



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

Construction Phase Monthly EM&A  
Report No. 103  
(For July 2024)

August 2024

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

T +852 2828 5757  
mottmac.hk

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Report No. 103  
(For July 2024)

August 2024

**This Monthly EM&A Report No. 103 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:**



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

**Date**

14 August 2024



AECOM +852 3922 9000 tel  
12/F, Grand Central Plaza, Tower +852 3922 9797 fax  
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

Our Ref : 60440482/C/RMKY240814

**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

14 August 2024

Dear Sir,

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

**Submission of Monthly EM&A Report No. 103 (July 2024)**

Reference is made to the Environmental Team's submission of the Monthly EM&A Report No. 103 under Condition 3.5 of the Environmental Permit No. EP-489/2014 certified by the ET Leader on 14 August 2024.

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



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# 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
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
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
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 103<sup>rd</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 July 2024.

During the reporting period, the project is in the Interim Two-Runway System (I-2RS) stage, in which the new North Runway and the associated taxiway and facilities were operated together with the South Runway and existing airport facilities, with the Centre Runway closed down for modification works.

### **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 land improvement works, filling works, pavement works, concourse superstructure works, tunnel works for Automated People Mover (APM) and Baggage Handling System (BHS) and associated works. Land-based works on existing airport island involved Terminal 2 (T2) expansion works, modification and tunnel works for APM and BHS, utilities works, road and drainage works, excavation works, and 132kV cable laying 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:

<b>Monitoring Activities</b>	<b>Number of Sessions</b>
1-hour Total Suspended Particulates (TSP) air quality monitoring	30
Noise monitoring	18
Vessel line-transect surveys for post-construction 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 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.

A post-construction phase CWD monitoring by vessel line transect survey was conducted following the same methodology as adopted in construction phase monitoring.

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

		
<p>Automatic Wheel Washing Facilities provided by Contractor</p>	<p>Contractor Conducted Visual Inspection of Treated Wastewater Quality</p>	<p>Air Quality Impact Monitoring conducted by ET at Man Tung Road Park</p>

**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**

- Filling materials delivery.

**Airfield Works:**

**Contract 3302 Eastern Vehicular Tunnel Advance Works**

- Underground utilities works.

**Contract 3305 Airfield Ground Lighting System**

- Enhanced vehicular warning light hardware installation;
- Power supply system installation; and
- Cable containment installation.

**Contract 3310 North Runway Modification Works**

- Underground utilities works;
- Construction of vehicular tunnels;
- Pavement works for runway;
- Land improvement works;
- Landscape works; and
- Architectural, builder's work and finishing works.

**Terminal 2 Concourse and Apron Works:**

**Contract 3402 New Integrated Airport Centres Enabling Works**

- Road resurfacing work.

**Contract 3403 New Integrated Airport Centres Building and Civil Works**

- Defects and outstanding works.

**Contract 3404 Integrated Airport Control System**

- Electrical and mechanical works.

### **Contract 3405 Third Runway Concourse Foundation and Substructure Works**

- Backfilling works; and
- Drainage works.

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

- Building services and architectural, builder's work and finishing works;
- Fuel pipe installation works;
- Utilities works;
- Erection works for concrete batching plant;
- Reinforced concrete works;
- Backfilling works; and
- Cable laying works.

### **Terminal 2 Expansion:**

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

- Pier, deck and parapet construction;
- Drainage construction and utilities works;
- Roof works;
- Link bridge works;
- Crossroad duct laying works;
- Construction of beams and columns;
- Electrical and mechanical works; and
- Architectural, builder's work and finishing works.

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

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

- Guide beam installation.

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

- Concrete plinth and track plinth construction;
- New Swing Gates installation works; and
- Cabling works.

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

- Steel work, mechanical and electrical installation; and
- Conveyor and electrical installation.

### **Airport Support Infrastructure:**

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

- Backfilling works;
- Road reinstatement works; and
- Drainage and underground utilities reinstatement works.

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

- Excavation and lateral supports;
- 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**

- Site setup and formation works;
- Superstructure works and architectural, builder's work and finishing works;



- Piles interface core and pile cap construction works;
- Electrical and mechanical works; and
- Underground utilities works.

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

- Pile cap works; 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**

- Operation of concrete batching plant and material conveyor belt.

**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.

**Utilities:**

**132kV Cable**

- Cable trenching, duct installation and backfilling.

**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		√	No construction activities-related complaint was received during the reporting period.	Nil
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 summary of construction works programme can be referred to **Section 1.4**.

## 1.2 Scope of this Report

This is the 103<sup>rd</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 July 2024.

## 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**.

**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) (Mott MacDonald Hong Kong Limited)	Environmental Team Leader	Terence Kong	2828 5919
	Deputy Environmental Team Leaders	Heidi Yu	2828 5704
		Ken Wong	2828 5817

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

Party	Position	Name	Telephone
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 3302 Eastern Vehicular Tunnel Advance Works (China Road and Bridge Corporation)	Project Manager	Dickey Yau	5699 4503
	Environmental Officer	Dennis Ho	5645 0563
Contract 3305 Airfield Ground Lighting System (ADB Safegate Hong Kong Limited)	Project Manager	Allam Al-Turk	2944 9725
	Environmental Officer	Ivan Ting	9222 9490
Contract 3306 Observation Facility Control System Supporting Interim 2RS and 3RS (Chinney Alliance Engineering Limited)	Project Director	Dennis Yam	9551 9920
	Environmental Officer	Richard Liu	9216 8990
Contract 3307 Fire Training Facility (Paul Y. Construction Company Limited)	Project Manager	Ken Tang	9640 5397
	Environmental Officer	Ferddy Leung	5585 6746
Contract 3308 Foreign Object Debris Detection System (DAS Aviation Services Group)	Project Manager	Jeffrey Yau	9873 7422
Contract 3310 North Runway Modification Works (China State Construction Engineering (Hong Kong) Ltd.)	Project Manager	Kingsley Chiang	9424 8437
	Environmental Officer	Federick Wong	9842 2703

#### Terminal 2 Concourse and Apron Works:

Party	Position	Name	Telephone
Contract 3402 New Integrated Airport Centres Enabling Works (Wing Hing Construction Co., Ltd.)	Project Manager	Wyman Lau	6112 9753
	Health Safety Environmental Manager	Mike Leung	6625 2550
Contract 3403	Project Manager	Alice Leung	9220 3162

Party	Position	Name	Telephone
New Integrated Airport Centres Building and Civil Works (Sun Fook Kong Construction Limited)	Environmental Officer	Ray Cheung	9785 1566
Contract 3404 Integrated Airport Control System (Shun Hing Systems Integration Co., Ltd.)	Project Manager	Andy Ng	9102 2739
	Environmental Officer	Michael Lo	6228 3926
Contract 3405 Third Runway Concourse Foundation and Substructure Works (China Road and Bridge Corporation – Bachy Soletanche Group Limited – LT Sambo Co., Ltd. Joint Venture)	Project Manager	Francis Choi	9423 3469
	Environmental Officer	Jacky Lai	9028 8975
Contract 3408 Third Runway Concourse and Apron Works (Beijing Urban Construction Group Company Limited and Chevalier (Construction) Company Limited Joint Venture)	Senior HSE Manager	Qian Zhang	5377 7976
	Environmental Officer	Malcolm Leung	7073 7559

### Terminal 2 Expansion:

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

### Automated People Mover and Baggage Handling System:

Party	Position	Name	Telephone
Contract 3601 New Automated People Mover System (TRC Line) (CRRC Puzhen Bombardier Transportation Systems Limited and CRRC Nanjing Puzhen Co., Ltd. Joint Venture)	Project Manager	Hongdan Wei	158 6180 9450
	Environmental Officer	H Y Yue	9185 8186
Contract 3602 Existing APM System Modification Works (Niigata Transys Co., Ltd.)	Project Manager	Xia Bo	6586 4950
	Environmental Officer	Y M Tong	5316 9801
Contract 3603 3RS Baggage Handling System (VISH Consortium)	Project Manager	K C Ho	9272 9626
	Environmental Officer	Richard Ng	9802 9577

### Airport Support Infrastructure:

Party	Position	Name	Telephone
Contract 3801 APM and BHS Tunnels on Existing Airport Island (China State Construction Engineering (Hong Kong) Ltd.)	Project Manager	Kingsley Chiang	9424 8437
	Environmental Officer	Eunice Kwok	9243 1331
Contract 3802 APM and BHS Tunnels and Related Works (Gammon Engineering & Construction Company Limited)	Project Director	John Adams	6111 6989
	Environmental Officer	Yan Ng	5345 8555
Contract 3804 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)	Project Manager	Mr. Zhang Xianda	4661 6818
	Environmental Officer	Mr. Calvin Sze	9205 9277
Contract 3805 New Airport District Police Operational Base (Chinney Construction Co., Ltd.)	Project Manager	Cheuk Wing Wai	9339 8321
	Environmental Officer	Mike Li	6306 8547

### Construction Support:

Party	Position	Name	Telephone
Contract 3721 Construction Support Infrastructure Works (China State Construction Engineering (Hong Kong) Ltd.)	Senior Project Manager	Thomas Lui	9011 5340
	Environmental Officer	John Mak	6273 8703
Contract 3728 Minor Site Works (Shun Yuen Construction Company Limited)	Contract Manager	C K Liu	9194 8739
	Environmental Officer	Dan Leung	6856 5899
Contract 3733 Emergency Repair Service (Wing Hing Construction Co., Ltd.)	Project Manager	Michael Kan	9206 0550
	Safety Health Environmental Manager	Mike Leung	6625 2550
Contract 3901A Concrete Batching Facility (K. Wah Concrete Company Limited)	Project Manager	Benedict Wong	9553 2806
	Environmental Officer	C P Fung	9874 2872
Contract 3901B Concrete Batching Facility (Gammon Construction Limited)	General Manager	Gabriel Chan	2435 3260
	Environmental Officer	Rex Wong	2695 6319

Party	Position	Name	Telephone
Contract 3908 Quay Management Services (Gitanes – Crown Asia Joint Venture)	Project Manager	Mr. Ian Li	9750 6438
	Environmental Officer	Mr. Tang Kai Fun	9406 3526
Contract 3913 Asphalt Batching Plant (SPR Joint Venture)	Project Manager	Xie Yi Sheng	6580 6005
	Environmental Officer	Kenneth Chan	9300 2182

**Utilities:**

Party	Position	Name	Telephone
132 kV Cable (CLP Power Hong Kong Limited / Kum Shing (K.F.) Construction Company Limited)	Engineer	Ken Fung	6391 9087
	Assistant Engineer	Ben Tang	5133 1754

**1.4 Summary of Construction Works**

During the reporting period, the project is in the Interim Two-Runway System (I-2RS) stage, in which the new North Runway and the associated taxiway and facilities were operated together with the South Runway and existing airport facilities, with the Centre Runway closed down for modification 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 land improvement works, filling works, pavement works, concourse superstructure works, tunnel works for APM and BHS and associated works. Land-based works on existing airport island involved T2 expansion works, modification and tunnel works for APM and BHS, utilities works, road and drainage works, excavation works, and 132kV cable laying 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 are 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.

Parameters	EM&A Requirements	Status
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 Impact 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.
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 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 proposal was accepted by EPD in Jun 2023.
<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 Egret Survey Plan	Once per month in the breeding season between April and July, prior to the commencement of HDD drilling works.	The Egret Survey Plan was submitted and approved by EPD under EP Condition 2.14.

Parameters	EM&A Requirements	Status
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.
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	6 months of baseline surveys before the commencement of land formation related construction works. Vessel line transect surveys: Two full surveys per month; 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 Passive Acoustic Monitoring (PAM): For the whole duration of baseline period.	Baseline CWD results were reported in the CWD Baseline Monitoring Report and submitted to EPD in accordance with EP Condition 3.4.
Impact Monitoring	Vessel line transect surveys: Two full surveys per month; 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 PAM: For the whole duration for land formation related construction works.	The construction phase CWD monitoring was completed in December 2023.
Post-construction Phase Monitoring	12 months of post-construction phase CWD monitoring upon the completion of marine construction works. Vessel line transect surveys: Two full surveys per month.	The post-construction phase CWD monitoring was commenced in January 2024.
<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.
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	No Marine Mammal Watching Plan (MMWP) implementation measures during this reporting period.



Parameters	EM&A Requirements	Status
Dolphin Exclusion Zone (DEZ) Plan implementation measures	Monitor and check	No Dolphin Exclusion Zone (DEZ) monitoring was conducted during this reporting period
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	Silt Curtain Deployment Plan measures was implemented at C7a during this reporting period.
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:

Eighteen environmental management meetings for EM&A review with works contracts: 9, 10, 11, 12, 15, 19, 24, 25, 26, 29 & 30 July 2024.

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)	9 May 2024	<b>Appendix D</b>
Portable direct reading dust meter (Laser dust monitor)	SIBATA LD-3B-2 (Serial No. 296098)	18 Sep 2023	Appendix E of Monthly EM&A Report No. 94

### 2.3 Monitoring Methodology

#### 2.3.1 Measuring Procedure

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

- a. The portable direct reading dust meter was mounted on a tripod at a height of 1.2m above the ground.
- b. 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 E of the Monthly EM&A Report No. 94 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/m <sup>3</sup> )	Action Level (mg/m <sup>3</sup> )	Limit Level (mg/m <sup>3</sup> )
AR1A	18 – 76	306	500
AR2	21 – 93	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)	03 Mar 2024	Appendix D of Monthly EM&A Report No.99
Integrated Sound Level Meter	Rion NL-52 (Serial No. 01287679)	22 Oct 2023	Appendix D of Monthly EM&A Report No.95
Acoustic Calibrator	Castle GA607 (Serial No. 040162)	03 Mar 2024	Appendix D of Monthly EM&A Report No.99
Acoustic Calibrator	Casella CEL-120 (Serial No. 2383737)	30 Jun 2024	<b>Appendix D</b>

### 3.3 Monitoring Methodology

#### 3.3.1 Monitoring Procedure

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

- a. 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.
- b. Façade measurements were made at the monitoring station NM3A.
- c. Parameters such as frequency weighting, time weighting and measurement time were set.
- d. 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.
- e. 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.
- f. Noise measurement results, when higher than the baseline monitoring levels, were corrected with reference to the baseline monitoring levels.
- g. 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:

- a. The microphone head of the sound level meter was cleaned with soft cloth at regular intervals.
- b. 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 <sub>eq</sub> (30mins)	L <sub>eq</sub> (30mins)
NM1A <sup>(1)</sup>	65 - 73	75
NM4 <sup>(1)</sup>	62 - 66	70 <sup>(2)</sup>
NM5 <sup>(1) (3)</sup>	53 - 66	75
NM6 <sup>(1) (3)</sup>	62 - 67	75

Notes:

- (1) +3dB(A) Façade correction included;
- (2) The limit level will be reduced to 65dB(A) during school examination periods at NM4. School examination took place on 16 July 2024 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)
Mar 2024 <sup>(2)</sup>	0	137	14,993	8,814	0	1,800	4,825
Apr 2024 <sup>(2)</sup>	0	131	3,058	4,959	0	0	4,875
Jun 2024 <sup>(2)</sup>	0	16,018	0	4,380	60	1,300	6,789
Jul 2024 <sup>(3)</sup>	0	13,793	0	6,060	1,300	0	6,003

Notes:

- (1) C&D refers to Construction and Demolition.
- (2) Updated figures were provided by contractors.



