環境保護署
Environmental Protection Department

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

Keppel Seghers

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

Quarterly EM&A Report No.12
(Period from 1 April to 30 June 2021)

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

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Signature			
Date:	30 July 2021	30 July 2021	30 July 2021

Revision History

A	First Submission	20 July 2021
Rev.	**DESCRIPTION OF MODIFICATION**	**DATE**

CONTENT

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 12th 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 April 2021 to 30 June 2021.

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

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

1. BASIC PROJECT INFORMATION

1.1. The Reporting Scope

1.1.1 This is the 12th Quarterly EM&A Report for the Project which summarizes the key findings of the EM&A programme during the reporting period from 1 April 2021 to 30 June 2021.

1.2. Project Organization

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

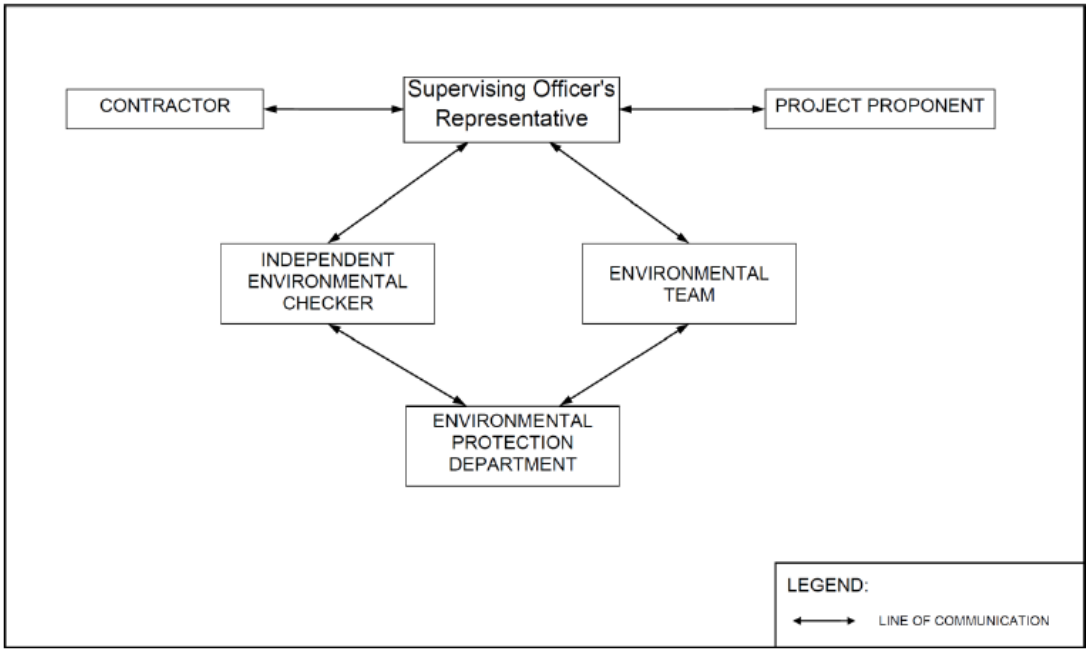


Figure 1.1 Project Organization Chart

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

Table 1.1 Contact Details of Key Personnel

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

1.3. Summary of Construction Works

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

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

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

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

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

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

Parameters	**Status**
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	
Baseline Monitoring	The baseline marine mammal monitoring result has been reported in Baseline Monitoring Report and submitted to EPD under FEP Condition 3.4
Impact Monitoring	On-going
Land-based Theodolite Tracking	30 days of theodolite surveys were started on 21 Feb 2019 and completed in May 2019.
Passive Acoustic Monitoring	30 days of PAM surveys were started on 1 May 2019 and completed until the end of May 2019.
White-bellied Sea Eagle	
Baseline Monitoring	The baseline WBSE monitoring result has been reported in Baseline Monitoring Report and submitted to EPD under FEP Condition 3.4
Impact Monitoring	On-going
Environmental Audit	
Site Inspection covering Measures of Air Quality, Noise Impact, Water Quality, Waste, Ecological Quality, Fisheries, Landscape and Visual	On-going
Mitigation Measures in Marine Mammal Watching Plan (MMWP)	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
• Water Depth(m) • Temperature(^oC) • Salinity(ppt) • pH (pH unit) • Dissolved Oxygen (DO)(mg/L and % of saturation) • Turbidity(NTU) • Suspended Solids (SS), mg/L • Current velocity (m/s) • Direction (in NESW)	General water quality monitoring: 3 days per week, at mid-flood and mid-ebb tides	3 water depths: 1m below sea surface, mid-depth and 1m above sea bed. If the water depth is less than 3m, mid-depth sampling only. If water depth is less than 6m, mid-depth may be omitted.

2.2 Water Quality Monitoring Locations

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

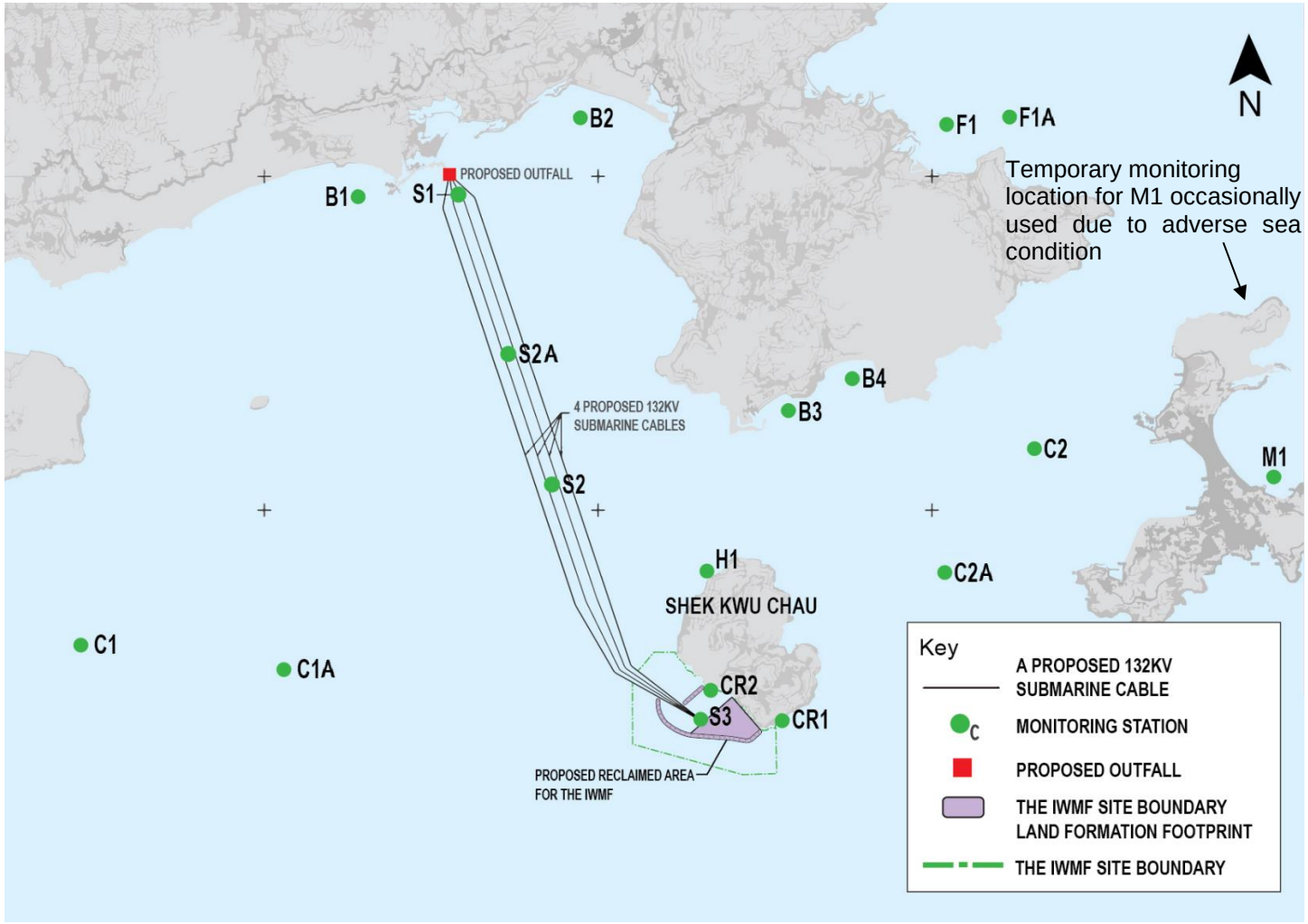


Figure 2.1 Water monitoring locations at Artificial Island near SKC

2.3 Action and Limit Levels

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

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

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

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

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

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

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

2.4 Monitoring Results and Observations

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

Table 2.4 Summary of Regular Impact Water Quality Monitoring Results

Locations		Parameters																				
		Salinity (ppt)			Dissolved Oxygen (mg/L)						pH			Turbidity (NTU)			Suspended Solids (mg/L)			Temp. (°C)		
					Surface & Middle			Bottom														
		Apr	May	Jun	Apr	May	Jun	Apr	May	Jun	Apr	May	Jun	Apr	May	Jun	Apr	May	Jun	Apr	May	Jun
B1	Avg.	30.89	30.09	30.65	8.88	8.83	9.02	8.96	9.00	9.14	8.40	8.50	8.40	2.9	2.8	2.9	4.83	4.07	3.38	25.1	29.0	29.0
	Min.	29.74	28.57	29.60	7.64	7.28	7.92	7.71	7.61	7.83	8.12	8.09	8.13	2.1	2.0	2.1	2.00	2.00	2.50	20.5	24.6	27.0
	Max.	32.48	31.78	31.83	10.42	9.82	10.39	10.3	10.0	10.1	8.73	9.06	8.84	3.8	3.9	3.8	12.00	11.00	7.40	28.5	30.4	31.1
B2	Avg.	30.85	30.05	30.61	8.91	8.80	9.01	8.86	8.79	9.02	8.40	8.49	8.40	3.0	2.9	2.8	5.26	4.16	3.50	25.2	29.0	29.0
	Min.	29.77	28.63	29.51	7.57	7.79	7.46	7.57	7.67	7.59	8.11	8.16	8.12	2.0	1.8	1.8	2.00	2.00	2.50	20.4	24.7	27.1
	Max.	32.22	31.53	31.70	10.18	10.00	10.34	10.7	9.96	10.1	8.66	8.96	8.77	4.1	4.0	3.7	14.00	8.00	8.20	28.5	30.4	31.0
B3	Avg.	30.90	30.05	30.61	8.92	8.83	8.97	9.00	8.84	9.07	8.41	8.50	8.41	3.0	2.8	2.8	5.28	3.96	3.09	25.3	29.1	29.1
	Min.	29.79	28.41	29.58	7.75	7.40	7.42	7.87	7.17	7.68	8.13	8.18	8.16	2.0	2.0	2.1	2.00	2.00	2.50	20.7	24.7	26.9
	Max.	32.31	31.64	31.65	10.69	9.85	10.37	10.1	10.0	10.3	8.68	9.02	8.82	4.0	3.9	3.9	11.00	8.00	4.90	28.8	30.3	31.1
B4	Avg.	30.91	30.06	30.62	8.84	8.89	8.94	8.88	8.87	9.10	8.41	8.50	8.41	2.9	2.9	2.9	5.48	4.13	3.38	25.3	29.1	29.0
	Min.	29.73	28.45	29.49	7.79	7.86	7.37	7.58	7.58	7.37	8.11	8.11	8.16	2.1	1.9	2.0	2.00	2.00	2.50	20.6	24.8	27.0
	Max.	32.49	31.63	31.72	10.36	10.05	10.04	10.5	10.0	10.3	8.73	9.07	8.78	4.2	3.8	4.0	14.00	8.00	8.50	28.8	30.4	31.1
C1A	Avg.	30.89	30.09	30.59	8.93	8.81	8.96	8.82	8.85	9.06	8.40	8.50	8.40	2.9	3.2	3.1	5.22	4.28	3.42	25.1	29.0	28.9
	Min.	29.77	28.46	29.38	7.60	7.09	7.62	7.63	7.36	7.71	8.08	8.14	8.13	2.0	2.0	2.1	2.00	2.00	2.50	20.4	24.6	27.0
	Max.	32.55	31.67	31.70	10.70	9.86	10.28	10.2	10.0	10.4	8.69	9.06	8.78	3.9	4.8	4.2	16.00	11.00	9.00	28.7	30.3	31.1
C2A	Avg.	30.92	30.07	30.62	8.88	8.91	8.94	8.96	8.88	9.07	8.39	8.51	8.40	2.9	3.2	3.1	5.17	4.20	3.81	25.2	29.1	29.0
	Min.	29.76	28.51	29.53	7.50	7.32	7.60	7.56	7.29	7.64	8.13	8.19	8.11	2.1	1.9	2.3	2.00	2.00	2.50	20.6	24.3	26.9
	Max.	32.53	31.78	31.85	10.76	10.05	10.20	10.2	10.0	10.3	8.64	9.02	8.81	4.0	4.7	4.1	12.00	8.00	9.80	28.9	30.3	31.1
CR1	Avg.	30.89	30.09	30.62	8.84	8.97	8.99	8.96	8.84	9.01	8.39	8.50	8.40	3.0	2.9	2.9	5.06	3.87	3.41	25.1	29.1	28.9
	Min.	29.73	28.52	29.49	7.47	7.46	7.66	7.45	7.78	7.69	8.11	8.10	8.13	2.0	2.0	1.9	2.00	2.00	2.50	20.7	24.4	27.0
	Max.	32.57	31.79	31.85	10.36	10.10	10.19	10.1	10.0	10.4	8.73	8.93	8.78	4.1	4.0	4.1	12.00	9.00	7.60	29.0	30.3	30.9
CR2	Avg.	30.87	30.04	30.61	8.90	8.88	9.04	8.92	8.84	9.02	8.40	8.49	8.40	2.9	2.9	2.9	5.04	3.95	3.68	25.1	29.0	28.9
	Min.	29.74	28.57	29.37	7.48	7.15	7.77	7.64	7.67	7.39	8.08	8.13	8.11	2.0	1.7	2.1	2.00	2.00	2.50	20.6	24.5	26.8
	Max.	32.15	31.75	31.81	10.38	9.99	10.22	10.5	9.85	10.4	8.71	8.99	8.80	3.9	4.1	3.9	15.00	7.00	8.50	28.8	30.2	31.0
F1A	Avg.	30.92	30.07	30.61	8.85	8.98	9.00	8.91	8.81	8.98	8.40	8.50	8.40	3.0	2.8	2.9	5.08	4.21	3.65	25.2	29.1	29.0
	Min.	29.71	28.58	29.43	7.47	7.56	7.65	7.73	7.71	7.42	8.12	8.10	8.11	1.9	2.1	2.1	2.00	2.00	2.50	20.5	24.9	27.0
	Max.	32.52	31.68	31.66	10.71	10.03	10.32	10.3	9.97	10.2	8.67	9.03	8.84	4.0	3.7	4.0	13.00	9.00	9.10	28.5	30.4	31.0

Locations		Parameters																				
		Salinity (ppt)			Dissolved Oxygen (mg/L)						pH			Turbidity (NTU)			Suspended Solids (mg/L)			Temp. (°C)		
					Surface & Middle			Bottom														
		Apr	May	Jun	Apr	May	Jun	Apr	May	Jun	Apr	May	Jun	Apr	May	Jun	Apr	May	Jun	Apr	May	Jun
H1	Avg.	30.88	30.09	30.63	8.85	8.78	9.02	8.89	8.80	8.98	8.39	8.49	8.40	3.0	2.8	2.9	5.02	4.25	3.51	25.2	29.1	29.0
	Min.	29.75	28.65	29.48	7.58	7.08	7.79	7.59	7.75	7.83	8.07	8.16	8.14	2.2	2.0	2.1	2.00	2.00	2.50	20.5	24.6	27.0
	Max.	32.39	31.71	31.81	10.20	10.10	10.38	10.7	10.0	10.1	8.66	9.06	8.77	4.1	3.9	3.8	14.00	10.00	9.70	28.8	30.3	31.0
M1	Avg.	30.92	30.07	30.62	8.86	8.83	9.05	8.93	8.95	9.06	8.41	8.48	8.41	2.9	2.8	2.8	5.03	4.04	3.82	25.2	29.0	28.9
	Min.	29.86	28.43	29.47	7.34	7.25	7.33	7.92	7.15	7.73	8.06	8.16	8.13	1.9	2.0	2.1	2.00	2.00	2.50	20.5	24.8	27.0
	Max.	32.56	31.69	31.67	10.64	10.11	10.41	10.2	10.0	10.3	8.73	8.99	8.76	3.9	4.3	3.8	15.00	8.00	9.10	28.5	30.4	31.0

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.

ii. The contractor had queried the abnormal fluctuation of seawater temperature during April 2021.

iii. The contractor had queried the abnormal high concentration of DO in all water depths, in particular the water samples taken at bottom level, and for all monitoring stations in the last couple of months and there were no trends of decreasing DO levels with increasing temperature during June 2021.

iv. The contractor had queried the in-situ monitoring data for turbidity and the subsequent SS monitoring when comparing to on site photos taken during water samples on 28 June 2021.

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

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

2.4.4 During the water quality monitoring on 19 April 2021, the location for monitoring station M1 was temporarily changed to the north of Cheung Chau (as shown on **Figure 2.1**) due to strong swell brought by monsoon.

2.4.5 The mid-flood monitoring on 28 June 2021 was cancelled due to the adverse weather (black rainstorm signal).

2.4.6 During the general water quality monitoring period for April to June 2021, Two (2) of general water quality monitoring results of suspended solids (SS) obtained had exceeded Action Level. None of general water quality monitoring results of SS obtained during the reporting period had exceeded the Limit Level.

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

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

Table 3.1 Noise Monitoring Parameters, Time, Frequency and Duration

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

3.2 Noise Monitoring Locations

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

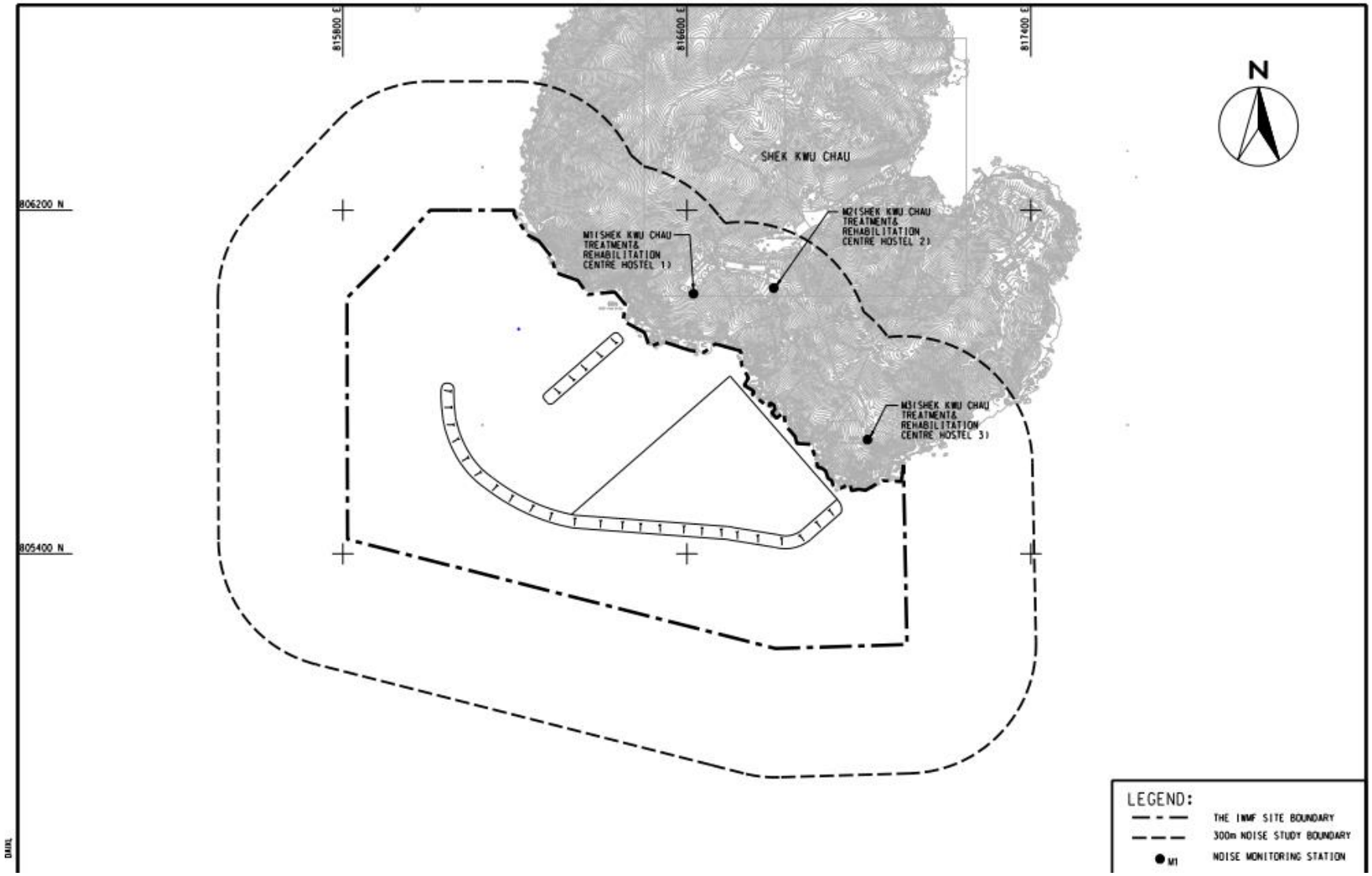


Figure 3.1 Noise monitoring locations at SKC

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

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

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

Table 3.2 Noise Monitoring Location

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

3.3 Action and Limit Levels

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

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

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

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

3.4 Monitoring Results and Observations

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

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

3.4.3 According to our field observations, the major noise source identified at the noise monitoring stations in the reporting month are summarised in **Table 3.4**. Air-conditioner was found to be the major noise source near the monitoring station M3.

Table 3.4 Summary of Field Observation

Monitoring Station	Major Noise Source
M1	Nil
M2	Nil
M3	Air-conditioner

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 $L_{90\ 30min}$		
	Apr	May	Jun	Apr	May	Jun	Apr	May	Jun
M1	60.0 – 63.5	54.9 – 59.8	59.5 – 66.5	63.7 – 66.2	58.3 – 63.7	62.6 – 68.3	58.1 – 60.1	52.7 – 58.3	55.1 – 63.7
M2	57.8 – 62.3	58.5 – 62.1	58.6 – 63.7	59.6 – 64.1	63.1 – 65.8	61.3 – 65.7	55.3 – 60.8	55.3 – 59.7	55.8 – 61.8
M3	58.1 – 64.7	57.5 – 62.8	56.1 – 59.7	62.8 – 67.2	59.5 – 65.2	58.3 – 61.7	54.9 – 61.8	55.4 – 58.6	52.2 – 56.8

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

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

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

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

Location	Noise in dB(A)								
	Range of $L_{eq\ 5min}$			Range of $L_{10\ 5min}$			Range of $L_{90\ 5min}$		
	Apr	May	Jun	Apr	May	Jun	Apr	May	Jun
M1	55.1 – 62.7	51.5 – 56.7	55.1 – 67.4	58.9 – 65.8	55.6 – 58.4	57.8 – 68.2	52.6 – 60.2	50.3 – 55.1	51.6 – 60.5
M2	51.1 – 64.3	53.3 – 63.0	51.4 – 64.7	54.6 – 66.4	57.4 – 66.7	56.2 – 67.1	48.5 – 61.8	51.6 – 61.4	50.1 – 62.0
M3	54.3 – 64.5	52.9 – 61.3	49.2 – 61.4	55.9 – 68.1	55.7 – 63.9	54.7 – 63.5	52.7 – 61.4	51.4 – 59.8	48.5 – 58.3

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

Location	Noise in dB(A)								
	Range of $L_{eq\ 5min}$			Range of $L_{10\ 5min}$			Range of $L_{90\ 5min}$		
	Apr	May	Jun	Apr	May	Jun	Apr	May	Jun
M1	50.2 – 60.1	50.5 – 60.3	52.7 – 61.2	54.6 – 62.3	53.8 – 61.8	54.6 – 62.8	48.6 – 57.3	48.2 – 58.3	49.2 – 58.9
M2	48.6 – 60.5	49.8 – 59.9	50.7 – 59.7	50.6 – 61.4	53.7 – 61.6	54.2 – 61.9	46.2 – 58.6	48.2 – 57.6	47.8 – 56.3
M3	49.6 – 58.5	53.2 – 58.9	43.1 – 58.7	50.9 – 60.2	56.1 – 60.3	48.2 – 61.2	48.3 – 56.7	51.4 – 57.6	42.1 – 55.8

4. WASTE

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

4.2 As advised by the Contractor, for C&D waste, no metals were generated and collected by registered recycling collector. No paper was generated on site and collected by registered recycling collector. No plastic waste was collected by registered recycling collector. No chemical waste was collected by licensed chemical waste collector. 130.0m^3 of other types of wastes (e.g. general refuse) were generated on site and disposed of at Landfill. 496,198.4 m^3 of public fill and 71,590.0 m^3 of fill rock were imported during the reporting period.

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

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

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

Table 4.1 Quantities of Waste Generated from the Project

Reporting Month	**Actual Quantities of Inert C&D Materials Generated Monthly**								**Actual Quantities of C&D Wastes Generated Monthly**					
	Total Quantity Generated	Hard Rock and Large Broken Concrete (see Note 1)	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill			Metals	Paper / cardboard packaging	Plastics (see Note 2)	Chemical Waste		Others, e.g. general refuse (see Note 3)
						Sand	Public Fill	Rock						
	(in ,000m^3)	(in ,000m^3)	(in ,000m^3)	(in ,000m^3)	(in ,000m^3)	(in ,000m^3)			(in ,000kg)	(in ,000kg)	(in ,000kg)	(in ,000kg)	(in ,000L)	(in ,000m^3)
Apr 2021	0	0	0	0	0	0	161.2956	27.2810	0	0	0	0	0	0.0130
May 2021	0	0	0	0	0	0	193.3300	20.5265	0	0	0	0	0	0.0715
Jun 2021	0	0	0	0	0	0	141.5728	23.7825	0	0	0	0	0	0.0455

Notes:

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

5. CORAL

5.1 Coral Monitoring Parameters

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

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

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

5.2 Coral Monitoring Locations

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

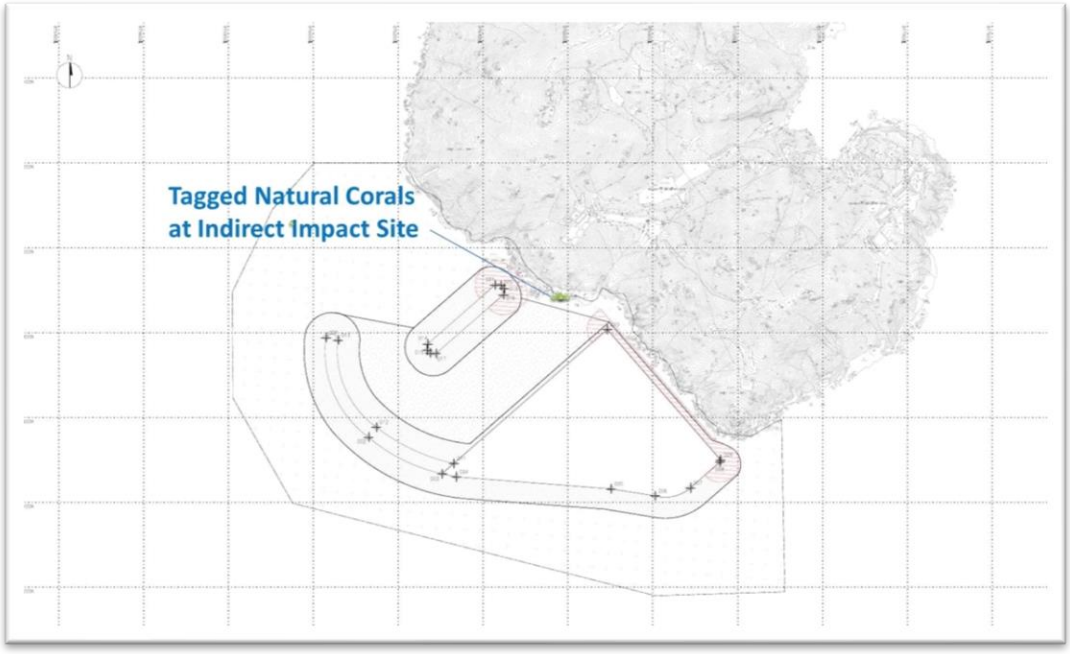


Figure 5.1 Tagged Natural Corals at Indirect Impact Site Near SKC for re-tagging after typhoon Mangkhut

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

Figure 5.3 Tagged Translocation Corals at Recipient Site R3 near SKC

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

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

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

Notes:

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

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

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

Notes:

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

Table 5.3 GPS Coordinates of Recipient Site R3

Site	GPS Coordinates	
R3	N22°11’43.69”	E113°28.99”

5.3 Action and Limit Levels

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

Table 5.4 Action and Limit Levels for Construction Phase Coral Monitoring

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

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

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

5.4 Monitoring Results and Observations

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

5.4.2 The 10th quarterly coral monitoring during construction phase at both Indirect Impact Site and Control Site was conducted on 28 June 2021 and the weather condition was summarized in **Table 5.6**.

Table 5.6 Weather Condition for the 10th Quarterly Coral Monitoring during Construction Phase at both Indirect Impact Site and Control Site

Date	Condition	Average Underwater Visibility
28 June 2021	- Southwest wind force 3-4, - Raining Day	Less than 0.5m

Table 5.7 Sizes, Condition, Mortality, Bleaching and Sediment of 10 Natural Coral Colonies at Control Site of 10th Quarterly Coral Monitoring (28 June 2021) during 34th to 36th Months Construction Phase Monitoring

Coral #	Species	Size (cm) – Max. Diameter	Condition	Mortality (%)		Bleaching (%)		Sediment (%)	
				Baseline (26 Jun 2018 & 3 Dec 2018)	28 Jun 2021	Baseline (26 Jun 2018 & 3 Dec 2018)	28 Jun 2021	Baseline (26 Jun 2018 & 3 Dec 2018)	28 Jun 2021
1	*Goniopora stutchburyi*	25	Fair	0	0	0	0	0	0
2R	*Goniopora stutchburyi*	10	Good	0	0	0	0	0	0
3	*Psammocora superficialis*	18	Fair	0	0	0	0	0	0
4	*Turbinaria peltata*	13	Good	0	0	0	0	0	0
5R	*Goniopora stutchburyi*	18	Good	0	0	0	0	0	0
6	*Cyphastrea serailia*	43	Fair	0	0	0	0	0	0
7R	*Coscinaraea* sp.	15	Good	0	0	0	0	0	0
8	*Goniopora stutchburyi*	21	Good	0	0	0	0	0	0
9	*Goniopora stutchburyi*	11	Fair	0	0	0	0	0	0
10R	*Goniopora stutchburyi*	20	Good	0	0	0	0	0	0

Notes:

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

Table 5.8 Sizes, Condition, Mortality, Bleaching and Sediment of 10 Natural Coral Colonies at Indirect Impact Site of 10th Quarterly Coral Monitoring (28 June 2021) during 34th to 36th Months Construction Phase Monitoring

Coral #	Species	Size (cm) – Max. Diameter	Condition	Mortality (%)		Bleaching (%)		Sediment (%)	
				Baseline (23 Nov 2018)	28 Jun 2021	Baseline (23 Nov 2018)	28 Jun 2021	Baseline (23 Nov 2018)	28 Jun 2021
11R	*Cyphastrea serailia*	48	Good	0	0	0	0	0	0
12R	*Favites chinensis*	27	Good	0	0	0	0	0	0
13R	*Turbinaria peltata*	21	Good	0	0	0	0	0	0
14R	*Favites chinensis*	8	Good	0	0	0	0	0	0
15R	*Goniopora stutchburyi*	11	Good	0	0	0	0	0	0
16R	*Psammocora superficialis*	27	Good	0	0	0	0	0	0
17R	*Favites chinensis*	15	Good	0	0	0	0	0	0
18R	*Psammocora superficialis*	39	Good	0	0	0	0	0	0
19R	*Psammocora superficialis*	42	Good	0	0	0	0	0	0
20R	*Psammocora superficialis*	29	Good	0	0	0	0	0	0

Notes:

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

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

5.4.4 No sediment, bleaching or increased mortality in the general condition of coral colonies were observed during the 10th quarterly coral monitoring period. No deterioration of the coral community was observed in the ecological monitoring results when compared with the baseline ecological monitoring results. There is no AL/LL exceedance during the monitoring period.

6. MARINE MAMMAL

6.1 Survey Methods

6.1.1 Vessel-based Line-transect Survey

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

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

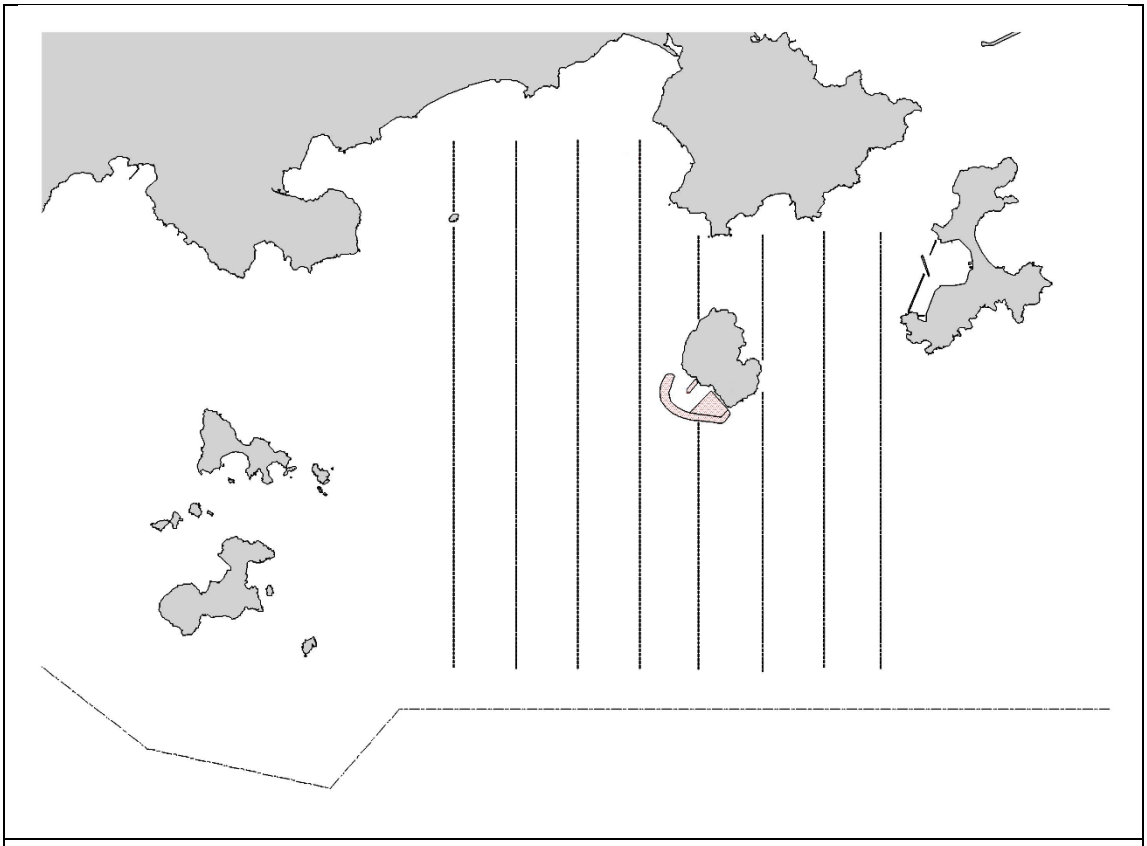


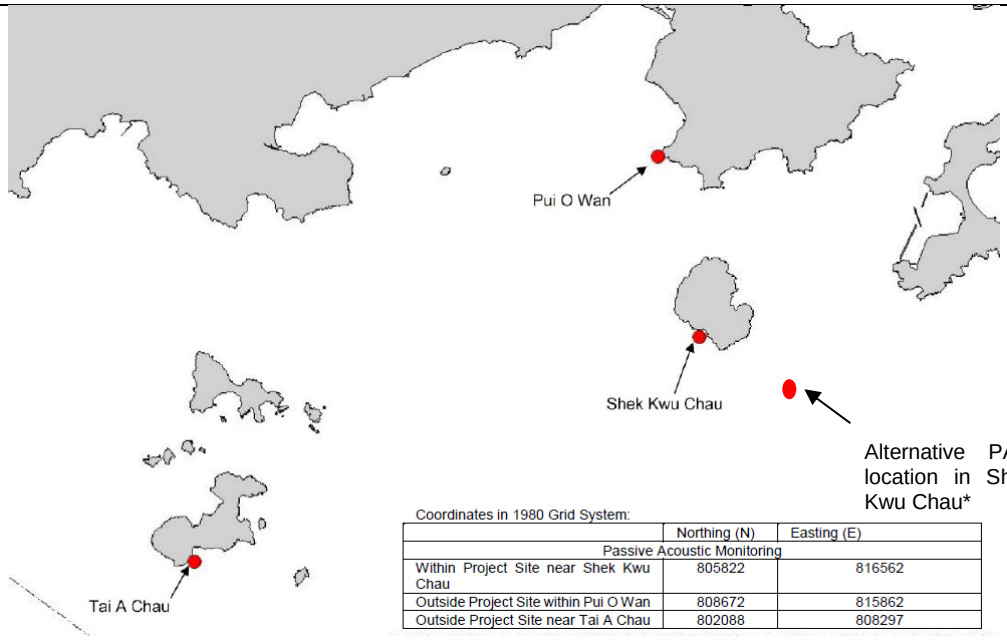
Figure 6.1 Line Transects for Marine Mammal Surveys

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

6.1.2 Passive Acoustic Monitoring (PAM)

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

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



Coordinates in 1980 Grid System:

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

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

Figure 6.2 Locations of Passive Acoustic Monitoring

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

Table 6.1 PAM Deployment Period

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

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

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

6.1.3 Land-based Theodolite Tracking

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

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

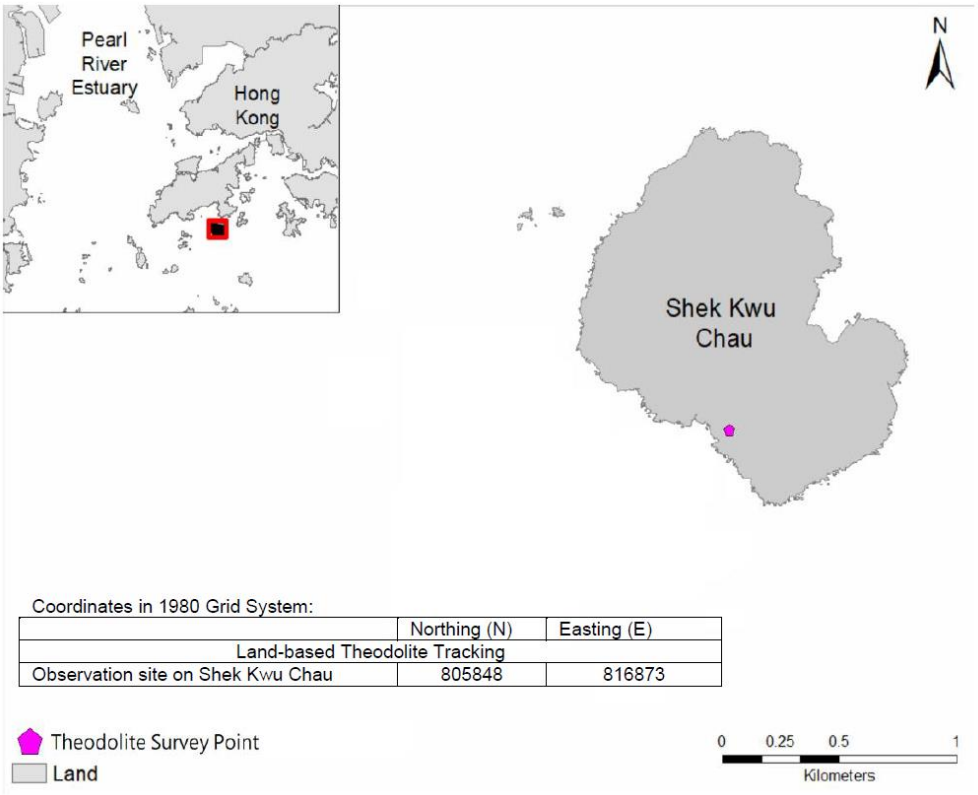


Figure 6.3 Locations of Land-based Theodolite Tracking

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

Table 6.2 Land-based Theodolite Tracking Survey Period

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

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

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

6.2 Specific Mitigation Measures

6.2.1 Monitored exclusion zones

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

6.2.2 Marine mammal watching plan

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

6.3 Results and Observations

6.3.1 Vessel-based Line-transect Survey

Five monthly surveys were conducted during the reporting period. As this is covering designated peak season (December – May) and non-peak season (June-November), four surveys were completed in April and May 2021 while one survey was completed in June 2021 respectively. A total on effort (transects only) survey length of 202.9 km was completed, 132.8 km at Beaufort Sea State 2 or better (**Table 6.3**). One (1) opportunistic Finless Porpoise sighting was recorded; and the details of recorded sightings were summarized (**Table 6.4, Figure 6.4**).

