



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

Construction Phase Monthly EM&A Report No.64
(For April 2021)

May 2021

3/F International Trade Tower
348 Kwun Tong Road
Kwun Tong
Kowloon
Hong Kong

T +852 2828 5757
F +852 2827 1823
mottmac.hk

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

Construction Phase Monthly EM&A Report No.64
(For April 2021)

May 2021

This Monthly EM&A Report No. 64 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:



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

Date

14 May 2021



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

+852 3922 9000 tel

+852 3922 9797 fax

Our Ref : 60440482/C/JCHL210514

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 May 2021

Dear Sir,

Contract No. 3102
3RS Independent Environmental Checker Consultancy Services

Submission of Monthly EM&A Report No. 64 (April 2021)

Reference is made to the Environmental Team's submission of the Monthly EM&A Report No. 64 under Condition 3.5 of the Environmental Permit No. EP-489/2014 certified by the ET Leader on 14 May 2021.

We write to 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 3922 9376.

Yours faithfully,
AECOM Asia Co. Ltd.

Jackel Law
Independent Environmental Checker

Contents

Abbreviations	1
Executive Summary	3
1 Introduction	7
1.1 Background	7
1.2 Scope of this Report	7
1.3 Project Organisation	7
1.4 Summary of Construction Works	11
1.5 Summary of EM&A Programme Requirements	11
2 Air Quality Monitoring	14
2.1 Action and Limit Levels	14
2.2 Monitoring Equipment	14
2.3 Monitoring Methodology	14
2.3.1 Measuring Procedure	14
2.3.2 Maintenance and Calibration	15
2.4 Summary of Monitoring Results	15
2.5 Conclusion	15
3 Noise Monitoring	16
3.1 Action and Limit Levels	16
3.2 Monitoring Equipment	16
3.3 Monitoring Methodology	17
3.3.1 Monitoring Procedure	17
3.3.2 Maintenance and Calibration	17
3.4 Summary of Monitoring Results	17
3.5 Conclusion	18
4 Water Quality Monitoring	19
4.1 Action and Limit Levels	20
4.2 Monitoring Equipment	22
4.3 Monitoring Methodology	22
4.3.1 Measuring Procedure	22
4.3.2 Maintenance and Calibration	23
4.3.3 Laboratory Measurement / Analysis	23
4.4 Summary of Monitoring Results	23
4.5 Conclusion	23

5	Waste Management	25
5.1	Action and Limit Levels	25
5.2	Waste Management Status	25
5.3	Marine Sediment Management	26
6	Chinese White Dolphin Monitoring	27
6.1	Action and Limit Levels	27
6.2	CWD Monitoring Transects and Stations	27
6.2.1	Small Vessel Line-transect Survey	27
6.2.2	Land-based Theodolite Tracking Survey	29
6.3	CWD Monitoring Methodology	29
6.3.1	Small Vessel Line-transect Survey	29
6.3.2	Photo Identification	30
6.3.3	Land-based Theodolite Tracking Survey	30
6.4	Monitoring Results and Observations	31
6.4.1	Small Vessel Line-transect Survey	31
6.4.2	Photo Identification	34
6.4.3	Land-based Theodolite Tracking Survey	34
6.5	Progress Update on Passive Acoustic Monitoring	35
6.6	Site Audit for CWD-related Mitigation Measures	36
6.7	Timing of Reporting CWD Monitoring Results	36
6.8	Summary of CWD Monitoring	36
7	Environmental Site Inspection and Audit	37
7.1	Environmental Site Inspection	37
7.2	Landscape and Visual Mitigation Measures	37
7.3	Land Contamination Assessment	45
7.4	Audit of SkyPier High Speed Ferries	46
7.5	Audit of Construction and Associated Vessels	46
7.6	Implementation of Dolphin Exclusion Zone	47
7.7	Status of Submissions under Environmental Permits	47
7.8	Compliance with Other Statutory Environmental Requirements	48
7.9	Analysis and Interpretation of Complaints, Notification of Summons and Status of Prosecutions	48
7.9.1	Complaints	48
7.9.2	Notifications of Summons or Status of Prosecution	48
7.9.3	Cumulative Statistics	48
8	Future Key Issues and Other EIA & EM&A Issues	49
8.1	Construction Programme for the Coming Reporting Period	49
8.2	Key Environmental Issues for the Coming Reporting Period	51
8.3	Monitoring Schedule for the Coming Reporting Period	51
8.4	Review of the Key Assumptions Adopted in the EIA Report	51

9 Conclusion and Recommendation

Tables

Table 1.1: Contact Information of Key Personnel	8
Table 1.2: Summary of status for all environmental aspects under the Updated EM&A Manual	11
Table 2.1: Locations of Impact Air Quality Monitoring Stations	14
Table 2.2: Action and Limit Levels of Air Quality Monitoring	14
Table 2.3: Air Quality Monitoring Equipment	14
Table 2.4: Summary of Air Quality Monitoring Results	15
Table 3.1: Locations of Impact Noise Monitoring Stations	16
Table 3.2: Action and Limit Levels for Noise Monitoring	16
Table 3.3: Noise Monitoring Equipment	17
Table 3.4: Summary of Construction Noise Monitoring Results	18
Table 4.1: Monitoring Locations and Parameters of Impact Water Quality Monitoring	19
Table 4.2: Action and Limit Levels for General Water Quality Monitoring and Regular DCM Monitoring	21
Table 4.3: The Control and Impact Stations during Flood Tide and Ebb Tide for General Water Quality Monitoring and Regular DCM Monitoring	21
Table 4.4: Water Quality Monitoring Equipment	22
Table 4.5: Other Monitoring Equipment	22
Table 4.6: Laboratory Measurement/ Analysis of SS and Heavy Metals	23
Table 5.1: Action and Limit Levels for Construction Waste	25
Table 5.2: Construction Waste Statistics	26
Table 6.1: Derived Values of Action and Limit Levels for Chinese White Dolphin Monitoring	27
Table 6.2: Coordinates of Transect Lines in NEL, NWL, AW, WL and SWL Survey Areas	28
Table 6.3: Land-based Theodolite Survey Station Details	29
Table 6.4: Comparison of CWD Encounter Rates of the Whole Survey Area with Action Levels	33
Table 6.5: Summary of Photo Identification	34
Table 6.6: Summary of Survey Effort and CWD Group of Land-based Theodolite Tracking	34
Table 7.1: Landscape and Visual – Construction Phase Audit Summary	38
Table 7.2: Examples of Landscape and Visual Mitigation Measures in the Reporting Period	39
Table 7.3: Monitoring Programme for Landscape and Visual	40
Table 7.4: Event and Action Plan for Landscape and Visual	41
Table 7.5: Summary of the Number of Retained, Transplanted and To-be-transplanted Trees in the Reporting Period	41
Table 7.6: Summary of the Transplanted Trees Updated in the Reporting Period	42
Table 7.7: Photos of the Existing Transplanted Trees	44
Table 7.8: Summary of Key Audit Findings against the SkyPier Plan	46
Table 7.9: Status of Submissions under Environmental Permit	47

Figures

- Figure 1.1 Locations of Key Construction Activities
- Figure 2.1 Locations of Air and Noise Monitoring Stations and Chek Lap Kok Wind Station
- Figure 4.1 Water Quality Monitoring Stations
- Figure 6.1 Vessel based Dolphin Monitoring Transects in Construction, Post-construction and Operation Phases
- Figure 6.2 Land based Dolphin Monitoring in Baseline and Construction Phases
- Figure 6.3 Sightings Distribution of Chinese White Dolphins
- Figure 6.4 Plots of First Sightings of All CWD Groups obtained from Land-based Stations
- Figure 6.5 Location for Autonomous Passive Acoustic Monitoring

Appendices

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

Abbreviations

3RS	Three-Runway System
AAHK	Airport Authority Hong Kong
AECOM	AECOM Asia Company Limited
AFCD	Agriculture, Fisheries and Conservation Department
AIS	Automatic Information System
ANI	Encounter Rate of Number of Dolphins
APM	Automated People Mover
AW	Airport West
BHS	Baggage Handling System
C&D	Construction and Demolition
CAP	Contamination Assessment Plan
CAR	Contamination Assessment Report
CTCC	Construction Traffic Control Centre
CWD	Chinese White Dolphin
DCM	Deep Cement Mixing
DEZ	Dolphin Exclusion Zone
DO	Dissolved Oxygen
EIA	Environmental Impact Assessment
EM&A	Environmental Monitoring & Audit
EP	Environmental Permit
EPD	Environmental Protection Department
EPSS	Emergency Power Supply Systems
ET	Environmental Team
FCZ	Fish Culture Zone
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
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
SCLKCOMP	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 64th 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 30 April 2021.

Key Activities in the Reporting Period

The key activities of the Project carried out in the reporting period included reclamation works and land-based works. Works in the reclamation areas included deep cement mixing (DCM) works, marine filling, seawall and facilities construction, together with runway and associated works. Land-based works on existing airport island involved mainly airfield works, foundation and substructure work for Terminal 2 expansion, modification and tunnel work for Automated People Mover (APM) and Baggage Handling System (BHS), and preparation work for utilities, with activities include site establishment, site office construction, road and drainage works, cable ducting, demolition, piling, and excavation works.




EM&A Activities Conducted in the Reporting Period

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

Monitoring Activities	Number of Sessions
1-hour Total Suspended Particulates (TSP) air quality monitoring	36
Noise monitoring	16
Water quality monitoring	13
Vessel line-transect surveys for Chinese White Dolphin (CWD) monitoring	2
Land-based theodolite tracking survey effort for CWD monitoring	2

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

Snapshots of EM&A Activities in the Reporting Period

		
<p>Small Vessel Line-transect Survey of CWD Conducted by ET</p>	<p>On-site Checking of Construction Noise Permit conducted by ET</p>	<p>Dump Truck with Mechanical Truck Cover used for Delivering C&D Materials</p>

Results of Impact Monitoring

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

Monitoring results of construction dust, construction noise, water quality, construction waste, and CWD did not trigger the corresponding Action and Limit Levels in the reporting period.

Summary of Upcoming Key Issues

Reclamation Works:

Contract 3206 Main Reclamation Works

- DCM works;
- Land-based ground improvement works;
- Seawall construction;
- Marine filling; and
- Sorting and reuse of inert waste from other 3RS contracts.

Airfield Works:

Contract 3301 North Runway Crossover Taxiway

- Cable ducting works; and
- Subgrade compaction and paving works.

Contract 3302 Eastern Vehicular Tunnel Advance Works

- Cable laying and ducting works;
- Backfilling and reinstatement works; and
- Piling and structure works.

Contract 3303 Third Runway and Associated Works

- Land-based ground improvement works;
- Operation of asphalt plant;
- Footing and utilities work; and
- Cable laying and ducting works.

Contract 3305 Airfield Ground Lighting System

- Delivery and installation of lighting system.

Contract 3307 Fire Training Facility

- Excavation; and
- Drainage works.

Third Runway Concourse:**Contract 3403 New Integrated Airport Centres Building and Civil Works**

- Architectural, Builder's Work and Finishing works;
- Roof lifting works; and
- Underground utilities construction.

Contract 3405 Third Runway Concourse Foundation and Substructure Works

- Plant mobilisation;
- Pre-drilling; and
- Piling work.

Terminal 2 Expansion:**Contract 3503 Terminal 2 Foundation and Substructure Works**

- T2 re-configuration;
- Excavation works;
- Utilities road work; and
- Piling and structure works.

Contract 3508 Terminal 2 Expansion Works

- Excavation and footing construction;
- Site formation;
- Piling work; and
- Builders' works.

Automated People Mover (APM) and Baggage Handling System (BHS):**Contract 3601 New Automated People Mover System (TRC Line)**

- Concreting work and rebar fixing.

Contract 3602 Existing APM System Modification Works

- Concreting work.

Construction Support (Facilities):**Contract 3721 Construction Support Infrastructure Works**

- Excavation and backfilling;
- Laying of drainage pipes and ducts; and
- Road works.

Contract 3722 Construction Support Facilities

- Foundation works;
- Erection of superstructure; and
- Site establishment.

Contract 3723 Construction Support Facilities

- Foundation works;
- Erection of superstructure; and

- Site establishment.

Airport Support Infrastructure:

Contract 3801 APM and BHS Tunnels on Existing Airport Island

- Construction of working platform and ventilation building;
- Box culvert connection works;
- Cofferdam for shaft;
- Excavation works; and
- Site clearance.

Contract 3802 APM and BHS Tunnels and Related Works

- Construction of Airside Fire Station and marine sediment treatment plant;
- Installation of sheet pipes and dewatering well;
- Pre-drilling; and
- Ducting works.

Construction Support (Services / Licences):

Contract 3901A Concrete Batching Facility

- Plant operation.

Contract 3901B Concrete Batching Facility

- Plant operation; and
- Foundation works.

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 [^]		√	No breach of Limit Level was recorded.	Nil
Breach of Action Level [^]		√	No breach of Action Level was recorded.	Nil
Complaint Received		√	A complaint regarding alleged dusty and muddy vehicles from Three Runway System Project at Tuen Mun Public Cargo Working Area was received on 20 April 2021.	The complaint is under investigation. Findings will be reported in the next Monthly EM&A Report.
Notification of any summons and status of prosecutions		√	No notification of summons or 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:

[^] 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 3.1¹. 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, 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**. Description of relevant contracts was presented in **Appendix A**.

1.2 Scope of this Report

This is the 64th 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 30 April 2021.

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**.

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

Table 1.1: Contact Information of Key Personnel

Party	Position	Name	Telephone
Project Manager's Representative (Airport Authority Hong Kong)	Principal Manager, Environmental Compliance, Sustainability	Lawrence Tsui	2183 2734
Environmental Team (ET) (Mott MacDonald Hong Kong Limited)	Environmental Team Leader	Terence Kong	2828 5919
	Deputy Environmental Team Leader	Heidi Yu	2828 5704
	Deputy Environmental Team Leader	Daniel Sum	2585 8495
Independent Environmental Checker (IEC) (AECOM Asia Company Limited)	Independent Environmental Checker	Jackel Law	3922 9376
	Deputy Independent Environmental Checker	Roy Man	3922 9141

Reclamation Works:

Party	Position	Name	Telephone
Contract 3206 Main Reclamation Works (ZHEC-CCCC-CDC Joint Venture)	Project Manager	Alan Mong	3763 1352
	Environmental Officer	Kwai Fung Wong	3763 1452

Airfield Works:

Party	Position	Name	Telephone
Contract 3301 North Runway Crossover Taxiway (FJT-CHEC-ZHEC Joint Venture)	Deputy Project Director	Kin Hang Chung	9800 0048
	Environmental Officer	Joe Wong	6182 0351
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 3303 Third Runway and Associated Works (SAPR Joint Venture)	Project Manager	Andrew Keung	6277 6628
	Environmental Officer	Max Chin	6447 5707
Contract 3305 Airfield Ground Lighting System (ADB Safegate Hong Kong Limited)	Coordination Manager	Kelvin Law	6289 2151
	Environmental Officer	Calvin Sze	9205 9277
Contract 3307 Fire Training Facility (Paul Y. Construction Company Limited)	Project Manager	Steven Meredith	6109 1813
	Environmental Officer	Albert Chan	9700 1083

Third Runway Concourse:

Party	Position	Name	Telephone
Contract 3402 New Integrated Airport Centres Enabling Works (Wing Hing Construction Co., Ltd.)	Contract Manager	Michael Kan	9206 0550
	Environmental Officer	Lisa He	5374 3418
Contract 3403 New Integrated Airport Centres Building and Civil Works (Sun Fook Kong Construction Limited)	Project Manager	Alice Leung	9220 3162
	Environmental Officer	Ray Cheung	9785 1566
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)	Assistant Project Manager	Qian Zhang	5377 7976
	Environmental Officer	Malcolm Leung	7073 7559

Terminal 2 (T2) Expansion:

Party	Position	Name	Telephone
Contract 3503 Terminal 2 Foundation and Substructure Works (Leighton – Chun Wo Joint Venture)	Project Manager	Eric Wu	3973 1718
	Environmental Officer	Gomez Yuen	9098 7807
Contract 3508 Terminal 2 Expansion Works (Gammon Engineering & Construction Company Limited)	Project Director	Richard Ellis	6201 5637
	Environmental Officer	Gena Tsang	9511 2283

Automated People Mover (APM) and Baggage Handling System (BHS):

Party	Position	Name	Telephone
Contract 3601 New Automated People Mover System (TRC Line) (CRRG Puzhen Bombardier Transportation Systems Limited and CRRG Nanjing Puzhen Co., Ltd. Joint Venture)	Project Manager	Hongdan Wei	158 6180 9450
	Environmental Officer	P L Wong	9143 2185
Contract 3602 Existing APM System Modification Works (Niigata Transys Co., Ltd.)	Project Manager	Kunihiro Tatecho	9755 0351
	Environmental Officer	Carrie Kwan	9276 0551

Party	Position	Name	Telephone
Contract 3603 3RS Baggage Handling System (VISH Consortium)	Project Manager	K C Ho	9272 9626
	Environmental Officer	Eric Ha	9215 3432

Construction Support (Facilities):

Party	Position	Name	Telephone
Contract 3721 Construction Support Infrastructure Works (China State Construction Engineering (Hong Kong) Ltd.)	Site Agent	Thomas Lui	9011 5340
	Environmental Officer	Xavier Lam	9493 2944
Contract 3722 Western Support Area – Construction Support Facilities (Tapbo Construction Company Limited and Konwo Modular House Limited Joint Venture)	Deputy Project Director	Philip Kong	9049 3161
	Environmental Officer	Jay Chua	6688 0237
Contract 3723 Eastern Support Area – Construction Support Facilities (Tapbo Construction Company Limited and Konwo Modular House Ltd. Joint Venture.)	Deputy Project Director	Philip Kong	9049 3161
	Environmental Officer	Jay Chua	6688 0237
Contract 3728 Minor Site Works (Shun Yuen Construction Company Limited)	Contract Manager	C K Liu	9194 8739
	Environmental Officer	K F Li	9086 1793

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	Federick Wong	9842 2703
Contract 3802 APM and BHS Tunnels and Related Works (Gammon Engineering & Construction Company Limited)	Project Director	John Adams	6111 6989
	Environmental Officer	Phoebe Ng	9869 1105

Construction Support (Services / Licences):

Party	Position	Name	Telephone
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)	Senior Project Manager	Gabriel Chan	2435 3260
	Environmental Officer	Rex Wong	2695 6319

1.4 Summary of Construction Works

The key activities of the Project carried out in the reporting period included reclamation works and land-based works. Works in the reclamation areas included DCM works, marine filling, seawall and facilities construction, together with runway and associated works. Land-based works on existing airport island involved mainly airfield works, foundation and substructure work for Terminal 2 expansion, modification and tunnel work for APM and BHS systems, and preparation work for utilities, with activities include site establishment, site office construction, road and drainage works, cable ducting, demolition of existing facilities, piling, and excavation works.

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

1.5 Summary of EM&A Programme Requirements

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

Table 1.2: Summary of status for all environmental aspects under the Updated EM&A Manual

Parameters	EM&A Requirements	Status
Air Quality		
Baseline Monitoring	At least 14 consecutive days before commencement of construction work	The baseline air quality monitoring result has been 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
Noise		
Baseline Monitoring	Daily for a period of at least two weeks prior to the commencement of construction works	The baseline noise monitoring result has been reported in Baseline Monitoring Report and submitted to EPD under EP Condition 3.4.
Impact Monitoring	Weekly	On-going
Water Quality		
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 has been 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.	On-going for reclamation works. General impact water quality monitoring for water jetting works was completed on 23 May 2017.
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.	On-going
Sewerage and Sewage Treatment		
Methodology for carrying out annual sewage flow monitoring for concerned gravity sewer	Methodology to be prepared and submitted to EPD at least one year before commencement of the operation of 3RS	The proposed methodology of the annual sewage flow monitoring was submitted to EPD.
Details of the routine H ₂ 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 details of the routine H ₂ S monitoring system will be prepared and submitted to EPD at least one year before commencement of operation of 3RS.
Waste Management		
Waste Monitoring	At least weekly	On-going

Parameters	EM&A Requirements	Status
Land Contamination		
Supplementary Contamination Assessment Plan (CAP)	At least 3 months before commencement of any soil remediation works.	The Supplementary CAP was submitted to EPD pursuant to EP Condition 2.20.
Contamination Assessment Report (CAR) for Golf Course	CAR to be submitted for golf course	The CAR for Golf Course was submitted to 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 to EPD.
Terrestrial Ecology		
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.
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.
Marine Ecology		
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.
Chinese White Dolphins (CWD)		
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.	On-going
Landscape & Visual		
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 has been reported in Baseline Monitoring Report and submitted to EPD under EP Condition 3.4.
Impact Monitoring	Weekly	On-going
Environmental Auditing		
Regular site inspection	Weekly	On-going

Parameters	EM&A Requirements	Status
Marine Mammal Watching Plan (MMWP) implementation measures	Monitor and check	On-going
Dolphin Exclusion Zone (DEZ) Plan implementation measures	Monitor and check	On-going
SkyPier High Speed Ferries (HSF) implementation measures	Monitor and check	On-going
Construction and Associated Vessels Implementation measures	Monitor and check	On-going
Silt Curtain Deployment Plan implementation measures	Monitor and check	On-going
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, water quality, waste management, landscape & visual, and CWD 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, environmental trainings and regular environmental management meetings were conducted during the reporting period, which are summarised as below:

- One skipper training session provided by ET: 28 April 2021; and
- Seventeen environmental management meetings for EM&A review with works contracts: 1, 8, 9, 13, 14, 19, 21, 22, 28, 29 and 30 April 2021.

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 B**.

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 ($\mu\text{g}/\text{m}^3$)	Limit Level ($\mu\text{g}/\text{m}^3$)
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-2 (Serial No. 296098)	20 Oct 2020	Monthly EM&A Report No. 58, Appendix E
	SIBATA LD-3B-1 (Serial No. 597337)	27 May 2020	Monthly EM&A Report No. 57, Appendix D

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 Construction Phase Monthly EM&A Report No. 58, 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 involved in the reporting period is provided in **Appendix C**.

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

Table 2.4: Summary of Air Quality Monitoring Results

Monitoring Station	1-hr TSP Concentration Range ($\mu\text{g}/\text{m}^3$)	Action Level ($\mu\text{g}/\text{m}^3$)	Limit Level ($\mu\text{g}/\text{m}^3$)
AR1A	18 - 33	306	500
AR2	10 - 35	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 ⁽¹⁾	Tung Chung West Development	To be determined
NM3A ⁽²⁾	Site Office	Facade
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

Note:

- (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 documented complaint is received from any one of the sensitive receivers	75dB(A) ⁽¹⁾

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)	20 Mar 2021	Monthly EM&A Report No. 63, Appendix E
	Rion NL-52 (Serial No. 01287679)	21 Jun 2020	Monthly EM&A Report No. 54, Appendix E
Acoustic Calibrator	Casella CEL-120/1 (Serial No. 2383737)	12 Sep 2020	Monthly EM&A Report No. 57, Appendix D
	Castle GA607 (Serial No. 040162)	20 Mar 2021	Monthly EM&A Report No. 63, Appendix E

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 involved in the reporting period is provided in **Appendix C**.

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

Table 3.4: Summary of Construction Noise Monitoring Results

Monitoring Station	Noise Level Range, dB(A)	Limit Level, dB(A)
	L_{eq} (30mins)	L_{eq} (30mins)
NM1A ⁽¹⁾	66 – 72	75
NM4 ⁽¹⁾⁽³⁾	60 – 64	70 ⁽²⁾
NM5 ⁽¹⁾⁽³⁾	53 – 57	75
NM6 ⁽¹⁾	64 – 68	75

Notes:

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

No complaints were received from any sensitive receiver that triggered the Action Level. All monitoring results were also 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 at NM4 and aircraft noise near NM5 and 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

Water quality monitoring of DO, pH, temperature, salinity, turbidity, suspended solids (SS), total alkalinity, chromium, and nickel was conducted three days per week, at mid-ebb and mid-flood tides, at a total of 23 water quality monitoring stations, comprising 12 impact (IM) stations, 8 sensitive receiver (SR) stations and 3 control (C) stations in the vicinity of water quality sensitive receivers around the airport island in accordance with the Manual. The purpose of water quality monitoring at the IM stations is to promptly capture any potential water quality impact from the Project before it could become apparent at sensitive receivers (represented by the SR stations). **Table 4.1** describes the details of the monitoring stations. **Figure 4.1** shows the locations of the monitoring stations.

Table 4.1: Monitoring Locations and Parameters of Impact Water Quality Monitoring

Monitoring Station	Description	Coordinates		Parameters
		Easting	Northing	
C1	Control Station	804247	815620	<u>General Parameters</u>
C2	Control Station	806945	825682	DO, pH, Temperature, Salinity, Turbidity, SS
C3 ⁽³⁾	Control Station	817803	822109	
IM1	Impact Station	807132	817949	<u>DCM Parameters</u>
IM2	Impact Station	806166	818163	Total Alkalinity, Heavy Metals ⁽²⁾
IM3	Impact Station	805594	818784	
IM4	Impact Station	804607	819725	
IM5	Impact Station	804867	820735	
IM6	Impact Station	805828	821060	
IM7	Impact Station	806835	821349	
IM8	Impact Station	808140	821830	
IM9	Impact Station	808811	822094	
IM10	Impact Station	809794	822385	
IM11	Impact Station	811460	822057	
IM12	Impact Station	812046	821459	
SR1A ⁽¹⁾	Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities (HKBCF) Seawater Intake for cooling	812660	819977	<u>General Parameters</u> DO, pH, Temperature, Salinity, Turbidity, SS
SR2 ⁽³⁾	Planned marine park / hard corals at The Brothers / Tai Mo To	814166	821463	<u>General Parameters</u> DO, pH, Temperature, Salinity, Turbidity, SS <u>DCM Parameters</u> Total Alkalinity, Heavy Metals ⁽²⁾⁽⁴⁾
SR3	Sha Chau and Lung Kwu Chau Marine Park / fishing and spawning grounds in North Lantau	807571	822147	<u>General Parameters</u> DO, pH, Temperature, Salinity, Turbidity, SS
SR4A	Sha Lo Wan	807810	817189	

Monitoring Station	Description	Coordinates		Parameters
		Easting	Northing	
SR5A	San Tau Beach SSSI	810696	816593	<u>General Parameters</u> DO, pH, Temperature, Salinity, Turbidity, SS
SR6A ⁽⁵⁾	Tai Ho Bay, Near Tai Ho Stream SSSI	814739	817963	
SR7	Ma Wan Fish Culture Zone (FCZ)	823742	823636	
SR8 ⁽⁶⁾	Seawater Intake for cooling at Hong Kong International Airport (East)	811623	820390	

Notes:

- (1) With the operation of HKBCF, water quality monitoring at SR1A station was commenced on 25 October 2018. To better reflect the water quality in the immediate vicinity of the intake, the monitoring location of SR1A has been shifted closer to the intake starting from 5 January 2019.
- (2) Details of selection criteria for the two heavy metals for regular DCM monitoring refer to the Detailed Plan on Deep Cement Mixing available on the dedicated 3RS website (<http://env.threerunwaysystem.com/en/ep-submissions.html>). DCM specific water quality monitoring parameters (total alkalinity and heavy metals) were only conducted at C1 to C3, SR2, and IM1 to IM12.
- (3) According to the Baseline Water Quality Monitoring Report, C3 station is not adequately representative as a control station of impact/ SR stations during the flood tide. The control reference has been changed from C3 to SR2 from 1 September 2016 onwards.
- (4) Total alkalinity and heavy metals results are collected at SR2 as a control station for regular DCM monitoring.
- (5) As the access to SR6 was obstructed by the construction activities and temporary structures for Tung Chung New Town Extension, the monitoring location has been relocated to SR6A starting from 8 August 2019.
- (6) The monitoring location for SR8 is subject to further changes due to silt curtain arrangements and the progressive relocation of this seawater intake.

4.1 Action and Limit Levels

In accordance with the Manual, baseline water quality levels at the above-mentioned representative water quality monitoring stations were established as presented in the Baseline Water Quality Monitoring Report. The Action and Limit Levels of general water quality monitoring and regular DCM monitoring stipulated in the EM&A programme for triggering the relevant investigation and follow-up procedures under the programme are provided in **Table 4.2**. The control and impact stations during ebb tide and flood tide for general water quality monitoring and regular DCM monitoring are presented in **Table 4.3**.

Table 4.2: Action and Limit Levels for General Water Quality Monitoring and Regular DCM Monitoring

Parameters		Action Level (AL)		Limit Level (LL)	
Action and Limit Levels for general water quality monitoring and regular DCM monitoring (excluding SR1A & SR8)					
General Water Quality Monitoring	DO in mg/l (Surface, Middle & Bottom)	Surface and Middle		Surface and Middle	
		4.5mg/l		4.1mg/l	
		Bottom		Bottom	
		3.4mg/l		2.7mg/l	
	Suspended Solids (SS) in mg/l	23	or 120% of upstream control station at the same tide of the same day,	37	or 130% of upstream control station at the same tide of the same day,
	Turbidity in NTU	22.6	whichever is higher	36.1	whichever is higher
Regular DCM Monitoring	Total Alkalinity in ppm	95		99	
	Representative Heavy Metals for regular DCM monitoring (Chromium) in µg/l	0.2		0.2	
	Representative Heavy Metals for regular DCM monitoring (Nickel) in µg/l	3.2		3.6	
Action and Limit Levels SR1A					
SS (mg/l)		33		42	
Action and Limit Levels SR8					
SS (mg/l)		52		60	

Notes:

- (1) For DO measurement, non-compliance occurs when monitoring result is lower than the limits.
- (2) For parameters other than DO, non-compliance of water quality results when monitoring results is higher than the limits.
- (3) Depth-averaged results are used unless specified otherwise.
- (4) Details of selection criteria for the two heavy metals for regular DCM monitoring refer to the Detailed Plan on Deep Cement Mixing available on the dedicated 3RS website (<http://env.threerunwaysystem.com/en/ep-submissions.html>)
- (5) The Action and Limit Levels for the two representative heavy metals chosen will be the same as that for the intensive DCM monitoring.

Table 4.3: The Control and Impact Stations during Flood Tide and Ebb Tide for General Water Quality Monitoring and Regular DCM Monitoring

Control Station	Impact Stations
Flood Tide	
C1	IM1, IM2, IM3, IM4, IM5, IM6, IM7, IM8, SR3
SR2 ⁽¹⁾	IM7, IM8, IM9, IM10, IM11, IM12, SR1A, SR3, SR4A, SR5A, SR6A, SR8
Ebb Tide	
C1	SR4A, SR5A, SR6A
C2	IM1, IM2, IM3, IM4, IM5, IM6, IM7, IM8, IM9, IM10, IM11, IM12, SR1A, SR2, SR3, SR7, SR8

Note:

- (1) As per findings of Baseline Water Quality Monitoring Report, the control reference has been changed from C3 to SR2 from 1 September 2016 onwards.

4.2 Monitoring Equipment

Table 4.4 summarises the equipment used in the reporting period for monitoring of specific water quality parameters under the water quality monitoring programme.

Table 4.4: Water Quality Monitoring Equipment

Equipment	Brand and Model	Last Calibration Date	Calibration Certificate Provided in
Multifunctional Meter (measurement of DO, pH, temperature, salinity and turbidity)	YSI 6920V2 (Serial No. 0001C6A7)	22 Apr 2021	Appendix E
	YSI ProDSS (Serial No. 17H105557)	3 Feb 2021	Monthly EM&A Report No. 62, Appendix D
	YSI ProDSS (Serial No. 18A104824)	25 Feb 2021	Monthly EM&A Report No. 62, Appendix D
	YSI ProDSS (Serial No. 15M100005)	25 Mar 2021	Monthly EM&A Report No. 63, Appendix E
	YSI ProDSS (Serial No. 16H104234)	22 Apr 2021	Appendix E
	YSI ProDSS (Serial No. 16H104233)	25 Feb 2021	Monthly EM&A Report No. 62, Appendix D
	YSI ProDSS (Serial No. 17E100747)	25 Mar 2021	Monthly EM&A Report No. 63, Appendix E
Digital Titrator (measurement of total alkalinity)	Titrette Bottle-top Burette, 50ml (Serial No. 10N64701)	26 Feb 2021	Monthly EM&A Report No. 62, Appendix D

Other equipment used as part of the impact water quality monitoring programme are listed in **Table 4.5**.

Table 4.5: Other Monitoring Equipment

Equipment	Brand and Model
Water Sampler	Van Dorn Water Sampler
Positioning Device (measurement of GPS)	Garmin eTrex Vista HCx
Current Meter (measurement of current speed and direction, and water depth)	Sontek HydroSurveyor

4.3 Monitoring Methodology

4.3.1 Measuring Procedure

Water quality monitoring samples were taken at three depths (at 1m below surface, at mid-depth, and at 1m above bottom) for locations with water depth >6m. For locations with water depth between 3m and 6m, water samples were taken at two depths (surface and bottom). For locations with water depth <3m, only the mid-depth was taken. Duplicate water samples were taken and analysed.

The water samples for all monitoring parameters were collected, stored, preserved and analysed according to the Standard Methods, APHA 22nd ed. and/or other methods as agreed by the EPD. In-situ measurements at monitoring locations including temperature, pH, DO, turbidity, salinity, alkalinity and water depth were collected by equipment listed in **Table 4.4** and **Table 4.5**. Water samples for heavy metals and SS analysis were stored in high density polythene bottles with no preservative added, packed in ice (cooled to 4°C without being frozen), delivered to the laboratory within 24 hours of collection.

4.3.2 Maintenance and Calibration

Calibration of In-situ Instruments

All in-situ monitoring instrument was checked, calibrated and certified by a laboratory accredited under HOKLAS before use. Responses of sensors and electrodes were checked with certified standard solutions before each use.

Wet bulb calibration for a DO meter was carried out before commencement of monitoring and after completion of all measurements each day. Calibration was not conducted at each monitoring location as daily calibration is adequate for the type of DO meter employed. A zero check in distilled water was performed with the turbidity probe at least once per monitoring day. The probe was then calibrated with a solution of known NTU. In addition, the turbidity probe was calibrated at least twice per month to establish the relationship between turbidity readings (in NTU) and levels of SS (in mg/l). Accuracy check of the digital titrator was performed at least once per monitoring day.

Calibration certificates of the monitoring equipment used in the reporting period are listed in **Table 4.4**.

4.3.3 Laboratory Measurement / Analysis

Analysis of SS and heavy metals have been carried out by a HOKLAS accredited laboratory, ALS Technichem (HK) Pty Ltd (Reg. No. HOKLAS 066). Sufficient water samples were collected at all the monitoring stations for carrying out the laboratory SS and heavy metals determination. The SS and heavy metals determination works were started within 24 hours after collection of the water samples. The analysis of SS and heavy metals have followed the standard methods summarised in **Table 4.6**. The QA/QC procedures for laboratory measurement/ analysis of SS and heavy metals were presented in Appendix F of the Construction Phase Monthly EM&A Report No.8.

Table 4.6: Laboratory Measurement/ Analysis of SS and Heavy Metals

Parameters	Instrumentation	Analytical Method	Reporting Limit
SS	Analytical Balance	APHA 2540D	2mg/l
Heavy Metals			
Chromium (Cr)	ICP-MS	USEPA 6020A	0.2µg/l
Nickel (Ni)	ICP-MS	USEPA 6020A	0.2µg/l

4.4 Summary of Monitoring Results

The water quality monitoring schedule for the reporting period is updated and provided in **Appendix C**.

The water quality monitoring results for all parameters (i.e. DO, turbidity, SS, total alkalinity, chromium, and nickel) obtained during the reporting period were within their corresponding Action and Limit Levels. The detailed monitoring results are presented in **Appendix D**.

4.5 Conclusion

During the reporting period, all monitoring results were within their corresponding Action and Limit Levels. Nevertheless, as part of the EM&A programme, the construction methods and mitigation measures for water quality will continue to be monitored and opportunities for further enhancement will continue to be explored and implemented where possible, to strive for better protection of water quality and the marine environment.

In the meantime, the contractors were reminded to implement and maintain all mitigation measures during weekly site inspection and regular environmental management meetings. These include maintaining mitigation measures properly for reclamation works including DCM works, marine filling and seawall construction as recommended in the Manual.

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 B**.

Based on updated information provided by contractors, construction waste generated in the reporting period is summarised in **Table 5.2**. Proactive measures have been undertaken during the re-configuration of T2 building. The contractor has established the recycling strategy for C&D materials with proper planning and design to maximize recycling and reuse. Dedicated recyclers were employed for different kinds of recyclable materials by the contractor, and ET and IEC have carried out site visit to recyclers' facilities to review recycling process. Recycling materials before leaving the site are weighted by a weight bridge and monitored by CCTV system. Dedicated areas for sorting of materials are established on site. Recyclable materials such as steel, reinforcement bar, structural steel, aluminum, copper, other metals and glass are sorted on-site and transported off-site for recycling. ET and IEC have carried out site audits regularly and reviewed the trip ticket system.

Table 5.2: Construction Waste Statistics

	C&D ⁽¹⁾ Material Stockpiled for Reuse or Recycle (m ³)	C&D Material Reused in the Project (m ³)	C&D Material Reused in other Projects (m ³)	C&D Material Transferred to Public Fill (m ³)	Chemical Waste (kg)	Chemical Waste (l)	General Refuse (tonne)
March 2021 ⁽²⁾⁽³⁾	*9,968	*60,721	0	7,984	1400	62,640	1,838
April 2021 ⁽²⁾⁽⁴⁾	25,441	55,442	0	4,140	0	0	1,194

Notes:

- (1) C&D refers to Construction and Demolition.
- (2) Metals, paper and/or plastics were recycled in the reporting period.
- (3) Updated figure for the previous month is reported and marked with an asterisk (*). Updated figures for earlier months will be reported in the forthcoming Quarterly and Annual EM&A Reports.
- (4) 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.

Along with the design and construction progress, further development on the treatment level/details and the re-use mode for marine sediment generated from 3RS Project has been conducted according to the EIA recommendation.

5.3 Marine Sediment Management

Marine sediment is managed according to the EIA Report, Updated EM&A Manual and Waste Management Plan of the Project. The sampling process, 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.

Sampling works for marine sediment generated from the reclaimed land area was on-going during the reporting period. The details of the marine sediment sampling, treatment and backfilling will be reported in the subsequent EM&A Reports upon completion.

6 Chinese White Dolphin Monitoring

In accordance with the Manual, CWD monitoring by small vessel line-transect survey supplemented by land-based theodolite tracking survey and passive acoustic monitoring should be conducted during construction phase.

The small vessel line-transect survey should be conducted at a frequency of two full surveys per month, while land-based theodolite tracking survey should be conducted at a frequency of one day per month per station at Sha Chau (SC) and Lung Kwu Chau (LKC) during the construction phase as stipulated in the Manual.

6.1 Action and Limit Levels

The Action and Limit Levels for CWD monitoring were formulated by the action response approach using the running quarterly dolphin encounter rates STG and ANI derived from the baseline monitoring data, as presented in the CWD Baseline Monitoring Report. The derived values of Action and Limit Levels for CWD monitoring were summarised in **Table 6.1**.

Table 6.1: Derived Values of Action and Limit Levels for Chinese White Dolphin Monitoring

NEL, NWL, AW, WL and SWL as a Whole	
Action Level ⁽³⁾	Running quarterly ⁽¹⁾ STG < 1.86 & ANI < 9.35
Limit Level ⁽³⁾	Two consecutive running quarterly ⁽²⁾ (3-month) STG < 1.86 & ANI < 9.35

Notes: (referring to the baseline monitoring report)

- (1) Action Level – running quarterly encounter rates STG & ANI of this month will be calculated from the reporting period and the two preceding survey months.
- (2) Limit Level – two consecutive running quarters mean both the running quarterly encounter rates of the preceding month and the running quarterly encounter rates of this month.
- (3) Action Level and/or Limit Level will be triggered if both STG and ANI fall below the criteria.

6.2 CWD Monitoring Transects and Stations

6.2.1 Small Vessel Line-transect Survey

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 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 6.2**, which are subject to on-site refinement based on the actual survey conditions and constraints.

Table 6.2: Coordinates of Transect Lines in NEL, NWL, AW, WL and SWL Survey Areas

Waypoint	Easting	Northing	Waypoint	Easting	Northing
NEL					
1S	813525	820900	6N	818568	824433
1N	813525	824657	7S	819532	821420
2S	814556	818449	7N	819532	824209
2N	814559	824768	8S	820451	822125
3S	815542	818807	8N	820451	823671
3N	815542	824882	9S	821504	822371
4S	816506	819480	9N	821504	823761
4N	816506	824859	10S	822513	823268
5S	817537	820220	10N	822513	824321
5N	817537	824613	11S	823477	823402
6S	818568	820735	11N	823477	824613
NWL					
1S	804671	814577	5S	808504	821735
1N	804671	831404	5N	808504	828602
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
AW					
1W	804733	818205	2W	805045	816912
1E	806708	818017	2E	805960	816633
WL					
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			
SWL					
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

Waypoint	Easting	Northing	Waypoint	Easting	Northing
5S	806473	801250	10S	811446	801335
5N	806473	808458	10N	811446	809436

6.2.2 Land-based Theodolite Tracking Survey

Land-based theodolite tracking survey stations were set up at two locations, one facing east/south/west on the southern slopes of Sha Chau (SC), and the other facing north/northeast/northwest at Lung Kwu Chau (LKC). The stations (D and E) are depicted in **Figure 6.2** and shown in **Table 6.3** with position coordinates, height of station and approximate distance of consistent theodolite tracking capabilities for CWD.

Table 6.3: Land-based Theodolite Survey Station Details

Stations	Location	Geographical Coordinates	Station Height (m)	Approximate Tracking Distance (km)
D	Sha Chau (SC)	22° 20' 43.5" N 113° 53' 24.66" E	45.66	2
E	Lung Kwu Chau (LKC)	22° 22' 44.83" N 113° 53' 0.2" E	70.40	3

6.3 CWD Monitoring Methodology

6.3.1 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 6.2.1**, 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 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.

6.3.2 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 during the baseline monitoring stage.

6.3.3 Land-based Theodolite Tracking Survey

Land-based theodolite tracking survey obtains fine-scale information on the time of day and movement patterns of the CWDs. A digital theodolite (Sokkia/Sokkisha Model DT5 or similar equipment) with 30-power magnification and 5-s precision was used to obtain the vertical and horizontal angle of each dolphin and vessel position. Angles were converted to geographic coordinates (latitude and longitude) and data were recorded using *Pythagoras* software, Version 1.2. This method delivers precise positions of multiple spatially distant targets in a short period of time. The technique is fully non-invasive, and allows for time and cost-effective descriptions of dolphin habitat use patterns at all times of daylight.

Three surveyors (one theodolite operator, one computer operator, and one observer) were involved in each survey. Observers searched for dolphins using unaided eyes and handheld binoculars (7X50). Theodolite tracking sessions were initiated whenever an individual CWD or group of CWDs was located. Where possible, a distinguishable individual was selected, based on colouration, within the group. The focal individual was then continuously tracked via the theodolite, with a position recorded each time the dolphin surfaced. In case an individual could not be positively distinguished from other members, the group was tracked by recording positions based on a central point within the group whenever the CWD surfaced. Tracking continued until animals were lost from view; moved beyond the range of reliable visibility (>1-3km, depending on station height); or environmental conditions obstructed visibility (e.g., intense haze, Beaufort sea state >4, or sunset), at which time the research effort was terminated. In addition to the tracking

of CWD, all vessels that moved within 2-3km of the station were tracked, with effort made to obtain at least two positions for each vessel.

Theodolite tracking included focal follows of CWD groups and vessels. Priority was given to tracking individual or groups of CWD. The survey team also attempted to track all vessels moving within 1 km of the focal CWD.

6.4 Monitoring Results and Observations

6.4.1 Small Vessel Line-transect Survey

Survey Effort

Within this reporting period, two complete sets of small vessel line-transect surveys were conducted on the 7, 12, 13, 14, 15, 19, 20 and 21 April 2021, covering all transects in NEL, NWL, AW, WL and SWL survey areas for twice.

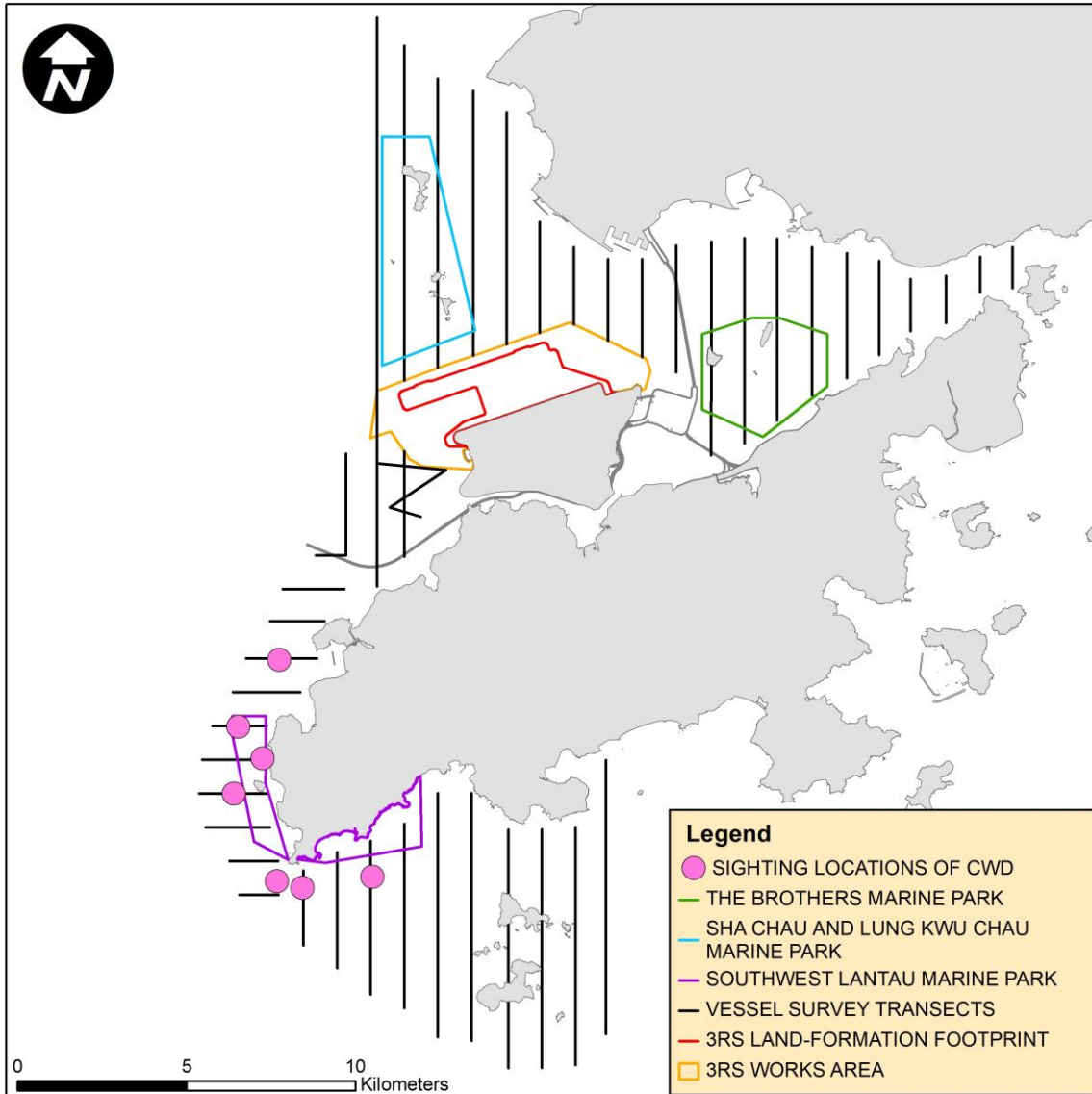
A total of around 453.52km of survey effort was collected from these surveys and around 76.2% of the survey effort was being conducted under favourable weather condition (i.e. Beaufort Sea State 3 or below with favourable visibility). Details of the survey effort are given in **Appendix D**.

Sighting Distribution

In April 2021, 7 sightings with 23 dolphins were sighted. All these sightings are on-effort records under favourable weather condition (i.e. Beaufort Sea State 3 or below with favourable visibility). Details of cetacean sightings are presented in **Appendix D**.

Distribution of all CWD sightings recorded in April 2021 is illustrated in **Figure 6.3**. In WL, CWD sightings were scattered between Tai O and Fan Lau with two sightings recorded within Southwest Lantau Marine Park. In SWL, the two CWD sightings were recorded near Fan Lau Tung Wan. No CWD sightings were recorded in neither NEL nor NWL survey areas during the reporting period.

Figure 6.3: Sightings Distribution of Chinese White Dolphins



Remarks: (1) Please note that there are 7 pink circles on the map indicating the sighting locations of CWDs. Some of them were very close to each other and therefore may appear overlapped on this distribution map. (2) Marine park excludes land area and the landward boundary generally follows the high water mark along the coastline.

Encounter Rate

Two types of dolphin encounter rates were calculated based on the vessel survey data. They included the number of dolphin sightings per 100 km survey effort (STG) and total number of dolphins per 100 km survey effort (ANI) in the whole survey area (i.e. NEL, NWL, AW, WL and SWL). In the calculation of dolphin encounter rates, only survey data collected under favourable weather condition (i.e. Beaufort Sea State 3 or below with favourable visibility) were used. The formulae used for calculation of the encounter rates are shown below:

Encounter Rate by Number of Dolphin Sightings (STG)

$$STG = \frac{\text{Total No. of On - effort Sightings}}{\text{Total Amount of Survey Effort (km)}} \times 100$$

Encounter Rate by Number of Dolphins (ANI)

$$ANI = \frac{\text{Total No. of Dolphins from On – effort Sightings}}{\text{Total Amount of Survey Effort (km)}} \times 100$$

(Notes: Only data collected under Beaufort 3 or below condition were used)

In April 2021, a total of around 345.70 km of survey effort were conducted under Beaufort Sea State 3 or below with favourable visibility, whilst a total number of 7 on-effort sightings with 23 dolphins were sighted under such condition. Calculation of the encounter rates for the month are shown in **Appendix D**.

For the running quarter of the reporting period (i.e., from February to April 2021), a total of around 1160.53 km of survey effort were conducted under Beaufort Sea State 3 or below with favourable visibility, whilst a total number of 32 on-effort sightings and a total number of 106 dolphins from on-effort sightings were obtained under such condition. Calculation of the running quarterly encounter rates are shown in **Appendix D**.

The STG and ANI of CWD in the whole survey area (i.e. NEL, NWL, AW, WL and SWL) during the month of April 2021 and during the running quarter are presented in **Table 6.4** below and compared with the Action Level. Although the running quarterly encounter rate ANI fall below the Action Level, the Action Level is not triggered as the running quarterly STG remain above the Action Level.

Table 6.4: Comparison of CWD Encounter Rates of the Whole Survey Area with Action Levels

	Encounter Rate (STG)	Encounter Rate (ANI)
April 2021	2.02	6.65
Running Quarter from February to April 2021 ⁽¹⁾	2.76	9.13
Action Level	Running quarterly ⁽¹⁾ STG < 1.86 & ANI < 9.35	

Note: (1) Running quarterly encounter rates STG & ANI were calculated from data collected in the reporting period and the two preceding survey months, i.e. the data from February to April 2021, containing six sets of transect surveys for all monitoring areas. Action Level will be triggered if both STG and ANI fall below the criteria.

Group Size

In April 2021, 7 groups of 23 dolphins in total were sighted, and the average group size of CWDs was 3.29 dolphins per group. Sightings with small group size (i.e. 1-2 dolphins) were dominant. There were no CWD sightings with large group size (i.e. 10 or more dolphins).

Activities and Association with Fishing Boats

Three CWD sightings were recorded engaging in feeding activities in April 2021 and all these sightings were observed associated with operating purse seiners in WL or SWL.

Mother-calf Pair

In April 2021, there was one CWD sighting recorded with the presence of mother-and-unspotted juvenile pair of which the sighting was recoded in WL.

6.4.2 Photo Identification

In April 2021, a total number of 13 different CWD individuals were identified for totally 17 times. A summary of photo identification works is presented in **Table 6.5**. Representative photos of these individuals are given in **Appendix D**.

Table 6.5: 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
SLMM003	12-Apr-21	4	WL	WLMM007	12-Apr-21	4	WL
SLMM007	12-Apr-21	4	WL	WLMM028	12-Apr-21	2	WL
SLMM014	12-Apr-21	2	WL	WLMM029	12-Apr-21	2	WL
		4	WL	WLMM039	12-Apr-21	4	WL
SLMM031	13-Apr-21	6	SWL	WLMM114	13-Apr-21	7	SWL
SLMM037	12-Apr-21	4	WL	WLMM131	13-Apr-21	6	SWL
	13-Apr-21	6	SWL	7		SWL	
		7	SWL	WLMM160	12-Apr-21	2	WL
SLMM073	12-Apr-21	4	WL				

6.4.3 Land-based Theodolite Tracking Survey

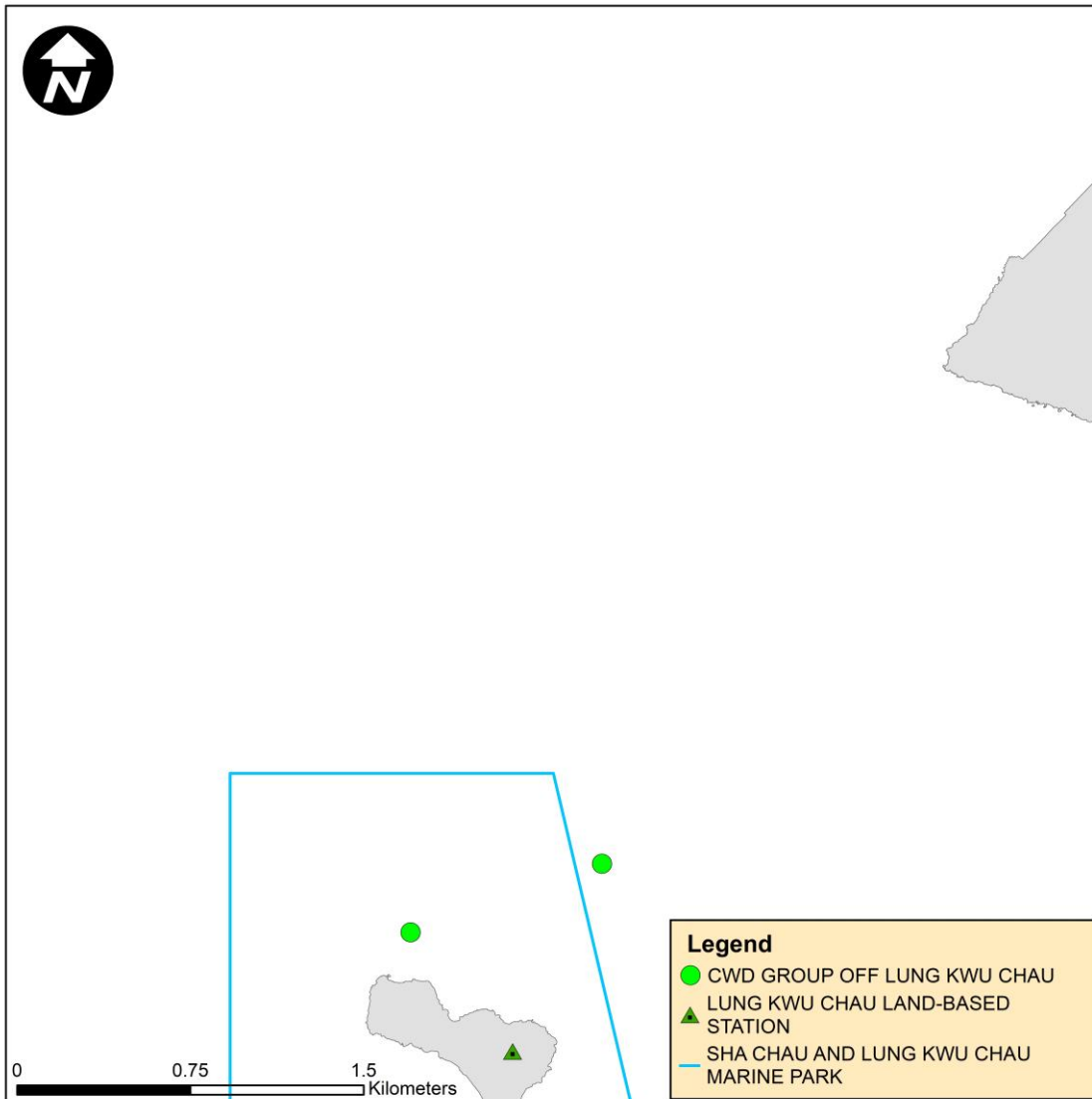
Survey Effort

Land-based theodolite tracking surveys were conducted at SC on 15 April 2021 and at LKC on 21 April 2021, with a total of two days of land-based theodolite tracking survey effort accomplished in this reporting period. Two CWD groups were tracked from Lung Kwu Chau while no CWD was observed from Sha Chau station during the reporting period. Information of survey effort and CWD groups are presented in **Table 6.6**. Details of the survey effort are presented in **Appendix D**. The first sighting location of CWD group tracked at LKC station during land-based theodolite tracking survey in April 2021 was depicted in **Figure 6.4**.

Table 6.6: Summary of Survey Effort and CWD Group of Land-based Theodolite Tracking

Land-based Station	No. of Survey Sessions	Survey Effort (hh:mm)	No. of CWD Groups Sighted	CWD Group Sighting per Survey Hour
Lung Kwu Chau	1	6:00	2	0.33
Sha Chau	1	6:00	0	0
TOTAL	2	12:00	2	0.17

Figure 6.4: Plots of First Sightings of All CWD Groups obtained from Land-based Stations



Remark: Marine park excludes land area and the landward boundary generally follows the high water mark along the coastline.

6.5 Progress Update on Passive Acoustic Monitoring

Underwater acoustic monitoring using Passive Acoustic Monitoring (PAM) should be undertaken during land formation related construction works. During this reporting period, the PAM device was remained underwater and positioned at south of Sha Chau Island inside the SCLKCMP (**Figure 6.5**). The C-POD was last deployed on 8 March 2021 and the next re-deployment is scheduled on mid-May 2021 to retrieve the data for analysis. Acoustic data would be reviewed to give an indication of CWDs occurrence patterns and anthropogenic noise information. Analysis would involve use of proprietary software for objective automated data analyses and experienced analysts to perform visual validation for assessment of dolphin detection. As the period of data collection and analysis takes about four months, PAM results could not be reported in monthly intervals but report for supplementing the annual CWD monitoring analysis.

6.6 Site Audit for CWD-related Mitigation Measures

During the reporting period, silt curtains were in place by the contractor for marine filling, in which dolphin observers were deployed by contractor in accordance with the MMWP. Overall, 2 to 5 dolphin observation stations and teams of at least two dolphin observers were deployed by the contractors for continuous monitoring of the DEZ for DCM works and seawall construction works in accordance with the DEZ Plan. Trainings for the proposed dolphin observers on the implementation of MMWP and DEZ monitoring were provided by the ET prior to the aforementioned works, with a cumulative total of 703 individuals being trained and the training records kept by the ET. From the contractors' MMWP observation records, no dolphin or other marine mammals were observed within or around the silt curtains. As for DEZ monitoring records, no dolphin or other marine mammals were observed within or around the DEZs in this reporting month. These contractors' records were also audited by the ET during site inspection.

Audits of acoustic decoupling measures for construction vessels were carried out during weekly site inspection and the observations are summarised in **Section 7.1**. 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.

6.7 Timing of Reporting CWD Monitoring Results

Detailed analysis of CWD monitoring results collected by small vessel line-transect survey will be provided in future quarterly reports. Detailed analysis of CWD monitoring results collected by land-based theodolite tracking survey and PAM will be provided in future annual reports after a larger sample size of data has been collected.

6.8 Summary of CWD Monitoring

Monitoring of CWD was conducted with two complete sets of small vessel line-transect surveys and two days of land-based theodolite tracking survey effort as scheduled. The running quarterly encounter rates STG and ANI in the reporting period did not trigger the Action Level for CWD monitoring.

7 Environmental Site Inspection and Audit

7.1 Environmental Site Inspection

Site inspections of the construction works were carried out on a weekly basis to monitor the implementation of proper environmental pollution control and mitigation measures for the Project. The weekly site inspection schedule of the construction works is provided in **Appendix C**. Bi-weekly site inspections were also conducted by the IEC. Besides, *ad-hoc* site inspections were 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 were 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 B**.

7.2 Landscape and Visual Mitigation Measures

Implementation of applicable landscape and visual mitigation measures (reference to the environmental protection measures CM1 – CM10 in **Appendix B**) 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 are 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 were checked by ET during weekly site inspection and clarified by the Contractors during the monthly Environmental Management Meetings. Implementation of the measures CM5, CM6 and CM7 by Contractors was observed.	3RS Project 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 have been provided in the relevant Contract Specifications respectively for implementation by the Contractors under the Project.	3302, 3503, 3508, 3602, 3801 3802 (To be implemented)

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 have been provided in the relevant Contract Specifications respectively for implementation by the Contractors under the Project where trees will 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 were currently monitored by ET annually.</p>	<p>3503, 3508, 3801</p> <p>3802 (To be implemented)</p>
<p>CM 10 – Land formation works shall be followed with advanced hydroseeding around taxiways and runways as soon as practical</p>	<p>To be implemented around taxiways and runways as soon as practicable.</p>	<p>To be implemented</p>

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

		
<p>Erection of site hoardings around works area in unobtrusive colors (CM5)</p>	<p>Avoidance of excessive height and bulk of site buildings (CM6)</p>	<p>Control of night-time lighting by hooding and minimisation of night working period (CM7)</p>
		
<p>General view of Tree Protection Zone for retained tree (CM8)</p>	<p>General view of a transplanted tree (CM9)</p>	

In accordance with the 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 and transplanted trees under the Project remained unchanged (i.e. 140 and 14 respectively) comparing to previous reporting period. Details of the retained trees, transplanted trees and to-be-transplanted trees under the Project are summarized in **Table 7.5:** . Photos of transplanted trees are presented in **Table 7.7.**

Details of the retained trees are to be discussed in the Quarterly EM&A reports.

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
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

Existing				
Contract	Retain (nos.)	Transplanted (nos.)		To-be-transplanted (nos.)
		Establishment Period	Maintenance Period	
3302	9	0	0	0
3503	19	6	3	0
3508 ⁽¹⁾	21	0	0	12
3602	2	0	0	0
3801	89	0	5	0
Sub-total	140	6	8	12
Provisional				
Contract	Retain (nos.)	Transplanted (nos.)		To-be-transplanted (nos.)
3508 ⁽¹⁾	134	0		10
Sub-total	134	0		10
Grand Total	274	14		22

Notes:

- (1) As some of the site areas have been handed over to Contract 3508, Contractor of Contract 3508 is currently managing some of the trees. Existing trees to be managed by Contract 3508 is subject to change after initial tree surveys for each batch of site areas have been conducted by the Contractor.







Summary of the updated transplanted trees and photos are presented in **Table 7.6** and **Table 7.7** respectively.

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>Establishment period</u> 4 May 2018 – May 2019 <u>Long Term Management period</u> Jun 2019 – May 2028	Contract 3801 Southern Landside Petrol Filling Station	Next inspection will be conducted in February 2022. Photos of the last inspection in February 2021 were shown in Table 7.7 .
CT1253	4 May 2018	<u>Establishment period</u> 5 May 2018 – May 2019 <u>Long Term Management period</u> Jun 2019 – May 2028	Contract 3801 Southern Landside Petrol Filling Station	
T835	22 Jan 2020	<u>Establishment period</u> 23 Jan 2020 – Jan 2021 <u>Long Term Management period</u> Feb 2021 – Jan 2030	Contract 3503	Next inspection will be conducted in February 2022. Photos of the last inspection in February 2021 were shown in Table 7.7 .
T836	13 Dec 2019	<u>Establishment period</u> 14 Dec 2020 – Jan 2021 <u>Long Term Management period</u> Feb 2021 – Jan 2030	Contract 3503	
T838	22 Jan 2020	<u>Establishment period</u> 23 Jan 2020 – Jan 2021 <u>Long Term Management period</u> Feb 2021 – Jan 2030	Contract 3503	
T812	21 Dec 2020	<u>Establishment period</u> 22 Dec 2020 – Dec 2021	Contract 3503	Next inspection will be conducted in May 2021. Photos of the last inspection in April 2021 were shown in Table 7.7 .
T814	20 Dec 2020	<u>Establishment period</u> 21 Dec 2020 – Dec 2021	Contract 3503	
T815	15 Dec 2020	<u>Establishment period</u> 16 Dec 2020 – Dec 2021	Contract 3503	
T829	18 Dec 2020	<u>Establishment period</u> 19 Dec 2020 – Dec 2021	Contract 3503	
T830	14 Dec 2020	<u>Establishment period</u> 15 Dec 2020 – Dec 2021	Contract 3503	
T831	19 Dec 2020	<u>Establishment period</u> 20 Dec 2020 – Dec 2021	Contract 3503	
CT1194	4 May 2018	<u>Establishment period</u> 5 May 2018 – May 2019 <u>Long Term Management period</u> Jun 2019 – May 2028	Contract 3801 Southern Landside Petrol Filling Station	NA 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.

Tree ID	Transplant Date	Management Stage	Management Agency	Remarks
CT1794	3 May 2018	<u>Establishment period</u> 4 May 2018 – May 2019	Contract 3801	NA
		<u>Long Term Management period</u> Jun 2019 – May 2028	AsiaWorld-Expo	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>Establishment period</u> 4 May 2018 – May 2019	Contract 3801	NA
		<u>Long Term Management period</u> Jun 2019 – May 2028	AsiaWorld-Expo	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 12-month Establishment Period:		
		
T812	T814	T815
		
T829	T830	T831

Under 10-year Long-term Management:		
		
CT276	CT1253	T835
		
T836	T838	

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 has issued no further comment for aforesaid CARs. No leakage was found after the removal of underground fuel pipelines 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. Based on the latest construction information, which has been presented in Appendix A Implementation Schedule of the approved CARs for T2 EPSS, there is no development programme for these locations at this stage. As such, the status of site re-appraisal/ additional site investigation 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.

Due to the COVID-19 pandemic, all SkyPier HSF services to/from Zhuhai and Macau have been suspended from 25 March 2020 until further notice. No ferry movement between HKIA SkyPier and Zhuhai and Macau was recorded in April 2021. Key audit findings for the SkyPier HSFs travelling to/from Zhuhai and 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., 2 to 3 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.

As updated by CLP Power, the construction works of the Hong Kong Offshore LNG Terminal Project may affect the route diversion operation of the SkyPier HSFs from Q3 to Q4 2021. The captains were informed on the issue and ET will continue to closely monitor the implementation of the SkyPier Plan in the period.

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

Requirements in the SkyPier Plan	1 to 30 April 2021
Total number of ferry movements recorded and audited for HSF to/from Zhuhai and Macau	0
Use diverted route and enter / leave SCZ through Gate Access Points	0 deviation
Daily Cap for all SkyPier HSFs including those not using diverted route	2 to 3 daily movement (within the maximum daily cap - 125 daily movements)

7.5 Audit of Construction and Associated Vessels

The updated Marine Travel Routes and Management Plan for Construction and Associated Vessel (MTRMP-CAV) was submitted and approved in May 2020 by EPD under EP Condition 2.9. The approved Plan is available on the dedicated website of the Project.

ET carried out the following actions during the reporting period:

- One skipper training session was held for contractors' concerned skippers of relevant construction vessels to familiarize them with the predefined routes; general education on local cetaceans; guidelines for avoiding adverse water quality impact; the required environmental practices / measures while operating construction and associated vessels under the Project; and guidelines for operating vessels safely in the presence of CWDs. The list of all trained skippers was properly recorded and maintained by ET.

- Six skipper training sessions were held by contractors' Environmental Officers. 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, 8 skippers were trained by ET and 10 skippers were trained by contractors' Environmental Officers. In total, 1742 skippers were trained from August 2016 to April 2021.
- The MSS automatically recorded deviation cases such as speeding, entering no entry zone and not travelling through the designated gate. ET conducted checking to ensure the MSS records deviation cases accurately.
- Deviations such as speeding in the works area, entered no entry zone, and entering from non-designated gates 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. The 24-hour DEZs with a 250m radius for marine works were established and implemented by the contractors for DCM works and seawall construction according to their Method Statement for DEZ Monitoring that followed the specifications and requirements of the DEZ Plan.

During the reporting period, ET was notified that no dolphin sightings were recorded within the DEZ by the contractors. The ET checked the dolphin sighting record and relevant records by the contractors to audit the implementation of DEZ.

7.7 Status of Submissions under Environmental Permits

The current status of submissions under the EP up to the reporting period is presented in **Table 7.9**.

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	Accepted / approved by EPD
2.10	Marine Travel Routes and Management Plan for High Speed Ferries of SkyPier	
2.11	Marine Mammal Watching Plan	
2.12	Coral Translocation Plan	
2.13	Fisheries Management Plan	
2.14	Egretty Survey Plan	
2.15	Silt Curtain Deployment Plan	
2.16	Spill Response Plan	

EP Condition	Submission	Status
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 environmental licenses and permits which are valid in the reporting period are presented in **Appendix F**.

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

7.9.1 Complaints

A complaint was received on 20 April 2021 regarding alleged dusty and muddy vehicles from 3RS Project at Tuen Mun Public Cargo Working Area. The case was investigated by ET in accordance with the Manual and the Complaint Management Plan of the Project. Findings of investigation will be reported in the next Monthly EM&A Report.

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 G**.

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

- DCM works;
- Land-based ground improvement works;
- Seawall construction;
- Marine filling; and
- Sorting and reuse of inert waste from other 3RS contracts.

Airfield Works:

Contract 3301 North Runway Crossover Taxiway

- Cable ducting works; and
- Subgrade compaction and paving works.

Contract 3302 Eastern Vehicular Tunnel Advance Works

- Cable laying and ducting works;
- Backfilling and reinstatement works; and
- Piling and structure works;

Contract 3303 Third Runway and Associated Works

- Land-based ground improvement works;
- Operation of asphalt plant;
- Footing and utilities work; and
- Cable laying and ducting works.

Contract 3305 Airfield Ground Lighting System

- Delivery and installation of lighting system.

Contract 3307 Fire Training Facility

- Excavation; and
- Drainage works.

Third Runway Concourse:

Contract 3403 New Integrated Airport Centres Building and Civil Works

- Architectural, Builder's Work and Finishing works;
- Roof lifting works; and
- Underground utilities construction.

Contract 3405 Third Runway Concourse Foundation and Substructure Works

- Plant mobilisation;
- Pre-drilling; and
- Piling work.

Terminal 2 Expansion:

Contract 3503 Terminal 2 Foundation and Substructure Works

- T2 re-configuration;
- Excavation works;
- Utilities and road work; and
- Piling and structure works.

Contract 3508 Terminal 2 Expansion Works

- Excavation and footing construction;
- Site formation;
- Piling work; and
- Builders' works.

Automated People Mover (APM) and Baggage Handling System (BHS):

Contract 3601 New Automated People Mover System (TRC Line)

- Concreting work and rebar fixing.

Contract 3602 Existing APM System Modification Works

- Concreting work.

Construction Support (Facilities):

Contract 3721 Construction Support Infrastructure Works

- Excavation and backfilling;
- Laying of drainage pipes and ducts; and
- Road works.

Contract 3722 Construction Support Facilities

- Foundation works;
- Erection of superstructure; and
- Site establishment.

Contract 3723 Construction Support Facilities

- Foundation works;
- Erection of superstructure; and
- Site establishment.

Airport Support Infrastructure:

Contract 3801 APM and BHS Tunnels on Existing Airport Island

- Construction of working platform and ventilation building;
- Box culvert connection works;
- Cofferdam for shaft;
- Excavation works; and
- Site clearance.

Contract 3802 APM and BHS Tunnels and Related Works

- Construction of Airside Fire Station and marine sediment treatment plant;
- Installation of sheet pipes and dewatering well;
- Pre-drilling; and
- Ducting works.

Construction Support (Services / Licenses):**Contract 3901A Concrete Batching Facility**

- Plant operation.

Contract 3901B Concrete Batching Facility

- Plant operation; and
- Foundation works.

8.2 Key Environmental Issues for 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;
- Water quality from DCM works and marine filling;
- DEZ monitoring for ground improvement works (DCM works) and seawall construction;
- Implementation of MMWP for silt curtain deployment;
- Sorting, recycling, storage and disposal of general refuse and construction waste;
- Reuse of treated marine sediments from piling and excavation works;
- Management of chemicals and avoidance of oil spillage on-site; and
- Acoustic decoupling measures for equipment on marine vessels.

