

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

Construction Phase Monthly EM&A Report No.62 (For February 2021)

March 2021

Airport Authority Hong Kong

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

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

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This Monthly EM&A Report No. 62 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 12 March 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

Our Ref: 60440482/C/JCHL210312

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

12 March 2021

Dear Sir,

Contract No. 3102 3RS Independent Environmental Checker Consultancy Services

Submission of Monthly EM&A Report No. 62 (February 2021)

Reference is made to the Environmental Team's submission of the Monthly EM&A Report No. 62 under Condition 3.5 of the Environmental Permit No. EP-489/2014 certified by the ET Leader on 12 March 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.

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Jackel Law

Independent Environmental Checker

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Abbreviations

	T		
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		
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		
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		
MTCC	Marine Traffic Control Centre		
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		
SCLKCMP	Sha Chau and Lung Kwu Chau Marine Park		
SS	Suspended Solids		
	1 11 11 11		

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 62nd 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 28 February 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 such as bored piling for approach lights. 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	30
Noise monitoring	16
Water quality monitoring	12
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



Noise Impact Monitoring conducted by ET in Man Tung Road Park



Silt Curtain deployed by Contractor for Piling Activities



Chemical Spill Drill conducted by Contractor

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;
- Trench excavation works;
- Backfilling and reinstatement works; and
- Piling and structure works.

Contract 3303 Third Runway and Associated Works

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

Contract 3307 Fire Training Facility

- Excavation; and
- Drainage works.

Third Runway Concourse:

Contract 3402 New Integrated Airport Centres Enabling Works

- Pavement resurfacing works; and
- Aeronautical Ground Lighting (AGL) cable works.

Contract 3403 New Integrated Airport Centres Building and Civil Works

- Architectural, Builder's Work and Finishing works;
- Temporary work for roof lifting; 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;
- Piling work;
- Pre-drilling; 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

- Modification works at APM depot; and
- 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.

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; and
- Site clearance.

Contract 3802 APM and BHS Tunnels and Related Works

- Foundation works; and
- Ducting works.

Construction Support (Services / Licences):

Contract 3901A Concrete Batching Facility

Plant construction.

Contract 3901B Concrete Batching Facility

Plant operation.

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	V		period, three complaints were received including two complaints regarding dust issue received on 25 January 2021, and one complaint	For the first complaint received on 25 January 2021 regarding dust issue, ET requested the relevant contractor to provide information related to the complaint. During a joint ad-hoc inspection, dust emission from the vehicular movements was observed but was rectified as observed in the subsequent inspection. All contractors were reminded to properly and adequately implement dust suppression measures to prevent air pollution on site. The case was considered closed.
				For the second complaint received on 25 January 2021 regarding dust issue, ET requested the relevant contractors to provide information related to the complaint. During regular site inspections, no dust issue was observed at the alleged area. In view of the information provided by the contractors and findings from ET's inspections and investigation, the case might be due to operation at a cement mixing barge, and the potential contractor related to the case was reminded to provide mitigation measures to prevent any recurrence. ET requested the contractor to continue implementing and strengthening their environmental mitigation measures on construction dust control to prevent any recurrence. The case was considered closed.

	Yes	No	Details	Analysis / Recommendation / Remedial Actions
				For the complaint received on 25 January 2021 regarding refuelling, ET requested the relevant contractors to provide information related to the complaint. Regular site inspections and night-time ad-hoc inspections were also conducted by ET during which no occurrence regarding fuel spillage onto sea surface was observed. ET also conducted an investigation on the reclaimed land, in particular the alleged area, during which no refuelling activities and environmental malpractice leading to fuel spillage onto seawater was observed. All contractors were reminded to continue with their current prope practice in handling of fuel to prevent spillage. The case was considered closed.
			issue at the North Eastern Quay of 3RS project was received on 1 February 2021.	•
			improper fuelling operation at 3RS project area was received on 2 February 2021.	•
			improper fuelling operation and high sulphur content fuel at	ET requested the relevant contractors to provide information related to the complain Regular site inspections and night-time ad-ho inspections were also conducted by ET durin which no occurrence regarding fuel spillag onto sea surface was observed. Furthermore no environmental malpractice on the handlin of fuel was observed at the alleged area. A contractors were reminded to properly handlifuel on site and implement their respective contract-specific spill response plan. The cas was considered closed.
			soil/muddy water from vehicles	ET requested the relevant contractors to provide information related to the complaint. Joint ad-hoc inspection was conducted at the landing site where no dust related issue was observed. Besides, no observation related to dust issue was recorded during regular sit inspections at the loading sites. All contractor was reminded to strictly conduct suppressin measures and maintain good housekeeping all times. The case was considered closed.
Notification of any summons and status of prosecutions		√	No notification of summons or prosecution was received.	Nil
Change that affect the EM&A		V	There was no change to the construction works that may affect the EM&A.	Nil

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 updated overall phasing programme of all construction works was presented in Appendix A of the Construction Phase Monthly EM&A Report No. 7 and the contract information was presented in Appendix A of Construction Phase Monthly EM&A Report No. 58.

1.2 Scope of this Report

This is the 62nd 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 28 February 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	Environmental Team Leader	Terence Kong	2828 5919	
Kong Limited)	Deputy Environmental Team Leader	Heidi Yu	2828 5704	
	Deputy Environmental Team Leader	Daniel Sum	2585 8495	
ndependent 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	Project Manager	Alan Mong	3763 1352	
(ZHEC-CCCC-CDC Joint Venture)	Environmental Officer	Kwai Fung Wong	3763 1452	

Airfield Works:

Party	Position	Name	Telephone
Contract 3301 North Runway Crossover Taxiway	Deputy Project Director	Kin Hang Chung	9800 0048
(FJT-CHEC-ZHEC Joint Venture)	Environmental Officer	Joe Wong	6182 0351
Contract 3302 Eastern Vehicular Tunnel Advance	Project Manager	Dickey Yau	5699 4503
Works (China Road and Bridge Corporation)	Environmental Officer	Dennis Ho	5645 0563
Contract 3303 Third Runway and Associated	Project Manager	Andrew Keung	6277 6628
Works (SAPR Joint Venture)	Environmental Officer	Max Chin	6447 5707
Contract 3307 Fire Training Facility	Project Manager	Steven Meredith	6109 1813
(Paul Y. Construction Company Limited)	Environmental Officer	Albert Chan	9700 1083

Third Runway Concourse:

Party	Position	Name	Telephone
Contract 3403 New Integrated Airport Centres Building and Civil Works (Sun Fook Kong Construction Limited)	Project Manager	Alice Leung	9220 3162
	Environmental Officer	Alpha Chia	9626 1114
Contract 3405 Third Runway Concourse Foundation and	Project Manager	Francis Choi	9423 3469
Substructure Works (China Road and Bridge Corporation – Bachy Soletanche Group Limited – LT Sambo Co., Ltd. Joint Venture)	Environmental Officer	Jacky Lai	9028 8975

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	Project Director	Richard Ellis	6201 5637	
(Gammon Engineering & Construction Company Limited)	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)	Project Manager	Hongdan Wei	158 6180 9450
(CRRC Puzhen Bombardier Transportation Systems Limited and CRRC Nanjing Puzhen Co., Ltd. Joint Venture)	Environmental Officer	P L Wong	9143 2185
Contract 3602 Existing APM System Modification Works	Project Manager	Kunihiro Tatecho	9755 0351
(Niigata Transys Co., Ltd.)	Environmental Officer	Yolanda Gao	5399 3509
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	Site Agent	Thomas Lui	9011 5340
(China State Construction Engineering (Hong Kong) Ltd.)	Environmental Officer	Xavier Lam	9493 2944
Contract 3722 Western Support Area – Construction Support	Deputy Project Director	Philip Kong	9049 3161
Facilities (Tapbo Construction Company Limited and Konwo Modular House Limited Joint Venture)	Environmental Officer	Sampson Lo	9752 9118

Airport Support Infrastructure:

Party	Position	Name	Telephone
Contract 3801 APM and BHS Tunnels on Existing Airport Island	Project Manager	Tony Wong	9642 8672
(China State Construction Engineering (Hong Kong) Ltd.)	Environmental Officer	Federick Wong	9842 2703
Contract 3802 APM and BHS Tunnels and Related	Project Director	John Adams	6111 6989
Works (Gammon Engineering & Construction Company Limited)	Environmental Officer	Andy Leung	9489 0035

Construction Support (Services / Licences):

Party	Position	Name	Telephone
Contract 3901A Concrete	Project Manager	Benedict Wong	9553 2806
Batching Facility (K. Wah Concrete Company Limited)	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 such as bored piling for approach lights. 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**. **Figure 1.2** presents the latest layout of enhanced silt curtain deployed and a section of enhanced silt curtain phased out in this reporting period. In accordance with the Silt Curtain Deployment Plan, when a certain section of seawalls were partially completed with rock core to high tide mark and filter layer on

the inner side, and an overlapping length of at least 150m for seawall and enhanced silt curtain was maintained, the enhanced silt curtain would be phased out.

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 and details can be referred to Table 1.2 of the Construction Phase Monthly EM&A Report No. 1.

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

Parameters	Status
Air Quality	
Baseline Monitoring	The baseline air quality monitoring result has been reported in Baseline Monitoring Report and submitted to EPD under EP Condition 3.4.
Impact Monitoring	On-going
Noise	
Baseline Monitoring	The baseline noise monitoring result has been reported in Baseline Monitoring Report and submitted to EPD under EP Condition 3.4.
Impact Monitoring	On-going On-going
Water Quality	
General Baseline Water Quality Monitoring for reclamation, water jetting and field joint 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	On-going Control of the control of t
Initial Intensive Deep Cement Mixing (DCM) Water Quality Monitoring	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	Due to the completion of all marine-based DCM works within December 2020, regular DCM monitoring is ceased at all monitoring stations starting from 14 January 2021 and would be resumed if there are marine-based DCM works in the coming future.
Sewerage and Sewage Treatment	
Methodology for carrying out annual sewage flow monitoring for concerned gravity sewer	The proposed methodology of the annual sewage flow monitoring will be prepared and submitted to EPD at least one year before commencement of operation of 3RS.
Details of the routine H ₂ S monitoring system for the sewerage system 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	On-going
Land Contamination	
Supplementary Contamination Assessment Plan (CAP)	The Supplementary CAP was submitted to EPD pursuant to EP Condition 2.20.
Contamination Assessment Report (CAR) for Golf Course	The CAR for Golf Course was submitted to EPD.
	The CARs for Terminal 2 Emergency Power Supply System Nos.1 (Volumes 1 and 2), 2, 3, 4 and 5 were submitted to EPD.
Terrestrial Ecology	
Pre-construction Egretry Survey Plan	The Egretry Survey Plan was submitted and approved by EPD under EP Condition 2.14.
Ecological Monitoring	The terrestrial ecological monitoring at Sheung Sha Chau was completed in January 2019.

Parameters	Status
Marine Ecology	
Pre-Construction Phase Coral Dive Survey	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	The post-translocation monitoring programme according to the Coral Translocation Plan was completed in April 2018.
Chinese White Dolphins (CWD)	
Vessel Survey, Land-based Theodolite Tracking and Passive Acoustic Monitoring (PAM)	
Baseline Monitoring	Baseline CWD results were reported in the CWD Baseline Monitoring Report and submitted to EPD in accordance with EP Condition 3.4.
Impact Monitoring	On-going
Landscape & Visual	
Landscape & Visual Plan	The Landscape & Visual Plan was submitted to EPD under EP Condition 2.18
Baseline Monitoring	The baseline landscape & visual monitoring result has been reported in Baseline Monitoring Report and submitted to EPD under EP Condition 3.4.
Impact Monitoring	On-going
Environmental Auditing	
Regular site inspection	On-going
Marine Mammal Watching Plan (MMWP) implementation measures	On-going Control of the Control of t
Dolphin Exclusion Zone (DEZ) Plan implementation measures	On-going Control of the Control of t
SkyPier High Speed Ferries (HSF) implementation measures	On-going
Construction and Associated Vessels Implementation measures	On-going
Complaint Hotline and Email channel	On-going
Environmental Log Book	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: 17 February 2021;
- Two environmental briefings on EP and EM&A requirements of the Project provided by ET: 3 and 18 February 2021; and
- Seventeen environmental management meetings for EM&A review with works contracts: 4, 5, 9, 17, 18, 23,24, and 25 February 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 A**.

2 Air Quality Monitoring

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

Table 2.1: Locations of Impact Air Quality Monitoring Stations

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

2.1 Action and Limit Levels

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

Table 2.2: Action and Limit Levels of Air Quality Monitoring

Monitoring Station	Action Level (μg/m³)	Limit Level (µg/m³)
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 B.

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

Table 2.4: Summary of Air Quality Monitoring Results

Monitoring Station	1-hr TSP Concentration Range (μg/m³)	Action Level (μg/m³)	Limit Level (μg/m³)
AR1A	7 - 80	306	500
AR2	9 - 59	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:

- 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)	24 Mar 2020 Monthly EM&A Report N Appendix D	
	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)	4 Jul 2020	Monthly EM&A Report No. 55, Appendix D

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.
- Noise measurement results 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 B.

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

Table 3.4: Summary of Construction Noise Monitoring Results

Monitoring Station	Noise Level Range, dB(A)	Limit Level, dB(A)
	Leq (30mins)	Leq (30mins)
NM1A ⁽¹⁾	68 - 73	75
NM4 ⁽¹⁾	59 - 61	70(2)
NM5 ⁽¹⁾	52 - 62	75
NM6 ⁽¹⁾	66 - 67	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.

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 and aircraft noise near NM6 during this reporting period. It is considered that the monitoring work during the reporting period was effective and there was no adverse impact attributable to the Project activities.

4 Water Quality Monitoring

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.

In view of the construction programme for marine-based DCM works, regular DCM monitoring, which was ceased since 14 January 2021, was resumed at all monitoring stations starting from 2 February 2021.

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

Monitoring Station	Description		Coordinates	Parameters
		Easting	Northing	
C1	Control Station	804247	815620	General Parameters
C2	Control Station	806945	825682	DO, pH, Temperature
C3 ⁽³⁾	Control Station	817803	822109	Salinity, Turbidity, SS
IM1	Impact Station	807132	817949	DCM Parameters
IM2	Impact Station	806166	818163	Total Alkalinity, Heavy
IM3	Impact Station	805594	818784	Metals ⁽²⁾
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	General Parameters DO, pH, Temperature Salinity, Turbidity, SS
SR2 ⁽³⁾	Planned marine park / hard corals at The Brothers / Tai Mo To	814166	821463	General Parameters DO, pH, Temperature Salinity, Turbidity, SS
				<u>DCM Parameters</u> Total Alkalinity, Heavy Metals ⁽²⁾⁽⁴⁾

Monitoring Station	Description		Coordinates	Parameters
SR3	Sha Chau and Lung Kwu Chau Marine Park / fishing and spawning grounds in North Lantau	807571	822147	General Parameters DO, pH, Temperature Salinity, Turbidity, SS
SR4A	Sha Lo Wan	807810	817189	
SR5A	San Tau Beach SSSI	810696	816593	
SR6A ⁽⁵⁾	Tai Ho Bay, Near Tai Ho Stream SSSI	814739	817963	General Parameters DO, pH, Temperature
SR7	Ma Wan Fish Culture Zone (FCZ)	823742	823636	Salinity, Turbidity, SS
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/epsubmissions.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)	
	Limit Levels for genera SR1A & SR8)	ıl water quality mon	itoring and regula	DCM monitoring	
General Water Quality Monitoring DO in mg/l (Surface, Middle & Bottom) Suspended Solids (SS) in mg/l	U (Surface and Middle 4.5mg/l		Surface and Middle 4.1mg/l	
	Bottom 3.4mg/l		5mg/l for Fish Culture Zone (SR7) only Bottom 2.7mg/l		
	•	23	or 120% of upstream control	37	or 130% of upstream control
	Turbidity in NTU	22.6	station at the same tide of the same day,	36.1	station at the same tide of the
Regular	Total Alkalinity in ppm	95		99	same day,
DCM Monitoring ⁽⁶⁾	CM Representative 0.2 whichever is	0.2	whichever is higher		
	Representative Heavy Metals for regular DCM monitoring (Nickel) in µg/l	3.2	_	3.6	_
Action and I	Limit Levels SR1A				
SS (mg/l))		33		42	
Action and I	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
- (5) The Action and Limit Levels for the two representative heavy metals chosen will be the same as that for the intensive DCM monitoring.
- (6) In view of the construction programme for marine-based DCM works, regular DCM monitoring was ceased from 14 January 2021 and resumed from 2 February 2021 at all monitoring stations.

