



生態系統顧問有限公司  
ECOSYSTEMS LTD.

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Your ref.  
Our ref. 2486-1/LCS/L010  
Date: 18 October 2024

Environmental Protection Department  
Environmental Assessment Division  
Territory South Group  
Lantau North West  
27<sup>th</sup> Floor, Southorn Centre,  
130 Hennessy Road, Wan Chai,  
Hong Kong

By Post and Email

**Attn: Mr. Andy Wong (EPD Env Protection Offr (Territory S)11)**

Dear MR. WONG,

**Contract No. PW 1/2024 Environmental Monitoring Works for Lung Kwu Chau Jetty  
Repair Works  
Submission of Monthly EM&A Report (Issue 3)**

Pursuant to Conditions 4.6 of the EP No. EP-150/2002/A, we hereby submit the Monthly EM&A Report (Issue 3) for the captioned Project at Lung Kwu Chau Jetty.

The aforesaid submission has been certified by the Environmental Team (ET) and verified by the Independent Engineer (IE). The ET certification and the IE verification letters have been enclosed for your record. Should you have any questions please feel free to contact us.

Yours faithfully,

Vincent LAI (ET Leader)  
Managing Director  
Ecosystems Ltd.



生態系統顧問有限公司  
ECOSYSTEMS LTD.

---

Your ref.

Our ref. 2486-1/LCS/L009

By Post and Email

Date: 18 October 2024

Civil Engineering and Development Department  
Civil Engineering Office  
Port Works Division  
Maintenance Section 2  
4/F, Civil Engineering and Development Building,  
101 Princess Margaret Road, Homantin,  
Kowloon

**Attn: Mr. Li (CEDD Engr / Maintenance 2 B)**

Dear Sir,

**Contract No. PW 1/2024 Environmental Monitoring Works for Lung Kwu Chau Jetty  
Repair Works  
Certification of Monthly EM&A Report (Issue 3)**

Pursuant to Conditions 4.6 of the EP No. EP-150/2002/A, we hereby certify the Monthly EM&A Report (Issue 3) for the captioned Project at Lung Kwu Chau Jetty.

Should you have any questions please feel free to contact us.

Yours faithfully,

Vincent LAI (ET Leader)  
Managing Director  
Ecosystems Ltd.

cc Independent Engineer Mr. Ivan Ting

By Post

Our Ref : P240304 -EMA-202409-V

Date : 18<sup>th</sup> October 2024

Civil Engineering and Development Department  
Civil Engineering Office  
Port Works Division  
Maintenance Section 2  
4/F, Civil Engineering and Development Building,  
101 Princess Margaret Rd, Homantin, Kowloon

Attn: Mr. Kalvin Li

**Agreement No. PW 2/2024****Independent Environmental Checker for Lung Kwu Chau Jetty Repair Works****Monthly EM&A Report for September 2024**

Dear Sir,

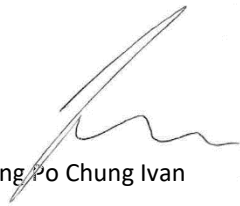
Pursuant to Condition 4.6 of Environmental Permit (EP) No. EP-150/2002/A, please note the report "Monthly EM&A Report No 1 (Issue 3)" dated 18 October 2024 submitted under the EP, certified by the Environmental Team Leader on 18 October 2024, had been reviewed and is hereby verified.

Should you have any query, please feel free to contact the undersigned at 3756 9590 or [ivanting@umwelt.consulting](mailto:ivanting@umwelt.consulting).

Your faithfully,

For and on behalf of:

Umwelt Consulting Limited



Ting Po Chung Ivan

Independent Engineer

# **Contract No. PW 1/2024 Environmental Monitoring Works for Lung Kwu Chau Jetty Repair Works**

## ***Monthly EM&A Report No 1 (Issue 3)***



**Ecosystems Limited**

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## ISSUES AND REVISION RECORD

Issue	Date	Description
1	8 Oct 2024	Draft Issue
2	15 Oct 2024	Revised Issue
3	18 Oct 2024	Third Issue

	Name	Role	Signature	Date
Prepared by	Klinsmann CHEUNG	Ecologist		18/10/2024
Approved by	Vincent LAI	Environmental Team Leader		18/10/2024

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## EXECUTIVE SUMMARY

The Lung Kwu Chau Jetty (the Jetty) is situated within the Sha Chau and Lung Kwu Chau Marine Park, the construction and operation of the Jetty is a designated project, a statutory EIA process was conducted, and the Environmental Impact Assessment (EIA) report was approved in November 2002 (Register No.: AEIAR-066/2002). The current Environmental Permit (EP) (EP No. EP-150/2002/A) was granted by the Director of Environmental Protection to CEDD in May 2003, and the construction works were completed in November 2003. However, substantial repair works would be required after inspection by CEDD in 2023.

The EP was issued to CEDD for the construction and operation of the Jetty, and the proposed repair works could be covered by the existing scope of EP. Ecosystems Ltd. is commissioned by CEDD as the Environmental Team responsible for the environmental monitoring requirements recommended in the EM&A Manual and EIA Report.

According to the EM&A Manual, baseline marine water monitoring was carried out at 3 designated monitoring stations from 15 July to 12 August 2024. The proposed repair works commenced on 23<sup>rd</sup> September 2024 and respective monitoring was also commenced.

Monitoring parameters including Dissolved Oxygen (DO), Turbidity and Suspended Solids (SS), and other relevant data (such as water depth, monitoring time, water temperature, salinity, pH, Dissolved Oxygen Saturation (%), tidal stages, weather and sea conditions) were recorded during the baseline monitoring.

This is the 1<sup>st</sup> EM&A report submitted under the Condition 4.2 of EP No. EP-150/2002/A. This report summarizes the findings on EM&A during the period from 23<sup>rd</sup> to 30<sup>th</sup> September 2024.

### **Exceedance of Action and Limit Levels**

During the monitoring period in September 2024, low level of DO was recorded on 23<sup>rd</sup> September 2024 at control station C1 during mid-flood tide. After investigation, no construction activities were conducted on the day of exceedances. The exceedance was probably due to localized natural variations. No Project-related Action or Limit Level exceedance were recorded.

### **Implementation of Mitigation Measures**

Site audits were carried out on 27<sup>th</sup> September 2024 to confirm the implementation measures undertaken by the Contractor in the reporting month. The outcomes are presented in **Section 3.2**.

### **Record of Complaints**

There was no record of complaints received, and no notifications of any summons and successful prosecutions in the reporting month.

### **Future Key Issues**

Construction activities to be undertaken in the next reporting period of October 2024 include demolish of the existing pavement and its underneath filling materials, refixing the dislocated the top layer of the concrete blocks, erection of formwork and pouring in-situ concrete for the pavement, and installation of anchor posts. Potential environmental impacts due to the construction activities will be monitored.

Environmental mitigation measures will be implemented on site as recommended and weekly site audits will be carried out to ensure that the environmental conditions are acceptable.

