

By Post

WWF Hong Kong
15/F, Manhattan Centre,
8 Kwai Cheong Road,
Kwai Chung,
NT

Level 5 Festival Walk
80 Tat Chee Avenue
Kowloon Tong
Kowloon
Hong Kong
t +852 2528 3031
d +852 2268 3437
f +852 2268 3380

ricky-kh.chui@arup.com
www.arup.com

For the attention of Ms. Nicole Wong

13 November 2023

Dear Ms. Wong

**Mai Po Nature Reserve Infrastructure Upgrade
Monthly EM&A Report for October 2023**

Reference is made to Environmental Team's captioned submission by email on 13 November 2023. Pursuant to Condition 3.4 of the Environmental Permit No. EP-598/2022, we are pleased to inform you that we have no comments and verify the captioned monthly EM&A report.

If you require further information, please do not hesitate to contact the undersigned.

Yours sincerely



Ricky Chui
Independent Environmental Checker

**Environmental Team for
EP-598/2022 – Mai Po Nature Reserve
Infrastructure Upgrade Project**

**Monthly Environmental Monitoring and
Audit Report for October 2023**

Certified By Environmental Team Leader: _____



(Joan Choi)

Company: Ka Shing Management Consultancy Ltd.

REMARKS:

The information supplied and contained within this report is, to the best of our knowledge, correct at the time of printing.

Ka Shing accepts no responsibility for changes made to this report by third parties.

Ka Shing Management Consultancy Ltd. www.ka-shing.net

Unit 2, 13/F Kai Yue Commercial Building, 2C Argyle St,

Mong Kok, Kowloon

Table of Contents

<i>EXECUTIVE SUMMARY</i>	3
1. Introduction.....	3
2. Environmental Monitoring and Audit Progress.....	3
3. Water Quality.....	3
4. Complaint Log.....	3
5. Notification of Summons and Successful Prosecutions.....	3
6. Reporting Changes.....	3
<i>1 INTRODUCTION</i>	4
1.1 Background.....	4
1.2 Purpose of the report.....	4
1.3 Project Organization.....	5
1.4 Summary of Construction Works Undertaken During Reporting Month.....	6
1.5 Construction Programme.....	6
1.6 Summary of EM&A Requirement.....	6
1.7 Status of Compliance with Environmental Permit (EP) Conditions.....	7
<i>2 WATER QUALITY</i>	8
2.1 Water Quality Monitoring for Foundation Works.....	8
<i>3 ENVIRONMENTAL SITE INSPECTION</i>	9
3.1 Site Audits.....	9
3.2 Implementation Status of Environmental Mitigation Measures.....	9
<i>4 ENVIRONMENTAL NON-COMPLIANCE</i>	11
4.1 Summary of Environmental Non-Compliance.....	11
4.2 Summary of Environmental Complaint.....	11
4.3 Summary of Environmental Summon and Successful Prosecution.....	11
<i>5 FUTURE KEY ISSUES</i>	12
5.1 Future Key Issues.....	12
<i>6 CONCLUSIONS AND RECOMMENDATIONS</i>	13
6.1 Conclusions.....	13
6.2 Recommendations.....	13

LIST OF TABLES

- Table E 1 Summary Table for EM&A Activities in the Reporting Month
- Table 1. 1 Key Contacts of the Project
- Table 1. 2 Status of Environmental Licences, Notifications and Permits
- Table 1. 3 Summary Table for Status of Compliance / Required Submission under EP
- Table 3. 1 Observations and Follow Up Action of Site Audit

LIST OF APPENDICES

- Appendix A Location of the Project
- Appendix B Site Inspection & Audit Schedules
- Appendix C The Environmental Mitigation Implementation Schedule (EMIS)
- Appendix D Waste Generation in the Reporting Month
- Appendix E Complaint Log
- Appendix F Summary of Successful Prosecution
- Appendix G The Construction Programmes

EXECUTIVE SUMMARY

1. Introduction

This is the 5th monthly Environmental Monitoring and Audit (EM&A) Report for the Mai Po Nature Reserve Infrastructure Upgrade Project No. EP-598/2022. This report was prepared by Ka Shing Management Consultancy Ltd. (Ka Shing) under “Mai Po Nature Reserve Infrastructure Upgrade Project No. EP-598/2022” (hereinafter called the “Service Contract”). This report documents the findings of Environmental Monitoring and Audit (EM&A) work conducted from 1st to 16th October 2023.

2. Environmental Monitoring and Audit Progress

The monthly EM&A programme was undertaken by the ET in accordance with the EM&A Manual. A summary of the monitoring and audit activities during the reporting period is presented below:

Table E 1 Summary Table for EM&A Activities in the Reporting Month

EM&A Activities	Date
Weekly Environmental Site Inspection	5, 10 & 16 October 2023

3. Water Quality

According to Section 4.2.8 of the EM&A Manual, the precautionary water quality monitoring shall be carried out when foundation works are carried out at TH2 and TH3. The foundation works of TH2 and TH3 are completed on 12 Jul 2023 and 01 Aug 2023. Precautionary water monitoring conducted on 1st, 3rd, 5th and 8th August 2023 showed no exceedance of Action/Limit Level. According to Section 4.2.9 of the EM&A Manual, post-construction monitoring is not required. Therefore, water quality monitoring at Sluice Gate 7 and Sluice Gate 19 is no longer necessary and no water quality monitoring was conducted in October 2023.

4. Complaint Log

No environmental complaint was received in the reporting period.

5. Notification of Summons and Successful Prosecutions

No notification of summons or successful prosecutions was received in the reporting period.

6. Reporting Changes

There was no reporting change in the reporting period.

