環境保護署
Environmental Protection Department

Contract No. EP/SP/66/12
Integrated Waste Management Facilities, Phase 1
Monthly EM&A Report No.63

Keppel Seghers

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

Monthly EM&A Report No.63
(Period from 1 September to 30 September 2023)

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

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A	First Submission	14 October 2023

CONTENTS

EXECUTIVE SUMMARY

Introduction

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 63rd Monthly EM&A Report, prepared by ASCL, for the Project summarizing the monitoring results and audit findings of the EM&A programme at and around Shek Kwu Chau (SKC) during the reporting period from 1 September to 30 September 2023.

Summary of Main Works Undertaken & Key Mitigation Measures Implemented

A4. Key activities carried out in this reporting period for the Project included the following:

- Reclamation Area:
  - Installation of Instrumentation
  - Site Investigation works for foundation
  - Foundation works (including Driven H Pile and Socketed H Pile)
  - Pile cap construction
  - Structural steel work
  - Superstructure construction
- Seawall Portion:
  - Caisson extension works, from +3mPD to +6mPD, at Seawall A and B
  - Construction of wave wall along the vertical seawall above +3mPD

A5. The key environmental mitigation measures implemented for the Project in this reporting period associated with the construction activities include:

- Reduction of noise from equipment and machinery on-site;
- Sorting, recycling, storage and disposal of general refuse and construction waste;
- Management of chemicals and avoidance of oil spillage on-site;
- Confirmation of the absence of silt content in the rock filling material and the filling work is properly conducted;
- Dust suppression measures for exposed earth surface and stockpile of dusty material; and
- Site runoff control measure during rainstorm.

Summary of Exceedance & Investigation & Follow-up

A6. The EM&A works for construction waste, noise monitoring, White-Bellied Sea Eagle (WBSE) and coral monitoring were conducted during the reporting period in accordance with the Updated EM&A Manual.

A7. No exceedance of the Action or Limit Levels in relation to noise, construction waste, WBSE and coral monitoring was recorded in the reporting month.

A8. Weekly site inspections of the construction work by ET were carried out on 07, 12, 19 and 26 September 2023 to audit the mitigation measures implementation status. Monthly joint site inspection was carried out on 12 September 2023 by ET and IEC. Observations were recorded in the site inspection checklists and provided to the contractors together with the appropriate follow-up actions where necessary.

Complaint Handling and Prosecution

A9. One complaint was received by the Environmental Protection Department on 05 September 2023 and referred to the ET and IEC on 06 September 2023. The complaints were related to alleged discharge of effluent near the shore of artificial island After the investigation, the leakage of muddy water was induced by the damaged geotextile at caisson 7. The damaged geotextile had been repaired immediately and no further leakage was reported or observed afterwards.

A10. Neither notifications of summons nor prosecution was received for the Project.

Reporting Change

A11. There was no change to be reported that may affect the on-going EM&A programme.

Summary of Upcoming Key Issues and Key Mitigation Measures

A12. Key activities anticipated in the next reporting period for the Project will include the following:

- Reclamation Area:
  - Installation of Instrumentation
  - Site Investigation works for foundation
  - Foundation works (including Driven H Pile and Socketed H Pile)
  - Pile cap construction
  - Structural steel work
  - Superstructure construction
- Seawall Portion:
  - Caisson extension works, from +3mPD to +6mPD, at Seawall A and B
  - Construction of wave wall along the vertical seawall above +3mPD

A13. The key environmental mitigation measures for the Project in the coming reporting period associated with the construction activities will include:

- Reduction of noise from equipment and machinery on-site;
- Sorting, recycling, storage and disposal of general refuse and construction waste;
- Management of chemicals and avoidance of oil spillage on-site, especially under heavy rains and adverse weather;
- Dust control of exposed soil surface and stockpile of dusty material at reclaimed area;
- Dust suppression measures for exposed earth surface and stockpile of dusty material;
- Site runoff control measure during construction works; and
- Dust and noise control of foundation works.

1. BASIC PROJECT INFORMATION

1.1 Background

1.1.1 The Government of Hong Kong SAR will develop the Integrated Waste Management Facilities (IWMF) Phase 1 (hereafter "the Project") with incineration to achieve substantial bulk reduction of unavoidable municipal solid waste (MSW) and to recover energy from the incineration process. The IWMF will be on an artificial island to be formed by reclamation at the south-western coast of Shek Kwu Chau. Keppel Seghers – Zhen Hua Joint Venture (KSZHJV) was awarded the contract under Contract No. EP/SP/66/12 Integrated Waste Management Facilities Phase 1 to construct and operate the Project.

1.1.2 An environmental impact assessment (EIA) study for the Project has been conducted and the EIA Report was approved under the Environmental Impact Assessment Ordinance on 17 January 2012. An Environmental Permit (EP) (EP No.: EP-429/2012) was granted to EPD on 19 January 2012 for the construction and operation of the Project. Subsequently, the EP was amended (EP No.: EP-429/2012/A) and a further EP (FEP) (EP No.: FEP-01/429/2012/A) was granted to the Keppel Seghers – Zhen Hua Joint Venture (KSZHJV) on 27 December 2017.

1.1.3 A further EP (FEP) (EP No.: FEP-02/429/2012/A) on Submarine Cable for the Development of the Project was granted to CLP Power Hong Kong Limited (CLP) on 17 January 2020.

1.1.4 The key design and construction elements of the Project include the Design and the Works including but not limited to the design, engineering procurement, construction, testing and commissioning of the Facility including:

- Ground Treatment works;
- Seawall and Breakwater construction;
- Non-dredged Reclamation;
- Other Marine works and Harbour and Port Facilities;
- Site formation;
- Municipal Solid Waste (MSW) Treatment Processes;
- Energy Recovery for Power Generation and Surplus Electricity export;
- Wastewater treatment process;
- Desalination and water treatment process;
- Civil works;
- Building and Structural works;
- Electrical and Mechanical works;
- Building Services;
- Architectural and Landscaping works; and
- All other design and works required for the operation and maintenance of the Facility according to the Contract requirements.

1.1.5 The location of the IWMF near Shek Kwu Chau (SKC) and general layout of IWMF are shown in **Figure 1.1** and **Figure 1.2** respectively.

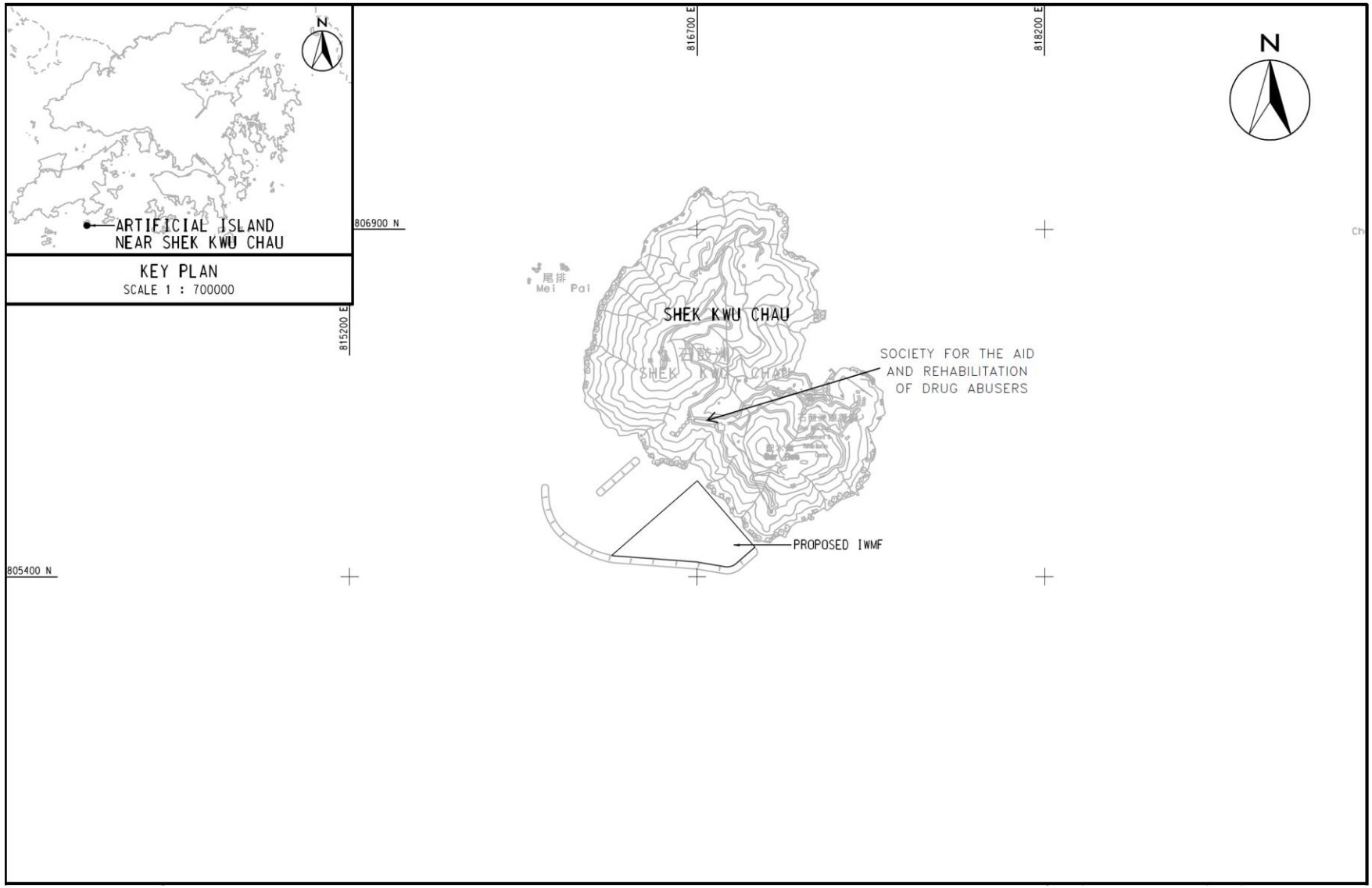


Figure 1.1 Location of the IWMF at the Artificial Island near SKC

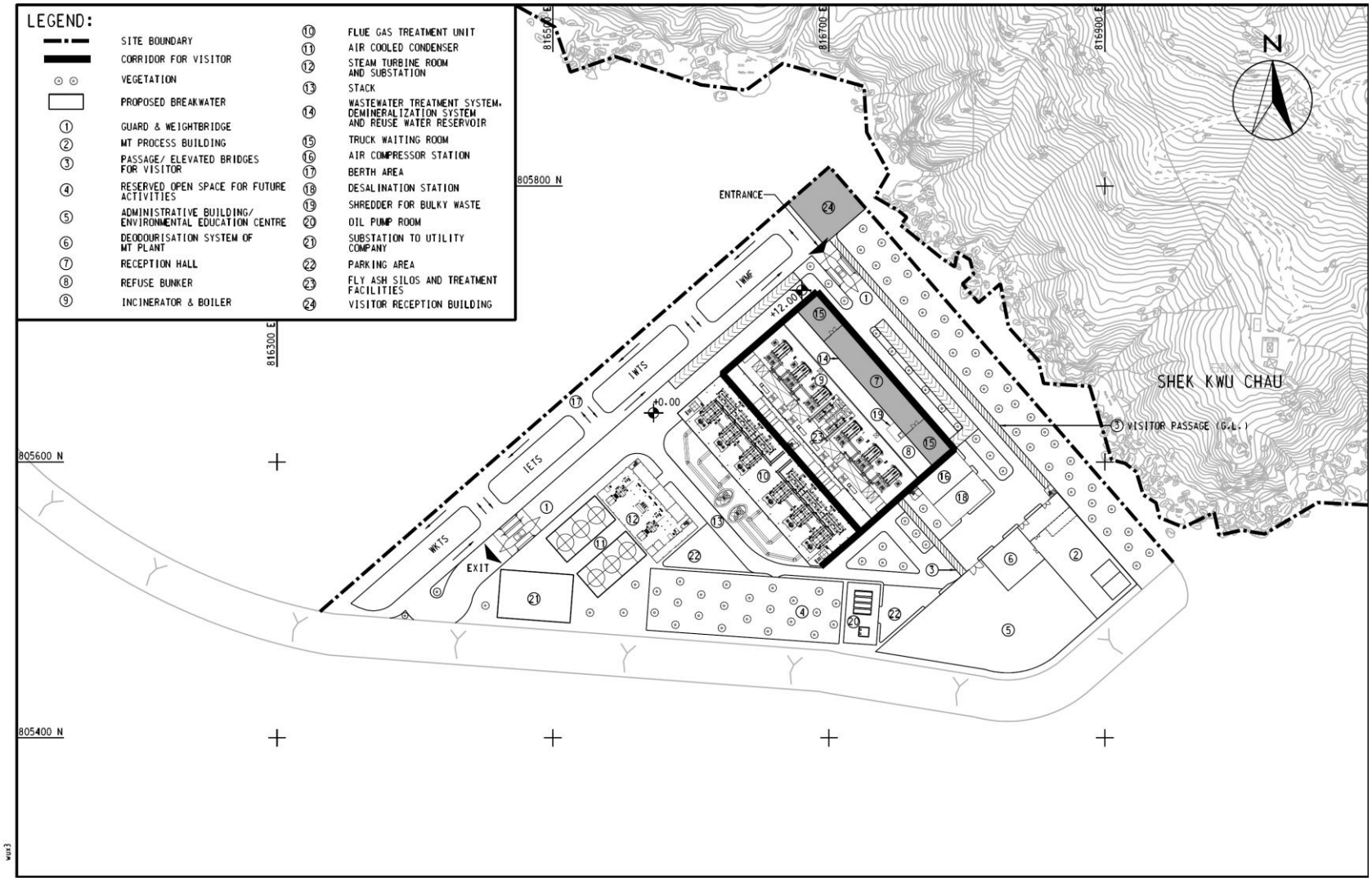


Figure 1.2 General Layout of the IWMF at the Artificial Island near SKC

1.2 The Reporting Scope

1.2.1 This is the 63rd Monthly EM&A Report for the Project which summarizes the key findings of the EM&A programme during the reporting period from 1 September 2023 to 30 September 2023.

1.3 Project Organization

1.3.1 The Project Organization structure for Construction Phase is presented in **Figure 1.3**.

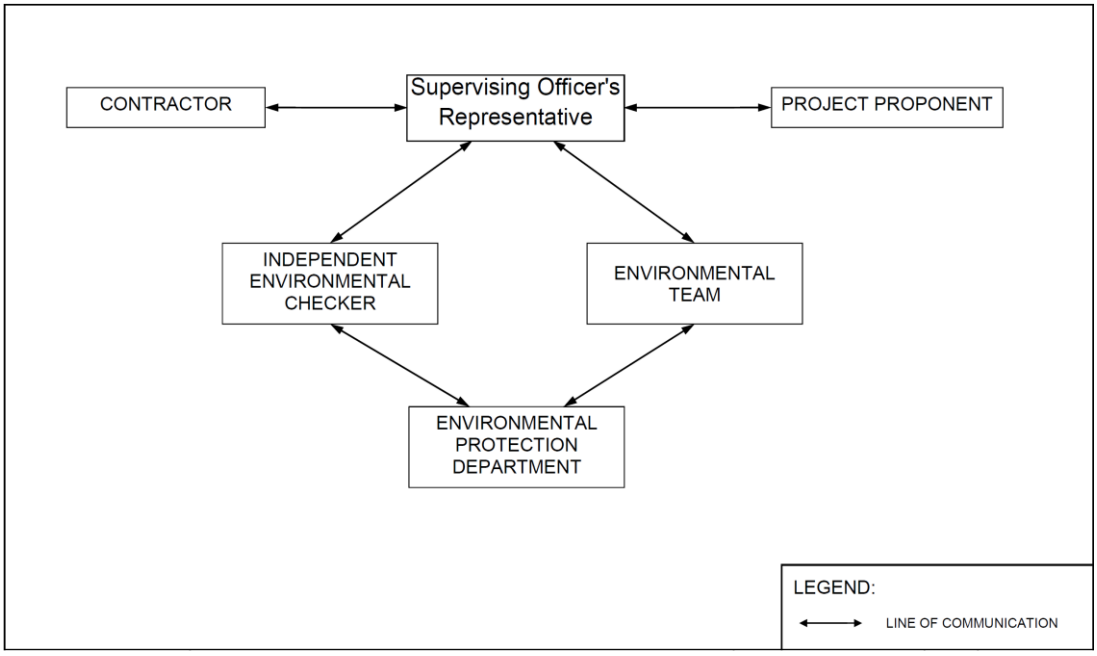


Figure 1.3 Project Organization Chart

1.3.2 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.
Keppel Seghers – Zhen Hua Joint Venture	Project Manager	Peter Chung	2192-0603
Acuity Sustainability Consulting Limited	Environmental Team Leader	F.C. Tsang	2698-6833
ERM-Hong Kong, Limited	Independent Environmental Checker	Mandy To	2271-3000

1.4 Summary of Construction Works

1.4.1 Details of the major construction activities undertaken in this reporting period are shown in **Table 1.2** and **Figure 1.4** below. The construction programme is presented in **Appendix A**.

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

Location of works	Construction activities undertaken	Remarks on progress
Reclamation area	• Installation of Instrumentation	• On-going
	• Site Investigation works for foundation	• On-going
	• Foundation works (including Driven H Pile and Socketed H Pile)	• On-going
	• Pile cap construction	• On-going
	• Structural steel work	• On-going
	• Superstructure construction	• On-going
Seawall portion	• Caisson extension works, from +3mPD to +6mPD, at Seawall A and B	• On-going
	• Construction of wave wall along the vertical seawall above +3mPD	• On-going

Figure 1.4 Location of Major Construction Activities Undertaken during the Reporting Month

1.5 Summary of Environmental Status

1.5.1 A summary of the valid permits, licences, and /or notifications on environmental protection for this Project is presented in **Table 1.3**

Table 1.3 Summary of the Status of Valid Environmental Licence, Notification, Permit and Documentations

Permit/ Licences/ Notification	Reference	Validity Period	Remarks
Variation of Environmental Permit	EP-429/2012/A	Throughout the Contract	
Further Environmental Permit	FEP-01/429/2012/A	Throughout the Contract	
Notification of Construction Works under the Air Pollution Control (Construction Dust) Regulation (Form NA)	Ref No.: 428778	15/12/2017 – 22/09/2024	
Wastewater Discharge Licence	WT00039438-2021	15/02/2022 – 28/02/2027	
Chemical Waste Producer Registration	WPN0017-933-K3301-01	Throughout the Contract	
	WPN5213-961-K3301-02	Throughout the Contract	
	WPN5296-839-K3301-03	Throughout the Contract	
Construction Noise Permit (24 hours)	GW-RS0611-23	27/07/2023– 26/01/2024	Portion 1, 1A & 1B
Billing Account for Disposal of Construction Waste	A/C No.:7029768	Throughout the Contract	

1.5.2 The status for all environmental aspects is presented in **Table 1.4**.

Table 1.4 Summary of Status for Key Environmental Aspects under the Updated EM&A Manual

Parameters	Status
Water Quality	
Baseline Monitoring under Updated EM&A Manual and Detailed Plan on DCM	The baseline water quality monitoring result has been reported in Baseline Monitoring Report and submitted to EPD under FEP Condition 3.4
Impact Monitoring	As confirmed with Contractor and Project Supervising Officer, no marine construction work will be carried out from March to December 2023 tentatively. An updated EM&A arrangement to propose the temporary suspension of water quality and line-transect monitoring from March to December 2023 was submitted to EPD on 21 March 2023. EPD advised no comment on the updated EM&A arrangement on 29 March 2023. The water quality and line-transect monitoring were then temporarily suspended from 30 March 2023 onward. A two-week advance notice will be made by the Contractor prior to resumption of marine construction works. The water quality monitoring and line-transection monitoring will be resumed upon the resumption of marine construction works. ET will notify the resumption of marine construction works with updated EM&A schedule within one day after receiving the notification from contractor
Post DCM Monitoring	All DCM was completed on 14 October 2020, regular DCM monitoring for further 4 weeks (i.e form 16 October 2020 to 14 November 2020) was completed according to the approved Detailed Plan on Deep Cement Mixing
Initial Intensive DCM Monitoring	Conducted from 11 February 2019 to 10 March 2019, had not been resumed since there was no DCM related parameter exceeding the AL/LL.
Baseline Water Quality of wet season	Completed over 13 August 2018 to 7 September 2018
Noise	
Baseline Monitoring	The baseline noise monitoring result has been reported in Baseline Monitoring Report and submitted to EPD under FEP Condition 3.4
Impact Monitoring	On-going
Waste Management	
Mitigation Measures in Waste Monitoring Plan	On-going
Coral	
Pre-translocation Survey and Coral Mapping	The Coral Translocation Plan was submitted and approved by EPD under EP Condition 2.12
Coral Translocation	Completed on 28 March 2018
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-	Re-tagging at Indirect Impact Site was conducted on 23

Parameters	Status
tagging	November and Re-tagging at Control Site was conducted on 3 December 2018.
Post Re-tagging Coral Monitoring	On-going
Marine Mammal	
Vessel-based Line-transect Survey Baseline Monitoring	The baseline marine mammal monitoring result has been reported in Baseline Monitoring Report and submitted to EPD under FEP Condition 3.4
Vessel-based Line-transect Survey Impact Monitoring	Temporarily suspended since 30 March 2023, as no marine construction works as defined in the approved EIA report (AEIAR-163/2012) and the Updated EM&A Manual was conducted in this reporting month.
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 by 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, since chick was observed during monitoring event on 28 March 2023, the frequency of impact monitoring will changed to 7-day consecutive monitoring.
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

1.5.3 Other than the EM&A work 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.

1.5.4 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 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 Requirements

2.1.1 To ensure no adverse water quality impact, water quality monitoring is recommended to be carried out at the nearby water sensitive receivers (WSRs) during construction phase including proposed reclamation, breakwater construction, etc.

2.1.2 In accordance with the Updated EM&A Manual, impact water quality monitoring were conducted 3 days per week at mid-flood and mid-ebb tide to obtain impact water quality levels at the eleven monitoring stations during general water quality monitoring for the reporting period.

2.2 Water Quality Parameters, Time, Frequency

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

2.2.2 DO, temperature, salinity, turbidity and pH have been measured in-situ and the SS, has been assayed in a HOKLAS laboratory.

2.2.3 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. The monitoring schedule is provided in **Appendix C**.

2.2.4 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 general water quality monitoring. The interval between two sets of monitoring has not been less than 36 hours.

2.2.5 **Table 2.1** summarizes the monitoring parameters, frequency and duration of the impact water quality monitoring during construction phase.

Table 2.1 Water Quality Monitoring Parameters, Frequency and Duration

Parameter, unit	Frequency	No. of Depths
• Water Depth (m) • Temperature (°C) • Salinity (ppt) • pH (pH unit) • Dissolved Oxygen (DO) (mg/L and % of saturation) • Turbidity (NTU) • Suspended Solids (SS), mg/L	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 less than 6m, mid-depth may be omitted.

2.3 Water Quality Monitoring Locations

2.3.1 Impact water quality monitoring was conducted at eleven monitoring locations (B1-B4, H1, C1, C2, F1, CR1, CR2 & M1) during general water quality monitoring in the reporting period as shown in **Figure 2.1**. As per the relocation proposal verified by IEC and approved by EPD, the monitoring location C1, C2, S2, F1 are relocated at C1A, C2A, S2A, F1A as equivalent points respectively to clear up the concerns from stakeholders.

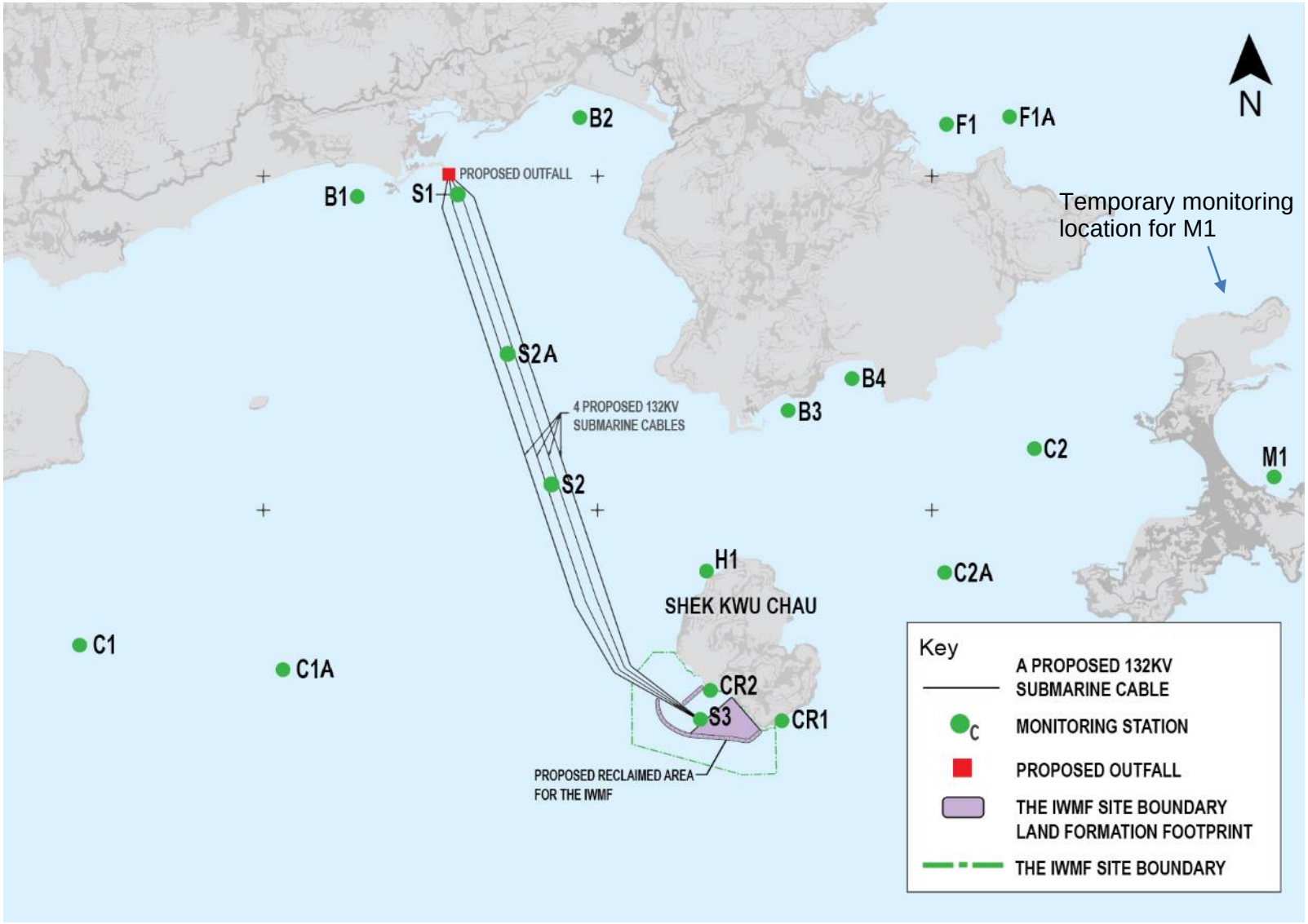


Figure 2.1 Water monitoring locations at Artificial Island near SKC

2.3.2 B1 to B4 are located at 4 beaches respectively at the southern shore of Lantau Island. Monitoring station H1 is located at the horseshoe crab habitat at northern SKC, while CR1 and CR2 are located at the coral communities at southwestern shore of SKC. Monitoring station F1 is located at the Cheung Sha Wan Fish Culture Zone while monitoring station M1 is located at Tung Wan at Cheung Chau. Monitoring station F1A is relocated for F1 at the Cheung Sha Wan Fish Culture Zone. S1, S2 and S3 are located at the northern landing site, midway and southern landing site of the proposed submarine cable, respectively. S2A is the relocated monitoring station of S2 which represents the midway landing site of the proposed submarine cable. S1, S2/S2A and S3 are required for monitoring due to the laying of submarine cable. Control stations C1 and C2 at far field locations are for comparison. Control stations C1A and C2A are relocated for C1 and C2 respectively as equivalent far field locations for comparison.

2.3.3 Fourteen monitoring stations are listed in **Table 2.2**.

Table 2.2 – Locations of Marine Water Quality Stations

Monitoring station	Description	Easting	Northing
B1	Beach – Cheung Sha Lower	813342	810316
B2	Beach – Pui O	815340	811025
B3	Beach – Yi Long Wan	817210	808395
B4	Beach – Tai Long Wan	817784	808682
H1	Horseshoe Crab – Shek Kwu Chau	816477	806953
C1	Control Station (note i)	810850	806288
C1A	Relocated Control Station	812823	806300
C2	Control Station (note ii)	819421	808053
C2A	Relocated Control Station	818869	806808
F1	Cheung Sha Wan Fish Culture Zone (note iii)	818631	810966
F1A	Cheung Sha Wan Fish Culture Zone	819109	810924
S1	Submarine Cable Landing Site	814245	810335
S2	Submarine Cable (note iv)	815076	807747
S2A	Submarine Cable	814808	808515
S3	Submarine Cable Landing Site	816420	805621
CR1	Coral	817144	805597
CR2	Coral	816512	805882
M1	Tung Wan	821572	807799

Note:

i. Relocated to C1A in Mar 2019
ii. Relocated to C2A in Mar 2019
iii. Relocated to S2A in Mar 2019
iv. Relocated to F1A in Mar 2019

2.4 Impact Monitoring Methodology

2.4.1 General water quality monitoring was conducted three days per week, at mid-flood and mid-ebb tides, at the designated water quality monitoring stations during the reporting period.

2.4.2 The interval between 2 sets of monitoring was not less than 36 hours. Sampling was collected at three water depths, namely, 1m below water surface, mid-depth and 1m above seabed, except where the water depth is less than 6m, the mid-depth was omitted. If the water depth was less than 3m, only the mid-depth station was monitored.

2.4.3 Duplicate in-situ measurements and water sampling were carried out in each sampling event. The monitoring probes were retrieved out of water after the first measurement and then redeployed for the second measurement. When the difference in value between the first and second readings of DO or turbidity is more than 25% of the value of the first reading, the reading would be discarded and further readings would be taken.

In-situ Measurement

2.4.4 Levels of DO, pH, temperature, turbidity and salinity would be measured in-situ by portable and weatherproof measuring instrument, e.g. YSI ProDSS and Horiba U-53 Multiparameter complete with cable and sensor. (Refer to http://www.ysi.com/ProDSS for YSI ProDSS technical specification and https://static.horiba.com/fileadmin/Horiba/Products/Process_and_Environmental/Water_Pollution/Instruction_Manuals/U-50/U-50_SS_E.pdf for Horiba U-53 technical specification). Water current velocity and water current direction would be measured by portable and weatherproof current meter, e.g. SonTek Hydrosurveyor (Refer to https://www.sontek.com/hydrosurveyor for SonTek Hydrosurveyor M9 technical specification). Parameters measured by in-situ measurement is tabulated in **Table 2.3**

Table 2.3 – Parameters Measured by In-situ Measurement

Parameter	Resolution	Range
Temperature	0.1 ºC	-5-70 ºC
Dissolved Oxygen (DO)	0.01 mg/L	0-50.0 mg/L
Turbidity	0.1 NTU	0-1000 NTU
pH	pH 0.01	pH 0-14
Salinity	0.01 ppt	0-40 ppt
Water Current Velocity	0.001m/s	±20m/s
Water Current Direction	±1º	±2º

Laboratory Analysis

2.4.5 Analysis of SS shall be carried out in a HOKLAS accredited laboratory. Sufficient water samples shall be collected at the monitoring stations for carrying out the laboratory determinations. The determination work shall be started within 24 hours after collection of the water samples. Analytical methods and detection limits for SS is presented in **Table 2.4**.

Table 2.4 – Analytical Methods Applied to Water Quality Samples

Parameter	Analytical method	Detection Level
Suspended Solids, SS	APHA 2540 D[i]	1 mg/L

Footnote:
i. "APHA 2540 D" stands for American Public Health Association Standard Methods for the Examination of Water and Wastewater, 23rd Edition.

Field Log

2.4.6 Other relevant data was recorded, such as: monitoring location / position, time, water depth, weather conditions and any special phenomena underway near the monitoring station.

2.5 Monitoring Equipment

2.5.1 Equipment used in the impact water quality monitoring programme is summarized in **Table 2.5** below.

Table 2.5 Impact Water Quality Monitoring Equipment

Monitored Parameter	Equipment	Brand and Model
DO, Temperature, Salinity, pH and Turbidity	Multi-functional Meter	Horiba U-53 YSI ProDSS Multi Parameter
Coordinates	Positioning Equipment	Garmin GPSMAP 78s
Water depth	Water Depth Detector	Hummingbird 160 Portable
SS	Water Sampler	Wildco 2 L Water Sampler with messenger

2.5.2 Dissolved Oxygen and Temperature Measuring Equipment

The instrument is a portable and weatherproof DO probe mounted on the multi-functional meter complete with cable and sensor and is powered by a DC supply source. The equipment was capable of measuring:

- A DO level in the range of 0 - 50 mg/L; and
- Temperature of -5 - 70 degree Celsius.

2.5.3 Turbidity Measurement Instrument

The instrument is a portable and weatherproof turbidity-measuring probe mounted on the multi-functional meter and is powered by a DC supply source. The instrument is equipped with a photoelectric sensor which is capable of measuring turbidity between 0 – 1000 NTU.

2.5.4 pH Measurement Instrument

The probe consists of a potentiometer, a glass electrode, a reference electrode and a temperature-compensating device mounted on the multi-functional meter. It is readable to 0.1 pH in a range of 0 to 14. Standard buffer solutions of at least pH 7 and pH 10 were used for calibration of the instrument before and after use.

2.5.5 Salinity Measurement Instrument

A portable salinometer mounted on the multi-functional meter capable of measuring salinity in the range of 0-40 parts per thousand (ppt) was provided for measuring salinity of the water at each monitoring location.

2.5.6 Sampler

The water sampler comprises a transparent PVC cylinder, with a capacity of not less than 2 litres, which can be effectively sealed with latex cups at both ends. The sampler has a positive latching system to keep it open and prevent premature closure until released by a messenger when the sampler is at the selected water depth.

2.5.7 Sample Containers and Storage

Water samples for SS were stored in high density polythene bottles with no preservative added, packed in ice (cooled to 4°C without being frozen) and delivered to the laboratory and analysed as soon as possible after collection. Sufficient volume of samples was collected to achieve the detection limit stated in **Table 2.4**.

2.5.8 Water Depth Detector

A portable, battery-operated echo sounder was used for the determination of water depth at each designated monitoring station. This unit could either be hand-held or affixed to the bottom of the work boat, if the same vessel is to be used throughout the monitoring programme.

2.5.9 Monitoring Position Equipment

Hand-held digital Differential Global Positioning System (DGPS) with way point bearing indication and Radio Technical Commission for maritime (RTCM) Type 16 error message 'screen pop-up' facilities (for real-time auto-display of error messages and DGPS corrections from the Hong Kong Hydrographic Office) was provided and used to ensure that the water sampling locations were correct during the water quality monitoring work.

2.6 Maintenance and Calibration

2.6.1 The multi-functional meters were checked and calibrated before use. Multi-functional meters were certified by a laboratory accredited under HOKLAS or any other international accreditation scheme, and subsequently re-calibrated at three monthly intervals throughout all stages of the water quality monitoring. Responses of sensors and electrodes were checked with certified standard solutions before each use. Wet bulb calibration for a DO meter was carried out before commencement of monitoring and after completion of all measurements each day. Calibration was not conducted at each monitoring location as daily calibration is adequate for the type of DO meter employed.

2.6.2 Sufficient stocks of spare parts were provided and maintained for replacements when necessary. Backup monitoring equipment was prepared for uninterrupted monitoring during equipment maintenance or calibration during monitoring.

2.7 Action and Limit Levels

2.7.1 The Action and Limit Levels have been set based on the derivation criteria specified in the Updated EM&A Manual and Detailed DCM Plan, as shown in **Table 2.6** below.

Table 2.6 Criteria of Action and Limit Levels for Water Quality

Parameters	Action	Limit
Construction Phase Impact Monitoring		
DO in mg/L	≤ 5 %-ile of baseline data	≤ 4
SS in mg/L	≥ 95 %-ile of baseline data or 120% of control station's SS at the same tide of the same day of measurement, whichever is higher	≥ 99 %-ile of baseline data or 130% of control station's SS at the same tide of the same day of measurement, whichever is higher
Turbidity in NTU	≥ 95 %-ile of baseline data or 120% of control station's turbidity at the same tide of the same day of measurement, whichever is higher	≥ 99 %-ile of baseline data 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

2.7.2 Based on the baseline monitoring data and the derivation criteria specified above, the Action/Limit Levels have been derived and are presented in **Table 2.7** and **Table 2.8** for both dry seasons (October – March) and wet seasons (April – September).

Table 2.7 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	≥ 12.8 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 2.8 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.

2.7.3 If exceedances were found during water quality monitoring, the actions in accordance with the Event and Action Plan shall be carried out according to **Appendix D**.

2.8 Monitoring Results and Observations

2.8.1 As confirmed by the Contractor on 14 October 2020, all DCM works was completed on 14 October 2020, the post DCM water quality monitoring was completed for further 4 weeks (i.e. from 16 October 2020 to 14 November 2020) according to the approved Detailed Plan on Deep Cement Mixing. As all DCM work and post DCM water quality monitoring were completed, no water quality monitoring was conducted at S1, S2A and S3 from 14 November 2020 onward. As no marine construction work will be carried out from March to December 2023 and EPD had no comment on temporary suspension of water quality monitoring on 29 March 2023, the water quality was then temporarily suspended from 30 March 2023 onward.

3. NOISE MONITORING

3.1 Monitoring Requirements

3.1.1 To ensure no adverse noise impact, noise monitoring is recommended to be carried out at the nearby noise sensitive receivers (NSRs) during construction phase.

3.1.2 In accordance with the Updated EM&A Manual, baseline noise level at the noise monitoring stations was established as presented in the Baseline Monitoring Report. Impact noise monitoring was conducted once per week in the form of 30-minutes measurements Leq, L10 and L90 levels recorded at each monitoring station between 0700 and 1900 hours on normal weekdays.

3.1.3 In accordance with the Updated EM&A Manual, additional weekly impact monitoring should be carried out during respective restricted hours period (1900 – 0700 hours) if the construction works were conducted at evening and night time. Additional weekly noise monitoring was conducted once per week in the form of 5-minutes measurements Leq, L10 and L90 levels recorded at each monitoring station between 1900 and 0700 hours as well as public holidays and Sundays.

3.2 Noise Monitoring Parameters, Time, Frequency

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

3.2.2 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. The monitoring schedule is provided in **Appendix C**.

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}

3.3 Noise Monitoring Locations

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

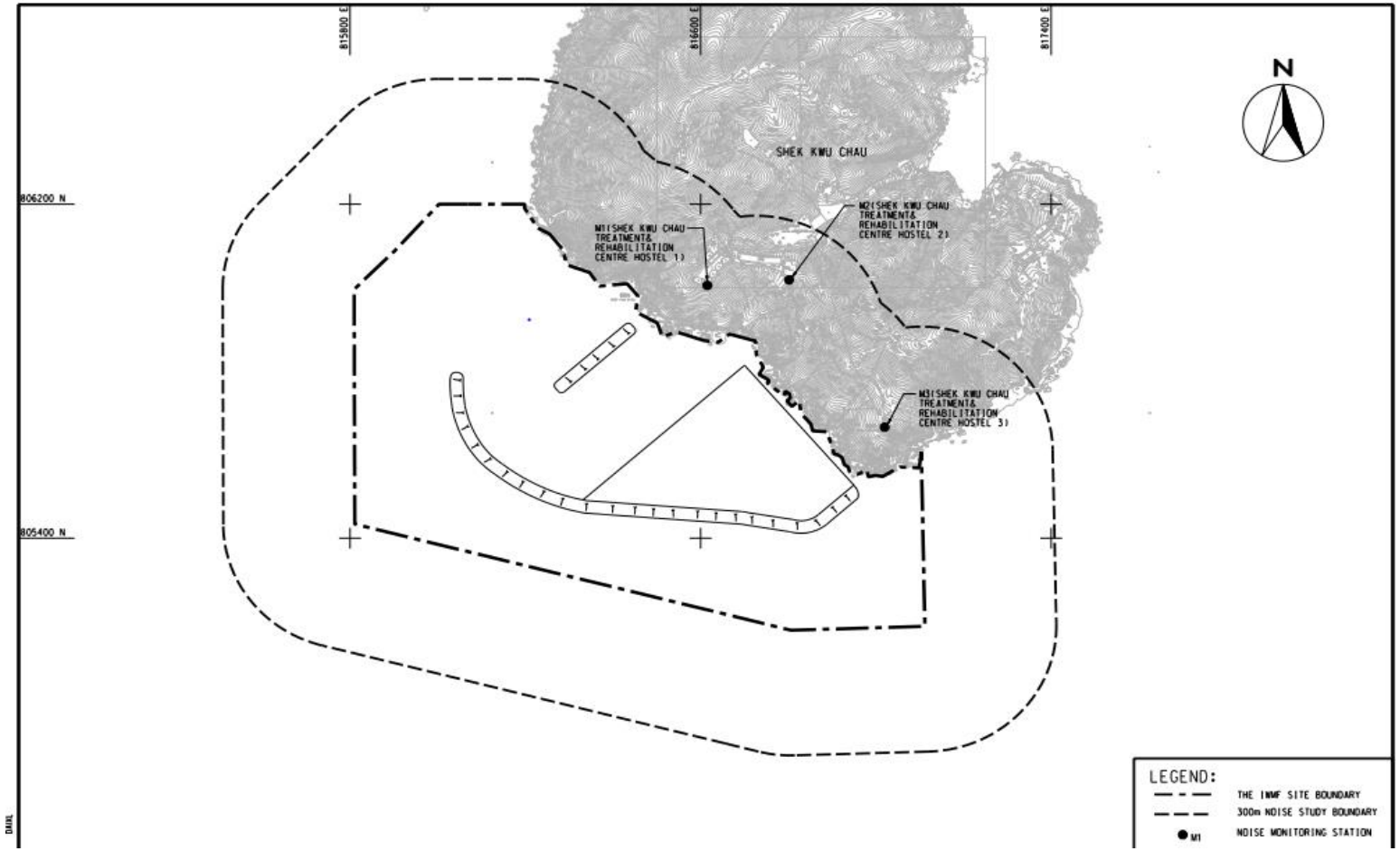


Figure 3.1 Noise monitoring locations at SKC

3.3.2 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.

3.3.3 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. 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

3.4 Impact Monitoring Methodology

3.4.1 At each designated monitoring location, measurements of six 5-minute A-weighted equivalent sound pressure level ["$L_{eq\ 5min}$"] was carried out between 0700 and 1900 hours for daytime measurements on a normal weekdays (excluding Sunday or general holiday). The measured six impact noise levels at each monitoring location shall then be averaged in logarithmic scale and expressed in terms of the 30-minute A-weighted equivalent continuous sound pressure level ($L_{eq\ 30min}$) for the time period between 0700 and 1900 hours on normal weekdays.

3.4.2 At each designated monitoring location, measurements of three 5-minute A-weighted equivalent sound pressure level ["$L_{eq\ 5min}$"] was carried out between 1900 and 0700 hours for evening time and night time measurements.

3.4.3 The monitoring procedures are as follows:

- The microphone head of the sound level meter was normally positioned 1 m exterior of the noise sensitive façade and lowered sufficiently so that the building's external wall acts as a reflecting surface.
- If there is a problem with the access to the normal monitoring position, an alternative may be chosen and appropriate correction would be applied according to acoustic principle when necessary. For reference, +3 dB(A) correction would be made for free-field measurements.
- The battery condition was checked to ensure good functioning of the meter.
- Parameters such as frequency weighting, the time weighting and the measurement time were set as follows:
  - Frequency weight: A
  - Time weighting: Fast
  - Measurement time: 5 minutes

- Prior to and after noise measurement, the meter was calibrated using the calibrator for 94.0 dB at 1000Hz. If the difference in the calibration level before and after measurement is more than 1.0 dB, the measurement was considered invalid and repeat of noise measurement was required after re-calibration or repair of the equipment.
- Noise monitoring was carried out for 30 minutes by sound level meter. At the end of the monitoring period, noise levels in terms of L_{eq}, L_{10} and L_{90} were recorded. In addition, site conditions and noise sources were recorded when the equipment was checked and inspected.
- All the monitoring data within the sound level meter system was downloaded through the computer software.

3.5 Monitoring Equipment

3.5.1 Integrated sound level meter was used for the noise monitoring. The meter shall comply with the International Electrotechnical Commission Publications 651: 1979 (Type 1) and 804: 1985 (Type 1) specifications.

3.5.2 Equipment used in the impact noise monitoring programme is summarized in **Table 3.3** below. Calibration certificates for the noise monitoring equipment are attached in **Appendix E**.

Table 3.3 Impact Noise Monitoring Equipment

Equipment	**Brand and Model**
Sound Level Meter	SVANTEK 971
Sound Calibrator	RION NC-75

3.6 Maintenance and Calibration

3.6.1 The maintenance and calibration procedures were as follows:

- The microphone head of the sound level meter and calibrator were cleaned with a soft cloth at quarterly intervals.
- The sound level meter and calibrator were checked and calibrated at yearly intervals
- Immediately prior to and following each noise measurement, the accuracy of the sound level meter shall be checked using an acoustic calibrator generating a known sound pressure level at a known frequency. Measurements may be accepted as valid only if the calibration levels from before and after the noise measurement agree to within 1.0dB.

3.7 Action and Limit Levels

3.7.1 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 3.4**.

Table 3.4 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.

3.7.2 If exceedances were found during noise monitoring, actions in accordance with the Event and Action Plan shall be carried out according to **Appendix F**.

3.8 Monitoring Results and Observations

3.8.1 Impact monitoring for noise impact for daytime was carried out on 06, 14, 19, 20, 21 and 25 September 2023. Impact monitoring for noise impact for evening time and night time was carried out on 06&07, 14&15, 19&20, 20&21 and 25&26 September 2023. The impact noise levels at Noise Monitoring Stations at SKC (i.e. M1/N_S1 to M3/N_S3) are summarized in **Table 3.6**, **Table 3.7** and **Table 3.8** respectively. Details of noise monitoring results are presented in **Appendix G**.

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

3.8.3 According to our field observations, the major noise source identified at the noise monitoring station in the reporting month are summarised in **Table 3.5**. Sound from the intermittent piling work was the noticeable noise source for monitoring stations M1, M2 and M3. Air conditioning units were also observed nearby monitoring stations M3.

Table 3.5 Summary of Field Observation

Monitoring Station	Major Noise Source
M1	Sound from the intermittent piling work
M2	Sound from the intermittent piling work
M3	Sound from the intermittent piling work, air-conditioner

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

Table 3.6 Summary of Impact Noise Monitoring Results during Day Time (0700 – 1900 hours)

Location	Measured Noise Level in dB(A)		
	Range of $L_{eq\ 30min}$	Range of $L_{10\ 30min}$	Range of $L_{90\ 30min}$
M1	57.8 – 59.7	59.1 – 64.9	54.4 – 55.5
M2	56.0 – 61.4	58.4 – 63.6	52.8 – 55.5
M3	57.8 – 64.3	59.3 – 64.6	49.6 – 58.6

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

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

3.8.7 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 was 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 3.7 Summary of Additional Impact Noise Monitoring Results during Evening Time (1900 – 2300 hours)

Location	Measured Noise Level in dB(A)		
	Range of $L_{eq\ 5min}$	Range of $L_{10\ 5min}$	Range of $L_{90\ 5min}$
M1	47.8 – 53.1	49.5 – 54.9	45.3 – 50.6
M2	49.7 – 58.2	50.5 – 60.4	48.9 – 54.8
M3	44.0 – 56.4	45.8 – 57.9	37.9 – 49.5

Table 3.8 Summary of Additional Impact Noise Monitoring Results during Night Time (2300 – 0700 hours)

Location	Measured Noise Level in dB(A)		
	Range of $L_{eq\ 5min}$	Range of $L_{10\ 5min}$	Range of $L_{90\ 5min}$
M1	46.4 – 50.6	47.5 – 50.9	45.1 – 49.6
M2	47.8 – 52.4	48.4 – 53.9	46.9 – 51.4
M3	41.1 – 53.7	42.2 – 55.0	39.9 – 52.1

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, no C&D materials were generated on site in the reporting month. No metal was generated and collected by registered recycling collector. No paper was collected by the registered recycling collector. No plastic waste was collected by registered recycling collector. No chemical waste was collected by the licensed chemical waste collector. 286.0m^3 of other types of wastes (e.g. general refuse) was disposed of at designated landfill. No fill sand, public fill or fill rock was imported during the reporting period.

4.3 Chemical waste generated from land-based construction activities was stored in the chemical waste cabinet for temporary storage.

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

4.5 The Contractor is advised to sort and store any solid and liquid waste on-site properly prior to disposal.

Table 4.1 Quantities of Waste Generated from the Project during September 2023

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)
Sep 2023	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2860

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.
(4) Use the conversion factor: rock density = 2 T/m^3.

5. CORAL

5.1 Coral Monitoring Requirements

5.1.1 To monitor the health condition of corals during different phases, corals located within areas likely to be affected by the Project, corals located at control sites (areas unlikely to be affected by the Project), the trans-located coral colonies as well as the tagged natural coral colonies at the recipient site were chosen, in order to identify any adverse indirect impact from the marine works. The size, percentage cover and health condition of corals (i.e. any sign of abnormal appearance, such as layer of mucus, bleaching, partial mortality etc.) at representative transects should be recorded during each monitoring.

5.2 Coral Monitoring Parameters, Time, Frequency

5.2.1 Rapid Ecological Assessment (REA) survey was conducted on 26 June 2018 at the suggested control site and indirect impact site within two weeks before commencement of the construction work which was 29 June 2018. 10 selected hard coral colonies with the similar species were tagged at both control and indirect impact sites. Following coral translocation in the recipient site R3, 16 coral colonies attached to rocks less than 50 cm in diameter were translocated and tagged, as well as 10 selected natural coral colonies, at the recipient site. One additional REA survey was conducted in December 2018 to further assess the seabed condition at Indirect Impact Site after Typhoon Mangkhut.

5.2.2 Tagged coral colonies at the suggested control site and indirect impact site are being monitored weekly for the first month and followed by monthly monitoring for two months. Quarterly monitoring will be carried out after the first three-month of monthly monitoring until the completion of marine works and bi-annual monitoring will be carried out after the completion of marine works. The selected Control Site is located at Yuen Kong Chau of Soko Islands about 7 km away from the project area. Tagged coral colonies at the proposed recipient site are being monitored quarterly for one year. The selected recipient site R3 is located at the opposite side of the Project area at about 2 km away. The detailed survey of the Control Site and Impact Site were conducted before the commencement of the Construction Phase.

5.2.3 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 tagged coral colony. The general environmental conditions including weather, sea, and tidal conditions of impact site, control site and recipient site were monitored.

5.2.4 **Table 5.1** summarizes the monitoring locations, time and frequency of the tagged coral colonies monitoring. The monitoring schedule is provided in **Appendix C**.

Table 5.1 Tagged Coral Monitoring Locations, Time and Frequency

Monitoring Location	Monitoring Month/Year	Frequency	No. of Monitoring Survey
10 selected hard coral colonies at control site / indirect impact site	1st Month	Weekly Survey	4
	2nd to 3rd Months	Monthly Survey	2
	4th Month (postponed to 5th month due to diver accident in Shek Kwu Chau in October 2018)	Re-tagging of Coral Colonies in Indirect Impact Site after Typhoon Mangkhut	
	4th Month (postponed to 5th month due to diver accident in Shek Kwu Chau in October 2018 and further postpone to 6th month due to adverse weather)	Re-tagging of Coral Colonies in Control Site after Typhoon Mangkhut	
	5th Month (postponed to 6th month due to diver accident in Shek Kwu Chau and further postponed to 7th month due to delay of re-tagging activities at both Indirect Impact Site and Control Site)	Post Re-tagging Monthly Survey	1
	7th to 68th Months (postponed to 8th to 57th month due to diver accident in Shek Kwu Chau in October 2018)	Quarterly Survey	20
	69th to 76th Months (The marine construction work is anticipated to be completed by February 2024, the frequency of monitoring will be changed to bi-annual with reference to the Updated EM&A Mannual (Rev.E))	Bi-annually Survey	2
16 translocated hard coral colonies and 10 selected natural hard coral colonies at recipient site R3	1st Year	Quarterly Survey	4

5.3 Coral Monitoring Locations

5.3.1 Location of the ten tagged coral colonies at each of the proposed indirect impact site (re-tagging after typhoon Mangkhut), control site (baseline) and recipient site R3 (translocation) are shown in **Figure 5.1**, **Figure 5.2** and **Figure 5.3** respectively:

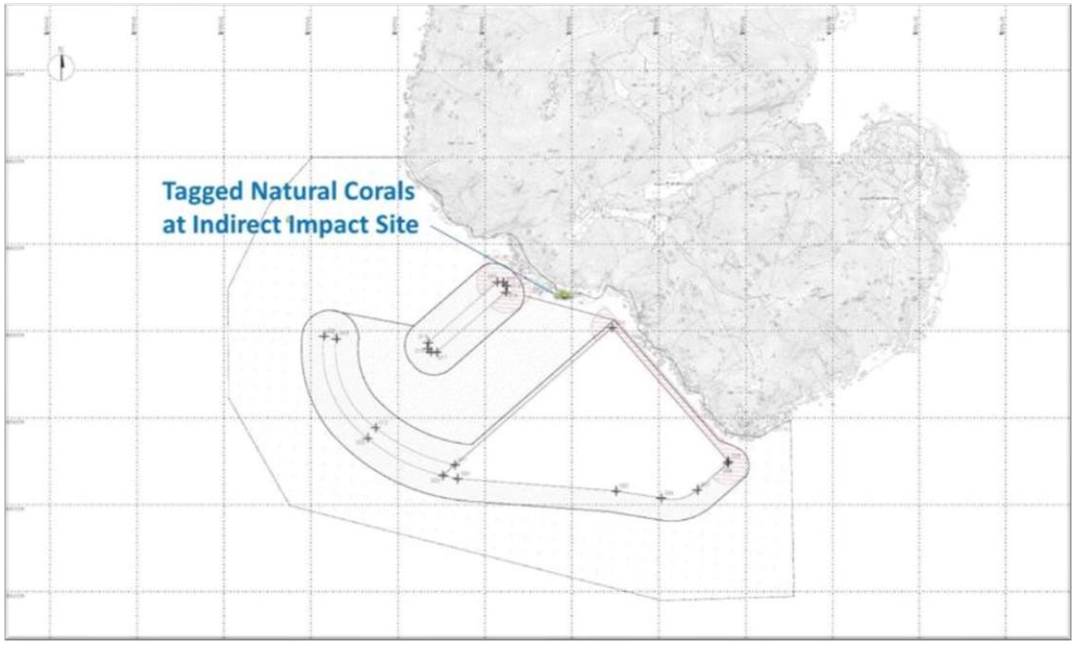


Figure 5.1 Tagged Natural Corals at Indirect Impact Site Near SKC for re-tagging after typhoon Mangkhut

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

5.3.2 The GPS coordinates of the tagged coral colonies, retagged coral colonies and recipient site were shown in **Table 5.2**, **Table 5.3** and **Table 5.4** respectively.

Table 5.2 Tagged Natural Corals during Baseline and Re-tagged Natural Corals after Typhoon Manghkut at Control Site near Yuen Long Chau

Coral #	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 5.3 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 5.4 GPS Coordinates of Recipient Site R3

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

5.4 Impact Monitoring Methodology

5.4.1 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.