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

Date	Area*	Beaufort	Effort (km)	Season	Vessel	Effort Type**
7 Apr 2021	SEL	1	3.8	SPRING	SEAMAR HK	P
		2	26.4			
		3	10.0			
20 Apr 2021	SEL	2	15.3	SPRING	SEAMAR HK	P
		3	17.1			
		4	8.5			
4 May 2021	SEL	1	41.1	SPRING	SEAMAR HK	P
18 May 2021	SEL	2	6.7	SPRING	SEAMAR HK	P
		3	14.6			
		4	18.9			
25 June 2021	SEL	1	5.9	SUMMER	SEAMAR HK	P
		2	33.6			
		3	1.0			

* 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 April 2021 to June 2021 of Vessel-based Line-transect Survey Effort

Date	Species	Sighting No.	Time	Group Size	PSD	Behaviour	Lat.	Long.	Area	Effort	Season
4 May 2021	Finless Porpoise	97	9:40	8	N/A	Travelling	22.21828	114.0667	SEL	Opp	SPRING

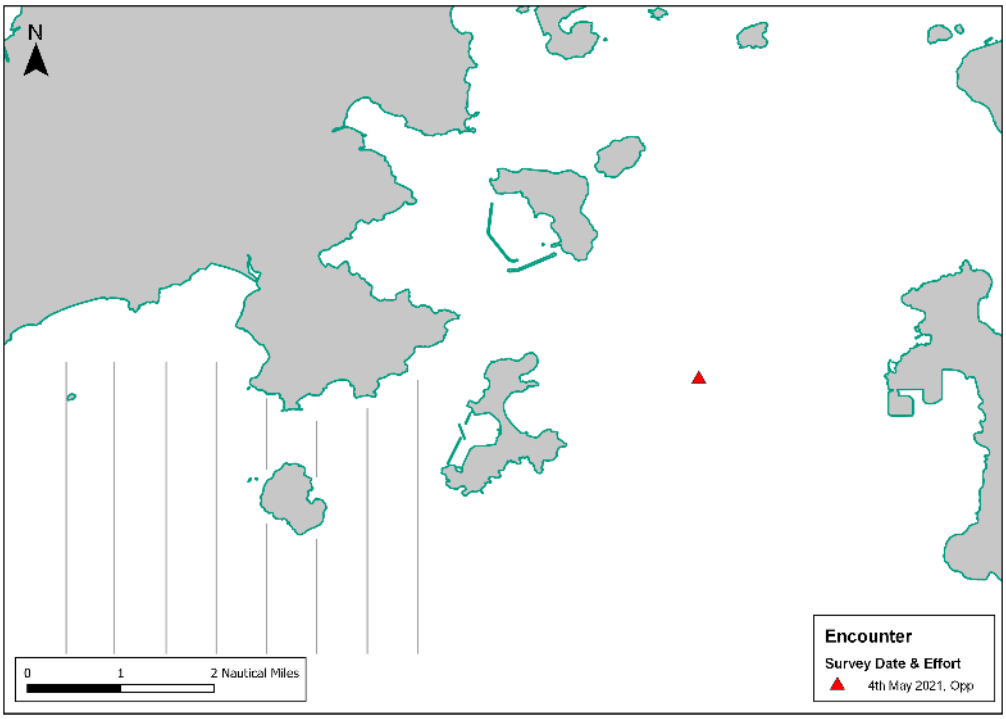


Figure 6.4 Location of sightings recorded during April to June 2021 Vessel-based Line-transect Survey

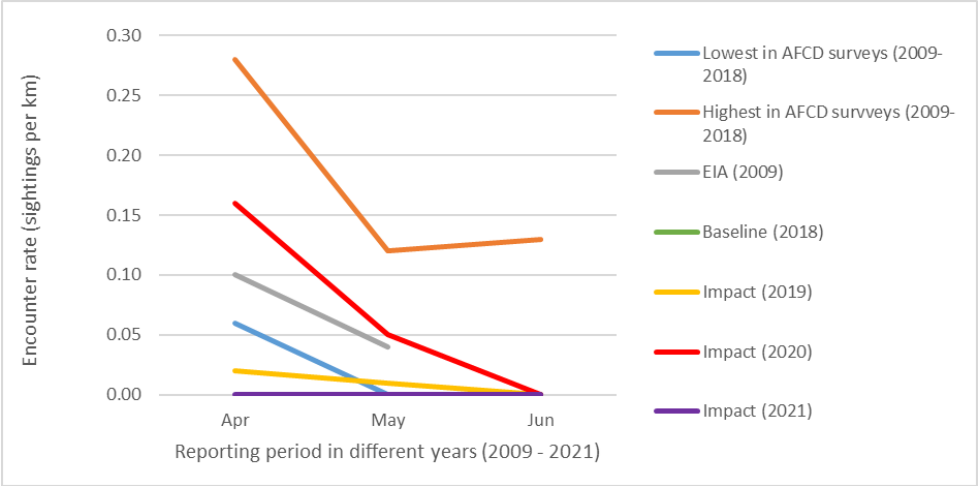


Figure 6.5 Plot of encounter rate during April to June in 2009 – 2021 from different surveys

6.3.1.1 A review of the long term AFCD marine mammal monitoring programme, the EIA and the pre-construction baseline monitoring report for this project was conducted. Both the EIA and the pre-construction baseline monitoring were conducted during the peak porpoise months Dec 2008 to May 2009 and Feb to April 2018, respectively.

The AFCD long term monitoring data and impact monitoring in 2019 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 2019 (only data available from AFCD at time of writing; (AFCD 2018; 2017; 2016; 2015; 2014; 2013; 2012; 2011; 2010)) shows that survey conditions in April and June 2021 were within the % limits of previous AFCD surveys, similar to impact monitoring surveys conducted in 2021.

6.3.1.3 A review of all the porpoise sightings in the survey area for April to June between 2009-2020 indicates that there are fluctuations between the number of sightings usually recorded in April to June. 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 April to June 2021 was 0.00km^{-1} respectively (see **Figure 6.5**), it is noted that the encounter rate of impact survey is low when compared to other years and other survey types. It is noted that the peak season of finless porpoise is coming to an end and that works at IWMF are increasing, both which may impact encounter rates. It is also noted that the impact survey focuses on a relatively small populations of highly mobile individuals and the survey area conducted for this monitoring is very small.

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

6.3.2 PAM and Land-based Theodolite Tracking

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

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

6.3.2.3 Overall, the PAM study showed that porpoise continue to consistently utilise the Shek Kwu Chau habitat immediately adjacent to the IWMF construction activities, although to a lesser degree than that prior to construction activities. In addition, the Pui O Wan site, which is 2.5 km away from the IWMF construction area, was also consistently utilised during the impact phase PAM study. A continued assessment of fine scale habitat use, particularly through PAM which yields large quantities of data, would allow a more comprehensive assessment of the EIA predictions.

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

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

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

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

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

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

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

Table 7.1 Weather Conditions during the WBSE Monitoring (Monthly)

Date	Condition	Temperature (℃)
15th April 2021	- North-east wind force 4 - Sunny	27
29th April 2021	- Southwest wind force 4 to 5 - Sunny	31
13th May 2021	- South wind force 3 to 4 - Sunny	32
27th May 2021	- South wind force 4 - Sunny	30
28th June 2021	- Southwest wind force 3 to 4 - Raining Day	27

7.2.2 Two WBSE adults were recorded near SKC island during the survey in April, May and June 2021. No abnormal behaviour of the adults was recorded during the reporting period. All marine works during the monitoring period did not show any impact to the WBSE.

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

Figure 7.1 Location of WBSE Nest on SKC

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

7.2.5 During the reporting period, no abnormal behaviour of the recorded adults and chick was shown. All marine works during the thirty-fourth to thirty-sixth months construction period did not show any influence on the WBSE.

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 April to June 2021, two (2) of general water quality monitoring results of suspended solids (SS) obtained had exceeded Action Level. None of general water quality monitoring results of SS obtained during the reporting period had exceeded the Limit Level.

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

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

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

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

9. EM&A SITE INSPECTION

9.1 Site inspections were carried out on a weekly basis to monitor the implementation of proper environmental pollution control and mitigation measures under the Contract. Site inspections were carried out at the Site Portions 1, 1A, 1B 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 a monthly basis.

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

- Soil was accumulated on the edge of the barge
- Prevention actions for oil/chemical spillage were not carried out properly
- Chemical was not stored properly at designated storage place
- The updated Construction Noise Permit (CNP) was not presented on-site
- Construction Noise Permit (CNP) and Environmental Permit (EP) were not presented on the barge
- Excessive black smoke was emitted from engine of the barge
- Dust control measures to exposed earth surface and stockpile of dusty material were not carried out properly
- Filling material was not stored properly at loading points
- Recyclable material was not separately stored from the general waste
- Soil was accumulated on the surface of the concrete block at loading points for filling material

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

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

10. CONCLUSION AND RECOMMENDATIONS

10.1 This 12th Quarterly Environmental Monitoring and Audit (EM&A) Report summarizes the EM&A works undertaken during the period from 1 April 2021 to 30 June 2021 in accordance with the Updated EM&A Manual and the requirement under EP- 429/2012/A and FEP-01/429/2012/A.

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

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

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

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

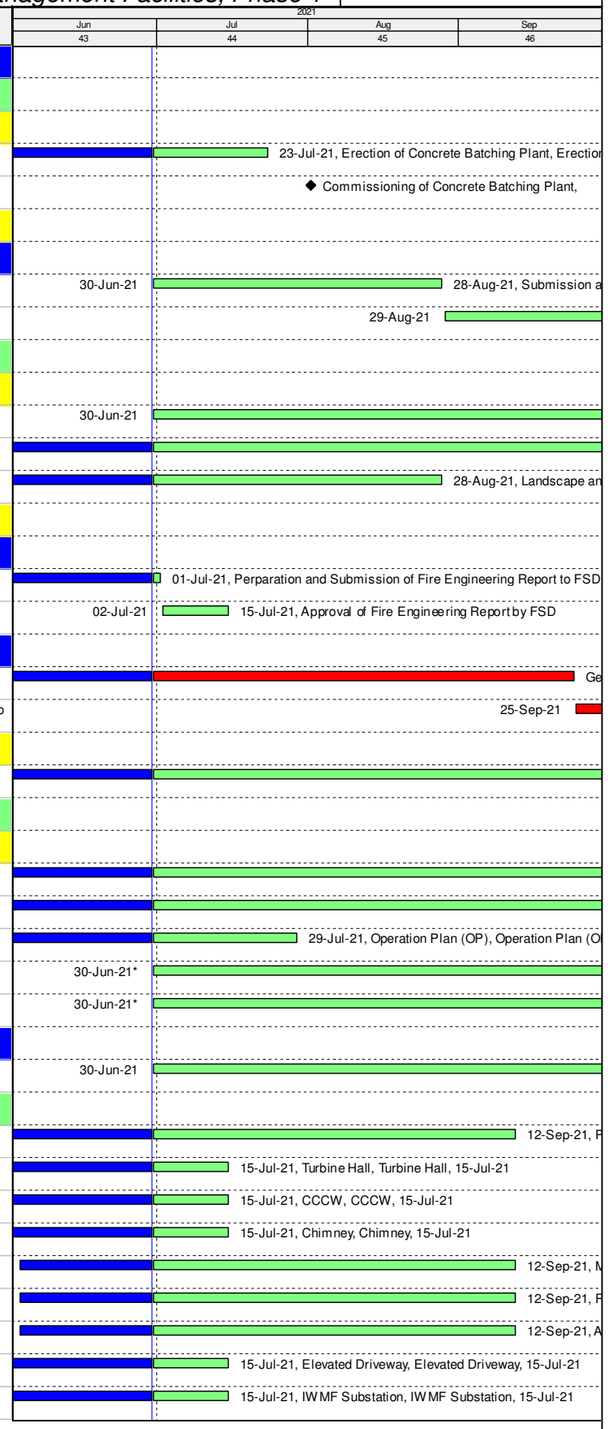
10.6 No environmental complaint was received in the reporting period.

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

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

Appendix A Master Programme

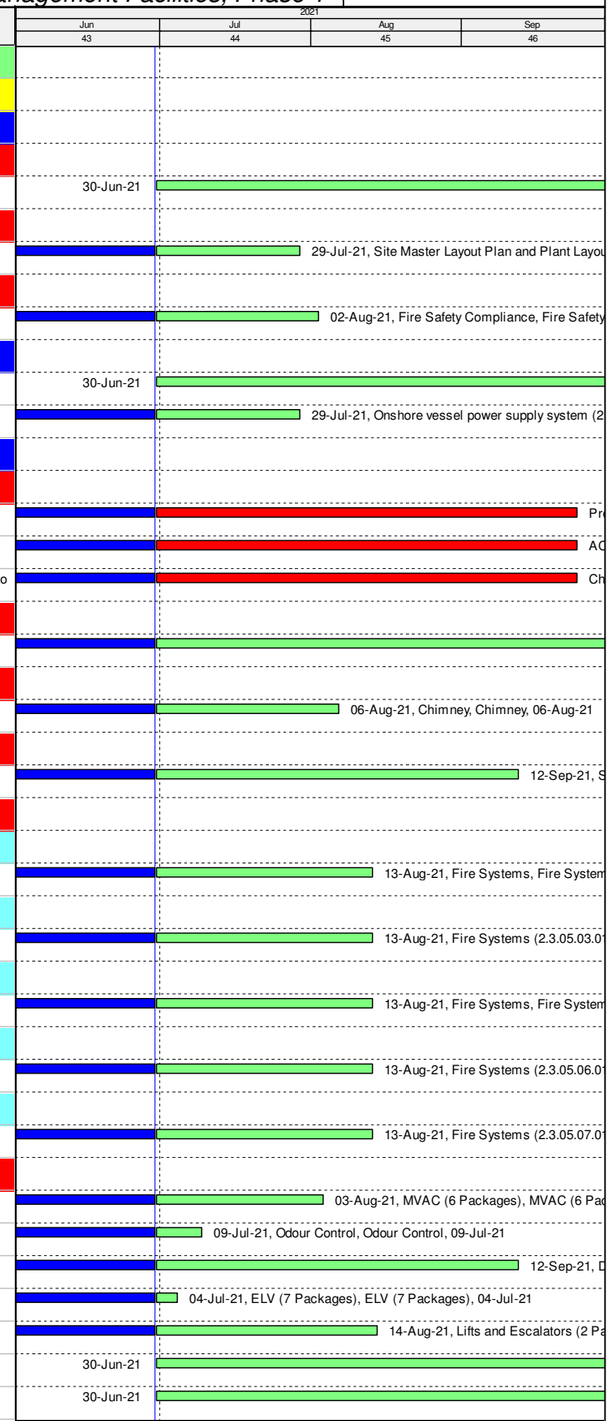
Activity ID	Activity Name	Original Duration	At Completion Duration	Duration % Complete	Activity % Complete	Remaining Duration	Primary Constraint	Current Start	Current Finish	Late Start	Late Finish	Total Float	M43 Remarks
EP_SP_66_12-WP6A-M43 Programme for Design and Construction Works WP6-M43		2564	2712	44.54%		1422		18-Dec-17 A	21-May-25	30-Jun-21	21-May-27	730	
EP_SP_66_12-WP6A-M43.02 Contract Preliminaries		180	361	16.67%		150		01-Dec-20 A	26-Nov-21	09-Jul-21	31-Dec-21	35	
EP_SP_66_12-WP6A-M43.02.3 Erection of Concrete Batching Plant on Artificial Island		63	244	47.62%		33		01-Dec-20 A	01-Aug-21	09-Jul-21	01-Aug-21	0	
02-1080	Erection of Concrete Batching Plant	60	235	60%	60%	24		01-Dec-20 A	23-Jul-21	09-Jul-21	01-Aug-21	9	
02-1090	Commissioning of Concrete Batching Plant	0	0	0%	0%	0	Finish On		01-Aug-21*		01-Aug-21	0	
EP_SP_66_12-WP6A-M43.02.4 Establishment of Public Relation Office		150	150	0%		150		30-Jun-21	26-Nov-21	04-Aug-21	31-Dec-21	35	
EP_SP_66_12-WP6A-M43.02.4.2 South Lantau (SLIO)		150	150	0%		150		30-Jun-21	26-Nov-21	04-Aug-21	31-Dec-21	35	
02-1070-1(6C)	Submission and approval for location, layout and details of IWMF Information Office(s)	60	60	0%	0%	60		30-Jun-21	28-Aug-21	04-Aug-21	02-Oct-21	35	New Activity
02-1120-1(6C)	Establishment of IWMF Information Office(s)	90	90	0%	0%	90	Finish On or Before	29-Aug-21	26-Nov-21*	03-Oct-21	31-Dec-21	35	New Activity
EP_SP_66_12-WP6A-M43.03 Licence/Permit Applications		2190	2338	35.07%		1422		27-Dec-18 A	21-May-25	30-Jun-21	21-May-27	730	
EP_SP_66_12-WP6A-M43.03.1 License/Permit for Construction		2120	2120	32.92%		1422		02-Aug-19 A	21-May-25	26-Nov-21	21-May-27	730	
03-1090	EPD APCO(SP) License for Concrete Batching Plant	120	120	0%	0%	120		30-Jun-21	27-Oct-21	26-Nov-21	25-Mar-22	149	
03-1360(2)	CNP for 24Hrs	2120	2120	32.92%	32.92%	1422		02-Aug-19 A	21-May-25	30-Jun-23	21-May-27	730	
03-1370_1(M34)	Landscape and Visual Plan	180	478	66.67%	66.67%	60		08-May-20 A	28-Aug-21	13-Mar-22	11-May-22	256	
EP_SP_66_12-WP6A-M43.03.4 Fire Services Installations (FSI) Certificatie		679	1004	71.72%		192		10-Apr-19 A	07-Jan-22	30-Jun-21	07-Jan-22	0	
EP_SP_66_12-WP6A-M43.03.4.3 Fire Engineering Report		550	828	97.09%		16		10-Apr-19 A	15-Jul-21	21-Jul-21	05-Aug-21	21	
05-3000	Perparation and Submission of Fire Engineering Report to FSD	550	814	99.64%	99.64%	2		10-Apr-19 A	01-Jul-21	21-Jul-21	22-Jul-21	21	
05-4450	Approval of Fire Engineering Report by FSD	14	14	0%	0%	14		02-Jul-21	15-Jul-21	23-Jul-21	05-Aug-21	21	
EP_SP_66_12-WP6A-M43.03.4.1 Fire Services Installations Certificate Inspection		145	403	0%		192		01-Dec-20 A	07-Jan-22	30-Jun-21	07-Jan-22	0	
03-1555(5a)	General Building Plans and FSI Provision Design Submission to FSD	90	298	3.33%	3.33%	87		01-Dec-20 A	24-Sep-21	30-Jun-21	24-Sep-21	0	
03-1555-1(5a)	Approval of General Building Plans and FSI Provision Design Submission	105	105	0%	0%	105		25-Sep-21	07-Jan-22	25-Sep-21	07-Jan-22	0	Revised durtation 135 to 105
EP_SP_66_12-WP6A-M43.03.5 Air Pollution Control (Specified Processes) License		600	1021	82.5%		105		27-Dec-18 A	12-Oct-21	30-Jul-21	11-Nov-21	30	
03-1730(3)	Early Engagement With EPD SP Licensing Department for Information exchange	600	1021	82.5%	82.5%	105		27-Dec-18 A	12-Oct-21	30-Jul-21	11-Nov-21	30	
EP_SP_66_12-WP6A-M43.04 General Submissions		1470	1475	87.41%		185		18-Dec-17 A	31-Dec-21	21-Nov-21	21-May-25	1237	
EP_SP_66_12-WP6A-M43.04.1 Contractor's Plans Submission and Approval		1470	1475	87.41%		185		18-Dec-17 A	31-Dec-21	21-Nov-21	21-May-25	1237	
04-1100(1)	Technical Resources Plan (TRP)	240	1474	22.92%	30%	185		19-Dec-17 A	31-Dec-21	16-Mar-23	16-Sep-23	624	
04-1200(1)	Works Plan (WP)	90	1475	0%	30%	185		18-Dec-17 A	31-Dec-21	16-Mar-23	16-Sep-23	624	
04-1400(1)	Operation Plan (OP)	240	1320	87.5%	87.5%	30		18-Dec-17 A	29-Jul-21	28-Aug-23	26-Sep-23	789	
04-1450(1)	Asset Management Plan (AMP)	120	120	0%	0%	120	Start On or Before	30-Jun-21*	27-Oct-21	21-Nov-21	20-Mar-22	144	
04-1500(1)	Handback Plan (HP)	120	120	0%	0%	120	Start On or Before	30-Jun-21*	27-Oct-21	21-Nov-21	20-Mar-22	144	
EP_SP_66_12-WP6A-M43.04.1.1 Provisional Assessment (PA)		180	180	0%		180		30-Jun-21	26-Dec-21	23-Nov-24	21-May-25	1242	
04-1500-1(1)	Preliminary Assessmant	180	180	0%	0%	180		30-Jun-21	26-Dec-21	23-Nov-24	21-May-25	1242	
EP_SP_66_12-WP6A-M43.1 Submission & Approval of General Building Plan		135	194	44.44%		75		03-Mar-21 A	12-Sep-21	12-Jul-21	24-Sep-21	12	
04-1600(M42)	Process Building & Wastewater Treatment Plant	135	105	44.44%	44.44%	75		31-May-21 A	12-Sep-21	12-Jul-21	24-Sep-21	12	New Activity
04-1610(M42)	Turbine Hall	135	135	88.15%	88.15%	16		03-Mar-21 A	15-Jul-21	09-Sep-21	24-Sep-21	71	New Activity
04-1620(M42)	CCCW	135	135	88.15%	88.15%	16		03-Mar-21 A	15-Jul-21	09-Sep-21	24-Sep-21	71	New Activity
04-1630(M42)	Chimney	135	135	88.15%	88.15%	16		03-Mar-21 A	15-Jul-21	09-Sep-21	24-Sep-21	71	New Activity
04-1640(M42)	M T & Water Treatment Plant	135	102	44.44%	44.44%	75		03-Jun-21 A	12-Sep-21	12-Jul-21	24-Sep-21	12	New Activity
04-1650(M42)	Reception Pavilion	135	102	44.44%	44.44%	75		03-Jun-21 A	12-Sep-21	12-Jul-21	24-Sep-21	12	New Activity
04-1660(M42)	Administration building	135	102	44.44%	44.44%	75		03-Jun-21 A	12-Sep-21	12-Jul-21	24-Sep-21	12	New Activity
04-1670(M42)	Elevated Driveway	135	135	88.15%	88.15%	16		03-Mar-21 A	15-Jul-21	09-Sep-21	24-Sep-21	71	New Activity
04-1680(M42)	IWMF Substation	135	135	88.15%	88.15%	16		03-Mar-21 A	15-Jul-21	09-Sep-21	24-Sep-21	71	New Activity



3-Month Rolling Programme (June 2021)

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

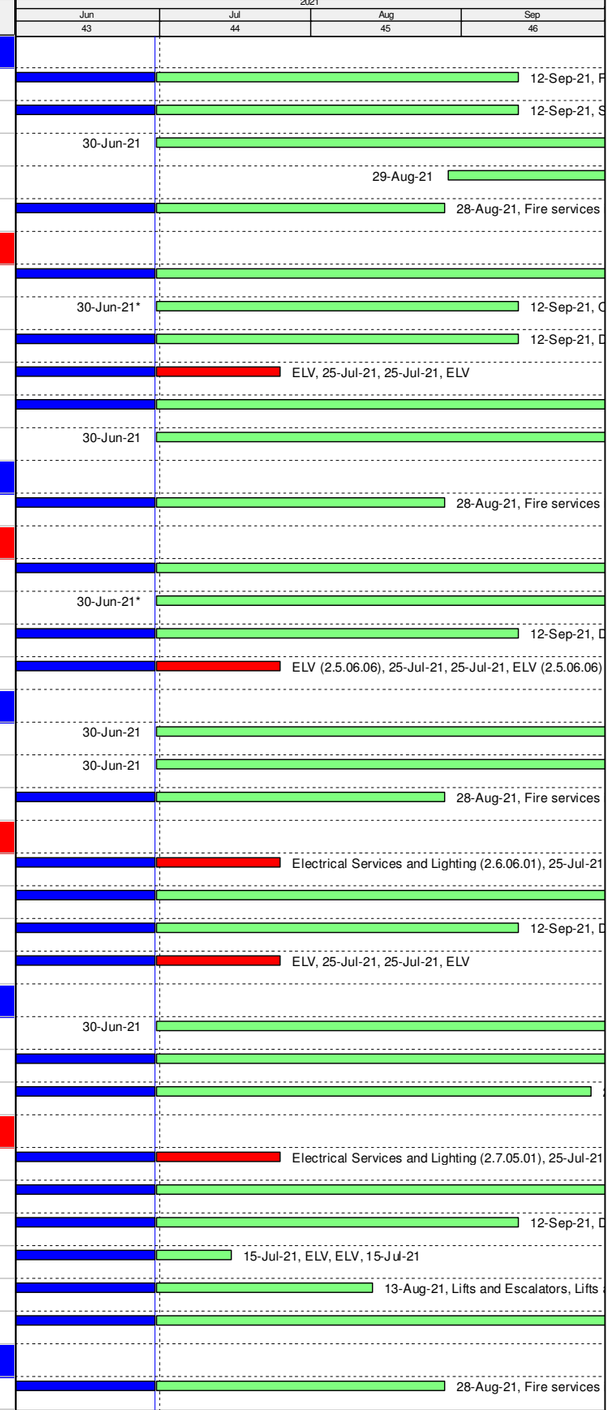
Activity ID	Activity Name	Original Duration	At Completion Duration	Duration % Complete	Activity % Complete	Remaining Duration	Primary Constraint	Current Start	Current Finish	Late Start	Late Finish	Total Float	M43 Remarks
EP_SP_66_12-WP6A-M43.05 Design Submissions		1624	1763	58.25%		678		11-Jul-18 A	08-May-23	30-Jun-21	13-Dec-24	585	
EP_SP_66_12-WP6A-M43.05.01 AIP Design Package Submissions		1149	1241	86.42%		156		11-Jul-18 A	02-Dec-21	30-Jun-21	01-Sep-23	638	
EP_SP_66_12-WP6A-M43.05.01.01 AIP Process and Layout Design (2.1)		284	908	66.2%		96		10-Apr-19 A	03-Oct-21	04-Jul-21	07-Dec-21	65	
EP_SP_66_12-WP6A-M43.05.01.01.2 MSW treatment process design for mechanical treatment (2.1.02)		96	96	0%		96		30-Jun-21	03-Oct-21	04-Jul-21	07-Oct-21	4	
05-1090	Mechanical Treatment Plant	96	96	0%	0%	96	Finish On or After	30-Jun-21	03-Oct-21*	04-Jul-21	07-Oct-21	4	
EP_SP_66_12-WP6A-M43.05.01.01.6 Site Master Layout Plan and Plant Layout (2.1.06)		105	149	71.43%		30		03-Mar-21 A	29-Jul-21	26-Aug-21	24-Sep-21	57	
05-3020	Site Master Layout Plan and Plant Layout	105	149	71.43%	25%	30		03-Mar-21 A	29-Jul-21	26-Aug-21	24-Sep-21	57	
EP_SP_66_12-WP6A-M43.05.01.01.7 Statutory Fire Compliance (2.1.25)		30	846	0%		34		10-Apr-19 A	02-Aug-21	04-Nov-21	07-Dec-21	127	
05-2990	Fire Safety Compliance	30	846	0%	25%	34		10-Apr-19 A	02-Aug-21	04-Nov-21	07-Dec-21	127	
EP_SP_66_12-WP6A-M43.05.01.02 AIP Ground Treatment, Reclamation, Seawall, Breakwater, Berth (2.2)		165	443	18.18%		135		26-Aug-20 A	11-Nov-21	03-Jul-21	14-Nov-21	3	
05-2970	Onshore crane Facility (2.2.11)	135	135	0%	0%	135		30-Jun-21	11-Nov-21	03-Jul-21	14-Nov-21	3	
05-2980	Onshore vessel power supply system (2.2.12)	135	338	77.78%	65%	30		26-Aug-20 A	29-Jul-21	16-Oct-21	14-Nov-21	108	
EP_SP_66_12-WP6A-M43.05.01.03 AIP Incineration Plant Buildings (2.3)		1100	1239	86%		154		11-Jul-18 A	30-Nov-21	30-Jun-21	11-Apr-22	132	
EP_SP_66_12-WP6A-M43.05.01.03.1 General Layout Drawings and Fire Saftey Strategy (2.3.00)		135	1149	35.56%		87		03-Aug-18 A	24-Sep-21	30-Jun-21	24-Sep-21	0	
05-1210	Process Building	135	1149	35.56%	25%	87		03-Aug-18 A	24-Sep-21	30-Jun-21	24-Sep-21	0	
05-1220	ACC Equipment Yard	135	357	35.56%	25%	87		03-Oct-20 A	24-Sep-21	30-Jun-21	24-Sep-21	0	
05-1250	Chimney	135	117	35.56%	25%	87		31-May-21 A	24-Sep-21	30-Jun-21	24-Sep-21	0	Revised durtation 135 to 120
EP_SP_66_12-WP6A-M43.05.01.03.2 Foundation design (2.3.01)		95	135	0%		95		21-May-21 A	02-Oct-21	10-Oct-21	12-Jan-22	102	
05-3070	Chimney	95	135	0%	5%	95		21-May-21 A	02-Oct-21	10-Oct-21	12-Jan-22	102	
EP_SP_66_12-WP6A-M43.05.01.03.3 Structural design (2.3.02)		0	135	0%		38		25-Mar-21 A	06-Aug-21	23-Nov-21	30-Dec-21	146	
05-1330	Chimney	0	135	0%	45%	38		25-Mar-21 A	06-Aug-21	23-Nov-21	30-Dec-21	146	
EP_SP_66_12-WP6A-M43.05.01.03.8 Operation Management System (2.3.03.04)		105	215	28.57%		75		10-Feb-21 A	12-Sep-21	18-Sep-21	01-Dec-21	80	
05-3180	Supervisory Control/Data Acquisition/Distributed Control (SCADA/DCS) System (12 Packages)	105	215	28.57%	25%	75	Start On or After	10-Feb-21 A	12-Sep-21	18-Sep-21	01-Dec-21	80	
EP_SP_66_12-WP6A-M43.05.01.03.6 Fire services installation design (2.3.05)		384	960	88.28%		45		28-Dec-18 A	13-Aug-21	24-Oct-21	07-Dec-21	116	
EP_SP_66_12-WP6A-M43.05.01.03.6.1 Process Building (2.3.05.01)		105	947	57.14%		45		10-Jan-19 A	13-Aug-21	24-Oct-21	07-Dec-21	116	
05-1510	Fire Systems	105	947	57.14%	5%	45		10-Jan-19 A	13-Aug-21	24-Oct-21	07-Dec-21	116	
EP_SP_66_12-WP6A-M43.05.01.03.6.3 Turbin Hall Building (2.3.05.03)		105	960	57.14%		45		28-Dec-18 A	13-Aug-21	24-Oct-21	07-Dec-21	116	
05-5400	Fire Systems (2.3.05.03.01)	105	960	57.14%	5%	45		28-Dec-18 A	13-Aug-21	24-Oct-21	07-Dec-21	116	
EP_SP_66_12-WP6A-M43.05.01.03.6.5 Elevated Drive Way and Associated Structures (2.3.05.05)		180	607	75%		45		16-Dec-19 A	13-Aug-21	24-Oct-21	07-Dec-21	116	
05-5445(M22)	Fire Systems	180	607	75%	5%	45		16-Dec-19 A	13-Aug-21	24-Oct-21	07-Dec-21	116	
EP_SP_66_12-WP6A-M43.05.01.03.6.6 Reception Pavilion (2.3.05.06)		270	680	83.33%		45		04-Oct-19 A	13-Aug-21	24-Oct-21	07-Dec-21	116	
05-5460(M22)	Fire Systems (2.3.05.06.01)	270	680	83.33%	5%	45		04-Oct-19 A	13-Aug-21	24-Oct-21	07-Dec-21	116	
EP_SP_66_12-WP6A-M43.05.01.03.6.7 Compressor & Closed Circuit (2.3.05.07)		140	703	67.86%		45		11-Sep-19 A	13-Aug-21	24-Oct-21	07-Dec-21	116	
05-5480-1(M22)	Fire Systems (2.3.05.07.01)	140	703	67.86%	5%	45		11-Sep-19 A	13-Aug-21	24-Oct-21	07-Dec-21	116	
EP_SP_66_12-WP6A-M43.05.01.03.7 Building services design (excluding fire services installation design) (2.3.06)		1093	1239	85.91%		154		11-Jul-18 A	30-Nov-21	11-Jul-21	11-Apr-22	132	
05-1560	MVAC (6 Packages)	105	937	66.67%	66.67%	35	Start On or After	10-Jan-19 A	03-Aug-21	04-Oct-21	07-Nov-21	96	
05-1570	Odour Control	135	1095	92.59%	5%	10	Start On or After	11-Jul-18 A	09-Jul-21	14-Sep-21	23-Sep-21	76	
05-1590	Drainage (7 Packages)	135	972	44.44%	25%	75	Start On or After	15-Jan-19 A	12-Sep-21	11-Jul-21	23-Sep-21	11	
05-1600	ELV (7 Packages)	135	907	96.3%	65%	5	Start On or After	10-Jan-19 A	04-Jul-21	21-Jul-21	25-Jul-21	21	
05-1610	Lifts and Escalators (2 Packages)	135	594	65.93%	5%	46	Start On or After	30-Dec-19 A	14-Aug-21	14-Jul-21	28-Aug-21	14	
05-1770	Vehicle & Container Wash System	154	154	0%	0%	154		30-Jun-21	30-Nov-21	25-Sep-21	25-Feb-22	87	
05-1770-2 (5a)	Process CCTV System	135	135	0%	0%	135		30-Jun-21	11-Nov-21	28-Nov-21	11-Apr-22	151	



3-Month Rolling Programme (June 2021)

