環境保護署
Environmental Protection Department

Contract No. EP/SP/66/12
Integrated Waste Management Facilities, Phase 1
11th Quarterly EM&A Report

Keppel Seghers

吉寶西格斯－振華聯營公司
KEPPEL SEGHERS - ZHEN HUA JOINT VENTURE

Quarterly EM&A Report No.11
(Period from 1 January to 31 March 2021)

(Clause 3.3, Further Environmental Permit FEP-01/429/2012/A)

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EXECUTIVE SUMMARY

A1. The Project, Integrated Waste Management Facility (IWMF), is a Designated Project under the Environmental Impact Assessment Ordinance (Cap. 499) (EIAO) and is currently governed by a Further Environmental Permit (FEP No. FEP-01/429/2012/A) for the construction and operation of the Project.

A2. In accordance with the Updated Environmental Monitoring and Audit (EM&A) Manual for the Project, EM&A works for marine water quality, noise, waste management and ecology should be carried out by Environmental Team (ET), Acuity Sustainability Consulting Limited (ASCL), during the construction phase of the Project.

A3. This is the 11th Quarterly EM&A Report, prepared by ASCL, for the Project summarizing and concluding the monitoring results and audit findings of the EM&A programme at and around Shek Kwu Chau (SKC) during the reporting period from 1 January 2021 to 31 March 2021.

A4. The EM&A works for construction noise, water quality, construction waste, coral, marine mammal and White-Bellied Sea Eagle (WBSE) were conducted during the reporting period in accordance with the Updated EM&A Manual.

A5. Weekly site inspections of the construction works were carried out by ET to audit the mitigation measures implementation status. Monthly joint site inspections were carried out by ET and IEC.

1. BASIC PROJECT INFORMATION

1.1. The Reporting Scope

1.1.1 This is the 11th Quarterly EM&A Report for the Project which summarizes the key findings of the EM&A programme during the reporting period from 1 January 2021 to 31 March 2021.

1.2. Project Organization

1.2.2 The Project Organization structure for Construction Phase is presented in **Figure 1.1**.

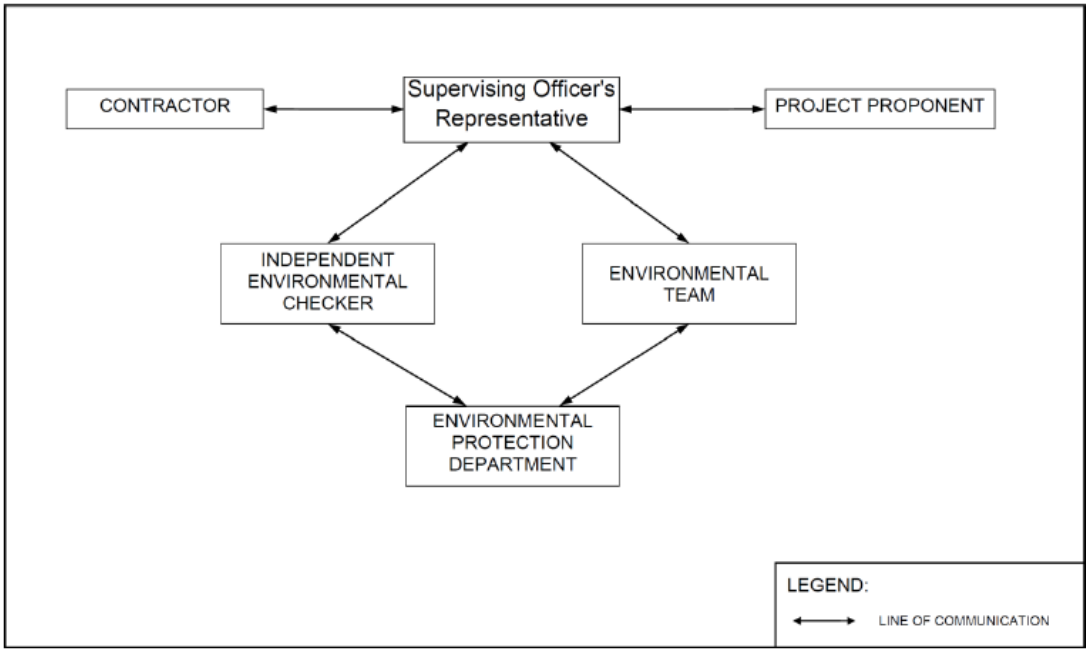


Figure 1.1 Project Organization Chart

1.2.3 Contact details of the key personnel are presented in **Table 1.1** below:

Table 1.1 Contact Details of Key Personnel

Party	Position	Name	Telephone no.
Environmental Protection Department	Project Proponent	Cheng Tak-Kuen	2594-6111
Keppel Seghers – Zhen Hua Joint Venture	Project Manager	Kenny Yu	2192-0606
Acuity Sustainability Consulting Limited	Environmental Team Leader	F.C. Tsang	2698-6833
ERM-Hong Kong, Limited	Independent Environmental Checker	Mandy To	2271-3000

1.3. Summary of Construction Works

1.3.1 Details of the major construction activities undertaken in this reporting period are shown in **Table 1.2** below. The construction programme is presented in **Appendix A**.

Table 1.2 Summary of the Construction Activities Undertaken during the Reporting Period

Location of works	Construction activities undertaken	Remarks on progress
Reclamation area	• Placing Rock Filter • Reclamation Works	• On-going • On-going
Seawall portion	• Installation of caisson • Installation of Chinese Pod • PVD Remedial Works • Installation of Settlement Markers	• On-going • On-going • On-going • On-going

1.3.2 The status for all environmental aspects is presented in **Table 1.3**.

Table 1.3 Summary of Status for Key Environmental Aspects under the Updated EM&A Manual

Parameters	Status
Water Quality	
Baseline Monitoring under Updated EM&A Manual and Detailed Plan on DCM	The baseline water quality monitoring result has been reported in Baseline Monitoring Report and submitted to EPD under FEP Condition 3.4
Impact Monitoring	On-going
Regular DCM Monitoring	All DCM was completed on 14 October 2020, regular DCM monitoring for further 4 weeks (i.e form 16 October 2020 to 14 November 2020) was completed according to the approved Detailed Plan on Deep Cement Mixing
Initial Intensive DCM Monitoring	Conducted from 11 February 2019 to 10 March 2019, had not been resumed since there was no DCM related parameter exceeding the AL/LL.
Baseline Water Quality of wet season	Completed over 13 August 2018 to 7 September 2018
Noise	
Baseline Monitoring	The baseline noise monitoring result has been reported in Baseline Monitoring Report and submitted to EPD under FEP Condition 3.4
Impact Monitoring	On-going
Waste Management	
Mitigation Measures in Waste Monitoring Plan	On-going
Coral	
Pre-translocation Survey and Coral Mapping	The Coral Translocation Plan was submitted and approved by EPD under EP Condition 2.12
Coral Translocation	Completed on 28 March 2018

Parameters	Status
Post-Translocation Coral Monitoring	Survey affected by missing of translocated and tagged coral colonies after typhoons in September 2018, completed on 28 March 2019.
Pre-construction Coral Survey and Tagging	Completed on 26 June 2018
Tagged Coral Monitoring	Survey obstructed due to missing of tagged coral colonies after typhoons in September 2018
Coral Survey and Re-tagging	Re-tagging at Indirect Impact Site was conducted on 23 November and Re-tagging at Control Site was conducted on 3 December 2018.
Post Re-tagging Coral Quarterly Monitoring	On-going
Marine Mammal	
Baseline Monitoring	The baseline marine mammal monitoring result has been reported in Baseline Monitoring Report and submitted to EPD under FEP Condition 3.4
Impact Monitoring	On-going
Land-based Theodolite Tracking	30 days of theodolite surveys were started on 21 Feb 2019 and completed in May 2019.
Passive Acoustic Monitoring	30 days of PAM surveys were started on 1 May 2019 and completed until the end of May 2019.
White-bellied Sea Eagle	
Baseline Monitoring	The baseline WBSE monitoring result has been reported in Baseline Monitoring Report and submitted to EPD under FEP Condition 3.4
Impact Monitoring	On-going
Environmental Audit	
Site Inspection covering Measures of Air Quality, Noise Impact, Water Quality, Waste, Ecological Quality, Fisheries, Landscape and Visual	On-going
Mitigation Measures in Marine Mammal Watching Plan (MMWP)	On-going
Mitigation Measures in Detailed Monitoring Programme on Finless Porpoise (DMPFP)	On-going
Mitigation Measures in Vessel Travel Details	On-going
Daily Site Audit and Monitoring for Dredging Work	Completed

1.3.3 Other than the EM&A works by ET, environmental briefings, trainings and regular environmental management meetings were conducted, in order to enhance environmental awareness and closely monitor the environmental performance of the contractors.

1.3.4 The EM&A programme has been implemented in accordance with the recommendations presented in the approved EIA Report and the Updated EM&A Manual. A summary of updated implementation status of the environmental mitigation measures for the construction phase of the Project during the reporting period is provided in **Appendix B**.

2. MARINE WATER QUALITY MONITORING

2.1 Water Quality Parameters

2.1.1 Measurement of Dissolved Oxygen (DO), Turbidity, Suspended Solids (SS), Salinity and pH have been undertaken at the eleven monitoring stations during general water quality monitoring.

2.1.2 DO, temperature, salinity, turbidity and pH were measured in-situ and the SS was assayed in a HOKLAS laboratory.

2.1.3 In associate with the water quality parameters, other relevant data were also measured, such as monitoring location/position, time, water depth, sampling depth, tidal stages, weather conditions and any special phenomena or work underway nearby were also recorded.

2.1.4 Impact water quality monitoring was conducted 3 days per week in the reporting period. All parameters were monitored during mid-flood and mid-ebb tides at three water depths for water quality monitoring. The interval between two sets of monitoring has not been less than 36 hours.

2.1.5 **Table 2.1** summarizes the monitoring parameters, frequency and duration of the impact water quality monitoring.

Table 2.1 Water Quality Monitoring Parameters, Frequency and Duration

Parameter, unit	Frequency	No. of Depths
• Water Depth(m) • Temperature(^{o}C) • Salinity(ppt) • pH (pH unit) • Dissolved Oxygen (DO)(mg/L and % of saturation) • Turbidity(NTU) • Suspended Solids (SS), mg/L • Current velocity (m/s) • Direction (in NESW)	General water quality monitoring: 3 days per week, at mid-flood and mid-ebb tides	3 water depths: 1m below sea surface, mid-depth and 1m above sea bed. If the water depth is less than 3m, mid-depth sampling only. If water depth is less than 6m, mid-depth may be omitted.

2.2 Water Quality Monitoring Locations

2.2.1 Impact water quality monitoring was conducted at eleven monitoring locations during general water quality monitoring as shown in **Figure 2.1**.

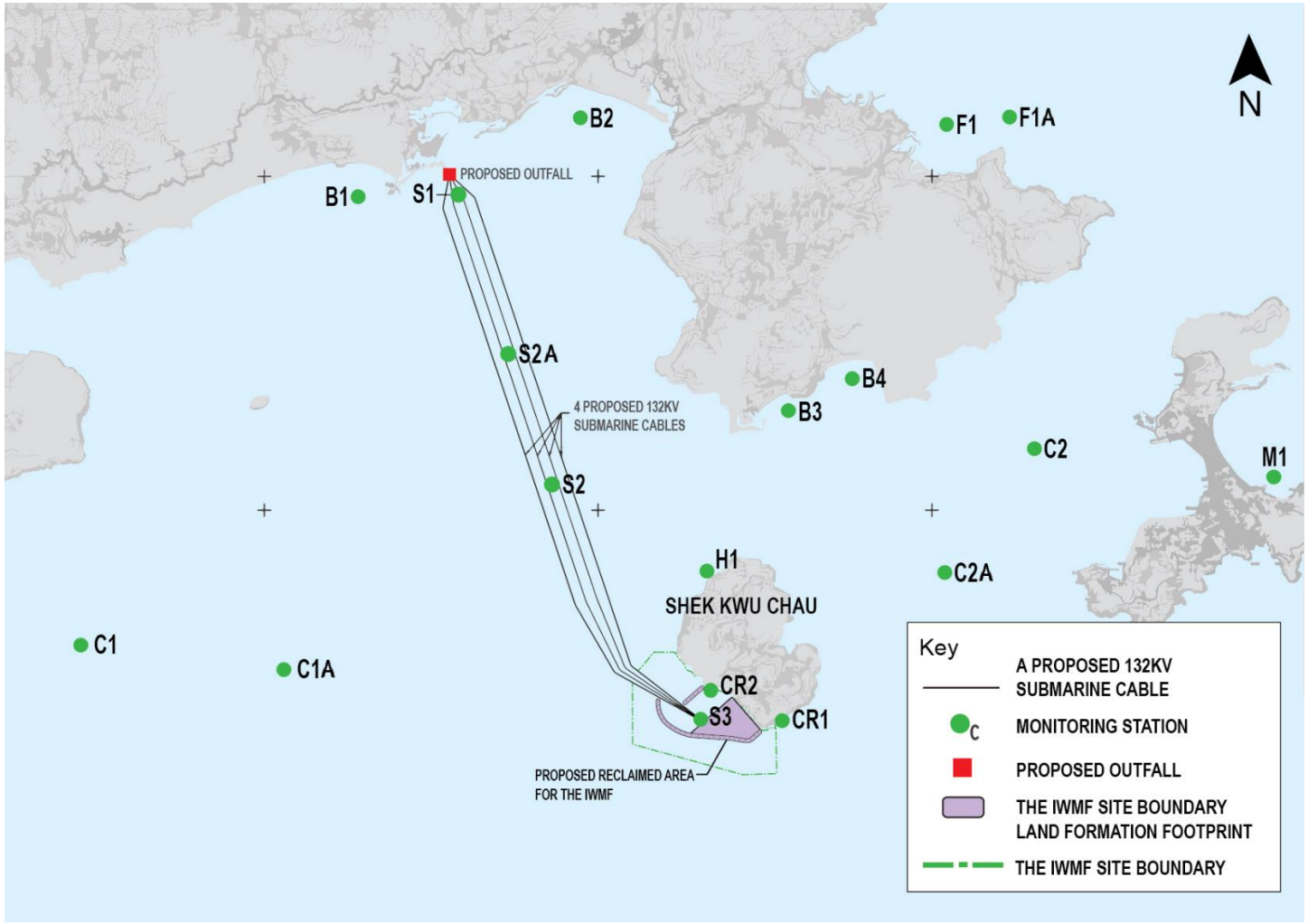


Figure 2.1 Water monitoring locations at Artificial Island near SKC

2.3 Action and Limit Levels

2.3.1 Based on the baseline monitoring data and the derivation criteria presented in the Baseline Monitoring Report, the Action/Limit Levels have been derived and are presented in **Table 2.2** and **Table 2.3** for both dry seasons (October – March) and wet seasons (April – September).

Table 2.2 Derived Action and Limit Levels for Water Quality Monitoring (Dry Season)

Parameters	Action	Limit
Construction Phase Impact Monitoring		
DO in mg/L	≤ 7.13	≤ 4
SS in mg/L	≥ 8 or 120% of control station's SS at the same tide of the same day of measurement, whichever is higher	≥ 10 or 130% of control station's SS at the same tide of the same day of measurement, whichever is higher
Turbidity in NTU	≥ 5.6 or 120% of control station's turbidity at the same tide of the same day of measurement, whichever is higher	≥ 12.81 or 130% of control station's turbidity at the same tide of the same day of measurement, whichever is higher
Temperature in°C	1.8°C above the temperature recorded at representative control station at the same tide of the same day	2°C above the temperature recorded at representative control station at the same tide of the same day

Notes:
i. "Depth-averaged" is calculated by taking the arithmetic means of reading of all three depths.
ii. For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits.
iii. For turbidity, SS and Salinity, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.

Table 2.3 Derived Action and Limit Levels for Water Quality (Wet Season)

Parameters	Action	Limit
Construction Phase Impact Monitoring		
DO in mg/L	≤ 5.28	≤ 4
SS in mg/L	≥ 12 or 120% of control station's SS at the same tide of the same day of measurement, whichever is higher	≥ 14 or 130% of control station's SS at the same tide of the same day of measurement, whichever is higher
Turbidity in NTU	≥ 4.0 or 120% of control station's turbidity at the same tide of the same day of measurement, whichever is higher	≥ 4.3 or 130% of control station's turbidity at the same tide of the same day of measurement, whichever is higher
Temperature in°C	1.8°C above the temperature recorded at representative control station at the same tide of the same day	2°C above the temperature recorded at representative control station at the same tide of the same day

Notes:
i. "Depth-averaged" is calculated by taking the arithmetic means of reading of all three depths.
ii. For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits.
iii. For turbidity, SS and Salinity, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.

2.4 Monitoring Results and Observations

2.4.1 As confirmed by the Contractor on 14 October 2020, all DCM works was completed on 14 October 2020, the post DCM water quality monitoring was completed for further 4 weeks (i.e. from 16 October 2020 to 14 November 2020) according to the approved Detailed Plan on Deep Cement Mixing. As all DCM work and post DCM water quality monitoring were completed on 14 November 2020, no water quality monitoring was conducted at S1, S2A and S3 after 14 November 2020. Monitoring results of 6 key parameters: Salinity, DO, turbidity, SS, pH and temperature for general water quality monitoring during the reporting period, are summarized in **Table 2.4**, and results trending are presented graphically in **Appendix C.**

Table 2.4 Summary of Regular Impact Water Quality Monitoring Results

Locations		Parameters																				
		Salinity (ppt)			Dissolved Oxygen (mg/L)						pH			Turbidity (NTU)			Suspended Solids (mg/L)			Temp. (°C)		
					Surface & Middle			Bottom														
		Jan	Feb	Mar	Jan	Feb	Mar	Jan	Feb	Mar	Jan	Feb	Mar	Jan	Feb	Mar	Jan	Feb	Mar	Jan	Feb	Mar
B1	Avg.	30.73	30.99	30.54	9.30	9.33	9.22	9.27	9.34	9.21	8.37	8.50	8.53	2.9	2.9	2.9	6.00	4.69	5.18	18.6	20.1	22.7
	Min.	29.80	29.47	28.70	7.29	7.65	8.01	6.54	7.65	7.60	8.05	8.11	8.14	2.0	2.0	2.0	2.00	2.00	2.00	15.5	17.6	18.5
	Max.	31.39	32.07	31.84	10.90	11.58	11.07	10.9	11.5	11.0	8.63	8.95	8.86	4.0	3.9	3.9	16.00	28.00	9.00	20.7	21.9	27.9
B2	Avg.	30.76	31.03	30.54	9.24	9.33	9.18	9.37	9.54	9.07	8.36	8.49	8.53	2.9	3.1	3.0	5.97	4.35	5.20	18.5	20.1	22.7
	Min.	29.86	29.45	28.72	7.40	7.83	7.36	6.82	7.60	7.95	8.10	8.09	8.06	1.8	2.4	2.1	2.00	2.00	2.00	15.4	17.7	18.6
	Max.	31.49	32.11	31.96	10.85	10.79	10.95	10.8	11.1	10.7	8.59	8.90	8.83	3.7	3.9	3.8	14.00	11.00	11.00	20.6	21.9	28.0
B3	Avg.	30.72	31.00	30.48	9.42	9.45	9.12	9.29	9.17	9.21	8.37	8.52	8.53	3.0	3.0	2.9	5.89	4.26	5.09	18.5	20.1	22.8
	Min.	29.65	29.49	28.70	7.38	7.77	7.47	6.39	7.69	7.99	8.06	8.10	8.07	1.7	2.1	2.1	2.00	2.00	2.00	15.4	17.7	18.5
	Max.	31.37	32.07	31.78	10.91	11.13	10.99	10.5	11.3	11.1	8.61	8.90	8.86	4.5	4.0	3.8	15.00	9.00	12.00	20.7	22.0	27.9
B4	Avg.	30.72	31.01	30.56	9.39	9.21	9.17	9.39	9.31	9.16	8.37	8.51	8.53	3.0	3.0	3.0	6.07	4.26	5.41	18.5	20.0	22.7
	Min.	29.57	29.57	28.85	6.32	7.70	7.33	7.20	7.66	7.31	8.06	8.15	8.18	2.1	2.0	2.0	2.00	2.00	2.00	15.3	17.8	18.6
	Max.	31.55	32.15	31.83	10.78	10.52	10.80	10.8	10.9	10.8	8.59	8.90	8.90	4.0	3.8	3.8	16.00	9.00	13.00	20.6	21.9	28.0
C1A	Avg.	30.76	30.96	30.54	9.35	9.37	9.12	9.23	9.24	9.20	8.37	8.50	8.52	3.0	3.0	3.0	5.93	4.09	5.39	18.4	20.0	22.6
	Min.	29.62	29.29	28.56	6.39	7.82	7.51	7.68	7.70	7.36	8.06	8.16	8.06	1.9	2.1	1.9	2.00	2.00	2.00	15.2	17.5	18.4
	Max.	31.44	32.15	31.87	10.74	11.57	10.99	10.5	11.7	11.2	8.64	8.92	8.92	4.5	4.0	3.9	15.00	9.00	12.00	20.5	21.9	27.9
C2A	Avg.	30.77	31.01	30.50	9.36	9.32	9.20	9.41	9.32	9.23	8.36	8.50	8.52	3.0	3.0	3.0	5.87	4.93	4.93	18.3	19.9	22.7
	Min.	29.66	29.29	28.65	6.55	7.65	7.75	7.72	7.80	7.32	8.05	8.11	8.07	2.1	2.0	2.1	2.00	2.00	2.00	15.3	18.0	18.4
	Max.	31.58	32.04	31.95	10.68	11.54	10.96	10.7	11.5	11.2	8.58	8.96	8.85	3.9	4.0	4.0	15.00	10.00	9.00	20.5	21.8	27.9
CR1	Avg.	30.77	30.99	30.53	9.27	9.27	9.18	9.38	9.31	9.15	8.37	8.50	8.54	3.0	3.0	2.9	5.82	4.79	5.10	18.3	20.0	22.8
	Min.	29.69	29.44	28.68	6.80	7.58	7.34	6.58	7.79	7.74	8.11	8.10	8.17	2.1	2.0	1.9	2.00	2.00	2.00	15.1	17.9	18.6
	Max.	31.53	32.21	31.69	10.77	11.57	10.84	10.8	11.3	10.9	8.63	8.94	8.89	4.0	4.0	3.9	15.00	10.00	9.00	20.6	21.8	28.2
CR2	Avg.	30.80	31.03	30.57	9.32	9.29	9.19	9.30	9.33	9.17	8.35	8.48	8.53	3.1	3.0	2.9	6.28	5.05	5.10	18.3	20.0	22.8
	Min.	29.71	29.28	28.62	6.97	7.59	7.31	6.44	7.57	7.33	8.05	8.10	8.08	2.0	2.0	2.0	2.00	2.00	2.00	15.2	17.9	18.5
	Max.	31.46	32.18	31.82	10.99	11.14	11.23	10.8	10.9	11.1	8.66	8.97	8.87	4.0	3.9	3.8	18.00	11.00	8.00	20.7	21.9	28.2
F1A	Avg.	30.77	31.03	30.50	9.31	9.29	9.09	9.38	9.33	9.27	8.38	8.48	8.54	2.9	3.0	3.0	6.01	5.05	5.26	18.3	20.0	22.7
	Min.	29.73	29.28	28.57	6.53	7.59	7.75	7.12	7.57	7.93	8.06	8.10	8.14	2.0	2.0	2.0	2.00	2.00	2.00	15.3	17.9	18.6
	Max.	31.53	32.18	31.88	11.01	11.14	10.77	10.7	10.9	10.9	8.60	8.97	8.79	3.7	3.9	3.9	16.00	11.00	10.00	20.6	21.9	28.3

Locations		Parameters																				
		Salinity (ppt)			Dissolved Oxygen (mg/L)						pH			Turbidity (NTU)			Suspended Solids (mg/L)			Temp. (°C)		
					Surface & Middle			Bottom														
		Jan	Feb	Mar	Jan	Feb	Mar	Jan	Feb	Mar	Jan	Feb	Mar	Jan	Feb	Mar	Jan	Feb	Mar	Jan	Feb	Mar
H1	Avg.	30.78	31.00	30.51	9.24	9.38	9.19	9.32	9.40	8.99	8.35	8.51	8.52	2.9	2.9	2.9	6.13	4.62	5.26	18.4	20.0	22.8
	Min.	29.70	29.28	28.74	6.33	7.64	7.78	6.28	7.84	7.34	8.06	8.09	8.07	1.8	2.0	2.0	2.00	2.00	2.00	15.3	17.8	18.7
	Max.	31.52	32.15	31.73	10.70	11.65	11.17	10.8	11.2	10.6	8.63	8.94	8.86	4.3	3.8	3.9	17.00	10.00	12.00	20.8	21.7	28.2
M1	Avg.	30.73	30.99	30.58	9.32	9.29	9.16	9.39	9.44	9.20	8.37	8.50	8.53	3.0	3.0	2.9	6.08	4.81	5.15	18.3	20.0	22.7
	Min.	29.59	29.51	28.58	6.45	7.59	7.34	6.54	7.60	7.25	8.06	8.09	8.06	2.1	2.2	1.9	2.00	2.00	2.00	15.3	17.5	18.4
	Max.	31.49	32.13	31.91	10.80	11.43	11.15	10.8	11.2	11.2	8.63	8.97	8.93	3.9	4.1	3.7	17.00	10.00	11.00	20.5	22.1	28.1

Notes:

i. "Avg", “Min” and “Max” is the average, minimum and maximum respectively of the data from measurements conducted under mid-flood and mid-ebb tides at three water depths, except that of DO where the data for “Surface & Middle” and “Bottom” are calculated separately.

2.4.2 All of the monitoring results for DO, turbidity and temperature obtained in the reporting period complied with their corresponding Action and Limit levels, while numbers of result for SS triggered their corresponding Action or Limit Levels, and investigations were conducted accordingly. For the salinity, pH, DO, turbidity, temperature and SS their trends were fluctuated independent to the site activities and presented in **Appendix C**.

2.4.3 No major pollution source and extreme weather which might affect the results were observed during the impact monitoring.

2.4.4 During the general water quality monitoring period for January to March 2021, fifteen (15) of general water quality monitoring results of suspended solids (SS) obtained had exceeded Action Level. Two (2) of general water quality monitoring results of SS obtained during the reporting period had exceeded the Limit Level.

2.4.5 Details of the exceedance are presented in **Section 8**.

2.4.6 Implemented mitigation measures minimizing the adverse impacts on water are listed in the implementation schedule given in **Appendix B**.

3. NOISE MONITORING

3.1 Noise Monitoring Parameters

3.1.1 Impact noise monitoring was conducted weekly in the reporting period between 0700-1900 hours on normal weekdays. Additional impact noise monitoring was conducted weekly in the reporting period between 1900-0700 hours on all days as well as public holidays and Sundays.

3.1.2 Construction noise level measured in terms of the A-weighted equivalent continuous sound pressure level (L_{Aeq}). $L_{eq\ 30min}$ was used as the monitoring parameter for the time period between 0700 and 1900 hours on normal weekdays. $L_{eq\ 5min}$ was used as the monitoring parameter for the time period between 1900 and 0700 hours as well as public holidays and Sundays. **Table 3.1** summarizes the monitoring parameters, frequency and duration of the impact noise monitoring and additional impact noise monitoring.

Table 3.1 Noise Monitoring Parameters, Time, Frequency and Duration

Monitoring Station	Time	Duration	Parameters
M1/ N_S1, M2/ N_S2, M3/ N_S3	Day time: 0700-1900 hrs (during normal weekdays)	Once per week $L_{eq\ 5min}$/$L_{eq\ 30min}$ (average of 6 consecutive $L_{eq\ 5min}$)	L_{eq}, L_{10} & L_{90}
	Evening time: 1900-2300 hrs (including normal weekdays, also public holidays and Sundays)	Once per week $L_{eq\ 5min}$ (3 sets of $L_{eq\ 5min}$)	L_{eq}, L_{10} & L_{90}
	Night time: 2300-0700 hrs (including normal weekdays, also public holidays and Sundays)	Once per week $L_{eq\ 5min}$ (3 sets of $L_{eq\ 5min}$)	L_{eq}, L_{10} & L_{90}

3.2 Noise Monitoring Locations

3.2.1 Three noise monitoring locations for impact monitoring and additional impact monitoring at the nearby sensitive receivers are shown in **Figure 3.1**

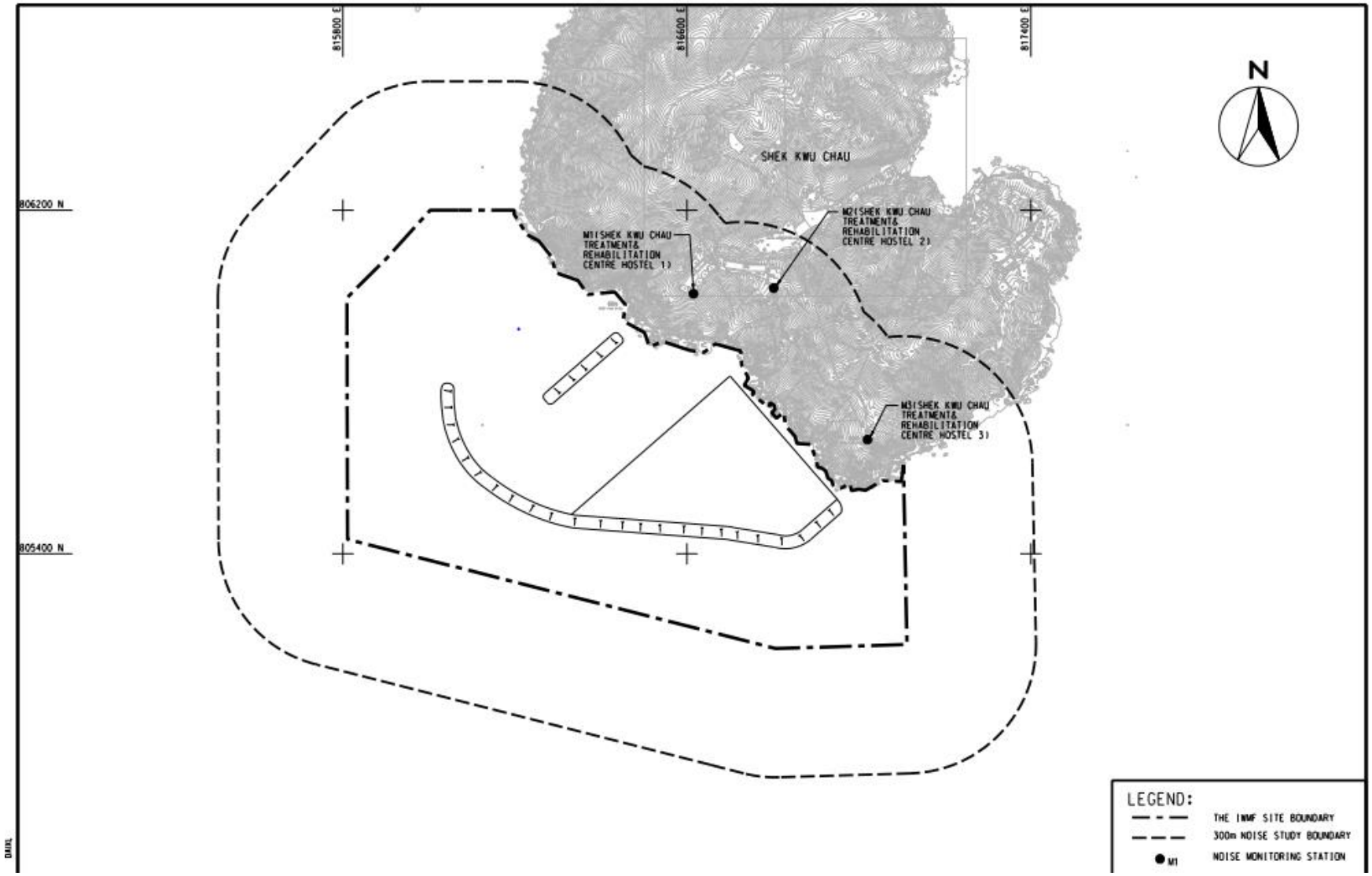


Figure 3.1 Noise monitoring locations at SKC

3.2.2 M1, M2 and M3 are Shek Kwu Chau Treatment and Rehabilitation Centre Hostel 1, 2 and 3 respectively of The Society for the Aid and Rehabilitation of Drug Abusers (SARDA) located at southern part of Shek Kwu Chau.

3.2.3 Measurements at M1 & M3 were conducted at a point 1m from the exterior of the sensitive receivers building façade and at a position 1.2m above the ground. Measurement setup at M3 has been varying with minor adjustment to minimize the disturbance to the users of Treatment Centre. Measurement at M2 was conducted at a point 1m from building façade of the ceiling of 1st floor level for avoidance of mutual disturbance with users of Treatment Centre. The minor adjustment of monitoring locations, which were in favour to mutual convenience with the users of Treatment Centre, were found with no effect on monitoring result based on on-site observation and experience from the Baseline monitoring of the Project.

3.2.4 The noise monitoring stations are summarized in **Table 3.2** below.

Table 3.2 Noise Monitoring Location

Station	NSR ID in EIA Report	Noise Monitoring Location	Type of sensitive receiver(s)	Measurement Type
M1	N_S1	Shek Kwu Chau Treatment & Rehabilitation Centre Hostel 1	Residential	Façade
M2	N_S2	Shek Kwu Chau Treatment & Rehabilitation Centre Hostel 2	Residential	Façade
M3	N_S3	Shek Kwu Chau Treatment & Rehabilitation Centre Hostel 3	Residential	Façade

3.3 Action and Limit Levels

3.3.1 The Action/Limit Levels in line with the criteria of Practice Note for Professional Persons (ProPECC PN 2/93) "Noise from Construction Activities – Non-statutory Controls" and Technical Memorandum on Environmental Impact Assessment Process issued by HKSAR Environmental Protection Department ["EPD"] under the Environmental Impact Assessment Ordinance, Cap 499, S.16 is presented in **Table 3.3.**

Table 3.3 Action and Limit Levels for Noise per Updated EM&A Manual

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

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

3.4 Monitoring Results and Observations

3.4.1 Impact monitoring for noise impact for daytime was conducted in the reporting period. The impact noise levels at Noise Monitoring Stations at SKC (i.e. M1/ N_S1 to M3/ N_S3) are summarized in **Table 3.5**. Additional impact monitoring during restricted hours was conducted in the reporting period. The additional impact noise levels at Noise Monitoring Stations at SKC (i.e. M1/ N_S1 to M3/ N_S3) are summarized in **Table 3.6** and **Table 3.7** respectively. Trending of the noise monitoring results is presented graphically in **Appendix D**.

3.4.2 Major construction activity, major noise source and extreme weather which might affect the results were recorded during the impact monitoring.

3.4.3 According to our field observations, the major noise source identified at the noise monitoring stations in the reporting month are summarised in **Table 3.4**. No noticeable noise source was found near the monitoring station M1, M2 and M3.

Table 3.4 Summary of Field Observation

Monitoring Station	Major Noise Source
M1	Nil
M2	Nil
M3	Nil

No data from impact monitoring during daytime had exceeded the stipulated limit level at 75 dB(A).

Table 3.5 Summary of Impact Noise Monitoring Results during Daytime (0700 – 1900 hrs)

Location	Noise in dB(A)								
	Range of $L_{eq\ 30min}$			Range of $L_{10\ 30min}$			Range of $L_{90\ 30min}$		
	Jan	Feb	Mar	Jan	Feb	Mar	Jan	Feb	Mar
M1	56.7 – 59.6	56.4 – 60.2	55.8 – 60.3	62.3 – 67.2	60.8 – 65.3	59.7 – 64.2	48.3 – 52.7	50.3 – 54.9	52.3 – 55.3
M2	57.4 – 61.2	54.7 – 65.8	55.5 – 58.3	62.1 – 67.5	59.6 – 68.1	58.6 – 63.8	50.1 – 56.7	49.3 – 60.1	50.3 – 55.6
M3	55.7 – 62.1	55.6 – 57.7	61.4 – 67.5	60.4 – 66.3	58.7 – 62.4	62.4 – 69.8	48.6 – 57.6	51.2 – 55.2	56.4 – 60.6

Applicable mitigation measures for construction works are fully implemented as shown in **Appendix B**, where double-glazed windows and air conditioning system were also installed and confirmed operable for the NSRs (N_S1, N_S2 & N_S3).

During the noise monitoring event, frontline staff of ET have inquired the treatment centre users on any noise disturbance from the construction activities at evening and night time, where no complaint and adverse opinions was received.

Data from impact monitoring during evening time and night time were compared with the NCO criteria. Where site inspection and auditing on Contractor's record have shown that the conditions stipulated in the Construction Noise Permit (CNP) issued by the Noise Control Authority for construction works during restricted hours were followed. No inappropriate practice were spotted during evening time and night time construction works, thus the stipulated requirement on noise impact control during night time and evening time was achieved.

Table 3.6 Summary of the Additional Impact Noise Monitoring Results during Evening Time (1900-2300 hrs)

Location	Noise in dB(A)								
	Range of $L_{eq\ 5min}$			Range of $L_{10\ 5min}$			Range of $L_{90\ 5min}$		
	Jan	Feb	Mar	Jan	Feb	Mar	Jan	Feb	Mar
M1	50.6 – 60.2	53.9 – 61.2	52.1 – 63.1	57.2 – 64.8	58.2 – 63.2	56.8 – 64.8	47.6 – 58.3	48.9 – 58.2	47.9 – 59.3
M2	49.9 – 60.3	50.8 – 66.6	50.5 – 58.7	52.4 – 64.2	53.6 – 68.2	54.1 – 60.4	45.7 – 59.4	48.1 – 64.8	48.5 – 53.6
M3	43.0 – 60.0	54.4 – 56.9	54.5 – 59.4	48.7 – 63.8	56.3 – 59.6	58.1 – 62.4	41.7 – 57.3	50.9 – 54.7	52.7 – 56.3

Table 3.7 Summary of Additional Impact Noise Monitoring Results during Night Time (2300 – 0700 hrs)

Location	Noise in dB(A)								
	Range of $L_{eq\ 5min}$			Range of $L_{10\ 5min}$			Range of $L_{90\ 5min}$		
	Jan	Feb	Mar	Jan	Feb	Mar	Jan	Feb	Mar
M1	52.3 – 60.3	46.2 – 58.4	45.6 – 59.9	57.4 – 63.8	52.2 – 61.1	49.3 – 62.3	45.6 – 58.3	44.7 – 52.9	43.2 – 56.7
M2	50.1 – 59.3	47.0 – 63.6	42.9 – 58.0	55.1 – 63.9	52.7 – 65.8	48.3 – 62.5	46.5 – 56.8	45.8 – 58.7	41.5 – 56.1
M3	47.8 – 62.1	53.8 – 58.8	48.9 – 57.7	54.9 – 63.7	56.2 – 63.7	52.0 – 59.6	43.0 – 57.8	47.5 – 53.6	46.8 – 52.7

4. WASTE

4.1 The waste generated from this Project includes inert construction and demolition (C&D) materials, and non-inert C&D materials. Non-inert C&D materials are made up of general refuse, vegetative wastes and recyclable wastes such as plastics and paper/cardboard packaging waste. Steel materials generated from the project are also grouped into non-inert C&D materials as the materials were not disposed of with other inert C&D materials.

4.2 As advised by the Contractor, for C&D waste, no metals were generated and collected by registered recycling collector. No paper was generated on site and collected by registered recycling collector. No plastic waste was collected by registered recycling collector. No chemical waste was collected by licensed chemical waste collector. 650.0m^3 of other types of wastes (e.g. general refuse) were generated on site and disposed of at Landfill. 445,265.5 m^3 of public fill and 80,924.5 m^3 of fill rock were imported during the reporting period.

4.3 Chemical waste generated from the cleaning of oil stain and leakage on deck of barges was stored in the chemical waste storage area on the barges.

4.4 With reference to relevant handling records and trip tickets of this Project, the quantities of different types of waste generated in the reporting period are summarised in **Table 4.1**. Details of cumulative waste management data are presented as a waste flow table in **Appendix E**.

4.5 Although there is not much waste generation in the reporting period from the Project, the Contractor is reminded to sort and store any solid and liquid waste on-site properly prior to disposal.

Table 4.1 Quantities of Waste Generated from the Project

Reporting 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 (see Note 1)	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill			Metals	Paper / cardboard packaging	Plastics (see Note 2)	Chemical Waste		Others, e.g. general refuse (see Note 3)
						Sand	Public Fill	Rock						
	(in ,000m^3)	(in ,000m^3)	(in ,000m^3)	(in ,000m^3)	(in ,000m^3)	(in ,000m^3)			(in ,000kg)	(in ,000kg)	(in ,000kg)	(in ,000kg)	(in ,000L)	(in ,000m^3)
Jan 2021	0	0	0	0	0	0	198.1311	36.4775	0	0	0	0	0	0.0065
Feb 2021	0	0	0	0	0	0	143.9511	20.9960	0	0	0	0	0	0.6305
Mar 2021	0	0	0	0	0	0	103.1833	23.4510	0	0	0	0	0	0.0130

Notes:

1. Broken concrete for recycling into aggregates.
2. Plastic refer to plastic bottles / containers, plastic sheets / foam from packaging materials.
3. Use the conversion factor: 1 full load of dumping truck being equivalent to 6.5 m^3 by volume.

5. CORAL

5.1 Coral Monitoring Parameters

5.1.1 Ten (10) tagged coral colonies at each site of suggested control site and indirect impact site are being monitored weekly for the first month and followed by monthly monitoring for three months. The selected Control Site is located at Yuen Kong Chau of Soko Islands about 7 km away from the project area. After the hitting of super typhoon Mangkhut in mid-September 2018, the coral re-tagging activities at indirect impact site and control site were conducted in November and December 2018 respectively. Tagged coral colonies at the proposed recipient site are being monitored quarterly for one year and the last post-translocation coral monitoring was completed on 28 Mar 2019. The selected recipient site R3 is located the opposite side of the Project area at about 2 km away.

5.1.2 Monitoring recorded the following parameters (using the same methodology adopted during the pre-translocation survey); the size, presence, health conditions (percentage of mortality/bleaching) and percentage of sediment of each trans-located coral colony. The general environmental conditions including weather, sea, and tidal conditions of survey sites were monitored.

5.1.3 Health status of coral was assessed by the following criteria:
Hard coral: Percentage of surface area exhibiting partial mortality and blanched/bleached area of each coral colony and degree of sedimentation.

5.2 Coral Monitoring Locations

Location of the ten tagged coral colonies at each of the proposed indirect impact site, control site, the recipient site R3 and REA transect at proposed indirect impact site are shown in **Figure 5.1**, **Figure 5.2** and **Figure 5.3** respectively:

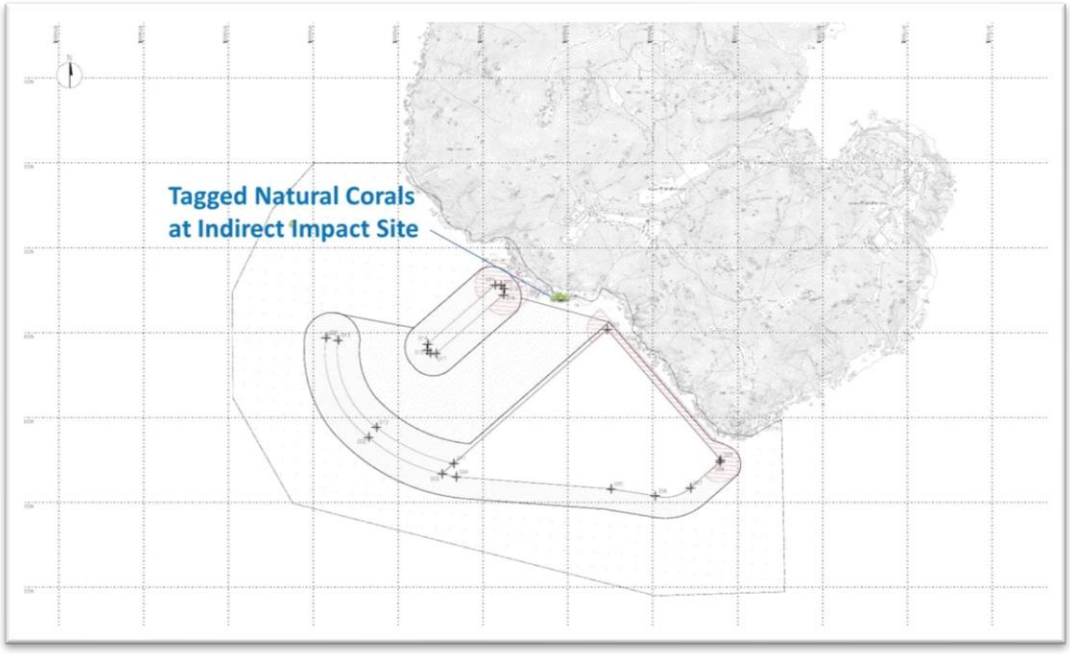


Figure 5.1 Tagged Natural Corals at Indirect Impact Site Near SKC for re-tagging after typhoon Mangkhut

Figure 5.2 Tagged Natural Corals at Control Site Near Yuen Kong Chau for re-tagging after typhoon Mangkhut

Figure 5.3 Tagged Translocation Corals at Recipient Site R3 near SKC

5.2.1 The GPS coordinates of the tagged coral colonies and retagged coral colonies at both indirect impact site, control site and recipient site R3 were shown in **Table 5.1**, **Table 5.2** and **Table 5.3** respectively.

Table 5.1 Tagged Natural Corals during Baseline and Re-tagged Natural Corals after Typhoon Manghkut at Control Site near Yuen Long Chau

Coral # note i	GPS Coordinates	
1	N22°09'45.96"	E113°54'57.81"
2R	N22°11'29.12"	E113°59'09.01"
3	N22°09'45.81"	E113°54'57.78"
4	N22°09'45.70"	E113°54'57.95"
5R	N22°11'29.10"	E113°59'09.18"
6	N22°09'45.75"	E113°54'58.02"
7R	N22°11'29.17"	E113°59'08.86"
7	N22°09'45.65"	E113°54'57.94"
8	N22°09'45.53"	E113°54'57.90"
9	N22°09'46.23"	E113°54'54.70"
10R	N22°11'29.18"	E113°59'08.91"

Notes:

i. The re-tagged corals were marked as ##**R**.

Table 5.2 Re-tagged Natural Corals after Typhoon Manghkut at Indirect Impact Site near SKC

Coral # note i	GPS Coordinates	
11R	N22°11'29.14"	E113°59'08.92"
12R	N22°11'29.12"	E113°59'09.01"
13R	N22°11'29.11"	E113°59'09.07"
14R	N22°11'29.13"	E113°59'09.12"
15R	N22°11'29.10"	E113°59'09.18"
16R	N22°11'29.07"	E113°59'09.23"
17R	N22°11'29.17"	E113°59'08.86"
18R	N22°11'29.14"	E113°59'08.94"
19R	N22°11'29.20"	E113°59'08.81"
20R	N22°11'29.18"	E113°59'08.91"

Notes:

i. The re-tagged corals were marked as ##**R**.

Table 5.3 GPS Coordinates of Recipient Site R3

Site	GPS Coordinates	
R3	N22°11'43.69"	E113°28.99"

5.3 Action and Limit Levels

5.3.1 Monitoring result was reviewed and compared against the below Action Level and Limit Level (AL/LL) as set with the below **Table 5.4** and **Table 5.5**.

Table 5.4 Action and Limit Levels for Construction Phase Coral Monitoring

Parameter	Action Level	Limit Level
Mortality	If during Impact Monitoring a 15% increase in the percentage of partial mortality on the corals occurs at more than 20% of the tagged indirect impact site coral colonies that is not recorded on the tagged corals at the control site, then the Action Level is exceeded.	If during Impact Monitoring a 25% increase in the percentage of partial mortality on the corals occurs at more than 20% of the tagged indirect impact site coral colonies that is not recorded on the tagged corals at the control site, then the Limit Level is exceeded.

Table 5.5 Action and Limit Levels for Post-Translocation Coral Monitoring

Parameter	Action Level	Limit Level
Mortality	If during Post-Translocation Monitoring a 15% increase in the percentage of partial mortality on the corals occurs at more than 20% of the translocated coral colonies that is not recorded on the original corals in the recipient site, then the Action Level is exceeded.	If during Post-Translocation Monitoring a 25% increase in the percentage of partial mortality on the corals occurs at more than 20% of the translocated coral colonies that is not recorded on the original corals in the recipient site, then the Limit Level is exceeded.

5.4 Monitoring Results and Observations

5.4.1 Ten (10) hard coral colonies were monitored at each site of Control and Indirect Impact sites as suggested in the Construction Phase Monitoring Plan. The general health conditions (size, mortality, bleaching and sediment) were recorded and summarized in **Table 5.7** and **Table 5.8**. Photos of each tagged coral colonies were taken during the monitoring activities and shown in **Appendix F.**

5.4.2 The 9th quarterly coral monitoring during construction phase at both Indirect Impact Site and Control Site was conducted on 25 Mar 2021 and the weather condition was summarized in **Table 5.6**.

