UMWELT CONSULTING LIMITED

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By Post

Our Ref : P230101-FEMA-R3-V
Date : 7th August 2023

Binnies Hong Kong Limited
IRTS Co-Office
Unit No. 2507-2509, 25/F, The Octagon
No. 6 Sha Tsui Road
Tsuen Wan, N.T.
Attn: Ms. Carmen Cheuk

Contract No. DP 16/2022-

Enhanced Independent Environmental Checker Services for Inter-reservoirs Transfer Scheme (IRTS) Water Tunnel between Kowloon Byewash Reservoir and Lower Shing Mun Reservoir

Dear Madam,

Pursuant to Condition 4.3 of Environmental Permit (EP) No. EP-345/2009/A, please note the Final EM&A Report (Rev. 3) submitted under the EP, certified by the Environmental Team Leader on 31 July 2023, had been reviewed and is hereby verified.

Should you have any query, please feel free to contact the undersigned at 3756 9590 or ivanting@umwelt.consulting .

Your faithfully,
For and on behalf of:
Umwelt Consulting Limited

Ting Po Chung Ivan
Independent Environmental Checker

Final EM&A Report (Rev. 3)

for

Inter-Reservoirs Transfer Scheme – Water Tunnel Between Kowloon Byewash Reservoir and Lower Shing Mun Reservoir (Contract No.: DC/2018/08)

	Prepared by:	Checked by:	Certified by:
Name	Joe HO	Tandy TSE	Kevin LI
Position	Environmental Team Member	Environmental Team Member	Environmental Team Leader
Signature			
Date	31 July 2023	31 July 2023	31 July 2023

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Revision History

Rev.	Description	Date
3	Revised based on EPD comments	31 July 2023
2	Revised based on IEC comments	16 May 2023
1	Revised based on IEC comments	27 March 2023
0	1st Submission for Comments	21 February 2023

EXECUTIVE SUMMARY

E1. Acuity Sustainability Consulting Limited (ASCL) has been commissioned by Bouygues Travaux Publics to undertake the assignment as the Environmental Team (ET) for the Designated Project of West Kowloon Drainage Improvement – Inter-reservoirs Transfer Scheme (IRTS) (the Project), with Contract No. DC/2018/08.

E2. This is the Final Environmental Monitoring and Audit (EM&A) Report presents EM&A works undertaken in the period from 12 July 2019 to 21 January 2023. EM&A works were performed in accordance with the approved EM&A Manual and conditions stipulated in the amended Environmental Permit EP-345/2009/A. The variation of Environmental Permit was issued on 11 November 2020. The amendments incorporated into the Environmental Permit are summarized as follow:

- "Location of Designated Project" changed;
- Location of cofferdam changed;
- Content of earth bund added;
- More plant species of conservation importance added.

E3. Prior to the commencement of construction work of the Project, baseline noise monitoring at all designated monitoring station was carried out from 3 May 2019 to 10 May 2019 while baseline water quality monitoring was performed during 28 May 2019 to 22 June 2019.

E4. According to the approved EM&A Manual, construction noise and water quality monitoring are required to be performed during the construction phase of the Project. Construction noise impact monitoring at designated monitoring location (i.e. NM1 & NM2) for period of daytime except general holidays and Sundays, for all days during evening, for all days during nighttime and daytime during general holidays and Sundays. Impact water quality monitoring was conducted at all approved monitoring points during the construction period.

E5. As per the notification letter (Ref No. 382766/(DC/2018/08/M45/110/(803546) issued by Engineer's Representative (ER), all the construction works were completed by 21 January 2023 and EM&A programme thus was completed on 21 January 2023. The notification letter is attached in **Appendix C**.

E6. No exceedance was recorded for noise during EM&A Programme.

E7. Non-project related exceedances were recorded for water quality monitoring during EM&A Programme. One (1) water quality monitoring results of pH value obtained during EM&A Programme had exceeded the Action Level and six (6) water quality monitoring results of pH value obtained during EM&A Programme had exceeded the Limit Level. Two (2) water quality monitoring results of turbidity obtained during EM&A Programme had exceeded the Action Level and five (5) water quality monitoring results of turbidity obtained during EM&A Programme had exceeded the Limit Level. Seven (7) water quality monitoring results of suspended solids obtained during EM&A Programme had exceeded

the Action Level and eight (8) water quality monitoring results of suspended solids obtained during EM&A Programme had exceeded the Limit Level.

E8. One complaint regarding the conduction of works within the country park area was received during EM&A Programme.

E9. No notification of summons nor prosecution have been received since the commencement of the Project.

Table of Contents

1. INTRODUCTION

1.1 Acuity Sustainability Consulting Limited (ASCL) has been commissioned by Bouygues Travaux Publics to undertake the assignment as the Environmental Team (ET) for the Contract of West Kowloon Drainage Improvement – Inter-reservoirs Transfer Scheme (IRTS) (the Project), with Contract No. DC/2018/08. The Project comprises the following principal works elements and the construction programme is presented in **Appendix A**:

- Construction of a new water tunnel, with about 2.8 km in length and 3m in diameter, from Kowloon Byewash Reservoir (KBR) to Lower Shing Mun Reservoir (LSMR);
- Construction of an intake structure at KBR and an isolation system;
- Construction of an outfall structure at LSMR with an energy dissipater; and
- All associated civil, structural, geotechnical, electrical and mechanical works, including landscaping, permanent and temporary accesses as may be necessary for the completion of the works elements listed above.

1.2 The Project site consists of the intake site at KBR and the outfall site at LSMR. The layout of the Project site is presented in **Appendix B**.

1.3 This project is a Designated Project under Part I of Schedule 2 of the Environmental Impact Assessment Ordinance (EIAO). An Environmental Permit (EP), with Permit No. EP345/2009, was granted to the Water Supplies Department (WSD) for permitting the construction and operation of this Project. Subsequently, the EP was amended and a variation of EP, with Permit No. EP345/2009/A, was granted to the WSD on 11 November 2020.

1.4 The commencement date of construction works of the Project was 12 July 2019. No major works except site clearance and preparation was performed before the commencement date of construction.

1.5 This is the Final Environmental Monitoring and Audit (EM&A) Report summarizing results and findings of all EM&A work required in the approved EM&A Manual for the period from 12 July 2019 to 21 January 2023. As per the notification letter (Ref No. 382766/(DC/2018/08/M45/110/(803546) issued by Engineer's Representative (ER), all the construction works were completed by 21 January 2023 and EM&A programme thus was completed on 21 January 2023. The notification letter is attached in **Appendix C**.

2. COMPLIANCE STATUS WITH THE ENVIRONMENTAL PERMIT

2.1 EP submission of the Project since the commencement of work including Monthly EM&A Reports is made available to the public via internet access at the website.

2.2 Project organization structure is presented in **Figure 2.1**.

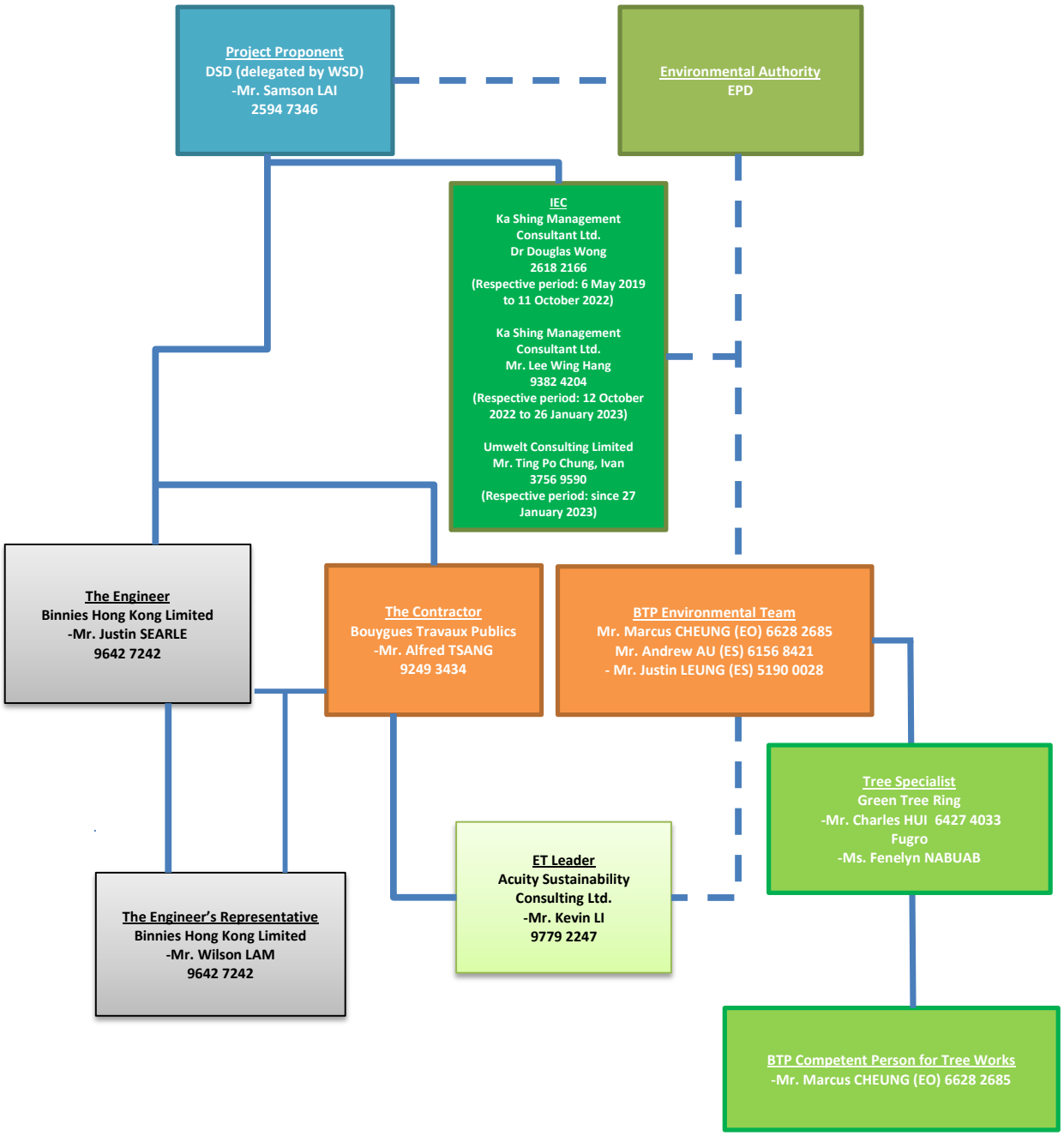


Figure 2.1 Project Organization Chart

2.3 Contact details of key personnel are presented in **Table 2.1** below.

Table 2.1- Contact Details of Key Personnel

Party	Position	Name	Contact No.
Bouygues Travaux Publics	Site Agent	Mr. Alfred Tsang	3959 7317
Acuity Sustainability Consulting Limited	Environmental Team Leader	Mr. Kevin Li	2698 6833
Ka Shing Management Consultant Limited	Independent Environment Checker (Respective period: 6 May 2019 to 11 October 2022)	Dr Douglas Wong	2618 2166
	Independent Environment Checker (Respective period: 12 October 2022 to 26 January 2023)	Mr. Lee Wing Hang	9382 4204
Umwelt Consulting Limited	Independent Environment Checker (Respective period: since 27 January 2023)	Mr. Ivan Ting	3756 9590

2.4 Ka Shing Management Consultant Limited had been appointed by Drainage Service Department (DSD) as the role of IEC for the captioned Project from 6 May 2019 to 26 January 2023 while Umwelt Consulting Limited has been appointed as the next IEC since 27 January 2023. Acuity Sustainability Consulting Limited has been commissioned by Bouygues Travaux Publics as the role of ET since the commencement of the Project.

2.5 Submissions required under conditions stipulated in the amended EP are summarized in **Table 2.2**.

Table 2.2-Documents Submission Required in the amended Environmental Permit

Document	EP Condition No.	Timeframe	Status	Remarks
Landscape Plan	2.4 & 2.5	Submission of document shall be done no later than 6 months after commencement of construction.	First submission was submitted to EPD on 9 January 2020. The revised document was submitted to EPD on 25 November 2022 and approved on 6 February 2023	N.A.
Condition Survey Report for Historic Structures	2.6	Document shall be deposited to the authority before	The document was deposited to EPD on 3 June 2019.	N.A.

Document	EP Condition No.	Timeframe	Status	Remarks
		commencement of construction.		
Baseline Monitoring Report	4.2	Submission of document shall be done at least two weeks before commencement of construction.	The document was submitted to EPD on 28 June 2019. 1st Revision was submitted to EPD on 6 August 2019 and approved on 30 August 2019.	N.A.
Monthly EM&A report	4.3	Submission of document shall be done within two weeks after the end of reporting month.	Majority of the monthly EM&A report had been submitted to EPD within two weeks after the end of reporting month. Among all EM&A Reports prepared, 7 monthly reports were partially verified or unable to be verified by IEC by the deadline of submission. After revision, they were re-submitted to EPD.	N.A.

2.6 EP condition 4.3 states that the monthly EM&A reports shall be certified by the ET Leader and verified by the IEC. Among all EM&A Reports prepared, 7 monthly EM&A reports were partially verified or unable to be verified by IEC by the deadline of submission. These reports were subsequently revised, verified by IEC and re-submitted to EPD.

3. ENVIRONMENTAL MONITORING REQUIREMENTS AND PROGRAMME

3.1 The Environmental Monitoring and Audit requirements are set out in the approved EM&A Manual. Construction noise and water quality were identified as key environmental issues during the construction phase. A summary of the requirements for conducting impact noise and water quality monitoring is presented in the sub-sections below.

Monitoring Parameters, Time and Frequency

3.2 Baseline monitoring and impact monitoring parameters are summarized in **Table 3.1** and **Table 3.2** below respectively.

Table 3.1 – Summary of Baseline Monitoring Parameters

Environmental Aspect	Parameters	Frequency
Noise	• At least six consecutive $L_{eq(5min)}$ during 1900 – 2300 hrs (evening time) • At least six consecutive $L_{eq(5min)}$ during 2300 – 0700 hrs (night time)	• Daily for 7 days
Water Quality	• Dissolved Oxygen (mg/L) • Dissolved Oxygen Saturation (%) • pH Value • Turbidity (NTU) • Temperature (^{o}C) • Suspended Solids (mg/L)	• 3 days per week for 4 consecutive weeks

Table 3.2 – Summary of Impact Monitoring Parameters

Environmental Aspect	Parameters	Frequency
Noise	• 1 no. of $L_{eq(30min)}$ noise measurements between 0700-1900 hours on any normal weekdays • 3 nos. of consecutive $L_{eq(5min)}$ noise measurement between 0700-1900 hours on general holidays or Sunday (if works are undertaken) • 3 nos. of consecutive $L_{eq(5min)}$ noise measurement between 1900-2300 hours (if evening works are undertaken) • 3 nos. of consecutive $L_{eq(5min)}$ noise measurement between 2300-0700 hours (if nighttime works are undertaken)	• Once per week
Water Quality	• Dissolved Oxygen (mg/L) • Dissolved Oxygen Saturation (%)	• 3 times per week

Environmental Aspect	Parameters	Frequency
	• pH Value • Turbidity (NTU) • Temperature (^{o}C) • Suspended Solids (mg/L)	• Interval between two sets of monitoring shall not be less than 36 hours

Monitoring Locations

Noise

3.3 According to Section 4.4 of the approved EM&A Manual, the two most representative and affected noise sensitive receivers (NSRs) were designated as monitoring stations. Details regarding the two noise monitoring stations are shown in **Table 3.3**. Layout plans showing the monitoring locations are presented in **Appendix D**.

Table 3.3 – Designated Noise Monitoring Location

Location ID (ID in EM&A Manual)	Type of NSR	Location	Description
NM1 (LG)	Residential	Tower 1, Lakeview Garden	The closest NSR to the Outfall Site (LSMR)
NM2 (VH)	Residential	4 ½ Milestone, Tai Po Road	The closest NSR to the Intake Site (KBR)

Water Quality

3.4 According to Section 5.4 of the approved EM&A Manual, water quality monitoring shall be performed at designated monitoring stations. Details regarding the four designated water quality monitoring stations are shown in **Table 3.4**.

Table 3.4 – Original Water Quality Monitoring Location

ID	Description	Location
C1	Control Point near Intake Site	Stepped channel by-passing KBR
D1	Impact Monitoring Point near Intake Site	Junction of stepped channel and overflow channel of KBR
C2	Control Point near Outfall Site	Natural Stream directing to LSMR
D2	Impact Monitoring Point near Outfall Site	Overflow channel of LSMR

3.5 As conditions of designated water quality monitoring locations have been changed since the issuing of the approved EM&A Manual, location C1, D1 and D2 are no longer feasible for conducting water quality monitoring. Therefore, the three locations were proposed to relocating to alternative monitoring locations. The proposal of alternative monitoring location was approved by EPD on 20 May 2019. Details regarding the approved water quality monitoring stations are shown in **Table 3.5**. Layout plans showing the original and approved monitoring locations are attached in **Appendix D**.

Table 3.5 – Approved Water Quality Monitoring Location

ID	Description	Location
C1b	Control Point near Intake Site	Overflow channel of Kowloon Reception Reservoir (KRR)
D1b	Impact Monitoring Point near Intake Site	KBR
C2	Control Point near Outfall Site	Natural Stream directing to LSMR
D2a	Impact Monitoring Point near Outfall Site	LSMR

3.6 The water level at LSMR (i.e., monitoring location D2a) changes in time. Due to the access constraint, water sampling could only be done at the boundary of the water body. Hence, the actual sampling location of D2a is subject to the actual water level of the reservoir and was determined on-site at locations close to the site. The actual sampling location of D2a was presented in each Monthly EM&A report.

3.7 A temporary standby pump and associated drainage pipe were installed on 7 February 2022 behind the sampling location C2 as a precautionary measure against site runoff during heavy rainstorm.

3.8 After the joint water sampling inspection with the ER, the IEC representative, the Contractor and the ET on 15 October 2021, it was agreed that 5L of water samples shall be collected when applicable to ensure detection limit is achievable.

3.9 At the control point C2, samples were collected at original access to the water body.

3.10 The alternative access point for C1b monitoring location was unable to access since 15 October 2022, original access is the only access point for sampling event for C1b monitoring location since 15 October 2022. At the control point C1b, samples were collected at original access to the water body.

Monitoring Equipment

Noise

3.11 Sound level meters in compliance with the International Electrical Commission Publications 651: 1979 (Type 1) and 804: 1985 (Type 1) specifications were used for carrying out the noise monitoring.

3.12 Immediately prior to and following each noise measurement the accuracy of the sound level meter was checked using an acoustic calibrator generating a known sound pressure level at a known frequency. Measurements may be accepted as valid only if the calibration level from before and after the noise measurement agrees to within 1.0dB. The acoustic calibrator to be used meet IEC 942, 1988 Class 1 specifications. Annual calibration of all sound level meters and acoustic calibrators were conducted by a laboratory in Hong Kong or the manufacturer in compliance with national standards as recommended by the manufacturer of the sound level meter and acoustic calibrator.

Water Quality

3.13 DO and water temperature were measured in-situ by a DO/temperature meter. The equipment was portable and weather proof using a DC power source. It had a membrane electrode with automatic temperature compensation complete with a cable. The equipment was capable of measuring:

- A DO level in the range of 0-20 mg/l and 0-200% saturation; and
- A temperature of between 0 and 45 degree Celsius.

3.14 A portable pH meter capable of measuring a range between 0.0 and 14.0 was provided to measure pH under the specified conditions (e.g. Orion Model 250A or an approved similar instrument) accordingly to the Standard Methods, APHA.

3.15 Turbidity was measured in situ by the nephelometric method. The instrument was portable and weatherproof using a DC power source complete with cable, sensor and comprehensive operation manuals. The equipment was capable of measuring turbidity between 0-1000 NTU.

3.16 A water sampler, consisting of a transparent PVC or glass cylinder of a capacity of not less than two litres which can be effectively sealed with cups at both ends was used. If the approved water sampler could not be used in shallow water (<11 cm), a water bucket or a small bottle made of inert material (e.g. plastic) was used instead. This approach was proposed due to the frequent occurrence of shallow water levels or dried-up conditions at the monitoring points, and a revision of the EM&A Manual was suggested. It was later verbally confirmed with IEC to adopt this approach in October 2021. The formal revision of EM&A Manual was not submitted.

3.17 In-situ monitoring instruments were checked, calibrated and certified by a laboratory accredited under HOKLAS or other international accreditation scheme before use, and subsequently re-calibrated at 3 monthly intervals.

4. BASELINE MONITORING

4.1 As part of the EM&A programme, baseline monitoring is required for determining the ambient environmental conditions. Baseline monitoring including background noise and water quality were conducted in periods from 3 May 2019 to 22 June 2019 in accordance to the approved EM&A Manual before commencement of construction works.

Monitoring Parameters, Time and Frequency

4.2 Baseline monitoring parameters are summarized in **Table 4.1** below.

Table 4.1 – Summary of Baseline Monitoring Parameters

Environmental Aspect	Parameters	Frequency and period	Baseline Monitoring Period
Noise	• At least six consecutive L_{eq}(5min) during 1900 – 2300 hrs (evening time) • At least six consecutive L_{eq}(5min) during 2300 – 0700 hrs (night time)	• Daily for 7 days	• 3 – 10 May 2019
Water Quality	• Dissolved Oxygen (mg/L) • Dissolved Oxygen Saturation (%) • pH Value • Turbidity (NTU) • Temperature (^{o}C) • Suspended Solids (mg/L)	• 3 days per week for 4 consecutive weeks	• 28 May 2019 – 22 June 2019

Noise Baseline Monitoring Result

4.3 Measurement data are summarized in **Table 4.2**.

Table 4.2 – Summary of Baseline Noise Monitoring Results

Monitoring Location	Time Period	L_{eq}(5min)		
		Mean	Max	Min
NM1	1900 – 2300	55.0	59.7	51.3
	2300 – 0700	51.9	57.0	45.5
NM2	1900 – 2300	53.0	57.8	49.7
	2300 – 0700	45.5	50.9	41.7

Water Baseline Quality Monitoring Result

4.4 Four consecutive weeks of baseline water quality monitoring at four approved monitoring stations were performed during 28 May 2019 to 22 June 2019. Measurement result is summarized in **Table 4.3**. Exceptional high results for Turbidity and Suspended Solids have been recorded at C1 and C2 during the baseline monitoring period, but the data was not used for determining the Action and Limit Level of the two impact monitoring points (i.e. D1b and D2a). The Action and Limit Level of the impact monitoring points were determined by the baseline data of D1b and D2a.

Table 4.3 – Summary of Baseline Water Quality Monitoring Result

Parameters		C1b	D1b	C2	D2a
Dissolved Oxygen (mg/L)	**5%-ile**	6.6	6.1	7.3	6.3
	1%-ile	6.2	5.8	6.7	6.1
	Min	6.2	5.8	6.7	6.1
	Max	9.6	9.4	10.6	9.8
	Mean	8.2	8.1	8.7	8.3
Dissolved Oxygen Saturation (%)	**Min**	75.7	70.8	81.5	74.1
	Max	121.3	120.6	137.8	127.7
	Mean	105.0	104.8	110.4	106.2
pH Value	**95%-ile**	9.0	8.8	9.0	9.0
	99%-ile	9.2	8.9	9.2	9.2
	Min	7.1	6.8	6.6	7.0
	Max	9.2	8.9	9.2	9.2
	Mean	8.1	7.9	8.1	8.1
Turbidity (NTU)	**95%-ile**	257.0	19.5	79.4	13.1
	99%-ile	331.0	23.4	85.3	18.9
	Min	1.8	3.1	2.7	2.6
	Max	331.0	23.4	85.3	18.9
	Mean	35.9	7.3	17.1	6.5
Suspended Solids (mg/L)	**95%-ile**	1530.0	9.0	177.0	22.0
	99%-ile	1560.0	13.0	180.0	25.0
	Min	2.0	2.0	2.0	2.0
	Max	1560.0	13.0	180.0	25.0
	Mean	188.7	5.3	23.3	6.1

Remarks:

1. Nearest Rank Method was used in percentile determination.

Environmental Quality Performance Limits (Action/Limit Levels)

4.5 The baseline results from basis for determining the environmental acceptance criteria for the impact monitoring. Derived Action/Limit Levels for noise and water quality are summarised in **Table 4.4** and **Table 4.5** respectively.

Table 4.4 – Action/Limit Levels for Construction Noise Monitoring

Time Period	Action Level	Limit Level, dB(A)
Daytime (0700-1900) except general holidays and Sunday **Measurements in $L_{eq\ (30min)}$*	When one documented compliant is received	75
Daytime (0700-1900) during general holidays and Sundays and all days during Evening (1900-2300 hrs) **Measurements in $L_{eq\ (5min)}$*		60
Night-time (2300 – 0700 hrs) **Measurements in $L_{eq\ (5min)}$*		45

Table 4.5 – Action/Limit Levels for Water Quality Monitoring

Parameter	Performance Criteria	Monitoring Location	
		D1b	D2a
Dissolved Oxygen (mg/L)	Action Level	6.1	6.3
	Limit Level	5.8	6.1
pH Value	Action Level	8.8	9.0
	Limit Level	≤ 6.5 **OR** ≥ 8.9	≤ 6.5 **OR** ≥ 9.2
Turbidity (NTU)	Action Level	19.5	13.1
		OR 120% of upstream control station of the same day	
	Limit Level	23.4	18.9
		OR 130% of upstream control station of the same day	
Suspended Solids (mg/L)	Action Level	9.0	22.0
		OR 120% of upstream control station of the same day	
	Limit Level	13.0	25.0
		OR 130% of upstream control station of the same day	

Remarks:

1. Non-compliance occurs when monitoring result of Dissolved Oxygen is lower than the limits.

2. Non-compliance occurs when monitoring result of pH value is higher than the Action Levels or when the result does not fall into the pH range of the Limit Levels.

3. Non-compliance occurs when monitoring results of Turbidity and Suspended Solids is higher than the limits.

Event / Action Plan

4.6 Shall there be any triggering of Action Levels, or exceedance of Limit Levels, the Event / Action Plan established in the approved EM&A Manual was followed. The Event / Action Plan is attached in **Appendix E**.

5. IMPACT MONITORING METHODOLOGY AND RESULTS

Monitoring Procedure

Noise

5.1 Field measurement procedures for each set of the noise level measurement are as followed:

i. Record the field condition including weather conditions and any other potential source of interference;
ii. Turn the power of sound level meter on;
iii. Check the general condition of the sound level meter and the battery status;
iv. Mount the sound level meter onto a tripod of 1.2 m height;
v. Check the distance of the probe from closest façade with 1 m away from the façade;
vi. Adjust the orientation of probe so that it is facing the project site;
vii. Calibrate the sound level meter by using acoustic calibrator;
viii. Select the period of measurement to be 30 minutes;
ix. Select the appropriate displaying unit, dB(A);
x. Collect and record the sampled data;
xi. Calibrate the sound level meter by using acoustic calibrator. Repeat procedure ii. to xi. if the difference in calibration level is more than 1.0 dB.

5.2 All noise measurements were performed in the absence of fog, rain and wind with a speed exceeding 5m/s or wind with gusts exceeding 10m/s. Wind speed was checked with portable wind speed meter.

Water Quality

5.3 Field measurement procedures for each set of the water quality measurement are as followed:

i. The DO probe of the multifunctional meter is checked by wet bulb method; the pH and turbidity probes are checked against standard solutions. Record the checking result;
ii. Record the field condition including weather conditions and any other potential source of interference;
iii. Lower the sampler into water body and rinse it with water in the target water body;
iv. Fill the sampler until adequate sample is collected. Replicate sample at each monitoring location is required;
v. Rinse the bottles by the sample before transferring samples into containing bottles;
vi. Rinse the probe of multimeter with distilled water;
vii. Measure and record temperature, turbidity, pH value and DO of each bottle of sample;
viii. Bottles containing sample is stored temporarily in insulation box with ice until reaching the laboratory;

5.4 Analysis of SS was carried out in a HOKLAS accredited laboratory. Standard test method, APHA 2540D (23ed), in accordance with American Public Health Association: Standard Methods for the Examination of Water and Wastewater APHA was adopted. The EM&A manual stated the use of 21st of APHA. However, since the EM&A manual was issued in 2009, and the project commenced in 2019 when the APHA had already been updated to newer editions. As there is no significant difference between the 21st edition and 23rd edition for SS test, the 23rd edition of APHA was considered an acceptable alternative to the required test method.

Data Management and QA/QC

5.5 The monitoring data were handled by the ET's in-house data recording and management system. Laboratory responsible for laboratory analysis would follow QA/QC requirements as set out under HOKLAS scheme.

5.6 The in-situ monitoring data measured in the equipment were recorded by both field operators and by the equipment itself. Laboratory analysis results were directly issued by the designated laboratory. All data were then input into a computerized database which is properly maintained by the ET. Cross checking between results was performed by other personnel.

Alternative Sampling Procedure at C1b and C2

5.7 After the joint water sampling inspection with the ER, the IEC representative, the Contractor and the ET on 15 October 2021, on days when very shallow flow (<11cm of water depth) were observed at the control points, actions would be taken to collect samples at the sampling locations. At the control point C1b, a small plastic bottle was used to collect samples according to the flow chart below. At the control point C2, samples were collected at original access to the water body. The fencing of the foot bridge across the catchwater at C1b monitoring location was restored on 15 October 2022, original access is the only access point for sampling event for C1b monitoring location since 15 October 2022.

Noise Monitoring Result

Noise Monitoring Summary

5.8 Construction noise monitoring was performed during the construction period.

5.9 Construction noise impact monitoring was conducted at NM1 and NM2 for daytime except general holidays and Sundays. The noise monitoring results are summarized in **Table 5.1** and **Appendix F**.

Table 5.1 – Summary of Construction Noise Monitoring Results

Monitoring Location	Time Period	$L_{eq(5min)}$, dB(A)			Limit Level, dB(A)
		Mean	Max	Min	
NM1	Daytime (0700 – 1900) except general holidays and Sunday	51.7	63.2	39.6	75
NM2		53.0	64.6	42.0	

5.10 Daytime during general holidays and Sundays construction work was conducted since April 2020. Construction noise monitoring was also conducted on the day when the works were conducted during general holidays and Sundays in daytime period. The daytime during general holidays and Sundays construction noise monitoring data is presented in **Table 5.2** and **Appendix F**.

Table 5.2 – Summary of Daytime during General Holidays and Sundays Noise Monitoring Result

Monitoring Location	Time Period	$L_{eq(5min)}$, dB(A)			Limit Level, dB(A)
		Mean	Max	Min	
NM1	Daytime (0700-1900) during general holidays and Sundays	48.4	59.2	41.6	60
NM2*		49.1	58.3	41.1	

Remark:
*Noise monitoring was conducted in April, May, June, November, December 2020, January and February 2021 when evening time works were conducted near NM2.

5.11 Evening time construction work has been conducted since 25 March 2020. Evening time monitoring was conducted at NM1 and NM2. The evening time construction noise monitoring data is summarized in **Table 5.3** and **Appendix F**.

Table 5.3 – Summary of Evening Time Noise Monitoring Result

Monitoring Location	Time Period	$L_{eq(5min)}$, dB(A)			Limit Level, dB(A)
		Mean	Max	Min	
NM1	All days during Evening (1900-2300)	47.4	59.0	39.2	60
NM2*		47.3	59.9	41.1	

Remark:
*Evening time noise monitoring was conducted in May, June, September, November, December 2020, January and February 2021 at NM2 when evening time works were conducted near NM2.

5.12 Nighttime time construction work has been conducted between April 2020 and September 2021. Nighttime monitoring was conducted at NM1 and NM2. The nighttime construction noise monitoring data is presented in **Table 5.4** and **Appendix F**.

Table 5.4 – Summary of Nighttime Noise Monitoring Result

Monitoring Location	**Time Period**	**$L_{eq(5min)}$, dB(A)#**			**Limit Level, dB(A)**
		Mean	**Max**	**Min**	
NM1	All days during Nighttime (2300-0700)	43.5	51.7	38.2	45
NM2*		40.6	45.3	32.2	

Remark:
*Nighttime noise monitoring was conducted in May and June 2020 at NM2 when nighttime works were conducted near NM2.

The measured $Leq_{(5min)}$ was corrected with baseline level at NM2 by:

$$\text{Corrected Level} = 10 \log (10^{(\text{Measured Level}/10)} - 10^{(\text{Baseline Level}/10)})$$

Exceedance on Noise Monitoring

5.13 No construction noise-related complaint was received during the construction period. No Action / Limit Levels exceedance of construction noise recorded during construction period.

Discussion on Noise Monitoring Results

5.14 No construction noise-related complaint was received during the construction period. No Action / Limit Levels exceedance of construction noise recorded during construction period.

5.15 No significant increase or change was observed during the whole construction period. This implies that insignificant noise impacts were generated from the construction works and any adverse noise impact from the construction works are effectively alleviated to acceptable noise level by the mitigation measures recommended in approved EM&A manual.

5.16 With reference to the assessment in noise impact made on the Environmental Impact Assessment (EIA) report, no exceedance in construction noise criteria was predicted in the unmitigated scenario and hence no residual noise impact was predicted during construction. Similar to the finding and prediction of EIA report, no exceedance or complaint regarding construction noise was recorded during EM&A Programme.

Water Quality Monitoring Result

Water Quality Monitoring Summary

5.17 Water quality monitoring was performed at approved monitoring locations, i.e. C1b, D1b, C2 and D2a, during the construction period.

5.18 Water quality monitoring were performed at each of the approved monitoring locations. The water quality monitoring data is presented in **Appendix G** and results are summarized in **Table 5.5**.

Table 5.5 – Summary of Water Quality Monitoring Results

Parameters		C1b		D1b		C2		D2a	
		Impact	**Baseline**	**Impact**	**Baseline**	**Impact**	**Baseline**	**Impact**	**Baseline**
pH Value	**Mean**	7.6	8.1	7.5	7.9	7.7	8.1	7.6	8.1
	Max	9.4	9.2	12.1	8.9	9.9	9.2	9.5	9.2
	Min	6.5	7.1	5.7	6.8	6.0	6.6	6.5	7.0
Dissolved Oxygen (mg/L)	**Mean**	7.9	8.2	8.1	8.1	7.9	8.7	8.2	8.3
	Max	14.8	9.6	23.0	9.4	17.0	10.6	20.7	9.8
	Min	5.7	6.2	5.9	5.8	2.7	6.7	3.9	6.1
Dissolved Oxygen Saturation (%)	**Mean**	92.9	105.0	98.6	104.8	93.3	110.4	99.8	106.2
	Max	294.8	121.3	303.1	120.6	210.2	137.8	268.7	127.7
	Min	66.1	75.7	68.1	70.8	30.0	81.5	56.8	74.1
Turbidity (NTU)	**Mean**	6.8	35.9	5.3	7.3	11.1	17.1	4.7	6.5
	Max	77.2	331	53.6	23.4	173.3	85.3	190.0	18.9
	Min	0.0	1.8	0.1	3.1	0.2	2.7	0.0	2.6
Suspended Solids [1] (mg/L)	**Mean**	5.3	188.7	3.8	5.3	22.8	23.3	4.7	6.1
	Max	96.4	1560.0	33.0	13.0	3830.0	180.0	98.0	25.0
	Min	<0.5	2	<0.5	2	<0.5	2	<0.5	2

Remarks:

1. Data lower than detection limit is regarded as 0.5 during calculation of average.

5.19 After the joint water sampling inspection with the ER, the IEC representative, the Contractor and the ET on 15 October 2021, it was agreed that 5L of water samples shall be collected when applicable to ensure detection limit for suspended solids of 0.5mg/L is achievable.

Exceedance on Water Quality Monitoring

5.20 No construction water quality-related complaint was received during the construction period.

5.21 Exceedances in pH value, Turbidity and Suspended Solids recorded in water quality monitoring during construction period are summarized in **Table 5.6**. All the exceedance is non-project related after the investigation. The investigation result is summarized in **Table 5.7**.

Table 5.6 – Summary of Exceedance in Water Quality Monitoring

Parameters		**D1b**	**D2a**
pH Value	**Action Level**	1	1
	Limit Level	4	1
Dissolved Oxygen (mg/L)	**Action Level**	0	0
	Limit Level	0	0
Turbidity (NTU)	**Action Level**	1	1
	Limit Level	2	3
Suspended Solids (mg/L)	**Action Level**	10	1
	Limit Level	4	5

Table 5.7 – Summary of Investigation Results of Exceedance in Water Quality Monitoring

Monitoring Date	Location	Aspects	Parameter	Measured Level	Control Level	Action Level	Limit Level	Type of Exceedance	Investigation
6 Aug 2019	D1b (KBR)	Water Quality	Turbidity	33.0 NTU	24.8 NTU	29.8 NTU	32.2 NTU	Limit Level	Construction work at KBR has not been commenced. The exceedance was deemed project unrelated.
8 Aug 2019	D1b (KBR)	Water Quality	Turbidity	27.8 NTU	20.2 NTU	24.2 NTU	26.3 NTU	Limit Level	Construction work at KBR has not been commenced. The exceedance was deemed project unrelated.
8 Aug 2019	D1b (KBR)	Water Quality	SS	10.0 mg/L	5.0 mg/L	9.0 mg/L	13.0 mg/L	Action Level	Construction work at KBR has not been commenced. The exceedance was deemed project unrelated.
10 Aug 2019	D1b (KBR)	Water Quality	SS	9.5 mg/L	4.0 mg/L	9.0 mg/L	13.0 mg/L	Action Level	Construction work at KBR has not been commenced. The exceedance was deemed project unrelated.
29 Aug 2019	D1b (KBR)	Water Quality	SS	11.5 mg/L	9.5 mg/L	11.4 mg/L	13.0 mg/L	Action Level	Construction work at KBR has not been commenced. The exceedance was deemed project unrelated.
3 Sep 2019	D1b (KBR)	Water Quality	SS	12.5 mg/L	7.5 mg/L	9.0 mg/L	13.0 mg/L	Action Level	Construction work at KBR has not been commenced. The exceedance was deemed project unrelated.
5 Sep 2019	D1b (KBR)	Water Quality	Turbidity	21.8 NTU	16.5 NTU	19.8 NTU	23.4 NTU	Action Level	Construction work at KBR has not been commenced. The exceedance was deemed project unrelated.
9 Sep 2019	D1b (KBR)	Water Quality	SS	9.5 mg/L	5.0 mg/L	9.0 mg/L	13.0 mg/L	Action Level	Construction work at KBR has not been commenced. The exceedance was deemed project unrelated.
11 Sep 2019	D2a (LSMR)	Water Quality	Turbidity	14.0 NTU	4.2 NTU	13.1 NTU	18.9 NTU	Action Level	Temporary excavated slope surface was covered up. Double silt curtains were installed. No signs of muddy water discharging to the reservoir from the site. The exceedance was deemed project unrelated.
5 Oct 2019	D1b (KBR)	Water Quality	SS	16.5 mg/L	3.0 mg/L	9.0 mg/L	13.0 mg/L	Limit Level	Construction work at KBR has not been commenced. The exceedance was deemed project unrelated.
4 Jan 2020	D1b (KBR)	Water Quality	pH	8.8	8.2	8.8	8.9	Action Level	No concreting / grouting works was conducted at KBR. The exceedance was deemed project unrelated.

Monitoring Date	Location	Aspects	Parameter	Measured Level	Control Level	Action Level	Limit Level	Type of Exceedance	Investigation
9 Jan 2020	D2a (LSMR)	Water Quality	pH	9.1	9.5	9	9.2	Action Level	Water pumps were placed at various sump pits within the site to collect the construction wastewater for water treatment through Wetsep before discharge to the designated discharge point. No signs of construction wastewater discharging from the site to the reservoir body. The exceedance was deemed project unrelated.
11 Jan 2020	D1b (KBR)	Water Quality	pH	9.3	9.1	8.8	8.9	Limit Level	No concreting / grouting works was conducted at KBR. The exceedance was deemed project unrelated.
20 Feb 2020	D1b (KBR)	Water Quality	pH	9.1	7.8	8.8	8.9	Limit Level	No concreting / grouting works was conducted at KBR. The exceedance was deemed project unrelated.
29 Feb 2020	D2a (LSMR)	Water Quality	pH	9.3	dried up	9	9.2	Limit Level	Absence of pH influencing construction works and the absence of abnormal observation from the works from LSMR site on 29 February 2020. The exceedance was deemed project unrelated.
10 Mar 2020	D1b (KBR)	Water Quality	pH	5.7	dried up	9	<6.5 or >8.9	Limit Level	Mitigation measures preventing leakage of surface runoff had been well implemented and absence of pH influencing construction works at the KBR site. The exceedance was deemed project unrelated.
16 Apr 2020	D2a (LSMR)	Water Quality	SS	23.5 mg/L	dried up	22 mg/L	25 mg/L	Action Level	Significant deviation in SS was observed in two collected samples, 15 mg/L and 32 mg/L. It is suspected that the deviation was due to water sampling errors in shallow water, as the first sampling may have stirred up sedimentation and contaminated the second sample. The exceedance was deemed project unrelated.

Monitoring Date	Location	Aspects	Parameter	Measured Level	Control Level	Action Level	Limit Level	Type of Exceedance	Investigation
9 May 2020	D2a (LSMR)	Water Quality	SS	31 mg/L	dried up	9 mg/L	13 mg/L	Limit Level	There was no waterway connection between the site and the monitoring location. Low water level at monitoring location was observed, although the sampling person was being extra careful but he could only get the sample at a shallow water region where it is impractical to avoid turbulence of the sedimented mud. The exceedance was deemed project unrelated.
31 May 2020	D2a (LSMR)	Water Quality	Turbidity	19.9 NTU	6.8 NTU	13.1 NTU	18.9 NTU	Limit Level	No waterway connection between the site and the monitoring location. The exceedance was deemed project unrelated.
9 Jun 2020	D2a (LSMR)	Water Quality	Turbidity	30.3 NTU	6.2 NTU	13.1 NTU	18.9 NTU	Limit Level	Observable difference between the inside and the outside of the silt curtain. There was no silt plume within the site boundary at the proximity of the silt curtain area but the overall reservoir outside of the silt curtain was more turbid. Therefore, the source of turbidity was considered from outside of the site boundary and unrelated to the Project.
9 Jun 2020	D1b (KBR)	Water Quality	SS	32.5 mg/L	20.5 mg/L	24.6 mg/L	26.65 mg/L	Limit Level	No work was conducted at the KBR site (D1b) on that day. The silt curtain was observed to be structurally intact and well-functioning. The exceedance was deemed project unrelated.
9 Jun 2020	D2a (LSMR)	Water Quality	SS	27 mg/L	2.5 mg/L	22 mg/L	25 mg/L	Limit Level	Observable difference between the inside and the outside of the silt curtain. There was no silt plume within the site boundary at the proximity of the silt curtain area but the overall reservoir outside of the silt

Monitoring Date	Location	Aspects	Parameter	Measured Level	Control Level	Action Level	Limit Level	Type of Exceedance	Investigation
									curtain was more turbid. Therefore, the source of turbidity was considered from outside of the site boundary and unrelated to the Project.
11 Jun 2020	D1b (KBR)	Water Quality	SS	16.5 mg/L	9.5 mg/L	11.4 mg/L	13 mg/L	Limit Level	No work was conducted at the KBR site (D1b) on that day. The silt curtain was observed to be structurally intact and well-functioning. The exceedance was deemed project unrelated.
16 Jun 2020	D2a (LSMR)	Water Quality	SS	28 mg/L	3.4 mg/L	22 mg/L	25 mg/L	Limit Level	Reservoir outside the silt curtain was more turbid than inside the silt curtain. Therefore, the source of the exceedance was considered from outside of the site boundary. The exceedance was deemed project unrelated.
16 Jul 2020	D2a (LSMR)	Water Quality	SS	25.5 mg/L	dried up	22 mg/L	25 mg/L	Limit Level	No waterway connection between the site and the monitoring location. The exceedance was deemed project unrelated.
17 Sep 2020	D1b (KBR)	Water Quality	SS	12 mg/L	2.5 mg/L	9 mg/L	13 mg/L	Action Level	No works were performed at the KBR site. Temporary exposed surface was covered with tarpaulin, and the results of the next sampling event comply with the Action and Limit Levels. The overall reservoir was observed to be turbid. Therefore, the exceedance seems likely to be caused by natural variation. The exceedance was deemed project unrelated.
8 Oct 2020	D1b (KBR)	Water Quality	SS	10 mg/L	6.6 mg/L	9 mg/L	13 mg/L	Action Level	No works were performed at the KBR site. Temporary exposed surface was covered with tarpaulin, and the results of the next sampling event comply with the Action and Limit Levels. The overall reservoir

Monitoring Date	Location	Aspects	Parameter	Measured Level	Control Level	Action Level	Limit Level	Type of Exceedance	Investigation
									was observed to be turbid. Therefore, the exceedance seems likely to be caused by natural variation. The exceedance was deemed project unrelated.
17 Feb 2021	D1b (KBR)	Water Quality	pH	11.7	dried up	8.8	8.9	Limit Level	Absence of alkaline material with leakage potential from the site, and the results of retest on the next day were in compliance with the action and limit level, the exceedance is considered project unrelated.
4 May 2021	D1b (KBR)	Water Quality	SS	12 mg/L	dried up	9 mg/L	13 mg/L	Action Level	No earthwork site activities. The exceedance was deemed project unrelated.
24 Jun 2021	D1b (KBR)	Water Quality	SS	15 mg/L	dried up	9 mg/L	13 mg/L	Limit Level	No earthwork site activities. Heavy rainfall from 21 to 23 June 2021 prior to the exceedance event was recorded. The exceedance was suspected due to natural stream flows of the reservoir.
19 Oct 2021	D1b (KBR)	Water Quality	SS	11.4 mg/L	2.5 mg/L	9 mg/L	13 mg/L	Action Level	No signs of muddy water discharging to the reservoir from the site and the reservoir was observed to be overall turbid. Heavy rainfall on 11 & 14 Oct 2021 prior to the exceedance event was recorded.
29 Nov 2021	D2a (LSMR)	Water Quality	Turbidity	190 NTU	23.7 NTU	28.44 NTU	30.81 NTU	Limit Level	No signs of muddy water discharging to the reservoir from the site and the reservoir was observed to be overall turbid. Low water level and accumulated sediment at the bottom of the reservoir at LSMR was observed. No exceedance in Turbidity level was recorded during the re-measurement next day.
29 Nov 2021	D2a (LSMR)	Water Quality	SS	94 mg/L	20 mg/L	24 mg/L	26 mg/L	Limit Level	No signs of muddy water discharging to the reservoir from the site and the reservoir was observed to be overall turbid. Low water level and

Monitoring Date	Location	Aspects	Parameter	Measured Level	Control Level	Action Level	Limit Level	Type of Exceedance	Investigation
									accumulated sediment at the bottom of the reservoir at LSMR was observed.
10 Aug 2022	D1b (KBR)	Water Quality	SS	9.5 mg/L	3.0 mg/L	9 mg/L	13 mg/L	Action Level	No construction work within the KBR site boundary. Heavy rainfall on 10 August 2022 was recorded. The exceedance was suspected due to natural stream flows of the reservoir.

Discussion on Water Quality Monitoring Results

5.22 There is no significant difference between the mean level of the measured parameter of pH value and Dissolved Oxygen during impact water quality monitoring result and baseline level while significant difference is observed in mean level of Turbidity and Suspended Solids. This may be caused by the sampling error during baseline monitoring in disturbance of the bottom soil in the shallow water body. The sampling error has been adjusted in the impact monitoring and hence significant decrease was observed in Turbidity and Suspended Solids level during impact monitoring.

