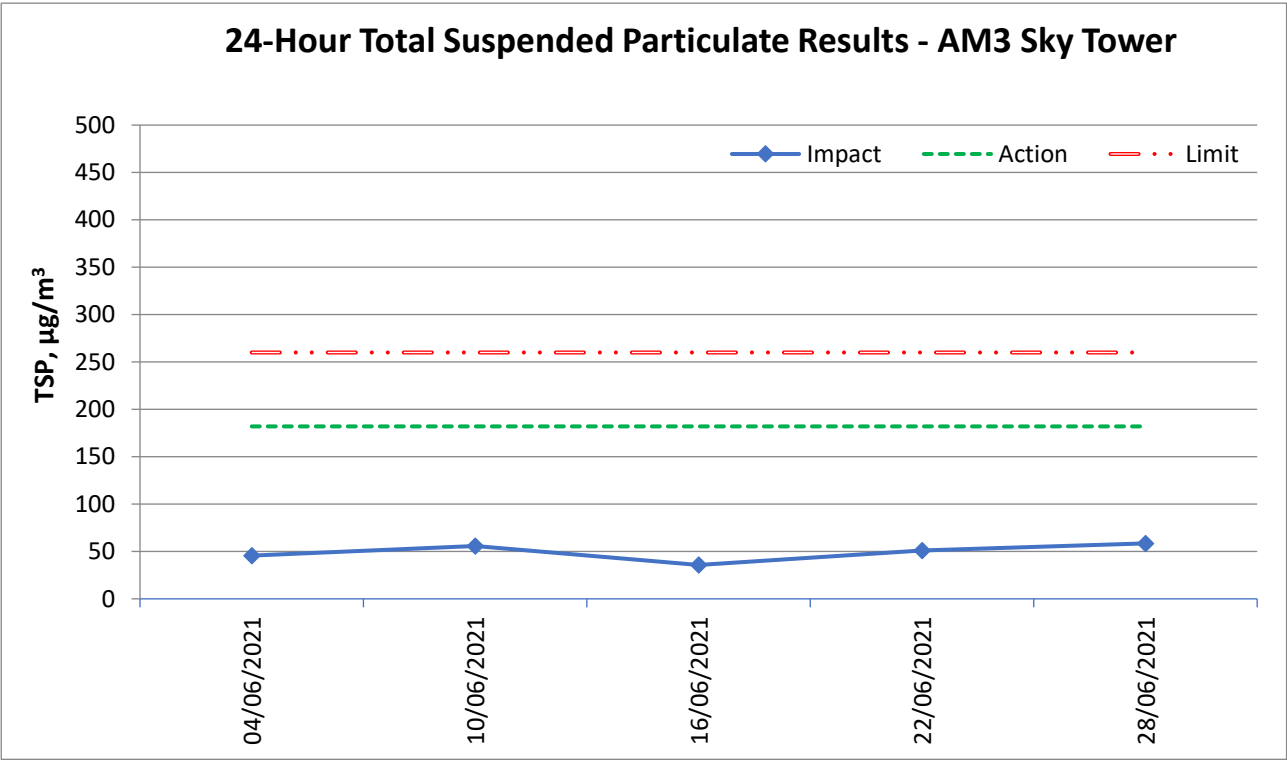
Location: AM4(A) – The Hong Kong Society for the Blind's Factory cum Sheltered Workshop

Start Date	Weather	Air Temp. (°C)	Atmospheric Pressure (hPa)	Filter weight (g)		Particulate weight (g)	Elapse Time		Sampling Time (min)	Flow Rate (cfm)		Av. Flow (m³/min)	Total vol. (m³)	Conc. (µg/m³)
				Initial	Final		Initial	Final		Initial	Final			
04/06/2021	Cloudy	28.9	1004.7	18.7559	18.8274	0.0715	2668.66	2692.68	1441	50	50	1.35	1941	37
10/06/2021	Cloudy	28.8	1005.6	18.5864	18.7065	0.1201	2693.32	2717.34	1441	48	48	1.29	1864	64
16/06/2021	Sunny	31.7	1006.3	15.1801	15.2778	0.0977	2717.65	2741.68	1442	48	48	1.29	1857	53
22/06/2021	Cloudy	29.2	1005.1	15.1672	15.2447	0.0775	2742.21	2766.23	1441	48	48	1.29	1862	42
28/06/2021	Cloudy	26.2	1005.2	18.4063	18.4885	0.0822	2766.36	2790.39	1442	50	50	1.35	1951	42
												Maximum		64
												Minimum		37
												Average		48
												Action Level		187
												Limit Level		260

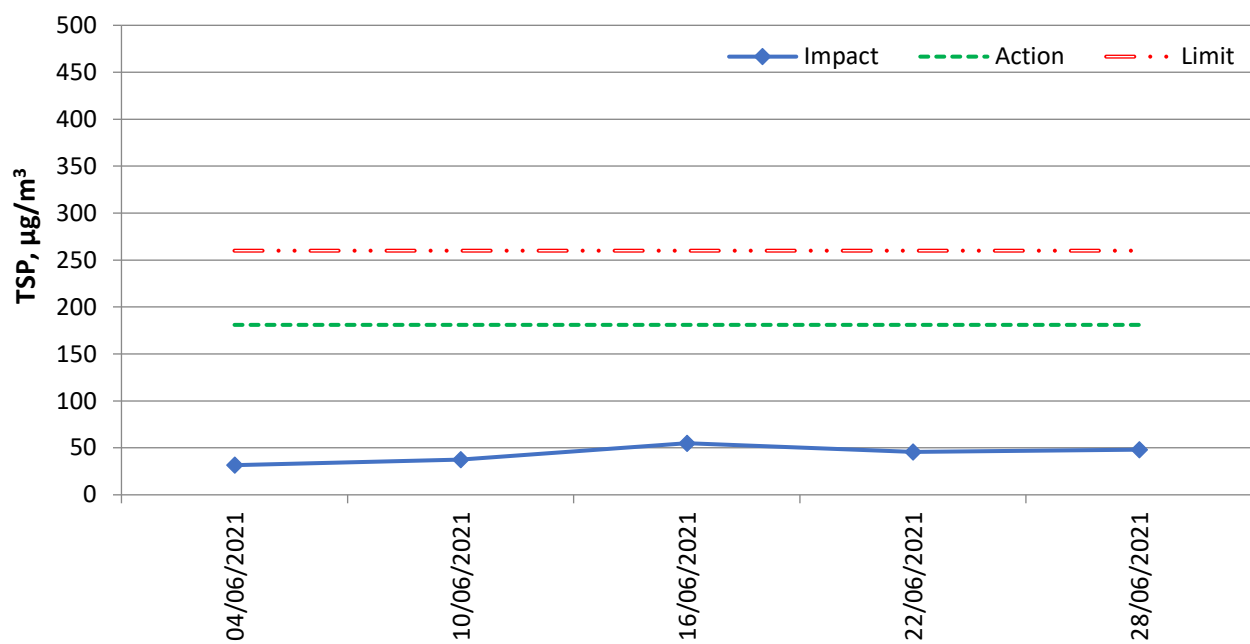
Location: AM7 – Hong Kong Children's Hospital

Start Date	Weather	Air Temp. (°C)	Atmospheric Pressure (hPa)	Filter weight (g)		Particulate weight (g)	Elapse Time		Sampling Time (min)	Flow Rate (cfm)		Av. Flow (m ³ /min)	Total vol. (m ³)	Conc. (µg/m ³)
				Initial	Final		Initial	Final		Initial	Final			
04/06/2021	Cloudy	28.9	1004.7	18.6133	18.6774	0.0641	7569.57	7593.59	1441	52	52	1.41	2030	32
10/06/2021	Cloudy	28.8	1005.6	18.5519	18.6284	0.0765	7593.96	7617.99	1442	52	52	1.41	2032	38
16/06/2021	Sunny	31.7	1006.3	15.3933	15.5045	0.1112	7618.12	7642.15	1442	52	52	1.40	2023	55
22/06/2021	Cloudy	29.2	1005.1	18.6483	18.7413	0.0930	7642.26	7666.28	1441	52	52	1.41	2029	46
28/06/2021	Cloudy	26.2	1005.2	18.5514	18.6459	0.0945	7666.39	7690.41	1441	50	50	1.36	1959	48
												Maximum		55
												Minimum		32
												Average		44
												Action Level		181
												Limit Level		260