Table 5.6 Weather Condition for the 9th Quarterly Coral Monitoring during Construction Phase at both Indirect Impact Site and Control Site

Date	Condition	Average Underwater Visibility
25 Mar 2021	- South wind force 3-4 - Sunny period	Less than 0.5m

Table 5.7 Sizes, Condition, Mortality, Bleaching and Sediment of 10 Natural Coral Colonies at Control Site of 9th Quarterly Coral Monitoring (25 Mar 2021) during 31st to 33rd Months Construction Phase Monitoring

Coral #	Species	Size (cm) – Max. Diameter	Condition	Mortality (%)		Bleaching (%)		Sediment (%)	
				Baseline (26 Jun 2018 & 3 Dec 2018)	25 Mar 2021	Baseline (26 Jun 2018 & 3 Dec 2018)	25 Mar 2021	Baseline (26 Jun 2018 & 3 Dec 2018)	25 Mar 2021
1	*Goniopora stutchburyi*	25	Fair	0	0	0	0	0	0
2R	*Goniopora stutchburyi*	10	Good	0	0	0	0	0	0
3	*Psammocora superficialis*	18	Fair	0	0	0	0	0	0
4	*Turbinaria peltata*	13	Good	0	0	0	0	0	0
5R	*Goniopora stutchburyi*	18	Good	0	0	0	0	0	0
6	*Cyphastrea serailia*	43	Fair	0	0	0	0	0	0
7R	*Coscinaraea* sp.	15	Good	0	0	0	0	0	0
8	*Goniopora stutchburyi*	21	Good	0	0	0	0	0	0
9	*Goniopora stutchburyi*	11	Fair	0	0	0	0	0	0
10R	*Goniopora stutchburyi*	20	Good	0	0	0	0	0	0

Notes:

i. The re-tagged corals were marked as ##R.

Table 5.8 Sizes, Condition, Mortality, Bleaching and Sediment of 10 Natural Coral Colonies at Indirect Impact Site of 9th Quarterly Coral Monitoring (25 Mar 2021) during 31st to 33rd Months Construction Phase Monitoring

Coral #	Species	Size (cm) – Max. Diameter	Condition	Mortality (%)		Bleaching (%)		Sediment (%)	
				Baseline (23 Nov 2018)	25 Mar 2021	Baseline (23 Nov 2018)	25 Mar 2021	Baseline (23 Nov 2018)	25 Mar 2021
11R	*Cyphastrea serailia*	48	Good	0	0	0	0	0	0
12R	*Favites chinensis*	27	Good	0	0	0	0	0	0
13R	*Turbinaria peltata*	21	Good	0	0	0	0	0	0
14R	*Favites chinensis*	8	Good	0	0	0	0	0	0
15R	*Goniopora stutchburyi*	11	Good	0	0	0	0	0	0
16R	*Psammocora superficialis*	27	Good	0	0	0	0	0	0
17R	*Favites chinensis*	15	Good	0	0	0	0	0	0
18R	*Psammocora superficialis*	39	Good	0	0	0	0	0	0
19R	*Psammocora superficialis*	42	Good	0	0	0	0	0	0
20R	*Psammocora superficialis*	29	Good	0	0	0	0	0	0

Notes:

i. The re-tagged corals were marked as ##R.

5.4.3 The re-tagging activity had been done at both Indirect Impact Site and Control Site on November 2018 and December 2018 respectively. A total of 20 tagged coral colonies (10 at control site and 10 at indirect impact site including the re-tagged coral colonies) were monitored. Similar to the baseline results performed in June, November and December 2018 and the results of the previous five quarterly coral monitoring during construction phase, the health condition of all tagged and re-tagged coral colonies at Indirect Impact Site and Control site were good in general. No increased mortality was recorded during the survey in March 2021.

5.4.4 No sediment, bleaching or increased mortality in the general condition of coral colonies were observed during the 9th quarterly coral monitoring period. No deterioration of the coral community was observed in the ecological monitoring results when compared with the baseline ecological monitoring results. There is no AL/LL exceedance during the monitoring period.

6. MARINE MAMMAL

6.1 Survey Methods

6.1.1 Vessel-based Line-transect Survey

For the vessel-based marine mammal surveys, the monitoring team adopted the standard line-transect method (Buckland et al. 2001) as same as that adopted during the EIA study and pre-construction phase monitoring to allow fair comparison of marine mammal monitoring results.

Eight transect lines are set at Southeast Lantau survey area, including Shek Kwu Chau, waters between Shek Kwu Chau and the Soko Islands, inshore waters of Lantau Island (e.g. Pui O Wan) as well as southwest corner of Cheung Chau as shown in **Figure 6.1** below:

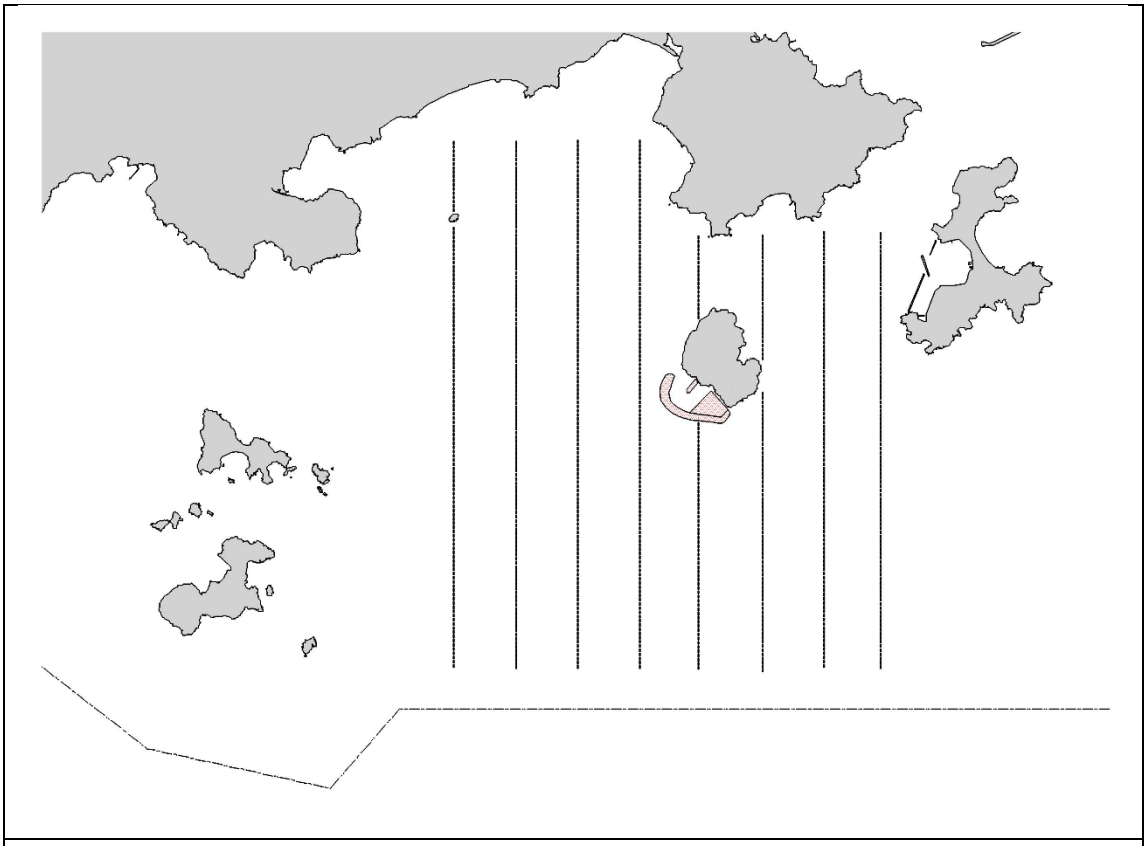


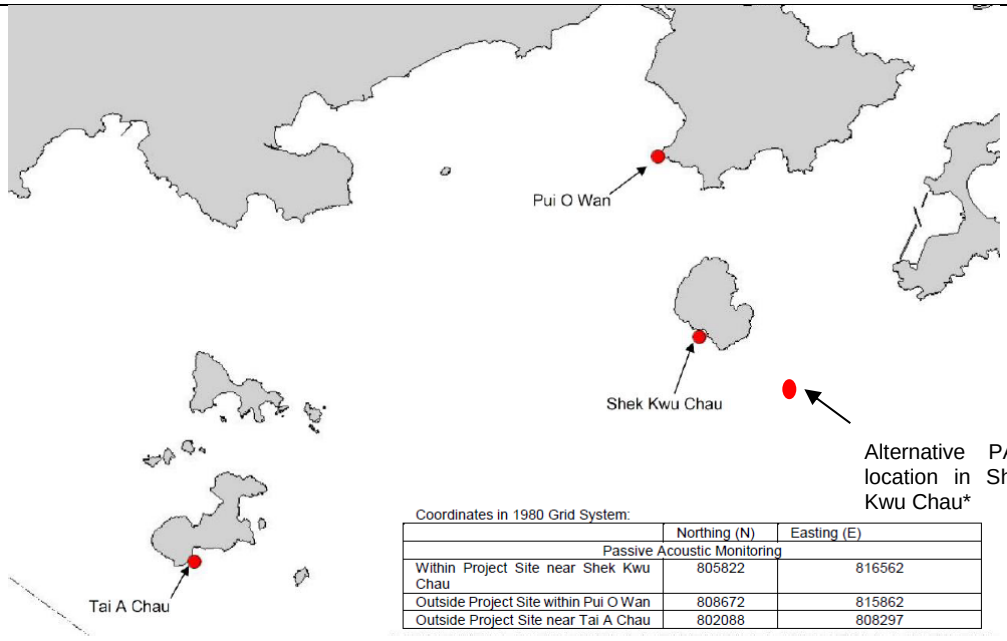
Figure 6.1 Line Transects for Marine Mammal Surveys

In comparison to the baseline monitoring results, results from the analyzed construction phase monitoring data would allow the detection of any changes of their usage of habitat, in response to the scheduled construction works.

6.1.2 Passive Acoustic Monitoring (PAM)

The PAM aims to study the usage of an area by Finless Porpoise by using an array of automated static porpoise detectors (e.g. C-POD) which would be deployed at different locations to detect the unique ultra-high frequency sounds produced by Finless Porpoise. During the construction period, the PAM survey will be conducted including placement of two passive porpoise detectors outside the Project Area as control site (i.e.

within Pui O Wan and to the south of Tai A Chau) and one porpoise detector within the Project Area (i.e. near Shek Kwu Chau) as shown in **Figure 6.2** below.



Coordinates in 1980 Grid System:

	Northing (N)	Easting (E)
Passive Acoustic Monitoring		
Within Project Site near Shek Kwu Chau	805822	816562
Outside Project Site within Pui O Wan	808672	815862
Outside Project Site near Tai A Chau	802088	808297

Note*: The alternative PAM device adjacent to the Project site was deployed from 5 Mar to 11 Apr 2019, which contained a full 37 days acoustic monitoring data set. After the confirmation of loss of the original PAM within the Project site, this data set was proposed to replace that of the original one, as consulted with AFCD accordingly.

Figure 6.2 Locations of Passive Acoustic Monitoring

These three detectors will be deployed on-site to carry out 24-hours monitoring for a period listed as **Table 6.1** below during the construction phase.

Table 6.1 PAM Deployment Period

Season	Months	Deployment Period
Peak Season	December, January, February, March, April or May	At least 30 days during the peak months of porpoise occurrence in South Lantau waters

6.1.2.1 The automated static porpoise detectors shall detect the presence and number of finless porpoise and Chinese White Dolphins respectively over the deployment period, with the false signal such as boat sonar and sediment transport noise distinguished and filtered out. The detectors shall be deployed and retrieved by professional dive team on the seabed of the three selected location shown in **Figure 6.2**. During each deployment, the C-POD unit serial numbers as well as the time and date of deployments shall be recorded. Information including the GPS positions and water depth at each of the deployment locations shall also be obtained.

6.1.2.2 The diel patterns (i.e. 24-hour activity pattern) of finless porpoise occurrence among the three sites at Shek Kwu Chau, Tai A Chau and Pui O Wan shall be analyzed. Peaks and troughs of finless porpoise occurrence per hour of day would be identified and compared with the results obtained from pre-construction monitoring.

6.1.3 Land-based Theodolite Tracking

The Land-based Theodolite Tracking study would use the same station as in the AFCD monitoring study(same as the baseline monitoring location), which is situated at the southwest side of Shek Kwu Chau (GPS position: 22º11.47' N and 113º59.33' E) as shown in below **Figure 6.3**. The station was selected based on its height above

sea level (at least 20 metres), close proximity to shore, and relatively unobstructed views of the entire Project Area to the southwest of Shek Kwu Chau. The height of the Shek Kwu Chau Station established by the HKCRP team is 74.6 m high at mean low water, and only a few hundred metres to the IWMF reclamation site, which is ideal for the purpose for the present behavioural and movement monitoring of finless porpoises as well during construction phase considering there as an un-obstructed vantage point at a height above the Project Site.

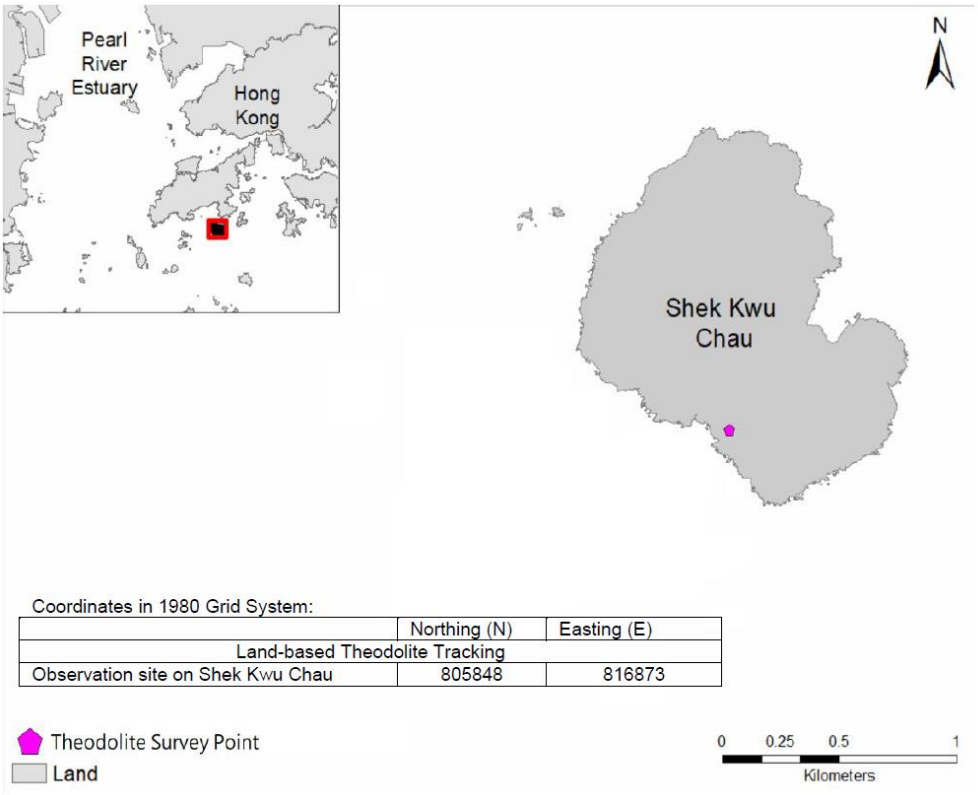


Figure 6.3 Locations of Land-based Theodolite Tracking

6.1.3.1 During the construction phase, Land-based Theodolite Tracking will be carried out for approximately six hours of tracking for each day of field work for a period listed as **Table 6.2** below, preferably at the initial stage of the construction period (i.e. December 2018 to May 2019).

Table 6.2 Land-based Theodolite Tracking Survey Period

Season	Months	Survey Period
Peak Season	December, January, February, March, April or May	30 days during the peak months of porpoise occurrence in South Lantau waters

6.1.3.2 The monitoring period for land-based theodolite tracking will be proposed to be overlapped with the PAM. The monitoring team consists of one experienced theodolite operator and at least two field observers for assistance. To conduct theodolite tracking, the observers will search systematically for Finless Porpoise using the unaided eye and 7 x 50 handheld binoculars on each survey day throughout the study area. When an individual or group of porpoises is located, a theodolite tracking session will be initiated and focal follow methods will be used to track the porpoise(s). Behavioural state data (i.e. resting, milling, travelling, feeding and socializing) shall also be recorded every 5 minutes for the focal individual or group.

Positions of porpoises and boats shall be measured using a digital theodolite connected to a laptop computer. This tracking survey will be conducted during the peak season between December 2018 and May 2019 for 30 surveys spanning across 15-16 weeks during the peak season to provide good temporal coverage during the initial stage of the construction period.

6.2 Specific Mitigation Measures

6.2.1 Monitored exclusion zones

During the installation/re-installation/relocation process of floating type silt curtains, in order to avoid the accidental entrance and entrapment of marine mammals within the silt curtains, a monitored exclusion zone of 250 m radius from silt curtain should be implemented and monitored by competent Marine Mammal Observers (MMOs). Marine Mammal Exclusion Zone (MMEZ) would also be implemented for precautionary purpose for DCM works.

6.2.2 Marine mammal watching plan

Upon the completion of silt curtain installation/re-installation/relocation, marine mammal watching plan would be implemented to observe the presence of any marine mammal around the localized silt curtain or being trapped by the localized silt curtain.

6.3 Results and Observations

6.3.1 Vessel-based Line-transect Survey

Six monthly surveys were conducted during the reporting period. As this is covering designated peak season (December – May), two surveys were completed in January 2021, February 2021 and March 2021 respectively. A total on effort (transects only) survey length of 238.6 km was completed, 192.6 km at Beaufort Sea State 2 or better (**Table 6.3**). Twenty-six (26) Finless Porpoise sightings were recorded, twenty-two (22) "on effort" and four (4) while transiting between transect lines (referred to as secondary line in AFCD reports; and the details of recorded sightings were summarized (**Table 6.4, Figure 6.4**).

Table 6.3 Summary of Vessel-based Line-transect Survey Effort

Date	Area*	Beaufort	Effort (km)	Season	Vessel	Effort Type**
15 Jan 2021	SEL	1	0.0	WINTER	SEAMAR HK	P
		2	24.0			
		3	15.7			
27 Jan 2021	SEL	1	0.0	WINTER	SEAMAR HK	P
		2	20.9			
		3	16.4			
		4	2.8			
5 Feb 2021	SEL	1	5.9	WINTER	SEAMAR HK	P
		2	25.1			
		3	7.1			
23 Feb 2021	SEL	1	30.2	WINTER	SEAMAR HK	P
		2	10.1			
1 Mar 2021	SEL	1	11.6	SPRING	SEAMAR HK	P
		2	23.5			
		3	4.0			

16 Mar 2021	SEL	1	39.5	SPRING	SEAMAR HK	P
		2	1.8			

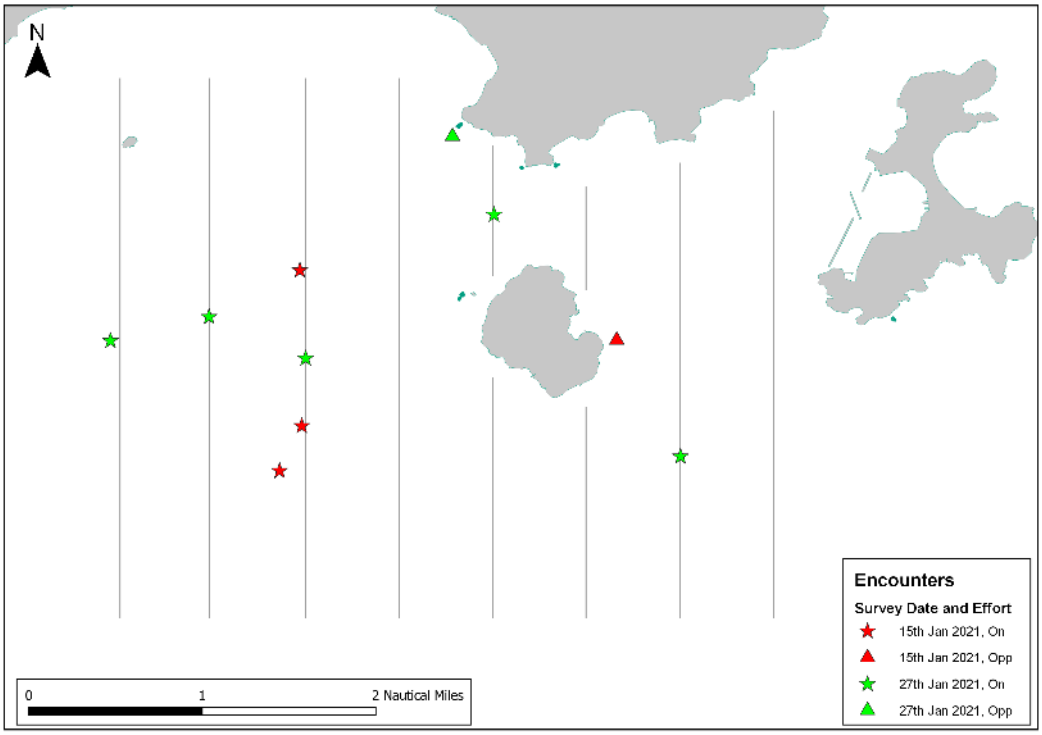
* As shown in **Figure. 6.1**

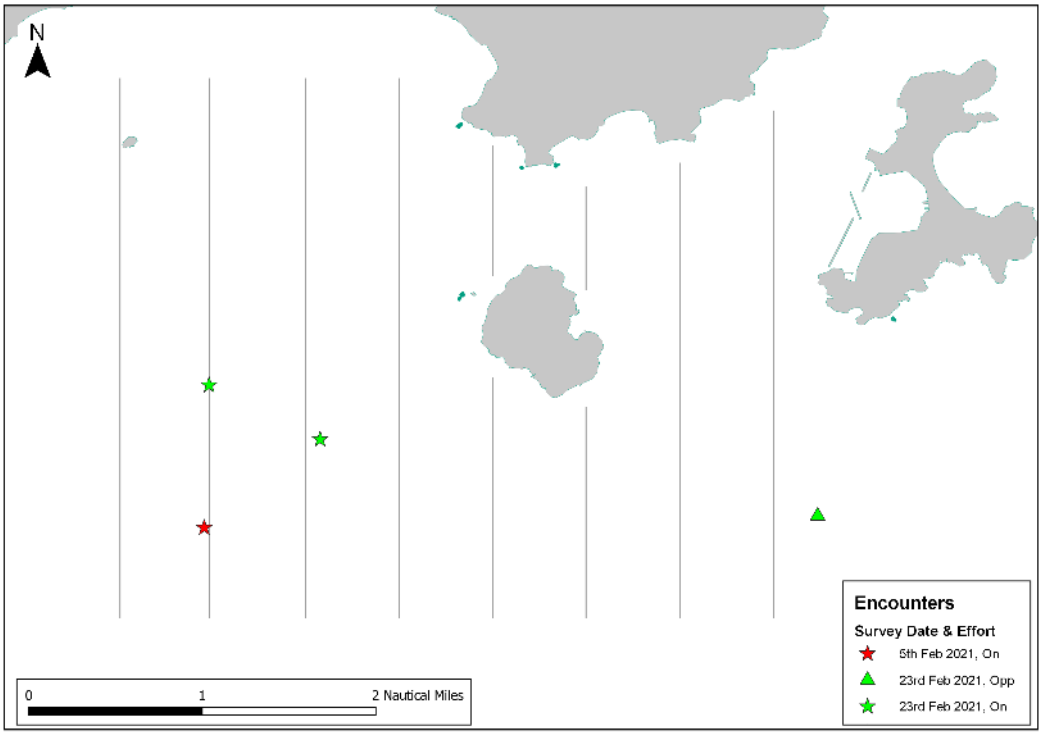
** P (from AFCD) denotes the ON EFFORT survey on the transect line, not the adjoining passages

Table 6.4 Summary of Sightings Recorded during January 2021 to March 2021 of Vessel-based Line-transect Survey Effort

Date	Species	Sighting No.	Time	Group Size	PSD	Behaviour	Lat.	Long.	Area	Effort	Season
15 Jan 2021	Finless Porpoise	71	12:22	2	86	Travelling	22.18079	113.9615	SEL	ON	WINTER
	Finless Porpoise	72	12:29	5	149	Travelling	22.18544	113.9638	SEL	ON	WINTER
	Finless Porpoise	73	12:46	1	23	Travelling	22.20156	113.9636	SEL	ON	WINTER
	Finless Porpoise	74	13:57	2	N/A	Travelling	22.19434	113.9964	SEL	OPP	WINTER
27 Jan 2021	Finless Porpoise	75	11:33	2	11	Travelling	22.18228	114.0030	SEL	ON	WINTER
	Finless Porpoise	76	12:35	1	6	Travelling	22.20732	113.9837	SEL	ON	WINTER
	Finless Porpoise	77	12:45	1	N/A	Travelling	22.21544	113.9794	SEL	OPP	WINTER
	Finless Porpoise	78	13:28	1	29	Travelling	22.19244	113.9642	SEL	ON	WINTER
	Finless Porpoise	79	13:57	2	1	Travelling	22.19674	113.9542	SEL	ON	WINTER
	Finless Porpoise	80	14:28	3	31	Travelling	22.19427	113.9440	SEL	ON	WINTER
5 Feb 2021	Finless Porpoise	81	11:34	2	29	Travelling	22.17491	113.9537	SEL	ON	WINTER
23 Feb 2021	Finless Porpoise	82	10:04	5	N/A	Travelling	22.17613	114.0172	SEL	OPP	WINTER
	Finless Porpoise	83	12:21	1	38	Travelling	22.18406	113.9657	SEL	ON	WINTER
	Finless Porpoise	84	12:46	3	379	Feeding	22.18967	113.9542	SEL	ON	WINTER
1 Mar 2021	Finless Porpoise	85	11:19	1	150	Travelling	22.18679	113.9441	SEL	ON	SPRING
	Finless Porpoise	86	11:29	3	242	Unknown	22.20188	113.9442	SEL	ON	SPRING
	Finless Porpoise	87	11:37	1	55	Unknown	22.20857	113.9442	SEL	ON	SPRING
	Finless Porpoise	88	11:53	2	140	Travelling	22.20651	113.9539	SEL	ON	SPRING
	Finless Porpoise	89	12:08	3	0	Travelling	22.18169	113.9535	SEL	ON	SPRING
	Finless Porpoise	90	12:33	6	175	Travelling	22.19131	113.9645	SEL	ON	SPRING
16 Mar 2021	Finless Porpoise	91	10:54	7	85	Feeding and Travelling	22.18436	114.0028	SEL	ON	SPRING
	Finless Porpoise	92	11:18	9	14	Travelling	22.17651	113.9930	SEL	ON	SPRING
	Finless Porpoise	93	12:32	2	N/A	Travelling	22.22137	113.9681	SEL	OPP	SPRING
	Finless Porpoise	94	12:41	2	100	Travelling	22.20599	113.9639	SEL	ON	SPRING

Finless Porpoise	95	13:39	4	18	Feeding	22.19129	113.9446	SEL	ON	SPRING
Finless Porpoise	96	13:56	3	173	Unknown	22.16725	113.9445	SEL	ON	SPRING





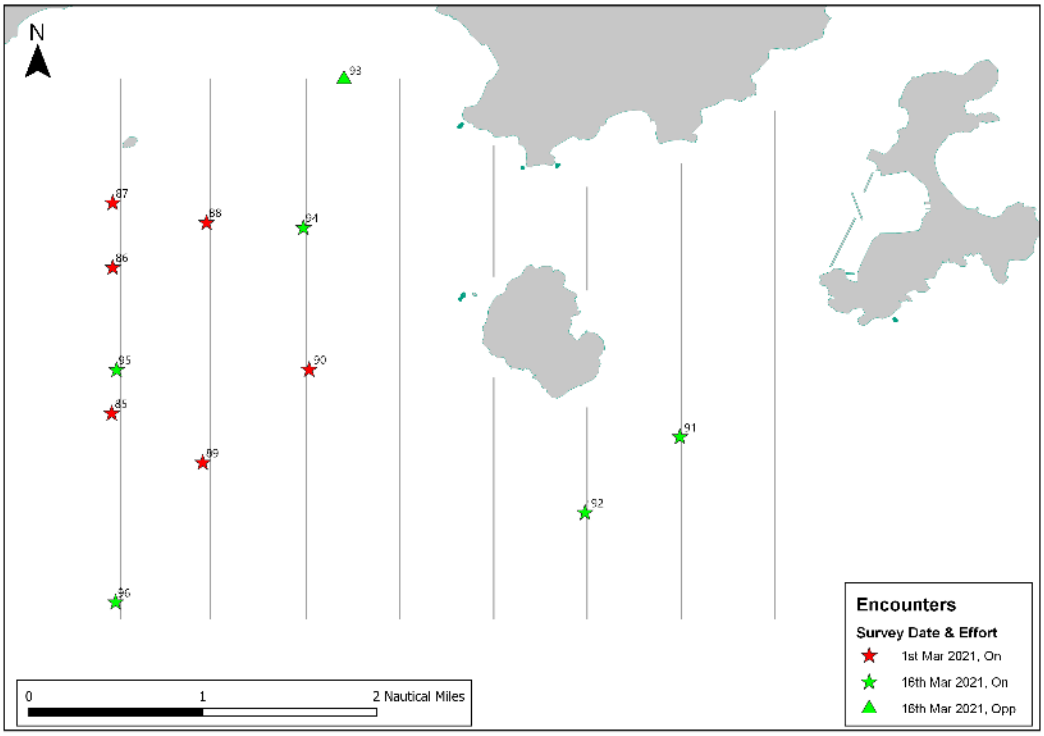


Figure 6.4 Location of sightings recorded during January to March 2021 Vessel-based Line-transect Survey

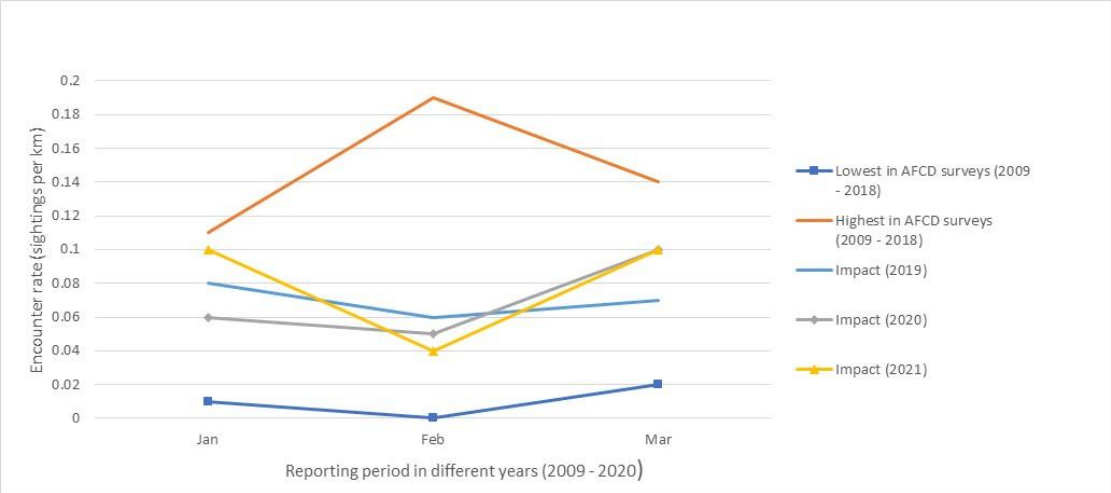


Figure 6.5 Plot of encounter rate during January to March in 2009 – 2021 from different surveys

6.3.1.1 A review of the long term AFCD marine mammal monitoring programme, the EIA and the pre-construction baseline monitoring report for this project was conducted. Both the EIA and the pre-construction baseline monitoring were conducted during the peak porpoise months Dec 2008 to May 2009 and Feb to April 2018, respectively. The AFCD long term monitoring data and impact monitoring in 2019 should be compared directly to Impact Survey results of the reporting periods.

6.3.1.2 A review of the Beaufort Sea state survey conditions between 2009 and 2019 (only data available from AFCD at time of writing; (AFCD 2018; 2017; 2016; 2015; 2014; 2013; 2012; 2011; 2010)) shows that survey conditions in January and March 2021

were within the % limits of previous AFCD surveys, similar to impact monitoring surveys conducted in 2021.

6.3.1.3 A review of all the porpoise sightings in the survey area for January to March between 2009 - 2018 indicates that there were more sighting recorded in January to March. Given the similar survey conditions and the encounter rate recorded for porpoise in the project area during the reporting period, the encounter rate for January to March 2021 was 0.1 sighting km^{-1}, 0.04 sighting km^{-1} and 0.1 sighting km^{-1} respectively (see **Figure 6.5**), it is noted that the encounter rate of impact survey is similar to other years. It is noted that the reporting period was covering peak season and that works at IWMF are increasing, both which may impact encounter rates. It is also noted that the impact survey focuses on a relatively small populations of highly mobile individuals and the survey area conducted for this monitoring is very small. For January to March 2021, as was similar to the case in 2020 impact monitoring conducted by ET and some of long-term monitoring data conducted by AFCD.

6.3.1.4 Data and records of the implemented mitigation measures, including construction vessel routing and speed control, marine mammal watching plan and avoidance of noisy work during the peak season, are collected form the Contractor and now under detail review. As surveys continue for this project, data shall be constantly re-evaluated across survey months to discern trends and impacts, if any.

6.3.2 PAM and Land-based Theodolite Tracking

6.3.2.1 30 days of PAM surveys were started at 1 May 2019 and completed until the end of May 2019. Multiple PAM systems were deployed at three sites. The PAM system located at the IWMF was lost, however, an alternative data set has been identified. The PAM systems at the two control sites Tai A Chau and Pui O were recovered on 3 August 2019. A summary of marine mammal detections shows that porpoise were recorded every day of deployment at each site, but at varying frequencies. The detailed theodolite result was presented in 17th Monthly EM&A report (November 2019) while detailed PAM result was presented in 18th Monthly EM&A report (December 2019).

6.3.2.2 For the baseline study, the DPM for each site was 11,160 (Shek Kwu Chau), 16,089 (Tai A Chau) and 3645 (Pui O Wan), totalling 30,894 DPM across all three sites, compared to DPMs of 4740 (Shek Kwu Chau), 7725 (Tai A Chau) and 23,986 (Pui O Wan), totalling 36,451 DPM, for the impact phase study. As the impact phase study was longer than the baseline study, it is not appropriate to directly compare total counts of DPM, however, the DPM rate (the average number of detections per day) for each site can be more directly compared. During the baseline study, Shek Kwu Chau averaged 338.2 DPM per day compared to 124.8 DPM per day, during the impact phase study. This showed a decrease in the daily average of porpoise detection at Shek Kwu Chau. During the baseline study, Tai A Chau averaged 487.6 DPM per day compared to 179.7 DPM per day, during the impact phase study. This showed a decrease in the daily average of porpoise detection at Tai A Chau. During the baseline study, Pui O Wan averaged 98.5 DPM per day compared to 557.8 DPM per day, during the impact phase study. This showed a significant increase in the daily average of porpoise detections at Pui O Wan (**Table 6.6**).

6.3.2.3 Overall, the PAM study showed that porpoise continue to consistently utilise the Shek Kwu Chau habitat immediately adjacent to the IWMF construction activities, although to a lesser degree than that prior to construction activities. In addition, the Pui O Wan site, which is 2.5 km away from the IWMF construction area, was also consistently utilised during the impact phase PAM study. A continued assessment of

fine scale habitat use, particularly through PAM which yields large quantities of data, would allow a more comprehensive assessment of the EIA predictions.

Table 6.6 Summary Statistic Comparison of Baseline (2018) and Impact Phase (2019) Passive Acoustic Monitoring

Baseline data									
Site	**Unit ID**	**Start**	**End**	**Days**	**DPD % Days**	**Total DPM**	**DPM /Day**	**% False Positive DPM**	**Time Lost %**
Shek Kwu Chau	2891	2018/02/09	2018/03/13	32.11	100	11160	338.2	0.0	1.00
Tai A Chau	2868	2018/02/09	2018/03/13	32.5	100	16089	487.6	1.0	2.00
Pui O Wan	2891	2018/03/13	2018/04/17	34.85	97.3	3645	98.5	2.0	31.87
Total				99.01		30894	312.0		
Impact Phase									
Site	**Unit ID**	**Start**	**End**	**Days**	**DPD % Days**	**Total DPM**	**DPM /Day**	**% False Positive DPM**	**Time Lost %**
Shek Kwu Chau	IWMF_BU_20190305_01	2019/03/05	2019/04/11	37.91	100	4740	124.8	0.0	0
Tai A Chau	IWMF_20190411_02	2019/04/11	2019/05/23	41.94	100	7725	179.7	0.0	0
Pui O Wan	IWMF_20190411_01	2019/04/11	2019/05/23	42.02	100	23986	557.8	0.0	0
Total				121.9		36451	299.1		

6.3.2.4 Theodolite surveys were completed in May 2019. In total, thirty four days of theodolite tracking were completed between February - May 2019, comprising 167 hours and 49 minutes of observation. No Chinese white dolphin was observed and only one finless was recorded. The finless porpoise encounter rate was calculated as 0.006 finless porpoise per hour, in all weather conditions.

6.3.2.5 A total of 2620 vessels of ten different types were observed and tracked within or in the proximity of the IWMF construction site. These comprised fishing boats (236), speed boats (29), container boats (155), government boats (22), high speed ferries (53), others (13) and IWMF-Related construction platforms (974), tug boats(240), transportation boats (363), construction boats (531 and approximately 8 buoys were present marking the site boundary. The detailed Land-based Theodolite Tracking Report was presented in 5th Quarterly EM&A report and 17th Monthly EM&A report.

6.3.2.6 The baseline theodolite tracking was conducted immediately prior to and during the site preparation activities of the site. The baseline data records a decrease in porpoise sightings as site preparation activities commenced and notes that the decrease was most likely due to the onset of site preparation activities. The impact theodolite tracking conducted for this study records a marked increase in the number of Project related vessels and platforms and, in agreement with baseline conclusions, shows a concomitant decrease in finless porpoise sightings.

6.3.2.7 Photo records of the marine mammal monitoring taken during the reporting period are presented in **Appendix G**.

6.3.3 Specific Mitigation Measures

6.3.3.1 Silt curtains were deployed for sand blanket laying works and reclamation during the reporting period. At least two MMO were on duty for continuous monitoring of the Marine Mammal Exclusion Zone (MMEZ) for reclamation works and installation/re-installation/relocation process of silt curtains, and the marine mammal trapping checking and silt curtains inspection in accordance with the Detailed Monitoring Programme of Finless Porpoise and Marine Mammal Watching Plan respectively during January and February 2021. Trainings for the MMO were provided by the ET prior to the aforementioned works, with a cumulative total of 98 individuals being trained and the training records kept by the ET. From the Marine Mammal Watching

observation records and MMEZ monitoring log records, no Finless Porpoise or other marine mammals were observed within or around the MMEZ and silt curtains in the reporting months.

7. WHITE-BELLIED SEA EAGLE

7.1 WBSE Monitoring Parameters

7.1.1 The objective of the construction phase monitoring should be to verify the utilisation of the area by WBSE, their responses to construction disturbance, as well as the effectiveness of the proposed mitigation measures. Throughout the construction phase, field surveys should be conducted twice per month during their core breeding season (from December to May), and once per month outside their core breeding season (from June to November). The monitoring frequency should be increased to weekly during the incubation period of each year. In order to confirm their foraging ground near the construction site, it is necessary to conduct daily monitoring during the first week of nestling period in each year.

7.1.2 Since the location of the WBSE nest was located at the southwest of SKC within the hillside shrubland, it is impossible to observe the eggs during incubation period. Therefore, monitoring with increased frequency during incubation period could not be carried out. Daily monitoring will be carried out once any chick is recorded during the monitoring day.

7.2 Results and Observations

7.2.1 Twelve monitoring for monthly construction phase were conducted during the reporting period. Since there is no landing point along the western part of SKC, boat survey was used for the monitoring survey. In order to increase the chance of finding the WBSEs, monitoring survey was carried out either early in the morning or later in the afternoon. The weather conditions of monitoring survey were shown in **Table 7.1**.

Table 7.1 Weather Conditions during the WBSE Monitoring (Monthly)

Date	Condition	Temperature (℃)
7th January 2021	- Northeast wind force 4 to 5 - Sunny	23
14th January 2021	- Northeast wind force 4 - Sunny	20
21st January 2021	- East wind force 4 - Sunny	23
27th January 2021	- East wind force 3 to 4 - Sunny	25
4th February 2021	- East wind force 4 - Sunny	25
10th February 2021	- Northeast wind force 3 to 4 - Sunny	24
18th February 2021	- East wind force 4 to 5 - Sunny	24
25th February 2021	- North wind force 4 to 5 - Sunny	23
4th March 2021	- East force 4, - Sunny period	27
11th March 2021	- South wind force 3 to 4 - Sunny	25
18th March 2021	- North wind force 4 to 5 - Sunny	28
25th March 2021	- Northeast wind force 4 - Sunny	26

7.2.2 Two WBSE adults were recorded near SKC island during the survey in January, February and March 2021. No abnormal behaviour of the adults were recorded during the reporting period. Adult WBSE was moved back to old nest for incubation since December 2020. Since no chick was recorded during the monitoring period, it is believed that incubation period was failed in March. All marine works during the monitoring period did not show any impact to the WBSE.

7.2.3 No disturbances from anthropogenic activities on the island were recorded during the monitoring survey. No invasion of other fauna species was recorded as well.

Figure 7.1 Location of WBSE Nest on SKC

7.2.4 No invasion of other fauna species was recorded and no sign of using the construction site as a foraging ground was recorded as well.

7.2.5 Since the incubation period was failed, the construction phase monitoring will be continued at twice per month frequency during the breeding season (between December to May) in order to monitor the incubation period, utilization of the area by WBSE and their responses to construction disturbance.

7.2.6 Photo records of the WBSE taken during the reporting period are presented in **Appendix H**.

8. SUMMARY OF MONITORING EXCEEDANCE, COMPLAINTS, NOTIFICATION OF SUMMONS AND PROSECUTIONS

8.1 No exceedance of the Action and Limit Levels of the regular construction noise, coral and WBSE monitoring was recorded during the reporting period.

8.2 During the general water quality monitoring period for January to March 2021, fifteen (15) of general water quality monitoring results of suspended solids (SS) obtained had exceeded Action Level. Two (2) of general water quality monitoring results of SS obtained during the reporting period had exceeded the Limit Level.

8.3 Investigations carried out immediately for each of the exceedance cases during the reporting period had shown that these exceedances were unrelated to the Project.

8.4 The Contractor has been reminded that all measures recommended in the deposited Silt Curtain Deployment Plan shall be fully and properly implemented for the Project as per Clause 2.6A of the FEP.

8.5 No notification of summons and prosecution was received in the reporting period.

8.6 Statistics on complaints, notifications of summons and successful prosecutions are summarized in **Appendix I**.

9. EM&A SITE INSPECTION

9.1 Site inspections were carried out on a weekly basis to monitor the implementation of proper environmental pollution control and mitigation measures under the Contract. Site inspections were carried out at the Site Portions 1, 1A, 1B, 7 & 8 during the reporting period. Portions 1, 1A & 1B were the sites near SKC within the Site boundary. Portion 7 was temporary storage place for site investigation bore log samples at Tung Chung. Portion 8 was public fill reception point near Tseung Kwan O Area 137 Fill Bank.

9.2 Joint site inspection with IEC was carried out on a monthly basis.

9.3 Minor deficiencies were observed during weekly site inspection. Key observations during the site inspections are summarized below:

- Prevention actions for oil/chemical spillage were not carried out properly
- Soil was accumulated on the edge of the barge
- NRMM label was not displayed on PME

9.4 The Contractor had rectified all of the observations identified during environmental site inspections in the reporting period.

9.5 According to the EIA Study Report, Environmental Permit, contract documents and Updated EM&A Manual, the mitigation measures detailed in the documents, except the silt curtain system, are implemented as much as practical during the reporting period. An updated Implementation Status of Environmental Mitigation Measures (EMIS) is provided in **Appendix B**.

10. CONCLUSION AND RECOMMENDATIONS

10.1 This 11th Quarterly Environmental Monitoring and Audit (EM&A) Report summarizes the EM&A works undertaken during the period from 1 January 2021 to 31 March 2021 in accordance with the Updated EM&A Manual and the requirement under EP-429/2012/A and FEP-01/429/2012/A.

10.2 Construction noise, water quality, construction waste, coral, marine mammal and White-Bellied Sea Eagle (WBSE) monitoring were carried out in the reporting period. No project-related exceedance of the Action and Limit Levels was recorded during the reporting period.

10.3 Weekly environmental site inspections were conducted during the reporting period. Environmental deficiencies were observed during site inspection and were rectified.

10.4 According to the environmental site inspections performed in the reporting period, the Contractor was reminded to pay attention on on-site housekeeping, and the proper storage of the chemicals and construction waste.

10.5 Regarding to the deployment of silt curtains as a principal water quality impact mitigation measures on various marine works, the Contractor has been reminded to follow strictly to the design and checking procedure as specified in the Silt Curtain Deployment Plan. The Contractor has been reminded to pay extra attention on the status of deployed silt curtain. The Contractor is reminded that all measures recommended in the deposited silt curtain deployment plan shall be fully and properly implemented for the Project as per EP condition 2.6 of the FEP.

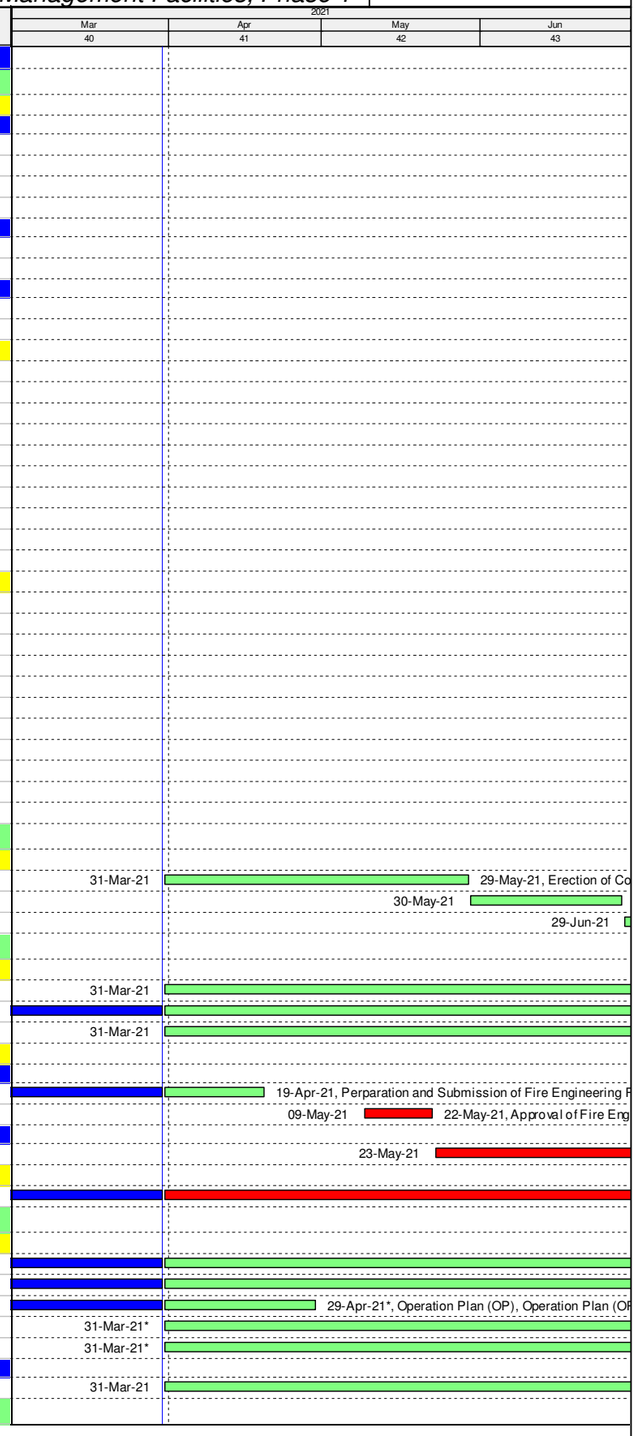
10.6 No environmental complaint was received in the reporting period.

10.7 No notification of summons or prosecution was received since commencement of the Contract.

10.8 The ET will keep track on the construction works to confirm compliance of environmental requirements and the proper implementation of all necessary mitigation measures.