5.23 No significant increase or change was observed during the whole construction period, except for the in-situ measurement of water temperature which is influenced by the natural occasion. This implied that insignificant water quality impacts were generated from the construction works and any adverse water quality impact from the construction works are effectively alleviated by the mitigation measures recommended in approved EM&A manual.

5.24 Exceedances in action level or limit level of pH value, Dissolved Oxygen, Turbidity and Suspended Solids were recorded during the construction period. All the exceedances were non-project related after the investigation.

5.25 With reference to the prediction in water quality impact made on the EIA report, implementation of mitigation measurements suggested in EIA report and EM&A manual could control the minor and short-term impact in water quality induced by construction activities and site runoff. Similar to the prediction of EIA report, no project related exceedance or complaint regarding water quality was recorded during EM&A Programme with the proper implementation of those suggested mitigation measurements.

6. WASTE MANAGEMENT

Waste Management Summary

6.1 An on-site environmental coordinator, i.e. Environmental Officer, has been employed by the Contractor to coordinate and supervise the project waste management works.

6.2 Waste arisen from the construction works are classified into the followings:

- Construction and demolition (C&D) material;
- Chemical waste; and
- General refuse.

6.3 Waste disposal record provided by the Contractor during the construction period is summarized in **Table 6.1**. The summary of waste flow table is presented in **Appendix H**.

Table 6.1 – Summary of Waste Disposal

Quantity					
Inert C&D Materials (in'000m^3)	Chemical Waste (in'000L)	Non-inert C&D Materials			
		Others, e.g. General Refuse disposed at Landfill (in'000m^3)	Recycled materials		
			Paper/card board (in'000kg)	Plastics (in'000kg)	Metals (in'000kg)
39.4641	14.69	0.87906	0.000	0.000	146.4

6.4 28,290m^3 of wastewater was generated during the construction period, all the generated wastewater was treated by the silt removal facility or Wetsep before discharging to designated discharge point.

Discussion on Waste Management

6.5 No complaint regarding the waste management was received during the EM&A Programme.

6.6 Similar to the prediction of EIA report, large amount of inert waste (estimated at 43,800m^3) were generated from the construction work and mainly contributed by tunnelling works. The total amount of inert waste deposited to public fill during the construction period was 39,464.1m^3 and mainly contributed by tunnelling works.

6.7 Mitigation measures recommended in Sections 6.7.2 of the EIA Report, including reuse and recycle all material, maintaining good site practice and educating worker by holding toolbox talk, were implemented by the Contractor as far as practicable and were considered effective in reducing the total quantity of wastes generated during the construction period.

7. SITE INSPECTION

Site Inspection Summary

7.1 Joint weekly site inspections were conducted by representative of ET, Contractor and Engineer so as to monitoring the implementation of proper environmental pollution control and mitigation measures. Weekly site inspections were performed during the construction period.

7.2 A joint site inspection with IEC representative was also undertaken on a monthly basis. Deficiency in mitigation measures observed during weekly site inspection were rectified by the Contractor within a week time.

7.3 Key observations found during the weekly site inspections throughout the EM&A programme are summarized in **Table 7.1**.

Table 7.1 – Summary of Observations of Weekly Site Inspections

Observation	**Occurrence during EM&A Programme**
Improper practice for chemical storage / chemical waste storage	39
Insufficient protection for retained tree.	24
Poor Housekeeping	23
Improper practice in waste handling	13
Insufficient measure for preventing site runoff	12
Insufficient dust suppression measure for construction works and storage of dusty materials	11
No EP / updated license or permit presented at the site entrance	10
Insufficient measure for preventing land contamination issue during construction works	6
No NRMM / faded NRMM presented on Powered Mechanical Equipment (PME)	6
Insufficient maintenance to temporary drainage system	3
Malfunctioning of Wetsep	2
Wheel of vehicle was not washed before leaving the site	2
Insufficient mitigation measure for construction noise	2
Unplugged water barrier / broken plug of water barrier	2
Improper deployment and insufficient maintenance for silt curtain	2
No “Eating is not allowed” / “Do Not Feed the Wildlife” notice presented on-site	1
No chemical waste cabinet provided	1
Insufficient anti-pest measure	1
Improper practice in construction material storage	1

Discussion on Effectiveness of Site Inspection

7.4 Joint weekly site inspections were conducted by representative of ET, Contractor and Engineer during EM&A Programme to ensure the implementation of environmental pollution control and mitigation measures in proper way.

7.5 Deficiencies in implementation of suggested mitigation measures were immediately rectified by the Contractor and hence no project related exceedance in noise and water quality was recorded during the EM&A Programme.

8. ENVIRONMENTAL COMPLAINT AND NON-COMPLIANCE

Environmental Related Complaint

8.1 One environmental complaint regarding the works within the country park area was received in March 2021. Information regarding the complaint is summarized in **Table 8.1**.

Table 8.1 – Summary of Environmental Complaint

Complaint received on 3 March 2021 from EPD	
Complaint description	Concern on insufficient conversation measure for vegetation and turtle populations of Ground Investigation (GI) works adjacent to a stream in Kam Shan Country Park.
Respective Aspect	Works within country park (Ecological Conversation)
Actions taken	The planned GI works within the concerned area were ceased before carrying out. Thus, no GI work was conducted within the country park. Only scaffolding platforms for GI works were erected. The temporary scaffolding platform and the wooden boards forming site access to the platform were dismantled shortly after the complaint was received. All plants, machines and most of the materials were removed off site. No disturbance to the country park area was observed after the clearance of deployed equipment and temporary structures.

Environmental Summons and Prosecution

8.2 There was no notification of summon and successful prosecution for breaches of current environmental protection/pollution control legislation during construction period.

8.3 The Cumulative statistics on complaints, notifications of summons and successful prosecutions is presented in **Appendix I**.

9. IMPLEMENTATION STATUS OF MITIGATION MEASURES

9.1 Referring to the Final EIA report, mitigation measures were suggested to be implemented during the construction period in aspect of construction noise, water quality, waste management, the suggested mitigation measures are summarized below:

Mitigation Measures for Construction Noise

- Code of Practice on Good Management Practice to Prevent Violation of the Noise Control Ordinance (Chapter 400) (for Construction Industry) published by EPD and relevant statutory and non-statutory requirements and guidelines shall be adopted by the contractor;

- Method statement of works with suggestion of proper noise mitigation measures to be implemented shall be submitted to Engineer for approval before commence of any works;

- The suggested noise mitigation measures shall be executed by the Contractor and experienced personnel with suitable training shall be provided to ensure that those mitigation measures are well implemented;

- General practice for minimizing the noise impact shall be implemented, including deploying the noisy equipment and noisy activities as far away from NSRs as practical, turning off unused equipment, minimizing the parallel use of noisy equipment and regular maintenance of all plant and equipment; and

- Stockpile of material and other structure shall be used as noise barrier as practicable.

Mitigation Measures for Water Quality

- Channel, earth bunds or sandbags barrier shall be provided for directing the surface runoff and effluent to silt removal facilities with efficient design in silt removal based on guidelines in Appendix A1 of ProPECC PN 1/94;

- Regular maintenance to existing silt removal facilities by removing the deposited silt regularly to maintain the proper function of those silt removal facilities;

- Existing manholes and newly constructed manholes shall be temporarily sealed;

- Open stockpile of material shall be avoided and shall be stored away from water gathering grounds as far as practicable;

- Excavation works shall be minimized in rainy season (i.e April to September), temporary exposed earth surface shall be covered with tarpaulin, intercepting channels surrounded the excavation area shall be provided;

- Final earth surface and slope shall be well compacted after the completion of construction works;

- Temporary sanitary facilities shall be proved by the Contractor and the sewage arising from temporary sanitary facilities shall be collected by a licensed collector;

- Vehicle washing facilities shall be provided, backfill shall be paved at the section of road between the wheel washing bay and the public road, collected wash water shall be treated by silt removal facilities before discharging or onsite reuse;

- Storage area for fuel and chemicals shall be a sealed and bunded areas with lock and sited away from the water gathering grounds as far as practicable;

- Drip tray with a capacity equal to 110% of the storage capacity shall be provided; and

- Chemical waste generated form construction works shall be properly stored, handled, treated and disposed of in compliance with the requirements stipulated under the Waste Disposal (Chemical Waste) (General) Regulation.

Mitigation Measures for Waste Management

- Preparation of Waste Management Plan (WMP) in accordance with the requirements set out in the ETWB TCW No. 19/2005, Waste Management on Construction Sites, WMP shall be updated regularly;

- Reuse or recycling of all materials on site shall be investigated and exhausted prior to treatment or disposal off-site, onsite sorting activities shall be conducted, any recyclable material shall be identified and sorted out for further recycling;

- A trip-ticket system shall be implemented by the Contractor in accordance with the contract and the requirements of WBTC 31/2004 “Trip Ticket System for Disposal of Construction and Demolition Material”;

- Registration of as a Chemical Waste Producer under the Waste Disposal (Chemical Waste) (General) Regulation, only licensed chemical waste collectors shall be employed to collect any chemical waste generated at site;

- Sufficient number of enclosed rubbish bin shall be provided for general refuse; and

- Toolbox talk shall be provided to workers to educate the concept of waste reduction, reuse and recycling.

Mitigation Measures for Ecology

- Transplanting the affected plants or compensatory planting shall be considered if onsite preservation is not feasible;
- No eating or leaving food in work area shall be allowed, feeding the wildlife shall be avoided;
- Fishes remaining at the proposed works area during the drain down process shall be translocated to area of the reservoir outside the cofferdam;
- Dust suppression measure shall be well implemented to avoid dust deposition on vegetation; and
- Minimizing the disturbance to wildlife by prohibiting open burning, turning off unused plan to minimize noise nuisance and prohibiting fishing in the reservoir area.

Mitigation Measures for Landscape and Visual Impact

- Topsoil shall be reused in constructing soft landscape works if practicable;
- Proper protection to tree to be retained shall be provided;
- Compensatory tree planting shall be provided to compensate for the felled trees;
- Erection of decorative screen hoarding compatible with surrounding environment;
- Site office, material storage area or workshop area shall be located outside the tree protection zone; and
- Reinstatement of disturbed vegetation after works.

9.2 The Contractor has been implementing environmental mitigation measures set out in the approved EM&A Manual and the aforementioned mitigation measures suggested in the final EIA report subject to the actual site condition. The environmental mitigation measure implementation schedule during the EM&A Programme is presented in **Appendix J**.

10. CONCLUSION

10.1 This is the Final Environmental Monitoring and Audit (EM&A) Report presents EM&A works undertaken in the period of 12 July 2019 to 21 January 2023. EM&A works were performed in accordance with the approved EM&A Manual and conditions stipulated in the amended Environmental Permit EP-345/2009/A.

10.2 Impact monitoring for construction noise and water quality were performed during EM&A programme.

10.3 Similar to predictions from the EIA report, no project-related exceedance was identified from the EM&A programme during the construction period.

10.4 Weekly site inspections were performed during the EM&A programme.

10.5 The results of noise monitoring showed a decreasing trend in impact noise levels when comparing data obtained during baseline and impact monitoring. For water quality monitoring, there was no significant difference between the mean levels of pH value and Dissolved Oxygen during impact monitoring and baseline measurements. However, a decrease was observed in the mean levels of Turbidity and Suspended Solids. Details of the data obtained from both baseline and impact monitoring are provided in the tables below:

Monitoring Location	**Baseline Monitoring Results Leq (5min), dB(A)**		**Construction Noise Monitoring Results Leq (5min), dB(A)**	
	Range	**Average**	**Range**	**Average**
NM1 (1900 - 2300)	51.3 - 59.7	55	39.2 - 59	47.4
NM1 (2300 - 0700)	45.5 - 57	51.9	38.2 - 51.7	43.5
NM2 (1900 - 2300)	49.7 - 57.8	53	41.1 - 59.9	47.3
NM2 (2300 - 0700)	41.7 - 50.9	45.5	32.2 - 45.3	40.6

Parameters		**D1b**		**D2a**	
		Baseline	**Impact**	**Baseline**	**Impact**
pH Value	**Mean**	7.9	7.5	8.1	7.6
	Range	6.8 - 8.9	5.7 - 12.1	7 - 9.2	6.5 - 9.5
Dissolved Oxygen (mg/L)	**Mean**	8.1	8.1	8.3	8.2
	Range	5.8 - 9.4	5.9 - 23	6.1 - 9.8	3.9 - 20.7
Turbidity (NTU)	**Mean**	7.3	5.3	6.5	4.7
	Range	3.1 - 23.4	0.1 - 53.6	2.6 - 18.9	0 - 190

Parameters		D1b		D2a	
		Baseline	Impact	Baseline	Impact
Suspended Solids (mg/L)	Mean	5.3	3.8	6.1	4.7
	Range	2 - 13	<0.5 - 33	2 - 25	<0.5 - 98

Based on these results, it is considered that the project did not have significant environmental impact towards the nearby sensitive receivers or environment after implementing the mitigation measures suggested in EIA and EM&A manual.

10.6 Discussion is made on the sampling and testing methodology and the sampling locations for water quality impact as follows:

Discussion on the Adopted Sampling Methodology

- With reference to the approved EM&A manual Section 5.3.5, water sampling shall be conducted with water sampler consisting of a transparent PVC or glass cylinder of a capacity of not less than two litres which can be effectively sealed with cups at both ends should be used for water sampling event. In view of the shallow water level observed in the two control points (i.e. C1b and C2) during dry season (i.e. October to March), no and very few water samples were collected with water sampler and thus no data could be collected from both in-situ measurement and laboratory testing. As the water quality of control points of the date of sampling event could not be revealed, no reliable basepoint information could be compared with data collected from impact monitoring locations (i.e. D1b and D2a) and hence the effect of construction works toward water quality could not be fully studied. Therefore, to facilitate the collection of water samples in shallow water conditions, other tools (i.e. a small plastic bottle and water bucket) were used in addition to the water sampler specified in the EM&A manual.

- Using the water sampler for sampling in water body with shallow water level could induce the unavoidable sampling error and measurement error in Turbidity and Suspended Solid level with the disturbance to bottom soil due to turbine generated during sampling event. Exceptionally high result in Turbidity and Suspended Solid level was observed during baseline monitoring period.

Discussion on the Approved Sampling Locations

- Shallow water level or dried-up condition was commonly observed in the approved alternative control point C1b and the originally designated control point C2 during dry season (i.e. October to March), no data could be collected from both in-situ measurement and laboratory testing as insufficient water sample could be collected. Therefore, the basepoint reference for the water quality of upstream could not be fully assessed.

10.7 The recommendations in the EM&A programme are as follows:

Electronic Form Attached to a Centralised Platform

It is suggested to use electronic forms attached to a centralised platform for inspections, investigation reports for exceedance events, and other data collection during the EM&A programme, this could help to effectively manage the project throughout the course of the EM&A programme. A centralised platform can provide easy access to summary reports, retrieve data, and conduct analysis at any stage of the EM&A programme. Additionally, automated functions such as collecting meteorological data and EM&A monitoring data from nearby projects can be implemented to enhance the analysis of the environmental impact generated by the project.

Collection of other sources of data to supplement EM&A monitoring

In this project, water quality within the reservoir is also monitored by Water Supplies Department (WSD). We can approach WSD to obtain their routine monitoring data as a additional source of data to supplement the EM&A monitoring.

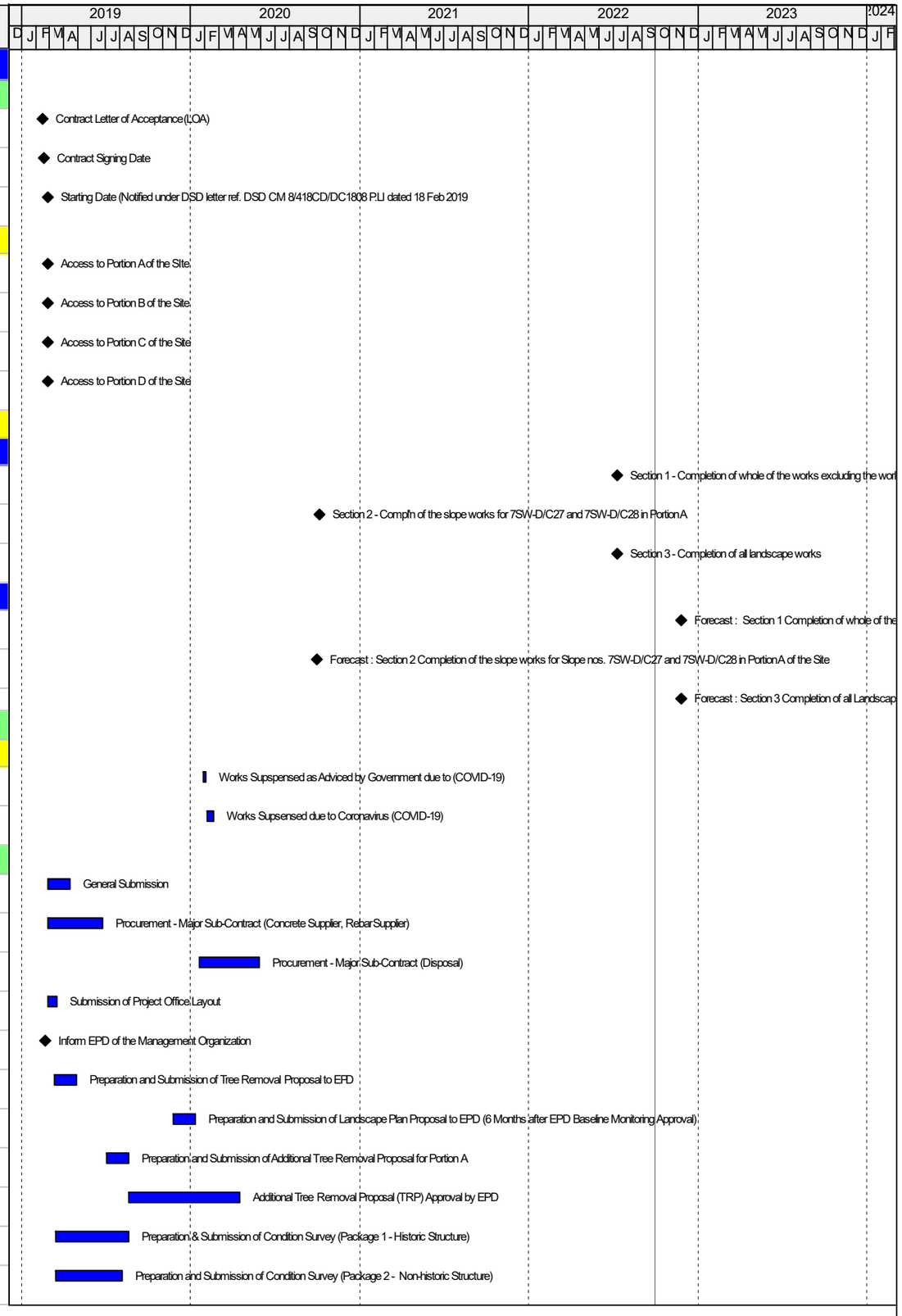
Alternative Sampling Method

When identifying monitoring locations, limitations including the changes in the watercourse over the years should also be considered. If fluctuations in the condition are anticipated, alternative sampling method should be proposed in the EM&A Manual and / or at the beginning of the EM&A programme.

10.8 In conclusion, the environmental performance of the Project is acceptable as neither project related exceedance in construction noise and water quality impact monitoring nor complaint related to construction noise and water quality was recorded during the construction period with the implementation of mitigation measures suggested in the EIA report.

Appendix A
Construction Programme

Activity ID	Activity Name	Dur	Start	Finish	Late Start	Late Finish	Total Float	% Compl.	Relative Weight
IRTS - Updated Programme (Y22M09D30b)									
Contract Dates									
CD_1000	Contract Letter of Acceptance(LOA)	0		14-Feb-19A		09-Oct-20		100%	
CD_1100	Contract Signing Date	0	19-Feb-19A		11-Apr-22			100%	
ST_1000	Starting Date (Notified under DSD letter ref. DSD CM 8/418CD/DC1808 P.LI dated 18 Feb 2019	0	27-Feb-19A		05-Oct-20			100%	
Possession of Site									
AD_1010	Access to Portion A of the SIte	0	27-Feb-19A		09-Jul-22			100%	
AD_1020	Access to Portion B of the Site	0	27-Feb-19A		09-Jul-22			100%	
AD_1030	Access to Portion C of the Site	0	27-Feb-19A		09-Jul-22			100%	
AD_1040	Access to Portion D of the Site	0	27-Feb-19A		09-Jul-22			100%	
Project Completion									
Contract Completion									
ComS1_1010	Section 1 - Completion of whole of the works excluding the works in Setion 2 and 3	0		09-Jul-22A		09-Jul-22		100%	
ComS2_1010	Section 2 - Compln of the slope works for 7SW-D/C27 and 7SW-D/C28 in PortionA	0		05-Oct-20A		05-Oct-20		100%	
ComS3_1010	Section 3 - Completion of all landscape works	0		09-Jul-22A		09-Jul-22		100%	
Planned Completion									
Pcom_S1-1010	Forecast : Section 1 Completion of whole of the works excluding the works in Setion 2 and 3	0		26-Nov-22		09-Jul-22	-140	0%	
Pcom_S2-1010	Forecast : Section 2 Completion of the slope works for Slope nos. 7SW-D/C27 and 7SW-D/C28 in Portion A of the Site	0		29-Sep-20A		09-Oct-20		100%	
Pcom_S3-1010	Forecast : Section 3 Completion of all Landscape Works	0		26-Nov-22		09-Jul-22	-140	0%	
Disruption of Works									
Works Suspension									
TSW_1000	Works Supspensed as Adviced by Government due to (COVID-19)	4	29-Jan-20A	01-Feb-20A	09-Oct-20	09-Oct-20		100%	
TSW_1010	Works Supsensed due to Coronavirus (COVID-19)	14	06-Feb-20A	19-Feb-20A	11-Apr-22	11-Apr-22		100%	
Preliminaries and General Requirements									
PGR_1000	General Submission	41	27-Feb-19A	16-Apr-19A	11-Apr-22	11-Apr-22		100%	0.20
PGR_1100	Procurement - Major Sub-Contract (Concrete Supplier, Rebar Supplier)	95	27-Feb-19A	24-Jun-19A	11-Apr-22	11-Apr-22		100%	0.40
PGR_1110	Procurement - Major Sub-Contract (Disposal)	99	20-Jan-20A	29-May-20A	11-Apr-22	11-Apr-22		100%	0.20
PGR_1200	Submission of Project Office Layout	17	27-Feb-19A	18-Mar-19A	04-Jul-23	04-Jul-23		100%	0.10
PGR_1300	Inform EPD of the Management Organization	0		21-Feb-19A		11-Apr-22		100%	0.10
PGR_1400-10	Preparation and Submission of Tree Removal Proposal to EPD	38	12-Mar-19A	29-Apr-19A	11-Apr-22	11-Apr-22		100%	0.10
PGR_1400-20	Preparation and Submission of Landscape Plan Proposal to EPD (6 Months after EPD Baseline Monitoring Approval)	37	25-Nov-19A	10-Jan-20A	25-Jun-22	25-Jun-22		100%	0.10
PGR_1400-30	Preparation and Submission of Additional Tree Removal Proposal for Portion A	43	02-Jul-19A	20-Aug-19A	11-Apr-22	11-Apr-22		100%	0.06
PGR_1400-40	Additional Tree Removal Proposal (TRP) Approval by EPD	190	21-Aug-19A	17-Apr-20A	11-Apr-22	11-Apr-22		100%	0.04
PGR_1500A	Preparation & Submission of Condition Survey (Package 1 - Historic Structure)	129	16-Mar-19A	21-Aug-19A	04-Jul-23	04-Jul-23		100%	0.15
PGR_1500B	Preparation and Submission of Condition Survey (Package 2 - Non-historic Structure)	115	16-Mar-19A	05-Aug-19A	11-Apr-22	11-Apr-22		100%	0.15



Actual Level of Effort | Actual Work | Remaining Work | Critical Remaining Work | Milestone | Remaining (Summary)

Contract No. DC/2018/08 : Inter-Reservoirs Transfer Scheme
Water Tunnel Between Kowloon Byewash Reservoir and Lower Shing Mun Reservoir

Date	Revision	Checked	Approved
30-Sep-22	Updated Y22M09D30a	A.Tsang	

Activity ID	Activity Name	Dur	Start	Finish	Late Start	Late Finish	Total Float	% Compl.	Relative Weight
PGR_1700	Preparation & Submission of Water Quality Management Plan *(P1d)	110	27-Feb-19 A	12-Jul-19 A	04-Jul-23	04-Jul-23		100%	0.10
PGR_1800	Preparation and Submission of Baseline Monitoring as stated in EM&A Manual *(P6)	97	27-Feb-19 A	26-Jun-19 A	09-Oct-20	09-Oct-20		100%	0.10
PGR_1810	EPD Approval for Baseline Monitoring	12	27-Jun-19 A	11-Jul-19 A	09-Oct-20	09-Oct-20		100%	0.10
PGR_1820	CNP Application for TBM Operation	6	01-Dec-20 A	08-Dec-20 A	11-Apr-22	11-Apr-22		100%	0.10
PGR_1830	CNP Application for LSM Mined Tunnel	20	02-Mar-20 A	25-Mar-20 A	11-Apr-22	11-Apr-22		100%	
BIM Submission									
PGR_1900	Submission of Construction Stage BIM Project Execution Plan *(P3)	22	20-Feb-19 A	16-Mar-19 A	13-May-22	13-May-22		100%	0.05
PGR_1910	Preparation and Submission of Existing Condition Model *(P3)	74	27-Feb-19 A	29-May-19 A	13-May-22	13-May-22		100%	0.13
PGR_1920	Preparation and Submission of Civil, Strcutural and Achitectual Element of the Model *(P3)	70	04-Mar-19 A	29-May-19 A	13-May-22	13-May-22		100%	0.13
PGR_1930	Preparation and Submission BIM Combined Services Drawings *(P3)	267	31-May-19 A	27-Apr-20 A	13-May-22	13-May-22		100%	0.13
PGR_1940	Preparation and Submission of Proposal for COBie Information Requirements *(P3)	79	20-Jan-20 A	05-May-20 A	03-Jan-23	03-Jan-23		100%	0.13
PGR_1950	Full Coordinated As-built BIM Model *(P3)	54	31-Oct-22	02-Jan-23*	13-May-22	16-Jul-22	-141	0%	0.17
PGR_1960	Preparation and Submission of COBie Data Deliverables *(P3)	31	03-Jan-23*	07-Feb-23	03-Jan-23	07-Feb-23	0	0%	0.13
PGR_1970	Preparation and Submission oif Asset Management *(P3)	78	20-Sep-22 A	21-Dec-22	17-Apr-23	04-Jul-23	166	0%	0.13
Procurement of Consultants and Sub-Contractors									
Consultants									
Pro_Cns_1000	Provision of Contractor's Designer Services	77	15-Feb-19 A	21-May-19 A	11-Apr-22	11-Apr-22		100%	0.07
Pro_Cns_1100	Provision of ICE Services	21	09-Apr-19 A	07-May-19 A	11-Apr-22	11-Apr-22		100%	0.07
Pro_Cns_1200	Provision of Pre-construction Conditions Survey	22	08-Apr-19 A	07-May-19 A	11-Apr-22	11-Apr-22		100%	0.07
Pro_Cns_1300	Provision of Traffic Consultant Services	130	15-Feb-19 A	24-Jul-19 A	11-Apr-22	11-Apr-22		100%	0.05
Pro_Cns_1400	Provision of Environmental Team Services	9	08-Apr-19 A	17-Apr-19 A	11-Apr-22	11-Apr-22		100%	0.07
Pro_Cns_1500	Provision of Tree Survey Works	10	12-Apr-19 A	26-Apr-19 A	11-Apr-22	11-Apr-22		100%	0.07
Sub-Contractors									
Pro_SCon_1000	Subcontract Transplanting of Existing Tree at Lower Shing Mun Reservoir	80	15-Feb-19 A	24-May-19 A	11-Apr-22	11-Apr-22		100%	0.04
Pro_SCon_1100	Subcontract Ground Investigation Works	128	15-Feb-19 A	22-Jul-19 A	09-Oct-20	09-Oct-20		100%	0.04
Pro_SCon_1200	Subcontract Geotechnical Instrumentation and Monitoring Works	128	15-Feb-19 A	22-Jul-19 A	09-Oct-20	09-Oct-20		100%	0.08
Pro_SCon_1300-05	Subcontract Pipe Pile Wall and Grouting Works for Portal (Stage 1)	16	01-Aug-19 A	19-Aug-19 A	11-Apr-22	11-Apr-22		100%	0.02
Pro_SCon_1300-10	Subcontract Pipe Pile Wall and Grouting Works for Portal (Stage 2A)	11	04-Jan-20 A	16-Jan-20 A	11-Apr-22	11-Apr-22		100%	0.04
Pro_SCon_1300-20	Subcontract Pipe Pile Wall and Grouting Works for Outfall Structure (Stage 2B)	48	07-Apr-21 A	07-Jun-21 A	04-Jul-23	04-Jul-23		100%	0.02
Pro_SCon_1400-10	Subcontract Supply & Installation of Strutting and Walling System for Outfall Structure	76	07-Apr-21 A	05-Jul-21 A	04-Jul-23	04-Jul-23		100%	0.04
Pro_SCon_1400-20	Subcontract Supply & Installation of Cofferdam for KBR Cut & Cover Tunnel	76	10-Nov-20 A	28-Dec-20 A	04-Jul-23	04-Jul-23		100%	0.04
Pro_SCon_1500	Subcontract Slope Upgrading Works at Lower Shing Mun Reservoir	97	15-Feb-19 A	14-Jun-19 A	09-Oct-20	09-Oct-20		100%	0.08
Pro_SCon_1600	Subcontract E&M work of the electrical actuated penstocks and the automatic flow control system *(P2a)	147	23-Dec-19 A	30-Jun-20 A	13-May-22	13-May-22		100%	0.08
Pro_SCon_1700	Subcontract Enhancement works at Kam Shan Country park works *(P3)	147	04-Mar-22 A	31-Aug-22 A	21-Apr-22	21-Apr-22		100%	0.08

Actual Level of Effort
Actual Work
Remaining Work
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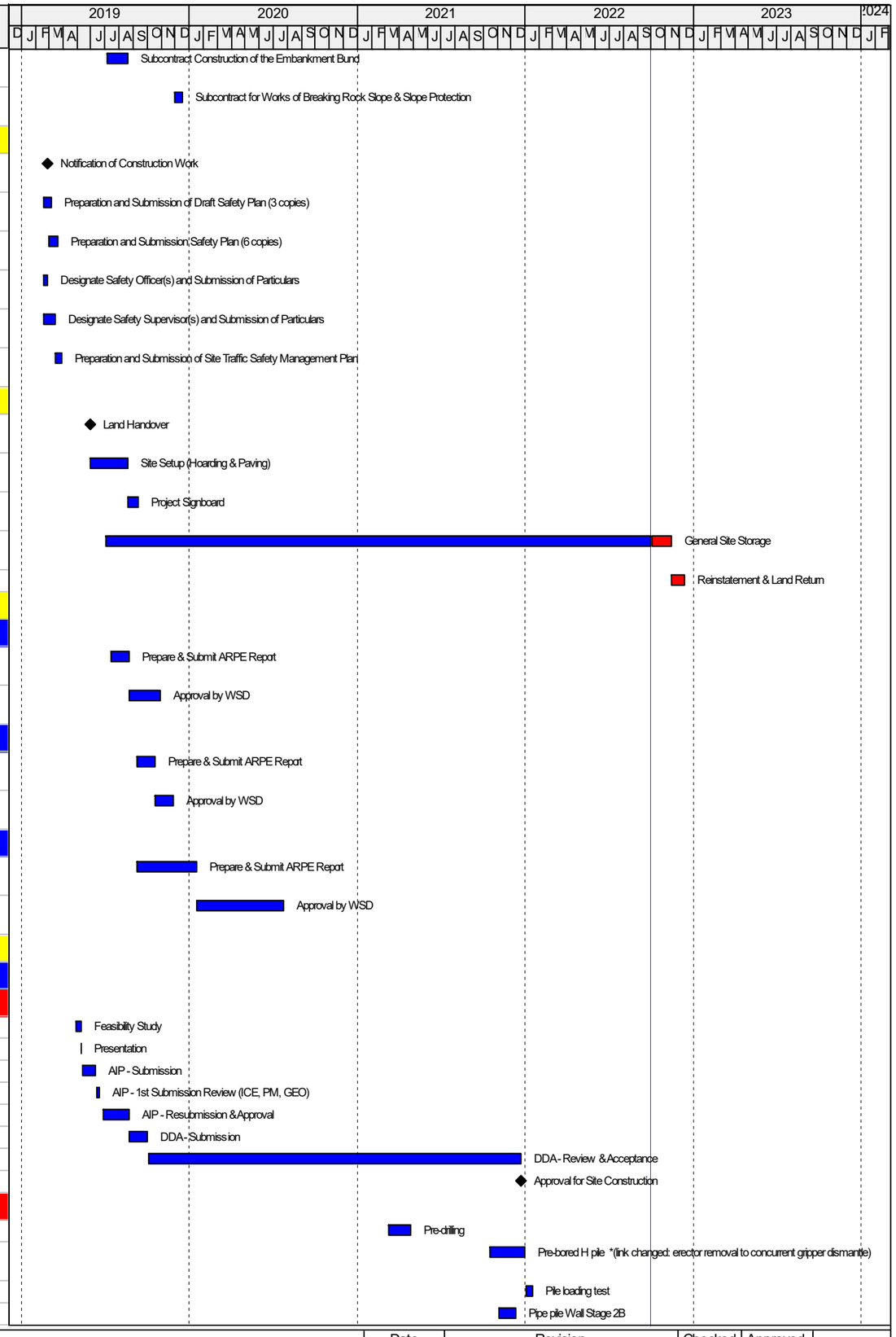
Remaining (Summary)

Contract No. DC/2018/08 : Inter-Reservoirs Transfer Scheme
Water Tunnel Between Kowloon Byewash Reservoir and Lower Shing Mun Reservoir

Date	Revision	Checked	Approved
30-Sep-22	Updated Y22M09D30a	A.Tsang	

Activity ID	Activity Name	Dur	Start	Finish	Late Start	Late Finish	Total Float	% Compl.	Relative Weight
Pro_SCon_1800	Subcontract Construction of the Embankment Bund	40	05-Jul-19A	20-Aug-19A	11-Apr-22	11-Apr-22		100%	0.04
Pro_SCon_1810	Subcontract for Works of Breaking Rock Slope & Slope Protection	15	29-Nov-19A	17-Dec-19A	04-Jul-23	04-Jul-23		100%	
Safety Related Submissions									
Safe_Sub_1000	Notification of Construction Work	0		27-Feb-19A		04-Jul-23		100%	0.10
Safe_Sub_1100	Preparation and Submission of Draft Safety Plan (3 copies)	15	19-Feb-19A	05-Mar-19A	04-Jul-23	04-Jul-23		100%	0.20
Safe_Sub_1200	Preparation and Submission Safety Plan (6 copies)	21	01-Mar-19A	21-Mar-19A	04-Jul-23	04-Jul-23		100%	0.10
Safe_Sub_1300	Designate Safety Officer(s) and Submission of Particulars	8	19-Feb-19A	26-Feb-19A	04-Jul-23	04-Jul-23		100%	0.20
Safe_Sub_1400	Designate Safety Supervisor(s) and Submission of Particulars	24	19-Feb-19A	14-Mar-19A	04-Jul-23	04-Jul-23		100%	0.20
Safe_Sub_1500	Preparation and Submission of Site Traffic Safety Management Plan	14	15-Mar-19A	28-Mar-19A	11-Apr-22	11-Apr-22		100%	0.20
Tai Po Road Site (TGLA No. TST453)									
TPR_GW-1010	Land Handover	0	30-May-19A		26-Apr-22			100%	
TPR_GW-1020	Site Setup (Hoarding & Paving)	69	30-May-19A	20-Aug-19A	08-Jul-22	08-Jul-22		100%	
TPR_GW-1030	Project Signboard	18	21-Aug-19A	10-Sep-19A	08-Jul-22	08-Jul-22		100%	
TPR_GW-1040	General Site Storage	993	02-Jul-19A	14-Nov-22	26-Apr-22	09-Jun-22	-131	90%	
TPR_GW-1050	Reinstatement & Land Return	24	15-Nov-22	12-Dec-22	10-Jun-22	08-Jul-22	-131	0%	
ARPE Submission									
Package 1 - LSMR Works									
ARPE_P1-010z	Prepare & Submit ARPE Report	34	15-Jul-19A	22-Aug-19A	11-Apr-22	11-Apr-22		100%	
ARPE_P1-020z	Approval by WSD	55	23-Aug-19A	28-Oct-19A	11-Apr-22	11-Apr-22		100%	
Package 2 - KBR Works									
ARPE_P2-010z	Prepare & Submit ARPE Report	33	09-Sep-19A	18-Oct-19A	13-May-22	13-May-22		100%	
ARPE_P2-020z	Approval by WSD	33	19-Oct-19A	26-Nov-19A	13-May-22	13-May-22		100%	
Package 3 - Tunnel Works									
ARPE_P3-010z	Prepare & Submit ARPE Report	106	10-Sep-19A	16-Jan-20A	11-Apr-22	11-Apr-22		100%	
ARPE_P3-020z	Approval by WSD	148	17-Jan-20A	24-Jul-20A	11-Apr-22	11-Apr-22		100%	
CSD Submission									
CSD 1 - Outfall Structure									
Design Submission									
CSD_PF_2010	Feasibility Study	11	29-Apr-19A	11-May-19 A	11-Apr-22	11-Apr-22		100%	
CSD_PF_2020	Presentation	1	11-May-19 A	11-May-19 A	11-Apr-22	11-Apr-22		100%	
CSD_PF_2030	AIP - Submission	25	13-May-19A	11-Jun-19 A	11-Apr-22	11-Apr-22		100%	
CSD_PF_2040	AIP - 1st Submission Review (ICE, PM, GEO)	6	12-Jun-19A	18-Jun-19A	11-Apr-22	11-Apr-22		100%	
CSD_PF_2050	AIP - Resubmission & Approval	48	28-Jun-19A	23-Aug-19A	11-Apr-22	11-Apr-22		100%	
CSD_PF_2060	DDA- Submission	33	24-Aug-19A	02-Oct-19A	11-Apr-22	11-Apr-22		100%	
CSD_PF_2070	DDA- Review & Acceptance	508	03-Oct-19A	23-Dec-21A	11-Apr-22	11-Apr-22		100%	
CSD_PF_2080	Approval for Site Construction	0		23-Dec-21A		11-Apr-22		100%	
Alternative Works (Subject to approval of Structure Design)									
CSD1_OF_0990	Pre-drilling	44	08-Mar-21A	27-Apr-21A	11-Apr-22	11-Apr-22		100%	
CSD1_OF_1000	Pre-bored H pile *(link changed: erector removal to concurrent gripper dismantle)	67	16-Oct-21A	31-Dec-21A	11-Apr-22	11-Apr-22		100%	
CSD1_OF_2000	Pile loading test	17	03-Jan-22A	17-Jan-22A	11-Apr-22	11-Apr-22		100%	
CSD1_OF_3000	Pipe pile Wall Stage 2B	55	04-Nov-21A	11-Dec-21 A	11-Apr-22	11-Apr-22		100%	

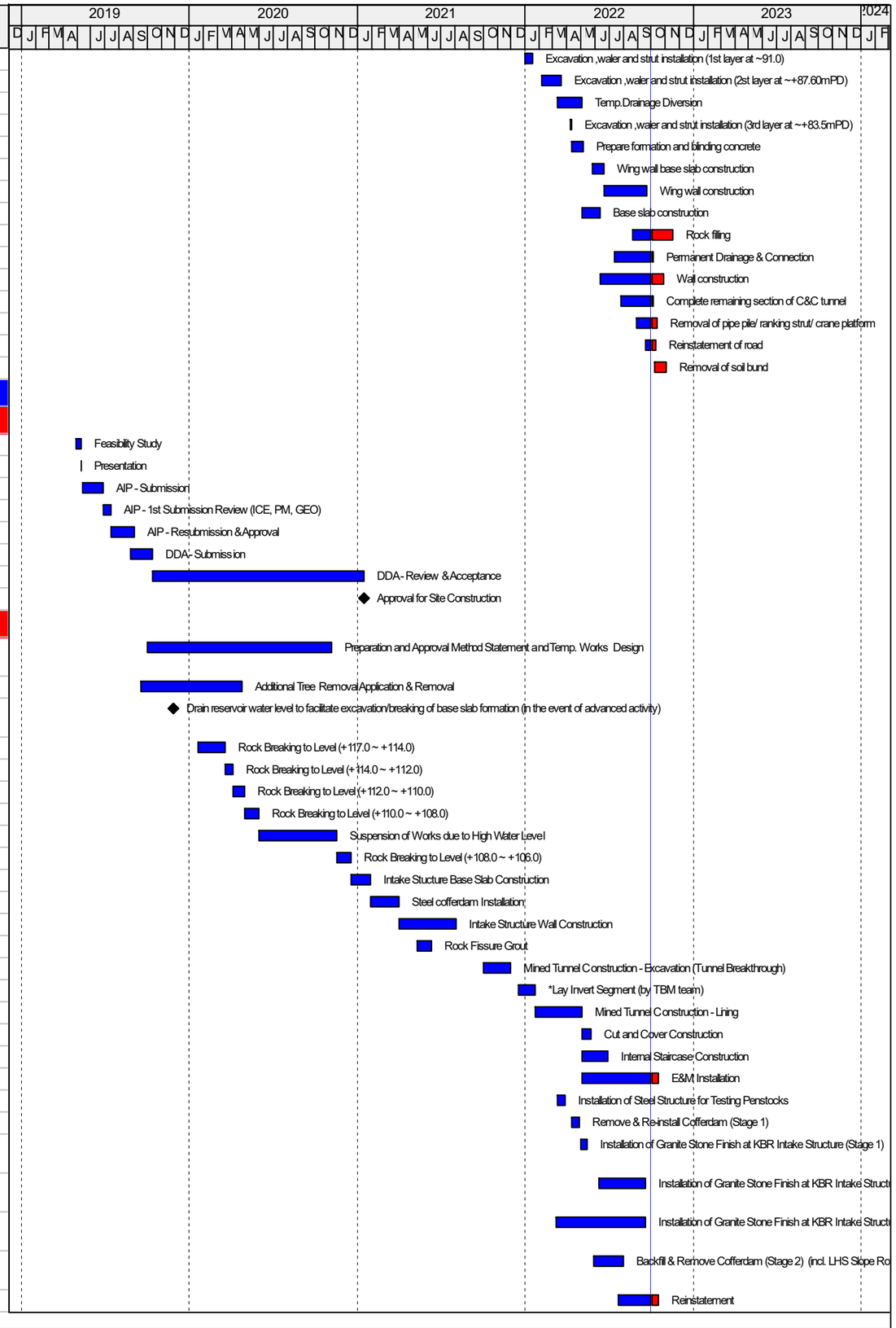


Actual Level of Effort | Actual Work | Remaining Work | Critical Remaining Work | Milestone | Remaining (Summary)

Contract No. DC/2018/08 : Inter-Reservoirs Transfer Scheme
Water Tunnel Between Kowloon Byewash Reservoir and Lower Shing Mun Reservoir

Date	Revision	Checked	Approved
30-Sep-22	Updated Y22M09D30a	A.Tsang	

Activity ID	Activity Name	Dur	Start	Finish	Late Start	Late Finish	Total Float	% Compl.	Relative Weight
CSD1_OF_4000	Excavation ,waler and strut installation (1st layer at ~91.0)	42	31-Dec-21 A	15-Jan-22 A	11-Apr-22	11-Apr-22		100%	
CSD1_OF_5000	Excavation ,waler and strut installation (2st layer at ~+87.60mPD)	42	04-Feb-22 A	18-Mar-22 A	11-Apr-22	11-Apr-22		100%	
CSD1_OF_5010	Temp.Drainage Diversion	15	11-Mar-22 A	03-May-22 A	11-Apr-22	11-Apr-22		100%	
CSD1_OF_6000	Excavation ,waler and strut installation (3rd layer at ~+83.5mPD)	17	07-Apr-22 A	10-Apr-22 A	11-Apr-22	11-Apr-22		100%	
CSD1_OF_7000	Prepare formation and blinding concrete	5	11-Apr-22 A	05-May-22 A	11-Apr-22	11-Apr-22		100%	
CSD1_OF_8000	Wing wall base slab construction	23	25-May-22 A	21-Jun-22 A	20-May-22	20-May-22		100%	
CSD1_OF_9000	Wing wall construction	77	22-Jun-22 A	21-Sep-22 A	20-May-22	20-May-22		100%	
CSD1_OF_9100	Base slab construction	33	04-May-22 A	13-Jun-22 A	11-Apr-22	11-Apr-22		100%	
CSD1_OF_9105	Rock filling	72	22-Aug-22 A	16-Nov-22	29-Jun-22	12-Aug-22	-79	0%	
CSD1_OF_9110	Permanent Drainage & Connection	70	13-Jul-22 A	05-Oct-22	05-Jul-22	06-Jul-22	-75	65%	
CSD1_OF_9200	Wall construction	116	13-Jun-22 A	29-Oct-22	11-Apr-22	12-May-22	-141	47%	
CSD1_OF_9300	Complete remaining section of C&C tunnel	59	26-Jul-22 A	05-Oct-22	11-Apr-22	12-Apr-22	-141	10%	
CSD1_OF_9500b	Removal of pipe pile/ ranking strut/ crane platform	35	31-Aug-22 A	13-Oct-22	29-Jun-22	09-Jul-22	-79	0%	
CSD1_OF_9600	Reinstatement of road	16	20-Sep-22 A	10-Oct-22	11-Apr-22	20-Apr-22	-141	0%	
CSD1_OF_9700	Removal of soil bund	22	10-Oct-22	03-Nov-22	20-Apr-22	17-May-22	-141	0%	
CSD 2 - Alternative Alignment & Intake Structure									
Design Submission									
CSD_PF_2090	Feasibility Study	10	29-Apr-19 A	11-May-19 A	13-May-22	13-May-22		100%	
CSD_PF_2100	Presentation	1	11-May-19 A	11-May-19 A	13-May-22	13-May-22		100%	
CSD_PF_2110	AIP - Submission	39	13-May-19 A	27-Jun-19 A	13-May-22	13-May-22		100%	
CSD_PF_2120	AIP - 1st Submission Review (ICE, PM, GEO)	13	28-Jun-19 A	13-Jul-19 A	13-May-22	13-May-22		100%	
CSD_PF_2130	AIP - Resubmission & Approval	43	15-Jul-19 A	03-Sep-19 A	13-May-22	13-May-22		100%	
CSD_PF_2140	DDA- Submission	38	26-Aug-19 A	11-Oct-19 A	13-May-22	13-May-22		100%	
CSD_PF_2150	DDA- Review & Acceptance	336	12-Oct-19 A	14-Jan-21 A	13-May-22	13-May-22		100%	
CSD_PF_2160	Approval for Site Construction	0		14-Jan-21 A		13-May-22		100%	
Alternative Works (Subject to approval of alternative tunnel alignment)									
CSD_PF_2170	Preparation and Approval Method Statement and Temp. Works Design	320	02-Oct-19 A	04-Nov-20 A	13-May-22	13-May-22		100%	
CSD_PF_2180	Additional Tree Removal Application & Removal	173	17-Sep-19 A	24-Apr-20 A	13-May-22	13-May-22		100%	
CSD_PF_2185	Drain reservoir water level to facilitate excavation/breaking of base slab formation (in the event of advanced activity)	0	26-Nov-19 A		04-Jul-23			100%	
CSD_PF_2190-10	Rock Breaking to Level (+117.0 ~ +114.0)	43	20-Jan-20 A	17-Mar-20 A	13-May-22	13-May-22		100%	
CSD_PF_2190-20	Rock Breaking to Level (+114.0 ~ +112.0)	15	18-Mar-20 A	03-Apr-20 A	13-May-22	13-May-22		100%	
CSD_PF_2190-30	Rock Breaking to Level (+112.0 ~ +110.0)	18	04-Apr-20 A	29-Apr-20 A	13-May-22	13-May-22		100%	
CSD_PF_2190-40	Rock Breaking to Level (+110.0 ~ +108.0)	26	30-Apr-20 A	01-Jun-20 A	13-May-22	13-May-22		100%	
CSD_PF_2190-45	Suspension of Works due to High Water Level	139	01-Jun-20 A	15-Nov-20 A	13-May-22	13-May-22		100%	
CSD_PF_2190-50	Rock Breaking to Level (+108.0 ~ +106.0)	45	16-Nov-20 A	17-Dec-20 A	13-May-22	13-May-22		100%	
CSD_PF_2200	Intake Stucture Base Slab Construction	35	18-Dec-20 A	28-Jan-21 A	13-May-22	13-May-22		100%	
CSD_PF_2200-10	Steel cofferdam Installation	42	29-Jan-21 A	31-Mar-21 A	13-May-22	13-May-22		100%	
CSD_PF_2210	Intake Structure Wall Construction	80	01-Apr-21 A	02-Aug-21 A	13-May-22	13-May-22		100%	
CSD_PF_2210-05	Rock Fissure Grout	60	10-May-21 A	09-Jun-21 A	14-May-22	14-May-22		100%	
CSD_PF_2210-20	Mined Tunnel Construction - Excavation (Tunnel Breakthrough)	38	30-Sep-21 A	29-Nov-21 A	14-May-22	14-May-22		100%	
CSD_PF_2210-25	*Lay Invert Segment (by TBM team)	26	16-Dec-21 A	21-Jan-22 A	14-May-22	14-May-22		100%	
CSD_PF_2210-30	Mined Tunnel Construction - Lining	33	22-Jan-22 A	04-May-22 A	14-May-22	14-May-22		100%	
CSD_PF_2220	Cut and Cover Construction	22	03-May-22 A	23-May-22 A	14-May-22	14-May-22		100%	
CSD_PF_2225	Internal Staircase Construction	48	03-May-22 A	29-Jun-22 A	04-Jul-22	04-Jul-22		100%	
CSD_PF_2230	E&M Installation	138	03-May-22 A	17-Oct-22	04-Jul-22	16-Jul-22	-76	70%	
CSD_PF_2231	Installation of Steel Structure for Testing Penstocks	17	10-Mar-22 A	29-Mar-22 A	13-May-22	13-May-22		100%	
CSD_PF_2232	Remove & Re-install Cofferdam (Stage 1)	14	11-Apr-22 A	29-Apr-22 A	14-May-22	14-May-22		100%	
CSD_PF_2233-1	Installation of Granite Stone Finish at KBR Intake Structure (Stage 1)	11	30-Apr-22 A	14-May-22 A	14-May-22	14-May-22		100%	
CSD_PF_2233-2	Installation of Granite Stone Finish at KBR Intake Structure (Stage 2)	86	09-Jun-22 A	19-Sep-22 A	09-Jul-22	09-Jul-22		100%	
CSD_PF_2233-3	Installation of Granite Stone Finish at KBR Intake Structure (Slope, Spillage Channel & Other Area)	158	09-Mar-22 A	19-Sep-22 A	14-May-22	14-May-22		100%	
CSD_PF_2240	Backfill & Remove Cofferdam (Stage 2) (incl. LHS Slope Rockfill Backfilling & Silt Curtain Removal)	53	30-May-22 A	01-Aug-22 A	14-May-22	14-May-22		100%	
CSD_PF_2250	Reinstatement	73	21-Jul-22 A	17-Oct-22	14-May-22	27-May-22	-117	25%	