24-hour average TSP



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



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

Location:
**AM3 -
 Sky Tower**

Date	Measurement Period			1-hr TSP concentration, $\mu\text{g}/\text{m}^3$	Weather
4/6/2021	9:00	-	10:00	29	Cloudy
	10:00	-	11:00	30	
	11:00	-	12:00	34	
10/6/2021	9:00	-	10:00	33	Cloudy
	10:00	-	11:00	37	
	11:00	-	12:00	36	
16/6/2021	13:00	-	14:00	24	Sunny
	14:00	-	15:00	28	
	15:00	-	16:00	28	
22/6/2021	13:00	-	14:00	33	Cloudy
	14:00	-	15:00	33	
	15:00	-	16:00	39	
28/6/2021	15:30	-	16:30	34	Cloudy
	16:30	-	17:30	37	
	17:30	-	18:30	38	
Maximum				39	
Minimum				24	
Average				33	
Action Level				297	
Limit Level				500	

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

Date	Measurement Period			1-hr TSP concentration, $\mu\text{g}/\text{m}^3$	Weather
4/6/2021	9:00	-	10:00	38	Cloudy
	10:00	-	11:00	39	
	11:00	-	12:00	32	
10/6/2021	13:00	-	14:00	40	Cloudy
	14:00	-	15:00	44	
	15:00	-	16:00	45	
16/6/2021	9:00	-	10:00	31	Sunny
	10:00	-	11:00	36	
	11:00	-	12:00	35	
22/6/2021	13:00	-	14:00	28	Cloudy
	14:00	-	15:00	32	
	15:00	-	16:00	34	
28/6/2021	11:00	-	12:00	27	Cloudy
	13:00	-	14:00	28	
	14:00	-	15:00	33	
Maximum				45	
Minimum				27	
Average				35	
Action Level				326	
Limit Level				500	

Location:

AM7 -

Hong

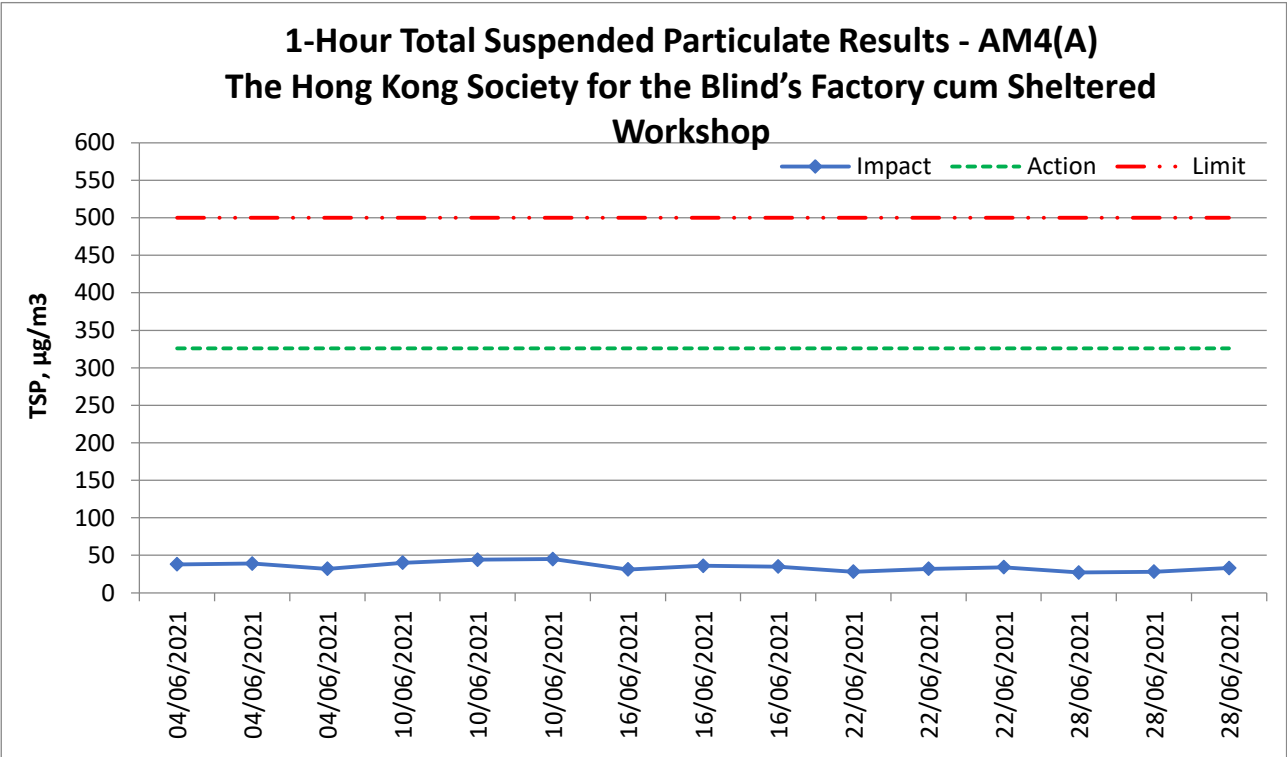
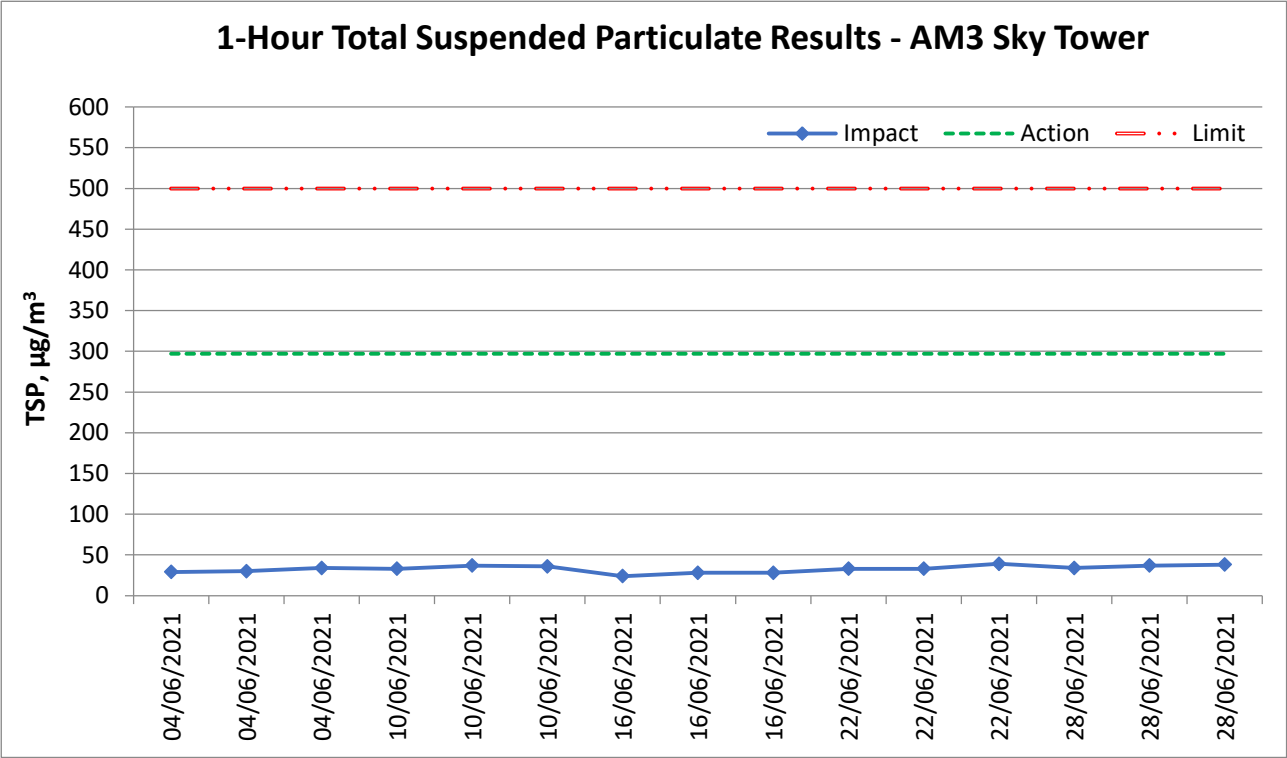
Children's