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
Ebb Tide C1	SR4A, SR5A, SR6A

Note:

 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)	3 Feb 2021	Appendix D
	YSI ProDSS (Serial No. 17H105557)	3 Feb 2021	Appendix D
	YSI ProDSS (Serial No. 18A104824)	25 Feb 2021	Appendix D
	YSI ProDSS (Serial No. 15M100005)	18 Jan 2021	Monthly EM&A Report No. 61, Appendix D
	YSI ProDSS (Serial No. 16H104234)	18 Jan 2021	Monthly EM&A Report No. 61, Appendix D
	YSI ProDSS (Serial No. 16H104233)	25 Feb 2021	Appendix D
Digital Titrator (measurement of total alkalinity)	Titrette Bottle-top Burette, 50ml (Serial No. 10N64701)	26 Feb 2021	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 B**.

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 C**.

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 A**.

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' facilitities 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 (m³)		Reused in other	Transferred to	Chemical Waste (kg)	Chemical Waste (I)	General Refuse (tonne)
January 2021 ⁽²⁾⁽³⁾	10,125	*39,724	0	5,780	0	0	1,696
February 2021 ⁽²⁾⁽⁴⁾	15,002	224,678	0	3,083	0	600	1,209

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 Annual EM&A Report.
- (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

		1300t Ellics III IV				
Waypoint	Easting	Northing	Waypoint	Easting	Northing	
1S	813525	820900	6N	818568	824433	
1N	813525	824657	7S	819532	821420	
2S	814556	818449	7S 7N	819532	824209	
2N	814559	824768	8S	820451	822125	
38	815542	818807	8N	820451	823671	
3N	815542	824882	9S		822371	
48	816506	819480	95 9N	821504 821504	823761	
4N	816506	824859	10S	822513	823268	
5S	817537	820220	10N	822513	824321	
5N	817537	824613	118	823477	823402	
6S	818568	820735	11N	823477	824613	
10	904674	NV		909504	004705	
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	
38	806464	821033	8S	811508	821839	
3N	806464	829598	8N	811508	824254	
4S	807518	821395	9S	812516	821356	
4N	807518	829230	9N	812516	824254	
		A				
1W	804733	818205	2W	805045	816912	
1E	806708	818017	2E	805960	816633	
		W				
1W	800600	805450	7W	800400	811450	
1E	801760	805450	7E	802400	811450	
2W	800300	806450	W8	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				
		SV	/L			
18	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	98	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
Е	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 5, 8, 9, 16, 17, 22, 23 and 24 February 2021, covering all transects in NEL, NWL, AW, WL and SWL survey areas for twice.

A total of around 445.64km of survey effort was collected from these surveys and around 91.6% 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 C**.

Sighting Distribution

In February 2021, 17 sightings with 65 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 C**.

Distribution of all CWD sightings recorded in February 2021 is illustrated in **Figure 6.3**. In NWL including AW transects, all CWD sightings distributed at the westernmost part of the survey area, with some of these sightings located within or in close vicinity to Sha Chau and Lung Kwu Chau Marine Park. In WL, the majority of the CWD sightings were clustered at the waters around Tai O and Yi O, with a few sightings scattered at waters around Peaked Hill and Fan Lau. No sightings of CWD were recorded in NEL and SWL.

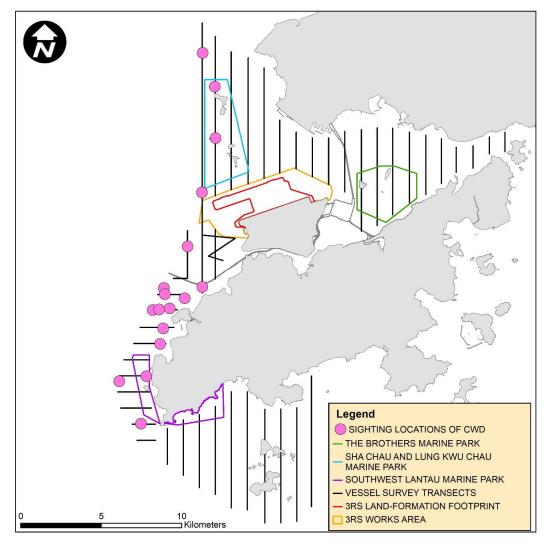


Figure 6.3: Sightings Distribution of Chinese White Dolphins

Remarks: (1) Please note that there are 17 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)

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

Encounter Rate by Number of Dolphins (ANI)

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

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

In February 2021, a total of around 408.03 km of survey effort were conducted under Beaufort Sea State 3 or below with favourable visibility, whilst a total number of 17 on-effort sightings with 65 dolphins were sighted under such condition. Calculation of the encounter rates for the month are shown in **Appendix C**.

For the running quarter of the reporting period (i.e., from December 2020 to February 2021), a total of around 1213.70 km of survey effort were conducted under Beaufort Sea State 3 or below with favourable visibility, whilst a total number of 50 on-effort sightings and a total number of 167 dolphins from on-effort sightings were obtained under such condition. Calculation of the running quarterly encounter rates are shown in **Appendix C**.

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

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

	Encounter Rate (STG)	Encounter Rate (ANI)
February 2021	4.17	15.93
Running Quarter from December 2020 to February 2021 ⁽¹⁾	4.12	13.76
Action Level	Running quarterly ⁽¹⁾ ST	G < 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 December 2020 to February 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 February 2021, 17 groups of 65 dolphins in total were sighted, and the average group size of CWDs was 3.8 dolphins per group. Sightings with small group size (i.e. 1-2 dolphins) are dominant. There were two CWD sightings with large group size (i.e. 10 or more dolphins) recorded and both these two sightings were located in NWL.

Activities and Association with Fishing Boats

Four sightings of CWDs were recorded engaging in feeding activities in February 2021. Two of these sightings were observed in association with operating gillnetter in WL during the reporting period.

Mother-calf Pair

In February 2021, six CWD sightings were recorded with the presence of mother-and-unspotted juvenile pair(s).

6.4.2 Photo Identification

In February 2021, a total number of 45 different CWD individuals were identified for totally 52 times. A summary of photo identification works is presented in **Table 6.5**. Representative photos of these individuals are given in **Appendix C**.

Table 6.5: Summary of Photo Identification

Individual ID	Date of Sighting (dd-mmm-yy)	Sighting Group No.	Area	Individua ID	Date of Sighting (dd-mmm-yy)	Sighting Group No.	Area
NLMM023	17-Feb-21	1	NWL	WLMM006	16-Feb-21	3	WL
NLMM052	17-Feb-21	1	NWL	WLMM013	08-Feb-21	1	NWL
NLMM058	08-Feb-21	1	NWL	WLMM028	16-Feb-21	4	WL
NLMM060	16-Feb-21	1	WL	WLMM029	16-Feb-21	3	WL
NLMM076	05-Feb-21	4	WL	WLMM030	08-Feb-21	1	NWL
		5	WL	WLMM039	16-Feb-21	2	WL
NLMM077	08-Feb-21	1	NWL	WLMM047	05-Feb-21	4	WL
NLMM078	08-Feb-21	3	NWL			5	WL
NLMM079	08-Feb-21	3	NWL	WLMM051	08-Feb-21	1	NWL
NLMM080	08-Feb-21	3	NWL	WLMM052	08-Feb-21	1	NWL
NLMM081	08-Feb-21	3	NWL	WLMM056	16-Feb-21	3	WL
SLMM007	05-Feb-21	4	WL	WLMM064	08-Feb-21	3	NWL
		5	WL	WLMM065	08-Feb-21	2	NWL
SLMM010	05-Feb-21	6	WL	WLMM071	08-Feb-21	3	NWL
SLMM014	05-Feb-21	7	WL		16-Feb-21	1	WL
	16-Feb-21	3	WL	WLMM083	08-Feb-21	1	NWL
SLMM023	16-Feb-21	3	WL	WLMM086	08-Feb-21	1	NWL
SLMM027	16-Feb-21	5	WL	WLMM090	08-Feb-21	3	NWL
SLMM029	05-Feb-21	2	WL	WLMM097	08-Feb-21	1	NWL
SLMM037	16-Feb-21	3	WL	WLMM107	16-Feb-21	2	WL
SLMM055	08-Feb-21	3	NWL	WLMM114	16-Feb-21	3	WL
SLMM071	08-Feb-21	3	NWL	WLMM118	16-Feb-21	4	WL
SLMM073	05-Feb-21	4	WL	WLMM131	05-Feb-21	2	WL
		5	WL	WLMM136	08-Feb-21	1	NWL
WLMM001	05-Feb-21	4	WL	WLMM138	08-Feb-21	1	NWL
		5	WL	WLMM149	16-Feb-21	2	WL

6.4.3 Land-based Theodolite Tracking Survey

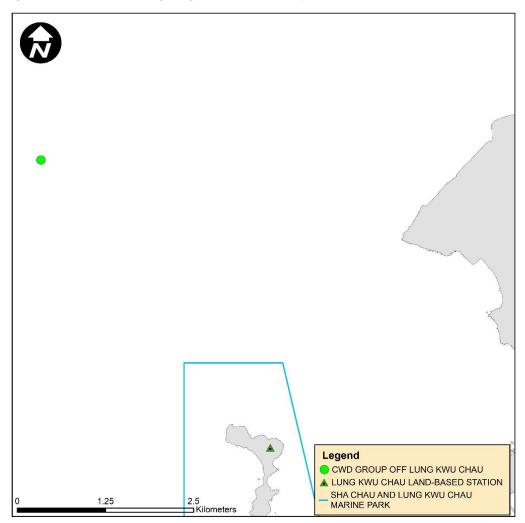
Survey Effort

Land-based theodolite tracking surveys were conducted at LKC on 24 February 2021 and at SC on 26 February 2021, with a total of two days of land-based theodolite tracking survey effort accomplished in this reporting period. One CWD groups were tracked from Lung Kwu Chau station during the survey. Information of survey effort and CWD groups are presented in **Table 6.6**. Details of the survey effort are presented in **Appendix C**. The first sighting location of CWD group tracked at LKC station during land-based theodolite tracking survey in February 2021 was depicted in **Figure 6.4**. No CWD group was sighted from SC station in this reporting month.

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	1	0.17
Sha Chau	1	6:00	0	0
TOTAL	2	12:00	1	0.08

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. In this reporting period, the F-POD was retrieved on 25 February 2021 and subsequently redeployed and positioned at south of Sha Chau Island inside the SCLKCMP (**Figure 6.5**). The PAM deployment is generally for 6 weeks prior to data retrieval 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 and bored piling, 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, bored piling 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 7.2** and **Section 7.3** 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 B**. Biweekly 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 A**.

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 A**) was monitored in accordance with the Manual. All measures undertaken by both the contractor and the landscape contractor during the construction phase and first year of the operation phase shall be audited by a landscape architect, as a member of the ET, on a regular basis to ensure compliance with the

intended aims of the measures. Site inspections shall be undertaken at least once every two months during the operation phase.

The implementation status of the environmental protection measures 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	3RS Project contracts
CM2 – Reduction of construction period to practical minimum	CM5, CM6 and CM7 by Contractors was observed.	
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	Tree Protection Specifications have been provided in the relevant Contract Specifications respectively for implementation by the Contractors under the Project.	3302, 3503, 3602, 3801
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	The Contractors' performance on the implementation of the trees maintenance and protection measures were observed and checked by the ET weekly during construction period.	3508, 3802 (To be implemented)

Landscape and Visual **Mitigation Measures during** Construction

Implementation Status

Relevant Contract(s) in the Reporting Period

CM9 - Trees unavoidably affected by the works shall be transplanted where practical. A detailed Tree Transplanting Specification shall be provided in the Contract Specification, if applicable. Sufficient time for necessary tree root and crown preparation periods shall be allowed in the project programme

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.

3503, 3801

3508, 3802 (To be implemented)

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.

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.

Long term management of the transplanted trees were

currently monitored by ET annually.

To be implemented

CM 10 - Land formation works shall be followed with advanced hydroseeding around taxiways and runways as soon as practical

To be implemented around taxiways and runways as soon as practicable.

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



Erection of site hoardings around works area in unobtrusive colors (CM5)



Avoidance of excessive height and bulk of site buildings (CM6)



Control of night-time lighting by hooding and minimisation of night working period (CM7)



General view of Tree Protection Zone for retained tree (CM8)



General view of a transplanted tree (CM9)

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 updated cumulative total number of retained and transplanted trees under the Project were 119 and 11, respectively. One tree is updated to 'retain' under Contract 3801 during the reporting period. Three trees under Contract 3503 transitioned from establishment period to long term management period during the reporting period and managed by Contract 3503 currently. Details of the retained trees, transplanted trees and to-betransplanted 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 report.

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 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

E A . M I I		A . 4*		
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 if design 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 beer completed.	Contractor on possible remedial measures. Advise AAHK / PM on	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 area 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.)	Transplant	Transplanted (nos.)		
		Establishment Period	Maintenance Period	(nos.)	
3302	9	0	0	0	
3503	19	6	3	0	
3602	2	0	0	0	
3801	89	0	5	0	
Sub-total	119	6	8	0	
Provisional					
Contract	Retain (nos.)	Transplant	ted (nos.)	To-be-transplanted (nos.	
3508 ⁽¹⁾	155	0		22	
Sub-total	155	0		22	
Grand Total	274	14		22	

Notes:

⁽¹⁾ Actual tree number is subject to confirmation after initial tree survey is conducted by the Contractor.

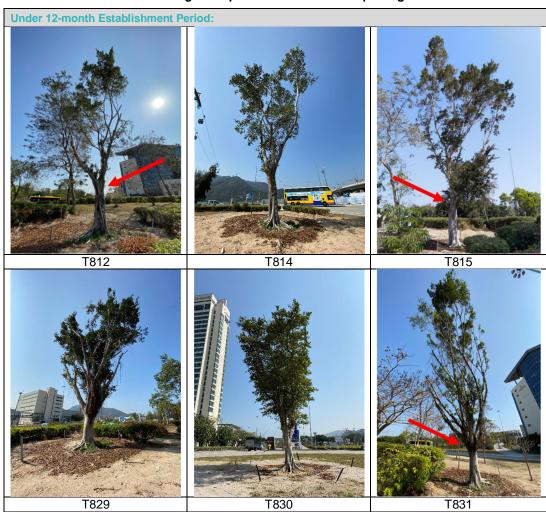
Summary of the updated transplanted trees and photos are presented in **Table 7.6** and **Table 7.7** respectively.

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	Establishment period	Contract 3801	NA
		4 May 2018 – May 2019 Long Term Management period Jun 2019 – May 2028	Southern Landside Petrol Filling Station	_
CT1253	4 May 2018	Establishment period	Contract 3801	_
		5 May 2018 – May 2019 Long Term Management period	Southern Landside	_
		Jun 2019 – May 2028	Petrol Filling Station	
T835	22 Jan 2020	Establishment period	Contract 3503	NA
		23 Jan 2020 – Jan 2021		
		Long Term Management period Feb 2021 – Jan 2030	Ī	
T836	13 Dec 2019	Establishment period	Contract 3503	_
		14 Dec 2020 – Jan 2021		
		Long Term Management period Feb 2021 – Jan 2030	Ī	
T838	22 Jan 2020	Establishment period	Contract 3503	_
		23 Jan 2020 - Jan 2021		
		Long Term Management period Feb 2021 – Jan 2030	[
T812	21 Dec 2020	Establishment period 22 Dec 2020 – Dec 2021	Contract 3503	_
T814	20 Dec 2020	Establishment period 21 Dec 2020 – Dec 2021	Contract 3503	_
T815	15 Dec 2020	Establishment period 16 Dec 2020 – Dec 2021	Contract 3503	_
T829	18 Dec 2020	Establishment period 19 Dec 2020 – Dec 2021	Contract 3503	_
T830	14 Dec 2020	Establishment period 15 Dec 2020 – Dec 2021	Contract 3503	
T831	19 Dec 2020	Establishment period 20 Dec 2020 – Dec 2021	Contract 3503	_
CT1194	4 May 2018	Establishment period 5 May 2018 – May 2019	Contract 3801	NA
		Long Term Management period Jun 2019 – May 2028	Southern Landside Petrol Filling Station	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 Filing Station.
CT1794	3 May 2018	Establishment period	Contract 3801	NA
		4 May 2018 - May 2019		
		Long Term Management period 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.

Tree ID	Transplant Date	Management Stage	Management Agency	Remarks
CT1795	3 May 2018	Establishment period 4 May 2018 – May 2019	Contract 3801	NA
		Long Term Management pe Jun 2019 – May 2028	<u>riod</u> 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 in the Reporting Period





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 System Nos.1 (Volumes 1 and 2), 2, 3, 4 and 5 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 all the CARs and required ET to submit additional photos for sides and bottom of some of sampling points after the removal of pipelines to reaffirm no leakage from the pipelines concerned. Afterwards, the potential land contamination concern of two concerned systems will be closed.