Actual Level of Effort
Actual Work
Remaining Work
Critical Remaining Work
Milestone
Remaining (Summary)

Contract No. DC/2018/08 : Inter-Reservoirs Transfer Scheme
Water Tunnel Between Kowloon Byewash Reservoir and Lower Shing Mun Reservoir

Date	Revision	Checked	Approved
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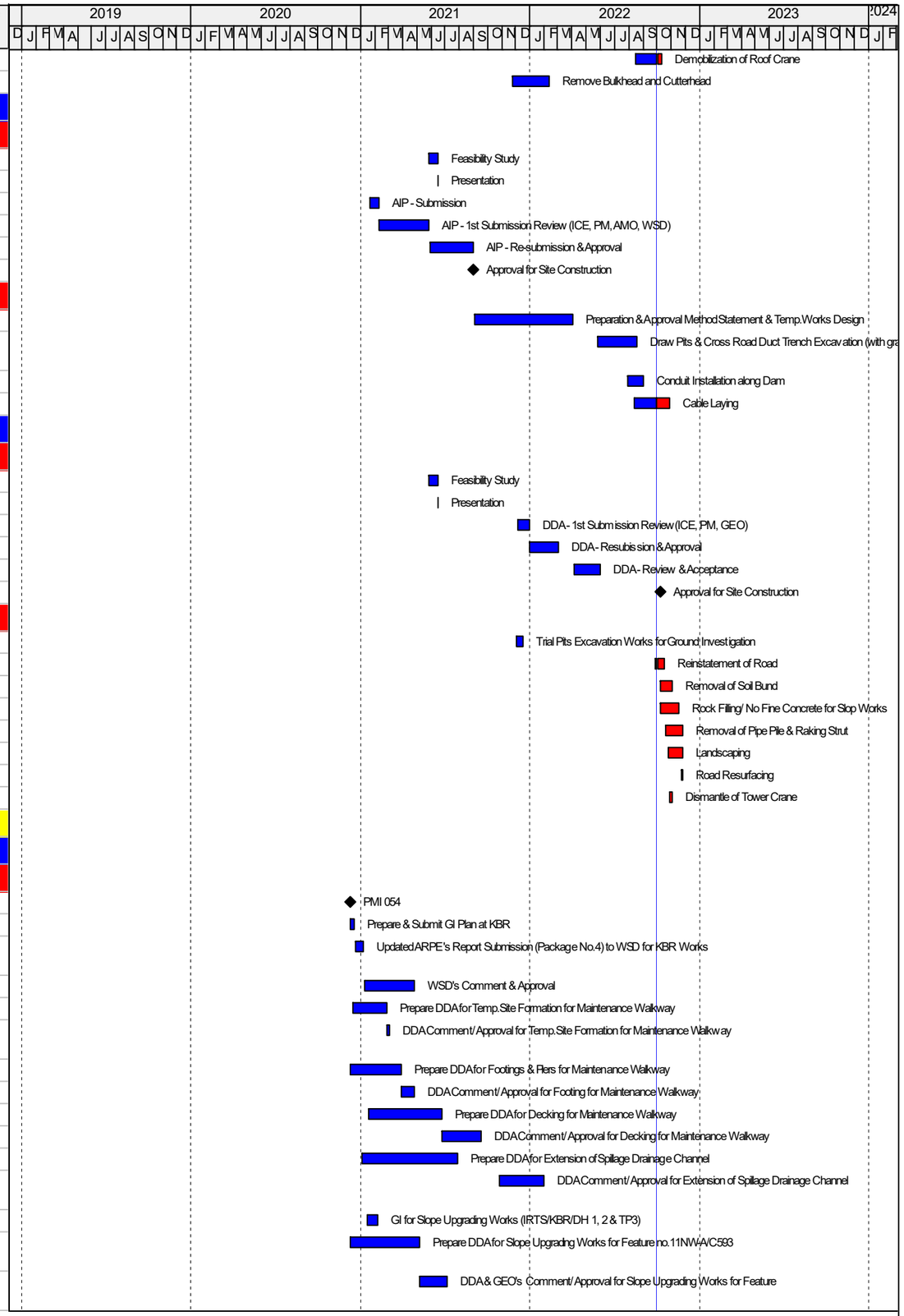
Activity ID	Activity Name	Dur	Start	Finish	Late Start	Late Finish	Total Float	% Compl.	Relative Weight
CSD_PF_2260	Demobilization of Roof Crane	46	15-Aug-22 A	10-Oct-22	04-Jul-22	09-Jul-22	-76	0%	
TB_Ds_1600	Remove Bulkhead and Cutterhead	59	25-Nov-21 A	11-Feb-22 A	14-May-22	14-May-22		100%	0.10
CSD 3 - Alternation of Power Supply Point & Cable Route for Connection to Kiosk at Intake Structure									
Design Submission									
CSD_PF_3010	Feasibility Study	18	27-May-21 A	17-Jun-21 A	04-Jul-23	04-Jul-23		100%	
CSD_PF_3020	Presentation	1	17-Jun-21 A	17-Jun-21 A	04-Jul-23	04-Jul-23		100%	
CSD_PF_3030	AIP - Submission	15	21-Jan-21 A	09-Feb-21 A	04-Jul-23	04-Jul-23		100%	
CSD_PF_3040	AIP - 1st Submission Review (ICE, PM, AMO, WSD)	83	10-Feb-21 A	28-May-21 A	04-Jul-23	04-Jul-23		100%	
CSD_PF_3050	AIP - Re-submission & Approval	80	29-May-21 A	01-Sep-21 A	04-Jul-23	04-Jul-23		100%	
CSD_PF_3060	Approval for Site Construction	0		01-Sep-21 A		04-Jul-23		100%	
Alternative Works (Subject to Approval of Road Excavation with STLA Application for Cable Laying									
CSD_PF_3210	Preparation & Approval Method Statement & Temp. Works Design	168	03-Sep-21 A	01-Apr-22 A	27-May-22	27-May-22		100%	
CSD_PF_3230	Draw Pits & Cross Road Duct Trench Excavation (with granting of STLA application for Cable Laying)	71	26-May-22 A	18-Aug-22 A	27-May-22	27-May-22		100%	
CSD_PF_3250	Conduit Installation along Dam	31	30-Jul-22 A	03-Sep-22 A	27-May-22	27-May-22		100%	
CSD_PF_3260	Cable Laying	79	12-Aug-22 A	29-Oct-22	27-May-22	24-Jun-22	-127	0%	
CSD 4 - Alternative Slope Upgrading Works for Feature No.7SW-D/F16 at Lower Shing Mun Reservoir (LSM									
Design Submission									
CSD_PF_4010	Feasibility Study	18	27-May-21 A	17-Jun-21 A	14-May-22	14-May-22		100%	
CSD_PF_4020	Presentation	1	17-Jun-21 A	17-Jun-21 A	14-May-22	14-May-22		100%	
CSD_PF_4040	DDA- 1st Submission Review (ICE, PM, GEO)	19	06-Dec-21 A	29-Dec-21 A	14-May-22	14-May-22		100%	
CSD_PF_4050	DDA- Resubmission & Approval	48	30-Dec-21 A	03-Mar-22 A	14-May-22	14-May-22		100%	
CSD_PF_4060	DDA- Review & Acceptance	21	06-Apr-22 A	31-May-22 A	14-May-22	14-May-22		100%	
CSD_PF_4070	Approval for Site Construction	0		08-Oct-22		19-May-22	-117	0%	
Alternative Works									
CSD_PF_4200	Trial Pits Excavation Works for Ground Investigation	4	03-Dec-21 A	16-Dec-21 A	25-Jun-22	25-Jun-22		100%	
CSD_PF_4205	Reinstatement of Road	14	29-Sep-22 A	17-Oct-22	25-Jun-22	09-Jul-22	-82	0%	
CSD_PF_4210	Removal of Soil Bund	22	10-Oct-22	03-Nov-22	13-Jun-22	08-Jul-22	-98	0%	
CSD_PF_4220	Rock Filling/ No Fine Concrete for Slop Works	33	10-Oct-22	16-Nov-22	20-May-22	28-Jun-22	-117	0%	
CSD_PF_4230	Removal of Pipe Pile & Raking Strut	32	20-Oct-22	25-Nov-22	31-May-22	08-Jul-22	-117	0%	
CSD_PF_4240	Landscaping	27	27-Oct-22	26-Nov-22	08-Jun-22	09-Jul-22	-117	0%	
CSD_PF_4250	Road Resurfacing	3	24-Nov-22	26-Nov-22	07-Jul-22	09-Jul-22	-117	0%	
CSD_PF_4260	Dismantle of Tower Crane	4	29-Oct-22	02-Nov-22	06-Jul-22	09-Jul-22	-96	0%	
Compensation Event									
CE-054 & CE-056: Feasibility Study & DDA for Maintenance Walkway at KBR									
CE-054 Design Submissions									
CE054-2010	PMI 054	0	09-Dec-20 A		14-May-22			100%	
CE054-2020	Prepare & Submit GI Plan at KBR	92	09-Dec-20 A	18-Dec-20 A	14-May-22	14-May-22		100%	
CE054-2030	Updated ARPE's Report Submission (Package No.4) to WSD for KBR Works	14	19-Dec-20 A	07-Jan-21 A	14-May-22	14-May-22		100%	
CE054-2040	WSD's Comment & Approval	70	08-Jan-21 A	27-Apr-21 A	14-May-22	14-May-22		100%	
CE054-2050	Prepare DDA for Temp. Site Formation for Maintenance Walkway	55	14-Dec-20 A	26-Feb-21 A	14-May-22	14-May-22		100%	
CE054-2060	DDA Comment/ Approval for Temp. Site Formation for Maintenance Walkway	3	27-Feb-21 A	02-Mar-21 A	14-May-22	14-May-22		100%	
CE054-2070	Prepare DDA for Footings & Piers for Maintenance Walkway	25	09-Dec-20 A	29-Mar-21 A	14-May-22	14-May-22		100%	
CE054-2080	DDA Comment/ Approval for Footing for Maintenance Walkway	24	30-Mar-21 A	27-Apr-21 A	14-May-22	14-May-22		100%	
CE054-2090	Prepare DDA for Decking for Maintenance Walkway	113	18-Jan-21 A	23-Jun-21 A	14-May-22	14-May-22		100%	
CE054-2100	DDA Comment/ Approval for Decking for Maintenance Walkway	24	24-Jun-21 A	16-Sep-21 A	14-May-22	14-May-22		100%	
CE054-2110	Prepare DDA for Extension of Spillage Drainage Channel	141	02-Jan-21 A	28-Jul-21 A	14-May-22	14-May-22		100%	
CE054-2120	DDA Comment/ Approval for Extension of Spillage Drainage Channel	24	28-Oct-21 A	31-Jan-22 A	14-May-22	14-May-22		100%	
CE054-2130	GI for Slope Upgrading Works (IRTS/KBR/DH 1, 2 & TP3)	40	14-Jan-21 A	06-Feb-21 A	14-May-22	14-May-22		100%	
CE054-2140	Prepare DDA for Slope Upgrading Works for Feature no.11NW-A/C593	73	08-Dec-20 A	06-May-21 A	14-May-22	14-May-22		100%	
CE054-2150	DDA & GEO's Comment/ Approval for Slope Upgrading Works for Feature	45	07-May-21 A	05-Jul-21 A	14-May-22	14-May-22		100%	



Actual Level of Effort | Critical Remaining Work
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Contract No. DC/2018/08 : Inter-Reservoirs Transfer Scheme
Water Tunnel Between Kowloon Byewash Reservoir and Lower Shing Mun Reservoir

Date	Revision	Checked	Approved
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Activity ID	Activity Name	Dur	Start	Finish	Late Start	Late Finish	Total Float	% Compl.	Relative Weight
CE054-2160	Prepare Utility Diversion Proposal (* AMO Rejected KBR Dam Parapet Removal)	55	18-Jan-21 A	26-Feb-21 A	14-May-22	14-May-22		100%	
CE054-2170	Utility Diversion Proposal Approval by Relevant UU Stake Hdders (Cancelled)	24	26-Feb-21 A	26-Feb-21 A	14-May-22	14-May-22		100%	
CE054-2180	Prepare DDA for Vertical Ladder & Intermediate Platform at Intake Structure	167	18-Jan-21 A	09-Nov-21 A	14-May-22	14-May-22		100%	
CE054-2190	DDA Comment/ Approval for Ladder & Platform at Intake Structure	28	10-Nov-21 A	30-Dec-21 A	14-May-22	14-May-22		100%	
CE054-2200	Design Review of the Intake Structure - Amendment	113	18-Jan-21 A	31-Jan-22 A	14-May-22	14-May-22		100%	
CE054-2210	Ready for Procurement	0		31-Jan-22 A		14-May-22		100%	
CE-056 Construction Works at KBR									
KBR Maintenance Access									
CE056-2010	Site Formation & Pile Caps	84	02-Jan-21 A	21-Apr-21 A	04-Jul-23	04-Jul-23		100%	
CE056-2020	Columns & Pier Head	50	22-Apr-21 A	22-Jun-21 A	04-Jul-23	04-Jul-23		100%	
CE056-2030	Bridge Decking	84	23-Jun-21 A	12-Oct-21 A	04-Jul-23	04-Jul-23		100%	
CE056-2050	GFRP Handrail	268	09-Oct-21 A	07-Sep-22 A	04-Jul-23	04-Jul-23		100%	
Spillage Channel									
CE056-3010	Draw Down Water to +103.6mPD by WSD	21	02-Nov-21 A	18-Nov-21 A	09-Jul-22	09-Jul-22		100%	
CE056-3020	Scaffold Erection	10	19-Nov-21 A	26-Nov-21 A	09-Jul-22	09-Jul-22		100%	
CE056-3030	Rock Breaking for Formation	14	27-Nov-21 A	21-Feb-22 A	09-Jul-22	09-Jul-22		100%	
CE056-3040	Concreting Works	49	04-Mar-22 A	26-Mar-22 A	09-Jul-22	09-Jul-22		100%	
Slope Upgrading Work									
CE056-4010	No Fined Concrete & Tiling	176	22-Jan-22 A	31-Aug-22 A	09-Jul-22	09-Jul-22		100%	
CE-064: Permanent Diversion of Twin 1200mm dia.Drainage Pipes									
CE-064 Design Submissions									
CE064-2020	Prepare & Submit Temp.Drainage Diversion DDA with ICE 1st Submisssion	24	15-Sep-21 A	19-Jan-22 A	04-Jul-23	04-Jul-23		100%	
CE064-2030	DDA Review & Comment	27	20-Jan-22 A	03-May-22 A	04-Jul-23	04-Jul-23		100%	
CE-063 Tower Crane at LSMR									
CE: Tower Crane at LSMR Design Submission									
CE063-1010	Detailed Design Approval for Tower Crane Foundation & Supporting Structurej at Outfall Structure	70	01-Dec-21 A	02-Mar-22 A	04-Jul-23	04-Jul-23		100%	
CE: Toewr Crane at LSMR Construction Works at LSMR									
CE063-2030	Preparation & Approval for Method Statement	56	01-Dec-21 A	14-Feb-22 A	04-Jul-23	04-Jul-23		100%	
CE063-2040	Erection of Tower Crane & Loading Test for Operation	11	17-Jan-22 A	28-Jan-22 A	04-Jul-23	04-Jul-23		100%	
CE063-2050	Dismantle of Tower Crane	3	27-Oct-22	29-Oct-22	01-Jul-23	04-Jul-23	211	0%	
CE-084: Widening of the Maintenance Walkway Entrance at KBR									
CE084-1010	Tree Removal (subject to approval)	3	03-Oct-22	06-Oct-22	14-May-22	17-May-22	-117	0%	
CE084-1020	Excavation & Temporary Works Installation	12	07-Oct-22	20-Oct-22	18-May-22	31-May-22	-117	0%	
CE084-1030	Blinding Layer, Rebar Fixing, Formwork & Casting of Retaining Structure	18	21-Oct-22	10-Nov-22	01-Jun-22	22-Jun-22	-117	0%	
CE084-1040	Backfilling Works to the Slope & Retaining Structure	14	11-Nov-22	26-Nov-22	23-Jun-22	09-Jul-22	-117	0%	
CE-061: Provisional Enchancement Works & Ancillary Facilities in Kam Shan Country Park, KBR & LSMR									
Kam Shan Country Park									
KSCP_PoS_1000	Submissionof Proposal on Enhancement Works & Facilities	41	02-Apr-22 A	26-May-22 A	25-Jun-22	25-Jun-22		100%	
KSCP_PoS_1010	Review & Comments	6	27-May-22 A	02-Jun-22 A	25-Jun-22	25-Jun-22		100%	
KSCP_PoS_1020	Re-submission of Proposal on Enhancement Works & Facilities	5	04-Jun-22 A	09-Jun-22 A	25-Jun-22	25-Jun-22		100%	
KSCP_PoS_1030	Review &Acceptance	55	10-Jun-22 A	13-Aug-22 A	25-Jun-22	25-Jun-22		100%	
KSCP_PoS_1040	Procurement & Supplier of Enhancement Works & Facilities	56	10-Jun-22 A	15-Aug-22 A	25-Jun-22	25-Jun-22		100%	
KSCP_PoS_1050	Construction & Installationof Enhancement Works & Facilities	93	01-Aug-22 A	19-Nov-22	25-Jun-22	12-Aug-22	-82	0%	
KBR									
KBR_PoS_1000	Submission of Proposal on Enhancement Works & Facilities	41	22-Apr-22 A	26-May-22 A	25-Jun-22	25-Jun-22		100%	
KBR_PoS_1010	Review & Comments	12	27-May-22 A	02-Jun-22 A	25-Jun-22	25-Jun-22		100%	
KBR_PoS_1020	Re-submission of Proposalon Enhancement Works & Facilities	5	04-Jun-22 A	09-Jun-22 A	25-Jun-22	25-Jun-22		100%	
KBR_PoS_1030	Review &Acceptance	43	10-Jun-22 A	13-Aug-22 A	25-Jun-22	25-Jun-22		100%	
KBR_PoS_1040	Procurement & Supplier of Enhancement works & Facilities	43	10-Jun-22 A	15-Aug-22 A	25-Jun-22	25-Jun-22		100%	
KBR_PoS_1050	Construction & Installatin of Enhancement Works & Facilities	93	01-Aug-22 A	19-Nov-22	25-Jun-22	12-Aug-22	-82	0%	

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LSMR									
LSMR_PoS_1000	Submssion of Proposal on Enhancement Works & Facilities	41	22-Apr-22 A	31-May-22 A	21-Apr-22	21-Apr-22		100%	
LSMR_PoS_1010	Review & Comments	5	01-Jun-22 A	07-Jun-22 A	21-Apr-22	21-Apr-22		100%	
LSMR_PoS_1020	Re-submission of Proposal on Enhancement Works & Facilities	6	08-Jun-22 A	14-Jun-22 A	21-Apr-22	21-Apr-22		100%	
LSMR_PoS_1030	Review &Acceptance	51	15-Jun-22 A	13-Aug-22 A	21-Apr-22	21-Apr-22		100%	
LSMR_PoS_1040	Procurement & Supplier of Enhancement Works & Facilities	57	09-Jun-22 A	15-Aug-22 A	21-Apr-22	21-Apr-22		100%	
LSMR_PoS_1050	Construction & Installation of Enhancement Works & Facilities	93	01-Aug-22 A	19-Nov-22	21-Apr-22	10-Jun-22	-135	30%	
Tunneling Works									
Design Submission									
Tunnel Lining Design									
TLD_1000	AIP Submission - TBM Tunnel Lining Design Preparation & Submission	131	16-Mar-19 A	23-Aug-19 A	11-Apr-22	11-Apr-22		100%	0.60
TLD_1100	AIP Review and Comments/ Approval	17	24-Aug-19 A	12-Sep-19 A	11-Apr-22	11-Apr-22		100%	
TLD_1200	DDA Submission - TBM Tunnel Lining Design Preparation & Submission with ICE	13	11-Sep-19 A	25-Sep-19 A	11-Apr-22	11-Apr-22		100%	0.40
TLD_1300	DDA Review and Acceptance	47	26-Sep-19 A	21-Nov-19 A	11-Apr-22	11-Apr-22		100%	
Earth Bund Design									
EB_D_0910	Temp.Drainage Diversion Desing Submission	19	23-May-19 A	14-Jun-19 A	11-Apr-22	11-Apr-22		100%	0.10
EB_D_0920	Temp.Drainage Review & Approval	27	15-Jun-19 A	17-Jul-19 A	11-Apr-22	11-Apr-22		100%	0.10
EB_D_1000	Earth Bund Preparation & Submission	61	28-Mar-19 A	14-Jun-19 A	11-Apr-22	11-Apr-22		100%	0.20
EB_D_4000	Review and Acceptance	86	15-Jun-19 A	25-Sep-19 A	11-Apr-22	11-Apr-22		100%	
Mined Tunnel Temporary Works Design									
LSMR Mined Tunnel									
MTD_LS_1000	1st Submission - Mined Tunnel Design Preparation & Submission	159	23-Apr-19 A	30-Oct-19 A	11-Apr-22	11-Apr-22		100%	0.12
MTD_LS_2000	Review and Comments	24	31-Oct-19 A	27-Nov-19 A	11-Apr-22	11-Apr-22		100%	
MTD_LS_3000	2nd Submission - Mined Tunnel Design Preparation & Submission with ICE	11	28-Nov-19 A	10-Dec-19 A	11-Apr-22	11-Apr-22		100%	0.08
MTD_LS_4000	Review and Acceptance	12	11-Dec-19 A	24-Dec-19 A	11-Apr-22	11-Apr-22		100%	
KBR Mined Tunnel									
MTD_KB_0980	GI for Mine Tunnel (IRTS/KBR/RDH 1 & 2)	21	13-Jan-21 A	23-Jan-21 A	14-May-22	14-May-22		100%	
MTD_KB_1000	1st Submission - Mined Tunnel Temp.Works Design Preparation & Submission	85	25-Jan-21 A	04-Jun-21 A	14-May-22	14-May-22		100%	0.12
MTD_KB_2000	Review and Comments (GEO)	18	05-Jun-21 A	26-Jun-21 A	14-May-22	14-May-22		100%	
MTD_KB_3000	2nd Submission - Mined Tunnel Temp.Works Design Preparation & Submission with ICE	34	28-Jun-21 A	26-Aug-21 A	14-May-22	14-May-22		100%	0.08
MTD_KB_4000	Review and Acceptance (GEO)	18	27-Aug-21 A	28-Sep-21 A	14-May-22	14-May-22		100%	
MTD_KB_4050	3rd submission - Mined Tunnel Temp.Works Design Preparation & Submission with ICE	26	29-Sep-21 A	11-Oct-21 A	14-May-22	14-May-22		100%	
MTD_KB_4060	Review and Acceptance (GEO)	18	12-Oct-21 A	27-Oct-21 A	14-May-22	14-May-22		100%	
Mined Tunnel Permanent Works Design									
MTD_KB_4010	1st Submission - Mined Tunnel Design Preparation & Submission	87	26-Apr-21 A	01-Sep-21 A	14-May-22	14-May-22		100%	0.40
MTD_KB_4020	Review and Comments	18	02-Sep-21 A	29-Oct-21 A	14-May-22	14-May-22		100%	
MTD_KB_4030	2nd Submission - Mined Tunnel Design Preparation & Submission with ICE	10	30-Oct-21 A	22-Nov-21 A	14-May-22	14-May-22		100%	0.20
MTD_KB_4040	Review and Acceptance	15	23-Nov-21 A	14-Dec-21 A	14-May-22	14-May-22		100%	
TBM Thrust Frame Design									
TTF_D_1000	1st Submission - TBM Thrust Frame Design Preparation & Submission	68	16-Sep-19 A	05-Dec-19 A	11-Apr-22	11-Apr-22		100%	0.10
TTF_D_2000	Review and Comments	19	06-Dec-19 A	30-Dec-19 A	11-Apr-22	11-Apr-22		100%	

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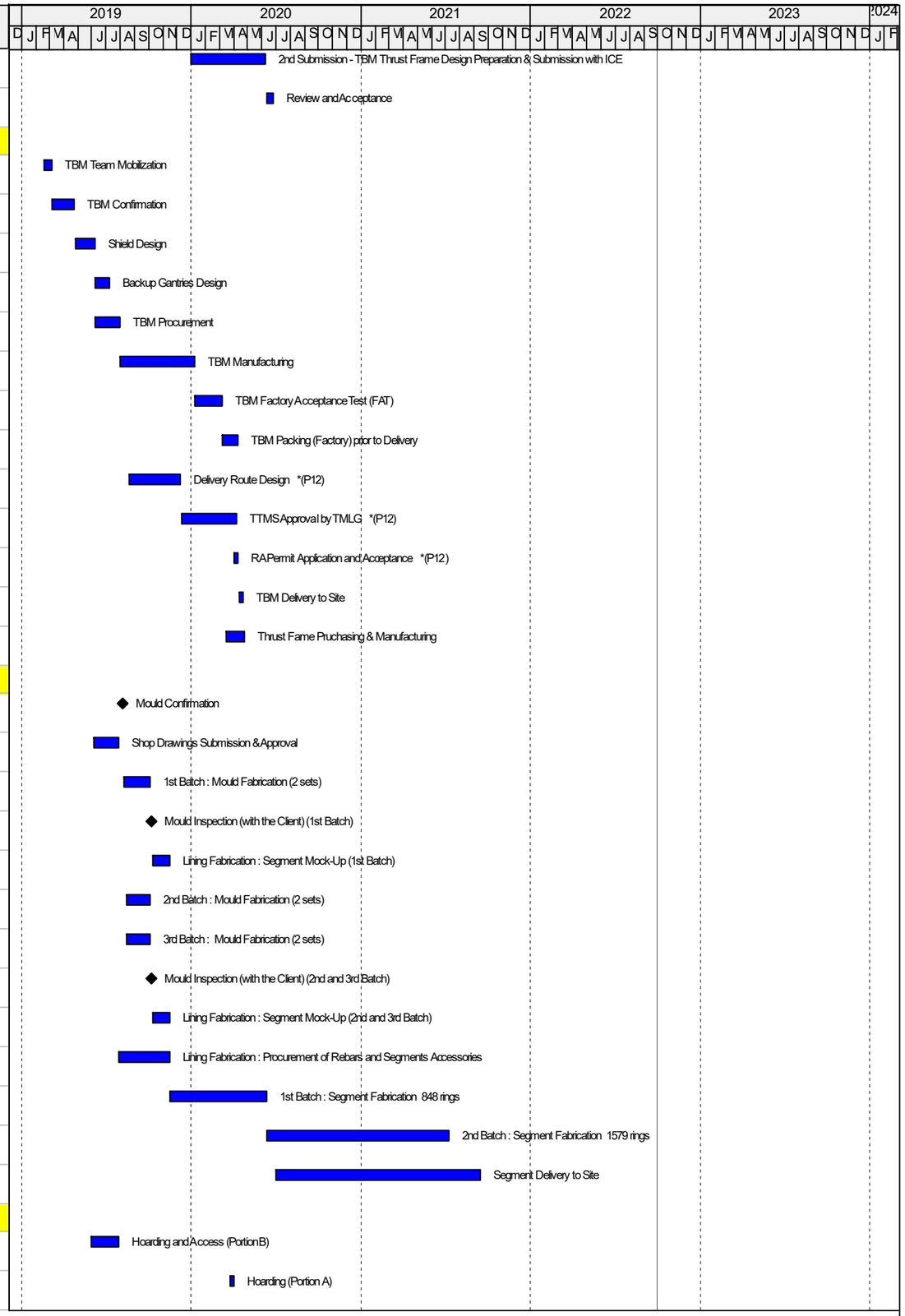
Activity ID	Activity Name	Dur	Start	Finish	Late Start	Late Finish	Total Float	% Compl.	Relative Weight
TTF_D_3000	2nd Submission - TBM Thrust Frame Design Preparation & Submission with ICE	125	31-Dec-19 A	09-Jun-20 A	11-Apr-22	11-Apr-22		100%	0.10
TTF_D_4000	Review and Acceptance	13	10-Jun-20 A	24-Jun-20 A	11-Apr-22	11-Apr-22		100%	
TBM Procurement, Manufacture and Delivery									
TBM_Pr_1000	TBM Team Mobilization	15	19-Feb-19 A	07-Mar-19 A	11-Apr-22	11-Apr-22		100%	0.20
TBM_Pr_1100	TBM Confirmation	37	08-Mar-19 A	24-Apr-19 A	11-Apr-22	11-Apr-22		100%	0.20
TBM_Pr_1200-10	Shield Design	36	25-Apr-19 A	07-Jun-19 A	11-Apr-22	11-Apr-22		100%	0.60
TBM_Pr_1200-20	Backup Gantries Design	26	08-Jun-19 A	09-Jul-19 A	04-Jul-23	04-Jul-23		100%	0.60
TBM_Pr_1300	TBM Procurement	45	08-Jun-19 A	31-Jul-19 A	11-Apr-22	11-Apr-22		100%	0.30
TBM_Pr_1300-10	TBM Manufacturing	132	01-Aug-19 A	07-Jan-20 A	11-Apr-22	11-Apr-22		100%	0.30
TBM_Pr_1300-20	TBM Factory Acceptance Test (FAT)	44	08-Jan-20 A	06-Mar-20 A	11-Apr-22	11-Apr-22		100%	0.30
TBM_Pr_1300-30	TBM Packing (Factory) prior to Delivery	28	07-Mar-20 A	09-Apr-20 A	11-Apr-22	11-Apr-22		100%	0.30
TBM_Pr_1310	Delivery Route Design *(P12)	93	21-Aug-19 A	09-Dec-19 A	11-Apr-22	11-Apr-22		100%	0.20
TBM_Pr_1320	TTMS Approval by TMLG *(P12)	93	10-Dec-19 A	08-Apr-20 A	11-Apr-22	11-Apr-22		100%	0.20
TBM_Pr_1330	RA Permit Application and Acceptance *(P12)	7	01-Apr-20 A	09-Apr-20 A	11-Apr-22	11-Apr-22		100%	0.20
TBM_Pr_1400	TBM Delivery to Site	7	14-Apr-20 A	20-Apr-20 A	11-Apr-22	11-Apr-22		100%	0.20
TBM_Pr_1410	Thrust Fame Pruchasing & Manufacturing	31	16-Mar-20 A	24-Apr-20 A	11-Apr-22	11-Apr-22		100%	0.20
Lining Mould Procurement, Manufacture and Delivery									
TBM_Ln_1000	Mould Confirmation	0		06-Aug-19 A		11-Apr-22		100%	0.20
TBM_Ln_1100-10	Shop Drawings Submission & Approval	43	06-Jun-19 A	27-Jul-19 A	11-Apr-22	11-Apr-22		100%	0.05
TBM_Ln_1100-20	1st Batch : Mould Fabrication (2 sets)	46	10-Aug-19 A	03-Oct-19 A	11-Apr-22	11-Apr-22		100%	0.05
TBM_Ln_1100-25	Mould Inspection (with the Client) (1st Batch)	0	08-Oct-19 A		11-Apr-22			100%	0.05
TBM_Ln_1100-28	Lining Fabrication : Segment Mock-Up (1st Batch)	33	09-Oct-19 A	15-Nov-19 A	11-Apr-22	11-Apr-22		100%	0.05
TBM_Ln_1100-30	2nd Batch : Mould Fabrication (2 sets)	43	14-Aug-19 A	03-Oct-19 A	11-Apr-22	11-Apr-22		100%	0.05
TBM_Ln_1100-40	3rd Batch : Mould Fabrication (2 sets)	43	14-Aug-19 A	03-Oct-19 A	11-Apr-22	11-Apr-22		100%	0.05
TBM_Ln_1100-45	Mould Inspection (with the Client) (2nd and 3rd Batch)	0	08-Oct-19 A		11-Apr-22			100%	0.05
TBM_Ln_1100-48	Lining Fabrication : Segment Mock-Up (2nd and 3rd Batch)	33	09-Oct-19 A	15-Nov-19 A	11-Apr-22	11-Apr-22		100%	0.20
TBM_Ln_1200	Lining Fabrication : Procurement of Rebars and Segments Accessories	93	29-Jul-19 A	15-Nov-19 A	11-Apr-22	11-Apr-22		100%	0.20
TBM_Ln_1400	1st Batch : Segment Fabrication 848 rings	162	16-Nov-19 A	10-Jun-20 A	11-Apr-22	11-Apr-22		100%	0.60
TBM_Ln_1500	2nd Batch : Segment Fabrication 1579 rings	315	11-Jun-20 A	10-Jul-21 A	11-Apr-22	11-Apr-22		100%	0.80
TBM_Ln_1510	Segment Delivery to Site	434	30-Jun-20 A	15-Sep-21 A	11-Apr-22	11-Apr-22		100%	
LSMR - Site Preparation									
TBM_SPr_1100	Hoarding and Access (Portion B)	50	30-May-19 A	29-Jul-19 A	04-Jul-23	04-Jul-23		100%	0.10
TBM_SPr_1200	Hoarding (Portion A)	10	23-Mar-20 A	02-Apr-20 A	11-Apr-22	11-Apr-22		100%	0.10

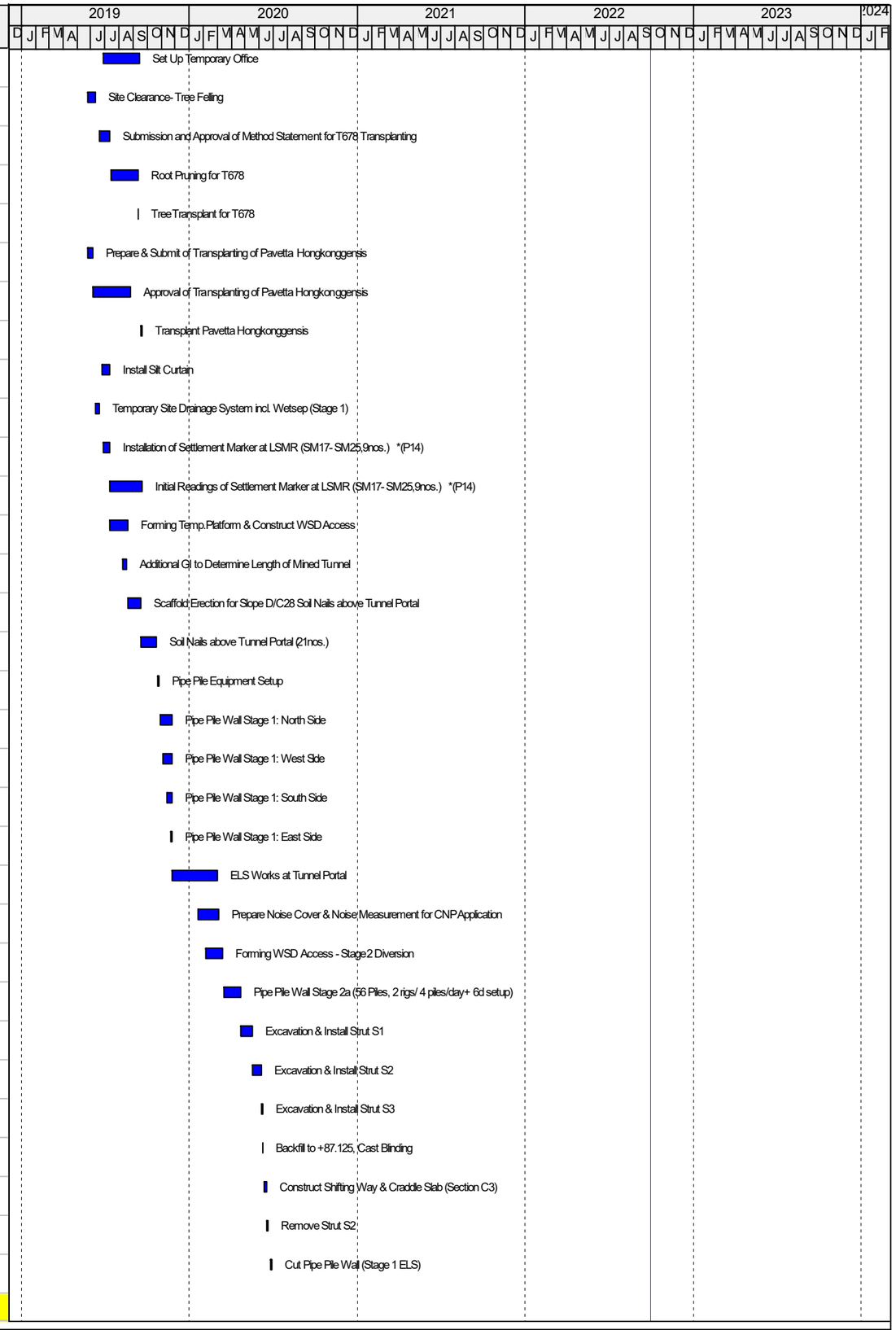


Actual Level of Effort
Actual Work
Remaining Work
Critical Remaining Work
Milestone
Remaining (Summary)

Contract No. DC/2018/08 : Inter-Reservoirs Transfer Scheme
Water Tunnel Between Kowloon Byewash Reservoir and Lower Shing Mun Reservoir

Date	Revision	Checked	Approved
30-Sep-22	Updated Y22M09D30a	A.Tsang	

Activity ID	Activity Name	Dur	Start	Finish	Late Start	Late Finish	Total Float	% Compl.	Relative Weight
TBM_SPr_1300	Set Up Temporary Office	68	27-Jun-19A	14-Sep-19A	04-Jul-23	04-Jul-23		100%	0.10
TBM_SPr_1400	Site Clearance- Tree Felling	14	24-May-19A	10-Jun-19A	11-Apr-22	11-Apr-22		100%	0.10
TBM_SPr_1401	Submission and Approval of Method Statement for T678 Transplanting	17	20-Jun-19A	10-Jul-19A	04-Jul-23	04-Jul-23		100%	0.10
TBM_SPr_1402	Root Pruning for T678	52	13-Jul-19A	11-Sep-19 A	04-Jul-23	04-Jul-23		100%	0.10
TBM_SPr_1404	Tree Transplant for T678	1	12-Sep-19A	12-Sep-19A	04-Jul-23	04-Jul-23		100%	0.10
TBM_SPr_1410	Prepare & Submit of Transplanting of Pavetta Hongkonggensis	10	25-May-19A	05-Jun-19A	04-Jul-23	04-Jul-23		100%	0.10
TBM_SPr_1420	Approval of Transplanting of Pavetta Hongkonggensis	67	06-Jun-19A	24-Aug-19A	04-Jul-23	04-Jul-23		100%	0.10
TBM_SPr_1430	Transplant Pavetta Hongkonggensis	1	19-Sep-19A	19-Sep-19A	04-Jul-23	04-Jul-23		100%	0.10
TBM_SPr_1500	Install Silt Curtain	14	25-Jun-19A	11-Jul-19 A	11-Apr-22	11-Apr-22		100%	0.10
TBM_SPr_1600	Temporary Site Drainage System incl. Wetsep (Stage 1)	7	11-Jun-19 A	18-Jun-19A	11-Apr-22	11-Apr-22		100%	0.10
TBM_SPr_1700	Installation of Settlement Marker at LSMR (SM17- SM25,9nos.) *(P14)	12	27-Jun-19A	11-Jul-19 A	11-Apr-22	11-Apr-22		100%	0.10
TBM_SPr_1800	Initial Readings of Settlement Marker at LSMR (SM17- SM25,9nos.) *(P14)	62	12-Jul-19A	21-Sep-19A	11-Apr-22	11-Apr-22		100%	0.10
TBM_SPr_1820	Forming Temp.Platform & Construct WSD Access	34	12-Jul-19A	20-Aug-19A	09-Oct-20	09-Oct-20		100%	0.10
TBM_SPr_1830	Additional GI to Determine Length of Mined Tunnel	9	08-Aug-19A	17-Aug-19A	09-Oct-20	09-Oct-20		100%	0.04
TBM_SPr_1840	Scaffold Erection for Slope D/C28 Soil Nails above Tunnel Portal	23	21-Aug-19A	16-Sep-19A	09-Oct-20	09-Oct-20		100%	0.04
TBM_SPr_1850	Soil Nails above Tunnel Portal (21nos.)	28	17-Sep-19A	21-Oct-19A	09-Oct-20	09-Oct-20		100%	0.02
TBM_SPr_1900-10	Pipe Pile Equipment Setup	4	23-Oct-19A	26-Oct-19A	11-Apr-22	11-Apr-22		100%	0.10
TBM_SPr_1900-20	Pipe Pile Wall Stage 1: North Side	23	29-Oct-19A	23-Nov-19A	11-Apr-22	11-Apr-22		100%	0.10
TBM_SPr_1900-30	Pipe Pile Wall Stage 1: West Side	17	04-Nov-19A	23-Nov-19A	11-Apr-22	11-Apr-22		100%	0.10
TBM_SPr_1900-40	Pipe Pile Wall Stage 1: South Side	9	13-Nov-19A	23-Nov-19A	11-Apr-22	11-Apr-22		100%	0.10
TBM_SPr_1900-50	Pipe Pile Wall Stage 1: East Side	3	20-Nov-19A	23-Nov-19A	11-Apr-22	11-Apr-22		100%	0.30
TBM_SPr_2000	ELS Works at Tunnel Portal	73	25-Nov-19A	29-Feb-20A	11-Apr-22	11-Apr-22		100%	0.20
TBM_SPr_2010	Prepare Noise Cover & Noise Measurement for CNP Application	32	20-Jan-20A	05-Mar-20A	11-Apr-22	11-Apr-22		100%	
TBM_SPr_2060	Forming WSD Access - Stage 2 Diversion	34	04-Feb-20A	14-Mar-20A	11-Apr-22	11-Apr-22		100%	
TBM_SPr_2100	Pipe Pile Wall Stage 2a (56 Piles, 2 rigs/ 4 piles/day+ 6d setup)	27	16-Mar-20A	21-Apr-20A	11-Apr-22	11-Apr-22		100%	0.20
TBM_SPr_2110-10	Excavation & Install Strut S1	19	22-Apr-20A	16-May-20A	11-Apr-22	11-Apr-22		100%	
TBM_SPr_2110-20	Excavation & Install Strut S2	16	18-May-20A	04-Jun-20A	11-Apr-22	11-Apr-22		100%	
TBM_SPr_2110-30	Excavation & Install Strut S3	3	05-Jun-20A	08-Jun-20A	11-Apr-22	11-Apr-22		100%	
TBM_SPr_2110-40	Backfill to +87.125, Cast Blinding	1	09-Jun-20A	09-Jun-20A	11-Apr-22	11-Apr-22		100%	
TBM_SPr_2110-45	Construct Shifting Way & Craddle Slab (Section C3)	6	10-Jun-20A	16-Jun-20A	11-Apr-22	11-Apr-22		100%	
TBM_SPr_2110-50	Remove Strut S2	3	18-Jun-20A	20-Jun-20A	11-Apr-22	11-Apr-22		100%	
TBM_SPr_2110-60	Cut Pipe Pile Wall (Stage 1 ELS)	2	25-Jun-20A	27-Jun-20A	11-Apr-22	11-Apr-22		100%	
Site Works									