5.5 Action and Limit Levels

5.5.1 Monitoring result was reviewed and compared against the below Action Level and Limit Level (AL/LL) as set with the below **Table 5.5** and **Table 5.6**.

Table 5.5 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 5.6 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.

5.5.2 If exceedance was found during coral monitoring. The actions in accordance with the Event and Action Plan should be carried out according to **Appendix I.**

5.6 Monitoring Results and Observations

5.6.1 The 19th quarterly coral monitoring during construction phase at both Indirect Impact Site and Control Site was conducted on 28 September 2023 and the weather condition was summarized in **Table 5.7**.

Table 5.7 Weather Condition for the 19th Quarterly Coral Monitoring during Construction Phase at both Indirect Impact Site and Control Site

Date	Condition	Average Underwater Visibility
28 September 2023	- Southwest wind force 3 to 4 - Sunny	Less than 10 cm

5.6.2 Ten (10) hard coral colonies were monitored at each Control site and Indirect Impact Site as suggested in the Construction Phase Monitoring Plan. The general health conditions (size, mortality, bleaching and sediment) were recorded and summarized in **Table 5.8** and **Table 5.9**. Photos of each coral colonies were taken during the monitoring activities shown in **Photo Plate 5.1** and **Photo Plate 5.2**.

Table 5.8 Sizes, Condition, Mortality, Bleaching and Sediment of 10 Natural Coral Colonies at Control Site during 19th Quarterly Coral Monitoring

Tag #	Species	Size (cm) – Max. Diameter	Condition	Mortality (%)		Bleaching (%)		Sediment (%)	
				Baseline	28/09	Baseline	28/09	Baseline	28/09
1	*Goniopora stutchburyi*	25	Good	0	0	0	0	0	0
2R	*Goniopora stutchburyi*	10	Good	0	0	0	0	0	0
3	*Psammocora superficialis*	18	Good	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	Good	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	Good	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**.

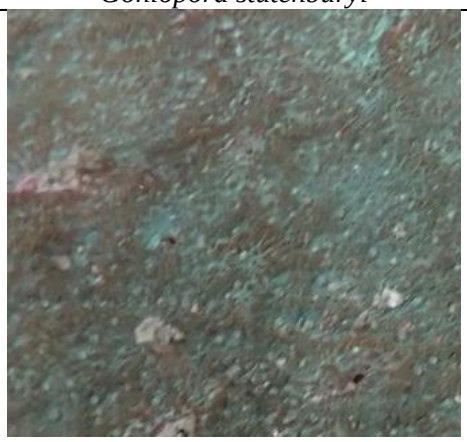
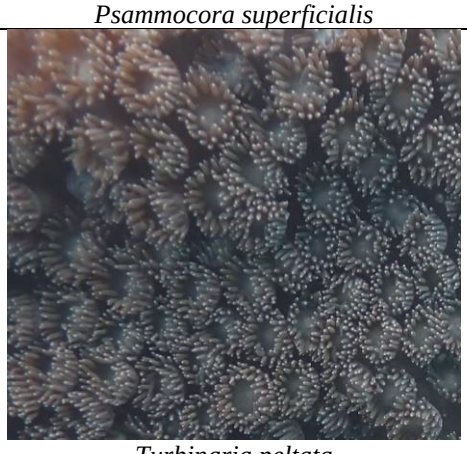
Table 5.9 Sizes, Condition, Mortality, Bleaching and Sediment of 10 Natural Coral Colonies at Indirect Impact Site during 19th Quarterly Coral Monitoring

Tag #	Species	Size (cm) – Max. Diameter	Condition	Mortality (%)		Bleaching (%)		Sediment (%)	
				Baseline	28/09	Baseline	28/09	Baseline	28/09
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**.

Photo Plate 5.1 Ten (10) Monitored Corals at Control Site

Tag #	28 September 2023
#1	 *Goniopora stutchburyi*
#2R	 *Goniopora stutchburyi*
#3	 *Psammocora superficialis*
#4	 *Turbinaria peltata*

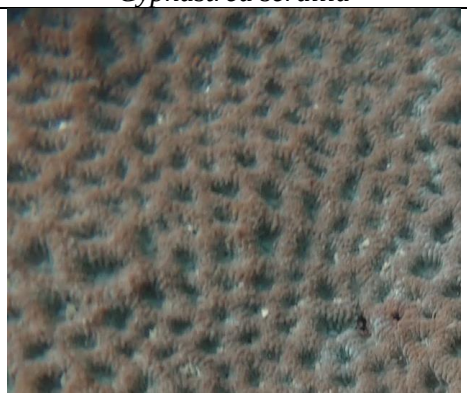
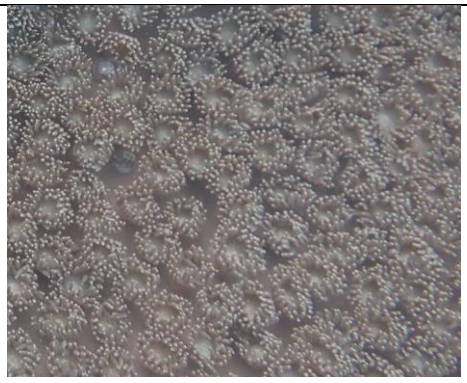
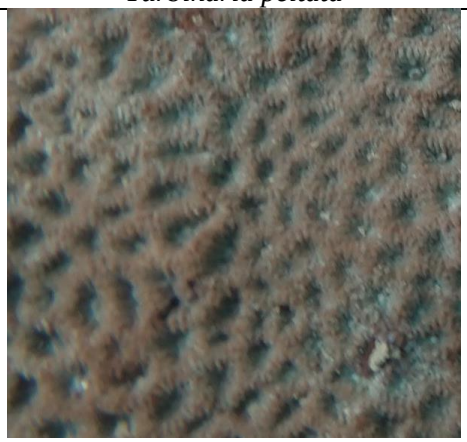
Tag #	28 September 2023
#5R	 *Goniopora stutchburyi*
#6	 *Cyphastrea serailia*
#7R	 *Coscinaraea* sp.
#8	 *Goniopora stutchburyi*

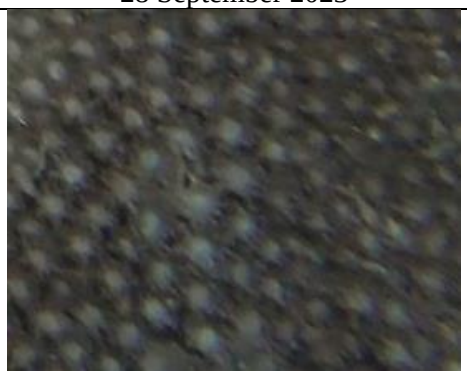
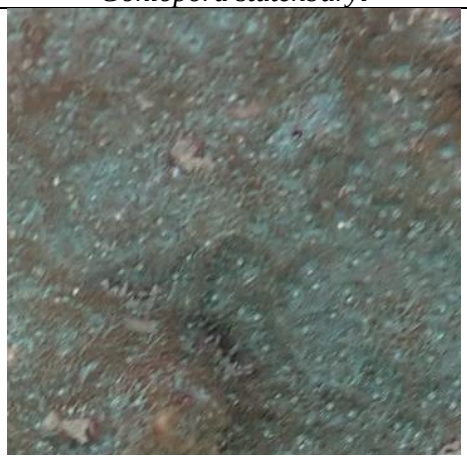
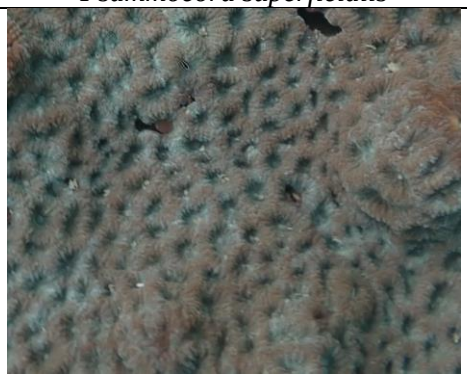
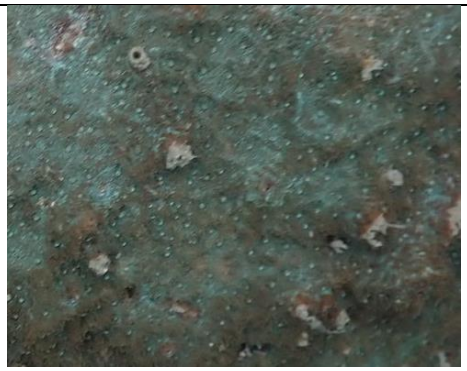
Tag #	28 September 2023
#9	 *Goniopora stutchburyi*
#10R	 *Goniopora stutchburyi*

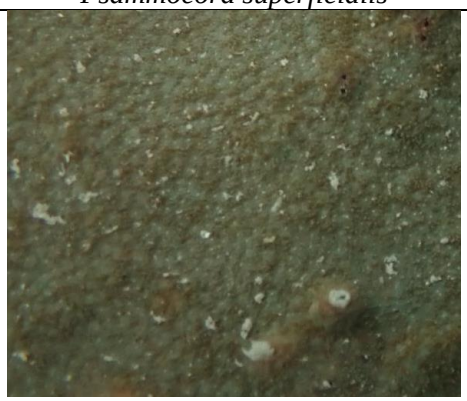
Notes:

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

Photo Plate 5.2 Ten (10) Monitored Corals at Indirect Impact Site

Tag #	28 September 2023
#11R	 *Cyphastrea serailia*
#12R	 *Favites chinensis*
#13R	 *Turbinaria peltata*
#14R	 *Favites chinensis*

Tag #	28 September 2023
#15R	 *Goniopora stutchburyi*
#16R	 *Psammocora superficialis*
#17R	 *Favites chinensis*
#18R	 *Psammocora superficialis*

Tag #	28 September 2023
#19R	 *Psammocora superficialis*
#20R	 *Psammocora superficialis*

Notes:

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

5.6.3 The coral re-tagging activities were carried out in the control site and indirect impact area on 23 November and 3 December 2018. Four and ten hard coral colonies were successfully re-tagged at both control and indirect impact sites respectively. Each re-tagged and remained coral colonies were photographed.

5.6.4 All tagged and re-tagged coral colonies showed good health condition during the 19th Quarterly Construction Phase Monitoring. There was no increased level of mortality, bleaching and sediment when compared with the baseline results.

5.6.5 No sediment, bleaching or increased mortality in the general condition of coral colonies were observed during the tenth construction phase 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. Photos of each tagged corals colonies were taken and shown in **Photo Plates 5.1** and **Photo Plate 5.2**.

6. MARINE MAMMAL

6.1 Monitoring Requirements

6.1.1 The marine mammal monitoring programme would focus on Finless Porpoise, as the study area near Shek Kwu Chau has been identified as a hotspot for this species, while the Chinese White Dolphins rarely occurred there in the past.

6.1.2 The monitoring will verify the predicted impacts on marine mammals and examine whether the mitigation measures recommended in the EIA report have been effectively implemented to protect marine mammals from negative impacts from construction activities.

6.1.3 The Vessel-based Line-transect Survey, the Passive Acoustic Monitoring and the Land-based Theodolite Tracking will be conducted to provide systematic, quantitative measurements of occurrence, encounter rate, habitat use, movement and behavioural patterns of marine mammals within or near the Project Area during construction and operational phases.

6.1.4 The mammal monitoring works during construction consist of the following three survey methods:

- Vessel-based Line-transect Survey – to monitor the occurrence of Finless Porpoises (and Chinese White Dolphins) in the study area during construction works, by comparing with the findings of the pre-construction marine mammal monitoring;
- Passive Acoustic Monitoring – to study the usage of the Project Area and two control sites in South Lantau Waters by Finless Porpoise during construction works, in reference with the baseline findings of the pre-construction marine mammal monitoring; and
- Land-based Theodolite Tracking – to study the movement and behavioral pattern of Finless Porpoise within and around the Project Area during construction works.

6.1.5 The marine mammal observation works of Marine Mammal Exclusion Zone (MMEZ) and Marine Mammal Watching as two of the specific mitigation measures recommended in the approved EIA report shall be fully and properly implemented for the Project to minimize disturbance on Finless Porpoise during construction and operational phases.

6.2 Survey Methods

6.2.1 Vessel-based Line-transect Survey

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

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

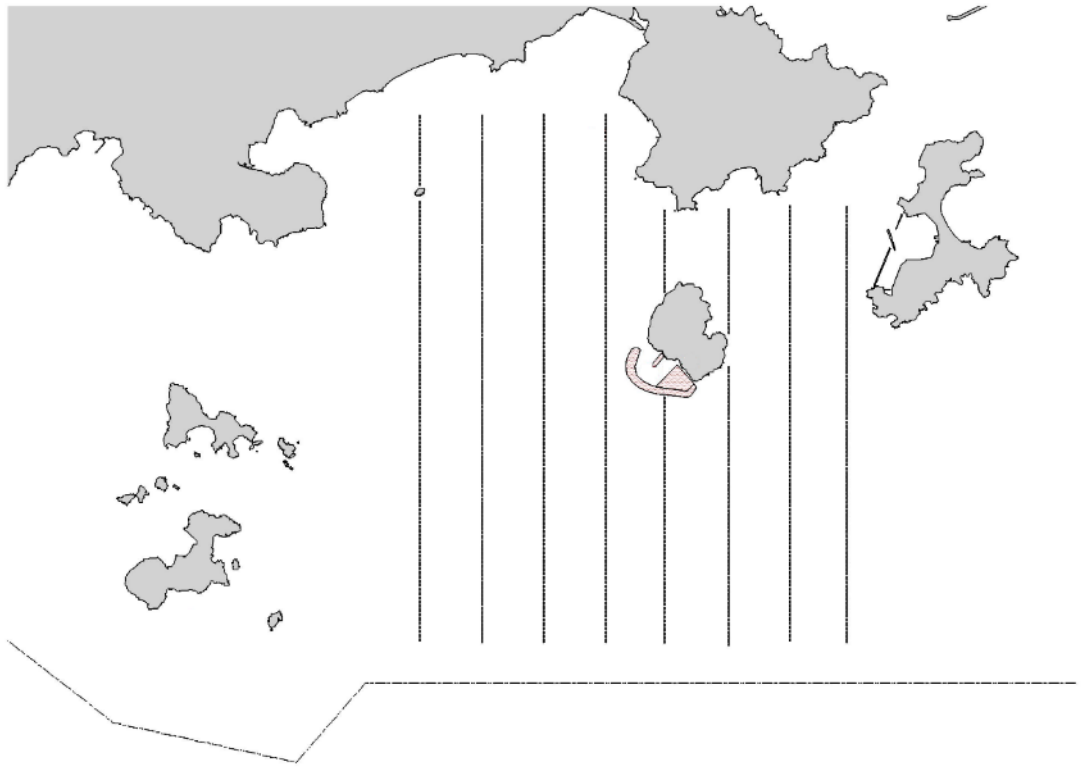


Figure 6.1 Line Transects for Marine Mammal Surveys

6.2.1.3 The surveys should cover all 4 seasons in order to take natural fluctuation and seasonal variations into account for data analysis of distribution, encounter rate, density and habitat use of both porpoises and dolphins (if any). In comparison to the baseline monitoring results, results from the analysed construction phase monitoring data would allow the detection of any changes of their usage of habitat, in response to the scheduled construction works. The monitoring surveys shall be conducted throughout the construction phase involving marine construction work with the frequency shown in **Table 6.1** below:

Table 6.1 Vessel-based Line-transect Survey Frequency

Season	Months	Frequency
Peak Season	December, January, February, March, April & May	Twice per month
Non-peak Season	June, July, August, September, October & November	Once per month

6.2.1.4 For each vessel survey, a 15-m inboard vessel with an open upper deck (about 4.5 m above water surface) would be used to make observations from the flying bridge area. Two experienced marine mammal observers (a data recorder and a primary observer) would make up the on-effort survey team, and the survey vessel would transit different transect lines at a constant speed of 13-15 km per hour. The data recorder shall search with unaided eyes and fill out the datasheets, while the primary observer shall search for dolphins and porpoises continuously through 7 x 50 marine binoculars. Both observers shall search the sea ahead of the vessel, between 270º and 90º (in relation to the bow, which is defined as 0°). Two additional experienced observers shall be available on the boat to work in shift (i.e. rotate every 30 minutes) in order to minimize fatigue of the survey team members. All observers shall be

experienced in small cetacean survey techniques and identifying local cetacean species with extensive training by marine mammal specialist of the ET.

6.2.1.5 During on-effort survey periods, the survey team shall record effort data including time, position (latitude and longitude), weather conditions (Beaufort sea state and visibility), and distance travelled in each series (a continuous period of search effort) with the assistance of a handheld GPS (Garmin eTrex Legend). Data including time, position and vessel speed would also be automatically and continuously logged by handheld GPS throughout the entire survey for subsequent review.

6.2.1.6 When porpoises or dolphins are sighted, the survey team shall end the survey effort, and immediately record the initial sighting distance and angle of the porpoise or dolphin group from the survey vessel, as well as the sighting time and position. Then the research vessel shall be diverted from its course to approach the animals for species identification, group size estimation, assessment of group composition, behavioural observations, and collection of identification photos (feasible only for Chinese White Dolphin). The perpendicular distance (PSD) of the porpoise or dolphin group to the transect line would then be calculated from the initial sighting distance and angle, which shall be used in the line-transect analysis for density and abundance estimation.

6.2.1.7 The line-transect survey data shall be integrated with a Geographic Information System (GIS) to visualize and interpret different spatial and temporal patterns of porpoise and dolphin distribution using their sighting positions collected from vessel surveys. Location data of porpoise and dolphin groups would be plotted on map layers of Hong Kong using a desktop GIS (e.g. ArcView© 3.1) to examine their distribution patterns in details. The encounter rate could be used as an indicator to determine areas or time periods of importance to porpoises within the study area. For encounter rate analysis of finless porpoises, only survey data collected under Beaufort 2 or below condition would be used for encounter rate analysis.

6.2.1.8 To take into account of the variations of survey effort across different sections within survey area, the quantitative grid analysis of habitat use would be conducted to examine finless porpoise usage among 1-km^2 grids within the Southeast Lantau survey area. For the grid analysis, SPSE (sighting density) and DPSE (porpoise density) values would be deduced for evaluation on level of porpoise usage. First, positions of on-effort porpoise sightings from the study period are plotted onto 68 grids (1 km x 1 km each) within the survey area. Sighting density grids and porpoise density grids shall then be normalized with the amount of survey effort conducted within each grid. The total amount of survey effort spent on each grid shall be calculated by examining the survey coverage on each line-transect survey to determine how many times the grid had been surveyed during study period. With the amount of survey effort calculated for each grid, the sighting density and porpoise density of each grid shall be further normalized (i.e. divided by the unit of survey effort).

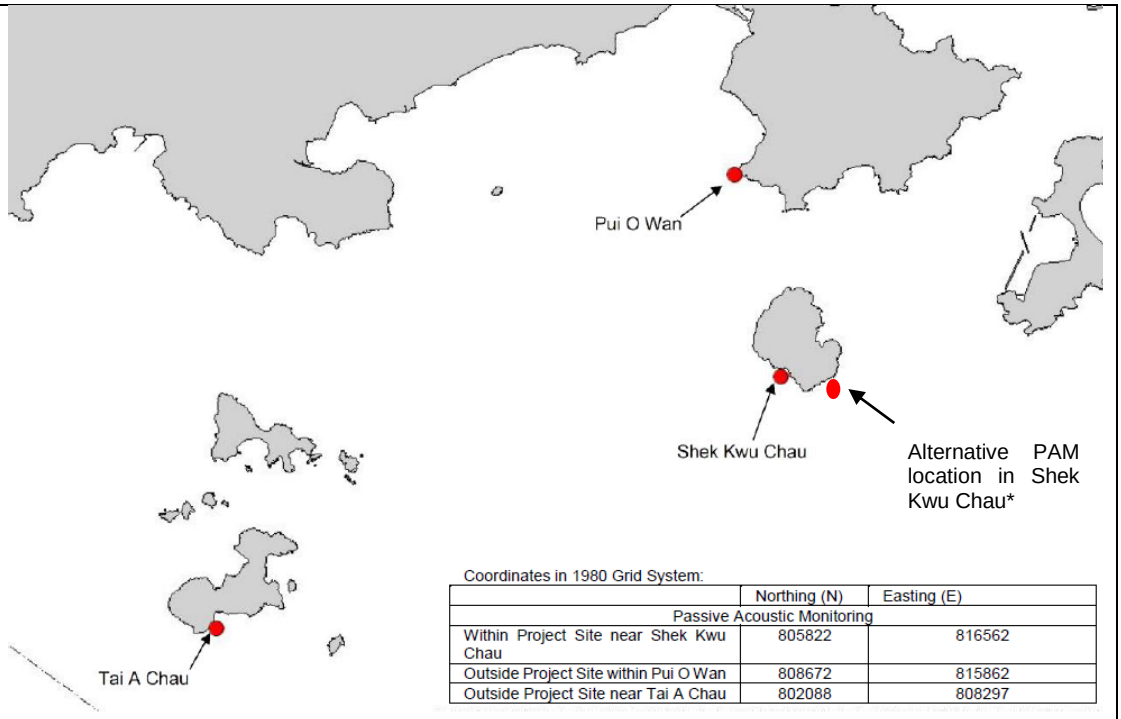
6.2.1.9 The newly-derived unit for sighting density was termed SPSE, representing the number of on-effort sightings per 100 units of survey effort. In addition, the derived unit for actual porpoise density was termed DPSE, representing the number of dolphins/porpoise per 100 units of survey effort. Among the 1-km^2 grids that were partially covered by land, the percentage of sea area was calculated using GIS tools, and their SPSE and DPSE values were adjusted accordingly. The following formulae shall be used to estimate SPSE and DPSE in each 1-km^2 grid within the study area:

$$SPSE = ((S / E) \times 100) / SA\%$$
$$DPSE = ((D / E) \times 100) / SA\%$$

where S = total number of on-effort sightings
D = total number of dolphins/porpoises from on-effort sightings
E = total number of units of survey effort
SA% = percentage of sea area

6.2.2 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

6.2.3 These three detectors will be deployed on-site to carry out 24-hours monitoring for a period listed as **Table 6.2** below during the construction phase.

Table 6.2 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

6.2.3.1 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.

6.2.3.2 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.

6.2.4 Land-based Theodolite Tracking

6.2.4.1 The Land-based Theodolite Tracking study would use the same station as in the AFCD monitoring study (same as the baseline monitoring location), which is situated at the southwest side of Shek Kwu Chau (GPS position: 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.

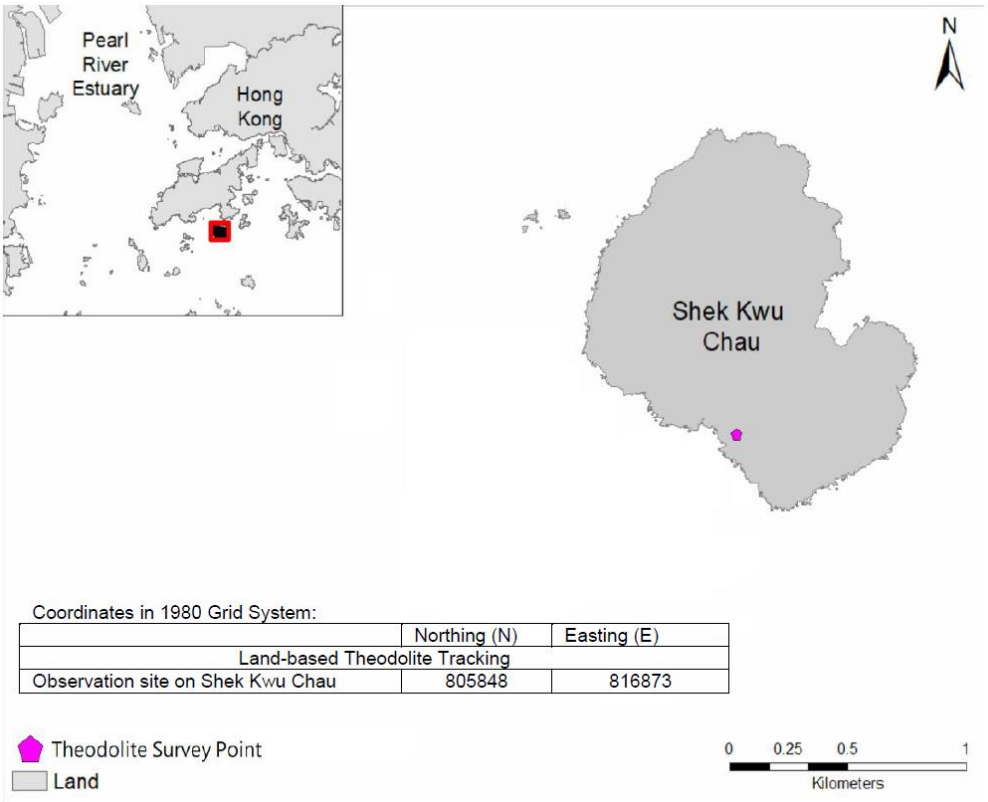


Figure 6.3 Locations of Land-based Theodolite Tracking

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 6.3** below, preferably at the initial stage of the construction period (i.e. December 2018 to May 2019).

Table 6.3 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

6.2.4.2 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 was 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.

6.3 Specific Mitigation Measures

6.3.1 Monitored exclusion zones

6.3.1.1 A MMEZ with 250 m distance from silt curtain shall be established during the above situation. If 3 or more construction vessels are required with MMO's duty and operating in close proximity, for the purpose of avoiding accidental entrance to the works area by Marine Mammal, a cluster MMEZ plan will be implemented to form a MMEZ with 250 m distance from the boundary of a work area as indicated in Figure 1 for reference. A team of MMO (i.e. at least two MMOs per day/night shift teams) would be arranged at the out-lying construction vessels to form the cluster MMEZ. The MMEZ serves as a monitoring approach to provide appropriate and immediate actions once finless porpoise or Chinese White Dolphin is sighted within the MMEZ. All MMEZ will be monitored by competent Marine Mammal Observers (MMOs) to be provided by the Environmental Team for the IWMF and trained by the Marine Mammal Monitoring Specialist of the ET who is independent from KSZHJV. The marine mammal observer(s) shall be independent of the construction contractor and shall form part of the Environmental Team and have the power to call-off construction activities.

6.3.1.2 According to the Condition 2.25 of the FEP, MMEZ should be implemented 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. Also, marine construction works expected to produce underwater acoustic disturbance as per Condition 2.27 of the FEP, especially within December and May, would require the implementation of MMEZ, which currently all those specific construction activities have been replaced by less acoustically disturbing construction methods such as Deep Cement Mixing (DCM) and Precast Concrete

Blocks Installation as discussed in Section 5.3 of the Detailed Monitoring Programme on Finless Porpoise, however, MMEZ would also be implemented for precautionary purpose for DCM works.

6.3.1.3 A MMEZ with 250 m distance from the boundary of a work area shall be established during the above situation. A typical MMEZ is indicated in **Figure 6.4** for reference. The MMEZ serves as a monitoring approach to provide appropriate and immediate actions once finless porpoise or Chinese White Dolphin is sighted within the MMEZ. All MMEZ will be monitored by competent Marine Mammal Observers (MMOs) to be provided by the Environmental Team (ET) for the IWMF and trained by the Marine Mammal Monitoring Specialist of the ET who is independent from KSZHJV.

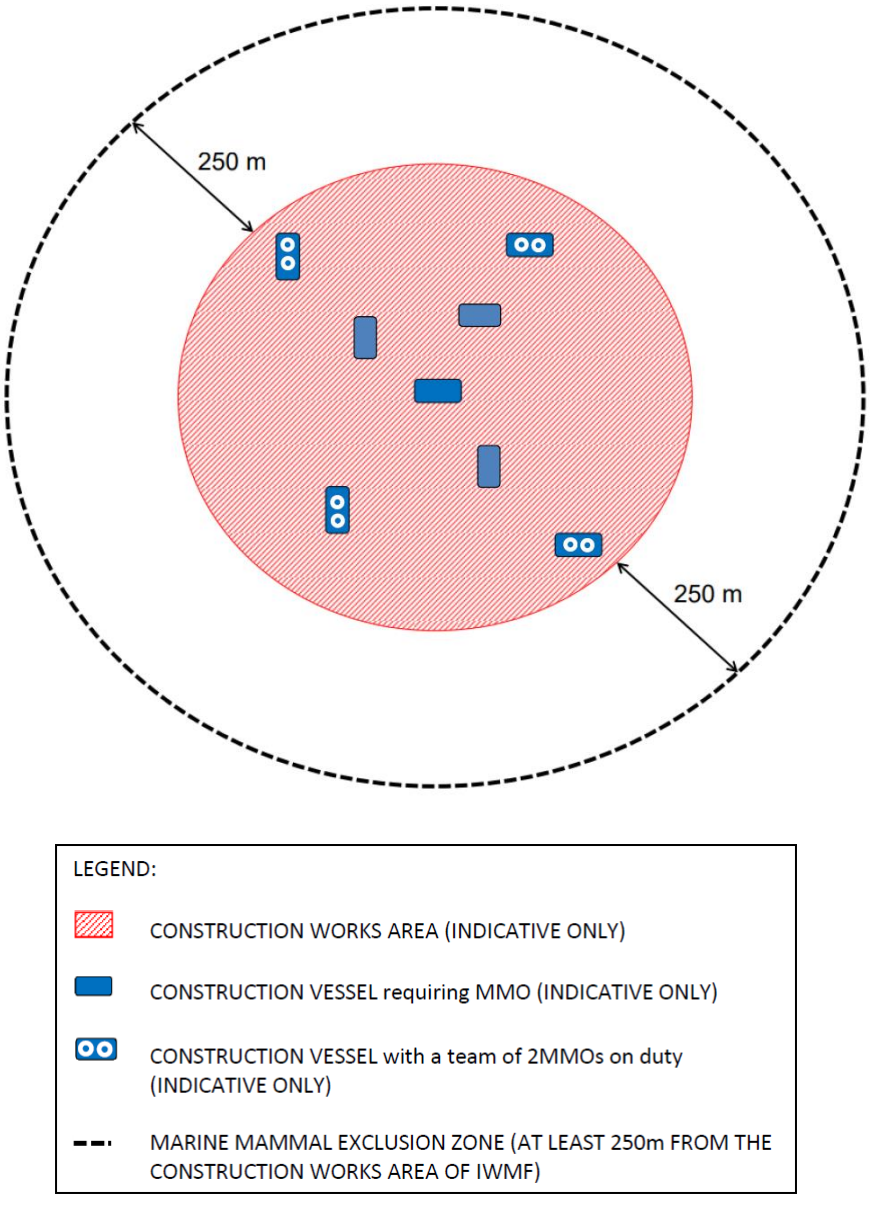


Figure 6.4 Illustration of Typical MMEZ

6.3.1.4 Prior to the commencement of construction activity, our MMOs shall ensure the boundary of a marine work area and setting up of the MMEZ for the work area and get access to the monitoring location on a barge or a lookout point where there is no obstructed views for monitoring the MMEZ during the construction activity. The MMEZ shall be scanned thoroughly by a MMO for any presence of marine mammal e.g. finless porpoise for an initial period of 30 minutes. Construction activity shall only be commenced after the MMO has confirmed that the MMEZ is clear of the marine mammal for the initial period of 30 minutes. The MMO shall then inform the construction superintendent through mobile phone or handheld transceivers to certify the commencement of construction activity. The MMEZ monitoring shall be carried on throughout the period for all active construction activities requiring implementation of MMEZ.

6.3.1.5 When any mammal marine, e.g. Finless Porpoise, is detected by the MMO within the MMEZ during construction, the MMO shall inform the construction superintendent immediately through mobile phone or handheld transceivers to cease construction activity within the MMEZ. Construction activity shall not be re-commenced until the MMO confirms that the MMEZ is continuously clear of marine mammal for a period of 30 minutes. The MMO shall then inform the construction superintendent through mobile phone or handheld transceivers to certify the re-commencement of construction activity.

6.3.1.6 As there could be a number of Contractors working at the same time within a work area for the IWMF project, a full contact list of MMEZ monitoring team members of the ET and the relevant responsible construction superintendents of the Contractor at the site shall be prepared, updated regularly and circulated to all parties involved in the MMEZ monitoring. With a full contact list, our MMOs shall be able to find out the contacts of corresponding persons in case of marine mammal sighting within and near the MMEZ or emergent occurrence of any unpredictable impact on marine mammal.

6.3.1.7 If a marine mammal is still observed in close vicinity but outside the MMEZ, the MMO shall inform the construction superintendent about the presence of marine mammal. The MMO shall remain in position and closely observe the movement of the marine mammal as well as searching for the appearance of any other marine mammal within the MMEZ. No matter the marine mammal is observed within or in close vicinity but outside the MMEZ, the construction superintendent or relevant persons shall inform all vessel captains involved in construction activities around the MMEZ to pay special attention of the presence of the marine mammal in order to reduce chance of collision with them. In case of injury or live-stranded marine mammal being found within the MMEZ, the marine mammal observer shall immediately inform the construction superintendent to suspend construction activities within the works area and contact AFCD through “1823” marine mammal stranding hotline.

6.3.2 Marine mammal watching plan

6.3.2.1 Upon the completion of silt curtain installation/re-installation/relocation, the marine works would be conducted within an enclosed environment within the silt curtain. Subsequently, Visual Inspection of the Waters Surrounded by Silt Curtains (Section 2.1, MMWP) and Regular Inspection of Deployed Silt Curtain (Section 2.2, MMWP) inspection under Marine Mammal Watching Plan would be implemented (where applicable, Marine Mammal Exclusion Zone shall be conducted at the meantime).

6.3.2.2 Before commencement of dredging/sand blanket laying work at each designated area, a trained MMO shall check whether position frame silt curtains are ready, well prepared and operated without any obvious damage. Also, the MMO shall confirm the presence of the relevant frontline staff of the main contractor or its sub-contractors and engineers on board to ensure the effective communication, coordination and implementation of the response plan in relation to any incidents involving marine mammals within the waters surrounded by the position frame type silt curtains and the work areas. Also, there are lookout points at an elevated level on each barge, clear and safe access at the edges of the derrick lighter/ flag-top barge for inspection during dredging/sand blanket laying works, provision of sufficient lighting is required if working at night.

6.3.2.3 During the operation, the inspection will be conducted daily. The MMO will walk along the edge of derrick lighter (DL) and flag-top barge (FB) along the position frame silt curtain or proper location without obstacles where appropriate to inspect the position frame silt curtain with naked eyes, the MMO will check that the position frame silt curtains are maintained in the correct positions with no obvious defects / entanglement and there is no observable muddy water passing through the position frame silt curtain system. Any floating refuse trapped by the silt curtain shall be removed as part of the regular inspection. For night inspection, spotlight will be used to provide sufficient brightness to assist the inspection in dark condition.

6.3.2.4 For the re-deployment of the localized silt curtains (frame-type, cage-type or enclosed floating-type silt curtains), MMO will conduct visual inspection to confirm that there is no presence of marine mammal within the localized silt curtains (frame-type, cage-type or enclosed floating-type silt curtains). Visual inspection will be conducted every hour by MMO for confirming that there is no marine mammal observed in the surrounding area of the deployed silt curtain during re-deployment of localized silt curtains (frame-type, cage-type or enclosed floating-type silt curtains). The duration will be subject to various conditions, e.g. weather or angle of observation. The works can only commence after confirming that the surrounding waters of the localized silt curtains do not contain any marine mammal. Thereafter, frontline staff, i.e. foremen, site agent, superintendents and engineers will assist our MMO in implementing the plan from the active work fronts within the waters surrounded by the silt curtains throughout the work period. The MMO will conduct regular check to observe the presence of any marine mammal around the localized silt curtain or being trapped by the localized silt curtain daily. The MMOs will also check if the localized silt curtains are in correct positions.

6.3.2.5 The MMO shall fill up our Marine Mammal Sighting Record Sheet. After inspection, those records should be kept properly and submitted to the project team. In case there is any marine mammal being found, the MMO should carry out the response actions and communicate with relevant parties to stop and then resume work after the discovered marine mammal leaves. After lifting up and mobilization of silt curtain, the MMO will repeat the procedures of regular and visual inspection until the end of the construction works.

6.3.2.6 Each lookout point will have an unobstructed view to waters around the DL and FB. The MMO will move around the DL and FB to establish a clear and unobstructed view as much as they can without compromising the safety concern. When appropriate, the lookout point can be replaced by a proper location if unobstructed view can be assured.

6.3.2.7 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.

6.4 Results and Observations

6.4.1 Vessel-based Line-transect Survey

6.4.1.1 As confirmed with Contractor and Project Supervising Officer, no marine construction work will be carried out from March to December 2023 tentatively. An updated EM&A arrangement to propose the temporary suspension of line transect monitoring from March to December 2023 was submitted to EPD on 21 March 2023 and EPD had no comment on the updated EM&A arrangement on 29 March 2023. The line transect monitoring was then temporarily suspended from 30 March 2023 onward.

6.4.2 PAM and Land-based Theodolite Tracking

6.4.2.1 30 days of PAM surveys were started on 1 May 2019 and completed in 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 had 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 showed 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).

6.4.2.2 For the baseline study, the Detection Positive Minutes (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 with 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 with 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 with 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.

6.4.2.3 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 yielded large quantities of data, would allow a more comprehensive assessment of the EIA predictions.

6.4.2.4 Theodolite surveys were completed in May 2019. In total, 34 days of theodolite tracking were completed between February and 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.

6.4.2.5 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.

6.4.2.6 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.

6.4.3 Specific Mitigation Measures

6.4.3.1 Trainings for the MMO were provided by the ET prior to the monitoring of the Marine Mammal Exclusion Zone (MMEZ) for installation/ re-installation/ relocation process of silt curtains, with a cumulative total of 98 individuals being trained and the training records kept by the ET.

7. WHITE-BELLIED SEA EAGLE

7.1 Monitoring Requirement

7.1.1 On Shek Kwu Chau Island, a nest of WBSE is located about 60 m above ground within a hillside shrubland habitat, 130 m in-land from shore, about 550 m away from the proposed reclaimed land, with no human access. 3 phases monitoring programme will be comprised of pre-construction phase, construction phase and operation phase.

7.1.2 The Pre-Construction WBSE monitoring was started on 30 January 2018 and the location of WBSE nest was confirmed on 21 February 2018 and it is located at the western part of SKC Island (**Figure 7.1**). Two adults and two chicks were also recorded on 5 March 2018 survey till the end of the Pre-construction monitoring on 15 May 2018. Construction Phase monitoring were carried out followed by the commencement of the Construction Phase on 28 June 2018.

7.2 WBSE Monitoring Parameters, Time, Frequency

7.2.1 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.

7.2.2 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 will be continued until chick was seen in the nest. Daily monitoring of 7-day consecutive monitoring will be carried out once any chick is recorded during the monitoring day. The monitoring schedule during the reporting period is provided in **Appendix C**.

7.3 Monitoring Location

7.3.1 Since there are no suitable land footings along the coast of SKC, only boat surveys were conducted. On Shek Kwu Chau Island, a nest of WBSE is located about 60 m above ground within a hillside shrubland habitat, 130 m in-land from shore, about 550 m away from the proposed reclaimed land, with no human access.

7.4 Monitoring Methodology

7.4.1 Information to be collected included feeding, perching/roosting, preening, soaring, flying, nesting and territorial guarding and the time spent on each activity. The responses and reactions to any disturbance to the WBSEs were also recorded and examined in conjunction with the construction noise and/or other events in the vicinity. Other disturbances such as weather condition, or invasion by other fauna species were also recorded.

7.4.2 Binocular, scope, camera, lens and GPS device used are summarized as **Table 7.1** below:

Table 7.1 List of Equipment Used during Construction Phase Monitoring

Equipment	Quantity
Swarovski EL 8.5 x 42 Binocular	1
Swarovski EL Range 8 x 42 Binocular	1
Swarovski ATX 25-60 x 85 Spotting Scope	1
Canon 1Dx Mark II Camera	1
Canon EF300mm F2.8 Lens with Canon 2x Teleconverter	1
Canon PowerShot G7X Camera	1
Garmin GPSMAP 64S	1

7.4.3 If event such as absence of White-bellied Sea Eagle during a whole day of monitoring was found during WBSE monitoring, the actions in accordance with the Event and Action Plan should be carried out according to **Appendix J.**

7.5 Results and Observations

7.5.1 To verify the utilization of the area by WBSE, their responses to construction disturbance, as well as the effectiveness of the proposed mitigation measures. Since there is no landing point long the western part of SKC, boat survey were used for the monitoring survey. The WBSE, monitoring survey was carried out in the morning. The weather condition of monitoring survey was shown in **Table 7.2**.

Table 7.2 Weather Conditions during the WBSE Monitoring

Date	Condition	Temperature (℃)
28 September 2023	- Southwest wind force 3 to 4 - Sunny	32

7.5.2 The September 2023 construction phase monitoring was conducted on 28 September 2023. During the whole monitoring survey period, two adult WBSEs were recorded. No abnormal behaviour of the recorded for adults WBSEs during the September 2023 construction phase monitoring.

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

7.5.4 All construction works during the monitoring period did not show any effect to the WBSE.

7.5.5 Any disturbances from anthropogenic activities on the island were not recorded during the monitoring survey. However, fishing boats moving close to the shore were recorded, but no disturbances were caused. No invasion of other faun species was recorded as well.

7.5.6 There was no sign of using the construction site as a foraging ground.

7.5.7 Once per month construction phase monitoring will be continued in October 2023 during the non-breeding season (between June to November) in order to monitor the

incubation period, utilization of the area by WBSE and their responses to construction disturbance.

Figure 7.1 Location of WBSE Nest on SKC

7.5.8 Photo record of WBSE from the survey in this reporting month is shown below:

One adult recorded flying around the nest area on 28 September 2023

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

8.1 The Environmental Complaint Handling Procedure is shown in **Figure 8.1**.

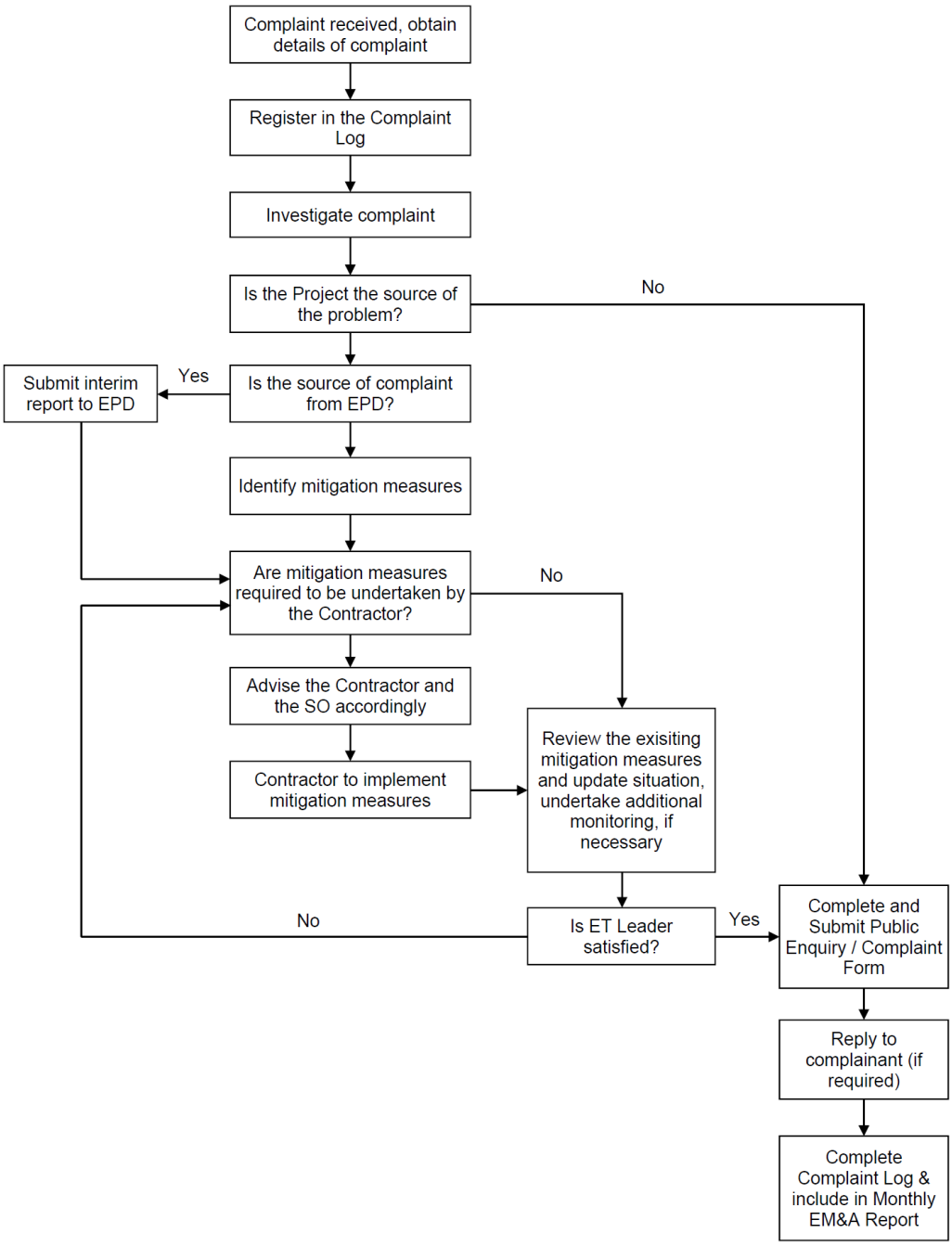


Figure 8.1 Environmental Complaint Handling Procedures

8.2 No exceedance of the Action and Limit Levels of the regular WBSE monitoring, coral monitoring and noise monitoring was recorded during the reporting period as shown in **Appendix K**.

8.3 One complaint was received by the Environmental Protection Department on 05 September 2023 and referred to the ET and IEC on 06 September 2023. The complaints were related to alleged discharge of effluent near the shore of artificial island After the investigation, the leakage of muddy water was induced by the damaged geotextile at caisson 7. The damaged geotextile had been repaired immediately and no further leakage was reported or observed afterwards.

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

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

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. In the reporting period, site inspections were carried out on 07, 12, 19 and 26 September 2023 at the site portions listed in **Table 9.1** below.

Table 9.1 Site Inspection Record

Date	Inspected Site Portion	Time
07 September 2023	Portion 1, 1A & 1B (near SKC)	10:30 AM – 11:20 AM
12 September 2023	Portion 1, 1A & 1B (near SKC)	10:15 AM – 11:15 AM
19 September 2023	Portion 1, 1A & 1B (near SKC)	10:30 AM – 11:20 AM
26 September 2023	Portion 1, 1A & 1B (near SKC)	10:30 AM – 11:15 AM

9.2 One joint site inspection with IEC was carried out on 12 September 2023.

9.3 Environmental deficiencies were observed during weekly site inspection. Key observations during the site inspections of the reporting period are summarized in **Table 9.2**.

Table 9.2 Site Observations

Date	Environmental Observations	Follow-up Status
07 September 2023 (Site inspection)	Observation(s) and Recommendation(s) 1. Near concrete batching barge, rubbish inside the u channel should be removed. Geotextile along the caisson should be deployed at right position. 2. Near concrete batching barge, oil drum should be placed on drip tray. 3. NRMM label should be displayed on PD09, air compressor STARKE AP800f and generator NES90.	1. Near concrete batching barge, rubbish inside the u channel had been removed. Geotextile and silt curtain along the caisson had been deployed at right position. 2. Near concrete batching barge, oil drum had been placed on drip tray. 3. NRMM label had been displayed on PD09 and generator NES90. As the power output of air compressor STARKE AP800f is greater than 560kW, NRMM system is not applicable to air compressor STARKE AP800f.
12 September 2023 (Site inspection)	Observation(s) and Recommendation(s) 1. At caisson 7-8, oil drums should be placed on drip tray. 2. At vertical seawall bay 5, site runoff leaking to sea is observed. 3. Near Bunker 3, sorting area for C&D waste should be fenced off	1. At caisson 7-8, oil drums had been placed on drip tray. 2. At vertical seawall bay 5, the leaking point had been blocked and geotextile had been repaired. No runoff had been observed after repairment. 3. Near Bunker 3, temporarily stored C&D waste had been removed form

Date	Environmental Observations	Follow-up Status
	and removed from site regularly.	site.
19 September 2023 (Site inspection)	Observation(s) and Recommendation(s) 1. At storage area of 岩土, oil drums should be placed on drip tray. Chemical battery should be stored at designated storage place. 2. At work area of 華航, housekeeping should be maintained and general waste should be stored inside rubbish bin.	1. At storage area of 岩土, oil drums had been placed on drip tray. Chemical battery had been stored at designated storage place. 2. At work area of 華航, housekeeping had been maintained and general waste had been stored inside rubbish bin.
26 September 2023 (Site inspection)	Observation(s) and Recommendation(s) Nill	Nill

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

9.5 According to the EIA Study Report, Environmental Permit, contract documents and Updated EM&A Manual, the mitigation measures detailed in the documents 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. FUTURE KEY ISSUES

10.1 Works to be undertaken in the next reporting month are:

- Reclamation Area:
  - Installation of Instrumentation
  - Site Investigation works for foundation
  - Foundation works (including Driven H Pile and Socketed H Pile)
  - Pile cap construction
  - Structural steel work
  - Superstructure construction
- Seawall Portion:
  - Caisson extension works, from +3mPD to +6mPD, at Seawall A and B
  - Construction of wave wall along the vertical seawall

10.2 Potential environmental impacts arising from the above construction activities are mainly associated with construction noise, waste management and ecology.

10.3 The key environmental mitigation measures for the Project in the coming reporting period expected to be associated with the construction activities include:

- Reduction of noise from equipment and machinery on-site;
- Sorting, recycling, storage and disposal of general refuse and construction waste;
- Management of chemicals and avoidance of oil spillage on-site, especially under heavy rains and adverse weather;
- Dust control of exposed soil surface and stockpile of dusty material at reclaimed area;
- Dust suppression measures for exposed earth surface and stockpile of dusty material;
- Site runoff control measure during construction works; and
- Dust and noise control of foundation works.

10.4 The tentative schedule of regular construction noise and ecology monitoring in the next reporting period is presented in **Appendix M**. The regular construction noise and ecology monitoring will be conducted at the same monitoring locations in the next reporting period.

11. CONCLUSION AND RECOMMENDATIONS

11.1 This 63rd monthly Environmental Monitoring and Audit (EM&A) Report presents the EM&A works undertaken during the period from 1 September to 30 September 2023, in accordance with the Updated EM&A Manual and the requirement under EP-429/2012/A and FEP-01/429/2012/A.

11.2 Construction noise, construction waste, WBSE and coral monitoring were carried out in the reporting period. No project-related exceedance of the Action and Limit Level was recorded from 1 September to 30 September 2023.

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

11.4 According to the environmental site inspections performed in the reporting month, the Contractor was reminded to pay attention on the proper storage of the chemicals for preventing accidental spillage of chemicals, proper deployment of geotextile for preventing site runoff, proper storage of general and C&D waste to maintain the site tidiness and displaying the NRMMs label to machineries.

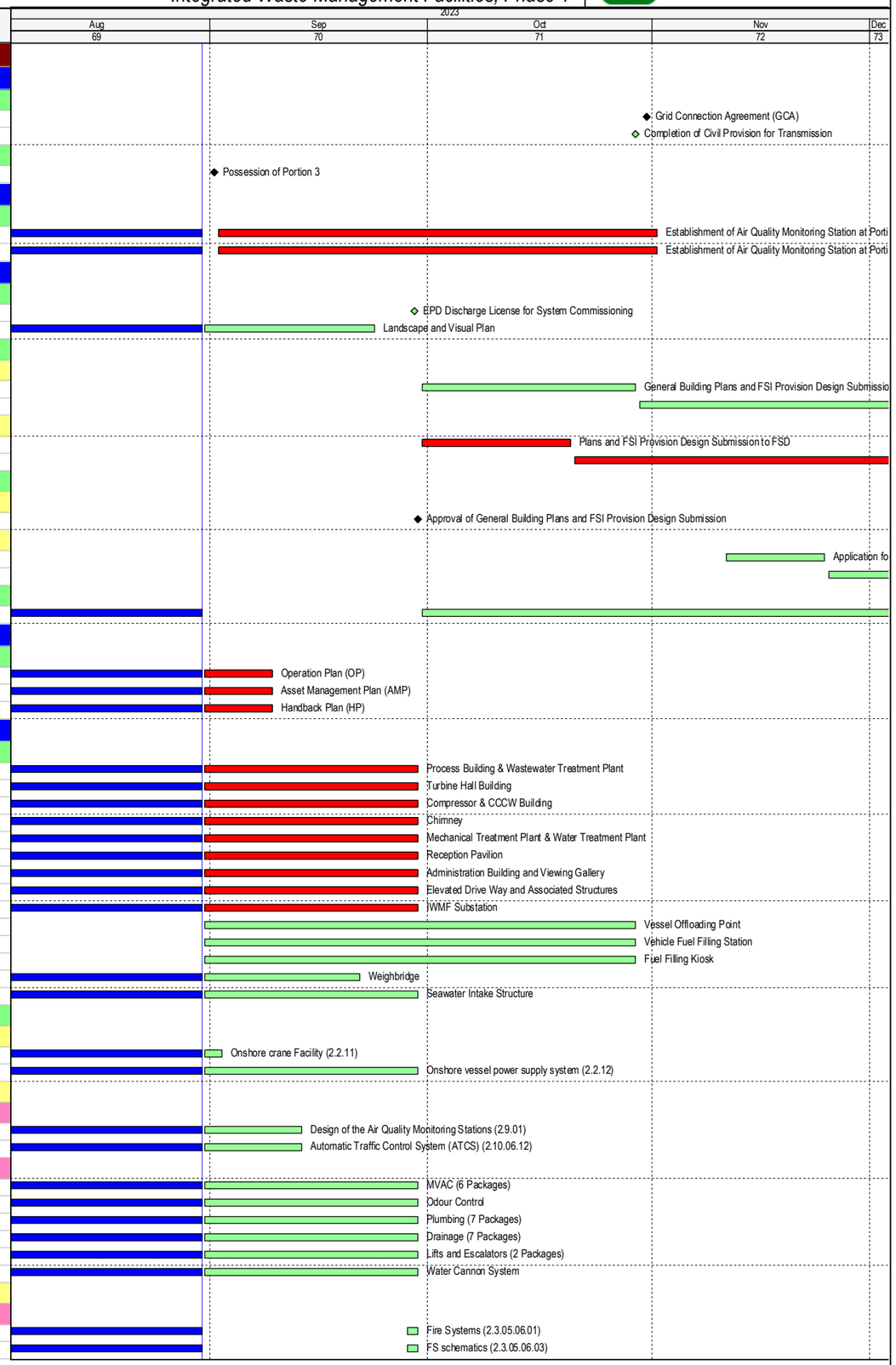
11.5 One complaint was received by the Environmental Protection Department on 05 September 2023 and referred to the ET and IEC on 06 September 2023. The complaints were related to alleged discharge of effluent near the shore of artificial island After the investigation, the leakage of muddy water was induced by the damaged geotextile at caisson 7. The damaged geotextile had been repaired immediately and no further leakage was reported or observed afterwards.

