



# **Expansion of Hong Kong International Airport into a Three-Runway System**

Construction Phase Monthly EM&A  
Report No. 113  
(For May 2025)

June 2025

Mott MacDonald  
3/F Manulife Place  
348 Kwun Tong Road  
Kwun Tong  
Kowloon  
Hong Kong

T +852 2828 5757  
mottmac.hk

# **Expansion of Hong Kong International Airport into a Three-Runway System**

Construction Phase Monthly EM&A  
Report No. 113  
(For May 2025)

June 2025

**This Environmental Monthly EM&A Report No. 113 has been reviewed**

**and certified by**

**the Environmental Team Leader (ETL) in accordance with**

**Condition 3.5 of Environmental Permit No. EP-489/2014.**

**Certified by:**

A handwritten signature in black ink, appearing to read 'Terence Kong', is positioned above a horizontal line.

---

Terence Kong  
Environmental Team Leader (ETL)  
Mott MacDonald Hong Kong Limited

**Date**

**13 June 2025**



AECOM  
12/F, Grand Central Plaza, Tower  
2, 138 Shatin Rural Committee  
Road, Shatin, Hong Kong  
香港新界沙田鄉事會路 138 號新城  
市中央廣場第 2 座 12 樓  
[www.aecom.com](http://www.aecom.com)

+852 3922 9000 tel

+852 3922 9797 fax

Our Ref : 60440482/C/RMKY250613

**By Email**

Airport Authority Hong Kong  
HKIA Tower, 1 Sky Plaza Road  
Hong Kong International Airport  
Lantau, Hong Kong

Attn: Mr. Lawrence Tsui, Principal Manager, Environmental Compliance

13 June 2025

Dear Sir,

**Contract No. 3102**  
**3RS Independent Environmental Checker Consultancy Services**

**Submission of Monthly EM&A Report No. 113 (May 2025)**

Reference is made to the Environmental Team's submission of the Monthly EM&A Report No. 113 under Condition 3.5 of the Environmental Permit No. EP-489/2014 certified by the ET Leader on 13 June 2025.

We would like to inform you that we have no adverse comment and verify the captioned submission in accordance with the requirement stipulated in Condition 3.5 of EP-489/2014.

Should you have any query, please feel free to contact the undersigned at 37290380.

Yours faithfully,  
AECOM Asia Co. Ltd.

Roy Man  
Independent Environmental Checker



# Contents

Abbreviations	1
Executive summary	3
<b>1 Introduction</b>	<b>7</b>
1.1 Background	7
1.2 Scope of this Report	7
1.3 Project Organisation	7
1.4 Summary of Construction Works	12
1.5 Summary of EM&A Programme Requirements	12
<b>2 Air Quality Monitoring</b>	<b>16</b>
2.1 Action and Limit Levels	16
2.2 Monitoring Equipment	16
2.3 Monitoring Methodology	16
2.3.1 Measuring Procedure	16
2.3.2 Maintenance and Calibration	17
2.4 Summary of Monitoring Results	17
2.5 Conclusion	17
<b>3 Noise Monitoring</b>	<b>18</b>
3.1 Action and Limit Levels	18
3.2 Monitoring Equipment	18
3.3 Monitoring Methodology	19
3.3.1 Monitoring Procedure	19
3.3.2 Maintenance and Calibration	19
3.4 Summary of Monitoring Results	19
3.5 Conclusion	20
<b>4 Water Quality Monitoring</b>	<b>21</b>
<b>5 Waste Management</b>	<b>22</b>
5.1 Action and Limit Levels	22
5.2 Waste Management Status	22
5.3 Marine Sediment Management	23
<b>6 Chinese White Dolphin Monitoring</b>	<b>24</b>
6.1 CWD Monitoring Transects	24
6.2 CWD Monitoring Methodology	26

6.2.1	Small Vessel Line-transect Survey	26
6.2.2	Photo Identification	26
6.3	Monitoring Results and Observations	27
6.3.1	Small Vessel Line-transect Survey	27
6.3.2	Photo Identification	29
6.4	Site Audit for CWD-related Mitigation Measures	29
6.5	Timing of reporting CWD Monitoring Results	29
6.6	Summary of CWD Monitoring	29
<b>7</b>	<b>Environmental Site Inspection and Audit</b>	<b>30</b>
7.1	Environmental Site Inspection	30
7.2	Landscape and Visual Mitigation Measures	30
7.3	Land Contamination Assessment	37
7.4	Audit of SkyPier High Speed Ferries	37
7.5	Audit of Construction and Associated Vessels	37
7.6	Implementation of Dolphin Exclusion Zone	38
7.7	Status of Submissions under Environmental Permits	38
7.8	Compliance with Other Statutory Environmental Requirements	39
7.9	Analysis and Interpretation of Complaints, Notification of Summons and Status of Prosecutions	39
7.9.1	Complaints	39
7.9.2	Notifications of Summons or Status of Prosecution	39
7.9.3	Cumulative Statistics	39
<b>8</b>	<b>Future Key Issues and Other EIA &amp; EM&amp;A Issues</b>	<b>40</b>
8.1	Construction Programme for the Coming Reporting Period	40
8.2	Key Environmental Issues for the Coming Reporting Period	42
8.2.1	Construction Activities in the Coming Reporting Period	42
8.3	Monitoring Schedule for the Coming Reporting Period	42
8.4	Review of the Key Assumptions Adopted in the EIA Report	42
<b>9</b>	<b>Conclusion and Recommendation</b>	<b>43</b>

## Tables

Table 1.1: Contact Information of Key Personnel	8
Table 1.2: Summary of Status of All Environmental Aspects under the Updated EM&A Manual	12
Table 2.1: Locations of Impact Air Quality Monitoring Stations	16
Table 2.2: Action and Limit Levels of Air Quality Monitoring	16
Table 2.3: Air Quality Monitoring Equipment	16
Table 2.4: Summary of Air Quality Monitoring Results	17

Table 3.1: Locations of Impact Noise Monitoring Stations	18
Table 3.2: Action and Limit Levels for Noise Monitoring	18
Table 3.3: Noise Monitoring Equipment	19
Table 3.4: Summary of Construction Noise Monitoring Results	20
Table 5.1: Action and Limit Levels for Construction Waste	22
Table 5.2: Construction Waste Statistics	22
Table 6.1: Coordinates of Transect Lines in NEL, NWL, AW, WL and SWL Survey Areas	24
Table 6.2: Summary of Photo Identification	29
Table 7.1: Landscape and Visual – Construction Phase Audit Summary	31
Table 7.2: Examples of Landscape and Visual Mitigation Measures in the Reporting Period	33
Table 7.3: Monitoring Programme for Landscape and Visual	33
Table 7.4: Event and Action Plan for Landscape and Visual	34
Table 7.5: Summary of the Number of Retained, Transplanted and To-be-transplanted Trees in the Reporting Period	35
Table 7.6: Summary of the Transplanted Trees Updated in the Reporting Period	35
Table 7.7: Status of Submissions under Environmental Permit	38

## Figures

Figure 1.1	Locations of Key Construction Activities
Figure 2.1	Locations of Air and Noise Monitoring Stations and Chek Lap Kok Wind Station
Figure 6.1	Vessel based Dolphin Monitoring Transects in Construction, Post-construction and Operation Phases
Figure 6.2	Sightings Distribution of Chinese White Dolphins

## Appendices

Appendix A	Environmental Mitigation Implementation Schedule (EMIS) for Construction Phase
Appendix B	Monitoring Schedule
Appendix C	Monitoring Results
Appendix D	Calibration Certificates
Appendix E	Status of Environmental Permits and Licenses
Appendix F	Cumulative Statistics on Exceedances, Environmental Complaints, Notification of Summons and Status of Prosecutions

# Abbreviations

3RS	Three-Runway System
AAHK	Airport Authority Hong Kong
AECOM	AECOM Asia Company Limited
AFCD	Agriculture, Fisheries and Conservation Department
AIS	Automatic Information System
ANI	Encounter Rate of Number of Dolphins
APM	Automated People Mover
AW	Airport West
BHS	Baggage Handling System
C&D	Construction and Demolition
CAP	Contamination Assessment Plan
CAR	Contamination Assessment Report
CTCC	Construction Traffic Control Centre
CWD	Chinese White Dolphin
DCM	Deep Cement Mixing
DEZ	Dolphin Exclusion Zone
DO	Dissolved Oxygen
EIA	Environmental Impact Assessment
EM&A	Environmental Monitoring & Audit
EP	Environmental Permit
EPD	Environmental Protection Department
EPSS	Emergency Power Supply Systems
ET	Environmental Team
FCZ	Fish Culture Zone
HDD	Horizontal Directional Drilling
HKBCF	Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities
HKIA	Hong Kong International Airport
HOKLAS	Hong Kong Laboratory Accreditation Scheme
HSF	High Speed Ferry
H <sub>2</sub> S	Hydrogen Sulphide
HVS	High Volume Sampler
I-2RS	Interim Two-Runway System
IEC	Independent Environmental Checker

LKC	Lung Kwu Chau
MMHK	Mott MacDonald Hong Kong Limited
MMWP	Marine Mammal Watching Plan
MSS	Maritime Surveillance System
MTRMP-CAV	Marine Travel Routes and Management Plan for Construction and Associated Vessel
NEL	Northeast Lantau
NLMP	North Lantau Marine Park
NWL	Northwest Lantau
PAM	Passive Acoustic Monitoring
PM	Project Manager
SC	Sha Chau
SCZ	Speed Control Zone
SCLKCMP	Sha Chau and Lung Kwu Chau Marine Park
SS	Suspended Solids
SSSI	Site of Special Scientific Interest
STG	Encounter Rate of Number of Dolphin Sightings
SWL	Southwest Lantau
T2	Terminal 2
The Project	The Expansion of Hong Kong International Airport into a Three-Runway System
The SkyPier Plan	Marine Travel Routes and Management Plan for High Speed Ferries of SkyPier
The Manual	The Updated EM&A Manual
TSP	Total Suspended Particulates
WL	West Lantau
WMP	Waste Management Plan

# Executive summary

The “Expansion of Hong Kong International Airport into a Three-Runway System” (the Project) serves to meet the future air traffic demands at Hong Kong International Airport (HKIA). On 7 November 2014, the Environmental Impact Assessment (EIA) Report (Register No.: AEIAR-185/2014) for the Project was approved and an Environmental Permit (EP) (Permit No.: EP-489/2014) was issued for the construction and operation of the Project.

Airport Authority Hong Kong (AAHK) commissioned Mott MacDonald Hong Kong Limited (MMHK) to undertake the role of Environmental Team (ET) for carrying out the Environmental Monitoring & Audit (EM&A) works during the construction phase of the Project in accordance with the Updated EM&A Manual (the Manual).

This is the 113<sup>th</sup> Construction Phase Monthly EM&A Report for the Project which summarises the monitoring results and audit findings of the EM&A programme during the reporting period from 1 to 31 May 2025.

The new North Runway was commissioned in November 2022. Following the completion of reconfiguration works on the Centre Runway, the Three-runway System (3RS) was commissioned on 28 November 2024.

## Key Activities in the Reporting Period

The key activities of the Project carried out in the reporting period are located in reclamation areas and existing airport island respectively. Works in the reclamation areas included concourse superstructure works, tunnel works for Automated People Mover (APM) and Baggage Handling System (BHS) and associated works. Meanwhile, works on the existing airport island involved Terminal 2 (T2) expansion works, modification and tunnel works for APM and BHS, utilities works, road and drainage works and excavation works.

## EM&A Activities Conducted in the Reporting Period

The monthly EM&A programme was undertaken in accordance with the Manual of the Project. Summary of the monitoring activities during this reporting period is presented as below:

Monitoring Activities	Number of Sessions
1-hour Total Suspended Particulates (TSP) air quality monitoring	30
Noise monitoring	18
Vessel line-transect surveys for operation phase Chinese White Dolphin (CWD) monitoring	2

Environmental auditing works, including weekly site inspections, ad-hoc site inspections of construction works conducted by the ET and bi-weekly site inspections conducted by the Independent Environmental Checker (IEC), audit of SkyPier High Speed Ferries (HSF), audit of construction and associated vessels and audit of implementation of Marine Mammal Watching Plan(MMWP) and Dolphin Exclusion Zone (DEZ) Plan were conducted in the reporting period. Based on the information including ET’s observations, records of Maritime Surveillance System (MSS), and contractors’ site records, it is noted that environmental pollution control and mitigation measures were properly implemented and construction activities of the Project in the reporting period did not introduce adverse impacts to the sensitive receivers.

### **Snapshots of EM&A Activities in the Reporting Period**

		
Dust Suppression Measure conducted by contractor	Noise Impact Monitoring conducted by ET at Sha Lo Wan House	Checking of Wastewater Treatment Facility by ET

### **Results of Impact Monitoring**

The monitoring works for construction dust, construction noise, construction waste and landscape & visual were conducted during the reporting period in accordance with the Updated EM&A Manual.

Monitoring results of construction dust, construction noise, and construction waste did not trigger the corresponding Action and Limit Levels in the reporting period. No non-conformity was recorded for landscape & visual monitoring in the reporting period.

### **Summary of Upcoming Key Issues**

#### **Reclamation Works:**

##### **Contract 3206 Main Reclamation Works**

- Installation of precast units, scour apron, armour rocks and miscellaneous works at eastern seawall.

#### **Airfield Works:**

##### **Contract 3305 Airfield Ground Lighting System**

- Cable laying works; and
- Hardware installation works.

##### **Contract 3310 North Runway Modification Works**

- Demolition of bulkhead wall, pavement, drainage works, profile barrier, mechanical, electrical and plumbing works, and architectural, builder's work and finishing works at vehicular tunnels;
- Falsework and formwork;
- Reinforced concrete works;
- Drainage and watermain works; and
- Architectural, builder's work and finishing works at ancillary buildings.

#### **Terminal 2 Concourse and Apron Works:**

##### **Contract 3404 Integrated Airport Control System**

- System testing works.

##### **Contract 3408 Third Runway Concourse and Apron Works**

- Building services and architectural, builder's work and finishing works;
- Cable laying and utilities works;
- Pavement works;
- Operation of concrete batching plant; and
- Reinforced concrete works.

### **Terminal 2 Expansion:**

#### **Contract 3508 Terminal 2 Expansion Works**

- Architectural, builder's work and finishing works;
- Electrical and mechanical works;
- Roof works;
- Hard landscape works;
- Link bridge works;
- Emergency vehicular access construction;
- Pier, deck, parapet and abutment construction;
- Road works, drainage and utilities works; and
- Crossroad duct laying works.

### **Automated People Mover and Baggage Handling System:**

#### **Contract 3601 New Automated People Mover System (TRC Line)**

- Guide beam installation; and
- Cable containment and cable laying works.

#### **Contract 3602 Existing APM System Modification Works**

- Restoration of buffer stop;
- Platform screen door installation works; and
- Steel fixing and formwork to track plinth.

#### **Contract 3603 Baggage Handling System (BHS)**

- IT cabling and commissioning;
- Steel work, mechanical, electrical, CCTV and IT installation; and
- Conveyor, electrical and fire service installation.

### **Airport Support Infrastructure:**

#### **Contract 3801 APM and BHS Tunnels on Existing Airport Island**

- Slope levelling works; and
- Construction of U-channel

#### **Contract 3802 APM and BHS Tunnels and Related Works**

- Lateral supports and backfilling works;
- Box culvert construction and superstructure works;
- APM and BHS Tunnel construction;
- Reinforced concrete works; and
- Architectural, builder's work and finishing works.

#### **Contract 3804 East and Landside Fire Stations**

- Superstructure works;
- Electrical and mechanical works;
- Utilities works; and
- Architectural, builder's work and finishing works.

#### **Contract 3805 New Airport District Police Operational Base**

- Construction of superstructures and drainage system;
- Installation of fuel tank; and
- Site formation works.

### **Construction Support:**

#### **Contract 3901A Concrete Batching Facility**

- Operation of concrete batching plant and material conveyor belt.



### Contract 3901B Concrete Batching Facility

- Decommissioning of concrete batching plant.

### Contract 3908 Quay Management Services

- Provision of services of site management and logistic control of 3RS quays; and
- Provision of flat top barge and vehicle delivery services between the launching point in Hong Kong and 3RS quays.

### Contract 3913 Asphalt Batching Plant

- Operation of asphalt batching plant.

### Summary Table

The following table summarises the key findings of the EM&A programme during the reporting period:

	Yes	No	Details	Analysis / Recommendation / Remedial Actions
Breach of Limit Level <sup>^</sup>		√	No breach of Limit Level was recorded.	Nil
Breach of Action Level <sup>^</sup>		√	No breach of Action Level was recorded.	Nil
Complaint Received		√	In the previous reporting period, a complaint regarding dust nuisance was received on 25 April 2025.	ET investigated the case and found that mixing works had been carried out at South Wing Level 6 of Terminal 2 Concourse. The contractor enhanced dust mitigation measures and provided worker training. No dust-related issues were observed during ET's inspections. The case is considered closed.
Notification of any summons and status of prosecutions		√	No notification of summons nor prosecution was received.	Nil
Change that affect the EM&A		√	There was no change to the construction works that may affect the EM&A.	Nil

Note:

<sup>^</sup> Only triggering of Action or Limit Level found related to Project works is counted as Breach of Action or Limit Level.

# 1 Introduction

## 1.1 Background

On 7 November 2014, the Environmental Impact Assessment (EIA) Report (Register No.: AEIAR-185/2014) for the “Expansion of Hong Kong International Airport into a Three-Runway System” (the Project) was approved and an Environmental Permit (EP) (Permit No.: EP-489/2014) was issued for the construction and operation of the Project.

Airport Authority Hong Kong (AAHK) commissioned Mott MacDonald Hong Kong Limited (MMHK) to undertake the role of Environmental Team (ET) for carrying out the Environmental Monitoring & Audit (EM&A) works during the construction phase of the Project in accordance with the Updated EM&A Manual (the Manual) submitted under EP Condition 3.1<sup>1</sup>. AECOM Asia Company Limited (AECOM) was employed by AAHK as the Independent Environmental Checker (IEC) for the Project.

The Project covers the expansion of the existing airport into a three-runway system (3RS) with key project components comprising land formation of about 650 ha and all associated facilities and infrastructure including taxiways, aprons, aircraft stands, a passenger concourse, an expanded Terminal 2 (T2), all related airside and landside works and associated ancillary and supporting facilities. The submarine aviation fuel pipelines and submarine power cables also require diversion as part of the works.

Construction of the Project is to proceed in the general order of diversion of the submarine aviation fuel pipelines, diversion of the submarine power cables, land formation, and construction of infrastructure, followed by construction of superstructures.

The new North Runway was commissioned in November 2022. Since then, HKIA has continued to operate with two runways, with the Centre Runway temporarily closed for reconfiguration. The reconfiguration works included relevening of the runway pavement to tie in with connecting taxiways, constructing new runway entry and exit taxiways, building new wrap-around taxiways at both ends of the runway. With the completion of the reconfiguration works, the flight check and aircraft crash and rescue exercise were completed on the Centre Runway in September and October 2024 respectively. Thereafter, the Three-runway System (3RS) was commissioned on 28 November 2024.

The summary of construction works programme can be referred to **Section 1.4**.

## 1.2 Scope of this Report

This is the 113<sup>th</sup> Construction Phase Monthly EM&A Report for the Project which summarises the key findings of the EM&A programme during the reporting period from 1 to 31 May 2025.

## 1.3 Project Organisation

The Project’s organisation structure presented in Appendix B of the Construction Phase Monthly EM&A Report No.1 remained unchanged during the reporting period. Contact details of the key personnel are presented in **Table 1.1**.

---

<sup>1</sup> The Manual is available on the Project’s dedicated website (accessible at: <http://env.threerunwaysystem.com/en/index.html>).

**Table 1.1: Contact Information of Key Personnel**

Party	Position	Name	Telephone
Project Manager's Representative (Airport Authority Hong Kong)	Principal Manager, Environmental Compliance, Sustainability	Lawrence Tsui	2183 2734
Environmental Team (ET)	Environmental Team Leader	Terence Kong	2828 5919
(Mott MacDonald Hong Kong Limited)	Deputy Environmental Team Leaders	Heidi Yu	2828 5704
		Ken Wong	2828 5817
Independent Environmental Checker (IEC)	Independent Environmental Checker	Roy Man	3729 0380
(AECOM Asia Company Limited)	Deputy Independent Environmental Checker	Jackel Law	3856 5312

**Reclamation Works:**

Party	Position	Name	Telephone
Contract 3206	Project Manager	Alan Mong	3763 1352
Main Reclamation Works (ZHEC-CCCC-CDC Joint Venture)	Environmental Officer	Zhang Bin Wang	3763 1525

**Airfield Works:**

Party	Position	Name	Telephone
Contract 3305	Project Manager	Allam Al-Turk	2944 9725
Airfield Ground Lighting System (ADB Safegate Hong Kong Limited)	Environmental Officer	Ivan Ting	9222 9490
Contract 3306	Project Director	Dennis Yam	9551 9920
Observation Facility Control System Supporting Interim 2RS and 3RS (Chinney Alliance Engineering Limited)	Environmental Officer	Richard Liu	9216 8990
Contract 3308			
Foreign Object Debris Detection System (DAS Aviation Services Group)	Project Manager	Jeffrey Yau	9873 7422
Contract 3310	Project Manager	Kingsley Chiang	9424 8437
North Runway Modification Works (China State Construction Engineering (Hong Kong) Ltd.)	Environmental Officer	Federick Wong	9842 2703

### Terminal 2 Concourse and Apron Works:

Party	Position	Name	Telephone
Contract 3402	Project Manager	Wyman Lau	6112 9753
New Integrated Airport Centres Enabling Works (Wing Hing Construction Co., Ltd.)	Health Safety Environmental Manager	Mike Leung	6625 2550
Contract 3404	Project Manager	Andy Ng	9102 2739
Integrated Airport Control System (Shun Hing Systems Integration Co., Ltd.)	Environmental Officer	Michael Lo	6228 3926
Contract 3405	Project Manager	Francis Choi	9423 3469
Third Runway Concourse Foundation and Substructure Works (China Road and Bridge Corporation – Bachy Soletanche Group Limited – LT Sambo Co., Ltd. Joint Venture)	Environmental Officer	Jacky Lai	9028 8975
Contract 3408	Senior HSE Manager	Qian Zhang	5377 7976
Third Runway Concourse and Apron Works (Beijing Urban Construction Group Company Limited and Chevalier (Construction) Company Limited Joint Venture)	Environmental Officer	Ivan Mak	9422 4805

### Terminal 2 Expansion:

Party	Position	Name	Telephone
Contract 3508	Project Director	Richard Ellis	6201 5637
Terminal 2 Expansion Works (Gammon Engineering & Construction Company Limited)	Environmental Officer	Carrie Kwan	9276 0551

### Automated People Mover and Baggage Handling System:

Party	Position	Name	Telephone
Contract 3601	Project Manager	Hongdan Wei	158 6180 9450
New Automated People Mover System (TRC Line) (CRRC Puzhen Bombardier Transportation Systems Limited and CRRC Nanjing Puzhen Co., Ltd. Joint Venture)	Environmental Officer	H Y Yue	9185 8186

Party	Position	Name	Telephone
Contract 3602	Project Manager	Xia Bo	6586 4950
Existing APM System Modification Works (Niigata Transys Co., Ltd.)	Environmental Officer	Y M Tong	5316 9801
Contract 3603	Project Manager	K C Ho	9272 9626
3RS Baggage Handling System (VISH Consortium)	Environmental Officer	Richard Ng	9802 9577

#### Airport Support Infrastructure:

Party	Position	Name	Telephone
Contract 3801	Project Manager	Kingsley Chiang	9424 8437
APM and BHS Tunnels on Existing Airport Island (China State Construction Engineering (Hong Kong) Ltd.)	Environmental Officer	Eunice Kwok	9243 1331
Contract 3802	Project Director	John Adams	6111 6989
APM and BHS Tunnels and Related Works (Gammon Engineering & Construction Company Limited)	Environmental Officer	Yan Ng	5345 8555
Contract 3804	Project Manager	Zhang Jinyuan	6708 0506
East and Landside Fire Stations (Beijing Urban Construction Group Company Limited - Beijing Urban Construction International Company Limited - Kin Shing (Leung's)General Contractors Ltd Joint Venture)	Environmental Representative	Karis Lam	6084 9745
Contract 3805	Project Manager	Peter Li	9628 0768
New Airport District Police Operational Base (Chinney Construction Co., Ltd.)	Environmental Officer	Mike Li	6306 8547

### Construction Support:

Party	Position	Name	Telephone
Contract 3721	Senior Project Manager	Thomas Lui	9011 5340
Construction Support Infrastructure Works  (China State Construction Engineering (Hong Kong) Ltd.)	Environmental Officer	John Mak	6273 8703
Contract 3728	Contract Manager	C K Liu	9194 8739
Minor Site Works  (Shun Yuen Construction Company Limited)	Environmental Officer	Dan Leung	6856 5899
Contract 3733	Project Manager	Michael Kan	9206 0550
Emergency Repair Service  (Wing Hing Construction Co., Ltd.)	Safety Health Environmental Manager	Mike Leung	6625 2550
Contract 3901A	Project Manager	Benedict Wong	9553 2806
Concrete Batching Facility  (K. Wah Concrete Company Limited)	Environmental Officer	C P Fung	9874 2872
Contract 3901B	General Manager	Gabriel Chan	2435 3260
Concrete Batching Facility  (Gammon Construction Limited)	Environmental Officer	Rex Wong	2695 6319
Contract 3908	Project Manager	Mr. Ian Li	9750 6438
Quay Management Services  (Gitanes – Crown Asia Joint Venture)	Environmental Officer	Mr. Tang Kai Fun	9406 3526
Contract 3913	Project Manager	Xie Yi Sheng	6580 6005
Asphalt Batching Plant  (SPR Joint Venture)	Environmental Officer	Kenneth Chan	9300 2182

### Utilities:

Party	Position	Name	Telephone
132 kV Cable	Engineer	Ken Fung	6391 9087
(CLP Power Hong Kong Limited / Kum Shing (K.F.) Construction Company Limited)	Project Engineer	Kevin Wu	6508 9779

## 1.4 Summary of Construction Works

The key activities of the Project carried out in the reporting period are located in reclamation areas and existing airport island, respectively. Works in the reclamation areas included concourse superstructure works, tunnel works for APM and BHS and associated works. Meanwhile, works on existing airport island involved T2 expansion works, modification and tunnel works for APM and BHS, utilities works, road and drainage works and excavation works.

The locations of key construction activities are presented in **Figure 1.1**.

## 1.5 Summary of EM&A Programme Requirements

The status for all environmental aspects is presented in **Table 1.2**. The EM&A requirements remained unchanged during the reporting period.

**Table 1.2: Summary of Status of All Environmental Aspects under the Updated EM&A Manual**

Parameters	EM&A Requirements	Status
<b>Air Quality</b>		
Baseline Monitoring	At least 14 consecutive days before commencement of construction work	The baseline air quality monitoring result was reported in Baseline Monitoring Report and submitted to EPD under EP Condition 3.4.
Impact Monitoring	At least 3 times every 6 days	On-going
<b>Noise</b>		
Baseline Monitoring	Daily for a period of at least two weeks prior to the commencement of construction works	The baseline noise monitoring result was reported in Baseline Monitoring Report and submitted to EPD under EP Condition 3.4.
Impact Monitoring	Weekly	On-going
<b>Water Quality</b>		
General Baseline Water Quality Monitoring for reclamation, water jetting and field joint works	Three days per week, at mid-flood and mid-ebb tides, for at least four weeks prior to the commencement of marine works.	The baseline water quality monitoring result was reported in Baseline Water Quality Monitoring Report and submitted to EPD under EP Condition 3.4.
General Baseline Water Quality Monitoring for reclamation, water jetting and field joint works	Three days per week, at mid-flood and mid-ebb tides.	General impact water quality monitoring for water jetting works was completed on 23 May 2017.  The impact water quality monitoring was terminated after 31 October 2023.
Initial Intensive Deep Cement Mixing (DCM) Water Quality Monitoring	At least four weeks	The Initial Intensive DCM Monitoring Report was submitted and approved by EPD in accordance with the Detailed Plan on DCM.

Parameters	EM&A Requirements	Status
Regular DCM Water Quality Monitoring	Three times per week until completion of DCM works.	Due to the completion of all marine-based DCM works within April 2022, regular DCM monitoring was ceased at all monitoring stations starting from 28 April 2022.
Post-construction phase water quality monitoring	Three days per week, at mid-flood and mid-ebb tides for four weeks	The four-week post-construction phase water quality monitoring exercise was commenced on 14 November 2023 and completed on 9 December 2023.
<b>Sewerage and Sewage Treatment</b>		
Methodology for carrying out annual sewage flow monitoring for concerned gravity sewer	Methodology to be prepared and submitted to EPD one year before the scheduled commencement of operation of the proposed third runway	The proposed methodology of the annual sewage flow monitoring was approved by EPD. The annual flow monitoring was started from June 2021 and completed in 2022.
Details of the routine Hydrogen Sulphide (H <sub>2</sub> S) monitoring system for the sewerage system of 3RS	Details to be prepared and submitted to EPD at least one year before commencement of the operation of 3RS	The H <sub>2</sub> S monitoring was started after the commissioning of the 3RS on 28 November 2024.
<b>Waste Management</b>		
Waste Monitoring	At least weekly	On-going
<b>Land Contamination</b>		
Supplementary Contamination Assessment Plan (CAP)	At least 3 months before commencement of any soil remediation works.	The Supplementary CAP was submitted and approved by EPD under EP Condition 2.20.
Site Re-appraisal Summary Report for Fire Training Facility	Site Re-appraisal Summary Report for Fire Training Facility	Site Re-appraisal Summary Report for Fire Training Facility was submitted and accepted by EPD.
Contamination Assessment Report (CAR) for Golf Course	CAR to be submitted for golf course	The CAR for Golf Course was submitted and accepted by EPD.
Contamination Assessment Reports (CAR) for Terminal 2 Emergency Power Supply Systems	CAR to be submitted for Terminal 2 Emergency Power Supply Systems	The CARs for Terminal 2 Emergency Power Supply Systems were submitted and accepted by EPD.
<b>Terrestrial Ecology</b>		
Pre-construction Egretty Survey Plan	Once per month in the breeding season between April and July, prior to the commencement of Horizontal Directional Drilling (HDD) drilling works.	The Egretty Survey Plan was submitted and approved by EPD under EP Condition 2.14.
Ecological Monitoring	Monthly monitoring during the HDD construction works period from August to March.	The terrestrial ecological monitoring at Sheung Sha Chau was completed in January 2019.
<b>Marine Ecology</b>		
Pre-Construction Phase Coral Dive Survey	Prior to marine construction works	The Coral Translocation Plan was submitted and approved by EPD under EP Condition 2.12.
Coral Translocation	-	The coral translocation was completed.