Hospital

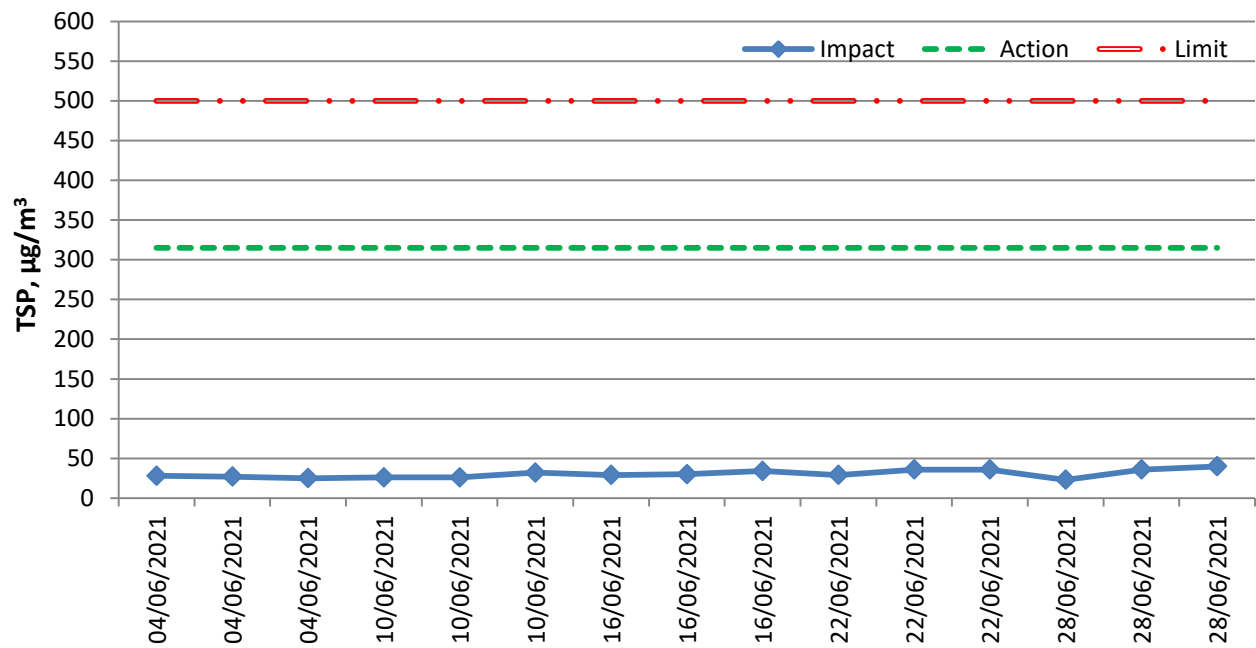
Kong

Date	Measurement Period			1-hr TSP concentration, $\mu\text{g}/\text{m}^3$	Weather
4/6/2021	13:00	-	14:00	28	Cloudy
	14:00	-	15:00	27	
	15:00	-	16:00	25	
10/6/2021	9:00	-	10:00	26	Cloudy
	10:00	-	11:00	26	
	11:00	-	12:00	32	
16/6/2021	13:00	-	14:00	29	Sunny
	14:00	-	15:00	30	
	15:00	-	16:00	34	
22/6/2021	9:00	-	10:00	29	Cloudy
	10:00	-	11:00	36	
	11:00	-	12:00	36	
28/6/2021	11:00	-	12:00	23	Cloudy
	16:20	-	17:20	36	
	17:20	-	18:20	40	
Maximum				40	
Minimum				23	
Average				30	
Action Level				315	
Limit Level				500	

1-hour average TSP



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



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.	4. implemented; 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

Catalogue of Sound Level Meter

Specifications

NL-52		NL-42	
Applicable standards		IEC 61672-1: 2002 Class 1 ANSI S1.4-1983 Type 1 ANSI S1.4A-1985 Type 1 ANSI S1.43-1997 Type 1 JIS C 1509-1: 2005 Class 1 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_s Maximum sound pressure level: L_{max} Minimum sound pressure level: L_{min} Percentile sound levels: L_N (0.1 to 99.9 %, 0.1-increment steps, max. 5 values) Processing (sub ch) Instantaneous sound pressure level: L_p Additional processing In addition to main processing items, one of the following can be selected for simultaneous processing: C-weighted equivalent continuous sound level: L_{Ceq} C-weighted peak sound level: L_{Cpeak} Z-weighted peak sound level: L_{Zpeak} 1-time-weighted equivalent continuous sound level: $L_{A,1eq}^{*2}$ Maximum 1-time-weighted equivalent continuous sound level: $L_{A,1max}^{*2}$ The power average of the maximum level of each 5 second interval: $L_{A,5}$ The frequency weighting for the additional processing synchronizes with the frequency weighting of the sub-channel, so when the sub-channel has A-weighting, $L_{A,5}$ 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	
	Sensitivity level	-27 dB	
Measurement range		A-weighting: 25 dB to 138 dB C-weighting: 33 dB to 138 dB Z-weighting: 38 dB to 138 dB C-weighting peak sound level: 55 dB to 141 dB Z-weighting peak sound level: 60 dB to 141 dB	
Inherent noise	A-weighting	17 dB or less	
	C-weighting	25 dB or less	
	Z-weighting	30 dB or less	
Frequency range		20 Hz to 20 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	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 μ s (L_p , L_{eq} , L_s , L_{max} , L_{min} , L_{peak} : sampling frequency: 48 kHz)	
Calibration		100 ms (L_N)	
Correction functions		Measurement Law: electrical calibration performed according to IEC and JIS standards, using internally generated signals: acoustic calibration performed with the NC-74. 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.	
	Auto+2	Internal memory: max. 1000 sets SD Card: depends on the capacity of the SD Card*1 Instantaneous values (L_p mode) and processed values (L_{eq} mode) are stored continuously and automatically at preset intervals.	
Lp sampling cycle		100 ms, 200 ms, 1 s, L_{eq} 1 s	
Leq 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 Processed value
Output interval	100 ms
Print out	Printing of measurement results on dedicated printer DPU-414
Power requirements	
Battery life (23 °C)	Four IEC R6 (size AA) batteries (alkaline or rechargeable batteries) or external power supply Alkaline battery LR6 (AA): 26 h NI-MH secondary battery: 25 h At the maximum: * Depends on the setting
AC adapter	NC-98C (NC-34 for previous models cannot be used)
External power voltage	5 to 7 V (rated voltage: 6 V)
Current consumption	Approximately 90 mA (normal operation, rated voltage)
Ambient conditions	Temperature: -10 to +50 °C Humidity: 10 to 90 % RH (non-condensing)
Dustproof / water-resistant performance*4	IP code: IP54 (except for microphone) See precautions regarding waterproofing
Dimensions, weight	Approx. 250 (H) x 76 (W) x 33 mm(D), approx. 400 g (with batteries)
Supplied accessories	Storage case x 1, Windscreen WS-10 x 1, Windscreen fall prevention rubber x 1, Hand strap x 1, LR6 (AA) alkaline batteries x 4, SD card 512 MB x 1 (NX-42EX preinstalled model only)

Options

Product name	Product number
Extended function program (Inst.on 512 MB SD card)	NX-42EX
Waveform recording program*2 (Inst.on 2 GB SD card)	NX-42WR
Octave, 1/3 octave real-time analysis program*2 (Inst.on 512 MB SD card)	NX-42RT
FFT analysis program*2 (Inst.on 512 MB SD card)	NX-42FT
Data management software for environmental measurement	AS-60
Data management software for environmental measurement (Includes the octave and 1/3 octave data management software)	AS-60RT
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-1506
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.

Distributed by:

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.

1011-4 212 P.D

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

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



Calibration Certificate of Sound Level Meter



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: 2HB20001172-0003
Certificate No. 



委托单位: Castco Testing Centre Limited
Client
仪器名称: Sound Level Meter
Description
型号规格: NL-52
Model/Type
制造商: RION
Manufacturer
机身号: 00976203
Serial No.
管理号: AAST-SLM-10
Asset No.
接收日期: 2020-07-15 校准日期: 2020-07-20
Rec. Date Cal. Date
签发日期: 2020-07-20 建议校准周期: 12个月(12 Months)
App. Date Reference Cal. Period
结论: 所校准项目合格(Passed at Calibration Items)
Conclusion

校准: 陈卓辉
Calibrated by
签发: 郑木力
Approved by

核验: 钟颖
Inspected by
印章:
Stamp

赛宝计量检测中心
广州总部地址: 广州天河区东莞庄路110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
H.Q. Addr: No.110,Dongguanzhuang Road,Tianhe District,Guangzhou
Service Tel: 020-87237633 Fax: 020-87236189
Complaint Tel: 020-87236896
Email: cal@ceprei.com
Website: www.ceprei-cal.com

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证书编号(Certificate No.): 2HB20001172-0003

说明

DIRECTIONS

1. 本机构质量管理体系符合ISO/IEC 17025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 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。(Please see the attachment of certificate No. L13344 at CNAS website for details, beyond which is not accredited).