11.6 No notification of summon or prosecution was received since commencement of the Contract.

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

Appendix A Master Programme

Activity ID	Activity Name	Original Duration	Remaining Duration	Activity % Complete	Current Start	Current Finish	Late Start	Late Finish	Total Float	M69 Remarks
Programme for Design and Construction Works WP6H-M69		2314	513		11-Jul-18 A	24-Jan-25	27-Apr-23	01-Oct-25	250	
Key Dates		59	59		01-Sep-23	31-Oct-23	28-Apr-23	30-Jan-24	92	
Planned Completion Dates		1	1		29-Oct-23	31-Oct-23	30-Oct-23	30-Jan-24	92	
01-1030(5a)	Grid Connection Agreement (GCA)	0	0	0%		31-Oct-23*		30-Oct-23	0	
01-1070	Completion of Civil Provision for Transmission	0	0	0%		29-Oct-23		30-Jan-24	93	
Dates of Site Possession		0	0		01-Sep-23	01-Sep-23	28-Apr-23	28-Apr-23	-126	
01-1160	Possession of Portion 3	0	0	0%		01-Sep-23		28-Apr-23	-126	
Contract Preliminaries		90	61		01-Jul-23 A	01-Nov-23	29-Apr-23	28-Jun-23	-126	
Establishment of Environmental Monitoring Stations		90	61		01-Jul-23 A	01-Nov-23	29-Apr-23	28-Jun-23	-126	
02-1030	Establishment of Air Quality Monitoring Station at Portion 3 (12m Prior to T&C)	90	61	32.22%	01-Jul-23 A	01-Nov-23	29-Apr-23	28-Jun-23	-126	
02-1050	Establishment of Air Quality Monitoring Station at Portion 5 (12m Prior to T&C)	90	61	32.22%	01-Jul-23 A	01-Nov-23	29-Apr-23	28-Jun-23	-126	
License/Permit Applications		452	300		24-Dec-22 A	25-Jun-24	25-Jul-23	29-Jan-25	218	
License/Permit for Construction		241	29		24-Dec-22 A	29-Sep-23	06-Jan-25	29-Jan-25	489	
03-1370(5a)	EPD Discharge License for System Commissioning	0	0	0%	29-Sep-23		06-Jan-25		465	
03-1370_1(M34)	Landscape and Visual Plan	180	24	86.67%	24-Dec-22 A	23-Sep-23	06-Jan-25	29-Jan-25	494	
DG Licence		210	210		30-Sep-23	26-Apr-24	26-Jul-23	24-Aug-24	120	
Day Tank & Fuel Oil Storage (Cat 5)		210	210		30-Sep-23	26-Apr-24	28-Jan-24	24-Aug-24	120	
03-1400	General Building Plans and FSI Provision Design Submission to FSD (Cat 5)	30	30	0%	30-Sep-23	29-Oct-23	28-Jan-24	26-Feb-24	120	
03-1410	DGD and VD Review and Approval of Submission	180	180	0%	30-Oct-23	26-Apr-24	27-Feb-24	24-Aug-24	120	
Chemical Stores (all Cat)		201	201		30-Sep-23	17-Apr-24	26-Jul-23	11-Feb-24	-66	
03-1480	Plans and FSI Provision Design Submission to FSD	21	21	0%	30-Sep-23	20-Oct-23	26-Jul-23	15-Aug-23	-66	
03-1490	DGD and VD Review and Approval of Submission	180	180	0%	21-Oct-23	17-Apr-24	16-Aug-23	11-Feb-24	-66	
Fire Services Installations (FSI) Certificate		70	70		29-Sep-23	08-Dec-23	25-Jul-23	04-Sep-24	271	
Fire Services Installations Certificate Inspection		0	0		29-Sep-23	29-Sep-23	25-Jul-23	25-Jul-23	-66	
03-1555-1(5a)	Approval of General Building Plans and FSI Provision Design Submission	0	0	0%		29-Sep-23		25-Jul-23	-66	
Fire Services Installations Certificate Inspection for IWMF Sub-Station		28	28		11-Nov-23	08-Dec-23	08-Aug-24	04-Sep-24	271	
03-3890	Application for FSI inspection	14	14	0%	11-Nov-23	24-Nov-23	08-Aug-24	21-Aug-24	271	
03-3900	FSD Process Application	14	14	0%	25-Nov-23	08-Dec-23	22-Aug-24	04-Sep-24	271	
Air Pollution Control (Specified Processes) License		300	270		24-Apr-23 A	25-Jun-24	05-Nov-23	31-Jul-24	36	
03-1750(3)	SP License Application Submissions and review by EPD	300	270	10%	24-Apr-23 A	25-Jun-24	05-Nov-23	31-Jul-24	36	
General Submissions		1735	10		27-Nov-18 A	09-Sep-23	03-Aug-23	28-Aug-23	-12	
Contractor's Plans Submission and Approval		1735	10		27-Nov-18 A	09-Sep-23	03-Aug-23	28-Aug-23	-12	
04-1400(1)	Operation Plan (OP)	240	10	95.83%	27-Nov-18 A	09-Sep-23	03-Aug-23	12-Aug-23	-28	
04-1450(1)	Asset Management Plan (AMP)	120	10	70%	15-Apr-23 A	09-Sep-23	19-Aug-23	28-Aug-23	-12	
04-1500(1)	Handback Plan (HP)	120	10	70%	15-Mar-23 A	09-Sep-23	19-Aug-23	28-Aug-23	-12	
Design Submissions		2023	285		11-Jul-18 A	10-Jun-24	27-Apr-23	01-Oct-25	478	
General Building Plan		821	60		03-Mar-21 A	29-Oct-23	26-Jun-23	28-Mar-24	151	
04-1600(M42)	Process Building & Wastewater Treatment Plant	135	30	77.78%	03-Jun-21 A	29-Sep-23	26-Jun-23	25-Jul-23	-66	
04-1610(M42)	Turbine Hall Building	135	30	77.78%	03-Mar-21 A	29-Sep-23	26-Jun-23	25-Jul-23	-66	
04-1620(M42)	Compressor & CCCW Building	135	30	77.78%	03-Mar-21 A	29-Sep-23	26-Jun-23	25-Jul-23	-66	
04-1630(M42)	Chimney	135	30	77.78%	03-Mar-21 A	29-Sep-23	26-Jun-23	25-Jul-23	-66	
04-1640(M42)	Mechanical Treatment Plant & Water Treatment Plant	135	30	77.78%	03-Jun-21 A	29-Sep-23	26-Jun-23	25-Jul-23	-66	
04-1650(M42)	Reception Pavilion	135	30	77.78%	03-Jun-21 A	29-Sep-23	26-Jun-23	25-Jul-23	-66	
04-1660(M42)	Administration Building and Viewing Gallery	135	30	77.78%	03-Jun-21 A	29-Sep-23	26-Jun-23	25-Jul-23	-66	
04-1670(M42)	Elevated Drive Way and Associated Structures	135	30	77.78%	03-Mar-21 A	29-Sep-23	26-Jun-23	25-Jul-23	-66	
04-1680(M42)	IWMF Substation	135	30	77.78%	03-Mar-21 A	29-Sep-23	26-Jun-23	25-Jul-23	-66	
04-1700	Vessel Offloading Point	60	60	0%	31-Aug-23	29-Oct-23	29-Jan-24	28-Mar-24	151	
04-1710	Vehicle Fuel Filling Station	60	60	0%	31-Aug-23	29-Oct-23	21-Jan-24	20-Mar-24	143	
04-1720	Fuel Filling Kiosk	60	60	0%	31-Aug-23	29-Oct-23	21-Jan-24	20-Mar-24	143	
04-1730	Weighbridge	135	22	80%	22-Apr-22 A	21-Sep-23	02-Sep-23	23-Sep-23	2	
04-1740	Seawater Intake Structure	60	30	80%	23-Feb-23 A	29-Sep-23	29-Dec-23	27-Jan-24	120	
AIP Design Package Submissions		1941	210		11-Jul-18 A	27-Mar-24	15-May-23	28-Dec-24	276	
AIP Ground Treatment, Reclamation, Seawall, Breakwater, Berth (2.2)		424	30		31-May-21 A	29-Sep-23	11-Nov-23	01-Sep-24	338	
05-2970	Onshore crane Facility (2.2.11)	90	3	80%	11-Apr-22 A	02-Sep-23	11-Nov-23	13-Nov-23	72	
05-2980	Onshore vessel power supply system (2.2.12)	135	30	80%	31-May-21 A	29-Sep-23	03-Aug-24	01-Sep-24	338	
AIP Incineration Plant Buildings (2.3)		1395	30		04-Dec-18 A	29-Sep-23	01-Sep-23	13-May-24	227	
Operation Management System (2.3.03.04)		121	14		14-Feb-22 A	13-Sep-23	05-Sep-23	04-May-24	234	
05-2250	Design of the Air Quality Monitoring Stations (2.9.01)	60	14	80%	01-Jun-22 A	13-Sep-23	05-Sep-23	18-Sep-23	5	
05-3840-1(M22)	Automatic Traffic Control System (ATCS) (2.10.06.12)	90	14	80%	14-Feb-22 A	13-Sep-23	21-Apr-24	04-May-24	234	
Building services design (excluding fire services installation design) (2.3.06)		467	30		04-Dec-18 A	29-Sep-23	01-Sep-23	13-May-24	227	
05-1560	MVAC (6 Packages)	105	30	60%	02-Jan-19 A	29-Sep-23	23-Nov-23	22-Dec-23	84	
05-1570	Odour Control	135	30	60%	04-Dec-18 A	29-Sep-23	23-Nov-23	22-Dec-23	84	
05-1580	Plumbing (7 Packages)	210	30	60%	31-Jan-19 A	29-Sep-23	08-Mar-24	06-Apr-24	190	
05-1590	Drainage (7 Packages)	135	30	60%	31-Jan-19 A	29-Sep-23	08-Mar-24	06-Apr-24	190	
05-1610	Lifts and Escalators (2 Packages)	135	30	80%	22-Feb-22 A	29-Sep-23	01-Sep-23	30-Sep-23	1	
05-1770-1(M20)	Water Cannon System	135	30	60%	31-Aug-19 A	29-Sep-23	14-Apr-24	13-May-24	227	
AIP Fire services installation design (2.3.05)		270	2		31-Oct-19 A	29-Sep-23	12-Apr-24	13-Apr-24	197	
Reception Pavilion (2.3.05.06)		270	2		31-Oct-19 A	29-Sep-23	12-Apr-24	13-Apr-24	197	
05-5460(M22)	Fire Systems (2.3.05.06.01)	270	2	80%	31-Oct-19 A	29-Sep-23	12-Apr-24	13-Apr-24	197	
05-5470-1(M22)	FS schematics (2.3.05.06.03)	135	2	80%	31-Oct-19 A	29-Sep-23	12-Apr-24	13-Apr-24	197	

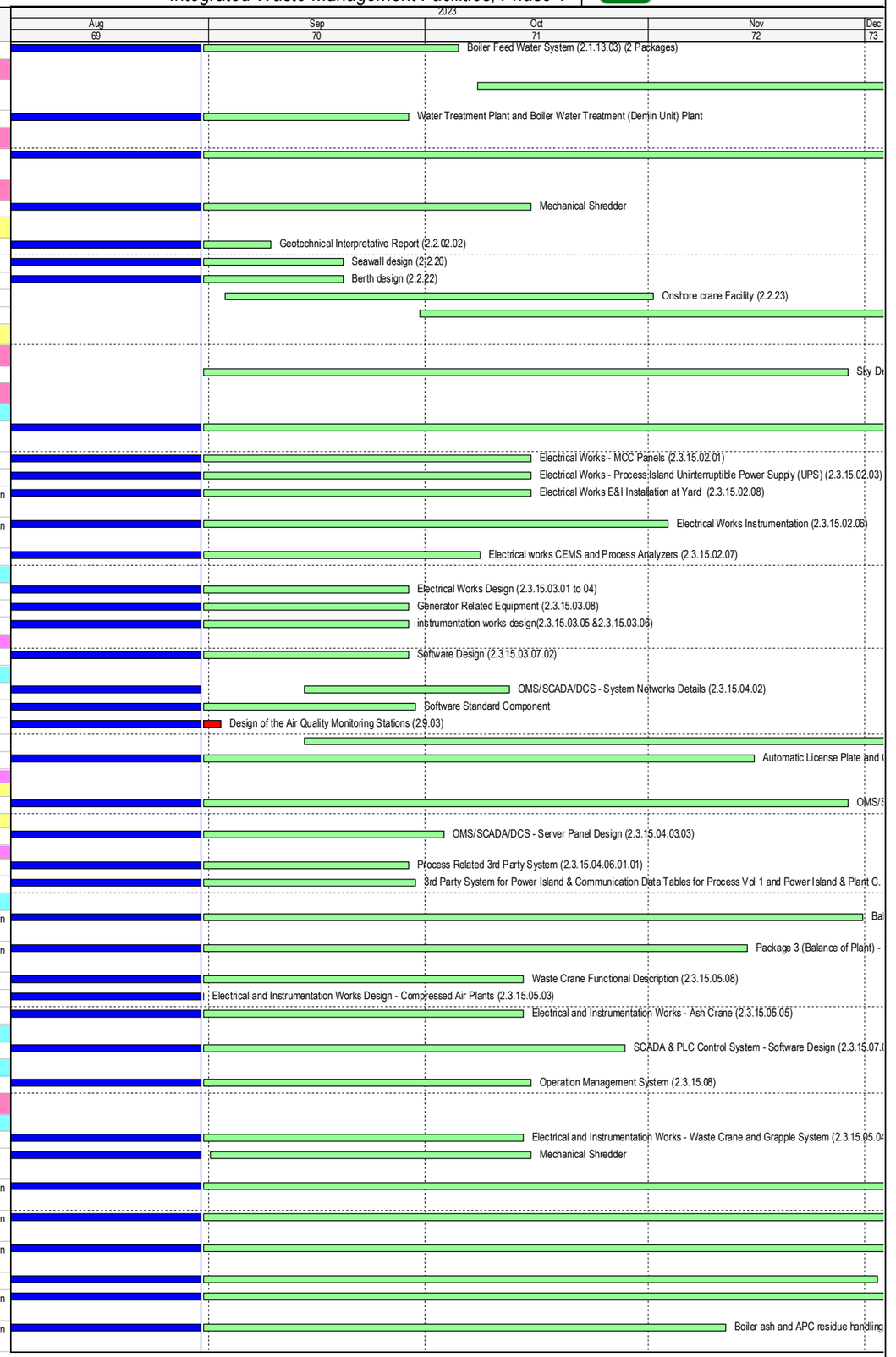


Actual Work | Remaining Work | Critical Remaining Work | Milestone | Actrual Milestone | Critical Milestone

Activity ID	Activity Name	Original Duration	Remaining Duration	Activity % Complete	Current Start	Current Finish	Late Start	Late Finish	Total Float	M69 Remarks
AIP Mechanical Treatment Plant Building (2.4)		432	160		11-Jul-18 A	06-Feb-24	01-Sep-23	29-May-24	113	
05-1670	Electrical and instrumentation works design (2.4.03)	190	160	40%	08-Aug-23 A	06-Feb-24	13-Oct-23	20-Mar-24	43	Actual Start Date Updated
05-1680	Mechanical works design (2.4.04)	30	106	60%	13-Jan-23 A	14-Dec-23	13-Oct-23	26-Jan-24	43	Actual Start Date Updated
Building services design (excluding fire services installation design) (2.4.06)		212	30		11-Jul-18 A	29-Sep-23	01-Sep-23	29-May-24	243	
05-1700	LV and Emergency Power Distribution Design	135	30	80%	18-Jan-22 A	29-Sep-23	30-Apr-24	29-May-24	243	
05-1720	Odour Control	90	0	80%	11-Jul-18 A	31-Aug-23	25-Nov-23	25-Nov-23	87	
05-1740	Drainage	90	0	80%	10-Jan-21 A	31-Aug-23	21-Mar-24	21-Mar-24	204	
05-1760	Lifts	90	30	80%	22-Feb-22 A	29-Sep-23	01-Sep-23	30-Sep-23	1	
AIP Wastewater Treatment Plant (2.5)		1170	30		31-Jan-19 A	29-Sep-23	01-Dec-23	30-Mar-24	183	
Building services design (excluding fire services installation design) (2.5.06)		1170	30		31-Jan-19 A	29-Sep-23	01-Dec-23	30-Mar-24	183	
05-1830	LV and Emergency Power Distribution Design (2.5.06.01)	135	30	80%	31-Jan-19 A	29-Sep-23	01-Mar-24	30-Mar-24	183	
05-1850	Odour Control (2.5.06.03)	105	30	80%	31-Dec-21 A	29-Sep-23	01-Dec-23	30-Dec-23	92	
AIP Water Treatment Plant Building (2.6)		135	30		30-Apr-19 A	29-Sep-23	11-Apr-24	28-Jul-24	303	
Building services design (excluding fire services installation design) (2.6.06)		135	30		30-Apr-19 A	29-Sep-23	11-Apr-24	28-Jul-24	303	
05-1960	Electrical Services and Lighting (2.6.06.01)	135	30	80%	30-Apr-19 A	29-Sep-23	29-Jun-24	28-Jul-24	303	
05-2000	Drainage	135	10	80%	20-Mar-22 A	09-Sep-23	11-Apr-24	20-Apr-24	224	
AIP Administration Building (2.7)		1490	90		31-Oct-19 A	28-Nov-23	01-Sep-23	20-Apr-24	144	
05-2050	Electrical and instrumentation works design (2.7.03)	90	90	0%	31-Aug-23	28-Nov-23	02-Nov-23	30-Jan-24	63	
Building services design (excluding fire services installation design) (2.7.05)		227	30		31-Oct-19 A	29-Sep-23	01-Sep-23	20-Apr-24	204	
05-2080	MVAC	135	0	80%	31-Oct-19 A	31-Aug-23	20-Apr-24	20-Apr-24	234	
05-2130	Lifts and Escalators	135	30	80%	22-Feb-22 A	29-Sep-23	01-Sep-23	30-Sep-23	1	
AIP Chimney		241	30		20-Sep-21 A	29-Sep-23	31-Aug-23	20-Feb-24	144	
Building services design (excluding fire services installation design)		241	30		20-Sep-21 A	29-Sep-23	31-Aug-23	20-Feb-24	144	
05-5430(5a)	Electrical Services and Lighting	90	30	60%	20-Sep-21 A	29-Sep-23	30-Dec-23	28-Jan-24	121	
05-5440(5a)	MVAC	90	30	60%	20-Sep-21 A	29-Sep-23	23-Dec-23	21-Jan-24	114	
05-5450(5a)	Plumbing	90	30	60%	20-Sep-21 A	29-Sep-23	22-Jan-24	20-Feb-24	144	
05-5460-1(5a)	Drainage	90	30	60%	20-Sep-21 A	29-Sep-23	22-Jan-24	20-Feb-24	144	
05-5470(5a)	ELV	90	30	60%	20-Sep-21 A	29-Sep-23	30-Dec-23	28-Jan-24	121	
05-5480-2(5a)	Lift	29	12	60%	31-May-22 A	11-Sep-23	19-Sep-23	30-Sep-23	19	
05-5490(5a)	Building Management System (BMS)	90	0	60%	27-Oct-21 A	31-Aug-23	31-Aug-23	31-Aug-23	1	
AIP Elevated Drive Way and Associated Structures Foundation		105	30		31-Dec-21 A	29-Sep-23	15-Sep-23	14-Oct-23	15	
Building services design (excluding fire services installation design)		105	30		31-Dec-21 A	29-Sep-23	15-Sep-23	14-Oct-23	15	
05-7090	Electrical Services and Lighting	105	30	60%	31-Dec-21 A	29-Sep-23	15-Sep-23	14-Oct-23	15	
AIP Roads and Utilities (2.10)		1094	60		31-Oct-20 A	29-Oct-23	23-Sep-23	19-Jan-24	82	
Water supply system design on the Artificial Island (2.10.04)		1094	60		31-Oct-20 A	29-Oct-23	23-Sep-23	05-Jan-24	68	
05-2360	Water Tanks (2.10.04.05)	60	60	0%	31-Aug-23	29-Oct-23	23-Sep-23	21-Nov-23	23	
05-2370-2(M24)	Building Services system for seawater intake (2.10.04.09)	105	30	60%	31-Oct-20 A	29-Sep-23	07-Dec-23	05-Jan-24	98	
05-2370-3(5a)	Chemical scrubber system for odour control (2.10.04.10)	105	30	60%	31-Oct-21 A	29-Sep-23	07-Dec-23	05-Jan-24	98	
Design of telecommunication and other utilities (2.10.06)		590	1		31-Jan-21 A	31-Aug-23	05-Nov-23	19-Jan-24	141	
05-2380	Power Distribution System concept / schematics (2.10.06.01)	135	1	80%	31-Jan-21 A	31-Aug-23	19-Jan-24	19-Jan-24	141	
05-2430	Site ELV Network System - Navigation aids concept / schematics (2.10.06.06)	105	1	80%	31-May-22 A	31-Aug-23	05-Nov-23	05-Nov-23	66	
AIP Architectural, Finishes and Landscaping Works (2.11)		698	90		05-Oct-21 A	28-Nov-23	17-Nov-23	27-May-24	181	
Facade Structural Design		698	90		05-Oct-21 A	28-Nov-23	17-Nov-23	27-May-24	181	
05-8040-1(6D)	Reception Pavilion (2.3.14.07.01)	90	30	80%	05-Oct-21 A	29-Sep-23	28-Apr-24	27-May-24	241	
05-8050-1(6D)	Mechanical Treatment Plant & Desalination Plant Building (2.4.14.01)	90	30	80%	08-Mar-22 A	29-Sep-23	09-Jan-24	07-Feb-24	131	
05-8060-1(6D)	Administration Building and Viewing Gallery (2.7.12.01)	90	30	80%	07-Dec-21 A	29-Sep-23	25-Nov-23	24-Dec-23	86	
05-8090-1(6D)	Sky Deck near Administration Building Structural Design	90	90	0%	31-Aug-23	28-Nov-23	17-Nov-23	14-Feb-24	78	
AIP Testing and Commissioning (2.12)		1718	207		23-Apr-19 A	24-Mar-24	15-May-23	21-Nov-24	242	
05-2650-1(5)	Factory Acceptance Testing plan (2.12.01.02-07) (8 Packages)	1651	207	60%	23-Apr-19 A	24-Mar-24	20-Jul-23	11-Feb-24	-42	
05-2660	Site Acceptance Testing plan (2.12.02)	90	90	0%	31-Aug-23	28-Nov-23	15-May-23	12-Aug-23	-108	
05-2670	System commissioning plan (2.12.03)	90	90	0%	31-Aug-23	28-Nov-23	31-Dec-23	29-Mar-24	122	
05-2680	Plant commissioning plan (2.12.04)	105	105	0%	29-Nov-23	12-Mar-24	09-Aug-24	21-Nov-24	254	
AIP Miscellaneous Works (2.14)		105	105		30-Oct-23	11-Feb-24	01-Nov-23	13-Feb-24	2	
05-2710	Existing onshore crane replacement works at Portion 2	105	105	0%	30-Oct-23*	11-Feb-24	01-Nov-23	13-Feb-24	2	Put Constraint Start on or After
AIP Auxiliary Plant Systems (2.16)		90	90		31-Aug-23	28-Nov-23	23-Sep-23	28-Jan-24	61	
05-2760	Maintenance workshops (2.16.01)	90	90	0%	31-Aug-23	28-Nov-23	13-Oct-23	10-Jan-24	43	
05-2770	Vehicle Fuel Filling Station (2.16.02)	90	90	0%	31-Aug-23	28-Nov-23	23-Sep-23	21-Dec-23	23	
05-2780	Stores systems (2.16.03)	90	90	0%	31-Aug-23	28-Nov-23	31-Oct-23	28-Jan-24	61	
AIP O&M Packages		637	210		06-Jun-22 A	27-Mar-24	04-Jun-24	28-Dec-24	276	
05-8010(6E)	Warehouse (O&M Scope)	185	167	40%	04-Jul-22 A	13-Feb-24	10-Jul-24	23-Dec-24	314	Remove Exp Finish Date
05-8020(6E)	Workshop (O&M Scope)	150	150	0%	30-Oct-23*	27-Mar-24	09-Jul-24	05-Dec-24	253	Remove Exp Finish Date; Put Constraint Start on or After; Update OD
05-8030(6E)	Ash & Residues Container (O&M Scope)	160	136	40%	06-Jun-22 A	13-Jan-24	04-Jun-24	17-Oct-24	278	Remove Exp Finish Date
05-8040(6E)	Bicar Debagging Station (O&M Scope)	105	51	40%	17-Nov-22 A	20-Oct-23	08-Nov-24	28-Dec-24	435	Remove Exp Finish Date; Remove Constraints Start On or After
DDA Design Package Submissions		2023	285		05-Sep-18 A	10-Jun-24	27-Apr-23	01-Oct-25	478	
DDA Process and Layout Design (2.1)		1284	219		22-Apr-20 A	05-Apr-24	02-Sep-23	21-Nov-24	230	
MSW treatment process design for incineration (2.1.13)		1078	137		22-Apr-20 A	14-Jan-24	13-Jan-24	21-Nov-24	312	
05-5090	Incineration System (2.1.13.01) (2 Packages)	105	106	60%	22-Apr-20 A	14-Dec-23	08-Aug-24	21-Nov-24	343	Remove Exp Finish Date
05-5100	Heat Recovery Boiler (2.1.13.02) (2 Packages)	105	106	60%	23-Apr-20 A	14-Dec-23	08-Aug-24	21-Nov-24	343	Remove Exp Finish Date
05-5120	Leachate Collection and Treatment (2.1.13.05) (2 Packages)	256	137	60%	30-Jun-22 A	14-Jan-24	08-Jul-24	21-Nov-24	312	Remove Exp Finish Date
05-5140	Overall Plan Water Scheme (2.1.13.07)	105	0	60%	29-Jan-21 A	31-Aug-23	21-Nov-24	21-Nov-24	449	

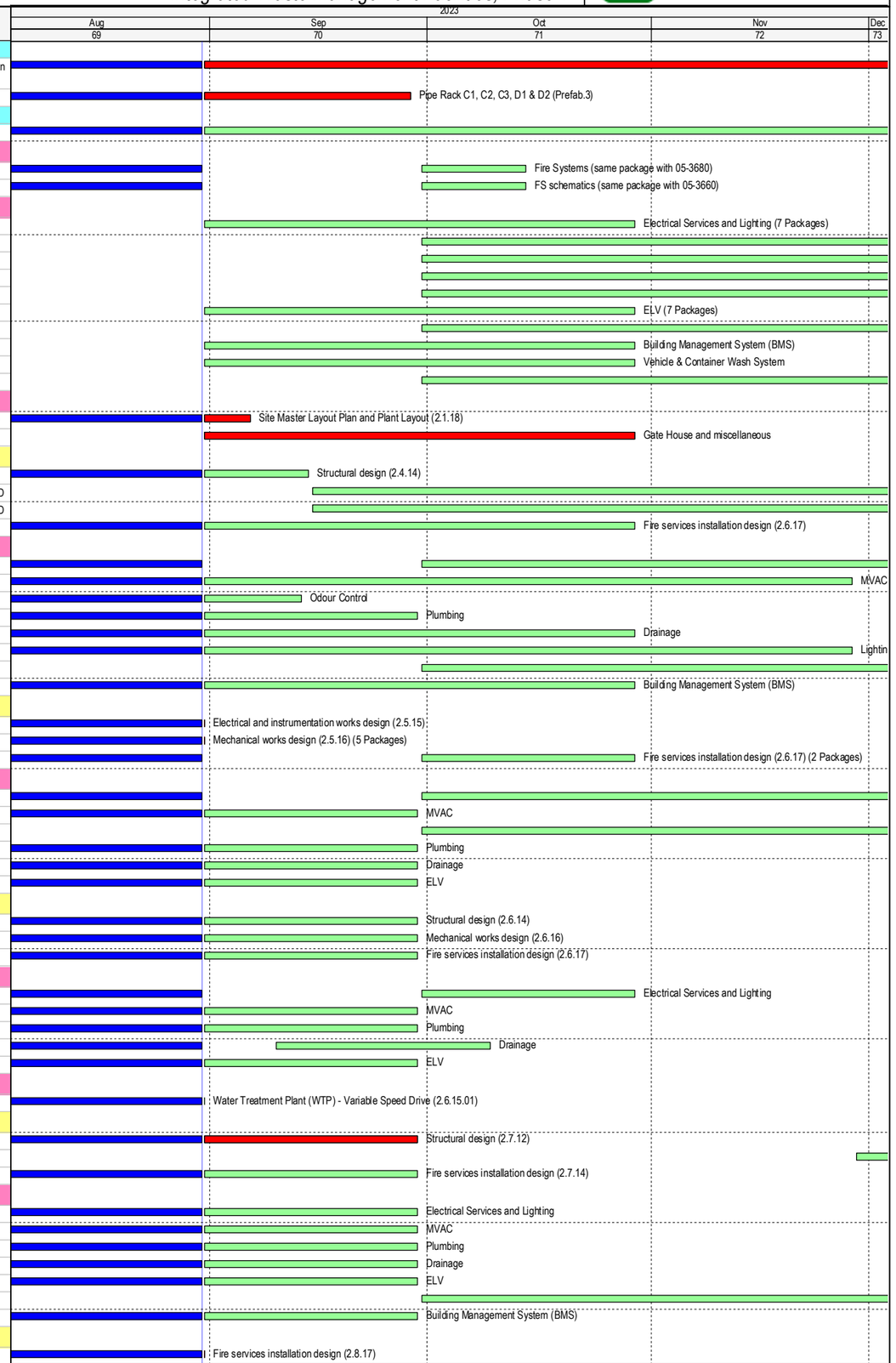
Actual Work
Remaining Work
Critical Remaining Work
Milestone
Actrual Milestone
Critical Milestone

Activity ID	Activity Name	Original Duration	Remaining Duration	Activity % Complete	Current Start	Current Finish	Late Start	Late Finish	Total Float	M69 Remarks
05-5150	Boiler Feed Water System (2.1.13.03) (2 Packages)	105	36	60%	23-Apr-20 A	05-Oct-23	13-Jan-24	17-Feb-24	135	Remove Exp Finish Date
MSW treatment process design for mechanical treatment (2.1.14)		1161	219		02-Oct-20 A	05-Apr-24	02-Sep-23	21-Nov-24	230	
05-3500	Mechanical Treatment Plant (2.1.14)	181	181	0%	08-Oct-23*	05-Apr-24	25-May-24	21-Nov-24	230	Remove Exp Finish Date; Update Constraints Start On or After; Update OD
05-3510	Water Treatment Plant and Boiler Water Treatment (Demin Unit) Plant	105	29	60%	02-Oct-20 A	28-Sep-23	02-Sep-23	30-Sep-23	2	Remove Exp Finish Date
Flue gas treatment process design for incineration (2.1.16)		105	106		23-Apr-20 A	14-Dec-23	08-Aug-24	21-Nov-24	343	
05-4980	Boiler ash and APC residue handling and solidification (2 Packages)	105	106	80%	23-Apr-20 A	14-Dec-23	08-Aug-24	21-Nov-24	343	Update Actual Start Date; Remove Actual Finish Date; Remove Sucessor 05-3800
Logistic arrangement design for MSW and Ash and Residues (2.1.17)		105	46		25-Sep-21 A	15-Oct-23	04-Jan-24	18-Feb-24	126	
05-4410	Mechanical Shredder	105	46	80%	25-Sep-21 A	15-Oct-23	04-Jan-24	18-Feb-24	126	Remove Exp Finish Date
DDA Ground Treatment, Reclamation, Seawall, Breakwater, Berth (2.2)		1804	120		20-Jan-19 A	28-Dec-23	17-Nov-23	30-Nov-24	338	
05-3430-2(M37)	Geotechnical Interpretative Report (2.2.02.02)	105	10	80%	31-Dec-20 A	09-Sep-23	07-May-24	17-May-24	251	
05-3450	Seawall design (2.2.20)	60	20	80%	20-Jan-19 A	19-Sep-23	17-Nov-23	06-Dec-23	78	
05-3470	Berth design (2.2.22)	60	20	80%	30-Jan-19 A	19-Sep-23	20-Jun-24	09-Jul-24	294	
05-3480	Onshore crane Facility (2.2.23)	60	60	0%	03-Sep-23	01-Nov-23	08-Sep-24	06-Nov-24	371	
05-3490	Onshore vessel power supply system (2.2.24)	90	90	0%	30-Sep-23	28-Dec-23	02-Sep-24	30-Nov-24	338	
DDA Incineration Plant Buildings (2.3)		1889	139		05-Sep-18 A	16-Jan-24	27-Apr-23	11-Aug-24	208	
Structural design (2.3.14)		90	90		31-Aug-23	28-Nov-23	08-Jan-24	06-Apr-24	130	
05-3280-1(M55)	Sky Deck	90	90	0%	31-Aug-23	28-Nov-23	08-Jan-24	06-Apr-24	130	
Electrical and instrumentation works design (2.3.15)		1842	128		05-Sep-18 A	05-Jan-24	27-Apr-23	02-Aug-24	210	
E&IC Package 1 (Process Island) (2.3.15.02)		378	128		22-Sep-20 A	05-Jan-24	26-Sep-23	09-Mar-24	64	
05-3370	Electric Heat Tracing (Process Island) (2.3.15.02.10)	120	128	60%	17-Feb-22 A	05-Jan-24	03-Nov-23	09-Mar-24	64	Remove Exp Finish Date; Update Lag on the Successor
05-3390-10(M55)	Electrical Works - MCC Panels (2.3.15.02.01)	105	46	80%	22-Sep-20 A	15-Oct-23	21-Oct-23	05-Dec-23	51	Remove Exp Finish Date
05-3390-11(M55)	Electrical Works - Process Island Uninterruptible Power Supply (UPS) (2.3.15.02.03)	105	46	80%	27-Nov-20 A	15-Oct-23	26-Sep-23	10-Nov-23	26	Remove Exp Finish Date
05-3390-13(M55)	Electrical Works E&I Installation at Yard (2.3.15.02.08)	105	46	60%	07-May-22 A	15-Oct-23	03-Jan-24	17-Feb-24	125	Remove Actual Finish Date; Update Lag on the Successor
05-3390-6(M55)	Electrical Works Instrumentation (2.3.15.02.06)	105	65	80%	15-Oct-21 A	03-Nov-23	15-Dec-23	17-Feb-24	106	Remove Actual Finish Date; Update Lag on the Successor
05-7400-1(M55)	Electrical works CEMS and Process Analyzers (2.3.15.02.07)	105	39	80%	12-Jul-21 A	08-Oct-23	07-Jan-24	14-Feb-24	129	Remove Exp Finish Date
E&IC Package 2 (Power Island) (2.3.15.03)		348	29		23-Dec-20 A	28-Sep-23	01-Sep-23	10-Dec-23	73	
05-3390-13(M55)10	Electrical Works Design (2.3.15.03.01 to 04)	105	29	80%	23-Dec-20 A	28-Sep-23	01-Sep-23	29-Sep-23	1	
05-3390-4(M46)	Generator Related Equipment (2.3.15.03.08)	105	29	80%	29-Jun-21 A	28-Sep-23	12-Nov-23	10-Dec-23	73	Remove Exp Finish Date
05-3390-7(M55)	instrumentation works design(2.3.15.03.05 &2.3.15.03.06)	105	29	80%	10-Feb-21 A	28-Sep-23	03-Oct-23	31-Oct-23	33	Remove Exp Finish Date
Control Works Design SCADA & PLC Control System (2.3.15.03.07)		105	29		30-Oct-21 A	28-Sep-23	01-Sep-23	29-Sep-23	1	
05-3390-2(M46)	Software Design (2.3.15.03.07.02)	105	29	80%	30-Oct-21 A	28-Sep-23	01-Sep-23	29-Sep-23	1	Remove Exp Finish Date
Operation Management System (2.3.15.04)		1842	104		05-Sep-18 A	12-Dec-23	27-Apr-23	02-Aug-24	234	
05-3390-6(M46)	OMS/SCADA/DCS - System Networks Details (2.3.15.04.02)	105	29	80%	30-Oct-21 A	12-Oct-23	19-Sep-23	17-Oct-23	5	Remove Exp Finish Date
05-3390-7(M46)	Software Standard Component	105	30	60%	09-Dec-20 A	29-Sep-23	17-Nov-23	16-Dec-23	78	
05-4490	Design of the Air Quality Monitoring Stations (2.9.03)	60	3	95%	16-Mar-23 A	02-Sep-23	27-Apr-23	29-Apr-23	-126	
05-5400-1(M22)	Automatic Traffic Control System (ATCS)	90	90	0%	14-Sep-23	12-Dec-23	05-May-24	02-Aug-24	234	
05-7400(6E)	Automatic License Plate and Container Recognition System (ALPCRS)	90	77	80%	05-Sep-18 A	15-Nov-23	16-Dec-23	01-Mar-24	107	Remove Exp Finish Date
2.3.15.04.03		167	90		19-Apr-22 A	28-Nov-23	18-Sep-23	16-Dec-23	18	
2.3.15.04.03.02		105	90		02-Aug-22 A	28-Nov-23	18-Sep-23	16-Dec-23	18	
05-3390-13(M58)	OMS/SCADA/DCS - Panel Design for Power Island and Plant Common (2.3.15.04.03.02)	105	90	80%	02-Aug-22 A	28-Nov-23	18-Sep-23	16-Dec-23	18	
2.3.15.04.03.03		105	34		19-Apr-22 A	03-Oct-23	13-Nov-23	16-Dec-23	74	
05-3390-14(M55)	OMS/SCADA/DCS - Server Panel Design (2.3.15.04.03.03)	105	34	80%	19-Apr-22 A	03-Oct-23	13-Nov-23	16-Dec-23	74	Remove Exp Finish Date
2.3.15.04.06		105	30		06-Oct-21 A	29-Sep-23	17-Nov-23	16-Dec-23	78	
05-3390-9(6D)	Process Related 3rd Party System (2.3.15.04.06.01.01)	105	29	80%	09-Dec-21 A	28-Sep-23	18-Nov-23	16-Dec-23	79	Remove Exp Finish Date
05-3420(M58)	3rd Party System for Power Island & Communication Data Tables for Process Vol 1 and Power Island & Plant C. Vol 1 & 2	105	30	80%	06-Oct-21 A	29-Sep-23	17-Nov-23	16-Dec-23	78	
2.3.15.05		105	92		15-Jul-21 A	30-Nov-23	01-Sep-23	05-Mar-24	96	
05-3390-15(M55)	Balance of Plant LV Switchgear Design (2.3.15.05.01)	105	92	80%	07-May-22 A	30-Nov-23	18-Nov-23	17-Feb-24	79	Remove Actual Finish Date; Update Lag on the Successor
05-3390-16(M55)	Package 3 (Balance of Plant) - Weighbridge Electrical & Instrumentation Package & ALPCRS (2.3.15.05.07)	105	76	45%	04-Jan-22 A	14-Nov-23	04-Dec-23	17-Feb-24	95	Remove Actual Finish Date; Update Lag on the Successor
05-3390-17(M55)	Waste Crane Functional Description (2.3.15.05.08)	105	45	80%	15-Jul-21 A	14-Oct-23	22-Dec-23	04-Feb-24	113	Remove Exp Finish Date
05-3390-3(M55)	Electrical and Instrumentation Works Design - Compressed Air Plants (2.3.15.05.03)	105	0	80%	29-Nov-21 A	31-Aug-23	01-Sep-23	01-Sep-23	2	
05-3390-5(M55)	Electrical and Instrumentation Works - Ash Crane (2.3.15.05.05)	105	45	80%	30-Aug-21 A	14-Oct-23	21-Jan-24	05-Mar-24	143	Remove Exp Finish Date
2.3.15.07		105	59		27-Sep-21 A	28-Oct-23	19-Oct-23	16-Dec-23	49	
05-3390-20(M55)	SCADA & PLC Control System - Software Design (2.3.15.07.02)	105	59	80%	27-Sep-21 A	28-Oct-23	19-Oct-23	16-Dec-23	49	
2.3.15.08		105	46		23-May-22 A	15-Oct-23	01-Nov-23	16-Dec-23	62	
05-3390-21(M55)	Operation Management System (2.3.15.08)	105	46	80%	23-May-22 A	15-Oct-23	01-Nov-23	16-Dec-23	62	
Mechanical works design (2.3.16)		1796	139		28-Feb-19 A	16-Jan-24	27-Jul-23	07-Apr-24	82	
Plant and Equipment		1796	139		28-Feb-19 A	16-Jan-24	14-Sep-23	07-Apr-24	82	
05-3390-4(M55)	Electrical and Instrumentation Works - Waste Crane and Grapple System (2.3.15.05.04)	105	45	80%	07-Jan-22 A	14-Oct-23	22-Dec-23	04-Feb-24	113	Remove Exp Finish Date
05-3600	Mechanical Shredder	105	45	80%	05-Oct-22 A	15-Oct-23	05-Jan-24	18-Feb-24	126	Update Actual Start Date; Remove Exp Finish Date; Update OD
05-3610	Incineration System (9 Packages)	105	139	80%	28-Feb-19 A	16-Jan-24	02-Oct-23	17-Feb-24	32	Remove Actual Finish Date; Update Lag on the Successor
05-3620	Heat Recovery Boiler (8 Packages)	105	137	80%	31-Jul-19 A	14-Jan-24	23-Nov-23	07-Apr-24	84	Remove Actual Finish Date; Update Lag on the Successor
05-3630	Boiler Feed Water Systems (4 Packages)	105	102	80%	30-Sep-19 A	10-Dec-23	08-Nov-23	17-Feb-24	69	Remove Actual Finish Date; Update Lag on the Successor
05-3650	Leachate collection and treatment	105	94	80%	04-Jul-23 A	02-Dec-23	14-Sep-23	16-Dec-23	14	
05-3790	Flue Gas Treatment System (12 Packages)	105	137	25%	31-Oct-19 A	14-Jan-24	24-Oct-23	08-Mar-24	54	Remove Actual Finish Date; Update Lag on the Successor
05-3800	Boiler ash and APC residue handling and solidification	105	73	70%	09-Jun-20 A	11-Nov-23	07-Dec-23	17-Feb-24	98	Remove Actual Finish Date; Update Lag on the Successor



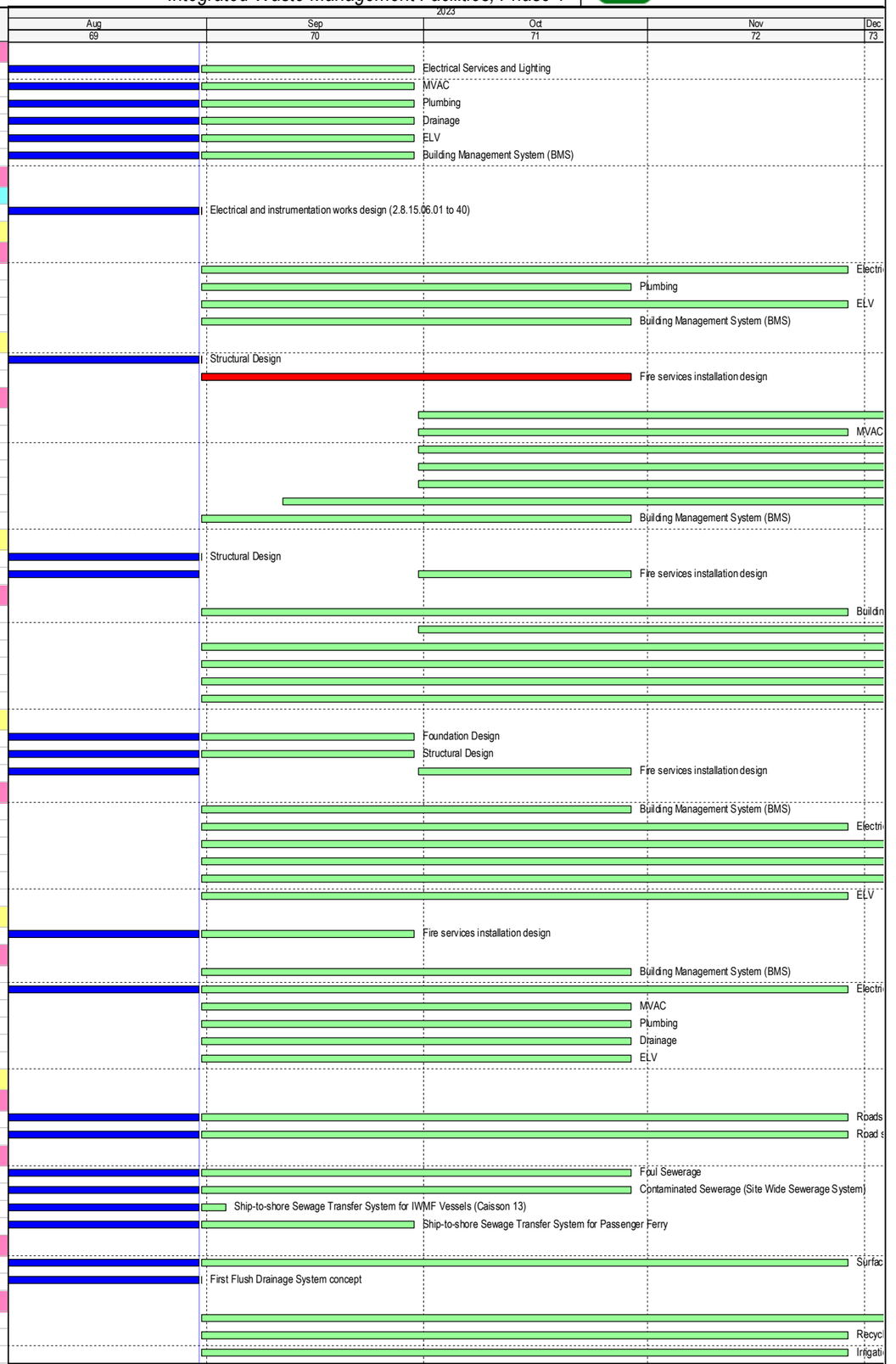
Actual Work
Remaining Work
Critical Remaining Work
Milestone
Actrual Milestone
Critical Milestone

Activity ID	Activity Name	Original Duration	Remaining Duration	Activity % Complete	Current Start	Current Finish	Late Start	Late Finish	Total Float	M69 Remarks
Process Pipeworks (Incl. Ductworks) and Valves		470	137		29-Feb-20 A	14-Jan-24	27-Jul-23	10-Dec-23	-35	
05-3840	Process island (furnace-boiler-FGC)	105	137	5%	29-Feb-20 A	14-Jan-24	27-Jul-23	10-Dec-23	-35	Remove Actual Finish Date; Update Lag on the Successor
05-4350	Pipe Rack C1, C2, C3, D1 & D2 (Prefab.3)	105	29	80%	28-Feb-21 A	28-Sep-23	10-Aug-23	07-Sep-23	-21	Remove Exp Finish Date
Process steel structure support (For equipment, piping & duct, cable tray etc)		105	105		29-May-21 A	13-Dec-23	29-Oct-23	10-Feb-24	59	
05-3540	Pipe Rack C1, C2, C3, D1 & D2 (Prefab.3)	105	105	80%	29-May-21 A	13-Dec-23	29-Oct-23	10-Feb-24	59	Remove Exp Finish Date
DDA Fire services installation design (2.3.17)		60	15		22-Sep-22 A	14-Oct-23	30-Jan-24	13-Feb-24	122	
05-3660	Fire Systems (same package with 05-3680)	60	15	60%	22-Sep-22 A	14-Oct-23	30-Jan-24	13-Feb-24	122	
05-3680	FS schematics (same package with 05-3660)	60	15	60%	22-Sep-22 A	14-Oct-23	30-Jan-24	13-Feb-24	122	
Building services design (excluding fire services installation design) (2.3.18)		120	120		31-Aug-23	28-Dec-23	01-Sep-23	11-Aug-24	227	
05-3690	Electrical Services and Lighting (7 Packages)	60	60	0%	31-Aug-23	29-Oct-23	02-Sep-23	31-Oct-23	2	
05-3700	MVAC	90	90	0%	30-Sep-23	28-Dec-23	23-Dec-23	21-Mar-24	84	
05-3710	Odour Control	90	90	0%	30-Sep-23	28-Dec-23	23-Dec-23	21-Mar-24	84	
05-3720	Plumbing (7 Packages)	90	90	0%	30-Sep-23	28-Dec-23	07-Apr-24	05-Jul-24	190	
05-3730	Drainage (7 Packages)	90	90	0%	30-Sep-23	28-Dec-23	07-Apr-24	05-Jul-24	190	
05-3740	ELV (7 Packages)	60	60	0%	31-Aug-23	29-Oct-23	02-Sep-23	31-Oct-23	2	
05-3750	Lifts and Escalators	90	90	0%	30-Sep-23	28-Dec-23	01-Oct-23	29-Dec-23	1	
05-3770	Building Management System (BMS)	60	60	0%	31-Aug-23	29-Oct-23	01-Sep-23	30-Oct-23	1	
05-3780	Vehicle & Container Wash System	60	60	0%	31-Aug-23	29-Oct-23	14-Dec-23	11-Feb-24	105	
05-3780-2(M20)	Water Cannon System	90	90	0%	30-Sep-23	28-Dec-23	14-May-24	11-Aug-24	227	
General Layout Drawings and Fire Safety Strategy (2.3.25)		244	60		06-Jun-23 A	29-Oct-23	18-Aug-23	16-Oct-23	-13	
05-3520	Site Master Layout Plan and Plant Layout (2.1.18)	60	7	80%	06-Jun-23 A	06-Sep-23	26-Aug-23	01-Sep-23	-5	Update Actual Start, remove Actual Finish
05-6110(M46)	Gate House and miscellaneous	60	60	0%	31-Aug-23	29-Oct-23	18-Aug-23	16-Oct-23	-13	
DDA Mechanical Treatment Plant Building (2.4)		349	196		20-Sep-22 A	13-Mar-24	01-Sep-23	27-Aug-24	167	
05-5180	Structural design (2.4.14)	60	15	80%	23-Feb-23 A	14-Sep-23	25-Nov-23	09-Dec-23	86	
05-5190	Electrical and instrumentation works design	181	181	0%	15-Sep-23	13-Mar-24	28-Oct-23	25-Apr-24	43	Remove Predecessor 05-3500; Update OD
05-5200	Mechanical works design (2.4.16)	181	181	0%	15-Sep-23	13-Mar-24	28-Oct-23	25-Apr-24	43	Remove Predecessor 05-3500; Update OD
05-5210	Fire services installation design (2.6.17)	60	60	80%	21-Apr-23 A	29-Oct-23	14-Feb-24	13-Apr-24	167	
Building services design (excluding fire services installation design) (2.4.18)		243	120		20-Sep-22 A	28-Dec-23	01-Sep-23	27-Aug-24	243	
05-3850	LV and Emergency Power Distribution Design	90	90	60%	20-Sep-22 A	28-Dec-23	30-May-24	27-Aug-24	243	
05-3860	MVAC	90	90	60%	14-Feb-23 A	28-Nov-23	23-Dec-23	21-Mar-24	114	
05-3870	Odour Control	90	14	60%	16-Apr-23 A	13-Sep-23	26-Nov-23	09-Dec-23	87	
05-3880	Plumbing	60	30	60%	20-Sep-22 A	29-Sep-23	17-Oct-23	15-Nov-23	47	
05-3890	Drainage	60	60	60%	24-Apr-23 A	29-Oct-23	22-Mar-24	20-May-24	204	
05-3900	Lighting and small power	90	90	60%	20-Sep-22 A	28-Nov-23	30-May-24	27-Aug-24	273	
05-3910	Lifts and Escalators	90	90	0%	30-Sep-23	28-Dec-23	01-Oct-23	29-Dec-23	1	
05-3910-1	Building Management System (BMS)	60	60	60%	20-Sep-22 A	29-Oct-23	01-Sep-23	30-Oct-23	1	
DDA Wastewater Treatment Plant (2.5)		577	120		10-Mar-22 A	28-Dec-23	22-Jun-23	25-Nov-24	333	
05-3950	Electrical and instrumentation works design (2.5.15)	60	0	25%	19-Sep-22 A	31-Aug-23	23-Jul-23	23-Jul-23	-38	
05-3960	Mechanical works design (2.5.16) (5 Packages)	232	0	80%	31-May-22 A	31-Aug-23	22-Jun-23	22-Jun-23	-69	
05-3970	Fire services installation design (2.6.17) (2 Packages)	60	30	60%	21-Apr-23 A	29-Oct-23	13-Jun-24	12-Jul-24	257	
Building services design (excluding fire services installation design) (2.5.18)		233	120		10-Mar-22 A	28-Dec-23	31-Dec-23	25-Nov-24	333	
05-3980	LV and Emergency Power Distribution Design for IWMF Waste Water Treatment Plant	90	90	60%	20-Sep-22 A	28-Dec-23	31-Mar-24	28-Jun-24	183	
05-3990	MVAC	90	30	60%	09-Mar-23 A	29-Sep-23	29-Feb-24	29-Mar-24	182	
05-4000	Odour Control	90	90	0%	30-Sep-23	28-Dec-23	31-Dec-23	29-Mar-24	92	
05-4010	Plumbing	90	30	60%	20-Sep-22 A	29-Sep-23	28-Aug-24	26-Sep-24	363	
05-4020	Drainage	105	30	80%	10-Mar-22 A	29-Sep-23	28-Aug-24	26-Sep-24	363	
05-4030	ELV	90	30	80%	22-Sep-22 A	29-Sep-23	27-Oct-24	25-Nov-24	423	
DDA Water Treatment Plant Building (2.6)		513	60		25-Nov-21 A	29-Oct-23	17-Oct-23	27-Aug-24	303	
05-4070	Structural design (2.6.14)	60	30	60%	25-Nov-21 A	29-Sep-23	17-Nov-23	16-Dec-23	78	
05-4090	Mechanical works design (2.6.16)	90	30	60%	02-May-22 A	29-Sep-23	05-Nov-23	04-Dec-23	66	
05-4100	Fire services installation design (2.6.17)	60	30	60%	22-Sep-22 A	29-Sep-23	15-Mar-24	13-Apr-24	197	
Building services design (excluding fire services installation design) (2.6.18)		455	60		29-Jun-22 A	29-Oct-23	17-Oct-23	27-Aug-24	303	
05-4110	Electrical Services and Lighting	90	30	60%	20-Sep-22 A	29-Oct-23	29-Jul-24	27-Aug-24	303	
05-4120	MVAC	90	30	60%	29-Jun-22 A	29-Sep-23	21-Feb-24	21-Mar-24	174	
05-4140	Plumbing	60	30	60%	20-Sep-22 A	29-Sep-23	17-Oct-23	15-Nov-23	47	
05-4150	Drainage	60	30	60%	20-Sep-22 A	09-Oct-23	21-Apr-24	20-May-24	224	
05-4160	ELV	90	30	60%	20-Sep-22 A	29-Sep-23	29-Jul-24	27-Aug-24	333	
Electrical and instrumentation works design (2.6.15)		238	0		11-Apr-22 A	31-Aug-23	04-Dec-23	04-Dec-23	96	
05-4080	Water Treatment Plant (WTP) - Variable Speed Drive (2.6.15.01)	238	0	80%	11-Apr-22 A	31-Aug-23	04-Dec-23	04-Dec-23	96	
DDA Administration Building (2.7)		303	150		20-Sep-22 A	27-Jan-24	27-Aug-23	27-Aug-24	213	
05-4190	Structural design (2.7.12)	105	30	60%	08-Dec-22 A	29-Sep-23	27-Aug-23	26-Sep-23	-4	
05-4200	Electrical and instrumentation works design (2.7.13)	60	60	0%	29-Nov-23	27-Jan-24	31-Jan-24	30-Mar-24	63	
05-4210	Fire services installation design (2.7.14)	60	30	60%	09-Mar-23 A	29-Sep-23	15-Mar-24	13-Apr-24	197	
Building services design (excluding fire services installation design) (2.7.15)		243	120		20-Sep-22 A	28-Dec-23	01-Oct-23	27-Aug-24	243	
05-4220	Electrical Services and Lighting	90	30	60%	02-Dec-22 A	29-Sep-23	30-May-24	28-Jun-24	273	
05-4230	MVAC	90	30	60%	14-Feb-23 A	29-Sep-23	21-Apr-24	20-May-24	234	
05-4250	Plumbing	90	30	60%	05-May-23 A	29-Sep-23	29-Jul-24	27-Aug-24	333	
05-4260	Drainage	90	30	60%	05-May-23 A	29-Sep-23	29-Jul-24	27-Aug-24	333	
05-4270	ELV	90	30	60%	20-Sep-22 A	29-Sep-23	30-May-24	28-Jun-24	273	
05-4280	Lifts and Escalators	90	90	0%	30-Sep-23	28-Dec-23	01-Oct-23	29-Dec-23	1	
05-4280-1	Building Management System (BMS)	90	30	60%	29-Oct-22 A	29-Sep-23	01-Oct-23	30-Oct-23	31	
DDA IWMF Substation (2.8)		274	30		16-Oct-21 A	29-Sep-23	17-Aug-23	26-Sep-24	363	
05-4340	Fire services installation design (2.8.17)	60	0	80%	17-Jun-22 A	31-Aug-23	17-Aug-23	17-Aug-23	-13	