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 in the next reporting period is provided in **Appendix C**.

8.4 Review of the Key Assumptions Adopted in the EIA Report

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

9 Conclusion and Recommendation

The key activities of the Project carried out in the reporting period included reclamation works and land-based works. Works in the reclamation areas included DCM works, marine filling, seawall and facilities construction, together with runway and associated works. Land-based works on existing airport island involved mainly airfield works, foundation and substructure work for Terminal 2 expansion, modification and tunnel work for APM and BHS systems, and preparation work for utilities, with activities include site establishment, site office construction, road and drainage works, cable ducting, demolition of existing facilities, piling, and excavation works.

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

Monitoring results of construction dust, construction noise, water quality, construction waste, and CWD did not trigger the corresponding Action and Limit Levels during the reporting period.

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, due to the COVID-19 pandemic, all SkyPier HSF services to/from Zhuhai and Macau have been suspended from 25 March 2020 until further notice. No HSF movement between HKIA SkyPier and Zhuhai and Macau was recorded during the reporting period. Therefore, no deviation was recorded in the HSF monitoring in the reporting period. The daily movements of all SkyPier HSFs in the reporting period, including those not using the diverted route, were in the range of 2 to 3 daily movements, which are within the maximum daily cap of 125 daily movements.

On the implementation of MTRMP-CAV, the MSS automatically recorded the deviation case such as speeding, entering no entry zone and not travelling through the designated gates. ET conducted checking to ensure the MSS records all deviation cases accurately. Training has been provided for the concerned skippers to facilitate them in familiarising with the requirements of the MTRMP-CAV. Deviations including speeding in the works area, entered no entry zone, and entry from non-designated gates 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

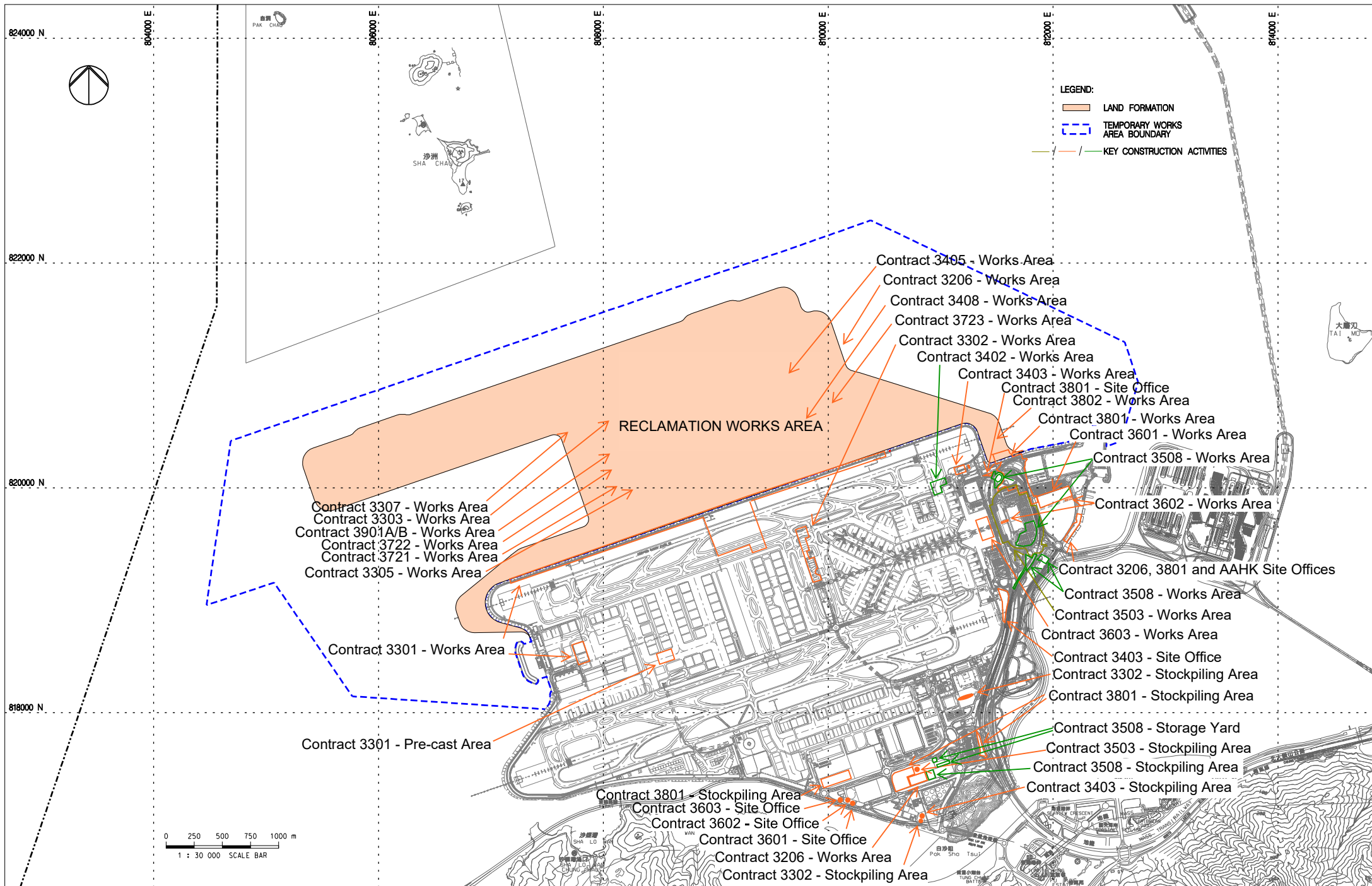


FIGURE 1.1 LOCATIONS OF KEY CONSTRUCTION ACTIVITIES

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

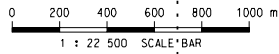
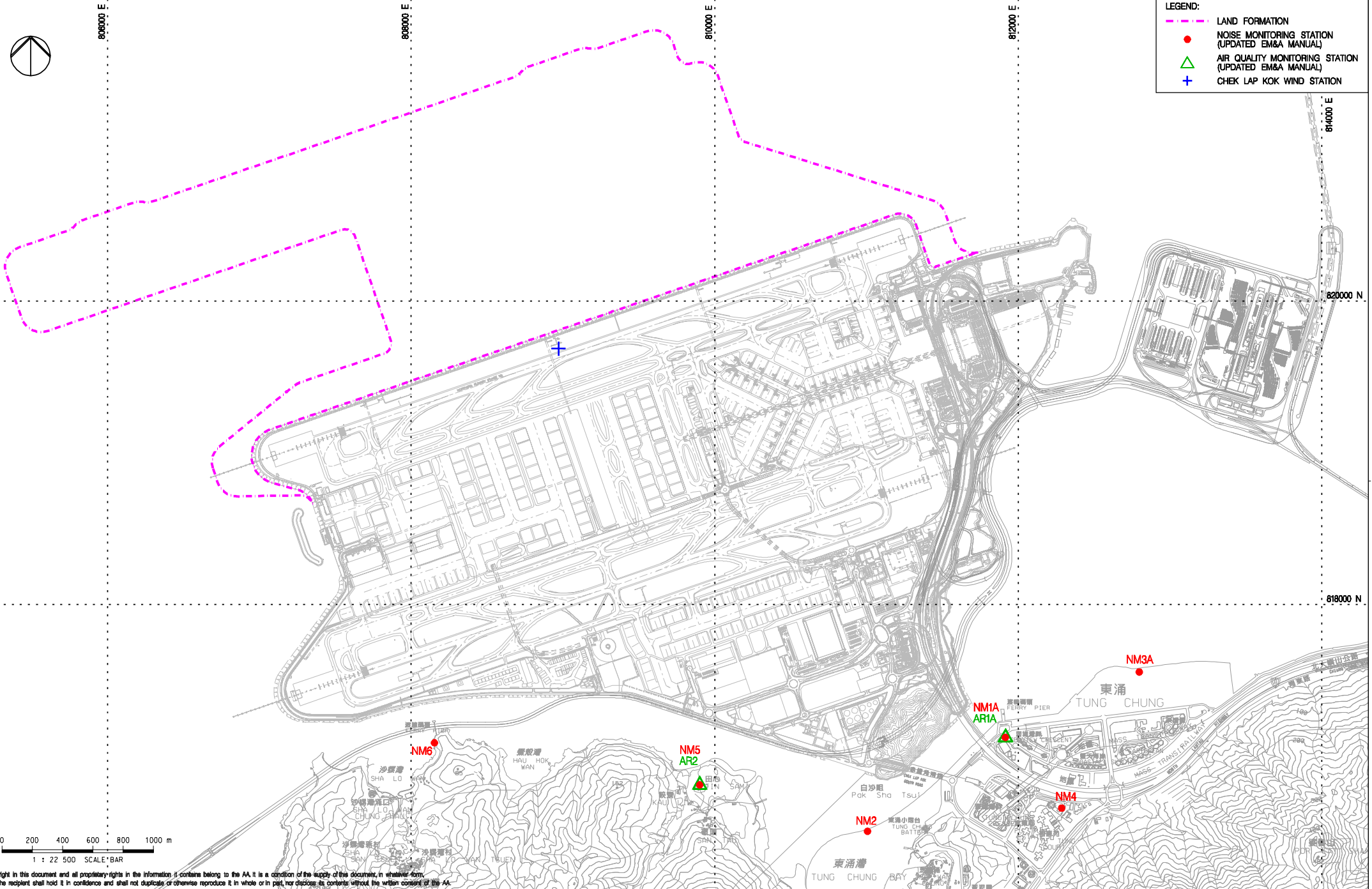
82000 E

84000 E

82000 N

81800 N

- LEGEND:
- - - LAND FORMATION
 - NOISE MONITORING STATION (UPDATED EM&A MANUAL)
 - ▲ AIR QUALITY MONITORING STATION (UPDATED EM&A MANUAL)
 - + CHEK LAP KOK WIND STATION



Copyright in this document and all proprietary rights in the information it contains belong to the AA. It is a condition of the supply of this document, in whatever form, that the recipient shall hold it in confidence and shall not duplicate or otherwise reproduce it in whole or in part, nor disclose its contents without the written consent of the AA.

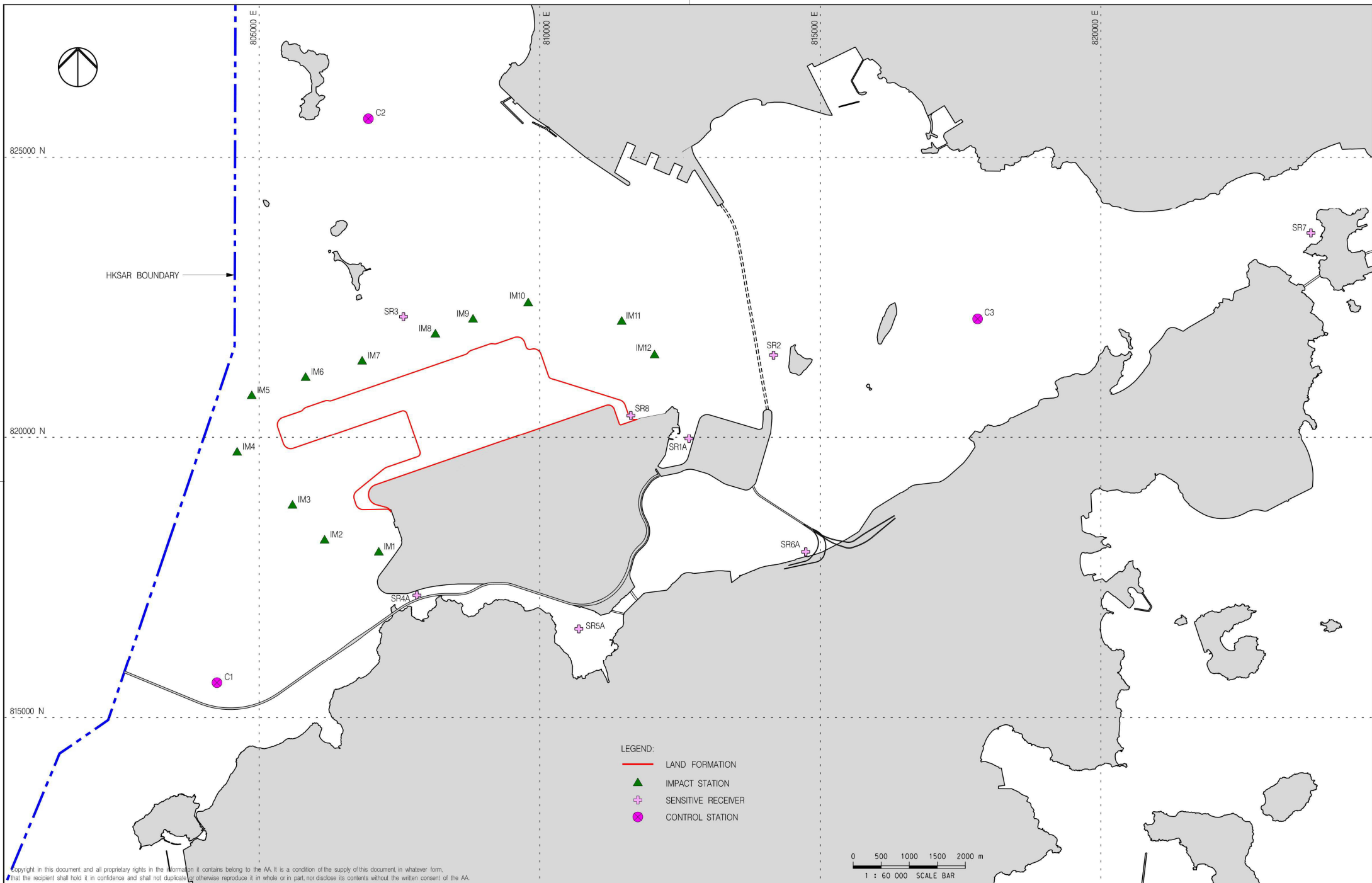
Rev.	Date	Description	Checked
A	06JAN16	FIRST ISSUE	RO
B	28JAN16	GENERAL REVISION	RO
C	11FEB16	GENERAL REVISION	RO
D	29OCT18	GENERAL REVISION	SH



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



Copyright in this document and all proprietary rights in the information it contains belong to the AA. It is a condition of the supply of this document, in whatever form, that the recipient shall hold it in confidence and shall not duplicate or otherwise reproduce it in whole or in part, nor disclose its contents without the written consent of the AA.

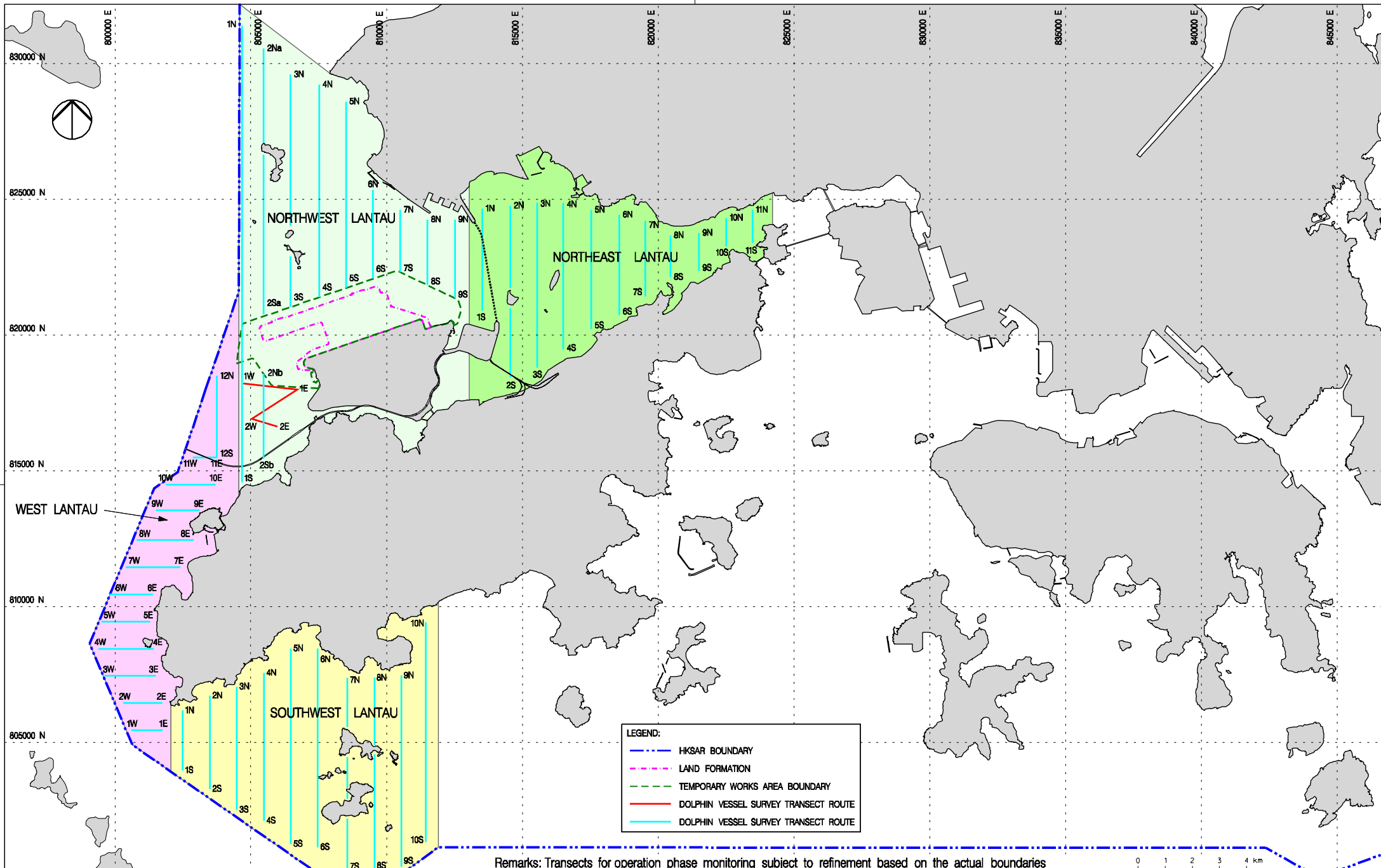
Rev.	Date	Description	Checked
A	21AUG19	FIRST ISSUE	VL



Title
WATER QUALITY MONITORING STATIONS

Consultant's Signatures for Approval		Date
Design	DC	21AUG19
Checkers	DC / TK	21AUG19
Approver	EC	21AUG19

EXPANSION OF HONG KONG INTERNATIONAL AIRPORT INTO A THREE-RUNWAY SYSTEM	
Drawing No.	Scale at A3 1 : 60000
FIGURE 4.1	Rev. A



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

Copyright in this document and all proprietary rights in the information it contains belong to the AA. It is a condition of the supply of this document, in whatever form, that the recipient shall hold it in confidence and shall not duplicate or otherwise reproduce it in whole or in part, nor disclose its contents without the written consent of the AA.

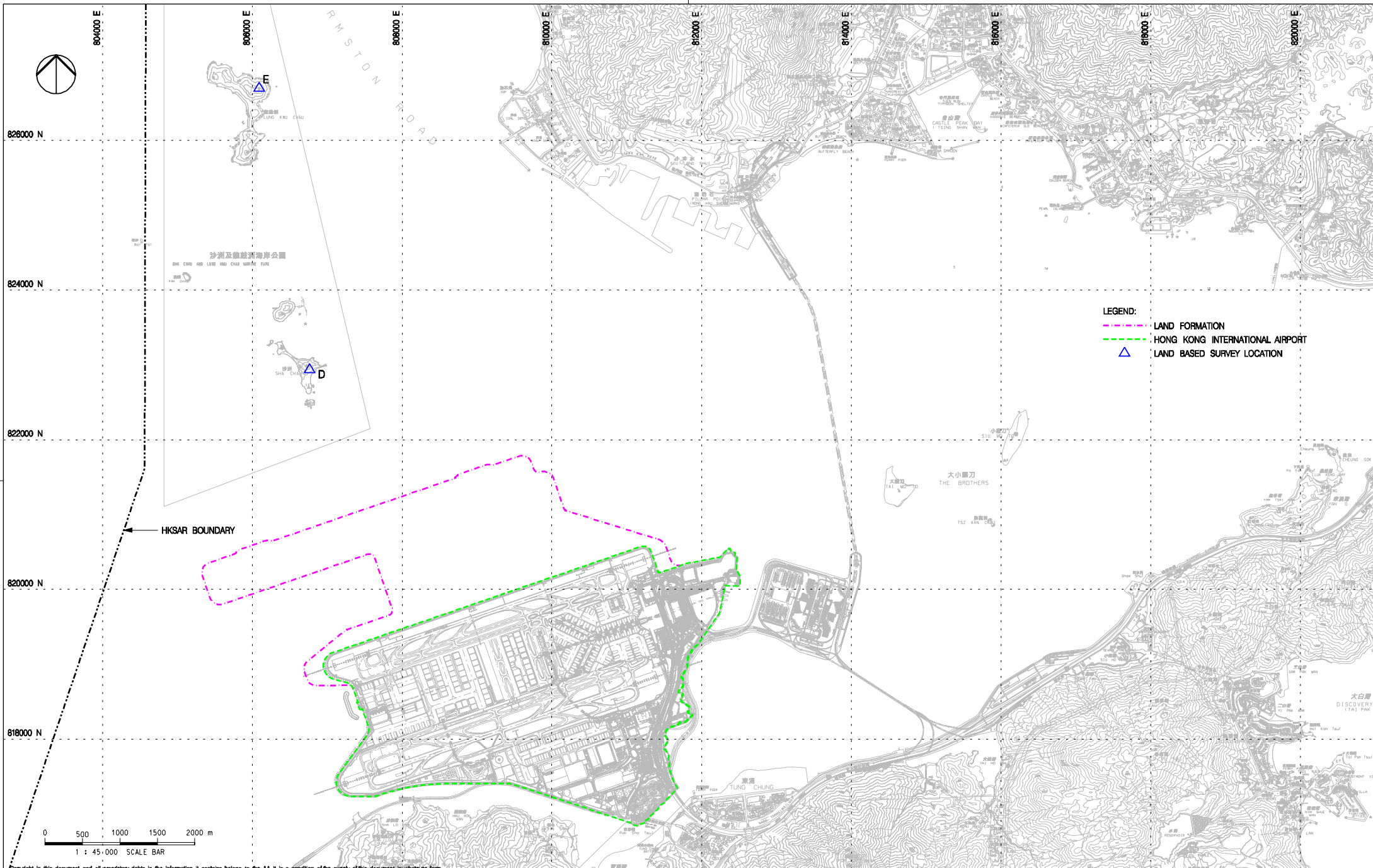
Rev.	Date	Description	Checked
B	27JUL16	GENERAL REVISION	JT
C	06FEB17	GENERAL REVISION	JT
D	01MAR17	GENERAL REVISION	JT
E	29OCT18	GENERAL REVISION	SH
F	04APR19	GENERAL REVISION	SH



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

Consultant's Signatures for Approval		Date
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	



Copyright in this document and all proprietary rights in the information it contains belong to the AA. It is a condition of the supply of this document, in whatever form, that the recipient shall hold it in confidence and shall not duplicate or otherwise reproduce it in whole or in part, nor disclose its contents without the written consent of the AA.

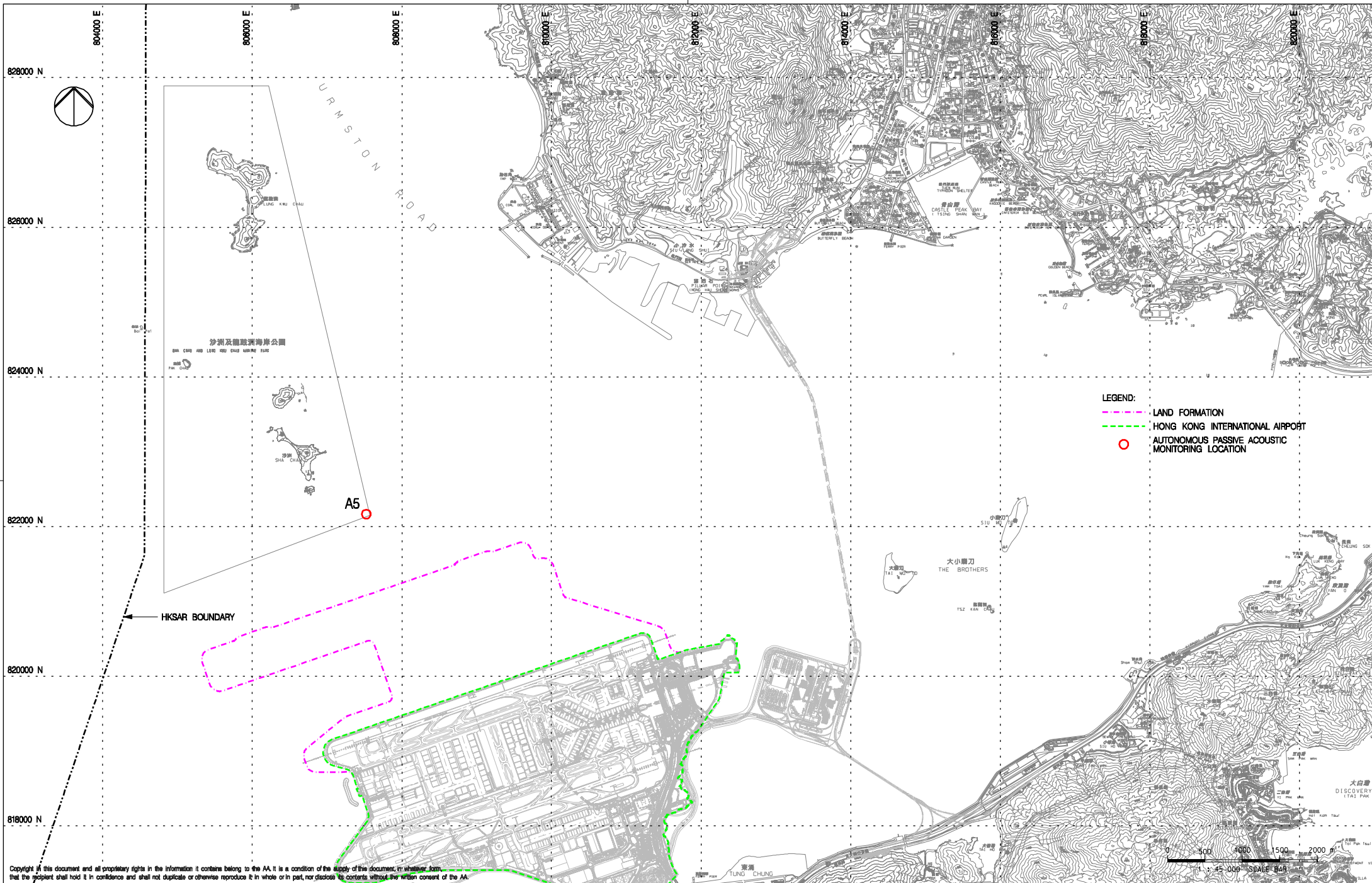
Rev.	Date	Description	Checked
A	02DEC15	FIRST ISSUE	JC
B	06FEB17	GENERAL REVISION	JC
C	29OCT18	GENERAL REVISION	SH



Title
**LAND BASED DOLPHIN MONITORING
 IN BASELINE AND CONSTRUCTION PHASES**

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

EXPANSION OF HONG KONG INTERNATIONAL AIRPORT
 INTO A THREE-RUNWAY SYSTEM
 Drawing No.
FIGURE 6.2
 Scale at A3
1 : 45000
 Rev. **C**



Copyright in this document and all proprietary rights in the information it contains belong to the AA. It is a condition of the supply of this document, in whatever form, that the recipient shall hold it in confidence and shall not duplicate or otherwise reproduce it in whole or in part, nor disclose its contents without the written consent of the AA.

Rev.	Date	Description	Checked
A	29AUG17	FIRST ISSUE	JT
B	10OCT17	GENERAL REVISION	PL
C	29OCT18	GENERAL REVISION	SH



Title
LOCATION FOR AUTONOMOUS PASSIVE ACOUSTIC MONITORING

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

EXPANSION OF HONG KONG INTERNATIONAL AIRPORT INTO A THREE-RUNWAY SYSTEM	
Drawing No.	Scale at A3 1:45000
FIGURE 6.5	Rev. C

Appendix A. Contract Description

Contract Description

Contract No.	Contract Title	Contractor	Key Construction Activities
3206	Reclamation Contract	Zhen Hua Engineering Company Ltd.-China Communications Construction Company Ltd.-CCCC Dredging (Group) Company Ltd. Joint Venture	<p>The works covered by the Contract 3206 comprise the formation of approximately 650 hectares of land north of the existing airport island for the project, the major construction activities including without limitation the following</p> <ul style="list-style-type: none"> • Geotechnical and ground improvement works; • Seawall construction; • Marine and land filling works; and • Civil works.
3301	North Runway Crossover Taxiway	Fujita Corporation-China Harbour Engineering Company Ltd.-Zhen Hua Engineering Company Ltd. Joint Venture	<p>The works covered by the Contract 3301 comprise the construction of a new dual taxiway across the existing north runway and utility services and cable ducting systems. The major construction activities include without limitation the following:</p> <ul style="list-style-type: none"> • Construction of a new dual taxiway; • Cable ducting works; • Extension of existing portable water supply system; and • All associated works.
3302	Eastern Vehicular Tunnel Advance Works	China Road and Bridge Corporation	<p>The works covered by the Contract 3302 comprise the design and construction of the first section of the new Eastern Vehicular Tunnel and a Road Tunnel Plant Building. The major construction activities include without limitation the following:</p> <ul style="list-style-type: none"> • Foundation and structural works; • Cast-in / Underground electrical & mechanical works and utility services; and • All associated testing and commissioning works.
3303	Third Runway and Associated Works	Sinohydro Corporation Limited, Powerchina Airport Construction Company Limited, Paul Y. Construction Company Limited, and Rock-One	<p>The works covered by the Contract 3303 comprise all elements of permanent works and temporary works required for the completion, commissioning and operation of the new North Runway and existing South Runway following the closure of the existing North Runway. The major construction activities include without limitation the following:</p> <ul style="list-style-type: none"> • New runway, taxiways, and associated works;

Contract No.	Contract Title	Contractor	Key Construction Activities
		Engineering Company Limited Joint Venture	<ul style="list-style-type: none"> • Infrastructure works; • Construction of ancillary buildings and facilities; • Set up of various airport systems; and • All associated testing and commissioning works.
3305	Airfield Ground Lighting System	ADB Safegate Hong Kong Limited	<p>The works covered by the Contract 3305 comprise the design, manufacture, installation and handover of the Airfield Ground Lighting (AGL) System. The major construction activities include without limitation the following:</p> <ul style="list-style-type: none"> • Light fittings works; • Power Supply System installation; • Fibre optic cables and data cables supply and connection; • Set up Control and Communication system; • All associated testing and commissioning works.
3307	Fire Training Facility	Paul Y. Construction Company Limited	<p>The works covered by the Contract 3307 comprise the construction of a Fire Training Facility on the new reclamation area to replace the existing facility at the Airport Island. The major construction activities include without limitation the following:</p> <ul style="list-style-type: none"> • Building services works; • Civil works; and • All associated testing and temporary works.
3402	New Integrated Airport Centers Enabling Works	Wing Hing Construction Co., Ltd.	<p>The works covered by the Contract 3402 comprise the enabling works for the new Integrated Airport Centers. The major construction activities include without limitation the following:</p> <ul style="list-style-type: none"> • Site clearance and demolition; • Building services works; • Utilities diversion and installation works; • Roadworks including associated facilities; and • All associated testing and commissioning works.
3403	New Integrated Airport Centres – Building and Civil Works	Sun Fook Kong Construction Limited	<p>The works covered by the Contract 3403 comprise the construction of a new Integrated Airport Centre (IAC) and a number of ancillary facilities and Additions and Alteration (A&A) works for converting the existing IAC into a back-up IAC, including without limitation the following:</p> <ul style="list-style-type: none"> • Site clearance and demolition;

Contract No.	Contract Title	Contractor	Key Construction Activities
			<ul style="list-style-type: none"> • Building structure and envelope; • Building Services and Airport Systems; and • Utilities division and installations.
3405	Third Runway Concourse Foundation and Substructure Works	China Road and Bridge Corporation - Bachy Soletanche Group Limited - LT Sambo Co., Ltd. Joint Venture	<p>The works covered by the Contract 3405 comprise without limitation the following:</p> <ul style="list-style-type: none"> • Piled foundation works; • Basement and tunnel structure works; • Associated internal reinforced concrete structures; • Backfilling and compaction of works area; and • Associated testing and temporary works.
3408	Third Runway Concourse and Apron Works	Beijing Urban Construction Group Company Limited and Chevalier (Construction) Company Limited Joint Venture	<p>The works covered by the Contract 3408 comprise the design and construction of the Third Runway Concourse (TRC), the TRC Apron, two cross-field taxiways, Ancillary Buildings, specific section of the Eastern Vehicular Tunnel (EVT), and the associated infrastructure, testing, and commissioning works.</p>
3503	Terminal 2 Foundation and Substructure Works	Leighton - Chun Wo Joint Venture	<p>The works covered by the Contract 3503 comprise the foundations for the new T2 terminal, two annex buildings and associated viaducts, construction of the new T2 basement and south annex building structures, diaphragm walls, utility services and other advance works.</p> <p>The major construction activities include without limitation the following:</p> <ul style="list-style-type: none"> • Re-configuration and demolition of existing utilities and structures; • Pile foundations for the expanded T2 Terminal Building, South Annex Building, and North Annex Building; • Construction of new South Annex Building; • Diversion and provisions of utilities; and • All associated testing and commissioning works.
3508	Terminal 2 Expansion Works	Gammon Engineering and Construction Co., Ltd	<p>The works covered by the Contract 3508 comprise the construction of T2, North Annex Building (NAB) and South Annex Building (SAB) with interconnecting bridges, landside transport infrastructure including viaducts and at grade roads, underground utility services, one sewage pumping</p>

Contract No.	Contract Title	Contractor	Key Construction Activities
			<p>station with the associated electrical building, footbridges, external works and modification works to existing facilities. The major construction activities include without limitation the following:</p> <ul style="list-style-type: none"> • Superstructure, interior landscaping, building services and airport system of T2, NAB, SAB and associated footbridges; • Additions and Alteration (A&A) works of the existing Airport World Trade Centre (AWTC); • Modification of the existing APM and BHS tunnels; • External works and road networks around T2; and • Utilities.
3601	New Automated People Mover System (TRC Line)	CRRC Puzhen Bombardier Transportation Systems Limited and CRRC Nanjing Puzhen Co., Ltd. Joint Venture	<p>The works covered by the Contract 3601 comprise the initial phase of the Automated People Mover (APM) system connecting the Third Runway Concourse (TRC) and the APM Interchange Station in the modified T2, and extension of the new APM system into the new APM Depot east of T2. The major construction activities include without limitation the following:</p> <ul style="list-style-type: none"> • New 3-guideway APM system between TRC and T2; • Extension of the TRC Line into the new APM Depot; • APM associated sub-systems (communications, signalling, etc.) • Associated civil works; and • All associated testing, commissioning works.
3602	Existing APM System Modification Works	Niigata Transys Co., Ltd.	<p>The works covered by the Contract 3602 comprise the detailed design, supply, manufacture, fabrication, implementation, testing and commissioning of the following modification works of the existing APM systems:</p> <ul style="list-style-type: none"> • Modification of existing APM depot and APM cars; • Modification of existing T1 & T2 tunnels; and • Preparation of new APM depot.
3603	3RS Baggage Handling System	Vanderlande Industries Hong Kong Limited and Shun Hing Systems Integration Company Limited	<p>The works covered by the Contract 3603 comprise the design, supply, manufacture, delivery, installation, testing and commissioning of the high-speed baggage handling system.</p>

Contract No.	Contract Title	Contractor	Key Construction Activities
3721	Construction Support Infrastructure Works	China State Construction Engineering (Hong Kong) Limited	The works covered by the Contract 3721 comprise the construction of the infrastructure works and building facilities on the reclaimed land formation. The major construction activities include without limitation the following: <ul style="list-style-type: none"> • Project site road; • Utilities; • Cargo loading quays; and • Security fencing and hoarding.
3722	Western Support Area – Construction Support Facilities	Tapbo Construction Company Limited and Konwo Modular House Limited Joint Venture	The works covered by the Contract 3722 comprise the design and construction of support facilities, including site office, Canteen, Safety Induction Centre and Medical Centre, Material Testing Laboratories and Typhoon Shelter, Vehicle Maintenance Facility and Fuel Storage Facility. The major construction activities include without limitation the following: <ul style="list-style-type: none"> • Construction of support facilities; • Foundation and structural works; and • Building services works.
3723	Eastern Support Area – Construction Support Facilities	Tapbo Construction Company Limited and Konwo Modular House Ltd. Joint Venture	The works covered by the Contract 3723 comprise the design and construction of support facilities, including site office, sewage treatment facility, canteen, and centralised power supply building. The major construction activities include without limitation the following: <ul style="list-style-type: none"> • Construction of support facilities; • Foundation, structural and superstructure works; • Sewage pipe network and connection works; and • Building services works.
3728	Minor Site Works	Shun Yuen Construction Company Limited	The works to be executed by the Contract 3728 comprise minor works within the Airside and Landside areas of the existing airport island to support the Project.
3801	APM and BHS Tunnels on Existing Airport Island	China State Construction Engineering (Hong Kong) Limited	The works covered by the Contract 3801 comprise the construction of the APM and Baggage Handling System (BHS) tunnels on existing airport island. The major construction activities include without limitation the following: <ul style="list-style-type: none"> • Construction of APM and BHS tunnels; • Construction of ventilation building and associated infrastructure; and • Construction, testing and commissioning of sewerage pumping station; and

Contract No.	Contract Title	Contractor	Key Construction Activities
			<ul style="list-style-type: none"> • Civil and structural engineering works.
3802	APM and BHS Tunnels and Related Works	Gammon Construction Limited	<p>The works covered by the Contract 3802 comprise the construction of the APM and BHS tunnels on existing airport island. The major construction activities include without limitation the following:</p> <ul style="list-style-type: none"> • Construction of APM/ BHS Tunnels; • Construction of ancillary buildings/ facilities; • Building services and airport systems; • Infrastructure Works; • Underground utilities and services; and • All associated testing and commissioning works.
3901A	Concrete Batching Facility	K. Wah Concrete Company Limited	<p>The works covered by the Contract 3901A comprise the establishment, operation and maintenance of a concrete batching facility at the Project Site and the supply of concrete products. The major construction activities include without limitation the following:</p> <ul style="list-style-type: none"> • Supply of all equipment for the installation of the Facility to the Site; and • Supply of all raw materials required for the production of ready mixed concrete products and the continual operation of the Facility.
3901B	Concrete Batching Facility	Gammon Construction Limited	<p>The works covered by the Contract 3901B comprise the establishment, operation and maintenance of a concrete batching facility at the Project Site and the supply of concrete products. The major construction activities include without limitation the following:</p> <ul style="list-style-type: none"> • Supply of all equipment for the installation of the Facility to the Site; and • Supply of all raw materials required for the production of ready mixed concrete products and the continual operation of the Facility.

Appendix B. 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?^
Air Quality Impact – Construction Phase					
5.2.6.2	2.1	-	Dust Control Measures <ul style="list-style-type: none"> Water spraying for 12 times a day or once every two hours for 24-hour working at all active works area. 	Within construction site / Duration of the construction phase	I
5.2.6.3	2.1	-	<ul style="list-style-type: none"> 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. 	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"> 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. 	Within construction site / Duration of the construction phase	I
			Disturbed Parts of the Roads <ul style="list-style-type: none"> Each and every main temporary access should be paved with concrete, bituminous hardcore materials or metal plates and kept clear of dusty materials; or Unpaved parts of the road should be sprayed with water or a dust suppression chemical so as to keep the entire road surface wet. 	Within construction site / Duration of the construction phase	I
			Exposed Earth <ul style="list-style-type: none"> 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. 	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>Loading, Unloading or Transfer of Dusty Materials</p> <ul style="list-style-type: none"> All dusty materials should be sprayed with water immediately prior to any loading or transfer operation so as to keep the dusty material wet. 	Within construction site / Duration of the construction phase	
			<p>Debris Handling</p> <ul style="list-style-type: none"> 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 Before debris is dumped into a chute, water should be sprayed so that it remains wet when it is dumped. 	Within construction site / Duration of the construction phase	
			<p>Transport of Dusty Materials</p> <ul style="list-style-type: none"> 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. 	Within construction site / Duration of the construction phase	
			<p>Wheel washing</p> <ul style="list-style-type: none"> 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. 	Within construction site / Duration of the construction phase	
			<p>Use of vehicles</p> <ul style="list-style-type: none"> 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; Immediately before leaving the construction site, every vehicle should be washed to remove any dusty materials from its body and wheels; and 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. 	Within construction site / Duration of the construction phase	
			<p>Site hoarding</p> <ul style="list-style-type: none"> 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. 	Within construction site / Duration of the construction phase	
5.2.6.5	2.1	-	<p>Best Practices for Concrete Batching Plant</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>	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?^
			<ul style="list-style-type: none"> ▪ 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; ▪ 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 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; ▪ Vents of all silos shall be fitted with fabric filtering system to meet the required emission limit; ▪ Vents of cement/PFA weighing scale shall be fitted with fabric filtering system to meet the required emission limit; and ▪ Seating of pressure relief valves of all silos shall be checked, and the valves re-seated if necessary, before each delivery. 		
			<p>Other raw materials</p> <ul style="list-style-type: none"> ▪ 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; ▪ 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, stock piles and material discharge points; ▪ 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; ▪ 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; ▪ All conveyor transfer points shall be totally enclosed. Openings for the passage of conveyors shall be fitted with adequate flexible seals; ▪ Scrapers shall be provided at the turning points of all conveyors to remove dust adhered to the belt surface; ▪ 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; ▪ 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; 	<p>Within Concrete Batching Plant / Duration of the construction phase</p>	I

EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
			<ul style="list-style-type: none"> The stockpile shall be enclosed at least on top and three sides and with flexible curtain to cover the entrance side; 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 The opening between the storage bin and weighing scale of the materials shall be fully enclosed. 		
			<p>Loading of materials for batching</p> <ul style="list-style-type: none"> Concrete truck shall be loaded in such a way as to minimise airborne dust emissions. The following control measures shall be implemented: <ol style="list-style-type: none"> 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 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. The loading bay shall be totally enclosed during the loading process. 	Within Concrete Batching Plant / Duration of the construction phase	I
			<p>Vehicles</p> <ul style="list-style-type: none"> All practicable measures shall be taken to prevent or minimize the dust emission caused by vehicle movement; and All access and route roads within the premises shall be paved and adequately wetted. 	Within Concrete Batching Plant / Duration of the construction phase	I
			<p>Housekeeping</p> <ul style="list-style-type: none"> 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. 	Within Concrete Batching Plant / Duration of the construction phase	I
5.2.6.6	2.1	-	<p>Best Practices for Asphaltic Concrete Plant</p> <p>The relevant best practices for dust control as stipulated in the Guidance Note on the Best Practicable Means for Tar and Bitumen Works (Asphaltic Concrete Plant) BPM 15 (94) as well as in the future Specified Process licence should be adopted. These include:</p> <p>Design of Chimney</p> <ul style="list-style-type: none"> The chimney shall not be less than 3 metres plus the building height or 8 metres above ground level, whichever is the greater; The efflux velocity of gases from the main chimney shall not be less than 12 m/s at full load condition; 	Within Concrete Batching Plant / Duration of the construction phase	N/A

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"> ▪ The flue gas exit temperature shall not be less than the acid dew point; and ▪ Release of the chimney shall be directed vertically upwards and not be restricted or deflected. 		
			<p>Cold feed side</p> <ul style="list-style-type: none"> ▪ 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; ▪ 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; ▪ 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; ▪ 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; ▪ 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; ▪ All conveyor transfer points shall be totally enclosed. Openings for the passages of conveyors shall be fitted with adequate flexible seals; and ▪ All materials returned from dust collection system shall be transferred in enclosed system and shall be stored inside bins or enclosures. 	<p>Within Concrete Batching Plant / Duration of the construction phase</p>	N/A
			<p>Hot feed side</p> <ul style="list-style-type: none"> ▪ 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; ▪ 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; ▪ 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; ▪ Chutes for carrying hot material shall be rigid and preferably fitted with abrasion resistant plate inside. They shall be inspected daily for leakages; 	<p>Within Concrete Batching Plant / Duration of the construction phase</p>	N/A

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"> ▪ 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 ▪ 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). 		
			<p>Material transportation</p> <ul style="list-style-type: none"> ▪ 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; ▪ 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 ▪ Haul roads inside the Works shall be adequately wetted with water and/or chemical suppressants by water trucks or water sprayers. 	Within Concrete Batching Plant / Duration of the construction phase	N/A
			<p>Control of emissions from bitumen decanting</p> <ul style="list-style-type: none"> ▪ 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; ▪ 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; ▪ Proper chimney for the discharge of bitumen fumes shall be provided at high level; ▪ The emission of bitumen fumes shall not exceed the required emission limit; and <p>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.</p>	Within Concrete Batching Plant / Duration of the construction phase	N/A
			<p>Liquid fuel</p> <ul style="list-style-type: none"> ▪ 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. 	Within Concrete Batching Plant / Duration of the construction phase	N/A
			<p>Housekeeping</p> <ul style="list-style-type: none"> ▪ 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. 	Within Concrete Batching Plant / Duration of the construction phase	N/A
5.2.6.7	2.1	-	<p>Best Practices for Rock Crushing Plants</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>	Within Concrete Batching Plant / Duration of the construction phase	N/A

EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
			<p>Crushers</p> <ul style="list-style-type: none"> ▪ 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; ▪ 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; ▪ Water sprayers shall be installed and operated in strategic locations at the feeding inlet of crushers; and ▪ 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. 		
			<p>Vibratory screens and grizzlies</p> <ul style="list-style-type: none"> ▪ 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 ▪ All grizzlies shall be enclosed on top and 3 sides and sufficient water sprayers shall be installed at their feeding and outlet areas. 	Within Concrete Batching Plant / Duration of the construction phase	N/A
			<p>Belt conveyors</p> <ul style="list-style-type: none"> ▪ 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; ▪ 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 ▪ 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. 	Within Concrete Batching Plant / Duration of the construction phase	N/A

EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
			<p>Storage piles and bins</p> <ul style="list-style-type: none"> 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. The surface of all surge piles and stockpiles of blasted rocks or aggregates shall be kept sufficiently wet by water spraying wherever practicable; All open stockpiles for aggregates of size in excess of 5 mm shall be kept sufficiently wet by water spraying where practicable; or 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. Scattered piles gathered beneath belt conveyors, inside and around enclosures shall be cleared regularly. 	Within Concrete Batching Plant / Duration of the construction phase	N/A
			<p>Rock drilling equipment</p> <ul style="list-style-type: none"> Appropriate dust control equipment such as a dust extraction and collection system shall be used during rock drilling activities. 	Within Concrete Batching Plant / Duration of the construction phase	N/A
Hazard to Human Life – Construction Phase					
Table 6.40	3.2	-	<ul style="list-style-type: none"> Precautionary measures should be established to request barges to move away during typhoons. 	Construction Site / Construction Period	I
Table 6.40	3.2	-	<ul style="list-style-type: none"> An appropriate marine traffic management system should be established to minimize risk of ship collision. 	Construction Site / Construction Period	I
Table 6.40	3.2	-	<ul style="list-style-type: none"> Location of all existing hydrant networks should be clearly identified prior to any construction works. 	Construction Site / Construction Period	I
Noise Impact – Construction Phase					
7.5.6	4.3	-	<p>Good Site Practice</p> <p>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:</p> <ul style="list-style-type: none"> only well-maintained plant to be operated on-site and plant should be serviced regularly during the construction works; machines and plant that may be in intermittent use to be shut down between work periods or should be throttled down to a minimum; 	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?^
			<ul style="list-style-type: none"> plant known to emit noise strongly in one direction, should, where possible, be orientated to direct noise away from the NSRs; mobile plant should be sited as far away from NSRs as possible; and material stockpiles and other structures to be effectively utilised, where practicable, to screen noise from on-site construction activities. 		
7.5.6	4.3	-	Adoption of QPME <ul style="list-style-type: none"> QPME should be adopted as far as applicable. 	Within the Project site / During construction phase / Prior to commencement of operation	I
7.5.6	4.3	-	Use of Movable Noise Barriers <ul style="list-style-type: none"> Movable noise barriers should be placed along the active works area and mobile plants to block the direct line of sight between PME and the NSRs. 	Within the Project site / During construction phase / Prior to commencement of operation	I
7.5.6	4.3	-	Use of Noise Enclosure/ Acoustic Shed <ul style="list-style-type: none"> Noise enclosure or acoustic shed should be used to cover stationary PME such as air compressor and generator. 	Within the Project site / During construction phase / Prior to commencement of operation	I
Water Quality Impact – Construction Phase					

EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
8.8.1.2 and 8.8.1.3	5.1	2.26	<p>Marine Construction Activities</p> <p><u>General Measures to be Applied to All Works Areas</u></p> <ul style="list-style-type: none"> ▪ Barges or hoppers shall not be filled to a level which will cause overflow of materials or pollution of water during loading or transportation; ▪ Use of Lean Material Overboard (LMOB) systems shall be prohibited; ▪ Excess materials shall be cleaned from the decks and exposed fittings of barges and hopper dredgers before the vessels are moved; ▪ Plants should not be operated with leaking pipes and any pipe leakages shall be repaired quickly; ▪ Adequate freeboard shall be maintained on barges to reduce the likelihood of decks being washed by wave action; ▪ All vessels shall be sized such that adequate clearance is maintained between vessels and the sea bed at all states of the tide to ensure that undue turbidity is not generated by turbulence from vessel movement or propeller wash; ▪ 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 ▪ 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 waste water meets the WPCO/TM requirements before discharge. No direct discharge of contaminated water is permitted. 	Within construction site / Duration of the construction phase	I
			<p><u>Specific Measures to be Applied to All Works Areas</u></p> <ul style="list-style-type: none"> ▪ The daily maximum production rates shall not exceed those assumed in the water quality assessment in the EIA report; ▪ 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; 	Within construction site / Duration of the construction phase	I
			<ul style="list-style-type: none"> ▪ 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; ▪ Closed grab dredger shall be used to excavate marine sediment; ▪ Silt curtains surrounding the closed grab dredger shall be deployed in accordance with the Silt Curtain Deployment Plan; and 		<p>N/A</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"> ▪ The Silt Curtain Deployment Plan shall be implemented. 		I

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 prior to Commencement of Marine Filling Works</u></p> <ul style="list-style-type: none"> 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; 	Within construction site / Duration of the construction phase	<p>N/A</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"> 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 		<p>For C7a, I</p> <p>For C8, I</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"> The silt curtains and silt screens should be regularly checked and maintained. 		I
			<p><u>Specific Measures to be Applied to Land Formation Activities during Marine Filling Works</u></p> <ul style="list-style-type: none"> 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; 	Within construction site / Duration of the construction phase	<p>I</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"> Double layer silt curtains to be applied at the south-western opening prior to commencement of marine filling activities; 		<p>N/A</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"> 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 		<p>N/A</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"> The silt curtains and silt screens should be regularly checked and maintained. 		I

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 the Field Joint Excavation Works for the Submarine Cable Diversion</u></p> <ul style="list-style-type: none"> 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 Silt curtains surrounding the closed grab dredger to be deployed as a precautionary measure. 	Within construction site / Duration of the construction phase	N/A
8.8.1.4	5.1	-	<p>Modification of the Existing Seawall</p> <ul style="list-style-type: none"> 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. 	At the existing northern seawall / Duration of the construction phase	N/A
8.8.1.5	5.1	-	<p>Construction of New Stormwater Outfalls and Modifications to Existing Outfalls</p> <ul style="list-style-type: none"> 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. 	Within construction site / Duration of the construction phase	N/A
8.8.1.6 8.8.1.7	5.1	2.27	<p>Piling Activities for Construction of New Runway Approach Lights and HKIAAA Marker Beacons</p> <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> <p><u>For construction of the eastern approach lights at the CMPs</u></p> <ul style="list-style-type: none"> Ground improvement via DCM using a close-spaced layout shall be completed prior to commencement of piling works; Steel casings shall be installed to enclose the excavation area prior to commencement of excavation; The excavated materials shall be removed using a closed grab within the steel casings; No discharge of the cement mixed materials into the marine environment will be allowed; and Excavated materials shall be treated and reused on-site. 	Within construction site / Duration of the construction phase	I I
8.8.1.8	5.1	-	<p>Construction of Site Runoff and Drainage</p> <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"> 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 sand bag barriers should be provided on site to direct storm water to silt removal facilities. The design of the temporary on-site 	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>drainage system should be undertaken by the Contractors prior to the commencement of construction (for works 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"> 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; 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; 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; 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 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. 		
8.8.1.9	5.1	-	<p>Sewage Effluent from Construction Workforce</p> <ul style="list-style-type: none"> 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. 	Within construction site / During construction phase	
8.8.1.10 8.8.1.11	5.1		<p>General Construction Activities</p> <ul style="list-style-type: none"> 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 	Within construction site / During 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"> ▪ 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. 		
8.8.1.12 8.8.1.13	5.1	2.28	<p>Drilling Activities for the Submarine Aviation Fuel Pipelines</p> <p>To prevent potential water quality impacts at Sha Chau, the following measures shall be applied:</p> <ul style="list-style-type: none"> ▪ A 'zero-discharge' policy shall be applied for all activities to be conducted at Sha Chau; ▪ No bulk storage of chemicals shall be permitted; and ▪ 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. 	Within construction site / During construction phase	I
			<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"> ▪ 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 ▪ 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. 	Within construction site / During construction phase	I
Waste Management Implication – Construction Phase					
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"> ▪ 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&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&D materials; ▪ Priority should be given to collect and reuse suitable inert C&D materials generated from other concurrent projects and the Government's PFRF as fill materials for the proposed land formation works; ▪ 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; ▪ 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 	Project Site Area / During design and construction phase	I
					I
					I
					I

EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
			<ul style="list-style-type: none"> ▪ For the marine sediments expected to be excavated from the piling works of TRC, APM & BHS tunnels, airside tunnels and other facilities on the proposed land formation area, piling work of marine sections of the approach lights and HKIAAA 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. 		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"> ▪ 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; ▪ Training of site personnel in proper waste management and chemical waste handling procedures; ▪ Provision of sufficient waste disposal points and regular collection for disposal; ▪ 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; ▪ Stockpiles of C&D materials should be kept wet or covered by impervious sheets to avoid wind-blown dust; ▪ All dusty materials including C&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; ▪ C&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; ▪ The speed of the trucks including dump trucks carrying C&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 ▪ To avoid or minimise dust emission during transport of C&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. 	Project Site Area / Construction Phase	I
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"> ▪ Use of steel or aluminium formworks and falseworks for temporary works as far as practicable; ▪ Adoption of repetitive design to allow reuse of formworks as far as practicable; ▪ 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; 	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"> 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; Any unused chemicals or those with remaining functional capacity should be collected for reused as far as practicable; Proper storage and site practices to minimise the potential for damage or contamination of construction materials; and Plan and stock construction materials carefully to minimise amount of waste generated and avoid unnecessary generation of waste. 		
10.5.1.5	7.1		<ul style="list-style-type: none"> Inert and non-inert C&D materials should be handled and stored separately to avoid mixing the two types of materials. 	Project Site Area / Construction Phase	I
10.5.1.5	7.1	-	<ul style="list-style-type: none"> Any recyclable materials should be segregated from the non-inert C&D materials for collection by reputable licensed recyclers whereas the non-recyclable waste materials should be disposed of at the designated landfill site by a reputable licensed waste collector. 	Project Site Area / Construction Phase	I
10.5.1.6	7.1	-	<ul style="list-style-type: none"> A trip-ticket system promulgated shall be developed in order to monitor the off-site delivery of surplus inert C&D materials that could not be reused on-site for the proposed land formation work at the PFRF and to control fly tipping. 	Project Site Area / Construction Phase	I
10.5.1.6	7.1	2.32	<ul style="list-style-type: none"> The Contractor should prepare and implement a Waste Management Plan detailing various waste arising and waste management practices. 	Construction Phase	I
10.5.1.16	7.1	-	<p>The following mitigation measures are recommended during excavation and treatment of the sediments:</p> <ul style="list-style-type: none"> On-site remediation should be carried out in an enclosed area in order to minimise odour/dust emissions; 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; All practical measures, including but not limited to speed control for vehicles, should be taken to minimise dust emission; Good housekeeping should be maintained at all times at the sediment treatment facility and storage area; Treated and untreated sediment should be clearly separated and stored separately; and 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. 	Project Site Area / Construction Phase	I I I I 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</p>	Project Site Area / Construction Phase	N/A

EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
			<p>followed to minimise potential impacts on water quality during transportation of the sediments requiring Type 1 disposal:</p> <ul style="list-style-type: none"> Bottom opening of barges shall be fitted with tight fitting seals to prevent leakage of material; 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 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. 		
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"> Good quality containers compatible with the chemical wastes should be used; Incompatible chemicals should be stored separately; 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 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. 	Project Site Area / Construction Phase	I
10.5.1.20	7.1	-	<ul style="list-style-type: none"> General refuse should be stored in enclosed bins or compaction units separated from inert C&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 'wind blown' light material. 	Project Site Area / Construction Phase	I
10.5.1.21	7.1	-	<ul style="list-style-type: none"> 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. 	Project Site Area / Construction Phase	I
Land Contamination – Construction Phase					
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"> Further site reconnaissance would be conducted once the areas are accessible in order to identify any land contamination concern for the areas. 	Project Site Area inaccessible during site reconnaissance / Prior to Construction Phase	I
			<ul style="list-style-type: none"> 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. 		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"> 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. 		I *(CAR for golf course and Terminal 2 Emergency Power Supply System Nos.1, 2, 3, 4 and 5)
			<ul style="list-style-type: none"> 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. 		N/A
11.8.1.2	8.1	-	<p>If contaminated soil is identified, the following mitigation measures are for the excavation and transportation of contaminated materials (if any):</p> <ul style="list-style-type: none"> To minimize the incidents of construction workers coming in contact with any contaminated materials, bulk earth-moving excavation equipment should be employed; 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; Stockpiling of contaminated excavated materials on site should be avoided as far as possible; The use of any contaminated soil for landscaping purpose should be avoided unless pre-treatment was carried out; Vehicles containing any excavated materials should be suitably covered to reduce dust emissions and/or release of contaminated wastewater; Truck bodies and tailgates should be sealed to prevent any discharge; 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; Speed control for trucks carrying contaminated materials should be exercised. 8km/h is the recommended speed limit; 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 Maintain records of waste generation and disposal quantities and disposal arrangements. 	Project Site Area / Construction Phase	N/A
Terrestrial Ecological – Construction Phase					
12.10.1.1	9.2	2.14	<p>Pre-construction Egretty Survey</p> <ul style="list-style-type: none"> Conduct ecological survey for Sha Chau egretty to update the latest boundary of the egretty. 	Breeding season (April - July) prior to commencement of	I

EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
				HDD drilling works at HKIA	
12.7.2.3 and 12.7.2.6	9.1	2.30	Avoidance and Minimisation of Direct Impact to Egret <ul style="list-style-type: none"> The daylighting location will avoid direct encroachment to the Sheung Sha Chau egret. The daylighting location and mooring of flat top barge, if required, will be kept away from the egret; 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 The containment pit at the daylighting location shall be covered or camouflaged. 	During construction phase at Sheung Sha Chau Island	
12.7.2.5	9.1	2.30	Preservation of Nesting Vegetation <ul style="list-style-type: none"> 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. 	During construction phase at Sheung Sha Chau Island	
12.7.2.4 and 12.7.2.6	9.1	2.30	Timing the Pipe Connection Works outside Ardeid's Breeding Season <ul style="list-style-type: none"> 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. 	During construction phase at Sheung Sha Chau Island	
12.10.1.1	9.3	-	Ecological Monitoring <ul style="list-style-type: none"> 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. 	at Sheung Sha Chau Island	
Marine Ecological Impact – Pre-construction Phase					
13.11.4.1	10.2.2	-	<ul style="list-style-type: none"> Pre-construction phase Coral Dive Survey. 	HKIAAA artificial seawall	
Marine Ecological Impact – Construction Phase					
13.11.1.3 to 13.11.1.6	-	-	Minimisation of Land Formation Area <ul style="list-style-type: none"> 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. 	Land formation footprint / during detailed design phase to completion of construction	
13.11.1.7 to 13.11.1.10	-	2.31	Use of Construction Methods with Minimal Risk/Disturbance <ul style="list-style-type: none"> Use of non-dredge method for the main land formation and ancillary works including the diversion of the aviation fuel pipeline to the AFRF; 	During construction phase at marine works area	

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"> ▪ 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; 		
			<ul style="list-style-type: none"> ▪ Use of bored piling in short duration to form the new approach lights and marker beacons for the new runway; 		
			<ul style="list-style-type: none"> ▪ Avoid bored piling during CWD peak calving season (Mar to Jun); 		
			<ul style="list-style-type: none"> ▪ Prohibition of underwater percussive piling; and 		
			<ul style="list-style-type: none"> ▪ 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. 		
13.11.2.1 to 13.11.2.7	-	-	<p>Mitigation for Indirect Disturbance due to Deterioration of Water Quality</p> <ul style="list-style-type: none"> ▪ Water quality mitigation measures during construction phases include consideration of alternative construction methods, deployment of silt curtain and good site practices; 	All works area during the construction phase	
			<ul style="list-style-type: none"> ▪ 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); 		
			<ul style="list-style-type: none"> ▪ Use of bored piling in short duration to form the new approach lights and marker beacons for the new runway; and 		
			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.		
13.11.1.12	-	-	<p>Strict Enforcement of No-Dumping Policy</p> <ul style="list-style-type: none"> ▪ 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; ▪ Mandatory educational programme of the no-dumping policy be made available to all construction site personnel for all project-related works; ▪ Fines for infractions should be implemented; and ▪ Unscheduled, on-site audits shall be implemented. 	All works area during the construction phase	
13.11.1.13	-	-	<p>Good Construction Site Practices</p> <ul style="list-style-type: none"> ▪ Regular inspection of the integrity and effectiveness of all silt curtains and monitoring of effluents to ensure that any discharge meets effluent discharge guidelines; ▪ Keep the number of working or stationary vessels present on-site to the minimum anytime; and ▪ 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. 	All works area during 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?^
13.11.1.3 to 13.11.1.6	-	-	Minimisation of Land Formation Area <ul style="list-style-type: none"> 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. 	Land formation footprint / during detailed design phase to completion of construction	I
13.11.5.4 to 13.11.5.13	10.3.1	-	SkyPier High Speed Ferries' Speed Restrictions and Route Diversions <ul style="list-style-type: none"> 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 Drawing No. MCL/P132/EIA/13-023 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&A data and taking reference to changes in total SkyPier HSF numbers; and A maximum of 10 knots will be enforced through the designated SCLKC Marine Park area at all times. Other mitigation measures <ul style="list-style-type: none"> 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 The effectiveness of the CWD mitigation measures after implementation of initial six month SkyPier HSF diversion and speed restriction will be reviewed. 	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	Dolphin Exclusion Zone <ul style="list-style-type: none"> Establishment of a 24 hr Dolphin Exclusion Zone (DEZ) with a 250 m radius around the land formation works areas; 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 A DEZ would also be implemented during bored piling work but as a precautionary measure only. 	Marine waters around land formation works area during construction phase	I
13.11.5.19	10.4	2.31	Acoustic Decoupling of Construction Equipment <ul style="list-style-type: none"> 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 Specific acoustic decoupling measures shall be specified during the detailed design of the project for use during the land formation works. 	Around coastal works area during construction phase	I
13.11.5.20	10.6.1	2.29	Spill Response Plan	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"> 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. 		
13.11.5.21 to 13.11.5.23	10.6.1	-	<p>Construction Vessel Speed Limits and Skipper Training</p> <ul style="list-style-type: none"> A speed limit of 10 knots should be strictly observed for construction vessels at areas with the highest CWD densities; and 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. 	All areas north and west of Lantau Island during construction phase	
Fisheries Impact – Construction Phase					
14.9.1.2 to 14.9.1.5	-	-	<p>Minimisation of Land Formation Area</p> <ul style="list-style-type: none"> Minimise the overall size of the land formation needed for the additional facilities to minimise the overall loss of habitat for fisheries resources. 	Land formation footprint / during detailed design phase to completion of construction	
14.9.1.6	-	-	<p>Use of Construction Methods with Minimal Risk/Disturbance</p> <ul style="list-style-type: none"> Use of non-dredge method for the main land formation and ancillary works including the diversion of the aviation fuel pipeline to the AFRF; 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; Use of bored piling in short duration to form the new approach lights and marker beacons for the new runway; and 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. 	During construction phase at marine works area	
14.9.1.11	-	-	<p>Strict Enforcement of No-Dumping Policy</p> <ul style="list-style-type: none"> 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; Mandatory educational programme of the no-dumping policy be made available to all construction site personnel for all project-related works; Fines for infractions should be implemented; and Unscheduled, on-site audits shall be implemented. 	All works area during 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?^
14.9.1.12	-		Good Construction Site Practices <ul style="list-style-type: none"> Regular inspection of the integrity and effectiveness of all silt curtains and monitoring of effluents to ensure that any discharge meets effluent discharge guidelines; Keep the number of working or stationary vessels present on-site to the minimum anytime; and 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. 	All works area during the construction phase	
14.9.1.13 to 14.9.1.18	-		Mitigation for Indirect Disturbance due to Deterioration of Water Quality <ul style="list-style-type: none"> Water quality mitigation measures during construction phases include consideration of alternative construction methods, deployment of silt curtain and good site practices; 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); Use of bored piling in short duration to form the new approach lights and marker beacons for the new runway; and 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. 	All works area during the construction phase	
Landscape and Visual Impact – Construction Phase					
Table 15.6	12.3	-	CM1 - 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.	
Table 15.6	12.3	-	CM2 - Reduction of construction period to practical minimum.	All works areas for duration of works; Upon handover and completion of works.	
Table 15.6	12.3	-	CM3 - 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.	
Table 15.6	12.3	-	CM4 - 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.	

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	-	CM5 - 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
Table 15.6	12.3	-	CM6 - 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	-	CM7 - 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	-	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.	All existing trees to be retained; Upon handover and completion of works.	I
Table 15.6	12.3	-	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.	All existing trees to be affected by the works; Upon handover and completion of works.	I
Table 15.6	12.3	-	CM10 - 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;	N/A

EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
				Upon handover and completion of works.	
			Cultural Heritage Impact – Construction Phase		
			Not applicable.		
			Health Impact – Aircraft Emissions		
			Not applicable.		
			Health Impact – Aircraft Noise		
			Not applicable.		

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 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.