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## 1. INTRODUCTION

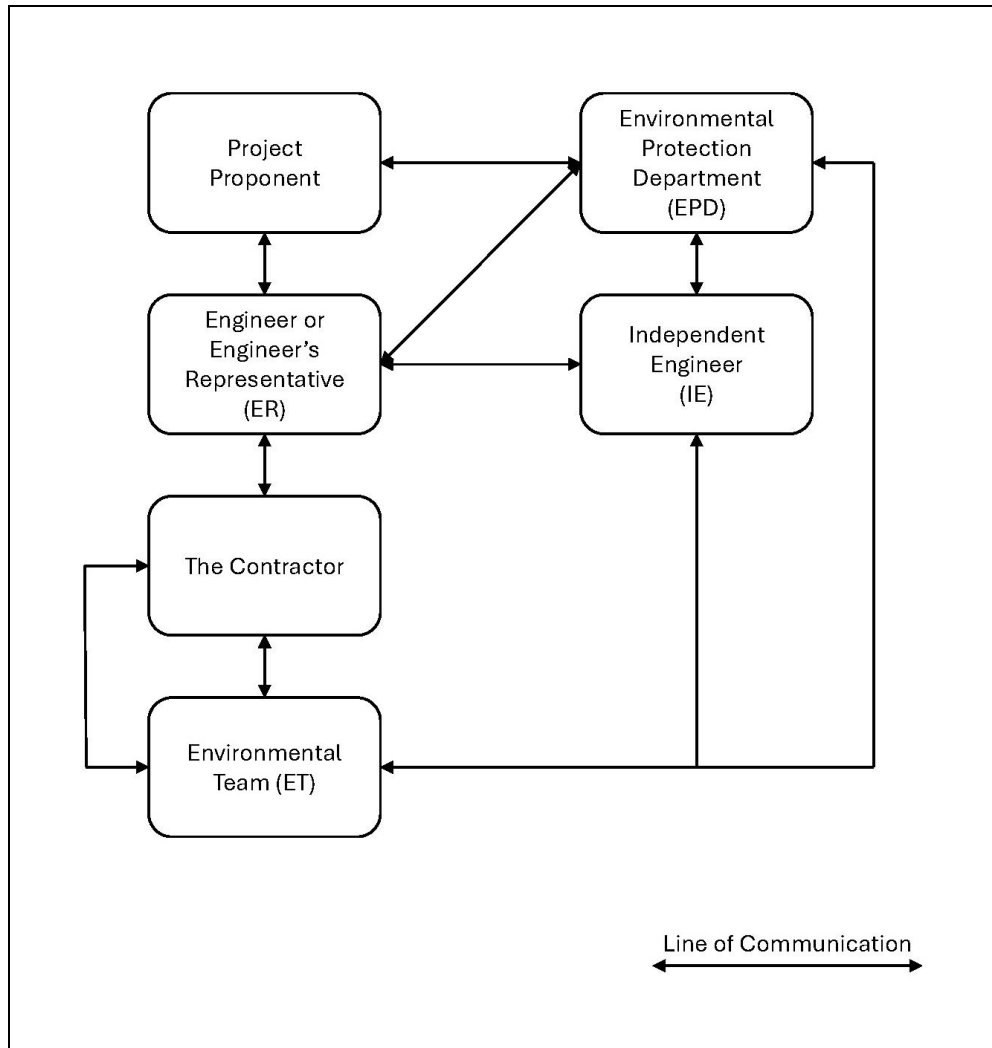
### 1.1 Background

- 1.1.1 The Lung Kwu Chau Jetty (the Jetty) is situated within Sha Chau and Lung Kwu Chau Marine Park which is managed by the Civil Aviation Department (CAD) and maintained by Port Works Division (PWD) of Civil Engineering and Development Department (CEDD). Since the Jetty is situated within the marine park, the construction and operation of the Jetty is a designated project, a statutory EIA process was conducted, and the Environmental Impact Assessment (EIA) report was approved in November 2002 (Register No.: AEIAR-066/2002). The current Environmental Permit (EP) (EP No. EP-150/2002/A) was granted by the Director of Environmental Protection to CEDD in May 2003, and the construction works were completed in November 2003.
- 1.1.2 Further to the previous repair works, PWD inspected the Jetty in November 2023 and considered that substantial repair works would be required. Location plan of the works area is shown in **Figure 1**. The scope of the works comprises:
- (i) removing damaged pier slab at the Jetty;
  - (ii) taking down and refixing the dislocated concrete blocks;
  - (iii) concreting the pier slab at the Jetty; and
  - (iv) installing anchor posts on the Jetty.
- 1.1.3 The EP (EP No. EP-150/2002/A) was issued to CEDD for the construction and operation of the Jetty, and the proposed repair works could be covered by the existing scope of EP. Ecosystems Ltd. is commissioned by CEDD as the Environmental Team to take into account the environmental monitoring requirements recommended in the EM&A Manual and EIA Report.
- 1.1.4 In accordance with the approved EIA Report, an EM&A programme is recommended to ensure compliance with the EIA study recommendations, to assess the effectiveness of the recommended mitigation measures and to identify any further need for additional mitigation measures or remedial action.

## 1.2 Project Organization

1.2.1 The project organization structure and lines of communication with respect to the environmental management structure is shown below:

### Project Organization for Environmental Works



1.2.2 The key personnel and contact are summarized in **Table 1.1**.

**Table 1.1 Contact Information of Key Personnel**

Party	Position	Name	Telephone	Fax
CEDD (Project Proponent)	Engineer	Kalvin Li	2762 5567	2714 2054
Contractor (Build King – CRCC Harbour Joint Venture)	Site Agent	Jerry Lau	6353 5489	-
Ecosystems Ltd.	Environmental Team Leader	Vincent Lai	2553 0468	2552 9191
Umwelt Consulting Ltd.	Independent Engineer	Ivan Ting	3756 9590	3582 3310

### 1.3 Summary of Construction Activities

1.3.1 During the reporting month, construction works of the Project undertaken include:

- Mobilization of plants and materials to site
- Erection of double silt curtain and fencing off the site

1.3.2 The construction works programme of the Project is provided in **Appendix A**.

### 1.4 Summary of EM&A Programme Requirements

1.4.1 The status of EM&A programme for the relevant environmental aspects required under the EM&A Manual are presented in **Table 1.2**. The requirements of relevant environmental monitoring are presented in **Section 2**.

**Table 1.2 Summary of Status for the Relevant EM&A Programme under the EM&A Manual**

Parameters	Descriptions	Locations	Frequencies	Status
Water quality	Dissolved oxygen (DO), dissolved oxygen saturation (DO%, temperature, turbidity, salinity, pH and suspended solids (SS)	C1, C2 and M2	3 days per week	On-going
Environmental site inspection	Mitigation measures, and waste management	Project Site	Weekly	On-going

## 2. ENVIRONMENTAL MONITORING AND AUDIT RESULTS

### 2.1 Summary of EM&A Manual's Requirement

2.1.1 In accordance with the EM&A Manual under the Project, impact monitoring shall be conducted during construction phase during dredging works. However, no dredging works are proposed for the present repairing works. The purpose of the present impact monitoring is to ensure the implementation of the recommended mitigation measures, provide effective control of any malpractices, and provide continuous improvements to the environmental conditions. The interval between two sets of monitoring shall not be less than 36 hours with a frequency of 3 days a week, at mid-flood and mid-ebb tides. The baseline conditions included the water quality parameters specified in the EM&A Manual, including dissolved oxygen (DO), dissolved oxygen saturation (DO%), temperature, turbidity, salinity, pH and suspended solids (SS) in the water body at all designated monitoring station for the Project. Further details of the water quality impact monitoring under this Project are presented in the following sections.

### 2.2 Monitoring Locations

2.2.1 Water quality impact monitoring was carried out at 3 locations within Sha Chau and Lung Kwu Chau Marine Park. The marine water quality monitoring stations during the baseline monitoring, construction monitoring and post-construction monitoring are shown in **Figure 2**. The coordinates of the monitoring stations are listed in **Table 2.1**.

**Table 2.1 Coordinates of the Monitoring Site and Control Sites**

Monitoring/Control Station	Easting	Northing
C1	806116	827618
C2	806034	825308
M2	806329	826408

### 2.3 Monitoring Parameters

2.3.1 Monitoring parameters listed in **Table 2.2** were measured by the ET to ensure that any deteriorating water quality could be readily detected and timely action be taken to rectify the situation. **Table 2.3** shows the other relevant water quality data also recorded during the monitoring.

**Table 2.2 Monitoring Parameters**

In-situ measurement	Laboratory analysis
Dissolved Oxygen (mg/L)	Suspended solids (mg/L)
Turbidity (NTU)	

**Table 2.3 Other Relevant Water Quality Parameters**

Water quality parameters	
Tidal stages	Ambient temperature and marine water temperature (°C)
Water depth (m)	Dissolved Oxygen saturation (%)
Monitoring time (hr:mm)	Salinity (ppt)
Weather condition	pH

## 2.4 Monitoring Frequency

2.4.1 The monitoring frequency during baseline monitoring is summarized in **Table 2.4**. The baseline monitoring programme is shown in **Table 2.5**.

**Table 2.4 Monitoring Frequency of Water Quality Monitoring**

Frequency	Monitoring depth
3 days/week, 2 tides/day	1m below water surface, mid-depth and 1m above sea bed

**Table 2.5 Monitoring Programme in September 2024**

Monitoring Date	1st Tide Monitoring	2nd Tide Monitoring
23/9/2024 (Mon)	11:00 Mid-Flood	17:00 Mid-Ebb
25/9/2024 (Wed)	08:00 Mid-Ebb	14:00 Mid-Flood
* 27/9/2024 (Fri)	11:00 Mid-Ebb	17:00 Mid-Flood
30/9/2024 (Mon)	13:00 Mid-Ebb	19:00 Mid-Flood

\*Date of site inspection

## 2.5 Monitoring Methodology and Equipment Used

### Positioning of the monitoring stations

2.5.1 A hand-held digital Global Positioning System (GPS) was used to identify the designated monitoring stations prior to water sampling.

### Water depth measurement

2.5.2 A portable, battery-operated echo sounder was used for the determination of water depth at each designated monitoring station.