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)
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(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 excavated marine sediment, treatment process, final backfilling location as well as associated 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 the Manual, CWD monitoring by small vessel line-transect survey should be conducted during the post-construction phase, with a frequency of two full surveys per month.

### 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 post-construction 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
<b>NEL</b>					
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
<b>NWL</b>					
1S	804671	814577	5S	808504	821735
1N	804671	831404	5N	808504	828602
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

Waypoint	Easting	Northing	Waypoint	Easting	Northing
<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 9, 10, 11, 12, 15, 16, 18 and 31 July 2024 covering all transects in NEL, NWL, AW, WL and SWL survey areas for twice.

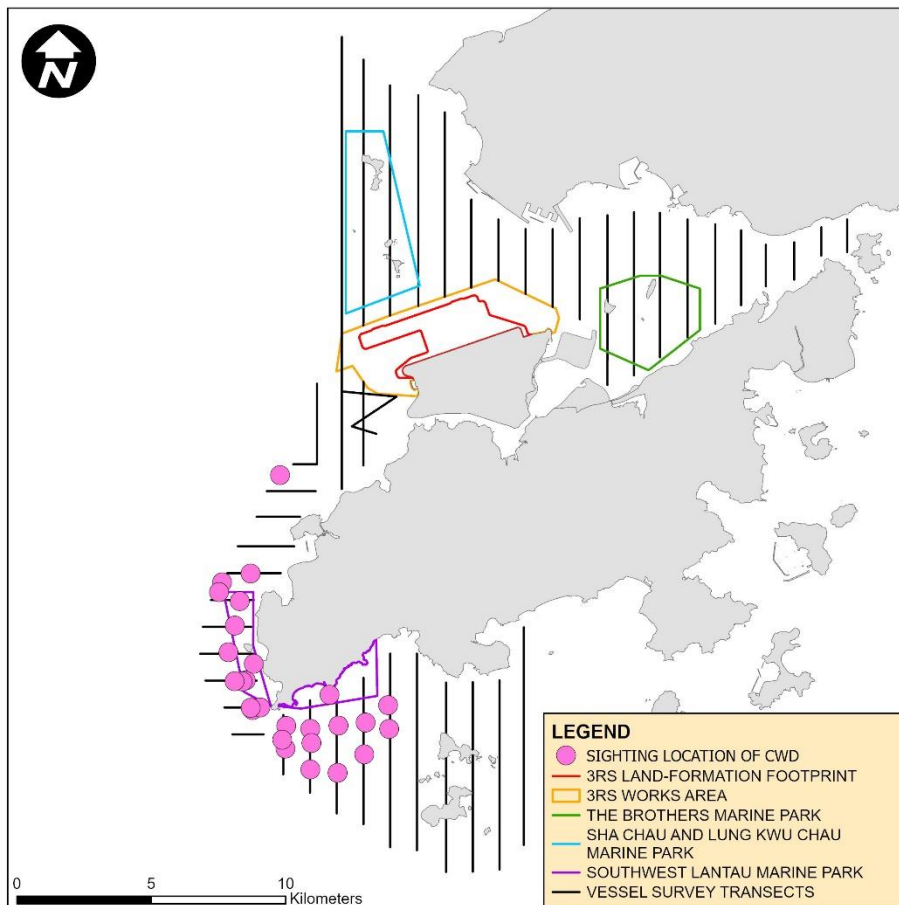
A total of around 438.42 km of survey effort was collected from these surveys and around 404.73 km survey effort was being conducted under favourable weather condition (i.e. Beaufort Sea State 3 or below with favourable visibility). Details of the survey effort are given in **Appendix C**.

#### Sighting Distribution

In the current reporting period, 27 sightings with 103 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, CWD sightings were mostly scattered in the waters between Yi O and Fan Lau. In SWL, CWD sightings were recorded in western part of the survey area, from Tai Long Wan to Fan Lau. There was no CWD sighting recorded in NWL and NEL during the reporting period.

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



Remarks: (1) Please note that there is 27 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, 27 groups of 103 dolphins in total were sighted, and the average group size of CWDs was 3.8 dolphins per group. The majority of the CWD sightings were having medium group size (i.e. 3-9 dolphins) and one CWD sighting with large group size (i.e. 10 or more dolphins) was recorded in the current reporting period.

**Activities and Association with Fishing Boats**

There was five CWD sightings recorded engaging in foraging activities in the current reporting period in WL and SWL survey areas during the current reporting period. Amongst these five sightings, there was one sighting observed in association with operating purse seiner in WL and two sighting observed in association with operating purse seiner in SWL.

**Mother-calf Pair**

In this reporting period, there were two sightings recorded with the presence of mother-and-unspotted juvenile pair(s). These two sightings were recorded in both WL and SWL.

### 6.3.2 Photo Identification

In the current reporting period, a total number of 30 different CWD individuals were identified for totally 42 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	10-Jul-24	4	WL	WLMM009	12-Jul-24	3	WL
	12-Jul-24	3	WL	WLMM038	12-Jul-24	1	WL
NLMM060	10-Jul-24	3	WL	WLMM052	10-Jul-24	3	WL
NLMM061	9-Jul-24	2	SWL	WLMM055	10-Jul-24	4	WL
NLMM063	9-Jul-24	6	SWL	WLMM063	12-Jul-24	1	WL
NLMM065	10-Jul-24	1	WL	WLMM071	10-Jul-24	1	WL
SLMM002	9-Jul-24	3	SWL	WLMM077	9-Jul-24	2	SWL
SLMM014	11-Jul-24	2	SWL		3	SWL	
SLMM027	9-Jul-24	2	SWL		12-Jul-24	2	WL
SLMM030	12-Jul-24	6	WL	WLMM091	9-Jul-24	12	SWL
SLMM049	9-Jul-24	3	SWL	WLMM092	9-Jul-24	12	SWL
	10-Jul-24	4	WL	WLMM109	10-Jul-24	4	WL
	12-Jul-24	6	WL		12-Jul-24	3	WL
SLMM050	9-Jul-24	5	SWL	WLMM111	12-Jul-24	5	WL
		6	SWL	WLMM113	9-Jul-24	2	SWL
	10-Jul-24	4	WL	WLMM114	9-Jul-24	5	SWL
WLMM001	9-Jul-24	3	SWL		12-Jul-24	6	WL
WLMM001	10-Jul-24	4	WL	WLMM118	9-Jul-24	2	SWL
	12-Jul-24	6	WL	WLMM161	10-Jul-24	3	WL
	WLMM005	10-Jul-24	4	WL	WLMM200	10-Jul-24	8
WLMM005	12-Jul-24	3	WL	WLMM201	12-Jul-24	6	WL

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

During the reporting period, no dolphin observation station was deployed by the contractor for continuous monitoring of the DEZ in accordance with the DEZ Plan. During this reporting period, no training session were provided by the ET for the proposed dolphin observers.

Audits of SkyPier high speed ferries route diversion and speed control and construction vessel management are presented in **Section 7.4** and **Section 7.5** respectively.

### 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

Monitoring of CWD was conducted with two complete sets of small vessel line-transect surveys. The tentative post-construction phase CWD monitoring schedule of next reporting month is provided in **Appendix B**.

## 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 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 3508 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.	





Landscape and Visual Mitigation Measures during Construction	Implementation Status	Relevant Contract(s) in the Reporting Period
<p>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>	<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
<p>CM10 – Land formation works shall be followed with advanced hydroseeding around taxiways and runways as soon as practical</p>	<p>The Contractor's performance on the implementation of advanced hydroseeding works was observed and checked by the ET during the weekly site inspection.</p>	3310
<p>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>	<p>Compensatory trees have been planted in batches at AAHK 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**

		
<p>Erection of site hoardings around works area in unobtrusive colours (CM5)</p>	<p>Avoidance of excessive height and bulk of site buildings (CM6)</p>	<p>Control of night-time lighting using light hooding and minimisation of night working period (CM7)</p>

		
<p>General view of retained tree (CM8)</p>	<p>General view of transplanted trees (CM9)</p>	<p>General view of advanced hydroseeding works (CM10)</p>
		
<p>General view of compensatory tree planting (OM7)</p>		

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. 33 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 was conducted in July 2024.

**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 measures. Any changes to the design, including design changes on site shall also be checked.	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
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.	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.	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. Discuss remedial actions with IEC, AAHK / PM and Contractor. Monitor remedial actions until rectification has been completed. If non-conformity stops, cease additional monitoring.	Check monitoring report. Check Contractor's working method. Discuss with ET and Contractor on possible remedial measures. Advise AAHK / PM on effectiveness of proposed remedial measures. Supervise 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.

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

Contract No.	Retain (nos.)	Transplanted (nos.)		To-be-transplanted (nos.)
		Establishment Period	Maintenance Period	
3503	0	0	9 <sup>(1)</sup>	0
3508	33	0	12	0
3801	0	0	5 <sup>(2)</sup>	0
<b>Grand Total</b>	<b>33</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 2025. Photos of the last inspection in February 2024 can be referred to Table 7.7 of the Construction Phase Monthly EM&A Report No.98.
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	
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 2024. Photos of the last inspection in December 2023 can be referred to Table 7.7 of the Construction Phase Monthly EM&A Report No. 96.
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 were shown in <b>Table 7.7</b> .
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>	Contract 3508	

Tree ID	Transplant Date	Management Stage	Management Agency	Remarks
		Aug 2022 – Jul 2031		
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	
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.



**Table 7.7: Photos of the Existing Transplanted Trees**

Under 10-year Long-term Management:		
		
T1493	T1494	T1495
		
T1496	T1497	T1498
		
T1499	T1500	T1501



### 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

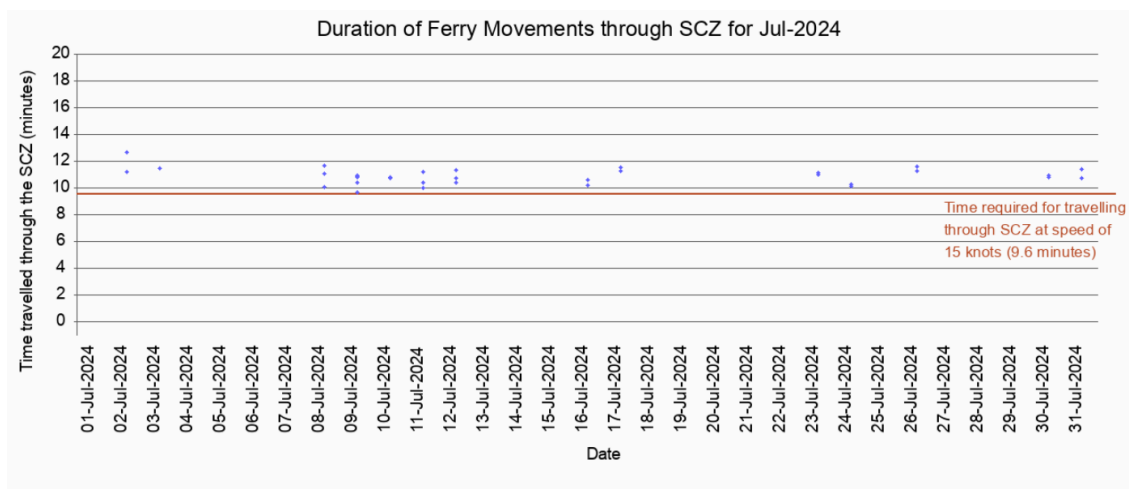
The Marine Travel Routes and Management Plan for High Speed Ferries of SkyPier (the SkyPier Plan) was submitted to the Advisory Council on the Environment for comment and subsequently submitted to and approved by EPD in November 2015 under EP Condition 2.10. The approved SkyPier Plan is available on 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.

Key audit findings for the SkyPier HSF travelling to/from Macau against the requirements of the SkyPier Plan during the reporting period are summarised in **Table 7.8**. The daily movement of all SkyPier HSFs, including those not using the diverted route, in this reporting period (i.e. 50 to 62 daily movements) were within the maximum daily cap of 125 daily movements. Status of compliance with the annual daily average of 99 movements will be further reviewed in the Annual EM&A Report.

For July 2024, a total of 34 ferry movements between HKIA SkyPier and Macau were recorded and the data are presented in **Appendix G**. The time spent by the SkyPier HSF travelling through the SCZ in July 2024 was presented in **Figure 7.1**. It will take 9.6 minutes to travel through the SCZ when the SkyPier HSFs adopt the maximum allowable speed of 15 knots within the SCZ. **Figure 7.1** shows that all the SkyPier HSF spent more than 9.6 minutes to travel through the SCZ.



**Figure 7.1: Duration of the SkyPier HSFs travelling through the SCZ for July 2024**



Note: Data above the red line indicated that the time spent by the SkyPier HSFs travelling through the SCZ is more than 9.6 minutes, which is in compliance with the SkyPier Plan.

**Table 7.8: Summary of Key Audit Findings against the SkyPier Plan**

Requirements in the SkyPier Plan	1 to 31 July 2024
Total number of ferry movements recorded and audited for HSF to/from Macau	34
Use diverted route and enter / leave SCZ through Gate Access Points	0 deviation
Speed control in speed control zone	The average speed of all HSFs travelling through the SCZ ranged from 10.7 to 14.0 knots. All HSFs travelled through the SCZ with average speed under 15 knots in compliance with the SkyPier Plan. The time used by HSFs to travel through SCZ is presented in <b>Figure 7.1</b> .
A maximum daily cap of 125 movements for all SkyPier HSFs including those not using diverted route	50 to 62 daily movements

## 7.5 Audit of Construction and Associated Vessels

The updated MTRMP-CAV was approved by EPD on 31 May 2022 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:

- Two skipper training sessions were held by contractor’s Environmental Officer. Competency tests were subsequently conducted with the trained skippers by ET. The list of all trained skippers was properly recorded and maintained by ET.
- In this reporting period, four skippers were trained by contractor’s Environmental Officer. In total, 1914 skippers were trained from August 2016 to July 2024.
- The MSS automatically recorded deviation cases such as speeding and entering no entry zone. ET conducted checking to ensure the MSS records deviation cases accurately.
- Deviations such as speeding within the works area 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.

## 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. No DEZ implementation was conducted during the reporting period.

## 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 7.9**.

**Table 7.9: Status of Submissions under Environmental Permit**

EP Condition	Submission	Status
2.1	Complaint Management Plan	
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	Accepted / approved by EPD
2.13	Fisheries Management Plan	
2.14	Egrettry Survey Plan	
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	
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

No construction activities-related complaint was received during the reporting period.

### 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**

- Filling materials delivery.

#### **Airfield Works:**

##### **Contract 3302 Eastern Vehicular Tunnel Advance Works**

- Underground utilities works.

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

- Enhanced vehicular warning light hardware installation;
- Power supply system installation; and
- Cable containment installation.

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

- Underground utilities works;
- Construction of vehicular tunnels;
- Pavement works for runway;
- Land improvement works;
- Landscape works; and
- Architectural, builder's work and finishing works.

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

##### **Contract 3402 New Integrated Airport Centres Enabling Works**

- Road resurfacing work.

##### **Contract 3403 New Integrated Airport Centres Building and Civil Works**

- Defects and outstanding works.