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 February 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., 1 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 Q2 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 28 February 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	1 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.
- Two 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.
- Based on the updated record, 3 skippers were trained by ET and 11 skippers were trained by contractors' Environmental Officers in the previous period. In this reporting period, 6 skippers were trained by ET and 3 skippers was trained by contractors' Environmental Officers. In total, 1689 skippers were trained from August 2016 to February 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 MTCC 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, seawall construction and bored piling 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		
2.10	Marine Travel Routes and Management Plan for High Speed Ferries of SkyPier			
2.11	Marine Mammal Watching Plan	тоу ЕРО		
2.12	Coral Translocation Plan			
2.13	Fisheries Management Plan			
2.14	Egretry Survey Plan			
2.15	Silt Curtain Deployment Plan			
2.16	Spill Response Plan			
2.17	Detailed Plan on Deep Cement Mixing			
2.18	Landscape & Visual Plan	Submitted to EPD		
2.19	Waste Management Plan			
2.20	Supplementary Contamination Assessment Plan	Accepted / approved		
3.1	Updated EM&A Manual	by EPD		
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 E**.

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

7.9.1 Complaints

Complaints received in the previous reporting period

As reported in the previous Monthly EM&A Report, three complaints were received in the previous reporting period, including:

- Two complaints regarding dust issue received on 25 January 2021; and
- A complaint regarding refuelling received on 25 January 2021.

The cases were investigated by ET in accordance with the Manual and the Complaint Management Plan of the Project. The findings of investigation are presented below.

First complaint regarding dust issue received on 25 January 2021

With the photo provided by the complainant, ET identified the related 3RS contractor and requested the contractor to provide more information regarding the complaint. According to the information provided by the contractor, the alleged area was under their management, yet the trucks in the photo were not operated by them. Water bowsers and manual water spraying were arranged within the alleged area. During a joint *ad-hoc* inspection of EPD, ET, AAHK and IEC on 25 January 2021, dust emission from the vehicular movements was observed and the contractor was advised to conduct water spraying at the alleged area. The issue was rectified as observed in the subsequent joint environmental site inspection on 1 February 2021, and the contractor was advised again to provide effective dust suppression measures on-site.

It was noted that all air quality monitoring results of the Project in January 2021 were within the corresponding Action and Limit Levels at all monitoring stations. Nevertheless, the ET requested the contractor to provide their environmental mitigation measures for dust suppression and water spraying records for checking. The ET also reminded all contractors to properly and adequately implement dust suppression measures to prevent air pollution on site. ET and IEC would continue to monitor the related contractor's environmental mitigation measures for dust suppression during the environmental site inspections. Hence, the complaint case was considered closed.

Second complaint regarding dust issue received on 25 January 2021

The ET identified the two related 3RS contractors and requested the contractors to provide more information regarding the complaint. Cement mixing activities were carried out at the alleged area and the condition of the filter for cement mixer and generator were unsatisfactory as reported by one of the contractors. The contractor reported that follow-up actions had been taken accordingly and would continue to conduct checking and maintenance of the cement mixing barge and keep procedural checklist as good practice. On the other hand, the other contractor had no works carried out at the alleged area during the alleged period and water spraying as set out in the contractor's dust control management plan was implemented along main haul road. Based on ET's regular site inspections in January 2021, no dust issue was observed at the alleged area.

In view of the information provided by the contractors and findings from ET's inspections and investigation, the case might be due to operation at a cement mixing barge, and the potential contractor related to the case was reminded to provide mitigation measures to prevent any recurrence. It was noted that all air quality monitoring results of the Project in January 2021 were within the corresponding Action and Limit Levels at all monitoring stations. Nevertheless, the ET requested the contractor to continue implementing and strengthening their environmental mitigation measures on construction dust control to prevent any recurrence. ET and IEC will continue to conduct inspections to ensure all similar cement mixing barges are maintaining good housekeeping and continue to monitor the Project's air quality monitoring results. Hence, the complaint case was considered closed.

Complaint regarding refuelling received on 25 January 2021

It was mentioned that the refuelling activities were observed at the shore of central northern area of the newly reclaimed land, where the ET identified the related 3RS contractors and requested the contractors to provide more information regarding the complaint. According to the information provided by the contractors, no fuel spillage incident was recorded in January 2021 which is in line with the ET's checking of fuel spillage incident record. The contractors also reported no refuelling activities were carried out at the alleged area. Based on ET's regular site inspections and night-time *ad-hoc* inspections in January and early February 2021, no occurrence regarding fuel spillage onto sea surface was observed. In addition, an investigation on the reclaimed land, in particular the alleged area, was conducted on 26 January 2021 during which no refuelling activities and environmental malpractice leading to fuel spillage onto seawater was observed.

It was noted that all water quality monitoring results of the Project from 1 to 23 January 2021 were within the corresponding Action and Limit Levels, except one case of chromium exceedance at IM11 on 2 January 2021 which was considered not due to the Project based on investigation findings. Nevertheless, the ET will continue to remind the related contractors and all other contractors to properly handle fuel, including storage, refuelling and implement their respective contract-specific spill response plan involving the conducting of regular spill drills and trainings, and to provide sufficient spills kits on site to prevent fuel spillage. ET and IEC would continue to monitor the Project's water quality, inspect contractors' fuel spillage records and conduct site inspections to check contractors' environmental practices and compliances. Hence, the complaint case was considered closed.

Complaints received in this reporting period

Four complaints were received in this reporting period, including:

- A complaint regarding dust issue at the North Eastern Quay of the Project received on 1 February 2021;
- A complaint regarding improper fuelling operation at the Project area received on 2 February 2021;
- A complaint regarding improper fuelling operation and high sulphur content fuel at the Project area received on 3 February 2021; and
- A complaint regarding soil/muddy water from vehicles of the Project received on 9 February 2021.

The cases were investigated by ET in accordance with the Manual and the Complaint Management Plan of the Project. The findings of investigation are presented below.

Complaint regarding dust issue received on 1 February 2021

The case is under investigation and findings of the investigation will be reported in the next Monthly EM&A Report.

Complaint regarding improper fuelling operation received on 2 February 2021

The case is under investigation and findings of the investigation will be reported in the next Monthly EM&A Report.

Complaint regarding improper fuelling operation and high sulphur content fuel received on 3 February 2021

No detail of the case such as date, time and name of the barge was provided in the complaint. It was mentioned that the improper fuelling operation and high sulphur content fuel were observed at the shore of central northern area of the newly reclaimed land, where the ET identified the related 3RS contractors and requested the contractors to provide more information regarding the complaint. All the contractors replied and provided relevant fuel purchasing records to prove that they had purchased Ultra Low Sulphur Diesel (ULSD) or equivalent such as EURO V which is in line with the ET's checking of their fuel purchasing records since October 2020. Based on ET's regular site inspections and night-time *ad-hoc* inspections in January 2021 and up to 10 February 2021, no occurrence regarding fuel spillage onto sea surface was observed. Furthermore, no environmental malpractice on the handling of fuel was observed at the alleged area.

In view of the information provided by the contractors and findings from ET's inspections and investigation, there was no evidence indicating the use of high sulphur content fuel at the project area. Nevertheless, the ET will continue to remind all contractors to properly handle fuel on site and implement their respective contract-specific spill response plan. ET and IEC would continue to continue to check contractors' fuel purchasing records and conduct site inspections to check contractors' environmental practices and compliances. Hence, the complaint case was considered closed.

Complaint regarding soil/muddy water from vehicles of the Project received on 9 February 2021

No detail of the case such as date, time, name of the barge and type of vehicles was provided in the complaint. The ET identified the related 3RS contractors and requested the contractors to provide more information regarding the complaint. According to the information provided by the contractors, all vehicles were fully enclosed or covered with impervious sheeting with the wheel washed before leaving site area. During a joint *ad-hoc* inspection of ET, AAHK and IEC on 17 February 2021, no soil or muddy water at the alleged area was observed. However, it was observed that the landing site was an open area shared with other non-Project related vehicles. Besides, no observation related to dust issue was recorded during ET's regular site inspection at the loading sites on the airport island used by the related contractors.

Although the landing site could be used by the public and other contractors not under the Project, the contractors under the Project who used the area in January 2021 were reminded to continue and strengthen their environmental mitigation measure for dust suppression, as well as to continue implementing good housekeeping practices during the entire periods of their operations at the alleged area. ET and IEC would check the training records of frontline staff for the related contractors with regards to the handling of dusty materials and reminded all contractors to strictly conduct suppression measures and maintain good housekeeping at all times. Hence, the complaint case was considered closed.

7.9.2 Notifications of Summons or Status of Prosecution

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

7.9.3 Cumulative Statistics

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

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

8.1 Construction Programme for the Coming Reporting Period

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

Reclamation Works:

Contract 3206 Main Reclamation Works

- 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;
- Trench excavation works;
- Backfilling and reinstatement works; and
- Piling and structure works;

Contract 3303 Third Runway and Associated Works

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

Contract 3307 Fire Training Facility

- Excavation; and
- Drainage works.

Third Runway Concourse:

Contract 3402 New Integrated Airport Centres Enabling Works

- Pavement resurfacing works; and
- AGL cable works.

Contract 3403 New Integrated Airport Centres Building and Civil Works

Architectural, Builder's Work and Finishing works;

- Temporary work for roof lifting; 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;
- Piling work;
- Pre-drilling; and
- Builders' works.

<u>Automated People Mover (APM) and Baggage Handling System (BHS):</u>

Contract 3601 New Automated People Mover System (TRC Line)

Concreting work and rebar fixing.

Contract 3602 Existing APM System Modification Works

- Modification works at APM depot; and
- Concreting work.

Construction Support (Facilities):

Contract 3721 Construction Support Infrastructure Works

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

Contract 3722 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 box culvert, working platform and ventilation ducts;
- Cofferdam for shaft; and
- Site clearance.

Contract 3802 APM and BHS Tunnels and Related Works

- Foundation works; and
- Ducting works.

Construction Support (Services / Licenses):

Contract 3901A Concrete Batching Facility

Plant construction.

Contract 3901B Concrete Batching Facility

Plant operation.

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 B**.

8.4 Review of the Key Assumptions Adopted in the EIA Report

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

9 Conclusion and Recommendation

The 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 such as bored pilling for approach lights. 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 1 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 MTCC 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

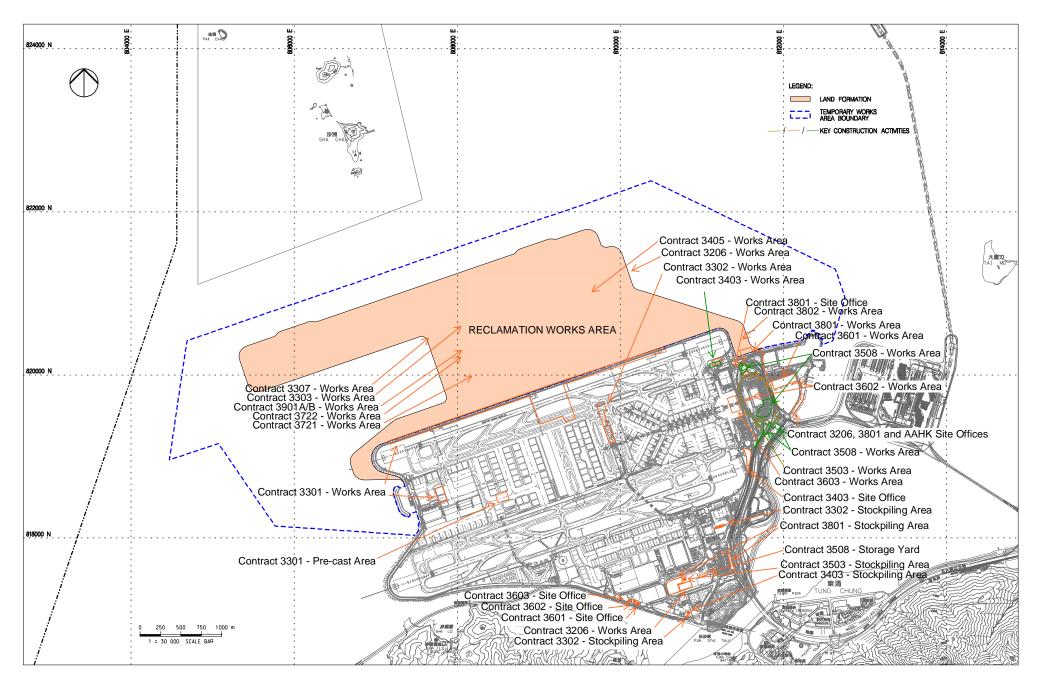
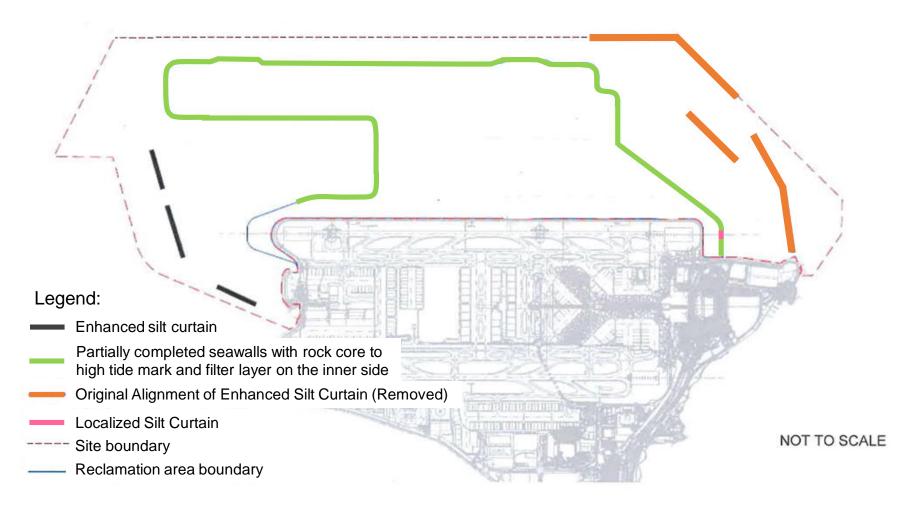
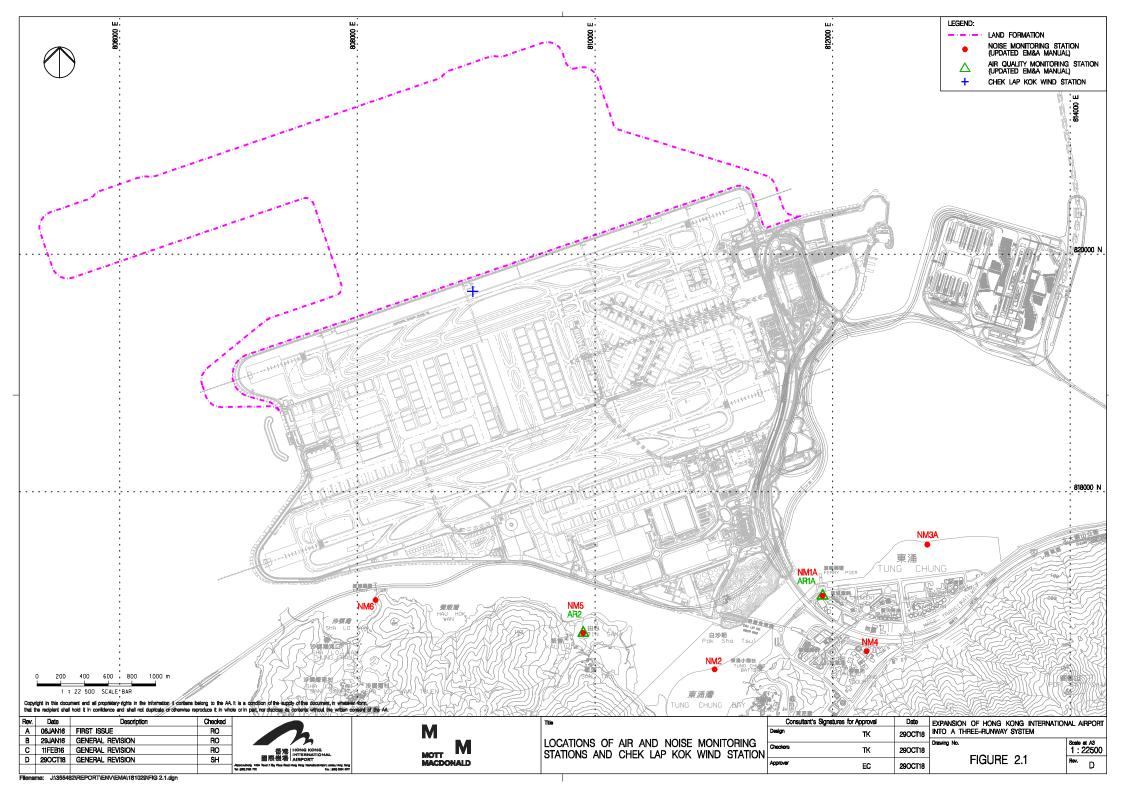