### Water quality multi-meter

2.5.3 Portable, weatherproof multi-meter with built-in salinity compensation (YSI ProDSS) was used in the monitoring. It could be capable for measuring:

- A dissolved oxygen level in the range of 0-20 mg/L and 0-200% saturation;
- A temperature of 0-45 degree Celsius
- Turbidity with photoelectric sensor between 0-1000 NTU
- Salinity in the range 0-40 ppt

Water sampling and sample analysis

- 2.5.4 In-situ monitoring was carried out at three depths: 1 meter below water surface, at mid-depth and 1 meter above the seabed. If the water depth is less than 6m, the mid-depth station was omitted and if the water depth is below 3m, only the mid depth station was monitored.
- 2.5.5 A water sampler comprising a transparent PVC cylinder, with a capacity of not less than 2 liters, was lowered into the water body at the predetermined depth. The opening ends of the sampler were then be closed accordingly, and water samples were collected.
- 2.5.6 The sample container, made by high-density polythene, was rinsed with a portion of the water sample. The water sample was then transferred to the container, labelled with a unique sample ID and sealed with a screw cap. the water samples were then be delivered to a local HOKLAS-accredited laboratory (ALS Technichem (HK) Pty Ltd) within 24 hours for analysis.

**2.6 Quality Assurance (QA) / Quality Control (QC) results and Determination Limits**

- 2.6.1 The in-situ monitoring multi-meter was checked, calibrated and certified by a laboratory accredited under HOKLAS before use, and subsequently re-calibrated at 3 monthly intervals, if necessary. At each measurement/sampling depth, two consecutive measurements of dissolved oxygen (DO), dissolved oxygen saturation (DOS), turbidity and salinity were taken. For the in-situ parameters to be measured, duplicate measurements were performed by dropping the calibrated probes of the multi-meter (i.e. YSI ProDSS) to the designated depths of the water column and taking readings after stabilized. The duplicate measurements were averaged if the difference is not greater than 25%.
- 2.6.2 The summary of laboratory testing method of total suspended solids analysis is shown in **Table 2.6**.

**Table 2.6 Summary of Laboratory Testing Method of Total Suspended Solids**

Laboratory analysis	Testing procedure	Method detection limit
Total suspended solids	American Public Health Association (APHA) Standard Methods for the Examination of Water and Wastewater, 23rd edition, 2540D or equivalent method	2mg/L

**2.7 Details of Site Equipment Used for In-situ Measurement**

- 2.7.1 List of in-situ water quality monitoring equipment is shown in **Table 2.7**. All of the monitoring equipment complied with the requirements as set out in the EM&A Manual. All the monitoring instrument / equipment has been checked, calibrated and certified by a laboratory accredited under HOKLAS. The calibration certificates are attached in **Appendix B**.

**Table 2.7 Details Monitoring Equipment (In-situ measurement)**

Parameter	Model (serial no., if any)	Date of Calibration / Performance check	Due Date
Coordinate of Monitoring stations	Garmin eTrex 30	N/A	N/A
Dissolved Oxygen (% and Saturation), Temperature	YSI ProDSS ODO optical dissolved (24F100112)	12/7/2024	11/10/2024
Turbidity	YSI ProDSS Turbidity (24E105092)	12/7/2024	11/10/2024
Salinity	YSI ProDSS Conductivity (24F101051)	12/7/2024	11/10/2024
pH	YSI ProDSS pH sensor (24G100579)	12/7/2024	11/10/2024
Water Depth	HONDEX PS-7	N/A	N/A

### 3. RESULTS AND OBSERVATION

#### 3.1 Results

##### General

3.1.1 Water quality impact monitoring was conducted three times per week at 3 monitoring stations (C1, C2 & M2) from 23/9/2024 to 30/9/2024. The monitoring results with weather and sea conditions at each monitoring day were attached in **Appendix C**.

##### Action and Limit Levels

3.1.2 The calculated Action and Limit Levels for the monitoring of the proposed repair works based on the baseline water quality monitoring results are shown in **Table 3.1**.

**Table 3.1 Action and Limit Level for Marine Water Quality at Lung Kwu Chau**

Parameters	Action Level	Limit Level
Dissolved Oxygen (DO), in mg/L  (Surface, Middle and Bottom)	<u>Surface and Middle</u> 5.05 mg/L  <u>Bottom</u> 3.94 mg/L	<u>Surface and Middle</u> 4 mg/L or 3.68 mg/L  <u>Bottom</u> 2 mg/L or 3.17 mg/L
Suspended Solids (SS), in mg/L (Depth-averaged)	20.95 mg/L or 120% of upstream control station's SS at the same tide of the same day	41.82 mg/L or 130% of the upstream control station's SS at the same tide on the same day
Turbidity in NTU (Depth-averaged)	15.29 NTU or 120% of the upstream control station's turbidity at the same tide on the same day	22.57 NTU or 130% of the upstream control station's turbidity at the same tide on the same day

Remarks:

1. "Depth-averaged" is calculated by taking the arithmetic means of reading of all three depths.
2. For turbidity and SS, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.
3. For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits.
4. All the figures given in the table are used for reference only and EPD may amend the figures whenever it is considered as necessary.



3.1.3 During the monitoring period in September 2024, low level of DO was recorded on 23<sup>rd</sup> September 2024 at control station C1 during mid-flood tide. After investigation, no construction activities were conducted on the day of exceedances. The exceedance was probably due to localized natural variations. No Project-related Action or Limit Level exceedance were recorded. The summary of marine water quality exceedances is shown in Table 3.2.

**Table 3.2 Daily Exceedance Summary of Marine Water Quality**

September 2024						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
22	<b>23</b> At the mid-flood (a.m.) Low level of DO at C1	24	<b>25</b> No exceedances in all WMP*	26	<b>27</b> No exceedances in all WMP*	28
29	<b>30</b> No exceedances in all WMP*					

Remarks:

\* WMP = Water monitoring parameters

**Table 3.3 Summary of the water monitoring results from all monitoring stations**

Monitoring parameters		Monitoring Stations			Action and Limit Level	
		C1	M2	C2	AL	LL
DO (mg/L)	Surface & Middle Depth Average	6.52	6.78	6.93	5.05	4 or 3.68
	Surface & Middle Depth Max	10.92	10.41	9.81		
	Surface & Middle Depth Min	4.73	5.15	5.29		
	Bottom Depth Average	5.55	5.94	6.51	3.94	2 or 3.17
	Bottom Depth Max	7.45	8.81	8.95		
	Bottom Depth Min	4.57	4.77	5.09		
Turbidity (NTU)	Average	6.09	5.46	6.33	15.29	22.57
	Max	28.18	12.18	17.71		
	Min	2.02	2.37	1.98		
Suspended Solids (mg/L)	Average	4.88	6.78	8.16	20.95	41.82
	Max	9	20	22		
	Min	2	3	2		

Remarks:

- AL = Action Level
- LL = Limit Level

3.1.4 In case of any exceedance of the Action or Limit Levels, appropriate actions set out in the Event and Action Plan (Refer to the EM&A Manual Table 2.3, Event and Action Plan for Water Quality) shall be taken upon ETL's notification.

### **3.2 Environmental Site Inspection**

3.2.1 Regular environmental site inspections were carried out with the Contractor to confirm the implementation of appropriate environmental protection and pollution control mitigation measures under the Project.

3.2.2 In the reporting period, one environmental site inspection was carried out on 23<sup>rd</sup> September 2024. The checklist of the site inspection is shown in **Appendix D**. As only site preparation works and deployment of silt curtain were conducted in the reporting month, most of the checking items were not applicable.

3.2.3 Waste management audits were also performed during the regular environmental site inspections carried out in the reporting period. No non-compliance for Contractor's waste management practices was identified during the audits. No inert or non-inert C&D materials, and no general refuse were generated by the Contractor during the reporting month.

### **3.3 Summary of Environmental Complaints, Notification of Summons and Successful Prosecutions**

3.3.1 There were no environmental complaints, notification of summons and successful prosecutions recorded in the reporting period.

#### **4. FORECAST FOR THE NEXT REPORTING PERIOD**

##### **4.1 Works Programme for the Next Reporting Period**

4.1.1 Construction activities to be undertaken in the next reporting period of October 2024 are summarized below:

- Demolish of the existing pavement and its underneath filling material
- Re-fixing the dislocated top layer of the concrete blocks
- Erection of formwork and pouring in-situ concrete for the pavement
- Installation of anchor posts

4.1.2 Potential environmental impacts due to the construction activities will be monitored. The ET will keep track on the construction activities to confirm compliance of environmental requirements and the proper implementation of all necessary mitigation measures.