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

- Electrical and mechanical works.

##### **Contract 3405 Third Runway Concourse Foundation and Substructure Works**

- Backfilling works; and
- Drainage works.

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

- Building services and architectural, builder's work and finishing works;
- Fuel pipe installation works;
- Utilities works;
- Erection works for concrete batching plant;
- Reinforced concrete works;
- Backfilling works; and
- Cable laying works.

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

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

- Pier, deck and parapet construction;
- Drainage construction and utilities works;
- Roof works;
- Link bridge works;
- Crossroad duct laying works;
- Construction of beams and columns;
- Electrical and mechanical works; and
- Architectural, builder's work and finishing works.

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

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

- Guide beam installation.

**Contract 3602 Existing APM System Modification Works**

- Concrete plinth and track plinth construction;
- New Swing Gates installation works; and
- Cabling works.

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

- Steel work, mechanical and electrical installation; and
- Conveyor and electrical installation.

**Airport Support Infrastructure:**

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

- Backfilling works;
- Road reinstatement works; and
- Drainage and underground utilities reinstatement works.

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

- Excavation and lateral supports;
- 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**

- Site setup and formation works;
- Superstructure works and architectural, builder's work and finishing works;
- Piles interface core and pile cap construction works;
- Electrical and mechanical works; and
- Underground utilities works.

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

- Pile cap works; 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**

- Operation of concrete batching plant and material conveyor belt.

**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.

#### **Utilities:**

##### **132kV Cable**

- Cable trenching, duct installation and backfilling.

## **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 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 post-construction 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

During the reporting period, the project is in the Interim Two-Runway System (I-2RS) stage, in which the new North Runway and the associated taxiway and facilities were operated together with the South Runway and existing airport facilities, with the Centre Runway closed down for modification 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 land improvement works, filling works, pavement works, concourse superstructure works, tunnel works for Automated People Mover (APM) and Baggage Handling System (BHS) and associated works. Land-based works on existing airport island involved Terminal 2 (T2) expansion works, modification and tunnel works for APM and BHS, utilities works, road and drainage works, excavation works, and 132kV cable laying 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.

A post-construction phase CWD monitoring by vessel line transect survey was conducted following the same methodology as adopted in construction phase monitoring in accordance with the Manual.

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, the daily movements of all SkyPier HSFs in the reporting period, including those not using the diverted route, were in the range of 50 to 62 daily movements, which are within the maximum daily cap of 125 daily movements. A total of 34 HSFs movements under the SkyPier Plan were recorded in the reporting period. The average speed of all HSFs travelling through the SCZ ranged from 10.7 to 14.0 knots. All HSFs travelled through the SCZ with average speed under 15 knots in compliance with the SkyPier Plan. In summary, the ET and IEC audited the HSF movements against the SkyPier Plan and conducted follow up investigations or actions accordingly.

On the implementation of MTRMP-CAV, the MSS automatically recorded the deviation case such as speeding and entering no entry zone. ET conducted checking to ensure the MSS records all deviation cases accurately. Deviations including speeding within the works area and entering no entry zone were reviewed by ET. All the concerned captains were reminded by the contractor's CTCC representative to comply with the requirements of the MTRMP-CAV. The ET reminded contractors that all vessels shall avoid entering the no-entry zone, in particular the Brothers Marine Park and the Sha Chau & Lung Kwu Chau Marine Park. 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



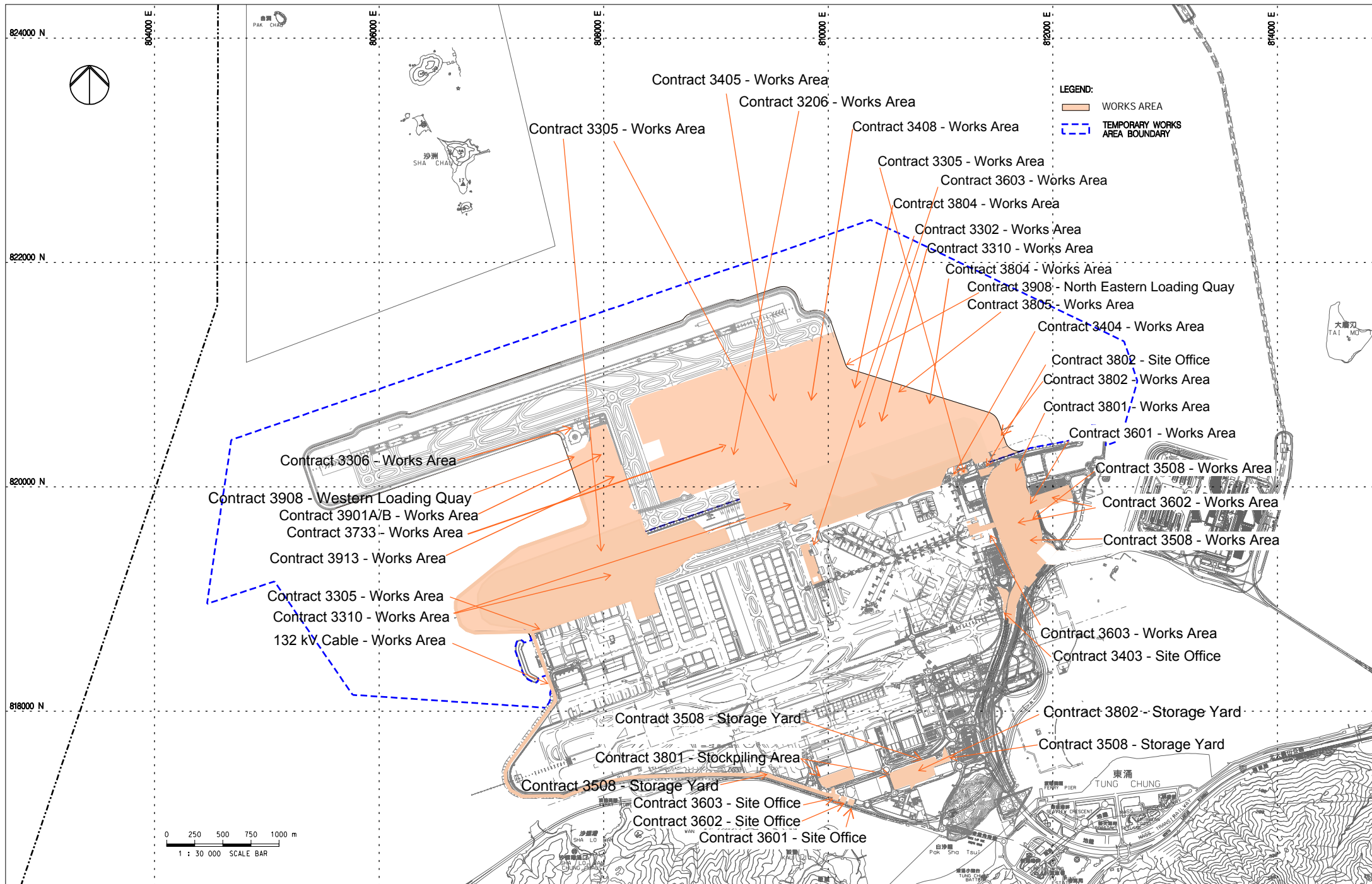


FIGURE 1.1 LOCATIONS OF KEY CONSTRUCTION ACTIVITIES

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



80000 E

80000 E

81000 E

82000 E

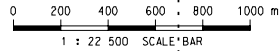
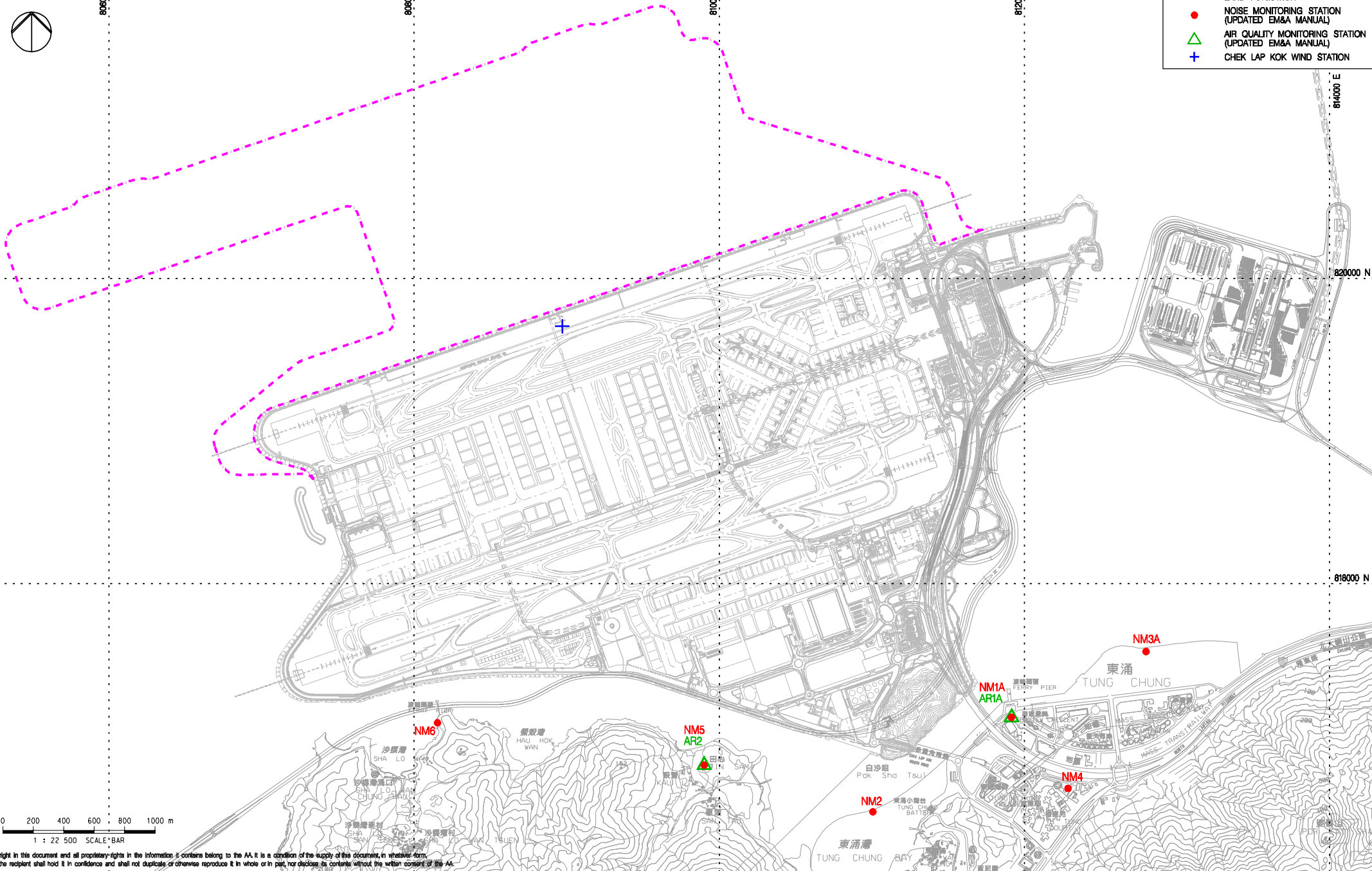
814000 N

820000 N

818000 N

LEGEND:

	LAND FORMATION
	NOISE MONITORING STATION (UPDATED EM&A MANUAL)
	AIR QUALITY MONITORING STATION (UPDATED EM&A MANUAL)
	CHEK LAP KOK WIND STATION



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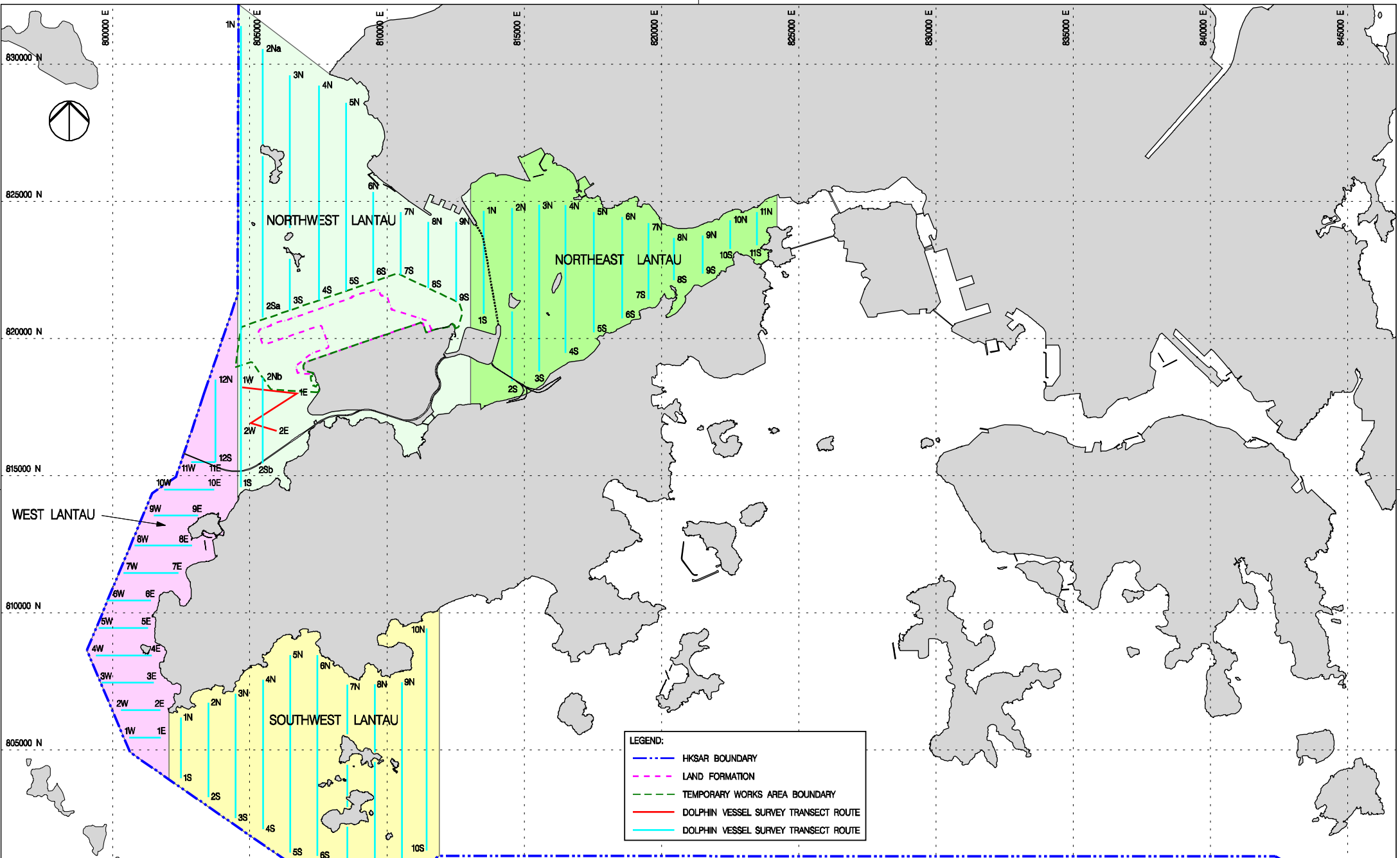
Rev.	Date	Description	Checked
A	06JAN16	FIRST ISSUE	RO
B	29JAN16	GENERAL REVISION	RO
C	11FEB16	GENERAL REVISION	RO
D	29OCT18	GENERAL REVISION	SH