Actual Level of Effort
Actual Work
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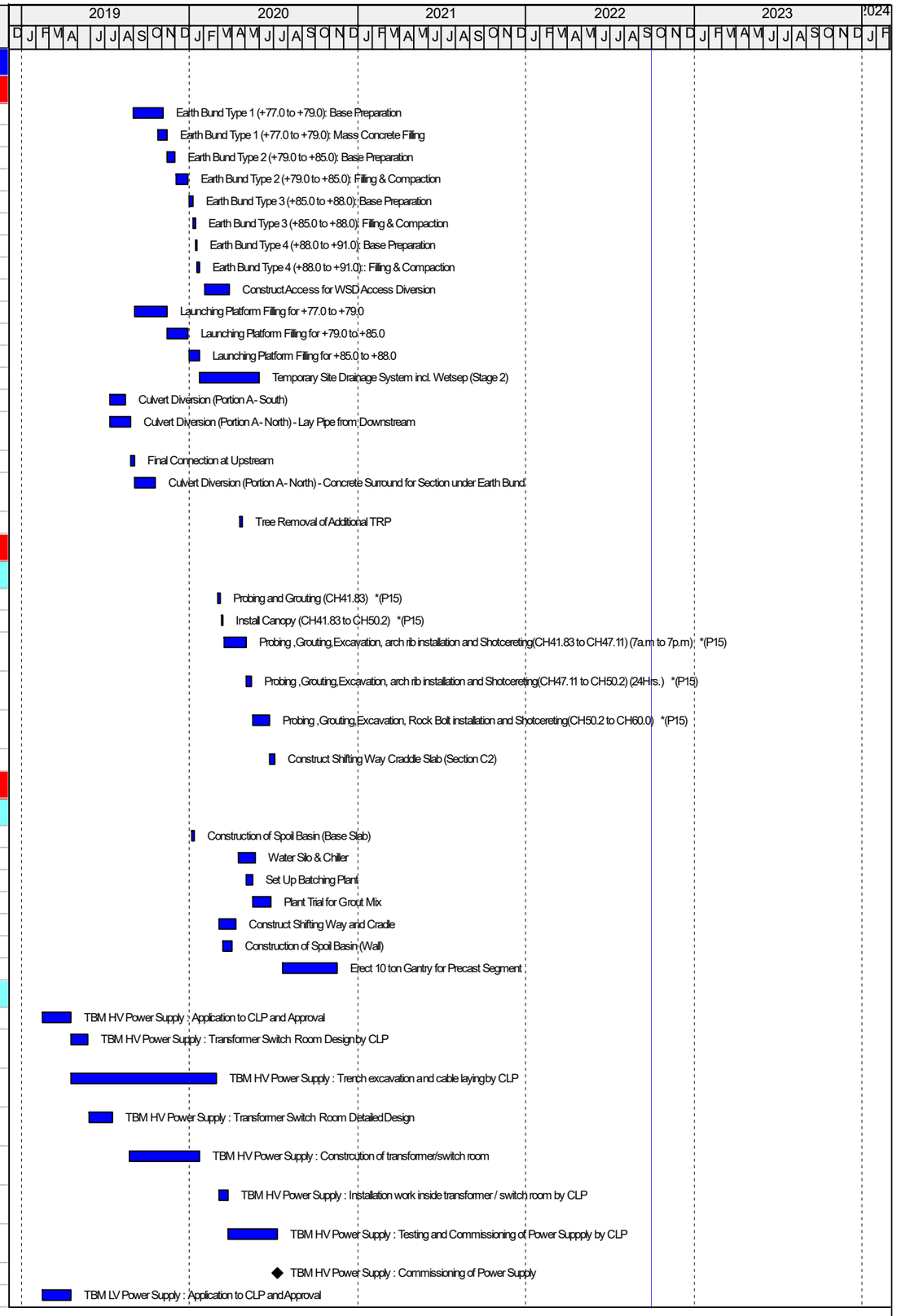
Contract No. DC/2018/08 : Inter-Reservoirs Transfer Scheme
Water Tunnel Between Kowloon Byewash Reservoir and Lower Shing Mun Reservoir

Date	Revision	Checked	Approved
30-Sep-22	Updated Y22M09D30a	A.Tsang	

Activity ID	Activity Name	Dur	Start	Finish	Late Start	Late Finish	Total Float	% Compl.	Relative Weight
LSMR (North Portal) & TBM									
LSMR : Excavation & Portal Formation									
NP_1000-10	Earth Bund Type 1 (+77.0 to +79.0): Base Preparation	55	30-Aug-19 A	05-Nov-19 A	11-Apr-22	11-Apr-22		100%	0.10
NP_1000-20	Earth Bund Type 1 (+77.0 to +79.0): Mass Concrete Filling	17	24-Oct-19 A	13-Nov-19 A	11-Apr-22	11-Apr-22		100%	0.10
NP_1000-30	Earth Bund Type 2 (+79.0 to +85.0): Base Preparation	14	14-Nov-19 A	30-Nov-19 A	11-Apr-22	11-Apr-22		100%	0.10
NP_1000-40	Earth Bund Type 2 (+79.0 to +85.0): Filling & Compaction	21	02-Dec-19 A	28-Dec-19 A	11-Apr-22	11-Apr-22		100%	0.10
NP_1000-50	Earth Bund Type 3 (+85.0 to +88.0): Base Preparation	7	30-Dec-19 A	08-Jan-20 A	11-Apr-22	11-Apr-22		100%	0.10
NP_1000-60	Earth Bund Type 3 (+85.0 to +88.0): Filling & Compaction	4	09-Jan-20 A	14-Jan-20 A	11-Apr-22	11-Apr-22		100%	0.10
NP_1000-70	Earth Bund Type 4 (+88.0 to +91.0): Base Preparation	1	15-Jan-20 A	16-Jan-20 A	11-Apr-22	11-Apr-22		100%	0.10
NP_1000-80	Earth Bund Type 4 (+88.0 to +91.0):: Filling & Compaction	4	17-Jan-20 A	22-Jan-20 A	11-Apr-22	11-Apr-22		100%	0.10
NP_1000-90	Construct Access for WSD Access Diversion	45	03-Feb-20 A	26-Mar-20 A	11-Apr-22	11-Apr-22		100%	0.10
NP_1100-10	Launching Platform Filling for +77.0 to +79.0	58	04-Sep-19 A	13-Nov-19 A	11-Apr-22	11-Apr-22		100%	0.10
NP_1100-20	Launching Platform Filling for +79.0 to +85.0	36	14-Nov-19 A	28-Dec-19 A	11-Apr-22	11-Apr-22		100%	0.10
NP_1100-30	Launching Platform Filling for +85.0 to +88.0	19	30-Dec-19 A	22-Jan-20 A	11-Apr-22	11-Apr-22		100%	0.10
NP_1100-40	Temporary Site Drainage System incl. Wetsep (Stage 2)	97	23-Jan-20 A	30-May-20 A	11-Apr-22	11-Apr-22		100%	0.10
NP_1200A	Culvert Diversion (Portion A- South)	30	12-Jul-19 A	15-Aug-19 A	11-Apr-22	11-Apr-22		100%	0.10
NP_1200B-10	Culvert Diversion (Portion A- North) - Lay Pipe from Downstream	38	12-Jul-19 A	24-Aug-19 A	11-Apr-22	11-Apr-22		100%	0.10
NP_1200B-30	Final Connection at Upstream	7	26-Aug-19 A	03-Sep-19 A	11-Apr-22	11-Apr-22		100%	0.08
NP_1200B-40	Culvert Diversion (Portion A- North) - Concrete Surround for Section under Earth Bund	37	04-Sep-19 A	19-Oct-19 A	11-Apr-22	11-Apr-22		100%	0.02
NP_1360	Tree Removal of Additional TRP	5	20-Apr-20 A	25-Apr-20 A	11-Apr-22	11-Apr-22		100%	0.10
LSMR : Mined Tunnel									
Mined Tunnel (CH 41.83 to CH62.04)									
NP_MT_1000	Probing and Grouting (CH41.83) *(P15)	5	02-Mar-20 A	07-Mar-20 A	11-Apr-22	11-Apr-22		100%	1.00
NP_MT_1100	Install Canopy (CH41.83 to CH50.2) *(P15)	5	09-Mar-20 A	14-Mar-20 A	11-Apr-22	11-Apr-22		100%	1.00
NP_MT_1200	Probing ,Grouting,Excavation, arch rib installation and Shotcereting(CH41.83 to CH47.11) (7a.m to 7p.m) *(P15)	41	16-Mar-20 A	02-May-20 A	11-Apr-22	11-Apr-22		100%	0.60
NP_MT_1210	Probing ,Grouting,Excavation, arch rib installation and Shotcereting(CH47.11 to CH50.2) (24Hrs.) *(P15)	10	04-May-20 A	15-May-20 A	11-Apr-22	11-Apr-22		100%	0.40
NP_MT_1400	Probing ,Grouting,Excavation, Rock Bolt installation and Shotcereting(CH50.2 to CH60.0) *(P15)	32	16-May-20 A	22-Jun-20 A	11-Apr-22	11-Apr-22		100%	1.00
NP_MT_1410	Construct Shifting Way Craddle Slab (Section C2)	9	24-Jun-20 A	04-Jul-20 A	11-Apr-22	11-Apr-22		100%	
LSMR : TBM Tunnel Excavation									
LSMR : Civil Provision for TBM Launching									
TBM_Cv_1000	Construction of Spoil Basin (Base Slab)	5	06-Jan-20 A	11-Jan-20 A	11-Apr-22	11-Apr-22		100%	
TBM_Cv_1010	Water Silo & Chiller	29	17-Apr-20 A	23-May-20 A	11-Apr-22	11-Apr-22		100%	
TBM_Cv_1020	Set Up Batching Plant	12	02-May-20 A	16-May-20 A	11-Apr-22	11-Apr-22		100%	
TBM_Cv_1030	Plant Trial for Grout Mix	33	18-May-20 A	24-Jun-20 A	11-Apr-22	11-Apr-22		100%	
TBM_Cv_1100	Construct Shifting Way and Cradle	30	04-Mar-20 A	09-Apr-20 A	11-Apr-22	11-Apr-22		100%	
TBM_Cv_1105	Construction of Spoil Basin (Wall)	16	14-Mar-20 A	02-Apr-20 A	11-Apr-22	11-Apr-22		100%	
TBM_Cv_1110	Erect 10 ton Gantry for Precast Segment	99	20-Jul-20 A	16-Nov-20 A	11-Apr-22	11-Apr-22		100%	
LSMR : TBM Power and Water Supply									
TBM_PoS_1000	TBM HV Power Supply : Application to CLP and Approval	52	15-Feb-19 A	17-Apr-19 A	11-Apr-22	11-Apr-22		100%	0.04
TBM_PoS_1100	TBM HV Power Supply : Transformer Switch Room Design by CLP	29	18-Apr-19 A	25-May-19 A	11-Apr-22	11-Apr-22		100%	0.08
TBM_PoS_1110	TBM HV Power Supply : Trench excavation and cable laying by CLP	252	18-Apr-19 A	27-Feb-20 A	11-Apr-22	11-Apr-22		100%	0.08
TBM_PoS_1120	TBM HV Power Supply : Transformer Switch Room Detailed Design	44	27-May-19 A	18-Jul-19 A	11-Apr-22	11-Apr-22		100%	0.08
TBM_PoS_1200	TBM HV Power Supply : Constrcution of transformer/switch room	125	23-Aug-19 A	22-Jan-20 A	11-Apr-22	11-Apr-22		100%	0.08
TBM_PoS_1300	TBM HV Power Supply : Installation work inside transformer / switch room by CLP	16	04-Mar-20 A	23-Mar-20 A	11-Apr-22	11-Apr-22		100%	0.08
TBM_PoS_1400	TBM HV Power Supply : Testing and Commissioning of Power Suppply by CLP	83	24-Mar-20 A	08-Jul-20 A	11-Apr-22	11-Apr-22		100%	0.04
TBM_PoS_1500	TBM HV Power Supply : Commissioning of Power Supply	0		08-Jul-20 A		11-Apr-22		100%	0.04
TBM_PoS_1600	TBM LV Power Supply : Application to CLP and Approval	51	15-Feb-19 A	17-Apr-19 A	11-Apr-22	11-Apr-22		100%	0.04



Actual Level of Effort
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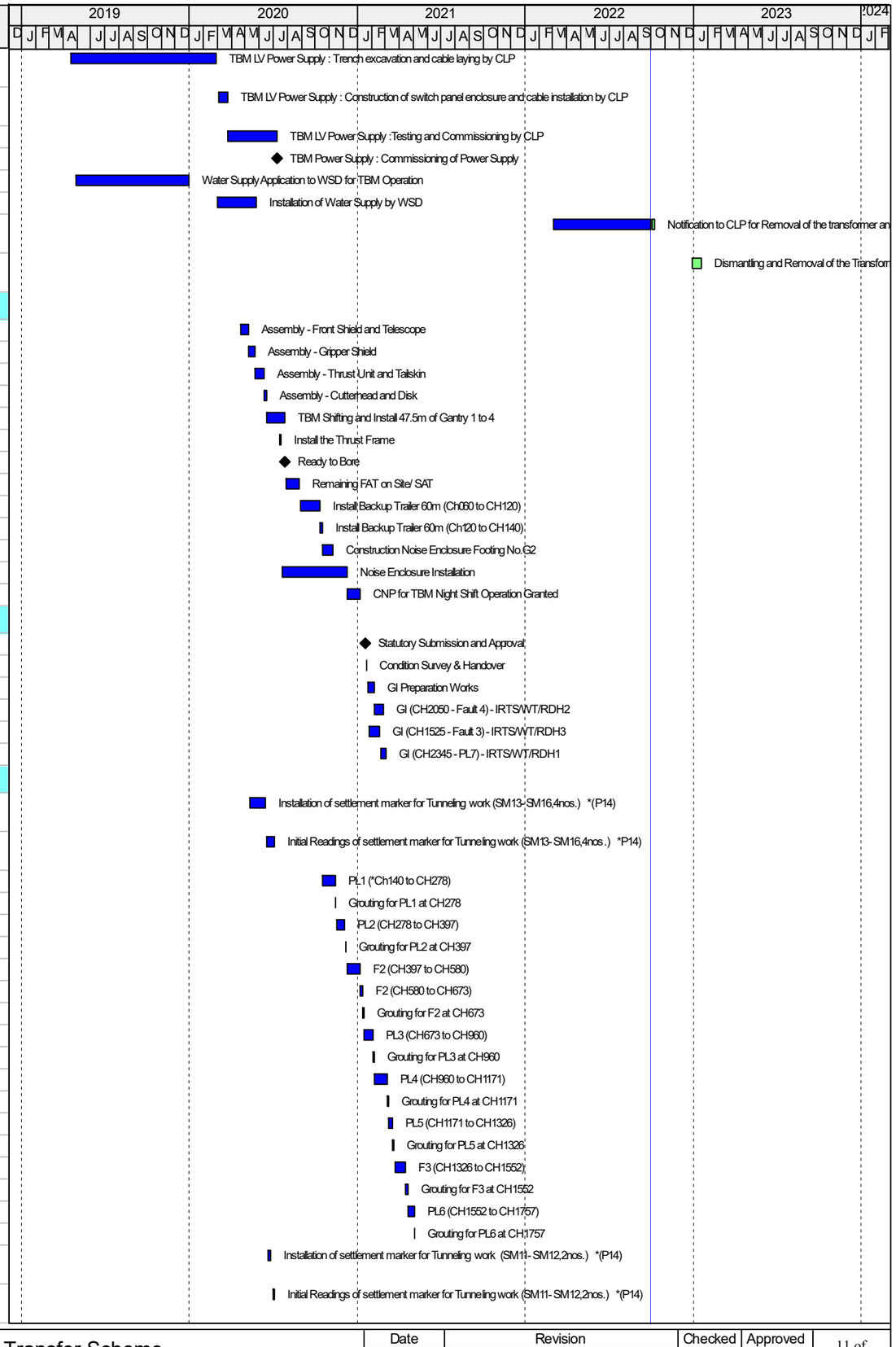
Contract No. DC/2018/08 : Inter-Reservoirs Transfer Scheme
Water Tunnel Between Kowloon Byewash Reservoir and Lower Shing Mun Reservoir

Date	Revision	Checked	Approved
30-Sep-22	Updated Y22M09D30a	A.Tsang	

Activity ID	Activity Name	Dur	Start	Finish	Late Start	Late Finish	Total Float	% Compl.	Relative Weight
TBM_PoS_1700	TBM LV Power Supply : Trench excavation and cable laying by CLP	252	18-Apr-19 A	27-Feb-20 A	11-Apr-22	11-Apr-22		100%	0.04
TBM_PoS_1800	TBM LV Power Supply : Construction of switch panel enclosure and cable installation by CLP	16	04-Mar-20 A	23-Mar-20 A	11-Apr-22	11-Apr-22		100%	0.04
TBM_PoS_1900	TBM LV Power Supply :Testing and Commissioning by CLP	83	24-Mar-20 A	08-Jul-20 A	11-Apr-22	11-Apr-22		100%	0.04
TBM_PoS_2000	TBM Power Supply : Commissioning of Power Supply	0		08-Jul-20 A		11-Apr-22		100%	0.04
TBM_WtrS_2100	Water Supply Application to WSD for TBM Operation	203	30-Apr-19 A	31-Dec-19 A	11-Apr-22	11-Apr-22		100%	0.04
TBM_WtrS_2200	Installation of Water Supply by WSD	67	02-Mar-20 A	25-May-20 A	11-Apr-22	11-Apr-22		100%	0.08
TBM_WtrS_2300	Notification to CLP for Removal of the transformer and Other Electrical Equipment *(P5)	177	04-Mar-22 A	08-Oct-22	09-Jun-23	14-Jun-23	212	90%	0.08
TBM_WtrS_2400	Dismantling and Removal of the Transformer and Other Electrical Equipment From the Substation	17	29-Dec-22	17-Jan-23	15-Jun-23	04-Jul-23	144	0%	0.08
LSMR : TBM Assembly									
TBM_Asb_1200	Assembly - Front Shield and Telescope	17	21-Apr-20 A	07-May-20 A	11-Apr-22	11-Apr-22		100%	0.16
TBM_Asb_1300	Assembly - Gripper Shield	15	08-May-20 A	22-May-20 A	11-Apr-22	11-Apr-22		100%	0.16
TBM_Asb_1340	Assembly - Thrust Unit and Tailskin	19	23-May-20 A	10-Jun-20 A	11-Apr-22	11-Apr-22		100%	0.16
TBM_Asb_1500	Assembly - Cutterhead and Disk	7	11-Jun-20 A	17-Jun-20 A	11-Apr-22	11-Apr-22		100%	0.16
TBM_Asb_1600	TBM Shifting and Install 47.5m of Gantry 1 to 4	38	18-Jun-20 A	25-Jul-20 A	11-Apr-22	11-Apr-22		100%	0.16
TBM_Asb_1700	Install the Thrust Frame	4	15-Jul-20 A	18-Jul-20 A	11-Apr-22	11-Apr-22		100%	0.12
TBM_Asb_1710	Ready to Bore	0		27-Jul-20 A		11-Apr-22		100%	
TBM_Asb_1720	Remaining FAT on Site/ SAT	27	28-Jul-20 A	27-Aug-20 A	11-Apr-22	11-Apr-22		100%	
TBM_Asb_1800	Install Backup Trailer 60m (Ch060 to CH120)	43	28-Aug-20 A	09-Oct-20 A	11-Apr-22	11-Apr-22		100%	0.08
TBM_Asb_1803	Install Backup Trailer 60m (Ch120 to CH140)	5	10-Oct-20 A	15-Oct-20 A	11-Apr-22	11-Apr-22		100%	
TBM_Asb_1805	Construction Noise Enclosure Footing No.G2	19	16-Oct-20 A	07-Nov-20 A	11-Apr-22	11-Apr-22		100%	
TBM_Asb_1810	Noise Enclosure Installation	112	20-Jul-20 A	09-Dec-20 A	11-Apr-22	11-Apr-22		100%	
TBM_Asb_1900	CNP for TBM Night Shift Operation Granted	21	09-Dec-20 A	06-Jan-21 A	11-Apr-22	11-Apr-22		100%	
TBM Fault Zone GI									
TBM_GI_2000	Statutory Submission and Approval	0		18-Jan-21 A		11-Apr-22		100%	
TBM_GI_2020	Condition Survey & Handover	2	20-Jan-21 A	21-Jan-21 A	11-Apr-22	11-Apr-22		100%	
TBM_GI_2030	GI Preparation Works	13	22-Jan-21 A	05-Feb-21 A	11-Apr-22	11-Apr-22		100%	
TBM_GI_2140	GI (CH2050 - Fault 4) - IRTS/WT/RDH2	11	06-Feb-21 A	26-Feb-21 A	11-Apr-22	11-Apr-22		100%	
TBM_GI_2150	GI (CH1525 - Fault 3) - IRTS/WT/RDH3	28	27-Jan-21 A	18-Feb-21 A	11-Apr-22	11-Apr-22		100%	
TBM_GI_2170	GI (CH2345 - PL7) - IRTS/WT/RDH1	23	19-Feb-21 A	04-Mar-21 A	11-Apr-22	11-Apr-22		100%	
TBM Excavation									
TBM_Exc_0100	Installation of settlement marker for Tunneling work (SM13- SM16,4nos.) *(P14)	31	11-May-20 A	15-Jun-20 A	11-Apr-22	11-Apr-22		100%	0.20
TBM_Exc_1000	Initial Readings of settlement marker for Tunneling work (SM13- SM16,4nos .) *P14)	15	16-Jun-20 A	04-Jul-20 A	11-Apr-22	11-Apr-22		100%	0.20
TBM_Exc_1100	PL1 (*Ch140 to CH278)	26	16-Oct-20 A	14-Nov-20 A	11-Apr-22	11-Apr-22		100%	0.80
TBM_Exc_1150	Grouting for PL1 at CH278	1	13-Nov-20 A	14-Nov-20 A	11-Apr-22	11-Apr-22		100%	
TBM_Exc_1200	PL2 (CH278 to CH397)	17	16-Nov-20 A	04-Dec-20 A	11-Apr-22	11-Apr-22		100%	0.80
TBM_Exc_1220	Grouting for PL2 at CH397	2	05-Dec-20 A	07-Dec-20 A	11-Apr-22	11-Apr-22		100%	
TBM_Exc_1240a	F2 (CH397 to CH580)	25	08-Dec-20 A	05-Jan-21 A	11-Apr-22	11-Apr-22		100%	
TBM_Exc_1240b	F2 (CH580 to CH673)	6	06-Jan-21 A	12-Jan-21 A	11-Apr-22	11-Apr-22		100%	
TBM_Exc_1260	Grouting for F2 at CH673	3	13-Jan-21 A	15-Jan-21 A	11-Apr-22	11-Apr-22		100%	
TBM_Exc_1300	PL3 (CH673 to CH960)	16	16-Jan-21 A	03-Feb-21 A	11-Apr-22	11-Apr-22		100%	0.80
TBM_Exc_1350	Grouting for PL3 at CH960	2	04-Feb-21 A	05-Feb-21 A	11-Apr-22	11-Apr-22		100%	
TBM_Exc_1500	PL4 (CH960 to CH1171)	24	06-Feb-21 A	05-Mar-21 A	11-Apr-22	11-Apr-22		100%	0.80
TBM_Exc_1550	Grouting for PL4 at CH1171	2	06-Mar-21 A	08-Mar-21 A	11-Apr-22	11-Apr-22		100%	
TBM_Exc_1600	PL5 (CH1171 to CH1326)	9	09-Mar-21 A	18-Mar-21 A	11-Apr-22	11-Apr-22		100%	0.80
TBM_Exc_1650	Grouting for PL5 at CH1326	2	19-Mar-21 A	20-Mar-21 A	11-Apr-22	11-Apr-22		100%	
TBM_Exc_1700	F3 (CH1326 to CH1552)	23	22-Mar-21 A	15-Apr-21 A	11-Apr-22	11-Apr-22		100%	0.80
TBM_Exc_1750	Grouting for F3 at CH1552	3	16-Apr-21 A	19-Apr-21 A	11-Apr-22	11-Apr-22		100%	
TBM_Exc_1800	PL6 (CH1552 to CH1757)	12	20-Apr-21 A	03-May-21 A	11-Apr-22	11-Apr-22		100%	0.80
TBM_Exc_1850	Grouting for PL6 at CH1757	2	04-May-21 A	05-May-21 A	11-Apr-22	11-Apr-22		100%	
TBM_Exc_1900	Installation of settlement marker for Tunneling work (SM11- SM12,2nos.) *(P14)	5	20-Jun-20 A	26-Jun-20 A	11-Apr-22	11-Apr-22		100%	0.10
TBM_Exc_2000	Initial Readings of settlement marker for Tunneling work (SM11- SM12,2nos.) *(P14)	24	30-Jun-20 A	03-Jul-20 A	11-Apr-22	11-Apr-22		100%	0.10



Actual Level of Effort
Actual Work
Remaining Work
Critical Remaining Work
Milestone
Remaining (Summary)

Contract No. DC/2018/08 : Inter-Reservoirs Transfer Scheme
Water Tunnel Between Kowloon Byewash Reservoir and Lower Shing Mun Reservoir

Date	Revision	Checked	Approved
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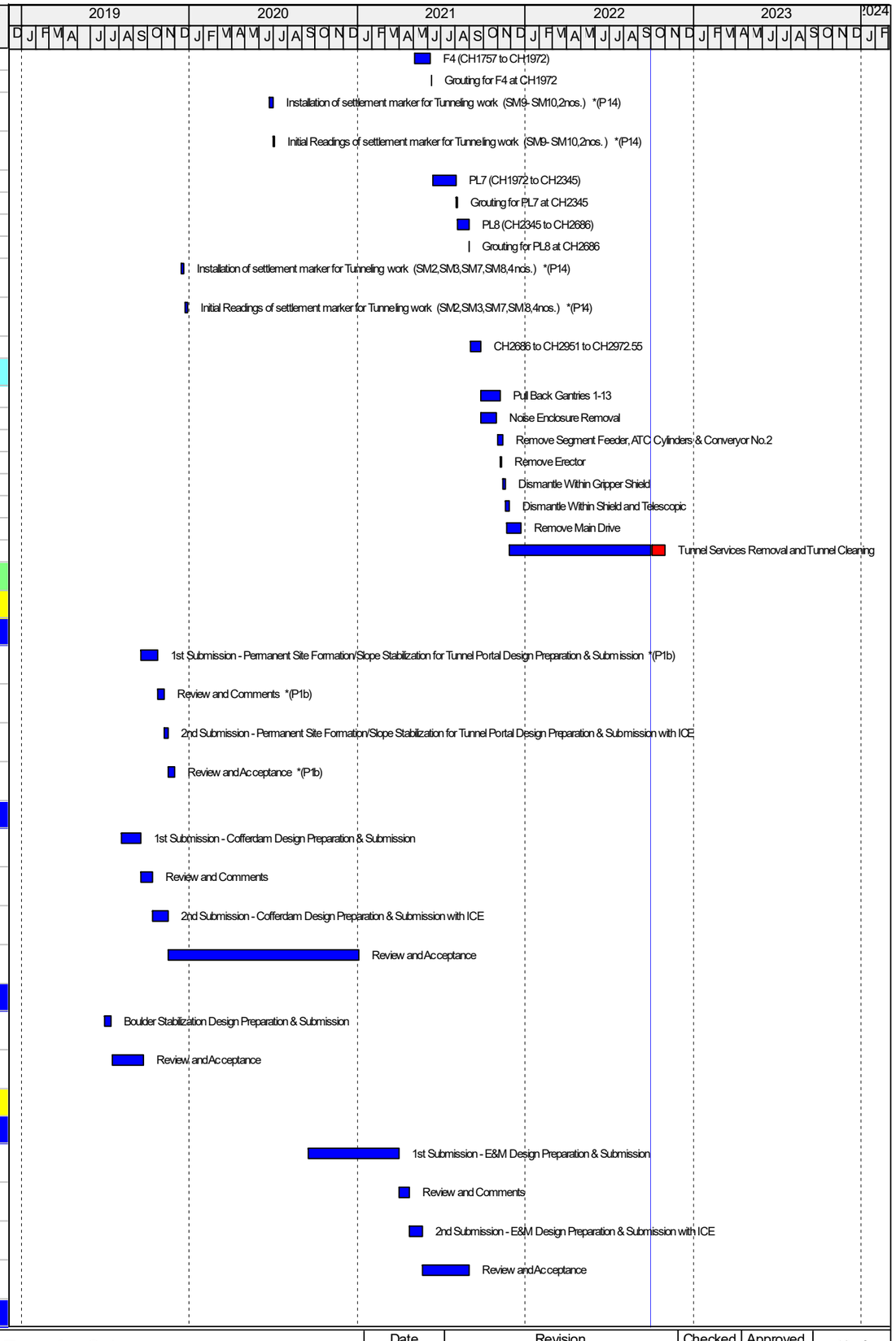
Activity ID	Activity Name	Dur	Start	Finish	Late Start	Late Finish	Total Float	% Compl.	Relative Weight
TBM_Exc_2100	F4 (CH1757 to CH1972)	30	06-May-21 A	08-Jun-21 A	11-Apr-22	11-Apr-22		100%	0.60
TBM_Exc_2150	Grouting for F4 at CH1972	3	09-Jun-21 A	11-Jun-21 A	11-Apr-22	11-Apr-22		100%	
TBM_Exc_2200	Installation of settlement marker for Tunneling work (SM9- SM10,2nos.) *(P14)	6	23-Jun-20 A	30-Jun-20 A	11-Apr-22	11-Apr-22		100%	0.10
TBM_Exc_2300	Initial Readings of settlement marker for Tunneling work (SM9- SM10,2nos.) *(P14)	3	30-Jun-20 A	03-Jul-20 A	11-Apr-22	11-Apr-22		100%	0.10
TBM_Exc_2400	PL7 (CH1972 to CH2345)	46	12-Jun-21 A	03-Aug-21 A	11-Apr-22	11-Apr-22		100%	0.60
TBM_Exc_2450	Grouting for PL7 at CH2345	2	04-Aug-21 A	05-Aug-21 A	11-Apr-22	11-Apr-22		100%	
TBM_Exc_2500	PL8 (CH2345 to CH2686)	22	06-Aug-21 A	31-Aug-21 A	11-Apr-22	11-Apr-22		100%	0.60
TBM_Exc_2550	Grouting for PL8 at CH2686	1	01-Sep-21 A	01-Sep-21 A	11-Apr-22	11-Apr-22		100%	
TBM_Exc_2600	Installation of settlement marker for Tunneling work (SM2,SM3,SM7,SM8,4nos.) *(P14)	7	13-Dec-19 A	20-Dec-19 A	11-Apr-22	11-Apr-22		100%	0.10
TBM_Exc_2700	Initial Readings of settlement marker for Tunneling work (SM2,SM3,SM7,SM8,4nos.) *(P14)	5	21-Dec-19 A	28-Dec-19 A	11-Apr-22	11-Apr-22		100%	0.10
TBM_Exc_2800	CH2686 to CH2951 to CH2972.55	20	02-Sep-21 A	24-Sep-21 A	11-Apr-22	11-Apr-22		100%	0.40
TBM Dismantling									
TB_Ds_1000	Pull Back Gantries 1-13	14	25-Sep-21 A	06-Nov-21 A	11-Apr-22	11-Apr-22		100%	0.10
TB_Ds_1010	Noise Enclosure Removal	18	27-Sep-21 A	30-Oct-21 A	04-Jul-23	04-Jul-23		100%	
TB_Ds_1020	Remove Segment Feeder, ATC Cylinders & Converyor No.2	8	01-Nov-21 A	12-Nov-21 A	11-Apr-22	11-Apr-22		100%	
TB_Ds_1100	Remove Erector	2	06-Nov-21 A	08-Nov-21 A	14-May-22	14-May-22		100%	0.10
TB_Ds_1300	Dismantle Within Gripper Shield	4	13-Nov-21 A	17-Nov-21 A	14-May-22	14-May-22		100%	0.10
TB_Ds_1400	Dismantle Within Shield and Telescopic	6	18-Nov-21 A	25-Nov-21 A	14-May-22	14-May-22		100%	0.10
TB_Ds_1500	Remove Main Drive	5	22-Nov-21 A	21-Dec-21 A	14-May-22	14-May-22		100%	0.10
TB_Ds_1700	Tunnel Services Removal and Tunnel Cleaning	271	26-Nov-21 A	31-Oct-22	14-May-22	11-Jun-22	-117	100%	0.10
Intake Structure at Kowloon Byewash Reservoir									
KBR Intake : Design Submission									
KBR Intake: Permanent Site Formation / Slope Stabilization for Tunnel Portal Design									
KBR_ISD_1000	1st Submission - Permanent Site Formation/Slope Stabilization for Tunnel Portal Design Preparation & Submission *(P1b)	30	16-Sep-19 A	23-Oct-19 A	04-Jul-23	04-Jul-23		100%	0.30
KBR_ISD_1100	Review and Comments *(P1b)	11	24-Oct-19 A	06-Nov-19 A	04-Jul-23	04-Jul-23		100%	
KBR_ISD_1200	2nd Submission - Permanent Site Formation/Slope Stabilization for Tunnel Portal Design Preparation & Submission with ICE	6	07-Nov-19 A	14-Nov-19 A	04-Jul-23	04-Jul-23		100%	0.20
KBR_ISD_1300	Review and Acceptance *(P1b)	11	15-Nov-19 A	28-Nov-19 A	04-Jul-23	04-Jul-23		100%	
KBR Intake : Cofferdam Design									
KBR_ISD_1400	1st Submission - Cofferdam Design Preparation & Submission	37	05-Aug-19 A	17-Sep-19 A	04-Jul-23	04-Jul-23		100%	0.30
KBR_ISD_1500	Review and Comments	18	18-Sep-19 A	11-Oct-19 A	04-Jul-23	04-Jul-23		100%	
KBR_ISD_1600	2nd Submission - Cofferdam Design Preparation & Submission with ICE	28	12-Oct-19 A	14-Nov-19 A	04-Jul-23	04-Jul-23		100%	0.20
KBR_ISD_1700	Review and Acceptance	306	15-Nov-19 A	04-Jan-21 A	04-Jul-23	04-Jul-23		100%	
KBR Intake : Permanent Boulder Stabilization									
KBR_ISD_2110	Boulder Stabilization Design Preparation & Submission	11	01-Jul-19 A	15-Jul-19 A	04-Jul-23	04-Jul-23		100%	0.50
KBR_ISD_2140	Review and Acceptance	59	16-Jul-19 A	23-Sep-19 A	04-Jul-23	04-Jul-23		100%	
KBR Intake : E&M for Electric Actuated Penstocks and Automatic Flow Control System									
KBR Intake : E&M Design of Automatic Flow Control System & Others									
KBR_EMD_1000	1st Submission - E&M Design Preparation & Submission	97	14-Sep-20 A	01-Apr-21 A	04-Jul-23	04-Jul-23		100%	0.75
KBR_EMD_1100	Review and Comments	28	02-Apr-21 A	22-Apr-21 A	04-Jul-23	04-Jul-23		100%	
KBR_EMD_1200	2nd Submission - E&M Design Preparation & Submission with ICE	28	23-Apr-21 A	21-May-21 A	04-Jul-23	04-Jul-23		100%	0.50
KBR_EMD_1300	Review and Acceptance	18	22-May-21 A	01-Sep-21 A	04-Jul-23	04-Jul-23		100%	0.25
KBR Intake : E&M Installation of Automatic Flow Control System & Others									



Actual Level of Effort | Critical Remaining Work
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Contract No. DC/2018/08 : Inter-Reservoirs Transfer Scheme
Water Tunnel Between Kowloon Byewash Reservoir and Lower Shing Mun Reservoir

Date	Revision	Checked	Approved
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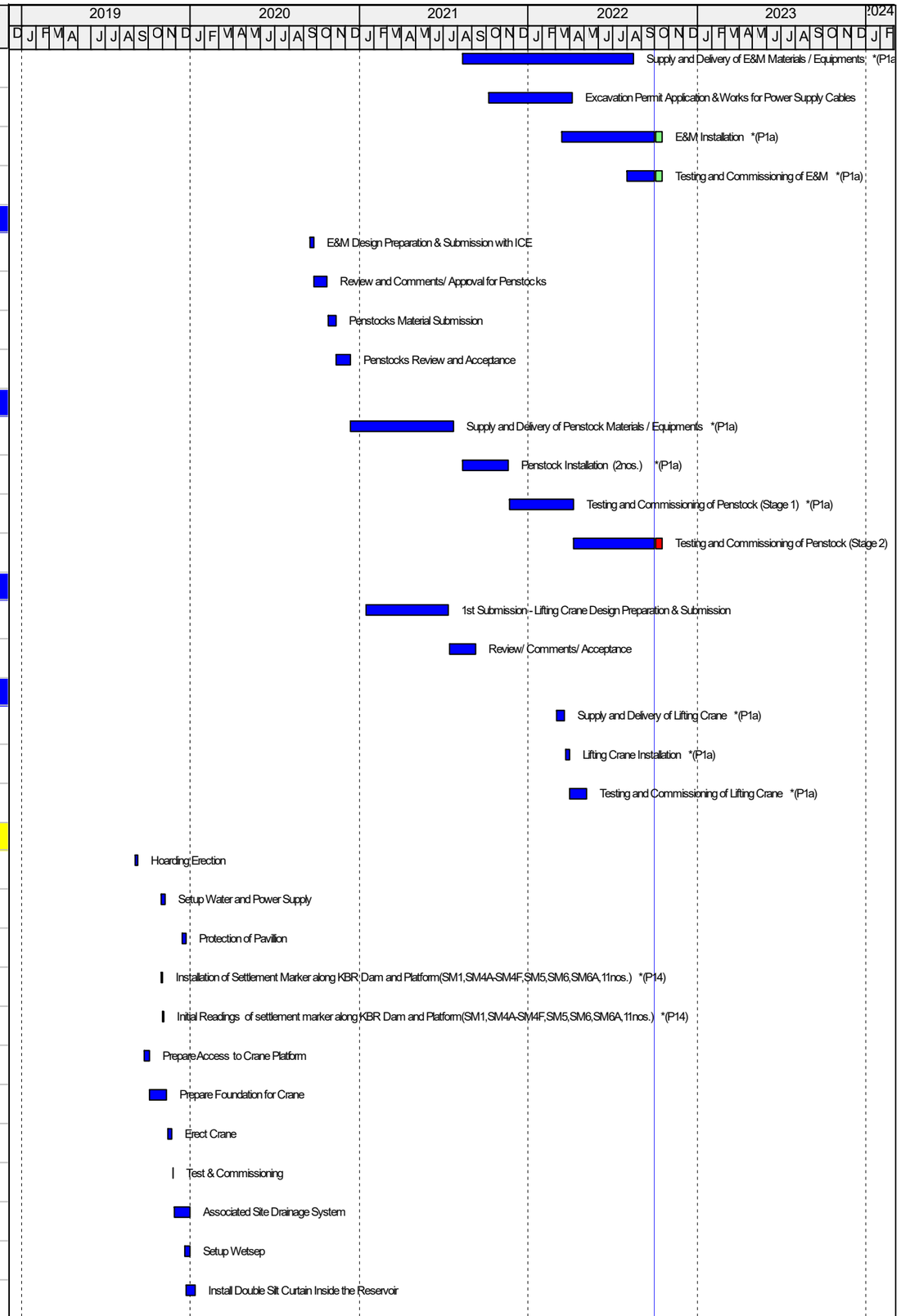
Activity ID	Activity Name	Dur	Start	Finish	Late Start	Late Finish	Total Float	% Compl.	Relative Weight
KB_ISW_3600	Supply and Delivery of E&M Materials / Equipments *(P1a)	297	11-Aug-21 A	15-Aug-22 A	04-Jul-23	04-Jul-23		100%	0.75
KB_ISW_3610	Excavation Permit Application & Works for Power Supply Cables	145	06-Oct-21 A	04-Apr-22 A	04-Jul-23	04-Jul-23		100%	
KB_ISW_3700	E&M Installation *(P1a)	176	14-Mar-22 A	17-Oct-22	21-Jun-23	04-Jul-23	222	80%	0.25
KB_ISW_3800	Testing and Commissioning of E&M *(P1a)	64	01-Aug-22 A	17-Oct-22	21-Jun-23	04-Jul-23	222	0%	
KBR Intake : E&M Design of Electrical Actuated Penstocks									
KBR_EMD_1310	E&M Design Preparation & Submission with ICE	8	14-Sep-20 A	23-Sep-20 A	13-May-22	13-May-22		100%	0.75
KBR_EMD_1320	Review and Comments/ Approval for Penstocks	16	24-Sep-20 A	23-Oct-20 A	13-May-22	13-May-22		100%	
KBR_EMD_1330	Penstocks Material Submission	28	24-Oct-20 A	09-Nov-20 A	13-May-22	13-May-22		100%	0.25
KBR_EMD_1340	Penstocks Review and Acceptance	18	10-Nov-20 A	11-Dec-20 A	13-May-22	13-May-22		100%	
KBR Intake : E&M Installation of Electrical Actuated Penstocks									
KB_ISW_3810	Supply and Delivery of Penstock Materials / Equipments *(P1a)	157	11-Dec-20 A	21-Jul-21 A	13-May-22	13-May-22		100%	0.75
KB_ISW_3830	Penstock Installation (2nos.) *(P1a)	56	11-Aug-21 A	19-Nov-21 A	13-May-22	13-May-22		100%	0.25
KB_ISW_3840	Testing and Commissioning of Penstock (Stage 1) *(P1a)	10	20-Nov-21 A	07-Apr-22 A	13-May-22	13-May-22		100%	
KB_ISW_3880	Testing and Commissioning of Penstock (Stage 2)	155	08-Apr-22 A	17-Oct-22	24-Jun-22	08-Jul-22	-83	75%	
KBR Intake : E&M Design for Lifting Crane									
KBR_EMD_1350	1st Submission - Lifting Crane Design Preparation & Submission	130	15-Jan-21 A	12-Jul-21 A	13-May-22	13-May-22		100%	0.75
KBR_EMD_1360	Review/ Comments/ Acceptance	16	13-Jul-21 A	07-Sep-21 A	13-May-22	13-May-22		100%	
KBR Intake : E&M Installation of Lifting Crane									
KB_ISW_3850	Supply and Delivery of Lifting Crane *(P1a)	56	04-Mar-22 A	18-Mar-22 A	13-May-22	13-May-22		100%	0.75
KB_ISW_3860	Lifting Crane Installation *(P1a)	56	21-Mar-22 A	30-Mar-22 A	13-May-22	13-May-22		100%	0.25
KB_ISW_3870	Testing and Commissioning of Lifting Crane *(P1a)	26	31-Mar-22 A	05-May-22 A	13-May-22	13-May-22		100%	
KBR : Site Setup and Access									
KB_ISW_1000	Hoarding Erection	6	02-Sep-19 A	09-Sep-19 A	04-Jul-23	04-Jul-23		100%	0.20
KB_ISW_1200	Setup Water and Power Supply	5	31-Oct-19 A	06-Nov-19 A	04-Jul-23	04-Jul-23		100%	0.20
KB_ISW_1300	Protection of Pavilion	7	14-Dec-19 A	23-Dec-19 A	04-Jul-23	04-Jul-23		100%	0.20
KB_ISW_1310	Installation of Settlement Marker along KBR Dam and Platform(SM1,SM4A-SM4F,SM5,SM6,SM6A,11nos.) *(P14)	1	30-Oct-19 A	31-Oct-19 A	04-Jul-23	04-Jul-23		100%	0.20
KB_ISW_1320	Initial Readings of settlement marker along KBR Dam and Platform(SM1,SM4A-SM4F,SM5,SM6,SM6A,11nos.) *(P14)	3	01-Nov-19 A	05-Nov-19 A	04-Jul-23	04-Jul-23		100%	0.10
KB_ISW_1400-15	Prepare Access to Crane Platform	8	23-Sep-19 A	03-Oct-19 A	04-Jul-23	04-Jul-23		100%	
KB_ISW_1400-30	Prepare Foundation for Crane	30	04-Oct-19 A	09-Nov-19 A	04-Jul-23	04-Jul-23		100%	0.20
KB_ISW_1400-40	Erect Crane	8	13-Nov-19 A	22-Nov-19 A	04-Jul-23	04-Jul-23		100%	0.40
KB_ISW_1400-50	Test & Commissioning	1	23-Nov-19 A	25-Nov-19 A	04-Jul-23	04-Jul-23		100%	0.20
KB_ISW_1700	Associated Site Drainage System	28	26-Nov-19 A	31-Dec-19 A	04-Jul-23	04-Jul-23		100%	0.10
KB_ISW_1800	Setup Wetsep	8	19-Dec-19 A	31-Dec-19 A	04-Jul-23	04-Jul-23		100%	0.10
XKB_ISW_1900	Install Double Silt Curtain Inside the Reservoir	14	21-Dec-19 A	10-Jan-20 A	04-Jul-23	04-Jul-23		100%	0.50



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Contract No. DC/2018/08 : Inter-Reservoirs Transfer Scheme
Water Tunnel Between Kowloon Byewash Reservoir and Lower Shing Mun Reservoir

