

Contract No. EP/SP/66/12
Integrated Waste Management Facilities, Phase 1
26th Quarterly EM&A Report






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

Quarterly EM&A Report No.26 (Period from 1 October to 31 December 2024)

(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 26th 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 October 2024 to 31 December 2024.
- 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.
- A6. As marine construction works as defined in the approved EIA report (AEIAR-163/2012) and the Updated EM&A Manual was conducted in October 2024, impact water quality monitoring and line transect monitoring were resumed in October 2024.

1. BASIC PROJECT INFORMATION

1.1. The Reporting Scope

1.1.1 This is the 26th Quarterly EM&A Report for the Project which summarizes the key findings of the EM&A programme during the reporting period from 1 October 2024 to 31 December 2024.

1.2. Project Organization

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

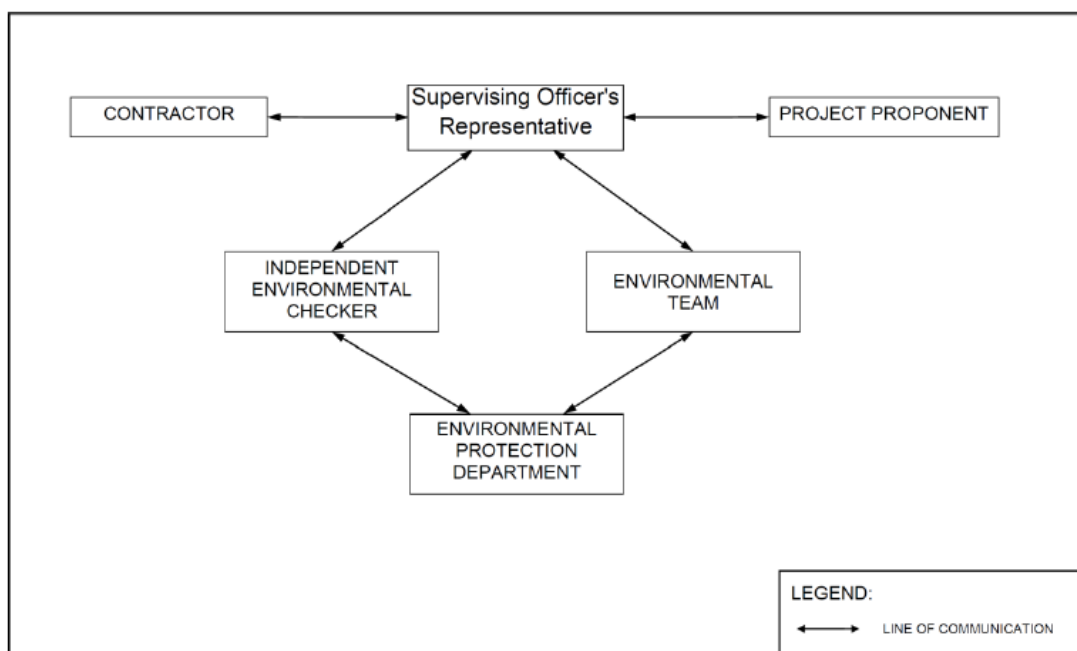


Figure 1.1 Project Organization Chart

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	Peter Chung	2192-0603
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	<ul style="list-style-type: none"> • Pile cap construction • Superstructure construction 	<ul style="list-style-type: none"> • On-going • On-going
Seawall portion	<ul style="list-style-type: none"> • Caisson extension works, from +3mPD to +6mPD, at Seawall A and B • Construction of wave wall along the vertical seawall above +3mPD 	<ul style="list-style-type: none"> • 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	As marine construction works as defined in the approved EIA report (AEIAR-163/2012) and the Updated EM&A Manual was conducted in October 2024, impact water quality monitoring was resumed in October 2024.
Regular DCM Monitoring	All DCM was completed on 14 October 2020, regular DCM monitoring for further 4 weeks (i.e from 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
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	
Vessel-based Line-transect Survey Baseline Monitoring	The baseline marine mammal monitoring result has been reported in Baseline Monitoring Report and submitted to EPD under FEP Condition 3.4
Vessel-based Line-transect Survey Impact Monitoring	As marine construction works as defined in the approved EIA report (AEIAR-163/2012) and the Updated EM&A Manual

Parameters	Status
	was conducted in October 2024, line-transect monitoring was resumed in October 2024.
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 at 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)	Installation of caisson No.19 was completed on 18 March 2021, which the reclamation area had been totally enclosed by permanent structure. Floating type silt curtain at marine access was removed on 18 March 2021. No enclosed area shall be formed by deployment of silt curtain for the remaining works programme.
Mitigation Measures in Detailed Monitoring Programme on Finless Porpoise (DMPFP)	Installation of caisson No.19 was completed on 18 March 2021, which the reclamation area had been totally enclosed by permanent structure. Floating type silt curtain at marine access was removed on 18 March 2021. No enclosed area shall be formed by deployment of silt curtain for the remaining works programme.
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
<ul style="list-style-type: none"> • Water Depth(m) • Temperature(°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 (i.e. B1-B4, H1, C1A, C2A, F1A, CR1, CR2 and M1) during general water quality monitoring as shown in **Figure 2.1**.

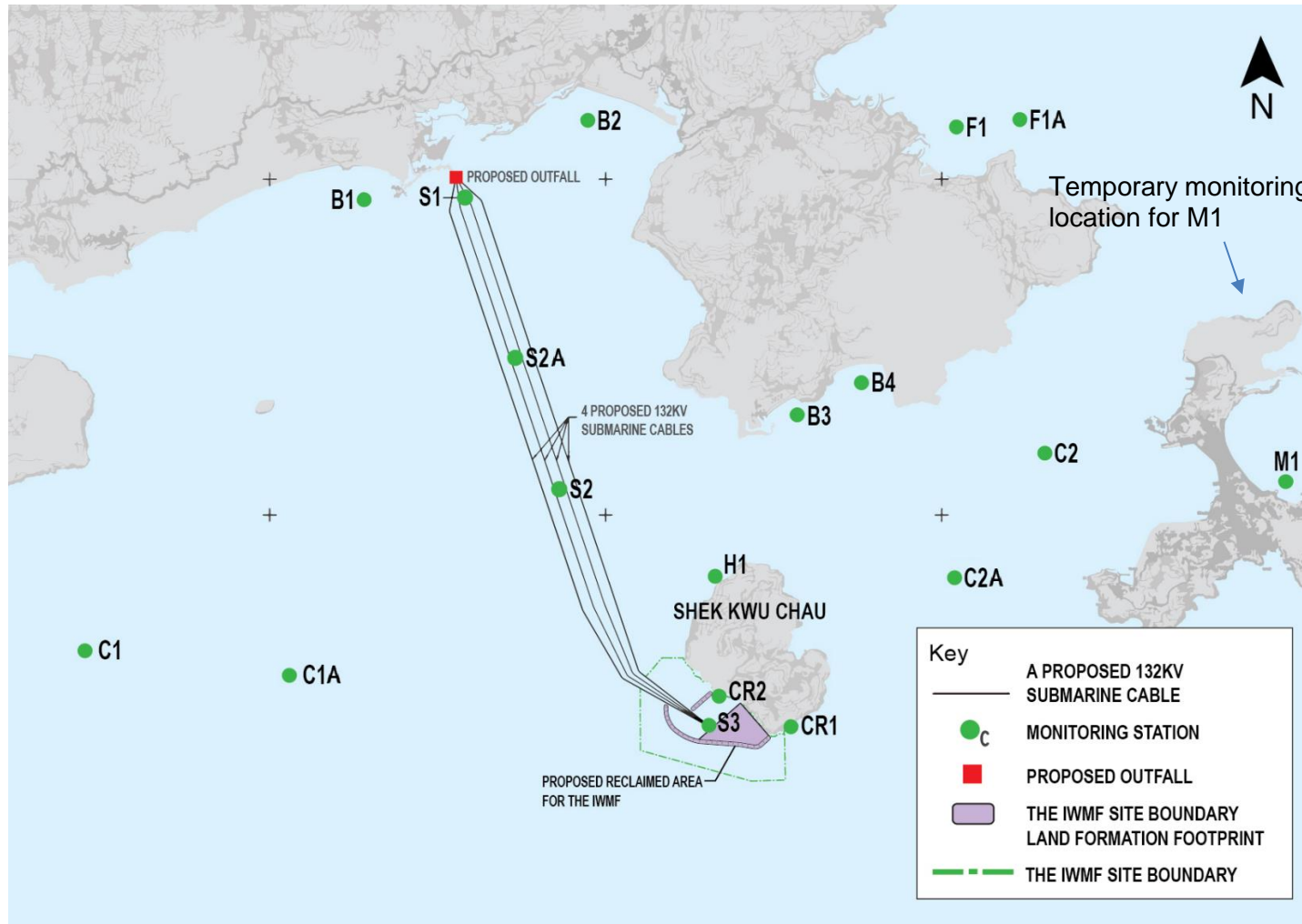


Figure 2.1 Water monitoring locations at Artificial Island near SKC

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, no water quality monitoring was conducted at S1, S2A and S3 from 14 November 2020 onward. As marine construction works as defined in the approved EIA report (AEIAR-163/2012) and the Updated EM&A Manual was conducted in October 2024, impact water quality monitoring was resumed in October 2024.

2.4.2 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														
		Oct	Nov	Dec	Oct	Nov	Dec	Oct	Nov	Dec	Oct	Nov	Dec	Oct	Nov	Dec	Oct	Nov	Dec	Oct	Nov	Dec
B1	Avg.	32.49	32.54	31.73	8.29	8.55	8.48	8.30	8.57	8.49	8.23	8.23	8.20	3.5	3.5	3.2	6.97	7.00	3.44	28.1	25.9	22.8
	Min.	31.04	31.28	30.75	7.20	7.57	7.59	7.26	7.63	7.56	8.06	8.06	8.04	2.4	2.2	2.1	2.70	2.00	<1.00	27.3	24.8	21.0
	Max.	35.40	33.49	33.07	9.95	9.36	9.40	9.91	9.43	9.47	8.43	8.37	8.36	4.7	4.9	4.2	14.40	16.00	8.20	28.8	26.6	24.5
B2	Avg.	32.36	32.40	31.94	8.40	8.46	8.42	8.42	8.46	8.42	8.25	8.21	8.19	3.6	3.5	3.3	7.00	6.86	3.34	28.1	25.8	22.9
	Min.	30.53	31.34	30.66	7.36	7.58	7.71	7.34	7.58	7.68	8.06	8.07	8.01	2.2	2.0	2.0	2.90	2.00	<1.00	27.1	24.8	21.0
	Max.	34.90	33.53	33.14	9.24	9.25	9.26	9.55	9.32	9.24	8.50	8.37	8.40	4.8	5.0	4.4	14.50	17.40	8.20	28.8	26.6	24.4
B3	Avg.	32.57	32.45	31.82	8.33	8.47	8.53	8.33	8.47	8.52	8.23	8.20	8.21	3.6	3.5	3.3	7.09	7.01	3.38	28.1	25.8	22.9
	Min.	30.70	31.13	30.77	7.33	7.53	7.88	7.32	7.50	7.88	8.04	8.01	8.06	2.4	2.1	2.2	3.00	2.20	<1.00	27.2	24.9	21.0
	Max.	34.55	33.64	33.38	10.25	9.25	9.29	10.26	9.28	9.30	8.40	8.39	8.39	4.6	4.9	4.1	13.40	16.80	6.90	29.0	26.5	24.3
B4	Avg.	32.37	32.32	32.11	8.45	8.70	8.39	8.45	8.70	8.39	8.24	8.22	8.18	3.4	3.4	3.2	6.73	6.88	3.66	28.1	25.8	22.9
	Min.	30.29	31.09	31.17	7.42	7.48	7.41	7.46	7.49	7.35	8.05	8.06	8.00	2.0	1.8	2.1	2.30	1.90	<1.00	27.4	24.9	21.1
	Max.	34.49	33.85	33.19	9.76	9.58	9.39	9.85	9.57	9.36	8.41	8.36	8.35	4.5	5.5	4.6	15.30	12.80	7.70	28.9	26.5	24.4
C1A	Avg.	32.30	32.55	31.82	8.35	8.29	8.63	8.34	8.29	8.64	8.22	8.22	8.20	4.5	4.1	4.0	7.01	6.70	3.41	28.1	25.8	22.9
	Min.	30.50	30.83	30.66	7.41	7.26	8.02	7.35	7.31	8.01	8.06	8.02	8.04	2.9	2.9	2.7	2.00	1.00	<1.00	27.2	24.9	21.1
	Max.	35.04	34.03	33.18	9.79	9.33	9.59	9.83	9.33	9.57	8.40	8.40	8.37	7.4	8.1	5.1	15.00	17.90	8.60	28.8	26.7	24.4
C2A	Avg.	32.19	32.33	32.00	8.16	8.57	8.45	8.17	8.56	8.45	8.24	8.21	8.20	4.4	4.1	4.0	7.06	6.63	3.58	28.1	25.8	22.9
	Min.	30.92	31.22	30.67	7.28	7.49	7.68	7.32	7.44	7.74	8.05	8.03	8.04	2.8	2.7	2.6	2.40	1.00	<1.00	27.3	25.1	21.0
	Max.	34.66	33.33	33.12	9.16	10.10	9.26	9.11	10.07	9.23	8.44	8.37	8.38	7.6	5.8	5.0	15.70	16.60	10.50	28.9	26.4	24.3
CR1	Avg.	32.32	32.44	31.81	8.30	8.50	8.53	8.28	8.50	8.52	8.21	8.22	8.21	3.6	3.5	3.2	6.51	7.05	3.35	28.0	25.8	22.9
	Min.	30.37	30.96	30.33	7.31	7.37	7.82	7.21	7.37	7.85	8.04	8.02	8.03	2.3	2.2	2.0	2.40	1.40	<1.00	27.2	25.1	21.1
	Max.	33.94	33.59	32.90	9.17	9.39	9.56	9.18	9.43	9.52	8.53	8.41	8.36	6.5	5.2	4.4	14.10	17.60	11.10	28.7	26.3	24.2
CR2	Avg.	32.29	32.35	31.77	8.24	8.52	8.64	8.25	8.52	8.64	8.23	8.20	8.21	3.7	3.3	3.3	6.53	7.02	3.30	28.1	25.8	22.9
	Min.	30.45	30.75	30.85	7.17	7.33	7.73	7.17	7.32	7.75	8.03	8.02	8.08	1.8	1.9	2.3	2.20	1.80	<1.00	27.1	24.9	20.9
	Max.	34.87	33.95	32.80	9.62	10.01	9.63	9.51	10.11	9.58	8.39	8.38	8.38	6.0	5.1	4.6	14.50	17.50	7.90	29.0	26.6	24.3
	Avg.	32.23	32.55	32.04	8.29	8.39	8.44	8.29	8.39	8.45	8.26	8.24	8.21	3.4	3.4	3.2	7.10	7.08	3.52	28.1	25.8	22.9

Locations		Parameters																				
		Salinity (ppt)			Dissolved Oxygen (mg/L)						pH			Turbidity (NTU)			Suspended Solids (mg/L)			Temp. (°C)		
					Surface & Middle			Bottom														
		Oct	Nov	Dec	Oct	Nov	Dec	Oct	Nov	Dec	Oct	Nov	Dec	Oct	Nov	Dec	Oct	Nov	Dec	Oct	Nov	Dec
F1A	Min.	30.92	30.47	30.79	7.17	7.59	7.55	7.23	7.58	7.54	8.09	8.09	8.06	2.1	1.9	2.3	2.80	1.30	<1.00	27.2	25.1	21.3
	Max.	34.06	34.04	33.17	9.80	9.56	9.69	9.78	9.56	9.71	8.47	8.40	8.34	5.0	4.6	4.3	15.00	16.50	7.60	28.8	26.6	24.4
H1	Avg.	32.27	32.33	32.06	8.35	8.56	8.43	8.35	8.56	8.42	8.24	8.23	8.22	3.5	3.4	3.3	6.72	6.64	3.33	28.0	25.9	22.8
	Min.	30.61	31.02	31.00	7.49	7.48	7.43	7.49	7.47	7.47	8.07	7.97	8.09	2.2	2.3	2.5	2.80	1.00	<1.00	27.2	25.0	21.1
	Max.	34.56	34.16	32.97	9.44	9.58	9.21	9.40	9.57	9.15	8.51	8.39	8.37	4.8	4.7	4.2	14.30	18.60	7.80	28.6	26.5	24.4
M1	Avg.	32.31	32.63	31.78	8.31	8.44	8.48	8.31	8.43	8.47	8.24	8.20	8.24	3.6	3.4	3.3	6.51	6.81	3.21	28.0	25.8	22.9
	Min.	31.05	30.89	30.70	7.27	7.36	7.64	7.27	7.37	7.58	8.10	8.02	8.03	2.1	2.1	2.3	1.70	2.00	<1.00	27.4	25.0	21.0
	Max.	34.47	33.71	33.01	9.58	9.55	9.34	9.54	9.48	9.33	8.45	8.39	8.39	6.3	5.7	4.3	14.20	16.50	8.30	28.7	26.6	24.2

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.

- 2.4.3 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**.
- 2.4.4 No major pollution source and extreme weather which might affect the results were observed during the impact monitoring.
- 2.4.5 The impact water quality monitoring scheduled on 13 November 2024 during mid-flood period was cancelled due to adverse weather (Strong wind signal No.3).
- 2.4.6 During the general water quality monitoring period for October to December 2024, eight (8) of general water quality monitoring results of SS obtained during the reporting period had exceeded the Action Level and two (2) of general water quality monitoring results of SS obtained during the reporting period had exceeded the Limit Level. Investigations were carried out for each exceedance during the reporting period.
- 2.4.7 Details of the exceedance are presented in **Section 8**.
- 2.4.8 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 and 1900 hours on normal weekdays. Additional impact noise monitoring was conducted weekly in the reporting period between 1900 and 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**

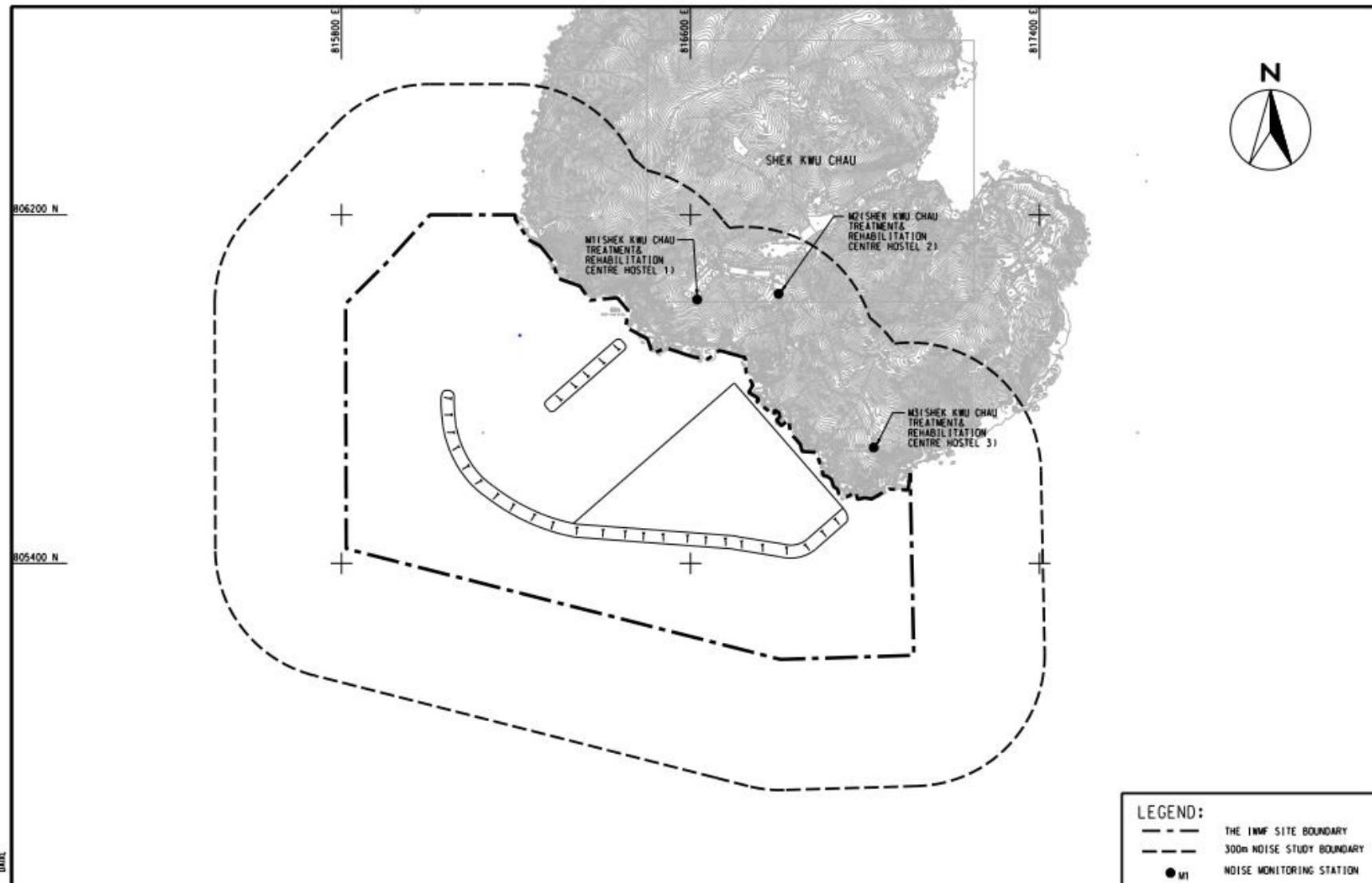


Figure 3.1 Noise monitoring locations at SKC

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 station in the reporting quarter are summarised in **Table 3.4**. Sound from the intermittent piling work was the noticeable noise source for monitoring stations M1, M2 and M3. Air conditioning units were also observed at station M3 during the impact monitoring.

Table 3.4 Summary of Field Observation

Monitoring Station	Major Noise Source
M1	NA
M2	NA
M3	Operation of nearby Air Quality Monitoring Station

- 3.4.4 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}		
	Oct	Nov	Dec	Oct	Nov	Dec	Oct	Nov	Dec
M1	55.5 – 56.7	54.4 – 59.5	56.5 – 60.5	56.9 – 58.1	56.4 – 61.0	58.6 – 60.6	53.7 – 55.0	52.6 – 57.9	53.6 – 57.2
M2	53.5 – 59.5	53.5 – 55.6	52.6 – 59.1	54.7 – 63.1	54.6 – 56.6	54.3 – 60.2	52.0 – 53.1	51.8 – 52.9	49.7 – 50.0
M3	57.0 – 58.5	56.0 – 58.2	53.9 – 57.8	58.1 – 60.0	57.0 – 58.7	56.0 – 58.7	54.9 – 55.9	54.9 – 57.6	50.7 – 56.9

- 3.4.5 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).
- 3.4.6 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.
- 3.4.7 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 $L_{90\ 5min}$		
	Oct	Nov	Dec	Oct	Nov	Dec	Oct	Nov	Dec
M1	45.8 – 54.9	44.1 – 60.3	43.5 – 60.5	47.6 – 57.1	44.8 – 61.9	45.3 – 61.4	44.6 – 50.1	43.4 – 58.7	42.3 – 59.5
M2	48.7 – 56.2	48.3 – 59.4	44.4 – 52.5	49.0 – 58.5	49.0 – 61.5	48.6 – 53.6	48.4 – 51.1	47.7 – 55.1	41.2 – 47.3
M3	41.8 – 57.7	48.0 – 56.1	42.4 – 56.2	42.4 – 57.9	50.4 – 57.6	42.9 – 56.3	41.1 – 57.6	45.0 – 51.1	41.9 – 55.8

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 $L_{90\ 5min}$		
	Oct	Nov	Dec	Oct	Nov	Dec	Oct	Nov	Dec
M1	45.6 – 55.6	45.4 – 59.4	46.7 – 56.0	49.0 – 59.1	47.3 – 60.2	47.1 – 57.2	42.9 – 44.2	43.3 – 58.3	46.3 – 51.9
M2	46.5 – 58.1	42.8 – 51.1	38.3 – 54.3	48.5 – 60.1	43.9 – 53.4	39.0 – 57.2	44.8 – 54.8	41.4 – 48.0	37.6 – 49.6
M3	43.6 – 54.9	44.6 – 56.9	42.6 – 55.9	44.2 – 56.3	45.9 – 60.9	43.2 – 56.2	43.0 – 52.3	43.3 – 46.5	42.1 – 55.6

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, 3.3 m³ of C&D materials were generated on site in the reporting period, 3.3 m³ of the materials were disposed as public fill. For C&D waste, no metal was generated and collected by registered recycling collector. 781 kg paper was collected by the registered recycling collector. No plastic waste was collected by registered recycling collector. No chemical waste was collected by the licensed chemical waste collector. 2,775.5 m³ of other types of wastes (e.g. general refuse) was disposed of at designated landfill. No fill sand or public fill was imported during the reporting period. No fill rock was imported during the reporting period.
- 4.3 Chemical waste generated from land-based construction activities was stored in the chemical waste cabinet for temporary storage.
- 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 The Contractor is advised 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 Period	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 ,000kg)	(in ,000L)	
(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)	
Oct 2024	0	0	0	0	0	0	0	0	0	0.2860	0	0	0	0.8775
Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0	0	0.7995
Dec 2024	0.0033	0	0	0	0.0033	0	0	0	0	0.4950	0	0	0	1.0985

Notes:

1. Broken concrete for recycling into aggregates.
2. Plastic refers 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 m³ by volume.
4. Use the conversion factor: rock density = 2 T/m³.

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:

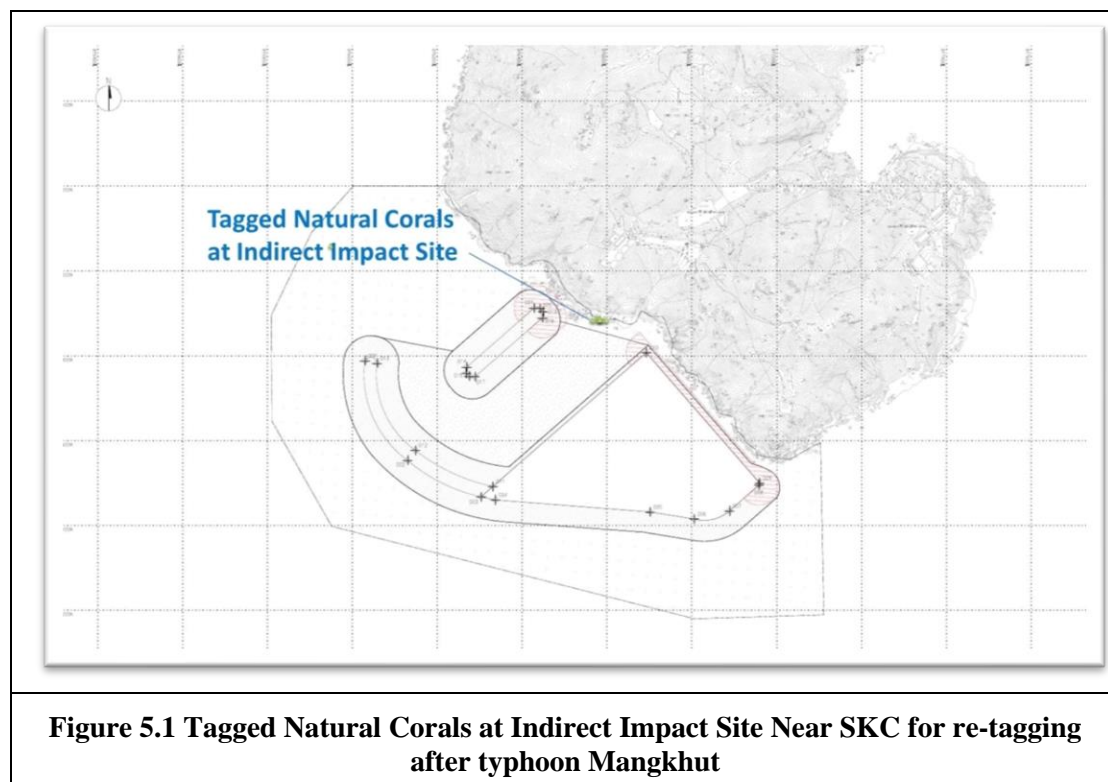




Figure 5.2 Tagged Natural Corals at Control Site Near Yuen Kong Chau for re-tagging after typhoon Mangkhut



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 24th quarterly coral monitoring during construction phase at both Indirect Impact Site and Control Site was conducted on 18 December 2024 and the weather condition was summarized in **Table 5.6**.

Table 5.6 Weather Condition for the 24th Quarterly Coral Monitoring during Construction Phase at both Indirect Impact Site and Control Site

Date	Condition	Average Underwater Visibility
18 December 2024	- Southwest wind force 5 - Sunny	- Less than 20 cm

Table 5.7 Sizes, Condition, Mortality, Bleaching and Sediment of 10 Natural Coral Colonies at Control Site of 24th Quarterly Coral Monitoring (18 December 2024) during 76th to 78th Monthly Construction Phase Monitoring

Coral #	Species	Size (cm) – Max. Diameter	Condition	Mortality (%)		Bleaching (%)		Sediment (%)	
				Baseline (26 Jun 2018 & 3 Dec 2018)	18 Dec 2024	Baseline (26 Jun 2018 & 3 Dec 2018)	18 Dec 2024	Baseline (26 Jun 2018 & 3 Dec 2018)	18 Dec 2024
1	<i>Goniopora stutchburyi</i>	25	Good	0	0	0	0	0	0
2R	<i>Goniopora stutchburyi</i>	10	Good	0	0	0	0	0	0
3	<i>Psammocora superficialis</i>	18	Good	0	0	0	0	0	0
4	<i>Turbinaria peltata</i>	13	Good	0	0	0	0	0	0
5R	<i>Goniopora stutchburyi</i>	18	Good	0	0	0	0	0	0
6	<i>Cyphastrea serailia</i>	43	Good	0	0	0	0	0	0
7R	<i>Coscinaraea</i> sp.	15	Good	0	0	0	0	0	0
8	<i>Goniopora stutchburyi</i>	21	Good	0	0	0	0	0	0
9	<i>Goniopora stutchburyi</i>	11	Good	0	0	0	0	0	0
10R	<i>Goniopora stutchburyi</i>	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 24th Quarterly Coral Monitoring (18 December 2024) during 76th to 78th Monthly Construction Phase Monitoring

Coral #	Species	Size (cm) – Max. Diameter	Condition	Mortality (%)		Bleaching (%)		Sediment (%)	
				Baseline (23 Nov 2018)	18 Dec 2024	Baseline (23 Nov 2018)	18 Dec 2024	Baseline (23 Nov 2018)	18 Dec 2024
11R	<i>Cyphastrea serailia</i>	48	Good	0	0	0	0	0	0
12R	<i>Favites chinensis</i>	27	Good	0	0	0	0	0	0
13R	<i>Turbinaria peltata</i>	21	Good	0	0	0	0	0	0
14R	<i>Favites chinensis</i>	8	Good	0	0	0	0	0	0
15R	<i>Goniopora stutchburyi</i>	11	Good	0	0	0	0	0	0
16R	<i>Psammocora superficialis</i>	27	Good	0	0	0	0	0	0
17R	<i>Favites chinensis</i>	15	Good	0	0	0	0	0	0
18R	<i>Psammocora superficialis</i>	39	Good	0	0	0	0	0	0
19R	<i>Psammocora superficialis</i>	42	Good	0	0	0	0	0	0
20R	<i>Psammocora superficialis</i>	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 in 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 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 December 2024.
- 5.4.4 No sediment, bleaching or increased mortality in the general condition of coral colonies were observed during the 24th 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.

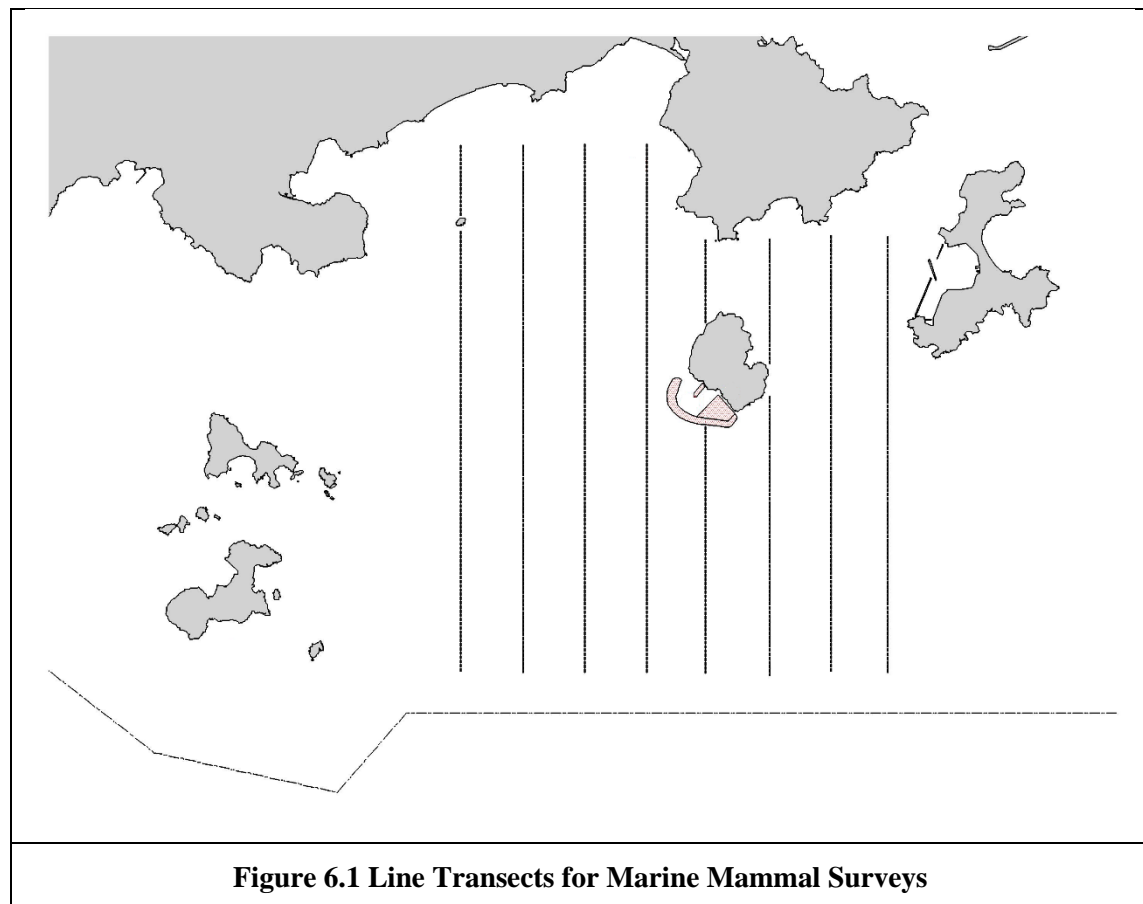
6. MARINE MAMMAL

6.1 Survey Methods

6.1.1 Vessel-based Line-transect Survey

6.1.1.1 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.

6.1.1.2 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:

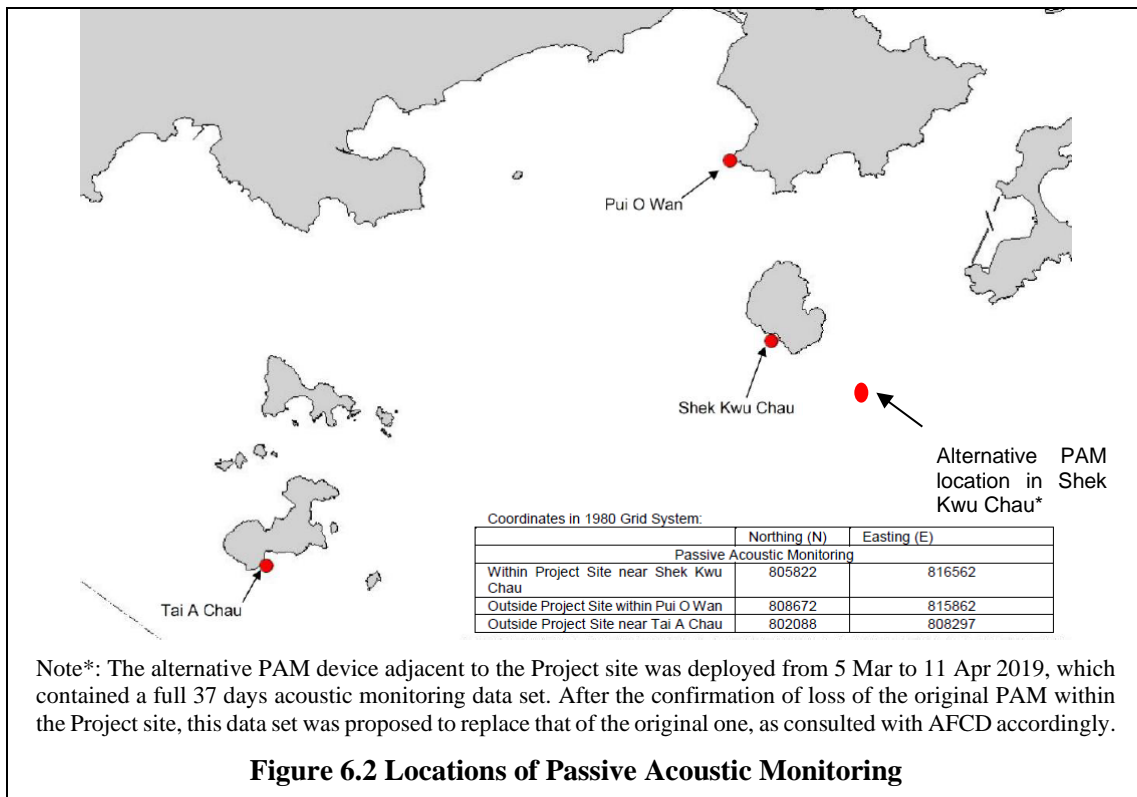


6.1.1.3 In comparison to the baseline monitoring results, results from the analyzed construction phase monitoring data would allow the detection of any changes of their usage of habitat, in response to the scheduled construction works.

6.1.2 Passive Acoustic Monitoring (PAM)

6.1.2.1 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.



6.1.2.2 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

6.1.2.3 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.

6.1.2.4 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

6.1.3.1 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: 22°11.47' N and 113°59.33' 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.