Title  
LOCATIONS OF AIR AND NOISE MONITORING STATIONS AND CHEK LAP KOK WIND STATION

Consultant's Signatures for Approval		Date
Design	TK	29OCT18
Checkers	TK	29OCT18
Approver	EC	29OCT18

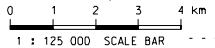
EXPANSION OF HONG KONG INTERNATIONAL AIRPORT INTO A THREE-RUNWAY SYSTEM	
Drawing No.	Scale at A3 1 : 22500
FIGURE 2.1	Rev. D



**LEGEND:**

- HKSAR BOUNDARY
- LAND FORMATION
- TEMPORARY WORKS AREA BOUNDARY
- DOLPHIN VESSEL SURVEY TRANSECT ROUTE
- DOLPHIN VESSEL SURVEY TRANSECT ROUTE

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



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Rev.	Date	Description	Checked
B	27JUL16	GENERAL REVISION	JT
C	06FEB17	GENERAL REVISION	JT
D	01MAR17	GENERAL REVISION	JT
E	28OCT18	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
Design	JC	04APR19
Checkers	JC / TK	04APR19
Approver	EC	04APR19

EXPANSION OF HONG KONG INTERNATIONAL AIRPORT INTO A THREE-RUNWAY SYSTEM		Scale at A3
Drawing No.	FIGURE 6.1	1 : 125000
Rev.	F	

# **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	-	Dust control practices as stipulated in the Air Pollution Control (Construction Dust) Regulation should be adopted. These practices include: Good Site Management <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
			Disturbed Parts of the Roads <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
			Exposed Earth <ul style="list-style-type: none"> <li>Exposed earth should be properly treated by compaction, hydroseeding, vegetation planting or seeding 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
			Loading, Unloading or Transfer of Dusty Materials <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?^
			Debris Handling <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	
			Transport of Dusty Materials <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	
			Wheel washing <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	
			Use of vehicles <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	
			Site hoarding <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	
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	

EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
			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; <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>		
			Other raw materials <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>	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?^
			Loading of materials for batching <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	
			Vehicles <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	
			Housekeeping <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	
5.2.6.6	2.1	-	<b>Best Practices for Asphaltic Concrete Plant</b> 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: Design of Chimney <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>	Within Asphaltic Concrete Plant / Duration of the construction phase	
			Cold feed side <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	



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	
			<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	

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	
			<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	
			<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	
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 <ul style="list-style-type: none"> <li>Appropriate dust control equipment such as a dust extraction and collection system shall be used during rock drilling activities.</li> </ul>	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	-	<ul style="list-style-type: none"> <li>Precautionary measures should be established to request barges to move away during typhoons.</li> </ul>	Construction Site / Construction Period	I
Table 6.40	3.2	-	<ul style="list-style-type: none"> <li>An appropriate marine traffic management system should be established to minimize risk of ship collision.</li> </ul>	Construction Site / Construction Period	I
Table 6.40	3.2	-	<ul style="list-style-type: none"> <li>Location of all existing hydrant networks should be clearly identified prior to any construction works.</li> </ul>	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: <ul style="list-style-type: none"> <li>only well-maintained plant to be operated on-site and plant should be serviced regularly during the construction works;</li> <li>machines and plant that may be in intermittent use to be shut down between work periods or should be throttled down to a minimum;</li> <li>plant known to emit noise strongly in one direction, should, where possible, be orientated to direct noise away from the NSRs;</li> <li>mobile plant should be sited as far away from NSRs as possible; and</li> <li>material stockpiles and other structures to be effectively utilised, where practicable, to screen noise from on-site construction activities.</li> </ul>	Within the Project site / During construction phase / Prior to commencement of operation	I
7.5.6	4.3	-	<b>Adoption of QPME</b> <ul style="list-style-type: none"> <li>QPME should be adopted as far as applicable.</li> </ul>	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> <ul style="list-style-type: none"> <li>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.</li> </ul>	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>I – For C7a and localised silt curtains</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>	<p>Within construction site / Duration of the construction phase</p>	<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>I – For C7a</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 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> <p>I – For C7a and localised silt curtains</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>I – 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>I – For C7a and localised silt curtains</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
			<p><u>For construction of the eastern approach lights at the CMPs</u></p> <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?^
			<p>areas located on the existing Airport island) or as soon as the new land is completed (for works areas located on the new landform);</p>		
			<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	-	<p><b>Sewage Effluent from Construction Workforce</b></p> <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		<p><b>General Construction Activities</b></p> <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	<p><b>Drilling Activities for the Submarine Aviation Fuel Pipelines</b></p> <p>To prevent potential water quality impacts at Sha Chau, the following measures shall be applied:</p> <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
			<p>At the airport island side of the drilling works, the following measures shall be applied for treatment of wastewater:</p> <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	-	<p>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:</p> <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	
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	
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	
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	
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	
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	     

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> <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>			
11.8.1.2	8.1	-	If contaminated soil is identified, the following mitigation measures are for the excavation and transportation of contaminated materials (if any): <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	-	-	<p><b>Minimisation of Land Formation Area</b></p> <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	<p><b>Use of Construction Methods with Minimal Risk/Disturbance</b></p> <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> <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> <li>Use of bored piling in short duration to form the new approach lights and marker beacons for the new runway;</li> <li>Avoid bored piling during CWD peak calving season (Mar to Jun);</li> <li>Prohibition of underwater percussive piling; and</li> <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>	During construction phase at marine works area	<p>C – Completed in Jan 2019 for diversion of aviation fuel pipeline</p> <p>C – Completed in Apr 2022</p> <p>C – Completed in Oct 2021 for new approach lights</p> <p>N/A for marker beacons as HKIAAAA Marker Beacons would be replaced by buoys</p> <p>N/A as no underwater piling works</p> <p>C – Completed in Jan 2019 for HDD works</p>
13.11.2.1 to 13.11.2.7	-	-	<p><b>Mitigation for Indirect Disturbance due to Deterioration of Water Quality</b></p> <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> <li>Use of bored piling in short duration to form the new approach lights and marker beacons for the new runway; and</li> </ul>	All works area during the construction phase	<p>I</p> <p>C – Completed in Apr 2022</p> <p>C – Completed in Oct 2021 for new approach lights</p>



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	-	-	<p><b>Strict Enforcement of No-Dumping Policy</b></p> <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	-	-	<p><b>Good Construction Site Practices</b></p> <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	-	<p><b>SkyPier High Speed Ferries' Speed Restrictions and Route Diversions</b></p> <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> <p><b>Other mitigation measures</b></p> <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
13.11.5.14 to 13.11.5.18	10.3.1	2.31	<p><b>Dolphin Exclusion Zone</b></p> <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 Sep 2016
					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	<p><b>Acoustic Decoupling of Construction Equipment</b></p> <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	<p><b>Spill Response Plan</b></p> <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	-	<p><b>Construction Vessel Speed Limits and Skipper Training</b></p> <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	-	-	<p><b>Minimisation of Land Formation Area</b></p> <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	-	-	<p><b>Use of Construction Methods with Minimal Risk/Disturbance</b></p> <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> <li>▪ Use of bored piling in short duration to form the new approach lights and marker beacons for the new runway; and</li> <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>		<p>C – Completed in Apr 2022</p> <p>C – Completed in Oct 2021 for new approach lights N/A for marker beacons as HKIAAAA Marker Beacons would be replaced by buoys</p> <p>C – Completed in Jan 2019 for HDD works</p>
14.9.1.11	-		<p><b>Strict Enforcement of No-Dumping Policy</b></p> <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	-		<p><b>Good Construction Site Practices</b></p> <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	-		<p><b>Mitigation for Indirect Disturbance due to Deterioration of Water Quality</b></p> <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?^
<b>Health Impact – Aircraft Noise</b>					
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**



# Jul-24

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	<b>1</b>	<b>2</b> Site Inspection	<b>3</b> Site Inspection	<b>4</b> Site Inspection  NM4, NM6	<b>5</b> Site Inspection  AR1A, AR2 NM1A, NM5	<b>6</b>
<b>7</b>	<b>8</b> Site Inspection	<b>9</b> Site Inspection	<b>10</b> Site Inspection	<b>11</b> Site Inspection  AR1A, AR2 NM1A, NM5	<b>12</b> Site Inspection  NM4, NM6	<b>13</b>
<b>14</b>	<b>15</b> Site Inspection	<b>16</b> Site Inspection	<b>17</b> Site Inspection  AR1A, AR2 NM1A, NM5	<b>18</b> Site Inspection	<b>19</b> Site Inspection  NM4, NM6	<b>20</b>
<b>21</b>	<b>22</b> Site Inspection	<b>23</b> Site Inspection  AR1A, AR2 NM1A, NM5	<b>24</b> Site Inspection	<b>25</b> Site Inspection	<b>26</b> Site Inspection  NM4, NM6	<b>27</b>
<b>28</b>	<b>29</b> Site Inspection  AR1A, AR2 NM1A, NM5	<b>30</b> Site Inspection	<b>31</b> Site Inspection			
		<b>Notes:</b> Site Inspection  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**

# Aug-24

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1 Site Inspection	2 Site Inspection  NM4, NM6	3  AR1A, AR2
4	5 Site Inspection	6 Site Inspection	7 Site Inspection  NM4, NM6	8 Site Inspection	9 Site Inspection  AR1A, AR2 NM1A, NM5	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	23 Site Inspection  NM4, NM6	24
25	26 Site Inspection	27 Site Inspection  AR1A, AR2 NM1A, NM5	28 Site Inspection	29 Site Inspection	30 Site Inspection  NM4, NM6	31
		<b>Notes:</b> Site Inspection  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				

# **Post-construction Phase CWD Monitoring Schedule of This Reporting Period**

# Jul-24

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

# **Tentative Post-construction Phase CWD Monitoring Schedule of Next Reporting Period**

# Aug-24

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

## **Appendix C. Monitoring Results**



# Air Quality Monitoring Results

**1-hour TSP Results**

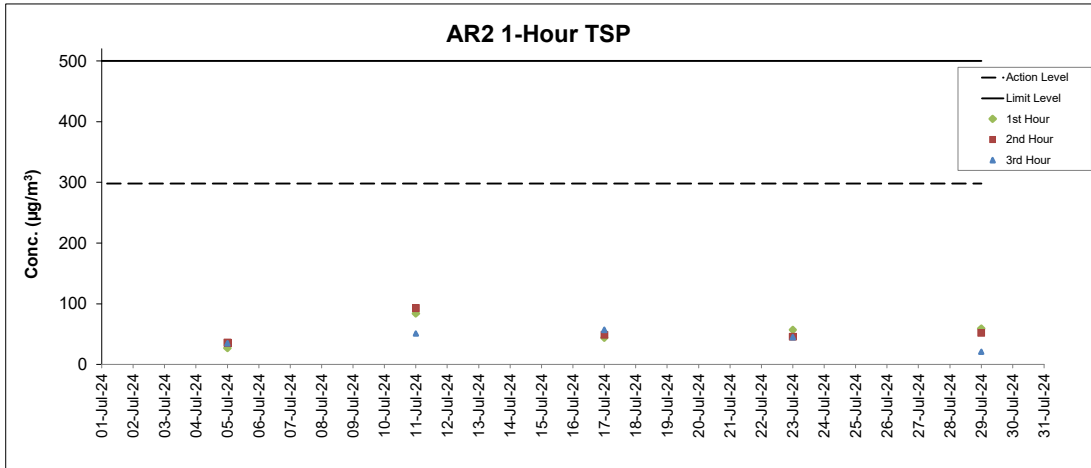
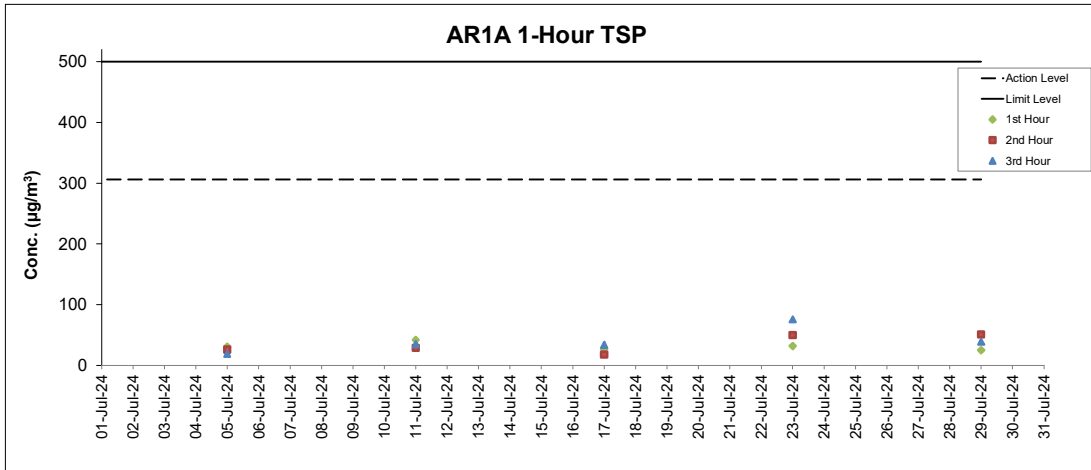
**Station: AR1A- Man Tung Road Park**

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 ( $\mu\text{g}/\text{m}^3$ )
5-Jul-24	15:08	Sunny	4.2	258	31	306	500
5-Jul-24	16:08	Sunny	1.1	Variable	26	306	500
5-Jul-24	17:08	Sunny	4.7	229	19	306	500
11-Jul-24	13:43	Sunny	4.7	202	42	306	500
11-Jul-24	14:43	Sunny	5.0	208	29	306	500
11-Jul-24	15:43	Sunny	5.6	195	35	306	500
17-Jul-24	8:36	Overcast	2.2	81	27	306	500
17-Jul-24	9:36	Overcast	3.3	69	18	306	500
17-Jul-24	10:36	Overcast	5.8	58	34	306	500
23-Jul-24	8:19	Sunny	2.8	68	32	306	500
23-Jul-24	9:19	Sunny	2.5	32	50	306	500
23-Jul-24	10:19	Sunny	1.7	349	76	306	500
29-Jul-24	8:23	Cloudy	4.2	102	25	306	500
29-Jul-24	9:23	Cloudy	5.0	113	51	306	500
29-Jul-24	10:23	Cloudy	6.7	111	39	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 ( $\mu\text{g}/\text{m}^3$ )
5-Jul-24	9:03	Sunny	3.3	89	27	298	500
5-Jul-24	10:03	Sunny	3.9	51	36	298	500
5-Jul-24	11:03	Sunny	2.8	48	35	298	500
11-Jul-24	9:07	Sunny	1.9	49	84	298	500
11-Jul-24	10:07	Sunny	3.1	57	93	298	500
11-Jul-24	11:07	Sunny	1.7	21	51	298	500
17-Jul-24	12:47	Overcast	4.2	86	44	298	500
17-Jul-24	13:47	Overcast	5.0	72	49	298	500
17-Jul-24	14:47	Overcast	5.3	103	57	298	500
23-Jul-24	12:32	Sunny	5.0	248	57	298	500
23-Jul-24	13:32	Sunny	5.3	229	46	298	500
23-Jul-24	14:32	Sunny	5.3	225	45	298	500
29-Jul-24	12:38	Cloudy	3.1	110	59	298	500
29-Jul-24	13:38	Cloudy	4.2	121	52	298	500
29-Jul-24	14:38	Cloudy	5.3	114	21	298	500