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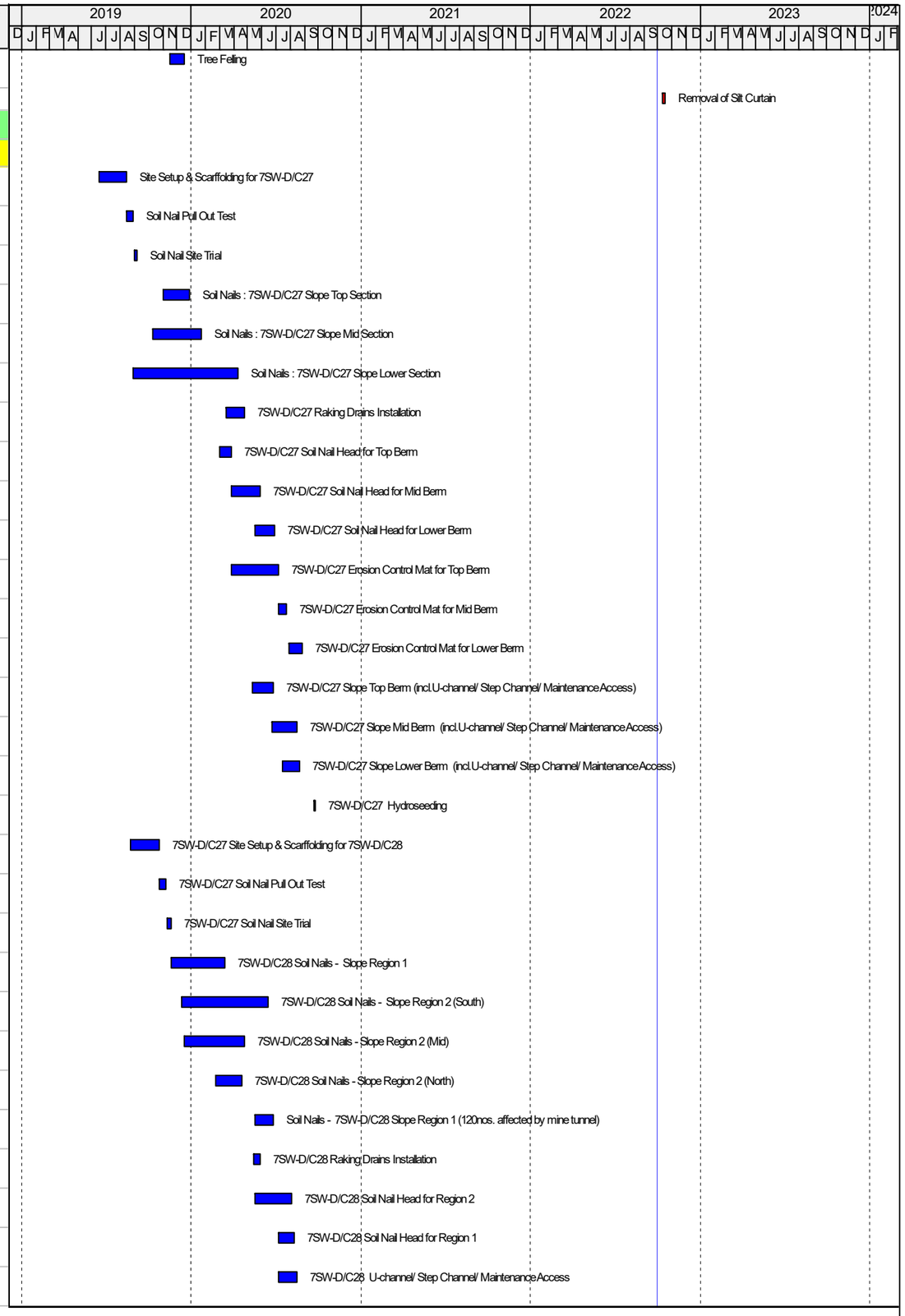
Activity ID	Activity Name	Dur	Start	Finish	Late Start	Late Finish	Total Float	% Compl.	Relative Weight
XKB_ISW_2000	Tree Felling	26	15-Nov-19 A	16-Dec-19 A	04-Jul-23	04-Jul-23		100%	0.50
XKB_ISW_3500	Removal of Silt Curtain	6	12-Oct-22	18-Oct-22	04-Jul-22	09-Jul-22	-83	0%	0.50
Slope Upgrading Works									
LSMR Slope Stabilization Works									
LSM_Slp_1000	Site Setup & Scaffolding for 7SW-D/C27	50	15-Jun-19 A	13-Aug-19 A	09-Oct-20	09-Oct-20		100%	0.20
LSM_Slp_1010	Soil Nail Pull Out Test	14	14-Aug-19 A	29-Aug-19 A	09-Oct-20	09-Oct-20		100%	0.10
LSM_Slp_1020	Soil Nail Site Trial	6	30-Aug-19 A	05-Sep-19 A	09-Oct-20	09-Oct-20		100%	0.10
LSM_Slp_1200-10	Soil Nails : 7SW-D/C27 Slope Top Section	46	02-Nov-19 A	27-Dec-19 A	09-Oct-20	09-Oct-20		100%	1.00
LSM_Slp_1200-20	Soil Nails : 7SW-D/C27 Slope Mid Section	88	09-Oct-19 A	22-Jan-20 A	09-Oct-20	09-Oct-20		100%	0.80
LSM_Slp_1200-30	Soil Nails : 7SW-D/C27 Slope Lower Section	180	29-Aug-19 A	09-Apr-20 A	09-Oct-20	09-Oct-20		100%	1.20
LSM_Slp_1210	7SW-D/C27 Raking Drains Installation	30	16-Mar-20 A	23-Apr-20 A	09-Oct-20	09-Oct-20		100%	0.20
LSM_Slp_1220	7SW-D/C27 Soil Nail Head for Top Berm	22	02-Mar-20 A	26-Mar-20 A	09-Oct-20	09-Oct-20		100%	
LSM_Slp_1230	7SW-D/C27 Soil Nail Head for Mid Berm	49	27-Mar-20 A	29-May-20 A	09-Oct-20	09-Oct-20		100%	
LSM_Slp_1240	7SW-D/C27 Soil Nail Head for Lower Berm	36	18-May-20 A	29-Jun-20 A	09-Oct-20	09-Oct-20		100%	
LSM_Slp_1250	7SW-D/C27 Erosion Control Mat for Top Berm	79	27-Mar-20 A	06-Jul-20 A	09-Oct-20	09-Oct-20		100%	
LSM_Slp_1260	7SW-D/C27 Erosion Control Mat for Mid Berm	16	07-Jul-20 A	24-Jul-20 A	09-Oct-20	09-Oct-20		100%	
LSM_Slp_1270	7SW-D/C27 Erosion Control Mat for Lower Berm	26	29-Jul-20 A	27-Aug-20 A	09-Oct-20	09-Oct-20		100%	
LSM_Slp_1600	7SW-D/C27 Slope Top Berm (incl.U-channel/ Step Channel/ Maintenance Access)	40	11-May-20 A	26-Jun-20 A	09-Oct-20	09-Oct-20		100%	0.20
LSM_Slp_1700	7SW-D/C27 Slope Mid Berm (incl.U-channel/ Step Channel/ Maintenance Access)	46	22-Jun-20 A	15-Aug-20 A	09-Oct-20	09-Oct-20		100%	0.20
LSM_Slp_1800	7SW-D/C27 Slope Lower Berm (incl.U-channel/ Step Channel/ Maintenance Access)	32	15-Jul-20 A	20-Aug-20 A	09-Oct-20	09-Oct-20		100%	0.20
LSM_Slp_1900	7SW-D/C27 Hydroseeding	3	21-Sep-20 A	23-Sep-20 A	09-Oct-20	09-Oct-20		100%	0.20
LSM_Slp_2010	7SW-D/C27 Site Setup & Scaffolding for 7SW-D/C28	52	22-Aug-19 A	23-Oct-19 A	09-Oct-20	09-Oct-20		100%	0.20
LSM_Slp_2050	7SW-D/C27 Soil Nail Pull Out Test	14	24-Oct-19 A	08-Nov-19 A	09-Oct-20	09-Oct-20		100%	0.20
LSM_Slp_2060	7SW-D/C27 Soil Nail Site Trial	8	09-Nov-19 A	18-Nov-19 A	09-Oct-20	09-Oct-20		100%	0.20
LSM_Slp_2110-10	7SW-D/C28 Soil Nails - Slope Region 1	91	19-Nov-19 A	14-Mar-20 A	09-Oct-20	09-Oct-20		100%	0.60
LSM_Slp_2110-20	7SW-D/C28 Soil Nails - Slope Region 2 (South)	146	10-Dec-19 A	15-Jun-20 A	09-Oct-20	09-Oct-20		100%	0.60
LSM_Slp_2110-30	7SW-D/C28 Soil Nails - Slope Region 2 (Mid)	99	17-Dec-19 A	25-Apr-20 A	09-Oct-20	09-Oct-20		100%	0.60
LSM_Slp_2110-70	7SW-D/C28 Soil Nails - Slope Region 2 (North)	46	21-Feb-20 A	18-Apr-20 A	09-Oct-20	09-Oct-20		100%	0.60
LSM_Slp_2110-80	Soil Nails - 7SW-D/C28 Slope Region 1 (120nos. affected by mine tunnel)	33	18-May-20 A	25-Jun-20 A	09-Oct-20	09-Oct-20		100%	
LSM_Slp_2510	7SW-D/C28 Raking Drains Installation	13	15-May-20 A	29-May-20 A	09-Oct-20	09-Oct-20		100%	0.20
LSM_Slp_2512	7SW-D/C28 Soil Nail Head for Region 2	65	18-May-20 A	03-Aug-20 A	09-Oct-20	09-Oct-20		100%	
LSM_Slp_2514	7SW-D/C28 Soil Nail Head for Region 1	30	06-Jul-20 A	08-Aug-20 A	09-Oct-20	09-Oct-20		100%	
LSM_Slp_2520	7SW-D/C28 U-channel/ Step Channel/ Maintenance Access	36	06-Jul-20 A	15-Aug-20 A	09-Oct-20	09-Oct-20		100%	0.20



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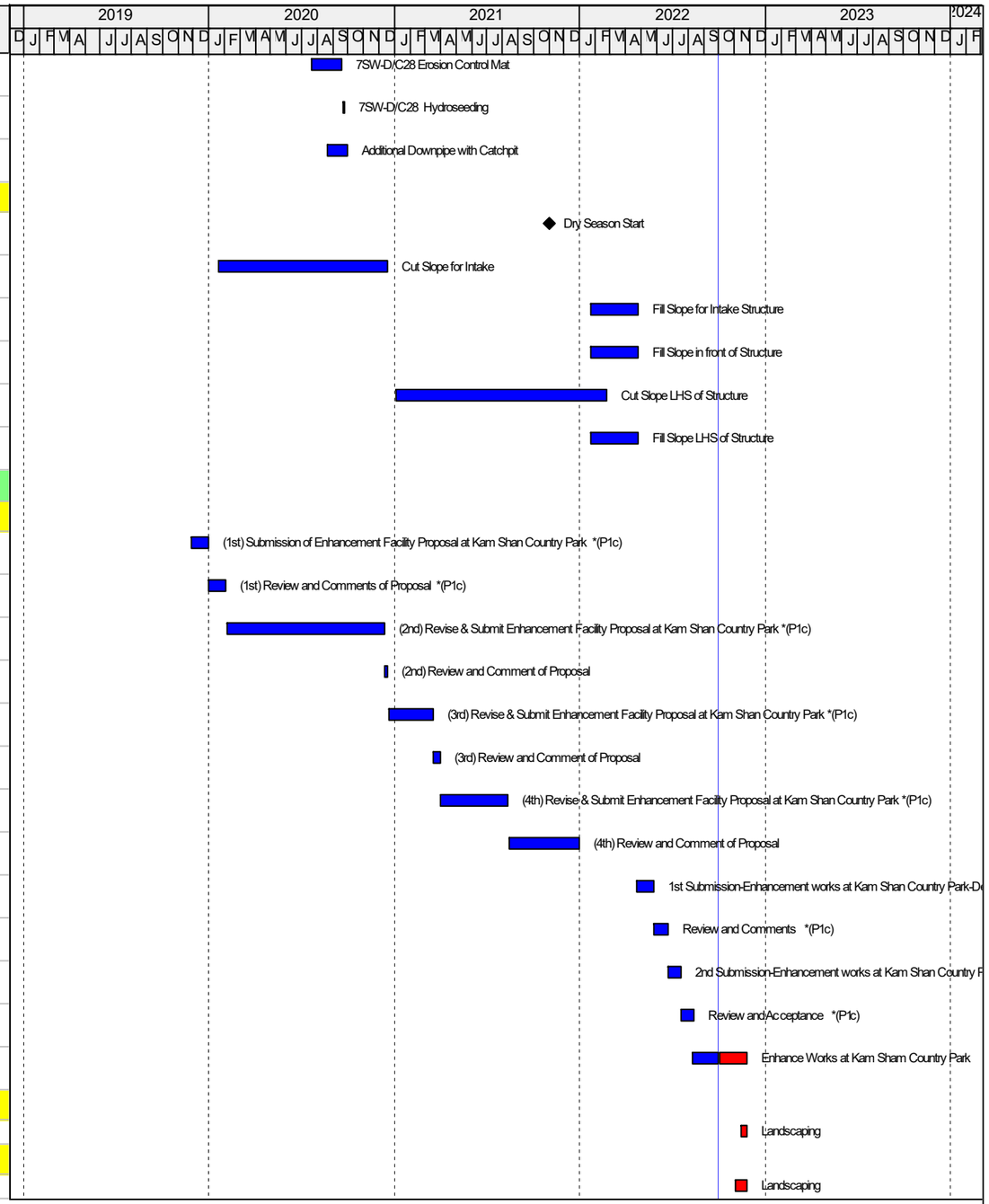
30-Sep-22	Updated Y22M09D30a	A.Tsang	

Activity ID	Activity Name	Dur	Start	Finish	Late Start	Late Finish	Total Float	% Compl.	Relative Weight
LSM_Slp_2525	7SW-D/C28 Erosion Control Mat	52	20-Jul-20 A	17-Sep-20 A	09-Oct-20	09-Oct-20		100%	
LSM_Slp_2530	7SW-D/C28 Hydroseeding	3	21-Sep-20 A	23-Sep-20 A	09-Oct-20	09-Oct-20		100%	0.20
LSM_Slp_2540	Additional Downpipe with Catchpit	35	20-Aug-20 A	29-Sep-20 A	09-Oct-20	09-Oct-20		100%	
KBR Slope Stabilization Works.									
KBR_Slp_Slp_0990	Dry Season Start	0	01-Nov-21 A		09-Jul-22			100%	0.40
KBR_Slp_Slp_1000	Cut Slope for Intake	268	20-Jan-20 A	17-Dec-20 A	09-Jul-22	09-Jul-22		100%	0.40
KBR_Slp_Slp_1100	Fill Slope for Intake Structure	71	22-Jan-22 A	26-Apr-22 A	09-Jul-22	09-Jul-22		100%	0.40
KBR_Slp_Slp_1200	Fill Slope in front of Structure	71	22-Jan-22 A	26-Apr-22 A	09-Jul-22	09-Jul-22		100%	0.40
KBR_Slp_Slp_1300	Cut Slope LHS of Structure	330	02-Jan-21 A	21-Feb-22 A	09-Jul-22	09-Jul-22		100%	0.40
KBR_Slp_Slp_1400	Fill Slope LHS of Structure	71	22-Jan-22 A	26-Apr-22 A	09-Jul-22	09-Jul-22		100%	0.40
Landscaping Works									
Enhancement Works of Kam Shan Country Park-Design									
KBR_EhW_1000	(1st) Submission of Enhancement Facility Proposal at Kam Shan Country Park *(P1c)	27	28-Nov-19 A	31-Dec-19 A	21-Apr-22	21-Apr-22		100%	0.41
KBR_EhW_1200	(1st) Review and Comments of Proposal *(P1c)	20	01-Jan-20 A	03-Feb-20 A	21-Apr-22	21-Apr-22		100%	
KBR_EhW_1210	(2nd) Revise & Submit Enhancement Facility Proposal at Kam Shan Country Park *(P1c)	256	04-Feb-20 A	10-Dec-20 A	21-Apr-22	21-Apr-22		100%	
KBR_EhW_1220	(2nd) Review and Comment of Proposal	7	11-Dec-20 A	18-Dec-20 A	21-Apr-22	21-Apr-22		100%	
KBR_EhW_1230	(3rd) Revise & Submit Enhancement Facility Proposal at Kam Shan Country Park *(P1c)	67	19-Dec-20 A	18-Mar-21 A	21-Apr-22	21-Apr-22		100%	
KBR_EhW_1240	(3rd) Review and Comment of Proposal	12	19-Mar-21 A	01-Apr-21 A	21-Apr-22	21-Apr-22		100%	
KBR_EhW_1250	(4th) Revise & Submit Enhancement Facility Proposal at Kam Shan Country Park *(P1c)	46	02-Apr-21 A	12-Aug-21 A	21-Apr-22	21-Apr-22		100%	
KBR_EhW_1260	(4th) Review and Comment of Proposal	18	13-Aug-21 A	30-Dec-21 A	21-Apr-22	21-Apr-22		100%	
KBR_EhW_1300	1st Submission-Enhancement works at Kam Shan Country Park-Design Preparation & Submission *(P1c)	28	22-Apr-22 A	26-May-22 A	21-Apr-22	21-Apr-22		100%	0.30
KBR_EhW_1400	Review and Comments *(P1c)	22	27-May-22 A	22-Jun-22 A	14-May-22	14-May-22		100%	
KBR_EhW_1500	2nd Submission-Enhancement works at Kam Shan Country Park-Design Preparation & Submission with ICE *(P1c)	21	23-Jun-22 A	18-Jul-22 A	14-May-22	14-May-22		100%	0.30
KBR_EhW_1600	Review and Acceptance *(P1c)	23	19-Jul-22 A	13-Aug-22 A	14-May-22	14-May-22		100%	
KBR_LSc_1100	Enhance Works at Kam Sham Country Park	90	11-Aug-22 A	26-Nov-22	14-May-22	09-Jul-22	-117	0%	1.00
KBR Landscaping									
KBR_LSc_1000	Landscaping	12	14-Nov-22	26-Nov-22	25-Jun-22	09-Jul-22	-117	0%	0.50
LSMR Landscaping									
LSM_LSc_1000	Landscaping	20	04-Nov-22	26-Nov-22	18-May-22	10-Jun-22	-141	0%	0.50

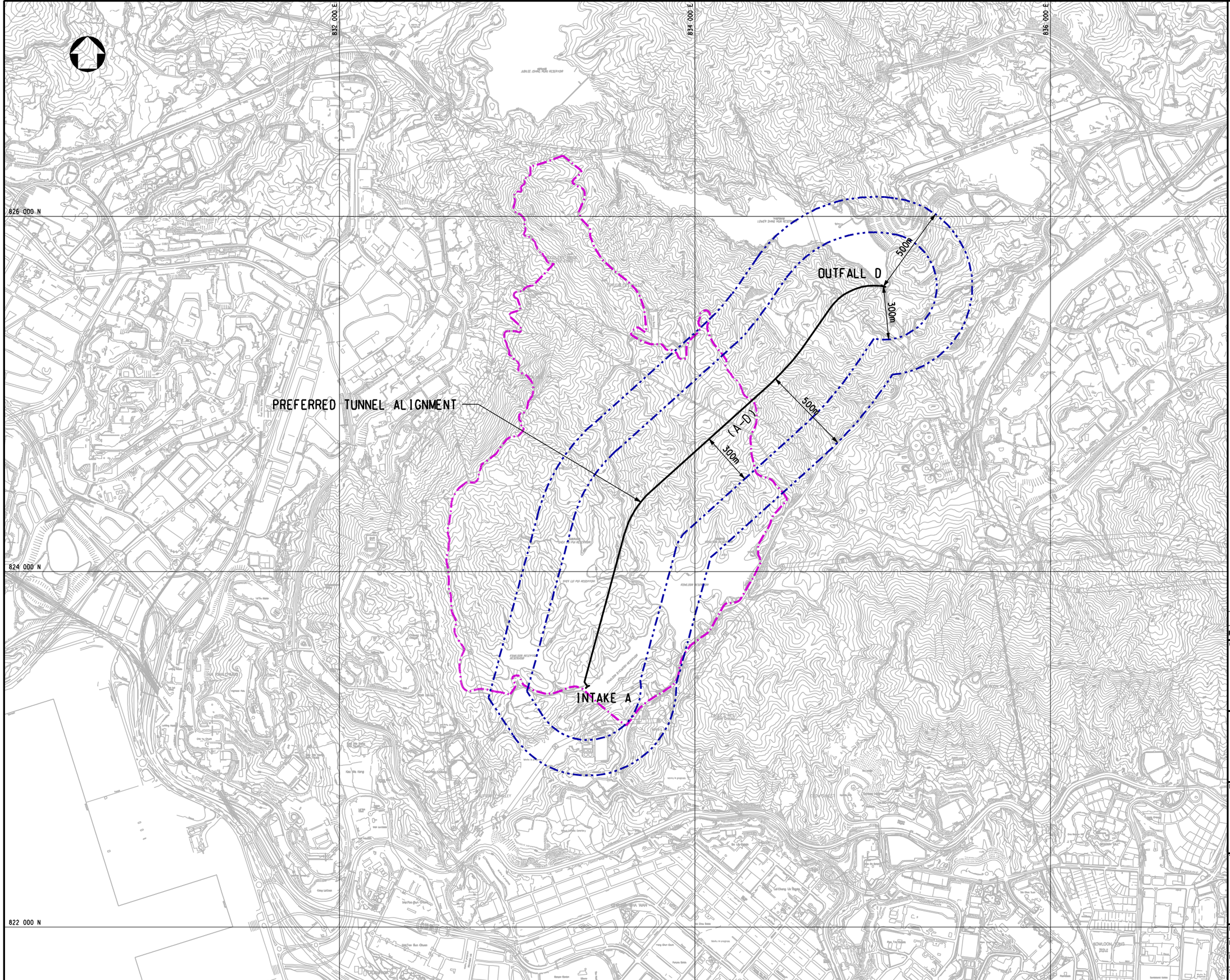


Actual Level of Effort
Actual Work
Remaining Work
Critical Remaining Work
Milestone
Remaining (Summary)

Contract No. DC/2018/08 : Inter-Reservoirs Transfer Scheme
Water Tunnel Between Kowloon Byewash Reservoir and Lower Shing Mun Reservoir

Date	Revision	Checked	Approved
30-Sep-22	Updated Y22M09D30a	A.Tsang	

Appendix B
Project Site Layout Plan



LEGEND:

KAM SHAN COUNTRY PARK BOUNDARY

STUDY AREA

Rev	Date	Drawn	Description	Ch'k'd	App'd

Client

THE GOVERNMENT OF THE HONG KONG SPECIAL ADMINISTRATIVE REGION WATER SUPPLIES DEPARTMENT

Mott MacDonald

Mott MacDonald Hong Kong Ltd
7th Floor
West Wing Office Building
New World Centre
20 Salisbury Road
Tsim Sha Tsui, Kowloon
Hong Kong

Tel 2828 5757
Fax 2827 1823
Web www.mottmac.com.hk

Project

Agreement No. CE55/2006(EP)
Inter-reservoirs Transfer Scheme (IRTS)
Water Tunnel between Kowloon Byewash Reservoir and Lower Shing Mun Reservoir
Environmental Impact Assessment Investigation

Title

THE PREFERRED SCHEME

Designed	HN/PW		Eng.Chk.	PW	
Drawn	VN		Coordination	PW	
Dwg.Chk.	HN		Approved	AFK	
Scale	1:10000@A1	Project	240564	Status	INF
		CAD File	J:\240564\REPORT\ENV\EM&A-08R2\FIGURE-1-1.dgn		
Drawing No.	FIGURE 1-1			Rev	

Appendix C
Notification Letter for Completion of EM&A Programme

Site Office (DC/2018/08) – Unit No. 2507-2509, 25/F, The Octagon, No. 6 Sha Tsui Road, Tsuen Wan, N.T.
Fax 傳真: 3188 5841

Our Ref : 382766/(DC/2018/08)/M45/110/(803546)
Your Ref :

20 January 2023

The EIA Ordinance Register Office,
Environmental Protection Department,
27th floor, Southorn Centre,
130 Hennessy Road,
Wanchai, Hong Kong

For the attention of Mr. TSE Tsz Lok

Dear Sir,

Contract No. DC/2018/08
Inter-reservoirs Transfer Scheme –
Water Tunnel between Kowloon Byewash Reservoir and Lower Shing Mun Reservoir
Completion of Environmental Monitoring and Audit (EM&A) Programme

Pursuant to Section 10.6.1 of the EM&A Manual of the captioned project, pleased be informed that the EM&A Programme and impact monitoring would be completed on 21 January 2023.

Should you have any queries, please contact my Assistant Resident Engineer Ms. Carmen Cheuk at 3959 7356.

Yours faithfully,

Irving Sze
Resident Engineer

c.c.	SE/DP2, DSD	- Attn: Mr. N.F. Wan, Antony	
	Binnies	- Attn: Mr. W. J. Searle	
	BTP	- Attn: Mr. Alfred TSANG	
	Ka Shing Management Consultant Ltd.	- Attn: Mr. Lee Wing Hang, Happy	(E-mail)
	Acuity Sustainability Consulting Ltd.	- Attn: Mr. Kevin Li	(E-mail)

IS/cc

Binnies Hong Kong Limited
賓尼斯工程顧問有限公司
43rd Floor, AIA Kowloon Tower, 100 How Ming Street, Kowloon, Hong Kong
香港九龍巧明街 100 號友邦九龍大樓 43 樓
Tel 電話: 2601 1000
Fax 傳真: 2601 3988

Appendix D
Monitoring Locations

E 833000
E 833500
E 834000
N 823500
N 823000

石鼓�special水塘
SHEK LEI PUI RESERVOIR

九龍水塘
KOWLOON RESERVOIR

九龍水塘
KOWLOON RESERVOIR

九龍接收水塘
KOWLOON RECEPTION RESERVOIR

九龍泳塘
KOWLOON BYEWASH RESERVOIR

(A-D)

300m

VH

Noise Monitoring Location 2 (NM2)
Village House

R(C)4
R(C)5
R(C)6
R(C)3
R(C)2
R(C)1
CDA
G/IC
GB
OU
G/IC(1)
G/IC(2)
G/IC(3)

LEGEND:

- STUDY AREA BOUNDARY
- PREFERRED TUNNEL ALIGNMENT
- \+ NOISE SENSITIVE RECEIVER
- C COMMERCIAL
- CDA COMPREHENSIVE DEVELOPMENT AREA
- G/IC GOVERNMENT/INSTITUTION/COMMUNITY
- GB GREEN BELT
- I INDUSTRIAL
- O OPEN SPACE
- OU OTHER SPECIFIED USES
- R(A) RESIDENTIAL (GROUP A)
- R(B) RESIDENTIAL (GROUP B)
- R(C) RESIDENTIAL (GROUP C)
- R(E) RESIDENTIAL (GROUP E)
- V VILLAGE TYPE DEVELOPMENT

Rev	Date	Drawn	Description	Ch'k'd	App'd
P2	NOV 08	MING	SENSITIVE RECEIVER REVISED	CWK	AFK
P1	MAR 08	VN	FIRST ISSUE	PW	AFK

Client

THE GOVERNMENT OF THE HONG KONG SPECIAL ADMINISTRATIVE REGION
WATER SUPPLIES DEPARTMENT

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Mott MacDonald Hong Kong Ltd
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West Wing Office Building
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20 Salisbury Road
Tsim Sha Tsui, Kowloon
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Tel 2828 5757
Fax 2827 1823
Web www.mottmac.com.hk

Project

Agreement No. CE55/2006(EP)
Inter-reservoirs Transfer Scheme (IRTS)
Water Tunnel between Kowloon Byewash Reservoir and Lower Shing Mun Reservoir
Environmental Impact Assessment Investigation

Title

THE STUDY AREA AND REPRESENTATIVE NSRs (INTAKE END)

Designed	HN/PW		Eng.Chk.	AFK	
Drawn	VN		Coordination	AFK	
Dwg.Chk.	HN		Approved	AFK	

Scale 1:2500@A1
Project 240564
Status INF
CAD File J:\240564\report\env\elo_report-08it26\FIGURE-4-1.dgn
Drawing No. FIGURE 4-1
Rev P2

0 25 50 75 100 125 M
1:2 500 SCALE BAR

E 834000
E 834500
E 835000
E 835500
N 826000
N 825500

CDA
V
GB
OU
G/IC
GB
R(B)
R(B)
R(B)
GB
GB

LOWER SHING MUN RESERVOIR
下禾門水塘
LOWER SHING MUN RESERVOIR
SHING MUN RIVER CHANNEL

300m
(A-D)
300m

Noise Monitoring Location 1 (NM1)
Tower 1, Lakeview Garden
House 17,
Golden Time Villas
House A, Ascot Villa

LC
GTV
AV

0 25 50 75 100 125m
1:2 500 SCALE BAR

LEGEND:

- STUDY AREA BOUNDARY
- PREFERRED TUNNEL ALIGNMENT
- \+ NOISE SENSITIVE RECEIVER
- C COMMERCIAL
- CDA COMPREHENSIVE DEVELOPMENT AREA
- G/IC GOVERNMENT/INSTITUTION/COMMUNITY
- GB GREEN BELT
- I INDUSTRIAL
- O OPEN SPACE
- OU OTHER SPECIFIED USES
- R(A) RESIDENTIAL (GROUP A)
- R(B) RESIDENTIAL (GROUP B)
- R(C) RESIDENTIAL (GROUP C)
- R(E) RESIDENTIAL (GROUP E)
- V VILLAGE TYPE DEVELOPMENT

Rev	Date	Drawn	Description	Ch'k'd	App'd
P2	NOV 08	MING	SENSITIVE RECEIVER REVISED	CWK	AFK
P1	MAR 08	VN	FIRST ISSUE	PW	AFK

Client

THE GOVERNMENT OF THE HONG KONG SPECIAL ADMINISTRATIVE REGION WATER SUPPLIES DEPARTMENT

Mott MacDonald
Mott MacDonald Hong Kong Ltd
7th Floor
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Hong Kong
Tel 2828 5757
Fax 2827 1823
Web www.mottmac.com.hk

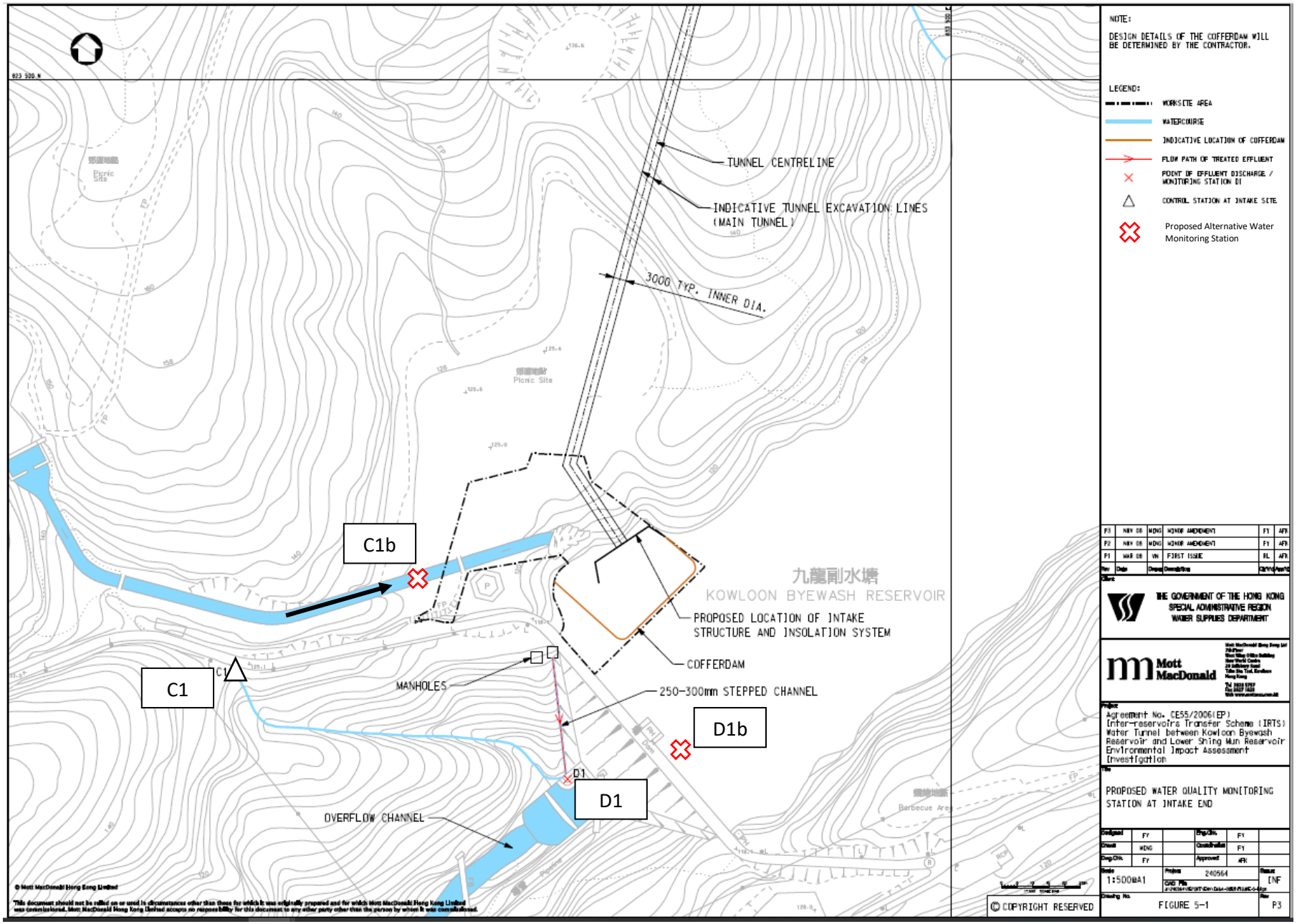
Project

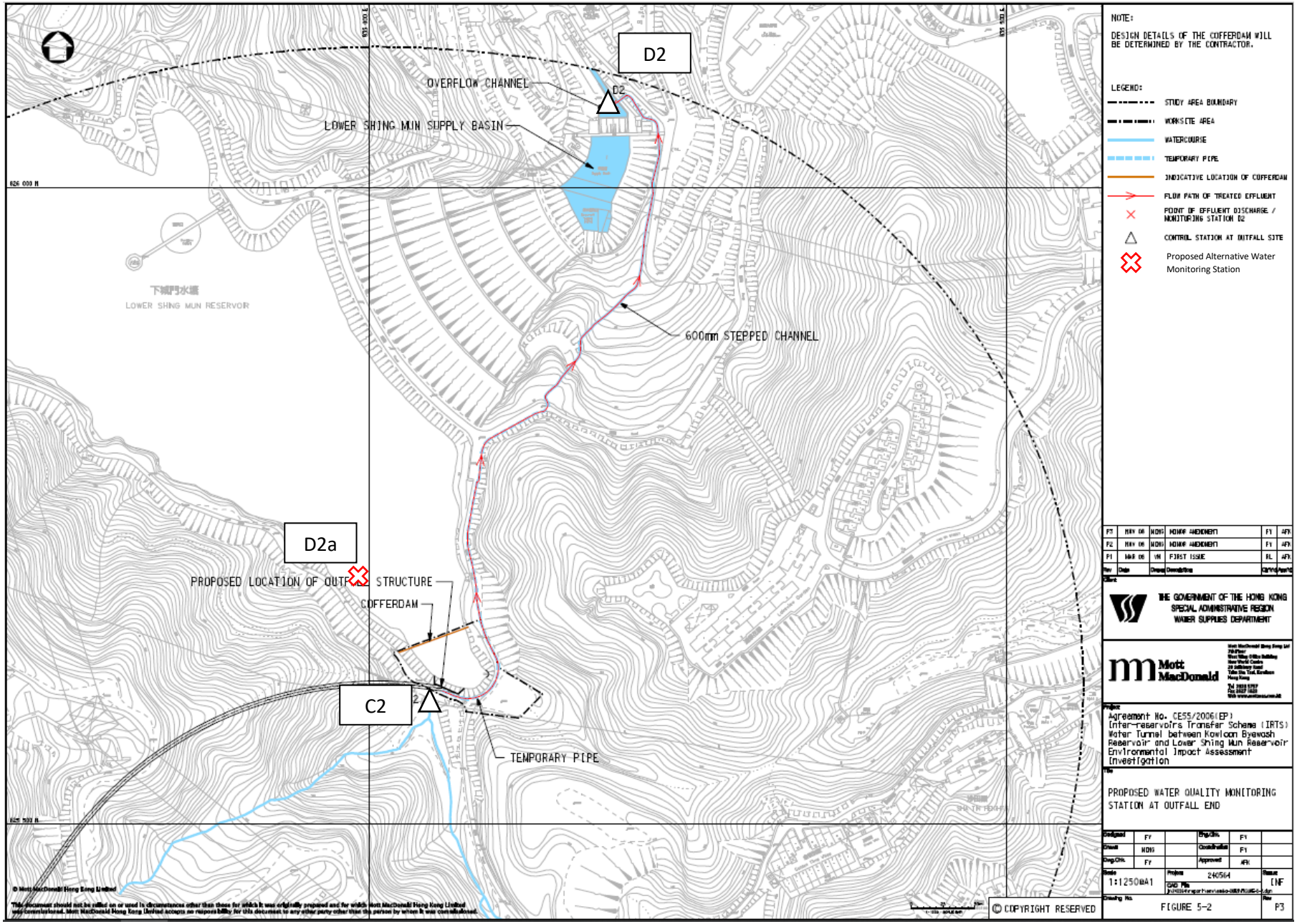
Agreement No. CE55/2006(EP)
Inter-reservoirs Transfer Scheme (IRTS)
Water Tunnel between Kowloon Byewash Reservoir and Lower Shing Mun Reservoir
Environmental Impact Assessment Investigation

Title

THE STUDY AREA AND REPRESENTATIVE NSRs (OUTFALL END)

Designed	HN/PW		Eng.Chk.	AFK	
Drawn	VN		Coordination	AFK	
Dwg.Chk.	HN		Approved	AFK	
Scale	1:2500@A1	Project	240564	Status	INF
		CAD File	j:\240564\report\env\elo_report-08126\FIGURE-4-2.dgn		
Drawing No.	FIGURE 4-2			Rev	P2


NOTE:
DESIGN DETAILS OF THE COFFERDAM WILL BE DETERMINED BY THE CONTRACTOR.
LEGEND:
WORKSITE AREA
WATERCOURSE
INDICATIVE LOCATION OF COFFERDAM
FLOW PATH OF TREATED EFFLUENT
POINT OF EFFLUENT DISCHARGE / MONITORING STATION D1
CONTROL STATION AT INTAKE SITE
Proposed Alternative Water Monitoring Station
TUNNEL CENTRELINE
INDICATIVE TUNNEL EXCAVATION LINES (MAIN TUNNEL)
3000 TYP. INNER DIA.
C1b
C1
九龍副水塘
KOWLOON BYEWASH RESERVOIR
PROPOSED LOCATION OF INTAKE STRUCTURE AND INSOLATION SYSTEM
COFFERDAM
MANHOLES
250-300mm STEPPED CHANNEL
D1b
D1
OVERFLOW CHANNEL
Picnic Site
Barbecue Area
THE GOVERNMENT OF THE HONG KONG SPECIAL ADMINISTRATIVE REGION
WATER SUPPLIES DEPARTMENT
Mott MacDonald
Agreement No. CE55/2006(EP)
Inter-reservoirs Transfer Scheme (IRTS)
Water Tunnel between Kowloon Byewash Reservoir and Lower Shing Mun Reservoir
Environmental Impact Assessment
Investigation
PROPOSED WATER QUALITY MONITORING STATION AT INTAKE END
1:5000@A1
240564
FIGURE 5-1
P3
© COPYRIGHT RESERVED


D2
OVERFLOW CHANNEL
D2
LOWER SHING MUN SUPPLY BASIN
下城門水塘
LOWER SHING MUN RESERVOIR
600mm STEPPED CHANNEL
D2a
PROPOSED LOCATION OF OUTFALL STRUCTURE
COFFERDAM
C2
TEMPORARY PIPE
NOTE:
DESIGN DETAILS OF THE COFFERDAM WILL BE DETERMINED BY THE CONTRACTOR.
LEGEND:
STUDY AREA BOUNDARY
WORKSITE AREA
WATERCOURSE
TEMPORARY PIPE
INDICATIVE LOCATION OF COFFERDAM
FLOW PATH OF TREATED EFFLUENT
POINT OF EFFLUENT DISCHARGE / MONITORING STATION D2
CONTROL STATION AT OUTFALL SITE
Proposed Alternative Water Monitoring Station
THE GOVERNMENT OF THE HONG KONG SPECIAL ADMINISTRATIVE REGION
WATER SUPPLIES DEPARTMENT
Mott MacDonald
Agreement No. CE55/2006(EP)
Inter-reservoirs Transfer Scheme (IRTS) Water Tunnel between Kowloon Byewash Reservoir and Lower Shing Mun Reservoir
Environmental Impact Assessment Investigation
PROPOSED WATER QUALITY MONITORING STATION AT OUTFALL END
1:1250@A1
240564
FIGURE 5-2
P3
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Appendix E
Event / Action Plans

Table B-1 Event/ Action Plan for Noise Impact

Event and Action Plan for Noise Impact				
Event	**Action**			
	ET Leader	**IEC**	**ER**	**Contractor**
Action Level is reached	1. Notify IEC and Contractor 2. Carry out investigation 3. Report the results of the investigation to the IEC and Contractor 4. Discuss with the Contractor and formulate remedial measures	1. Discuss amongst ER, ET and Contractor on the potential remedial actions 2. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly 3. Supervise the implementation of remedial measures	1. Confirm receipt of notification of failure in writing 2. Notify Contractor 3. Require Contractor to propose remedial measures for the analyzed noise problem 4. Ensure remedial measures are properly implemented 5.	1. Submit noise mitigation proposal to IEC 2. Implement noise mitigation proposals
Limit Level is reached	1. Notify IEC, ER, EPD and Contractor 2. Identify source 3. Repeat measurement to confirm findings 4. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented 5. Inform IEC, ER and EPD the causes & actions taken for the exceedances 6. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results 7. If exceedance stops cease additional monitoring	1. Discuss amongst ER, ET and Contractor on the potential remedial actions 2. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly 3. Supervise the implementation of remedial measures	1. Confirm receipt of notification of failure in writing 2. Notify Contractor 3. Require Contractor to propose remedial measures for the analyzed noise problem 4. Ensure remedial measures are properly implemented 5. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion or work until the exceedance is abated	1. Take immediate action to avoid further exceedance 2. Submit proposals for remedial actions to IEC within 3 working days of notification 3. Implement the agreed proposals 4. Resubmit proposals if problem still not under control 5. Stop the relevant portion of works as determined by the ER until the exceedance is abated

Table B-2 Event/ Action Plan for Water Quality Impact

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
Action level being exceeded by one sampling day	1. Repeat in-situ measurement to confirm findings and repeat measurement on next day of exceedance being recorded; 2. Identify source(s) of impact; 3. Inform IEC, contractor, ER and EPD; 4. Check monitoring data, all plant, equipment and Contractor's working methods; 5. Discuss mitigation measures with IEC, ER and Contractor;	1. Check monitoring data submitted by ET and Contractor's working methods. 2. Discuss with ET and Contractor on possible mitigation measures; 3. Review the proposed mitigation measures submitted by Contractor and advise the ER accordingly;	1. Confirm receipt of notification of failure in writing 2. Discuss with IEC, ET and Contractor on the proposed mitigation. 3. Request Contractor to view the working methods. 4. Ensure mitigation measures are properly implemented.	1. Inform the ER and confirm notification of the non-compliance in writing; 2. Rectify unacceptable practice; 3 Check all plant and equipment and consider changes of working methods; 4. Discuss with ET, IEC and ER and propose mitigation measures to ER and IEC within 3 working days; 5. Implement the agreed mitigation measures.
Limit level being exceeded by more than one consecutive sampling days	1. Repeat in-situ measurement to confirm findings and repeat measurement on next day of exceedance being recorded; 2. Identify source(s) of impact; 3. Inform IEC, Contractor, ER and EPD; 4. Check monitoring data, all plant, equipment and Contractor's working methods; 5. Discuss mitigation measures with IEC, ER and Contractor; 6. Ensure mitigation measures are implemented; 7. Increase the monitoring frequency	1. Check monitoring data submitted by ET and Contractor's working methods. 2. Discuss with ET and Contractor on possible mitigation measures; 3. Review the proposed mitigation measures submitted by Contractor and advise the ER accordingly; 4. Supervise the implementation of mitigation measures.	1. Discuss with IEC, ET and Contractor on the proposed mitigation measures; 2. Request Contractor to critically review the working methods; 3. Make agreement on the mitigation measures to be implemented; 4. Ensure mitigation measures are properly implemented; 5. Consider and instruct, if necessary, the Contractor to slow down or to stop all or part of the construction activities until no exceedance of Limit level.	1. Take immediate action to avoid further exceedance 2. Discuss with ET, IEC and ER and propose mitigation measures to ER and IEC; 3. Implement the agreed mitigation measures; 4. Resubmit proposals of mitigation measures if problem still not under control; 5. As directed by the Engineer, to slow down or to stop all or part of the construction activities until no exceedance of Limit level.

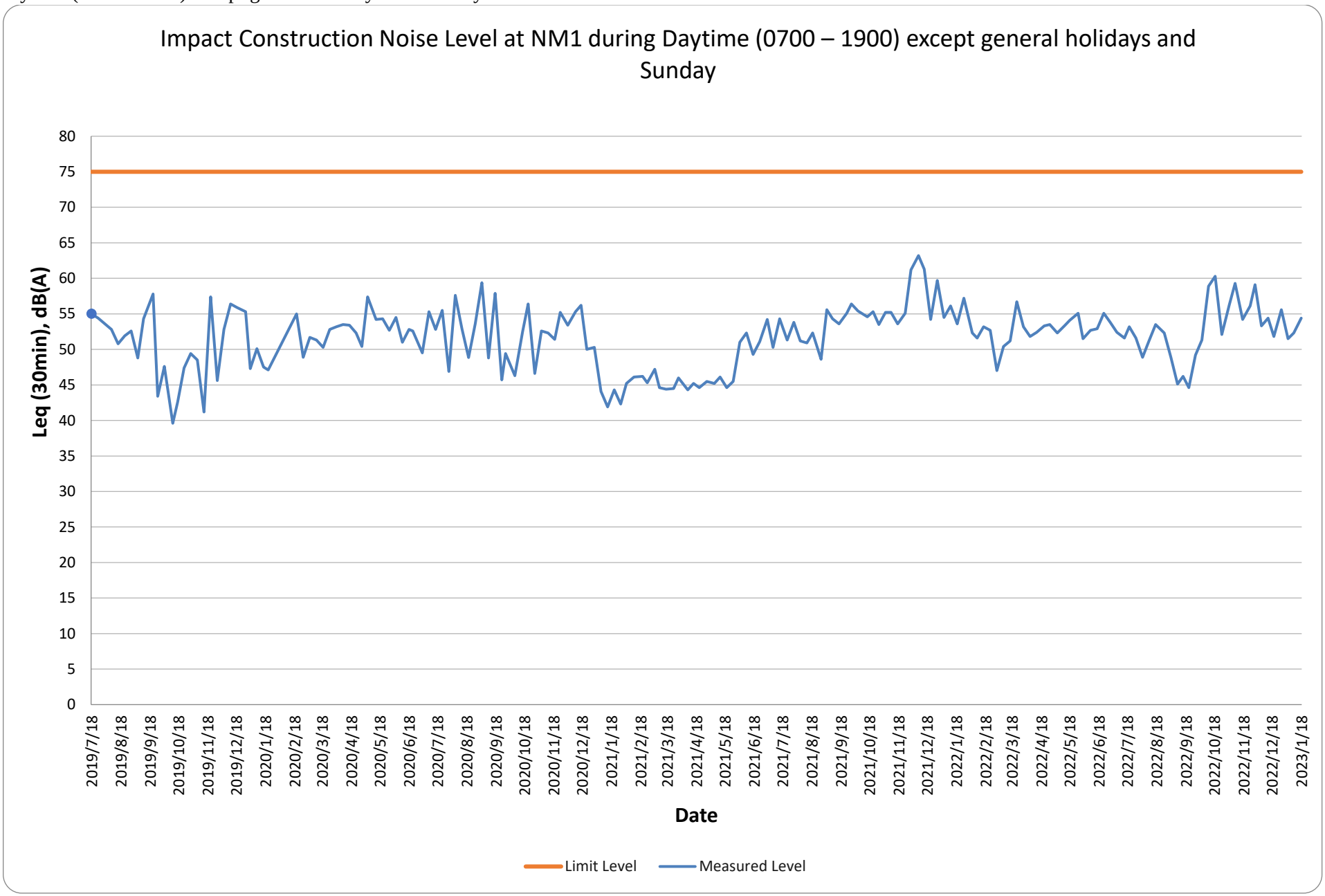
	to daily until no exceedance of Limit level for two consecutive days.			