Appendix A Master Programme

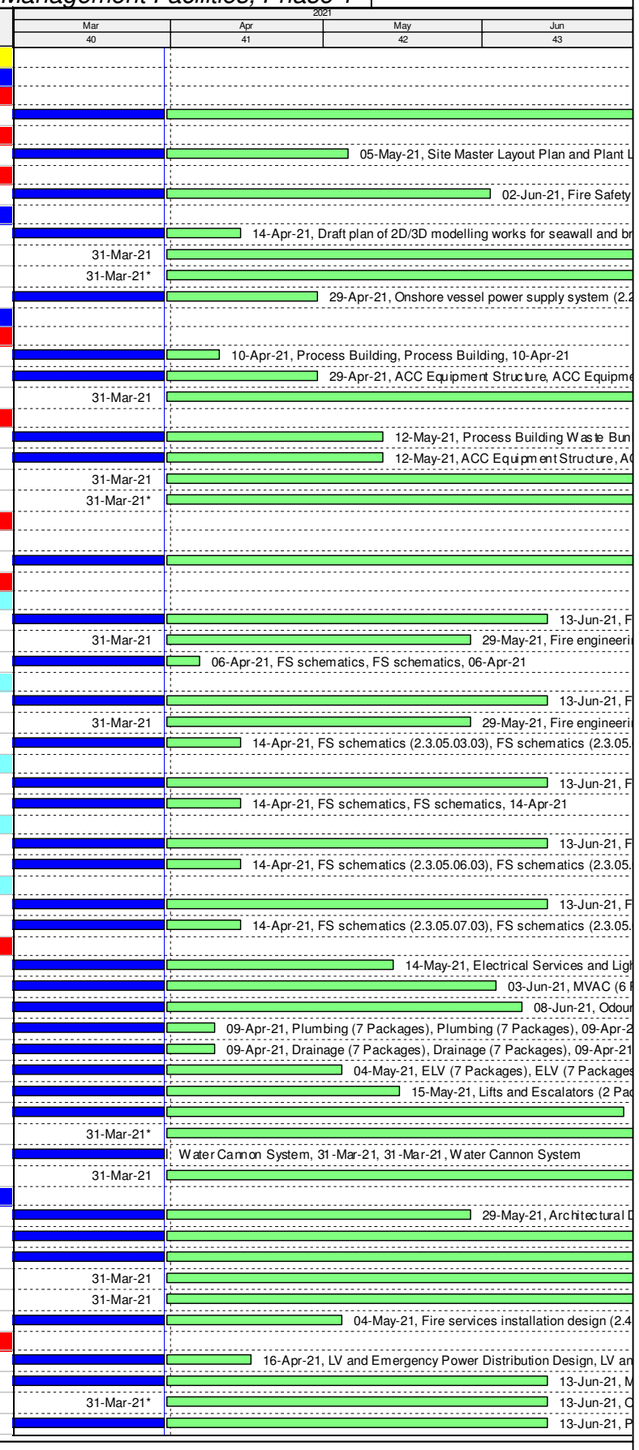
Activity ID	Activity Name	Original Duration	At Completion Duration	Duration % Complete	Activity % Complete	Remaining Duration	Primary Constraint	Current Start	Current Finish	Late Start	Late Finish	Total Float	M39 Remarks
EP_SP_66_12-WP-6-M40	Programme for Design and Construction Works WP6-M40	3468	3468	35.32%		2243		22-Nov-17 A	21-May-27	30-Mar-21	21-May-27	0	
EP_SP_66_12-WP-6-M40.01	Key Dates	3468	3468	45.67%		1884		22-Nov-17 A	21-May-27	30-Mar-22	21-May-27	0	
EP_SP_66_12-WP-6-M40.01.1	Contractual Key Dates	2794	2794	87.33%		354		22-Nov-17 A	16-Jul-25	27-Jul-24	16-Jul-25	0	
EP_SP_66_12-WP-6-M40.01.1.1	Design and Construction Phase	2738	2738	89.12%		298		22-Nov-17 A	21-May-25	27-Jul-24	21-May-25	0	
01-1000	Contract Award/Date of Acceptance of Tender	0	0	100%	100%	0	Mandatory Start	22-Nov-17 A					
01-1010	Date of Commencement of the Design and the Works	0	0	100%	100%	0	Mandatory Start	15-Dec-17 A					
01-1015(3)(M12)	Original Substantial Completion of the Works	0	0	0%	0%	0	Mandatory Finish		27-Jul-24*		27-Jul-24	0	
01-1020	Extended Substantial Completion of The Works	0	0	0%	0%	0	Mandatory Finish		21-May-25*		21-May-25	0	
EP_SP_66_12-WP-6-M40.01.1.3	Extension of Time Granted	298	298	0%		298		27-Jul-24	21-May-25	27-Jul-24	21-May-25	0	
01-1015-1(3)(M12)	Extension of time granted (Claim No.1 to No.53) *Claim No.9 excluded	298	298	0%	0%	298		27-Jul-24	21-May-25	27-Jul-24	21-May-25	0	
01-1060	Issuance of FS Certificate	0	0	0%	0%	0	Finish On or Befc		29-Oct-24*		29-Oct-24	0	
EP_SP_66_12-WP-6-M40.01.1.2	Operation Phase	56	56	0%		56		22-May-25	16-Jul-25	22-May-25	16-Jul-25	0	
01-1030	Commencement of Operation	0	0	0%	0%	0	Start On or Before	22-May-25*		22-May-25		0	
01-1230	Issue Certificate of Completion of the Works (56 days after Substantial Completion)	0	0	0%	0%	0	Finish On or Befc		16-Jul-25*		16-Jul-25	0	
EP_SP_66_12-WP-6-M40.01.2	Planned Completion Dates	1612	1612	0%		1612		21-Dec-22	21-May-27	20-Mar-23	21-May-27	0	
01-1030(5a)	Grid Connection Agreement (GCA)	0	0	0%	0%	0	As Late As Poss		18-Jan-24		19-Feb-24	32	
01-1040	Incoming Power Energization to IWMF Substation	0	0	0%	0%	0			16-Jul-24		17-Aug-24	32	
01-1050	Export Power to Grid	0	0	0%	0%	0			15-Aug-24		27-Dec-24	134	
01-1070	Completion of Civil Provision for Transmission	0	0	0%	0%	0			21-Dec-22		20-Mar-23	89	
01-1080	Commencement of C1.3.4.11 System Commissioning Test	0	0	0%	0%	0		01-Sep-24		01-Sep-24		0	
01-1090	Completion of C1.3.4.11 System Commission Test	0	0	0%	0%	0	Finish On or Befc		08-Nov-24*		08-Nov-24	0	
01-1100	Completion of 90 Days Plant Commissioning Test	0	0	0%	0%	0			21-May-25		21-May-25	0	
01-1110(3)(M15)	Issue of Certificate of Substantial Completion for the Works	0	0	0%	0%	0	Finish On or Befc		16-Jul-25*		16-Jul-25	0	
01-1110-1(5a)	Completion of 180 Days for Installation, T&C of CCTV System and Onshore Power Syst	0	0	0%	0%	0	Finish On or Befc		17-Nov-25*		17-Nov-25	0	
01-1110-2(5a)	Replacement of Onshore Cranes within 2 yrs at Portion 2	0	0	0%	0%	0	Finish On or Befc		21-May-27*		21-May-27	0	
EP_SP_66_12-WP-6-M40.01.3	Dates of Site Pocessions	2715	2715	57.5%		1154		15-Dec-17 A	22-May-25	30-Mar-22	22-May-25	0	
01-1120	Possession of Portion 1	0	0	100%	100%	0			15-Dec-17 A				
01-1130	Possession of Portion 1A	0	0	100%	100%	0			15-Dec-17 A				
01-1140	Possession of Portion 1B	0	0	100%	100%	0			15-Dec-17 A				
01-1150	Possession of Portion 2	0	0	0%	0%	0		22-May-25		22-May-25		0	
01-1160	Possession of Portion 3	0	0	0%	0%	0	As Late As Poss		24-Mar-22		30-Mar-22	6	
01-1170	Possession of Portion 4	0	0	0%	0%	0	As Late As Poss		24-Mar-22		30-Mar-22	6	
01-1180	Possession of Portion 5	0	0	0%	0%	0	As Late As Poss		24-Mar-22		30-Mar-22	6	
01-1190	Possession of Portion 6	0	0	0%	0%	0	As Late As Poss	13-Jun-24		13-Jun-24		0	
01-1200	Possession of Portion 7	0	0	100%	100%	0	Finish On or Befc		05-Jan-18 A				
01-1210	Possession of Portion 7A	0	0	100%	100%	0	Finish On or Befc		07-Dec-18 A				
01-1210(5a)	Possession of Portion 8	0	0	100%	100%	0	Start On	29-Apr-20 A					
EP_SP_66_12-WP-6-M40.02	Contract Preliminaries	939	939	0%		939		31-Mar-21	25-Oct-23	03-May-21	22-Mar-24	149	
EP_SP_66_12-WP-6-M40.02.3	Erection of Concrete Batching Plant on Artificial Island	939	939	0%		939		31-Mar-21	25-Oct-23	03-May-21	22-Mar-24	149	
02-1080	Erection of Concrete Batching Plant	60	60	0%	0%	60	As Late As Poss	31-Mar-21	29-May-21	03-May-21	01-Jul-21	33	
02-1090	Commissioning of Concrete Batching Plant	30	30	0%	0%	30	As Late As Poss	30-May-21	28-Jun-21	02-Jul-21	31-Jul-21	33	
02-1100	Opertaion of Concrete Batching Plant	849	849	0%	0%	849		29-Jun-21	25-Oct-23	25-Nov-21	22-Mar-24	149	
EP_SP_66_12-WP-6-M40.03	Licence/Permit Applications	1005	2338	0%		1513		27-Dec-18 A	21-May-25	31-Mar-21	21-May-27	730	
EP_SP_66_12-WP-6-M40.03.1	License/Permit for Construction	935	2120	0%		1513		02-Aug-19 A	21-May-25	06-Aug-21	21-May-27	730	
03-1090	EPD APCO(SP) License for Concrete Batching Plant	120	120	0%	0%	120		31-Mar-21	28-Jul-21	24-Nov-23	22-Mar-24	968	
03-1360(2)	CNP for 24Hrs	182	2120	0%	0%	1513		02-Aug-19 A	21-May-25	31-Mar-23	21-May-27	730	
03-1370_1(M34)	Landscape and Visual Plan	180	180	0%	0%	180		31-Mar-21	26-Sep-21	06-Aug-21	01-Feb-22	128	
EP_SP_66_12-WP-6-M40.03.4	Fire Services Installations (FSI) Certificatie	550	864	74%		143		10-Apr-19 A	20-Aug-21	19-Apr-21	20-Aug-21	0	
EP_SP_66_12-WP-6-M40.03.4.3	Fire Engineering Report	550	774	90.36%		53		10-Apr-19 A	22-May-21	19-Apr-21	22-May-21	0	
05-3000	Perparation and Submission of Fire Engineering Report to FSD	550	741	96.36%	96.36%	20		10-Apr-19 A	19-Apr-21	19-Apr-21	08-May-21	19	
05-4450	Approval of Fire Engineering Report by FSD	14	14	0%	0%	14		09-May-21	22-May-21	09-May-21	22-May-21	0	
EP_SP_66_12-WP-6-M40.03.4.1	Fire Services Installations Certificate Inspection	90	90	0%		90		23-May-21	20-Aug-21	23-May-21	20-Aug-21	0	
03-1555(5a)	General Building Plans and FSI Provision Design Submission to FSD	90	90	0%	0%	90		23-May-21	20-Aug-21	23-May-21	20-Aug-21	0	
EP_SP_66_12-WP-6-M40.03.5	Air Pollution Control (Specified Processes) License	600	1021	67.33%		196		27-Dec-18 A	12-Oct-21	31-Mar-21	12-Oct-21	0	
03-1730(3)	Early Engagement With EPD SP Licensing Department for Information exchange	600	1021	67.33%	67.33%	196		27-Dec-18 A	12-Oct-21	31-Mar-21	12-Oct-21	0	
EP_SP_66_12-WP-6-M40.04	General Submissions	1379	1475	79.99%		276		18-Dec-17 A	31-Dec-21	01-Apr-21	21-May-25	1237	
EP_SP_66_12-WP-6-M40.04.1	Contractor's Plans Submission and Approval	1379	1475	79.99%		276		18-Dec-17 A	31-Dec-21	01-Apr-21	21-May-25	1237	
04-1100(1)	Technical Resources Plan (TRP)	240	1474	0%	30%	276		19-Dec-17 A	31-Dec-21	18-Jan-23	20-Oct-23	658	
04-1200(1)	Works Plan (WP)	90	1475	0%	30%	276		18-Dec-17 A	31-Dec-21	18-Jan-23	20-Oct-23	658	
04-1400(1)	Operation Plan (OP)	240	1229	87.5%	87.5%	30	Finish On or Befc	18-Dec-17 A	29-Apr-21*	01-Apr-21	30-Apr-21	1	
04-1450(1)	Asset Management Plan (AMP)	120	120	0%	0%	120	Start On or Before	31-Mar-21*	28-Jul-21	21-Nov-21	20-Mar-22	235	
04-1500(1)	Handback Plan (HP)	120	120	0%	0%	120	Start On or Before	31-Mar-21*	28-Jul-21	21-Nov-21	20-Mar-22	235	
EP_SP_66_12-WP-6-M40.04.1.1	Provisional Assessment (PA)	180	180	0%		180		31-Mar-21	26-Sep-21	23-Nov-24	21-May-25	1333	
04-1500(1)10	Preliminary Assessmant	180	180	0%	0%	180		31-Mar-21	26-Sep-21	23-Nov-24	21-May-25	1333	
EP_SP_66_12-WP-6-M40.05	Design Submissions	1292	1296	82.43%		227		27-Apr-18 A	12-Nov-21	30-Mar-21	21-May-27	2016	



3-Month Rolling Programme (March 2021)

Remaining Work
Actual Work
Critical Remaining Work
Milestone
Actual Milestone
Critical Milestone

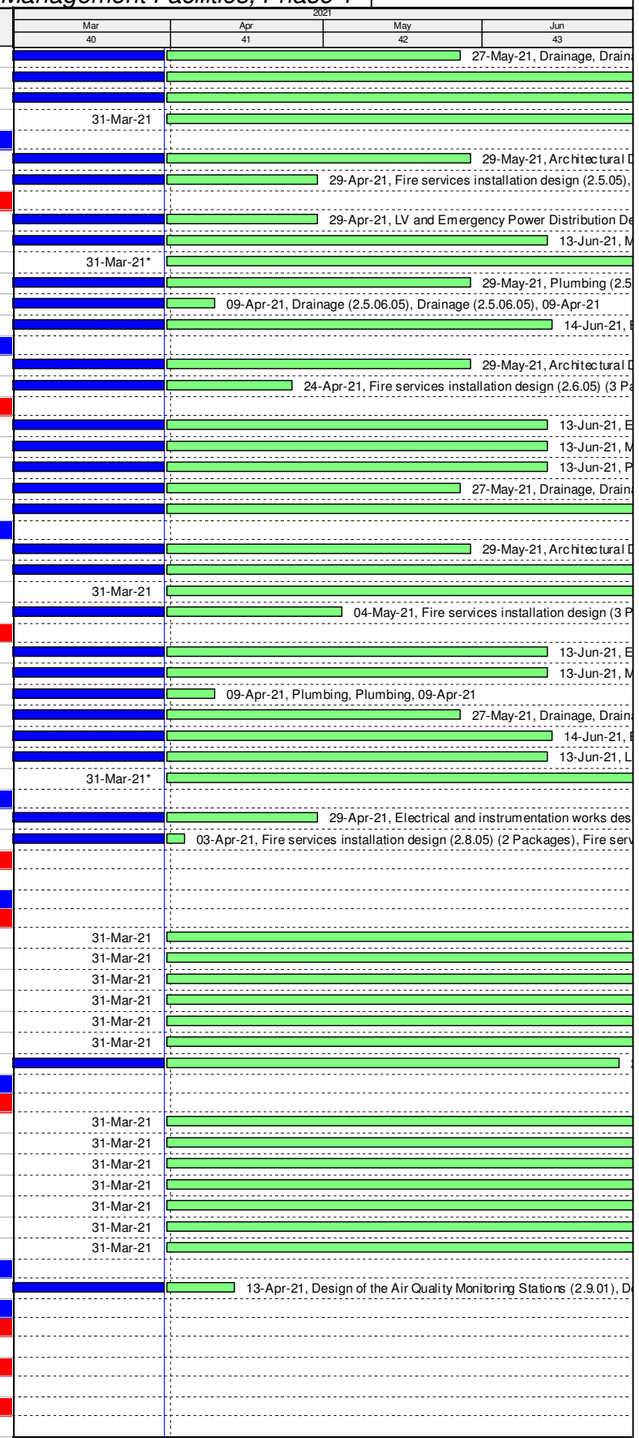
Activity ID	Activity Name	Original Duration	At Completion Duration	Duration % Complete	Activity % Complete	Remaining Duration	Primary Constraint	Current Start	Current Finish	Late Start	Late Finish	Total Float	M39 Remarks
EP_SP_66_12-WP-6-M40.05.01 AIP Design Package Submissions		1245	1249	85.54%		180		27-Apr-18 A	26-Sep-21	30-Mar-21	07-Apr-23	558	
EP_SP_66_12-WP-6-M40.05.01.01 AIP Process and Layout Design (2.1)		1111	1174	90.55%		105		27-Apr-18 A	13-Jul-21	12-Apr-21	23-Jul-22	375	
EP_SP_66_12-WP-6-M40.05.01.01.2 MSW treatment process design for mechanical treatment (2.1.02)		105	251	0%		105		05-Nov-20 A	13-Jul-21	10-Apr-22	23-Jul-22	375	
05-1090	Mechanical Treatment Plant	105	251	0%	5%	105		05-Nov-20 A	13-Jul-21	10-Apr-22	23-Jul-22	375	
EP_SP_66_12-WP-6-M40.05.01.01.6 Site Master Layout Plan and Plant Layout (2.1.06)		60	1105	40%		36		27-Apr-18 A	05-May-21	12-Apr-21	17-May-21	12	
05-3020	Site Master Layout Plan and Plant Layout	60	1105	40%	65%	36		27-Apr-18 A	05-May-21	12-Apr-21	17-May-21	12	
EP_SP_66_12-WP-6-M40.05.01.01.7 Statutory Fire Compliance (2.1.25)		30	785	0%		64		10-Apr-19 A	02-Jun-21	18-Jun-21	20-Aug-21	79	
05-2990	Fire Safety Compliance	30	785	0%	0%	64		10-Apr-19 A	02-Jun-21	18-Jun-21	20-Aug-21	79	
EP_SP_66_12-WP-6-M40.05.01.02 AIP Ground Treatment, Reclamation, Seawall, Breakwater, Berth (2.2)		990	1198	86.36%		135		03-May-18 A	12-Aug-21	24-Apr-21	20-Apr-22	251	
05-1280	Draft plan of 2D/3D modelling works for seawall and breakwater design (2.2.05)	135	1078	88.89%	80%	15	Start On	03-May-18 A	14-Apr-21	17-Jun-21	01-Jul-21	78	
05-2960-1(M37)	Mooring Dolphins	135	135	0%	0%	135		31-Mar-21	12-Aug-21	07-Dec-21	20-Apr-22	251	
05-2970	Onshore crane Facility (2.2.11)	135	135	0%	0%	135	Start On or After	31-Mar-21*	12-Aug-21	09-May-21	20-Sep-21	39	
05-2980	Onshore vessel power supply system (2.2.12)	135	253	77.78%	77.78%	30		20-Aug-20 A	29-Apr-21	24-Apr-21	23-May-21	24	
EP_SP_66_12-WP-6-M40.05.01.03 AIP Incineration Plant Buildings (2.3)		990	1129	86.36%		135		11-Jul-18 A	12-Aug-21	30-Mar-21	26-Oct-22	440	
EP_SP_66_12-WP-6-M40.05.01.03.1 General Layout Drawings and Fire Saftey Strategy (2.3.00)		990	1045	86.36%		135		03-Oct-18 A	12-Aug-21	30-Apr-21	12-Oct-21	61	
05-1210	Process Building	135	921	91.85%	5%	11	Start On or After	03-Oct-18 A	10-Apr-21	30-Apr-21	10-May-21	30	
05-1220	ACC Equipment Structure	135	209	77.78%	77.78%	30		03-Oct-20 A	29-Apr-21	24-Jul-21	22-Aug-21	115	
05-1250	Chimney and viewing platform	135	135	0%	0%	135		31-Mar-21	12-Aug-21	31-May-21	12-Oct-21	61	
EP_SP_66_12-WP-6-M40.05.01.03.2 Foundation design (2.3.01)		317	367	57.41%		135		11-Aug-20 A	12-Aug-21	12-Jul-21	23-Aug-22	376	
05-3030	Process Building Waste Bunker, Tipping Hall, Basin Area and Workshop	43	275	0%	5%	43	Start On or After	11-Aug-20 A	12-May-21	12-Jul-21	23-Aug-21	103	
05-3040	ACC Equipment Structure	43	275	0%	0%	43	Start On or After	11-Aug-20 A	12-May-21	28-Sep-21	09-Nov-21	181	
05-3070	Chimney and viewing platform	135	135	0%	0%	135		31-Mar-21	12-Aug-21	14-Oct-21	25-Feb-22	197	
05-3090	Reception Pavilion	135	135	0%	0%	135	Start On or After	31-Mar-21*	12-Aug-21	11-Apr-22	23-Aug-22	376	
EP_SP_66_12-WP-6-M40.05.01.03.3 Structural design (2.3.02)		617	805	78.12%		135		31-May-19 A	12-Aug-21	14-Jun-22	26-Oct-22	440	
05-1300	ACC Equipment Structure	98	59	100%	0%	0	Start On or After	23-Jul-19 A	20-Sep-19 A				
05-1330	Chimney and viewing platform	167	805	19.16%	5%	135	Start On or After	31-May-19 A	12-Aug-21	14-Jun-22	26-Oct-22	440	
EP_SP_66_12-WP-6-M40.05.01.03.6 Fire services installation design (2.3.05)		691	899	89.15%		75		28-Dec-18 A	13-Jun-21	23-Apr-21	20-Aug-21	68	
EP_SP_66_12-WP-6-M40.05.01.03.6.1 Process Building (2.3.05.01)		691	886	89.15%		75		10-Jan-19 A	13-Jun-21	01-May-21	20-Aug-21	68	
05-1510	Fire Systems	105	886	28.57%	5%	75		10-Jan-19 A	13-Jun-21	07-Jun-21	20-Aug-21	68	
05-1520	Fire engineering	60	60	0%	0%	60		31-Mar-21	29-May-21	22-Jun-21	20-Aug-21	83	
05-1530	FS schematics	105	818	93.33%	5%	7		10-Jan-19 A	06-Apr-21	01-May-21	07-May-21	31	
EP_SP_66_12-WP-6-M40.05.01.03.6.3 Turbin Hall Building (2.3.05.03)		608	899	87.66%		75		28-Dec-18 A	13-Jun-21	23-Apr-21	20-Aug-21	68	
05-5400	Fire Systems (2.3.05.03.01)	105	899	28.57%	5%	75		28-Dec-18 A	13-Jun-21	07-Jun-21	20-Aug-21	68	
05-5410 (M22)	Fire engineering	60	60	0%	0%	60		31-Mar-21	29-May-21	22-Jun-21	20-Aug-21	83	
05-5420 (M22)	FS schematics (2.3.05.03.03)	105	839	85.71%	5%	15		28-Dec-18 A	14-Apr-21	23-Apr-21	07-May-21	23	
EP_SP_66_12-WP-6-M40.05.01.03.6.5 Elevated Drive Way and Associated Structures (2.3.05.05)		180	546	58.33%		75		16-Dec-19 A	13-Jun-21	23-Apr-21	20-Aug-21	68	
05-5445 (M22)	Fire Systems	180	546	58.33%	5%	75		16-Dec-19 A	13-Jun-21	07-Jun-21	20-Aug-21	68	
05-5450 (M22)	FS schematics	180	486	91.67%	5%	15		16-Dec-19 A	14-Apr-21	23-Apr-21	07-May-21	23	
EP_SP_66_12-WP-6-M40.05.01.03.6.6 Reception Pavilion (2.3.05.06)		270	619	72.22%		75		04-Oct-19 A	13-Jun-21	23-Apr-21	20-Aug-21	68	
05-5460 (M22)	Fire Systems (2.3.05.06.01)	270	619	72.22%	5%	75		04-Oct-19 A	13-Jun-21	07-Jun-21	20-Aug-21	68	
05-5470 (M22)	FS schematics (2.3.05.06.03)	270	559	94.44%	5%	15		04-Oct-19 A	14-Apr-21	23-Apr-21	07-May-21	23	
EP_SP_66_12-WP-6-M40.05.01.03.6.7 Compressor & Closed Circuit (2.3.05.07)		140	642	46.43%		75		11-Sep-19 A	13-Jun-21	23-Apr-21	20-Aug-21	68	
05-5480 (M22)	Fire Systems (2.3.05.07.01)	140	642	46.43%	25%	75		11-Sep-19 A	13-Jun-21	07-Jun-21	20-Aug-21	68	
05-5490 (M22)	FS schematics (2.3.05.07.03)	140	582	89.29%	25%	15		11-Sep-19 A	14-Apr-21	23-Apr-21	07-May-21	23	
EP_SP_66_12-WP-6-M40.05.01.03.7 Building services design (excluding fire services installation desi		953	1099	88.98%		105		11-Jul-18 A	13-Jul-21	30-Mar-21	16-Dec-21	156	
05-1550	Electrical Services and Lighting	150	856	70%	5%	45	Start On or After	10-Jan-19 A	14-May-21	27-Apr-21	10-Jun-21	27	
05-1560	MVAC (6 Packages)	105	876	38.1%	38.1%	65	Start On or After	10-Jan-19 A	03-Jun-21	06-Jun-21	09-Aug-21	67	
05-1570	Odour Control	135	1064	48.15%	5%	70	Start On or After	11-Jul-18 A	08-Jun-21	01-Jun-21	09-Aug-21	62	
05-1580	Plumbing (7 Packages)	210	816	95.24%	65%	10	Start On or After	15-Jan-19 A	09-Apr-21	02-May-21	11-May-21	32	
05-1590	Drainage (7 Packages)	210	816	95.24%	25%	10	Start On or After	15-Jan-19 A	09-Apr-21	02-May-21	11-May-21	32	
05-1600	ELV (7 Packages)	135	846	74.07%	65%	35	Start On or After	10-Jan-19 A	04-May-21	21-Jul-21	24-Aug-21	112	
05-1610	Lifts and Escalators (2 Packages)	135	503	65.93%	5%	46	Start On or After	30-Dec-19 A	15-May-21	26-Apr-21	10-Jun-21	26	
05-1630	Building Management System (BMS) (7 Packages)	135	249	33.33%	5%	90	Start On or After	23-Oct-20 A	28-Jun-21	18-Sep-21	16-Dec-21	171	
05-1770	Vehicle & Container Wash System	105	105	0%	0%	105	Start On or After	31-Mar-21*	13-Jul-21	02-Apr-21	15-Jul-21	2	
05-1770-1(M20)	Water Cannon System	135	659	100%	5%	0	Start On or After	11-Jun-19 A	31-Mar-21	30-Mar-21	30-Mar-21	0	
05-1770-2 (5a)	Process CCTV System	105	105	0%	0%	105		31-Mar-21	13-Jul-21	02-Apr-21	15-Jul-21	2	
EP_SP_66_12-WP-6-M40.05.01.04 AIP Mechanical Treatment Plant Building (2.4)		885	1071	84.75%		135		07-Sep-18 A	12-Aug-21	03-Apr-21	22-Aug-22	375	
05-1640	Architectural Design (2.4.00)	105	996	42.86%	65%	60		07-Sep-18 A	29-May-21	11-Mar-22	09-May-22	345	
05-1650	Foundation design (2.4.01)	105	738	0%	5%	105	Start On or After	07-Jul-19 A	13-Jul-21	19-Dec-21	02-Apr-22	263	
05-1660	Structural design (2.4.02)	457	785	77.02%	5%	105	Start On or After	21-May-19 A	13-Jul-21	10-May-22	22-Aug-22	405	
05-1670	Electrical and instrumentation works design (2.4.03)	105	105	0%	0%	105		31-Mar-21	13-Jul-21	05-May-21	17-Aug-21	35	
05-1680	Mechanical works design (2.4.04)	105	105	0%	0%	105		31-Mar-21	13-Jul-21	20-May-21	01-Sep-21	50	
05-1690	Fire services installation design (2.4.05) (3 Packages)	105	777	66.67%	0%	35	Start On or After	20-Mar-19 A	04-May-21	03-Apr-21	07-May-21	3	
EP_SP_66_12-WP-6-M40.05.01.04.7 Building services design (excluding fire services installation desi		836	877	83.85%		135		20-Mar-19 A	12-Aug-21	12-Apr-21	02-Oct-21	51	
05-1700	LV and Emergency Power Distribution Design	17	759	0%	5%	17	Start On or After	20-Mar-19 A	16-Apr-21	25-May-21	10-Jun-21	55	
05-1710	MVAC	135	812	44.44%	5%	75	Start On or After	25-Mar-19 A	13-Jun-21	27-May-21	09-Aug-21	57	
05-1720	Odour Control	75	75	0%	0%	75	Start On or After	31-Mar-21*	13-Jun-21	27-May-21	09-Aug-21	57	
05-1730	Plumbing	135	817	44.44%	5%	75	Start On or After	20-Mar-19 A	13-Jun-21	12-May-21	25-Jul-21	42	



3-Month Rolling Programme (March 2021)

Remaining Work
Actual Work
Critical Remaining Work
Milestone
Actual Milestone
Critical Milestone

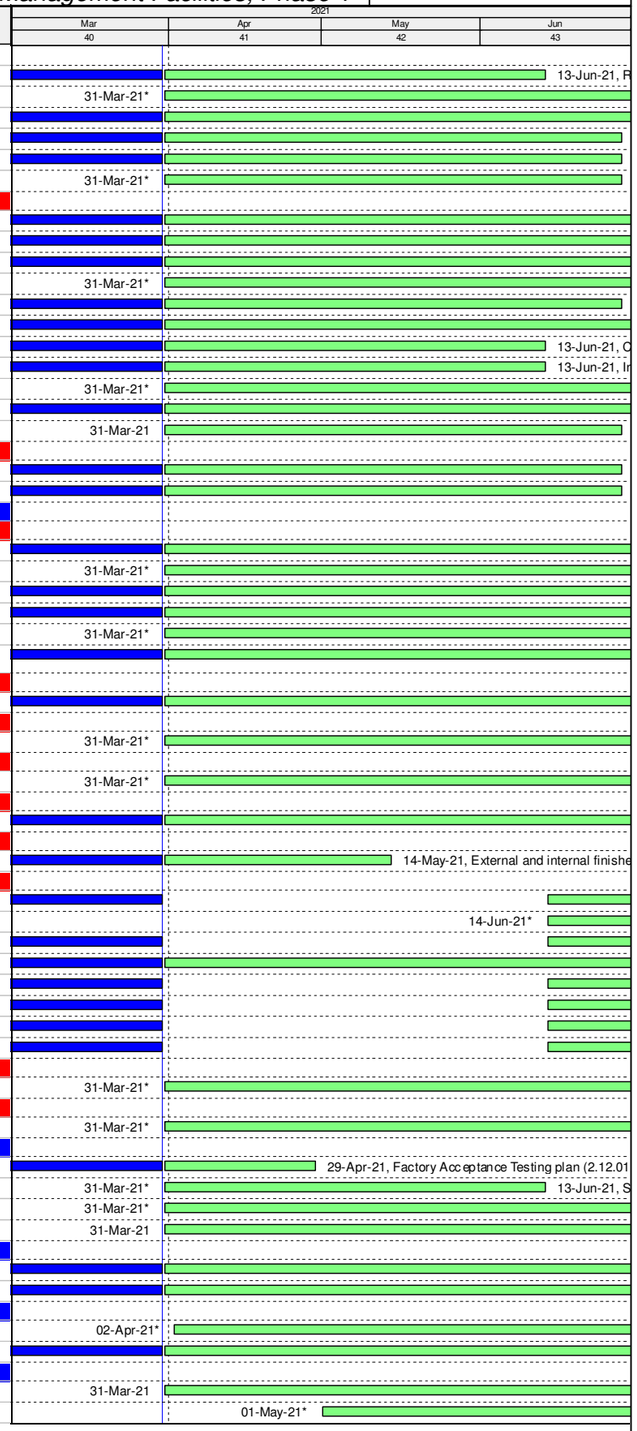
Activity ID	Activity Name	Original Duration	At Completion Duration	Duration % Complete	Activity % Complete	Remaining Duration	Primary Constraint	Current Start	Current Finish	Late Start	Late Finish	Total Float	M39 Remarks
05-1740	Drainage	135	800	57.04%	5%	58	Start On or After	20-Mar-19 A	27-May-21	29-May-21	25-Jul-21	59	
05-1750	ELV	135	877	0%	0%	135	Start On or After	20-Mar-19 A	12-Aug-21	12-Apr-21	24-Aug-21	12	
05-1760	Lifts	135	562	22.22%	0%	105	Start On or After	30-Dec-19 A	13-Jul-21	22-Apr-21	04-Aug-21	22	
05-1760-1(M20)	Building Management System (BMS)	135	135	0%	0%	135		31-Mar-21	12-Aug-21	21-May-21	02-Oct-21	51	
EP_SP_66_12-WP-6-M40.05.01.05 AIP Wastewater Treatment Plant (2.5)		984	1015	89.33%		105		03-Oct-18 A	13-Jul-21	08-Apr-21	24-Aug-21	42	
05-1780	Architectural Design (2.5.00)	135	970	55.56%	65%	60	Start On or After	03-Oct-18 A	29-May-21	18-May-21	16-Jul-21	48	
05-2790	Fire services installation design (2.5.05)	105	835	71.43%	5%	30		16-Jan-19 A	29-Apr-21	08-Apr-21	07-May-21	8	
EP_SP_66_12-WP-6-M40.05.01.05.7 Building services design (excluding fire services installation desi		895	910	88.27%		105		16-Jan-19 A	13-Jul-21	27-Apr-21	24-Aug-21	42	
05-1830	LV and Emergency Power Distribution Design (2.5.06.01)	135	835	77.78%	25%	30	Start On or After	16-Jan-19 A	29-Apr-21	12-May-21	10-Jun-21	42	
05-1840	MVAC (2.5.06.02)	135	880	44.44%	25%	75	Start On or After	16-Jan-19 A	13-Jun-21	11-Jun-21	24-Aug-21	72	
05-1850	Odour Control (2.5.06.03)	105	105	0%	0%	105	Start On or After	31-Mar-21*	13-Jul-21	27-Apr-21	09-Aug-21	27	
05-1860	Plumbing (2.5.06.04)	135	865	55.56%	25%	60	Start On or After	16-Jan-19 A	29-May-21	27-May-21	25-Jul-21	57	
05-1870	Drainage (2.5.06.05)	135	815	92.59%	25%	10	Start On or After	16-Jan-19 A	09-Apr-21	02-May-21	11-May-21	32	
05-1880	ELV (2.5.06.06)	135	881	43.7%	25%	76	Start On or After	16-Jan-19 A	14-Jun-21	10-Jun-21	24-Aug-21	71	
EP_SP_66_12-WP-6-M40.05.01.06 AIP Water Treatment Plant Building (2.6)		329	1071	58.97%		135		07-Sep-18 A	12-Aug-21	12-Apr-21	10-Mar-22	210	
05-1900	Architectural Design (2.6.00)	105	996	42.86%	65%	60	Start On or After	07-Sep-18 A	29-May-21	10-Jan-22	10-Mar-22	285	
05-1950	Fire services installation design (2.6.05) (3 Packages)	105	767	76.19%	76.19%	25		20-Mar-19 A	24-Apr-21	13-Apr-21	07-May-21	13	
EP_SP_66_12-WP-6-M40.05.01.06.7 Building services design (excluding fire services installation desi		135	877	0%		135		20-Mar-19 A	12-Aug-21	12-Apr-21	24-Aug-21	12	
05-1960	Electrical Services and Lighting (2.6.06.01)	135	817	44.44%	5%	75	Start On or After	20-Mar-19 A	13-Jun-21	11-Jun-21	24-Aug-21	72	
05-1970	MVAC	135	812	44.44%	5%	75	Start On or After	25-Mar-19 A	13-Jun-21	27-May-21	09-Aug-21	57	
05-1990	Plumbing	135	817	44.44%	5%	75	Start On or After	20-Mar-19 A	13-Jun-21	12-May-21	25-Jul-21	42	
05-2000	Drainage	135	800	57.04%	5%	58	Start On or After	20-Mar-19 A	27-May-21	29-May-21	25-Jul-21	59	
05-2010	ELV	135	877	0%	5%	135	Start On or After	20-Mar-19 A	12-Aug-21	12-Apr-21	24-Aug-21	12	
EP_SP_66_12-WP-6-M40.05.01.07 AIP Administration Building (2.7)		990	1106	86.36%		135		03-Aug-18 A	12-Aug-21	03-Apr-21	27-Feb-23	564	
05-2020	Architectural Design (2.7.00)	135	1031	55.56%	65%	60	Start On or After	03-Aug-18 A	29-May-21	12-Jan-22	12-Mar-22	287	
05-2040	Structural design (2.7.02)	135	746	0%	65%	135	Start On or After	29-Jul-19 A	12-Aug-21	16-Oct-22	27-Feb-23	564	
05-2050	Electrical and instrumentation works design (2.7.03)	105	105	0%	0%	105		31-Mar-21	13-Jul-21	05-Apr-21	18-Jul-21	5	
05-2060	Fire services installation design (3 Packages) (2.7.04)	135	610	74.07%	74.07%	35	Start On or After	03-Sep-19 A	04-May-21	03-Apr-21	07-May-21	3	
EP_SP_66_12-WP-6-M40.05.01.07.6 Building services design (excluding fire services installation desi		652	710	79.29%		135		03-Sep-19 A	12-Aug-21	17-Apr-21	16-Dec-21	126	
05-2070	Electrical Services and Lighting (2.7.05.01)	135	650	44.44%	5%	75	Start On or After	03-Sep-19 A	13-Jun-21	11-Jun-21	24-Aug-21	72	
05-2080	MVAC	135	650	44.44%	5%	75	Start On or After	03-Sep-19 A	13-Jun-21	27-May-21	09-Aug-21	57	
05-2100	Plumbing	135	585	92.59%	5%	10	Start On or After	03-Sep-19 A	09-Apr-21	02-May-21	11-May-21	32	
05-2110	Drainage	135	633	57.04%	5%	58	Start On or After	03-Sep-19 A	27-May-21	29-May-21	25-Jul-21	59	
05-2120	ELV	135	651	43.7%	5%	76	Start On or After	03-Sep-19 A	14-Jun-21	10-Jun-21	24-Aug-21	71	
05-2130	Lifts and Escalators	135	532	44.44%	5%	75	Start On or After	30-Dec-19 A	13-Jun-21	17-Apr-21	30-Jun-21	17	
05-2130-1(M20)	Building Management System (BMS)	135	135	0%	0%	135	Start On or After	31-Mar-21*	12-Aug-21	04-Aug-21	16-Dec-21	126	
EP_SP_66_12-WP-6-M40.05.01.08 AIP IWMF Substation (2.8)		694	885	95.68%		30		27-Nov-18 A	29-Apr-21	04-Apr-21	02-Dec-21	217	
05-2170	Electrical and instrumentation works design (2.8.03) (14 Packages)	180	553	83.33%	55%	30	Start On or After	25-Oct-19 A	29-Apr-21	03-Nov-21	02-Dec-21	217	
05-2190	Fire services installation design (2.8.05) (2 Packages)	170	859	97.65%	65%	4	Start On or After	27-Nov-18 A	03-Apr-21	04-Apr-21	07-Apr-21	4	
EP_SP_66_12-WP-6-M40.05.01.08.7 Building services design (excluding fire services installation desi		135	178	100%		0		24-Dec-19 A	19-Jun-20 A				
05-2240-1(M20)	Building Management System (BMS)	135	178	100%	65%	0	Start On or After	24-Dec-19 A	19-Jun-20 A				
EP_SP_66_12-WP-6-M40.05.01.1 AIP Chimney		317	598	57.41%		135		24-Dec-19 A	12-Aug-21	07-Aug-21	19-Dec-21	129	
EP_SP_66_12-WP-6-M40.05.01.1.1 Building services design (excluding fire services installation desig		317	598	57.41%		135		24-Dec-19 A	12-Aug-21	07-Aug-21	19-Dec-21	129	
05-5430(5a)	Electrical Services and Lighting	135	135	0%	0%	135		31-Mar-21	12-Aug-21	07-Aug-21	19-Dec-21	129	
05-5440(5a)	MVAC	105	105	0%	0%	105		31-Mar-21	13-Jul-21	25-Aug-21	07-Dec-21	147	
05-5450(5a)	Plumbing	105	105	0%	0%	105		31-Mar-21	13-Jul-21	06-Sep-21	19-Dec-21	159	
05-5460(5a)	Drainage	135	135	0%	0%	135		31-Mar-21	12-Aug-21	07-Aug-21	19-Dec-21	129	
05-5470(5a)	ELV	135	135	0%	0%	135		31-Mar-21	12-Aug-21	07-Aug-21	19-Dec-21	129	
05-5480(5a)	Lift	135	135	0%	0%	135		31-Mar-21	12-Aug-21	07-Aug-21	19-Dec-21	129	
05-5490(5a)	Building Management System (BMS)	135	552	34.07%	25%	89		24-Dec-19 A	27-Jun-21	22-Sep-21	19-Dec-21	175	
EP_SP_66_12-WP-6-M40.05.01.2 AIP Weighbridge		105	105	0%		105		31-Mar-21	13-Jul-21	29-Jan-22	25-Sep-22	439	
EP_SP_66_12-WP-6-M40.05.01.2.1 Building services design (excluding fire services installation desig		105	105	0%		105		31-Mar-21	13-Jul-21	29-Jan-22	25-Sep-22	439	
05-5500(5a)	Electrical Services and Lighting	105	105	0%	0%	105		31-Mar-21	13-Jul-21	13-Jun-22	25-Sep-22	439	
05-5510(5a)	MVAC	105	105	0%	0%	105		31-Mar-21	13-Jul-21	29-Jan-22	13-May-22	304	
05-5520(5a)	Plumbing	105	105	0%	0%	105		31-Mar-21	13-Jul-21	29-Jan-22	13-May-22	304	
05-5530(5a)	Drainage	105	105	0%	0%	105		31-Mar-21	13-Jul-21	29-Jan-22	13-May-22	304	
05-5540(5a)	ELV	105	105	0%	0%	105		31-Mar-21	13-Jul-21	29-Jan-22	13-May-22	304	
05-5550(5a)	Lift	105	105	0%	0%	105		31-Mar-21	13-Jul-21	29-Jan-22	13-May-22	304	
05-5560(5a)	Building Management System (BMS)	105	105	0%	0%	105		31-Mar-21	13-Jul-21	13-Jun-22	25-Sep-22	439	
EP_SP_66_12-WP-6-M40.05.01.09 AIP Air Quality Monitoring Stations (2.9)		120	195	88.33%		14		01-Oct-20 A	13-Apr-21	06-Apr-21	19-Apr-21	6	
05-2250	Design of the Air Quality Monitoring Stations (2.9.01)	120	195	88.33%	88.33%	14	Start On or After	01-Oct-20 A	13-Apr-21	06-Apr-21	19-Apr-21	6	
EP_SP_66_12-WP-6-M40.05.01.10 AIP Roads and Utilities (2.10)		777	990	82.63%		135		27-Nov-18 A	12-Aug-21	21-Apr-21	23-Jan-23	529	
EP_SP_66_12-WP-6-M40.05.01.10.2 Sewerage design on the Artificial Island (2.10.02)		135	163	100%		0		18-Sep-19 A	28-Feb-20 A				
05-2290	Contaminated Sewerage concept / sizing	135	163	100%	5%	0	Start On or After	18-Sep-19 A	28-Feb-20 A				
EP_SP_66_12-WP-6-M40.05.01.10.3 Drainage system design on the Artificial Island (2.10.03)		135	282	100%		0		22-May-19 A	28-Feb-20 A				
05-2310	First Flush Drainage System concept / sizing	135	282	100%	5%	0	Start On or After	22-May-19 A	28-Feb-20 A				
EP_SP_66_12-WP-6-M40.05.01.10.4 Water supply system design on the Artificial Island (2.10.04)		622	714	78.3%		135		30-Aug-19 A	12-Aug-21	12-May-21	13-Apr-22	244	
05-2330	Reuse Water Distribution System (2.10.04.02)	135	362	100%	65%	0	Start On or After	15-Nov-19 A	11-Nov-20 A				



3-Month Rolling Programme (March 2021)

Remaining Work
Actual Work
Critical Remaining Work
Milestone
Actual Milestone
Critical Milestone