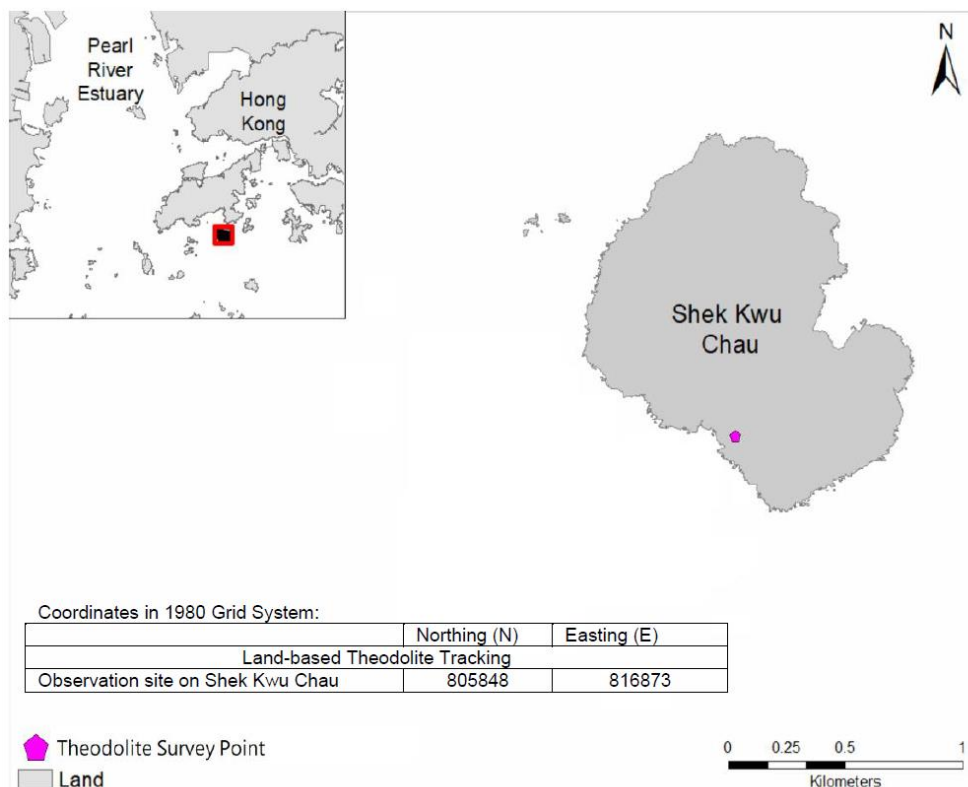


Figure 6.3 Locations of Land-based Theodolite Tracking

6.1.3.2 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

6.1.3.3 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

6.2.1.1 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

6.2.2.1 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

Four monthly surveys were conducted during the reporting period. As this is covering designated peak season (December – May) and non-peak season (June-November), two surveys were completed in October 2024 and November 2024 (non-peak season) while two surveys were completed in December 2024 (designated peak season) respectively. A total on effort (transects only) survey length of 161.9 km was completed, 76.8 km at Beaufort Sea State 2 or better (**Table 6.3**). Five (5) on-effort finless porpoise sightings were recorded and three (3) opportunistic finless porpoise sightings were recorded and confirmed by qualified ecologist (**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**
28 Oct 2024	SEL	1	5.6	AUTUMN	SEAMAR HK	P
		2	22.5			
		3	7.6			
		4	4			
28 Nov 2024	SEL	2	2.1	AUTUMN	SEAMAR HK	P
		3	7.1			
		4	31.1			
2 Dec 2024	SEL	1	26.4	WINTER	SEAMAR HK	P
		2	14.5			
4 Dec 2024	SEL	2	5.7	WINTER	SEAMAR HK	P
		3	11.2			
		4	24.1			

* 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 October 2024 to December 2024 of Vessel-based Line-transect Survey Effort

Date	Species	Sighting No.	Time	Group Size	PSD	Behaviour	Lat.	Long.	Area	Season
28 Oct 2024	Finless Porpoise	155	11:09	4	25	Travelling	22.17548	113.9837	SEL	AUTUMN
28 Oct 2024	Finless Porpoise	156	11:25	4	NA	Other	22.18519	113.9825	SEL	AUTUMN
28 Oct 2024	Finless Porpoise	157	12:09	1	5	Travelling	22.18427	113.9739	SEL	AUTUMN
28 Oct 2024	Finless Porpoise	158	13:10	3	NA	Unknown	22.16535	113.9514	SEL	AUTUMN
28 Oct 2024	Finless Porpoise	159	13:23	1	66	Travelling	22.18912	113.9439	SEL	AUTUMN
2 Dec 2024	Finless Porpoise	160	12:47	6	NA	SA	22.17776	113.9442	SEL	WINTER
4 Dec 2024	Finless Porpoise	161	10:27	1	65	Unknown	22.17624	113.9441	SEL	WINTER
4 Dec 2024	Finless Porpoise	162	13:22	2	122	Travelling	22.17983	114.0023	SEL	WINTER

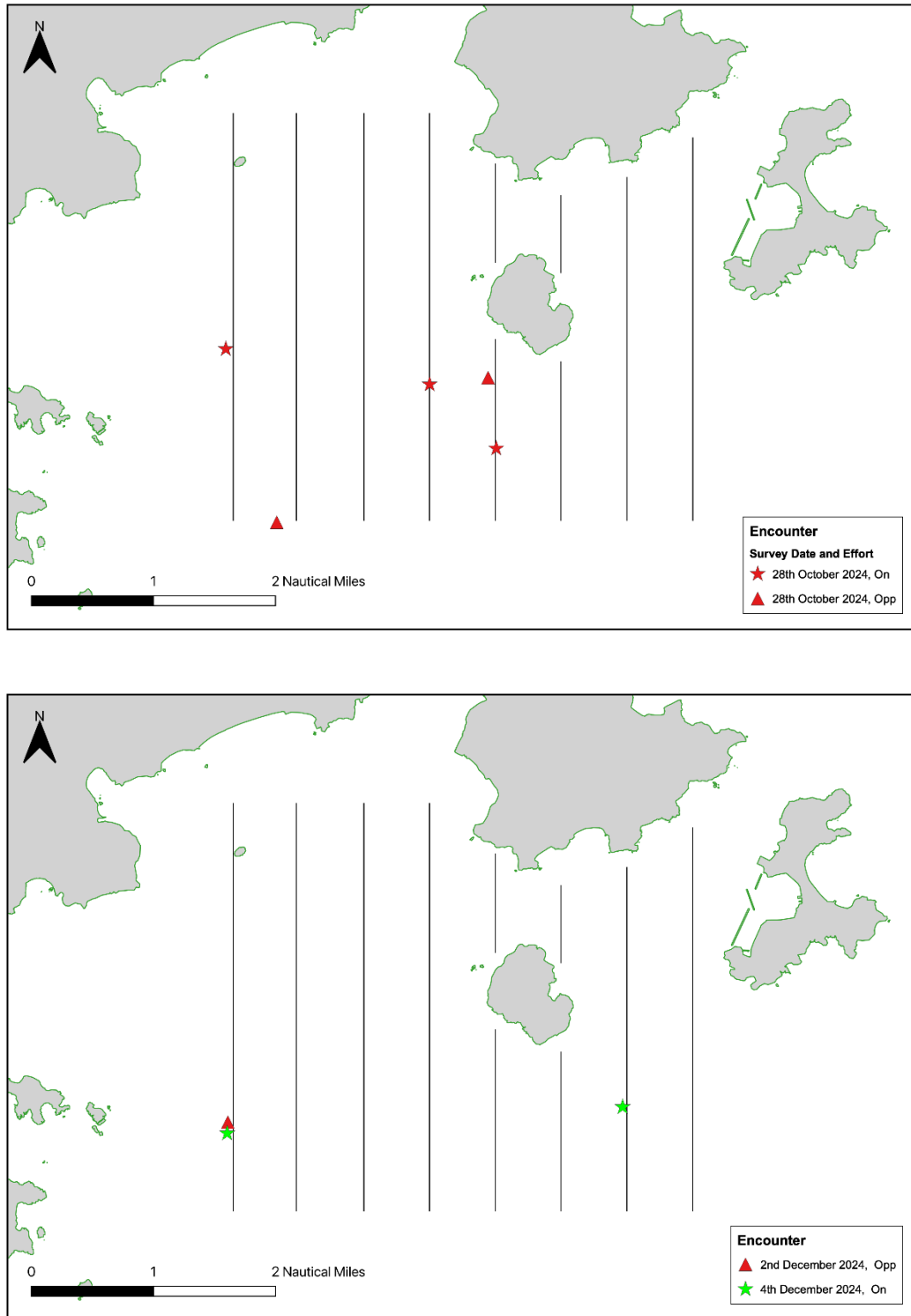


Figure 6.4 Location of sightings recorded during October 2024 to December 2024 Vessel-based Line-transect Survey

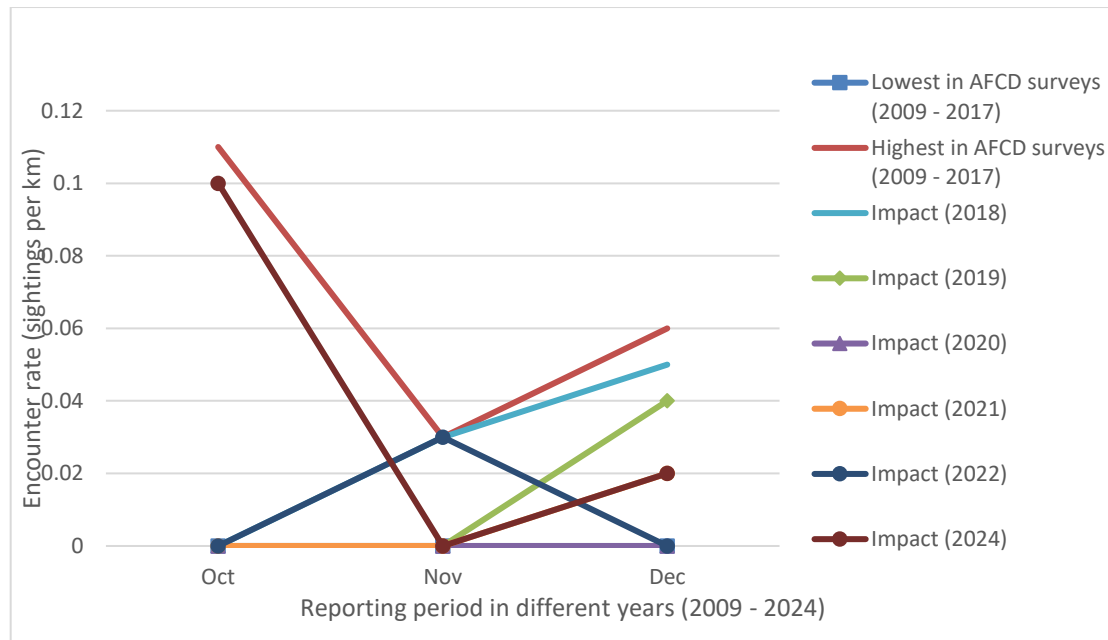


Figure 6.5 Plot of encounter rate during October to December in 2009 – 2024 from different surveys

- 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 and 2020 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 2017 (only data available from AFCD at time of writing; (AFCD 2018; 2017; 2016; 2015; 2014; 2013; 2012; 2011; 2010)) shows that the survey conditions in October 2024 were better than average for previous surveys conducted by the AFCD while the survey conditions in November 2024 and December 2024 were below the average of previous surveys conducted by the AFCD.
- 6.3.1.3 A review of all the porpoise sightings in the survey area for October to December between 2009-2017 indicates that there are fluctuations between the number of sightings usually recorded in November and December. Given the similar survey conditions and the encounter rate recorded for porpoise in the project area during the reporting period, the encounter rate in effort for October was 0.1 km^{-1} , 0 km^{-1} was recorded in November while 0.02 km^{-1} was recorded in December (see **Figure 6.5**), it is noted that the encounter rate of impact survey was high in October when compared to other years and other survey types. The 0 encounter rate was not unusual in November as the sighting number did normally increase in November before the commencement of peak season. For December 2024, $0.02 \text{ sighting km}^{-1}$ was within the bounds of encounter rates noted for the long term marine mammal monitoring programme prior to construction commencement.
- 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 from 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.

6.3.1.5 Photo records of the line-transect survey during the reporting period are presented in **Appendix G**.

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 6.5**).

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 6.5 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, 34 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 IWWMF construction site. These comprised fishing boats (236), speed boats (29), container boats (155), government boats (22), high speed ferries (53), others (13) and IWWMF-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.

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 Two adult WBSEs were recorded near Shek Kwu Chau area in October, November and December 2024. No abnormal behaviours of the adults were recorded during October, November and December 2024 construction phase monitoring. All construction works during the monitoring period did not show any impact to the WBSE. As incubation activity was recorded during the monitoring survey on 18 December 2024, the weekly monitoring was commenced since 18 December 2024.

7.2.2 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 (°C)
28 October 2024	- Northeast wind force 4 to 5 - Sunny	29
21 November 2024	- Northeast wind force 4 to 5 - Sunny	29
18 December 2024	- Northeast wind force 3 to 4 - Sunny	22
24 December 2024	- Northeast wind force 4 to 5 - Sunny	21

7.2.3 The juvenile recorded in 2022 and 2023 has not been observed since monitoring event in September 2022 and September 2023 respectively, it is suggested that the juvenile left the nest at SKC and nesting in other area outside our monitoring boundary.

7.2.4 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

- 7.2.5 No invasion of other fauna species was recorded and no sign of using the construction site as a foraging ground was recorded as well.
- 7.2.6 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 October to December 2024, eight (8) of general water quality monitoring results of SS obtained during the reporting period had exceeded the Action Level and two (2) of general water quality monitoring results of SS obtained during the reporting period had exceeded the Limit Level. Investigations were carried out for each exceedance during the reporting period.
- 8.3 No environmental complaint was received in the reporting period.
- 8.4 No notification of summon or prosecution was received since commencement of the Contract.
- 8.5 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 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 during the reporting period. Portions 1, 1A & 1B were the sites near SKC within the Site boundary.
- 9.2 Joint site inspection with IEC was carried out on 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/ chemical waste spillage were not carried out properly;
 - Chemical was not stored properly at designated storage place;
 - Chemical label was not displayed properly;
 - Prevention actions for site runoff and overflow at wastewater collection point were not carried out properly;
 - General waste was not stored inside the enclosed rubbish bin and housekeeping was not maintained;
 - C&D waste and construction waste was not separately stored;
 - Regular cleaning for temporary drainage was not carried out properly; and
 - NRMM label was not properly displayed on machinery.
- 9.4 The Contractor had rectified all 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 26th Quarterly Environmental Monitoring and Audit (EM&A) Report summarizes the EM&A works undertaken during the period from 1 October 2024 to 31 December 2024 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 month, the Contractor was reminded to pay attention on proper measure for preventing site runoff and overflow at wastewater collection point, proper storage of chemicals, proper storage of general waste, the maintenance of deployed geotextile and proper labelling to chemicals in-use.
- 10.5 No environmental complaint was received in the reporting period.
- 10.6 No notification of summon or prosecution was received since commencement of the Contract.
- 10.7 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	Remaining Duration	Activity % Complete	Current Start	Current Finish	Late Start	Late Finish	Total Float	M&B1 Remarks	2024					
											Aug 81	Sep 82	Oct 83	Nov 84		
Programme for Design and Construction Works WP7A-M81 - 3-Month																
Key Dates																
Contractual Key Dates																
01-1015(3)(M12)	Original Date of Substantial Completion of the Works	0	0	0%	31-Aug-24*	31-Aug-24*	27-Jul-24	27-Jul-24	-34		◆	Original Date of Substantial Completion of the Works				
01-1020(7A)	Extension of Time (EOT) Granted (in working days)	317	288	9.15%	28-Jul-24 A	21-Aug-25	30-Aug-24	21-Aug-25	0							
Dates of Site Possession																
01-1170	Possession of Portion 4 (EC No. 040)	0	0	0%	31-Aug-24	31-Aug-24	10-Mar-25	17-Sep-26	748		◆	Possession of Portion 4 (EC No. 040)				
01-1190	Possession of Portion 6	0	0	0%	20-Oct-24*	31-Aug-24	10-Mar-25	17-Sep-26	141		◆	Possession of Portion 6				
License/Permit Applications																
License Application for Brine Discharge																
03-3960(7)	Review by EPD	28	6	80%	15-Apr-24 A	05-Sep-24	26-Jun-24	01-Jul-24	-66		◆	Review by EPD				
03-3970(7)	Re-Submission of Application to EPD	14	14	0%	05-Nov-24	18-Nov-24	02-Jul-24	15-Jul-24	-126							
03-3980(7)	Issuance of Temporary License by EPD	0	0	0%	18-Nov-24	18-Nov-24	15-Jul-24	15-Jul-24	-126							
03-3990(7)	Public Consultation	40	40	0%	19-Nov-24	28-Dec-24	16-Jul-24	24-Aug-24	-126							
DG Licence																
Day Tank & Fuel Oil Storage (Cat 5)																
03-1400	General Building Plans and FSI Provision Design Submission to FSD (Cat 5)	30	30	0%	12-Oct-24	10-Nov-24	29-May-24	27-Jun-24	-136							
03-1410	DGD and VD Review and Approval of Submission	90	90	0%	11-Nov-24	08-Feb-25	28-Jun-24	25-Sep-24	-136							
Chemical Stores (all Cat)																
03-1480	Plans and FSI Provision Design Submission to FSD	21	21	0%	12-Oct-24	01-Nov-24	12-Aug-24	01-Sep-24	-61							
03-1490	DGD and VD Review and Approval of Submission	90	90	0%	02-Nov-24	30-Jan-25	02-Sep-24	30-Nov-24	-61							
Fire Services Installations (FSI) Certificate																
Fire Engineering Report																
05-4460(7)	Submission of Revised FER (comment by FSD in Nov 2023)	30	12	60%	01-Mar-24 A	11-Sep-24	17-Apr-24	28-Apr-24	-136		◆	Submission of Revised FER (comment by FSD in Nov 2023)				
05-4470	FSD review and approval of General Building Plan	30	30	0%	12-Sep-24	11-Oct-24	29-Apr-24	28-May-24	-136		◆	FSD review and approval of General Building Plan				
Fire Services Installations Certificate Inspection																
03-1555-1(5a)	Approval of General Building Plans and FSI Provision Design Submission	0	0	0%	11-Oct-24	11-Oct-24	28-May-24	28-May-24	-136		◆	Approval of General Building Plans and FSI Provision Design Submission				
Fire Services Installations Certificate Inspection for IWMF Sub-Station																
03-3880	Completion of FSI Installations for IWMF Sub-Station	0	0	0%	07-Nov-24	07-Nov-24	06-Aug-24	06-Aug-24	-93		◆	Completion of FSI Installations for IWMF Sub-Station				
03-3890	Application for FSI inspection	14	14	0%	11-Oct-24	24-Oct-24	10-Jul-24	23-Jul-24	-93		◆	Application for FSI inspection				
03-3900	FSD Process Application	14	14	0%	25-Oct-24	07-Nov-24	24-Jul-24	06-Aug-24	-93		◆	FSD Process Application				
03-3910	FSD Initial Inspection	14	14	0%	08-Nov-24	21-Nov-24	07-Aug-24	20-Aug-24	-93		◆	FSD Initial In				
03-3920	Defect Rectifications	30	30	0%	22-Nov-24	21-Dec-24	21-Aug-24	19-Sep-24	-93		◆	Defect Rectifications				
Lifts or Escalators																
03-1060	Notification of Commencement of Works Involving Installation or Maintenance	0	0	0%	31-Aug-24	31-Aug-24	06-Mar-24	06-Mar-24	-178		◆	Notification of Commencement of Works Involving Installation or Maintenance				
Design Submissions																
General Building Plan																
04-1600(M42)	Process Building & Wastewater Treatment Plant	135	31	77.04%	03-Jun-21 A	30-Sep-24	28-Apr-24	28-May-24	-125							
04-1610(M42)	Turbine Hall Building	135	31	77.04%	03-Mar-21 A	30-Sep-24	28-Apr-24	28-May-24	-125							
04-1620(M42)	Compressor & CCCW Building	135	31	77.04%	03-Mar-21 A	30-Sep-24	28-Apr-24	28-May-24	-125							
04-1630(M42)	Chimney	135	31	77.04%	03-Mar-21 A	30-Sep-24	28-Apr-24	28-May-24	-125							
04-1640(M42)	Mechanical Treatment Plant & Water Treatment Plant	135	31	77.04%	03-Jun-21 A	30-Sep-24	28-Apr-24	28-May-24	-125							
04-1650(M42)	Reception Pavilion	135	31	77.04%	03-Jun-21 A	30-Sep-24	28-Apr-24	28-May-24	-125							
04-1660(M42)	Administration Building and Viewing Gallery	135	31	77.04%	03-Jun-21 A	30-Sep-24	28-Apr-24	28-May-24	-125							
04-1670(M42)	Elevated Drive Way and Associated Structures	135	31	77.04%	03-Mar-21 A	30-Sep-24	28-Apr-24	28-May-24	-125							
04-1680(M42)	IWMF Substation	135	31	77.04%	03-Mar-21 A	30-Sep-24	28-Apr-24	28-May-24	-125							
04-1690(M46)	ACC Equipment Structure	135	31	77.04%	03-Mar-21 A	30-Sep-24	28-Apr-24	28-May-24	-125							
AIP Design Package Submissions																
AIP Mechanical Treatment Plant Building (2.4)																
05-1670	Electrical and instrumentation works design (2.4.03)	190	90	52.63%	08-Aug-23 A	28-Nov-24	08-Mar-24	11-Jul-24	-140							
Building services design (excluding fire services installation design) (2.4.06)																
05-1700	LV and Emergency Power Distribution Design	135	30	77.78%	18-Jan-22 A	29-Sep-24	12-Jun-24	11-Jul-24	-80							
AIP Roads and Utilities (2.10)																
Water supply system design on the Artificial Island (2.10.04)																
05-2360	Water Tanks (2.10.04.05)	60	60	0%	31-Aug-24	29-Oct-24	26-Mar-24	24-May-24	-158							
AIP Testing and Commissioning (2.12)																
05-2670	System commissioning plan (2.12.03)	90	90	0%	31-Aug-24	28-Nov-24	22-Jun-24	19-Sep-24	-70							
05-2680	Plant commissioning plan (2.12.04)	105	105	0%	29-Nov-24	13-Mar-25	20-Sep-24	02-Jan-25	-70							
AIP Miscellaneous Works (2.14)																
05-2710	Existing onshore crane replacement works at Portion 2	221	151	31.67%	30-Apr-24 A	28-Jan-25	27-Jan-25	26-Jun-25	149							
AIP Auxiliary Plant Systems (2.16)																
05-2760	Maintenance workshops (2.16.01)	90	90	0%	31-Aug-24	28-Nov-24	30-Apr-24	28-Jul-24	-123							
05-2770	Vehicle Fuel Filling Station (2.16.02)	90	32	64.44%	01-Apr-24 A	01-Oct-24	12-Apr-24	13-May-24	-141							
05-2780	Stores systems (2.16.03)	90	90	0%	31-Aug-24	28-Nov-24	09-May-24	06-Aug-24	-114							
AIP O&M Packages																
05-8010(6E)	Warehouse (O&M Scope)	185	31	83.24%	04-Jul-22 A	30-Sep-24	19-Jul-24	18-Aug-24	-43							
05-8020(6E)	Workshop (O&M Scope)	150	31	79.33%	04-Jul-22 A	30-Sep-24	19-Jul-24	18-Aug-24	-43							
05-8030(6E)	Ash & Residues Container (O&M Scope)	160	126	21.25%	06-Jun-22 A	03-Jan-25	17-Aug-24	20-Dec-24	-14							
DDA Design Package Submissions																
DDA Ground Treatment, Reclamation, Seawall, Breakwater, Berth (2.2)																

Activity ID	Activity Name	Original Duration	Remaining Duration	Activity % Complete	Current Start	Current Finish	Late Start	Late Finish	Total Float	M&B1 Remarks	2024				
											Aug 81	Sep 82	Oct 83	Nov 84	
05-3450	Seawall design (2.2.20)	60	20	66.67%	20-Jan-19 A	19-Sep-24	19-Apr-24	08-May-24	-134						
05-3470	Berth design (2.2.22)	60	15	75%	30-Jan-19 A	14-Sep-24	02-May-24	16-May-24	-121						
05-3470-1(M37)	Mooring Dolphins	55	55	0%	31-Aug-24	24-Oct-24	30-Apr-24	23-Jun-24	-123	Change Lag to Successor 09-4000(6G) from FS0 to SS14					
05-3480	Onshore crane Facility (2.2.23)	60	15	74.17%	01-Feb-24 A	15-Sep-24	30-Jul-24	14-Aug-24	-31						
05-3490	Onshore vessel power supply system (2.2.24)	90	59	34.44%	29-Feb-24 A	28-Oct-24	14-Oct-24	11-Dec-24	44						
DDA Incineration Plant Buildings (2.3)															
Electrical and instrumentation works design (2.3.15)															
E&IC Package 1 (Process Island) (2.3.15.02)															
05-7400-1(M55)	Electrical works CEMS and Process Analyzers (2.3.15.02.07)	105	30	71.43%	12-Jul-21 A	29-Sep-24	20-Apr-24	19-May-24	-133						
E&IC Package 2 (Power Island) (2.3.15.03)															
05-3390-4(M46)	Generator Related Equipment (2.3.15.03.08)	105	30	71.43%	29-Jun-21 A	29-Sep-24	22-May-24	20-Jun-24	-101						
Operation Management System (2.3.15.04)															
05-5400-1(M22)	Automatic Traffic Control System (ATCS)	90	45	50%	14-Jun-23 A	14-Oct-24	07-Aug-24	20-Sep-24	-24						
2.3.15.04.03															
2.3.15.04.03.02															
05-3390-13(M58)	OMS/SCADA/DCS - Panel Design for Power Island and Plant Common (2.3.15.04.03.02)	105	29	72.38%	02-Aug-22 A	28-Sep-24	21-Apr-24	19-May-24	-132						
2.3.15.04.06															
05-3390-9(6D)	Process Related 3rd Party System (2.3.15.04.06.01.01)	105	31	70.48%	09-Dec-21 A	30-Sep-24	29-Apr-24	29-May-24	-124						
2.3.15.05															
05-3390-4(M55)	Electrical and Instrumentation Works - Waste Crane and Grapple System (2.3.15.05.04)	105	31	70.48%	30-Sep-20 A	30-Sep-24	06-Jul-24	05-Aug-24	-56						
Building services design (excluding fire services installation design) (2.3.18)															
05-3710	Odour Control	90	90	0%	31-Aug-24	28-Nov-24	09-Aug-24	06-Nov-24	-22						
05-3720	Plumbing (7 Packages)	90	29	67.78%	02-Dec-22 A	28-Sep-24	03-Oct-24	31-Oct-24	33						
05-3750	Lifts and Escalators	90	29	67.78%	13-Jul-23 A	28-Sep-24	06-Apr-24	04-May-24	-147						
05-3780	Vehicle & Container Wash System	60	30	50%	28-Apr-23 A	29-Sep-24	10-Apr-24	09-May-24	-143						
05-3780-2(M20)	Water Cannon System	90	90	0%	31-Aug-24	28-Nov-24	24-Jul-24	21-Oct-24	-38						
General Layout Drawings and Fire Safety Strategy (2.3.25)															
05-3290	Process Building & Wastewater Treatment Plant	60	14	76.67%	13-Jun-22 A	13-Sep-24	09-Aug-24	22-Aug-24	-22						
05-3330	Chimney	60	28	53.33%	23-May-22 A	27-Sep-24	26-Jul-24	22-Aug-24	-36						
05-3340	Elevated Drive Way and Associated Structures	105	62	40.95%	31-Jul-21 A	31-Oct-24	22-Jun-24	22-Aug-24	-70						
05-4170	Administration Building and Viewing Gallery (2.7.1)	60	62	80%	15-Dec-22 A	31-Oct-24	23-Apr-24	23-Jun-24	-130						
05-4800	IWMF Site Wide Architectural Details	105	62	40.95%	20-Nov-21 A	31-Oct-24	20-Feb-25	22-Apr-25	173						
05-5160	Mechanical Treatment Plant & Water Treatment Plant (2.4.25)	60	28	53.33%	15-Dec-22 A	27-Sep-24	09-Jun-24	06-Jul-24	-83						
DDA Mechanical Treatment Plant Building (2.4)															
05-5190	Electrical and instrumentation works design	121	121	0%	30-Sep-24	28-Jan-25	07-Apr-24	05-Aug-24	-176	Change Original Duration from 181d to 12					
05-5200	Mechanical works design (2.4.16)	135	31	20%	14-Aug-23 A	30-Sep-24	07-May-24	06-Jun-24	-116						
05-5210	Fire services installation design (2.6.17)	60	29	51.67%	21-Apr-23 A	28-Sep-24	08-Jun-24	06-Jul-24	-84						
Building services design (excluding fire services installation design) (2.4.18)															
05-3870	Odour Control	90	14	84.44%	16-Apr-23 A	13-Sep-24	26-May-24	08-Jun-24	-97						
05-3900	Lighting and small power	90	29	67.78%	20-Sep-22 A	28-Sep-24	13-Jun-24	11-Jul-24	-79						
05-3910	Lifts and Escalators	90	37	58.89%	13-Jul-23 A	06-Oct-24	28-May-24	03-Jul-24	-95						
DDA Wastewater Treatment Plant (2.5)															
05-3950	Electrical and instrumentation works design (2.5.15)	60	14	20%	19-Sep-22 A	13-Sep-24	12-May-24	25-May-24	-111						
05-3960	Mechanical works design (2.5.16) (5 Packages)	232	109	35%	31-May-22 A	17-Dec-24	19-Feb-24	06-Jun-24	-194						
Building services design (excluding fire services installation design) (2.5.18)															
05-4000	Odour Control	90	45	50%	08-Jan-24 A	14-Oct-24	23-Aug-24	06-Oct-24	-8						
05-4010	Plumbing	90	30	66.67%	20-Sep-22 A	29-Sep-24	21-Jan-25	19-Feb-25	143						
DDA Water Treatment Plant Building (2.6)															
05-4090	Mechanical works design (2.6.16)	90	41	30%	02-May-22 A	10-Oct-24	02-Jul-24	11-Aug-24	-60						
Electrical and instrumentation works design (2.6.15)															
05-4080	Water Treatment Plant (WTP) - Variable Speed Drive (2.6.15.01)	238	109	25%	11-Apr-22 A	17-Dec-24	02-Jul-24	18-Oct-24	-60	Remove Actual Finish Date					
DDA Administration Building (2.7)															
05-4200	Electrical and instrumentation works design (2.7.13)	60	20	66.67%	02-Dec-22 A	19-Sep-24	23-May-24	11-Jun-24	-100						
05-4210	Fire services installation design (2.7.14)	60	30	50%	09-Mar-23 A	29-Sep-24	25-May-24	23-Jun-24	-98						
Building services design (excluding fire services installation design) (2.7.15)															
05-4280	Lifts and Escalators	90	37	58.89%	13-Jul-23 A	06-Oct-24	28-May-24	03-Jul-24	-95						
DDA IWMF Substation (2.8)															
Electrical and instrumentation works design (2.8.15)															
2.8.15.06															
05-4320	Electrical and instrumentation works design (2.8.15.06.01 to 40)	90	0	100%	16-Oct-21 A	31-Aug-24	07-Jun-24	07-Jun-24	-84						
DDA Chimney															
Building services design (excluding fire services installation design)															
05-6010(5a)	MVAC	60	60	0%	31-Aug-24	29-Oct-24	10-Jul-24	07-Sep-24	-52						
05-6020-1(5a)	Plumbing	90	90	0%	31-Aug-24	28-Nov-24	02-Jul-24	29-Sep-24	-60						
05-6050-1(5a)	Lift	90	37	58.89%	13-Jul-23 A	06-Oct-24	28-May-24	03-Jul-24	-95						
DDA Elevated Drive Way and Associated Structures Foundation															
05-5540-3(6D)	Fire services installation design	60	30	50%	24-Apr-23 A	29-Sep-24	24-Jul-24	22-Aug-24	-38						
DDA Reception Pavilion															
05-3280	Foundation Design	90	30	66.67%	15-Dec-22 A	29-Sep-24	08-May-24	06-Jun-24	-115						
DDA Roads and Utilities (2.10)															
Permanent road works layout on the Artificial Island (2.10.13)															
05-4480	Road signage and markings	90	23	75%	08-Aug-22 A	22-Sep-24	08-Sep-24	30-Sep-24	9						

Activity ID	Activity Name	Original Duration	Remaining Duration	Activity % Complete	Current Start	Current Finish	Late Start	Late Finish	Total Float	M&B1 Remarks	2024			
											Aug 81	Sep 82	Oct 83	Nov 84
05-5400	Roads and hardstandings layout	90	23	75%	08-Aug-22 A	22-Sep-24	09-Aug-24	31-Aug-24	-22					
Sewerage design on the Artificial Island (2.10.14)														
05-4430	Foul Sewerage	60	15	75%	14-Mar-23 A	14-Sep-24	31-Mar-24	14-Apr-24	-153					
05-4440	Contaminated Sewerage (Site Wide Sewerage System)	60	15	75%	14-Mar-23 A	14-Sep-24	31-Mar-24	14-Apr-24	-153					
05-4440-2(M55)	Ship-to-shore Sewage Transfer System for Passenger Ferry	90	32	64.91%	13-Jan-21 A	01-Oct-24	01-Oct-24	01-Sep-24	-30					
Drainage system design on the Artificial Island (2.10.15)														
05-5310	Surface water Drainage System	90	18	80%	22-Feb-23 A	17-Sep-24	28-Mar-24	14-Apr-24	-156					
05-5340(M81)	Pipework Design and Operation for Brine Discharge (2.10.15.05)	90	31	65.56%	20-Feb-23 A	30-Sep-24	20-May-26	19-Jun-26	627	New Activity				
Water supply system design on the Artificial Island (2.10.16)														
05-5250	Potable Water Distribution System	105	105	0%	31-Aug-24	13-Dec-24	05-Apr-24	18-Jul-24	-148					
05-5260	Reuse Water System	90	90	0%	31-Aug-24	28-Nov-24	26-Mar-24	23-Jun-24	-158					
05-5270	Irrigation System	90	90	0%	31-Aug-24	28-Nov-24	26-Mar-24	23-Jun-24	-158					
05-5280	Rainwater harvesting System	90	90	0%	31-Aug-24	28-Nov-24	26-Mar-24	23-Jun-24	-158					
05-5290	Water Tanks	60	60	0%	30-Sep-24	28-Nov-24	25-Apr-24	23-Jun-24	-158					
05-5300	External FS Systems	60	60	0%	31-Aug-24	29-Oct-24	25-Apr-24	23-Jun-24	-128					
05-5300-1(M24)	E&M system for seawater intake (2.10.16.07)	105	14	86.67%	04-Apr-22 A	13-Sep-24	10-Jun-24	23-Jun-24	-82					
05-5300-3(5a)	Chemical scrubber system for odour control (2.10.16.10)	105	105	0%	31-Aug-24	13-Dec-24	05-Apr-24	18-Jul-24	-148					
Design of telecommunication and other utilities (2.10.18)														
05-4580	Power Distribution System concept / schematics	60	60	0%	31-Aug-24	29-Oct-24	11-Apr-24	09-Jun-24	-142					
05-4590	Site Lighting Concept / Schematics	80	80	0%	31-Aug-24	18-Nov-24	22-Apr-24	10-Jul-24	-131	Update Original Duration from 90d to 80d				
05-4600	Lightning Protection System concept / schematics	80	80	0%	31-Aug-24	18-Nov-24	22-Apr-24	10-Jul-24	-131	Update Original Duration from 90d to 80d				
05-4610	Site ELV Network System - Communications System concept / schematics	75	30	60%	16-Aug-22 A	29-Sep-24	11-Jun-24	10-Jul-24	-81					
05-4620	Site ELV Network System - Security Systems concept / schematics	75	30	60%	14-Jun-22 A	29-Sep-24	11-Jun-24	10-Jul-24	-81					
05-4630	Site ELV Network System - Navigation aids concept / schematics	60	60	0%	31-Aug-24	29-Oct-24	12-May-24	10-Jul-24	-111					
05-4640	Microwave transmission of FS direct link	105	3	97.14%	22-Aug-22 A	02-Sep-24	08-Jul-24	10-Jul-24	-54					
05-4650	Fuel Handling System concept / schematics	60	60	0%	31-Aug-24	29-Oct-24	29-Apr-24	27-Jun-24	-124					
Utility ducts/Pipebridges design (2.10.26)														
05-5040	Design of Pipe / Utilities Trenches concept	90	23	75%	05-Jul-23 A	22-Sep-24	07-Mar-24	29-Mar-24	-177					
05-5050	Site-wide Utilities Trenches Design	90	23	75%	03-Jul-23 A	22-Sep-24	07-Mar-24	29-Mar-24	-177					
DDA Architectural, Finishes and Landscaping Works (2.11)														
External and internal finishes design														
05-4670	External and internal finishes design for Incineration Plant Building (2.11.15.01)	90	28	68.89%	19-Sep-22 A	27-Sep-24	10-Jul-24	06-Aug-24	-52					
05-4720	External and internal finishes design for Reception Pavilion (2.11.01.05)	90	28	68.89%	10-Nov-22 A	27-Sep-24	26-Jul-24	22-Aug-24	-36					
05-4730	External and internal finishes design for MT Plant Building (2.11.16)	60	29	51.67%	16-Aug-23 A	28-Sep-24	07-Aug-24	04-Sep-24	-24					
05-4740	External and internal finishes design for the Wastewater Treatment Plant (2.11.17)	60	29	51.67%	06-Jun-23 A	28-Sep-24	02-Sep-24	30-Sep-24	2					
05-4750	External and internal finishes design for the Water Treatment Plant Building (2.11.08)	60	29	51.67%	16-Aug-23 A	28-Sep-24	12-Apr-24	10-May-24	-141					
05-4760	External and internal finishes design for the Administration Building (2.11.19)	60	29	51.67%	21-Sep-23 A	28-Sep-24	09-Jul-24	06-Aug-24	-53					
05-5430	External and internal finishes design for Elevated Driveway	90	29	67.78%	15-Jun-21 A	28-Sep-24	25-Jun-24	23-Jul-24	-67					
Landscaping Works (2.11.21)														
05-4780	Landscape Masterplan & Landscape Design for Water Feature (2.11.19.01)	105	2	98%	26-Jan-23 A	02-Sep-24	19-Feb-25	21-Feb-25	173					
Facade Structural Design														
05-8040(6D)	Reception Pavilion (2.3.14.07.01)	90	90	0%	31-Aug-24	28-Nov-24	24-Nov-24	21-Feb-25	85					
05-8060(6D)	Administration Building and Viewing Gallery (2.7.12.01)	60	6	89.89%	01-Dec-23 A	06-Sep-24	14-Sep-24	20-Sep-24	15					
05-8090(6D)	Sky Deck near Administration Building Structural Design	90	90	0%	31-Aug-24	28-Nov-24	25-Sep-24	23-Dec-24	25					
DDA Testing and Commissioning (2.12)														
05-4810-2(M55)	FAT of DCS - Software SIL FAT Plant for Process Island (2.12.09.03.01)	105	10	90.48%	19-May-22 A	09-Sep-24	10-May-24	19-May-24	-113					
05-4820	Site Acceptance Testing plan (2.12.10)	90	56	37.58%	28-Nov-23 A	26-Oct-24	28-Apr-24	23-Jun-24	-124					
05-4830	System commissioning plan (2.12.11)	90	90	0%	29-Nov-24	26-Feb-25	21-Sep-24	19-Dec-24	-69					
DDA Transportation Facilities for the Operation (2.13)														
05-4850	Design of vehicles for MSW and Ash and Residues delivery (2.13.05)	186	186	0%	30-Sep-24	03-Apr-25	16-Mar-26	17-Sep-26	532	Update Lag from Predecessor				
05-4860	Design of marine vessels for the use of the Employer and visitors (2.13.06)	240	119	50.42%	30-Jun-23 A	27-Dec-24	22-May-26	17-Sep-26	629					
DDA Miscellaneous Works (2.14)														
05-4870	Process Related CCTV and Existing onshore crane replacement works at Portion 2 (2.14.05)	220	220	0%	20-Oct-24	27-May-25	18-Mar-25	23-Oct-25	149					
05-4880	Design of visitors and environmental education facilities (2.14.06)	153	153	0%	30-Sep-24	01-Mar-25	20-Jan-25	21-Jun-25	112	Update Lag from the Predecessor, Update Original Duration from 241d to 153d				
DDA Miscellaneous Detailing (2.15)														
05-4890	Covered walkway at passenger berth (2.15.06)	70	70	0%	31-Aug-24	08-Nov-24	14-May-24	22-Jul-24	-109	Change Relationship to Successor 08-2420(7) from FS0 to SS30				
05-4900	Gatehouses (2.15.07)	60	60	0%	31-Aug-24	29-Oct-24	03-Jul-24	31-Aug-24	-59					
05-4910	Weighbridge office (2.15.08)	63	63	0%	31-Aug-24	01-Nov-24	04-Apr-24	05-Jun-24	-149					
DDA Auxiliary Plant Systems (2.16)														
05-4920	Maintenance workshops (2.16.04)	0	0	0%	29-Nov-24	29-Nov-24	28-Jul-24	28-Jul-24	-123					
05-4930	Vehicle Fuel Filling Station (2.16.05)	30	30	0%	02-Sep-24	01-Oct-24	14-Apr-24	13-May-24	-141	Update Lag from Predecessor 05-2770 from FS-7 to FFO				
05-4940	Stores systems (2.16.06)	90	90	0%	29-Nov-24	26-Feb-25	07-Aug-24	04-Nov-24	-114					
05-4940-2(5a)	Hoisting systems (2.16.10)	180	31	82.78%	24-May-23 A	30-Sep-24	05-Oct-24	04-Nov-24	35					
DDA O&M Packages														
05-8070(6E)	Warehouse (O&M Scope)	181	181	0%	01-Oct-24	30-Mar-25	19-Aug-24	15-Feb-25	-43					
05-8080(6E)	Workshop (O&M Scope)	181	181	0%	01-Oct-24	30-Mar-25	19-Aug-24	15-Feb-25	-43					
05-8090(6E)	Ash & Residues Container (O&M Scope)	153	153	0%	30-Sep-24	01-Mar-25	16-Sep-24	15-Feb-25	-14	Update Lag from Predecessor: Update Original Duration				
05-8110(6E)	Other Mobile Plants (O&M Scope)	181	181	0%	30-Sep-24	29-Mar-25	19-Aug-24	15-Feb-25	-42	Update Lag from Predecessor				
Procurement of Major Equipment														
Off-site Fabrication of Incineration Modules														
3-Month Rolling Programme (August 2024)														

■ Actual Work ■ Critical Remaining Work ◆ Actual Milestone
■ Remaining Work ◆ Milestone ◆ Critical Milestone