Parameters	EM&A Requirements	Status
Post-Translocation Coral Monitoring	As per an enhanced monitoring programme based on the Coral Translocation Plan	The post-translocation monitoring programme according to the Coral Translocation Plan was completed in April 2018.
<b>Chinese White Dolphins (CWD)</b>		
Baseline Monitoring	<p>6 months of baseline surveys before the commencement of land formation related construction works.</p> <p>Vessel line transect surveys: Two full surveys per month;</p> <p>Land-based theodolite tracking surveys: Two days per month at the Sha Chau station and two days per month at the Lung Kwu Chau station; and</p> <p>Passive Acoustic Monitoring (PAM): For the whole duration of baseline period.</p>	Baseline CWD results were reported in the CWD Baseline Monitoring Report and submitted to EPD in accordance with EP Condition 3.4.
Impact Monitoring	<p>Vessel line transect surveys: Two full surveys per month;</p> <p>Land-based theodolite tracking surveys: One day per month at the Sha Chau station and one day per month at the Lung Kwu Chau station; and</p> <p>PAM: For the whole duration for land formation related construction works.</p>	The construction phase CWD monitoring was completed in December 2023.
Post-construction Phase Monitoring	<p>12 months of post-construction phase CWD monitoring upon the completion of marine construction works.</p> <p>Vessel line transect surveys: Two full surveys per month.</p>	The post-construction phase CWD monitoring was completed in December 2024.
Operation Phase Monitoring	<p>12 months of operation phase CWD monitoring upon full implementation of North Lantau Marine Park.</p> <p>Vessel line transect surveys: Two full surveys per month.</p>	The operation phase CWD monitoring was commenced in January 2025.
Operation Phase Audit	<p>SkyPier High Speed Ferries (HSF) implementation measures: Once every three months for a period of one year upon operation of 3RS.</p> <p>Spill Response Plan implementation measures: Once every six months for a period of one year upon operation of 3RS.</p>	<p>The 2<sup>nd</sup> audit was conducted in May 2025.</p> <p>The 1<sup>st</sup> audit was conducted in May 2025.</p>
<b>Landscape &amp; Visual</b>		
Landscape & Visual Plan	At least 3 months before the commencement of construction works on the formed land of the Project.	The Landscape & Visual Plan was submitted and approved by EPD under EP Condition 2.18.
Baseline Monitoring	One-off survey within the Project site boundary prior to commencement of any construction works	The baseline landscape & visual monitoring result was reported in Baseline Monitoring Report and submitted to EPD under EP Condition 3.4.

Parameters	EM&A Requirements	Status
Impact Monitoring	Weekly	On-going
Establishment Works Monitoring	Bi-monthly	On-going
Long Term Management (10 years) Monitoring	Annually	On-going
<b>Environmental Auditing</b>		
Regular site inspection	Weekly	On-going
Marine Mammal Watching Plan (MMWP) implementation measures	Monitor and check	On-going
Dolphin Exclusion Zone (DEZ) Plan implementation measures	Monitor and check	On-going
SkyPier High Speed Ferries (HSF) implementation measures	Monitor and check	On-going
Construction and Associated Vessels Implementation measures	Monitor and check	On-going
Silt Curtain Deployment Plan implementation measures	Monitor and check	No Silt Curtain Deployment Plan measures was implemented at C7a after 17 March 2025.
Spill Response Plan implementation measures	Monitor and check	On-going
Complaint Hotline and Email channel	Construction phase	On-going
Environmental Log Book	Construction phase	On-going

Taking into account the construction works in this reporting period, impact monitoring of air quality, noise, waste management and landscape & visual were carried out in the reporting period.

The EM&A programme also involved weekly site inspections and related auditing conducted by the ET for checking the implementation of the required environmental mitigation measures recommended in the approved EIA Report. To promote the environmental awareness and enhance the environmental performance of the contractors, regular environmental management meetings were conducted during the reporting period, which are summarised as below:

- Twelve environmental management meetings for EM&A review with works contracts: 6, 13, 14, 15, 16, 22, 23 & 29 May 2025.

The EM&A programme has been following the recommendations presented in the approved EIA Report and the Manual. A summary of implementation status of the environmental mitigation measures for the construction phase of the Project during the reporting period is provided in **Appendix A**.

## 2 Air Quality Monitoring

Air quality monitoring of 1-hour Total Suspended Particulates (TSP) was conducted three times every six days at two representative monitoring stations in the vicinity of air sensitive receivers in Tung Chung and villages in North Lantau in accordance with the Manual. **Table 2.1** describes the details of the monitoring stations. **Figure 2.1** shows the locations of the monitoring stations.

**Table 2.1: Locations of Impact Air Quality Monitoring Stations**

Monitoring Station	Location
AR1A	Man Tung Road Park
AR2	Village House at Tin Sum

### 2.1 Action and Limit Levels

In accordance with the Manual, baseline air quality monitoring of 1-hour TSP levels at the two air quality monitoring stations were established as presented in the Baseline Monitoring Report. The Action and Limit Levels of the air quality monitoring stipulated in the EM&A programme for triggering the relevant investigation and follow-up procedures under the programme are provided in **Table 2.2**.

**Table 2.2: Action and Limit Levels of Air Quality Monitoring**

Monitoring Station	Action Level (mg/m <sup>3</sup> )	Limit Level (mg/m <sup>3</sup> )
AR1A	306	500
AR2	298	

### 2.2 Monitoring Equipment

Portable direct reading dust meter was used to carry out the air quality monitoring. Details of equipment used in the reporting period are given in **Table 2.3**.

**Table 2.3: Air Quality Monitoring Equipment**

Equipment	Brand and Model	Last Calibration Date	Calibration Certificate Provided in
Portable direct reading dust meter (Laser dust monitor)	SIBATA LD-3B-1 (Serial No. 597337)	28 April 2025	<b>Appendix D</b>

### 2.3 Monitoring Methodology

#### 2.3.1 Measuring Procedure

The measurement procedures involved in the impact air quality monitoring can be summarised as follows:

- The portable direct reading dust meter was mounted on a tripod at a height of 1.2m above the ground.
- Prior to the measurement, the equipment was set up for 1 minute span check and 6 second background check.

- c. The one hour dust measurement was started. Site conditions and dust sources at the nearby area were recorded on a record sheet.
- d. When the measurement completed, the “Count” reading per hour was recorded for result calculation.

### 2.3.2 Maintenance and Calibration

The portable direct reading dust meter is calibrated every year against high volume sampler (HVS) to check the validity and accuracy of the results measured by direct reading method. The calibration record of the HVS provided in Appendix D of the Monthly EM&A Report No. 103 and the calibration certificates of portable direct reading dust meters listed in **Table 2.3** are valid in the reporting period.

## 2.4 Summary of Monitoring Results

The air quality monitoring schedule of the reporting period is provided in **Appendix B**.

The air quality monitoring results in the reporting period are summarised in **Table 2.4**. Detailed impact monitoring results are presented in **Appendix C**.

**Table 2.4: Summary of Air Quality Monitoring Results**

Monitoring Station	1-hr TSP Concentration Range (mg/m3)	Action Level (mg/m3)	Limit Level (mg/m3)
AR1A	24 – 62	306	500
AR2	29 – 79	298	

The monitoring results were within the corresponding Action and Limit Levels at all monitoring stations in the reporting period.

General meteorological conditions throughout the impact monitoring period were recorded. Wind data including wind speed and wind direction for each monitoring day were collected from the Chek Lap Kok Wind Station.

## 2.5 Conclusion

No dust emission source was observed at the monitoring stations during the monitoring sessions. As the sensitive receivers were far away from the construction activities, with the implementation of dust control measures, there was no adverse impact at the sensitive receivers attributable to the works of the Project.

## 3 Noise Monitoring

Noise monitoring in the form of 30-minute measurements of  $L_{eq}$ ,  $L_{10}$ , and  $L_{90}$  levels was conducted once per week between 0700 and 1900 on normal weekdays at four representative monitoring stations in the vicinity of noise sensitive receivers in Tung Chung and villages in North Lantau in accordance with the Manual. **Table 3.1** describes the details of the monitoring stations. **Figure 2.1** shows the locations of the monitoring stations.

**Table 3.1: Locations of Impact Noise Monitoring Stations**

Monitoring Station	Location	Type of measurement
NM1A	Man Tung Road Park	Free field
NM2 <sup>(1)</sup>	Tung Chung West Development	To be determined
NM3A <sup>(2)</sup>	Site Office	Façade
NM4	Ching Chung Hau Po Woon Primary School	Free field
NM5	Village House in Tin Sum	Free field
NM6	House No. 1, Sha Lo Wan	Free field

Notes:

- (1) As described in Section 4.3.3 of the Manual, noise monitoring at NM2 will only commence after occupation of the future Tung Chung West Development.
- (2) According to Section 4.3.3 of the Manual, the noise monitoring at NM3A was temporarily suspended starting from 1 September 2018 and would be resumed with the completion of the Tung Chung East Development.

### 3.1 Action and Limit Levels

In accordance with the Manual, baseline noise levels at the noise monitoring stations were established as presented in the Baseline Monitoring Report. The Action and Limit Levels of the noise monitoring stipulated in the EM&A programme for triggering the relevant investigation and follow-up procedures under the programme are provided in **Table 3.2**.

**Table 3.2: Action and Limit Levels for Noise Monitoring**

Monitoring Stations	Time Period	Action Level	Limit Level, $L_{eq(30mins)}$ dB(A)
NM1A, NM2, NM3A, NM4, NM5 and NM6	0700-1900 hours on normal weekdays	When one valid documented complaint is received from any one of the sensitive receivers	75dB(A) <sup>(1)</sup>

Note:

- (1) The Limit Level for NM4 is reduced to 70dB(A) for being an educational institution. During school examination period, the Limit Level is further reduced to 65dB(A).

### 3.2 Monitoring Equipment

Noise monitoring was performed using sound level meter at each designated monitoring station. The sound level meters deployed comply with the International Electrotechnical Commission Publications 651:1979 (Type 1) and 804:1985 (Type 1) specifications. Acoustic calibrator was used to check the sound level meters by a known sound pressure level for field measurement. Details of equipment used in the reporting period are given in **Table 3.3**.

**Table 3.3: Noise Monitoring Equipment**

Equipment	Brand and Model	Last Calibration Date	Calibration Certificate Provided in
Integrated Sound Level Meter	Rion NL-52 (Serial No. 00998505)	17 Feb 2025	Appendix D of Monthly EM&A Report No. 111
Integrated Sound Level Meter	Rion NL-52 (Serial No. 01287679)	14 Oct 2024	Appendix D of Monthly EM&A Report No.108
Acoustic Calibrator	Castle GA607 (Serial No. 040162)	17 Feb 2025	Appendix D of Monthly EM&A Report No. 111
Acoustic Calibrator	Casella CEL-120 (Serial No. 2383737)	30 Jun 2024	Appendix D of Monthly EM&A Report No.103

### 3.3 Monitoring Methodology

#### 3.3.1 Monitoring Procedure

The monitoring procedures involved in the noise monitoring can be summarised as follows:

- The sound level meter was set on a tripod at least a height of 1.2m above the ground for free-field measurements at monitoring stations NM1A, NM4, NM5 and NM6. A correction of +3dB(A) was applied to the free field measurements.
- Façade measurements were made at the monitoring station NM3A.
- Parameters such as frequency weighting, time weighting and measurement time were set.
- Prior to and after each noise measurement, the meter was calibrated using the acoustic calibrator. If the difference in the calibration level before and after measurement was more than 1dB(A), the measurement would be considered invalid and repeat of noise measurement would be required after re-calibration or repair of the equipment.
- During the monitoring period,  $L_{eq}$ ,  $L_{10}$  and  $L_{90}$  were recorded. In addition, site conditions and noise sources were recorded on a record sheet.
- Noise measurement results, when higher than the baseline monitoring levels, were corrected with reference to the baseline monitoring levels.
- Observations were recorded when high intrusive noise (e.g., dog barking, helicopter noise) was observed during the monitoring.

#### 3.3.2 Maintenance and Calibration

The maintenance and calibration procedures are summarised below:

- The microphone head of the sound level meter was cleaned with soft cloth at regular intervals.
- The meter and calibrator were sent to the supplier or laboratory accredited under Hong Kong Laboratory Accreditation Scheme (HOKLAS) to check and calibrate at yearly intervals.

Calibration certificates of the sound level meters, and acoustic calibrators used in the noise monitoring listed in **Table 3.3** are valid in the reporting period.

### 3.4 Summary of Monitoring Results

The noise monitoring schedule of reporting period is provided in **Appendix B**.

The noise monitoring results in the reporting period are summarised in **Table 3.4**. Detailed impact monitoring results are presented in **Appendix C**.

**Table 3.4: Summary of Construction Noise Monitoring Results**

Monitoring Station	Noise Level Range, dB(A)	Limit Level, dB(A)
	$L_{eq}$ (30mins)	$L_{eq}$ (30mins)
NM1A <sup>(1)</sup>	63 - 65	75
NM4 <sup>(1) (3)</sup>	60 - 66	70 <sup>(2)</sup>
NM5 <sup>(1)</sup>	55 - 59	75
NM6 <sup>(1) (3)</sup>	63 - 68	75

Notes:

- (1) +3dB(A) Façade correction included;
- (2) The limit level will be reduced to 65dB(A) during school examination periods at NM4. No school examination took place during this reporting period.
- (3) Some of the noise measurement results were higher than the baseline monitoring levels. To reduce the influence of non-Project related noise on the monitoring results, these measurement results were corrected with reference to the baseline monitoring results.

No complaints were received from any sensitive receiver as listed in **Table 3.1** that triggered the Action Level. All monitoring results were within the corresponding Limit Levels at all monitoring stations in the reporting period.

### 3.5 Conclusion

As the construction activities were far away from the monitoring stations, major sources of noise dominating the monitoring stations observed during the construction noise impact monitoring were traffic noise near NM1A, school activities near NM4 and aircraft noise near NM6 during this reporting period. It is considered that the monitoring work during the reporting period was effective and there was no adverse impact attributable to the Project activities.

## 4 Water Quality Monitoring

All water impact monitoring work has been completed, with results presented in the Annual EM&A Report for 2023 and to be included in the Final EM&A Report. Based on the analysis presented in Annual EM&A Report for 2023, the post-construction phase water quality monitoring did not reveal significant changes of the water quality when comparing with baseline water quality monitoring, and it can be concluded that the marine works of the Project during construction phase did not cause deterioration in or adverse impacts on the marine water quality surrounding the Project site.



## 5 Waste Management

In accordance with the Manual, the waste generated from construction activities was audited once per week to determine if wastes are being managed in accordance with the Waste Management Plan (WMP) prepared for the Project, contract-specific WMP, and any statutory and contractual requirements. All aspects of waste management including waste generation, storage, transportation and disposal were assessed during the audits.

### 5.1 Action and Limit Levels

The Action and Limit Levels of the construction waste are provided in **Table 5.1**.

**Table 5.1: Action and Limit Levels for Construction Waste**

Monitoring Stations	Action Level	Limit Level
Construction Area	When one valid documented complaint is received	Non-compliance of the WMP, contract-specific WMPs, any statutory and contractual requirements

### 5.2 Waste Management Status

Weekly monitoring on all works contracts were carried out by the ET to check and monitor the implementation of proper waste management practices during the construction phase.

Recommendations made included provision and maintenance of proper chemical waste storage area, as well as handling, segregation, and regular disposal of general refuse. The contractors have taken actions to implement the recommended measures. Waste management audits were carried out by ET according to the requirement of the Waste Management Plan, Updated EM&A Manual and the implementation schedule of the waste management mitigation measures in **Appendix A**.

Based on updated contractors' information, construction waste generated in the reporting period is summarised in **Table 5.2**. The ET and IEC have carried out site audits regularly and reviewed the trip ticket system. Dedicated areas for sorting of materials are established on site. Recyclable materials such as steel bar, metal strip, aluminium, paper and plastic are sorted on-site and transported off-site for recycling during this reporting period.

**Table 5.2: Construction Waste Statistics**

	C&D Material Stockpiled for Reuse or Recycle <sup>(1)</sup> (m <sup>3</sup> )	C&D Material Reused in the Project (m <sup>3</sup> )	C&D Material Reused in other Projects (m <sup>3</sup> )	C&D Material Transferred to Public Fill (m <sup>3</sup> )	Chemical Waste (kg)	Chemical Waste (l)	General Refuse (tonne)
Apr 2025 <sup>(2)</sup>	760	1,885	0	4,680	0	0	4,336
May 2025 <sup>(3)</sup>	692	841	34	3,676	0	600	3,295

Notes:

- (1) C&D refers to Construction and Demolition.
- (2) Updated figures were provided by contractors.
- (3) The data was based on the information provided by contractors up to the submission date of this Monthly EM&A Report and might be updated in the forthcoming Monthly EM&A Report.

There were no complaints, non-compliance of the WMP, contract-specific WMPs, statutory and contractual requirements that triggered Action and Limit Levels in the reporting period.

### **5.3 Marine Sediment Management**

Marine sediment is managed according to the EIA Report, Updated EM&A Manual, Waste Management Plan and the proposal of Further Development on Treatment Level / Details and the Reuse Mode for Marine Sediment (hereinafter referred to as “Further Development Proposal”) of the Project. The storage conditions of the treated marine sediment, and final backfilling location records were inspected and checked by ET and verified by IEC to ensure they were in compliance with the requirements as stipulated in the Waste Management Plan and Further Development Proposal.

Backfilling works for treated marine sediment was conducted during the reporting period. The details of the marine sediment sampling, treatment and backfilling can be referred to Annual EM&A Report.

## 6 Chinese White Dolphin Monitoring

In accordance with Section 10.2.3.2 (4) of the Updated EM&A Manual, the operation phase CWD monitoring will be conducted for a period of at least 12 months after the full implementation of the North Lantau Marine Park (NLMP) at a frequency of two full surveys per month. Following the full implementation of the NLMP and the completion of post-construction phase CWD monitoring in December 2024, the operation phase CWD monitoring was commenced in January 2025.

### 6.1 CWD Monitoring Transects

Small vessel line-transect surveys were conducted along the transects covering Northeast Lantau (NEL), Northwest Lantau (NWL), Airport West (AW), West Lantau (WL) and Southwest Lantau (SWL) areas as proposed in the Manual, which are consistent with the Agriculture, Fisheries and Conservation Department (AFCD) long-term monitoring programme (except the addition of AW). The AW transect has not been previously surveyed in the AFCD programme due to the restrictions of HKIA Approach Area, nevertheless, this transect was established during the EIA of the 3RS Project and refined in the Manual with the aim to collect project specific baseline information within the HKIA Approach Area to fill the data gap that was not covered by the AFCD programme. This also provided a larger sample size for estimating the density, abundance and patterns of movements in the broader study area of the project.

The planned vessel survey transect lines for operation phase CWD monitoring following the waypoints set for construction phase monitoring as proposed in the Manual are depicted in **Figure 6.1** with the waypoint coordinates of all transect lines given in **Table 6.1**, which are subject to on-site refinement based on the actual survey conditions and constraints.

**Table 6.1: Coordinates of Transect Lines in NEL, NWL, AW, WL and SWL Survey Areas**

Waypoint	Easting	Northing	Waypoint	Easting	Northing
NEL					
1S	813525	820900	6N	818568	824433
1N	813525	824657	7S	819532	821420
2S	814556	818449	7N	819532	824209
2N	814559	824768	8S	820451	822125
3S	815542	818807	8N	820451	823671
3N	815542	824882	9S	821504	822371
4S	816506	819480	9N	821504	823761
4N	816506	824859	10S	822513	823268
5S	817537	820220	10N	822513	824321
5N	817537	824613	11S	823477	823402
6S	818568	820735	11N	823477	824613
NWL					
1S	804671	814577	5S	808504	821735
1N	804671	831404	5N	808504	828602

Waypoint	Easting	Northing	Waypoint	Easting	Northing
2Sb	805475	815457	6S	809490	822075
2Nb	805476	818571	6N	809490	825352
2Sa	805476	820770	7S	810499	822323
2Na	805476	830562	7N	810499	824613
3S	806464	821033	8S	811508	821839
3N	806464	829598	8N	811508	824254
4S	807518	821395	9S	812516	821356
4N	807518	829230	9N	812516	824254
<b>AW</b>					
1W	804733	818205	2W	805045	816912
1E	806708	818017	2E	805960	816633
<b>WL</b>					
1W	800600	805450	7W	800400	811450
1E	801760	805450	7E	802400	811450
2W	800300	806450	8W	800800	812450
2E	801750	806450	8E	802900	812450
3W	799600	807450	9W	801500	813550
3E	801500	807450	9E	803120	813550
4W	799400	808450	10W	801880	814500
4E	801430	808450	10E	803700	814500
5W	799500	809450	11W	802860	815500
5E	801300	809450	12S/11E	803750	815500
6W	799800	810450	12N	803750	818500
6E	801400	810450			
<b>SWL</b>					
1S	802494	803961	6S	807467	801137
1N	802494	806174	6N	807467	808458
2S	803489	803280	7S	808553	800329
2N	803489	806720	7N	808553	807377
3S	804484	802509	8S	809547	800338
3N	804484	807048	8N	809547	807396
4S	805478	802105	9S	810542	800423
4N	805478	807556	9N	810542	807462
5S	806473	801250	10S	811446	801335
5N	806473	808458	10N	811446	809436

## 6.2 CWD Monitoring Methodology

### 6.2.1 Small Vessel Line-transect Survey

Small vessel line-transect surveys provided data for density and abundance estimation and other assessments using distance-sampling methodologies, specifically, line-transect methods.

The surveys involved small vessel line-transect data collection and have been designed to be similar to, and consistent with, previous surveys for the AFCD for their long-term monitoring of small cetaceans in Hong Kong. The survey was designed to provide systematic, quantitative measurements of density, abundance and habitat use.

As mentioned in **Section 6.1**, the transects covered NEL, NWL, AW, WL and SWL areas as proposed in the Manual, which are consistent with the AFCD long-term monitoring programme (except AW). There are two types of transect lines:

- Primary transect lines: the parallel and zigzag transect lines as shown in **Figure 6.1**; and
- Secondary transect lines: transect lines connecting between the primary transect lines and going around islands.

All data collected on both primary and secondary transect lines were used for analysis of sighting distribution, group size, activities including association with fishing boat, and mother-calf pairs. Only on-effort data collected under favourable conditions of Beaufort 0-3 and visibility of approximately 1200 m or beyond were used for analysis of the CWD encounter rates.

A 15-20m vessel with a flying bridge observation platform about 4 to 5m above water level and unobstructed forward view, and a team of three to four observers were deployed to undertake the surveys. Two observers were on search effort at all times when following the transect lines with a constant speed of 7 to 8 knots (i.e. 13 to 15 km per hour), one using 7X handheld binoculars and the other using unaided eyes and recording data.

During on-effort survey periods, the survey team recorded effort data including time, position (waypoints), weather conditions (Beaufort sea state and visibility) and distance travelled in each series with assistance of a handheld GPS device. The GPS device also continuously and automatically logged data including time, position (latitude and longitude) and vessel speed throughout the entire survey.

When CWDs were seen, the survey team was taken off-effort, the dolphins were approached and photographed for photo-ID information (using a Canon 7D [or similar] camera and long 300 mm+ telephoto lens), then followed until they were lost from view. At that point, the boat returned (off effort) to the survey line at the closest point after obtaining photo records of the dolphin group and began to survey on effort again.

Focal follows of dolphins would be used for providing supplementary information only where practicable (i.e. when individual dolphins or small stable groups of dolphins with at least one member that could be readily identifiable with unaided eyes during observations and weather conditions are favourable). These would involve the boat following (at an appropriate distance to minimise disturbance) an identifiable individual dolphin for an extended period of time, and collecting detailed data on its location, behaviour, response to vessels, and associates.

### 6.2.2 Photo Identification

CWDs can be identified by their unique features like presence of scratches, nick marks, cuts, wounds, deformities of their dorsal fin and distinguished colouration and spotting patterns.

When CWDs were observed, the survey team was taken off-effort, the dolphins were approached and photographed for photo-ID information (using a Canon 7D [or similar] camera and long 300

mm+ telephoto lens). The survey team attempted to photograph both sides of every single dolphin in the group as the colouration and spotting pattern on both sides may not be identical. The photos were taken at the highest available resolution and stored on Compact Flash memory cards for transferring into a computer.

All photos taken were initially examined to sort out those containing potentially identifiable individuals. These sorted-out images would then be examined in detail and compared to the CWD photo-identification catalogue established for 3RS Project since the baseline monitoring stage.

## 6.3 Monitoring Results and Observations

### 6.3.1 Small Vessel Line-transect Survey

#### **Survey Effort**

Within this reporting period, two complete sets of small vessel line-transect surveys were conducted on the 6, 9, 15, 16, 19, 20, 21 and 23 May 2025 covering all transects in NEL, NWL, AW, WL and SWL survey areas for twice.

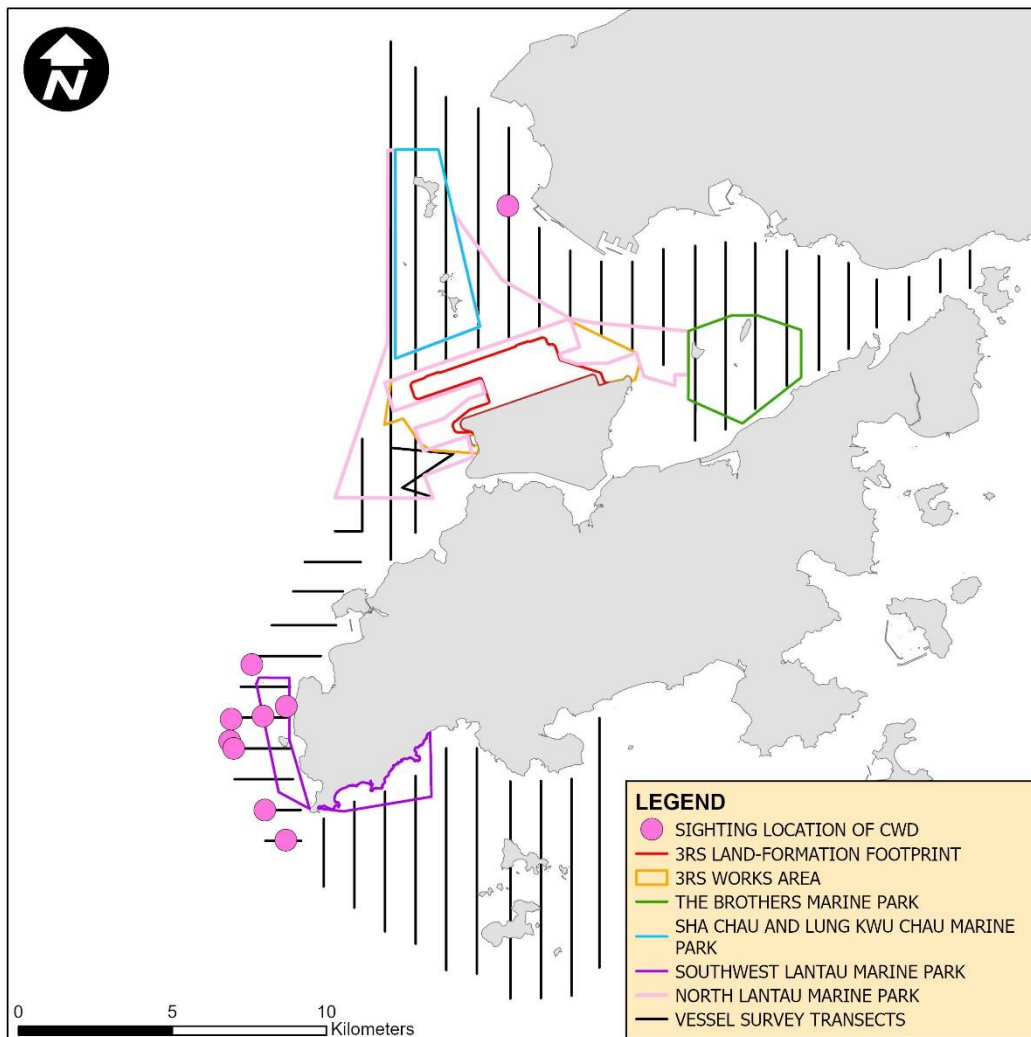
A total of around 450.5 km of survey effort was collected from these surveys and around 438.6 km of survey effort was being conducted under favourable weather condition (i.e. Beaufort Sea State 3 or below with favourable visibility). Details of the survey effort are given in **Appendix C**.