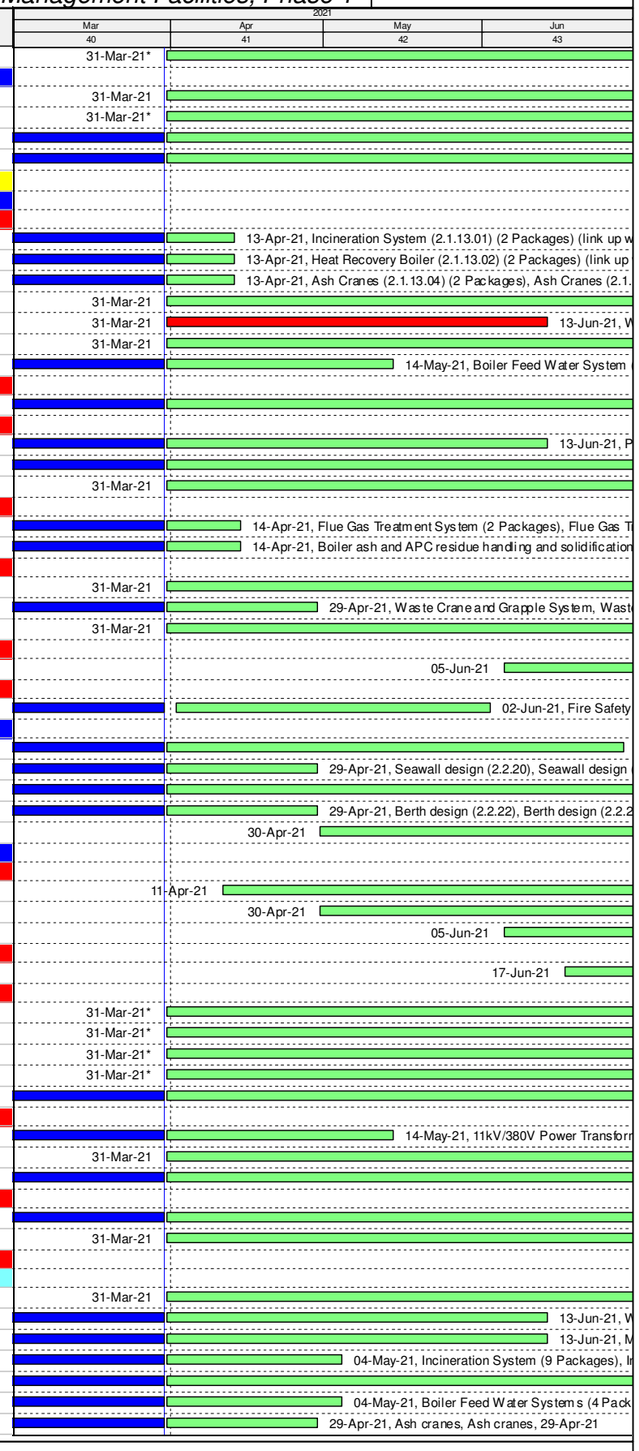
Activity ID	Activity Name	Original Duration	At Completion Duration	Duration % Complete	Activity % Complete	Remaining Duration	Primary Constraint	Current Start	Current Finish	Late Start	Late Finish	Total Float	M39 Remarks
05-2340	Reuse Water Distribution System - Irrigation System (2.10.04.03)	135	362	100%	0%	0	Start On or After	15-Nov-19 A	11-Nov-20 A				
05-2350	Rainwater harvesting System (2.10.04.04)	135	213	44.44%	5%	75	Start On or After	13-Nov-20 A	13-Jun-21	12-May-21	25-Jul-21	42	
05-2360	Water Tanks (2.10.04.05)	135	135	0%	0%	135	Start On or After	31-Mar-21*	12-Aug-21	30-Nov-21	13-Apr-22	244	
05-2370	External FS Systems (2.10.04.06)	135	648	0%	65%	135		04-Nov-19 A	12-Aug-21	30-Nov-21	13-Apr-22	244	
05-2370-1(M24)	E&M system for seawater intake and brine discharge (2.10.04.07)	90	669	0%	5%	90		30-Aug-19 A	28-Jun-21	03-Aug-21	31-Oct-21	125	
05-2370-2(M24)	Building Services system for seawater intake and brine discharge (2.10.04.09)	90	475	0%	5%	90		11-Mar-20 A	28-Jun-21	11-Jun-21	08-Sep-21	72	
05-2370-3(5a)	Chemical scrubber system for odour control (2.10.04.10)	90	90	0%	0%	90	Start On or After	31-Mar-21*	28-Jun-21	12-May-21	09-Aug-21	42	
EP_SP_66_12-WP-6-M40.05.01.10.6	Design of telecommunication and other utilities (2.10.06)	747	990	81.93%		135		27-Nov-18 A	12-Aug-21	21-Apr-21	12-Jan-23	518	
05-2380	Power Distribution System concept / schematics (2.10.06.01)	135	198	22.22%	5%	105	Start On or After	28-Dec-20 A	13-Jul-21	22-Apr-21	04-Aug-21	22	
05-2410	Site ELV Network System - Communications System concept / schematics (2.10.06.04)	135	492	22.22%	5%	105	Start On or After	09-Mar-20 A	13-Jul-21	22-Apr-21	04-Aug-21	22	
05-2420	Site ELV Network System - Security Systems concept / schematics (2.10.06.05)	135	492	22.22%	5%	105	Start On or After	09-Mar-20 A	13-Jul-21	22-Apr-21	04-Aug-21	22	
05-2430	Site ELV Network System - Navigation aids concept / schematics (2.10.06.06)	105	105	0%	0%	105	Start On or After	31-Mar-21*	13-Jul-21	22-Apr-21	04-Aug-21	22	
05-2440	Microwave transmission of FS direct link (2.10.06.07)	135	945	33.33%	33.33%	90		27-Nov-18 A	28-Jun-21	07-May-21	04-Aug-21	37	
05-2450	Fuel Handling System concept / schematics (2.10.06.08)	135	567	0%	5%	135	Start On or After	24-Jan-20 A	12-Aug-21	31-Aug-22	12-Jan-23	518	
05-3190	Computerised Maintenance Management System (CMMS)	105	735	28.57%	5%	75	Start On or After	10-Jun-19 A	13-Jun-21	21-Apr-21	04-Jul-21	21	
05-3200	Information and Document Management System (IDMS)	105	700	28.57%	5%	75	Start On or After	15-Jul-19 A	13-Jun-21	21-Apr-21	04-Jul-21	21	
05-3200-1(M34)	Design of Pipe / Utilities Trenches concept (2.10.06.09.01)	105	105	0%	0%	105	Start On or After	31-Mar-21*	13-Jul-21	17-Nov-21	01-Mar-22	231	
05-3200-2(M34)	Sitewide Utilities Trenches Design (2.10.06.09.02)	105	265	0%	5%	105	Start On or After	22-Oct-20 A	13-Jul-21	17-Nov-21	01-Mar-22	231	
05-3840 (M22)	Automatic Traffic Control System (ATCS) (2.10.06.12)	90	90	0%	0%	90		31-Mar-21	28-Jun-21	25-Jun-21	22-Sep-21	86	
EP_SP_66_12-WP-6-M40.05.01.10.7	Utility ducts/Pipebridges design (2.10.25)	90	305	0%		90		28-Aug-20 A	28-Jun-21	26-Oct-22	23-Jan-23	574	
05-2460	Design of Pipe / Utilities Trenches concept	90	305	0%	5%	90		28-Aug-20 A	28-Jun-21	26-Oct-22	23-Jan-23	574	
05-2470	Utility ducts network	90	305	0%	5%	90		28-Aug-20 A	28-Jun-21	26-Oct-22	23-Jan-23	574	
EP_SP_66_12-WP-6-M40.05.01.11	AIP Architectural, Finishes and Landscaping Works (2.11)	362	546	50.28%		180		30-Mar-20 A	26-Sep-21	16-Apr-21	16-May-22	232	
EP_SP_66_12-WP-6-M40.05.01.11.1	External and internal finishes design for Incineration Plant Buildi	288	503	52.43%		137		30-Mar-20 A	14-Aug-21	14-Jul-21	23-Apr-22	252	
05-2510	External and internal finishes design for Incineration Plant Building (6 Packages)	137	468	0%	5%	137	Start On or After	04-May-20 A	14-Aug-21	09-Sep-21	23-Jan-22	162	
05-2520	External and internal finishes design for ACC Equipment Structure	137	137	0%	0%	137	Start On or After	31-Mar-21*	14-Aug-21	14-Jul-21	27-Nov-21	105	
05-2530	External and internal finishes design for Turbine Hall Building (3 Packages)	137	468	0%	5%	137	Start On or After	04-May-20 A	14-Aug-21	08-Dec-21	23-Apr-22	252	
05-2540	External and internal finishes design for Air Compressor Building (3 Packages)	137	468	0%	5%	137	Start On or After	04-May-20 A	14-Aug-21	10-Nov-21	26-Mar-22	224	
05-2550	External and internal finishes design for Chimney (6 Packages)	137	137	0%	0%	137	Start On or After	31-Mar-21*	14-Aug-21	28-Nov-21	13-Apr-22	242	
05-2560	External and internal finishes design for Reception Pavilion (5 Packages)	137	503	0%	5%	137	Start On or After	30-Mar-20 A	14-Aug-21	10-Nov-21	26-Mar-22	224	
EP_SP_66_12-WP-6-M40.05.01.11.2	External and internal finishes design for MT Plant Building (2.11.(	136	474	0%		136		27-Apr-20 A	13-Aug-21	07-Oct-21	19-Feb-22	190	
05-2570	External and internal finishes design for MT Plant Building (7 Packages)	136	474	0%	5%	136	Start On or After	27-Apr-20 A	13-Aug-21	07-Oct-21	19-Feb-22	190	
EP_SP_66_12-WP-6-M40.05.01.11.3	External and internal finishes design for the Wastewater Treatmer	135	135	0%		135		31-Mar-21	12-Aug-21	08-Oct-21	19-Feb-22	191	
05-2580	External and internal finishes design for the Wastewater Treatment Plant (3 Packages)	135	135	0%	0%	135	Start On or After	31-Mar-21*	12-Aug-21	08-Oct-21	19-Feb-22	191	
EP_SP_66_12-WP-6-M40.05.01.11.4	External and internal finishes design for the Water Treatment Plar	135	135	0%		135		31-Mar-21	12-Aug-21	08-Oct-21	19-Feb-22	191	
05-2590	External and internal finishes design for the Water Treatment Plant Building (3 Package	135	135	0%	0%	135	Start On or After	31-Mar-21*	12-Aug-21	08-Oct-21	19-Feb-22	191	
EP_SP_66_12-WP-6-M40.05.01.11.5	External and internal finishes design for the Administration Build	135	473	0%		135		27-Apr-20 A	12-Aug-21	02-Jan-22	16-May-22	277	
05-2600	External and internal finishes design for the Administration Building (6 Packages)	135	473	0%	5%	135	Start On or After	27-Apr-20 A	12-Aug-21	02-Jan-22	16-May-22	277	
EP_SP_66_12-WP-6-M40.05.01.11.6	External and internal finishes design for the IWMF Substation (2'	135	411	66.67%		45		30-Mar-20 A	14-May-21	16-Apr-21	30-May-21	16	
05-2610	External and internal finishes design for the IWMF Substation (4 Packages)	135	411	66.67%	5%	45	Start On or After	30-Mar-20 A	14-May-21	16-Apr-21	30-May-21	16	
EP_SP_66_12-WP-6-M40.05.01.11.7	Landscape masterplan (2.11.07)	362	507	50.28%		180		08-May-20 A	26-Sep-21	20-Oct-21	17-Apr-22	203	
05-2620	Water Feature (2.11.07.01)	105	465	0%	5%	105	Start On or After	19-Jun-20 A	26-Sep-21	20-Oct-21	01-Feb-22	128	
05-2630	Planting details	105	105	0%	0%	105	Start On or After	14-Jun-21*	26-Sep-21	20-Oct-21	01-Feb-22	128	
05-2920_1(M34)	Turbine Hall Building (2.11.07.04)	105	507	0%	5%	105		08-May-20 A	26-Sep-21	03-Jan-22	17-Apr-22	203	
05-2920_2(M34)	Reception Pavilion (2.11.07.06)	105	432	0%	5%	105		08-May-20 A	13-Jul-21	03-Jan-22	17-Apr-22	278	
05-2920_3(M34)	MT Plant Building and Water Treatment Plant Building (2.11.07.07)	105	507	0%	5%	105		08-May-20 A	26-Sep-21	03-Jan-22	17-Apr-22	203	
05-2920_4(M34)	Administration Building (2.11.07.08)	105	507	0%	5%	105		08-May-20 A	26-Sep-21	03-Jan-22	17-Apr-22	203	
05-2920_5(M34)	IWMF Substation (2.11.07.09)	105	507	0%	5%	105		08-May-20 A	26-Sep-21	03-Jan-22	17-Apr-22	203	
05-2920_6(M34)	Process Building (2.11.07.10)	105	507	0%	5%	105		08-May-20 A	26-Sep-21	03-Jan-22	17-Apr-22	203	
EP_SP_66_12-WP-6-M40.05.01.11.8	Architectural Detailing - Site Wide (2.11.29)	107	107	0%		107		31-Mar-21	15-Jul-21	11-Jul-21	25-Oct-21	102	
05-2640	Architectural Detailing - Site Wide Concept	107	107	0%	0%	107	Start On or After	31-Mar-21*	15-Jul-21	11-Jul-21	25-Oct-21	102	
EP_SP_66_12-WP-6-M40.05.01.11.9	External and internal finishes design for Elavated Driveway	137	137	0%		137		31-Mar-21	14-Aug-21	27-Aug-21	10-Jan-22	149	
05-5410	External and internal finishes design for Elavated Driveway	137	137	0%	0%	137	Start On or After	31-Mar-21*	14-Aug-21	27-Aug-21	10-Jan-22	149	
EP_SP_66_12-WP-6-M40.05.01.12	AIP Testing and Commissioning (2.12)	745	813	85.91%		105		23-Apr-19 A	13-Jul-21	30-May-21	31-Aug-22	414	
05-2650-1(5)	Factory Acceptance Testing plan (2.12.01.02-06) (7 Packages)	60	738	50%	0%	30		23-Apr-19 A	29-Apr-21	11-Nov-21	10-Dec-21	225	
05-2660	Site Acceptance Testing plan (2.12.02)	75	75	0%	0%	75	Start On or After	31-Mar-21*	13-Jun-21	29-Jul-21	11-Oct-21	120	
05-2670	System commissioning plan (2.12.03)	105	105	0%	0%	105	Start On or After	31-Mar-21*	13-Jul-21	30-May-21	11-Sep-21	60	
05-2680	Plant commissioning plan (2.12.04)	105	105	0%	0%	105		31-Mar-21	13-Jul-21	19-May-22	31-Aug-22	414	
EP_SP_66_12-WP-6-M40.05.01.13	AIP Transportation Facilities for the Operation (2.13)	136	380	22.79%		105		29-Jun-20 A	13-Jul-21	19-May-21	11-Sep-21	60	
05-2690	Design of vehicles for MSW and Ash and Residues delivery (2.13.01)	105	380	0%	5%	105		29-Jun-20 A	13-Jul-21	30-May-21	11-Sep-21	60	
05-2700	Design of marine vessels for the use of the Employer and visitors (2.13.02)	105	309	0%	5%	105		08-Sep-20 A	13-Jul-21	19-May-21	31-Aug-21	49	
EP_SP_66_12-WP-6-M40.05.01.14	AIP Miscellaneous Works (2.14)	258	375	58.53%		107		06-Jul-20 A	15-Jul-21	21-Jul-21	07-Apr-23	631	
05-2710	Design of process related CCTV and existing onshore crane replacement works at Porti	105	105	0%	0%	105	Start On or After	02-Apr-21*	15-Jul-21	24-Dec-22	07-Apr-23	631	
05-2720	Design of visitors and environmental education facilities (2.14.02)	105	373	0%	5%	105		06-Jul-20 A	13-Jul-21	21-Jul-21	02-Nov-21	112	
EP_SP_66_12-WP-6-M40.05.01.15	AIP Miscellaneous Detailing (2.15)	166	166	0%		166		31-Mar-21	12-Sep-21	16-Sep-21	05-Sep-22	358	
05-2730	Covered walkway at passenger berth (2.15.02)	105	105	0%	0%	105		31-Mar-21	13-Jul-21	16-Sep-21	29-Dec-21	169	
05-2740	Gatehouses (2.15.03)	135	135	0%	0%	135	Start On or After	01-May-21*	12-Sep-21	24-Apr-22	05-Sep-22	358	



3-Month Rolling Programme (March 2021)

Remaining Work
Actual Work
Critical Remaining Work
Milestone
Actual Milestone
Critical Milestone

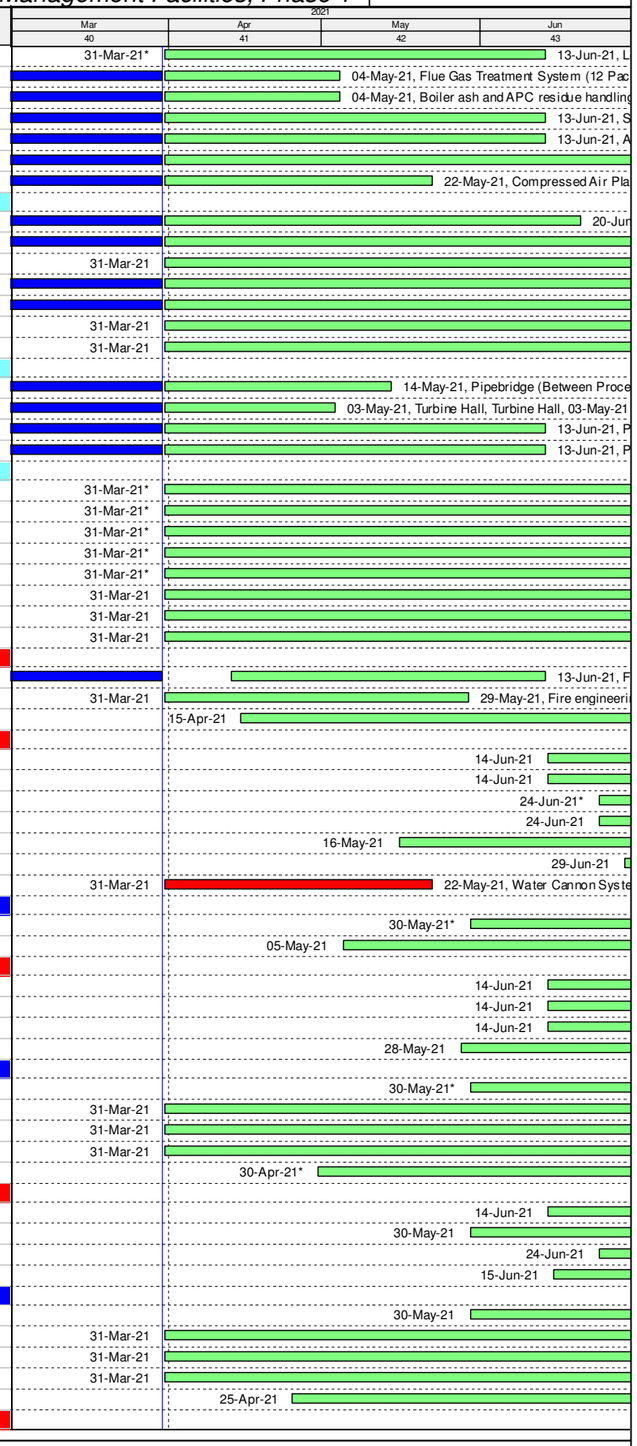
Activity ID	Activity Name	Original Duration	At Completion Duration	Duration % Complete	Activity % Complete	Remaining Duration	Primary Constraint	Current Start	Current Finish	Late Start	Late Finish	Total Float	M39 Remarks
05-2750	Weighbridge office (2.15.04)	105	105	0%	0%	105	Start On or After	31-Mar-21*	13-Jul-21	30-Mar-22	12-Jul-22	364	
EP_SP_66_12-WP-6-M40.05.01.16	AIP Auxiliary Plant Systems (2.16)	286	457	52.8%		135		13-May-20 A	12-Aug-21	01-May-21	26-Jul-22	348	
05-2770	Vehicle Fuel Filling Station (2.16.02)	135	135	0%	0%	135		31-Mar-21	12-Aug-21	28-Jan-22	11-Jun-22	303	
05-2780	Stores systems (2.16.03)	135	135	0%	0%	135	Start On or After	31-Mar-21*	12-Aug-21	14-Mar-22	26-Jul-22	348	
05-2780-1(5a)	IWMF Laboratory (2.16.04)	135	457	0%	5%	135		13-May-20 A	12-Aug-21	09-Sep-21	21-Jan-22	162	
05-2780-2(5a)	hoisting systems (2.16.09)	135	331	0%	5%	135		16-Sep-20 A	12-Aug-21	01-May-21	12-Sep-21	31	
EP_SP_66_12-WP-6-M40.05.02	DDA Design Package Submissions	1028	1125	77.92%		227		15-Oct-18 A	12-Nov-21	31-Mar-21	21-May-27	2016	
EP_SP_66_12-WP-6-M40.05.02.01	DDA Process and Layout Design (2.1)	383	892	55.35%		171		10-Apr-19 A	17-Sep-21	31-Mar-21	12-Aug-22	329	
EP_SP_66_12-WP-6-M40.05.02.01.1	MSW treatment process design for incineration (2.1.13)	287	447	63.41%		105		23-Apr-20 A	13-Jul-21	31-Mar-21	01-Nov-21	111	
05-5090	Incineration System (2.1.13.01) (2 Packages) (link up with 05-3610)	105	258	86.67%	5%	14		30-Jul-20 A	13-Apr-21	29-Sep-21	12-Oct-21	182	
05-5100	Heat Recovery Boiler (2.1.13.02) (2 Packages) (link up with 05-3620)	105	356	86.67%	5%	14	Start On or After	23-Apr-20 A	13-Apr-21	29-Sep-21	12-Oct-21	182	
05-5110	Ash Cranes (2.1.13.04) (2 Packages)	105	128	86.67%	5%	14		07-Dec-20 A	13-Apr-21	19-Oct-21	01-Nov-21	202	
05-5120	Leachate Collection and Treatment (2.1.13.05) (2 Packages)	105	105	0%	0%	105		31-Mar-21	13-Jul-21	20-Jul-21	01-Nov-21	111	
05-5130	Waste Water Treatment System (2.1.13.06) (2 Packages)	75	75	0%	0%	75		31-Mar-21	13-Jun-21	31-Mar-21	13-Jun-21	0	
05-5140	Overall Plan Water Scheme (2.1.13.07)	105	105	0%	0%	105		31-Mar-21	13-Jul-21	20-Jul-21	01-Nov-21	111	
05-5150	Boiler Feed Water System (2.1.13.03) (2 Packages)	105	285	57.14%	45%	45	Start On or After	03-Aug-20 A	14-May-21	18-Sep-21	01-Nov-21	171	
EP_SP_66_12-WP-6-M40.05.02.01.2	MSW treatment process design for mechanical treatment (2.1.14)	105	207	0%		105		19-Dec-20 A	13-Jul-21	30-Apr-22	12-Aug-22	395	
05-3510	Water Treatment Plant and Boiler Water Treatment (Demin Unit) Plant	105	207	0%	5%	105		19-Dec-20 A	13-Jul-21	30-Apr-22	12-Aug-22	395	
EP_SP_66_12-WP-6-M40.05.02.01.3	Waste heat recovery and Power generation system (2.1.15)	317	450	66.88%		105		20-Apr-20 A	13-Jul-21	30-Jul-21	09-Feb-22	211	
05-5220	Power Island (Steam Turbine Generator, Pressure Reducing and Desuperheating Statio	105	385	28.57%	5%	75		25-May-20 A	13-Jun-21	30-Jul-21	12-Oct-21	121	
05-5230	Closed Circuit Cooling Water System	105	450	0%	5%	105		20-Apr-20 A	13-Jul-21	28-Oct-21	09-Feb-22	211	
05-5240	Compressed Air Plants	105	105	0%	0%	105		31-Mar-21	13-Jul-21	28-Oct-21	09-Feb-22	211	
EP_SP_66_12-WP-6-M40.05.02.01.4	Flue gas treatment process design for incineration (2.1.16)	105	357	85.71%		15		23-Apr-20 A	14-Apr-21	28-Sep-21	01-Nov-21	201	
05-4660	Flue Gas Treatment System (2 Packages)	105	357	85.71%	5%	15	Start On or After	23-Apr-20 A	14-Apr-21	28-Sep-21	12-Oct-21	181	
05-4980	Boiler ash and APC residue handling and solidification (2 Packages)	105	357	85.71%	5%	15	Start On or After	23-Apr-20 A	14-Apr-21	18-Oct-21	01-Nov-21	201	
EP_SP_66_12-WP-6-M40.05.02.01.5	Logistic arrangement design for MSW and Ash and Residues (2.1	317	373	66.88%		105		06-Jul-20 A	13-Jul-21	23-Jun-21	01-Nov-21	111	
05-4390	Weighbridge Systems	105	105	0%	0%	105		31-Mar-21	13-Jul-21	23-Jun-21	05-Oct-21	84	
05-4400	Waste Crane and Grapple System	105	298	71.43%	5%	30		06-Jul-20 A	29-Apr-21	24-Jun-21	23-Jul-21	85	
05-4410	Mechanical Shredder	105	105	0%	0%	105		31-Mar-21	13-Jul-21	20-Jul-21	01-Nov-21	111	
EP_SP_66_12-WP-6-M40.05.02.01.6	Site Master Layout Plan and Plant Layout (2.1.18)	105	105	0%		105		05-Jun-21	17-Sep-21	17-Jun-21	29-Sep-21	12	
05-3520	Site Master Layout Plan and Plant Layout	105	105	0%	0%	105		05-Jun-21	17-Sep-21	17-Jun-21	29-Sep-21	12	
EP_SP_66_12-WP-6-M40.05.02.01.7	Statutory Fire Compliance (2.1.26)	60	785	0%		62		10-Apr-19 A	02-Jun-21	20-Jun-21	20-Aug-21	79	
05-4420	Fire Safety Compliance	60	785	0%	0%	62		10-Apr-19 A	02-Jun-21	20-Jun-21	20-Aug-21	79	
EP_SP_66_12-WP-6-M40.05.02.02	DDA Ground Treatment, Reclamation, Seawall, Breakwater, Berth (2.	966	1063	82.92%		165		15-Oct-18 A	11-Sep-21	18-May-21	26-Mar-22	196	
05-3430-2(M37)	Geotechnical Interpretative Report (2.2.02.02)	105	988	14.29%	65%	90		15-Oct-18 A	28-Jun-21	18-May-21	15-Aug-21	48	
05-3450	Seawall design (2.2.20)	60	900	50%	65%	30		12-Nov-18 A	29-Apr-21	02-Jul-21	31-Jul-21	93	
05-3460	Breakwater design (2.2.21)	105	824	0%	65%	105		12-Apr-19 A	13-Jul-21	02-Nov-21	14-Feb-22	216	
05-3470	Berth design (2.2.22)	60	911	50%	65%	30		01-Nov-18 A	29-Apr-21	25-Feb-22	26-Mar-22	331	
05-3490	Onshore vessel power supply system (2.2.24)	135	135	0%	0%	135		30-Apr-21	11-Sep-21	24-May-21	05-Oct-21	24	
EP_SP_66_12-WP-6-M40.05.02.03	DDA Incineration Plant Buildings (2.3)	987	1002	77.2%		225		13-Feb-19 A	10-Nov-21	31-Mar-21	21-May-27	2018	
EP_SP_66_12-WP-6-M40.05.02.03.1	General Layout Drawings and Fire Saftey Strategy (2.3.25)	190	190	0%		190		11-Apr-21	17-Oct-21	11-May-21	04-Jan-22	79	
05-3290	Process Building	105	105	0%	0%	105		11-Apr-21	24-Jul-21	11-May-21	23-Aug-21	30	
05-3300	ACC Equipment Structure	135	135	0%	0%	135		30-Apr-21	11-Sep-21	23-Aug-21	04-Jan-22	115	
05-3310	Turbin Hall Building	135	135	0%	0%	135		05-Jun-21	17-Oct-21	06-Aug-21	18-Dec-21	62	
EP_SP_66_12-WP-6-M40.05.02.03.2	Foundation design (2.3.13)	137	137	0%		137		17-Jun-21	31-Oct-21	15-Dec-21	30-Apr-22	181	
05-3230	ACC Equipment Structure	137	137	0%	0%	137		17-Jun-21	31-Oct-21	15-Dec-21	30-Apr-22	181	
EP_SP_66_12-WP-6-M40.05.02.03.3	Structural design (2.3.14)	340	496	44.41%		189		28-May-20 A	05-Oct-21	30-Apr-21	08-Jun-23	611	
05-5340	ACC Equipment Structure	150	150	0%	0%	150	Start On or After	31-Mar-21*	27-Aug-21	30-Apr-21	26-Sep-21	30	
05-5350	Turbin Hall Building (2.3.14.03)	189	189	0%	0%	189	Start On or After	31-Mar-21*	05-Oct-21	20-Apr-22	25-Oct-22	385	
05-5360	Compressor and CCCW Building	189	189	0%	0%	189	Start On or After	31-Mar-21*	05-Oct-21	02-Dec-22	08-Jun-23	611	
05-5380	Chimney, Elevated Drive Way and associated structures and Reception Pavilion	189	189	0%	0%	189	Start On or After	31-Mar-21*	05-Oct-21	02-Oct-22	08-Apr-23	550	
05-5390	Reception Pavilion Structural Design	189	496	0%	5%	189	Start On or After	28-May-20 A	05-Oct-21	04-Oct-22	10-Apr-23	552	
EP_SP_66_12-WP-6-M40.05.02.03.4	Electrical and instrumentation works design (2.3.15)	241	310	50.21%		120		22-Sep-20 A	28-Jul-21	03-Aug-21	21-May-27	2123	
05-3360	11kV/380V Power Transformers and 11kV Earthing Transformer	105	235	57.14%	5%	45		22-Sep-20 A	14-May-21	07-Apr-27	21-May-27	2198	
05-3370	E&IC Package 1 (Process Island)	120	120	0%	0%	120		31-Mar-21	28-Jul-21	03-Aug-21	30-Nov-21	125	
05-3380	E&IC Package 2 (Power Island)	165	218	27.27%	0%	120		23-Dec-20 A	28-Jul-21	03-Aug-21	30-Nov-21	125	
EP_SP_66_12-WP-6-M40.05.02.03.8	Operation Management System (2.3.15.04)	317	401	66.88%		105		08-Jun-20 A	13-Jul-21	16-Jan-22	30-Apr-22	291	
05-3390	Supervisory Control/Data Acquisition/Distributed Control (SCADA/DCS) System (12 P	105	401	0%	5%	105		08-Jun-20 A	13-Jul-21	16-Jan-22	30-Apr-22	291	
05-3420	Automatic License Plate and Container Recoginition System (ALPCRS)	105	105	0%	0%	105		31-Mar-21	13-Jul-21	16-Jan-22	30-Apr-22	291	
EP_SP_66_12-WP-6-M40.05.02.03.5	Mechanical works design (2.3.16)	926	882	88.66%		105		13-Feb-19 A	13-Jul-21	05-Apr-21	21-May-27	2138	
EP_SP_66_12-WP-6-M40.05.02.03.5.1	Plant and Equipment	867	882	87.89%		105		13-Feb-19 A	13-Jul-21	05-Apr-21	21-May-27	2138	
05-3580	Weighbridge Systems	105	105	0%	0%	105		31-Mar-21	13-Jul-21	23-Jun-21	05-Oct-21	84	
05-3590	Waste Crane and Grapple System	105	257	28.57%	5%	75		30-Sep-20 A	13-Jun-21	24-Jul-21	06-Oct-21	115	
05-3600	Mechanical Shredder	105	248	28.57%	0%	75		09-Oct-20 A	13-Jun-21	05-Apr-21	18-Jun-21	5	
05-3610	Incineration System (9 Packages)	105	812	66.67%	5%	35		13-Feb-19 A	04-May-21	08-Sep-21	12-Oct-21	161	
05-3620	Heat Recovery Boiler (8 Packages)	105	787	2%	5%	103		17-May-19 A	11-Jul-21	08-Feb-27	21-May-27	2140	
05-3630	Boiler Feed Water Systems (4 Packages)	105	659	66.67%	5%	35		16-Jul-19 A	04-May-21	11-May-21	14-Jun-21	41	
05-3640	Ash cranes	30	325	0%	0%	30		09-Jun-20 A	29-Apr-21	24-Jun-21	23-Jul-21	85	



3-Month Rolling Programme (March 2021)

Remaining Work
Actual Work
Critical Remaining Work
Milestone
Actual Milestone
Critical Milestone

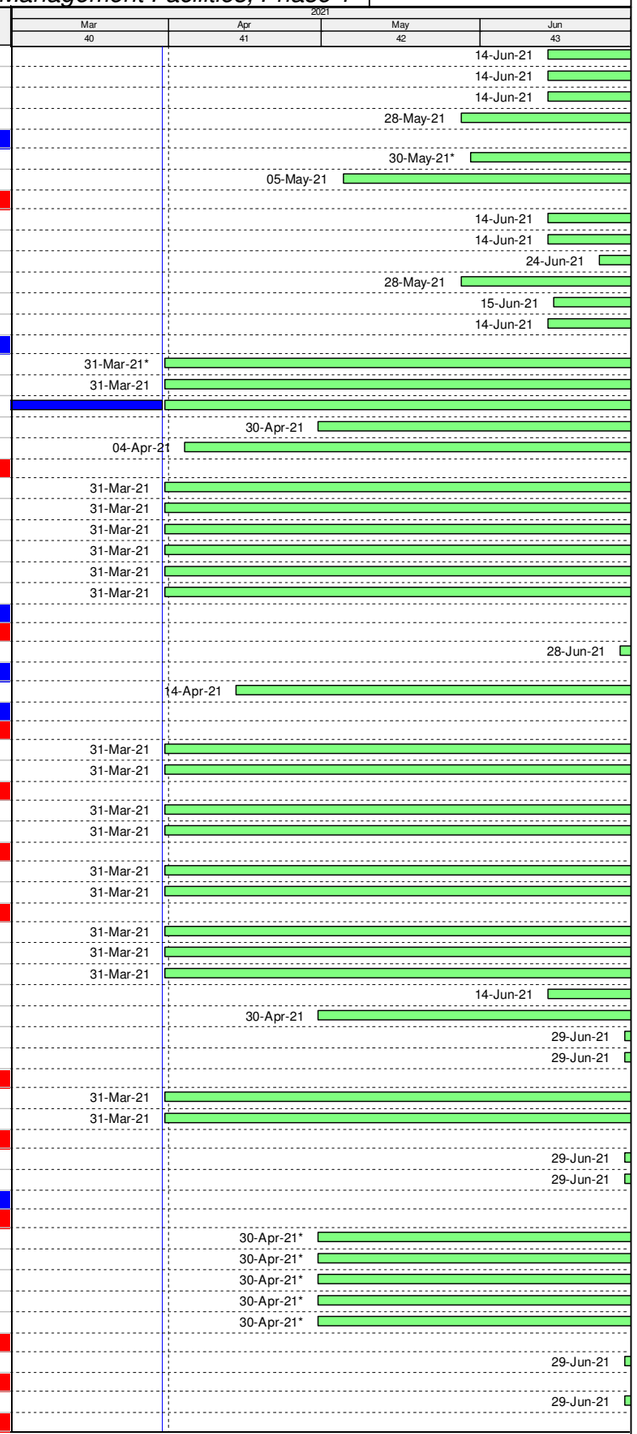
Activity ID	Activity Name	Original Duration	At Completion Duration	Duration % Complete	Activity % Complete	Remaining Duration	Primary Constraint	Current Start	Current Finish	Late Start	Late Finish	Total Float	M39 Remarks
05-3650	Leachate collection and treatment	75	75	0%	0%	75	Start On or After	31-Mar-21*	13-Jun-21	05-Apr-21	18-Jun-21	5	
05-3790	Flue Gas Treatment System (12 Packages)	105	568	66.67%	5%	35		15-Oct-19 A	04-May-21	08-Sep-21	12-Oct-21	161	
05-3800	Boiler ash and APC residue handling and solidification	105	330	66.67%	5%	35	Start On or After	09-Jun-20 A	04-May-21	11-May-21	14-Jun-21	41	
05-3810	Steam Turbine Generator (STG) and Pressure Reducing and Desuperheating Station (P	105	319	28.57%	5%	75		30-Jul-20 A	13-Jun-21	30-Jul-21	12-Oct-21	121	
05-3820	Air cooled condenser	105	319	28.57%	5%	75		30-Jul-20 A	13-Jun-21	20-Jun-21	02-Sep-21	81	
05-3825(3)	Closed Circuit Cooling Water System	105	349	0%	5%	105		30-Jul-20 A	13-Jul-21	21-May-21	02-Sep-21	51	
05-3830	Compressed Air Plants	105	830	49.52%	5%	53		13-Feb-19 A	22-May-21	19-Mar-22	10-May-22	353	
EP_SP_66_12-WP-6-M40.05.02.03.5.2	**Process Pipeworks (Incl. Ductworks) and Valves**	501	790	79.04%		105		16-May-19 A	13-Jul-21	30-Apr-21	04-Jan-22	175	
05-3840	Process island (furnace-boiler-FGC)	105	767	21.9%	0%	82		16-May-19 A	20-Jun-21	13-Oct-21	02-Jan-22	196	
05-4350	Pipebridge A (Between Process island & Turbine Hall)	105	320	0%	5%	105		28-Aug-20 A	13-Jul-21	23-May-21	04-Sep-21	53	
05-4360	Compressed Air Plant area	105	105	0%	0%	105		31-Mar-21	13-Jul-21	22-Sep-21	04-Jan-22	175	
05-4370	Pipebridge B (Between CCCW Area & Turbine Hall)	105	320	0%	5%	105		28-Aug-20 A	13-Jul-21	30-Apr-21	12-Aug-21	30	
05-4380	Pipebridge C (Between Turbine Hall & ACC Yard)	105	320	0%	5%	105		28-Aug-20 A	13-Jul-21	23-May-21	04-Sep-21	53	
05-4950	Turbine Hall	105	105	0%	0%	105		31-Mar-21	13-Jul-21	16-Sep-21	29-Dec-21	169	
05-4970	CCCW Area	105	105	0%	0%	105		31-Mar-21	13-Jul-21	22-Sep-21	04-Jan-22	175	
EP_SP_66_12-WP-6-M40.05.02.03.5.3	**Process steel structure support (For eqipment, piping & duct,**	376	319	80.05%		75		30-Jul-20 A	13-Jun-21	14-Apr-21	25-Oct-22	499	
05-3540	Pipebridge (Between Process island & Turbine Hall)	105	260	57.14%	5%	45		28-Aug-20 A	14-May-21	14-Apr-21	28-May-21	14	
05-3550	Turbine Hall	105	278	67.62%	0%	34		30-Jul-20 A	03-May-21	22-Sep-22	25-Oct-22	540	
05-3560	Pipebridge (Between CCCW Area & Turbine Hall)	105	290	28.57%	5%	75		28-Aug-20 A	13-Jun-21	30-May-21	12-Aug-21	60	
05-3570	Pipebridge (Between Turbine Hall & ACC Yard)	105	290	28.57%	5%	75		28-Aug-20 A	13-Jun-21	22-Jun-21	04-Sep-21	83	
EP_SP_66_12-WP-6-M40.05.02.03.5.4	**Equipment and piping insulation**	105	105	0%		105		31-Mar-21	13-Jul-21	21-May-21	04-Jan-22	175	
05-4500	Incineration System	105	105	0%	0%	105	Start On or After	31-Mar-21*	13-Jul-21	30-Jun-21	12-Oct-21	91	
05-4510	Heat Recovery Boiler	105	105	0%	0%	105	Start On or After	31-Mar-21*	13-Jul-21	30-Jun-21	12-Oct-21	91	
05-4520	Boiler Feed Water Systems	105	105	0%	0%	105	Start On or After	31-Mar-21*	13-Jul-21	22-Sep-21	04-Jan-22	175	
05-4530	Flue Gas Treatment System	105	105	0%	0%	105	Start On or After	31-Mar-21*	13-Jul-21	30-Jun-21	12-Oct-21	91	
05-4540	Boiler ash and APC residue handling and solidification	105	105	0%	0%	105	Start On or After	31-Mar-21*	13-Jul-21	22-Sep-21	04-Jan-22	175	
05-4550	Steam Turbine Generator (STG) and Pressure Reducing and Desuperheating Station (P	105	105	0%	0%	105		31-Mar-21	13-Jul-21	30-Jun-21	12-Oct-21	91	
05-4560	Air cooled condenser	105	105	0%	0%	105		31-Mar-21	13-Jul-21	22-Sep-21	04-Jan-22	175	
05-4570	Closed Circuit Cooling Water System	105	105	0%	0%	105		31-Mar-21	13-Jul-21	21-May-21	02-Sep-21	51	
EP_SP_66_12-WP-6-M40.05.02.03.6	**Fire services installation design (2.3.17)**	151	841	20.53%		120		10-Apr-19 A	28-Jul-21	08-May-21	20-Aug-21	23	
05-3660	Fire Systems	90	796	31.11%	0%	62		10-Apr-19 A	13-Jun-21	20-Jun-21	20-Aug-21	68	
05-3670	Fire engineering	60	60	0%	0%	60		31-Mar-21	29-May-21	22-Jun-21	20-Aug-21	83	
05-3680	FS schematics	105	105	0%	0%	105		15-Apr-21	28-Jul-21	08-May-21	20-Aug-21	23	
EP_SP_66_12-WP-6-M40.05.02.03.7	**Building services design (excluding fire services installation desi**	225	225	0%		225		31-Mar-21	10-Nov-21	31-Mar-21	30-Apr-22	171	
05-3700	MVAC (6 Packages)	135	135	0%	0%	135		14-Jun-21	26-Oct-21	10-Aug-21	22-Dec-21	57	
05-3710	Odour Control	135	135	0%	0%	135		14-Jun-21	26-Oct-21	10-Aug-21	22-Dec-21	57	
05-3720	Plumbing (7 Packages)	135	135	0%	0%	135	Start On or After	24-Jun-21*	05-Nov-21	26-Jul-21	07-Dec-21	32	
05-3730	Drainage (7 Packages)	135	135	0%	0%	135		24-Jun-21	05-Nov-21	26-Jul-21	07-Dec-21	32	
05-3750	Lifts and Escalators	135	135	0%	0%	135		16-May-21	27-Sep-21	11-Jun-21	23-Oct-21	26	
05-3770	Building Management System (BMS) ELV (7 Packages)	135	135	0%	0%	135		29-Jun-21	10-Nov-21	17-Dec-21	30-Apr-22	171	
05-3780-1(M20)	Water Cannon System	53	53	0%	0%	53		31-Mar-21	22-May-21	31-Mar-21	22-May-21	0	
EP_SP_66_12-WP-6-M40.05.02.04	**DDA Mechanical Treatment Plant Building (2.4)**	175	175	0%		175		05-May-21	26-Oct-21	08-May-21	22-Aug-22	300	
05-5160	Architectural Design (2.4.25)	105	105	0%	0%	105	Start On or After	30-May-21*	11-Sep-21	10-May-22	22-Aug-22	345	
05-5210	Fire services installation design (2.4.17)	105	105	0%	0%	105		05-May-21	17-Aug-21	08-May-21	20-Aug-21	3	
EP_SP_66_12-WP-6-M40.05.02.04.7	**Building services design (excluding fire services installation desi**	152	152	0%		152		28-May-21	26-Oct-21	26-Jul-21	22-Dec-21	57	
05-3860	MVAC	135	135	0%	0%	135		14-Jun-21	26-Oct-21	10-Aug-21	22-Dec-21	57	
05-3870	Odour Control	135	135	0%	0%	135		14-Jun-21	26-Oct-21	10-Aug-21	22-Dec-21	57	
05-3880	Plumbing	135	135	0%	0%	135		14-Jun-21	26-Oct-21	26-Jul-21	07-Dec-21	42	
05-3890	Drainage	135	135	0%	0%	135		28-May-21	09-Oct-21	26-Jul-21	07-Dec-21	59	
EP_SP_66_12-WP-6-M40.05.02.05	**DDA Wastewater Treatment Plant (2.5)**	220	220	0%		220		31-Mar-21	05-Nov-21	08-May-21	17-Jan-22	73	
05-3920	Architectural Design (2.5.25)	75	75	0%	0%	75	Start On or After	30-May-21*	12-Aug-21	17-Jul-21	29-Sep-21	48	
05-3930	Foundation design (2.5.13)	135	135	0%	0%	135		31-Mar-21	12-Aug-21	05-Sep-21	17-Jan-22	158	
05-3950	Electrical and instrumentation works design (2.5.15)	135	135	0%	0%	135		31-Mar-21	12-Aug-21	10-May-21	21-Sep-21	40	
05-3960	Mechanical works design (2.5.16) (2 Packages)	105	105	0%	0%	105		31-Mar-21	13-Jul-21	09-Jun-21	21-Sep-21	70	
05-3970	Fire services installation design (2.5.17) (2 Packages)	105	105	0%	0%	105	Start On or After	30-Apr-21*	12-Aug-21	08-May-21	20-Aug-21	8	
EP_SP_66_12-WP-6-M40.05.02.05.7	**Building services design (excluding fire services installation desi**	160	160	0%		160		30-May-21	05-Nov-21	26-Jul-21	06-Jan-22	62	
05-3990	MVAC	120	120	0%	0%	120		14-Jun-21	11-Oct-21	25-Aug-21	22-Dec-21	72	
05-4010	Plumbing	135	135	0%	0%	135		30-May-21	11-Oct-21	26-Jul-21	07-Dec-21	57	
05-4020	Drainage	135	135	0%	0%	135		24-Jun-21	05-Nov-21	26-Jul-21	07-Dec-21	32	
05-4030	ELV	135	135	0%	0%	135		15-Jun-21	27-Oct-21	25-Aug-21	06-Jan-22	71	
EP_SP_66_12-WP-6-M40.05.02.06	**DDA Water Treatment Plant Building (2.6)**	210	210	0%		210		31-Mar-21	26-Oct-21	08-May-21	16-Jul-22	263	
05-4050	Architectural Design (2.6.25)	105	105	0%	0%	105		30-May-21	11-Sep-21	11-Mar-22	23-Jun-22	285	
05-4060	Foundation design (2.6.13)	180	180	0%	0%	180		31-Mar-21	26-Sep-21	18-Jan-22	16-Jul-22	293	
05-4080	Electrical and instrumentation works design (2.6.15)	105	105	0%	0%	105		31-Mar-21	13-Jul-21	09-Jun-21	21-Sep-21	70	
05-4090	Mechanical works design (2.6.16)	105	105	0%	0%	105		31-Mar-21	13-Jul-21	09-Jun-21	21-Sep-21	70	
05-4100	Fire services installation design (2.6.17)	105	105	0%	0%	105		25-Apr-21	07-Aug-21	08-May-21	20-Aug-21	13	
EP_SP_66_12-WP-6-M40.05.02.06.7	**Building services design (excluding fire services installation desi**	152	152	0%		152		28-May-21	26-Oct-21	26-Jul-21	06-Jan-22	72	



3-Month Rolling Programme (March 2021)

Remaining Work
Actual Work
Critical Remaining Work
Milestone
Actual Milestone
Critical Milestone