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

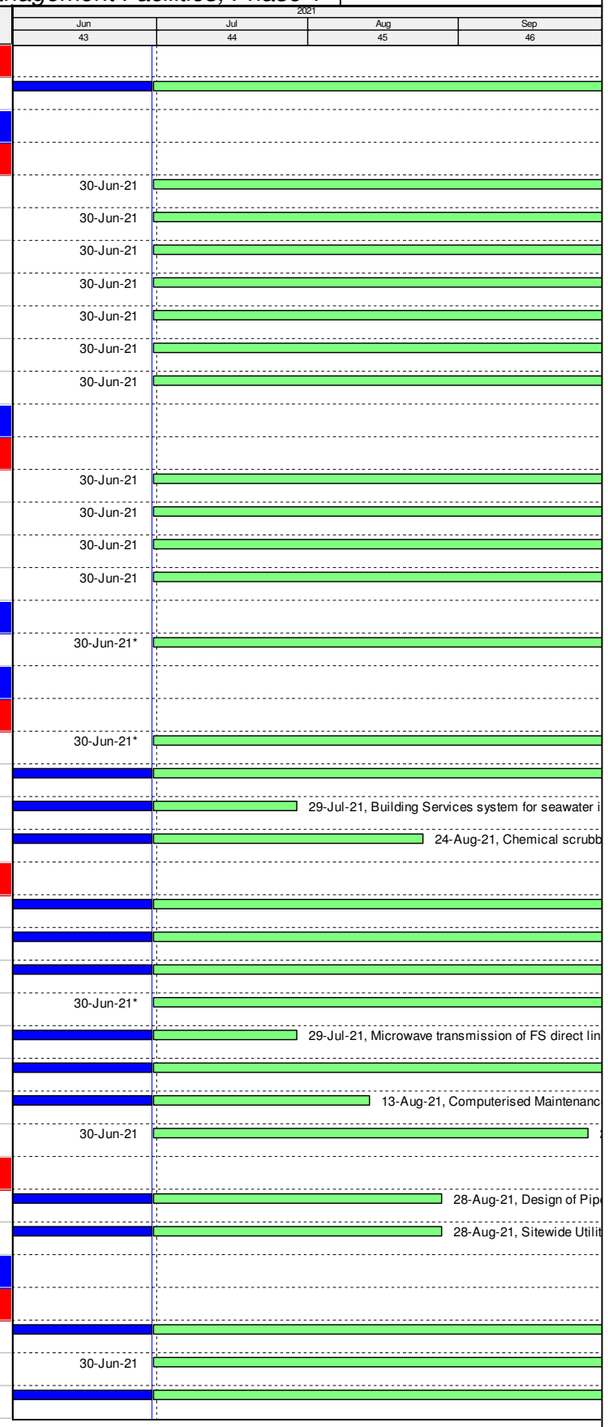
Activity ID	Activity Name	Original Duration	At Completion Duration	Duration % Complete	Activity % Complete	Remaining Duration	Primary Constraint	Current Start	Current Finish	Late Start	Late Finish	Total Float	M43 Remarks
EP_SP_66_12-WP6A-M43.05.01.04	**AIP Mechanical Treatment Plant Building (2.4)**	948	989	83.54%		156		20-Mar-19 A	02-Dec-21	30-Jun-21	08-Dec-21	6	
05-1650	Foundation design (2.4.01)	135	799	44.44%	5%	75	Start On or After	07-Jul-19 A	12-Sep-21	25-Sep-21	08-Dec-21	87	
05-1660	Structural design (2.4.02)	457	846	83.59%	5%	75	Start On or After	21-May-19 A	12-Sep-21	26-Aug-21	08-Nov-21	57	
05-1670	Electrical and instrumentation works design (2.4.03)	96	96	0%	0%	96		30-Jun-21	03-Oct-21	28-Aug-21	01-Dec-21	59	
05-1680	Mechanical works design (2.4.04)	96	96	0%	0%	96		29-Aug-21	02-Dec-21	02-Sep-21	06-Dec-21	4	
05-1690	Fire services installation design (2.4.05) (3 Packages)	135	893	55.56%	5%	60		20-Mar-19 A	28-Aug-21	10-Aug-21	08-Oct-21	41	
EP_SP_66_12-WP6A-M43.05.01.04.7	**Building services design (excluding fire services installation design) (2.4.06)**	927	968	85.44%		135		20-Mar-19 A	11-Nov-21	30-Jun-21	28-Nov-21	17	
05-1710	MVAC	135	948	11.11%	5%	120	Start On or After	25-Mar-19 A	27-Oct-21	11-Jul-21	07-Nov-21	11	
05-1720	Odour Control	75	75	0%	0%	75	Start On or After	30-Jun-21*	12-Sep-21	11-Jul-21	23-Sep-21	11	
05-1740	Drainage	135	908	44.44%	5%	75	Start On or After	20-Mar-19 A	12-Sep-21	11-Jul-21	23-Sep-21	11	
05-1750	ELV	135	859	80.74%	5%	26	Start On or After	20-Mar-19 A	25-Jul-21	30-Jun-21	25-Jul-21	0	
05-1760	Lifts	135	645	28.15%	5%	97	Start On or After	30-Dec-19 A	04-Oct-21	23-Jul-21	27-Oct-21	23	
05-1760-1(M20)	Building Management System (BMS)	135	135	0%	0%	135		30-Jun-21	11-Nov-21	17-Jul-21	28-Nov-21	17	
EP_SP_66_12-WP6A-M43.05.01.05	**AIP Wastewater Treatment Plant (2.5)**	986	1016	87.83%		120		16-Jan-19 A	27-Oct-21	30-Jun-21	07-Nov-21	11	
05-2790	Fire services installation design (2.5.05)	135	956	55.56%	5%	60		16-Jan-19 A	28-Aug-21	10-Aug-21	08-Oct-21	41	
EP_SP_66_12-WP6A-M43.05.01.05.7	**Building services design (excluding fire services installation design) (2.5.06)**	986	1016	87.83%		120		16-Jan-19 A	27-Oct-21	30-Jun-21	07-Nov-21	11	
05-1840	MVAC (2.5.06.02)	135	1016	11.11%	25%	120	Start On or After	16-Jan-19 A	27-Oct-21	11-Jul-21	07-Nov-21	11	
05-1850	Odour Control (2.5.06.03)	105	105	0%	0%	105	Start On or After	30-Jun-21*	12-Oct-21	11-Jul-21	23-Oct-21	11	
05-1870	Drainage (2.5.06.05)	135	971	44.44%	25%	75	Start On or After	16-Jan-19 A	12-Sep-21	11-Jul-21	23-Sep-21	11	
05-1880	ELV (2.5.06.06)	135	922	80.74%	25%	26	Start On or After	16-Jan-19 A	25-Jul-21	30-Jun-21	25-Jul-21	0	
EP_SP_66_12-WP6A-M43.05.01.06	**AIP Water Treatment Plant Building (2.6)**	927	968	85.44%		135		20-Mar-19 A	11-Nov-21	30-Jun-21	08-Dec-21	27	
05-1910	Foundation design (2.6.01)	135	135	0%	0%	135		30-Jun-21	11-Nov-21	27-Jul-21	08-Dec-21	27	
05-1920	Structural design (2.6.02)	105	105	0%	0%	105		30-Jun-21	12-Oct-21	26-Aug-21	08-Dec-21	57	
05-1950	Fire services installation design (2.6.05) (3 Packages)	135	893	55.56%	5%	60		20-Mar-19 A	28-Aug-21	10-Aug-21	08-Oct-21	41	
EP_SP_66_12-WP6A-M43.05.01.06.7	**Building services design (excluding fire services installation design) (2.6.06)**	135	953	11.11%		120		20-Mar-19 A	27-Oct-21	30-Jun-21	07-Nov-21	11	
05-1960	Electrical Services and Lighting (2.6.06.01)	135	859	80.74%	5%	26	Start On or After	20-Mar-19 A	25-Jul-21	30-Jun-21	25-Jul-21	0	
05-1970	MVAC	135	948	11.11%	5%	120	Start On or After	25-Mar-19 A	27-Oct-21	11-Jul-21	07-Nov-21	11	
05-2000	Drainage	135	908	44.44%	5%	75	Start On or After	20-Mar-19 A	12-Sep-21	11-Jul-21	23-Sep-21	11	
05-2010	ELV	135	859	80.74%	5%	26	Start On or After	20-Mar-19 A	25-Jul-21	30-Jun-21	25-Jul-21	0	
EP_SP_66_12-WP6A-M43.05.01.07	**AIP Administration Building (2.7)**	743	942	81.83%		135		15-Apr-19 A	11-Nov-21	30-Jun-21	14-Aug-22	276	
05-2030	Foundation design (2.7.01)	135	135	0%	0%	135		30-Jun-21	11-Nov-21	27-Jul-21	08-Dec-21	27	
05-2040	Structural design (2.7.02)	135	807	22.22%	65%	105	Start On or After	29-Jul-19 A	12-Oct-21	27-Jul-21	08-Nov-21	27	
05-2060	Fire services installation design (3 Packages) (2.7.04)	135	756	33.33%	5%	90	Start On or After	03-Sep-19 A	27-Sep-21	11-Jul-21	08-Oct-21	11	
EP_SP_66_12-WP6A-M43.05.01.07.6	**Building services design (excluding fire services installation design) (2.7.05)**	713	927	83.17%		120		15-Apr-19 A	27-Oct-21	30-Jun-21	14-Aug-22	291	
05-2070	Electrical Services and Lighting (2.7.05.01)	135	692	80.74%	5%	26	Start On or After	03-Sep-19 A	25-Jul-21	30-Jun-21	25-Jul-21	0	
05-2080	MVAC	135	786	11.11%	5%	120	Start On or After	03-Sep-19 A	27-Oct-21	11-Jul-21	07-Nov-21	11	
05-2110	Drainage	135	741	44.44%	5%	75	Start On or After	03-Sep-19 A	12-Sep-21	11-Jul-21	23-Sep-21	11	
05-2120	ELV	135	682	88.15%	5%	16	Start On or After	03-Sep-19 A	15-Jul-21	10-Jul-21	25-Jul-21	10	
05-2130	Lifts and Escalators	135	593	66.67%	5%	45		30-Dec-19 A	13-Aug-21	15-Jul-21	28-Aug-21	15	
05-2130-1(M20)	Building Management System (BMS)	135	912	22.22%	5%	105		15-Apr-19 A	12-Oct-21	02-May-22	14-Aug-22	306	
EP_SP_66_12-WP6A-M43.05.01.08	**AIP IWMF Substation (2.8)**	139	1066	13.67%		120		27-Nov-18 A	27-Oct-21	23-Nov-21	06-Apr-22	161	
05-2190	Fire services installation design (2.8.05) (2 Packages)	135	1006	55.56%	5%	60	Start On or After	27-Nov-18 A	28-Aug-21	23-Nov-21	21-Jan-22	146	



3-Month Rolling Programme (June 2021)

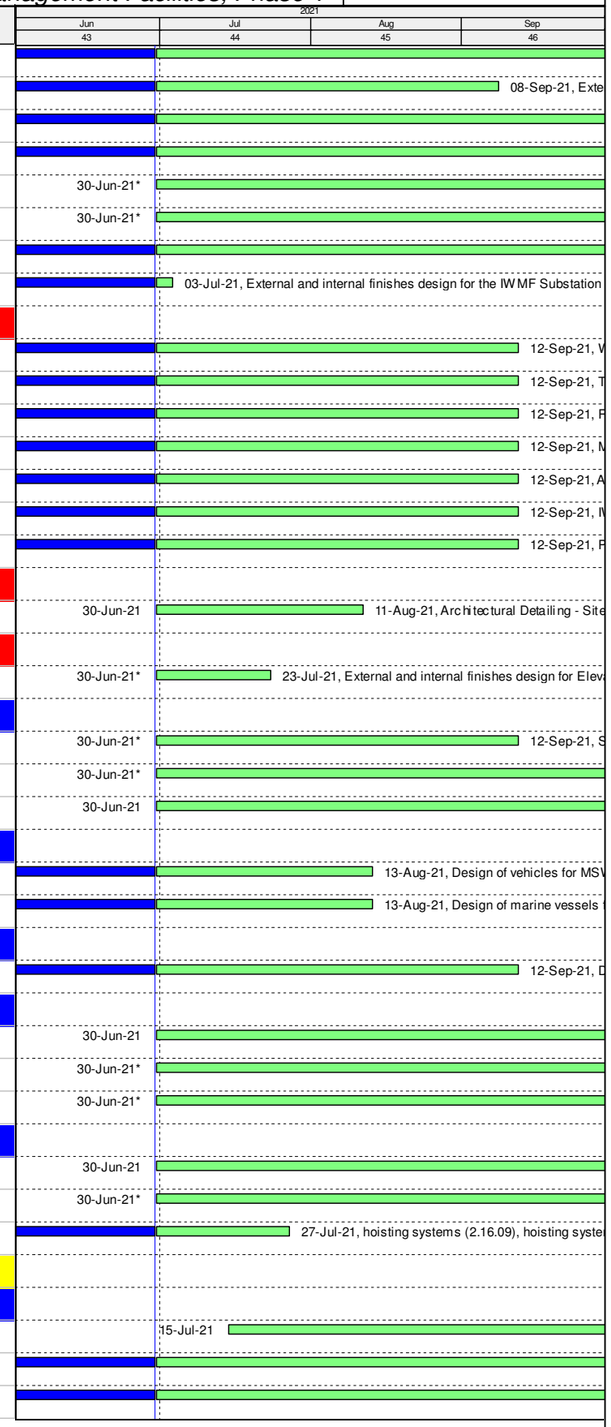
Remaining Work
Actual Work
Critical Remaining Work
Milestone
Actual Milestone
Critical Milestone

Activity ID	Activity Name	Original Duration	At Completion Duration	Duration % Complete	Activity % Complete	Remaining Duration	Primary Constraint	Current Start	Current Finish	Late Start	Late Finish	Total Float	M43 Remarks
EP_SP_66_12-WP6A-M43.05.01.08.7 Building services design (excluding fire services installation design) (2.8.06)		135	1066	11.11%		120		27-Nov-18 A	27-Oct-21	08-Dec-21	06-Apr-22	161	
05-2210	MVAC	135	1066	11.11%	5%	120	Start On or After	27-Nov-18 A	27-Oct-21	08-Dec-21	06-Apr-22	161	
EP_SP_66_12-WP6A-M43.05.01.1 AIP Chimney		135	135	0%		135		30-Jun-21	11-Nov-21	18-Aug-21	29-Jan-22	79	
EP_SP_66_12-WP6A-M43.05.01.1.1 Building services design (excluding fire services installation design)		135	135	0%		135		30-Jun-21	11-Nov-21	18-Aug-21	29-Jan-22	79	
05-5430(5a)	Electrical Services and Lighting	135	135	0%	0%	135		30-Jun-21	11-Nov-21	18-Aug-21	30-Dec-21	49	
05-5440(5a)	MVAC	135	135	0%	0%	135		30-Jun-21	11-Nov-21	25-Aug-21	06-Jan-22	56	
05-5450(5a)	Plumbing	105	105	0%	0%	105		30-Jun-21	12-Oct-21	17-Sep-21	30-Dec-21	79	
05-5460-1(5a)	Drainage	135	135	0%	0%	135		30-Jun-21	11-Nov-21	17-Sep-21	29-Jan-22	79	
05-5470(5a)	ELV	135	135	0%	0%	135		30-Jun-21	11-Nov-21	18-Aug-21	30-Dec-21	49	
05-5480-2(5a)	Lift	135	135	0%	0%	135		30-Jun-21	11-Nov-21	18-Aug-21	30-Dec-21	49	
05-5490(5a)	Building Management System (BMS)	135	135	0%	0%	135		30-Jun-21	11-Nov-21	18-Aug-21	30-Dec-21	49	
EP_SP_66_12-WP6A-M43.05.01.2 AIP Weighbridge		135	135	0%		135		30-Jun-21	11-Nov-21	28-Sep-21	12-Jul-22	243	
EP_SP_66_12-WP6A-M43.05.01.2.1 Building services design (excluding fire services installation design)		135	135	0%		135		30-Jun-21	11-Nov-21	28-Sep-21	12-Jul-22	243	
05-5520-1(5a)	Plumbing	105	105	0%	0%	105		30-Jun-21	12-Oct-21	28-Feb-22	12-Jun-22	243	
05-5530-1(5a)	Drainage	135	135	0%	0%	135		30-Jun-21	11-Nov-21	28-Feb-22	12-Jul-22	243	
05-5540-1(5a)	ELV	105	105	0%	0%	105		30-Jun-21	12-Oct-21	28-Feb-22	12-Jun-22	243	
05-5550-1(5a)	Lift	105	105	0%	0%	105		30-Jun-21	12-Oct-21	28-Sep-21	10-Jan-22	90	
EP_SP_66_12-WP6A-M43.05.01.09 AIP Air Quality Monitoring Stations (2.9)		120	120	0%		120		30-Jun-21	27-Oct-21	26-Nov-22	25-Mar-23	514	
05-2250	Design of the Air Quality Monitoring Stations (2.9.01)	120	120	0%	0%	120	Start On or After	30-Jun-21*	27-Oct-21	26-Nov-22	25-Mar-23	514	
EP_SP_66_12-WP6A-M43.05.01.10 AIP Roads and Utilities (2.10)		868	1081	84.45%		135		27-Nov-18 A	11-Nov-21	05-Jul-21	02-Feb-23	448	
EP_SP_66_12-WP6A-M43.05.01.10.4 Water supply system design on the Artificial Island (2.10.04)		713	739	81.07%		135		04-Nov-19 A	11-Nov-21	30-Jul-21	10-Apr-22	150	
05-2360	Water Tanks (2.10.04.05)	135	135	0%	0%	135	Start On or After	30-Jun-21*	11-Nov-21	27-Nov-21	10-Apr-22	150	
05-2370	External FS Systems (2.10.04.06)	135	709	22.22%	5%	105		04-Nov-19 A	12-Oct-21	27-Dec-21	10-Apr-22	180	
05-2370-2(M24)	Building Services system for seawater intake (2.10.04.09)	90	506	66.67%	5%	30		11-Mar-20 A	29-Jul-21	09-Sep-21	08-Oct-21	71	
05-2370-3(5a)	Chemical scrubber system for odour control (2.10.04.10)	90	218	37.78%	37.78%	56		19-Jan-21 A	24-Aug-21	30-Jul-21	23-Sep-21	30	
EP_SP_66_12-WP6A-M43.05.01.10.6 Design of telecommunication and other utilities (2.10.06)		868	1081	84.45%		135		27-Nov-18 A	11-Nov-21	05-Jul-21	02-Feb-23	448	
05-2380	Power Distribution System concept / schematics (2.10.06.01)	135	289	22.22%	5%	105	Start On or After	28-Dec-20 A	12-Oct-21	14-Oct-21	26-Jan-22	106	
05-2410	Site ELV Network System - Communications System concept / schematics (2.10.06.04)	135	583	22.22%	5%	105	Start On or After	09-Mar-20 A	12-Oct-21	14-Oct-21	26-Jan-22	106	
05-2420	Site ELV Network System - Security Systems concept / schematics (2.10.06.05)	135	583	22.22%	5%	105	Start On or After	09-Mar-20 A	12-Oct-21	14-Oct-21	26-Jan-22	106	
05-2430	Site ELV Network System - Navigation aids concept / schematics (2.10.06.06)	135	135	0%	0%	135	Start On or After	30-Jun-21*	11-Nov-21	30-Aug-21	11-Jan-22	61	
05-2440	Microwave transmission of FS direct link (2.10.06.07)	135	976	77.78%	77.78%	30		27-Nov-18 A	29-Jul-21	29-Oct-21	27-Nov-21	121	
05-2450	Fuel Handling System concept / schematics (2.10.06.08)	135	628	22.22%	5%	105	Start On or After	24-Jan-20 A	12-Oct-21	30-Sep-22	12-Jan-23	457	
05-3190	Computerised Maintenance Management System (CMMS)	105	796	57.14%	65%	45	Start On or After	10-Jun-19 A	13-Aug-21	05-Jul-21	18-Aug-21	5	
05-3840-1(M22)	Automatic Traffic Control System (ATCS) (2.10.06.12)	90	90	0%	0%	90		30-Jun-21	27-Sep-21	05-Nov-22	02-Feb-23	493	
EP_SP_66_12-WP6A-M43.05.01.10.7 Utility ducts/Pipebridges design (2.10.25)		105	366	42.86%		60		28-Aug-20 A	28-Aug-21	13-Jun-22	11-Aug-22	348	
05-2460	Design of Pipe / Utilities Trenches concept (2.10.06.09.01)	105	366	42.86%	5%	60		28-Aug-20 A	28-Aug-21	13-Jun-22	11-Aug-22	348	
05-2470	Sitewide Utilities Trenches Design (2.10.06.09.02)	105	366	42.86%	5%	60		28-Aug-20 A	28-Aug-21	13-Jun-22	11-Aug-22	348	
EP_SP_66_12-WP6A-M43.05.01.11 AIP Architectural, Finishes and Landscaping Works (2.11)		476	592	71.64%		135		30-Mar-20 A	11-Nov-21	13-Sep-21	18-Nov-22	372	
EP_SP_66_12-WP6A-M43.05.01.11.1 External and internal finishes design for Incineration Plant Buildings		445	592	69.66%		135		30-Mar-20 A	11-Nov-21	13-Sep-21	03-Sep-22	296	
05-2510	External and internal finishes design for Incineration Plant Building (2.11.01)	135	529	20.74%	5%	107	Start On or After	04-May-20 A	14-Oct-21	13-Sep-21	28-Dec-21	75	
05-2520	External and internal finishes design for ACC Equipment Yard	135	135	0%	0%	135		30-Jun-21	11-Nov-21	03-Jan-22	17-May-22	187	
05-2530	External and internal finishes design for Turbine Hall Building	135	529	20.74%	5%	107	Start On or After	04-May-20 A	14-Oct-21	16-Dec-21	01-Apr-22	169	



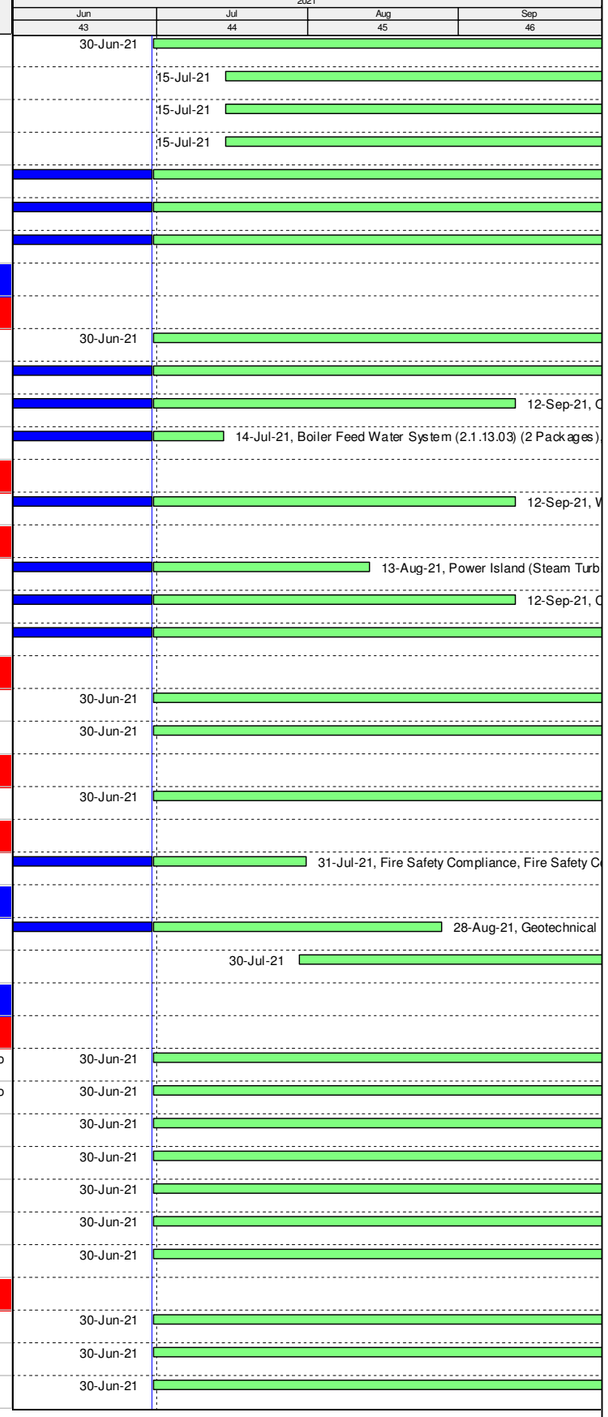
Remaining Work
Actual Work
Critical Remaining Work
Milestone
Actual Milestone
Critical Milestone

Activity ID	Activity Name	Original Duration	At Completion Duration	Duration % Complete	Activity % Complete	Remaining Duration	Primary Constraint	Current Start	Current Finish	Late Start	Late Finish	Total Float	M43 Remarks
05-2540	External and internal finishes design for CCCW Building	135	529	20.74%	5%	107	Start On or After	04-May-20 A	14-Oct-21	02-Nov-21	16-Feb-22	125	
05-2550	External and internal finishes design for Chimney	135	135	47.41%	5%	71		27-Apr-21 A	08-Sep-21	25-Jun-22	03-Sep-22	360	
05-2560	External and internal finishes design for Reception Pavilion	135	564	20.74%	5%	107	Start On or After	30-Mar-20 A	14-Oct-21	05-Jan-22	21-Apr-22	189	
05-2570	External and internal finishes design for MT Plant Building (2.11.02)	136	535	22.06%	5%	106	Start On or After	27-Apr-20 A	13-Oct-21	08-Jan-22	23-Apr-22	192	
05-2580	External and internal finishes design for the Wastewater Treatment Plant (2.11.03)	135	135	0%	0%	135	Start On or After	30-Jun-21*	11-Nov-21	30-Sep-21	11-Feb-22	92	
05-2590	External and internal finishes design for the Water Treatment Plant Building (2.11.04)	135	135	0%	0%	135	Start On or After	30-Jun-21*	11-Nov-21	13-Oct-21	24-Feb-22	105	
05-2600	External and internal finishes design for the Administration Building (2.11.05)	135	534	22.22%	5%	105	Start On or After	27-Apr-20 A	12-Oct-21	19-Dec-21	02-Apr-22	172	
05-2610	External and internal finishes design for the IWMF Substation (2.11.06)	135	461	97.04%	5%	4	Start On or After	30-Mar-20 A	03-Jul-21	30-Jan-22	02-Feb-22	214	
EP_SP_66_12-WP6A-M43.05.01.11.7	Landscape masterplan (2.11.07)	180	493	58.33%		75		08-May-20 A	12-Sep-21	05-Sep-22	18-Nov-22	432	
05-2620	Water Feature (2.11.07.01)	105	451	28.57%	5%	75	Start On or After	19-Jun-20 A	12-Sep-21	05-Sep-22	18-Nov-22	432	
05-2920_1(M34)	Turbine Hall Building (2.11.07.04)	105	493	28.57%	5%	75		08-May-20 A	12-Sep-21	05-Sep-22	18-Nov-22	432	
05-2920_2(M34)	Reception Pavilion (2.11.07.06)	105	493	28.57%	5%	75		08-May-20 A	12-Sep-21	05-Sep-22	18-Nov-22	432	
05-2920_3(M34)	MT Plant Building and Water Treatment Plant Building (2.11.07.07)	105	493	28.57%	5%	75		08-May-20 A	12-Sep-21	05-Sep-22	18-Nov-22	432	
05-2920_4(M34)	Administration Building (2.11.07.08)	105	493	28.57%	5%	75		08-May-20 A	12-Sep-21	05-Sep-22	18-Nov-22	432	
05-2920_5(M34)	IWMF Substation (2.11.07.09)	105	493	28.57%	5%	75		08-May-20 A	12-Sep-21	05-Sep-22	18-Nov-22	432	
05-2920_6(M34)	Process Building (2.11.07.10)	105	493	28.57%	5%	75		08-May-20 A	12-Sep-21	05-Sep-22	18-Nov-22	432	
EP_SP_66_12-WP6A-M43.05.01.11.8	Architectural Detailing - Site Wide (2.11.29)	43	43	0%		43		30-Jun-21	11-Aug-21	02-Jan-22	13-Feb-22	186	
05-2640	Architectural Detailing - Site Wide Concept	43	43	0%	5%	43		30-Jun-21	11-Aug-21	02-Jan-22	13-Feb-22	186	
EP_SP_66_12-WP6A-M43.05.01.11.9	External and internal finishes design for Elavated Driveway	24	24	0%		24		30-Jun-21	23-Jul-21	21-Aug-22	13-Sep-22	417	
05-5410	External and internal finishes design for Elevated Driveway	24	24	0%	0%	24	Start On or After	30-Jun-21*	23-Jul-21	21-Aug-22	13-Sep-22	417	
EP_SP_66_12-WP6A-M43.05.01.12	AIP Testing and Commissioning (2.12)	105	105	0%		105		30-Jun-21	12-Oct-21	19-May-22	01-Sep-23	689	
05-2660	Site Acceptance Testing plan (2.12.02)	75	75	0%	0%	75	Start On or After	30-Jun-21*	12-Sep-21	19-Feb-23	04-May-23	599	
05-2670	System commissioning plan (2.12.03)	105	105	0%	0%	105	Start On or After	30-Jun-21*	12-Oct-21	20-May-23	01-Sep-23	689	
05-2680	Plant commissioning plan (2.12.04)	105	105	0%	0%	105		30-Jun-21	12-Oct-21	19-May-22	31-Aug-22	323	
EP_SP_66_12-WP6A-M43.05.01.13	AIP Transportation Facilities for the Operation (2.13)	136	411	66.91%		45		29-Jun-20 A	13-Aug-21	23-Dec-22	15-Apr-23	610	
05-2690	Design of vehicles for MSW and Ash and Residues delivery (2.13.01)	105	411	57.14%	5%	45		29-Jun-20 A	13-Aug-21	23-Dec-22	05-Feb-23	541	
05-2700	Design of marine vessels for the use of the Employer and visitors (2.13.02)	105	340	57.14%	5%	45		08-Sep-20 A	13-Aug-21	02-Mar-23	15-Apr-23	610	
EP_SP_66_12-WP6A-M43.05.01.14	AIP Miscellaneous Works (2.14)	105	434	28.57%		75		06-Jul-20 A	12-Sep-21	23-Aug-22	05-Nov-22	419	
05-2720	Design of visitors and environmental education facilities (2.14.02)	105	434	28.57%	5%	75		06-Jul-20 A	12-Sep-21	23-Aug-22	05-Nov-22	419	
EP_SP_66_12-WP6A-M43.05.01.15	AIP Miscellaneous Detailing (2.15)	135	135	0%		135		30-Jun-21	11-Nov-21	16-Sep-21	05-Sep-22	298	
05-2730	Covered walkway at passenger berth (2.15.02)	105	105	0%	0%	105		30-Jun-21	12-Oct-21	16-Sep-21	29-Dec-21	78	
05-2740	Gatehouses (2.15.03)	135	135	0%	0%	135	Start On or After	30-Jun-21*	11-Nov-21	24-Apr-22	05-Sep-22	298	
05-2750	Weighbridge office (2.15.04)	105	105	0%	0%	105	Start On or After	30-Jun-21*	12-Oct-21	29-Apr-22	11-Aug-22	303	
EP_SP_66_12-WP6A-M43.05.01.16	AIP Auxiliary Plant Systems (2.16)	377	422	64.19%		135		16-Sep-20 A	11-Nov-21	06-Jan-22	25-Aug-22	287	
05-2770	Vehicle Fuel Filling Station (2.16.02)	135	135	0%	0%	135		30-Jun-21	11-Nov-21	13-Apr-22	25-Aug-22	287	
05-2780	Stores systems (2.16.03)	135	135	0%	0%	135	Start On or After	30-Jun-21*	11-Nov-21	06-Jan-22	20-May-22	190	
05-2780-2(5a)	hoisting systems (2.16.09)	135	315	79.26%	5%	28		16-Sep-20 A	27-Jul-21	13-Jan-22	09-Feb-22	197	
EP_SP_66_12-WP6A-M43.05.02	DDA Design Package Submissions	1531	1667	55.72%		678		15-Oct-18 A	08-May-23	03-Jul-21	13-Dec-24	585	
EP_SP_66_12-WP6A-M43.05.02.3	DDA General Building Plan	120	288	0%		120		13-Jan-21 A	27-Oct-21	07-Mar-22	19-Jun-22	235	
05-6000-1(M42)	Process Building & Wastewater Treatment Plant	105	105	0%	0%	105		15-Jul-21	27-Oct-21	07-Mar-22	19-Jun-22	235	New Activity
05-6010-1(M42)	Turbine Hall	105	167	0%	5%	105		29-Apr-21 A	12-Oct-21	07-Mar-22	19-Jun-22	250	New Activity
05-6020-2(M42)	CCCW	105	168	0%	5%	105		28-Apr-21 A	12-Oct-21	07-Mar-22	19-Jun-22	250	New Activity



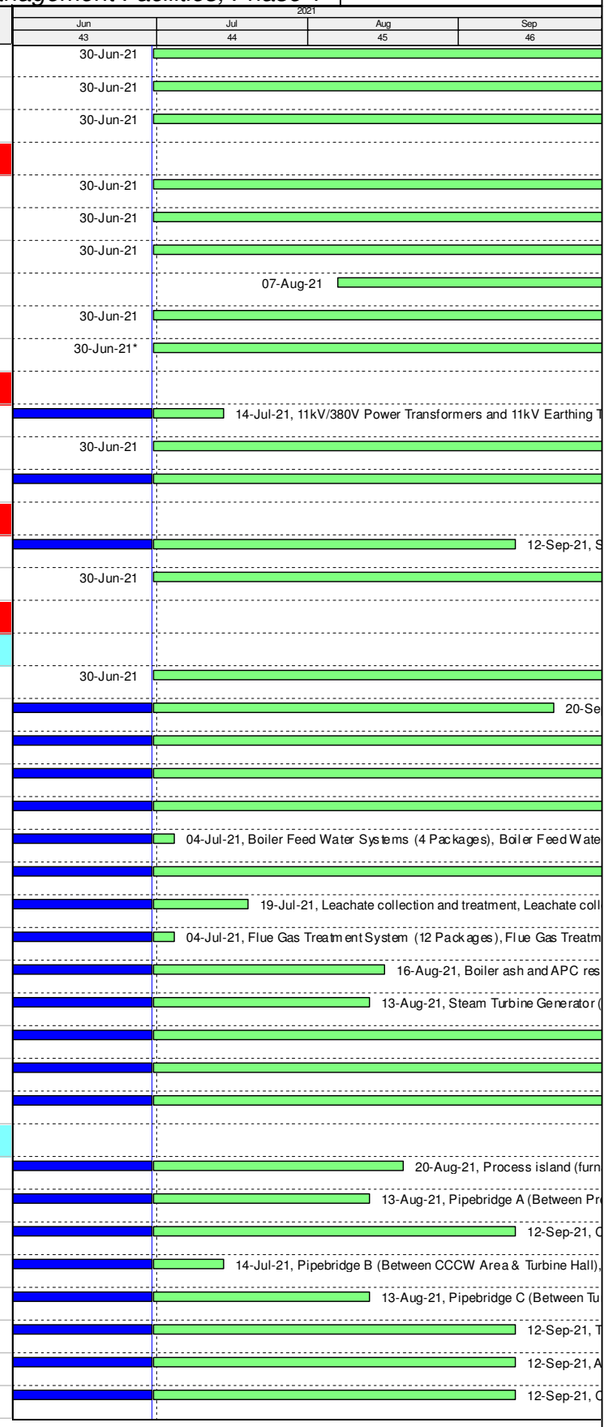
Remaining Work
Actual Work
Critical Remaining Work
Milestone
Actual Milestone
Critical Milestone