Appendix F
Impact Noise Monitoring Data

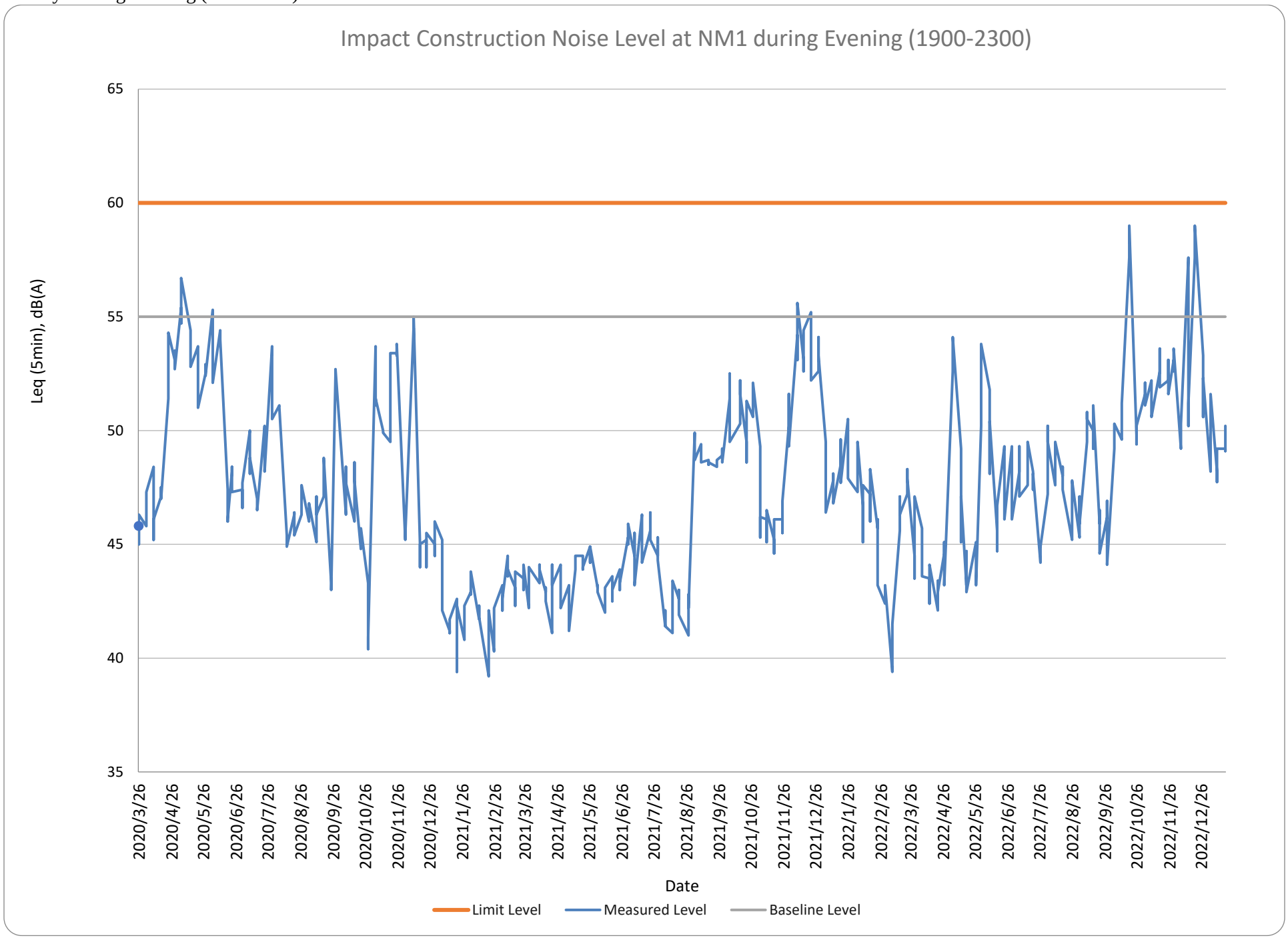
Impact Noise Monitoring Data

NM1 – Lakeview Garden

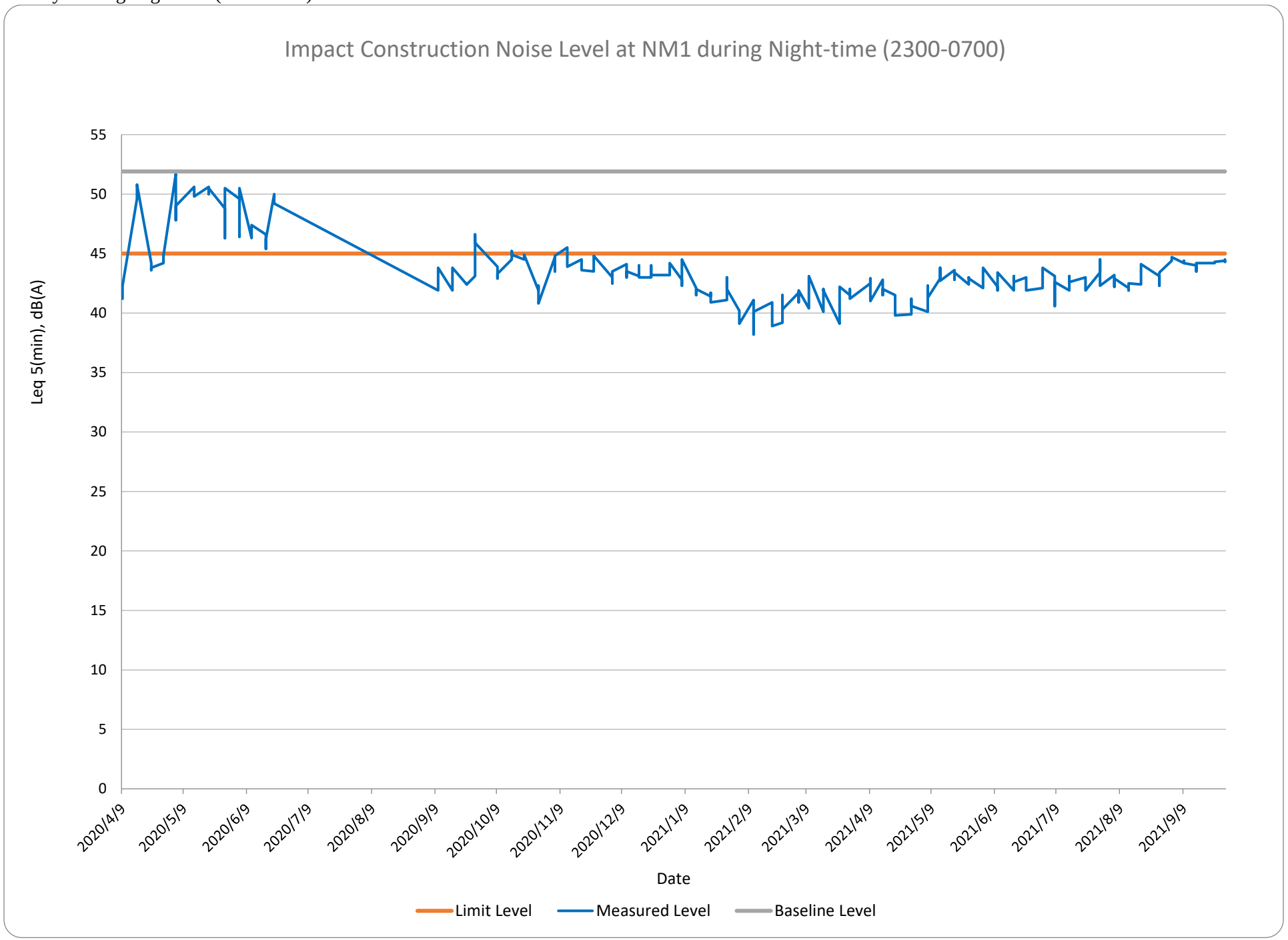
Daytime (0700 – 1900) except general holidays and Sunday



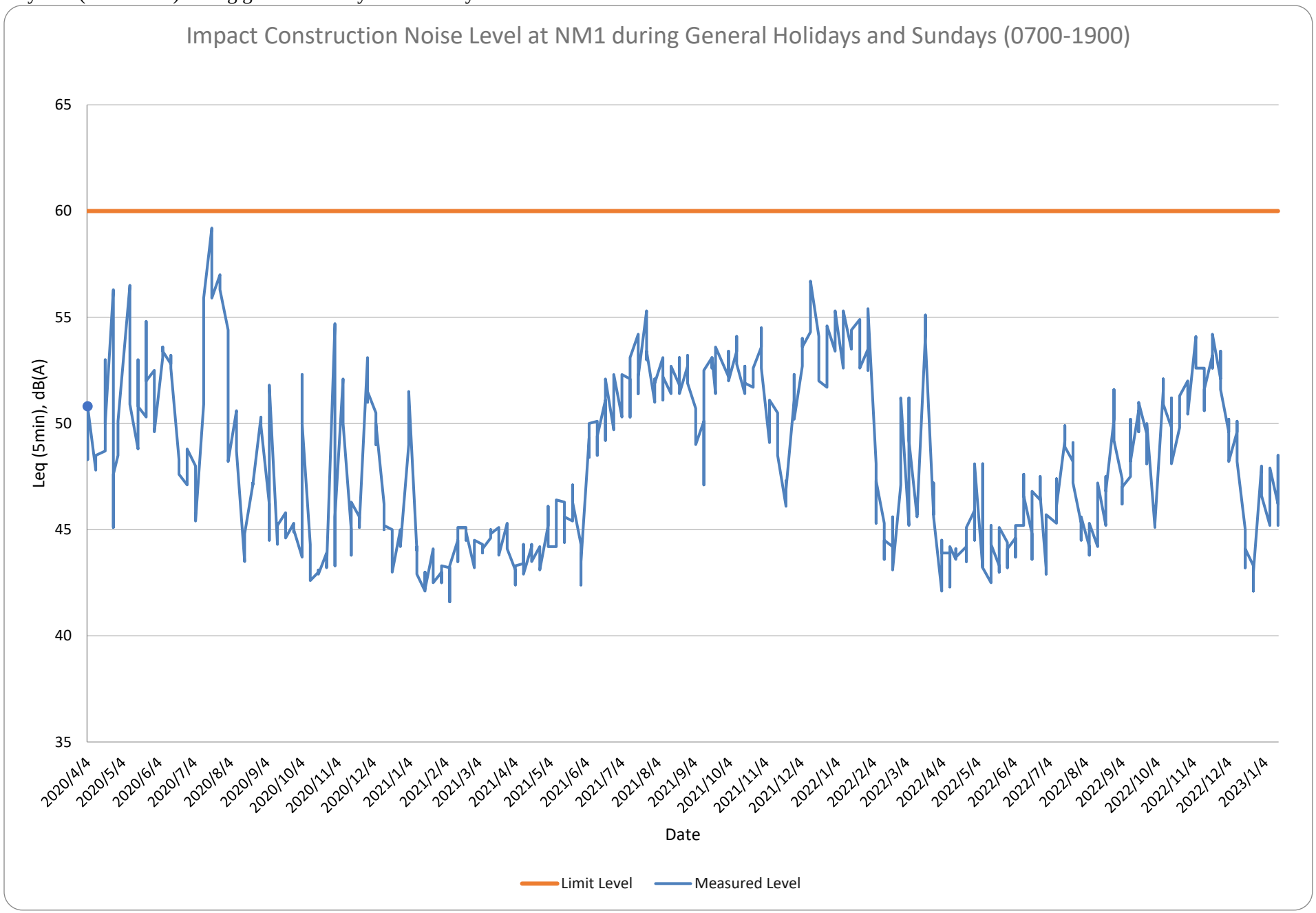
All days during Evening (1900-2300)



All days during Nighttime (2300-0700)

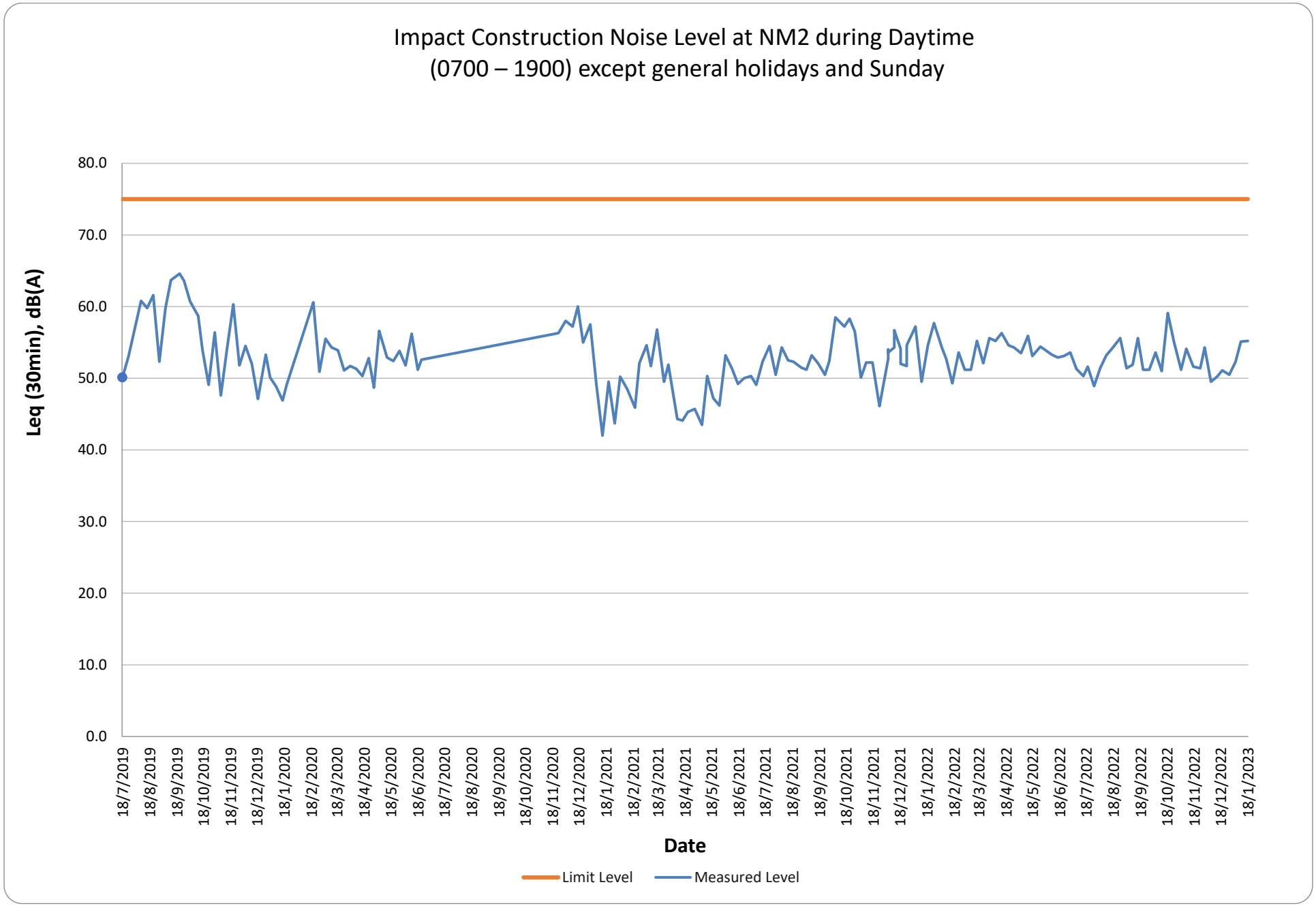


Daytime (0700-1900) during general holidays and Sundays

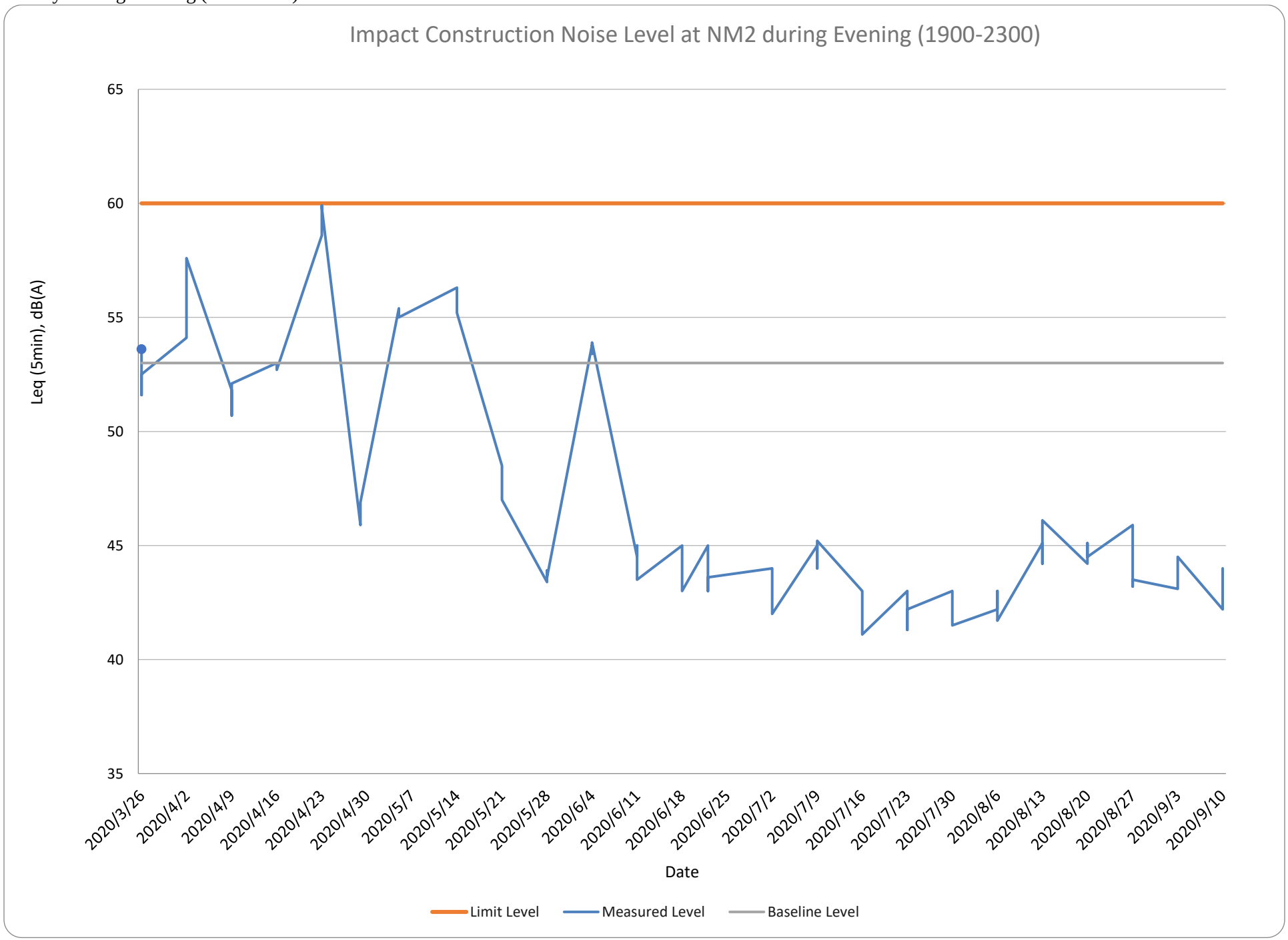


Impact Noise Monitoring Data

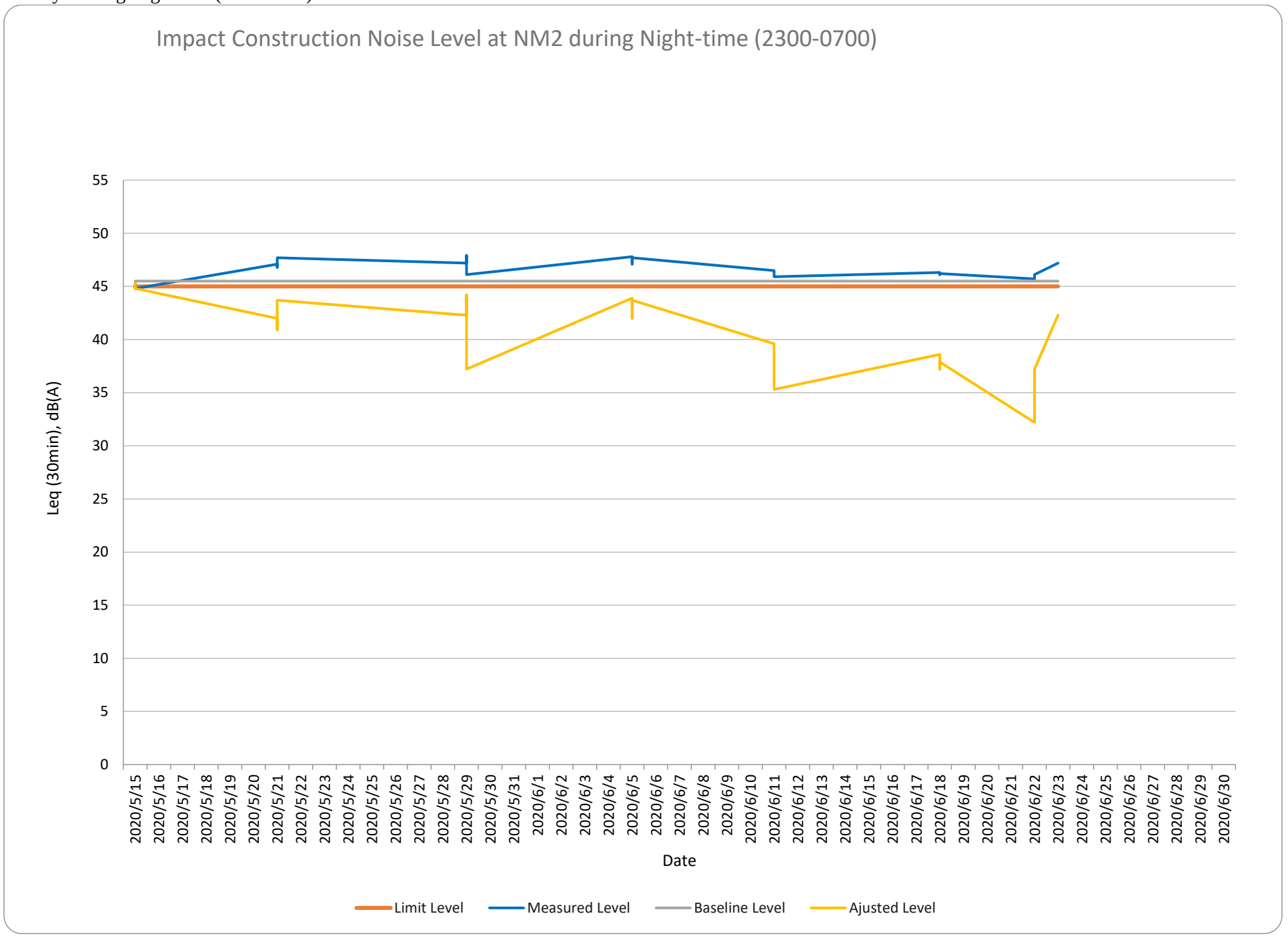
NM2 – 4 ½ Milestone, Tai Po Road



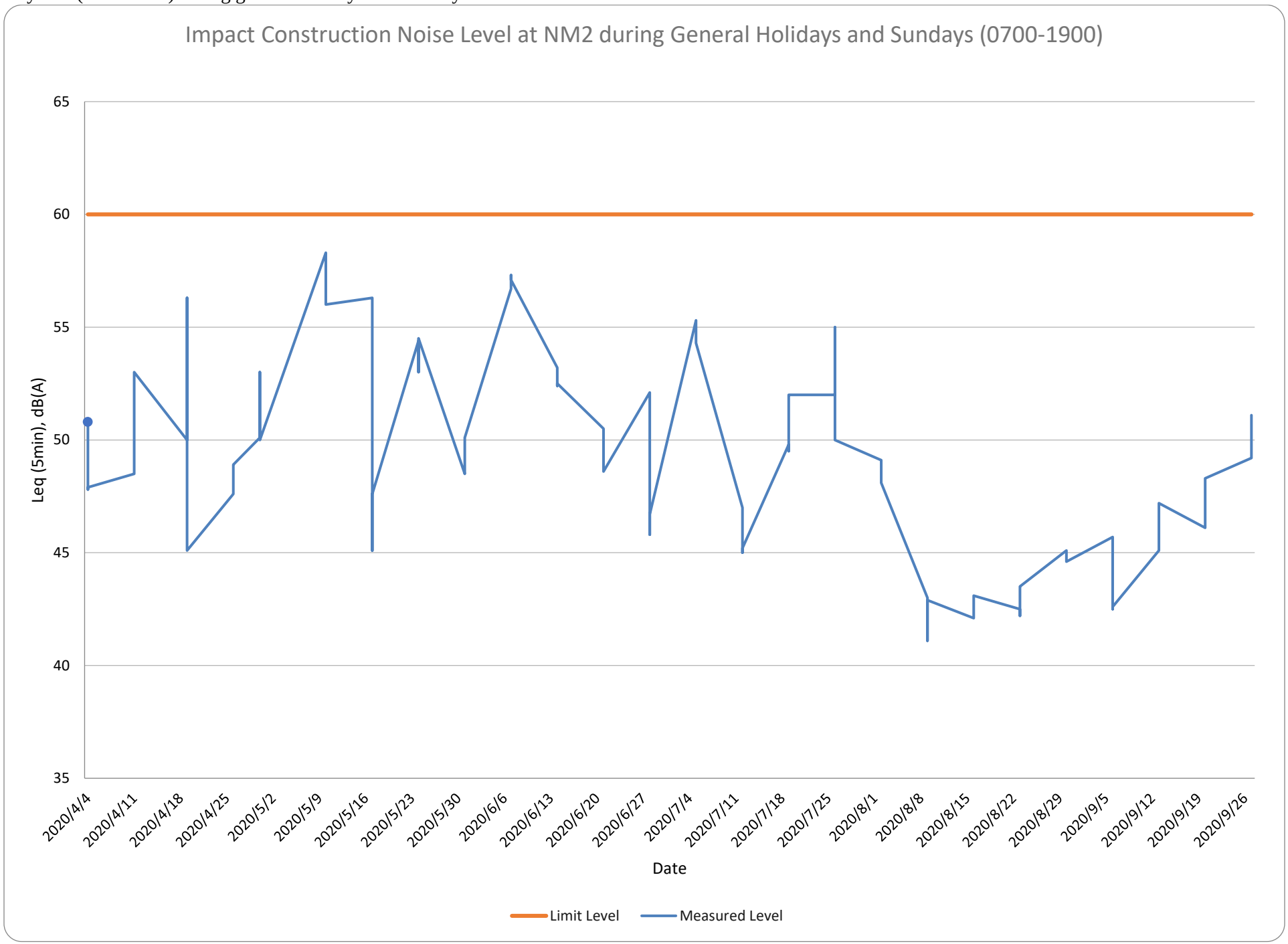
All days during Evening (1900-2300)



All days during Nighttime (2300-0700)



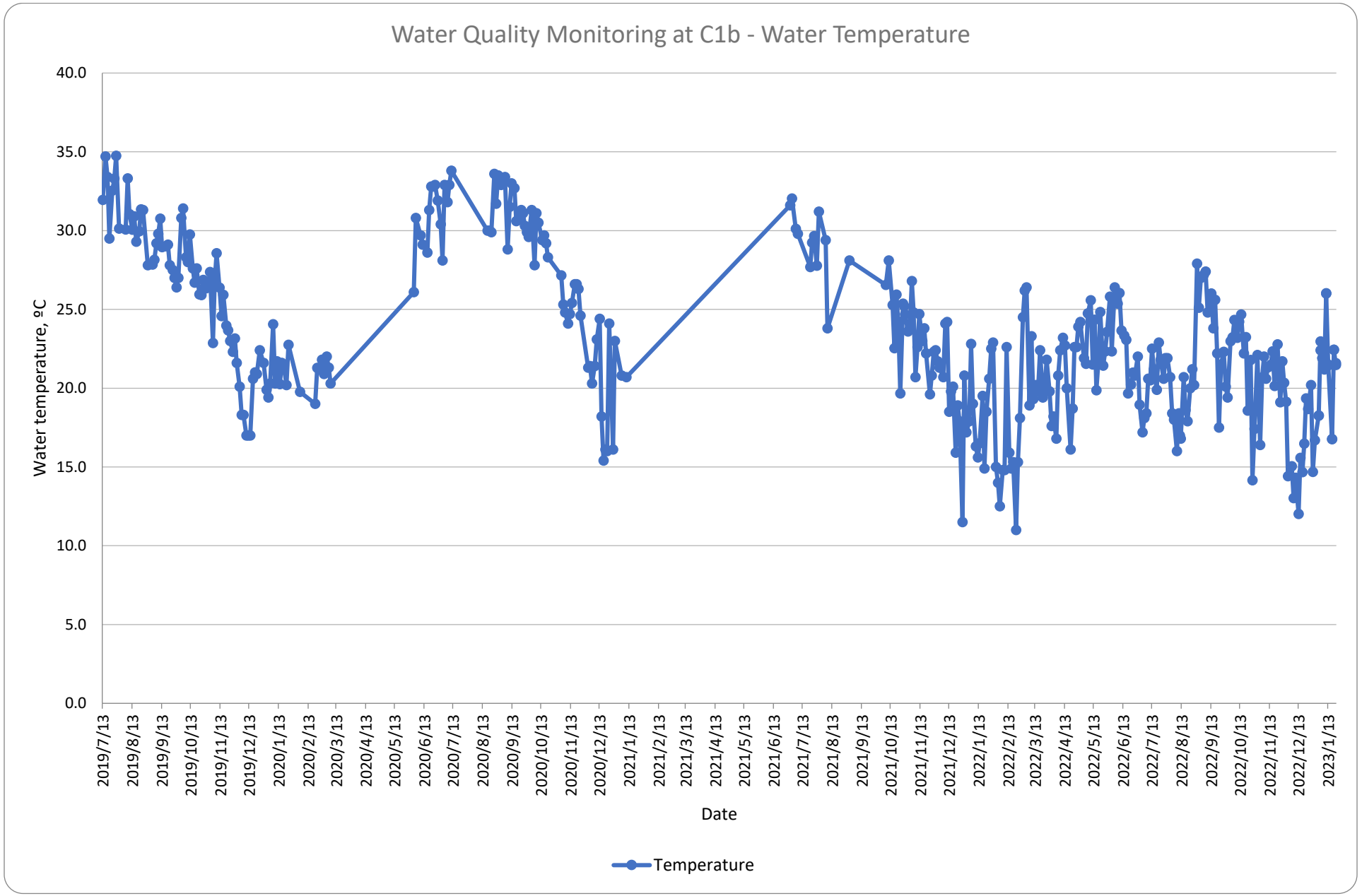
Daytime (0700-1900) during general holidays and Sundays



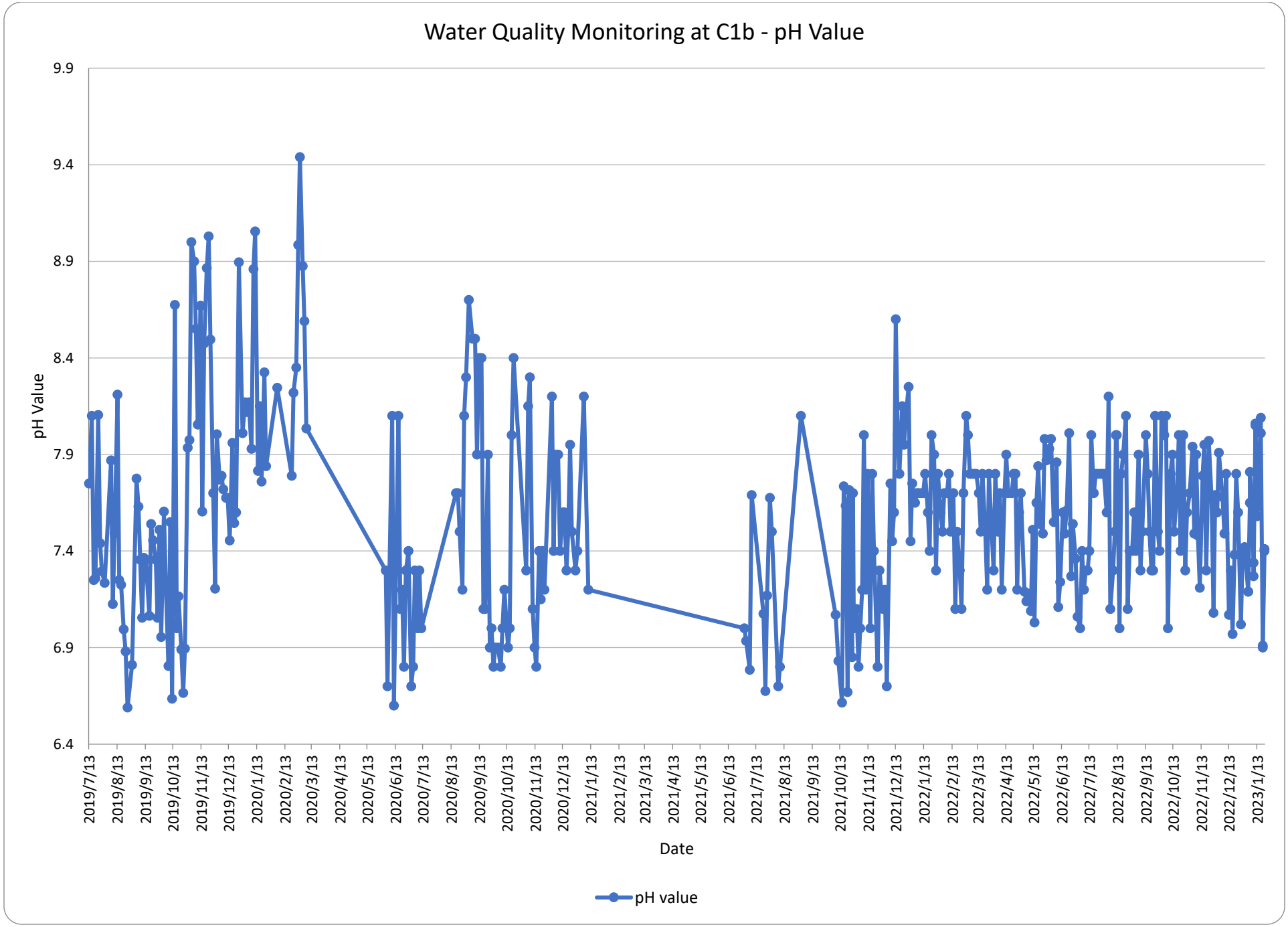
Appendix G
Impact Water Quality Monitoring Data

Impact Water Monitoring Data

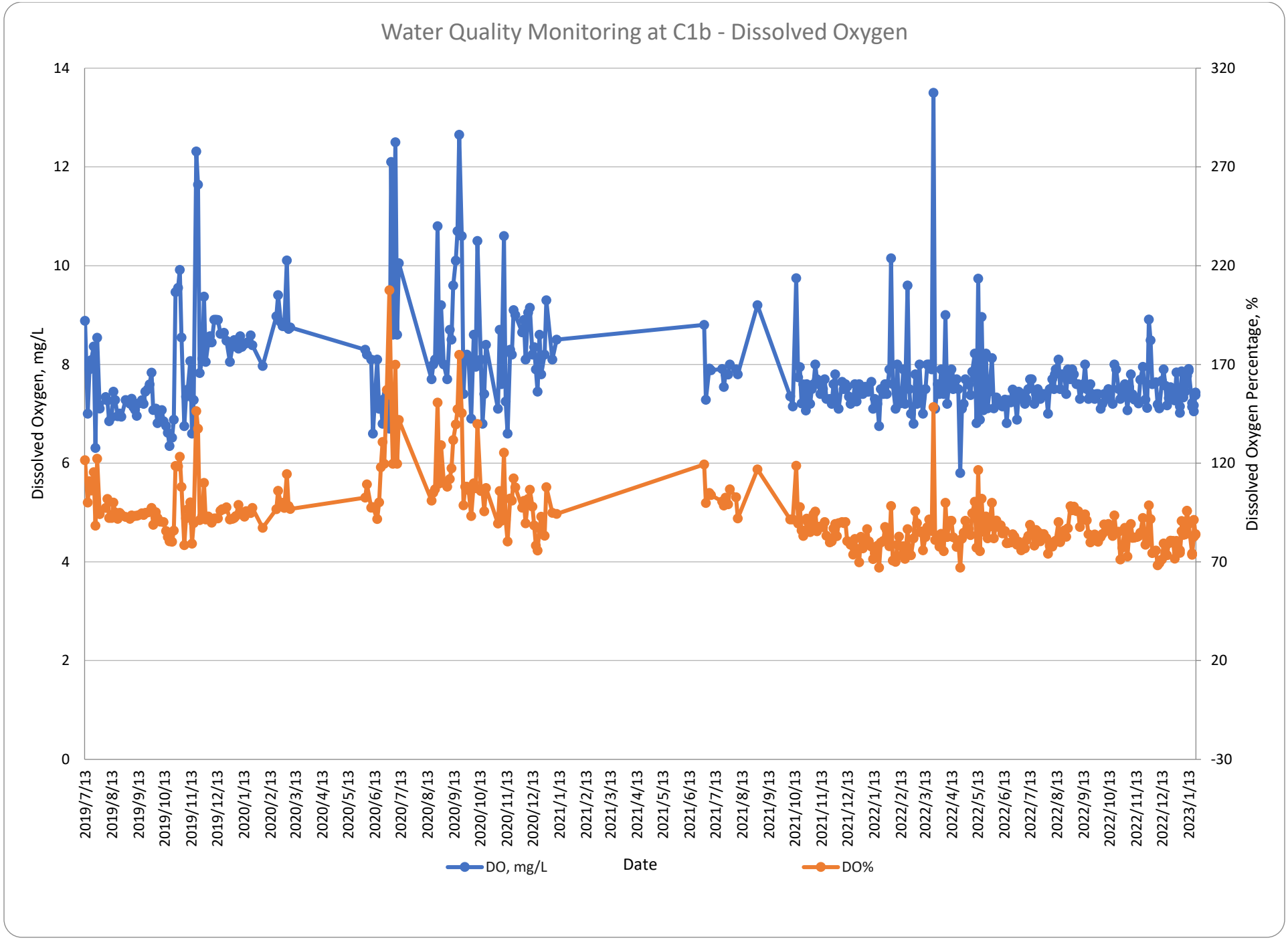
C1b



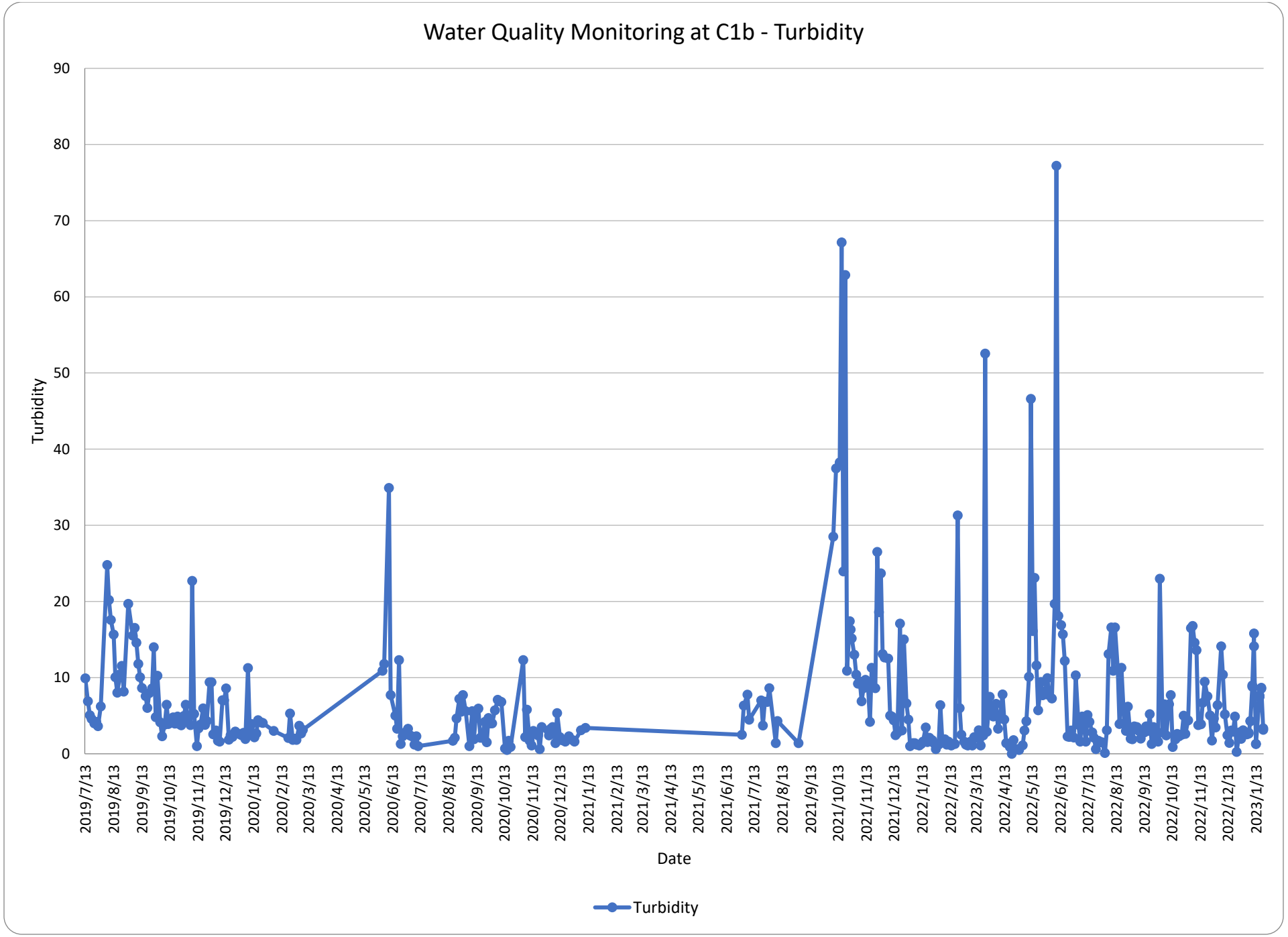
Note 1: Period without data implied that water in location C1b was dried up or insufficient water was available for sample collection



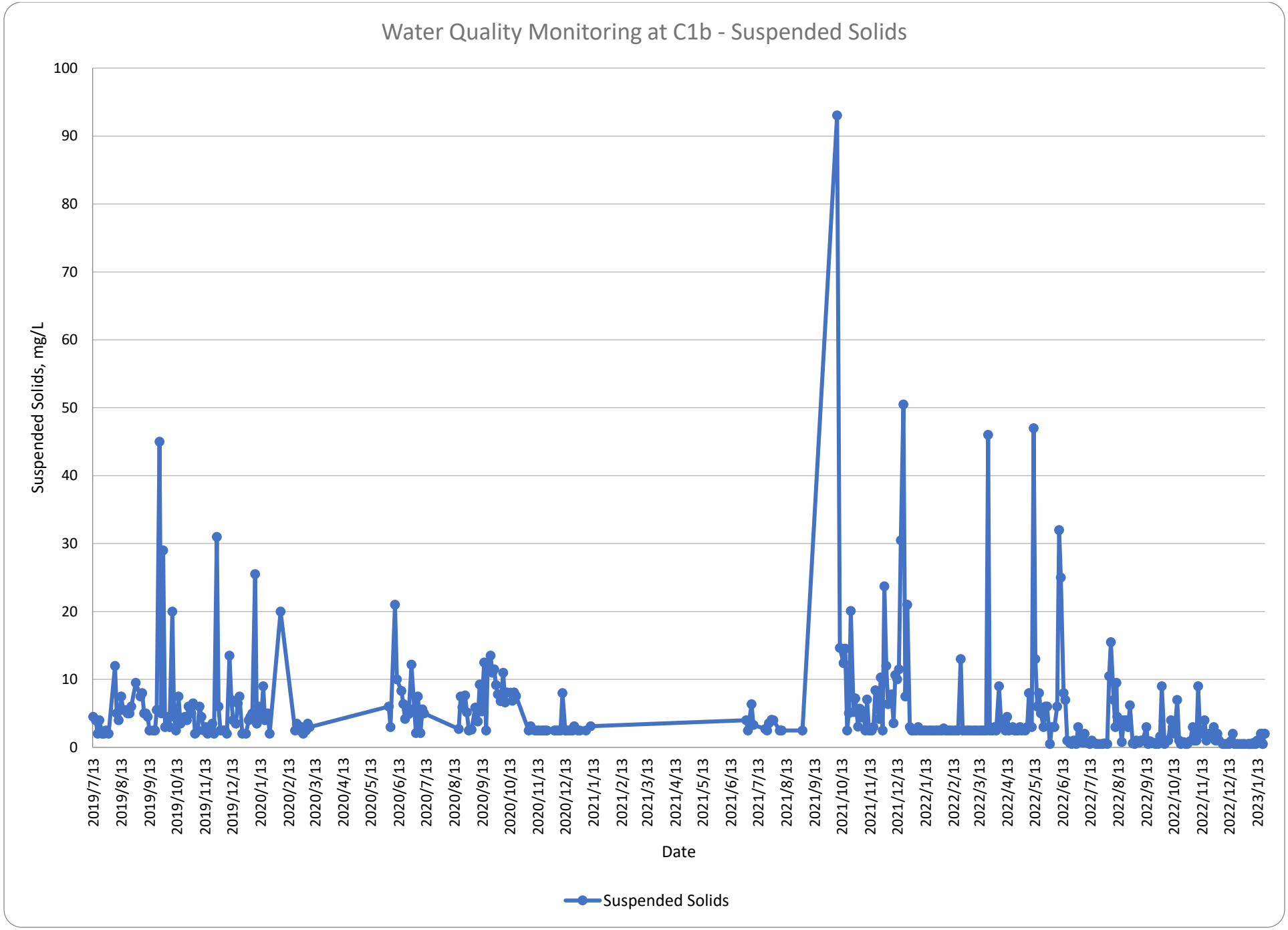
Note 1: Period without data implied that water in location C1b was dried up or insufficient water was available for sample collection



Note 1: Period without data implied that water in location C1b was dried up or insufficient water was available for sample collection



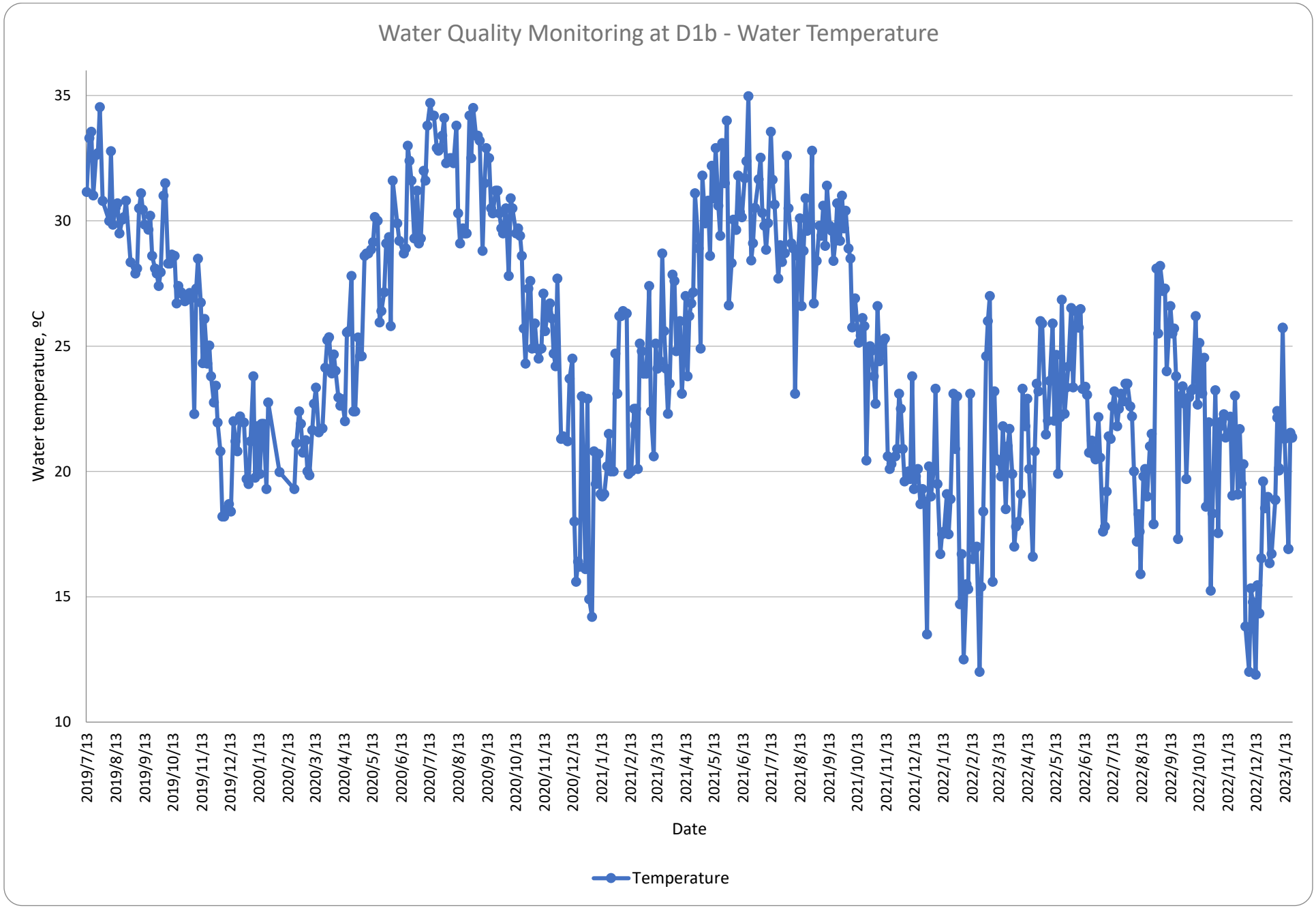
Note 1: Period without data implied that water in location C1b was dried up or insufficient water was available for sample collection