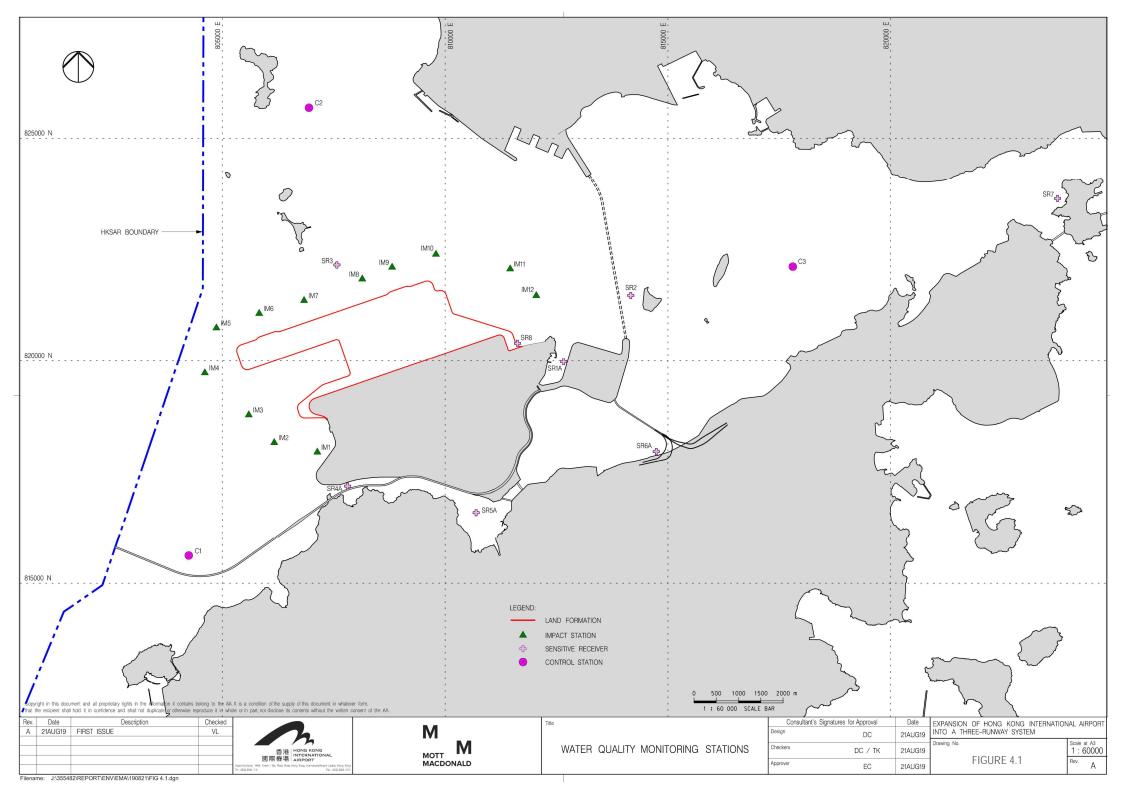
FIGURE 1.1 LOCATIONS OF KEY CONSTRUCTION ACTIVITIES

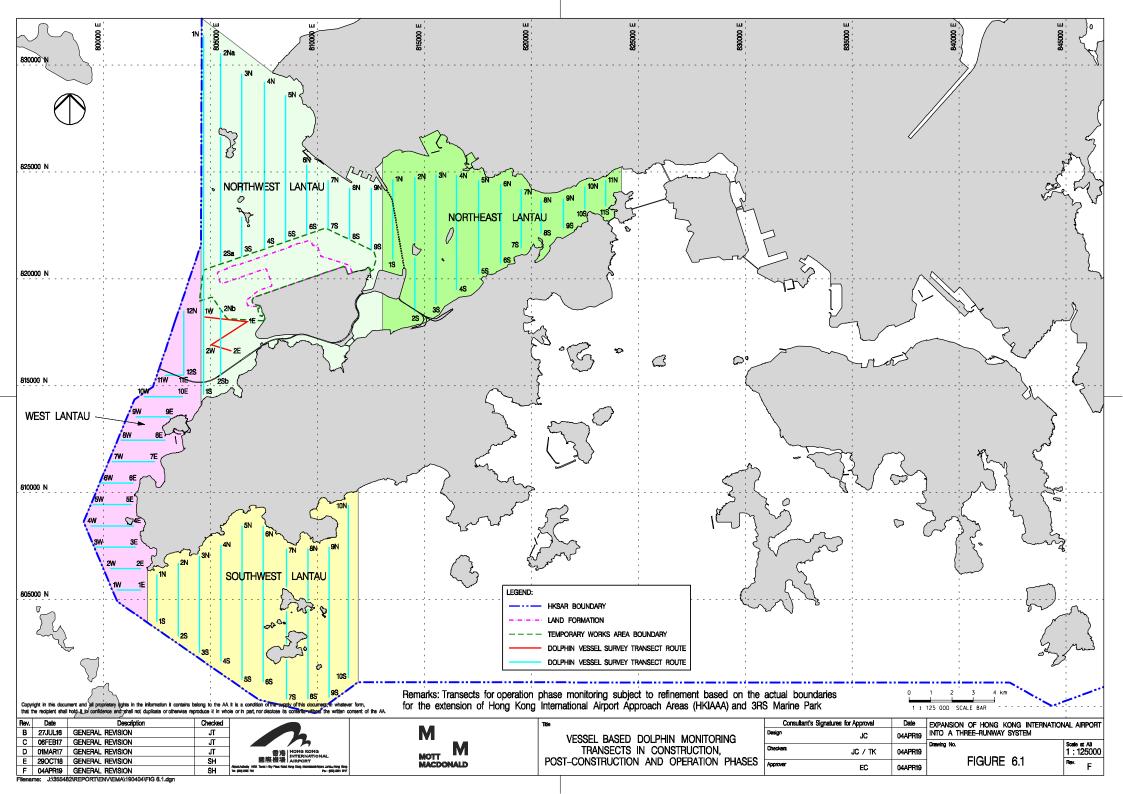
Figure 1.2

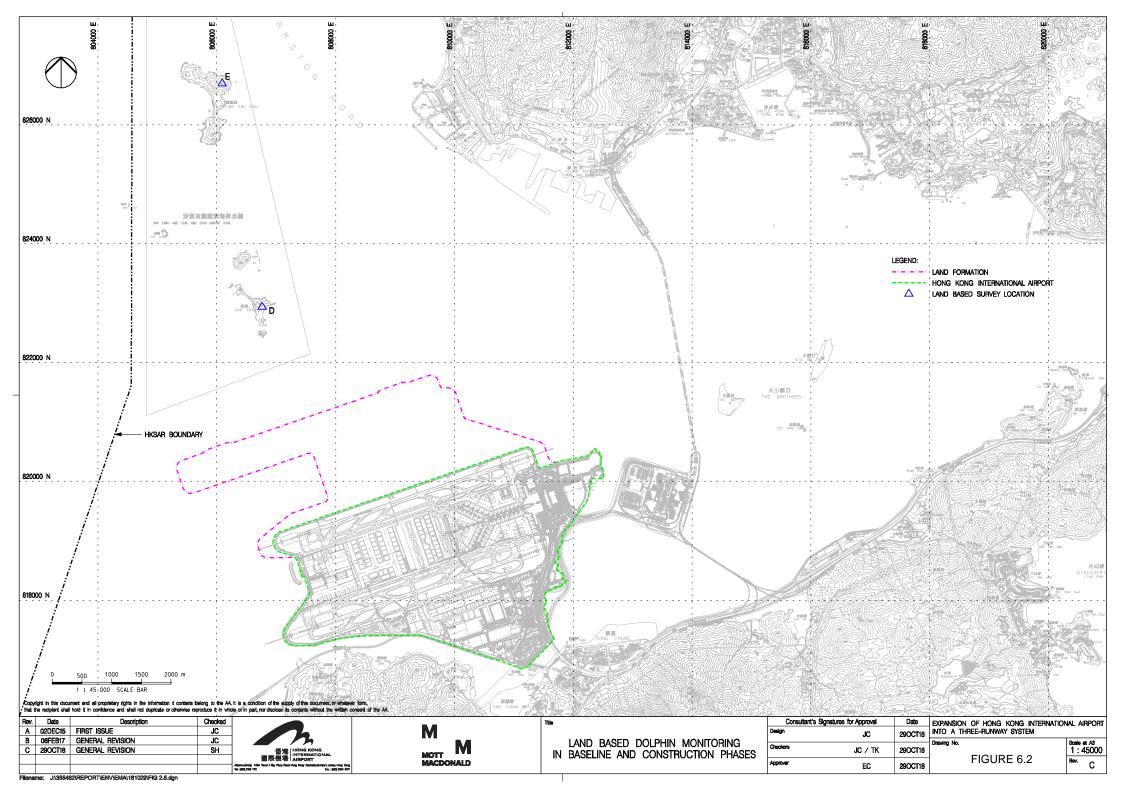
Latest Layout of the Enhanced Silt Curtain

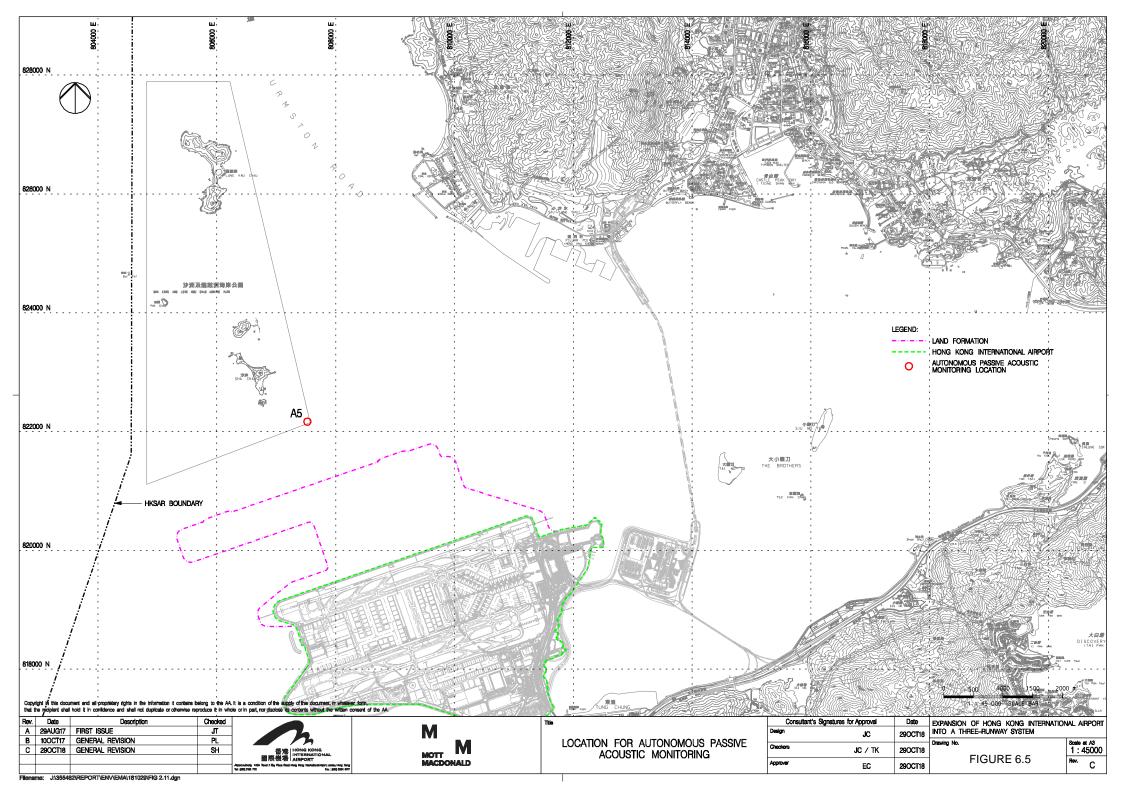












Appendix A. Environmental Mitigation Implementation Schedule (EMIS) for Construction Phase



Environmental Mitigation Implementation Schedule (EMIS) for Construction Phase

EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
			Air Quality Impact – Construction Phase		
5.2.6.2	2.1	-	Dust Control Measures ■ 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	-	 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 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 byproducts 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 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 Exposed earth should be properly treated by compaction, hydroseeding, vegetation planting or seating with latex, vinyl, bitumen within six months after the last construction activity on the site or part of the site where the exposed earth lies. 	Within construction site / Duration of the construction phase	1

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



	A EP Environmental Protection Measures Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
		Loading, Unloading or Transfer of Dusty Materials 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	I
		Debris Handling 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	Within construction site / Duration of the construction phase	1
		 Before debris is dumped into a chute, water should be sprayed so that it remains wet when it is dumped. Transport of Dusty Materials 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	1
		Wheel washing 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	1
		Use of vehicles 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;	Within construction site / Duration of the construction phase	I
		 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.		
		Site hoarding 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	1
2.1	-	Best Practices for Concrete Batching Plant 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:	Within Concrete Batching Plant / Duration of the construction phase	I
	2.1	2.1 -	All dusty materials should be sprayed with water immediately prior to any loading or transfer operation so as to keep the dusty material wet. Debris Handling	Loading, Unloading or Transfer of Dusty Materials • All dusty materials should be sprayed with water immediately prior to any loading or transfer operation site / Duration of the so as to keep the dusty material wet. Debris Handling • 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. Transport of Dusty Materials • 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 tallboards. Wheel washing • 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. Use of vehicles • 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 exit per 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 do not leak from the vehicle. Site hoarding • 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. **Best Practices for Concrete Batching Plant** The relevant best practices for dust control as stipulated in the Guidance Note on the Best Practicable means for Cament Works (Concrete Batching Plant) BPM 3/2 as well as in the fut



EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
			• 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. 		
			Other raw materials	Within Concrete	I
			 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; 	Batching Plant / Duration of the construction phase	
			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; 		



EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion	Mitigation Measures Implemented?
				of measures	
			 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.		
			Loading of materials for batching	Within Concrete	I
			Concrete truck shall be loaded in such a way as to minimise airborne dust emissions. The following control measures shall be implemented:	Batching Plant / Duration of the	
			(a) Pre-mixing the materials in a totally enclosed concrete mixer before loading the materials into the concrete truck is recommended. All dust-laden air generated by the pre-mixing process as well as the loading process shall be totally vented to fabric filtering system to meet the required emission limit; and	construction phase	
			(b) If truck mixing batching or other types of batching method is used, effective dust control measures acceptable to EPD shall be adopted. The dust control measures must have been demonstrated to EPD that they are capable to collect and vent all dust-laden air generated by the material loading/mixing to dust arrestment plant to meet the required emission limit.		
			• The loading bay shall be totally enclosed during the loading process.		
			Vehicles	Within Concrete	1
			 All practicable measures shall be taken to prevent or minimize the dust emission caused by vehicle movement; and 	Batching Plant / Duration of the construction phase	
			• All access and route roads within the premises shall be paved and adequately wetted.	construction phase	
			Housekeeping	Within Concrete	1
			 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. 	Batching Plant / Duration of the construction phase	
5.2.6.6	2.1	-	Best Practices for Asphaltic Concrete Plant	Within Concrete Batching Plant / Duration of the construction phase	N/A
			The relevant best practices for dust control as stipulated in the Guidance Note on the Best Practicable Means for Tar and Bitumen Works (Asphaltic Concrete Plant) BPM 15 (94) as well as in the future Specified Process licence should be adopted. These include:		
			Design of Chimney		
			• 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;		



EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?
			■ 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. 		
			Cold feed side	Within Concrete	N/A
			 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; 	Batching Plant / Duration of the	
			• 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;	construction phase	
			• 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. 		
			Hot feed side	Within Concrete	N/A
			 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; 	Batching Plant / Duration of the construction phase	
			 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; 		



EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
			 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). 		
			Material transportation	Within Concrete	N/A
			 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; 	Batching Plant / Duration of the construction phase	
			 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. 		
			Control of emissions from bitumen decanting	Within Concrete	N/A
			 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; 	Batching Plant / Duration of the	
			 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; 	construction phase	
			 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		
			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.		
			Liquid fuel	Within Concrete	N/A
			• 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.	Batching Plant / Duration of the construction phase	
			Housekeeping	Within Concrete	N/A
			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.	Batching Plant / Duration of the construction phase	
5.2.6.7	2.1	-	Best Practices for Rock Crushing Plants	Within Concrete	N/A
			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:	Batching Plant / Duration of the construction phase	



EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures	Mitigation Measures Implemented?
				Timing of completion of measures	
			Crushers		
			• 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. 		
			Vibratory screens and grizzlies	Within Concrete Batching Plant / Duration of the construction phase	N/A
			• 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. 		
			Belt conveyors	Within Concrete	N/A
			 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; 	Batching Plant / Duration of the construction phase	
			• 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.		



EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures	Mitigation Measures Implemented?^
				Timing of completion of measures	implementeu :
			Storage piles and bins	Within Concrete	N/A
			 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. 	Batching Plant / Duration of the construction phase	
			 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. 		
			Rock drilling equipment	Within Concrete	N/A
			 Appropriate dust control equipment such as a dust extraction and collection system shall be used during rock drilling activities. 	Batching Plant / Duration of the construction phase	
			Hazard to Human Life - Construction Phase		
Table 6.40	3.2	-	 Precautionary measures should be established to request barges to move away during typhoons. 	Construction Site / Construction Period	1
Table 6.40	3.2	-	 An appropriate marine traffic management system should be established to minimize risk of ship collision. 	Construction Site / Construction Period	I
Table 6.40	3.2	-	 Location of all existing hydrant networks should be clearly identified prior to any construction works. 	Construction Site / Construction Period	1
			Noise Impact – Construction Phase		
7.5.6	4.3	-	Good Site Practice 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:	Within the Project site / During construction phase / Prior to	I
			 only well-maintained plant to be operated on-site and plant should be serviced regularly during the construction works; 	commencement of operation	
			 machines and plant that may be in intermittent use to be shut down between work periods or should be throttled down to a minimum; 		



EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures	Mitigation Measures
				Timing of completion of measures	Implemented?^
			 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	Within the Project site /	
		 QPME should be adopted as far as applicable. 	During construction phase / Prior to commencement of operation		
7.5.6	4.3	- (Use of Movable Noise Barriers	Within the Project site /	1
			 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. 	During construction phase / Prior to commencement of operation	
7.5.6	4.3	.3 - Use of N	Use of Noise Enclosure/ Acoustic Shed	Within the Project site /	1
			 Noise enclosure or acoustic shed should be used to cover stationary PME such as air compressor and generator. 	During construction phase / Prior to commencement of operation	
			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	 Marine Construction Activities General Measures to be Applied to All Works Areas 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 	Within construction site / Duration of the construction phase	
			 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. 		
			 Specific Measures to be Applied to All Works Areas 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
		 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; 	•	I	
			■ Closed grab dredger shall be used to excavate marine sediment;	•	N/A
			 Silt curtains surrounding the closed grab dredger shall be deployed in accordance with the Silt Curtain Deployment Plan; and 		*(The arrangement of silt curtain has been modified. The details can be referred to Si Curtain Deployment Plan)
			■ The Silt Curtain Deployment Plan shall be implemented.	-	1



EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
			Specific Measures to be Applied to Land Formation Activities prior to Commencement of Marine Filling Works 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; 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	Within construction site / Duration of the construction phase	N/A *(The arrangement of silt curtain has been modified. The details can be referred to Silt Curtain Deployment Plan) For C7a, I For C8, I
				_	*(The requirement of silt curtain / screen has been modified. The details can be referred to Silt Curtain Deployment Plan)
			The silt curtains and silt screens should be regularly checked and maintained.		I
			Specific Measures to be Applied to Land Formation Activities during Marine Filling Works	Within construction	I
			 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; 	site / Duration of the construction phase	*(The arrangement of silt curtain has been modified. The details can be referred to Silt Curtain Deployment Plan)
			■ Double layer silt curtains to be applied at the south-western opening prior to commencement of marine		N/A
			filling activities;		*(The arrangement of silt curtain has been modified. The details can be referred to Silt Curtain Deployment Plan)
			■ Double layer silt curtain to enclose WSR C7a and silt screens installed at the intake points for both WSR		N/A
			C7a and C8 prior to commencement of marine filling activities; and		*(The requirement of silt curtain / screen has been modified. The details can be referred to Silt Curtain Deployment Plan)
			■ The silt curtains and silt screens should be regularly checked and maintained.		1



EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
			 Specific Measures to be Applied to the Field Joint Excavation Works for the Submarine Cable Diversion 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 	Within construction site / Duration of the construction phase	N/A
			 Silt curtains surrounding the closed grab dredger to be deployed as a precautionary measure. 		
8.8.1.4	5.1	-	 Modification of the Existing Seawall 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	-	 Construction of New Stormwater Outfalls and Modifications to Existing Outfalls 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	Piling Activities for Construction of New Runway Approach Lights and HKIAAA Marker Beacons 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.	Within construction site / Duration of the construction phase	1
			For construction of the eastern approach lights at the CMPs 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.	-	I
8.8.1.8	5.1	-	Construction of Site Runoff and Drainage 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:	Within construction site / Duration of the construction phase	
			• 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	-	I



EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
			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);		
			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;	_	ı
			 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; 	_	1
			 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; 	_	I
			• 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	_	1
			• 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.		ı
8.8.1.9	5.1		Sewage Effluent from Construction Workforce	Within construction	I
			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.	site / During construction phase	
8.8.1.10	5.1		General Construction Activities	Within construction	1
8.8.1.11			 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 	site / During construction phase	



EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures	Mitigation Measures
			Timing of completion of measures	Implemented?^	
			• 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	5.1	2.28 Drilling Activities for the Submarine Aviation Fuel Pipelines	Within construction	1	
8.8.1.13			To prevent potential water quality impacts at Sha Chau, the following measures shall be applied:	site / During	
			 A 'zero-discharge' policy shall be applied for all activities to be conducted at Sha Chau; 	construction phase	
			 No bulk storage of chemicals shall be permitted; and 		
		 A containment pit shall be constructed around the drill holes. This containment pit shall be line impermeable lining and bunded on the outside to prevent inflow from off-site areas. 	 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. 		
			At the airport island side of the drilling works, the following measures shall be applied for treatment of wastewater:	Within construction site / During	I
			 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 	construction phase	
			 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. 		
			Waste Management Implication – Construction Phase		
10.5.1.1	7.1	-	Opportunities to minimise waste generation and maximise the reuse of waste materials generated by the project have been incorporated where possible into the planning, design and construction stages, and the following measures have been recommended:		
		been carefully planned and developed to minimise the extent of excavation and to maximise the on-site Dur	Project Site Area / During design and construction phase	1	
			 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; 		I
			 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; 	_	I
			 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 		1



EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?
			■ 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	-	The following good site practices should be performed during the construction activities include:	Project Site Area /	1
			 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; 	Construction Phase	
			 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.		
10.5.1.3	7.1	-	The following practices should be performed to achieve waste reduction include:	Project Site Area /	1
			 Use of steel or aluminium formworks and falseworks for temporary works as far as practicable; 	Construction Phase	
			 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; 		



EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures	Mitigation Measures
				Timing of completion of measures	Implemented?^
			 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		 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	1
10.5.1.5	7.1	-	 Any recyclable materials should be segregated from the non-inert C&D materials for collection by reputable licensed recyclers whereas the non-recyclable waste materials should be disposed of at the designated landfill site by a reputable licensed waste collector. 	Project Site Area / Construction Phase	I
10.5.1.6	7.1	-	 A trip-ticket system promulgated shall be developed in order to monitor the off-site delivery of surplus inert C&D materials that could not be reused on-site for the proposed land formation work at the PFRF and to control fly tipping. 	Project Site Area / Construction Phase	I
10.5.1.6	7.1	2.32	 The Contractor should prepare and implement a Waste Management Plan detailing various waste arising and waste management practices. 	Construction Phase	1
10.5.1.16	7.1	-	The following mitigation measures are recommended during excavation and treatment of the sediments: On-site remediation should be carried out in an enclosed area in order to minimise odour/dust emissions;	Project Site Area / Construction Phase	I
			 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; 		1
			 All practical measures, including but not limited to speed control for vehicles, should be taken to minimise dust emission; 		I
			 Good housekeeping should be maintained at all times at the sediment treatment facility and storage area; 	_	I
			Treated and untreated sediment should be clearly separated and stored separately; and	-	I
			 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. 	-	I
10.5.1.18	7.1	-	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	Project Site Area / Construction Phase	N/A



EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures	Mitigation Measures
				Timing of completion of measures	Implemented?^
			followed to minimise potential impacts on water quality during transportation of the sediments requiring Type 1 disposal:		
			 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	-	Contractor should register with the EPD as a chemical waste producer and to follow the relevant guidelines. The following measures should be implemented:	Project Site Area / Construction Phase	1
			 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. 		
10.5.1.20	7.1	-	• 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	-	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	1
			Land Contamination – Construction Phase		
11.10.1.2	8.1	2.32	For areas inaccessible during site reconnaissance survey	Project Site Area	
to 11.10.1.3			• Further site reconnaissance would be conducted once the areas are accessible in order to identify any land contamination concern for the areas.	inaccessible during site reconnaissance / Prior to Construction Phase	I
			 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. 	-	ı



EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
			 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)
			 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	-	If contaminated soil is identified, the following mitigation measures are for the excavation and transportation of contaminated materials (if any):	Project Site Area / Construction Phase	N/A
			 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. 		
			Terrestrial Ecological – Construction Phase		
12.10.1.1	9.2	2.14	Pre-construction Egretry Survey	Breeding season (April	I
			■ Conduct ecological survey for Sha Chau egretry to update the latest boundary of the egretry.	 July) prior to commencement of 	



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	9.1	2.30	Avoidance and Minimisation of Direct Impact to Egretry	During construction	I
and 12.7.2.6			 The daylighting location will avoid direct encroachment to the Sheung Sha Chau egretry. The daylighting location and mooring of flat top barge, if required, will be kept away from the egretry; 	phase at Sheung Sha Chau Island	
			• 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.		
12.7.2.5	9.1	2.30	Preservation of Nesting Vegetation	During construction	1
			• 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.	phase at Sheung Sha Chau Island	
12.7.2.4	9.1	2.30	Timing the Pipe Connection Works outside Ardeid's Breeding Season	During construction	I
and 12.7.2.6			 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. 	phase at Sheung Sha Chau Island	
12.10.1.1	9.3	-	Ecological Monitoring	at Sheung Sha Chau	1
			 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. 	Island	
			Marine Ecological Impact – Pre-construction Phase		
13.11.4.1	10.2.2	-	■ Pre-construction phase Coral Dive Survey.	HKIAAA artificial seawall	I
			Marine Ecological Impact – Construction Phase		
13.11.1.3	-	-	Minimisation of Land Formation Area	Land formation	I
to 13.11.1.6			 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. 	footprint / during detailed design phase to completion of construction	
13.11.1.7	-	2.31	Use of Construction Methods with Minimal Risk/Disturbance	During construction	
to 13.11.1.10			 Use of non-dredge method for the main land formation and ancillary works including the diversion of the aviation fuel pipeline to the AFRF; 	phase at marine works area	1



EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures	Mitigation Measures Implemented?^
				Timing of completion of measures	
			 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; 		1
			 Use of bored piling in short duration to form the new approach lights and marker beacons for the new runway; 		ı
			 Avoid bored piling during CWD peak calving season (Mar to Jun); 	_	1
			■ Prohibition of underwater percussive piling; and		1
			 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. 		I
13.11.2.1	-	-	Mitigation for Indirect Disturbance due to Deterioration of Water Quality	All works area during	
to 13.11.2.7			 Water quality mitigation measures during construction phases include consideration of alternative construction methods, deployment of silt curtain and good site practices; 	the construction phase	1
			 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); 		1
			 Use of bored piling in short duration to form the new approach lights and marker beacons for the new runway; and 		I
			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.		I
13.11.1.12	-	-	Strict Enforcement of No-Dumping Policy	All works area during	I
			 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; 	the construction phase	
			 Mandatory educational programme of the no-dumpling 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. 		
13.11.1.13	-	-	 Good Construction Site Practices 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	I



EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures	Mitigation Measures
				Timing of completion of measures	Implemented?^
13.11.1.3 to 13.11.1.6	loss of habitat for marine resources, especially the CWD population.		 Minimise the overall size of the land formation needed for the additional facilities to minimise the overall 	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 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. 	Area between the footprint and SCLKC Marine Park during construction phase	I
			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 Establishment of a 24 hr Dolphin Exclusion Zone (DEZ) with a 250 m radius around the land formation works areas; 	Marine waters around land formation works area during construction phase	ı
			 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 		1
			 A DEZ would also be implemented during bored piling work but as a precautionary measure only. 		l
13.11.5.19	10.4	2.31	 Acoustic Decoupling of Construction Equipment 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	ı
13.11.3.20	10.0.1	۷.۷۶	ории певропве и кап	Construction phase	ı



EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
			 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	10.6.1	-	Construction Vessel Speed Limits and Skipper Training	All areas north and	I
to 13.11.5.23			 A speed limit of 10 knots should be strictly observed for construction vessels at areas with the highest CWD densities; and 	west of Lantau Island during construction	
			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.	phase	
			Fisheries Impact – Construction Phase		
14.9.1.2 to	-		Minimisation of Land Formation Area	Land formation	I
14.9.1.5			 Minimise the overall size of the land formation needed for the additional facilities to minimise the overall loss of habitat for fisheries resources. 	footprint / during detailed design phase to completion of construction	
14.9.1.6	-	-	Use of Construction Methods with Minimal Risk/Disturbance	During construction	
			 Use of non-dredge method for the main land formation and ancillary works including the diversion of the aviation fuel pipeline to the AFRF; 	phase at marine works area	1
			 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; 		I
			 Use of bored piling in short duration to form the new approach lights and marker beacons for the new runway; and 	_	1
			 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. 	_	I
14.9.1.11	-		Strict Enforcement of No-Dumping Policy	All works area during	I
			 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; 	the construction phase	
			 Mandatory educational programme of the no-dumpling 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. 		



EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures	Mitigation Measures
				Timing of completion of measures	Implemented?^
14.9.1.12	-		 Good Construction Site Practices 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	I
14.9.1.13	-		Mitigation for Indirect Disturbance due to Deterioration of Water Quality	All works area during	
to 14.9.1.18			 Water quality mitigation measures during construction phases include consideration of alternative construction methods, deployment of silt curtain and good site practices; 	the construction phase	1
			• 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);		I
			 Use of bored piling in short duration to form the new approach lights and marker beacons for the new runway; and 		1
			 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. 		I
			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.	I
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.	I
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.	I
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.	I



EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
Table 15.6	12.3	-	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.	1
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.	ı
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	Mitigation Measures Implemented?^
				Timing of completion of measures	·
				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:

[&]quot; - " 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.

[&]quot;I" Implemented where applicable.

[&]quot; N/A" Not applicable to the construction works implemented during the reporting month.

[&]quot;^" Checked by ET through site inspection and record provided by the Contractor.

Appendix B. Monitoring Schedule

Monitoring Schedule of This Reporting Period

Feb-21

				10021				
Sunday	Monday	Tuesday		Wednesday	Thursday		Friday	Saturday
·	1	2		3	4		5	6
	Site Inspection	Site Inspection		Site Inspection	Site Inspection		Site Inspection	-
				·	·		•	
							CWD Survey (Vessel)	
		AR1A, AR2		NIMA NIMO				AR1A, AR2
		NM1A, NM5		NM4, NM6				
		WQ General & Regular DCM			WQ General & Regular DCM			WQ General & Regular DCM
			16:24		mid-ebb:	18:21		mid-ebb: 8:02
			10:43		mid-flood:	12:00		mid-flood: 13:40
7	8	9		10	11		12	13
	Site Inspection	Site Inspection			Site Inspection			
	CWD Survey (Vessel)	CWD Survey (Vessel)			4844 489			
				NM1A, NM4, NM6	AR1A, AR2 NM5			
				TAIVITA, TAIVITA, TAIVIO	INING			
		WQ General & Regular DCM			WQ General & Regular DCM			WQ General & Regular DCM
		mid-ebb:	11:55		mid-ebb:	13:18		mid-ebb: 14:28
			16:43		mid-flood:	7:59		mid-flood: 9:02
14	15	16		17	18		19	20
		Site Inspection		Site Inspection	Site Inspection		Site Inspection	
		0.00						
		CWD Survey (Vessel)		CWD Survey (Vessel, Land-based) AR1A, AR2	CWD Survey (Land-based)			
		NM4, NM6		NM1A, NM5				
		THINH, THING		THINTY, THIND				
		WQ General & Regular DCM			WQ General & Regular DCM			WQ General & Regular DCM
			16:00		mid-ebb:	17:20		mid-ebb: 19:41
			10:07		mid-flood:	10:49		mid-flood: 11:43
21	22	23		24	25		26	27
	Site Inspection	Site Inspection			Site Inspection		Site Inspection	
	CWD Survey (Vessel)	CWD Survey (Vessel)		CWD Survey (Vessel, Land-based)			CWD Survey (Land-based)	
	CVVD Survey (Vessel)	AR1A, AR2		OVVD Survey (Vessel, Land-based)			CWD Survey (Land-based)	
		NM1A, NM5		NM4, NM6				
		WQ General & Regular DCM			WQ General & Regular DCM			WQ General & Regular DCM
			22:54 10:32		mid-ebb: mid-flood:	12:08 6:57		mid-ebb: 13:21 mid-flood: 7:55
28		mid-1100d:	10:32		mid-flood:	6:57		mid-fi00d: 7:55
28								
		Notes:						
		1						
		CWD - Chinese White Dolphin						
		C. D Chinose White Dolphin		NM1A/AR1A - Man Tung Road Park				
		Air quality and Noise Monitoring Station		NM4 - Ching Chung Hau Po Woon Primar	y School			
		All quality and Noise Monitoring Station		NM5/AR2 - Village House, Tin Sum				
				NM6 - House No. 1, Sha Lo Wan				
		WQ - Water Quality						
		DCM - Deep Cement Mixing						