##### **4.2 Monitoring Schedule for the Next Reporting Period**

4.2.1 The tentative schedule for marine water quality monitoring for the next reporting period is provided in **Appendix E**.

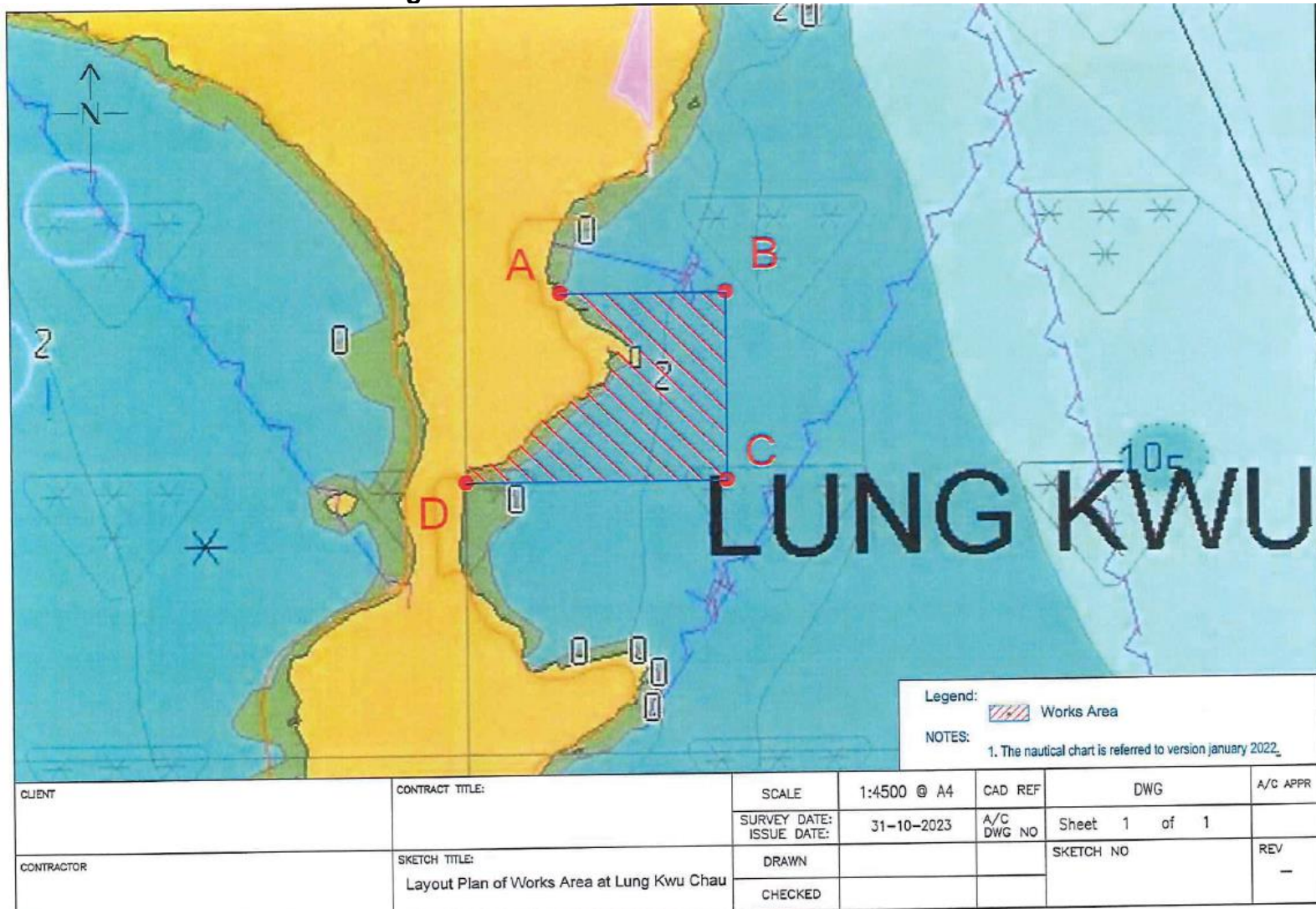
## **5. CONCLUSION**

- 5.1.1 This Monthly EM&A Report presents the key findings of the EM&A works during the reporting period from 23<sup>rd</sup> to 30<sup>th</sup> September 2024 for the construction works for the Project in accordance with the EM&A Manual and the requirements of the EP.
- 5.1.2 Environmental auditing works, including regular site inspections of construction works were conducted by the ET during the reporting period. No non-compliance of environmental statutory requirements was identified.
- 5.1.3 During the reporting month, no Project-related exceedances of water quality parameters were recorded. There were also no environmental complaints, notification of summons and successful prosecutions recorded in the reporting month.
- 5.1.4 The ET will keep track on the construction works to confirm compliance if environmental requirements and the proper implementation of all necessary mitigation measures.

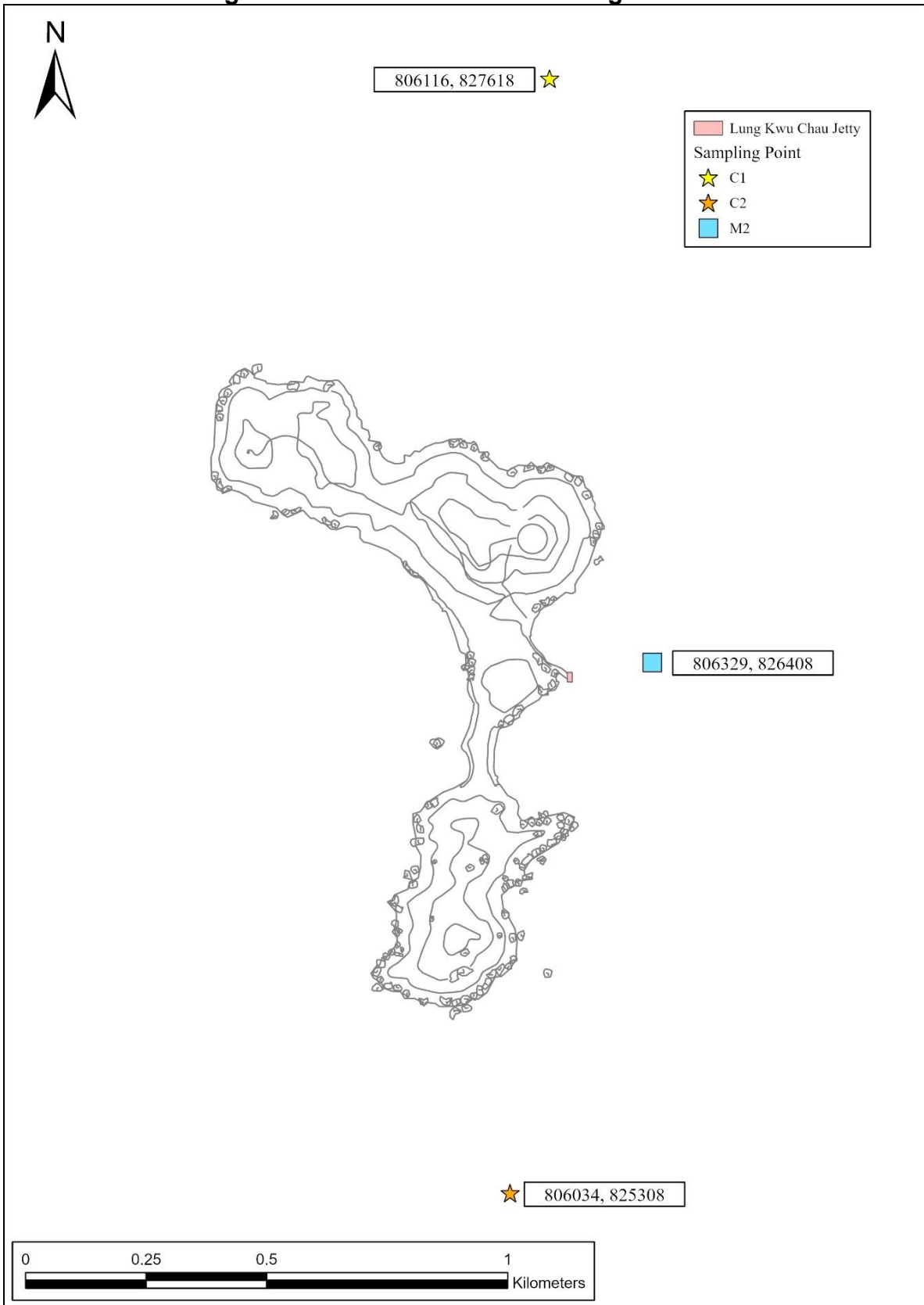
## FIGURE



**Figure 1 Location Plan of the Works Area**



**Figure 2 Location of Monitoring Stations**



## APPENDICES



# Appendix A

## Construction Works Programme

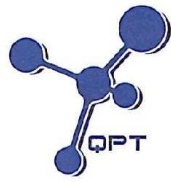
**CEDD Maintenance Contract for Piers (2022-2027)**  
**Task Order No. MW/091/2201**  
**Repair and Enhancement Works in Lung Kwu Chau Jetty**  
**TASK ORDER PROGRAMME**