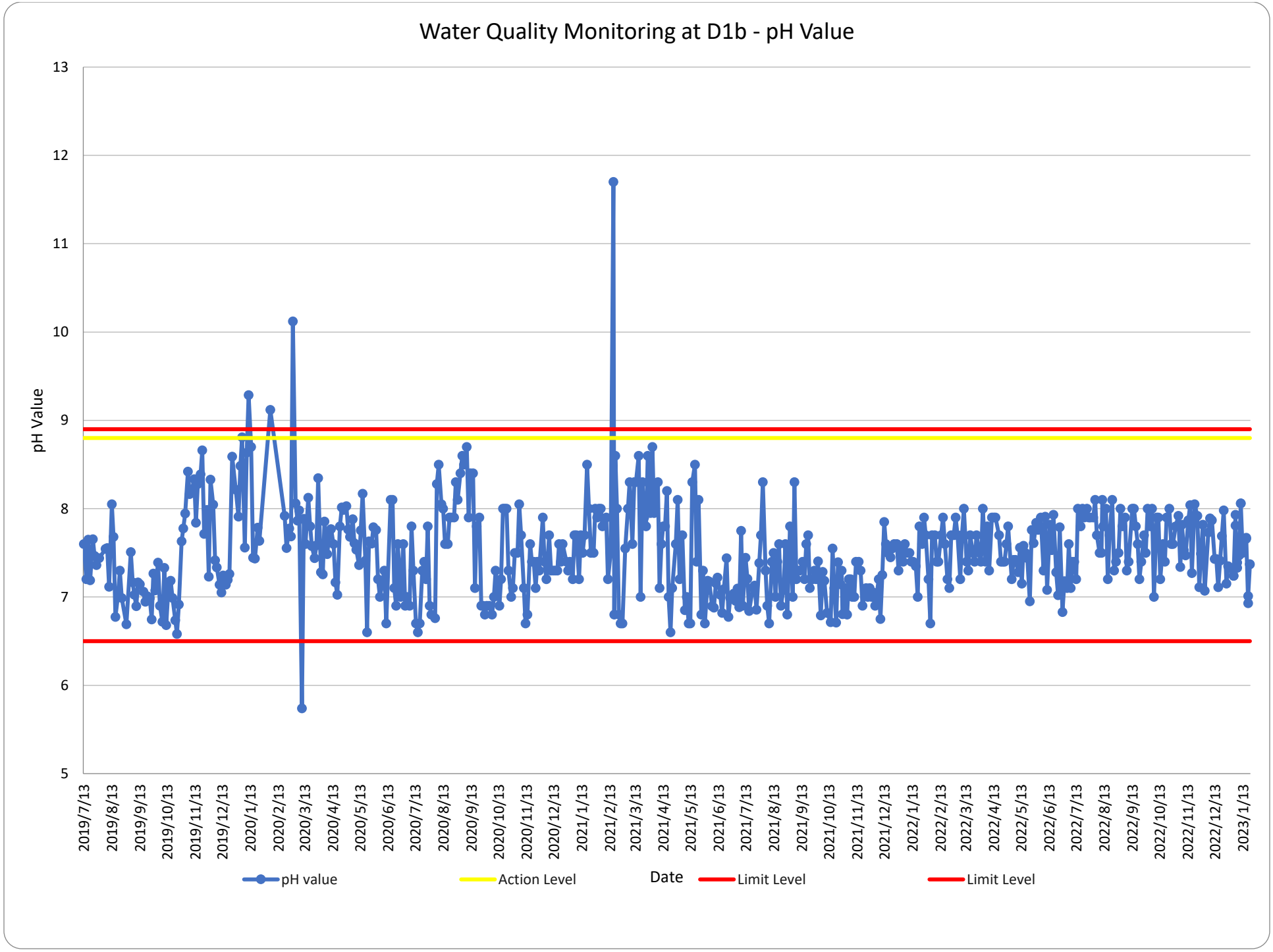


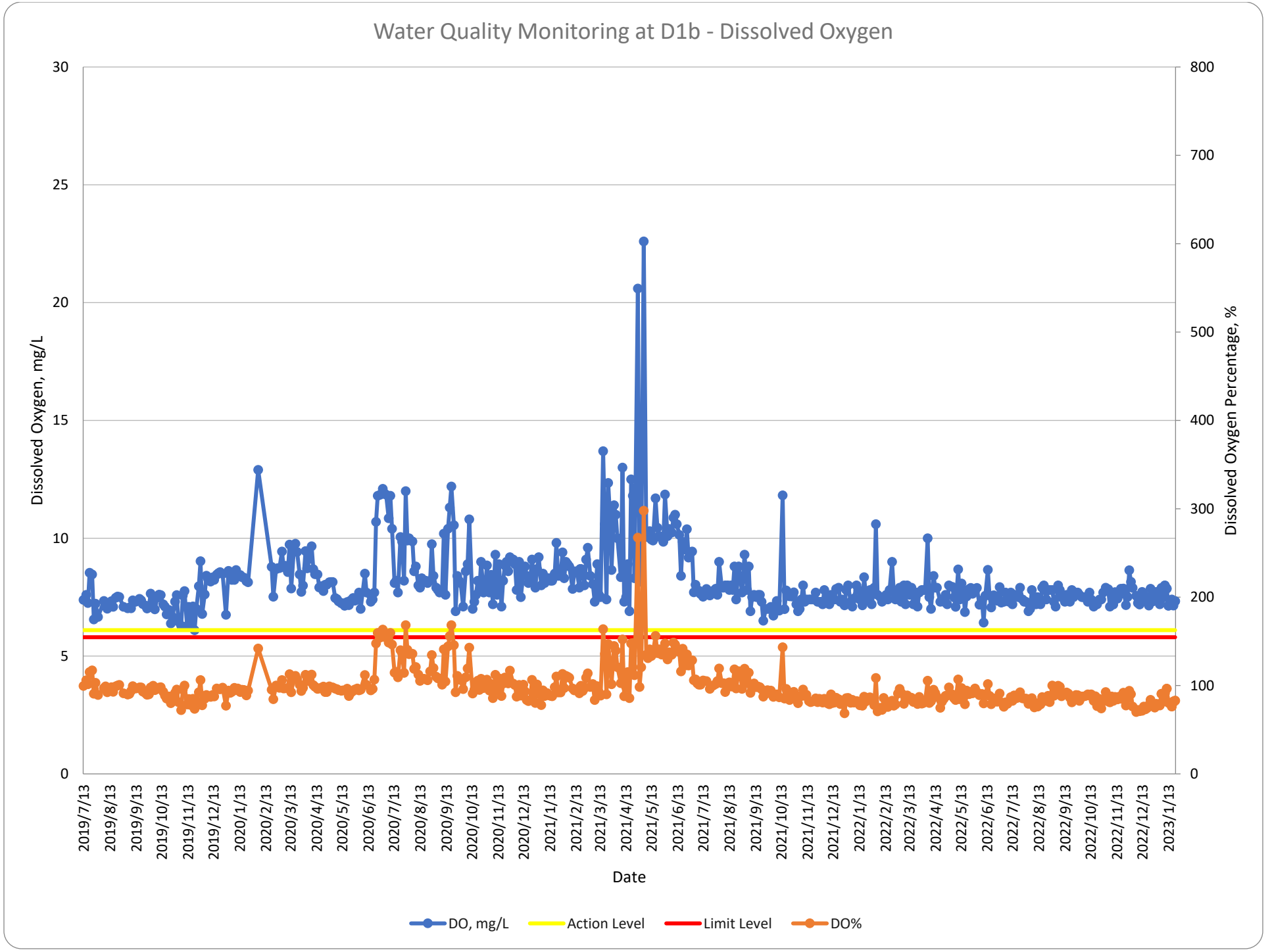
Note 1: Period without data implied that water in location C1b was dried up or insufficient water was available for sample collection

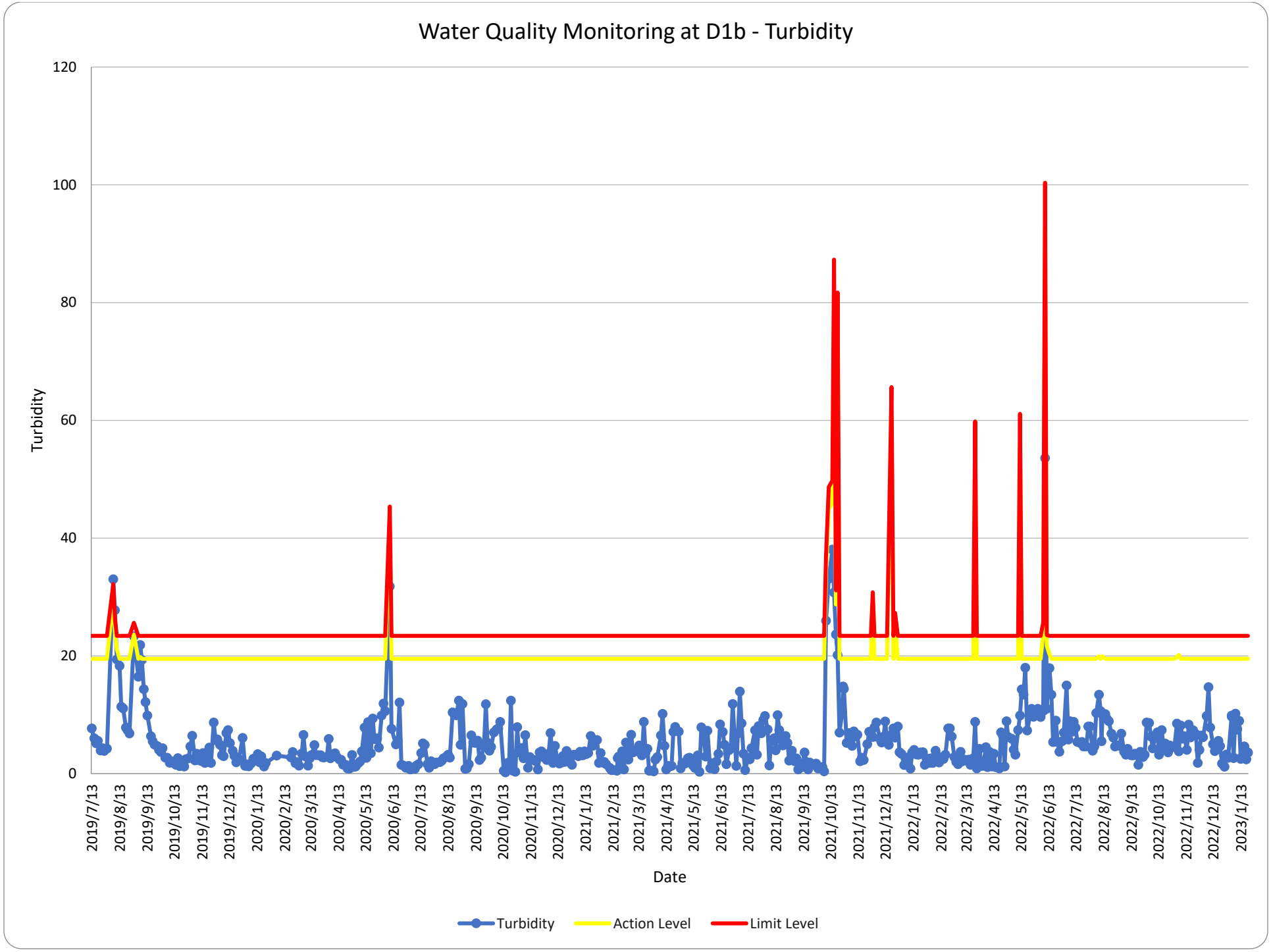
Impact Water Quality Monitoring Data

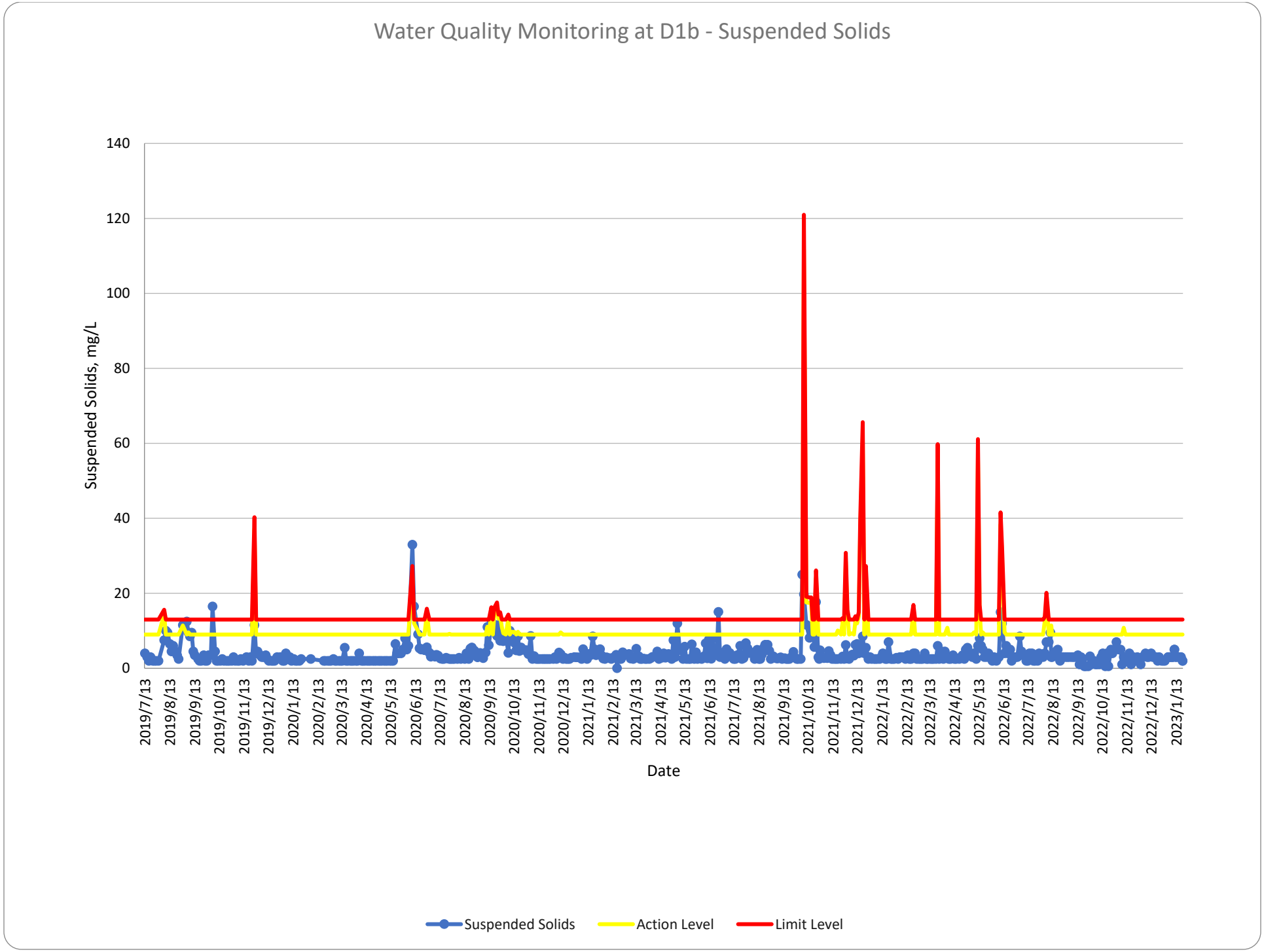
D1b




Water Quality Monitoring at D1b - pH Value
pH Value
13
12
11
10
9
8
7
6
5
2019/7/13
2019/8/13
2019/9/13
2019/10/13
2019/11/13
2019/12/13
2020/1/13
2020/2/13
2020/3/13
2020/4/13
2020/5/13
2020/6/13
2020/7/13
2020/8/13
2020/9/13
2020/10/13
2020/11/13
2020/12/13
2021/1/13
2021/2/13
2021/3/13
2021/4/13
2021/5/13
2021/6/13
2021/7/13
2021/8/13
2021/9/13
2021/10/13
2021/11/13
2021/12/13
2022/1/13
2022/2/13
2022/3/13
2022/4/13
2022/5/13
2022/6/13
2022/7/13
2022/8/13
2022/9/13
2022/10/13
2022/11/13
2022/12/13
2023/1/13
Date
pH value
Action Level
Limit Level
Limit Level

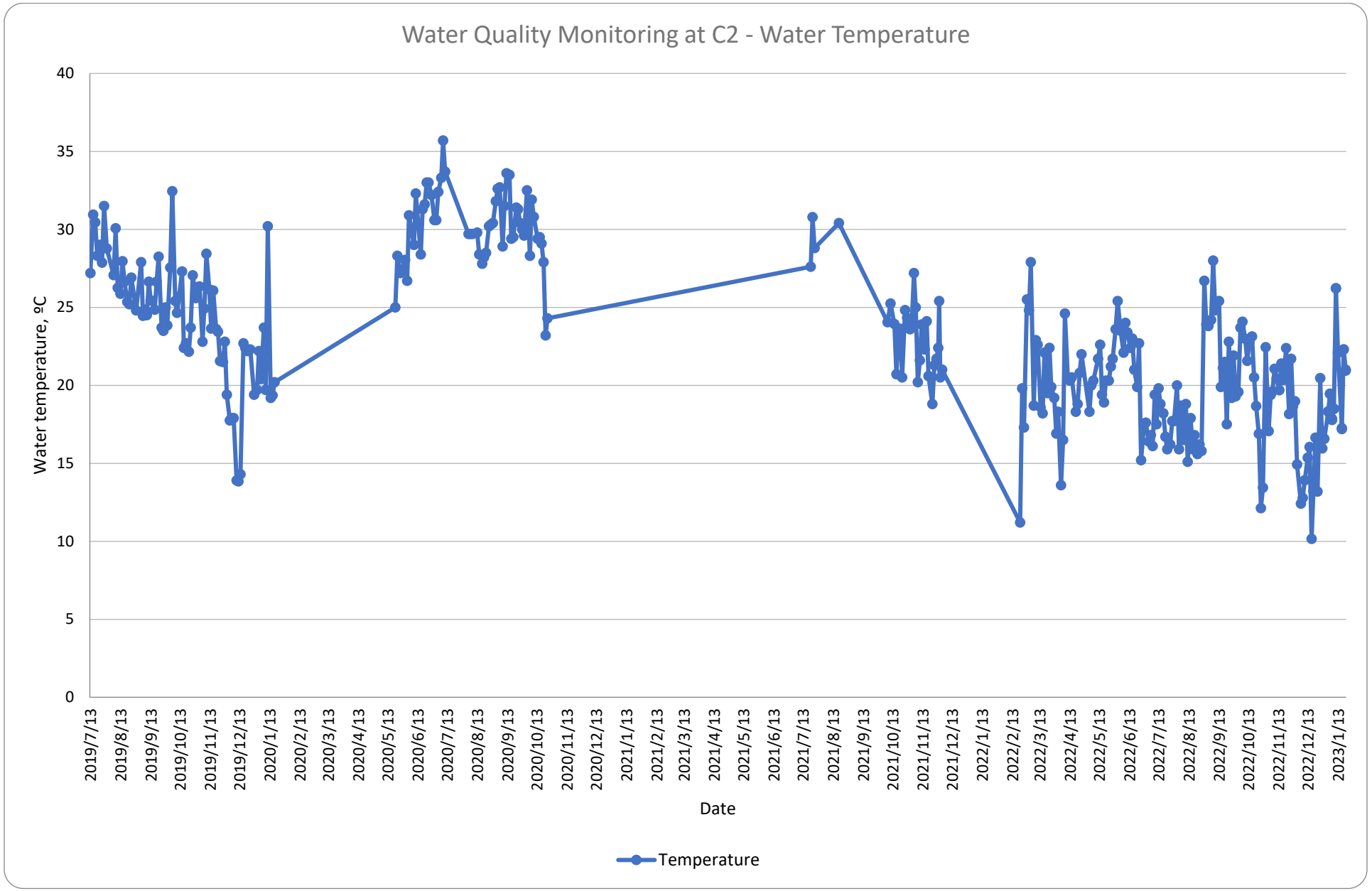

Water Quality Monitoring at D1b - Dissolved Oxygen
Dissolved Oxygen, mg/L
Dissolved Oxygen Percentage, %
Date
DO, mg/L
Action Level
Limit Level
DO%


Water Quality Monitoring at D1b - Turbidity
Turbidity
120
100
80
60
40
20
0
2019/7/13
2019/8/13
2019/9/13
2019/10/13
2019/11/13
2019/12/13
2020/1/13
2020/2/13
2020/3/13
2020/4/13
2020/5/13
2020/6/13
2020/7/13
2020/8/13
2020/9/13
2020/10/13
2020/11/13
2020/12/13
2021/1/13
2021/2/13
2021/3/13
2021/4/13
2021/5/13
2021/6/13
2021/7/13
2021/8/13
2021/9/13
2021/10/13
2021/11/13
2021/12/13
2022/1/13
2022/2/13
2022/3/13
2022/4/13
2022/5/13
2022/6/13
2022/7/13
2022/8/13
2022/9/13
2022/10/13
2022/11/13
2022/12/13
2023/1/13
Date
Turbidity
Action Level
Limit Level

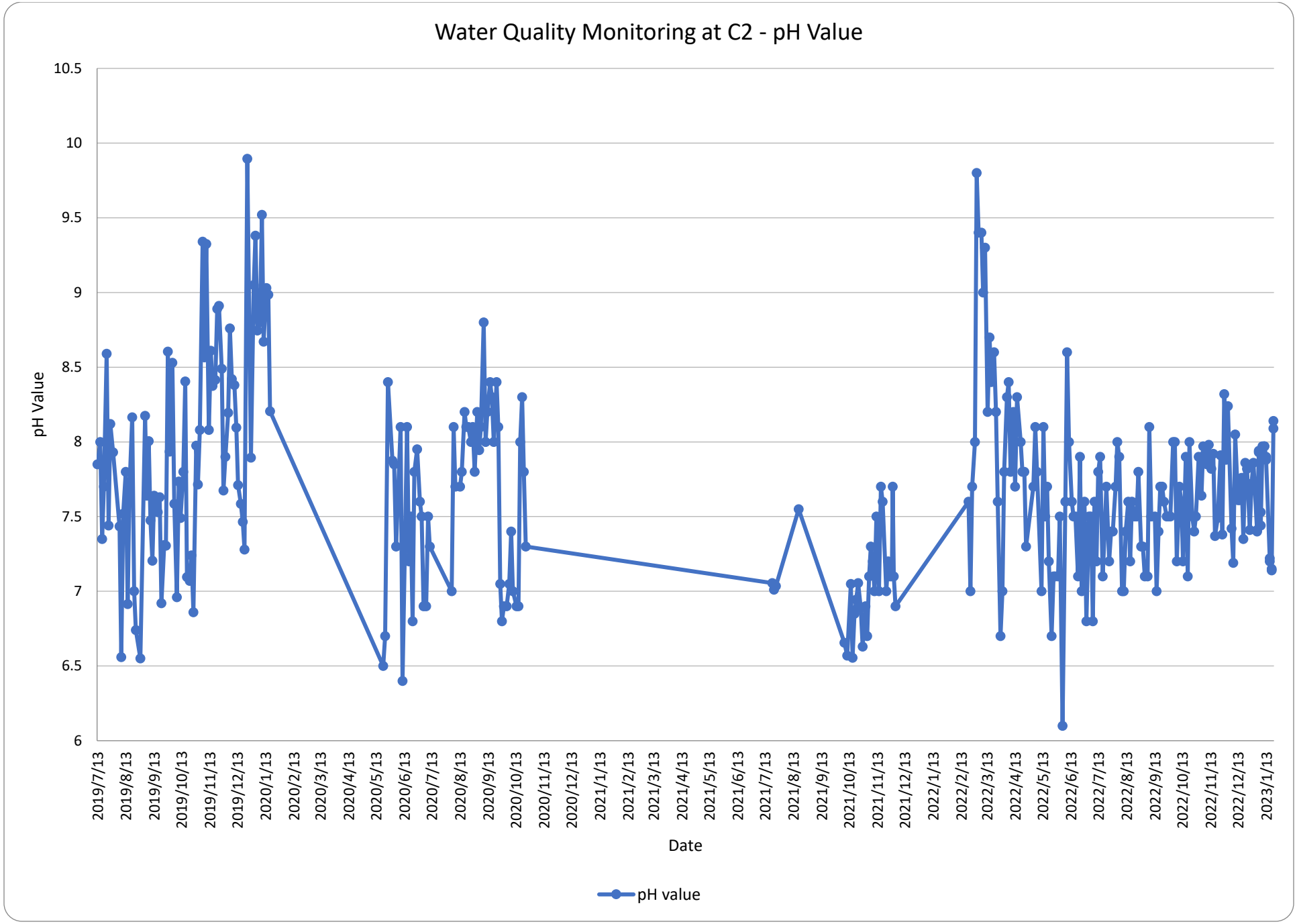

Water Quality Monitoring at D1b - Suspended Solids
Suspended Solids, mg/L
140
120
100
80
60
40
20
0
2019/7/13
2019/8/13
2019/9/13
2019/10/13
2019/11/13
2019/12/13
2020/1/13
2020/2/13
2020/3/13
2020/4/13
2020/5/13
2020/6/13
2020/7/13
2020/8/13
2020/9/13
2020/10/13
2020/11/13
2020/12/13
2021/1/13
2021/2/13
2021/3/13
2021/4/13
2021/5/13
2021/6/13
2021/7/13
2021/8/13
2021/9/13
2021/10/13
2021/11/13
2021/12/13
2022/1/13
2022/2/13
2022/3/13
2022/4/13
2022/5/13
2022/6/13
2022/7/13
2022/8/13
2022/9/13
2022/10/13
2022/11/13
2022/12/13
2023/1/13
Date
Suspended Solids
Action Level
Limit Level

Impact Water Quality Monitoring Data

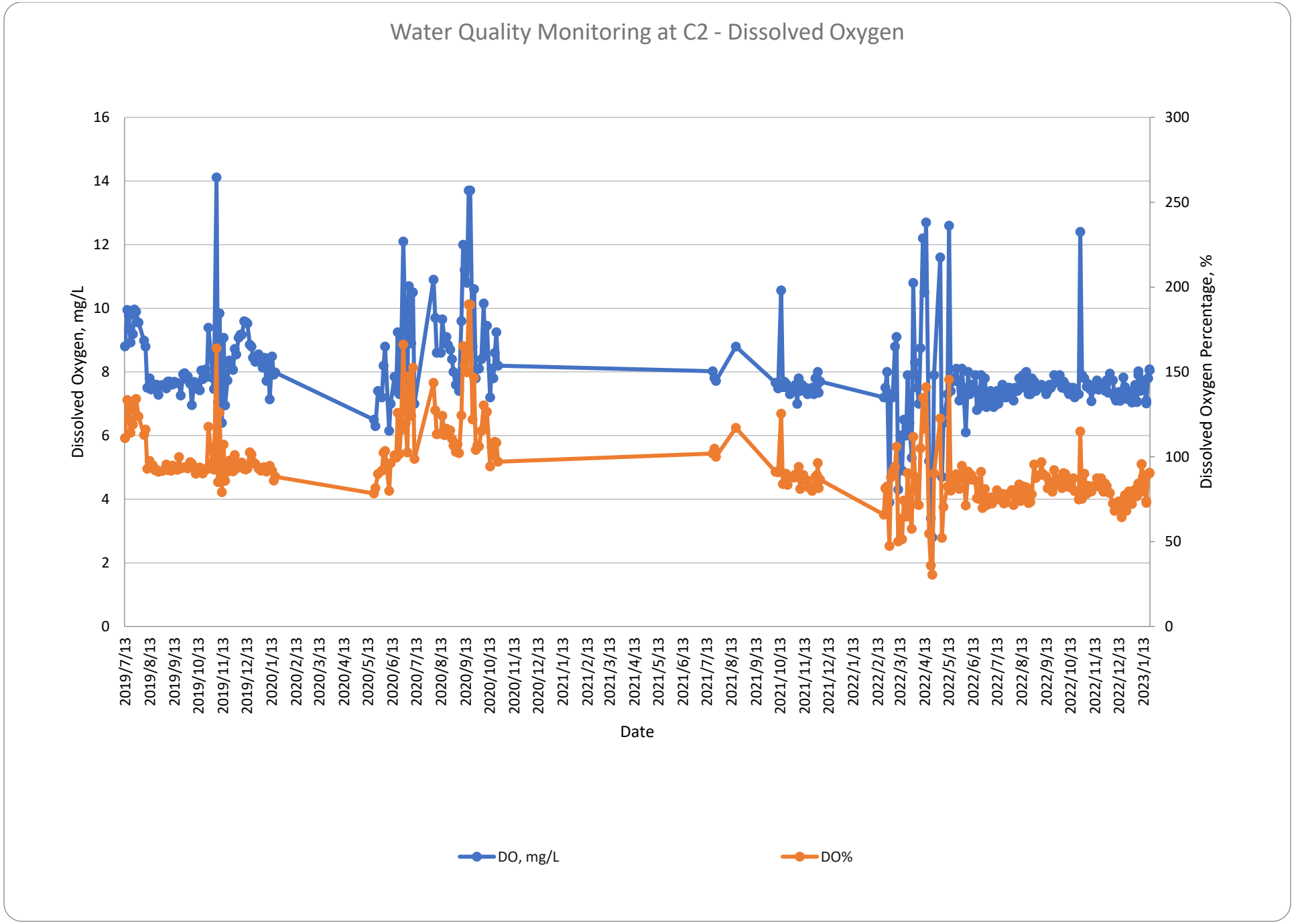
C2



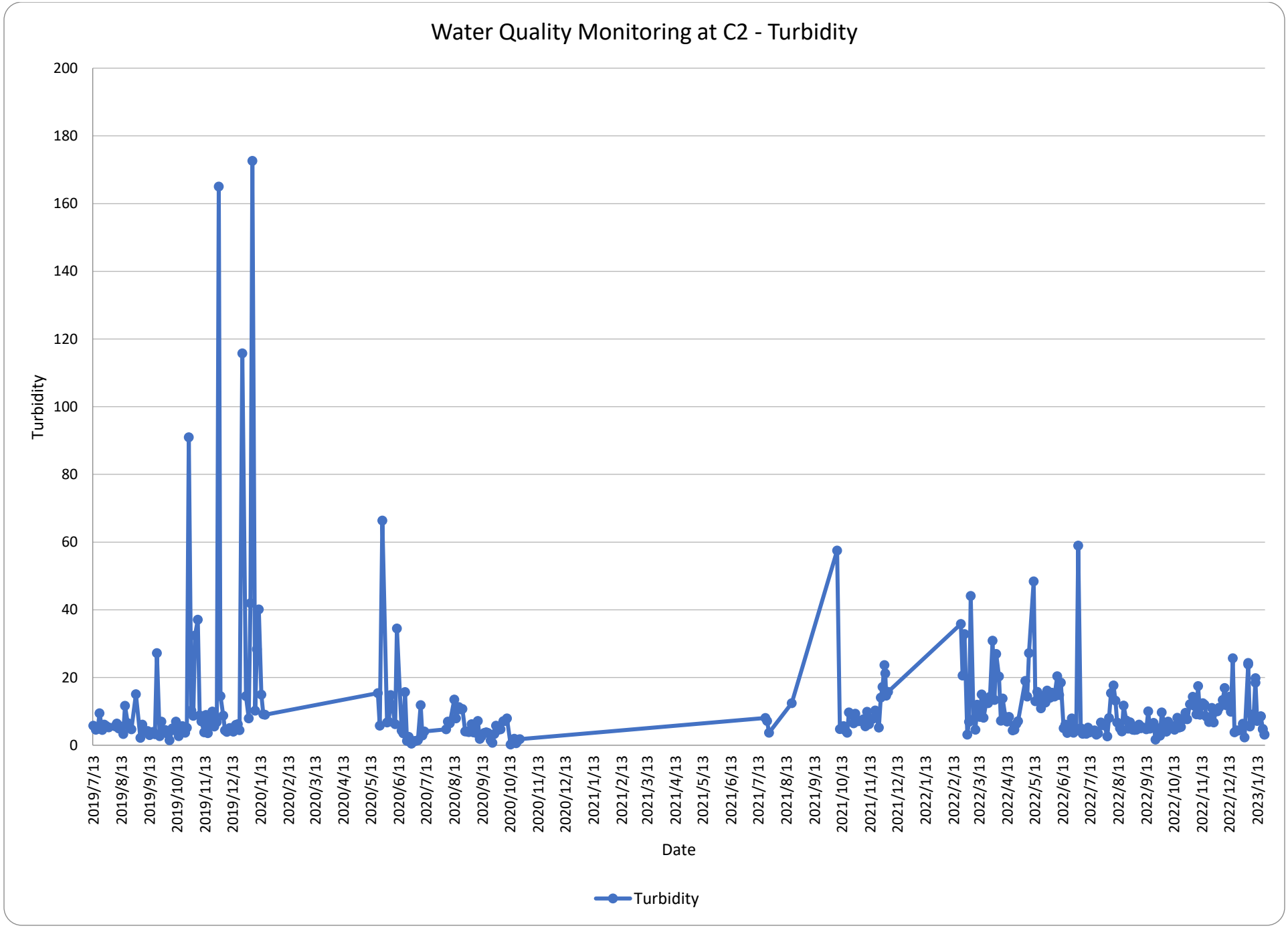
Note 1: Period without data implied that water in location C2 was dried up or insufficient water was available for sample collection



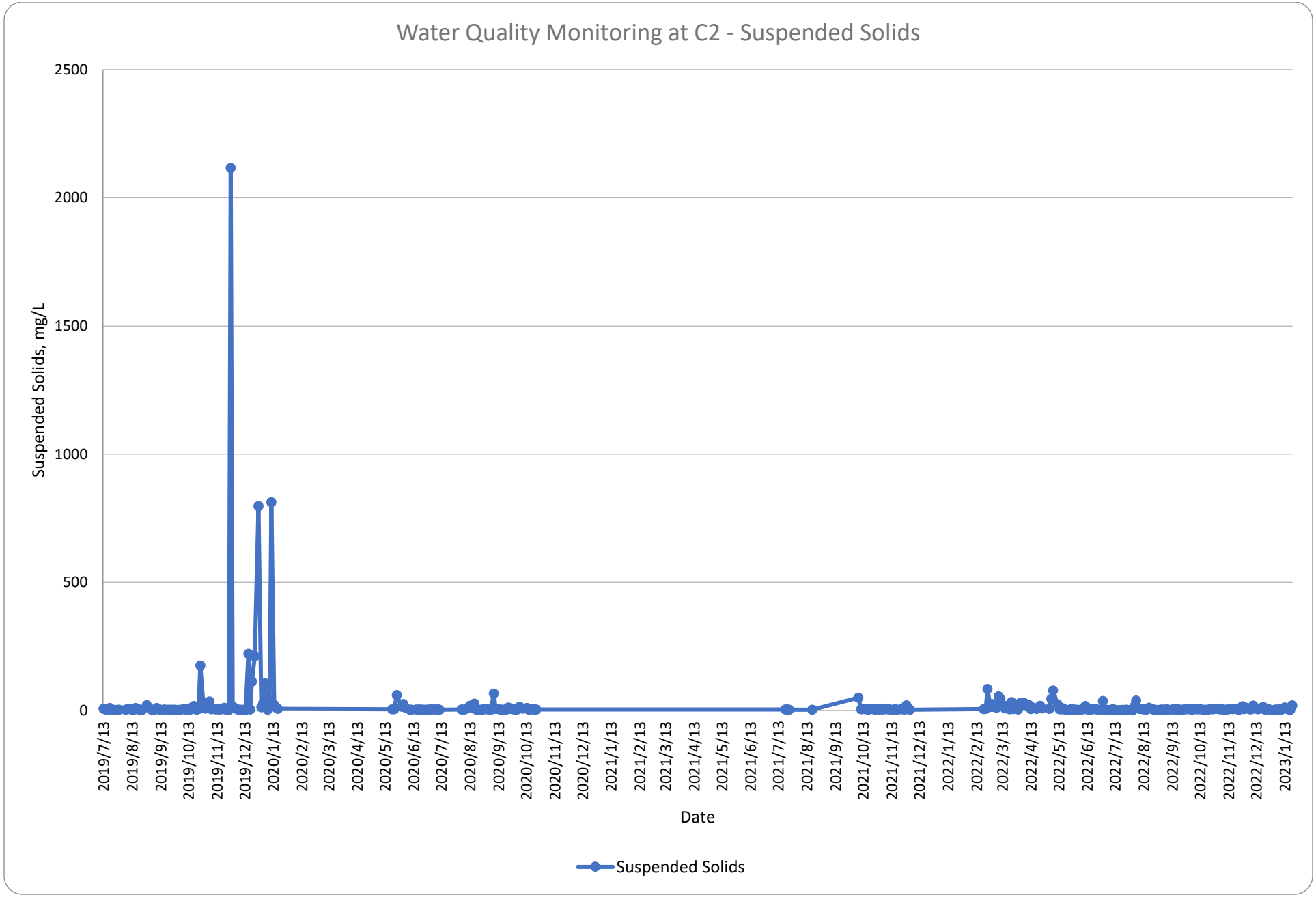
Note 1: Period without data implied that water in location C2 was dried up or insufficient water was available for sample collection



Note 1: Period without data implied that water in location C2 was dried up or insufficient water was available for sample collection



Note 1: Period without data implied that water in location C2 was dried up or insufficient water was available for sample collection

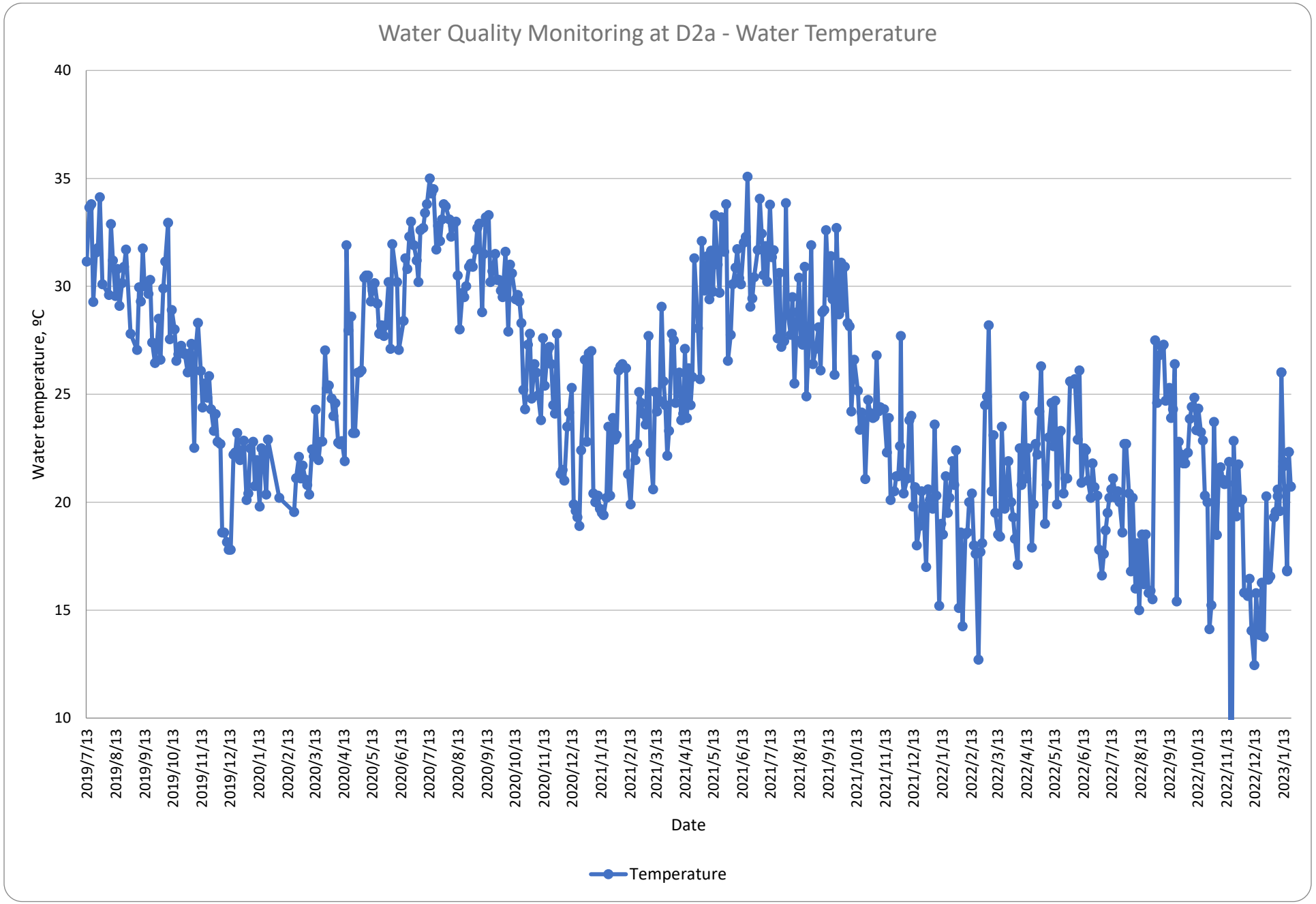


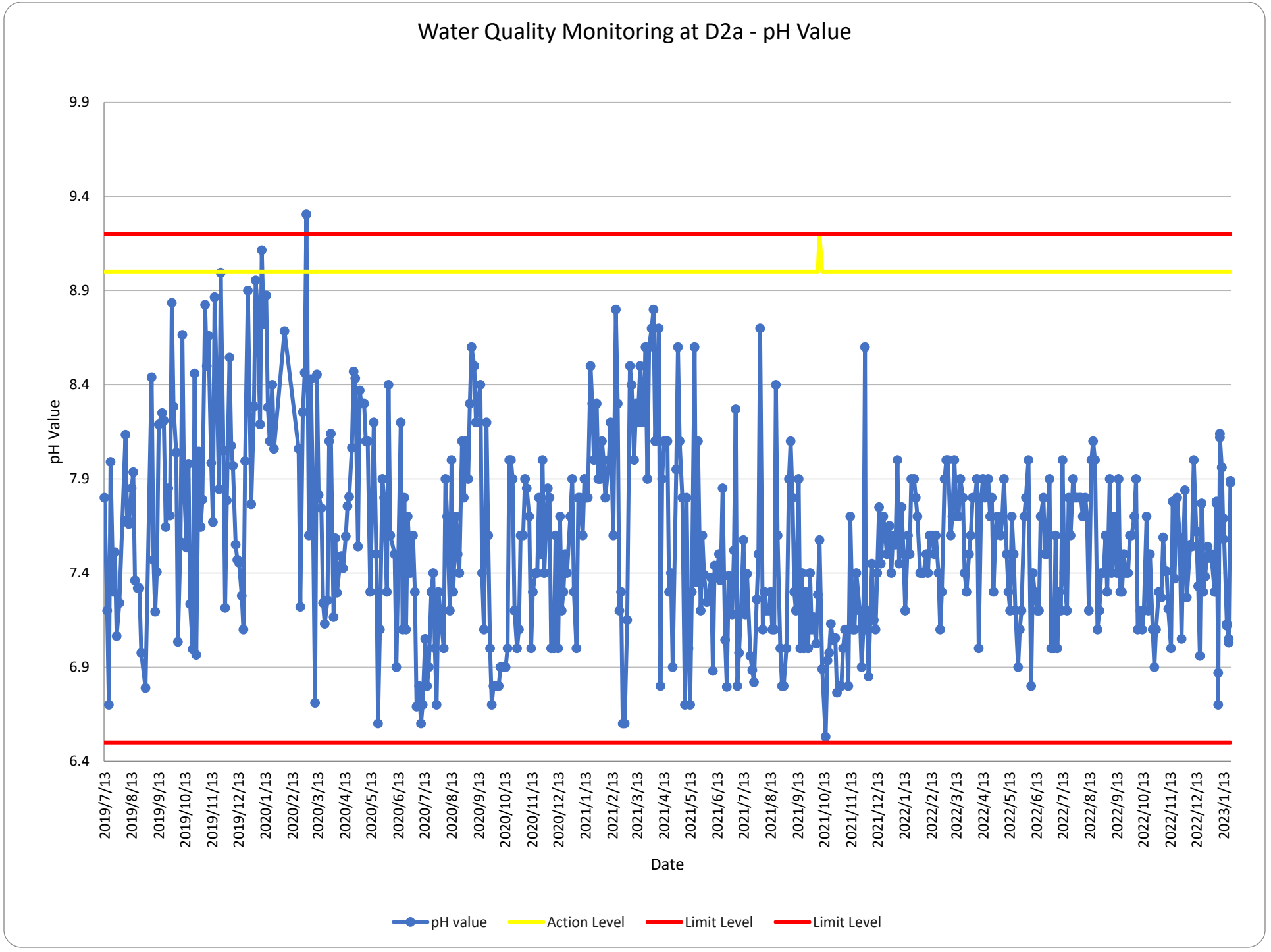
Note 1: Period without data implied that water in location C2 was dried up or insufficient water was available for sample collection

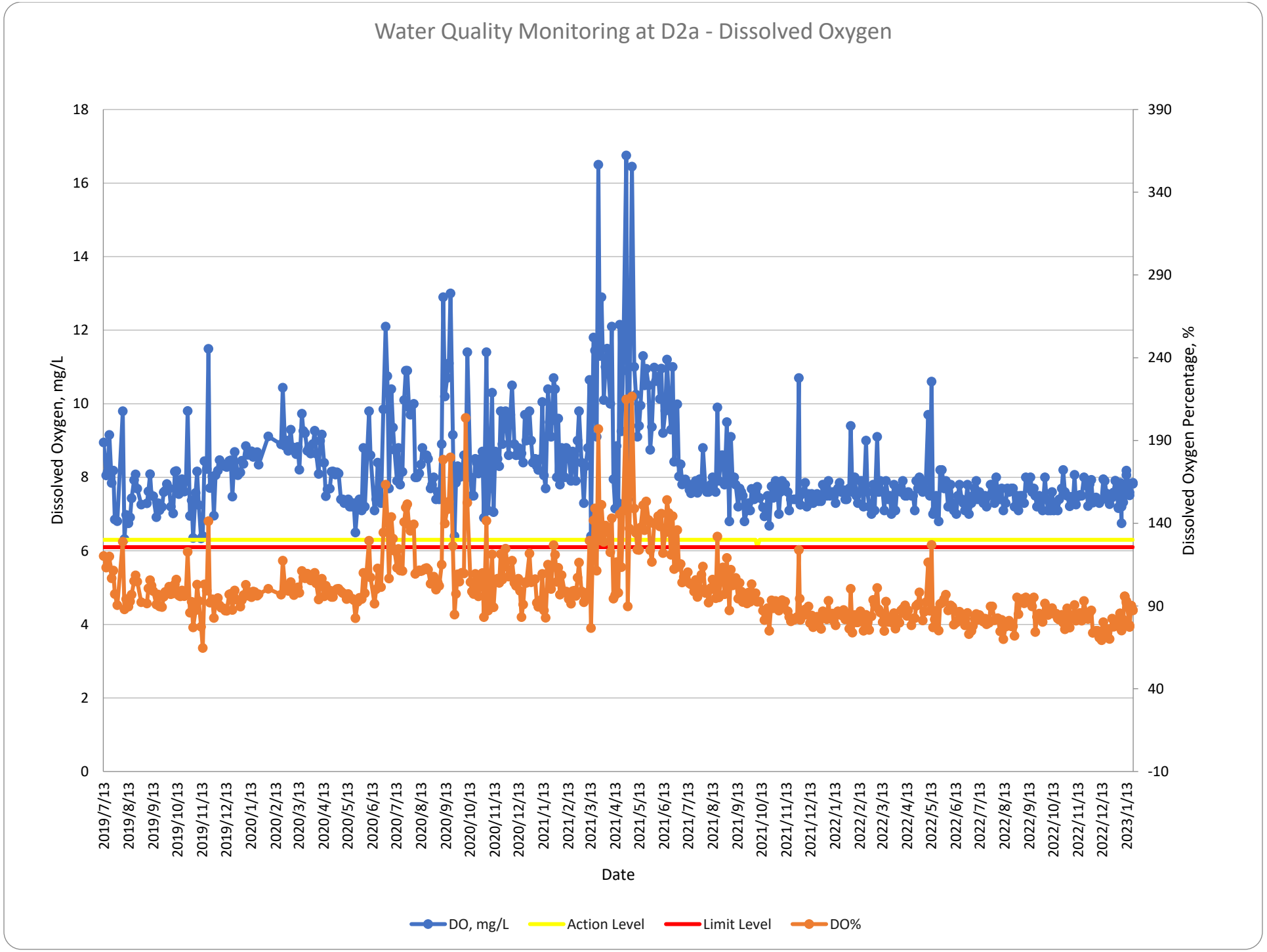
2: Spike in suspended solid level recorded in November 2019 and December was caused by the disturbance of bottle sediment during sampling in shallow water