Activity ID	Activity Name	Original Duration	Remaining Duration	Activity % Complete	Current Start	Current Finish	Late Start	Late Finish	Total Float	M&B1 Remarks	2024											
											Aug 81	Sep 82	Oct 83	Nov 84								
Fabrication of Module (TPU)																						
PFab 1- Line 1																						
Insulation																						
06-TPU-1-1020	PFab 1-Line 1 - Insulation	698	47	93.27%	23-May-22 A	16-Oct-24	15-Aug-24	30-Sep-24	-16													
Precommissioning																						
06-TPU-1-1030	PFab 1-Line 1 - Pre-commissioning	78	92	0%	10-Jun-24 A	30-Nov-24	01-Jul-24	30-Sep-24	-61													
PFab 1- Line 2																						
Insulation																						
06-TPU-2-1010	PFab 1-Line 2 - Insulation	698	61	91.26%	22-May-22 A	30-Oct-24	01-Jul-24	30-Aug-24	-61													
Precommissioning																						
06-TPU-2-1020	PFab 1-Line 2 - Pre-commissioning	70	70	0%	22-Sep-24	30-Nov-24	23-Jul-24	30-Sep-24	-61	Change Lag from Predecessor 06-TPU-2-1010 from FF0 to FF31												
PFab 1- Line 3																						
E&I Installation																						
Electrical																						
06-TPU-3-1270	PFab 1-Line 3 - Electrical Cable Pulling and Termination	180	123	31.67%	27-May-24 A	31-Dec-24	07-May-24	06-Sep-24	-116													
06-TPU-3-1280	PFab 1-Line 3 - Electrical Equipment Installation	180	118	34.44%	03-Jun-24 A	26-Dec-24	07-May-24	01-Sep-24	-116													
Instrument																						
06-TPU-3-1300	PFab 1-Line 3 - Instrument Cable Pulling and Termination	180	123	31.67%	27-May-24 A	31-Dec-24	07-May-24	06-Sep-24	-116													
06-TPU-3-1310	PFab 1-Line 3 - Instrument Equipment Installation	180	118	34.44%	03-Jun-24 A	26-Dec-24	07-May-24	01-Sep-24	-116													
06-TPU-3-1320	PFab 1-Line 3 - Instrument Tubing Installation	180	118	34.44%	03-Jun-24 A	26-Dec-24	07-May-24	01-Sep-24	-116													
Insulation																						
06-TPU-3-1010	PFab 1-Line 3 - Insulation	769	153	80.1%	23-May-22 A	30-Jan-25	19-May-24	18-Oct-24	-104													
Precommissioning																						
06-TPU-3-1020	PFab 1-Line 3 - Pre-commissioning	70	70	0%	22-Nov-24	30-Jan-25	10-Aug-24	18-Oct-24	-104	Update Original Duration from 90d to 70d												
PFab 1- Line 4																						
E&I Installation																						
Electrical																						
06-TPU-4-1270	PFab 1-Line 4 - Electrical Cable Pulling and Termination	180	123	31.67%	03-Jun-24 A	31-Dec-24	07-May-24	06-Sep-24	-116													
06-TPU-4-1280	PFab 1-Line 4 - Electrical Equipment Installation	180	118	34.44%	03-Jun-24 A	26-Dec-24	07-May-24	01-Sep-24	-116													
Instrument																						
06-TPU-4-1300	PFab 1-Line 4 - Instrument Cable Pulling and Termination	180	123	31.67%	03-Jun-24 A	31-Dec-24	07-May-24	06-Sep-24	-116													
06-TPU-4-1310	PFab 1-Line 4 - Instrument Equipment Installation	180	118	34.44%	03-Jun-24 A	26-Dec-24	07-May-24	01-Sep-24	-116													
06-TPU-4-1320	PFab 1-Line 4 - Instrument Tubing Installation	180	118	34.44%	03-Jun-24 A	26-Dec-24	07-May-24	01-Sep-24	-116													
Insulation																						
06-TPU-4-1010	PFab 1-Line 4 - Insulation	767	153	80.05%	25-May-22 A	30-Jan-25	19-May-24	18-Oct-24	-104													
PFab 1- Line 5																						
E&I Installation																						
Electrical																						
06-TPU-5-1270	PFab 1-Line 5 - Electrical Cable Pulling and Termination	180	164	8.89%	01-Aug-24 A	10-Feb-25	27-Apr-24	07-Oct-24	-126	Update Actual Start Date												
06-TPU-5-1280	PFab 1-Line 5 - Electrical Equipment Installation	180	150	16.67%	01-Aug-24 A	27-Jan-25	27-Apr-24	23-Sep-24	-126	Update Actual Start Date												
Instrument																						
06-TPU-5-1300	PFab 1-Line 5 - Instrument Cable Pulling and Termination	180	164	8.89%	01-Aug-24 A	10-Feb-25	27-Apr-24	07-Oct-24	-126	Update Actual Start Date												
06-TPU-5-1310	PFab 1-Line 5 - Instrument Equipment Installation	180	150	16.67%	01-Aug-24 A	27-Jan-25	27-Apr-24	23-Sep-24	-126	Update Actual Start Date												
06-TPU-5-1320	PFab 1-Line 5 - Instrument Tubing Installation	180	150	16.67%	01-Aug-24 A	27-Jan-25	27-Apr-24	23-Sep-24	-126	Update Actual Start Date												
Insulation																						
06-TPU-5-1010	PFab 1-Line 5 - Insulation	822	175	78.71%	04-Jun-22 A	21-Feb-25	30-Apr-24	21-Oct-24	-123													
PFab 1- Line 6																						
E&I Installation																						
Electrical																						
06-TPU-6-1270	PFab 1-Line 6 - Electrical Cable Pulling and Termination	180	164	8.89%	01-Aug-24 A	10-Feb-25	27-Apr-24	07-Oct-24	-126	Update Actual Start Date												
06-TPU-6-1280	PFab 1-Line 6 - Electrical Equipment Installation	180	150	16.67%	01-Aug-24 A	27-Jan-25	27-Apr-24	23-Sep-24	-126	Update Actual Start Date												
Instrument																						
06-TPU-6-1300	PFab 1-Line 6 - Instrument Cable Pulling and Termination	180	164	8.89%	01-Aug-24 A	10-Feb-25	27-Apr-24	07-Oct-24	-126	Update Actual Start Date												
06-TPU-6-1310	PFab 1-Line 6 - Instrument Equipment Installation	180	150	16.67%	01-Aug-24 A	27-Jan-25	27-Apr-24	23-Sep-24	-126	Update Actual Start Date												
06-TPU-6-1320	PFab 1-Line 6 - Instrument Tubing Installation	180	150	16.67%	01-Aug-24 A	27-Jan-25	27-Apr-24	23-Sep-24	-126	Update Actual Start Date												
Insulation																						
06-TPU-6-1010	PFab 1-Line 6 - Insulation	761	175	77%	08-Jul-22 A	21-Feb-25	23-Apr-24	14-Oct-24	-130													
Fabrication of Module (FGC)																						
PFab 2 - Line 1																						
Insulation																						
06-FGC-1-1130	PFab 2-Line 1 - Insulation	666	47	92.94%	25-May-22 A	16-Oct-24	15-Aug-24	30-Sep-24	-16													
Precommissioning																						
06-FGC-1-1190	PFab 2-Line 1 - Pre-commissioning	78	92	0%	10-Jun-24 A	30-Nov-24	01-Jul-24	30-Sep-24	-61													
PFab 2 - Line 2																						
Insulation																						
06-FGC-2-1010	PFab 2-Line 2 - Insulation	405	61	84.94%	10-Feb-23 A	30-Oct-24	01-Jul-24	30-Aug-24	-61													
Precommissioning																						
06-FGC-2-1020	PFab 2-Line 2 - Pre-commissioning	70	70	0%	22-Sep-24	30-Nov-24	23-Jul-24	30-Sep-24	-61	Change Lag from Predecessor 06-FGC-2-1010 From FF0 to FF31												
PFab 2 - Line 3																						
E&I Installation																						
Electrical																						
06-FGC-3-1250	PFab 2-Line 3 - Electrical Cable Pulling and Termination	180	123	31.67%	27-May-24 A	31-Dec-24	07-May-24	06-Sep-24	-116													
06-FGC-3-1260	PFab 2-Line 3 - Electrical Equipment Installation	180	118	34.44%	03-Jun-24 A	26-Dec-24	07-May-24	01-Sep-24	-116													
Instrument																						
06-FGC-3-1270	PFab 2-Line 3 - Instrument Cable Pulling and Termination	212	123	31.67%	27-May-24 A	31-Dec-24	07-May-24	06-Sep-24	-116													

Activity ID	Activity Name	Original Duration	Remaining Duration	Activity % Complete	Current Start	Current Finish	Late Start	Late Finish	Total Float	M&B1 Remarks	2024				
											Aug 81	Sep 82	Oct 83	Nov 84	
06-FGC-3-1280	PFab 2-Line 3 - Instrument Cable Pulling and Termination	180	123	31.67%	27-May-24 A	31-Dec-24	07-May-24	06-Sep-24	-116						
06-FGC-3-1290	PFab 2-Line 3 - Instrument Equipment Installation	180	118	34.44%	03-Jun-24 A	26-Dec-24	07-May-24	01-Sep-24	-116						
06-FGC-3-1300	PFab 2-Line 3 - Instrument Tubing Installation	180	118	34.44%	03-Jun-24 A	26-Dec-24	07-May-24	01-Sep-24	-116						
PFab 2 - Line 4															
E&I Installation															
Electrical															
06-FGC-4-1250	PFab 2-Line 4 - Electrical Cable Pulling and Termination	180	123	31.67%	03-Jun-24 A	31-Dec-24	07-May-24	06-Sep-24	-116						
06-FGC-4-1260	PFab 2-Line 4 - Electrical Equipment Installation	180	118	34.44%	03-Jun-24 A	26-Dec-24	07-May-24	01-Sep-24	-116						
Instrument															
06-FGC-4-1280	PFab 2-Line 4 - Instrument Cable Pulling and Termination	180	123	31.67%	03-Jun-24 A	31-Dec-24	07-May-24	06-Sep-24	-116						
06-FGC-4-1290	PFab 2-Line 4 - Instrument Equipment Installation	180	118	34.44%	03-Jun-24 A	26-Dec-24	07-May-24	01-Sep-24	-116						
06-FGC-4-1300	PFab 2-Line 4 - Instrument Tubing Installation	180	118	34.44%	03-Jun-24 A	26-Dec-24	07-May-24	01-Sep-24	-116						
Insulation															
06-FGC-4-1010	PFab 2-Line 4 - Insulation	90	90	0%	02-Nov-24	30-Jan-25	21-Jul-24	18-Oct-24	-104						
PFab 2 - Line 5															
E&I Installation															
Electrical															
06-FGC-5-1250	PFab 2-Line 5 - Electrical Cable Pulling and Termination	180	165	8.33%	14-Aug-24 A	11-Feb-25	26-Apr-24	07-Oct-24	-127	Update Actual Start Date					
06-FGC-5-1260	PFab 2-Line 5 - Electrical Equipment Installation	180	150	16.67%	01-Aug-24 A	27-Jan-25	26-Apr-24	22-Sep-24	-127	Update Actual Start Date					
Instrument															
06-FGC-5-1280	PFab 2-Line 5 - Instrument Cable Pulling and Termination	180	165	8.33%	14-Aug-24 A	11-Feb-25	26-Apr-24	07-Oct-24	-127	Update Actual Start Date					
06-FGC-5-1290	PFab 2-Line 5 - Instrument Equipment Installation	180	150	16.67%	01-Aug-24 A	27-Jan-25	26-Apr-24	22-Sep-24	-127	Update Actual Start Date					
06-FGC-5-1300	PFab 2-Line 5 - Instrument Tubing Installation	180	150	16.67%	01-Aug-24 A	27-Jan-25	26-Apr-24	22-Sep-24	-127	Update Actual Start Date					
Insulation															
06-FGC-5-1200	PFab 2-Line 5 - Insulation	736	175	76.22%	30-Jun-22 A	21-Feb-25	30-Apr-24	21-Oct-24	-123						
PFab 2 - Line 6															
E&I Installation															
Electrical															
06-FGC-6-1260	PFab 2-Line 6 - Electrical Cable Pulling and Termination	180	164	8.89%	14-Aug-24 A	10-Feb-25	27-Apr-24	07-Oct-24	-126	Update Actual Start Date					
06-FGC-6-1270	PFab 2-Line 6 - Electrical Equipment Installation	180	150	16.67%	01-Aug-24 A	27-Jan-25	23-Apr-24	19-Sep-24	-130	Update Actual Start Date					
Instrument															
06-FGC-6-1290	PFab 2-Line 6 - Instrument Cable Pulling and Termination	180	164	8.89%	14-Aug-24 A	10-Feb-25	23-Apr-24	03-Oct-24	-130	Update Actual Start Date					
06-FGC-6-1300	PFab 2-Line 6 - Instrument Equipment Installation	180	150	16.67%	01-Aug-24 A	27-Jan-25	23-Apr-24	19-Sep-24	-130	Update Actual Start Date					
06-FGC-6-1310	PFab 2-Line 6 - Instrument Tubing Installation	180	150	16.67%	01-Aug-24 A	27-Jan-25	23-Apr-24	19-Sep-24	-130	Update Actual Start Date					
Insulation															
06-FGC-6-1020	PFab 2-Line 6 - Insulation	90	174	0%	23-Jun-24 A	20-Feb-25	23-Apr-24	13-Oct-24	-130	Update Actual Start Date					
Procurement for ACC Units															
06-1150	Factory Acceptance Test (FAT) for ACC-3	16	35	0%	30-Mar-24 A	04-Oct-24	05-Apr-24	09-May-24	-148						
06-1170	Delivery to Site ACC-2	21	21	0%	05-Sep-24	25-Sep-24	15-Mar-24	04-Apr-24	-174						
06-1190	Delivery to Site ACC-3	21	21	0%	05-Oct-24	25-Oct-24	10-May-24	30-May-24	-148						
Procurement for CCCW Building Equipment															
06-1420-1(1)	Delivery to Site	38	21	50%	09-Apr-24 A	20-Sep-24	17-Apr-24	07-May-24	-136						
Procurement for Mechanical Treatment Plant Building Plant Equipment															
06-1180	Delivery to Site	61	62	0%	01-May-24 A	31-Oct-24	06-Apr-24	06-Jun-24	-147						
Procurement for Wastewater Treatment Plant Equipment															
06-1200-1(1)	Mechanical Equipment Procurement (Incl. FAT)	210	31	85.24%	01-Sep-22 A	30-Sep-24	12-May-24	11-Jun-24	-111						
06-1200-2(1)	Pipe Material Procurement (Incl. FAT)	210	31	85.24%	01-Sep-22 A	30-Sep-24	12-May-24	11-Jun-24	-111						
06-1200-3(1)	Electrical and Instrumentation Material Procurement (Incl. FAT)	210	31	85.24%	01-Sep-22 A	30-Sep-24	12-May-24	11-Jun-24	-111						
06-1220	Delivery to Site	90	57	36.67%	15-Jan-24 A	26-Oct-24	30-Apr-24	25-Jun-24	-123						
Procurement for Desal & Demin Plant Equipment															
06-1240-3(1)	Electrical and Instrumentation Material Procurement (Incl. FAT)	60	16	73.33%	01-Sep-22 A	15-Sep-24	18-May-24	02-Jun-24	-105						
06-1260	Delivery to Site	55	31	43.64%	15-Feb-24 A	30-Sep-24	03-May-24	02-Jun-24	-120						
Procurement for HV Transformers and Associated Equipment															
Procurement of IS Limiter															
06-1270(7)	IS Limiter Design Approval	4	26	0%	01-Jan-23 A	25-Sep-24	24-Apr-24	19-May-24	-129						
06-1280(7)	Manufacturing of IS Limiter	90	33	63.33%	31-Dec-23 A	03-Oct-24	16-Apr-24	19-May-24	-136						
06-1290(7)	Factory Acceptance Test (FAT)	15	15	0%	03-Oct-24	18-Oct-24	20-May-24	03-Jun-24	-136						
06-1300(7)	Delivery to Site	15	15	0%	18-Oct-24	02-Nov-24	04-Jun-24	18-Jun-24	-136						
Procurement for Control SCADA Systems															
06-1340	Delivery to Site	21	21	0%	05-Sep-24	25-Sep-24	29-Apr-24	19-May-24	-129	Update Lag from Predecessor: Update Original Duration from 11d to 21d					
Procurement for Onshore Crane at Berth															
06-1350	Supplier Submission and Approval	60	2	96.67%	04-Dec-22 A	01-Sep-24	19-Apr-24	20-Apr-24	-134						
06-1360	Material & Equipment Procurement	180	72	60%	01-Apr-24 A	12-Nov-24	21-Apr-24	01-Jul-24	-134						
06-1370	Factory Acceptance Test (FAT)	30	30	0%	13-Nov-24	12-Dec-24	02-Jul-24	31-Jul-24	-134						
Procurement for Weighbridge System															
06-2240(1)	Delivery to Site (EIAC Equipment)	76	76	0%	01-Sep-24	15-Nov-24	05-Apr-24	19-Jun-24	-149	Update Lag from Predecessor					
Procurement for Truck Wash System															
06-2290(1)	Material Submission and Approval	60	60	0%	30-Sep-24	28-Nov-24	10-May-24	08-Jul-24	-143						
06-2300(1)	Material & Equipment Procurement	80	80	0%	29-Nov-24	16-Feb-25	09-Jul-24	26-Sep-24	-143	Update Original Duration from 90d to 80d					
Procurement for Curtain Wall Materials															
06-8200(6D)	Material Submission and Approval	60	29	51.67%	30-Apr-24 A	28-Sep-24	09-Jun-24	07-Jul-24	-83						
06-8210(6D)	Material & Equipment Procurement	90	90	0%	29-Sep-24	27-Dec-24	08-Jul-24	05-Oct-24	-83						
06-8220(6D)	Factory Acceptance Test (FAT)	90	90	0%	29-Oct-24	26-Jan-25	07-Aug-24	04-Nov-24	-83						
06-8230(6D)	Delivery to Site	90	90	0%	28-Nov-24	25-Feb-25	06-Sep-24	04-Dec-24	-83						

Activity ID	Activity Name	Original Duration	Remaining Duration	Activity % Complete	Current Start	Current Finish	Late Start	Late Finish	Total Float	M&B1 Remarks	2024			
											Aug 81	Sep 82	Oct 83	Nov 84
Off-site Precasting of Facade Panels														
06-8040(6D)	Procurement of Precast Concrete Wall Panel Moulding & Fabrication	205	7	96.59%	14-Feb-23 A	04-Jan-25	10-Feb-24	30-Dec-24	-5					
IWMF Substation														
06-8070(6D)	Precasting of Concrete Panels	60	60	0%	06-Sep-24	05-Nov-24	19-Jun-24	17-Aug-24	-80					
06-8080(6D)	Factory Acceptance Test (FAT)	60	60	0%	06-Oct-24	05-Dec-24	19-Jul-24	16-Sep-24	-80					
Elevated Drive Way														
06-8100	Precasting of Concrete Panels	60	60	0%	06-Sep-24	05-Nov-24	29-Mar-24	27-May-24	-162					
06-8110	Factory Acceptance Test (FAT)	60	60	0%	21-Sep-24	20-Nov-24	13-Apr-24	11-Jun-24	-162					
06-8120	Delivery to Site	30	30	0%	04-Nov-24	04-Dec-24	27-May-24	25-Jun-24	-162	Change Relationship from Predecessor 06-8110 from FS0 to FF14				
Turbine Hall														
06-8130	Precasting of Concrete Panels	45	45	0%	06-Sep-24	21-Oct-24	17-Feb-24	01-Apr-24	-203					
06-8140	Factory Acceptance Test (FAT)	45	45	0%	06-Oct-24	20-Nov-24	18-Mar-24	01-May-24	-203					
06-8150	Delivery to Site	30	30	0%	05-Nov-24	05-Dec-24	17-Apr-24	16-May-24	-203					
Process Building														
06-8160	Precasting of Concrete Panels	60	60	0%	06-Sep-24	05-Nov-24	17-Feb-24	16-Apr-24	-203					
06-8170	Factory Acceptance Test (FAT)	60	60	0%	21-Sep-24	20-Nov-24	03-Mar-24	01-May-24	-203					
06-8180	Delivery to Site	30	30	0%	05-Nov-24	05-Dec-24	17-Apr-24	16-May-24	-203					
Mechanical Treatment Plant														
06-8190	Precasting of Concrete Panels	60	60	0%	06-Sep-24	05-Nov-24	24-Mar-24	22-May-24	-167					
06-8200	Factory Acceptance Test (FAT)	60	60	0%	06-Oct-24	05-Dec-24	23-Apr-24	21-Jun-24	-167					
Administration Building														
06-8250	Precasting of Concrete Panels	60	60	0%	06-Sep-24	05-Nov-24	26-Mar-24	24-May-24	-165					
06-8260	Factory Acceptance Test (FAT)	60	60	0%	06-Oct-24	05-Dec-24	25-Apr-24	23-Jun-24	-165					
06-8270	Delivery to Site	30	30	0%	19-Nov-24	19-Dec-24	08-Jun-24	07-Jul-24	-165	Change Relationship from Predecessor 06-8260 from FS0 to FF14				
Chimney														
06-8280	Steel Claddings Fabrication	90	90	0%	06-Sep-24	05-Dec-24	01-Sep-24	30-Dec-24	-5					
06-8290	Factory Acceptance Test (FAT)	60	60	0%	05-Nov-24	04-Jan-25	31-Oct-24	30-Dec-24	-5					
Environmental Works														
Baseline Air Quality Monitoring Works														
07-1220	Carry out baseline Air Quality monitoring at Portion 3 (Alternative Location)	365	245	32.88%	01-Feb-24 A	02-May-25	19-Apr-24	19-Dec-24	-134					
07-1240	Carry out baseline Air Quality monitoring at Portion 5	365	245	32.88%	01-Feb-24 A	02-May-25	19-Apr-24	19-Dec-24	-134					
Maritime Works														
Marine Construction														
Phase I - Construction of Perimeter Seawalls														
Seawall and Berth at DCM Area														
Seawall Structural Works														
08-1115(3)	Caisson infill, Solid ballast, toe protection, precast concrete blocks ...etc Laying	250	10	96.18%	30-Nov-19 A	09-Sep-24	08-May-24	17-May-24	-115					
Remain Works														
08-1120	Construction of Seawall and Wave Wall Extension from +3mPD to Deck Level for Seawall A	220	42	81%	10-Oct-21 A	11-Oct-24	27-Apr-24	07-Jun-24	-126					
08-1120-1(6)	Construction of Seawall and Wave Wall Extension from +3mPD to Deck Level for Seawall B	220	8	96.31%	10-Oct-21 A	08-Sep-24	30-May-24	07-Jun-24	-92					
08-1120-2(M55)	Construction of Seawall and Wave Wall Extension from +3mPD to Deck Level for Seawall B No. C1 & C2 (Caisson A2 & A3)	60	17	71.75%	28-Jun-23 A	16-Sep-24	08-Apr-24	24-Apr-24	-145					
08-1120-4(M55)	Construction of Seawall and Wave Wall Extension from +3mPD to Deck Level for Seawall B No. C73 & C734	60	25	58.51%	01-Dec-23 A	24-Sep-24	29-Mar-24	22-Apr-24	-155					
08-1320(6)	Construction of Rear Wall Buttress & Panel for Seawall A	180	180	0%	20-Sep-24	18-Mar-25	09-May-24	04-Nov-24	-134					
Seawall at Dredging Area														
Remain Works														
08-1170	Construction of Seawall and Wave Wall Extension from +3mPD to Deck Level (Bay 1 to Bay 8)	160	10	93.5%	11-Jul-22 A	10-Sep-24	11-Jun-25	21-Jun-25	285					
Phase II - Reclamation, Breakwater and Berth Construction														
Breakwater														
Remain Works														
08-1310(7)	Breakwater Profile Barrier and Pavement Road	120	120	0%	30-Oct-24	26-Feb-25	22-Feb-25	21-Jun-25	115					
Seawall and Berth at Marine Access														
Remain Works														
08-1330(2)	Construction of Seawall and Wave Wall Extension from +3mPD to Deck Level	30	2	93%	10-May-24 A	24-Sep-24	05-Jun-24	07-Jun-24	-109					
Seawater Intake Structure														
08-2400(6D)	Construction of Seawater Intake	90	11	87.78%	22-Mar-23 A	10-Sep-24	09-Apr-24	19-Apr-24	-144					
Fire Boat Access														
08-2500(6D)	Construction of Fire Boat Access	120	120	0%	16-Sep-24	14-Jan-25	25-Apr-24	22-Aug-24	-145					
Mooring Dolphins														
09-4000(6G)	Mooring Dolphins Piling Works	90	90	0%	14-Sep-24	12-Dec-24	14-May-24	11-Aug-24	-123					
Foundation Works														
Sky Deck Foundation														
Sky Deck Pile Caps Construction														
09-2730(M62)	Excavation to Pile Cap Formation	21	14	32%	23-Jun-24 A	28-Sep-24	06-Mar-24	03-Apr-24	-177					
09-2740(M62)	Pile Cut-off & Capping Plate (2 Welders @ 2nr/d)	21	12	41%	03-Jul-24 A	21-Sep-24	15-Mar-24	27-Mar-24	-177					
09-2750(M62)	Pile Caps Construction	30	25	18%	27-Aug-24 A	28-Sep-24	10-Mar-24	03-Apr-24	-177	Change Relationship from Predecessor 09-2740(M62) from FS0 to FF7				
Process Building - Waste Bunker & Tipping Hall Bld Foundation														
Process Building Pile Cap Construction														
Pile Cap Stage 3 (Module 3 Between Grid PB22 to PB32)														
Process Building (Module 3) WWTP														

Activity ID	Activity Name	Original Duration	Remaining Duration	Activity % Complete	Current Start	Current Finish	Late Start	Late Finish	Total Float	M&B1 Remarks	2024			
											Aug 81	Sep 82	Oct 83	Nov 84
09-1260	Pile Caps and Raft Foundation Construction (60m x 24m 4set@100m2/7day)	26	2	92.12%	05-Aug-23 A	02-Sep-24	07-Apr-24	09-Apr-24	-146					
ACC Equipment Foundation														
ACC Pile Cap Construction														
09-1710-3(M78)	Tie Beams Construction (Module 2 & 3 @+6.5mPD) Grid ACA-ACD, AC4-AC6	30	6	80%	12-Jul-24 A	09-Sep-24	13-May-24	18-May-24	-114					
09-1720-1(M58)	On-grade Slab Construction Grid ACA-ACG, AC3-AC4	45	45	0%	10-Sep-24	24-Oct-24	31-May-24	14-Jul-24	-102					
Mechanical Treatment Plant & Water Treatment Plant Bld Foundation														
Mechanical Treatment Plant & Water Treatment Plant Bld Pile Cap Construction														
Mechanical Treatment Plant Pile Cap Construction														
09-1920	Excavation to Pile Cap Formation	39	2	95.57%	22-Jan-24 A	01-Sep-24	25-Mar-24	27-Mar-24	-158					
09-1930	Pile Cut-off & Capping Plate (410nrs, @20/d)	21	1	93%	01-Feb-24 A	01-Sep-24	26-Mar-24	27-Mar-24	-158					
09-1940	Pile Caps Construction	60	9	85%	21-Mar-24 A	08-Sep-24	18-Mar-24	27-Mar-24	-165					
Elevated Drive Way and Associated Structures Foundation														
Elevated Drive Way Pile Cap Construction														
Elevated Drive Way RSU to RSAF														
09-2730(M57)	Pile Caps Construction	21	3	86.35%	30-Dec-23 A	02-Sep-24	03-Apr-24	06-Apr-24	-150					
Reception Pavilion Foundation														
09-2100	Formation, Compaction & Raft Foundation Construction	30	30	0%	09-Oct-24	08-Nov-24	08-May-24	06-Jun-24	-155					
Weighbridge Foundation														
09-2710(6F)	Excavation & Construction of Weighbridge Bays and Cast-in bolts	45	45	0%	02-Oct-24	15-Nov-24	06-May-24	19-Jun-24	-149					
Heavy Load Access														
Demolition														
09-3040(6D)	Removal of Sub Base & Road Base & Foundation Works (Stage 3)	3	3	0%	26-Sep-24	28-Sep-24	05-Apr-24	07-Apr-24	-174					
Superstructure Works														
Administration & Viewing Gallery Bld Structure														
10-1030	Column & Wall to +17.0mPD	21	4	80%	25-Jul-24 A	04-Sep-24	23-Apr-24	27-Apr-24	-129	Update Actual Start Date				
10-1040	Beam & Slab to +17.0mPD	21	8	60%	25-Jul-24 A	08-Sep-24	23-Apr-24	01-May-24	-129	Update Actual Start Date: Change Relationship from Predecessor 10-1030 from FS0 to SS0				
10-1050	Column & Wall to +22.5mPD	21	21	0%	08-Sep-24	29-Sep-24	02-May-24	22-May-24	-129					
10-1060	Beam & Slab to +22.5mPD	21	21	0%	29-Sep-24	20-Oct-24	23-May-24	12-Jun-24	-129					
10-1070	Roof Parapet and Dog House	21	21	0%	20-Oct-24	10-Nov-24	13-Jun-24	03-Jul-24	-129					
Sky Deck Structure														
10-2310 (M55)	Construction of RC Column (16nr, 0.9m Dia x 11m, 3 pours @5d/pour with 4 formwork sets)	60	60	0%	13-Sep-24	12-Nov-24	20-Mar-24	18-May-24	-177					
10-2315 (7)	Beam & Slab to Deck Level app.+18mPD (appx. 600m3)	30	30	0%	03-Nov-24	03-Dec-24	10-May-24	08-Jun-24	-177					
Process Building - Waste Bunker & Tipping Hall Bld Structure														
Waste & Ash Bunker Bld Structure														
Process Building (Module 2) Waste & Ash Bunker Bld Structure														
10-1260	Column & Wall to +33.5mPD	30	8	75%	21-Apr-24 A	07-Sep-24	23-Mar-24	30-Mar-24	-161					
10-1280	Beam & Slab to +33.5mPD	30	6	80%	24-May-24 A	07-Sep-24	25-Mar-24	30-Mar-24	-161					
10-1290	Column, Wall & Beam to +41.0mPD	21	21	0%	31-Aug-24	20-Sep-24	10-Mar-24	30-Mar-24	-174					
10-1300	Column & Wall to +53.7mPD	21	21	0%	21-Sep-24	11-Oct-24	09-Apr-24	29-Apr-24	-165					
Process Building (Module 3) Waste & Ash Bunker Bld Structure														
10-1370	Column & Wall to +33.5mPD	18	14	25%	21-Jul-24 A	13-Sep-24	09-Feb-24	22-Feb-24	-204					
10-1390	Beam & Slab to +33.5mPD	18	18	0%	13-Sep-24	01-Oct-24	23-Feb-24	11-Mar-24	-204					
10-1400	Column, Wall & Beam to +41.0mPD	21	21	0%	01-Oct-24	22-Oct-24	12-Mar-24	01-Apr-24	-204					
10-1410	Column & Wall to +53.7mPD	21	21	0%	22-Oct-24	12-Nov-24	02-Apr-24	22-Apr-24	-204					
Process Building Waste & Ash Bunker Bld Structural Steel Roof														
10-2075(M81)	Install Temporary Construction Platform for Steel Roof Erection	30	16	46.67%	09-Aug-24 A	15-Sep-24	28-Mar-24	12-Apr-24	-156	New Activity				
10-2080	Module 1 Bunker Steel Roof Erection	45	45	0%	16-Sep-24	30-Oct-24	13-Apr-24	27-May-24	-156	Update Activity Name: Update Original Duration				
10-2080-01(M81)	Module 2 Bunker Steel Roof Erection	45	45	0%	31-Oct-24	14-Dec-24	28-May-24	11-Jul-24	-156	New Activity				
10-2220(7)	Module 1 Bunker Roof Cladding Installation	30	30	0%	31-Oct-24	29-Nov-24	06-Jun-24	05-Jul-24	-147	Update Activity Name: Update Original Duration				
Process Building Waste & Ash Bunker Bld Structure Between Bunker 1 and 2														
10-2370 (M78)	Beam & Slab to +33.5mPD Grid Line PBG to PBJ	21	6	70%	01-May-24 A	06-Sep-24	03-May-24	09-May-24	-119					
10-2390 (M78)	Beam & Slab to +17.5mPD	14	3	80%	06-Jul-24 A	02-Sep-24	16-Apr-24	18-Apr-24	-137					
10-2400 (M78)	Beam & Slab to +27.28mPD	12	10	15%	15-Aug-24 A	12-Sep-24	20-Apr-24	30-Apr-24	-135					
10-2410 (M78)	Beam & Slab to +11.58mPD and +12.4mPD	11	11	0%	12-Sep-24	23-Sep-24	29-Apr-24	09-May-24	-137					
10-2420 (M78)	Beam & Slab to +33.5mPD Grid Line PBA to PBG	9	9	0%	14-Sep-24	23-Sep-24	01-May-24	09-May-24	-137	Update Activity Name				
Process Building Waste & Ash Bunker Bld Structure Between Bunker 2 and 3														
10-2430 (M78)	Beam & Slab to +20.5mPD	14	10	30%	27-Jun-24 A	09-Sep-24	29-Feb-24	09-Mar-24	-184					
10-2440 (M78)	Beam & Slab to +33.5mPD Grid Line PBG to PBJ	21	21	0%	09-Sep-24	30-Sep-24	10-Mar-24	30-Mar-24	-184					
10-2460 (M78)	Beam & Slab to +17.5mPD	14	13	10%	22-Aug-24 A	12-Sep-24	26-Feb-24	09-Mar-24	-187					
10-2470 (M78)	Beam & Slab to +27.28mPD	12	12	0%	12-Sep-24	24-Sep-24	10-Mar-24	21-Mar-24	-187					
10-2480 (M78)	Beam & Slab to +11.58mPD and +12.4mPD	11	11	0%	22-Sep-24	03-Oct-24	20-Mar-24	30-Mar-24	-187					
10-2490 (M78)	Beam & Slab to +33.5mPD Grid Line PBA to PBG	9	9	0%	24-Sep-24	03-Oct-24	22-Mar-24	30-Mar-24	-187	Update Activity Name				
Process Building Waste & Ash Bunker Bld Misc. Steel Structure														
10-2330 (M63)	Facade Structural Frame Installation at Module 1	60	60	0%	21-Sep-24	19-Nov-24	26-May-24	24-Jul-24	-118					
10-2340 (M63)	Facade Structural Frame Installation at Module 2	60	60	0%	12-Oct-24	10-Dec-24	06-Jun-24	04-Aug-24	-128					
10-2350 (M63)	Facade Structural Frame Installation at Module 3	60	60	0%	29-Oct-24	28-Dec-24	09-Apr-24	07-Jun-24	-204					
10-2360-1(M81)	Waste Crane Runway Beam at Module 1	35	21	40%	02-Aug-24 A	20-Sep-24	13-Apr-24	03-May-24	-140	New Activity				
10-2360-2(M81)	Waste Crane Runway Beam at Module 2	35	35	0%	05-Oct-24	08-Nov-24	14-May-24	17-Jun-24	-144	New Activity				

Activity ID	Activity Name	Original Duration	Remaining Duration	Activity % Complete	Current Start	Current Finish	Late Start	Late Finish	Total Float	M&B1 Remarks	2024			
											Aug 81	Sep 82	Oct 83	Nov 84
10-2360-3(M81)	Waste Crane Runway Beam at Module 3	35	35	0%	09-Nov-24	13-Dec-24	28-Jun-24	01-Aug-24	-134	New Activity				
10-2360-4(M81)	Ash Crane Runway Beam at Module 1	35	35	0%	30-Sep-24	03-Nov-24	03-May-24	06-Jun-24	-150	New Activity				Ash Crane Runway Beam at Module 1
10-2360-5(M81)	Ash Crane Runway Beam at Module 2	35	35	0%	04-Nov-24	08-Dec-24	07-Jun-24	11-Jul-24	-150	New Activity				
Tipping Hall Bld Structure		128	21		12-Apr-24 A	20-Sep-24	09-Apr-24	27-Aug-24	-24					
Process Building (Module 2) Tipping Hall Bld Structure		43	21		12-Apr-24 A	20-Sep-24	09-Apr-24	29-Apr-24	-144					
10-1510	Column & Wall to +27.28mPD	21	2	90%	12-Apr-24 A	02-Sep-24	09-Apr-24	11-Apr-24	-144			Column & Wall to +27.28mPD		
10-1520	Beam & Slab to +27.28mPD	21	19	10%	27-May-24 A	20-Sep-24	11-Apr-24	29-Apr-24	-144			Beam & Slab to +27.28mPD		
Process Building (Module 3) WWTP & Tipping Hall Structure		14	3		21-Jul-24 A	04-Sep-24	25-Aug-24	27-Aug-24	-8					
10-3070-6(7)	Beam & Slab to +27.28mPD	14	3	80%	21-Jul-24 A	04-Sep-24	25-Aug-24	27-Aug-24	-8	Update Actual Start Date		Beam & Slab to +27.28mPD		
Process Building - Boiler & Flue Gas Treatment Bld Structure		629	140		21-Aug-23 A	17-Jan-25	06-Mar-24	02-Aug-24	-168					
Steel Structure		453	52		21-Aug-23 A	21-Oct-24	27-Apr-24	17-Jun-24	-126					
Boiler Building Steel Structure		453	52		21-Aug-23 A	21-Oct-24	27-Apr-24	17-Jun-24	-126					
Process Building (Module 1) Steel Structure Erection		60	14		21-Aug-23 A	14-Sep-24	03-Jun-24	17-Jun-24	-88					
10-1640	Roof Cladding Installation	60	14	75.95%	21-Aug-23 A	14-Sep-24	03-Jun-24	17-Jun-24	-88			Roof Cladding Installation		
Process Building (Module 2) Steel Structure Erection		60	52		25-Oct-23 A	21-Oct-24	27-Apr-24	17-Jun-24	-126					
10-1680	Roof Cladding Installation	60	52	13.42%	25-Oct-23 A	21-Oct-24	27-Apr-24	17-Jun-24	-126			Roof Cladding Installation		
Process Building (Module 3) Process Building Steel Structure Erection		60	35		12-Dec-23 A	05-Oct-24	13-May-24	17-Jun-24	-109					
10-1720	Roof Cladding Installation	60	35	41%	12-Dec-23 A	05-Oct-24	13-May-24	17-Jun-24	-109			Roof Cladding Installation		
Flue Gas Treatment Bld Steel Structure		30	3		11-Apr-24 A	02-Sep-24	01-Jun-24	03-Jun-24	-91					
Process Building (Module 3) Steel Structure Erection		30	3		11-Apr-24 A	02-Sep-24	01-Jun-24	03-Jun-24	-91					
10-1840	Roof Cladding Installation	30	3	90%	11-Apr-24 A	02-Sep-24	01-Jun-24	03-Jun-24	-91			Roof Cladding Installation		
Process Building Internal Partition Wall and Staircase		140	140		31-Aug-24	17-Jan-25	06-Mar-24	02-Aug-24	-168					
10-1850	RC Partition and Staircase at Module 1	60	60	0%	31-Aug-24	29-Oct-24	06-Mar-24	04-May-24	-178					RC Partition and Staircase at Module 1
10-1860	RC Partition and Staircase at Module 2	60	60	0%	10-Oct-24	08-Dec-24	25-Apr-24	23-Jun-24	-168					
10-1870	RC Partition and Staircase at Module 3	60	60	0%	19-Nov-24	17-Jan-25	04-Jun-24	02-Aug-24	-168					
Compressor & CCCW Bld Structure		21	21		31-Aug-24	20-Sep-24	16-Apr-24	06-May-24	-137					
10-2210	Concrete Plinth & install anchor bolts @+15.0mPD	21	21	0%	31-Aug-24	20-Sep-24	16-Apr-24	06-May-24	-137			Concrete Plinth & install anchor bolts @+15.0mPD		
Chimney Structure		40	40		27-Nov-24	05-Jan-25	22-Aug-24	30-Sep-24	-97	Remove Predecessor 10-2240 FS1				
10-2060-1	Chimney Roof Slab (47th Pour)	40	40	0%	27-Nov-24	05-Jan-25	22-Aug-24	30-Sep-24	-97					
Mechanical Treatment Plant Bld Structure		183	92		20-Mar-24 A	01-Dec-24	18-Mar-24	13-Jul-24	-140					
10-2090	Ground Slab @+6.5mPD	21	10	53%	20-Mar-24 A	09-Sep-24	18-Mar-24	28-Mar-24	-165			Ground Slab @+6.5mPD		
10-2095	Column & Wall to +13.5mPD	21	15	30%	08-May-24 A	14-Sep-24	18-Mar-24	02-Apr-24	-165			Column & Wall to +13.5mPD		
10-2096	1/F Slab @+13.5mPD	21	15	30%	05-Aug-24 A	29-Sep-24	02-Apr-24	16-Apr-24	-165			1/F Slab @+13.5mPD		
10-2100	Column & Wall to +17.5mPD	21	21	0%	29-Sep-24	20-Oct-24	17-Apr-24	07-May-24	-165			Column & Wall to +17.5mPD		
10-2110	2/F Slab @+17.5mPD	21	21	0%	20-Oct-24	10-Nov-24	02-Jun-24	22-Jun-24	-140			2/F Slab @+17.5mPD		
10-2120	Column & Wall to +23.0mPD	21	21	0%	10-Nov-24	01-Dec-24	23-Jun-24	13-Jul-24	-140					
Water Treatment Plant Bld Structure		21	3		16-Jul-24 A	03-Sep-24	10-Apr-24	13-Apr-24	-142					
10-2390(6F)	Parapet Wall	21	3	84%	16-Jul-24 A	03-Sep-24	10-Apr-24	13-Apr-24	-142			Parapet Wall		
Elevated Drive Way and Associated Structures		288	176		15-Apr-24 A	22-Feb-25	01-Apr-24	19-Oct-24	-126					
Elevated Drive Way RSA to RSG (FS Control Rm & Vehicle Washing Facility)		207	176		01-Jul-24 A	22-Feb-25	14-Apr-24	19-Oct-24	-126					
10-2220(M57)	Wall & Column to +12.5mPD Mezzanine Level	30	5	83%	01-Jul-24 A	05-Sep-24	14-Apr-24	19-Apr-24	-138			Wall & Column to +12.5mPD Mezzanine Level		
10-2230(M57)	Beam & Slab to +12.5mPD Mezzanine Level	21	20	5%	26-Aug-24 A	19-Sep-24	14-Apr-24	03-May-24	-139	Update Actual Start Date; Change Relationship from Predecessor from FS0 to FFT4		Beam & Slab to +12.5mPD Mezzanine Level		
10-2250(M57)	Wall & Column to +17.5 Ramp Level	30	30	0%	19-Sep-24	19-Oct-24	04-May-24	02-Jun-24	-139			Wall & Column to +17.5 Ramp Level		
10-2260(M57)	Beam & Slab to +17.5 Ramp Level	21	21	0%	19-Oct-24	09-Nov-24	03-Jun-24	23-Jun-24	-139			Beam & Slab to +17.5 Ramp Level		
10-2270(M57)	Truck Washing Facility House Column and Roof Slab to +28mPD	90	90	0%	24-Nov-24	22-Feb-25	22-Jul-24	19-Oct-24	-126					
Elevated Drive Way RSG to RSX (Transform Room)		131	92		15-May-24 A	14-Dec-24	16-Apr-24	16-Jul-24	-151					
10-2310(M57)	G/F Base Slab	30	8	75%	15-May-24 A	22-Sep-24	16-Apr-24	23-Apr-24	-151			G/F Base Slab		
10-2320(M57)	Wall & Column to +12.5mPD Mezzanine Level	21	21	0%	22-Sep-24	12-Oct-24	24-Apr-24	14-May-24	-151			Wall & Column to +12.5mPD Mezzanine Level		
10-2330(M57)	Beam & Slab to +12.5mPD Mezzanine Level	21	21	0%	13-Oct-24	02-Nov-24	15-May-24	04-Jun-24	-151			Beam & Slab to +12.5mPD Mezzanine Level		
10-2340(M57)	Wall & Column to +17.5 Ramp Level	21	21	0%	03-Nov-24	23-Nov-24	05-Jun-24	25-Jun-24	-151			Wall & Column to +17.5 Ramp Level		
10-2350(M57)	Beam & Slab to +17.5 Ramp Level	21	21	0%	24-Nov-24	14-Dec-24	26-Jun-24	16-Jul-24	-151					
Elevated Drive Way RSX to RSAB		72	72		29-Sep-24	09-Dec-24	08-Apr-24	18-Jun-24	-174					
10-2410(M81)	G/F Base Slab	30	30	0%	29-Sep-24	28-Oct-24	08-Apr-24	07-May-24	-174	New Activity		G/F Base Slab		
10-2420(M81)	Wall & Column to +12.5mPD Mezzanine Level	14	14	0%	29-Oct-24	11-Nov-24	08-May-24	21-May-24	-174	New Activity		Wall & Column to +12.5mPD Mezzanine Level		
10-2430(M81)	Beam & Slab to +12.5mPD Mezzanine Level	14	14	0%	12-Nov-24	25-Nov-24	22-May-24	04-Jun-24	-174	New Activity		Beam & Slab to +12.5mPD Mezzanine Level		
10-2440(M81)	Wall & Column to +17.5 Ramp Level	14	14	0%	26-Nov-24	09-Dec-24	05-Jun-24	18-Jun-24	-174	New Activity		Wall & Column to +17.5 Ramp Level		
Elevated Drive Way RSAB to RSAF		112	115		15-Apr-24 A	23-Dec-24	01-Apr-24	02-Jul-24	-174					
10-2360(M57)	G/F Base Slab	45	5	90%	15-Apr-24 A	04-Sep-24	01-Apr-24	06-Apr-24	-151			G/F Base Slab		
10-2370(M57)	Wall & Column to +13mPD Mezzanine Level	45	20	55%	20-Apr-24 A	20-Sep-24	01-Apr-24	21-Apr-24	-151			Wall & Column to +13mPD Mezzanine Level		
10-2380(M57)	Beam & Slab to +13mPD Mezzanine Level	30	21	30%	10-May-24 A	11-Oct-24	22-Apr-24	12-May-24	-151			Beam & Slab to +13mPD Mezzanine Level		
10-2390(M57)	Wall & Column to +17.5 Ramp Level	30	21	30%	17-May-24 A	01-Nov-24	13-May-24	02-Jun-24	-151			Wall & Column to +17.5 Ramp Level		
10-2400(M57)	Beam & Slab to +17.5 Ramp Level	30	30	0%	20-May-24 A	23-Dec-24	03-Jun-24	02-Jul-24	-174					
Reception Pavilion Structure		30	30		08-Nov-24	08-Dec-24	07-Jun-24	06-Jul-24	-155					
10-2280	Reception Pavilion RC Structure Construction	30	30	0%	08-Nov-24	08-Dec-24	07-Jun-24	06-Jul-24	-155					
Pipebridge Structure		9	9		31-Aug-24	08-Sep-24	30-May-24	07-Jun-24	-93					
Pipe Bridge C		9	9		31-Aug-24	08-Sep-24	30-May-24	07-Jun-24	-93					
Connect to ACC 1		3	3		31-Aug-24	02-Sep-24	30-May-24	01-Jun-24	-93					
10-2310(6)	Erection of Pipebridge C between Turbine Hall & ACC 1	3	3	0%	31-Aug-24	02-Sep-24	30-May-24	01-Jun-24	-93			Erection of Pipebridge C between Turbine Hall & ACC 1		
Connect to ACC 2		3	3		03-Sep-24	05-Sep-24	02-Jun-24	04-Jun-24	-93					
10-2310-1(M63)	Erection of Pipebridge C between Turbine Hall & ACC 2	3	3	0%	03-Sep-24	05-Sep-24	02-Jun-24	04-Jun-24	-93			Erection of Pipebridge C between Turbine Hall & ACC 2		