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)
数字多用表	4GC19040017-0001/2020-11-03/赛宝	DCV: $\pm 0.0035\%$; ACV: $\pm 0.06\%$; DCI: $\pm 0.05\%$; ACI: $\pm 0.1\%$; R: $\pm 0.01\%$; f: $\pm 0.01\%$
步进衰减器	4GC20000158-0012/2021-04-29/赛宝	$\pm 3dB$
标准传声器	GFJGL1001200310164/2021-02-26/航空304所	$U=(0.05-0.12)dB (k=2)$
声校准器	4GC19040146-0209/2020-12-29/赛宝	1级
正弦信号发生器	4GC19040057-0001/2020-11-05/赛宝	f: $\pm 1mHz$; 失真度: $< -70dB$
PULSE分析系统	4GC20000009-0001/2021-01-08/赛宝	频率: $U_{ref}=0.001\%$; $k=2$; 电压: $U_{ref}=0.04\%$; $k=2$
前置放大器	GFJGL1001200310165/2021-02-26/航空304所	$U=0.3dB (k=2)$

4. 校准地点(The calibration place):

广州市天河区东莞庄路110号401楼振动声学室

5. 环境条件(Environmental conditions):

温度(Temperature): 24°C 相对湿度(Relative Humidity): 60%

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"。本证书报告的判定规则和结论仅供参考, 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 $\leq$ High Limit", "F" and "Fail" stand for "the measured value $<$ Low Limit or the measured value $>$ High Limit", "N/A" stands for "Not Applicable". The judgment rules and 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建议校准周期。

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

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

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

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Calibration Certificate of Sound Level Meter



证书编号(Certificate No.): 2HB20001172-0003

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	12132	NH-25	76320	
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	94.0	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):	-0.2 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):	-0.2 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):	-0.2 dB
U (k=2)	0.4 dB
下限以上5dB间隔1dB点的最大误差(Maximum Error for each 1dB above Lower Limit 5dB):	-0.1 dB
U (k=2)	0.4 dB

数据页(Data sheet) ID: U071288

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证书编号(Certificate No.): 2HB20001172-0003

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	-50.7	-50.5	-0.2	+2.0	P	0.5
25	-45.0	-44.7	-0.3	+2.0 ~ -1.5	P	0.5
31.5	-39.5	-39.4	-0.1	+1.5	P	0.5
40	-34.5	-34.6	0.1	+1.0	P	0.5
50	-30.2	-30.2	0.0	+1.0	P	0.5
63	-26.1	-26.2	0.1	+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	-16.1	-16.1	0.0	+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	-3.2	-3.2	0.0	+1.0	P	0.4
630	-1.8	-1.9	0.1	+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	0.9	1.0	-0.1	+1.0	P	0.6
2000	1.1	1.2	-0.1	+1.0	P	0.6
2500	1.1	1.3	-0.2	+1.0	P	0.6
3150	1.0	1.2	-0.2	+1.0	P	0.6
4000	0.7	1.0	-0.3	+1.0	P	0.6
5000	0.3	0.5	-0.2	+1.5	P	0.6
6300	-0.2	-0.1	-0.1	+1.5 ~ -2.0	P	0.6
8000	-1.1	-1.1	0.0	+1.5 ~ -2.5	P	0.6
10000	-2.3	-2.5	0.2	+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	-18.4	-9.3	-9.1	+3.0 ~ -∞	P	1.0

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Calibration Certificate of Sound Level Meter



证书编号(Certificate No.): 2HB20001172-0003

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	-4.6	-4.4	-0.2	+2.0 ~ -1.5	P	0.5
31.5	-3.1	-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	-0.8	-0.8	0.0	±1.0	P	0.5
80	-0.4	-0.5	0.1	±1.0	P	0.5
100	-0.2	-0.3	0.1	±1.0	P	0.5
125	-0.1	-0.2	0.1	±1.0	P	0.5
160	0.0	-0.1	0.1	±1.0	P	0.5
200	0.0	0.0	0.0	±1.0	P	0.5
250	0.1	0.0	0.1	±1.0	P	0.5
315	0.1	0.0	0.1	±1.0	P	0.4
400	0.1	0.0	0.1	±1.0	P	0.4
500	0.1	0.0	0.1	±1.0	P	0.4
630	0.1	0.0	0.1	±1.0	P	0.4
800	0.1	0.0	0.1	±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	-0.5	-0.3	-0.2	±1.0	P	0.6
3150	-0.7	-0.5	-0.2	±1.0	P	0.6
4000	-1.1	-0.8	-0.3	±1.0	P	0.6
5000	-1.5	-1.3	-0.2	±1.5	P	0.6
6300	-2.1	-2.0	-0.1	+1.5 ~ -2.0	P	0.6
8000	-3.0	-3.0	0.0	+1.5 ~ -2.5	P	0.6
10000	-4.2	-4.4	0.2	+2.0 ~ -3.0	P	0.6
12500	-6.2	-6.2	0.0	+2.0 ~ -5.0	P	1.0
16000	-10.4	-8.5	-1.9	+2.5 ~ -16.0	P	1.0
20000	-20.4	-11.2	-9.2	+3.0 ~ ∞	P	1.0

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证书编号(Certificate No.): 2HB20001172-0003

6 自生噪声 (Autogenous noise)

计权 (Weighting)	实测值 (Actual) (dB)
A	24.0

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Calibration Certificate of Sound Level Meter



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

校准证书

CALIBRATION CERTIFICATE

证书编号: 2HB20001172-0004
Certificate No. 



委托单位: Castco Testing Centre Limited
Client
仪器名称: Sound Level Meter
Description
型号规格: NL-52
Model/Type
制造商: RION
Manufacturer
机身号: 00976204
Serial No.
管理号: AAST-SLM-11
Asset No.
接收日期: 2020-07-15
Rec. Date
校准日期: 2020-07-20
Cal. Date
签发日期: 2020-07-20
App. Date
建议校准周期: 12个月(12 Months)
Reference Cal. Period
结论: 所校准项目合格(Passed at Calibration Items)
Conclusion

校准: 陈卓辉
Calibrated by
签发: 郑木力
Approved by

核验: 钟颖
Inspected by
印章: 
Stamp

赛宝计量检测中心
广州总部地址: 广州天河区东莞庄路110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
H.Q. Addr: No.110,Dongguanzhuang Road,Tianhe District,Guangzhou
Service Tel: 020-87237633 Fax: 020-87236189
Complaint Tel: 020-87236896
Email: cal@ceprei.com
Website: www.ceprei-cal.com

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

说明

DIRECTIONS

1. 本机构质量管理体系符合ISO/IEC 17025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 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。(Please see the attachment of certificate No. L13344 at CNAS website for details, beyond which is not accredited).

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)
数字多用表	4GC19040017-0001/2020-11-03/赛宝	DCV: $\pm 0.0035\%$; ACV: $\pm 0.06\%$; DCI: $\pm 0.05\%$; ACI: $\pm 0.1\%$; R: $\pm 0.01\%$; f: $\pm 0.01\%$
步进衰减器	4GC20000158-0012/2021-04-29/赛宝	$\pm 3dB$
标准传声器	GFJGJL1001200310164/2021-02-26/航空304所	$U=(0.05-0.12)dB$ ($k=2$)
声校准器	4GC19040146-0209/2020-12-29/赛宝	1级
正弦信号发生器	4GC19040057-0001/2020-11-05/赛宝	f: $\pm 1mHz$; 失真度: $< -70dB$
PULSE分析系统	4GC20000009-0001/2021-01-08/赛宝	频率: $U_{me}=0.001\%$; $k=2$; 电压: $U_{me}=0.04\%$; $k=2$
前置放大器	GFJGJL1001200310165/2021-02-26/航空304所	$U=0.3dB$ ($k=2$)

4. 校准地点(The calibration place):

广州市天河区东莞庄路110号401楼振动声学室

5. 环境条件(Environmental conditions):

温度(Temperature): 24°C 相对湿度(Relative Humidity): 60%

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"。本证书报告的判定规则和结论仅供参考, 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 $\leq$ the measured value $\leq$ High Limit", "F" and "Fail" stand for "the measured value $<$ Low Limit or the measured value $>$ High Limit", "N/A" stands for "Not Applicable". The judgment rules and 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建议校准周期。

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

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

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

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Calibration Certificate of Sound Level Meter