#### **Sighting Distribution**

In the current reporting period, nine sightings with 19 dolphins were sighted. All these sightings were on-effort records under favourable weather condition (i.e. Beaufort Sea State 3 or below with favourable visibility). Details of dolphin sightings are presented in **Appendix C**.

Distribution of all CWD sightings recorded in the current reporting period is illustrated in **Figure 6.2**. In WL, the majority of CWD sightings were scattered between Yi O and Fan Lau. In NWL, a CWD sighting was recorded at the waters near Castle Peak Power Station. It's been a while since last sighting in this part of the NWL survey area dated back to 2022. There was no CWD sighting recorded in SWL and NEL during the reporting period.

**Figure 6.2: Sightings Distribution of Chinese White Dolphins**



Remarks: (1) Please note that there are nine pink circles on the map indicating the sighting locations of CWDs. (2) Marine park excludes land area and the landward boundary generally follows the high water mark along the coastline.

### **Group Size**

In the current reporting period, nine groups with 19 dolphins in total were sighted, and the average group size of CWDs was 2.1 dolphins per group. Most of the CWD sightings were having small group size (i.e. 1-2 dolphins) and no CWD sighting with large group size (i.e. 10 or more dolphins) was recorded during the current reporting period.

### **Activities and Association with Fishing Boats**

There were two CWD sightings recorded engaging in foraging activities in WL during the current reporting period. Both sightings were observed in association with operating purse seiner in WL.

### **Mother-calf Pair**

In this reporting period, there was a CWD sighting recorded with the presence of mother-and-unspotted juvenile pair(s) in WL.

### 6.3.2 Photo Identification

In the current reporting period, a total number of nine different CWD individuals were identified for a total of nine times. A summary of photo identification works is presented in **Table 6.2**. Representative photos of these individuals are given in **Appendix C**.

**Table 6.2: Summary of Photo Identification**

Individual ID	Date of Sighting (dd-mmm-yy)	Sighting Group No.	Area	Individual ID	Date of Sighting (dd-mmm-yy)	Sighting Group No.	Area
NLMM013	9-May-25	1	NWL	WLMM067	16-May-25	4	WL
NLMM095	9-May-25	1	NWL	WLMM068	16-May-25	4	WL
SLMM034	16-May-25	3	WL	WLMM111	16-May-25	4	WL
SLMM050	16-May-25	4	WL	WLMM162	16-May-25	4	WL
WLMM043	16-May-25	3	WL				

### 6.4 Site Audit for CWD-related Mitigation Measures

During the reporting period, one dolphin observation station and team of at least two dolphin observers was deployed by the contractor for continuous monitoring of the DEZ for rock armour laying works in accordance with the DEZ Plan. During this reporting period, no training session were provided by the ET for the proposed dolphin observers. From the contractor's records, no dolphin or other marine mammals were observed this reporting month. The contractor's records were also audited by ET during site inspection.

The construction vessel management are presented in **Section 7.5** below.

According to Section 10.6.2.2 of the Updated EM&A Manual, audits of HSF implementation measures and Spill Responses Plan implementation measures will be conducted once every three months and every six months respectively for one year upon operation of 3RS. The second audit of HSF implementation measures was conducted in May 2025. During the audit period from 1 March 2025 to 31 May 2025, no SkyPier HSFs were recorded travelling between HKIA SkyPier and Zhuhai/Macau. The first audit of the Spill Responses Plan measures was conducted in May 2025.

### 6.5 Timing of reporting CWD Monitoring Results

Detailed analysis of CWD monitoring results collected by small vessel line-transect survey will be provided in upcoming quarterly reports and annual report.

### 6.6 Summary of CWD Monitoring

Following the full implementation of the NLMP and the completion of post-construction phase CWD monitoring in December 2024, the operation phase CWD monitoring was commenced in January 2025.



## 7 Environmental Site Inspection and Audit

### 7.1 Environmental Site Inspection

Site inspections of the construction works to audit the implementation of proper environmental pollution control and mitigation measures for the Project were conducted by ET and IEC on a weekly and bi-weekly basis, respectively. The weekly site inspection schedule of the construction works is provided in **Appendix B**. Besides, ad-hoc site inspections were also conducted by ET and IEC if environmental problems were identified, or subsequent to receipt of an environmental complaint, or as part of the investigation work. These site inspections provided a direct means to reinforce the specified environmental protection requirements and pollution control measures in construction sites.

During site inspections, environmental situation, status of implementation of pollution control and mitigation measures were observed. Environmental documents and site records, including waste disposal record, maintenance record of environmental equipment, and relevant environmental permit and licences, were also checked on site. Observations were recorded in the site inspection checklist and passed to the contractor together with the recommended mitigation measures where necessary in order to advise contractors on environmental improvement, awareness and on-site enhancement measures. The observations were made with reference to the following information during the site inspections:

- The EIA and EM&A requirements;
- Relevant environmental protection laws, guidelines, and practice notes;
- The EP conditions and other submissions under the EP;
- Monitoring results of EM&A programme;
- Works progress and programme;
- Proposal of individual works;
- Contract specifications on environmental protection; and
- Previous site inspection results.

Good site practices were observed in site inspections during the reporting period. Advice was given when necessary to ensure the construction workforce were familiar with relevant procedures, and to maintain good environmental performance on site. Regular toolbox talks on environmental issues were organised for the construction workforce by the contractors to ensure understanding and proper implementation of environmental protection and pollution control mitigation measures.

A summary of implementation status of the environmental mitigation measures for the construction phase of the Project during the reporting period is provided in **Appendix A**.

### 7.2 Landscape and Visual Mitigation Measures

Implementation of applicable landscape and visual mitigation measures (reference to the environmental protection measures CM1 – CM10 and OM7 in **Appendix A**) was monitored in accordance with the Manual. All measures undertaken by both the contractor and the landscape contractor during the construction phase and first year of the operation phase shall be audited by a landscape architect, as a member of the ET, on a regular basis to ensure compliance with the intended aims of the measures. Site inspections shall be undertaken at least once every two months during the first year of the operation phase.

The implementation status of the environmental protection measures is summarized below in **Table 7.1**. Examples of landscape and visual mitigation measures are shown in **Table 7.2**. The monitoring programme for detailed design, construction, establishment works and long term management (10 years) stages is presented in **Table 7.3**. Event and Action Plan for Landscape and Visual impacts is stated in **Table 7.4**.

**Table 7.1: Landscape and Visual – Construction Phase Audit Summary**






Landscape and Visual Mitigation Measures during Construction	Implementation Status	Relevant Contract(s) in the Reporting Period
CM1 – The construction area and contractor's temporary works areas shall be minimised to avoid impacts on adjacent landscape.	The implementation of mitigation measures was checked by ET during weekly site inspection and reported by the Contractors during the monthly Environmental Management Meetings. Implementation of the measures CM5, CM6 and CM7 by Contractors was observed.	All works contracts
CM2 – Reduction of construction period to practical minimum		
CM3 – Phasing of the construction stage to reduce visual impacts during the construction phase.		
CM4 – Construction traffic (land and sea) including construction plants, construction vessels and barges shall be kept to a practical minimum.		
CM5 – Erection of decorative mesh screens or construction hoardings around works areas in visually unobtrusive colours.		
CM6 – Avoidance of excessive height and bulk of site buildings and structures		
CM7 – Control of night-time lighting by hooding all lights and through minimisation of night working periods		
CM8 – All existing trees shall be carefully protected during construction. Detailed Tree Protection Specification shall be provided in the Contract Specification. Under this specification, the Contractor shall be required to submit, for approval, a detailed working method statement for the protection of trees prior to undertaking any works adjacent to all retained trees, including trees in contractor's works areas	Tree Protection Specifications were provided in the relevant Contract Specifications respectively for implementation by the Contractors under the Project.  The Contractors' performance on the implementation of the tree maintenance and protection measures were observed and checked by the ET weekly during construction period.	3508, 132kV Cable

Landscape and Visual Mitigation Measures during Construction	Implementation Status	Relevant Contract(s) in the Reporting Period
CM9 – Trees unavoidably affected by the works shall be transplanted where practical. A detailed Tree Transplanting Specification shall be provided in the Contract Specification, if applicable. Sufficient time for necessary tree root and crown preparation periods shall be allowed in the project programme	<p>Tree Transplanting Specifications were provided in the relevant Contract Specifications respectively for implementation by the Contractors under the Project where trees would unavoidably be affected by the construction works.</p> <p>The Contractors were required to submit Method Statements for tree transplanting prior to the transplanting works. Tree inspections were conducted by ET to check the tree transplanting works implemented by the Contractors on site.</p> <p>The Contractors' performance on the implementation of trees maintenance and protection measures on transplanted trees were observed and checked by the ET bi-monthly during the 12-month establishment period after the completion of each batch of transplanting works.</p> <p>Long term management of the transplanted trees was currently monitored by ET annually.</p>	3508
CM10 – Land formation works shall be followed with advanced hydroseeding around taxiways and runways as soon as practical	The implementation of advanced hydroseeding works by the Contractors were completed.	-
OM7 – Compensatory tree planting for all felled trees shall be provided to the satisfaction of relevant Government departments. Required numbers and locations of compensatory trees shall be determined and agreed separately with Government during the Tree Felling Application process under the relevant technical circulars. <sup>(1)</sup>	<p>Compensatory trees have been planted in batches at different time periods.</p> <p>The compensatory trees were checked by ET bi-monthly during the 12-month establishment period after the completion of each batch of compensatory tree planting works.</p> <p>Subsequently, the trees were monitored annually throughout the 10-year long-term management period, succeeding the establishment period for each batch of compensatory planting.</p>	AAHK

Note:

(1) AAHK is the management and maintenance agency of the compensatory trees. Tree Felling Application is not required for 3RS project.

**Table 7.2: Examples of Landscape and Visual Mitigation Measures in the Reporting Period**

		
Erection of site hoardings around works area in unobtrusive colours (CM5)	Avoidance of excessive height and bulk of site buildings (CM6)	Control of night-time lighting using light hooding and minimisation of night working period (CM7)
		
General view of retained tree (CM8)	General view of transplanted trees (CM9)	General view of compensatory tree planting (OM7)

In accordance with the Updated EM&A Manual, all existing trees shall be protected carefully during construction. Trees unavoidably affected by the works shall be transplanted where practical. In this reporting period, the cumulative total number of retained trees and transplanted trees under the Project remained unchanged (i.e. 76 and 26 respectively) comparing to the previous reporting period. No non-conformity was recorded in the reporting period.

Details of the retained trees, transplanted trees and to-be-transplanted trees under the Project are summarized in **Table 7.5**. Details of the retained trees are to be discussed in the Quarterly EM&A reports.

For the compensatory tree monitoring, a bi-monthly site inspection for the 12-month establishment period and an annual site inspection for the long-term management period were conducted in May 2025.

**Table 7.3: Monitoring Programme for Landscape and Visual**

Stage	Monitoring Task	Monitoring Report	Form of Approval	Frequency
Detailed Design	Checking of design works against the recommendations of the landscape and visual impact assessments within the EIA shall be undertaken during detailed design and tender stage, to ensure that they fulfil the intention of the mitigation	Report by AAHK / PM confirming that the design conforms to requirements of EP.	Approved by Client	At the end of the Detailed Design Phase

Stage	Monitoring Task	Monitoring Report	Form of Approval	Frequency
	measures. Any changes to the design, including design changes on site shall also be checked.			
Construction	Checking of the contractor's operations during the construction period.	Report on Contractor's compliance, by ET	Counter signature of report by IEC	Weekly
Establishment Works	Checking of the planting works during the twelve-month Establishment Period after completion of each batch of transplanting works or compensatory tree planting works.	Report on Contractor's compliance, by ET	Counter signature of report by IEC	Every two months
Long Term Management (10 year)	Monitoring of the long-term management of the planting works in the period up to 10 years after completion of each batch of transplanting works or compensatory tree planting works.	Report on compliance by ET or maintenance Agency as appropriate	Counter signature of report by Management Agency	Annually

**Table 7.4: Event and Action Plan for Landscape and Visual**

Event Action Level	Action			
	ET	IEC	AAHK / PM	Contractor
Design Check	Check final design conforms to the requirements of EP and prepare report.	Check report. Recommend remedial design if necessary.	Undertake remedial design if necessary.	
Non-conformity on one occasion	Identify source. Inform IEC and AAHK / PM. Discuss remedial actions with IEC, AAHK / PM and Contractor. Monitor remedial actions until rectification has been completed.	Check report. Check Contractor's working method. Discuss with ET and Contractor on possible remedial measures. Advise AAHK / PM on effectiveness of proposed remedial measures. Check implementation of remedial measures.	Notify Contractor. Ensure remedial measures are properly implemented.	Amend working methods to prevent recurrence of non-conformity. Rectify damage and undertake additional action necessary.
Repeated Non-conformity	Identify source. Inform IEC and AAHK / PM. Increase monitoring frequency.	Check monitoring report. Check Contractor's working method. Discuss with ET and Contractor on possible remedial measures.	Notify Contractor. Ensure remedial measures area properly implemented.	Amend working methods to prevent recurrence of non-conformity. Rectify damage and undertake

Event Action Level	Action			
	ET	IEC	AAHK / PM	Contractor
	Discuss remedial actions with IEC, AAHK / PM and Contractor.	Advise AAHK / PM on effectiveness of proposed remedial measures.		additional action necessary.
	Monitor remedial actions until rectification has been completed.	Supervise implementation of remedial measures.		
	If non-conformity stops, cease additional monitoring.			

**Table 7.5: Summary of the Number of Retained, Transplanted and To-be-transplanted Trees in the Reporting Period**

Contract No. / Works	Retain (nos.)	Transplanted (nos.)		To-be-transplanted (nos.)
		Establishment Period	Maintenance Period	
3503	0	0	9 <sup>(1)</sup>	0
3508	24	0	12	0
3801	0	0	5 <sup>(2)</sup>	0
132kV Cable	52	0	0	0
<b>Grand Total</b>	<b>76</b>	<b>0</b>	<b>26</b>	<b>0</b>

Note:

(1) Contract 3503 was completed. The 9 transplanted trees, including T835, T836, T838, T812, T814, T815, T829, T830 and T831 were handed over to AAHK in February 2022.

(2) The 5 transplanted trees including CT276, CT1253, CT1194, CT1794 and CT1795 have been handed over to other management agencies. Details of the management agency are presented in **Table 7.6**.

Summary of the updated transplanted trees are presented in **Table 7.6**.

**Table 7.6: Summary of the Transplanted Trees Updated in the Reporting Period**

Tree ID	Transplant Date	Management Stage	Management Agency	Remarks
CT276	3 May 2018	<u>Long Term Management period</u> Jun 2019 – May 2028	Southern Landside Petrol Filling Station	Establishment Period was completed. Next inspection will be conducted in February 2026. Photos of the last inspection in February 2025 can be referred to Table 7.7 of the Construction Phase Monthly EM&A Report No.110.
CT1253	4 May 2018	<u>Long Term Management period</u> Jun 2019 – May 2028	Southern Landside Petrol Filling Station	
T835	22 Jan 2020	<u>Long Term Management period</u> Feb 2021 – Jan 2030	AAHK	Establishment Period was completed. The tree within the land parcel was acquired for construction of infrastructure. The tree was felled in 2023.
T836	13 Dec 2019	<u>Long Term Management period</u> Feb 2021 – Jan 2030	AAHK	
T838	22 Jan 2020	<u>Long Term Management period</u> Feb 2021 – Jan 2030	AAHK	



Tree ID	Transplant Date	Management Stage	Management Agency	Remarks
T812	21 Dec 2020	<u>Long Term Management period</u> Jan 2022 – Dec 2031	AAHK	Establishment Period was completed. Next inspection will be conducted in December 2025. Photos of the last inspection in December 2024 can be referred to Table 7.7 of the Construction Phase Monthly EM&A Report No.108.
T814	20 Dec 2020	<u>Long Term Management period</u> Jan 2022 – Dec 2031	AAHK	
T815	15 Dec 2020	<u>Long Term Management period</u> Jan 2022 – Dec 2031	AAHK	
T829	18 Dec 2020	<u>Long Term Management period</u> Jan 2022 – Dec 2031	AAHK	
T830	14 Dec 2020	<u>Long Term Management period</u> Jan 2022 – Dec 2031	AAHK	
T831	19 Dec 2020	<u>Long Term Management period</u> Jan 2022 – Dec 2031	AAHK	
T1493	6 Jul 2021	<u>Long Term Management period</u> Aug 2022 – Jul 2031	Contract 3508	Establishment Period was completed. Next inspection will be conducted in July 2025. Photos of the last inspection in July 2024 can be referred to Table 7.7 of the Construction Phase Monthly EM&A Report No.103.
T1494	6 Jul 2021	<u>Long Term Management period</u> Aug 2022 – Jul 2031	Contract 3508	
T1495	10 Jul 2021	<u>Long Term Management period</u> Aug 2022 – Jul 2031	Contract 3508	
T1496	5 Jul 2021	<u>Long Term Management period</u> Aug 2022 – Jul 2031	Contract 3508	
T1497	5 Jul 2021	<u>Long Term Management period</u> Aug 2022 – Jul 2031	Contract 3508	
T1498	29 Jun 2021	<u>Long Term Management period</u> Aug 2022 – Jul 2031	Contract 3508	
T1499	29 Jun 2021	<u>Long Term Management period</u> Aug 2022 – Jul 2031	Contract 3508	
T1500	30 Jun 2021	<u>Long Term Management period</u> Aug 2022 – Jul 2031	Contract 3508	
T1501	30 Jun 2021	<u>Long Term Management period</u> Aug 2022 – Jul 2031	Contract 3508	
T1502	5 Jul 2021	<u>Long Term Management period</u> Aug 2022 – Jul 2031	Contract 3508	
T1503	6 Jul 2021	<u>Long Term Management period</u> Aug 2022 – Jul 2031	Contract 3508	
T1504	24 Jun 2021	<u>Long Term Management period</u> Aug 2022 – Jul 2031	Contract 3508	

Tree ID	Transplant Date	Management Stage	Management Agency	Remarks
CT1194	4 May 2018	<u>Long Term Management period</u> Jun 2019 – May 2028	Southern Landside Petrol Filling Station	Establishment Period was completed. Uprooted and collapsed due to Typhoon Higos on 18 August 2020. Tree removal was conducted as recommended by tree specialist of the contractor of Southern Landside Petrol Filling Station.
CT1794	3 May 2018	<u>Long Term Management period</u> Jun 2019 – May 2028	AsiaWorld-Expo	Establishment Period was completed. The tree within the land parcel was acquired by the government for construction of emergency hospital to handle COVID19 pandemic at AsiaWorld-Expo. The tree was felled in late 2020.
CT1795	3 May 2018	<u>Long Term Management period</u> Jun 2019 – May 2028	AsiaWorld-Expo	Establishment Period was completed. The tree within the land parcel was acquired by the government for construction of emergency hospital to handle COVID19 pandemic at AsiaWorld-Expo. The tree was felled in late 2020.

### 7.3 Land Contamination Assessment

The Supplementary CAP was submitted to EPD pursuant to EP Condition 2.20. The CARs for Golf Course and T2 Emergency Power Supply Systems (EPSS) were submitted to EPD in accordance with EP Condition 1.9 and the Supplementary CAP in which no land contamination issues were identified. EPD issued no further comment for aforesaid CARs. No leakage was found after the removal of underground fuel pipelines of T2 EPSS and all required additional photos have been submitted to EPD.

According to the approved supplementary CAP, there are 3 remaining locations where site re-appraisal / additional site investigation are proposed. The site re-appraisal summary report for Fire Training Facility was submitted and accepted by EPD on 20 December 2023. The status of site re-appraisal/ additional site investigation of the 2 remaining locations (Fuel Tank Room to the west of CAD Antenna Farm and Airside Petrol Filling Station) shall be further updated upon latest development programme is available.

### 7.4 Audit of SkyPier High Speed Ferries

The Marine Travel Routes and Management Plan for High Speed Ferries of SkyPier (the SkyPier Plan) was submitted to the Advisory Council on the Environment for comment and subsequently submitted to and approved by EPD in November 2015 under EP Condition 2.10. The approved SkyPier Plan is available on the dedicated website of the Project. In the SkyPier Plan, AAHK has committed to implement the mitigation measure of requiring HSFs of SkyPier travelling between HKIA and Zhuhai/Macau to start diverting the route with associated speed control across the area, i.e. Speed Control Zone (SCZ), with high CWD abundance. The route diversion and speed restriction at the SCZ have been implemented since 28 December 2015.

During the reporting period, the SkyPier HSF travelling to and from Zhuhai and Macau has been suspended until further notice. No SkyPier HSFs were recorded travelling between HKIA SkyPier and Zhuhai/Macau in May 2025.



## 7.5 Audit of Construction and Associated Vessels

The updated MTRMP-CAV was approved by EPD on 16 May 2025 under EP Condition 2.9. The approved Plan is available on the dedicated website of the Project.

ET carried out the following actions during the reporting period:

- One skipper training session was held by contractor's Environmental Officer. Competency test was subsequently conducted with trained skipper by ET. The list of all trained skippers was properly recorded and maintained by ET.
- During this reporting period, one skipper was trained by contractor's Environmental Officer. In total, 1941 skippers were trained from August 2016 to May 2025.
- Deviations recorded in MSS such as speeding and entering no-entry zone were identified. All the concerned contractors were reminded to comply with the requirements of the MTRMP-CAV during the bi-weekly Construction Traffic Control Centre (CTCC) audit.
- Three-month rolling programmes (one month record and three months forecast) for construction vessel activities were received from the contractors in order to help maintain the number of construction and associated vessels on site to a practicable minimal level.
- Conducted a trial for auditing construction and associated vessels according to the updated MTRMP-CAV.

## 7.6 Implementation of Dolphin Exclusion Zone

The DEZ Plan was submitted in accordance with EP Condition 3.1 (v) requirement and Section 10.3 of the Manual and approved in April 2016 by EPD. The ET checked the contractor's dolphin sighting record and relevant records to audit the implementation of DEZ and there was no finding. During the reporting period, there was no dolphin sightings within the DEZ.

## 7.7 Status of Submissions under Environmental Permits

The current status of submissions under the EP up to the reporting period is presented in **Table 7.7**.

**Table 7.7: Status of Submissions under Environmental Permit**

EP Condition	Submission	Status
2.1	Complaint Management Plan	Accepted / approved by EPD
2.4	Management Organizations	
2.5	Construction Works Schedule and Location Plans	
2.7	Marine Park Proposal	
2.8	Marine Ecology Conservation Plan	
2.9	Marine Travel Routes and Management Plan for Construction and Associated Vessels	
2.10	Marine Travel Routes and Management Plan for High Speed Ferries of SkyPier	
2.11	Marine Mammal Watching Plan	
2.12	Coral Translocation Plan	
2.13	Fisheries Management Plan	
2.14	Egret Survey Plan	

EP Condition	Submission	Status
2.15	Silt Curtain Deployment Plan	
2.16	Spill Response Plan	
2.17	Detailed Plan on Deep Cement Mixing	
2.18	Landscape & Visual Plan	
2.19	Waste Management Plan	
2.20	Supplementary Contamination Assessment Plan	
2.21	Procedures for Mitigation of Aircraft Noise	
2.23	Aircraft Noise Monitoring Plan	
2.24	Airport Operation related Emissions Control Plan	
2.25	Operational Phase Waste Management Plan	
3.1	Updated EM&A Manual	
3.4	Baseline Monitoring Reports	

## 7.8 Compliance with Other Statutory Environmental Requirements

During the reporting period, environmental related licenses and permits required for the construction activities were checked. No non-compliance with environmental statutory requirements was recorded. The latest statuses of the environmental licenses and permits in the reporting period are presented in **Appendix E**.

## 7.9 Analysis and Interpretation of Complaints, Notification of Summons and Status of Prosecutions

### 7.9.1 Complaints

A complaint was received on 25 April 2025 concerning dust nuisance at South Wing Level 6 of Terminal 2 Concourse. In accordance with the Project's Manual and Complaint Management Plan, the ET initiated an investigation. The relevant contractor confirmed that mixing works had been conducted in the area. Prior to resuming such activities, dust mitigation measures were enhanced and training was provided to workers. ET conducted site inspections and did not observe any dust-related items. The contractor was reminded to continue reviewing dust control measures and ensure proper training is provided before future mixing works. Based on the findings, the complaint case is considered resolved and closed.

### 7.9.2 Notifications of Summons or Status of Prosecution

Neither notification of summons nor prosecution was received during the reporting period.

### 7.9.3 Cumulative Statistics

Cumulative statistics on complaints, notifications of summons and status of prosecutions are summarised in **Appendix F**.

## 8 Future Key Issues and Other EIA & EM&A Issues

### 8.1 Construction Programme for the Coming Reporting Period

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

#### **Reclamation Works:**

##### **Contract 3206 Main Reclamation Works**

- Installation of precast units, scour apron, armour rocks and miscellaneous works at eastern seawall.

#### **Airfield Works:**

##### **Contract 3305 Airfield Ground Lighting System**

- Cable laying works; and
- Hardware installation works.

##### **Contract 3310 North Runway Modification Works**

- Demolition of bulkhead wall, pavement, drainage works, profile barrier, mechanical, electrical and plumbing works, and architectural, builder's work and finishing works at vehicular tunnels;
- Falsework and formwork;
- Reinforced concrete works;
- Drainage and watermain works; and
- Architectural, builder's work and finishing works at ancillary buildings.

#### **Terminal 2 Concourse and Apron Works:**

##### **Contract 3404 Integrated Airport Control System**

- System testing works.

##### **Contract 3408 Third Runway Concourse and Apron Works**

- Building services and architectural, builder's work and finishing works;
- Cable laying and utilities works;
- Pavement works;
- Operation of concrete batching plant; and
- Reinforced concrete works.

#### **Terminal 2 Expansion:**

##### **Contract 3508 Terminal 2 Expansion Works**

- Architectural, builder's work and finishing works;
- Electrical and mechanical works;
- Roof works;
- Hard landscape works;
- Link bridge works;
- Emergency vehicular access construction;
- Pier, deck, parapet and abutment construction;
- Road works, drainage and utilities works; and
- Crossroad duct laying works.

**Automated People Mover and Baggage Handling System:**

**Contract 3601 New Automated People Mover System (TRC Line)**

- Guide beam installation; and
- Cable containment and cable laying works.

**Contract 3602 Existing APM System Modification Works**

- Restoration of buffer stop;
- Platform screen door installation works; and
- Steel fixing and formwork to track plinth.

**Contract 3603 Baggage Handling System (BHS)**

- IT cabling and commissioning;
- Steel work, mechanical, electrical, CCTV and IT installation; and
- Conveyor, electrical and fire service installation .

**Airport Support Infrastructure:**

**Contract 3801 APM and BHS Tunnels on Existing Airport Island**

- Slope levelling works; and
- Construction of U-channel

**Contract 3802 APM and BHS Tunnels and Related Works**

- Lateral supports and backfilling works;
- Box culvert construction and superstructure works;
- APM and BHS Tunnel construction;
- Reinforced concrete works; and
- Architectural, builder's work and finishing works.

**Contract 3804 East and Landside Fire Stations**

- Superstructure works;
- Electrical and mechanical works;
- Utilities works; and
- Architectural, builder's work and finishing works.

**Contract 3805 New Airport District Police Operational Base**

- Construction of superstructures and drainage system;
- Installation of fuel tank; and
- Site formation works.

**Construction Support:**

**Contract 3901A Concrete Batching Facility**

- Operation of concrete batching plant and material conveyor belt.

**Contract 3901B Concrete Batching Facility**

- Decommissioning of concrete batching plant.

**Contract 3908 Quay Management Services**

- Provision of services of site management and logistic control of 3RS quays; and
- Provision of flat top barge and vehicle delivery services between the launching point in Hong Kong and 3RS quays.

**Contract 3913 Asphalt Batching Plant**

- Operation of asphalt batching plant.

## 8.2 Key Environmental Issues for the Coming Reporting Period

### 8.2.1 Construction Activities in the Coming Reporting Period

The key environmental issues for the Project in the coming reporting period are expected to be associated with the construction activities include:

- Generation of dust from construction works and stockpiles;
- Noise from operating equipment and machinery on-site;
- Generation of site surface runoffs and wastewater from activities on-site;
- Sorting, recycling, storage and disposal of general refuse and construction waste;
- Reuse of treated marine sediments from excavation works; and
- Management of chemicals and avoidance of oil spillage on-site.

The implementation of required mitigation measures by the contractors will be monitored by the ET.

### 8.3 Monitoring Schedule for the Coming Reporting Period

A tentative schedule of the planned environmental monitoring work and the operation phase CWD monitoring in the next reporting period is provided in **Appendix B**.

### 8.4 Review of the Key Assumptions Adopted in the EIA Report

With reference to Appendix E of the Manual, it is noted that the key assumptions adopted in approved EIA report for the construction phase are still valid and no major changes are involved. The environmental mitigation measures recommended in the approved EIA Report remain applicable and shall be implemented in undertaking construction works for the Project.

## 9 Conclusion and Recommendation

The new North Runway was commissioned in November 2022. Following the completion of reconfiguration works on the Centre Runway, the 3RS was commissioned on 28 November 2024.

The key activities of the Project carried out in the reporting period are located in reclamation areas and existing airport island respectively. Works in the reclamation areas included concourse superstructure works, tunnel works for Automated People Mover (APM) and Baggage Handling System (BHS) and associated works. Meanwhile, works on the existing airport island involved Terminal 2 (T2) expansion works, modification and tunnel works for APM and BHS, utilities works, road and drainage works and excavation works.

All the monitoring works for construction dust, construction noise, construction waste and landscape & visual were conducted during the reporting period in accordance with the Manual.

Monitoring results of construction dust, construction noise and construction waste did not trigger the corresponding Action and Limit Levels during the reporting period. No non-conformity was recorded for landscape & visual monitoring in the reporting period.