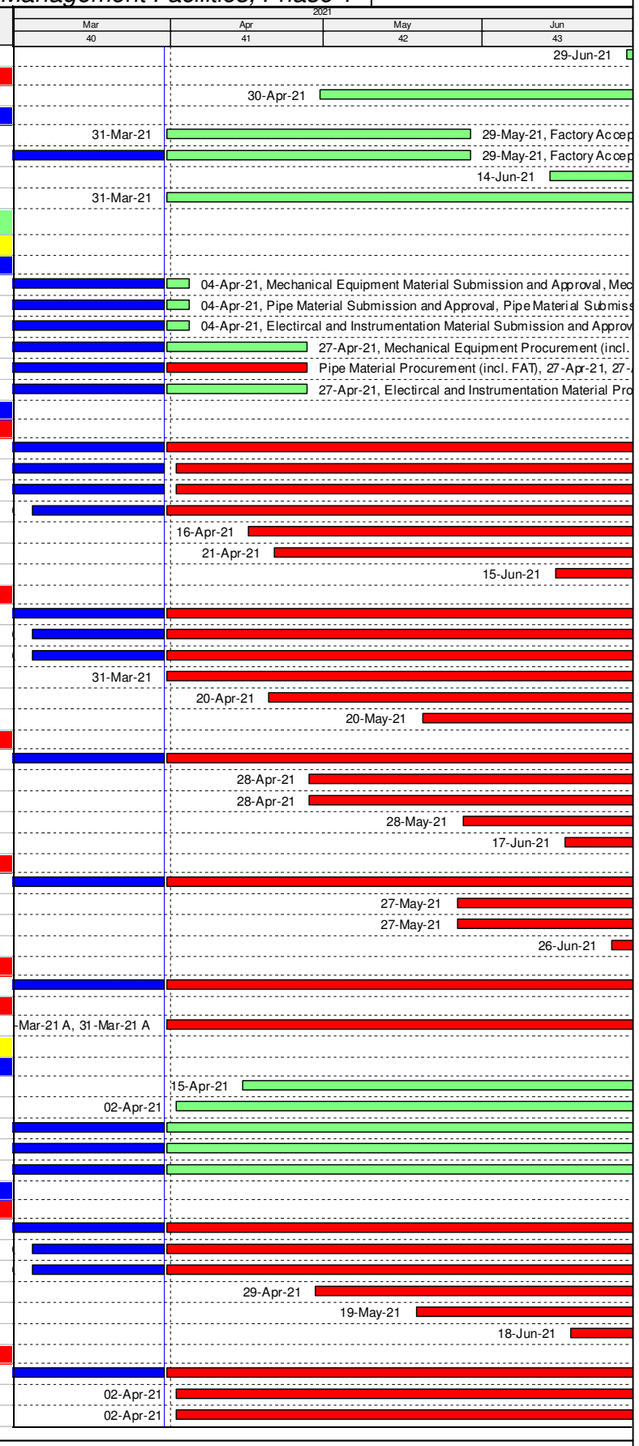
Activity ID	Activity Name	Original Duration	At Completion Duration	Duration % Complete	Activity % Complete	Remaining Duration	Primary Constraint	Current Start	Current Finish	Late Start	Late Finish	Total Float	M39 Remarks
05-4110	Electrical Services and Lighting	135	135	0%	0%	135		14-Jun-21	26-Oct-21	25-Aug-21	06-Jan-22	72	
05-4120	MVAC	135	135	0%	0%	135		14-Jun-21	26-Oct-21	10-Aug-21	22-Dec-21	57	
05-4140	Plumbing	135	135	0%	0%	135		14-Jun-21	26-Oct-21	26-Jul-21	07-Dec-21	42	
05-4150	Drainage	135	135	0%	0%	135		28-May-21	09-Oct-21	26-Jul-21	07-Dec-21	59	
EP_SP_66_12-WP-6-M40.05.02.07 DDA Administration Building (2.7)		185	185	0%		185		05-May-21	05-Nov-21	08-May-21	25-Jun-22	232	
05-4170	Architectural Design (2.7.21)	105	105	0%	0%	105	Start On or After	30-May-21*	11-Sep-21	13-Mar-22	25-Jun-22	287	
05-4210	Fire services installation design (2.7.14)	105	105	0%	0%	105		05-May-21	17-Aug-21	08-May-21	20-Aug-21	3	
EP_SP_66_12-WP-6-M40.05.02.07.6 Building services design (excluding fire services installation desi		162	162	0%		162		28-May-21	05-Nov-21	01-Jul-21	06-Jan-22	62	
05-4220	Electrical Services and Lighting	135	135	0%	0%	135		14-Jun-21	26-Oct-21	25-Aug-21	06-Jan-22	72	
05-4230	MVAC	135	135	0%	0%	135		14-Jun-21	26-Oct-21	10-Aug-21	22-Dec-21	57	
05-4250	Plumbing	135	135	0%	0%	135		24-Jun-21	05-Nov-21	26-Jul-21	07-Dec-21	32	
05-4260	Drainage	135	135	0%	0%	135		28-May-21	09-Oct-21	26-Jul-21	07-Dec-21	59	
05-4270	ELV	135	135	0%	0%	135		15-Jun-21	27-Oct-21	25-Aug-21	06-Jan-22	71	
05-4280	Lifts and Escalators	135	135	0%	0%	135		14-Jun-21	26-Oct-21	01-Jul-21	12-Nov-21	17	
EP_SP_66_12-WP-6-M40.05.02.08 DDA IWMF Substation (2.8)		246	598	18.7%		200		27-Feb-20 A	16-Oct-21	08-Apr-21	06-Jul-22	263	
05-4290	Architectural Design (2.8.25)	105	105	0%	0%	105	Start On or After	31-Mar-21*	13-Jul-21	24-Dec-21	07-Apr-22	268	
05-4300	Foundation design (2.8.13)	200	200	0%	0%	200		31-Mar-21	16-Oct-21	03-Sep-21	21-Mar-22	156	
05-4310	Structural design (2.8.14)	195	593	0%	5%	195		27-Feb-20 A	11-Oct-21	24-Dec-21	06-Jul-22	268	
05-4320	Electrical and instrumentation works design (2.8.15)	135	135	0%	0%	135		30-Apr-21	11-Sep-21	03-Dec-21	16-Apr-22	217	
05-4340	Fire services installation design (2.8.17)	135	135	0%	0%	135		04-Apr-21	16-Aug-21	08-Apr-21	20-Aug-21	4	
EP_SP_66_12-WP-6-M40.05.02.08.7 Building services design (excluding fire services installation desi		135	135	0%		135		31-Mar-21	12-Aug-21	26-Jul-21	30-Apr-22	261	
05-4990	Electrical Services and Lighting	135	135	0%	0%	135		31-Mar-21	12-Aug-21	25-Aug-21	06-Jan-22	147	
05-5000	MVAC	135	135	0%	0%	135		31-Mar-21	12-Aug-21	10-Aug-21	22-Dec-21	132	
05-5010	Plumbing	135	135	0%	0%	135		31-Mar-21	12-Aug-21	26-Jul-21	07-Dec-21	117	
05-5020	Drainage	135	135	0%	0%	135		31-Mar-21	12-Aug-21	26-Jul-21	07-Dec-21	117	
05-5030	ELV	135	135	0%	0%	135		31-Mar-21	12-Aug-21	25-Aug-21	06-Jan-22	147	
05-5030-1(M20)	Building Management System (BMS)	135	135	0%	0%	135		31-Mar-21	12-Aug-21	17-Dec-21	30-Apr-22	261	
EP_SP_66_12-WP-6-M40.05.02.1 DDA Chimney		135	135	0%		135		28-Jun-21	09-Nov-21	20-Dec-21	03-May-22	175	
EP_SP_66_12-WP-6-M40.05.02.1.1 Building services design (excluding fire services installation desig		135	135	0%		135		28-Jun-21	09-Nov-21	20-Dec-21	03-May-22	175	
05-6060(5a)	Building Management System (BMS)	135	135	0%	0%	135		28-Jun-21	09-Nov-21	20-Dec-21	03-May-22	175	
EP_SP_66_12-WP-6-M40.05.02.09 DDA Air Quality Monitoring Stations (2.9)		105	105	0%		105		14-Apr-21	27-Jul-21	20-Apr-21	02-Aug-21	6	
05-4490	Design of the Air Quality Monitoring Stations (2.9.03)	105	105	0%	0%	105		14-Apr-21	27-Jul-21	20-Apr-21	02-Aug-21	6	
EP_SP_66_12-WP-6-M40.05.02.10 DDA Roads and Utilities (2.10)		225	225	0%		225		31-Mar-21	10-Nov-21	24-Apr-21	19-Dec-23	769	
EP_SP_66_12-WP-6-M40.05.02.10.1 Permanent road works layout on the Artificial Island (2.10.13)		135	135	0%		135		31-Mar-21	12-Aug-21	25-Mar-23	19-Dec-23	859	
05-4470	Roads and hardstandings layout	135	135	0%	0%	135		31-Mar-21	12-Aug-21	25-Mar-23	06-Aug-23	724	
05-4480	Road signage and markings	135	135	0%	0%	135		31-Mar-21	12-Aug-21	07-Aug-23	19-Dec-23	859	
EP_SP_66_12-WP-6-M40.05.02.10.2 Sewerage design on the Artificial Island (2.10.14)		135	135	0%		135		31-Mar-21	12-Aug-21	26-Jul-21	10-Sep-22	394	
05-4430	Foul Sewerage	135	135	0%	0%	135		31-Mar-21	12-Aug-21	26-Jul-21	07-Dec-21	117	
05-4440	Contaminated Sewerage	135	135	0%	0%	135		31-Mar-21	12-Aug-21	29-Apr-22	10-Sep-22	394	
EP_SP_66_12-WP-6-M40.05.02.10.3 Drainage system design on the Artificial Island (2.10.15)		135	135	0%		135		31-Mar-21	12-Aug-21	03-Jul-21	07-Dec-21	117	
05-5310	Surface water Drainage System	135	135	0%	0%	135		31-Mar-21	12-Aug-21	26-Jul-21	07-Dec-21	117	
05-5320	First Flush Drainage System concept	135	135	0%	0%	135		31-Mar-21	12-Aug-21	03-Jul-21	14-Nov-21	94	
EP_SP_66_12-WP-6-M40.05.02.10.4 Water supply system design on the Artificial Island (2.10.16)		225	225	0%		225		31-Mar-21	10-Nov-21	26-Jul-21	21-Aug-22	284	
05-5250	Potable Water Distribution System	135	135	0%	0%	135		31-Mar-21	12-Aug-21	09-Apr-22	21-Aug-22	374	
05-5260	Recycled Water System	135	135	0%	0%	135		31-Mar-21	12-Aug-21	09-Apr-22	21-Aug-22	374	
05-5270	Irrigation System	135	135	0%	0%	135		31-Mar-21	12-Aug-21	26-Jul-21	07-Dec-21	117	
05-5280	Rainwater harvesting System	135	135	0%	0%	135		14-Jun-21	26-Oct-21	26-Jul-21	07-Dec-21	42	
05-5300-1(M24)	E&M system for seawater intake and brine discharge (2.10.04.07)	90	90	0%	0%	90		30-Apr-21	28-Jul-21	02-Sep-21	30-Nov-21	125	
05-5300-2(M24)	Building Services system for seawater intake and brine discharge (2.10.04.09)	90	90	0%	0%	90		29-Jun-21	26-Sep-21	09-Sep-21	07-Dec-21	72	
05-5300-3(5a)	Chemical scrubber system for odour control (2.10.16.10)	135	135	0%	0%	135		29-Jun-21	10-Nov-21	10-Aug-21	22-Dec-21	42	
EP_SP_66_12-WP-6-M40.05.02.10.6 Design of telecommunication and other utilities (2.10.18)		135	135	0%		135		31-Mar-21	12-Aug-21	24-Apr-21	06-Aug-23	724	
05-4590	Site Lighting Concept / Schematics	135	135	0%	0%	135		31-Mar-21	12-Aug-21	25-Mar-23	06-Aug-23	724	
05-4600	Lightning Protection System concept / schematics	135	135	0%	0%	135		31-Mar-21	12-Aug-21	24-Apr-21	05-Sep-21	24	
EP_SP_66_12-WP-6-M40.05.02.10.7 Utility ducts/Pipebridges design (2.10.26)		135	135	0%		135		29-Jun-21	10-Nov-21	24-Jan-23	07-Jun-23	574	
05-5040	Design of Pipe / Utilities	135	135	0%	0%	135		29-Jun-21	10-Nov-21	24-Jan-23	07-Jun-23	574	
05-5050	Utility ducts network	135	135	0%	0%	135		29-Jun-21	10-Nov-21	24-Jan-23	07-Jun-23	574	
EP_SP_66_12-WP-6-M40.05.02.11 DDA Architectural, Finishes and Landscaping Works (2.11)		197	197	0%		197		30-Apr-21	12-Nov-21	16-May-21	16-Aug-22	277	
EP_SP_66_12-WP-6-M40.05.02.11.1 External and internal finishes design for Incineration Plant Buildi		137	137	0%		137		30-Apr-21	13-Sep-21	09-Oct-21	23-May-22	252	
05-4670	External and internal finishes design for Incineration Plant Building (13 Packages)	137	137	0%	0%	137	Start On or After	30-Apr-21*	13-Sep-21	09-Oct-21	22-Feb-22	162	
05-4690	External and internal finishes design for Turbine Hall Building (7 Packages)	137	137	0%	0%	137	Start On or After	30-Apr-21*	13-Sep-21	07-Jan-22	23-May-22	252	
05-4700	External and internal finishes design for Air Compressor Building (7 Packages)	137	137	0%	0%	137	Start On or After	30-Apr-21*	13-Sep-21	10-Dec-21	25-Apr-22	224	
05-4710	External and internal finishes design for Chimney (10 Packages)	137	137	0%	0%	137	Start On or After	30-Apr-21*	13-Sep-21	28-Dec-21	13-May-22	242	
05-4720	External and internal finishes design for Reception Pavilion (10 Packages)	137	137	0%	0%	137	Start On or After	30-Apr-21*	13-Sep-21	10-Dec-21	25-Apr-22	224	
EP_SP_66_12-WP-6-M40.05.02.11.3 External and internal finishes design for the Wastewater Treatmer		137	137	0%		137		29-Jun-21	12-Nov-21	06-Jan-22	22-May-22	191	
05-4740	External and internal finishes design for the Wastewater Treatment Plant (7 Packages)	137	137	0%	0%	137		29-Jun-21	12-Nov-21	06-Jan-22	22-May-22	191	
EP_SP_66_12-WP-6-M40.05.02.11.4 External and internal finishes design for the WT Plant Building (2		137	137	0%		137		29-Jun-21	12-Nov-21	06-Jan-22	22-May-22	191	
05-4750	External and internal finishes design for the Water Treatment Plant Building (9 Package	137	137	0%	0%	137		29-Jun-21	12-Nov-21	06-Jan-22	22-May-22	191	
EP_SP_66_12-WP-6-M40.05.02.11.5 External and internal finishes design for the Administration Build		137	137	0%		137		29-Jun-21	12-Nov-21	02-Apr-22	16-Aug-22	277	



3-Month Rolling Programme (March 2021)

Remaining Work
Actual Work
Critical Remaining Work
Milestone
Actual Milestone
Critical Milestone

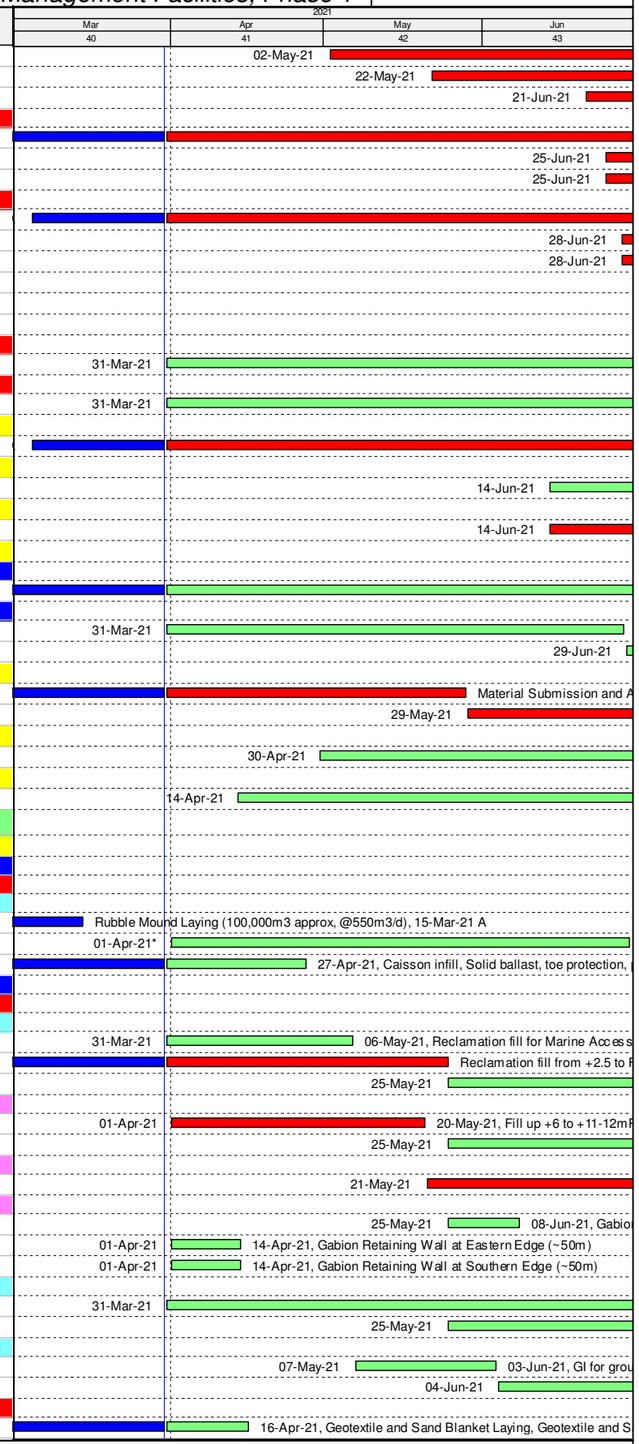
Activity ID	Activity Name	Original Duration	At Completion Duration	Duration % Complete	Activity % Complete	Remaining Duration	Primary Constraint	Current Start	Current Finish	Late Start	Late Finish	Total Float	M39 Remarks
05-4760	External and internal finishes design for the Administration Building (12 Packages)	137	137	0%	0%	137		29-Jun-21	12-Nov-21	02-Apr-22	16-Aug-22	277	
EP_SP_66_12-WP-6-M40.05.02.11.6	External and internal finishes design for the IWMF Substation (2	137	137	0%		137		30-Apr-21	13-Sep-21	16-May-21	29-Sep-21	16	
05-4770	External and internal finishes design for the IWMF Substation	137	137	0%	0%	137		30-Apr-21	13-Sep-21	16-May-21	29-Sep-21	16	
EP_SP_66_12-WP-6-M40.05.02.12	DDA Testing and Commissioning (2.12)	586	888	69.28%		180		23-Apr-19 A	26-Sep-21	12-Oct-21	20-Jun-22	267	
05-4810	Factory Acceptance Testing plan (2.12.09.01) (1 Packages)	60	60	0%	0%	60		31-Mar-21	29-May-21	12-Oct-21	10-Dec-21	195	
05-4810-1(5a)	Factory Acceptance Testing plan (2.12.09.02-07) (8 Packages)	60	768	0%	5%	60		23-Apr-19 A	29-May-21	12-Oct-21	10-Dec-21	195	
05-4820	Site Acceptance Testing plan (2.12.10)	105	105	0%	0%	105		14-Jun-21	26-Sep-21	12-Oct-21	24-Jan-22	120	
05-5430(M38)	Construction Plan for Prefabs 1-2-3 (2.12.09.07)	105	105	0%	0%	105		31-Mar-21	13-Jul-21	08-Mar-22	20-Jun-22	342	
EP_SP_66_12-WP-6-M40.06	**Procurement of Major Equipment**	1331	1586	57.25%		569		18-Jun-18 A	20-Oct-22	31-Mar-21	20-Oct-22	0	
EP_SP_66_12-WP-6-M40.06.1	**Off-site Fabrication of Incineration Modules**	1331	1484	64.09%		478		29-Jun-18 A	21-Jul-22	31-Mar-21	21-Jul-22	0	
EP_SP_66_12-WP-6-M40.06.1.25	**Material Procurement**	821	1034	96.59%		28		29-Jun-18 A	27-Apr-21	31-Mar-21	25-May-21	28	
06-1000-1(1)	Mechanical Equipment Material Submission and Approval	180	1001	97.22%	97.22%	5		09-Jul-18 A	04-Apr-21	21-May-21	25-May-21	51	
06-1000-2(1)	Pipe Material Submission and Approval	90	524	94.44%	92%	5		29-Oct-19 A	04-Apr-21	23-Apr-21	27-Apr-21	23	
06-1000-3(1)	Electircal and Instrumentation Material Submission and Approval	90	524	94.44%	94.44%	5		29-Oct-19 A	04-Apr-21	09-May-21	13-May-21	39	
06-1010-1(1)	Mechanical Equipment Procurement (incl. FAT)	360	1034	92.22%	92.22%	28		29-Jun-18 A	27-Apr-21	28-Apr-21	25-May-21	28	
06-1010-2(1)	Pipe Material Procurement (incl. FAT)	23	547	0%	0%	28		29-Oct-19 A	27-Apr-21	31-Mar-21	27-Apr-21	0	
06-1010-3(1)	Electircal and Instrumentation Material Procurement (Incl. FAT)	0	547	0%	0%	28		29-Oct-19 A	27-Apr-21	16-Apr-21	13-May-21	16	
EP_SP_66_12-WP-6-M40.06.1.26	**Fabrication of Module**	600	1167	20.33%		478		12-May-19 A	21-Jul-22	31-Mar-21	21-Jul-22	0	
EP_SP_66_12-WP-6-M40.06.1.26.1	**Process Island Furnace Boiler Liner 1**	600	1165	20.67%		476		12-May-19 A	19-Jul-22	31-Mar-21	19-Jul-22	0	
A0900	Process Island Furnace Boiler Liner 1 Structure Cutting, Painting, Pre-assembly & Ere	600	975	52.33%	52.33%	286		12-May-19 A	10-Jan-22	31-Mar-21	10-Jan-22	0	
A1000	Process Island Furnace Boiler Liner 1 Equipment Fabrication	520	375	39.62%	39.62%	314		31-Jan-21 A	09-Feb-22	02-Apr-21	09-Feb-22	0	
A1010	Process Island Furnace Boiler Liner 1 Equipment Installation	520	375	39.62%	39.62%	314		31-Jan-21 A	09-Feb-22	02-Apr-21	09-Feb-22	0	
A1020	Process Island Furnace Boiler Liner 1 Piping Fabrication & installation	375	372	7.73%	7.73%	346		05-Mar-21 A	11-Mar-22	31-Mar-21	11-Mar-22	0	
A1030	Process Island Furnace Boiler Liner 1 Electircal & Instrumentation Fabrication & instal	375	375	0%	0%	375		16-Apr-21	25-Apr-22	16-Apr-21	25-Apr-22	0	
A1050	Process Island Furnace Boiler Liner 1 Pre-commissioning (FAT)	400	400	0%	0%	400		21-Apr-21	25-May-22	21-Apr-21	25-May-22	0	
A1050a	Process Island Furnace Boiler Liner 1 Insulation	400	400	0%	0%	400	As Late As Poss	15-Jun-21	19-Jul-22	15-Jun-21	19-Jul-22	0	
EP_SP_66_12-WP-6-M40.06.1.26.2	**Process Island Furnace Boiler Liner 2**	600	509	25%		450		31-Jan-21 A	23-Jun-22	31-Mar-21	23-Jun-22	0	
A1080	Process Island Furnace Boiler Liner 2 Structure Cutting, Painting, Pre-assembly & Ere	600	374	47.5%	47.5%	315		31-Jan-21 A	08-Feb-22	31-Mar-21	08-Feb-22	0	
A1090	Process Island Furnace Boiler Liner 2 Equipment Fabrication	375	371	8%	8%	345		05-Mar-21 A	10-Mar-22	31-Mar-21	10-Mar-22	0	
A1100	Process Island Furnace Boiler Liner 2 Equipment Installation	375	371	8%	8%	345		05-Mar-21 A	10-Mar-22	31-Mar-21	10-Mar-22	0	
A1110	Process Island Furnace Boiler Liner 2 Piping Fabrication & installation	375	375	0%	0%	375		31-Mar-21	09-Apr-22	31-Mar-21	09-Apr-22	0	
A1120	Process Island Furnace Boiler Liner 2 Electircal & Instrumentation Fabrication & instal	400	400	0%	0%	400		20-Apr-21	24-May-22	20-Apr-21	24-May-22	0	
A1130	Process Island Furnace Boiler Liner 2 Pre-commissioning (FAT)	400	400	0%	0%	400		20-May-21	23-Jun-22	20-May-21	23-Jun-22	0	
EP_SP_66_12-WP-6-M40.06.1.26.3	**Process Island Furnace Boiler Liner 3**	600	537	20.33%		478		31-Jan-21 A	21-Jul-22	31-Mar-21	21-Jul-22	0	
A1170	Process Island Furnace Boiler Liner 3 Structure Cutting, Painting, Pre-assembly & Ere	600	432	37.83%	37.83%	373		31-Jan-21 A	07-Apr-22	31-Mar-21	07-Apr-22	0	
A1180	Process Island Furnace Boiler Liner 3 Equipment Fabrication	375	375	0%	0%	375		28-Apr-21	07-May-22	28-Apr-21	07-May-22	0	
A1190	Process Island Furnace Boiler Liner 3 Equipment Installation	375	375	0%	0%	375		28-Apr-21	07-May-22	28-Apr-21	07-May-22	0	
A1200	Process Island Furnace Boiler Liner 3 Piping Fabrication & installation	375	375	0%	0%	375		28-May-21	06-Jun-22	28-May-21	06-Jun-22	0	
A1210	Process Island Furnace Boiler Liner 3 Electircal & Instrumentation Fabrication & instal	400	400	0%	0%	400		17-Jun-21	21-Jul-22	17-Jun-21	21-Jul-22	0	
EP_SP_66_12-WP-6-M40.06.1.26.4	**Process Island Furnace Boiler Liner 4**	600	521	23%		462		31-Jan-21 A	05-Jul-22	31-Mar-21	05-Jul-22	0	
A1260	Process Island Furnace Boiler Liner 4 Structure Cutting, Painting, Pre-assembly & Ere	600	461	33%	33%	402		31-Jan-21 A	06-May-22	31-Mar-21	06-May-22	0	
A1270	Process Island Furnace Boiler Liner 4 Equipment Fabrication	375	375	0%	0%	375		27-May-21	05-Jun-22	27-May-21	05-Jun-22	0	
A1280	Process Island Furnace Boiler Liner 4 Equipment Installation	375	375	0%	0%	375		27-May-21	05-Jun-22	27-May-21	05-Jun-22	0	
A1290	Process Island Furnace Boiler Liner 4 Piping Fabrication & installation	375	375	0%	0%	375		26-Jun-21	05-Jul-22	26-Jun-21	05-Jul-22	0	
EP_SP_66_12-WP-6-M40.06.1.26.5	**Process Island Furnace Boiler Liner 5**	600	523	22.67%		464		31-Jan-21 A	07-Jul-22	31-Mar-21	07-Jul-22	0	
A1350	Process Island Furnace Boiler Liner 5 Structure Cutting, Painting, Pre-assembly & Ere	600	523	22.67%	22.67%	464		31-Jan-21 A	07-Jul-22	31-Mar-21	07-Jul-22	0	
EP_SP_66_12-WP-6-M40.06.1.26.6	**Process Island Furnace Boiler Liner 6**	495	478	3.43%		478		31-Mar-21 A	21-Jul-22	31-Mar-21	21-Jul-22	0	
A1440	Process Island Furnace Boiler Liner 6 Structure Cutting, Painting, Pre-assembly & Ere	495	478	3.43%	3.43%	478		31-Mar-21 A	21-Jul-22	31-Mar-21	21-Jul-22	0	
EP_SP_66_12-WP-6-M40.06.2	**Off-site Fabrication of Turbine Modules**	781	1586	27.14%		569		18-Jun-18 A	20-Oct-22	31-Mar-21	20-Oct-22	0	
EP_SP_66_12-WP-6-M40.06.2.1	**Material Procurement**	546	1262	55.13%		245		18-Jun-18 A	30-Nov-21	02-Apr-21	18-Jan-22	49	
06-1050-2(1)	Pipe Material Submission and Approval	90	90	0%	0%	90		15-Apr-21	13-Jul-21	01-Oct-21	29-Dec-21	169	
06-1050-3(1)	Electircal and Instrumentation Material Submission and Approval	90	90	0%	0%	90		02-Apr-21	30-Jun-21	21-Oct-21	18-Jan-22	202	
06-1060-1(1)	Mechanical Equipment Procurement (Incl. FAT)	350	1262	30%	30%	245		18-Jun-18 A	30-Nov-21	02-Apr-21	02-Dec-21	2	
06-1060-2(1)	Pipe Material Procurement (Incl. FAT)	180	612	0%	0%	245		29-Mar-20 A	30-Nov-21	29-Apr-21	29-Dec-21	29	
06-1060-3(1)	Electircal and Instrumentation Material Procurement (Incl. FAT)	365	612	32.88%	32.88%	245		29-Mar-20 A	30-Nov-21	19-May-21	18-Jan-22	49	
EP_SP_66_12-WP-6-M40.06.2.2	**Fabrication of Module**	600	628	5.17%		569		31-Jan-21 A	20-Oct-22	31-Mar-21	20-Oct-22	0	
EP_SP_66_12-WP-6-M40.06.2.2.1	**Process Island FGC Liner 1**	510	538	6.08%		479		31-Jan-21 A	22-Jul-22	31-Mar-21	22-Jul-22	0	
A0810	Process Island FGC Liner 1 Structure Cutting, Painting, Pre-assembly & Erection	495	403	30.51%	30.51%	344		31-Jan-21 A	09-Mar-22	31-Mar-21	09-Mar-22	0	
A1530	Process Island FGC Liner 1 Equipment Fabrication	375	400	0.27%	0.27%	374		05-Mar-21 A	08-Apr-22	31-Mar-21	08-Apr-22	0	
A1540	Process Island FGC Liner 1 Equipment Installation	375	400	0.27%	0.27%	374		05-Mar-21 A	08-Apr-22	31-Mar-21	08-Apr-22	0	
A1550	Process Island FGC Liner 1 Piping Fabrication & installation	375	375	0%	0%	375		29-Apr-21	08-May-22	29-Apr-21	08-May-22	0	
A1560	Process Island FGC Liner 1 Electircal & Instrumentation Fabrication & installation	400	400	0%	0%	400		19-May-21	22-Jun-22	19-May-21	22-Jun-22	0	
A1570	Process Island FGC Liner 1 Pre-commissioning (FAT)	400	400	0%	0%	400		18-Jun-21	22-Jul-22	18-Jun-21	22-Jul-22	0	
EP_SP_66_12-WP-6-M40.06.2.2.2	**Process Island FGC Liner 2**	513	541	6.04%		482		31-Jan-21 A	25-Jul-22	31-Mar-21	25-Jul-22	0	
A1600	Process Island FGC Liner 2 Structure Cutting, Painting, Pre-assembly & Erection	495	406	29.9%	29.9%	347		31-Jan-21 A	12-Mar-22	31-Mar-21	12-Mar-22	0	
A1610	Process Island FGC Liner 2 Equipment Fabrication	375	375	0%	0%	375		02-Apr-21	11-Apr-22	02-Apr-21	11-Apr-22	0	
A1620	Process Island FGC Liner 2 Equipment Installation	375	375	0%	0%	375		02-Apr-21	11-Apr-22	02-Apr-21	11-Apr-22	0	



3-Month Rolling Programme (March 2021)

Remaining Work
Actual Work
Critical Remaining Work
Milestone
Actual Milestone
Critical Milestone

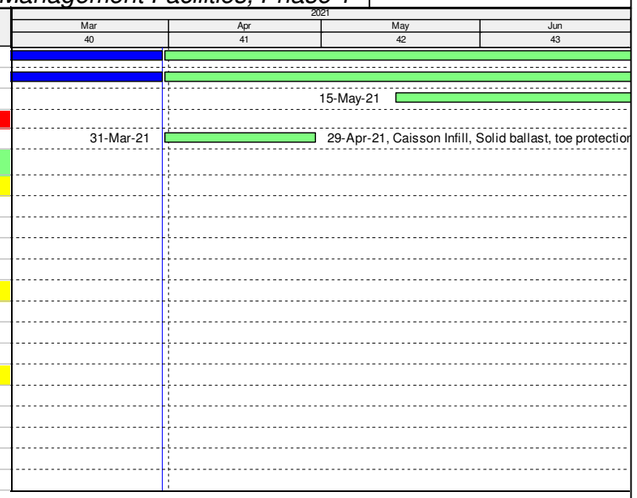
Activity ID	Activity Name	Original Duration	At Completion Duration	Duration % Complete	Activity % Complete	Remaining Duration	Primary Constraint	Current Start	Current Finish	Late Start	Late Finish	Total Float	M39 Remarks
A1630	Process Island FGC Liner 2 Piping Fabrication & installation	375	375	0%	0%	375		02-May-21	11-May-22	02-May-21	11-May-22	0	
A1640	Process Island FGC Liner 2 Electircal & Instrumentation Fabrication & installation	400	400	0%	0%	400		22-May-21	25-Jun-22	22-May-21	25-Jun-22	0	
A1650	Process Island FGC Liner 2 Pre-commissioning (FAT)	400	400	0%	0%	400		21-Jun-21	25-Jul-22	21-Jun-21	25-Jul-22	0	
EP_SP_66_12-WP-6-M40.06.2.2.3	Process Island FGC Liner 3	495	520	6.87%		461		31-Jan-21 A	04-Jul-22	31-Mar-21	04-Jul-22	0	
A1690	Process Island FGC Liner 3 Structure Cutting, Painting, Pre-assembly & Erection	495	490	12.93%	12.93%	431		31-Jan-21 A	04-Jun-22	31-Mar-21	04-Jun-22	0	
A1700	Process Island FGC Liner 3 Equipment Fabrication	375	375	0%	0%	375		25-Jun-21	04-Jul-22	25-Jun-21	04-Jul-22	0	
A1710	Process Island FGC Liner 3 Equipment Installation	375	375	0%	0%	375		25-Jun-21	04-Jul-22	25-Jun-21	04-Jul-22	0	
EP_SP_66_12-WP-6-M40.06.2.2.4	Process Island FGC Liner 4	569	595	0%		569		05-Mar-21 A	20-Oct-22	31-Mar-21	20-Oct-22	0	
A1780	Process Island FGC Liner 4 Structure Cutting, Painting, Pre-assembly & Erection	465	460	6.67%	6.67%	434		05-Mar-21 A	07-Jun-22	31-Mar-21	07-Jun-22	0	
A1790	Process Island FGC Liner 4 Equipment Fabrication	375	375	0%	0%	375		28-Jun-21	07-Jul-22	28-Jun-21	07-Jul-22	0	
A1800	Process Island FGC Liner 4 Equipment Installation	375	375	0%	0%	375		28-Jun-21	07-Jul-22	28-Jun-21	07-Jul-22	0	
A1810	Process Island FGC Liner 4 Piping Fabrication & installation	375	375	0%	0%	375		28-Jul-21	06-Aug-22	28-Jul-21	06-Aug-22	0	
A1820	Process Island FGC Liner 4 Electircal & Instrumentation Fabrication & installation	400	400	0%	0%	400		17-Aug-21	20-Sep-22	17-Aug-21	20-Sep-22	0	
A1830	Process Island FGC Liner 4 Pre-commissioning (FAT)	400	400	0%	0%	400		16-Sep-21	20-Oct-22	16-Sep-21	20-Oct-22	0	
EP_SP_66_12-WP-6-M40.06.2.2.5	Process Island FGC Liner 5	495	495	0%		495		31-Mar-21	07-Aug-22	27-Apr-21	03-Sep-22	27	
A1870	Process Island FGC Liner 5 Structure Cutting, Painting, Pre-assembly & Erection	495	495	0%	0%	495		31-Mar-21	07-Aug-22	27-Apr-21	03-Sep-22	27	
EP_SP_66_12-WP-6-M40.06.2.2.6	Process Island FGC Liner 6	495	495	0%		495		31-Mar-21	07-Aug-22	15-Apr-21	22-Aug-22	15	
A1960	Process Island FGC Liner 6 Structure Cutting, Painting, Pre-assembly & Erection	495	495	0%	0%	495		31-Mar-21	07-Aug-22	15-Apr-21	22-Aug-22	15	
EP_SP_66_12-WP-6-M40.06.3	Procurement for ACC Units	200	206	10%		180		05-Mar-21 A	26-Sep-21	31-Mar-21	26-Sep-21	0	
06-1110	Material & Equipment Procurement	200	206	10%	10%	180		05-Mar-21 A	26-Sep-21	31-Mar-21	26-Sep-21	0	
EP_SP_66_12-WP-6-M40.06.4	Procurement for MT Plant Equipment	180	180	0%		180		14-Jun-21	10-Dec-21	19-Jun-21	15-Dec-21	5	
06-1150-1(1)	Mechanical Equipment Material Submission and Approval	180	180	0%	0%	180		14-Jun-21	10-Dec-21	19-Jun-21	15-Dec-21	5	
EP_SP_66_12-WP-6-M40.06.5	Procurement for WWTP Equipment	180	180	0%		180		14-Jun-21	10-Dec-21	14-Jun-21	10-Dec-21	0	
06-1190-1(1)	Mechanical Equipment Material Submission and Approval	180	180	0%	0%	180		14-Jun-21	10-Dec-21	14-Jun-21	10-Dec-21	0	
EP_SP_66_12-WP-6-M40.06.7	Procurement for HV Transformers and Associated Equipment	550	1046	22.73%		425		19-Jul-19 A	29-May-22	22-Jun-21	23-Aug-22	86	
EP_SP_66_12-WP-6-M40.06.7.1	Procurement of Transformers & EDG	550	959	38.55%		338		19-Jul-19 A	03-Mar-22	22-Jun-21	25-May-22	83	
06-1280(1)	Procurement of Transfromers	550	959	38.55%	38.55%	338		19-Jul-19 A	03-Mar-22	22-Jun-21	25-May-22	83	
EP_SP_66_12-WP-6-M40.06.7.2	Procurement of Switchboard/Pannels and Cables	425	425	0%		425		31-Mar-21	29-May-22	25-Jun-21	23-Aug-22	86	
06-2090(1)	Material Submission and Approval	90	90	0%	0%	90		31-Mar-21	28-Jun-21	25-Jun-21	22-Sep-21	86	
06-2100(1)	Material & Equipment Procurement	335	335	0%	0%	335		29-Jun-21	29-May-22	23-Sep-21	23-Aug-22	86	
EP_SP_66_12-WP-6-M40.06.10	Procruement and Off-site Fabrication of Pipe Bridges (Incl	270	454	11.48%		239		28-Aug-20 A	24-Nov-21	31-Mar-21	24-Nov-21	0	
06-1390(1)	Material Submission and Approval	90	274	34.44%	34.44%	59		28-Aug-20 A	28-May-21	31-Mar-21	28-May-21	0	
06-1400	Material & Equipment Procurement	180	180	0%	0%	180		29-May-21	24-Nov-21	29-May-21	24-Nov-21	0	
EP_SP_66_12-WP-6-M40.06.18	Procurement for Cranage Equipment	120	120	0%		120		30-Apr-21	27-Aug-21	24-Jul-21	20-Nov-21	85	
06-1710	Material Submission and Approval	120	120	0%	0%	120		30-Apr-21	27-Aug-21	24-Jul-21	20-Nov-21	85	
EP_SP_66_12-WP-6-M40.06.21	Procurement for Air Quality Monitoring Station Equipment	90	90	0%		90		14-Apr-21	12-Jul-21	05-May-21	02-Aug-21	21	
06-2150(1)	Material Submission and Approval	90	90	0%	0%	90		14-Apr-21	12-Jul-21	05-May-21	02-Aug-21	21	
EP_SP_66_12-WP-6-M40.08	Maritime Works	718	1021	67.83%		231		31-Jan-19 A	16-Nov-21	31-Mar-21	03-Nov-22	352	
EP_SP_66_12-WP-6-M40.08.1	Marine Construction	718	1021	67.83%		231		31-Jan-19 A	16-Nov-21	31-Mar-21	03-Nov-22	352	
EP_SP_66_12-WP-6-M40.08.1.1	Phase I - Construction of Perimeter Seawalls	578	610	84.26%		91		29-Oct-19 A	29-Jun-21	13-Apr-21	11-Jul-21	12	
EP_SP_66_12-WP-6-M40.08.1.1.1	Seawall and Berth at DCM Area	578	610	84.26%		91		29-Oct-19 A	29-Jun-21	13-Apr-21	11-Jul-21	12	
EP_SP_66_12-WP-6-M40.08.1.1.1.5	Seawall Structural Works	578	610	84.26%		91		29-Oct-19 A	29-Jun-21	13-Apr-21	11-Jul-21	12	
08-1100	Rubble Mound Laying (100,000m3 approx, @550m3/d)	182	261	100%	100%	0		27-Jun-20 A	15-Mar-21 A				
08-1105-07 (6)	Precast Yard Setup	90	90	0%	0%	90	Start On or After	01-Apr-21*	29-Jun-21	13-Apr-21	11-Jul-21	12	
08-1115(3)	Caisson infill, Solid ballast, toe protection, precast concrete blocks ..etc Laying	250	547	89%	89%	28		29-Oct-19 A	27-Apr-21	29-Apr-21	26-May-21	30	
EP_SP_66_12-WP-6-M40.08.1.2	Phase II - Reclamation, Breakwater and Berth Construction	701	1021	67.06%		231		31-Jan-19 A	16-Nov-21	31-Mar-21	03-Nov-22	352	
EP_SP_66_12-WP-6-M40.08.1.2.1	Reclamation	234	262	1.45%		231		28-Feb-21 A	16-Nov-21	31-Mar-21	03-Nov-22	352	
EP_SP_66_12-WP-6-M40.08.1.2.1.6	Reclamation Works	234	262	1.45%		231		28-Feb-21 A	16-Nov-21	31-Mar-21	16-Nov-21	0	
08-1200-3 (M35)	Reclamation fill for Marine Access from -9.0mPD to +2.5mPD (~300,000m3 @ 4000m3	37	37	0%	0%	37		31-Mar-21	06-May-21	18-Apr-21	25-May-21	18	
08-1210	Reclamation fill from +2.5 to Formation Level (130,000m3 @2000m3/d)	120	86	54%	54%	55		28-Feb-21 A	25-May-21	31-Mar-21	25-May-21	0	
08-1210-1(6)	Reclamation fill from +2.5 to Formation Level (289,000m3 @6000m3/d)	49	49	0%	0%	49		25-May-21	13-Jul-21	27-May-21	14-Jul-21	2	
EP_SP_66_12-WP-6-M40.08.1.2.1.6.3	Surcharge Filling	106	106	0%		106		01-Apr-21	16-Jul-21	01-Apr-21	17-Jul-21	2	
08-3000(6)	Fill up +6 to +11-12mPD at PB1-2 (Stage 1) (102,555m3 @ 2000m3/d)	50	50	0%	0%	50		01-Apr-21	20-May-21	01-Apr-21	20-May-21	0	
08-3010(6)	Fill up +6 to +11-12mPD at PB2-3 (Stage 2) (102,555m3 @ 2000m3/d)	52	52	0%	0%	52		25-May-21	16-Jul-21	27-May-21	17-Jul-21	2	
EP_SP_66_12-WP-6-M40.08.1.2.1.6.4	Surcharge Period	180	180	0%		180		21-May-21	16-Nov-21	21-May-21	16-Nov-21	0	
08-3090(6)	Loading @ +11-12mPD at PB1-2 (Stage 1)	180	180	0%	0%	180		21-May-21	16-Nov-21	21-May-21	16-Nov-21	0	
EP_SP_66_12-WP-6-M40.08.1.2.1.6.5	Retaining Wall	68	68	0%		68		01-Apr-21	08-Jun-21	07-May-21	17-Jul-21	40	
08-3140(6)	Gabion Retaining Wall at Northern Edge (~50m)	14	14	0%	0%	14		25-May-21	08-Jun-21	04-Jul-21	17-Jul-21	40	
08-3150(6)	Gabion Retaining Wall at Eastern Edge (~50m)	14	14	0%	0%	14		01-Apr-21	14-Apr-21	07-May-21	20-May-21	36	
08-3160(6)	Gabion Retaining Wall at Southern Edge (~50m)	14	14	0%	0%	14		01-Apr-21	14-Apr-21	07-May-21	20-May-21	36	
EP_SP_66_12-WP-6-M40.08.1.2.1.1	Instrumentation	120	120	0%		120		31-Mar-21	28-Jul-21	07-Jul-22	03-Nov-22	463	
08-1340 (M23)	Placing Settlement Plates for Settlement Markers & Instrumentation on +2.5mPD (~42	120	120	0%	0%	120		31-Mar-21	28-Jul-21	07-Jul-22	03-Nov-22	463	
08-1350 (M23)	Extension of instruments above +2.5mPD	65	65	0%	0%	65		25-May-21	28-Jul-21	31-Aug-22	03-Nov-22	463	
EP_SP_66_12-WP-6-M40.08.1.2.1.2	PVD Remedial Works	118	118	0%		118		07-May-21	01-Sep-21	13-Jul-21	07-Nov-21	67	
08-1390 (M34)20	GI for ground condition varification at other Zone for PVD (10 nr approx @0.5 nr/day) Inc	28	28	0%	0%	28		07-May-21	03-Jun-21	13-Jul-21	09-Aug-21	67	
08-1390 (M34)25	Install Sand Drains at other Zones (approx. 549 nr @ 8nr/day/4 set of equipment)	90	90	0%	0%	90		04-Jun-21	01-Sep-21	10-Aug-21	07-Nov-21	67	
EP_SP_66_12-WP-6-M40.08.1.2.2	Breakwater	666	985	70.64%		195		31-Jan-19 A	12-Oct-21	02-Oct-21	15-Apr-22	186	
08-1250	Geotextile and Sand Blanket Laying	45	806	64%	64%	16		31-Jan-19 A	16-Apr-21	13-Feb-22	01-Mar-22	320	



3-Month Rolling Programme (March 2021)

Remaining Work
Actual Work
Critical Remaining Work
Milestone
Actual Milestone
Critical Milestone

Activity ID	Activity Name	Original Duration	At Completion Duration	Duration % Complete	Activity % Complete	Remaining Duration	Primary Constraint	Current Start	Current Finish	Late Start	Late Finish	Total Float	M39 Remarks
08-1280	Rubble Mound Laying (100,000m3 approx, @550m3/d)	188	371	12%	12%	165		06-Sep-20 A	12-Sep-21	02-Oct-21	16-Mar-22	186	
08-1285(1)	Prefabrication for Caission	180	443	12%	12%	158		19-Jun-20 A	05-Sep-21	09-Oct-21	16-Mar-22	193	
08-1290	Caisson Laying (Total 29nrs, @2 nrs/week)	150	150	0%	0%	150		15-May-21	12-Oct-21	17-Nov-21	15-Apr-22	186	
EP_SP_66_12-WP-6-M40.08.1.2.3 Seawall and Berth at Marine Access		30	30	0%		30		31-Mar-21	29-Apr-21	18-Apr-21	18-May-21	18	
08-1320(5A)	Caisson Infill, Solid ballast, toe protection, precast concrete blocks ..etc Laying	30	30	0%	0%	30		31-Mar-21	29-Apr-21	18-Apr-21	18-May-21	18	
EP_SP_66_12-WP-6-M40.15 Works By CLP		603	603	0%		603		21-Dec-22	15-Aug-24	20-Mar-23	30-Oct-24	76	
EP_SP_66_12-WP-6-M40.15.1 Installation of Transmission System		120	120	0%		120		21-Dec-22	20-Apr-23	20-Mar-23	18-Mar-24	333	
15-0800	450 days Prior to Commencement of System Commissioning Test	0	0	0%	0%	0			21-Mar-23		20-Mar-23	0	
15-0900	Completion of Civil Provision for Transmission	0	0	0%	0%	0			21-Dec-22		20-Mar-23	89	
15-1000	Construction of Transmission System	90	90	0%	0%	90	Start On or After	22-Dec-22*	21-Mar-23	20-Nov-23	17-Feb-24	333	
15-1002	Cable Testing	30	30	0%	0%	30		22-Mar-23	20-Apr-23	18-Feb-24	18-Mar-24	333	
EP_SP_66_12-WP-6-M40.15.2 Remaining Installation Works by CLP		150	150	0%		150		23-Jul-23	19-Dec-23	23-Jul-23	16-Jun-24	180	
15-1005	Plant Installation inside CLP Equipment Room	60	60	0%	0%	60		23-Jul-23	20-Sep-23	23-Jul-23	20-Sep-23	0	
15-1010	Cable Termination Works	30	30	0%	0%	30		21-Sep-23	20-Oct-23	19-Mar-24	17-Apr-24	180	
15-1015	Testing and Commissioning	60	60	0%	0%	60		21-Oct-23	19-Dec-23	18-Apr-24	16-Jun-24	180	
EP_SP_66_12-WP-6-M40.15.3 Metering & Energization		74	74	0%		74		03-Jun-24	15-Aug-24	17-Jun-24	30-Oct-24	76	
15-1020	Incoming Power System Final Inspection and Metering works	30	30	0%	0%	30		03-Jun-24	03-Jul-24	17-Jun-24	16-Jul-24	14	
15-1030	Energization of Incoming Power Supply Main System	0	0	0%	0%	0			16-Jul-24		16-Jul-24	0	
15-1040	Energization of Incoming Power Supply Sub System	0	0	0%	0%	0			16-Jul-24		16-Jul-24	0	
15-1050	Export Power System Final Inspection and Metering works	30	30	0%	0%	30		17-Jul-24	15-Aug-24	01-Oct-24	30-Oct-24	76	
15-1060	Connection to Grid	0	0	0%	0%	0			15-Aug-24		30-Oct-24	76	



Remaining Work
Actual Work
Critical Remaining Work
Milestone
Actual Milestone
Critical Milestone

Appendix B Summary of Implementation Status of Environmental Mitigation

Appendix B

Table B.1 Implementation Schedule for Air Quality Measures for the IWMF at the artificial island near SKC

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
S3b.8.1	Air Pollution Control (Construction Dust) Regulation & Good Site Practices • Use of regular watering, with complete coverage, to reduce dust emissions from exposed site surfaces and unpaved roads, particularly during dry weather. • Use of frequent watering for particularly dusty construction areas and areas close to ASRs. • Side enclosure and covering of any aggregate or dusty material storage piles to reduce emissions. Where this is not practicable owing to frequent usage, watering shall be applied to aggregate fines. • Open stockpiles shall be avoided or covered. Where possible, prevent placing dusty material storage piles near ASRs. • Tarpaulin covering of all dusty vehicle loads transported to, from and between site locations. • Establishment and use of vehicle wheel and body washing facilities at the exit points of the site. • Provision of wind shield and dust extraction units or similar dust mitigation measures at the loading	Work site / During the construction period	Contractor		✓			Air Pollution Control (Construction Dust) Regulation	Implemented, N/A for dust control measures for transportation outside site boundary.

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
	points, and use of water sprinklers at the loading area where dust generation is likely during the loading process of loose material, particularly in dry seasons/ periods. • Imposition of speed controls for vehicles on unpaved site roads. Ten kilometers per hour is the recommended limit. • Where possible, routing of vehicles and positioning of construction plant should be at the maximum possible distance from ASRs • Instigation of an environmental monitoring and auditing program to monitor the construction process in order to enforce controls and modify method of work if dusty conditions arise.								
S3b.6.3	<u>Odour Removal by Deodorizers</u> • Deodorizers with 95% odour removal efficiency would be installed for the air ventilated from the mechanical treatment plant before discharge to the atmosphere	Waste reception halls, the waste storage area, the mechanical treatment plant / During design & operation phase	IWMF Operator	✓		✓		EIAO-TM	N/A
S3b.8.2	<u>Air Pollution Control and Stack Monitoring</u>	IWMF stack emissions / During	IWMF Operator	✓		✓		EIAO-TM, Supporting Document for	N/A

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
	• Air pollution control and stack monitoring system will be installed for the IWMF to ensure that the emissions from the IWMF stack will meet the proposed target emission limits. • Voluntary Enhancement Measures in Flue Gas Cleaning and Emission Monitoring: 1. Two-stage bag filter system with reagent recirculation; 2. In addition to SCR, provide SNCR for removal of NO_x; tighten emission limit for half-hourly and daily NO_x to 160 mg/m^3 and 80 mg/m_3 respectively; 3. Well-mixed feed waste: to minimize the fluctuation of pollutant loading on the flue gas treatment system; 4. Two more AQMSs would be set up at South Lantau and Shek Kwu Chau respectively; 5. Limit levels will be set under the IWMF DBO contract to require that waste feed shall cease if any of the air pollutant has exceeded 95% of the emission concentration limit as stipulated in the Special Process license; and 6. Each incineration chamber shall be fitted with auxiliary burners to ensure complete burn out of the combustion gases.	design & operation phase						Application for Variation of Environmental Permit (EP-429/2012)	

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
-	Treated Fly Ash and Air Pollution Control Residues: • During testing and commissioning, the Contractor shall sample and test every container of treated fly ash and air pollution control residues for conformance to the Incineration Residue Pollution Control Limits and leachability criteria shown in Table 2 of the Environmental Permit. If a test result confirms that any one of the samples does not conform to the limits and the criteria, the Contractor shall be required to sample and test every container of treated fly ash and air pollution control residues for conformance to the Incineration Residue Pollution Control Limits and leachability criteria for the next six months. • During the first six months of operation, if the requirements in (a) could be fully conformed with, the Contractor shall sample and test every shipload of treated fly ash and air pollution control residues for conformance to the Incineration Residue Pollution Control Limits and leachability criteria shown in Table 2 of the Environmental Permit. The Contractor shall take two samples from each shipload for testing and the Contractor shall not dispose of any of that shipload of treated fly ash and air	IWMF stack emissions / During design & operation phase	IWMF Operator	✓		✓		Supporting Document for Application for Variation of Environmental Permit (EP-429/2012)	N/A

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
	pollution control residues until the test results confirm that the two samples conform to the limits and the criteria. If a test result confirms that any one of the two samples does not conform to the limits and the criteria, the Contractor shall be required to sample and test every shipload of treated fly ash and air pollution control residues for conformance to the Incineration Residue Pollution Control Limits and leachability criteria for the next six months. The Contractor shall make due allowance in the Design and the Operation for the time to sample and test treated fly ash and air pollution control residues before disposal. • Provided that there is no non-conformance to the Incineration Residue Pollution Control Limits and leachability criteria shown in Table 2 of the Environmental Permit throughout a continuous sixmonth period in the Operation Period, the testing frequency shall be reduced to monthly interval.Two samples from one shipload of treated fly ash and air pollution control residues shall be collected and tested for conformance to the Incineration Residue Pollution Control Limits and leachability criteria. The Contractor shall not dispose of any of the treated fly ash and air pollution								

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
	control residues in the shipload which the samples are taken until the test results confirm that the samples conform to the limits and the criteria. If the test result confirm that any one of the samples does not conform to the limits and the criteria, the Contractor shall be required to sample and test every shipload of treated fly ash and air pollution control residues for conformance to the Incineration Residue Pollution Control Limits and leachability criteria shown in Table 2 of the Environmental Permit for the next six months.								
-	<u>Bottom Ash:</u> • During testing and commissioning, the Contractor shall sample and test every container of bottom ash for conformance to the leachability criteria shown in Table 2 of the Environmental Permit. If a test result confirms that any one of the samples does not conform to the criteria, the Contractor shall be required to sample and test every container of bottom ash for conformance to the leachability criteria for the next six months. • During the first six months of operation, if the requirements in (d) could be fully conformed with, the Contractor shall sample and test one shipload of bottom ash each month for	IWMF stack emissions / During design & operation phase	IWMF Operator	✓		✓		Supporting Document for Application for Variation of Environmental Permit (EP-429/2012)	N/A

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
	conformance to the leachability criteria shown in Table 2 of the Environmental Permit. The Contractor shall take two samples from the shipload for testing and the Contractor shall not dispose of any of that shipload of bottom ash until the test results confirm that the two samples conform to the criteria. If a test result confirms that any one of the two samples does not conform to the criteria, the Contractor shall be required to sample and test each shipload of bottom ash for conformance to the leachability criteria for the next six months. The Contractor shall make due allowance in the Design and the Operation for the time to sample and test bottom ash before disposal. • Provided that there is no non-conformance to the leachability criteria shown in Table 2 of the Environmental Permit throughout a continuous six month period in the Operation Period, the Contractor shall be allowed to take two samples from any one shipload of bottom ash once every six months for conformance to the leachability criteria. The Contractor shall not dispose of any of the bottom ash in the shipload which the samples are taken until the test								

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
	results confirm that the samples conform to the criteria. If the test result confirm that any one of the samples does not conform to the criteria, the Contractor shall be required to sample and test one shipload of bottom ash each month for conformance to the leachability criteria shown in Table 2 of the Environmental Permit for the next six months as stipulated above.								