Activity ID	Activity Name	Original Duration	Remaining Duration	Activity % Complete	Current Start	Current Finish	Late Start	Late Finish	Total Float	M&B1 Remarks	2024								
											Aug 81	Sep 82	Oct 83	Nov 84					
Connect to ACC 3																			
10-2310-2(M63)	Erection of Pipebridge C between Turbine Hall & ACC 3	3	3	0%	06-Sep-24	08-Sep-24	05-Jun-24	07-Jun-24	-93										
Vehicle Fuel Filling Station																			
10-2450(6D)	Filling Station Structure Construction	45	45	0%	02-Oct-24	15-Nov-24	14-May-24	27-Jun-24	-141										
Vessel Offloading Point																			
08-2420(7)	Vehicle Ferry Ramp Installation	120	120	0%	24-Oct-24	21-Feb-25	13-Jun-24	10-Oct-24	-134										
Weighbridge Kiosk																			
08-2430(M79)	Construction of Weighbridge Kiosk	45	45	0%	02-Oct-24	15-Nov-24	06-May-24	19-Jun-24	-149										
ACC Yard																			
13-2000	Delivery and Erection of ACC Steel Structure & Steel Structure Support of Condensate Tank (Module 1)	90	45	50%	31-Mar-24 A	14-Oct-24	05-Apr-24	19-May-24	-148										
13-2040	Delivery and Erection of ACC Steel Structure & Steel Structure Support of Condensate Tank (Module 2)	90	90	0%	25-Sep-24	23-Dec-24	04-Apr-24	02-Jul-24	-174										
13-2080	Delivery and Erection of ACC Steel Structure & Steel Structure Support of Condensate Tank (Module 3)	90	90	0%	11-Oct-24	08-Jan-25	16-May-24	13-Aug-24	-148										
Architectural Builders Works & Finishes																			
Process Building - Waste Bunker & Tipping Hall Bid ABWF Works																			
11-1070	Metal Railings, Platforms, Gratings, Cable trench covers Installations	90	90	0%	13-Sep-24	12-Dec-24	06-Oct-24	03-Jan-25	23										
11-1080	Internal Wall and Floor Finishes	230	200	13%	20-Nov-23 A	19-Mar-25	20-May-24	06-Dec-24	-103										
11-1090	False ceiling and Raise Floor installation (in CCR)	45	45	0%	31-Aug-24	14-Oct-24	06-May-24	19-Jun-24	-117										
11-1100	External Finishes, Curtain Walls and Roof Waterproofing	90	87	3%	20-Feb-24 A	26-Nov-24	05-Jul-24	30-Sep-24	-56										
11-1540(M63)	Facade Panels Erection for Module 2 (284pcs. @4pcs/d)	77	77	0%	11-Nov-24	26-Jan-25	06-Jul-24	20-Sep-24	-128	Change Relationship to Successor 16-1570 from FS0 to FF0									
11-1550(M63)	Facade Panels Erection for Module 3 (612pcs. @8pcs/d)	77	77	0%	27-Nov-24	12-Feb-25	08-May-24	23-Jul-24	-204										
Process Building - Boiler & Flue Gas Bid ABWF Works																			
11-1120	Metal Railings, Staircase, Platforms & Gratings Installations	200	200	0%	21-Oct-24	09-May-25	18-Jun-24	03-Jan-25	-126										
11-1130	Internal Wall and Floor Finishes	180	162	10%	01-Aug-24 A	08-Feb-25	27-Feb-24	06-Aug-24	-186	Update Actual Start Date									
11-1560(7)	Transformer Room 1 & 2 Blockwork and Finishes	30	18	40%	25-Jul-24 A	17-Sep-24	19-Feb-24	08-Mar-24	-194										
11-1570(7)	Transformer Room 3 & 4 Blockwork and Finishes	30	29	5%	27-Aug-24 A	28-Sep-24	19-Feb-24	18-Mar-24	-194	Update Actual Start Date									
11-1580(7)	Transformer Room 5 & 6 Blockwork and Finishes	30	27	10%	25-Jul-24 A	26-Sep-24	07-Feb-24	04-Mar-24	-206	Change Relationship from Predecessor from FS-14 to FF-14									
Turbine Hall Bid ABWF Works																			
Electrical Bid ABWF Works																			
11-1150	Door, Windows and Louvers Installation	90	90	0%	31-Aug-24	28-Nov-24	20-Apr-24	18-Jul-24	-133										
11-1160	Metal Railings, Platforms, Gratings, Cable trench covers Installations	90	81	10%	15-Apr-24 A	19-Nov-24	29-Apr-24	18-Jul-24	-124										
11-1170	Internal Wall and Floor Finishes	90	16	82%	09-Dec-23 A	16-Sep-24	02-Jul-24	18-Jul-24	-59										
11-1180	False ceiling and Raise Floor installation	90	90	0%	31-Aug-24	28-Nov-24	24-Mar-24	21-Jun-24	-160										
11-1190	External Finishes, Roof Waterproofing	90	90	0%	31-Aug-24	28-Nov-24	20-Apr-24	18-Jul-24	-133	Change Lag from Predecessor 11-1150 from FF30 to FF0									
11-1540	Facade Panels Erection (167pcs. @8pcs/d)	23	23	0%	22-Oct-24	13-Nov-24	26-Jun-24	18-Jul-24	-118										
Turbine Hall ABWF Works																			
11-1200	Door, Roller Shutter, Windows and Louvers Installation	60	60	0%	12-Nov-24	10-Jan-25	24-Apr-24	22-Jun-24	-202										
11-1210	Metal Railings, Platforms, Gratings, Cable trench covers Installations	90	90	0%	31-Aug-24	28-Nov-24	25-Apr-24	23-Jul-24	-128										
11-1220	Internal Wall and Floor Finishes for remain area	90	90	0%	31-Aug-24	28-Nov-24	12-May-24	09-Aug-24	-111										
11-1240	External Finishes, Curtain Walls and Roof Waterproofing	120	120	0%	13-Oct-24	09-Feb-25	25-Mar-24	22-Jul-24	-202										
11-1540-1(M63)	Facade Structural Frame Erection	52	52	0%	31-Aug-24	21-Oct-24	11-Feb-24	02-Apr-24	-202										
11-1550	Facade Panels Erection (207pcs. @4pcs/d)	51	51	0%	22-Oct-24	11-Dec-24	03-Apr-24	23-May-24	-202										
Compressor & CCCW Bid ABWF Works																			
11-1250	Door, Roller Shutter, Windows and Louvers Installation	90	90	0%	31-Aug-24	28-Nov-24	20-Apr-24	18-Jul-24	-133										
11-1260	Metal Railings, Platforms, Gratings, Cable trench covers Installations	90	90	0%	31-Aug-24	28-Nov-24	20-Apr-24	18-Jul-24	-133	Change Lag from Successor 11-1290 from FF30 to FF0									
11-1270	Internal Wall and Floor Finishes	90	90	0%	31-Aug-24	28-Nov-24	20-Apr-24	18-Jul-24	-133										
11-1280	False ceiling and Raise Floor installation	90	90	0%	31-Aug-24	28-Nov-24	20-Apr-24	18-Jul-24	-133										
11-1290	External Finishes and Roof Waterproofing	90	90	0%	31-Aug-24	28-Nov-24	20-Apr-24	18-Jul-24	-133										
Chimney ABWF Works																			
10-2240	Erection of Steel Grating Platform	55	55	0%	07-Sep-24	31-Oct-24	10-May-24	03-Jul-24	-120	Add Predecessor 10-2230 FS11: Update Original Duration from 90d to 55d									
11-1000	Installation of Metal Staircase, Railings, Lift Shaft	26	26	0%	01-Nov-24	26-Nov-24	27-Jul-24	21-Aug-24	-97	Update Activity Name: Update Relationship from Predecessor 10-2240 from FF30 to FS0; Update Original Duration from 90d									
11-1490	Door and Windows Installation	60	60	0%	20-Sep-24	18-Nov-24	15-Aug-24	13-Oct-24	-36	Change Relationship from Predecessor from FF30 to SS13									
11-1500	Internal Wall and Floor Finishes	30	30	0%	01-Nov-24	30-Nov-24	24-Jul-24	22-Aug-24	-100										
Mechanical Treatment Plant & Water Treatment Plant Bid ABWF Works																			
Mechanical Treatment Plant ABWF Works																			
11-1310	Metal Railings, Platforms, Gratings, Cable trench covers Installations	120	120	0%	29-Oct-24	26-Feb-25	19-Sep-24	16-Jan-25	-40										
11-1320	Internal Wall and Floor Finishes	120	120	0%	29-Oct-24	26-Feb-25	05-Sep-24	02-Jan-25	-54										
Water Treatment Plant ABWF Works																			
11-1600(7)	Door, Roller Shutter, Windows and Louvers Installation	90	90	0%	21-Sep-24	19-Dec-24	04-May-24	01-Aug-24	-140	Change Lag from Predecessor 11-1650(7) from FF10 to FF0									
11-1610(7)	Metal Railings, Platforms, Gratings, Cable trench covers Installations	90	90	0%	31-Aug-24	28-Nov-24	04-May-24	01-Aug-24	-119	Update Original Duration from 120d to 90d									
11-1620(7)	Internal Wall and Floor Finishes	90	90	0%	14-Sep-24	12-Dec-24	04-May-24	01-Aug-24	-133	Update Original Duration from 120d to 90d									
11-1630(7)	External Finishes, and Roof Waterproofing	90	90	0%	23-Sep-24	22-Dec-24	04-May-24	01-Aug-24	-142	Change Lag from Predecessor 10-2390(6F) from FS30 to FS20; Change Lag from Predecessor 05-4750 from FS0 to FF0									
11-1640(7)	Facade Structural Frame Erection	90	90	0%	31-Aug-24	28-Nov-24	13-Apr-24	11-Jul-24	-140										
11-1650(7)	Facade Panels Erection (272pcs. @8pcs/d)	80	80	0%	01-Oct-24	19-Dec-24	14-May-24	01-Aug-24	-140	Change Lag from Predecessor from FF30 to FF21									

Activity ID	Activity Name	Original Duration	Remaining Duration	Activity % Complete	Current Start	Current Finish	Late Start	Late Finish	Total Float	M&B1 Remarks	2024			
											Aug 81	Sep 82	Oct 83	Nov 84
IWMF Substation BS Works														
12-1470	Plumbing & Drainage System	90	13	85.75%	10-Oct-23 A	18-Sep-24	30-May-24	06-Nov-24	49					
12-1480	MVAC System	90	9	90%	11-Oct-23 A	08-Sep-24	29-Oct-24	06-Nov-24	59					
12-1490	Fire Service System (IWMF Substation)	90	9	90%	12-Oct-23 A	08-Sep-24	30-May-24	07-Jun-24	-93					
12-1500	Electrical and Lighting System	90	19	79%	10-Oct-23 A	18-Sep-24	11-Oct-24	30-Oct-24	42					
12-1510	Security, Surveillance & Communication System	90	14	85%	20-Nov-23 A	13-Sep-24	11-Oct-24	24-Oct-24	42					
ACC Equipment Structure BS Works														
12-1580(5a)	Plumbing & Drainage System	60	60	0%	22-Oct-24	20-Dec-24	22-Dec-24	19-Feb-25	61					
12-1590(5a)	MVAC System	90	90	0%	22-Oct-24	19-Jan-25	09-Aug-24	06-Nov-24	-74					
12-1600(5a)	Fire Service System (Equipment/Appliance)	60	60	0%	22-Oct-24	20-Dec-24	23-Aug-24	21-Oct-24	-60					
12-1610(5a)	Electrical and Lighting System	60	60	0%	22-Oct-24	20-Dec-24	21-Oct-24	19-Dec-24	-1					
12-1620(5a)	Security, Surveillance & Communication System	60	60	0%	22-Oct-24	20-Dec-24	26-Aug-24	24-Oct-24	-57					
Vehicle Fuel Filling Station BS Works														
12-2020(6D)	Fire Service System (Vehicle Filling Station)	60	60	0%	16-Nov-24	14-Jan-25	23-Aug-24	21-Oct-24	-85					
12-2030(6D)	Electrical and Lighting System (Vehicle Filling Station)	60	60	0%	16-Nov-24	14-Jan-25	10-Sep-24	08-Nov-24	-67					
12-2040(6D)	Security, Surveillance & Communication System (Vehicle Filling Station)	30	30	0%	16-Nov-24	15-Dec-24	25-Sep-24	24-Oct-24	-52					
12-2050(6D)	Install Fuel Filling Kiosk	60	60	0%	16-Nov-24	14-Jan-25	28-Jun-24	26-Aug-24	-141					
Seawater Intake Chamber BS Works														
12-1630(7)	Plumbing & Drainage System	60	60	0%	10-Oct-24	09-Dec-24	20-May-24	18-Jul-24	-144					
12-1640(7)	MVAC System	60	60	0%	10-Oct-24	09-Dec-24	08-Sep-24	06-Nov-24	-33					
12-1650(7)	Fire Service System (Equipment/Appliance)	60	60	0%	10-Oct-24	09-Dec-24	23-Aug-24	21-Oct-24	-49					
12-1660(7)	Electrical and Lighting System	60	60	0%	10-Oct-24	09-Dec-24	20-May-24	18-Jul-24	-144					
12-1670(7)	Security, Surveillance & Communication System	60	60	0%	09-Nov-24	08-Jan-25	26-Aug-24	24-Oct-24	-76					
Process Equipment Installation														
Process Building - Waste Bunker & Tipping Hall Bid Process Equipment Installation														
Equipment, Piping and Instrument Installation and Connection Works														
Process Building (Module 1)														
12-3010(6F)	Piping Installation Works	80	72	10%	30-Jun-24 A	19-Dec-24	04-Apr-24	23-Jul-24	-149					
12-3020(6F)	Pipe Testing	60	60	0%	06-Oct-24	04-Dec-24	10-May-24	08-Jul-24	-149					
12-3030(6F)	Piping Insulation Works	60	60	0%	21-Oct-24	19-Dec-24	25-May-24	23-Jul-24	-149					
Process Building (Module 2)														
12-3040(6F)	Embedded Piping Installation	60	15	75%	02-Jan-24 A	14-Sep-24	12-Mar-24	26-Mar-24	-172					
12-3050(6F)	Piping Installation Works	90	90	0%	31-Aug-24	28-Nov-24	31-Jan-24	29-Apr-24	-213					
12-3060(6F)	Pipe Testing	60	60	0%	26-Oct-24	24-Dec-24	27-Mar-24	25-May-24	-213					
12-3070(6F)	Piping Insulation Works	90	90	0%	25-Nov-24	22-Feb-25	26-Apr-24	24-Jul-24	-213					
12-3075(M71)	Equipment Installation at Basin Area at +6.5mPD (Included Boiler Drainage Tanks)	90	90	0%	31-Aug-24	28-Nov-24	26-Mar-24	23-Jun-24	-158					
Process Building (Module 3)														
12-3080(6F)	Embedded Piping Installation	60	45	25%	05-Feb-24 A	14-Oct-24	10-May-24	23-Jun-24	-113					
12-3090(6F)	Piping Installation Works	90	90	0%	13-Oct-24	11-Jan-25	25-Apr-24	23-Jul-24	-172					
Process Building (WWTP)														
12-3160(6F)	Embedded Piping Installation	60	60	0%	20-Sep-23 A	01-Nov-24	09-Apr-24	08-Jun-24	-146					
Ash Treatment Equipment (Module 1)														
12-4000(6G_R1)	Deliver and installation of Ash Treatment Equipments	120	36	70%	10-Mar-24 A	05-Oct-24	19-May-24	23-Jun-24	-104					
Ash Treatment Equipment (Module 2)														
12-4010(6G_R1)	Deliver and installation of Ash Treatment Equipments	120	108	10%	30-Jun-24 A	16-Dec-24	23-Mar-24	08-Jul-24	-161					
Ash Treatment Equipment (Module 3)														
12-4020(6G_R1)	Deliver and installation of Ash Treatment Equipments	120	116	3%	15-Jul-24 A	25-Dec-24	05-May-24	29-Aug-24	-117					
Process Building (Cranes and Shredder)														
Process Building (Module 1)														
13-1000-1(6)	Ash Crane Nos. 1 & 2 Installation @+15.3mPD	70	42	40%	30-Apr-24 A	15-Dec-24	16-Aug-24	26-Sep-24	-80	Remove Successor 16-1390				
13-1000-2(6)	Shredder No.1 Installation	60	60	0%	23-Sep-24	22-Nov-24	10-May-24	08-Jul-24	-137					
13-1000-5(6B)	Waste Crane Control Room 1 Equipment (+33.5)	70	70	0%	31-Aug-24	08-Nov-24	29-Jul-24	06-Oct-24	-33	Rename Activity Name: Remove Predecessor 05-4940-3(6E)				
13-1000-6(6B)	EOTC & Monorail Hoist System installation in Ash Crane Control Room (+15.8mPD & +19.9mPD)	70	70	0%	23-Oct-24	01-Jan-25	29-Jul-24	06-Oct-24	-87	Add Predecessor 10-2420 (M78) FS30; Remove Successor 16-1390 F50				
13-1000-7(6B)	EOTC & Monorail Hoist System installation in Mechanical Shredder Area +28.5mPD	70	70	0%	23-Sep-24	02-Dec-24	29-Jul-24	06-Oct-24	-57	Add Predecessor 10-2420 (M78) F50				
13-1000-8(6B)	Monorail Hoist System installation in CCR Electrical Switch room +13.75mPD	60	60	0%	31-Aug-24	29-Oct-24	20-May-24	18-Jul-24	-103					
13-1000-9(6B)	Monorail Hoist System installation in CCR Electrical Switch room +23mPD	60	60	0%	31-Aug-24	29-Oct-24	20-May-24	18-Jul-24	-103					
13-1010(6B)	EOTC Hoist System installation in Main Workshop & Store +15.3mPD	60	21	65%	15-Mar-24 A	20-Sep-24	16-Sep-24	06-Oct-24	16					
13-1020(M81)	Ash Crane Control Room 1 Equipment	4	4	0%	23-Sep-24	27-Sep-24	03-Oct-24	06-Oct-24	9	New Activity ID				
Process Building (Module 2)														
13-1004-2(M71)	Shredder No.2 Installation	70	70	0%	03-Oct-24	12-Dec-24	31-Mar-24	08-Jun-24	-187					
13-1004-3(M71)	Waste Crane Hoist Installation (Grid PB21-PB22)	70	70	0%	15-Oct-24	24-Dec-24	16-Aug-24	24-Oct-24	-61	Rename Activity Name: Remove Successor 16-1390 F50				
13-1004-6(M71)	EOTC & Monorail Hoist System installation in Ash Crane Control Room (+15.8mPD & +19.9mPD)	70	70	0%	17-Oct-24	26-Dec-24	16-Aug-24	24-Oct-24	-63	Add Successor 10-2490 (M78) FS14; Remove Successor 16-1390 F50				
13-1004-7(M71)	EOTC & Monorail Hoist System installation in Mechanical Shredder Area +28.5mPD	70	70	0%	28-Sep-24	07-Dec-24	29-Jul-24	06-Oct-24	-62					
13-1008-5(M71)	Waste Crane Control Room 2 Equipment	70	70	0%	12-Nov-24	21-Jan-25	16-Aug-24	24-Oct-24	-89	Rename Activity Name: Add Predecessor 10-2490 (M78) FS30; Remove Successor 16-1390 F50				
13-1008-8(M81)	Ash Control Room 2 Equipment	30	30	0%	02-Nov-24	02-Dec-24	25-Sep-24	24-Oct-24	-39	New Activity				
Process Building (Module 3)														
13-1008-3(M71)	Waste Crane Hoist Installation (Grid PB31-PB32)	70	70	0%	22-Oct-24	31-Dec-24	16-Aug-24	24-Oct-24	-68	Rename Activity Name: Remove Successor 16-1390 F50				

Activity ID	Activity Name	Original Duration	Remaining Duration	Activity % Complete	Current Start	Current Finish	Late Start	Late Finish	Total Float	M&B1 Remarks	2024			
											Aug 81	Sep 82	Oct 83	Nov 84
Process Building (WWTP)														
13-1010-1(6)	WWTP Piping and instrument installation	120	108	10.04%	01-Mar-23 A	18-Dec-24	09-Apr-24	01-Aug-24	-139	Update forecast Finish Date				
13-1010-10(6E)	Provision of Temporary Power Supply for WWTP Testing & Commissioning	60	60	0%	20-Oct-24	18-Dec-24	03-Jun-24	01-Aug-24	-139					
13-1010-2(6)	WWTP Electrical Equipment installation & Cable pulling and termination	90	90	0%	02-Sep-24	01-Dec-24	27-Apr-24	25-Jul-24	-128	Update Original Duration from 120d to 90d				
WWTP Mechanical equipment installation														
13-1010-12(M63)	Equipments for Bio-Tank Area @+3.3mPd	120	90	50.04%	07-Jul-24 A	31-Oct-24	27-May-24	25-Jul-24	-98					Equipments for Bio-Tank Area @+3.3mPd
13-1010-13(M63)	Equipments for Centrale Area, Inlet Sump & EQ Tank Area @+2.0mPd	90	90	0%	02-Sep-24	01-Dec-24	27-Apr-24	25-Jul-24	-128	Update Original Duration from 100d to 90d				
13-1010-5(6B)	EOTC Hoist System installation in WWTP +6.5	60	57	5%	15-Aug-24 A	29-Oct-24	10-May-24	05-Jul-24	-115	Remove Lag from Predecessors 10-3060(6F) and 10-3070-4(M63); Update Actual Start Date				EOTC Hoist System installation in WWTP +6.5
13-1010-6(6B)	Monorail Hoist System installation in WWTP +10mPD & +13.3mPD	60	60	0%	10-Sep-24	09-Nov-24	07-May-24	05-Jul-24	-126					Monorail Hoist System installation
13-1010-7(6B)	LVSG 6A/6B @ WWTP Switch room +13.3mPD	60	60	0%	02-Sep-24	01-Nov-24	27-Apr-24	25-Jun-24	-128					LVSG 6A/6B @ WWTP Switch room +13.3mPD
13-1010-8(6B)	UPS DB @ WWTP Switch room @13.3mPd	60	60	0%	02-Sep-24	01-Nov-24	27-Apr-24	25-Jun-24	-128					UPS DB @ WWTP Switch room @13.3mPd
13-1020(6F)	Equipment Installation for Equipment Rm, Sludge Dewatering Rm & Chemical Rm Area @+6.5mPd	90	81	10%	21-Aug-24 A	22-Nov-24	06-May-24	25-Jul-24	-119	Update Actual Start Date				Equipment
13-1030(6F)	Equipment Installation for MBR Tank, DAF & Chemical Tank Area @+10.0mPd	60	60	0%	02-Sep-24	01-Nov-24	27-Apr-24	25-Jun-24	-128					Equipment Installation for MBR Tank, DAF & Che
13-1040(6F)	Equipment for Pretreatment, Chemical Tank, RO, MBR, AQP, MCC & Control Area @+12.5mPd	60	54	10%	20-Aug-24 A	26-Oct-24	03-May-24	25-Jun-24	-122	Update Actual Start Date				Equipment for Pretreatment, Chemical Tank, RO, MBR, AQ
Process Building (Central Control System Installation)														
13-1010-3(6B)	Mechanical equipment installation (Control Room 2 +36.5mPD)	98	98	0%	31-Aug-24	06-Dec-24	26-Apr-24	01-Aug-24	-127					
13-1980	Control Systems Installation at CCR	60	60	0%	29-Sep-24	27-Nov-24	20-May-24	18-Jul-24	-132					
13-1990	Cable laying and Termination	60	60	0%	29-Sep-24	27-Nov-24	20-May-24	18-Jul-24	-132					
13-2160(6B)	DCS Installation	60	60	0%	29-Sep-24	27-Nov-24	20-May-24	18-Jul-24	-132					
13-2210(6B)	CMMS Installation	60	60	0%	29-Sep-24	27-Nov-24	20-May-24	18-Jul-24	-132					
13-2260(6B)	IDMS installation	60	60	0%	29-Sep-24	27-Nov-24	20-May-24	18-Jul-24	-132					
13-2270(6B)	OMS Installation	60	60	0%	29-Sep-24	27-Nov-24	20-May-24	18-Jul-24	-132					
13-2280(6D)	Monorail Hoist System installation in CCR Electrical Switch room +13.75mPD	60	60	0%	11-Oct-24	10-Dec-24	20-May-24	18-Jul-24	-145					
Process Building (Switch Room)														
13-1000-4(6B)	Waste Crane Switch room E&I Equipment installation @+29.5mPd, inclusive of Control Chair and Junction box in WCCR	60	60	0%	31-Aug-24	29-Oct-24	20-May-24	18-Jul-24	-103					Waste Crane Switch room E&I Equipment installation
13-1010-4(6B)	Mechanical equipment installation (Switch Room +28.25mPD)	90	90	0%	31-Aug-24	28-Nov-24	20-Apr-24	18-Jul-24	-133	Update Original Duration from 120d to 90d				
13-2280(6B)	Transformer @ Process Bldg. switch room x4 Nos. @+13.3 mPD	90	90	0%	31-Aug-24	28-Nov-24	20-Apr-24	18-Jul-24	-133					
13-2280-1(6B)	LVSG 1A/1B and 2A/2B (below Toilet/Server Room - Process building Switch room)	90	90	0%	31-Aug-24	28-Nov-24	20-Apr-24	18-Jul-24	-133					
13-2280-2(6B)	UPS @ Process Building Switch room and Battery room	90	86	5%	20-Aug-24 A	25-Nov-24	24-Apr-24	18-Jul-24	-130					UPS @
Process Building - Boiler House & Flue Gas Treatment Bld Process Equipment Installation														
Process Building (Installation TPU Module)														
TPU Train 1														
13-1040	Boiler Condition Check and Repair	70	70	0%	07-Oct-24	15-Dec-24	23-Jul-24	30-Sep-24	-76					
13-1070	Pipe Insulation Works	60	60	0%	31-Aug-24	29-Oct-24	25-Apr-24	23-Jun-24	-128					Pipe Insulation Works
13-1080	Electrical Instrument and Cabling Works	67	67	0%	31-Aug-24	05-Nov-24	18-Apr-24	23-Jun-24	-135					Electrical Instrument and Cabling Works
13-1090	Boiler Pressure Test	15	15	0%	30-Sep-24	14-Oct-24	25-Apr-24	09-May-24	-158					Boiler Pressure Test
13-1100	Boiler Refractory works	90	90	0%	15-Oct-24	12-Jan-25	03-Jul-24	30-Sep-24	-104	Add Successor 13-2620 FF0				
TPU Train 2														
13-1130	Boiler Condition Check and Repair	70	70	0%	22-Oct-24	30-Dec-24	23-Jul-24	30-Sep-24	-91					
13-1160	Pipe Insulation Works	60	60	0%	31-Aug-24	29-Oct-24	25-Apr-24	23-Jun-24	-128					Pipe Insulation Works
13-1170	Electrical Instrument and Cabling Works	67	67	0%	11-Sep-24	16-Nov-24	03-May-24	08-Jul-24	-131					Electrical Instrument
13-1180	Boiler Pressure Test	15	15	0%	15-Oct-24	29-Oct-24	10-May-24	24-May-24	-158					Boiler Pressure Test
13-1190	Boiler Refractory works	90	90	0%	30-Oct-24	27-Jan-25	03-Jul-24	30-Sep-24	-119	Add Successor 13-2620 FF0				
TPU Train 3														
13-1220	Boiler Condition Check and Repair	71	71	0%	06-Nov-24	15-Jan-25	09-Aug-24	18-Oct-24	-89					
13-1240	Pipe Connection to FGT Unit	121	30	75%	12-Jan-24 A	30-Sep-24	27-Feb-24	28-Mar-24	-186					Pipe Connection to FGT Unit
13-1250	Pipe Insulation Works	60	60	0%	31-Aug-24	30-Oct-24	20-Aug-24	18-Oct-24	-11	Update Original Duration from 120d to 60d				Pipe Insulation Works
13-1260	Electrical Instrument and Cabling Works	67	67	0%	05-Sep-24	11-Nov-24	03-Mar-24	08-May-24	-187	Change Lag from Predecessor 13-1795(6A) from FF60 to FF30				Electrical Instrument and Cabili
13-1270	Boiler Pressure Test	15	15	0%	30-Oct-24	13-Nov-24	25-May-24	08-Jun-24	-158					Boiler Pressure Test
13-1280	Boiler Refractory works	90	90	0%	14-Nov-24	11-Feb-25	21-Jul-24	18-Oct-24	-116					
TPU Train 4														
13-1310	Boiler Condition Check and Repair	70	70	0%	21-Nov-24	29-Jan-25	10-Aug-24	18-Oct-24	-103					
13-1330	Pipe Connection to FGT Unit	120	30	75%	12-Jan-24 A	03-Oct-24	27-Feb-24	28-Mar-24	-190					Pipe Connection to FGT Unit
13-1340	Pipe Insulation Works	60	60	0%	04-Sep-24	02-Nov-24	20-Aug-24	18-Oct-24	-15	Update Original Duration from 120d to 60d				Pipe Insulation Works
13-1350	Electrical Instrument and Cabling Works	67	67	0%	05-Sep-24	11-Nov-24	03-Mar-24	08-May-24	-187	Change Lag from Predecessor 13-1795(6A) from FF60 to FF30				Electrical Instrument and Cabili
13-1360	Boiler Pressure Test	15	15	0%	14-Nov-24	28-Nov-24	09-Jun-24	23-Jun-24	-158					
13-1370	Boiler Refractory works	90	90	0%	29-Nov-24	26-Feb-25	21-Jul-24	18-Oct-24	-131					
TPU Train 5														
13-1510	Pipe Connection to FGT Unit	120	60	50%	27-Mar-24 A	29-Oct-24	25-Feb-24	24-Apr-24	-188					Pipe Connection to FGT Unit
13-1520	Pipe Insulation Works	60	60	0%	30-Sep-24	28-Nov-24	26-Mar-24	24-May-24	-188	Update Original Duration from 120d to 60d				
13-1530	Electrical Instrument and Cabling Works	67	67	0%	11-Oct-24	16-Dec-24	18-May-24	23-Jul-24	-146					
13-1540	Boiler Pressure Test	15	15	0%	29-Nov-24	13-Dec-24	24-Jun-24	08-Jul-24	-158					
TPU Train 6														
13-1395(M63)-2	TPU-6 Welding to Base Plate	20	1	95.84%	22-Dec-23 A	31-Aug-24	18-Mar-24	18-Mar-24	-166					TPU-6 Welding to Base Plate
13-1420	Pipe Connection to FGT Unit	120	0	99.9%	28-Mar-24 A	05-Oct-24	24-Apr-24	24-Apr-24	-164					Pipe Connection to FGT Unit
13-1430	Pipe Insulation Works	60	60	0%	05-Sep-24	04-Nov-24	26-Mar-24	24-May-24	-164	Update Original Duration from 120d to 60d				Pipe Insulation Works
13-1440	Electrical Instrument and Cabling Works	67	67	0%	11-Oct-24	16-Dec-24	19-Mar-24	24-May-24	-206					
Process Building (Installation of Flue Gas Module)														
FGC Train 1														
13-1580	FGC Unit Condition Check and Repair	70	70	0%	07-Oct-24	15-Dec-24	23-Jul-24	30-Sep-24	-76					