Appendix C. Monitoring Schedule

Monitoring Schedule of This Reporting Period

Apr-21

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1 Site Inspection AR1A, AR2 WQ General & Regular DCM mid-ebb: 15:33 mid-flood: 09:04	2	3 WQ General & Regular DCM mid-ebb: 17:19 mid-flood: 10:12
4	5	6 WQ General & Regular DCM mid-ebb: 21:26 mid-flood: 08:51	7 Site Inspection CWD Survey (Vessel) AR1A, AR2 NM1A, NM5	8 Site Inspection NM4, NM6 WQ General & Regular DCM mid-ebb: 11:37 mid-flood: 16:43	9 Site Inspection	10 WQ General & Regular DCM mid-ebb: 12:38 mid-flood: 06:45
11	12 Site Inspection CWD Survey (Vessel) AR1A, AR2 NM1A, NM5	13 Site Inspection CWD Survey (Vessel) NM4, NM6 WQ General & Regular DCM mid-ebb: 13:55 mid-flood: 07:39	14 CWD Survey (Vessel)	15 Site Inspection CWD Survey (Vessel, Land-based) WQ General & Regular DCM mid-ebb: 14:53 mid-flood: 08:17	16 Site Inspection	17 AR1A, AR2 WQ General & Regular DCM mid-ebb: 16:00 mid-flood: 08:55
18	19 Site Inspection CWD Survey (Vessel)	20 Site Inspection CWD Survey (Vessel) WQ General & Regular DCM mid-ebb: 18:41 mid-flood: 06:04	21 CWD Survey (Vessel, Land-based) NM4, NM6	22 Site Inspection WQ General & Regular DCM mid-ebb: 09:59 mid-flood: 14:36	23 Site Inspection AR1A, AR2 NM1A, NM5	24 WQ General & Regular DCM mid-ebb: 11:18 mid-flood: 16:55
25	26 Site Inspection	27 Site Inspection WQ General & Regular DCM mid-ebb: 13:06 mid-flood: 06:49	28	29 Site Inspection AR1A, AR2 NM1A, NM5 WQ General & Regular DCM mid-ebb: 14:32 mid-flood: 07:54	30 Site Inspection NM4, NM6	
Notes: CWD - Chinese White Dolphin Air quality and Noise Monitoring Station WQ - Water Quality DCM - Deep Cement Mixing 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 Monitoring Schedule of Next Reporting Period

May-21

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1 WQ General & Regular DCM mid-ebb: 16:10 mid-flood: 09:05
2	3 Site Inspection	4 Site Inspection NM4, NM6 WQ General & Regular DCM mid-ebb: 19:28 mid-flood: 06:51	5 CWD Survey (Vessel) AR1A, AR2 NM1A, NM5	6 Site Inspection WQ General & Regular DCM mid-ebb: 10:29 mid-flood: 15:26	7 Site Inspection	8 WQ General & Regular DCM mid-ebb: 11:38 mid-flood: 17:17
9	10 Site Inspection NM4, NM6	11 Site Inspection CWD Survey (Vessel) AR1A, AR2 NM1A, NM5 WQ General & Regular DCM mid-ebb: 13:01 mid-flood: 06:30	12	13 Site Inspection CWD Survey (Land-based) WQ General & Regular DCM mid-ebb: 14:00 mid-flood: 07:12	14 Site Inspection	15 WQ General & Regular DCM mid-ebb: 15:05 mid-flood: 07:58
16	17 Site Inspection AR1A, AR2 NM1A, NM5	18 Site Inspection WQ General & Regular DCM mid-ebb: 17:15 mid-flood: 04:47	19	20 Site Inspection CWD Survey (Vessel) NM4, NM6 WQ General & Regular DCM mid-ebb: 19:26 mid-flood: 06:57	21 Site Inspection CWD Survey (Vessel)	22 AR1A, AR2 WQ General & Regular DCM mid-ebb: 10:02 mid-flood: 15:33
23	24 Site Inspection CWD Survey (Land-based)	25 Site Inspection CWD Survey (Vessel) WQ General & Regular DCM mid-ebb: 12:03 mid-flood: 18:43	26 CWD Survey (Vessel) NM4, NM6	27 Site Inspection CWD Survey (Vessel) WQ General & Regular DCM mid-ebb: 13:33 mid-flood: 06:45	28 Site Inspection CWD Survey (Vessel) AR1A, AR2 NM1A, NM5	29 WQ General & Regular DCM mid-ebb: 15:09 mid-flood: 08:03
30	31	Notes: CWD - Chinese White Dolphin Air quality and Noise Monitoring Station WQ - Water Quality DCM - Deep Cement Mixing 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				

Appendix D. Monitoring Results

Air Quality Monitoring Results

1-hour TSP Results

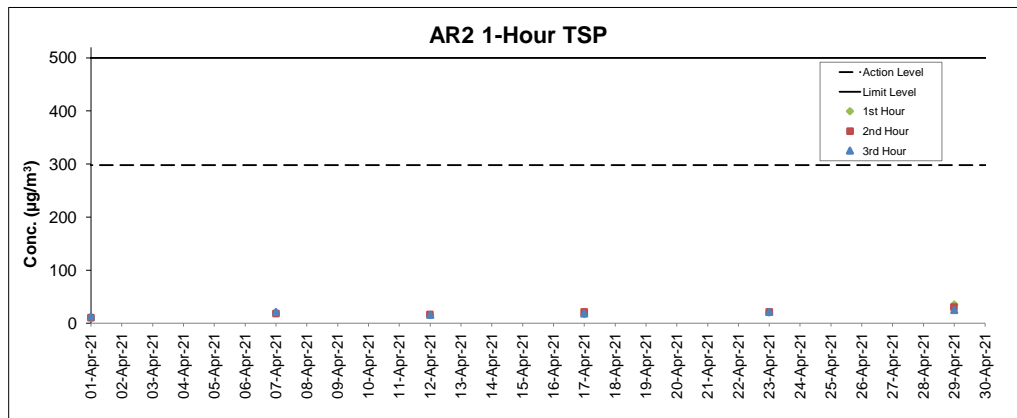
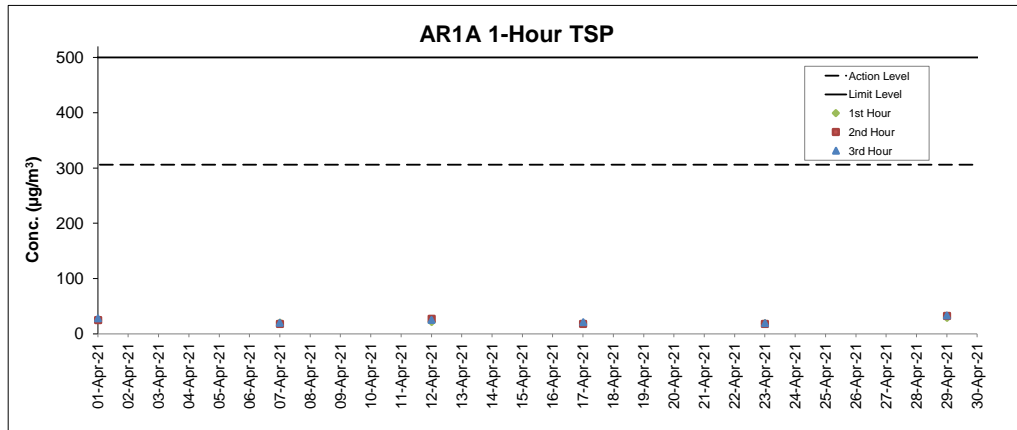
Station: AR1A- Man Tung Road Park

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 ($\mu\text{g}/\text{m}^3$)
1-Apr-21	13:22	Cloudy	5.3	199	25	306	500
1-Apr-21	14:22	Cloudy	6.7	206	25	306	500
1-Apr-21	15:22	Cloudy	5.0	208	28	306	500
7-Apr-21	13:26	Cloudy	7.5	84	20	306	500
7-Apr-21	14:26	Cloudy	6.9	81	18	306	500
7-Apr-21	15:26	Cloudy	6.7	87	20	306	500
12-Apr-21	13:09	Cloudy	4.2	260	21	306	500
12-Apr-21	14:09	Cloudy	3.9	255	27	306	500
12-Apr-21	15:09	Cloudy	2.2	306	25	306	500
17-Apr-21	13:04	Cloudy	2.5	96	19	306	500
17-Apr-21	14:04	Cloudy	2.5	107	18	306	500
17-Apr-21	15:04	Cloudy	3.3	90	21	306	500
23-Apr-21	13:13	Cloudy	4.7	255	19	306	500
23-Apr-21	14:13	Cloudy	5.3	257	18	306	500
23-Apr-21	15:13	Cloudy	6.7	240	19	306	500
29-Apr-21	13:20	Cloudy	3.9	274	29	306	500
29-Apr-21	14:20	Cloudy	4.2	282	32	306	500
29-Apr-21	15:20	Cloudy	3.3	279	33	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 ($\mu\text{g}/\text{m}^3$)
1-Apr-21	13:15	Cloudy	5.3	200	10	298	500
1-Apr-21	14:15	Cloudy	5.8	209	10	298	500
1-Apr-21	15:15	Cloudy	4.7	207	13	298	500
7-Apr-21	13:47	Cloudy	7.8	90	19	298	500
7-Apr-21	14:47	Cloudy	6.7	87	18	298	500
7-Apr-21	15:47	Cloudy	5.8	100	21	298	500
12-Apr-21	12:50	Cloudy	3.9	265	15	298	500
12-Apr-21	13:50	Cloudy	3.1	264	16	298	500
12-Apr-21	14:50	Cloudy	2.2	297	16	298	500
17-Apr-21	9:39	Cloudy	2.2	72	17	298	500
17-Apr-21	10:39	Cloudy	2.8	73	21	298	500
17-Apr-21	11:39	Cloudy	2.8	120	18	298	500
23-Apr-21	12:46	Sunny	4.7	254	20	298	500
23-Apr-21	13:46	Sunny	5.0	240	21	298	500
23-Apr-21	14:46	Sunny	5.8	239	21	298	500
29-Apr-21	14:04	Cloudy	3.9	282	35	298	500
29-Apr-21	15:04	Cloudy	3.3	274	30	298	500
29-Apr-21	16:04	Cloudy	3.6	267	25	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 ₁₀ dB(A)	Measured L ₅₀ dB(A)	L _{eq(30mins)} dB(A) ^
07-Apr-21	Cloudy	17:29	65.2	59.7	66
07-Apr-21	Cloudy	17:34	65.4	61.7	
07-Apr-21	Cloudy	17:39	65.4	61.7	
07-Apr-21	Cloudy	17:44	64.2	59.4	
07-Apr-21	Cloudy	17:49	63.4	59.7	
07-Apr-21	Cloudy	17:54	63.3	59.6	
12-Apr-21	Cloudy	16:24	73.4	50.3	72
12-Apr-21	Cloudy	16:29	70.0	50.5	
12-Apr-21	Cloudy	16:34	73.4	50.7	
12-Apr-21	Cloudy	16:39	73.5	52.3	
12-Apr-21	Cloudy	16:44	72.2	50.7	
12-Apr-21	Cloudy	16:49	70.9	50.6	
23-Apr-21	Cloudy	13:19	73.8	61.9	70
23-Apr-21	Cloudy	13:24	74.1	63.0	
23-Apr-21	Cloudy	13:29	68.4	57.3	
23-Apr-21	Cloudy	13:34	68.2	57.5	
23-Apr-21	Cloudy	13:39	68.3	57.4	
23-Apr-21	Cloudy	13:44	64.9	53.3	
29-Apr-21	Cloudy	13:20	70.0	60.4	70
29-Apr-21	Cloudy	13:25	70.3	61.1	
29-Apr-21	Cloudy	13:30	70.6	61.4	
29-Apr-21	Cloudy	13:35	72.6	61.0	
29-Apr-21	Cloudy	13:40	68.1	58.8	
29-Apr-21	Cloudy	13:45	66.5	58.3	

Remark:

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

Noise Measurement Results

Station: NM4- Ching Chung Hau Po Woon Primary School

Date	Weather	Time	Measured L ₁₀ dB(A)	Measured L ₅₀ dB(A)	L _{eq(30mins)} dB(A) ^
08-Apr-21	Cloudy	13:16	64.5	57.9	64
08-Apr-21	Cloudy	13:21	63.1	58.0	
08-Apr-21	Cloudy	13:26	63.1	58.8	
08-Apr-21	Cloudy	13:31	62.8	58.8	
08-Apr-21	Cloudy	13:36	61.9	57.2	
08-Apr-21	Cloudy	13:41	62.2	57.7	
13-Apr-21	Cloudy	13:02	60.7	57.0	60*
13-Apr-21	Cloudy	13:07	61.5	57.7	
13-Apr-21	Cloudy	13:12	62.5	58.2	
13-Apr-21	Cloudy	13:17	65.0	58.1	
13-Apr-21	Cloudy	13:22	65.6	58.3	
13-Apr-21	Cloudy	13:27	64.6	58.3	
21-Apr-21	Cloudy	13:02	71.8	59.3	64*
21-Apr-21	Cloudy	13:07	66.9	60.0	
21-Apr-21	Cloudy	13:12	65.4	58.9	
21-Apr-21	Cloudy	13:17	69.5	57.7	
21-Apr-21	Cloudy	13:22	65.4	57.7	
21-Apr-21	Cloudy	13:27	62.1	56.9	
30-Apr-21	Cloudy	13:12	61.0	55.8	62
30-Apr-21	Cloudy	13:17	61.7	55.3	
30-Apr-21	Cloudy	13:22	60.3	54.5	
30-Apr-21	Cloudy	13:27	60.6	54.7	
30-Apr-21	Cloudy	13:32	61.7	54.8	
30-Apr-21	Cloudy	13:37	61.1	55.9	

Remarks:

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

*: The measurement result was corrected with reference to the baseline monitoring levels.

Noise Measurement Results

Station: NM5- Village House, Tin Sum

Date	Weather	Time	Measured L ₁₀ dB(A)	Measured L ₅₀ dB(A)	L _{eq(30mins)} dB(A) ^
07-Apr-21	Cloudy	14:28	61.6	53.2	53*
07-Apr-21	Cloudy	14:33	57.6	52.9	
07-Apr-21	Cloudy	14:38	57.8	48.9	
07-Apr-21	Cloudy	14:43	57.5	48.7	
07-Apr-21	Cloudy	14:48	58.0	48.4	
07-Apr-21	Cloudy	14:53	57.4	47.3	
12-Apr-21	Cloudy	12:54	50.3	45.7	54
12-Apr-21	Cloudy	12:59	53.6	44.5	
12-Apr-21	Cloudy	13:04	50.5	44.3	
12-Apr-21	Cloudy	13:09	50.0	43.0	
12-Apr-21	Cloudy	13:14	56.3	43.3	
12-Apr-21	Cloudy	13:19	52.5	43.9	
23-Apr-21	Sunny	13:01	50.8	41.0	53
23-Apr-21	Sunny	13:06	50.7	41.6	
23-Apr-21	Sunny	13:11	46.3	41.3	
23-Apr-21	Sunny	13:16	51.6	43.0	
23-Apr-21	Sunny	13:21	48.6	43.1	
23-Apr-21	Sunny	13:26	56.8	42.4	
29-Apr-21	Cloudy	14:10	53.8	44.7	57
29-Apr-21	Cloudy	14:15	55.6	45.6	
29-Apr-21	Cloudy	14:20	53.2	46.1	
29-Apr-21	Cloudy	14:25	52.7	46.2	
29-Apr-21	Cloudy	14:30	56.5	49.0	
29-Apr-21	Cloudy	14:35	59.4	47.4	

Remarks:

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

*: The measurement result was corrected with reference to the baseline monitoring levels.

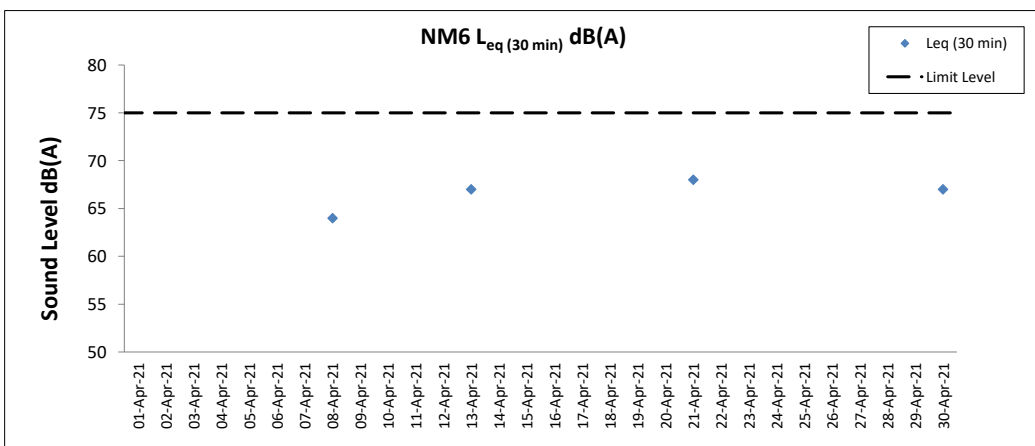
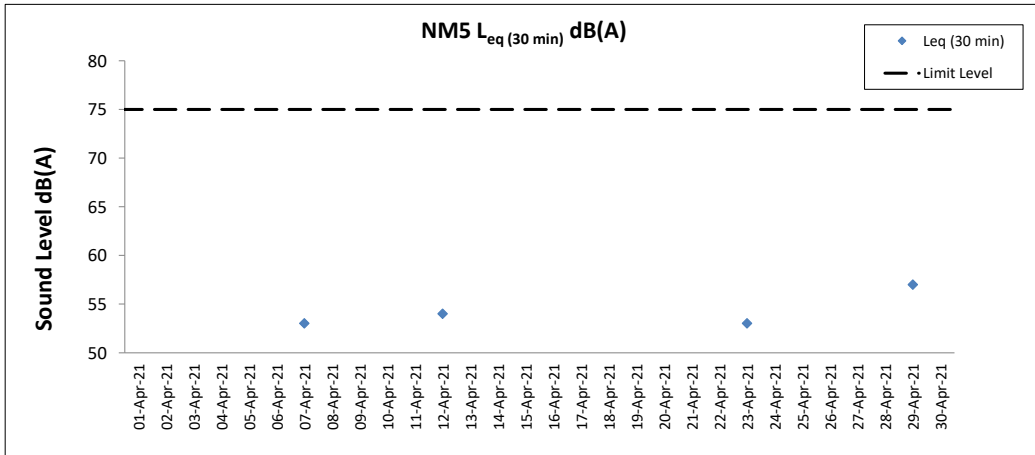
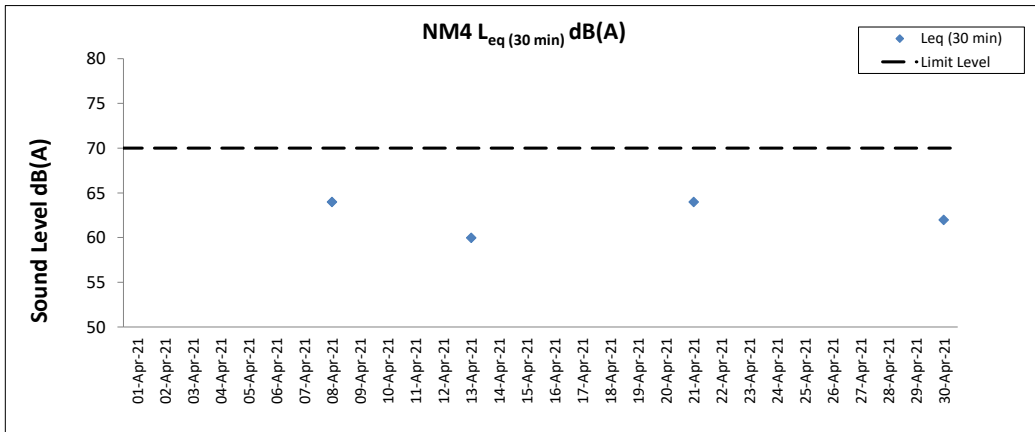
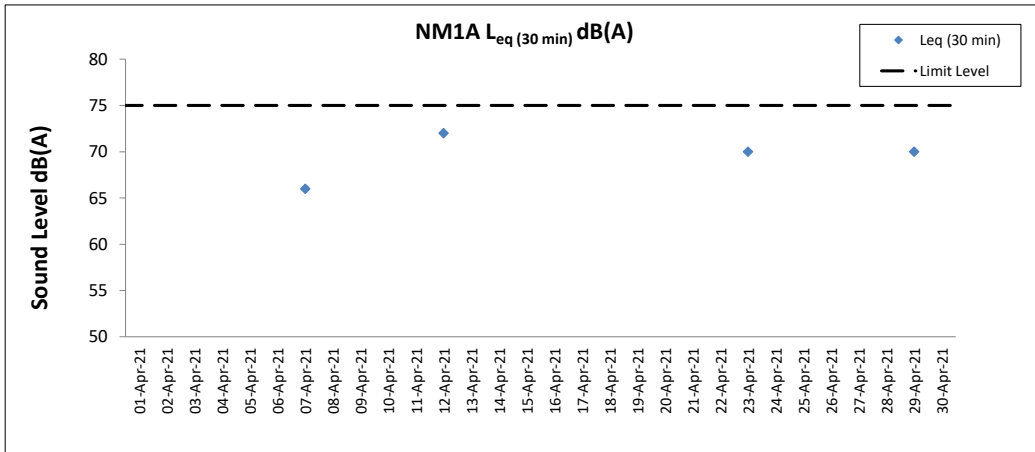
Noise Measurement Results

Station: NM6- House No.1 Sha Lo Wan

Date	Weather	Time	Measured L ₁₀ dB(A)	Measured L ₅₀ dB(A)	L _{eq(30mins)} dB(A) ^
08-Apr-21	Cloudy	15:51	65.3	55.6	64
08-Apr-21	Cloudy	15:56	65.7	55.8	
08-Apr-21	Cloudy	16:01	61.2	54.8	
08-Apr-21	Cloudy	16:06	59.5	54.9	
08-Apr-21	Cloudy	16:11	60.1	55.4	
08-Apr-21	Cloudy	16:16	62.1	55.3	
13-Apr-21	Cloudy	15:48	65.3	55.8	67
13-Apr-21	Cloudy	15:53	65.5	56.0	
13-Apr-21	Cloudy	15:58	65.5	56.1	
13-Apr-21	Cloudy	16:03	66.3	55.5	
13-Apr-21	Cloudy	16:08	71.5	56.6	
13-Apr-21	Cloudy	16:13	66.4	56.1	
21-Apr-21	Cloudy	15:47	70.2	58.0	68
21-Apr-21	Cloudy	15:52	67.2	57.3	
21-Apr-21	Cloudy	15:57	68.9	57.8	
21-Apr-21	Cloudy	16:02	68.1	56.6	
21-Apr-21	Cloudy	16:07	66.2	56.6	
21-Apr-21	Cloudy	16:12	68.3	56.9	
30-Apr-21	Cloudy	15:40	64.5	51.1	67
30-Apr-21	Cloudy	15:45	64.8	49.4	
30-Apr-21	Cloudy	15:50	53.5	45.1	
30-Apr-21	Cloudy	15:55	59.0	47.3	
30-Apr-21	Cloudy	16:00	59.9	43.4	
30-Apr-21	Cloudy	16:05	67.7	47.0	

Remarks:

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



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.

Water Quality Monitoring Results

Expansion of Hong Kong International Airport into a Three-Runway System
Water Quality Monitoring

Water Quality Monitoring Results on 01 April 21 during Mid-Ebb Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)	Current Speed (m/s)		Current Direction		Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity (NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)			
						Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA
						Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA
C1	Misty	Calm	14:54	8.0	Surface	1.0	2.0	97	24.4	24.4	8.1	8.1	33.0	33.0	107.1	107.1	7.4	7.4	4.8	4	88	91	815621	804268	<0.2	0.9	<0.2	0.9					
						1.0	2.2	104	24.4	8.1	8.1	33.0	33.0	107.0	107.0	7.4	7.4	4.4	4	88	91	<0.2	0.9	<0.2	0.9								
					Middle	4.0	1.9	96	24.2	24.2	8.1	8.1	33.2	33.2	103.3	103.3	7.2	7.2	5.4	3	92	91	<0.2	0.9	<0.2	0.9							
						4.0	1.9	96	24.1	24.1	8.1	8.1	33.2	33.2	102.9	102.9	7.2	7.2	5.6	3	92	91	<0.2	0.9	<0.2	0.9							
					Bottom	7.0	2.0	94	23.9	23.9	8.1	8.1	33.5	33.5	100.8	100.8	7.0	7.0	6.8	3	93	91	<0.2	0.9	<0.2	0.9							
						7.0	2.0	99	23.9	23.9	8.1	8.1	33.5	33.5	100.4	100.4	7.0	7.0	6.9	3	93	91	<0.2	0.9	<0.2	0.9							
C2	Sunny	Moderate	13:48	13.4	Surface	1.0	0.5	145	24.4	24.4	8.0	8.0	29.8	29.8	101.2	101.1	7.1	7.1	5.0	4	86	89	825667	806952	<0.2	1.3	<0.2	1.3					
						1.0	0.5	157	24.3	24.3	8.0	8.0	29.9	29.9	100.9	100.9	7.1	7.1	5.0	4	87	89	<0.2	1.3	<0.2	1.3							
					Middle	6.7	0.4	137	24.1	24.1	8.0	8.0	30.6	30.6	99.1	99.1	7.0	7.0	4.9	4	89	89	<0.2	1.3	<0.2	1.3							
						6.7	0.5	141	24.0	24.0	8.0	8.0	30.6	30.6	99.1	99.1	7.0	7.0	4.9	4	89	89	<0.2	1.2	<0.2	1.2							
					Bottom	12.4	0.4	154	24.1	24.1	8.0	8.0	30.7	30.7	98.6	98.6	7.0	7.0	6.3	5	91	89	<0.2	1.3	<0.2	1.3							
						12.4	0.4	166	24.1	24.1	8.0	8.0	30.7	30.7	98.5	98.5	7.0	7.0	6.0	5	91	89	<0.2	1.3	<0.2	1.3							
C3	Sunny	Moderate	15:41	11.7	Surface	1.0	0.6	122	24.2	24.2	8.0	8.0	30.6	30.6	101.0	100.9	7.1	7.1	4.2	6	86	88	822096	817821	<0.2	1.3	<0.2	1.3					
						1.0	0.6	125	24.2	24.2	8.0	8.0	30.7	30.6	100.8	100.9	7.1	7.1	4.2	6	87	88	<0.2	1.3	<0.2	1.3							
					Middle	5.9	0.4	118	24.0	24.0	8.0	8.0	31.0	31.0	99.6	99.6	7.0	7.0	4.4	5	88	88	<0.2	1.6	<0.2	1.6							
						5.9	0.5	125	24.0	24.0	8.0	8.0	31.0	31.0	99.6	99.6	7.0	7.0	4.4	5	87	89	<0.2	1.5	<0.2	1.5							
					Bottom	10.7	0.3	111	24.0	24.0	8.0	8.0	31.1	31.1	99.4	99.4	7.0	7.0	5.9	4	90	89	<0.2	1.3	<0.2	1.3							
						10.7	0.3	113	24.0	24.0	8.0	8.0	31.1	31.1	99.4	99.4	7.0	7.0	6.0	5	89	89	<0.2	1.1	<0.2	1.1							
IM1	Misty	Calm	14:32	5.0	Surface	1.0	0.1	192	24.5	24.5	8.1	8.1	32.4	32.4	102.3	102.0	7.1	7.1	4.2	3	87	89	817960	807128	<0.2	0.8	<0.2	0.8					
						1.0	0.1	196	24.5	24.5	8.1	8.1	32.4	32.4	101.7	101.7	7.1	7.1	4.5	2	88	89	<0.2	0.8	<0.2	0.8							
					Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
					Bottom	4.0	0.1	172	24.3	24.3	8.1	8.1	32.5	32.5	97.0	96.2	6.8	6.7	7.1	2	90	89	<0.2	0.7	<0.2	0.7							
						4.0	0.1	173	24.3	24.3	8.1	8.1	32.5	32.5	95.4	96.2	6.6	6.7	7.3	2	91	89	<0.2	0.7	<0.2	0.7							
IM2	Misty	Calm	14:25	7.0	Surface	1.0	2.3	295	24.2	24.2	8.1	8.1	32.6	32.6	102.4	102.3	7.1	7.1	3.7	<2	87	90	818158	806170	<0.2	0.8	<0.2	0.8					
						1.0	2.5	299	24.2	24.2	8.1	8.1	32.7	32.6	102.2	102.3	7.1	7.1	4.0	<2	87	90	<0.2	0.8	<0.2	0.8							
					Middle	3.5	2.5	300	24.0	24.0	8.1	8.1	32.9	32.8	101.1	101.1	7.1	7.1	5.0	<2	91	89	<0.2	0.8	<0.2	0.8							
						3.5	2.7	326	24.0	24.0	8.1	8.1	32.8	32.8	101.1	101.1	7.1	7.1	5.3	<2	92	89	<0.2	0.8	<0.2	0.8							
					Bottom	6.0	2.3	303	23.9	23.9	8.1	8.1	33.3	33.3	98.0	97.6	6.8	6.8	6.6	<2	92	89	<0.2	0.9	<0.2	0.9							
						6.0	2.4	331	23.9	23.9	8.0	8.0	33.3	33.3	97.2	97.6	6.8	6.8	6.5	<2	93	89	<0.2	0.8	<0.2	0.8							
IM3	Misty	Calm	14:19	7.2	Surface	1.0	1.7	269	24.3	24.3	8.1	8.1	32.4	32.5	104.0	103.7	7.2	7.2	3.9	<2	89	91	818763	805591	<0.2	0.8	<0.2	0.8					
						1.0	1.7	289	24.3	24.3	8.1	8.1	32.4	32.5	103.4	103.7	7.2	7.2	3.7	<2	89	91	<0.2	0.8	<0.2	0.8							
					Middle	3.6	1.7	266	24.2	24.2	8.1	8.1	32.6	32.6	101.9	101.8	7.1	7.1	5.6	2	92	91	<0.2	0.7	<0.2	0.7							
						3.6	1.9	275	24.2	24.2	8.1	8.1	32.6	32.6	101.6	101.6	7.1	7.1	5.3	3	92	91	<0.2	0.8	<0.2	0.8							
					Bottom	6.2	1.8	276	23.9	23.9	8.1	8.1	33.2	33.2	99.0	98.9	6.9	6.9	6.7	3	92	89	<0.2	0.8	<0.2	0.8							
						6.2	1.8	276	23.9	23.9	8.1	8.1	33.2	33.2	98.8	98.9	6.9	6.9	6.9	2	93	89	<0.2	1.0	<0.2	1.0							
IM4	Misty	Calm	14:10	8.6	Surface	1.0	2.2	247	24.6	24.5	8.0	8.0	31.5	31.6	101.5	101.7	7.1	7.1	3.5	<2	88	91	819739	804608	<0.2	0.8	<0.2	0.8					
						1.0	2.3	260	24.4	24.4	8.1	8.1	31.7	31.6	101.8	101.7	7.1	7.1	3.7	<2	89	91	<0.2	0.8	<0.2	0.8							
					Middle	4.3	2.3	245	24.1	24.1	8.1	8.1	32.6	32.6	101.1	100.9	7.0	7.0	4.3	2	91	91	<0.2	0.8	<0.2	0.8							
						4.3	2.4	250	24.1	24.1	8.1	8.1	32.7	32.6	100.7	100.9	7.0	7.0	4.6	3	91	91	<0.2	0.8	<0.2	0.8							
					Bottom	7.6	2.1	248	24.0	24.0	8.1	8.1	33.0	33.0	98.6	98.2	6.9	6.9	5.8	3	92	89	<0.2	0.8	<0.2	0.8							
						7.6	2.2	256	24.0	24.0	8.1	8.1	33.0	33.0	97.8	98.2	6.8	6.9	5.7	3	92	89	<0.2	0.7	<0.2	0.7							
IM5	Misty	Moderate	14:02	8.0	Surface	1.0	2.0	264	24.5	24.4	8.1	8.1	31.7	31.7	102.4	102.5	7.1	7.1	2.8	2	87	90	820719	804848	<0.2	0.8	<0.2	0.8					
						1.0	2.1	272	24.4	24.4	8.1	8.1	31.8	31.7	102.6	102.5	7.2	7.2	2.9	2	87	90	<0.2	0.8	<0.2	0.8							
					Middle	4.0	2.3	263	24.1	24.1	8.1	8.1	32.6	32.6	101.2	101.0	7.1	7.1	3.4	2	91	91	<0.2	0.8	<0.2	0.8							
						4.0	2.5	281	24.1	24.1	8.1	8.1	32.7	32.6	100.8	101.0	7.0	7.0	3.5	3	91	91	<0.2	0.7	<0.2	0.7							
					Bottom	7.0	2.0	266	24.0	24.0	8.1	8.1	33.0	33.0	99.1	98.9	6.9	6.9	3.8	3	92	89	<0.2	0.8	<0.2	0.8							
						7.0	2.2	273	24.0	24.0	8.1	8.1	33.0	33.0	98.7	98.9	6.9	6.9	3.8	3	92	89	<0.2	0.8	<0.2	0.8							
IM6	Misty	Moderate	13:55	7.8	Surface	1.0	1.4	117	24.6	24.6	8.0	8.0	31.4	31.4	101.5	101.4	7.1	7.1	3.1	3	87	90	821080	805849	<0.2	0.8	<0.2	0.8					
						1.0	1.5	127	24.5	24.5	8.0	8.0	31.5	31.4	101.2	101.4	7.1	7.1	3.2	3	88	90	<0.2	0.8	<0.2	0.8							
					Middle	3.9	1.6	118	24.1	24.1	8.1	8.1	32.6	32.5	99.8	99.7	7.0	7.0	4.2	3	90	90	<0.2	0.7	<0.2	0.7							
						3.9	1.6	125	24.1	24.1	8.1	8.1	32.5	32.5	99.5	99.7	7.0	7.0	4.5	3	90	91	<0.2	0.7	<0.2	0.7							
					Bottom	6.8	1.7	1																									

Expansion of Hong Kong International Airport into a Three-Runway System
Water Quality Monitoring

Water Quality Monitoring Results on 01 April 21 during Mid-Ebb Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)	Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity (NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)					
								Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA		
IM9	Sunny	Moderate	14:14	7.4	Surface	1.0	0.4	137	24.6	24.6	8.0	8.0	30.0	30.0	104.1	104.0	7.3	3.4	3	84	87	822084	808801	<0.2	1.1	1.3	1.3						
						1.0	0.4	148	24.6	8.0	8.0	30.0	30.0	103.9	102.5	7.3	3.6	3	85	3	88	89	<0.2	1.1	1.3	1.3							
						3.7	0.3	120	24.1	24.1	8.1	8.1	30.6	30.7	102.4	102.5	7.2	5.4	3	88	3	88	89	<0.2	1.1	1.3	1.3						
					Middle	3.7	0.3	123	24.1	24.1	8.1	8.1	30.7	30.7	102.6	102.5	7.2	5.7	3	88	3	88	89	<0.2	1.1	1.3	1.3						
						6.4	0.3	111	24.0	24.0	8.1	8.1	31.3	31.3	102.8	102.7	7.2	7.6	2	89	2	89	90	<0.2	1.1	1.3	1.3						
						6.4	0.4	120	24.0	24.0	8.1	8.1	31.3	31.3	102.6	102.7	7.2	7.7	3	90	3	90	91	<0.2	1.1	1.3	1.4						
					IM10	Sunny	Moderate	14:20	8.1	Surface	1.0	0.6	108	24.3	24.3	8.0	8.0	30.5	30.6	102.6	102.5	7.2	6.0	2	86	89	822366	809787	<0.2	1.1	1.1	1.1	
											1.0	0.6	109	24.3	24.3	8.0	8.0	30.6	30.6	102.4	102.5	7.2	5.9	3	87	3	89	90	<0.2	1.1	1.1	1.1	
											4.1	0.5	102	24.1	24.1	8.0	8.0	30.7	30.7	100.9	100.8	7.1	6.3	3	90	3	90	91	<0.2	1.1	1.1	1.1	
Middle	4.1	0.5	104	24.1						24.1	8.0	8.0	30.7	30.7	100.7	100.8	7.1	6.2	2	90	2	90	91	<0.2	1.1	1.1	1.1						
	7.1	0.4	111	24.1						24.1	8.0	8.0	30.8	30.8	99.8	99.7	7.0	8.6	5	91	5	91	91	<0.2	1.1	1.0	1.0						
	7.1	0.4	118	24.1						24.1	8.0	8.0	30.7	30.7	99.5	99.7	7.0	8.5	5	91	5	91	91	<0.2	1.1	1.0	1.1						
IM11	Sunny	Moderate	14:30	8.5						Surface	1.0	0.7	120	24.2	24.2	8.0	8.0	30.5	30.5	99.3	99.2	7.0	5.8	4	87	90	822038	811440	<0.2	1.1	1.0	1.0	
											1.0	0.8	127	24.1	24.1	8.0	8.0	30.5	30.5	99.1	99.2	7.0	6.0	4	88	4	89	90	<0.2	1.1	1.0	1.0	
											4.3	0.6	120	24.1	24.1	8.0	8.0	30.5	30.5	98.5	98.5	7.0	7.9	4	89	4	90	91	<0.2	1.1	1.0	1.0	
					Middle	4.3	0.6	129	24.1	24.1	8.0	8.0	30.5	30.5	98.4	98.5	6.9	8.1	4	89	4	90	91	<0.2	1.1	1.0	1.0						
						7.5	0.5	130	24.1	24.1	8.0	8.0	30.5	30.5	97.9	97.9	6.9	9.5	2	92	2	92	91	<0.2	1.1	1.0	1.0						
						7.5	0.5	140	24.1	24.1	8.0	8.0	30.5	30.5	97.8	97.9	6.9	9.7	3	91	3	91	91	<0.2	1.1	1.0	1.0						
					IM12	Sunny	Moderate	14:36	9.6	Surface	1.0	0.6	92	24.4	24.4	8.0	8.0	30.3	30.3	102.2	102.1	7.2	4.3	3	86	89	821474	812062	<0.2	1.1	1.1	1.1	
											1.0	0.7	95	24.4	24.4	8.0	8.0	30.3	30.3	102.0	102.1	7.2	4.6	4	87	4	88	89	<0.2	1.1	1.1	1.1	
											4.8	0.6	100	24.2	24.2	8.0	8.0	30.5	30.5	99.4	99.4	7.0	5.5	4	88	4	88	89	<0.2	1.1	1.3	1.2	
Middle	4.8	0.6	101	24.2						24.2	8.0	8.0	30.5	30.5	99.4	99.4	7.0	5.7	3	88	3	88	89	<0.2	1.1	1.3	1.2						
	8.6	0.5	87	24.2						24.2	8.0	8.0	30.5	30.5	98.8	98.7	7.0	6.3	3	91	3	91	91	<0.2	1.1	1.2	1.1						
	8.6	0.5	94	24.2						24.2	8.0	8.0	30.5	30.5	98.6	98.7	7.0	6.3	3	91	3	91	91	<0.2	1.1	1.2	1.1						
SR1A	Sunny	Calm	15:04	5.7						Surface	1.0	-	-	24.4	24.4	8.0	8.0	30.6	30.6	100.3	100.1	7.0	4.0	3	-	-	819982	812661	-	-	-	-	
											1.0	-	-	24.4	24.4	8.0	8.0	30.6	30.6	99.8	100.1	7.0	4.1	3	-	-	-	-	-	-	-	-	
											2.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
					Middle	2.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
						4.7	-	-	24.3	24.3	8.0	8.0	30.8	30.8	98.4	98.5	6.9	4.4	2	-	-	-	-	-	-	-	-	-	-	-			
						4.7	-	-	24.3	24.3	8.0	8.0	30.8	30.8	98.5	98.5	6.9	4.4	3	-	-	-	-	-	-	-	-	-	-	-			
					SR2	Sunny	Calm	15:19	4.8	Surface	1.0	0.4	82	24.3	24.3	8.0	8.0	30.4	30.4	102.3	102.2	7.2	7.0	7	88	90	821461	814153	<0.2	1.2	1.1	1.1	
											1.0	0.4	86	24.3	24.3	8.0	8.0	30.4	30.4	102.1	102.2	7.2	7.0	6	89	6	89	90	<0.2	1.1	1.1	1.1	
											-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Middle	-	-	-	-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	3.8	0.4	82	24.3						24.3	8.0	8.0	30.4	30.4	101.4	101.3	7.1	6.6	5	91	5	91	92	<0.2	1.1	1.1	1.1						
	3.8	0.4	87	24.3						24.3	8.0	8.0	30.4	30.4	101.1	101.3	7.1	6.5	6	92	6	92	92	<0.2	1.1	1.1	1.2						
SR3	Sunny	Moderate	14:03	9.4						Surface	1.0	0.1	215	24.3	24.3	8.0	8.0	30.2	30.2	101.1	101.1	7.1	4.4	5	-	-	822146	807574	-	-	-	-	
											1.0	0.1	226	24.3	24.3	8.0	8.0	30.2	30.2	101.1	101.1	7.1	4.4	5	-	-	-	-	-	-	-	-	-
											4.7	0.1	123	24.1	24.1	8.0	8.0	30.6	30.6	101.6	101.7	7.2	5.5	4	-	-	-	-	-	-	-	-	-
					Middle	4.7	0.1	134	24.1	24.1	8.0	8.0	30.6	30.6	101.8	101.7	7.2	5.6	3	-	-	-	-	-	-	-	-	-	-				
						8.4	0.1	120	24.1	24.1	8.0	8.0	31.3	31.3	101.7	101.4	7.1	8.6	3	-	-	-	-	-	-	-	-	-					
						8.4	0.1	121	24.1	24.1	8.0	8.0	31.3	31.3	101.0	101.4	7.1	8.7	4	-	-	-	-	-	-	-	-	-					
					SR4A	Misty	Calm	15:18	8.8	Surface	1.0	2.1	257	24.3	24.3	8.1	8.1	32.6	32.6	100.4	100.3	7.0	3.8	3	-	-	817207	807824	-	-	-	-	
											1.0	2.2	268	24.3	24.3	8.1	8.1	32.7	32.6	100.1	100.3	7.0	3.9	3	-	-	-	-	-	-	-	-	
											4.4	2.3	257	24.0	24.0	8.1	8.1	32.7	32.7	98.9	99.0	6.9	4.2	4	-	-	-	-	-	-	-	-	
Middle	4.4	2.3	273	24.0						24.0	8.1	8.1	32.7	32.7	99.0	99.0	6.9	4.2	5	-	-	-	-	-	-	-	-	-					
	7.8	2.4	257	24.0						24.0	8.1	8.1	32.9	32.9	96.5	96.5	6.7	6.4	5	-	-	-	-	-	-	-	-						
	7.8	2.6	277	24.0						24.0	8.1	8.1	32.8	32.9	96.5	96.5	6.7	6.4	4	-	-	-	-	-	-	-	-						
SR5A	Misty	Calm	15:36	4.8						Surface	1.0	0.1	48	24.7	24.7	8.0	8.0	32.4	32.4	98.9	98.4	6.8	3.7	3	-	-	816573	810693	-	-	-	-	
											1.0	0.1	51	24.6	24.6	8.0	8.0	32.4	32.4	97.8	98.4	6.8	4.0	4	-	-	-	-	-	-	-		
											-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
						3.8	0.1	52	24.5	24.5	8.0	7.9	32.4	32.4	96.0	95.4	6.7	5.4	4	-	-	-	-	-	-	-							
						3.8	0.1	53	24.5	24.5	7.8	7.9	32.3	32.4	94.8	95.4	6.6	5.4	4	-	-	-	-	-	-								
					SR6A	Misty	Calm	16:18	3.6	Surface	1.0	0.1	347	24.9	24.9	8.1	8.1	31.6	31.6	102.2	102.2	7.1	2.0	5	-	-	817971	814753	-	-	-	-	
											1.0	0.1	319	24.9	24.9	8.1	8.1	31.6	31.6	102.2	102.2	7.1											

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

Water Quality Monitoring

Water Quality Monitoring Results on 03 April 21 during Mid-Flood Tide

Table with columns: Monitoring Station, Weather Condition, Sea Condition, Sampling Time, Water Depth (m), Sampling Depth (m), Current Speed, Current Direction, Water Temperature (°C), pH, Salinity (ppt), DO Saturation (%), Dissolved Oxygen, Turbidity (NTU), Suspended Solids (mg/L), Total Alkalinity (ppm), Coordinate HK Grid (North/Easting), Chromium (µg/L), Nickel (µg/L).

DA: Depth-Averaged
Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
Value exceeding Action Level is underlined; Value exceeding Limit Level is bolded and underlined

Expansion of Hong Kong International Airport into a Three-Runway System
 Water Quality Monitoring

Water Quality Monitoring Results on **06 April 21** during **Mid-Flood Tide**

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity (NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)							
									Value		Average		Value		Average		Value		Average		Value		DA		Value		DA		Value		DA		Value	DA	Value	DA
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA						
IM9	Sunny	Moderate	09:48	7.8	Surface	1.0	0.2	103	24.8	24.8	8.0	8.0	29.3	29.3	95.1	95.1	6.7	6.7	4.8	4.8	3	3	85	85	-	-	<0.2	1.7	1.7	1.7						
						1.0	0.2	110	24.8	8.0	8.0	29.3	29.3	95.1	95.1	6.7	6.7	4.8	4.8	3	3	86	86	-	-	<0.2	1.8	1.8	1.8							
						3.9	0.3	85	24.5	24.5	8.0	8.0	30.5	30.5	92.8	92.8	6.5	6.5	5.9	5.9	3	3	89	89	-	-	<0.2	1.7	1.7	1.7						
					Middle	3.9	0.3	91	24.5	24.5	8.0	8.0	30.5	30.5	92.7	92.7	6.5	6.5	5.9	5.9	3	3	90	90	3	3	90	90	-	-	<0.2	1.4	1.4	1.4		
						6.8	0.3	73	24.3	24.3	8.0	8.0	31.7	31.7	91.6	91.6	6.4	6.4	7.6	7.6	3	3	94	94	-	-	<0.2	1.6	1.6	1.6						
						6.8	0.3	75	24.3	24.3	8.0	8.0	31.7	31.7	91.6	91.6	6.4	6.4	7.6	7.6	2	2	93	93	-	-	<0.2	1.6	1.6	1.6						
					Bottom	1.0	0.4	111	24.8	24.8	8.0	8.0	29.5	29.5	95.3	95.3	6.7	6.7	4.9	4.9	4	4	85	85	-	-	<0.2	1.6	1.6	1.6						
						1.0	0.4	113	24.8	24.8	8.0	8.0	29.5	29.5	95.3	95.3	6.7	6.7	4.9	4.9	3	3	85	85	-	-	<0.2	1.6	1.6	1.6						
						3.6	0.4	106	24.4	24.4	8.0	8.0	31.1	31.1	89.1	89.1	6.2	6.2	7.1	7.1	4	4	90	90	3	3	90	90	-	-	<0.2	1.7	1.7	1.7		
Bottom	3.6	0.4	108	24.4	24.4	8.0	8.0	31.1	31.1	89.0	89.0	6.2	6.2	7.1	7.1	3	3	90	90	3	3	90	90	-	-	<0.2	1.7	1.7	1.7							
	6.1	0.2	106	24.4	24.4	7.9	7.9	31.9	31.9	85.0	85.0	5.9	5.9	6.6	6.6	2	2	93	93	-	-	<0.2	1.4	1.4	1.4											
	6.1	0.2	108	24.4	24.4	7.9	7.9	31.9	31.9	85.0	85.0	5.9	5.9	6.6	6.6	3	3	94	94	-	-	<0.2	1.5	1.5	1.5											

DA: Depth-Averaged
 Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
 Value exceeding Action Level is underlined; Value exceeding Limit Level is **bolded and underlined**

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

Water Quality Monitoring

Water Quality Monitoring Results on 10 April 21 during Mid-Flood Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)	Current		Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity (NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)					
						Speed (m/s)	Direction	Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA				
						Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA				
C1	Fine	Moderate	07:23	8.7	Surface	1.0	0.4	43	23.6	23.6	8.0	8.0	32.3	32.3	96.1	96.1	6.8	6.8	6.3	6.3	6	6	85	85	87	815626	804225	<0.2	<0.2	0.7	0.7		
						1.0	0.5	44	23.6	23.6	8.0	8.0	32.3	32.3	96.0	96.0	6.8	6.8	6.4	6.4	5	5	85	85	87	815626	804225	<0.2	<0.2	0.7	0.7		
					Middle	4.4	0.5	43	23.6	23.6	8.0	8.0	32.4	32.4	95.8	95.8	6.7	6.7	12.5	12.5	5	5	88	88	87	815626	804225	<0.2	<0.2	0.8	0.8		
						4.4	0.5	46	23.6	23.6	8.0	8.0	32.4	32.4	95.7	95.7	6.7	6.7	13.0	13.0	4	4	88	88	87	815626	804225	<0.2	<0.2	0.8	0.8		
					Bottom	7.7	0.4	39	23.6	23.6	8.0	8.0	32.4	32.4	95.8	95.8	6.8	6.8	14.7	14.7	4	4	89	89	87	815626	804225	<0.2	<0.2	0.6	0.6		
						7.7	0.4	39	23.6	23.6	8.0	8.0	32.4	32.4	95.9	95.9	6.8	6.8	14.6	14.6	5	5	89	89	87	815626	804225	<0.2	<0.2	0.7	0.7		
C2	Fine	Moderate	07:58	12.7	Surface	1.0	0.3	352	23.8	23.8	8.0	8.0	30.8	30.8	92.2	92.2	6.5	6.5	6.9	6.9	9	9	82	82	86	825686	806938	<0.2	<0.2	1.2	1.2		
						1.0	0.3	324	23.8	23.8	8.0	8.0	30.8	30.8	92.2	92.2	6.5	6.5	6.9	6.9	9	9	82	82	86	825686	806938	<0.2	<0.2	1.2	1.2		
					Middle	6.4	0.5	16	23.7	23.7	8.1	8.1	31.5	31.5	92.9	92.9	6.6	6.6	8.3	8.3	9	9	86	86	87	825686	806938	<0.2	<0.2	1.2	1.2		
						6.4	0.5	16	23.7	23.7	8.1	8.1	31.5	31.5	92.9	92.9	6.6	6.6	8.2	8.2	9	9	86	86	87	825686	806938	<0.2	<0.2	1.2	1.2		
					Bottom	11.7	0.3	9	23.6	23.6	8.1	8.1	31.9	31.9	92.7	92.7	6.5	6.5	9.2	9.2	9	9	89	89	87	825686	806938	<0.2	<0.2	1.2	1.2		
						11.7	0.3	9	23.6	23.6	8.1	8.1	31.9	31.9	92.7	92.7	6.5	6.5	9.2	9.2	9	9	89	89	87	825686	806938	<0.2	<0.2	1.1	1.1		
C3	Cloudy	Moderate	05:47	12.0	Surface	1.0	0.3	241	23.6	23.6	8.0	8.0	31.9	31.9	89.5	89.5	6.3	6.3	2.1	2.1	3	3	84	84	87	822089	817820	<0.2	<0.2	1.0	1.0		
						1.0	0.3	254	23.6	23.6	8.0	8.0	31.9	31.9	89.4	89.4	6.3	6.3	2.1	2.1	2	2	83	83	87	822089	817820	<0.2	<0.2	0.9	0.9		
					Middle	6.0	0.4	252	23.7	23.7	8.0	8.0	32.7	32.7	87.4	87.4	6.1	6.1	3.2	3.2	3	3	87	87	87	822089	817820	<0.2	<0.2	0.9	0.9		
						6.0	0.4	275	23.7	23.7	8.0	8.0	32.7	32.7	87.4	87.4	6.1	6.1	3.2	3.2	2	2	87	87	87	822089	817820	<0.2	<0.2	0.9	0.9		
					Bottom	11.0	0.4	266	23.7	23.7	8.0	8.0	32.8	32.8	87.3	87.3	6.1	6.1	4.5	4.5	2	2	90	90	87	822089	817820	<0.2	<0.2	0.9	0.9		
						11.0	0.4	289	23.7	23.7	8.0	8.0	32.8	32.8	87.4	87.4	6.1	6.1	4.1	4.1	2	2	91	91	87	822089	817820	<0.2	<0.2	0.9	0.9		
IM1	Fine	Moderate	07:43	5.4	Surface	1.0	0.1	5	23.5	23.5	8.0	8.0	31.3	31.3	93.7	93.7	6.6	6.6	3.4	3.4	5	5	84	84	87	817951	807132	<0.2	<0.2	0.8	0.8		
						1.0	0.1	5	23.5	23.5	8.0	8.0	31.3	31.3	93.7	93.7	6.6	6.6	3.5	3.5	4	4	85	85	87	817951	807132	<0.2	<0.2	0.7	0.7		
					Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	85	817951	807132	<0.2	<0.2	-	-
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	85	817951	807132	<0.2	<0.2	-
					Bottom	4.4	0.1	356	23.5	23.5	8.0	8.0	31.3	31.3	93.6	93.6	6.7	6.7	5.6	5.6	9	9	88	88	87	817951	807132	<0.2	<0.2	0.8	0.8		
						4.4	0.1	328	23.5	23.5	8.0	8.0	31.3	31.3	93.7	93.7	6.7	6.7	6.0	6.0	8	8	84	84	87	817951	807132	<0.2	<0.2	0.8	0.8		
IM2	Fine	Moderate	07:50	7.3	Surface	1.0	0.3	12	23.7	23.7	8.0	8.0	31.1	31.1	94.7	94.7	6.7	6.7	6.4	6.4	7	7	86	86	87	818145	806173	<0.2	<0.2	1.0	1.0		
						1.0	0.3	12	23.7	23.7	8.0	8.0	31.1	31.1	94.6	94.6	6.7	6.7	6.5	6.5	8	8	85	85	87	818145	806173	<0.2	<0.2	1.0	1.0		
					Middle	3.7	0.3	359	23.7	23.7	8.0	8.0	31.2	31.2	94.2	94.2	6.7	6.7	11.7	11.7	7	7	88	88	87	818145	806173	<0.2	<0.2	1.1	1.1		
						3.7	0.3	330	23.7	23.7	8.0	8.0	31.2	31.2	94.1	94.1	6.7	6.7	12.7	12.7	8	8	88	88	87	818145	806173	<0.2	<0.2	1.0	1.0		
					Bottom	6.3	0.2	327	23.7	23.7	8.0	8.0	31.3	31.3	94.0	94.0	6.7	6.7	13.5	13.5	8	8	89	89	87	818145	806173	<0.2	<0.2	1.1	1.1		
						6.3	0.2	355	23.7	23.7	8.0	8.0	31.3	31.3	94.0	94.0	6.7	6.7	13.9	13.9	7	7	89	89	87	818145	806173	<0.2	<0.2	1.1	1.1		
IM3	Fine	Moderate	07:56	7.6	Surface	1.0	0.3	358	23.7	23.7	8.1	8.1	31.3	31.3	94.5	94.5	6.7	6.7	7.5	7.5	10	10	85	85	87	818781	805608	<0.2	<0.2	1.1	1.1		
						1.0	0.4	329	23.7	23.7	8.1	8.1	31.3	31.3	94.5	94.5	6.7	6.7	7.6	7.6	10	10	85	85	87	818781	805608	<0.2	<0.2	1.1	1.1		
					Middle	3.8	0.3	337	23.7	23.7	8.1	8.1	31.4	31.4	94.4	94.4	6.7	6.7	8.0	8.0	10	10	88	88	87	818781	805608	<0.2	<0.2	1.1	1.1		
						3.8	0.3	348	23.7	23.7	8.1	8.1	31.4	31.4	94.4	94.4	6.7	6.7	8.1	8.1	9	9	89	89	87	818781	805608	<0.2	<0.2	1.1	1.1		
					Bottom	6.6	0.3	317	23.7	23.7	8.0	8.0	31.5	31.5	93.9	93.9	6.6	6.6	10.9	10.9	9	9	90	90	87	818781	805608	<0.2	<0.2	1.1	1.1		
						6.6	0.3	344	23.7	23.7	8.0	8.0	31.5	31.5	93.9	93.9	6.6	6.6	11.0	11.0	8	8	90	90	87	818781	805608	<0.2	<0.2	1.1	1.1		
IM4	Fine	Moderate	08:05	8.3	Surface	1.0	0.5	356	23.7	23.7	8.1	8.1	31.5	31.5	94.2	94.2	6.7	6.7	9.8	9.8	8	8	86	86	87	819746	804589	<0.2	<0.2	1.1	1.1		
						1.0	0.5	328	23.7	23.7	8.1	8.1	31.5	31.5	94.1	94.1	6.7	6.7	10.1	10.1	9	9	86	86	87	819746	804589	<0.2	<0.2	1.1	1.1		
					Middle	4.2	0.4	0	23.7	23.7	8.0	8.0	31.5	31.5	94.0	94.0	6.7	6.7	11.0	11.0	10	10	89	89	87	819746	804589	<0.2	<0.2	1.2	1.2		
						4.2	0.5	0	23.6	23.6	8.0	8.0	31.5	31.5	94.0	94.0	6.7	6.7	12.6	12.6	9	9	89	89	87	819746	804589	<0.2	<0.2	1.2	1.2		
					Bottom	7.3	0.4	3	23.6	23.6	8.0	8.0	31.5	31.5	93.8	93.8	6.6	6.6	15.2	15.2	10	10	89	89	87	819746	804589	<0.2	<0.2	1.2	1.2		
						7.3	0.5	3	23.6	23.6	8.0	8.0	31.5	31.5	93.8	93.8	6.6	6.6	15.3	15.3	10	10	90	90	87	819746	804589	<0.2	<0.2	1.1	1.1		
IM5	Fine	Moderate	08:11	8.1	Surface	1.0	0.7	9	23.7	23.7	8.1	8.1	31.1	31.1	94.4	94.4	6.7	6.7	8.4	8.4	4	4	84	84	87	820750	804862	<0.2	<0.2	1.2	1.2		
						1.0	0.8	9	23.7	23.7	8.1	8.1	31.1	31.1	94.4	94.4	6.7	6.7	8.7	8.7	5	5	85	85	87	820750	804862	<0.2	<0.2	1.1	1.1		
					Middle	4.1	0.7	12	23.7	23.7	8.0	8.0	31.1	31.1	94.1	94.1	6.7	6.7	10.6	10.6	5	5	88	88	87	820750	804862	<0.2	<0.2	1.2	1.2		
						4.1	0.7	12	23.7	23.7	8.0	8.0	31.1	31.1	94.1	94.1	6.7	6.7	10.2	10.2	6	6	88	88	87	820750	804862	<0.2	<0.2	1.1	1.1		
					Bottom	7.1	0.5	17	23.7	23.7	8.0	8.0	31.1	31.1	94.1	94.1	6.7	6.7	11.0	11.0	5	5	89	89	87	820750	804862	<0.2	<0.2	1.1	1.1		
						7.1	0.5	17	23.7	23.7	8.0	8.0	31.1	31.1	94.1	94.1	6.7	6.7	11.4	11.4	6	6	89	89	87	820750	804862	<0.2	<0.2	1.1	1.1		
IM6	Fine	Moderate	08:19	7.8	Surface	1.0	0.1	23	23.8	23.8	8.0	8.0	29.7	29.7	92.8	92.8	6.6	6.6	2.5	2.5	7</												

Expansion of Hong Kong International Airport into a Three-Runway System
Water Quality Monitoring

Water Quality Monitoring Results on 13 April 21 during Mid-Ebb Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)	Current Speed (m/s)		Current Direction		Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity(NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)					
						Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA
						Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA
C1	Sunny	Moderate	13:24	8.0	Surface	1.0	0.4	216	24.3	24.3	8.1	8.1	31.7	31.7	103.9	103.8	7.2	7.2	4.1	4.1	6	6	88	88	91	815596	804232	<0.2	1.1	1.0	1.0				
						1.0	0.4	236	24.3	24.3	8.1	8.1	31.7	31.7	103.7	103.7	7.2	7.2	4.1	4.1	5	5	89	89	91	815596	804232	<0.2	1.0	1.0	1.0				
					Middle	4.0	0.5	224	24.2	24.1	8.1	8.1	32.5	32.6	98.2	98.0	6.8	6.8	7.9	7.9	5	5	92	92	91	815596	804232	<0.2	1.0	1.0	1.0				
						4.0	0.5	227	24.1	24.1	8.1	8.1	32.6	32.6	97.7	97.8	6.8	6.8	8.0	8.0	6	6	93	93	91	815596	804232	<0.2	1.0	1.0	1.0				
					Bottom	7.0	0.4	219	24.0	24.0	8.1	8.1	32.8	32.8	97.1	97.1	6.8	6.8	9.4	9.4	7	7	93	93	91	815596	804232	<0.2	1.0	1.0	1.0				
						7.0	0.4	236	24.0	24.0	8.1	8.1	32.8	32.8	97.1	97.1	6.8	6.8	9.3	9.3	7	7	93	93	91	815596	804232	<0.2	1.0	1.0	1.0				
C2	Misty	Calm	12:11	12.0	Surface	1.0	0.6	180	24.8	24.8	8.2	8.2	28.8	28.8	102.3	102.1	7.2	7.2	1.9	1.9	4	4	88	88	90	825690	806922	<0.2	1.1	1.0	1.1				
						1.0	0.7	184	24.8	24.8	8.2	8.2	28.9	28.9	101.9	101.9	7.2	7.2	1.9	1.9	3	3	88	88	90	825690	806922	<0.2	1.0	1.0	1.1				
					Middle	6.0	0.3	166	24.5	24.5	8.2	8.2	29.9	29.9	91.5	91.4	6.4	6.4	3.4	3.4	4	4	90	90	90	825690	806922	<0.2	1.0	1.0	1.0				
						6.0	0.3	175	24.4	24.4	8.2	8.2	30.0	30.0	91.3	91.3	6.4	6.4	3.3	3.3	3	3	90	90	90	825690	806922	<0.2	1.0	1.0	1.0				
					Bottom	11.0	0.2	115	24.4	24.4	8.3	8.3	30.1	30.1	90.7	90.8	6.4	6.4	4.6	4.6	5	5	93	93	93	825690	806922	<0.2	1.0	1.0	1.2				
						11.0	0.2	120	24.4	24.4	8.3	8.3	30.1	30.1	90.9	90.8	6.4	6.4	4.6	4.6	5	5	93	93	93	825690	806922	<0.2	1.0	1.0	1.2				
C3	Misty	Calm	14:08	12.0	Surface	1.0	2.5	341	24.8	24.8	8.2	8.2	29.7	29.7	99.9	99.9	7.0	7.0	3.4	3.4	5	5	85	85	89	822098	817824	<0.2	1.2	1.3	1.2				
						1.0	2.7	354	24.8	24.8	8.2	8.2	29.7	29.7	99.8	99.8	7.0	7.0	3.3	3.3	6	6	85	85	89	822098	817824	<0.2	1.2	1.3	1.2				
					Middle	6.0	2.5	342	24.7	24.7	8.2	8.2	29.8	29.8	98.3	98.1	6.9	6.9	4.1	4.1	6	6	88	88	89	822098	817824	<0.2	1.2	1.2	1.2				
						6.0	2.7	315	24.7	24.7	8.2	8.2	29.9	29.9	97.8	97.8	6.9	6.9	4.1	4.1	6	6	89	89	93	822098	817824	<0.2	1.2	1.2	1.2				
					Bottom	11.0	2.8	344	24.4	24.4	8.2	8.2	30.3	30.3	91.7	91.8	6.5	6.5	6.7	6.7	6	6	93	93	93	822098	817824	<0.2	1.2	1.2	1.2				
						11.0	2.9	355	24.4	24.4	8.2	8.2	30.3	30.3	91.8	91.8	6.5	6.5	6.6	6.6	5	5	93	93	93	822098	817824	<0.2	1.2	1.2	1.2				
IM1	Sunny	Moderate	13:02	5.0	Surface	1.0	0.1	193	25.3	25.3	8.1	8.1	32.0	32.0	112.1	112.1	7.7	7.7	5.4	5.4	6	6	85	85	88	817927	807124	<0.2	0.8	0.9	0.9				
						1.0	0.1	197	25.3	25.3	8.1	8.1	32.0	32.0	112.1	112.1	7.7	7.7	5.5	5.5	5	5	86	86	88	817927	807124	<0.2	0.9	0.9	0.9				
					Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
					Bottom	4.0	0.1	213	24.8	24.8	8.0	8.0	32.1	32.1	102.3	102.3	7.1	7.1	7.8	7.8	4	4	90	90	91	817927	807124	<0.2	1.0	1.0	1.0				
						4.0	0.1	233	24.8	24.8	8.0	8.0	32.1	32.1	102.3	102.3	7.1	7.1	7.8	7.8	3	3	91	91	91	817927	807124	<0.2	1.0	1.0	1.0				
IM2	Sunny	Moderate	12:55	6.9	Surface	1.0	0.2	167	25.3	25.3	8.1	8.1	31.8	31.8	105.0	104.9	7.2	7.2	4.4	4.4	3	3	85	85	88	818139	806164	<0.2	0.8	0.9	0.9				
						1.0	0.2	170	25.3	25.3	8.1	8.1	31.9	31.8	104.7	104.7	7.2	7.2	4.4	4.4	3	3	85	85	88	818139	806164	<0.2	0.9	0.9	0.9				
					Middle	3.5	0.2	170	24.6	24.6	8.1	8.1	32.1	32.1	99.3	99.2	6.9	6.9	5.4	5.4	4	4	89	89	90	818139	806164	<0.2	0.9	0.9	0.9				
						3.5	0.2	176	24.6	24.6	8.1	8.1	32.1	32.1	99.1	99.1	6.9	6.9	5.3	5.3	4	4	90	90	90	818139	806164	<0.2	0.9	0.9	0.9				
					Bottom	5.9	0.2	170	24.4	24.4	8.1	8.1	32.4	32.4	97.8	97.8	6.8	6.8	7.2	7.2	4	4	90	90	91	818139	806164	<0.2	0.9	0.9	0.9				
						5.9	0.2	180	24.4	24.4	8.1	8.1	32.4	32.4	97.7	97.8	6.8	6.8	7.1	7.1	4	4	91	91	91	818139	806164	<0.2	0.9	0.9	0.9				
IM3	Sunny	Moderate	12:48	7.2	Surface	1.0	0.3	141	24.9	24.8	8.1	8.1	31.9	31.9	102.3	102.3	7.1	7.1	5.0	5.0	4	4	88	87	90	818139	805584	<0.2	1.1	1.3	1.1				
						1.0	0.3	152	24.8	24.8	8.1	8.1	31.9	31.9	102.2	102.2	7.1	7.1	5.0	5.0	4	4	87	87	90	818139	805584	<0.2	1.1	1.3	1.1				
					Middle	3.6	0.2	151	24.7	24.7	8.1	8.1	32.1	32.1	100.4	100.4	7.0	7.0	5.9	5.9	4	4	90	90	91	818139	805584	<0.2	1.2	0.9	0.9				
						3.6	0.2	163	24.7	24.7	8.1	8.1	32.1	32.1	100.3	100.4	7.0	7.0	5.9	5.9	4	4	91	91	91	818139	805584	<0.2	0.9	0.9	1.1				
					Bottom	6.2	0.1	124	24.4	24.4	8.0	8.0	32.4	32.4	98.3	98.5	6.8	6.8	7.6	7.6	5	5	91	91	91	818139	805584	<0.2	1.0	1.0	1.1				
						6.2	0.1	132	24.4	24.4	8.0	8.0	32.4	32.4	98.7	98.5	6.8	6.8	7.5	7.5	4	4	91	91	91	818139	805584	<0.2	1.0	1.1	1.1				
IM4	Sunny	Moderate	12:40	8.5	Surface	1.0	0.5	195	25.2	25.1	8.1	8.1	30.2	30.2	102.1	102.0	7.1	7.1	3.7	3.7	5	5	87	87	89	819734	804591	<0.2	0.9	0.9	0.9				
						1.0	0.6	200	25.1	25.1	8.1	8.1	30.3	30.2	101.8	101.8	7.1	7.1	3.7	3.7	6	6	87	87	89	819734	804591	<0.2	0.9	0.9	0.9				
					Middle	4.3	0.4	178	24.6	24.6	8.0	8.0	31.7	31.7	98.6	98.7	6.9	6.9	5.2	5.2	5	5	89	89	90	819734	804591	<0.2	0.8	0.8	0.9	0.9			
						4.3	0.4	179	24.6	24.6	8.0	8.0	31.7	31.7	98.7	98.7	6.9	6.9	5.3	5.3	4	4	90	90	91	819734	804591	<0.2	0.8	0.8	0.9	0.9			
					Bottom	7.5	0.2	169	24.4	24.4	8.0	8.0	32.3	32.3	96.8	96.8	6.7	6.7	6.6	6.6	3	3	91	91	91	819734	804591	<0.2	0.9	0.9	0.9				
						7.5	0.2	184	24.4	24.4	8.0	8.0	32.3	32.3	96.8	96.8	6.7	6.7	6.5	6.5	4	4	91	91	91	819734	804591	<0.2	0.9	0.9	0.9				
IM5	Sunny	Moderate	12:32	8.1	Surface	1.0	0.4	210	25.2	25.2	8.1	8.1	30.2	30.2	105.7	105.7	7.3	7.3	2.6	2.6	3	3	87	86	89	820741	804867	<0.2	0.8	1.0	0.9				
						1.0	0.4	214	25.2	25.2	8.1	8.1	30.2	30.2	105.7	105.7	7.3	7.3	2.7	2.7	3	3	86	86	89	820741	804867	<0.2	1.0	0.9	0.9				
					Middle	4.1	0.4	187	24.5	24.5	8.1	8.1	32.2	32.2	97.8	97.7	6.8	6.8	4.2	4.2	3	3	90	90	86	820741	804867	<0.2	0.9	1.0	0.9	0.9			
						4.1	0.4	194	24.5	24.5	8.1	8.1	32.2	32.2	97.6	97.6	6.8	6.8	4.3	4.3	3	3	86	86	91	820741	804867	<0.2	0.9	1.0	0.9	0.9			
					Bottom	7.1	0.3	184	24.4	24.4	8.0	8.0	32.3	32.3	96.9	97.3	6.7	6.7	5.5	5.5	3	3	91	91	91	820741	804867	<0.2	0.9	1.0	0.9	0.9			
						7.1	0.3	196	24.4	24.4	8.0	8.0	32.3	32.3	97.6	97.3	6.8	6.8	5.6	5.6	3	3	91	91	91	820741	804867	<0.2	0.9	1.0	0.9	0.9			
IM6	Sunny	Moderate	12:20	7.6	Surface	1.0	0.2	233	25.0	25.0	8.0	8.0	30.9	30.9	100.9	101.0	7.0	7.0	4.5	4.5	2	2	89	87	89	821054	805818	<0.2	0.8	0.8	0.8				
						1.0	0.2	256	25.0	25.0	8.0	8.0	30.9	30.9	101.0	101.0	7.0	7.0	4.5	4.5	3	3	87	87	89	821054	805818	<0.2	0.8	0.8	0.8				
					Middle																														

Expansion of Hong Kong International Airport into a Three-Runway System
Water Quality Monitoring

Water Quality Monitoring Results on **13 April 21** during Mid-Ebb Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity (NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)					
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA	Value	DA
IM9	Misty	Calm	12:41	7.4	Surface	1.0	2.7	201		24.9	24.9	8.2	8.2	28.7	28.8	106.2	106.0	7.5	7.4	4.0	4.0	3	87	90	822091	808794	<0.2	1.4		1.4				
						1.0	3.0	216		24.9		8.2	8.2	28.9	28.8	105.8	106.0	7.4	7.4	4.0	4.0	3	87	90	822091	808794	<0.2	1.4		1.4				
						3.7	2.8	201		24.8	24.8	8.2	8.2	29.4	29.4	98.2	98.2	6.9	6.9	4.5	4.5	4	90	91	822091	808794	<0.2	1.3		1.3				
						3.7	3.0	205		24.8	24.8	8.2	8.2	29.4	29.4	98.0	98.1	6.9	6.9	4.5	4.5	4	91	91	822091	808794	<0.2	1.3		1.3				
						6.4	2.5	201		24.9	24.9	8.1	8.1	30.0	30.0	98.0	98.2	6.8	6.8	5.8	5.8	3	91	91	822091	808794	<0.2	1.4		1.4				
						6.4	2.6	205		24.9	24.9	8.1	8.1	29.9	30.0	98.3	98.2	6.9	6.9	5.8	5.8	4	91	91	822091	808794	<0.2	1.3		1.3				
IM10	Misty	Calm	12:47	7.8	Surface	1.0	2.7	193		25.3	25.3	8.1	8.1	28.3	28.4	107.3	107.2	7.5	7.5	1.6	1.5	3	86	90	822364	809811	<0.2	1.4		1.4				
						1.0	2.9	196		25.2	25.2	8.1	8.1	28.5	28.5	107.0	107.2	7.5	7.5	1.5	1.5	4	87	91	822364	809811	<0.2	1.4		1.4				
						3.9	2.8	195		24.7	24.7	8.1	8.1	29.5	29.5	96.9	96.9	6.8	6.8	3.6	3.6	5	91	91	822364	809811	<0.2	1.4		1.4				
						3.9	2.8	212		24.7	24.7	8.1	8.1	29.5	29.5	96.9	96.9	6.8	6.8	3.6	3.6	4	91	92	822364	809811	<0.2	1.4		1.4				
						6.8	2.7	195		24.8	24.8	8.1	8.1	29.7	29.7	95.5	95.5	6.7	6.7	4.2	4.2	4	92	92	822364	809811	<0.2	1.4		1.4				
						6.8	2.9	198		24.8	24.8	8.1	8.1	29.7	29.7	95.5	95.5	6.7	6.7	4.1	4.1	5	92	92	822364	809811	<0.2	1.4		1.4				
IM11	Misty	Calm	12:56	9.4	Surface	1.0	3.1	74		25.2	25.2	8.2	8.2	28.6	28.7	106.9	106.8	7.5	7.5	2.5	2.4	6	84	88	822044	811436	<0.2	1.4		1.4				
						1.0	3.1	77		25.1	25.1	8.2	8.2	28.7	28.7	106.7	106.8	7.5	7.5	2.4	2.4	7	84	88	822044	811436	<0.2	1.3		1.3				
						4.7	2.8	75		24.6	24.6	8.2	8.2	29.6	29.6	93.7	93.6	6.6	6.6	3.8	3.8	5	88	92	822044	811436	<0.2	1.4		1.4				
						4.7	3.1	77		24.6	24.6	8.2	8.2	29.6	29.6	93.5	93.6	6.6	6.6	3.8	3.8	6	88	92	822044	811436	<0.2	1.4		1.4				
						8.4	3.2	77		24.6	24.6	8.2	8.2	29.7	29.7	92.6	92.7	6.5	6.5	4.1	4.1	6	93	97	822044	811436	<0.2	1.4		1.4				
						8.4	3.4	83		24.6	24.6	8.2	8.2	29.7	29.7	92.8	92.7	6.5	6.5	4.2	4.2	5	97	97	822044	811436	<0.2	1.4		1.4				
IM12	Misty	Calm	13:01	9.6	Surface	1.0	2.5	70		25.0	25.0	8.1	8.1	28.7	28.7	104.3	104.1	7.3	7.3	3.0	2.9	5	86	86	821462	812059	<0.2	1.3		1.5				
						1.0	2.7	70		24.9	24.9	8.1	8.1	28.8	28.7	103.9	103.9	7.3	7.3	2.9	2.9	6	86	87	821462	812059	<0.2	1.4		1.4				
						4.8	2.6	68		24.8	24.8	8.1	8.1	29.2	29.2	96.7	96.7	6.8	6.8	3.4	3.5	6	87	90	821462	812059	<0.2	1.4		1.4				
						4.8	2.8	68		24.8	24.8	8.1	8.1	29.2	29.2	96.7	96.8	6.8	6.8	3.5	3.5	5	87	90	821462	812059	<0.2	1.3		1.4				
						8.6	2.7	59		24.8	24.8	8.1	8.1	29.2	29.2	96.4	96.4	6.8	6.8	5.0	5.0	4	92	92	821462	812059	<0.2	1.3		1.4				
						8.6	2.8	62		24.8	24.8	8.1	8.1	29.2	29.2	96.4	96.4	6.8	6.8	5.1	5.1	5	92	92	821462	812059	<0.2	1.4		1.4				
SR1A	Misty	Calm	13:34	4.0	Surface	1.0	-	-		25.3	25.3	8.1	8.1	28.3	28.3	107.7	107.7	7.5	7.5	1.5	1.5	11	-	-	819971	812656	-	-		-				
						1.0	-	-		25.3	25.3	8.1	8.1	28.4	28.3	107.6	107.7	7.5	7.5	1.5	1.5	12	-	-	819971	812656	-	-		-				
						2.0	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.9	11	-	-	819971	812656	-	-		-	
						2.0	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	-	-	819971	812656	-	-		-
						3.0	-	-		25.1	25.1	8.1	8.1	29.0	29.0	102.6	102.6	7.2	7.2	2.4	2.4	10	-	-	9	-	-	819971	812656	-	-		-	
						3.0	-	-		25.1	25.1	8.1	8.1	29.0	29.0	102.5	102.6	7.2	7.2	2.4	2.4	9	-	-	9	-	-	819971	812656	-	-		-	
SR2	Misty	Calm	13:48	4.6	Surface	1.0	0.4	88		25.0	25.0	8.2	8.2	29.1	29.2	100.1	99.9	7.0	7.0	2.7	2.8	10	90	91	821459	814146	<0.2	1.3		1.3				
						1.0	0.4	95		25.0	25.0	8.2	8.2	29.1	29.2	99.6	99.9	7.0	7.0	2.8	2.8	10	90	91	821459	814146	<0.2	1.3		1.3				
						-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.2	-	10	-	-	821459	814146	<0.2	1.2		1.2
						-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	-	-	821459	814146	<0.2	1.2		1.2
						3.6	0.4	83		25.0	25.0	8.1	8.1	29.2	29.2	98.8	98.9	6.9	6.9	3.6	3.6	9	92	93	821459	814146	<0.2	1.2		1.2				
						3.6	0.4	90		25.0	25.0	8.1	8.1	29.2	29.2	98.9	98.9	6.9	6.9	3.7	3.7	9	93	93	821459	814146	<0.2	1.2		1.2				
SR3	Misty	Calm	12:28	9.0	Surface	1.0	2.0	241		24.8	24.8	8.2	8.2	28.7	28.7	100.3	100.4	7.1	7.1	1.1	1.1	9	-	-	822132	807555	-	-		-				
						1.0	2.1	264		24.8	24.8	8.2	8.2	28.7	28.7	100.5	100.4	7.1	7.1	1.1	1.1	9	-	-	822132	807555	-	-		-				
						4.5	2.1	246		24.7	24.8	8.2	8.2	29.3	29.4	97.3	97.3	6.8	6.8	4.2	4.1	7	-	-	822132	807555	-	-		-				
						4.5	2.1	259		24.8	24.8	8.2	8.2	29.4	29.4	97.2	97.3	6.8	6.8	4.1	4.1	7	-	-	822132	807555	-	-		-				
						8.0	1.9	243		24.8	24.8	8.2	8.2	29.7	29.6	97.5	97.6	6.8	6.8	5.3	5.3	6	-	-	822132	807555	-	-		-				
						8.0	2.0	247		24.8	24.8	8.2	8.2	29.6	29.6	97.7	97.6	6.9	6.9	5.3	5.3	7	-	-	822132	807555	-	-		-				
SR4A	Sunny	Moderate	13:45	9.5	Surface	1.0	0.1	64		25.1	25.1	8.1	8.1	32.0	32.0	104.9	104.9	7.2	7.2	4.4	4.4	7	-	-	817204	807827	-	-		-				
						1.0	0.1	69		25.1	25.1	8.1	8.1	32.0	32.0	104.8	104.9	7.2	7.2	4.4	4.4	8	-	-	817204	807827	-	-		-				
						4.8	0.0	201		24.7	24.7	8.1	8.1	32.2	32.2	100.1	100.0	6.9	6.9	4.8	4.9	8	-	-	817204	807827	-	-		-				
						4.8	0.0	211		24.7	24.7	8.1	8.1	32.2	32.2	99.8	100.0	6.9	6.9	4.9	4.9	7	-	-	817204	807827	-	-		-				
						8.5	0.1	195		24.6	24.6	8.0	8.0	32.2	32.2	100.2	100.4	6.9	6.9	5.1	5.1	6	-	-	817204	807827	-	-		-				
						8.5	0.1	203		24.6	24.6	8.0	8.0	32.2	32.2	100.5	100.4	7.0	7.0	5.0	5.0	6	-	-	817204	807827	-	-		-				
SR5A	Sunny	Moderate	14:03	3.5	Surface	1.0	0.1	23		26.1	26.1	8.1	8.1	32.1	32.1	108.8	108.8	7.4	7.4	5.3	5.3	15	-	-										