Tentative Monitoring Schedule of Next Reporting Period

Mar-21

Sunday Monday Tuesday Wednesday Thursday Friday Saturday 1 Site Inspection 2 Site Inspection 3 Site Inspection CWD Survey (Vessel) AR1A, AR2 NM1A, NM5 NM4, NM6 WO General & Regular DCM mid-ebb: mid-bod: 10.19 8 Site Inspection CWD Survey (Vessel) 7 8 Site Inspection CWD Survey (Vessel) 8 Site Inspection CWD Survey (Vessel) CWD Survey (Vessel) NM4, NM6 WO General & Regular DCM mid-bod: 10.19 Site Inspection CWD Survey (Vessel) NM4, NM6 WO General & Regular DCM mid-bod: 12.30 mid-flood: 12.30 mid-flood: 15.42 NM4, NM6 WO General & Regular DCM mid-bod: 7.00 Tibe Inspection CWD Survey (Vessel) 11 Site Inspection CWD Survey (Vessel) CWD Survey (Vessel) CWD Survey (Vessel) CWD Survey (Vessel, Land-based) WO General & Regular DCM MO General & Regular DCM	14101 21								
1 Site Inspection This is Inspection Site Inspection CWD Survey (Vessel) 10 11 Site Inspection CWD Survey (Vessel) Site Inspection CWD Survey (Vessel) WQ General & Regular DCM mid-sbb: mid-flood: 11 Site Inspection WQ General & Regular DCM mid-sbb: mid-flood: 12 Site Inspection AR1A, AR2 NM1A, NM5 WQ General & Regular DCM mid-sbb: mid-flood: 15 Site Inspection WQ General & Regular DCM mid-sbb: mid-flood: 12 Site Inspection WQ General & Regular DCM mid-sbb: mid-flood: 12 Site Inspection WQ General & Regular DCM mid-sbb: mid-flood: 13 Site Inspection WQ General & Regular DCM mid-sbb: mid-flood: 12 Site Inspection WQ General & Regular DCM mid-sbb: mid-flood: 12 Site Inspection WQ General & Regular DCM mid-sbb: mid-flood: 13 Site Inspection WQ General & Regular DCM mid-sbb: mid-flood: 13 AR1A, AR2 NM1A, NM5 NM4, NM6 WQ General & Regular DCM mid-sbb: mid-flood: AR1A, AR2 NM1A, NM5 NM4, NM6 NM4, NM6	у								
AR1A, AR2 NM1A, NM5 NM4, NM6 WQ General & Regular DCM mid-ebb: mid-lood: 9 Site Inspection CWD Survey (Vessel) WQ General & Regular DCM mid-ebb: mid-lood: 11 Site Inspection CWD Survey (Vessel) WQ General & Regular DCM mid-ebb: mid-lood: NM4, NM6 WQ General & Regular DCM mid-ebb: mid-lood: NM4, NM6 WQ General & Regular DCM mid-ebb: mid-lood: 11 Site Inspection WQ General & Regular DCM mid-ebb: mid-lood: 12 AR1A, AR2 NM1A, NM5 WQ General & Regular DCM mid-ebb: mid-lood: mid-lood: 15 Site Inspection CWD Survey (Vessel, Land-based)									
Mid-ebb: 15:10 mid-ebb: 16:41 mid-lood: mid-lood: 9:18 10 11 12 13 13	2								
Site Inspection CWD Survey (Vessel) CWD Survey (Vessel) NM4, NM6 WQ General & Regular DCM mid-ebb: mid-flood: 11:07 mid-flood: 15:42 15 Site Inspection Site Inspection Site Inspection WQ General & Regular DCM mid-ebb: mid-flood: 15:42 17 18 Site Inspection CWD Survey (Vessel, Land-based) CWD Survey (Vessel, Land-based) CWD Survey (Vessel, Land-based) CWD Survey (Vessel, Land-based) Site Inspection Site Inspection Site Inspection Site Inspection Site Inspection AR1A, AR2 NM1A, NM5 NM4, NM6	gular DCM 18:5 11:3								
NM4, NM6 WQ General & Regular DCM mid-ebb: mid-ebb: mid-flood: 15 Site Inspection CWD Survey (Vessel, Land-based) NM4, NM6 NM4, NM6 WQ General & Regular DCM mid-ebb: mid-flood: 7:00 T1 18 Site Inspection CWD Survey (Vessel, Land-based) NM4, NM6 NM4, NM6 AR1A, AR2 NM1A, NM5 NM4, NM6 WQ General & Regular DCM mid-flood: 7:00 T1 T1 T1 T1 T1 T1 T1 T1 T1									
11:07 mid-ebb: mid-flood: 11:07 mid-ebb: mid-flood: 7:00 mid-flood: 15:42 mid-flood: 7:00 mid-flood: 15:42 mid-flood: 7:00 mid-flood: 16:42 mid-flood: 7:00 mid-flood: 7:00									
14 15 Site Inspection CWD Survey (Vessel, Land-based) 16 Site Inspection CWD Survey (Vessel, Land-based) 17 Site Inspection CWD Survey (Vessel, Land-based) 18 Site Inspection Site Inspection CWD Survey (Vessel, Land-based) AR1A, AR2 NM1A, NM5 NM4, NM6	gular DCM 13:3 7:5								
AR1A, AR2 NM1A, NM5 NM4, NM6	7:5								
WQ General & Regular DCM WQ General & Regular DCM WQ General & Regular DCM									
mid-ebb: 14:52 mid-ebb: 15:54 mid-ebb: mid-flood: 8:48 mid-flood: 9:25 mid-flood:	gular DCM 17:1 10:0								
21 22 Site Inspection Site Inspection 24 25 Site Inspection Site Inspection Site Inspection Site Inspection									
CWD Survey (Vessel)									
WQ General & Regular DCM WQ General & Regular DCM WQ General & Regular DCM mid-ebb: 21:09 mid-ebb: 11:12 mid-ebb: mid-flood: 8:36 mid-flood: 16:10 mid-flood:	gular DCM 12:2 17:5								
28 29 30 31 Site Inspection Site Inspection	17.0								
CWD Survey (Land-based) AR1A, AR2 NM1A, NM5 NM4, NM6									
WQ General & Regular DCM mid-ebb: 14:07 mid-flood: 8:03									
Notes: CWD - Chinese White Dolphin									
NM1A/AR1A - Man Tung Road Park Air quality and Noise Monitoring Station Air quality and Noise Monitoring Station NM5/AR2 - Village House, Tin Sum NM6 - House No. 1, Sha Lo Wan									
WQ - Water Quality DCM - Deep Cement Mixing									

Appendix C. Monitoring Results

t MacDonald Expansion of Hong Kong International Airport into a Three-Runway System	
ir Quality Monitoring Results	
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1-hour TSP Results

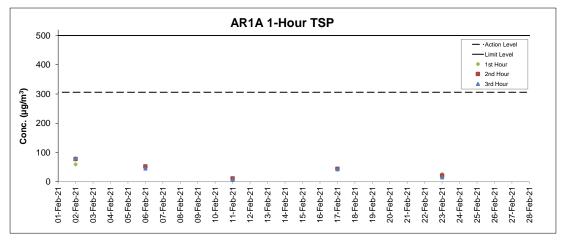
Station: AR1A- Man Tung Road Park

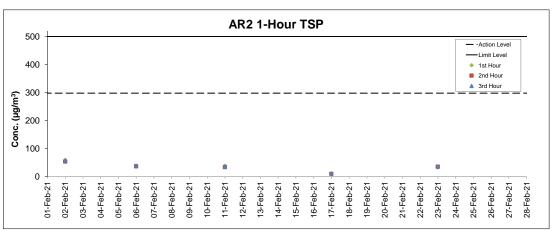
Date	Time	Weather	Wind Speed (m/s)	Wind Direction (deg)	1-hr TSP (μg/m³)	Action Level (μg/m³)	Limit Level (μg/m³)
02-Feb-21	13:07	Sunny	3.3	261	59	306	500
02-Feb-21	14:07	Sunny	3.1	257	77	306	500
02-Feb-21	15:07	Sunny	2.2	251	80	306	500
06-Feb-21	13:05	Cloudy	3.3	255	47	306	500
06-Feb-21	14:05	Cloudy	3.3	261	52	306	500
06-Feb-21	15:05	Cloudy	3.1	261	45	306	500
11-Feb-21	8:50	Cloudy	3.3	340	10	306	500
11-Feb-21	9:50	Cloudy	3.3	347	11	306	500
11-Feb-21	10:50	Cloudy	3.1	342	7	306	500
17-Feb-21	13:20	Cloudy	2.2	Variable	41	306	500
17-Feb-21	14:20	Cloudy	4.2	293	44	306	500
17-Feb-21	15:20	Cloudy	4.2	297	43	306	500
23-Feb-21	12:48	Sunny	4.7	256	26	306	500
23-Feb-21	13:48	Sunny	4.4	261	21	306	500
23-Feb-21	14:48	Sunny	2.5	313	15	306	500

1-hour TSP Results

Station: AR2- Village House, Tin Sum

Station. ANZ- Villa	ge nouse, m	Julii					
Date	Time	Weather	Wind Speed (m/s)	Wind Direction	4 h = TCD (== (== 3)	Action Level	Limit Level
Date	Tille	weather wind 3p	willa speed (III/s)	(deg)	1-hr TSP (μg/m³)	(μg/m³)	(μg/m³)
02-Feb-21	13:22	Cloudy	3.3	256	59	298	500
02-Feb-21	14:22	Cloudy	3.1	254	54	298	500
02-Feb-21	15:22	Cloudy	2.5	260	59	298	500
06-Feb-21	9:34	Cloudy	1.9	313	39	298	500
06-Feb-21	10:34	Cloudy	2.2	263	37	298	500
06-Feb-21	11:34	Cloudy	3.3	267	40	298	500
11-Feb-21	9:10	Cloudy	2.8	342	39	298	500
11-Feb-21	10:10	Cloudy	3.3	327	34	298	500
11-Feb-21	11:10	Cloudy	3.1	350	35	298	500
17-Feb-21	13:40	Sunny	3.3	337	9	298	500
17-Feb-21	14:40	Sunny	4.4	295	10	298	500
17-Feb-21	15:40	Sunny	3.6	293	11	298	500
23-Feb-21	13:02	Sunny	5.0	269	33	298	500
23-Feb-21	14:02	Sunny	3.9	268	36	298	500
23-Feb-21	15:02	Sunny	2.8	40	36	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 Mor	nitoring Re	esults		

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

Noise Measurement Results

Station: NM1A- Man Tung Road Park

Date	Weather	Time	Measured	Measured	1
Date	weather	Time	L ₁₀ dB(A)	L ₉₀ dB(A)	L _{eq(30mins)} dB(A)
02-Feb-21	Cloudy	11:25	72.6	55.8	
02-Feb-21	Cloudy	11:30	72.4	55.0	
02-Feb-21	Cloudy	11:35	70.5	52.6	72
02-Feb-21	Cloudy	11:40	72.0	55.3	/2
02-Feb-21	Cloudy	11:45	71.3	52.3	
02-Feb-21	Cloudy	11:50	73.2	55.8	
10-Feb-21	Cloudy	16:44	70.6	54.6	
10-Feb-21	Cloudy	16:49	68.2	54.8	
10-Feb-21	Cloudy	16:54	67.4	54.8	69
10-Feb-21	Cloudy	16:59	70.5	55.2	69
10-Feb-21	Cloudy	17:04	73.3	59.7	1
10-Feb-21	Cloudy	17:09	67.9	54.8	
17-Feb-21	Cloudy	11:34	74.6	51.8	
17-Feb-21	Cloudy	11:39	74.9	50.0	Ī
17-Feb-21	Cloudy	11:44	73.8	49.6	73
17-Feb-21	Cloudy	11:49	72.3	51.8	/3
17-Feb-21	Cloudy	11:54	74.5	49.8	
17-Feb-21	Cloudy	11:59	73.5	50.5	1
23-Feb-21	Sunny	11:39	70.1	62.0	
23-Feb-21	Sunny	11:44	70.0	63.2	1
23-Feb-21	Sunny	11:49	66.1	55.4	68
23-Feb-21	Sunny	11:54	62.1	55.8] 08
23-Feb-21	Sunny	11:59	62.1	56.0	
23-Feb-21	Sunny	12:04	58.2	52.7	

Noise Measurement Results

Station: NM4- Ching Chung Hau Po Woon Primary School

D-4-	14/	T:	Measured	Measured	
Date	Weather	Time	$\mathbf{L}_{10}\mathrm{dB}(A)$	L ₉₀ dB(A)	L _{eq(30mins)} dB(A)
03-Feb-21	Cloudy	13:08	59.8	50.1	
03-Feb-21	Cloudy	13:13	58.8	52.0	
03-Feb-21	Cloudy	13:18	56.0	48.2	61
03-Feb-21	Cloudy	13:23	57.7	48.7	91
03-Feb-21	Cloudy	13:28	57.5	46.8	
03-Feb-21	Cloudy	13:33	57.3	48.7	
10-Feb-21	Cloudy	13:40	63.3	55.4	
10-Feb-21	Cloudy	13:45	61.3	54.8	
10-Feb-21	Cloudy	13:50	58.9	55.2	61
10-Feb-21	Cloudy	13:55	58.9	54.4	61
10-Feb-21	Cloudy	14:00	59.5	55.5	
10-Feb-21	Cloudy	14:05	60.9	55.9	
16-Feb-21	Cloudy	13:40	59.2	52.4	
16-Feb-21	Cloudy	13:45	56.5	51.7	
16-Feb-21	Cloudy	13:50	58.6	53.0	61
16-Feb-21	Cloudy	13:55	57.5	52.3	01
16-Feb-21	Cloudy	14:00	63.5	52.7	
16-Feb-21	Cloudy	14:05	59.5	55.5	
24-Feb-21	Sunny	13:15	57.4	51.9	
24-Feb-21	Sunny	13:20	57.3	52.3	
24-Feb-21	Sunny	13:25	57.8	52.9	59
24-Feb-21	Sunny	13:30	55.7	51.6	
24-Feb-21	Sunny	13:35	59.2	51.8	
24-Feb-21	Sunny	13:40	56.7	52.6	

Remarks: +3dB (A) correction was applied to free-field measurement.

⁺³dB (A) correction was applied to free-field measurement.

Noise Measurement Results

Station: NM5- Village House, Tin Sum

D-4-	14/	T:	Measured	Measured	
Date	Weather	Time	L ₁₀ dB(A)	$\mathbf{L}_{90}\mathrm{dB}(A)$	L _{eq(30mins)} dB(A)
02-Feb-21	Cloudy	14:01	58.8	49.8	
02-Feb-21	Cloudy	14:06	57.8	49.4	1
02-Feb-21	Cloudy	14:11	58.2	50.0	57
02-Feb-21	Cloudy	14:16	62.2	45.1	37
02-Feb-21	Cloudy	14:21	64.2	45.9	1
02-Feb-21	Cloudy	14:26	61.2	42.1	1
11-Feb-21	Cloudy	9:15	61.6	49.9	
11-Feb-21	Cloudy	9:20	61.1	48.5	Ī
11-Feb-21	Cloudy	9:25	59.5	47.7	57
11-Feb-21	Cloudy	9:30	61.3	49.7	37
11-Feb-21	Cloudy	9:35	61.4	50.1	1
11-Feb-21	Cloudy	9:40	64.2	51.2	
17-Feb-21	Sunny	13:57	53.5	45.3	
17-Feb-21	Sunny	14:02	50.3	44.8	1
17-Feb-21	Sunny	14:07	50.9	44.7	52
17-Feb-21	Sunny	14:12	48.4	45.2	32
17-Feb-21	Sunny	14:17	48.5	45.1	1
17-Feb-21	Sunny	14:22	53.5	45.5	1
23-Feb-21	Sunny	13:38	58.2	50.8	
23-Feb-21	Sunny	13:43	55.2	51.4	Ī
23-Feb-21	Sunny	13:48	55.6	51.1	62
23-Feb-21	Sunny	13:53	68.3	52.2] 02
23-Feb-21	Sunny	13:58	67.5	54.2	
23-Feb-21	Sunny	14:03	63.5	46.9	1