1. INTRODUCTION

1.1 Background

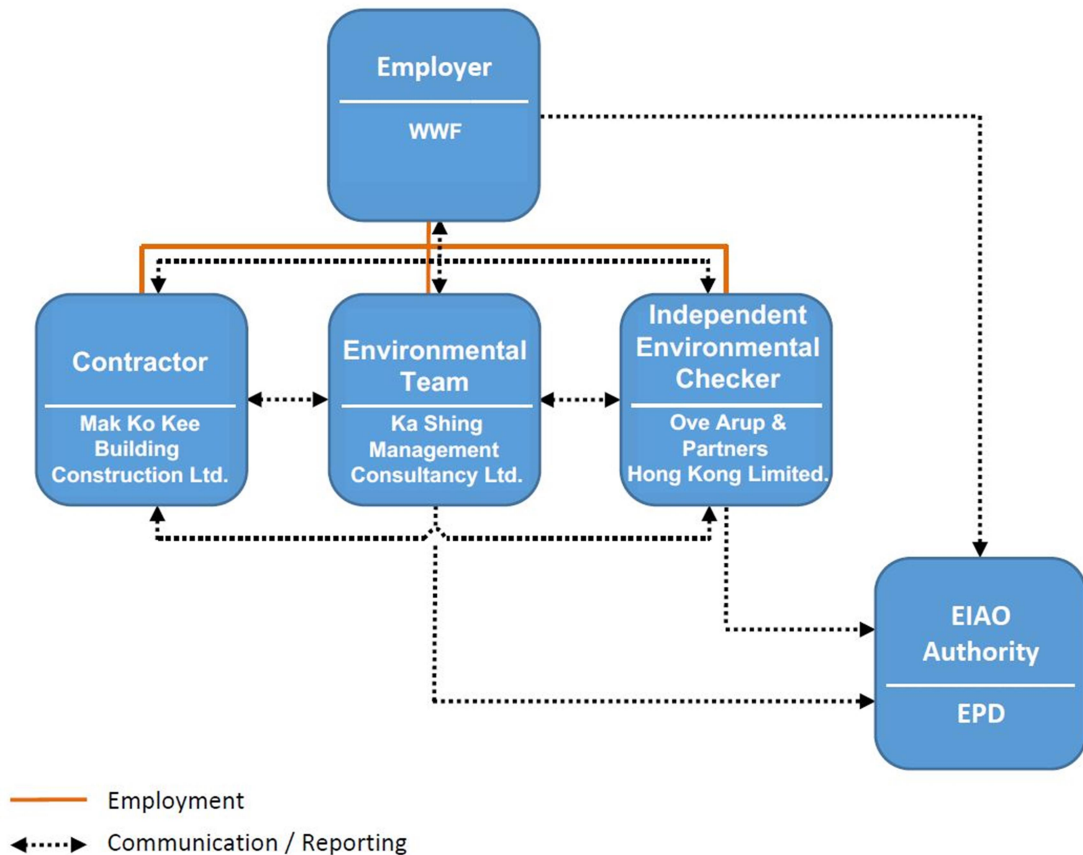
- 1.1.1 The Mai Po Nature Reserve has served Hong Kong as one of the most valuable ecological assets in the city, and is managed by the World Wide Fund for Nature Hong Kong (“WWF”). WWF proposes to update of an existing concrete footpath of about 1.5m wide to a raised wooden boardwalk of about 1.65m wide, construction of a new three-storey tower hide (TH2) and the associated access wooden boardwalk of about 156m long and 1.65m wide; and construction of a new three-storey tower hide (TH3) and the associated access wooden boardwalk of about 85m long and 1.65m wide. The location of the Project as shown in the **Appendix A** of this report.
- 1.1.2 The project site is located in Mai Po Nature Reserve (MPNR) where has been managed by World Wide Fund for Nature Hong Kong (“WWF”) since 1984. More than 20,000 people per year visiting the MPNR and growing in visitor numbers is anticipated. Most of the existing facilities have been in use for more than 20 years, in order to cater for an increasing number of visitors and providing the good condition of facilities in the future, the upgrade of infrastructure is proposed. The WWF had completed an Environmental Impact Assessment (EIA) and is the Permit Holder.
- 1.1.3 The Project under Mai Po Nature Reserve Infrastructure Upgrade Project (Register No. AEIAR-233/2022) is approved by the EIA report and later granted an EP. The approved EIA report described both the construction phase and operational phase.
- 1.1.4 Ka Shing Management Consultancy Ltd. has been commissioned by the WWF to undertake the assignment as the Environmental Team (ET) for the Designated Project of Mai Po Nature Reserve Infrastructure Upgrade Project.
- 1.1.5 In accordance with the Project EM&A Manual requirements, water quality monitoring, and site inspections should be covered in this Contract. Overall, the EM&A works follows the demarcation of monitoring responsibilities.

1.2 Purpose of the report

- 1.2.1 This is the 5th monthly EM&A Report which summarises audit findings for the EM&A programme during the reporting period from 1st to 16th October 2023.

1.3 Project Organization

1.3.1 EM&A Organization



1.3.2 Different parties with different levels of involvement in the Project organization under EP no.: EP-598/2022 include:

- Project Proponent – WWF Hong Kong
- Contractor– Mak Ko Kee Building Construction Ltd
- Environmental Team (ET) – Ka Shing Management Consultancy Ltd.
- Independent Environmental Checker (IEC) – Ove Arup & Partners Hong Kong Limited

1.3.3 The key personnel contact names and numbers under Mai Po Nature Reserve Infrastructure Upgrade Project and the other contact names and numbers under WWF (Hong Kong) are summarised in **Table 1.1**.

Table 1. 1 Key Contacts of the Project

Party	Role	Contact Person	Phone No.	Fax No.
WWF Hong Kong	Project Proponent	Mr. Alex WONG	2526 1011	2161 9628
Contractor (Mak Ko Kee Building Construction Ltd)	Site Agent	Mr. Kin Hung LAM	2649 1883	2647 7389
Ka Shing Management Consultancy Ltd.	ETL	Ms. Joan CHOI	2618 2166	2120 7752
Ove Arup & Partners Hong Kong Limited	IEC	Mr. Ricky CHUI	2268 3437	2268 3380

1.4 Summary of Construction Works Undertaken During Reporting Month

1.4.1 The major site activities undertaken in the reporting month included:

- Tower Hide – Structure building by pre-fabrication module assemble, Roof covering, Cladding module assemble. Structure Painting, E&M conduit, ELV devices installation
- Ramp path – Wood decking installation, Fencing installation
- Footpath – Protection and Safety signage caution, Pedestal footing work, Pedestal installation, Wood decking installation, Ramp Decking, Landing Platform Installation and Extension of Decking

1.5 Construction Programme

1.5.1 A copy of Contractors' construction programmes is provided in **Appendix G**.

1.5.2 A summary of the relevant permits, licences, and/or notifications on environmental protection for this Project is presented in **Table 1.2**.

Table 1. 2 Status of Environmental Licences, Notifications and Permits

Permit / Licence No.	Valid Period		Status
	From	To	
1. Environmental Permit (EP)			
EP-598/2022	16 Feb 2022	N/A	Valid
2. Air Pollution Control (Construction Dust) Regulation			
493298	02 Jun 2023	N/A	Notified

1.6 Summary of EM&A Requirement

1.6.1 The EM&A programme requires water quality monitoring as well as environmental site audits.

The EM&A requirements are described in the following sections, including:

- All monitoring parameters;
 - Action and Limit levels for all environmental parameters;
 - Event / Action Plans;
 - Environmental mitigation measures, as recommended in the Project EIA study final report;
- and

- Environmental requirements in contract documents.