Activity ID	Activity Name	Original Duration	At Completion Duration	Duration % Complete	Activity % Complete	Remaining Duration	Primary Constraint	Current Start	Current Finish	Late Start	Late Finish	Total Float	M43 Remarks
05-6030-2(M42)	Chimney	105	105	0%	0%	105		30-Jun-21	12-Oct-21	07-Mar-22	19-Jun-22	250	New Activity
05-6040-2(M42)	M T & Water Treatment Plant	105	105	0%	0%	105		15-Jul-21	27-Oct-21	07-Mar-22	19-Jun-22	235	New Activity
05-6050-2(M42)	Reception Pavilion	105	105	0%	0%	105		15-Jul-21	27-Oct-21	07-Mar-22	19-Jun-22	235	New Activity
05-6060-2(M42)	Administration building	105	105	0%	0%	105		15-Jul-21	27-Oct-21	07-Mar-22	19-Jun-22	235	New Activity
05-6070-1(M42)	Elevated Driveway	105	156	0%	5%	105		10-May-21 A	12-Oct-21	07-Mar-22	19-Jun-22	250	New Activity
05-6080-1(M42)	IWMF Substation	105	273	0%	5%	105		13-Jan-21 A	12-Oct-21	07-Mar-22	19-Jun-22	250	New Activity
05-6090(M42)	Side Wide Arch Details	105	168	0%	5%	105		28-Apr-21 A	12-Oct-21	07-Mar-22	19-Jun-22	250	New Activity
EP_SP_66_12-WP6A-M43.05.02.01 DDA Process and Layout Design (2.1)		408	947	66.91%		135		10-Apr-19 A	11-Nov-21	07-Jul-21	19-Jun-22	220	
EP_SP_66_12-WP6A-M43.05.02.01.1 MSW treatment process design for incineration (2.1.13)		347	466	61.1%		135		03-Aug-20 A	11-Nov-21	23-Jul-21	26-Apr-22	166	
05-5120	Leachate Collection and Treatment (2.1.13.05) (2 Packages)	105	105	0%	0%	105		30-Jun-21	12-Oct-21	12-Jan-22	26-Apr-22	196	
05-5130	Waste Water Treatment System (2.1.13.06) (2 Packages)	105	296	0%	5%	135		20-Jan-21 A	11-Nov-21	23-Jul-21	04-Dec-21	23	
05-5140	Overall Plan Water Scheme (2.1.13.07)	105	236	28.57%	5%	75		20-Jan-21 A	12-Sep-21	23-Jul-21	05-Oct-21	23	
05-5150	Boiler Feed Water System (2.1.13.03) (2 Packages)	105	346	85.71%	45%	15	Start On or After	03-Aug-20 A	14-Jul-21	08-Dec-21	22-Dec-21	161	
EP_SP_66_12-WP6A-M43.05.02.01.2 MSW treatment process design for mechanical treatment (2.1.14)		105	268	28.57%		75		19-Dec-20 A	12-Sep-21	07-Jul-21	19-Sep-21	7	
05-3510	Water Treatment Plant and Boiler Water Treatment (Demin Unit) Plant	105	268	28.57%	5%	75		19-Dec-20 A	12-Sep-21	07-Jul-21	19-Sep-21	7	
EP_SP_66_12-WP6A-M43.05.02.01.3 Waste heat recovery and Power generation system (2.1.15)		408	541	74.26%		105		20-Apr-20 A	12-Oct-21	25-Aug-21	19-Jun-22	250	
05-5220	Power Island (Steam Turbine Generator, Pressure Reducing and Desuperheating Station, Air Cooled Condenser)	105	446	57.14%	5%	45		25-May-20 A	13-Aug-21	06-May-22	19-Jun-22	310	
05-5230	Closed Circuit Cooling Water System	105	511	28.57%	5%	75		20-Apr-20 A	12-Sep-21	25-Aug-21	07-Nov-21	56	
05-5240	Compressed Air Plants	105	180	0%	5%	105		16-Apr-21 A	12-Oct-21	24-Oct-21	05-Feb-22	116	
EP_SP_66_12-WP6A-M43.05.02.01.5 Logistic arrangement design for MSW and Ash and Residues (2.1.17)		105	105	0%		105		30-Jun-21	12-Oct-21	16-Oct-21	27-Feb-22	138	
05-4390	Weighbridge Systems	105	105	0%	0%	105		30-Jun-21	12-Oct-21	15-Nov-21	27-Feb-22	138	
05-4410	Mechanical Shredder	105	105	0%	0%	105		30-Jun-21	12-Oct-21	16-Oct-21	28-Jan-22	108	
EP_SP_66_12-WP6A-M43.05.02.01.6 Site Master Layout Plan and Plant Layout (2.1.18)		105	105	0%		105		30-Jun-21	12-Oct-21	07-Mar-22	19-Jun-22	250	
05-3520	Site Master Layout Plan and Plant Layout	105	105	0%	0%	105		30-Jun-21	12-Oct-21	07-Mar-22	19-Jun-22	250	
EP_SP_66_12-WP6A-M43.05.02.01.7 Statutory Fire Compliance (2.1.26)		60	844	46.67%		32		10-Apr-19 A	31-Jul-21	06-Nov-21	07-Dec-21	129	
05-4420	Fire Safety Compliance	60	844	46.67%	5%	32		10-Apr-19 A	31-Jul-21	06-Nov-21	07-Dec-21	129	
EP_SP_66_12-WP6A-M43.05.02.02 DDA Ground Treatment, Reclamation, Seawall, Breakwater, Berth (2.2)		346	1154	52.31%		165		15-Oct-18 A	11-Dec-21	19-Aug-21	29-Mar-22	108	
05-3430-2(M37)	Geotechnical Interpretative Report (2.2.02.02)	105	1049	42.86%	65%	60		15-Oct-18 A	28-Aug-21	19-Aug-21	17-Oct-21	50	
05-3490	Onshore vessel power supply system (2.2.24)	135	135	0%	0%	135		30-Jul-21	11-Dec-21	15-Nov-21	29-Mar-22	108	
EP_SP_66_12-WP6A-M43.05.02.03 DDA Incineration Plant Buildings (2.3)		1093	1108	78.04%		240		13-Feb-19 A	24-Feb-22	03-Jul-21	06-Apr-23	406	
EP_SP_66_12-WP6A-M43.05.02.03.1 General Layout Drawings and Fire Saftey Strategy (2.3.25)		105	105	0%		105		30-Jun-21	12-Oct-21	26-Feb-22	19-Jun-22	250	
05-3290	Process Building	105	105	0%	0%	105		30-Jun-21	12-Oct-21	26-Feb-22	10-Jun-22	241	Revised durtation 135 to 105
05-3300	ACC Equipment Yard	105	105	0%	0%	105		30-Jun-21	12-Oct-21	07-Mar-22	19-Jun-22	250	Revised durtation 135 to 105
05-3310	Turbine Hall Building	105	105	0%	0%	105		30-Jun-21	12-Oct-21	07-Mar-22	19-Jun-22	250	
05-3320	CCCW Building	105	105	0%	0%	105		30-Jun-21	12-Oct-21	07-Mar-22	19-Jun-22	250	
05-3330	Chimney	105	105	0%	0%	105		30-Jun-21	12-Oct-21	07-Mar-22	19-Jun-22	250	
05-3340	Elevated Drive Way and Associated Structures	105	105	0%	0%	105		30-Jun-21	12-Oct-21	07-Mar-22	19-Jun-22	250	
05-3350	Reception Pavilion	105	105	0%	0%	105		30-Jun-21	12-Oct-21	07-Mar-22	19-Jun-22	250	
EP_SP_66_12-WP6A-M43.05.02.03.2 Foundation design (2.3.13)		137	137	0%		137		30-Jun-21	13-Nov-21	23-Oct-21	21-Jan-23	434	
05-3220	Process Building Waste Bunker, Tipping Hall, Basin Area and Workshop	137	137	0%	0%	137		30-Jun-21	13-Nov-21	23-Oct-21	08-Mar-22	115	
05-3230	ACC Equipment Yard	137	137	0%	0%	137		30-Jun-21	13-Nov-21	05-Jan-22	21-May-22	189	
05-3240	Turbin Hall Building	135	135	0%	0%	135		30-Jun-21	11-Nov-21	08-Jan-22	22-May-22	192	



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

Activity ID	Activity Name	Original Duration	At Completion Duration	Duration % Complete	Activity % Complete	Remaining Duration	Primary Constraint	Current Start	Current Finish	Late Start	Late Finish	Total Float	M43 Remarks
05-3250	Compressor and CCCW Building	137	137	0%	0%	137		30-Jun-21	13-Nov-21	12-Jan-22	28-May-22	196	
05-3270	Elevated Drive Way and Associated Structures	137	137	0%	0%	137		30-Jun-21	13-Nov-21	23-Feb-22	09-Jul-22	238	
05-3280	Reception Pavilion	137	137	0%	0%	137		30-Jun-21	13-Nov-21	07-Sep-22	21-Jan-23	434	
EP_SP_66_12-WP6A-M43.05.02.03.3 Structural design (2.3.14)		189	189	0%		189		30-Jun-21	04-Jan-22	17-Jul-21	06-Apr-23	457	
05-5330	Process Building	189	189	0%	0%	189		30-Jun-21	04-Jan-22	24-Jan-22	31-Jul-22	208	
05-5350	Turbin Hall Building (2.3.14.03)	189	189	0%	0%	189		30-Jun-21	04-Jan-22	21-Apr-22	26-Oct-22	295	
05-5360	Compressor and CCCW Building	189	189	0%	0%	189		30-Jun-21	04-Jan-22	17-Jul-21	21-Jan-22	17	
05-5370	Chimney	135	135	0%	0%	135		07-Aug-21	19-Dec-21	31-Dec-21	14-May-22	146	
05-5380	Elevated Drive Way and associated structures	189	189	0%	0%	189		30-Jun-21	04-Jan-22	02-Jan-22	09-Jul-22	186	
05-5390	Reception Pavilion Structural Design	159	159	0%	0%	159	Start On or After	30-Jun-21*	05-Dec-21	30-Oct-22	06-Apr-23	487	
EP_SP_66_12-WP6A-M43.05.02.03.4 Electrical and instrumentation works design (2.3.15)		332	324	59.34%		135		23-Dec-20 A	11-Nov-21	17-Sep-21	29-Jul-22	260	
05-3360	11kV/380V Power Transformers and 11kV Earthing Transformer	105	65	85.71%	5%	15		11-May-21 A	14-Jul-21	15-Jul-22	29-Jul-22	380	
05-3370	E&IC Package 1 (Process Island)	120	120	0%	0%	120		30-Jun-21	27-Oct-21	17-Sep-21	14-Jan-22	79	
05-3380	E&IC Package 2 (Power Island)	165	324	18.18%	5%	135	Finish On	23-Dec-20 A	11-Nov-21*	05-Feb-22	19-Jun-22	220	
EP_SP_66_12-WP6A-M43.05.02.03.8 Operation Management System (2.3.15.04)		408	492	74.26%		105		08-Jun-20 A	12-Oct-21	19-Aug-21	01-Dec-21	50	
05-3390	Supervisory Control/Data Acquisition/Distributed Control (SCADA/DCS) System (12 Packages)	105	462	28.57%	5%	75		08-Jun-20 A	12-Sep-21	18-Sep-21	01-Dec-21	80	
05-3420	Automatic License Plate and Container Recoginition System (ALPCRS)	105	105	0%	0%	105		30-Jun-21	12-Oct-21	19-Aug-21	01-Dec-21	50	
EP_SP_66_12-WP6A-M43.05.02.03.5 Mechanical works design (2.3.16)		1093	1108	78.04%		240		13-Feb-19 A	24-Feb-22	03-Jul-21	26-Oct-22	244	
EP_SP_66_12-WP6A-M43.05.02.03.5.1 Plant and Equipment		1093	1108	78.04%		240		13-Feb-19 A	24-Feb-22	03-Jul-21	19-Jun-22	115	
05-3580	Weighbridge Systems	240	240	0%	0%	240		30-Jun-21	24-Feb-22	03-Jul-21	27-Feb-22	3	
05-3590	Waste Crane and Grapple System	105	356	20.95%	5%	83		30-Sep-20 A	20-Sep-21	07-Nov-21	28-Jan-22	130	
05-3600	Mechanical Shredder	105	452	0%	5%	188		09-Oct-20 A	03-Jan-22	25-Jul-21	28-Jan-22	25	
05-3610	Incineration System (9 Packages)	105	1096	0%	5%	228		13-Feb-19 A	12-Feb-22	04-Nov-21	19-Jun-22	127	
05-3620	Heat Recovery Boiler (8 Packages)	105	1003	0%	5%	228		17-May-19 A	12-Feb-22	11-Jul-21	23-Feb-22	11	
05-3630	Boiler Feed Water Systems (4 Packages)	105	720	95.24%	5%	5		16-Jul-19 A	04-Jul-21	14-Nov-21	18-Nov-21	137	
05-3640	Ash cranes	30	298	0%	65%	157		09-Feb-21 A	03-Dec-21	25-Aug-21	28-Jan-22	56	
05-3650	Leachate collection and treatment	105	293	80.95%	45%	20	Start On or After	30-Sep-20 A	19-Jul-21	07-Apr-22	26-Apr-22	281	
05-3790	Flue Gas Treatment System (12 Packages)	105	629	95.24%	5%	5		15-Oct-19 A	04-Jul-21	15-Jun-22	19-Jun-22	350	
05-3800	Boiler ash and APC residue handling and solidification	105	434	54.29%	5%	48	Start On or After	09-Jun-20 A	16-Aug-21	10-Mar-22	26-Apr-22	253	
05-3810	Steam Turbine Generator (STG) and Pressure Reducing and Desuperheating Station (PRDS)	105	380	57.14%	5%	45		30-Jul-20 A	13-Aug-21	06-May-22	19-Jun-22	310	
05-3820	Air cooled condenser	105	435	4.76%	5%	100		30-Jul-20 A	07-Oct-21	14-Oct-21	21-Jan-22	106	
05-3825(3)	Closed Circuit Cooling Water System	105	478	0%	5%	143		30-Jul-20 A	19-Nov-21	15-Dec-21	06-May-22	168	
05-3830	Compressed Air Plants	105	1078	0%	5%	210		13-Feb-19 A	25-Jan-22	09-Oct-21	06-May-22	101	
EP_SP_66_12-WP6A-M43.05.02.03.5.2 Process Pipeworks (Incl. Ductworks) and Valves		562	851	86.65%		75		16-May-19 A	12-Sep-21	22-Jul-21	19-Jun-22	280	
05-3840	Process island (furnace-boiler-FGC)	105	828	50.48%	5%	52		16-May-19 A	20-Aug-21	29-Apr-22	19-Jun-22	303	
05-4350	Pipebridge A (Between Process island & Turbine Hall)	105	351	57.14%	5%	45		28-Aug-20 A	13-Aug-21	22-Jul-21	04-Sep-21	22	
05-4360	Compressed Air Plant area	105	381	28.57%	5%	75		28-Aug-20 A	12-Sep-21	04-Oct-21	17-Dec-21	96	
05-4370	Pipebridge B (Between CCCW Area & Turbine Hall)	105	321	85.71%	5%	15		28-Aug-20 A	14-Jul-21	29-Jul-21	12-Aug-21	29	
05-4380	Pipebridge C (Between Turbine Hall & ACC Equipment Yard)	105	351	57.14%	5%	45		28-Aug-20 A	13-Aug-21	22-Jul-21	04-Sep-21	22	
05-4950	Turbine Hall	105	381	28.57%	5%	75		28-Aug-20 A	12-Sep-21	06-Jan-22	21-Mar-22	190	
05-4960	ACC Equipment Yard	105	381	28.57%	5%	75		28-Aug-20 A	12-Sep-21	04-Oct-21	17-Dec-21	96	
05-4970	CCCW Area	105	381	28.57%	5%	75		28-Aug-20 A	12-Sep-21	04-Oct-21	17-Dec-21	96	



Remaining Work
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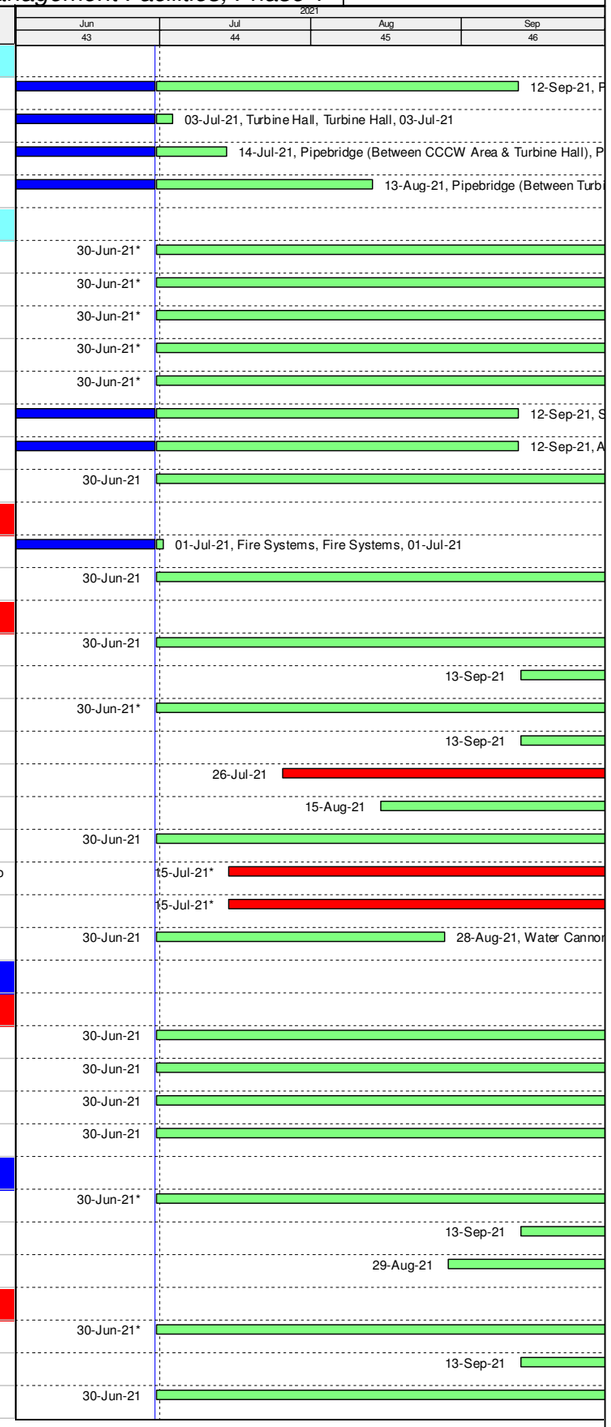
Activity ID	Activity Name	Original Duration	At Completion Duration	Duration % Complete	Activity % Complete	Remaining Duration	Primary Constraint	Current Start	Current Finish	Late Start	Late Finish	Total Float	M43 Remarks
EP_SP_66_12-WP6A-M43.05.02.03.5.3	**Process steel structure support (For eqipment, piping & duct, cable tray e**	378	410	80.16%		75		30-Jul-20 A	12-Sep-21	22-Jul-21	26-Oct-22	409	
05-3530-1(M42)	Process island (furnace-boiler-FGC) (Prefab 2)	75	167	0%	45%	75		30-Mar-21 A	12-Sep-21	08-Aug-21	21-Oct-21	39	Extracted Activity
05-3550	Turbine Hall	105	339	96.19%	5%	4		30-Jul-20 A	03-Jul-21	23-Oct-22	26-Oct-22	480	
05-3560	Pipebridge (Between CCCW Area & Turbine Hall)	105	321	85.71%	5%	15		28-Aug-20 A	14-Jul-21	29-Jul-21	12-Aug-21	29	
05-3570	Pipebridge (Between Turbine Hall & ACC Equipment Yard)	105	351	57.14%	5%	45		28-Aug-20 A	13-Aug-21	22-Jul-21	04-Sep-21	22	
EP_SP_66_12-WP6A-M43.05.02.03.5.4	**Equipment and piping insulation**	166	282	36.75%		105		04-Jan-21 A	12-Oct-21	04-Sep-21	17-Dec-21	66	
05-4500	Incineration System	105	105	0%	0%	105	Start On or After	30-Jun-21*	12-Oct-21	04-Sep-21	17-Dec-21	66	
05-4510	Heat Recovery Boiler	105	105	0%	0%	105	Start On or After	30-Jun-21*	12-Oct-21	04-Sep-21	17-Dec-21	66	
05-4520	Boiler Feed Water Systems	105	105	0%	0%	105	Start On or After	30-Jun-21*	12-Oct-21	04-Sep-21	17-Dec-21	66	
05-4530	Flue Gas Treatment System	105	105	0%	0%	105	Start On or After	30-Jun-21*	12-Oct-21	04-Sep-21	17-Dec-21	66	
05-4540	Boiler ash and APC residue handling and solidification	105	105	0%	0%	105	Start On or After	30-Jun-21*	12-Oct-21	04-Sep-21	17-Dec-21	66	
05-4550	Steam Turbine Generator (STG) and Pressure Reducing and Desuperheating Station (PRDS)	105	252	28.57%	45%	75		04-Jan-21 A	12-Sep-21	04-Oct-21	17-Dec-21	96	
05-4560	Air cooled condenser	105	252	28.57%	45%	75		04-Jan-21 A	12-Sep-21	04-Oct-21	17-Dec-21	96	
05-4570	Closed Circuit Cooling Water System	105	105	0%	0%	105		30-Jun-21	12-Oct-21	04-Sep-21	17-Dec-21	66	
EP_SP_66_12-WP6A-M43.05.02.03.6	**Fire services installation design (2.3.17)**	227	917	53.74%		105		10-Apr-19 A	12-Oct-21	25-Aug-21	07-Dec-21	56	
05-3660	Fire Systems	90	814	97.78%	5%	2		10-Apr-19 A	01-Jul-21	06-Dec-21	07-Dec-21	159	
05-3680	FS schematics	105	105	0%	0%	105		30-Jun-21	12-Oct-21	25-Aug-21	07-Dec-21	56	
EP_SP_66_12-WP6A-M43.05.02.03.7	**Building services design (excluding fire services installation design) (2.3.18)**	210	210	0%		210		30-Jun-21	25-Jan-22	15-Jul-21	05-Feb-22	11	
05-3690	Electrical Services and Lighting (7 Packages)	135	135	0%	0%	135		30-Jun-21	11-Nov-21	26-Jul-21	07-Dec-21	26	
05-3710	Odour Control	135	135	0%	0%	135		13-Sep-21	25-Jan-22	24-Sep-21	05-Feb-22	11	
05-3720	Plumbing (7 Packages)	135	135	0%	0%	135	Start On or After	30-Jun-21*	11-Nov-21	25-Aug-21	06-Jan-22	56	
05-3730	Drainage (7 Packages)	105	105	0%	0%	105		13-Sep-21	26-Dec-21	24-Sep-21	06-Jan-22	11	
05-3740	ELV (7 Packages)	135	135	0%	0%	135		26-Jul-21	07-Dec-21	26-Jul-21	07-Dec-21	0	
05-3750	Lifts and Escalators	135	135	0%	0%	135		15-Aug-21	27-Dec-21	29-Aug-21	10-Jan-22	14	
05-3770	Building Management System (BMS)	135	135	0%	0%	135		30-Jun-21	11-Nov-21	20-Sep-21	01-Feb-22	82	
05-3780	Vehicle & Container Wash System	105	105	0%	0%	105	Start On	15-Jul-21*	27-Oct-21	15-Jul-21	27-Oct-21	0	Revised duration 135 to 105
05-3780-1(5a)	Process CCTV System	135	135	0%	0%	135	Start On	15-Jul-21*	26-Nov-21	15-Jul-21	26-Nov-21	0	
05-3780-2(M20)	Water Cannon System	60	60	0%	0%	60		30-Jun-21	28-Aug-21	27-Jul-21	24-Sep-21	27	
EP_SP_66_12-WP6A-M43.05.02.9	**DDA Air Cool Condensers Equipment (2.3.06)**	135	135	0%		135		30-Jun-21	11-Nov-21	26-Jul-21	03-Oct-22	326	
EP_SP_66_12-WP6A-M43.05.02.9.7	**Building services design (excluding fire services installation design) (2.3.06)**	135	135	0%		135		30-Jun-21	11-Nov-21	26-Jul-21	03-Oct-22	326	
05-5510	Electrical Services and Lighting	135	135	0%	0%	135		30-Jun-21	11-Nov-21	26-Jul-21	07-Dec-21	26	
05-5520	Plumbing	135	135	0%	0%	135		30-Jun-21	11-Nov-21	25-Aug-21	06-Jan-22	56	
05-5530	ELV	135	135	0%	0%	135		30-Jun-21	11-Nov-21	02-Sep-21	14-Jan-22	64	
05-5540	Building Management System (BMS)	135	135	0%	0%	135		30-Jun-21	11-Nov-21	22-May-22	03-Oct-22	326	
EP_SP_66_12-WP6A-M43.05.02.04	**DDA Mechanical Treatment Plant Building (2.4)**	210	210	0%		210		30-Jun-21	25-Jan-22	26-Jul-21	19-Jun-22	145	
05-5160	Architectural Design (2.4.25)	105	105	0%	0%	105	Start On or After	30-Jun-21*	12-Oct-21	26-Aug-21	08-Dec-21	57	
05-5170	Foundation design (2.4.13)	135	135	0%	0%	135		13-Sep-21	25-Jan-22	05-Feb-22	19-Jun-22	145	
05-5210	Fire services installation design (2.4.17)	60	60	0%	0%	60		29-Aug-21	27-Oct-21	09-Oct-21	07-Dec-21	41	
EP_SP_66_12-WP6A-M43.05.02.04.7	**Building services design (excluding fire services installation design) (2.4.18)**	210	210	0%		210		30-Jun-21	25-Jan-22	26-Jul-21	05-Feb-22	11	
05-3850	LV and Emergency Power Distribution Design	135	135	0%	0%	135	Start On or After	30-Jun-21*	11-Nov-21	26-Jul-21	07-Dec-21	26	
05-3870	Odour Control	135	135	0%	0%	135		13-Sep-21	25-Jan-22	24-Sep-21	05-Feb-22	11	
05-3880	Plumbing	135	135	0%	0%	135		30-Jun-21	11-Nov-21	25-Aug-21	06-Jan-22	56	



Remaining Work
Actual Work
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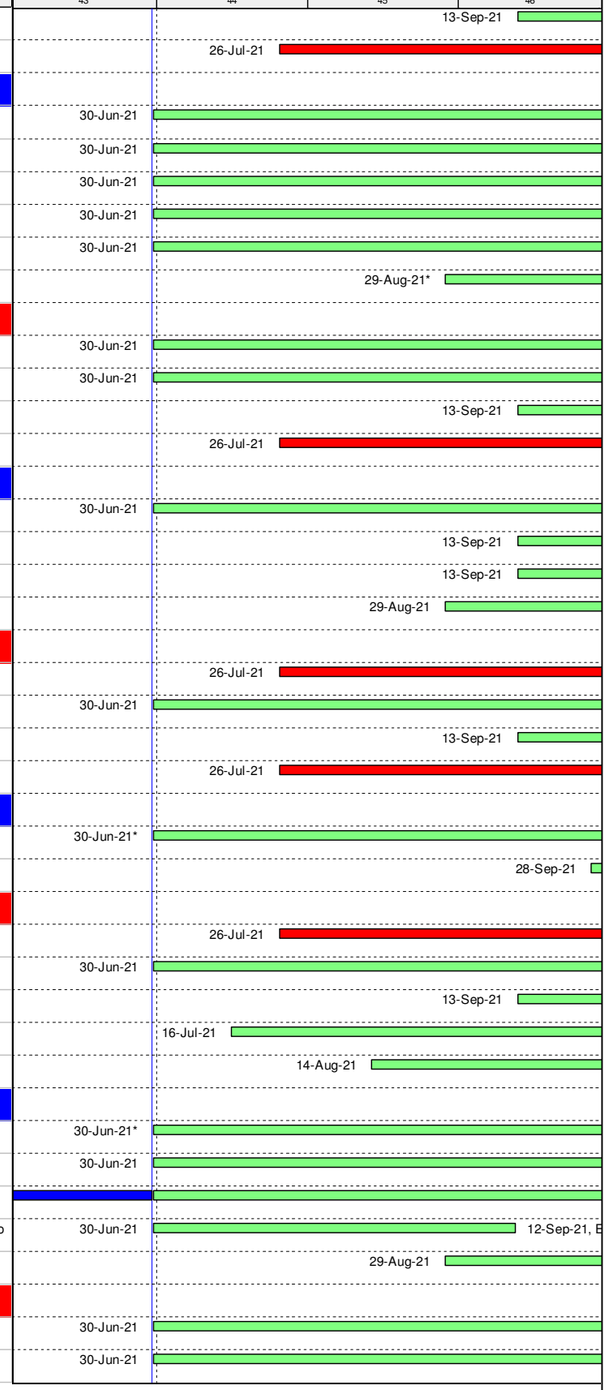
Activity ID	Activity Name	Original Duration	At Completion Duration	Duration % Complete	Activity % Complete	Remaining Duration	Primary Constraint	Current Start	Current Finish	Late Start	Late Finish	Total Float	M43 Remarks
05-3890	Drainage	105	105	0%	0%	105		13-Sep-21	26-Dec-21	24-Sep-21	06-Jan-22	11	
05-3900	Lighting and small power	135	135	0%	0%	135		26-Jul-21	07-Dec-21	26-Jul-21	07-Dec-21	0	
EP_SP_66_12-WP6A-M43.05.02.05 DDA Wastewater Treatment Plant (2.5)		254	254	0%		254		30-Jun-21	10-Mar-22	04-Jul-21	09-Aug-22	152	
05-3920	Architectural Design (2.5.25)	135	135	0%	0%	135		30-Jun-21	11-Nov-21	05-Feb-22	19-Jun-22	220	
05-3930	Foundation design (2.5.13)	135	135	0%	0%	135		30-Jun-21	11-Nov-21	27-Sep-21	08-Feb-22	89	
05-3940	Structural design (2.5.14)	135	135	0%	0%	135		30-Jun-21	11-Nov-21	27-Sep-21	08-Feb-22	89	
05-3950	Electrical and instrumentation works design (2.5.15)	254	254	0%	0%	254		30-Jun-21	10-Mar-22	29-Nov-21	09-Aug-22	152	
05-3960	Mechanical works design (2.5.16) (2 Packages)	234	234	0%	0%	234		30-Jun-21	18-Feb-22	04-Jul-21	22-Feb-22	4	
05-3970	Fire services installation design (2.5.17) (2 Packages)	60	60	0%	0%	60	Start On or After	29-Aug-21*	27-Oct-21	09-Oct-21	07-Dec-21	41	
EP_SP_66_12-WP6A-M43.05.02.05.7 Building services design (excluding fire services installation design) (2.5.18)		180	180	0%		180		30-Jun-21	26-Dec-21	26-Jul-21	06-Jan-22	11	
05-3980	LV and Emergency Power Distribution Design for IWMF Waste Water Treatment Plant	135	135	0%	0%	135		30-Jun-21	11-Nov-21	26-Jul-21	07-Dec-21	26	
05-4010	Plumbing	135	135	0%	0%	135		30-Jun-21	11-Nov-21	25-Aug-21	06-Jan-22	56	
05-4020	Drainage	105	105	0%	0%	105		13-Sep-21	26-Dec-21	24-Sep-21	06-Jan-22	11	
05-4030	ELV	135	135	0%	0%	135		26-Jul-21	07-Dec-21	26-Jul-21	07-Dec-21	0	
EP_SP_66_12-WP6A-M43.05.02.06 DDA Water Treatment Plant Building (2.6)		399	399	0%		399		30-Jun-21	02-Aug-22	26-Jul-21	09-Aug-22	7	
05-4050	Architectural Design (2.6.25)	135	135	0%	0%	135		30-Jun-21	11-Nov-21	05-Feb-22	19-Jun-22	220	
05-4080	Electrical and instrumentation works design (2.6.15)	324	324	0%	0%	324		13-Sep-21	02-Aug-22	20-Sep-21	09-Aug-22	7	
05-4090	Mechanical works design (2.6.16)	256	256	0%	0%	256		13-Sep-21	26-May-22	27-Nov-21	09-Aug-22	75	
05-4100	Fire services installation design (2.6.17)	60	60	0%	0%	60		29-Aug-21	27-Oct-21	09-Oct-21	07-Dec-21	41	
EP_SP_66_12-WP6A-M43.05.02.06.7 Building services design (excluding fire services installation design) (2.6.18)		180	180	0%		180		30-Jun-21	26-Dec-21	26-Jul-21	06-Jan-22	11	
05-4110	Electrical Services and Lighting	135	135	0%	0%	135		26-Jul-21	07-Dec-21	26-Jul-21	07-Dec-21	0	
05-4140	Plumbing	135	135	0%	0%	135		30-Jun-21	11-Nov-21	25-Aug-21	06-Jan-22	56	
05-4150	Drainage	105	105	0%	0%	105		13-Sep-21	26-Dec-21	24-Sep-21	06-Jan-22	11	
05-4160	ELV	135	135	0%	0%	135		26-Jul-21	07-Dec-21	26-Jul-21	07-Dec-21	0	
EP_SP_66_12-WP6A-M43.05.02.07 DDA Administration Building (2.7)		180	180	0%		180		30-Jun-21	26-Dec-21	26-Jul-21	10-Jan-22	15	
05-4170	Architectural Design (2.7.21)	105	105	0%	0%	105	Start On or After	30-Jun-21*	12-Oct-21	26-Aug-21	08-Dec-21	57	
05-4210	Fire services installation design (2.7.14)	60	60	0%	0%	60		28-Sep-21	26-Nov-21	09-Oct-21	07-Dec-21	11	
EP_SP_66_12-WP6A-M43.05.02.07.6 Building services design (excluding fire services installation design) (2.7.15)		180	180	0%		180		30-Jun-21	26-Dec-21	26-Jul-21	10-Jan-22	15	
05-4220	Electrical Services and Lighting	135	135	0%	0%	135		26-Jul-21	07-Dec-21	26-Jul-21	07-Dec-21	0	
05-4250	Plumbing	135	135	0%	0%	135		30-Jun-21	11-Nov-21	25-Aug-21	06-Jan-22	56	
05-4260	Drainage	105	105	0%	0%	105		13-Sep-21	26-Dec-21	24-Sep-21	06-Jan-22	11	
05-4270	ELV	135	135	0%	0%	135		16-Jul-21	27-Nov-21	26-Jul-21	07-Dec-21	10	
05-4280	Lifts and Escalators	135	135	0%	0%	135		14-Aug-21	26-Dec-21	29-Aug-21	10-Jan-22	15	
EP_SP_66_12-WP6A-M43.05.02.08 DDA IWMF Substation (2.8)		272	776	0%		287		27-Feb-20 A	12-Apr-22	26-Jul-21	27-Sep-22	168	
05-4290	Architectural Design (2.8.25)	105	105	0%	0%	105	Start On or After	30-Jun-21*	12-Oct-21	26-Aug-21	08-Dec-21	57	
05-4300	Foundation design (2.8.13)	135	135	0%	0%	135		30-Jun-21	11-Nov-21	17-Feb-22	01-Jul-22	232	
05-4310	Structural design (2.8.14)	195	776	0%	65%	287		27-Feb-20 A	12-Apr-22	15-Dec-21	27-Sep-22	168	
05-4320	Electrical and instrumentation works design (2.8.15)	75	75	0%	0%	75		30-Jun-21	12-Sep-21	14-Aug-21	27-Oct-21	45	Revised durtation 135 to 105
05-4340	Fire services installation design (2.8.17)	60	60	0%	0%	60		29-Aug-21	27-Oct-21	22-Jan-22	22-Mar-22	146	
EP_SP_66_12-WP6A-M43.05.02.08.7 Building services design (excluding fire services installation design) (2.8.18)		135	135	0%		135		30-Jun-21	11-Nov-21	26-Jul-21	20-Jul-22	251	
05-4990	Electrical Services and Lighting	135	135	0%	0%	135		30-Jun-21	11-Nov-21	26-Jul-21	07-Dec-21	26	
05-5010	Plumbing	135	135	0%	0%	135		30-Jun-21	11-Nov-21	25-Aug-21	06-Jan-22	56	



Remaining Work
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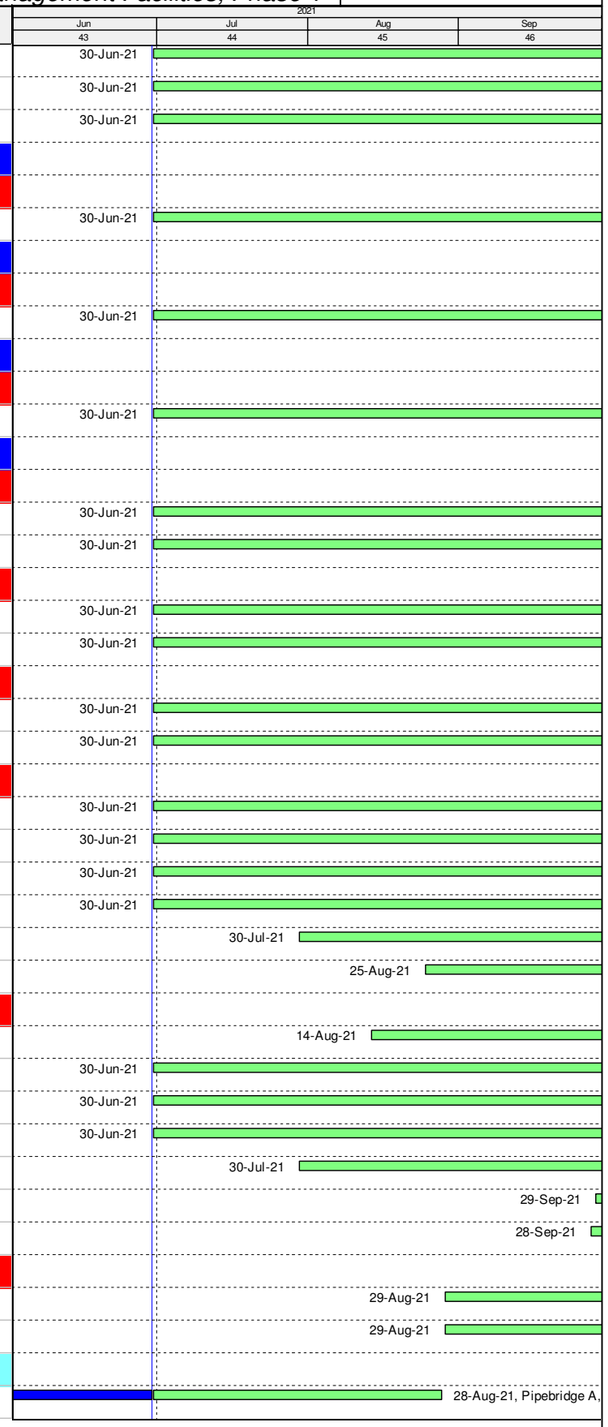
Activity ID	Activity Name	Original Duration	At Completion Duration	Duration % Complete	Activity % Complete	Remaining Duration	Primary Constraint	Current Start	Current Finish	Late Start	Late Finish	Total Float	M43 Remarks
05-5020	Drainage	105	105	0%	0%	105		30-Jun-21	12-Oct-21	07-Apr-22	20-Jul-22	281	
05-5030	ELV	135	135	0%	0%	135		30-Jun-21	11-Nov-21	26-Jul-21	07-Dec-21	26	
05-5030-1	Building Management System (BMS)	135	135	0%	0%	135		30-Jun-21	11-Nov-21	17-Nov-21	31-Mar-22	140	
EP_SP_66_12-WP6A-M43.05.02.4 DDA Elevated Drive Way and Associated Structures Foundation		135	135	0%		135		30-Jun-21	11-Nov-21	20-Mar-22	01-Aug-22	263	
EP_SP_66_12-WP6A-M43.05.02.4.1 Building services design (excluding fire services installation design)		135	135	0%		135		30-Jun-21	11-Nov-21	20-Mar-22	01-Aug-22	263	
05-5560	Building Management System (BMS)	135	135	0%	0%	135		30-Jun-21	11-Nov-21	20-Mar-22	01-Aug-22	263	
EP_SP_66_12-WP6A-M43.05.02.5 DDA Reception Pavilion		135	135	0%		135		30-Jun-21	11-Nov-21	27-May-22	08-Oct-22	331	
EP_SP_66_12-WP6A-M43.05.02.5.1 Building services design (excluding fire services installation design)		135	135	0%		135		30-Jun-21	11-Nov-21	27-May-22	08-Oct-22	331	
05-2130-1	Building Management System (BMS)	135	135	0%	0%	135		30-Jun-21	11-Nov-21	27-May-22	08-Oct-22	331	
EP_SP_66_12-WP6A-M43.05.02.6 DDA CCCW Building		135	135	0%		135		30-Jun-21	11-Nov-21	06-Aug-22	18-Dec-22	402	
EP_SP_66_12-WP6A-M43.05.02.6.1 Building services design (excluding fire services installation design)		135	135	0%		135		30-Jun-21	11-Nov-21	06-Aug-22	18-Dec-22	402	
05-2130-2	Building Management System (BMS)	135	135	0%	0%	135		30-Jun-21	11-Nov-21	06-Aug-22	18-Dec-22	402	
EP_SP_66_12-WP6A-M43.05.02.10 DDA Roads and Utilities (2.10)		270	532	16.3%		226		28-Aug-20 A	10-Feb-22	07-Jul-21	19-Dec-23	677	
EP_SP_66_12-WP6A-M43.05.02.10.1 Permanent road works layout on the Artificial Island (2.10.13)		135	135	0%		135		30-Jun-21	11-Nov-21	25-Mar-23	19-Dec-23	768	
05-4470	Roads and hardstandings layout	135	135	0%	0%	135		30-Jun-21	11-Nov-21	25-Mar-23	06-Aug-23	633	
05-4480	Road signage and markings	135	135	0%	0%	135		30-Jun-21	11-Nov-21	07-Aug-23	19-Dec-23	768	
EP_SP_66_12-WP6A-M43.05.02.10.2 Sewerage design on the Artificial Island (2.10.14)		135	135	0%		135		30-Jun-21	11-Nov-21	25-Aug-21	07-Sep-22	300	
05-4430	Foul Sewerage	135	135	0%	0%	135		30-Jun-21	11-Nov-21	25-Aug-21	06-Jan-22	56	
05-4440	Contaminated Sewerage	135	135	0%	0%	135		30-Jun-21	11-Nov-21	26-Apr-22	07-Sep-22	300	
EP_SP_66_12-WP6A-M43.05.02.10.3 Drainage system design on the Artificial Island (2.10.15)		105	105	0%		105		30-Jun-21	12-Oct-21	30-Jul-21	06-Jan-22	86	
05-5310	Surface water Drainage System	105	105	0%	0%	105		30-Jun-21	12-Oct-21	24-Sep-21	06-Jan-22	86	
05-5320	First Flush Drainage System concept	105	105	0%	0%	105		30-Jun-21	12-Oct-21	30-Jul-21	11-Nov-21	30	
EP_SP_66_12-WP6A-M43.05.02.10.4 Water supply system design on the Artificial Island (2.10.16)		191	191	0%		191		30-Jun-21	06-Jan-22	25-Aug-21	18-Aug-22	224	
05-5250	Potable Water Distribution System	135	135	0%	0%	135		30-Jun-21	11-Nov-21	06-Apr-22	18-Aug-22	280	
05-5260	Recycled Water System	135	135	0%	0%	135		30-Jun-21	11-Nov-21	06-Apr-22	18-Aug-22	280	
05-5270	Irrigation System	135	135	0%	0%	135		30-Jun-21	11-Nov-21	25-Aug-21	06-Jan-22	56	
05-5280	Rainwater harvesting System	135	135	0%	0%	135		30-Jun-21	11-Nov-21	25-Aug-21	06-Jan-22	56	
05-5300-2(M24)	Building Services system for seawater intake (2.10.04.09)	90	90	0%	0%	90		30-Jul-21	27-Oct-21	09-Oct-21	06-Jan-22	71	
05-5300-3(5a)	Chemical scrubber system for odour control (2.10.16.10)	135	135	0%	0%	135		25-Aug-21	06-Jan-22	24-Sep-21	05-Feb-22	30	
EP_SP_66_12-WP6A-M43.05.02.10.6 Design of telecommunication and other utilities (2.10.18)		226	226	0%		226		30-Jun-21	10-Feb-22	19-Aug-21	03-Aug-23	539	
05-3400 (M21)	Computerised Maintenance Management System (CMMS)	105	105	0%	0%	105		14-Aug-21	26-Nov-21	19-Aug-21	01-Dec-21	5	
05-3410 (M21)	Information and Document Management System (IDMS)	105	105	0%	0%	105		30-Jun-21	12-Oct-21	19-Aug-21	01-Dec-21	50	
05-4590	Site Lighting Concept / Schematics	135	135	0%	0%	135		30-Jun-21	11-Nov-21	22-Mar-23	03-Aug-23	630	
05-4600	Lightning Protection System concept / schematics	135	135	0%	0%	135		30-Jun-21	11-Nov-21	02-Sep-21	14-Jan-22	64	
05-4640	Microwave transmission of FS direct link	135	135	0%	0%	135		30-Jul-21	11-Dec-21	28-Nov-21	11-Apr-22	121	
05-4650	Fuel Handling System concept / schematics	135	135	0%	0%	135		29-Sep-21	10-Feb-22	30-Dec-22	13-May-23	457	
05-5400-1(M22)	Automatic Traffic Control System (ATCS)	135	135	0%	0%	135		28-Sep-21	09-Feb-22	03-Feb-23	17-Jun-23	493	
EP_SP_66_12-WP6A-M43.05.02.10.7 Utility ducts/Pipebridges design (2.10.26)		270	501	27.78%		195		28-Aug-20 A	10-Jan-22	07-Jul-21	24-Dec-22	348	
05-5040	Design of Pipe / Utilities Trenches concept	135	135	0%	0%	135		29-Aug-21	10-Jan-22	12-Aug-22	24-Dec-22	348	
05-5050	Sitewide Utilities Trenches Design	135	135	0%	0%	135		29-Aug-21	10-Jan-22	12-Aug-22	24-Dec-22	348	
EP_SP_66_12-WP6A-M43.05.02.10.7.3 Layout Plan for Pipe Bridge Network		135	366	55.56%		60		28-Aug-20 A	28-Aug-21	07-Jul-21	04-Sep-21	7	
05-7000	Pipebridge A	135	324	55.56%	5%	60		09-Oct-20 A	28-Aug-21	07-Jul-21	04-Sep-21	7	Extracted Activity