Actual Work · Remaining Work · Critical Remaining Work · Milestone · Actrual Milestone · Critical Milestone

Activity ID	Activity Name	Original Duration	Remaining Duration	Activity % Complete	Current Start	Current Finish	Late Start	Late Finish	Total Float	M69 Remarks
Building services design (excluding fire services installation design) (2.8.18)		151	30		25-Oct-21 A	29-Sep-23	21-Apr-24	26-Sep-24	363	
05-4990	Electrical Services and Lighting	90	30	60%	22-Apr-22 A	29-Sep-23	29-Jun-24	28-Jul-24	303	
05-5000	MVAC	90	30	60%	19-Nov-21 A	29-Sep-23	21-Apr-24	20-May-24	234	
05-5010	Plumbing	90	30	60%	08-Dec-22 A	29-Sep-23	29-Jul-24	27-Aug-24	333	
05-5020	Drainage	90	30	60%	10-Nov-22 A	29-Sep-23	29-Jul-24	27-Aug-24	333	
05-5030	ELV	90	30	60%	25-Oct-21 A	29-Sep-23	29-Jun-24	28-Jul-24	303	
05-5030-1	Building Management System (BMS)	90	30	60%	25-Oct-21 A	29-Sep-23	28-Aug-24	26-Sep-24	363	
Electrical and instrumentation works design (2.8.15)		90	0		16-Oct-21 A	31-Aug-23	17-Aug-23	17-Aug-23	-13	
2.8.15.06		90	0		16-Oct-21 A	31-Aug-23	17-Aug-23	17-Aug-23	-13	
05-4320	Electrical and instrumentation works design (2.8.15.06.01 to 40)	90	0	80%	16-Oct-21 A	31-Aug-23	17-Aug-23	17-Aug-23	-13	
DDA Air Cool Condensers Equipment (2.3.06)		90	90		31-Aug-23	28-Nov-23	01-Sep-23	19-Jul-24	234	
Building services design (excluding fire services installation design) (2.3.06)		90	90		31-Aug-23	28-Nov-23	01-Sep-23	19-Jul-24	234	
05-5510	Electrical Services and Lighting	90	90	0%	31-Aug-23	28-Nov-23	30-Jan-24	28-Apr-24	152	
05-5520	Plumbing	60	60	0%	31-Aug-23	29-Oct-23	21-May-24	19-Jul-24	264	
05-5530	ELV	90	90	0%	31-Aug-23	28-Nov-23	30-Jan-24	28-Apr-24	152	
05-5540	Building Management System (BMS)	60	60	0%	31-Aug-23	29-Oct-23	01-Sep-23	30-Oct-23	1	
DDA Chimney		547	120		14-Mar-22 A	28-Dec-23	03-Jul-23	20-May-24	144	
05-5370	Structural Design	90	0	80%	14-Mar-22 A	31-Aug-23	03-Jul-23	03-Jul-23	-58	
05-5540-2(6D)	Fire services installation design	60	60	0%	31-Aug-23	29-Oct-23	02-Aug-23	30-Sep-23	-29	
Building services design (excluding fire services installation design)		120	120		31-Aug-23	28-Dec-23	01-Sep-23	20-May-24	144	
05-6000-1(5a)	Electrical Services and Lighting	90	90	0%	30-Sep-23	28-Dec-23	29-Jan-24	27-Apr-24	121	
05-6010(5a)	MVAC	60	60	0%	30-Sep-23	28-Nov-23	22-Jan-24	21-Mar-24	114	
05-6020-1(5a)	Plumbing	90	90	0%	30-Sep-23	28-Dec-23	21-Feb-24	20-May-24	144	
05-6030-1(5a)	Drainage	90	90	0%	30-Sep-23	28-Dec-23	21-Feb-24	20-May-24	144	
05-6040-1(5a)	ELV	90	90	0%	30-Sep-23	28-Dec-23	29-Jan-24	27-Apr-24	121	
05-6050-1(5a)	Lift	90	90	0%	11-Sep-23	10-Dec-23	01-Oct-23	29-Dec-23	19	
05-6060-1(5a)	Building Management System (BMS)	60	60	0%	31-Aug-23	29-Oct-23	01-Sep-23	30-Oct-23	1	
DDA Elevated Drive Way and Associated Structures Foundation		243	120		06-Jan-22 A	28-Dec-23	01-Sep-23	14-Mar-24	77	
05-5380	Structural Design	90	0	80%	06-Jan-22 A	31-Aug-23	16-Sep-23	16-Sep-23	17	
05-5540-3(6D)	Fire services installation design	60	30	50%	24-Apr-23 A	29-Oct-23	14-Feb-24	14-Mar-24	137	
Building services design (excluding fire services installation design)		120	120		31-Aug-23	28-Dec-23	01-Sep-23	30-Jan-24	33	
05-5560	Building Management System (BMS)	90	90	0%	31-Aug-23	28-Nov-23	01-Sep-23	29-Nov-23	1	
05-7240	Electrical Services and Lighting	90	90	0%	30-Sep-23	28-Dec-23	15-Oct-23	12-Jan-24	15	
05-7250	MVAC	105	105	0%	31-Aug-23	13-Dec-23	16-Oct-23	28-Jan-24	46	
05-7260	Plumbing	105	105	0%	31-Aug-23	13-Dec-23	18-Oct-23	30-Jan-24	48	
05-7270	Drainage	105	105	0%	31-Aug-23	13-Dec-23	18-Oct-23	30-Jan-24	48	
05-7280	ELV	105	105	0%	31-Aug-23	13-Dec-23	30-Sep-23	12-Jan-24	30	
DDA Reception Pavilion		228	105		09-Apr-21 A	13-Dec-23	01-Sep-23	26-Sep-24	288	
05-3280	Foundation Design	90	30	60%	09-Apr-21 A	29-Sep-23	22-Sep-23	21-Oct-23	22	
05-5390	Structural Design	60	30	60%	03-Mar-23 A	29-Sep-23	16-Nov-23	15-Dec-23	77	
05-5540-4(6D)	Fire services installation design	60	30	50%	24-Apr-23 A	29-Oct-23	14-Apr-24	13-May-24	197	
Building services design (excluding fire services installation design)		105	105		31-Aug-23	13-Dec-23	01-Sep-23	26-Sep-24	288	
05-2130-1	Building Management System (BMS)	60	60	0%	31-Aug-23	29-Oct-23	01-Sep-23	30-Oct-23	1	
05-7290	Electrical Services and Lighting	90	90	0%	31-Aug-23	28-Nov-23	29-Jun-24	26-Sep-24	303	
05-7300	MVAC	105	105	0%	31-Aug-23	13-Dec-23	07-Mar-24	19-Jun-24	189	
05-7310	Plumbing	105	105	0%	31-Aug-23	13-Dec-23	30-Jan-24	13-May-24	152	
05-7320	Drainage	105	105	0%	31-Aug-23	13-Dec-23	30-Jan-24	13-May-24	152	
05-7330	ELV	90	90	0%	31-Aug-23	28-Nov-23	29-Jun-24	26-Sep-24	303	
DDA CCCW Building		213	90		21-Jun-22 A	28-Nov-23	01-Oct-23	22-Jul-24	237	
05-5540-5(6D)	Fire services installation design	60	30	50%	08-Dec-22 A	29-Sep-23	15-Mar-24	13-Apr-24	197	
Building services design (excluding fire services installation design)		213	90		21-Jun-22 A	28-Nov-23	01-Oct-23	22-Jul-24	237	
05-2130-2	Building Management System (BMS)	60	60	0%	31-Aug-23	29-Oct-23	01-Oct-23	29-Nov-23	31	
05-7340	Electrical Services and Lighting	90	90	60%	21-Jun-22 A	28-Nov-23	24-Feb-24	23-May-24	177	
05-7350	MVAC	60	60	0%	31-Aug-23	29-Oct-23	22-Jan-24	21-Mar-24	144	
05-7360	Plumbing	60	60	0%	31-Aug-23	29-Oct-23	14-Feb-24	13-Apr-24	167	
05-7370	Drainage	60	60	0%	31-Aug-23	29-Oct-23	14-Feb-24	13-Apr-24	167	
05-7380	ELV	60	60	0%	31-Aug-23	29-Oct-23	24-May-24	22-Jul-24	267	
DDA Roads and Utilities (2.10)		743	135		13-Jan-21 A	12-Jan-24	04-Jul-23	19-Apr-24	98	
Permanent road works layout on the Artificial Island (2.10.13)		90	90		08-Aug-22 A	28-Nov-23	06-Jan-24	04-Apr-24	128	
05-4470	Roads and hardstandings layout	90	90	60%	08-Aug-22 A	28-Nov-23	06-Jan-24	04-Apr-24	128	
05-4480	Road signage and markings	90	90	60%	08-Aug-22 A	28-Nov-23	06-Jan-24	04-Apr-24	128	
Sewerage design on the Artificial Island (2.10.14)		427	60		13-Jan-21 A	29-Oct-23	13-Dec-23	04-Apr-24	158	
05-4430	Foul Sewerage	60	60	60%	14-Mar-23 A	29-Oct-23	13-Dec-23	10-Feb-24	104	
05-4440	Contaminated Sewerage (Site Wide Sewerage System)	60	60	60%	14-Mar-23 A	29-Oct-23	13-Dec-23	10-Feb-24	104	
05-4440-1(M55)	Ship-to-shore Sewage Transfer System for IWMF Vessels (Caisson 13)	90	4	60%	13-Jan-22 A	03-Sep-23	16-Feb-24	19-Feb-24	169	
05-4440-2(M55)	Ship-to-shore Sewage Transfer System for Passenger Ferry	90	30	60%	13-Jan-21 A	29-Sep-23	06-Mar-24	04-Apr-24	188	
Drainage system design on the Artificial Island (2.10.15)		698	90		31-Dec-21 A	28-Nov-23	13-Nov-23	10-Feb-24	74	
05-5310	Surface water Drainage System	90	90	60%	22-Feb-23 A	28-Nov-23	13-Nov-23	10-Feb-24	74	
05-5320	First Flush Drainage System concept	105	0	80%	31-Dec-21 A	31-Aug-23	10-Feb-24	10-Feb-24	164	
Water supply system design on the Artificial Island (2.10.16)		500	135		04-Apr-22 A	12-Jan-24	22-Nov-23	19-Apr-24	98	
05-5250	Potable Water Distribution System	105	105	0%	31-Aug-23	13-Dec-23	31-Dec-23	13-Apr-24	122	
05-5260	Recycled Water System	90	90	0%	31-Aug-23	28-Nov-23	15-Jan-24	13-Apr-24	137	
05-5270	Irrigation System	90	90	0%	31-Aug-23	28-Nov-23	06-Jan-24	04-Apr-24	128	

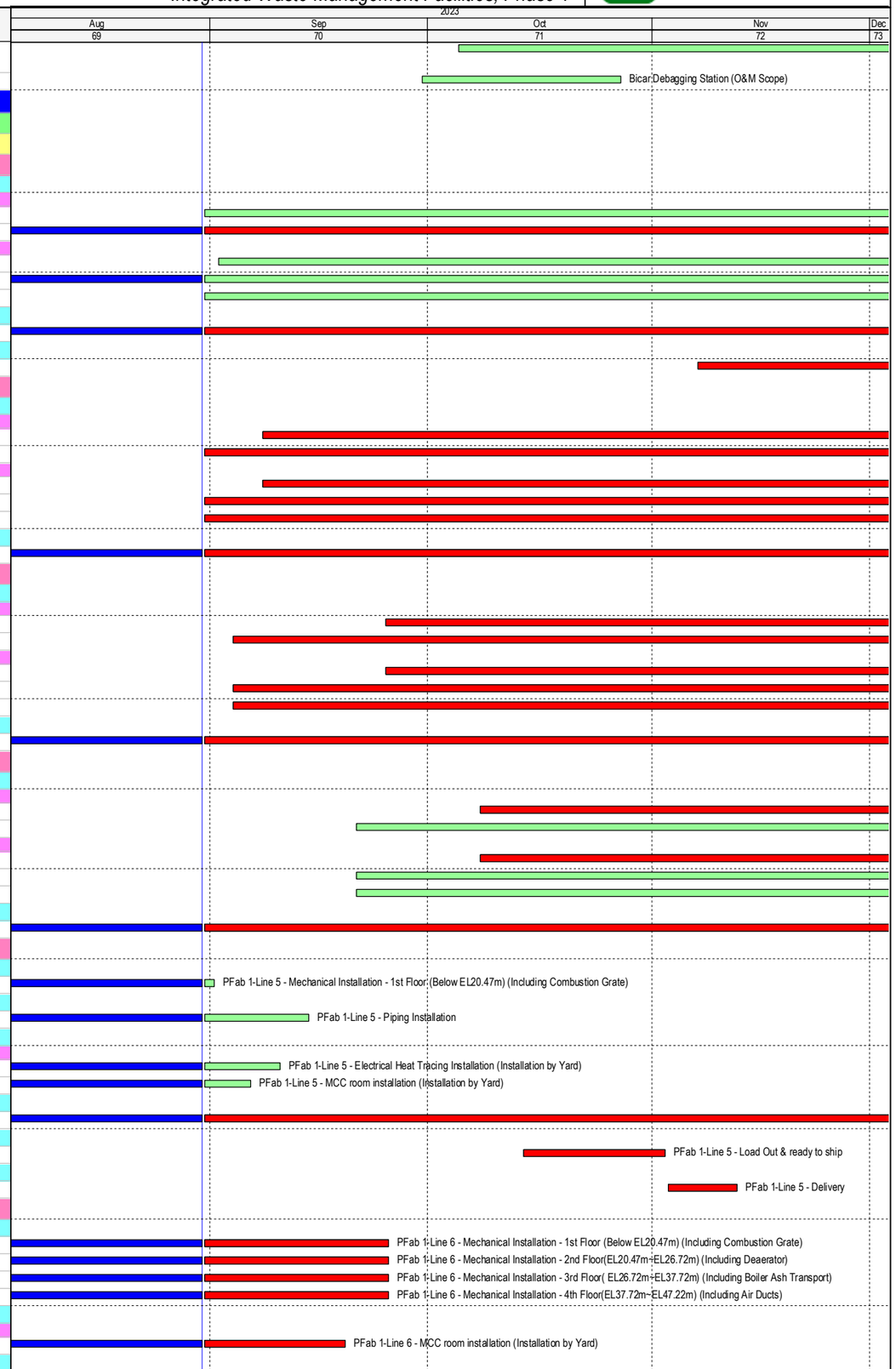


Actual Work | Critical Remaining Work | Actrual Milestone
Remaining Work | Milestone | Critical Milestone

Activity ID	Activity Name	Original Duration	Remaining Duration	Activity % Complete	Current Start	Current Finish	Late Start	Late Finish	Total Float	M69 Remarks
05-5280	Rainwater harvesting System	90	90	0%	31-Aug-23	28-Nov-23	06-Jan-24	04-Apr-24	128	
05-5290	Water Tanks	60	60	0%	30-Oct-23	28-Dec-23	22-Nov-23	20-Jan-24	23	
05-5300	External FS Systems	60	60	0%	31-Aug-23	29-Oct-23	22-Nov-23	20-Jan-24	83	
05-5300-1(M24)	E&M system for seawater intake (2.10.16.07)	105	75	60%	04-Apr-22 A	13-Nov-23	05-Feb-24	19-Apr-24	158	
05-5300-2(M24)	Building Services system for seawater intake (2.10.16.09)	105	105	0%	30-Sep-23	12-Jan-24	06-Jan-24	19-Apr-24	98	
05-5300-3(5a)	Chemical scrubber system for odour control (2.10.16.10)	105	105	0%	30-Sep-23	12-Jan-24	06-Jan-24	19-Apr-24	98	
Design of telecommunication and other utilities (2.10.18)		486	90		23-May-22 A	28-Nov-23	04-Jul-23	19-Apr-24	143	
05-3400 (M21)	Computerized Maintenance Management System (CMMS) (2.10.18.10)	90	46	80%	23-May-22 A	15-Oct-23	04-Jul-23	18-Aug-23	-58	
05-4580	Power Distribution System concept / schematics	75	75	0%	01-Sep-23	14-Nov-23	20-Jan-24	03-Apr-24	141	
05-4590	Site Lighting Concept / Schematics	90	90	0%	31-Aug-23	28-Nov-23	21-Jan-24	19-Apr-24	143	
05-4600	Lightning Protection System concept / schematics	90	90	0%	31-Aug-23	28-Nov-23	05-Jan-24	03-Apr-24	127	
05-4610	Site ELV Network System - Communications System concept / schematics	75	30	60%	16-Aug-22 A	29-Sep-23	06-Dec-23	04-Jan-24	97	
05-4620	Site ELV Network System - Security Systems concept / schematics	75	30	60%	14-Jun-22 A	29-Sep-23	06-Dec-23	04-Jan-24	97	
05-4630	Site ELV Network System - Navigation aids concept / schematics	60	60	0%	01-Sep-23	30-Oct-23	06-Nov-23	04-Jan-24	66	
05-4640	Microwave transmission of FS direct link	105	3	80%	22-Aug-22 A	02-Sep-23	02-Jan-24	04-Jan-24	124	
05-4650	Fuel Handling System concept / schematics	60	60	0%	31-Aug-23	29-Oct-23	05-Feb-24	04-Apr-24	158	
Utility ducts/Pipebridges design (2.10.26)		90	90		03-Jul-23 A	28-Nov-23	22-Oct-23	19-Jan-24	52	
05-5040	Design of Pipe / Utilities Trenches concept	90	90	60%	05-Jul-23 A	28-Nov-23	22-Oct-23	19-Jan-24	52	
05-5050	Sitewide Utilities Trenches Design	90	90	60%	03-Jul-23 A	28-Nov-23	22-Oct-23	19-Jan-24	52	
DDA Architectural, Finishes and Landscaping Works (2.11)		608	180		15-Jun-21 A	26-Feb-24	07-Jul-23	01-Sep-24	188	
External and internal finishes design		425	90		15-Jun-21 A	28-Nov-23	14-Jul-23	01-Sep-24	278	
05-4670	External and internal finishes design for Incineration Plant Building (2.11.15.01)	90	30	80%	19-Sep-22 A	29-Sep-23	25-May-24	23-Jun-24	268	
05-4690	External and internal finishes design for Turbine Hall Building	90	9	80%	10-Aug-22 A	08-Sep-23	04-Aug-23	12-Aug-23	-27	
05-4700	External and internal finishes design for CCCW Building	90	0	80%	10-Aug-22 A	31-Aug-23	27-Apr-24	27-Apr-24	241	
05-4710	External and internal finishes design for Chimney	90	60	80%	02-Sep-22 A	29-Oct-23	14-Jul-23	11-Sep-23	-48	
05-4720	External and internal finishes design for Reception Pavilion	90	90	0%	31-Aug-23	28-Nov-23	17-Oct-23	14-Jan-24	47	
05-4730	External and internal finishes design for MT Plant Building (2.11.16)	60	60	0%	31-Aug-23	29-Oct-23	30-Nov-23	28-Jan-24	91	
05-4740	External and internal finishes design for the Wastewater Treatment Plant (2.11.17)	60	60	0%	31-Aug-23	29-Oct-23	27-Nov-23	25-Jan-24	88	
05-4750	External and internal finishes design for the Water Treatment Plant Building (2.11.08)	60	60	0%	31-Aug-23	29-Oct-23	30-Nov-23	28-Jan-24	91	
05-4760	External and internal finishes design for the Administration Building (2.11.19)	60	60	80%	31-Aug-23	29-Oct-23	30-Dec-23	27-Feb-24	121	
05-4770	External and internal finishes design for the IWMF Substation (2.11.20)	90	5	80%	10-Aug-22 A	04-Sep-23	28-Aug-24	01-Sep-24	363	
05-5420	External and internal finishes design for Elevated Driveway	90	60	80%	15-Jun-21 A	29-Oct-23	01-Sep-23	30-Oct-23	1	
Landscaping Works (2.11.21)		152	3		11-Jul-22 A	02-Sep-23	07-Jul-23	09-Jul-23	-55	
05-4780	Landscape Masterplan & Landscape Design for Water Feature (2.11.19.01)	105	3	80%	26-Jan-23 A	02-Sep-23	07-Jul-23	09-Jul-23	-55	Remove Actual on the Finish Date
05-4780-3(6C)	Landscape Architectural Design for MT Plant Building and Water Treatment Plant Building (2.11.07.08)	75	3	80%	08-Mar-23 A	02-Sep-23	07-Jul-23	09-Jul-23	-55	Remove Actual on the Finish Date
05-4780-4(6C)	Landscape Architectural Design for Administration Building (2.11.07.09)	105	3	80%	12-Jan-23 A	02-Sep-23	07-Jul-23	09-Jul-23	-55	Remove Actual on the Finish Date
05-4780-5(6C)	Landscape Architectural Design for IWMF Substation 2.11.07.10)	105	3	80%	11-Jul-22 A	02-Sep-23	07-Jul-23	09-Jul-23	-55	Remove Actual on the Finish Date
05-4780-6(6C)	Landscape Architectural Design for Process Building (2.11.07.11)	105	3	80%	10-Aug-22 A	02-Sep-23	07-Jul-23	09-Jul-23	-55	Remove Actual on the Finish Date
Facade Structural Design		608	180		07-Apr-22 A	26-Feb-24	02-Aug-23	25-Aug-24	181	
05-8000(M45)	Chimney (2.3.14.05.01)	60	60	80%	29-Nov-22 A	29-Oct-23	02-Aug-23	30-Sep-23	-29	
05-8010(M45)	IWMF Substation	90	7	80%	11-Jul-22 A	06-Sep-23	24-Sep-23	30-Sep-23	24	
05-8020(6D)	Process Building & Wastewater Treatment Plant (2.6.14.01)	90	60	80%	07-Apr-22 A	29-Oct-23	09-Mar-24	07-May-24	191	
05-8040(6D)	Reception Pavilion (2.3.14.07.01)	90	90	0%	30-Sep-23	28-Dec-23	28-May-24	25-Aug-24	241	
05-8050(6D)	Mechanical Treatment Plant & Desalination Plant Building (2.4.14.01)	90	90	0%	30-Sep-23	28-Dec-23	08-Feb-24	07-May-24	131	
05-8060(6D)	Administration Building and Viewing Gallery (2.7.12.01)	90	90	0%	30-Sep-23	28-Dec-23	25-Dec-23	23-Mar-24	86	
05-8070(6D)	Turbine Hall Building	90	90	80%	12-May-23 A	28-Nov-23	22-Feb-24	21-May-24	175	
05-8080(6D)	Elevated Driveway and Associated Structures	90	90	80%	05-May-23 A	28-Nov-23	23-Apr-24	21-Jul-24	236	
05-8090(6D)	Sky Deck near Administration Building Structural Design	90	90	0%	29-Nov-23	26-Feb-24	15-Feb-24	14-May-24	78	
DDA Testing and Commissioning (2.12)		624	180		23-Apr-19 A	26-Feb-24	20-Jul-23	27-Jun-24	122	
05-4810-1(5a)	Factory Acceptance Testing plan (2.12.09.02-07) (8 Packages)	90	24	80%	23-Apr-19 A	23-Sep-23	20-Jul-23	12-Aug-23	-42	Update Actual Start Date
05-4810-2(M55)	FAT of DCS - Software SIL FAT Plant for Process Island (2.12.09.03.01)	105	10	80%	19-May-22 A	09-Sep-23	08-Oct-23	17-Oct-23	38	
05-4820	Site Acceptance Testing plan (2.12.10)	90	90	0%	29-Nov-23	26-Feb-24	13-Aug-23	10-Nov-23	-108	
05-4830	System commissioning plan (2.12.11)	90	90	0%	29-Nov-23	26-Feb-24	30-Mar-24	27-Jun-24	122	
DDA Transportation Facilities for the Operation (2.13)		285	285		30-Jun-23 A	10-Jun-24	13-Aug-23	01-Oct-25	478	
05-4850	Design of vehicles for MSW and Ash and Residues delivery (2.13.05)	240	240	0%	15-Oct-23*	10-Jun-24	13-Aug-23	08-Apr-24	-63	Remove Actual Start Date; Remove Exp Finish Date; Update OD; Apply Primary Constraints
05-4860	Design of marine vessels for the use of the Employer and visitors (2.13.06)	240	256	80%	30-Jun-23 A	12-May-24	19-Jan-25	01-Oct-25	507	Remove Exp Finish Date; Update OD
DDA Miscellaneous Works (2.14)		244	244		31-Aug-23	30-Apr-24	06-May-24	04-Jan-25	249	
05-4880	Design of visitors and environmental education facilities (2.14.06)	244	244	0%	31-Aug-23	30-Apr-24	06-May-24	04-Jan-25	249	
DDA Miscellaneous Detailing (2.15)		90	90		31-Aug-23	28-Nov-23	23-Sep-23	30-Nov-24	368	
05-4890	Covered walkway at passenger berth (2.15.06)	90	90	0%	31-Aug-23	28-Nov-23	02-Sep-24	30-Nov-24	368	
05-4900	Gatehouses (2.15.07)	60	60	0%	31-Aug-23	29-Oct-23	23-Sep-23	21-Nov-23	23	
05-4910	Weighbridge office (2.15.08)	62	62	0%	31-Aug-23	31-Oct-23	24-Sep-23	24-Nov-23	24	
DDA Auxiliary Plant Systems (2.16)		547	180		26-Apr-22 A	26-Feb-24	23-Aug-23	27-Apr-24	61	
05-4920	Maintenance workshops (2.16.04)	2	2	0%	29-Nov-23	30-Nov-23	11-Jan-24	12-Jan-24	43	
05-4930	Vehicle Fuel Filling Station (2.16.05)	90	90	0%	29-Nov-23	26-Feb-24	22-Dec-23	20-Mar-24	23	
05-4940	Stores systems (2.16.06)	90	90	0%	29-Nov-23	26-Feb-24	29-Jan-24	27-Apr-24	61	
05-4940-1(5a)	IWMF Laboratory (2.16.08)	90	29	80%	11-Nov-22 A	28-Sep-23	30-Mar-24	27-Apr-24	212	Update Actual Start Date
05-4940-2(5a)	Hoisting systems (2.16.10)	90	87	80%	24-May-23 A	25-Nov-23	11-Oct-23	05-Jan-24	41	Remove Actual Finish Date
05-4940-3(6E)	EOTC System (2.16.11)	90	16	80%	26-Apr-22 A	15-Sep-23	23-Aug-23	07-Sep-23	-8	Remove Actual Finish Date
DDA O&M Packages		210	210		30-Sep-23	26-Apr-24	09-Jun-24	04-Jan-25	253	
05-8070(6E)	Warehouse (O&M Scope)	149	149	0%	30-Sep-23	25-Feb-24	09-Aug-24	04-Jan-25	314	Update Predecessor Lag; Update OD
05-8080(6E)	Workshop (O&M Scope)	210	210	0%	30-Sep-23	26-Apr-24	09-Jun-24	04-Jan-25	253	Update Predecessor Lag; Update OD

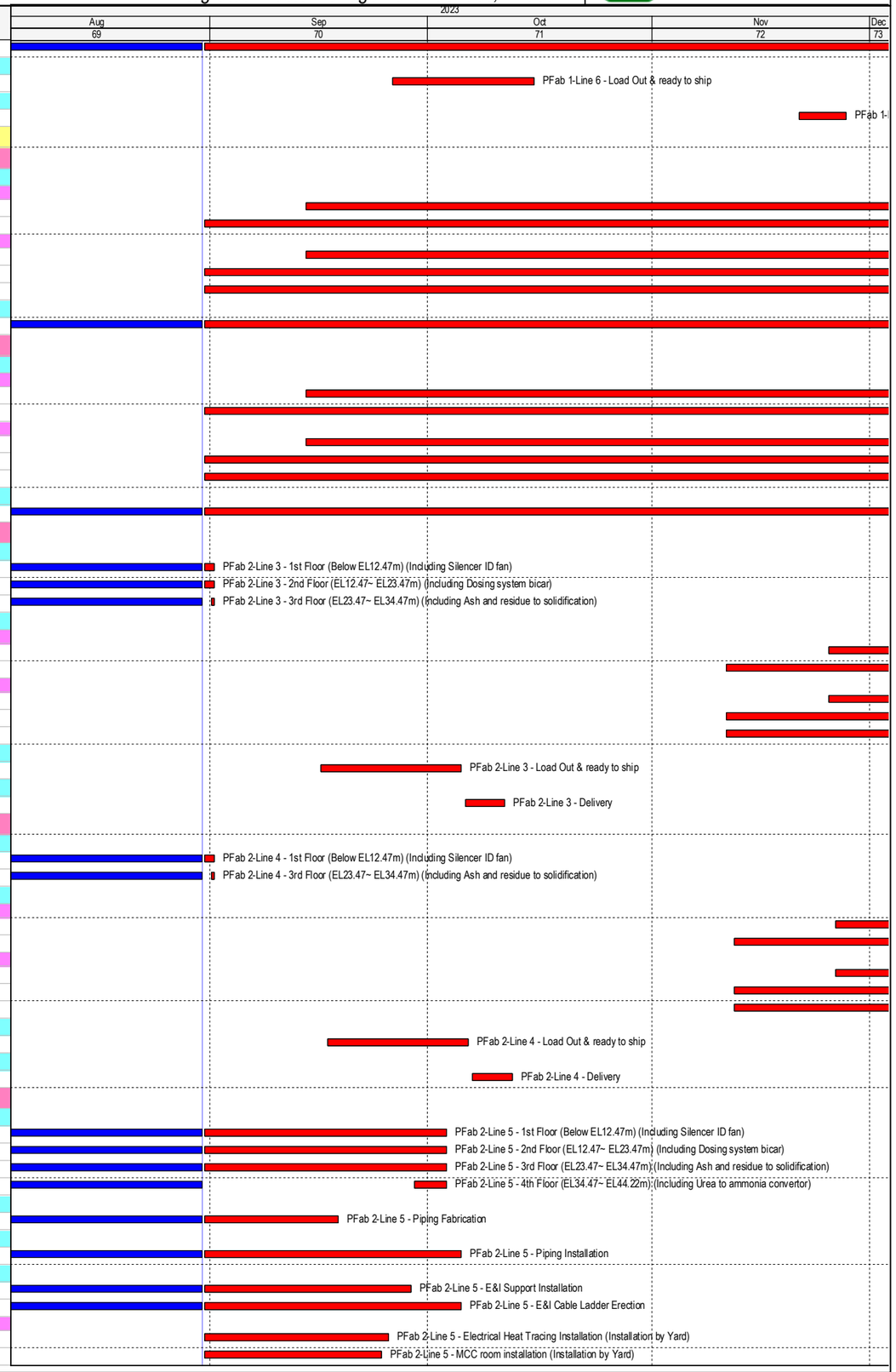
Actual Work | Remaining Work | Critical Remaining Work | Milestone | Actrual Milestone | Critical Milestone

Activity ID	Activity Name	Original Duration	Remaining Duration	Activity % Complete	Current Start	Current Finish	Late Start	Late Finish	Total Float	M69 Remarks
05-8090(6E)	Ash & Residues Container (O&M Scope)	180	180	0%	05-Oct-23	01-Apr-24	09-Jul-24	04-Jan-25	278	Remove Exp Finish Date; Update OD; Update Predecessor Lag
05-8100(6E)	Bicar Debagging Station (O&M Scope)	28	28	0%	30-Sep-23	27-Oct-23	08-Dec-24	04-Jan-25	435	Update Predecessor Lag; Update OD
Procurement of Major Equipment		1368	513		08-Jan-20 A	24-Jan-25	27-Apr-23	15-May-25	111	
Off-site Fabrication of Incineration Modules		1368	369		18-Jun-21 A	02-Sep-24	27-Apr-23	02-Aug-24	-31	
Fabrication of Module (TPU)		1125	369		02-Mar-22 A	02-Sep-24	19-May-23	02-Aug-24	-31	
PFab 1- Line 1		698	214		23-May-22 A	31-Mar-24	17-Aug-23	31-Mar-24	0	
E&I Installation (On-site Installation)		461	182		25-Nov-22 A	28-Feb-24	17-Aug-23	01-Mar-24	2	
Electrical		180	180		04-Aug-23 A	26-Feb-24	17-Aug-23	01-Mar-24	4	
06-TPU-1-1280	PFab 1-Line 1 - Electrical Cable Pulling and Termination	180	180	0%	31-Aug-23	26-Feb-24	04-Sep-23	01-Mar-24	4	
06-TPU-1-1290	PFab 1-Line 1 - Electrical Equipment Installation	180	152	15.56%	04-Aug-23 A	29-Jan-24	17-Aug-23	15-Jan-24	-14	
Instrument		461	182		25-Nov-22 A	28-Feb-24	02-Sep-23	01-Mar-24	2	
06-TPU-1-1310	PFab 1-Line 1 - Instrument Cable Pulling and Termination	180	180	0%	02-Sep-23	28-Feb-24	04-Sep-23	01-Mar-24	2	
06-TPU-1-1320	PFab 1-Line 1 - Instrument Equipment Installation	180	101	43.89%	25-Nov-22 A	09-Dec-23	02-Sep-23	11-Dec-23	2	
06-TPU-1-1330	PFab 1-Line 1 - Instrument Tubing Installation	180	180	0%	31-Aug-23	26-Feb-24	02-Sep-23	28-Feb-24	2	
Insulation		698	202		23-May-22 A	19-Mar-24	31-Aug-23	19-Mar-24	0	
06-TPU-1-1020	PFab 1-Line 1 - Insulation	698	202	71.06%	23-May-22 A	19-Mar-24*	31-Aug-23	19-Mar-24	0	
Precommissioning		146	146		07-Nov-23	31-Mar-24	07-Nov-23	31-Mar-24	0	
06-TPU-1-1030	PFab 1-Line 1 - Pre-commissioning	146	146	0%	07-Nov-23	31-Mar-24*	07-Nov-23	31-Mar-24	0	
PFab 1- Line 2		698	201		22-May-22 A	18-Mar-24	17-Aug-23	18-Mar-24	0	
E&I Installation (On-site Installation)		188	188		31-Aug-23	05-Mar-24	17-Aug-23	20-Feb-24	-14	
Electrical		188	188		31-Aug-23	05-Mar-24	17-Aug-23	20-Feb-24	-14	
06-TPU-2-1270	PFab 1-Line 2 - Electrical Cable Pulling and Termination	180	180	0%	08-Sep-23	05-Mar-24	25-Aug-23	20-Feb-24	-14	
06-TPU-2-1280	PFab 1-Line 2 - Electrical Equipment Installation	180	180	0%	31-Aug-23*	26-Feb-24	17-Aug-23	12-Feb-24	-14	
Instrument		188	188		31-Aug-23	05-Mar-24	17-Aug-23	20-Feb-24	-14	
06-TPU-2-1300	PFab 1-Line 2 - Instrument Cable Pulling and Termination	180	180	0%	08-Sep-23	05-Mar-24*	25-Aug-23	20-Feb-24	-14	
06-TPU-2-1310	PFab 1-Line 2 - Instrument Equipment Installation	180	180	0%	31-Aug-23	26-Feb-24	17-Aug-23	12-Feb-24	-14	
06-TPU-2-1320	PFab 1-Line 2 - Instrument Tubing Installation	180	180	0%	31-Aug-23	26-Feb-24	17-Aug-23	12-Feb-24	-14	
Insulation		698	201		22-May-22 A	18-Mar-24	31-Aug-23	18-Mar-24	0	
06-TPU-2-1010	PFab 1-Line 2 - Insulation	698	201	71.2%	22-May-22 A	18-Mar-24*	31-Aug-23	18-Mar-24	0	
PFab 1- Line 3		769	304		23-May-22 A	29-Jun-24	31-Jul-23	29-May-24	-31	
E&I Installation		201	201		04-Sep-23	22-Mar-24	04-Sep-23	22-Mar-24	0	
Electrical		201	201		04-Sep-23	22-Mar-24	04-Sep-23	22-Mar-24	0	
06-TPU-3-1270	PFab 1-Line 3 - Electrical Cable Pulling and Termination	180	180	0%	25-Sep-23	22-Mar-24*	25-Sep-23	22-Mar-24	0	
06-TPU-3-1280	PFab 1-Line 3 - Electrical Equipment Installation	180	180	0%	04-Sep-23	01-Mar-24	04-Sep-23	01-Mar-24	0	
Instrument		201	201		04-Sep-23	22-Mar-24	04-Sep-23	22-Mar-24	0	
06-TPU-3-1300	PFab 1-Line 3 - Instrument Cable Pulling and Termination	180	180	0%	25-Sep-23	22-Mar-24*	25-Sep-23	22-Mar-24	0	
06-TPU-3-1310	PFab 1-Line 3 - Instrument Equipment Installation	180	180	0%	04-Sep-23	01-Mar-24	04-Sep-23	01-Mar-24	0	
06-TPU-3-1320	PFab 1-Line 3 - Instrument Tubing Installation	180	180	0%	04-Sep-23	01-Mar-24	04-Sep-23	01-Mar-24	0	
Insulation		769	304		23-May-22 A	29-Jun-24	31-Jul-23	29-May-24	-31	
06-TPU-3-1010	PFab 1-Line 3 - Insulation	769	304	60.47%	23-May-22 A	29-Jun-24	31-Jul-23	29-May-24	-31	
PFab 1- Line 4		767	304		25-May-22 A	29-Jun-24	31-Jul-23	29-May-24	-31	
E&I Installation		197	197		21-Sep-23	04-Apr-24	24-Sep-23	04-Apr-24	0	
Electrical		197	197		21-Sep-23	04-Apr-24	24-Sep-23	04-Apr-24	0	
06-TPU-4-1270	PFab 1-Line 4 - Electrical Cable Pulling and Termination	180	180	0%	08-Oct-23	04-Apr-24*	08-Oct-23	04-Apr-24	0	
06-TPU-4-1280	PFab 1-Line 4 - Electrical Equipment Installation	180	180	0%	21-Sep-23	18-Mar-24	24-Sep-23	21-Mar-24	3	
Instrument		197	197		21-Sep-23	04-Apr-24	24-Sep-23	04-Apr-24	0	
06-TPU-4-1300	PFab 1-Line 4 - Instrument Cable Pulling and Termination	180	180	0%	08-Oct-23	04-Apr-24*	08-Oct-23	04-Apr-24	0	
06-TPU-4-1310	PFab 1-Line 4 - Instrument Equipment Installation	180	180	0%	21-Sep-23	18-Mar-24	24-Sep-23	21-Mar-24	3	
06-TPU-4-1320	PFab 1-Line 4 - Instrument Tubing Installation	180	180	0%	21-Sep-23	18-Mar-24	24-Sep-23	21-Mar-24	3	
Insulation		767	304		25-May-22 A	29-Jun-24	31-Jul-23	29-May-24	-31	
06-TPU-4-1010	PFab 1-Line 4 - Insulation	767	304	60.37%	25-May-22 A	29-Jun-24*	31-Jul-23	29-May-24	-31	
PFab 1- Line 5		1125	369		02-Mar-22 A	02-Sep-24	31-Jul-23	02-Aug-24	-31	
Mechanical Erection		80	2		02-Mar-22 A	01-Sep-23	30-Oct-23	31-Oct-23	60	
06-TPU-5-1040	PFab 1-Line 5 - Mechanical Installation - 1st Floor (Below EL20.47m) (Including Combustion Grate)	80	2	97.5%	02-Mar-22 A	01-Sep-23	30-Oct-23	31-Oct-23	60	
Piping Installation		62	15		03-May-23 A	14-Sep-23	17-Oct-23	31-Oct-23	47	
06-TPU-5-1000	PFab 1-Line 5 - Piping Installation	62	15	75.81%	03-May-23 A	14-Sep-23	17-Oct-23	31-Oct-23	47	
E&I Installation		56	11		25-Jun-23 A	10-Sep-23	23-Sep-23	03-Oct-23	23	
Electrical		56	11		25-Jun-23 A	10-Sep-23	23-Sep-23	03-Oct-23	23	
06-TPU-5-1290	PFab 1-Line 5 - Electrical Heat Tracing Installation (Installation by Yard)	25	11	56%	12-Jul-23 A	10-Sep-23	23-Sep-23	03-Oct-23	23	
06-TPU-5-1330	PFab 1-Line 5 - MCC room installation (Installation by Yard)	25	7	72%	25-Jun-23 A	06-Sep-23	27-Sep-23	03-Oct-23	27	
Insulation		822	369		04-Jun-22 A	02-Sep-24	31-Jul-23	02-Aug-24	-31	
06-TPU-5-1010	PFab 1-Line 5 - Insulation	822	369	55.11%	04-Jun-22 A	02-Sep-24*	31-Jul-23	02-Aug-24	-31	
Load out & Shipping		20	20		14-Oct-23	02-Nov-23	04-Oct-23	23-Oct-23	-10	
06-TPU-5-1030	PFab 1-Line 5 - Load Out & ready to ship	20	20	0%	14-Oct-23*	02-Nov-23	04-Oct-23	23-Oct-23	-10	
Delivery		10	10		03-Nov-23	12-Nov-23	24-Oct-23	02-Nov-23	-10	
06-TPU-5-1340	PFab 1-Line 5 - Delivery	10	10	0%	03-Nov-23	12-Nov-23	24-Oct-23	02-Nov-23	-10	
PFab 1- Line 6		1022	342		03-Mar-22 A	06-Aug-24	19-May-23	06-Jul-24	-31	
Mechanical Erection		450	26		03-Mar-22 A	25-Sep-23	19-May-23	13-Jun-23	-104	
06-TPU-6-1160	PFab 1-Line 6 - Mechanical Installation - 1st Floor (Below EL20.47m) (Including Combustion Grate)	80	26	67.5%	03-Mar-22 A	25-Sep-23	19-May-23	13-Jun-23	-104	
06-TPU-6-1170	PFab 1-Line 6 - Mechanical Installation - 2nd Floor(EL20.47m~EL26.72m) (Including Deaerator)	80	26	67.5%	20-May-22 A	25-Sep-23	19-May-23	13-Jun-23	-104	
06-TPU-6-1180	PFab 1-Line 6 - Mechanical Installation - 3rd Floor(EL26.72m~EL37.72m) (Including Boiler Ash Transport)	80	26	67.5%	19-Aug-22 A	25-Sep-23	19-May-23	13-Jun-23	-104	
06-TPU-6-1190	PFab 1-Line 6 - Mechanical Installation - 4th Floor(EL37.72m~EL47.22m) (Including Air Ducts)	39	26	33.33%	03-Mar-23 A	25-Sep-23	19-May-23	13-Jun-23	-104	
E&I Installation		25	20		25-Jun-23 A	19-Sep-23	25-May-23	13-Jun-23	-98	
Electrical		25	20		25-Jun-23 A	19-Sep-23	25-May-23	13-Jun-23	-98	
06-TPU-6-1330	PFab 1-Line 6 - MCC room installation (Installation by Yard)	25	20	20%	25-Jun-23 A	19-Sep-23	25-May-23	13-Jun-23	-98	
Insulation		761	342		08-Jul-22 A	06-Aug-24	31-Jul-23	06-Jul-24	-31	



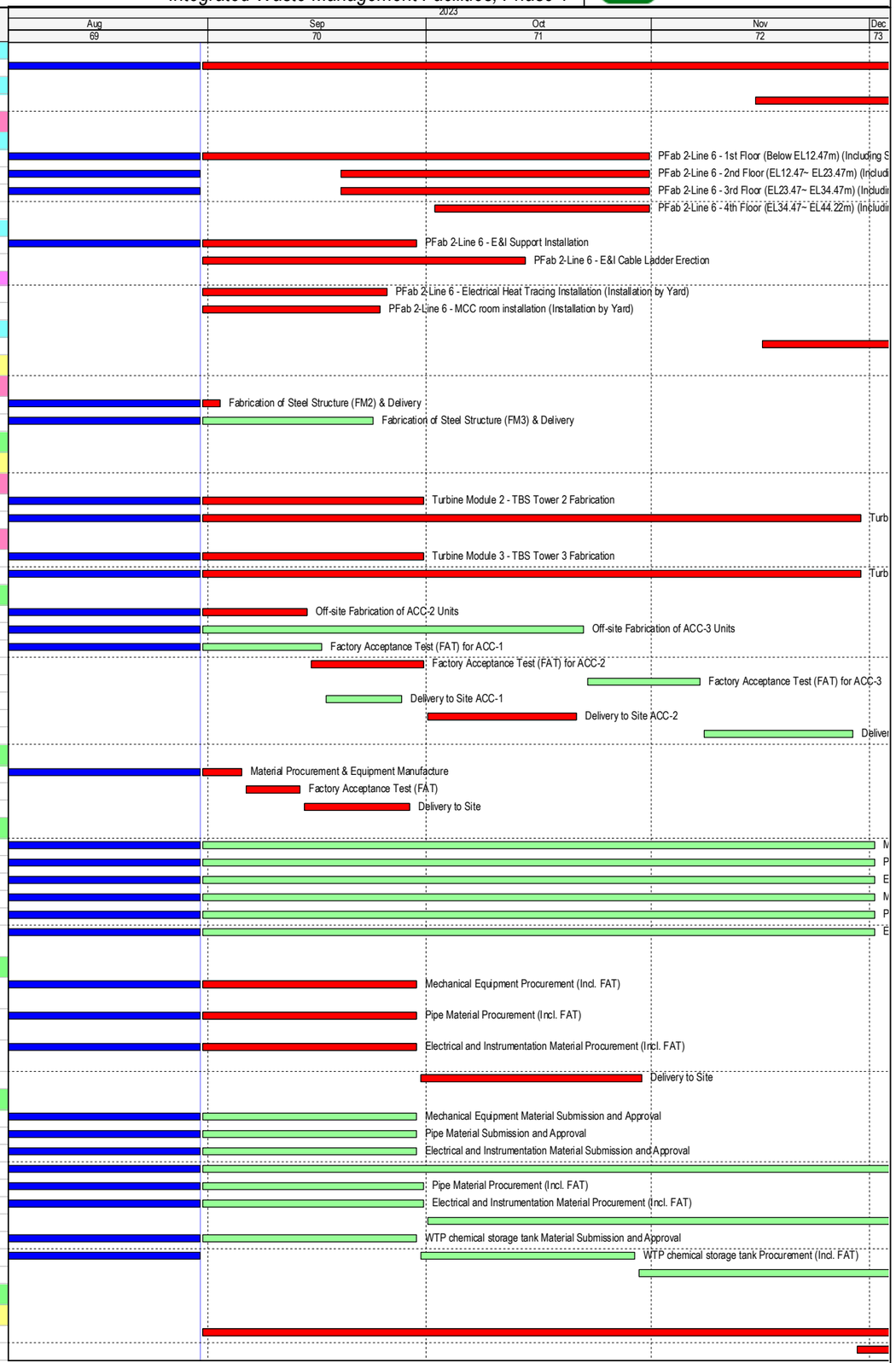
Actual Work | Critical Remaining Work | Actrual Milestone
Remaining Work | Milestone | Critical Milestone

Activity ID	Activity Name	Original Duration	Remaining Duration	Activity % Complete	Current Start	Current Finish	Late Start	Late Finish	Total Float	M69 Remarks
06-TPU-6-1010	PFab 1-Line 6 - Insulation	761	342	55.06%	08-Jul-22 A	06-Aug-24	31-Jul-23	06-Jul-24	-31	
Load out & Shipping		20	20		26-Sep-23	15-Oct-23	14-Jun-23	03-Jul-23	-104	
06-TPU-6-1030	PFab 1-Line 6 - Load Out & ready to ship	20	20	0%	26-Sep-23*	15-Oct-23	14-Jun-23	03-Jul-23	-104	
Delivery		7	7		21-Nov-23	27-Nov-23	04-Jul-23	10-Jul-23	-140	
06-TPU-6-1340	PFab 1-Line 6 - Delivery	7	7	0%	21-Nov-23	27-Nov-23	04-Jul-23	10-Jul-23	-140	
Fabrication of Module (FGC)		1227	309		18-Jun-21 A	04-Jul-24	27-Apr-23	03-Jun-24	-31	
PFab 2 - Line 1		666	203		25-May-22 A	20-Mar-24	30-Jun-23	18-Jan-24	-62	
E&I Installation		134	134		31-Aug-23	11-Jan-24	15-Aug-23	26-Dec-23	-16	
Electrical		134	134		31-Aug-23	11-Jan-24	15-Aug-23	26-Dec-23	-16	
06-FGC-1-1250	PFab 2-Line 1 - Electrical Cable Pulling and Termination	120	120	0%	14-Sep-23	11-Jan-24*	29-Aug-23	26-Dec-23	-16	
06-FGC-1-1260	PFab 2-Line 1 - Electrical Equipment Installation	120	120	0%	31-Aug-23*	28-Dec-23	15-Aug-23	12-Dec-23	-16	
Instrument		134	134		31-Aug-23	11-Jan-24	15-Aug-23	26-Dec-23	-16	
06-FGC-1-1280	PFab 2-Line 1 - Instrument Cable Pulling and Termination	120	120	0%	14-Sep-23	11-Jan-24*	29-Aug-23	26-Dec-23	-16	
06-FGC-1-1290	PFab 2-Line 1 - Instrument Equipment Installation	120	120	0%	31-Aug-23	28-Dec-23	15-Aug-23	12-Dec-23	-16	
06-FGC-1-1300	PFab 2-Line 1 - Instrument Tubing Installation	120	120	0%	31-Aug-23	28-Dec-23	15-Aug-23	12-Dec-23	-16	
Insulation		666	203		25-May-22 A	20-Mar-24	30-Jun-23	18-Jan-24	-62	
06-FGC-1-1130	PFab 2-Line 1 - Insulation	666	203	69.52%	25-May-22 A	20-Mar-24	30-Jun-23	18-Jan-24	-62	
PFab 2 - Line 2		405	203		10-Feb-23 A	20-Mar-24	30-Jun-23	18-Jan-24	-62	
E&I Installation		134	134		31-Aug-23	11-Jan-24	14-Aug-23	26-Dec-23	-16	
Electrical		134	134		31-Aug-23	11-Jan-24	14-Aug-23	26-Dec-23	-16	
06-FGC-2-1250	PFab 2-Line 2 - Electrical Cable Pulling and Termination	120	120	0%	14-Sep-23	11-Jan-24*	28-Aug-23	26-Dec-23	-16	
06-FGC-2-1260	PFab 2-Line 2 - Electrical Equipment Installation	120	120	0%	31-Aug-23*	28-Dec-23	14-Aug-23	12-Dec-23	-16	
Instrument		134	134		31-Aug-23	11-Jan-24	14-Aug-23	26-Dec-23	-16	
06-FGC-2-1280	PFab 2-Line 2 - Instrument Cable Pulling and Termination	120	120	0%	14-Sep-23	11-Jan-24*	28-Aug-23	26-Dec-23	-16	
06-FGC-2-1290	PFab 2-Line 2 - Instrument Equipment Installation	120	120	0%	31-Aug-23	28-Dec-23	14-Aug-23	12-Dec-23	-16	
06-FGC-2-1300	PFab 2-Line 2 - Instrument Tubing Installation	120	120	0%	31-Aug-23	28-Dec-23	14-Aug-23	12-Dec-23	-16	
Insulation		405	203		10-Feb-23 A	20-Mar-24	30-Jun-23	18-Jan-24	-62	
06-FGC-2-1010	PFab 2-Line 2 - Insulation	405	203	49.88%	10-Feb-23 A	20-Mar-24*	30-Jun-23	18-Jan-24	-62	
PFab 2 - Line 3		783	206		02-Jan-22 A	23-Mar-24	27-Apr-23	05-Mar-24	-18	
Mechanical Erection		302	2		02-Jan-22 A	01-Sep-23	27-Apr-23	29-Apr-23	-125	
06-FGC-3-1000	PFab 2-Line 3 - 1st Floor (Below EL12.47m) (Including Silencer ID fan)	60	2	96.67%	02-Jan-22 A	01-Sep-23	28-Apr-23	29-Apr-23	-125	
06-FGC-3-1010	PFab 2-Line 3 - 2nd Floor (EL12.47~ EL23.47m) (Including Dosing system bicar)	60	2	96.67%	10-Mar-22 A	01-Sep-23	27-Apr-23	28-Apr-23	-126	
06-FGC-3-1020	PFab 2-Line 3 - 3rd Floor (EL23.47~ EL34.47m) (Including Ash and residue to solidification)	60	1	98.33%	01-Sep-22 A	01-Sep-23	28-Apr-23	28-Apr-23	-126	
E&I Installation		134	134		11-Nov-23	23-Mar-24	24-Oct-23	05-Mar-24	-18	
Electrical		134	134		11-Nov-23	23-Mar-24	24-Oct-23	05-Mar-24	-18	
06-FGC-3-1250	PFab 2-Line 3 - Electrical Cable Pulling and Termination	120	120	0%	25-Nov-23	23-Mar-24*	07-Nov-23	05-Mar-24	-18	
06-FGC-3-1260	PFab 2-Line 3 - Electrical Equipment Installation	120	120	0%	11-Nov-23	09-Mar-24	24-Oct-23	20-Feb-24	-18	
Instrument		134	134		11-Nov-23	23-Mar-24	24-Oct-23	05-Mar-24	-18	
06-FGC-3-1280	PFab 2-Line 3 - Instrument Cable Pulling and Termination	120	120	0%	25-Nov-23	23-Mar-24	07-Nov-23	05-Mar-24	-18	
06-FGC-3-1290	PFab 2-Line 3 - Instrument Equipment Installation	120	120	0%	11-Nov-23	09-Mar-24	24-Oct-23	20-Feb-24	-18	
06-FGC-3-1300	PFab 2-Line 3 - Instrument Tubing Installation	120	120	0%	11-Nov-23	09-Mar-24	24-Oct-23	20-Feb-24	-18	
Load out & Shipping		20	20		16-Sep-23	05-Oct-23	29-Apr-23	18-May-23	-140	
06-FGC-3-1200	PFab 2-Line 3 - Load Out & ready to ship	20	20	0%	16-Sep-23*	05-Oct-23	29-Apr-23	18-May-23	-140	
Delivery		6	6		06-Oct-23	11-Oct-23	19-May-23	24-May-23	-140	
06-FGC-3-1320	PFab 2-Line 3 - Delivery	6	6	0%	06-Oct-23	11-Oct-23	19-May-23	24-May-23	-140	Update OD
PFab 2 - Line 4		784	207		24-Dec-21 A	24-Mar-24	28-Apr-23	06-Mar-24	-18	
Mechanical Erection		187	2		24-Dec-21 A	01-Sep-23	28-Apr-23	29-Apr-23	-125	
06-FGC-4-1040	PFab 2-Line 4 - 1st Floor (Below EL12.47m) (Including Silencer ID fan)	60	2	96.67%	24-Dec-21 A	01-Sep-23	28-Apr-23	29-Apr-23	-125	
06-FGC-4-1060	PFab 2-Line 4 - 3rd Floor (EL23.47~ EL34.47m) (Including Ash and residue to solidification)	60	1	98.33%	11-Feb-22 A	01-Sep-23	29-Apr-23	29-Apr-23	-125	
E&I Installation		134	134		12-Nov-23	24-Mar-24	25-Oct-23	06-Mar-24	-18	
Electrical		134	134		12-Nov-23	24-Mar-24	25-Oct-23	06-Mar-24	-18	
06-FGC-4-1250	PFab 2-Line 4 - Electrical Cable Pulling and Termination	120	120	0%	26-Nov-23	24-Mar-24*	08-Nov-23	06-Mar-24	-18	
06-FGC-4-1260	PFab 2-Line 4 - Electrical Equipment Installation	120	120	0%	12-Nov-23	10-Mar-24	25-Oct-23	21-Feb-24	-18	
Instrument		134	134		12-Nov-23	24-Mar-24	25-Oct-23	06-Mar-24	-18	
06-FGC-4-1280	PFab 2-Line 4 - Instrument Cable Pulling and Termination	120	120	0%	26-Nov-23	24-Mar-24*	08-Nov-23	06-Mar-24	-18	
06-FGC-4-1290	PFab 2-Line 4 - Instrument Equipment Installation	120	120	0%	12-Nov-23	10-Mar-24	25-Oct-23	21-Feb-24	-18	
06-FGC-4-1300	PFab 2-Line 4 - Instrument Tubing Installation	120	120	0%	12-Nov-23	10-Mar-24	25-Oct-23	21-Feb-24	-18	
Load out & Shipping		20	20		17-Sep-23	06-Oct-23	30-Apr-23	19-May-23	-140	
06-FGC-4-1030	PFab 2-Line 4 - Load Out & ready to ship	20	20	0%	17-Sep-23*	06-Oct-23	30-Apr-23	19-May-23	-140	
Delivery		6	6		07-Oct-23	12-Oct-23	20-May-23	25-May-23	-140	
06-FGC-4-1320	PFab 2-Line 4 - Delivery	6	6	0%	07-Oct-23	12-Oct-23	20-May-23	25-May-23	-140	Update OD
PFab 2 - Line 5		1227	309		18-Jun-21 A	04-Jul-24	27-Jul-23	03-Jun-24	-31	
Mechanical Erection		353	34		21-Jan-22 A	03-Oct-23	27-Jul-23	29-Aug-23	-35	
06-FGC-5-1000	PFab 2-Line 5 - 1st Floor (Below EL12.47m) (Including Silencer ID fan)	60	34	43.33%	21-Jan-22 A	03-Oct-23	27-Jul-23	29-Aug-23	-35	
06-FGC-5-1010	PFab 2-Line 5 - 2nd Floor (EL12.47~ EL23.47m) (Including Dosing system bicar)	60	34	43.33%	24-Jun-22 A	03-Oct-23	27-Jul-23	29-Aug-23	-35	
06-FGC-5-1020	PFab 2-Line 5 - 3rd Floor (EL23.47~ EL34.47m) (Including Ash and residue to solidification)	60	34	43.33%	19-Sep-22 A	03-Oct-23	27-Jul-23	29-Aug-23	-35	
06-FGC-5-1030	PFab 2-Line 5 - 4th Floor (EL34.47~ EL44.22m) (Including Urea to ammonia convertor)	50	5	90%	07-Oct-22 A	03-Oct-23	25-Aug-23	29-Aug-23	-35	
Piping Fabrication		180	19		18-Jun-21 A	18-Sep-23	27-Jul-23	14-Aug-23	-35	
06-FGC-5-1170	PFab 2-Line 5 - Piping Fabrication	180	19	89.44%	18-Jun-21 A	18-Sep-23	27-Jul-23	14-Aug-23	-35	
Piping Installation		140	36		19-May-23 A	05-Oct-23	27-Jul-23	31-Aug-23	-35	
06-FGC-5-1190	PFab 2-Line 5 - Piping Installation	140	36	74.29%	19-May-23 A	05-Oct-23	27-Jul-23	31-Aug-23	-35	
E&I Installation		88	36		14-Jun-23 A	05-Oct-23	27-Jul-23	31-Aug-23	-35	
06-FGC-5-1230	PFab 2-Line 5 - E&I Support Installation	45	29	35.56%	14-Jun-23 A	28-Sep-23	27-Jul-23	24-Aug-23	-35	
06-FGC-5-1240	PFab 2-Line 5 - E&I Cable Ladder Erection	45	36	20%	14-Jul-23 A	05-Oct-23	27-Jul-23	31-Aug-23	-35	
Electrical		26	26		31-Aug-23	25-Sep-23	06-Aug-23	31-Aug-23	-25	
06-FGC-5-1270	PFab 2-Line 5 - Electrical Heat Tracing Installation (Installation by Yard)	26	26	0%	31-Aug-23	25-Sep-23	06-Aug-23	31-Aug-23	-25	
06-FGC-5-1310	PFab 2-Line 5 - MCC room installation (Installation by Yard)	25	25	0%	31-Aug-23*	24-Sep-23	07-Aug-23	31-Aug-23	-24	