識別碼	Task Name	工期	開始時間	完成時間	前置任務	2024年上半年						2024年下半年						2025年上半年					
						十一月	十二月	一月	二月	三月	四月	五月	六月	七月	八月	九月	十月	十一月	十二月	一月	二月	三月	四月
1	<b>Task Order Programme - Repair and enhancement works in Lung Kwu Chau Jetty</b>	<b>613 days</b>	<b>1/12/2023</b>	<b>11/12/2025</b>		1/12																	
2	Start Date	0 days	1/12/2023	1/12/2023		1/12																	
3	Completion Date	0 days	23/5/2025	23/5/2025		23/5																	
4	<b>1. Application for Working Permits and Documentation Approval</b>	<b>90 days</b>	<b>1/12/2023</b>	<b>21/3/2024</b>		1/12																	
5	1.1 Application for MDN	90 days	1/12/2023	21/3/2024	2SS	21/3																	
6	1.2 Preparation and submission of materilas method statement, programme and risk assessment	28 days	1/12/2023	5/1/2024	2SS	1/12																	
7	1.3 Principle Approval from CEDD	14 days	6/1/2024	22/1/2024	6	6/1																	
8	<b>2. Mobilization and preparation of materials</b>	<b>4 days</b>	<b>21/9/2024</b>	<b>25/9/2024</b>		21/9																	
9	2.1 Mobilization and preparation of construction materials	4 days	21/9/2024	25/9/2024	7,5,31	25/9																	
10	<b>3. Construction Works</b>	<b>170 days</b>	<b>26/9/2024</b>	<b>21/4/2025</b>		26/9																	
11	3.1 Site set-up and placement of sinkers for vessel berthing	2 days	26/9/2024	27/9/2024	9,5	27/9																	
12	3.2 Erection of silt curtain	2 days	28/9/2024	30/9/2024	11	30/9																	
13	3.3 Phase 1 - Removal of concrete slab	45 days	2/10/2024	23/11/2024	12	2/10																	
14	3.4 Phase 1 - Take down and refix the displaced concrete blocks by the derrick lighter	15 days	25/11/2024	11/12/2024	13	25/11																	
15	3.5 Phase 1 - Erect formwork for Portion 1 and 2	14 days	12/12/2024	30/12/2024	14	12/12																	
16	3.6 Phase 1 - Concreting works for Portion 1 and 2	2 days	31/12/2024	2/1/2025	15	31/12																	
17	3.7 Phase 1 - Erect formwork for Portion 3 & 4	14 days	31/12/2024	16/1/2025	15	31/12																	
18	3.8 Phase 1 - Concreting works for Portion 3 & 4	2 days	17/1/2025	18/1/2025	17	17/1																	
19	3.9 Phase 1 - Coring and installation of anchor posts	40 days	12/10/2024	27/11/2024	12SS+10 days	12/10																	
20	3.10 Phase 2 - Removal of concrete slab	35 days	17/1/2025	1/3/2025	19,17	17/1																	
21	3.11 Phase 2 - Take down and refix the displaced concrete blocks by the derrick lighter	8 days	3/3/2025	11/3/2025	20	3/3																	
22	3.12 Phase 2 - Erect formwork for Portion 5 and 6	8 days	12/3/2025	20/3/2025	21	12/3																	
23	3.13 Phase 2 - Concreting works for Portion 5 and 6	2 days	21/3/2025	22/3/2025	22	21/3																	
24	3.14 Phase 2 - Erect formwork for Portion 7 & 8	9 days	21/3/2025	31/3/2025	22	21/3																	
25	3.15 Phase 2 - Concreting works for Portion 7 & 8	2 days	1/4/2025	2/4/2025	24	1/4																	
26	3.14 Phase 2 - Erect formwork for Portion 9 & 10	8 days	3/4/2025	11/4/2025	25	3/4																	
27	3.15 Phase 2 - Concreting works for Portion 9 & 10	2 days	12/4/2025	14/4/2025	26	12/4																	
28	3.16 Phase 2 - Coring and installation of anchor posts	35 days	28/11/2024	10/1/2025	19	28/11																	
29	3.17 Demobilization and site clearance	6 days	15/4/2025	21/4/2025	28,27	15/4																	
30	<b>4. Water Quality Monitoring</b>	<b>433 days</b>	<b>15/7/2024</b>	<b>11/12/2025</b>		15/7																	
31	4.1 Baseline W.Q.M and obtaining approval from EPD by ET	58 days	15/7/2024	20/9/2024	5FS+90 days	15/7																	
32	4.2 Impact W.Q.M by ET	173 days	22/4/2025	8/11/2025	31FS+1 day,29	22/4																	
33	4.3 Post Project W.Q.M by ET	28 days	10/11/2025	11/12/2025	32	10/11																	

<b>Build King - CRCC Harbour JV</b> Rev. 5 on 5 Oct 2024	任務		進度		摘要		上顯型要徑任務		上顯型進度		外部任務		摘要群組	
	要徑任務		里程碑		上顯型任務		上顯型里程碑		分割		專案摘要		期限	

## **Appendix B**

# **Calibration Certificates for Water Quality Monitoring Equipment**



專業化驗有限公司  
QUALITY PRO TEST-CONSULT LIMITED

Unit 10, 5/F, Wah Wai Centre, 38-40 Au Pui Wan St., Fotan, Hong Kong  
Email: info@qualityprotest.com; Website: www.qualityprotest.com  
Tel: (852) 3956 8717; Fax: (852) 3956 3928

## REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Test Report No. : R-BD070014  
Date of Issue : 12 July 2024  
Page No. : 1 of 2

### PART A - CUSTOMER INFORMATION

Ecosystems Limited  
Unit B13, 12/F., Block B2, Yau Tong Industrial City, 17 Ko Fai Road, Yau Tong, Kowloon, HK

### PART B - SAMPLE INFORMATION

Name of Equipment : YSI ProDSS Multi Parameters  
Manufacturer : YSI  
Serial Number : 24C101291  
Date of Received : 09 July 2024  
Date of Calibration : 12 July 2024  
Date of Next Calibration : 11 October 2024  
Request No. : D-BD070014

### PART C - REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

Test Parameter	Reference Method
pH value	APHA 21e 4500-H <sup>+</sup> B
Temperature	Section 6 of international Accreditation New Zealand Technical Guide no. 3 Second edition March 2008: Working Thermometer Calibration Procedure
Salinity	APHA 21e 2520 B
Dissolved oxygen	APHA 23e 4500-O G (Membrane Electrode Method)
Turbidity	APHA 21c 2130 B (Nephelometric Method)

### PART D - CALIBRATION RESULT

#### (1) pH value

Target (pH unit)	Display Reading (pH unit)	Tolerance	Result
4.00	4.14	0.14	Satisfactory
7.42	7.37	-0.05	Satisfactory
10.01	9.97	-0.04	Satisfactory

Tolerance of pH value should be less than  $\pm 0.2$  (pH unit)

#### (2) Temperature

Reading of Ref. thermometer (°C)	Display Reading (°C)	Tolerance	Result
17.0	16.9	-0.1	Satisfactory
27.0	26.1	-0.9	Satisfactory
34.0	32.9	-1.1	Satisfactory

Tolerance of Temperature should be less than  $\pm 2.0$  (°C)

#### (3) Salinity

Expected Reading (g/L)	Display Reading (g/L)	Tolerance (%)	Result
10	9.95	-0.50	Satisfactory
20	20.44	2.20	Satisfactory
30	31.13	3.77	Satisfactory

Tolerance of Salinity should be less than  $\pm 10.0$  (%)

--- CONTINUED ON NEXT PAGE ---

AUTHORIZED  
SIGNATORY:

  
LEE Chun-ning  
Assistant Manager



專業化驗有限公司

QUALITY PRO TEST-CONSULT LIMITED

Unit 10, 5/F, Wah Wai Centre, 38-40 Au Pui Wan St., Fotan, Hong Kong

Email: info@qualityprotest.com; Website: www.qualityprotest.com

Tel: (852) 3956 8717; Fax: (852) 3956 3928

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Test Report No. : R-BD070014