Remaining Work
Actual Work
Critical Remaining Work
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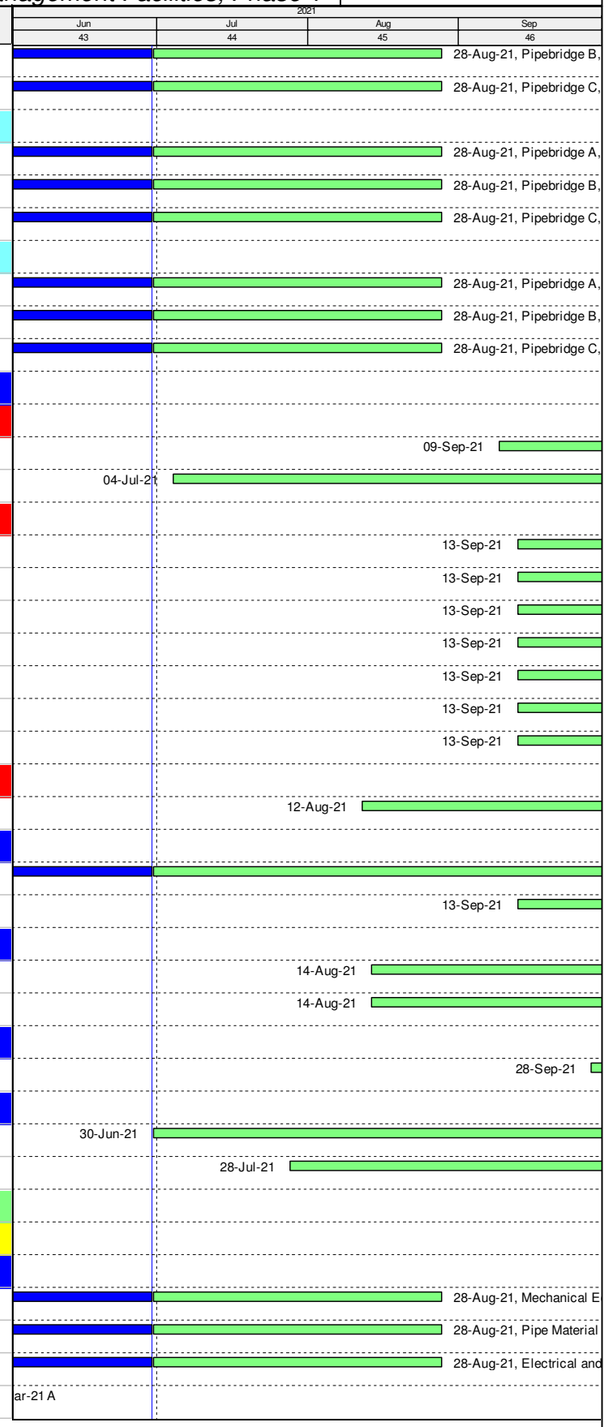
Activity ID	Activity Name	Original Duration	At Completion Duration	Duration % Complete	Activity % Complete	Remaining Duration	Primary Constraint	Current Start	Current Finish	Late Start	Late Finish	Total Float	M43 Remarks
05-7010	Pipebridge B	135	366	55.56%	5%	60		28-Aug-20 A	28-Aug-21	07-Jul-21	04-Sep-21	7	Extracted Activity
05-7020	Pipebridge C	135	366	55.56%	5%	60		28-Aug-20 A	28-Aug-21	07-Jul-21	04-Sep-21	7	Extracted Activity
EP_SP_66_12-WP6A-M43.05.02.10.7.1 Foundaion Plan for Pipe Bridge Network		135	366	55.56%		60		28-Aug-20 A	28-Aug-21	07-Jul-21	04-Sep-21	7	
05-7030	Pipebridge A	135	324	55.56%	5%	60		09-Oct-20 A	28-Aug-21	07-Jul-21	04-Sep-21	7	Extracted Activity
05-7040	Pipebridge B	60	366	0%	5%	60		28-Aug-20 A	28-Aug-21	07-Jul-21	04-Sep-21	7	Extracted Activity
05-7050	Pipebridge C	60	366	0%	5%	60		28-Aug-20 A	28-Aug-21	07-Jul-21	04-Sep-21	7	Extracted Activity
EP_SP_66_12-WP6A-M43.05.02.10.7.2 Structure Plan for Pipe Bridge Network		135	366	55.56%		60		28-Aug-20 A	28-Aug-21	07-Jul-21	04-Sep-21	7	
05-7060	Pipebridge A	135	324	55.56%	5%	60		09-Oct-20 A	28-Aug-21	07-Jul-21	04-Sep-21	7	Extracted Activity
05-7070	Pipebridge B	135	366	55.56%	5%	60		28-Aug-20 A	28-Aug-21	07-Jul-21	04-Sep-21	7	Extracted Activity
05-7080	Pipebridge C	135	366	55.56%	5%	60		28-Aug-20 A	28-Aug-21	07-Jul-21	04-Sep-21	7	Extracted Activity
EP_SP_66_12-WP6A-M43.05.02.11 DDA Architectural, Finishes and Landscaping Works (2.11)		202	202	0%		202		04-Jul-21	21-Jan-22	03-Feb-22	03-Mar-23	406	
EP_SP_66_12-WP6A-M43.05.02.11.1 External and internal finishes design for Incineration Plant Buildings		202	202	0%		202		04-Jul-21	21-Jan-22	03-Feb-22	16-Jan-23	360	
05-4710	External and internal finishes design for Chimney	135	135	0%	0%	135		09-Sep-21	21-Jan-22	04-Sep-22	16-Jan-23	360	
05-4770	External and internal finishes design for the IWMF Substation (2.11.20)	137	137	0%	0%	137		04-Jul-21	17-Nov-21	03-Feb-22	19-Jun-22	214	
EP_SP_66_12-WP6A-M43.05.02.11.7 Landscape masterplan (2.11.21)		105	105	0%		105		13-Sep-21	26-Dec-21	19-Nov-22	03-Mar-23	432	
05-4780	Water Feature	105	105	0%	0%	105		13-Sep-21	26-Dec-21	19-Nov-22	03-Mar-23	432	
05-4780-1(6C)	Turbine Hall Building (2.11.07.04)	105	105	0%	0%	105		13-Sep-21	26-Dec-21	19-Nov-22	03-Mar-23	432	
05-4780-2(6C)	Reception Pavilion (2.11.07.06)	105	105	0%	0%	105		13-Sep-21	26-Dec-21	19-Nov-22	03-Mar-23	432	
05-4780-3(6C)	MT Plant Building and Water Treatment Plant Building (2.11.07.07)	105	105	0%	0%	105		13-Sep-21	26-Dec-21	19-Nov-22	03-Mar-23	432	
05-4780-4(6C)	Administration Building (2.11.07.08)	105	105	0%	0%	105		13-Sep-21	26-Dec-21	19-Nov-22	03-Mar-23	432	
05-4780-5(6C)	IWMF Substation (2.11.07.09)	105	105	0%	0%	105		13-Sep-21	26-Dec-21	19-Nov-22	03-Mar-23	432	
05-4780-6(6C)	Process Building (2.11.07.10)	105	105	0%	0%	105		13-Sep-21	26-Dec-21	19-Nov-22	03-Mar-23	432	
EP_SP_66_12-WP6A-M43.05.02.11.8 Architectural Detailing - Site Wide (2.11.30)		135	135	0%		135		12-Aug-21	24-Dec-21	14-Feb-22	28-Jun-22	186	
05-4800	Architectural Detailing - Site Wide Concept	135	135	0%	0%	135		12-Aug-21	24-Dec-21	14-Feb-22	28-Jun-22	186	
EP_SP_66_12-WP6A-M43.05.02.12 DDA Testing and Commissioning (2.12)		180	979	0%		180		23-Apr-19 A	26-Dec-21	15-Jun-22	17-Aug-23	599	
05-4810-1(5a)	Factory Acceptance Testing plan (2.12.09.02-07) (8 Packages)	105	904	0%	5%	105		23-Apr-19 A	12-Oct-21	15-Jun-22	27-Sep-22	350	
05-4820	Site Acceptance Testing plan (2.12.10)	105	105	0%	0%	105		13-Sep-21	26-Dec-21	05-May-23	17-Aug-23	599	
EP_SP_66_12-WP6A-M43.05.02.13 DDA Transportation Facilities for the Operation (2.13)		608	608	0%		608		14-Aug-21	13-Apr-23	06-Feb-23	13-Dec-24	610	
05-4850	Design of vehicles for MSW and Ash and Residues delivery (2.13.05)	493	493	0%	0%	493		14-Aug-21	19-Dec-22	06-Feb-23	12-Jun-24	541	
05-4860	Design of marine vessels for the use of the Employer and visitors (2.13.06)	608	608	0%	0%	608		14-Aug-21	13-Apr-23	16-Apr-23	13-Dec-24	610	
EP_SP_66_12-WP6A-M43.05.02.14 DDA Miscellaneous Works (2.14)		588	588	0%		588		28-Sep-21	08-May-23	21-Nov-22	30-Jun-24	419	
05-4880	Design of visitors and environmental education facilities (2.14.06)	588	588	0%	0%	588		28-Sep-21	08-May-23	21-Nov-22	30-Jun-24	419	
EP_SP_66_12-WP6A-M43.05.02.16 DDA Auxiliary Plant Systems (2.16)		297	297	0%		297		30-Jun-21	22-Apr-22	10-Feb-22	21-Nov-22	213	
05-4940-1(5a)	IWMF Laboratory (2.16.08)	135	135	0%	0%	135		30-Jun-21	11-Nov-21	10-Jul-22	21-Nov-22	375	
05-4940-2(5a)	hoisting systems (2.16.10)	269	269	0%	0%	269		28-Jul-21	22-Apr-22	10-Feb-22	05-Nov-22	197	
EP_SP_66_12-WP6A-M43.06 Procurement of Major Equipment		1357	1612	62.86%		504		18-Jun-18 A	15-Nov-22	30-Jun-21	21-May-27	1648	
EP_SP_66_12-WP6A-M43.06.1 Off-site Fabrication of Incineration Modules		1357	1601	62.86%		504		29-Jun-18 A	15-Nov-22	30-Jun-21	21-May-27	1648	
EP_SP_66_12-WP6A-M43.06.1.25 Material Procurement		911	1157	93.41%		60		29-Jun-18 A	28-Aug-21	23-Mar-27	21-May-27	2092	
06-1000-1(1)	Mechanical Equipment Material Submission and Approval	180	1147	66.67%	66.67%	60		09-Jul-18 A	28-Aug-21	23-Mar-27	21-May-27	2092	
06-1000-2(1)	Pipe Material Submission and Approval	180	670	66.67%	92%	60		29-Oct-19 A	28-Aug-21	23-Mar-27	21-May-27	2092	
06-1000-3(1)	Electrical and Instrumentation Material Submission and Approval	180	670	66.67%	66.67%	60		29-Oct-19 A	28-Aug-21	23-Mar-27	21-May-27	2092	
06-1010-1(1)	Mechanical Equipment Procurement (incl. FAT)	90	1002	100%	45%	0		29-Jun-18 A	27-Mar-21 A				



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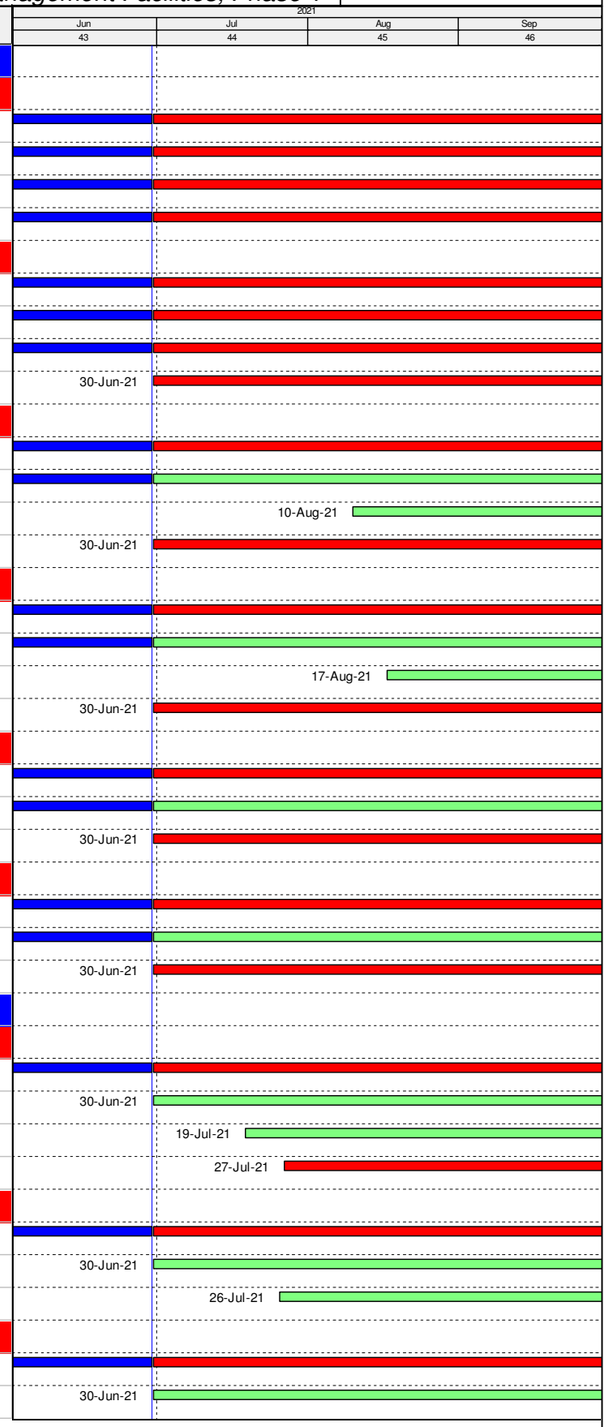
Activity ID	Activity Name	Original Duration	At Completion Duration	Duration % Complete	Activity % Complete	Remaining Duration	Primary Constraint	Current Start	Current Finish	Late Start	Late Finish	Total Float	M43 Remarks
EP_SP_66_12-WP6A-M43.06.1.26	**Fabrication of Module (TPU)**	544	707	22.43%		422		18-Sep-20 A	25-Aug-22	30-Jun-21	25-Aug-22	0	
EP_SP_66_12-WP6A-M43.06.1.26.1	**Process Island Furnace Boiler Line 1**	442	604	27.83%		319		18-Sep-20 A	14-May-22	30-Jun-21	14-May-22	0	
06-2010(6)	Process Island Furnace Boiler Line 1 Structure Cutting, Painting, Pre-assembly & Erection	390	548	32.56%	32.56%	263		18-Sep-20 A	19-Mar-22	30-Jun-21	19-Mar-22	0	
06-2020(6)	Process Island Furnace Boiler Line 1 Equipment Fabrication	300	341	62%	62%	114		15-Nov-20 A	21-Oct-21	30-Jun-21	21-Oct-21	0	
06-2030(6)	Process Island Furnace Boiler Line 1 Equipment Installation	264	389	9.47%	9.47%	239		31-Jan-21 A	23-Feb-22	30-Jun-21	23-Feb-22	0	
06-2040(6)	Process Island Furnace Boiler Line 1 Piping Fabrication & installation	350	459	8.86%	8.86%	319		10-Feb-21 A	14-May-22	30-Jun-21	14-May-22	0	
EP_SP_66_12-WP6A-M43.06.1.26.2	**Process Island Furnace Boiler Line 2**	439	559	27.79%		317		31-Oct-20 A	12-May-22	30-Jun-21	12-May-22	0	
06-2100(6)	Process Island Furnace Boiler Line 2 Structure Cutting, Painting, Pre-assembly & Erection	390	519	28.97%	28.97%	277		31-Oct-20 A	02-Apr-22	30-Jun-21	02-Apr-22	0	
06-2110(6)	Process Island Furnace Boiler Line 2 Equipment Fabrication	300	354	57.67%	57.67%	127		15-Nov-20 A	03-Nov-21	30-Jun-21	03-Nov-21	0	
06-2120(6)	Process Island Furnace Boiler Line 2 Equipment Installation	256	387	7.42%	7.42%	237		31-Jan-21 A	21-Feb-22	30-Jun-21	21-Feb-22	0	
06-2130(6)	Process Island Furnace Boiler Line 2 Piping Fabrication & installation	317	317	0%	0%	317		30-Jun-21	12-May-22	30-Jun-21	12-May-22	0	
EP_SP_66_12-WP6A-M43.06.1.26.3	**Process Island Furnace Boiler Line 3**	427	523	28.57%		305		24-Nov-20 A	30-Apr-22	30-Jun-21	30-Apr-22	0	
06-2190(6)	Process Island Furnace Boiler Line 3 Structure Cutting, Painting, Pre-assembly & Erection	390	510	25.13%	25.13%	292		24-Nov-20 A	17-Apr-22	30-Jun-21	17-Apr-22	0	
06-2200-1(6)	Process Island Furnace Boiler Line 3 Equipment Fabrication	300	355	50.67%	50.67%	148		05-Dec-20 A	24-Nov-21	15-Aug-21	09-Jan-22	46	
06-2210-1(6)	Process Island Furnace Boiler Line 3 Equipment Installation	218	218	0%	0%	218		10-Aug-21	15-Mar-22	25-Sep-21	30-Apr-22	46	
06-2220-1(6)	Process Island Furnace Boiler Line 3 Piping Fabrication & installation	305	305	0%	0%	305		30-Jun-21	30-Apr-22	30-Jun-21	30-Apr-22	0	
EP_SP_66_12-WP6A-M43.06.1.26.4	**Process Island Furnace Boiler Line 4**	475	555	25.68%		353		10-Dec-20 A	17-Jun-22	30-Jun-21	17-Jun-22	0	
06-2280(6)	Process Island Furnace Boiler Line 4 Structure Cutting, Painting, Pre-assembly & Erection	390	515	19.74%	19.74%	313		10-Dec-20 A	08-May-22	30-Jun-21	08-May-22	0	
06-2290-1(6)	Process Island Furnace Boiler Line 4 Equipment Fabrication	300	393	35%	35%	195		14-Dec-20 A	10-Jan-22	19-Aug-21	01-Mar-22	50	
06-2300-1(6)	Process Island Furnace Boiler Line 4 Equipment Installation	225	225	0%	0%	225		17-Aug-21	29-Mar-22	06-Oct-21	18-May-22	50	
06-2310-1(6)	Process Island Furnace Boiler Line 4 Piping Fabrication & installation	353	353	0%	0%	353		30-Jun-21	17-Jun-22	30-Jun-21	17-Jun-22	0	
EP_SP_66_12-WP6A-M43.06.1.26.5	**Process Island Furnace Boiler Line 5**	514	594	23.74%		392		10-Dec-20 A	26-Jul-22	30-Jun-21	26-Jul-22	0	
06-2370(6)	Process Island Furnace Boiler Line 5 Structure Cutting, Painting, Pre-assembly & Erection	390	554	9.74%	9.74%	352		10-Dec-20 A	16-Jun-22	30-Jun-21	16-Jun-22	0	
06-2380(6)	Process Island Furnace Boiler Line 5 Equipment Fabrication	300	407	30.33%	30.33%	209		14-Dec-20 A	24-Jan-22	08-Sep-21	04-Apr-22	70	
06-2400-1(6)	Process Island Furnace Boiler Line 5 Piping Fabrication & installation	392	392	0%	0%	392		30-Jun-21	26-Jul-22	30-Jun-21	26-Jul-22	0	
EP_SP_66_12-WP6A-M43.06.1.26.6	**Process Island Furnace Boiler Line 6**	544	609	22.43%		422		25-Dec-20 A	25-Aug-22	30-Jun-21	25-Aug-22	0	
06-2460(6)	Process Island Furnace Boiler Line 6 Structure Cutting, Painting, Pre-assembly & Erection	390	529	2.05%	2.05%	382		03-Feb-21 A	16-Jul-22	30-Jun-21	16-Jul-22	0	
06-2470(6)	Process Island Furnace Boiler Line 6 Equipment Fabrication	300	466	7%	7%	279		25-Dec-20 A	04-Apr-22	18-Sep-21	23-Jun-22	80	
06-2490(6)	Process Island Furnace Boiler Line 6 Piping Fabrication & installation	422	422	0%	0%	422		30-Jun-21	25-Aug-22	30-Jun-21	25-Aug-22	0	
EP_SP_66_12-WP6A-M43.06.1.7	**Fabrication of Module (FGC)**	626	638	19.49%		504		16-Feb-21 A	15-Nov-22	30-Jun-21	15-Nov-22	0	
EP_SP_66_12-WP6A-M43.06.1.7.1	**Process Island FGC Line 1**	500	505	24.4%		378		23-Feb-21 A	12-Jul-22	30-Jun-21	12-Jul-22	0	
06-2000(6)	Process Island FGC Line 1 Structure Cutting, Painting, Pre-assembly & Erection	460	369	47.39%	47.39%	242		23-Feb-21 A	26-Feb-22	30-Jun-21	26-Feb-22	0	
06-2550(6)	Process Island FGC Line 1 Equipment Fabrication	199	199	0%	0%	199		30-Jun-21	14-Jan-22	19-Aug-21	05-Mar-22	50	
06-2560(6)	Process Island FGC Line 1 Equipment Installation	229	229	0%	0%	229		19-Jul-21	04-Mar-22	07-Sep-21	23-Apr-22	50	
06-2570(6)	Process Island FGC Line 1 Piping Fabrication & installation	351	351	0%	0%	351		27-Jul-21	12-Jul-22	27-Jul-21	12-Jul-22	0	
EP_SP_66_12-WP6A-M43.06.1.7.2	**Process Island FGC Line 2**	460	384	45.65%		250		16-Feb-21 A	06-Mar-22	30-Jun-21	25-Apr-22	50	
06-2630(6)	Process Island FGC Line 2 Structure Cutting, Painting, Pre-assembly & Erection	460	384	45.65%	45.65%	250		16-Feb-21 A	06-Mar-22	30-Jun-21	06-Mar-22	0	
06-2640(6)	Process Island FGC Line 2 Equipment Fabrication	216	216	0%	0%	216		30-Jun-21	31-Jan-22	20-Aug-21	23-Mar-22	51	
06-2650(6)	Process Island FGC Line 2 Equipment Installation	223	223	0%	0%	223		26-Jul-21	05-Mar-22	15-Sep-21	25-Apr-22	51	
EP_SP_66_12-WP6A-M43.06.1.7.3	**Process Island FGC Line 3**	582	593	20.96%		460		17-Feb-21 A	02-Oct-22	30-Jun-21	02-Oct-22	0	
06-2720(6)	Process Island FGC Line 3 Structure Cutting, Painting, Pre-assembly & Erection	460	415	38.7%	38.7%	282		17-Feb-21 A	07-Apr-22	30-Jun-21	07-Apr-22	0	
06-2730(6)	Process Island FGC Line 3 Equipment Fabrication	245	245	0%	0%	245		30-Jun-21	01-Mar-22	29-Aug-21	30-Apr-22	60	



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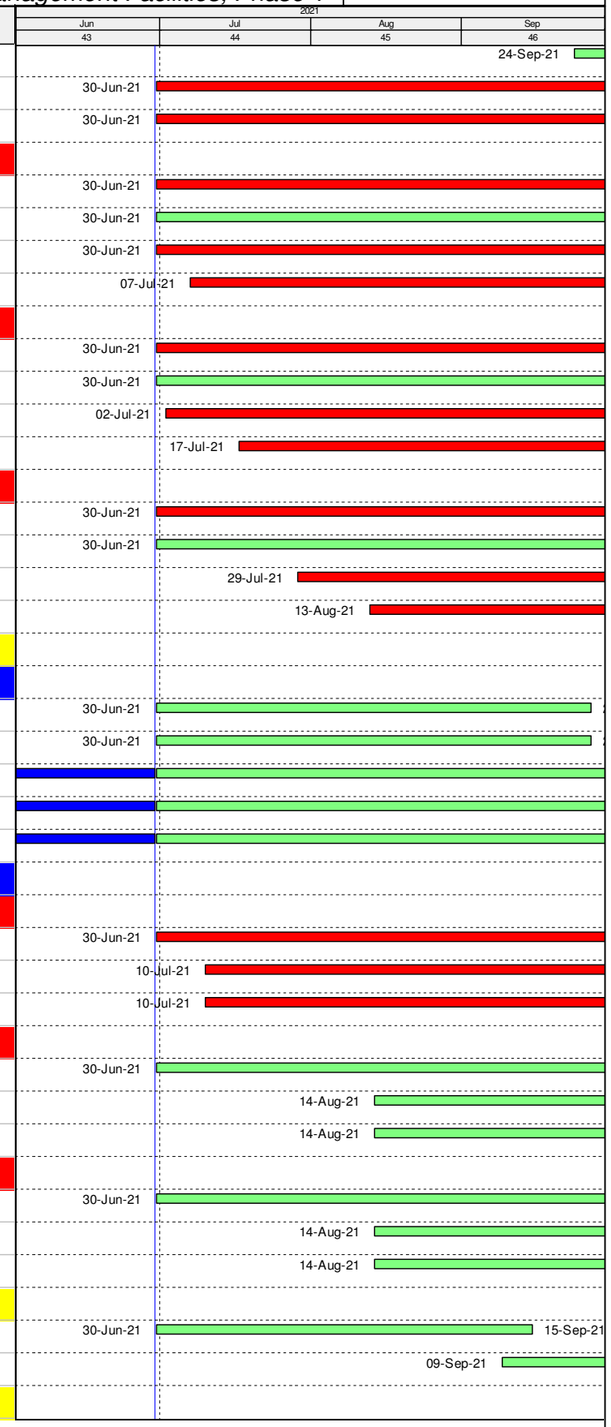
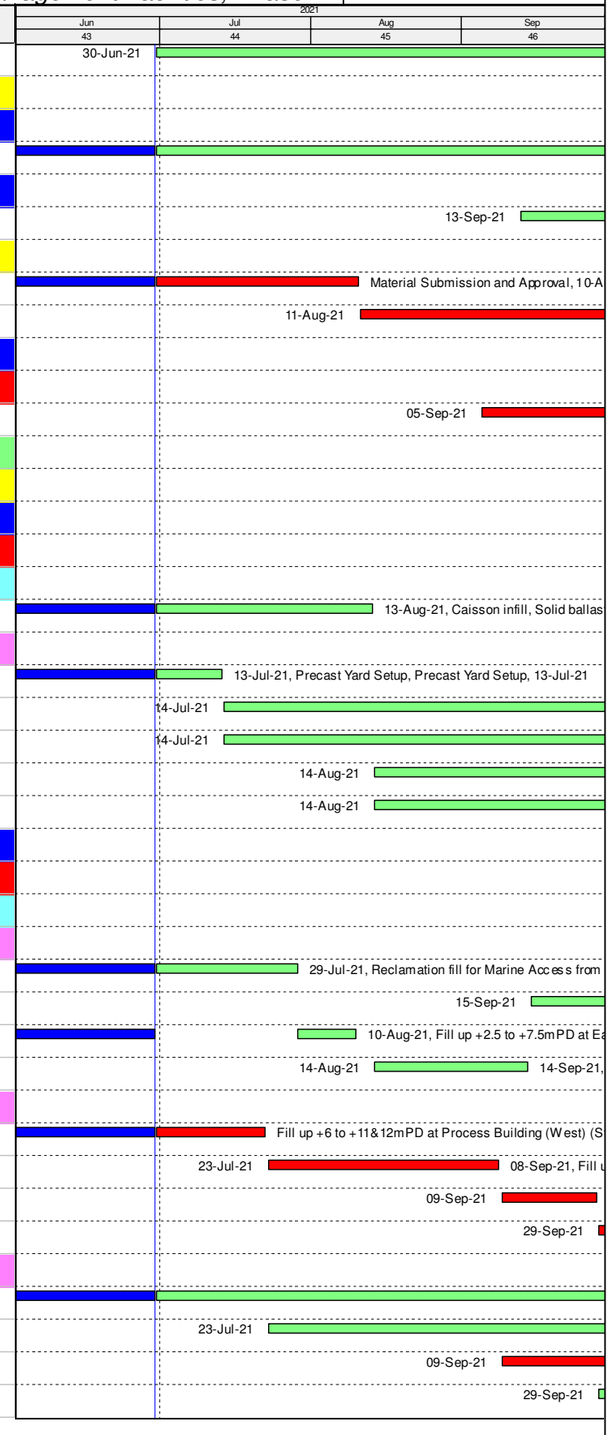
06-2740(6)	Process Island FGC Line 3 Equipment Installation	220	220	0%	0%	220		24-Sep-21	01-May-22	23-Nov-21	30-Jun-22	60	
06-2750(6)	Process Island FGC Line 3 Piping Fabrication & installation	396	396	0%	0%	396		30-Jun-21	30-Jul-22	30-Jun-21	30-Jul-22	0	
06-2760(6)	Process Island FGC Line 3 Electircal & Instrumentation Fabrication & installation	460	460	0%	0%	460		30-Jun-21	02-Oct-22	30-Jun-21	02-Oct-22	0	
EP_SP_66_12-WP6A-M43.06.1.7.4 Process Island FGC Line 4		467	467	0%		467		30-Jun-21	09-Oct-22	30-Jun-21	09-Oct-22	0	
06-2810(6)	Process Island FGC Line 4 Structure Cutting, Painting, Pre-assembly & Erection	322	322	0%	0%	322		30-Jun-21	17-May-22	30-Jun-21	17-May-22	0	
06-2820(6)	Process Island FGC Line 4 Equipment Fabrication	261	261	0%	0%	261		30-Jun-21	17-Mar-22	09-Aug-21	26-Apr-22	40	
06-2840(6)	Process Island FGC Line 4 Piping Fabrication & installation	392	392	0%	0%	392		30-Jun-21	26-Jul-22	30-Jun-21	26-Jul-22	0	
06-2850(6)	Process Island FGC Line 4 Electircal & Instrumentation Fabrication & installation	460	460	0%	0%	460		07-Jul-21	09-Oct-22	07-Jul-21	09-Oct-22	0	
EP_SP_66_12-WP6A-M43.06.1.7.5 Process Island FGC Line 5		477	477	0%		477		30-Jun-21	19-Oct-22	30-Jun-21	19-Oct-22	0	
06-2900(6)	Process Island FGC Line 5 Structure Cutting, Painting, Pre-assembly & Erection	352	352	0%	0%	352		30-Jun-21	16-Jun-22	30-Jun-21	16-Jun-22	0	
06-2910(6)	Process Island FGC Line 5 Equipment Fabrication	267	267	0%	0%	267		30-Jun-21	23-Mar-22	30-Jul-21	22-Apr-22	30	
06-2930(6)	Process Island FGC Line 5 Piping Fabrication & installation	430	430	0%	0%	430		02-Jul-21	04-Sep-22	02-Jul-21	04-Sep-22	0	
06-2940(6)	Process Island FGC Line 5 Electircal & Instrumentation Fabrication & installation	460	460	0%	0%	460		17-Jul-21	19-Oct-22	17-Jul-21	19-Oct-22	0	
EP_SP_66_12-WP6A-M43.06.1.7.6 Process Island FGC Line 6		504	504	0%		504		30-Jun-21	15-Nov-22	30-Jun-21	15-Nov-22	0	
06-2990(6)	Process Island FGC Line 6 Structure Cutting, Painting, Pre-assembly & Erection	422	422	0%	0%	422		30-Jun-21	25-Aug-22	30-Jun-21	25-Aug-22	0	
06-3000(6)	Process Island FGC Line 6 Equipment Fabrication	338	338	0%	0%	338		30-Jun-21	02-Jun-22	17-Aug-21	20-Jul-22	48	
06-3020(6)	Process Island FGC Line 6 Piping Fabrication & installation	430	430	0%	0%	430		29-Jul-21	01-Oct-22	29-Jul-21	01-Oct-22	0	
06-3030(6)	Process Island FGC Line 6 Electircal & Instrumentation Fabrication & installation	460	460	0%	0%	460		13-Aug-21	15-Nov-22	13-Aug-21	15-Nov-22	0	
EP_SP_66_12-WP6A-M43.06.2 Off-site Fabrication of Turbine Modules		648	1453	46.76%		345		18-Jun-18 A	09-Jun-22	30-Jun-21	01-Aug-22	53	
EP_SP_66_12-WP6A-M43.06.2.1 Material Procurement		546	1345	56.59%		237		18-Jun-18 A	21-Feb-22	11-Sep-21	05-May-22	73	
06-1050-2(1)	Pipe Material Submission and Approval	90	90	0%	0%	90		30-Jun-21	27-Sep-21	22-Dec-21	21-Mar-22	175	
06-1050-3(1)	Electircal and Instrumentation Material Submission and Approval	90	90	0%	0%	90		30-Jun-21	27-Sep-21	05-Feb-22	05-May-22	220	
06-1060-1(1)	Mechanical Equipment Procurement (Incl. FAT)	380	1255	61.32%	61.32%	147		18-Jun-18 A	23-Nov-21	11-Sep-21	04-Feb-22	73	
06-1060-2(1)	Pipe Material Procurement (Incl. FAT)	180	612	14.44%	14.44%	154		29-Mar-20 A	30-Nov-21	19-Oct-21	21-Mar-22	111	
06-1060-3(1)	Electrical and Instrumentation Material Procurement (Incl. FAT)	365	695	35.07%	35.07%	237		29-Mar-20 A	21-Feb-22	11-Sep-21	05-May-22	73	
EP_SP_66_12-WP6A-M43.06.2.2 Fabrication of Module (Power Island)		345	345	0%		345		30-Jun-21	09-Jun-22	30-Jun-21	01-Aug-22	53	
EP_SP_66_12-WP6A-M43.06.2.2.1 Turbine Module 1		310	310	0%		310		30-Jun-21	05-May-22	30-Jun-21	05-May-22	0	
06-4000(6)	Turbine Module 1 - Structure Cutting, Painting, Pre-assembly & Erection	265	265	0%	0%	265		30-Jun-21	21-Mar-22	30-Jun-21	21-Mar-22	0	
06-4010(6)	Turbine Module 1 - Equipment Fabrication	300	300	0%	0%	300		10-Jul-21	05-May-22	10-Jul-21	05-May-22	0	
06-4020(6)	Turbine Module 1 - Equipment Installation	300	300	0%	0%	300		10-Jul-21	05-May-22	10-Jul-21	05-May-22	0	
EP_SP_66_12-WP6A-M43.06.2.2.2 Turbine Module 2		345	345	0%		345		30-Jun-21	09-Jun-22	07-Aug-21	17-Jul-22	38	
06-4200(6)	Turbine Module 2 - Structure Cutting, Painting, Pre-assembly & Erection	300	300	0%	0%	300		30-Jun-21	25-Apr-22	07-Aug-21	02-Jun-22	38	
06-4210(6)	Turbine Module 2 - Equipment Fabrication	300	300	0%	0%	300		14-Aug-21	09-Jun-22	21-Sep-21	17-Jul-22	38	
06-4220(6)	Turbine Module 2 - Equipment Installation	300	300	0%	0%	300		14-Aug-21	09-Jun-22	21-Sep-21	17-Jul-22	38	
EP_SP_66_12-WP6A-M43.06.2.2.3 Turbine Module 3		345	345	0%		345		30-Jun-21	09-Jun-22	22-Aug-21	01-Aug-22	53	
06-4400(6)	Turbine Module 3 - Structure Cutting, Painting, Pre-assembly & Erection	300	300	0%	0%	300		30-Jun-21	25-Apr-22	22-Aug-21	17-Jun-22	53	
06-4410(6)	Turbine Module 3 - Equipment Fabrication	300	300	0%	0%	300		14-Aug-21	09-Jun-22	06-Oct-21	01-Aug-22	53	
06-4420(6)	Turbine Module 3 - Equipment Installation	300	300	0%	0%	300		14-Aug-21	09-Jun-22	06-Oct-21	01-Aug-22	53	
EP_SP_66_12-WP6A-M43.06.3 Procurement for ACC Units		471	471	0%		471		30-Jun-21	13-Oct-22	19-Aug-21	02-Dec-22	50	
06-1110	Material & Equipment Procurement	78	78	0%	0%	78		30-Jun-21	15-Sep-21	19-Aug-21	04-Nov-21	50	
06-1120	Off-site Fabrication of ACC Units	400	400	0%	0%	400		09-Sep-21	13-Oct-22	29-Oct-21	02-Dec-22	50	
EP_SP_66_12-WP6A-M43.06.5 Procurement for WWTP Equipment		180	180	0%		180		30-Jun-21	26-Dec-21	17-Aug-21	12-Feb-22	48	