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

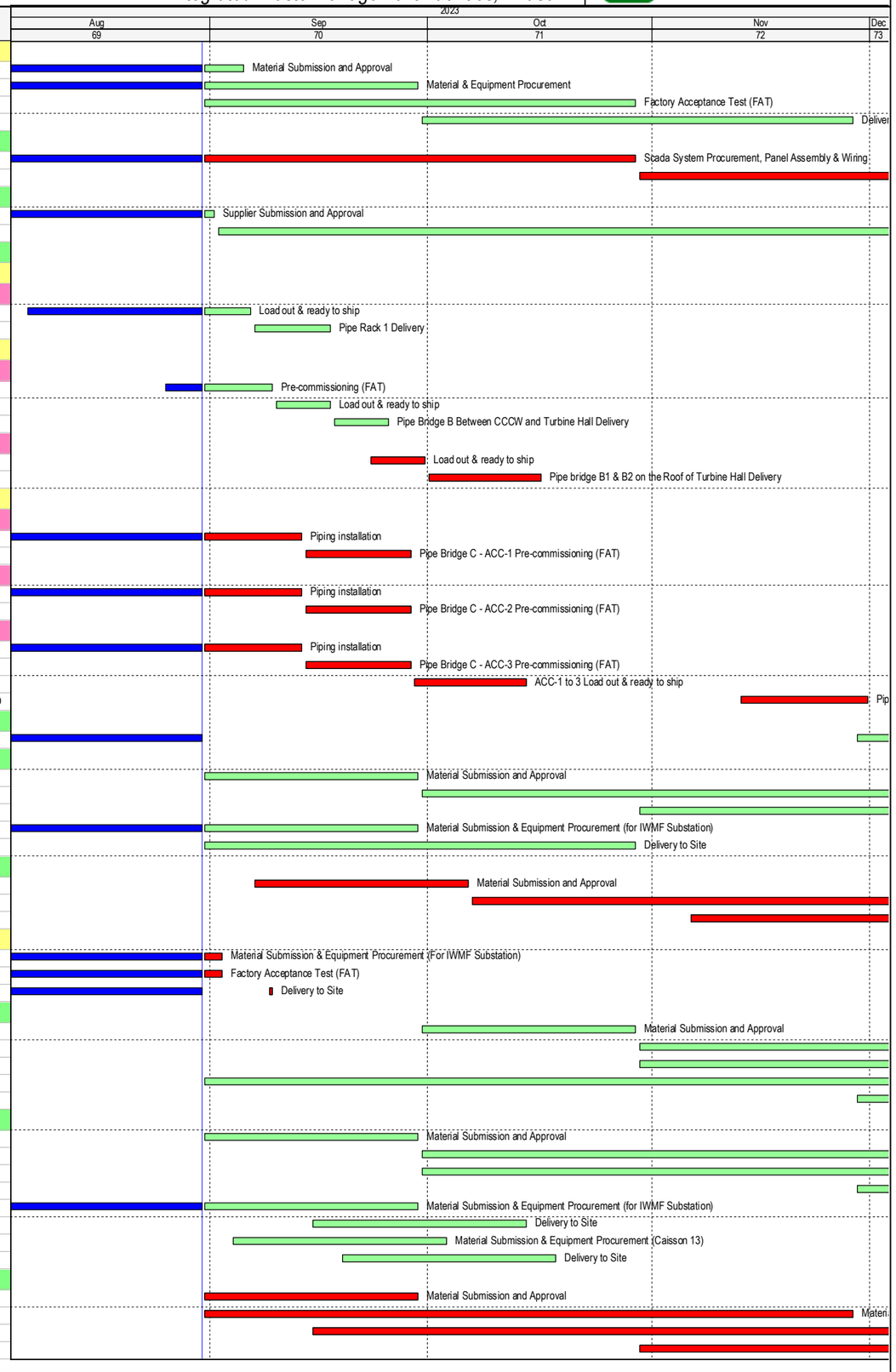
Activity ID	Activity Name	Original Duration	Remaining Duration	Activity % Complete	Current Start	Current Finish	Late Start	Late Finish	Total Float	M69 Remarks
Insulation		736	309		30-Jun-22 A	04-Jul-24	31-Jul-23	03-Jun-24	-31	
06-FGC-5-1200	PFab 2-Line 5 - Insulation	736	309	58.02%	30-Jun-22 A	04-Jul-24*	31-Jul-23	03-Jun-24	-31	
Load out & Shipping		20	20		15-Nov-23	04-Dec-23	01-Sep-23	20-Sep-23	-75	
06-FGC-5-1220	PFab 2-Line 5 - Load Out & ready to ship	20	20	0%	15-Nov-23*	04-Dec-23	01-Sep-23	20-Sep-23	-75	
PFab 2 - Line 6		649	97		21-Jan-22 A	05-Dec-23	02-Jul-23	21-Sep-23	-75	
Mechanical Erection		649	62		21-Jan-22 A	31-Oct-23	02-Jul-23	01-Sep-23	-60	
06-FGC-6-1170	PFab 2-Line 6 - 1st Floor (Below EL12.47m) (Including Silencer ID fan)	649	62	90.45%	21-Jan-22 A	31-Oct-23	02-Jul-23	01-Sep-23	-60	
06-FGC-6-1180	PFab 2-Line 6 - 2nd Floor (EL12.47~ EL23.47m) (Including Dosing system bicar)	60	43	28.33%	24-Jun-22 A	31-Oct-23	21-Jul-23	01-Sep-23	-60	
06-FGC-6-1190	PFab 2-Line 6 - 3rd Floor (EL23.47~ EL34.47m) (Including Ash and residue to solidification)	60	43	28.33%	08-Sep-22 A	31-Oct-23	21-Jul-23	01-Sep-23	-60	
06-FGC-6-1200	PFab 2-Line 6 - 4th Floor (EL34.47~ EL44.22m) (Including Urea to ammonia convertor)	30	30	0%	02-Oct-23*	31-Oct-23	03-Aug-23	01-Sep-23	-60	
E&I Installation		107	45		15-Jun-23 A	14-Oct-23	19-Jul-23	01-Sep-23	-43	
06-FGC-6-1240	PFab 2-Line 6 - E&I Support Installation	45	30	33.33%	15-Jun-23 A	29-Sep-23	19-Jul-23	17-Aug-23	-43	
06-FGC-6-1250	PFab 2-Line 6 - E&I Cable Ladder Erection	45	45	0%	31-Aug-23	14-Oct-23	19-Jul-23	01-Sep-23	-43	
Electrical		26	26		31-Aug-23	25-Sep-23	07-Aug-23	01-Sep-23	-24	
06-FGC-6-1280	PFab 2-Line 6 - Electrical Heat Tracing Installation (Installation by Yard)	26	26	0%	31-Aug-23*	25-Sep-23	07-Aug-23	01-Sep-23	-24	
06-FGC-6-1320	PFab 2-Line 6 - MCC room installation (Installation by Yard)	25	25	0%	31-Aug-23*	24-Sep-23	08-Aug-23	01-Sep-23	-23	
Load out & Shipping		20	20		16-Nov-23	05-Dec-23	02-Sep-23	21-Sep-23	-75	
06-FGC-6-1040	PFab 2-Line 6 - Load Out & ready to ship	20	20	0%	16-Nov-23*	05-Dec-23	02-Sep-23	21-Sep-23	-75	
Fabrication of Mega Steel Structure		93	24		27-Feb-23 A	23-Sep-23	29-May-23	14-Nov-23	52	
Fabrication of Steel Structure		93	24		27-Feb-23 A	23-Sep-23	29-May-23	14-Nov-23	52	
16-8550 (6E)	Fabrication of Steel Structure (FM2) & Delivery	30	3	90%	27-Feb-23 A	02-Sep-23	29-May-23	31-May-23	-94	
16-8560 (6E)	Fabrication of Steel Structure (FM3) & Delivery	30	24	20%	17-Apr-23 A	23-Sep-23	22-Oct-23	14-Nov-23	52	
Off-site Fabrication of Turbine Modules		615	91		20-Oct-22 A	29-Nov-23	22-May-23	29-Sep-23	-61	
Fabrication of Module (Power Island)		615	91		20-Oct-22 A	29-Nov-23	22-May-23	29-Sep-23	-61	
Turbine Module 2		615	91		20-Oct-22 A	29-Nov-23	22-May-23	20-Aug-23	-101	
06-4240(6)	Turbine Module 2 - TBS Tower 2 Fabrication	60	31	48.33%	20-Oct-22 A	30-Sep-23	22-May-23	21-Jun-23	-101	
06-4240-1(M55)	Turbine Module 2 - TBS Tower 2 Erection & Installation	274	91	66.79%	01-Mar-23 A	29-Nov-23	22-May-23	20-Aug-23	-101	Update OD
Turbine Module 3		509	91		30-Oct-22 A	29-Nov-23	01-Jul-23	29-Sep-23	-61	
06-4440(6)	Turbine Module 3 - TBS Tower 3 Fabrication	60	31	48.33%	30-Oct-22 A	30-Sep-23	01-Jul-23	31-Jul-23	-61	
06-4440-1(M55)	Turbine Module 3 - TBS Tower 3 Erection & Installation	168	91	45.83%	15-Jun-23 A	29-Nov-23	01-Jul-23	29-Sep-23	-61	Update OD
Procurement for ACC Units		639	90		28-Feb-22 A	28-Nov-23	17-Aug-23	06-Dec-23	8	
06-1120-1	Off-site Fabrication of ACC-2 Units	178	15	91.57%	28-Feb-22 A	14-Sep-23	17-Aug-23	31-Aug-23	-14	Remove Exp Finish Date
06-1120-2	Off-site Fabrication of ACC-3 Units	178	53	70.22%	28-Feb-22 A	22-Oct-23	08-Sep-23	30-Oct-23	8	
06-1130	Factory Acceptance Test (FAT) for ACC-1	60	17	71.67%	28-Sep-22 A	16-Sep-23	20-Sep-23	06-Oct-23	20	Remove Exp Finish Date
06-1140	Factory Acceptance Test (FAT) for ACC-2	16	16	0%	15-Sep-23	30-Sep-23	01-Sep-23	16-Sep-23	-14	Remove Exp Finish Date; Update OD
06-1150	Factory Acceptance Test (FAT) for ACC-3	16	16	0%	23-Oct-23	07-Nov-23	31-Oct-23	15-Nov-23	8	Update OD
06-1160	Delivery to Site ACC-1	11	11	0%	17-Sep-23	27-Sep-23	07-Oct-23	17-Oct-23	20	Remove Exp Finish Date; Update OD
06-1170	Delivery to Site ACC-2	21	21	0%	01-Oct-23	21-Oct-23	17-Sep-23	07-Oct-23	-14	Remove Exp Finish Date; Update OD
06-1190	Delivery to Site ACC-3	21	21	0%	08-Nov-23	28-Nov-23	16-Nov-23	06-Dec-23	8	
Procurement for CCCW Building Equipment		517	29		01-Mar-22 A	28-Sep-23	14-Aug-23	11-Sep-23	-17	
06-1410(1)	Material Procurement & Equipment Manufacture	300	6	98%	01-Mar-22 A	05-Sep-23	14-Aug-23	19-Aug-23	-17	Remove Actual Finsh Date
06-1420(1)	Factory Acceptance Test (FAT)	8	8	0%	06-Sep-23	13-Sep-23	20-Aug-23	27-Aug-23	-17	Remove Actual Start Date; Update OD
06-1420-1(1)	Delivery to Site	15	15	0%	14-Sep-23	28-Sep-23	28-Aug-23	11-Sep-23	-17	Update OD
Procurement for Mechanical Treatment Plant Building Plant Equipment		469	93		30-Jun-22 A	01-Dec-23	26-Oct-23	26-Jan-24	56	
06-1150-1(1)	Mechanical Equipment Material Submission and Approval	180	93	48.33%	30-Jun-22 A	01-Dec-23	26-Oct-23	26-Jan-24	56	Remove Exp Finish Date
06-1150-2(1)	Pipe Material Submission and Approval	180	93	48.33%	30-Jun-22 A	01-Dec-23	26-Oct-23	26-Jan-24	56	Remove Exp Finish Date
06-1150-3(1)	Electrical and Instrumentation Material Submission and Approval	180	93	48.33%	30-Jun-22 A	01-Dec-23	26-Oct-23	26-Jan-24	56	Remove Exp Finish Date
06-1160-1(1)	Mechanical Equipment Procurement (Incl. FAT)	217	93	57.14%	30-Jun-22 A	01-Dec-23	26-Oct-23	26-Jan-24	56	Remove Exp Finish Date
06-1160-2(1)	Pipe Material Procurement (Incl. FAT)	180	93	48.33%	30-Jun-22 A	01-Dec-23	26-Oct-23	26-Jan-24	56	Remove Exp Finish Date
06-1160-3(1)	Electrical and Instrumentation Material Procurement (Incl. FAT)	180	93	48.33%	08-Dec-22 A	01-Dec-23	26-Oct-23	26-Jan-24	56	Remove Exp Finish Date; Update Lag with Predecessor 06-1160-1(1) FF30
Procurement for Wastewater Treatment Plant Equipment		363	61		01-Sep-22 A	30-Oct-23	23-Jun-23	22-Aug-23	-69	
06-1200-1(1)	Mechanical Equipment Procurement (Incl. FAT)	210	30	85.71%	01-Sep-22 A	29-Sep-23	23-Jun-23	22-Jul-23	-69	Remove Exp Finish Date; Update Actual Start Date; Update OD
06-1200-2(1)	Pipe Material Procurement (Incl. FAT)	210	30	85.71%	01-Sep-22 A	29-Sep-23	23-Jun-23	22-Jul-23	-69	Remove Exp Finish Date; Update Actual Start Date; Update OD
06-1200-3(1)	Electrical and Instrumentation Material Procurement (Incl. FAT)	210	30	85.71%	01-Sep-22 A	29-Sep-23	24-Jun-23	23-Jul-23	-68	Remove Exp Finish Date; Update Actual Start Date; Update OD
06-1220	Delivery to Site	31	31	0%	30-Sep-23	30-Oct-23	23-Jul-23	22-Aug-23	-69	Update OD
Procurement for Desal & Demin Plant Equipment		752	147		08-Jan-20 A	24-Jan-24	05-Nov-23	27-May-24	124	
06-1230-1(1)	Mechanical Equipment Material Submission and Approval	90	30	66.67%	08-Jan-22 A	29-Sep-23	05-Nov-23	04-Dec-23	66	
06-1230-2(1)	Pipe Material Submission and Approval	90	30	66.67%	08-Jan-20 A	29-Sep-23	06-Nov-23	05-Dec-23	67	
06-1230-3(1)	Electrical and Instrumentation Material Submission and Approval	90	30	66.67%	16-Apr-20 A	29-Sep-23	06-Nov-23	05-Dec-23	67	
06-1240-1(1)	Mechanical Equipment Procurement (Incl. FAT)	576	122	78.82%	01-Jun-22 A	30-Dec-23	30-Nov-23	30-Mar-24	91	Update OD
06-1240-2(1)	Pipe Material Procurement (Incl. FAT)	150	31	79.33%	01-Sep-22 A	30-Sep-23	05-Nov-23	05-Dec-23	66	Update Actual Start Date
06-1240-3(1)	Electrical and Instrumentation Material Procurement (Incl. FAT)	60	31	48.33%	01-Sep-22 A	30-Sep-23	05-Nov-23	05-Dec-23	66	Update Actual Start Date
06-1260	Delivery to Site	116	116	0%	01-Oct-23	24-Jan-24	06-Dec-23	30-Mar-24	66	Update OD
06-1260-1(M55)	WTP chemical storage tank Material Submission and Approval	120	30	75%	21-Apr-22 A	29-Sep-23	29-Jan-24	27-Feb-24	151	
06-1260-2(M55)	WTP chemical storage tank Procurement (Incl. FAT)	180	30	83.33%	22-Apr-22 A	29-Oct-23	28-Feb-24	28-Mar-24	151	
06-1260-3(M55)	Chemical storage tank delivery to Site	60	60	0%	30-Oct-23	28-Dec-23	29-Mar-24	27-May-24	151	
Procurement for HV Transformers and Associated Equipment		607	150		31-May-22 A	27-Jan-24	29-Jun-23	01-Dec-23	-57	
Procurement of Transformers & EDG		150	150		31-Aug-23	27-Jan-24	29-Jun-23	25-Nov-23	-63	
06-1290(1)	Factory Acceptance Test (FAT)	120	120	0%	31-Aug-23	28-Dec-23	29-Jun-23	26-Oct-23	-63	
06-1300	Delivery to Site	60	60	0%	29-Nov-23	27-Jan-24	27-Sep-23	25-Nov-23	-63	



3-Month Rolling Programme (August 2023)

Actual Work | Remaining Work | Critical Remaining Work | Milestone | Actrual Milestone | Critical Milestone

Activity ID	Activity Name	Original Duration	Remaining Duration	Activity % Complete	Current Start	Current Finish	Late Start	Late Finish	Total Float	M69 Remarks
Procurement of Switchboard/Panels and Cables		547	90		31-May-22 A	28-Nov-23	03-Sep-23	01-Dec-23	3	
06-2090(1)	Material Submission and Approval	60	6	90%	31-May-22 A	05-Sep-23	03-Sep-23	08-Sep-23	3	
06-2100(1)	Material & Equipment Procurement	240	30	87.5%	31-May-22 A	29-Sep-23	03-Sep-23	02-Oct-23	3	
06-2110(1)	Factory Acceptance Test (FAT)	60	60	0%	31-Aug-23	29-Oct-23	03-Sep-23	01-Nov-23	3	
06-2120(1)	Delivery to Site	60	60	0%	30-Sep-23	28-Nov-23	03-Oct-23	01-Dec-23	3	
Procurement for Control SCADA Systems		577	120		23-May-22 A	28-Dec-23	20-Jun-23	17-Oct-23	-72	
06-1310	Scada System Procurement, Panel Assembly & Wiring	140	60	57.14%	23-May-22 A	29-Oct-23	20-Jun-23	18-Aug-23	-72	
06-1330	Factory Acceptance Test (FAT)	60	60	0%	30-Oct-23	28-Dec-23	19-Aug-23	17-Oct-23	-72	
Procurement for Onshore Crane at Berth		514	302		04-Dec-22 A	27-Jun-24	11-Nov-23	07-Sep-24	72	
06-1350	Supplier Submission and Approval	60	2	96.67%	04-Dec-22 A	01-Sep-23	11-Nov-23	12-Nov-23	72	
06-1360	Material & Equipment Procurement	300	300	0%	02-Sep-23	27-Jun-24	13-Nov-23	07-Sep-24	72	
Procurement and Off-site Fabrication of Pipe Bridges (Incl. Pipings)		92	92		30-Jul-23 A	30-Nov-23	27-Jul-23	16-Nov-23	-14	
Fabrication of Pipe Rack (Prefab.3)		31	18		07-Aug-23 A	17-Sep-23	30-Oct-23	16-Nov-23	60	
Pipe Rack 1		31	18		07-Aug-23 A	17-Sep-23	30-Oct-23	16-Nov-23	60	
06-5040(6)	Load out & ready to ship	31	7	77.42%	07-Aug-23 A	06-Sep-23	30-Oct-23	05-Nov-23	60	
06-5050(6)	Pipe Rack 1 Delivery	11	11	0%	07-Sep-23	17-Sep-23	06-Nov-23	16-Nov-23	60	Update OD
Fabrication of Pipe Bridge B		47	47		26-Aug-23 A	16-Oct-23	09-Sep-23	04-Oct-23	-12	
Pipe Bridge B Between CCCW and Turbine Hall		31	26		26-Aug-23 A	25-Sep-23	09-Sep-23	04-Oct-23	9	
06-5330(6)	Pre-commissioning (FAT)	31	10	67.74%	26-Aug-23 A	09-Sep-23	09-Sep-23	18-Sep-23	9	
06-5340(6)	Load out & ready to ship	8	8	0%	10-Sep-23	17-Sep-23	19-Sep-23	26-Sep-23	9	Update OD
06-5350(6)	Pipe Bridge B Between CCCW and Turbine Hall Delivery	8	8	0%	18-Sep-23	25-Sep-23	27-Sep-23	04-Oct-23	9	Update OD
Pipe bridge B1 & B2 on the Roof of Turbine Hall		24	24		23-Sep-23	16-Oct-23	11-Sep-23	04-Oct-23	-12	
06-5390-1(6D)	Load out & ready to ship	8	8	0%	23-Sep-23	30-Sep-23	11-Sep-23	18-Sep-23	-12	Update OD
06-5390-2(6D)	Pipe bridge B1 & B2 on the Roof of Turbine Hall Delivery	16	16	0%	01-Oct-23	16-Oct-23	19-Sep-23	04-Oct-23	-12	Update OD
Fabrication of Pipe Bridge C		92	92		30-Jul-23 A	30-Nov-23	27-Jul-23	26-Oct-23	-35	
Pipe Bridge C between Turbine Hall & ACC -1		47	29		30-Jul-23 A	28-Sep-23	27-Jul-23	24-Aug-23	-35	
06-5420(6)	Piping installation	40	14	65%	30-Jul-23 A	13-Sep-23	27-Jul-23	09-Aug-23	-35	Update Actual Start Date
06-5430(6)	Pipe Bridge C - ACC-1 Pre-commissioning (FAT)	15	15	0%	14-Sep-23	28-Sep-23	10-Aug-23	24-Aug-23	-35	
Pipe Bridge C between Turbine Hall & ACC -2		40	29		30-Jul-23 A	28-Sep-23	27-Jul-23	24-Aug-23	-35	
06-5460(6)	Piping installation	40	14	65%	30-Jul-23 A	13-Sep-23	27-Jul-23	09-Aug-23	-35	Update Actual Start Date
06-5470(6)	Pipe Bridge C - ACC-2 Pre-commissioning (FAT)	15	15	0%	14-Sep-23	28-Sep-23	10-Aug-23	24-Aug-23	-35	
Pipe Bridge C between Turbine Hall & ACC -3		89	92		30-Jul-23 A	30-Nov-23	27-Jul-23	26-Oct-23	-35	
06-5500(6)	Piping installation	40	14	65%	30-Jul-23 A	13-Sep-23	27-Jul-23	09-Aug-23	-35	Update Actual Start Date
06-5510(6)	Pipe Bridge C - ACC-3 Pre-commissioning (FAT)	15	15	0%	14-Sep-23	28-Sep-23	10-Aug-23	24-Aug-23	-35	
06-5520(6)	ACC-1 to 3 Load out & ready to ship	16	16	0%	29-Sep-23	14-Oct-23	25-Aug-23	09-Sep-23	-35	
06-5530(6)	Pipe Bridge C - ACC1 to 3 Delivery	18	18	0%	13-Nov-23	30-Nov-23	09-Oct-23	26-Oct-23	-35	Update Predecessor Lag 0-29; Update OD
Procurement for LV Electrical System for On-site Installation		180	30		01-Mar-22 A	28-Dec-23	24-May-24	22-Jun-24	177	
06-1440	Material & Equipment Procurement	180	30	83.33%	01-Mar-22 A	28-Dec-23	24-May-24	22-Jun-24	177	
Procurement for Ventilation and Odor Treatment System		242	150		04-May-23 A	27-Jan-24	23-Nov-23	20-May-24	114	
06-1470(1)	Material Submission and Approval	30	30	0%	31-Aug-23	29-Sep-23	23-Nov-23	22-Dec-23	84	
06-1480	Material & Equipment Procurement	90	90	0%	30-Sep-23	28-Dec-23	23-Dec-23	21-Mar-24	84	
06-1490	Factory Acceptance Test (FAT)	90	90	0%	30-Oct-23	27-Jan-24	22-Jan-24	20-Apr-24	84	
06-1820(6C)	Material Submission & Equipment Procurement (for IWMF Substation)	60	30	50%	04-May-23 A	29-Sep-23	22-Mar-24	20-Apr-24	204	
06-1820-1(6C)	Delivery to Site	60	60	0%	31-Aug-23	29-Oct-23	22-Mar-24	20-May-24	204	
Procurement for Fire Services System		614	157		31-May-22 A	03-Feb-24	08-Aug-23	29-Jan-24	-5	
06-1510	Material Submission and Approval	30	30	0%	07-Sep-23	06-Oct-23	02-Sep-23	01-Oct-23	-5	
06-1520	Material & Equipment Procurement	90	90	0%	07-Oct-23	04-Jan-24	02-Oct-23	30-Dec-23	-5	
06-1530	Factory Acceptance Test (FAT)	90	90	0%	06-Nov-23	03-Feb-24	01-Nov-23	29-Jan-24	-5	
IWMF Substation		516	10		31-May-22 A	09-Sep-23	08-Aug-23	17-Aug-23	-23	
06-1810(6)	Material Submission & Equipment Procurement (For IWMF Substation)	457	3	99.34%	31-May-22 A	02-Sep-23	08-Aug-23	10-Aug-23	-23	
06-1820(6)	Factory Acceptance Test (FAT)	243	3	98.77%	01-Jan-23 A	02-Sep-23	08-Aug-23	10-Aug-23	-23	
06-1830(6)	Delivery to Site	125	1	99.2%	08-May-23 A	09-Sep-23	17-Aug-23	17-Aug-23	-23	
Procurement for Plumbing System		150	150		31-Aug-23	27-Jan-24	16-Nov-23	26-Jul-24	181	
06-1550	Material Submission and Approval	30	30	0%	30-Sep-23	29-Oct-23	16-Nov-23	15-Dec-23	47	
06-1560	Material & Equipment Procurement	90	90	0%	30-Oct-23	27-Jan-24	16-Dec-23	14-Mar-24	47	
06-1570	Factory Acceptance Test (FAT)	90	90	0%	30-Oct-23	27-Jan-24	16-Dec-23	14-Mar-24	47	
06-1580-1(6C)	Material Submission & Equipment Procurement	120	120	0%	31-Aug-23	28-Dec-23	28-Feb-24	26-Jun-24	181	
06-1580-2(6C)	Delivery to Site	60	60	0%	29-Nov-23	27-Jan-24	28-May-24	26-Jul-24	181	
Procurement for Drainage System		242	150		19-May-23 A	27-Jan-24	16-Nov-23	27-Aug-24	213	
06-1590	Material Submission and Approval	30	30	0%	31-Aug-23	29-Sep-23	16-Nov-23	15-Dec-23	77	
06-1600	Material & Equipment Procurement	90	90	0%	30-Sep-23	28-Dec-23	16-Dec-23	14-Mar-24	77	
06-1610	Factory Acceptance Test (FAT)	90	90	0%	30-Sep-23	28-Dec-23	16-Dec-23	14-Mar-24	77	
06-1620	Delivery to Site	60	60	0%	29-Nov-23	27-Jan-24	14-Feb-24	13-Apr-24	77	
06-1620-1(6C)	Material Submission & Equipment Procurement (for IWMF Substation)	60	30	50%	19-May-23 A	29-Sep-23	14-Jul-24	12-Aug-24	318	
06-1620-2(6C)	Delivery to Site	30	30	0%	15-Sep-23	14-Oct-23	29-Jul-24	27-Aug-24	318	
06-1620-3(M55)	Material Submission & Equipment Procurement (Caisson 13)	30	30	0%	04-Sep-23	03-Oct-23	20-Feb-24	20-Mar-24	169	
06-1620-4(M55)	Delivery to Site	30	30	0%	19-Sep-23	18-Oct-23	06-Mar-24	04-Apr-24	169	
Procurement for Lighting System		120	120		31-Aug-23	28-Dec-23	04-Jul-23	31-Oct-23	-58	
06-1630	Material Submission and Approval	30	30	0%	31-Aug-23	29-Sep-23	04-Jul-23	02-Aug-23	-58	
06-1640	Material & Equipment Procurement	90	90	0%	31-Aug-23	28-Nov-23	04-Jul-23	01-Oct-23	-58	
06-1650	Factory Acceptance Test (FAT)	90	90	0%	15-Sep-23	13-Dec-23	19-Jul-23	16-Oct-23	-58	
06-1660	Delivery to Site	60	60	0%	30-Oct-23	28-Dec-23	02-Sep-23	31-Oct-23	-58	



Actual Work | Remaining Work | Critical Remaining Work | Milestone | Actrual Milestone | Critical Milestone

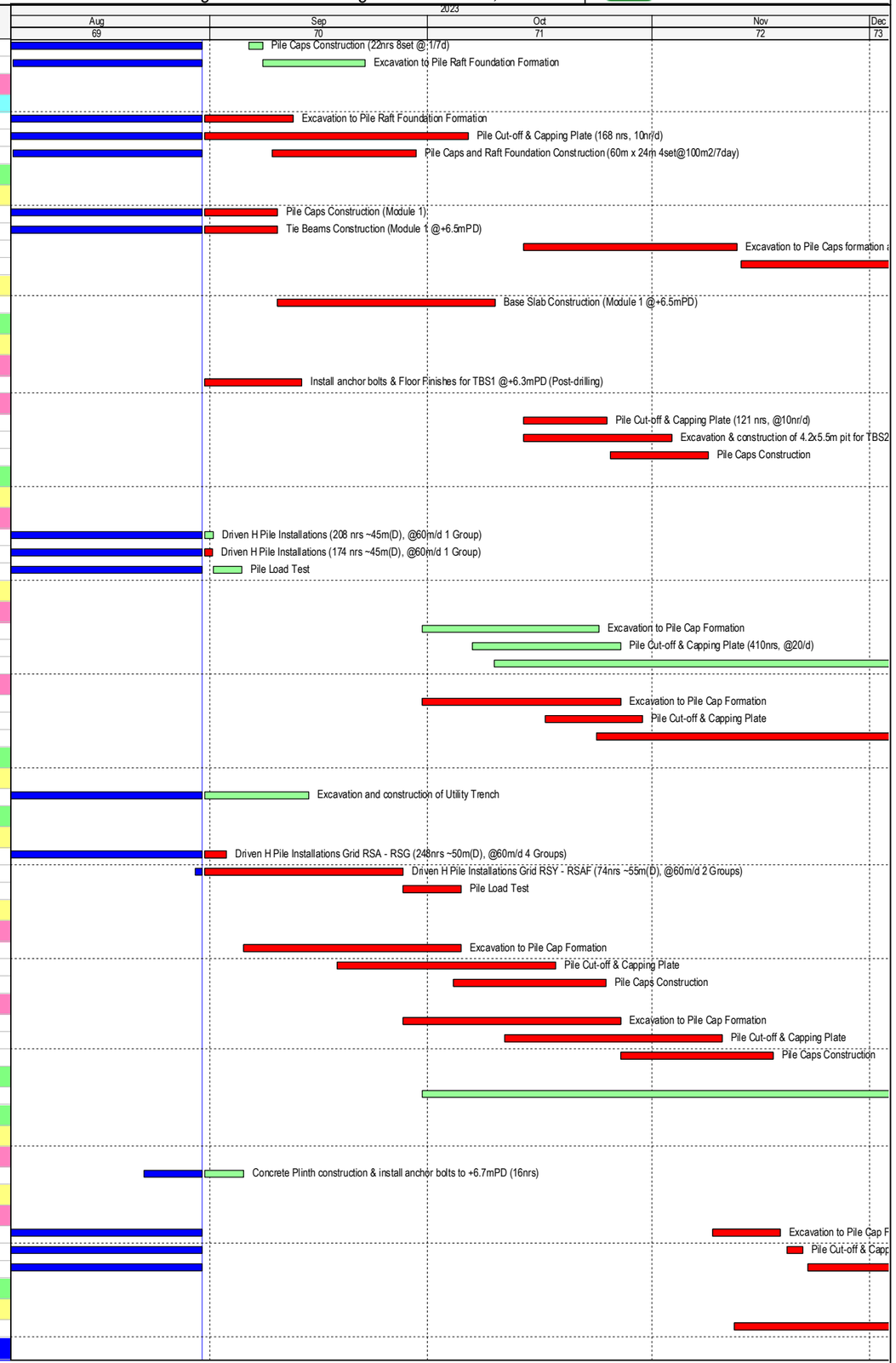
Activity ID	Activity Name	Original Duration	Remaining Duration	Activity % Complete	Current Start	Current Finish	Late Start	Late Finish	Total Float	M69 Remarks
Procurement for Security, Surveillance & Communication System		120	120		30-Oct-23	26-Feb-24	31-Oct-23	27-Feb-24	1	
06-1670	Material Submission and Approval	30	30	0%	30-Oct-23	28-Nov-23	31-Oct-23	29-Nov-23	1	
06-1680	Material & Equipment Procurement	90	90	0%	29-Nov-23	26-Feb-24	30-Nov-23	27-Feb-24	1	
Procurement for Cranage Equipment		666	117		02-Aug-21 A	25-Dec-23	05-Jan-24	04-Feb-24	41	
Waste Crane		594	45		02-Aug-21 A	15-Oct-23	05-Jan-24	04-Feb-24	113	
06-1720	Material & Equipment Procurement	180	0	100%	02-Aug-21 A	31-Aug-23	05-Jan-24	05-Jan-24	128	
06-1730	Manufacture and Factory Acceptance Test (FAT)	30	30	0%	31-Aug-23	29-Sep-23	06-Jan-24	04-Feb-24	128	
06-1740	Waste Crane Delivery to Site	0	0	0%	15-Oct-23	15-Oct-23	04-Feb-24	04-Feb-24	113	
Ash Crane		11	11		04-Sep-23	14-Sep-23	25-Jan-24	04-Feb-24	143	
06-1850	Ash Crane Delivery to Site	11	11	0%	04-Sep-23	14-Sep-23	25-Jan-24	04-Feb-24	143	Remove Exp Finish Date; Update Lag with Predecessor 05-3390-5(M55)
Shredder		31	31		30-Sep-23	30-Oct-23	05-Jan-24	04-Feb-24	97	
06-1890	Shredder Delivery to Site	31	31	0%	30-Sep-23*	30-Oct-23	05-Jan-24	04-Feb-24	97	Apply Primary Constraints; Update OD
Hoist System		30	30		26-Nov-23	25-Dec-23	06-Jan-24	04-Feb-24	41	
06-8330(M57)	Monorail Hoist Delivery to Site	30	30	0%	26-Nov-23	25-Dec-23	06-Jan-24	04-Feb-24	41	
Procurement for Lift and Escalator Systems		60	60		29-Nov-23	27-Jan-24	30-Nov-23	28-Jan-24	1	
06-1750	Material Submission and Approval	60	60	0%	29-Nov-23	27-Jan-24	30-Nov-23	28-Jan-24	1	
Procurement for Soft Landscape Materials		510	510		03-Sep-23	24-Jan-25	10-Jul-23	30-Nov-24	-55	
06-1790	Material Submission and Approval	60	60	0%	03-Sep-23	01-Nov-23	10-Jul-23	07-Sep-23	-55	
06-1800	Material Procurement & Nursery	450	450	0%	02-Nov-23	24-Jan-25	08-Sep-23	30-Nov-24	-55	
Procurement for Air Quality Monitoring Station Equipment		30	30		03-Sep-23	02-Oct-23	30-Apr-23	29-May-23	-126	
06-2200(1)	Delivery to Site	30	30	0%	03-Sep-23	02-Oct-23	30-Apr-23	29-May-23	-126	
Procurement for Weighbridge System		149	149		22-Nov-22 A	17-Feb-24	24-Sep-23	19-Feb-24	2	
06-2220(1)	Material & Equipment Procurement	90	59	34.44%	22-Nov-22 A	19-Nov-23	24-Sep-23	21-Nov-23	2	Update Actual Start Date
06-2230(1)	Factory Acceptance Test (FAT)	90	90	0%	20-Nov-23	17-Feb-24	22-Nov-23	19-Feb-24	2	
Procurement for Pipes and Insulation for on site installations		206	26		27-Aug-22 A	25-Sep-23	16-Oct-23	10-Nov-23	46	
06-2260(1)	Material & Equipment Procurement	120	15	87.5%	27-Aug-22 A	14-Sep-23	16-Oct-23	30-Oct-23	46	Update Actual Start Date
06-2270(1)	Delivery to Site	11	11	0%	15-Sep-23	25-Sep-23	31-Oct-23	10-Nov-23	46	Update OD
Procurement for Truck Wash System		60	60		30-Oct-23	28-Dec-23	12-Feb-24	11-Apr-24	105	
06-2290(1)	Material Submission and Approval	60	60	0%	30-Oct-23	28-Dec-23	12-Feb-24	11-Apr-24	105	
Procurement for Hard Landscape Materials (Paving, Greening, Furniture and Lighting)		90	90		29-Nov-23	26-Feb-24	05-Apr-24	03-Jul-24	128	
06-7000(6)	Material Submission and Approval	90	90	0%	29-Nov-23	26-Feb-24	05-Apr-24	03-Jul-24	128	
Procurement for Building Finishes Materials (Doors, windows and louvers ie...)		300	300		31-Aug-23	25-Jun-24	13-Aug-23	15-May-25	324	
06-8000(6)	Incineration Plant Building - Material Submission, Procurement, FAT and Delivery	90	90	0%	31-Aug-23	28-Nov-23	26-Mar-24	23-Jun-24	208	
06-8010(6)	ACC Equipment Yard - Material Submission, Procurement, FAT and Delivery	300	300	0%	31-Aug-23	25-Jun-24	20-Jul-24	15-May-25	324	
06-8020(6)	Turbine Hall Building - Material Submission, Procurement, FAT and Delivery	90	90	0%	09-Sep-23	07-Dec-23	13-Aug-23	10-Nov-23	-27	
06-8030(6)	CCCW Building - Material Submission, Procurement, FAT and Delivery	90	90	0%	31-Aug-23	28-Nov-23	28-Apr-24	26-Jul-24	241	
06-8030(6)10	Chimney - Material Submission, Procurement, FAT and Delivery	200	200	0%	30-Oct-23	16-May-24	12-Sep-23	29-Mar-24	-48	
06-8030(6)20	Reception Pavilion - Material Submission, Procurement, FAT and Delivery	90	90	0%	29-Nov-23	26-Feb-24	15-Jan-24	13-Apr-24	47	
06-8030(6)30	MT Plant Building - Material Submission, Procurement, FAT and Delivery	180	180	0%	30-Oct-23	26-Apr-24	29-Jan-24	26-Jul-24	91	
06-8030(6)40	Wastewater Treatment Plant - Material Submission, Procurement, FAT and Delivery	150	150	0%	30-Oct-23	27-Mar-24	26-Jan-24	23-Jun-24	88	
06-8030(6)50	Water Treatment Plant Building - Material Submission, Procurement, FAT and Delivery	180	180	0%	30-Oct-23	26-Apr-24	29-Jan-24	26-Jul-24	91	
06-8030(6)60	Administration Building - Material Submission, Procurement, FAT and Delivery	120	120	0%	30-Oct-23	26-Feb-24	28-Feb-24	26-Jun-24	121	
06-8030(6)70	IWMF Substation - Material Submission, Procurement, FAT and Delivery	90	90	0%	05-Sep-23	03-Dec-23	02-Sep-24	30-Nov-24	363	
06-8030(6)80	Elevated Driveway - Material Submission, Procurement, FAT and Delivery	180	180	0%	30-Oct-23	26-Apr-24	31-Oct-23	27-Apr-24	1	
Procurement for Curtain Wall Materials		180	180		30-Sep-23	27-Mar-24	03-Aug-24	29-Jan-25	308	
06-8200(6D)	Material Submission and Approval	60	60	0%	30-Sep-23	28-Nov-23	03-Aug-24	01-Oct-24	308	
06-8210(6D)	Material & Equipment Procurement	120	120	0%	29-Nov-23	27-Mar-24	02-Oct-24	29-Jan-25	308	
Off-site Precasting of Facade Panels		454	270		14-Feb-23 A	26-May-24	24-Sep-23	20-Aug-24	86	
06-8040(6D)	Procurement of Precast Concrete Wall Panel Moulding & Fabrication	205	7	96.59%	14-Feb-23 A	06-Sep-23	24-Sep-23	30-Sep-23	24	
IWMF Substation		90	90		07-Sep-23	05-Dec-23	31-Oct-23	19-May-24	166	
06-8070(6D)	Precasting of Concrete Panels	60	60	0%	07-Sep-23	05-Nov-23	31-Oct-23	29-Dec-23	54	
06-8080(6D)	Factory Acceptance Test (FAT)	60	60	0%	07-Oct-23	05-Dec-23	21-Mar-24	19-May-24	166	
Elevated Drive Way		90	90		30-Sep-23	28-Dec-23	23-May-24	20-Aug-24	236	
06-8100	Precasting of Concrete Panels	60	60	0%	30-Sep-23	28-Nov-23	23-May-24	21-Jul-24	236	
06-8110	Factory Acceptance Test (FAT)	60	60	0%	30-Oct-23	28-Dec-23	22-Jun-24	20-Aug-24	236	
Turbine Hall		90	90		07-Sep-23	05-Dec-23	06-Mar-24	03-Jun-24	181	
06-8130	Precasting of Concrete Panels	45	45	0%	07-Sep-23	21-Oct-23	06-Mar-24	19-Apr-24	181	
06-8140	Factory Acceptance Test (FAT)	45	45	0%	07-Oct-23	20-Nov-23	05-Apr-24	19-May-24	181	
06-8150	Delivery to Site	30	30	0%	06-Nov-23	05-Dec-23	05-May-24	03-Jun-24	181	
Process Building		90	90		07-Sep-23	05-Dec-23	03-Mar-24	31-May-24	178	
06-8160	Precasting of Concrete Panels	60	60	0%	07-Sep-23	05-Nov-23	03-Mar-24	01-May-24	178	
06-8170	Factory Acceptance Test (FAT)	60	60	0%	22-Sep-23	20-Nov-23	18-Mar-24	16-May-24	178	
06-8180	Delivery to Site	30	30	0%	06-Nov-23	05-Dec-23	02-May-24	31-May-24	178	
Mechanical Treatment Plant		90	90		07-Sep-23	05-Dec-23	09-Jan-24	07-Apr-24	124	
06-8190	Precasting of Concrete Panels	60	60	0%	07-Sep-23	05-Nov-23	09-Jan-24	08-Mar-24	124	
06-8200	Factory Acceptance Test (FAT)	60	60	0%	07-Oct-23	05-Dec-23	08-Feb-24	07-Apr-24	124	
Administration Building		90	90		07-Sep-23	05-Dec-23	25-Nov-23	22-Feb-24	79	
06-8250	Precasting of Concrete Panels	60	60	0%	07-Sep-23	05-Nov-23	25-Nov-23	23-Jan-24	79	
06-8260	Factory Acceptance Test (FAT)	60	60	0%	07-Oct-23	05-Dec-23	25-Dec-23	22-Feb-24	79	
Chimney		210	210		30-Oct-23	26-May-24	01-Oct-23	27-Apr-24	-29	
06-8280	Steel Claddings	210	210	0%	30-Oct-23	26-May-24	01-Oct-23	27-Apr-24	-29	

Actual Work | Remaining Work | Critical Remaining Work | Milestone | Actrual Milestone | Critical Milestone

Activity ID	Activity Name	Original Duration	Remaining Duration	Activity % Complete	Current Start	Current Finish	Late Start	Late Finish	Total Float	M69 Remarks
Procurement for IWMF Equipments for BS Works		178	55		11-Apr-23 A	24-Oct-23	08-Oct-23	01-Dec-23	38	
06-8310(6E)	Material & Equipment Procurement	60	3	95%	11-Apr-23 A	02-Sep-23	08-Oct-23	10-Oct-23	38	
06-8320(6E)	Factory Acceptance Test (FAT)	40	40	0%	31-Aug-23	09-Oct-23	08-Oct-23	16-Nov-23	38	
06-8330(6E)	Delivery to Site	30	30	0%	25-Sep-23	24-Oct-23	02-Nov-23	01-Dec-23	38	
Off-site Prefabrication of Steel Grating Platform for Chimney		120	120		31-Aug-23	28-Dec-23	19-Jul-23	15-Nov-23	-43	
06-8310(6F)	Prefabrication of Steel Grating Platform	60	60	0%	31-Aug-23	29-Oct-23	19-Jul-23	16-Sep-23	-43	
06-8320(6F)	Factory Acceptance Test (FAT)	60	60	0%	30-Sep-23	28-Nov-23	18-Aug-23	16-Oct-23	-43	
06-8330(6F)	Delivery to Site	30	30	0%	29-Nov-23	28-Dec-23	17-Oct-23	15-Nov-23	-43	
Delivery of Cast-in pipes, Fittings and Anchor Bolts for Structures (if applicable)		90	90		31-Aug-23	29-Nov-23	31-May-23	27-May-24	180	
04-1805(6F)	Wastewater Treatment Plant (30d)	0	0	0%	31-Aug-23		31-May-23		-92	
04-1810(6F)	Tipping Hall and Bunker (30d)	0	0	0%	31-Aug-23		12-Apr-24		225	
04-1830(6F)	Chimney (30d)	0	0	0%	31-Aug-23		03-Aug-23		-28	
04-1840(6F)	Mechanical Treatment Plant & Water Treatment Plant (90d)	0	0	0%	24-Sep-23		18-Sep-23		-6	
04-1850(6F)	Reception Pavilion (90d)	0	0	0%	15-Sep-23		07-Oct-23		22	
04-1860(6F)	Administration Building and Viewing Gallery (90d)	0	0	0%	26-Sep-23		23-Sep-23		-4	
04-1870(6F)	Elevated Drive Way and Associated Structures (30d)	0	0	0%	31-Aug-23		29-Jun-23		-63	
04-1910(6F)	Vehicle Fuel Filling Station (90d)	0	0	0%	29-Nov-23		22-Dec-23		23	
04-1920(6F)	Fuel Filling Kiosk (30d)	0	0	0%	30-Sep-23		27-May-24		240	
Environmental Works		365	365		02-Nov-23	31-Oct-24	29-Jun-23	27-Jun-24	-126	
Baseline Air Quality Monitoring Works		365	365		02-Nov-23	31-Oct-24	29-Jun-23	27-Jun-24	-126	
07-1220	Carry out baseline Air Quality monitoring at Portion 3	365	365	0%	02-Nov-23	31-Oct-24	29-Jun-23	27-Jun-24	-126	
07-1240	Carry out baseline Air Quality monitoring at Portion 5	365	365	0%	02-Nov-23	31-Oct-24	29-Jun-23	27-Jun-24	-126	
Maritime Works		1570	200		30-Nov-19 A	17-Mar-24	07-Dec-23	26-Jul-24	131	
Marine Construction		1570	200		30-Nov-19 A	17-Mar-24	07-Dec-23	26-Jul-24	131	
Phase I - Construction of Perimeter Seawalls		1570	200		30-Nov-19 A	17-Mar-24	07-Dec-23	03-Jun-24	78	
Seawall and Berth at DCM Area		1570	200		30-Nov-19 A	17-Mar-24	07-Dec-23	03-Jun-24	78	
Seawall Structural Works		1570	200		30-Nov-19 A	17-Mar-24	07-Dec-23	03-Jun-24	78	
08-1115(3)	Caisson infill, Solid ballast, toe protection, precast concrete blocks ..etc Laying	250	30	88%	30-Nov-19 A	29-Sep-23	05-Feb-24	05-Mar-24	158	
Remain Works		890	200		10-Oct-21 A	17-Mar-24	07-Dec-23	03-Jun-24	78	
08-1105-11(6)	Prefabrication of Precast Copping for Vertical Seawall	140	140	0%	31-Aug-23	17-Jan-24	16-Jan-24	03-Jun-24	138	
08-1120	Construction of Seawall and Wave Wall Extension from +3mPD to Deck Level for Seawall A	220	26	88%	10-Oct-21 A	29-Oct-23	09-Mar-24	04-Apr-24	158	
08-1120-1(6)	Construction of Seawall and Wave Wall Extension from +3mPD to Deck Level for Seawall B	220	55	75%	10-Oct-21 A	24-Oct-23	10-Feb-24	04-Apr-24	163	
08-1120-2(M55)	Construction of Seawall and Wave Wall Extension from +3mPD to Deck Level for Seawall B No. C1 & C2 (Caisson A2 & A	60	48	20%	31-May-22 A	17-Oct-23	17-Apr-24	03-Jun-24	230	
08-1120-4(M55)	Construction of Seawall and Wave Wall Extension from +3mPD to Deck Level for Seawall B No. C73 & C73C1	60	30	50%	31-May-22 A	29-Sep-23	05-May-24	03-Jun-24	248	
08-1320(6)	Construction of Rear Wall Buttress & Panel for Seawall A	180	180	0%	20-Sep-23	17-Mar-24	07-Dec-23	03-Jun-24	78	
Seawall at Dredging Area		160	16		11-Jul-22 A	15-Sep-23	26-Jan-24	10-Feb-24	148	
Remain Works		160	16		11-Jul-22 A	15-Sep-23	26-Jan-24	10-Feb-24	148	
08-1170	Construction of Seawall and Wave Wall Extension from +3mPD to Deck Level (Bay 1 to Bay 8)	160	16	90%	11-Jul-22 A	15-Sep-23	26-Jan-24	10-Feb-24	148	
Phase II - Reclamation, Breakwater and Berth Construction		1033	180		08-Feb-21 A	26-Feb-24	07-Dec-23	26-Jul-24	151	
Breakwater		1033	180		30-Apr-21 A	26-Feb-24	07-Dec-23	03-Jun-24	98	
08-1295(3)	Caisson Infill, Solid ballast, toe protection, precast concrete blocks ..etc Laying	200	10	95%	30-Apr-21 A	09-Sep-23	25-Feb-24	05-Mar-24	178	
Remain Works		637	180		31-May-22 A	26-Feb-24	07-Dec-23	03-Jun-24	98	
08-1300	Construction of Caissons Extension from +3mPD to Deck Level	637	180	71.74%	31-May-22 A	26-Feb-24	07-Dec-23	03-Jun-24	98	
Seawall and Berth at Marine Access		423	180		08-Feb-21 A	26-Feb-24	28-Jan-24	26-Jul-24	151	
08-1320(5A)	Caisson Infill, Solid ballast, toe protection, precast concrete blocks ..etc Laying	90	23	74.44%	08-Feb-21 A	22-Sep-23	12-Feb-24	05-Mar-24	165	
Remain Works		30	30		31-Aug-23	29-Sep-23	05-May-24	03-Jun-24	248	
08-1330(2)	Construction of Seawall and Wave Wall Extension from +3mPD to Deck Level	30	30	0%	31-Aug-23	29-Sep-23	05-May-24	03-Jun-24	248	
Seawater Intake Structure		90	72		22-Mar-23 A	10-Dec-23	28-Jan-24	08-Apr-24	120	
08-2400(6D)	Construction of Seawater Intake	90	72	20%	22-Mar-23 A	10-Dec-23	28-Jan-24	08-Apr-24	120	
Fire Boat Access		120	120		30-Oct-23	26-Feb-24	29-Mar-24	26-Jul-24	151	
08-2500(6D)	Construction of Fire Boat Access	120	120	0%	30-Oct-23	26-Feb-24	29-Mar-24	26-Jul-24	151	
Foundation Works		376	123		23-Dec-22 A	31-Dec-23	11-May-23	22-May-24	143	
Administration & Viewing Gallery Bld Foundation		125	86		11-Aug-23 A	18-Dec-23	20-Sep-23	14-Dec-23	-4	
Administration & Viewing Gallery Bld Pile Caps Construction		125	86		11-Aug-23 A	18-Dec-23	20-Sep-23	14-Dec-23	-4	
09-1090	Excavation to Pile Cap Formation	60	6	90%	11-Aug-23 A	29-Sep-23	20-Sep-23	26-Sep-23	-4	Update Actual Start Date
09-1100	Pile Cut-off & Capping Plate (6 Welders @ 2nr/d)	14	8	40%	14-Aug-23 A	06-Oct-23	25-Sep-23	03-Oct-23	-4	Update Actual Start Date
09-1110	Pile Caps Construction	90	81	10%	14-Sep-23 A	18-Dec-23	25-Sep-23	14-Dec-23	-4	Update Actual Start Date
Sky Deck Foundation		138	98		02-Jun-23 A	06-Dec-23	21-Feb-24	06-Apr-24	123	
Sky Deck Piling Works (Driven H-pile)		23	1		02-Jun-23 A	01-Sep-23	21-Feb-24	22-Feb-24	175	
09-2705(M62)	Driven H Pile Installations (23 nrs ~60m(D) @ 60m/d 1 Group)	23	1	95%	02-Jun-23 A	01-Sep-23	21-Feb-24	22-Feb-24	175	
Sky Deck Pile Caps Construction		44	44		23-Oct-23	06-Dec-23	23-Feb-24	06-Apr-24	123	
09-2730(M62)	Excavation to Pile Cap Formation	21	21	0%	23-Oct-23	13-Nov-23	23-Feb-24	14-Mar-24	123	
09-2740(M62)	Pile Cut-off & Capping Plate (2 Welders @ 2nr/d)	7	7	0%	13-Nov-23	20-Nov-23	17-Mar-24	23-Mar-24	125	
09-2750(M62)	Pile Caps Construction	30	30	0%	06-Nov-23	06-Dec-23	08-Mar-24	06-Apr-24	123	
Process Building - Waste Bunker & Tipping Hall Bld Foundation		116	37		15-Jun-23 A	06-Oct-23	31-May-23	22-May-24	229	
Process Building Pile Cap Construction		116	37		15-Jun-23 A	06-Oct-23	31-May-23	22-May-24	229	
Pile Cap Stage 1 (Module 1)		23	1		15-Jun-23 A	01-Sep-23	10-May-24	11-May-24	254	
Process Building (Module 1) Tipping Hall		23	1		15-Jun-23 A	01-Sep-23	10-May-24	11-May-24	254	
09-1200	Pile Caps Construction (26nrs 8set @ 1/7d)	23	1	95%	15-Jun-23 A	01-Sep-23	10-May-24	11-May-24	254	
Pile Cap Stage 2 (Module 2)		92	22		15-Jun-23 A	22-Sep-23	30-Apr-24	22-May-24	243	
Process Building (Module 2) Tipping Hall		92	22		15-Jun-23 A	22-Sep-23	30-Apr-24	22-May-24	243	
09-1210	Excavation to Pile Cap Formation	25	1	95%	15-Jun-23 A	01-Sep-23	30-Apr-24	01-May-24	243	