**Expansion of Hong Kong International Airport into a Three-Runway System
Water Quality Monitoring**

Water Quality Monitoring Results on 13 April 21 during Mid-Flood Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity (NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)							
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA		
									Value	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value
IM9	Misty	Calm	08:29	7.4	Surface	1.0	2.7	85	24.7	24.7	8.1	8.1	27.7	27.7	99.8	99.7	7.1	7.1	3.6	3	87	90	90	822098	808820	<0.2	1.6	<0.2	1.6							
						1.0	2.9	90	24.7	8.1	8.1	27.8	27.8	99.5	99.5	7.1	7.1	3.6	4	87	89	90	90	822098	808820	<0.2	1.6	<0.2	1.6							
						3.7	2.6	84	24.7	8.0	8.0	27.9	27.9	98.7	98.6	7.0	7.0	4.6	5	90	89	90	90	822098	808820	<0.2	1.6	<0.2	1.6							
					Middle	3.7	2.7	86	24.7	24.7	8.0	8.0	28.0	28.0	98.4	98.4	7.0	7.0	4.6	4	91	90	90	90	822098	808820	<0.2	1.6	<0.2	1.6						
						6.4	2.6	84	24.7	24.7	8.0	8.0	28.2	28.2	98.2	98.4	7.0	7.0	5.2	5	92	89	90	90	822098	808820	<0.2	1.6	<0.2	1.6						
						6.4	2.7	88	24.7	24.7	8.0	8.0	28.2	28.2	98.5	98.4	7.0	7.0	5.1	4	92	89	90	90	822098	808820	<0.2	1.6	<0.2	1.6						
					IM10	Misty	Calm	08:22	7.6	Surface	1.0	1.5	56	24.7	24.7	8.1	8.1	28.7	28.7	99.1	98.9	7.0	7.0	1.7	6	86	90	90	822364	809798	<0.2	1.6	<0.2	1.6		
											1.0	1.6	57	24.7	24.7	8.1	8.1	28.8	28.9	98.7	98.1	7.0	7.0	1.7	7	87	89	90	90	822364	809798	<0.2	1.6	<0.2	1.6	
											3.8	1.7	60	24.7	24.7	8.1	8.1	28.9	28.9	98.1	98.1	6.9	6.9	3.9	5	90	89	90	90	822364	809798	<0.2	1.6	<0.2	1.6	
Middle	3.8	1.9	61	24.7						24.7	8.1	8.1	28.9	28.9	98.1	98.1	6.9	6.9	3.9	4	91	89	90	90	822364	809798	<0.2	1.6	<0.2	1.6						
	6.6	1.8	64	24.7						24.7	8.1	8.1	28.9	28.9	97.4	97.5	6.9	6.9	4.9	4	93	89	90	90	822364	809798	<0.2	1.6	<0.2	1.6						
	6.6	1.9	69	24.7						24.7	8.1	8.1	28.9	28.9	97.5	97.5	6.9	6.9	4.9	3	93	89	90	90	822364	809798	<0.2	1.6	<0.2	1.6						
IM11	Misty	Calm	08:13	8.0						Surface	1.0	1.7	30	24.6	24.6	8.0	8.0	29.2	29.2	96.7	96.7	6.8	6.8	1.6	6	85	89	88	822062	811461	<0.2	1.6	<0.2	1.6		
											1.0	1.9	30	24.6	24.6	8.0	8.0	29.2	29.2	96.7	96.3	6.8	6.8	1.6	5	85	89	89	88	822062	811461	<0.2	1.6	<0.2	1.6	
											4.0	1.7	31	24.6	24.6	8.0	8.0	29.3	29.3	96.3	96.3	6.8	6.8	2.4	8	89	89	90	88	822062	811461	<0.2	1.6	<0.2	1.6	
					Middle	4.0	1.9	32	24.6	24.6	8.0	8.0	29.3	29.3	96.3	96.3	6.8	6.8	2.3	7	89	89	90	88	822062	811461	<0.2	1.6	<0.2	1.6						
						7.0	1.9	31	24.6	24.6	8.0	8.0	29.3	29.3	96.8	96.9	6.8	6.8	3.1	8	90	89	90	88	822062	811461	<0.2	1.6	<0.2	1.6						
						7.0	1.9	31	24.6	24.6	8.0	8.0	29.3	29.3	97.0	96.9	6.8	6.8	3.1	8	90	89	90	88	822062	811461	<0.2	1.6	<0.2	1.6						
					IM12	Misty	Calm	08:08	9.2	Surface	1.0	1.2	76	24.5	24.5	8.0	8.0	29.5	29.5	95.6	95.6	6.7	6.7	1.6	11	85	89	89	821470	812055	<0.2	1.3	<0.2	1.3		
											1.0	1.3	77	24.5	24.5	8.0	8.0	29.5	29.5	95.5	95.1	6.7	6.7	1.6	12	85	89	89	89	821470	812055	<0.2	1.3	<0.2	1.3	
											4.6	1.2	74	24.5	24.5	8.0	8.0	29.5	29.5	95.1	95.1	6.7	6.7	2.9	12	89	89	90	89	821470	812055	<0.2	1.3	<0.2	1.3	
Middle	4.6	1.3	79	24.5						24.5	8.0	8.0	29.9	29.9	98.1	98.1	6.9	6.9	3.9	10	91	89	90	89	821470	812055	<0.2	1.3	<0.2	1.3						
	8.2	1.2	77	24.5						24.5	8.0	8.0	29.6	29.6	95.0	95.1	6.7	6.7	3.9	9	91	89	90	89	821470	812055	<0.2	1.3	<0.2	1.3						
	8.2	1.2	80	24.5						24.5	8.0	8.0	29.6	29.6	95.1	95.1	6.7	6.7	4.0	10	92	89	90	89	821470	812055	<0.2	1.3	<0.2	1.4						
SR1A	Misty	Calm	07:37	4.2						Surface	1.0	-	-	24.6	24.6	8.1	8.0	29.1	29.2	98.0	97.9	6.9	6.9	1.3	6	-	-	-	819983	812666	-	-	-	-	-	
											1.0	-	-	24.6	24.6	8.0	8.0	29.2	29.2	97.7	97.9	6.9	6.9	1.3	5	-	-	-	-	819983	812666	-	-	-	-	-
											2.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
					Middle	2.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
						3.2	-	-	24.6	24.6	8.0	8.0	29.4	29.4	97.2	97.4	6.8	6.9	3.0	5	-	-	-	-	-	-	-	-	-	-	-	-	-			
						3.2	-	-	24.6	24.6	8.0	8.0	29.4	29.4	97.5	97.4	6.9	6.9	2.9	4	-	-	-	-	-	-	-	-	-	-	-	-	-			
					SR2	Misty	Calm	07:22	3.6	Surface	1.0	0.2	120	24.5	24.5	8.0	8.0	29.5	29.5	95.0	95.0	6.7	6.7	1.7	7	87	88	89	821440	814168	<0.2	1.2	<0.2	1.2		
											1.0	0.2	131	24.5	24.5	8.0	8.0	29.5	29.5	95.0	95.0	6.7	6.7	1.7	8	88	89	90	89	821440	814168	<0.2	1.2	<0.2	1.2	
											-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Middle	-	-	-	-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
	2.6	0.2	110	24.5						24.5	8.1	8.1	29.5	29.5	95.1	95.2	6.7	6.7	3.6	7	89	89	90	89	821440	814168	<0.2	1.1	<0.2	1.1						
	2.6	0.2	120	24.5						24.5	8.1	8.1	29.5	29.5	95.2	95.2	6.7	6.7	3.6	7	90	89	90	89	821440	814168	<0.2	1.2	<0.2	1.2						
SR3	Misty	Calm	08:40	9.0						Surface	1.0	2.6	353	24.9	24.9	8.1	8.1	26.7	26.7	107.8	107.7	7.7	7.7	1.2	5	-	-	-	822163	807568	-	-	-	-		
											1.0	2.7	325	24.8	24.8	8.1	8.1	26.8	26.8	107.6	107.7	7.7	7.7	1.2	4	-	-	-	-	822163	807568	-	-	-	-	-
											4.5	2.7	352	24.8	24.8	8.1	8.1	27.0	27.0	106.6	106.5	7.6	7.6	2.1	6	-	-	-	-	822163	807568	-	-	-	-	-
					Middle	4.5	2.9	356	24.8	24.8	8.1	8.1	27.0	27.0	106.4	106.5	7.6	7.6	2.0	6	-	-	-	-	-	822163	807568	-	-	-	-	-				
						8.0	2.5	354	24.7	24.7	8.1	8.1	27.2	27.2	102.4	102.5	7.3	7.3	4.5	6	-	-	-	-	-	822163	807568	-	-	-	-	-				
						8.0	2.6	326	24.7	24.7	8.1	8.1	27.2	27.2	102.5	102.5	7.3	7.3	4.5	6	-	-	-	-	-	822163	807568	-	-	-	-	-				
					SR4A	Fine	Moderate	07:46	9.6	Surface	1.0	0.2	80	24.6	24.6	8.0	8.0	32.2	32.2	98.6	98.6	6.8	6.8	4.4	13	-	-	-	817174	807826	-	-	-	-		
											1.0	0.2	81	24.6	24.6	8.0	8.0	32.2	32.2	98.5	98.6	6.8	6.8	4.4	12	-	-	-	-	817174	807826	-	-	-	-	-
											4.8	0.2	69	24.6	24.6	8.0	8.0	32.3	32.3	97.1	97.1	6.7	6.7	4.5	15	-	-	-	-	817174	807826	-	-	-	-	-
Middle	4.8	0.2	69	24.6						24.6	8.0	8.0	32.3	32.3	97.1	97.1	6.7	6.7	4.5	16	-	-	-	-	-	817174	807826	-	-	-	-	-				
	8.6	0.1	45	24.6						24.6	8.0	8.0	32.4	32.4	96.7	96.7	6.7	6.7	4.8	15	-	-	-	-	-	817174	807826	-	-	-	-	-				
	8.6	0.2	45	24.6						24.6	8.0	8.0	32.4	32.4	96.7	96.7	6.7	6.7	4.8	16	-	-	-	-												

Expansion of Hong Kong International Airport into a Three-Runway System
Water Quality Monitoring

Water Quality Monitoring Results on **15 April 21** during Mid-Ebb Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)	Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity (NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)					
								Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA
								IM9	Rainy	Moderate	13:42	8.0	Surface	1.0	1.9	33	24.8	24.8	8.1	8.1	29.2	29.2	98.3	98.2	6.9	6.9	4.3	4.3	4	4	87	90	822100
					Middle	4.0	2.0	31	24.6	24.6	8.1	8.1	30.1	30.2	97.3	97.3	6.8	6.8	5.2	5.2	4	4	87	90	822100	808792	<0.2	1.1	<0.2	1.1			
					Bottom	7.0	2.1	33	24.4	24.4	8.1	8.1	30.6	30.6	97.5	97.6	6.8	6.9	5.2	6.9	4	5	87	91	822100	808792	<0.2	1.2	<0.2	1.0			
						7.0	2.2	35	24.4	24.4	8.1	8.1	30.6	30.6	97.7	97.6	6.9	6.9	5	5	4	5	87	92	822100	808792	<0.2	1.0	<0.2	1.0			
IM10	Rainy	Moderate	13:49	7.8	Surface	1.0	1.9	45	24.8	24.8	8.0	8.0	29.5	29.6	93.5	93.4	6.6	6.6	4.3	4.2	4	4	86	87	822379	809793	<0.2	0.9	<0.2	0.9			
					Middle	3.9	2.1	44	24.8	24.8	8.0	8.0	29.6	29.6	94.0	94.1	6.6	6.6	5.2	5.5	5	5	87	91	822379	809793	<0.2	0.9	<0.2	0.9			
					Bottom	6.8	2.2	41	24.5	24.5	8.1	8.1	30.4	30.4	95.1	95.2	6.7	6.7	6.9	6.9	5	5	87	92	822379	809793	<0.2	1.0	<0.2	1.0			
						6.8	2.4	43	24.5	24.5	8.1	8.1	30.4	30.4	95.3	95.2	6.7	6.7	6.9	6.9	5	5	87	92	822379	809793	<0.2	1.0	<0.2	1.0			
IM11	Rainy	Moderate	13:59	9.0	Surface	1.0	1.9	47	24.8	24.8	8.0	8.0	29.3	29.4	96.2	96.1	6.8	6.7	7.4	7.4	6	6	84	84	822050	811457	<0.2	1.0	<0.2	1.0			
					Middle	4.5	2.0	49	24.7	24.7	8.0	8.0	29.8	29.8	91.4	91.4	6.4	6.4	8.5	8.4	7	7	88	88	822050	811457	<0.2	0.9	<0.2	0.9			
					Bottom	8.0	2.0	46	24.7	24.7	8.0	8.0	29.8	29.8	91.9	92.2	6.5	6.5	9.9	10.0	5	6	93	97	822050	811457	<0.2	0.9	<0.2	0.9			
						8.0	2.1	48	24.7	24.7	8.0	8.0	29.8	29.8	92.4	92.2	6.5	6.5	10.0	10.0	6	6	93	97	822050	811457	<0.2	0.9	<0.2	0.9			
IM12	Rainy	Moderate	14:05	9.9	Surface	1.0	2.1	49	24.8	24.8	8.0	8.0	29.1	29.2	94.6	94.4	6.7	6.6	5.7	5.7	5	5	86	86	821469	812066	<0.2	0.9	<0.2	0.9			
					Middle	5.0	2.3	43	24.8	24.8	8.0	8.0	29.5	29.5	93.7	93.7	6.6	6.6	6.1	6.1	6	5	87	90	821469	812066	<0.2	1.0	<0.2	1.0			
					Bottom	8.9	2.1	45	24.7	24.7	8.0	8.0	29.5	29.5	94.5	94.7	6.6	6.7	7.4	7.5	4	4	92	92	821469	812066	<0.2	1.1	<0.2	1.1			
						8.9	2.2	46	24.7	24.7	8.1	8.1	29.5	29.5	94.9	94.7	6.7	6.7	7.5	7.5	4	4	92	92	821469	812066	<0.2	1.1	<0.2	1.1			
SR1A	Rainy	Moderate	14:35	4.2	Surface	1.0	-	-	24.8	24.8	8.1	8.1	29.3	29.3	98.3	98.3	6.9	6.9	2.3	2.3	3	3	-	-	819974	812666	-	-	-	-			
					Middle	2.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	-	-	819974	812666	-	-	-	-		
					Bottom	3.2	-	-	24.8	24.8	8.1	8.1	29.4	29.4	98.7	98.8	6.9	6.9	2.5	2.6	4	3	-	-	819974	812666	-	-	-	-			
						3.2	-	-	24.8	24.8	8.1	8.1	29.4	29.4	98.9	98.8	6.9	6.9	2.6	2.6	3	3	-	-	819974	812666	-	-	-	-			
SR2	Rainy	Moderate	14:49	5.0	Surface	1.0	0.5	38	24.8	24.8	8.0	8.0	29.4	29.4	94.6	94.7	6.7	6.7	3.7	3.7	2	2	90	91	821467	814158	<0.2	0.8	<0.2	1.0			
					Middle	4.0	0.5	40	24.7	24.7	8.0	8.0	29.5	29.5	94.7	94.7	6.7	6.7	3.7	3.7	2	2	90	91	821467	814158	<0.2	0.8	<0.2	1.0			
					Bottom	4.0	0.3	40	24.7	24.7	8.0	8.0	29.5	29.5	95.6	95.7	6.7	6.7	4.9	4.9	2	3	92	92	821467	814158	<0.2	0.9	<0.2	1.0			
						4.0	0.3	42	24.7	24.7	8.0	8.0	29.5	29.5	95.7	95.7	6.7	6.7	4.9	4.9	2	3	92	92	821467	814158	<0.2	0.9	<0.2	1.0			
SR3	Rainy	Moderate	13:30	10.0	Surface	1.0	1.3	32	24.9	24.9	8.1	8.1	28.9	28.9	97.7	97.7	6.9	6.9	3.1	3.1	4	4	-	-	822155	807563	-	-	-	-			
					Middle	5.0	1.3	31	24.7	24.7	8.1	8.1	29.8	29.9	97.2	97.2	6.8	6.8	3.7	3.7	5	5	-	-	822155	807563	-	-	-	-			
					Bottom	9.0	1.5	30	24.4	24.4	8.1	8.1	30.8	30.8	97.2	97.3	6.8	6.8	4.9	4.8	5	5	-	-	822155	807563	-	-	-	-			
						9.0	1.5	32	24.5	24.5	8.1	8.1	30.8	30.8	97.3	97.3	6.8	6.8	4.8	4.8	5	5	-	-	822155	807563	-	-	-	-			
SR4A	Rainy	Calm	14:43	9.2	Surface	1.0	0.0	83	24.4	24.4	8.1	8.1	33.3	33.3	100.4	100.4	6.9	6.9	4.8	4.8	6	6	-	-	817177	807828	-	-	-	-			
					Middle	4.6	0.1	68	24.2	24.2	8.1	8.1	33.6	33.6	97.5	97.5	6.7	6.8	6.2	6.2	5	5	-	-	817177	807828	-	-	-	-			
					Bottom	8.2	0.1	60	24.2	24.2	8.0	8.0	33.6	33.6	96.7	96.7	6.7	6.7	6.7	6.6	6	5	-	-	817177	807828	-	-	-	-			
						8.2	0.1	65	24.2	24.2	8.0	8.0	33.6	33.6	96.7	96.7	6.7	6.7	6.6	6.6	5	5	-	-	817177	807828	-	-	-	-			
SR5A	Rainy	Calm	15:00	4.1	Surface	1.0	0.0	112	24.9	24.9	8.0	8.0	31.7	31.7	102.3	102.3	7.1	7.1	3.6	3.7	5	5	-	-	816601	810703	-	-	-	-			
					Middle	1.0	0.0	112	24.9	24.9	8.0	8.0	31.7	31.7	102.2	102.2	7.1	7.1	3.7	3.7	6	6	-	-	816601	810703	-	-	-	-			
					Bottom	3.1	0.0	119	24.7	24.7	8.0	8.0	32.3	32.3	100.9	101.0	7.0	7.0	4.0	4.0	3	3	-	-	816601	810703	-	-	-	-			
						3.1	0.0	128	24.7	24.7	8.0	8.0	32.3	32.3	101.0	101.0	7.0	7.0	4.0	4.0	3	3	-	-	816601	810703	-	-	-	-			
SR6A	Rainy	Calm	15:44	4.3	Surface	1.0	0.1	23	24.8	24.8	8.1	8.1	30.6	30.6	105.1	105.1	7.3	7.3	8.0	7.8	6	5	-	-	817963	814757	-	-	-	-			
					Middle	1.0	0.1	23	24.8	24.8	8.1	8.1	30.6	30.6	105.0	105.1	7.3	7.3	7.8	7.8	5	5	-	-	817963	814757	-	-	-	-			
					Bottom	3.3	0.1	20	24.8	24.8	8.0	8.0	30.6	30.6	103.6	103.5	7.2	7.2	7.6	7.9	5	4	-	-	817963	814757	-	-	-	-			
						3.3	0.1	21	24.8	24.8	8.0	8.0	30.6	30.6	103.4	103.5	7.2	7.2	7.9	7.9	4	4	-	-	817963	814757	-	-	-	-			
SR7	Rainy	Moderate	15:36	18.0	Surface	1.0	0.9	178	24.5	24.5	8.0	8.0	30.5	30.6	95.8	96.2	6.7	6.8	1.3	1.3	4	5	-	-	823618	823755	-	-	-	-			
					Middle	9.0	0.8	174	24.4	24.4	8.0	8.0	31.0	31.0	92.5	92.5	6.5	6.5	2.2	2.2	5	5	-	-	823618	823755	-	-	-	-			
					Bottom	17.0	0.9	194	24.4	24.4	8.1	8.1	31.0	31.0	94.2	94.4	6.6	6.6	3.8	3.8	5	5	-	-	823618	823755	-	-	-	-			
						17.0	1.0	195	24.4	24.4	8.1	8.1	31.0	31.0	94.6	94.6	6.6	6.6	3.8	3.8	5	5	-	-	823618	823755	-	-	-	-			
SR8	Rainy	Moderate	14:13	5.4	Surface	1.0	-																										

**Expansion of Hong Kong International Airport into a Three-Runway System
Water Quality Monitoring
Water Quality Monitoring Results on 15 April 21 during Mid-Flood Tide**

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)	Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity (NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)									
								Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA								
C1	Cloudy	Rough	08:40	8.7	Surface	1.0	0.4	37	24.2	24.2	8.1	8.1	33.6	33.6	99.0	99.0	6.9	11.0	10	85	88	815620	804223	<0.2	0.6	<0.2	0.6										
						1.0	0.4	38	24.2	8.1	8.1	33.6	33.6	99.0	99.0	6.9	11.2	11	85	<0.2				0.6													
						4.4	0.4	35	24.2	24.2	8.1	8.1	33.6	33.6	98.8	98.8	6.8	11.7	11	88				<0.2	0.6												
					Middle	4.4	0.5	36	24.2	24.2	8.1	8.1	33.6	33.6	98.8	98.8	6.8	11.8	11	88				<0.2	0.6												
						7.7	0.4	36	24.2	24.2	8.0	8.0	33.6	33.6	98.1	98.1	6.8	12.7	3	90				<0.2	0.7												
						7.7	0.4	38	24.2	24.2	8.0	8.0	33.6	33.6	98.3	98.3	6.8	12.6	4	91				<0.2	0.5												
					C2	Rainy	Calm	09:49	12.6	Surface	1.0	1.9	17	25.0	25.0	8.0	8.0	28.6	28.6	97.2				97.2	6.8			4.5	17	87	90	825679	806958	<0.2	0.9	<0.2	1.1
											1.0	2.0	17	25.0	25.0	8.0	8.0	28.6	28.6	97.1				97.1	6.8			4.4	19	88				<0.2	0.9		
											6.3	2.1	17	24.9	24.9	8.0	8.0	28.7	28.7	96.5				96.5	6.8			5.3	14	90				<0.2	1.1		
Middle	6.3	2.1	18	24.9						24.9	8.0	8.0	28.7	28.7	96.4	96.4	6.8	5.3	16	91	<0.2	1.1															
	11.6	2.0	15	24.9						24.9	8.0	8.0	28.7	28.7	96.3	96.3	6.8	6.3	13	93	<0.2	1.2															
	11.6	2.2	15	24.9						24.9	8.0	8.0	28.6	28.6	96.3	96.3	6.8	6.3	12	93	<0.2	1.2															
C3	Rainy	Calm	07:39	12.0						Surface	1.0	1.1	339	24.7	24.7	8.0	8.0	30.0	30.0	95.7	95.7	6.7	2.0	7	85	88	822108	817818	<0.2	1.0				<0.2	1.1		
											1.0	1.1	343	24.6	24.6	8.0	8.0	30.1	30.1	95.5	95.5	6.7	1.9	6	85				<0.2	1.0							
											6.0	1.2	343	24.5	24.5	8.0	8.0	30.8	30.8	90.5	90.5	6.3	3.6	6	89				<0.2	1.0							
					Middle	6.0	1.3	316	24.5	24.5	8.0	8.0	30.8	30.8	90.5	90.5	6.3	3.7	7	89	<0.2	1.2															
						11.0	1.2	329	24.5	24.5	8.0	8.0	30.8	30.8	91.0	91.0	6.4	4.3	6	89	<0.2	1.0															
						11.0	1.2	334	24.5	24.5	8.0	8.0	30.8	30.8	91.2	91.2	6.4	4.2	7	91	<0.2	1.0															
					IM1	Cloudy	Rough	09:01	5.6	Surface	1.0	0.1	319	24.3	24.3	8.0	8.0	32.7	32.7	96.8	96.8	6.7	6.4	19	85				87	817939	807139	<0.2	0.8			<0.2	0.8
											1.0	0.1	346	24.3	24.3	8.0	8.0	32.7	32.7	96.8	96.8	6.7	6.4	20	86							<0.2	0.8				
											-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							-	-				
Middle	-	-	-	-						-	-	-	-	-	-	-	-	-	-	-	-	-	-														
	4.6	0.1	33	24.3						24.3	8.0	8.0	32.7	32.7	96.5	96.5	6.7	7.6	12	89	<0.2	0.8															
	4.6	0.1	36	24.3						24.3	8.0	8.0	32.7	32.7	96.5	96.5	6.7	7.5	14	88	<0.2	0.8															
IM2	Cloudy	Rough	09:12	7.5						Surface	1.0	0.2	357	24.3	24.3	8.1	8.1	33.1	33.1	99.4	99.4	6.9	7.5	16	84	87	818163	806149				<0.2	0.6	<0.2	0.7		
											1.0	0.2	328	24.3	24.3	8.1	8.1	33.1	33.1	99.4	99.4	6.9	7.4	15	84							<0.2	0.7				
											3.8	0.3	2	24.3	24.3	8.0	8.0	33.1	33.1	98.6	98.6	6.8	8.7	14	87							<0.2	0.6				
					Middle	3.8	0.3	2	24.3	24.3	8.0	8.0	33.1	33.1	98.7	98.7	6.8	8.7	16	87	<0.2	0.7															
						6.5	0.2	4	24.3	24.3	8.0	8.0	33.2	33.2	98.6	98.6	6.8	10.2	14	89	<0.2	0.7															
						6.5	0.2	4	24.3	24.3	8.0	8.0	33.2	33.2	98.6	98.6	6.8	10.3	12	90	<0.2	0.7															
					IM3	Cloudy	Rough	09:19	7.8	Surface	1.0	0.4	340	24.3	24.3	8.1	8.1	33.2	33.2	99.3	99.4	6.9	8.8	12	84				87	818768	805585	<0.2	0.7			<0.2	0.7
											1.0	0.4	313	24.3	24.3	8.1	8.1	33.2	33.2	99.4	99.4	6.9	8.6	13	83							<0.2	0.7				
											3.9	0.3	348	24.3	24.3	8.1	8.1	33.2	33.2	98.2	98.3	6.8	10.1	14	86							<0.2	0.7				
Middle	3.9	0.3	320	24.3						24.3	8.1	8.1	33.2	33.2	98.3	98.3	6.8	10.1	13	87	<0.2	0.6															
	6.8	0.2	350	24.3						24.3	8.1	8.1	33.2	33.2	97.7	97.7	6.8	11.4	13	89	<0.2	0.8															
	6.8	0.2	352	24.3						24.3	8.1	8.1	33.2	33.2	97.7	97.7	6.8	11.3	15	90	<0.2	0.7															
IM4	Cloudy	Rough	09:28	9.0						Surface	1.0	0.6	349	24.3	24.3	8.1	8.1	33.2	33.2	99.3	99.3	6.9	12.3	16	84	87	819701	804604				<0.2	0.7	<0.2	0.7		
											1.0	0.6	321	24.3	24.3	8.1	8.1	33.2	33.2	99.3	99.3	6.9	12.1	18	84							<0.2	0.7				
											4.5	0.5	356	24.3	24.3	8.1	8.1	33.2	33.2	98.8	98.8	6.9	13.2	21	86							<0.2	0.6				
					Middle	4.5	0.6	327	24.3	24.3	8.1	8.1	33.2	33.2	98.4	98.6	6.8	13.3	20	87	<0.2	0.6															
						8.0	0.5	356	24.3	24.3	8.1	8.1	33.2	33.2	98.3	98.3	6.8	14.4	22	89	<0.2	0.7															
						8.0	0.5	328	24.3	24.3	8.1	8.1	33.2	33.2	98.3	98.3	6.8	14.4	20	89	<0.2	0.7															
					IM5	Cloudy	Rough	09:36	8.3	Surface	1.0	0.7	4	24.4	24.4	8.1	8.1	32.7	32.7	99.3	99.3	6.9	7.3	18	83				86	820715	804848	<0.2	0.6			<0.2	0.7
											1.0	0.8	4	24.4	24.4	8.1	8.1	32.7	32.7	99.3	99.3	6.9	7.3	20	84							<0.2	0.7				
											4.2	0.7	6	24.4	24.4	8.1	8.1	32.7	32.7	99.2	99.2	6.9	8.1	21	86							<0.2	0.7				
Middle	4.2	0.8	6	24.4						24.4	8.1	8.1	32.7	32.7	99.3	99.3	6.9	8.1	19	86	<0.2	0.7															
	7.3	0.6	14	24.4						24.4	8.0	8.0	32.7	32.7	98.4	98.4	6.8	10.4	21	89	<0.2	0.6															
	7.3	0.6	15	24.4						24.4	8.0	8.0	32.7	32.7	98.4	98.4	6.8	10.4	20	88	<0.2	0.6															
IM6	Cloudy	Rough	09:44	8.4						Surface	1.0	0.1	359	24.8	24.8	8.0	8.0	30.7	30.7	99.6	99.6	6.9	3.0	16	83	86	821049	805808				<0.2	1.1	<0.2	1.1		
											1.0	0.1	336	24.8	24.8	8.0	8.0	30.7	30.7	99.6	99.6	6.9	3.0	14	83							<0.2	1.2				
											4.2	0.3	32	24.7	24.7	8.0	8.0	31.0	31.0	98.3	98.4	6.9	4.0	6	86							<0.2	1.0				
					Middle	4.2	0.3	33	24.7	24.7	8.0	8.0	31.0	31.0	98.4	98.4	6.9	3.9	5	86	<0.2	1.1															
						7.4	0.3	56	24.5	24.5	8.0	8.0	32.1	32.1	95.5	95.5	6.6	5.4	5	88	<0.2	1.1															
						7.4	0.3	61	24.5	24.5	8.0	8.0	32.1	32.1	95.4	95.4	6.6	5.2	6	88	<0.2	1.1															
					IM7	Cloudy	Rough	09:55	9.2	Surface	1.0	0.1	80	24.9	24.9	8.0	8.0	30.2	30.2	101.1	101.1	7.1	3.2	6	84				87	821370	806828	<0.2	1.2			<0.2	1.2
											1.0	0.1	84	24.9	24.9	8.0	8.0	30.2	30.2	101.0	101.0	7.1	3.3	7	84							<0.2	1.2				
											4.6	0.2	77	24.8	24.8	8.0	8.0	30.5	30.5	99.5	99.5	6.9	4.4	6	86							<0.2	1.2				
Middle	4.6	0.2	79	24.8						24.8	8.0	8.0	30.5	30.5	99.4	99.4	6.9	4.4	7	86	<0.2	1.2															
	8.2	0.2	84	24.5						24.5	8.0	8.0	32.3	32.3	97.7	97.8	6.8	5.2	7	89	<0.2	1.2															
	8.2	0.2	84	24.5						24.5	8.0	8.0	32.3	32.3	97.8	97.8	6.8	5.0	6	90	<0.2	1.2															
IM8	Rainy	Calm	09:21	8.2						Surface	1.0	2.3	52	24.9	24.9	8.0	8.0	28.7	28.7	95.5	95.5	6.7	3.5	12	87	91	821809	808127				<0.2	1.1	<0.2	1.2		
											1.0	2.3	56	24.9	24.9	8.0	8.0	28.7	28.7	95.5	95.5	6.7															

**Expansion of Hong Kong International Airport into a Three-Runway System
Water Quality Monitoring**

Water Quality Monitoring Results on 15 April 21 during Mid-Flood Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity (NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)		Coordinate HK Grid (Easting)		Chromium (µg/L)		Nickel (µg/L)					
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA
IM9	Rainy	Calm	09:15	8.0	Surface	1.0	1.6	50	25.0	25.0	8.0	8.0	28.7	28.7	94.2	94.2	6.6	6.6	4.9	4.9	5	87	90	82	82	822086	808813			<0.2	1.2					
						1.0	1.6	51	25.0	8.0	8.0	28.7	28.7	94.2	94.2	6.6	6.6	4.9	4.9	4	87	90	82	82	822086	808813			<0.2	1.2						
						4.0	1.9	51	25.0	8.0	8.0	28.7	28.7	94.1	94.1	6.6	6.6	5.0	5.0	4	91	89	89	91	89	89	89	822086	808813			<0.2	1.2			
					Middle	4.0	1.9	55	24.9	25.0	8.0	8.0	28.7	28.7	94.0	94.0	6.6	6.6	5.0	5.0	5	91	89	89	91	89	89	89	822086	808813			<0.2	1.2		
						7.0	2.0	50	24.9	24.9	8.0	8.0	28.7	28.7	94.1	94.1	6.6	6.6	5.1	5.1	12	92	90	92	92	92	92	92	822086	808813			<0.2	1.1		
						7.0	2.1	50	24.9	24.9	8.0	8.0	28.7	28.7	94.1	94.1	6.6	6.6	5.1	5.1	11	92	90	92	92	92	92	92	822086	808813			<0.2	1.1		
IM10	Rainy	Calm	09:09	7.2	Surface	1.0	1.5	3	25.0	25.0	8.0	8.0	29.1	29.1	91.9	91.9	6.4	6.4	7.1	7.1	5	86	90	88	88	822372	809779			<0.2	1.1					
						1.0	1.5	3	25.0	25.0	8.0	8.0	29.1	29.1	91.8	91.8	6.4	6.4	7.0	7.0	6	87	90	89	89	822372	809779			<0.2	1.2					
						3.6	1.5	2	24.9	24.9	8.0	8.0	29.1	29.1	91.7	91.7	6.4	6.4	8.1	8.1	10	90	89	89	89	89	822372	809779			<0.2	1.2				
					Middle	3.6	1.6	2	24.9	24.9	8.0	8.0	29.1	29.1	91.7	91.7	6.4	6.4	8.2	8.2	10	91	89	89	91	89	89	89	822372	809779			<0.2	1.2		
						6.2	1.5	6	24.9	24.9	8.0	8.0	29.2	29.2	92.3	92.3	6.5	6.5	9.4	9.4	10	93	90	93	93	93	93	822372	809779			<0.2	1.2			
						6.2	1.6	6	24.9	24.9	8.0	8.0	29.2	29.2	92.4	92.4	6.5	6.5	9.5	9.5	11	93	90	93	93	93	93	822372	809779			<0.2	1.2			
IM11	Rainy	Calm	09:00	8.8	Surface	1.0	1.1	25	24.9	24.9	8.0	8.0	29.0	29.0	93.5	93.4	6.6	6.6	7.9	7.9	5	85	88	88	88	822050	811479			<0.2	1.1					
						1.0	1.1	26	24.9	24.9	8.0	8.0	29.1	29.1	93.3	93.3	6.6	6.6	7.9	7.9	6	85	88	88	88	822050	811479			<0.2	1.1					
						4.4	1.1	24	24.9	24.9	8.0	8.0	29.1	29.1	92.4	92.4	6.5	6.5	8.7	8.7	6	89	88	89	89	822050	811479			<0.2	1.1					
					Middle	4.4	1.1	25	24.9	24.9	8.0	8.0	29.2	29.1	92.3	92.3	6.5	6.5	8.8	8.8	5	89	88	89	89	822050	811479			<0.2	1.1					
						7.8	1.1	20	24.8	24.8	8.0	8.0	29.2	29.2	92.5	92.5	6.5	6.5	10.8	10.8	7	90	89	90	90	822050	811479			<0.2	1.2					
						7.8	1.2	21	24.8	24.8	8.0	8.0	29.2	29.2	92.6	92.6	6.5	6.5	10.8	10.8	6	90	89	90	90	822050	811479			<0.2	1.1					
IM12	Rainy	Calm	08:54	9.8	Surface	1.0	0.5	14	24.8	24.8	8.0	8.0	29.6	29.6	93.2	93.2	6.5	6.5	1.8	1.8	4	85	89	89	89	821460	812037			<0.2	1.1					
						1.0	0.5	15	24.8	24.8	8.0	8.0	29.6	29.6	93.1	93.1	6.5	6.5	1.9	1.9	5	85	89	89	89	821460	812037			<0.2	1.0					
						4.9	0.5	17	24.8	24.8	8.0	8.0	29.6	29.6	93.0	93.0	6.5	6.5	3.7	3.7	5	89	89	89	89	821460	812037			<0.2	1.1					
					Middle	4.9	0.5	17	24.8	24.8	8.0	8.0	29.6	29.6	93.0	93.0	6.5	6.5	3.9	3.9	4	90	89	90	90	821460	812037			<0.2	1.1					
						8.8	0.5	15	24.8	24.8	8.0	8.0	29.6	29.6	92.9	92.9	6.5	6.5	4.1	4.1	5	91	89	91	91	821460	812037			<0.2	1.1					
						8.8	0.5	15	24.8	24.8	8.0	8.0	29.6	29.6	92.8	92.8	6.5	6.5	4.2	4.2	6	92	89	92	92	821460	812037			<0.2	1.1					
SR1A	Rainy	Calm	08:17	4.0	Surface	1.0	-	-	25.0	25.0	8.1	8.1	29.0	29.0	96.1	96.0	6.7	6.7	1.2	1.2	11	-	-	-	-	819975	812661			-	-					
						1.0	-	-	25.0	25.0	8.1	8.1	29.0	29.0	95.9	95.9	6.7	6.7	1.2	1.2	10	-	-	-	-	819975	812661			-	-					
						2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
					Middle	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	819975	812661			-	-		
						3.0	-	-	25.0	25.0	8.1	8.1	29.0	29.0	95.2	95.2	6.7	6.7	1.5	1.5	10	-	-	-	-	-	-	819975	812661			-	-			
						3.0	-	-	25.0	25.0	8.1	8.1	29.0	29.0	95.1	95.1	6.7	6.7	1.4	1.4	11	-	-	-	-	-	-	819975	812661			-	-			
SR2	Rainy	Calm	08:00	5.0	Surface	1.0	0.3	102	24.8	24.8	8.0	8.0	29.2	29.2	94.3	94.3	6.6	6.6	4.7	4.7	10	88	88	88	88	821448	814150			<0.2	1.0					
						1.0	0.3	105	24.8	24.8	8.0	8.0	29.3	29.3	94.3	94.3	6.6	6.6	4.6	4.6	10	88	88	88	88	821448	814150			<0.2	1.2					
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	821448	814150			<0.2	1.1		
					Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	821448	814150			<0.2	1.1		
						4.0	0.2	83	24.6	24.6	8.1	8.1	29.5	29.5	94.2	94.2	6.6	6.6	5.7	5.7	12	89	88	89	89	821448	814150			<0.2	1.1					
						4.0	0.3	87	24.6	24.6	8.1	8.1	29.5	29.5	94.2	94.2	6.6	6.6	5.8	5.8	13	90	88	90	90	821448	814150			<0.2	1.1					
SR3	Rainy	Calm	09:29	9.6	Surface	1.0	2.1	39	24.9	24.9	8.0	8.0	28.6	28.6	95.0	95.0	6.7	6.7	3.6	3.6	22	-	-	-	-	822138	807554			-	-					
						1.0	2.1	39	24.9	24.9	8.0	8.0	28.6	28.6	94.9	94.9	6.7	6.7	3.7	3.7	25	-	-	-	-	822138	807554			-	-					
						4.8	2.3	41	24.9	24.9	8.0	8.0	28.7	28.7	94.4	94.4	6.6	6.6	4.6	4.6	24	-	-	-	-	822138	807554			-	-					
					Middle	4.8	2.3	43	24.9	24.9	8.0	8.0	28.7	28.7	94.2	94.2	6.6	6.6	4.6	4.6	22	-	-	-	-	-	-	822138	807554			-	-			
						8.6	2.3	44	24.9	24.9	8.0	8.0	28.7	28.7	93.3	93.2	6.6	6.6	5.9	5.9	22	-	-	-	-	-	-	822138	807554			-	-			
						8.6	2.5	44	24.9	24.9	8.0	8.0	28.7	28.7	93.0	93.2	6.6	6.6	5.9	5.9	16	-	-	-	-	-	-	822138	807554			-	-			
SR4A	Cloudy	Calm	08:16	9.5	Surface	1.0	0.1	81	24.8	24.8	8.0	8.0	31.7	31.7	96.7	96.7	6.7	6.7	4.8	4.8	8	-	-	-	-	817168	807790			-	-					
						1.0	0.1	84	24.8	24.8	8.0	8.0	31.7	31.7	96.7	96.7	6.7	6.7	4.8	4.8	7	-	-	-	-	817168	807790			-	-					
						4.8	0.3	72	24.6	24.6	8.0	8.0	32.1	32.1	96.2	96.3	6.7	6.7	5.9	5.9	6	-	-	-	-	817168	807790			-	-					
					Middle	4.8	0.3	77	24.6	24.6	8.0	8.0	32.1	32.1	96.3	96.3	6.7	6.7	5.9	5.9	7	-	-	-	-	-	-	817168	807790			-	-			
						8.5	0.3	66	24.3	24.3	8.0	8.0	32.6	32.6	95.3	95.3	6.6	6.6	6.7	6.7	6	-	-	-	-	-	-	81716								

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

Water Quality Monitoring

Water Quality Monitoring Results on **17 April 21** during Mid-Ebb Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)	Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity (NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)			
								Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA
								Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA
C1	Rainy	Calm	15:23	8.0	Surface	1.0	0.3	208	24.4	24.4	8.1	8.1	31.9	31.9	105.1	105.0	7.3	7.2	2.0	2.7	4	3	86	88	815606	804224	<0.2	1.1	1.0	1.0	
						1.0	0.3	221	24.4	8.1	8.1	31.9	31.9	104.9	101.3	7.3	7.0	2.1	2.7	4	3	85	87	86	88						
					Middle	4.0	0.4	222	24.5	8.1	8.1	33.0	33.0	101.3	101.3	7.0	7.0	2.5	2.7	2	3	87	88	89	90						
						4.0	0.4	229	24.5	8.1	8.1	33.0	33.0	101.2	101.3	7.0	7.0	2.4	2.7	3	3	88	88	88	88						
					Bottom	7.0	0.3	217	24.4	8.1	8.1	33.4	33.4	100.7	100.9	7.0	7.0	3.6	2.7	3	3	90	88	88	88						
						7.0	0.4	231	24.4	8.1	8.1	33.4	33.4	101.1	101.1	7.0	7.0	3.5	2.7	2	3	90	88	88	88						
C2	Rainy	Moderate	14:16	11.5	Surface	1.0	0.2	135	24.8	24.8	8.1	8.1	28.0	28.1	99.1	99.0	7.0	6.8	4.0	5.0	4	3	88	90	825674	806933	<0.2	1.3	1.4	1.4	
						1.0	0.2	143	24.8	8.1	8.1	28.1	28.1	98.9	91.8	7.0	6.5	4.1	5.0	3	3	87	89	89	90						
					Middle	5.8	0.5	154	24.7	24.7	8.1	8.1	29.2	29.2	91.8	91.8	6.5	6.2	5.4	6.2	3	3	89	89	89	89					
						5.8	0.5	163	24.7	24.7	8.1	8.1	29.2	29.2	91.8	88.3	6.5	6.2	5.5	6.2	2	3	90	88	88	88					
					Bottom	10.5	0.5	144	24.5	24.5	8.0	8.0	30.3	30.3	88.2	88.3	6.2	6.2	5.5	6.2	2	3	93	88	88	88					
						10.5	0.5	149	24.5	24.5	8.0	8.0	30.3	30.3	88.3	88.3	6.2	6.2	5.5	6.2	3	3	92	88	88	88					
C3	Rainy	Moderate	16:17	10.7	Surface	1.0	0.4	286	24.6	24.6	8.1	8.1	29.9	29.9	91.7	91.7	6.4	6.4	3.7	4.1	3	4	86	88	822105	817782	<0.2	1.3	1.4	1.4	
						1.0	0.4	311	24.6	24.6	8.1	8.1	29.9	29.9	91.7	91.5	6.4	6.4	3.8	6.4	3	4	86	88							
					Middle	5.4	0.2	257	24.6	24.6	8.1	8.1	29.9	29.9	91.5	91.5	6.4	6.4	4.2	4.4	3	4	88	87	88	88					
						5.4	0.2	266	24.6	24.6	8.1	8.1	29.9	29.9	91.5	91.1	6.4	6.4	4.2	6.4	4	4	87	88	89	89					
					Bottom	9.7	0.1	120	24.5	24.5	8.1	8.1	30.0	30.0	91.0	91.1	6.4	6.4	4.4	6.4	4	5	90	88	88	88					
						9.7	0.1	128	24.5	24.5	8.1	8.1	30.0	30.0	91.1	91.1	6.4	6.4	4.4	6.4	5	5	91	88	88	88					
IM1	Rainy	Calm	15:02	5.0	Surface	1.0	0.1	134	24.6	24.6	8.1	8.1	32.0	32.0	104.5	104.4	7.3	7.3	3.3	4.4	2	3	86	88	817951	807113	<0.2	1.1	1.2	1.1	
						1.0	0.1	138	24.6	24.6	8.1	8.1	32.0	32.0	104.3	104.3	7.2	7.3	3.4	4.4	3	3	86	-	-	-					
					Bottom	4.0	0.1	311	24.5	24.5	8.1	8.0	32.4	32.4	99.4	99.5	6.9	6.9	5.2	6.9	3	2	89	89	89	89					
						4.0	0.1	336	24.5	24.5	8.0	8.0	32.3	32.4	99.5	99.5	6.9	6.9	5.6	6.9	2	2	89	89	89	89					
IM2	Rainy	Calm	14:55	6.8	Surface	1.0	0.2	175	24.5	24.5	8.1	8.1	32.2	32.2	101.1	101.3	7.0	7.0	3.2	4.3	4	3	87	86	818145	806160	<0.2	1.3	1.3	1.3	
						1.0	0.2	188	24.5	24.5	8.1	8.1	32.2	32.2	101.4	100.8	7.0	7.0	3.2	4.3	3	3	86	88	88	88					
					Middle	3.4	0.1	166	24.5	24.5	8.1	8.1	32.4	32.4	100.9	100.7	7.0	7.0	4.0	4.3	4	3	88	88	88	88					
						3.4	0.1	173	24.5	24.5	8.1	8.1	32.4	32.4	100.7	99.8	7.0	6.9	4.2	6.9	3	3	88	89	89	89					
					Bottom	5.8	0.2	120	24.5	24.5	8.1	8.1	33.0	33.0	99.8	99.8	6.9	6.9	5.7	6.9	3	3	89	89	89	89					
						5.8	0.2	127	24.5	24.5	8.1	8.1	33.0	33.0	99.7	99.8	6.9	6.9	5.7	6.9	3	3	90	89	89	89					
IM3	Rainy	Calm	14:49	7.0	Surface	1.0	0.3	153	24.5	24.5	8.1	8.1	31.9	31.9	97.2	97.5	6.8	6.8	2.6	3.2	2	3	86	86	818782	805578	<0.2	1.2	1.2	1.2	
						1.0	0.3	160	24.5	24.5	8.1	8.1	32.0	32.0	97.7	97.5	6.8	6.8	2.7	3.2	3	3	86	87	87	87					
					Middle	3.5	0.2	155	24.6	24.6	8.1	8.1	32.1	32.1	98.9	99.0	6.9	6.9	3.1	3.2	3	3	100	87	87	87					
						3.5	0.2	165	24.6	24.6	8.1	8.1	32.1	32.1	99.1	99.0	6.9	6.9	3.3	3.2	3	3	87	87	87	87					
					Bottom	6.0	0.1	119	24.5	24.5	8.1	8.1	32.9	32.9	99.2	99.0	6.9	6.9	3.9	6.9	4	4	87	87	87	87					
						6.0	0.1	121	24.5	24.5	8.1	8.1	32.8	32.9	98.7	99.0	6.8	6.8	3.6	6.9	4	4	90	87	87	87					
IM4	Rainy	Calm	14:41	8.4	Surface	1.0	0.5	183	24.5	24.5	8.1	8.1	32.3	32.3	98.4	98.5	6.8	6.8	5.4	7.6	7	6	86	87	819741	804620	<0.2	1.5	1.5	1.5	
						1.0	0.5	190	24.5	24.5	8.1	8.1	32.3	32.3	98.5	98.0	6.8	6.8	5.8	7.6	6	6	87	88	88	88					
					Middle	4.2	0.5	184	24.5	24.5	8.1	8.1	32.4	32.4	98.0	98.0	6.8	6.8	7.5	7.6	5	6	88	87	87	87					
						4.2	0.5	191	24.5	24.5	8.1	8.1	32.4	32.4	98.0	97.5	6.8	6.8	7.7	7.6	5	6	87	88	88	88					
					Bottom	7.4	0.4	177	24.5	24.5	8.1	8.1	32.5	32.5	97.5	97.5	6.8	6.8	9.9	6.8	5	4	87	87	88	88					
						7.4	0.4	191	24.5	24.5	8.1	8.1	32.5	32.5	97.5	97.5	6.8	6.8	9.5	6.8	4	4	91	87	88	88					
IM5	Rainy	Calm	14:31	8.0	Surface	1.0	0.4	207	24.6	24.6	8.1	8.1	31.9	31.9	99.3	99.1	6.9	6.9	4.2	5.7	3	4	86	85	820722	804880	<0.2	1.4	1.3	1.5	
						1.0	0.4	212	24.6	24.6	8.1	8.1	31.9	31.9	98.9	99.1	6.9	6.8	4.5	5.7	4	4	85	87	87	87					
					Middle	4.0	0.4	189	24.5	24.5	8.1	8.1	32.7	32.7	97.4	97.5	6.7	6.7	6.1	6.7	4	4	87	87	88	88					
						4.0	0.4	205	24.5	24.5	8.1	8.1	32.7	32.7	97.5	97.5	6.8	6.8	6.2	6.7	3	4	87	87	88	88					
					Bottom	7.0	0.3	191	24.5	24.5	8.1	8.1	32.8	32.8	96.6	96.6	6.7	6.7	6.6	6.7	4	4	89	89	89	89					
						7.0	0.3	206	24.5	24.5	8.1	8.1	32.8	32.8	96.6	96.6	6.7	6.7	6.6	6.7	5	4	90	89	89	89					
IM6	Rainy	Calm	14:25	7.6	Surface	1.0	0.2	209	24.7	24.7	8.1	8.1	31.0	31.0	100.4	100.4	7.0	6.9	3.4	4.2	3	3	90	87	821052	805841	<0.2	1.4	1.4	1.4	
						1.0	0.2	217	24.7	24.7	8.1	8.1	31.0	31.0	100.4	98.5	7.0	6.8	3.4	6.9	3	3	87	87	88	88					
					Middle	3.8	0.2	200	24.6	24.6	8.1	8.1	31.9	31.9	98.5	98.5	6.8	6.8	4.1	4.2	3	3	90	88	88	88					
						3.8	0.2	201	24.6	24.6	8.1	8.0	32.2	32.2	98.4	98.3	6.8	6.8	4.2	6.8	2	2	89	88	88	88					
					Bottom	6.6	0.2	201	24.5	24.5	8.0	8.0	32.2	32.2	98.1	98.3	6.8	6.8	4.9	6.8	2	2	88	88	88	88					
						6.6	0.2	211	24.5	24.5	8.0	8.0	32.2	32.2	98.4	98.3	6.8	6.8	5.0	6.8	2	2	88	88	88	88					
IM7	Rainy	Calm	14:17	9.0	Surface	1.0	0.1	221	24.8	24.8	8.1	8.1	30.4	30.4	100.2	100.1	7.0	6.9	2.1	3.4	2	2	86	86	821344	806850	<0.2	1.5	1.4	1.4	
						1.0	0.1	228	24.8	24.8	8.1	8.0	31.9	31.9	100.0	97.7	7.0	6.8	2.2	3.4	3	2	86	88	88	89					
					Middle	4.5	0.1	136	24.6	24.6	8.1	8.0	31.9	31.9	97.5	97.6	6.8	6.8	3.2	4.6	<2	4	88	89	89	89					
						4.5	0.1	136	24.6	24.6	8.0	8.0	31.9	31.9	97.5	97.1	6.8	6.7	3.4	4.7	<2	4	89	89	89	89					
					Bottom	8.0	0.1	128	24.6	24.6	8.0	8.0	32.1	32.1	97.1	97.1	6.7	6.7	4.6	6.7	<2	4	90	89	89	89					
						8.0	0.1	137	24.6	24.6	8.0	8.1	32.1	32.1	97.1	97.1	6.7	6.7	4.7	6.7	<2	4	90	89	89	89					
IM8	Rainy	Moderate	14:42	8.3	Surface	1.0	2.3	324	24.9	24.9	8.1	8.1	28.5	28.5	95.1	95.1	6.7	6.7	3.7												

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

Water Quality Monitoring

Water Quality Monitoring Results on 17 April 21 during Mid-Ebb Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)	Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity (NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)		Coordinate HK Grid (Easting)		Chromium (µg/L)		Nickel (µg/L)							
								Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA
								IM9	Rainy	Moderate	14:48	7.9	Surface	1.0	2.9	243	24.9	24.9	8.1	8.1	28.2	28.2	98.8	98.8	7.0	2.9	6.9	2.9	<2		85	87	822094	808831	<0.2		1.3
					Middle	1.0	3.0	260	24.9	24.7	8.1	8.1	28.2	29.2	98.7	94.9	7.0	2.9	6.9	5.0	<2	2	85	87			<0.2		1.3	1.3							
					Bottom	4.0	2.8	245	24.7	24.7	8.1	8.1	29.2	29.2	94.9	94.9	6.7	5.0	6.7	5.0	<2	2	87	88			<0.2		1.4	1.4							
						6.9	2.9	248	24.5	24.5	8.1	8.1	30.1	30.1	95.0	95.0	6.7	7.2	6.7	<2		89	89			<0.2		1.2	1.2								
						6.9	3.1	255	24.5	24.5	8.1	8.1	30.1	30.1	95.0	95.0	6.7	7.1	6.7	<2		89	89			<0.2		1.4	1.4								
IM10	Rainy	Moderate	14:57	8.1	Surface	1.0	0.7	100	24.7	24.7	8.1	8.1	28.3	28.3	104.1	104.0	7.4	3.1	7.1	3.1	3		86	86	822364	809814	<0.2	<0.2	1.3	1.3							
					Middle	1.0	0.7	100	24.7	24.7	8.1	8.1	28.3	29.2	103.9	95.3	7.4	3.0	7.1	3.0	3	4	87	88			<0.2		1.3	1.3							
					Bottom	4.1	0.7	108	24.7	24.7	8.1	8.1	29.2	29.2	95.3	95.3	6.7	5.3	6.6	5.3	3	4	87	88			<0.2		1.3	1.3							
						4.1	0.7	112	24.7	24.7	8.1	8.1	29.2	29.2	95.2	93.7	6.7	5.3	6.6	5.3	4	4	88	89			<0.2		1.3	1.3							
						7.1	0.4	99	24.6	24.6	8.1	8.1	29.5	29.5	93.7	93.7	6.6	7.3	6.6	7.3	5	5	89	89			<0.2		1.2	1.2							
						7.1	0.4	102	24.6	24.6	8.1	8.1	29.5	29.5	93.6	93.6	6.6	7.5	6.6	7.5	5	5	89	89			<0.2		1.3	1.3							
IM11	Rainy	Moderate	15:07	8.7	Surface	1.0	1.9	261	24.8	24.8	8.1	8.1	28.4	28.4	101.8	101.8	7.2	3.1	7.0	3.1	5		85	85	822050	811453	<0.2	<0.2	1.3	1.3							
					Middle	1.0	1.9	283	24.8	24.8	8.1	8.1	28.4	28.7	101.8	95.4	7.2	3.2	7.0	3.2	3	5	85	87			<0.2		1.3	1.3							
					Bottom	4.4	1.9	264	24.8	24.8	8.1	8.1	28.7	28.7	95.4	95.4	6.7	3.8	6.6	3.8	4	5	87	88			<0.2		1.3	1.3							
						4.4	1.9	275	24.8	24.8	8.1	8.1	28.7	29.8	95.3	87.2	6.7	3.8	6.7	3.8	5	4	88	89			<0.2		1.2	1.2							
						7.7	2.2	268	24.6	24.6	8.0	8.0	29.8	29.8	87.2	87.3	6.1	11.8	6.1	11.8	4	4	89	89			<0.2		1.3	1.3							
						7.7	2.3	279	24.6	24.6	8.0	8.0	29.8	29.8	87.3	87.3	6.1	11.6	6.1	11.6	4	4	89	89			<0.2		1.3	1.3							
IM12	Rainy	Moderate	15:13	8.3	Surface	1.0	0.5	95	24.8	24.8	8.1	8.1	28.5	28.5	97.0	96.9	6.8	3.8	6.6	3.8	8		85	84	821475	812052	<0.2	<0.2	1.3	1.3							
					Middle	1.0	0.5	97	24.8	24.8	8.1	8.1	28.5	29.6	96.7	89.3	6.8	3.9	6.6	3.9	9	6	84	86			<0.2		1.2	1.2							
					Bottom	4.2	0.4	116	24.7	24.7	8.1	8.1	29.6	29.6	89.2	89.3	6.3	10.2	6.3	10.2	5	6	86	87			<0.2		1.3	1.3							
						4.2	0.4	125	24.7	24.7	8.1	8.1	29.6	29.7	89.3	88.2	6.3	10.2	6.3	10.2	4	4	87	89			<0.2		1.3	1.3							
						7.3	0.2	92	24.7	24.7	8.0	8.0	29.7	29.7	88.2	88.2	6.2	12.8	6.2	12.8	3	3	89	90			<0.2		1.3	1.3							
						7.3	0.2	92	24.7	24.7	8.0	8.0	29.7	29.7	88.2	88.2	6.2	12.8	6.2	12.8	4	4	89	90			<0.2		1.3	1.3							
SR1A	Rainy	Moderate	15:44	5.6	Surface	1.0	-	-	24.8	24.8	8.1	8.1	28.7	28.7	93.8	93.8	6.6	4.1	6.6	4.1	5		-	-	819978	812658	-	-	-	-							
					Middle	1.0	-	-	24.8	24.8	8.1	8.1	28.7	28.7	93.8	93.8	6.6	4.1	6.6	4.1	6	6	-	-			-	-	-	-							
					Bottom	2.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-							
						2.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-								
						4.6	-	-	24.8	24.8	8.1	8.1	28.9	28.9	93.4	93.5	6.6	3.6	6.6	3.6	5	-	-	-	-	-	-	-	-								
						4.6	-	-	24.8	24.8	8.1	8.1	28.9	28.9	93.5	93.5	6.6	3.5	6.6	3.5	6	-	-	-	-	-	-	-	-								
SR2	Rainy	Moderate	15:57	3.9	Surface	1.0	0.5	86	24.7	24.7	8.0	8.0	29.4	29.4	89.7	89.7	6.3	6.2	6.3	6.2	4		85	84	821461	814152	<0.2	<0.2	1.2	1.3							
					Middle	1.0	0.5	90	24.7	24.7	8.0	8.0	29.4	29.4	89.6	89.7	6.3	6.3	6.3	6.3	5	4	84	85			<0.2		1.3	1.3							
					Bottom	2.9	0.3	78	24.7	24.7	8.0	8.0	29.5	29.5	88.9	89.0	6.3	8.0	6.3	8.0	4	4	85	86			<0.2		1.4	1.4							
						2.9	0.3	80	24.7	24.7	8.0	8.0	29.5	29.5	89.0	89.0	6.3	7.9	6.3	7.9	3	3	86	86			<0.2		1.4	1.4							
SR3	Rainy	Moderate	14:36	9.8	Surface	1.0	1.7	20	25.0	25.0	8.1	8.1	28.0	28.0	98.6	98.6	7.0	2.4	6.8	2.4	3		-	-	822128	807576	-	-	-	-							
					Middle	1.0	1.8	21	25.0	25.0	8.1	8.1	28.0	29.1	98.5	93.6	7.0	2.4	6.8	2.4	3	4	-	-			-	-	-	-							
					Bottom	4.9	1.8	19	24.8	24.8	8.1	8.1	29.1	29.1	93.6	93.5	6.6	5.3	6.6	5.3	4	4	-	-			-	-	-	-							
						4.9	1.9	19	24.8	24.8	8.1	8.1	29.1	30.3	93.4	96.0	6.6	5.4	6.6	5.4	5	5	-	-			-	-	-	-							
						8.8	1.7	14	24.6	24.6	8.1	8.1	30.3	30.3	96.0	96.0	6.7	8.4	6.7	8.4	5	5	-	-			-	-	-	-							
						8.8	1.8	15	24.6	24.6	8.1	8.1	30.3	30.3	96.0	96.0	6.7	8.4	6.7	8.4	4	4	-	-			-	-	-	-							
SR4A	Rainy	Calm	15:47	9.2	Surface	1.0	0.0	83	24.6	24.6	8.1	8.1	32.1	32.1	99.2	99.2	6.9	3.7	6.8	3.7	6		-	-	817201	807804	-	-	-	-							
					Middle	1.0	0.0	90	24.6	24.6	8.1	8.1	32.3	32.3	99.2	95.7	6.9	3.8	6.8	3.8	6	7	-	-			-	-	-	-							
					Bottom	4.6	-	264	24.6	24.6	8.1	8.1	32.3	32.3	95.7	94.9	6.6	4.4	6.6	4.4	7	7	-	-			-	-	-	-							
						4.6	-	280	24.6	24.6	8.1	8.1	32.3	32.3	95.5	94.9	6.6	4.5	6.6	4.5	6	6	-	-			-	-	-	-							
						8.2	0.0	246	24.6	24.6	8.1	8.1	32.3	32.3	94.9	95.0	6.6	4.7	6.6	4.7	8	8	-	-			-	-	-	-							
						8.2	0.0	265	24.6	24.6	8.1	8.1	32.3	32.3	95.0	95.0	6.6	4.7	6.6	4.7	9	9	-	-			-	-	-	-							
SR5A	Rainy	Calm	16:04	4.0	Surface	1.0	0.0	297	24.6	24.6	8.0	8.0	31.6	31.6	95.9	96.0	6.7	4.1	6.7	4.1	8		-	-	816581	810706	-	-	-	-							
					Middle	1.0	0.0	319	24.6	24.6	8.0	8.0	31.6	32.0	96.0	96.7	6.7	4.1																			

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

Water Quality Monitoring

Water Quality Monitoring Results on

17 April 21

during Mid-Flood Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)	Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity (NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)					
								Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA	Value	DA
								Value		Value		Value		Value		Value		Value		Value		Value				Value		Value		Value		Value	
C1	Rainy	Calm	09:30	8.6	Surface	1.0	0.7	41	24.5	24.5	8.1	8.1	32.6	32.6	101.8	101.7	7.1	7.1	4.0	7.0	7	85	85	87	815631	804229	<0.2	1.0	<0.2	0.9			
						1.0	0.7	41	24.5	24.5	8.1	8.1	32.6	32.6	101.6	101.7	7.0	7.0	4.2	7.0	8	85	85	87			<0.2	1.0	<0.2	1.0			
						4.3	0.5	36	24.5	24.5	8.1	8.1	33.2	33.2	100.9	100.8	7.0	7.0	6.8	6.7	7	86	87	87			<0.2	1.0	<0.2	0.8			
					4.3	0.5	39	24.5	24.5	8.1	8.1	33.2	33.2	100.7	100.7	7.0	7.0	6.7	6.7	8	86	87	87	<0.2			1.0	<0.2	0.8				
					7.6	0.4	37	24.4	24.4	8.1	8.1	33.4	33.4	100.0	100.0	6.9	6.9	8.0	8.0	6	89	89	89	<0.2			1.0	<0.2	0.9				
					7.6	0.5	38	24.4	24.4	8.1	8.1	33.3	33.3	99.9	99.9	6.9	6.9	7.8	7.8	6	89	89	89	<0.2			1.0	<0.2	0.9				
					1.0	0.3	350	25.3	25.3	8.1	8.1	27.4	27.4	105.1	105.3	7.4	7.4	2.1	2.1	5	88	88	88	<0.2			1.2	<0.2	1.3				
					1.0	0.3	351	25.3	25.3	8.1	8.1	27.4	27.4	105.4	105.4	7.4	7.4	2.1	2.1	4	89	89	89	<0.2			1.2	<0.2	1.2				
					6.1	0.4	28	24.9	24.9	8.1	8.1	28.2	28.2	97.0	97.0	6.8	6.8	3.3	3.3	5	91	91	91	<0.2			1.3	<0.2	1.4				
6.1	0.4	29	24.9	24.9	8.1	8.1	28.2	28.2	97.0	97.0	6.8	6.8	3.3	3.3	5	91	91	91	<0.2	1.3	<0.2	1.4											
11.2	0.4	346	24.8	24.8	8.1	8.1	28.5	28.5	97.0	97.1	6.8	6.8	5.7	5.7	9	93	93	93	<0.2	1.4	<0.2	1.3											
11.2	0.4	348	24.8	24.8	8.1	8.1	28.5	28.5	97.1	97.1	6.8	6.8	5.6	5.6	9	92	92	92	<0.2	1.3	<0.2	1.3											
C2	Cloudy	Moderate	10:30	12.2	Surface	1.0	0.3	241	24.7	24.7	8.1	8.1	29.0	29.0	95.8	95.8	6.8	6.8	2.8	2.8	4	87	87	87	825697	806942	<0.2	1.2	<0.2	1.3			
						1.0	0.3	241	24.7	24.7	8.1	8.1	29.0	29.0	95.8	95.8	6.7	6.7	2.7	2.7	5	86	86	86			<0.2	1.5	<0.2	1.4			
						5.6	0.4	252	24.5	24.5	8.0	8.0	30.3	30.3	89.0	89.0	6.2	6.2	2.8	2.8	4	91	91	91			<0.2	1.4	<0.2	1.4			
					5.6	0.4	255	24.5	24.5	8.0	8.0	30.3	30.3	89.0	89.0	6.2	6.2	2.8	2.8	3	91	91	91	<0.2			1.4	<0.2	1.4				
					10.1	0.4	266	24.4	24.4	8.0	8.0	31.1	31.1	85.9	86.0	6.0	6.0	14.7	14.7	3	92	92	92	<0.2			1.4	<0.2	1.4				
					10.1	0.4	269	24.4	24.4	8.0	8.0	31.1	31.1	86.0	86.0	6.0	6.0	14.8	14.8	4	92	92	92	<0.2			1.3	<0.2	1.3				
					1.0	0.1	25	24.6	24.6	8.1	8.1	32.2	32.2	98.7	98.8	6.8	6.8	5.9	5.9	5	86	86	86	<0.2			1.2	<0.2	1.2				
					1.0	0.1	26	24.6	24.6	8.1	8.1	32.2	32.2	98.9	98.9	6.9	6.9	5.4	5.4	6	87	87	87	<0.2			1.2	<0.2	1.2				
					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	88	817935	807142	<0.2
4.6	0.1	20	24.6	24.6	8.0	8.0	32.3	32.3	98.2	98.2	6.8	6.8	6.8	6.8	6	89	89	89	<0.2	1.2	<0.2	1.1											
4.6	0.1	21	24.6	24.6	8.0	8.0	32.3	32.3	98.1	98.1	6.8	6.8	6.7	6.7	7	89	89	89	<0.2	1.1	<0.2	1.1											
C3	Rainy	Moderate	08:30	11.1	Surface	1.0	0.3	10	24.5	24.5	8.1	8.1	31.7	31.7	100.2	100.2	7.0	7.0	5.5	5.5	6	85	85	85	822115	817788	<0.2	1.2	<0.2	1.3			
						1.0	0.3	10	24.5	24.5	8.1	8.1	31.8	31.8	100.1	100.1	7.0	7.0	5.1	5.1	7	85	85	85			<0.2	1.2	<0.2	1.2			
						3.7	0.2	350	24.6	24.6	8.1	8.1	32.3	32.3	99.4	99.3	6.9	6.9	8.2	8.2	6	88	88	88			<0.2	1.3	<0.2	1.3			
					3.7	0.2	322	24.6	24.6	8.1	8.1	32.3	32.3	99.1	99.1	6.9	6.9	8.1	8.1	5	88	88	88	<0.2			1.3	<0.2	1.3				
					6.4	0.2	344	24.6	24.6	8.1	8.1	32.3	32.3	99.1	99.2	6.9	6.9	8.5	8.5	5	90	90	90	<0.2			1.1	<0.2	1.1				
					6.4	0.2	316	24.6	24.6	8.1	8.1	32.3	32.3	99.2	99.2	6.9	6.9	8.4	8.4	6	90	90	90	<0.2			1.2	<0.2	1.2				
					1.0	0.4	344	24.5	24.5	8.1	8.1	32.0	32.0	99.0	98.9	6.9	6.9	6.7	6.7	4	89	89	89	<0.2			1.2	<0.2	1.2				
					1.0	0.4	316	24.6	24.6	8.1	8.1	32.2	32.2	98.8	98.8	6.9	6.9	6.2	6.2	4	87	87	87	<0.2			1.2	<0.2	1.2				
					3.8	0.3	336	24.6	24.6	8.1	8.1	32.3	32.3	98.4	98.4	6.8	6.8	7.8	7.8	4	88	88	88	<0.2			1.2	<0.2	1.2				
3.8	0.3	345	24.6	24.6	8.1	8.1	32.3	32.3	98.4	98.4	6.8	6.8	7.8	7.8	5	89	89	89	<0.2	1.2	<0.2	1.2											
6.6	0.3	324	24.6	24.6	8.1	8.1	32.4	32.4	98.3	98.4	6.8	6.8	8.5	8.5	5	90	90	90	<0.2	1.2	<0.2	1.2											
6.6	0.3	340	24.6	24.6	8.1	8.1	32.4	32.4	98.4	98.4	6.8	6.8	8.6	8.6	5	91	91	91	<0.2	1.3	<0.2	1.3											
IM1	Rainy	Calm	09:49	5.6	Surface	1.0	0.6	329	24.6	24.6	8.1	8.1	32.1	32.1	99.1	99.1	6.9	6.9	7.4	7.0	5	85	85	85	818186	806159	<0.2	1.3	<0.2	1.2			
						1.0	0.6	338	24.6	24.6	8.1	8.1	32.1	32.1	99.0	99.0	6.9	6.9	7.0	7.0	5	85	85	85			<0.2	1.2	<0.2	1.2			
						4.3	0.5	346	24.6	24.6	8.1	8.1	32.2	32.2	98.6	98.6	6.8	6.8	8.8	8.6	6	88	88	88			<0.2	1.3	<0.2	1.2			
					4.3	0.5	318	24.6	24.6	8.1	8.1	32.2	32.2	98.6	98.6	6.8	6.8	8.6	8.6	5	88	88	88	<0.2			1.2	<0.2	1.3				
					7.6	0.4	357	24.5	24.5	8.1	8.1	32.3	32.3	98.6	98.5	6.8	6.8	9.8	9.9	6	91	91	91	<0.2			1.2	<0.2	1.2				
					7.6	0.4	328	24.5	24.5	8.1	8.1	32.3	32.3	98.3	98.3	6.8	6.8	9.9	9.9	5	91	91	91	<0.2			1.1	<0.2	1.1				
					1.0	0.8	352	24.6	24.6	8.1	8.1	32.1	32.1	98.6	98.5	6.8	6.8	5.1	5.1	3	85	85	85	<0.2			1.2	<0.2	1.2				
					1.0	0.9	324	24.6	24.6	8.1	8.1	32.1	32.1	98.3	98.3	6.8	6.8	5.1	5.1	4	85	85	85	<0.2			1.3	<0.2	1.3				
					4.0	0.7	358	24.6	24.6	8.1	8.1	32.2	32.2	98.1	98.1	6.8	6.8	6.3	6.3	3	89	89	89	<0.2			1.4	<0.2	1.4				
4.0	0.7	329	24.6	24.6	8.1	8.1	32.2	32.2	98.1	98.1	6.8	6.8	6.5	6.5	4	90	90	90	<0.2	1.2	<0.2	1.2											
7.0	0.6	3	24.6	24.6	8.1	8.1	32.2	32.2	98.0	98.0	6.8	6.8	7.1	7.1	3	91	91	91	<0.2	1.4	<0.2	1.4											
7.0	0.6	3	24.6	24.6	8.1	8.1	32.2	32.2	97.9	97.9	6.8	6.8	7.4	7.4	4	90	90	90	<0.2	1.3	<0.2	1.3											
IM2	Rainy	Calm	09:57	7.4	Surface	1.0	0.1	211	24.8	24.8	8.1	8.1	30.1	30.2	101.7	101.5	7.1	7.1	2.2	2.3	5	85	85	85	820714	804881	<0.2	1.3	<0.2	1.4			
						1.0	0.1	213	24.8	24.8	8.1	8.1	30.2	30.2	101.2	101.2	7.1	7.1	2.3	2.3	5	86	86	86			<0.2	1.4	<0.2	1.4			
						3.9	0.2	58	24.7	24.7	8.1	8.1	31.1	31.0	100.4	100.7	7.0	7.0	2.6	2.7	4	87	87	87			<0.2	1.4	<0.2	1.4			
					3.9	0.2	62	24.7	24.7	8.1	8.1	30.9	31.0	99.7	99.7	7.0	7.0	2.7	2.7	5	87	87	87	<0.2			1.4	<0.2	1.4				
					6.8	0.2	50	24.6	24.6	8.1	8.1	31.8	31.8	98.5	98.7	6.9	6.9	3.1	3.1	5	90	90	90	<0.2			1.5	<0.2	1.5				
					6.8	0.2	51	24.6	24.6	8.1	8.1	31.8	31.8	98.8	98.8	6.9	6.9	3.1	3.1	4	90	90	90	<0.2			1.4	<0.2	1.4				
					1.0	0.0	0	24.9	24.9	8.1	8.1	29.1	29.1	103.4	103.3	7.3	7.3	2.7	2.7	5	87	87	87	<0.2			1.3	<0.2	1.3				
					1.0	0.0	0	24.9	24.9	8.1	8.1	29.1	29.1	103.1	103.1	7.2	7.2	3.0	3.0	4	86	86	86	<0.2			1.4	<0.2	1.4				
					4.5	0.2	134	24.7	24.7	8.1	8.1	30.5	30.5	98.4	98.1	6.9	6.9	7.3	7.3	5	88	88	88	<0.2			1.5	<0.2	1.5				