* Des - Design, C - Construction, O – Operation, and Dec - Decommissioning

Table B.2 Implementation Schedule for Noise Impact Measures for the IWMF at the artificial island near SKC

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
S4b.8	Good site practices to limit noise emissions at source and use of quiet plant and working methods, whenever practicable.	Work Sites / Construction Period	EPD and its contractors		✓			EIAO-TM	Implemented
S4b.6 & S4b.8	All the ventilation fans installed in the below will be provided with silencers or acoustics treatment. (i) Stack of the incinerator (ii) Ventilation systems within the IWMF Enclosure and discharge silencer or other acoustic treatment equipment should be installed in the air-cooled chillers Other than provision of silencer or other acoustic treatment equipment for the stack of the incinerator and ventilation system, the detailed design should incorporate the following good practice in order to minimize the nuisance on the neighboring NSRs. (i) The exhaust of the ventilation system and any opening of the building should be located facing away from any NSRs; and (ii) Louver or other acoustic treatment equipment could also be applied to the exhaust of the ventilation system.	Within IWMF area / Construction Period	EPD and its contractors	✓		✓		EIAO-TM	N/A

-	<u>Voluntary Enhancement Measure</u> • Provision of air-conditioner and double glazed windows to nearby NSR at Shek Kwu Chau (i.e. SARDA) as precautionary measures.	IWMF site	Design team, contractor, IWMF operator	✓	✓			Supporting Document for Application for Variation of Environmental Permit (EP-429/2012)	Implemented

* Des - Design, C - Construction, O – Operation, and Dec - Decommissioning

Table B.3 Implementation Schedule for Water Quality Measures for the Artificial Island near SKC

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
S5b.8.1.1	<u>Drainage and Construction Site Runoff</u> The site practices outlined in ProPECC PN 1/94 "Construction Site Drainage" should be followed as far as practicable in order to minimise surface runoff and the chance of erosion. These practices include the following items: • At the start of site establishment, perimeter cut-off drains to direct off-site water around the site should be constructed with internal drainage works and erosion and sedimentation control facilities implemented Channels (both temporary and permanent drainage pipes and culverts), earth bunds or sand bag barriers should be provided on site to direct storm water to silt removal facilities. The design of the temporary on-site drainage system will be undertaken by the contractor prior to the commencement of construction. • Boundaries of earthworks should be surrounded by dykes or embankments for flood protection, as necessary. • Sand/silt removal facilities such as sand/silt traps and sediment basins should be provided to remove sand/silt particles from runoff to meet the requirements of the TM-DSS. The design of efficient silt removal facilities	Work site / During the construction period	Contractor		✓			EIAO-TM; ProPECC PN 1/94; WPCO	N/A

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
	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. The detailed design of the sand/silt traps shall be undertaken by the contractor prior to the commencement of construction. • Water pumped out from foundation piles must be discharged into silt removal facilities. • Measures should be taken to minimize the ingress of site runoff and drainage into excavations. Drainage water pumped out from excavations should be discharged into storm drains via silt removal facilities. • During rainstorms, exposed slope/soil surfaces should be covered by a tarpaulin or other means, as far as practicable. Other measures that need to be implemented before, during and after rainstorms are summarized in ProPECC PN 1/94. • Exposed soil areas should be minimized to reduce potential for increased siltation and contamination of runoff. • Earthwork final surfaces should be well compacted and subsequent permanent work or surface protection should be immediately performed.								

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
	• Open stockpiles of construction materials or construction wastes on-site should be covered with tarpaulin or similar fabric during rainstorms.								
S5b.8.1.2	General Construction Activities Construction solid waste should be collected, handled and disposed of properly to avoid entering to the nearby watercourses and public drainage system. Rubbish and litter from construction sites should also be collected to prevent spreading of rubbish and litter from the site area. It is recommended to clean the construction sites on a regular basis.	Work site / During the construction period	Contractor		✓			EIAO-TM; ProPECC PN 1/94; WPCO	Implemented

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
S5b.8.1.3	There is a need to apply to EPD for a discharge license for discharge of effluent from the construction site under the WPCO. The discharge quality must meet the requirements specified in the discharge license. All the run-off and wastewater generated from the works areas should be treated so that it satisfies all the standards listed in the TM-DSS. The beneficial uses of the treated effluent for other on-site activities such as dust suppression and general cleaning etc., can minimize water consumption and reduce the effluent discharge volume. If monitoring of the treated effluent quality from the works areas is required during the construction phase of the Project, the monitoring should be carried out in accordance with the relevant WPCO license which is under the ambit of regional office of EPD.	Work site / During the construction period	Contractor		✓			EIAO-TM; ProPECC PN 1/94; WPCO	Discharge License was issued on 22/08/2019.
S5b.8.1.4	Accidental Spillage Contractor must register as a chemical waste producer if chemical wastes would be produced from construction activities. The Waste Disposal Ordinance (Cap 354) and its subsidiary regulations in particular the Waste Disposal (Chemical Waste) (General) Regulation should be observed and complied with for control of chemical wastes.	Work site / During the construction period	Contractor		✓			EIAO-TM; ProPECC PN 1/94; WPCO; WDO	Deficiency of Mitigation Measures but rectified by the Contractor.
S5b.8.1.5	Maintenance of vehicles and equipment involving activities with potential for leakage and spillage should only be undertaken within the areas which	Work site / During the construction period	Contractor		✓			EIAO-TM; ProPECC PN 1/94; WPCO; WDO	Implemented.

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
	appropriately equipped to control these discharges.								
S5b.8.1.6	Oils and fuels should only be used and stored in designated areas which have pollution prevention facilities. All fuel tanks and storage areas should be sited on sealed areas in order to prevent spillage of fuels and solvents to the nearby watercourses. All waste oils and fuels should be collected in designated tanks prior to disposal.	Work site / During the construction period	Contractor		✓			EIAO-TM; ProPECC PN 1/94; WPCO; WDO	Deficiency of Mitigation Measures but rectified by the Contractor.
S5b.8.1.7	Disposal of chemical wastes should be carried out in compliance with the Waste Disposal Ordinance. The Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes published under the Waste Disposal Ordinance details the requirements to deal with chemical wastes. General requirements are given as follows: • Suitable containers should be used to hold the chemical wastes to avoid leakage or spillage during storage, handling and transport. • Chemical waste containers should be suitably labelled, to notify and warn the personnel who are handling the wastes, to avoid accidents. • Storage area should be selected at a safe location on site and adequate space should be allocated to the storage area.	Work site / During the construction period	Contractor		✓			EIAO-TM; ProPECC PN 1/94; WPCO; WDO	Deficiency of Mitigation Measures but rectified by the Contractor.
S5b.8.1.8	<u>Sewage Effluent</u> Temporary sanitary facilities, such as portable chemical toilets, should be employed on-site where necessary to	Work site / During the construction period	Contractor		✓			EIAO-TM; ProPECC PN 1/94; WPCO	N/A

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
	handle sewage from the workforce. A licensed contractor would be responsible. for appropriate disposal and maintenance of these facilities.								
S5b.8.1.9	<u>Reclamation and Construction of Breakwaters</u> • The proposed dredging and reclamation should be commenced in phases. The breakwaters and seawalls should be constructed and the reclamation should be started within the enclosed breakwaters after the completion of the breakwater. Silt curtain should be applied around caissons / blockwork during the filling of the cell to prevent the loss of fine in the filling material. • The maximum production rate for dredging for the anti-scouring protection layer shall not exceed the permitted maximum daily dredging rate and carried out within its respective distance from the nearest non-translocatable coral community by the dredging contractor as specified in S.2.18 of the Further Environmental Permit (no.:FEP-01/429/2012/A). It is recommended to employ closed grab with small capacity of 2 m^3 to control the dredging rate. • Any gap that may need to be provided for marine access will be located at the middle of the North Western seawall, away from the identified coral communities and will be shielded by silt curtains systems to control sediment plume dispersion. • The silt curtain system at marine access opening should be closed as soon as the	Work site / During the marine construction period	Contractor		✓			EIAO-TM; WPCO, Supporting Document for Application for Variation of Environmental Permit (EP-429/2012) Further Environmental Permit No. FEP-01/429/2012/A	Implemented.

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
	barges passes through the marine access opening in order to minimize the period of curtain opening. Filling should only be carried out behind the silt curtain when the silt curtain is completely closed. • To enhance the effectiveness of the silt curtain at the marine access, the northern breakwater would be built before the commencement of the reclamation to reduce the current velocity towards the marine access opening. • The silt curtain system at marine access opening should be regularly checked and maintained to ensure proper functioning. • Where public fill is proposed for filling below +2.5mPD, the fine content in the public fill will be controlled to 25% which is in line with the CEDD's General Specification; • The filling for reclamation should be carried out behind the seawall. The filling material should only consist of public fill, rock and sand. The filling composition and filling rates at each filling area should follow those delineated in Table 1 of the FEP-01/429/2012/. The filling above high watermark is not restricted; • No dredging should be carried out within 16m to the nearest non-translocatable coral community; • Daily site audit including full-time on-site monitoring by the ET is recommended during the dredging for anti-scouring protection layer								

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
	for checking the compliance with the permitted no. of grab; • Closed grab dredger should be used to minimize the loss of sediment during the raising of the loaded grabs through the water column; • Frame-type silt curtains should be deployed around the dredging operations; • Floating-type silt curtains should be used to surround the circular cell during the sheetpiling work; • The descent speed of grabs should be controlled to minimize the seabed impact speed; • Barges should be loaded carefully to avoid splashing of material; • All barges used for the transport of dredged materials should be fitted with tight bottom seals in order to prevent leakage of material during loading and transport; • No concurrence works between laying of submarine cables and dredging/reclamation works within the same location is allowed. For works close to each other, the construction program should be arranged so that the dredging/reclamation works within area bounded by the breakwaters and the laying of cables would not operate within a distance of 80m from each other to avoid any accumulative impact on the environment (in case if such tight schedule is necessary).								

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
	• All barges should be filled to a level which ensures that material does not spill over during loading and transport to the disposal site and that adequate freeboard is maintained to ensure that the decks are not washed by wave action. • No DCM works should be carried out within 100m to the nearest non-translocatable coral colony / colonies. • Silt curtains should be employed to enclose DCM field trial and any full scale DCM work to minimize the potential impacts on water aspect. • A sand blanket is to be placed on top of the marine deposit using tremie pipes prior to the DCM ground treatment to avoid seabed sediment disturbance.								
S5b.8.2.3	Operational Phase Discharges A pipeline drainage system will serve the development area collecting surface runoff from paved areas, roof, etc. Sustainable drainage principle would be adopted in the drainage system design to minimize peak surface runoff, maximize permeable surface and maximize beneficial use of rainwater.	Within IWMF site / During the operational phase	IWMF Operator	✓		✓		WPCO	N/A
S5b.8.2.4	Oil interceptors should be provided in the drainage system of any potentially contaminated areas (such as truck parking area and maintenance workshop) and regularly cleaned to prevent the release of oil products into the storm water drainage system in case of accidental spillages.	Within IWMF site / During the operational phase	IWMF Operator	✓		✓		WPCO; WDO	N/A

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
	Accidental spillage should be cleaned up as soon as practicable and all waste oils and fuels should be collected and handled in compliance with the Waste Disposal Ordinance.								
S5b.8.2.5	Refuse Entrapment Collection and removal of floating refuse should be performed at regular intervals for keeping the water within the Project site boundary and the neighboring water free from rubbish.	Within the Project site / During the operational phase	IWMF Operator			✓		WPCO	N/A
S5b.8.2.6	Transportation of bottom ash, fly ash and APC residues to WENT Landfill for disposal Covered container should be used in the shipping of the incineration waste to limit the contact between the incineration waste and the marine water. A comprehensive emergency response plan for any accidental spillage should be submitted by the operation contractor to the EPD for agreement before the operation of the facilities. Salvage and cleanup action to recover the spilled incineration waste containers following the spillage should be carried out according to the emergency response plan to mitigate the environmental impact in case of spillage.	Transportation of Incineration Ash / During the operational phase	IWMF Operator			✓			N/A

* Des - Design, C - Construction, O – Operation, and Dec - Decommissioning

Table B.4 Implementation Schedule for Waste Management Measures for the IWMF at the artificial island near SKC

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
6b.5.1.2	<u>Good Site Practices</u> Adverse environmental impacts in relation to waste management are not expected, provided that good site practices are strictly followed. Recommendations for good site practices during the construction activities would include: • Obtain relevant waste disposal permits from appropriate authorities, in accordance with the Waste Disposal Ordinance (Cap. 354) and subsidiary Regulations and the Land (Miscellaneous Provisions) Ordinance (Cap. 28); • Provide staff training for proper waste management and chemical handling procedures; • Provide sufficient waste disposal points and regular waste collection; • Provide appropriate measures to minimize windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers; and • Carry out regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors; • Separate chemical wastes for special handling and disposed of to licensed facility for treatment; and • Employ licensed waste collector to collect waste.	Work Site/ During Construction Period	Contractor		✓			WDO; LDO; ETWB TCW No. 19/2005; EIAO-TM	Implemented
6b.5.1.3	<u>Waste Reduction Measures</u>	Work Site/ During Design	Contractor	✓	✓				Implemented

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
	Good management and control can prevent the generation of a significant amount of waste. Waste reduction is best achieved at the planning and design stage, as well as by ensuring the implementation of good site practices. Recommendations to achieve waste reduction include: • Design foundation works that could minimize the amount of excavated material to be generated. • Provide training to workers on the importance of site cleanliness and appropriate waste management procedures, including waste reduction, reuse and recycling; • Sort out demolition debris and excavated materials from demolition works to recover reusable/recyclable portions (i.e. soil, broken concrete, metal etc.); • Segregate and store different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal; • Encourage the collection of aluminum cans by providing separate labelled bins to enable this waste to be segregated from other general refuse generated by the work force; • Proper storage and site practices to minimize the potential for damage or contamination of construction materials; and • Plan and stock construction materials carefully to minimize amount of waste to be	& Construction Period							N/A for foundation and demolition items

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
	generated and to avoid unnecessary generation of waste.								
6b.5.1.7	<u>Dredged Sediment – Application of Dumping Permit</u> The project proponent should agree in advance with MFC of CEDD on the site allocation. The project proponent or contractor for the dredging works shall then apply for the site allocations of marine sediment disposal based on the prior agreement with MFC/CEDD. The project proponent or contractor should also be responsible for the application of all necessary permits from relevant authorities, including the dumping permit as required under DASO from EPD, for the disposal of dredged sediment prior to the commencement of the dredging works.	Seawall and Reclamation site / Construction Period	EPD and its contractor	✓	✓			DASO ETWB TCW 34/2002	Implemented
6b.5.1.8	<u>Dredged Sediment – Sediment Quality Report</u> The project proponent or contractor will need to satisfy the appropriate authorities that the quality of the marine sediment to be dredged has been identified according to the requirements of ETWB TCW 34/2002. This should be completed well before the dredging works and would include at least the submission of a formal Sediment Quality Report under Tier I of ETWB TCW No. 34/2002 to DEP for approval. Subject to advice from DEP, it is possible that further marine SI in accordance with ETWB TCW 34/2002 might be necessary for the application of dumping permit under DASO. In such case, a sediment sampling and testing	Seawall and Reclamation site / Construction Period	EPD and its contractor	✓				DASO ETWB TCW 34/2002	Implemented

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
	proposal shall be submitted to and approved by DEP before the additional marine SI works.								
6b.5.1.9	Dredged Sediment – Sediment Transportation The barge transporting the sediments to the designated disposal sites should be equipped with tight fitting seals to prevent leakage and should not be filled to a level that would cause overflow of materials or laden water during loading or transportation. In addition, monitoring of the barge loading shall be conducted to ensure that loss of material does not take place during transportation. Transport barges or vessels shall be equipped with automatic self-monitoring devices as specified by the DEP.	Seawall and Reclamation site / Construction Period	EPD and its contractor		✓			DASO ETWB TCW 34/2002	Implemented
6b.5.1.10	Construction and Demolition Materials In order to minimize the impact resulting from collection and transportation of C&D materials for off-site disposal, the excavated material arising from site formation and foundation works should be reused on-site as backfilling material and for landscaping works as far as practicable. Other mitigation requirements are listed below: • A Waste Management Plan (WMP), which becomes part of the Environmental Management Plan (EMP), should be prepared in accordance with ETWB TCW No.19/2005; • A recording system for the amount of wastes generated, recycled and disposed	Work Site/ During Design & Construction Period	Contractor	✓	✓			ETWB TCW No. 19/2005	Implemented

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
	(including the disposal sites) should be adopted for easy tracking; and • In order to monitor the disposal of C&D materials at public filling facilities and landfills and to control fly-tipping, a trip-ticket system should be adopted (refer to *ETWB TCW No. 31/2004*).								
6b.5.1.11 – 6b.5.1.12	The Contactor should prepare and implement an EMP in accordance with ETWB TCW No.19/2005, which describes the arrangements for avoidance, reuse, recovery, recycling, storage, collection, treatment and disposal of different categories of waste to be generated from construction activities. Such a management plan should incorporate site specific factors, such as the designation of areas for segregation and temporary storage of reusable and recyclable materials. The EMP should be submitted to the Engineer for approval. The Contractor should implement waste management practices in the EMP throughout the construction stage of the Project. The EMP should be reviewed regularly and updated by the Contractor, preferably on a monthly basis. All surplus C&D materials arising from or in connection with construction works should become the property of the Contractor when it is removed unless otherwise stated. The Contractor would be responsible for devising a system to work for on-site sorting of C&D materials and promptly removing all sorted and process materials arising from the	Work Site/ During Design & Construction Period	Contractor	✓	✓			ETWB TCW No. 19/2005	Implemented

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
	construction activities to minimize temporary stockpiling on-site. The system should be included in the EMP identifying the source of generation, estimated quantity, arrangement for on-site sorting, collection, temporary storage areas and frequency of collection by recycling Contractors or frequency of removal off-site.								
6b.5.1.13	<u>Chemical Wastes</u> Should chemical wastes be produced at the construction site, the Contractor would be required to register with EPD as a Chemical Waste Producer and to follow the guidelines stated in the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes. Good quality containers compatible with the chemical wastes should be used, and incompatible chemicals should be stored separately. Appropriate labels should be securely attached on each chemical waste container indicating the corresponding chemical characteristics of the chemical waste (such as explosive, flammable, oxidizing, irritant, toxic, harmful, or corrosive). The Contractor should employ a licensed collector to transport and dispose of the chemical wastes, to either the Chemical Waste Treatment Centre at Tsing Yi, or another licensed facility, in accordance with the Waste Disposal (Chemical Waste) (General) Regulation.	Work Site/ During Construction Period	Contractor		✓			Waste Disposal (Chemical Waste) (General) Regulation	Deficiency of Mitigation Measures but rectified by the Contractor.

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
6b.5.1.14	<u>General Refuse</u> General refuse should be stored in enclosed bins or compaction units separate from C&D materials. A licensed waste collector should be employed by the Contractor to remove general refuse from the site, separately from C&D materials. Preferably an enclosed and covered area should be provided to reduce the occurrence of 'wind blown' light material.	Work Site/ During Construction Period	Contractor		✓			Public Health and Municipal Services Ordinance	Implemented
6b.5.1.16 – 6b.5.1.33	<u>Biogas Generation</u> The Contractor shall review the data and analysis results, and the data from further Site Investigation, if any. Subject to the review findings, the following gas protection measures may be considered if necessary: - gas monitoring after reclamation; - passive ventilation; - gas impermeable membrane; - ventilation with "at risk" rooms; - protection of utilities or below ground services; - precautions during construction works; - precautions prior to entry of belowground services	Reclamation site (if dredging at the reclamation site is not required) / Design & Construction Period	Designer and/or contractor	✓	✓			EPD/TR8/97	N/A
6b.5.2.1	<u>Good Site Practices</u>	IWMF Site/During	IWMF Operator			✓		Waste Disposal Ordinance (Cap.354);	N/A

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
	It is recommended that the following good operational practices should be adopted to minimise waste management impacts: • Obtain the necessary waste disposal permits from the appropriate authorities, in accordance with the Waste Disposal Ordinance (Cap. 354) and Waste Disposal (Chemical Waste) (General) Regulation; • Nomination of an approved person to be responsible for good site practice, arrangements for collection and effective disposal to an appropriate facility of all wastes generated at the site; • Use of a waste haulier licensed to collect specific category of waste; • A trip-ticket system should be included as one of the contractual requirements and implemented by the Environmental Team to monitor the disposal of solid wastes at landfills, and to control fly tipping. Reference should be made to ETWB TCW No. 31/2004. • Training of site personnel in proper waste management and chemical waste handling procedures; • Separation of chemical wastes for special handling and appropriate treatment at a licensed facility; • Routine cleaning and maintenance programme for drainage systems, sumps and oil interceptors;	Operation Period						Waste Disposal (Chemical Waste) (General) Regulation; ETWB TCW No. 1/2004	

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
	• Provision of sufficient waste disposal points and regular collection for disposal; • Adoption of appropriate measures to minimize windblown litter and dust during transportation of waste, such as covering trucks or transporting wastes in enclosed containers; and • Implementation of a recording system for the amount of wastes generated, and disposed of (including recycled the disposal sites).								
6b.5.2.2	<u>Waste Reduction Measures</u> Good management and control can prevent the generation of significant amounts of waste. It is recommended that the following good operational practices should be adopted to ensure waste reduction: • Segregation and storage of different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal; • Encourage collection of aluminum cans, plastic bottles and packaging material (e.g. carton boxes) and office paper by individual collectors. Separate labelled bins should be provided to help segregate this waste from other general refuse generated by the work force; and • Any unused chemicals or those with remaining functional capacity should be reused as far as practicable.	IWMF Site/ During Operation Period	IWMF Operator			✓			Implemented

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
6b.5.2.3	<u>Storage, Handling, Treatment, Collection and Disposal of</u> <u>Incineration By-Products</u> The following measures are recommended for the storage, handling and collection of the incineration by-products: • Ash should be stored in storage silos; • Ash should be handled and conveyed in closed systems fully segregated from the ambient environment; • Ash should be wetted with water to control fugitive dust, where necessary; • All fly ash and APC residues should be treated, e.g. by cement solidification or chemical stabilization, for compliance with the proposed Incineration Residue Pollution Control Limits and leachability criteria prior to disposal; • The ash should be transported in covered trucks or containers to the designated landfill site. The Contractor should provide EPD with chemical analysis results of the bottom ash, and treated fly ash and APC residues to confirm that the ash/residue can comply with the proposed Incineration Residue Pollution Control Limits before disposal.	IWMF Site/ During Operation Period	IWMF Operator			✓		Incineration Residue Pollution Control Limits	N/A

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
6b.6.3.1	<u>Fuel Oil Tank Construction and Test</u> • The fuel tank to be installed should be of specified durability. • Double skin tanks are preferred. • Underground fuel storage tank should be placed within a concrete pit. • The concrete pit shall be accessible to allow regular tank integrity tests to be carried out at regular intervals. • Tank integrity tests should be conducted by an independent qualified surveyor or structural engineer. • Any potential problems identified in the test should be rectified as soon as possible.	Fuel Oil Storage Tank/ During Design, Construction and Operation Periods	IWMF Contractor	✓	✓	✓			N/A
6b.6.3.1	<u>Fuel Oil Pipeline Construction and Test</u> • Installation of aboveground fuel oil pipelines is preferable; if underground pipelines are unavoidable, concrete lined trenches should be constructed to contain the pipelines. • Double skin pipelines are preferred. • Distance between the fuel oil refuelling points and the fuel oil storage tank shall be minimized.	Fuel Oil Pipelines/ During Design, Construction and Operation Periods	IWMF Contractor	✓	✓	✓			N/A

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
	• Integrity tests for the pipelines should be conducted by an independent qualified surveyor or structural engineer at regular intervals. • Any potential problems identified in the test should be rectified as soon as possible.								
6b.6.3.1	<u>Fuel Oil Leakage Detection</u> • Installation of leak detection device at storage tank and pipelines. • Installation and use of pressure gauges (e.g. at the two ends of a filling line) in fuel filling, which allows unexpected pressure drop or difference and sign of leakage to be detected.	Fuel Oil Storage Tank and Pipelines/ During Design, Construction and Operation Periods	IWMF Contractor	✓	✓	✓			N/A
6b.6.3.1	<u>Fuel Oil Storage Tank Refuelling</u> • Storage tank refuelling (from road tanker) should only be conducted by authorized staff of the oil company using the company's standard procedures.	Fuel Oil Refuelling Point/ During Operation Period	IWMF Operator			✓			N/A
6b.6.3.1	<u>Fuel Oil Spillage Response</u> An Oil Spill Response Plan should be prepared by the operator to document the appropriate response procedures for oil spillage incidents in detail. General procedures to be taken in case of fuel oil spillage are presented below. • Training	IWMF Site/ During Operation Period	IWMF Operator			✓			N/A

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
	- Training on oil spill response actions should be given to relevant staff. The training shall cover the followings: ➢Tools & resources to combat oil spillage and fire, e.g. locations of oil spill handling equipment and fire fighting equipment; ➢General methods to deal with oil spillage and fire incidents; ➢Procedures for emergency drills in the event of oil spills and fire; and ➢Regular drills shall be carried out. • Communication -Establish communication channel with the Fire Services Department (FSD) and EPD to report any oil spillage incident so that necessary assistance from relevant department can be quickly sought. • Response Procedures -Any fuel oil spillage within the IWMF site should be immediately reported to the Plant Manager with necessary details including location, source, possible cause and extent of the spillage. -Plant Manager should immediately attend to the spillage and initiate any appropriate action to confine and clean up the spillage. The response								

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
	procedures shall include the following: ➢Identify and isolate the source of spillage as soon as possible. ➢Contain the oil spillage and avoid infiltration into soil/ groundwater and discharge to storm water channels. ➢Remove the oil spillage. ➢Clean up the contaminated area. ➢If the oil spillage occurs during storage tank refuelling, the refueling operation should immediately be stopped. ➢Recovered contaminated fuel oil and the associated material to remove the spilled oil should be considered as chemical waste. The handling and disposal procedures for chemical wastes are discussed in the following paragraphs.								
6b.6.3.2	<u>Chemicals and Chemical Wastes Handling & Storage</u> • Chemicals and chemical wastes should only be stored in suitable containers in purpose-built areas. • The storage of chemical wastes should comply with the requirements of the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes. • The storage areas for chemicals and chemical wastes shall have an	Chemicals and Chemical Wastes Storage Area / During Operation Period	IWMF Operator			✓			N/A

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
	impermeable floor or surface. The impermeable floor/ surface shall possess the following properties: - Not liable to chemically react with the materials and their containers to be stored. - Able to withstand normal loading and physical damage caused by container handling - The integrity and condition of the impermeable floor or surface should be inspected at regular intervals to ensure that it is satisfactorily maintained ➢ For liquid chemicals and chemical wastes storage, the storage area should be bunded to contain at least 110% of the storage capacity of the largest containers or 20% of the total quantity of the chemicals/chemical wastes stored, whichever is the greater. ➢ Storage containers shall be checked at regular intervals for their structural integrity and to ensure that the caps or fill points are tightly closed. ➢ Chemical handling shall be conducted by trained workers under supervision.								
6b.6.3.2	<u>Chemicals and Chemical Wastes Spillage Response</u>	IWMF Site/ During	IWMF Operator			✓			N/A

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
	A Chemicals and/ or Chemical Wastes Spillage Response Plan shall be prepared by the operator to document in detail the appropriate response procedures for chemicals or chemical wastes spillage incidents. General procedures to be undertaken in case of chemicals/ chemical waste spillages are presented below. • Training - Training on spill response actions should be given to relevant staff. The training shall cover the followings: ➢ Tools & resources to handle spillage, e.g. locations of spill handling equipment; ➢ General methods to deal with spillage; and ➢ Procedures for emergency drills in the event of spills. • Communication - Establish communication channel with FSD and EPD to report the spillage incident so that necessary assistance from relevant department can be quickly sought. • Response Procedures	Operation Period							

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
	- Any spillage within the IWMF site should be reported to the Plant Manager. - Plant Manager shall attend to the spillage and initiate any appropriate actions needed to confine and clean up the spillage. The response procedures shall include the followings: ➢ Identify and isolate the source of spillage as soon as possible; ➢ Contain the spillage and avoid infiltration into soil/ groundwater and discharge to storm water channels (in case the spillage occurs at locations out of the designated storage areas); ➢ Remove the spillage; the removal method/ procedures documented in the Material Safety Data Sheet (MSDS) of the chemicals spilled should be observed; ➢ Clean up the contaminated area (in case the spillage occurs at locations out of the designated storage areas); and								

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
	➢ The waste arising from the cleanup operation should be considered as chemical wastes.								
6b.6.3.3	<u>Preventive Measures for Incineration By-products Handling</u> The recommended measures listed below can minimize the potential contamination to the surrounding environment due to the incineration by-products: • Ash should be stored in storage silos; • Ash should be handled and conveyed in closed systems fully segregated from the ambient environment; • Ash should be wetted with water to control fugitive dust, where necessary; • All fly ash and APC residues should be treated, e.g. by cement solidification or chemical stabilization, for compliance with the proposed Incineration Residue Pollution Control Limits and leachability criteria prior to disposal; • The ash should be transported in covered trucks or containers to the designated landfill site.	Storage, Handling & Collection of Incineration Ash at IWMF/ During Operation Period	IWMF Operator			✓			N/A
6b.6.3.4 - 6b.6.3.6	<u>Incident Record</u>	IWMF Site/ During	IWMF Operator			✓		Guidance Manual for Use of Risk-based Remediation	N/A

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
	After any spillage, an incident report should be prepared by the Plant Manager. The incident report should contain details of the incident including the cause of the incident, the material spilled and estimated spillage amount, and also the response actions undertaken. The incident record should be kept carefully and able to be retrieved when necessary. The incident report should provide sufficient details for the evaluation of any environmental impacts due to the spillage and assessment of the effectiveness of measures taken. In case any spillage or accidents results in significant land contamination, EPD should be informed immediately and the IWMF operator should be responsible for the cleanup of the affected area. The responses procedures described in **Section 6b.6.3.1** and **Section 6b.6.3.2** of EIA report should be followed accordingly together with the land contamination assessment and remediation guidelines stipulated in the *Guidance Manual for Use of Risk-based Remediation Goals for Contaminated Land Management and the Guidance Note for Contaminated Land and Remediation.*	Operation Period						Goals for Contaminated Land Management and the Guidance Note for Contaminated Land and Remediation.	

* Des - Design, C - Construction, O – Operation, and Dec - Decommissioning

Table B.5 Implementation Schedule for Ecological Quality Measures for the IWMF at the artificial island near SKC

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
7b.8.2.1	<u>Measures to avoid direct loss of intertidal habitat</u> • The site boundary has been proposed to avoid direct contact with the intertidal natural rocky shore of Shek Kwu Chau. It avoids direct loss of intertidal communities and the existing natural rocky shore habitat, where Reef Egret and White-bellied Sea Eagle have been recorded within and in the vicinity of this habitat.	IWMF site	Design team	✓				EIAO-TM	N/A
7b.8.2.2	<u>Measures to minimise loss of coastal subtidal habitat</u> • Extensive coral colonies were recorded at the coastal hard bottom habitat at Shek Kwu Chau. To avoid and minimise the extensive direct impact on the coral colonies, the proposed reclamation area has been moved further offshore to minimise loss of subtial habitat near shore.	IWMF site	Design team	✓				EIAO-TM	N/A
7b.8.2.3	<u>Zero Discharge Scheme</u> • The design scheme of the Project has avoided discharge of wastewater into the marine environment. A zero discharge scheme would be adopted during the operation of the Project. An on-site wastewater treatment plant would be provided to treat the wastewater generated from the IWMF (mainly human sewage). The treated effluent would be re-used in the incineration	IWMF site	Design team, IWMF operator	✓		✓		WPCO	N/A

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
	plant and mechanical treatment plant, or for onsite washdown and landscape.								
7b.8.2.4	<u>Measures to avoid loss of plant species of conservation importance</u> • Landing portal construction works would not cause direct lost to the recorded individual of protected plant species, • *Aquilaria sinensis*, at the coastal shrubland habitat at Cheung Sha. As a precautionary measure, the plant should be tagged with eye-catching tape and fenced off prior to works, in order to avoid any damage by workers.	Cheung Sha landing portal	Design team, Contractor	✓	✓		✓	EIAO-TM	N/A
7b.8.3.1-7b.8.3.15	<u>Measures to minimise water quality impact</u> • Measures for water quality as recommended in **Section 5b** of the EIA Report should be implemented.	Work site	Design team, contractor, IWMF operator	✓	✓	✓	✓	EIAO-TM; ProPECC PN 1/94; WPCO	Implemented
7b.8.3.16 - 7b.8.3.30	<u>Measures to minimise disturbance on Finless Porpoise</u> *Minimisation of Habitat Loss for Finless Porpoise* • Substantial revision has been made on the layout plan and form of the breakwater, in order to minimise the potential loss of important habitat for Finless Porpoise. The revision has greatly reduced the size of the embayment area, as well as the Project footprint. As a result, the size of habitat loss for Finless Porpoise has	IWMF site, work site, marine traffic route	Design team, contractor, IWMF operator	✓	✓	✓	✓	EIAO-TM, Supporting Document for Application for Variation of the Environmental Permit (EP-429/2012)	Implemented for avoidance of construction works that may produce underwater acoustic disturbance, Vessel Travel Route implementation, training of staff, MMEZ and marine mammal watching works during deployment of silt curtain; N/A for others

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
	reduced from the original ~50 ha, down to ~31 ha. *Avoidance of peak season for finless porpoise occurrence* • To minimise potential acoustic disturbance from construction activities on Finless Porpoise, construction works that may produce underwater acoustic disturbance should be scheduled outside the months with peak Finless Porpoise occurrence (December to May), including: - sheet piling works for construction of cofferdam surrounding the reclamation area (Phase 1); - sheet piling works for construction of the shorter section of breakwater (Phase 1); - sheet piling works for construction of the remaining section of breakwater (Phase 3); - bored piling works for berth area (Phase 3); and - submarine cable installation works between Shek Kwu Chau and Cheung Sha. Such works should be restricted within June to November. This approach would not only avoid the peak season for Finless Porpoise occurrence, the magnitude of impacts arise								

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
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	from acoustic disturbance would also be minimised. • Submarine cable installation works are also recommended to be scheduled within June to November, when sightings of Finless Porpoise is scarce in the area of the proposed alignment of the submarine cable. • Since the DCM ground treatment and the installation of precast seawalls and breakwaters should generate no underwater acoustic disturbance to Finless Porpoise, no specific mitigation measures are required. *Opt for quieter construction methods and plants* • Considering the sensitivity of marine mammals to underwater acoustic disturbance, instead of the previously proposed conventional breakwater and reclamation peripheral structure, which requires noisy piling works, the current circular cells structure for breakwater and reclamation peripheral structure is proposed. A quieter sheet piling method using vibratory hammer or hydraulic impact hammer, should be adopted for the installation of circular cells for cellular cofferdam and northern breakwater during								

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				Des	C	O	Dec		
	Phase 1, and southern breakwater Phase 3; • Non-percussive bore piling method would be adopted for the installation of tubular piles for the berth construction during Phase 3. *Monitored exclusion zones* • During the installation/re-installation/relocation process of floating type silt curtains, in order to avoid the accidental entrance and entrapment of marine mammals within the silt curtains, a monitored exclusion zone of 250 m radius from silt curtain should be implemented. The exclusion zone should be closely monitored by an experienced marine mammal observer at least 30 minutes before the start of installation/re-installation/relocation process. If a marine mammal is noted within the exclusion zone, all marine works should stop immediately and remain idle for 30 minutes, or until the exclusion zone is free from marine mammals. • The experienced marine mammal observer should be well trained to detect marine mammals. Binoculars should be used to search the exclusion zone from an elevated platform with unobstructed visibility. The observer should also be independent								

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				Des	C	O	Dec		
	from the project proponent and has the power to call-off construction activities. • In addition, as marine mammals cannot be effectively monitored within the proposed monitored exclusion zone at night, or during adverse weather conditions (i.e. Beaufort 5 or above, visibility of 300 meters or below), marine works should be avoided under weather conditions with low visibility. *Marine mammal watching plan* • Upon the completion of the installation/re-installation/relocation of floating type silt curtain, all marine works would be conducted within a fully enclosed environment within the silt curtain, hence exclusion zone monitoring would no longer be required. Subsequently, a marine mammal watching plan should be implemented. The plan should include regular inspection of silt curtains, and visual inspection of the waters surrounded by the curtains. Special attention should be paid to Phase 2 (reclamation) where the floating type still curtain would be opened occasionally for vessel access, leaving a temporary 50 m opening. An action plan should be devised to cope with any unpredicted incidents such as the case when								

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	marine mammals are found within the waters surrounded by the silt curtains. *Small openings at silt curtains* • The openings for vessel access at the silt curtains should be as small as possible to minimise the risk of accidental entrance. *Adoption of regular travel route* • During construction and operation, captains of all vessels should adopt regular travel route, in order to minimize the chance of vessel collision with marine mammals, which may otherwise result in damage to health or mortality. The regular travel route should avoid areas with high sighting density of Finless Porpoise as much as possible. *Vessel speed limit* • The frequent vessel traffic in the vicinity of works area may increase the chance of mammal mammals being killed or seriously injured by vessel collision. A speed limit of ten knots should be strictly enforced within areas with high density of Finless Porpoise. • Passive acoustic monitoring and land-based theodolite monitoring surveys should be								

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
	adopted to verify the predicted impacts and effectiveness of the proposed mitigation measures. *Training of Staff* • Staff, including captains of vessels, should be aware of the guidelines for safe vessel operations in the presence of cetaceans during construction and operation phases. Adequate trainings should be provided								
7b.8.3.31 - 7b.8.3.34	<u>Measures to minimise impact on corals</u> *Coral translocation* • Coral communities within and in proximity to the proposed dredging sites would be disturbed by the Project due to the dredging operations. In order to minimise direct loss of coral communities, translocation of corals that are attached to movable rocks with diameter less than 50 cm are recommended. In order to avoid disturbance to corals during the spawning period, the spawning season of corals (June to August) should be avoided; and that translocation should be carried out during the winter season (November-March).	IWMF site	Design team, contractor, IWMF operator	✓	✓	✓	✓	EIAO-TM	Implemented, tagged coral found missing after hitting by typhoons Re-tagging of 10 coral colonies at indirect impact site and control site were conducted in November and December 2018 respectively.

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
	• The REA survey results suggest that the 198 directly affected coral colonies were attached to movable rocks (less than 50 cm in diameter). It is technically feasible to translocate them to avoid direct loss. • Prior to coral translocation, a more detailed baseline survey, including a coral mapping survey, is recommended to further confirm the exact number and location of coral colonies within the potentially affected area. A more detailed coral translocation plan, including selection of suitable recipient site, plan for coral translocation, and event / action plan for coral monitoring should be submitted upon approval of this Project, prior to commencement of construction works. Advice from relevant governmental departments (i.e. AFCD) and professionals would be sought after, in order to identify a desirable location for the relocation of coral communities. Post-translocation monitoring on the translocated corals should also be considered. *Coral monitoring programme* • A coral monitoring programme is recommended to assess any adverse and unacceptable impacts to the coral								

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				Des	C	O	Dec		
	communities at the coasts of Shek Kwu Chau during construction of the Project. *Phasing of Works* • To minimize environmental impacts, the proposed phasing of construction works has been carefully designed to reduce the amount of concurrent works, hence minimize SS elevation and the associated impacts on corals.								
7b.8.3.35 - 7b.8.3.41	<u>Specific measures to minimize disturbance on breeding White-bellied Sea Eagle</u> *Avoidance of noisy works during the breeding season of White-bellied Sea Eagle* • To minimize potential noise disturbance from construction activities on WBSE, noisy construction works should be scheduled outside their breeding season (December to May) to minimise potential degradation in breeding ground quality and breeding activities, including: - sheet piling works for construction of cofferdam surrounding the reclamation area (Phase 1); - sheet piling works for construction of the shorter section of breakwater (Phase 1);	IWMF site, marine traffic route	Design Team, Contractor, IWMF operator	✓	✓	✓	✓	EIAO-TM	Implemented

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
	- sheet piling works for construction of the remaining section of breakwater (Phase 3); and - bored piling works for berth area (Phase 3). *Opt for quieter construction methods and plants* • To minimise potential construction noise disturbance on WBSE, quieter construction methods and plants should be adopted. The recommended noise mitigation measures in the **Noise** chapter (**Section 4b.8** of the EIA Report) should be implemented to minimise potential noise disturbance to acceptable levels. *Restriction on vessel access near the nest of White-bellied Sea Eagle* • During construction and operation, in order to minimize disturbance on the existing WBSE nest, a pre-defined practical route to restrict vessel access near the nest should be adopted to keep vessels and boats as far away from the nest as possible. *White-bellied Sea Eagle monitoring programme* • A WBSE monitoring programme is recommended to assess any adverse and unacceptable impacts to the breeding								

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	activities of WBSE during construction and operation of the Project. Monitoring surveys for WBSE would include pre-construction phase (twice per month for duration of three months during their breeding season -between December and May, immediately before the commencement of works), construction phase, and operation phase (two years after the completion of construction works). • Surveys should be conducted twice per month during their breeding season (from December to May); and once per month outside breeding season (June to November). More details on monitoring for WBSE are presented in the EM&A Manual. *Education of staff* • Staff, including captains of all vessels during construction and operation phases, should be aware of the ecological importance of WBSE. Awareness should be raised among staff to minimise any intentional or unintentional disturbance to the nest. *Minimisation of Glare Disturbance* • To minimise glare disturbance on WBSE, which may cause disorientation of birds								

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				Des	C	O	Dec		
	by interfering with their magnetic compass, and disruption in behavioural patterns such as reproduction, fat storage and foraging pattern, any un-necessary outdoor lighting should be avoided, and in-ward and down-ward pointing of lights should be adopted.								
-	<u>Construction of Seawall/Breakwaters</u> • To widen the open channel between the Artificial Island and Shek Kwu Chau. • To design the precast concrete seawall with environmental friendly features.	IWMF site	Design team, contractor, IWMF operator	✓	✓			Supporting Document for Application for Variation of Environmental Permit (EP-429/2012)	N/A
7b.8.3.42	<u>Opt for Quieter Construction Methods and Plants</u> • Quieter construction methods and plants should be used to minimise disturbance to the nearby terrestrial habitat and the associated wildlife.	Work site	Design team, contractor, IWMF operator	✓	✓	✓	✓	EIAO-TM	Implemented
7b.8.3.43	<u>Measures to minimize impacts from artificial lighting</u> • Unnecessary lighting should be avoided, and shielding of lights should be provided to minimize disturbance from light pollution on fauna groups.	IWMF site	Design team, contractor, IWMF operator	✓	✓	✓		EIAO-TM	Implemented
7b.8.3.44 - 7b.8.3.45	<u>Measures to minimize accidental spillage</u> • Regular maintenance of vessels, vehicles and equipment that may cause leakage and spillage should only be undertaken within	Work site	Contractor, IWMF operator		✓	✓	✓	EIAO-TM	Deficiency of Mitigation Measures but rectified by the Contractor.

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
	pre-designated areas, which are appropriately equipped to control the associated discharges. • Oils, fuels and chemicals should be contained in suitable containers, and only be used and stored in designated areas which have pollution prevention facilities. All fuel tanks and storage areas should be sited on sealed areas in order to prevent spillage of fuels and solvents to the nearby watercourses. All waste oils and fuels should be collected in designated tanks prior to disposal.								
7b.8.3.46	<u>Measures to minimise sewage effluent</u> • Temporary sanitary facilities, such as portable chemical toilets, should be employed on-site where necessary to handle sewage from the workforce.	Work site	Contractor		✓			EIAO-TM	N/A
7b.8.3.47	<u>Measures to minimise drainage and construction runoff</u> • Potential ecological impacts resulted from potential degradation of water quality due to unmitigated surface runoff could be minimised via the detailed mitigation measures in **Section 5b.8** of the EIA Report. The following presents some of the mitigation measures:	Work site	Contractor		✓		✓	EIAO-TM	N/A

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
	- On-site drainage system with implemented sedimentation control facilities. - Channels, earth bunds or sand bag barriers should be provided on site to direct storm water to silt removal facilities. - Provision of embankment at boundaries of earthworks for flood protection. - Water pumped out from foundation piles must be discharged into silt removal facilities. - During rainstorms, exposed slope/soil surfaces should be covered by tarpaulin or other means, as far as practicable. - Exposed soil surface should be minimized to reduce siltation and runoff. - Earthwork final surfaces should be well compacted. Subsequent permanent surface protection should be immediately performed. - Open stockpiles of construction materials, and construction wastes on-site should be covered with tarpaulin or similar fabric during rainstorms.								
7b.8.3.48	<u>Measures to minimise impacts from general construction activities</u> • To avoid the entering of construction solid waste into the nearby habitats, construction solid waste should be collected, handled	Work site	Contractor		✓			EIAO-TM	Implemented

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
	and disposed of properly to avoid entering to the nearby habitats. It is recommended to clean the construction sites on a regular basis.								
7b.8.3.49	<u>Pest Control</u> Good waste management practices should be adopted at the IWMF in order to minimise the risk of introduction of pest to the island: - Transportation of wastes in enclosed containers - Waste storage area should be well maintained and cleaned - Waste should only be disposed of at designated areas - Timely removal of the newly arrived waste - Removal of items that are capable of retaining water - Rapid clean up of any waste spillages - Maintenance of a tidy and clean site environment - Regular application of pest control - Education of staff the importance of site cleanliness	IWMF site	IWMF operator			✓			N/A
7b.8.3.50	<u>Control of Marine Habitat Quality during Operation Phase</u> • Depending on the seabed condition of the approach channel for marine vessels during operation phase of the IWMF, maintenance dredging may be required to	IWMF site	IWMF operator			✓		EIAO-TM; WPCO	N/A

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
	ensure safe access. In order to avoid degradation in water quality due to elevation in SS and dispersion of sediment plume due to dredging works, it is recommended that any future maintenance dredging works should not be carried out within 100 m from the shore, similar to that of the dredging for anti-scouring protection layer during construction phase. All maintenance dredging works should be carried out with the implementation of silt curtain to control the dispersion of SS. The production rate should comply with the permit dredging rate and number of grab per hour.								
7b.8.4.1 – 7b.8.4.8	<u>Compensation of loss of important habitat of Finless Porpoise</u> *Designation of Marine Park* • The Project Proponent has made a firm commitment to seek to designate a marine park of approximately 700 ha in the waters between Soko Islands and Shek Kwu Chau, in accordance with the statutory process stipulated in the Marine Parks Ordinance, as a compensation measure for the habitat loss arising from the construction of the IWMF at the artificial island near SKC. • The Project Proponent shall seek to complete the designation by 2018 to tie in	Waters between Shek Kwu Chau and Soko Islands	Project Proponent	✓		✓		EIAO-TM	N/A

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
	with the operation of the IWMF at the artificial island near SKC. • A further study should be carried out to review relevant previous studies and collate available information on the ecological characters of the proposed area for marine park designation; and review available survey data for Finless Porpoise, water quality, fisheries, marine traffic and planned development projects in the vicinity. Based on the findings, ecological profiles of the proposed area for marine park designation should be established, and the extent and location of the proposed marine park be determined. The adequacy of enhancement measures should also be reviewed. • In addition, a management plan for the proposed marine park should be proposed, covering information on the responsible departments for operation and management (O&M) of the marine park, as well as the O&M duties of each of the departments involved. Consultation with relevant government departments and stakeholders should be conducted under the study. The study should be submitted to Director of Environmental Protection (DEP) for approval before the commencement of construction works.								

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
	• The Project Proponent should provide assistance to AFCD during the process of the marine park designation. .								
7b.8.5.1 – 7b.8.5.4	Additional Enhancement or Precautionary Measures *Deployment of Artificial Reefs* • Deployment of artificial reefs (ARs) is an enhancement measure for the marine habitats. ARs are proposed to be deployed within the proposed marine park under this Project. The exact location, dimension and type of ARs to be deployed are to be further investigated along with the further study of the proposed marine park under this Project. The proposed ARs would be deployed at the same time as the complete designation of marine park. *Release of Fish Fry at Artificial Reefs and Marine Park* • Release of fish fry at the proposed ARs, as well as the proposed marine park under this study, should enhance the fish resources in the nearby waters, and subsequently food sources for Finless Porpoise. The proposed ARs with various micro-habitats would have the potential to provide shelter and nursery ground for the released fish fry.	Within the proposed marine park under this study	Project Proponent	✓		✓		EIAO-TM	N/A

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
	The frequency and quantity of fry to be released should be agreed by AFCD.								