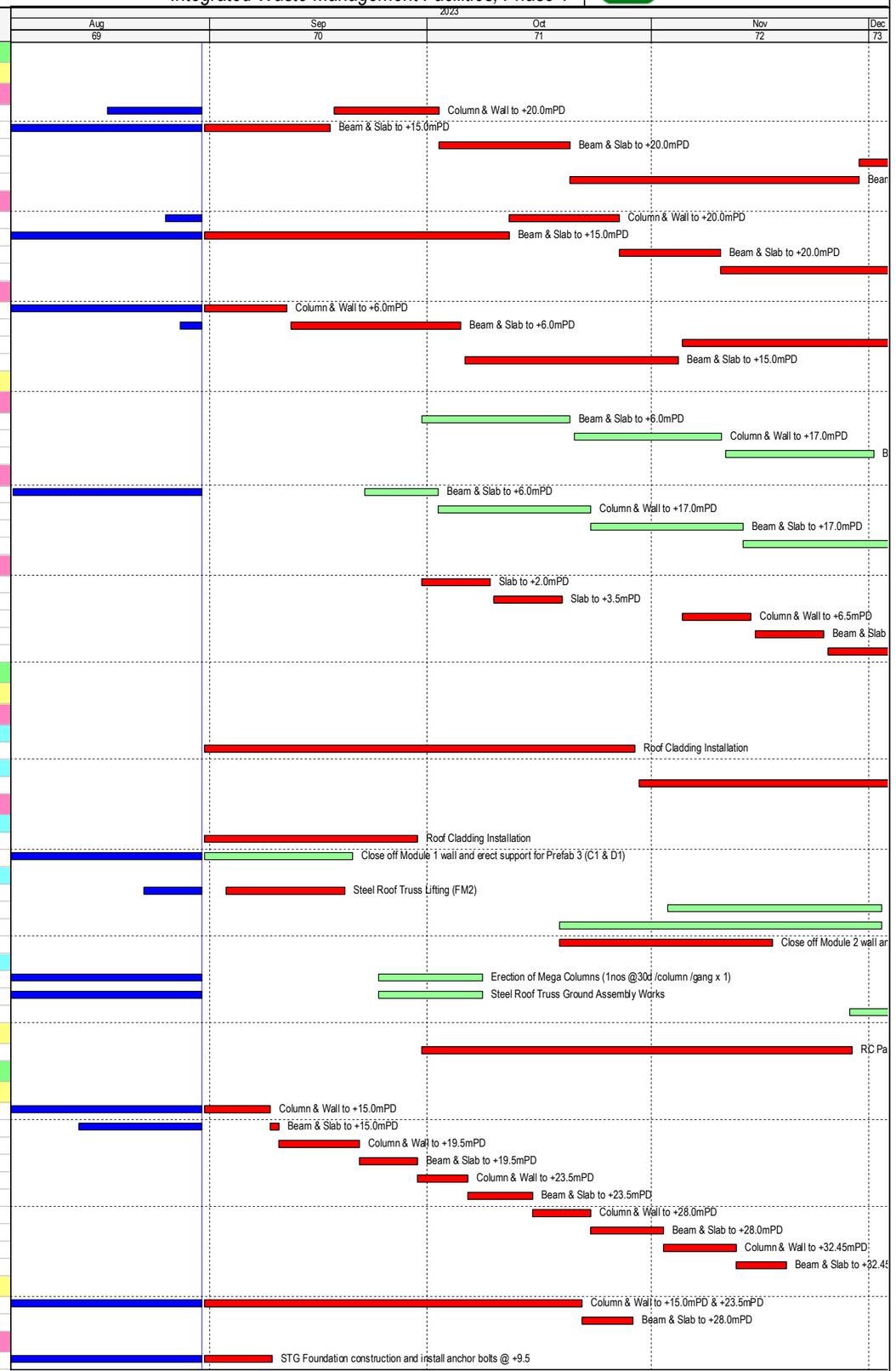
Actual Work | Remaining Work | Critical Remaining Work | Milestone | Actrual Milestone | Critical Milestone

Activity ID	Activity Name	Original Duration	Remaining Duration	Activity % Complete	Current Start	Current Finish	Late Start	Late Finish	Total Float	M69 Remarks
09-1230	Pile Caps Construction (22nrs 8set @ 1/7d)	20	2	90%	22-Jun-23 A	08-Sep-23	06-May-24	08-May-24	243	
09-2370	Excavation to Pile Raft Foundation Formation	28	14	50%	05-Aug-23 A	22-Sep-23	08-May-24	22-May-24	243	Update Actual Start Date
Pile Cap Stage 3 (Module 3)		85	37		03-Jul-23 A	06-Oct-23	31-May-23	17-Jul-23	-82	
Process Building (Module 3) WWTP		85	37		03-Jul-23 A	06-Oct-23	31-May-23	17-Jul-23	-82	
09-1240	Excavation to Pile Raft Foundation Formation	25	13	50%	03-Jul-23 A	12-Sep-23	31-May-23	12-Jun-23	-92	
09-1250	Pile Cut-off & Capping Plate (168 nrs, 10nr/d)	74	37	50%	06-Jul-23 A	06-Oct-23	10-Jun-23	17-Jul-23	-82	
09-1260	Pile Caps and Raft Foundation Construction (60m x 24m 4set@100m2/7day)	26	20	25%	05-Aug-23 A	29-Sep-23	10-Jun-23	29-Jun-23	-92	
ACC Equipment Foundation		135	104		02-Jul-23 A	12-Dec-23	31-Jul-23	02-Oct-23	-71	
ACC Pile Cap Construction		135	104		02-Jul-23 A	12-Dec-23	31-Jul-23	28-Sep-23	-75	
09-1710	Pile Caps Construction (Module 1)	30	10	65.91%	02-Jul-23 A	10-Sep-23	23-Aug-23	02-Sep-23	-7	
09-1710-1(6)	Tie Beams Construction (Module 1 @+6.5mPD)	30	10	65.91%	02-Jul-23 A	10-Sep-23	23-Aug-23	02-Sep-23	-7	
09-1710-1(M58)	Excavation to Pile Caps formation and construction (Module 2 & 3)	30	30	0%	14-Oct-23	12-Nov-23	31-Jul-23	29-Aug-23	-75	
09-1710-2(M58)	Tie Beams & Slab Construction (Module 2 & 3 @+6.5mPD)	30	30	0%	13-Nov-23	12-Dec-23	30-Aug-23	28-Sep-23	-75	
ACC Equipment Structure		30	30		10-Sep-23	10-Oct-23	03-Sep-23	02-Oct-23	-7	
09-1720	Base Slab Construction (Module 1 @+6.5mPD)	30	30	0%	10-Sep-23	10-Oct-23	03-Sep-23	02-Oct-23	-7	
Turbine Hall Bld Foundation		70	70		31-Aug-23	08-Nov-23	15-Jun-23	21-Aug-23	-79	
Turbine Hall Pile Caps Construction		70	70		31-Aug-23	08-Nov-23	15-Jun-23	21-Aug-23	-79	
Electrical Bld & TBS1		14	14		31-Aug-23	13-Sep-23	08-Aug-23	21-Aug-23	-23	
09-1770-1(M58)	Install anchor bolts & Floor Finishes for TBS1 @+6.3mPD (Post-drilling)	14	14	0%	31-Aug-23	13-Sep-23	08-Aug-23	21-Aug-23	-23	
TBS2 & 3		26	26		14-Oct-23	08-Nov-23	15-Jun-23	10-Jul-23	-121	
09-1770-2(6G)	Pile Cut-off & Capping Plate (121 nrs, @10nr/d)	12	12	0%	14-Oct-23	25-Oct-23	15-Jun-23	26-Jun-23	-121	
09-1770-3(M62)	Excavation & construction of 4.2x5.5m pit for TBS2&3 @2mPD	21	21	0%	14-Oct-23	03-Nov-23	15-Jun-23	05-Jul-23	-121	
09-1780	Pile Caps Construction	14	14	0%	26-Oct-23	08-Nov-23	27-Jun-23	10-Jul-23	-121	
Mechanical Treatment Plant & Water Treatment Plant Bld Foundation		357	114		23-Dec-22 A	22-Dec-23	25-Aug-23	16-Dec-23	-6	
Mechanical Treatment Plant & Water Treatment Plant Piling Works		253	6		23-Dec-22 A	05-Sep-23	25-Aug-23	25-Oct-23	50	
Mechanical Treatment Plant & Water Treatment Plant (Driven H-pile)		253	6		23-Dec-22 A	05-Sep-23	25-Aug-23	25-Oct-23	50	
09-1870	Driven H Pile Installations (208 nrs ~45m(D), @60m/d 1 Group)	156	2	99%	08-Jan-23 A	01-Sep-23	16-Oct-23	17-Oct-23	46	
09-1870-1(M54)	Driven H Pile Installations (174 nrs ~45m(D), @60m/d 1 Group)	131	1	99%	23-Dec-22 A	01-Sep-23	25-Aug-23	26-Aug-23	-6	
09-1880	Pile Load Test	8	4	50%	21-Feb-23 A	05-Sep-23	22-Oct-23	25-Oct-23	50	Update Actual Start Date
Mechanical Treatment Plant & Water Treatment Plant Bld Pile Cap Construction		84	84		30-Sep-23	22-Dec-23	24-Sep-23	16-Dec-23	-6	
Mechanical Treatment Plant Pile Cap Construction		70	70		30-Sep-23	08-Dec-23	01-Oct-23	09-Dec-23	1	
09-1920	Excavation to Pile Cap Formation	25	25	0%	30-Sep-23	24-Oct-23	01-Oct-23	25-Oct-23	1	
09-1930	Pile Cut-off & Capping Plate (410nrs, @20/d)	21	21	0%	07-Oct-23	27-Oct-23	08-Oct-23	28-Oct-23	1	
09-1940	Pile Caps Construction	60	60	0%	10-Oct-23	08-Dec-23	11-Oct-23	09-Dec-23	1	
Water Treatment Plant Pile Cap Construction		84	84		30-Sep-23	22-Dec-23	24-Sep-23	16-Dec-23	-6	
09-1950	Excavation to Pile Cap Formation	28	28	0%	30-Sep-23	27-Oct-23	24-Sep-23	21-Oct-23	-6	
09-1960	Pile Cut-off & Capping Plate	14	14	0%	17-Oct-23	30-Oct-23	11-Oct-23	24-Oct-23	-6	
09-1970	Pile Caps Construction	60	60	0%	24-Oct-23	22-Dec-23	18-Oct-23	16-Dec-23	-6	
IWMF Substation Building Foundation		60	15		29-Jul-23 A	14-Sep-23	17-Dec-23	31-Dec-23	108	
IWMF Substation Pile Cap Construction		60	15		29-Jul-23 A	14-Sep-23	17-Dec-23	31-Dec-23	108	
09-2030(6G)	Excavation and construction of Utility Trench	60	15	75%	29-Jul-23 A	14-Sep-23	17-Dec-23	31-Dec-23	108	Update Actual Start Date
Elevated Drive Way and Associated Structures Foundation		171	79		15-May-23 A	17-Nov-23	11-May-23	16-Sep-23	-62	
Elevated Drive Way Piling Works (Driven H-pile)		128	36		15-May-23 A	05-Oct-23	11-May-23	27-Aug-23	-39	
09-2030(M57)	Driven H Pile Installations Grid RSA - RSG (248nrs ~50m(D), @60m/d 4 Groups)	52	3	94%	15-May-23 A	03-Sep-23	25-Jul-23	28-Jul-23	-36	
09-2030-2(M45)	Driven H Pile Installations Grid RSY - RSAF (74nrs ~55m(D), @60m/d 2 Groups)	34	28	18%	30-Aug-23 A	27-Sep-23	11-May-23	07-Jun-23	-112	Update Actual Start Date
09-2040(M57)	Pile Load Test	8	8	0%	27-Sep-23	05-Oct-23	20-Aug-23	27-Aug-23	-39	
Elevated Drive Way Pile Cap Construction		73	73		05-Sep-23	17-Nov-23	08-Jun-23	16-Sep-23	-62	
Elevated Drive Way RSA to RSG		50	50		05-Sep-23	25-Oct-23	29-Jul-23	16-Sep-23	-39	
09-2050(M57)	Excavation to Pile Cap Formation	30	30	0%	05-Sep-23	05-Oct-23	29-Jul-23	27-Aug-23	-39	
09-2060(M57)	Pile Cut-off & Capping Plate	30	30	0%	18-Sep-23	18-Oct-23	11-Aug-23	09-Sep-23	-39	
09-2070(M57)	Pile Caps Construction	21	21	0%	04-Oct-23	25-Oct-23	27-Aug-23	16-Sep-23	-39	
Elevated Drive Way RSU to RSAF		51	51		27-Sep-23	17-Nov-23	08-Jun-23	28-Jul-23	-112	
09-2710(M57)	Excavation to Pile Cap Formation	30	30	0%	27-Sep-23	27-Oct-23	08-Jun-23	07-Jul-23	-112	
09-2720(M57)	Pile Cut-off & Capping Plate	30	30	0%	11-Oct-23	10-Nov-23	22-Jun-23	21-Jul-23	-112	
09-2730(M57)	Pile Caps Construction	21	21	0%	27-Oct-23	17-Nov-23	08-Jul-23	28-Jul-23	-112	
Reception Pavilion Foundation		75	75		30-Sep-23	13-Dec-23	22-Oct-23	04-Jan-24	22	
09-2100	Formation, Compaction & Raft Foundation Construction	75	75	0%	30-Sep-23	13-Dec-23	22-Oct-23	04-Jan-24	22	
Pipe Bridge Foundation		43	96		02-Jun-23 A	04-Dec-23	28-Sep-23	23-Oct-23	-42	
Pipe Bridge B		24	6		23-Aug-23 A	05-Sep-23	29-Sep-23	04-Oct-23	29	
Pipe Bridge B Pile Caps Construction		24	6		23-Aug-23 A	05-Sep-23	29-Sep-23	04-Oct-23	29	
09-2490-1(M58)	Concrete Plinth construction & install anchor bolts to +6.7mPD (16nrs)	24	6	75%	23-Aug-23 A	05-Sep-23	29-Sep-23	04-Oct-23	29	Update Actual Start Date
Pipe Bridge C		35	26		02-Jun-23 A	04-Dec-23	28-Sep-23	23-Oct-23	-42	
Pipe Bridge C Pile Caps Construction		35	26		02-Jun-23 A	04-Dec-23	28-Sep-23	23-Oct-23	-42	
09-2520	Excavation to Pile Cap Formation	21	10	52.38%	02-Jun-23 A	18-Nov-23	28-Sep-23	07-Oct-23	-42	
09-2530	Pile Cut-off & Capping Plate (20 nrs, @ 4nr/d)	5	2	52.37%	03-Jun-23 A	21-Nov-23	08-Oct-23	10-Oct-23	-42	
09-2540	Pile Caps Construction and install anchor bolts (20 nr, 4set @ 1nr/7d)	21	13	40%	05-Jun-23 A	04-Dec-23	11-Oct-23	23-Oct-23	-42	
Heavy Load Access		50	50		12-Nov-23	31-Dec-23	04-Jul-23	22-Aug-23	-131	
Demolition		50	50		12-Nov-23	31-Dec-23	04-Jul-23	22-Aug-23	-131	
09-3030(6D)	Removal of Sub Base & Road Base & Foundation Works (Stage 2)	50	50	0%	12-Nov-23	31-Dec-23	04-Jul-23	22-Aug-23	-131	
Superstructure Works		231	139		17-Apr-23 A	16-Jan-24	04-May-23	03-Aug-24	200	



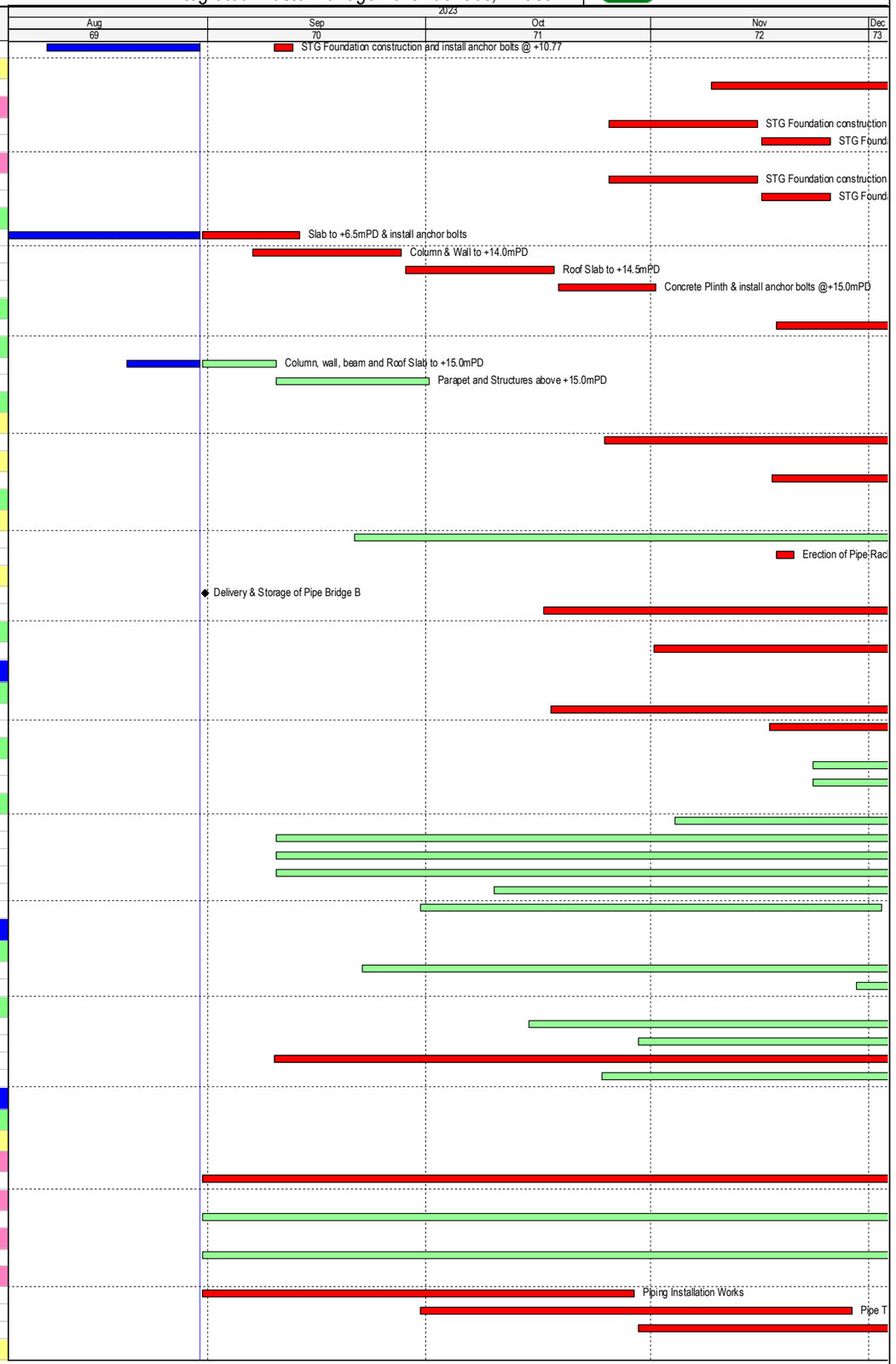
Actual Work | Critical Remaining Work | Actrual Milestone
Remaining Work | Milestone | Critical Milestone

Activity ID	Activity Name	Original Duration	Remaining Duration	Activity % Complete	Current Start	Current Finish	Late Start	Late Finish	Total Float	M69 Remarks
Process Building - Waste Bunker & Tipping Hall Bld Structure		154	106		02-Jun-23 A	14-Dec-23	04-May-23	03-Aug-24	233	
Waste & Ash Bunker Bld Structure		154	106		02-Jun-23 A	14-Dec-23	04-May-23	22-Nov-23	-22	
Process Building (Module 1) Waste & Ash Bunker Bld Structure		138	106		02-Jun-23 A	14-Dec-23	04-May-23	17-Aug-23	-119	
10-1120	Column & Wall to +20.0mPD	23	15	35%	18-Aug-23 A	02-Oct-23	22-May-23	05-Jun-23	-119	Update Actual Start Date
10-1130	Beam & Slab to +15.0mPD	30	18	40%	02-Jun-23 A	17-Sep-23	04-May-23	22-May-23	-119	
10-1140	Beam & Slab to +20.0mPD	18	18	0%	02-Oct-23	20-Oct-23	06-Jun-23	23-Jun-23	-119	
10-1150	Column & Wall to +33.0mPD	15	15	0%	29-Nov-23	14-Dec-23	03-Aug-23	17-Aug-23	-119	
10-1160	Beam & Slab to +28.0mPD	40	40	0%	20-Oct-23	29-Nov-23	24-Jun-23	02-Aug-23	-119	
Process Building (Module 2) Waste & Ash Bunker Bld Structure		100	100		15-Jul-23 A	08-Dec-23	22-May-23	29-Aug-23	-101	
10-1230	Column & Wall to +20.0mPD	17	15	10%	26-Aug-23 A	27-Oct-23	03-Jul-23	18-Jul-23	-101	Update Actual Start Date
10-1240	Beam & Slab to +15.0mPD	47	42	10%	15-Jul-23 A	12-Oct-23	22-May-23	03-Jul-23	-101	Update Actual Start Date
10-1250	Beam & Slab to +20.0mPD	14	14	0%	27-Oct-23	10-Nov-23	19-Jul-23	01-Aug-23	-101	
10-1270	Beam & Slab to +28.0mPD	28	28	0%	10-Nov-23	08-Dec-23	02-Aug-23	29-Aug-23	-101	
Process Building (Module 3) Waste & Ash Bunker Bld Structure		144	96		07-Jun-23 A	04-Dec-23	15-May-23	22-Nov-23	-12	
10-1320	Column & Wall to +6.0mPD	40	12	70%	07-Jun-23 A	11-Sep-23	15-May-23	26-May-23	-108	
10-1330	Beam & Slab to +6.0mPD	30	24	20%	28-Aug-23 A	05-Oct-23	27-May-23	19-Jun-23	-108	Update Actual Start Date
10-1340	Column & Wall to +20.0mPD	30	30	0%	05-Nov-23	04-Dec-23	24-Oct-23	22-Nov-23	-12	
10-1350	Beam & Slab to +15.0mPD	30	30	0%	06-Oct-23	04-Nov-23	24-Sep-23	23-Oct-23	-12	
Tipping Hall Bld Structure		74	75		05-Aug-23 A	05-Dec-23	30-Jun-23	03-Aug-24	242	
Process Building (Module 1) Tipping Hall Bld Structure		63	63		30-Sep-23	01-Dec-23	12-May-24	13-Jul-24	225	
10-1430	Beam & Slab to +6.0mPD	21	21	0%	30-Sep-23	20-Oct-23*	12-May-24	01-Jun-24	225	
10-1440	Column & Wall to +17.0mPD	21	21	0%	21-Oct-23	10-Nov-23	02-Jun-24	22-Jun-24	225	
10-1450	Beam & Slab to +17.0mPD	21	21	0%	11-Nov-23	01-Dec-23	23-Jun-24	13-Jul-24	225	
Process Building (Module 2)Tipping Hall Bld Structure		73	74		05-Aug-23 A	04-Dec-23	22-May-24	03-Aug-24	243	
10-1480	Beam & Slab to +6.0mPD	21	11	50%	05-Aug-23 A	02-Oct-23	22-May-24	01-Jun-24	243	Update Actual Start Date
10-1490	Column & Wall to +17.0mPD	21	21	0%	02-Oct-23	23-Oct-23	02-Jun-24	22-Jun-24	243	
10-1500	Beam & Slab to +17.0mPD	21	21	0%	23-Oct-23	13-Nov-23	23-Jun-24	13-Jul-24	243	
10-1510	Column & Wall to +25.7mPD	21	21	0%	13-Nov-23	04-Dec-23	14-Jul-24	03-Aug-24	243	
Process Building (Module 3) WWTP Structure		67	67		30-Sep-23	05-Dec-23	30-Jun-23	19-Aug-23	-108	
10-3000(6F)	Slab to +2.0mPD	10	10	0%	30-Sep-23	09-Oct-23	30-Jun-23	09-Jul-23	-92	
10-3010(6F)	Slab to +3.5mPD	10	10	0%	10-Oct-23	19-Oct-23	10-Jul-23	19-Jul-23	-92	
10-3020(6F)	Column & Wall to +6.5mPD	10	10	0%	05-Nov-23	14-Nov-23	20-Jul-23	29-Jul-23	-108	
10-3030(6F)	Beam & Slab to +6.5mPD	10	10	0%	15-Nov-23	24-Nov-23	30-Jul-23	08-Aug-23	-108	
10-3060(6F)	Column & Wall to +10.0 & 12.5mPD	11	11	0%	25-Nov-23	05-Dec-23	09-Aug-23	19-Aug-23	-108	
Process Building - Boiler & Flue Gas Treatment Bld Structure		158	120		17-Apr-23 A	28-Dec-23	01-Jun-23	29-Mar-24	92	
Steel Structure		158	120		17-Apr-23 A	28-Dec-23	01-Jun-23	29-Mar-24	92	
Boiler Building Steel Structure		120	120		31-Aug-23	28-Dec-23	04-Jul-23	31-Oct-23	-58	
Process Building (Module 2) Steel Structure Erection		60	60		31-Aug-23	29-Oct-23	04-Jul-23	01-Sep-23	-58	
10-1680	Roof Cladding Installation	60	60	0%	31-Aug-23	29-Oct-23	04-Jul-23	01-Sep-23	-58	
Process Building (Module 3) Process Building Steel Structure Erection		60	60		30-Oct-23	28-Dec-23	02-Sep-23	31-Oct-23	-58	
10-1720	Roof Cladding Installation	60	60	0%	30-Oct-23	28-Dec-23	02-Sep-23	31-Oct-23	-58	
Flue Gas Treatment Bld Steel Structure		154	116		17-Apr-23 A	24-Dec-23	01-Jun-23	29-Mar-24	96	
Process Building (Module 1) Steel Structure Erection		30	30		31-May-23 A	29-Sep-23	03-Aug-23	22-Sep-23	-7	
10-1760	Roof Cladding Installation	30	30	0%	31-Aug-23	29-Sep-23	03-Aug-23	01-Sep-23	-28	
10-1880_1(M68)	Close off Module 1 wall and erect support for Prefab 3 (C1 & D1)	21	21	0%	31-May-23 A	20-Sep-23	01-Sep-23	22-Sep-23	2	
Process Building (Module 2) Steel Structure Erection		45	91		23-Aug-23 A	02-Dec-23	01-Jun-23	29-Mar-24	118	
10-1790	Steel Roof Truss Lifting (FM2)	14	17	0%	23-Aug-23 A	19-Sep-23	01-Jun-23	17-Jun-23	-94	Update Actual Start Date
10-1800	Roof Cladding Installation	30	30	0%	03-Nov-23	02-Dec-23	29-Feb-24	29-Mar-24	118	
10-1890	Facade Structural Frame Installation at Module 2	45	45	0%	19-Oct-23	02-Dec-23	14-Feb-24	29-Mar-24	118	
10-1890_1(M68)	Close off Module 2 wall and erect support for Prefab 3 (C2)	30	30	0%	19-Oct-23	17-Nov-23	01-Jun-23	30-Jun-23	-140	Update OD
Process Building (Module 3) Steel Structure Erection		154	92		17-Apr-23 A	24-Dec-23	15-Nov-23	26-Dec-23	2	
10-1810	Erection of Mega Columns (1nos @30d /column /gang x 1)	30	15	50%	17-Apr-23 A	08-Oct-23	15-Nov-23	29-Nov-23	52	
10-1820	Steel Roof Truss Ground Assembly Works	30	15	50%	17-Apr-23 A	08-Oct-23	15-Nov-23	29-Nov-23	52	
10-1830	Steel Roof Truss Lifting (FM3)	27	27	0%	28-Nov-23	24-Dec-23	30-Nov-23	26-Dec-23	2	
Process Building Internal Partition Wall and Staircase		60	60		30-Sep-23	28-Nov-23	02-Sep-23	31-Oct-23	-28	
10-1850	RC Partition and Staircase at Module 1	60	60	0%	30-Sep-23	28-Nov-23	02-Sep-23	31-Oct-23	-28	
Turbine Hall Bld Structure		192	100		26-May-23 A	08-Dec-23	24-Jun-23	13-Nov-23	-25	
Turbine Hall Electrical Bld		143	81		12-Jun-23 A	19-Nov-23	28-Jul-23	26-Oct-23	-24	
10-1920	Column & Wall to +15.0mPD	93	9	90%	12-Jun-23 A	09-Sep-23	28-Jul-23	06-Aug-23	-34	
10-1930	Beam & Slab to +15.0mPD	16	2	90%	14-Aug-23 A	10-Sep-23	06-Aug-23	07-Aug-23	-34	Update Actual Start Date
10-1940	Column & Wall to +19.5mPD	11	11	0%	10-Sep-23	21-Sep-23	08-Aug-23	18-Aug-23	-34	
10-1950	Beam & Slab to +19.5mPD	8	8	0%	21-Sep-23	29-Sep-23	19-Aug-23	26-Aug-23	-34	
10-1960	Column & Wall to +23.5mPD	7	7	0%	29-Sep-23	06-Oct-23	27-Aug-23	02-Sep-23	-34	
10-1970	Beam & Slab to +23.5mPD	9	9	0%	06-Oct-23	15-Oct-23	03-Sep-23	11-Sep-23	-34	
10-1980	Column & Wall to +28.0mPD	8	8	0%	15-Oct-23	23-Oct-23	17-Sep-23	24-Sep-23	-29	
10-1990	Beam & Slab to +28.0mPD	10	10	0%	23-Oct-23	02-Nov-23	25-Sep-23	04-Oct-23	-29	
10-2070(M64)	Column & Wall to +32.45mPD	10	10	0%	02-Nov-23	12-Nov-23	10-Oct-23	19-Oct-23	-24	
10-2080(M64)	Beam & Slab to +32.45mPD	7	7	0%	12-Nov-23	19-Nov-23	20-Oct-23	26-Oct-23	-24	
Turbine Hall TBS1		151	59		26-May-23 A	29-Oct-23	24-Jun-23	22-Aug-23	-67	
10-2310	Column & Wall to +15.0mPD & +23.5mPD	131	52	60%	26-May-23 A	22-Oct-23	24-Jun-23	15-Aug-23	-67	
10-2320	Beam & Slab to +28.0mPD	7	7	0%	22-Oct-23	29-Oct-23	16-Aug-23	22-Aug-23	-67	
STG Foundation (PC1)		42	13		25-Jul-23 A	12-Sep-23	05-Aug-23	17-Aug-23	-26	
10-1990-1(M58)	STG Foundation construction and install anchor bolts @ +9.5	7	10	95%	25-Jul-23 A	09-Sep-23	05-Aug-23	14-Aug-23	-26	



Actual Work | Remaining Work | Critical Remaining Work | Milestone | Actrual Milestone | Critical Milestone

Activity ID	Activity Name	Original Duration	Remaining Duration	Activity % Complete	Current Start	Current Finish	Late Start	Late Finish	Total Float	M69 Remarks
10-1990-2(M58)	STG Foundation construction and install anchor bolts @ +10.77	3	3	95%	10-Aug-23 A	12-Sep-23	15-Aug-23	17-Aug-23	-26	Update Actual Start Date
Turbine Hall TBS2 & 3		44	44		26-Oct-23	08-Dec-23	11-Jul-23	13-Nov-23	-25	
10-2000	Ground Beam and Slab to +6.0mPD and install anchor bolts & Floor Finishes for TBS2 & 3 @ +6.3mPD	30	30	0%	09-Nov-23	08-Dec-23	11-Jul-23	09-Aug-23	-121	
STG Foundation (PC2)		31	31		26-Oct-23	25-Nov-23	04-Sep-23	04-Oct-23	-52	
10-1990-3(M58)	STG Foundation construction and install anchor bolts @ +9.5	21	21	0%	26-Oct-23	15-Nov-23	04-Sep-23	24-Sep-23	-52	
10-1990-4(M58)	STG Foundation construction and install anchor bolts @ +10.77	10	10	0%	16-Nov-23	25-Nov-23	25-Sep-23	04-Oct-23	-52	
STG Foundation (PC3)		31	31		26-Oct-23	25-Nov-23	14-Oct-23	13-Nov-23	-12	
10-1990-5(M58)	STG Foundation construction and install anchor bolts @ +9.5	21	21	0%	26-Oct-23	15-Nov-23	14-Oct-23	03-Nov-23	-12	
10-1990-6(M58)	STG Foundation construction and install anchor bolts @ +10.77	10	10	0%	16-Nov-23	25-Nov-23	04-Nov-23	13-Nov-23	-12	
Compressor & CCCW Bld Structure		79	63		11-Jun-23 A	01-Nov-23	11-Jun-23	12-Aug-23	-81	
10-2030	Slab to +6.5mPD & install anchor bolts	21	14	33.33%	11-Jun-23 A	13-Sep-23	11-Jun-23	24-Jun-23	-81	
10-2040	Column & Wall to +14.0mPD	21	21	0%	07-Sep-23	27-Sep-23	18-Jun-23	08-Jul-23	-81	
10-2050	Roof Slab to +14.5mPD	21	21	0%	28-Sep-23	18-Oct-23	09-Jul-23	29-Jul-23	-81	
10-2210	Concrete Plinth & install anchor bolts @+15.0mPD	14	14	0%	19-Oct-23	01-Nov-23	30-Jul-23	12-Aug-23	-81	
Chimney Structure		60	60		18-Nov-23	16-Jan-24	04-Jul-23	01-Sep-23	-137	
10-2059	Excavation to Formation Level and Install Tower Crane	60	60	0%	18-Nov-23	16-Jan-24	04-Jul-23	01-Sep-23	-137	
IWMF Substation Structure		32	32		21-Aug-23 A	01-Oct-23	20-Sep-23	30-Oct-23	30	
10-2190	Column, wall, beam and Roof Slab to +15.0mPD	21	11	50%	21-Aug-23 A	10-Sep-23	20-Sep-23	30-Sep-23	21	
10-2200	Parapet and Structures above +15.0mPD	21	21	0%	10-Sep-23	01-Oct-23	10-Oct-23	30-Oct-23	30	
Elevated Drive Way and Associated Structures		68	68		25-Oct-23	01-Jan-24	29-Jul-23	31-Oct-23	-62	
Elevated Drive Way RSA to RSG (42.8m)		45	45		25-Oct-23	09-Dec-23	17-Sep-23	31-Oct-23	-39	
10-2210(M57)	G/F Base Slab	45	45	0%	25-Oct-23	09-Dec-23	17-Sep-23	31-Oct-23	-39	
Elevated Drive Way RSU to RSAF (99m)		45	45		17-Nov-23	01-Jan-24	29-Jul-23	11-Sep-23	-112	
10-2360(M57)	G/F Base Slab	45	45	0%	17-Nov-23	01-Jan-24	29-Jul-23	11-Sep-23	-112	
Pipebridge Structure		136	136		31-Aug-23	14-Jan-24	01-Jul-23	14-Feb-24	31	
Pipe Rack		90	90		21-Sep-23	19-Dec-23	01-Jul-23	14-Feb-24	57	
10-2320(6)	Erection of Pipe Rack 1 (Pipe Rack C1 & D1 to CCCW)	90	90	0%	21-Sep-23	19-Dec-23	17-Nov-23	14-Feb-24	57	
10-2330(6)	Erection of Pipe Rack 2 (Pipe Rack C2)	3	3	0%	18-Nov-23	20-Nov-23	01-Jul-23	03-Jul-23	-140	Update OD
Pipe Bridge B		136	136		31-Aug-23	14-Jan-24	31-Aug-23	02-Jan-24	-12	
10-2290(6F)	Delivery & Storage of Pipe Bridge B	0	0	0%		31-Aug-23*		31-Aug-23	0	
10-2300(6)	Erection of Pipe Bridge B Between CCCW and Turbine Hall	90	90	0%	17-Oct-23	14-Jan-24	05-Oct-23	02-Jan-24	-12	
ACC Yard		45	45		01-Nov-23	16-Dec-23	17-Oct-23	30-Nov-23	-15	
13-2000	Delivery and Erection of ACC Steel Structure & Steel Structure Support of Condensate Tank (Module 1)	45	45	0%	01-Nov-23	16-Dec-23	17-Oct-23	30-Nov-23	-15	
Architectural Builders Works & Finishes		288	288		10-Sep-23	23-Jun-24	03-Oct-23	29-Jan-25	220	
Process Building - Waste Bunker & Tipping Hall Bld ABWF Works		250	250		18-Oct-23	23-Jun-24	18-Oct-23	23-Jun-24	0	
11-1060	Door, Roller Shutter, Windows and Louvers Installation	250	250	0%	18-Oct-23	23-Jun-24	18-Oct-23	23-Jun-24	0	
11-1080	Internal Wall and Floor Finishes	180	180	0%	17-Nov-23	14-May-24	17-Nov-23	14-May-24	0	
Process Building - Boiler & Flue Gas Bld ABWF Works		200	200		23-Nov-23	09-Jun-24	08-Apr-24	24-Oct-24	137	
11-1120	Metal Railings, Staircase, Platforms & Gratings Installations	200	200	0%	23-Nov-23	09-Jun-24	08-Apr-24	24-Oct-24	137	
11-1130	Internal Wall and Floor Finishes	200	200	0%	23-Nov-23	09-Jun-24	08-Apr-24	24-Oct-24	137	
IWMF Substation ABWF Works		145	145		10-Sep-23	01-Feb-24	03-Oct-23	29-Jan-25	363	
11-1340	Door, Roller Shutter, Windows and Louvers Installation	90	90	0%	04-Nov-23	01-Feb-24	01-Nov-24	29-Jan-25	363	
11-1350	Metal Railings, Platforms, Gratings, Cable trench covers Installations	90	90	0%	10-Sep-23	09-Dec-23	03-Oct-23	31-Dec-23	23	
11-1360	Internal Wall and Floor Finishes	90	90	0%	10-Sep-23	09-Dec-23	03-Oct-23	31-Dec-23	23	
11-1370	False ceiling and Raise Floor installation	90	90	0%	10-Sep-23	09-Dec-23	03-Oct-23	31-Dec-23	23	
11-1380	External Finishes and Roof Waterproofing	86	86	0%	10-Oct-23	04-Jan-24	31-Oct-23	24-Jan-24	21	
11-1560-1(M63)	Facade Structural Frame Installation	64	64	0%	30-Sep-23	02-Dec-23	16-Apr-24	18-Jun-24	199	
Building Services Installation		260	260		10-Sep-23	26-May-24	18-Aug-23	25-Dec-24	213	
Process Building - Waste Bunker & Tipping Hall Bld BS Works		248	248		22-Sep-23	26-May-24	14-Feb-24	25-Dec-24	213	
12-1080	Fire Service System	180	180	0%	22-Sep-23	19-Mar-24	14-Feb-24	11-Aug-24	145	
12-1100	Security, Surveillance & Communication System	180	180	0%	29-Nov-23	26-May-24	29-Jun-24	25-Dec-24	213	
IWMF Substation BS Works		170	170		10-Sep-23	26-Feb-24	18-Aug-23	25-Dec-24	303	
12-1470	Plumbing & Drainage System	120	120	0%	15-Oct-23	11-Feb-24	28-Aug-24	25-Dec-24	318	
12-1480	MVAC System	120	120	0%	30-Oct-23	26-Feb-24	21-May-24	17-Sep-24	204	
12-1490	Fire Service System	90	90	0%	10-Sep-23	08-Dec-23	18-Aug-23	15-Nov-23	-23	
12-1500	Electrical and Lighting System	120	120	0%	25-Oct-23	21-Feb-24	29-Jul-24	25-Nov-24	278	
Process Equipment Installation		352	290		17-Jun-23 A	15-Jun-24	28-Apr-23	01-Sep-24	78	
Process Building - Waste Bunker & Tipping Hall Bld Process Equipment Installation		290	290		31-Aug-23	15-Jun-24	06-Jun-23	01-Sep-24	78	
Piping and Instrument Installation and Connection Works		180	180		31-Aug-23	26-Feb-24	06-Jun-23	28-May-24	92	
Process Building (Module 1)		180	180		31-Aug-23	26-Feb-24	14-Jul-23	09-Jan-24	-48	
12-3000(6F)	Embedded Piping Installation	180	180	0%	31-Aug-23	26-Feb-24	14-Jul-23	09-Jan-24	-48	
Process Building (Module 2)		180	180		31-Aug-23	26-Feb-24	02-Oct-23	29-Mar-24	32	
12-3040(6F)	Embedded Piping Installation	180	180	0%	31-Aug-23	26-Feb-24	02-Oct-23	29-Mar-24	32	
Process Building (Module 3)		180	180		31-Aug-23	26-Feb-24	01-Dec-23	28-May-24	92	
12-3080(6F)	Embedded Piping Installation	180	180	0%	31-Aug-23	26-Feb-24	01-Dec-23	28-May-24	92	
Process Building (WWTP)		120	120		31-Aug-23	28-Dec-23	06-Jun-23	05-Oct-23	-84	
12-3160(6F)	Piping Installation Works	60	60	0%	31-Aug-23	29-Oct-23	06-Jun-23	04-Aug-23	-86	
12-3170(6F)	Pipe Testing	60	60	0%	30-Sep-23	28-Nov-23	08-Jul-23	05-Sep-23	-84	
12-3180(6F)	Piping Insulation Works	60	60	0%	30-Oct-23	28-Dec-23	07-Aug-23	05-Oct-23	-84	
Process Building (Cranes and Shredder)		263	263		27-Sep-23	15-Jun-24	05-Feb-24	01-Sep-24	78	



Actual Work · Critical Remaining Work · Actrual Milestone
Remaining Work · Milestone · Critical Milestone

Activity ID	Activity Name	Original Duration	Remaining Duration	Activity % Complete	Current Start	Current Finish	Late Start	Late Finish	Total Float	M69 Remarks
13-1000-1(6)	Ash Crane Installation @+15.3mPD	210	210	0%	19-Nov-23	15-Jun-24	05-Feb-24	01-Sep-24	78	
13-1000-6(6B)	EOTC & Monorail Hoist System installation in Ash Crane Control Room (+15.8mPD & +19.9mPD)	210	210	0%	27-Sep-23	23-Apr-24	05-Feb-24	01-Sep-24	131	
Process Building (WWTP)		152	152		31-Aug-23	29-Jan-24	06-Jun-23	04-Nov-23	-86	
13-1010-1(6)	WWTP Piping and instrument installation	145	145	0%	31-Aug-23	22-Jan-24	06-Jun-23	28-Oct-23	-86	
13-1010-2(6)	WWTP Electrical Equipment installation & Cable pulling and termination	145	145	0%	07-Sep-23	29-Jan-24	13-Jun-23	04-Nov-23	-86	
WWTP Mechanical equipment installation		79	79		31-Oct-23	17-Jan-24	23-Aug-23	04-Nov-23	-74	
13-1010-12(M63)	Equipments for Bio-Tank Area @+3.3mPd	60	60	0%	19-Nov-23	17-Jan-24	06-Sep-23	04-Nov-23	-74	
13-1010-13(M63)	Equipments for Centrate Area, Inlet Sump & EQ Tank Area @+2.0mPd	60	60	0%	31-Oct-23	29-Dec-23	23-Aug-23	21-Oct-23	-69	
Process Building (Switch Room)		145	145		14-Nov-23	07-Apr-24	16-Nov-23	08-Apr-24	1	
13-1010-4(6B)	Mechanical equipment installation (Switch Room +28.25mPD)	145	145	0%	14-Nov-23	07-Apr-24	16-Nov-23	08-Apr-24	1	
Process Building - Boiler House & Flue Gas Treatment Bld Process Equipment Installation		253	191		17-Jun-23 A	08-Mar-24	28-Apr-23	28-Feb-24	-9	
Process Building (Installation TPU Module)		253	191		17-Jun-23 A	08-Mar-24	28-Apr-23	16-Dec-23	-84	
TPU Train 1		252	190		17-Jun-23 A	07-Mar-24	05-May-23	10-Nov-23	-118	
13-1035(M63)-2	TPU-1 Welding to Base Plate	20	7	65%	17-Jun-23 A	06-Sep-23	07-Jul-23	13-Jul-23	-55	
13-1040	Boiler Condition Check and Repair	70	70	0%	31-Aug-23	08-Nov-23	05-May-23	13-Jul-23	-118	
13-1050	Remaining Equipment Installation at GL	120	120	0%	07-Sep-23	04-Jan-24	14-Jul-23	10-Nov-23	-55	
13-1090	Boiler Pressure Test	15	15	0%	09-Nov-23	23-Nov-23	14-Jul-23	28-Jul-23	-118	
13-1100	Boiler Refractory works	105	105	0%	24-Nov-23	07-Mar-24	29-Jul-23	10-Nov-23	-118	
TPU Train 2		252	190		17-Jun-23 A	07-Mar-24	05-May-23	10-Nov-23	-118	
13-1125(M63)-2	TPU-2 Welding to Base Plate	20	7	65%	17-Jun-23 A	06-Sep-23	07-Jul-23	13-Jul-23	-55	
13-1130	Boiler Condition Check and Repair	70	70	0%	31-Aug-23	08-Nov-23	05-May-23	13-Jul-23	-118	
13-1140	Remaining Equipment Installation at GL	120	120	0%	07-Sep-23	04-Jan-24	14-Jul-23	10-Nov-23	-55	
13-1180	Boiler Pressure Test	15	15	0%	09-Nov-23	23-Nov-23	14-Jul-23	28-Jul-23	-118	
13-1190	Boiler Refractory works	105	105	0%	24-Nov-23	07-Mar-24	29-Jul-23	10-Nov-23	-118	
TPU Train 3		191	191		31-Aug-23	08-Mar-24	28-Apr-23	16-Dec-23	-84	
13-1215(M63)-2	TPU-3 Welding to Base Plate	20	20	0%	31-Aug-23	19-Sep-23	28-Apr-23	18-May-23	-125	
13-1220	Boiler Condition Check and Repair	71	71	0%	31-Aug-23	09-Nov-23	08-Jun-23	18-Aug-23	-84	
13-1230	Remaining Equipment Installation at GL	121	121	0%	20-Sep-23	18-Jan-24	18-May-23	16-Sep-23	-125	
13-1270	Boiler Pressure Test	15	15	0%	10-Nov-23	24-Nov-23	18-Aug-23	02-Sep-23	-84	
13-1280	Boiler Refractory works	105	105	0%	25-Nov-23	08-Mar-24	02-Sep-23	16-Dec-23	-84	
TPU Train 4		190	190		31-Aug-23	07-Mar-24	30-Apr-23	15-Dec-23	-83	
13-1305 (M63)-2	TPU-4 Welding to Base Plate	20	20	0%	31-Aug-23	19-Sep-23	30-Apr-23	19-May-23	-123	
13-1310	Boiler Condition Check and Repair	70	70	0%	31-Aug-23	08-Nov-23	09-Jun-23	17-Aug-23	-83	
13-1320	Remaining Equipment Installation at GL	120	120	0%	20-Sep-23	17-Jan-24	20-May-23	16-Sep-23	-123	
13-1360	Boiler Pressure Test	15	15	0%	09-Nov-23	23-Nov-23	18-Aug-23	01-Sep-23	-83	
13-1370	Boiler Refractory works	105	105	0%	24-Nov-23	07-Mar-24	02-Sep-23	15-Dec-23	-83	
TPU Train 6		70	70		04-Nov-23	13-Jan-24	25-Jun-23	31-Oct-23	-74	
13-1390	Boiler Final Position by SPMT (TPU Train 6)	0	0	0%		04-Nov-23		25-Jun-23	-132	
13-1395(M63)-1	Removal of Temporary Steel from Prefab from TPU-6	8	8	0%	05-Nov-23	12-Nov-23	03-Jul-23	10-Jul-23	-125	
13-1395(M63)-2	TPU-6 Welding to Base Plate	20	20	0%	13-Nov-23	02-Dec-23	14-Jul-23	02-Aug-23	-122	
13-1400	Boiler Condition Check and Repair	70	70	0%	05-Nov-23	13-Jan-24	23-Aug-23	31-Oct-23	-74	
TPU Train 5		70	70		27-Nov-23	05-Feb-24	10-Jul-23	05-Nov-23	-92	
13-1480	Boiler Final Position by SPMT (TPU Train 5)	0	0	0%		27-Nov-23		10-Jul-23	-140	
13-1485(M63)-1	Removal of Temporary Steel from Prefab from TPU-5	8	8	0%	28-Nov-23	05-Dec-23	11-Jul-23	18-Jul-23	-140	
13-1490	Boiler Condition Check and Repair	70	70	0%	28-Nov-23	05-Feb-24	28-Aug-23	05-Nov-23	-92	
Process Building (Installation of Flue Gas Module)		133	133		31-Aug-23	10-Jan-24	24-May-23	28-Feb-24	49	
FGC Train 1		90	90		31-Aug-23	28-Nov-23	12-Sep-23	10-Dec-23	12	
13-1575(M63)-2	FGC-1 Welding to Base Plate	14	14	0%	31-Aug-23	13-Sep-23	14-Oct-23	27-Oct-23	44	
13-1580	FGC Unit Condition Check and Repair	70	70	0%	31-Aug-23	08-Nov-23	02-Oct-23	10-Dec-23	32	
13-1590	Remaining Equipment Installation at GL	90	90	0%	31-Aug-23	28-Nov-23	12-Sep-23	10-Dec-23	12	
FGC Train 2		90	90		31-Aug-23	28-Nov-23	12-Sep-23	28-Feb-24	92	
13-1645(M63)-2	FGC-2 Welding to Base Plate	14	14	0%	14-Sep-23	27-Sep-23	28-Oct-23	10-Nov-23	44	
13-1650	FGC Unit Condition Check and Repair	70	70	0%	31-Aug-23	08-Nov-23	02-Oct-23	10-Dec-23	32	
13-1655(6A)	Installation 4 nos. of Transformers for Process Module 1	14	14	0%	09-Nov-23	22-Nov-23	15-Feb-24	28-Feb-24	98	
13-1660	Remaining Equipment Installation at GL	90	90	0%	31-Aug-23	28-Nov-23	12-Sep-23	10-Dec-23	12	
FGC Train 3		90	90		11-Oct-23	09-Jan-24	24-May-23	16-Oct-23	-85	
13-1710	Flue Gas Final Position by SPMT (FGC Train 3)	0	0	0%		11-Oct-23		24-May-23	-140	
13-1715(M63)-1	Removal of Temporary Steel from Prefab from FGC-3	7	7	0%	13-Oct-23	19-Oct-23	19-Jun-23	25-Jun-23	-116	
13-1715(M63)-2	FGC-3 Welding to Base Plate	14	14	0%	20-Oct-23	02-Nov-23	06-Aug-23	19-Aug-23	-75	
13-1720	FGC Unit Condition Check and Repair	70	70	0%	12-Oct-23	20-Dec-23	08-Aug-23	16-Oct-23	-65	
13-1730	Remaining Equipment Installation at GL	90	90	0%	12-Oct-23	09-Jan-24	19-Jul-23	16-Oct-23	-85	
FGC Train 4		90	90		12-Oct-23	10-Jan-24	25-May-23	16-Oct-23	-86	
13-1780	Flue Gas Final Position by SPMT (FGC Train 4)	0	0	0%		12-Oct-23		25-May-23	-140	
13-1785(M63)-1	Removal of Temporary Steel from Prefab from FGC-4	7	7	0%	20-Oct-23	26-Oct-23	26-Jun-23	02-Jul-23	-116	
13-1785(M63)-2	FGC-4 Welding to Base Plate	14	14	0%	03-Nov-23	16-Nov-23	20-Aug-23	02-Sep-23	-75	
13-1790	FGC Unit Condition Check and Repair	70	70	0%	13-Oct-23	21-Dec-23	25-Jul-23	02-Oct-23	-80	
13-1800	Remaining Equipment Installation at GL	90	90	0%	13-Oct-23	10-Jan-24	19-Jul-23	16-Oct-23	-86	
Turbine Hall Bld Equipment Installation		140	140		29-Oct-23	17-Mar-24	23-Aug-23	09-Jan-24	-67	
Turbine Hall Module 1 Installation		140	140		29-Oct-23	17-Mar-24	23-Aug-23	09-Jan-24	-67	
13-2120	STG Module 1 Installation	22	22	0%	31-Oct-23	22-Nov-23	25-Aug-23	15-Sep-23	-67	
13-2120-1(11)	TBS Tower 1 Delivery	0	0	0%		31-Oct-23		03-Oct-23	-27	
13-2120-1(6H)	TBS Tower 1 Installation	60	60	0%	01-Nov-23	31-Dec-23	03-Oct-23	02-Dec-23	-28	
13-2150	Turbine Electrical installation Works	120	120	0%	18-Nov-23	17-Mar-24	12-Sep-23	09-Jan-24	-67	

Actual Work | Critical Remaining Work | Actrual Milestone
Remaining Work | Milestone | Critical Milestone

Activity ID	Activity Name	Original Duration	Remaining Duration	Activity % Complete	Current Start	Current Finish	Late Start	Late Finish	Total Float	M69 Remarks
13-2160(6)	Install Maintenance Girder & Crane at Module 1 @+22.247mPd	30	30	0%	29-Oct-23	28-Nov-23	23-Aug-23	21-Sep-23	-67	
Compressor & CCCW Bld Equipment Installation		169	169		31-Aug-23	15-Feb-24	02-Sep-23	29-Jan-24	-17	
Air Compressor Equipment Installation		169	169		31-Aug-23	15-Feb-24	02-Sep-23	29-Jan-24	-17	
13-2320	Air Compressor Rm Equipment installations	90	90	0%	18-Nov-23	15-Feb-24	02-Sep-23	30-Nov-23	-77	
13-2720(M62)	Cable Laying and Termination Works for Air Compressor	90	90	0%	31-Aug-23	28-Nov-23	01-Nov-23	29-Jan-24	62	
IWMF Substation Bld Equipment Installation		194	194		16-Sep-23	27-Mar-24	31-Oct-23	30-Mar-24	3	
13-2440	132kV GIS Switch Gear @+6.5mPD	120	120	0%	29-Nov-23	27-Mar-24	02-Dec-23	30-Mar-24	3	
13-2450	GIS Insulation Switchboard installation	120	120	0%	29-Nov-23	27-Mar-24	02-Dec-23	30-Mar-24	3	
13-2460	Main Switch Board Installation	120	120	0%	29-Nov-23	27-Mar-24	02-Dec-23	30-Mar-24	3	
13-2470	Other Associated Equipment Installation	120	120	0%	25-Oct-23	21-Feb-24	02-Dec-23	30-Mar-24	38	
13-2630(6B)	EOTC Hoist System installation in Substation @+14.1mPD	30	30	0%	16-Sep-23	15-Oct-23	31-Oct-23	29-Nov-23	45	Update OD, Link FS to 15-1005
Equipment Installation at External Area		60	60		30-Oct-23	28-Dec-23	26-Jun-24	24-Aug-24	240	
13-2520	Fuel Oil Reception and Distribution System Installation at Berth Area	60	60	0%	30-Oct-23	28-Dec-23	26-Jun-24	24-Aug-24	240	
External Process Pipe Works		90	90		16-Nov-23	13-Feb-24	11-Nov-23	08-Feb-24	-5	
Process and Non-process Piping Works		90	90		16-Nov-23	13-Feb-24	11-Nov-23	08-Feb-24	-5	
Piping from Module 1 to Turbine Bld		90	90		16-Nov-23	13-Feb-24	11-Nov-23	08-Feb-24	-5	
13-2550	Piping Installation Works	90	90	0%	16-Nov-23	13-Feb-24	11-Nov-23	08-Feb-24	-5	
Landscape, External Road and Drains Works		507	111		28-Apr-22 A	19-Dec-23	03-Aug-23	03-Jun-24	167	
Underground Utilities Works		507	111		28-Apr-22 A	19-Dec-23	03-Aug-23	03-Jun-24	167	
Underground Utility Systems & Cables		90	60		10-May-23 A	29-Oct-23	03-Aug-23	01-Oct-23	-28	
14-1050	Cable Ducting and Landing Jointing bay for CLP Transmission System	90	60	33.33%	10-May-23 A	29-Oct-23*	03-Aug-23	01-Oct-23	-28	
Drainage Works		162	111		15-May-23 A	19-Dec-23	17-Sep-23	03-Jun-24	167	
14-1000-1(M55)	Sewage Transfer System for IWMF Vessels (Caisson 13)	60	60	0%	19-Oct-23	17-Dec-23	05-Apr-24	03-Jun-24	169	
Box Culvert		162	111		15-May-23 A	19-Dec-23	17-Sep-23	03-Jun-24	167	
East Culvert (3.5m x 2.5m x 118m)		139	37		15-May-23 A	29-Oct-23	17-Sep-23	29-Feb-24	123	
14-2010	Construction of Box Culvert (118m, 1.7m/d)	70	7	90%	15-May-23 A	29-Sep-23	17-Sep-23	23-Sep-23	-6	
14-2020	Backfill, Compaction & Testing	65	7	90%	29-Aug-23 A	29-Oct-23	23-Feb-24	29-Feb-24	123	Update Actual Start Date
West Culvert (2.5m x 2.5m x 102m)		111	111		31-Aug-23	19-Dec-23	14-Feb-24	03-Jun-24	167	
14-3000	Excavation to Formation	60	60	0%	31-Aug-23	29-Oct-23	14-Feb-24	13-Apr-24	167	
14-3010	Construction of Box Culvert (102m, 1.7m/d)	60	60	0%	30-Sep-23	28-Nov-23	15-Mar-24	13-May-24	167	
14-3020	Backfill, Compaction & Testing	60	60	0%	21-Oct-23	19-Dec-23	05-Apr-24	03-Jun-24	167	
Earthing System		180	90		28-Apr-22 A	28-Nov-23	29-Feb-24	28-May-24	182	
16-1900-2(6)	Installation of Ground Earthing Mesh	180	90	50%	28-Apr-22 A	28-Nov-23	29-Feb-24	28-May-24	182	
Works By CLP		90	90		29-Oct-23	27-Jan-24	30-Jan-24	29-Apr-24	93	
Installation of Transmission System		90	90		29-Oct-23	27-Jan-24	30-Jan-24	29-Apr-24	93	
15-0900	Completion of Civil Provision for Transmission	0	0	0%		29-Oct-23		30-Jan-24	93	
15-1000	Construction of Transmission System	90	90	0%	30-Oct-23	27-Jan-24	31-Jan-24	29-Apr-24	93	

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

Appendix B Summary of Implementation Status of Environmental Mitigation

Appendix B

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

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

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

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

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

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

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

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

* 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

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
-	<u>Voluntary Enhancement Measure</u> • 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	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		
	design of efficient silt removal facilities should be based on the guidelines in Appendix A1 of ProPECC PN 1/94, which states that the retention time for silt/sand traps should be 5 minutes under maximum flow conditions. 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.								