**Expansion of Hong Kong International Airport into a Three-Runway System
Water Quality Monitoring**

Water Quality Monitoring Results on 17 April 21 during Mid-Flood Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)	Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity (NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)							
								Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA				
								IM9	Cloudy	Moderate	09:59	7.7	Surface	1.0	2.4	69	24.9	24.9	8.1	8.1	28.1	28.1	96.6			96.6	6.8	6.8	5.0	9	86	89	89	822082	808807
1.0	2.5	71	24.9	24.9	8.1	8.1	28.1							28.1	96.5	96.5	6.8	6.8	5.2	10	85	89	89	89	822082	808807	<0.2	1.5	<0.2	1.6					
3.9	2.5	69	24.9	24.9	8.1	8.1	28.2							28.2	95.7	95.8	6.8	6.8	7.0	10	89	89	89	89	822082	808807	<0.2	1.5	<0.2	1.6					
Middle	3.9	2.5	71	24.9	24.9	8.1	8.1						28.2	28.2	95.8	95.8	6.8	6.8	6.6	10	89	89	89	89	822082	808807	<0.2	1.6	<0.2	1.6					
	6.7	2.5	71	24.9	24.9	8.1	8.1						28.3	28.3	95.3	95.3	6.7	6.7	8.9	10	92	92	92	92	822082	808807	<0.2	1.6	<0.2	1.6					
	6.7	2.7	72	24.9	24.9	8.1	8.1						28.3	28.3	95.3	95.3	6.7	6.7	9.5	11	92	92	92	92	822082	808807	<0.2	1.6	<0.2	1.6					
IM10	Cloudy	Moderate	09:52	8.5	Surface	1.0	2.0						24	24.9	24.9	8.1	8.1	27.9	27.9	104.0	104.0	7.3	7.3	2.5	4	85	88	88	822377	809811	<0.2	1.5	<0.2	1.4	
						1.0	2.0						24	24.9	24.9	8.1	8.1	27.9	27.9	103.9	103.9	7.3	7.3	2.5	5	83	84	84	84	822377	809811	<0.2	1.4	<0.2	1.4
						4.3	2.3						28	24.9	24.9	8.1	8.1	28.4	28.4	97.1	97.1	6.8	6.8	4.0	5	84	85	85	85	822377	809811	<0.2	1.4	<0.2	1.4
					Middle	4.3	2.5	30	24.9	24.9	8.1	8.1	28.4	28.4	97.0	97.0	6.8	6.8	4.0	6	85	85	85	85	822377	809811	<0.2	1.9	<0.2	1.3					
						7.5	2.2	34	24.9	24.9	8.0	8.0	28.8	28.8	91.9	91.9	6.5	6.5	7.4	5	95	95	95	95	822377	809811	<0.2	1.3	<0.2	1.3					
						7.5	2.3	36	24.9	24.9	8.0	8.0	28.8	28.8	91.8	91.8	6.5	6.5	7.6	6	95	95	95	95	822377	809811	<0.2	1.3	<0.2	1.4					
					IM11	Cloudy	Moderate	09:42	8.3	Surface	1.0	2.7	292	24.9	24.9	8.1	8.1	28.6	28.6	96.9	97.1	6.8	6.8	3.7	7	85	88	88	822033	811446	<0.2	1.8	<0.2	2.0	
											1.0	2.8	318	24.9	24.9	8.1	8.1	28.6	28.6	97.2	97.1	6.9	6.9	3.5	8	84	89	89	89	822033	811446	<0.2	1.9	<0.2	1.9
											4.2	2.6	294	24.8	24.8	8.0	8.0	29.1	29.1	91.0	91.0	6.4	6.4	11.2	7	89	89	89	89	822033	811446	<0.2	1.9	<0.2	1.9
Middle	4.2	2.8	318	24.8						24.8	8.0	8.0	29.1	29.1	91.0	91.0	6.4	6.4	11.0	6	85	85	85	85	822033	811446	<0.2	1.9	<0.2	1.9					
	7.3	2.8	291	24.7						24.7	8.0	8.0	29.4	29.4	89.3	89.3	6.3	6.3	13.6	5	92	92	92	92	822033	811446	<0.2	1.5	<0.2	1.4					
	7.3	2.9	304	24.7						24.7	8.0	8.0	29.4	29.4	89.3	89.3	6.3	6.3	13.5	5	91	91	91	91	822033	811446	<0.2	1.4	<0.2	1.4					
IM12	Cloudy	Moderate	09:35	9.2						Surface	1.0	2.1	245	24.7	24.7	8.1	8.1	29.4	29.4	92.1	92.1	6.5	6.5	4.5	4	87	91	91	821466	812028	<0.2	1.3	<0.2	1.4	
											1.0	2.2	267	24.7	24.7	8.1	8.1	29.4	29.4	92.1	92.1	6.5	6.5	4.6	5	87	91	91	91	821466	812028	<0.2	1.4	<0.2	1.4
											4.6	2.2	244	24.7	24.7	8.1	8.1	29.5	29.5	90.9	90.9	6.4	6.4	6.5	3	91	92	92	92	821466	812028	<0.2	1.2	<0.2	1.4
					Middle	4.6	2.3	246	24.7	24.7	8.1	8.1	29.5	29.5	90.9	90.9	6.4	6.4	6.5	4	92	94	94	94	821466	812028	<0.2	1.4	<0.2	1.8					
						8.2	2.2	242	24.7	24.7	8.1	8.1	29.5	29.5	91.0	91.1	6.4	6.4	10.1	4	94	94	94	94	821466	812028	<0.2	1.8	<0.2	1.9					
						8.2	2.3	243	24.7	24.7	8.1	8.1	29.5	29.5	91.1	91.1	6.4	6.4	10.0	3	94	94	94	94	821466	812028	<0.2	1.9	<0.2	1.9					
					SR1A	Rainy	Moderate	09:04	5.1	Surface	1.0	-	-	24.9	24.9	8.1	8.1	28.2	28.2	99.6	99.6	7.0	7.0	2.8	6	-	-	-	819976	812660	-	-	-	-	
											1.0	-	-	24.9	24.9	8.1	8.1	28.2	28.2	99.5	99.5	7.0	7.0	2.8	5	-	-	-	-	819976	812660	-	-	-	-
											2.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Middle	2.6	-	-	-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	819976	812660	-	-	-	-			
	4.1	-	-	24.7						24.7	8.1	8.1	28.8	28.8	92.5	92.5	6.5	6.5	4.2	6	-	-	-	-	-	-	819976	812660	-	-	-	-			
	4.1	-	-	24.7						24.7	8.1	8.1	28.8	28.8	92.5	92.5	6.5	6.5	4.2	7	-	-	-	-	-	-	819976	812660	-	-	-	-			
SR2	Rainy	Moderate	08:50	4.7						Surface	1.0	0.2	89	24.8	24.8	8.1	8.1	28.7	28.7	95.2	95.2	6.7	6.7	3.0	3	87	87	87	821448	814145	<0.2	1.5	<0.2	1.5	
											1.0	0.2	95	24.8	24.8	8.1	8.1	28.7	28.7	95.2	95.2	6.7	6.7	3.0	4	87	87	87	87	821448	814145	<0.2	1.5	<0.2	1.5
											-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
					Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	821448	814145	<0.2	1.4	<0.2	1.4			
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	821448	814145	<0.2	1.4	<0.2	1.4		
						3.7	0.1	85	24.7	24.7	8.0	8.0	29.5	29.5	90.2	90.2	6.3	6.3	6.3	2	90	90	90	90	821448	814145	<0.2	1.3	<0.2	1.4					
					Bottom	3.7	0.1	93	24.7	24.7	8.0	8.0	29.5	29.5	90.2	90.2	6.3	6.3	6.4	3	89	89	89	89	821448	814145	<0.2	1.4	<0.2	1.4					

DA: Depth-Averaged
 Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
 Value exceeding Action Level is underlined; Value exceeding Limit Level is bolded and underlined

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

Water Quality Monitoring

Water Quality Monitoring Results on **20 April 21** during Mid-Ebb Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)	Current Speed (m/s)		Current Direction		Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity (NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)					
						Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA		
C1	Fine	Calm	18:09	8.4	Surface	1.0	0.3	216		23.7	23.7	8.1	8.1	33.2	33.2	105.4	105.2	7.4	7.4	2.7	2.7	4	4	88	88			815619	804227	<0.2	0.7				
						1.0	0.3	217		23.7	23.7	8.1	8.1	33.2	33.2	105.0	105.0	7.3	7.3	2.7	2.7	5	5	88	88							<0.2	0.6		
					Middle	4.2	0.2	200		23.5	23.5	8.1	8.1	33.8	33.8	98.4	98.4	6.9	6.9	3.4	3.4	8	8	92	92							<0.2	0.6		
						4.2	0.2	212		23.5	23.5	8.1	8.1	33.8	33.8	98.4	98.4	6.9	6.9	3.4	3.4	8	8	92	92							<0.2	0.7		
					Bottom	7.4	0.2	185		23.5	23.5	8.1	8.1	34.0	34.0	98.5	98.5	6.9	6.9	3.8	3.8	10	10	93	93							<0.2	0.6		
						7.4	0.2	195		23.5	23.5	8.1	8.1	34.0	34.0	98.6	98.6	6.9	6.9	3.8	3.8	9	9	93	93							<0.2	0.7		
C2	Fine	Moderate	16:57	11.5	Surface	1.0	0.3	180		24.1	24.1	8.1	8.1	28.0	28.0	94.4	94.2	6.8	6.8	0.3	0.3	6	6	85	85			825665	806927	<0.2	1.1				
						1.0	0.3	181		24.1	24.1	8.1	8.1	28.1	28.1	94.0	94.0	6.7	6.7	0.3	0.3	6	6	86	86							<0.2	1.2		
					Middle	5.8	0.9	164		24.2	24.2	8.1	8.0	28.4	28.3	91.9	92.0	6.6	6.6	2.2	2.2	6	6	88	88							<0.2	0.9		1.0
						5.8	1.0	176		24.2	24.2	8.0	8.0	28.3	28.3	92.0	92.0	6.6	6.6	2.3	2.3	5	5	89	89							<0.2	1.0		
					Bottom	10.5	0.3	199		24.2	24.2	8.0	8.0	30.1	30.1	84.3	84.5	6.0	6.0	3.1	3.1	5	5	90	90							<0.2	0.9		
						10.5	0.3	218		24.2	24.2	8.0	8.0	30.1	30.1	84.7	84.7	6.0	6.0	3.1	3.1	6	6	90	90							<0.2	0.9		
C3	Fine	Moderate	18:54	12.6	Surface	1.0	0.4	45		23.9	23.9	8.1	8.1	31.7	31.7	88.0	88.0	6.2	6.2	0.7	0.7	6	6	85	85			822122	817795	<0.2	1.0		1.0		
						1.0	0.4	46		23.9	23.9	8.1	8.1	31.7	31.7	87.9	87.9	6.2	6.2	0.8	0.8	6	6	85	85							<0.2	0.9		
					Middle	6.3	0.2	21		23.8	23.8	8.0	8.0	32.1	32.1	82.0	82.0	5.8	5.8	2.9	2.9	5	5	88	88							<0.2	1.0		
						6.3	0.2	21		23.7	23.7	8.0	8.0	32.1	32.1	81.9	81.9	5.8	5.8	3.0	3.0	6	6	89	89							<0.2	0.9		
					Bottom	11.6	0.1	60		23.7	23.7	8.0	8.0	32.1	32.1	83.6	83.9	5.9	5.9	4.4	4.4	4	4	90	90							<0.2	1.0		
						11.6	0.1	63		23.7	23.7	8.0	8.0	32.1	32.1	84.1	84.1	5.9	5.9	4.5	4.5	5	5	90	90							<0.2	1.0		
IM1	Fine	Calm	17:48	5.0	Surface	1.0	0.1	181		23.9	23.9	8.1	8.1	33.8	33.8	100.5	100.4	7.0	7.0	3.5	3.5	11	11	87	88			817968	807143	<0.2	0.7		0.7		
						1.0	0.1	194		23.9	23.9	8.1	8.1	33.8	33.8	100.2	100.2	7.0	7.0	3.7	3.7	12	12	88	88							<0.2	0.7		
					Middle	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	89	817968	807143	<0.2	-		-	
						-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	90	817968	807143	<0.2	-		-	
					Bottom	4.0	0.1	217		23.9	23.9	8.1	8.1	33.9	33.9	100.5	100.5	7.0	7.0	4.6	4.6	8	8	90	90							<0.2	0.8		0.8
						4.0	0.1	221		23.9	23.9	8.1	8.1	33.9	33.9	100.4	100.4	7.0	7.0	4.5	4.5	9	9	91	91							<0.2	0.7		0.7
IM2	Fine	Calm	17:40	7.0	Surface	1.0	0.2	175		23.8	23.8	8.1	8.1	33.6	33.6	102.5	102.5	7.1	7.1	4.1	4.1	10	9	87	87			818168	806152	<0.2	0.8		0.7		
						1.0	0.2	181		23.8	23.8	8.1	8.1	33.6	33.6	102.5	102.5	7.1	7.1	4.2	4.2	9	9	87	87							<0.2	0.7		
					Middle	3.5	0.2	121		23.8	23.8	8.1	8.1	33.6	33.6	99.6	99.4	6.9	6.9	4.7	4.7	9	9	91	91							<0.2	0.6		0.7
						3.5	0.2	130		23.8	23.8	8.1	8.1	33.6	33.6	99.1	99.1	6.9	6.9	4.8	4.8	10	10	92	92							<0.2	0.7		
					Bottom	6.0	0.2	143		23.7	23.7	8.1	8.1	33.9	33.9	98.2	98.3	6.9	6.9	5.7	5.7	9	9	92	92							<0.2	0.7		
						6.0	0.2	150		23.7	23.7	8.1	8.1	33.9	33.9	98.3	98.3	6.9	6.9	5.8	5.8	8	8	93	93							<0.2	0.7		
IM3	Fine	Moderate	17:32	7.2	Surface	1.0	0.2	216		23.7	23.7	8.1	8.1	33.3	33.3	102.8	102.8	7.2	7.2	2.9	2.9	10	11	89	89			818784	805603	<0.2	0.8		0.8		
						1.0	0.2	234		23.7	23.7	8.1	8.1	33.3	33.3	102.8	102.8	7.2	7.2	2.9	2.9	11	11	89	89							<0.2	0.8		
					Middle	3.6	0.1	198		23.7	23.7	8.1	8.1	33.4	33.4	100.5	100.1	7.0	7.0	3.5	3.5	8	8	92	92							<0.2	0.6		0.7
						3.6	0.1	208		23.7	23.7	8.1	8.1	33.5	33.4	99.7	99.7	7.0	7.0	3.6	3.6	9	9	92	92							<0.2	0.7		
					Bottom	6.2	0.3	125		23.7	23.7	8.1	8.1	33.8	33.8	99.6	100.4	6.9	6.9	4.9	4.9	9	9	93	93							<0.2	0.7		
						6.2	0.3	131		23.7	23.7	8.1	8.1	33.8	33.8	101.1	101.1	7.0	7.0	4.6	4.6	8	8	93	93							<0.2	0.6		
IM4	Fine	Moderate	17:22	8.4	Surface	1.0	0.4	235		23.7	23.7	8.1	8.1	33.3	33.3	102.5	102.4	7.2	7.2	3.5	3.5	10	9	88	89			819704	804621	<0.2	0.6		0.6		
						1.0	0.4	243		23.7	23.7	8.1	8.1	33.3	33.3	102.3	102.3	7.2	7.2	3.5	3.5	9	9	89	89							<0.2	0.7		
					Middle	4.2	0.2	161		23.7	23.7	8.1	8.1	33.4	33.4	99.6	99.5	7.0	7.0	3.9	3.9	9	9	91	91							<0.2	0.6		0.6
						4.2	0.2	174		23.7	23.7	8.1	8.1	33.5	33.4	99.4	99.4	7.0	7.0	4.0	4.0	9	9	91	91							<0.2	0.6		
					Bottom	7.4	0.2	142		23.7	23.7	8.1	8.1	33.6	33.6	99.7	99.7	7.0	7.0	4.1	4.1	7	7	92	92							<0.2	0.6		0.6
						7.4	0.2	143		23.7	23.7	8.1	8.1	33.6	33.6	99.7	99.7	7.0	7.0	4.1	4.1	7	7	93	93							<0.2	0.7		
IM5	Fine	Moderate	17:14	8.0	Surface	1.0	0.3	212		23.7	23.7	8.1	8.1	33.3	33.3	101.2	101.2	7.1	7.1	4.2	4.2	5	6	91	91			820735	804862	<0.2	0.7		0.7		
						1.0	0.3	218		23.7	23.7	8.1	8.1	33.3	33.3	101.1	101.1	7.1	7.1	4.2	4.2	6	6	91	91							<0.2	0.7		
					Middle	4.0	0.2	174		23.7	23.7	8.1	8.1	33.3	33.3	100.3	100.3	7.0	7.0	4.4	4.4	6	6	91	91							<0.2	0.6		0.6
						4.0	0.2	190		23.7	23.7	8.1	8.1	33.3	33.3	100.3	100.3	7.0	7.0	4.5	4.5	5	5	91	91							<0.2	0.6		
					Bottom	7.0	0.2	166		23.7	23.7	8.1	8.1	33.3	33.3	100.1	100.0	7.0	7.0	5.0	5.0	5	5	92	92							<0.2	0.6		0.6
						7.0	0.2	175		23.7	23.7	8.1	8.1	33.3	33.3	99.9	99.9	7.0	7.0	4.8	4.8	6	6	93	93							<0.2	0.6		
IM6	Fine	Moderate	17:06	7.6	Surface	1.0	0.2	289		24.0	24.0	8.1	8.1	30.9	30.9	99.1	99.2	7.0	7.0	2.5	2.5	5	6	87	88			821064	805815	<0.2	0.5		0.6		
						1.0	0.2	301		24.0	24.0	8.1	8.1	30.9	30.9	99.3	99.2	7.0	7.0	2.6	2.6	6	6	88	88							<0.2	0.6		

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

Water Quality Monitoring

Water Quality Monitoring Results on 20 April 21 during Mid-Ebb Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)	Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity (NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)							
								Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA	Value	DA	Value	DA
IM9	Fine	Moderate	17:28	7.5	Surface	1.0	0.2	108	23.9	23.9	8.1	8.1	29.9	29.9	91.0	91.0	6.5	6.5	1.8	6	86	89	-	-	<0.2	0.9									
						1.0	0.2	117	23.9	8.1	8.1	29.9	29.9	91.0	91.0	6.5	6.5	1.9	7	88	89	-	-	<0.2	0.9										
						3.8	0.2	89	23.8	23.8	8.1	8.1	30.3	30.3	90.8	90.8	6.5	6.5	2.3	7	89	89	-	-	<0.2	1.0									
					Middle	3.8	0.2	97	23.8	23.8	8.1	8.1	30.4	30.3	90.7	90.8	6.4	6.5	2.5	6	89	89	-	-	<0.2	1.0									
						6.5	0.2	76	23.7	23.7	8.1	8.1	30.8	30.8	91.2	91.3	6.5	6.5	4.8	6	91	89	-	-	<0.2	0.9									
						6.5	0.3	80	23.7	23.7	8.1	8.1	30.8	30.8	91.4	91.4	6.5	6.5	4.5	5	91	89	-	-	<0.2	0.9									
					Bottom	1.0	0.5	100	23.9	23.9	8.0	8.0	29.8	29.8	92.7	92.6	6.6	6.6	1.5	5	86	89	-	-	<0.2	0.9									
						1.0	0.5	109	23.9	23.9	8.0	8.0	29.8	29.8	92.5	92.6	6.6	6.6	1.6	6	87	89	-	-	<0.2	0.9									
						3.9	0.5	117	23.8	23.9	8.0	8.0	30.2	30.2	95.4	95.2	6.1	6.1	2.1	6	88	89	-	-	<0.2	0.9									
IM10	Fine	Moderate	17:35	7.7	Surface	1.0	0.5	109	23.9	23.9	8.0	8.0	30.2	30.2	95.0	95.0	6.1	6.1	2.1	6	88	89	-	-	<0.2	0.9									
						3.9	0.6	122	23.9	23.9	8.0	8.0	30.2	30.2	95.0	95.0	6.0	6.0	2.1	7	88	89	-	-	<0.2	0.9									
						6.7	0.4	98	23.9	23.9	8.0	8.0	30.4	30.4	84.6	84.8	6.0	6.0	2.9	7	91	89	-	-	<0.2	0.8									
					Middle	6.7	0.4	98	23.9	23.9	8.0	8.0	30.4	30.4	84.9	84.9	6.0	6.0	2.9	8	91	89	-	-	<0.2	0.8									
						1.0	0.8	104	23.9	23.9	8.1	8.1	30.1	30.1	92.8	92.8	6.6	6.6	1.3	8	86	89	-	-	<0.2	0.9									
						1.0	0.8	112	23.9	23.9	8.1	8.1	30.1	30.1	92.7	92.8	6.6	6.6	1.3	8	86	89	-	-	<0.2	0.9									
					Bottom	4.1	0.6	119	23.8	23.8	8.0	8.0	30.2	30.2	91.5	91.5	6.5	6.5	1.3	6	87	89	-	-	<0.2	0.9									
						4.1	0.6	126	23.8	23.8	8.0	8.0	30.2	30.2	91.4	91.4	6.5	6.5	1.3	7	87	89	-	-	<0.2	0.9									
						7.1	0.3	70	23.9	23.9	8.0	8.0	31.0	30.9	87.3	87.5	6.2	6.2	2.8	5	90	89	-	-	<0.2	0.9									
IM11	Fine	Moderate	17:45	8.1	Surface	1.0	0.3	76	23.9	23.9	8.0	8.0	30.9	30.9	87.6	87.6	6.2	6.2	2.8	6	91	89	-	-	<0.2	1.0									
						1.0	0.6	118	23.9	23.9	8.0	8.0	30.4	30.4	89.0	88.9	6.3	6.3	1.6	4	86	89	-	-	<0.2	1.0									
						1.0	0.6	118	23.9	23.9	8.0	8.0	30.4	30.4	88.8	88.8	6.3	6.3	1.6	4	86	89	-	-	<0.2	1.0									
					Middle	4.7	0.5	102	23.9	23.9	8.0	8.0	30.6	30.6	87.5	87.5	6.2	6.2	1.9	5	89	89	-	-	<0.2	0.9									
						4.7	0.5	104	23.9	23.9	8.0	8.0	30.6	30.6	87.4	87.4	6.2	6.2	2.0	6	90	89	-	-	<0.2	0.9									
						8.4	0.3	87	23.9	23.9	8.0	8.0	30.9	30.9	88.5	88.6	6.3	6.3	3.3	5	91	89	-	-	<0.2	0.9									
					Bottom	8.4	0.3	88	23.9	23.9	8.0	8.0	30.9	30.9	88.7	88.7	6.3	6.3	3.1	6	92	89	-	-	<0.2	0.9									
						1.0	-	-	23.7	23.7	8.1	8.1	30.0	30.0	89.4	89.5	6.4	6.4	2.4	6	-	-	-	-	<0.2	0.9									
						1.0	-	-	23.7	23.7	8.1	8.1	30.1	30.0	89.5	89.5	6.4	6.4	2.4	7	-	-	-	-	<0.2	0.9									
SR1A	Fine	Moderate	18:19	5.2	Surface	2.6	-	-	-	-	-	-	-	-	-	-	-	-	6.4	-	-	-	-	-	-	-									
						2.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.2	6	-	-	-	-	-	-						
						4.2	-	-	23.7	23.7	8.1	8.1	30.1	30.1	91.3	91.6	6.5	6.6	4.0	6	-	-	-	-	-	-	-	-	-	-					
					Middle	4.2	-	-	23.6	23.6	8.1	8.1	30.1	30.1	91.8	91.8	6.6	6.6	4.1	5	-	-	-	-	-	-	-	-	-	-	-				
						1.0	0.5	72	23.9	23.9	8.0	8.0	30.9	30.9	89.3	89.3	6.3	6.3	2.1	6	84	87	-	-	<0.2	0.9									
						1.0	0.5	77	23.9	23.9	8.0	8.0	30.9	30.9	89.2	89.2	6.3	6.3	2.1	7	85	87	-	-	<0.2	0.9									
					Bottom	3.6	0.3	81	23.9	23.9	8.1	8.1	31.1	31.1	90.0	90.2	6.4	6.4	2.1	6	89	87	-	-	<0.2	0.9									
						3.6	0.4	82	23.9	23.9	8.1	8.1	31.0	31.0	90.4	90.4	6.4	6.4	2.0	5	89	89	-	-	<0.2	0.9									
						1.0	0.2	204	24.0	24.0	8.1	8.1	29.1	29.2	95.5	95.4	6.8	6.8	1.4	7	-	-	-	-	-	-	-	-	-	-	-				
SR2	Fine	Moderate	18:33	4.6	Surface	1.0	0.2	215	24.0	24.0	8.1	8.1	29.3	29.2	95.2	95.4	6.8	6.8	1.4	7	-	-	-	-	-	-	-	-	-						
						5.0	0.3	195	24.0	24.0	8.1	8.1	30.0	30.0	89.9	90.0	6.4	6.4	2.5	6	-	-	-	-	-	-	-	-	-	-	-				
						5.0	0.3	198	23.9	23.9	8.1	8.1	30.1	30.0	90.0	90.0	6.4	6.4	2.8	5	-	-	-	-	-	-	-	-	-	-	-				
					Middle	8.9	0.1	180	23.7	23.7	8.1	8.1	31.3	31.3	90.1	90.2	6.4	6.4	4.1	4	-	-	-	-	-	-	-	-	-	-	-	-			
						8.9	0.1	196	23.7	23.7	8.1	8.1	31.3	31.3	90.2	90.2	6.4	6.4	4.2	4	-	-	-	-	-	-	-	-	-	-	-	-			
						1.0	0.2	67	23.9	23.9	8.1	8.1	33.7	33.7	104.3	104.3	7.3	7.3	3.3	5	-	-	-	-	-	-	-	-	-	-	-	-			
					Bottom	1.0	0.2	68	23.9	23.9	8.1	8.1	33.7	33.7	104.3	104.3	7.3	7.3	3.4	9	-	-	-	-	-	-	-	-	-	-	-	-			
						4.6	0.1	54	23.9	23.8	8.1	8.1	33.8	33.8	101.2	101.2	7.0	7.0	4.6	7	-	-	-	-	-	-	-	-	-	-	-	-			
						4.6	0.1	58	23.8	23.8	8.1	8.1	33.8	33.8	101.1	101.1	7.0	7.0	4.5	5	-	-	-	-	-	-	-	-	-	-	-	-			
SR3	Fine	Moderate	17:19	9.9	Surface	8.2	0.1	67	23.8	23.8	8.1	8.1	33.8	33.8	101.1	101.3	7.0	7.1	4.7	6	-	-	-	-	-	-	-	-	-	-					
						8.2	0.1	67	23.8	23.8	8.1	8.1	33.8	33.8	101.4	101.4	7.1	7.1	4.9	5	-	-	-	-	-	-	-	-	-	-	-	-			
						1.0	0.0	90	23.6	23.6	8.0	8.0	32.3	32.3	100.6	100.5	7.1	7.1	3.0	6	-	-	-	-	-	-	-	-	-	-	-	-			
					Middle	1.0	0.0	98	23.6	23.6	8.0	8.0	32.3	32.3	100.3	100.3	7.1	7.1	3.1	5	-	-	-	-	-	-	-	-	-	-	-	-	-		
						2.6	0.1	115	23.6	23.6	8.0	8.0	32.5	32.4	99.7	99.6	7.0	7.0	4.6	9	-	-	-	-	-	-	-	-	-	-	-	-	-		
						2.6	0.1	122	23.6	23.6	8.0	8.0	32.4	32.4	99.5	99.5	7.0	7.0	4.8	8	-	-	-	-	-	-	-	-	-	-	-	-	-		
					Bottom	1.0	0.0	89	23.9	23.9	8.0	8.0	31.8	31.8	95.1	95.0	6.7	6.7	3.9	6	-	-	-	-	-	-	-	-	-	-	-	-	-		
						1.0	0.0	89	23.9	23.9	8.0	8.0	31.8	31.8	94.9	94.9	6.7	6.7	3.7	5	-	-	-	-	-	-	-	-	-	-	-	-	-		
						3.0	0.1	77	23.8	23.8	8.0	8.0	31.8	31.8	94.5	94.5	6.7	6.7	5.5	6	-	-	-	-	-	-	-	-	-	-	-	-	-		
SR4A	Fine	Calm	18:30	9.2	Surface	3.0	0.1	81	23.9	23.9	8.0	8.0	31.8	31.8	94.5	94.5	6.7	6.7	5.4	6	-	-	-	-	-	-	-	-	-	-					
						3.0	0.1	81	23.8	23.8	8.0	8.0	31.8	31.8	94.5	94.5	6.7	6.7	5.4	6	-	-	-	-	-	-	-	-	-	-	-	-			
						1.0	0.6	78	23.7	23.7	8.1	8.1	32.2	32.2	83.5	83.5	5.9	5.9	1.0	5	-	-	-	-	-	-	-	-	-	-	-	-			
					Middle	1.0	0.6	81	23.7	23.7	8.1	8.1	32.2	32.2	83.5	83.5	5.9	5.9	1.0	6	-	-	-	-	-	-	-	-	-	-	-	-	-		
						10.2	0.3	43	23.7	23.7	8.1	8.1	32.3	32.3	83.4	83.4	5.9	5.9	1.4	7	-	-	-	-	-	-	-	-	-	-	-	-	-		
						10.2	0.3	45	23.7	23.7	8.1	8.1	32.3	32.3	83.4	83.4	5.9	5.9	1.4	6	-	-	-	-	-	-	-	-	-	-	-	-	-		
					Bottom	19.4	0.4	36	23.7	23.7	8.0	8.0	32.4	32.4	83.6	83.7	5.9	5.9	1.9	8	-	-	-	-	-	-	-	-	-	-	-	-	-		
						19.4	0.4	37	23.7	23.7	8.0	8.0	32.																						

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

Water Quality Monitoring

Water Quality Monitoring Results on 20 April 21 during Mid-Flood Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)	Current Speed (m/s)		Water Temperature (°C)	pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity (NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)		
						Current Speed	Current Direction		Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value
C1	Fine	Calm	05:29	8.6	Surface	1.0	0.7	57	23.8	23.8	8.1	8.1	32.9	32.9	101.9	101.7	7.1	7.1	2.7	6	86	88	<0.2	0.6	<0.2	0.6			
						1.0	0.8	58	23.8	8.1	8.1	32.9	32.9	101.4	101.4	7.1	7.1	2.8	5	86	86	<0.2	0.6	<0.2	0.6				
					Middle	4.3	0.8	65	23.5	23.5	8.1	8.1	33.7	33.7	98.1	97.9	6.9	6.8	3.1	5	89	89	<0.2	0.5	<0.2	0.6			
						4.3	0.9	70	23.5	23.5	8.1	8.1	33.7	33.7	97.7	97.6	6.8	6.8	3.2	4	89	89	<0.2	0.6	<0.2	0.6			
					Bottom	7.6	0.6	54	23.6	23.6	8.1	8.1	33.9	33.9	97.6	97.9	6.8	6.8	3.6	5	90	90	<0.2	0.6	<0.2	0.6			
						7.6	0.6	56	23.6	23.6	8.1	8.1	33.9	33.9	98.3	98.3	6.9	6.9	3.5	4	90	90	<0.2	0.5	<0.2	0.5			
C2	Fine	Moderate	07:01	11.1	Surface	1.0	0.5	312	24.1	24.1	8.1	8.1	28.2	28.2	93.1	93.1	6.7	0.3	6	86	86	<0.2	1.1	<0.2	1.1				
						1.0	0.5	335	24.1	24.1	8.1	8.1	28.2	28.2	93.0	93.0	6.7	0.3	5	87	87	<0.2	1.2	<0.2	1.2				
					Middle	5.6	0.4	322	24.2	24.2	8.0	8.0	28.9	29.0	91.7	91.5	6.5	6.5	1.0	6	91	91	<0.2	1.2	<0.2	1.2			
						5.6	0.4	349	24.2	24.2	8.0	8.0	29.1	29.1	91.3	91.3	6.5	6.5	1.1	5	91	91	<0.2	1.2	<0.2	1.2			
					Bottom	10.1	0.3	317	24.2	24.2	8.0	8.0	29.9	29.9	84.5	84.7	6.0	6.0	1.9	7	93	93	<0.2	1.1	<0.2	1.1			
						10.1	0.3	323	24.2	24.2	8.0	8.0	30.0	30.0	84.8	84.8	6.0	6.0	1.9	7	93	93	<0.2	1.1	<0.2	1.1			
C3	Fine	Moderate	05:02	11.8	Surface	1.0	0.5	290	23.8	23.8	8.0	8.0	31.3	31.3	87.3	87.3	6.2	0.5	3	86	86	<0.2	0.8	<0.2	0.8				
						1.0	0.5	314	23.8	23.8	8.0	8.0	31.5	31.5	86.1	86.1	6.1	6.1	0.8	3	89	89	<0.2	0.8	<0.2	0.8			
					Middle	5.9	0.6	278	23.8	23.8	8.0	8.0	31.5	31.5	86.1	86.1	6.1	6.1	0.8	4	89	89	<0.2	0.8	<0.2	0.8			
						5.9	0.6	279	23.8	23.8	8.0	8.0	31.5	31.5	86.1	86.1	6.1	6.1	0.8	4	89	89	<0.2	0.8	<0.2	0.8			
					Bottom	10.8	0.5	289	23.8	23.8	8.0	8.0	31.9	31.9	84.1	84.2	5.9	5.9	4.4	5	91	91	<0.2	0.9	<0.2	0.9			
						10.8	0.5	315	23.8	23.8	8.0	8.0	31.9	31.9	84.3	84.3	5.9	5.9	4.8	5	91	91	<0.2	1.0	<0.2	1.0			
IM1	Fine	Moderate	05:51	5.2	Surface	1.0	0.1	24	23.8	23.8	8.1	8.1	33.6	33.6	98.7	98.7	6.9	4.4	3	85	85	<0.2	0.6	<0.2	0.6				
						1.0	0.1	25	23.8	23.8	8.1	8.1	33.6	33.6	98.7	98.7	6.9	6.9	4.4	4	85	85	<0.2	0.6	<0.2	0.6			
					Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.2	0.6	<0.2	0.6	
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.2	0.6	<0.2	0.6	
					Bottom	4.2	0.2	38	23.8	23.8	8.0	8.0	33.7	33.7	95.3	95.4	6.6	6.6	6.6	5	89	89	<0.2	0.7	<0.2	0.7			
						4.2	0.2	40	23.8	23.8	8.0	8.0	33.7	33.7	95.4	95.4	6.7	6.5	6.5	5	86	86	<0.2	0.7	<0.2	0.7			
IM2	Fine	Moderate	05:58	7.2	Surface	1.0	0.3	24	23.7	23.7	8.1	8.1	33.3	33.3	101.3	101.3	7.1	2.6	3	86	86	<0.2	0.6	<0.2	0.6				
						1.0	0.3	24	23.7	23.7	8.1	8.1	33.3	33.3	101.3	101.3	7.1	2.6	3	85	85	<0.2	0.6	<0.2	0.6				
					Middle	3.6	0.5	39	23.7	23.7	8.1	8.1	33.3	33.3	100.6	100.5	7.0	7.0	3.6	4	89	89	<0.2	0.7	<0.2	0.7			
						3.6	0.5	39	23.7	23.7	8.1	8.1	33.3	33.3	100.4	100.4	7.0	7.0	3.7	4	90	90	<0.2	0.7	<0.2	0.7			
					Bottom	6.2	0.2	11	23.8	23.8	8.1	8.0	33.9	33.9	97.2	97.4	6.8	6.8	7.8	6	91	91	<0.2	0.7	<0.2	0.7			
						6.2	0.2	11	23.8	23.8	8.0	8.0	33.9	33.9	97.6	97.6	6.8	6.8	7.2	5	91	91	<0.2	0.7	<0.2	0.7			
IM3	Fine	Moderate	06:04	7.4	Surface	1.0	0.3	6	23.7	23.7	8.1	8.1	33.2	33.2	101.1	100.9	7.1	3.6	5	87	87	<0.2	0.7	<0.2	0.7				
						1.0	0.3	6	23.7	23.7	8.1	8.1	33.2	33.2	100.7	100.7	7.1	3.9	6	89	89	<0.2	0.7	<0.2	0.7				
					Middle	3.7	0.3	12	23.7	23.7	8.1	8.1	33.3	33.3	99.6	99.5	7.0	7.0	5.1	7	90	90	<0.2	0.7	<0.2	0.7			
						3.7	0.3	13	23.7	23.7	8.1	8.1	33.3	33.3	99.3	99.3	7.0	7.0	5.2	6	91	91	<0.2	0.6	<0.2	0.6			
					Bottom	6.4	0.3	4	23.8	23.8	8.1	8.1	33.7	33.7	97.5	97.9	6.8	6.8	7.2	6	91	91	<0.2	0.8	<0.2	0.8			
						6.4	0.3	4	23.8	23.8	8.1	8.1	33.7	33.7	98.2	98.2	6.8	6.8	7.1	7	87	87	<0.2	0.7	<0.2	0.7			
IM4	Fine	Moderate	06:13	8.6	Surface	1.0	0.6	322	23.7	23.7	8.1	8.1	33.4	33.4	103.7	103.7	7.2	3.2	6	88	88	<0.2	0.6	<0.2	0.6				
						1.0	0.6	341	23.7	23.7	8.1	8.1	33.4	33.4	103.7	103.7	7.2	3.2	5	90	90	<0.2	0.8	<0.2	0.8				
					Middle	4.3	0.5	335	23.7	23.7	8.1	8.1	33.4	33.4	101.2	101.2	7.1	7.1	3.6	5	91	91	<0.2	0.7	<0.2	0.7			
						4.3	0.5	359	23.7	23.7	8.1	8.1	33.4	33.4	101.2	101.2	7.1	7.1	3.6	6	91	91	<0.2	0.7	<0.2	0.7			
					Bottom	7.6	0.5	354	23.8	23.8	8.1	8.1	33.5	33.5	97.3	97.3	6.8	6.8	4.3	6	92	92	<0.2	0.6	<0.2	0.6			
						7.6	0.5	356	23.8	23.8	8.1	8.1	33.5	33.5	97.2	97.2	6.8	6.8	4.3	7	86	86	<0.2	0.6	<0.2	0.6			
IM5	Fine	Moderate	06:21	8.0	Surface	1.0	0.8	342	23.7	23.7	8.1	8.1	33.3	33.3	100.6	100.7	7.0	4.2	7	86	86	<0.2	0.8	<0.2	0.8				
						1.0	0.9	356	23.7	23.7	8.1	8.1	33.3	33.3	100.8	100.8	7.0	7.0	4.2	6	87	87	<0.2	0.8	<0.2	0.8			
					Middle	4.0	0.7	350	23.7	23.7	8.1	8.1	33.3	33.3	99.3	99.1	6.9	6.9	4.4	7	90	90	<0.2	0.7	<0.2	0.7			
						4.0	0.7	355	23.7	23.7	8.1	8.1	33.3	33.3	98.9	98.9	6.9	6.9	4.5	6	91	91	<0.2	0.7	<0.2	0.7			
					Bottom	7.0	0.6	7	23.7	23.7	8.1	8.1	33.3	33.3	99.2	99.2	6.9	6.9	5.1	4	91	91	<0.2	0.7	<0.2	0.7			
						7.0	0.6	7	23.7	23.7	8.1	8.1	33.3	33.3	99.2	99.2	6.9	6.9	5.2	5	86	86	<0.2	0.7	<0.2	0.7			
IM6	Fine	Moderate	06:29	7.8	Surface	1.0	0.1	213	24.1	24.0	8.1	8.1	30.7	30.8	98.7	98.8	7.0	2.4	7	86	86	<0.2	0.9	<0.2	0.9				
						1.0	0.1	225	24.0	24.0	8.1	8.1	30.8	30.8	98.9	98.9	7.0	2.5	6	89	89	<0.2	0.9	<0.2	0.9				
					Middle	3.9	0.2	65	23.9	23.9	8.1	8.1	31.6	31.5	97.2	97.2	6.8	6.8	3.2	5	89	89	<0.2	1.1	<0.2	1.1			
						3.9	0.2	65	23.9	23.9	8.1	8.1	31.6	31.5	97.1	97.1	6.8	6.8	3.3	4	89	89	<0.2	1.1	<0.2	1.1			
					Bottom	6.8	0.2	54	23.7	23.7	8.0	8.0	33.2	33.2	95.6	95.8	6.7	6.7	4.4	4	91	91	<0.2	1.0	<0.2	1.0			
						6.8	0.2	58	23.7	23.7	8.0	8.0	33.2	33.2	95.9	95.9	6.7	6.7	4.8	5	91	91	<0.2	1.0	<0.2	1.0			
IM7	Fine	Moderate	06:37	9.0	Surface	1.0	0.0	1	24.1	24.1	8.0	8.0	30.3	30.3	96.9	96.6	6.9	2.0	4	88	88	<0.2	0.7	<0.2	0.7				
						1.0	0.0	1	24.1	24.1	8.0	8.0	30.3	30.3	96.3	96.3	6.8	6.8	2.1	3	88	88	<0.2	0.6	<0.2	0.6			
					Middle	4.5	0.2	123	23.9	23.9	8.0	8.0	32.1	32.1	93.9	93.8	6.6	6.6	3.5	2	89	89	<0.2	1.1	<0.2	1.1			
						4.5	0.2	131	23.9	23.9	8.0	8.0	32.1	32.1	93.6	93.6	6.6	6.6	3.5	2	90	90	<0.2	1.1	<0.2	1.1			
					Bottom	8.0	0.2	139	23.8	23.8	8.0	8.0	33.2	33.2	91.9	91.9	6.4	6.4	4.1	2	91	91	<0.2	1.0	<0.2	1.0			
						8.0	0.2	148	23.8	23.8	8.0	8.0	33.2	33.2	91.9	91.9</													

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

Water Quality Monitoring

Water Quality Monitoring Results on 20 April 21 during Mid-Flood Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)	Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity (NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)								
								Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA			
IM9	Fine	Moderate	06:25	7.0	Surface	1.0	0.0	<u>256</u>	<u>24.0</u>	24.0	8.1	8.1	<u>29.4</u>	<u>29.4</u>	91.4	91.3	6.5	6.5	2.2	2	86	89	89	822099	808805	<0.2	1.2	1.2	1.1							
						1.0	0.0	<u>264</u>	<u>24.0</u>	8.1	8.1	<u>29.5</u>	<u>24.0</u>	91.2	91.2	6.5	6.5	2.2	2	86	89	89	822099	808805	<0.2	1.2	1.2	1.1								
						3.5	0.0	78	<u>23.8</u>	8.1	8.1	<u>30.4</u>	<u>30.5</u>	91.1	91.2	6.5	6.5	2.7	3	89	89	89	822099	808805	<0.2	1.2	1.2	1.1								
					Middle	3.5	0.0	<u>83</u>	<u>23.8</u>	8.1	8.1	<u>30.6</u>	<u>30.5</u>	91.3	91.2	6.5	6.5	2.7	4	89	89	89	822099	808805	<0.2	1.2	1.2	1.1								
						6.0	0.0	104	<u>23.7</u>	8.1	8.1	<u>30.9</u>	<u>30.9</u>	92.5	92.6	6.6	6.6	2.8	6	90	90	90	822099	808805	<0.2	1.2	1.2	1.1								
						6.0	0.0	111	<u>23.7</u>	8.1	8.1	<u>30.9</u>	<u>30.9</u>	92.7	92.6	6.6	6.6	2.9	5	91	91	91	822099	808805	<0.2	1.2	1.2	1.0								
					IM10	Fine	Moderate	06:19	7.7	Surface	1.0	0.8	<u>276</u>	<u>23.9</u>	23.9	8.0	8.0	<u>29.7</u>	<u>29.7</u>	86.8	86.6	6.2	6.2	2.1	<2	85	88	88	822396	809774	<0.2	1.1	1.2	1.2		
											1.0	0.8	<u>299</u>	<u>23.9</u>	23.9	8.0	8.0	<u>29.8</u>	<u>29.9</u>	86.4	86.1	6.2	6.2	<2	<2	85	89	89	822396	809774	<0.2	1.2	1.2	1.2		
											3.9	0.6	<u>288</u>	<u>23.9</u>	23.9	8.0	8.0	<u>30.0</u>	<u>29.9</u>	85.1	85.1	6.1	6.1	2.2	2	89	89	89	822396	809774	<0.2	1.2	1.2	1.2		
Middle	3.9	0.6	<u>297</u>	<u>23.9</u>						23.9	8.0	8.0	<u>29.9</u>	<u>29.9</u>	85.1	85.1	6.1	6.1	2.3	3	89	89	89	822396	809774	<0.2	1.2	1.2	1.2							
	6.7	0.5	261	<u>23.9</u>						23.9	8.0	8.0	<u>30.3</u>	<u>30.3</u>	77.8	77.9	5.5	5.5	4.4	2	90	90	90	822396	809774	<0.2	1.2	1.1	1.1							
	6.7	0.5	261	<u>23.9</u>						23.9	8.0	8.0	<u>30.3</u>	<u>30.3</u>	77.9	77.9	5.5	5.5	4.4	3	90	90	90	822396	809774	<0.2	1.1	1.1	1.1							
IM11	Fine	Moderate	06:09	8.0						Surface	1.0	0.8	<u>294</u>	<u>23.7</u>	23.7	8.1	8.0	<u>30.0</u>	<u>30.0</u>	91.8	91.7	6.6	6.6	1.4	<2	86	88	88	822061	811436	<0.2	1.2	1.2	1.1		
											1.0	0.8	<u>308</u>	<u>23.7</u>	23.7	8.0	8.0	<u>30.0</u>	<u>30.0</u>	91.6	91.6	6.5	6.5	1.4	<2	87	89	89	822061	811436	<0.2	1.2	1.2	1.1		
											4.0	0.6	281	<u>23.7</u>	23.7	8.0	8.0	<u>30.2</u>	<u>30.3</u>	90.2	90.1	6.4	6.4	1.8	2	89	89	89	822061	811436	<0.2	1.2	1.2	1.1		
					Middle	4.0	0.6	<u>303</u>	<u>23.7</u>	23.7	8.0	8.0	<u>30.3</u>	<u>30.3</u>	89.9	89.9	6.4	6.4	2.0	2	89	89	89	822061	811436	<0.2	1.1	1.1	1.1							
						7.0	0.4	290	<u>23.7</u>	23.7	8.0	8.0	<u>30.4</u>	<u>30.4</u>	89.6	89.7	6.4	6.4	2.9	2	90	90	90	822061	811436	<0.2	1.0	1.0	0.9							
						7.0	0.4	<u>303</u>	<u>23.7</u>	23.7	8.0	8.0	<u>30.4</u>	<u>30.4</u>	89.7	89.7	6.4	6.4	3.0	3	90	90	90	822061	811436	<0.2	1.0	0.9	0.9							
					IM12	Fine	Moderate	06:04	9.5	Surface	1.0	0.7	<u>261</u>	<u>23.7</u>	23.7	8.1	8.0	<u>30.0</u>	<u>30.0</u>	91.9	91.9	6.6	6.6	1.6	<2	86	88	88	821481	812027	<0.2	0.9	0.9	0.9		
											1.0	0.7	<u>282</u>	<u>23.7</u>	23.7	8.0	8.0	<u>30.0</u>	<u>30.0</u>	91.8	91.8	6.5	6.5	1.6	<2	85	89	89	821481	812027	<0.2	0.9	0.9	0.9		
											4.8	0.7	<u>273</u>	<u>23.7</u>	23.7	8.0	8.0	<u>30.2</u>	<u>30.2</u>	90.1	90.0	6.4	6.4	3.2	2	89	89	89	821481	812027	<0.2	1.1	1.1	1.0		
Middle	4.8	0.7	<u>275</u>	<u>23.7</u>						23.7	8.0	8.0	<u>30.2</u>	<u>30.2</u>	89.9	89.9	6.4	6.4	3.3	3	89	89	89	821481	812027	<0.2	1.1	1.1	1.0							
	8.5	0.5	270	<u>23.8</u>						23.8	8.0	8.0	<u>30.6</u>	<u>30.5</u>	90.4	90.7	6.4	6.5	3.2	2	90	90	90	821481	812027	<0.2	1.0	1.0	1.0							
	8.5	0.6	<u>288</u>	<u>23.7</u>						23.8	8.0	8.0	<u>30.5</u>	<u>30.5</u>	91.0	90.7	6.5	6.5	3.3	3	90	90	90	821481	812027	<0.2	1.0	1.0	1.0							
SR1A	Fine	Calm	05:37	5.6						Surface	1.0	-	-	<u>23.6</u>	23.6	8.0	8.0	<u>29.8</u>	<u>29.9</u>	87.6	87.5	6.3	6.3	0.9	2	-	-	-	819980	812665	-	-	-	-		
											1.0	-	-	<u>23.6</u>	23.6	8.0	8.0	<u>29.9</u>	<u>29.9</u>	87.4	87.4	6.2	6.3	1.0	2	-	-	-	819980	812665	-	-	-	-		
											2.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
					Middle	2.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	819980	812665	-	-	-	-				
						4.6	-	-	<u>23.7</u>	23.7	8.0	8.0	<u>30.2</u>	<u>30.2</u>	87.6	87.7	6.2	6.3	1.2	3	-	-	-	-	-	-	819980	812665	-	-	-	-				
						4.6	-	-	<u>23.7</u>	23.7	8.0	8.0	<u>30.2</u>	<u>30.2</u>	87.7	87.7	6.3	6.3	1.2	3	-	-	-	-	-	-	819980	812665	-	-	-	-				
					SR2	Fine	Calm	05:23	4.7	Surface	1.0	0.1	<u>21</u>	<u>23.7</u>	23.7	8.0	8.0	<u>30.3</u>	<u>30.3</u>	90.0	90.0	6.4	6.4	1.6	2	88	88	88	821486	814165	<0.2	0.9	0.9	0.9		
											1.0	0.1	<u>22</u>	<u>23.7</u>	23.7	8.0	8.0	<u>30.3</u>	<u>30.3</u>	90.0	90.0	6.4	6.4	1.7	3	87	88	88	821486	814165	<0.2	0.9	0.9	0.9		
											-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	821486	814165	<0.2	0.9	0.9
Middle	-	-	-	-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	821486	814165	<0.2	0.9	0.9	0.9				
	3.7	0.1	<u>126</u>	<u>23.7</u>						23.7	8.0	8.0	<u>30.4</u>	<u>30.4</u>	90.9	91.0	6.5	6.5	3.2	3	89	89	89	821486	814165	<0.2	0.8	0.8	0.8							
	3.7	0.1	<u>135</u>	<u>23.7</u>						23.7	8.0	8.0	<u>30.4</u>	<u>30.4</u>	91.0	91.0	6.5	6.5	3.2	2	89	89	89	821486	814165	<0.2	0.8	0.8	0.8							
SR3	Fine	Moderate	06:43	9.3						Surface	1.0	0.1	<u>312</u>	<u>24.0</u>	24.0	8.1	8.1	<u>29.2</u>	<u>29.3</u>	94.7	94.5	6.7	6.7	1.5	4	-	-	-	822162	807551	-	-	-	-		
											1.0	0.1	<u>330</u>	<u>24.0</u>	24.0	8.1	8.1	<u>29.4</u>	<u>29.3</u>	94.3	94.3	6.7	6.5	1.6	3	-	-	-	-	-	-	822162	807551	-	-	-
											4.7	0.1	<u>346</u>	<u>24.0</u>	24.0	8.1	8.1	<u>30.0</u>	<u>30.0</u>	87.7	87.8	6.2	6.2	2.3	3	-	-	-	-	-	-	822162	807551	-	-	-
					Middle	4.7	0.1	<u>355</u>	<u>24.0</u>	24.0	8.1	8.1	<u>30.0</u>	<u>30.0</u>	87.9	87.9	6.2	6.2	2.3	2	-	-	-	-	-	-	822162	807551	-	-	-	-				
						8.3	0.1	83	<u>23.7</u>	23.7	8.1	8.1	<u>31.2</u>	<u>31.2</u>	89.3	89.4	6.3	6.3	3.5	3	-	-	-	-	-	-	822162	807551	-	-	-					
						8.3	0.1	<u>86</u>	<u>23.7</u>	23.7	8.1	8.1	<u>31.2</u>	<u>31.2</u>	89.4	89.4	6.3	6.3	3.4	2	-	-	-	-	-	-	822162	807551	-	-	-					
					SR4A	Fine	Calm	05:07	9.4	Surface	1.0	0.0	74	<u>23.6</u>	23.6	8.1	8.1	<u>33.2</u>	<u>33.2</u>	98.3	98.4	6.9	6.9	4.1	2	-	-	-	817188	807833	-	-	-			
											1.0	0.0	79	<u>23.6</u>	23.6	8.1	8.1	<u>33.2</u>	<u>33.2</u>	98.4	98.4	6.9	6.8	4.3	2	-	-	-	-	-	-	817188	807833	-	-	-
											4.7	0.1	90	<u>23.8</u>	23.8	8.1	8.1	<u>33.7</u>	<u>33.7</u>	96.1	96.0	6.7	6.7	5.5	3	-	-	-	-	-	-	817188	807833	-	-	-
Middle	4.7	0.1	94	<u>23.8</u>						23.8	8.1	8.1	<u>33.7</u>	<u>33.7</u>	95.8	96.0	6.7	6.7	5.4	2	-	-	-	-	-	-	817188	807833	-	-	-					
	8.4	0.1	34	<u>23.8</u>						23.8	8.0	8.0	<u>33.8</u>	<u>33.8</u>	96.2	96.3	6.7																			

Expansion of Hong Kong International Airport into a Three-Runway System
 Water Quality Monitoring

Water Quality Monitoring Results on 22 April 21 during Mid-Ebb Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)	Current Speed (m/s)		Current Direction		Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity (NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)												
						Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA							
						Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA							
C1	Fine	Calm	10:25	8.6	Surface	1.0	0.1	72	24.5	24.4	8.2	8.2	28.4	28.6	133.8	131.4	9.5	8.6	3.4	2	84	3	3	87	815640	804239	<0.2	<0.2	0.5	0.5												
						1.0	0.1	75	24.2	8.2	8.0	28.8	28.6	9.2	8.6	3.4	3	86	0.5																							
						4.3	0.1	80	23.7	8.0	8.0	32.2	32.3	112.0	111.8	7.9	5.4	3	88	0.4																						
					4.3	0.1	87	23.7	8.0	8.0	32.3	32.3	111.5	111.8	7.9	5.8	2	90	0.5																							
					7.6	0.1	231	23.7	8.0	8.0	32.4	32.4	108.0	108.3	7.6	7.6	3	87	0.5																							
					7.6	0.1	234	23.7	8.0	8.0	32.4	32.4	108.6	108.3	7.6	7.6	3	89	0.6																							
C2	Cloudy	Moderate	11:27	12.5	Surface	1.0	2.5	70	25.1	25.1	8.4	8.4	24.6	24.6	107.2	107.2	7.7	7.0	1.0	4	92	3	3	91	825661	806933	<0.2	<0.2	2.3	2.3												
						1.0	2.6	71	25.1	8.4	8.4	24.6	24.6	107.2	107.2	7.7	7.0	3	90	2.5																						
						6.3	2.3	68	24.2	8.4	8.4	30.0	30.0	89.2	89.3	6.3	2.6	2	85	0.9																						
					6.3	2.5	68	24.2	8.4	8.4	30.1	30.1	89.3	89.3	6.3	2.7	3	86	2.1																							
					11.5	2.4	67	24.1	8.4	8.4	30.8	30.8	86.8	86.9	6.1	5.5	2	99	2.2																							
					11.5	2.6	67	24.1	8.4	8.4	30.8	30.8	87.0	86.9	6.1	5.4	2	94	2.1																							
C3	Cloudy	Moderate	08:55	12.6	Surface	1.0	3.7	7	24.1	24.1	8.1	8.1	30.3	30.3	95.5	95.5	6.8	6.4	1.0	3	82	3	3	85	822131	817797	<0.2	<0.2	0.9	0.9												
						1.0	4.0	7	24.1	8.1	8.1	30.3	30.3	95.4	95.5	6.7	7.7	3	88	0.9																						
						6.3	3.4	7	23.9	8.1	8.1	31.8	31.8	86.4	86.4	6.1	2.1	3	84	0.9																						
					6.3	3.5	7	23.9	8.1	8.1	31.8	31.8	86.4	86.4	6.1	2.1	3	83	0.9																							
					11.6	3.3	5	23.8	8.1	8.1	31.9	31.9	86.4	86.4	6.1	5.7	3	85	0.9																							
					11.6	3.5	5	23.8	8.1	8.1	31.9	31.9	86.4	86.4	6.1	5.5	2	90	0.9																							
IM1	Fine	Calm	10:46	5.2	Surface	1.0	0.0	176	24.7	24.7	8.2	8.2	28.9	29.0	134.6	134.4	9.5	9.5	3.0	3	81	3	3	84	817946	807155	<0.2	<0.2	0.5	0.5												
						1.0	0.0	185	24.6	8.2	8.2	29.1	29.0	134.1	134.1	9.5	3.0	2	84	0.5																						
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-								-		-	-	-	-	-	-	-	-	-	-	-	-
					4.2	0.1	112	24.5	8.1	8.1	30.1	30.1	123.6	123.7	8.7	6.4	4	82	0.5																							
					4.2	0.1	120	24.5	8.1	8.1	30.1	30.1	123.7	123.7	8.7	6.4	4	88	0.5																							
					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-								-		-	-	-	-	-	-	-	-	-	-	-	-
IM2	Fine	Calm	10:55	7.0	Surface	1.0	0.1	215	24.5	24.5	8.2	8.1	28.7	28.8	135.7	135.4	9.6	9.2	3.1	2	86	3	3	87	818183	806184	<0.2	<0.2	0.6	0.5												
						1.0	0.1	218	24.5	8.1	8.1	28.9	28.8	135.0	135.0	9.6	3.0	2	86	0.5																						
						3.5	0.1	126	24.2	8.1	8.1	30.1	30.2	124.9	124.6	8.8	5.2	4	88	0.4																						
					3.5	0.1	131	24.1	8.1	8.1	30.4	30.2	124.2	124.6	8.8	5.2	4	80	0.5																							
					6.0	0.1	98	24.1	8.1	8.1	30.6	30.5	112.3	112.6	7.9	6.0	4	89	0.5																							
					6.0	0.1	100	24.2	8.1	8.1	30.3	30.5	112.9	112.6	8.0	5.9	4	92	0.5																							
IM3	Fine	Calm	11:01	7.2	Surface	1.0	0.1	254	24.5	24.5	8.2	8.1	29.3	29.4	136.1	135.6	9.6	9.2	3.5	3	87	3	3	91	818787	805573	<0.2	<0.2	0.5	0.5												
						1.0	0.1	276	24.4	8.1	8.1	29.5	29.4	135.1	135.1	9.5	3.4	3	85	0.6																						
						3.6	0.0	157	24.2	8.1	8.1	30.2	30.3	124.8	124.7	8.8	4.1	3	92	0.5																						
					3.6	0.0	165	24.2	8.1	8.1	30.3	30.3	124.6	124.6	8.8	4.2	4	97	0.5																							
					6.2	0.1	102	23.9	8.1	8.1	31.3	31.3	111.1	111.2	7.8	9.9	4	97	0.5																							
					6.2	0.1	108	23.9	8.1	8.1	31.3	31.3	111.3	111.3	7.8	9.9	3	90	0.4																							
IM4	Fine	Calm	11:11	8.6	Surface	1.0	0.2	200	24.4	24.4	8.1	8.1	30.0	30.1	121.4	121.2	8.6	8.3	3.9	3	86	3	3	87	819723	804601	<0.2	<0.2	0.5	0.5												
						1.0	0.2	218	24.3	8.1	8.1	30.2	30.1	121.0	121.0	8.5	3.9	2	88	0.5																						
						4.3	0.1	178	24.2	8.1	8.0	30.8	30.9	114.2	114.2	8.0	6.1	3	82	0.5																						
					4.3	0.1	193	24.1	8.0	8.0	31.0	30.9	114.1	114.1	8.0	6.1	2	85	0.5																							
					7.6	0.1	125	24.0	8.0	8.0	31.7	31.6	107.3	107.5	7.5	7.5	4	89	0.4																							
					7.6	0.1	131	24.0	8.0	8.0	31.6	31.6	107.7	107.5	7.5	7.5	3	92	0.5																							
IM5	Fine	Calm	11:19	8.0	Surface	1.0	0.3	226	24.7	24.7	8.1	8.1	28.4	28.4	125.4	125.4	8.9	8.9	3.6	5	93	4	4	89	820749	804883	<0.2	<0.2	0.5	0.5												
						1.0	0.3	240	24.7	8.1	8.1	28.4	28.4	125.3	125.3	8.9	3.6	5	95	0.6																						
						4.0	0.2	212	24.4	8.1	8.1	30.0	30.0	126.7	126.5	8.9	5.1	5	85	0.6																						
					4.0	0.2	223	24.4	8.1	8.1	30.0	30.0	126.3	126.5	8.9	5.2	4	87	0.6																							
					7.0	0.2	205	24.4	8.1	8.1	30.2	30.2	120.3	120.6	8.5	6.3	2	88	0.5																							
					7.0	0.2	222	24.4	8.1	8.1	30.2	30.2	120.8	120.6	8.5	6.3	3	87	0.5																							
IM6	Fine	Calm	11:28	7.8	Surface	1.0	0.2	243	24.6	24.6	8.1	8.1	28.5	28.6	126.1	125.9	8.9	8.6	4.0	2	92	3	3	88	821060	805839	<0.2	<0.2	0.5	0.6												
						1.0	0.2	263	24.5	8.1	8.1	28.7	28.6	125.6	125.9	8.9	4.4	3	91	0.6																						
						3.9	0.1	231	24.4	8.1	8.1	29.5	29.5	117.0	116.8	8.3	5.1	3	87	0.5																						
					3.9	0.1	238	24.4	8.1	8.1	29.5	29.5	116.5	116.8	8.2	5.2	4	84	0.6																							
					6.8	0.1	167	24.4	8.1	8.1	29.6	29.6	115.3	115.4	8.1	7.0	4	86	0.6																							
					6.8	0.2	179	24.4	8.1	8.1	29.6	29.6	115.4	115.4	8.1	7.0	3	88	0.5																							
IM7	Fine	Calm	11:35	9.0	Surface	1.0	0.1	276	24.7	24.7	8.1	8.1	28.2	28.4	125.5	125.2	8.9	8.5	4.1	4	82	4	4	86	821345	806832	<0.2	<0.2	0.5	1.0												
						1.0	0.1	292	24.6	8.1	8.1	28.5	28.4	124.9	125.2	8.8	4.1	5	85	0.5																						
						4.5	0.2	119	24.4	8.1	8.1	29.5	29.6	114.8	114.4	8.1	6.2	4	89	1.2																						
					4.5	0.2	128	24.3	8.1	8.1	29.7	29.6	113.9	114.4	8.0	6.3	3	86	1.3																							
					8.0	0.1	100	24.2	8.0	8.0	30.2	30.2	95.4	95.5	6.7	8.9	4	88	1.3																							
					8.0	0.2	101	24.2	8.0	8.0	30.2	30.2	95.5	95.5	6.7	8.9	3	88	1.3																							
IM8	Cloudy	Moderate	10:53	7.9	Surface	1.0	2.1	256	24.9	24.9	8.2	8.2	26.9	26.9	111.4	111.4	7.9	7.8	2.0	5	83	5	5	86	821852	808123	<0.2	<0.2	1.2	1.9												
						1.0	2.3	275	24.9	8.2	8.2	26.9	26.9	111.3	111.4	7.9	2.1	4	84	1.3																						
						4.0	2.3	256	24.6	8.2	8.2	28.0	28.0	108.6	108.6	7.7	2.4	4	86	2.1																						
					4.0	2.5	269	24.6	8.2	8.2	28.1	28.0	108.5	108.6	7.7	2.5	4	88	2.3																							
					6.9	2.3	257	24.5	8.2	8.2	29.3	29.3	9																													

Expansion of Hong Kong International Airport into a Three-Runway System
Water Quality Monitoring

Water Quality Monitoring Results on 22 April 21 during Mid-Ebb Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)	Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity (NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)				
								Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA			
								Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA			
IM9	Cloudy	Moderate	10:46	7.1	Surface	1.0	2.2	317	24.7	24.7	8.2	8.2	27.1	27.1	106.5	106.5	7.6	7.6	2.2	3	88	92	92	822104	808799	<0.2	1.4	1.2	1.3			
						2.2	327	24.7	8.2	27.1	27.1	106.5	106.5	7.6	7.6	2.3	3	90	92	92	822104	808799	<0.2	1.3	1.2	1.4						
					Middle	3.6	2.1	319	24.6	24.6	8.1	8.1	28.3	28.3	92.9	93.0	6.6	6.6	3.3	4	85	85	88	822104	808799	<0.2	1.2	1.2	1.2	1.4		
						3.6	2.2	330	24.6	24.6	8.1	8.1	28.4	28.4	93.0	93.0	6.6	6.6	3.6	3	91	91	91	822104	808799	<0.2	1.2	1.4	1.4			
					Bottom	6.1	2.3	313	24.5	24.5	8.2	8.2	28.8	28.8	94.0	94.1	6.7	6.7	6.1	4	92	92	92	822104	808799	<0.2	1.4	1.4	1.4	1.4		
						6.1	2.3	315	24.5	24.5	8.2	8.2	28.8	28.8	94.2	94.2	6.7	6.7	6.4	3	91	91	91	822104	808799	<0.2	1.4	1.4	1.4	1.4		
						6.2	2.3	315	24.5	24.5	8.2	8.2	28.8	28.8	94.2	94.2	6.7	6.7	6.4	3	91	91	91	822104	808799	<0.2	1.4	1.4	1.4	1.4		
IM10	Cloudy	Moderate	10:38	7.5	Surface	1.0	2.7	171	25.0	25.0	8.2	8.2	24.9	24.9	105.1	105.1	7.5	7.5	0.9	3	84	88	88	822378	809806	<0.2	1.6	1.5	1.5			
						1.0	2.7	178	25.0	25.0	8.2	8.2	24.9	24.9	105.0	105.0	7.5	7.5	0.9	2	86	88	88	822378	809806	<0.2	1.5	1.5	1.5			
					Middle	3.8	2.6	170	24.6	24.6	8.2	8.2	28.1	28.1	97.2	97.3	6.9	6.9	3.2	2	88	88	88	822378	809806	<0.2	1.4	1.4	1.4	1.5		
						3.8	2.7	173	24.6	24.6	8.2	8.2	28.1	28.1	97.3	97.3	6.9	6.9	3.6	3	88	88	88	822378	809806	<0.2	1.2	1.2	1.2	1.5		
					Bottom	6.5	2.8	171	24.5	24.5	8.2	8.2	29.2	29.2	96.9	97.0	6.8	6.8	6.4	3	90	90	90	822378	809806	<0.2	1.5	1.5	1.5	1.5		
						6.5	3.0	183	24.5	24.5	8.2	8.2	29.2	29.2	97.0	97.0	6.9	6.9	6.4	4	92	92	92	822378	809806	<0.2	1.6	1.6	1.6	1.6		
						6.5	3.0	183	24.5	24.5	8.2	8.2	29.2	29.2	97.0	97.0	6.9	6.9	6.4	4	92	92	92	822378	809806	<0.2	1.6	1.6	1.6	1.6		
IM11	Cloudy	Moderate	10:23	7.8	Surface	1.0	3.0	118	24.9	24.9	8.1	8.1	26.9	26.9	96.1	96.1	6.8	6.8	1.1	2	98	95	95	822065	811472	<0.2	1.9	1.8	1.8	1.9		
						1.0	3.0	126	24.9	24.9	8.1	8.1	27.0	27.0	96.1	96.1	6.8	6.8	1.1	2	95	87	85	822065	811472	<0.2	1.8	1.8	1.9	1.9		
					Middle	3.9	2.9	120	24.3	24.3	8.2	8.1	29.5	29.5	94.4	94.4	6.7	6.7	2.3	2	87	85	88	822065	811472	<0.2	1.9	1.9	1.9	1.9		
						3.9	2.9	130	24.3	24.3	8.1	8.1	29.5	29.5	94.3	94.3	6.7	6.7	2.3	3	85	84	88	822065	811472	<0.2	1.8	2.0	2.0	2.0		
					Bottom	6.8	2.9	120	24.1	24.1	8.1	8.1	30.5	30.5	86.9	86.9	6.1	6.1	2.3	2	84	88	88	822065	811472	<0.2	2.0	2.0	2.0	2.0		
						6.8	3.0	126	24.1	24.1	8.1	8.1	30.5	30.5	86.9	86.9	6.1	6.1	2.3	2	88	88	88	822065	811472	<0.2	2.0	2.0	2.0	2.0		
						6.8	3.0	126	24.1	24.1	8.1	8.1	30.5	30.5	86.9	86.9	6.1	6.1	2.3	2	88	88	88	822065	811472	<0.2	2.0	2.0	2.0	2.0		
IM12	Cloudy	Moderate	10:15	9.5	Surface	1.0	2.4	170	24.7	24.7	8.2	8.2	26.2	26.2	100.5	100.5	7.2	7.2	1.9	3	83	85	86	821443	812069	<0.2	2.0	2.1	1.9	1.9		
						1.0	2.4	174	24.7	24.7	8.2	8.2	26.3	26.2	100.5	100.5	7.2	7.2	1.9	2	85	86	87	821443	812069	<0.2	1.8	1.9	1.8	1.9		
					Middle	4.8	2.4	175	24.2	24.2	8.1	8.1	30.0	30.0	93.2	93.2	6.6	6.6	1.8	3	86	87	88	821443	812069	<0.2	1.9	1.8	1.8	1.9		
						4.8	2.6	178	24.1	24.1	8.1	8.1	30.0	30.0	93.1	93.1	6.6	6.6	1.9	2	87	88	88	821443	812069	<0.2	1.8	1.8	1.8	1.9		
					Bottom	8.5	2.5	173	24.0	24.0	8.1	8.1	30.7	30.7	84.4	84.5	6.0	6.0	5.5	2	88	88	88	821443	812069	<0.2	1.8	1.9	1.8	1.9		
						8.5	2.7	178	24.0	24.0	8.1	8.1	30.7	30.7	84.5	84.5	6.0	6.0	5.7	2	88	88	88	821443	812069	<0.2	1.8	1.9	1.8	1.9		
						8.5	2.7	178	24.0	24.0	8.1	8.1	30.7	30.7	84.5	84.5	6.0	6.0	5.7	2	88	88	88	821443	812069	<0.2	1.8	1.9	1.8	1.9		
SR1A	Cloudy	Calm	09:37	5.0	Surface	1.0	-	-	24.2	24.2	8.2	8.2	29.6	29.6	96.8	96.8	6.9	6.9	2.2	3	-	-	-	819976	812664	-	-	-	-	-		
						1.0	-	-	24.2	24.2	8.2	8.2	29.7	29.6	96.7	96.7	6.9	6.9	2.3	2	-	-	-	819976	812664	-	-	-	-	-		
					Middle	2.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	819976	812664	-	-	-	-	-
						2.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	819976	812664	-	-	-	-	-
					Bottom	4.0	-	-	24.2	24.2	8.2	8.2	30.1	30.1	96.5	96.5	6.8	6.8	2.8	2	-	-	-	-	-	819976	812664	-	-	-	-	-
						4.0	-	-	24.2	24.2	8.2	8.2	30.1	30.1	96.5	96.5	6.8	6.8	2.6	2	-	-	-	-	-	819976	812664	-	-	-	-	-
						4.0	-	-	24.2	24.2	8.2	8.2	30.1	30.1	96.5	96.5	6.8	6.8	2.6	2	-	-	-	-	-	819976	812664	-	-	-	-	-
SR2	Cloudy	Moderate	09:20	4.5	Surface	1.0	0.1	15	24.2	24.2	8.2	8.2	29.8	29.8	100.1	100.1	7.1	7.1	1.5	3	91	92	92	821448	814184	<0.2	2.0	2.0	2.0	2.0		
						1.0	0.1	15	24.2	24.2	8.2	8.2	29.8	29.8	100.1	100.1	7.1	7.1	1.5	2	92	92	92	821448	814184	<0.2	2.0	2.0	2.0	2.0		
					Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	821448	814184	<0.2	2.0	2.0	2.0	2.0
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	821448	814184	<0.2	2.0	2.0	2.0	2.0
					Bottom	3.5	0.1	20	24.1	24.1	8.2	8.2	30.1	30.1	95.1	95.1	6.7	6.7	2.3	3	85	85	85	821448	814184	<0.2	2.0	2.0	2.0	2.0		
						3.5	0.1	20	24.1	24.1	8.2	8.2	30.1	30.1	95.1	95.1	6.7	6.7	2.6	2	85	85	85	821448	814184	<0.2	2.0	2.0	2.0	2.0		
						3.5	0.1	20	24.1	24.1	8.2	8.2	30.1	30.1	95.1	95.1	6.7	6.7	2.6	2	85	85	85	821448	814184	<0.2	2.0	2.0	2.0	2.0		
SR3	Cloudy	Moderate	11:00	9.0	Surface	1.0	2.3	195	24.8	24.8	8.3	8.3	26.7	26.7	117.7	117.7	8.4	8.4	1.9	3	-	-	-	822135	807557	-	-	-	-			
						1.0	2.5	211	24.8	24.8	8.3	8.3	26.7	26.7	117.6	117.6	8.4	8.4	1.9	3	-	-	-	822135	807557	-	-	-	-			
					Middle	4.5	2.5	198	24.5	24.5	8.2	8.2	28.8	28.8	99.2	99.2	7.0	7.0	2.3	4	-	-	-	822135	807557	-	-	-	-			
						4.5	2.7	208	24.5	24.5	8.2	8.2	28.8	28.8	99.2	99.2	7.0	7.0	2.4	3	-	-	-	822135	807557	-	-	-	-			
					Bottom	8.0	2.7	195	24.5	24.5	8.2	8.2	29.2	29.1	99.8	99.8	7.1	7.1	2.9	3	-	-	-	822135	807557	-	-	-	-			
						8.0	2.8	202	24.5	24.5	8.2	8.2	29.1	29.1	99.8	99.8	7.1	7.1	3.2	3	-	-	-	822135	807557	-	-	-	-			