1.7 Status of Compliance with Environmental Permit (EP) Conditions

1.7.1 The status of statutory environmental compliance with the EP conditions under the EIAO, submission status under the EP and implementation status of mitigation measures are presented in **Table 1.3**:

Table 1.3 Summary Table for Status of Compliance / Required Submission under EP

EP Conditions	Submission	Status
1.12	Notification of Commencement Date of Construction	Deposit
2.1	Employment of Environmental Team (ET)	Deposit
2.4	Employment of IEC	Deposit
2.7	Employment of Qualified Ecologist	Qualified Ecologists have been employed to carry out work relating to ecological aspects
2.8	Submission of Environmental Permit (EP) Submission Schedule	Deposit
2.9	Submission of Tree Pruning or Felling Plan	Deposit
2.11	Submission of Egretty Mitigation Measures Plan	Deposit
2.13	Submission of Method Statement and Management Plan for the Design and Construction of the Wooden Boardwalk	Deposit
2.14	Submission of Water Quality Mitigation Measures Plan	Deposit
2.15	Measures to Mitigate Ecological Impacts for water birds and wetland-dependent species	Under implementation
2.16	Measures to Mitigate Ecological Impacts for roost and pre-roost sites of Collared Crow and ardeid	Under implementation
3.2(i)	Conducting baseline environmental monitoring	Deposit
3.2(ii)	Conducting impact monitoring	The termination of water quality monitoring on 08 Aug 2023.
3.2(iii)	carrying out remedial actions described in the Event/Action Plans of the EM&A Manual	Under implementation
3.2(iv)	Logging and keeping records of the details of conducting baseline and impact monitoring	Completed
3.3	Submission of copy of Baseline Monitoring Report	Deposit
3.4	Submission of copy of Monthly EM&A Report	On-going
4.1	Submission of electronic copies of the Baseline Monitoring Report and Monthly EM&A Reports	Submitted
4.2	Internet address of a dedicated web site	Submitted
4.3	The Internet website is user-friendly for the public access	On-going

2 WATER QUALITY

2.1 Water Quality Monitoring for Foundation Works

2.1.1 According to Section 4.2.8 of the EM&A Manual, the precautionary water quality monitoring shall be carried out when foundation works are carried out at TH2 and TH3. The foundation works of TH2 and TH3 are completed on 12 Jul 2023 and 01 Aug 2023. Precautionary water monitoring conducted on 1st, 3rd, 5th and 8th August 2023 showed no exceedance of Action/ Limit Level. According to Section 4.2.9 of the EM&A Manual, post-construction monitoring is not required. Therefore, water quality monitoring at Sluice Gate 7 and Sluice Gate 19 is no longer necessary and no water quality monitoring was conducted in October 2023.

3 ENVIRONMENTAL SITE INSPECTION

3.1 Site Audits

- 3.1.1 Site audits were carried out by ET on weekly basis to monitor the timely implementation of proper environmental management practices and mitigation measures on the Contract site.
- 3.1.2 Site audits were conducted by ET with the representative of the client’s Representative and the Contractor on 5, 10 & 16 October 2023 in the reporting month. Joint site audits with the representative of the Client representative, the Contractor and IEC were carried out on 5 & 16 October 2023.
- 3.1.3 During site inspections in the reporting month, no non-compliance was identified. The observations and recommendations made during the audit sessions are summarized in **Table 3.1**.

Table 3. 1 Observations and Follow Up Action of Site Audit

Parameters	Date	Observations	Follow Up Action
Air Quality	5-Oct-23	Regular watering to the exposed grounds and unpaved roads is necessary. (TH2)	Regular watering to the exposed grounds and unpaved roads has been used.
	10-Oct-23	Solid screen is recommended to be erected around the dusty work. (TH2)	The dusty work was screened.
Water Quality	--	No environmental deficiency was identified during the reporting month.	--
Ecology	--	No environmental deficiency was identified during the reporting month.	--
Waste / Chemical Management	--	No environmental deficiency was identified during the reporting month.	--
Permit /Licences	--	No environmental deficiency was identified during the reporting month.	--
Other	5- Oct-23	Defect was found on the screen	The screen was fixed.

3.2 Implementation Status of Environmental Mitigation Measures

- 3.2.1 According to the EIA Report, Environmental Permit and the EM&A Manual of the Project, the mitigation measures detailed in the documents are recommended to be implemented during the construction phase. An updated summary of the Environmental Mitigation Implementation Schedule (EMIS) is provided in **Appendix C**.

- 3.2.2 During site inspections in the reporting month, the Contractor's readiness with the mitigation measures against dust emission was found generally satisfactory despite some observations/recommendations as detailed above were raised.
- 3.2.3 Waste generated from this Project includes inert C&D materials and non-inert C&D materials. Non-inert C&D materials are made up of general refuse and waste that cannot be reused or recycled and has to be disposed of at the designated landfill sites. The amount of wastes generated by the construction works of the Project during the reporting month is shown in **Appendix D**.

4 ENVIRONMENTAL NON-COMPLIANCE

4.1 Summary of Environmental Non-Compliance

4.1.1 No environmental non-compliance was recorded in the reporting month.

4.2 Summary of Environmental Complaint

4.2.1 In accordance with the EM&A Manual, complaints should be referred to the ET for action. During the complaint investigation works, the ET and IEC as established according to EP can carry out Ad-hoc site inspections to identify the source of the complaint, review the effectiveness of the Contractor's remedial measures and the updated situation once received the complaint. In addition, additional monitoring and audit can also be arranged immediately to verify the situation if necessary. ET and IEC will also oversee the circumstances that leading to the complaint do not recur. Moreover, ET and IEC can cooperate efficiently with the Contractor on site for completion of the investigation.

4.2.2 There was no environmental complaint received in the reporting month.

4.3 Summary of Environmental Summon and Successful Prosecution

4.3.1 There was no successful environmental prosecution or notification of summons received since the Project commencement.

5 FUTURE KEY ISSUES

5.1 Future Key Issues

- 5.1.1 With reference to construction programs provided in Appendix G, which outlined the activities planned, it is important to note that outdoor construction works were not inspected during the site inspection on 16 October 2023. During the construction phase, potential environmental impacts were identified, particularly related to waste management, landscape, visual aspects, and ecology. Mitigation measures were planned and implemented to address these environmental impacts.
- 5.1.2 According to the Project EM&A Manual, the project programme refers to the outdoor construction works of the Project only. According to the site audit on 16 October 2023, outdoor construction works were not inspected. Therefore, the EM&A was terminated from 17 October 2023.

6 CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusions

- 6.1.1 This Monthly EM&A Report presents the EM&A work undertaken in October 2023 in accordance with EM&A Manual.
- 6.1.2 Environmental site inspections were conducted on 5, 10 & 16 October 2023 by ET in the reporting month. No environmental non-compliance was recorded in the reporting month.
- 6.1.3 According to Section 4.2.8 of the EM&A Manual, the precautionary water quality monitoring shall be carried out when foundation works are carried out at TH2 and TH3. The foundation works of TH2 and TH3 are completed on 12 Jul 2023 and 01 Aug 2023. Precautionary water monitoring conducted on 1st, 3rd, 5th and 8th August 2023 showed no exceedance of Action/ Limit Level. According to Section 4.2.9 of the EM&A Manual, post-construction monitoring is not required. Therefore, water quality monitoring at Sluice Gate 7 and Sluice Gate 19 is no longer necessary and no water quality monitoring was conducted in October 2023.
- 6.1.4 No environmental complaint, notification of summons or successful prosecutions was received in the reporting month.
- 6.1.5 According to the Project EM&A Manual, the project programme refers to the outdoor construction works of the Project only. According to the site audit on 16 October 2023, outdoor construction works were not inspected. Therefore, the EM&A was terminated from 17 October 2023.