The operation phase CWD monitoring was conducted in May 2025.

Weekly site inspections of the construction works were carried out by the ET to audit the implementation of proper environmental pollution control and mitigation measures for the Project. Bi-weekly site inspections were also conducted by the IEC. Site inspection findings were recorded in the site inspection checklists and provided to the contractors to follow up.

On the implementation of the SkyPier Plan, SkyPier HSF services to and from Zhuhai and Macau has been suspended until further notice. No SkyPier HSFs were recorded travelling between HKIA SkyPier and Zhuhai/Macau during the reporting period.

For the implementation of MTRMP-CAV, the MSS automatically recorded the deviation cases such as speeding and entering no-entry zone. The ET checked the MSS records to ensure all deviation cases were followed up. All the concerned captains were reminded by the contractor's CTCC representative to comply with the requirements of the MTRMP-CAV. Three-month rolling programmes for construction vessel activities, which ensures the proposed vessels are necessary and minimal through good planning, were also received from contractors.

# Figures

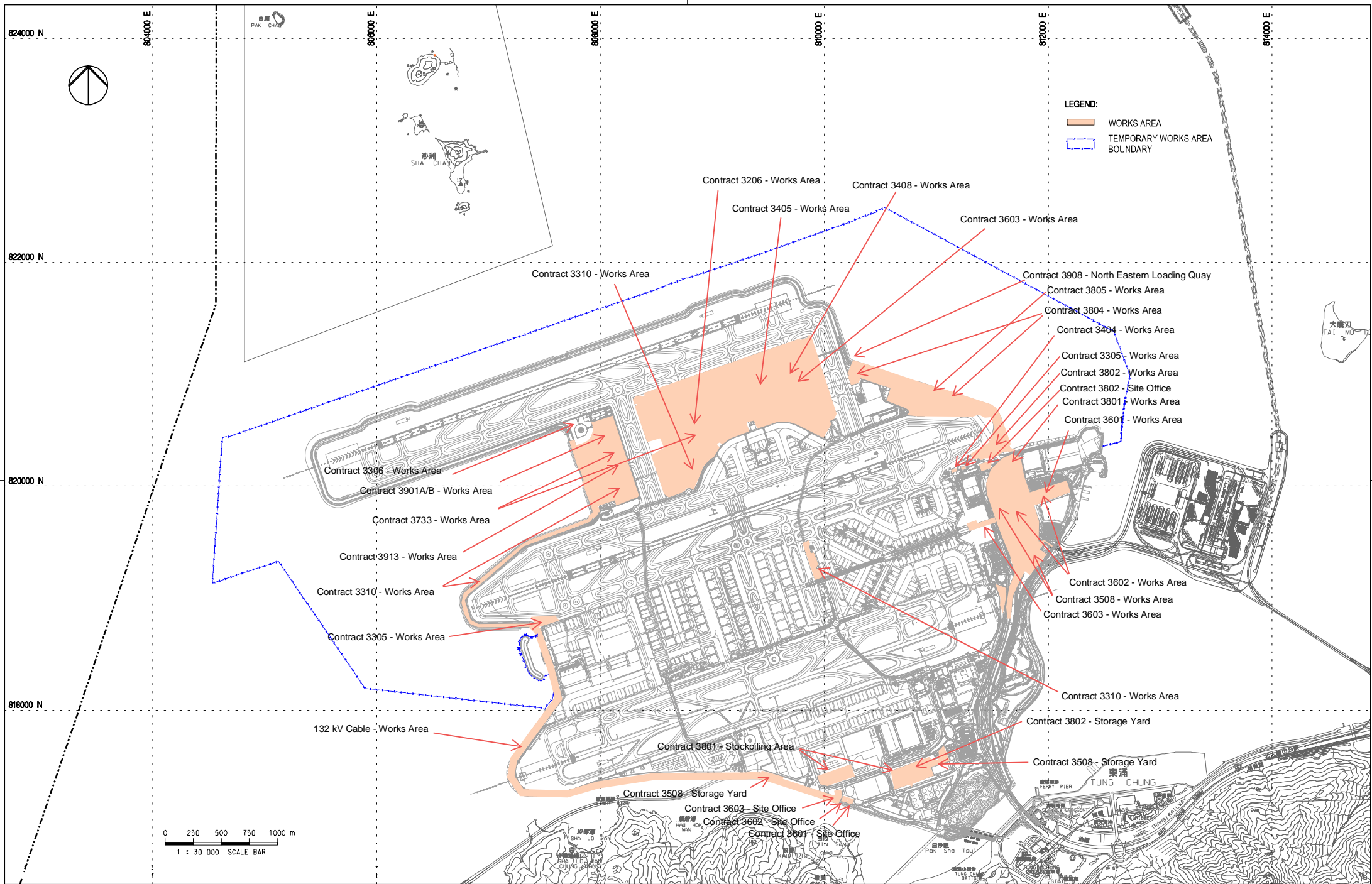
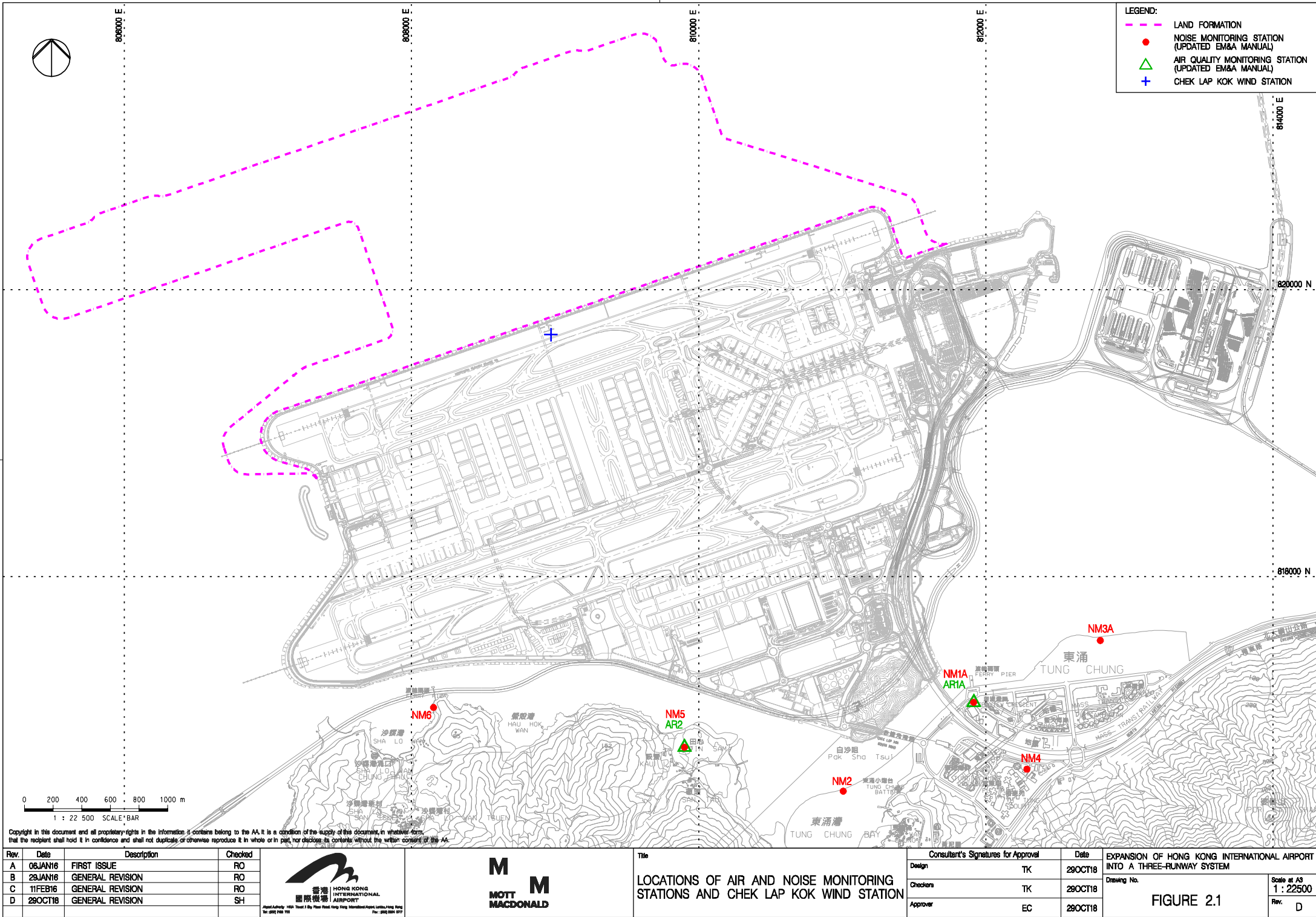
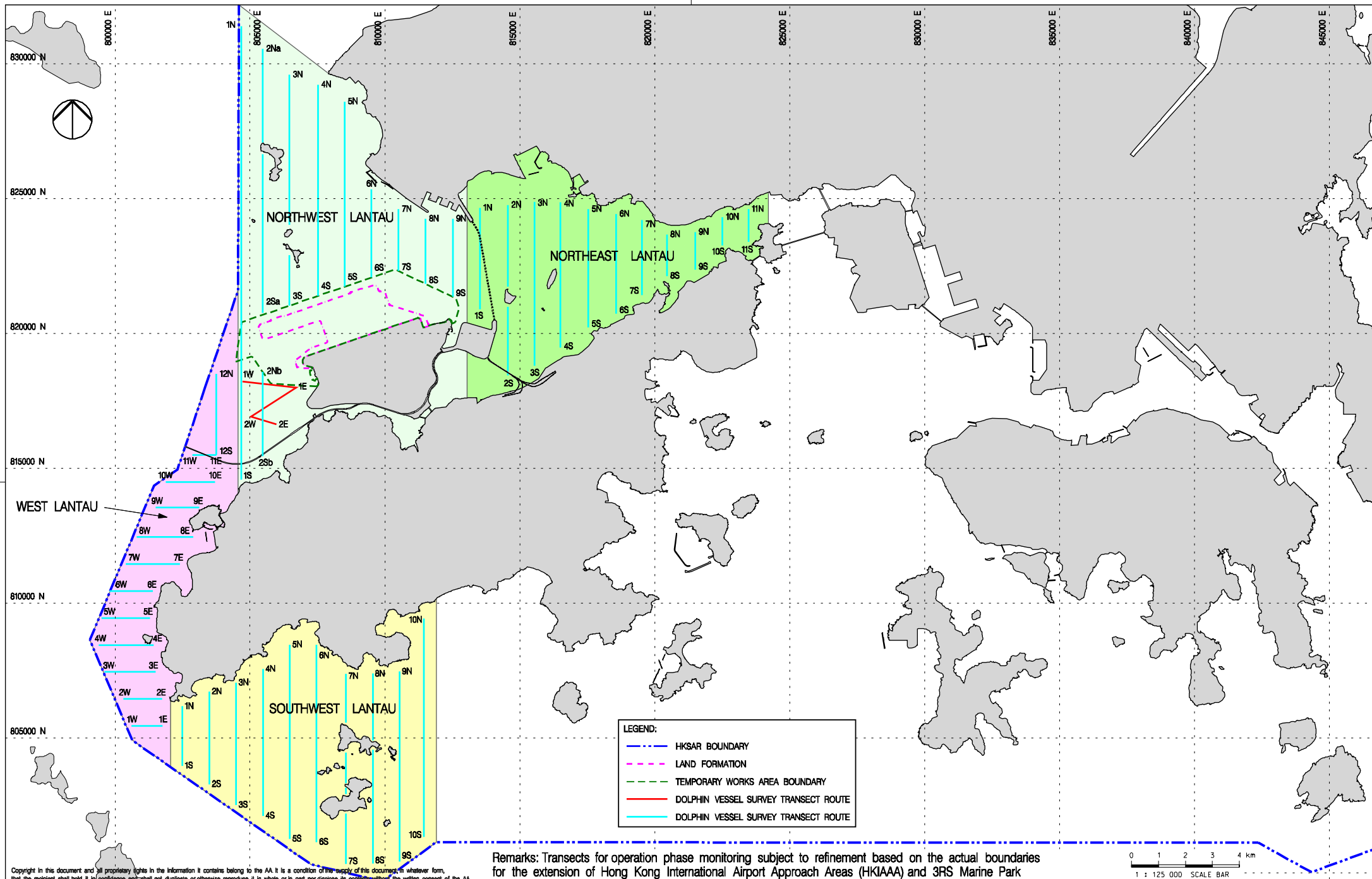


FIGURE 1.1 LOCATIONS OF KEY CONSTRUCTION ACTIVITIES

Note: The locations are for indicative purpose. The actual construction work locations are in accordance with the construction work programme







Remarks: Transects for operation phase monitoring subject to refinement based on the actual boundaries for the extension of Hong Kong International Airport Approach Areas (HKIAAA) and 3RS Marine Park

Rev.	Date	Description	Checked
B	27JUL16	GENERAL REVISION	JT
C	08FEB17	GENERAL REVISION	JT
D	01MAR17	GENERAL REVISION	JT
E	29OCT18	GENERAL REVISION	SH
F	04APR19	GENERAL REVISION	SH



Title  
VESSEL BASED DOLPHIN MONITORING  
TRANSECTS IN CONSTRUCTION,  
POST-CONSTRUCTION AND OPERATION PHASES

Consultant's Signatures for Approval		Date	EXPANSION OF HONG KONG INTERNATIONAL AIRPORT INTO A THREE-RUNWAY SYSTEM	
Design	JC	04APR19	Drawing No.  <b>FIGURE 6.1</b>	Scale at A3 1 : 125000  Rev. <b>F</b>
Checkers	JC / TK	04APR19		
Approver	EC	04APR19		

**Appendix A. Environmental Mitigation  
Implementation Schedule (EMIS) for  
Construction Phase**

# Environmental Mitigation Implementation Schedule (EMIS) for Construction Phase

EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
<b>Air Quality Impact – Construction Phase</b>					
5.2.6.2	2.1	-	<b>Dust Control Measures</b> <ul style="list-style-type: none"> <li>Water spraying for 12 times a day or once every two hours for 24-hour working at all active works area.</li> </ul>	Within construction site / Duration of the construction phase	I
5.2.6.3	2.1	-	<ul style="list-style-type: none"> <li>Covering of at least 80% of the stockpiling area by impervious sheets. Water spraying of all dusty materials immediately prior to any loading transfer operation so as to keep the dusty material wet during material handling.</li> </ul>	Within construction site / Duration of the construction phase	I
5.2.6.4	2.1	-	<p>Dust control practices as stipulated in the Air Pollution Control (Construction Dust) Regulation should be adopted. These practices include:</p> <p>Good Site Management</p> <ul style="list-style-type: none"> <li>Good site management is important to help reducing potential air quality impact down to an acceptable level. As a general guide, the Contractor should maintain high standard of housekeeping to prevent emission of fugitive dust. Loading, unloading, handling and storage of raw materials, wastes or by-products should be carried out in a manner so as to minimise the release of visible dust emission. Any piles of materials accumulated on or around the work areas should be cleaned up regularly. Cleaning, repair and maintenance of all plant facilities within the work areas should be carried out in a manner minimising generation of fugitive dust emissions. The material should be handled properly to prevent fugitive dust emission before cleaning.</li> </ul>	Within construction site / Duration of the construction phase	I
			<p>Disturbed Parts of the Roads</p> <ul style="list-style-type: none"> <li>Each and every main temporary access should be paved with concrete, bituminous hardcore materials or metal plates and kept clear of dusty materials; or</li> <li>Unpaved parts of the road should be sprayed with water or a dust suppression chemical so as to keep the entire road surface wet.</li> </ul>	Within construction site / Duration of the construction phase	I
			<p>Exposed Earth</p> <ul style="list-style-type: none"> <li>Exposed earth should be properly treated by compaction, hydroseeding, vegetation planting or seating with latex, vinyl, bitumen within six months after the last construction activity on the site or part of the site where the exposed earth lies.</li> </ul>	Within construction site / Duration of the construction phase	I
			<p>Loading, Unloading or Transfer of Dusty Materials</p> <ul style="list-style-type: none"> <li>All dusty materials should be sprayed with water immediately prior to any loading or transfer operation so as to keep the dusty material wet.</li> </ul>	Within construction site / Duration of the construction phase	I

EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
			<p>Debris Handling</p> <ul style="list-style-type: none"> <li>Any debris should be covered entirely by impervious sheeting or stored in a debris collection area sheltered on the top and the three sides; and</li> <li>Before debris is dumped into a chute, water should be sprayed so that it remains wet when it is dumped.</li> </ul>	Within construction site / Duration of the construction phase	I
			<p>Transport of Dusty Materials</p> <ul style="list-style-type: none"> <li>Vehicle used for transporting dusty materials/spoils should be covered with tarpaulin or similar material. The cover should extend over the edges of the sides and tailboards.</li> </ul>	Within construction site / Duration of the construction phase	I
			<p>Wheel washing</p> <ul style="list-style-type: none"> <li>Vehicle wheel washing facilities should be provided at each construction site exit. Immediately before leaving the construction site, every vehicle should be washed to remove any dusty materials from its body and wheels.</li> </ul>	Within construction site / Duration of the construction phase	I
			<p>Use of vehicles</p> <ul style="list-style-type: none"> <li>The speed of the trucks within the site should be controlled to about 10km/hour in order to reduce adverse dust impacts and secure the safe movement around the site;</li> <li>Immediately before leaving the construction site, every vehicle should be washed to remove any dusty materials from its body and wheels; and</li> <li>Where a vehicle leaving the construction site is carrying a load of dusty materials, the load should be covered entirely by clean impervious sheeting to ensure that the dusty materials do not leak from the vehicle.</li> </ul>	Within construction site / Duration of the construction phase	I
			<p>Site hoarding</p> <ul style="list-style-type: none"> <li>Where a site boundary adjoins a road, street, service lane or other area accessible to the public, hoarding of not less than 2.4m high from ground level should be provided along the entire length of that portion of the site boundary except for a site entrance or exit.</li> </ul>	Within construction site / Duration of the construction phase	I
5.2.6.5	2.1	-	<p><b>Best Practices for Concrete Batching Plant</b></p> <p>The relevant best practices for dust control as stipulated in the Guidance Note on the Best Practicable Means for Cement Works (Concrete Batching Plant) BPM 3/2 as well as in the future Specified Process licence should be adopted. The best practices are recommended to be applied to both the land based and floating concrete batching plants. Best practices include:</p> <p>Cement and other dusty materials</p> <ul style="list-style-type: none"> <li>The loading, unloading, handling, transfer or storage of cement, pulverised fuel ash (PFA) and/or other equally dusty materials shall be carried in a totally enclosed system acceptable to EPD. All dust-laden air or waste gas generated by the process operations shall be properly extracted and vented to fabric filtering system to meet the required emission limit;</li> <li>Cement, PFA and/or other equally dusty materials shall be stored in storage silo fitted with audible high-level alarms to warn of over-filling. The high-level alarm indicators shall be interlocked with the material</li> </ul>	Within Concrete Batching Plant / Duration of the construction phase	I

EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
			<p>filling line such that in the event of the silo approaching an overfilling condition, an audible alarm will operate, and after 1 minute or less the material filling line will be closed;</p> <ul style="list-style-type: none"> <li>▪ Vents of all silos shall be fitted with fabric filtering system to meet the required emission limit;</li> <li>▪ Vents of cement/PFA weighing scale shall be fitted with fabric filtering system to meet the required emission limit; and</li> <li>▪ Seating of pressure relief valves of all silos shall be checked, and the valves re-seated if necessary, before each delivery.</li> </ul>		
			<p>Other raw materials</p> <ul style="list-style-type: none"> <li>▪ The loading, unloading, handling, transfer or storage of other raw materials which may generate airborne dust emissions such as crushed rock, sand, stone aggregate, shall be carried out in such a manner to prevent or minimize dust emissions;</li> <li>▪ The materials shall be adequately wetted prior to and during the loading, unloading and handling operations. Manual or automatic water spraying system shall be provided at all unloading areas, stockpiles and material discharge points;</li> <li>▪ All receiving hoppers for unloading relevant materials shall be enclosed on three sides up to 3 m above the unloading point. In no case shall these hoppers be used as the material storage devices;</li> <li>▪ The belt conveyor for handling materials shall be enclosed on top and two sides with a metal board at the bottom to eliminate any dust emission due to wind-whipping effect. Other type of enclosure will also be accepted by EPD if it can be demonstrated that the proposed enclosure can achieve same performance;</li> <li>▪ All conveyor transfer points shall be totally enclosed. Openings for the passage of conveyors shall be fitted with adequate flexible seals;</li> <li>▪ Scrapers shall be provided at the turning points of all conveyors to remove dust adhered to the belt surface;</li> <li>▪ Conveyors discharged to stockpiles of relevant materials shall be arranged to minimize free fall as far as practicable. All free falling transfer points from conveyors to stockpiles shall be enclosed with chute(s) and water sprayed;</li> <li>▪ Aggregates with a nominal size less than or equal to 5 mm should be stored in totally enclosed structure such as storage bin and should not be handled in open area. Where there is sufficient buffer area surrounding the concrete batching plant, ground stockpiling may be used;</li> <li>▪ The stockpile shall be enclosed at least on top and three sides and with flexible curtain to cover the entrance side;</li> <li>▪ Aggregates with a nominal size greater than 5 mm should preferably be stored in a totally enclosed structure. If open stockpiling is used, the stockpile shall be enclosed on three sides with the enclosure wall sufficiently higher than the top of the stockpile to prevent wind whipping; and</li> <li>▪ The opening between the storage bin and weighing scale of the materials shall be fully enclosed.</li> </ul>	<p>Within Concrete Batching Plant / Duration of the construction phase</p>	I



EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
			<p>Loading of materials for batching</p> <ul style="list-style-type: none"> <li>Concrete truck shall be loaded in such a way as to minimise airborne dust emissions. The following control measures shall be implemented: <ul style="list-style-type: none"> <li>(a) Pre-mixing the materials in a totally enclosed concrete mixer before loading the materials into the concrete truck is recommended. All dust-laden air generated by the pre-mixing process as well as the loading process shall be totally vented to fabric filtering system to meet the required emission limit; and</li> <li>(b) If truck mixing batching or other types of batching method is used, effective dust control measures acceptable to EPD shall be adopted. The dust control measures must have been demonstrated to EPD that they are capable to collect and vent all dust-laden air generated by the material loading/mixing to dust arrestment plant to meet the required emission limit.</li> </ul> </li> <li>The loading bay shall be totally enclosed during the loading process.</li> </ul>	Within Concrete Batching Plant / Duration of the construction phase	I
			<p>Vehicles</p> <ul style="list-style-type: none"> <li>All practicable measures shall be taken to prevent or minimize the dust emission caused by vehicle movement; and</li> <li>All access and route roads within the premises shall be paved and adequately wetted.</li> </ul>	Within Concrete Batching Plant / Duration of the construction phase	I
			<p>Housekeeping</p> <ul style="list-style-type: none"> <li>A high standard of housekeeping shall be maintained. All spillages or deposits of materials on ground, support structures or roofs shall be cleaned up promptly by a cleaning method acceptable to EPD. Any dumping of materials at open area shall be prohibited.</li> </ul>	Within Concrete Batching Plant / Duration of the construction phase	I
5.2.6.6	2.1	-	<p><b>Best Practices for Asphaltic Concrete Plant</b></p> <p>The relevant best practices for dust control as stipulated in the Guidance Note on the Best Practicable Means for Tar and Bitumen Works (Asphaltic Concrete Plant) BPM 15 (94) as well as in the future Specified Process licence should be adopted. These include:</p> <p>Design of Chimney</p> <ul style="list-style-type: none"> <li>The chimney shall not be less than 3 metres plus the building height or 8 metres above ground level, whichever is the greater;</li> <li>The efflux velocity of gases from the main chimney shall not be less than 12 m/s at full load condition;</li> <li>The flue gas exit temperature shall not be less than the acid dew point; and</li> <li>Release of the chimney shall be directed vertically upwards and not be restricted or deflected.</li> </ul> <p>Cold feed side</p> <ul style="list-style-type: none"> <li>The aggregates with a nominal size less than or equal to 5 mm shall be stored in totally enclosed structure such as storage bin and shall not be handled in open area;</li> </ul>	Within Asphaltic Concrete Plant / Duration of the construction phase	I
			<p>Cold feed side</p> <ul style="list-style-type: none"> <li>The aggregates with a nominal size less than or equal to 5 mm shall be stored in totally enclosed structure such as storage bin and shall not be handled in open area;</li> </ul>	Within Asphaltic Concrete Plant / Duration of the construction phase	I

EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
			<ul style="list-style-type: none"> <li>Where there is sufficient buffer area surrounding the plant, ground stockpiling may be used. The stockpile shall be enclosed at least on top and three sides and with flexible curtain to cover the entrance side. If these aggregates are stored above the feeding hopper, they shall be enclosed at least on top and three sides and be wetted on the surface to prevent wind-whipping;</li> <li>The aggregates with a nominal size greater than 5 mm should preferably be stored in totally enclosed structure. Aggregates stockpile that is above the feeding hopper shall be enclosed at least on top and three sides. If open stockpiling is used, the stockpiles shall be enclosed on three sides with the enclosure wall sufficiently higher than the top of the stockpile to prevent wind whipping;</li> <li>Belt conveyors shall be enclosed on top and two sides and provided with a metal board at the bottom to eliminate any dust emission due to the wind-whipping effect. Other type of enclosure will also be accepted by EPD if it can be demonstrated that the proposed enclosure can be achieve the same performance;</li> <li>Scrapers shall be provided at the turning points of all belt conveyors inside the chute of the transfer points to remove dust adhered to the belt surface;</li> <li>All conveyor transfer points shall be totally enclosed. Openings for the passages of conveyors shall be fitted with adequate flexible seals; and</li> <li>All materials returned from dust collection system shall be transferred in enclosed system and shall be stored inside bins or enclosures.</li> </ul>		
			<p>Hot feed side</p> <ul style="list-style-type: none"> <li>The inlet and outlet of the rotary dryer shall be enclosed and ducted to a dust extraction and collection system such as a fabric filter. The particulate and gaseous concentration at the exhaust outlet of the dust collector shall not exceed the required limiting values;</li> <li>The bucket elevator shall be totally enclosed and the air be extracted and ducted to a dust collection system to meet the required particulates limiting value;</li> <li>All vibratory screens shall be totally enclosed and dust tight with close-fitted access inspection opening. Gaskets shall be installed to seal off any cracks and edges of any inspection openings;</li> <li>Chutes for carrying hot material shall be rigid and preferably fitted with abrasion resistant plate inside. They shall be inspected daily for leakages;</li> <li>All hot bins shall be totally enclosed and dust tight with close-fitted access inspection opening. Gaskets shall be installed to seal off any cracks and edges of any inspection openings. The air shall be extracted and ducted to a dust collection system to meet the required particulates limiting value; and</li> <li>Appropriate control measures shall be adopted in order to meet the required bitumen emission limit as well as the ambient odour level (2 odour units).</li> </ul>	Within Asphaltic Concrete Plant / Duration of the construction phase	I
			<p>Material transportation</p> <ul style="list-style-type: none"> <li>The loading, unloading, handling, transfer or storage of other raw materials which may generate airborne dust emissions such as crushed rocks, sands, stone aggregates, reject fines, shall be carried out in such a manner as to minimize dust emissions;</li> </ul>	Within Asphaltic Concrete Plant / Duration of the construction phase	I



EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
			<ul style="list-style-type: none"> <li>Roadways from the entrance of the plant to the product loading points and/or any other working areas where there are regular movements of vehicles shall be paved or hard surfaced; and</li> <li>Haul roads inside the Works shall be adequately wetted with water and/or chemical suppressants by water trucks or water sprayers.</li> </ul>		
			<p>Control of emissions from bitumen decanting</p> <ul style="list-style-type: none"> <li>The heating temperature of the particular bitumen type and grade shall not exceed the corresponding temperature limit of the same type listed in Appendix 1 of the Guidance Note;</li> <li>Tamper-free high temperature cut-off device shall be provided to shut off the fuel supply or electricity in case the upper limit for bitumen temperature is reached;</li> <li>Proper chimney for the discharge of bitumen fumes shall be provided at high level;</li> <li>The emission of bitumen fumes shall not exceed the required emission limit; and</li> <li>The air-to-fuel ratio shall be properly controlled to allow complete combustion of the fuel. The fuel burners, if any, shall be maintained properly and free from carbon deposits in the burner nozzles.</li> </ul>	Within Asphaltic Concrete Plant / Duration of the construction phase	I
			<p>Liquid fuel</p> <ul style="list-style-type: none"> <li>The receipt, handling and storage of liquid fuel shall be carried out so as to prevent the release of emissions of organic vapours and/or other noxious and offensive emissions to the air.</li> </ul>	Within Asphaltic Concrete Plant / Duration of the construction phase	I
			<p>Housekeeping</p> <ul style="list-style-type: none"> <li>A high standard of housekeeping shall be maintained. Waste material, spillage and scattered piles gathered beneath belt conveyors, inside and around enclosures shall be cleared frequently. The minimum clearing frequency is on a weekly basis.</li> </ul>	Within Asphaltic Concrete Plant / Duration of the construction phase	I
5.2.6.7	2.1	-	<p><b>Best Practices for Rock Crushing Plants</b></p> <p>The relevant best practices for dust control as stipulated in the Guidance Note on the Best Practicable Means for Mineral Works (Stone Crushing Plant) BPM 11/1 (95) as well as in the future Specified Process licence should be adopted. These include:</p> <p>Crushers</p> <ul style="list-style-type: none"> <li>The outlet of all primary crushers, and both inlet and outlet of all secondary and tertiary crushers, if not installed inside a reasonably dust tight housing, shall be enclosed and ducted to a dust extraction and collection system such as a fabric filter;</li> <li>The inlet hopper of the primary crushers shall be enclosed on top and 3 sides to contain the emissions during dumping of rocks from trucks. The rock while still on the trucks shall be wetted before dumping;</li> <li>Water sprayers shall be installed and operated in strategic locations at the feeding inlet of crushers; and</li> <li>Crusher enclosures shall be rigid and be fitted with self-closing doors and close-fitting entrances and exits. Where conveyors pass through the crusher enclosures, flexible covers shall be installed at entries and exits of the conveyors to the enclosure.</li> </ul>	Within Rock Crushing Plant / Duration of the construction phase	N/A as there was no rock crushing plant at this stage

EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
			<p>Vibratory screens and grizzlies</p> <ul style="list-style-type: none"> <li>All vibratory screens shall be totally enclosed in a housing. Screenhouses shall be rigid and reasonably dust tight with self-closing doors or close-fitted entrances and exits for access. Where conveyors pass through the screenhouse, flexible covers shall be installed at entries and exits of the conveyors to the housing. Where containment of dust within the screenhouse structure is not successful then a dust extraction and collection system shall be provided; and</li> <li>All grizzlies shall be enclosed on top and 3 sides and sufficient water sprayers shall be installed at their feeding and outlet areas.</li> </ul>	Within Rock Crushing Plant / Duration of the construction phase	N/A as there was no rock crushing plant at this stage
			<p>Belt conveyors</p> <ul style="list-style-type: none"> <li>Except for those conveyors which are placed within a totally enclosed structure such as a screenhouse or those erected at the ground level, all conveyors shall be totally enclosed with windshield on top and 2 sides;</li> <li>Effective belt scraper such as the pre-cleaner blades made by hard wearing materials and provided with pneumatic tensioner, or equivalent device, shall be installed at the head pulley of designated conveyor as required to dislodge fine dust particles that may adhere to the belt surface and to reduce carry-back of fine materials on the return belt. Bottom plates shall also be provided for the conveyor unless it has been demonstrated that the corresponding belt scraper is effective and well maintained to prevent falling material from the return belt; and</li> </ul> <p>Except for those transfer points which are placed within a totally enclosed structure such as a screenhouse, all transfer points to and from conveyors shall be enclosed. Where containment of dust within the enclosure is not successful, then water sprayers shall be provided. Openings for any enclosed structure for the passage of conveyors shall be fitted with flexible seals.</p>	Within Rock Crushing Plant / Duration of the construction phase	N/A as there was no rock crushing plant at this stage
			<p>Storage piles and bins</p> <ul style="list-style-type: none"> <li>Where practicable, free falling transfer points from conveyors to stockpiles shall be fitted with flexible curtains or be enclosed with chutes designed to minimize the drop height. Water sprays shall also be used where required.</li> <li>The surface of all surge piles and stockpiles of blasted rocks or aggregates shall be kept sufficiently wet by water spraying wherever practicable;</li> <li>All open stockpiles for aggregates of size in excess of 5 mm shall be kept sufficiently wet by water spraying where practicable; or</li> <li>The stockpiles of aggregates 5 mm in size or less shall be enclosed on 3 sides or suitably located to minimize wind-whipping. Save for fluctuations in stock or production, the average stockpile shall stay within the enclosure walls and in no case the height of the stockpile shall exceed twice the height of the enclosure walls; and</li> <li>Scattered piles gathered beneath belt conveyors, inside and around enclosures shall be cleared regularly.</li> </ul>	Within Rock Crushing Plant / Duration of the construction phase	N/A as there was no rock crushing plant at this stage

EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
			Rock drilling equipment ▪ Appropriate dust control equipment such as a dust extraction and collection system shall be used during rock drilling activities.	Within Rock Crushing Plant / Duration of the construction phase	N/A as there was no rock crushing plant at this stage
<b>Hazard to Human Life – Construction Phase</b>					
Table 6.40	3.2	-	▪ Precautionary measures should be established to request barges to move away during typhoons.	Construction Site / Construction Period	I
Table 6.40	3.2	-	▪ An appropriate marine traffic management system should be established to minimize risk of ship collision.	Construction Site / Construction Period	I
Table 6.40	3.2	-	▪ Location of all existing hydrant networks should be clearly identified prior to any construction works.	Construction Site / Construction Period	I
<b>Noise Impact – Construction Phase</b>					
7.5.6	4.3	-	<b>Good Site Practice</b> Good site practice and noise management can significantly reduce the impact of construction site activities on nearby NSRs. The following package of measures should be followed during each phase of construction: ▪ only well-maintained plant to be operated on-site and plant should be serviced regularly during the construction works; ▪ machines and plant that may be in intermittent use to be shut down between work periods or should be throttled down to a minimum; ▪ plant known to emit noise strongly in one direction, should, where possible, be orientated to direct noise away from the NSRs; ▪ mobile plant should be sited as far away from NSRs as possible; and ▪ material stockpiles and other structures to be effectively utilised, where practicable, to screen noise from on-site construction activities.	Within the Project site / During construction phase / Prior to commencement of operation	I
7.5.6	4.3	-	<b>Adoption of QPME</b> ▪ QPME should be adopted as far as applicable.	Within the Project site / During construction phase / Prior to commencement of operation	I
7.5.6	4.3	-	<b>Use of Movable Noise Barriers</b> ▪ Movable noise barriers should be placed along the active works area and mobile plants to block the direct line of sight between PME and the NSRs.	Within the Project site / During construction phase / Prior to commencement of operation	I

EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
7.5.6	4.3	-	<b>Use of Noise Enclosure/ Acoustic Shed</b> <ul style="list-style-type: none"> <li>Noise enclosure or acoustic shed should be used to cover stationary PME such as air compressor and generator.</li> </ul>	Within the Project site / During construction phase / Prior to commencement of operation	I
<b>Water Quality Impact – Construction Phase</b>					
8.8.1.2 and 8.8.1.3	5.1	2.26	<b>Marine Construction Activities</b> <u>General Measures to be Applied to All Works Areas</u> <ul style="list-style-type: none"> <li>Barges or hoppers shall not be filled to a level which will cause overflow of materials or pollution of water during loading or transportation;</li> <li>Use of Lean Material Overboard (LMOB) systems shall be prohibited;</li> <li>Excess materials shall be cleaned from the decks and exposed fittings of barges and hopper dredgers before the vessels are moved;</li> <li>Plants should not be operated with leaking pipes and any pipe leakages shall be repaired quickly;</li> <li>Adequate freeboard shall be maintained on barges to reduce the likelihood of decks being washed by wave action;</li> <li>All vessels shall be sized such that adequate clearance is maintained between vessels and the seabed at all states of the tide to ensure that undue turbidity is not generated by turbulence from vessel movement or propeller wash;</li> <li>The works shall not cause foam, oil, grease, litter or other objectionable matter to be present in the water within and adjacent to the works site; and</li> <li>For ground improvement activities including DCM, the wash water from cleaning of the drilling shaft should be appropriately treated before discharge. The Contractor should ensure the wastewater meets the WPCO/TM requirements before discharge. No direct discharge of contaminated water is permitted.</li> </ul>	Within construction site / Duration of the construction phase	C – Completed in Apr 2022
			<u>Specific Measures to be Applied to All Works Areas</u> <ul style="list-style-type: none"> <li>The daily maximum production rates shall not exceed those assumed in the water quality assessment in the EIA report;</li> <li>A maximum of 10 % fines content to be adopted for sand blanket and 20 % fines content for marine filling below +2.5 mPD prior to substantial completion of seawall (until end of Year 2017) shall be specified in the works contract document;</li> </ul>	Within construction site / Duration of the construction phase	C – Marine filling works completed in March 2023
			<ul style="list-style-type: none"> <li>An advance seawall of at least 200m to be constructed (comprising either rows of contiguous permanent steel cells completed above high tide mark or partially completed seawalls with rock core to high tide mark and filter layer on the inner side) prior to commencement of marine filling activities;</li> </ul>		C – Completed in May 2018

EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
			<ul style="list-style-type: none"> <li>▪ Closed grab dredger shall be used to excavate marine sediment;</li> <li>▪ Silt curtains surrounding the closed grab dredger shall be deployed in accordance with the Silt Curtain Deployment Plan; and</li> </ul>		<p>C – Marine filling works completed in March 2023</p> <p>(The arrangement of silt curtain has been modified. The details can be referred to Silt Curtain Deployment Plan)</p>
			<ul style="list-style-type: none"> <li>▪ The Silt Curtain Deployment Plan shall be implemented.</li> </ul>		<p>C – Completed in Mar 2025 for C7a</p> <p>(All enhanced silt curtain removed since March 2023)</p>
			<p><u>Specific Measures to be Applied to Land Formation Activities prior to Commencement of Marine Filling Works</u></p> <ul style="list-style-type: none"> <li>▪ Double layer 'Type III' silt curtains to be applied around the active eastern works areas prior to commencement of sand blanket laying activities. The silt curtains shall be configured to minimise SS release during ebb tides. A silt curtain efficiency test shall be conducted to validate the performance of the silt curtains;</li> </ul>	Within construction site / Duration of the construction phase	<p>C – Marine filling works completed in March 2023</p> <p>(The arrangement of silt curtain has been modified. The details can be referred to Silt Curtain Deployment Plan)</p>
			<ul style="list-style-type: none"> <li>▪ Double layer silt curtains to enclose WSRs C7a and silt screens installed at the intake points for both WSR C7a and C8 prior to commencement of construction; and</li> </ul>		<p>C – Completed in Mar 2025 for C7a</p>
					<p>C – Completed in Dec 2021 for C8</p> <p>*(The requirement of silt curtain / screen has been modified. The details can be referred to Silt Curtain Deployment Plan)</p>
			<ul style="list-style-type: none"> <li>▪ The silt curtains and silt screens should be regularly checked and maintained.</li> </ul>		<p>C – Completed in Mar 2025 for C7a</p> <p>(All enhanced silt curtain removed since March 2023)</p>

EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
			<p><u>Specific Measures to be Applied to Land Formation Activities during Marine Filling Works</u></p> <ul style="list-style-type: none"> <li>Double layer 'Type II' or 'Type III' silt curtains to be applied around the eastern openings between partially completed seawalls prior to commencement of marine filling activities. The silt curtains shall be configured to minimise SS release during ebb tides;</li> </ul>	Within construction site / Duration of the construction phase	<p>C – Marine filling works completed in March 2023</p> <p>(The arrangement of silt curtain has been modified. The details can be referred to Silt Curtain Deployment Plan)</p>
			<ul style="list-style-type: none"> <li>Double layer silt curtains to be applied at the south-western opening prior to commencement of marine filling activities;</li> </ul>		<p>C – Marine filling works completed in March 2023</p> <p>(The arrangement of silt curtain has been modified. The details can be referred to Silt Curtain Deployment Plan)</p>
			<ul style="list-style-type: none"> <li>Double layer silt curtain to enclose WSR C7a and silt screens installed at the intake points for both WSR C7a and C8 prior to commencement of marine filling activities; and</li> </ul>		<p>C – Completed in Mar 2025 for C7a</p>
					<p>C – Completed in Dec 2021 for C8</p> <p>(The requirement of silt curtain / screen has been modified. The details can be referred to Silt Curtain Deployment Plan)</p>
			<ul style="list-style-type: none"> <li>The silt curtains and silt screens should be regularly checked and maintained.</li> </ul>		<p>C – Completed in Mar 2025 for C7a</p> <p>(All enhanced silt curtain removed since March 2023)</p>
			<p><u>Specific Measures to be Applied to the Field Joint Excavation Works for the Submarine Cable Diversion</u></p> <ul style="list-style-type: none"> <li>Only closed grabs designed and maintained to avoid spillage shall be used and should seal tightly when operated. Excavated materials shall be disposed at designated marine disposal area in accordance with the Dumping at Sea Ordinance (DASO) permit conditions; and</li> <li>Silt curtains surrounding the closed grab dredger to be deployed as a precautionary measure.</li> </ul>	Within construction site / Duration of the construction phase	<p>N/A – the field joint excavation works for the submarine cable diversion will no longer be</p>

EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
					conducted anymore
8.8.1.4	5.1	-	<b>Modification of the Existing Seawall</b> <ul style="list-style-type: none"> <li>Silt curtains shall be deployed around the seawall modification activities to completely enclose the active works areas, and care should be taken to avoid splashing of rockfill / rock armour into the surrounding marine environment. For the connecting sections with the existing outfalls, works for these connection areas should be undertaken during the dry season in order that individual drainage culvert cells may be isolated for interconnection works.</li> </ul>	At the existing northern seawall / Duration of the construction phase	N/A – no marine-based seawall modification works undertaken after land formation.
8.8.1.5	5.1	-	<b>Construction of New Stormwater Outfalls and Modifications to Existing Outfalls</b> <ul style="list-style-type: none"> <li>During operation of the temporary drainage channel, runoff control measures such as bunding or silt fence shall be provided on both sides of the channel to prevent accumulation and release of SS via the temporary channel. Measures should also be taken to minimise the ingress of site drainage into the culvert excavations.</li> </ul>	Within construction site / Duration of the construction phase	I
8.8.1.6 8.8.1.7	5.1	2.27	<b>Piling Activities for Construction of New Runway Approach Lights and HKIAAA Marker Beacons</b> <p>Silt curtains shall be deployed around the piling activities to completely enclose the piling works and care should be taken to avoid spillage of excavated materials into the surrounding marine environment.</p>	Within construction site / Duration of the construction phase	C – For approach lights  N/A for marker beacons as HKIAAA Marker Beacons would be replaced by buoys
			<u>For construction of the eastern approach lights at the CMPs</u> <ul style="list-style-type: none"> <li>Ground improvement via DCM using a close-spaced layout shall be completed prior to commencement of piling works;</li> <li>Steel casings shall be installed to enclose the excavation area prior to commencement of excavation;</li> <li>The excavated materials shall be removed using a closed grab within the steel casings;</li> <li>No discharge of the cement mixed materials into the marine environment will be allowed; and</li> <li>Excavated materials shall be treated and reused on-site.</li> </ul>		C – Completed in Oct 2021
8.8.1.8	5.1	-	<b>Construction of Site Runoff and Drainage</b> <p>The site practices outlined in ProPECC Note PN 1/94 should be followed as far as practicable in order to minimise surface runoff and the chance of erosion. The following measures are recommended:</p> <ul style="list-style-type: none"> <li>Install perimeter cut-off drains to direct off-site water around the site and implement internal drainage, erosion and sedimentation control facilities. Channels, earth bunds or sandbag barriers should be provided on site to direct storm water to silt removal facilities. The design of the temporary on-site drainage system should be undertaken by the Contractors prior to the commencement of construction (for works</li> </ul>	Within construction site / Duration of the construction phase	I

EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
			areas located on the existing Airport island) or as soon as the new land is completed (for works areas located on the new landform);		
			<ul style="list-style-type: none"> <li>Sand/silt removal facilities such as sand/silt traps and sediment basins should be provided to remove sand/silt particles from runoff to meet the requirements of the TM-DSS standards under the WPCO. The design of efficient silt removal facilities should make reference to the guidelines in Appendix A1 of ProPECC Note PN 1/94. Sizes may vary depending upon the flow rate. The detailed design of the sand/silt traps should be undertaken by the Contractors prior to the commencement of construction;</li> </ul>		
			<ul style="list-style-type: none"> <li>All drainage facilities and erosion and sediment control structures should be regularly inspected and maintained to ensure proper and efficient operation at all times and particularly during rainstorms. Deposited silt and grit should be regularly removed, at the onset of and after each rainstorm to ensure that these facilities are functioning properly;</li> </ul>		
			<ul style="list-style-type: none"> <li>Measures should be taken to minimize the ingress of site drainage into excavations. If excavation of trenches in wet periods is necessary, they should be dug and backfilled in short sections wherever practicable. Water pumped out from foundation excavations should be discharged into storm drains via silt removal facilities;</li> </ul>		
			<ul style="list-style-type: none"> <li>In the event that contaminated groundwater is identified at excavation areas, this should be treated on-site using a suitable wastewater treatment process. The effluent should be treated according to the requirements of the TM-DSS standards under the WPCO prior to discharge to foul sewers or collected for proper disposal off-site. No direct discharge of contaminated groundwater is permitted; and</li> </ul>		
			<ul style="list-style-type: none"> <li>All vehicles and plant should be cleaned before leaving a construction site to ensure no earth, mud, debris and the like is deposited by them on roads. An adequately designed and sited wheel washing facility should be provided at construction site exits. Wash-water should have sand and silt settled out and removed regularly to ensure the continued efficiency of the process. The section of access road leading to, and exiting from, the wheel-wash bay to the public road should be paved with sufficient backfall toward the wheel-wash bay to prevent vehicle tracking of soil and silty water to public roads and drains. All washwater should be treated according to the requirements of the TM-DSS standards under the WPCO prior to discharge.</li> </ul>		
			<ul style="list-style-type: none"> <li>Open stockpiles of construction materials or construction wastes on-site should be covered with tarpaulin or similar fabric during rainstorms. Measures should be taken to prevent the construction materials, soil, silt or debris from washing away into the drainage system;</li> </ul>		
			<ul style="list-style-type: none"> <li>Manholes (including newly constructed ones) should be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris being washed into the drainage system and to prevent stormwater runoff being directed into foul sewers; and</li> </ul>		
			<ul style="list-style-type: none"> <li>Precautionary measures should be taken at any time of the year when rainstorms are likely. Actions to be taken when a rainstorm is imminent or forecasted are summarized in Appendix A2 of ProPECC Note PN 1/94. This includes actions to be taken during and/or after rainstorms. Particular attention should be paid to the control of silty surface runoff during storm events.</li> </ul>		



EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
8.8.1.9	5.1	-	<b>Sewage Effluent from Construction Workforce</b> <ul style="list-style-type: none"> <li>Temporary sanitary facilities, such as portable chemical toilets, should be employed on-site where necessary to handle sewage from the workforce. A licensed contractor should be employed to provide appropriate and adequate portable toilets and be responsible for appropriate disposal and maintenance.</li> </ul>	Within construction site / During construction phase	I
8.8.1.10 8.8.1.11	5.1		<b>General Construction Activities</b> <ul style="list-style-type: none"> <li>Construction solid waste, debris and refuse generated on-site should be collected, handled and disposed of properly to avoid entering any nearby storm water drain. Stockpiles of cement and other construction materials should be kept covered when not being used; and</li> <li>Oils and fuels should only be stored in designated areas which have pollution prevention facilities. To prevent spillage of fuels and solvents to any nearby storm water drain, all fuel tanks and storage areas should be provided with locks and be sited on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank. The bund should be drained of rainwater after a rain event.</li> </ul>	Within construction site / During construction phase	I
8.8.1.12 8.8.1.13	5.1	2.28	<b>Drilling Activities for the Submarine Aviation Fuel Pipelines</b> To prevent potential water quality impacts at Sha Chau, the following measures shall be applied: <ul style="list-style-type: none"> <li>A 'zero-discharge' policy shall be applied for all activities to be conducted at Sha Chau;</li> <li>No bulk storage of chemicals shall be permitted; and</li> <li>A containment pit shall be constructed around the drill holes. This containment pit shall be lined with impermeable lining and bunded on the outside to prevent inflow from off-site areas.</li> </ul>	Within construction site / During construction phase	C – Completed in Jan 2019
			At the airport island side of the drilling works, the following measures shall be applied for treatment of wastewater: <ul style="list-style-type: none"> <li>During pipe cleaning, appropriate desilting or sedimentation device should be provided on site for treatment before discharge. The Contractor should ensure discharge water from the sedimentation tank meet the WPCO/TM requirements before discharge; and</li> <li>Drilling fluid used in drilling activities should be reconditioned and reused as far as possible. Temporary enclosed storage locations should be provided on-site for any unused chemicals that needs to be transported away after all the related construction activities are completed. The requirements in ProPECC Note PN 1/94 should be adhered to in the handling and disposal of bentonite slurries.</li> </ul>	Within construction site / During construction phase	C – Completed in Jan 2019
<b>Waste Management Implication – Construction Phase</b>					
10.5.1.1	7.1	-	Opportunities to minimise waste generation and maximise the reuse of waste materials generated by the project have been incorporated where possible into the planning, design and construction stages, and the following measures have been recommended: <ul style="list-style-type: none"> <li>The relevant construction methods (particularly for the tunnel works) and construction programme have been carefully planned and developed to minimise the extent of excavation and to maximise the on-site reuse of inert C&amp;D materials generated by the project as far as practicable. Temporary stockpiling areas will also be provided to facilitate on-site reuse of inert C&amp;D materials;</li> </ul>	Project Site Area / During design and construction phase	I

EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
			<ul style="list-style-type: none"> <li>Priority should be given to collect and reuse suitable inert C&amp;D materials generated from other concurrent projects and the Government's PFRF as fill materials for the proposed land formation works;</li> </ul>		C – Completed in the first Quarter of 2023 for the land formation works
			<ul style="list-style-type: none"> <li>Only non-dredged ground improvement methods should be adopted in order to completely avoid the need for dredging and disposal of marine sediment for the proposed land formation work;</li> </ul>		C – Completed in the first Quarter of 2023 for the land formation works
			<ul style="list-style-type: none"> <li>Excavation work for constructing the APM tunnels, BHS tunnels and airside tunnels will not be down to the CMPs beneath the fill materials in order to avoid excavating any sediments; and</li> </ul>		C – Completed in the second Quarter of 2024
			<ul style="list-style-type: none"> <li>For the marine sediments expected to be excavated from the piling works of TRC, APM &amp; BHS tunnels, airside tunnels and other facilities on the proposed land formation area, piling work of marine sections of the approach lights and HKIAAAA beacons, basement works for some of T2 expansion area and excavation works for the proposed APM depot should be treated and reused on-site as backfilling materials, although required treatment level / detail and the specific re-use mode are under development.</li> </ul>		I
10.5.1.1	7.1	-	<p>The following good site practices should be performed during the construction activities include:</p> <ul style="list-style-type: none"> <li>Nomination of an approved person, such as a site manager, to be responsible for good site practices, arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site;</li> <li>Training of site personnel in proper waste management and chemical waste handling procedures;</li> <li>Provision of sufficient waste disposal points and regular collection for disposal;</li> <li>Appropriate measures to minimise windblown litter and dust during transportation of waste by either covering trucks by tarpaulin/ similar material or by transporting wastes in enclosed containers. The cover should be extended over the edges of the sides and tailboards;</li> <li>Stockpiles of C&amp;D materials should be kept wet or covered by impervious sheets to avoid wind-blown dust;</li> <li>All dusty materials including C&amp;D materials should be sprayed with water immediately prior to any loading transfer operation so as to keep the dusty material wet during material handling at the barging points/ stockpile areas;</li> <li>C&amp;D materials to be delivered to and from the project site by barges or by trucks should be kept wet or covered to avoid wind-blown dust;</li> <li>The speed of the trucks including dump trucks carrying C&amp;D or waste materials within the site should be controlled to about 10 km/hour in order to reduce the adverse dust impact and secure the safe movement around the site; and</li> </ul>	Project Site Area / Construction Phase	I

EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
			<ul style="list-style-type: none"> <li>To avoid or minimise dust emission during transport of C&amp;D or waste materials within the site, each and every main temporary access should be paved with concrete, bituminous hardcore materials or metal plates and kept clear of dusty materials. Unpaved parts of the road should be sprayed with water or a dust suppression chemical so as to keep the entire road surface wet.</li> </ul>		
10.5.1.3	7.1	-	<p>The following practices should be performed to achieve waste reduction include:</p> <ul style="list-style-type: none"> <li>Use of steel or aluminium formworks and falseworks for temporary works as far as practicable;</li> <li>Adoption of repetitive design to allow reuse of formworks as far as practicable;</li> <li>Segregation and storage of different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal;</li> <li>Encourage collection of aluminium cans, PET bottles and paper by providing separate labelled bins to enable these wastes to be segregated from other general refuse generated by the work force;</li> <li>Any unused chemicals or those with remaining functional capacity should be collected for reused as far as practicable;</li> <li>Proper storage and site practices to minimise the potential for damage or contamination of construction materials; and</li> <li>Plan and stock construction materials carefully to minimise amount of waste generated and avoid unnecessary generation of waste.</li> </ul>	Project Site Area / Construction Phase	I
10.5.1.5	7.1		Inert and non-inert C&D materials should be handled and stored separately to avoid mixing the two types of materials.	Project Site Area / Construction Phase	I
10.5.1.5	7.1	-	Any recyclable materials should be segregated from the non-inert C&D materials for collection by reputable licensed recyclers whereas the non-recyclable waste materials should be disposed of at the designated landfill site by a reputable licensed waste collector.	Project Site Area / Construction Phase	I
10.5.1.6	7.1	-	A trip-ticket system promulgated shall be developed in order to monitor the off-site delivery of surplus inert C&D materials that could not be reused on-site for the proposed land formation work at the PFRF and to control fly tipping.	Project Site Area / Construction Phase	I
10.5.1.6	7.1	2.32	The Contractor should prepare and implement a Waste Management Plan detailing various waste arising and waste management practices.	Construction Phase	I
10.5.1.16	7.1	-	<p>The following mitigation measures are recommended during excavation and treatment of the sediments:</p> <ul style="list-style-type: none"> <li>On-site remediation should be carried out in an enclosed area in order to minimise odour/dust emissions;</li> <li>The loading, unloading, handling, transfer or storage of treated and untreated sediment should be carried out in such a manner to prevent or minimise dust emissions;</li> <li>All practical measures, including but not limited to speed control for vehicles, should be taken to minimise dust emission;</li> <li>Good housekeeping should be maintained at all times at the sediment treatment facility and storage area;</li> </ul>	Project Site Area / Construction Phase	I I I I

EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
			<ul style="list-style-type: none"> <li>Treated and untreated sediment should be clearly separated and stored separately; and</li> </ul>		I
			<ul style="list-style-type: none"> <li>Surface runoff from the enclosed area should be properly collected and stored separately, and then properly treated to levels in compliance with the relevant effluent standards as required by the Water Pollution Control Ordinance before final discharge.</li> </ul>		I
10.5.1.18	7.1	-	<p>The marine sediments to be removed from the cable field joint area would be disposed of at the designated disposal sites to be allocated by the MFC. The following mitigation measures should be strictly followed to minimise potential impacts on water quality during transportation of the sediments requiring Type 1 disposal:</p> <ul style="list-style-type: none"> <li>Bottom opening of barges shall be fitted with tight fitting seals to prevent leakage of material;</li> <li>Monitoring of the barge loading shall be conducted to ensure that loss of material does not take place during transportation. Transport barges or vessels shall be equipped with automatic self-monitoring devices as specified by EPD; and</li> <li>Barges or hopper barges shall not be filled to a level that would cause the overflow of materials or sediment laden water during loading or transportation.</li> </ul>	Project Site Area / Construction Phase	N/A – the field joint excavation works for the submarine cable diversion will no longer be conducted anymore
10.5.1.19	7.1	-	<p>Contractor should register with the EPD as a chemical waste producer and to follow the relevant guidelines. The following measures should be implemented:</p> <ul style="list-style-type: none"> <li>Good quality containers compatible with the chemical wastes should be used;</li> <li>Incompatible chemicals should be stored separately;</li> <li>Appropriate labels must be securely attached on each chemical waste container indicating the corresponding chemical characteristics of the chemical waste, such as explosive, flammable, oxidizing, irritant, toxic, harmful, corrosive, etc.; and</li> <li>The contractor will use a licensed collector to transport and dispose of the chemical wastes at the approved Chemical Waste Treatment Centre or other licensed recycling facilities, in accordance with the Waste Disposal (Chemical Waste) (General) Regulation.</li> </ul>	Project Site Area / Construction Phase	I
10.5.1.20	7.1	-	<p>General refuse should be stored in enclosed bins or compaction units separated from inert C&amp;D material. A reputable waste collector should be employed by the contractor to remove general refuse from the site for disposal at designated landfill sites. An enclosed and covered area should be provided to reduce the occurrence of 'windblown' light material.</p>	Project Site Area / Construction Phase	I
10.5.1.21	7.1	-	<p>The construction contractors will be required to regularly check and clean any refuse trapped or accumulated along the newly constructed seawall. Such refuse will then be stored and disposed of together with the general refuse.</p>	Project Site Area / Construction Phase	I
<b>Land Contamination – Construction Phase</b>					
11.10.1.2 to 11.10.1.3	8.1	2.32	<p>For areas inaccessible during site reconnaissance survey</p> <ul style="list-style-type: none"> <li>Further site reconnaissance would be conducted once the areas are accessible in order to identify any land contamination concern for the areas.</li> </ul>	Project Site Area inaccessible during site reconnaissance /	I

EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
			<ul style="list-style-type: none"> <li>Subject to further site reconnaissance findings, a supplementary Contamination Assessment Plan (CAP) for additional site investigation (SI) (if necessary) may be prepared and submitted to EPD for endorsement prior to the commencement of SI at these areas.</li> </ul>	Prior to Construction Phase	C – Completed in Jan 2018 (The site re-appraisal summary report for fire training facility was submitted to EPD.)
			<ul style="list-style-type: none"> <li>After completion of SI, the Contamination Assessment Report (CAR) will be prepared and submitted to EPD for approval prior to start of the proposed construction works at the golf course, the underground and above-ground fuel storage tank areas, emergency power generation units, airside petrol filling station and fuel tank room.</li> </ul>		I *(CAR for golf course and Terminal 2 emergency power supply system nos. 1, 2, 3, 4 and 5 were submitted to EPD)
			<ul style="list-style-type: none"> <li>Should remediation be required, Remediation Action Plan (RAP) and Remediation Report (RR) will be prepared for EPD's approval prior to commencement of the proposed remediation and any construction works respectively.</li> </ul>		N/A as no remediation was required.
11.8.1.2	8.1	-	<p>If contaminated soil is identified, the following mitigation measures are for the excavation and transportation of contaminated materials (if any):</p> <ul style="list-style-type: none"> <li>To minimize the incidents of construction workers coming in contact with any contaminated materials, bulk earth-moving excavation equipment should be employed;</li> <li>Contact with contaminated materials can be minimised by wearing appropriate clothing and personal protective equipment such as gloves and masks (especially when working directly with contaminated material), provision of washing facilities and prohibition of smoking and eating on site;</li> <li>Stockpiling of contaminated excavated materials on site should be avoided as far as possible;</li> <li>The use of any contaminated soil for landscaping purpose should be avoided unless pre-treatment was carried out;</li> <li>Vehicles containing any excavated materials should be suitably covered to reduce dust emissions and/or release of contaminated wastewater;</li> <li>Truck bodies and tailgates should be sealed to prevent any discharge;</li> <li>Only licensed waste haulers should be used to collect and transport contaminated material to treatment/disposal site and should be equipped with tracking system to avoid fly tipping;</li> </ul>	Project Site Area / Construction Phase	N/A as no contaminated soil was found.

EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
			<ul style="list-style-type: none"> <li>Speed control for trucks carrying contaminated materials should be exercised. 8km/h is the recommended speed limit;</li> <li>Strictly observe all relevant regulations in relation to waste handling, such as Waste Disposal Ordinance (Cap 354), Waste Disposal (Chemical Waste) (General) Regulation (Cap 354) and obtain all necessary permits where required; and</li> <li>Maintain records of waste generation and disposal quantities and disposal arrangements.</li> </ul>		
<b>Terrestrial Ecological – Construction Phase</b>					
12.10.1.1	9.2	2.14	<b>Pre-construction Egretty Survey</b> <ul style="list-style-type: none"> <li>Conduct ecological survey for Sha Chau egretty to update the latest boundary of the egretty.</li> </ul>	Breeding season (April - July) prior to commencement of HDD drilling works at HKIA	C – Completed in Jan 2019
12.7.2.3 and 12.7.2.6	9.1	2.30	<b>Avoidance and Minimisation of Direct Impact to Egretty</b> <ul style="list-style-type: none"> <li>The daylighting location will avoid direct encroachment to the Sheung Sha Chau egretty. The daylighting location and mooring of flat top barge, if required, will be kept away from the egretty;</li> <li>In any event, controls such as demarcation of construction site boundary and confining the lighting within the site will be practised to minimise disturbance to off-site habitat at Sheung Sha Chau Island; and</li> <li>The containment pit at the daylighting location shall be covered or camouflaged.</li> </ul>	During construction phase at Sheung Sha Chau Island	C – Completed in Jan 2019
12.7.2.5	9.1	2.30	<b>Preservation of Nesting Vegetation</b> <ul style="list-style-type: none"> <li>The proposed daylighting location and the arrangement of connecting pipeline will avoid the need of tree cutting, therefore the trees that are used by ardeids for nesting will be preserved.</li> </ul>	During construction phase at Sheung Sha Chau Island	C – Completed in Jan 2019
12.7.2.4 and 12.7.2.6	9.1	2.30	<b>Timing the Pipe Connection Works outside Ardeid's Breeding Season</b> <ul style="list-style-type: none"> <li>All HDD and related construction works on Sheung Sha Chau Island will be scheduled outside the ardeids' breeding season (between April and July). No night-time construction work will be allowed on Sheung Sha Chau Island during all seasons.</li> </ul>	During construction phase at Sheung Sha Chau Island	C – Completed in Jan 2019
12.10.1.1	9.3	-	<b>Ecological Monitoring</b> <ul style="list-style-type: none"> <li>During the HDD construction works period from August to March, ecological monitoring will be undertaken monthly at the HDD daylighting location on Sheung Sha Chau Island to identify and evaluate any impacts with appropriate actions taken as required to address and minimise any adverse impact found.</li> </ul>	at Sheung Sha Chau Island	C – Completed in Jan 2019
<b>Marine Ecological Impact – Pre-construction Phase</b>					
13.11.4.1	10.2.2	-	<ul style="list-style-type: none"> <li>Pre-construction phase Coral Dive Survey.</li> </ul>	HKIAAA artificial seawall	C – Completed in Jan 2016
<b>Marine Ecological Impact – Construction Phase</b>					

EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
13.11.1.3 to 13.11.1.6	-	-	<b>Minimisation of Land Formation Area</b> <ul style="list-style-type: none"> <li>Minimise the overall size of the land formation needed for the additional facilities to minimise the overall loss of habitat for marine resources, especially the CWD population.</li> </ul>	Land formation footprint / during detailed design phase to completion of construction	C – Completed in the first Quarter of 2023 for the land formation works
13.11.1.7 to 13.11.1.10	-	2.31	<b>Use of Construction Methods with Minimal Risk/Disturbance</b> <ul style="list-style-type: none"> <li>Use of non-dredge method for the main land formation and ancillary works including the diversion of the aviation fuel pipeline to the AFRF;</li> </ul>	During construction phase at marine works area	C – Completed in Jan 2019 for diversion of aviation fuel pipeline
			<ul style="list-style-type: none"> <li>Use of Deep Cement Mixing (DCM) method instead of conventional seabed dredging for the land formation works to reduce the risk of negative impacts through the elevation of suspended solids and contaminants on CWDs, fisheries and the marine environment;</li> </ul>		C – Completed in Apr 2022
			<ul style="list-style-type: none"> <li>Use of bored piling in short duration to form the new approach lights and marker beacons for the new runway;</li> </ul>		C – Completed in Oct 2021 for new approach lights
			<ul style="list-style-type: none"> <li>Avoid bored piling during CWD peak calving season (Mar to Jun);</li> </ul>		N/A for marker beacons as HKIAAA Marker Beacons would be replaced by buoys
			<ul style="list-style-type: none"> <li>Prohibition of underwater percussive piling; and</li> </ul>		N/A as no underwater piling works
			<ul style="list-style-type: none"> <li>Use of horizontal directional drilling (HDD) method and water jetting methods for placement of submarine cables and pipelines to minimise the disturbance to the CWDs and other marine ecological resources.</li> </ul>		C – Completed in Jan 2019 for HDD works
13.11.2.1 to 13.11.2.7	-	-	<b>Mitigation for Indirect Disturbance due to Deterioration of Water Quality</b> <ul style="list-style-type: none"> <li>Water quality mitigation measures during construction phases include consideration of alternative construction methods, deployment of silt curtain and good site practices;</li> </ul>	All works area during the construction phase	I
			<ul style="list-style-type: none"> <li>Alternative construction methods including use of non-dredge methods for ground improvement (e.g. Deep Cement Mixing (DCM), prefabricated vertical drains (PVD), sand compaction piles, steel cells, stone columns and vertical sand drains);</li> </ul>		C – Completed in Apr 2022
			<ul style="list-style-type: none"> <li>Use of bored piling in short duration to form the new approach lights and marker beacons for the new runway; and</li> </ul>		C – Completed in Oct 2021 for new approach lights

EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
			<ul style="list-style-type: none"> <li>Use of horizontal directional drilling (HDD) method and water jetting methods for placement of undersea cables and pipelines to minimise the disturbance to the CWDs and other marine ecological resources.</li> </ul>		C – Completed in Jan 2019 for HDD works
13.11.1.12	-	-	<b>Strict Enforcement of No-Dumping Policy</b> <ul style="list-style-type: none"> <li>A policy prohibiting dumping of wastes, chemicals, oil, trash, plastic, or any other substance that would potentially be harmful to dolphins and/or their habitat in the work area;</li> <li>Mandatory educational programme of the no-dumping policy be made available to all construction site personnel for all project-related works;</li> <li>Fines for infractions should be implemented; and</li> <li>Unscheduled, on-site audits shall be implemented.</li> </ul>	All works area during the construction phase	I
13.11.1.13	-	-	<b>Good Construction Site Practices</b> <ul style="list-style-type: none"> <li>Regular inspection of the integrity and effectiveness of all silt curtains and monitoring of effluents to ensure that any discharge meets effluent discharge guidelines;</li> <li>Keep the number of working or stationary vessels present on-site to the minimum anytime; and</li> <li>Unscheduled, on-site audits for all good site practice restrictions should be conducted, and fines or penalties sufficient to be an effective deterrent need to be levied against violators.</li> </ul>	All works area during the construction phase	I
13.11.5.4 to 13.11.5.13	10.3.1	-	<b>SkyPier High Speed Ferries' Speed Restrictions and Route Diversions</b> <ul style="list-style-type: none"> <li>SkyPier HSFs operating to / from Zhuhai and Macau would divert north of SCLKC Marine Park with a 15 knot speed limit to apply for the part-journeys that cross high CWD abundance grid squares as indicatively shown in <b>Drawing No. MCL/P132/EIA/13-023</b> of the EIA Report. Both the alignment of the northerly route and the portion of routings to be subject to the speed limit of 15 knots shall be finalised prior to commencement of construction based on the future review of up-to-date CWD abundance and EM&amp;A data and taking reference to changes in total SkyPier HSF numbers; and</li> <li>A maximum of 10 knots will be enforced through the designated SCLKC Marine Park area at all times.</li> </ul>	Area between the footprint and SCLKC Marine Park during construction phase	I
			<b>Other mitigation measures</b> <ul style="list-style-type: none"> <li>The ET will audit various parameters including actual daily numbers of HSFs, compliance with the 15-knot speed limit in the speed control zone and diversion compliance for SkyPier HSFs operating to / from Zhuhai and Macau; and</li> <li>The effectiveness of the CWD mitigation measures after implementation of initial six month SkyPier HSF diversion and speed restriction will be reviewed.</li> </ul>	Area between the footprint and SCLKC Marine Park during construction phase	I  C – Completed in Sep 2016
13.11.5.14 to 13.11.5.18	10.3.1	2.31	<b>Dolphin Exclusion Zone</b> <ul style="list-style-type: none"> <li>Establishment of a 24 hr Dolphin Exclusion Zone (DEZ) with a 250 m radius around the land formation works areas;</li> </ul>	Marine waters around land formation works area during construction phase	C – Completed in the first Quarter of 2023 for the land formation works



EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
			<ul style="list-style-type: none"> <li>A DEZ would also be implemented during ground improvement works (e.g. DCM), water jetting works for submarine cables diversion, open trench dredging at the field joint locations and seawall construction; and</li> <li>A DEZ would also be implemented during bored piling work but as a precautionary measure only.</li> </ul>		<p>C – Completed in Apr 2022</p> <p>C – Completed in Oct 2021 for the bored piling work of New approach lights</p>
13.11.5.19	10.4	2.31	<b>Acoustic Decoupling of Construction Equipment</b> <ul style="list-style-type: none"> <li>Air compressors and other noisy equipment that must be mounted on steel barges should be acoustically-decoupled to the greatest extent feasible, for instance by using rubber or air-filled tyres; and</li> <li>Specific acoustic decoupling measures shall be specified during the detailed design of the project for use during the land formation works.</li> </ul>	Around coastal works area during construction phase	I
13.11.5.20	10.6.1	2.29	<b>Spill Response Plan</b> <ul style="list-style-type: none"> <li>An oil and hazardous chemical spill response plan is proposed to be established during the construction phase as a precautionary measure so that appropriate actions to prevent or reduce risks to CWDs can be undertaken in the event of an accidental spillage.</li> </ul>	Construction phase	I
13.11.5.21 to 13.11.5.23	10.6.1	-	<b>Construction Vessel Speed Limits and Skipper Training</b> <ul style="list-style-type: none"> <li>A speed limit of 10 knots should be strictly observed for construction vessels at areas with the highest CWD densities (as currently indicated by the 1x1km grid squares in Figure 6 of Appendix 13.2 of EIA report).</li> <li>Vessels traversing through the work areas should be required to use predefined and regular routes (which would presumably become known to resident dolphins) to reduce disturbance to cetaceans due to vessel movements. Specific marine routes shall be specified by the Contractor prior to construction commencing.</li> </ul>	All areas north and west of Lantau Island during construction phase	I
<b>Fisheries Impact – Construction Phase</b>					
14.9.1.2 to 14.9.1.5	-	-	<b>Minimisation of Land Formation Area</b> <ul style="list-style-type: none"> <li>Minimise the overall size of the land formation needed for the additional facilities to minimise the overall loss of habitat for fisheries resources.</li> </ul>	Land formation footprint / during detailed design phase to completion of construction	C – Completed in the first Quarter of 2023 for the land formation works
14.9.1.6	-	-	<b>Use of Construction Methods with Minimal Risk/Disturbance</b> <ul style="list-style-type: none"> <li>Use of non-dredge method for the main land formation and ancillary works including the diversion of the aviation fuel pipeline to the AFRF;</li> </ul>	During construction phase at marine works area	C – Completed in Jan 2019 for diversion of aviation fuel pipeline

EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
			<ul style="list-style-type: none"> <li>Use of Deep Cement Mixing (DCM) method instead of conventional seabed dredging for the land formation works to reduce the risk of negative impacts through the elevation of suspended solids and contaminants on fisheries and the marine environment;</li> </ul>		C – Completed in Apr 2022
			<ul style="list-style-type: none"> <li>Use of bored piling in short duration to form the new approach lights and marker beacons for the new runway; and</li> </ul>		C – Completed in Oct 2021 for new approach lights N/A for marker beacons as HKIAAAA Marker Beacons would be replaced by buoys
			<ul style="list-style-type: none"> <li>Use of horizontal directional drilling (HDD) method and water jetting methods for placement of undersea cables and pipelines to minimise the disturbance to fisheries resources.</li> </ul>		C – Completed in Jan 2019 for HDD works
14.9.1.11	-		<b>Strict Enforcement of No-Dumping Policy</b> <ul style="list-style-type: none"> <li>A policy prohibiting dumping of wastes, chemicals, oil, trash, plastic, or any other substance that would potentially be harmful to dolphins and/or their habitat in the work area;</li> <li>Mandatory educational programme of the no-dumping policy be made available to all construction site personnel for all project-related works;</li> <li>Fines for infractions should be implemented; and</li> <li>Unscheduled, on-site audits shall be implemented.</li> </ul>	All works area during the construction phase	I
14.9.1.12	-		<b>Good Construction Site Practices</b> <ul style="list-style-type: none"> <li>Regular inspection of the integrity and effectiveness of all silt curtains and monitoring of effluents to ensure that any discharge meets effluent discharge guidelines;</li> <li>Keep the number of working or stationary vessels present on-site to the minimum anytime; and</li> <li>Unscheduled, on-site audits for all good site practice restrictions should be conducted, and fines or penalties sufficient to be an effective deterrent need to be levied against violators.</li> </ul>	All works area during the construction phase	I
14.9.1.13 to 14.9.1.18	-		<b>Mitigation for Indirect Disturbance due to Deterioration of Water Quality</b> <ul style="list-style-type: none"> <li>Water quality mitigation measures during construction phases include consideration of alternative construction methods, deployment of silt curtain and good site practices;</li> <li>Alternative construction methods including use of non-dredge methods for ground improvement (e.g. Deep Cement Mixing (DCM), prefabricated vertical drains (PVD), sand compaction piles, steel cells, stone columns and vertical sand drains);</li> </ul>	All works area during the construction phase	I  C – Completed in Apr 2022

EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
			<ul style="list-style-type: none"> <li>Use of bored piling in short duration to form the new approach lights and marker beacons for the new runway; and</li> </ul>		C – Completed in Oct 2021 for new approach lights N/A for marker beacons as HKIAAA Marker Beacons would be replaced by buoys
			<ul style="list-style-type: none"> <li>Use of horizontal directional drilling (HDD) method and water jetting methods for placement of undersea cables and pipelines to minimise the disturbance to fisheries resources.</li> </ul>		C – Completed on Jan 2019 for HDD work
<b>Landscape and Visual Impact – Construction Phase</b>					
Table 15.6	12.3	-	<b>CM1</b> - The construction area and contractor's temporary works areas should be minimised to avoid impacts on adjacent landscape.	All works areas for duration of works; Upon handover and completion of works.	I
Table 15.6	12.3	-	<b>CM2</b> - Reduction of construction period to practical minimum.	All works areas for duration of works; Upon handover and completion of works.	I
Table 15.6	12.3	-	<b>CM3</b> - Phasing of the construction stage to reduce visual impacts during the construction phase.	All works areas for duration of works; Upon handover and completion of works.	I
Table 15.6	12.3	-	<b>CM4</b> - Construction traffic (land and sea) including construction plants, construction vessels and barges should be kept to a practical minimum.	All works areas for duration of works; Upon handover and completion of works.	I
Table 15.6	12.3	-	<b>CM5</b> - Erection of decorative mesh screens or construction hoardings around works areas in visually unobtrusive colours.	All works areas for duration of works; Upon handover and completion of works. – may be disassembled in phases.	I

EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
Table 15.6	12.3	-	<b>CM6</b> - Avoidance of excessive height and bulk of site buildings and structures.	New passenger concourse, terminal 2 expansion and other proposed airport related buildings and structures under the project; Upon handover and completion of works.	I
Table 15.6	12.3	-	<b>CM7</b> - Control of night-time lighting by hooding all lights and through minimisation of night working periods.	All works areas for duration of works; Upon handover and completion of works. – may be disassembled in phases.	I
Table 15.6	12.3	-	<b>CM8</b> - All existing trees shall be carefully protected during construction. Detailed Tree Protection Specification shall be provided in the Contract Specification. Under this specification, the Contractor shall be required to submit, for approval, a detailed working method statement for the protection of trees prior to undertaking any works adjacent to all retained trees, including trees in contractor's works areas.	All existing trees to be retained; Upon handover and completion of works.	I
Table 15.6	12.3	-	<b>CM9</b> - Trees unavoidably affected by the works shall be transplanted where practical. A detailed Tree Transplanting Specification shall be provided in the Contract Specification, if applicable. Sufficient time for necessary tree root and crown preparation periods shall be allowed in the project programme.	All existing trees to be affected by the works; Upon handover and completion of works.	I
Table 15.6	12.3	-	<b>CM10</b> - Land formation works shall be followed with advanced hydroseeding around taxiways and runways as soon as practical.	All affected existing grass areas around runways and verges/Duration of works; Upon handover and completion of works.	I
<b>Cultural Heritage Impact – Construction Phase</b>					
Not applicable to the construction stage of this project.					
<b>Health Impact – Aircraft Emissions</b>					
Not applicable to the construction stage of this project.					

EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
Health Impact – Aircraft Noise					
Not applicable to the construction stage of this project.					

Notes:

- “ - ” For items denoted as “ - ” provided under the columns of EM&A Ref. or EP Condition, environmental protection measures should be referred to the relevant paragraph(s) / table(s) in the approved EIA Report.
- “ I ” Implemented and on-going where applicable.
- “ N/A ” Not applicable to the construction works implemented during the reporting month.
- “ ^ ” Checked by ET through site inspection and record provided by the Contractor.
- “ C ” Construction works completed.

# Appendix B.      Monitoring Schedule

**Impact Monitoring Schedule  
of This Reporting Period**

May-25

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1	2 Site Inspection  NM4, NM6	3  AR1A, AR2
4	5	6 Site Inspection	7 Site Inspection	8 Site Inspection	9 Site Inspection  AR1A, AR2 NM1A, NM5, NM4, NM6	10
11	12 Site Inspection	13 Site Inspection	14 Site Inspection	15 Site Inspection  AR1A, AR2 NM1A, NM5	16 Site Inspection  NM4, NM6	17
18	19 Site Inspection	20 Site Inspection	21 Site Inspection  AR1A, AR2 NM1A, NM5	22 Site Inspection  NM4, NM6	23 Site Inspection	24
25	26 Site Inspection	27 Site Inspection  AR1A, AR2 NM1A, NM5	28 Site Inspection	29 Site Inspection  NM4, NM6	30 Site Inspection	31
		<b>Notes:</b>  Air quality and Noise Monitoring Station  NM1A/AR1A - Man Tung Road Park NM4 - Ching Chung Hau Po Woon Primary School NM5/AR2 - Village House, Tin Sum NM6 - House No. 1, Sha Lo Wan				



## **Tentative Impact Monitoring Schedule of Next Reporting Period**

Jun-25

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2 Site Inspection  AR1A, AR2 NM1A, NM5	3 Site Inspection  NM4, NM6	4 Site Inspection	5 Site Inspection	6 Site Inspection	7  AR1A, AR2
8	9 Site Inspection	10 Site Inspection	11 Site Inspection	12 Site Inspection  NM4, NM6	13 Site Inspection  AR1A, AR2 NM1A, NM5	14
15	16 Site Inspection	17 Site Inspection	18 Site Inspection	19 Site Inspection  AR1A, AR2 NM1A, NM5	20 Site Inspection  NM4, NM6	21
22	23 Site Inspection	24 Site Inspection	25 Site Inspection  AR1A, AR2 NM1A, NM5	26 Site Inspection	27 Site Inspection  NM4, NM6	28
29	30 Site Inspection  AR1A, AR2 NM1A, NM5					
		<b>Notes:</b>  Air quality and Noise Monitoring Station  NM1A/AR1A - Man Tung Road Park NM4 - Ching Chung Hau Po Woon Primary School NM5/AR2 - Village House, Tin Sum NM6 - House No. 1, Sha Lo Wan				

# **Operation Phase CWD Monitoring Schedule of This Reporting Period**

May-25

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1	2	3
4	5	6 CWD Survey (Vessel)	7	8	9 CWD Survey (Vessel)	10
11	12	13	14	15 CWD Survey (Vessel)	16 CWD Survey (Vessel)	17
18	19 CWD Survey (Vessel)	20 CWD Survey (Vessel)	21 CWD Survey (Vessel)	22	23 CWD Survey (Vessel)	24
25	26	27	28	29	30	31
		Notes: CWD - Chinese White Dolphin				

# **Tentative Operation Phase CWD Monitoring Schedule of Next Reporting Period**

Jun-25

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3	4	5	6 CWD Survey (Vessel)	7
8	9 CWD Survey (Vessel)	10 CWD Survey (Vessel)	11	12 CWD Survey (Vessel)	13 CWD Survey (Vessel)	14
15	16	17 CWD Survey (Vessel)	18 CWD Survey (Vessel)	19 CWD Survey (Vessel)	20	21
22	23	24	25	26	27	28
29	30					
		Notes: CWD - Chinese White Dolphin				

# Appendix C.      Monitoring Results

## **Air Quality Monitoring Results**



1-hour TSP Results

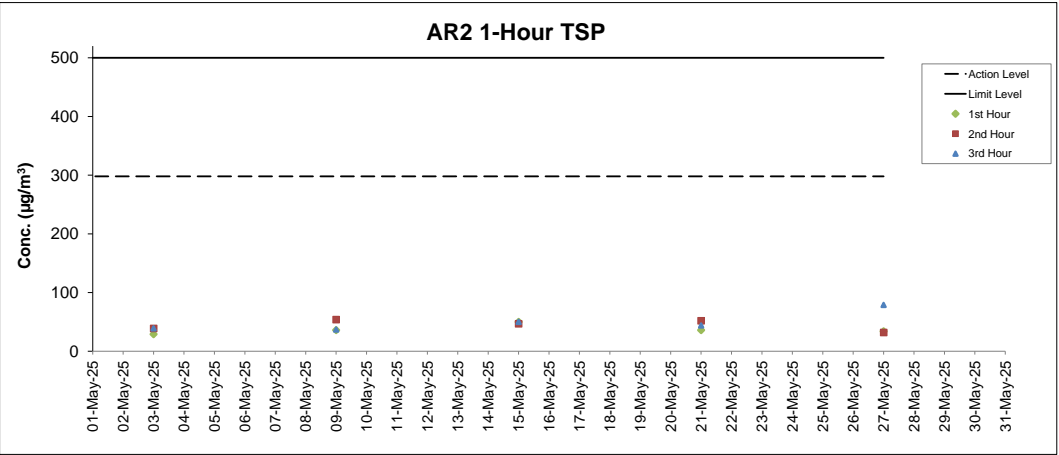
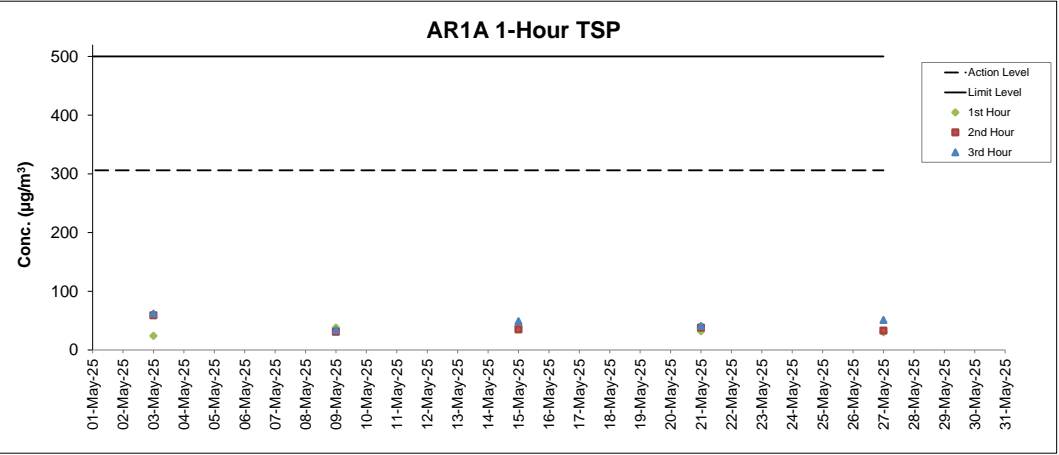
Station: AR1A- Man Tung Road Park

Date	Time	Weather	Wind Speed (m/s)	Wind Direction (deg)	1-hr TSP ( $\mu\text{g}/\text{m}^3$ )	Action Level ( $\mu\text{g}/\text{m}^3$ )	Limit Level ( $\mu\text{g}/\text{m}^3$ )
03-May-25	13:50	Sunny	3.9	225	24	306	500
03-May-25	14:50	Sunny	1.7	202	59	306	500
03-May-25	15:50	Sunny	1.7	260	62	306	500
09-May-25	8:31	Cloudy	1.9	45	38	306	500
09-May-25	9:31	Cloudy	1.1	15	31	306	500
09-May-25	10:31	Cloudy	3.1	280	34	306	500
15-May-25	8:39	Sunny	4.2	180	41	306	500
15-May-25	9:39	Sunny	4.7	112	35	306	500
15-May-25	10:39	Sunny	3.6	291	49	306	500
21-May-25	9:41	Sunny	6.1	202	32	306	500
21-May-25	10:41	Sunny	5.3	202	38	306	500
21-May-25	11:41	Sunny	4.7	202	41	306	500
27-May-25	8:45	Sunny	3.9	88	30	306	500
27-May-25	9:45	Sunny	3.3	92	33	306	500
27-May-25	10:45	Sunny	4.2	93	51	306	500

1-hour TSP Results

Station: AR2- Village House, Tin Sum

Date	Time	Weather	Wind Speed (m/s)	Wind Direction (deg)	1-hr TSP ( $\mu\text{g}/\text{m}^3$ )	Action Level ( $\mu\text{g}/\text{m}^3$ )	Limit Level ( $\mu\text{g}/\text{m}^3$ )
03-May-25	10:19	Sunny	3.3	50	29	298	500
03-May-25	14:16	Sunny	2.2	45	39	298	500
03-May-25	15:16	Sunny	1.7	315	39	298	500
09-May-25	12:11	Cloudy	3.3	360	36	298	500
09-May-25	13:11	Cloudy	1.1	360	54	298	500
09-May-25	14:11	Cloudy	2.8	15	37	298	500
15-May-25	12:30	Sunny	2.8	315	50	298	500
15-May-25	13:30	Sunny	2.2	247	47	298	500
15-May-25	14:30	Sunny	2.2	315	50	298	500
21-May-25	13:19	Sunny	4.4	215	36	298	500
21-May-25	14:19	Sunny	4.7	210	52	298	500
21-May-25	15:19	Sunny	6.4	210	44	298	500
27-May-25	12:22	Sunny	4.9	120	34	298	500
27-May-25	13:22	Sunny	4.2	93	32	298	500
27-May-25	14:22	Sunny	3.9	98	79	298	500



Notes

- Major site activities carried out during the reporting period are summarized in Section 1.4 of the monthly EM&A report.
- Weather conditions during monitoring are presented in the data tables above.
- QA/QC requirements as stipulated in the EM&A Manual were carried out during measurement.

# Noise Monitoring Results

## Noise Measurement Results

### Station: NM1A- Man Tung Road Park

Date	Weather	Time	Measured $L_{10}$ dB(A)	Measured $L_{90}$ dB(A)	$L_{eq(30mins)}$ dB(A) ^
09-May-25	Cloudy	8:38	63.0	59.4	64
09-May-25	Cloudy	8:43	62.7	58.4	
09-May-25	Cloudy	8:48	62.7	59.1	
09-May-25	Cloudy	8:53	63.4	59.7	
09-May-25	Cloudy	8:58	64.3	60.0	
09-May-25	Cloudy	9:03	62.8	59.3	
15-May-25	Sunny	8:51	62.4	59.1	65
15-May-25	Sunny	8:56	62.7	59.2	
15-May-25	Sunny	9:01	62.7	58.9	
15-May-25	Sunny	9:06	63.8	59.6	
15-May-25	Sunny	9:11	63.2	57.9	
15-May-25	Sunny	9:16	64.9	60.0	
21-May-25	Sunny	9:03	63.7	59.0	64
21-May-25	Sunny	9:08	63.2	59.4	
21-May-25	Sunny	9:13	62.4	57.8	
21-May-25	Sunny	9:18	63.3	59.7	
21-May-25	Sunny	9:23	63.7	58.8	
21-May-25	Sunny	9:28	62.2	58.5	
27-May-25	Sunny	8:41	61.9	57.4	63
27-May-25	Sunny	8:46	61.7	58.6	
27-May-25	Sunny	8:51	62.3	58.5	
27-May-25	Sunny	8:56	62.3	57.8	
27-May-25	Sunny	9:01	62.1	58.4	
27-May-25	Sunny	9:06	62.1	58.5	

Remarks:

(^)+3dB (A) correction in  $L_{eq(30mins)}$  dB(A) was applied to free-field measurement.