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.): 2HB20001172-0004

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	-50.6	-50.5	-0.1	±2.0	P	0.5
25	-44.9	-44.7	-0.2	+2.0 ~ -1.5	P	0.5
31.5	-39.8	-39.4	-0.4	±1.5	P	0.5
40	-34.6	-34.6	0.0	±1.0	P	0.5
50	-30.4	-30.2	-0.2	±1.0	P	0.5
63	-26.3	-26.2	-0.1	±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	-6.7	-6.6	-0.1	±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	-7.9	-6.6	-1.3	+2.5 ~ -16.0	P	1.0
20000	-14.2	-9.3	-4.9	+3.0 ~ -∞	P	1.0

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Calibration Certificate of Sound Level Meter



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

5 C计权特性(C-Weighting Characteristic)

频率 (Frequency)	实测值 (Actual)	理论值 (Theoretical value)	误差 (Error)	允许误差 (Limit)	结论 (Pass/Fail)	U (k=2)
(Hz)	(dB)	(dB)	(dB)	(dB)	(P/F)	(dB)
20	-6.4	-6.2	-0.2	±2.0	P	0.5
25	-4.5	-4.4	-0.1	+2.0 ~ -1.5	P	0.5
31.5	-3.1	-3.0	-0.1	±1.5	P	0.5
40	-2.1	-2.0	-0.1	±1.0	P	0.5
50	-1.3	-1.3	0.0	±1.0	P	0.5
63	-0.9	-0.8	-0.1	±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	-0.1	-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	0.0	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	-0.1	-0.2	0.1	±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.): 2HB20001172-0004

6 自生噪声 (Autogenous noise)

计权 (Weighting)	实测值 (Actual)
(dB)	(dB)
A	23.8

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Catalogue of Sound Calibrator

For microphone calibration **NC-74**

How to use

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

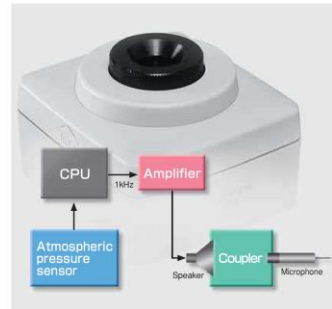


Usage example (NL series)

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

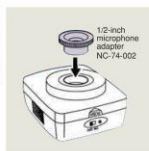
Atmospheric pressure compensation principle

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



Using the 1/2-inch adapter

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



Specifications

Applicable standards	IEC 60942:2003 Class 1 dB 61615:2004 Class 1
Suitable microphones	1-inch microphones IEC 61094-1 Type LS1P UC-27 UC-25 UC-34 1/2-inch microphones IEC 61094-1 Type LS2aP UC-59 UC-57 UC-58A UC-50 UC-26 UC-30 UC-31 UC-33P
Nominal sound pressure level	94 dB
Sound pressure level tolerance	±0.3 dB
Nominal frequency	1 kHz
Frequency tolerance	±1.0 % or less
Power requirements	IEC LR6 (size AA) alkaline battery X 2
Dimensions, mass	Approx. 49 (H) X 80 (W) X 74 (D) mm Approx. 200 g (including batteries)
Supplied accessories	Class X 1 IEC LR6 (size AA) alkaline battery X 2 1/2-inch microphone adapter NC-74-002 X 1

* Specification subject to change without notice.

RION CO., LTD.

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

Distributed by:

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



Printed in Japan 0510-1 0807.P.MP

Calibration Certificate of Sound Calibrator



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

校准证书 CALIBRATION CERTIFICATE

证书编号: 2HB20001561-0002

Certificate No.



中国认可
国际互认
校准
CALIBRATION
CNAS L13344

委托单位: Castco Testing Centre Limited
Client
仪器名称: Sound Level Calibrator
Description
型号规格: NC-74
Model/Type
制造商: RION
Manufacturer
机身号: 34678556
Serial No.
管理号: AAST-SLC-06
Asset No.
接收日期: 2020-09-08
Rec. Date
校准日期: 2020-09-12
Cal. Date
签发日期: 2020-09-12
App. Date
建议校准周期: 12个月(12 months)
Reference Cal. Period
结论: 所校准项目合格(Passed at Calibration Items)
Conclusion

校准:
Calibrated by

陈卓辉
郑木力

核验:
Inspected by

钟灏
印章:

赛宝计量检测中心
广州总部地址: 广州天河区东莞庄路110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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Complaint Tel: 020-87236896
Email: cal@ceprei.com
Website: www.ceprei-cal.com

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Calibration Certificate of Sound Calibrator

证书编号(Certificate No.): 2HB20001561-0002

说明 DIRECTIONS

1. 本机构质量管理体系符合ISO/IEC 17025:2017标准的要求, 获得中国合格评定国家认可委员会 (CNAS) 认可, 认可证书号为: CNAS L13344。
This laboratory quality management system meets the ISO/IEC 17025:2017 and is accredited by the China National Accreditation Service for Conformity Assessment, No. CNAS L13344.

2. 本次校准的技术依据及CNAS认可范围(Reference documents and CNAS accredited scopes):
▪ JJG 176-2005 声校准器检定规程: Sound Pressure Level: 94dB、104dB、114dB、124dB(63Hz~8kHz); 94dB、104dB、114dB(31.5Hz~16kHz); Frequency: 31.5Hz~16kHz; Harmonic Distortion: 0~10%, (20Hz~20 kHz)。
* 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。(Please see the attachment of certificate No. L13344 at CNAS website for details, beyond which is not accredited).

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	LSvm2020-02491/2021-04-26/中国计量院	频率: $U_{rel}=0.001\%$, $k=2$; 电压: $U_{rel}=0.04\%$, $k=2$	频率:0.001Hz~51.2kHz, 电压: $(1 \times 10^{-5} \sim 30)V$
标准传声器	GFJGIL1001200310164/2021-02-26/航空304所	$U=(0.05 \sim 0.12)dB$ ($k=2$)	20Hz~20kHz
前置放大器	GFJGIL1001200310165/2021-02-26/航空304所	$U=0.3dB$ ($k=2$)	(10~20000) Hz

4. 校准地点(The calibration place):
广州市天河区东莞庄路110号401楼振动声学室

5. 环境条件(Environmental conditions):
温度(Temperature): 24°C 相对湿度(Relative Humidity): 60%

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"。本证书报告的判定规则和结论仅供参考, 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 $\leq$ High Limit", "F" and "Fail" stand for "the measured value $<$ Low Limit or the measured value $>$ High Limit", "N/A" stands for "Not Applicable". The judgment rules and 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建议校准周期。
The reference calibration period is based on the reference documents and normal operating conditions of the calibrated instrument. It is only for reference. The client may decide the calibration period of the instrument according to the actual use.

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

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

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证书编号(Certificate No.): 2HB20001561-0002

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)	测量声压级 (Measured SPL)	声压级差的绝对值 (Absolute value of SPL)	允许范围 (Limit)	结论 (Pass/Fail)	U (dB)
(dB)	(dB)	(dB)	(dB)		(dB)
94	94.05	0.05	≤ 0.40	P	0.10

3 频率 (Frequency)

规定频率 (Prescribed Fre.)	测量频率 (Measured Fre.)	频率误差的绝对值 (Absolute value of Fre.)	允许范围 (Limit)	结论 (Pass/Fail)	U_{rel} (%)
(Hz)	(Hz)	(%)	(%)		(%)
1000	1003.7	0.37	≤ 1.00	P	0.10

4 总失真 (Distortion)

规定声压级 (Prescribed SPL)	规定频率 (Measured Fre.)	总失真 (Distortion)	允许范围 (Limit)	结论 (Pass/Fail)	U_{rel} (%)
(dB)	(Hz)	(%)	(%)		(%)
94	1000	0.96	≤ 3.00	P	5.0

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数据页(Data sheet) ID: U013393

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Calibration Certificate of Sound Calibrator



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

校准证书

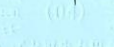
CALIBRATION CERTIFICATE

证书编号: 2HB20001172-0006
Certificate No. 