6.2 Recommendations

- 6.2.1 According to the environmental audits performed in the reporting month, the following recommendations were made:

1. *Air Quality*

- Regular watering to the exposed grounds and unpaved roads has been used.
- The dusty work was screened.

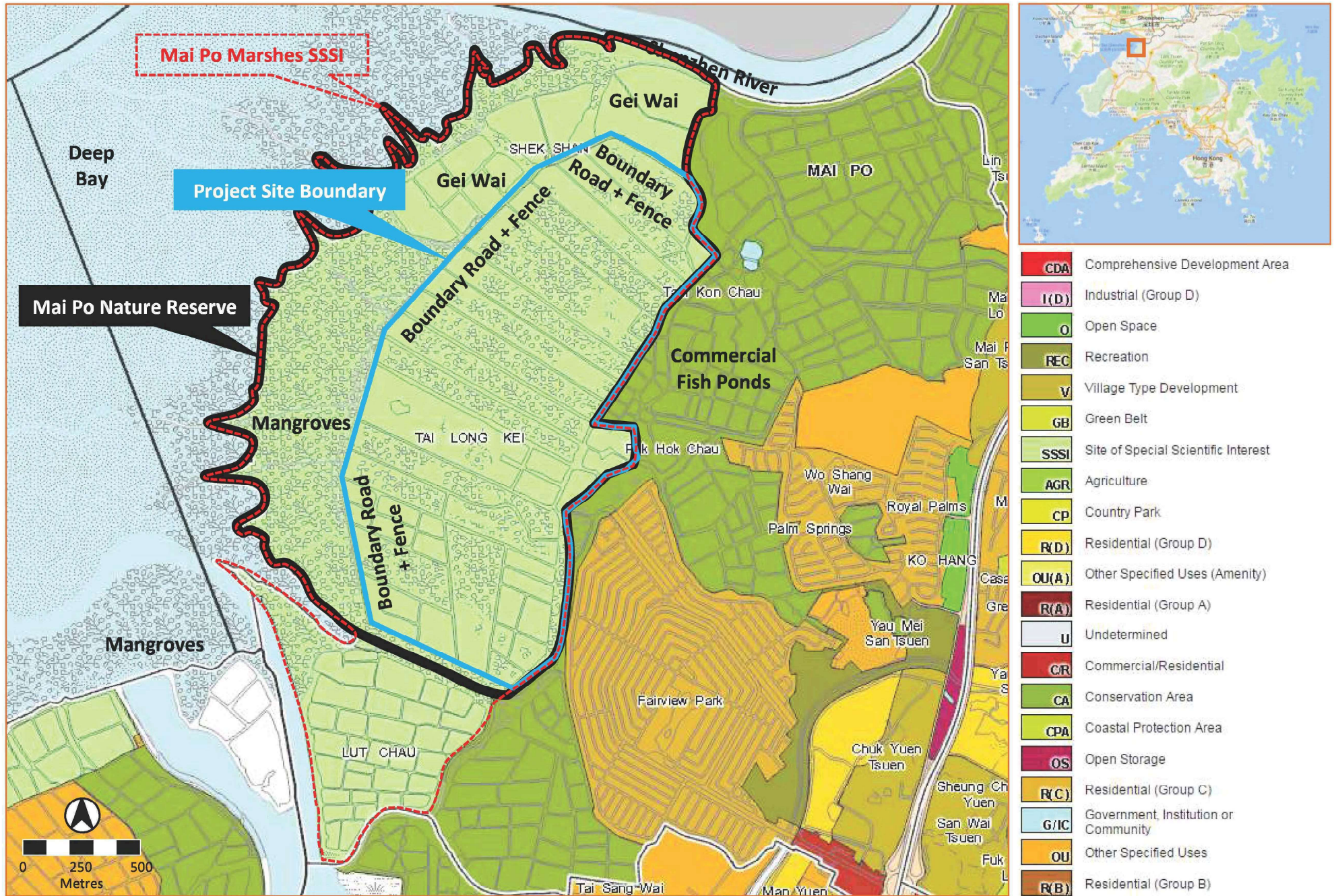
2. *Other*

- The screen was fixed.

APPENDIX A

Location of the Project

Statutory Plan Showing Location of Project and its Environments



Source: Extract from the approved Mai Po and Fairview Park OZP No. S/YL-MP/6, from PlanD Statutory Planning Portal 2.

APPENDIX B
Site Inspection & Audit Schedule

**Mai Po Nature Reserve Infrastructure Upgrade Project
Site Inspection/Audit Schedule
October-2023**

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1-Oct	2-Oct	3-Oct	4-Oct	5-Oct	6-Oct	7-Oct
				Site Inspection & Audit		
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
8-Oct	9-Oct	10-Oct	11-Oct	12-Oct	13-Oct	14-Oct
		Site Inspection & Audit				
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
15-Oct	16-Oct	17-Oct	18-Oct	19-Oct	20-Oct	21-Oct
	Site Inspection & Audit					
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
22-Oct	23-Oct	24-Oct	25-Oct	26-Oct	27-Oct	28-Oct
Sunday	Monday	Tuesday				
29-Oct	30-Oct	31-Oct				

APPENDIX C
The Environmental Mitigation
Implementation Schedule (EMIS)

EIA REPORT REF.	EM&A ACTION REF.	RECOMMENDED MITIGATION MEASURES	OBJECTIVES OF THE MEASURE AND MAIN CONCERNS TO ADDRESS	LOCATION OF MEASURE	WHO TO IMPLEMENT MEASURE?	WHEN TO IMPLEMENT MEASURE?*			STANDARD OR REQUIREMENTS FOR MEASURE TO ACHIEVE?
						D	C	O	
AIR QUALITY									
3.2.6	A.1	Use of approved Non-road Mobile Machinery (NRMM) for all site works areas	To minimise pollutants from exhaust emissions of mobile plant and equipment	All works areas	Construction Contractor		✓		Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation
3.6.2	A.2	Off-site Pre-fabrication of key elements for TH2 and TH3	To reduce air quality impacts associated with construction of new buildings	TH2 and TH3	Engineer + Construction Contractor	✓	✓		Additional measure for minimisation of detrimental impacts to wildlife and the local community
3.7.2	A.3	<ol style="list-style-type: none"> 1. Regular watering to reduce dust emissions from exposed site surfaces and unpaved roads, particularly during dry weather 2. Open stockpiles shall be avoided or covered. Where possible, prevent placing dusty materials storage piles near ASRs. 3. Side enclosure of any aggregate or dusty material storage piles to reduce emissions. Where this is not practicable owing to frequent usage, spraying with water shall be carried out 4. Tarpaulin covering of all dusty vehicle loads transported to and from the Site 5. Use of water sprinklers at the loading area where dust generation is likely during the loading process of loose material, particularly in dry weather 6. Imposition of speed controls for vehicles on Site 7. Establishment and use of vehicle wheel and body washing facilities at the exit of the Site to minimise the fugitive dust emissions generated 8. Site layout should be carefully planned such that machinery and dust causing activities (e.g. 	To reduce fugitive dust emissions from works areas	All works areas	Construction Contractor		✓		Air Pollution Control (Construction Dust) Regulation