## Noise Measurement Results

### Station: NM4- Ching Chung Hau Po Woon Primary School

Date	Weather	Time	Measured $L_{10}$ dB(A)	Measured $L_{90}$ dB(A)	$L_{eq(30mins)}$ dB(A) ^
02-May-25	Sunny	11:13	61.3	58.0	63
02-May-25	Sunny	11:18	61.5	58.0	
02-May-25	Sunny	11:23	61.3	57.5	
02-May-25	Sunny	11:28	62.0	57.3	
02-May-25	Sunny	11:33	60.3	57.2	
02-May-25	Sunny	11:38	61.5	57.1	
09-May-25	Cloudy	14:03	60.5	57.3	66
09-May-25	Cloudy	14:08	61.6	58.1	
09-May-25	Cloudy	14:13	67.2	60.3	
09-May-25	Cloudy	14:18	66.1	61.3	
09-May-25	Cloudy	14:23	66.5	62.1	
09-May-25	Cloudy	14:28	66.5	62.6	
16-May-25	Cloudy	12:59	67.1	64.7	60*
16-May-25	Cloudy	13:04	66.7	63.1	
16-May-25	Cloudy	13:09	63.8	60.5	
16-May-25	Cloudy	13:14	64.7	62.0	
16-May-25	Cloudy	13:19	66.1	61.4	
16-May-25	Cloudy	13:24	62.7	58.6	
22-May-25	Sunny	12:46	60.7	57.9	64
22-May-25	Sunny	12:51	61.2	58.6	
22-May-25	Sunny	12:56	62.5	58.6	
22-May-25	Sunny	13:01	63.1	59.4	
22-May-25	Sunny	13:06	63.6	59.9	
22-May-25	Sunny	13:11	65.1	60.3	
29-May-25	Overcast	13:14	65.2	61.8	66
29-May-25	Overcast	13:19	65.3	60.9	
29-May-25	Overcast	13:24	63.9	60.5	
29-May-25	Overcast	13:29	66.4	60.8	
29-May-25	Overcast	13:34	67.9	60.5	
29-May-25	Overcast	13:39	65.7	60.3	

Remarks:

(^)+3dB (A) correction in  $L_{eq(30mins)}$  dB(A) was applied to free-field measurement.

(\*) The measurement result was corrected with reference to the baseline monitoring levels.

## Noise Measurement Results

### Station: NM5- Village House, Tin Sum

Date	Weather	Time	Measured L <sub>10</sub> dB(A)	Measured L <sub>90</sub> dB(A)	L <sub>eq(30mins)</sub> dB(A) ^
09-May-25	Cloudy	12:18	53.9	50.3	55
09-May-25	Cloudy	12:23	52.7	48.8	
09-May-25	Cloudy	12:28	52.4	49.9	
09-May-25	Cloudy	12:33	52.7	50.2	
09-May-25	Cloudy	12:38	53.4	50.7	
09-May-25	Cloudy	12:43	53.8	50.3	56
15-May-25	Sunny	12:02	55.3	51.0	
15-May-25	Sunny	12:07	55.6	50.9	
15-May-25	Sunny	12:12	53.8	50.9	
15-May-25	Sunny	12:17	54.9	50.7	
15-May-25	Sunny	12:22	54.5	51.3	
15-May-25	Sunny	12:27	54.5	51.1	59
21-May-25	Sunny	12:35	57.7	54.6	
21-May-25	Sunny	12:40	57.4	53.4	
21-May-25	Sunny	12:45	56.9	54.1	
21-May-25	Sunny	12:50	56.3	53.4	
21-May-25	Sunny	12:55	56.0	53.2	
21-May-25	Sunny	13:00	57.0	54.3	55
27-May-25	Sunny	11:57	55.0	46.8	
27-May-25	Sunny	12:02	49.8	46.1	
27-May-25	Sunny	12:07	60.4	49.3	
27-May-25	Sunny	12:12	51.2	46.0	
27-May-25	Sunny	12:17	52.1	45.6	
27-May-25	Sunny	12:22	54.2	45.3	

Remarks:

(^) +3dB (A) correction in Leq(30mins) dB(A) was applied to free-field measurement.

## Noise Measurement Results

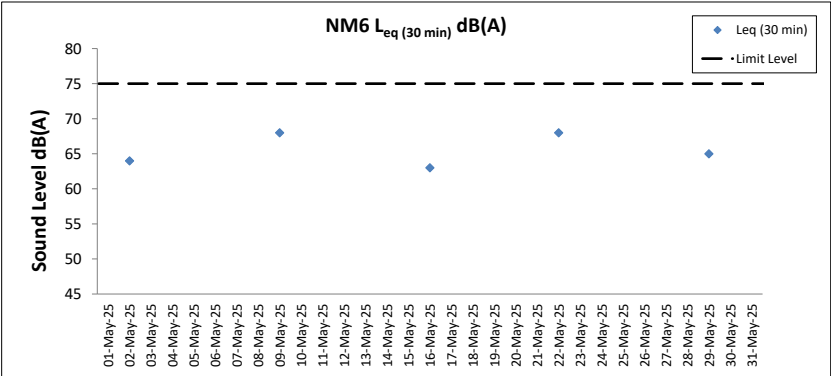
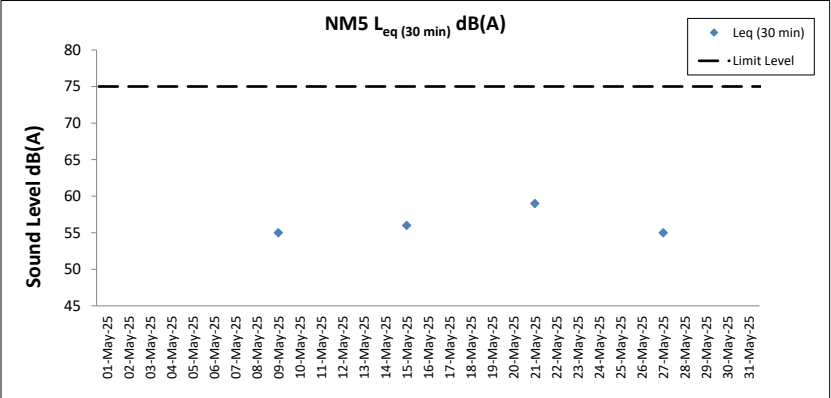
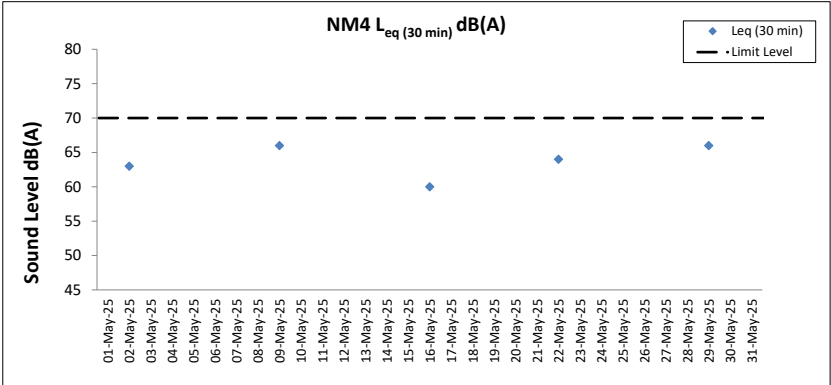
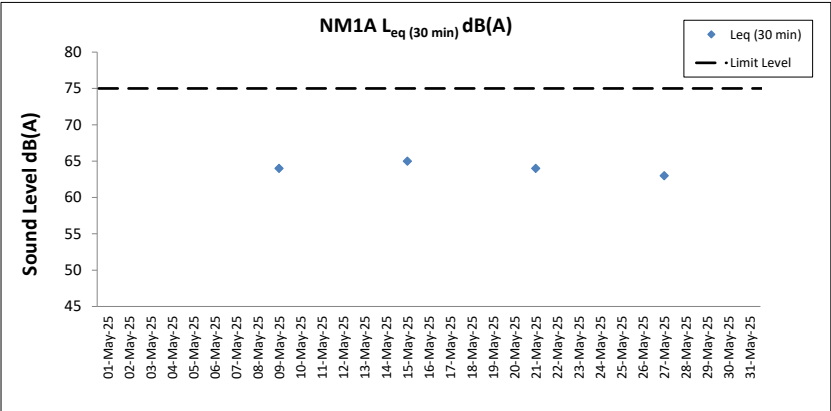
### Station: NM6- House No.1 Sha Lo Wan

Date	Weather	Time	Measured L <sub>10</sub> dB(A)	Measured L <sub>90</sub> dB(A)	L <sub>eq(30mins)</sub> dB(A) ^
02-May-25	Sunny	9:58	67.3	51.3	64
02-May-25	Sunny	10:03	62.0	51.9	
02-May-25	Sunny	10:08	64.9	54.3	
02-May-25	Sunny	10:13	63.9	48.2	
02-May-25	Sunny	10:18	63.2	45.5	
02-May-25	Sunny	10:23	63.4	53.8	
09-May-25	Cloudy	15:49	73.0	52.5	68*
09-May-25	Cloudy	15:54	72.6	51.5	
09-May-25	Cloudy	15:59	73.3	51.4	
09-May-25	Cloudy	16:04	66.8	51.4	
09-May-25	Cloudy	16:09	70.7	51.0	
09-May-25	Cloudy	16:14	66.3	50.5	
16-May-25	Cloudy	15:53	55.8	45.6	63
16-May-25	Cloudy	15:58	59.3	48.9	
16-May-25	Cloudy	16:03	60.3	50.8	
16-May-25	Cloudy	16:08	58.4	48.8	
16-May-25	Cloudy	16:13	58.8	48.9	
16-May-25	Cloudy	16:18	59.4	49.2	
22-May-25	Sunny	15:47	57.6	49.4	68
22-May-25	Sunny	15:52	63.4	51.7	
22-May-25	Sunny	15:57	64.1	47.8	
22-May-25	Sunny	16:02	65.8	48.7	
22-May-25	Sunny	16:07	61.5	48.7	
22-May-25	Sunny	16:12	67.8	47.6	
29-May-25	Overcast	15:56	62.6	45.2	65
29-May-25	Overcast	16:01	62.7	53.9	
29-May-25	Overcast	16:06	63.3	54.2	
29-May-25	Overcast	16:11	65.6	54.4	
29-May-25	Overcast	16:16	67.8	57.6	
29-May-25	Overcast	16:21	64.6	54.6	

Remarks:

(^) +3dB (A) correction in Leq(30mins) dB(A) was applied to free-field measurement.

(\*) The measurement result was corrected with reference to the baseline monitoring levels.



- Notes
1. Major site activities carried out during the reporting period are summarized in Section 1.4 of the monthly EM&A report.
  2. Weather conditions during monitoring are presented in the data tables above.
  3. QA/QC requirements as stipulated in the EM&A Manual were carried out during measurement.

## **Operation Phase Chinese White Dolphin Monitoring Results**

## CWD Small Vessel Line-transect Survey

## Survey Effort Data

DATE	AREA	BEAU	KM SEARCHED	SEASON	VESSEL	TYPE	P/S
03-Mar-25	SWL	1	31.48	SPRING	32166	3RS ET – OPER	P
03-Mar-25	SWL	2	17.866	SPRING	32166	3RS ET – OPER	P
03-Mar-25	SWL	1	14.725	SPRING	32166	3RS ET – OPER	S
03-Mar-25	SWL	2	5.344	SPRING	32166	3RS ET – OPER	S
10-Mar-25	NEL	2	22.93	SPRING	32166	3RS ET – OPER	P
10-Mar-25	NEL	3	13.57	SPRING	32166	3RS ET – OPER	P
10-Mar-25	NEL	2	6.8	SPRING	32166	3RS ET – OPER	S
10-Mar-25	NEL	3	3.4	SPRING	32166	3RS ET – OPER	S
12-Mar-25	SWL	1	14.195	SPRING	32166	3RS ET – OPER	P
12-Mar-25	SWL	2	40.604	SPRING	32166	3RS ET – OPER	P
12-Mar-25	SWL	1	2.595	SPRING	32166	3RS ET – OPER	S
12-Mar-25	SWL	2	11.478	SPRING	32166	3RS ET – OPER	S
17-Mar-25	NEL	2	14.6	SPRING	32166	3RS ET – OPER	P
17-Mar-25	NEL	3	22.72	SPRING	32166	3RS ET – OPER	P
17-Mar-25	NEL	2	3.2	SPRING	32166	3RS ET – OPER	S
17-Mar-25	NEL	3	6.28	SPRING	32166	3RS ET – OPER	S
18-Mar-25	NWL	2	1.5	SPRING	32166	3RS ET – OPER	P
18-Mar-25	NWL	3	52.5	SPRING	32166	3RS ET – OPER	P
18-Mar-25	NWL	4	9.3	SPRING	32166	3RS ET – OPER	P
18-Mar-25	NWL	2	1	SPRING	32166	3RS ET – OPER	S
18-Mar-25	NWL	3	10.7	SPRING	32166	3RS ET – OPER	S
19-Mar-25	NWL	2	19.41	SPRING	32166	3RS ET – OPER	P
19-Mar-25	NWL	3	42.99	SPRING	32166	3RS ET – OPER	P
19-Mar-25	NWL	2	3.1	SPRING	32166	3RS ET – OPER	S
19-Mar-25	NWL	3	8.5	SPRING	32166	3RS ET – OPER	S
20-Mar-25	AW	2	4.47	SPRING	32166	3RS ET – OPER	P
20-Mar-25	WL	2	12.088	SPRING	32166	3RS ET – OPER	P
20-Mar-25	WL	3	3.764	SPRING	32166	3RS ET – OPER	P
20-Mar-25	WL	2	6.114	SPRING	32166	3RS ET – OPER	S
20-Mar-25	WL	3	1.986	SPRING	32166	3RS ET – OPER	S
21-Mar-25	AW	2	4.69	SPRING	32166	3RS ET – OPER	P
21-Mar-25	WL	2	16.49	SPRING	32166	3RS ET – OPER	P
21-Mar-25	WL	2	9.111	SPRING	32166	3RS ET – OPER	S
03-Apr-25	NWL	2	63.9	SPRING	32166	3RS ET – OPER	P
03-Apr-25	NWL	2	11.5	SPRING	32166	3RS ET – OPER	S
07-Apr-25	NEL	2	12.23	SPRING	32166	3RS ET – OPER	P
07-Apr-25	NEL	3	24.28	SPRING	32166	3RS ET – OPER	P
07-Apr-25	NEL	2	2.99	SPRING	32166	3RS ET – OPER	S
07-Apr-25	NEL	3	7.6	SPRING	32166	3RS ET – OPER	S
08-Apr-25	SWL	2	33.26	SPRING	32166	3RS ET – OPER	P
08-Apr-25	SWL	3	19.6	SPRING	32166	3RS ET – OPER	P
08-Apr-25	SWL	2	14.43	SPRING	32166	3RS ET – OPER	S
08-Apr-25	SWL	3	2.9	SPRING	32166	3RS ET – OPER	S
09-Apr-25	NWL	2	64	SPRING	32166	3RS ET – OPER	P
09-Apr-25	NWL	2	11.5	SPRING	32166	3RS ET – OPER	S
11-Apr-25	NEL	2	23.26	SPRING	32166	3RS ET – OPER	P
11-Apr-25	NEL	3	13.4	SPRING	32166	3RS ET – OPER	P
11-Apr-25	NEL	2	7.24	SPRING	32166	3RS ET – OPER	S
11-Apr-25	NEL	3	3.2	SPRING	32166	3RS ET – OPER	S
15-Apr-25	SWL	1	8.034	SPRING	32166	3RS ET – OPER	P
15-Apr-25	SWL	2	44.314	SPRING	32166	3RS ET – OPER	P
15-Apr-25	SWL	1	2.16	SPRING	32166	3RS ET – OPER	S
15-Apr-25	SWL	2	12.777	SPRING	32166	3RS ET – OPER	S

DATE	AREA	BEAU	KM SEARCHED	SEASON	VESSEL	TYPE	P/S
17-Apr-25	AW	1	4.73	SPRING	32166	3RS ET – OPER	P
17-Apr-25	WL	2	8.474	SPRING	32166	3RS ET – OPER	P
17-Apr-25	WL	3	9.107	SPRING	32166	3RS ET – OPER	P
17-Apr-25	WL	2	5.293	SPRING	32166	3RS ET – OPER	S
17-Apr-25	WL	3	4.736	SPRING	32166	3RS ET – OPER	S
22-Apr-25	AW	2	1.93	SPRING	32166	3RS ET – OPER	P
22-Apr-25	AW	3	2.69	SPRING	32166	3RS ET – OPER	P
22-Apr-25	WL	2	0.1	SPRING	32166	3RS ET – OPER	P
22-Apr-25	WL	3	18.8	SPRING	32166	3RS ET – OPER	P
22-Apr-25	WL	3	10.8	SPRING	32166	3RS ET – OPER	S
06-May-25	SWL	2	35.19	SPRING	32166	3RS ET – OPER	P
06-May-25	SWL	3	15.88	SPRING	32166	3RS ET – OPER	P
06-May-25	SWL	2	8	SPRING	32166	3RS ET – OPER	S
06-May-25	SWL	3	10.33	SPRING	32166	3RS ET – OPER	S
09-May-25	NWL	2	43.78	SPRING	32166	3RS ET – OPER	P
09-May-25	NWL	3	10.2	SPRING	32166	3RS ET – OPER	P
09-May-25	NWL	4	2.8	SPRING	32166	3RS ET – OPER	P
09-May-25	NWL	5	6.1	SPRING	32166	3RS ET – OPER	P
09-May-25	NWL	2	6.02	SPRING	32166	3RS ET – OPER	S
09-May-25	NWL	3	2.4	SPRING	32166	3RS ET – OPER	S
09-May-25	NWL	5	3	SPRING	32166	3RS ET – OPER	S
15-May-25	SWL	2	0.73	SPRING	32166	3RS ET – OPER	P
15-May-25	SWL	3	53.88	SPRING	32166	3RS ET – OPER	P
15-May-25	SWL	2	1.7	SPRING	32166	3RS ET – OPER	S
15-May-25	SWL	3	13.99	SPRING	32166	3RS ET – OPER	S
16-May-25	AW	1	4.86	SPRING	32166	3RS ET – OPER	P
16-May-25	WL	2	11.8	SPRING	32166	3RS ET – OPER	P
16-May-25	WL	3	7.157	SPRING	32166	3RS ET – OPER	P
16-May-25	WL	2	4.4	SPRING	32166	3RS ET – OPER	S
16-May-25	WL	3	4.695	SPRING	32166	3RS ET – OPER	S
19-May-25	AW	2	4.6	SPRING	32166	3RS ET – OPER	P
19-May-25	WL	2	16.615	SPRING	32166	3RS ET – OPER	P
19-May-25	WL	3	2.45	SPRING	32166	3RS ET – OPER	P
19-May-25	WL	2	9.255	SPRING	32166	3RS ET – OPER	S
19-May-25	WL	3	1.68	SPRING	32166	3RS ET – OPER	S
20-May-25	NWL	2	2.78	SPRING	32166	3RS ET – OPER	P
20-May-25	NWL	3	60.22	SPRING	32166	3RS ET – OPER	P
20-May-25	NWL	3	12.4	SPRING	32166	3RS ET – OPER	S
21-May-25	NEL	2	37.07	SPRING	32166	3RS ET – OPER	P
21-May-25	NEL	2	9.73	SPRING	32166	3RS ET – OPER	S
23-May-25	NEL	2	37.06	SPRING	32166	3RS ET – OPER	P
23-May-25	NEL	2	9.74	SPRING	32166	3RS ET – OPER	S

Notes: CWD monitoring survey data of the two preceding survey months are presented for reference only.



## CWD Small Vessel Line-transect Survey

## Sighting Data

DATE	STG #	TIME	CWD/FP	GP SZ	AREA	BEAU	PSD	EFFORT	TYPE	DEC LAT	DEC LON	SEASON	BOAT ASSOC.	P/S
03-Mar-25	1	1055	FP	3	SWL	1	1	ON	3RS ET – OPER	22.183540	113.936279	SPRING	NONE	P
03-Mar-25	2	1116	FP	3	SWL	1	34	ON	3RS ET – OPER	22.145204	113.930076	SPRING	NONE	S
03-Mar-25	3	1119	FP	2	SWL	1	81	ON	3RS ET – OPER	22.147736	113.927216	SPRING	NONE	P
03-Mar-25	4	1129	FP	4	SWL	1	126	ON	3RS ET – OPER	22.165093	113.927504	SPRING	NONE	P
03-Mar-25	5	1155	FP	6	SWL	1	139	ON	3RS ET – OPER	22.196880	113.917735	SPRING	NONE	P
03-Mar-25	6	1215	FP	1	SWL	1	313	ON	3RS ET – OPER	22.158444	113.917714	SPRING	NONE	P
03-Mar-25	7	1219	FP	1	SWL	1	28	ON	3RS ET – OPER	22.152765	113.917749	SPRING	NONE	P
03-Mar-25	8	1234	FP	6	SWL	1	397	ON	3RS ET – OPER	22.149244	113.908270	SPRING	NONE	P
03-Mar-25	9	1243	FP	3	SWL	1	12	ON	3RS ET – OPER	22.161935	113.898550	SPRING	NONE	S
03-Mar-25	10	1337	FP	1	SWL	2	155	ON	3RS ET – OPER	22.156443	113.897168	SPRING	NONE	P
03-Mar-25	11	1529	CWD	1	SWL	2	118	ON	3RS ET – OPER	22.190556	113.849708	SPRING	NONE	P
03-Mar-25	12	1537	CWD	1	SWL	2	111	ON	3RS ET – OPER	22.191077	113.849387	SPRING	NONE	P
12-Mar-25	1	1110	FP	2	SWL	1	234	ON	3RS ET – OPER	22.159833	113.927398	SPRING	NONE	P
12-Mar-25	2	1119	FP	1	SWL	1	52	ON	3RS ET – OPER	22.176666	113.928266	SPRING	NONE	P
12-Mar-25	3	1125	FP	1	SWL	1	424	ON	3RS ET – OPER	22.187550	113.927616	SPRING	NONE	P
12-Mar-25	4	1141	FP	6	SWL	2	296	ON	3RS ET – OPER	22.198940	113.917615	SPRING	NONE	P
12-Mar-25	5	1214	FP	2	SWL	2	12	ON	3RS ET – OPER	22.147290	113.907780	SPRING	NONE	P
12-Mar-25	6	1222	FP	2	SWL	2	206	ON	3RS ET – OPER	22.196773	113.899798	SPRING	NONE	S
12-Mar-25	7	1317	FP	8	SWL	2	26	ON	3RS ET – OPER	22.156301	113.897570	SPRING	NONE	P
12-Mar-25	8	1323	FP	6	SWL	2	175	ON	3RS ET – OPER	22.148902	113.893346	SPRING	NONE	S
12-Mar-25	9	1336	FP	1	SWL	2	95	ON	3RS ET – OPER	22.165877	113.887683	SPRING	NONE	P
12-Mar-25	10	1359	CWD	1	SWL	1	26	ON	3RS ET – OPER	22.210401	113.883150	SPRING	NONE	S
12-Mar-25	11	1422	FP	1	SWL	1	29	ON	3RS ET – OPER	22.191921	113.878339	SPRING	NONE	P
12-Mar-25	12	1427	FP	1	SWL	2	61	ON	3RS ET – OPER	22.183075	113.878552	SPRING	NONE	P
12-Mar-25	13	1451	FP	3	SWL	2	14	ON	3RS ET – OPER	22.178749	113.868783	SPRING	NONE	P
12-Mar-25	14	1456	FP	1	SWL	2	17	ON	3RS ET – OPER	22.184075	113.868467	SPRING	NONE	P
12-Mar-25	15	1459	FP	2	SWL	2	21	ON	3RS ET – OPER	22.187993	113.868395	SPRING	NONE	P
19-Mar-25	1	1107	CWD	2	NWL	3	313	ON	3RS ET – OPER	22.347225	113.878416	SPRING	NONE	P
20-Mar-25	1	1115	CWD	6	WL	2	836	ON	3RS ET – OPER	22.223815	113.827586	SPRING	NONE	P
20-Mar-25	2	1134	CWD	2	WL	2	262	ON	3RS ET – OPER	22.214824	113.824038	SPRING	NONE	P
20-Mar-25	3	1142	CWD	3	WL	2	390	ON	3RS ET – OPER	22.214912	113.832078	SPRING	NONE	P

DATE	STG #	TIME	CWD/FP	GP SZ	AREA	BEAU	PSD	EFFORT	TYPE	DEC LAT	DEC LON	SEASON	BOAT ASSOC.	P/S
20-Mar-25	4	1154	CWD	3	WL	2	513	ON	3RS ET – OPER	22.206800	113.839286	SPRING	NONE	S
20-Mar-25	5	1210	CWD	8	WL	2	107	ON	3RS ET – OPER	22.196280	113.829415	SPRING	NONE	P
20-Mar-25	6	1223	CWD	2	WL	2	238	ON	3RS ET – OPER	22.196546	113.833261	SPRING	NONE	P
20-Mar-25	7	1233	CWD	2	WL	2	311	ON	3RS ET – OPER	22.195202	113.841788	SPRING	NONE	P
20-Mar-25	8	1245	CWD	1	WL	3	20	ON	3RS ET – OPER	22.195065	113.842396	SPRING	NONE	S
20-Mar-25	9	1256	CWD	3	WL	2	36	ON	3RS ET – OPER	22.187513	113.835985	SPRING	NONE	P
21-Mar-25	1	1043	CWD	3	WL	2	514	ON	3RS ET – OPER	22.246990	113.851225	SPRING	PURSE SEINER	S
21-Mar-25	2	1101	CWD	2	WL	2	155	ON	3RS ET – OPER	22.237011	113.826072	SPRING	NONE	S
21-Mar-25	3	1120	CWD	1	WL	2	185	ON	3RS ET – OPER	22.232192	113.830334	SPRING	NONE	P
21-Mar-25	4	1131	CWD	4	WL	2	92	ON	3RS ET – OPER	22.224202	113.832300	SPRING	NONE	P
21-Mar-25	5	1153	CWD	4	WL	2	381	ON	3RS ET – OPER	22.214271	113.826562	SPRING	NONE	P
08-Apr-25	1	1036	FP	2	SWL	1	71	ON	3RS ET – OPER	22.193704	113.936244	SPRING	NONE	P
08-Apr-25	2	1044	FP	2	SWL	2	350	ON	3RS ET – OPER	22.179386	113.935990	SPRING	NONE	P
08-Apr-25	3	1111	FP	1	SWL	2	75	ON	3RS ET – OPER	22.164292	113.927572	SPRING	NONE	P
15-Apr-25	1	1153	FP	2	SWL	2	70	ON	3RS ET – OPER	22.152396	113.917341	SPRING	NONE	P
15-Apr-25	2	1210	FP	2	SWL	2	161	ON	3RS ET – OPER	22.154933	113.902673	SPRING	NONE	S
15-Apr-25	3	1258	FP	1	SWL	2	126	ON	3RS ET – OPER	22.177199	113.897364	SPRING	NONE	P
15-Apr-25	4	1302	FP	1	SWL	2	228	ON	3RS ET – OPER	22.170798	113.897120	SPRING	NONE	P
15-Apr-25	5	1308	FP	1	SWL	2	256	ON	3RS ET – OPER	22.158703	113.896943	SPRING	NONE	P
15-Apr-25	6	1310	FP	4	SWL	2	41	ON	3RS ET – OPER	22.154309	113.897139	SPRING	NONE	P
15-Apr-25	7	1324	FP	1	SWL	2	83	ON	3RS ET – OPER	22.164758	113.888631	SPRING	NONE	P
15-Apr-25	8	1337	FP	2	SWL	2	178	ON	3RS ET – OPER	22.192654	113.888238	SPRING	NONE	P
15-Apr-25	9	1349	FP	2	SWL	2	119	ON	3RS ET – OPER	22.212648	113.885390	SPRING	NONE	S
15-Apr-25	10	1412	FP	2	SWL	1	50	ON	3RS ET – OPER	22.164074	113.878414	SPRING	NONE	P
15-Apr-25	11	1415	FP	3	SWL	1	14	ON	3RS ET – OPER	22.157950	113.878676	SPRING	NONE	P
15-Apr-25	12	1431	CWD	1	SWL	1	149	ON	3RS ET – OPER	22.180883	113.869018	SPRING	NONE	P
17-Apr-25	1	1022	CWD	1	WL	2	476	ON	3RS ET – OPER	22.260575	113.851938	SPRING	NONE	P
17-Apr-25	2	1038	CWD	2	WL	2	39	ON	3RS ET – OPER	22.251964	113.833047	SPRING	NONE	S
17-Apr-25	3	1105	CWD	3	WL	2	139	ON	3RS ET – OPER	22.241576	113.843157	SPRING	NONE	P
17-Apr-25	4	1130	CWD	1	WL	3	95	ON	3RS ET – OPER	22.232096	113.837869	SPRING	NONE	P
17-Apr-25	5	1221	CWD	7	WL	3	174	ON	3RS ET – OPER	22.195575	113.841702	SPRING	NONE	P
22-Apr-25	1	1145	CWD	1	WL	2	240	ON	3RS ET – OPER	22.187556	113.840253	SPRING	NONE	P
09-May-25	1	1333	CWD	2	NWL	2	30	ON	3RS ET – OPER	22.373559	113.907000	SPRING	NONE	P

DATE	STG #	TIME	CWD/FP	GP SZ	AREA	BEAU	PSD	EFFORT	TYPE	DEC LAT	DEC LON	SEASON	BOAT ASSOC.	P/S
16-May-25	1	1115	CWD	2	WL	2	856	ON	3RS ET – OPER	22.238898	113.826616	SPRING	NONE	S
16-May-25	2	1142	CWD	1	WL	3	702	ON	3RS ET – OPER	22.223854	113.830159	SPRING	NONE	P
16-May-25	3	1155	CWD	2	WL	3	19	ON	3RS ET – OPER	22.222867	113.820136	SPRING	PURSE SEINER	S
16-May-25	4	1218	CWD	5	WL	3	112	ON	3RS ET – OPER	22.216483	113.819700	SPRING	NONE	S
16-May-25	5	1245	CWD	2	WL	3	137	ON	3RS ET – OPER	22.214317	113.820992	SPRING	NONE	P
16-May-25	6	1315	CWD	2	WL	3	76	ON	3RS ET – OPER	22.196230	113.830844	SPRING	NONE	P
16-May-25	7	1335	CWD	2	WL	3	300	ON	3RS ET – OPER	22.187450	113.837444	SPRING	NONE	P
19-May-25	1	1109	CWD	1	WL	2	477	ON	3RS ET – OPER	22.226658	113.837521	SPRING	PURSE SEINER	S

Abbreviations: STG# = Sighting Number; GP SZ = Group Size; BEAU = Beaufort Sea State; PSD = Perpendicular Distance (in metres); N/A = Not Applicable;  
DEC LAT = Latitude (WGS84 in Decimal), DEC LON = Longitude (WGS84 in Decimal); BOAT ASSOC. = Fishing Boat Association; P/S = Primary Transect / Secondary Transect







Notes:




CWD monitoring survey data of the two preceding survey months are presented for reference only. No relevant figure or text will be mentioned in this monthly EM&A report.