Activity ID	Activity Name	Original Duration	Remaining Duration	Activity % Complete	Current Start	Current Finish	Late Start	Late Finish	Total Float	M&I Remarks	2024			
											Aug 81	Sep 82	Oct 83	Nov 84
13-1600	Pipe Connection Works to TPU and Pipebridge	90	8	91%	01-Dec-23 A	08-Sep-24	03-May-24	11-May-24	-120					
13-1610	Pipe Insulation Works	90	90	0%	31-Aug-24	28-Nov-24	10-Apr-24	08-Jul-24	-143					
13-1620	Electrical instrument and Cabling Works	67	67	0%	11-Sep-24	16-Nov-24	03-May-24	08-Jul-24	-131					
FGC Train 2		281	122		01-Jan-24 A	30-Dec-24	10-Apr-24	30-Sep-24	-91					
13-1650	FGC Unit Condition Check and Repair	70	70	0%	22-Oct-24	30-Dec-24	23-Jul-24	30-Sep-24	-91					
13-1655(6A)	Installation 4 nos. of Transformers for Process Module 1	14	14	0%	04-Sep-24	17-Sep-24	26-Apr-24	09-May-24	-131					
13-1670	Pipe Connection Works to TPU and Pipebridge	90	8	90.97%	01-Jan-24 A	08-Sep-24	04-Jun-24	12-Jun-24	-87					
13-1680	Pipe Insulation Works	90	90	0%	31-Aug-24	28-Nov-24	10-Apr-24	08-Jul-24	-143					
13-1690	Electrical instrument and Cabling Works	67	67	0%	11-Sep-24	16-Nov-24	03-May-24	08-Jul-24	-131					
FGC Train 3		229	137		20-Jan-24 A	14-Jan-25	09-Feb-24	18-Oct-24	-88					
13-1720	FGC Unit Condition Check and Repair	70	70	0%	06-Nov-24	14-Jan-25	10-Aug-24	18-Oct-24	-88					
13-1740	Pipe Connection Works to TPU and Pipebridge	90	24	73%	20-Jan-24 A	30-Sep-24	04-Mar-24	28-Mar-24	-186					
13-1750	Pipe Insulation Works	90	90	0%	31-Aug-24	29-Nov-24	09-Feb-24	09-May-24	-203					
13-1760	Electrical instrument and Cabling Works	67	67	0%	05-Sep-24	11-Nov-24	04-Mar-24	09-May-24	-186	Change Lag from Predecessor 13-1795(6A) from FF60 to FF30				
FGC Train 4		279	152		20-Jan-24 A	29-Jan-25	10-Feb-24	18-Oct-24	-103					
13-1790	FGC Unit Condition Check and Repair	70	70	0%	21-Nov-24	29-Jan-25	10-Aug-24	18-Oct-24	-103					
13-1795(6A)	Installation 4 nos. of Transformers for Process Module 2	14	14	0%	28-Sep-24	12-Oct-24	26-Mar-24	08-Apr-24	-187					
13-1810	Pipe Connection Works to TPU and Pipebridge	90	24	73%	20-Jan-24 A	03-Oct-24	04-Mar-24	28-Mar-24	-190					
13-1820	Pipe Insulation Works	90	90	0%	31-Aug-24	28-Nov-24	10-Feb-24	09-May-24	-203					
13-1830	Electrical instrument and Cabling Works	67	67	0%	09-Sep-24	15-Nov-24	04-Mar-24	09-May-24	-190	Change Lag from Predecessor 13-1795(6A) from FF60 to FF30				
FGC Train 5		193	108		15-May-24 A	16-Dec-24	25-Feb-24	24-May-24	-206					
13-1880	Pipe Connection Works to TPU and Pipebridge	90	44	51%	15-May-24 A	14-Oct-24	11-Mar-24	24-Apr-24	-172					
13-1890	Pipe Insulation Works	90	90	0%	31-Aug-24	28-Nov-24	25-Feb-24	24-May-24	-188					
13-1900	Electrical instrument and Cabling Works	67	67	0%	11-Oct-24	16-Dec-24	19-Mar-24	24-May-24	-206					
FGC Train 6		179	108		15-May-24 A	16-Dec-24	25-Feb-24	24-May-24	-206					
13-1935(6A)	Installation 4 nos. of Transformers for Process Module 3	14	14	0%	27-Sep-24	10-Oct-24	05-Mar-24	18-Mar-24	-206					
13-1950	Pipe Connection Works to TPU and Pipebridge	90	44	51%	15-May-24 A	29-Oct-24	16-Mar-24	29-Apr-24	-183					
13-1960	Pipe Insulation Works	90	90	0%	31-Aug-24	28-Nov-24	25-Feb-24	24-May-24	-188					
13-1970	Electrical instrument and Cabling Works	67	67	0%	11-Oct-24	16-Dec-24	19-Mar-24	24-May-24	-206					
ACC Equipment Installation		267	175		15-May-24 A	21-Feb-25	25-Apr-24	24-Oct-24	-120					
ACC Equipment 1 Installation		202	110		15-May-24 A	18-Dec-24	25-Apr-24	06-Oct-24	-73					
13-2000-1(M63)	Condensate Tank & Equipments Delivery and Installation (Module 1)	80	36	55%	15-May-24 A	05-Oct-24	25-Apr-24	30-May-24	-128					
13-2010	Piping and Instrument Installation and Connection Works	80	80	0%	31-Aug-24	18-Nov-24	20-May-24	07-Aug-24	-103					
13-2010-1(6E)	Air Tight Test	14	14	0%	19-Nov-24	02-Dec-24	17-Sep-24	30-Sep-24	-63					
13-2020	Pipe Insulation Works	80	80	0%	30-Sep-24	18-Dec-24	19-Jul-24	06-Oct-24	-73					
13-2030	Cable Laying and Termination Works	80	80	0%	30-Sep-24	18-Dec-24	19-Jul-24	06-Oct-24	-73					
ACC Equipment 2 Installation		150	150		25-Sep-24	21-Feb-25	25-Apr-24	24-Oct-24	-120					
13-2040-1(M63)	Condensate Tank & Equipments Delivery and Installation (Module 2)	90	90	0%	25-Sep-24	23-Dec-24	25-Apr-24	23-Jul-24	-153					
13-2050	Piping and Instrument Installation and Connection Works	90	90	0%	25-Oct-24	22-Jan-25	15-Jun-24	12-Sep-24	-132					
13-2060	Pipe Insulation Works	90	90	0%	24-Nov-24	21-Feb-25	21-Jul-24	18-Oct-24	-126					
13-2070	Cable Laying and Termination Works	90	90	0%	24-Nov-24	21-Feb-25	27-Jul-24	24-Oct-24	-120					
ACC Equipment 3 Installation		105	105		16-Oct-24	28-Jan-25	16-May-24	28-Aug-24	-153					
13-2080-1(M63)	Condensate Tank & Equipments Delivery and Installation (Module 3)	90	90	0%	16-Oct-24	13-Jan-25	16-May-24	13-Aug-24	-153					
13-2090	Piping and Instrument Installation and Connection Works	90	90	0%	31-Oct-24	28-Jan-25	31-May-24	28-Aug-24	-153					
Turbine Hall Bld Equipment Installation		264	141		30-Apr-24 A	18-Jan-25	22-Feb-24	12-Aug-24	-159					
Turbine Hall Module 1 Installation		90	90		31-Aug-24	28-Nov-24	12-Apr-24	10-Jul-24	-141					
13-2130	Equipment, Piping and Instrument Installation and Connection Works	60	60	0%	31-Aug-24	29-Oct-24	12-Apr-24	10-Jun-24	-141					
13-2130-1(6E)	STG & TBS Piping hydrostatic test	7	7	0%	30-Oct-24	05-Nov-24	14-Jun-24	20-Jun-24	-138					
13-2140	Turbine Hall Piping Insulation Works	60	60	0%	30-Sep-24	28-Nov-24	12-May-24	10-Jul-24	-141					
13-2150	Turbine Electrical installation and instrumentation Works	90	90	0%	31-Aug-24	28-Nov-24	12-Apr-24	10-Jul-24	-141					
Turbine Hall Module 2 Installation		238	115		30-Apr-24 A	24-Dec-24	22-Feb-24	09-Aug-24	-136					
13-2170-3(7)	STG Module 2 unpack and assembly	27	24	10%	20-Aug-24 A	25-Sep-24	23-Feb-24	18-Mar-24	-190	Update Actual Start Date				
13-2180	Equipment, Piping and Instrument Installation and Connection Works	60	60	0%	25-Sep-24	24-Nov-24	19-Mar-24	17-May-24	-190					
13-2180-1(6E)	STG & TBS Piping hydrostatic test	7	7	0%	24-Nov-24	01-Dec-24	18-May-24	24-May-24	-190					
13-2190	Turbine Hall Piping Insulation Works	60	60	0%	25-Oct-24	24-Dec-24	11-Jun-24	09-Aug-24	-136					
13-2200	Turbine Electrical installation and instrumentation Works	90	90	0%	01-Sep-24	30-Nov-24	08-May-24	05-Aug-24	-116					
13-2210(6)	Install Maintenance Girder & Crane at Module 2 @+22.247mPd	21	1	95%	30-Apr-24 A	01-Sep-24	22-Feb-24	23-Feb-24	-190					
Turbine Hall Module 3 Installation		203	141		29-Jun-24 A	18-Jan-25	23-Feb-24	12-Aug-24	-159					
13-2220-1(6H)	TBS Tower 3 Transport to final position	4	4	0%	31-Aug-24 A	03-Sep-24	28-Mar-24	31-Mar-24	-156	Update Actual Start Date				
13-2220-3(7)	STG Module 3 unpack and assembly	30	30	0%	21-Sep-24	20-Oct-24	15-Apr-24	14-May-24	-159					
13-2230	Equipment, Piping and Instrument Installation and Connection Works	60	60	0%	21-Oct-24	19-Dec-24	15-May-24	13-Jul-24	-159					
13-2240	Turbine Hall Piping Insulation Works	60	60	0%	20-Nov-24	18-Jan-25	14-Jun-24	12-Aug-24	-159					
13-2250	Turbine Electrical installation and instrumentation Works	90	90	0%	21-Sep-24	19-Dec-24	11-May-24	08-Aug-24	-133					
13-2260(6)	Install Maintenance Girder & Crane at Module 3 @+22.247mPd	21	21	0%	29-Jun-24 A	20-Sep-24	23-Feb-24	15-Mar-24	-189					
Turbine Hall Electrical Room Equipment Installation		150	134		15-Aug-24 A	11-Jan-25	07-Apr-24	12-Aug-24	-152					
13-2280-1(6A)	Transport and Position 4 nos. of Transformers @ 1F (ZH)	15	15	0%	14-Sep-24	28-Sep-24	07-Apr-24	21-Apr-24	-160					
13-2300	Other Associated Equipment Installation	90	90	0%	14-Sep-24	12-Dec-24	12-Apr-24	10-Jul-24	-155					
13-2310	Cable Laying and Termination for Module 1	80	80	0%	29-Sep-24	17-Dec-24	22-Apr-24	10-Jul-24	-160	Update Original Duration from 90d to 80d				
13-2730(7)	Cable Laying and Termination for Module 2	90	90	0%	14-Oct-24	11-Jan-25	12-May-24	09-Aug-24	-155					
13-2740(7)	Cable Laying and Termination for Module 3	90	90	0%	14-Oct-24	11-Jan-25	15-May-24	12-Aug-24	-152					
Turbine Hall Electrical Room @+15.00mPD		136	90		15-Aug-24 A	28-Nov-24	20-Apr-24	18-Jul-24	-133					
13-2290-1(6B)	Switchgear & electrical equipment Installation 1F - I&C room (I/O, Server, Control Panel, Workstation)	120	90	25%	15-Aug-24 A	28-Nov-24	20-Apr-24	18-Jul-24	-133	Update Target Finish Date				

Activity ID	Activity Name	Original Duration	Remaining Duration	Activity % Complete	Current Start	Current Finish	Late Start	Late Finish	Total Float	M&B1 Remarks	2024				
											Aug 81	Sep 82	Oct 83	Nov 84	
13-2290-2(6B)	Switchgear & electrical equipment Installation 1F - Generator Control Room (GPP,SP,DC batter Charger/Generator contri	120	90	25%	15-Aug-24 A	28-Nov-24	20-Apr-24	18-Jul-24	-133	Update Target Finish Date					
13-2290-3(6B)	Switchgear & electrical equipment Installation 1F - Battery Room (AC UPS,DC Battery Charger)	120	90	25%	15-Aug-24 A	28-Nov-24	20-Apr-24	18-Jul-24	-133	Update Target Finish Date					
13-2290-4(6B)	Switchgear & electrical equipment Installation 1F - HV Switch room (GCB)	90	90	0%	31-Aug-24	28-Nov-24	20-Apr-24	18-Jul-24	-133	Update Original Duration from 120d to 90d					
13-2290-5(6B)	Monorail Hoist System installation in Turbine Hall (1st Floor @+15)	90	90	0%	31-Aug-24	28-Nov-24	20-Apr-24	18-Jul-24	-133						
Turbine Hall Electrical Room @+23.50mPD															
13-2280-2(6A)	Installation 6 nos. of Transformers @ Turbine Hall Electrical Room 3F 23.5mPD	60	6	90%	30-Aug-24 A	05-Sep-24	13-Jul-24	18-Jul-24	-49	Change Relationship from Predecessor 05-3390-4(M46) from FS0 to FF0					
13-2290	Switchgear & electrical equipment Installation 3F (MCC-7,8,9,14,15,16, VSD ,soft starter,UPS)	90	90	0%	31-Aug-24	28-Nov-24	20-Apr-24	18-Jul-24	-133	Update Original Duration from 120d to 90d					
13-2290-6(6B)	Monorail Hoist System installation in Turbine Hall (3rd Floor @+23.5)	90	90	0%	31-Aug-24	28-Nov-24	20-Apr-24	18-Jul-24	-133						
Compressor & CCCW Bld Equipment Installation															
Air Compressor Equipment Installation															
13-2320	Air Compressor Rm Equipment Installations	90	9	90%	25-Mar-24 A	08-Sep-24	11-May-24	19-May-24	-112						
13-2700(M62)	Piping installation and connections	90	32	65%	01-Jun-24 A	08-Oct-24	18-May-24	18-Jun-24	-112						
13-2710(M62)	Electrical Instrumentation and Insulation Installations	90	90	0%	31-Aug-24	28-Nov-24	20-Apr-24	18-Jul-24	-133						
13-2720(M62)	Cable Laying and Termination Works for Air Compressor	90	90	0%	31-Aug-24	28-Nov-24	20-Apr-24	18-Jul-24	-133						
CCCW Bld Equipment Installation															
13-2330	CCCW Equipment Installation	100	27	73%	01-May-24 A	27-Sep-24	17-Apr-24	13-May-24	-137						
13-2340	Piping installation and connections	90	54	40%	01-Jun-24 A	27-Oct-24	20-Apr-24	12-Jun-24	-137						
13-2350	Electrical Instrumentation and Insulation Installations	90	90	0%	04-Sep-24	02-Dec-24	20-Apr-24	18-Jul-24	-137						
13-2360	Cable Laying and Termination Works	90	90	0%	04-Sep-24	02-Dec-24	20-Apr-24	18-Jul-24	-137	Change Lag from Predecessor 13-2350 from FF10 to FF0					
Water Treatment Bld Process Equipment Installation															
13-2390	Mechanical Equipment and Piping Installation	150	60	60%	20-Feb-24 A	04-Nov-24	03-May-24	01-Jul-24	-126						
13-2410	Electrical and instrumentation Installation	90	90	0%	31-Aug-24	28-Nov-24	21-Apr-24	19-Jul-24	-132	Update Original Duration from 120d to 90d					
13-2410-1(6D)	Transformer @ WTP Bldg Switchroom +6.5mPD	90	90	0%	31-Aug-24	28-Nov-24	05-Apr-24	03-Jul-24	-148	Update Original Duration from 120d to 90d					
13-2410-3(6D)	Delivery and fabrication of Water Tank @+6.5mPD	90	36	60%	20-Feb-24 A	05-Oct-24	27-Apr-24	01-Jun-24	-126						
13-2410-4(6B)	EOTC & Monorail Hoist System installation in WTP +6.5mPD	90	63	30%	11-Aug-24 A	01-Nov-24	05-Aug-24	06-Oct-24	-26	Update Actual Start Date					
13-2410-5(6B)	Monorail Hoist System installation in WTP +13.5mPD	90	90	0%	31-Aug-24	28-Nov-24	26-Apr-24	24-Jul-24	-127						
13-2410-6(6B)	MCC-12 @ WTP Switch Room	90	90	0%	15-Sep-24	13-Dec-24	20-Apr-24	18-Jul-24	-148						
13-2410-7(6B)	DB for MCC-12 @ WTP Switch Room	90	90	0%	15-Sep-24	13-Dec-24	20-Apr-24	18-Jul-24	-148						
13-2410-8(6B)	UPS DB @ WTP Switch room @ +6.5mPd	90	90	0%	31-Aug-24	28-Nov-24	20-Apr-24	18-Jul-24	-133	Change Lag from Predecessor 13-2410-1(6D) from SS15 to SS0					
13-2410-9(M55)	WTP chemical storage tank installation	60	18	70%	06-May-24 A	17-Sep-24	02-Jul-24	19-Jul-24	-60						
IWMF Substation Bld Equipment Installation															
13-2430	Deliver and Position of 11kV Trans formers @+6.5mPD (KS)	15	15	0%	31-Aug-24	14-Sep-24	20-Apr-24	04-May-24	-133						
13-2440	132kV GIS Switch Gear @+6.5mPD	110	72	34.55%	15-May-24 A	10-Nov-24	23-Apr-24	03-Jul-24	-130	Update Target Finish Date					
13-2450	GIS Insulation Switchboard installation	110	72	34.55%	15-May-24 A	10-Nov-24	23-Apr-24	03-Jul-24	-130	Update Target Finish Date					
13-2460	Main Switch Board Installation	110	72	34.55%	15-May-24 A	10-Nov-24	23-Apr-24	03-Jul-24	-130	Update Target Finish Date					
13-2470	Other Associated Equipment Installation	30	30	0%	02-Nov-24	02-Dec-24	19-Jun-24	18-Jul-24	-136	Change Lag to Successor 13-2480 from FF15 to FF0					
13-2480	Cable Laying and Termination	90	90	0%	03-Sep-24	02-Dec-24	20-Apr-24	18-Jul-24	-136	Change Lag from Predecessor 13-2430 from FS-7 to SS0; Update Original Duration from 110d to 90d					
Elevated Drive Way & Storage Bld Equipment Installation															
13-2500	Workshop Equipment	150	150	0%	29-Nov-24	27-Apr-25	29-Jul-24	25-Dec-24	-123						
13-2630-2(6D)	EOTC Hoist System installation in Vehicle Workshop +6.5mPD	90	90	0%	17-Oct-24	15-Jan-25	09-Jul-24	06-Oct-24	-101						
Seawater Intake Chamber															
13-2540-1(6B)	Monorail Hoist System Installation in Sea Water Intake Pump Area	90	90	0%	25-Sep-24	24-Dec-24	21-May-24	18-Aug-24	-128	Change Lag to Successor 16-1300 from FS0 to FS-30					
13-2540-2(7)	Seawater Intake Pumps and Associated equipment installation	60	60	0%	25-Oct-24	24-Dec-24	20-Jun-24	18-Aug-24	-128	Change Lag to Successor 16-1300 from FS0 to FS-30					
Equipment Installation at External Area															
13-2520	Fuel Oil Reception and Distribution System Installation at Berth Area	60	60	0%	11-Nov-24	09-Jan-25	28-Jun-24	26-Aug-24	-136						
13-2525	Weighbridge Equipment Installation	60	60	0%	16-Nov-24	14-Jan-25	20-Jun-24	18-Aug-24	-149	New Activity					
13-2530	Weighbridge System & Equipment Installation	60	60	0%	16-Nov-24	14-Jan-25	20-Jun-24	18-Aug-24	-149	Remove Predecessor 08-2430(M79)					
External Process Pipe Works															
Process and Non-process Piping Works															
Piping from Module 1 to Turbine Bld															
13-2550	Piping Installation Works	60	21	65%	01-May-24 A	20-Sep-24	04-May-24	24-May-24	-119						
13-2560	Piping Pressure Test	60	60	0%	07-Sep-24	05-Nov-24	25-Apr-24	23-Jun-24	-135						
13-2570	Piping Insulation Works	60	60	0%	07-Oct-24	05-Dec-24	25-May-24	23-Jul-24	-135						
Pipe Rack Piping from Module 2 & 3 to Turbine Bld															
13-2580	Piping Installation Works	60	60	0%	31-Aug-24	29-Oct-24	25-Feb-24	24-Apr-24	-188						
13-2590	Piping Pressure Test	60	60	0%	02-Oct-24	01-Dec-24	26-Mar-24	24-May-24	-190						
13-2600	Piping Insulation Works	60	60	0%	01-Nov-24	31-Dec-24	25-Apr-24	23-Jun-24	-190						
Pipe Bridge B Piping from Turbine Bld 1 to CCCW Bld															
13-2680	Piping Pressure Test	60	60	0%	31-Aug-24	29-Oct-24	25-Apr-24	23-Jun-24	-128	Remove Predecessor 13-2230-1(6E) FF0					
13-2690	Piping Insulation Works	60	60	0%	30-Sep-24	28-Nov-24	25-May-24	23-Jul-24	-128						
Pipe Bridge B Piping from Turbine Bld 2&3 to CCCW Bld															
13-2710	Piping Pressure Test	60	60	0%	31-Aug-24	29-Oct-24	08-Jun-24	06-Aug-24	-84						
13-2720	Piping Insulation Works	60	60	0%	30-Sep-24	28-Nov-24	08-Jul-24	05-Sep-24	-84						
Pipe Bridge C Piping from Turbine Bld to ACC 1															
13-2640	Piping Installation Works	60	60	0%	20-Sep-24	18-Nov-24	09-Jun-24	07-Aug-24	-103						
13-2650	Piping Pressure Test	60	60	0%	20-Oct-24	18-Dec-24	09-Jul-24	06-Sep-24	-103						
13-2660	Piping Insulation Works	60	60	0%	19-Nov-24	17-Jan-25	08-Aug-24	06-Oct-24	-103						

Activity ID	Activity Name	Original Duration	Remaining Duration	Activity % Complete	Current Start	Current Finish	Late Start	Late Finish	Total Float	M&I Remarks	2024			
											Aug 81	Sep 82	Oct 83	Nov 84
Pipe Bridge C Piping from Turbine Bld to ACC 2														
13-2700(M64)	Piping Installation Works	60	60	0%	24-Nov-24	22-Jan-25	15-Jul-24	12-Sep-24	-132					
Chimney Flue Gas Ducting Works														
13-2510(7)	Fabrication and Delivery of Chimney Flue Gas Duct	110	82	25.45%	25-Jun-24 A	20-Nov-24	22-May-24	11-Aug-24	-101	Update Actual Start Date				
13-2610	Line 1 & 2 Flue Gas Duct Erection Works and weld test	24	24	0%	07-Nov-24	30-Nov-24	13-Aug-24	05-Sep-24	-86	Update Activity Name and Original Duration from 80d to 24d; Update Lag from Predecessor 13-2510(7) from FF30 to				
13-2610-0(M81)	Line 3 & 4 Flue Gas Duct Erection Works and weld test	28	28	0%	27-Nov-24	24-Dec-24	18-Aug-24	14-Sep-24	-101	New Activity				
13-2630	CEMS Delivery and installation (3nrs.)	30	30	0%	22-Sep-24	21-Oct-24	14-Sep-24	13-Oct-24	-8					
Landscape, External Road and Drains Works														
Site Wide/External BS System														
14-1000(M81)	BS Works for Weighbridge	45	45	0%	16-Nov-24	30-Dec-24	05-Jul-24	18-Aug-24	-134	New Activity				
14-1100(6D)	Site Wide and External BS System	200	200	0%	19-Nov-24	06-Jun-25	11-Jul-24	26-Jan-25	-131					
External Utilities Works														
External Utilities C&S Works														
14-1055(7)	Cable Duct and Drawpit	280	280	0%	31-Aug-24	06-Jun-25	14-May-24	18-Feb-25	-108					
14-4010(7)	Utility Trench Construction Section UT2 (27nr Semi-precast segments @3nrs/5d)	60	27	55%	15-Jun-24 A	26-Sep-24	15-Mar-24	10-Apr-24	-169					
14-4025(7)	Utility Trench Construction Section UT3b (11nr Semi-precast segments @2nrs/5d)	45	9	80%	02-Jul-24 A	12-Sep-24	02-Apr-24	10-Apr-24	-155	Change Relationship from Predecessors 05-5040 & 05-5050 from FS0 to SS0				
14-4030(7)	Utility Trench Construction Section UT4 (36nr Semi-precast segments @3nrs/5d)	70	70	0%	22-Sep-24	01-Dec-24	01-Apr-24	09-Jun-24	-175					
14-4035(M80)	Utility Trench Construction Section FT1	70	70	0%	22-Sep-24	01-Dec-24	15-Apr-24	23-Jun-24	-161					
14-4040(7)	Utility Trench Construction Section UT5 (29nr Semi-precast segments @3nrs/5d)	60	39	35%	15-Jul-24 A	08-Oct-24	11-Apr-24	19-May-24	-142					
14-4060(7)	Utility Trench Construction Section UT7 (43nr Semi-precast segments @3nrs/5d)	80	80	0%	12-Sep-24	30-Nov-24	07-Mar-24	25-May-24	-189					
14-4070(7)	Utility Trench Construction Section UT8 (90nr Semi-precast segments @3nrs/5d)	150	150	0%	10-Nov-24	08-Apr-25	05-May-24	01-Oct-24	-189					
14-4080(7)	Utility Trench Construction Section UT9 (62nr Semi-precast segments @3nrs/5d)	110	110	0%	10-Nov-24	27-Feb-25	05-May-24	22-Aug-24	-189					
14-4090(7)	Utility Trench Construction Section UT10 (25nr Semi-precast segments @3nrs/5d)	45	45	0%	22-Sep-24	06-Nov-24	15-Jun-24	29-Jul-24	-100					
External Power & Signal Cable Laying in Utility Trench														
14-4100(7)	External Power & Signal Cable Laying - Substation to Electrical Building and ACC	60	60	0%	31-Aug-24	29-Oct-24	20-May-24	18-Jul-24	-103					
14-4110(7)	External Power & Signal Cable - Electrical Building to PB Module 1 & 2 and CCCW	60	60	0%	27-Sep-24	25-Nov-24	11-Apr-24	09-Jun-24	-169	Change Lag from Predecessor 05-4580 from FS0 to FF0				
14-4130(7)	External Power & Signal Cable Laying - Electrical Building to MT & WTP, Process Building Module 1	60	60	0%	09-Oct-24	07-Dec-24	20-May-24	18-Jul-24	-142	Change Relationship from Predecessor 05-4580 from FS0 to FF0				
External Watermains Laying														
14-4210(7)	Watermain Laying - ACC Area to CCCW (Approx. 70m @6m/3d)	35	35	0%	29-Nov-24	02-Jan-25	17-Sep-24	21-Oct-24	-73					
14-4230(7)	Watermain Laying - Substation to Reception Pavilion (Approx. 240m @6m/3d)	120	120	0%	29-Nov-24	28-Mar-25	24-Jun-24	21-Oct-24	-158					
Drainage Works														
Overtopping Drain System														
East Culvert (3.5m x 2.5m x 118m)														
14-2020	Rectangular Section (69m @10m/5d)	40	40	0%	28-Sep-24	06-Nov-24	12-Jun-25	21-Jul-25	257					
14-3010	Pipe Section (69m @5m/d)	62	62	0%	31-Aug-24	31-Oct-24	24-Feb-24	25-Apr-24	-189					
14-3020	Rectangular Section (184m @10m/5d)	100	100	0%	01-Nov-24	08-Feb-25	01-Sep-24	09-Dec-24	-61					
U/G Storm Drainage System														
14-1000(6D)	External Drainage System Construction Works (Common trench construction Utility Trench)	220	220	0%	20-Sep-24	27-Apr-25	15-Apr-24	20-Nov-24	-158					
14-1010(M81)	Construction of Outfall-01	60	60	0%	31-Aug-24	29-Oct-24	26-Mar-24	24-May-24	-158	New Activity				
14-1020(M81)	Construction of Outfall-02	60	60	0%	30-Oct-24	28-Dec-24	25-May-24	23-Jul-24	-158	New Activity				
U/G Wastewater Drainage System														
14-1000-1(M55)10	External Sewage Drainage System Construction Works (Common trench construction Utility Trench)	200	200	0%	20-Sep-24	07-Apr-25	15-Apr-24	31-Oct-24	-158	Update Original Duration from 220d to 200				
Brine Discharge Pipe														
14-1070(M81)	Brine Discharge Outfall Prefabrication	60	60	0%	01-Oct-24	29-Nov-24	20-Jun-26	18-Aug-26	627	New Activity				
Earthing System														
16-1900-2(6)	Installation of Ground Earthing Mesh	180	90	50%	28-Apr-22 A	28-Nov-24	16-Apr-24	15-Jul-24	-137					
External Road Works														
14-1010-2(6D)	Road Works	210	210	0%	30-Oct-24	27-May-25	08-Jun-24	03-Jan-25	-144	Change Lag from Predecessor 08-1320(6) from SS60 to SS30				
Works By CLP														
Remaining Installation Works by CLP														
15-1007	Telecom / Digital / Security / Metering Equipment Installation	210	123	41.43%	20-Jul-24 A	31-Dec-24	19-May-24	18-Sep-24	-104					
Metering & Energization														
Energization of Submain														
15-1040-8(7)	Energization of Sub System - CCCW Building Area (EDG Temporary Power)	4	4	0%	26-Nov-24	29-Nov-24	29-Jul-24	01-Aug-24	-120					
Testing & Commissioning														
SAT & System Commissioning Tests														
11kV Electrical System T&C														
Turbine Hall & CCCW Building 11kV T&C														
16-1940(1)	Systemwise Construction Completion Inspection and Testing	14	14	0%	29-Nov-24	12-Dec-24	19-Jul-24	01-Aug-24	-133					
Compressor & CCCW Bld T&C														
Air Compressor														
16-1210	Systemwise Construction Completion Inspection	14	14	0%	29-Nov-24	12-Dec-24	19-Jul-24	01-Aug-24	-133					
Ash Treatment Equipments T&C														
16-1970(M62)	Systemwise Construction Completion Inspection - Module 1	30	30	0%	06-Oct-24	04-Nov-24	24-Jun-24	23-Jul-24	-104					
Control SCADA Systems T&C														
16-1970(M62)	Systemwise Construction Completion Inspection - Module 1	14	14	0%	28-Nov-24	11-Dec-24	19-Jul-24	01-Aug-24	-132					

Activity ID	Activity Name	Original Duration	Remaining Duration	Activity % Complete	Current Start	Current Finish	Late Start	Late Finish	Total Float	M&I Remarks	2024			
											Aug 81	Sep 82	Oct 83	Nov 84
16-1780	Systemwise Construction Completion Inspection	14	14	0%	28-Nov-24	11-Dec-24	19-Jul-24	01-Aug-24	-132					
Earthing & Lightning Protection System T&C		10	10		29-Nov-24	08-Dec-24	19-Jul-24	28-Jul-24	-133					
16-1970(6D)	Systemwise Construction Completion Inspection	10	10	0%	29-Nov-24	08-Dec-24	19-Jul-24	28-Jul-24	-133					
Incineration Processing T&C		221	189		15-May-24 A	08-Mar-25	05-Apr-24	23-Aug-24	-197					
Module 1 & Equipments (Train 1 & 2)		210	178		15-May-24 A	25-Feb-25	05-Apr-24	23-Aug-24	-186					
16-1540	Site Acceptance Test (Systemwise Construction Completion Inspection)	120	110	8.33%	15-May-24 A	19-Dec-24	05-Apr-24	23-Jul-24	-149	Remove Predecessor 11-1070FF15				
16-1550	Site Acceptance Test (Pre-commissioning Test)	120	120	0%	29-Oct-24	25-Feb-25	26-Apr-24	23-Aug-24	-186					
Module 2 & Equipments (Train 3 & 4)		120	120		09-Nov-24	08-Mar-25	10-Apr-24	07-Aug-24	-213					
16-1560	Site Acceptance Test (Systemwise Construction Completion Inspection)	120	120	0%	09-Nov-24	08-Mar-25	10-Apr-24	07-Aug-24	-213					

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	<p><u>Air Pollution Control (Construction Dust) Regulation & Good Site Practices</u></p> <ul style="list-style-type: none"> • 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		✓			<p>Air Pollution Control (Construction Dust) Regulation</p> <p>Implemented</p> <p>N/A for dust control measures for transportation outside site boundary</p>	

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		
	<p>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.</p> <ul style="list-style-type: none"> • 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	<p><u>Odour Removal by Deodorizers</u></p> <ul style="list-style-type: none"> • Deodorizers with 95% odour removal efficiency would be installed for the air ventilated from the mechanical treatment plant before discharge to the atmosphere 	<p>Waste reception halls, the waste storage area, the mechanical treatment plant / During design & operation phase</p>	IWMF Operator	✓		✓		EIAO-TM	N/A
S3b.8.2	<p><u>Air Pollution Control and Stack Monitoring</u></p>	<p>IWMF stack emissions / During</p>	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		
	<ul style="list-style-type: none"> • 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: <ol style="list-style-type: none"> 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/m³ and 80 mg/m₃ 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 	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		
	6. Each incineration chamber shall be fitted with auxiliary burners to ensure complete burn out of the combustion gases.								
-	<p><u>Treated Fly Ash and Air Pollution Control Residues:</u></p> <ul style="list-style-type: none"> 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 	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		
	<p>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 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.</p> <ul style="list-style-type: none"> • 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 								

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 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 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.								
-	<p><u>Bottom Ash:</u></p> <ul style="list-style-type: none"> 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 	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		
	<p>container of bottom ash for conformance to the leachability criteria for the next six months.</p> <ul style="list-style-type: none"> 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 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 								

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		
	<p>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 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.</p>								

* 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	<p>All the ventilation fans installed in the below will be provided with silencers or acoustics treatment.</p> <p>(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</p> <p>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.</p> <p>(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.</p>	Within IWMF area / Construction Period	EPD and its contractors	✓		✓		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		
-	<u>Voluntary Enhancement Measure</u> <ul style="list-style-type: none"> 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	<p><u>Drainage and Construction Site Runoff</u></p> <p>The site practices outlined in ProPECC PN 2/23 “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:</p> <ul style="list-style-type: none"> 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 <p>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.</p> <ul style="list-style-type: none"> 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 	Work site / During the construction period	Contractor		✓			EIAO-TM; ProPECC PN 2/23; WPCO	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		
	<p>design of efficient silt removal facilities should be based on the guidelines in Appendix A1 of ProPECC PN 2/23, 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.</p> <ul style="list-style-type: none"> • 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 2/23. • 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 								

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		
	<p>work or surface protection should be immediately performed.</p> <ul style="list-style-type: none"> Open stockpiles of construction materials or construction wastes on-site should be covered with tarpaulin or similar fabric during rainstorms. 								
S5b.8.1.2	<p><u>General Construction Activities</u></p> <p>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.</p> <p>It is recommended to clean the construction sites on a regular basis.</p>	Work site / During the construction period	Contractor		✓			EIAO-TM; ProPECC PN 2/23; WPCO	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		
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 2/23; WPCO	Implemented Discharge License was issued on 15/02/2022
S5b.8.1.4	<u>Accidental Spillage</u> 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 2/23; 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 2/23; 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 2/23; 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: <ul style="list-style-type: none"> 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 2/23; 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		
S5b.8.1.8	<p><u>Sewage Effluent</u></p> <p>Temporary sanitary facilities, such as portable chemical toilets, should be employed on-site where necessary to handle sewage from the workforce. A licensed contractor would be responsible. For appropriate disposal and maintenance of these facilities.</p>	Work site / During the construction period	Contractor		✓			EIAO-TM; ProPECC PN 2/23; WPCO	Implemented
S5b.8.1.9	<p><u>Reclamation and Construction of Breakwaters</u></p> <ul style="list-style-type: none"> 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 m³ to control the dredging rate. Any gap that may need to be provided for marine access will be located at the middle 	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	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		
	<p>of the North Western seawall, away from the identified coral communities and will be shielded by silt curtains systems to control sediment plume dispersion.</p> <ul style="list-style-type: none"> • The silt curtain system at marine access opening should be closed as soon as the 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; 								

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		
	<ul style="list-style-type: none"> • 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 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; • 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 								

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		
	<p>maintained to ensure that the decks are not washed by wave action.</p> <ul style="list-style-type: none"> 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	<p><u>Operational Phase Discharges</u></p> <p>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.</p>	Within IWMF site / During the operational phase	IWMF Operator	✓		✓		WPCO	N/A
S5b.8.2.4	<p>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. Accidental spillage should be cleaned up as soon as practicable and all waste oils and fuels should be collected and handled in</p>	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		
	compliance with the Waste Disposal Ordinance.								
S5b.8.2.5	<p><u>Refuse Entrapment</u></p> <p>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.</p>	<p>Within the Project site / During the operational phase</p>	IWMF Operator			✓		WPCO	N/A
S5b.8.2.6	<p><u>Transportation of bottom ash, fly ash and APC residues to WENT Landfill for disposal</u></p> <p>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.</p>	<p>Transportation of Incineration Ash / During the operational phase</p>	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	<p><u>Good Site Practices</u></p> <p>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:</p> <ul style="list-style-type: none"> • 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	Deficiency of Mitigation Measures but rectified by the Contractor

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				Des	C	O	Dec		
6b.5.1.3	<p><u>Waste Reduction Measures</u></p> <p>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.</p> <p>Recommendations to achieve waste reduction include:</p> <ul style="list-style-type: none"> • 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 	Work Site/ During Design & Construction Period	Contractor	✓	✓			Implemented N/A for demolition items	

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	<ul style="list-style-type: none"> Plan and stock construction materials carefully to minimize amount of waste to be generated and to avoid unnecessary generation of waste. 								
6b.5.1.7	<p><u>Dredged Sediment – Application of Dumping Permit</u></p> <p>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.</p>	Seawall and Reclamation site / Construction Period	EPD and its contractor	✓	✓			DASO ETWB TCW 34/2002	Implemented
6b.5.1.8	<p><u>Dredged Sediment – Sediment Quality Report</u></p> <p>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</p>	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
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	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 proposal shall be submitted to and approved by DEP before the additional marine SI works.								
6b.5.1.9	<p><u>Dredged Sediment – Sediment Transportation</u></p> <p>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.</p>	Seawall and Reclamation site / Construction Period	EPD and its contractor		✓			DASO ETWB TCW 34/2002	Implemented
6b.5.1.10	<p><u>Construction and Demolition Materials</u></p> <p>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:</p> <ul style="list-style-type: none"> • A Waste Management Plan (WMP), which becomes part of the Environmental Management Plan 	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
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	<p>(EMP), should be prepared in accordance with ETWB TCW No.19/2005;</p> <ul style="list-style-type: none"> • A recording system for the amount of wastes generated, recycled and disposed (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 <i>ETWB TCW No. 31/2004</i>). 								
6b.5.1.1 1 – 6b.5.1.12	<p>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.</p>	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
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	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 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	Work Site/ During Construction Period	Contractor		✓			Waste Disposal (Chemical Waste) (General) Regulation	Implemented

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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	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.								
6b.5.1.14	<p><u>General Refuse</u></p> <p>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.</p>	Work Site/ During Construction Period	Contractor		✓			Public Health and Municipal Services Ordinance	Deficiency of Mitigation Measures but rectified by the Contractor
6b.5.1.1 6 – 6b.5.1.33	<p><u>Biogas Generation</u></p> <p>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:</p> <ul style="list-style-type: none"> - gas monitoring after reclamation; - passive ventilation; - gas impermeable membrane; - ventilation with "at risk" rooms; - protection of utilities or below ground services; 	Reclamation site (if dredging at the reclamation site is not required) / Design & Construction Period	Designer and/or contractor	✓	✓			EPD/TR8/97	N/A

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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	- precautions during construction works; - precautions prior to entry of belowground services								
6b.5.2.1	<p><u>Good Site Practices</u></p> <p>It is recommended that the following good operational practices should be adopted to minimise waste management impacts:</p> <ul style="list-style-type: none"> 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; 	IWMF Site/During Operation Period	IWMF Operator			✓		Waste Disposal Ordinance (Cap.354); Waste Disposal (Chemical Waste) (General) Regulation; ETWB TCW No. 1/2004	N/A

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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	<ul style="list-style-type: none"> 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; 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	<p><u>Waste Reduction Measures</u></p> <p>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:</p> <ul style="list-style-type: none"> 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 	IWMF Site/ During Operation Period	IWMF Operator			✓		Implemented	

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	<p>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</p> <ul style="list-style-type: none"> Any unused chemicals or those with remaining functional capacity should be reused as far as practicable. 								
6b.5.2.3	<p><u>Storage, Handling, Treatment, Collection and Disposal of Incineration By-Products</u></p> <p>The following measures are recommended for the storage, handling and collection of the incineration by-products:</p> <ul style="list-style-type: none"> 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; 	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		
	<ul style="list-style-type: none"> The ash should be transported in covered trucks or containers to the designated landfill site. <p>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.</p>								
6b.6.3.1	<p><u>Fuel Oil Tank Construction and Test</u></p> <ul style="list-style-type: none"> 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. <ul style="list-style-type: none"> 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	

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6b.6.3.1	<p><u>Fuel Oil Pipeline Construction and Test</u></p> <ul style="list-style-type: none"> 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. 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. 	Fuel Oil Pipelines/ During Design, Construction and Operation Periods	IWMF Contractor	✓	✓	✓			N/A
6b.6.3.1	<p><u>Fuel Oil Leakage Detection</u></p> <ul style="list-style-type: none"> 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	<p><u>Fuel Oil Storage Tank Refuelling</u></p>	Fuel Oil Refuelling Point/	IWMF Operator			✓			N/A

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	<ul style="list-style-type: none"> Storage tank refuelling (from road tanker) should only be conducted by authorized staff of the oil company using the company's standard procedures. 	During Operation Period							
6b.6.3.1	<p><u>Fuel Oil Spillage Response</u></p> <p>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.</p> <ul style="list-style-type: none"> Training <ul style="list-style-type: none"> - Training on oil spill response actions should be given to relevant staff. The training shall cover the followings: <ul style="list-style-type: none"> ➤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 <ul style="list-style-type: none"> -Establish communication channel with the Fire Services Department (FSD) and EPD to report any oil spillage incident 	IWMF Site/ During Operation Period	IWMF Operator			✓		N/A	

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	<p>so that necessary assistance from relevant department can be quickly sought.</p> <ul style="list-style-type: none"> • 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 procedures shall include the following: <ul style="list-style-type: none"> ➢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 								

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	procedures for chemical wastes are discussed in the following paragraphs.								
6b.6.3.2	<p><u>Chemicals and Chemical Wastes Handling & Storage</u></p> <ul style="list-style-type: none"> • 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 impermeable floor or surface. The impermeable floor/ surface shall possess the following properties: <ul style="list-style-type: none"> - 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 <p>➤ For liquid chemicals and chemical wastes storage, the</p>	Chemicals and Chemical Wastes Storage Area / During Operation Period	IWMF Operator			✓			N/A

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	<p>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.</p> <ul style="list-style-type: none"> ➤ 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	<p><u>Chemicals and Chemical Wastes Spillage Response</u></p> <p>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.</p> <ul style="list-style-type: none"> • Training <ul style="list-style-type: none"> - Training on spill response actions should be given to relevant staff. The training shall cover the followings: 	IWMF Site/ During Operation Period	IWMF Operator			✓		N/A	

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	<ul style="list-style-type: none"> ➤ 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. <ul style="list-style-type: none"> • Communication <ul style="list-style-type: none"> - 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 <ul style="list-style-type: none"> - 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: <ul style="list-style-type: none"> ➤ Identify and isolate the source of spillage as soon as possible; ➤ Contain the spillage and avoid infiltration into soil/ 								

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	<p>groundwater and discharge to storm water channels (in case the spillage occurs at locations out of the designated storage areas);</p> <ul style="list-style-type: none"> ➤ 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 ➤ The waste arising from the cleanup operation should be considered as chemical wastes. 								
6b.6.3.3	<p><u>Preventive Measures for Incineration By-products Handling</u></p> <p>The recommended measures listed below can minimize the potential contamination to the surrounding environment due to the incineration by-products:</p> <ul style="list-style-type: none"> • Ash should be stored in storage silos; • Ash should be handled and conveyed in closed systems fully segregated 	Storage, Handling & Collection of Incineration Ash at IWMF/ During Operation Period	IWMF Operator			✓		N/A	

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	<p>from the ambient environment;</p> <ul style="list-style-type: none"> 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. 								
6b.6.3.4 -6b.6.3.6	<p><u>Incident Record</u></p> <p>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.</p> <p>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.</p>	IWMF Site/ During Operation Period	IWMF Operator			✓		Guidance Manual for Use of Risk-based Remediation Goals for Contaminated Land Management and the Guidance Note for Contaminated Land and Remediation.	N/A

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	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 <i>Guidance Manual for Use of Risk-based Remediation Goals for Contaminated Land Management and the Guidance Note for Contaminated Land and Remediation</i> .								