**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.

## **Noise Monitoring Results**

**Noise Measurement Results**  
**Station: NM1A- Man Tung Road Park**

Date	Weather	Time	Measured L <sub>10</sub> dB(A)	Measured L <sub>50</sub> dB(A)	L <sub>eq(30mins)</sub> dB(A) ^
5-Jul-24	Sunny	14:03	74.0	53.9	73
5-Jul-24	Sunny	14:08	75.1	59.0	
5-Jul-24	Sunny	14:13	75.5	60.0	
5-Jul-24	Sunny	14:18	75.3	59.3	
5-Jul-24	Sunny	14:23	74.5	55.0	
5-Jul-24	Sunny	14:28	65.5	58.2	67
11-Jul-24	Sunny	14:10	60.6	53.4	
11-Jul-24	Sunny	14:15	61.4	55.7	
11-Jul-24	Sunny	14:20	67.0	58.6	
11-Jul-24	Sunny	14:25	67.3	64.9	
11-Jul-24	Sunny	14:30	65.8	62.9	
11-Jul-24	Sunny	14:35	64.8	62.2	65
17-Jul-24	Overcast	8:53	63.6	59.9	
17-Jul-24	Overcast	8:58	63.9	59.8	
17-Jul-24	Overcast	9:03	64.0	60.6	
17-Jul-24	Overcast	9:08	64.0	60.6	
17-Jul-24	Overcast	9:13	63.6	60.7	
17-Jul-24	Overcast	9:18	63.8	59.7	65
23-Jul-24	Sunny	8:57	63.4	59.6	
23-Jul-24	Sunny	9:02	62.7	58.9	
23-Jul-24	Sunny	9:07	64.0	60.4	
23-Jul-24	Sunny	9:12	63.4	60.0	
23-Jul-24	Sunny	9:17	62.9	59.7	
23-Jul-24	Sunny	9:22	63.3	59.9	65
29-Jul-24	Cloudy	9:02	64.7	59.8	
29-Jul-24	Cloudy	9:07	65.2	60.1	
29-Jul-24	Cloudy	9:12	64.0	59.9	
29-Jul-24	Cloudy	9:17	63.6	60.1	
29-Jul-24	Cloudy	9:22	63.7	60.0	
29-Jul-24	Cloudy	9:27	62.5	58.9	

Remarks:

(^) +3dB (A) correction in Leq(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 <sub>10</sub> dB(A)	Measured L <sub>50</sub> dB(A)	L <sub>eq(30mins)</sub> dB(A) ^
4-Jul-24	Sunny	13:54	62.1	59.0	64
4-Jul-24	Sunny	13:59	61.7	59.3	
4-Jul-24	Sunny	14:04	62.3	60.3	
4-Jul-24	Sunny	14:09	63.0	60.4	
4-Jul-24	Sunny	14:14	61.6	59.2	
4-Jul-24	Sunny	14:19	60.5	58.5	65
12-Jul-24	Sunny	11:07	61.1	57.9	
12-Jul-24	Sunny	11:12	70.9	58.2	
12-Jul-24	Sunny	11:17	62.0	58.4	
12-Jul-24	Sunny	11:22	62.4	58.4	
12-Jul-24	Sunny	11:27	62.3	59.1	66
12-Jul-24	Sunny	11:32	62.7	59.6	
19-Jul-24	Overcast	11:08	65.7	53.7	
19-Jul-24	Overcast	11:13	69.5	58.8	
19-Jul-24	Overcast	11:18	68.9	54.0	
19-Jul-24	Overcast	11:23	59.0	50.1	62
19-Jul-24	Overcast	11:28	60.0	50.5	
19-Jul-24	Overcast	11:33	64.7	52.5	
26-Jul-24	Cloudy	11:10	61.7	55.9	
26-Jul-24	Cloudy	11:15	60.4	56.6	
26-Jul-24	Cloudy	11:20	61.1	56.5	
26-Jul-24	Cloudy	11:25	61.0	57.2	
26-Jul-24	Cloudy	11:30	61.7	56.4	
26-Jul-24	Cloudy	11:35	59.9	55.9	

Remarks:

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

### Noise Measurement Results

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

Date	Weather	Time	Measured L <sub>10</sub> dB(A)	Measured L <sub>50</sub> dB(A)	L <sub>eq(30mins)</sub> dB(A) ^
5-Jul-24	Sunny	8:07	63.0	58.8	61*
5-Jul-24	Sunny	8:12	61.1	56.9	
5-Jul-24	Sunny	8:17	60.9	57.3	
5-Jul-24	Sunny	8:22	60.6	57.3	
5-Jul-24	Sunny	8:27	61.0	56.3	
5-Jul-24	Sunny	8:32	60.8	56.6	
11-Jul-24	Sunny	9:10	58.2	52.1	59*
11-Jul-24	Sunny	9:15	56.8	52.6	
11-Jul-24	Sunny	9:20	63.4	53.3	
11-Jul-24	Sunny	9:25	62.2	54.0	
11-Jul-24	Sunny	9:30	61.7	52.9	
11-Jul-24	Sunny	9:35	62.9	53.9	
17-Jul-24	Overcast	12:14	54.4	49.6	56
17-Jul-24	Overcast	12:19	53.6	49.6	
17-Jul-24	Overcast	12:24	55.2	50.5	
17-Jul-24	Overcast	12:29	54.8	50.8	
17-Jul-24	Overcast	12:34	54.4	49.2	
17-Jul-24	Overcast	12:39	54.0	50.1	
23-Jul-24	Sunny	12:13	66.3	62.2	66*
23-Jul-24	Sunny	12:18	66.3	62.8	
23-Jul-24	Sunny	12:23	65.9	62.3	
23-Jul-24	Sunny	12:28	66.2	62.9	
23-Jul-24	Sunny	12:33	66.2	61.8	
23-Jul-24	Sunny	12:38	66.7	62.5	
29-Jul-24	Cloudy	11:51	54.9	50.3	53*
29-Jul-24	Cloudy	11:56	54.2	50.6	
29-Jul-24	Cloudy	12:01	55.4	51.4	
29-Jul-24	Cloudy	12:06	64.7	51.6	
29-Jul-24	Cloudy	12:11	55.6	51.9	
29-Jul-24	Cloudy	12:16	57.3	51.7	

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.

### Noise Measurement Results

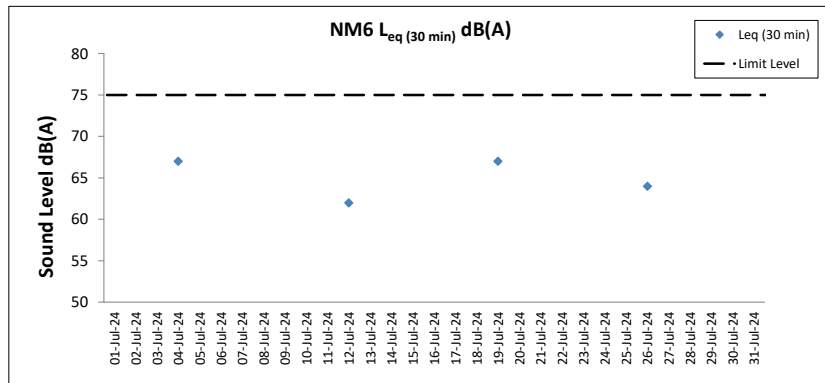
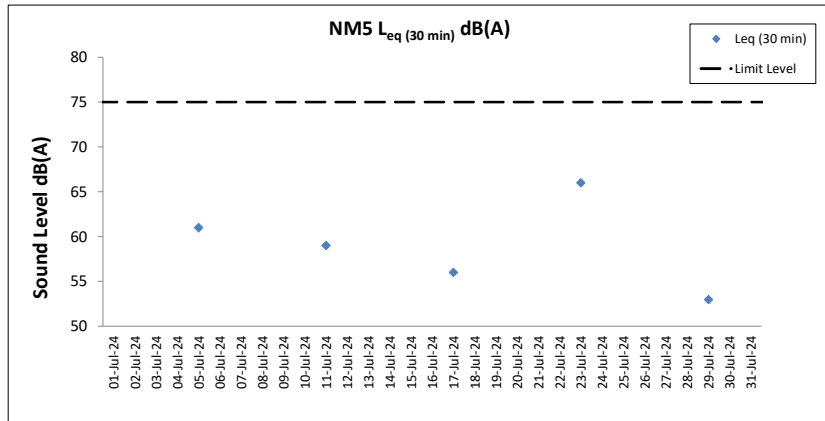
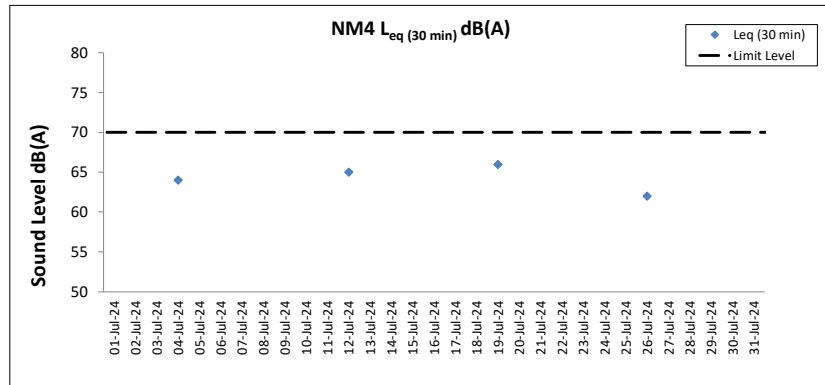
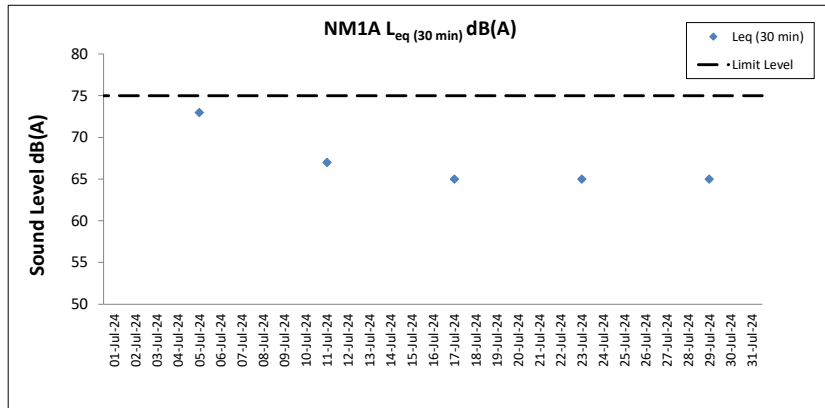
#### Station: NM6- House No.1 Sha Lo Wan

Date	Weather	Time	Measured L <sub>10</sub> dB(A)	Measured L <sub>50</sub> dB(A)	L <sub>eq(30mins)</sub> dB(A) ^
4-Jul-24	Sunny	15:51	68.8	48.5	67
4-Jul-24	Sunny	15:56	67.9	60.4	
4-Jul-24	Sunny	16:01	62.3	54.8	
4-Jul-24	Sunny	16:06	67.0	56.6	
4-Jul-24	Sunny	16:11	62.0	52.0	
4-Jul-24	Sunny	16:16	67.4	50.3	
12-Jul-24	Sunny	9:45	72.7	50.2	62*
12-Jul-24	Sunny	9:50	63.4	47.8	
12-Jul-24	Sunny	9:55	70.1	48.6	
12-Jul-24	Sunny	10:00	70.6	48.4	
12-Jul-24	Sunny	10:05	71.8	50.4	
12-Jul-24	Sunny	10:10	71.4	48.0	
19-Jul-24	Sunny	9:46	65.2	55.2	67
19-Jul-24	Sunny	9:51	63.3	54.0	
19-Jul-24	Sunny	9:56	66.1	58.9	
19-Jul-24	Sunny	10:01	67.7	59.0	
19-Jul-24	Sunny	10:06	66.8	57.4	
19-Jul-24	Sunny	10:11	62.6	54.4	
26-Jul-24	Cloudy	9:46	65.6	55.8	64
26-Jul-24	Cloudy	9:51	62.6	54.5	
26-Jul-24	Cloudy	9:56	62.5	54.2	
26-Jul-24	Cloudy	10:01	67.8	56.1	
26-Jul-24	Cloudy	10:06	61.4	54.5	
26-Jul-24	Cloudy	10:11	60.2	54.9	

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.

# **Post Construction 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
06-May-24	SWL	2	52.706	SPRING	32166	3RS ET – POST	P
06-May-24	SWL	2	13.915	SPRING	32166	3RS ET – POST	S
08-May-24	NEL	2	37.14	SPRING	32166	3RS ET – POST	P
08-May-24	NEL	2	9.66	SPRING	32166	3RS ET – POST	S
13-May-24	AW	2	5.01	SPRING	32166	3RS ET – POST	P
13-May-24	WL	2	10.926	SPRING	32166	3RS ET – POST	P
13-May-24	WL	3	8.53	SPRING	32166	3RS ET – POST	P
13-May-24	WL	2	7.933	SPRING	32166	3RS ET – POST	S
13-May-24	WL	3	2.26	SPRING	32166	3RS ET – POST	S
13-May-24	WL	4	0.9	SPRING	32166	3RS ET – POST	S
14-May-24	NWL	2	31.9	SPRING	32166	3RS ET – POST	P
14-May-24	NWL	3	30.24	SPRING	32166	3RS ET – POST	P
14-May-24	NWL	2	8.87	SPRING	32166	3RS ET – POST	S
14-May-24	NWL	3	3.79	SPRING	32166	3RS ET – POST	S
16-May-24	NEL	2	1.2	SPRING	32166	3RS ET – POST	P
16-May-24	NEL	3	18.4	SPRING	32166	3RS ET – POST	P
16-May-24	NEL	4	17.42	SPRING	32166	3RS ET – POST	P
16-May-24	NEL	3	7.1	SPRING	32166	3RS ET – POST	S
16-May-24	NEL	4	2.88	SPRING	32166	3RS ET – POST	S
17-May-24	NWL	2	61.89	SPRING	32166	3RS ET – POST	P
17-May-24	NWL	3	1.71	SPRING	32166	3RS ET – POST	P
17-May-24	NWL	2	11.6	SPRING	32166	3RS ET – POST	S
27-May-24	AW	3	1.11	SPRING	32166	3RS ET – POST	P
27-May-24	AW	4	3.73	SPRING	32166	3RS ET – POST	P
27-May-24	WL	2	1.04	SPRING	32166	3RS ET – POST	P
27-May-24	WL	3	18.72	SPRING	32166	3RS ET – POST	P
27-May-24	WL	2	0.9	SPRING	32166	3RS ET – POST	S
27-May-24	WL	3	8.31	SPRING	32166	3RS ET – POST	S
27-May-24	WL	4	1.3	SPRING	32166	3RS ET – POST	S
28-May-24	SWL	2	42.33	SPRING	32166	3RS ET – POST	P
28-May-24	SWL	3	9.6	SPRING	32166	3RS ET – POST	P
28-May-24	SWL	2	15.67	SPRING	32166	3RS ET – POST	S
28-May-24	SWL	3	2.3	SPRING	32166	3RS ET – POST	S
05-Jun-24	AW	3	4.62	SUMMER	32166	3RS ET – POST	P
05-Jun-24	WL	2	8.54	SUMMER	32166	3RS ET – POST	P
05-Jun-24	WL	3	10.78	SUMMER	32166	3RS ET – POST	P
05-Jun-24	WL	4	1.2	SUMMER	32166	3RS ET – POST	P
05-Jun-24	WL	2	4.97	SUMMER	32166	3RS ET – POST	S
05-Jun-24	WL	3	4.29	SUMMER	32166	3RS ET – POST	S
05-Jun-24	WL	4	0.4	SUMMER	32166	3RS ET – POST	S
11-Jun-24	AW	2	1.97	SUMMER	32166	3RS ET – POST	P
11-Jun-24	AW	3	2.76	SUMMER	32166	3RS ET – POST	P
11-Jun-24	WL	3	21.783	SUMMER	32166	3RS ET – POST	P
11-Jun-24	WL	3	7.979	SUMMER	32166	3RS ET – POST	S
12-Jun-24	SWL	2	5.5	SUMMER	32166	3RS ET – POST	P
12-Jun-24	SWL	3	47.94	SUMMER	32166	3RS ET – POST	P
12-Jun-24	SWL	2	3.9	SUMMER	32166	3RS ET – POST	S
12-Jun-24	SWL	3	12.36	SUMMER	32166	3RS ET – POST	S
13-Jun-24	NEL	2	34.58	SUMMER	32166	3RS ET – POST	P
13-Jun-24	NEL	3	2.8	SUMMER	32166	3RS ET – POST	P
13-Jun-24	NEL	2	9.92	SUMMER	32166	3RS ET – POST	S
14-Jun-24	NEL	2	30.4	SUMMER	32166	3RS ET – POST	P