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

Water Quality Monitoring

Water Quality Monitoring Results on 22 April 21 during Mid-Flood Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)	Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity (NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)									
								Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA
C1	Fine	Calm	13:58	8.4	Surface	1.0	0.3	43	25.2	25.3	8.2	8.2	28.7	28.6	144.0	143.5	10.1	9.3	3.8	4	84	86	<0.2							1.9							
						1.0	0.3	46	25.3	8.2	8.2	28.6	28.6	142.9	143.0	10.0	9.3	3.8	3	84	86	<0.2											1.8				
						4.2	0.2	40	23.9	23.9	8.1	8.1	32.0	32.0	121.8	121.6	8.6	7.5	5.5	4	88	89	<0.2	<0.2								2.0					
					4.2	0.2	42	23.9	23.9	8.1	8.1	32.0	32.0	121.3	121.3	8.5	7.5	5.6	3	89	86	<0.2	<0.2										1.9				
					7.4	0.2	37	23.7	23.7	8.1	8.1	32.4	32.4	106.4	106.5	7.5	6.4	6.8	4	86	86	<0.2	<0.2										1.9				
					7.4	0.2	37	23.7	23.7	8.1	8.1	32.4	32.4	106.6	106.6	7.5	6.4	6.8	4	86	86	<0.2	<0.2											1.8			
C2	Fine	Moderate	12:52	12.3	Surface	1.0	3.3	27	25.4	25.4	8.4	8.4	25.4	25.4	113.3	113.3	8.1	7.9	1.6	3	89	90	<0.2							1.7							
						1.0	3.6	27	25.3	25.3	8.4	8.4	25.4	25.4	113.3	113.3	8.1	7.9	1.6	3	90	88	<0.2	<0.2									1.6				
						6.2	3.6	27	24.6	24.6	8.4	8.4	27.9	27.9	106.9	106.8	7.6	6.4	2.9	3	88	91	<0.2	<0.2									1.4				
					6.2	3.7	27	24.6	24.6	8.4	8.4	27.9	27.9	106.7	106.7	7.6	6.4	2.9	3	91	92	<0.2	<0.2									1.5					
					11.3	3.8	27	24.3	24.3	8.4	8.4	29.9	29.9	91.1	91.0	6.4	6.4	3.0	3	92	92	<0.2	<0.2									1.6					
					11.3	3.9	27	24.3	24.3	8.4	8.4	29.9	29.9	90.9	90.9	6.4	6.4	3.0	3	92	88	<0.2	<0.2									1.6					
C3	Fine	Moderate	15:10	12.0	Surface	1.0	3.2	252	24.8	24.8	8.3	8.3	29.3	29.3	117.3	117.3	8.2	7.8	0.8	2	86	92	<0.2							0.5							
						1.0	3.5	272	24.8	24.8	8.3	8.3	30.3	30.3	117.2	117.2	8.2	7.8	1.0	2	86	92	<0.2	<0.2									0.6				
						6.0	3.4	252	24.3	24.3	8.3	8.3	30.4	30.4	103.2	103.1	7.3	6.0	1.0	2	92	94	<0.2	<0.2									1.2				
					6.0	3.6	256	24.3	24.3	8.3	8.3	30.4	30.4	103.0	103.0	7.3	6.0	1.0	2	92	92	<0.2	<0.2									1.2					
					11.0	3.7	259	23.9	23.9	8.2	8.2	31.8	31.8	85.5	85.5	6.0	6.0	4.5	2	94	92	<0.2	<0.2									1.2					
					11.0	4.0	257	23.9	23.9	8.2	8.2	31.8	31.8	85.5	85.5	6.0	6.0	4.7	3	92	88	<0.2	<0.2									1.2					
IM1	Fine	Calm	13:37	5.0	Surface	1.0	0.1	347	25.4	25.5	8.2	8.2	27.8	27.8	147.5	147.5	10.3	10.3	2.6	2	88	87	<0.2							0.7							
						1.0	0.1	347	25.5	25.5	8.2	8.2	27.7	27.7	147.5	147.5	10.3	10.3	2.5	3	87	85	<0.2	<0.2									0.7				
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
					4.0	0.1	22	24.2	24.3	8.2	8.2	30.6	30.5	122.5	122.9	8.6	8.7	4.4	5	85	86	<0.2	<0.2									0.6					
					4.0	0.1	23	24.3	24.3	8.2	8.2	30.4	30.5	123.2	122.9	8.7	8.7	4.4	5	86	86	<0.2	<0.2									0.6					
					4.0	0.1	22	24.2	24.3	8.2	8.2	30.6	30.5	122.5	122.9	8.6	8.7	4.4	5	85	86	<0.2	<0.2									0.6					
IM2	Fine	Calm	13:30	7.0	Surface	1.0	0.1	332	25.0	24.9	8.2	8.2	28.5	28.6	148.6	148.4	10.5	9.7	2.9	6	86	89	<0.2							1.4							
						1.0	0.1	350	24.8	24.8	8.2	8.2	28.8	28.6	148.1	148.4	10.4	9.7	2.8	5	86	89	<0.2	<0.2									1.3				
						3.5	0.1	354	24.1	24.1	8.1	8.1	30.7	30.8	127.1	126.4	9.0	8.8	5.7	6	89	90	<0.2	<0.2									1.5				
					3.5	0.1	326	24.1	24.1	8.1	8.1	30.9	30.8	125.6	126.4	8.8	8.0	5.7	6	90	90	<0.2	<0.2									1.4					
					6.0	0.2	46	23.9	23.9	8.1	8.1	31.6	31.6	113.7	113.8	8.0	8.0	7.5	7	90	90	<0.2	<0.2									1.6					
					6.0	0.2	47	23.9	23.9	8.1	8.1	31.6	31.6	113.8	113.8	8.0	8.0	7.5	6	90	90	<0.2	<0.2									1.6					
IM3	Fine	Calm	13:24	7.2	Surface	1.0	0.1	311	24.8	24.8	8.2	8.2	29.0	29.1	147.3	147.0	10.4	9.8	3.0	7	87	87	<0.2							1.2							
						1.0	0.1	337	24.7	24.7	8.2	8.2	29.2	29.2	146.7	147.0	10.3	9.8	2.9	7	88	87	<0.2	<0.2									1.2				
						3.6	0.1	342	24.1	24.1	8.2	8.2	30.9	31.1	131.4	130.0	9.3	8.8	5.5	6	87	89	<0.2	<0.2									1.4				
					3.6	0.1	358	24.0	24.0	8.2	8.2	31.3	31.1	128.5	128.5	9.1	8.8	5.5	5	89	92	<0.2	<0.2									1.4					
					6.2	0.1	28	23.9	23.9	8.1	8.1	31.7	31.7	110.3	110.5	7.8	7.8	7.3	4	92	91	<0.2	<0.2									1.5					
					6.2	0.1	28	23.9	23.9	8.1	8.1	31.7	31.7	110.7	110.5	7.8	7.8	7.4	4	91	88	<0.2	<0.2									1.5					
IM4	Fine	Calm	13:16	8.4	Surface	1.0	0.1	342	24.6	24.6	8.1	8.1	29.8	29.8	118.1	118.4	8.3	8.2	4.4	7	86	87	<0.2							1.2							
						1.0	0.1	346	24.5	24.5	8.1	8.1	29.9	29.8	118.6	118.4	8.3	8.2	4.5	8	86	87	<0.2	<0.2									1.3				
						4.2	0.1	1	24.3	24.3	8.1	8.1	30.5	30.6	115.9	115.7	8.2	8.1	5.7	5	87	89	<0.2	<0.2									1.5				
					4.2	0.1	1	24.2	24.3	8.1	8.1	30.7	30.6	115.5	115.7	8.1	8.1	5.7	5	89	90	<0.2	<0.2									1.4					
					7.4	0.2	27	23.8	23.8	8.1	8.1	32.0	32.0	105.1	105.2	7.4	7.4	8.5	5	90	91	<0.2	<0.2									1.8					
					7.4	0.2	27	23.9	23.9	8.1	8.1	32.0	32.0	105.3	105.2	7.4	7.4	8.4	4	91	86	<0.2	<0.2									1.8					
IM5	Fine	Calm	13:08	8.0	Surface	1.0	0.1	300	24.5	24.5	8.1	8.1	29.4	29.5	122.1	122.1	8.6	8.6	4.4	3	90	86	<0.2							1.3							
						1.0	0.1	328	24.5	24.5	8.1	8.1	29.6	29.5	122.1	122.3	8.6	8.6	4.5	3	86	88	<0.2	<0.2									1.2				
						4.0	0.1	287	24.4	24.4	8.1	8.1	30.2	30.2	121.8	122.3	8.6	8.1	5.3	4	88	91	<0.2	<0.2								1.3					
					4.0	0.1	301	24.4	24.4	8.1	8.1	30.2	30.2	122.8	122.3	8.6	8.1	5.4	3	91	87	<0.2	<0.2									1.2					
					7.0	0.0	121	24.3	24.4	8.1	8.1	30.2	30.2	114.9	114.9	8.1	8.1	6.3	4	87	89	<0.2	<0.2									1.4					
					7.0	0.0	131	24.4	24.4	8.1	8.1	30.2	30.2	114.9	114.9	8.1	8.1	6.4	5	89	89	<0.2	<0.2									1.4					
IM6	Fine	Calm	13:01	7.6	Surface	1.0	0.1	189	25.7	25.2	8.1	8.1	28.2	28.7	127.3	128.7	8.9	8.9	3.3	5	84	86	<0.2							1.4							
						1.0	0.1	205	24.6	24.6	8.1	8.1	29.2	28.7	130.1	125.3	9.2	8.8	3.4	5	86	85	<0.2	<0.2									1.5				
						3.8	0.1	215	24.5	24.5	8.1	8.1	29.6	29.6	125.3	125.3	8.8	8.8	4.1	3	88	85	<0.2	<0.2									1.4				
					3.8	0.1	223	24.5	24.5	8.1	8.1	29.6	29.6	125.2	125.2	8.8	8.8	4.1	4	85	89	<0.2	<0.2									1.2					
					6.6	0.1	226	24.4	24.4	8.1	8.1	30.0	30.0	122.9	122.9	8.7	8.7	5.2	3	89	91	<0.2	<0.2									1.2					
					6.6	0.1	229	24.4	24.4	8.1	8.1	30.0	30.0	122																							

Expansion of Hong Kong International Airport into a Three-Runway System
Water Quality Monitoring

Water Quality Monitoring Results on 22 April 21 during Mid-Flood Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)	Current		Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity (NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)	
						Speed (m/s)	Direction	Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA
IM9	Fine	Moderate	13:27	7.4	Surface	1.0	2.5	232	25.3	25.3	8.3	8.3	25.3	25.3	121.2	121.1	8.6	8.1	1.0	4	88	89	89	822098	808805	<0.2	2.2	2.1	2.1
						1.0	2.6	245	25.3	8.3	8.3	25.3	25.3	121.0	121.0	8.6	8.1	1.0	3	86	89	89	822098	808805	<0.2	2.1	2.1	2.1	
						3.7	2.4	232	24.6	8.3	8.3	28.6	28.6	108.0	108.0	7.6	7.7	2.3	5	89	89	89	822098	808805	<0.2	2.1	2.1	2.1	
					Middle	3.7	2.6	238	24.6	8.3	8.3	28.6	28.6	108.0	108.0	7.6	7.7	2.3	4	89	89	89	822098	808805	<0.2	2.2	2.1	2.1	
						6.4	2.1	230	24.6	8.3	8.3	29.1	29.1	109.1	109.4	7.7	7.7	2.8	5	90	89	89	822098	808805	<0.2	2.1	2.1	2.1	
						6.4	2.2	237	24.7	8.3	8.3	29.1	29.1	109.6	109.6	7.7	7.7	2.7	4	90	89	89	822098	808805	<0.2	2.1	2.1	2.1	
					Bottom	1.0	2.6	24	24.9	24.9	8.4	8.4	26.8	26.8	125.1	125.0	8.9	8.6	1.2	5	87	89	89	822098	808805	<0.2	2.2	2.1	2.1
						1.0	2.6	25	24.9	24.9	8.4	8.4	26.7	26.7	124.9	124.9	8.9	8.6	1.2	4	87	89	89	822098	808805	<0.2	2.1	2.1	2.1
						4.1	2.3	26	24.6	24.6	8.3	8.3	28.6	28.6	115.7	115.7	8.2	8.2	2.2	4	86	89	89	822098	808805	<0.2	2.2	2.1	2.2
IM10	Fine	Moderate	13:36	8.1	Surface	1.0	2.6	24	24.9	24.9	8.4	8.4	26.8	26.8	125.1	125.0	8.9	8.6	1.2	5	87	89	89	822374	809804	<0.2	2.2	2.1	2.2
						1.0	2.6	25	24.9	24.9	8.4	8.4	26.7	26.7	124.9	124.9	8.9	8.6	1.2	4	87	89	89	822374	809804	<0.2	2.1	2.1	2.2
						4.1	2.3	26	24.6	24.6	8.3	8.3	28.6	28.6	115.7	115.7	8.2	8.2	2.2	4	86	89	89	822374	809804	<0.2	2.2	2.1	2.2
					Middle	4.1	2.4	26	24.6	24.6	8.3	8.3	28.6	28.6	115.6	115.6	8.2	8.2	2.2	5	86	89	89	822374	809804	<0.2	2.2	2.1	2.2
						7.1	2.6	21	24.6	24.6	8.3	8.3	28.9	28.8	105.1	105.3	7.4	7.5	1.9	3	94	89	89	822374	809804	<0.2	2.2	2.1	2.2
						7.1	2.7	22	24.6	24.6	8.3	8.3	28.7	28.7	105.4	105.3	7.5	7.5	2.0	4	92	89	89	822374	809804	<0.2	2.2	2.1	2.2
					Bottom	1.0	2.6	47	24.9	24.9	8.4	8.4	26.9	26.8	123.1	123.0	8.7	8.3	1.4	5	88	89	89	822077	811473	<0.2	2.0	1.9	1.9
						1.0	2.9	48	24.9	24.9	8.4	8.4	26.8	26.8	122.9	122.9	8.7	8.3	1.4	5	88	89	89	822077	811473	<0.2	2.2	1.9	1.9
						3.8	2.5	45	24.6	24.6	8.3	8.3	28.6	28.6	111.7	111.6	7.9	8.3	1.7	5	86	89	89	822077	811473	<0.2	1.9	1.7	1.7
IM11	Fine	Moderate	13:46	7.5	Surface	1.0	2.6	47	24.9	24.9	8.4	8.4	26.9	26.8	123.1	123.0	8.7	8.3	1.4	5	88	89	89	822077	811473	<0.2	2.0	1.9	1.9
						1.0	2.9	48	24.9	24.9	8.4	8.4	26.8	26.8	122.9	122.9	8.7	8.3	1.4	5	88	89	89	822077	811473	<0.2	2.2	1.9	1.9
						3.8	2.5	45	24.6	24.6	8.3	8.3	28.6	28.6	111.7	111.6	7.9	8.3	1.7	5	86	89	89	822077	811473	<0.2	1.9	1.7	1.7
					Middle	3.8	2.7	48	24.6	24.6	8.3	8.3	28.6	28.6	111.5	111.6	7.9	8.3	1.6	4	89	89	89	822077	811473	<0.2	1.8	1.7	1.7
						6.5	2.9	36	24.4	24.5	8.3	8.3	29.4	29.4	99.1	99.2	7.0	7.0	2.0	5	90	89	89	822077	811473	<0.2	1.7	1.6	1.6
						6.5	3.0	37	24.5	24.5	8.3	8.3	29.4	29.4	99.3	99.2	7.0	7.0	2.0	4	92	89	89	822077	811473	<0.2	1.6	1.6	1.6
					Bottom	1.0	2.9	41	25.2	25.2	8.3	8.3	26.5	26.5	122.5	122.5	8.7	8.2	1.4	4	88	89	89	821461	812033	<0.2	1.8	1.7	1.7
						1.0	3.0	42	25.2	25.2	8.3	8.3	26.5	26.5	122.5	122.5	8.7	8.2	1.5	4	89	89	89	821461	812033	<0.2	1.7	1.7	1.7
						4.7	2.8	41	24.5	24.5	8.3	8.3	28.9	28.9	108.4	108.4	7.7	8.2	2.0	4	92	89	89	821461	812033	<0.2	1.7	1.7	1.7
IM12	Fine	Moderate	13:53	9.4	Surface	1.0	2.9	41	25.2	25.2	8.3	8.3	28.9	28.9	108.4	108.4	7.7	8.2	2.0	4	92	89	89	821461	812033	<0.2	1.6	1.6	1.7
						1.0	3.0	42	25.2	25.2	8.3	8.3	28.9	28.9	108.4	108.4	7.7	8.2	1.9	5	93	89	89	821461	812033	<0.2	1.7	1.6	1.7
						4.7	2.8	41	24.5	24.5	8.3	8.3	28.9	28.9	108.4	108.4	7.7	8.2	2.0	4	92	89	89	821461	812033	<0.2	1.6	1.6	1.7
					Middle	4.7	2.9	43	24.5	24.5	8.3	8.3	28.9	28.9	108.4	108.4	7.7	8.2	1.9	5	93	89	89	821461	812033	<0.2	1.7	1.6	1.7
						8.4	2.8	38	24.2	24.2	8.2	8.2	30.4	30.4	92.8	92.8	6.5	6.5	1.9	5	90	89	89	821461	812033	<0.2	1.8	1.7	1.7
						8.4	3.0	39	24.2	24.2	8.2	8.2	30.4	30.4	92.7	92.8	6.5	6.5	1.9	6	88	89	89	821461	812033	<0.2	1.8	1.7	1.7
					Bottom	1.0	-	-	25.7	25.7	8.3	8.3	26.6	26.6	120.7	120.5	8.5	8.5	1.1	4	-	-	-	819983	812661	-	-	-	-
						1.0	-	-	25.7	25.7	8.3	8.3	26.6	26.6	120.2	120.5	8.4	8.5	1.1	5	-	-	-	819983	812661	-	-	-	-
						2.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	819983	812661	-	-	-	-
SR1A	Fine	Calm	14:29	5.5	Surface	1.0	-	-	25.7	25.7	8.3	8.3	26.6	26.6	120.7	120.5	8.5	8.5	1.1	4	-	-	-	819983	812661	-	-	-	-
						1.0	-	-	25.7	25.7	8.3	8.3	26.6	26.6	120.2	120.5	8.4	8.5	1.1	5	-	-	-	819983	812661	-	-	-	-
						2.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	819983	812661	-	-	-	-
					Middle	2.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	819983	812661	-	-	-	-
						4.5	-	-	25.0	25.0	8.3	8.3	27.6	27.7	115.2	115.1	8.1	8.1	4.2	5	-	-	-	819983	812661	-	-	-	-
						4.5	-	-	25.0	25.0	8.3	8.3	27.8	27.7	115.0	115.0	8.1	8.1	4.6	4	-	-	-	819983	812661	-	-	-	-
					Bottom	1.0	0.1	70	25.7	25.7	8.3	8.3	25.7	25.7	125.6	125.4	8.9	8.9	0.3	6	86	86	86	821479	814170	<0.2	1.1	1.1	1.1
						1.0	0.1	70	25.7	25.7	8.3	8.3	25.7	25.7	125.1	125.4	8.8	8.9	0.4	6	86	86	86	821479	814170	<0.2	1.1	1.1	1.1
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	821479	814170	<0.2	1.3	1.2	1.2
SR2	Fine	Calm	14:47	4.3	Surface	1.0	0.1	70	25.7	25.7	8.3	8.3	25.7	25.7	125.6	125.4	8.9	8.9	0.3	6	86	86	86	821479	814170	<0.2	1.1	1.1	1.1
						1.0	0.1	70	25.7	25.7	8.3	8.3	25.7	25.7	125.1	125.4	8.8	8.9	0.4	6	86	86	86	821479	814170	<0.2	1.1	1.1	1.1
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	821479	814170	<0.2	1.3	1.2	1.2
					Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	821479	814170	<0.2	1.3	1.2	1.2
						3.3	0.1	344	24.2	24.3	8.3	8.3	30.3	30.3	98.1	98.2	6.9	6.9	3.7	5	91	90	90	821479	814170	<0.2	1.3	1.2	1.2
						3.3	0.1	316	24.3	24.3	8.3	8.3	30.3	30.3	98.2	98.2	6.9	6.9	3.7	6	90	90	90	821479	814170	<0.2	1.2	1.2	1.2
					Bottom	1.0	2.2	245	25.1	25.1	8.4	8.4	25.7	25.7	119.9	119.9	8.6	8.1	1.4	4	-	-	-	822140	807576	-	-	-	-
						1.0	2.4	258	25.1	25.1	8.4	8.4	25.7	25.7	119.9	119.9	8.6	8.1	1.6	5	-	-	-	822140	807576	-	-	-	-
						4.6	2.3	246	24.6	24.6	8.4	8.4	28.7	28.7	107.0	107.0	7.6	8.1	2.5	4	-	-	-	822140	807576	-	-	-	-
SR3	Fine	Moderate	13:14	9.1	Surface	1.0	2.2	245	25.1	25.1	8.4	8.4	25.7	25.7	119.9	119.9	8.6	8.1	1.4	4	-	-	-	822140	807576	-	-	-	-
						1.0	2.4	258	25.1	25.1	8.4	8.4	25.7	25.7	119.9	1													

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

Water Quality Monitoring

Water Quality Monitoring Results on 24 April 21 during Mid-Ebb Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)	Current Speed (m/s)		Current Direction		Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity (NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)						
						Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA	Value	DA	
																																				Value
C1	Misty	Calm	11:12	8.6	Surface	1.0	2.0	130	25.3	25.3	8.3	8.3	26.6	26.7	137.8	137.4	9.7	9.7	3.4	3.4	3	3	86	86	88	815641	804246	<0.2	2.0	1.9						
						1.0	2.0	136	25.2	8.3	8.3	26.8	26.8	137.0	137.0	9.7	9.7	3.5	3.5	2	2	86	86	88	815641	804246	<0.2	1.9	1.9							
						4.3	2.2	127	24.1	8.1	8.1	31.3	31.3	116.3	116.3	8.2	8.2	4.2	4.2	3	3	89	89	88	815641	804246	<0.2	2.0	1.9							
						4.3	2.3	135	24.1	8.1	8.1	31.3	31.3	116.3	116.3	8.2	8.2	4.2	4.2	4	4	89	89	88	815641	804246	<0.2	1.9	1.9							
						7.6	2.2	133	23.9	8.1	8.1	32.1	32.0	109.2	109.4	7.7	7.7	6.2	6.2	4	4	88	88	89	815641	804246	<0.2	1.8	1.9							
						7.6	2.3	133	23.9	8.1	8.1	32.0	32.0	109.5	109.4	7.7	7.7	6.2	6.2	3	3	89	89	88	815641	804246	<0.2	1.9	1.9							
C2	Sunny	Moderate	13:00	11.6	Surface	1.0	0.2	135	26.2	26.2	8.6	8.6	23.7	23.7	140.0	139.9	9.9	9.9	4.8	4.8	5	5	85	85	89	825697	806967	<0.2	1.8	1.8						
						1.0	0.2	144	26.2	8.6	8.6	23.7	23.7	139.8	139.8	9.9	9.9	4.9	4.9	5	5	85	85	90	825697	806967	<0.2	1.7	1.8							
						5.8	0.5	154	25.2	8.5	8.5	26.7	26.7	101.6	101.6	7.2	7.2	4.6	4.6	5	5	90	90	89	825697	806967	<0.2	1.8	1.8							
						5.8	0.5	156	25.2	8.5	8.5	26.7	26.7	101.5	101.5	7.2	7.2	4.6	4.6	4	4	89	89	90	825697	806967	<0.2	1.8	1.8							
						10.6	0.5	144	24.8	8.6	8.6	28.4	28.4	93.7	93.8	6.6	6.6	6.1	6.1	5	5	94	94	89	825697	806967	<0.2	1.7	1.8							
						10.6	0.5	158	24.9	8.6	8.6	28.4	28.4	93.8	93.8	6.6	6.6	6.1	6.1	5	5	93	93	89	825697	806967	<0.2	1.7	1.7							
C3	Sunny	Moderate	10:04	12.5	Surface	1.0	0.4	286	25.3	25.3	8.4	8.4	27.4	27.4	130.4	130.2	9.2	9.2	2.9	2.9	3	3	85	85	90	822123	817802	<0.2	1.2	1.3						
						1.0	0.4	307	25.3	8.4	8.4	27.5	27.4	129.9	129.9	9.1	9.1	2.9	2.9	4	4	86	86	90	822123	817802	<0.2	1.3	1.2							
						6.3	0.2	257	24.4	8.2	8.2	30.6	30.6	98.4	98.4	6.9	6.9	3.6	3.6	4	4	90	90	89	822123	817802	<0.2	1.2	1.2							
						6.3	0.2	259	24.4	8.2	8.2	30.6	30.6	98.3	98.3	6.9	6.9	3.7	3.7	3	3	90	90	89	822123	817802	<0.2	1.2	1.2							
						11.5	0.1	120	24.3	8.2	8.2	31.2	31.2	94.1	94.2	6.6	6.6	4.9	4.9	3	3	94	94	89	822123	817802	<0.2	1.2	1.2							
						11.5	0.1	131	24.3	8.2	8.2	31.2	31.2	94.2	94.2	6.6	6.6	5.0	5.0	3	3	94	94	89	822123	817802	<0.2	1.1	1.1							
IM1	Fine	Calm	11:36	5.0	Surface	1.0	0.1	188	25.0	25.0	8.2	8.2	27.8	27.9	128.2	128.0	9.0	9.0	4.9	4.9	7	7	89	88	88	817949	807139	<0.2	1.8	1.8						
						1.0	0.1	189	24.9	8.2	8.2	28.1	27.9	127.7	127.7	9.0	9.0	4.8	4.8	6	6	86	86	88	817949	807139	<0.2	1.8	1.8							
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
						4.0	0.1	136	24.6	8.2	8.2	29.4	29.2	113.0	113.1	8.0	8.0	7.3	7.3	5	5	88	88	88	817949	807139	<0.2	1.8	1.8							
						4.0	0.1	139	24.7	8.2	8.2	29.0	29.2	113.1	113.1	8.0	8.0	7.3	7.3	4	4	88	88	88	817949	807139	<0.2	1.7	1.7							
IM2	Fine	Calm	11:43	6.8	Surface	1.0	2.6	275	25.6	25.6	8.3	8.3	26.3	26.3	134.0	133.6	9.4	9.4	4.0	4.0	5	5	86	85	89	818164	806178	<0.2	1.6	1.6						
						1.0	2.6	282	25.6	8.3	8.3	26.3	26.3	133.2	133.2	9.4	9.4	3.9	3.9	4	4	85	85	90	818164	806178	<0.2	1.6	1.6							
						3.4	2.6	278	24.3	8.2	8.2	30.4	30.4	116.3	116.3	8.2	8.2	6.2	6.2	4	4	90	90	89	818164	806178	<0.2	1.6	1.6							
						3.4	2.8	278	24.3	8.2	8.2	30.4	30.4	116.3	116.3	8.2	8.2	6.2	6.2	5	5	90	90	89	818164	806178	<0.2	1.6	1.6							
						5.8	2.7	276	24.3	8.2	8.2	30.7	30.6	113.3	113.5	8.0	8.0	7.7	7.7	3	3	90	90	89	818164	806178	<0.2	1.6	1.6							
						5.8	2.9	296	24.3	8.2	8.2	30.6	30.6	113.7	113.5	8.0	8.0	7.7	7.7	4	4	91	91	89	818164	806178	<0.2	1.6	1.6							
IM3	Fine	Calm	11:50	7.0	Surface	1.0	1.3	61	25.5	25.5	8.3	8.3	26.3	26.4	135.7	135.4	9.6	9.6	4.0	4.0	4	4	87	89	89	818760	805610	<0.2	1.6	1.4						
						1.0	1.3	64	25.4	8.3	8.3	26.5	26.4	135.0	135.0	9.5	9.5	4.0	4.0	5	5	89	89	90	818760	805610	<0.2	1.6	1.4							
						3.5	1.4	69	24.4	8.2	8.2	29.3	29.2	117.3	117.3	8.3	8.3	7.6	7.6	5	5	90	90	89	818760	805610	<0.2	1.5	1.5							
						3.5	1.5	71	24.4	8.2	8.2	29.2	29.2	117.3	117.3	8.3	8.3	7.6	7.6	5	5	87	87	90	818760	805610	<0.2	1.5	1.5							
						6.0	1.5	65	24.2	8.1	8.1	30.8	30.8	110.1	110.0	7.7	7.7	9.7	9.7	5	5	91	91	89	818760	805610	<0.2	1.6	1.6							
						6.0	1.6	70	24.2	8.1	8.1	30.8	30.8	109.9	110.0	7.7	7.7	9.6	9.6	4	4	87	87	89	818760	805610	<0.2	1.5	1.5							
IM4	Fine	Calm	12:03	8.2	Surface	1.0	1.9	34	25.2	25.2	8.1	8.1	27.0	27.1	116.4	116.2	8.2	8.2	7.5	7.5	6	6	88	89	88	819719	804594	<0.2	1.5	1.5						
						1.0	1.9	35	25.2	8.1	8.1	27.2	27.1	116.0	116.2	8.2	8.2	7.4	7.4	7	7	91	91	88	819719	804594	<0.2	1.5	1.5							
						4.1	2.0	42	24.5	8.1	8.1	29.5	29.5	111.8	111.7	7.9	7.9	8.6	8.6	7	7	91	91	88	819719	804594	<0.2	1.6	1.5							
						4.1	2.2	43	24.5	8.1	8.1	29.5	29.5	111.5	111.7	7.9	7.9	8.6	8.6	6	6	91	91	88	819719	804594	<0.2	1.5	1.5							
						7.2	2.0	42	24.3	8.1	8.1	30.4	30.4	108.8	109.1	7.7	7.7	9.0	9.0	8	8	92	92	88	819719	804594	<0.2	1.6	1.5							
						7.2	2.1	43	24.3	8.1	8.1	30.3	30.4	109.4	109.1	7.7	7.7	9.1	9.1	8	8	86	86	88	819719	804594	<0.2	1.5	1.5							
IM5	Fine	Calm	12:18	7.8	Surface	1.0	3.0	220	25.4	25.4	8.2	8.2	26.4	26.5	121.7	121.7	8.6	8.6	6.0	6.0	7	7	86	87	89	820748	804875	<0.2	1.6	1.5						
						1.0	3.0	231	25.3	8.2	8.2	26.6	26.5	121.7	121.7	8.6	8.6	6.0	6.0	6	6	87	87	90	820748	804875	<0.2	1.5	1.5							
						3.9	3.0	219	24.9	8.1	8.1	28.0	28.0	115.1	115.0	8.1	8.1	6.3	6.3	7	7	90	90	89	820748	804875	<0.2	1.8	1.8							
						3.9	3.2	224	24.9	8.1	8.1	28.0	28.0	114.9	115.0	8.1	8.1	6.3	6.3	6	6	91	91	89	820748	804875	<0.2	1.9	1.8							
						6.8	3.0	218	24.6	8.1	8.1	28.9	28.9	108.9	109.0	7.7	7.7	7.4	7.4	7	7	91	91	89	820748	804875	<0.2	1.9	1.9							
						6.8	3.0	222	24.6	8.1	8.1	28.9	28.9	109.0	109.0	7.7	7.7	7.4	7.4	8	8</															

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

Water Quality Monitoring

Water Quality Monitoring Results on 24 April 21 during Mid-Ebb Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)	Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity (NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)								
								Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA					
								IM9	Sunny	Moderate	11:51	7.4	Surface	1.0	0.3	140	26.0	26.0	8.4	8.4	23.8	23.8	131.3			131.2	9.3	8.6	4.9	6.3	5	6	86	90	822087	808788
1.0	0.4	152	26.0	8.4	8.4	23.8	25.0							131.1	110.9	9.3	8.6	5.0	7.3	5	6	86	91	<0.2	1.6	<0.2	1.5									
3.7	0.4	139	25.5	8.3	8.3	26.0	25.0							111.0	110.9	7.9	8.6	6.2	7.3	5	6	90	91	<0.2	1.6	<0.2	1.5									
Middle	3.7	0.4	141	25.5	25.5	8.3	8.3						25.0	25.0	110.7	110.9	7.9	8.6	6.2	7.3	6	6	91	91	<0.2	1.6	<0.2	1.5								
	6.4	0.2	87	25.1	25.1	8.3	8.3						27.1	27.1	102.4	102.5	7.2	7.3	7.7	7.3	6	6	94	94	<0.2	1.2	<0.2	1.3								
	6.4	0.2	93	25.1	25.1	8.3	8.3						27.1	27.1	102.5	102.5	7.3	7.3	7.7	7.3	6	6	94	94	<0.2	1.2	<0.2	1.3								
Bottom	1.0	0.5	124	26.0	26.0	8.4	8.4						24.1	24.1	130.5	130.4	9.2	8.9	4.8	8.9	5	6	85	91	90	822375	809804	<0.2	1.3	<0.2	1.4					
	1.0	0.6	134	26.0	26.0	8.4	8.4						24.1	25.2	130.3	119.6	9.2	8.9	4.7	7.4	5	6	86	91	90	822375	809804	<0.2	1.3	<0.2	1.4					
	3.7	0.6	131	25.5	25.5	8.4	8.4						25.2	25.2	119.3	119.6	8.5	8.9	6.2	7.4	5	6	91	91	90	822375	809804	<0.2	1.4	<0.2	1.5					
Middle	3.7	0.7	140	25.5	25.5	8.4	8.4	25.2	25.2	119.9	119.9	8.5	8.9	6.0	7.4	6	6	91	90	90	822375	809804	<0.2	1.4	<0.2	1.5										
	6.4	0.4	118	25.2	25.2	8.3	8.3	26.6	26.6	104.8	104.9	7.4	7.4	8.9	8.9	7	6	93	93	93	822375	809804	<0.2	1.3	<0.2	1.5										
	6.4	0.4	121	25.2	25.2	8.3	8.3	26.6	26.6	104.9	104.9	7.4	7.4	9.0	8.9	6	6	94	94	94	822375	809804	<0.2	1.5	<0.2	1.5										
IM10	Sunny	Moderate	11:42	7.4	Surface	1.0	0.5	110	26.1	26.1	8.4	8.4	23.9	23.9	125.0	125.0	8.9	8.2	4.2	5.6	6	5	85	91	822039	811460	<0.2	1.6	<0.2	1.7						
						1.0	0.6	116	26.0	26.0	8.4	8.4	23.9	26.9	124.9	107.2	8.9	8.2	4.3	6.3	5	5	86	90			90	822039	811460	<0.2	1.6	<0.2	1.7			
						4.4	0.5	113	25.2	25.2	8.3	8.3	26.9	26.9	106.7	107.2	7.5	8.2	5.8	6.3	6	5	90	91			90	822039	811460	<0.2	1.6	<0.2	1.6			
					Middle	4.4	0.6	117	25.2	25.2	8.3	8.3	26.8	26.9	107.6	107.2	7.6	8.2	5.6	6.3	5	5	90	91			90	822039	811460	<0.2	1.5	<0.2	1.6			
						7.7	0.3	104	24.8	24.8	8.2	8.2	28.7	28.7	89.0	89.1	6.3	6.3	6.9	6.3	3	3	94	94			94	822039	811460	<0.2	1.6	<0.2	1.6			
						7.7	0.3	107	24.8	24.8	8.2	8.2	28.7	28.7	89.2	89.1	6.3	6.3	6.8	6.3	4	3	94	94			94	822039	811460	<0.2	1.5	<0.2	1.5			
					Bottom	1.0	0.5	95	26.1	26.1	8.3	8.3	24.0	24.0	119.2	119.2	8.4	8.4	5.0	7.8	7	5	86	90			91	821454	812026	<0.2	1.6	<0.2	1.6			
						1.0	0.5	95	26.0	26.0	8.3	8.3	24.0	24.0	119.1	119.2	8.4	8.4	4.9	7.8	6	5	90	90			91	821454	812026	<0.2	1.6	<0.2	1.6			
						4.8	0.4	116	25.2	25.2	8.3	8.3	27.2	27.1	101.8	101.8	7.2	7.8	5.4	6.3	5	5	90	90			90	821454	812026	<0.2	1.5	<0.2	1.5			
Middle	4.8	0.4	120	25.2	25.2	8.3	8.3	27.1	27.1	101.8	101.8	7.2	7.8	5.3	6.3	4	4	90	90	90	821454	812026	<0.2	1.4	<0.2	1.4										
	8.6	0.2	92	24.9	24.9	8.2	8.2	28.3	28.4	96.1	95.8	6.8	6.8	5.3	6.8	4	4	94	94	94	821454	812026	<0.2	1.3	<0.2	1.3										
	8.6	0.2	94	24.9	24.9	8.2	8.2	28.5	28.4	95.5	95.8	6.7	6.8	5.1	6.8	5	5	94	94	94	821454	812026	<0.2	1.5	<0.2	1.5										
SR1A	Sunny	Moderate	10:46	5.2	Surface	1.0	-	-	25.9	25.9	8.4	8.4	25.5	25.5	132.4	132.3	9.3	9.3	3.7	4.2	4	5	-	-	819972	812661	-	-	-	-						
						1.0	-	-	25.9	25.9	8.4	8.4	25.5	25.5	132.2	132.2	9.3	9.3	3.7	4.2	5	5	-	-			-	-	-	-	-	-				
						2.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-			
					Middle	2.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	
						4.2	-	-	25.2	25.2	8.3	8.3	27.6	27.6	118.1	118.2	8.3	8.3	4.8	6.3	5	5	-	-			-	-	-	-	-	-	-	-		
						4.2	-	-	25.2	25.2	8.3	8.3	27.6	27.6	118.3	118.3	8.3	8.3	4.8	6.3	5	5	-	-			-	-	-	-	-	-	-	-		
					Bottom	1.0	0.4	72	25.9	25.9	8.4	8.4	24.7	24.7	131.3	131.2	9.3	9.3	3.7	9.3	3.7	4.2	4	4			86	85	-	-	819972	812661	<0.2	1.5	<0.2	1.6
						1.0	0.4	73	25.9	25.9	8.4	8.4	24.7	24.7	131.1	131.1	9.3	9.3	3.7	9.3	3.7	4.2	5	4			85	85	-	-	819972	812661	<0.2	1.6	<0.2	1.6
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-		
Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
	3.3	0.2	71	25.2	25.2	8.4	8.4	27.7	27.6	108.8	111.4	7.7	7.9	5.0	7.9	4	4	90	90	90	819972	812661	<0.2	1.6	<0.2	1.6										
	3.3	0.2	75	25.3	25.3	8.4	8.4	27.6	27.6	113.9	111.4	8.0	7.9	5.0	7.9	3	3	90	90	90	819972	812661	<0.2	1.5	<0.2	1.5										
SR2	Sunny	Moderate	10:29	4.3	Surface	1.0	0.4	72	25.9	25.9	8.4	8.4	24.7	24.7	131.3	131.2	9.3	9.3	3.7	4.2	4	4	86	85	821465	814179	<0.2	1.5	<0.2	1.6						
						1.0	0.4	73	25.9	25.9	8.4	8.4	24.7	24.7	131.1	131.1	9.3	9.3	3.7	4.2	5	4	85	85			-	-	-	-	-					
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-			
					Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	
						3.3	0.2	71	25.2	25.2	8.4	8.4	27.7	27.6	108.8	111.4	7.7	7.9	5.0	7.9	4	4	90	90			90	821465	814179	<0.2	1.6	<0.2	1.6			
						3.3	0.2	75	25.3	25.3	8.4	8.4	27.6	27.6	113.9	111.4	8.0	7.9	5.0	7.9	3	3	90	90			90	821465	814179	<0.2	1.5	<0.2	1.5			
					Bottom	1.0	0.3	211	26.1	26.1	8.5	8.5	23.9	23.9	137.7	137.6	9.7	8.8	4.6	7.6	7	6	-	-			-	-	-	-	-	-	-	-		
						1.0	0.3	221	26.1	26.1	8.5	8.5	23.9	23.9	137.5	137.6	9.7	8.8	4.5	7.6	6	6	-	-			-	-	-	-	-	-	-			
						4.3	0.1	224	25.3	25.3	8.4	8.4	25.9	25.9	109.7	109.6	7.8	7.8	7.0	7.6	7	6	-	-			-	-	-	-	-	-				
Middle	4.3	0.1	235	25.3	25.3	8.4	8.4	25.9	25.9	109.5	109.6	7.8	7.8	6.9	7.6	6	6	-	-	-	-	-	-	-	-											
	7.6	0.1	235	25.1	25.1	8.4	8.4	26.8	26.8	107.2	107.4	7.6	7.6	11.2	7.6	5	6	-	-	-	-	-	-	-												
	7.6	0.1	245	25.1	25.1	8.4	8.4	26.8	26.8	107.5	107.4	7.6	7.6	11.1	7.6	4	4	-	-	-	-	-	-	-												
Bottom	1.0	1.7	251	25.3	25.3	8.2	8.2	26.9	27.0	125.5	125.3	8.9	8.9	5.9	8.5	5	6	-	-	-	-	-	-	-	-											
	1.0	1.8	269	25.2	25.2	8.2	8.2	27																												

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

Water Quality Monitoring

Water Quality Monitoring Results on 24 April 21 during Mid-Flood Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)	Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity (NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)							
								Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA				
C1	Fine	Calm	16:23	8.2	Surface	1.0	2.0	8	25.6	25.6	8.3	8.3	27.1	27.1	136.6	136.2	9.6	8.7	4.9	5.8	4	4	88	91	815618	804263	<0.2	1.7	<0.2	1.7					
						1.0	2.2	8	25.6	25.6	8.3	8.3	27.1	27.1	135.8	136.2	9.5	8.7	4.9	5.8	4	4	88	91			<0.2	1.6	<0.2	1.6					
					Middle	4.1	2.2	8	24.1	24.1	8.1	8.1	31.2	31.1	111.9	111.9	7.9	7.9	5.9	5.9	5	4	91	91			<0.2	1.6	<0.2	1.6					
						4.1	2.2	8	24.1	24.1	8.1	8.1	31.1	31.1	111.8	111.8	7.9	7.9	5.9	5.9	5	4	91	91			<0.2	1.7	<0.2	1.7					
					Bottom	7.2	2.2	2	24.0	24.0	8.1	8.1	31.7	31.7	108.7	108.7	7.6	7.6	6.8	6.8	3	4	93	93			<0.2	1.7	<0.2	1.7					
						7.2	2.3	2	24.0	24.0	8.1	8.1	31.7	31.7	108.6	108.6	7.6	7.6	6.7	6.7	4	4	93	93			<0.2	1.6	<0.2	1.6					
C2	Fine	Moderate	15:10	10.7	Surface	1.0	0.3	350	26.5	26.5	8.6	8.6	22.7	22.7	151.0	150.7	10.7	8.9	4.5	5.2	4	4	87	91	825670	806945	<0.2	1.6	<0.2	1.7					
						1.0	0.3	358	26.5	26.5	8.6	8.6	22.7	22.7	150.7	150.7	10.7	8.9	4.4	5.2	4	4	88	91			<0.2	1.7	<0.2	2.3					
					Middle	5.4	0.4	28	25.1	25.1	8.5	8.5	26.3	26.3	98.9	98.9	7.0	7.0	5.1	5.1	4	4	91	91			<0.2	2.1	<0.2	1.8					
						5.4	0.4	29	25.1	25.1	8.5	8.5	26.3	26.3	98.9	98.9	7.0	7.0	5.1	5.1	4	4	91	91			<0.2	1.8	<0.2	1.7					
					Bottom	9.7	0.4	346	25.0	25.0	8.5	8.5	27.4	27.4	97.2	97.4	6.9	6.9	6.2	6.2	5	5	95	95			<0.2	1.8	<0.2	1.7					
						9.7	0.5	318	25.0	25.0	8.5	8.5	27.4	27.4	97.5	97.5	6.9	6.9	6.1	6.1	5	5	95	95			<0.2	1.7	<0.2	2.0					
C3	Sunny	Moderate	17:22	12.1	Surface	1.0	0.3	241	25.4	25.4	8.4	8.4	27.4	27.4	135.2	134.8	9.5	8.3	3.1	4.8	4	4	87	91	822114	817806	<0.2	1.9	<0.2	1.9					
						1.0	0.3	251	25.4	25.4	8.4	8.4	27.5	27.4	134.4	134.4	9.4	8.3	3.1	4.8	3	4	87	91			<0.2	2.2	<0.2	1.9					
					Middle	6.1	0.4	252	24.6	24.6	8.2	8.2	30.0	30.0	101.5	101.5	7.1	7.1	3.3	3.3	5	4	91	90			<0.2	1.8	<0.2	1.8					
						6.1	0.4	269	24.6	24.6	8.2	8.2	30.0	30.0	101.4	101.4	7.1	7.1	3.3	3.3	5	4	90	90			<0.2	1.8	<0.2	1.8					
					Bottom	11.1	0.4	266	24.3	24.3	8.2	8.2	31.3	31.2	92.9	93.0	6.5	6.5	7.9	7.9	5	5	95	94			<0.2	1.8	<0.2	1.8					
						11.1	0.4	290	24.3	24.3	8.2	8.2	31.2	31.2	93.0	93.0	6.5	6.5	7.9	7.9	4	4	94	94			<0.2	1.8	<0.2	1.8					
IM1	Fine	Calm	16:01	4.6	Surface	1.0	0.2	4	24.6	24.6	8.3	8.3	29.6	29.7	134.4	134.0	9.4	9.4	5.3	7.3	7	7	88	87	817965	807154	<0.2	1.8	<0.2	1.6					
						1.0	0.2	4	24.6	24.6	8.3	8.3	29.8	29.7	133.6	133.6	9.4	9.4	5.3	7.3	6	7	87	87			<0.2	1.6	<0.2	1.7					
					Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-
					Bottom	3.6	0.1	345	24.3	24.3	8.2	8.1	30.9	30.9	112.2	112.0	7.9	7.9	9.3	9.3	7	7	87	87			<0.2	1.8	<0.2	1.7					
						3.6	0.1	317	24.3	24.3	8.1	8.1	30.8	30.9	111.7	111.7	7.9	7.9	9.3	9.3	7	7	87	87			<0.2	1.7	<0.2	1.7					
IM2	Fine	Calm	15:53	6.6	Surface	1.0	2.6	266	25.0	24.9	8.3	8.3	28.7	28.8	134.4	133.7	9.4	8.7	5.5	7.2	6	6	87	90	818153	806187	<0.2	1.9	<0.2	1.8					
						1.0	2.7	278	24.8	24.8	8.3	8.3	28.9	28.8	132.9	132.9	9.4	8.7	5.5	7.2	7	6	87	91			<0.2	1.8	<0.2	1.8					
					Middle	3.3	2.7	263	24.4	24.4	8.2	8.2	30.3	30.4	112.3	112.3	7.9	7.9	7.5	7.5	6	6	91	91			<0.2	1.8	<0.2	1.8					
						3.3	2.8	283	24.3	24.3	8.2	8.2	30.5	30.4	112.2	112.2	7.9	7.9	7.6	7.6	5	6	91	91			<0.2	1.7	<0.2	1.7					
					Bottom	5.6	2.6	266	24.2	24.2	8.2	8.2	31.1	31.1	111.3	111.3	7.8	7.8	8.6	8.6	6	6	92	92			<0.2	1.7	<0.2	1.7					
						5.6	2.6	274	24.2	24.2	8.2	8.2	31.1	31.1	111.2	111.2	7.8	7.8	8.7	8.7	5	5	92	92			<0.2	1.7	<0.2	1.7					
IM3	Fine	Calm	15:46	6.8	Surface	1.0	2.2	40	26.1	26.1	8.3	8.3	26.9	26.9	141.9	141.0	9.9	8.8	4.8	7.7	7	6	89	91	818760	805598	<0.2	1.9	<0.2	1.8					
						1.0	2.2	41	26.1	26.1	8.3	8.3	26.8	26.9	140.1	140.1	9.8	8.8	4.8	7.7	8	6	89	91			<0.2	1.8	<0.2	1.8					
					Middle	3.4	2.3	45	24.4	24.4	8.1	8.1	30.0	30.0	109.3	109.3	7.7	7.7	7.6	7.6	5	6	92	90			<0.2	1.8	<0.2	1.8					
						3.4	2.5	48	24.3	24.3	8.1	8.1	30.1	30.0	109.2	109.2	7.7	7.7	7.6	7.6	4	6	92	90			<0.2	1.7	<0.2	1.7					
					Bottom	5.8	2.6	43	24.2	24.2	8.1	8.1	31.2	31.2	109.2	109.2	7.7	7.7	10.8	10.8	4	4	93	93			<0.2	1.7	<0.2	1.7					
						5.8	2.7	46	24.2	24.2	8.1	8.1	31.2	31.2	109.2	109.2	7.7	7.7	10.8	10.8	5	5	93	93			<0.2	1.6	<0.2	1.6					
IM4	Fine	Moderate	15:35	8.0	Surface	1.0	1.7	236	26.0	26.0	8.3	8.3	26.6	26.7	139.5	139.0	9.7	8.5	4.7	8.1	6	5	88	91	819725	804609	<0.2	1.8	<0.2	1.7					
						1.0	1.8	252	26.0	26.0	8.3	8.3	26.8	26.7	138.5	138.5	9.7	8.5	4.7	8.1	5	5	89	91			<0.2	1.7	<0.2	1.7					
					Middle	4.0	2.2	245	24.6	24.6	8.1	8.1	29.0	29.0	102.8	102.7	7.3	7.3	9.2	9.2	6	6	91	91			<0.2	1.8	<0.2	1.8					
						4.0	2.3	263	24.6	24.6	8.1	8.1	29.1	29.0	102.5	102.5	7.2	7.2	9.3	9.3	5	5	91	91			<0.2	1.8	<0.2	1.8					
					Bottom	7.0	2.3	251	24.3	24.3	8.1	8.1	30.3	30.3	101.0	101.1	7.1	7.1	10.5	10.5	5	5	93	93			<0.2	1.5	<0.2	1.5					
						7.0	2.3	274	24.3	24.3	8.1	8.1	30.3	30.3	101.1	101.1	7.1	7.1	10.4	10.4	4	4	93	93			<0.2	1.7	<0.2	1.7					
IM5	Fine	Moderate	15:27	7.4	Surface	1.0	2.1	236	25.7	25.7	8.3	8.3	25.7	25.8	141.5	141.1	10.0	9.2	4.8	6.3	9	9	91	92	820752	804885	<0.2	1.8	<0.2	1.8					
						1.0	2.2	244	25.7	25.7	8.3	8.3	25.8	25.8	140.7	140.7	9.9	9.2	4.8	6.3	9	9	91	91			<0.2	1.8	<0.2	1.8					
					Middle	3.7	1.9	240	25.3	25.3	8.2	8.1	26.6	26.6	119.6	119.7	8.5	8.5	6.0	6.0	8	8	91	91			<0.2	1.6	<0.2	1.6					
						3.7	2.0	251	25.3	25.3	8.1	8.1	26.6	26.6	119.8	119.8	8.5	8.5	6.1	6.1	9	9	91	91			<0.2	1.5	<0.2	1.5					
					Bottom	6.4	2.0	240	25.2	25.2	8.1	8.1	27.0	27.0	111.3	111.3	7.9	7.9	8.2	8.2	8	8	93	93			<0.2	1.8	<0.2	1.8					
						6.4	2.1	244	25.2	25.2	8.1	8.1	27.0	27.0	111.2	111.2	7.9	7.9	8.2	8.2	9	9	93	93			<0.2	1.7	<0.2	1.7					
IM6	Fine	Moderate	15:20	6.8	Surface	1.0	1.8	27	25.5	25.5	8.3	8.3	26.1	26.2	139.2	138.1	9.8	9.0	6.4	7.5															

Expansion of Hong Kong International Airport into a Three-Runway System
Water Quality Monitoring

Water Quality Monitoring Results on 24 April 21 during Mid-Flood Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity (NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)					
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA				
IM9	Sunny	Moderate	15:40	6.8	Surface	1.0	0.4	245	26.1	26.1	8.5	8.5	24.8	24.8	151.7	151.6	10.7	10.7	3.9	6	6	88	91	822101	808830	<0.2	1.5	1.6	1.6					
						1.0	0.5	267	26.1	26.1	8.5	8.5	24.8	24.8	151.4	151.4	10.7	10.7	4.0	6	6	87	91	822101	808830	<0.2	1.5	1.6	1.6					
						3.4	0.4	241	25.9	25.9	8.4	8.4	25.0	25.0	128.1	130.7	9.0	9.4	4.4	6	6	91	95	822101	808830	<0.2	1.5	1.6	1.6					
					Middle	3.4	0.4	251	25.9	25.9	8.4	8.4	25.0	25.0	133.2	130.7	9.4	9.4	4.4	6	6	92	95	822101	808830	<0.2	1.5	1.6	1.6					
						5.8	0.4	252	25.3	25.3	8.3	8.3	26.4	26.4	101.7	101.8	7.2	7.2	6.4	6	6	95	95	822101	808830	<0.2	1.5	1.6	1.6					
						5.8	0.5	257	25.3	25.3	8.3	8.3	26.4	26.4	101.8	101.8	7.2	7.2	6.4	6	6	95	95	822101	808830	<0.2	1.5	1.6	1.6					
					IM10	Sunny	Moderate	15:49	8.2	Surface	1.0	0.4	289	26.4	26.4	8.6	8.6	24.6	24.6	167.0	166.8	11.7	11.7	3.8	6	6	87	91	822384	809804	<0.2	1.5	1.5	1.5
											1.0	0.4	305	26.4	26.4	8.6	8.6	24.6	24.6	166.6	166.6	11.7	11.7	3.8	6	6	87	92	822384	809804	<0.2	1.5	1.5	1.5
											4.1	0.3	270	25.8	25.8	8.4	8.4	25.3	25.3	123.2	123.0	8.7	8.7	4.5	6	6	92	91	822384	809804	<0.2	1.5	1.3	1.3
Middle	4.1	0.3	291	25.8						25.8	8.4	8.4	25.3	25.3	122.8	122.8	8.7	8.7	4.5	6	6	91	95	822384	809804	<0.2	1.5	1.3	1.3					
	7.2	0.3	280	25.4						25.4	8.3	8.3	26.1	26.1	106.4	106.4	7.5	7.5	5.3	5	5	95	95	822384	809804	<0.2	1.6	1.6	1.6					
	7.2	0.3	307	25.4						25.4	8.3	8.3	26.1	26.1	106.3	106.3	7.5	7.5	5.3	6	6	95	95	822384	809804	<0.2	1.7	1.7	1.7					
IM11	Sunny	Moderate	16:01	7.6						Surface	1.0	0.4	288	26.4	26.4	8.6	8.6	24.7	24.7	168.9	168.5	11.8	11.8	4.0	6	6	87	91	822053	811454	<0.2	1.4	1.5	1.4
											1.0	0.4	310	26.4	26.4	8.6	8.6	24.7	24.7	168.1	168.1	11.8	11.8	3.9	5	5	87	91	822053	811454	<0.2	1.5	1.5	1.5
											3.8	0.4	278	25.9	25.9	8.4	8.4	25.3	25.3	135.4	135.4	9.5	9.5	3.9	7	7	91	95	822053	811454	<0.2	1.3	1.3	1.3
					Middle	3.8	0.4	289	25.9	25.9	8.5	8.5	25.3	25.3	135.4	135.4	9.6	9.6	3.9	6	6	96	95	822053	811454	<0.2	1.3	1.3	1.3					
						6.6	0.4	281	25.0	25.0	8.2	8.2	27.4	27.4	93.9	94.2	6.6	6.7	12.9	7	7	95	95	822053	811454	<0.2	1.5	1.5	1.5					
						6.6	0.4	292	25.0	25.0	8.2	8.2	27.4	27.4	94.4	94.2	6.6	6.7	12.7	8	8	95	95	822053	811454	<0.2	1.4	1.4	1.4					
					IM12	Sunny	Moderate	16:09	9.3	Surface	1.0	0.4	287	26.4	26.4	8.5	8.5	24.6	24.6	158.0	157.7	11.1	11.1	3.5	5	5	87	92	821478	812069	<0.2	1.7	1.6	1.6
											1.0	0.4	314	26.4	26.4	8.5	8.5	24.6	24.6	157.3	157.3	11.0	11.0	3.5	6	6	88	91	821478	812069	<0.2	1.6	1.6	1.6
											4.7	0.3	289	25.2	25.2	8.2	8.2	26.7	26.7	101.1	101.0	7.2	7.2	5.2	5	5	91	92	821478	812069	<0.2	1.5	1.5	1.5
Middle	4.7	0.4	301	25.2						25.2	8.2	8.2	26.7	26.7	100.9	101.0	7.1	7.1	5.3	6	6	92	95	821478	812069	<0.2	1.6	1.6	1.6					
	8.3	0.2	289	24.5						24.5	8.2	8.2	29.9	29.9	87.0	87.2	6.1	6.1	7.2	6	6	95	95	821478	812069	<0.2	1.6	1.6	1.6					
	8.3	0.2	289	24.5						24.5	8.2	8.2	29.9	29.9	87.3	87.3	6.1	6.1	7.2	7	7	96	96	821478	812069	<0.2	1.5	1.5	1.5					
SR1A	Sunny	Moderate	16:42	5.4						Surface	1.0	-	-	26.5	26.5	8.5	8.5	25.2	25.2	160.5	160.4	11.2	11.2	4.0	5	5	-	-	819981	812660	-	-	-	-
											1.0	-	-	26.5	26.5	8.5	8.5	25.2	25.2	160.2	160.2	11.2	11.2	4.0	6	6	-	-	819981	812660	-	-	-	-
											2.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
					Middle	2.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	819981	812660	-	-	-	-		
						4.4	-	-	26.1	26.1	8.4	8.4	25.5	25.5	142.0	141.9	10.0	10.0	4.2	8	8	-	-	-	-	819981	812660	-	-	-	-			
						4.4	-	-	26.1	26.1	8.4	8.4	25.5	25.5	141.8	141.8	10.0	10.0	4.2	8	8	-	-	-	-	819981	812660	-	-	-	-			
					SR2	Sunny	Moderate	16:57	5.0	Surface	1.0	0.4	306	25.9	25.9	8.4	8.4	26.4	26.4	144.2	144.0	10.1	10.1	4.6	9	9	88	89	821452	814189	<0.2	1.3	1.4	1.4
											1.0	0.4	318	25.9	25.9	8.4	8.4	26.4	26.4	143.7	144.0	10.1	10.1	4.6	9	9	87	91	821452	814189	<0.2	1.4	1.4	1.4
											-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	821452	814189	<0.2
Middle	-	-	-	-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	821452	814189	<0.2	1.4	1.4	1.4		
	4.0	0.2	225	25.0						25.0	8.2	8.2	28.7	28.7	103.1	102.9	7.2	7.2	6.7	6	6	91	91	821452	814189	<0.2	1.4	1.4	1.4					
	4.0	0.2	239	24.9						24.9	8.2	8.2	28.7	28.7	102.6	102.9	7.2	7.2	6.9	6	6	91	91	821452	814189	<0.2	1.5	1.5	1.5					
SR3	Fine	Moderate	15:26	9.1						Surface	1.0	0.5	217	26.6	26.6	8.6	8.6	24.0	24.0	153.3	153.2	10.8	10.8	4.1	7	7	-	-	822161	807591	-	-	-	-
											1.0	0.6	226	26.6	26.6	8.6	8.6	24.0	24.0	153.0	153.0	10.7	10.7	4.1	7	7	-	-	822161	807591	-	-	-	-
											4.6	0.5	226	25.9	25.9	8.5	8.5	24.8	24.8	125.0	124.8	8.8	8.8	4.7	8	8	-	-	822161	807591	-	-	-	-
					Middle	4.6	0.5	245	25.8	25.8	8.5	8.5	24.8	24.8	124.5	124.8	8.8	8.8	4.8	8	8	-	-	822161	807591	-	-	-	-					
						8.1	0.3	245	25.2	25.2	8.4	8.4	26.6	26.6	102.2	102.3	7.2	7.3	12.3	8	8	-	-	822161	807591	-	-	-	-					
						8.1	0.3	250	25.2	25.2	8.4	8.4	26.6	26.6	102.4	102.3	7.3	7.3	13.1	8	8	-	-	822161	807591	-	-	-	-					
					SR4A	Fine	Calm	16:43	9.0	Surface	1.0	1.9	33	26.0	25.9	8.3	8.3	26.9	27.1	143.4	143.1	10.0	10.0	4.9	8	8	-	-	817170	807796	-	-	-	-
											1.0	2.0	34	25.8	25.8	8.3	8.3	27.3	27.3	142.8	142.8	10.0	9.3	4.9	9	9	-	-	817170	807796	-	-	-	-
											4.5	2.4	36	25.0	25.0	8.2	8.1	28.6	28.7	120.8	121.4	8.5	8.6	6.0	8	8	-	-	817170	807796	-	-	-	-
Middle	4.5	2.6	36	24.9						24.9	8.1	8.1	28.7	28.7	122.0	121.4	8.6	8.6	5.9	7	7	-	-	817170	807796	-	-	-	-					
	8.0	2.3	38	24.2						24.2	8.1	8.1	30.8	30.8	105.4	105.4	7.4	7.4	9.9	7	7	-	-	817170	807796	-	-	-	-					
	8.0	2.4	41	24.2						24.2	8.1	8.1	30.8	30.8	105.4	105.4	7.4	7.4	9.9	8	8	-	-	817170	807796	-	-	-	-					
SR5A	Fine	Calm	17:01	4.4						Surface	1.0	0.2	273	26.2	26.2	8.3	8.3	26.5	26.5	155.4	154.9	10.8	10.8	3.4	8	8	-	-	816593	810678	-	-	-	-

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

Water Quality Monitoring

Water Quality Monitoring Results on 27 April 21 during Mid-Ebb Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)	Current Speed (m/s)		Current Direction		Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity (NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)							
						Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA				
						Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA	Value	DA		
C1	Cloudy	Moderate	12:50	8.7	Surface	1.0	2.3	276	24.3	24.3	8.2	8.2	30.4	30.4	113.0	112.9	7.9	7.9	5.0	6	86	6	86	88	815604	804264	<0.2	1.5	<0.2	1.5							
						1.0	2.3	287	24.3	24.3	8.2	8.2	30.4	30.4	112.7	112.9	7.9	7.9	5.0	5	87	5	87	88	815604	804264	<0.2	1.5	<0.2	1.5							
						4.4	2.3	275	24.3	24.3	8.2	8.2	31.6	31.7	110.4	110.4	7.7	7.7	4.8	7	87	7	87	88	815604	804264	<0.2	1.6	<0.2	1.6							
					Middle	4.4	2.4	296	24.3	24.3	8.2	8.2	31.8	31.7	110.3	110.4	7.7	7.7	4.8	6	87	6	87	6	87	88	815604	804264	<0.2	1.5	<0.2	1.5					
						7.7	2.2	278	24.4	24.4	8.2	8.2	32.3	32.3	109.7	109.7	7.6	7.6	15.1	7	90	7	90	6	89	88	815604	804264	<0.2	1.4	<0.2	1.4					
						7.7	2.2	278	24.4	24.4	8.2	8.2	32.2	32.3	109.7	109.7	7.6	7.6	14.9	6	89	6	89	6	89	88	815604	804264	<0.2	1.3	<0.2	1.3					
					C2	Rainy	Moderate	11:22	12.0	Surface	1.0	0.5	163	24.7	24.7	8.2	8.2	27.8	27.9	91.5	91.5	6.5	6.5	5.4	11	87	11	87	90	825677	806940	<0.2	1.6	<0.2	1.6		
											1.0	0.5	169	24.7	24.7	8.2	8.2	28.0	28.0	91.5	91.5	6.5	6.5	5.3	11	88	11	88	90	825677	806940	<0.2	1.7	<0.2	1.7		
											6.0	0.6	170	24.7	24.7	8.2	8.2	28.4	28.4	91.6	91.6	6.5	6.5	8.6	9	90	9	90	6	89	88	825677	806940	<0.2	1.6	<0.2	1.6
Middle	6.0	0.6	184	24.7						24.7	8.2	8.2	28.4	28.4	91.5	91.5	6.5	6.5	8.6	9	91	9	91	6	89	88	825677	806940	<0.2	1.6	<0.2	1.6					
	11.0	0.4	175	24.7						24.7	8.2	8.2	28.5	28.5	91.9	92.0	6.5	6.5	9.2	8	93	8	93	6	89	88	825677	806940	<0.2	1.3	<0.2	1.3					
	11.0	0.4	188	24.7						24.7	8.2	8.2	28.5	28.5	92.1	92.0	6.5	6.5	9.2	9	93	9	93	6	89	88	825677	806940	<0.2	1.4	<0.2	1.4					
C3	Rainy	Moderate	13:27	11.8						Surface	1.0	0.5	50	24.6	24.6	8.2	8.2	28.8	28.9	94.8	94.6	6.7	6.7	4.6	6	85	6	85	87	822130	817820	<0.2	1.4	<0.2	1.4		
											1.0	0.5	52	24.6	24.6	8.2	8.2	29.0	28.9	94.3	94.6	6.7	6.7	4.6	6	85	6	85	6	88	87	822130	817820	<0.2	1.5	<0.2	1.5
											5.9	0.4	64	24.6	24.6	8.2	8.2	29.6	29.6	92.6	92.6	6.5	6.5	5.3	6	88	6	88	6	88	87	822130	817820	<0.2	1.4	<0.2	1.4
					Middle	5.9	0.4	69	24.6	24.6	8.2	8.2	29.6	29.6	92.5	92.6	6.5	6.5	5.3	6	88	6	88	6	88	6	88	87	822130	817820	<0.2	1.5	<0.2	1.5			
						10.8	0.3	78	24.5	24.5	8.2	8.2	30.0	30.0	91.8	92.0	6.5	6.5	6.1	7	89	7	89	6	89	87	822130	817820	<0.2	1.5	<0.2	1.5					
						10.8	0.3	80	24.5	24.5	8.2	8.2	30.0	30.0	92.1	92.0	6.5	6.5	6.0	6	89	6	89	6	89	6	89	87	822130	817820	<0.2	1.5	<0.2	1.5			
					IM1	Rainy	Moderate	12:31	5.3	Surface	1.0	1.8	358	24.3	24.3	8.2	8.2	30.2	30.2	105.3	105.3	7.4	7.4	7.3	5	87	5	87	89	817958	807144	<0.2	1.6	<0.2	1.6		
											1.0	1.9	329	24.3	24.3	8.2	8.2	30.3	30.2	105.3	105.3	7.4	7.4	8.0	6	87	6	87	5	87	89	817958	807144	<0.2	1.7	<0.2	1.7
											-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Middle	-	-	-	-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	4.3	2.0	0	24.3						24.3	8.2	8.2	31.2	31.2	105.1	105.1	7.4	7.4	12.3	8	91	8	91	7	90	88	817958	807144	<0.2	1.6	<0.2	1.6					
	4.3	2.0	0	24.2						24.3	8.2	8.2	31.2	31.2	105.1	105.1	7.4	7.4	11.9	7	90	7	90	7	90	6	89	88	817958	807144	<0.2	1.7	<0.2	1.7			
IM2	Rainy	Moderate	12:24	7.2						Surface	1.0	2.1	229	24.3	24.3	8.2	8.2	30.4	30.4	106.8	106.9	7.5	7.5	5.7	6	87	6	87	89	818164	806175	<0.2	1.7	<0.2	1.7		
											1.0	2.2	231	24.3	24.3	8.2	8.2	30.5	30.4	106.9	106.9	7.5	7.5	5.8	7	86	7	86	6	87	89	818164	806175	<0.2	1.6	<0.2	1.6
											3.6	2.0	225	24.3	24.3	8.2	8.2	31.1	31.1	107.1	107.2	7.5	7.5	5.8	7	87	7	87	6	87	89	818164	806175	<0.2	1.8	<0.2	1.8
					Middle	3.6	2.1	228	24.3	24.3	8.2	8.2	31.2	31.1	107.2	107.2	7.5	7.5	5.9	6	89	6	89	6	89	6	89	89	818164	806175	<0.2	1.6	<0.2	1.6			
						6.2	2.3	230	24.4	24.4	8.2	8.2	31.6	31.6	107.0	107.0	7.5	7.5	11.4	7	90	7	90	6	89	88	818164	806175	<0.2	1.4	<0.2	1.4					
						6.2	2.4	244	24.3	24.3	8.2	8.2	31.6	31.6	107.0	107.0	7.5	7.5	11.6	8	92	8	92	6	89	88	818164	806175	<0.2	1.4	<0.2	1.4					
					IM3	Rainy	Moderate	12:17	7.5	Surface	1.0	2.3	258	24.3	24.3	8.2	8.2	30.4	30.4	107.2	107.3	7.5	7.5	6.5	6	86	6	86	88	818794	805594	<0.2	1.5	<0.2	1.5		
											1.0	2.5	265	24.3	24.3	8.2	8.2	30.4	30.4	107.3	107.3	7.5	7.5	6.6	5	86	5	86	6	88	88	818794	805594	<0.2	1.6	<0.2	1.6
											3.8	2.1	257	24.3	24.3	8.2	8.2	31.1	31.2	107.7	107.7	7.5	7.5	6.9	7	88	7	88	6	88	88	818794	805594	<0.2	1.6	<0.2	1.6
Middle	3.8	2.1	258	24.3						24.3	8.2	8.2	31.2	31.2	107.7	107.7	7.5	7.5	6.8	7	87	7	87	6	88	88	818794	805594	<0.2	1.7	<0.2	1.7					
	6.5	2.2	256	24.4						24.4	8.2	8.2	31.7	31.7	107.5	107.5	7.5	7.5	12.8	8	90	8	90	6	89	88	818794	805594	<0.2	1.6	<0.2	1.6					
	6.5	2.4	271	24.4						24.4	8.2	8.2	31.7	31.7	107.4	107.5	7.5	7.5	13.2	8	91	8	91	6	89	88	818794	805594	<0.2	1.5	<0.2	1.5					
IM4	Rainy	Moderate	12:07	8.0						Surface	1.0	2.5	267	24.4	24.4	8.2	8.2	29.5	29.6	100.6	100.7	7.1	7.1	5.7	5	86	5	86	88	819740	804604	<0.2	1.5	<0.2	1.5		
											1.0	2.7	272	24.4	24.4	8.2	8.2	29.7	29.6	100.7	100.7	7.1	7.1	6.0	6	86	6	86	6	88	88	819740	804604	<0.2	1.5	<0.2	1.5
											4.0	2.3	270	24.4	24.4	8.2	8.2	31.3	31.4	105.5	105.5	7.4	7.4	8.6	6	88	6	88	6	88	88	819740	804604	<0.2	1.6	<0.2	1.6
					Middle	4.0	2.3	275	24.4	24.4	8.2	8.2	31.4	31.4	105.4	105.4	7.4	7.4	8.6	7	87	7	87	6	88	88	819740	804604	<0.2	1.8	<0.2	1.8					
						7.0	2.6	272	24.4	24.4	8.2	8.2	31.9	31.9	105.1	105.1	7.3	7.3	10.2	7	90	7	90	6	89	88	819740	804604	<0.2	1.8	<0.2	1.8					
						7.0	2.9	289	24.4	24.4	8.2	8.2	31.9	31.9	105.0	105.0	7.3	7.3	10.1	8	91	8	91	6	89	88	819740	804604	<0.2	1.9	<0.2	1.9					
					IM5	Rainy	Moderate	12:00	8.4	Surface	1.0	1.5	59	24.5	24.5	8.1	8.1	28.3	28.4	100.6	100.6	7.1	7.1	4.9	5	86	5	86	88	820735	804883	<0.2	1.7	<0.2	1.7		
											1.0	1.6	59	24.5	24.5	8.1	8.1																				