* Des - Design, C - Construction, O – Operation, and Dec - Decommissioning

Table B.6 Implementation Schedule for Fisheries Measures for the IWMF at the artificial island near SKC

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
8b.8.1.2	Measure to minimize loss of and disturbance on fisheries resources • Alteration to the phasing of works, construction method, and layout plan of the IWMF at the artificial island near SKC has been made. The total fishing ground to be permanently lost due to the project has been significantly reduced from ~50 ha to ~31 ha. By adopting the current circular cells instead of the conventional seawall construction method, SS elevation would be greatly reduced, minimizing adverse impact on the health of fisheries resources.	IWMF site	Design team, contractor	✓	✓		✓	EIAO-TM	N/A
8b.8.1.3	Measure to minimize impingement and entrainment • Provision of a screen at the water intake point for desalination plant would be essential to minimize the risk of impingement and entrainment of fisheries resources (including fish, larvae and egg) through the intake point.	IWMF site	Design team, contractor, IWMF operator	✓	✓	✓		EIAO-TM	N/A

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
8b.8.1.4- 8b.8.1.6	<u>Measures to control water quality</u> • No wastewater effluent, anti-fouling agent, heavy metals and other contaminants would be released during operation phase of the Project. • Mitigation measures recommended in the water quality impact assessment during construction and operation would serve to protect fisheries resources from indirect impacts resulted from the Project	Work site, IWMF site	Design team, contractor, IWMF operator	✓	✓	✓	✓	EIAO-TM	Implemented
8b.8.1.7 – 8b.8.1.8	<u>Additional Enhancement / Precautionary Measures</u> • Artificial Reefs (ARs) are proposed to be deployed within the proposed marine park under this Project as an enhancement measure for the marine habitats. This enhancement feature would bring positive impacts to the previously identified important spawning and nursery ground for fisheries resources. *Release of Fish Fry at Artificial Reefs* • Release of fish fry has been proposed under this Project. The proposed deployment of ARs within the proposed marine park would provide shelter and nursery ground for the released fish fry. The frequency and quantity of fry to be released should be agreed by AFCD.	Within the proposed marine park in the waters between Soko Islands and Shek Kwu Chau	Project Proponent	✓		✓		EIAO-TM	N/A

* Des - Design, C - Construction, O – Operation, and Dec - Decommissioning

Table B.7 Implementation Schedule for Landscape and Visual Measures for the IWMF at the artificial island near SKC

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
S10b.10 MLVC- 01	Grass-hydroseeded bare soil surface and stock pile area	Work site / During construction phase	Contractor		✓				N/A
S10b.10 MLVC-02	<u>Landscape Design</u> 1) Early planting using fast grow trees and tall shrubs at strategic locations within site as buffer to block view corridors to the site from the VSRs, and to locally screen haul roads, excavation works and site preparation works. 2) Use of tree species of dense tree crown to serve as visual barrier. 3) Hard and soft landscape treatment (e.g. trees and shrubs) of open areas within development to provide a background for the outdoor containers from open view, shade and shelter, and a green appearance from surrounding viewpoints. 4) Planting strip along the periphery of the project site. 5) Selected tree species suitable for the coastal condition.	Work site / During design & construction phases	Contractor	✓	✓				N/A

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
S10b.10 MLVC-03	<u>Adoption of Natural Features of the Existing Shoreline</u> 1) Use of boulders in different sizes and with the similar textures of the existing rocky shores for the construction of breakwater and artificial shoreline in order to blend into the existing natural shoreline. 2) Use of cellular cofferdam together with the natural boulders to form a curvature shoreline for the reclamation area to echo with the natural shoreline of SKC.	Work site / During construction phase	Contractor		✓				N/A
S10b.10 MLVC-04	<u>Greening Design (Rooftop & Vertical Greening)</u> 1) Implementation of rooftop and vertical greening (vertical building envelope) along the periphery of each building block to increase the amenity value of the work, moderate temperature extremes and enhance building energy performance. The greening appearance of the building shall enhance its visual harmony with the natural surroundings as well as reduce the apparent visual mass of the structure. 2) Sufficient space between concrete enclosure and stack to minimize heat transfer. 3) Introduction of landscape decks at the stack to further enhance the overall natural and green concept unique for this site.	Work site / During design & construction phases	Contractor	✓	✓				N/A

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
S10b.10 MVC-01	<u>Visual Mitigation and Aesthetic Design</u> 1) Use of natural materials with recessive color to minimize the bulkiness of the building. 2) Adoption of innovative aesthetic design to the chimney to minimize or visually mitigate the massing of the chimney so as to reduce its visual impact to the surroundings. 3) Color of the chimney in a gradual changing manner to match with the color of the sky. 4) Provision of observation deck for public enjoyment at the top of the chimney to diminish the feeling of chimney. 5) Provision of sky gardens between the two stacks to allow additional greening for enhancing the aesthetic quality. Maintenance access (elevator and staircase) from the ground floor to the sky gardens will be provided to allow maintenance of the sky gardens. 6) Integration of the visitor's walkway with different material façade design of incinerator plant to enhance the aesthetic quality.	Structures in IWMF / During design & constructio n phases	Contractor	✓	✓				N/A
S10b.10 MVC-02	Control of the security floodlight for construction areas at night to avoid excessive glare to the surrounding receiver.	Work site / During construction phase	Contractor		✓				Implemented

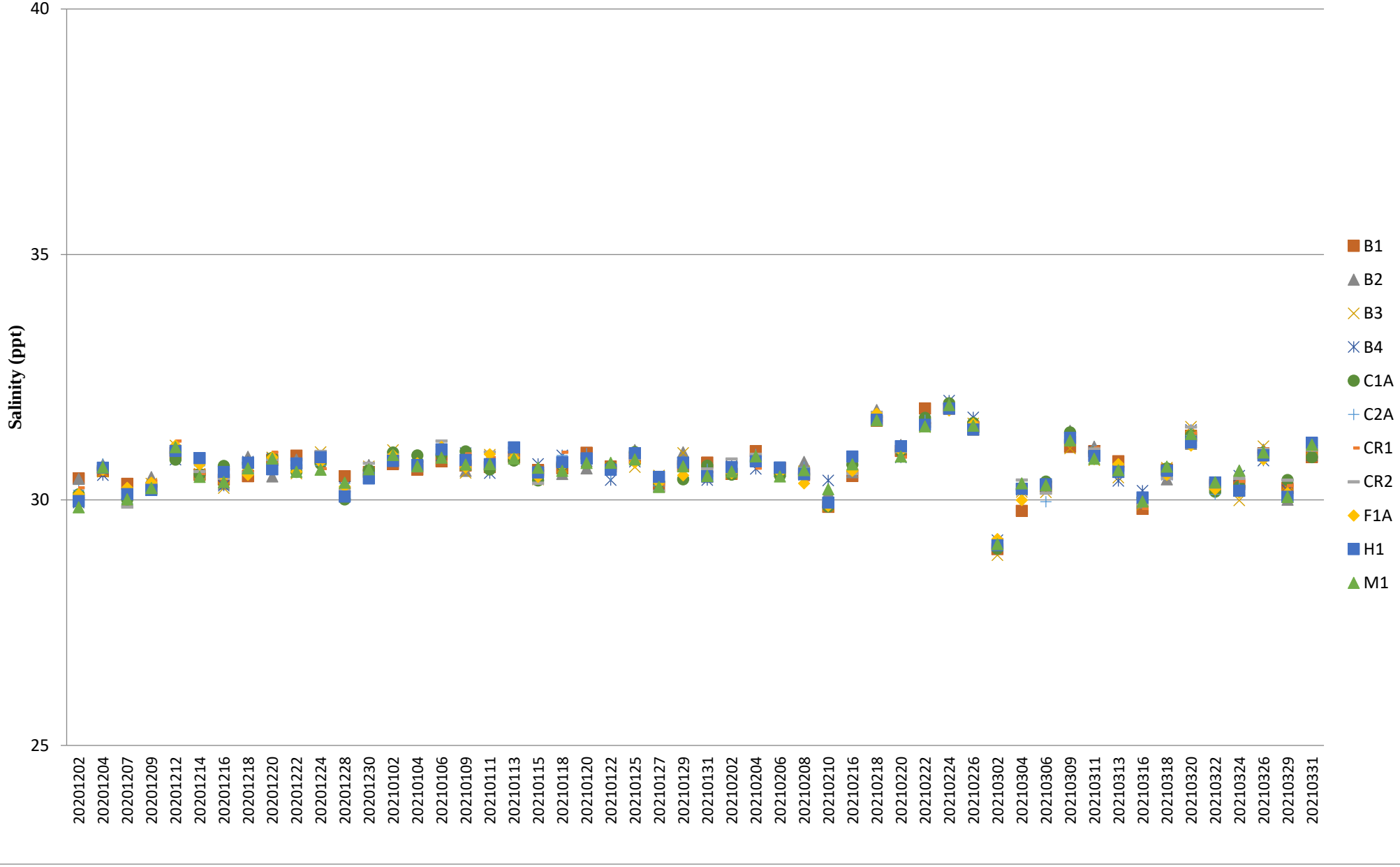
EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
S10b.10 MVC-03	Optimization of the construction sequence and construction programme to minimize the duration of impact.	Work site / During design & construction phases	Contractor	✓	✓				Implemented
S10b.10 MVC-04	Storage of the backfilling materials for site formation & construction materials / wastes on site at a maximum height of 2m, covered with an impermeable material of visually un-obtrusive material (in earth tone).	Work site / During construction phase	Contractor		✓				N/A
S10b.10 MVC-05	Reduction of the number of construction traffic at the site to practical minimum.	Work site / During construction phase	Contractor		✓				Implemented
S10b.10 MLVO-01	<u>Planting Maintenance</u> Provision of proper planting maintenance and replacement of defective plant species on the new planting areas to enhance aesthetic and landscape quality.	Project site / During Operation phase	Contractor			✓			N/A
S10b.10 MVO-01	<u>Environmental Education Centre</u> Development of an Environmental Education Center, in which regular exhibitions and lectures to promote environmental awareness and waste reduction concept would be provided, as a part of the IWMF for the general public to alleviate negative public perceptions of the development.	Project site / During Operation phase	Contractor			✓			N/A
S10b.10 MVO-02	<u>Control of Light</u> Control the numbers of lights and their intensity to a level that is good enough to meet the safety requirements at night but not excessive.	Project site / During Operation phase	Contractor			✓			N/A

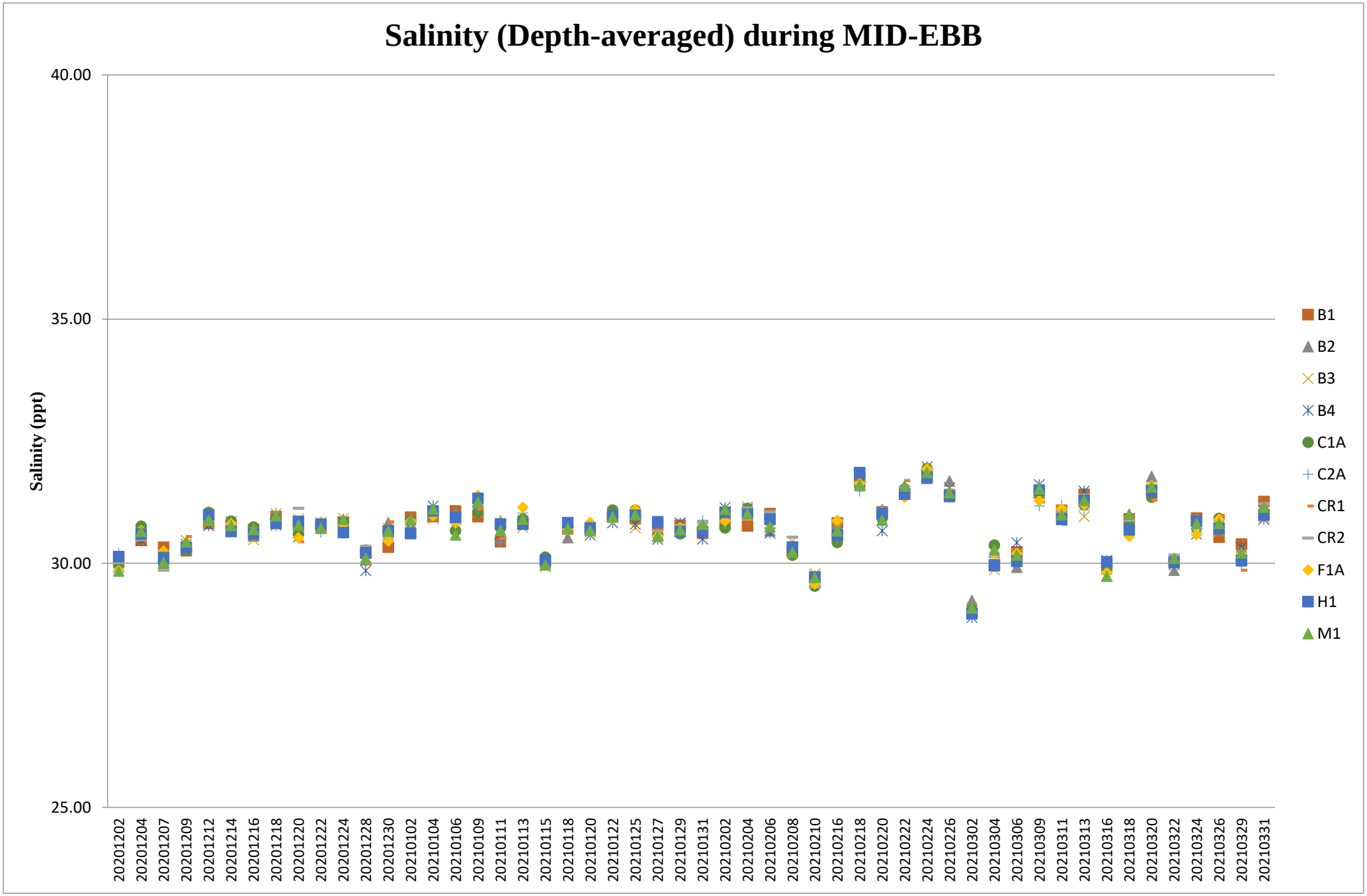
EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
S10b.10 MVO-03	Control of Operation Time Minimization of the frequency of waste transportation to practical minimum (e.g. limit the reception of MSW from 8 am to 8 pm)	Project site / During Operation phase	Contractor			✓			N/A

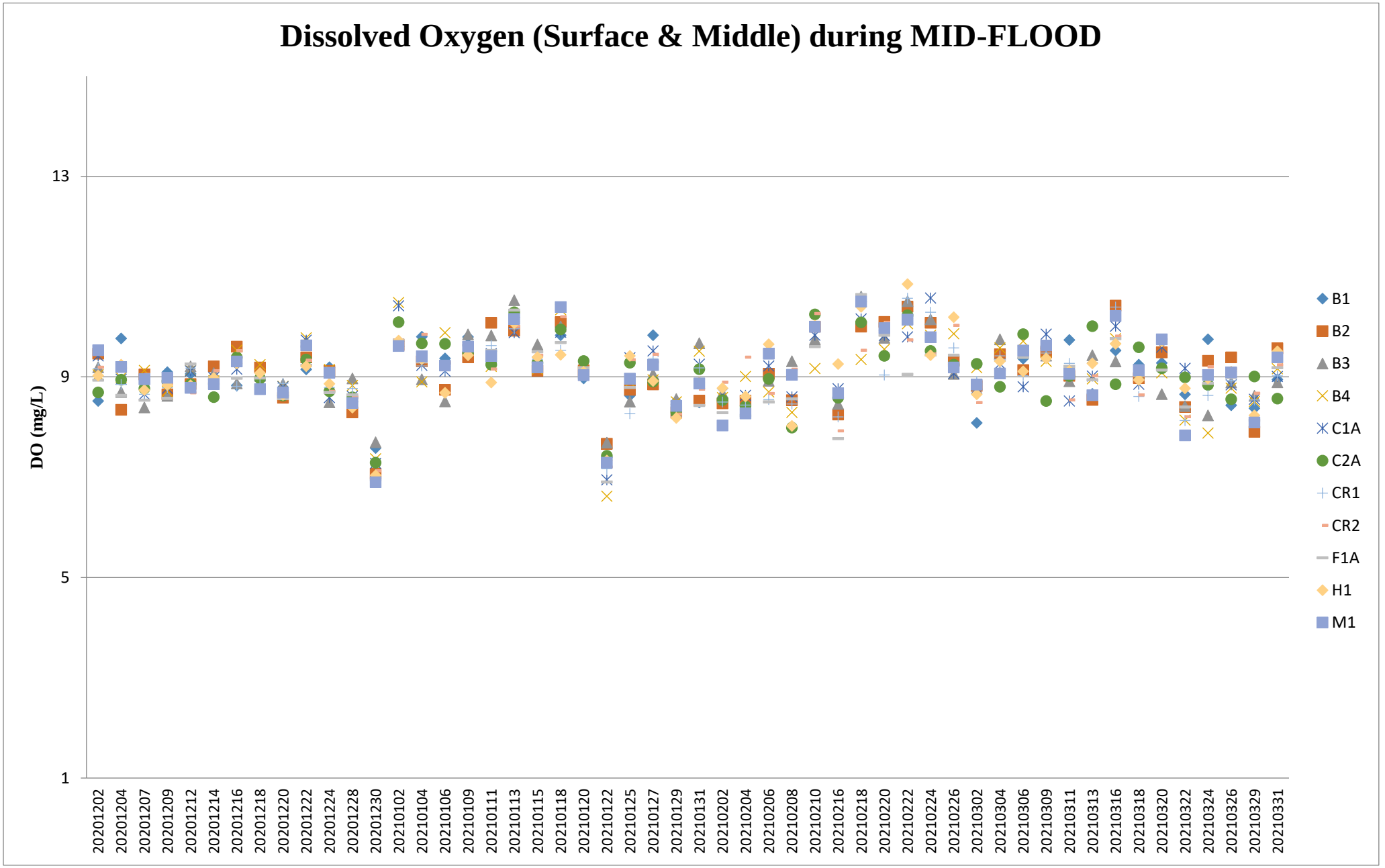
* Des - Design, C - Construction, O – Operation, and Dec - Decommissioning

Appendix C Water Quality Monitoring Data Trending

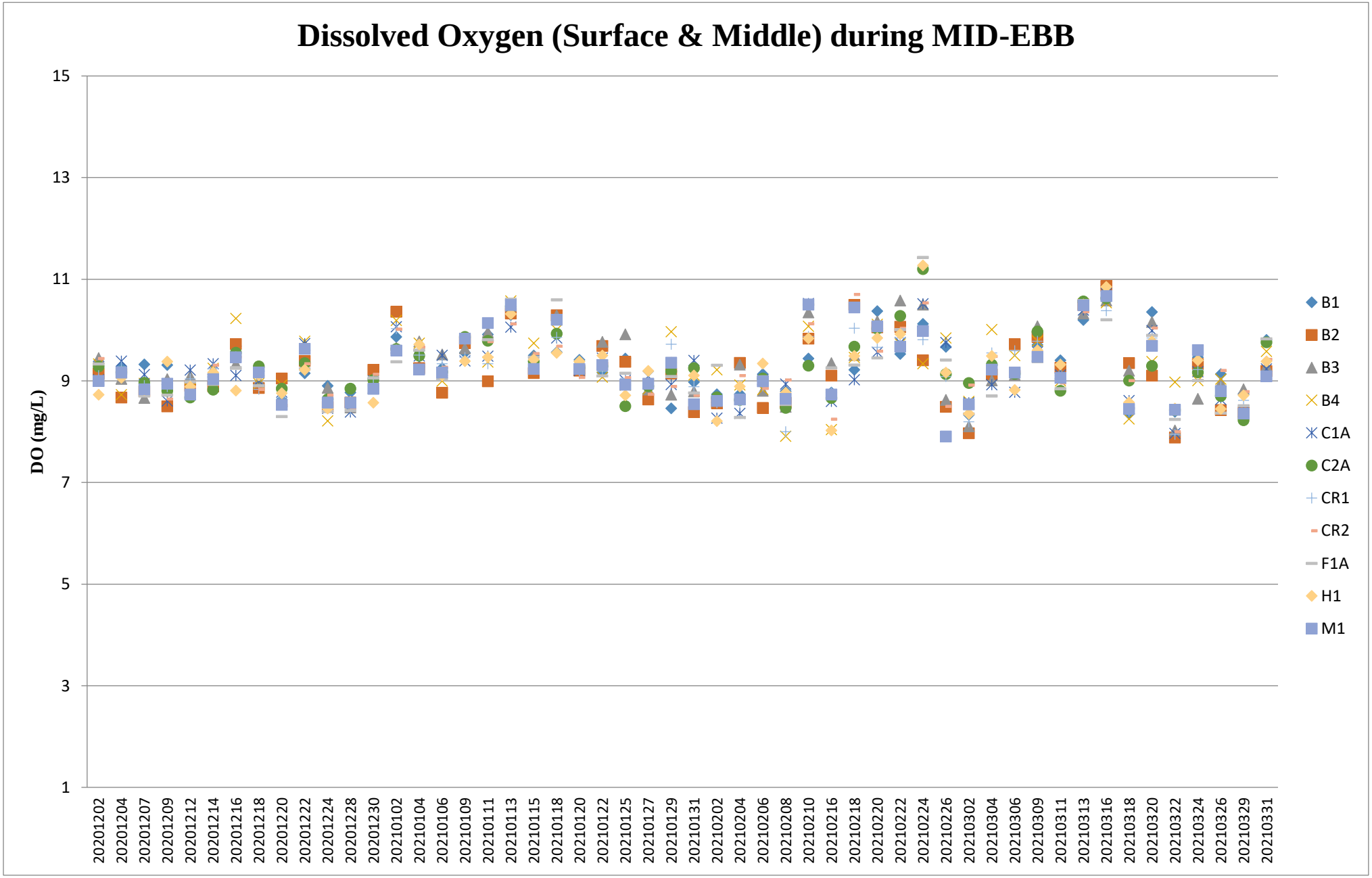
Salinity (Depth-averaged) during MID-FLOOD



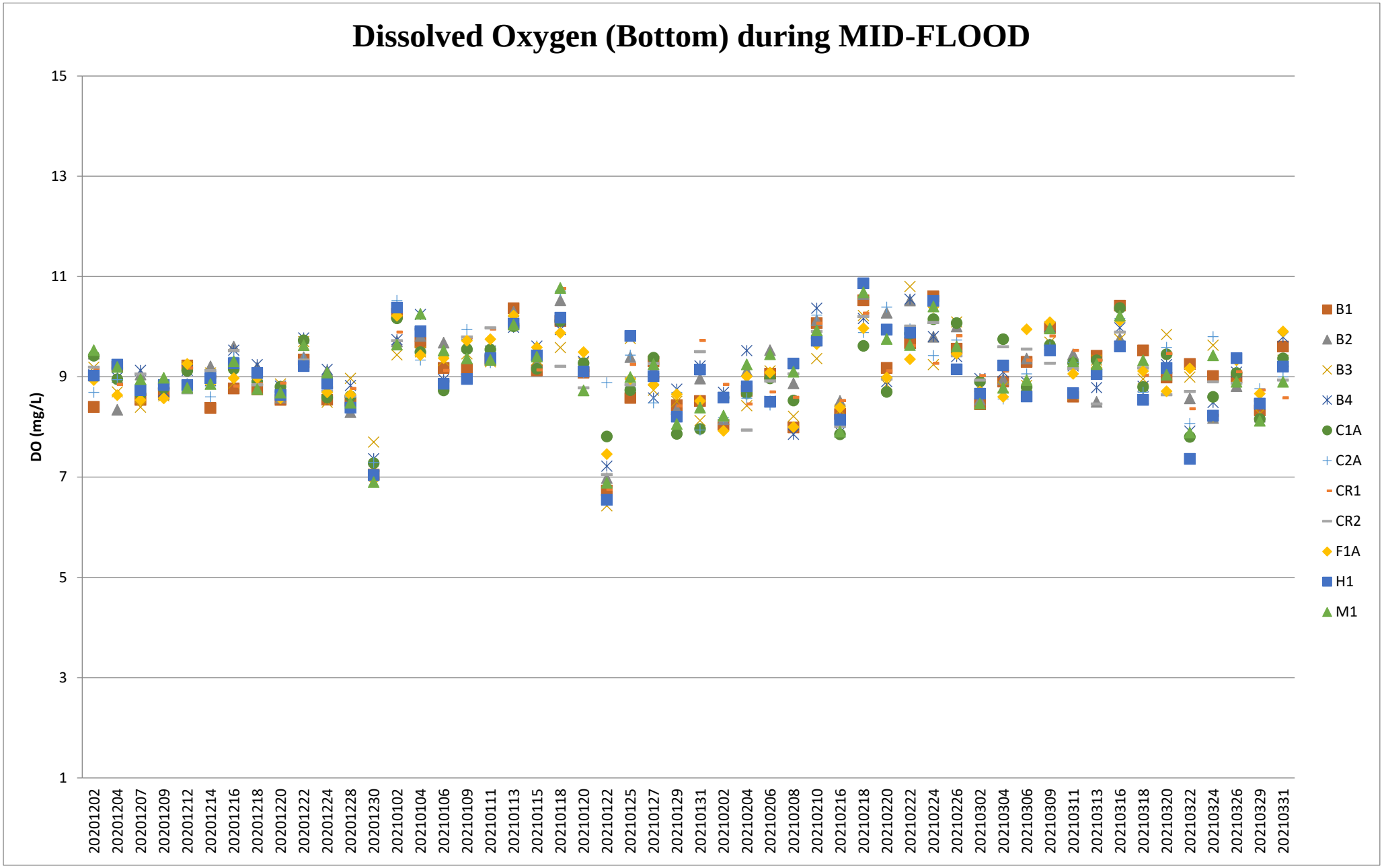

Salinity (Depth-averaged) during MID-EBB
Salinity (ppt)
40.00
35.00
30.00
25.00
20201202
20201204
20201207
20201209
20201212
20201214
20201216
20201218
20201220
20201222
20201224
20201228
20201230
20210102
20210104
20210106
20210109
20210111
20210113
20210115
20210118
20210120
20210122
20210125
20210127
20210129
20210131
20210202
20210204
20210206
20210208
20210210
20210216
20210218
20210220
20210222
20210224
20210226
20210302
20210304
20210306
20210309
20210311
20210313
20210316
20210318
20210320
20210322
20210324
20210326
20210329
20210331
B1
B2
B3
B4
C1A
C2A
CR1
CR2
F1A
H1
M1



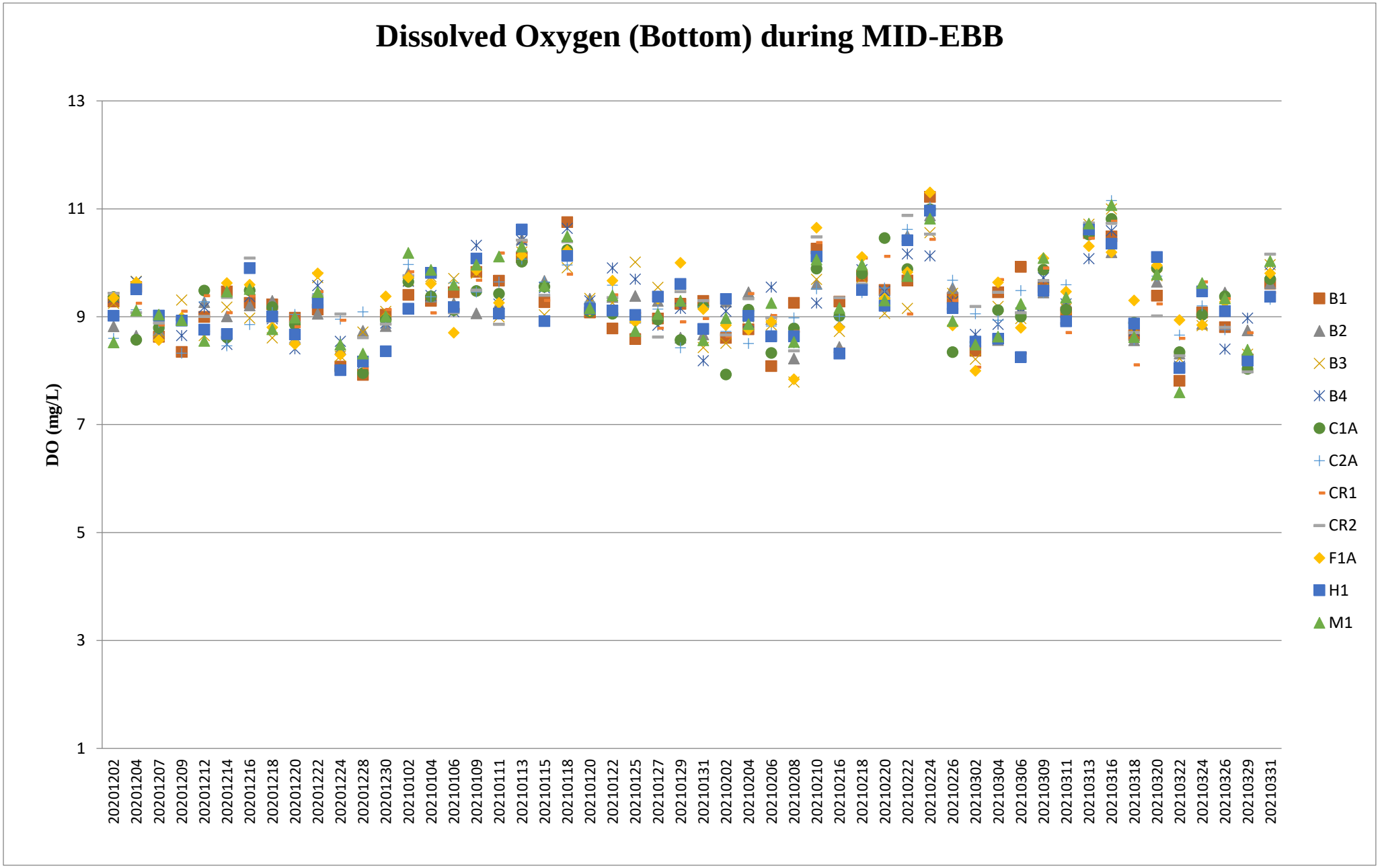
Note: The Action and Limit Level of dissolved oxygen can be referred to **Table 2.2** of the quarterly EM&A report.



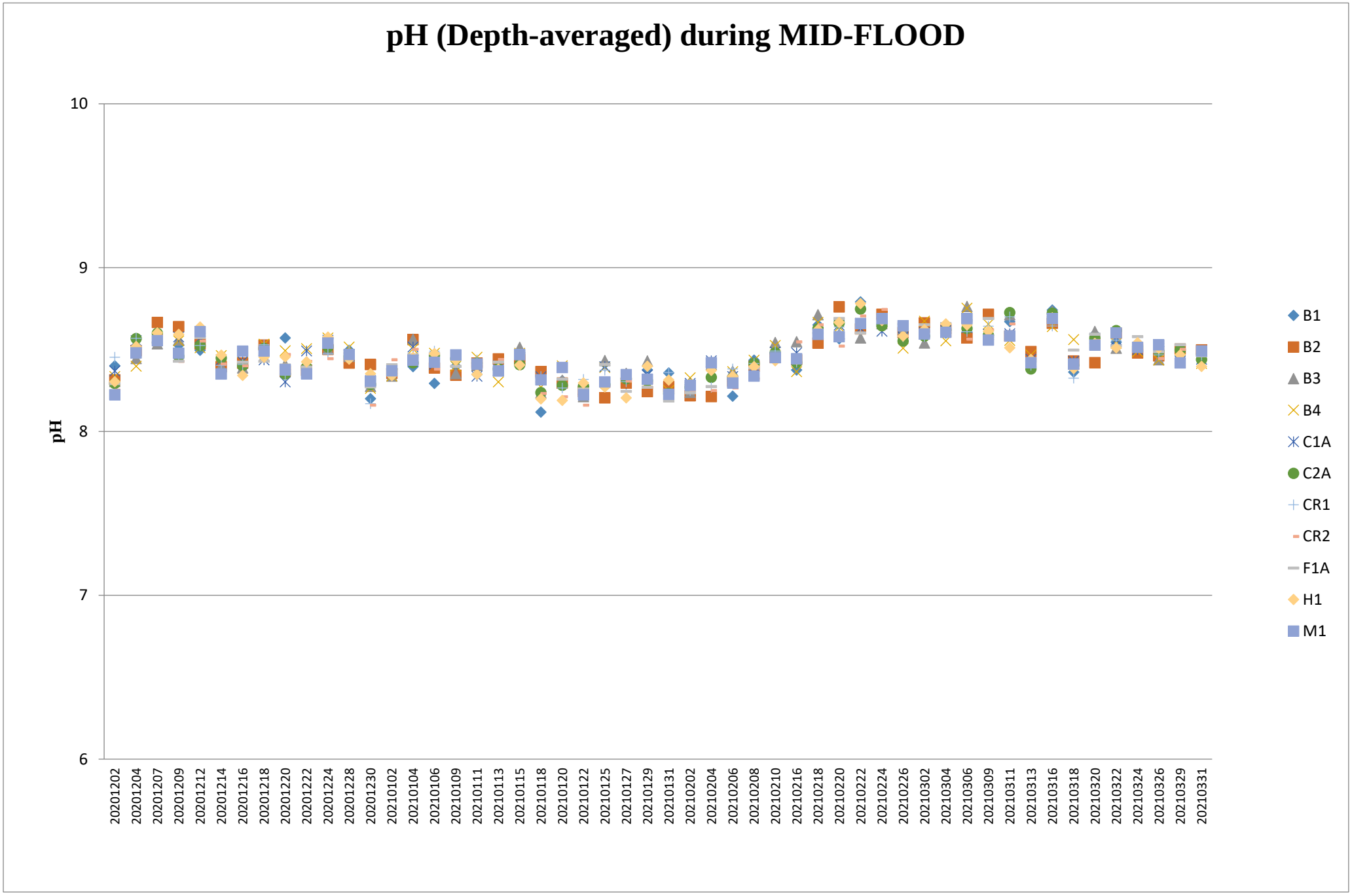
Note: The Action and Limit Level of dissolved oxygen can be referred to **Table 2.2** of the quarterly EM&A report.

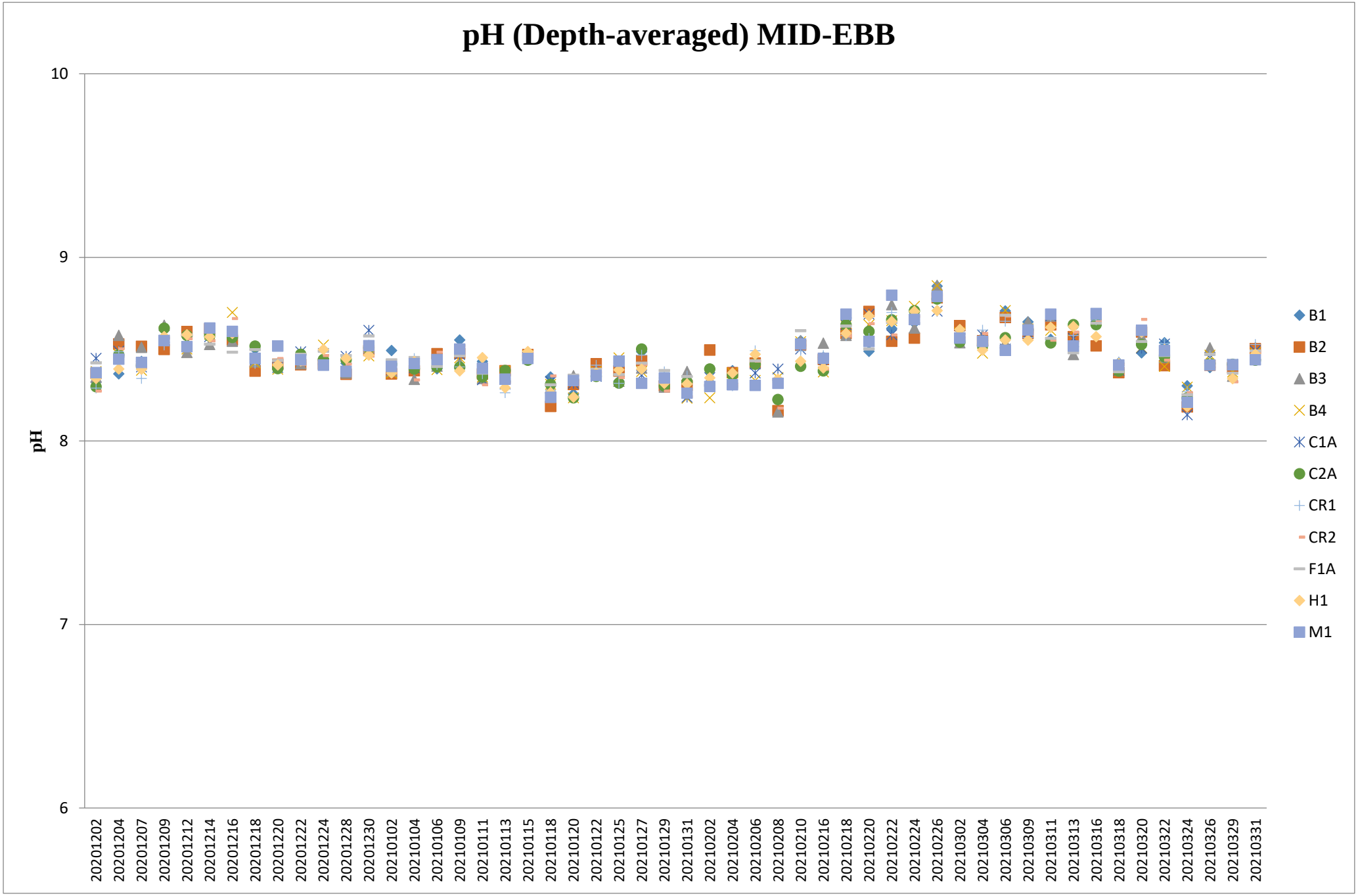


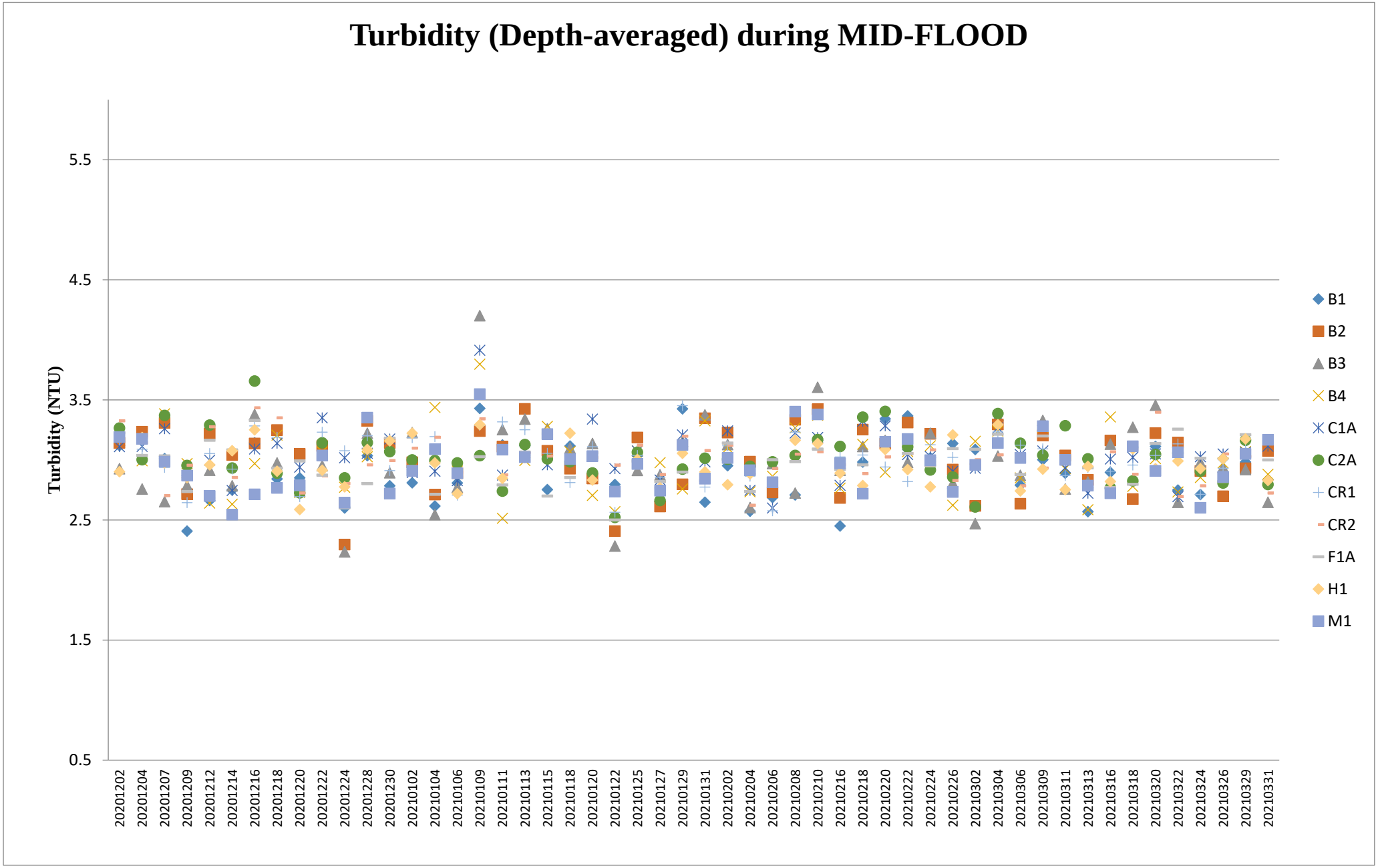
Note: The Action and Limit Level of dissolved oxygen can be referred to **Table 2.2** of the quarterly EM&A report.



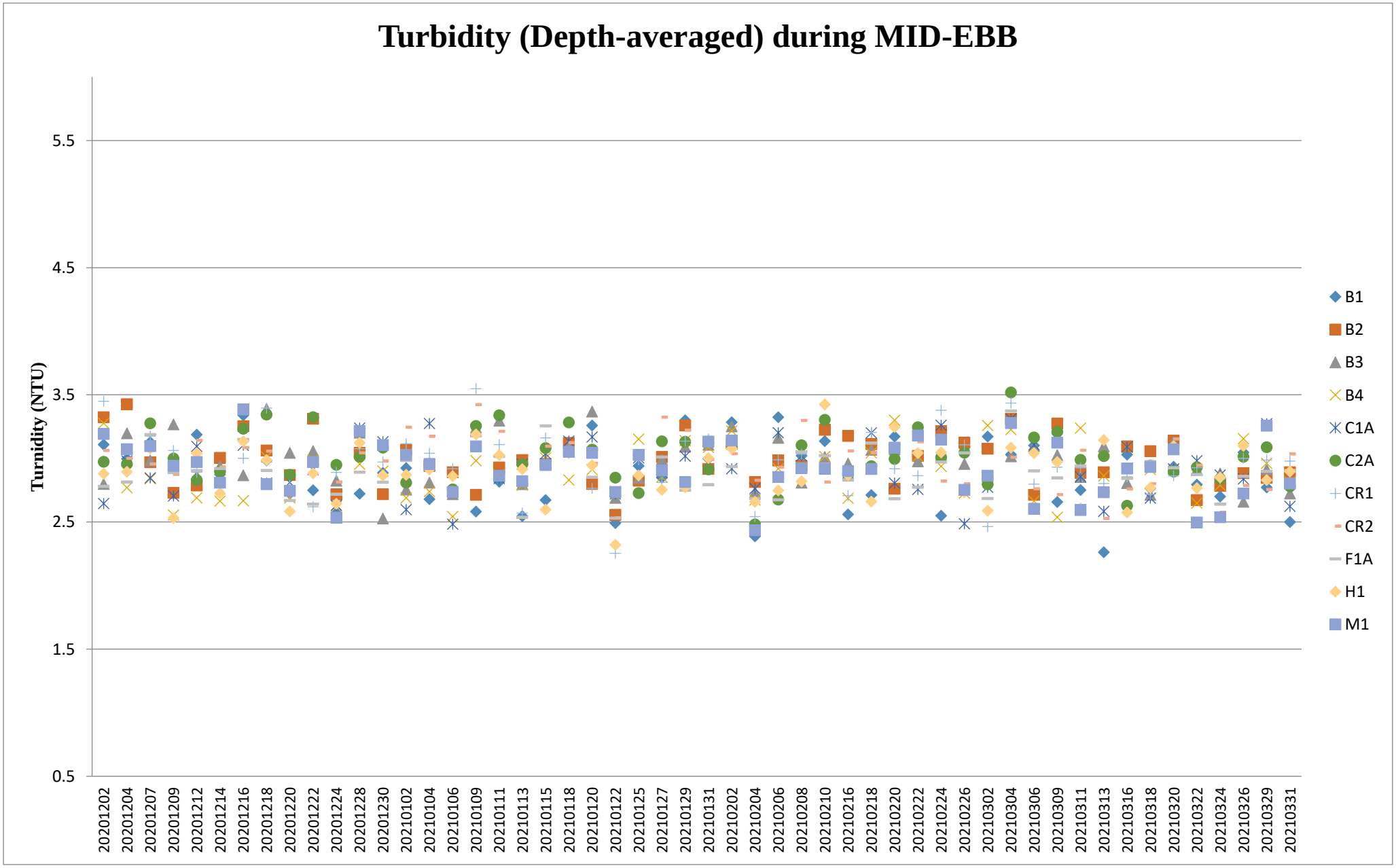
Note: The Action and Limit Level of dissolved oxygen can be referred to **Table 2.2** of the quarterly EM&A report.


pH (Depth-averaged) during MID-FLOOD
pH
10
9
8
7
6
20201202
20201204
20201207
20201209
20201212
20201214
20201216
20201218
20201220
20201222
20201224
20201228
20201230
20210102
20210104
20210106
20210109
20210111
20210113
20210115
20210118
20210120
20210122
20210125
20210127
20210129
20210131
20210202
20210204
20210206
20210208
20210210
20210216
20210218
20210220
20210222
20210224
20210226
20210302
20210304
20210306
20210309
20210311
20210313
20210316
20210318
20210320
20210322
20210324
20210326
20210329
20210331
B1
B2
B3
B4
C1A
C2A
CR1
CR2
F1A
H1
M1

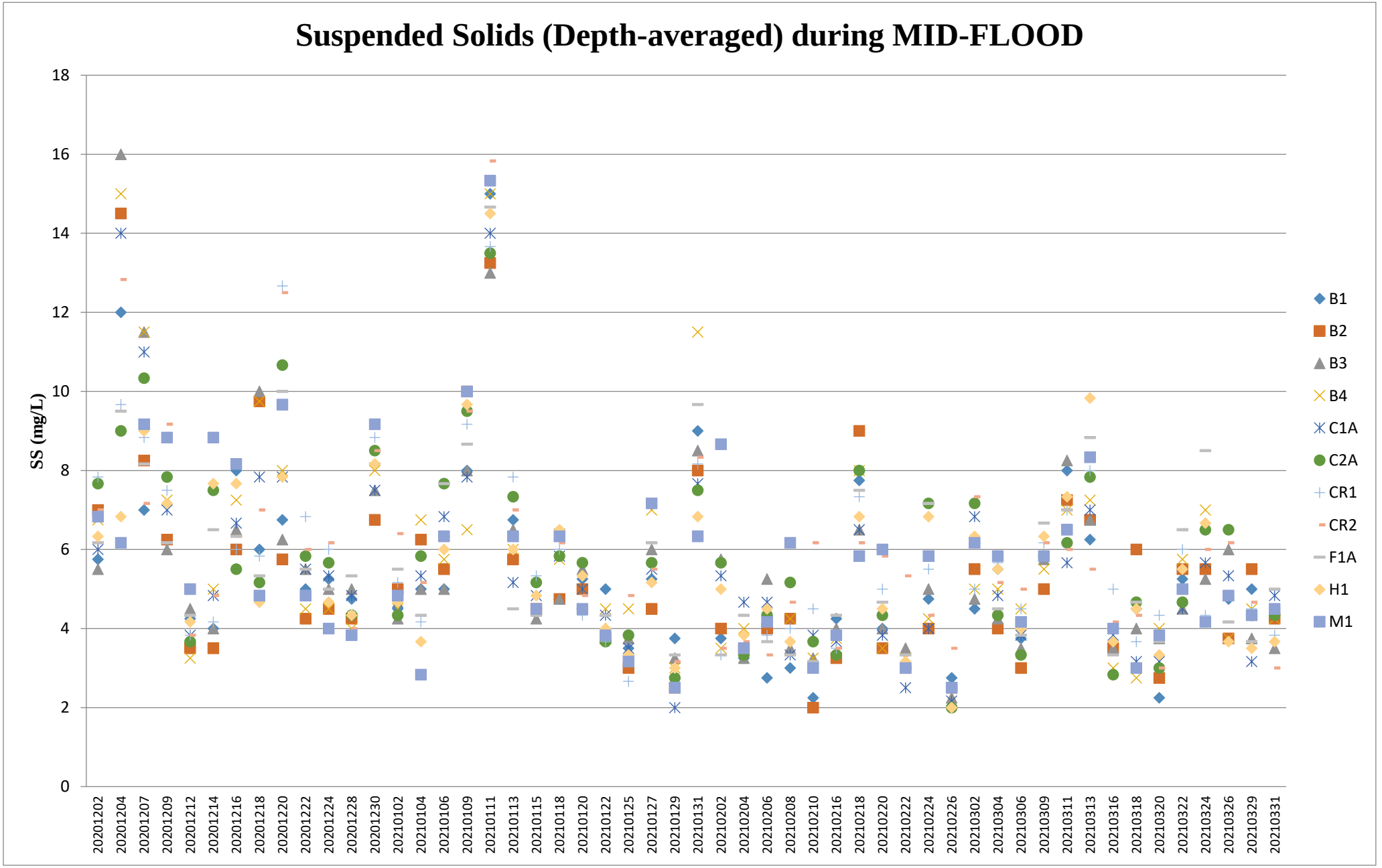

pH (Depth-averaged) MID-EBB
pH
10
9
8
7
6
20201202
20201204
20201207
20201209
20201212
20201214
20201216
20201218
20201220
20201222
20201224
20201228
20201230
20210102
20210104
20210106
20210109
20210111
20210113
20210115
20210118
20210120
20210122
20210125
20210127
20210129
20210131
20210202
20210204
20210206
20210208
20210210
20210216
20210218
20210220
20210222
20210224
20210226
20210302
20210304
20210306
20210309
20210311
20210313
20210316
20210318
20210320
20210322
20210324
20210326
20210329
20210331
B1
B2
B3
B4
C1A
C2A
CR1
CR2
F1A
H1
M1



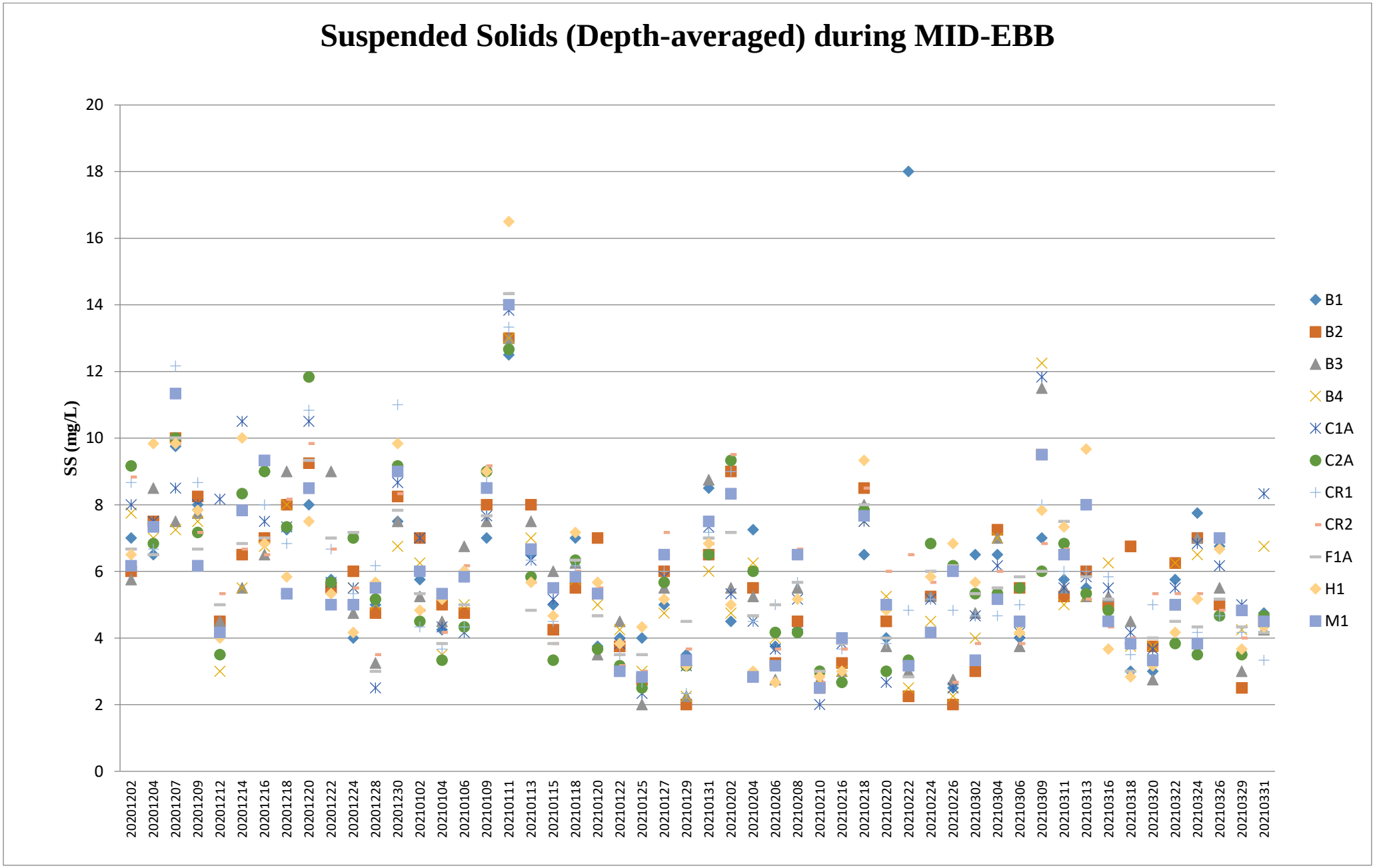
Note: The Action and Limit Level of turbidity can be referred to **Table 2.2** of the quarterly EM&A report.