委托单位: Castco Testing Centre Limited
Client
仪器名称: Sound Level Calibrator
Description
型号规格: NC-74
Model/Type
制造商: RION
Manufacturer
机身号: 34178129
Serial No.
管理号: AAST-SLC-05
Asset No.
接收日期: 2020-07-15 校准日期: 2020-07-20
Rec. Date Cal. Date
签发日期: 2020-07-21 建议校准周期: 12个月(12 Months)
App. Date Reference Cal. Period
结论: 所校准项目合格(Passed at Calibration Items)
Conclusion

校准: 陈卓辉
Calibrated by
签发: 郑木力
Approved by

核验: 钟颖
Inspected by
印章: 
Stamp

赛宝计量检测中心
广州总部地址: 广州天河区东莞庄路110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
H.Q. Addr: No.110,Dongguanhuang Road,Tianhe District,Guangzhou
Service Tel: 020-87237633 Fax: 020-87236189
Complaint Tel: 020-87236896
Email: cal@ceprei.com
Website: www.ceprei-cal.com

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证书编号(Certificate No.): 2HB20001172-0006

说明

DIRECTIONS

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标准传声器	GJGJL1001200310164/2021-02-26/航空304所	$U=(0.05-0.12)\text{dB}$ ($k=2$)
前置放大器	GJGJL1001200310165/2021-02-26/航空304所	$U=0.3\text{dB}$ ($k=2$)
PULSE分析系统	4GC20000024-0064/2021-02-12/赛宝	频率: $U_{\text{rel}}=0.001\%$, $k=2$; 电压: $U_{\text{rel}}=0.04\%$, $k=2$

4. 校准地点(The calibration place):
广州市天河区东莞庄路110号401楼振动声学室

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温度(Temperature): 24°C 相对湿度(Relative Humidity): 60%

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Calibration Certificate of Sound Calibrator



证书编号(Certificate No.): 2HB20001172-0006

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

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规定声压级 (Prescribed SPL)	测量声压级 (Measured SPL)	声压级差的绝对值 (Absolute value of SPL)	允许范围 (Limit)	结论 (Pass/Fail)	U
(dB)	(dB)	(dB)	(dB)	(Pass/Fail)	(k=2)
94	94.38	0.38	≤0.40	P	0.10

3 频率 (Frequency)

规定频率 (Prescribed Fre.)	测量频率 (Measured Fre.)	频率误差的绝对值 (Absolute value of Fre.)	允许范围 (Limit)	结论 (Pass/Fail)	U _{rel}
(Hz)	(Hz)	(%)	(%)	(Pass/Fail)	(k=2)
1000	1002.0	0.20	≤1.00	P	0.10

4 总失真 (Distortion)

规定声压级 (Prescribed SPL)	规定频率 (Measured Fre.)	总失真 (Distortion)	允许范围 (Limit)	结论 (Pass/Fail)	U _{rel}
(dB)	(Hz)	(%)	(%)	(Pass/Fail)	(k=2)
94	1000	2.48	≤3.00	P	5.0

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Catalogue of Air Flow Meter (TSI TA440)

SPECIFICATIONS

THERMAL ANEMOMETERS MODELS TA410, TA430 AND TA440

Velocity

Range (TA410)	0 to 20 m/s (0 to 4,000 ft/min)
Range (TA430, TA440)	0 to 30 m/s (0 to 6,000 ft/min)
Accuracy (TA410) ^{1a2}	±5% of reading or ±0.025 m/s (±5 ft/min), whichever is greater
Accuracy (TA430, TA440) ^{1a2}	±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	-18 to 93°C (0 to 200°F)
Operating (Probe)	-10 to 60°C (14 to 140°F)
Model TA440	-10 to 60°C (14 to 140°F)
Storage	-20 to 60°C (-4 to 140°F)

Data Storage Capabilities (TA430, TA440)

Range	12,700+ samples and 100 test IDs
-------	----------------------------------

Logging Interval (TA430, TA440)

1 second to 1 hour

Specifications subject to change without notice.

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

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

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

Time Constant (TA430, TA440)

User selectable

External Meter Dimensions

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

Meter Weight with Batteries

0.27 kg (0.6 lbs.)

Meter Probe Dimensions

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

Articulating Probe Dimensions

Articulating Section 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	+	+	+

^{1a} Temperature compensated over an air temperature range of 5 to 65°C (40 to 150°F).

^{1b} 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 6000 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 (0.05°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.

Calibration Certificate of Air Flow Meter



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



校准证书

CALIBRATION CERTIFICATE

证书编号:
Certificate No. DH21AA002160001

委托方名称:
Client name Castco Testing Centre Limited

委托方地址:
Add. of Client 33, On Kui Street, Fanling, N.T.

计量器具名称:
Name of Instrument 风速计

型号/规格:
Type/Specification TA440

制造单位:
Manufacturer AIRFLOW

器具编号:
Serial No. AAST-FLOW-03/TA4401706003

接收日期:
Date of Receipt 2021 年 02 月 23 日

校准日期:
Date of calibration 2021 年 02 月 26 日

批准人:
Approved by 蒋荣飞

签发日期: 2021 年 02 月 26 日
Date of issue Year/ Month Day

核验员:
Checked by 张吉庆

校准员:
Calibrated by 蒋新建

(证书专用章)
Stamp



计量校准机构备案号: 粤校备2017B010

地址: 深圳市龙华区大浪街道同胜社区浦华科技园厂房A1层

电话: 0755-28161768/28162768/28166778

传真: 0755-21004376 邮编: 518109

网址: www.szdhl.com 电子邮箱: szdhl@163.com

Register No: 粤校备2017B010

Add: 1st Floor, Building A1, Puhua Science and Technology Park, Tongsheng Community, Dalang Street, Longhua District, Shenzhen, Guangdong, China

Tel: 0755-28161768/28162768/28166778

Fax: 0755-21004376 Zip Code: 518109

http://www.szdhl.com E-mail: szdhl@163.com

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

证书编号:
Certificate No. DH21AA002160001

证书说明

Certificate Statement

- 1、本校准证书包含的数据和信息仅对本次被校准的计量器具负责。
The calibration certificate contains data and information applies only to the calibrated instrument.
- 2、本公司仅对加盖我司的“证书专用章”的完整证书负责。
The company only Division I stamped “certificate special seal” is responsible for the full certificate.
- 3、未经本公司书面授权, 不得部分复印证书。
The certificate shall not be photocopied without the written authorization of the company.
- 4、本次校准依据的技术文件:
Reference Documents for the Calibration:
JJG (建设) 0001-1992 热球式风速仪计量检定规程
JJG (建设) 0001-1992 Metrological Verification Regulation of Hot Ball shaped Anemometer

- 5、本次校准所使用的主要计量标准器具:

Major standards of measurement used in the calibration:

设备名称 Equipment Name	测量范围 Measuring Range	不确定度/准确度等级 /最大允许误差 Uncertainty/Accuracy/Class/ Maximum permissible Error	设备编号 Equipment No.	溯源机构/ 证书编号 Traceability to/ Certificate No.	溯源有效期 Traceability Due Date
补偿式微压计	(-2500~2500) Pa	二等	SM1926	上海市计量测试技术研究院 2018E21-20-2637951001	2022-07-28
皮托管	(0~30) m/s	-	SM326	中国计量科学研究院 RGV2019-0007	2024-01-20
机械式温湿度计	温度: (-20~80) °C; 湿度: (0~100) %RH	MPE: 温度: ±2°C; 湿度: ±(5~7) %	85926	深圳市计量质量检测研究院 205605616	2021-05-10
空盒气压表	(800~1060) hPa	$U=0.6\text{hPa}, k=2$	15033115	深圳市计量质量检测研究院 204373348	2021-08-17
标准水银温度计	(0~50) °C	$U=0.03^\circ\text{C}, k=2$	2-204	深圳市计量质量检测研究院 205502058	2022-03-09

- 6、校准地点: 本公司力学实验室
Operation Location

- 7、环境条件: 温度 21.7 °C 相对湿度 60 % 大气压 1010.0 hPa
Operation Environment Temperature RH

第 2 页, 共 3 页 page of pages

Calibration Certificate of Air Flow Meter



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Shenzhen Donghua Metrology & Testing Technology Co., Ltd.

证书编号: DH21AA002160001
Certificate No.

校准结果

Result of Calibration

- 1、外观及工作正常性检查: 正常
- 2、校准结果:

标准值 (m/s)	示值 (m/s)	示值误差 (m/s)	不确定度 (k=2) U_{rel}
2.50	2.50	0.00	3%
3.00	2.99	-0.01	3%
5.00	4.98	-0.02	3%
10.00	9.98	-0.02	3%
15.00	14.96	-0.04	3%
20.00	19.96	-0.04	3%
25.00	24.95	-0.05	3%

说明 (Explanation):

- 1、本次测量结果的不确定度 ($k=2$)。

The uncertainty of the measurement result ($k=2$).