Expansion of Hong Kong International Airport into a Three-Runway System
Water Quality Monitoring

Water Quality Monitoring Results on 27 April 21 during Mid-Flood Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)	Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity (NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)											
								Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA										
C1	Rainy	Moderate	07:17	8.2	Surface	1.0	2.0	16	24.4	24.4	8.2	8.2	30.8	30.9	109.6	109.8	7.7	7.7	9.6	4	86	87	87	87	815633	804229	<0.2	1.2	1.1	1.1									
						1.0	2.1	16	24.4	24.4	8.2	8.2	31.0	31.0	7.7	7.7	9.8	3	85	87	87	87	87	87	87	87	815633	804229	<0.2	1.2	1.1	1.1							
						4.1	2.0	12	24.4	24.4	8.2	8.2	32.2	32.2	111.2	111.2	7.7	7.7	8.9	4	87	87	87	87	87	87	87	87	87	87	87	87	87	87					
					Middle	4.1	2.2	12	24.4	24.4	8.2	8.2	32.2	32.2	111.2	111.2	7.7	7.7	9.0	4	88	87	87	87	87	87	87	87	87	87	87	87	87	87	87				
						7.2	2.0	13	24.4	24.4	8.2	8.2	32.2	32.2	111.2	111.2	7.6	7.6	11.3	4	89	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87			
						7.2	2.1	14	24.3	24.3	8.2	8.2	32.2	32.2	109.7	109.7	7.6	7.6	11.9	5	89	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87			
					C2	Rainy	Moderate	08:28	12.0	Surface	1.0	0.1	322	24.9	24.9	8.2	8.2	25.9	25.9	90.3	90.4	6.5	7.1	10	10	87	87	87	87	825692	806931	<0.2	1.3	1.4	1.5				
											1.0	0.1	340	24.9	24.9	8.2	8.2	25.9	25.9	90.4	90.4	6.5	7.1	11	11	87	87	87	87	87	87	87	87	87	87	87	87	87	87
											6.0	0.1	290	24.8	24.8	8.2	8.2	26.3	26.3	91.0	91.2	6.5	6.5	8.6	9	90	87	87	87	87	87	87	87	87	87	87	87	87	87
Middle	6.0	0.1	291	24.8						24.8	8.2	8.2	26.3	26.3	91.3	91.3	6.5	6.5	8.6	8	91	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87			
	11.0	0.0	141	24.5						24.5	8.2	8.2	28.6	28.6	92.5	92.5	6.6	6.6	9.3	6	93	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87			
	11.0	0.0	148	24.5						24.5	8.2	8.2	28.6	28.6	92.5	92.5	6.6	6.6	9.3	7	93	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87			
C3	Misty	Calm	06:29	11.6						Surface	1.0	0.6	261	24.7	24.7	8.2	8.2	29.0	29.0	94.6	94.6	6.7	7.1	4	4	85	85	85	85	822123	817789	<0.2	1.2	1.2	1.3				
											1.0	0.6	272	24.7	24.7	8.2	8.2	29.0	29.0	94.6	94.6	6.7	7.1	3.0	4	85	85	85	85	85	85	85	85	85	85	85	85	85	85
											5.8	0.7	263	24.6	24.6	8.2	8.2	29.4	29.4	94.5	94.5	6.7	6.7	3.8	4	89	87	87	87	87	87	87	87	87	87	87	87	87	87
					Middle	5.8	0.8	263	24.6	24.6	8.2	8.2	29.4	29.4	94.5	94.5	6.6	6.6	3.7	5	89	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87			
						10.6	0.6	263	24.6	24.6	8.2	8.2	29.6	29.6	94.3	94.3	6.6	6.6	9.0	5	91	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87			
						10.6	0.7	272	24.7	24.7	8.2	8.2	29.5	29.5	94.5	94.4	6.7	6.7	9.1	5	91	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87			
					IM1	Rainy	Moderate	07:36	5.5	Surface	1.0	1.7	1	24.2	24.2	8.1	8.1	29.8	29.8	102.9	102.9	7.3	7.3	6.3	5	87	86	86	86	817962	807124	<0.2	1.2	1.1	1.2				
											1.0	1.8	1	24.2	24.2	8.1	8.1	29.8	29.8	102.8	102.8	7.3	7.3	6.5	11	86	86	86	86	86	86	86	86	86	86	86	86	86	
											-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Middle	4.5	1.6	358	24.3						24.3	8.1	8.1	30.1	30.1	102.5	102.5	7.2	7.2	8.0	13	89	87	87	87	87	87	87	87	87	87	87	87	87	87	87				
	4.5	1.7	358	24.3						24.3	8.1	8.1	30.1	30.1	102.5	102.5	7.2	7.2	8.3	5	90	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87			
	-	-	-	-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
IM2	Rainy	Moderate	07:43	7.6						Surface	1.0	0.1	335	24.3	24.3	8.1	8.1	29.9	29.9	103.1	103.1	7.3	7.3	12.6	13	85	87	87	87	818160	806180	<0.2	1.0	1.0	1.1				
											1.0	0.1	338	24.3	24.3	8.1	8.1	29.9	29.9	103.0	103.0	7.3	7.3	12.5	13	87	87	87	87	87	87	87	87	87	87	87	87	87	87
											3.8	0.1	354	24.3	24.3	8.1	8.1	29.9	29.9	102.7	102.7	7.3	7.3	14.6	17	87	87	87	87	87	87	87	87	87	87	87	87	87	87
					Middle	3.8	0.1	326	24.3	24.3	8.1	8.1	29.9	29.9	102.7	102.7	7.3	7.3	15.0	17	88	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87			
						6.6	0.2	43	24.3	24.3	8.1	8.1	29.9	29.9	102.5	102.5	7.2	7.2	11.5	18	90	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87			
						6.6	0.2	46	24.3	24.3	8.1	8.1	29.9	29.9	102.5	102.5	7.2	7.2	11.9	17	91	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87			
					IM3	Rainy	Moderate	07:49	7.2	Surface	1.0	0.1	312	24.3	24.3	8.2	8.2	30.0	30.0	104.2	104.3	7.4	7.4	12.5	5	86	86	86	86	818798	805576	<0.2	1.0	1.1	1.1				
											1.0	0.1	333	24.3	24.3	8.2	8.2	30.1	30.1	104.3	104.3	7.4	7.4	12.6	6	86	86	86	86	86	86	86	86	86	86	86	86	86	86
											3.6	0.1	348	24.3	24.3	8.1	8.1	30.6	30.6	105.3	105.3	7.4	7.4	14.0	6	87	87	87	87	87	87	87	87	87	87	87	87	87	87
Middle	3.6	0.1	320	24.3						24.3	8.1	8.1	30.6	30.6	105.3	105.3	7.4	7.4	14.0	6	88	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87			
	6.2	0.1	26	24.3						24.3	8.1	8.1	30.6	30.6	104.6	104.6	7.4	7.4	14.3	7	90	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87			
	6.2	0.1	26	24.3						24.3	8.1	8.1	30.6	30.6	104.5	104.5	7.4	7.4	14.6	8	91	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87			
IM4	Rainy	Moderate	07:58	7.8						Surface	1.0	0.1	342	24.3	24.3	8.2	8.2	31.1	31.1	107.2	107.2	7.5	7.5	12.9	3	85	86	86	86	819730	804606	<0.2	1.1	1.0	1.0				
											1.0	0.1	315	24.3	24.3	8.2	8.2	31.1	31.1	107.2	107.2	7.5	7.5	13.2	3	86	86	86	86	86	86	86	86	86	86	86	86	86	86
											3.9	0.1	1	24.3	24.3	8.2	8.2	31.2	31.2	106.9	106.9	7.5	7.5	12.0	3	87	87	87	87	87	87	87	87	87	87	87	87	87	87
					Middle	3.9	0.1	1	24.3	24.3	8.2	8.2	31.2	31.2	106.8	106.8	7.5	7.5	12.0	14	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87			
						6.8	0.2	35	24.3	24.3	8.1	8.1	31.2	31.2	106.5	106.5	7.5	7.5	14.7	12	89	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87			
						6.8	0.2	35	24.3	24.3	8.1	8.1	31.2	31.2	106.5	106.5	7.5	7.5	14.9	10	90	87	87	87	87	87	87	87	87	87	87	87	87	87	87				
					IM5	Rainy	Moderate	08:04	8.2	Surface	1.0	0.1	289	24.3	24.3	8.2	8.2	30.5	30.5	104																			

Expansion of Hong Kong International Airport into a Three-Runway System
Water Quality Monitoring

Water Quality Monitoring Results on 29 April 21 during Mid-Ebb Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)	Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity (NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)									
								Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA	Value	DA				
IM9	Fine	Moderate	13:14	7.8	Surface	1.0	0.3	97	24.9	24.9	8.2	8.2	27.2	27.2	87.3	87.3	6.2	6.2	8.3	8.3	8	8	83	83	86	822108	808788	<0.2	1.1	<0.2	1.1						
						1.0	0.3	102	24.9	24.9	8.2	8.2	27.2	27.2	87.3	87.3	6.2	6.2	8.3	8.3	7	7	84	84													
						3.9	0.3	97	24.8	24.8	8.2	8.2	27.3	27.3	87.5	87.5	6.2	6.2	9.0	9.0	10	10	86	86													
					Middle	3.9	0.3	102	24.8	24.8	8.2	8.2	27.3	27.3	87.5	87.5	6.2	6.2	8.9	8.9	9	9	87	87													
						6.8	0.4	83	24.6	24.6	8.3	8.3	28.0	28.0	89.1	89.1	6.3	6.3	10.5	10.5	10	10	89	89													
						6.8	0.4	87	24.6	24.6	8.3	8.3	28.0	28.0	89.1	89.1	6.3	6.3	10.3	10.3	9	9	89	89													
					Bottom	1.0	0.7	115	25.0	25.0	8.3	8.3	27.2	27.2	88.4	88.4	6.3	6.3	8.2	8.2	10	10	83	83													
						1.0	0.8	121	25.0	25.0	8.3	8.3	27.2	27.2	88.3	88.3	6.3	6.3	8.2	8.2	9	9	83	83													
						4.1	0.6	109	24.7	24.7	8.3	8.3	27.9	27.9	85.3	85.3	6.0	6.0	9.5	9.5	9	9	87	87													
Middle	4.1	0.6	118	24.7	24.7	8.3	8.3	27.9	27.9	85.2	85.2	6.0	6.0	9.6	9.6	9	9	88	88																		
	7.1	0.5	106	24.7	24.7	8.3	8.3	27.9	27.9	84.5	84.5	6.0	6.0	11.2	11.2	7	7	89	89																		
	7.1	0.5	115	24.7	24.7	8.3	8.3	27.9	27.9	84.6	84.6	6.0	6.0	11.0	11.0	7	7	89	89																		
IM10	Fine	Moderate	13:21	8.1	Surface	1.0	0.7	115	25.0	25.0	8.3	8.3	27.2	27.2	88.4	88.4	6.3	6.3	8.2	8.2	10	10	83	83	87	822390	809808	<0.2	1.0	<0.2	1.0						
						1.0	0.8	121	25.0	25.0	8.3	8.3	27.2	27.2	88.3	88.3	6.3	6.3	8.2	8.2	9	9	83	83													
						4.1	0.6	109	24.7	24.7	8.3	8.3	27.9	27.9	85.3	85.3	6.0	6.0	9.5	9.5	9	9	87	87													
					Middle	4.1	0.6	118	24.7	24.7	8.3	8.3	27.9	27.9	85.2	85.2	6.0	6.0	9.6	9.6	9	9	88	88													
						7.1	0.5	106	24.7	24.7	8.3	8.3	27.9	27.9	84.5	84.5	6.0	6.0	11.2	11.2	7	7	89	89													
						7.1	0.5	115	24.7	24.7	8.3	8.3	27.9	27.9	84.6	84.6	6.0	6.0	11.0	11.0	7	7	89	89													
					Bottom	1.0	0.9	117	25.0	25.0	8.3	8.3	27.3	27.3	89.8	89.8	6.4	6.4	7.5	7.5	9	9	84	84													
						1.0	0.9	117	25.0	25.0	8.3	8.3	27.3	27.3	89.8	89.8	6.4	6.4	7.5	7.5	9	9	84	84													
						4.3	0.8	108	24.7	24.7	8.3	8.3	27.8	27.8	87.2	87.2	6.2	6.2	8.4	8.4	8	8	87	87													
Middle	4.3	0.8	116	24.7	24.7	8.3	8.3	27.8	27.8	87.1	87.1	6.2	6.2	8.4	8.4	9	9	87	87																		
	7.5	0.5	95	24.7	24.7	8.3	8.3	28.6	28.6	84.2	84.2	6.0	6.0	9.7	9.7	9	9	88	88																		
	7.5	0.5	100	24.7	24.7	8.3	8.3	28.6	28.6	84.2	84.2	6.0	6.0	9.4	9.4	8	8	88	88																		
IM11	Fine	Moderate	13:33	8.5	Surface	1.0	0.9	117	25.0	25.0	8.3	8.3	27.3	27.3	89.8	89.8	6.4	6.4	7.5	7.5	9	9	84	84	86	822033	811460	<0.2	1.1	<0.2	1.1						
						1.0	0.9	117	25.0	25.0	8.3	8.3	27.3	27.3	89.8	89.8	6.4	6.4	7.5	7.5	9	9	84	84													
						4.3	0.8	108	24.7	24.7	8.3	8.3	27.8	27.8	87.2	87.2	6.2	6.2	8.4	8.4	8	8	87	87													
					Middle	4.3	0.8	116	24.7	24.7	8.3	8.3	27.8	27.8	87.1	87.1	6.2	6.2	8.4	8.4	9	9	87	87													
						7.5	0.5	95	24.7	24.7	8.3	8.3	28.6	28.6	84.2	84.2	6.0	6.0	9.7	9.7	9	9	88	88													
						7.5	0.5	100	24.7	24.7	8.3	8.3	28.6	28.6	84.2	84.2	6.0	6.0	9.4	9.4	8	8	88	88													
					Bottom	1.0	0.9	123	25.2	25.2	8.3	8.3	27.5	27.5	90.6	90.6	6.4	6.4	7.2	7.2	9	9	84	84													
						1.0	1.0	125	25.1	25.1	8.3	8.3	27.5	27.5	90.5	90.5	6.4	6.4	7.3	7.3	10	10	85	85													
						4.9	0.6	114	24.8	24.8	8.3	8.3	27.9	27.9	84.2	84.2	6.0	6.0	8.4	8.4	10	10	87	87													
Middle	4.9	0.6	118	24.8	24.8	8.3	8.3	27.9	27.9	84.1	84.1	6.0	6.0	8.6	8.6	9	9	88	88																		
	8.7	0.3	109	24.6	24.6	8.3	8.3	28.9	28.9	82.4	82.4	5.8	5.8	10.4	10.4	9	9	89	89																		
	8.7	0.3	112	24.6	24.6	8.3	8.3	28.9	28.9	82.4	82.4	5.8	5.8	10.3	10.3	8	8	90	90																		
SR1A	Fine	Calm	14:54	5.0	Surface	1.0	-	-	25.1	25.1	8.2	8.2	26.9	26.9	86.5	86.5	6.1	6.1	6.3	6.3	8	8	-	-	819981	812656	-	-	-	-							
						1.0	-	-	25.1	25.1	8.2	8.2	26.9	26.9	86.5	86.5	6.1	6.1	6.4	6.4	8	8	-	-													
						2.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-									
					Middle	2.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-			-	-	-	-	-	-	-
						4.0	-	-	24.9	24.9	8.2	8.2	27.6	27.6	85.0	85.0	6.0	6.0	5.2	5.2	9	9	-	-													
						4.0	-	-	24.9	24.9	8.2	8.2	27.6	27.6	85.0	85.0	6.0	6.0	5.1	5.1	8	8	-	-													
					Bottom	1.0	0.5	99	24.9	24.9	8.3	8.3	27.7	27.7	88.0	88.0	6.2	6.2	7.8	7.8	13	13	83	83													
						1.0	0.5	100	24.9	24.9	8.3	8.3	27.7	27.7	88.0	88.0	6.2	6.2	8.0	8.0	14	14	83	83													
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-													
Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-																		
	3.4	0.4	98	24.9	24.9	8.3	8.3	27.8	27.8	88.2	88.2	6.2	6.2	9.0	9.0	13	13	88	88																		
	3.4	0.4	99	24.9	24.9	8.3	8.3	27.8	27.8	88.2	88.2	6.2	6.2	9.3	9.3	13	13	88	88																		
SR2	Fine	Moderate	15:06	4.4	Surface	1.0	0.5	99	24.9	24.9	8.3	8.3	27.7	27.7	88.0	88.0	6.2	6.2	7.8	7.8	13	13	83	83	86	821455	814188	<0.2	1.1	<0.2	1.2						
						1.0	0.5	100	24.9	24.9	8.3	8.3	27.7	27.7	88.0	88.0	6.2	6.2	8.0	8.0	14	14	83	83													
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-													
					Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-													
						3.4	0.4	98	24.9	24.9	8.3	8.3	27.8	27.8	88.2	88.2	6.2	6.2	9.0	9.0	13	13	88	88													
						3.4	0.4	99	24.9	24.9	8.3	8.3	27.8	27.8	88.2	88.2	6.2	6.2	9.3	9.3	13	13	88	88													
					Bottom	1.0	0.1	196	25.2	25.2	8.3	8.3	26.7	26.7	87.8	87.8	6.2	6.2	6.2	6.2	9	9	-	-													
						1.0	0.1	208	25.2	25.2	8.3	8.3	26.7	26.7	87.8	87.8	6.2	6.2	6.2	6.2	8	8	-	-													
						4.7	0.1	139	24.7	24.7	8.4	8.4	27.2	27.2	86.9	86.9	6.2	6.2	7.9	7.9	8	8	-	-													
Middle	4.7	0.1	149	24.7	24.7	8.4	8.4	27.2	27.2	87.0	87.0	6.2	6.2	8.0	8.0	8	8	-	-																		
	8.4	0.2	100	24.7	24.7	8.4	8.4	28.5	28.5	91.2	91.2	6.4	6.4	8.7	8.7	7	7	-	-																		
	8.4	0.2	105	24.7	24.7	8.4	8.4	28.5	28.5	91.2	91.2	6.4	6.4	8.7	8.7	7	7	-	-																		
SR4A	Cloudy	Moderate	14:29	9.3	Surface	1.0	2.1	150	25.0	25.0	8.1	8.1	28.1	28.1	96.9	96.9	6.8	6.8	5.6	5.6	5	5	-	-	817210	807830	-	-	-	-							
						1.0	2.2	158	25.0	25.0</																											

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

Water Quality Monitoring

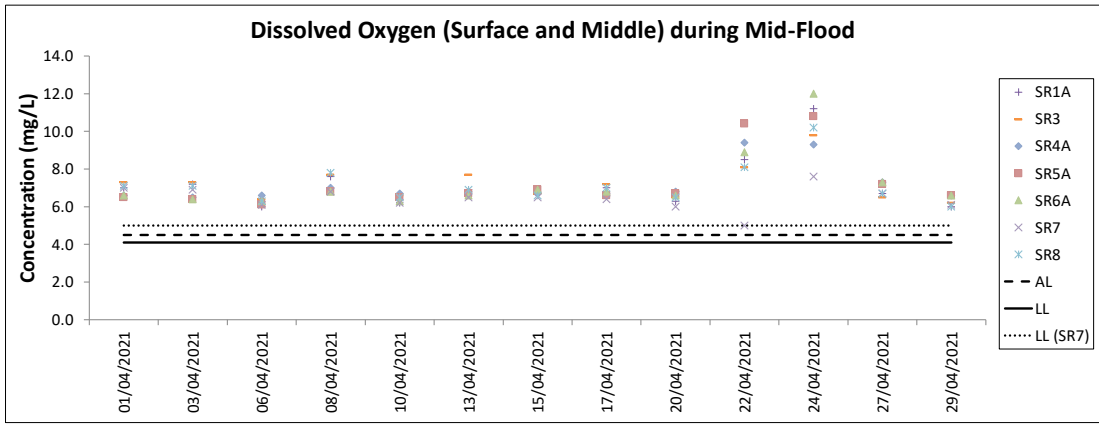
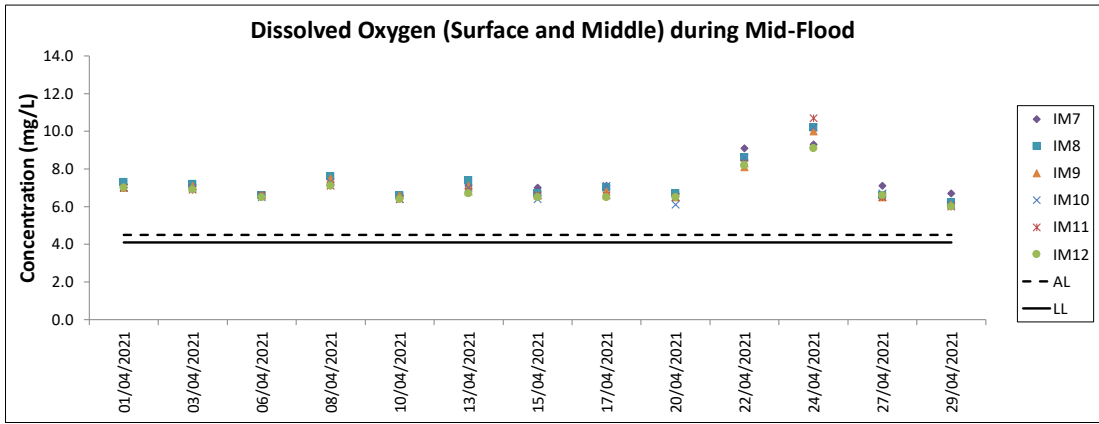
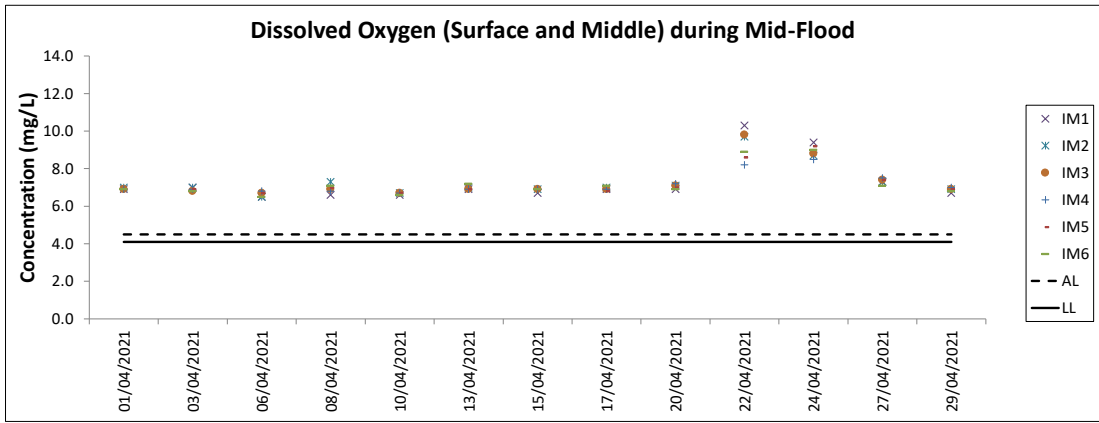
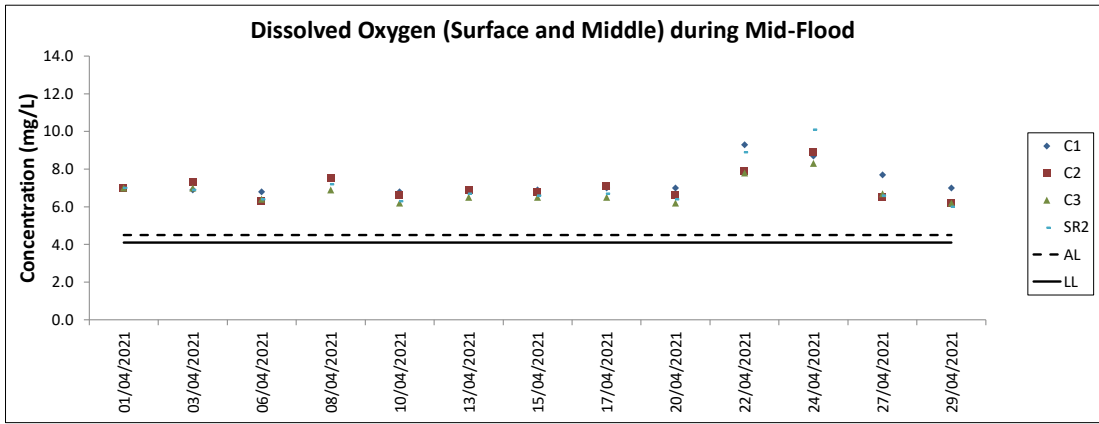
Water Quality Monitoring Results on 29 April 21 during Mid-Flood Tide

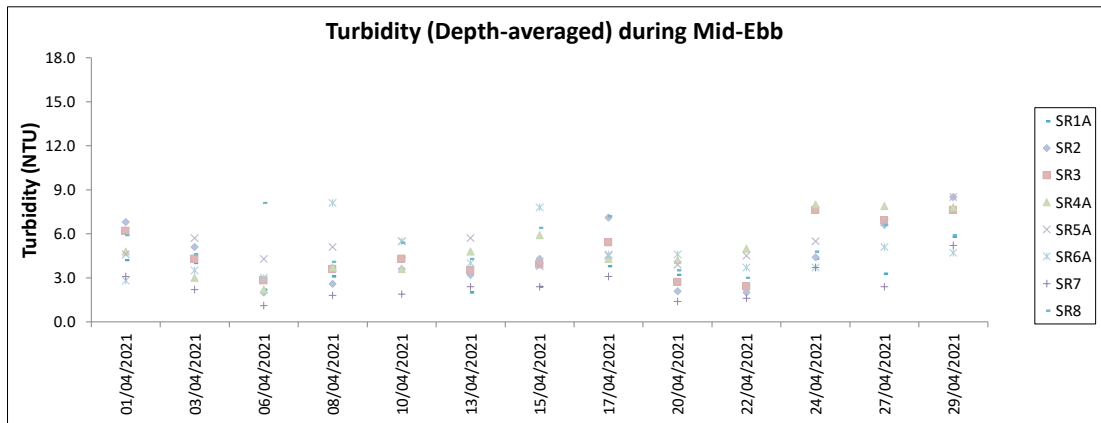
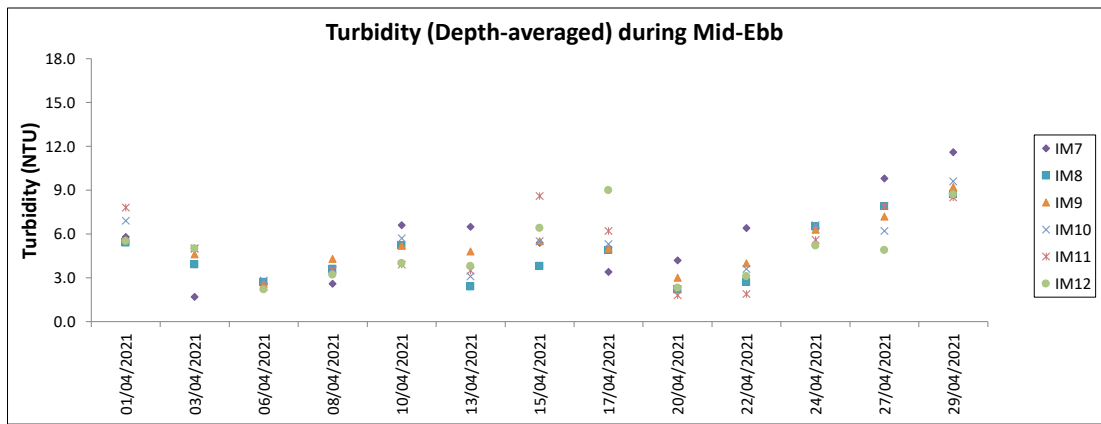
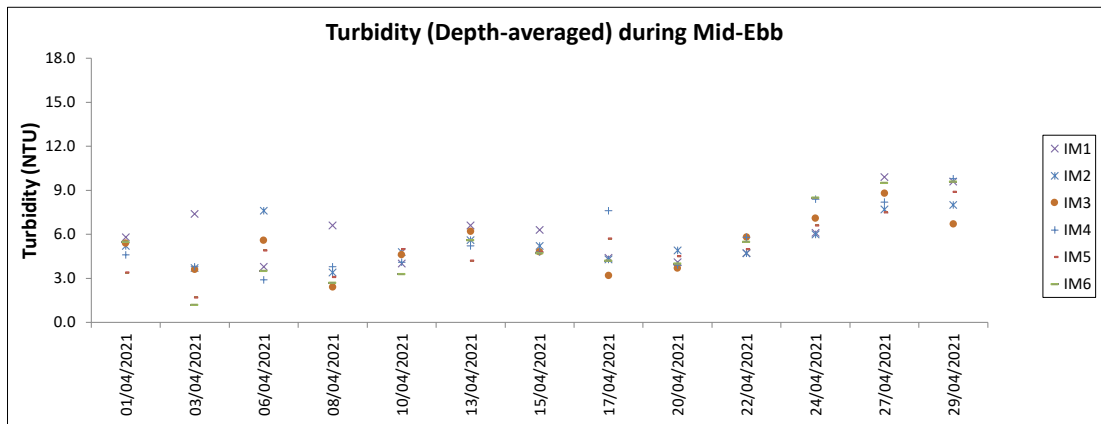
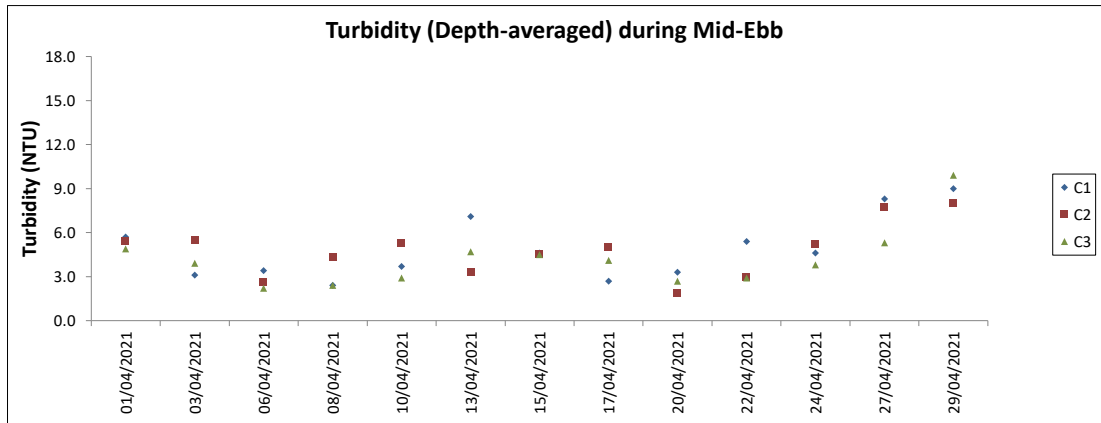
Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)	Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity (NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)					
								Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA
								Value	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value
C1	Rainy	Moderate	08:34	8.1	Surface	1.0	1.3	115	24.4	24.4	8.1	8.1	28.2	28.2	98.6	98.6	7.0	7.0	6.0	4	83	85	815627	804267	<0.2	0.9	<0.2	1.0					
						28.2	28.2	98.6	98.6	7.0	7.0	4	83	85	815627	804267	<0.2	1.0															
						4.1	1.2	123	24.4	24.4	8.1	8.1	30.1	30.0	98.7	98.7	7.0	7.0	12.3	10.9	4	86	85	815627	804267	<0.2	0.9						
					Middle	4.1	1.2	128	24.4	24.4	8.1	8.1	30.0	30.0	98.7	98.7	7.0	7.0	12.2	10.9	4	86	85	815627	804267	<0.2	1.0						
						7.1	1.1	127	24.3	24.3	8.1	8.1	31.3	31.3	98.8	98.8	6.9	6.9	14.4	6.9	4	87	85	815627	804267	<0.2	0.9						
						7.1	1.1	130	24.3	24.3	8.1	8.1	31.3	31.3	98.8	98.8	6.9	6.9	14.6	6.9	3	87	85	815627	804267	<0.2	0.9						
					Bottom	1.0	0.5	347	24.9	24.9	8.2	8.2	25.1	25.1	86.2	86.2	6.2	6.2	4.3	7	86	88	825680	806933	<0.2	1.4							
						1.0	0.6	353	24.9	24.9	8.2	8.2	25.1	25.1	86.2	86.2	6.2	6.2	4.3	7	86	88	825680	806933	<0.2	1.4							
						6.4	0.5	354	24.8	24.8	8.2	8.2	26.0	26.0	85.3	85.3	6.1	6.1	5.6	5.4	4	87	88	825680	806933	<0.2	1.5						
C2	Cloudy	Moderate	09:20	12.8	Surface	6.4	0.5	326	24.8	24.8	8.2	8.2	26.0	26.0	85.3	85.3	6.1	6.1	5.4	4	87	89	822106	817794	<0.2	1.5							
						11.8	0.4	359	24.7	24.7	8.2	8.2	27.6	27.6	84.2	84.2	6.0	6.0	6.5	4	89	89	822106	817794	<0.2	1.5							
						11.8	0.5	330	24.7	24.7	8.2	8.2	27.5	27.5	84.4	84.4	6.0	6.0	6.4	4	89	89	822106	817794	<0.2	1.5							
C3	Cloudy	Moderate	07:10	11.1	Surface	1.0	0.7	248	24.7	24.7	8.2	8.2	27.3	27.3	86.6	86.6	6.2	6.2	3.2	4	84	87	822106	817794	<0.2	1.2							
						1.0	0.7	270	24.7	24.7	8.2	8.2	28.3	28.3	86.1	86.1	6.1	6.1	3.3	5	86	87	822106	817794	<0.2	1.1							
						5.6	0.7	248	24.7	24.7	8.2	8.2	28.3	28.3	86.1	86.1	6.1	6.1	3.3	5	86	87	822106	817794	<0.2	1.1							
Middle	5.6	0.7	268	24.7	24.7	8.2	8.2	28.3	28.3	86.1	86.1	6.1	6.1	4.3	4	89	89	822106	817794	<0.2	1.0												
	10.1	0.7	251	24.6	24.6	8.2	8.2	29.7	29.7	86.1	86.1	6.1	6.1	4.2	5	89	89	822106	817794	<0.2	1.1												
	10.1	0.7	263	24.6	24.6	8.2	8.2	29.7	29.7	86.2	86.2	6.1	6.1	4.2	5	89	89	822106	817794	<0.2	1.1												
C3	Bottom	10.1	0.7	263	24.6	24.6	8.2	8.2	29.7	29.7	86.2	86.2	6.1	6.1	4.2	5	89	89	822106	817794	<0.2	1.1											
		1.0	1.3	340	24.4	24.4	8.1	8.1	27.7	27.7	94.3	94.3	6.7	6.7	8.9	5	82	88	817966	807131	<0.2	1.0											
		1.0	1.3	343	24.4	24.4	8.1	8.1	27.8	27.8	94.1	94.1	6.7	6.7	8.9	20	88	88	817966	807131	<0.2	1.2											
IM1	Rainy	Moderate	08:53	5.5	Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
						4.5	1.1	331	24.5	24.5	8.0	8.0	28.2	28.2	93.5	93.5	6.6	6.6	8.9	4	85	85	817966	807131	<0.2	1.1							
						4.5	1.1	356	24.5	24.5	8.0	8.0	28.2	28.2	93.5	93.5	6.6	6.6	8.8	6	85	85	817966	807131	<0.2	1.0							
IM1	Bottom	4.5	1.1	331	24.5	24.5	8.0	8.0	28.2	28.2	93.5	93.5	6.6	6.6	8.9	4	85	85	817966	807131	<0.2	1.1											
		4.5	1.1	356	24.5	24.5	8.0	8.0	28.2	28.2	93.5	93.5	6.6	6.6	8.8	6	85	85	817966	807131	<0.2	1.0											
		1.0	1.6	331	24.5	24.5	8.1	8.1	28.0	28.0	96.5	96.5	6.9	6.9	13.5	12	88	88	818158	806142	<0.2	1.2											
IM2	Cloudy	Moderate	09:00	7.3	Surface	1.0	1.7	342	24.5	24.5	8.1	8.1	28.0	28.0	96.5	96.5	6.9	6.9	13.6	13	88	88	818158	806142	<0.2	1.2							
						3.7	1.7	328	24.5	24.5	8.1	8.1	28.1	28.1	96.2	96.2	6.8	6.8	15.2	9	89	89	818158	806142	<0.2	1.2							
						3.7	1.9	359	24.5	24.5	8.1	8.1	28.1	28.1	96.2	96.2	6.8	6.8	15.3	10	90	89	818158	806142	<0.2	1.3							
IM2	Middle	3.7	1.9	359	24.5	24.5	8.1	8.1	28.1	28.1	96.2	96.2	6.8	6.8	15.3	10	90	89	818158	806142	<0.2	1.3											
		6.3	2.0	326	24.5	24.5	8.1	8.1	28.1	28.1	96.1	96.1	6.8	6.8	16.0	13	85	85	818158	806142	<0.2	1.2											
		6.3	2.1	349	24.5	24.5	8.1	8.1	28.1	28.1	96.2	96.2	6.8	6.8	14.0	12	86	86	818158	806142	<0.2	1.2											
IM2	Bottom	6.3	2.0	326	24.5	24.5	8.1	8.1	28.1	28.1	96.1	96.1	6.8	6.8	16.0	13	85	85	818158	806142	<0.2	1.2											
		6.3	2.1	349	24.5	24.5	8.1	8.1	28.1	28.1	96.2	96.2	6.8	6.8	14.0	12	86	86	818158	806142	<0.2	1.2											
		1.0	1.4	118	24.4	24.4	8.1	8.1	28.1	28.1	97.6	97.6	6.9	6.9	9.0	9	88	88	818782	805605	<0.2	1.2											
IM3	Cloudy	Moderate	09:07	7.7	Surface	1.0	1.5	122	24.4	24.4	8.1	8.1	28.1	28.1	97.5	97.5	6.9	6.9	8.9	8	89	89	818782	805605	<0.2	1.3							
						3.9	1.6	121	24.4	24.4	8.1	8.1	28.3	28.3	96.7	96.7	6.9	6.9	10.9	8	90	90	818782	805605	<0.2	1.2							
						3.9	1.7	124	24.4	24.4	8.1	8.1	28.3	28.3	96.7	96.7	6.9	6.9	11.0	17	90	90	818782	805605	<0.2	1.2							
IM3	Middle	3.9	1.7	124	24.4	24.4	8.1	8.1	28.3	28.3	96.7	96.7	6.9	6.9	11.0	17	90	90	818782	805605	<0.2	1.2											
		6.7	1.5	122	24.5	24.5	8.1	8.1	28.7	28.7	96.3	96.3	6.8	6.8	12.0	21	86	86	818782	805605	<0.2	1.2											
		6.7	1.6	124	24.5	24.5	8.1	8.1	28.7	28.7	96.3	96.3	6.8	6.8	11.9	20	86	86	818782	805605	<0.2	1.2											
IM3	Bottom	6.7	1.5	122	24.5	24.5	8.1	8.1	28.7	28.7	96.3	96.3	6.8	6.8	12.0	21	86	86	818782	805605	<0.2	1.2											
		6.7	1.6	124	24.5	24.5	8.1	8.1	28.7	28.7	96.3	96.3	6.8	6.8	11.9	20	86	86	818782	805605	<0.2	1.2											
		1.0	1.2	113	24.4	24.4	8.1	8.1	28.3	28.2	98.8	98.8	7.0	7.0	10.0	7	89	89	819712	804615	<0.2	1.2											
IM4	Cloudy	Moderate	09:15	8.6	Surface	1.0	1.2	122	24.3	24.3	8.1	8.1	28.3	28.2	98.8	98.8	7.0	7.0	9.3	8	89	89	819712	804615	<0.2	1.2							
						4.3	1.3	119	24.4	24.4	8.1	8.1	29.8	29.8	97.5	97.5	6.9	6.9	13.3	8	89	89	819712	804615	<0.2	1.1							
						4.3	1.4	130	24.4	24.4	8.1	8.1	29.8	29.8	97.5	97.5	6.9	6.9	13.6	22	90	89	819712	804615	<0.2	1.2							
IM4	Middle	4.3	1.4	130	24.4	24.4	8.1	8.1	29.8	29.8	97.5	97.5	6.9	6.9	13.6	22	90	89	819712	804615	<0.2	1.2											
		7.6	1.3	127	24.4	24.4	8.1	8.1	29.8	29.8	97.5	97.5	6.9	6.9	13.2	21	84	84	819712	804615	<0.2	1.3											
		7.6	1.4	138	24.4	24.4	8.1	8.1	29.8	29.8	97.6	97.6	6.9	6.9	13.3	22	85	85	819712	804615	<0.2	1.2											
IM4	Bottom	7.6	1.3	127	24.4	24.4	8.1	8.1	29.8	29.8	97.5	97.5	6.9	6.9	13.2	21	84	84	819712	804615	<0.2	1.3											
		7.6	1.4	138	24.4	24.4	8.1	8.1	29.8	29.8	97.6	97.6	6.9	6.9	13.3	22	85	85	819712	804615	<0.2	1.2											
		1.0	2.5	334	24.4	24.4	8.1	8.1	28.3	28.3	97.4	97.4	6.9	6.9	7.8	7	84	88	820734	804887	<0.2	1.1											
IM5	Cloudy	Moderate	09:21	8.1	Surface	1.0	2.6	347	24.4	24.4	8.1	8.1	28.3	28.3	97.4	97.4	6.9	6.9	7.4	18	88	88	820734	804887	<0.2	1.1							
						4.1	2.4	333	24.4	24.4	8.1	8.1	28.4	28.4	97.1	97.1	6.9	6.9	13.4	5	88	88	820734	804887	<0.2	1.1							
						4.1	2.6	355	24.4	24.4	8.1	8.1	28.4	28.4	97.1	97.1	6.9	6.9	13.6	4	89	89	820734	804887	<0.2	1.2							
IM5	Middle	4.1	2.6	355	24.4	24.4	8.1	8.1	28.4	28.4	97.1	97.1	6.9	6.9	13.6	4	89	89	820734	804887													

Expansion of Hong Kong International Airport into a Three-Runway System
 Water Quality Monitoring

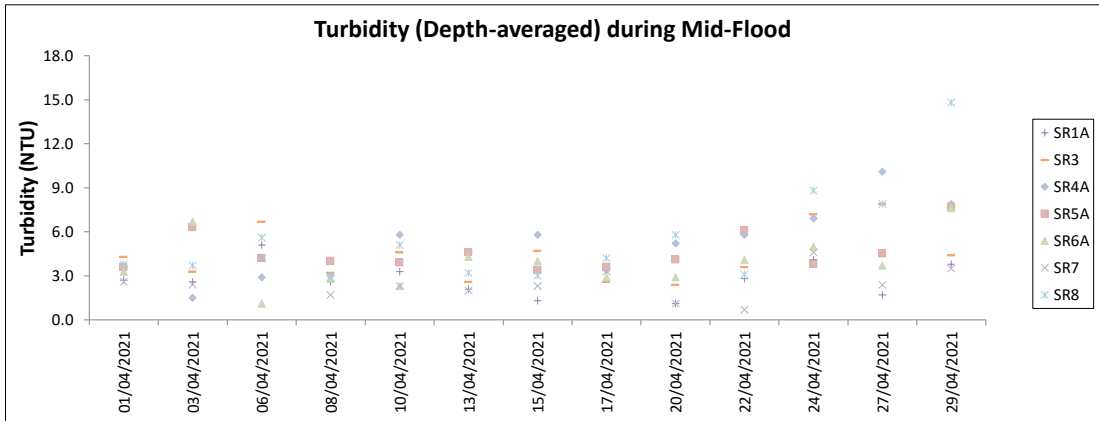
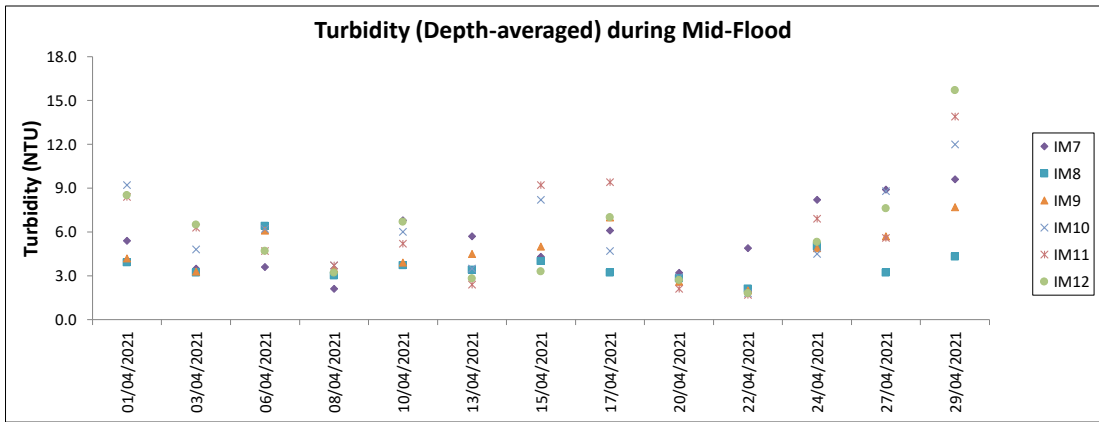
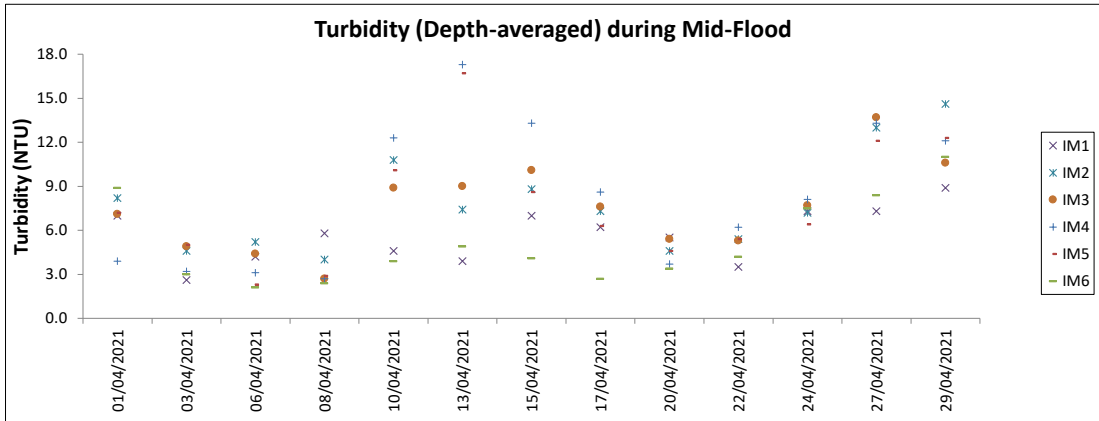
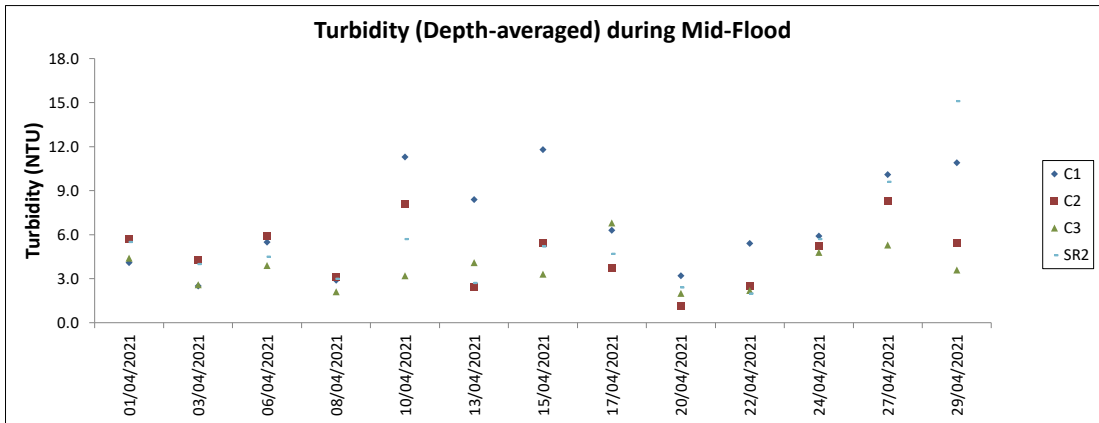
Water Quality Monitoring Results on **29 April 21** during Mid-Flood Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)	Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity (NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)		
								Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	
IM9	Cloudy	Moderate	08:47	7.9	Surface	1.0	0.3	43	24.8	8.2	8.2	26.1	26.1	85.4	85.4	6.1	6.1	7.5	12	84	87	87	87	87	822083	808815	-0.2	1.5	-0.2	1.4
						1.0	0.3	47	24.8	8.2	8.2	26.1	26.1	85.4	85.4	6.1	6.1	7.5	13	84	87	87	87							
						4.0	0.3	39	24.8	8.2	8.2	26.1	26.1	85.1	85.1	6.1	6.1	7.5	12	87	87	87	87							
					4.0	0.3	40	24.8	8.2	8.2	26.1	26.1	85.0	85.0	6.1	6.1	7.5	13	87	87	87	87								
					6.9	0.3	32	24.8	8.2	8.2	26.2	26.2	84.8	84.8	6.1	6.1	8.0	15	89	89	89	89								
					6.9	0.3	33	24.8	8.2	8.2	26.2	26.2	84.8	84.8	6.1	6.1	8.2	14	90	90	90	90								
IM10	Cloudy	Moderate	08:39	9.2	Surface	1.0	0.8	328	24.7	8.2	8.2	27.4	27.4	85.4	85.4	6.1	6.1	10.9	12	84	85	87	87	87	822399	809786	-0.2	1.3	-0.2	1.3
						1.0	0.9	343	24.7	8.2	8.2	27.4	27.4	85.4	85.4	6.1	6.1	10.9	11	85	87	87	87							
						4.6	0.7	325	24.7	8.2	8.2	27.6	27.6	84.8	84.8	6.0	6.0	11.9	12	87	87	87	87							
					4.6	0.7	333	24.7	8.2	8.2	27.6	27.6	84.8	84.8	6.0	6.0	11.8	11	87	87	87	87								
					8.2	0.7	324	24.7	8.2	8.2	27.6	27.6	85.1	85.1	6.1	6.1	13.1	15	89	89	89	89								
					8.2	0.8	350	24.6	8.2	8.2	27.6	27.6	85.2	85.2	6.1	6.1	13.1	16	89	89	89	89								
IM11	Rainy	Moderate	08:29	8.4	Surface	1.0	0.7	305	24.8	8.2	8.2	27.5	27.5	84.7	84.7	6.0	6.0	13.0	16	83	84	85	85	86	822068	811451	-0.2	1.4	-0.2	1.3
						1.0	0.8	327	24.8	8.2	8.2	27.5	27.5	84.7	84.7	6.0	6.0	12.9	16	84	85	87	87							
						4.2	0.7	308	24.8	8.2	8.2	27.5	27.5	84.2	84.2	6.0	6.0	13.8	16	85	85	87	87							
					4.2	0.7	325	24.8	8.2	8.2	27.5	27.5	84.2	84.2	6.0	6.0	13.7	17	85	85	87	87								
					7.4	0.5	302	24.7	8.2	8.2	27.5	27.5	84.2	84.3	6.0	6.0	14.8	21	88	88	89	89								
					7.4	0.6	317	24.7	8.2	8.2	27.5	27.5	84.3	84.3	6.0	6.0	14.9	21	88	88	89	89								
IM12	Rainy	Moderate	08:23	9.9	Surface	1.0	0.9	271	24.8	8.2	8.2	27.4	27.4	85.0	85.0	6.0	6.0	14.6	20	84	84	86	87	87	821469	812052	-0.2	1.4	-0.2	1.3
						1.0	1.0	277	24.8	8.2	8.2	27.4	27.4	85.0	85.0	6.0	6.0	14.7	19	84	86	87	87							
						5.0	0.9	268	24.8	8.2	8.2	27.4	27.4	84.7	84.7	6.0	6.0	15.8	20	86	87	87	87							
					5.0	0.9	281	24.8	8.2	8.2	27.4	27.4	84.7	84.7	6.0	6.0	15.8	20	87	87	89	89								
					8.9	0.7	271	24.7	8.2	8.2	27.6	27.6	84.4	84.4	6.0	6.0	16.7	17	89	89	89	89								
					8.9	0.8	289	24.7	8.2	8.2	27.6	27.6	84.4	84.4	6.0	6.0	16.5	18	89	89	89	89								
SR1A	Rainy	Calm	07:46	5.1	Surface	1.0	-	-	24.7	8.1	8.1	26.5	26.5	84.2	84.2	6.0	6.0	3.2	5	-	-	-	-	87	819981	812658	-	-	-	-
						1.0	-	-	24.7	8.1	8.1	26.5	26.5	84.1	84.1	6.0	6.0	3.2	4	-	-	-	-							
						2.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				-			
					2.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
					4.1	-	-	24.6	8.1	8.1	27.6	27.6	82.1	82.1	5.8	5.8	4.3	5	-	-	-	-								
					4.1	-	-	24.6	8.1	8.1	27.6	27.6	82.1	82.1	5.8	5.8	4.4	6	-	-	-	-								
SR2	Rainy	Moderate	07:29	4.8	Surface	1.0	0.1	344	24.7	8.1	8.1	27.5	27.5	83.8	83.8	6.0	6.0	14.4	5	83	83	83	83	86	821455	814173	-0.2	1.1	-0.2	1.2
						1.0	0.1	345	24.7	8.1	8.1	27.5	27.5	83.8	83.8	6.0	6.0	14.3	5	83	83	83	83							
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				-			
					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				-			
					3.8	0.1	54	24.7	8.1	8.1	27.8	27.8	84.1	84.1	6.0	6.0	15.8	10	88	88	88	88								
					3.8	0.1	56	24.7	8.1	8.1	27.8	27.8	84.2	84.2	6.0	6.0	15.9	11	88	88	88	88								
SR3	Cloudy	Moderate	09:00	10.0	Surface	1.0	0.3	87	24.9	8.2	8.2	24.9	24.9	86.5	86.5	6.2	6.2	3.6	4	-	-	-	-	87	822140	807574	-	-	-	-
						1.0	0.3	90	24.9	8.2	8.2	24.9	24.9	86.5	86.5	6.2	6.2	3.6	5	-	-	-	-							
						5.0	0.4	86	24.9	8.2	8.2	25.1	25.1	85.8	85.8	6.2	6.2	4.6	4	-	-	-	-							
					5.0	0.4	87	24.9	8.2	8.2	25.1	25.1	85.8	85.8	6.2	6.2	4.7	5	-	-	-	-								
					9.0	0.3	81	24.8	8.2	8.2	25.5	25.5	85.4	85.4	6.1	6.1	4.9	6	-	-	-	-								
					9.0	0.3	85	24.8	8.2	8.2	25.5	25.5	85.4	85.4	6.1	6.1	4.9	7	-	-	-	-								
SR4A	Rainy	Moderate	08:08	7.6	Surface	1.0	1.4	5	24.5	8.1	8.1	28.2	28.2	92.3	92.3	6.6	6.6	7.7	4	-	-	-	-	87	817194	807810	-	-	-	-
						1.0	1.4	5	24.5	8.1	8.1	28.2	28.2	92.3	92.3	6.6	6.6	7.7	5	-	-	-	-							
						3.8	1.2	355	24.5	8.0	8.0	28.4	28.4	92.1	92.1	6.5	6.5	7.7	5	-	-	-	-							
					3.8	1.3	327	24.5	8.0	8.0	28.4	28.4	92.1	92.1	6.5	6.5	7.8	6	-	-	-	-								
					6.6	1.4	358	24.5	8.0	8.0	28.5	28.5	92.9	93.0	6.6	6.6	8.2	5	-	-	-	-								
					6.6	1.5	329	24.5	8.0	8.0	28.5	28.5	93.0	93.0	6.6	6.6	8.4	6	-	-	-	-								
SR5A	Rainy	Moderate	07:49	3.1	Surface	1.0	0.2	292	24.5	8.1	8.1	28.6	28.6	92.6	92.6	6.6	6.6	7.0	5	-	-	-	-	87	816589	810706	-	-	-	-
						1.0	0.2	320	24.5	8.1	8.1	28.6	28.6	92.6	92.6	6.6	6.6	7.1	4	-	-	-	-							
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				-			
					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
					2.1	0.1	294	24.5	8.1	8.1	28.6	28.6	92.6	92.7	6.6	6.6	8.3	5	-	-	-	-								
					2.1	0.2	309	24.5	8.1	8.1	28.6	28.6	92.7	92.7	6.6	6.6	8.4	6	-	-	-	-								
SR6A	Cloudy	Moderate	07:22	3.5	Surface	1.0	0.1	274	24.6	8.0	8.0	27.5	27.5	92.3	92.3	6.6	6.6	7.9	7	-	-	-	-	87	817943	814717	-	-	-	-
						1.0	0.1	274	24.6	8.0	8.0	27.5	27.5	92.3	92.3	6.6	6.6	7.9	8	-	-	-	-							
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				-			
					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
					2.5	0.1	324	24.5	8.0	8.0	27.7	27.7	92.2	92.3	6.6	6.6	7.3	5	-	-	-	-								
					2.5	0.1	347	24.5	8.0	8.0	27.7	27.7	92.3	92.3	6.6	6.6	7.3	5	-	-	-	-								
SR7	Cloudy	Moderate	06:42	15.9	Surface	1.0	0.2	338	24.6	8.2	8.2	28.3	28.3	86.5	86.5	6.1	6.1	2.6	5	-	-	-	-	87	823633	823745	-	-	-	-
						1.0	0.3	351	24.6	8.2	8.2	28.3	28.3	86.5	86.5	6.1	6.1	2.6	4	-	-	-	-							
						8.0	0.2	3	24.6	8.2	8.2	28.8	28.8	85.6	85.6	6.1	6.1	3.1	4	-	-	-	-							
					8.0	0.2	3	2																						

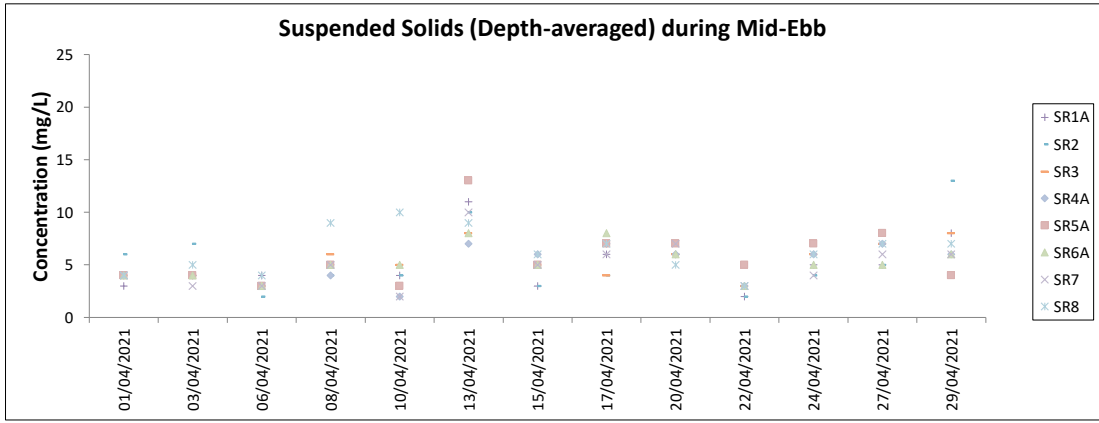
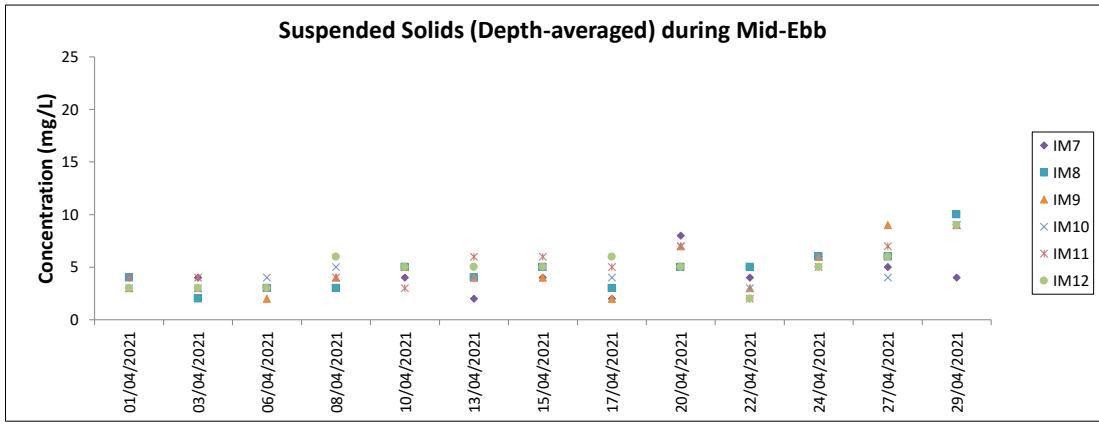
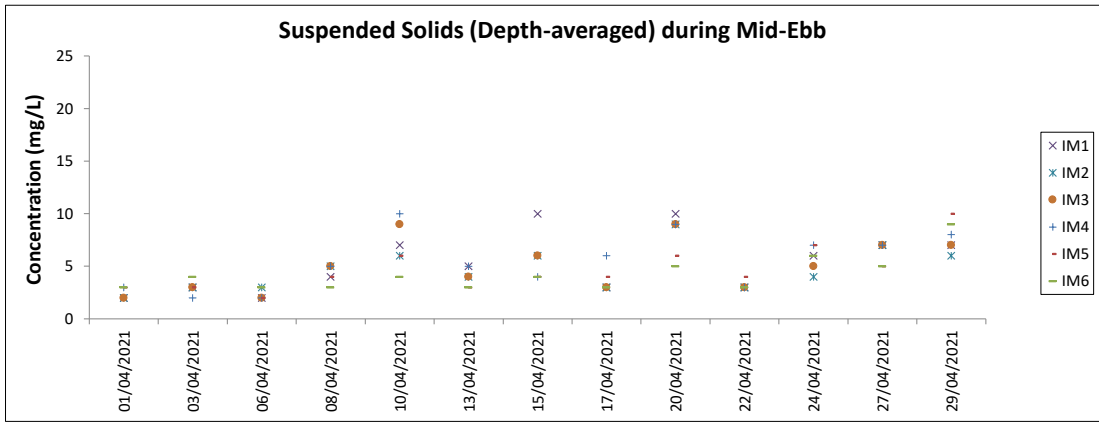
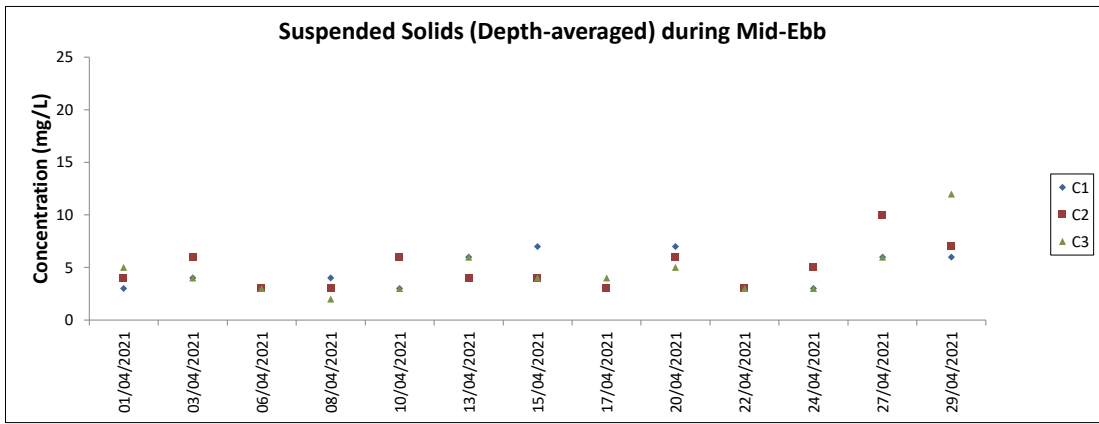




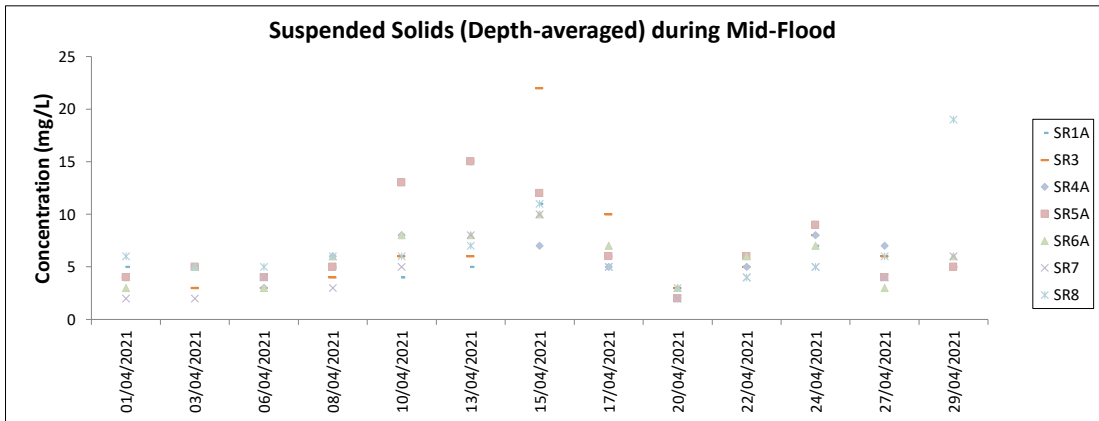
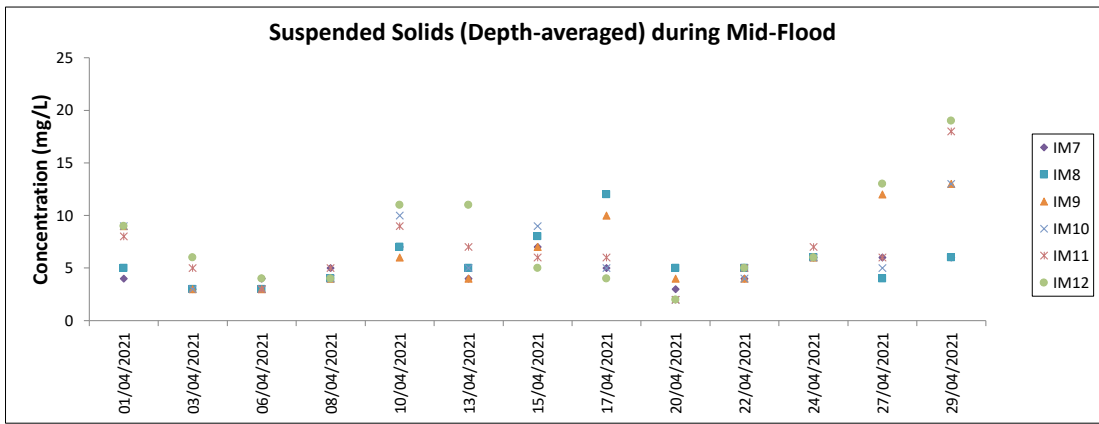
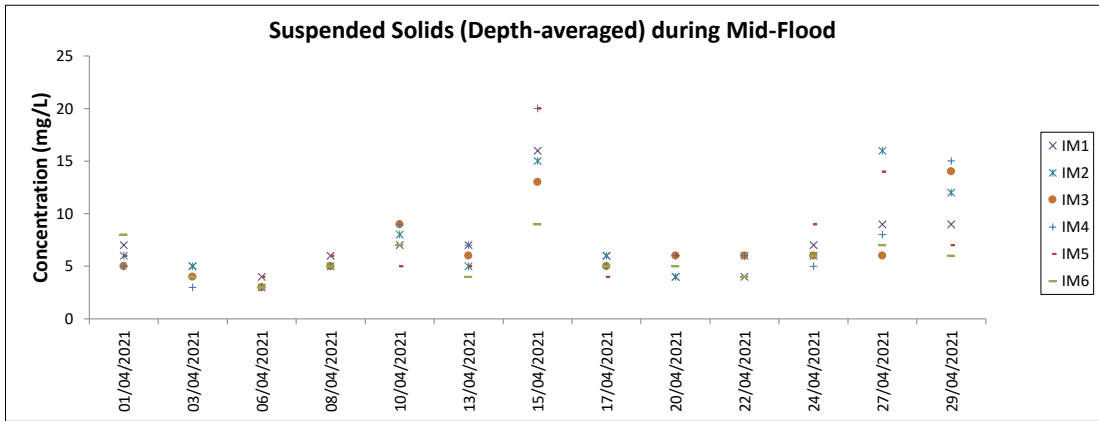
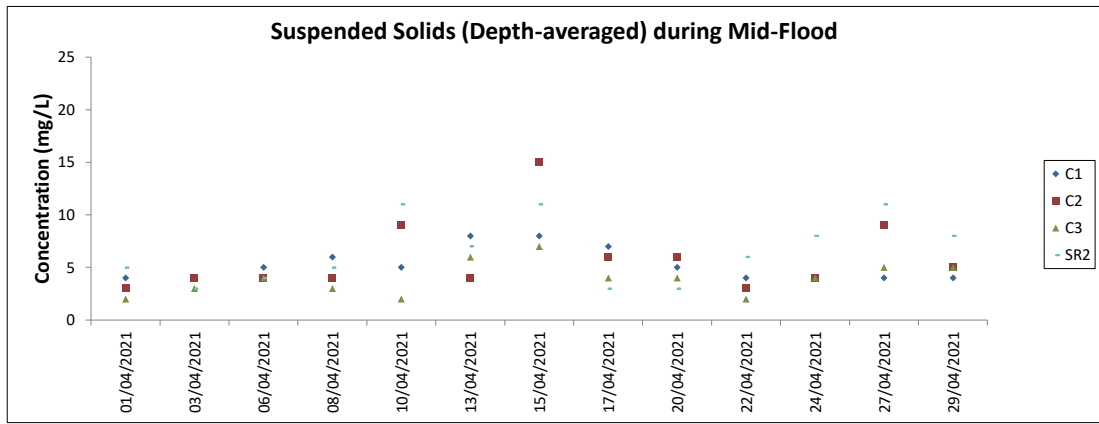
Note: The Action and Limit Level of turbidity can be referred to Table 4.2 of the monthly EM&A report.