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### (4) Dissolved oxygen

Expected Reading ( mg/L )	Display Reading ( mg/L )	Tolerance	Result
8.50	8.09	-0.41	Satisfactory
7.18	6.85	-0.33	Satisfactory
4.39	4.44	0.05	Satisfactory
0.56	0.60	0.04	Satisfactory

Tolerance of Dissolved oxygen should be less than  $\pm 0.5$  ( mg/L )

### (5) Turbidity

Expected Reading ( NTU )	Display Reading ( NTU )	Tolerance ( % )	Result
0	0.17	--	--
10	9.88	-1.2	Satisfactory
20	19.64	-1.8	Satisfactory
100	98.57	-1.4	Satisfactory
800	745.42	-6.8	Satisfactory

Tolerance of Turbidity should be less than  $\pm 10.0$  ( % )

### Remark(s)

- The "Date of Next Calibration" is recommended according to best practice principals as practiced by QPT or quoted form relevant international standards.
- The results relate only to the calibrated equipment as received
- The performance of the equipment stated in this report is checked with independent reference material and results compared against a calibrated secondary source.
- "Displayed Reading" denotes the figure shown on item under calibration/ checking regardless of equipment precision or significant figures.
- The "Tolerance Limit" mentioned is the acceptance criteria applicable for similar equipment used by Quality Pro Test-Consult Ltd. or quoted form relevant international standards.

--- END OF REPORT ---

## **Appendix C**

# **Water Quality Monitoring Results**

Date (dd-mm-yyyy)	Tide	Station	Weather (Sunny/ Cloudy/ Rainy)	Sea (Calm/ Moderate/ Rough)	Sampling Time		Ambient Temp	Total Water Depth (m)	Level	Sampling Depth (m)	pH		Water Temperature (°C)		Salinity (ppt)		Turbidity (NTU)			DO mg/L			DO Saturation (%)			Suspended Solids (mg/L)		
			Condition	Condition	Start	Finish					Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	Value	Average	Value	Average
23/9/2024	Mid-Ebb	M2	Rainy	Rough	17:30	17:30	25.2	5.4	surface	1	7.86	7.855	29.1	29.1	24.35	24.35	4.71	4.23	8.2	5.15	5.205	5.20	76.7	77.55	5	4.5	7.25	
			Rainy	Rough	17:30	17:30					7.85		29.1		24.35		3.75			5.26		5			78.4			4
			Rainy	Rough	17:30	17:30			bottom	4.4	7.88	29.1	26.37	12.18	12.175	5.01	4.995	4.99		75.7	75.4	10	10					
			Rainy	Rough	17:30	17:30					7.88	29.1	26.82	12.17		4.98		5		75.1		10						
	Mid-Ebb	C1	Rainy	Rough	17:45	17:45	25.2	9	surface	1	7.86	7.86	28.9	28.9	25.23	25.21	4.8	4.86	4.8	5.54	5.535	5.51	82.6	82.5	7	7	7	
			Rainy	Rough	17:45	17:45					7.86		28.9		25.19		4.92			5.53			7					
			Rainy	Rough	17:44	17:44			middle	4.5	7.88	28.9	25.62	4.47	4.475	5.47	5.485	5.51		81.8	82.05	9	8					
			Rainy	Rough	17:44	17:44					7.88	28.9	25.59	4.48		5.5		7										
			Rainy	Rough	17:43	17:43			bottom	8	7.9	7.895	29	29	26.56	26.465	5.19	5.21		5.39	81.4	81.15	6	6				
			Rainy	Rough	17:44	17:44					7.89		29		26.37		5.23			5.38	5		80.9		6			
	Mid-Ebb	C2	Rainy	Rough	17:11	17:12	25.2	5.4	surface	1	7.93	7.935	28.8	28.75	27.23	27.23	3.34	3.125	6.2	5.7	5.72	5.72	85.8	86.1	4	4.5	5.5	
			Rainy	Rough	17:12	17:12					7.94		28.7		27.23		2.91			5.74			5					
			Rainy	Rough	17:11	17:11			bottom	4.4	7.93	28.9	28	28	9.22	9.29	5.3	5.28		5.28	80.4	80.05	6	6.5				
			Rainy	Rough	17:11	17:11					7.92	28.9	28		9.36		5.26			7								
	Mid-Flood	M2	Rainy	Rough	11:36	11:36	27.2	5.6	surface	1	7.81	7.81	29.1	29.1	22.71	22.72	3.26	3.33	5.1	5.3	5.31	5.31	78.2	78.35	6	5.5	7	
			Rainy	Rough	11:36	11:37					7.81		29.1		22.73		3.4			5.32			5					
			Rainy	Rough	11:35	11:35			bottom	4.6	7.83	29.3	26.73	26.73	6.85	6.79	4.91	4.84		4.84	74.4	73.3	8	8.5				
			Rainy	Rough	11:35	11:36					7.84	29.3	26.73		6.73		4.77			9								
	Mid-Flood	C1	Rainy	Rough	11:53	11:53	27.2	8.4	surface	1	7.83	7.825	29.2	29.15	23.12	23.125	3.55	3.29	12	4.99	5.03	4.89	73.8	74.45	4	4.5	6	
			Rainy	Rough	11:53	11:53					7.82		29.1		23.13		3.03			5.07			5					
			Rainy	Rough	11:53	11:53			middle	4.2	7.85	29.2	25.28	25.295	4.35	4.185	4.73	4.76		4.79	71	71.45	5	5				
			Rainy	Rough	11:53	11:53					7.84	29.2	25.31		4.02		4.79			5								
			Rainy	Rough	11:52	11:52			bottom	7.4	7.86	29.2	27.57	27.585	26.75	27.465	4.64	4.605		4.60	70.6	70.05	8	8.5				
			Rainy	Rough	11:52	11:52					7.86	29.2	27.6		28.18		4.57			5	69.5		9					
	Mid-Flood	C2	Rainy	Rough	12:12	12:12	27.2	5.2	surface	1	7.82	7.82	29.1	29.1	23.71	23.72	2.94	2.915	7.9	5.29	5.29	5.29	78.5	78.55	5	5	13	
			Rainy	Rough	12:12	12:13					7.82		29.1		23.73		2.89			5.29			5					
			Rainy	Rough	12:10	12:10			bottom	4.2	7.83	29	25.43	25.385	14.53	12.835	5.15	5.12		5.12	77	76.55	22	21				
			Rainy	Rough	12:11	12:11					7.83	29	25.34		11.14		5.09			20								