- 2、本次校准结果不确定度的评估和表述依据JJF1059.1的要求。

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

- 3、根据客户要求 and 所依据技术文件的规定, 建议复校时间间隔不超过12个月。

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

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Calibration Certificate of Air Flow Meter



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



校准证书

CALIBRATION CERTIFICATE

证书编号: DH21AA002160002
Certificate No.

委托方名称: Castco Testing Centre Limited
Client name

委托方地址: 33, On Kui Street, Fanling, N.T.
Add. of Client

计量器具名称: 风速计
Name of Instrument

型号/规格: TA440
Type/Specification

制造单位: AIRFLOW
Manufacturer

器具编号: AAST-FLOW-04/TA4401739003
Serial No.

接收日期: 2021 年 02 月 23 日
Date of Receipt Year Month Day

校准日期: 2021 年 02 月 26 日
Date of calibration Year Month Day

批准人: 蒋荣飞
Approved by

签发日期: 2021 年 02 月 26 日
Date of issue Year Month Day

核验员: 张吉庆
Checked by

校准员: 蒋新建
Calibrated by

计量校准机构备案号: 粤校备2017B010

地址: 深圳市龙华区大浪街道同胜社区蒲华科技园厂房
A1层

电话: 0755-28161768/28162768/28166778

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网址: www.szdhjl.com 电子邮箱: szdhjl@163.com

Register No: 粤校备2017B010

Add: 1st Floor, Building A1, Puhua Science and Technology
Park, Tongsheng Community, Dalang Street, Longhua District,
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Calibration Certificate of Air Flow Meter



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Shenzhen Donghua Metrology & Testing Technology Co., Ltd.

证书编号: DH21AA002160002
Certificate No.

证书说明 Certificate Statement

- 1、本校准证书包含的数据和信息仅对本次被校准的计量器具负责。
The calibration certificate contains data and information applies only to the calibrated instrument.
- 2、本公司仅对加盖我司的“证书专用章”的完整证书负责。
The company only Division I stamped "certificate special seal" is responsible for the full certificate.
- 3、未经本公司书面授权,不得部分复印证书。
The certificate shall not be photocopied without the written authorization of the company.
- 4、本次校准依据的技术文件:
Reference Documents for the Calibration
JJG(建设)0001-1992 热球式风速仪计量检定规程
JJG(建设)0001-1992 Metrological Verification Regulation of Hot Ball shaped Anemometer

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

设备名称 Equipment Name	测量范围 Measuring Range	不确定度/准确度等级 /最大允许误差 Uncertainty/Accuracy Class/ Maximum permissible Error	设备编号 Equipment No.	溯源机构/ 证书编号 Traceability to/ Certificate No.	溯源有效期 Traceability Due Date
补偿式微压计	(-2500~2500) Pa	二等	SM1926	上海市计量测试技术研究院 2018E21-20- 2637951001	2022-07-28
皮托管	(0~30) m/s	-	SM326	中国计量科学研究院 RGFv2019-0007	2024-01-20
机械式温湿度计	温度: (-20~80) ℃; 湿度: (0~ 100) %RH	MPE: 温度: ±2℃; 湿 度: ±(5~7) %	85926	深圳市计量质量检测研 究院 205605616	2021-05-10
空盒气压表	(800~1060) hPa	$U=0.6$ hPa, $k=2$	15033115	深圳市计量质量检测研 究院 204373348	2021-08-17
标准水银温度计	(0~50)℃	$U=0.03$ ℃, $k=2$	2-204	深圳市计量质量检测研 究院 205502058	2022-03-09

- 6、校准地点: 本公司力学实验室
Operation Location

- 7、环境条件: 温度 21.7℃ 相对湿度 60% 大气压 1010.0 hPa
Operation Environment Temperature RH

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

证书编号: DH21AA002160002
Certificate No.

校准结果 Result of Calibration

- 1、外观及工作正常性检查: 正常
- 2、校准结果:

标准值 (m/s)	示值 (m/s)	示值误差 (m/s)	不确定度 ($k=2$) U_{rel}
2.50	2.50	0.00	3%
3.00	3.00	0.00	3%
5.00	4.99	-0.01	3%
10.00	9.98	-0.02	3%
15.00	14.96	-0.04	3%
20.00	19.95	-0.05	3%
25.00	24.95	-0.05	3%

说明 (Explanation):

- 1、本次测量结果的不确定度 ($k=2$)。
The uncertainty of the measurement result ($k=2$).
- 2、本次校准结果不确定度的评估和表述依据JJF1059.1的要求。
The uncertainty of the calibration result is evaluated and expressed according to the requirement of JJF1059.1.
- 3、根据客户要求和所依据技术文件的规定, 建议复校时间间隔不超过12个月。
According to customers' request and technical documents, the re-check time interval should not exceed 12 months.

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Appendix K – Noise monitoring results and graphical presentation

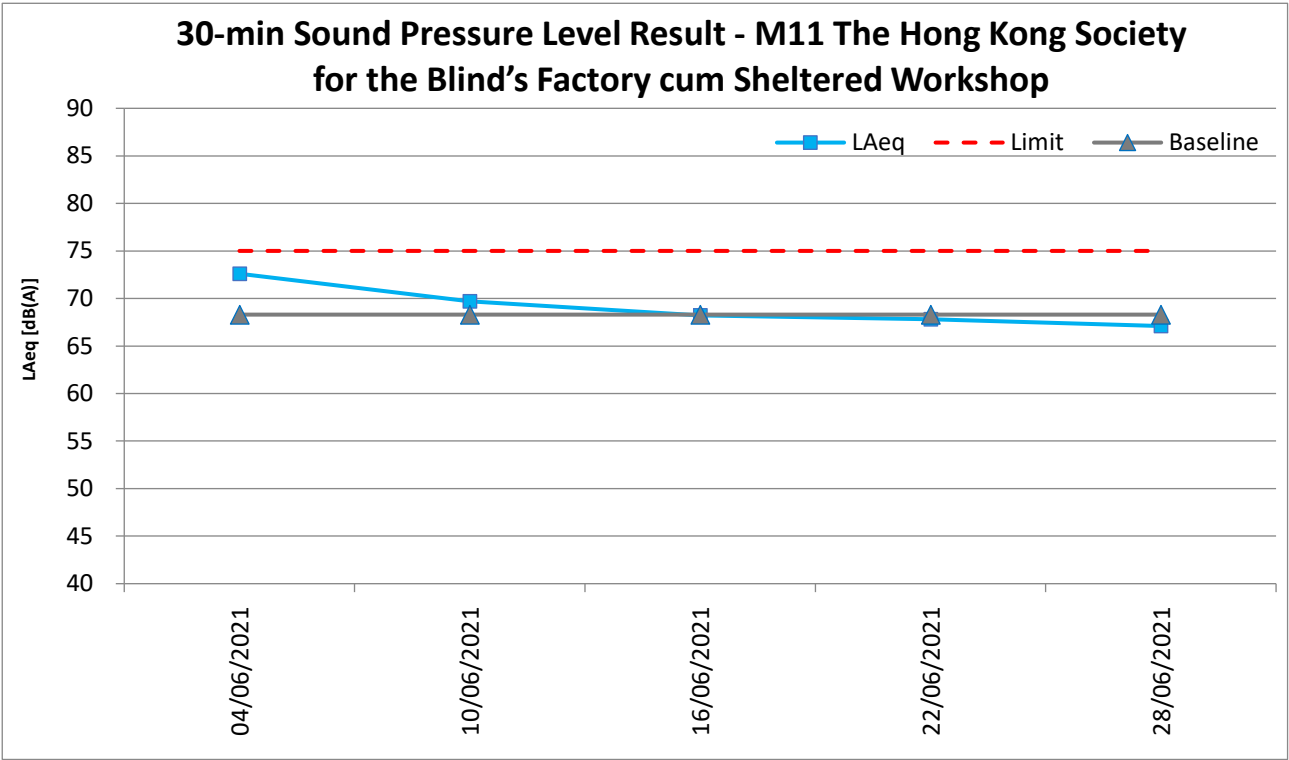
M11 - The Hong Kong Society for the Blind's Factory cum Sheltered Workshop

Date	Temp (°C)	Weather	Measured Noise Level at M11, dB(A)							Limit
			Time			Baseline	L _{Aeq}	L _{A10}	L _{A90}	
04/06/2021	28.9	Cloudy	9:40	-	10:10	68.3	72.6	75.2	63.2	75
10/06/2021	28.8	Cloudy	14:06	-	14:36	68.3	69.7	72.1	64.7	75
16/06/2021	31.7	Sunny	10:37	-	11:07	68.3	68.2	70.9	61.8	75
22/06/2021	29.2	Cloudy	14:02	-	14:32	68.3	67.8	70.4	61.7	75
28/06/2021	26.2	Cloudy	14:00	-	14:30	68.3	67.1	70.2	61.6	75
Maximum						72.6				
Minimum						67.1				
Average						69.6				