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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
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7b.8.2.1	<p><u>Measures to avoid direct loss of intertidal habitat</u></p> <ul style="list-style-type: none"> 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	<p><u>Measures to minimise loss of coastal subtidal habitat</u></p> <ul style="list-style-type: none"> 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 subtidal habitat near shore. 	IWMF site	Design team	✓				EIAO-TM	N/A
7b.8.2.3	<p><u>Zero Discharge Scheme</u></p> <ul style="list-style-type: none"> 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 	IWMF site	Design team, IWMF operator	✓		✓		WPCO	N/A

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	provided to treat the wastewater generated from the IWMF (mainly human sewage). The treated effluent would be re-used in the incineration plant and mechanical treatment plant, or for onsite washdown and landscape.								
7b.8.2.4	<p><u>Measures to avoid loss of plant species of conservation importance</u></p> <ul style="list-style-type: none"> Landing portal construction works would not cause direct lost to the recorded individual of protected plant species, <i>Aquilaria sinensis</i>, 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	<p><u>Measures to minimise water quality impact</u></p> <ul style="list-style-type: none"> 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 2/23; WPCO	Implemented
7b.8.3.16 - 7b.8.3.30	<p><u>Measures to minimise disturbance on Finless Porpoise</u></p> <p><i>Minimisation of Habitat Loss for Finless Porpoise</i></p>	IWMF site, work site, marine traffic route	Design team, contractor, IWMF operator	✓	✓	✓	✓	EIAO-TM, Supporting Document for Application for Variation of the Environmental	Implemented for avoidance of construction works that may produce underwater acoustic disturbance, Vessel Travel Route implementation, training of staff; 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
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	<ul style="list-style-type: none"> 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 reduced from the original ~50 ha, down to ~31 ha. <p><i>Avoidance of peak season for finless porpoise occurrence</i></p> <ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> 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); 						Permit (EP-429/2012)		

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	<ul style="list-style-type: none"> - sheet piling works for construction of the remaining section of breakwater (Phase 3) and - bored piling works for berth area (Phase 3) <p>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 from acoustic disturbance would also be minimised.</p> <ul style="list-style-type: none"> • 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. <p><i>Opt for quieter construction methods and plants</i></p> <ul style="list-style-type: none"> • 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 								

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	<p>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 Phase 1, and southern breakwater Phase 3;</p> <ul style="list-style-type: none"> Non-percussive bore piling method would be adopted for the installation of tubular piles for the berth construction during Phase 3. <p><i>Monitored exclusion zones</i></p> <ul style="list-style-type: none"> 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 								

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	<p>exclusion zone is free from marine mammals.</p> <ul style="list-style-type: none"> 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 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. <p><i>Marine mammal watching plan</i></p> <ul style="list-style-type: none"> 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 								

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	<p>be required. Subsequently, a marine mammal watching plan should be implemented.</p> <p>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.</p> <p>An action plan should be devised to cope with any unpredicted incidents such as the case when marine mammals are found within the waters surrounded by the silt curtains.</p> <p><i>Small openings at silt curtains</i></p> <ul style="list-style-type: none"> The openings for vessel access at the silt curtains should be as small as possible to minimise the risk of accidental entrance. <p><i>Adoption of regular travel route</i></p> <ul style="list-style-type: none"> During construction and operation, captains of all vessels should adopt regular travel route, in order to minimize the chance of vessel collision with 								

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	<p>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.</p> <p><i>Vessel speed limit</i></p> <ul style="list-style-type: none"> 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 adopted to verify the predicted impacts and effectiveness of the proposed mitigation measures. <p><i>Training of Staff</i></p> <ul style="list-style-type: none"> 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 								

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7b.8.3.3 1 - 7b.8.3.3 4	<p><u>Measures to minimise impact on corals</u></p> <p><i>Coral translocation</i></p> <ul style="list-style-type: none"> • 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). • 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 	IWMF site	Design team, contractor, IWMF operator	✓	✓	✓	✓	EIAO-TM	<p>Implemented, tagged coral found missing after hitting by typhoons</p> <p>Re-tagging of 10 coral colonies at indirect impact site and control site were conducted in November and December 2018 respectively.</p>

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	<p>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.</p> <p><i>Coral monitoring programme</i></p> <ul style="list-style-type: none"> A coral monitoring programme is recommended to assess any adverse and unacceptable impacts to the coral communities at the coasts of Shek Kwu Chau during construction of the Project. <p><i>Phasing of Works</i></p> <ul style="list-style-type: none"> To minimize environmental impacts, the proposed phasing of construction works has been carefully designed to 								

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	reduce the amount of concurrent works, hence minimize SS elevation and the associated impacts on corals.								
7b.8.3.3 5 - 7b.8.3.4 1	<p><u>Specific measures to minimize disturbance on breeding White-bellied Sea Eagle</u></p> <p><i>Avoidance of noisy works during the breeding season of White-bellied Sea Eagle</i></p> <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> - 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); and - bored piling works for berth area (Phase 3). 	IWMF site, marine traffic route	Design Team, Contractor, IWMF operator	✓	✓	✓	✓	EIAO-TM	Implemented

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	<p><i>Opt for quieter construction methods and plants</i></p> <ul style="list-style-type: none"> 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. <p><i>Restriction on vessel access near the nest of White-bellied Sea Eagle</i></p> <ul style="list-style-type: none"> 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. <p><i>White-bellied Sea Eagle monitoring programme</i></p> <ul style="list-style-type: none"> A WBSE monitoring programme is recommended to assess any adverse and unacceptable impacts to the breeding activities of WBSE during construction and operation of the 								

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	<p>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).</p> <ul style="list-style-type: none"> 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. <p><i>Education of staff</i></p> <ul style="list-style-type: none"> 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. <p><i>Minimisation of Glare Disturbance</i></p>								

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	<ul style="list-style-type: none"> To minimise glare disturbance on WBSE, which may cause disorientation of birds 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. 								
-	<p><u>Construction of Seawall/Breakwaters</u></p> <ul style="list-style-type: none"> 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	<p><u>Opt for Quieter Construction Methods and Plants</u></p> <ul style="list-style-type: none"> 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	<p><u>Measures to minimize impacts from artificial lighting</u></p> <ul style="list-style-type: none"> 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

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7b.8.3.4 4 - 7b.8.3.4 5	<p><u>Measures to minimize accidental spillage</u></p> <ul style="list-style-type: none"> Regular maintenance of vessels, vehicles and equipment that may cause leakage and spillage should only be undertaken within 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. 	Work site	Contractor, IWMF operator		✓	✓	✓	EIAO-TM	Deficiency of Mitigation Measures but rectified by the Contractor.
7b.8.3.46	<p><u>Measures to minimise sewage effluent</u></p> <ul style="list-style-type: none"> 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	<p><u>Measures to minimise drainage and construction runoff</u></p> <ul style="list-style-type: none"> Potential ecological impacts resulted from potential degradation of water quality due to unmitigated surface 	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		
	<p>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:</p> <ul style="list-style-type: none"> - 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- 								

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	site should be covered with tarpaulin or similar fabric during rainstorms.								
7b.8.3.48	<p><u>Measures to minimise impacts from general construction activities</u></p> <ul style="list-style-type: none"> To avoid the entering of construction solid waste into the nearby habitats, construction solid waste should be collected, handled and disposed of properly to avoid entering to the nearby habitats. It is recommended to clean the construction sites on a regular basis. 	Work site	Contractor		✓			EIAO-TM	Implemented
7b.8.3.49	<p><u>Pest Control</u></p> <p>Good waste management practices should be adopted at the IWMF in order to minimise the risk of introduction of pest to the island:</p> <ul style="list-style-type: none"> 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 	IWMF site	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		
	<ul style="list-style-type: none"> - Maintenance of a tidy and clean site environment - Regular application of pest control - Education of staff the importance of site cleanliness 								
7b.8.3.50	<p><u>Control of Marine Habitat Quality during Operation Phase</u></p> <ul style="list-style-type: none"> • Depending on the seabed condition of the approach channel for marine vessels during operation phase of the IWMF, maintenance dredging may be required to 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. 	IWMF site	IWMF operator			✓		EIAO-TM; WPCON/A	
7b.8.4.1 –	<u>Compensation of loss of important habitat of Finless Porpoise</u>	Waters between Shek	Project Proponent	✓		✓		EIAO-TM	N/A

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7b.8.4.8	<p><i>Designation of Marine Park</i></p> <ul style="list-style-type: none"> 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 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 	Kwu Chau and Soko Islands							

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	<p>location of the proposed marine park be determined. The adequacy of enhancement measures should also be reviewed.</p> <ul style="list-style-type: none"> 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. The Project Proponent should provide assistance to AFCD during the process of the marine park designation. . 								
7b.8.5.1 – 7b.8.5.4	<p><u>Additional Enhancement or Precautionary Measures</u> <i>Deployment of Artificial Reefs</i></p> <ul style="list-style-type: none"> Deployment of artificial reefs (ARs) is an enhancement measure for the marine habitats. ARs are proposed to be deployed within the proposed 	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		
	<p>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.</p> <p><i>Release of Fish Fry at Artificial Reefs and Marine Park</i></p> <ul style="list-style-type: none"> 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. 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	<p><u>Measure to minimize loss of and disturbance on fisheries resources</u></p> <ul style="list-style-type: none"> 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	<p><u>Measure to minimize impingement and entrainment</u></p> <ul style="list-style-type: none"> 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, IW MF 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
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8b.8.1.4-8b.8.1.6	<p><u>Measures to control water quality</u></p> <ul style="list-style-type: none"> 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	<p><u>Additional Enhancement / Precautionary Measures</u></p> <ul style="list-style-type: none"> 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. <p><i>Release of Fish Fry at Artificial Reefs</i></p> <ul style="list-style-type: none"> 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

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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	<p><u>Landscape Design</u></p> <ol style="list-style-type: none"> 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	<p><u>Adoption of Natural Features of the Existing Shoreline</u></p> <p>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.</p> <p>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.</p>	Work site / During construction phase	Contractor		✓				N/A
S10b.10 MLVC-04	<p><u>Greening Design (Rooftop & Vertical Greening)</u></p> <p>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.</p> <p>2) Sufficient space between concrete enclosure and stack to minimize heat transfer.</p> <p>3) Introduction of landscape decks at the stack to further enhance the overall natural and green concept unique for this site.</p>	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
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S10b.10 MVC-01	<p><u>Visual Mitigation and Aesthetic Design</u></p> <ol style="list-style-type: none"> 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 & construction 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	

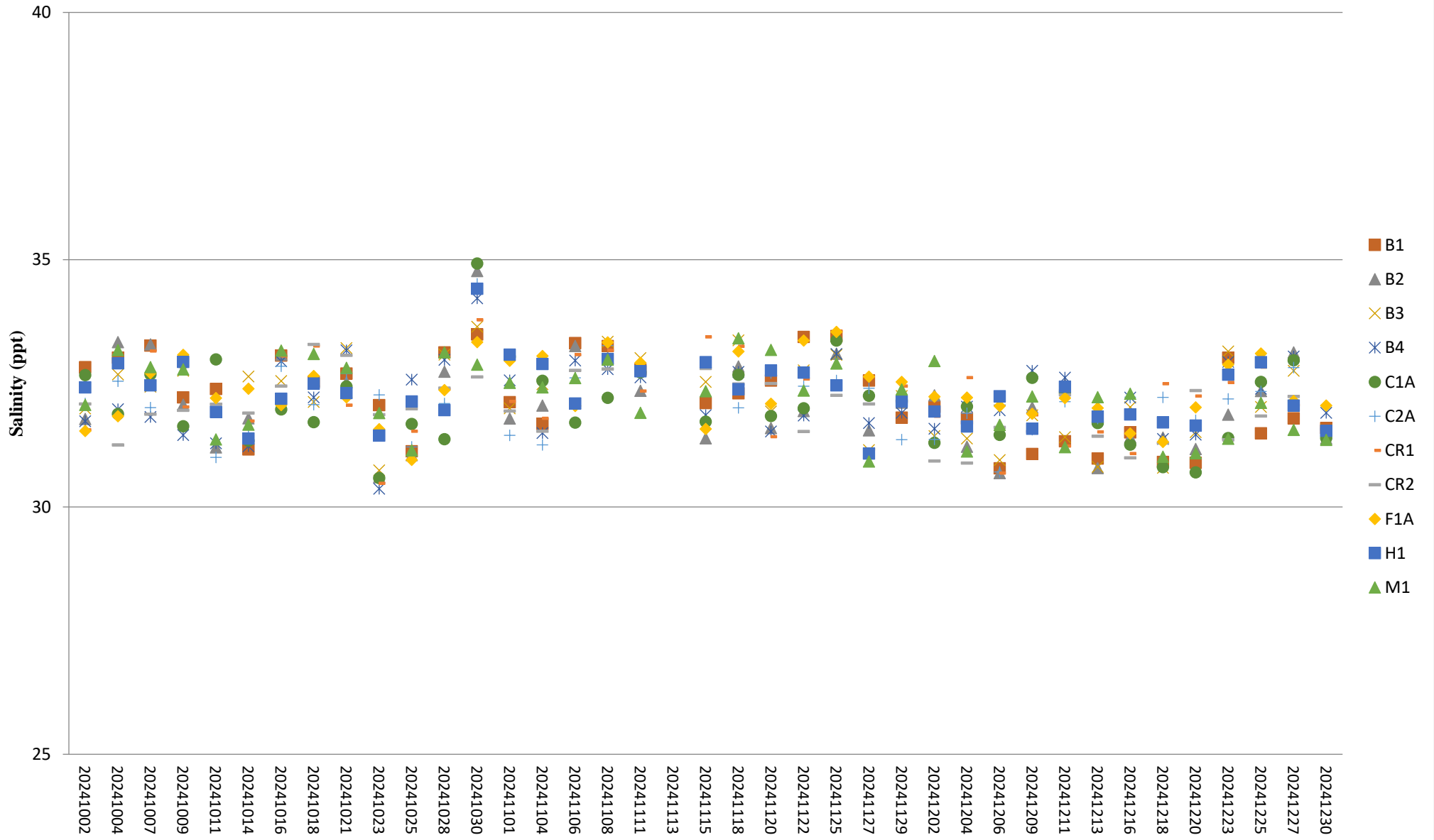
EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
S10b.10 MVC-03	Optimization of the construction sequence and construction programme 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 unobtrusive 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	<u>Control of Operation Time</u> 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

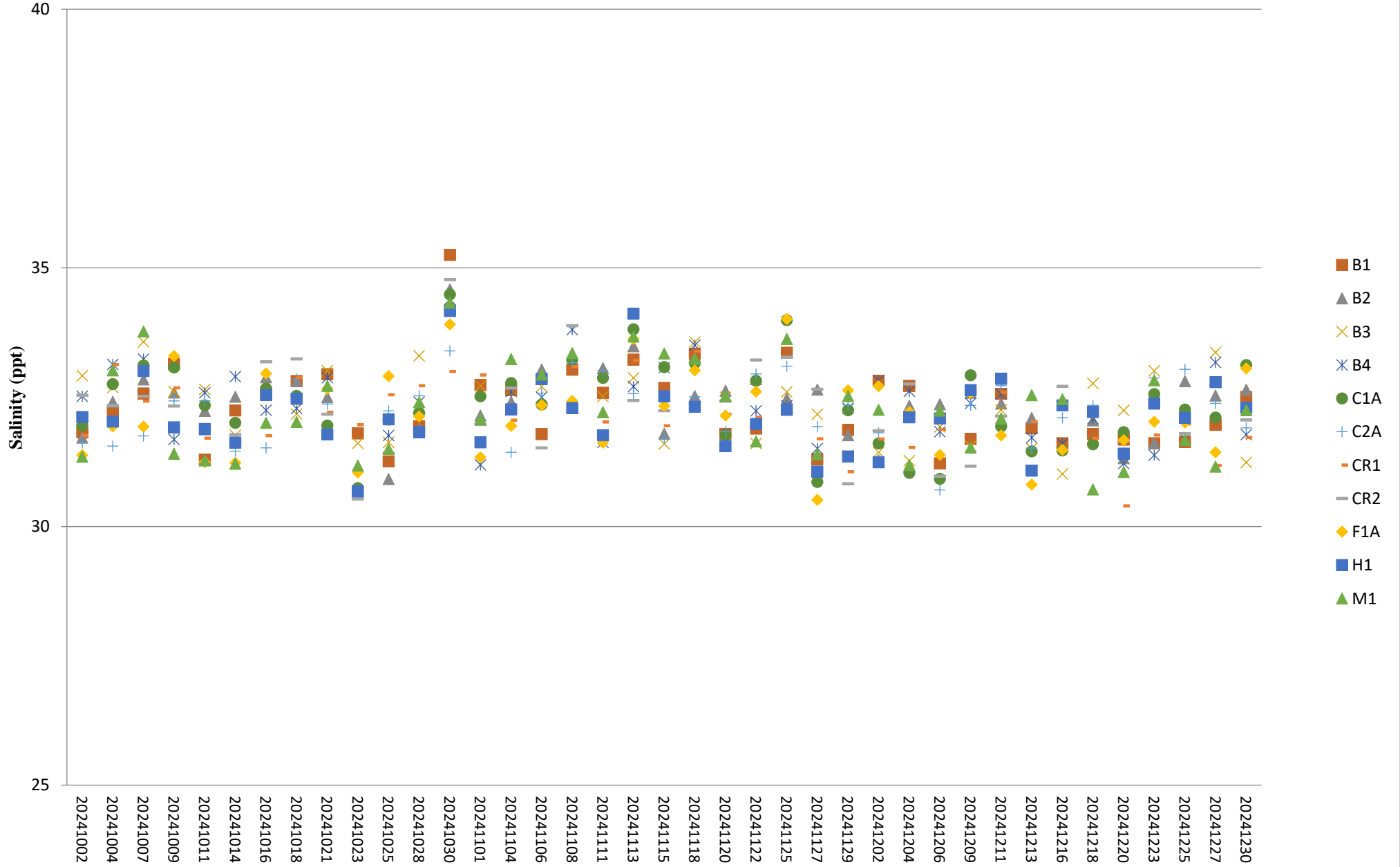
* Des - Design, C - Construction, O – Operation, and Dec - Decommissioning

Appendix C Water Quality Monitoring Data Trending

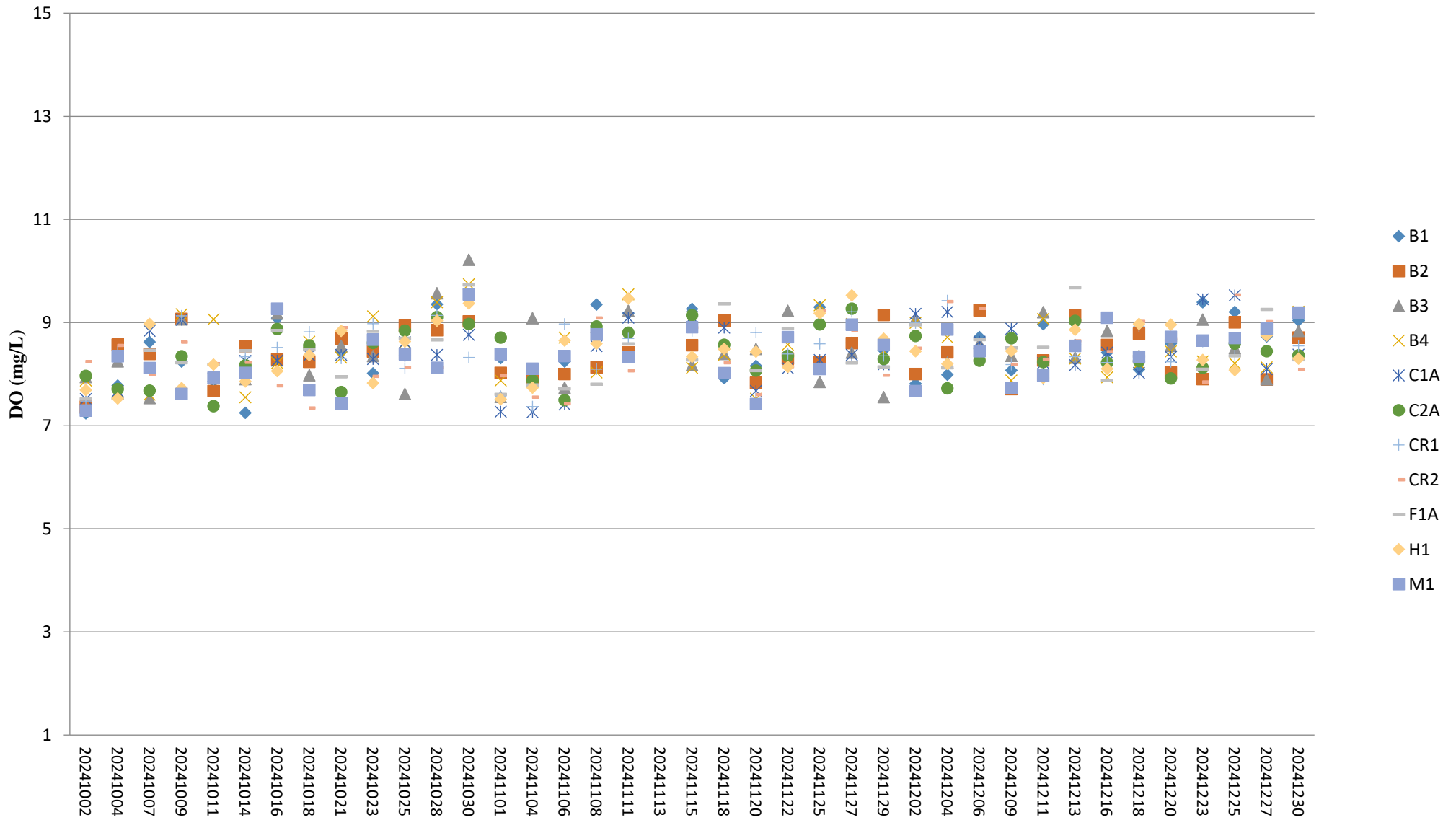
Salinity (Depth-averaged) during MID-FLOOD



Salinity (Depth-averaged) during MID-EBB



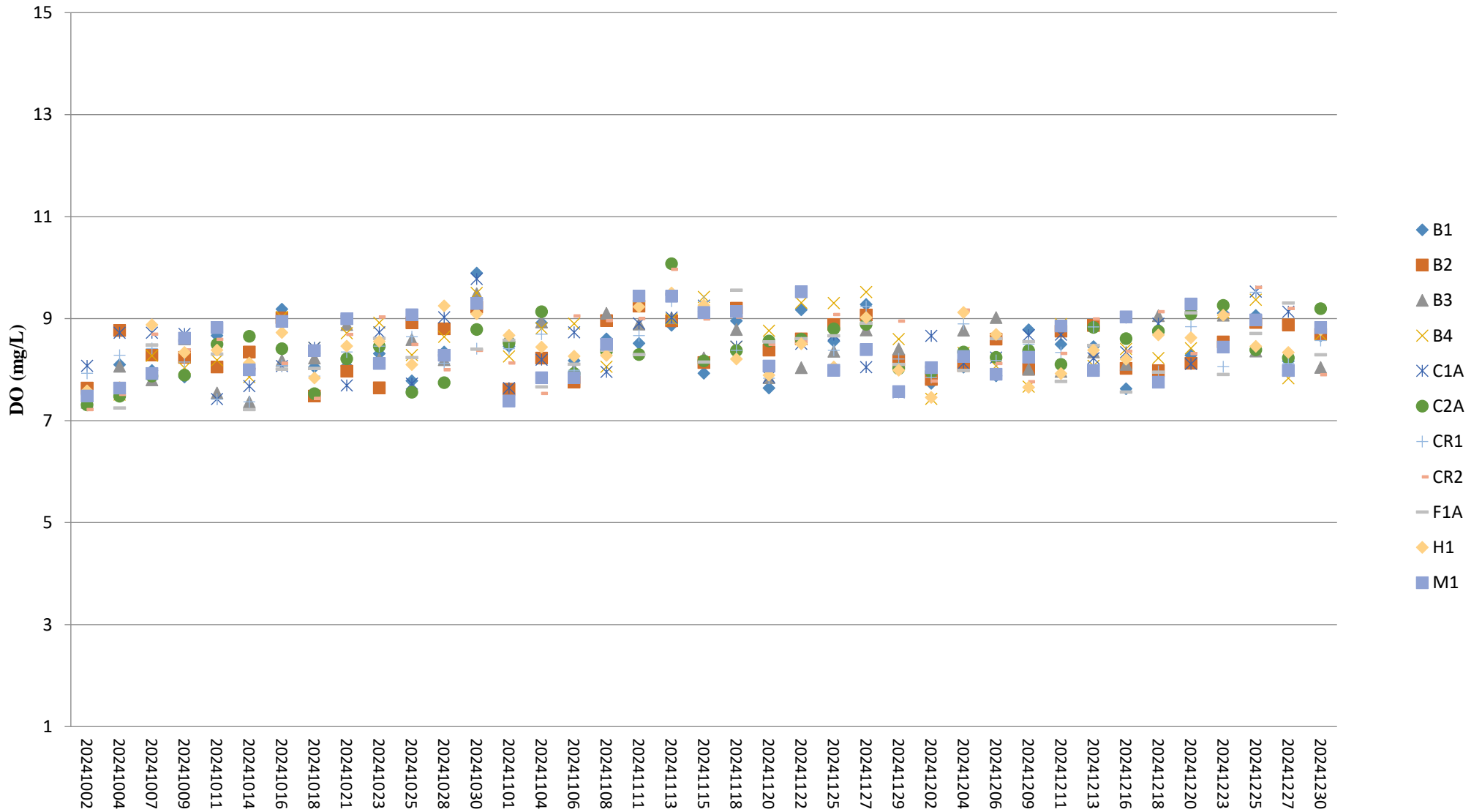
Dissolved Oxygen (Surface & Middle) during MID-FLOOD



Note:

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

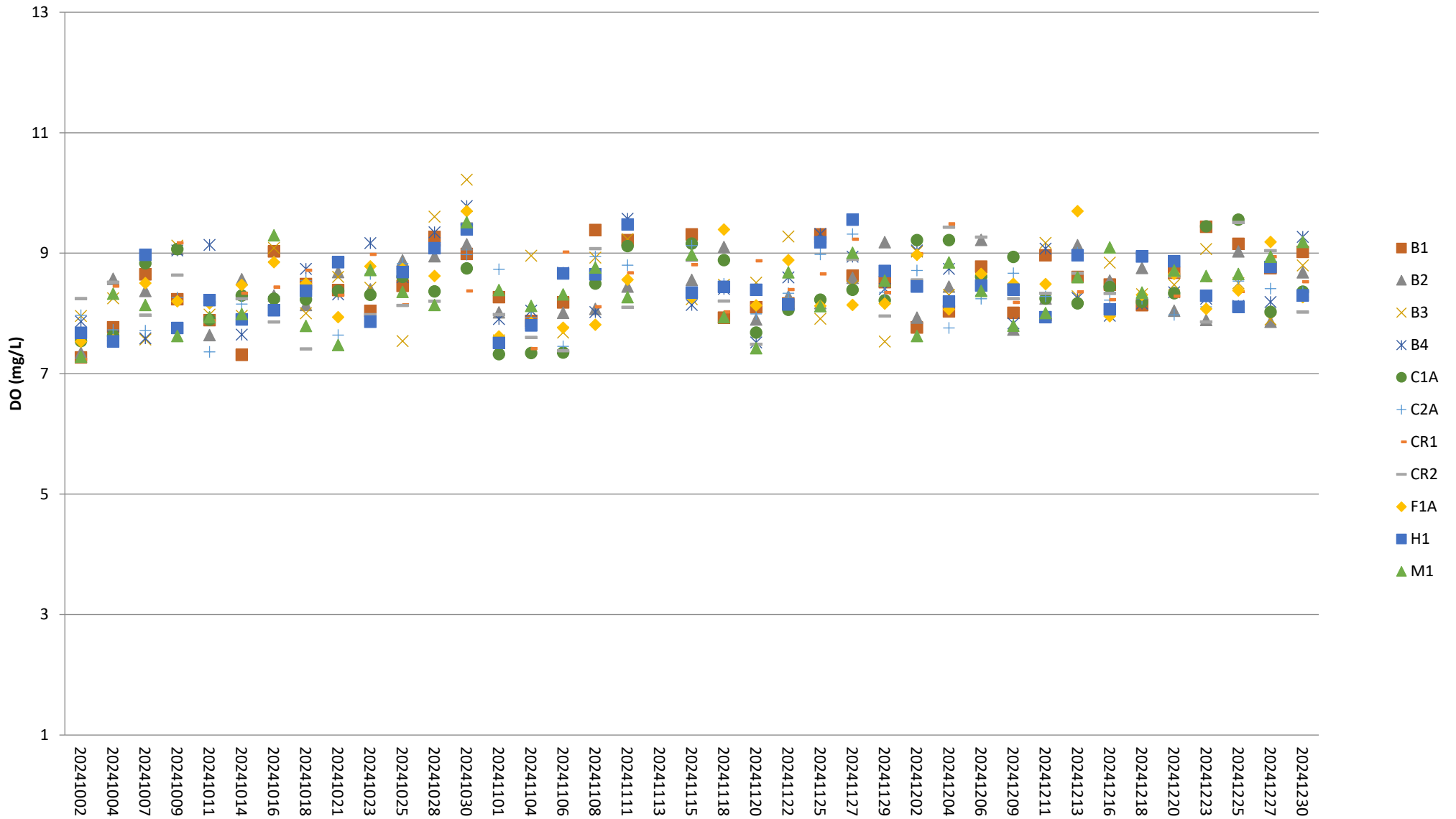
Dissolved Oxygen (Surface & Middle) during MID-EBB



Note:

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

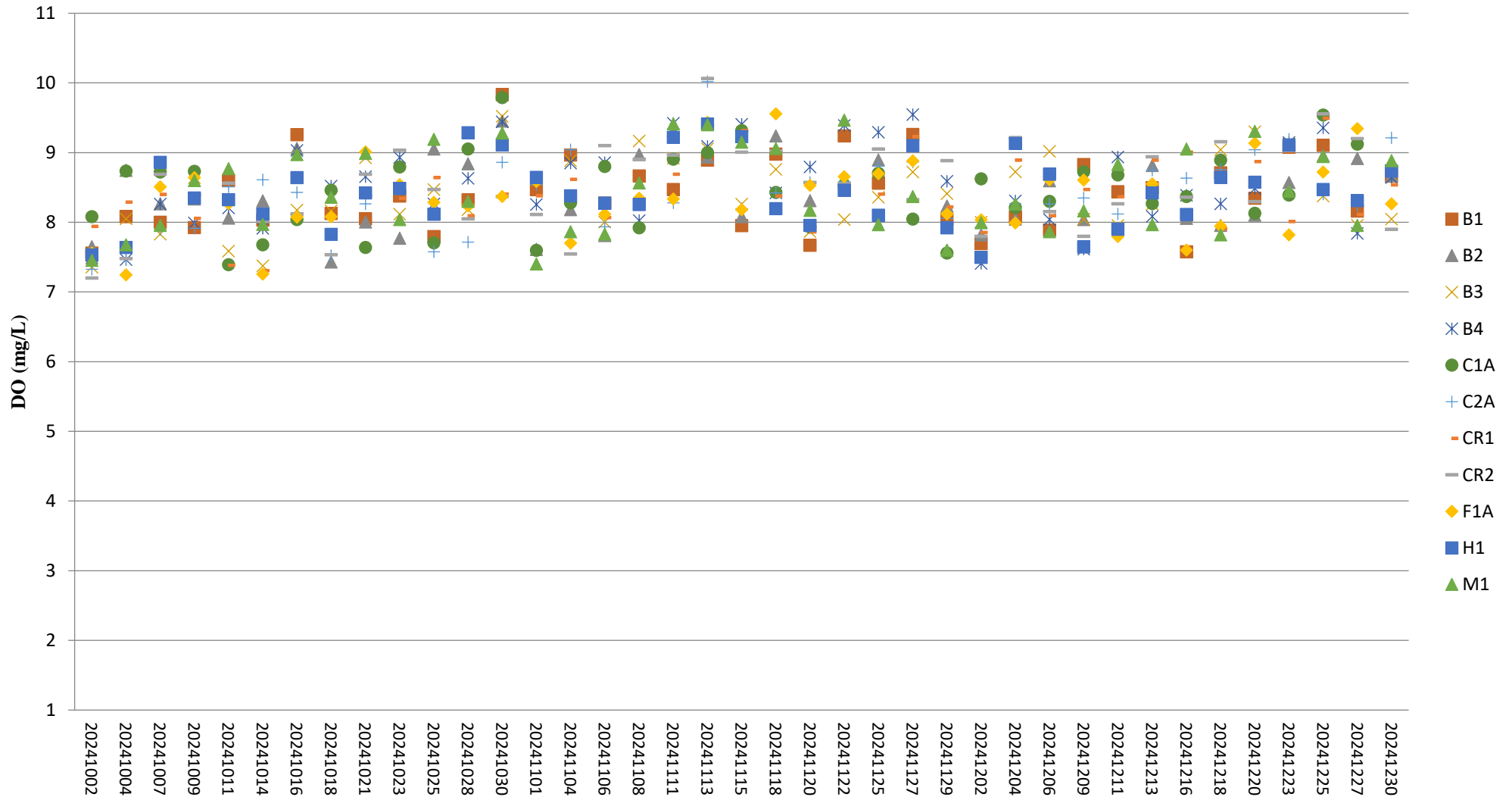
Dissolved Oxygen (Bottom) during MID-FLOOD



Note:

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

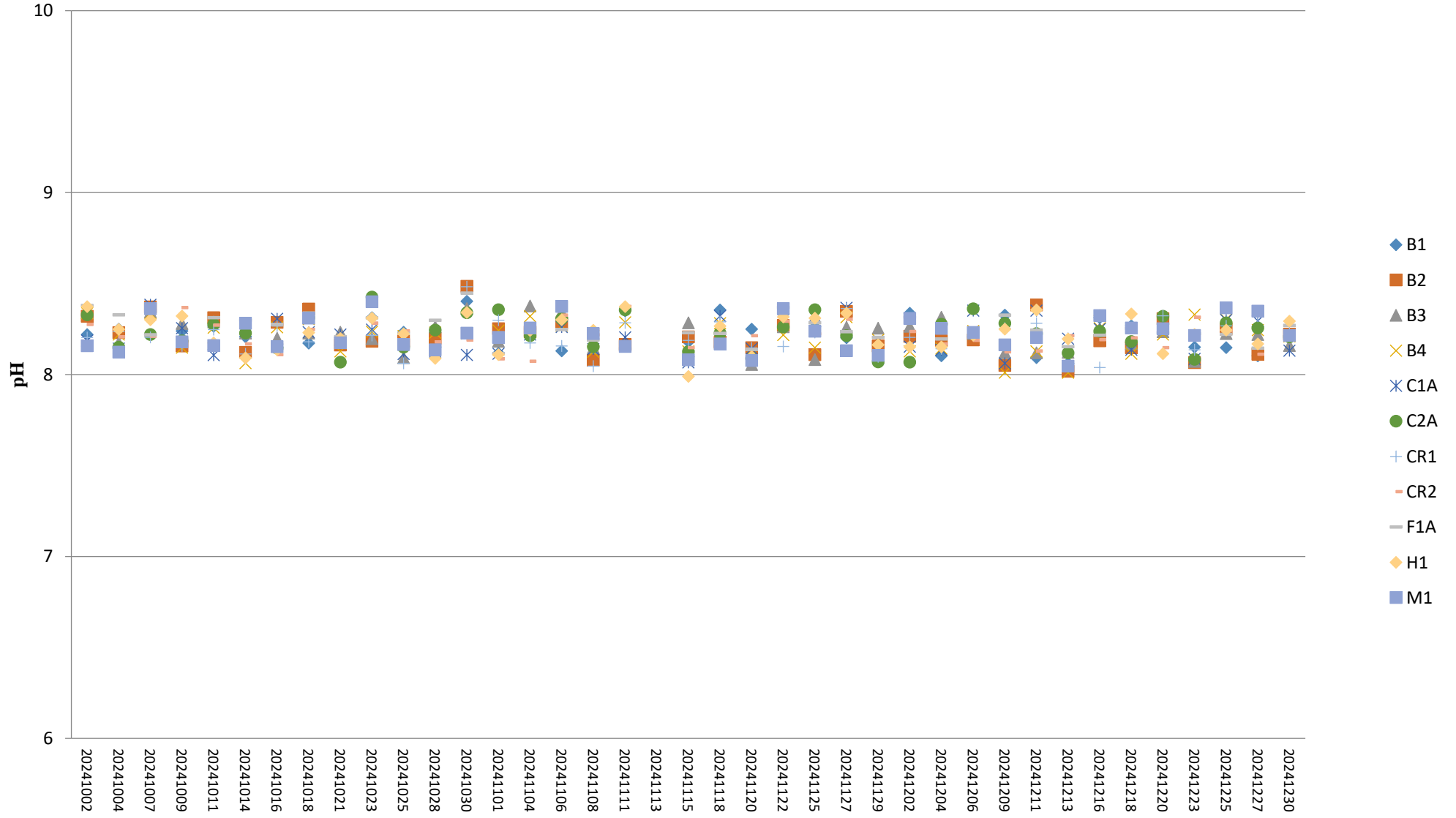
Dissolved Oxygen (Bottom) during MID-EBB



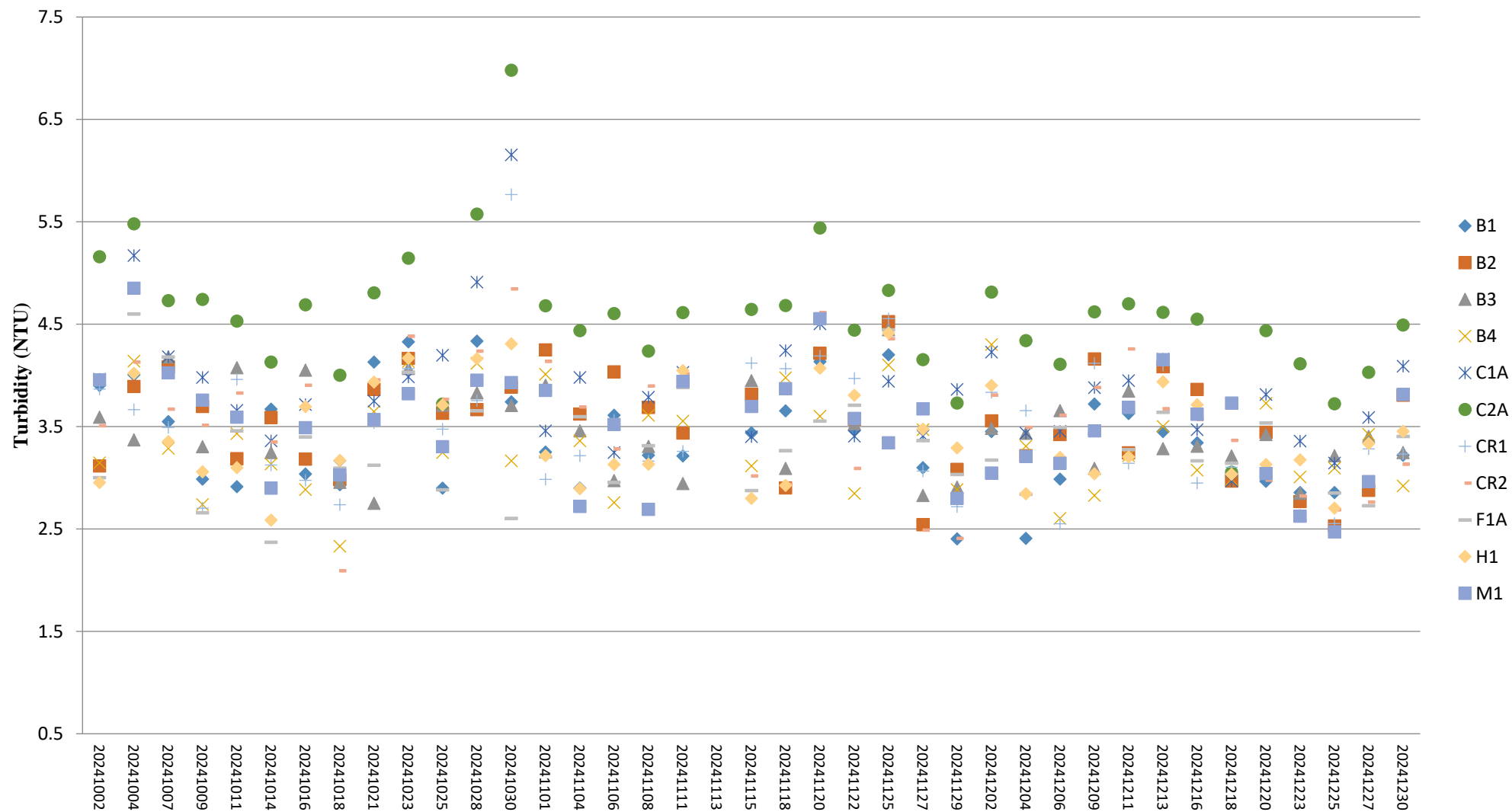
Note:

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

pH (Depth-averaged) during MID-FLOOD



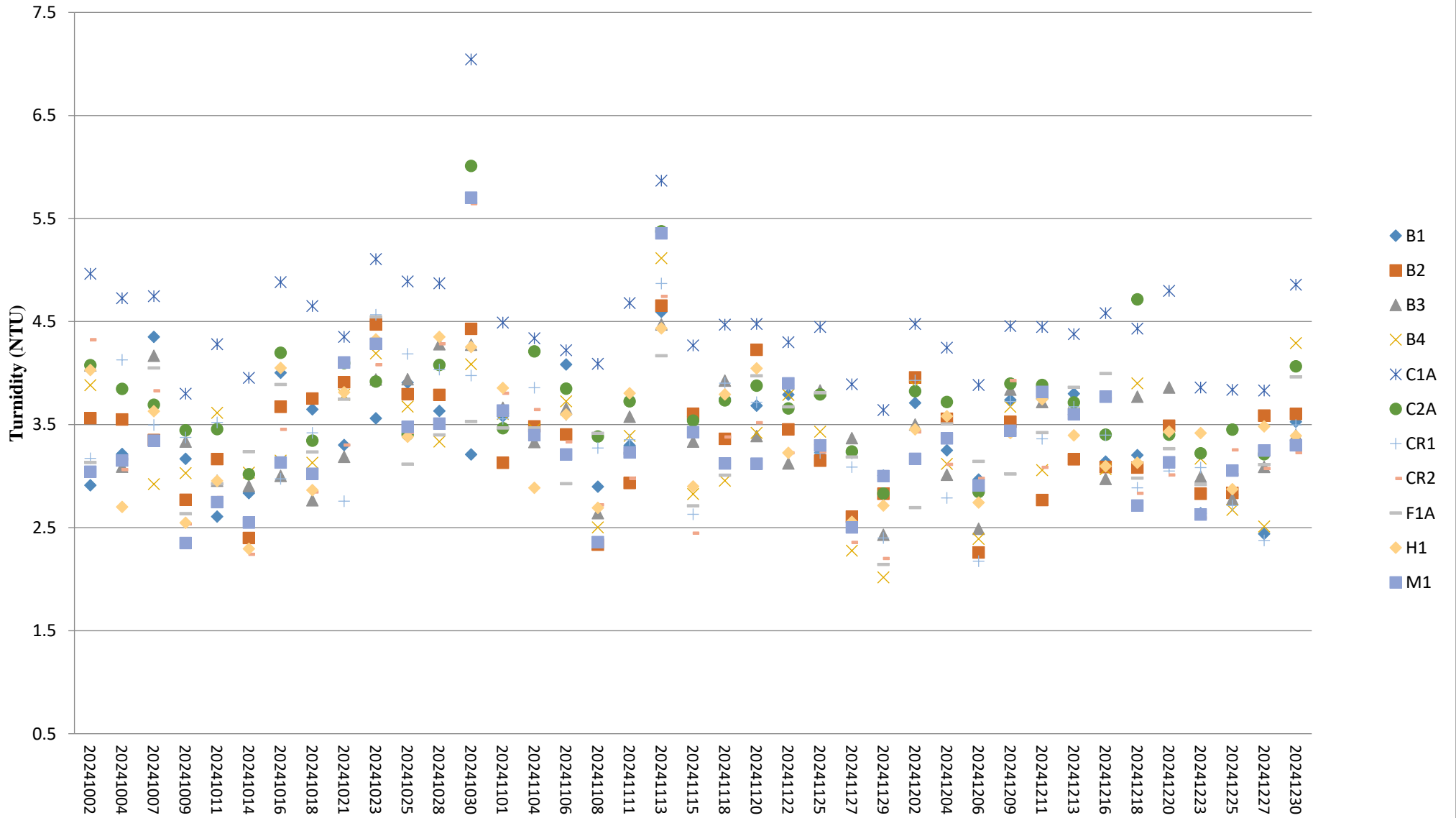
Turbidity (Depth-averaged) during MID-FLOOD



Note:

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

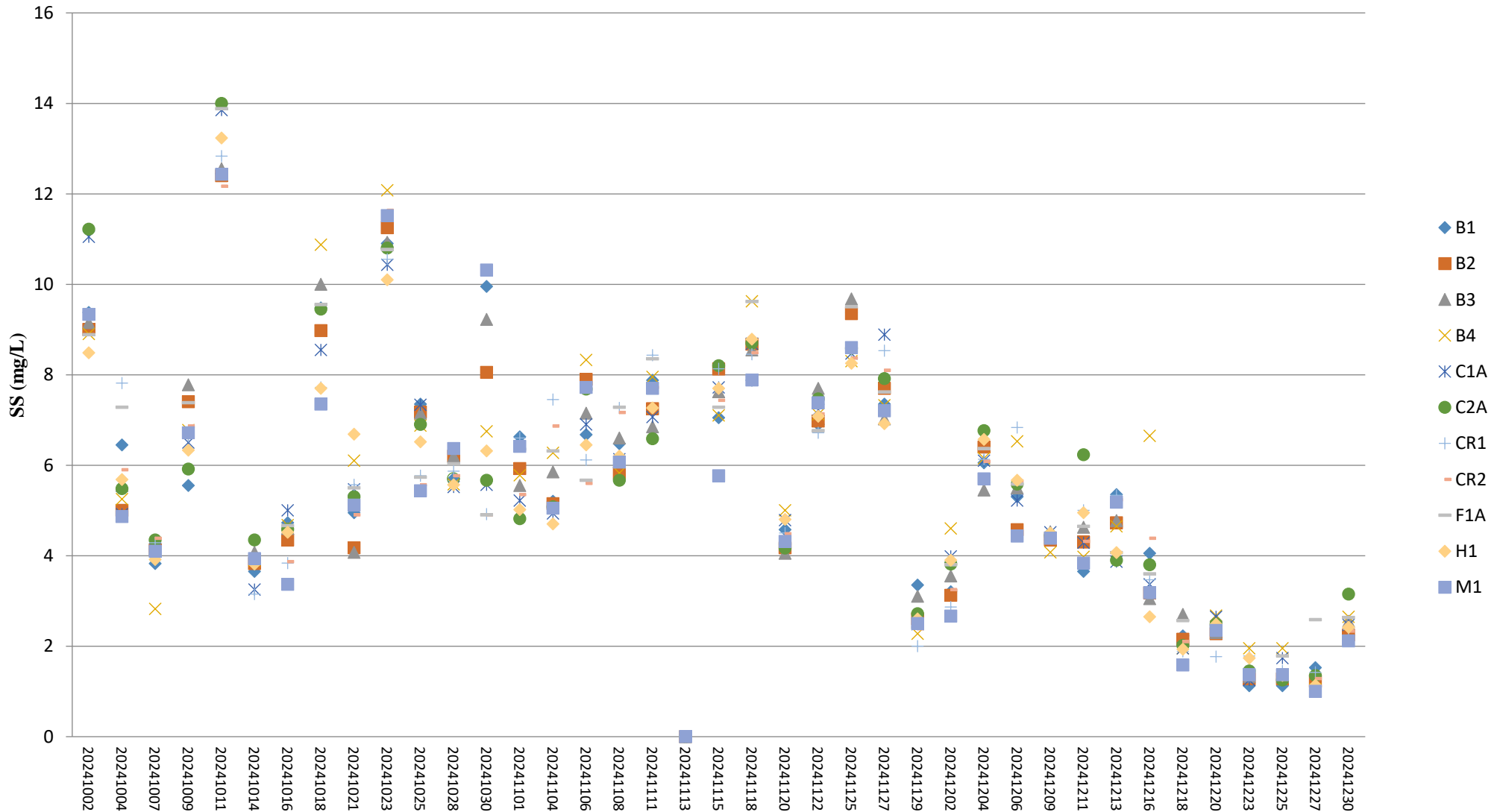
Turbidity (Depth-averaged) during MID-EBB



Note:

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

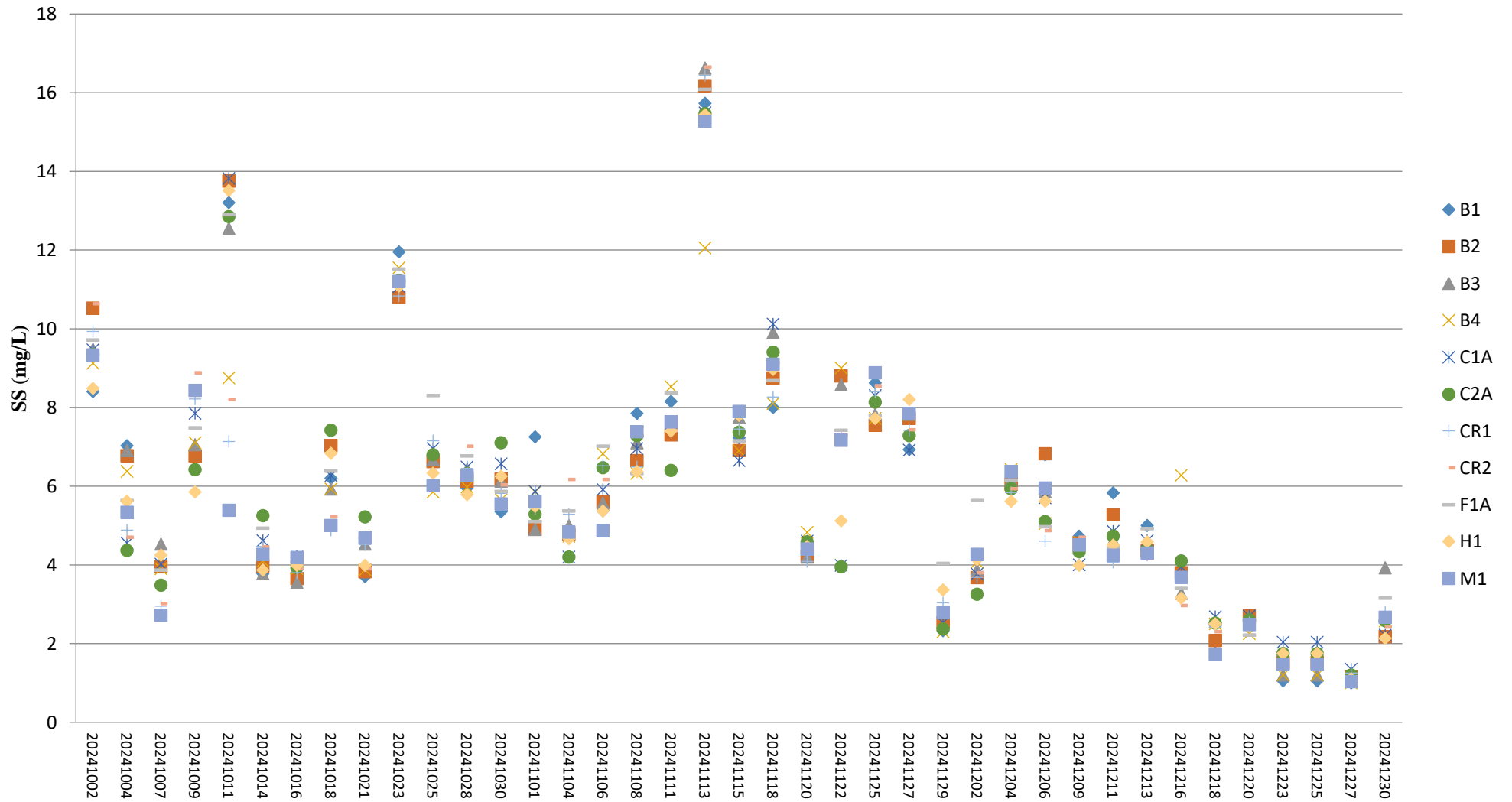
Suspended Solids (Depth-averaged) during MID-FLOOD



Note:

1. The Action and Limit Levels of suspended solids can be referred to **Table 2.2** of the quarterly EM&A report.
2. For the SS concentrations below the detection limit of 1 mg/L, the SS concentration is taken as 1 mg/L for the calculation of depth-averaged value.

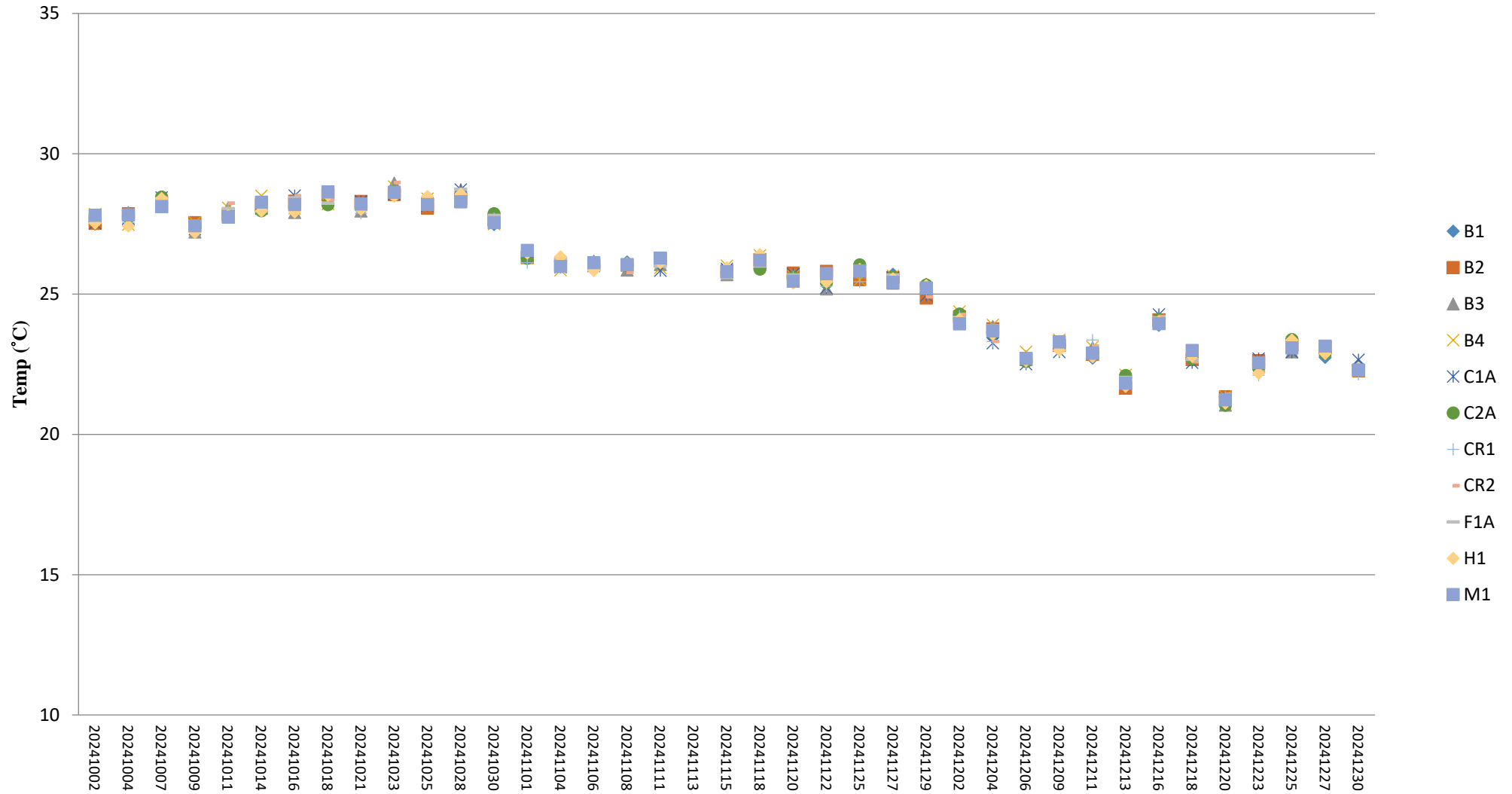
Suspended Solids (Depth-averaged) during MID-EBB



Note:

1. The Action and Limit Levels of suspended solids can be referred to **Table 2.2** of the quarterly EM&A report.
2. For the SS concentrations below the detection limit of 1 mg/L, the SS concentration is taken as 1 mg/L for the calculation of depth-averaged value.

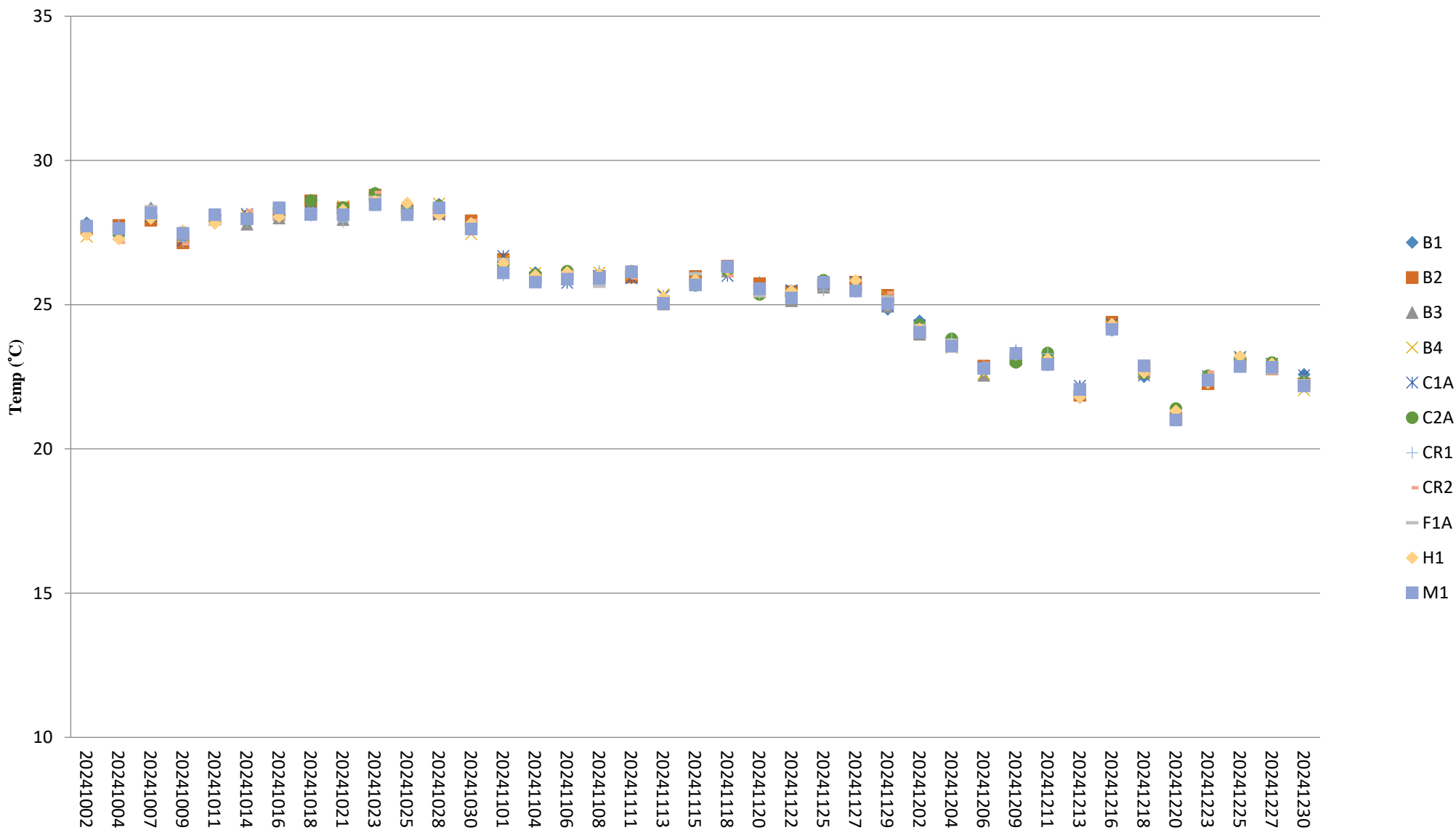
Temperature (Depth-averaged) during MID-FLOOD



Note:

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

Temperature (Depth-averaged) during MID-EBB

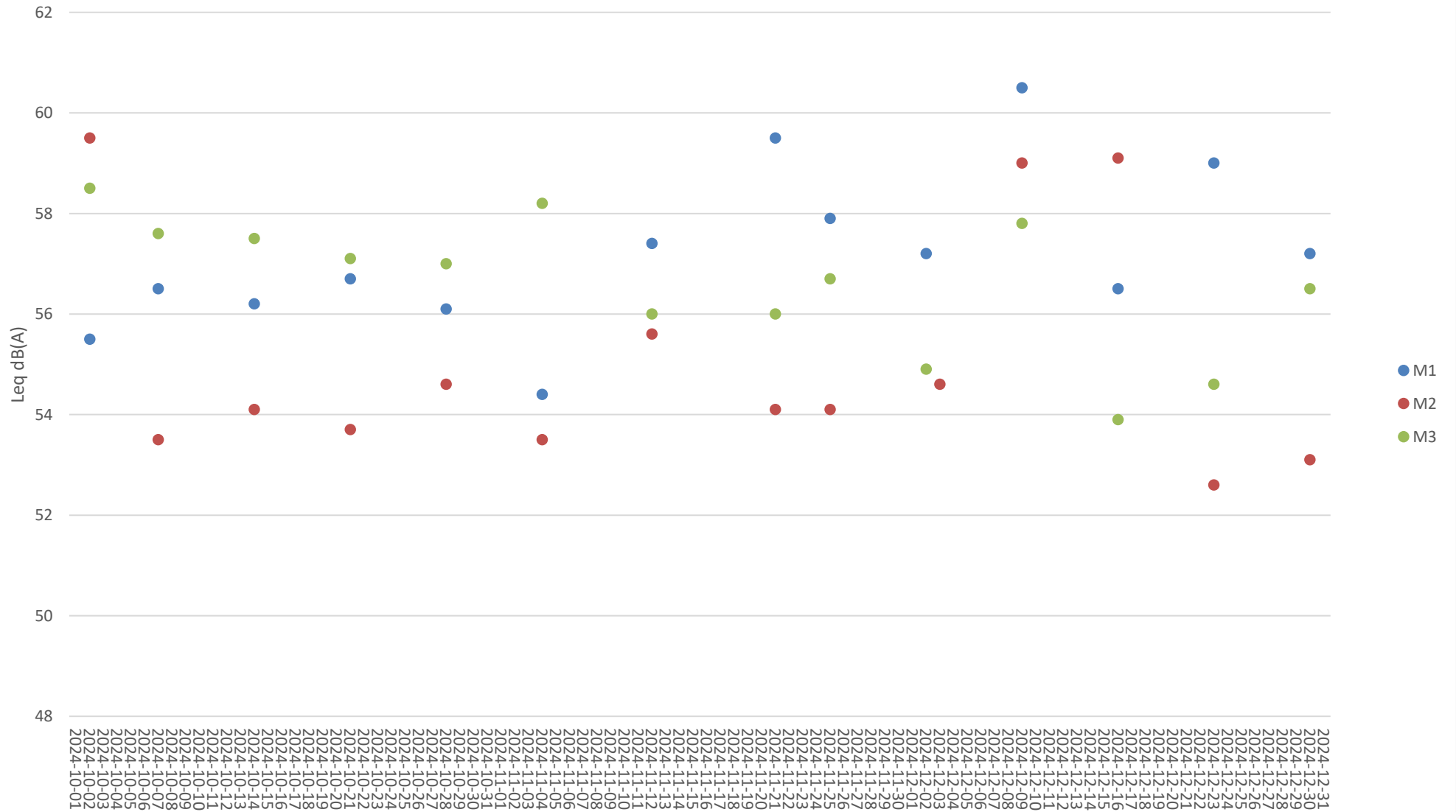


Note:

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

Appendix D Noise Monitoring Data Trending

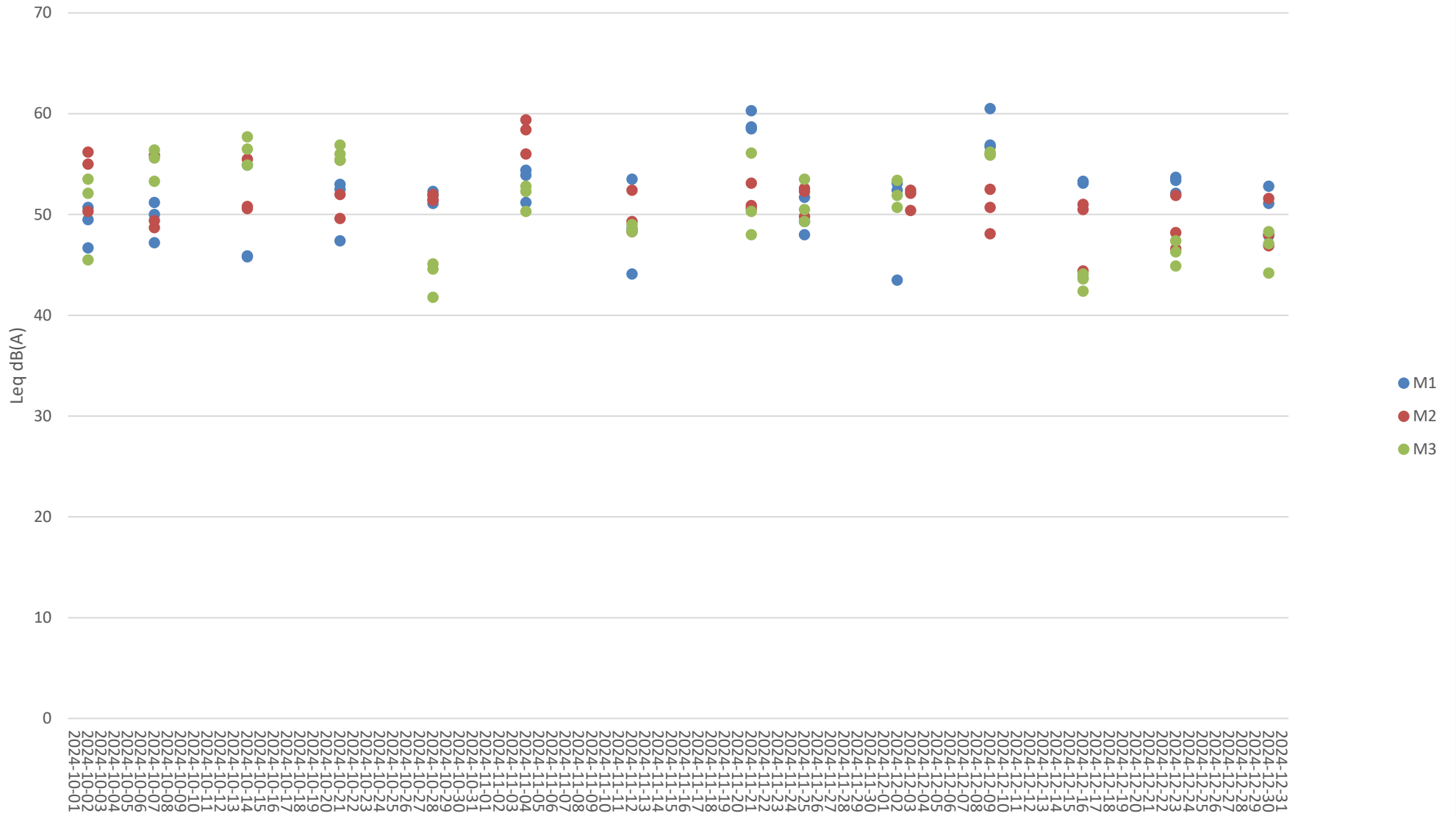
Impact Noise Monitoring Results during Day Time (0700 - 1900 hours)



Remark:

1. Construction works carried out during reporting month refer to **Table 1.2**.
2. Weather condition recorded and noise source other than construction activities from the Project observed during the monitoring events refer to noise monitoring data summary in **Appendix G**.

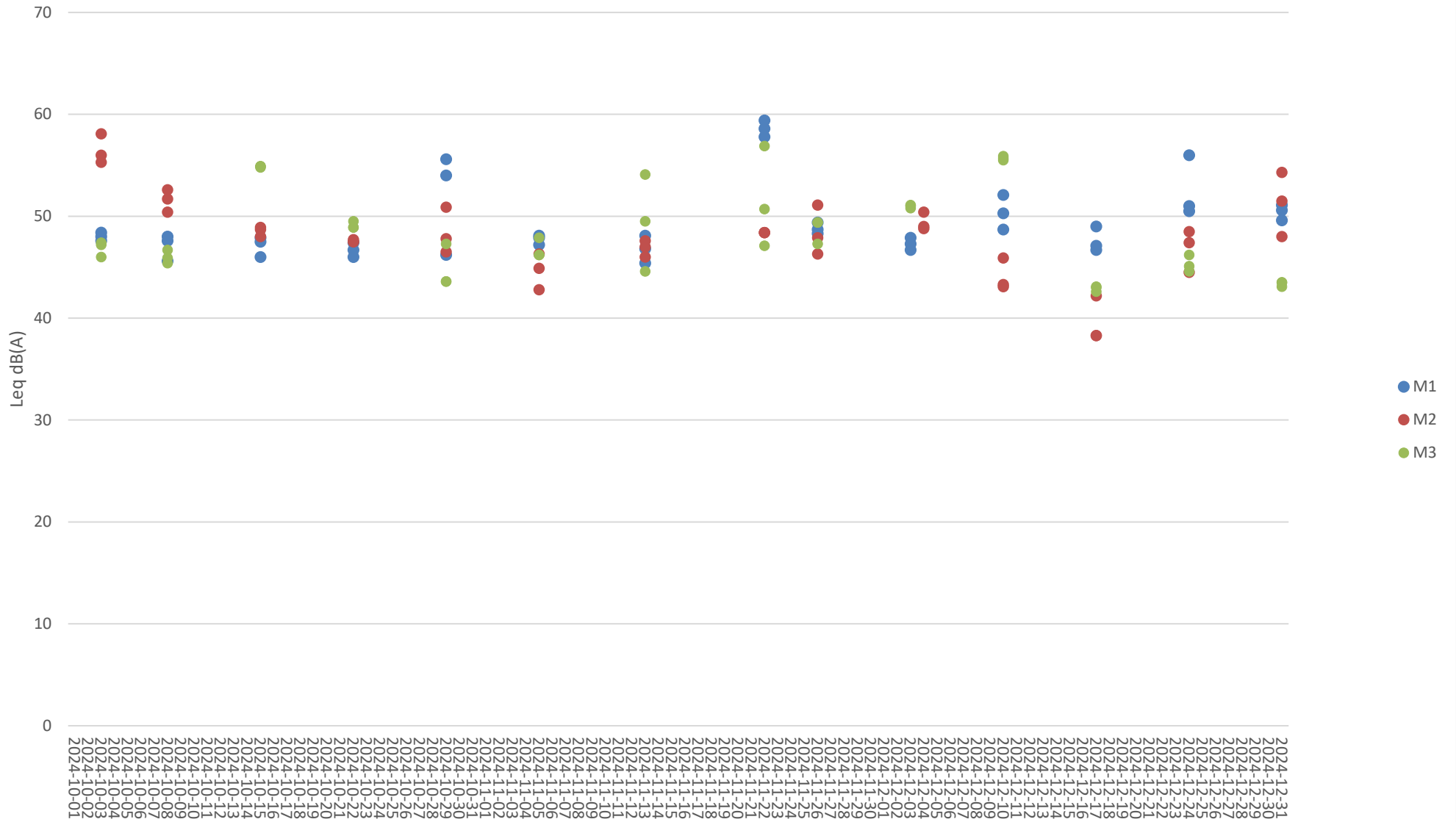
Additional Impact Noise Monitoring Results during Evening Time (1900 - 2300 hours)



Remark:

1. Construction works carried out during reporting month refer to **Table 1.2**.
2. Weather condition recorded and noise source other than construction activities from the Project observed during the monitoring events refer to noise monitoring data summary in **Appendix G**.

Additional Impact Noise Monitoring Results during Night Time (2300 - 0700 hours)



Remark:

1. Construction works carried out during reporting month refer to **Table 1.2**.
2. Weather condition recorded and noise source other than construction activities from the Project observed during the monitoring events refer to noise monitoring data summary in **Appendix G**.

Summary of the Construction Activities Undertaken during the Reporting Period

Location of works	Construction activities undertaken	Remarks on progress
Reclamation area	<ul style="list-style-type: none">• Pile cap construction• Superstructure construction	<ul style="list-style-type: none">• On-going• On-going
Seawall portion	<ul style="list-style-type: none">• Caisson extension works, from +3mPD to +6mPD, at Seawall A and B• Construction of wave wall along the vertical seawall above +3mPD	<ul style="list-style-type: none">• On-going• On-going

Location: Shek Kwu Chau Treatment & Rehabilitation Centre Hostel 1 (M1 / N_S1)

Monitoring date: 02, 07, 14, 21 and 28 October 2024 (Daytime)

02&03, 07&08, 14&15, 21&22 and 28&29 October 2024 (Evening & Nighttime)

Parameter: $L_{eq\ 30min}$ (Daytime), $L_{eq\ 5min}$ (Evening & Night time)

Noise source other than construction activities from the Project: Nil

Noise Monitoring Data:

Date	Start time		End time	Weather	$L_{eq\ 30min}$ dB(A) / $L_{eq\ 5min}$ dB(A)	Sound Level Meter Used	Calibrator Used
02 Oct 2024	13:19	-	13:49	Sunny	55.5	SVAN 971 (Serial No. 103482)	Rion NC-75 (No.34524163)
02 Oct 2024	19:14	-	19:19	Fine	49.5	SVAN 971 (Serial No. 103482)	Rion NC-75 (No.34524163)
	20:09	-	20:14		50.7		
	21:39	-	21:44		46.7		
03 Oct 2024	1:19	-	1:24	Fine	48.0	SVAN 971 (Serial No. 103482)	Rion NC-75 (No.34524163)
	3:19	-	3:24		48.4		
	5:09	-	5:14		47.6		
07 Oct 2024	13:31	-	14:01	Sunny	56.5	SVAN 971 (Serial No. 103482)	Rion NC-75 (No.34524163)
07 Oct 2024	19:06	-	19:11	Fine	51.2	SVAN 971 (Serial No. 103482)	Rion NC-75 (No.34524163)
	20:16	-	20:21		50.0		
	21:16	-	21:21		47.2		
08 Oct 2024	1:26	-	1:31	Fine	47.6	SVAN 971 (Serial No. 103482)	Rion NC-75 (No.34524163)
	3:21	-	3:26		45.6		
	5:16	-	5:21		48.0		
14 Oct 2024	13:48	-	14:18	Sunny	56.2	SVAN 971 (Serial No. 103482)	Rion NC-75 (No.34524163)
14 Oct 2024	19:18	-	19:23	Fine	54.9	SVAN 971 (Serial No. 103482)	Rion NC-75 (No.34524163)
	20:18	-	20:23		45.9		
	21:18	-	21:23		45.8		
15 Oct 2024	1:18	-	1:23	Fine	47.9	SVAN 971 (Serial No. 103482)	Rion NC-75 (No.34524163)
	3:23	-	3:28		46.0		
	5:08	-	5:13		47.5		
21 Oct 2024	13:26	-	13:56	Sunny	56.7	SVAN 971 (Serial No. 103482)	Rion NC-75 (No.34524163)
21 Oct 2024	19:16	-	19:21	Fine	52.5	SVAN 971 (Serial No. 103482)	Rion NC-75 (No.34524163)
	20:26	-	20:31		53.0		
	21:41	-	21:46		47.4		
22 Oct 2024	1:26	-	1:31	Fine	47.4	SVAN 971 (Serial No. 103482)	Rion NC-75 (No.34524163)
	3:31	-	3:36	Fine	46.0		
	5:16	-	5:21	Fine	46.7		

Date	Start time		End time	Weather	L_{eq 30min} dB(A) / L_{eq 5min} dB(A)	Sound Level Meter Used	Calibrator Used
28 Oct 2024	13:36	-	14:06	Sunny	56.1	SVAN 971 (Serial No. 103482)	Rion NC-75 (No.34524163)
28 Oct 2024	19:26	-	19:31	Fine	51.1	SVAN 971 (Serial No. 103482)	Rion NC-75 (No.34524163)
	20:21	-	20:26	Fine	52.3		
	21:26	-	21:31	Fine	51.9		
29 Oct 2024	1:31	-	1:36	Fine	46.2	SVAN 971 (Serial No. 103482)	Rion NC-75 (No.34524163)
	3:21	-	3:26	Fine	54.0		
	5:11	-	5:16	Fine	55.6		

Location: Shek Kwu Chau Treatment & Rehabilitation Centre Hostel 2 (M2 / N_S2)

Monitoring date: 02, 07, 14, 21 and 28 October 2024 (Daytime)

02&03, 07&08, 14&15, 21&22 and 28&29 October 2024 (Evening & Nighttime)

Parameter: $L_{eq\ 30min}$ (Daytime), $L_{eq\ 5min}$ (Evening & Night time)

Noise source other than construction activities from the Project: Nil

Noise Monitoring Data:

Date	Start time		End time	Weather	$L_{eq\ 30min}$ dB(A) / $L_{eq\ 5min}$ dB(A)	Sound Level Meter Used	Calibrator Used
02 Oct 2024	13:28	-	13:58	Sunny	59.5	SVAN 971 (Serial No. C132260)	Rion NC-75 (No.34524163)
02 Oct 2024	19:13	-	19:18	Fine Fine Fine	56.2	SVAN 971 (Serial No. C132260)	Rion NC-75 (No.34524163)
	20:13	-	20:18		50.3		
	21:18	-	21:23		55.0		
03 Oct 2024	1:13	-	1:18	Fine Fine Fine	55.3	SVAN 971 (Serial No. C132260)	Rion NC-75 (No.34524163)
	3:08	-	3:13		56.0		
	5:08	-	5:13		58.1		
07 Oct 2024	13:41	-	14:11	Sunny	53.5	SVAN 971 (Serial No. C132260)	Rion NC-75 (No.34524163)
07 Oct 2024	19:06	-	19:11	Fine Fine Fine	49.4	SVAN 971 (Serial No. C132260)	Rion NC-75 (No.34524163)
	20:16	-	20:21		55.9		
	21:16	-	21:21		48.7		
08 Oct 2024	1:16	-	1:21	Fine Fine Fine	50.4	SVAN 971 (Serial No. C132260)	Rion NC-75 (No.34524163)
	3:16	-	3:21		51.7		
	5:11	-	5:16		52.6		
14 Oct 2024	13:32	-	14:02	Sunny	54.1	SVAN 971 (Serial No. C132260)	Rion NC-75 (No.34524163)
14 Oct 2024	19:17	-	19:22	Fine Fine Fine	55.5	SVAN 971 (Serial No. C132260)	Rion NC-75 (No.34524163)
	20:17	-	20:22		50.6		
	21:22	-	21:27		50.8		
15 Oct 2024	1:17	-	1:22	Fine Fine Fine	48.0	SVAN 971 (Serial No. C132260)	Rion NC-75 (No.34524163)
	3:22	-	3:27		48.7		
	5:07	-	5:12		48.9		
21 Oct 2024	13:31	-	14:01	Sunny	53.7	SVAN 971 (Serial No. C132260)	Rion NC-75 (No.34524163)
21 Oct 2024	19:11	-	19:16	Fine Fine Fine	52.0	SVAN 971 (Serial No. C132260)	Rion NC-75 (No.34524163)
	20:26	-	20:31		55.4		
	21:41	-	21:46		49.6		
22 Oct 2024	1:26	-	1:31	Fine Fine Fine	47.5	SVAN 971 (Serial No. C132260)	Rion NC-75 (No.34524163)
	3:31	-	3:36		47.7		
	5:16	-	5:21		47.5		

Date	Start time		End time	Weather	L_{eq 30min} dB(A) / L_{eq 5min} dB(A)	Sound Level Meter Used	Calibrator Used
28 Oct 2024	13:39	-	14:09	Sunny	54.6	SVAN 971 (Serial No. C132260)	Rion NC-75 (No.34524163)
28 Oct 2024	19:24	-	19:29	Fine	52.0	SVAN 971 (Serial No. C132260)	Rion NC-75 (No.34524163)
	20:19	-	20:24	Fine	51.5		
	21:14	-	21:19	Fine	51.4		
29 Oct 2024	1:29	-	1:34	Fine	46.5	SVAN 971 (Serial No. C132260)	Rion NC-75 (No.34524163)
	3:34	-	3:39	Fine	47.8		
	5:14	-	5:19	Fine	50.9		

Location: Shek Kwu Chau Treatment & Rehabilitation Centre Hostel 3 (M3 / N_S3)

Monitoring date: 02, 07, 14, 21 and 28 October 2024 (Daytime)

02&03, 07&08, 14&15, 21&22 and 28&29 October 2024 (Evening & Nighttime)

Parameter: $L_{eq\ 30min}$ (Daytime), $L_{eq\ 5min}$ (Evening & Night time)

Noise source other than construction activities from the Project: Operation of nearby Air Quality Monitoring Station

Noise Monitoring data:

Date	Start time		End time	Weather	$L_{eq\ 30min}$ dB(A) / $L_{eq\ 5min}$ dB(A)	Sound Level Meter Used	Calibrator Used
02 Oct 2024	13:12	-	13:42	Sunny	58.5	SVAN 971 (Serial No. C132269)	Rion NC-75 (No. 34524163)
02 Oct 2024	19:22	-	19:27	Fine	52.1	SVAN 971 (Serial No. C132269)	Rion NC-75 (No. 34524163)
	20:17	-	20:22		53.5		
	21:27	-	21:32		45.5		
03 Oct 2024	1:12	-	1:17	Fine	47.4	SVAN 971 (Serial No. C132269)	Rion NC-75 (No. 34524163)
	3:17	-	3:22		46.0		
	5:22	-	5:27		47.2		
07 Oct 2024	13:30	-	14:00	Sunny	57.6	SVAN 971 (Serial No. C132269)	Rion NC-75 (No. 34524163)
07 Oct 2024	19:05	-	19:10	Fine	55.6	SVAN 971 (Serial No. C132269)	Rion NC-75 (No. 34524163)
	20:10	-	20:15		56.4		
	21:10	-	21:15		53.3		
08 Oct 2024	1:15	-	1:20	Fine	45.9	SVAN 971 (Serial No. C132269)	Rion NC-75 (No. 34524163)
	3:20	-	3:25		45.4		
	5:10	-	5:15		46.7		
14 Oct 2024	13:46	-	14:16	Sunny	57.5	SVAN 971 (Serial No. C132269)	Rion NC-75 (No. 34524163)
14 Oct 2024	19:16	-	19:21	Fine	57.7	SVAN 971 (Serial No. C132269)	Rion NC-75 (No. 34524163)
	20:21	-	20:26		54.9		
	21:11	-	21:16		56.5		
15 Oct 2024	1:31	-	1:36	Fine	54.8	SVAN 971 (Serial No. C132269)	Rion NC-75 (No. 34524163)
	3:31	-	3:36		54.9		
	5:16	-	5:21		54.9		
21 Oct 2024	13:49	-	14:19	Sunny	57.1	SVAN 971 (Serial No. C132269)	Rion NC-75 (No. 34524163)
21 Oct 2024	19:24	-	19:29	Fine	56.9	SVAN 971 (Serial No. C132269)	Rion NC-75 (No. 34524163)
	20:29	-	20:34		56.0		
	21:44	-	21:49		55.4		
22 Oct 2024	1:24	-	1:29	Fine	48.9	SVAN 971 (Serial No. C132269)	Rion NC-75 (No. 34524163)
	3:34	-	3:39		48.9		
	5:19	-	5:24		49.5		