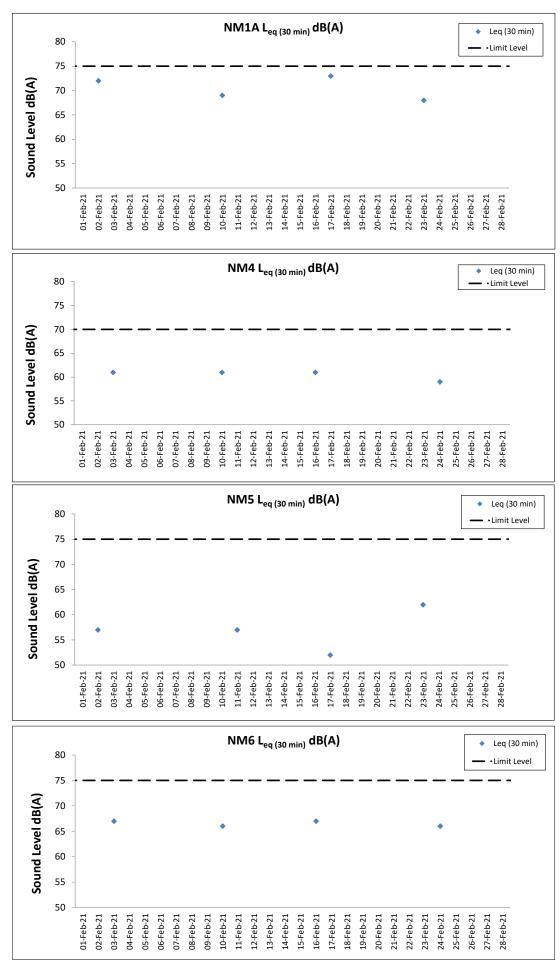
Noise Measurement Results

Station: NM6- House No.1 Sha Lo Wan

Date	Weather	Time	Measured	Measured	1
Date	weather	rime	L ₁₀ dB(A)	L ₉₀ dB(A)	L _{eq(30mins)} dB(A)
03-Feb-21	Cloudy	15:44	64.7	52.1	
03-Feb-21	Cloudy	15:49	63.1	51.6	
03-Feb-21	Cloudy	15:54	60.9	50.2	67
03-Feb-21	Cloudy	15:59	68.0	51.4] ",
03-Feb-21	Cloudy	16:04	64.1	49.7	
03-Feb-21	Cloudy	16:09	63.8	51.6	
10-Feb-21	Cloudy	15:51	69.9	55.2	
10-Feb-21	Cloudy	15:56	69.5	53.4	Ī
10-Feb-21	Cloudy	16:01	68.8	52.8	66
10-Feb-21	Cloudy	16:06	68.3	51.6	00
10-Feb-21	Cloudy	16:11	68.5	53.2	Ī
10-Feb-21	Cloudy	16:16	69.4	52.5	Ī
16-Feb-21	Cloudy	15:44	66.0	50.4	
16-Feb-21	Cloudy	15:49	68.4	50.3	
16-Feb-21	Cloudy	15:54	68.8	54.4	67
16-Feb-21	Cloudy	15:59	64.6	48.6	07
16-Feb-21	Cloudy	16:04	68.8	49.2	
16-Feb-21	Cloudy	16:09	67.9	52.9	
24-Feb-21	Sunny	15:45	63.8	53.2	
24-Feb-21	Sunny	15:50	59.9	51.7	7
24-Feb-21	Sunny	15:55	62.3	51.0	66
24-Feb-21	Sunny	16:00	71.1	55.9] 00
24-Feb-21	Sunny	16:05	65.1	52.9	7
24-Feb-21	Sunny	16:10	63.9	50.9	1

Remarks: +3dB (A) correction was applied to free-field measurement.

Remarks: +3dB (A) correction 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	Monito	ring Re	sults	

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

Water Quality Monitoring Results on 02 February 21 during Mid-Ebb Tide Turbidity(NTU) Suspended Solids Total Alkalinity DO Saturation Chromium Salinity (ppt) Coordinate Coordinate Nickel (µg/L) Weather Sampling Water Water Temperature (°C) Monitoring Current Speed Oxvaen (mg/L) (maga) Sampling Depth (m) HK Grid HK Grid Station Direction Condition Time Depth (m) (m/s) Average Value Average Average Value Average Value DA Value DA Value DA Value DA (Northing) Value DA Value DA Condition Value Value (Easting) 18.5 0.2 8.1 31.4 1.0 224 18.4 31.4 2.7 <2 0.9 1.0 41 0.2 217 18.2 8.1 31.6 124. 9.7 3 93 <0.2 124.4 92 804233 C1 Sunny Moderate 15:57 8.1 31.5 815617 0.9 4.1 0.2 217 18.3 8.1 31.5 124.4 9.7 2.6 3 93 <0.2 0.8 7.2 0.2 194 18.0 8.1 32.6 116.1 9.0 5.3 5 94 <0.2 0.9 Bottom 8.1 32.6 116.3 7.2 0.2 195 18.0 8.1 32.6 116.4 9.1 5.2 6 94 <0.2 0.9 18.8 1.0 0.3 8.4 28.4 122. 9.6 1.3 4 87 < 0.2 1.5 Surface 8.4 28.5 122.2 <0.2 1.0 0.3 79 18.8 8.4 28.5 9.6 1.5 3 88 1.5 6.0 0.3 77 18.7 8.4 28.8 9.5 3.7 4 89 90 <0.2 1.4 C2 Sunny Moderate 14:39 11.9 Middle 8.4 28.8 120.7 825674 806956 6.0 79 18.7 0.3 8.4 28.8 120 9.5 10.9 0.4 18.7 8.4 5.0 4 1.5 92 28.8 119. 9.4 90 < 0.2 Bottom 18.7 8.4 28.8 119.7 3 9.4 5.1 1.5 10.9 0.4 92 18.7 8.4 91 <0.2 28.8 119 1.0 0.4 63 18.6 8.3 2.4 1.4 29.5 9.4 < 0.2 Surface 18.6 8.3 29.5 119.2 2.5 1.4 1.0 9.3 6 87 <0.2 0.4 68 18.6 8.3 29.5 118. 92 1.4 3 <0.2 6.0 18.5 9.1 9.1 90 91 8.3 C3 Sunny Calm 16:26 11.9 Middle 8.3 29.7 115.9 90 822120 817802 1.5 6.0 18.5 4.4 0.3 8.3 75 <0.2 1.5 10.9 0.3 85 18.4 8.3 30.0 8.8 4.5 2 91 112.4 8.3 112.4 8.8 Bottom 18.4 30.0 10.9 0.4 87 18.4 8.3 30.0 112.4 8.8 4.6 3 92 <0.2 1.4 0.1 178 18.9 3.3 8.2 31.1 5 <0.2 123.3 9.5 0.9 Surface 18.9 8.2 31.1 123.2 1.0 0.1 184 18.9 8.2 31.1 123.0 9.5 3.4 4 88 <0.2 0.9 9.5 807115 IM1 Moderate 15:36 5.1 Middle 89 817927 0.9 Sunny 4.1 0.1 191 18.8 8.2 9.3 3.7 3 91 <0.2 0.9 120. Bottom 18.9 8.2 31.2 119.9 9.3 4.1 0.1 209 18.9 8.2 31.2 9.3 3.5 0.8 0.1 18.4 8.2 31.1 9.4 2.8 4 87 <0.2 1.0 Surface 18.4 8.2 31.1 120.8 1.0 0.1 188 18.4 9.4 2.8 4 87 <0.2 3.4 0.1 183 18.4 9.4 2.5 6 89 <0.2 <0.2 <0.2 0.9 0.9 0.9 8.2 119.9 806159 Sunnv Moderate 15:27 Middle 8.2 31.2 818145 18.4 2.5 5 7 3.4 0.1 5.8 0.1 236 18.4 8.2 31.2 9.2 2.4 2.5 89 Bottom 18.4 8.2 31.2 118.1 9.2 1.0 5.8 0.1 249 18.4 8.2 31.2 118 92 8 89 <0.2 0.9 1.0 0.1 184 18.5 8.2 31.1 120. 9.4 3.4 4 87 <0.2 Surface 8.2 31.1 120.5 1.0 0.1 199 18.5 8.2 31.1 9.4 3.4 5 85 <0.2 0.9 3.5 0.1 144 18.3 8.2 31.2 9.2 3.4 5 88 <0.2 IM3 Sunny Moderate 15:15 7.0 Middle 8.2 118.0 818770 805589 <0.2 3.5 0.1 155 18.3 3.5 4 9.0 3.6 89 1.0 6.0 0.1 150 18.3 8.2 31.2 6 115.6 3.6 0.1 18.3 8.2 31.2 6 6.0 164 90 **∠**0.2 1.0 0.1 214 18.4 8.2 31.0 120. 9.4 9.4 3.6 5 88 <0.2 1.1 Surface 18.4 8.2 31.0 120.4 8.2 3.6 5 88 1.0 0.1 214 18.4 31 (< 0.2 4.2 197 3.9 4.0 6 91 91 1.0 0.1 18.3 8.2 31.2 9.3 <0.2 IM4 Sunny Moderate 15:04 Middle 18.3 8.2 31.2 118.4 819707 804621 4.2 205 18.3 8.2 0.1 31.2 7 7.4 0.1 198 18.3 18.3 8.2 31.2 9.2 4.2 4.2 92 <0.2 1.0 Rottom 18.3 8.2 31.2 117.7 9.2 0.1 213 92 < 0.2 1.0 1.0 0.2 18.8 88 263 8.2 30.4 121. 9.4 2.2 9 <0.2 Surface 18.8 8.2 30.5 121.1 1.0 289 8.2 30.5 9.4 <0.2 1.0 0.2 18.8 121. 2.4 8 87 3.8 295 18.6 9.3 3.1 8 91 <0.2 0.9 0.1 8.2 30.9 IM5 14:53 7.6 8.2 30.9 119.4 820747 804871 Sunny Moderate Middle 18.6 90 3.8 307 18.6 8.2 30.9 9.3 3.2 8 91 < 0.2 0.9 0.2 <0.2 0.9 6.6 0.0 268 269 18.4 8.2 3.3 3.3 92 93 8.2 31.0 117.5 9.2 9.2 Bottom 18.4 31.0 6.6 0.0 18.4 8.2 6 87 1.2 1.0 0.2 241 18.6 8.2 30.5 9.4 2.3 8 <0.2 121. Surface 18.6 8.2 30.6 121.0 1.0 0.2 264 18.6 8.2 30.6 120. 9.4 2.4 88 <0.2 3.7 0.1 223 18.5 8.2 9.3 3.1 <0.2 1.1 14:43 7.4 Middle 18.5 8.2 31.0 119.5 821049 805835 IM6 Sunny Moderate 3.7 0.1 235 18.5 8.2 31.0 119.4 9.3 3.1 6 91 <0.2 1.1 6.4 0.1 226 18.5 8.2 118.2 9.2 4.4 4 91 <0.2 1.0 Bottom 18.5 8.2 31.1 118.2 9.2 1.2 6.4 0.1 18.5 4.5 232 1.0 0.1 229 18.8 8.2 30.3 121.4 2.2 87 <0.2 1.1 Surface 18.8 8.2 30.3 121.4 1.0 0.2 229 18.8 8.2 30.3 121.4 9.5 2.2 7 88 <0.2 1.1 1.3 4.1 0.1 167 18.5 9.3 2.7 6 90 <0.2 IM7 Sunny Moderate 14:39 8.2 Middle 18.5 8.2 31.0 119.8 821327 806819 4.1 0.1 177 18.5 8.2 31.0 110 9.3 2.8 5 91 <0.2 7.2 0.1 176 18.5 8.2 31.0 9.2 3.1 3 92 <0.2 1.0 8.2 31.0 118.5 9.2 7.2 0.1 180 18.5 8.2 31.0 118 3.1 92 <0.2 1.0 1.0 0.3 105 18.8 8.3 28.3 122.9 9.7 2.1 <2 86 < 0.2 1.6 122.9 Surface 8.3 28.3 1.6 1.0 0.3 106 18.8 8.3 28.4 122.8 9.7 2.2 <2 86 <0.2 4 0 0.3 86 18.7 8.3 28.9 121.7 9.6 3.8 2 89 90 <0.2 1.4 1.5 IM8 Sunny Moderate 14:58 8.0 Middle 18.7 8.3 28.9 121.6 89 821808 808122 4.0 0.3 92 18.7 8.3 28.9 9.5 3.8 < 0.2 7.0 0.3 64 18.7 8.3 29.3 118.8 9.3 4.6 3 90 <0.2 1.5 8.3 Bottom 18.8 29.2 118.7 9.3 0.3 18.8

DA: Depth-Averaged

Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Water Quality Monitoring Results on 02 February 21 during Mid-Ebb Tide DO Saturation Suspended Solids Total Alkalinity Chromium Salinity (ppt) Turbidity(NTU) Coordinate Coordinate Nickel (µg/L) Weather Sampling Water Water Temperature (°C) Monitoring Speed Current Oxvaen (mg/L) (ppm) Sampling Depth (m) HK Grid HK Grid Station Direction Time (m/s) Average Average Value DA Value DA Value DA Value DA Value DA Value DA Condition Condition Depth (m) Value Value Average Value Average Value (Northing) (Easting) 0.1 19.0 Surface 8.3 123.6 1.0 19.0 3.8 0.2 57 18.8 8.3 28.6 122. 9.6 3.0 2 89 <0.2 1.6 121.9 808832 IM9 Sunny Moderate 15:04 7.5 8.3 28.7 822092 3.8 0.2 62 18.8 8.3 28.7 121.7 9.6 3.0 2 89 <0.2 1.5 6.5 0.1 92 18.7 8.3 29.2 120.1 9.4 4.8 2 90 <0.2 1.3 Bottom 8.3 29.2 120.0 6.5 0.1 93 18.7 8.3 29.2 1199 94 4.8 2 90 <0.2 1.4 1.0 0.6 93 18.9 8.3 28.6 122. 9.6 2.3 86 < 0.2 1.5 Surface 8.3 28.6 121.9 1.0 0.6 95 18.9 8.3 28.6 9.5 2.3 3 86 <0.2 1.5 3.6 0.6 88 18.8 8.3 28.9 9.4 4.7 3 88 89 <0.2 1.4 IM10 Sunny Moderate 15:10 7.2 Middle 8.3 28.9 120.0 822371 809792 8.3 4.8 < 0.2 3.6 0.6 89 18.7 29.0 9.4 0.6 18.7 8.3 5.4 2 1.6 6.2 85 29.1 118. 9.3 90 < 0.2 Bottom 18.7 8.3 29.1 118.2 9.3 1.6 6.2 0.6 18.7 8.3 93 5.4 90 85 29 1 118 (**-**0 2 1.0 0.5 18.8 2.6 83 8.3 28.5 9.5 <2 1.6 Surface 18.8 8.3 28.6 120.6 1.5 1.0 18.7 2.6 4.4 <2 83 0.5 119 8.3 28.6 120. 9.5 < 0.2 9.5 18.7 <2 <2 1.6 9.4 90 90 <0.2 4.0 0.4 8.3 28.9 IM11 Sunnv Moderate 15:20 8.0 Middle 18.7 8.3 29.0 119.4 89 822041 811445 1.5 4.0 18.7 4.3 0.4 8.3 29.0 98 1.5 7.0 0.4 94 18.7 8.3 29.1 9.3 5.2 3 92 <0.2 18.7 117.7 9.3 Bottom 8.3 29.1 7.0 0.4 99 18.7 8.3 29.1 9.2 5.4 2 93 <0.2 1.4 0.4 18.9 2.4 84 <0.2 1.3 8.3 28.5 9.6 Surface 18.9 8.3 28.6 122.5 1.0 0.4 152 18.8 8.3 28.6 122.3 9.6 2.5 2 85 <0.2 1.4 4.9 0.4 142 18.6 9.4 3.2 86 <0.2 1.6 8.3 29.2 3 812059 IM12 Moderate 15:25 9.8 Middle 18.6 8.3 29.2 119.6 821453 Sunny 4.9 18.6 8.3 9.4 3.2 89 <0.2 1.6 0.4 151 3 8.8 0.3 125 18.6 8.3 29.2 9.3 4.4 92 <0.2 1.5 18.7 8.3 118.5 9.3 Rottom 29.2 8.8 0.3 137 18.7 8.3 118. 9.3 4.5 1.5 18.9 8.3 29.2 9.4 3.2 2 Surface 18.9 8.3 120.5 29.2 1.0 18.9 9.4 3.2 3 2.5 Sunny Calm 15:55 Middle 819981 812653 2.5 3.9 18.8 8.3 29.2 9.3 4.2 4 Bottom 18.8 8.3 29.2 119.1 9.3 3.9 18.8 83 29.2 118 93 4.2 4 1.0 0.4 65 19.0 8.3 28.4 122.1 9.6 2.3 85 <0.2 1.7 Surface 19.0 8.3 28.4 122.1 1.0 0.4 67 19.0 8.3 28.4 9.6 2.4 2 85 < 0.2 1.8 9.6 SR2 Sunny 16:09 4.4 Middle 821484 814159 3.4 4.4 89 0.4 74 18 9 8.3 28.7 9.4 2 <0.2 1.6 119.6 Bottom 4.5 3.4 19.0 28.7 15 0.4 76 83 89 r0 2 1.0 0.2 119 18 9 8.3 28.3 123.2 9.7 2.2 2 Surface 8.3 28.4 123.1 2.2 4.7 83 3 1.0 0.2 121 18.8 28 4 4.6 3 0.2 131 18.7 8.3 28.8 121. 9.6 SR3 Sunny Calm 14:54 Middle 18.7 8.3 121.7 822148 807571 9.6 4.9 140 18.7 2 4.6 0.2 8.4 28.8 5.5 5.4 3 8.1 0.2 87 18.7 8.4 8.4 9.5 9.5 Bottom 18.7 8.4 29.2 120.7 9.5 18.7 8.1 0.2 94 29.2 1.0 18.7 0.2 65 8.2 31.1 123.1 9.6 2.8 4 Surface 18.7 8.2 31.1 123.0 9.6 1.0 0.2 67 18.6 8.2 31.1 122. 2.9 4 4.2 18.5 2.8 4 0.1 31.1 9.5 . 8.2 121.0 SR4A 16:23 8.2 31.1 121.5 817197 807797 Sunny Moderate 8.4 Middle 18.5 4.2 18.5 2.8 4 0.1 60 8.2 121. 2.7 7.4 0.1 67 18.5 8.2 31.1 9.4 6 8.2 120. 119.9 94 Rottom 18.5 31.1 7.4 0.1 18.5 8.2 9.3 4.9 1.0 0.0 332 19.2 8.2 31.2 120.2 9.2 19.2 8.2 31.2 120.1 Surface 1.0 0.0 348 19.2 8.2 9.2 5.1 8 SR5A 3.5 Middle 816594 810685 Moderate 16:42 Sunny 2.5 0.1 19.0 9.1 10.8 6 Bottom 19.0 8.2 31.2 117.3 9.1 0.1 19.0 9.0 10.7 2.5 98 1.0 0.0 358 19.3 8.2 30.9 9.0 4.4 4 Surface 19.3 8.2 30.9 116.9 1.0 0.0 329 19.3 8.2 30.9 116. 9.0 4.3 5 SR6A Sunny Moderate 17:26 4.0 Middle 817941 814733 3.0 0.0 349 19.3 30.9 8.9 4.2 5 Bottom 8.2 30.9 115.4 8.9 3.0 0.0 321 19.3 30.9 2 2 4.2 4 1.0 0.5 53 18.6 8.3 29.8 116 9.1 1.5 <2 116.4 Surface 8.3 29.8 1.0 0.5 54 18.6 8.3 29.8 116 9.1 1.6 <2 99 0.3 48 18.5 8.3 29.9 114 2 9.0 3.5 2 SR7 Sunny Calm 16:53 19.8 Middle 8.3 29.9 114.2 823657 823722 9.9 0.3 51 18.4 8.3 29.9 114.2 9.0 3.5 18.8 0.2 28 18.5 8.3 29.9 8.9 4.3 3 Bottom 18.5 8.3 29.9 113.3 18.8 0.3 30 18.5 8.3 29.9 8.9 4.3 4 1.0 19.1 8.3 29.2 9.5 3.4 2 Surface 19.1 8.3 29.2 121.4 1.0 19.1 8.3 29.2 121. 9.5 3.4 3 . -820412 811623 SR8 Sunny Calm 15:38 3.8 Middle -2.8 19.0 4.6 3 8.3 29.1 120.3 9.4 19.0 8.3 29.1 120.2 9.4