Note: * D = Deign Stage | C = Construction Stage | O = Operation Stage

EIA REPORT REF.	EM&A ACTION REF.	RECOMMENDED MITIGATION MEASURES	OBJECTIVES OF THE MEASURE AND MAIN CONCERNS TO ADDRESS	LOCATION OF MEASURE	WHO TO IMPLEMENT MEASURE?	WHEN TO IMPLEMENT MEASURE?*			STANDARD OR REQUIREMENTS FOR MEASURE TO ACHIEVE?
						D	C	O	
		<p>haul roads and stockpiling areas) could be located away from the ASR as far as possible</p> <p>9. Where possible, routing of vehicles and positioning of construction plant should be at the maximum possible distance from ASRs</p> <p>10. Solid screens are recommended to be erected around any dusty construction activities</p>							
NOISE									
4.6.3	N.1	Prohibition of works during Restricted Hours	To restrict and reduce noise nuisance during restricted hours.	All works areas	Construction Contractor		✓		NCO
4.6.3	N.2	Prohibition of percussive piling	To restrict and reduce noise nuisance from the use of noisy and heavy piling equipment.	All works areas	Construction Contractor		✓		TM on Noise from Percussive Piling
4.9.1	N.3	<ol style="list-style-type: none"> 1. Adopt <i>Code of Practice on Good Management Practice to Prevent Violation of the NCO</i> 2. Before commencing work, the Contractor shall submit to the Project Engineer the method of working, equipment and noise mitigation measures intended to be used at the Site 3. Devise and execute working methods to minimise the noise impact on the surrounding sensitive uses, and provide experienced personnel with suitable training to ensure that those methods are implemented 4. PME should be kept to a minimum and the parallel use of noisy equipment/ machinery should be avoided 5. Turn off unused equipment 6. Regular maintenance (off-site) of all plant and equipment 	To restrict and reduce noise nuisance from works areas.	All works areas	Construction Contractor		✓	<p>Mai Po Inner Deep Bay Ramsar Site Management Plan</p> <p>Code of Practice on Good Management Practice to Prevent Violation of the NCO (for Construction Industry)</p>	

Note: * D = Deign Stage | C = Construction Stage | O = Operation Stage

EIA REPORT REF.	EM&A ACTION REF.	RECOMMENDED MITIGATION MEASURES	OBJECTIVES OF THE MEASURE AND MAIN CONCERNS TO ADDRESS	LOCATION OF MEASURE	WHO TO IMPLEMENT MEASURE?	WHEN TO IMPLEMENT MEASURE?*			STANDARD OR REQUIREMENTS FOR MEASURE TO ACHIEVE?	
						D	C	O		
WATER QUALITY										
5.4.17	WQ.1	Foundation works at TH2 and TH3 shall be aligned with the schedule of draining the adjacent gei wai set out in the <i>MPNR Management Plan 2019-2024</i> .	Making use of hydraulic isolation of adjacent gei wai to avoid pollution of other gei wai and Deep Bay	TH2 and TH3 for foundation works	Engineer + Construction Contractor	✓	✓		MPNR Management Plan 2019-2024	
5.4.27	WQ.2	A perimeter bund will be constructed around the work sites for TH2 and TH3 to ensure that any runoff generated from within these sites is discharged only into the adjacent drained gei wai	To ensure pollutants cannot discharge into other water-filled gei wai and so provide a pathway for pollutants to enter Deep Bay	TH2 and TH3 for foundation works	Engineer + Construction Contractor	✓	✓		Additional measure for minimisation of detrimental impacts to wildlife and the local community	
5.4.27	WQ.3	The majority of construction components shall be pre-fabricated off-site to avoid any impacts associated with construction on-site	To achieve zero polluted runoff from works areas by minimising on-site construction of building components	Off-site	Engineer + Construction Contractor	✓	✓			
5.4.27	WQ.4	All concrete will be mixed off-site and brought into each works area only when needed and only in the quantities required, so that there is no need to store (or dispose of) any surplus concrete	To achieve zero polluted runoff from works areas by avoiding concrete mixing, storage and/or disposal on site	Off-site	Construction Contractor		✓			
5.4.27	WQ.5	Any concrete spilled within the works area will be immediately cleaned up and removed from the area	To achieve zero polluted runoff from works areas by immediate cleaning up and removal of spilled concrete	All works areas	Construction Contractor		✓			
5.4.27	WQ.6	Plant, equipment and vehicles shall not be maintained or repaired within any works area in the Project Site	To achieve zero polluted runoff from works areas by handling and treating any resulting oil, chemical waste or other polluting substances off-site in an appropriate manner	Off-site	Construction Contractor		✓			
5.4.27	WQ.7	During re-fuelling, drip trays shall be provided at any fuel connection point. Any spilled fuel shall be collected and taken off-site for proper treatment/disposal	To achieve zero polluted runoff from works areas by carrying out the refuelling with extreme care	All works areas	Construction Contractor		✓			Good Site Practice
5.4.27	WQ.8	Materials, plant or equipment that could give rise to contaminated runoff during extreme rainfall will be	To minimise the quantity of contaminated runoff during	All works areas	Construction Contractor		✓			