Date	Start time		End time	Weather	L_{eq 30min} dB(A) / L_{eq 5min} dB(A)	Sound Level Meter Used	Calibrator Used
28 Oct 2024	13:49	-	14:19	Sunny	57.0	SVAN 971 (Serial No. C132269)	Rion NC-75 (No. 34524163)
28 Oct 2024	19:24	-	19:29	Fine	41.8	SVAN 971 (Serial No. C132269)	Rion NC-75 (No. 34524163)
	20:19	-	20:24		45.1		
	21:14	-	21:19		44.6		
29 Oct 2024	1:29	-	1:34	Fine	47.3	SVAN 971 (Serial No. C132269)	Rion NC-75 (No. 34524163)
	3:29	-	3:34		43.6		
	5:14	-	5:19		43.6		

Location: Shek Kwu Chau Treatment & Rehabilitation Centre Hostel 1 (M1 / N_S1)

Monitoring date: 04, 12, 21 and 25 November 2024 (Daytime)

04&05, 12&13, 21&22 and 25&26 November 2024 (Evening & Nighttime)

Parameter: $L_{eq\ 30min}$ (Daytime), $L_{eq\ 5min}$ (Evening & Night time)

Noise source other than construction activities from the Project: Nil

Noise Monitoring Data:

Date	Start time		End time	Weather	$L_{eq\ 30min}$ dB(A) / $L_{eq\ 5min}$ dB(A)	Sound Level Meter Used	Calibrator Used
4 Nov 2024	11:48	-	12:18	Sunny	54.4	SVAN 971 (Serial No. 103482)	Rion NC-75 (No.34524163)
4 Nov 2024	19:15	-	19:20	Fine	54.4	SVAN 971 (Serial No. 103482)	Rion NC-75 (No.34524163)
	20:10	-	20:15		53.9		
	21:25	-	21:30		51.2		
5 Nov 2024	1:20	-	1:25	Fine	47.2	SVAN 971 (Serial No. 103482)	Rion NC-75 (No.34524163)
	3:25	-	3:30		48.1		
	5:20	-	5:25		47.9		
12 Nov 2024	13:56	-	14:26	Sunny	57.4	SVAN 971 (Serial No. 103482)	Rion NC-75 (No.34524163)
12 Nov 2024	19:16	-	19:21	Fine	53.5	SVAN 971 (Serial No. 103482)	Rion NC-75 (No.34524163)
	20:11	-	20:16		48.6		
	21:11	-	21:16		44.1		
13 Nov 2024	1:11	-	1:16	Fine	48.1	SVAN 971 (Serial No. 103482)	Rion NC-75 (No.34524163)
	3:16	-	3:21		46.8		
	5:21	-	5:26		45.4		
21 Nov 2024	15:04	-	15:34	Fine	59.5	SVAN 971 (Serial No. 103482)	Rion NC-75 (No.34524163)
21 Nov 2024	19:09	-	19:14	Fine	58.7	SVAN 971 (Serial No. 103482)	Rion NC-75 (No.34524163)
	20:34	-	20:39		58.5		
	21:09	-	21:14		60.3		
22 Nov 2024	1:29	-	1:34	Fine	58.6	SVAN 971 (Serial No. 103482)	Rion NC-75 (No.34524163)
	3:34	-	3:39		59.4		
	5:29	-	5:34		57.8		
25 Nov 2024	13:52	-	14:22	Sunny	57.9	SVAN 971 (Serial No. 103482)	Rion NC-75 (No.34524163)
25 Nov 2024	19:07	-	19:12	Fine	51.7	SVAN 971 (Serial No. 103482)	Rion NC-75 (No.34524163)
	20:12	-	20:17		49.3		
	21:07	-	21:12		48.0		
26 Nov 2024	1:32	-	1:37	Fine	49.4	SVAN 971 (Serial No. 103482)	Rion NC-75 (No.34524163)
	3:17	-	3:22		48.3		
	5:12	-	5:17		48.7		

Location: Shek Kwu Chau Treatment & Rehabilitation Centre Hostel 2 (M2 / N_S2)

Monitoring date: 04, 12, 21 and 25 November 2024 (Daytime)

04&05, 12&13, 21&22 and 25&26 November 2024 (Evening & Nighttime)

Parameter: $L_{eq\ 30min}$ (Daytime), $L_{eq\ 5min}$ (Evening & Night time)

Noise source other than construction activities from the Project: Nil

Noise Monitoring Data:

Date	Start time		End time	Weather	$L_{eq\ 30min}$ dB(A) / $L_{eq\ 5min}$ dB(A)	Sound Level Meter Used	Calibrator Used
4 Nov 2024	11:27	-	11:57	Sunny	53.5	SVAN 971 (Serial No. C132260)	Rion NC-75 (No.34524163)
4 Nov 2024	19:12	-	19:17	Fine	59.4	SVAN 971 (Serial No. C132260)	Rion NC-75 (No.34524163)
	20:17	-	20:22		58.4		
	21:42	-	21:47		56.0		
5 Nov 2024	1:12	-	1:17	Fine	46.3	SVAN 971 (Serial No. C132260)	Rion NC-75 (No.34524163)
	3:22	-	3:27		44.9		
	5:32	-	5:37		42.8		
12 Nov 2024	13:39	-	14:09	Sunny	55.6	SVAN 971 (Serial No. C132260)	Rion NC-75 (No.34524163)
12 Nov 2024	19:14	-	19:19	Fine	52.4	SVAN 971 (Serial No. C132260)	Rion NC-75 (No.34524163)
	20:24	-	20:29		49.3		
	21:34	-	21:39		48.3		
13 Nov 2024	1:14	-	1:19	Fine	47.6	SVAN 971 (Serial No. C132260)	Rion NC-75 (No.34524163)
	3:24	-	3:29		46.0		
	5:29	-	5:34		47.0		
21 Nov 2024	14:53	-	15:23	Fine	54.1	SVAN 971 (Serial No. C132260)	Rion NC-75 (No.34524163)
21 Nov 2024	19:08	-	19:13	Fine	53.1	SVAN 971 (Serial No. C132260)	Rion NC-75 (No.34524163)
	20:33	-	20:38		50.9		
	21:08	-	21:13		50.6		
22 Nov 2024	1:28	-	1:33	Fine	48.4	SVAN 971 (Serial No. C132260)	Rion NC-75 (No.34524163)
	3:33	-	3:38		48.4		
	5:28	-	5:33		48.4		
25 Nov 2024	13:39	-	14:09	Sunny	54.1	SVAN 971 (Serial No. C132260)	Rion NC-75 (No.34524163)
25 Nov 2024	19:09	-	19:14	Fine	49.8	SVAN 971 (Serial No. C132260)	Rion NC-75 (No.34524163)
	20:14	-	20:19		52.3		
	21:09	-	21:14		52.6		
26 Nov 2024	1:29	-	1:34	Fine	46.3	SVAN 971 (Serial No. C132260)	Rion NC-75 (No.34524163)
	3:19	-	3:24		47.9		
	5:19	-	5:24		51.1		

Location: Shek Kwu Chau Treatment & Rehabilitation Centre Hostel 3 (M3 / N_S3)

Monitoring date: 04, 12, 21 and 25 November 2024 (Daytime)

04&05, 12&13, 21&22 and 25&26 November 2024 (Evening & Nighttime)

Parameter: $L_{eq\ 30min}$ (Daytime), $L_{eq\ 5min}$ (Evening & Night time)

Noise source other than construction activities from the Project: Operation of nearby Air Quality Monitoring Station

Noise Monitoring data:

Date	Start time		End time	Weather	$L_{eq\ 30min}$ dB(A) / $L_{eq\ 5min}$ dB(A)	Sound Level Meter Used	Calibrator Used
4 Nov 2024	13:10	-	13:40	Sunny	58.2	SVAN 971 (Serial No. C132269)	Rion NC-75 (No. 34524163)
4 Nov 2024	19:30	-	19:35	Fine	52.8	SVAN 971 (Serial No. C132269)	Rion NC-75 (No. 34524163)
	20:20	-	20:25		52.3		
	21:20	-	21:25		50.3		
5 Nov 2024	1:35	-	1:40	Fine	47.9	SVAN 971 (Serial No. C132269)	Rion NC-75 (No. 34524163)
	3:25	-	3:30		46.2		
	5:25	-	5:30		46.2		
12 Nov 2024	13:17	-	13:47	Sunny	56.0	SVAN 971 (Serial No. C132269)	Rion NC-75 (No. 34524163)
12 Nov 2024	19:22	-	19:27	Fine	49.0	SVAN 971 (Serial No. C132269)	Rion NC-75 (No. 34524163)
	20:27	-	20:32		48.3		
	21:27	-	21:32		48.5		
13 Nov 2024	1:32	-	1:37	Fine	44.6	SVAN 971 (Serial No. C132269)	Rion NC-75 (No. 34524163)
	3:12	-	3:17		49.5		
	5:17	-	5:22		54.1		
21 Nov 2024	14:50	-	15:20	Fine	56.0	SVAN 971 (Serial No. C132269)	Rion NC-75 (No. 34524163)
21 Nov 2024	19:05	-	19:10	Fine	56.1	SVAN 971 (Serial No. C132269)	Rion NC-75 (No. 34524163)
	20:35	-	20:40		48.0		
	21:05	-	21:10		50.3		
22 Nov 2024	1:25	-	1:30	Fine	56.9	SVAN 971 (Serial No. C132269)	Rion NC-75 (No. 34524163)
	3:30	-	3:35		47.1		
	5:35	-	5:40		50.7		
25 Nov 2024	14:18	-	14:48	Sunny	56.7	SVAN 971 (Serial No. C132269)	Rion NC-75 (No. 34524163)
25 Nov 2024	19:43	-	19:48	Fine	53.5	SVAN 971 (Serial No. C132269)	Rion NC-75 (No. 34524163)
	20:23	-	20:28		50.5		
	21:13	-	21:18		49.3		
26 Nov 2024	1:28	-	1:33	Fine	49.4	SVAN 971 (Serial No. C132269)	Rion NC-75 (No. 34524163)
	3:18	-	3:23		47.3		
	5:18	-	5:23		49.4		

Location: Shek Kwu Chau Treatment & Rehabilitation Centre Hostel 1 (M1 / N_S1)

Monitoring date: 02, 09, 16, 23 and 30 December 2024 (Daytime)

02&03, 09&10, 16&17, 23&24 and 30&31 December 2024 (Evening & Nighttime)

Parameter: $L_{eq\ 30min}$ (Daytime), $L_{eq\ 5min}$ (Evening & Night time)

Noise source other than construction activities from the Project: Nil

Noise Monitoring Data:

Date	Start time		End time	Weather	$L_{eq\ 30min}$ dB(A) / $L_{eq\ 5min}$ dB(A)	Sound Level Meter Used	Calibrator Used
2 Dec 2024	13:48	-	14:18	Sunny	57.2	SVAN 971 (Serial No. 103482)	Rion NC-75 (No.34524163)
2 Dec 2024	19:23	-	19:28	Fine	53.1	SVAN 971 (Serial No. 103482)	Rion NC-75 (No.34524163)
	20:28	-	20:33		52.4		
	21:33	-	21:38		43.5		
2 Dec 2024	1:33	-	1:38	Fine	47.9	SVAN 971 (Serial No. 103482)	Rion NC-75 (No.34524163)
	3:23	-	3:28		47.3		
	5:28	-	5:33		46.7		
9 Dec 2024	14:29	-	14:59	Sunny	60.5	SVAN 971 (Serial No. 103482)	Rion NC-75 (No.34524163)
9 Dec 2024	19:09	-	19:14	Fine	60.5	SVAN 971 (Serial No. 103482)	Rion NC-75 (No.34524163)
	20:34	-	20:39		56.9		
	21:29	-	21:34		56.7		
10 Dec 2024	1:34	-	1:39	Fine	50.3	SVAN 971 (Serial No. 103482)	Rion NC-75 (No.34524163)
	3:39	-	3:44		48.7		
	5:04	-	5:09		52.1		
16 Dec 2024	14:26	-	14:56	Sunny	56.5	SVAN 971 (Serial No. 103482)	Rion NC-75 (No.34524163)
16 Dec 2024	19:11	-	19:16	Fine	53.3	SVAN 971 (Serial No. 103482)	Rion NC-75 (No.34524163)
	20:21	-	20:26		53.1		
	21:21	-	21:26		43.7		
17 Dec 2024	1:31	-	1:36	Fine	49.0	SVAN 971 (Serial No. 103482)	Rion NC-75 (No.34524163)
	3:31	-	3:36		47.1		
	5:21	-	5:26		46.7		
23 Dec 2024	13:26	-	13:56	Sunny	59.0	SVAN 971 (Serial No. 103482)	Rion NC-75 (No.34524163)
23 Dec 2024	19:21	-	19:26	Fine	53.7	SVAN 971 (Serial No. 103482)	Rion NC-75 (No.34524163)
	20:16	-	20:21		53.4		
	21:31	-	21:36		52.1		
24 Dec 2024	1:16	-	1:21	Fine	50.5	SVAN 971 (Serial No. 103482)	Rion NC-75 (No.34524163)
	3:46	-	3:51		56.0		
	5:31	-	5:36		51.0		

Date	Start time		End time	Weather	$L_{eq\ 30min\ dB(A)} / L_{eq\ 5min\ dB(A)}$	Sound Level Meter Used	Calibrator Used
30 Dec 2024	13:49	-	14:19	Sunny	57.2	SVAN 971 (Serial No. 103482)	Rion NC-75 (No.34524163)
30 Dec 2024	19:24	-	19:29	Fine	52.8	SVAN 971 (Serial No. 103482)	Rion NC-75 (No.34524163)
	20:19	-	20:24		47.9		
	21:34	-	21:39		51.1		
31 Dec 2024	1:14	-	1:19	Fine	51.1	SVAN 971 (Serial No. 103482)	Rion NC-75 (No.34524163)
	3:44	-	3:49		50.6		
	5:19	-	5:24		49.6		

Location: Shek Kwu Chau Treatment & Rehabilitation Centre Hostel 2 (M2 / N_S2)

Monitoring date: 03, 09, 16, 23 and 30 December 2024 (Daytime)

03&04, 09&10, 16&17, 23&24 and 30&31 December 2024 (Evening & Nighttime)

Parameter: $L_{eq\ 30min}$ (Daytime), $L_{eq\ 5min}$ (Evening & Night time)

Noise source other than construction activities from the Project: Nil

Noise Monitoring Data:

Date	Start time		End time	Weather	$L_{eq\ 30min}$ dB(A) / $L_{eq\ 5min}$ dB(A)	Sound Level Meter Used	Calibrator Used
3 Dec 2024	13:47	-	14:17	Sunny	54.6	SVAN 971 (Serial No. 103482)	Rion NC-75 (No.34524163)
3 Dec 2024	19:22	-	19:27	Fine	52.1	SVAN 971 (Serial No. 103482)	Rion NC-75 (No.34524163)
	20:27	-	20:32		50.4		
	21:32	-	21:37		52.4		
4 Dec 2024	1:32	-	1:37	Fine	50.4	SVAN 971 (Serial No. 103482)	Rion NC-75 (No.34524163)
	3:22	-	3:27		49.0		
	5:32	-	5:37		48.8		
9 Dec 2024	14:34	-	15:04	Sunny	59.0	SVAN 971 (Serial No. C132260)	Rion NC-75 (No.34524163)
9 Dec 2024	19:29	-	19:34	Fine	50.7	SVAN 971 (Serial No. C132260)	Rion NC-75 (No.34524163)
	20:34	-	20:39	Fine	52.5		
	21:29	-	21:34	Fine	48.1		
10 Dec 2024	1:34	-	1:39	Fine	45.9	SVAN 971 (Serial No. C132260)	Rion NC-75 (No.34524163)
	3:44	-	3:49	Fine	43.1		
	5:14	-	5:19	Fine	43.3		
16 Dec 2024	14:36	-	15:06	Sunny	59.1	SVAN 971 (Serial No. C132261)	Rion NC-75 (No.34524163)
16 Dec 2024	19:16	-	19:21	Fine	50.5	SVAN 971 (Serial No. C132261)	Rion NC-75 (No.34524163)
	20:26	-	20:31	Fine	51.0		
	21:26	-	21:31	Fine	44.4		
17 Dec 2024	1:36	-	1:41	Fine	38.3	SVAN 971 (Serial No. C132261)	Rion NC-75 (No.34524163)
	3:26	-	3:31	Fine	38.3		
	5:41	-	5:46	Fine	42.2		
23 Dec 2024	13:37	-	14:07	Sunny	52.6	SVAN 971 (Serial No. C132261)	Rion NC-75 (No.34524163)
23 Dec 2024	19:22	-	19:27	Fine	51.9	SVAN 971 (Serial No. C132261)	Rion NC-75 (No.34524163)
	20:22	-	20:27	Fine	48.2		
	21:32	-	21:37	Fine	46.6		
24 Dec 2024	1:17	-	1:22	Fine	47.4	SVAN 971 (Serial No. C132261)	Rion NC-75 (No.34524163)
	3:42	-	3:47	Fine	44.5		
	5:32	-	5:37	Fine	48.5		

Date	Start time		End time	Weather	L_{eq 30min} dB(A) / L_{eq 5min} dB(A)	Sound Level Meter Used	Calibrator Used
30 Dec 2024	13:46	-	14:16	Sunny	53.1	SVAN 971 (Serial No. C132261)	Rion NC-75 (No.34524163)
30 Dec 2024	19:21	-	19:26	Fine	51.6	SVAN 971 (Serial No. C132261)	Rion NC-75 (No.34524163)
	20:16	-	20:21	Fine	48.0		
	21:41	-	21:46	Fine	46.9		
31 Dec 2024	1:16	-	1:21	Fine	48.0	SVAN 971 (Serial No. C132261)	Rion NC-75 (No.34524163)
	3:46	-	3:51	Fine	54.3		
	5:21	-	5:26	Fine	51.5		

Location: Shek Kwu Chau Treatment & Rehabilitation Centre Hostel 3 (M3 / N_S3)

Monitoring date: 02, 09, 16, 23 and 30 December 2024 (Daytime)

02&03, 09&10, 16&17, 23&24 and 30&31 December 2024 (Evening & Nighttime)

Parameter: $L_{eq\ 30min}$ (Daytime), $L_{eq\ 5min}$ (Evening & Night time)

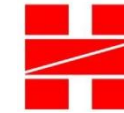
Noise source other than construction activities from the Project: Operation of nearby Air Quality Monitoring Station

Noise Monitoring data:

Date	Start time		End time	Weather	$L_{eq\ 30min}$ dB(A) / $L_{eq\ 5min}$ dB(A)	Sound Level Meter Used	Calibrator Used
2 Dec 2024	13:46	-	14:16	Sunny	54.9	SVAN 971 (Serial No. C132269)	Rion NC-75 (No. 34524163)
2 Dec 2024	19:26	-	19:31	Fine	53.4	SVAN 971 (Serial No. C132269)	Rion NC-75 (No. 34524163)
	20:26	-	20:31		51.9		
	21:26	-	21:31		50.7		
2 Dec 2024	1:31	-	1:36	Fine	50.8	SVAN 971 (Serial No. C132269)	Rion NC-75 (No. 34524163)
	3:21	-	3:26		51.1		
	5:31	-	5:36		51.0		
9 Dec 2024	14:48	-	15:18	Sunny	57.8	SVAN 971 (Serial No. C132269)	Rion NC-75 (No. 34524163)
9 Dec 2024	19:18	-	19:23	Fine	56.0	SVAN 971 (Serial No. C132269)	Rion NC-75 (No. 34524163)
	20:33	-	20:38		55.9		
	21:28	-	21:33		56.2		
10 Dec 2024	1:38	-	1:43	Fine	55.7	SVAN 971 (Serial No. C132269)	Rion NC-75 (No. 34524163)
	3:43	-	3:48		55.5		
	5:18	-	5:23		55.9		
16 Dec 2024	14:36	-	15:06	Sunny	53.9	SVAN 971 (Serial No. C132269)	Rion NC-75 (No. 34524163)
16 Dec 2024	19:16	-	19:21	Fine	44.1	SVAN 971 (Serial No. C132269)	Rion NC-75 (No. 34524163)
	20:26	-	20:31		43.6		
	21:26	-	21:31		42.4		
17 Dec 2024	1:26	-	1:31	Fine	42.6	SVAN 971 (Serial No. C132269)	Rion NC-75 (No. 34524163)
	3:26	-	3:31		43.0		
	5:36	-	5:41		43.1		
23 Dec 2024	13:48	-	14:18	Sunny	54.6	SVAN 971 (Serial No. C132269)	Rion NC-75 (No. 34524163)
23 Dec 2024	19:23	-	19:28	Fine	47.4	SVAN 971 (Serial No. C132269)	Rion NC-75 (No. 34524163)
	20:23	-	20:28		44.9		
	21:23	-	21:28		46.3		
24 Dec 2024	1:18	-	1:23	Fine	46.2	SVAN 971 (Serial No. C132269)	Rion NC-75 (No. 34524163)
	3:43	-	3:48		45.1		
	5:28	-	5:33		44.6		

Date	Start time		End time	Weather	L_{eq 30min} dB(A) / L_{eq 5min} dB(A)	Sound Level Meter Used	Calibrator Used
30 Dec 2024	13:50	-	14:20	Sunny	56.5	SVAN 971 (Serial No. C132269)	Rion NC-75 (No. 34524163)
30 Dec 2024	19:20	-	19:25	Fine	48.3	SVAN 971 (Serial No. C132269)	Rion NC-75 (No. 34524163)
	20:15	-	20:20		44.2		
	21:40	-	21:45		47.1		
31 Dec 2024	1:15	-	1:20	Fine	43.5	SVAN 971 (Serial No. C132269)	Rion NC-75 (No. 34524163)
	3:45	-	3:50		43.5		
	5:25	-	5:30		43.1		

Appendix E Waste Flow Table



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 (see Note 4)	Imported Fill Sand (see Note 4)	Imported Fill Public fill (see Note 4)	Imported Fill Rock (see Note 4)	Metals (see Note 5)	Paper/ cardboard packaging (see Note 5)	Plastics (see Note 2, 5)	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 6.5m³ by volume.
 - (4) Use the conversion factor: sand density = 1.6T/m³, public fill density = 1.8T/m³ and rock density = 2T/m³
 - (5) Materials recycled.



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 (see Note 4)	Imported Fill Sand (see Note 4)	Imported Fill Public fill (see Note 4)	Imported Fill Rock (see Note 4)	Metals (see Note 5)	Paper/ cardboard packaging (see Note 5)	Plastics (see Note 2, 5)	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 6.5m³ by volume.
 - (4) Use the conversion factor: sand density = 1.6T/m³, public fill density = 1.8T/m³ and rock density = 2T/m³
 - (5) Materials recycled.



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 (see Note 4)	Imported Fill Sand (see Note 4)	Imported Fill Public fill (see Note 4)	Imported Fill Rock (see Note 4)	Metals (see Note 5)	Paper/ cardboard packaging (see Note 5)	Plastics (see Note 2, 5)	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 6.5m³ by volume.
 - (4) Use the conversion factor: sand density = 1.6T/m³, public fill density = 1.8T/m³ and rock density = 2T/m³
 - (5) Materials recycled.



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 (see Note 4)	Imported Fill Sand (see Note 4)	Imported Fill Public fill (see Note 4)	Imported Fill Rock (see Note 4)	Metals (see Note 5)	Paper/ cardboard packaging (see Note 5)	Plastics (see Note 2, 5)	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	0	0	0	0	0	0	161.2956	27.2810	0	0	0	0	0	0.0130
May	0	0	0	0	0	0	193.3300	20.5265	0	0	0	0	0	0.0715
Jun	0	0	0	0	0	0	141.5728	23.7825	0	0.2440	0	0	0	0.0455
Sub-total	0	0	0	0	0	0	941.4639	152.5145	0	0.2440	0	0	0	0.7800
Jul	0	0	0	0	0	0	105.1083	30.6065	0	0	0	0	0	0.0195
Aug	0	0	0	0	0	0	11.1822	7.5180	0	0	0	0	0	0.0130
Sep	0	0	0	0	0	0	0	5.7575	0	0	0	0	0.6000	0.0390
Oct	0	0	0	0	0	0	0	6.8885	0	0	0	0	0	0
Nov	0	0	0	0	0	0	0	6.2975	0	0.1610	0	0	0	0.0130
Dec	0	0	0	0	0	0	0	5.9235	0	0	0	0	0	0
Total	0	0	0	0	0	0	1057.7544	215.5060	0	0.4050	0	0	0.6000	0.8645

- 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 6.5m³ by volume.
 - (4) Use the conversion factor: sand density = 1.6T/m³, public fill density = 1.8T/m³ and rock density = 2T/m³.
 - (5) Materials recycled.



Monthly Summary Waste Flow Table for 2022 (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 (see Note 4)	Disposed as Public Fill (see Note 4)	Imported Fill Sand (see Note 4)	Imported Fill Public fill (see Note 4)	Imported Fill Rock (see Note 4)	Metals (see Note 5)	Paper/ cardboard packaging (see Note 5)	Plastics (see Note 2, 5)	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	4.9389	2.7070	0	0.1550	0	0	0	0.0715
Feb	0	0	0	0	0	0	3.2478	4.0290	0	0	0	0.4000	0.2250	0
Mar	0	0	0	0	0	0	2.3422	2.7820	0	0	0	0	0	0.0780
Apr	0	0	0	0	0	0	18.2189	5.8100	0	0.3120	0	0	0	0.1495
May	0.0648	0	0	0	0.0648	0	16.7711	17.2320	0	0	0	0	0	0.0975
Jun	0.0037	0	0	0	0.0037	0.2115	1.1128	14.1470	36.3000	0.3890	0	0	1.7250	0.0975
Sub-total	0.0685	0	0	0	0.0685	0.2115	46.6317	46.7070	36.3000	0.8560	0	0.4000	1.9500	0.4940
Jul	25.7183	0	0	25.7183	0	0.1125	0.8333	17.5210	0	0.6400	0.0060	0	0	0.1235
Aug	13.2494	0	0	13.2494	0	0	0	24.5210	76.0300	1.8870	0	0	0	0.1170
Sep	24.9072	0	0	24.8494	0.0578	0	0	16.2815	72.0600	0.3060	0	0	0	0.1885
Oct	13.3139	0	0	13.3006	0.0133	0	0	11.8665	78.1000	0.5800	0	0	0	0.2405
Nov	26.5583	0	0	26.5583	0	0	0	7.2055	0	0	0	0	0	0.1105
Dec	29.1411	0	0	29.1411	0	0	0	3.5174	0	0	0	0	0	0.2535
Total	132.9567	0	0	132.8171	0.1396	0.3240	47.4650	127.6199	262.4900	4.2690	0.0060	0.4000	1.9500	1.5275

- 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 6.5m³ by volume.
 - (4) Use the conversion factor: sand density = 1.6T/m³, public fill density = 1.8T/m³ and rock density = 2T/m³.
 - (5) Materials recycled.



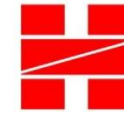
Monthly Summary Waste Flow Table for 2023 (year)

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 (see Note 4)	Disposed as Public Fill (see Note 4)	Imported Fill Sand (see Note 4)	Imported Fill Public fill (see Note 4)	Imported Fill Rock (see Note 4)	Metals (see Note 5)	Paper/ cardboard packaging (see Note 5)	Plastics (see Note 2, 5)	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	24.6728	0	0	24.6728	0	0	0	1.3545	0	0.3150	0	0	0	0.1365
Feb	26.7206	0	0	26.7206	0	0	0	1.8990	11.1501	0	0.0007	0	0	0.1235
Mar	22.1089	0	0	22.1089	0	0	0	0.9025	0	0	0	0	0	0.1105
Apr	36.0011	0	0	36.0011	0	0	0	0	0	0.2150	0	0	0	0.1365
May	21.8900	0	0	21.8900	0	0	0	0	0	0.3160	0	0	0	0.1495
Jun	8.8878	0	0	8.8878	0	0	0	0	0	0	0	0	0	0.1950
Sub-total	140.2812	0	0	140.2812	0	0	0	4.1560	11.1501	0.8460	0.0007	0	0	0.8515
Jul	2.2233	0	0	2.2233	0	0	0	0	0	0.3870	0	0	0	0.1495
Aug	4.4200	0	0	4.4200	0	0	0	0	0	0	0	0	0	0.2015
Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2860
Oct	0	0	0	0	0	0	0	0.4025	0	0.3770	0	0	0	0.2405
Nov	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3510
Dec	0	0	0	0	0	0	0	0.4960	0	0	0	0	0	0.3835
Total	146.9245	0	0	146.9245	0	0	0	5.0545	11.1501	1.6100	0.0007	0	0	2.4635

- 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 6.5m³ by volume.
 - (4) Use the conversion factor: sand density = 1.6T/m³, public fill density = 1.8T/m³ and rock density = 2T/m³.
 - (5) Materials recycled.



Monthly Summary Waste Flow Table for 2024 (year)

Project : Integrated Waste Management Facilities, Phase 1

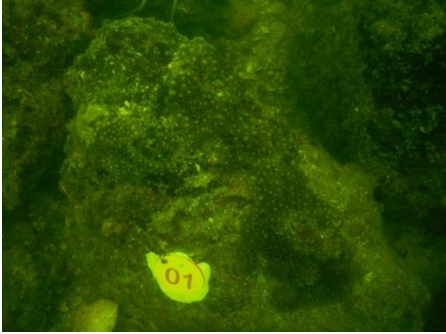



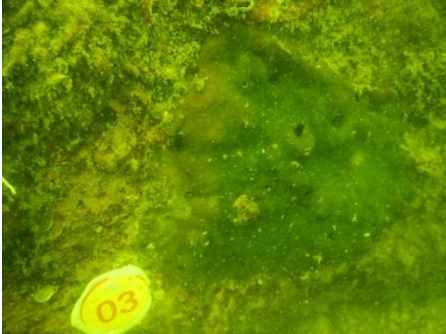



Contract No.: EP/SP/66/12




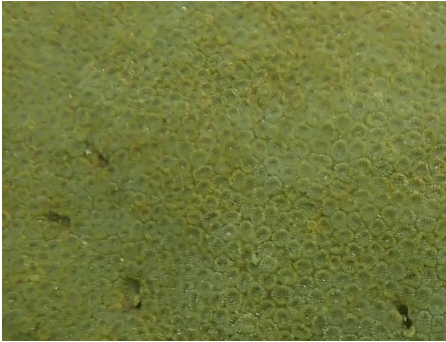

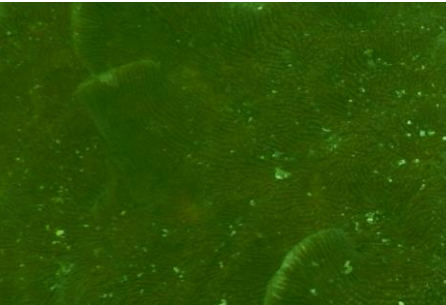


Month	Actual Quantities of Inert C&D Materials Generated Monthly								Actual Quantities of C&D Wastes Generated Monthly					
	Total Quantity Generated	Hard Rock and Large Broken Concrete (see Note 1)	Reused in the Contract	Reused in other Projects (see Note 4)	Disposed as Public Fill (see Note 4)	Imported Fill Sand (see Note 4)	Imported Fill Public fill (see Note 4)	Imported Fill Rock (see Note 4)	Metals (see Note 5)	Paper/ cardboard packaging (see Note 5)	Plastics (see Note 2, 5)	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	22.8700	0	0	0	0	0.4940
Feb	1.9433	0	0	1.9433	0	0	0	0	0	0.3190	0	0	0	0.2665
Mar	4.4367	0	0	4.4367	0	0	0	0	0	0	0	0	0	0.3640
Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5915
May	0	0	0	0	0	0	0	0	0	0.6530	0	0	0	0.7410
Jun	5.0453	0	0	0	5.0453	0	0	0.5120	0	0	0	0	0	0.4940
Sub-total	11.4253	0	0	6.3800	5.0453	0	0	0.5120	22.8700	0.9720	0	0	0	2.9510
Jul	5.5519	0	0	2.1883	3.3636	0	0	0	0	0.6060	0	0	0	0.7215
Aug	2.1000	0	0	2.1000	0	0	0	0	0	0	0	0	0	0.6955
Sep	2.1894	0	0	2.1894	0	0	0	0	0	0	0	0	0	0.7540
Oct	0	0	0	0	0	0	0	0	0	0.2860	0	0	0	0.8775
Nov	0	0	0	0	0	0	0	0	0	0	0	0	0	0.7995
Dec	0.0033	0	0	0	0.0033	0	0	0	0	0.4950	0	0	0	1.0985
Total	21.2699	0	0	12.8577	8.4122	0	0	0.5120	22.8700	2.3590	0	0	0	7.8975


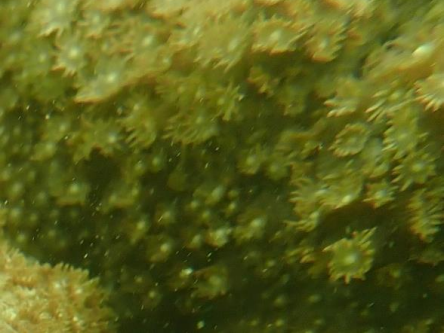

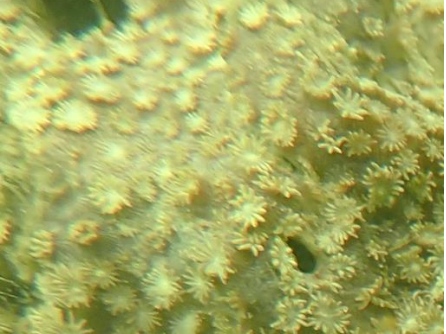
- Notes:
- (1) Broken concrete for recycling into aggregates.
 - (2) Plastics refer to plastic bottles/ containers, plastic sheets/ foam from packaging materials.
 - (3) Use the conversion factor : 1 full load of dumping truck being equivalent to 6.5m³ by volume.
 - (4) Use the conversion factor: sand density = 1.6T/m³, public fill density = 1.8T/m³ and rock density = 2T/m³.
 - (5) Materials recycled.

Appendix F Photo Records for Coral Monitoring

Photo Plate for Tagged and Re-tagged Corals at Control Site during the 24th Quarterly Coral Monitoring during Construction Phase on 18 December 2024

Tag #	Baseline (26 June 2018 & 3 December 2018)	18 December 2024
#1	 <p align="center"><i>Goniopora stutchburyi</i></p>	 <p align="center"><i>Goniopora stutchburyi</i></p>
#2R	 <p align="center"><i>Goniopora stutchburyi</i></p>	 <p align="center"><i>Goniopora stutchburyi</i></p>
#3	 <p align="center"><i>Psammocora superficialis</i></p>	 <p align="center"><i>Psammocora superficialis</i></p>
#4	 <p align="center"><i>Turbinaria peltata</i></p>	 <p align="center"><i>Turbinaria peltata</i></p>



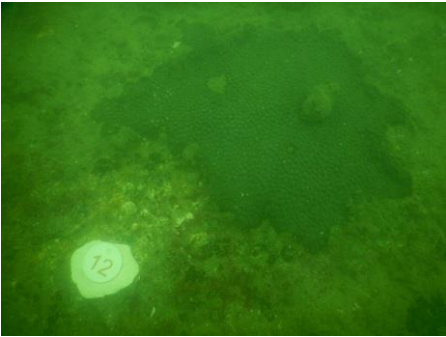

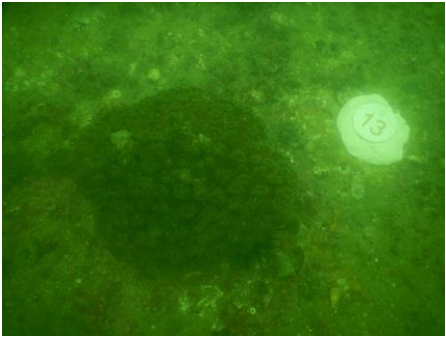



Tag #	Baseline (26 June 2018 & 3 December 2018)	18 December 2024
#5R	 <p><i>Goniopora stutchburyi</i></p>	 <p><i>Goniopora stutchburyi</i></p>
#6	 <p><i>Cyphastrea serailia</i></p>	 <p><i>Cyphastrea serailia</i></p>
#7R	 <p><i>Coscinaraea</i> sp.</p>	 <p><i>Coscinaraea</i> sp.</p>
#8	 <p><i>Goniopora stutchburyi</i></p>	 <p><i>Goniopora stutchburyi</i></p>



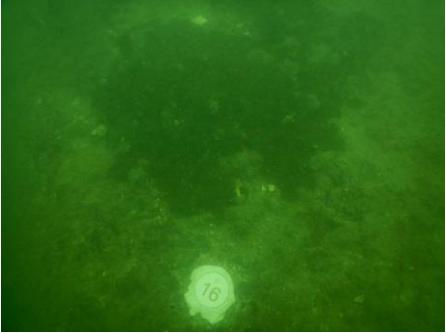

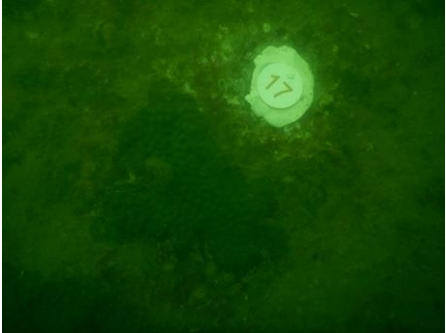


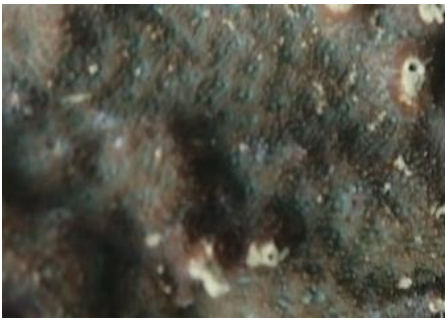


Tag #	Baseline (26 June 2018 & 3 December 2018)	18 December 2024
#9	 <p><i>Goniopora stutchburyi</i></p>	 <p><i>Goniopora stutchburyi</i></p>
#10R	 <p><i>Goniopora stutchburyi</i></p>	 <p><i>Goniopora stutchburyi</i></p>



Notes:

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

Photo Plate for Re-tagged Corals at Indirect Impact during the 24th Quarterly Coral Monitoring during Construction Phase on 18 December 2024

Tag #	Baseline (23 November 2018)	18 December 2024
#11R	 <p align="center"><i>Cyphastrea serailia</i></p>	 <p align="center"><i>Cyphastrea serailia</i></p>
#12R	 <p align="center"><i>Favites chinensis</i></p>	 <p align="center"><i>Favites chinensis</i></p>
#13R	 <p align="center"><i>Turbinaria peltata</i></p>	 <p align="center"><i>Turbinaria peltata</i></p>
#14R	 <p align="center"><i>Favites chinensis</i></p>	 <p align="center"><i>Favites chinensis</i></p>

Tag #	Baseline (23 November 2018)	18 December 2024
#15R	 <p><i>Goniopora stutchburyi</i></p>	 <p><i>Goniopora stutchburyi</i></p>
#16R	 <p><i>Psammocora superficialis</i></p>	 <p><i>Psammocora superficialis</i></p>
#17R	 <p><i>Favites chinensis</i></p>	 <p><i>Favites chinensis</i></p>
#18R	 <p><i>Psammocora superficialis</i></p>	 <p><i>Psammocora superficialis</i></p>
#19R	 <p><i>Psammocora superficialis</i></p>	 <p><i>Psammocora superficialis</i></p>

Tag #	Baseline (23 November 2018)	18 December 2024
#20R	 <p><i>Psammocora superficialis</i></p>	 <p><i>Psammocora superficialis</i></p>

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 during the reporting period
Line-transect survey during October 2024:



Line-transect survey during November 2024:



Line-transect survey during December 2024:



Appendix H Photo Records for White-bellied Sea Eagle Monitoring

Photo Plate for 76th Monthly WBSE monitoring



One Adult WBSE was recorded staying near the nest on 28 October 2024

Photo Plate for 77th Monthly WBSE monitoring



One Adult WBSE was recorded staying near the nest on 21 November 2024

Photo Plate for 76th Monthly WBSE monitoring



Two adult WBSE was recorded staying near the nest on 18 December 2024



One adult WBSE was recorded staying near the nest on 24 December 2024

Appendix I Complaint Log

Statistical Summary of Environmental Complaints

Reporting Period	Environmental Complaint Statistics		
	Frequency	Cumulative	Complaint Nature
1 Oct 2024-31 Oct 2024	0	4	N/A
1 Nov 2024-30 Nov 2024	0	4	N/A
1 Dec 2024-31 Dec 2024	0	4	N/A

Statistical Summary of Environmental Summons

Reporting Period	Environmental Summons Statistics		
	Frequency	Cumulative	Details
1 Oct 2024-31 Oct 2024	0	0	N/A
1 Nov 2024-30 Nov 2024	0	0	N/A
1 Dec 2024-31 Dec 2024	0	0	N/A

Statistical Summary of Environmental Prosecution

Reporting Period	Environmental Prosecution Statistics		
	Frequency	Cumulative	Details
1 Oct 2024-31 Oct 2024	0	0	N/A
1 Nov 2024-30 Nov 2024	0	0	N/A
1 Dec 2024-31 Dec 2024	0	0	N/A