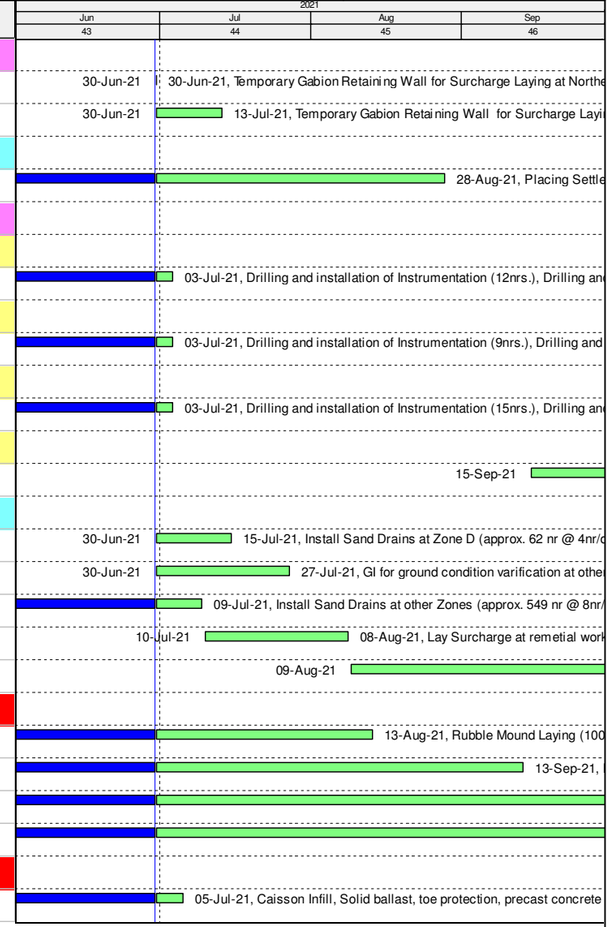
Remaining Work
Actual Work
Critical Remaining Work
Milestone
Actual Milestone
Critical Milestone

Activity ID	Activity Name	Original Duration	At Completion Duration	Duration % Complete	Activity % Complete	Remaining Duration	Primary Constraint	Current Start	Current Finish	Late Start	Late Finish	Total Float	M43 Remarks
06-1190-3(1)	Electircal and Instrumentation Material Submission and Approval	180	180	0%	0%	180		30-Jun-21	26-Dec-21	17-Aug-21	12-Feb-22	48	
EP_SP_66_12-WP6A-M43.06.7 Procurement for HV Transformers and Associated Equipment		550	1020	44%		308		19-Jul-19 A	03-May-22	28-Oct-21	27-Sep-22	147	
EP_SP_66_12-WP6A-M43.06.7.1 Procurement of Transformers & EDG		550	1020	44%		308		19-Jul-19 A	03-May-22	24-Nov-21	27-Sep-22	147	
06-1280(1)	Procurement of Transfromers	550	1020	44%	44%	308		19-Jul-19 A	03-May-22	24-Nov-21	27-Sep-22	147	
EP_SP_66_12-WP6A-M43.06.7.2 Procurement of Switchboard/Pannels and Cables		90	90	0%		90		13-Sep-21	11-Dec-21	28-Oct-21	25-Jan-22	45	
06-2090(1)	Material Submission and Approval	90	90	0%	0%	90		13-Sep-21	11-Dec-21	28-Oct-21	25-Jan-22	45	
EP_SP_66_12-WP6A-M43.06.10 Procruement and Off-site Fabrication of Pipe Bridges (Incl. Pipings)		439	623	27.79%		317		28-Aug-20 A	12-May-22	30-Jun-21	12-May-22	0	
06-1390(1)	Material Submission and Approval	90	348	53.33%	53.33%	42		28-Aug-20 A	10-Aug-21	30-Jun-21	10-Aug-21	0	
06-1400	Material & Equipment Procurement	108	108	0%	0%	108		11-Aug-21	26-Nov-21	11-Aug-21	26-Nov-21	0	
EP_SP_66_12-WP6A-M43.06.10.1 Fabrication of Pipe Bridge		250	250	0%		250		05-Sep-21	12-May-22	05-Sep-21	12-May-22	0	
EP_SP_66_12-WP6A-M43.06.10.1.1 Pipe Bridge C1 & D1		250	250	0%		250		05-Sep-21	12-May-22	05-Sep-21	12-May-22	0	
06-5000(6)	Process Island Pipebridge (C1) & Pipe Rack (D1) Structure Cutting, Painting, Pre-assembly & Erection	250	250	0%	0%	250		05-Sep-21	12-May-22	05-Sep-21	12-May-22	0	
EP_SP_66_12-WP6A-M43.08 Maritime Works		849	881	68.08%		271		29-Oct-19 A	27-Mar-22	30-Jun-21	21-May-27	1881	
EP_SP_66_12-WP6A-M43.08.1 Marine Construction		849	881	68.08%		271		29-Oct-19 A	27-Mar-22	30-Jun-21	21-May-27	1881	
EP_SP_66_12-WP6A-M43.08.1.1 Phase I - Construction of Perimeter Seawalls		843	875	68.56%		265		29-Oct-19 A	21-Mar-22	14-Jul-21	28-May-22	68	
EP_SP_66_12-WP6A-M43.08.1.1.1 Seawall and Berth at DCM Area		843	875	68.56%		265		29-Oct-19 A	21-Mar-22	14-Jul-21	28-May-22	68	
EP_SP_66_12-WP6A-M43.08.1.1.1.5 Seawall Structural Works		843	875	68.56%		265		29-Oct-19 A	21-Mar-22	14-Jul-21	28-May-22	68	
08-1115(3)	Caisson infill, Solid ballast, toe protection, precast concrete blocks ..etc Laying	250	655	82%	82%	45		29-Oct-19 A	13-Aug-21	14-Jul-21	27-Aug-21	14	
EP_SP_66_12-WP6A-M43.08.1.1.1.5.1 Remain Works		295	414	10.17%		265		01-Feb-21 A	21-Mar-22	04-Aug-21	28-May-22	68	
08-1105-07(6)	Precast Yard Setup	60	163	76.67%	76.67%	14	Start On or After	01-Feb-21 A	13-Jul-21	04-Aug-21	17-Aug-21	35	
08-1105-08(6)	Prefabrication of Precast Beam and Slab for Seawall A	140	140	0%	0%	140		14-Jul-21	30-Nov-21	18-Aug-21	04-Jan-22	35	
08-1105-09(6)	Prefabrication of Precast Beam & Slab for Seawall B	140	140	0%	0%	140		14-Jul-21	30-Nov-21	18-Aug-21	04-Jan-22	35	
08-1120	Construction of Seawall and Wave Wall Extension from +3mPD to Deck Level for Seawall A	220	220	0%	0%	220		14-Aug-21	21-Mar-22	21-Oct-21	28-May-22	68	
08-1120-1(6)	Construction of Seawall and Wave Wall Extension from +3mPD to Deck Level for Seawall B	220	220	0%	0%	220		14-Aug-21	21-Mar-22	28-Aug-21	04-Apr-22	14	
EP_SP_66_12-WP6A-M43.08.1.2 Phase II - Reclamation, Breakwater and Berth Construction		511	647	46.94%		271		19-Jun-20 A	27-Mar-22	30-Jun-21	21-May-27	1881	
EP_SP_66_12-WP6A-M43.08.1.2.1 Reclamation		301	451	9.97%		271		01-Jan-21 A	27-Mar-22	30-Jun-21	21-May-27	1881	
EP_SP_66_12-WP6A-M43.08.1.2.1.6 Reclamation Works		271	361	0%		271		01-Apr-21 A	27-Mar-22	30-Jun-21	22-Apr-22	26	
EP_SP_66_12-WP6A-M43.08.1.2.1.6.1 Reclamation Fill		96	128	0%		96		29-May-21 A	03-Oct-21	17-Jul-21	17-Oct-21	14	
08-1200-3 (M35)	Reclamation fill for Marine Access from -9.0mPD to +2.5mPD (~300,000m3 @ 4000m3/d)	75	60	61%	61%	29		30-May-21 A	29-Jul-21	17-Jul-21	15-Aug-21	18	
08-1220(6)	Reclamation fill for Marine Access from +2.5 to Formation Level (75,000m3 @4000m3/d)	19	19	0%	0%	19		15-Sep-21	03-Oct-21	29-Sep-21	17-Oct-21	14	
08-3030(6)	Fill up +2.5 to +7.5mPD at East Edge Area (Stage 3-2) (127,250m3 @ 4000m3/d)	32	73	62%	62%	12		29-May-21 A	10-Aug-21	15-Aug-21	27-Aug-21	18	
08-3040(6)	Fill up +2.5 to +7.5mPD at West Edge Area (Stage 3-3) (127,250m3 @ 4000m3/d)	32	32	0%	0%	32		14-Aug-21	14-Sep-21	28-Aug-21	28-Sep-21	14	
EP_SP_66_12-WP6A-M43.08.1.2.1.6.3 Surcharge Filling		90	203	0%		113		01-Apr-21 A	20-Oct-21	30-Jun-21	20-Oct-21	0	
08-3010(6)	Fill up +6 to +11&12mPD at Process Building (West) (Stage 2) (75,000m3 @ 2000m3/d)	38	113	39.47%	39.47%	23		01-Apr-21 A	22-Jul-21	30-Jun-21	22-Jul-21	0	
08-3020(6)	Fill up +6 to +12mPD at TH & CCCW Building (Stage 3) (95,000m3 @ 2500m3/d)	48	48	0%	0%	48		23-Jul-21	08-Sep-21	23-Jul-21	08-Sep-21	0	
08-3020-1(6)	Fill up +6 to +12mPD at ACC Building (Stage 4) (51,000m3 @ 2500m3/d)	20	20	0%	0%	20		09-Sep-21	28-Sep-21	09-Sep-21	28-Sep-21	0	
08-3060(6)	Fill up +7.5 to +11&12mPD at West Edge Area (Stage 5) (55,000m3 @ 2500m3/d)	22	22	0%	0%	22		29-Sep-21	20-Oct-21	29-Sep-21	20-Oct-21	0	
EP_SP_66_12-WP6A-M43.08.1.2.1.6.4 Surcharge Period		271	303	0%		271		29-May-21 A	27-Mar-22	17-Jul-21	22-Apr-22	26	
08-3090(6)	Loading @ +11&12mPD at Process Building (East) (Stage 1)	180	180	17.78%	17.78%	148		29-May-21 A	24-Nov-21	17-Jul-21	11-Dec-21	17	
08-3100(6)	Loading @ +11&12mPD at Process Building (West) (Stage 2)	180	180	0%	0%	180		23-Jul-21	18-Jan-22	17-Sep-21	15-Mar-22	56	
08-3110(6)	Loading @ +12mPD at TH & CCCW Building (Stage 3)	180	180	0%	0%	180		09-Sep-21	07-Mar-22	09-Sep-21	07-Mar-22	0	
08-3110-1(6)	Loading @ +12mPD at ACC Building (Stage 4)	180	180	0%	0%	180		29-Sep-21	27-Mar-22	25-Oct-21	22-Apr-22	26	



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

Activity ID	Activity Name	Original Duration	At Completion Duration	Duration % Complete	Activity % Complete	Remaining Duration	Primary Constraint	Current Start	Current Finish	Late Start	Late Finish	Total Float	M43 Remarks
EP_SP_66_12-WP6A-M43.08.1.2.1.6.5 Retaining Wall		14	14	0%		14		30-Jun-21	13-Jul-21	09-Jul-21	16-Sep-21	65	
08-3140(6)	Temporary Gabion Retaining Wall for Surcharge Laying at Northern Edge (~50m)	0	0	0%	0%	0		30-Jun-21	30-Jun-21	16-Sep-21	16-Sep-21	79	
08-3160(6)	Temporary Gabion Retaining Wall for Surcharge Laying at Southern Edge (~50m)	14	14	0%	0%	14		30-Jun-21	13-Jul-21	09-Jul-21	22-Jul-21	9	
EP_SP_66_12-WP6A-M43.08.1.2.1.1 Instrumentation		195	335	15.38%		165		11-Jan-21 A	11-Dec-21	05-Sep-21	21-May-27	1987	
08-1340 (M23)	Placing Settlement Plates for Settlement Markers & Instrumentation on +2.5mPD (~42nrs)	121	151	50.41%	50.41%	60		31-Mar-21 A	28-Aug-21	23-Mar-27	21-May-27	2092	
EP_SP_66_12-WP6A-M43.08.1.2.1.1.1 Instruments above +2.5mPD		195	335	15.38%		165		11-Jan-21 A	11-Dec-21	05-Sep-21	16-Feb-22	67	
EP_SP_66_12-WP6A-M43.08.1.2.1.1.1.1 Adjacent Elevated Drive Way		96	174	95.83%		4		11-Jan-21 A	03-Jul-21	12-Nov-21	15-Nov-21	135	
08-2000 (M42)	Drilling and installation of Instrumentation (12nrs.)	96	174	95.83%	95.83%	4		11-Jan-21 A	03-Jul-21	12-Nov-21	15-Nov-21	135	Extracted Activity
EP_SP_66_12-WP6A-M43.08.1.2.1.1.1.5 ACC Equipment		72	130	94.44%		4		24-Feb-21 A	03-Jul-21	05-Sep-21	08-Sep-21	67	
08-2040 (M42)	Drilling and installation of Instrumentation (9nrs.)	72	130	94.44%	94.44%	4		24-Feb-21 A	03-Jul-21	05-Sep-21	08-Sep-21	67	Extracted Activity
EP_SP_66_12-WP6A-M43.08.1.2.1.1.1.6 CCCW Building		120	130	96.67%		4		24-Feb-21 A	03-Jul-21	05-Sep-21	08-Sep-21	67	
08-2050 (M42)	Drilling and installation of Instrumentation (15nrs.)	120	130	96.67%	96.67%	4		24-Feb-21 A	03-Jul-21	05-Sep-21	08-Sep-21	67	Extracted Activity
EP_SP_66_12-WP6A-M43.08.1.2.1.1.1.7 IWMF Substation (East)		88	88	0%		88		15-Sep-21	11-Dec-21	21-Nov-21	16-Feb-22	67	
08-2060 (M42)	Drilling and installation of Instrumentation (11nrs.)	88	88	0%	0%	88		15-Sep-21	11-Dec-21	21-Nov-21	16-Feb-22	67	Extracted Activity
EP_SP_66_12-WP6A-M43.08.1.2.1.2 PVD Remedial Works		222	400	0.9%		220		01-Jan-21 A	04-Feb-22	02-Nov-21	09-Jun-22	125	
08-1390 (M34)15	Install Sand Drains at Zone D (approx. 62 nr @ 4nr/day/2 set of equipment)	16	16	0%	0%	16		30-Jun-21	15-Jul-21	26-Nov-21	11-Dec-21	149	
08-1390 (M34)20	GI for ground condition varification at other Zone for PVD (10 nr approx @0.5 nr/day) Inc Report	28	28	0%	0%	28		30-Jun-21	27-Jul-21	14-Nov-21	11-Dec-21	137	
08-1390 (M34)25	Install Sand Drains at other Zones (approx. 549 nr @ 8nr/day/4 set of equipment)	90	190	88.89%	88.89%	10		01-Jan-21 A	09-Jul-21	02-Nov-21	11-Nov-21	125	
08-1390 (M34)30	Lay Surcharge at remetial works area	30	30	0%	0%	30		10-Jul-21	08-Aug-21	12-Nov-21	11-Dec-21	125	
08-1390 (M34)40	Surcharge Period at remedial area	180	180	0%	0%	180		09-Aug-21	04-Feb-22	12-Dec-21	09-Jun-22	125	
EP_SP_66_12-WP6A-M43.08.1.2.2 Breakwater		379	526	60.4%		150		19-Jun-20 A	26-Nov-21	23-Feb-22	06-Sep-22	284	
08-1280	Rubble Mound Laying (100,000m3 approx, @550m3/d)	188	342	76.06%	76.06%	45		06-Sep-20 A	13-Aug-21	26-Mar-22	09-May-22	269	
08-1285(1)	Prefabrication for Caission	180	452	57.78%	57.78%	76		19-Jun-20 A	13-Sep-21	23-Feb-22	09-May-22	238	
08-1290	Caisson Laying (Total 29nrs, @2 nrs/week)	150	294	29.33%	29.33%	106		24-Dec-20 A	13-Oct-21	23-Feb-22	08-Jun-22	238	
08-1295(3)	Caisson Infill, Solid ballast, toe protection, precast concrete blocks ..etc Laying	200	337	25%	25%	150		25-Dec-20 A	26-Nov-21	10-Apr-22	06-Sep-22	284	
EP_SP_66_12-WP6A-M43.08.1.2.3 Seawall and Berth at Marine Access		30	109	80%		6		19-Mar-21 A	05-Jul-21	15-Oct-21	20-Oct-21	107	
08-1320(5A)	Caisson Infill, Solid ballast, toe protection, precast concrete blocks ..etc Laying	30	109	80%	80%	6		19-Mar-21 A	05-Jul-21	15-Oct-21	20-Oct-21	107	



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

Appendix B Summary of Implementation Status of Environmental Mitigation

Appendix B

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
	should be based on the guidelines in Appendix A1 of ProPECC PN 1/94, which states that the retention time for silt/sand traps should be 5 minutes under maximum flow conditions. The detailed design of the sand/silt traps shall be undertaken by the contractor prior to the commencement of construction. • Water pumped out from foundation piles must be discharged into silt removal facilities. • Measures should be taken to minimize the ingress of site runoff and drainage into excavations. Drainage water pumped out from excavations should be discharged into storm drains via silt removal facilities. • During rainstorms, exposed slope/soil surfaces should be covered by a tarpaulin or other means, as far as practicable. Other measures that need to be implemented before, during and after rainstorms are summarized in ProPECC PN 1/94. • Exposed soil areas should be minimized to reduce potential for increased siltation and contamination of runoff. • Earthwork final surfaces should be well compacted and subsequent permanent work or surface protection should be immediately performed.								

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
	• Open stockpiles of construction materials or construction wastes on-site should be covered with tarpaulin or similar fabric during rainstorms.								
S5b.8.1.2	<u>General Construction Activities</u> Construction solid waste should be collected, handled and disposed of properly to avoid entering to the nearby watercourses and public drainage system. Rubbish and litter from construction sites should also be collected to prevent spreading of rubbish and litter from the site area. It is recommended to clean the construction sites on a regular basis.	Work site / During the construction period	Contractor		✓			EIAO-TM; ProPECC PN 1/94; WPCO	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 1/94; WPCO	Discharge License was issued on 22/08/2019.
S5b.8.1.4	Accidental Spillage Contractor must register as a chemical waste producer if chemical wastes would be produced from construction activities. The Waste Disposal Ordinance (Cap 354) and its subsidiary regulations in particular the Waste Disposal (Chemical Waste) (General) Regulation should be observed and complied with for control of chemical wastes.	Work site / During the construction period	Contractor		✓			EIAO-TM; ProPECC PN 1/94; WPCO; WDO	Deficiency of Mitigation Measures but rectified by the Contractor.
S5b.8.1.5	Maintenance of vehicles and equipment involving activities with potential for leakage and spillage should only be undertaken within the areas which	Work site / During the construction period	Contractor		✓			EIAO-TM; ProPECC PN 1/94; WPCO; WDO	Implemented.

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

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

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

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

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

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

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

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

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.5.1.3	<u>Waste Reduction Measures</u> Good management and control can prevent the generation of a significant amount of waste. Waste reduction is best achieved at the planning and design stage, as well as by ensuring the implementation of good site practices. Recommendations to achieve waste reduction include: • 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	✓	✓				Deficiency of Mitigation Measures but rectified by the Contractor. N/A for foundation and demolition items

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

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

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

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
	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	Chemical Wastes Should chemical wastes be produced at the construction site, the Contractor would be required to register with EPD as a Chemical Waste Producer and to follow the guidelines stated in the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes. Good quality containers compatible with the chemical wastes should be used, and incompatible chemicals should be stored separately. Appropriate labels should be securely attached on each chemical waste container indicating the corresponding chemical characteristics of the chemical waste (such as explosive, flammable, oxidizing, irritant, toxic, harmful, or corrosive). The Contractor should employ a licensed collector to transport and dispose of the chemical wastes, to either the Chemical Waste Treatment Centre at Tsing Yi, or another licensed facility, in accordance with	Work Site/ During Construction Period	Contractor		✓			Waste Disposal (Chemical Waste) (General) Regulation	Deficiency of Mitigation Measures but rectified by the Contractor.

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

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
6b.5.2.1	<u>Good Site Practices</u> It is recommended that the following good operational practices should be adopted to minimise waste management impacts: • Obtain the necessary waste disposal permits from the appropriate authorities, in accordance with the Waste Disposal Ordinance (Cap. 354) and Waste Disposal (Chemical Waste) (General) Regulation; • Nomination of an approved person to be responsible for good site practice, arrangements for collection and effective disposal to an appropriate facility of all wastes generated at the site; • Use of a waste haulier licensed to collect specific category of waste; • A trip-ticket system should be included as one of the contractual requirements and implemented by the Environmental Team to monitor the disposal of solid wastes at landfills, and to control fly tipping. Reference should be made to ETWB TCW No. 31/2004. • Training of site personnel in proper waste management and chemical waste handling procedures; • Separation of chemical wastes for special handling and appropriate treatment at a licensed facility;	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
				Des	C	O	Dec		
	• 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	<u>Waste Reduction Measures</u> Good management and control can prevent the generation of significant amounts of waste. It is recommended that the following good operational practices should be adopted to ensure waste reduction: • Segregation and storage of different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal; • Encourage collection of aluminum cans, plastic bottles and packaging material (e.g. carton boxes) and office paper by individual collectors. Separate labelled bins should be provided to help segregate this waste from other general refuse generated by the work force; and	IWMF Site/ During Operation Period	IWMF Operator			✓			Implemented

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
	• Any unused chemicals or those with remaining functional capacity should be reused as far as practicable.								
6b.5.2.3	Storage, Handling, Treatment, Collection and Disposal of Incineration By-Products The following measures are recommended for the storage, handling and collection of the incineration by-products: • Ash should be stored in storage silos; • Ash should be handled and conveyed in closed systems fully segregatedfrom the ambient environment; • Ash should be wetted with water to control fugitive dust, where necessary; • All fly ash and APC residues should be treated, e.g. by cement solidification or chemical stabilization, for compliance with the proposed Incineration Residue Pollution Control Limits and leachability criteria prior to disposal; • The ash should be transported in covered trucks or containers to the designated landfill site. The Contractor should provide EPD with chemical analysis results of the bottom ash, and treated fly ash and APC residues to confirm that the ash/residue	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		
	can comply with the proposed Incineration Residue Pollution Control Limits before disposal.								
6b.6.3.1	<u>Fuel Oil Tank Construction and Test</u> • The fuel tank to be installed should be of specified durability. • Double skin tanks are preferred. • Underground fuel storage tank should be placed within a concrete pit. • The concrete pit shall be accessible to allow regular tank integrity tests to be carried out at regular intervals. • Tank integrity tests should be conducted by an independent qualified surveyor or structural engineer. • Any potential problems identified in the test should be rectified as soon as possible.	Fuel Oil Storage Tank/ During Design, Construction and Operation Periods	IWMF Contractor	✓	✓	✓			N/A
6b.6.3.1	<u>Fuel Oil Pipeline Construction and Test</u> • Installation of aboveground fuel oil pipelines is preferable; if underground pipelines are unavoidable, concrete lined trenches should be constructed to contain the pipelines. • Double skin pipelines are preferred.	Fuel Oil Pipelines/ During Design, Construction and Operation Periods	IWMF Contractor	✓	✓	✓			N/A

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

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

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

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
	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: - Not liable to chemically react with the materials and their containers to be stored. - Able to withstand normal loading and physical damage caused by container handling - The integrity and condition of the impermeable floor or surface should be inspected at regular intervals to ensure that it is satisfactorily maintained ➢ For liquid chemicals and chemical wastes storage, the storage area should be bunded to contain at least 110% of the storage capacity of the largest containers or 20% of the total quantity of the chemicals/chemical wastes stored, whichever is the greater. ➢ Storage containers shall be checked at regular intervals for their structural integrity and to ensure that the caps or fill points are tightly closed.								

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		
	➢ Chemical handling shall be conducted by trained workers under supervision.								
6b.6.3.2	<u>Chemicals and Chemical Wastes Spillage Response</u> A Chemicals and/ or Chemical Wastes Spillage Response Plan shall be prepared by the operator to document in detail the appropriate response procedures for chemicals or chemical wastes spillage incidents. General procedures to be undertaken in case of chemicals/ chemical waste spillages are presented below. • Training - Training on spill response actions should be given to relevant staff. The training shall cover the followings: ➢ Tools & resources to handle spillage, e.g. locations of spill handling equipment; ➢ General methods to deal with spillage; and ➢ Procedures for emergency drills in the event of spills. • Communication - Establish communication channel with FSD and EPD to report the spillage incident so that necessary	IWMF Site/ During Operation Period	IWMF Operator			✓			N/A

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

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

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
6b.6.3.4 - 6b.6.3.6	Incident Record After any spillage, an incident report should be prepared by the Plant Manager. The incident report should contain details of the incident including the cause of the incident, the material spilled and estimated spillage amount, and also the response actions undertaken. The incident record should be kept carefully and able to be retrieved when necessary. The incident report should provide sufficient details for the evaluation of any environmental impacts due to the spillage and assessment of the effectiveness of measures taken. In case any spillage or accidents results in significant land contamination, EPD should be informed immediately and the IWMF operator should be responsible for the cleanup of the affected area. The responses procedures described in **Section 6b.6.3.1** and **Section 6b.6.3.2** of EIA report should be followed accordingly together with the land contamination assessment and remediation guidelines stipulated in the *Guidance Manual for Use of Risk-based Remediation Goals for Contaminated Land Management and the Guidance Note for Contaminated Land and Remediation.*	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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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				Des	C	O	Dec		
	by interfering with their magnetic compass, and disruption in behavioural patterns such as reproduction, fat storage and foraging pattern, any un-necessary outdoor lighting should be avoided, and in-ward and down-ward pointing of lights should be adopted.								
-	Construction of Seawall/Breakwaters • 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	Opt for Quieter Construction Methods and Plants • 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	Measures to minimize impacts from artificial lighting • Unnecessary lighting should be avoided, and shielding of lights should be provided to minimize disturbance from light pollution on fauna groups.	IWMF site	Design team, contractor, IWMF operator	✓	✓	✓		EIAO-TM	Implemented
7b.8.3.44 - 7b.8.3.45	Measures to minimize accidental spillage • Regular maintenance of vessels, vehicles and equipment that may cause leakage and spillage should only be undertaken within	Work site	Contractor, IWMF operator		✓	✓	✓	EIAO-TM	Deficiency of Mitigation Measures but rectified by the Contractor.

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

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

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

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

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

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

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

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

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

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

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

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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	<u>Landscape Design</u> 1) Early planting using fast grow trees and tall shrubs at strategic locations within site as buffer to block view corridors to the site from the VSRs, and to locally screen haul roads, excavation works and site preparation works. 2) Use of tree species of dense tree crown to serve as visual barrier. 3) Hard and soft landscape treatment (e.g. trees and shrubs) of open areas within development to provide a background for the outdoor containers from open view, shade and shelter, and a green appearance from surrounding viewpoints. 4) Planting strip along the periphery of the project site. 5) Selected tree species suitable for the coastal condition.	Work site / During design & construction phases	Contractor	✓	✓				N/A

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

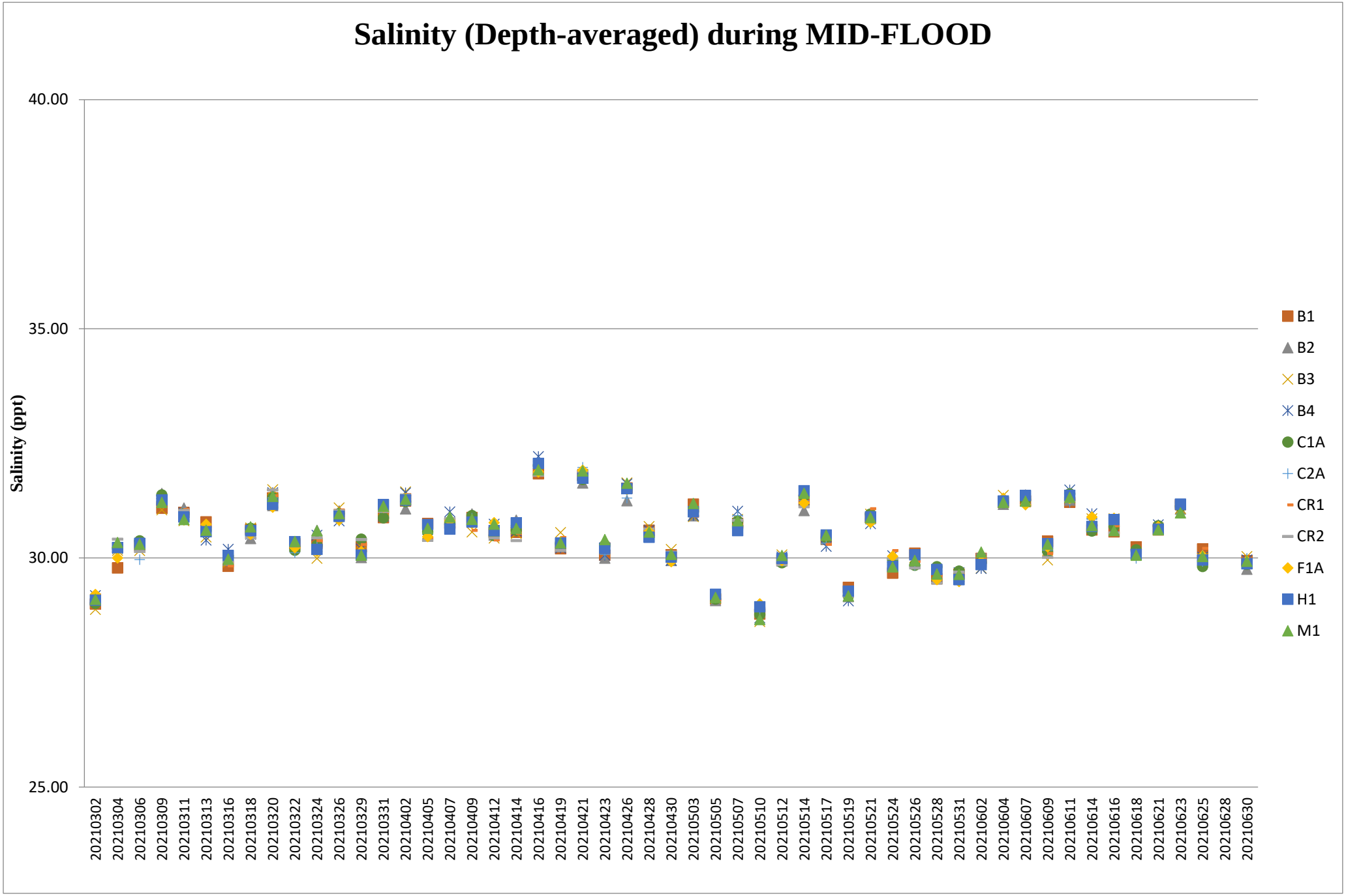
EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
S10b.10 MVC-01	<u>Visual Mitigation and Aesthetic Design</u> 1) Use of natural materials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

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

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
S10b.10 MVO-03	<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 (ppt)
40.00
35.00
30.00
25.00
20210302
20210304
20210306
20210309
20210311
20210313
20210316
20210318
20210320
20210322
20210324
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20210621
20210623
20210625
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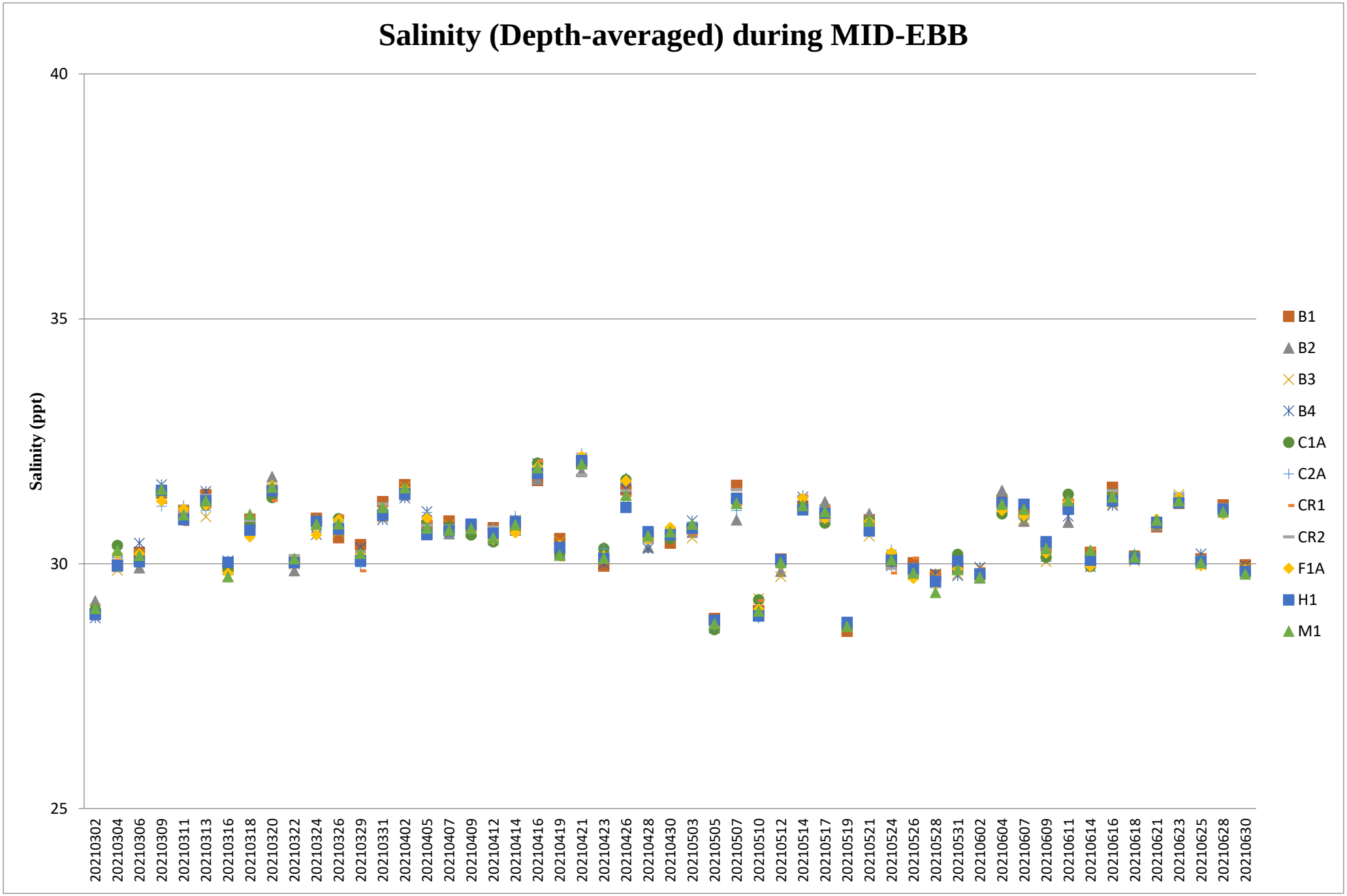
B1
B2
B3
B4
C1A
C2A
CR1
CR2
F1A
H1
M1