Note: * D = Deign Stage | C = Construction Stage | O = Operation Stage

EIA REPORT REF.	EM&A ACTION REF.	RECOMMENDED MITIGATION MEASURES	OBJECTIVES OF THE MEASURE AND MAIN CONCERNS TO ADDRESS	LOCATION OF MEASURE	WHO TO IMPLEMENT MEASURE?	WHEN TO IMPLEMENT MEASURE?*			STANDARD OR REQUIREMENTS FOR MEASURE TO ACHIEVE?
						D	C	O	
		protected by being covered, either by tarpaulin or by small gazebos that can be erected within minutes	extreme rainfall						
5.4.27	WQ.9	Each works area will be provided with at least one chemical toilet for use by workers. Sewage collected in these chemical toilets will be treated off-site	To ensure sewage is collected and treated off-site properly	All works areas	Construction Contractor		✓		
5.4.27	WQ.10	Each works area will be provided one bunded and covered area for the temporary storage of C&D material – one section for inert C&D material and one area for C&D waste. These areas will be emptied frequently, using construction material delivery vehicles that are empty on their return journey	To ensure proper storage of C&D material to avoid polluting adjacent gei wai or fishponds	All works areas	Construction Contractor		✓		
5.4.27	WQ.11	Each works area will be provided with at least one set of waterproof waste receptacles – one for recyclable waste and one for non-recyclable waste. These areas will be emptied frequently	To ensure proper storage of wastes to avoid polluting adjacent gei wai or fishponds	All works areas	Construction Contractor		✓		
5.6.2	WQ.12	<ol style="list-style-type: none"> 1. Perimeter channels at site boundaries shall be provided to intercept storm runoff from outside the works areas so that it will not wash across the works areas and to direct all site runoff only into adjacent drained gei wai 2. For the purpose of preventing soil erosion, exposed slope surfaces shall be covered e.g. by tarpaulin, and temporary access roads shall be protected by crushed stone or gravel 3. Intercepting channels shall be provided (e.g. along the crest/edge of excavation) to prevent storm runoff from washing across exposed soil surfaces. Arrangements shall always be in place to ensure that adequate surface protection measures can be safely carried out well before the arrival of a rainstorm 4. Earthworks final surfaces shall be well compacted and subsequent permanent works 	To minimise the quantity of contaminated runoff and muddy water from works areas by following the good site practice	All works areas	Construction Contractor		✓		ProPECC PN 1/94 Construction Site Drainage

Note: * D = Deign Stage | C = Construction Stage | O = Operation Stage

EIA REPORT REF.	EM&A ACTION REF.	RECOMMENDED MITIGATION MEASURES	OBJECTIVES OF THE MEASURE AND MAIN CONCERNS TO ADDRESS	LOCATION OF MEASURE	WHO TO IMPLEMENT MEASURE?	WHEN TO IMPLEMENT MEASURE?*			STANDARD OR REQUIREMENTS FOR MEASURE TO ACHIEVE?
						D	C	O	
		<p>or surface protection shall be carried out immediately after the final surfaces are formed to prevent erosion. Appropriate drainage like intercepting channels shall be provided where necessary</p> <p>5. Measures shall be taken to minimise the ingress of rainwater into trenches – they shall be dug and backfilled in short sections</p>							
5.5.1	WQ.13	The two new tower hides will not be provided with toilets or washrooms. Runoff from the roof of the tower hides and from the boardwalks will not be contaminated	No wastewater will be generated during operation.	TH2 and TH3	Construction Contractor			✓	Additional measure for minimisation of detrimental impacts to wildlife and the local community
WASTE MANAGEMENT									
6.6.2	WM.1	Preparation of a WMP to manage waste on site	To identify potential environmental impacts from the generation of waste; to recommend appropriate waste handling, collection, sorting, disposal and recycling measures; and to categorise and permit segregation of C&D material (i.e. inert C&D materials, C&D waste, etc.) for off-site reuse, recycling, treatment and/or disposal	All works areas	Construction Contractor		✓		ETWB TC(W) No. 19/2005, Env Mgmt on Construction Sites
6.6.3	WM.2	Waste storage areas should be well maintained and cleaned regularly	To adopt good housekeeping practices and prevent waste materials being blown around by wind, flushed or leached into nearby waters, or creating odour nuisance or pest and vermin problems	All works areas	Construction Contractor		✓		Good Site Practice
6.6.4	WM.3	Store refuse pending removal in receptacles provided with close fitting covers and remove and properly dispose of refuse daily	To avoid waste materials be flushed or leached during inclement weather conditions such as heavy rainfall	All works areas	Construction Contractor		✓		PNRC No. 17 Control of Env Nuisance from Construction Sites

Note: * D = Deign Stage | C = Construction Stage | O = Operation Stage

EIA REPORT REF.	EM&A ACTION REF.	RECOMMENDED MITIGATION MEASURES	OBJECTIVES OF THE MEASURE AND MAIN CONCERNS TO ADDRESS	LOCATION OF MEASURE	WHO TO IMPLEMENT MEASURE?	WHEN TO IMPLEMENT MEASURE?*			STANDARD OR REQUIREMENTS FOR MEASURE TO ACHIEVE?
						D	C	O	
6.6.4	WM.4	Dump trucks shall be fitted with covered box type dump bed and such dump trucks shall comply with the particular specification listed in Part B of Annex 2 to Appendix C of ETWB TC(W) No. 19/2005	To ensure C&D Material will be delivered to the appropriate designated outlets and dump trucks to minimise potential nuisance during transportation of waste	All works areas	Construction Contractor		✓		Part B of Annex 2 to Appendix C of ETWB TC(W) No. 19/2005
6.6.5	WM.5	Establishment of a Trip Ticket System to monitor the disposal of public fill and solid wastes at public filling facilities and landfills, and to control fly-tipping	To monitor the disposal of public fill and solid wastes at public filling facilities and landfills, and to control fly-tipping	Off-site	Construction Contractor		✓		DevB TC(W) No. 6/2010 and Waste Disposal (Charges for Disposal of Constr. Waste) Reg
6.6.6	WM.6	General refuse should be stored in enclosed bins or compaction units separate from C&D material. A reputable waste collector should be employed by the construction contractor to remove general refuse from the Site, separately from C&D materials	To separate general refuses from C&D material and ensure proper disposal	All works areas	Construction Contractor		✓		Good Site Practice
6.6.7	WM.7	<ol style="list-style-type: none"> The Contractor shall observe and comply with the WDO and its subsidiary regulations The Contractor shall submit to the Engineer a WMP with appropriate mitigation measures including allocation of an area for waste segregation and shall ensure that day-to-day site operations comply with the approved WMP The Contractor shall minimise the generation of waste from his work. Avoidance and minimisation of waste can be achieved through changing or improving design and practices, careful planning and good site management The Contractor shall ensure that different types of wastes are segregated on-site and stored in different containers, skips or stockpiles to facilitate reuse/recycling of waste and, as the last resort, disposal at different outlets 	To further minimise the environmental impacts related to waste arising from the Project	All works areas	Construction Contractor		✓		Good Site Practice Waste Disposal (Chemical Waste) (General) Regulation