DATE	AREA	BEAU	KM SEARCHED	SEASON	VESSEL	TYPE	P/S
14-Jun-24	NEL	3	6.89	SUMMER	32166	3RS ET – POST	P
14-Jun-24	NEL	2	8.31	SUMMER	32166	3RS ET – POST	S
14-Jun-24	NEL	3	1.9	SUMMER	32166	3RS ET – POST	S
20-Jun-24	SWL	2	35.592	SUMMER	32166	3RS ET – POST	P
20-Jun-24	SWL	3	15.84	SUMMER	32166	3RS ET – POST	P
20-Jun-24	SWL	2	13.11	SUMMER	32166	3RS ET – POST	S
20-Jun-24	SWL	3	3.12	SUMMER	32166	3RS ET – POST	S
21-Jun-24	NWL	2	34	SUMMER	32166	3RS ET – POST	P
21-Jun-24	NWL	3	30	SUMMER	32166	3RS ET – POST	P
21-Jun-24	NWL	2	5.2	SUMMER	32166	3RS ET – POST	S
21-Jun-24	NWL	3	6.1	SUMMER	32166	3RS ET – POST	S
25-Jun-24	NWL	2	4.9	SUMMER	32166	3RS ET – POST	P
25-Jun-24	NWL	3	59.21	SUMMER	32166	3RS ET – POST	P
25-Jun-24	NWL	3	11.49	SUMMER	32166	3RS ET – POST	S
09-Jul-24	SWL	2	42.763	SUMMER	32166	3RS ET – POST	P
09-Jul-24	SWL	3	6.35	SUMMER	32166	3RS ET – POST	P
09-Jul-24	SWL	2	13.392	SUMMER	32166	3RS ET – POST	S
09-Jul-24	SWL	3	1.21	SUMMER	32166	3RS ET – POST	S
10-Jul-24	AW	2	4.66	SUMMER	32166	3RS ET – POST	P
10-Jul-24	WL	2	7.824	SUMMER	32166	3RS ET – POST	P
10-Jul-24	WL	3	10.296	SUMMER	32166	3RS ET – POST	P
10-Jul-24	WL	2	3.226	SUMMER	32166	3RS ET – POST	S
10-Jul-24	WL	3	6.112	SUMMER	32166	3RS ET – POST	S
11-Jul-24	SWL	2	37.688	SUMMER	32166	3RS ET – POST	P
11-Jul-24	SWL	3	14.317	SUMMER	32166	3RS ET – POST	P
11-Jul-24	SWL	2	9.23	SUMMER	32166	3RS ET – POST	S
11-Jul-24	SWL	3	4.815	SUMMER	32166	3RS ET – POST	S
11-Jul-24	SWL	4	1.3	SUMMER	32166	3RS ET – POST	S
12-Jul-24	AW	2	4.77	SUMMER	32166	3RS ET – POST	P
12-Jul-24	WL	2	7.46	SUMMER	32166	3RS ET – POST	P
12-Jul-24	WL	3	10.856	SUMMER	32166	3RS ET – POST	P
12-Jul-24	WL	2	2.38	SUMMER	32166	3RS ET – POST	S
12-Jul-24	WL	3	6.849	SUMMER	32166	3RS ET – POST	S
15-Jul-24	NEL	2	36.94	SUMMER	32166	3RS ET – POST	P
15-Jul-24	NEL	2	9.76	SUMMER	32166	3RS ET – POST	S
16-Jul-24	NEL	2	28.37	SUMMER	32166	3RS ET – POST	P
16-Jul-24	NEL	3	5.2	SUMMER	32166	3RS ET – POST	P
16-Jul-24	NEL	4	3.29	SUMMER	32166	3RS ET – POST	P
16-Jul-24	NEL	2	9.06	SUMMER	32166	3RS ET – POST	S
16-Jul-24	NEL	3	0.9	SUMMER	32166	3RS ET – POST	S
18-Jul-24	NWL	2	4.9	SUMMER	32166	3RS ET – POST	P
18-Jul-24	NWL	3	55.8	SUMMER	32166	3RS ET – POST	P
18-Jul-24	NWL	4	3	SUMMER	32166	3RS ET – POST	P
18-Jul-24	NWL	2	0.9	SUMMER	32166	3RS ET – POST	S
18-Jul-24	NWL	3	10.4	SUMMER	32166	3RS ET – POST	S
31-Jul-24	NWL	2	3	SUMMER	32166	3RS ET – POST	P
31-Jul-24	NWL	3	37.1	SUMMER	32166	3RS ET – POST	P
31-Jul-24	NWL	4	23	SUMMER	32166	3RS ET – POST	P
31-Jul-24	NWL	3	8.2	SUMMER	32166	3RS ET – POST	S
31-Jul-24	NWL	4	3.1	SUMMER	32166	3RS ET – POST	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
06-May-24	1	1038	FP	1	SWL	2	62	ON	3RS ET – POST	22.185202	113.936117	SPRING	NONE	P
06-May-24	2	1042	FP	2	SWL	2	23	ON	3RS ET – POST	22.181401	113.936005	SPRING	NONE	P
06-May-24	3	1105	FP	1	SWL	2	23	ON	3RS ET – POST	22.152234	113.928157	SPRING	NONE	P
06-May-24	4	1116	FP	1	SWL	2	223	ON	3RS ET – POST	22.170622	113.928376	SPRING	NONE	P
06-May-24	5	1120	FP	12	SWL	2	38	ON	3RS ET – POST	22.174289	113.928408	SPRING	NONE	P
06-May-24	6	1140	CWD	2	SWL	2	503	ON	3RS ET – POST	22.205483	113.922004	SPRING	NONE	S
06-May-24	7	1224	FP	3	SWL	2	59	ON	3RS ET – POST	22.144022	113.907800	SPRING	NONE	P
06-May-24	8	1251	CWD	2	SWL	2	175	ON	3RS ET – POST	22.188334	113.905322	SPRING	NONE	S
06-May-24	9	1437	CWD	1	SWL	2	297	ON	3RS ET – POST	22.160500	113.869880	SPRING	NONE	S
06-May-24	10	1529	CWD	3	SWL	2	17	ON	3RS ET – POST	22.173456	113.849804	SPRING	NONE	P
13-May-24	1	1054	CWD	6	WL	3	21	ON	3RS ET – POST	22.241573	113.842234	SPRING	NONE	P
13-May-24	2	1109	CWD	1	WL	2	57	ON	3RS ET – POST	22.241684	113.834789	SPRING	NONE	P
13-May-24	3	1145	CWD	1	WL	3	278	ON	3RS ET – POST	22.214050	113.833344	SPRING	NONE	P
14-May-24	1	1021	CWD	1	NWL	3	369	ON	3RS ET – POST	22.304794	113.870037	SPRING	NONE	P
27-May-24	1	1131	CWD	1	WL	3	85	ON	3RS ET – POST	22.214763	113.833378	SPRING	NONE	P
05-Jun-24	1	1153	CWD	7	WL	3	127	ON	3RS ET – POST	22.193425	113.842457	SUMMER	NONE	S
11-Jun-24	1	1044	CWD	2	WL	3	233	ON	3RS ET – POST	22.254940	113.835700	SUMMER	NONE	S
11-Jun-24	2	1110	CWD	2	WL	3	773	ON	3RS ET – POST	22.241973	113.838163	SUMMER	PURSE SEINER	P
11-Jun-24	3	1129	CWD	3	WL	3	119	ON	3RS ET – POST	22.238116	113.826417	SUMMER	NONE	S
11-Jun-24	4	1143	CWD	2	WL	3	305	ON	3RS ET – POST	22.223311	113.831120	SUMMER	PURSE SEINER	P
11-Jun-24	5	1211	CWD	1	WL	3	41	ON	3RS ET – POST	22.217972	113.819614	SUMMER	NONE	S
20-Jun-24	1	1121	CWD	1	SWL	2	533	ON	3RS ET – POST	22.205144	113.918873	SUMMER	GILLNETTER	S
20-Jun-24	2	1144	CWD	1	SWL	2	99	ON	3RS ET – POST	22.192009	113.918474	SUMMER	NONE	P
20-Jun-24	3	1219	CWD	1	SWL	2	51	ON	3RS ET – POST	22.154684	113.905568	SUMMER	NONE	S
20-Jun-24	4	1244	CWD	8	SWL	2	38	ON	3RS ET – POST	22.192402	113.906930	SUMMER	NONE	S
20-Jun-24	5	1400	CWD	9	SWL	3	300	ON	3RS ET – POST	22.181793	113.887713	SUMMER	NONE	P
20-Jun-24	6	1519	CWD	2	SWL	2	31	ON	3RS ET – POST	22.192438	113.858869	SUMMER	NONE	P
25-Jun-24	1	1021	CWD	1	NWL	3	100	ON	3RS ET – POST	22.309436	113.870352	SUMMER	NONE	P
09-Jul-24	2	1345	CWD	7	SWL	2	17	ON	3RS ET – POST	22.189164	113.887583	SUMMER	NONE	P
09-Jul-24	3	1404	CWD	4	SWL	2	24	ON	3RS ET – POST	22.197137	113.887181	SUMMER	PURSE SEINER	P
09-Jul-24	4	1435	CWD	1	SWL	2	482	ON	3RS ET – POST	22.191283	113.879085	SUMMER	NONE	P

DATE	STG #	TIME	CWD/FP	GP SZ	AREA	BEAU	PSD	EFFORT	TYPE	DEC LAT	DEC LON	SEASON	BOAT ASSOC.	P/S
09-Jul-24	5	1448	CWD	2	SWL	3	186	ON	3RS ET – POST	22.180607	113.878580	SUMMER	PURSE SEINER	P
09-Jul-24	6	1516	CWD	6	SWL	3	433	ON	3RS ET – POST	22.174373	113.868995	SUMMER	NONE	P
09-Jul-24	7	1537	CWD	2	SWL	2	220	ON	3RS ET – POST	22.190265	113.869258	SUMMER	NONE	P
09-Jul-24	8	1558	CWD	3	SWL	2	199	ON	3RS ET – POST	22.189163	113.859117	SUMMER	NONE	P
09-Jul-24	9	1605	CWD	4	SWL	2	105	ON	3RS ET – POST	22.184422	113.859532	SUMMER	NONE	P
09-Jul-24	10	1614	CWD	1	SWL	3	189	ON	3RS ET – POST	22.175476	113.859154	SUMMER	NONE	P
09-Jul-24	11	1618	CWD	2	SWL	3	27	ON	3RS ET – POST	22.182510	113.850143	SUMMER	NONE	P
09-Jul-24	12	1635	CWD	4	SWL	3	99	ON	3RS ET – POST	22.190094	113.850449	SUMMER	NONE	P
10-Jul-24	1	1021	CWD	4	WL	2	417	ON	3RS ET – POST	22.274378	113.847994	SUMMER	PURSE SEINER	S
10-Jul-24	2	1115	CWD	4	WL	2	270	ON	3RS ET – POST	22.238347	113.827155	SUMMER	NONE	S
10-Jul-24	3	1119	CWD	5	WL	3	57	ON	3RS ET – POST	22.235064	113.826031	SUMMER	NONE	S
10-Jul-24	4	1140	CWD	7	WL	3	272	ON	3RS ET – POST	22.223808	113.831824	SUMMER	NONE	P
10-Jul-24	5	1201	CWD	1	WL	3	96	ON	3RS ET – POST	22.214815	113.829508	SUMMER	NONE	P
10-Jul-24	6	1219	CWD	6	WL	3	600	ON	3RS ET – POST	22.205413	113.835764	SUMMER	NONE	P
10-Jul-24	7	1235	CWD	1	WL	3	176	ON	3RS ET – POST	22.195427	113.838294	SUMMER	NONE	P
10-Jul-24	8	1248	CWD	2	WL	3	96	ON	3RS ET – POST	22.196335	113.841044	SUMMER	NONE	P
11-Jul-24	2	1442	CWD	3	SWL	2	105	ON	3RS ET – POST	22.200599	113.866037	SUMMER	NONE	S
11-Jul-24	3	1520	CWD	3	SWL	3	150	ON	3RS ET – POST	22.185459	113.848936	SUMMER	NONE	P
12-Jul-24	1	1102	CWD	7	WL	3	120	ON	3RS ET – POST	22.241310	113.837431	SUMMER	NONE	P
12-Jul-24	2	1129	CWD	2	WL	3	22	ON	3RS ET – POST	22.232020	113.833559	SUMMER	NONE	P
12-Jul-24	3	1206	CWD	9	WL	3	20	ON	3RS ET – POST	22.210995	113.838672	SUMMER	NONE	P
12-Jul-24	4	1225	CWD	1	WL	3	11	ON	3RS ET – POST	22.204993	113.834609	SUMMER	NONE	P
12-Jul-24	5	1229	CWD	1	WL	3	255	ON	3RS ET – POST	22.205064	113.831774	SUMMER	NONE	P
12-Jul-24	6	1251	CWD	11	WL	3	56	ON	3RS ET – POST	22.196207	113.837629	SUMMER	NONE	P