Date (dd-mm-yyyy)	Tide	Station	Weather (Sunny/ Cloudy/ Rainy)	Sea (Calm/ Moderate/ Rough)	Sampling Time		Ambient Temp	Total Water Depth (m)	Level	Sampling Depth (m)	pH		Water Temperature (°C)		Salinity (ppt)		Turbidity (NTU)			DO mg/L			DO Saturation (%)		Suspended Solids (mg/L)		
			Condition	Condition	Start	Finish					Value	Average	Value	Average	Value	Average	Value	Average	DA *	Value	Average	DA*	Value	Average	Value	Average	Value
25/9/2024	Mid-Ebb	M2	Cloudy	Moderate	8:21	8:22	27	4.9	surface	1	7.82	7.82	28.9	28.9	19.26	19.25	6.27	6.28	7.7	5.51	5.51	5.51	79.6	79.55	8	8	13.8
			Cloudy	Moderate	8:21	8:22					7.82		28.9		19.24		6.29			5.51			79.5		8		
			Cloudy	Moderate	8:22	8:23			bottom	3.9	7.82	28.9	24.99	24.98	9.07	9.025	5.03	5.03		5.03	75.1	75.05	20	19.5			
			Cloudy	Moderate	8:22	8:23					7.82	28.9	24.97	8.98	5.03		75			19							
	Mid-Ebb	C1	Cloudy	Moderate	8:49	8:50	27	7.9	surface	1	7.79	7.79	29	29	17.17	17.19	3.26	3.265	3.4	5.42	5.42	5.30	77.6	77.6	4	4	5
			Cloudy	Moderate	8:49	8:50					7.79		29		17.21		3.27			5.42			77.6		4		
			Cloudy	Moderate	8:50	8:51			middle	3.95	7.79	29	20.29	20.29	3.24	3.225	5.19	5.185		5.02	75.6	75.55	6	5.5			
			Cloudy	Moderate	8:50	8:51					7.79	29	20.29	3.21	5.18		75.5				5						
			Cloudy	Moderate	8:51	8:52			bottom	6.9	7.81	29	22.02	22.045	3.79	3.8	5.03	5.025		5.02	73.9	73.85	6	5.5			
			Cloudy	Moderate	8:51	8:52					7.81	29	22.07	3.81	5.02		73.8			5							
	Mid-Ebb	C2	Rainy	Moderate	8:05	8:06	27	4.7	surface	1	7.81	7.81	28.8	28.8	22.79	22.785	6.72	6.725	7.7	5.41	5.41	5.41	79.6	79.55	12	11.5	10.8
			Rainy	Moderate	8:05	8:06					7.81		28.8		22.78		6.73			5.41			79.5		11		
			Rainy	Moderate	8:06	8:07			bottom	3.7	7.82	28.9	25.57	25.565	8.86	8.755	5.11	5.105		5.10	76.4	76.35	10	10			
			Rainy	Moderate	8:06	8:07					7.82	28.9	25.56	8.65	5.1		76.3				10						
	Mid-Flood	M2	Sunny	Moderate	14:28	14:29	31	5.1	surface	1	7.86	7.86	29.9	29.85	20.57	20.575	4.8	4.805	3.6	5.65	5.64	5.64	83.4	83.35	5	4.5	4
			Sunny	Moderate	14:28	14:29					7.86		29.8		20.58		4.81			5.63			83.3		4		
			Sunny	Moderate	14:29	14:30			bottom	4.1	7.82	29.1	23.83	23.82	2.37	2.38	5.08	5.08		5.08	75.5	75.45	4	3.5			
			Sunny	Moderate	14:29	14:30					7.82	29.1	23.81	2.39	5.08		75.4			3							
	Mid-Flood	C1	Sunny	Moderate	14:47	14:48	31	8.8	surface	1	7.83	7.83	29.3	29.3	20.98	20.975	2.61	2.615	3.4	5.38	5.375	5.19	78.9	78.85	4	3.5	3.17
			Sunny	Moderate	14:47	14:48					7.83		29.3		20.97		2.62			5.37			78.8		3		
			Sunny	Moderate	14:48	14:49			middle	4.4	7.82	29	24.73	24.715	2.35	2.34	5.02	5.02		4.7	74.8	74.85	4	3.5			
			Sunny	Moderate	14:48	14:49					7.82	29	24.7	2.33	5.02		74.9				3						
			Sunny	Moderate	14:49	14:50			bottom	7.8	7.87	29	27.6	27.595	5.32	5.265	4.7	4.7		4.7	71.1	71.1	2	2.5			
			Sunny	Moderate	14:49	14:50					7.87	29	27.59	5.21	4.7		71.1			3							
	Mid-Flood	C2	Sunny	Moderate	14:03	14:04	31	5.1	surface	1	7.83	7.83	30	30	19.59	19.595	2.12	2.115	2.2	5.53	5.525	5.52	81.4	81.4	3	3.5	3.25
			Sunny	Moderate	14:03	14:04					7.83		30		19.6		2.11			5.52			81.4		4		
			Sunny	Moderate	14:05	14:06			bottom	4.1	7.81	29.3	23.08	23.065	2.28	2.29	5.17	5.165		5.16	76.8	76.7	3	3			
			Sunny	Moderate	14:05	14:06					7.81	29.3	23.05	2.3	5.16		76.6				3						



Date (dd-mm-yyyy)	Tide	Station	Weather (Sunny/ Cloudy/ Rainy)	Sea (Calm/ Moderate/ Rough)	Sampling Time		Ambient Temp	Total Water Depth (m)	Level	Sampling Depth (m)	pH		Water Temperature (°C)		Salinity (ppt)		Turbidity (NTU)			DO mg/L			DO Saturation (%)		Suspended Solids (mg/L)		
			Condition	Condition	Start	Finish					Value	Average	Value	Average	Value	Average	Value	Average	DA *	Value	Average	DA*	Value	Average	Value	Average	Value
27/9/2024	Mid-Ebb	M2	Sunny	Moderate	11:13	11:13	27	4.8	surface	1	7.82	7.82	30	29.95	16.91	17.22	4.37	4.555	6	6.13	6.09	6.09	88.9	88.5	4	4.5	7.25
			Sunny	Moderate	11:14	11:14					7.82		29.9		17.53		4.74			6.05			88.1		5		
			Sunny	Moderate	11:14	11:15					7.84	29.5	23.23	7.46	5.45	81.2	10										
			Sunny	Moderate	11:15	11:15					7.85	29.4	23.28	7.55	5.44	81	10										
	Mid-Ebb	C1	Sunny	Moderate	11:35	11:35	27	7.8	surface	1	7.9	7.9	30.4	30.35	12.24	12.295	3.24	3.255	2.7	6.8	6.82	6.43	96.8	97	3	2.5	3.67
			Sunny	Moderate	11:35	11:36					7.9		30.3		12.35		3.27			6.84			97.2		2		
			Sunny	Moderate	11:36	11:36			7.87	29.7	20.55	2.12	6.06	89.3	4												
			Sunny	Moderate	11:37	11:37			7.86	29.7	20.55	2.02	6.02	88.7	3												
			Sunny	Moderate	11:37	11:38			7.87	29.6	21.46	2.71	5.82	86.1	5												
			Sunny	Moderate	11:38	11:38			7.87	29.6	21.7	2.95	5.84	86.4	5												
	Mid-Ebb	C2	Sunny	Moderate	12:08	12:08	27	4.7	surface	1	7.9	7.9	29.7	29.7	21.32	21.465	2.1	2.075	2	6.24	6.215	6.21	92.4	92.05	3	3	4.25
			Sunny	Moderate	12:08	12:09					7.9		29.7		21.61		2.05			6.19			91.7		3		
			Sunny	Moderate	12:09	12:09			7.88	29.5	24.16	1.98	5.75	86.2	5												
			Sunny	Moderate	12:10	12:10			7.88	29.5	24.28	2.03	5.68	85.7	6												
	Mid-Flood	M2	Sunny	Moderate	17:30	17:30	26	5.3	surface	1	8.02	8.02	30.3	30.3	19.72	19.79	2.6	2.63	3.1	7.37	7.355	7.35	109.1	108.95	5	5	4.75
			Sunny	Moderate	17:30	17:31					8.02		30.3		19.86		2.66			7.34			108.8		5		
			Sunny	Moderate	17:31	17:31			7.91	29.6	23.74	3.54	5.93	88.7	4												
			Sunny	Moderate	17:32	17:32			7.91	29.6	23.73	3.73	5.88	87.9	5												
	Mid-Flood	C1	Sunny	Moderate	17:03	17:04	26	9.6	surface	1	8.04	8.04	30.5	30.5	17.02	16.96	2.7	2.7	6.1	8.17	8.165	8.16	119.5	119.4	3	3	3.67
			Sunny	Moderate	17:03	17:04					8.04		30.5		16.9		2.7			8.16			119.3		3		
			Sunny	Moderate	17:04	17:05			7.89	29.5	23.98	2.78	5.24	78.5	2												
			Sunny	Moderate	17:04	17:05			7.89	29.5	23.82	2.78	5.32	79.6	2												
			Sunny	Moderate	17:05	17:06			7.89	29.4	25.73	2.34	4.99	75.4	6												
			Sunny	Moderate	17:05	17:06			7.89	29.5	25.86	23.35	4.98	75.3	6												
	Mid-Flood	C2	Sunny	Moderate	17:45	17:45	26	5.2	surface	1	8.13	8.13	30.3	30.3	17.79	17.77	2.57	2.54	2.5	8.6	8.365	8.36	126.2	126.45	3	2.5	3.5
			Sunny	Moderate	17:46	17:46					8.13		30.3		17.75		2.51			8.13			126.7		2		
			Sunny	Moderate	17:48	17:48			8.13	30.3	17.7	2.5	8.67	127.1	4												
			Sunny	Moderate	17:48	17:49			8	30.1	20.77	2.54	7.21	107.1	5												