Note: * D = Deign Stage | C = Construction Stage | O = Operation Stage

EIA REPORT REF.	EM&A ACTION REF.	RECOMMENDED MITIGATION MEASURES	OBJECTIVES OF THE MEASURE AND MAIN CONCERNS TO ADDRESS	LOCATION OF MEASURE	WHO TO IMPLEMENT MEASURE?	WHEN TO IMPLEMENT MEASURE?*			STANDARD OR REQUIREMENTS FOR MEASURE TO ACHIEVE?
						D	C	O	
		<p>5. The reuse and recycling of waste shall be practised as far as possible. The recycled materials shall include paper/cardboard, timber and metal, etc.</p> <p>6. The Contractor shall ensure that C&D materials are sorted into public fill (inert portion) and C&D waste (non-inert portion). Public fill, which comprises soil, rock, concrete, brick, cement plaster/mortar, inert building debris, aggregates and asphalt, shall be reused in earth filling, reclamation or site formation works. C&D waste, which comprises metal, timber, paper, glass, junk and general refuse, shall be reused, recycled or, as the last resort, disposed of at landfill</p> <p>7. The Contractor shall record the amount of waste generated, recycled and disposed of</p> <p>8. The Contractor shall use a trip ticket system for the disposal of C&D materials to any designated PFRFs and/or landfill</p> <p>9. Training shall be provided for workers about the concepts of site cleanliness and appropriate waste management procedures, including waste reduction, reuse and recycling</p> <p>10. The Contractor shall not permit any sewage, wastewater or effluent containing sand, cement, silt or any other suspended or dissolved material to flow from the Site onto any adjoining land or allow any waste matter that is not part of the final product from waste processing plants to be deposited anywhere within the Site or onto any adjoining land. He shall arrange removal of such matter from the site in a proper manner to the satisfaction of the Engineer</p>							

Note: * D = Deign Stage | C = Construction Stage | O = Operation Stage

EIA REPORT REF.	EM&A ACTION REF.	RECOMMENDED MITIGATION MEASURES	OBJECTIVES OF THE MEASURE AND MAIN CONCERNS TO ADDRESS	LOCATION OF MEASURE	WHO TO IMPLEMENT MEASURE?	WHEN TO IMPLEMENT MEASURE?*			STANDARD OR REQUIREMENTS FOR MEASURE TO ACHIEVE?
						D	C	O	
		11. The Contractor shall observe and comply with the Waste Disposal (Chemical Waste) (General) Regulation							
6.6.8	WM.8	<ol style="list-style-type: none"> 1. Construction material, stockpiles, chemical and waste storage/recycling facilities should be immediately moved to secured area 2. Construction material, stockpiles and waste storage/recycling facilities should be covered by an impermeable sheeting, if necessary 3. Intercepting channels will be provided at the edge of the excavated area to prevent storm runoff from washing across the exposed surface 	To adopt additional control measures when inclement weather (e.g. heavy rain, typhoon, etc.) is forecast	All works areas	Construction Contractor		✓		Good Site Practice
6.6.9	WM.9	Visitors will be encouraged to bring their own reusable water bottles and food containers, rather than single-use containers, and free drinking water for visitors will be provided at the MPEC. No waste receptacles are provided within MPNR and visitors will be encouraged to take their waste home with them	To minimise the amount of waste generated by visitors to MPNR	Throughout MPNR	WWF			✓	Additional measure for minimisation of detrimental impacts to wildlife and the local community
Table 6-3	WM.10	Inert C&D Material: PFRF at Tuen Mun Area 38	To ensure proper management and treatment of inert C&D material	Off-site	Construction Contractor		✓		
Table 6-3	WM.11	C&D Waste (non-inert): Segregation + recycling by local recyclers / residual waste to NENT Landfill	To ensure proper management and treatment of C&D waste (non-inert)	Off-site	Construction Contractor		✓		
Table 6-3	WM.12	C&D Waste (vegetation): Vegetation shall be composted on-site	To ensure proper management and treatment of C&D waste (veg)	On-site	WWF		✓		
Table 6-3	WM.13	General Refuse: Segregation + off-site recycling by local recyclers/residual waste to NWNT RTS	To ensure proper management and treatment of general refuse	Off-site	Construction Contractor		✓		
ECOLOGY									
7.9.3	E.1	The three project elements will be assembled/constructed over a two-month period between mid-April and mid-October	To avoid impacts on the high number of waterbirds and wetland-dependent species present in the dry season	All works areas	Construction Contractor		✓		Additional measure for minimisation of detrimental impacts to wildlife and the

Note: * D = Deign Stage | C = Construction Stage | O = Operation Stage

EIA REPORT REF.	EM&A ACTION REF.	RECOMMENDED MITIGATION MEASURES	OBJECTIVES OF THE MEASURE AND MAIN CONCERNS TO ADDRESS	LOCATION OF MEASURE	WHO TO IMPLEMENT MEASURE?	WHEN TO IMPLEMENT MEASURE?*			STANDARD OR REQUIREMENTS FOR MEASURE TO ACHIEVE?
						D	C	O	
7.9.4	E.2	Adequate site checks in the works area and in the vicinity of the footprint of all project elements will be conducted by a suitably qualified ecologist prior to commencement of works to search for substantive usage of the habitat by flora and/or fauna of conservation concern, e.g. the presence of an otter holt	To avoid impacts on mammals, in particular Eurasian Otter	All works areas	ET		✓		local community
7.9.6	E.3	Install a 2m-high solid, opaque screen around works areas	To mitigate disturbance to species using adjacent habitats	All works areas	Construction Contractor		✓		
7.9.6	E.4	Provide screen planting using native bamboo species <i>Bambusa tuldoides</i> (青稈竹, 花眉竹) to the access path to the new Tower Hides to reduce disturbance during the construction and operational phase (see also LV.6, below)	To mitigate disturbance to species using adjacent habitats	Access to THs	Construction Contractor +WWF		✓	✓	
7.9.7	E.5	All construction activity for TH2 and its associated access path, including the passage of construction vehicles, will cease two hours before sunset, this means 4pm in the wet season construction period	To avoid impacts on nocturnal roost sites and associated pre-roost gatherings of Collared Crow in the vicinity of Pond 20	TH2	Construction Contractor		✓		
7.9.8	E.6	Ahead of construction, ET checks will be conducted during the breeding season. These checks should be carried out two weeks prior to construction commencing and the day before. Should any egret be discovered in the vicinity of works areas, the need for mitigation measures shall be assessed in consultation with AFCD	To check for the presence of breeding ardeids within 500m of the footprint of project elements	All works areas	ET		✓		
7.9.9	E.7	All construction activity for footpath and TH3 will cease one hour before sunset	To prevent disturbance to nearby ardeid pre-roost and roost activities	TH3 and footpath	Construction Contractor		✓		
7.9.11	E.8	Adequate site checks along haul roads and in the works area and in the immediate vicinity should be conducted prior to the commencement of works at TH2 and TH3	To detect substantive use of adjacent habitat by species of conservation concern. If roosts or breeding species are found,	TH2 and TH3	ET		✓		