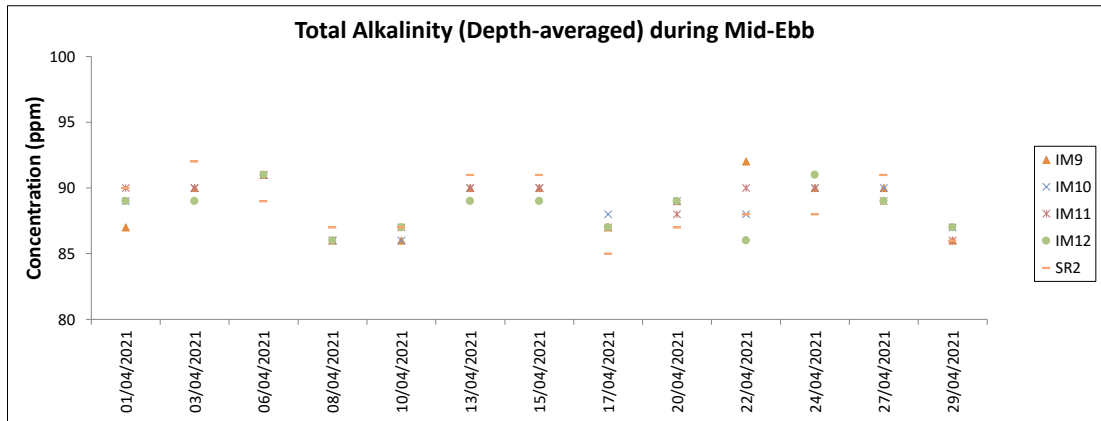
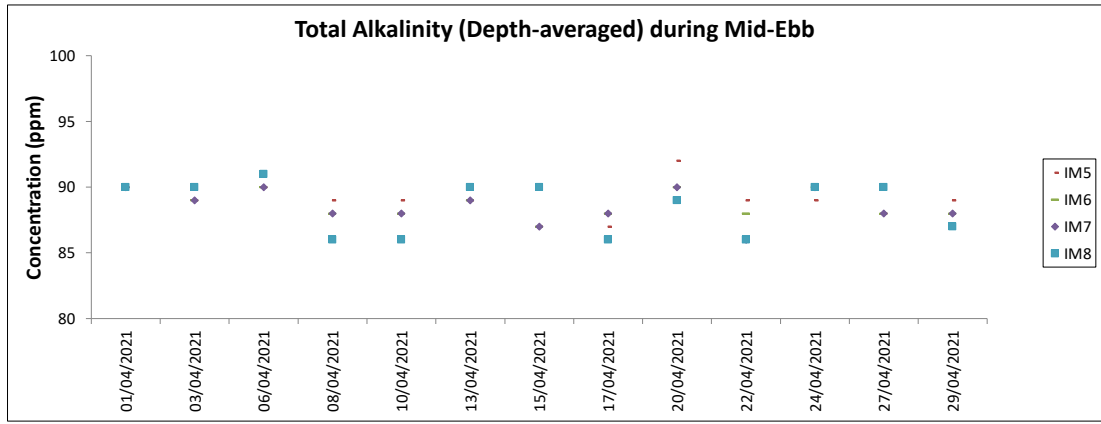
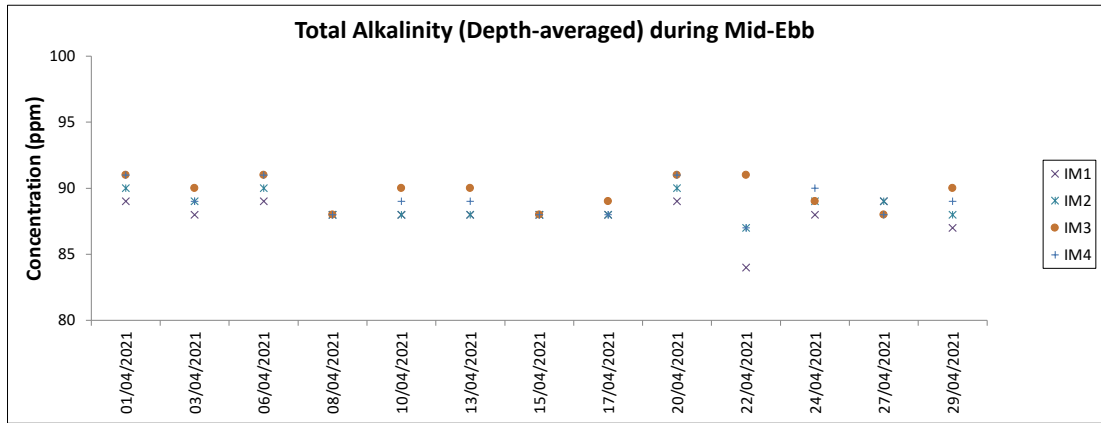
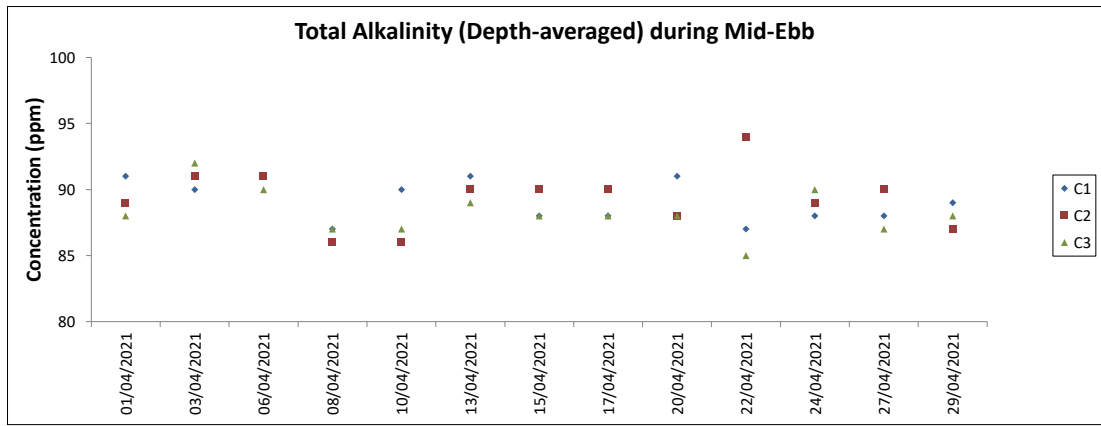
Note: The Action and Limit Level of turbidity can be referred to Table 4.2 of the monthly EM&A report.



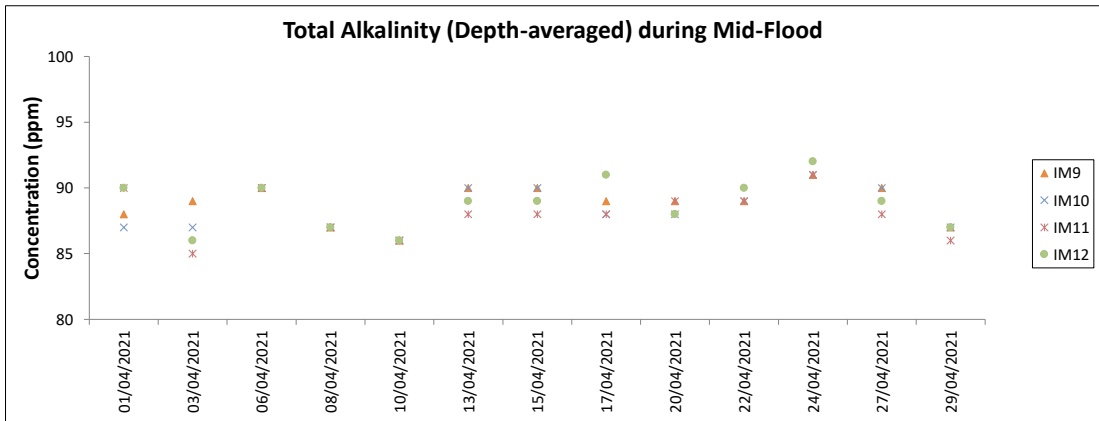
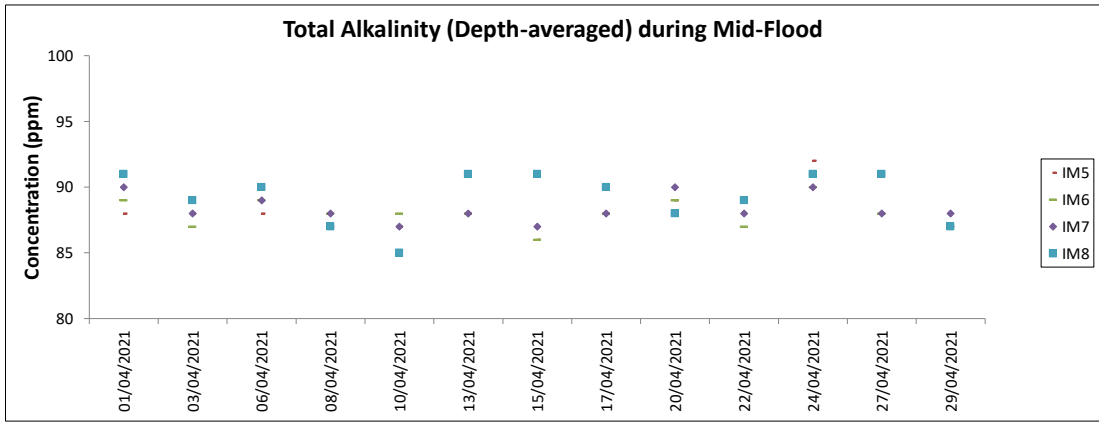
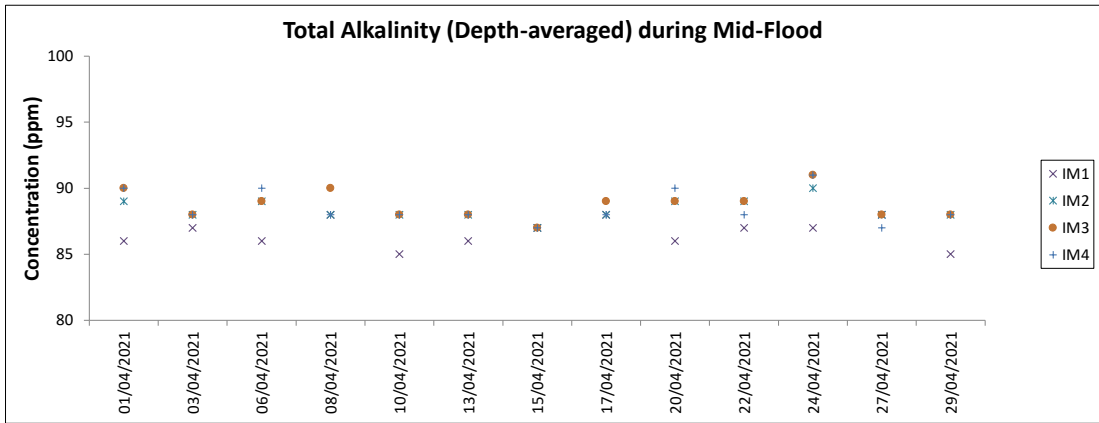
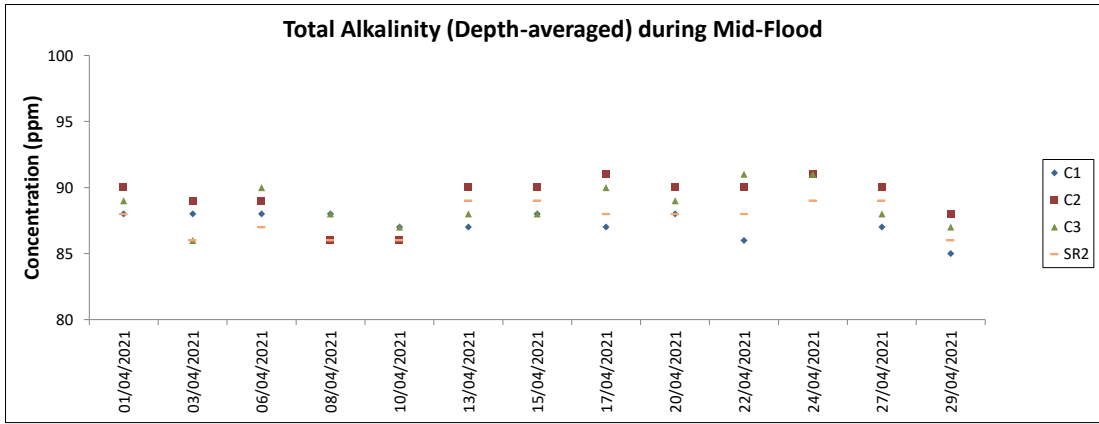
Note: The Action and Limit Level of suspended solids can be referred to Table 4.2 of the monthly EM&A report.



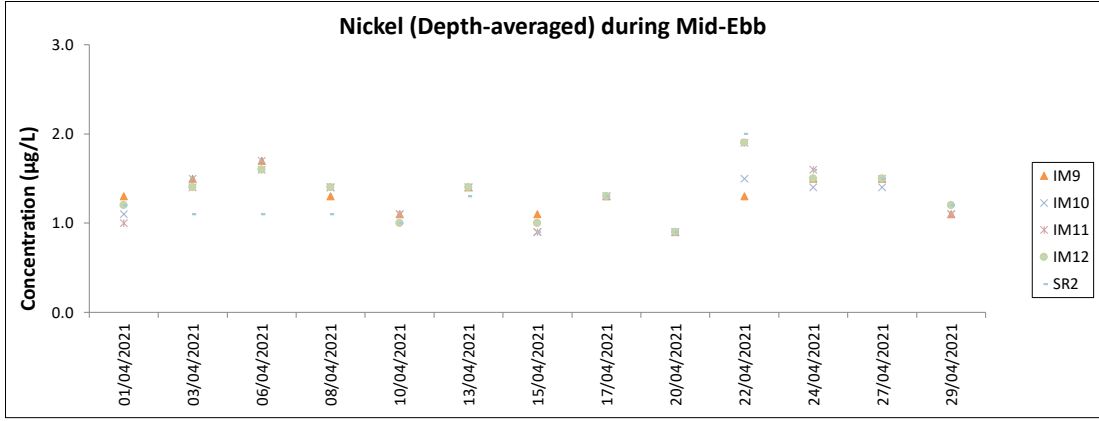
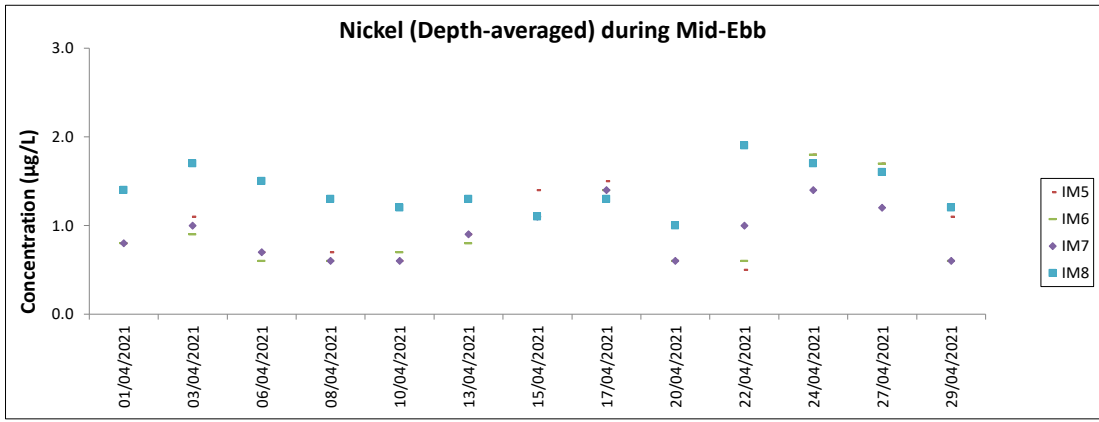
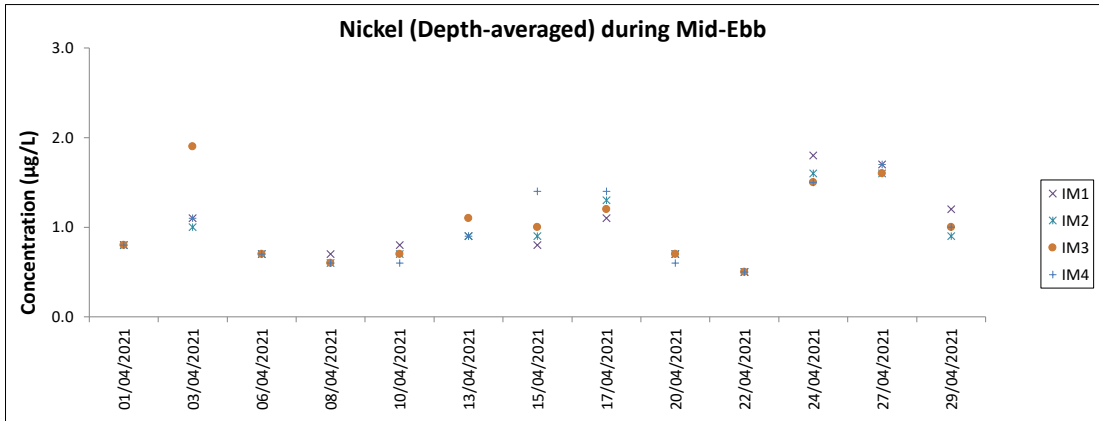
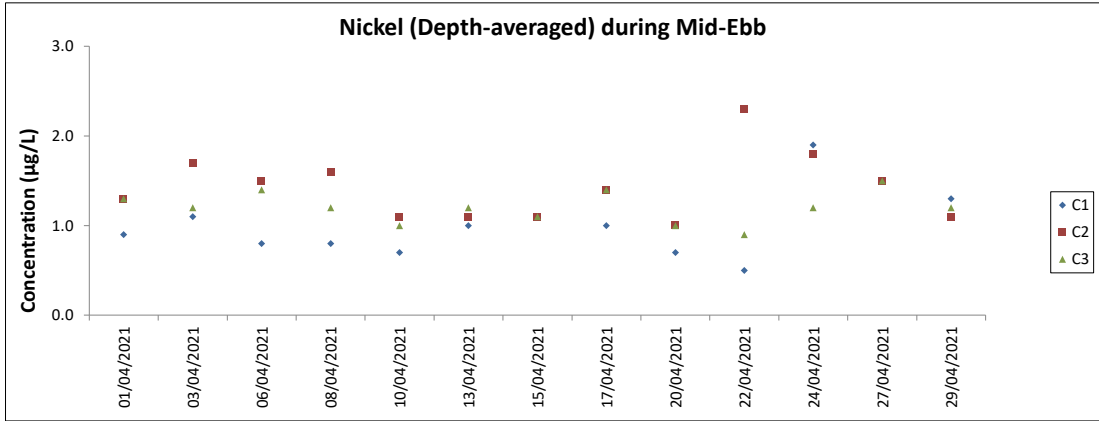
Note: The Action and Limit Level of suspended solids can be referred to Table 4.2 of the monthly EM&A report.



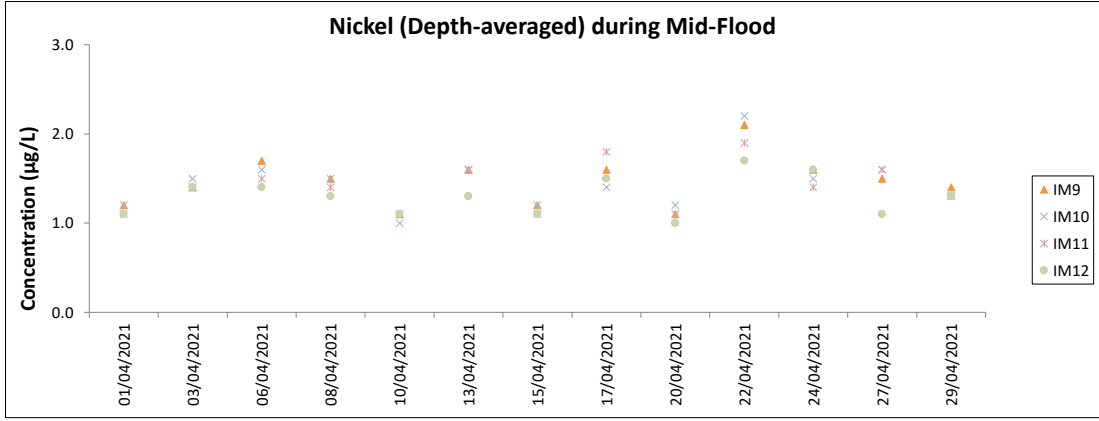
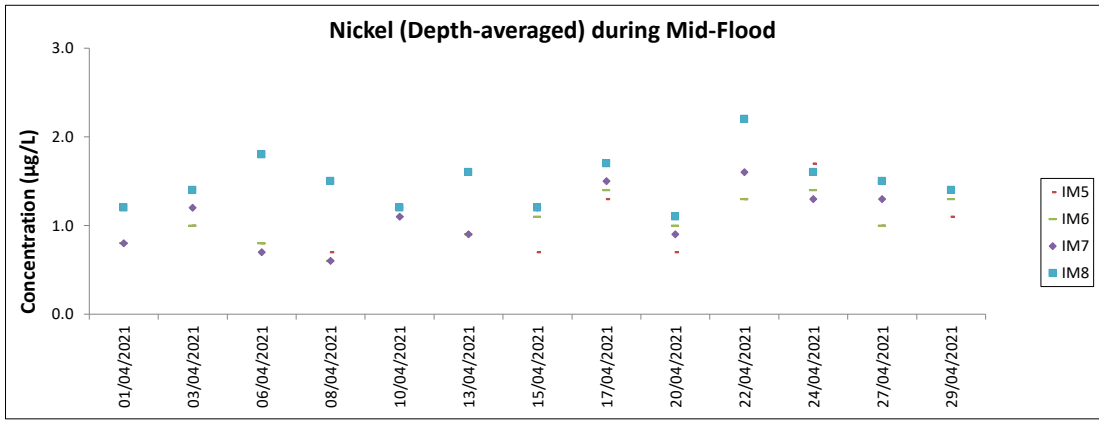
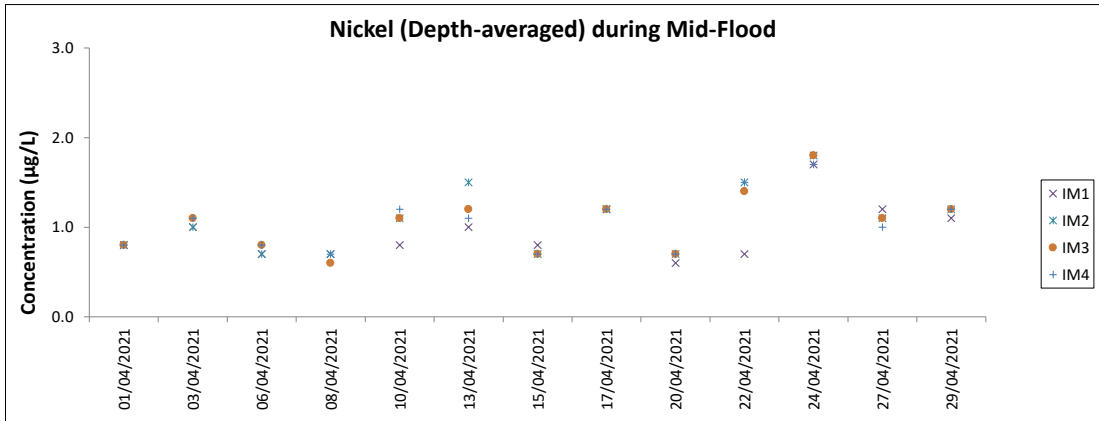
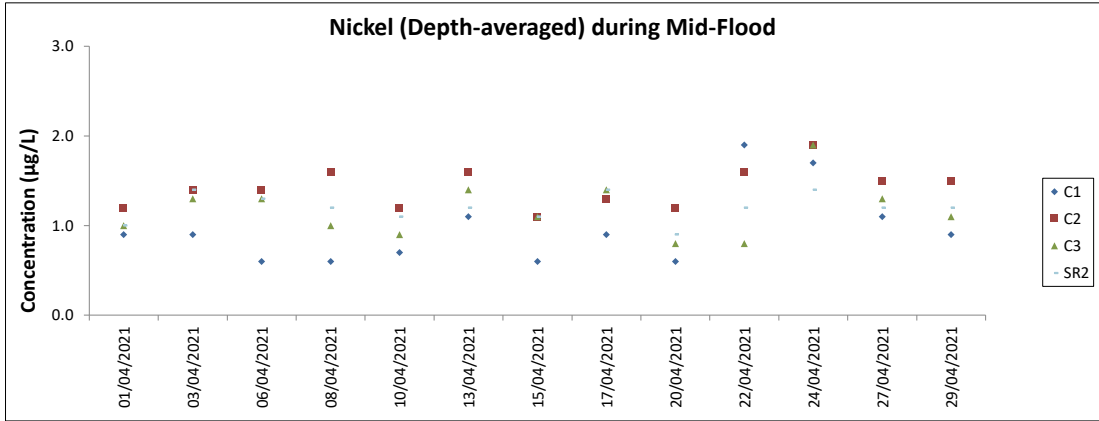
Note: The Action and Limit Level of total alkalinity can be referred to Table 4.2 of the monthly EM&A report.



Note: The Action and Limit Level of total alkalinity can be referred to Table 4.2 of the monthly EM&A report.



Note: The Action and Limit Level of nickel can be referred to Table 4.2 of the monthly EM&A report.
All chromium results in the reporting period was below the reporting limit 0.2 µg/L.



Note: The Action and Limit Level of nickel can be referred to Table 4.2 of the monthly EM&A report.
 All chromium results in the reporting period was below the reporting limit 0.2 µg/L.
 Major site activities carried out during the reporting period are summarized in Section 1.4 of the monthly EM&A report.
 Weather conditions during monitoring are presented in the data tables above.
 QA/QC requirements as stipulated in the EM&A Manual were carried out during measurement.

Chinese White Dolphin Monitoring Results

CWD Small Vessel Line-transect Survey

Survey Effort Data

DATE	AREA	BEAU	KM SEARCHED	SEASON	VESSEL	TYPE	P/S
5-Feb-21	AW	3	4.670	WINTER	32166	3RS ET	P
5-Feb-21	WL	2	10.448	WINTER	32166	3RS ET	P
5-Feb-21	WL	3	6.690	WINTER	32166	3RS ET	P
5-Feb-21	WL	2	7.922	WINTER	32166	3RS ET	S
5-Feb-21	WL	3	2.180	WINTER	32166	3RS ET	S
8-Feb-21	NWL	2	3.780	WINTER	32166	3RS ET	P
8-Feb-21	NWL	3	24.720	WINTER	32166	3RS ET	P
8-Feb-21	NWL	4	30.770	WINTER	32166	3RS ET	P
8-Feb-21	NWL	2	4.170	WINTER	32166	3RS ET	S
8-Feb-21	NWL	3	1.900	WINTER	32166	3RS ET	S
8-Feb-21	NWL	4	5.440	WINTER	32166	3RS ET	S
9-Feb-21	NEL	2	2.900	WINTER	32166	3RS ET	P
9-Feb-21	NEL	3	32.690	WINTER	32166	3RS ET	P
9-Feb-21	NEL	4	1.400	WINTER	32166	3RS ET	P
9-Feb-21	NEL	3	10.310	WINTER	32166	3RS ET	S
16-Feb-21	AW	3	4.800	WINTER	32166	3RS ET	P
16-Feb-21	WL	2	10.372	WINTER	32166	3RS ET	P
16-Feb-21	WL	3	9.920	WINTER	32166	3RS ET	P
16-Feb-21	WL	2	6.548	WINTER	32166	3RS ET	S
16-Feb-21	WL	3	3.027	WINTER	32166	3RS ET	S
17-Feb-21	NWL	2	8.500	WINTER	32166	3RS ET	P
17-Feb-21	NWL	3	54.950	WINTER	32166	3RS ET	P
17-Feb-21	NWL	2	2.000	WINTER	32166	3RS ET	S
17-Feb-21	NWL	3	8.950	WINTER	32166	3RS ET	S
22-Feb-21	SWL	1	11.870	WINTER	32166	3RS ET	P
22-Feb-21	SWL	2	41.274	WINTER	32166	3RS ET	P
22-Feb-21	SWL	1	3.184	WINTER	32166	3RS ET	S
22-Feb-21	SWL	2	12.507	WINTER	32166	3RS ET	S
23-Feb-21	SWL	2	52.641	WINTER	32166	3RS ET	P
23-Feb-21	SWL	3	2.000	WINTER	32166	3RS ET	P
23-Feb-21	SWL	2	15.510	WINTER	32166	3RS ET	S
24-Feb-21	NEL	2	1.950	WINTER	32166	3RS ET	P
24-Feb-21	NEL	3	35.420	WINTER	32166	3RS ET	P
24-Feb-21	NEL	2	2.960	WINTER	32166	3RS ET	S
24-Feb-21	NEL	3	7.270	WINTER	32166	3RS ET	S
3-Mar-21	NEL	3	37.340	SPRING	32166	3RS ET	P
3-Mar-21	NEL	3	9.760	SPRING	32166	3RS ET	S
8-Mar-21	NWL	2	1.100	SPRING	32166	3RS ET	P
8-Mar-21	NWL	3	35.740	SPRING	32166	3RS ET	P
8-Mar-21	NWL	4	26.780	SPRING	32166	3RS ET	P
8-Mar-21	NWL	2	2.300	SPRING	32166	3RS ET	S
8-Mar-21	NWL	3	5.000	SPRING	32166	3RS ET	S
8-Mar-21	NWL	4	3.900	SPRING	32166	3RS ET	S
9-Mar-21	AW	3	4.720	SPRING	32166	3RS ET	P
9-Mar-21	WL	2	9.720	SPRING	32166	3RS ET	P
9-Mar-21	WL	3	10.360	SPRING	32166	3RS ET	P
9-Mar-21	WL	2	6.740	SPRING	32166	3RS ET	S

DATE	AREA	BEAU	KM SEARCHED	SEASON	VESSEL	TYPE	P/S
9-Mar-21	WL	3	4.630	SPRING	32166	3RS ET	S
10-Mar-21	NEL	2	1.100	SPRING	32166	3RS ET	P
10-Mar-21	NEL	3	25.400	SPRING	32166	3RS ET	P
10-Mar-21	NEL	4	10.430	SPRING	32166	3RS ET	P
10-Mar-21	NEL	3	7.070	SPRING	32166	3RS ET	S
10-Mar-21	NEL	4	3.100	SPRING	32166	3RS ET	S
12-Mar-21	SWL	1	3.850	SPRING	32166	3RS ET	P
12-Mar-21	SWL	2	49.702	SPRING	32166	3RS ET	P
12-Mar-21	SWL	3	0.900	SPRING	32166	3RS ET	P
12-Mar-21	SWL	2	14.678	SPRING	32166	3RS ET	S
12-Mar-21	SWL	3	1.100	SPRING	32166	3RS ET	S
15-Mar-21	AW	2	1.910	SPRING	32166	3RS ET	P
15-Mar-21	AW	3	2.740	SPRING	32166	3RS ET	P
15-Mar-21	WL	2	16.658	SPRING	32166	3RS ET	P
15-Mar-21	WL	3	3.340	SPRING	32166	3RS ET	P
15-Mar-21	WL	2	9.742	SPRING	32166	3RS ET	S
16-Mar-21	NWL	2	58.960	SPRING	32166	3RS ET	P
16-Mar-21	NWL	3	3.860	SPRING	32166	3RS ET	P
16-Mar-21	NWL	2	8.700	SPRING	32166	3RS ET	S
16-Mar-21	NWL	3	1.900	SPRING	32166	3RS ET	S
17-Mar-21	SWL	2	49.752	SPRING	32166	3RS ET	P
17-Mar-21	SWL	3	2.340	SPRING	32166	3RS ET	P
17-Mar-21	SWL	2	15.682	SPRING	32166	3RS ET	S
7-Apr-21	NWL	2	5.840	SPRING	32166	3RS ET	P
7-Apr-21	NWL	3	45.160	SPRING	32166	3RS ET	P
7-Apr-21	NWL	4	12.900	SPRING	32166	3RS ET	P
7-Apr-21	NWL	3	8.800	SPRING	32166	3RS ET	S
7-Apr-21	NWL	4	2.600	SPRING	32166	3RS ET	S
12-Apr-21	AW	2	2.950	SPRING	32166	3RS ET	P
12-Apr-21	AW	3	1.920	SPRING	32166	3RS ET	P
12-Apr-21	WL	2	14.085	SPRING	32166	3RS ET	P
12-Apr-21	WL	3	4.941	SPRING	32166	3RS ET	P
12-Apr-21	WL	2	7.213	SPRING	32166	3RS ET	S
12-Apr-21	WL	3	2.029	SPRING	32166	3RS ET	S
12-Apr-21	WL	4	0.970	SPRING	32166	3RS ET	S
13-Apr-21	SWL	1	1.810	SPRING	32166	3RS ET	P
13-Apr-21	SWL	2	43.686	SPRING	32166	3RS ET	P
13-Apr-21	SWL	3	7.090	SPRING	32166	3RS ET	P
13-Apr-21	SWL	2	13.349	SPRING	32166	3RS ET	S
13-Apr-21	SWL	3	2.280	SPRING	32166	3RS ET	S
14-Apr-21	NEL	3	37.080	SPRING	32166	3RS ET	P
14-Apr-21	NEL	3	9.920	SPRING	32166	3RS ET	S
15-Apr-21	NEL	3	29.770	SPRING	32166	3RS ET	P
15-Apr-21	NEL	4	7.400	SPRING	32166	3RS ET	P
15-Apr-21	NEL	3	7.730	SPRING	32166	3RS ET	S
15-Apr-21	NEL	4	2.100	SPRING	32166	3RS ET	S
19-Apr-21	NWL	3	24.300	SPRING	32166	3RS ET	P
19-Apr-21	NWL	4	33.330	SPRING	32166	3RS ET	P
19-Apr-21	NWL	5	6.370	SPRING	32166	3RS ET	P

DATE	AREA	BEAU	KM SEARCHED	SEASON	VESSEL	TYPE	P/S
19-Apr-21	NWL	3	5.900	SPRING	32166	3RS ET	S
19-Apr-21	NWL	4	2.900	SPRING	32166	3RS ET	S
19-Apr-21	NWL	5	3.000	SPRING	32166	3RS ET	S
20-Apr-21	AW	3	4.860	SPRING	32166	3RS ET	P
20-Apr-21	WL	2	1.600	SPRING	32166	3RS ET	P
20-Apr-21	WL	3	18.466	SPRING	32166	3RS ET	P
20-Apr-21	WL	2	1.100	SPRING	32166	3RS ET	S
20-Apr-21	WL	3	9.774	SPRING	32166	3RS ET	S
21-Apr-21	SWL	3	25.980	SPRING	32166	3RS ET	P
21-Apr-21	SWL	4	13.080	SPRING	32166	3RS ET	P
21-Apr-21	SWL	5	15.050	SPRING	32166	3RS ET	P
21-Apr-21	SWL	3	8.070	SPRING	32166	3RS ET	S
21-Apr-21	SWL	4	4.740	SPRING	32166	3RS ET	S
21-Apr-21	SWL	5	3.380	SPRING	32166	3RS ET	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
5-Feb-21	1	1025	CWD	2	WL	2	374	ON	3RS ET	22.2726	113.8471	WINTER	NONE	S
5-Feb-21	2	1031	CWD	4	WL	2	22	ON	3RS ET	22.2692	113.8477	WINTER	GILLNETTER	P
5-Feb-21	3	1056	CWD	2	WL	2	817	ON	3RS ET	22.2612	113.8506	WINTER	NONE	P
5-Feb-21	4	1102	CWD	6	WL	2	424	ON	3RS ET	22.2602	113.8404	WINTER	NONE	P
5-Feb-21	5	1134	CWD	5	WL	2	698	ON	3RS ET	22.2413	113.8449	WINTER	NONE	P
5-Feb-21	6	1201	CWD	1	WL	2	130	ON	3RS ET	22.2232	113.8366	WINTER	NONE	P
5-Feb-21	7	1245	CWD	1	WL	3	231	ON	3RS ET	22.1967	113.8335	WINTER	NONE	P
8-Feb-21	1	1003	CWD	12	NWL	3	513	ON	3RS ET	22.4049	113.8702	WINTER	NONE	P
8-Feb-21	2	1102	CWD	1	NWL	3	779	ON	3RS ET	22.3266	113.8699	WINTER	NONE	P
8-Feb-21	3	1133	CWD	10	NWL	2	893	ON	3RS ET	22.2732	113.8703	WINTER	NONE	P
8-Feb-21	4	1254	CWD	1	NWL	3	18	ON	3RS ET	22.3571	113.8781	WINTER	NONE	P
16-Feb-21	1	1001	CWD	3	WL	3	698	ON	3RS ET	22.2962	113.8613	WINTER	NONE	P
16-Feb-21	2	1038	CWD	3	WL	3	175	ON	3RS ET	22.2669	113.8596	WINTER	NONE	S
16-Feb-21	3	1058	CWD	9	WL	3	510	ON	3RS ET	22.2606	113.8443	WINTER	GILLNETTER	P
16-Feb-21	4	1135	CWD	2	WL	3	275	ON	3RS ET	22.2500	113.8467	WINTER	NONE	P
16-Feb-21	5	1219	CWD	1	WL	2	35	ON	3RS ET	22.2203	113.8203	WINTER	NONE	S
17-Feb-21	1	1130	CWD	2	NWL	3	6	ON	3RS ET	22.3859	113.8775	WINTER	NONE	P
22-Feb-21	1	1043	FP	8	SWL	1	288	ON	3RS ET	22.1749	113.9366	WINTER	NONE	P
22-Feb-21	2	1051	FP	3	SWL	1	72	ON	3RS ET	22.1625	113.9363	WINTER	NONE	P
22-Feb-21	3	1058	FP	1	SWL	1	9	ON	3RS ET	22.1494	113.9355	WINTER	NONE	S
22-Feb-21	4	1101	FP	8	SWL	1	89	ON	3RS ET	22.1471	113.9322	WINTER	NONE	S
22-Feb-21	5	1108	FP	1	SWL	1	55	ON	3RS ET	22.1477	113.9275	WINTER	NONE	P
22-Feb-21	6	1115	FP	1	SWL	1	16	ON	3RS ET	22.1572	113.9274	WINTER	NONE	P
22-Feb-21	7	1308	FP	5	SWL	2	599	ON	3RS ET	22.1761	113.8972	WINTER	NONE	P
22-Feb-21	8	1314	FP	2	SWL	2	67	ON	3RS ET	22.1663	113.8972	WINTER	NONE	P
22-Feb-21	9	1320	FP	6	SWL	2	113	ON	3RS ET	22.1568	113.8974	WINTER	NONE	P
22-Feb-21	10	1330	FP	2	SWL	2	1	ON	3RS ET	22.1518	113.8876	WINTER	NONE	P
22-Feb-21	11	1339	FP	3	SWL	2	161	ON	3RS ET	22.1696	113.8878	WINTER	NONE	P
22-Feb-21	12	1405	FP	1	SWL	2	471	ON	3RS ET	22.2064	113.8785	WINTER	NONE	S
22-Feb-21	13	1410	FP	4	SWL	2	64	ON	3RS ET	22.1979	113.8982	WINTER	NONE	P
22-Feb-21	14	1442	FP	5	SWL	2	513	ON	3RS ET	22.1793	113.8686	WINTER	NONE	P
22-Feb-21	15	1446	FP	3	SWL	2	199	ON	3RS ET	22.1848	113.8687	WINTER	NONE	P

DATE	STG #	TIME	CWD/FP	GP SZ	AREA	BEAU	PSD	EFFORT	TYPE	DEC LAT	DEC LON	SEASON	BOAT ASSOC.	P/S
22-Feb-21	16	1449	FP	5	SWL	2	672	ON	3RS ET	22.1891	113.8684	WINTER	NONE	P
22-Feb-21	17	1456	FP	1	SWL	2	61	ON	3RS ET	22.1966	113.8685	WINTER	NONE	P
22-Feb-21	18	1508	FP	3	SWL	2	360	ON	3RS ET	22.1849	113.8590	WINTER	NONE	P
23-Feb-21	1	1042	FP	2	SWL	2	310	ON	3RS ET	22.1774	113.9358	WINTER	NONE	P
23-Feb-21	2	1304	FP	3	SWL	2	62	ON	3RS ET	22.1668	113.89727	WINTER	NONE	P
23-Feb-21	3	1310	FP	7	SWL	2	285	ON	3RS ET	22.1643	113.8972	WINTER	NONE	P
23-Feb-21	4	1314	FP	3	SWL	2	18	ON	3RS ET	22.1587	113.8975	WINTER	NONE	P
23-Feb-21	5	1430	FP	3	SWL	2	63	ON	3RS ET	22.1743	113.8688	WINTER	NONE	P
8-Mar-21	1	0939	CWD	1	NWL	3	150	ON	3RS ET	22.4023	113.8702	SPRING	NONE	P
9-Mar-21	1	1145	CWD	4	WL	3	41	ON	3RS ET	22.2052	113.8337	SPRING	NONE	P
12-Mar-21	1	1051	FP	8	SWL	1	49	ON	3RS ET	22.1885	113.9365	SPRING	NONE	P
12-Mar-21	2	1105	FP	3	SWL	2	25	ON	3RS ET	22.1730	113.9361	SPRING	NONE	P
12-Mar-21	3	1114	FP	2	SWL	2	41	ON	3RS ET	22.1572	113.9366	SPRING	NONE	P
12-Mar-21	4	1145	FP	2	SWL	2	17	ON	3RS ET	22.1934	113.9270	SPRING	NONE	P
15-Mar-21	1	1010	CWD	1	WL	3	71	ON	3RS ET	22.2908	113.8613	SPRING	NONE	P
15-Mar-21	2	1146	CWD	7	WL	2	434	ON	3RS ET	22.2074	113.8395	SPRING	NONE	S
15-Mar-21	3	1217	CWD	1	WL	2	404	ON	3RS ET	22.2054	113.8230	SPRING	NONE	P
16-Mar-21	1	1039	CWD	1	NWL	2	915	ON	3RS ET	22.2800	113.8784	SPRING	NONE	P
16-Mar-21	2	1105	CWD	2	NWL	2	223	ON	3RS ET	22.3070	113.8753	SPRING	NONE	S
17-Mar-21	1	1038	FP	3	SWL	2	200	ON	3RS ET	22.2012	113.9359	SPRING	NONE	P
17-Mar-21	2	1046	FP	7	SWL	2	315	ON	3RS ET	22.1876	113.9360	SPRING	NONE	P
17-Mar-21	3	1054	FP	8	SWL	2	9	ON	3RS ET	22.1763	113.9359	SPRING	NONE	P
17-Mar-21	4	1107	FP	2	SWL	2	2	ON	3RS ET	22.1491	113.9344	SPRING	NONE	S
17-Mar-21	5	1216	FP	2	SWL	2	58	ON	3RS ET	22.1411	113.9089	SPRING	NONE	S
17-Mar-21	6	1223	FP	4	SWL	2	211	ON	3RS ET	22.1526	113.9079	SPRING	NONE	P
17-Mar-21	7	1228	FP	2	SWL	2	13	ON	3RS ET	22.1556	113.9019	SPRING	NONE	S
17-Mar-21	8	1319	FP	4	SWL	2	184	ON	3RS ET	22.1728	113.8968	SPRING	NONE	P
17-Mar-21	9	1327	FP	3	SWL	2	72	ON	3RS ET	22.1582	113.8974	SPRING	NONE	P
17-Mar-21	10	1340	FP	2	SWL	2	186	ON	3RS ET	22.1579	113.8881	SPRING	NONE	P
17-Mar-21	11	1420	FP	3	SWL	3	67	ON	3RS ET	22.1856	113.8779	SPRING	NONE	P
17-Mar-21	12	1431	FP	1	SWL	2	122	ON	3RS ET	22.1630	113.8785	SPRING	NONE	P
17-Mar-21	13	1451	FP	1	SWL	2	11	ON	3RS ET	22.1891	113.8686	SPRING	NONE	P
17-Mar-21	14	1524	CWD	1	SWL	2	86	ON	3RS ET	22.1843	113.8486	SPRING	NONE	P

DATE	STG #	TIME	CWD/FP	GP SZ	AREA	BEAU	PSD	EFFORT	TYPE	DEC LAT	DEC LON	SEASON	BOAT ASSOC.	P/S
12-Apr-21	1	1047	CWD	2	WL	2	271	ON	3RS ET	22.2501	113.8423	SPRING	NONE	P
12-Apr-21	2	1130	CWD	4	WL	2	335	ON	3RS ET	22.2322	113.8306	SPRING	NONE	P
12-Apr-21	3	1140	CWD	2	WL	2	52	ON	3RS ET	22.2237	113.8375	SPRING	NONE	S
12-Apr-21	4	1206	CWD	7	WL	2	438	ON	3RS ET	22.2143	113.8293	SPRING	NONE	P
13-Apr-21	1	1050	FP	3	SWL	2	222	ON	3RS ET	22.1852	113.9374	SPRING	NONE	P
13-Apr-21	2	1055	FP	4	SWL	2	150	ON	3RS ET	22.1759	113.9373	SPRING	NONE	P
13-Apr-21	3	1100	FP	3	SWL	2	14	ON	3RS ET	22.1700	113.9372	SPRING	NONE	P
13-Apr-21	4	1214	FP	1	SWL	2	419	ON	3RS ET	22.1414	113.9163	SPRING	NONE	S
13-Apr-21	5	1349	FP	3	SWL	2	413	ON	3RS ET	22.1900	113.8887	SPRING	NONE	P
13-Apr-21	6	1450	CWD	3	SWL	3	125	ON	3RS ET	22.1923	113.8691	SPRING	PURSE SEINER	P
13-Apr-21	7	1536	CWD	3	SWL	3	322	ON	3RS ET	22.1893	113.8491	SPRING	PURSE SEINER	P
20-Apr-21	1	1204	CWD	2	WL	3	155	ON	3RS ET	22.1910	113.8417	SPRING	PURSE SEINER	S
21-Apr-21	1	1152	FP	4	SWL	5	132	ON	3RS ET	22.1602	113.9181	SPRING	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.

Calculation of the encounter rates STG and ANI in the whole survey area (NEL, NWL, AW, WL, SWL):

A total of 345.703 km of survey effort was collected under Beaufort Sea State 3 or below with favourable visibility; total no. of 7 on-effort sightings and total number of 23 dolphins from on-effort sightings were collected under such condition. Calculation of the encounter rates in April 2021 are shown as below:

Encounter Rate by Number of Dolphin Sightings (STG) in April 2021

$$STG = \frac{7}{345.703} \times 100 = 2.02$$

Encounter Rate by Number of Dolphins (ANI) in April 2021

$$ANI = \frac{23}{345.703} \times 100 = 6.65$$

Calculation of the running quarterly STG and ANI in the whole survey area (NEL, NWL, AW, WL, SWL):

A total of 1160.530 km of survey effort was collected under Beaufort Sea State 3 or below with favourable visibility; total no. of 32 on-effort sightings and total number of 106 dolphins from on-effort sightings were collected under such condition. Calculation of the running quarterly encounter rates are shown as below:

Running Quarterly Encounter Rate by Number of Dolphin Sightings (STG)









$$STG = \frac{32}{1160.530} \times 100 = 2.76$$

Running Quarterly Encounter Rate by Number of Dolphins (ANI)

$$ANI = \frac{106}{1160.530} \times 100 = 9.13$$

CWD Small Vessel Line-transect Survey

Photo Identification

	
SLMM014_20210412_2_2	WLMM028_20210412_2_4
	
WLMM029_20210412_2_4	WLMM160_20210412_2_5
	
SLMM003_20210412_4_2	SLMM007_20210412_4_14
	
SLMM014_20210412_4_2	SLMM037_20210412_4_5



SLMM073_20210412_4_10



WLMM007_20210412_4_14



WLMM039_20210412_4_8



SLMM031_20210413_6_1



SLMM037_20210413_6_9



WLMM131_20210413_6_14



SLMM037_20210413_7_3



WLMM114_20210413_7_1



WLMM131_20210413_7_3

CWD Land-based Theodolite Tracking Survey**CWD Groups by Survey Date**

Date	Station	Start Time	End Time	Duration	Beaufort Range	Visibility	No. of Focal Follow Dolphin Groups Tracked	Dolphin Group Size Range
15/Apr/21	Sha Chau	10:43	16:43	6:00	3-4	1-2	0	-
21/Apr/21	Lung Kwu Chau	8:52	14:52	6:00	2-3	2	2	1-4

Visibility: 1=Excellent, 2=Good, 3=Fair, 4=Poor

Appendix E. Calibration Certificates



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

Unit 10, 14/F, Wah Wai Centre, 38-40 Au Pui Wan St., Fotan, Hong Kong
Email: info@qualityprotest.com; Website: www.qualityprotest.com
Tel: (852) 3956 8717; Fax: (852) 3956 3928

REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Report No. : BA040092
Date of Issue : 22 April 2021
Page No. : 1 of 2

PART A – CUSTOMER INFORMATION

Enovative Environmental Service Ltd.
Flat 2207, Yu Fun House,
Yu Chui Court, Shatin
New Territories, Hong Kong
Attn: Mr. Thomas WONG

PART B – DESCRIPTION

Name of Equipment : YSI ProDSS (Multi-Parameters)
Manufacturer : YSI (a xylem brand)
Serial Number : 16H104234
Date of Received : Apr 22, 2021
Date of Calibration : Apr 22, 2021
Date of Next Calibration^(a) : Jul 21, 2021

PART C – REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

<u>Parameter</u>	<u>Reference Method</u>
pH at 25°C	APHA 21e 4500-H ⁺ B
Dissolved Oxygen	APHA 21e 4500-O G
Conductivity at 25°C	APHA 21e 2510 B
Salinity	APHA 21e 2520 B
Turbidity	APHA 21e 2130 B
Temperature	Section 6 of international Accreditation New Zealand Technical Guide no. 3 Second edition March 2008: Working Thermometer Calibration Procedure.

PART D – CALIBRATION RESULTS^(b,c)

(1) pH at 25°C

Target (pH unit)	Displayed Reading ^(d) (pH Unit)	Tolerance ^(e) (pH Unit)	Results
4.00	3.98	-0.02	Satisfactory
7.42	7.40	-0.02	Satisfactory
10.01	9.92	-0.09	Satisfactory

Tolerance of pH should be less than ± 0.20 (pH unit)

(2) Temperature

Reading of Ref. thermometer (°C)	Displayed Reading (°C)	Tolerance (°C)	Results
10	10.02	0.02	Satisfactory
25	24.00	-1.00	Satisfactory
40	40.00	0.00	Satisfactory

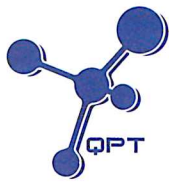
Tolerance limit of temperature should be less than ± 2.0 (°C)

~ CONTINUED ON NEXT PAGE ~

Remark(s): -

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


LEE Chun-ning, Desmond
Senior Chemist



專業化驗有限公司

QUALITY PRO TEST-CONSULT LIMITED

Unit 10, 14/F, Wah Wai Centre, 38-40 Au Pui Wan St., Fotan, Hong Kong
Email: info@qualityprotest.com; Website: www.qualityprotest.com
Tel: (852) 3956 8717; Fax: (852) 3956 3928

REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Report No. : BA040092
Date of Issue : 22 April 2021
Page No. : 2 of 2

PART D – CALIBRATION RESULTS (Cont'd)

(3) Dissolved Oxygen

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)	Results
0.15	0.27	0.12	Satisfactory
1.88	1.92	0.04	Satisfactory
5.79	5.79	0.00	Satisfactory
8.49	8.42	-0.07	Satisfactory

Tolerance limit of dissolved oxygen should be less than ± 0.50 (mg/L)

(4) Conductivity at 25°C

Conc. of KCl (M)	Expected Reading ($\mu\text{S}/\text{cm}$)	Displayed Reading ($\mu\text{S}/\text{cm}$)	Tolerance (%)	Results
0.001	146.9	145.3	-1.09	Satisfactory
0.01	1412	1331	-5.74	Satisfactory
0.1	12890	12364	-4.08	Satisfactory
0.5	58670	56724	-3.32	Satisfactory
1.0	111900	109210	-2.40	Satisfactory

Tolerance limit of conductivity should be less than ± 10.0 (%)

(5) Salinity

Expected Reading (g/L)	Displayed Reading (g/L)	Tolerance (%)	Results
10	10.18	1.80	Satisfactory
20	20.25	1.25	Satisfactory
30	30.04	0.13	Satisfactory

Tolerance limit of salinity should be less than ± 10.0 (%)

(6) Turbidity

Expected Reading (NTU)	Displayed Reading ⁽¹⁾ (NTU)	Tolerance ⁽²⁾ (%)	Results
0	0.00	--	Satisfactory
10	10.10	1.0	Satisfactory
20	20.14	0.7	Satisfactory
100	107.6	7.6	Satisfactory
800	790	-1.3	Satisfactory

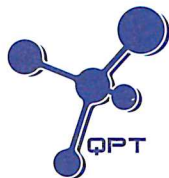
Tolerance limit of turbidity should be less than ± 10.0 (%)

~ END OF REPORT ~

Remark(s): -

⁽¹⁾ "Displayed Reading" presents the figures shown on item under calibration/ checking regardless of equipment precision or significant figures.

⁽²⁾ The "Tolerance Limit" mentioned is the acceptance criteria applicable for similar equipment used by Quality Pro Test-Consult Ltd. or quoted from relevant international standards.



專業化驗有限公司

QUALITY PRO TEST-CONSULT LIMITED

Unit 10, 14/F, Wah Wai Centre, 38-40 Au Pui Wan St., Fotan, Hong Kong

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

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

REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Report No. : BA040093
Date of Issue : 22 April 2021
Page No. : 1 of 2

PART A – CUSTOMER INFORMATION

Enovative Environmental Service Ltd.
Flat 2207, Yu Fun House,
Yu Chui Court, Shatin
New Territories, Hong Kong
Attn: Mr. Thomas WONG

PART B – DESCRIPTION

Name of Equipment : YSI 6920V2 (Multi-Parameters)
Manufacturer : YSI (a xylem brand)
Serial Number : 0001C6A7
Date of Received : Apr 22, 2021
Date of Calibration : Apr 22, 2021
Date of Next Calibration^(a) : Jul 21, 2021

PART C – REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

<u>Parameter</u>	<u>Reference Method</u>
pH at 25°C	APHA 21e 4500-H ⁺ B
Dissolved Oxygen	APHA 21e 4500-O G
Conductivity at 25°C	APHA 21e 2510 B
Salinity	APHA 21e 2520 B
Turbidity	APHA 21e 2130 B
Temperature	Section 6 of international Accreditation New Zealand Technical Guide no. 3 Second edition March 2008: Working Thermometer Calibration Procedure.

PART D – CALIBRATION RESULTS^(b,c)

(1) pH at 25°C

Target (pH unit)	Displayed Reading ^(d) (pH Unit)	Tolerance ^(e) (pH Unit)	Results
4.00	4.03	0.03	Satisfactory
7.42	7.44	0.02	Satisfactory
10.01	10.06	0.05	Satisfactory

Tolerance of pH should be less than ± 0.20 (pH unit)

(2) Temperature


Reading of Ref. thermometer (°C)	Displayed Reading (°C)	Tolerance (°C)	Results
10	9.96	-0.04	Satisfactory
25	24.92	-0.08	Satisfactory
40	39.88	-0.12	Satisfactory

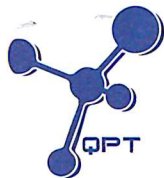
Tolerance limit of temperature should be less than ± 2.0 (°C)

~ CONTINUED ON NEXT PAGE ~

Remark(s): -

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


LEE Chun-ning, Desmond
Senior Chemist



專業化驗有限公司

QUALITY PRO TEST-CONSULT LIMITED

Unit 10, 14/F, Wah Wai Centre, 38-40 Au Pui Wan St., Fotan, Hong Kong

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

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

REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Report No. : BA040093
Date of Issue : 22 April 2021
Page No. : 2 of 2

PART D – CALIBRATION RESULTS (Cont'd)

(3) Dissolved Oxygen

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)	Results
0.15	0.27	0.12	Satisfactory
1.88	1.92	0.04	Satisfactory
5.79	5.79	0.00	Satisfactory
8.49	8.42	-0.07	Satisfactory

Tolerance limit of dissolved oxygen should be less than ± 0.50 (mg/L)

(4) Conductivity at 25°C

Conc. of KCl (M)	Expected Reading ($\mu\text{S}/\text{cm}$)	Displayed Reading ($\mu\text{S}/\text{cm}$)	Tolerance (%)	Results
0.001	146.9	138.7	-5.58	Satisfactory
0.01	1412	1365	-3.33	Satisfactory
0.1	12890	12484	-3.15	Satisfactory
0.5	58670	56842	-3.12	Satisfactory
1.0	111900	108864	-2.71	Satisfactory

Tolerance limit of conductivity should be less than ± 10.0 (%)

(5) Salinity

Expected Reading (g/L)	Displayed Reading (g/L)	Tolerance (%)	Results
10	10.05	0.50	Satisfactory
20	20.17	0.85	Satisfactory
30	30.46	1.53	Satisfactory

Tolerance limit of salinity should be less than ± 10.0 (%)

(6) Turbidity

Expected Reading (NTU)	Displayed Reading ⁽¹⁾ (NTU)	Tolerance ⁽²⁾ (%)	Results
0	0.00	--	Satisfactory
10	9.90	-1.0	Satisfactory
20	19.82	-0.9	Satisfactory
100	98.3	-1.7	Satisfactory
800	798	-0.2	Satisfactory

Tolerance limit of turbidity should be less than ± 10.0 (%)

~ END OF REPORT ~

Remark(s): -

⁽¹⁾ "Displayed Reading" presents the figures shown on item under calibration/ checking regardless of equipment precision or significant figures.

⁽²⁾ The "Tolerance Limit" mentioned is the acceptance criteria applicable for similar equipment used by Quality Pro Test-Consult Ltd. or quoted from relevant international standards.

Appendix F. Status of Environmental Permits and Licences

	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	409237	Receipt acknowledged by EPD on 25 Oct 2016
		Works area of 3206 (Area 11)	447899	Receipt acknowledged by EPD on 8 Aug 2019
	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
		Works Area of 3206 (Area 11)	WPN 5213-951-Z4035-04	Completion of Registration on 4 Sep 2019
	Construction Noise Permit (General Works)	Works Area of 3206	GW-RS0187-21	Valid from 24 Mar 2021 to 15 Sep 2021
		Works Area of 3206 (Area 11)	GW-RS0107-21	Valid from 2 Mar 2021 to 30 Jun 2021
	Bill Account for disposal	Works area of 3206	A/C 7026398	Approval granted from EPD on 16 Nov 2016
3301	Notification of Construction Work under APCO	Works area of 3301	415821	Receipt acknowledged by EPD on 19 Apr 2017
	Registration as Chemical Waste Producer	Works area of 3301	WPN 5213-951-F2718-02	Completion of Registration on 9 Jun 2017
	Discharge License under WPCO	Works area of 3301	WT00029286-2017	Valid from 20 Sep 2017 to 30 Sep 2022
	Bill Account for disposal	Works area of 3301	A/C 7027728	Approval granted from EPD on 8 May 2017
	Construction Noise Permit (General Works)	Works area of 3301	GW-RS0118-21	Valid from 24 Feb 2021 to 21 Aug 2021
Works area of 3301 (Cable ducting works) (Special Case)		GW-RS0188-21	Valid from 29 Mar 2021 to 28 Sep 2021	
3302	Notification of Construction Work under APCO	Works area of 3302	440222	Receipt acknowledged by EPD on 10 Dec 2018
		Staging area of 3302	2018CES1	Receipt acknowledged by EPD on 21 Dec 2018
			454882	Receipt acknowledged by EPD on 2 Apr 2020
	Registration as Chemical Waste Producer	Works area of 3302	5296-951-C4331-01	Completion of Registration on 4 Jan 2019

Contract No.	Description	Location	Permit/ Reference No.	Status
	Discharge License under WPCO	Works area of 3302	WT00034539-2019	Valid from 11 Mar 2020 to 31 Mar 2025
		Works area of 3302	WT00034541-2019	Valid from 14 Oct 2019 to 31 Oct 2024
	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-RS0988-20	Valid from 7 Jan 2021 to 6 July 2021
			GW-RS0987-20	Valid from 7 Jan 2020 to 6 July 2021
	3303	Notification of Construction Work under APCO	Works area of 3303	445611
	Registration as Chemical Waste Producer	Works area of 3303	5213-951-S4174-01	Completion of Registration on 17 Jun 2019
	Discharge License under WPCO	Works area of 3303	WT00035689-2020	Valid from 11 May 2020 to 31 May 2025
		Works area of 3303	WT00036734-2020	Valid from 1 Dec 2020 to 31 Dec 2025
	Bill Account for disposal	Works area of 3303	A/C 7034272	Approval granted from EPD on 10 Jun 2019
	Construction Noise Permit (General Works)	Works area of 3303 (Existing airport)	GW-RS0825-20	Valid from 16 Nov 2020 to 15 May 2021
			GW-RS0194-21	Superseded by GW-RS0285-21
		Works area of 3303 (Reclamation area)	GW-RS0285-21	Valid from 30 Apr 2021 to 28 Oct 2021
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	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
3307	Notification of Construction Work under APCO	Works area of 3307	454964	Receipt acknowledged by EPD on 6 Apr 2020
	Registration as Chemical Waste Producer	Works area of 3307	5211-951-P3379-01	Completion of Registration on 8 Jun 2020
	Discharge License under WPCO	Works area of 3307	WT00036926-2020	Valid from 31 Dec 2020 to 31 Dec 2025
	Bill Account for disposal	Works area of 3307	A/C 7037129	Approval granted from EPD on 5 May 2020
	Construction Noise Permit (General Works)	Works area of 3307	GW-RS0033-21	Valid from 7 Feb 2021 to 6 Aug 2021
3402	Notification of Construction Work under APCO	Works area of 3402	464622	Receipt acknowledged by EPD on 18 Feb 2021
	Bill Account for disposal	Works area of 3402	A/C 7032577	Approval granted from EPD on 27 Nov 2018
	Construction Noise Permit (General Works)	Works area of 3402	GW-RS0129-21	Valid from 20 Mar 2021 to 9 Sep 2021
3403	Notification of Construction Work under APCO	Works area of 3403	450860	Receipt acknowledged by EPD on 11 Nov 2019

Contract No.	Description	Location	Permit/ Reference No.	Status
	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
	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-RS0822-20	Valid from 29 Nov 2020 to 28 May 2021
	Construction Noise Permit (Special Case)	Works area of 3403	GW-RS0010-21	Valid from 15 Jan 2021 to 31 May 2021
3405	Notification of Construction Work under APCO	Works area of 3405	453447	Receipt acknowledged by EPD on 18 Feb 2020
	Registration as Chemical Waste Producer	Works area of 3405	WPN 5218-951-C4431-01	Completion of Registration on 12 Mar 2020
	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-RS0013-21	Valid from 16 Jan 2021 to 7 Jul 2021
3408	Notification of Construction Work under APCO	Works area of 3408	461958	Receipt acknowledged by EPD on 17 Nov 2020
	Registration as Chemical Waste Producer	Works area of 3408	WPN 5218-951-B2621-01	Completion of Registration on 14 Jan 2021
	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-RS0224-21	Valid from 11 Apr 2021 to 30 Sep 2021
3503	Notification of Construction Work under APCO	Works area of 3503	459394	Receipt acknowledged by EPD on 28 Aug 2020
		Stockpiling area of 3503	459392	Receipt acknowledged by EPD on 28 Aug 2020
	Registration as Chemical Waste Producer	Works area of 3503	WPN 5113-951-L2845-02	Completion of Registration on 3 Sep 2019
		Stockpiling area of 3503	WPN 5113-951-L2845-04	Completion of Registration on 19 Jun 2020
	Discharge License under WPCO	Works area of 3503	WT00031258-2018	Valid from 6 Aug 2019 to 30 Jun 2023
			WT00036551-2020	Valid from 17 Sep 2020 to 30 Sep 2025
			WT00036697-2020	Valid from 2 Nov 2020 to 30 Nov 2025
	Bill Account for disposal	Works area of 3503	A/C 7029665	Approval granted from EPD on 27 Dec 2017
	Construction Noise Permit (General Works)	Works area of 3503	GW-RS0054-21	Superseded by GW-RS0257-21
			GW-RS0257-21	Valid from 16 Apr 2021 to 12.Oct 2021

Contract No.	Description	Location	Permit/ Reference No.	Status
		Stockpiling area of 3503	GW-RS0870-20	Superseded by GW-RS0215-21
			GW-RS0215-21	Valid from 19 Apr 2021 to 18 Oct 2021
		Works area of 3503 (Special Case)	GW-RS0246-21	Valid from 15 Apr 2021 to 31 May 2021
3508	Notification of Construction Work under APCO	Works area of 3508	459469	Receipt acknowledged by EPD on 4 Sep 2020
	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-RS0158-21	Superseded by GW-RS0213-21
			GW-RS0213-21	Valid from 1 Apr 2021 to 30 Sep 2021
		Works area of 3508(Area 3)	GW-RS0802-20	Valid from 27 Oct 2020 to 23 Apr 2021
		Works area of 3508 (Special Case)	GW-RS0884-20	Valid from 27 Nov 2020 to 25 May 2021
		Works area of 3508 (Special Case)	GW-RS0088-21	Valid from 23 Feb 2021 to 15 Apr 2021
		Works area of 3508 (Special Case)	GW-RS0175-21	Valid from 1 Apr 2021 to 31 May 2021
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
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
	Construction Noise Permit (General Works)	Works area of 3602	GW-RS0186-21	Valid from 31 Mar 2021 to 30 Sep 2021

Contract No.	Description	Location	Permit/ Reference No.	Status
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	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-RS0190-21	Valid from 26 Mar 2021 to 22 Sep 2021
3721	Notification of Construction Work under APCO	Works area of 3721	448657	Receipt acknowledged by EPD on 02 Sep 2019
	Registration as Chemical Waste Producer	Works area of 3721	WPN 5218-951-C4412-01	Completion of Registration on 9 Dec 2019
	Bill Account for disposal	Works area of 3721	A/C 7035234	Approval granted from EPD on 25 Sep 2019
	Construction Noise Permit (General Works)	Works area of 3721	GW-RS0916-20	Valid from 5 Dec 2020 to 3 Jun 2021
3722	Notification of Construction Work under APCO	Works area of 3722A	465843	Receipt acknowledged by EPD on 14 Aug 2020
		Works area of 3722B	465845	Receipt acknowledged by EPD on 14 Aug 2020
		Works area of 3722C	465842	Receipt acknowledged by EPD on 14 Aug 2020
		Works area of 3722D	465846	Receipt acknowledged by EPD on 14 Aug 2020
	Registration as Chemical Waste Producer	Works area of 3722A	WPN 5218-951-T3863-01	Completion of Registration on 18 Mar 2020
		Works area of 3722B	WPN 5218-951-T3864-01	Completion of Registration on 18 Mar 2020
		Works area of 3722C	WPN 5218-951-T3862-01	Completion of Registration on 18 Mar 2020
		Works area of 3722D	WPN 5218-951-T3865-01	Completion of Registration on 18 Mar 2020
	Bill Account for disposal	Works area of 3722A	A/C 7036752	Approval granted from EPD on 11 Mar 2020
		Works area of 3722B	A/C 7036966	Approval granted from EPD on 6 Apr 2020
		Works area of 3722C	A/C 7036967	Approval granted from EPD on 6 Apr 2020
		Works area of 3722D	A/C 7036795	Approval granted from EPD on 20 Mar 2020
	Construction Noise Permit (General Works)	Works area of 3722A, 3722B, 3722C and 3722D	GW-RS0153-21	Valid from 15 Mar 2021 to 14 Sep 2021
3723	Notification of Construction Work under APCO	3723A	464440	Receipt acknowledged by EPD on 9 Feb 2021
		3723B	464444	Receipt acknowledged by EPD on 9 Feb 2021

Contract No.	Description	Location	Permit/ Reference No.	Status
	Registration as Chemical Waste Producer	3723A	WPN 5218-951-T3920-01	Completion of Registration on 9 Feb 2021
		3723B	WPN 5218-951-T3921-01	Completion of Registration on 9 Feb 2021
	Discharge License under WPCO	Works area of 3723A & 3723B	/	Application submitted on 15 March 2021
	Bill Account for disposal	Works area of 3723A	A/C 7039755	Approval granted from EPD on 24 Feb 2021
		Works area of 3723B	A/C 7039754	Approval granted from EPD on 24 Feb 2021
	Construction Noise Permit (General Works)	Works area of 3723A & 3723B	GW-RS0221-21	Valid from 11 Apr 2021 to 10 Oct 2021
3801	Notification of Construction Work under APCO	Works area of 3801	418345	Receipt acknowledged by EPD on 26 Jun 2017
			430372	Receipt acknowledged by EPD on 2 Feb 2018
			435652	Receipt acknowledged by EPD on 16 Jul 2018
			451991	Receipt acknowledged by EPD on 18 Dec 2019
		Stockpiling area of 3801	450940	Receipt acknowledged by EPD on 13 Nov 2019
	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 and stockpiling area of 3801	WT00029535-2017	Valid from 24 Nov 2017 to 30 Nov 2022
		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-RS0826-20	Superseded by GW-RS0245-21
			GW-RS0245-21	Valid from 28 Apr 2021 to 27 Oct 2021
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
	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-RS0053-21	Superseded by GW-RS0225-21
			GW-RS0225-21	Valid from 11 Apr 2021 to 10 Oct 2021
3901A	Notification of Construction Work under APCO	Works area of 3901A	456240	Receipt acknowledged by EPD on 18 May 2020
		Works area of 3901A	466883	Receipt acknowledged by EPD on 26 Apr 2021
	Specified Process license under APCO	Works area of 3901A	L-3-261(1)	Valid from 14 Sep 2020 to 13 Sep 2024
	Registration as Chemical Waste Producer	Works area of 3901A	WPN 5218-951-K3400-01	Completion of Registration on 17 Jul 2020

Contract No.	Description	Location	Permit/ Reference No.	Status
	Bill Account for disposal	Works area of 3901A	7037889	Approval granted from EPD on 20 Jul 2020
	Construction Noise Permit (General Works)	Works area of 3901A	GW-RS0095-21	Valid from 19 Feb 2021 to 17 Jul 2021
3901B	Notification of Construction Work under APCO	Works area of 3901B	466885	Receipt acknowledged by EPD on 26 Apr 2021
	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-RS0146-21	Valid from 14 Mar 2021 to 10 Sep 2021

Appendix G. 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	0	0
	Limit	0	0
Waste	Action	0	0
	Limit	0	0
CWD	Action	0	0
	Limit	0	0

Remark: Exceedances, which are not project related, are not shown in this table.

Statistics for Complaints, Notifications of Summons and Prosecutions

Reporting Period	Cumulative Statistics		
	Complaints	Notifications of Summons	Prosecutions
This reporting period	1	0	0
From 28 December 2015 to end of the reporting period	35	1	1