Salinity (Depth-averaged) during MID-EBB
Salinity (ppt)
40
35
30
25
20210302
20210304
20210306
20210309
20210311
20210313
20210316
20210318
20210320
20210322
20210324
20210326
20210329
20210331
20210402
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B1
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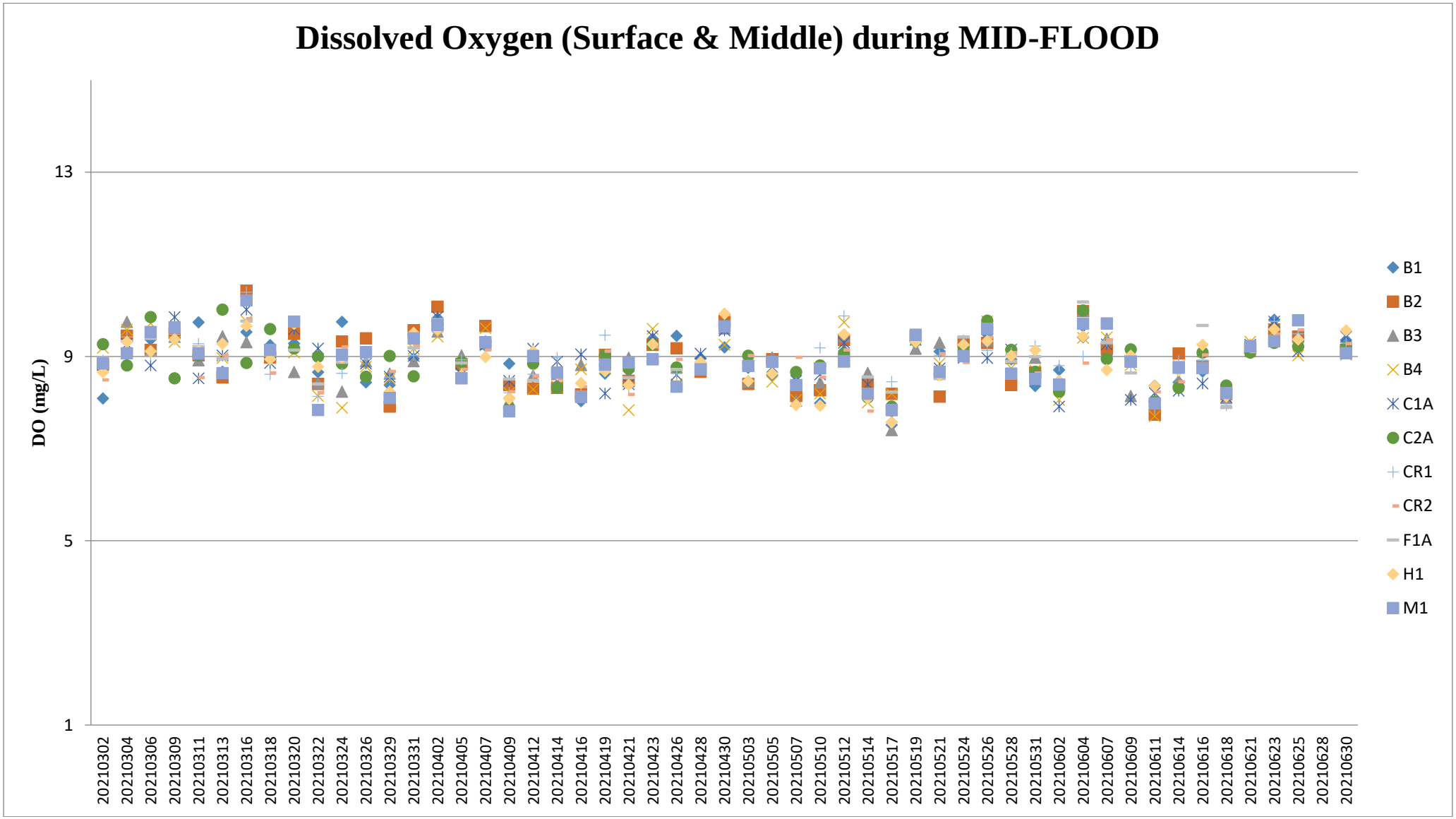
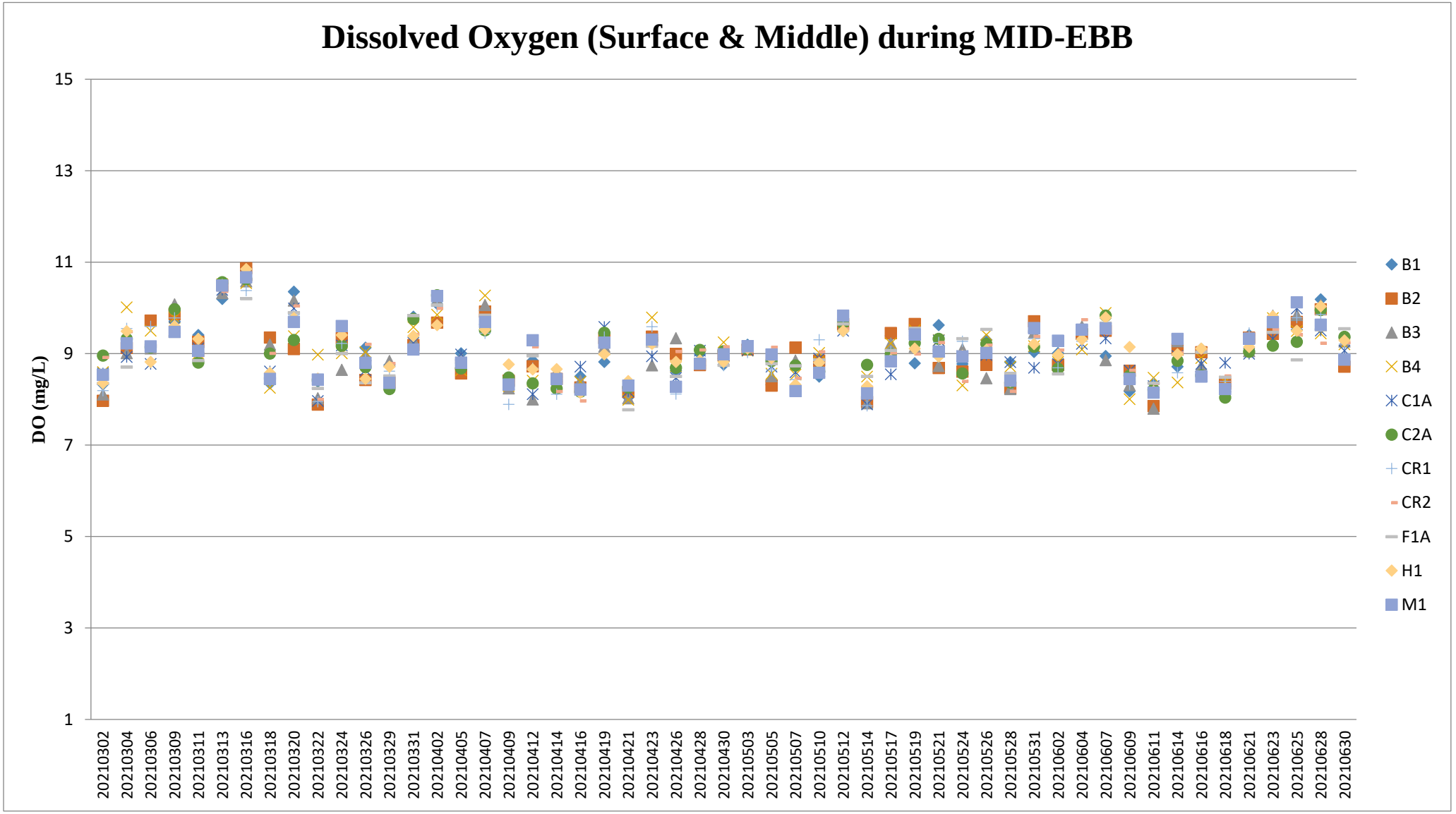
B3
B4
C1A
C2A
CR1
CR2
F1A
H1
M1



Note:

1. The Action and Limit Level of dissolved oxygen can be referred to **Table 2.3** of the quarterly EM&A report.
2. The contractor had queried the abnormal high concentration of DO in all water depths, in particular the water samples taken at bottom level, and for all monitoring stations in the last couple of months and there were no trends of decreasing DO levels with increasing temperature during June 2021.



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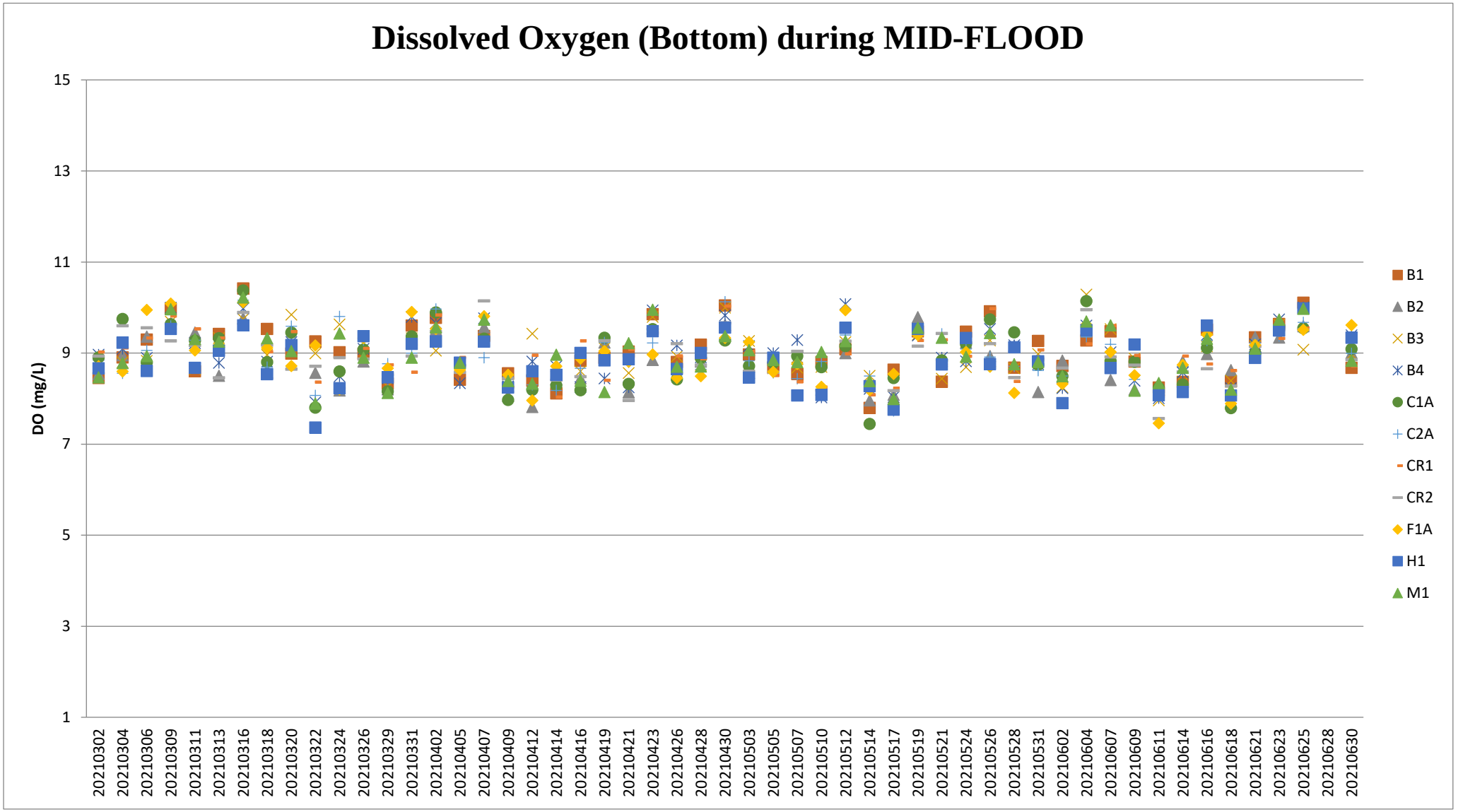

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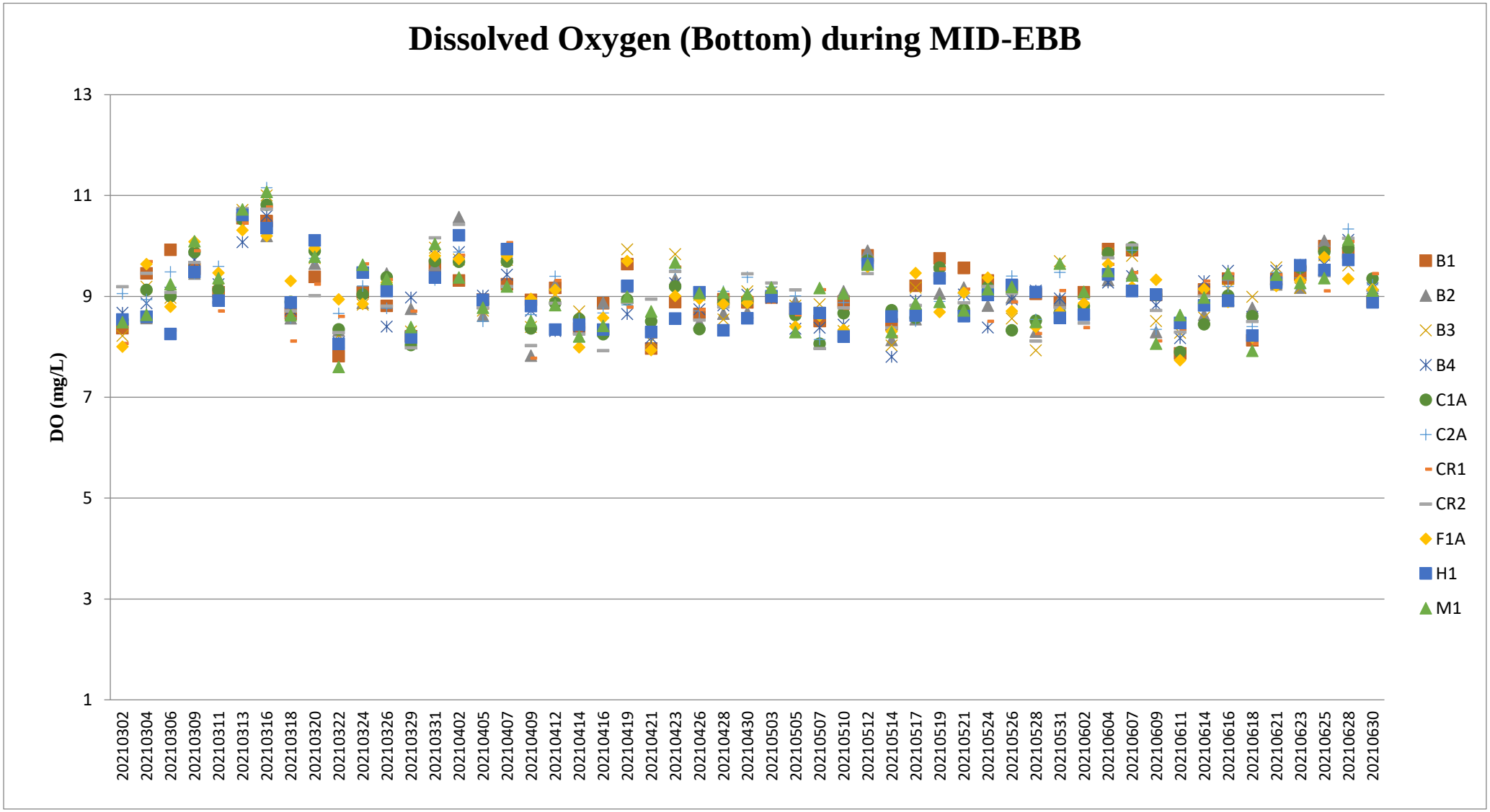

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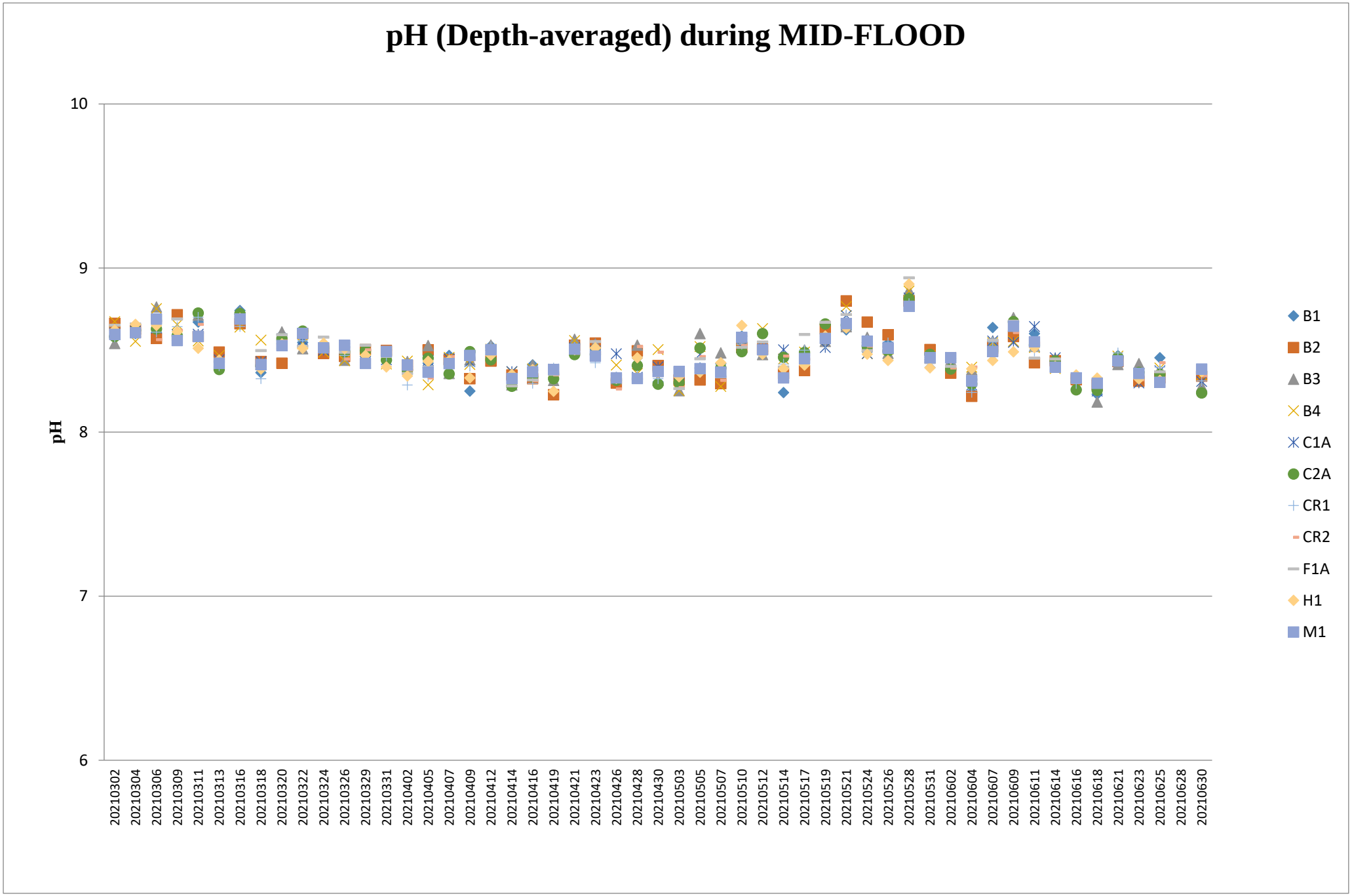
pH (Depth-averaged) during MID-FLOOD
pH
10
9
8
7
6
20210302
20210304
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20210311
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20210316
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20210320
20210322
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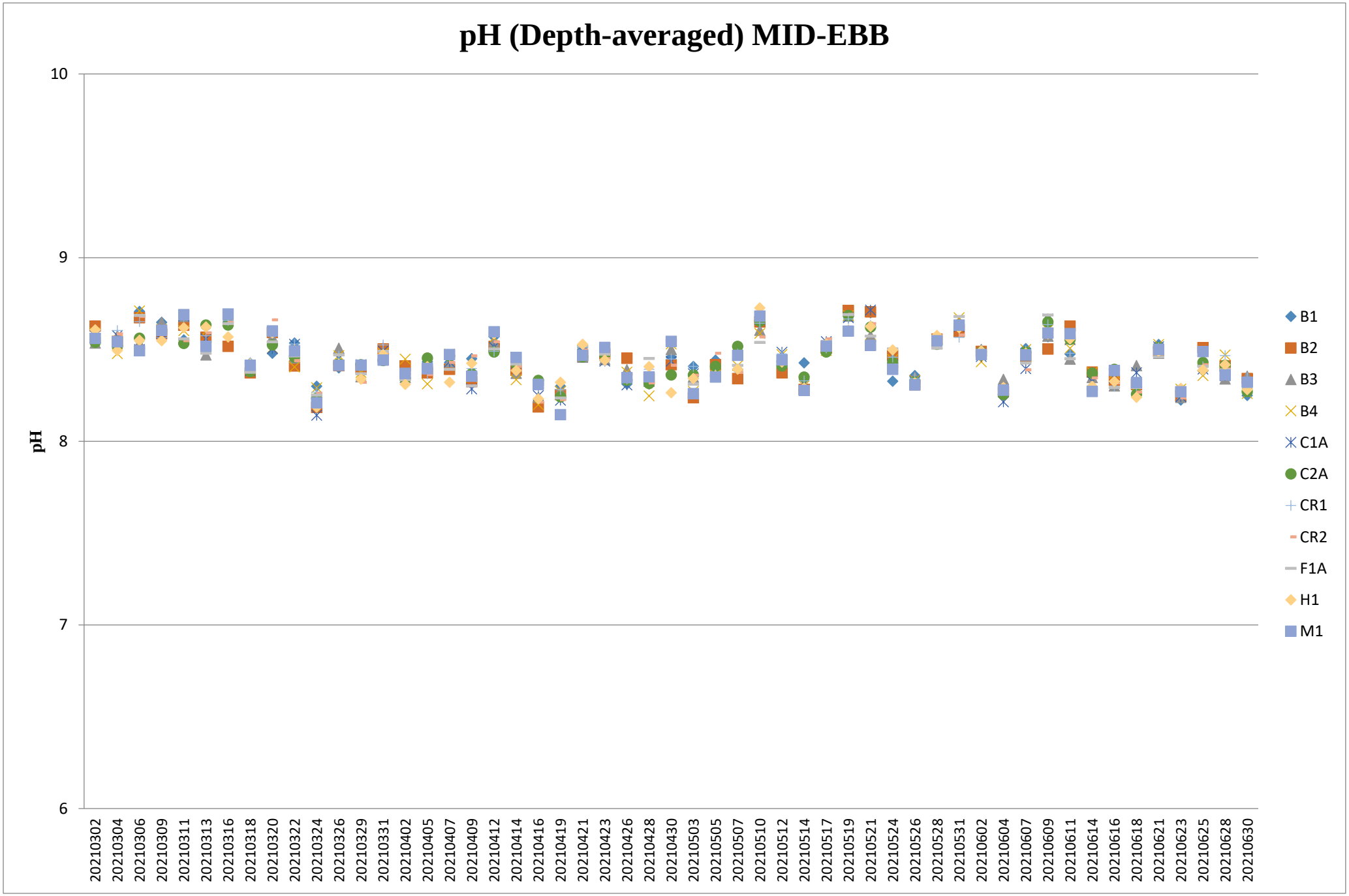
pH (Depth-averaged) MID-EBB
pH
10
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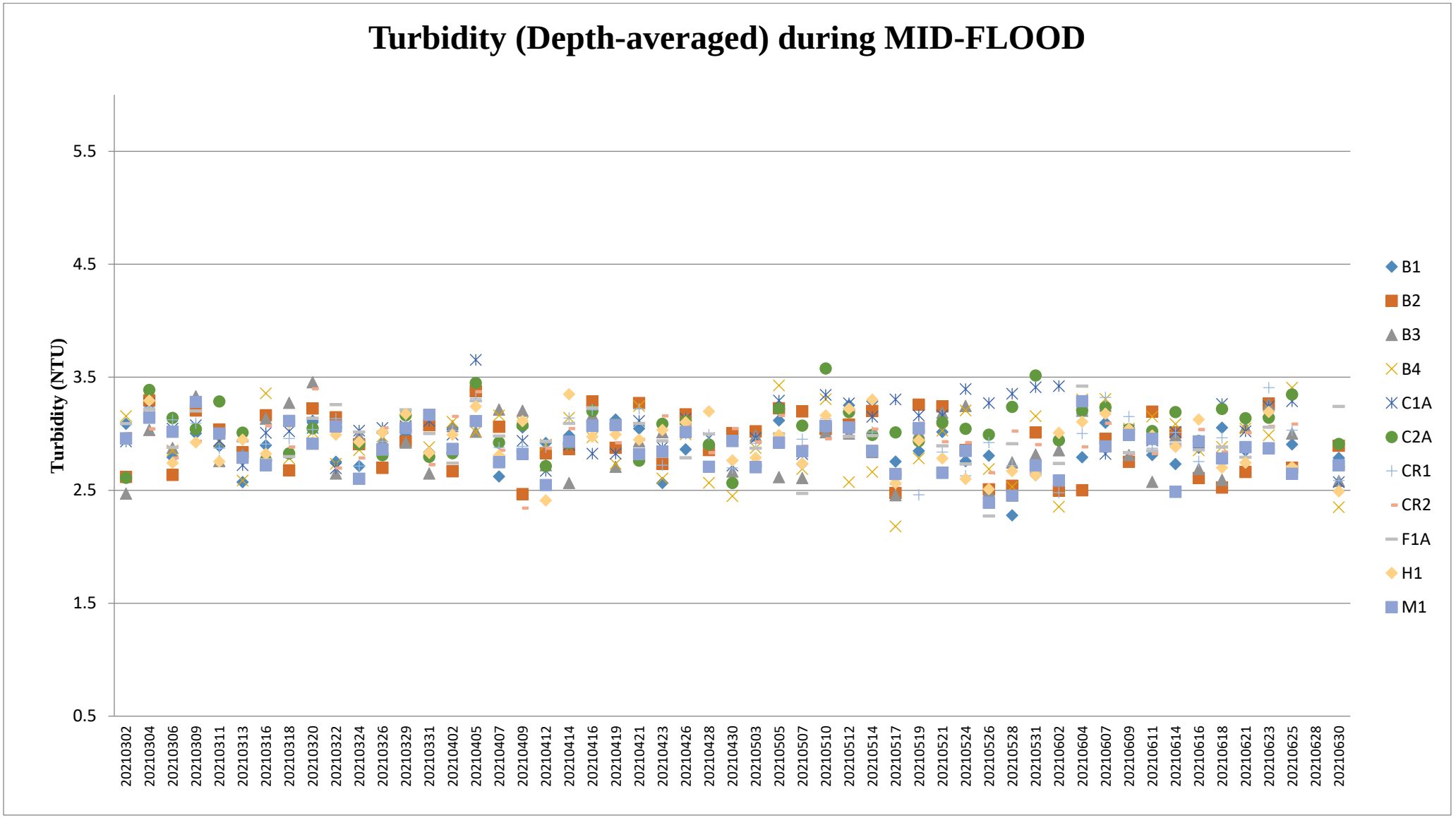
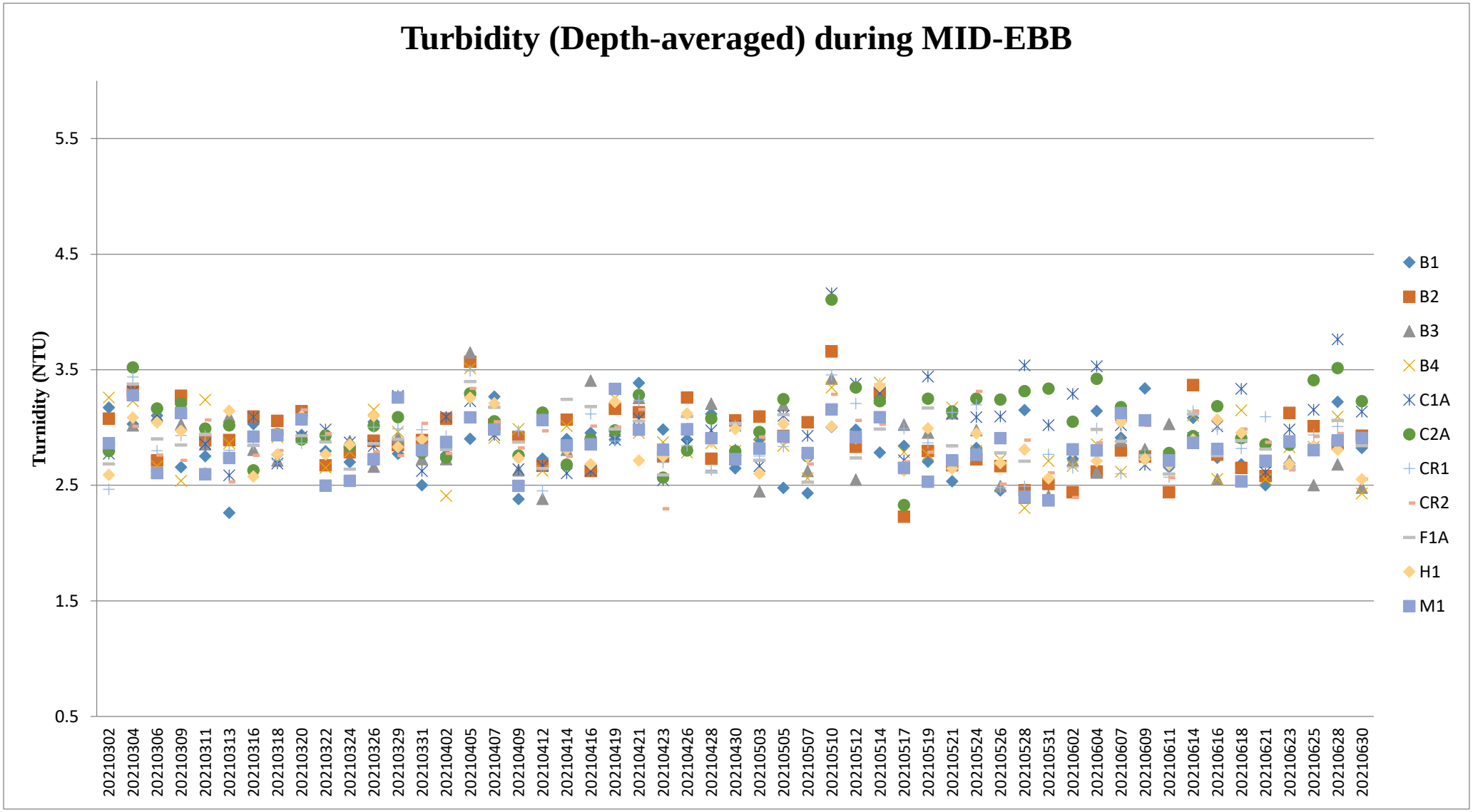


Note:

1. The Action and Limit Level of turbidity can be referred to **Table 2.3** of the quarterly EM&A report.
2. The contractor had queried the in-situ monitoring data for turbidity and the subsequent SS monitoring when comparing to on site photos taken during water samples on 28 June 2021.



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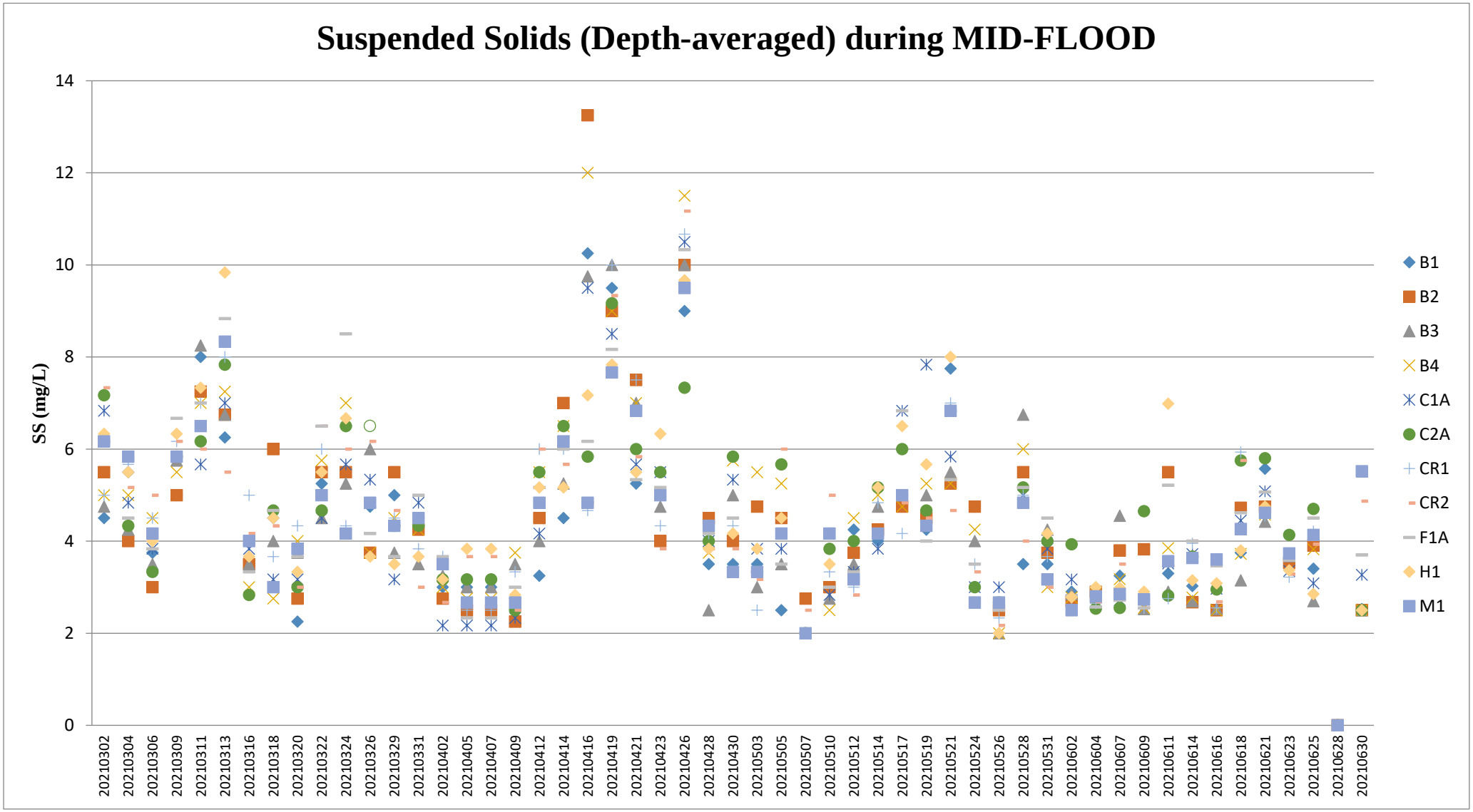

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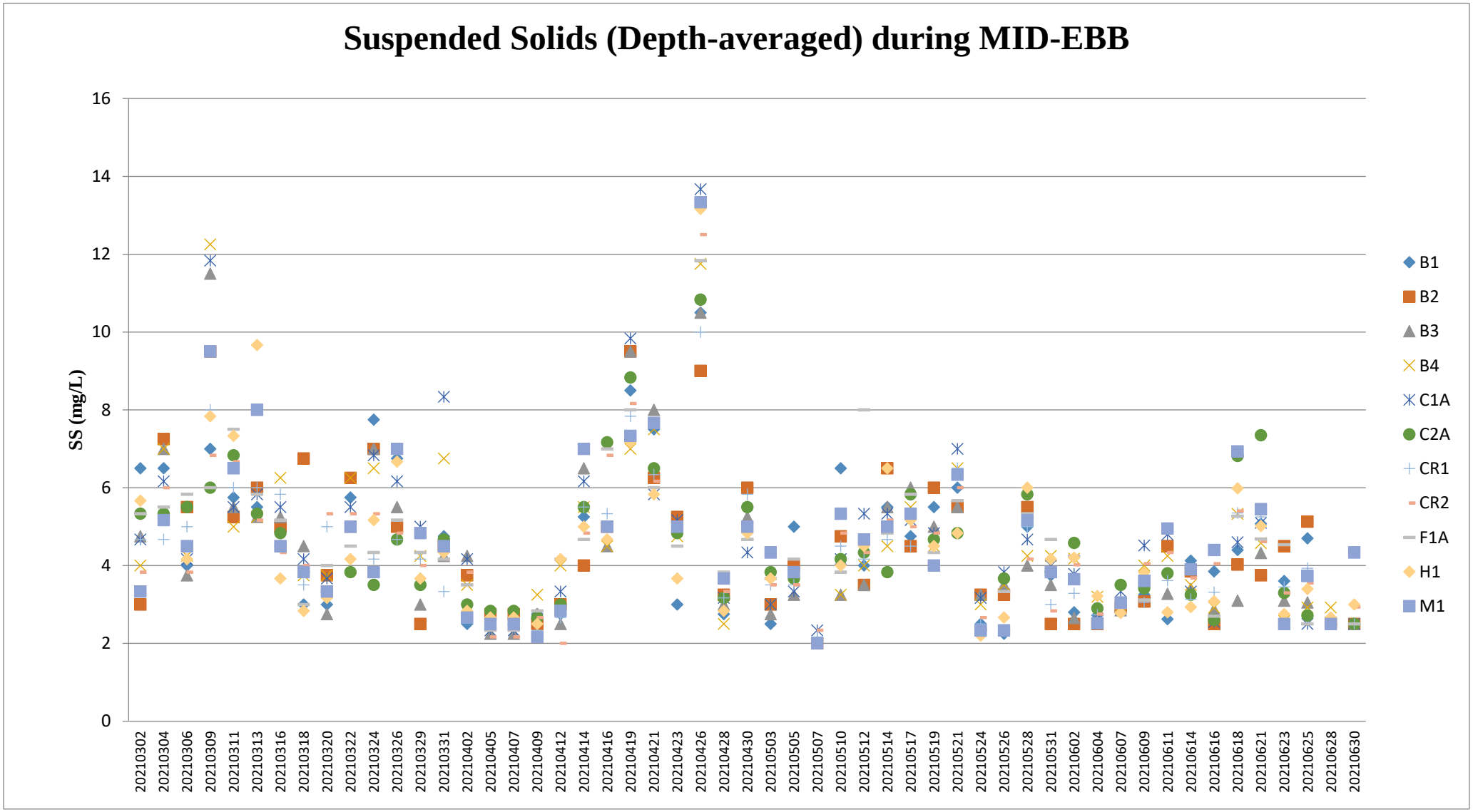