Date (dd-mm-yyyy)	Tide	Station	Weather (Sunny/ Cloudy/ Rainy)	Sea (Calm/ Moderate/ Rough)	Sampling Time		Ambient Temp	Total Water Depth (m)	Level	Sampling Depth (m)	pH		Water Temperature (°C)		Salinity (ppt)		Turbidity (NTU)			DO mg/L			DO Saturation (%)		Suspended Solids (mg/L)		
			Condition	Condition	Start	Finish					Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	Value	Average	Value
30/9/2024	Mid-Ebb	M2	Sunny	Moderate	14:16	14:16	31	4.8	surface	1	8.2	8.2	30	30.05	23.71	23.695	4.48	4.625	5.4	8.75	8.76	8.76	131.7	131.95	6	6.5	5.75
			Sunny	Moderate	14:16	14:17					8.2		30.1		23.68		4.77			8.77		8.76	132.2		7		
			Sunny	Moderate	14:17	14:18					8.19	30	23.93	6	8.81	8.805	133	5									
			Sunny	Moderate	14:18	14:19					8.19	30	23.95	6.43	8.8	8.805	132.9	5									
	Mid-Ebb	C1	Sunny	Moderate	13:31	13:32	31	8.5	surface	1	8.1	8.1	30	30	23.5	23.47	9.73	8.565	10	8.41	8.46	8.17	126.5	127.25	6	5.5	5.67
			Sunny	Moderate	13:32	13:33					8.1		30		23.44		7.4			8.51			8.46		128		
			Sunny	Moderate	13:33	13:33			8.08	29.9	25.49	13.81	7.87	7.88	119.6	4											
			Sunny	Moderate	13:34	13:34			8.08	29.9	25.43	12.6	7.89	7.88	119.8	3											
			Sunny	Moderate	13:34	13:35			8.05	29.8	26.35	8.22	7.45	7.415	113.6	8											
			Sunny	Moderate	13:35	13:36			8.04	29.8	26.42	9.29	7.38	7.415	112.5	8											
	Mid-Ebb	C2	Sunny	Moderate	13:55	13:55	31	5.6	surface	1	8.21	8.21	30	30.05	23.86	23.85	16.42	16.34	17	9.12	9.135	9.135	137.5	137.85	17	17.5	19.8
			Sunny	Moderate	13:56	13:56					8.21		30.1		23.84		16.26			9.15		9.135	138.2		18		
			Sunny	Moderate	13:56	13:57			8.2	30	24.58	17.57	8.95	8.945	135.5	22											
			Sunny	Moderate	13:57	13:57			8.2	30	24.58	17.71	8.94	8.945	135.4	22											
	Mid-Flood	M2	Sunny	Moderate	19:02	19:02	29	5.1	surface	1	8.44	8.44	30.4	30.5	20.86	20.84	4.15	3.69	4.6	10.26	10.335	10.34	153.1	154.45	3	3.5	4.5
			Sunny	Moderate	19:03	19:03					8.44		30.6		20.82		3.23			10.41		10.335	155.8		4		
			Sunny	Moderate	19:04	19:05			8.16	30	26.59	5.37	7.44	7.395	114	6											
			Sunny	Moderate	19:05	19:05			8.16	29.9	26.66	5.53	7.35	7.395	112.5	5											
	Mid-Flood	C1	Sunny	Moderate	19:17	19:17	29	9.9	surface	1	8.41	8.41	30.5	30.5	19.87	19.89	2.94	2.88	6.4	10.54	10.73	9.915	156.8	159.65	4	4	4.83
			Sunny	Moderate	19:17	19:18					8.41		30.5		19.91		2.82			10.92			10.73		162.5		
			Sunny	Moderate	19:18	19:19			8.33	30.2	22.68	4.2	9.04	9.1	135.7	5											
			Sunny	Moderate	19:19	19:19			8.33	30.2	22.6	4.09	9.16	9.1	137.7	5											
			Sunny	Moderate	19:20	19:20			8.17	29.7	28.26	12.47	6.44	6.435	99	6											
			Sunny	Moderate	19:20	19:20			8.17	29.7	28.23	11.8	6.43	6.435	98.8	5											
	Mid-Flood	C2	Sunny	Moderate	19:21	19:21	29	5.3	surface	1	8.28	8.285	30.2	30.2	22.57	22.545	4.4	4.19	5	9.73	9.77	9.77	146.1	146.75	2	2.5	5.25
			Sunny	Moderate	19:21	19:22					8.29		30.2		22.52		3.98			9.81		9.77	147.4		3		
			Sunny	Moderate	19:23	19:24			8.25	30	25.19	5.79	8.82	8.77	134	8											
			Sunny	Moderate	19:24	19:24			8.24	30	25.28	5.95	8.72	8.77	132.6	8											

## **Appendix D**

# **Environmental Checklist**



**Ecosystems Ltd.**  
生態系統顧問有限公司

**Environmental Monitoring Works for Lung Kwu Chau Jetty Repair Works**

**Environmental Checklist for Site Audit**

Date: 27 Sep 2024

Time: 12:22 pm


Weather: Sunny

Audit No: 001


Item	Environmental Protection Measures / Mitigation Measures	Implementation			Action / Remarks
		Y	N	NA	
<b>Previous follow up action</b>					
1.1	Are previous follow up actions implemented and accepted?			✓	
<b>Measure / Practice to be implemented</b>					
2.1	Is the Environmental Permit displayed at the entrance of construction site?	✓			
2.2	Is Permit under s11 of Cap. 476A for the anchorage works obtained?	✓			
2.3	Is MDN for the proposed reinstatement works obtained?	✓			
2.4	Is the site kept clean and tidy?	✓			
2.5	Is the site free from wastewater discharge to the sea?	✓			
2.6	Are there any measures to prevent leaked oil/chemical from entering the sea?			✓	
2.7	Is the site free from general waste (from construction worker) with reasonable condition?	✓			
2.8	Are there any measures to collect spilt cement and concrete washings during concreting works?			✓	
2.9	Are construction solid waste, debris and rubbish (from construction activities) on site collected, handled and disposed of properly to avoid water quality impacts?			✓	
2.11	Is the 24-hour guard boat present around the Jetty?	✓			
2.12	Is the double layer of floating type silt curtain adopted?	✓			
2.13	Are there spare silt curtains ready on site?	✓			
2.14	Are steel drag anchors adopted for the derrick lighter?			✓	
2.15	Are the armour rock stored properly at the hopper of derrick lighter?			✓	
2.16	Are the broken slab stored properly at the hopper of derrick lighter?			✓	
2.17	Is the repair works area fenced off for maintaining an access for other's use?			✓	
2.18	Is there any foundation of slab interrupted?				
2.19	Is quieter machinery being used (e.g. silenced breaker)?			✓	
2.20	Is there any blasting work observed?			✓	
2.21	Are lifting eyes installed to the concrete blocks, if the existing lifting holes are missing?			✓	
2.22	All pipe leakages shall be repaired promptly, and plant shall not be operated with leaking pipes.			✓	

Item	Environmental Protection Measures / Mitigation Measures	Implementation			Action / Remarks
		Y	N	NA	
4.8	In order to monitor the disposal of C&D materials at public filling areas, and to control fly-tipping, a trip-ticket system shall be included as one of the contractual requirements.			✓	
4.9	Prior to disposal of C&D waste. It is recommended that wood, steel and other metals shall be separated for re-use and / or recycling to minimise the quantity of waste to be disposed of to landfill.			✓	
4.10	Proper storage and site practices to minimise the potential for damage or contamination of construction materials.			✓	
4.11	Plan use of construction materials carefully to minimise amount of waste generated and avoid unnecessary generation of waste.	✓			

Recorded by:  
Date: 27, 9, 2024  
(Environmental Monitoring Team)

Signature: 

Follow up by:  
Date: 27 Sep 2024.  
(Contractor's representative)

  
Signature:

## **Appendix E**

# **Schedule of Water Quality Monitoring in October 2024**

Monitoring Date	1st Tide Monitoring	2nd Tide Monitoring
2/10/2024 (Wed)	13:00 Mid-Ebb	19:00 Mid-Flood
* 4/10/2024 (Fri)	08:00 Mid-Flood	14:00 Mid-Ebb
7/10/2024 (Mon)	10:00 Mid-Flood	16:00 Mid-Ebb
* 9/10/2024 (Wed)	07:00 Mid-Ebb	13:00 Mid-Flood
# 11/10/2024 (Fri)	08:00 Mid-Ebb	15:00 Mid-Flood
14/10/2024 (Mon)	11:00 Mid-Ebb	17:00 Mid-Flood
* 16/10/2024 (Wed)	12:00 Mid-Ebb	18:00 Mid-Flood
18/10/2024 (Fri)	08:00 Mid-Flood	14:00 Mid-Ebb
21/10/2024 (Mon)	10:00 Mid-Flood	16:00 Mid-Ebb
23/10/2024 (Wed)	07:00 Mid-Ebb	13:00 Mid-Flood
* 25/10/2024 (Fri)	09:00 Mid-Ebb	15:00 Mid-Flood
28/10/2024 (Mon)	11:00 Mid-Ebb	17:00 Mid-Flood
30/10/2024 (Wed)	11:00 Mid-Ebb	17:00 Mid-Flood

\* Tentative Site Inspection date

# Public Holiday