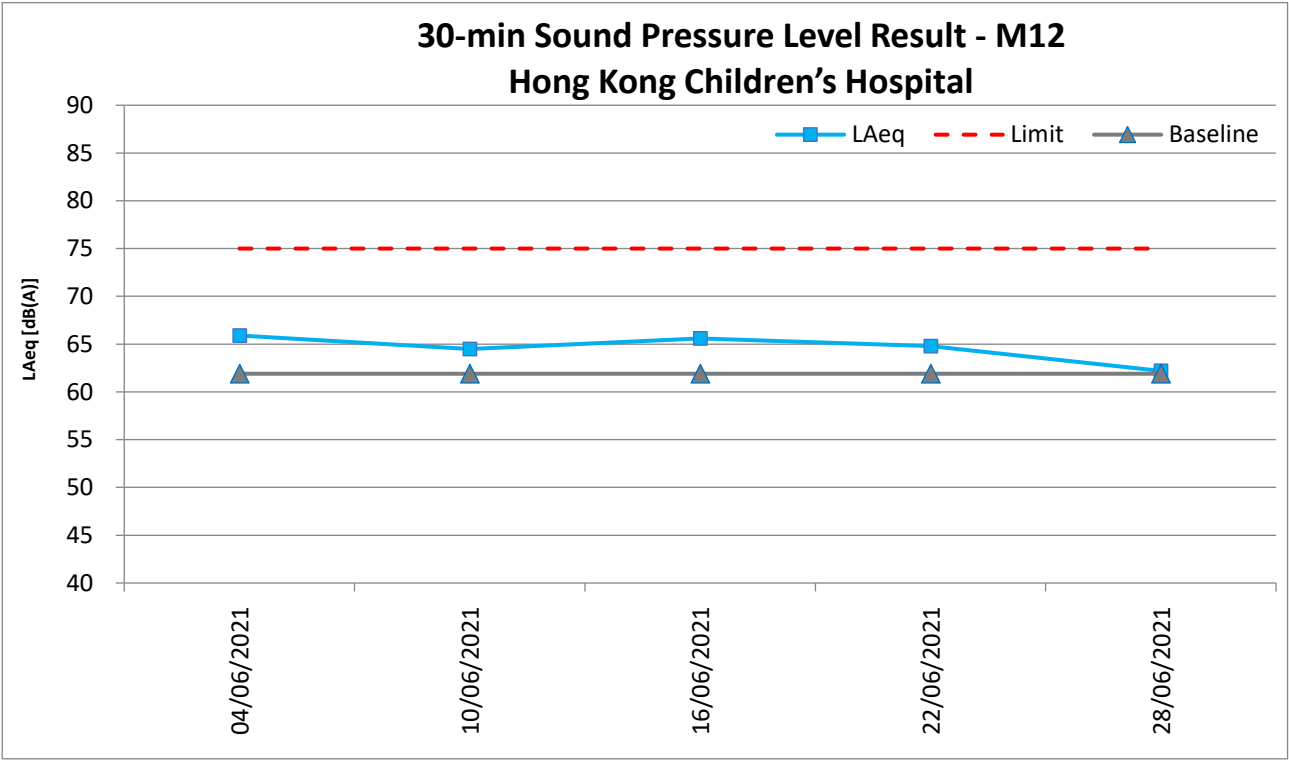
M12 - Hong Kong Children's Hospital

Date	Temp (°C)	Weather	Measured Noise Level at M12, dB(A)							Limit
			Time			Baseline	L _{Aeq}	L _{A10}	L _{A90}	
04/06/2021	28.9	Cloudy	13:49	-	14:19	61.9	65.9	68.0	63.2	75
10/06/2021	28.8	Cloudy	9:53	-	10:23	61.9	64.5	66.3	62.0	75
16/06/2021	31.7	Sunny	15:16	-	15:46	61.9	65.6	67.9	62.8	75
22/06/2021	29.2	Cloudy	10:50	-	11:20	61.9	64.8	66.9	62.8	75
28/06/2021	26.2	Cloudy	16:40	-	17:10	61.9	62.2	64.3	60.1	75
Maximum						65.9				
Minimum						62.2				
Average						64.8				

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



L_{Aeq}, 30-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 Contractor'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 June 2021

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	9.107	0.177	--	7.885	1.045	--	--	--	--	--	0.091
Feb	5.637	0.127	1.660	2.261	1.589	--	--	--	--	--	0.106
Mar	4.780	--	2.580	--	1.530	0.670	--	--	--	--	0.101
Apr	4.320	--	1.350	--	2.970	--	--	--	--	--	0.120
May	12.813	--	1.225	9.693	1.895	--	--	--	--	--	0.138
Jun	10.791	--	0.680	9.411	0.700	--	--	--	--	--	0.140
Sub-total	47.448	0.304	7.495	29.25	9.729	0.670	--	--	--	--	0.696
July	--	--	--	--	--	--	--	--	--	--	--
Aug	--	--	--	--	--	--	--	--	--	--	--
Sep	--	--	--	--	--	--	--	--	--	--	--
Oct	--	--	--	--	--	--	--	--	--	--	--
Nov	--	--	--	--	--	--	--	--	--	--	--
Dec	--	--	--	--	--	--	--	--	--	--	--
Total	47.448	0.304	7.495	29.25	9.729	0.670	--	--	--	--	0.696

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	--	--	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
(4) The Contractor shall also submit the latest forecast of the total amount of C&D materials expected to be generated from the works, together with a breakdown of the nature where the total amount of C&D materials expected to be generated from the Works is equal to or exceeding 50,000m³ (ER Part 8 Clause 8.7.5(d)(ii) refers)
(5) Assume inert C&D materials density and non-inert C&D materials are 1.9 m³/ton and 1.5 m³/ton

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	<u>Boring and Drilling Water</u> Water used in ground boring and drilling for site investigation or rock / soil anchoring should as far as practicable be re-circulated after sedimentation. When there is a need for final disposal, the wastewater should be discharged into storm drains via silt removal facilities.	^
	S5.8	<u>Acid Cleaning, Etching and Pickling Wastewater</u> Acidic wastewater generated from acid cleaning, etching, pickling and similar activities should be neutralized to within the pH range of 6 to 10 before discharging into foul sewers.	NA
	S5.8	<u>Effluent Discharge</u> There is a need to apply to EPD for a discharge licence for discharge of effluent from the construction site under the WPCO. The discharge quality must meet the requirements specified in the discharge licence. All the runoff and wastewater generated from the works areas should be treated so that it satisfies all the standards listed in the TM-DSS. Minimum distance of 100 m should be maintained between the discharge points of construction site effluent and the existing seawater intakes and the planned WSR mentioned in S5.3.1 as appropriate. The beneficial uses of the treated effluent for other on-site activities such as dust suppression, wheel washing and general cleaning etc., can minimise water consumption and reduce the effluent discharge volume. If monitoring of the treated effluent quality from the works areas is required during the construction phase of the Project, the monitoring should be carried out in accordance with the relevant WPCO licence which is under the ambit of regional office (RO) of EPD.	^
	S5.8	<u>Accidental Spillage</u> Contractor must register as a chemical waste producer if chemical wastes would be produced from the construction activities. The Waste Disposal Ordinance (Cap 354) and its subsidiary regulations in particular the Waste Disposal (Chemical Waste) (General) Regulation, should be observed and complied with for control of chemical wastes. Any service shop and maintenance facilities should be located on	^

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

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

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	<u>Construction Site Control</u> - CM1 - Minimized construction area and contractor's temporary works areas.	^
		- CM2- Control of night-time lighting and glare by hooding all lights.	^
		- CM3 - Erection of decorative mesh screens or construction	^

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:	04 June 2021	Date:	17 June 2021
Mitigation Measures:	Haul road was sprayed with water to maintain the entire road surface wet.	Mitigation Measures:	Quiet PME was used.
			
Date:	24 June 2021	Date:	30 June 2021
Mitigation Measures:	Manholes have been adequately covered and temporarily sealed.	Mitigation Measures:	Provided domestic garbage bins for waste storage.

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

Reporting Month: June 2021

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	1	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 public 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.	- 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
			<u>Action taken</u> 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.	