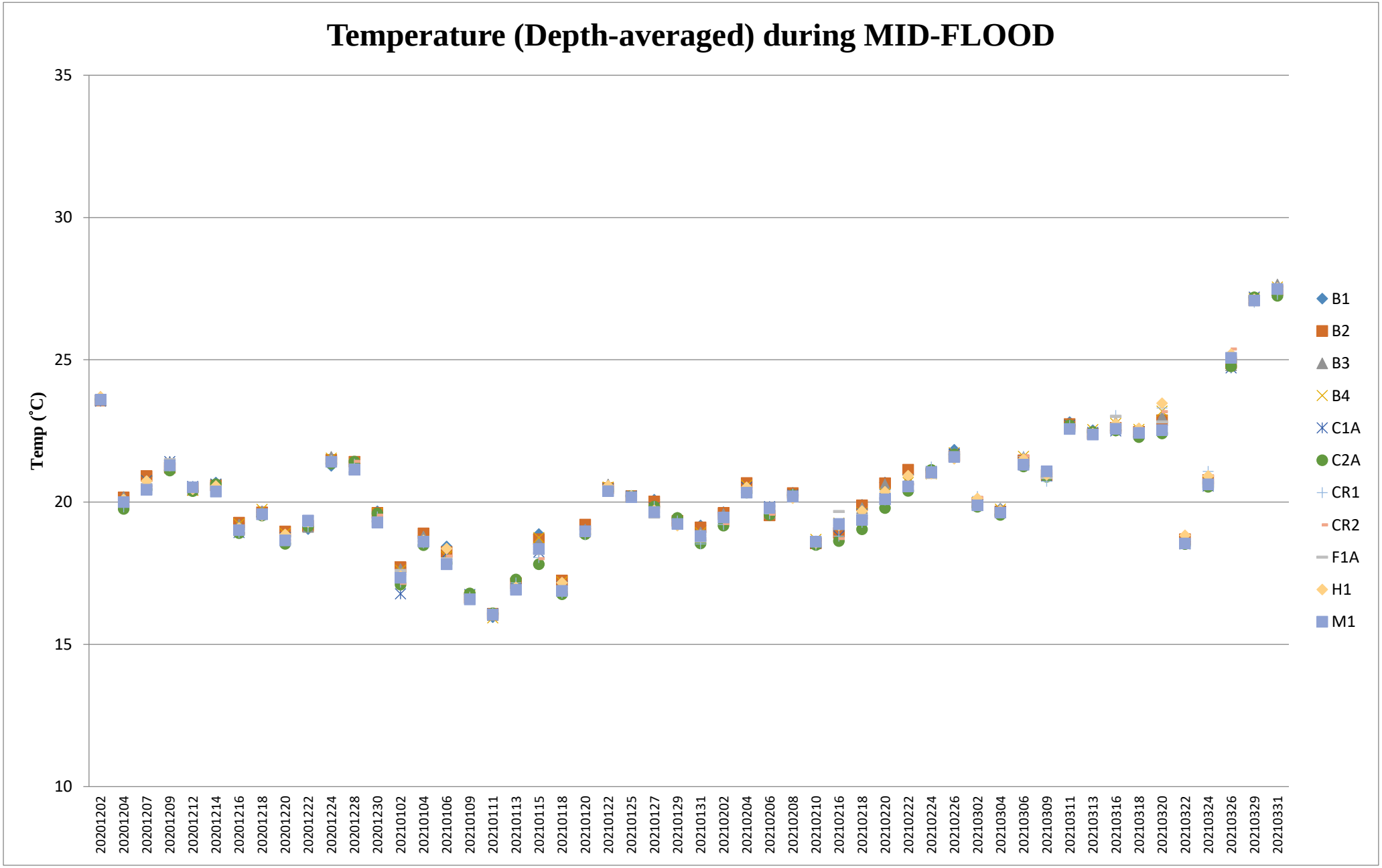
Note: The Action and Limit Level of turbidity can be referred to **Table 2.2** of the quarterly EM&A report.



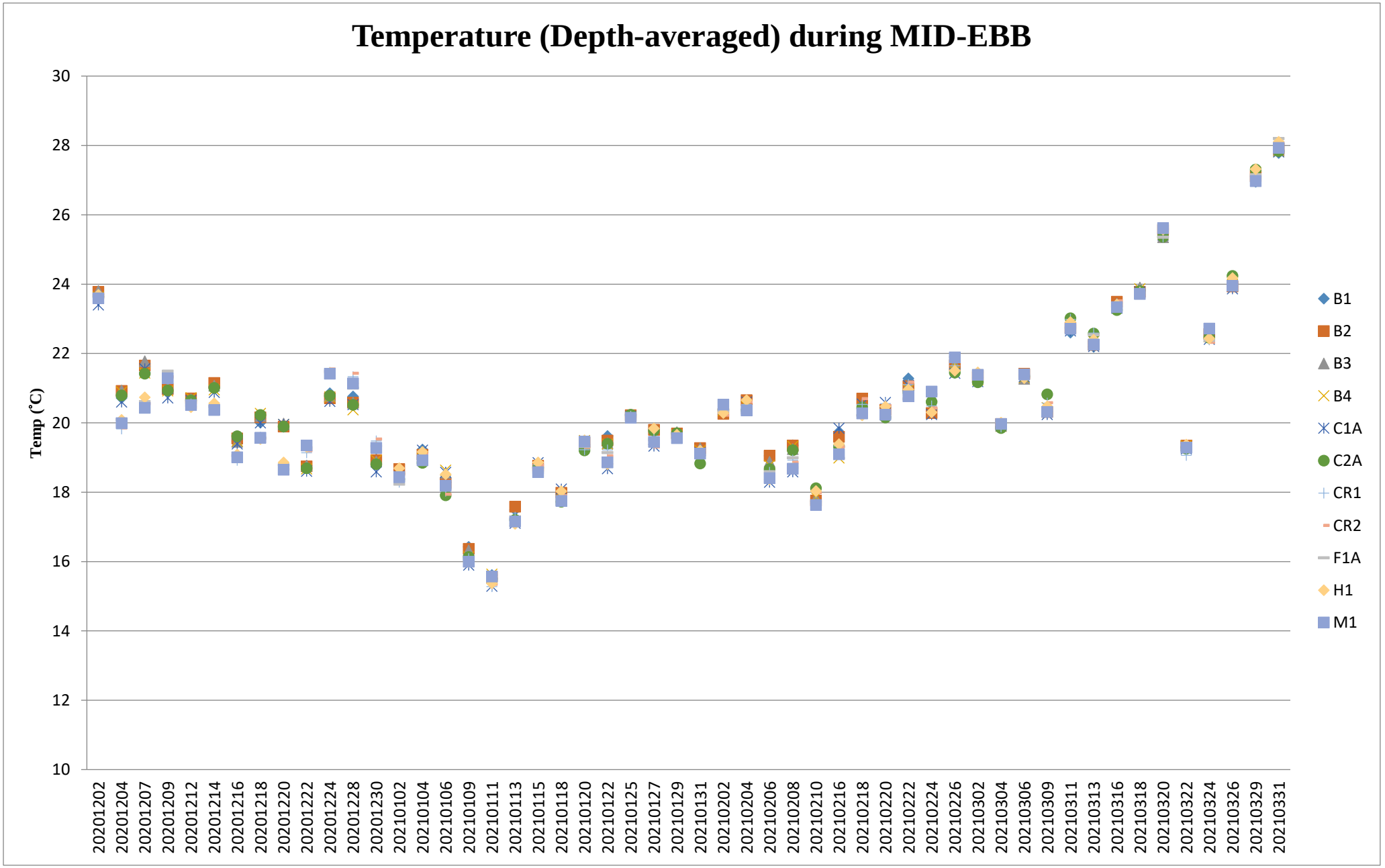
Note: The Action and Limit Level of suspended solids can be referred to **Table 2.2** of the quarterly EM&A report.



Note: The Action and Limit Level of suspended solids can be referred to **Table 2.2** of the quarterly EM&A report.

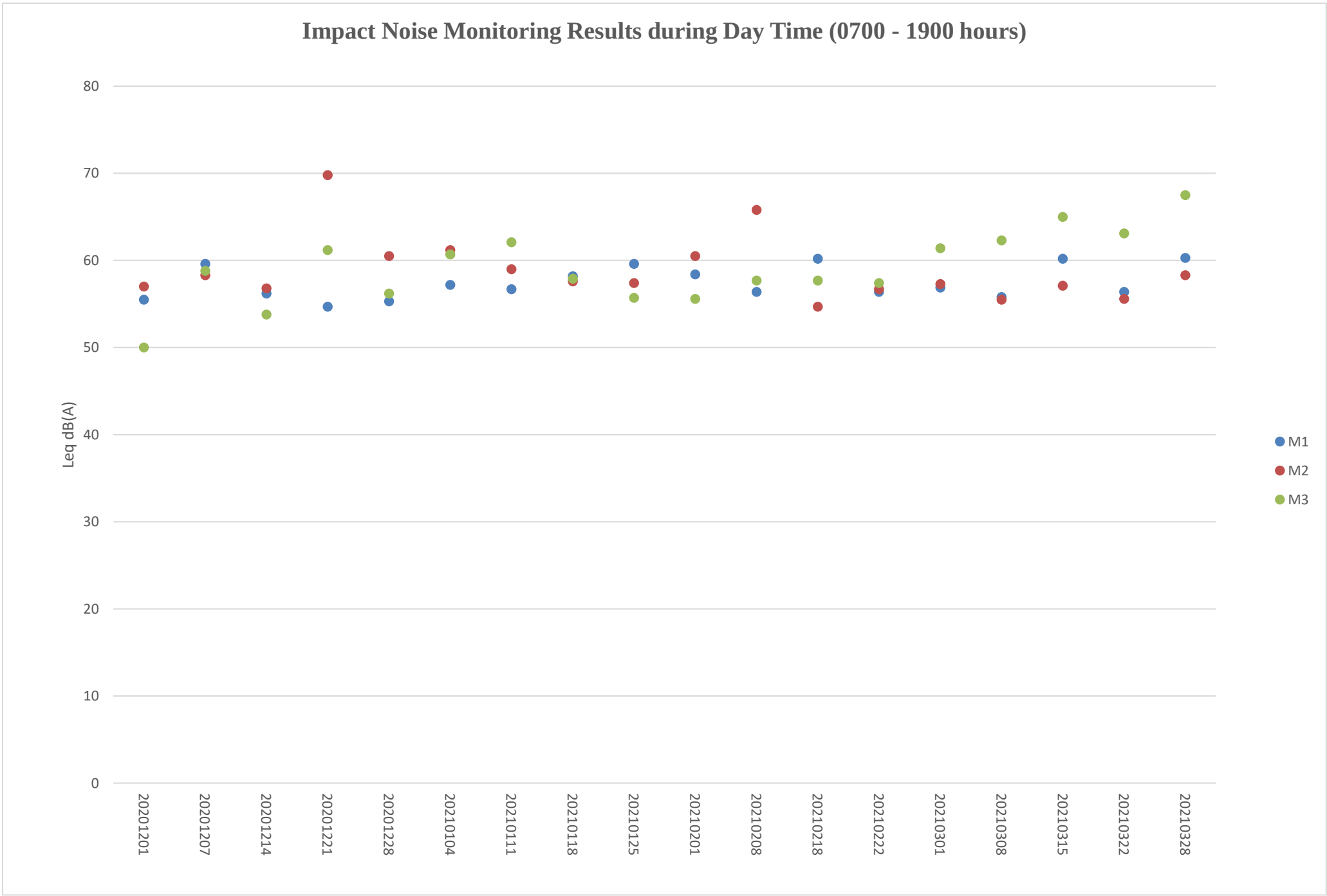


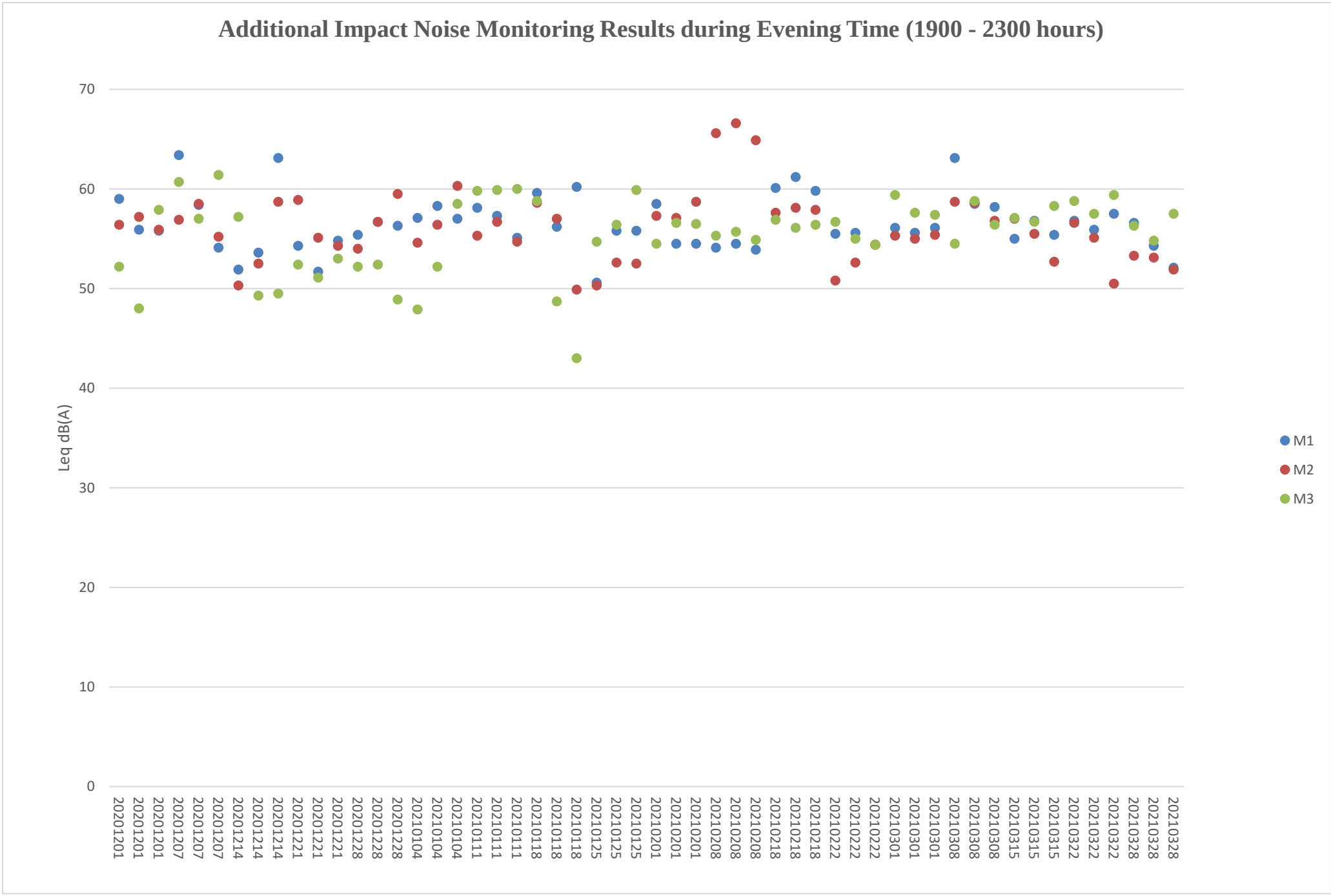
Note: The Action and Limit Level of temperature can be referred to **Table 2.2** of the quarterly EM&A report.

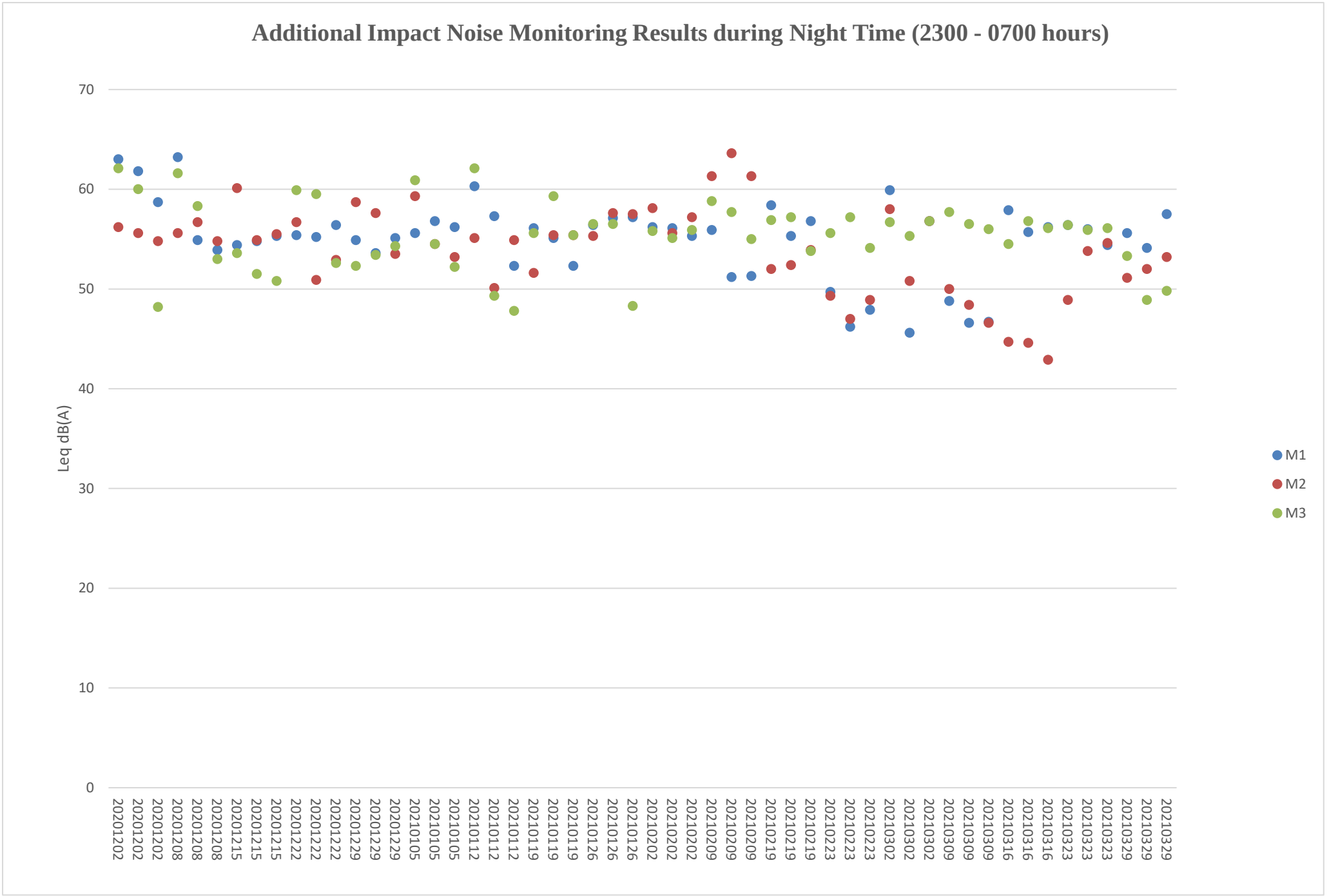


Note: The Action and Limit Level of temperature can be referred to **Table 2.2** of the quarterly EM&A report.

Appendix D Noise Monitoring Data Trending


Impact Noise Monitoring Results during Day Time (0700 - 1900 hours)
Leq dB(A)
80
70
60
50
40
30
20
10
0
20201201
20201207
20201214
20201221
20201228
20210104
20210111
20210118
20210125
20210201
20210208
20210218
20210222
20210301
20210308
20210315
20210322
20210328
M1
M2
M3


Additional Impact Noise Monitoring Results during Evening Time (1900 - 2300 hours)
Leq dB(A)
70
60
50
40
30
20
10
0
20201201
20201201
20201201
20201207
20201207
20201207
20201214
20201214
20201214
20201221
20201221
20201221
20201228
20201228
20201228
20210104
20210104
20210104
20210111
20210111
20210111
20210118
20210118
20210118
20210125
20210125
20210125
20210201
20210201
20210201
20210208
20210208
20210208
20210218
20210218
20210218
20210222
20210222
20210222
20210301
20210301
20210301
20210308
20210308
20210308
20210315
20210315
20210315
20210322
20210322
20210322
20210328
20210328
20210328
M1
M2
M3


Additional Impact Noise Monitoring Results during Night Time (2300 - 0700 hours)
Leq dB(A)
70
60
50
40
30
20
10
0
M1
M2
M3
20201202
20201202
20201202
20201208
20201208
20201208
20201215
20201215
20201215
20201222
20201222
20201222
20201229
20201229
20201229
20210105
20210105
20210105
20210112
20210112
20210112
20210119
20210119
20210119
20210126
20210126
20210126
20210202
20210202
20210202
20210209
20210209
20210209
20210219
20210219
20210219
20210223
20210223
20210223
20210302
20210302
20210302
20210309
20210309
20210309
20210316
20210316
20210316
20210323
20210323
20210323
20210329
20210329
20210329

Appendix E Waste Flow Table

吉寶西格斯 - 振華聯營公司

Keppel Seghers - Zhen Hua Joint Venture

Monthly Summary Waste Flow Table for 2018 (year)

Project : Integrated Waste Management Facilities, Phase 1 Contract No.: EP/SP/66/12

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 (see Note 1)	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill Sand	Imported Fill Public fill	Imported Fill Rock	Metals	Paper/ cardboard packaging	Plastics (see Note 2)	Chemical Waste		Others, e.g. general refuse (see Note 3)
	(in ,000m^3)	(in ,000m^3)	(in ,000m^3)	(in ,000m^3	(in ,000m^3)	(in ,000m^3)			(in ,000 kg)	(in ,000kg)	(in ,000kg)	(in ,000kg)	(in ,000L)	(in ,000 m^3)
Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0
May	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub-total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0065
Sep	0	0	0	0	0	2.9619	0	0	0	0	0	0	0	0
Oct	0	0	0	0	0	3.0771	0	0	0	0	0	0	0	0.0130
Nov	0	0	0	0	0	6.7871	0	0	0	0	0	0	0	0
Dec	0	0	0	0	0	59.0709	0	0	0	0	0	0.2000	0.8700	0
Total	0	0	0	0	0	71.8970	0	0	0	0	0	0.2000	0.8700	0.0195

Notes:
(1) Broken concrete for recycling into aggregates.
(2) Plastics refer to plastic bottles/ containers, plastic sheets/ foam from packaging materials.
(3) Use the conversion factor : 1 full load of dumping truck being equivalent to 6.5m^3 by volume.

吉寶西格斯 - 振華聯營公司
Keppel Seghers - Zhen Hua Joint Venture

Monthly Summary Waste Flow Table for 2019 (year)

Project : Integrated Waste Management Facilities, Phase 1 Contract No.: EP/SP/66/12

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 (see Note 1)	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill Sand	Imported Fill Public fill	Imported Fill Rock	Metals	Paper/ cardboard packaging	Plastics (see Note 2)	Chemical Waste		Others, e.g. general refuse (see Note 3)
	(in ,000m^3)	(in ,000m^3)	(in ,000m^3)	(in ,000m^3	(in ,000m^3)	(in ,000m^3)			(in ,000 kg)	(in ,000kg)	(in ,000kg)	(in ,000kg)	(in ,000L)	(in ,000 m^3)
Jan	0	0	0	0	0	82.6139	0	0	0	0	0	0	0	0.0065
Feb	0	0	0	0	0	46.7821	0	0	0	0	0	0	0	0
Mar	0	0	0	0	0	97.1000	0	0.7552	0	0.2560	0	0	0	0
Apr	0	0	0	0	0	58.0413	0	0	0	0	0	0	0	0
May	0	0	0	0	0	14.5625	0	1.4648	0	0	0	0	0	0.0065
Jun	0	0	0	0	0	0	0	6.8421	0	0	0	0	0	0
Sub-total	0	0	0	0	0	299.0998	0	9.0621	0	0.2560	0	0	0	0.0130
Jul	0	0	0	0	0	0	0	0.4289	0	0	0	0	8.4000	0.0130
Aug	0	0	0	0	0	2.5775	0	10.5600	0	0	0	0	0	0
Sep	0	0	0	0	0	6.1081	0	8.4704	0	0.3530	0	0	0	0.0065
Oct	0	0	0	0	0	9.8875	0	7.1900	0	0	0	0	0	0
Nov	0	0	0	0	0	38.3088	0	19.3105	0	0	0	0	0	0.0195
Dec	0	0	0	0	0	54.3469	0	26.9807	0	0	0	0	0	0.0910
Total	0	0	0	0	0	410.3286	0	82.0026	0	0.6090	0	0	8.4000	0.1430

Notes:
(1) Broken concrete for recycling into aggregates.
(2) Plastics refer to plastic bottles/ containers, plastic sheets/ foam from packaging materials.
(3) Use the conversion factor : 1 full load of dumping truck being equivalent to 6.5m^3 by volume.

吉寶西格斯 - 振華聯營公司
Keppel Seghers - Zhen Hua Joint Venture

Monthly Summary Waste Flow Table for 2020 (year)

Project : Integrated Waste Management Facilities, Phase 1 Contract No.: EP/SP/66/12

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 (see Note 1)	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill Sand	Imported Fill Public fill	Imported Fill Rock	Metals	Paper/ cardboard packaging	Plastics (see Note 2)	Chemical Waste		Others, e.g. general refuse (see Note 3)
	(in ,000m^3)	(in ,000m^3)	(in ,000m^3)	(in ,000m^3	(in ,000m^3)	(in ,000m^3)			(in ,000 kg)	(in ,000kg)	(in ,000kg)	(in ,000kg)	(in ,000L)	(in ,000 m^3)
Jan	0	0	0	0	0	37.1550	0	25.0812	0	0	0	0	0	0.0065
Feb	0	0	0	0	0	27.7910	0	18.8300	0	0	0	0	0	0.0065
Mar	0	0	0	0	0	22.5669	0	26.1586	0	0	0	0	7.2000	0.0065
Apr	0	0	0	0	0	12.7800	0	10.1825	0	0	0	0	0	0.0195
May	0	0	0	0	0	16.1138	0	24.3740	0	0.4220	0	0	0	0.0195
Jun	0	0	0	0	0	31.5177	0	28.3030	0	0	0	0	0	0.0065
Sub-total	0	0	0	0	0	147.9244	0	132.9293	0	0.4220	0	0	7.2000	0.0650
Jul	0	0	0	0	0	34.7856	17.0606	35.1800	0	0	0	0	0	0.0195
Aug	0	0	0	0	0	27.1375	65.5667	27.9335	0	0	0	0	0	0
Sep	0	0	0	0	0	11.9813	110.1328	43.5435	0	0	0	0	0	0.0195
Oct	0	0	0	0	0	2.8213	131.6600	22.5415	0	0	0	0	0	0.0130
Nov	0	0	0	0	0	0	162.1811	44.6475	0	0.4090	0	0	0.4000	0.0130
Dec	0	0	0	0	0	0	174.9800	57.8380	0	0	0	0	0	0.0130
Total	0	0	0	0	0	224.6501	661.5812	364.6133	0	0.8310	0	0	7.6000	0.1430

Notes:
(1) Broken concrete for recycling into aggregates.
(2) Plastics refer to plastic bottles/ containers, plastic sheets/ foam from packaging materials.
(3) Use the conversion factor : 1 full load of dumping truck being equivalent to 6.5m^3 by volume.

吉寶西格斯 - 振華聯營公司
Keppel Seghers - Zhen Hua Joint Venture

Monthly Summary Waste Flow Table for 2021 (year)

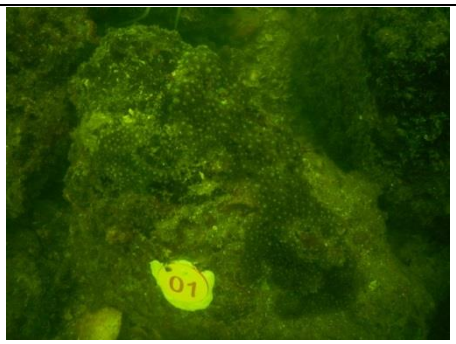
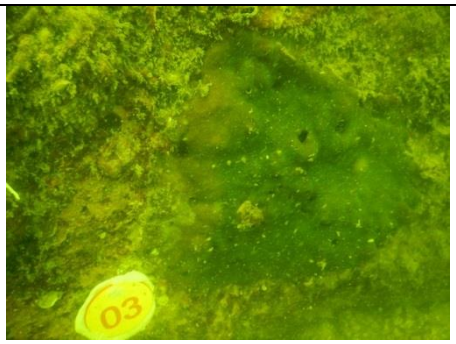
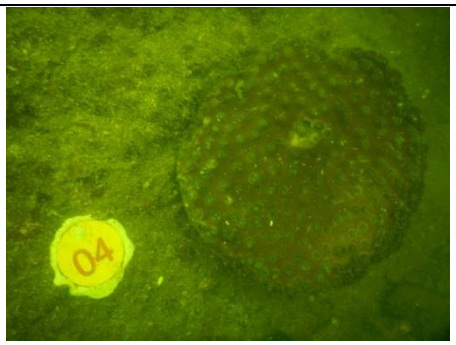
Project : Integrated Waste Management Facilities, Phase 1 Contract No.: EP/SP/66/12

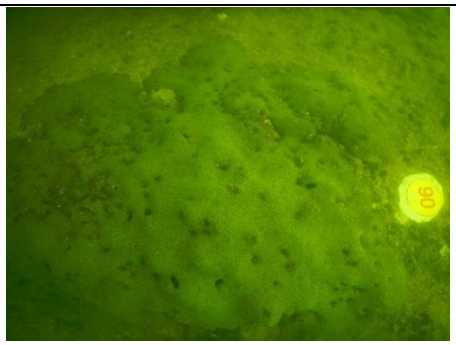
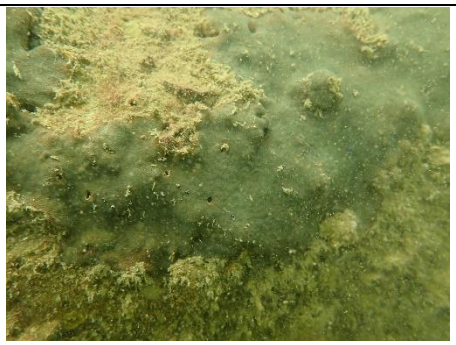
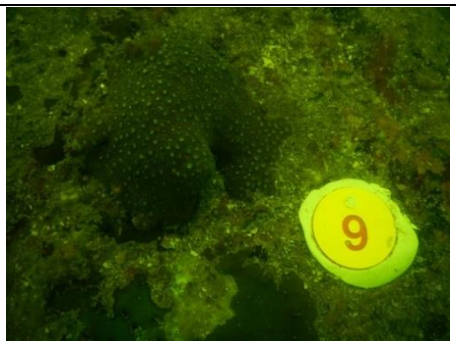
Month	Actual Quantities of Inert C&D Materials Generated Monthly								Actual Quantities of C&D Wastes Generated Monthly					
	Total Quantity Generated	Hard Rock and Large Broken Concrete (see Note 1)	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill Sand	Imported Fill Public fill	Imported Fill Rock	Metals	Paper/ cardboard packaging	Plastics (see Note 2)	Chemical Waste		Others, e.g. general refuse (see Note 3)
	(in ,000m^3)	(in ,000m^3)	(in ,000m^3)	(in ,000m^3	(in ,000m^3)	(in ,000m^3)			(in ,000 kg)	(in ,000kg)	(in ,000kg)	(in ,000kg)	(in ,000L)	(in ,000 m^3)
Jan	0	0	0	0	0	0	198.1311	36.4775	0	0	0	0	0	0.0065
Feb	0	0	0	0	0	0	143.9511	20.9960	0	0	0	0	0	0.6305
Mar	0	0	0	0	0	0	103.1833	23.4510	0	0	0	0	0	0.0130
Apr														
May														
Jun														
Sub-total	0	0	0	0	0	0	445.2655	80.9245	0	0	0	0	0	0.6500
Jul														
Aug														
Sep														
Oct														
Nov														
Dec														
Total	0	0	0	0	0	0	445.2655	80.9245	0	0	0	0	0	0.6500

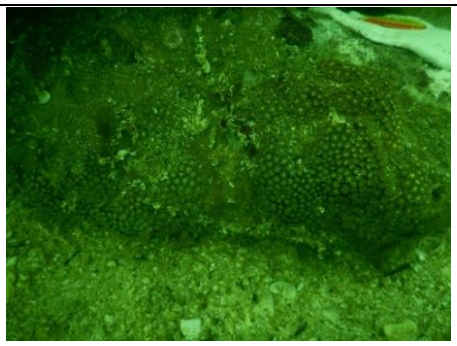
Notes:
(1) Broken concrete for recycling into aggregates.
(2) Plastics refer to plastic bottles/ containers, plastic sheets/ foam from packaging materials.
(3) Use the conversion factor : 1 full load of dumping truck being equivalent to 6.5m^3 by volume.

Appendix F Photo Records for Coral Monitoring

Photo Plate for Tagged and Re-tagged Corals at Control Site during the 9th Quarterly Coral Monitoring during Construction Phase on 25 March 2021

Tag #	Baseline (26 June 2018 & 3 December 2018)	25 March 2021
#1	 *Goniopora stutchburyi*	 *Goniopora stutchburyi*
#2R	 *Goniopora stutchburyi*	 *Goniopora stutchburyi*
#3	 *Psammocora superficialis*	 *Psammocora superficialis*
#4	 *Turbinaria peltata*	 *Turbinaria peltata*

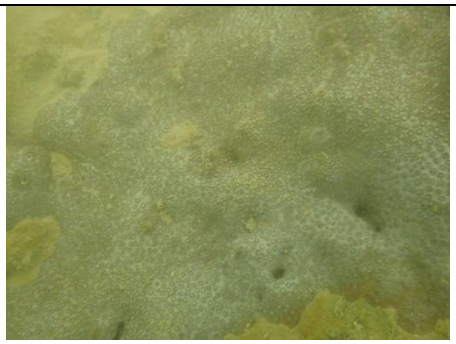
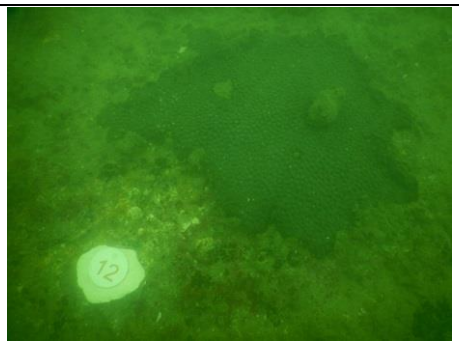
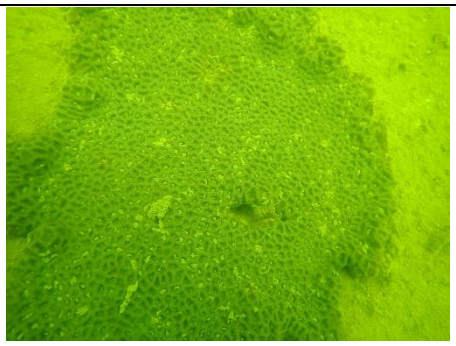
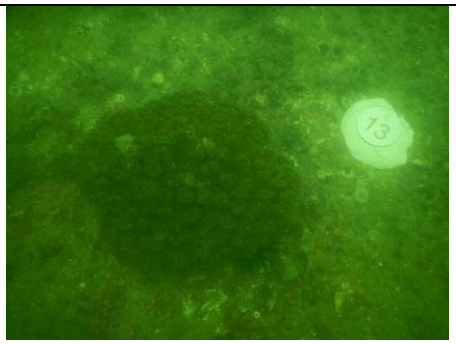
Tag #	Baseline (26 June 2018 & 3 December 2018)	25 March 2021
#5R	 *Goniopora stutchburyi*	 *Goniopora stutchburyi*
#6	 *Cyphastrea serailia*	 *Cyphastrea serailia*
#7R	 *Coscinaraea* sp.	 *Coscinaraea* sp.
#8	 *Goniopora stutchburyi*	 *Goniopora stutchburyi*
#9	 *Goniopora stutchburyi*	 *Goniopora stutchburyi*

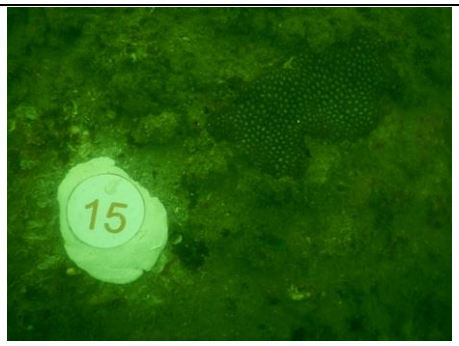
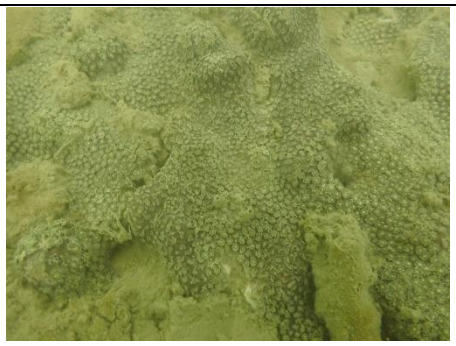
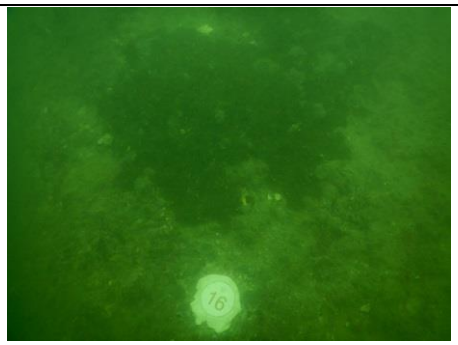
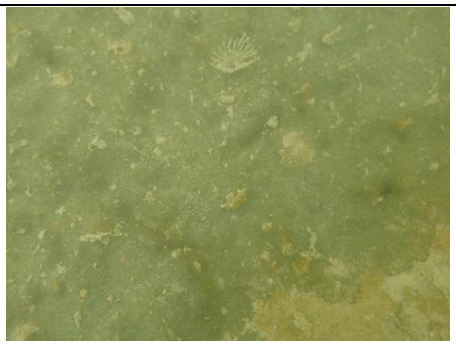
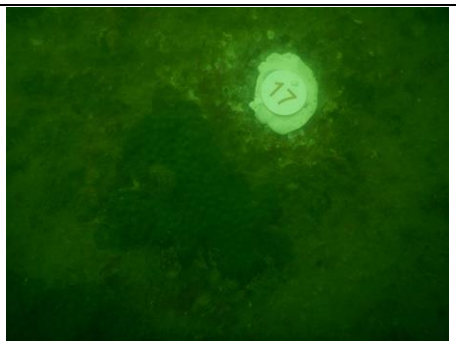
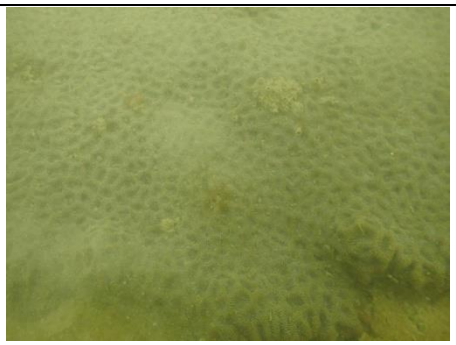
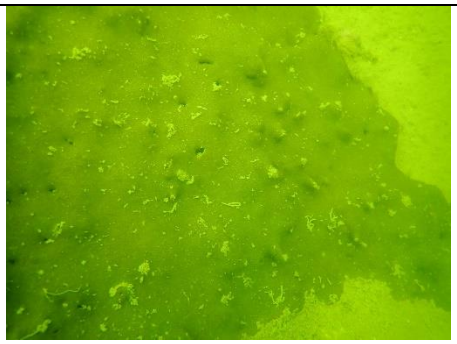
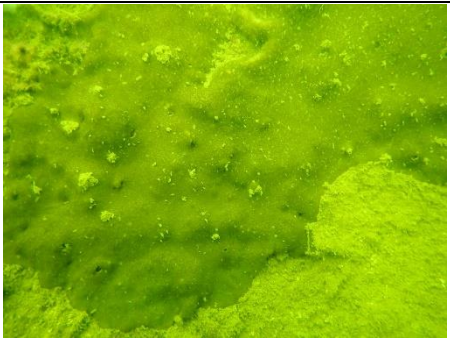
Tag #	Baseline (26 June 2018 & 3 December 2018)	25 March 2021
#10R	 *Goniopora stutchburyi*	 *Goniopora stutchburyi*

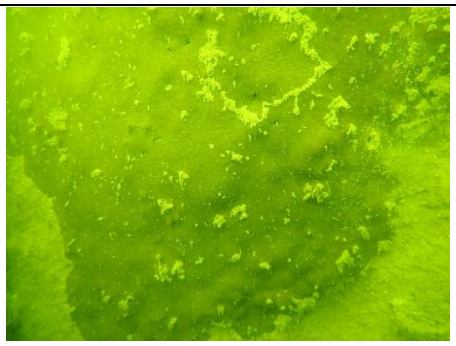
Notes:

i. The re-tagged corals were marked as ##**R**.

Photo Plate for Re-tagged Corals at Indirect Impact during the 9th Quarterly Coral Monitoring during Construction Phase on 25 March 2021

Tag #	Baseline (23 November 2018)	25 March 2021
#11R	 *Cyphastrea serailia*	 *Cyphastrea serailia*
#12R	 *Favites chinensis*	 *Favites chinensis*
#13R	 *Turbinaria peltata*	 *Turbinaria peltata*
#14R	 *Favites chinensis*	 *Favites chinensis*

Tag #	Baseline (23 November 2018)	25 March 2021
#15R	 *Goniopora stutchburyi*	 *Goniopora stutchburyi*
#16R	 *Psammocora superficialis*	 *Psammocora superficialis*
#17R	 *Favites chinensis*	 *Favites chinensis*
#18R	 *Psammocora superficialis*	 *Psammocora superficialis*
#19R	 *Psammocora superficialis*	 *Psammocora superficialis*

Tag #	Baseline (23 November 2018)	25 March 2021
#20R	 *Psammocora superficialis*	 *Psammocora superficialis*

Notes:

i. The re-tagged corals were marked as ##**R**.

Appendix G Photo Records for Marine Mammal Monitoring

Photo records of Vessel-based Line-Transect Survey Effort

Representative Photos during January 2021 Vessel-based Line-transect Survey

Representative Photos during Feburary 2021 Vessel-based Line-transect Survey

Representative Photos during March 2021 Vessel-based Line-transect Survey	
	
	

Appendix H Photo Records for White-bellied Sea Eagle Monitoring

Photo Plate for 31st Monthly WBSE monitoring

Adult WBSE recorded staying in the old nest

Adult WBSE recorded staying in the old nest

Adult WBSE flying over the nest area

Photo Plate for 32nd Monthly WBSE monitoring

Adult WBSE recorded staying in the old nest

Adult WBSE recorded staying in the old nest

Adult WBSE recorded staying in the old nest

Photo Plate for 33rd Monthly WBSE monitoring

Adult WBSE recorded staying in the old nest

Adult WBSE flying over the nest area

Appendix I Complaint Log

Statistical Summary of Environmental Complaints

Reporting Period	Environmental Complaint Statistics		
	Frequency	Cumulative	Complaint Nature
1 Jan 2021 – 31 Jan 2021	0	0	N/A
1 Feb 2021 – 28 Feb 2021	0	0	N/A
1 Mar 2021 – 31 Mar 2021	0	0	N/A

Statistical Summary of Environmental Summons

Reporting Period	Environmental Summons Statistics		
	Frequency	Cumulative	Details
1 Jan 2021 – 31 Jan 2021	0	0	N/A
1 Feb 2021 – 28 Feb 2021	0	0	N/A
1 Mar 2021 – 31 Mar 2021	0	0	N/A

Statistical Summary of Environmental Prosecution

Reporting Period	Environmental Prosecution Statistics		
	Frequency	Cumulative	Details
1 Jan 2021 – 31 Jan 2021	0	0	N/A
1 Feb 2021 – 28 Feb 2021	0	0	N/A
1 Mar 2021 – 31 Mar 2021	0	0	N/A