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		
	• Earthwork final surfaces should be well compacted and subsequent permanent work or surface protection should be immediately performed. • 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	Implemented

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
S5b.8.1.3	There is a need to apply to EPD for a discharge license for discharge of effluent from the construction site under the WPCO. The discharge quality must meet the requirements specified in the discharge license. All the run-off and wastewater generated from the works areas should be treated so that it satisfies all the standards listed in the TM-DSS. The beneficial uses of the treated effluent for other on-site activities such as dust suppression and general cleaning etc., can minimize water consumption and reduce the effluent discharge volume. If monitoring of the treated effluent quality from the works areas is required during the construction phase of the Project, the monitoring should be carried out in accordance with the relevant WPCO license which is under the ambit of regional office of EPD.	Work site / During the construction period	Contractor		✓			EIAO-TM; ProPECC PN 1/94; WPCO	Implemented Discharge License was issued on 15/02/2022
S5b.8.1.4	<u>Accidental Spillage</u> Contractor must register as a chemical waste producer if chemical wastes would be produced from construction activities. The Waste Disposal Ordinance (Cap 354) and its subsidiary regulations in particular the Waste Disposal (Chemical Waste) (General) Regulation should be observed and complied with for control of chemical wastes.	Work site / During the construction period	Contractor		✓			EIAO-TM; ProPECC PN 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

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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S5b.8.1.8	Sewage Effluent Temporary sanitary facilities, such as portable chemical toilets, should be employed on-site where necessary to handle sewage from the workforce. A licensed contractor would be responsible. For appropriate disposal and maintenance of these facilities.	Work site / During the construction period	Contractor		✓			EIAO-TM; ProPECC PN 1/94; WPCO	Implemented
S5b.8.1.9	Reclamation and Construction of Breakwaters • 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	Work site / During the marine construction period	Contractor		✓			EIAO-TM; WPCO, Supporting Document for Application for Variation of Environmental Permit (EP-429/2012) Further Environmental Permit No. FEP-01/429/2012/A	N/A

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				Des	C	O	Dec		
	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 barges passes through the marine access opening in order to minimize the period of curtain opening. Filling should only be carried out behind the silt curtain when the silt curtain is completely closed. • To enhance the effectiveness of the silt curtain at the marine access, the northern breakwater would be built before the commencement of the reclamation to reduce the current velocity towards the marine access opening. • The silt curtain system at marine access opening should be regularly checked and maintained to ensure proper functioning. • Where public fill is proposed for filling below +2.5mPD, the fine content in the public fill will be controlled to 25% which is in line with the CEDD's General Specification; • The filling for reclamation should be carried out behind the seawall. The filling material should only consist of public fill, rock and sand. The filling composition and filling rates at each filling area should follow those delineated in Table 1 of the FEP-01/429/2012/. The filling above high watermark is not restricted;								

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
	• No dredging should be carried out within 16m to the nearest non-translocatable coral community; • Daily site audit including full-time on-site monitoring by the ET is recommended during the dredging for anti-scouring protection layer for checking the compliance with the permitted no. of grab; • Closed grab dredger should be used to minimize the loss of sediment during the raising of the loaded grabs through the water column; • Frame-type silt curtains should be deployed around the dredging operations; • Floating-type silt curtains should be used to surround the circular cell during the sheetpiling work; • The descent speed of grabs should be controlled to minimize the seabed impact speed; • Barges should be loaded carefully to avoid splashing of material; • All barges used for the transport of dredged materials should be fitted with tight bottom seals in order to prevent leakage of material during loading and transport; • All barges should be filled to a level which ensures that material does not spill over during loading and transport to the disposal site and that adequate freeboard is								

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
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	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. Accidental spillage should be cleaned up as soon as practicable and all waste oils and fuels should be collected and handled in	Within IWMF site / During the operational phase	IWMF Operator	✓		✓		WPCO; WDO	N/A

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

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

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

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

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
6b.5.1.3	<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	✓	✓				Implemented. N/A for 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	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		
	accordance with ETWB TCW 34/2002 might be necessary for the application of dumping permit under DASO. In such case, a sediment sampling and testing proposal shall be submitted to and approved by DEP before the additional marine SI works.								
6b.5.1.9	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	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		
	(EMP), should be prepared in accordance with ETWB TCW No.19/2005; • 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.	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		
	All surplus C&D materials arising from or in connection with construction works should become the property of the Contractor when it is removed unless otherwise stated. The Contractor would be responsible for devising a system to work for on-site sorting of C&D materials and promptly removing all sorted and process materials arising from the construction activities to minimize temporary stockpiling on-site. The system should be included in the EMP identifying the source of generation, estimated quantity, arrangement for on-site sorting, collection, temporary storage areas and frequency of collection by recycling Contractors or frequency of removal off-site.								
6b.5.1.13	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	Work Site/ During Construction Period	Contractor		✓			Waste Disposal (Chemical Waste) (General) Regulation	Implemented.

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
	licensed collector to transport and dispose of the chemical wastes, to either the Chemical Waste Treatment Centre at Tsing Yi, or another licensed facility, in accordance with the Waste Disposal (Chemical Waste) (General) Regulation.								
6b.5.1.14	General Refuse 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	Deficiency of Mitigation Measures but rectified by the Contractor
6b.5.1.16 – 6b.5.1.33	Biogas Generation 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;	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		
	- precautions during construction works; - precautions prior to entry of belowground services								
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.	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		
	• Training of site personnel in proper waste management and chemical waste handling procedures; • Separation of chemical wastes for special handling and appropriate treatment at a licensed facility; • Routine cleaning and maintenance programme for drainage systems, sumps and oil interceptors; • 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;	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		
	• Encourage collection of aluminum cans, plastic bottles and packaging material (e.g. carton boxes) and office paper by individual collectors. Separate labelled bins should be provided to help segregate this waste from other general refuse generated by the work force; and • Any unused chemicals or those with remaining functional capacity should be reused as far as practicable.								
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;	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		
	• The ash should be transported in covered trucks or containers to the designated landfill site. The Contractor should provide EPD with chemical analysis results of the bottom ash, and treated fly ash and APC residues to confirm that the ash/residue can comply with the proposed Incineration Residue Pollution Control Limits before disposal.								
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

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
6b.6.3.1	<u>Fuel Oil Pipeline Construction and Test</u> • Installation of aboveground fuel oil pipelines is preferable; if underground pipelines are unavoidable, concrete lined trenches should be constructed to contain the pipelines. • Double skin pipelines are preferred. • Distance between the fuel oil refuelling points and the fuel oil storage tank shall be minimized. • Integrity tests for the pipelines should be conducted by an independent qualified surveyor or structural engineer at regular intervals. • Any potential problems identified in the test should be rectified as soon as possible.	Fuel Oil Pipelines/ During Design, Construction and Operation Periods	IWMF Contractor	✓	✓	✓			N/A
6b.6.3.1	<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>	Fuel Oil Refuelling Point/	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		
	• Storage tank refuelling (from road tanker) should only be conducted by authorized staff of the oil company using the company's standard procedures.	During Operation Period							
6b.6.3.1	<u>Fuel Oil Spillage Response</u> An Oil Spill Response Plan should be prepared by the operator to document the appropriate response procedures for oil spillage incidents in detail. General procedures to be taken in case of fuel oil spillage are presented below. • Training - 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	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		
	so that necessary assistance from relevant department can be quickly sought. • Response Procedures -Any fuel oil spillage within the IWMF site should be immediately reported to the Plant Manager with necessary details including location, source, possible cause and extent of the spillage. -Plant Manager should immediately attend to the spillage and initiate any appropriate action to confine and clean up the spillage. The response 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								

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	procedures for chemical wastes are discussed in the following paragraphs.								
6b.6.3.2	<u>Chemicals and Chemical Wastes Handling & Storage</u> • Chemicals and chemical wastes should only be stored in suitable containers in purpose-built areas. • The storage of chemical wastes should comply with the requirements of the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes. • The storage areas for chemicals and chemical wastes shall have an 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	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		
	storage area should be bunded to contain at least 110% of the storage capacity of the largest containers or 20% of the total quantity of the chemicals/chemical wastes stored, whichever is the greater. ➢ Storage containers shall be checked at regular intervals for their structural integrity and to ensure that the caps or fill points are tightly closed. ➢ Chemical handling shall be conducted by trained workers under supervision.								
6b.6.3.2	<u>Chemicals and Chemical Wastes Spillage Response</u> 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:	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		
	➢ Tools & resources to handle spillage, e.g. locations of spill handling equipment; ➢ General methods to deal with spillage; and ➢ Procedures for emergency drills in the event of spills. • Communication - Establish communication channel with FSD and EPD to report the spillage incident so that necessary assistance from relevant department can be quickly sought. • Response Procedures - 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/								

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		
	groundwater and discharge to storm water channels (in case the spillage occurs at locations out of the designated storage areas); ➢ Remove the spillage; the removal method/ procedures documented in the Material Safety Data Sheet (MSDS) of the chemicals spilled should be observed; ➢ Clean up the contaminated area (in case the spillage occurs at locations out of the designated storage areas); and ➢ 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	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		
	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.								
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.	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

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		
	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.*								

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

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

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

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
	provided to treat the wastewater generated from the IWMF (mainly human sewage). The treated effluent would be re-used in the incineration plant and mechanical treatment plant, or for onsite washdown and landscape.								
7b.8.2.4	<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*	IWMF site, work site, marine traffic route	Design team, contractor, IWMF operator	✓	✓	✓	✓	EIAO-TM, Supporting Document for Application for Variation of the Environmental	Implemented for avoidance of construction works that may produce underwater acoustic disturbance, Vessel Travel Route implementation, training of staff; N/A for others

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
	• Substantial revision has been made on the layout plan and form of the breakwater, in order to minimise the potential loss of important habitat for Finless Porpoise. The revision has greatly reduced the size of the embayment area, as well as the Project footprint. As a result, the size of habitat loss for Finless Porpoise has reduced from the original ~50 ha, down to ~31 ha. *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);							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		
	- sheet piling works for construction of the remaining section of breakwater (Phase 3) and - bored piling works for berth area (Phase 3) Such works should be restricted within June to November. This approach would not only avoid the peak season for Finless Porpoise occurrence, the magnitude of impacts arise from acoustic disturbance would also be minimised. • 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								

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		
	breakwater and reclamation peripheral structure is proposed. A quieter sheet piling method using vibratory hammer or hydraulic impact hammer, should be adopted for the installation of circular cells for cellular cofferdam and northern breakwater during Phase 1, and southern breakwater Phase 3; • 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								

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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	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 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								

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		
	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 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								

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		
	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 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								

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
7b.8.3.31 - 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). • The REA survey results suggest that the 198 directly affected coral colonies were attached to movable rocks (less than 50 cm in diameter). It is technically feasible to translocate them to avoid direct loss. • Prior to coral translocation, a more detailed baseline survey, including a coral mapping survey, is recommended to further confirm the	IWMF site	Design team, contractor, IWMF operator	✓	✓	✓	✓	EIAO-TM	Implemented, tagged coral found missing after hitting by typhoons Re-tagging of 10 coral colonies at indirect impact site and control site were conducted in November and December 2018 respectively.

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
	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 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								

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		
	reduce the amount of concurrent works, hence minimize SS elevation and the associated impacts on corals.								
7b.8.3.35 - 7b.8.3.41	Specific measures to minimize disturbance on breeding White-bellied Sea Eagle *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); - sheet piling works for construction of the remaining section of breakwater (Phase 3); and - bored piling works for berth area (Phase 3).	IWMF site, marine traffic route	Design Team, Contractor, IWMF operator	✓	✓	✓	✓	EIAO-TM	Implemented

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		
	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 activities of WBSE during construction and operation of the								

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
	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*								

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		
	• To minimise glare disturbance on WBSE, which may cause disorientation of birds by interfering with their magnetic compass, and disruption in behavioural patterns such as reproduction, fat storage and foraging pattern, any un-necessary outdoor lighting should be avoided, and in-ward and down-ward pointing of lights should be adopted.								
-	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

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
7b.8.3.44 - 7b.8.3.45	<u>Measures to minimize accidental spillage</u> • Regular maintenance of vessels, vehicles and equipment that may cause leakage and spillage should only be undertaken within pre-designated areas, which are appropriately equipped to control the associated discharges. • Oils, fuels and chemicals should be contained in suitable containers, and only be used and stored in designated areas which have pollution prevention facilities. All fuel tanks and storage areas should be sited on sealed areas in order to prevent spillage of fuels and solvents to the nearby watercourses. All waste oils and fuels should be collected in designated tanks prior to disposal.	Work site	Contractor, IWMF operator		✓	✓	✓	EIAO-TM	Deficiency of Mitigation Measures but rectified by the Contractor.
7b.8.3.46	<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>	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		
	• 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: - 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.								

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, and construction wastes on-site should be covered with tarpaulin or similar fabric during rainstorms.								
7b.8.3.48	Measures to minimise impacts from general construction activities • To avoid the entering of construction solid waste into the nearby habitats, construction solid waste should be collected, handled and disposed of properly to avoid entering to the nearby habitats. It is recommended to clean the construction sites on a regular basis.	Work site	Contractor		✓			EIAO-TM	Implemented
7b.8.3.49	Pest Control 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	IWMF site	IWMF operator			✓			N/A

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines	Implementation Status and Remarks
				Des	C	O	Dec		
	- 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								
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 ensure safe access. In order to avoid degradation in water quality due to elevation in SS and dispersion of sediment plume due to dredging works, it is recommended that any future maintenance dredging works should not be carried out within 100 m from the shore, similar to that of the dredging for anti-scouring protection layer during construction phase. All maintenance dredging works should be carried out with the implementation of silt curtain to control the dispersion of SS. The production rate should comply with the permit dredging rate and number of grab per hour.	IWMF site	IWMF operator			✓		EIAO-TM; 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		
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 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	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		
	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. • The Project Proponent should provide assistance to AFCD during the process of the marine park designation. .								
7b.8.5.1 – 7b.8.5.4	<u>Additional Enhancement or Precautionary Measures</u> *Deployment of Artificial Reefs* • Deployment of artificial reefs (ARs) is an enhancement measure for the	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		
	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. 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	Control of Operation Time Minimization of the frequency of waste transportation to practical minimum (e.g. limit the reception of MSW from 8 am to 8 pm)	Project site / During Operation phase	Contractor			✓			N/A

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

Appendix C Impact Monitoring Schedule of the Reporting Month

Impact Monitoring Schedule for IWMF						
Sep-23						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1	2
3	4	5	6	7	8	9
			Impact Daytime & Evening Noise monitoring for M1, M2 & M3	Impact Night time Noise monitoring for M1, M2 & M3		
10	11	12	13	14	15	16
				Impact Daytime & Evening Noise monitoring for M1, M2 & M3	Impact Night time Noise monitoring for M1, M2 & M3	
17	18	19	20	21	22	23
		Impact Daytime & Evening Noise monitoring for M1 & M2	Impact Night time Noise monitoring for M1 & M2 Daytime & Evening Noise monitoring for M3	Impact Night time Noise monitoring for M3		
24	25	26	27	28	29	30
	Impact Daytime & Evening Noise monitoring for M1, M2 & M3	Impact Night time Noise monitoring for M1, M2 & M3		Impact Ecology monitoring for WBSE 19th Quarterly Coral Monitoring at Indirect Impact Site and Control Site		

Remarks:
1. Daytime Noise Monitoring (07:00-1900), Evening Time Noise Monitoring (1900-2300), Night Time Noise Monitoring (2300-0700)
2. Water Quality Monitoring for S1,S2 and S3 will only conduct during DCM works, refer to Detailed DCM Plan
3. No marine construction work is tentatively scheduled to be carried out in September 2023

Appendix D Event / Action Plan for Water Quality Exceedance

Event	Action			
	ET	IEC	SO	Contractor
Action level being exceeded by one sampling day	Repeat in-situ measurement to confirm findings; Identify source(s) of impact; Inform IEC and Contractor; Check monitoring data, all plant, equipment and Contractor's working methods; Discuss mitigation measures with IEC and Contractor; Repeat measurement on next day of exceedance. (The above actions should be taken within 1 working day after the exceedance is identified)	Discuss with ET and Contractor on the mitigation measures; Review proposals on mitigation measures submitted by Contractor and advise the SO accordingly; Assess the effectiveness of the implemented mitigation measures. (The above actions should be taken within 1 working day after the exceedance is identified)	Discuss with IEC on the proposed mitigation measures; Make agreement on the mitigation measures to be implemented. (The above actions should be taken within 1 working day after the exceedance is identified)	Inform the SO and confirm notification of the non-compliance in writing; Rectify unacceptable practice; Check all plant and equipment; Consider changes of working methods; Discuss with ET and IEC and propose mitigation measures to IEC and SO within 3 working days; Implement the agreed mitigation measures. (The above actions should be taken within 1 working day after the exceedance is identified)
Action level being exceeded by more than one consecutive sampling days	Identify source(s) of impact; Inform IEC and Contractor; Check monitoring data, all plant, equipment and Contractor's working methods; Discuss mitigation measures with IEC and Contractor; Ensure mitigation measures are implemented; Prepare to increase the monitoring frequency to daily; Repeat measurement on next working day of exceedance. (The above actions should be taken within 1 working day after Action Level being exceeded by two consecutive sampling days)	Discuss with ET and Contractor on the mitigation measures; Review proposals on mitigation measures submitted by Contractor and advise the SO accordingly; Assess the effectiveness of the implemented mitigation measures. (The above actions should be taken within 1 working day after Action Level being exceeded by two consecutive sampling days)	Discuss with IEC on the proposed mitigation measures; Make agreement on the mitigation measures to be implemented. Assess the effectiveness of the implemented mitigation measures. (The above actions should be taken within 1 working day after Action Level being exceeded by two consecutive sampling days)	Inform the SO and confirm notification of the non-compliance in writing; Rectify unacceptable practice; Check all plant and equipment; Consider changes of working methods; Discuss with ET and IEC and propose mitigation measures to IEC and SO within 3 working days; Implement the agreed mitigation measures. (The above actions should be taken within 1 working day after Action Level being exceeded by two consecutive sampling days)

Event	Action			
	ET	IEC	SO	Contractor
Limit level being exceeded by one sampling day	Inform the SO and confirm notification of the non-compliance in writing; Rectify unacceptable practice; Check all plant and equipment; Consider changes of working methods; Discuss with Contractor, IEC and SO and propose mitigation measures to IEC and SO within 3 working days; Implement the agreed mitigation measures. (The above actions should be taken within 1 working day after the exceedance is identified)	Discuss with ET and Contractor on the mitigation measures; Review proposals on mitigation measures submitted by Contractor and advise the SO accordingly; Assess the effectiveness of the implemented mitigation measures. (The above actions should be taken within 1 working day after the exceedance is identified)	Discuss with IEC, ET and Contractor on the proposed mitigation measures; Request Contractor to critically review the working methods; Make agreement on the mitigation measures to be implemented. Assess the effectiveness of the implemented measures. (The above actions should be taken within 1 working day after the exceedance is identified)	Inform the SO and confirm notification of the non-compliance in writing; Rectify unacceptable practice; Check all plant and equipment; Consider changes of working methods; Discuss with ET, IEC and SO and propose mitigation measures to IEC and SO within 3 working days; Implement the agreed mitigation measures. (The above actions should be taken within 1 working day after the exceedance is identified)

Event	Action			
	ET	IEC	SO	Contractor
Limit level being exceeded by more than one consecutive sampling days	Identify source(s) of impact; Inform IEC, Contractor and EPD; Check monitoring data, all plant, equipment and Contractor's working methods. Discuss mitigation measures with IEC, SO and Contractor. Ensure mitigation measures are implemented; Increase the monitoring frequency to daily until no exceedance of Limit level for two consecutive days. (The above actions should be taken within 1 working day after Limit Level being exceeded by two consecutive sampling days)	Discuss with ET and Contractor on the mitigation measures; Review proposals on mitigation measures submitted by Contractor and advise the SO accordingly; Assess the effectiveness of the implemented mitigation measures. (The above actions should be taken within 1 working day after Limit Level being exceeded by two consecutive sampling days)	Discuss with IEC, ET and Contractor on the proposed mitigation measures; Request Contractor to critically review the working methods; Make agreement on the mitigation measures to be implemented. Assess the effectiveness of the implemented measures. Consider and instruct, if necessary, the Contractor to slow down or to stop all or part of the marine work until no exceedance of Limit level. (The above actions should be taken within 1 working day after Limit Level being exceeded by two consecutive sampling days)	Inform the SO and confirm notification of the non-compliance in writing; Rectify unacceptable practice; Check all plant and equipment; Consider changes of working methods; Discuss with ET, IEC and SO and propose mitigation measures to IEC and SO within 3 working days; Implement the agreed mitigation measures; As directed by the SOR, to slow down or to stop all or part of the marine work or construction activities. (The above actions should be taken within 1 working day after Limit Level being exceeded by two consecutive sampling days)

Appendix E Noise Monitoring Equipment Calibration Certificate

SVANTEK

ISO9001 certified

FACTORY CALIBRATION DATA OF THE *SVAN 971 No. C119577*

with preamplifier SVANTEK type SV 18 No. C122487 and

with microphone ACO type 7052E No. 85197

1. CALIBRATION* (acoustical)

LEVEL METER function; Range: Low; Reference frequency: 1000Hz; Sound Pressure Level: **114.03** dB.

Characteristic	Correct value [dB]	Indication [dB]	Error [dB]
Z	114.03	114.05	0.02
A	114.03	114.05	0.02
C	114.03	114.05	0.02

Calibration measured with the microphone ACO type 7052E No. 85197. Calibration factor: 0.74 dB.

2. LINEARITY TEST* (electrical)

LEVEL METER function; Range: Low; Characteristic: A; f_{sin}= 31.5 Hz

Nominal result LEQ [dB]	24.0	25.0	26.0	28.0	30.0	40.0	60.0	83.0
Error [dB]	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0

LEVEL METER function; Range: Low; Characteristic: A; f_{sin}= 1000 Hz

Nominal result LEQ [dB]	24.0	25.0	26.0	28.0	30.0	40.0	60.0	80.0	100.0	123.0
Error [dB]	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.0	-0.0	-0.0	-0.0

LEVEL METER function; Range: Low; Characteristic: A; f_{sin}= 8000 Hz

Nominal result LEQ [dB]	24.0	25.0	26.0	28.0	30.0	40.0	60.0	80.0	100.0	122.0
Error [dB]	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.0	-0.0	-0.0	-0.0

LEVEL METER function; Range: High; Characteristic: A; f_{sin}= 31.5 Hz

Nominal result LEQ [dB]	34.0	35.0	36.0	38.0	40.0	60.0	80.0	97.0
Error [dB]	0.0	0.0	0.0	0.0	0.0	0.0	-0.0	0.0

LEVEL METER function; Range: High; Characteristic: A; f_{sin}= 1000 Hz

Nominal result LEQ [dB]	34.0	35.0	36.0	38.0	40.0	60.0	80.0	100.0	120.0	137.0
Error [dB]	-0.0	0.0	-0.0	-0.0	-0.1	-0.1	-0.0	-0.0	-0.0	-0.0

LEVEL METER function; Range: High; Characteristic: A; f_{sin}= 8000 Hz

Nominal result LEQ [dB]	34.0	35.0	36.0	38.0	40.0	60.0	80.0	100.0	120.0	136.0
Error [dB]	-0.0	-0.0	-0.1	-0.1	-0.1	-0.1	0.0	0.0	-0.0	0.0

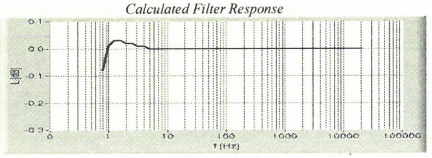
1/3 OCTAVE (1kHz); Range: Low; f_{sin}= 1000 Hz

Nominal result [dB]	25.0	30.0	40.0	60.0	80.0	100.0	120.0	123.0
Error [dB]	0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0

4. FREQUENCY RESPONSE* (electrical)

LEVEL METER function; Characteristic: Z; Range: Low; Input signal =120 dB;

Calculated Filter Response



Measured Filter Response with Preamplifier SV18 (f-frequency, L-level)

f [Hz]	L [dB]	f [Hz]	L [dB]	f [Hz]	L [dB]
10	-0.1	63	0.0	4000	0.0
12.5	-0.0	125	0.0	8000	0.0
16	0.0	250	0.0	16000	0.0
20	0.0	500	0.0	20000	0.0
25	0.0	1000	0.0		
31.5	0.0	2000	0.0		

All frequencies are nominal center values for the 1/3 octave bands

5. INTERNAL NOISE LEVEL* (electrical - compensated)

LEVEL METER function; Range: Low; (Back-light – off) ; Calibration factor: 0dB

Characteristic	Z	A	C
Level [dB]	≤20	≤12	≤12

* measured with preamplifier SVANTEK type SV 18 No. C122487.

6. INTERNAL NOISE LEVEL (acoustical - compensated)

LEVEL METER function; Characteristic: A; (Backlight – off)

Range	Low	High
Indication [dB]	≤15	20.5

Noise measured in special chamber, with reference microphone G.R.A.S type 40AN No. 73421

ENVIRONMENTAL CONDITIONS

Temperature	Relative humidity	Ambient pressure
23 °C	42%	1008 hPa

TEST EQUIPMENT

Item	Manufacturer	Model	Serial no.	Description
1.	SVANTEK	SVAN 401	100	Signal generator
2.	SVANTEK	SVAN 912A	4369	Sound & Vibration Analyser
3.	RIGOL	DM3068	DM30155100773	Digital multimeter
4.	SVANTEK	SV33B	93171	Acoustic calibrator
5.	SVANTEK	ST02	-	Microphone equivalent electrical impedance (18pF)

CONFORMITY & TEST DECLARATION

1. Herewith Svantek company declares that this instrument has been calibrated and tested in compliance with the internal ISO9001 procedures and meets all specification given in the Manual(s) or respectively surpass them.

2. The acoustic calibration was performed using the Sound Calibrator and is traceable to the GUM (Central Office of Measures) reference standard - sound level calibrator type 4231 No 2292773.

3. The information appearing on this sheet has been compiled specifically for this instrument. This form is produced with advanced equipment & procedures which permit comprehensive quality assurance verification of all data supplied herein.

4. This calibration sheet shall not be reproduced except in full, without written permission of the SVANTEK Ltd.

Calibration specialist: Cezary Dardziński ……

Test date: 2022-10-11

SVANTEK

ISO9001 certified

FACTORY CALIBRATION DATA OF THE SVAN 971 No. C132260

with preamplifier SVANTEK type SV 18 No. C132221 and

with microphone ACO type 7052E No. 82767

1. CALIBRATION* (acoustical)

LEVEL METER function; Range: Low; Reference frequency: 1000Hz; Sound Pressure Level: **114.03 dB**

Characteristic	Correct value [dB]	Indication [dB]	Error [dB]
Z	114.03	114.05	0.02
A	114.03	114.05	0.02
C	114.03	114.05	0.02

Calibration measured with the microphone ACO type 7052E No. 82767. Calibration factor: 0.68 dB.

2. LINEARITY TEST* (electrical)

LEVEL METER function; Range: Low; Characteristic: A; f_{sin}= 31.5 Hz

Nominal result LEQ [dB]	24.0	25.0	26.0	28.0	30.0	40.0	60.0	83.0
Error [dB]	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0

LEVEL METER function; Range: Low; Characteristic: A; f_{sin}= 1000 Hz

Nominal result LEQ [dB]	24.0	25.0	26.0	28.0	30.0	40.0	60.0	80.0	100.0	123.0
Error [dB]	0.1	0.1	0.1	0.0	0.1	0.0	-0.0	-0.0	0.0	-0.0

LEVEL METER function; Range: Low; Characteristic: A; f_{sin}= 8000 Hz

Nominal result LEQ [dB]	24.0	25.0	26.0	28.0	30.0	40.0	60.0	80.0	100.0	122.0
Error [dB]	0.1	0.1	0.0	0.0	0.0	-0.0	-0.0	-0.0	0.0	-0.0

LEVEL METER function; Range: High; Characteristic: A; f_{sin}= 31.5 Hz

Nominal result LEQ [dB]	34.0	35.0	36.0	38.0	40.0	60.0	80.0	97.0
Error [dB]	0.0	0.0	0.0	0.0	0.0	0.0	-0.0	0.0

LEVEL METER function; Range: High; Characteristic: A; f_{sin}= 1000 Hz

Nominal result LEQ [dB]	34.0	35.0	36.0	38.0	40.0	60.0	80.0	100.0	120.0	137.0
Error [dB]	0.1	0.1	0.1	0.0	0.0	-0.0	-0.0	-0.0	-0.0	-0.0

LEVEL METER function; Range: High; Characteristic: A; f_{sin}= 8000 Hz

Nominal result LEQ [dB]	34.0	35.0	36.0	38.0	40.0	60.0	80.0	100.0	120.0	136.0
Error [dB]	0.1	0.0	0.1	0.0	0.0	-0.0	-0.0	-0.0	-0.0	0.0

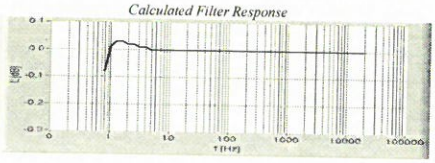
1/3 OCTAVE (1kHz); Range: Low; f_{sin}= 1000 Hz

Nominal result [dB]	25.0	30.0	40.0	60.0	80.0	100.0	120.0	123.0
Error [dB]	0.1	0.0	0.0	-0.0	-0.0	0.0	-0.0	-0.0

4. FREQUENCY RESPONSE* (electrical)

LEVEL METER function; Characteristic: Z; Range: Low; Input signal =120 dB;

Calculated Filter Response



Measured Filter Response with Preamplifier SV18
(f-frequency, L-level)

f [Hz]	L [dB]	f [Hz]	L [dB]	f [Hz]	L [dB]
10	-0.1	63	0.0	4000	0.0
12.5	0.0	125	0.0	8000	0.0
16	0.0	250	0.0	16000	0.0
20	0.0	500	0.0	20000	0.0
25	0.0	1000	0.0		
31.5	0.0	2000	0.0		

All frequencies are nominal center values for the 1/3 octave bands

5. INTERNAL NOISE LEVEL* (electrical - compensated)

LEVEL METER function; Range: Low; (Back-light – off) ; Calibration factor: 0dB

Characteristic	Z	A	C
Level [dB]	≤20	≤12	≤12

* measured with preamplifier SVANTEK type SV 18 No. C132221.

6. INTERNAL NOISE LEVEL (acoustical - compensated)

LEVEL METER function; Characteristic: A; (Backlight – off)

Range	Low	High
Indication [dB]	≤15	20.4

Noise measured in special chamber, with reference microphone G.R.A.S type 40AN No. 73421

ENVIRONMENTAL CONDITIONS

Temperature	Relative humidity	Ambient pressure
21 °C	43%	1012 hPa

TEST EQUIPMENT

Item	Manufacturer	Model	Serial no.	Description
1.	SVANTEK	SVAN 401	100	Signal generator
2.	SVANTEK	SVAN 912A	4369	Sound & Vibration Analyser
3.	RIGOL	DM3068	DM30155100773	Digital multimeter
4.	SVANTEK	SV33B	93171	Acoustic calibrator
5.	SVANTEK	ST02	-	Microphone equivalent electrical impedance (18pF)

CONFORMITY & TEST DECLARATION

1. Herewith Svantek company declares that this instrument has been calibrated and tested in compliance with the internal ISO9001 procedures and meets all specification given in the Manual(s) or respectively surpass them.
2. The acoustic calibration was performed using the Sound Calibrator and is traceable to the GUM (Central Office of Measures) reference standard - sound level calibrator type 4231 No 2292773.
3. The information appearing on this sheet has been compiled specifically for this instrument. This form is produced with advanced equipment & procedures which permit comprehensive quality assurance verification of all data supplied herein.
4. This calibration sheet shall not be reproduced except in full, without written permission of the SVANTEK Ltd.

Calibration specialist: Cezary Dardziński .....

Test date: 2022-10-27

SVANTEK

ISO9001 certified

FACTORY CALIBRATION DATA OF THE *SVAN 971 No. C132261*

with preamplifier SVANTEK type SV 18 No. C132231 and

with microphone ACO type 7052E No. 85231

1. CALIBRATION* (acoustical)

LEVEL METER function; Range: Low; Reference frequency: 1000Hz; Sound Pressure Level: **114.07 dB**.

Characteristic	Correct value [dB]	Indication [dB]	Error [dB]
Z	114.07	114.07	0.00
A	114.07	114.07	0.00
C	114.07	114.07	0.00

Calibration measured with the microphone ACO type 7052E No. 85231. Calibration factor: 0.95 dB.

2. LINEARITY TEST* (electrical)

LEVEL METER function; Range: Low; Characteristic: A; f_{sin}= 31.5 Hz

Nominal result LEQ [dB]	24.0	25.0	26.0	28.0	30.0	40.0	60.0	83.0
Error [dB]	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0

LEVEL METER function; Range: Low; Characteristic: A; f_{sin}= 1000 Hz

Nominal result LEQ [dB]	24.0	25.0	26.0	28.0	30.0	40.0	60.0	80.0	100.0	123.0
Error [dB]	0.1	0.0	0.1	0.0	0.0	0.0	-0.0	0.0	0.0	0.0

LEVEL METER function; Range: Low; Characteristic: A; f_{sin}= 8000 Hz

Nominal result LEQ [dB]	24.0	25.0	26.0	28.0	30.0	40.0	60.0	80.0	100.0	122.0
Error [dB]	0.0	0.0	0.0	-0.0	0.0	-0.0	-0.0	0.0	0.0	-0.0

LEVEL METER function; Range: High; Characteristic: A; f_{sin}= 31.5 Hz

Nominal result LEQ [dB]	34.0	35.0	36.0	38.0	40.0	60.0	80.0	97.0
Error [dB]	0.0	0.0	0.0	0.0	0.0	0.0	-0.0	0.0

LEVEL METER function; Range: High; Characteristic: A; f_{sin}= 1000 Hz

Nominal result LEQ [dB]	34.0	35.0	36.0	38.0	40.0	60.0	80.0	100.0	120.0	137.0
Error [dB]	0.1	0.1	0.1	0.0	0.0	-0.0	-0.0	-0.0	-0.0	-0.0

LEVEL METER function; Range: High; Characteristic: A; f_{sin}= 8000 Hz

Nominal result LEQ [dB]	34.0	35.0	36.0	38.0	40.0	60.0	80.0	100.0	120.0	136.0
Error [dB]	-0.0	0.0	-0.0	-0.0	-0.0	-0.0	0.0	0.0	-0.0	0.0

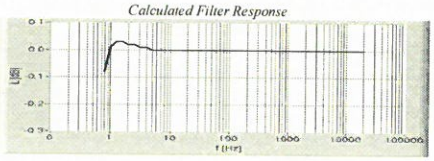
1/3 OCTAVE (1kHz); Range: Low; f_{sin}= 1000 Hz

Nominal result [dB]	25.0	30.0	40.0	60.0	80.0	100.0	120.0	123.0
Error [dB]	0.1	0.0	0.0	-0.0	0.0	0.0	0.0	0.0

4. FREQUENCY RESPONSE* (electrical)

LEVEL METER function; Characteristic: Z; Range: Low; Input signal =120 dB;

Calculated Filter Response



Measured Filter Response with Preamplifier SV18
(f-frequency, L-level)

f [Hz]	L [dB]	f [Hz]	L [dB]	f [Hz]	L [dB]
10	-0.1	63	0.0	4000	-0.0
12.5	-0.0	125	0.0	8000	-0.0
16	0.0	250	0.0	16000	0.0
20	0.0	500	0.0	20000	0.0
25	0.0	1000	0.0		
31.5	0.0	2000	0.0		

All frequencies are nominal center values for the 1/3 octave bands

5. INTERNAL NOISE LEVEL* (electrical - compensated)

LEVEL METER function; Range: Low; (Back-light – off) ; Calibration factor: 0dB

Characteristic	Z	A	C
Level [dB]	≤20	≤12	≤12

* measured with preamplifier SVANTEK type SV 18 No. C132231.

6. INTERNAL NOISE LEVEL (acoustical - compensated)

LEVEL METER function; Characteristic: A; (Backlight – off)

	Low	High
Range		
Indication [dB]	≤15	20.9

Noise measured in special chamber, with reference microphone G.R.A.S type 40AN No. 73421

ENVIRONMENTAL CONDITIONS

Temperature	Relative humidity	Ambient pressure
22 °C	47%	1011 hPa

TEST EQUIPMENT

Item	Manufacturer	Model	Serial no.	Description
1.	SVANTEK	SVAN 401	100	Signal generator
2.	SVANTEK	SVAN 912A	4369	Sound & Vibration Analyser
3.	RIGOL	DM3068	DM30155100773	Digital multimeter
4.	SVANTEK	SV33B	93171	Acoustic calibrator
5.	SVANTEK	ST02	-	Microphone equivalent electrical impedance (18pF)

CONFORMITY & TEST DECLARATION

1. Herewith Svantek company declares that this instrument has been calibrated and tested in compliance with the internal ISO9001 procedures and meets all specification given in the Manual(s) or respectively surpass them.
2. The acoustic calibration was performed using the Sound Calibrator and is traceable to the GUM (Central Office of Measures) reference standard - sound level calibrator type 4231 No 2292773.
3. The information appearing on this sheet has been compiled specifically for this instrument. This form is produced with advanced equipment & procedures which permit comprehensive quality assurance verification of all data supplied herein.
4. This calibration sheet shall not be reproduced except in full, without written permission of the SVANTEK Ltd.

Test date: 2022-10-28

Calibration specialist: Cezary Dardziński .....

Certificate of Calibration

for

Description:	***Sound Level Meter***
Manufacturer:	***SVANTEK***
Type No.:	***971 (Serial No.: 96062)***
Microphone:	***13905***
Preamplifier:	***SVANTEK SV 18 (Serial No.:C132231)***

Submitted by:

Customer:	*Acuity Sustainability Consulting Limited*
Address:	*Unit E, 12/F., Ford Glory Plaza,*
	Nos. 37-39 Wing Hong Street,
	Cheung Sha Wan, Kowloon, Hong Kong

Upon receipt for calibration, the instrument was found to be:

☑ **Within (31.5Hz – 8kHz)**
☐ **Outside**

the allowable tolerance.

The test equipment used for calibration are traceable to National Standards via:
- The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory

Date of receipt: 27 July 2023

Date of calibration: 3 August 2023

Date of NEXT calibration: 2 August 2024

Calibrated by: _____
Calibration Technician

Certified by: _____
Mr. Ng Yan Wa
Laboratory Manager

Date of issue: **3 August 2023**

Certificate No.: APJ23-049-CC001

ACOUSTICS AND AIR TESTING LABORATORY CO. LTD. (A+A)*L

Room 422,Leader Industrial Centre,57-59 Au Pui Wan Street ,Fo Tan, Shatin,N.T.,Hong Kong
Tel: (852) 2668 3423 Fax:(852) 2668 6946
Homepage: http://www.aa-lab.com E-mail : inquiry@aa-lab.com

1. *Calibration Precaution:*

- The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 24 hours, and switched on to warm up for over 10 minutes before the commencement of the test.

- The results presented are the mean of 3 measurements at each calibration point.

2. *Calibration Conditions:*

Air Temperature:	22.6 **°C**
Air Pressure:	1006 **hPa**
Relative Humidity:	52.9 **%**

3. *Calibration Equipment:*

	Type	Serial No.	Calibration Report Number	Traceable to
Multifunction Calibrator	B&K 4226	2288467	AV220061	HOKLAS

4. *Calibration Results*

Sound Pressure Level

Reference Sound Pressure Level

Setting of Unit-under-test (UUT)			Applied value		UUT Reading, dB	IEC 61672 Class 1 Specification, dB
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz		
25.0-124.2	dBA SPL	Fast	94	1000	94.0	±0.4

Linearity

Setting of Unit-under-test (UUT)			Applied value		UUT Reading, dB	IEC 61672 Class 1 Specification, dB
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz		
25.0-124.2	dBA SPL	Fast	94	1000	94.0	Ref
			104		104.0	±0.3
			114		114.0	±0.3

Time Weighting

Setting of Unit-under-test (UUT)			Applied value		UUT Reading, dB	IEC 61672 Class 1 Specification, dB
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz		
25.0-124.2	dBA SPL	Fast	94	1000	94.0	Ref
		Slow			94.0	±0.3

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Frequency Response

Linear Response

Setting of Unit-under-test (UUT)			Applied value		UUT Reading, dB	IEC 61672 Class 1 Specification, dB
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz		
25.0-124.2	dB SPL	Fast	94	31.5	94.3	±2.0
				63	94.2	±1.5
				125	94.1	±1.5
				250	94.1	±1.4
				500	94.0	±1.4
				1000	94.0	Ref
				2000	93.7	±1.6
				4000	93.1	±1.6
				8000	91.9	+2.1; -3.1

A-weighting

Setting of Unit-under-test (UUT)			Applied value		UUT Reading, dB	IEC 61672 Class 1 Specification, dB
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz		
25.0-124.2	dBA SPL	Fast	94	31.5	55.3	-39.4 ±2.0
				63	68.2	-26.2 ±1.5
				125	78.0	-16.1 ±1.5
				250	85.4	-8.6 ±1.4
				500	90.8	-3.2 ±1.4
				1000	94.0	Ref
				2000	94.9	+1.2 ±1.6
				4000	94.1	+1.0 ±1.6
				8000	90.9	-1.1+2.1; -3.1

C-weighting

Setting of Unit-under-test (UUT)			Applied value		UUT Reading, dB	IEC 61672 Class 1 Specification, dB
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz		
25.0-124.2	dBC SPL	Fast	94	31.5	91.3	-3.0 ±2.0
				63	93.3	-0.8 ±1.5
				125	93.9	-0.2 ±1.5
				250	94.0	-0.0 ±1.4
				500	94.0	-0.0 ±1.4
				1000	94.0	Ref
				2000	93.6	-0.2 ±1.6
				4000	92.4	-0.8 ±1.6
				8000	89.1	–3.0 +2.1: –3.1

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5. *Calibration Results Applied*

The results apply to the particular unit-under-test only. All calibration points are within manufacture's specification as IEC 61672 Class 1.

Uncertainties of Applied Value:

94 dB	31.5 Hz	± 0.05
	63 Hz	± 0.05
	125 Hz	± 0.05
	250 Hz	± 0.05
	500 Hz	± 0.05
	1000 Hz	± 0.05
	2000 Hz	± 0.05
	4000 Hz	± 0.05
	8000 Hz	± 0.10
104 dB	1000 Hz	± 0.05
114 dB	1000 Hz	± 0.05

The uncertainties are evaluated for a 95% confidence level.

Note:
The values given in this certification only related to the values measured at the time of the calibration and any uncertainties quoted will not allow for the equipment long-term drift, variations with environmental changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the calibration. (A+A)*L shall not be liable for any loss or damage resulting from the use of the equipment.

Room 422,Leader Industrial Centre,57-59 Au Pui Wan Street ,Fo Tan, Shatin,N.T.,Hong Kong
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Homepage: http://www.aa-lab.com E-mail : inquiry@aa-lab.com

Certificate No. D224645E

JCSS 0197

CALIBRATION CERTIFICATE

Product	:	SOUND CALIBRATOR
Type	:	NC-75
Serial number	:	35124528
Manufacturer	:	RION CO., LTD.
Calibration quantities	:	Sound pressure level (with reference standard microphone)
Calibration method	:	Measured by specified secondary standard microphone according to JCSS calibration procedure specified by RION.
Ambient conditions	:	Temperature 23.9 ℃, Relative humidity 49 %, Static pressure 100.6 kPa
Calibration date	:	02/11/2022 (DD/MM/YYYY)
Calibration location	:	3-20-41 Higashimotomachi, Kokubunji, Tokyo 185-8533, Japan RION CO., LTD. Calibration Room

We hereby certify that the results of this calibration were as follows.

Issue date : 09/11/2022 (DD/MM/YYYY)

Junichi Kawamura
Manager
Quality Assurance Section,
Quality Assurance Department,
Environmental Instrument Division,
RION CO., LTD.
3-20-41 Higashimotomachi, Kokubunji,
Tokyo 185-8533, Japan

Certificate No. D224645E

CALIBRATION RESULT

1. Sound pressure level (with reference standard microphone)

Measured value	Expanded uncertainty *1
93.99 dB	0.09 dB

Specified secondary standard microphone:
Type : 4160
Serial number : 2973341
Reference Sound pressure : 2×10^{-5} Pa

*1 Defines an interval estimated to have a level of confidence of approximately 95 %.
Coverage factor k=2

Calibration result is the calibration value in ambient conditions during calibration.