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**

	
NLMM061_20240709_2_7	SLMM027_20240709_2_7
	
WLMM077_20240709_2_2	WLMM113_20240709_2_5
	
WLMM118_20240709_2_7	SLMM002_20240709_3_4





SLMM049\_20240709\_3\_4



WLMM001\_20240709\_3\_3



WLMM077\_20240709\_3\_4



SLMM050\_20240709\_5\_8



WLMM114\_20240709\_5\_2



NLMM063\_20240709\_6\_1



SLMM050\_20240709\_6\_2



WLMM091\_20240709\_12\_2





WLMM092\_20240709\_12\_3



NLMM065\_20240710\_1\_3



WLMM071\_20240710\_1\_1



NLMM060\_20240710\_3\_3



WLMM052\_20240710\_3\_1



WLMM161\_20240710\_3\_1



NLMM013\_20240710\_4\_5



SLMM049\_20240710\_4\_2





SLMM050\_20240710\_4\_4



WLMM001\_20240710\_4\_1



WLMM005\_20240710\_4\_5



WLMM055\_20240710\_4\_3



WLMM109\_20240710\_4\_6



WLMM200\_20240710\_8\_3



SLMM014\_20240711\_2\_1



WLMM038\_20240712\_1\_2





WLMM063\_20240712\_1\_3



WLMM077\_20240712\_2\_2



NLMM013\_20240712\_3\_4



WLMM005\_20240712\_3\_1



WLMM009\_20240712\_3\_2



WLMM109\_20240712\_3\_2

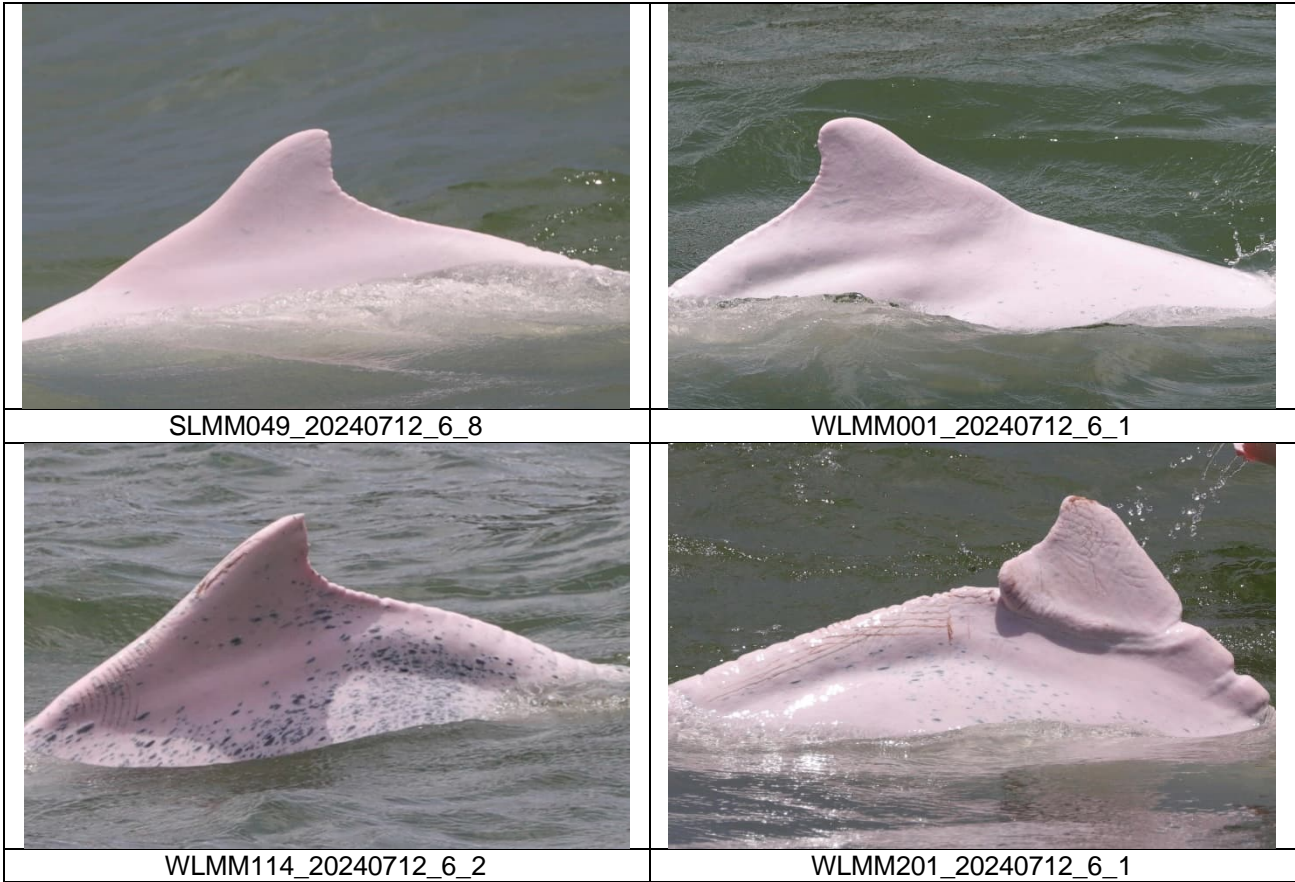


WLMM111\_20240712\_5\_3



SLMM030\_20240712\_6\_2





## **Appendix D. Calibration Certificates**



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### SUB-CONTRACTING REPORT

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CONTACT	: NICK SIN	WORK ORDER	: <b>HK2414805</b>
CLIENT	: <b>MOTT MACDONALD HONG KONG LIMITED</b>		
ADDRESS	: 3/F INTERNATIONAL TRADE TOWER, 348 KWUN TONG ROAD, KWUN TONG, KOWLOON, HONG KONG	SUB-BATCH	: 1
		DATE RECEIVED	: 26-APR-2024
		DATE OF ISSUE	: 9-MAY-2024
PROJECT	: CALIBRATION/PERFORMANCE CHECK OF DUST METER	NO. OF SAMPLES	: 1
		CLIENT ORDER	: ---

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#### *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 picked up from client by ALS staff. 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

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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 : HK2414805  
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.
HK2414805-001	S/N:597337	Equipments	26-Apr-2024	S/N:597337

# Equipment Verification Report (TSP)

## Equipment Calibrated:

Type: Laser Dust monitor  
 Manufacturer: Sibata LD-3B  
 Serial No. 597337  
 Equipment Ref: Nil  
 Job Order HK2414805

## Standard Equipment:

Standard Equipment: Higher Volume Sampler  
 Location & Location ID: AUES office (calibration room)  
 Equipment Ref: HVS 018  
 Last Calibration Date: 16 February 2024

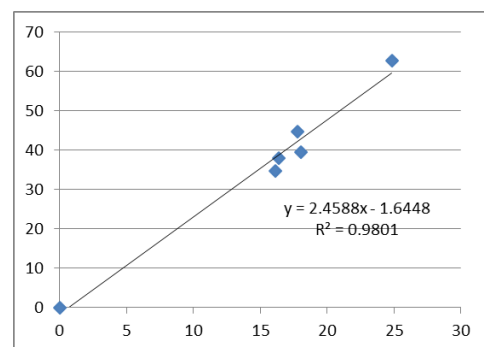
## Equipment Verification Results:

Testing Date: 6 & 7 May 2024

Hour	Time	Mean Temp °C	Mean Pressure (hPa)	Concentration in µg/m <sup>3</sup> (Standard Equipment)	Total Count (Calibrated Equipment)	Count/Minute (Total Count/min)
2hr00min	09:45 ~ 11:45	27.7	1012.0	62.8	2982	24.9
2hr01min	11:58 ~ 13:59	27.7	1012.0	39.5	2188	18.1
2hr04min	14:16 ~ 16:20	27.7	1012.0	37.8	2027	16.4
2hr01min	09:36 ~ 11:37	27.2	1013.4	34.6	1943	16.1
2hr01min	11:48 ~ 13:49	27.2	1013.4	44.6	2158	17.8

## Linear Regression of Y or X

Slope (K-factor): 2.4588 (µg/m<sup>3</sup>)/CPM  
 Correlation Coefficient (R) 0.9900  
 Date of Issue 9 May 2024



## Remarks:

- Strong** Correlation ( $R > 0.8$ )
- Factor 2.4588 (µg/m<sup>3</sup>)/CPM should be applied for TSP monitoring

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

Operator : Martin Li Signature : [Signature] Date : 9 May 2024

QC Reviewer : Ben Tam Signature : [Signature] Date : 9 May 2024

## TSP SAMPLER CALIBRATION CALCULATION SPREADSHEET

Location : Gold King Industrial Building, Kwai Chung Date of Calibration: 16-Feb-24  
 Location ID : Calibration Room - TISCH Higher Volume Sampler (Model TE-5170) S/N:1260 Next Calibration Date: 16-May-24

### CONDITIONS

Sea Level Pressure (hPa)	1019	Corrected Pressure (mm Hg)	764.25
Temperature (°C)	20.4	Temperature (K)	293

### CALIBRATION ORIFICE

Make->	TISCH	Qstd Slope ->	2.13163
Model->	5025A	Qstd Intercept ->	-0.03523
Calibration Date->	15-Dec-23	Expiry Date->	15-Dec-24

### CALIBRATION

Plate No.	H2O (L) (in)	H2O (R) (in)	H2O (in)	Qstd (m3/min)	I (chart)	IC corrected	LINEAR REGRESSION
18	5.8	5.8	11.6	1.631	54	54.57	Slope = 31.3860 Intercept = 2.3377 Corr. coeff. = 0.9976
13	4.7	4.7	9.4	1.470	47	47.50	
10	3.6	3.6	7.2	1.289	42	42.45	
8	2.4	2.4	4.8	1.055	35	35.37	
5	1.2	1.2	2.4	0.751	26	26.28	

**Calculations :**

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

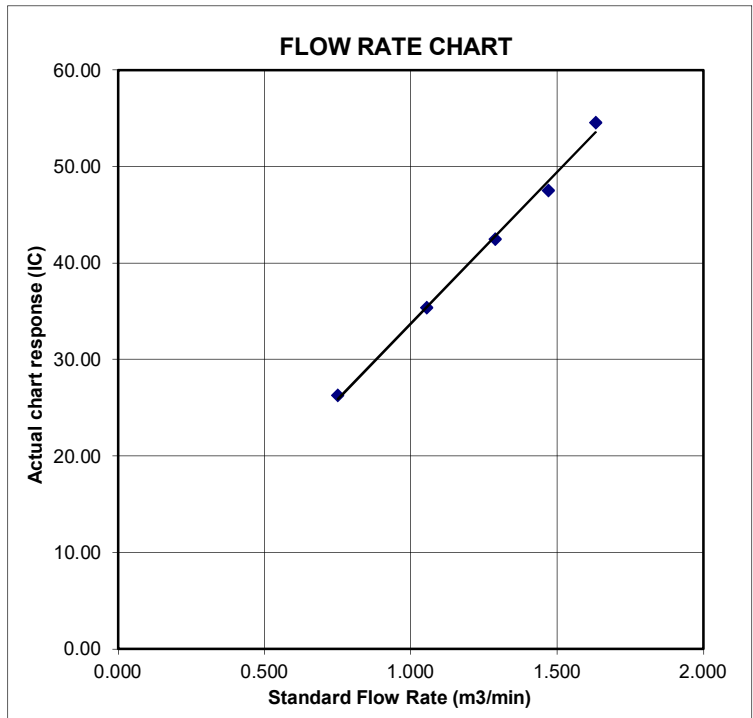
$$IC = I[\text{Sqrt}(Pa/Pstd)(Tstd/Ta)]$$

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



**RECALIBRATION**
**DUE DATE:**
**December 15, 2024**

# Certificate of Calibration

**Calibration Certification Information**

<b>Cal. Date:</b> December 15, 2023	<b>Rootsmeter S/N:</b> 438320	<b>Ta:</b> 295 °K
<b>Operator:</b> Jim Tisch		<b>Pa:</b> 748.5 mm Hg
<b>Calibration Model #:</b> TE-5025A	<b>Calibrator S/N:</b> 1941	

Run	Vol. Init (m3)	Vol. Final (m3)	ΔVol. (m3)	ΔTime (min)	ΔP (mm Hg)	ΔH (in H2O)
1	1	2	1	1.4590	3.2	2.00
2	3	4	1	1.0360	6.4	4.00
3	5	6	1	0.9260	8.0	5.00
4	7	8	1	0.8840	8.9	5.50
5	9	10	1	0.7290	12.9	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)	$\sqrt{\Delta H (Ta/Pa)}$ (y-axis)
0.9907	0.6790	1.4106	0.9957	0.6825	0.8878
0.9864	0.9522	1.9949	0.9914	0.9570	1.2556
0.9843	1.0630	2.2304	0.9893	1.0684	1.4037
0.9831	1.1121	2.3393	0.9881	1.1178	1.4723
0.9778	1.3413	2.8213	0.9828	1.3481	1.7756
<b>QSTD</b>	<b>m=</b>	<b>2.13163</b>	<b>QA</b>	<b>m=</b>	<b>1.33479</b>
	<b>b=</b>	<b>-0.03523</b>		<b>b=</b>	<b>-0.02217</b>
	<b>r=</b>	<b>0.99999</b>		<b>r=</b>	<b>0.99999</b>

**Calculations**

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

**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





# Certificate of Calibration

## 校正證書

Certificate No. : C243573  
證書編號

ITEM TESTED / 送檢項目 (Job No. / 序引編號 : IC24-1024)

Date of Receipt / 收件日期 : 7 June 2024

Description / 儀器名稱 : Acoustic Calibrator  
Manufacturer / 製造商 : Casella  
Model No. / 型號 : CEL-120/1  
Serial No. / 編號 : 2383737  
Supplied By / 委託者 : Mott MacDonald Hong Kong Limited  
3/F., Manulife Place, 348 Kwun Tong Road, Kwun Tong,  
Kowloon, Hong Kong

### TEST CONDITIONS / 測試條件

Temperature / 溫度 :  $(23 \pm 2)^{\circ}\text{C}$  Relative Humidity / 相對濕度 :  $(50 \pm 25)\%$   
Line Voltage / 電壓 : ---

### TEST SPECIFICATIONS / 測試規範

Calibration check

DATE OF TEST / 測試日期 : 30 June 2024


### TEST RESULTS / 測試結果

The results apply to the particular unit-under-test only.  
The results do not exceed specified limits.  
These limits refer to manufacturer's published tolerances as requested by the customer.  
The results are detailed in the subsequent page(s).

The test equipment used for calibration are traceable to National Standards via :  
- The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory  
- Hottinger Brüel & Kjær Calibration Laboratory, Denmark  
- Agilent Technologies / Keysight Technologies  
- Fluke Everett Service Center, USA

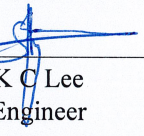
Tested By  
測試

:

  
H T Wong  
Assistant Engineer

Certified By  
核證

:

  
K C Lee  
Engineer

Date of Issue  
簽發日期

:

2 July 2024

The test equipment used for calibration is traceable to the National Standards as specified in this certificate. This certificate shall not be reproduced except in full, without the prior written approval of this laboratory.