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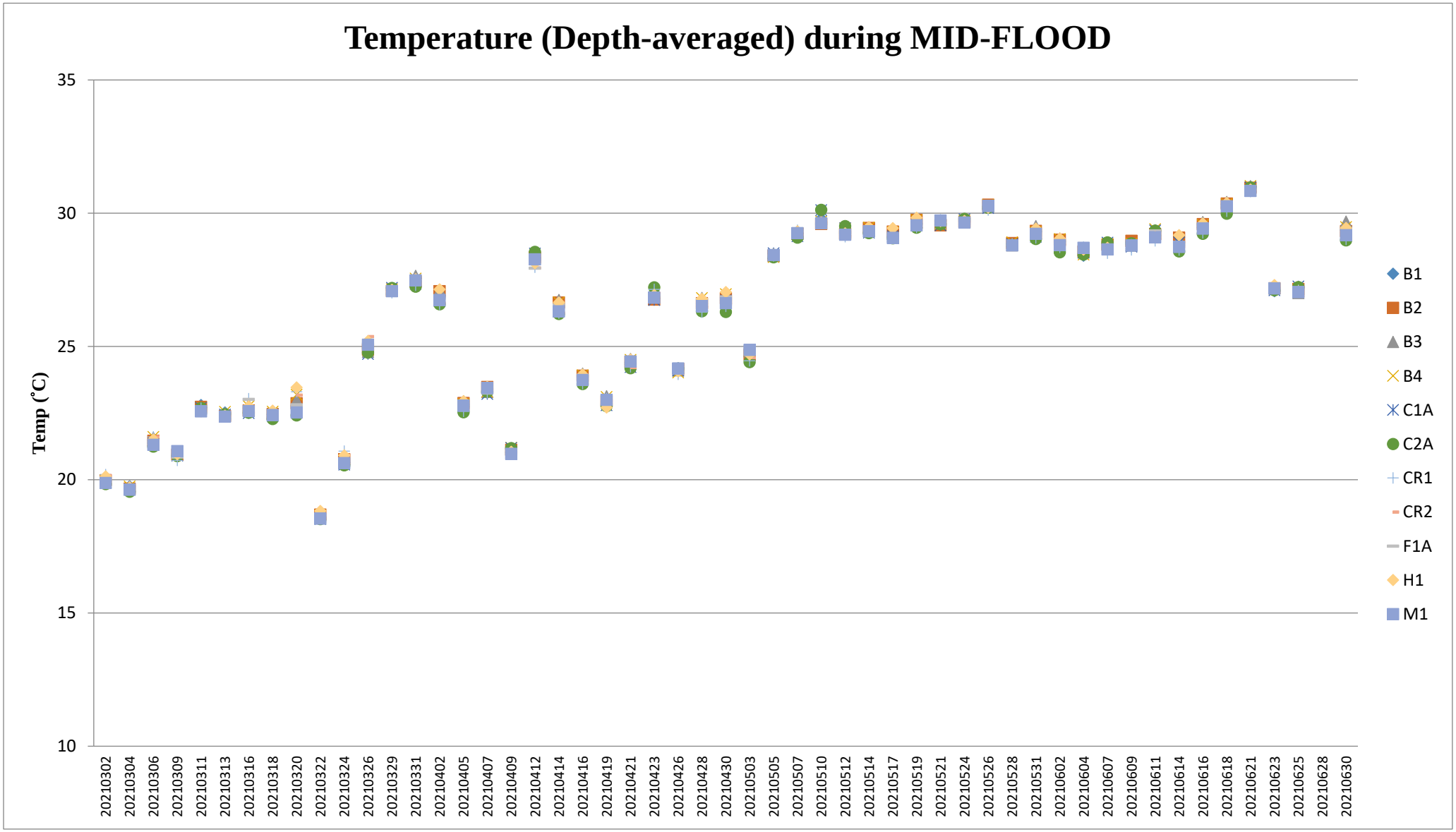
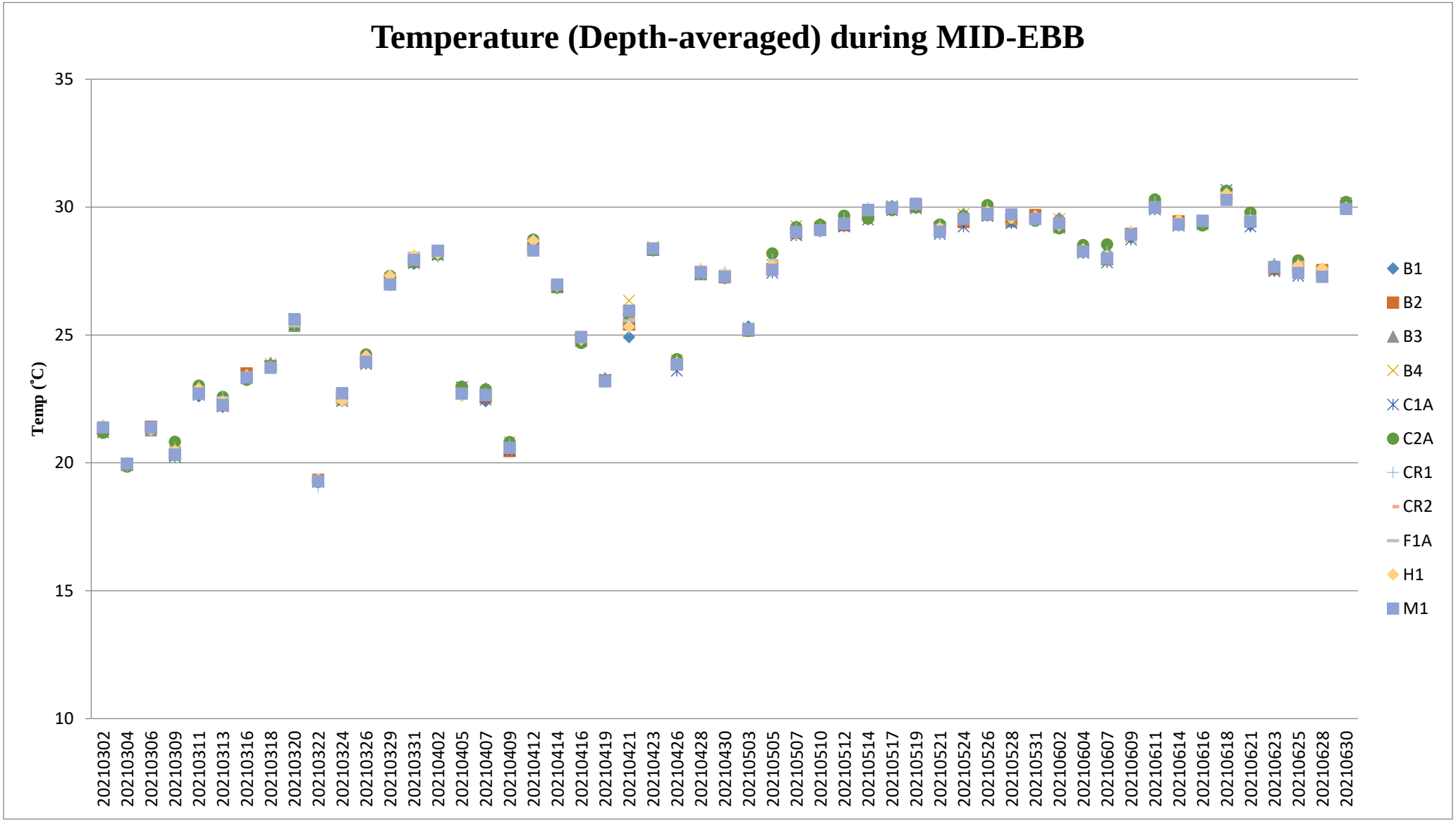


Note:

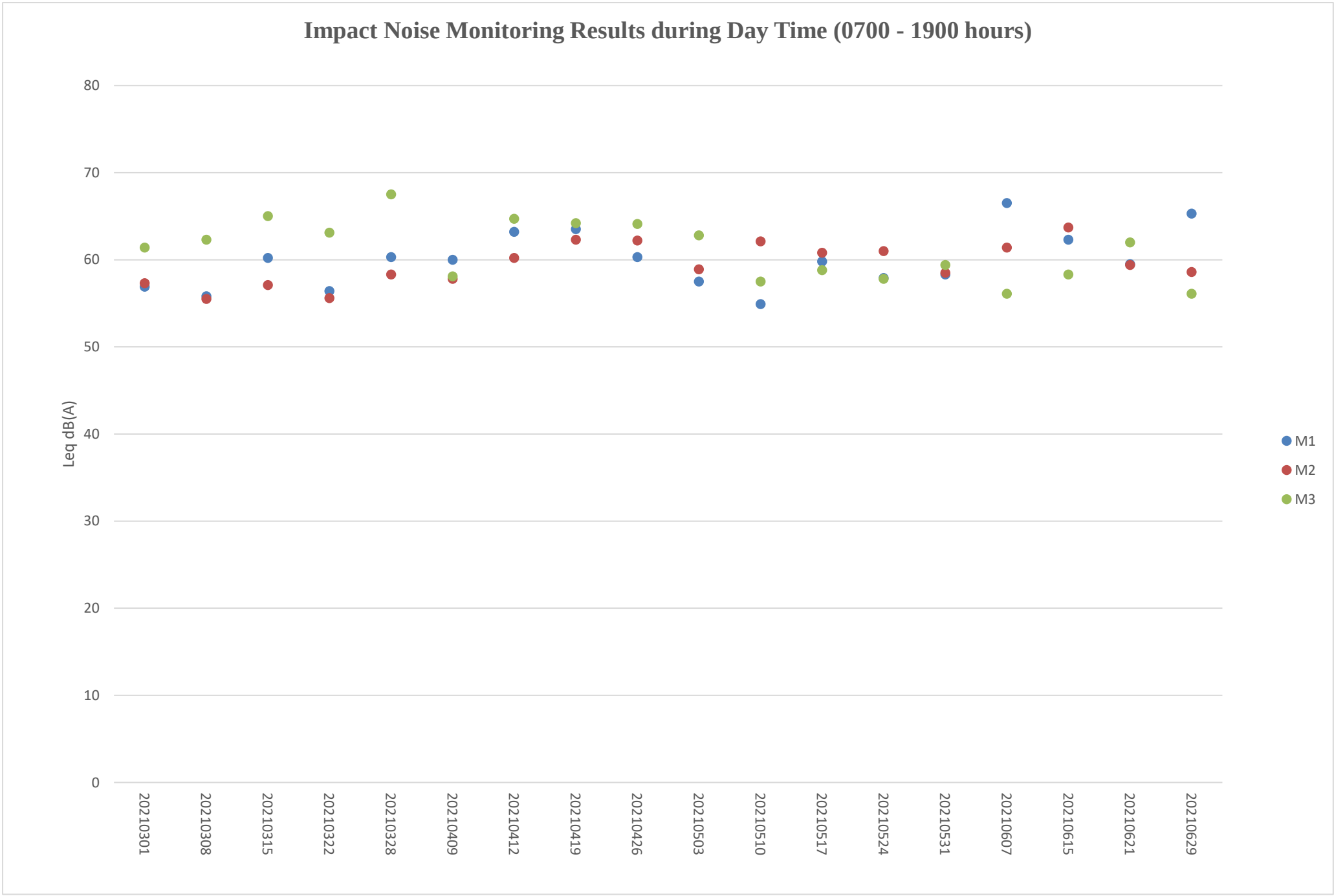
1. The Action and Limit Level of temperature can be referred to **Table 2.3** of the quarterly EM&A report.
2. The contractor had queried the abnormal fluctuation of seawater temperature during April 2021.

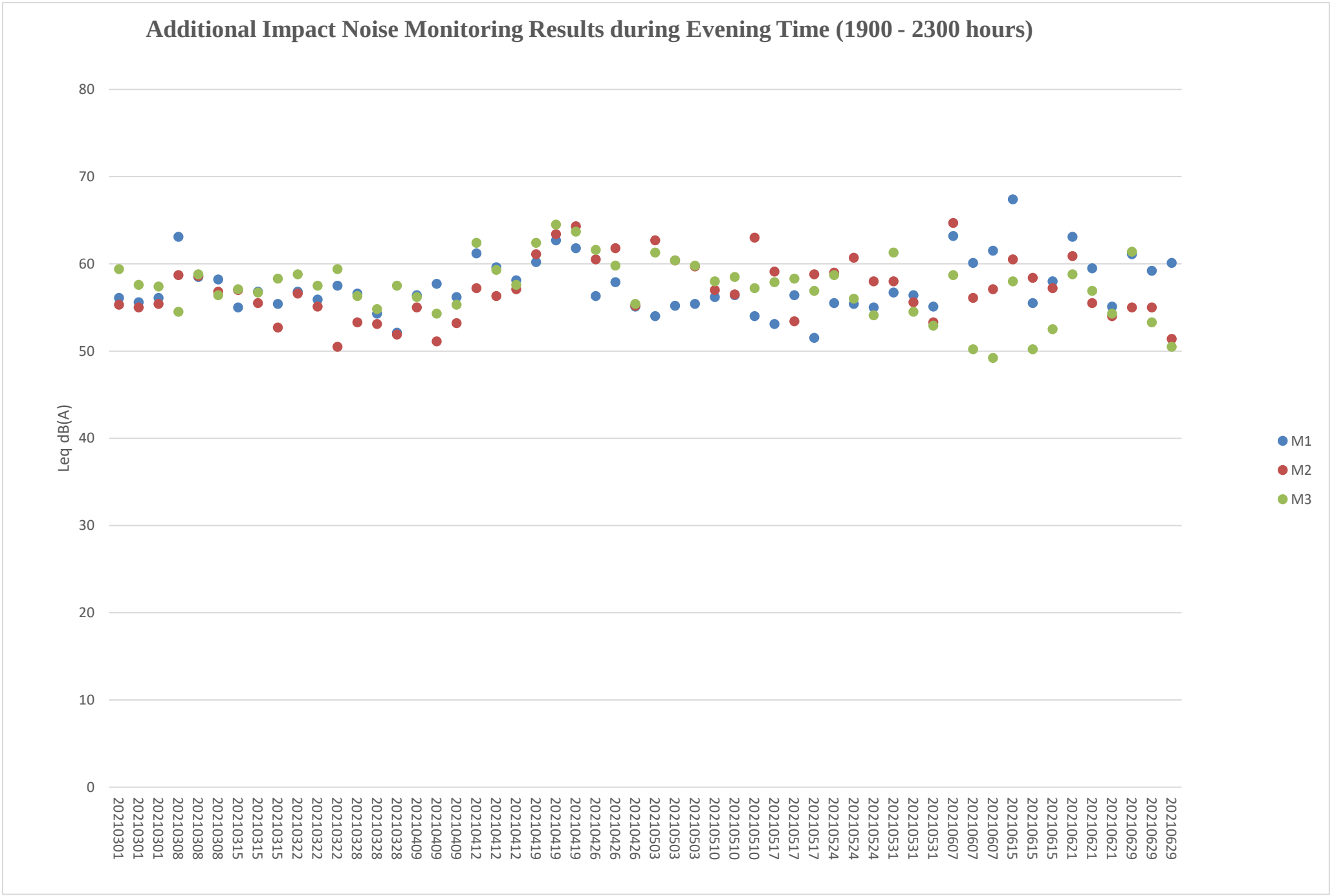


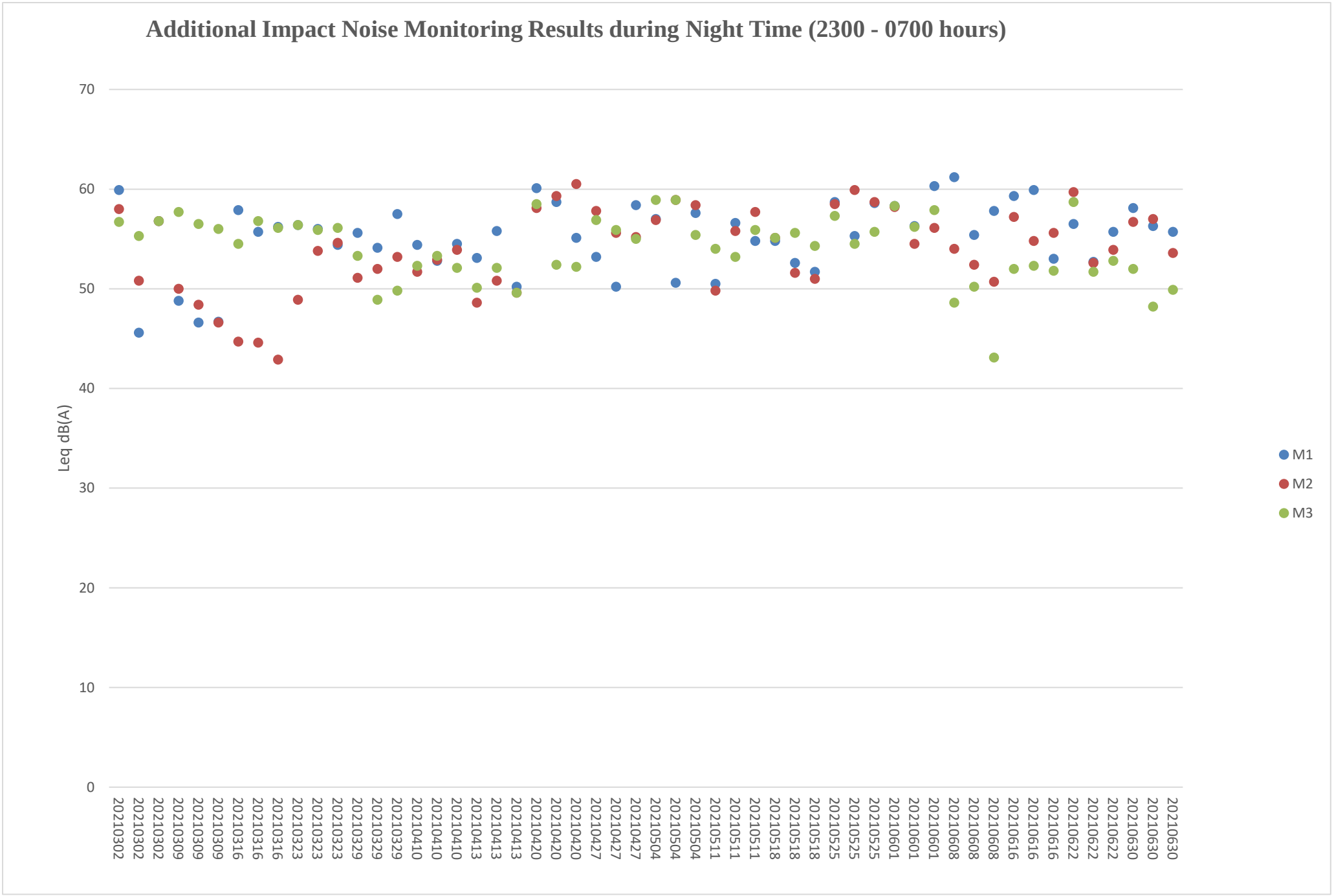
Note:

1. The Action and Limit Level of temperature can be referred to **Table 2.3** of the quarterly EM&A report.
2. The contractor had queried the abnormal fluctuation of seawater temperature during April 2021.

Appendix D Noise Monitoring Data Trending


Impact Noise Monitoring Results during Day Time (0700 - 1900 hours)
Leq dB(A)
80
70
60
50
40
30
20
10
0
20210301
20210308
20210315
20210322
20210328
20210409
20210412
20210419
20210426
20210503
20210510
20210517
20210524
20210531
20210607
20210615
20210621
20210629
M1
M2
M3


Additional Impact Noise Monitoring Results during Evening Time (1900 - 2300 hours)
Leq dB(A)
80
70
60
50
40
30
20
10
0
20210301
20210301
20210301
20210308
20210308
20210308
20210315
20210315
20210315
20210322
20210322
20210322
20210328
20210328
20210328
20210409
20210409
20210409
20210412
20210412
20210412
20210419
20210419
20210419
20210426
20210426
20210426
20210503
20210503
20210503
20210510
20210510
20210510
20210517
20210517
20210517
20210524
20210524
20210524
20210531
20210531
20210531
20210607
20210607
20210607
20210615
20210615
20210615
20210621
20210621
20210621
20210629
20210629
20210629
M1
M2
M3


Additional Impact Noise Monitoring Results during Night Time (2300 - 0700 hours)
Leq dB(A)
70
60
50
40
30
20
10
0
M1
M2
M3
20210302
20210302
20210302
20210309
20210309
20210309
20210316
20210316
20210316
20210323
20210323
20210323
20210329
20210329
20210329
20210410
20210410
20210410
20210413
20210413
20210413
20210420
20210420
20210420
20210427
20210427
20210427
20210504
20210504
20210504
20210511
20210511
20210511
20210518
20210518
20210518
20210525
20210525
20210525
20210601
20210601
20210601
20210608
20210608
20210608
20210616
20210616
20210616
20210622
20210622
20210622
20210630
20210630
20210630

Appendix E Waste Flow Table

吉寶西格斯 - 振華聯營公司

Keppel Seghers - Zhen Hua Joint Venture

Monthly Summary Waste Flow Table for 2018 (year)

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

Month	Actual Quantities of Inert C&D Materials Generated Monthly								Actual Quantities of C&D Wastes Generated Monthly					
	Total Quantity Generated	Hard Rock and Large Broken Concrete (see Note 1)	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill Sand	Imported Fill Public fill	Imported Fill Rock	Metals	Paper/ cardboard packaging	Plastics (see Note 2)	Chemical Waste		Others, e.g. general refuse (see Note 3)
	(in ,000m^3)	(in ,000m^3)	(in ,000m^3)	(in ,000m^3	(in ,000m^3)	(in ,000m^3)			(in ,000 kg)	(in ,000kg)	(in ,000kg)	(in ,000kg)	(in ,000L)	(in ,000 m^3)
Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0
May	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub-total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0065
Sep	0	0	0	0	0	2.9619	0	0	0	0	0	0	0	0
Oct	0	0	0	0	0	3.0771	0	0	0	0	0	0	0	0.0130
Nov	0	0	0	0	0	6.7871	0	0	0	0	0	0	0	0
Dec	0	0	0	0	0	59.0709	0	0	0	0	0	0.2000	0.8700	0
Total	0	0	0	0	0	71.8970	0	0	0	0	0	0.2000	0.8700	0.0195

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

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

Monthly Summary Waste Flow Table for 2019 (year)

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

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

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

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

Monthly Summary Waste Flow Table for 2020 (year)

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

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

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

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

Monthly Summary Waste Flow Table for 2021 (year)

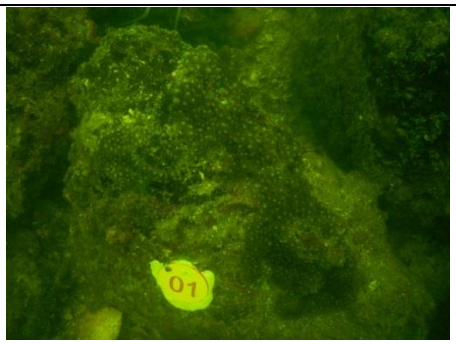
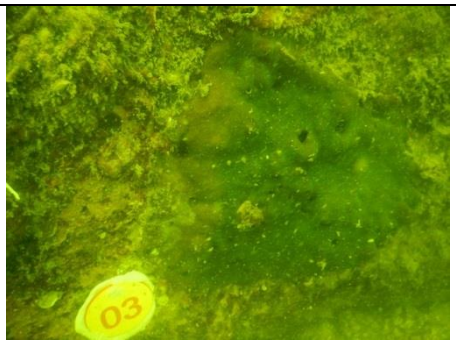
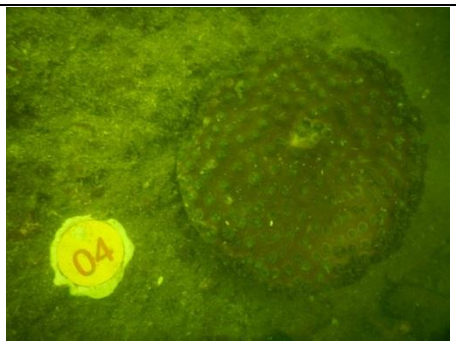
Project : Integrated Waste Management Facilities, Phase 1 Contract No.: EP/SP/66/12

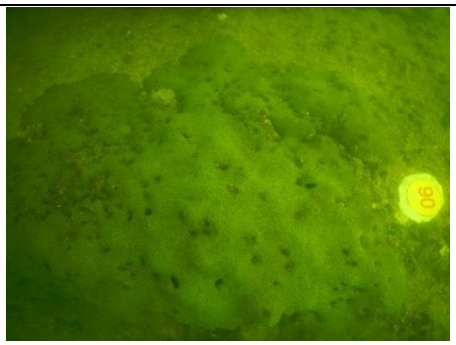
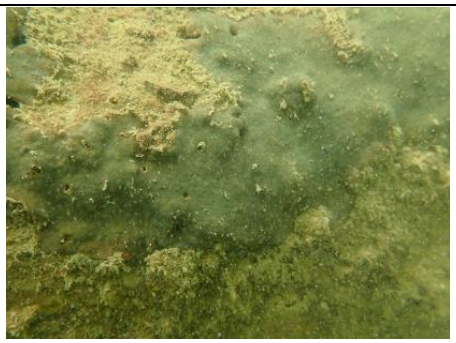
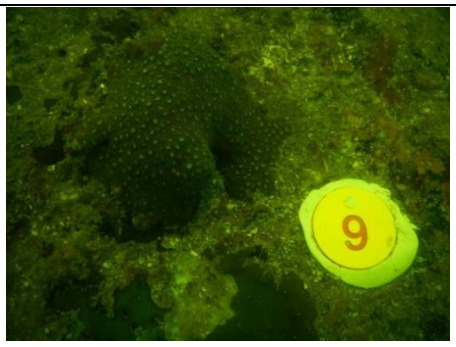
Month	Actual Quantities of Inert C&D Materials Generated Monthly								Actual Quantities of C&D Wastes Generated Monthly					
	Total Quantity Generated	Hard Rock and Large Broken Concrete (see Note 1)	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill Sand	Imported Fill Public fill	Imported Fill Rock	Metals	Paper/ cardboard packaging	Plastics (see Note 2)	Chemical Waste		Others, e.g. general refuse (see Note 3)
	(in ,000m^3)	(in ,000m^3)	(in ,000m^3)	(in ,000m^3	(in ,000m^3)	(in ,000m^3)			(in ,000 kg)	(in ,000kg)	(in ,000kg)	(in ,000kg)	(in ,000L)	(in ,000 m^3)
Jan	0	0	0	0	0	0	198.1311	36.4775	0	0	0	0	0	0.0065
Feb	0	0	0	0	0	0	143.9511	20.9960	0	0	0	0	0	0.6305
Mar	0	0	0	0	0	0	103.1833	23.4510	0	0	0	0	0	0.0130
Apr	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	0	0	0	0.0455
Sub-total	0	0	0	0	0	0	941.4639	152.5145	0	0	0	0	0	0.7800
Jul														
Aug														
Sep														
Oct														
Nov														
Dec														
Total	0	0	0	0	0	0	941.4639	152.5145	0	0	0	0	0	0.7800

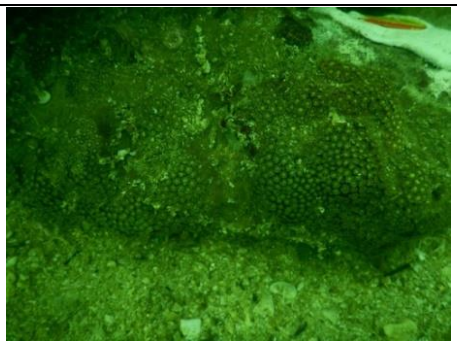
Notes:
(1) Broken concrete for recycling into aggregates.
(2) Plastics refer to plastic bottles/ containers, plastic sheets/ foam from packaging materials.
(3) Use the conversion factor : 1 full load of dumping truck being equivalent to 6.5m^3 by volume.

Appendix F Photo Records for Coral Monitoring

Photo Plate for Tagged and Re-tagged Corals at Control Site during the 10th Quarterly Coral Monitoring during Construction Phase on 28 June 2021

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

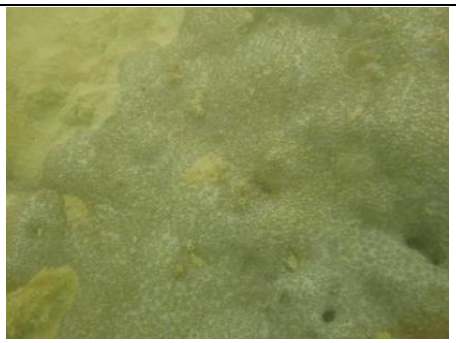
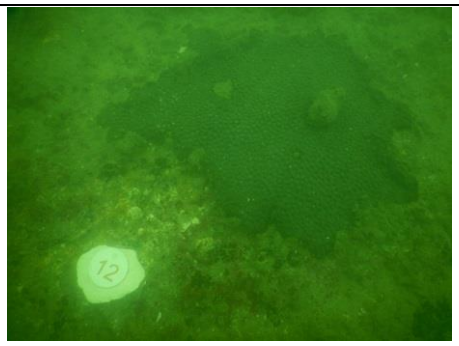
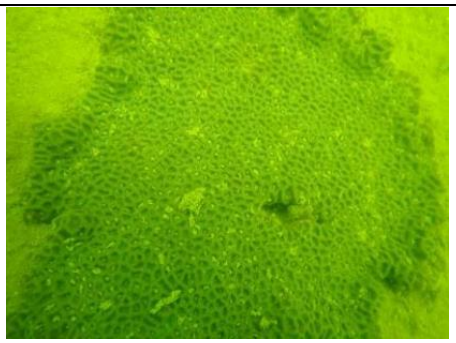
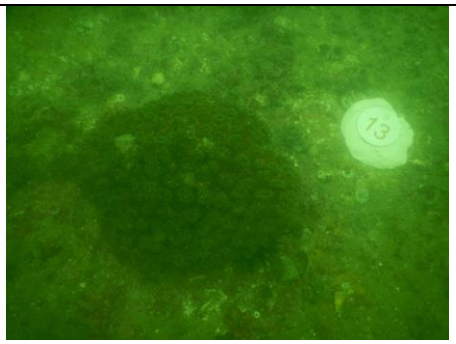
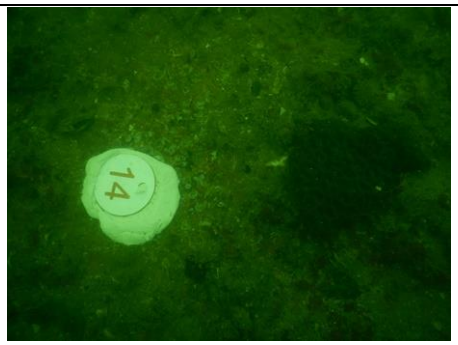
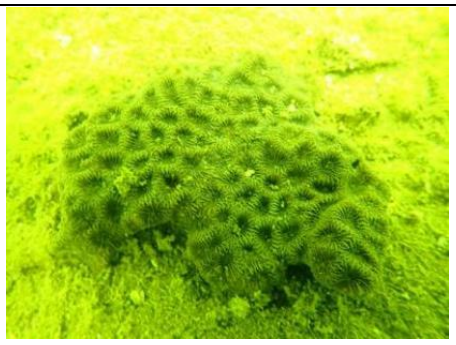
Tag #	Baseline (26 June 2018 & 3 December 2018)	26 June 2021
#5R	 *Goniopora stutchburyi*	 *Goniopora stutchburyi*
#6	 *Cyphastrea serailia*	 *Cyphastrea serailia*
#7R	 *Coscinaraea* sp.	 *Coscinaraea* sp.
#8	 *Goniopora stutchburyi*	 *Goniopora stutchburyi*
#9	 *Goniopora stutchburyi*	 *Goniopora stutchburyi*

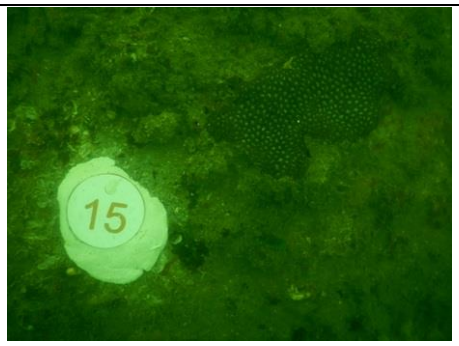
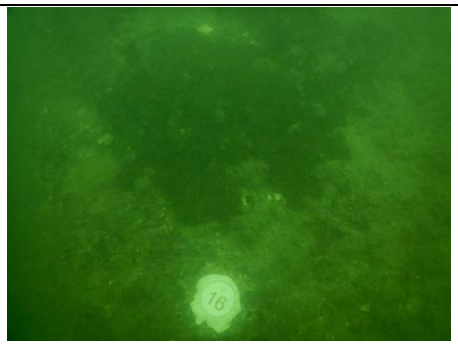
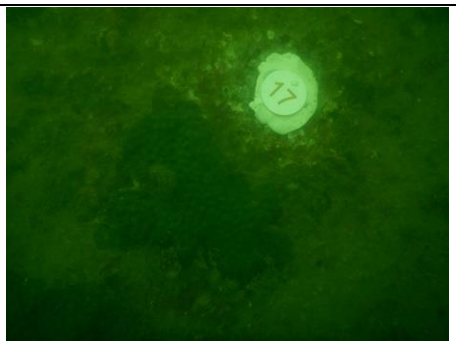
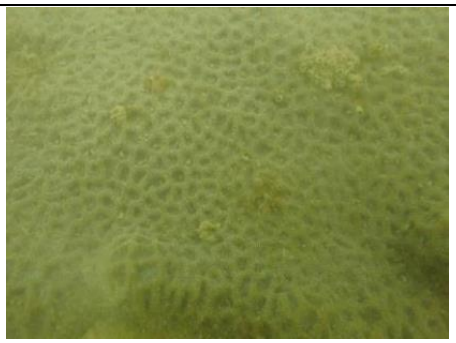
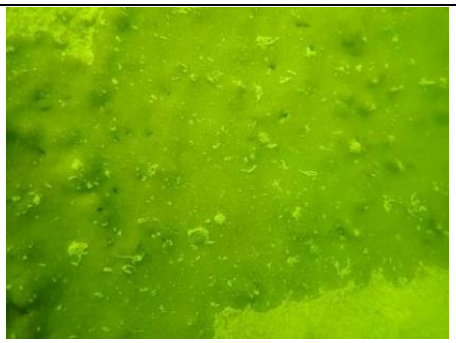
Tag #	Baseline (26 June 2018 & 3 December 2018)	26 June 2021
#10R	 *Goniopora stutchburyi*	 *Goniopora stutchburyi*

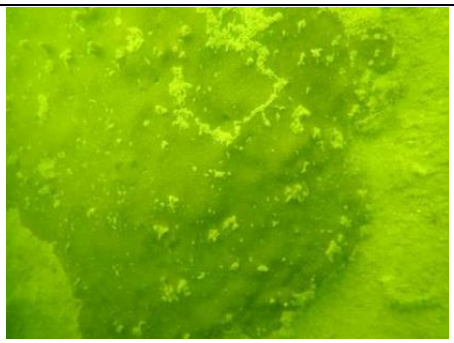
Notes:

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

Photo Plate for Re-tagged Corals at Indirect Impact during the 10th Quarterly Coral Monitoring during Construction Phase on 28 June 2021

Tag #	Baseline (23 November 2018)	28 June 2021
#11R	 *Cyphastrea serailia*	 *Cyphastrea serailia*
#12R	 *Favites chinensis*	 *Favites chinensis*
#13R	 *Turbinaria peltata*	 *Turbinaria peltata*
#14R	 *Favites chinensis*	 *Favites chinensis*

Tag #	Baseline (23 November 2018)	28 June 2021
#15R	 *Goniopora stutchburyi*	 *Goniopora stutchburyi*
#16R	 *Psammocora superficialis*	 *Psammocora superficialis*
#17R	 *Favites chinensis*	 *Favites chinensis*
#18R	 *Psammocora superficialis*	 *Psammocora superficialis*
#19R	 *Psammocora superficialis*	 *Psammocora superficialis*

Tag #	Baseline (23 November 2018)	28 June 2021
#20R	 *Psammocora superficialis*	 *Psammocora superficialis*

Notes:

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

Appendix G Photo Records for Marine Mammal Monitoring

Photo records of Vessel-based Line-Transect Survey Effort

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

NB_2021-05-04_09-41-10_0027_CROP

NB_2021-05-04_09-44-16_0057_CROP

NB_2021-05-04_09-45-08_0078_CROP

NB_2021-05-04_09-45-13_0086_CROP

Appendix H Photo Records for White-bellied Sea Eagle Monitoring

Photo Plate for 34th Monthly WBSE monitoring

Adult WBSE Recorded in Shek Kwu Chau on 15 April 2021

Adult WBSE Recorded in Shek Kwu Chau on 29 April 2021

Photo Plate for 35th Monthly WBSE monitoring

Adult WBSE Recorded in Shek Kwu Chau on 13 May 2021

Adult WBSE Recorded in Shek Kwu Chau on 27 May 2021

Photo Plate for 36th Monthly WBSE monitoring

Adult WBSE Recorded in Shek Kwu Chau on 28 June 2021

Appendix I Complaint Log

Statistical Summary of Environmental Complaints

Reporting Period	Environmental Complaint Statistics		
	Frequency	Cumulative	Complaint Nature
1 Apr 2021 – 30 Apr 2021	0	0	N/A
1 May 2021 – 31 May 2021	0	0	N/A
1 Jun 2021 – 30 Jun 2021	0	0	N/A

Statistical Summary of Environmental Summons

Reporting Period	Environmental Summons Statistics		
	Frequency	Cumulative	Details
1 Apr 2021 – 30 Apr 2021	0	0	N/A
1 May 2021 – 31 May 2021	0	0	N/A
1 Jun 2021 – 30 Jun 2021	0	0	N/A

Statistical Summary of Environmental Prosecution

Reporting Period	Environmental Prosecution Statistics		
	Frequency	Cumulative	Details
1 Apr 2021 – 30 Apr 2021	0	0	N/A
1 May 2021 – 31 May 2021	0	0	N/A
1 Jun 2021 – 30 Jun 2021	0	0	N/A