BE OUT OF JCSS CALIBRATION

1. Frequency

Measured value	Measurement uncertainty (k=2)
1000.0 Hz	2.7×10^{-4} Hz

Working measurement standard universal counter:
Type : 53132A
Serial number : MY40005574
(JCSS Calibration Certificate No. 2208001889940)

2. Total distortion

Measured value
0.2 %

Working measurement standard distortion meter:
Type : VA-2230A
Serial number : 11076061
(A2LA Calibration Certificate No. 1502-03109)

- closing -

Appendix F Event / Action Plan for Noise Exceedance

Event	Actions to be taken by Environmental Team as immediate as practicable	Actions to be taken by Independent Environmental Checker as immediate as practicable	Actions to be taken by Supervising Officer's Representative as immediate as practicable	Actions to be taken by Contractor as immediate as practicable
Action Level being exceeded	1. Notify IEC and Contractor; 2. Carry out investigation; 3. Report the results of investigation to the IEC, SO and Contractor; 4. Discuss with the IEC and Contractor on remedial measures required; 5. Increase monitoring frequency to check mitigation effectiveness. (The above actions should be taken within 2 working .days after the exceedance is identified)	1. Review the investigation results submitted by the ET; 2. Review the proposed remedial measures by the Contractor and advise the SO accordingly; 3. Advise the SO on the effectiveness of the proposed remedial measures. (The above actions should be taken within 2 working days after the exceedance is identified).	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented; 4. Supervise the implementation of remedial measures. (The above actions should be taken within 2 working days after the exceedance is identified).	1. Submit noise mitigation proposals to IEC and SO; 2. Implement noise mitigation proposals. (The above actions should be taken within 2 working days after the exceedance is identified)
Limit Level being exceeded	1. Inform IEC, SO, Contractor and EPD; 2. Repeat measurements to confirm findings; 3. Increase monitoring frequency; 4. Identify source and investigate the cause of exceedance; 5. Carry out analysis of Contractor's working procedures; 6. Discuss with the IEC, Contractor and SO on remedial measures required; 7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and SO informed of the results; 8. If exceedance stops, cease additional monitoring. (The above actions should be taken within 2 working days after the exceedance is identified)	1. Discuss amongst SO, ET, and Contractor on the potential remedial actions; 2. Review Contractors remedial actions whenever necessary to assure their effectiveness and advise the SO accordingly. (The above actions should be taken within 2 working days after the exceedance is identified)	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented; 4. Supervise the implementation of remedial measures; 5. If exceedance continues, consider stopping the Contractor to continue working on that portion of work which causes the exceedance until the exceedance is abated. (The above actions should be taken within 2 working days after the exceedance is identified)	1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IEC and SO within 3 working days of notification; 3. Implement the agreed proposals; 4. Submit further proposal if problem still not under control; 5. Stop the relevant portion of works as instructed by the SO until the exceedance is abated. (The above actions should be taken within 2 working days after the exceedance is identified)

Appendix G Noise Monitoring Data

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

Monitoring date: 06, 15, 19, 25 September 2023 (Daytime)

06&15, 15&16, 19&20 and 25&26 September 2023 (Evening & Night time)

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

Noise source other than construction activities from the Project: Nil

Noise Monitoring Data:

Date	Start time		End time	Weather	$L_{eq\ 30min}$ dB(A) / $L_{eq\ 5min}$ dB(A)	Sound Level Meter Used	Calibrator Used
06 Sep 2023	14:16	-	14:46	Cloudy	59.4	SVAN 971 (Serial No. C132260)	Rion NC-75 (No.35124528)
06 Sep 2023	19:16	-	19:21	Fine	51.2	SVAN 971 (Serial No. C132260)	Rion NC-75 (No.35124528)
	20:26	-	20:31		50.8		
	21:16	-	21:21		51.6		
07 Sep 2023	1:36	-	1:41	Fine	48.1	SVAN 971 (Serial No. C132260)	Rion NC-75 (No.35124528)
	3:46	-	3:51		48.2		
	5:31	-	5:36		50.6		
15 Sep 2023	13:24	-	13:54	Cloudy	59.7	SVAN 971 (Serial No. C132260)	Rion NC-75 (No.35124528)
15 Sep 2023	19:19	-	19:24	Fine	47.8	SVAN 971 (Serial No. C132260)	Rion NC-75 (No.35124528)
	20:14	-	20:19		48.1		
	20:49	-	20:54		48.0		
16 Sep 2023	1:34	-	1:39	Fine	46.4	SVAN 971 (Serial No. C132260)	Rion NC-75 (No.35124528)
	3:19	-	3:24		47.5		
	5:19	-	5:24		47.5		
19 Sep 2023	13:29	-	13:59	Sunny	58.1	SVAN 971 (Serial No. C132261)	Rion NC-75 (No.35124528)
19 Sep 2023	19:24	-	19:29	Fine	49.8	SVAN 971 (Serial No. C132261)	Rion NC-75 (No.35124528)
	20:19	-	20:24		49.6		
	22:14	-	22:19		49.1		
20 Sep 2023	1:14	-	1:19	Fine	49.4	SVAN 971 (Serial No. C132261)	Rion NC-75 (No.35124528)
	3:29	-	3:34		48.5		
	5:24	-	5:29		47.8		
25 Sep 2023	13:50	-	14:20	Sunny	57.8	SVAN 971 (Serial No. 96062)	Rion NC-75 (No.35124528)
25 Sep 2023	19:25	-	19:30	Fine	51.9	SVAN 971 (Serial No. 96062)	Rion NC-75 (No.35124528)
	20:15	-	20:20		53.1		
	21:10	-	21:15		51.8		
26 Sep 2023	1:30	-	1:35	Fine	48.0	SVAN 971 (Serial No. 96062)	Rion NC-75 (No.35124528)
	3:15	-	3:20		48.1		
	5:20	-	5:25		48.0		

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

Monitoring date: 06, 15, 19, 25 September 2023 (Daytime)

06&15, 15&16, 19&20 and 25&26 September 2023 (Evening & Night time)

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

Noise source other than construction activities from the Project: Nil

Noise Monitoring Data:

Date	Start time		End time	Weather	$L_{eq\ 30min}$ dB(A) / $L_{eq\ 5min}$ dB(A)	Sound Level Meter Used	Calibrator Used
06 Sep 2023	14:21	-	14:51	Cloudy	56.0	SVAN 971 (Serial No. C119577)	Rion NC-75 (No.35124528)
06 Sep 2023	19:16	-	19:21	Fine	58.2	SVAN 971 (Serial No. C119577)	Rion NC-75 (No.35124528)
	20:26	-	20:31		51.8		
	21:16	-	21:21		51.9		
07 Sep 2023	1:36	-	1:41	Fine	51.0	SVAN 971 (Serial No. C119577)	Rion NC-75 (No.35124528)
	3:46	-	3:51		51.7		
	5:31	-	5:36		52.4		
15 Sep 2023	13:31	-	14:01	Cloudy	57.4	SVAN 971 (Serial No. C119577)	Rion NC-75 (No.35124528)
15 Sep 2023	19:16	-	19:21	Fine	53.2	SVAN 971 (Serial No. C119577)	Rion NC-75 (No.35124528)
	20:16	-	20:21		55.3		
	20:51	-	20:56		57.1		
16 Sep 2023	1:31	-	1:36	Fine	49.1	SVAN 971 (Serial No. C119577)	Rion NC-75 (No.35124528)
	3:16	-	3:21		48.7		
	5:16	-	5:21		50.8		
19 Sep 2023	13:31	-	14:01	Sunny	61.4	SVAN 971 (Serial No. C119577)	Rion NC-75 (No.35124528)
19 Sep 2023	19:31	-	19:36	Fine	53.7	SVAN 971 (Serial No. C119577)	Rion NC-75 (No.35124528)
	20:16	-	20:21		52.1		
	22:16	-	22:21		49.7		
20 Sep 2023	1:11	-	1:16	Fine	48.6	SVAN 971 (Serial No. C119577)	Rion NC-75 (No.35124528)
	3:31	-	3:36		48.0		
	5:21	-	5:26		49.1		
25 Sep 2023	13:54	-	14:24	Sunny	57.1	SVAN 971 (Serial No. C119577)	Rion NC-75 (No.35124528)
25 Sep 2023	19:39	-	19:44	Fine	50.4	SVAN 971 (Serial No. C119577)	Rion NC-75 (No.35124528)
	20:24	-	20:29		55.5		
	21:09	-	21:14		52.2		
26 Sep 2023	1:29	-	1:34	Fine	47.9	SVAN 971 (Serial No. C119577)	Rion NC-75 (No.35124528)
	3:14	-	3:19		48.6		
	5:19	-	5:24		47.8		

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

Monitoring date: 06, 15, 20, 25 September 2023 (Daytime)

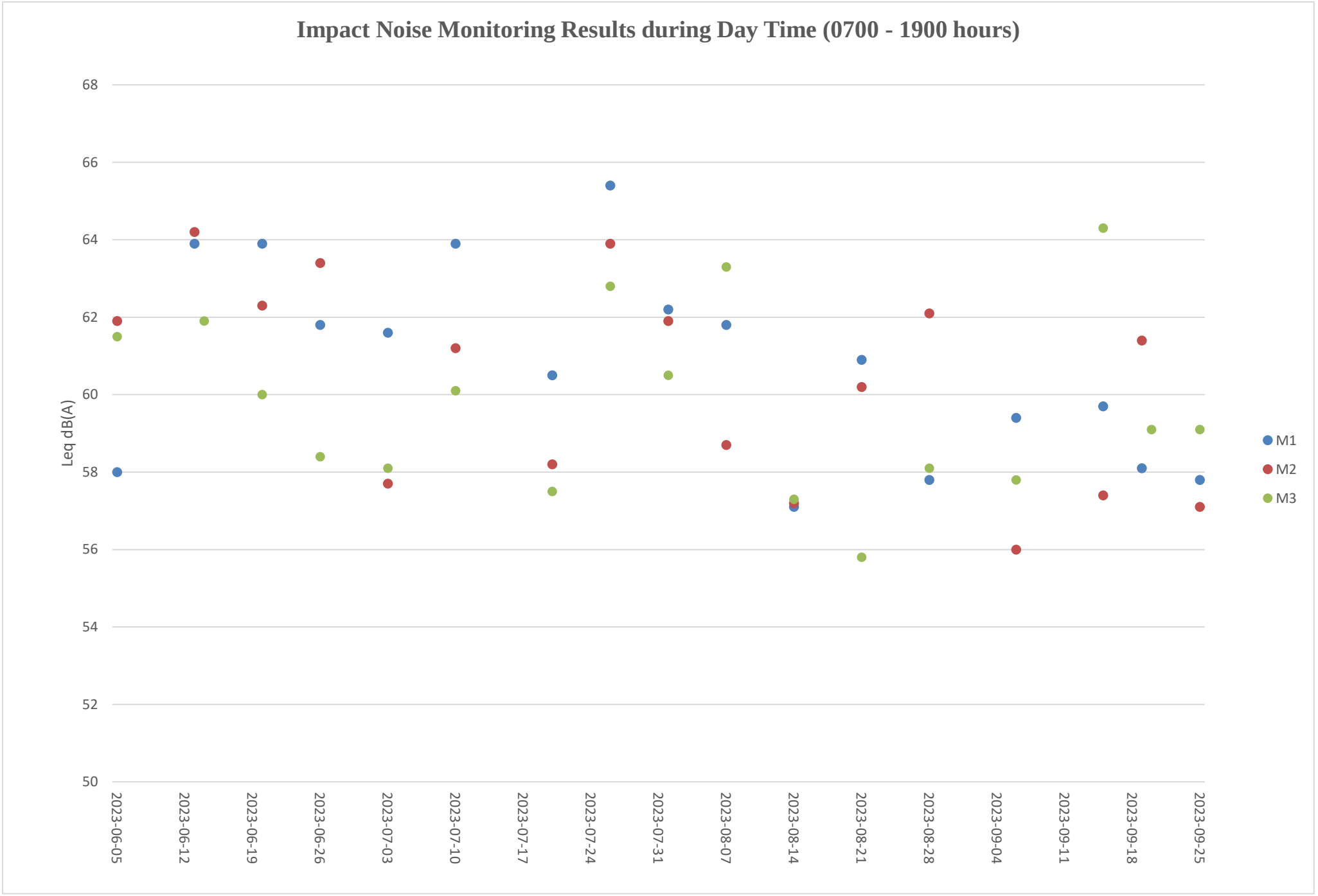
06&15, 15&16, 20&21 and 25&26 September 2023 (Evening & Night time)

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

Noise source other than construction activities from the Project: Air-conditioner

Noise Monitoring data:

Date	Start time		End time	Weather	$L_{eq\ 30min}$ dB(A) / $L_{eq\ 5min}$ dB(A)	Sound Level Meter Used	Calibrator Used
06 Sep 2023	14:29	-	14:59	Cloudy	57.8	SVAN 971 (Serial No. C132261)	Rion NC-75 (No.35124528)
06 Sep 2023	19:19	-	19:24	Fine	51.3	SVAN 971 (Serial No. C132261)	Rion NC-75 (No.35124528)
	20:24	-	20:29		53.7		
	21:14	-	21:19		46.9		
07 Sep 2023	1:34	-	1:39	Fine	47.2	SVAN 971 (Serial No. C132261)	Rion NC-75 (No.35124528)
	3:44	-	3:49		46.0		
	5:34	-	5:39		53.7		
15 Sep 2023	13:18	-	13:48	Cloudy	64.3	SVAN 971 (Serial No. C132269)	Rion NC-75 (No.35124528)
15 Sep 2023	19:13	-	19:18	Fine	54.4	SVAN 971 (Serial No. C132269)	Rion NC-75 (No.35124528)
	20:13	-	20:18		54.9		
	20:58	-	21:03		45.9		
16 Sep 2023	1:33	-	1:38	Fine	44.4	SVAN 971 (Serial No. C132269)	Rion NC-75 (No.35124528)
	3:18	-	3:23		41.8		
	5:13	-	5:18		47.4		
20 Sep 2023	13:42	-	14:12	Sunny	59.1	SVAN 971 (Serial No. 96062)	Rion NC-75 (No.35124528)
20 Sep 2023	19:12	-	19:17	Fine	55.9	SVAN 971 (Serial No. 96062)	Rion NC-75 (No.35124528)
	20:32	-	20:37		53.7		
	22:17	-	22:22		44.0		
21 Sep 2023	1:12	-	1:17	Fine	42.0	SVAN 971 (Serial No. 96062)	Rion NC-75 (No.35124528)
	3:32	-	3:37		41.1		
	5:22	-	5:27		43.0		
25 Sep 2023	13:38	-	14:08	Sunny	59.1	SVAN 971 (Serial No. C132261)	Rion NC-75 (No.35124528)
25 Sep 2023	19:38	-	19:43	Fine	56.4	SVAN 971 (Serial No. C132261)	Rion NC-75 (No.35124528)
	20:18	-	20:23		53.5		
	21:13	-	21:18		48.8		
26 Sep 2023	1:28	-	1:33	Fine	48.1	SVAN 971 (Serial No. C132261)	Rion NC-75 (No.35124528)
	3:13	-	3:18		50.9		
	5:18	-	5:23		47.9		


Impact Noise Monitoring Results during Day Time (0700 - 1900 hours)
Leq dB(A)
68
66
64
62
60
58
56
54
52
50
2023-06-05
2023-06-12
2023-06-19
2023-06-26
2023-07-03
2023-07-10
2023-07-17
2023-07-24
2023-07-31
2023-08-07
2023-08-14
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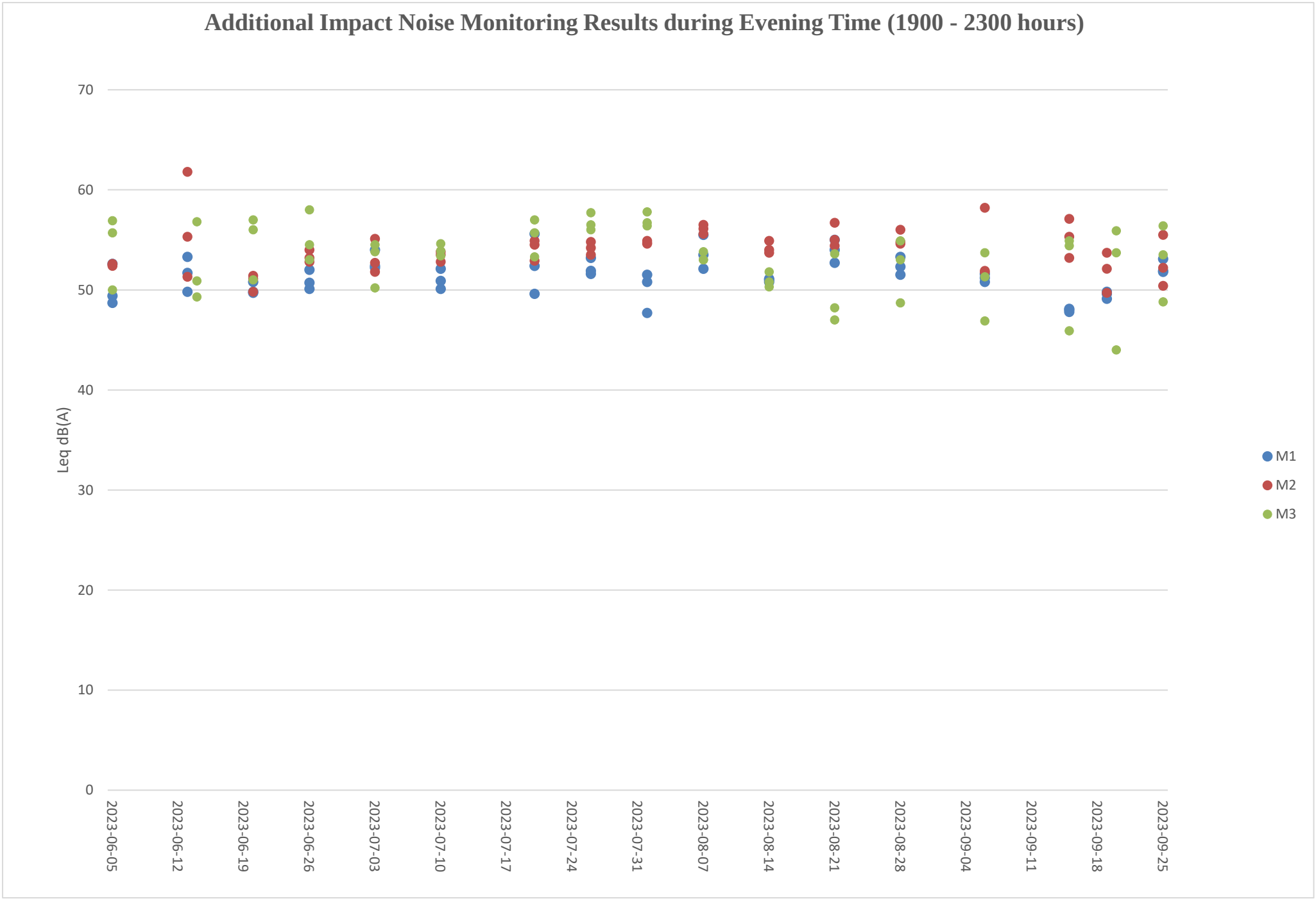
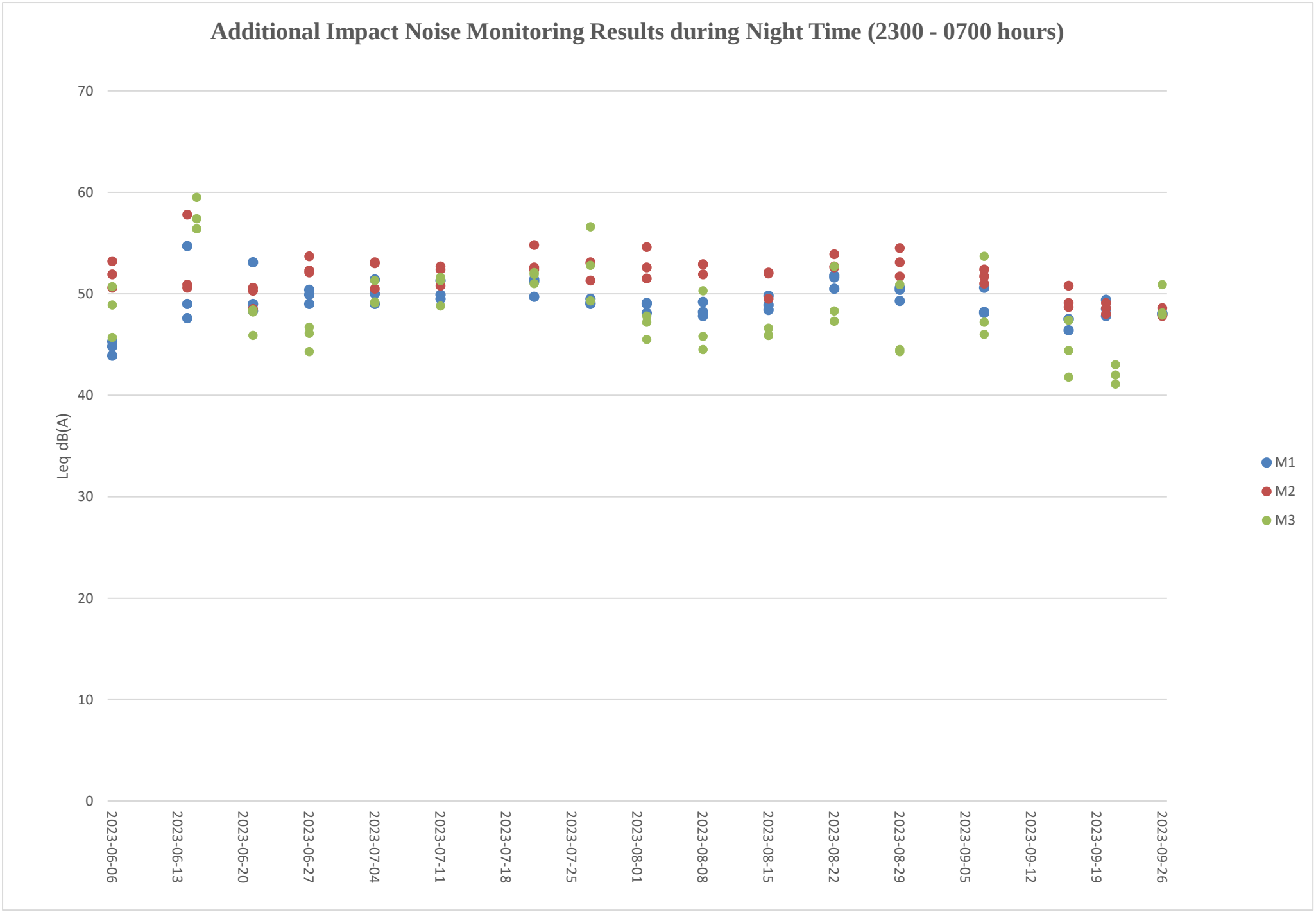
2023-09-11
2023-09-18
2023-09-25
M1
M2
M3


Additional Impact Noise Monitoring Results during Evening Time (1900 - 2300 hours)
Leq dB(A)
70
60
50
40
30
20
10
0
2023-06-05
2023-06-12
2023-06-19
2023-06-26
2023-07-03
2023-07-10
2023-07-17
2023-07-24
2023-07-31
2023-08-07
2023-08-14
2023-08-21
2023-08-28
2023-09-04
2023-09-11
2023-09-18
2023-09-25
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
2023-06-06
2023-06-13
2023-06-20
2023-06-27
2023-07-04
2023-07-11
2023-07-18
2023-07-25
2023-08-01
2023-08-08
2023-08-15
2023-08-22
2023-08-29
2023-09-05
2023-09-12
2023-09-19
2023-09-26
M1
M2
M3

Appendix H 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 (see Note 4)	Imported Fill Sand (see Note 4)	Imported Fill Public fill (see Note 4)	Imported Fill Rock (see Note 4)	Metals (see Note 5)	Paper/ cardboard packaging (see Note 5)	Plastics (see Note 2, 5)	Chemical Waste		Others, e.g. general refuse (see Note 3)
	(in ,000m^3)	(in ,000m^3)	(in ,000m^3)	(in ,000m^3	(in ,000m^3)	(in ,000m^3)			(in ,000 kg)	(in ,000kg)	(in ,000kg)	(in ,000kg)	(in ,000L)	(in ,000 m^3)
Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0
May	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub-total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0065
Sep	0	0	0	0	0	2.9619	0	0	0	0	0	0	0	0
Oct	0	0	0	0	0	3.0771	0	0	0	0	0	0	0	0.0130
Nov	0	0	0	0	0	6.7871	0	0	0	0	0	0	0	0
Dec	0	0	0	0	0	59.0709	0	0	0	0	0	0.2000	0.8700	0
Total	0	0	0	0	0	71.8970	0	0	0	0	0	0.2000	0.8700	0.0195

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

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 (see Note 4)	Imported Fill Sand (see Note 4)	Imported Fill Public fill (see Note 4)	Imported Fill Rock (see Note 4)	Metals (see Note 5)	Paper/ cardboard packaging (see Note 5)	Plastics (see Note 2, 5)	Chemical Waste		Others, e.g. general refuse (see Note 3)
	(in ,000m^3)	(in ,000m^3)	(in ,000m^3)	(in ,000m^3	(in ,000m^3)	(in ,000m^3)			(in ,000 kg)	(in ,000kg)	(in ,000kg)	(in ,000kg)	(in ,000L)	(in ,000 m^3)
Jan	0	0	0	0	0	82.6139	0	0	0	0	0	0	0	0.0065
Feb	0	0	0	0	0	46.7821	0	0	0	0	0	0	0	0
Mar	0	0	0	0	0	97.1000	0	0.7552	0	0.2560	0	0	0	0
Apr	0	0	0	0	0	58.0413	0	0	0	0	0	0	0	0
May	0	0	0	0	0	14.5625	0	1.4648	0	0	0	0	0	0.0065
Jun	0	0	0	0	0	0	0	6.8421	0	0	0	0	0	0
Sub-total	0	0	0	0	0	299.0998	0	9.0621	0	0.2560	0	0	0	0.0130
Jul	0	0	0	0	0	0	0	0.4289	0	0	0	0	8.4000	0.0130
Aug	0	0	0	0	0	2.5775	0	10.5600	0	0	0	0	0	0
Sep	0	0	0	0	0	6.1081	0	8.4704	0	0.3530	0	0	0	0.0065
Oct	0	0	0	0	0	9.8875	0	7.1900	0	0	0	0	0	0
Nov	0	0	0	0	0	38.3088	0	19.3105	0	0	0	0	0	0.0195
Dec	0	0	0	0	0	54.3469	0	26.9807	0	0	0	0	0	0.0910
Total	0	0	0	0	0	410.3286	0	82.0026	0	0.6090	0	0	8.4000	0.1430

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

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 (see Note 4)	Imported Fill Sand (see Note 4)	Imported Fill Public fill (see Note 4)	Imported Fill Rock (see Note 4)	Metals (see Note 5)	Paper/ cardboard packaging (see Note 5)	Plastics (see Note 2, 5)	Chemical Waste		Others, e.g. general refuse (see Note 3)
	(in ,000m^3)	(in ,000m^3)	(in ,000m^3)	(in ,000m^3	(in ,000m^3)	(in ,000m^3)			(in ,000 kg)	(in ,000kg)	(in ,000kg)	(in ,000kg)	(in ,000L)	(in ,000 m^3)
Jan	0	0	0	0	0	37.1550	0	25.0812	0	0	0	0	0	0.0065
Feb	0	0	0	0	0	27.7910	0	18.8300	0	0	0	0	0	0.0065
Mar	0	0	0	0	0	22.5669	0	26.1586	0	0	0	0	7.2000	0.0065
Apr	0	0	0	0	0	12.7800	0	10.1825	0	0	0	0	0	0.0195
May	0	0	0	0	0	16.1138	0	24.3740	0	0.4220	0	0	0	0.0195
Jun	0	0	0	0	0	31.5177	0	28.3030	0	0	0	0	0	0.0065
Sub-total	0	0	0	0	0	147.9244	0	132.9293	0	0.4220	0	0	7.2000	0.0650
Jul	0	0	0	0	0	34.7856	17.0606	35.1800	0	0	0	0	0	0.0195
Aug	0	0	0	0	0	27.1375	65.5667	27.9335	0	0	0	0	0	0
Sep	0	0	0	0	0	11.9813	110.1328	43.5435	0	0	0	0	0	0.0195
Oct	0	0	0	0	0	2.8213	131.6600	22.5415	0	0	0	0	0	0.0130
Nov	0	0	0	0	0	0	162.1811	44.6475	0	0.4090	0	0	0.4000	0.0130
Dec	0	0	0	0	0	0	174.9800	57.8380	0	0	0	0	0	0.0130
Total	0	0	0	0	0	224.6501	661.5812	364.6133	0	0.8310	0	0	7.6000	0.1430

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

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 (see Note 4)	Imported Fill Sand (see Note 4)	Imported Fill Public fill (see Note 4)	Imported Fill Rock (see Note 4)	Metals (see Note 5)	Paper/ cardboard packaging (see Note 5)	Plastics (see Note 2, 5)	Chemical Waste		Others, e.g. general refuse (see Note 3)
	(in ,000m^3)	(in ,000m^3)	(in ,000m^3)	(in ,000m^3	(in ,000m^3)	(in ,000m^3)			(in ,000 kg)	(in ,000kg)	(in ,000kg)	(in ,000kg)	(in ,000L)	(in ,000 m^3)
Jan	0	0	0	0	0	0	198.1311	36.4775	0	0	0	0	0	0.0065
Feb	0	0	0	0	0	0	143.9511	20.9960	0	0	0	0	0	0.6305
Mar	0	0	0	0	0	0	103.1833	23.4510	0	0	0	0	0	0.0130
Apr	0	0	0	0	0	0	161.2956	27.2810	0	0	0	0	0	0.0130
May	0	0	0	0	0	0	193.3300	20.5265	0	0	0	0	0	0.0715
Jun	0	0	0	0	0	0	141.5728	23.7825	0	0.2440	0	0	0	0.0455
Sub-total	0	0	0	0	0	0	941.4639	152.5145	0	0.2440	0	0	0	0.7800
Jul	0	0	0	0	0	0	105.1083	30.6065	0	0	0	0	0	0.0195
Aug	0	0	0	0	0	0	11.1822	7.5180	0	0	0	0	0	0.0130
Sep	0	0	0	0	0	0	0	5.7575	0	0	0	0	0.6000	0.0390
Oct	0	0	0	0	0	0	0	6.8885	0	0	0	0	0	0
Nov	0	0	0	0	0	0	0	6.2975	0	0.1610	0	0	0	0.0130
Dec	0	0	0	0	0	0	0	5.9235	0	0	0	0	0	0
Total	0	0	0	0	0	0	1057.7544	215.5060	0	0.4050	0	0	0.6000	0.8645

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

吉寶西格斯 - 振華聯營公司

Keppel Seghers - Zhen Hua Joint Venture

Monthly Summary Waste Flow Table for 2022 (year)

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

Month	Actual Quantities of Inert C&D Materials Generated Monthly								Actual Quantities of C&D Wastes Generated Monthly					
	Total Quantity Generated	Hard Rock and Large Broken Concrete (see Note 1)	Reused in the Contract	Reused in other Projects (see Note 4)	Disposed as Public Fill (see Note 4)	Imported Fill Sand (see Note 4)	Imported Fill Public fill (see Note 4)	Imported Fill Rock (see Note 4)	Metals (see Note 5)	Paper/ cardboard packaging (see Note 5)	Plastics (see Note 2, 5)	Chemical Waste		Others, e.g. general refuse (see Note 3)
	(in ,000m^3)	(in ,000m^3)	(in ,000m^3)	(in ,000m^3	(in ,000m^3)	(in ,000m^3)			(in ,000 kg)	(in ,000kg)	(in ,000kg)	(in ,000kg)	(in ,000L)	(in ,000 m^3)
Jan	0	0	0	0	0	0	4.9389	2.7070	0	0.1550	0	0	0	0.0715
Feb	0	0	0	0	0	0	3.2478	4.0290	0	0	0	0.4000	0.2250	0
Mar	0	0	0	0	0	0	2.3422	2.7820	0	0	0	0	0	0.0780
Apr	0	0	0	0	0	0	18.2189	5.8100	0	0.3120	0	0	0	0.1495
May	0.0648	0	0	0	0.0648	0	16.7711	17.2320	0	0	0	0	0	0.0975
Jun	0.0037	0	0	0	0.0037	0.2115	1.1128	14.1470	36.3000	0.3890	0	0	1.7250	0.0975
Sub-total	0.0685	0	0	0	0.0685	0.2115	46.6317	46.7070	36.3000	0.8560	0	0.4000	1.9500	0.4940
Jul	25.7183	0	0	25.7183	0	0.1125	0.8333	17.5210	0	0.6400	0.0060	0	0	0.1235
Aug	13.2494	0	0	13.2494	0	0	0	24.5210	76.0300	1.8870	0	0	0	0.1170
Sep	24.9072	0	0	24.8494	0.0578	0	0	16.2815	72.0600	0.3060	0	0	0	0.1885
Oct	13.3139	0	0	13.3006	0.0133	0	0	11.8665	78.1000	0.5800	0	0	0	0.2405
Nov	26.5583	0	0	26.5583	0	0	0	7.2055	0	0	0	0	0	0.1105
Dec	29.1411	0	0	29.1411	0	0	0	3.5174	0	0	0	0	0	0.2535
Total	132.9567	0	0	132.8171	0.1396	0.3240	47.4650	127.6199	262.4900	4.2690	0.0060	0.4000	1.9500	1.5275

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

吉寶西格斯 - 振華聯營公司

Keppel Seghers - Zhen Hua Joint Venture

Monthly Summary Waste Flow Table for 2023 (year)

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

Month	Actual Quantities of Inert C&D Materials Generated Monthly								Actual Quantities of C&D Wastes Generated Monthly					
	Total Quantity Generated	Hard Rock and Large Broken Concrete (see Note 1)	Reused in the Contract	Reused in other Projects (see Note 4)	Disposed as Public Fill (see Note 4)	Imported Fill Sand (see Note 4)	Imported Fill Public fill (see Note 4)	Imported Fill Rock (see Note 4)	Metals (see Note 5)	Paper/ cardboard packaging (see Note 5)	Plastics (see Note 2, 5)	Chemical Waste		Others, e.g. general refuse (see Note 3)
	(in ,000m^3)	(in ,000m^3)	(in ,000m^3)	(in ,000m^3	(in ,000m^3)	(in ,000m^3)			(in ,000 kg)	(in ,000kg)	(in ,000kg)	(in ,000kg)	(in ,000L)	(in ,000 m^3)
Jan	24.6728	0	0	24.6728	0	0	0	1.3545	0	0.3150	0	0	0	0.1365
Feb	26.7206	0	0	26.7206	0	0	0	1.8990	11.1501	0	0.0007	0	0	0.1235
Mar	22.1089	0	0	22.1089	0	0	0	0.9025	0	0	0	0	0	0.1105
Apr	36.0011	0	0	36.0011	0	0	0	0	0	0.2150	0	0	0	0.1365
May	21.8900	0	0	21.8900	0	0	0	0	0	0.3160	0	0	0	0.1495
Jun	8.8878	0	0	8.8878	0	0	0	0	0	0	0	0	0	0.1950
Sub-total	140.2812	0	0	140.2812	0	0	0	4.1560	11.1501	0.8460	0.0007	0	0	0.8515
Jul	2.2233	0	0	2.2233	0	0	0	0	0	0.3870	0	0	0	0.1495
Aug	4.4200	0	0	4.4200	0	0	0	0	0	0	0	0	0	0.2015
Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2860
Oct														
Nov														
Dec														
Total	146.9245	0	0	146.9245	0	0	0	4.1560	11.1501	1.2330	0.0007	0	0	1.4885

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.
(4) Use the conversion factor: sand density = 1.6T/m^3, public fill density = 1.8T/m^3 and rock density = 2T/m^3.
(5) Materials recycled.

Appendix I Event / Action Plan for Coral Monitoring

Event	Action			
	ET Leader	IEC	SO	Contractor
Action Level Exceedance	1. Check monitoring data 2. Inform the IEC, SO ,and Contractor of the findings; 3. Increase the monitoring to at least once a month to confirm findings; 4. Propose mitigation measures for consideration	1. Discuss monitoring with the ET and the Contractor; 2. Review proposals for additional monitoring and any other measures submitted by the Contractor and advise the SO accordingly.	1. Discuss with the IEC additional monitoring requirements and any other measures proposed by the ET; 2. Make the agreement on the measures to be implemented.	1. Inform the SO and confirm notification of the non-compliance in writing; 2. Discuss with the ET and the IEC and propose measures to the IEC and the SO; 3. Implement the agreed measures.
Limit Level Exceedance	1. Undertake Steps 1-4 as in the Action Level Exceedance. If further exceedance of Limit Level, propose enhancement measures for consideration.	1. Discuss monitoring with the ET and the Contractor; 2. Review proposals for additional monitoring and any other measures submitted by the Contractor and advise the SO accordingly.	1. Discuss with the IEC additional monitoring requirements and any other measures proposed by the ET; 2. Make the agreement on the measures to be implemented.	1. Inform the SO and confirm notification of the non-compliance in writing; 2. Discuss with the ET and the IEC and propose measures to the IEC and the SO; 3. Implement the agreed measures.

Appendix J Event / Action Plan for White-Bellied Sea Eagle

Event	Action		
	Environmental Team	**Audit Team**	**Contractor**
Absence of White-bellied Sea Eagle during a whole day of monitoring.	Inform audit team. Increase monitoring frequency to daily.	Inform site engineer and contractor. If the absence remains: • Review construction activities and noise monitoring records of the associated period; • Identify potential causes of the absence; • Propose remedial measures, such as change of construction method and sequence; • Confirm the feasibility of the proposed remedial measures with site engineer and contractor; • Discuss with environmental team about the effectiveness of the proposed remedial measures.	Implement the agreed remedial measures.

Appendix K Exceedance Report

Statistical Summary of Exceedances in the Reporting Period

Noise (Day Time)			
Location	**Action Level**	**Limit Level**	**Total**
M1	0	0	0
M2	0	0	0
M3	0	0	0
Noise (Evening Time)			
Location	**Action Level**	**Limit Level**	**Total**
M1	0	0	0
M2	0	0	0
M3	0	0	0
Noise (Night Time)			
Location	**Action Level**	**Limit Level**	**Total**
M1	0	0	0
M2	0	0	0
M3	0	0	0

Appendix L Complaint Log

Statistical Summary of Environmental Complaints

Reporting Period	Environmental Complaint Statistics		
	Frequency	**Cumulative**	**Complaint Nature**
01 Sep 2023- 30 Sep 2023	1	4	Alleged discharge of effluent

Statistical Summary of Environmental Summons

Reporting Period	Environmental Summons Statistics		
	Frequency	**Cumulative**	**Details**
01 Sep 2023- 30 Sep 2023	0	0	N/A

Statistical Summary of Environmental Prosecution

Reporting Period	Environmental Prosecution Statistics		
	Frequency	**Cumulative**	**Details**
01 Sep 2023- 30 Sep 2023	0	0	N/A

COMPLAINT DETAILS

Date Received	05 September 2023 From: Environmental Protection Department (Compliance Division)
Parameter	*~~Air / Noise~~ / Water /~~ Waste/ Landscape and Visual/ Chemical Spillage~~
Reference No.	IWMF_EC04_20230905
Enquirer's Details:	
Name	Not disclosed
Contact Tel No.	Not disclosed
Address	Not disclosed
Source	*~~Telephone/Site Visit~~ / Referred from Environmental Protection Department

Details of a Complaint:

A complaint was received by the Environmental Protection Department on 05 September 2023 and referred to the Environmental Team (ET), Independent Environmental Checker (IEC) and Supervising Officer (SO) on 06 September 2023. The complaint was related to alleged discharge of effluent near the shore of artificial island. Details of the complaint are as below:

From Notification of Environmental Complaint

- The complainant alleged that discharge of effluent was observed near the shore of artificial island.
- The complainant reported that discharged effluent was suspected to be cement water.

Actions taken / to be taken:

- ET notified the Contractor and requested for more information on 06 September 2023.
- Information had been provided by Contractor on 06 September 2023.
- Field investigations were conducted on 07, 12 and 19 September 2023.
- Leakage test with fluorescent dye at pits near the shore of artificial island was conducted on 19 September 2023.

Investigation Findings:

With reference to the information provided by the Contractor, the location of alleged discharge of cement water is in the vicinity of caisson 7. As the land based concrete batching plant was still not in operation and no leakage was reported and observed at the concrete batching barge on 05 September 2023, no cement water shall be generated or observed in the work areas adjacent to caisson 7.

In view of impossibility of the existence of cement water at the work areas adjacent to caisson 7, the accidentally discharged effluent claimed in the complaint was suspected to be the surface runoff along haul road near caisson 7. The accidental discharge might be caused by the minor leakage from the damaged geotextile at caisson 7.

As reported by the Contractor, damaged geotextile at caisson 7 was observed during the post typhoon inspection on 05 September 2023 and the damaged geotextile had been repaired immediately after the post inspection. The photo record of the replacing the damaged geotextile is given in **Figure 1**. The damage was possibly due to adverse weather under Super Typhoon "SAOLA"[1].

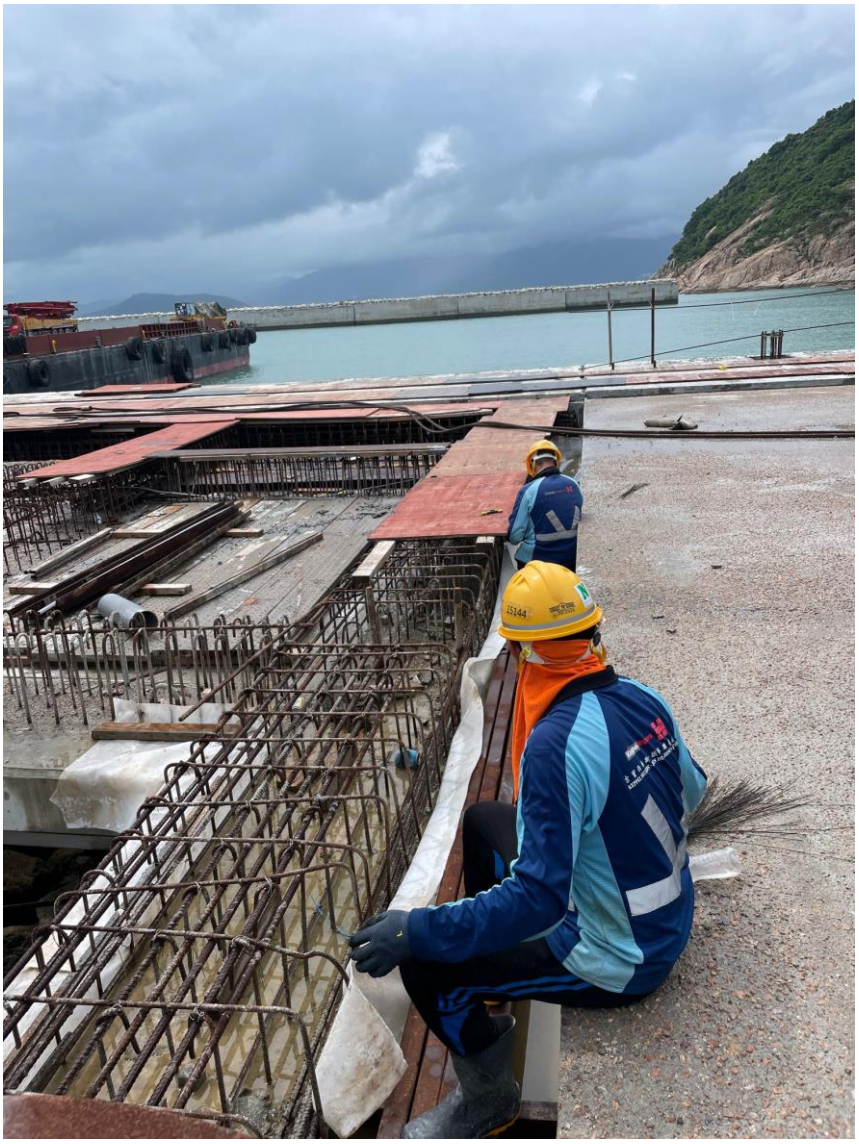


Figure 1 Replacement of Damaged Geotextile on 05 September 2023

Note:

[1]: Record of Tropical Cyclone Warning Signals can be retrieved on Hong Kong Observatory Webpage: https://www.hko.gov.hk/en/wxinfo/climat/warndb/warndb1.shtml

MONITORING

Ad hoc Monitoring undertaken	*~~Yes~~ / No
--	

FOLLOW-UP SITE VISIT

Date	Status / Observation
07, 12 and 19 September 2023 (Weekly site inspection)	No silt plume was observed on the sea surface along the seawall B during the site inspection on 07, 12 and 19 September 2023. The site photo records of seawall B during site inspection on 07, 12 and 19 September 2023 are given in **Figure 2, Figure 3 and Figure 4** respectively.  **Figure 2** Shore Condition along Seawall B during Site Inspection on 07 September 2023

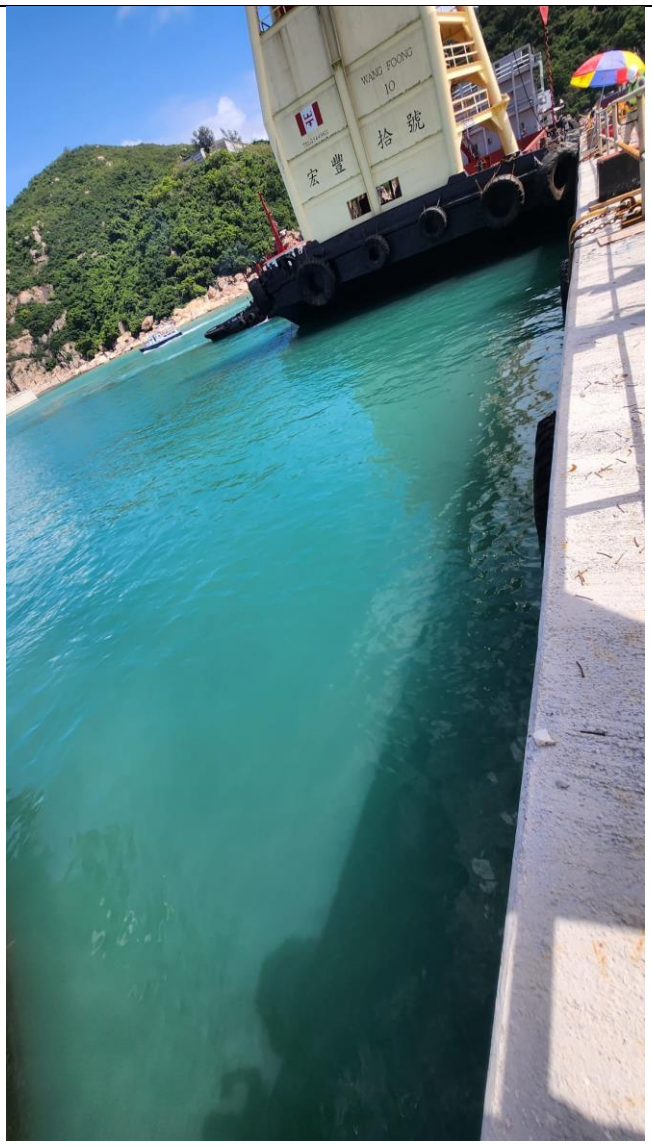
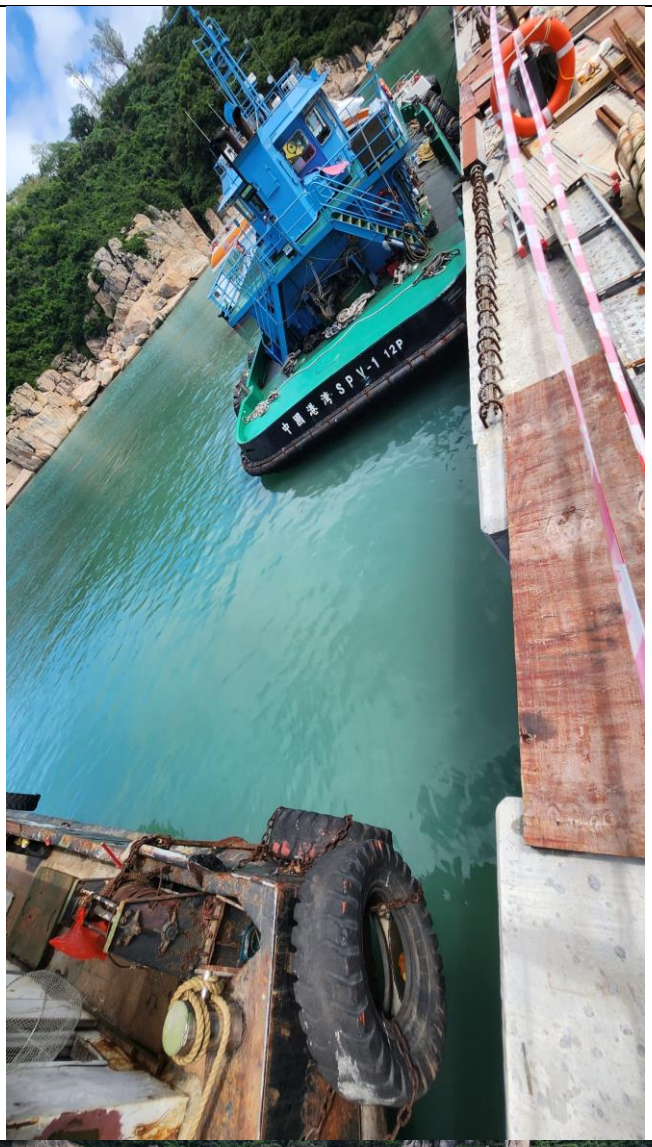


Figure 3 Shore Condition along Seawall B during Site Inspection on 12 September 2023



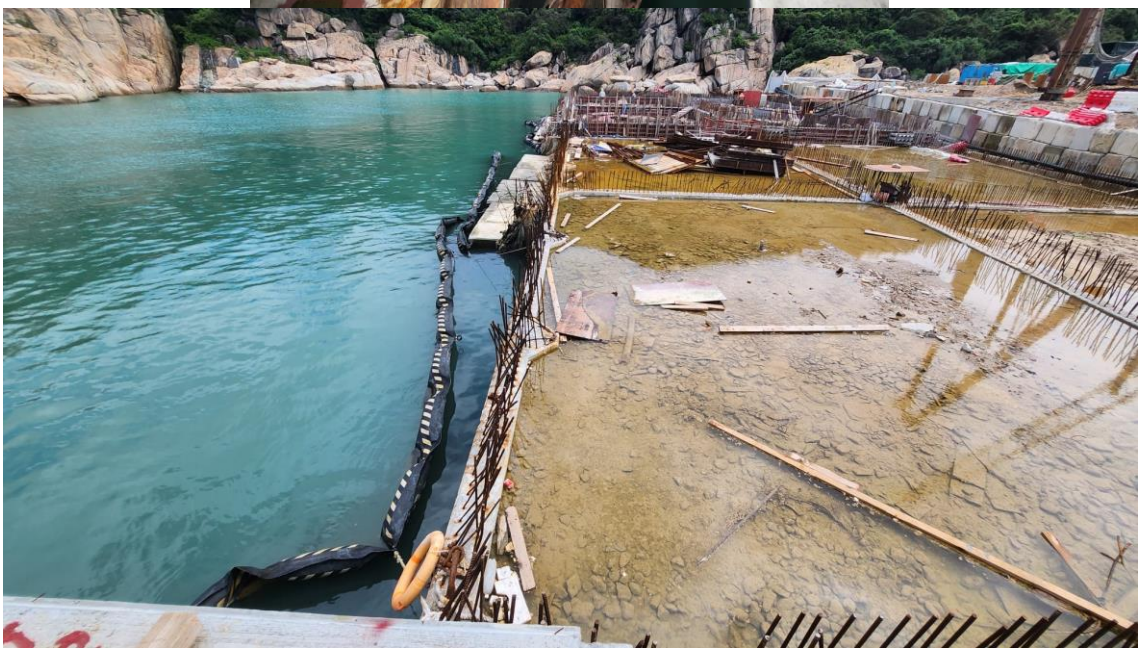
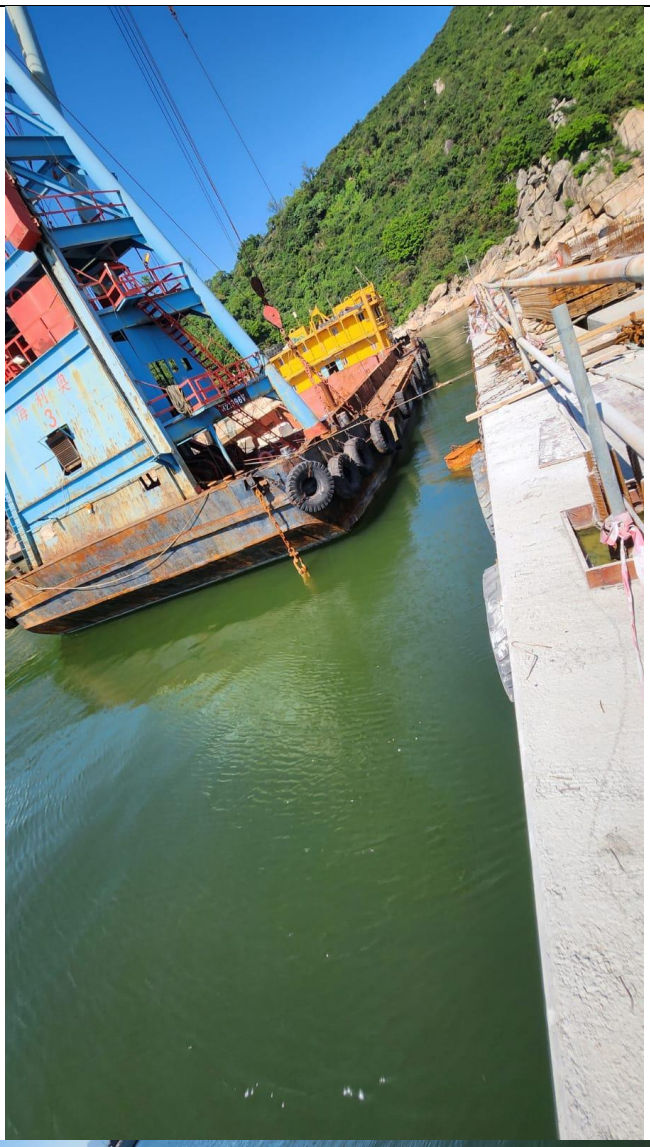


Figure 4 Shore Condition along Seawall B during Site Inspection on 19 September 2023

19 September 2023 (Leakage Test)	In an attempt to identify the source of effluent discharge, a leakage test with fluorescent dye was conducted on 19 September 2023. The pits at caisson 5 and water channel at caisson A2, which are other potential sources of alleged effluent discharge, were selected for the leakage test. The fluorescent dye was diluted with ratio of 1.5mL dye to 1L water. The diluted dye was then poured into the selected pit or water channel. The sea condition near the shore of seawall B was inspected around 1 hour later after the diluted dye was poured. No fluorescent dye was observed during the inspection along the seawall B. The photo records of diluting fluorescent dye, pouring dye into selected test locations and sea condition along seawall B after leakage test are given in **Figure 5**, **Figure 6** and **Figure 7** respectively.  **Figure 5** Dilution of Fluorescent Dye with Water

Figure 6 Leakage Test at Caisson 5 and Caisson A2



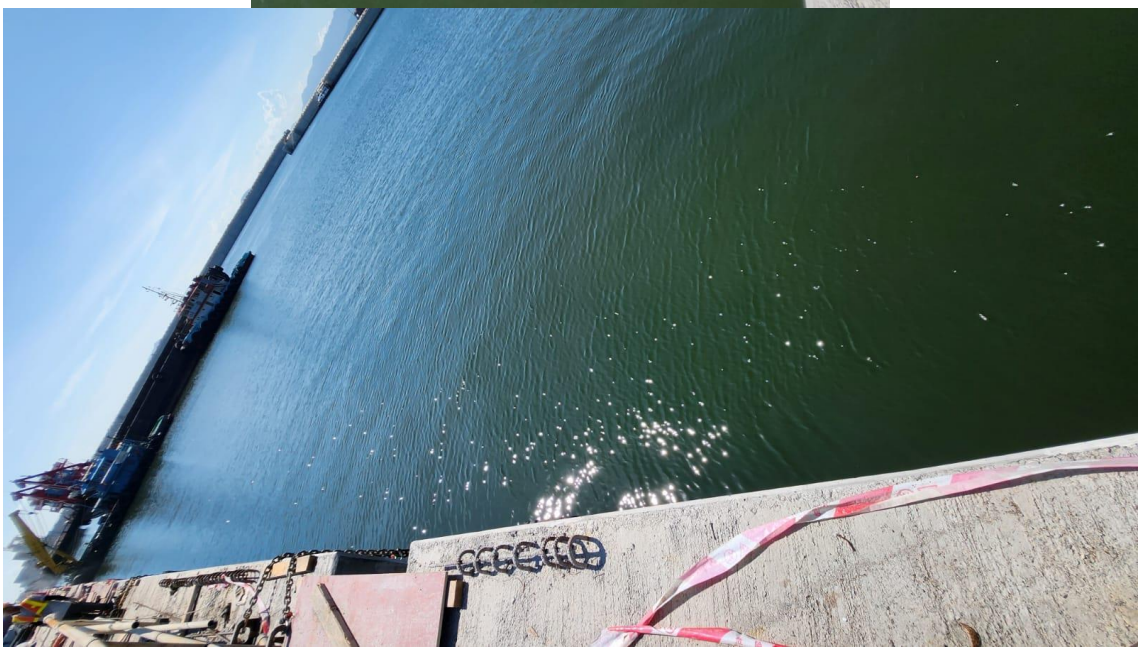


Figure 7 Inspection along Seawall B after Leakage Test

CONCLUSION

Based on the information provided by the Contractor and collected from the site inspections, and the outcome of the leakage test, it is considered that the leakage of muddy water was induced by the damaged geotextile at caisson 7. The damaged geotextile had been repaired immediately and no further leakage was reported or observed afterwards.

RECOMMENDATIONS

In view of public concern, the following measures should be implemented/maintained to minimise the potential environmental impact:

1. Regular and/or random site inspection by SO/ the Contractor/ the ET to ensure that the geotextile is in good condition and deployed at proper location. The geotextile should be repaired immediately if damage on geotextile is observed.
2. Conduct induction/ refresher training and tool-box talks of proper maintenance of temporary drainage system, including the maintenance and repair of geotextile and removal of general waste / sludge inside the temporary drainage system. Records of training should be kept by the Contractor for future audit.

STATUS OF COMPLAINANT: *~~Follow-up~~/Closed

Prepared by	:	Joe Ho	Certified by	:	F C Tsang
Designation	:	Environmental Team Member	Designation	:	Environmental Team Leader
Signature	:		Signature	:	
Date	:	26 September 2023	Date	:	26 September 2023

Appendix M Impact Monitoring Schedule of Next Reporting Month

Impact Monitoring Schedule for IWMF						
Oct-23						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5	6	7
		Impact Daytime & Evening Noise monitoring for M1, M2 & M3	Impact Night time Noise monitoring for M1, M2 & M3			
8	9	10	11	12	13	14
				Impact Daytime & Evening Noise monitoring for M1, M2 & M3	Impact Night time Noise monitoring for M1, M2 & M3	
15	16	17	18	19	20	21
			Impact Daytime & Evening Noise monitoring for M1, M2 & M3	Impact Night time Noise monitoring for M1, M2 & M3		
22	23	24	25	26	27	28
		Impact Daytime & Evening Noise monitoring for M1, M2 & M3	Impact Night time Noise monitoring for M1, M2 & M3			
29	30	31				
	Impact Daytime & Evening Noise monitoring for M1, M2 & M3 Ecology monitoring for WBSE	Impact Night time Noise monitoring for M1, M2 & M3				

Remarks:
1. Daytime Noise Monitoring (07:00-1900), Evening Time Noise Monitoring (1900-2300), Night Time Noise Monitoring (2300-0700)
2. Water Quality Monitoring for S1,S2 and S3 will only conduct during DCM works, refer to Detailed DCM Plan
3. No marine construction work is tentatively scheduled to be carried out in September 2023