Note: * D = Deign Stage | C = Construction Stage | O = Operation Stage

EIA REPORT REF.	EM&A ACTION REF.	RECOMMENDED MITIGATION MEASURES	OBJECTIVES OF THE MEASURE AND MAIN CONCERNS TO ADDRESS	LOCATION OF MEASURE	WHO TO IMPLEMENT MEASURE?	WHEN TO IMPLEMENT MEASURE?*			STANDARD OR REQUIREMENTS FOR MEASURE TO ACHIEVE?
						D	C	O	
			appropriate measures should be taken to avoid adverse impact, including adjustments to the timing of works						
7.9.12	E.9	Prior to any tree pruning or felling works, a careful check should be conducted by an experienced ecologist to ensure that bats or active bird nests are not present	To avoid disturbance to bat and bird species nesting in trees	All works areas	ET		✓		
7.9.14	E.10	Desilting channels at gei wai 19, reconnecting gei wai 19a with gei wai 19b, and merging the six sub-ponds (20a to 20f) of gei wai 20 (for TH2); and enhancement of gei wai 8a through reprofiling and connection of gei wai 8a with gei wai 7 (for TH3).	To provide habitat enhancement to offset the loss of very small areas of gei wai bund and pond bund due to construction of the new TH2, TH3 and boardwalk path	TH2 and TH3	Construction Contractor +WWF		✓		
FISHERIES									
8.3.19	F.1	Contingency plan when construction works are in the vicinity of commercial fish ponds: 1. Identification of potential emergency situations – consult with WWF and owners of the ponds. 2. Emergency response team 3. Emergency response procedures 4. List of emergency telephone hotlines 5. Location and type of emergency equipment 6. Training plan and testing for effectiveness	To prevent perforated liner and damaged/destabilized pond bunds	In the vicinity of commercial fish ponds	Construction Contractor		✓		Additional measure for minimisation of detrimental impacts to wildlife and the local community
LANDSCAPE AND VISUAL									
9.7.4	LV.1	CM1: Construction lighting control: to ensure no night time lighting at all works areas.	To restrict and reduce light pollution during night time.	All works areas	Construction Contractor		✓		Additional measure for minimisation of detrimental impacts to wildlife and the local community
9.7.4	LV.2	CM2: All existing trees and vegetation outside the works footprints shall be properly preserved and	To protect the landscape quality of the existing trees and vegetation.	All works areas	Construction Contractor		✓		DevB TCW No. 7/2015

Note: * D = Design Stage | C = Construction Stage | O = Operation Stage

EIA REPORT REF.	EM&A ACTION REF.	RECOMMENDED MITIGATION MEASURES	OBJECTIVES OF THE MEASURE AND MAIN CONCERNS TO ADDRESS	LOCATION OF MEASURE	WHO TO IMPLEMENT MEASURE?	WHEN TO IMPLEMENT MEASURE?*			STANDARD OR REQUIREMENTS FOR MEASURE TO ACHIEVE?
						D	C	O	
		protected.							
9.7.4	LV.3	CM3: All the construction materials shall be properly stored at the designated locations within the works areas.	To ensure proper storage of construction materials and enhance tidiness on site.	All works areas	Construction Contractor		✓		Good Site Practice
9.7.4	LV.4	CM4: Erection of screen hoarding for TH2 and TH3 (where appropriate, hoardings with surface treatment/ colour suitable to the rural context shall be used).	To minimise potential impact on landscape / visual quality during construction of TH2 and TH3.	All works areas	Construction Contractor		✓		Additional measure for minimisation of detrimental impacts to wildlife and the local community
9.7.5	LV.5	OM1: Suitable/responsive design of the proposed Boardwalks and Bird-watching Hides	To enhance overall landscape / visual quality by fitting in with the surrounding natural landscapes.	TH2 and TH3, New Boardwalks	Design Consultant/ WWF	✓			
9.7.5	LV.6	OM2: Provide screen planting using native bamboo species <i>Bambusa tuldooides</i> (青稈竹, 花眉竹) to the access to the new Tower Hides to soften the appearance of the hard elements of the Project.	To enhance overall landscape / visual quality by fitting in with the surrounding natural landscapes.	Access to THs	Construction Contractor		✓	✓	

Note: * D = Deign Stage | C = Construction Stage | O = Operation Stage

APPENDIX D

Waste Generation in the Reporting Month

Monthly Summary Waste Flow Table for 2023 (year)

Project : EP-598/2022 – Mai Po Nature Reserve Infrastructure Upgrade Project

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	Bituminous Material	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. general refuse
	(in '000m 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 '000 m ³)
Jun	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sub-total	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Jul	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Aug	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sep	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Oct	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Nov												
Dec												
Total	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

- Notes:
- (1) The performance targets are given in the Particular Specification on Environmental Management Plan.
 - (2) The waste flow table shall also include construction waste that are specified in the Contract to be imported for use at the site.
 - (3) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material.
 - (4) Broken concrete for recycling into aggregates.
 - (5) If necessary, use the conversion factor: 1 full load of dumping truck being equivalent to 6.5 m3 by volume.

APPENDIX E
Complaint Log

Complaint Log

Reporting month: October 2023

Complaint Log Ref.	EPD Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action Status	Status
N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.

Cumulative Complaint Log

Complaint Log Reporting Period	Total no. of Complaint Received
This reporting month	0
From 2 June 2023 to end of the reporting month	0

APPENDIX F
Summary of Successful Prosecution

Summary of Successful Prosecution

Date of Successful Prosecution	Details of the Successful Prosecution	Status	Follow Up	Total no. Received in this Reporting Month	Total no. Received since Project Commencement
-	-	-	-	-	-

APPENDIX G

The Construction Programmes

Project: Mai Po Nature Reserve Infrastructure Upgrade Project – Tower Hides and Footpath

Indicative Construction Programme

Date: 15 Oct 2023

Major Activities	Start	Finish	Year 2023																																			
			Mar				Apr				May				June				Jul				Aug				Sep				Oct				Nov			
			W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4				
<u>Tower Hide 2 & 3 Works</u>																																						
<u>Outdoor Works</u>																																						
Mobilization and site setup	17-Apr-23	29-May-23																																				
Foundation construction	30-May-23	30-Jun-23																																				
Steel structure installation	1-Jul-23	31-Aug-23																																				
External ramp installation	15-Aug-23	30-Sep-23																																				
External facade installation	1-Sep-23	15-Oct-23																																				
<u>Footpath Works</u>																																						
Floor decking installation (Section 1s)	3-Jul-23	24-Jul-23																																				
Floor decking installation (Section 2s)	25-Jul-23	8-Aug-23																																				
Floor decking installation (Section 3s)	9-Aug-23	23-Aug-23																																				
Floor decking installation (Section 4s)	24-Aug-23	7-Sep-23																																				
Floor decking installation (Section 5s)	8-Sep-23	22-Sep-23																																				
Floor decking installation (Section 6s)	23-Sep-23	11-Oct-23																																				
Cleaning and defect rectification	12-Oct-23	15-Oct-23																																				

Note:

[1] According to the Project EM&A Manual, the Project programme refers to the outdoor construction works of the Project only. According to the site audit on 16 October 2023, outdoor construction works were not inspected. Therefore, the EM&A was terminated from 17 October 2023. There would be no outdoor works of the Project during bird season and internal works for the Tower 2 & 3 will be carried out during bird season.