Sighting data of finless porpoise (FP) are presented for reference only. No relevant figure or text will be mentioned in the monthly EM&A report. All FP sightings are excluded in calculation.

**CWD Small Vessel Line-transect Survey**

**Photo Identification**

	
NLMM013_20250509_1_7	NLMM095_20250509_1_6
	
SLMM034_20250516_3_5	WLMM043_20250516_3_2
	
SLMM050_20250516_4_11	WLMM067_20250516_4_4

	
<p>WLMM068_20250516_4_7</p>	<p>WLMM111_20250516_4_3</p>
	
<p>WLMM162_20250516_4_2</p>	

# Appendix D. Calibration Certificates



### SUB-CONTRACTING REPORT

CONTACT	: KELVIN CHEUNG	WORK ORDER	: <b>HK2514339</b>
CLIENT	: <b>MOTT MACDONALD HONG KONG LIMITED</b>		
ADDRESS	: 3/F, MANULIFE PLACE, 348 KWUN TONG ROAD KWUN TONG, KOWLOON, HONG KONG	SUB-BATCH	: 1
		DATE RECEIVED	: 11-APR-2025
		DATE OF ISSUE	: 28-APR-2025
PROJECT	: CALIBRATION/PERFORMANCE CHECK OF DUST METER	NO. OF SAMPLES	: 1
		CLIENT ORDER	: ---

#### General Comments

- Sample information (Project name, Sample ID, Sampling date/time, etc.) is provided by client.
- Result(s) of sample(s) is/are reported on as received basis, unless otherwise specified. The result(s) is/are related only to the item(s) tested.
- Sample(s) was/ were submitted by client. Sample(s) arrived laboratory in ambient condition.
- Calibration was subcontracted to and analysed by Action-United Environmental Services & Consulting (AUES).

#### Signatories

This document has been signed by those names that appear on this report and are the authorised signatories

Signatories

Position

Richard Fung

Managing Director

This report supersedes any previous report(s) with the same work order number.

All pages of this report have been checked and approved for release.

**ALS Technichem (HK) Pty Ltd**  
Part of the **ALS Laboratory Group**

WORK ORDER : HK2514339  
SUB-BATCH : 1  
CLIENT : MOTT MACDONALD HONG KONG LIMITED  
PROJECT : CALIBRATION/PERFORMANCE CHECK OF DUST METER



ALS Lab ID	Client's Sample ID	Sample Type	Sample Date	External Lab Report No.
HK2514339-001	S/N:597337	Equipments	11-Apr-2025	S/N:597337

----- END OF REPORT -----



## Equipment Verification Report (TSP)

### Equipment Calibrated:

Type: Laser Dust monitor  
Manufacturer: Sibata LD-3B  
Serial No. 597337  
Equipment Ref: Nil  
Job Order HK2514339

### Standard Equipment:

Standard Equipment: Higher Volume Sampler  
Location & Location ID: AUES office (calibration room)  
Equipment Ref: HVS 018  
Last Calibration Date: 12 February 2025

### Equipment Verification Results:

Testing Date: 22 & 24 April 2025

Hour	Time	Mean Temp °C	Mean Pressure (hPa)	Concentration in $\mu\text{g}/\text{m}^3$ (Standard Equipment)	Total Count (Calibrated Equipment)	Count/Minute (Total Count/min)
2hr00min	09:35 ~ 11:35	27.3	1010.5	55.3	1908	15.9
2hr00min	11:39 ~ 13:39	27.3	1010.5	50.8	2025	16.9
2hr00min	13:42 ~ 15:42	27.3	1010.5	48.1	1758	14.7
2hr00min	12:36 ~ 14:36	27.5	1009.3	47.3	1578	13.2
2hr01min	14:48 ~ 16:49	27.5	1009.3	62.1	2079	17.2

### Linear Regression of Y or X

Slope (K-factor): 3.3582 ( $\mu\text{g}/\text{m}^3$ )/CPM

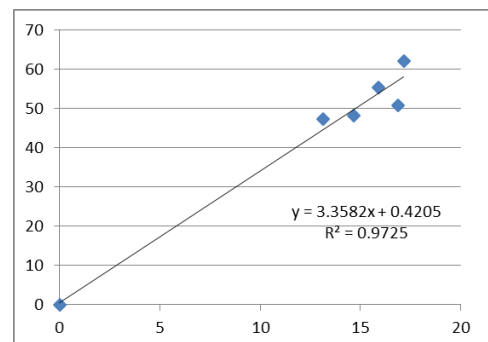
Correlation Coefficient (R) 0.9862

Date of Issue 28 April 2025

### Remarks:

1. **Strong** Correlation ( $R > 0.8$ )
2. Factor 3.3582 ( $\mu\text{g}/\text{m}^3$ )/CPM should be applied for TSP monitoring

\*If  $R < 0.5$ , repair or re-verification is required for the equipment



Operator : Jeff Ip Signature : [Signature] Date : 28 April 2025

QC Reviewer : Ben Tam Signature : [Signature] Date : 28 April 2025

## TSP SAMPLER CALIBRATION CALCULATION SPREADSHEET

Location : Gold King Industrial Building, Kwai Chung Date of Calibration: 12-Feb-25  
 Location ID : Calibration Room - TISCH Higher Volume Sampler (Model TE-5170) S/N:1260 Next Calibration Date: 12-May-25

### CONDITIONS

Sea Level Pressure (hPa)	1017.2	Corrected Pressure (mm Hg)	762.9
Temperature (°C)	18.8	Temperature (K)	292

### CALIBRATION ORIFICE

Make->	TISCH	Qstd Slope ->	2.09671
Model->	5025A	Qstd Intercept ->	-0.01852
Calibration Date->	16-Dec-24	Expiry Date->	16-Dec-25

### CALIBRATION

Plate No.	H2O (L) (in)	H2O (R) (in)	H2O (in)	Qstd (m3/min)	I (chart)	IC corrected	LINEAR REGRESSION
18	5.6	5.6	11.2	1.625	55	55.69	Slope = 35.3445 Intercept = -2.1779 Corr. coeff. = 0.9989
13	4.5	4.5	9.0	1.458	48	48.60	
10	3.4	3.4	6.8	1.268	42	42.52	
8	2.3	2.3	4.6	1.045	35	35.44	
5	1.2	1.2	2.4	0.757	24	24.30	

#### Calculations :

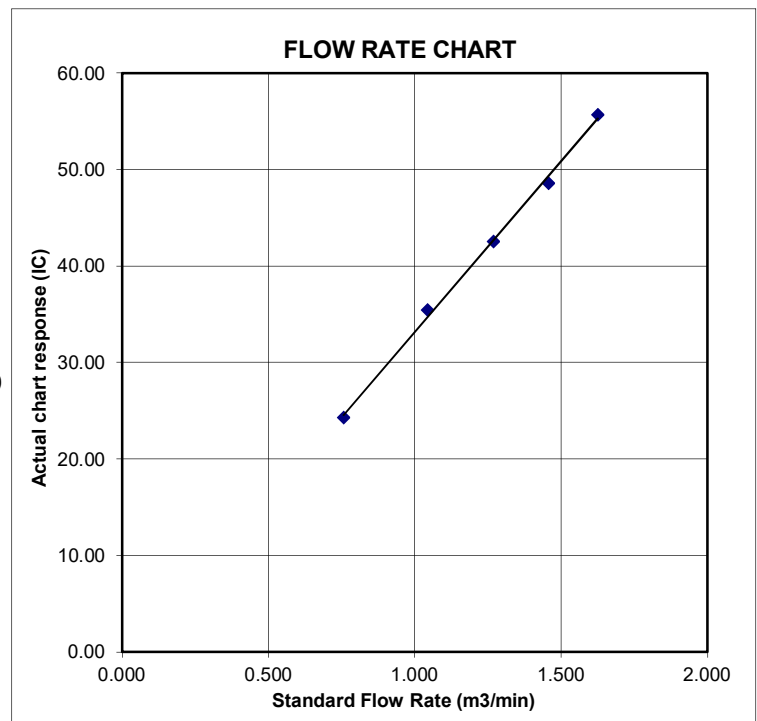
$Qstd = 1/m[\text{Sqrt}(H2O(Pa/Pstd)(Tstd/Ta))-b]$   
 $IC = I[\text{Sqrt}(Pa/Pstd)(Tstd/Ta)]$

Qstd = standard flow rate  
 IC = corrected chart responses  
 I = actual chart response  
 m = calibrator Qstd slope  
 b = calibrator Qstd intercept  
 Ta = actual temperature during calibration ( deg K )  
 Pstd = actual pressure during calibration ( mm Hg )

#### For subsequent calculation of sampler flow:

$1/m(( I )[\text{Sqrt}(298/Tav)(Pav/760)]-b)$

m = sampler slope  
 b = sampler intercept  
 I = chart response  
 Tav = daily average temperature  
 Pav = daily average pressure





# Certificate of Calibration

## Calibration Certification Information

Cal. Date: December 16, 2024      Rootsometer S/N: 438320      Ta: 293 °K  
Operator: Jim Tisch      Pa: 749.0 mm Hg  
Calibration Model #: TE-5025A      Calibrator S/N: 4064

Run	Vol. Init (m3)	Vol. Final (m3)	ΔVol. (m3)	ΔTime (min)	ΔP (mm Hg)	ΔH (in H2O)
1	1	2	1	1.4600	3.2	2.00
2	3	4	1	1.0300	6.4	4.00
3	5	6	1	0.9220	8.0	5.00
4	7	8	1	0.8770	8.8	5.50
5	9	10	1	0.7250	12.8	8.00

## Data Tabulation

Vstd (m3)	Qstd (x-axis)	$\sqrt{\Delta H \left( \frac{Pa}{Pstd} \right) \left( \frac{Tstd}{Ta} \right)}$ (y-axis)	Va	Qa (x-axis)	$\sqrt{\Delta H \left( \frac{Ta}{Pa} \right)}$ (y-axis)
0.9981	0.6836	1.4159	0.9957	0.6820	0.8845
0.9938	0.9649	2.0024	0.9915	0.9626	1.2509
0.9917	1.0756	2.2388	0.9893	1.0730	1.3985
0.9906	1.1296	2.3480	0.9883	1.1269	1.4668
0.9853	1.3590	2.8318	0.9829	1.3557	1.7690
<b>QSTD</b>	m=	<b>2.09671</b>	<b>QA</b>	m=	<b>1.31292</b>
	b=	<b>-0.01852</b>		b=	<b>-0.01157</b>
	r=	<b>0.99999</b>		r=	<b>0.99999</b>

## Calculations

Vstd=	$\Delta Vol((Pa-\Delta P)/Pstd)(Tstd/Ta)$	Va=	$\Delta Vol((Pa-\Delta P)/Pa)$
Qstd=	Vstd/ΔTime	Qa=	Va/ΔTime
For subsequent flow rate calculations:			
Qstd=	$1/m \left( \left( \sqrt{\Delta H \left( \frac{Pa}{Pstd} \right) \left( \frac{Tstd}{Ta} \right)} \right) - b \right)$	Qa=	$1/m \left( \left( \sqrt{\Delta H \left( \frac{Ta}{Pa} \right)} \right) - b \right)$

## Standard Conditions

Tstd: 298.15 °K  
Pstd: 760 mm Hg

## Key

ΔH: calibrator manometer reading (in H2O)  
ΔP: rootsmeter manometer reading (mm Hg)  
Ta: actual absolute temperature (°K)  
Pa: actual barometric pressure (mm Hg)  
b: intercept  
m: slope

## RECALIBRATION

US EPA recommends annual recalibration per 1998 40 Code of Federal Regulations Part 50 to 51, Appendix B to Part 50, Reference Method for the Determination of Suspended Particulate Matter in the Atmosphere, 9.2.17, page 30

## Appendix E. Status of Environmental Permits and Licenses

	Description		Permit/ Reference No.	Status
EIAO	Environmental Permit		EP-489/2014	Approved on 7 Nov 2014

Contract No.	Description	Location	Permit/ Reference No.	Status
3206	Notification of Construction Work under APCO	Works area of 3206	10013053	Receipt acknowledged by EPD on 09 Jan 2025
	Registration as Chemical Waste Producer	Site office of 3206	WPN 5213-951-Z4035-01	Completion of Registration on 18 Nov 2016
		Works area of 3206	WPN 5213-951-Z4035-02	Completion of Registration on 18 Nov 2016
	Construction Noise Permit (General Works)	Works Area of 3206	GW-RS1194-24	Valid from 12 Dec 2024 to 30 May 2025 (Superseded by GW-RS0477-25)
			GW-RS0477-25	Valid from 8 May 2025 to 31 Aug 2025
	Bill Account for disposal	Works area of 3206	A/C 7026398	Approval granted from EPD on 16 Nov 2016
3305	Notification of Construction Work under APCO	Works area of 3305	460857	Receipt acknowledged by EPD on 12 Oct 2020
	Registration as Chemical Waste Producer	Works area of 3305	WPN 5213-951-A3024-01	Completion of Registration on 13 Nov 2020
	Bill Account for disposal	Works area of 3305	A/C 7035360	Approval granted from EPD on 9 Oct 2019
	Construction Noise Permit (General Works)	Works area of 3305	GW-RS1180-24	Valid from 11 Dec 2024 to 30 Jun 2025
3306	Registration as Chemical Waste Producer	Works area of 3306	WPN 8335-951-C4434-01	Completion of Registration on 1 Apr 2020
	Bill Account for disposal	Works area of 3306	A/C 7035868	Approval granted from EPD on 27 Nov 2019
3308	Bill Account for disposal	Works area of 3308	A/C 7038988	Approval granted from EPD on 24 Nov 2020

Contract No.	Description	Location	Permit/ Reference No.	Status
3310	Notification of Construction Work under APCO	Works area of 3310	10008429	Receipt acknowledged by EPD on 23 Aug 2024
	Registration as Chemical Waste Producer	Works area of 3310	WPN 5213-951-C4682-01	Completion of Registration on 5 Jan 2024
	Discharge License under WPCO	Works area of 3310	WT00039654-2021	Valid from 31 Dec 2021 to 31 Dec 2026
	Bill Account for disposal	Works area of 3310	A/C 7042793	Approval granted from EPD on 4 Jan 2022
	Construction Noise Permit (General Works)	Works area of 3310 (Reclamation area)	GW-RS0237-25	Valid from 6 Mar 2025 to 27 Aug 2025
		Works area of 3310 (Existing airport)	GW-RS0212-25	Valid from 27 Feb 2025 to 24 Aug 2025
3402	Bill Account for disposal	Works area of 3402	A/C 7032577	Approval granted from EPD on 11 Jan 2019
3404	Bill Account for disposal	Works area of 3404	A/C 7035158	Approval granted from EPD on 12 Sep 2019
3405	Registration as Chemical Waste Producer	Works area of 3405	WPN 5218-951-C4431-01	Completion of Registration on 12 Mar 2020  Revised license was issued on 14 Jul 2023
	Bill Account for disposal	Works area of 3405	A/C 7036796	Approval granted from EPD on 20 Mar 2020
3408	Notification of Construction Work under APCO	Works area of 3408	10007566	Receipt acknowledged by EPD on 02 Aug 2024
		3408 CSA-CBP	488443	Receipt acknowledged by EPD on 13 Jan 2023
	Specified Process Licence (Cement Works)	3408 CSA-CBP	L-3-268(1)	Valid from 10 Jan 2024 to 21 May 2025
	Registration as Chemical Waste Producer	Works area of 3408	WPN 5218-951-B2621-01	Completion of Registration on 16 Jul 2021
	Discharge License under WPCO	Works area of 3408	WT00038836-2021	Valid from 13 Dec 2023 to 30 Sep 2026
	Bill Account for disposal	Works area of 3408	A/C 7039063	Approval granted from EPD on 2 Dec 2020
	Construction Noise Permit (General Works)	Works area of 3408	GW-RS1145-24	Valid from 23 Dec 2024 to 22 Jun 2025
	Construction Noise Permit (Special Case)	Works area of 3408	GW-RS0073-25	Valid from 19 Feb 2025 to 18 Aug 2025
3508		Works area of 3508	10012716	Receipt acknowledged by EPD on 30 Dec 2024

Contract No.	Description	Location	Permit/ Reference No.	Status
	Notification of Construction Work under APCO	Storage yard of 3508	10013131	Receipt acknowledged by EPD on 13 Jan 2025
	Registration as Chemical Waste Producer	Works area of 3508	WPN 5218-951-G2898-01	Completion of Registration on 28 Sep 2020
	Discharge License under WPCO	Works area of 3508	WT00037209-2020	Valid from 11 Mar 2021 to 31 Mar 2026
			WT00037523-2021	Valid from 1 Apr 2021 to 30 Apr 2026
			WT00037225-2020	Valid from 1 Apr 2021 to 30 Apr 2026
			WT00037549-2021	Valid from 1 Apr 2021 to 30 Apr 2026
	Bill Account for disposal	Works area of 3508	7038224	Approval granted from EPD on 8 Sep 2020
	Construction Noise Permit (General Works)	Works area of 3508	GW-RS1170-24	Valid from 6 Dec 2024 to 5 Jun 2025
		Works area of 3508	GW-RS0061-25	Valid from 8 Feb 2025 to 7 Aug 2025
		Works area of 3508	GW-RS0153-25	Valid from 20 Feb 2025 to 19 Aug 2025
		Works area of 3508	GW-RS0276-25	Valid from 22 Mar 2025 to 21 Sep 2025
		Works area of 3508	GW-RS0396-25	Valid from 22 Apr 2025 to 21 Oct 2025
	Construction Noise Permit (Special Case)	Works area of 3508	GW-RS0132-25	Valid from 10 Feb 2025 to 10 May 2025
		Works area of 3508	GW-RS0135-25	Valid from 10 Feb 2025 to 10 May 2025
3601	Notification of Construction Work under APCO	Works area of 3601	10008453	Receipt acknowledged by EPD on 23 Aug 2024
	Registration as Chemical Waste Producer	Works area of 3601	WPN 7119-951-C4421-01	Completion of Registration on 9 Jan 2020
	Bill Account for disposal	Works area of 3601	A/C 7029991	Approval granted from EPD on 1 Feb 2018
	Construction Noise Permit (General Works)	Works area of 3601	GW-RS0479-25	Valid from 8 May 2025 to 7 November 2025
3602	Notification of Construction Work under APCO	Works area of 3602	421278	Receipt acknowledged by EPD on 18 Sep 2017
		Works area of 3602	WPN 5296-951-N2673-01	Completion of Registration on 9 Oct 2017

Contract No.	Description	Location	Permit/ Reference No.	Status
	Registration as Chemical Waste Producer	Site office of 3602	WPN 5296-951-N2673-02	Completion of Registration on 11 Dec 2017
	Bill Account for disposal	Works area of 3602	A/C 7028942	Approval granted from EPD on 6 Oct 2017
	Construction Noise Permit (Special Case)	Works area of 3602	GW-RS0387-25	Valid from 16 Apr 2025 to 9 Sep 2025
3603	Notification of Construction Work under APCO	Site office of 3603	433604	Receipt acknowledged by EPD on 16 May 2018
	Registration as Chemical Waste Producer	Site office of 3603	WPN 5296-951-S4069-01	Completion of Registration on 22 Jan 2018
	Bill Account for disposal	Works area of 3603	A/C 7030002	Approval granted from EPD on 1 Feb 2018
3721	Notification of Construction Work under APCO	Works area of 3721	448657	Receipt acknowledged by EPD on 2 Sep 2019
	Bill Account for disposal	Works area of 3721	A/C 7035234	Approval granted from EPD on 25 Sep 2019
	Construction Noise Permit (General Works)	Works area of 3721	GW-RS1100-24	Valid from 28 Nov 2024 to 27 May 2025 (Superseded by GW-RS0494-25)
			GW-RS0494-25	Valid from 27 May 2025 to 26 Nov 2025
3728	Registration as Chemical Waste Producer	Works area of 3728	WPN 5113-951-S4481-01	Completion of Registration on 20 Oct 2023
	Bill Account for disposal	Works area of 3728	A/C 7039409	Approval granted from EPD on 22 Jan 2021
3733	Notification of Construction Work under APCO	Works area of 3733	472772	Receipt acknowledged by EPD on 18 Oct 2021
	Registration as Chemical Waste Producer	Works area of 3733	WPN 5213-951-W3660-01	Completion of Registration on 30 Dec 2021
	Bill Account for disposal	Works area of 3733	7041945	Approval granted from EPD on 21 Oct 2021
3801	Notification of Construction Work under APCO	Works area of 3801	10012491	Receipt acknowledged by EPD on 19 Dec 2024
		Stockpiling area of 3801	10007317	Receipt acknowledged by EPD on 25 Jul 2024
	Registration as Chemical Waste Producer	Works area of 3801	WPN 5296-951-C1169-53	Completion of Registration on 14 Aug 2018



Contract No.	Description	Location	Permit/ Reference No.	Status
	Discharge License under WPCO	Works area of 3801	WT00041429-2022	Valid from 16 Aug 2022 to 31 Aug 2027
		Stockpiling area of 3801	WT00037354-2021	Valid from 8 Mar 2021 to 31 Mar 2026
	Bill Account for disposal	Works area of 3801	A/C 7028254	Approval granted from EPD on 3 Jul 2017
	Notification of Construction Work under APCO	Works area of 3802	10008525	Receipt acknowledged by EPD on 27 Aug 2024
	Registration as Chemical Waste Producer	Works area of 3802	WPN 5218-951-G2895-01	Completion of Registration on 28 Aug 2020
3802	Discharge License under WPCO	Works area of 3802 (Existing airport)	WPN 5218-951-G2945-01	Completion of Registration on 29 Sep 2020
		Works area of 3802	WT00037032-2020	Valid from 25 May 2021 to 31 May 2026 (Variation of licence WT00037032-2020 granted on 31 Dec 2024)
		Works area of 3802 (Existing airport)	WT00039092-2021	Valid from 30 Nov 2021 to 31 Nov 2026
			WT00043143-2023	Valid from 17 Mar 2023 to 31 Mar 2028
			WT00041807-2022	Valid from 3 Oct 2022 to 31 Oct 2027
	Bill Account for disposal	Works area of 3802	A/C 7037575	Approval granted from EPD on 15 Jun 2020
	Construction Noise Permit (General Works)	Works area of 3802	GW-RS0323-25	Valid from 28 Mar 2025 to 25 Sep 2025
		Works area of 3802 (Existing airport)	GW-RS0148-25	Valid from 17 Feb 2025 to 16 Aug 2025
		Works area of 3802 (NOTAM)	GW-RS0335-25	Valid from 21 Apr 2025 to 23 May 2025 (Superseded by GW-RS0550-25)
			GW-RS0550-25	Valid from 26 May 2025 to 20 Oct 2025
3804	Notification of Construction Work under APCO	Works area of 3804	487452	Receipt acknowledged by EPD on 14 Dec 2022
		Works area of 3804	10012542	Receipt acknowledged by EPD on 20 Dec 2024
	Construction Noise Permit (General Works)	Works area of 3804	GW-RS0245-25	Valid from 17 Mar 2025 to 16 Sep 2025
	Registration as Chemical Waste Producer	Works area of 3804	WPN 5213-951-B2686-01	Completion of Registration on 4 Jan 2023



Contract No.	Description	Location	Permit/ Reference No.	Status
	Bill Account for disposal	Works area of 3804	A/C 7046121	Approval granted from EPD on 3 Jan 2023
	Discharge License under WPCO	Works area of 3804	WT00044391-2023	Valid from 17 Aug 2023 to 31 Aug 2028
3805	Notification of Construction Work under APCO	Works area of 3805	490065	Receipt acknowledged by EPD on 2 Mar 2023
			10017209	Receipt acknowledged by EPD on 14 May 2025
	Construction Noise Permit (General Works)	Works area of 3805	GW-RS0183-25	Valid from 4 Mar 2025 to 3 Sep 2025
	Registration as Chemical Waste Producer	Works area of 3805	WPN 5218-951-C4788-01	Completion of Registration on 31 Mar 2023
	Bill Account for disposal	Works area of 3805	A/C 7046828	Approval granted from EPD on 10 Mar 2023
	Discharge License under WPCO	Works area of 3805	WT00043804-2023	Valid from 15 Jun 2023 to 30 Jun 2028
3901A	Air Pollution Control (Furnaces, Ovens and Chimneys) (Installation and Alteration) Regulations	Works area of 3901A	EP/RS/0000443053	Approval granted on 11 Dec 2020
	Specified Process license under APCO	Works area of 3901A	L-3-261(2)	Valid from 20 Dec 2024 to 19 Dec 2026
	Landfill Disposal of Waste Concrete from Batching Plant	Works area of 3901A	92290	Valid from 10 Aug 2024 to 9 May 2025
	Registration as Chemical Waste Producer	Works area of 3901A	WPN 5218-951-K3400-01	Completion of Registration on 17 Jul 2020
	Bill Account for disposal	Works area of 3901A	A/C 7037889	Approval granted on 20 Jul 2020
	Construction Noise Permit (General Works)	Works area of 3901A	GW-RS0056-25	Valid from 5 Feb 2025 to 4 Aug 2025
3901B	Air Pollution Control (Furnaces, Ovens and Chimneys) (Installation and Alteration) Regulations	Works area of 3901B	EP/RS/0000438488	Approval granted on 26 Jun 2020
	Registration as Chemical Waste Producer	Works area of 3901B	WPN 5218-951-G2880-01	Completion of Registration on 17 Jan 2020
	Bill Account for disposal	Works area of 3901B	A/C 7032417	Approval granted from EPD on 13 Nov 2018
	Construction Noise Permit (General Works)	Works area of 3901B	GW-RS0059-25	Valid from 5 Feb 2025 to 4 Aug 2025

Contract No.	Description	Location	Permit/ Reference No.	Status
3913	Specified Process license under APCO	Works area of 3913	L-15-040(2)	Valid from 19 Feb 2025 to 18 Feb 2027
	Registration as Chemical Waste Producer	Works area of 3913	WPN 5213-951-S4405-01	Completion of Registration on 22 Jul 2022, updated on 29 Mar 2023
	Bill Account for disposal	Works area of 3913	A/C 7044632	Approval granted from EPD on 18 Aug 2022
	Construction Noise Permit (General Works)	Works area of 3913	GW-RS0233-25	Valid from 20 Mar 2025 to 19 Sep 2025
132 kV Cable	Bill Account for disposal	Works area of 132 kV Cable	A/C 7039280	Approval granted from EPD on 8 Jan 2021

## Appendix F. Cumulative Statistics on Exceedances, Environmental Complaints, Notification of Summons and Status of Prosecutions

### Statistics for Exceedances for 1-hour TSP, Noise, Water, Waste, CWD Monitoring

		Total no. recorded in the reporting period	Total no. recorded since the project commenced
1-hr TSP	Action	0	0
	Limit	0	0
Noise	Action	0	0
	Limit	0	0
Water	Action	Nil <sup>(2)</sup>	0
	Limit	Nil <sup>(2)</sup>	0
Waste	Action	0	1
	Limit	0	0
CWD	Action	Nil <sup>(3)</sup>	0
	Limit	Nil <sup>(3)</sup>	0

Remarks: 1) Exceedances, which are not project related, are not shown in this table.

2) With the completion of land formation works including seawall construction and all marine filling works in the first quarter of 2023, the construction phase water quality impact monitoring was terminated after 31 October 2023. No water quality impact monitoring was undertaken during the reporting period.

3) Construction phase CWD monitoring by small vessel line-transect survey supplemented by land-based theodolite tracking survey and passive acoustic monitoring was completed in December 2023. No CWD impact monitoring was undertaken during the reporting period.

### Statistics for Complaints, Notifications of Summons and Prosecutions

Reporting Period	Cumulative Statistics		
	Complaints	Notifications of Summons	Prosecutions
This reporting period	0	0	0
From 28 December 2015 to end of the reporting period	82	2	2