本證書所載校正用之測試器材均可溯源至國際標準。局部複印本證書需先獲本實驗所書面批准。



# Certificate of Calibration

## 校正證書

Certificate No. : C243573

證書編號

- The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 12 hours before the commencement of the test.
- The results presented are the mean of 3 measurements at each calibration point.
- Test equipment :

<u>Equipment ID</u>	<u>Description</u>	<u>Certificate No.</u>
CL130	Universal Counter	C233799
CL281	Multifunction Acoustic Calibrator	CDK2302738
TST150A	Measuring Amplifier	C241879

- Test procedure : MA100N.

- Results :

### 5.1 Sound Level Accuracy

UUT Nominal Value	Measured Value (dB)	Mfr's Limit (dB)	Uncertainty of Measured Value (dB)
94 dB, 1 kHz	94.05	± 0.25	± 0.20
114 dB, 1 kHz	114.10		

### 5.2 Frequency Accuracy

UUT Nominal Value (kHz)	Measured Value (kHz)	Mfr's Limit	Uncertainty of Measured Value (Hz)
1	1.000 0	1 kHz ± 5 Hz	± 0.1

Remark : The uncertainties are for a confidence probability of not less than 95 %.

Note :

Only the original copy or the laboratory's certified true copy is valid.

The values given in this Certificate only relate to the values measured at the time of the test and any uncertainties quoted will not include allowance for the equipment long term drift, variations with environment changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Sun Creation Engineering Limited shall not be liable for any loss or damage resulting from the use of the equipment.

The test equipment used for calibration is traceable to the National Standards as specified in this certificate. This certificate shall not be reproduced except in full, without the prior written approval of this laboratory.

本證書所載校正用之測試器材均可溯源至國際標準。局部複印本證書需先獲本實驗室所書面批准。

Sun Creation Engineering Limited – Calibration & Testing Laboratory

c/o 4/F, 1 Hing On Lane, Tuen Mun, New Territories, Hong Kong

輝創工程有限公司 - 校正及檢測實驗室

c/o 香港新界屯門興安里一號四樓

Tel/電話: (852) 2927 2606

Fax/傳真: (852) 2744 8986

E-mail/電郵: callab@suncreation.com

Website/網址: www.suncreation.com



## 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	501333	Receipt acknowledged by EPD on 29 Dec 2023
	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-RS0229-24	Valid from 25 Mar 2024 to 16 Sep 2024
	Bill Account for disposal	Works area of 3206	A/C 7026398	Approval granted from EPD on 16 Nov 2016
3302	Notification of Construction Work under APCO	Works area of 3302	10003488	Receipt acknowledged by EPD on 8 Apr 2024
	Registration as Chemical Waste Producer	Works area of 3302	WPN 5296-951-C4331-01	Completion of Registration on 4 Jan 2019
	Discharge License under WPCO	Works area of 3302	WT00034539-2019	Valid from 11 Mar 2020 to 31 Mar 2025
	Bill Account for disposal	Works area of 3302	A/C 7032881	Approval granted from EPD on 8 Jan 2019
	Construction Noise Permit (General Works)	Works area of 3302	GW-RS0358-24	Valid from 24 Apr 2024 to 21 Oct 2024
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-RS0448-24	Valid from 1 Jun 2024 to 30 Nov 2024
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
3307	Registration as Chemical Waste Producer	Works area of 3307	WPN 5211-951-P3379-01	Completion of Registration on 8 Jun 2020
	Bill Account for disposal	Works area of 3307	A/C 7037129	Approval granted from EPD on 5 May 2020

Contract No.	Description	Location	Permit/ Reference No.	Status
3308	Bill Account for disposal	Works area of 3308	A/C 7038988	Approval granted from EPD on 24 Nov 2020
3310	Notification of Construction Work under APCO	Works area of 3310	485057	Receipt acknowledged by EPD on 6 Oct 2022
	Registration as Chemical Waste Producer	Works area of 3310	WPN 5213-951-C4682-01	Completion of Registration on 21 Dec 2021
		Works area of 3310	WPN 5213-974-C3317-27	Completion of Registration on 31 Aug 2022
	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-RS0133-24	Valid from 17 Feb 2024 to 14 Aug 2024 (Superseded by GW-RS0678-24)
		Works area of 3310 (Existing airport)	GW-RS0565-24	Valid from 20 Jun 2024 to 13 Dec 2024
Works area of 3310 (Reclamation area)		GW-RS0678-24	Valid from 26 Jul 2024 to 25 Jan 2025	
3402	Construction Noise Permit (General Works)	Works area of 3402	GW-RS0628-24	Valid from 8 Jul 2024 to 7 Jan 2025
	Bill Account for disposal	Works area of 3402	A/C 7032577	Approval granted from EPD on 11 Jan 2019
3403	Notification of Construction Work under APCO	Works area of 3403	485039	Receipt acknowledged by EPD on 6 Oct 2022
		Works area of 3403 (with Area 17 and Area 15)	475369	Receipt acknowledged by EPD on 28 Dec 2021
	Registration as Chemical Waste Producer	Works area of 3403	WPN 5213-951-S4218-01	Completion of Registration on 9 Jan 2020
	Discharge License under WPCO	Works area of 3403	WT00035841-2020	Valid from 5 Jun 2020 to 30 Jun 2025
				Approved variation on 9 Jun 2022
	Bill Account for disposal	Works area of 3403	A/C 7035267	Approval granted from EPD on 30 Sep 2019
Construction Noise Permit (General Works)	Works area of 3403	GW-RS0036-24	Valid from 1 Mar 2024 to 31 Aug 2024	
3404	Bill Account for disposal	Works area of 3404	A/C 7035158	Approval granted from EPD on 12 Sep 2019
3405	Notification of Construction Work under APCO	Works area of 3405	484926	Receipt acknowledged by EPD on 30 Sep 2022
		Works area of 3405	10004150	Receipt acknowledged by EPD on 25 Apr 2024
	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

Contract No.	Description	Location	Permit/ Reference No.	Status
	Discharge License under WPCO	Works area of 3405	WT00037084-2020	Valid from 17 Mar 2021 to 31 Mar 2026
	Bill Account for disposal	Works area of 3405	A/C 7036796	Approval granted from EPD on 20 Mar 2020
	Construction Noise Permit (General Works)	Works area of 3405	GW-RS0419-24	Valid from 11 May 2024 to 9 Nov 2024
3408	Notification of Construction Work under APCO	Works area of 3408	461958	Receipt acknowledged by EPD on 17 Nov 2020
		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-RS0074-24	Valid from 5 Feb 2024 to 25 Jul 2024 (Superseded by GW-RS0667-24)
		Works area of 3408	GW-RS0667-24	Valid from 26 Jul 2024 to 25 Jan 2025
	Construction Noise Permit (Special Case)	Works area of 3408	GW-RS0119-24	Valid from 19 Feb 2024 to 18 Aug 2024
	3508	Notification of Construction Work under APCO	Works area of 3508	10000515
		Storage yard of 3508	467132	Receipt acknowledged by EPD on 3 May 2021
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-RS0100-24	Valid from 10 Feb 2024 to 7 Aug 2024
		Works area of 3508	GW-RS0195-24	Valid from 22 Mar 2024 to 21 Sep 2024
	Works area of 3508	GW-RS0365-24	Valid from 25 Apr 2024 to 22 Oct 2024	

Contract No.	Description	Location	Permit/ Reference No.	Status
		Works area of 3508	GW-RS0390-24	Valid from 3 May 2024 to 2 Nov 2024
		Works area of 3508	GW-RS0494-24	Valid from 6 Jun 2024 to 5 Dec 2024
	Construction Noise Permit (Special Case)	Works area of 3508	GW-RS0250-24	Valid from 1 Apr 2024 to 30 Sep 2024
		Works area of 3508	GW-RS0251-24	Valid from 1 Apr 2024 to 30 Sep 2024
		Works area of 3508	GW-RS0478-24	Valid from 1 Jun 2024 to 30 Nov 2024
		Works area of 3508	GW-RS0541-24	Valid from 19 Jun 2024 to 30 Nov 2024
		Works area of 3508	GW-RS0613-24	Valid from 11 Jul 2024 to 20 Aug 2024
		Works area of 3508	GW-RS0662-24	Valid from 20 Jul 2024 to 31 Dec 2024
3601	Notification of Construction Work under APCO	Works area of 3601	451762	Receipt acknowledged by EPD on 10 Dec 2019
	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-RS0415-24	Valid from 8 May 2024 to 7 Nov 2024
3602	Notification of Construction Work under APCO	Works area of 3602	421278	Receipt acknowledged by EPD on 18 Sep 2017
	Registration as Chemical Waste Producer	Works area of 3602	WPN 5296-951-N2673-01	Completion of Registration on 9 Oct 2017
		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
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
	Construction Noise Permit (General Works)	Works area of 3603	GW-RS0466-24	Valid from 25 May 2024 to 21 Nov 2024
3721	Notification of Construction Work under APCO	Works area of 3721	448657	Receipt acknowledged by EPD on 02 Sep 2019
	Bill Account for disposal	Works area of 3721	A/C 7035234	Approval granted from EPD on 25 Sep 2019

Contract No.	Description	Location	Permit/ Reference No.	Status
	Construction Noise Permit (General Works)	Works area of 3721	GW-RS0467-24	Valid from 29 May 2024 to 28 Nov 2024
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	10006309	Receipt acknowledged by EPD on 26 Jun 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
	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
	Construction Noise Permit (General Works)	Works area of 3801	GW-RS0134-24	Valid from 17 Feb 2024 to 14 Aug 2024
3802	Notification of Construction Work under APCO	Works area of 3802	458122	Receipt acknowledged by EPD on 14 Jul 2020
	Registration as Chemical Waste Producer	Works area of 3802	WPN 5218-951-G2895-01	Completion of Registration on 28 Aug 2020
		Works area of 3802 (Existing airport)	WPN 5218-951-G2945-01	Completion of Registration on 29 Sep 2020
	Discharge License under WPCO	Works area of 3802	WT00037032-2020	Valid from 25 May 2021 to 31 May 2026
		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-RS0089-24	Valid from 5 Feb 2024 to 4 Aug 2024 (Superseded by GW-RS0622-24)

Contract No.	Description	Location	Permit/ Reference No.	Status
			GW-RS0622-24	Valid from 6 July 2024 to 4 Jan 2025
		Works area of 3802 (Existing airport)	GW-RS0493-24	Valid from 8 Jun 2024 to 7 Dec 2024
3804	Notification of Construction Work under APCO	Works area of 3804	487452	Receipt acknowledged by EPD on 14 Dec 2022
	Construction Noise Permit (General Works)	Works area of 3804	GW-RS0554-24	Valid from 27 Jun 2024 to 25 Dec 2024
	Registration as Chemical Waste Producer	Works area of 3804	WPN 5213-951-B2686-01	Completion of Registration on 4 Jan 2023
	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
	Construction Noise Permit (General Works)	Works area of 3805	GW-RS0114-24	Valid from 4 Mar 2024 to 3 Sep 2024
	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	Notification of Construction Work under APCO	Works area of 3901A	466883	Receipt acknowledged by EPD on 26 Apr 2021
	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(1)	Valid from 14 Sep 2020 to 13 Sep 2024
	Landfill Disposal of Waste Concrete from Batching Plant	Works area of 3901A	EP195/01/18	Valid from 10 Nov 2023 to 9 Aug 2024
	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-RS0037-24	Valid from 5 Feb 2024 to 4 Aug 2024

Contract No.	Description	Location	Permit/ Reference No.	Status
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
	Specified Process license under APCO	Works area of 3901B	L-3-262(1)	Valid from 17 Nov 2020 to 16 Nov 2024
	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-RS0067-24	Valid from 5 Feb 2024 to 4 Aug 2024
3913	Specified Process license under APCO	Works area of 3913	L-15-040 (1)	Valid from 29 Mar 2021 to 28 Mar 2025
	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-RS0187-24	Valid from 20 Mar 2024 to 19 Sep 2024
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	76	2	2

## **Appendix G. Data of SkyPier HSF Movements to/from Macau (between 1 and 31 July 2024)**

### **Data of SkyPier HSF Movements to/from Macau (between 1 and 31 July 2024)**

Date	Time [Arrival at / Departure from HKIA SkyPier]	Ferry No.	Connecting Port [YFT – Macao (Taipa)/ XZM – Macao (Maritime Ferry Terminal)]	Travel Direction [Arrival at / Departure from HKIA SkyPier]	Average Speed within Speed Control Zone (knots)	Extent of Instantaneous Speeding by SkyPier HSFs across SCZ (knots)	Duration of the Instantaneous Speeding (min)
02-Jul	11:51	8S212	XZM	STA	12.3	8.4	14
02-Jul	12:30	8S123	XZM	ATS	10.7	8.4	12.9
03-Jul	11:49	8S212	XZM	STA	11.9	8.1	14.7
08-Jul	14:27	3A161	YFT	ATS	11.7	10.4	12.5
08-Jul	15:46	3A162	YFT	ATS	13.5	11.5	14
08-Jul	22:24	3A163	YFT	ATS	12.3	9.9	12.8
09-Jul	11:52	8S212	XZM	STA	12.5	11.2	13.2
09-Jul	12:29	8S123	XZM	ATS	12.4	11.2	13.3
09-Jul	14:17	3A161	YFT	ATS	14	12.4	14.4
09-Jul	15:39	3A162	YFT	ATS	13.1	11.1	13.7
09-Jul	21:48	3A163	YFT	ATS	12.6	11.2	13.5
10-Jul	11:47	8S212	XZM	STA	12.6	11.1	13.5
10-Jul	12:33	8S123	XZM	ATS	12.6	11.4	13.4
11-Jul	08:14	3A061	YFT	STA	13.1	11.3	13.8
11-Jul	12:12	3A062	YFT	STA	13.6	12.3	14
11-Jul	14:25	3A063	YFT	STA	12.1	11	12.6
12-Jul	08:06	3A061	YFT	STA	12	10.9	12.9
12-Jul	11:48	8S212	XZM	STA	12.7	11.8	13.7
12-Jul	12:27	8S123	XZM	ATS	13.1	11.6	14.2
12-Jul	14:07	3A063	YFT	STA	12	11.5	12.5
16-Jul	11:53	8S212	XZM	STA	12.8	11.7	13.9
16-Jul	12:31	8S123	XZM	ATS	13.4	11.9	14.3
17-Jul	11:49	8S212	XZM	STA	12.1	11	13.3
17-Jul	12:28	8S123	XZM	ATS	11.8	11.1	13
23-Jul	11:49	8S212	XZM	STA	12.2	10.6	13.1
23-Jul	12:28	8S123	XZM	ATS	12.3	10.4	13
24-Jul	11:46	8S212	XZM	STA	13.3	12.7	13.9
24-Jul	12:32	8S123	XZM	ATS	13.4	12.8	13.8
26-Jul	11:46	8S212	XZM	STA	12.1	10.5	13.3
26-Jul	12:39	8S123	XZM	ATS	11.7	10.4	14
30-Jul	11:46	8S212	XZM	STA	12.6	11.3	13.6
30-Jul	12:21	8S123	XZM	ATS	12.5	11.3	13.3
31-Jul	11:46	8S212	XZM	STA	12.7	11.2	14.2
31-Jul	12:27	8S123	XZM	ATS	11.9	10.5	12.9

#### Follow-up on instantaneous speeding

Referring to the data of SkyPier HSF movements in July 2024, no instantaneous speeding (i.e. a sudden change in speed at over 15 knots for a short period of time) within the SCZ was recorded.



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