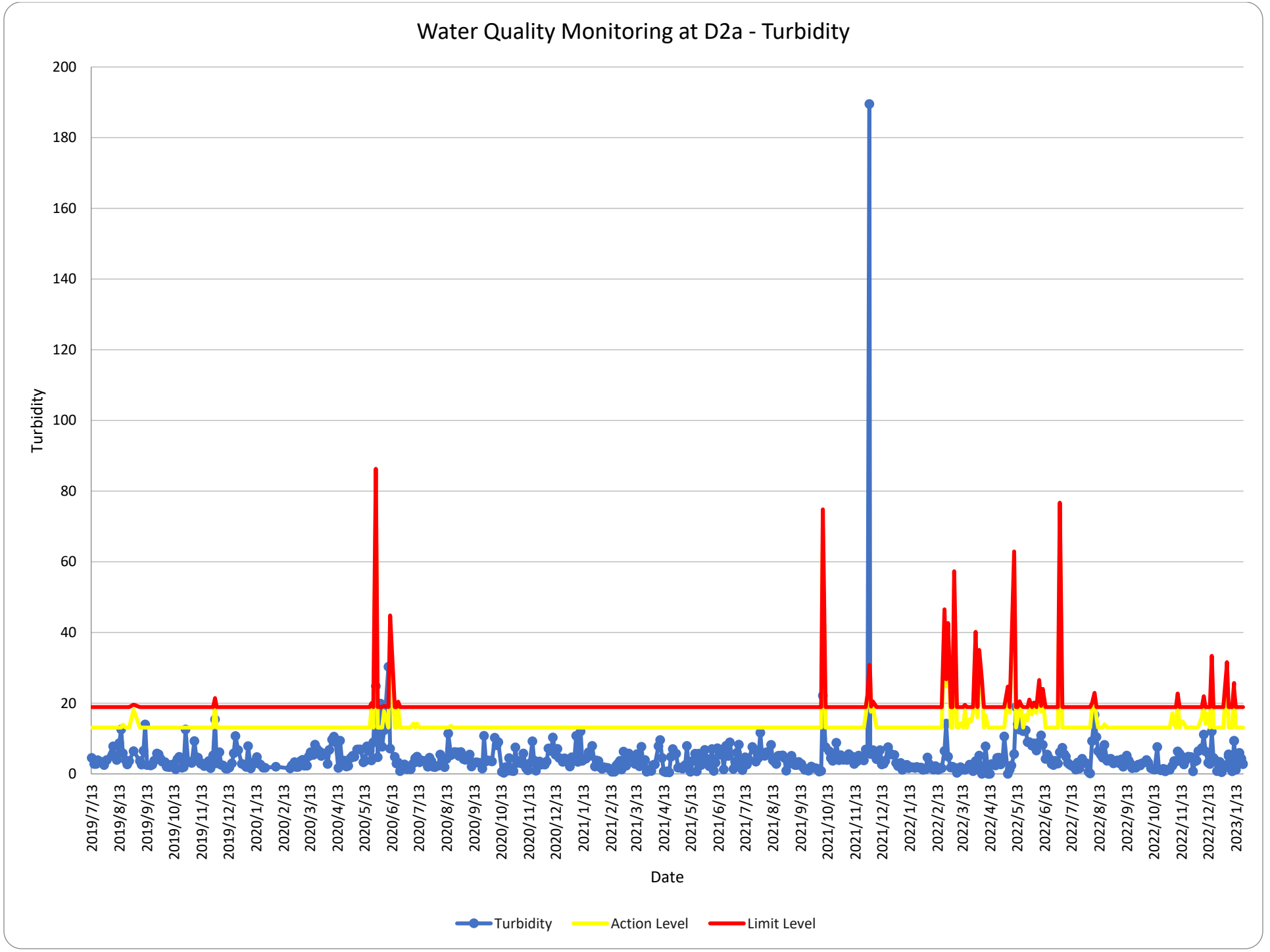
Impact Water Quality Monitoring Data

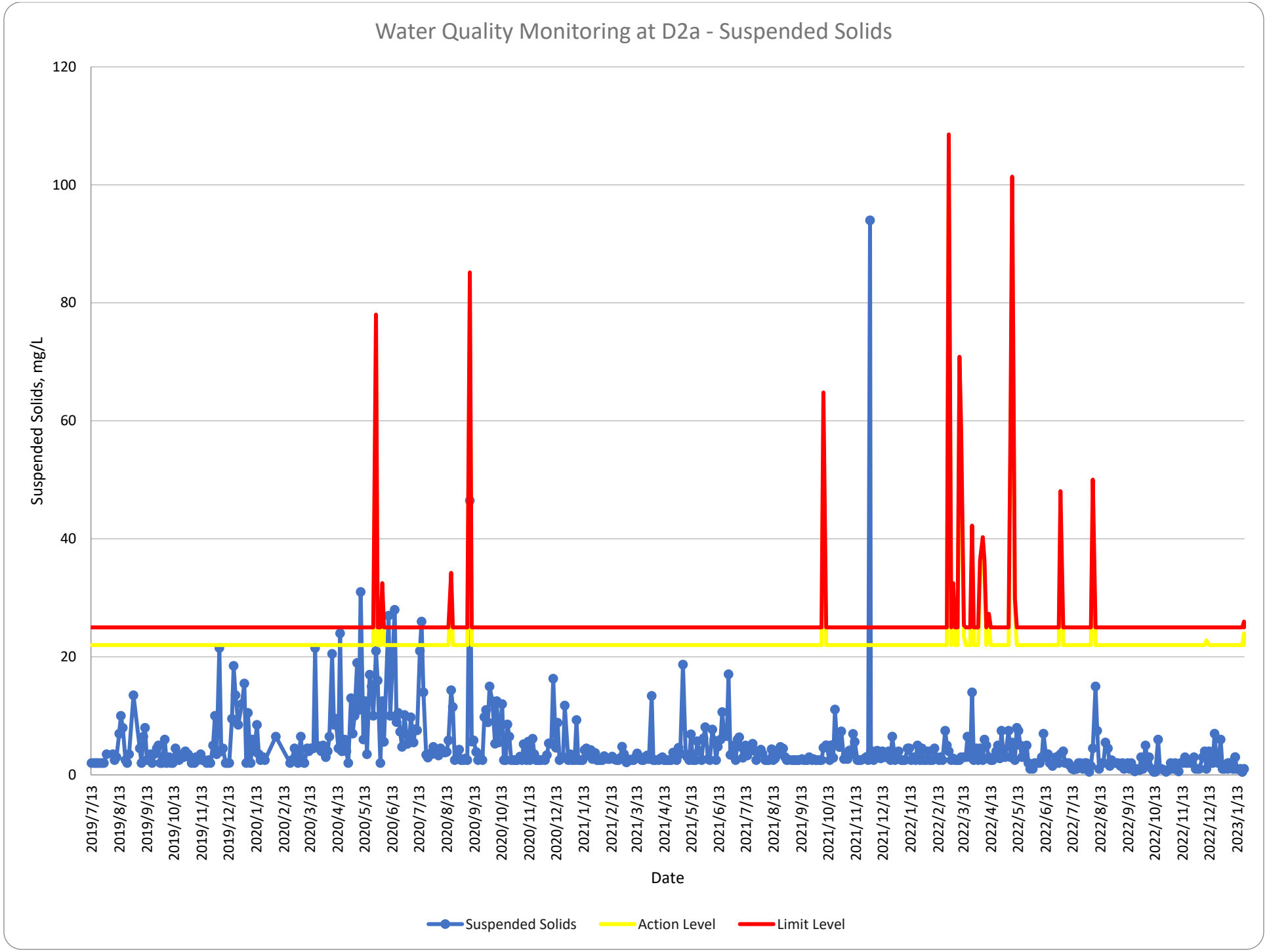
D2a




Water Quality Monitoring at D2a - pH Value
9.9
9.4
8.9
8.4
7.9
7.4
6.9
6.4
pH Value
2019/7/13
2019/8/13
2019/9/13
2019/10/13
2019/11/13
2019/12/13
2020/1/13
2020/2/13
2020/3/13
2020/4/13
2020/5/13
2020/6/13
2020/7/13
2020/8/13
2020/9/13
2020/10/13
2020/11/13
2020/12/13
2021/1/13
2021/2/13
2021/3/13
2021/4/13
2021/5/13
2021/6/13
2021/7/13
2021/8/13
2021/9/13
2021/10/13
2021/11/13
2021/12/13
2022/1/13
2022/2/13
2022/3/13
2022/4/13
2022/5/13
2022/6/13
2022/7/13
2022/8/13
2022/9/13
2022/10/13
2022/11/13
2022/12/13
2023/1/13
Date
pH value
Action Level
Limit Level
Limit Level


Water Quality Monitoring at D2a - Dissolved Oxygen
Dissolved Oxygen, mg/L
Dissolved Oxygen Percentage, %
Date
DO, mg/L
Action Level
Limit Level
DO%


Water Quality Monitoring at D2a - Turbidity
Turbidity
200
180
160
140
120
100
80
60
40
20
0
2019/7/13
2019/8/13
2019/9/13
2019/10/13
2019/11/13
2019/12/13
2020/1/13
2020/2/13
2020/3/13
2020/4/13
2020/5/13
2020/6/13
2020/7/13
2020/8/13
2020/9/13
2020/10/13
2020/11/13
2020/12/13
2021/1/13
2021/2/13
2021/3/13
2021/4/13
2021/5/13
2021/6/13
2021/7/13
2021/8/13
2021/9/13
2021/10/13
2021/11/13
2021/12/13
2022/1/13
2022/2/13
2022/3/13
2022/4/13
2022/5/13
2022/6/13
2022/7/13
2022/8/13
2022/9/13
2022/10/13
2022/11/13
2022/12/13
2023/1/13
Date
Turbidity
Action Level
Limit Level


Water Quality Monitoring at D2a - Suspended Solids
Suspended Solids, mg/L
120
100
80
60
40
20
0
2019/7/13
2019/8/13
2019/9/13
2019/10/13
2019/11/13
2019/12/13
2020/1/13
2020/2/13
2020/3/13
2020/4/13
2020/5/13
2020/6/13
2020/7/13
2020/8/13
2020/9/13
2020/10/13
2020/11/13
2020/12/13
2021/1/13
2021/2/13
2021/3/13
2021/4/13
2021/5/13
2021/6/13
2021/7/13
2021/8/13
2021/9/13
2021/10/13
2021/11/13
2021/12/13
2022/1/13
2022/2/13
2022/3/13
2022/4/13
2022/5/13
2022/6/13
2022/7/13
2022/8/13
2022/9/13
2022/10/13
2022/11/13
2022/12/13
2023/1/13
Date
Suspended Solids
Action Level
Limit Level

Appendix H
Summary of Waste Flow Table

Name of Department: ArchSD/CEDD/DSD/EMSD/HyD/WSD Contract No.: DC/2018/08

Monthly Summary Waste Flow Table for 2019 (year)

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	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 '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m^3)
Jan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Feb	0	0	0	0	0	0	0	0	0	0
Mar	0	0	0	0	0	0	0	0	0	0
Apr	0	0	0	0	0	0	0	0	0	0
May	0.0120	0	0	0	0	0	0	0	0	0.0120
June	0.1876	0	0	0	0.1650	0	0	0	0	0.0226
Sub-total	0.1996	0.0000	0.0000	0.0000	0.1650	0.0000	0.0000	0.0000	0.0000	0.0346
July	0.0175	0	0	0	0.0149	0	0	0	0	0.0026
Aug	0.0102	0	0	0	0	0	0	0	0	0.0102
Sept	0.0056	0	0	0	0	0	0	0	0	0.0056
Oct	0.1932	0	0	0	0.1890	0	0	0	0	0.0042
Nov	0.1245	0	0	0	0.1209	0	0	0	0	0.0036
Dec	0.0869	0	0	0	0.0799	0	0	0	0	0.0070
Total	0.6375	0.0000	0.0000	0.0000	0.5697	0.0000	0.0000	0.0000	0.0000	0.0678

Remark: Use of conversion factors: density of inert C&D materials (2 ton/m^3) and general refuse (1 ton/m^3)

Name of Department: ArchSD/CEDD/DSD/EMSD/HyD/WSD Contract No.: DC/2018/08

Monthly Summary Waste Flow Table for 2020 (year)

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 '000L)	(in '000m^3)
Jan	0.1263	0	0	0	0.1263	0	0	0	0	0	0.0041
Feb	0.2843	0	0	0	0.2843	0	0	0	0	0	0.0010
Mar	0.1355	0	0	0	0.1355	0	0	0	0	0	0.0056
Apr	0.3707	0	0	0	0.3707	0	0	0	0	0	0.0192
May	2.1170	0	0	0	2.1170	0	0	0	0	0	0.0138
June	3.9858	0	0	3.3000	0.6858	0	0	0	0	0	0.0199
Sub-total	7.0196	0	0	3.3000	3.7196	0	0	0	0	0	0.0636
July	0.3854	0	0	0	0.3854	0	0	0	0	0.72	0.0149
Aug	0.1389	0	0	0	0.1389	0	0	0	0	0	0.0150
Sept	2.4171	0	0	2.2550	0.1621	0	0	0	0	0.72	0.0168
Oct	1.8078	0	0	0.8867	0.9211	0	0	0	0	0	0.0179
Nov	2.8753	0	0	0.9031	1.9722	0	0	0	0	0	0.0249
Dec	3.4173	0	0	0.8551	2.5622	0	0	0	0	0	0.01421
Total	18.0614	0	0	8.1999	9.8615	0	0	0	0	1.44	0.16731

Remark: Use of conversion factors: density of inert C&D materials (2 ton/m^3) and general refuse (1 ton/m^3)

Name of Department: ArchSD/CEDD/DSD/EMSD/HyD/WSD Contract No.: DC/2018/08

Monthly Summary Waste Flow Table for 2021 (year)

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 '000L)	(in '000m^3)
Jan	6.334	0	0	3.028	3.306	0	0	0	0	0.4	0.00847
Feb	4.008	0	0	1.461	2.547	0	0	0	0	1.4	0.01195
Mar	6.096	0	0	0	6.096	0	0	0	0	0	0.00638
Apr	4.013	0	0	0	4.013	0	0	0	0	4.2	0.00612
May	4.096	0	0	1.130	2.966	0	0	0	0	0	0.00769
June	5.882	0	0	5.212	0.670	0	0	0	0	0	0.00533
Sub-total	30.429	0	0	10.831	19.598	0	0	0	0	6	0.04594
July	4.194	0	0	3.188	1.006	0	0	0	0	0.05	0.02628
Aug	6.064	0	0	2.820	3.243	0	0	0	0	1	0.01173
Sept	5.775	0	0	4.467	1.308	0	64.05	0	0	0	0.01292
Oct	0.164	0	0	0	0.164	0	82.35	0	0	0	0.02909
Nov	0.160	0	0	0	0.160	0	0	0	0	1.4	0.02673
Dec	0.0797	0	0	0	0.0797	0	0	0	0	0.8	0.01460
Total	46.8657	0	0	21.306	25.5587	0	146.40	0	0	9.25	0.16729

Remark: Use of conversion factors: density of inert C&D materials (2 ton/m^3) and general refuse (1 ton/m^3)

Name of Department: ArchSD/CEDD/DSD/EMSD/HyD/WSD Contract No.: DC/2018/08

Monthly Summary Waste Flow Table for 2022 (year)

Month	Actual Quantities of Inert C&D Materials Generated Monthly					Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public 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 '000 kg)	(in '000kg)	(in '000kg)	(in '000L)	(in '000m^3)
Jan	1.773	0	0	0.812	0.961	0	0	0	4	0.01807
Feb	1.760	0	0	1.712	0.04742	0	0	0	0	0.00519
Mar	3.394	0	0	3.389	0.0051	0	0	0	0	0.00834
Apr	3.2298	0	0	3.2298	0	0	0	0	0	0.02382
May	0.1347	0	0	0	0.1347	0	0	0	0	0.01369
June	0.0717	0	0	0	0.0717	0	0	0	0	0.04995
Sub-total	10.3632	0	0	9.1428	1.21992	0	0	0	4	0.11906
July	0.0326	0	0	0.0261	0.0065	0	0	0	0	0.01554
Aug	0.0926	0	0	0	0.0926	0	0	0	0	0.03616
Sept	0.1277	0	0	0	0.1277	0	0	0	0	0.02861
Oct	1.7649	0	0	1.4428	0.3221	0	0	0	0	0.04641
Nov	3.4910	0	0	2.2516	1.2394	0	0	0	0	0.10867
Dec	0.85495	0	0	0.43255	0.4224	0	0	0	0	0.05148
Total	16.7270	0	0	13.29585	3.43062	0	0	0	4	0.40593

Remark: Use of conversion factors: density of inert C&D materials (2 ton/m^3) and general refuse (1 ton/m^3)

Name of Department: ArchSD/CEDD/DSD/EMSD/HyD/WSD Contract No.: DC/2018/08

Monthly Summary Waste Flow Table for 2023 (year)

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	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 '000 kg)	(in '000kg)	(in '000kg)	(in '000L)	(in '000m^3)
Jan	0.04358	0	0	0	0.04358	0	0	0	0	0.07073
Feb										
Mar										
Apr										
May										
June										
Sub-total	0.04358	0	0	0	0.04358	0	0	0	0	0.07073
July										
Aug										
Sept										
Oct										
Nov										
Dec										
Total	0.04358	0	0	0	0.04358	0	0	0	0	0.07073

Remark: Use of conversion factors: density of inert C&D materials (2 ton/m^3) and general refuse (1 ton/m^3)

Appendix I

Cumulative Statistics on Complaints, Notifications of Summons And Successful Prosecutions

Statistical Summary of Environmental Complaints

Reporting Period	Environmental Complaint Statistics		
	Frequency	Cumulative	Complaint Nature
12 July 2019 - 21 January 2023	0	1	Works within Country Park

Statistical Summary of Environmental Summons

Reporting Period	Environmental Summons Statistics		
	Frequency	Cumulative	Details
12 July 2019 - 21 January 2023	0	0	N/A

Statistical Summary of Environmental Prosecution

Reporting Period	Environmental Prosecution Statistics		
	Frequency	Cumulative	Details
12 July 2019 - 21 January 2023	0	0	N/A

Appendix J
Implementation Schedule of Recommended Mitigation Measures

Air Quality Impact – Implementation Schedule of Recommended Mitigation Measures

EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Implementation Agent	Location / Timing of Implementation of Measures	Relevant Legislation And Guidelines	Implementation Status
Construction Phase							
S.3.5.9	S.3.2.2	All the dust control measures as recommended in the Air Pollution Control (Construction Dust) Regulation, where applicable, should be implemented. Typical dust control measures include:	Air Quality (fugitive dust) Control during Construction Phase	Contractors	At all construction areas of the site during the entire construction period	EIAO -TM, Air Pollution Control (Construction Dust) Regulation	Implemented
S.3.5.9	S.3.2.2	• The works area for site clearance shall be sprayed with water before, during and after the operation so as to maintain the entire surface wet	Air Quality (fugitive dust) Control during Construction Phase	Contractors	Ditto	EIAO -TM, Air Pollution Control (Construction Dust) Regulation	Implemented
S.3.5.9	S.3.2.2	• Restricting heights from which materials are to be dropped, as far as practicable to minimise the fugitive dust arising from unloading/ loading	Air Quality (fugitive dust) Control during Construction Phase	Contractors	Ditto	EIAO -TM, Air Pollution Control (Construction Dust) Regulation	Implemented
S.3.5.9	S.3.2.2	• Immediately before leaving a construction site, all vehicles shall be washed to remove any dusty materials from the bodies and wheels. However, all spraying of materials and surfaces should avoid excessive water usage	Air Quality (fugitive dust) Control during Construction Phase	Contractors	Ditto	EIAO -TM, Air Pollution Control (Construction Dust) Regulation	Implemented
S.3.5.9	S.3.2.2	• Where a vehicle leaving a	Air Quality (fugitive dust)	Contractors	Ditto	EIAO -TM, Air	Implemented

EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Implementation Agent	Location / Timing of Implementation of Measures	Relevant Legislation And Guidelines	Implementation Status
		construction site is carrying a load of dusty materials, the load shall be covered entirely by clean impervious sheeting to ensure that the dusty materials will not leak from the vehicle	Control during Construction Phase			Pollution Control (Construction Dust) Regulation	
S.3.5.9	S.3.2.2	• Erection of hoarding of not less than 2.4 m high from ground level along the site boundary, where appropriate	Air Quality (fugitive dust) Control during Construction Phase	Contractors	Ditto	EIAO -TM, Air Pollution Control (Construction Dust) Regulation	Implemented
S.3.5.9	S.3.2.2	• Any stockpile of dusty materials shall be covered entirely by impervious sheeting; and/or placed in an area sheltered on the top and 4 sides	Air Quality (fugitive dust) Control during Construction Phase	Contractors	Ditto	EIAO -TM, Air Pollution Control (Construction Dust) Regulation	Implemented
S.3.5.9	S.3.2.2	• All dusty materials shall be sprayed with water immediately prior to any loading, unloading or transfer operation so as to maintain the dusty materials wet	Air Quality (fugitive dust) Control during Construction Phase	Contractors	Ditto	EIAO -TM, Air Pollution Control (Construction Dust) Regulation	Implemented
Operational Phase							
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Noise Impact – Implementation Schedule of Recommended Mitigation Measures

EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Implementation Agent	Location / Timing of Implementation of Measures	Relevant Legislation And Guidelines	Implementation Status
Construction Phase							
S.4.8.2	S.4.8.1	The Contractor shall adopt the Code of Practice on Good Management Practice to Prevent Violation of the Noise Control Ordinance (Chapter 400) (for Construction Industry) published by EPD	Noise control during construction	Contractors	At all construction areas of the site during the entire construction period	Annex 5 of EIAO-TM	Implemented
S.4.8.2	S.4.8.1	• The Contractor shall observe and comply with the statutory and non-statutory requirements and guidelines	Noise control during construction	Contractors	Ditto	Annex 5 of EIAO-TM	Implemented
S.4.8.2	S.4.8.1	• Before commencing any work, the Contractor shall submit to the Engineer Representative for approval the method of working, equipment and noise mitigation measures intended to be used at the site	Noise control during construction	Contractors	Ditto	Annex 5 of EIAO-TM	Implemented
S.4.8.2	S.4.8.1	• The Contractor shall devise and execute working methods to minimise the noise impact on the surrounding sensitive uses, and provide experienced personnel with suitable training to ensure that those methods are implemented	Noise control during construction	Contractors	Ditto	Annex 5 of EIAO-TM	Implemented

EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Implementation Agent	Location / Timing of Implementation of Measures	Relevant Legislation And Guidelines	Implementation Status
S.4.8.2	S.4.8.1	• Noisy equipment and noisy activities should be located as far away from the NSRs as is practical	Noise control during construction	Contractors	Ditto	Annex 5 of EIAO-TM	Implemented
S.4.8.2	S.4.8.1	• Unused equipment should be turned off. PME should be kept to a minimum and the parallel use of noisy equipment / machinery should be avoided	Noise control during construction	Contractors	Ditto	Annex 5 of EIAO-TM	Implemented
S.4.8.2	S.4.8.1	• Regular maintenance of all plant and equipment	Noise control during construction	Contractors	Ditto	Annex 5 of EIAO-TM	Implemented
S.4.8.2	S.4.8.1	• Material stockpiles and other structures should be effectively utilised as noise barriers, where practicable	Noise control during construction	Contractors	Ditto	Annex 5 of EIAO-TM	Implemented
Operational Phase							
N/A	N/A	N/A	N/A	N/A	N/A	N/A	

Water Quality Impact – Implementation Schedule of Recommended Mitigation Measures

EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Implementation Agent	Location / Timing of Implementation of Measures	Relevant Legislation And Guidelines	Implementation Status
Construction Phase							
S.5.10.1 -5.10.2	S.5.8.2 -5.8.3	Construction for the desilting facilities at intake and outfall portals should be carried out behind a temporary cofferdam which is watertight enclosure built in the reservoirs and pumped dry to expose the bottom.	Point Pollution Control	Contractors	At all construction areas of the site during the entire construction period	Water Pollution Control Ordinance	Implemented
S.5.10.3	S.5.8.4	• The cofferdams should be regularly inspected and maintained to ensure no spillage of waste or wastewater into the reservoirs.	Point Pollution Control	Contractors	Ditto	Water Pollution Control Ordinance	Implemented
S. 5.10.4	S. 5.8.5	• Construction of desilting facilities within works areas capable of controlling discharge of SS to comply with WPCO/TM-DSS	Point and Non-point Pollution Control	Contractors	Ditto	Water Pollution Control Ordinance	Implemented
S.5.10.5	S.5.8.6	• Construction runoff will be managed as per the Practice Note for Professional Persons ProPECC PN1/94 - Construction Site Drainage and the conditions of working within Water Gathering Grounds stipulated by WSD	Stormwater and Non-point Source Pollution Control	Contractors	Ditto	Water Pollution Control Ordinance Water Gathering Ground control by WSD	Implemented
S.5.10.6	S. 5.8.7	• A Drainage Management Plan should	Stormwater and Non-point	Contractors	Ditto	Water Pollution	Implemented

EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Implementation Agent	Location / Timing of Implementation of Measures	Relevant Legislation And Guidelines	Implementation Status
		be prepared by the Contractor for approval by the Engineer for each of the works areas, detailing the facilities and measures to manage pollution arising from surface runoff from those works areas	Source Pollution Control			Control Ordinance Water Gathering Ground control by WSD	
S. 5.10.7	S. 5.8.8	• An Emergency Contingency Plan should also be prepared by the Contractor, detailing the response and procedures to contain and remove any accidental spillage along the temporary and permanent roads and at the site at short notice to prevent or minimize the quantities of contaminants from reaching the reservoirs and local streams leading to the reservoirs. The Emergency Contingency Plan should be submitted to the Engineer for approval	Stormwater and Non-point Source Pollution Control	Contractors	Ditto	Water Pollution Control Ordinance Water Gathering Ground control by WSD	Implemented
S. 5.10.8	S. 5.8.9	• Surface run-off and effluent from the construction sites at the intake at Kowloon Byewash Reservoir and outfall at the Lower Shing Mun	Stormwater and Non-point Source Pollution Control	Contractors	Ditto	Water Pollution Control Ordinance	Implemented

EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Implementation Agent	Location / Timing of Implementation of Measures	Relevant Legislation And Guidelines	Implementation Status
		Reservoir will be directed towards adequately designed sand/silt removal facilities such as sand/silt traps and sediment basins to remove sand/silt particles from runoff to meet the requirements of the TM standards under the WPCO before discharging to discharge points downstream of the Kowloon Byewash Reservoir Dam and Lower Shing Mun Reservoir Dam respectively. The design of efficient silt removal facilities should be based on the guidelines in Appendix A1 of ProPECC PN 1/94, which states that the retention time for silt/sand traps should be 5 minutes under maximum flow conditions. Sizes may vary depending upon the flow rate, but for a flow rate of 0.1m3/s a sedimentation basin of 30m3 would be required and for a flow rate of 0.5m3/s the basin would be 150m3. The detailed design of the sand/silt traps should be undertaken by the contractor prior to					

EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Implementation Agent	Location / Timing of Implementation of Measures	Relevant Legislation And Guidelines	Implementation Status
		the commencement of construction					
S. 5.10.8	S. 5.8.9	• Channels, earth bunds or sand bag barriers will be provided on-site to properly direct stormwater to the above-mentioned facilities	Stormwater and Non-point Source Pollution Control	Contractors	Ditto	Water Pollution Control Ordinance	Implemented
S. 5.10.8	S. 5.8.9	• Existing on-site silt removal facilities, channels and manholes, if any, will be maintained and the deposited silt and grit will be removed regularly, at the onset of and after each rainstorm to ensure that these facilities are functioning properly at all times	Stormwater and Non-point Source Pollution Control	Contractors	Ditto	Water Pollution Control Ordinance	Implemented
S. 5.10.8	S. 5.8.9	• Other manholes, if any, including any newly constructed ones will be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris from getting into the drainage system	Stormwater and Non-point Source Pollution Control	Contractors	Ditto	Water Pollution Control Ordinance	Implemented
S. 5.10.8	S. 5.8.9	• Open stockpiles of materials on site will be avoided within water gathering grounds as far as practicable. All surplus spoil will be removed from water gathering grounds as soon as possible Measures	Stormwater and Non-point Source Pollution Control	Contractors	Ditto	Water Pollution Control Ordinance	Implemented

EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Implementation Agent	Location / Timing of Implementation of Measures	Relevant Legislation And Guidelines	Implementation Status
		will be taken to prevent the washing away of construction materials, soil, silt or debris					
S. 5.10.8	S. 5.8.9	• Where possible, works entailing soil excavation will be minimized during the rainy season (i.e. April to September). If excavation in soil could not 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 to ensure that adequate surface protection measures can be safely carried out well before the arrival of a	Stormwater and Non-point Source Pollution Control	Contractors	Ditto	Water Pollution Control Ordinance	Implemented

EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Implementation Agent	Location / Timing of Implementation of Measures	Relevant Legislation And Guidelines	Implementation Status
		rainstorm					
S. 5.10.8	S. 5.8.9	• Where applicable, final earthworks surfaces/ slopes will be well compacted and hydro-seeded following completion to prevent erosion	Stormwater and Non-point Source Pollution Control	Contractors	Ditto	Water Pollution Control Ordinance	Implemented
S. 5.10.8	S. 5.8.9	• Where surface runoff or construction effluent is likely to be contaminated with oil, properly designed and maintained petrol interceptor will be provided to meet the WPCO/TM-DSS requirements. Oil leakage or spillage shall be contained and cleaned up immediately. Detailed design of the petrol interceptor shall be provided by the Contractor before commencement of construction	Stormwater and Non-point Source Pollution Control	Contractors	Ditto	Water Pollution Control Ordinance	Implemented
S. 5.10.8	S. 5.8.9	• Sewage arising from the construction workers on site should be collected by temporary sanitary facilities e.g. portable chemical toilets. Portable toilets should be used coupled with tankering away services provided by a licensed collector	Stormwater and Non-point Source Pollution Control	Contractors	Ditto	Water Pollution Control Ordinance	Implemented

EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Implementation Agent	Location / Timing of Implementation of Measures	Relevant Legislation And Guidelines	Implementation Status
S. 5.10.8	S. 5.8.9	• All site discharges within Inland Waters Group A must comply with the terms and conditions of a valid discharge licence issued by EPD	Stormwater and Non-point Source Pollution Control	Contractors	Ditto	Water Pollution Control Ordinance	Implemented
S. 5.10.8	S. 5.8.9	• Vehicle wheel washing facilities should be provided, where applicable, at the site exit such that mud, debris, etc. deposited onto the vehicle wheels or body can be washed off before the vehicles are leaving the site area	Stormwater and Non-point Source Pollution Control	Contractors	Ditto	Water Pollution Control Ordinance	Implemented
S. 5.10.8	S. 5.8.9	• Section of the road between the wheel washing bay and the public road should be paved with backfill to reduce vehicle tracking of soil and to prevent site run-off from entering public road drains	Stormwater and Non-point Source Pollution Control	Contractors	Ditto	Water Pollution Control Ordinance	Implemented
S. 5.10.8	S. 5.8.9	• Vehicle washing facilities should be drained into desilting facilities before discharge. The water should be recycled on site wherever possible. It is suggested that the wash water from the wheel wash basin is either reused for site watering or pumped to the on-site desilting facilities for treatment	Stormwater and Non-point Source Pollution Control	Contractors	Ditto	Water Pollution Control Ordinance	Implemented

EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Implementation Agent	Location / Timing of Implementation of Measures	Relevant Legislation And Guidelines	Implementation Status
S. 5.10.8	S. 5.8.9	• Desilting facilities should be checked and the deposited silt and grit should be removed regularly to ensure they are working properly at all times	Stormwater and Non-point Source Pollution Control	Contractors	Ditto	Water Pollution Control Ordinance	Implemented
S. 5.10.8	S. 5.8.9	• To minimize water quality impact, recycled water should be used at the cutter face for cooling purposes. Used water should be collected and discharged to settling tank for settlement	Stormwater and Non-point Source Pollution Control	Contractors	Ditto	Water Pollution Control Ordinance	Implemented
S. 5.10.8	S. 5.8.9	• Excess water from the settling tank would be transferred to the desilting facilities for treatment before discharge. The Contractor should ensure that the discharge water from the desilting facilities and treated spent effluent arising from tunnel boring from the desilting facilities comply with the WPCO/TM-DSS requirements before discharge	Stormwater and Non-point Source Pollution Control	Contractors	Ditto	Water Pollution Control Ordinance	Implemented
S. 5.10.8	S. 5.8.9	• Existing on-site silt removal facilities, channels and manholes, if any, would be maintained such that the deposited silt and grit will be removed regularly,	Stormwater and Non-point Source Pollution Control	Contractors	Ditto	Water Pollution Control Ordinance	Implemented

EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Implementation Agent	Location / Timing of Implementation of Measures	Relevant Legislation And Guidelines	Implementation Status
		at the onset of and after each rainstorm to ensure that these facilities are functioning properly at all times;					
S. 5.10.8	S. 5.8.9	• Desilting facilities should be checked and the deposited silt and grit should be removed regularly to ensure they are working properly at all times;	Stormwater and Non-point Source Pollution Control	Contractors	Ditto	Water Pollution Control Ordinance	Implemented
S. 5.10.8	S. 5.8.9	• The project may occasionally involve the handling of fuel and generates chemical wastes. It must be ensured that all fuel tanks and chemical storage are sited on sealed and bunded areas, provided with locks and located outside water gathering grounds as far as practicable	Stormwater and Non-point Source Pollution Control	Contractors	Ditto	Water Pollution Control Ordinance	Implemented
S. 5.10.8	S. 5.8.9	• The storage areas will be surrounded by bunds with a capacity equal to 110% of the storage capacity of the largest tank to prevent accidentally spilled oil, fuel or chemicals from reaching the receiving waters	Protection Against Accidental Spillage	Contractors	Ditto	Water Pollution Control Ordinance	Implemented
S. 5.10.8	S. 5.8.9	• Oil and grease removal facilities will be provided where appropriate, for example, in area near plant workshop/	Protection Against Accidental Spillage	Contractors	Ditto	Water Pollution Control Ordinance	Implemented

EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Implementation Agent	Location / Timing of Implementation of Measures	Relevant Legislation And Guidelines	Implementation Status
		maintenance areas, if any					
S. 5.10.8	S. 5.8.9	• Chemical waste arising from the site should be properly stored, handled, treated and disposed of in compliance with the requirements stipulated under the Waste Disposal (Chemical Waste) (General) Regulation	Protection Against Accidental Spillage	Contractors	Ditto	Water Pollution Control Ordinance	Implemented
Operational Phase							
N/A	N/A	N/A	N/A	N/A	N/A	N/A	

Waste Management Implication – Implementation Schedule of Recommended Mitigation Measures

EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Implementation Agent	Location / Timing of Implementation of Measures	Relevant Legislation And Guidelines	Implementation Status
Construction Phase							
S.6.7.1		Given the potential for secondary environmental impacts (dust, noise, water quality and visual impacts), mitigation measures are required to ensure proper handling, storage, transportation and disposal of materials at the outset and throughout the construction phase of the project	Waste management during construction	Contractors	At all construction areas of the site during the entire construction period	Waste Disposal Ordinance	Implemented
S.6.7.2	S. 6.2.5	• An on-site environmental co-ordinator employed by the Contractor should be identified at the outset of the works. The co-ordinator shall prepare a Waste Management Plan ("WMP") in accordance with the requirements set out in the ETWB TCW No. 19/2005, Waste Management on Construction Sites. The WMP shall include monthly and yearly Waste Flow Tables ("WFT") that indicate the amounts of waste generated, recycled and disposed of (including final disposal site), and	Waste management during construction	Contractors	Ditto	ETWB TCW No. 19/2005, Waste Management on Construction Sites	Implemented

EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Implementation Agent	Location / Timing of Implementation of Measures	Relevant Legislation And Guidelines	Implementation Status
		which should be regularly updated					
S.6.7.2	S. 6.2.5	• The reuse/ recycling of all materials on site shall be investigated and exhausted prior to treatment/ disposal off-site	Waste management during construction	Contractors	Ditto	Waste Disposal Ordinance	Implemented
S.6.7.2	S. 6.2.5	• Good site practices shall be adopted from the commencement of works to avoid the generation of waste, reduce cross contamination of waste and to promote waste minimisation	Waste management during construction	Contractors	Ditto	Waste Disposal Ordinance	Implemented
S.6.7.2	S. 6.2.5	• All waste materials shall be sorted on-site into inert and non-inert C&D materials, and where the materials can be recycled or reused, they shall be further segregated. Inert material, or public fill will comprise stone, rock, concrete and soil which is suitable for land reclamation and site formation whilst non-inert materials include all other wastes generated from the construction process such as plastic packaging and vegetation (from site clearance)	Waste management during construction	Contractors	Ditto	Waste Disposal Ordinance	Implemented
S.6.7.2	S. 6.2.5	• The Contractor shall be responsible	Waste management during	Contractors	Ditto	Waste Disposal	Implemented

EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Implementation Agent	Location / Timing of Implementation of Measures	Relevant Legislation And Guidelines	Implementation Status
		for identifying what materials can be recycled/ reused, whether on-site or off-site. In the event of the latter, the Contractor shall make arrangements for the collection of the recyclable materials. Any remaining non-inert waste shall be collected and disposed of to the public fill reception facilities whilst any inert C&D materials shall be re-used on site as far as possible. Alternatively, if no use of the inert material can be found on-site, the materials can be delivered to a public fill reception facilities after obtaining the appropriate licence	construction			Ordinance	
S.6.7.2	S. 6.2.5	• In order to monitor the disposal of C&D material and solid wastes at public fill reception facilities and landfills, and control fly-tipping, a trip-ticket system shall be implemented by the Contractor, in accordance with the contract and the requirements of WBTC 31/2004 "Trip Ticket System for Disposal of	Waste management during construction	Contractors	Ditto	WBTC 31/2004 "Trip Ticket System for Disposal of Construction and Demolition Material"	Implemented

EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Implementation Agent	Location / Timing of Implementation of Measures	Relevant Legislation And Guidelines	Implementation Status
		Construction and Demolition Material"					
S.6.7.2	S. 6.2.5	• Under the Waste Disposal (Chemical Waste) (General) Regulation, the Contractor shall register as a Chemical Waste Producer if chemical wastes such as spent lubricants and paints are generated on site. Only licensed chemical waste collectors shall be employed to collect any chemical waste generated at site. The handling, storage, transportation and disposal of chemical wastes shall be conducted in accordance with the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes and A Guide to the Chemical Waste Control Scheme both published by EPD	Waste management during construction	Contractors	Ditto	Waste Disposal (Chemical Waste) (General) Regulation	Implemented
S.6.7.2	S. 6.2.5	• A sufficient number of covered bins shall be provided on site for the containment of general refuse to prevent visual impacts and nuisance to the sensitive surroundings. These bins	Waste management during construction	Contractors	Ditto	Waste Disposal Ordinance	Implemented

EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Implementation Agent	Location / Timing of Implementation of Measures	Relevant Legislation And Guidelines	Implementation Status
		shall be cleared daily and the collected waste disposed of to the refuse transfer station. Further to the issue of ETWB TCW No. 6/2002A, Enhanced Specification for Site Cleanliness and Tidiness, the Contractor is required to maintain a clean and hygienic site throughout the project works					
S.6.7.2	S. 6.2.5	• All chemical toilets, if any, shall be regularly cleaned and the night-soil collected and transported by a licensed contractor to a Government Sewage Treatment Works facility for disposal	Waste management during construction	Contractors	Ditto	Waste Disposal Ordinance	Implemented
S.6.7.2	S. 6.2.5	• Toolbox talks should be provided to workers about the concepts of site cleanliness and appropriate waste management procedures, including waste reduction, reuse and recycling	Waste management during construction	Contractors	Ditto	Waste Disposal Ordinance	Implemented
S.6.7.2	S. 6.2.5	• The Contractor shall comply with all relevant statutory requirements and guidelines and their updated versions that may be issued during the course of project construction	Waste management during construction	Contractors	Ditto	Waste Disposal Ordinance	Implemented
Operational Phase							

EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Implementation Agent	Location / Timing of Implementation of Measures	Relevant Legislation And Guidelines	Implementation Status
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Ecological Impact – Implementation Schedule of Recommended Mitigation Measures

EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Implementation Agent	Location / Timing of Implementation of Measures	Relevant Legislation And Guidelines	Implementation Status
Construction Phase							
S 8.8	N/A	• Minimise the habitat loss of secondary woodland / plantation and grassland as far as possible	Reduce habitat and vegetation loss	Contractors	At all construction areas of the site during the entire construction period	Annex 16 of EIAO-TM	Implemented
S 8.8	N/A	• Disturbed secondary woodland / plantation and grassland should be reinstated after the completion of works	Reinstate disturbed habitats	Contractors	Ditto	Annex 16 of EIAO-TM	Implemented
S 8.8	N/A	• Provide clear definition of site boundary	Prevent impact on offsite habitats	Contractors	Ditto	Annex 16 of EIAO-TM	Implemented
S 8.8	N/A	• Protect the protected plant Pavetta hongkongensis on its existing location; • Transplant the Pavetta hongkongensis to other suitable location if onsite protection is not feasible.	Preserve the protected plant species	Contractors	Ditto	Annex 16 of EIAO-TM	Implemented
S 8.8	N/A	• Carry out compensatory planting if the individual of Artocarpus hypargyreus cannot be retained onsite	Mitigate the tree removal	Contractors	Ditto	Annex 16 of EIAO-TM	Implemented
S 8.8	N/A	• Workers should avoid eating and	Avoidance of injury to wildlife	Contractors	Ditto	Annex 16 of EIAO-TM	Implemented

EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Implementation Agent	Location / Timing of Implementation of Measures	Relevant Legislation And Guidelines	Implementation Status
		leave food in works area and avoid feeding the wildlife; • Fishes observed remaining at the proposed works area during the draining down process should be translocated to the portion of the reservoir outside the cofferdam.					
S 8.8	N/A	• Implement standard good site practices for dust suppression	Avoid dust deposition on vegetation	Contractors	Ditto	Annex 16 of EIAO-TM	Implemented
S 8.8	N/A	• Implement standard good site practices for water quality control	Avoid site runoff to nearby habitats	Contractors	Ditto	Annex 16 of EIAO-TM	Implemented
S 8.8	N/A	• Workers shall not disturb birds and other wildlife; • Litter shall not be burned on-site but shall be removed off-site; • Machinery not in use should be switched off to minimize the noise nuisance; • No fishing is allowed in the reservoir without permission.	Avoid disturbance to wildlife	Contractors	Ditto	Annex 16 of EIAO-TM	Implemented
Operational Phase							
S 8.8	N/A	• Compensate the habitat loss (grassland and woodland) by restoration of same type of habitats to	Mitigate the temporary habitat loss	Contractors	Woodland at worksite area at Kowloon	Annex 16 of EIAO-TM	Implemented

EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Implementation Agent	Location / Timing of Implementation of Measures	Relevant Legislation And Guidelines	Implementation Status
		be lost. The compensatory ratio should not be less than 1:1 in terms of area.			Byewash Reservoir and Grassland at worksite area at Lower Shing Mun Reservoir / Operational period		

Landscape and Visual Impact – Implementation Schedule of Recommended Mitigation Measures

Id No.	Landscape and Visual Mitigation Measures	Location	Funding	Implementation/ Maintenance Agent	Relevant Standard or Requirement	Timing of Implementation	Objectives of the Recommended Measure and Main Concern to address
LMM1	Topsoil, where identified, should be stripped and stored for re-use in the construction of the soft landscape works, where practical	Site	WSD	Contractor	TM-EIA Annex 18	Throughout construction phase	To provide a viable growing medium suited to the existing conditions and reduce the need for the importation of top soil
LMM2	Existing Trees to be retained on site should be carefully protected during construction	Site	WSD	Contractor	TM-EIA Annex 18, ETWB TCW No. 2/2004 & ETWB TCW No. 3/2006	Throughout construction phase	To ensure the success of the tree preservation proposal
LMM3	Compensatory tree planting should be provided to compensate for felled trees	Site	WSD	Contractor	TM-EIA Annex 18, ETWB TCW No. 2/2004 & ETWB TCW No. 3/2006	Throughout design and construction phase	The planting proposal seeks to compensate for the predicted tree loss resulting form the construction, visually integrate the proposals within its existing landscape framework and provide an improved visual amenity
LMM4	Erection of decorative screen hoarding compatible with surrounding setting	Site	WSD	Contractor	TM-EIA Annex 18 and BD	Throughout construction phase	To integrate the construction site with the existing environment
LMM5	Locations of the site office, storage or workshops should be carefully	Site	WSD	Contractor	TM-EIA Annex 18 and BD	Throughout design phase	To avoid unnecessary felling of trees

Id No.	Landscape and Visual Mitigation Measures	Location	Funding	Implementation/ Maintenance Agent	Relevant Standard or Requirement	Timing of Implementation	Objectives of the Recommended Measure and Main Concern to address
	adjusted to areas out of tree protection zones.						
LMM6	Selection of intake and outfall portals to areas enclosed by existing topography or vegetation	Site	WSD	Contractor	TM-EIA Annex 18 and BD	Throughout design phase	To preserve the existing topography and as many as trees as possible
LMM7	Appearance of the water intake and outfall structures	Site	WSD	Contractor	TM-EIA Annex 18 and BD	Throughout design phase	To reduce the apparent visual mass of water intake and outfall structures
LMM8	Reinstatement of disturbed vegetation at both portal	Site	WSD	Contractor	TM-EIA Annex 18	After the completion of construction	To mitigate disturbance to vegetation arising from the proposed construction

Cultural Heritage – Implementation Schedule of Recommended Mitigation Measures

EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Implementation Agent	Location / Timing of Implementation of Measures	Relevant Legislation And Guidelines	Implementation Status
Construction Phase							
S 10.7	S8.1.2	Condition Survey for the identified historic items and monitoring of vibration levels if required.	Prevention of structural damage to the identified historic items	Contractors	Condition survey to be undertaken prior to the construction phase and vibration monitoring to be undertaken during the construction phase if required.	None	Implemented. The condition survey had been submitted on 3 June 2019.
Operational Phase							
N/A	N/A	None	None	None	None	None	N/A