DA: Depth-Average

Water Quality Monitoring Results on 02 February 21 during Mid-Flood Tide DO Saturation Dissolved Suspended Solids Total Alkalinity Chromium Salinity (ppt) Turbidity(NTU) Coordinate Coordinate Nickel (µg/L) Weather Sampling Water Water Temperature (°C) Monitoring Current Speed Oxvaen (mg/L) (maga) Sampling Depth (m) HK Grid HK Grid Station Direction Condition Time Depth (m) (m/s) Average Value Average Average Value Average Value DA Value DA Value DA Value DA Value DA Value DA Condition Value Value (Northing) (Easting) 0.5 18.1 Surface 18.1 8.1 31.2 115.7 1.0 0.5 39 18.1 31.2 115. 9.1 9.4 54 85 <0.2 0.9 18.0 7.6 1.0 0.5 88 <0.2 C1 8 1 31.5 114.6 804227 11:06 8.0 Middle 18.0 23 87 815630 Sunny Moderate 83 1 0 18.0 31.5 9.0 7.3 7 88 <0.2 1.0 4.0 0.5 42 8.1 7.0 0.5 40 18.0 8.1 31.6 8.9 8.1 6 89 <0.2 1.0 8.1 113.5 8.9 Bottom 18.0 31.6 8.9 1.0 18.0 8.6 7.0 0.5 43 8.1 31.6 6 89 < 0.2 1.0 0.4 18.6 1.9 0.2 8.3 1.7 Surface 18.6 8.3 27.7 121.7 18.6 9.6 2.0 4.1 85 0.2 1.0 0.4 342 8.3 345 88 1.1 6.0 0.4 18.6 8.3 9.5 2 27.8 < 0.2 C2 Sunny Moderate 11:41 12 0 Middle 18.6 8.3 27.8 120.1 88 825664 806945 8.3 27.8 120.0 9.5 4.3 2 88 <0.2 6.0 0.4 353 18.6 11.0 0.4 19 18.5 8.3 9.3 5.5 <2 89 <0.2 1.2 28.2 8.3 28.2 117.0 9.3 Bottom 18.5 11.0 0.4 20 18.5 8.3 28.2 5.4 <2 90 <0.2 1.2 1.0 0.5 8.3 1.1 <0.2 1.2 29.2 Surface 18.5 8.3 29.2 117.0 1.0 0.5 259 18.5 8.3 9.2 1.1 3 87 <0.2 1.2 1.2 4 1.3 5.6 264 18.4 90 90 <0.2 0.5 8.3 29.4 9.0 C3 114.6 822117 817792 Sunny Calm 09:40 11.2 Middle 18.4 8.3 29.4 89 1.2 5.6 0.6 283 18.4 10.2 0.4 261 18.4 8.3 29.4 8.9 2.9 4 91 <0.2 1.2 Bottom 18.4 8.3 29.4 113.3 8.9 10.2 0.5 271 18.4 8.3 29.4 8.9 3.0 4 91 1.2 1.0 0.2 353 18.5 31.3 3.3 84 <0.2 0.8 Surface 18.5 8.1 31.3 118.6 1.0 0.2 325 18.5 8.1 31.3 118. 9.2 3.5 3 85 <0.2 0.6 IM1 Sunny Moderate 11:26 5.4 Middle 817952 44 0.1 337 18.5 8.1 31.4 117 9.2 3.9 6 88 < 0.2 0.6 Bottom 18.5 8.1 31.4 117.7 9.2 44 0.1 310 18.5 8.1 31 4 1176 9.2 3.8 5 88 <0.2 0.6 1.0 4.7 0.2 18.3 8.1 31.1 9.1 8 85 < 0.2 0.7 Surface 8.1 31.1 117.0 1.0 0.3 18.3 8.1 31.1 116.9 9.1 5.0 7 85 <0.2 0.8 5.6 5.7 3.5 0.2 18.3 8.1 31.1 9.1 9 88 <0.2 0.8 IM2 Moderate 11:36 6.9 Middle 8.1 31.1 116.2 818176 806182 <0.2 0.6 0.7 0.9 3.5 0.2 18.3 8.1 31.1 9.1 8 89 5.1 9 10 5.9 0.2 353 18.3 8 1 31 1 114 9.0 89 <0.2 8.1 31.1 114.9 9.0 5.9 5.0 0.2 325 18.3 8 1 31 1 9.0 ٩n <0.2 114 1.0 0.3 345 18.3 8.2 31.0 116 91 5.2 10 85 < 0.2 11 Surface 8.2 31.0 116.4 5.2 5.5 5.6 6.6 1.0 1.0 10 86 0.3 317 18.3 8.2 116. 9.1 <0.2 31.0 3.6 18.3 10 88 <0.2 0.9 0.3 343 8.2 31.0 9.1 IM3 Sunny Moderate 11:45 7.1 Middle 18.3 8.2 31.0 115.9 88 818782 805581 18.3 18.2 9.1 9 89 90 3.6 0.3 316 <0.2 0.9 6.1 0.2 335 8.2 31.0 114. 8.9 114.1 Rottom 18.2 8.2 31.0 8.9 6.1 0.3 308 18.2 8.2 31.0 8.9 6.5 9 90 <0.2 0.9 1.0 0.6 359 18.2 1.0 8.2 30.7 9.2 4.9 4 86 <0.2 Surface 18.2 8.2 30.7 117.7 0.6 330 18.2 8.2 9.2 4.9 5 86 <0.2 1.0 358 4.8 89 <0.2 1.0 3.5 18.2 6 0.5 8.2 30.7 9.2 IM4 Moderate 11:55 7.0 Middle 18.2 8.2 30.7 117.4 819745 804611 Sunny 3.5 329 18.2 8.2 4.8 89 <0.2 0.6 6.0 0.4 18.3 4.9 9 89 1.0 8.2 9.0 115.2 Bottom 18.3 8.2 30.7 9.0 6.0 0.4 18.3 8.2 30.7 4.8 8 <0.2 1.0 1.0 0.8 18.3 8.2 30.8 4.9 84 0.2 1.1 116.5 9.1 6 Surface 18.3 8.2 116.5 30.8 21 18.3 8.2 30.8 116. 9.1 4.9 6 85 0.2 0.8 3.6 0.8 21 18.3 5.5 6 7 88 <0.2 1.0 8.2 9.1 IM5 12:03 7.2 Middle 18.3 8.2 30.8 115.6 820740 804848 Sunny Moderate 3.6 18.3 30.8 5.6 <0.2 0.8 8 1.0 6.2 0.6 18.3 8.2 8.2 30.8 9.0 5.7 89 <0.2 18.3 8.2 114.6 9.0 Bottom 30.8 6.2 0.7 18.3 30.8 114 5.6 < 0.2 1.0 0.1 17 18.6 8.2 30.0 2.3 4 86 <0.2 1.0 Surface 8.2 30.0 119.0 1.0 0.2 17 18.6 8.2 30.1 118 9.3 2.5 4 86 <0.2 0.9 3.7 0.2 35 18.5 30.7 3.6 5 89 <0.2 Sunny Moderate 12:12 Middle 18.5 8.2 30.8 117.5 821070 805818 <0.2 3.7 0.2 38 18.5 8.2 30.8 117 9.2 3.7 6 89 0.9 6.4 0.3 50 18.5 8.2 9.1 4.1 6 91 <0.2 116.5 9.1 6.4 0.3 53 18.5 8.2 3.8 6 91 1.0 1.0 0.0 133 18.6 8.2 29.7 3.3 9 88 <0.2 Surface 18.6 119.7 94 3.3 4.0 1.0 0.0 141 18.6 82 29.7 119 9 88 <0.2 10 0.9 4.3 0.1 89 <0.2 124 18.4 8.2 30.8 117.9 9.2 IM7 Moderate 12:22 Middle 18.4 8.2 117.9 821362 806820 Sunny 11 90 4.3 0.1 133 18.4 8.2 30.8 9.2 4.2 7.6 0.1 87 18.4 8.2 31.1 9.1 4.1 11 91 <0.2 1.0 Bottom 18.4 8.2 31.1 117.2 7.6 0.1 88 18.4 4.3 11 <0.2 0.9 1.0 0.1 31 18.6 8.3 27.7 120. 9.6 1.1 7 84 < 0.2 1.5 Surface 18.6 8.3 27.7 120.6 9.6 1.3 18.6 8.3 27.7 1.0 0.2 33 120. 1.1 7 85 < 0.2 8.3 27.7 9.5 2.1 6 86 <0.2 1.4 3.8 0.1 75 18.5 119.5 18.5 8.3 27.7 119.4 821844 808140 IM8 Sunny Moderate 11:18 7.6 Middle 87 2.2 87 1.5 9.5 3.8 0.2 82 18.5 8.3 27.7 119. 5 89 1.4 6.6 0.2 18.6 8.3 27.7 4.2 4 <0.2 45 117. 9.3 18.6 8.3 27.7 116.9 9.3 Rottom

DA: Depth-Average

Water Quality Monitoring Results on 02 February 21 during Mid-Flood Tide DO Saturation Suspended Solids Total Alkalinity Chromium Salinity (ppt) Turbidity(NTU) Coordinate Coordinate Nickel (µg/L) Weather Sampling Water Water Temperature (°C) Monitoring Speed Current Oxvaen (mg/L) (ppm) Sampling Depth (m) HK Grid HK Grid Station Direction Time (m/s) Average Average Value Average Value DA Value DA Value DA Value DA Value DA Value DA Condition Condition Depth (m) Value Value Average Value (Northing) (Easting) 18.7 0.2 Surface 8.3 28.3 1.0 0.2 18.7 3.0 4.6 3.6 0.1 358 18.6 8.3 28.5 116 9.2 2 89 <0.2 1.4 116.3 808787 IM9 Sunny Moderate 11:12 8.3 28.5 822092 3.6 0.1 329 18.6 8.3 28.5 116 1 9.2 4.7 3 89 <0.2 1.4 6.2 0.1 358 18.6 8.3 28.5 114.6 9.0 5.3 5 92 <0.2 1.3 Bottom 8.3 28.5 114.5 9.0 6.2 0.1 329 18.6 8.3 28.5 1144 9.0 5.3 4 93 <0.2 1.4 1.0 0.5 302 18.5 8.3 29.0 9.2 2.5 83 < 0.2 1.4 Surface 8.3 29.0 117.2 7 <0.2 1.0 0.6 327 18.5 8.3 29.0 9.2 2.6 85 1.3 4.0 0.6 300 18.5 8.3 9.2 3.1 5 6 90 90 <0.2 1.4 IM10 Sunny Moderate 11:06 8.0 Middle 8.3 29.0 116.6 822375 809805 0.6 328 8.3 < 0.2 4.0 18.5 29.0 9.2 7.0 0.5 18.5 8.3 1.3 305 28.9 116. 9.2 4.2 4 92 < 0.2 Bottom 18.5 8.3 28.9 116.1 9.2 3 7.0 1.3 0.5 332 18.5 8.3 116 (9.1 4.4 93 28.9 **-**0 2 1.0 0.6 18.6 3.0 8.3 9.3 1.1 Surface 8.3 29.2 118.2 1.1 1.0 297 3.2 85 < 0.2 0.7 18.6 8.3 29.2 118. 9.3 3 9.3 1.4 4.4 4.5 <0.2 18.5 9.2 6 5 89 89 4.1 302 302 8.3 IM11 Sunnv Moderate 10:56 8.2 Middle 8.3 29.3 117.3 88 822049 811476 4.1 18.5 0.5 8.3 29.3 7 <0.2 1.3 7.2 0.5 302 18.5 8.3 29.3 9.2 4.8 90 117.0 9.2 Bottom 18.5 8.3 29.3 7.2 0.6 329 18.5 8.3 29.3 9.2 4.9 6 91 <0.2 1.1 0.6 18.4 3.1 84 <0.2 8.3 29.2 Surface 18.4 8.3 29.2 117.0 1.0 0.6 295 18.4 8.3 29.2 9.2 3.0 10 85 <0.2 1.1 4.4 0.6 267 18.4 4.8 9 88 <0.2 1.2 8.3 29.2 9.2 812044 IM12 Moderate 10:50 8.8 Middle 18.4 8.3 29.2 116.5 821444 Sunny 4.4 18.4 8.3 4.8 8 89 <0.2 0.6 291 264 18.5 8.3 29.2 5.3 6 90 <0.2 1.0 9.1 18.5 8.3 29.2 115.2 9 1 Rottom 7.8 0.7 270 18.5 8.3 9.1 5.3 1.2 1.0 18.6 8.3 29.3 9.2 1.3 4 Surface 18.6 8.3 116.4 29.3 1.0 18.6 1.2 4 2.3 Sunny Calm 10:17 Middle 819982 812660 2.3 3.5 18.6 8.3 29.2 114 9.0 5.8 7 Bottom 18.6 8.3 29.2 114.5 9.0 9.0 3.5 18.6 83 29.2 114 5.9 6 1.0 0.2 329 18.4 8.3 29.2 116.9 9.2 2.2 4 86 <0.2 1.3 Surface 18.4 8.3 29.2 116.9 1.0 0.2 337 18.4 8.3 29.2 116.8 9.2 2.1 5 86 < 0.2 1.2 SR2 Sunny 10:02 4.3 Middle 821445 814181 33 324 3.2 90 0.1 18.4 8.3 29.2 9.2 3 <0.2 11 116.1 9.2 Bottom 33 0.1 18.4 83 3 11 347 29.2 90 r0 2 1.0 0.1 324 18.7 8.3 27.6 121. 9.6 9.6 2.3 3 Surface 18.7 8.3 27.6 121.0 18.7 83 27.6 2.3 2 1.0 0.1 324 4.5 9.4 9.4 4.3 2 0.1 337 18.5 8.3 27.7 SR3 Moderate 11:24 Middle 18.5 8.3 27.7 118.4 822158 807562 4.5 18.5 8.3 4.5 0.1 310 <2 <2 7.9 0.2 44 18.5 18.5 8.3 8.3 117.0 9.3 5.6 5.7 Bottom 18.5 8.3 27.7 9.3 0.2 45 1.0 0.3 71 18.4 8.1 31.3 9.1 2.6 4 Surface 18.4 8.1 31.3 117.1 1.0 71 9.1 5 0.3 18.4 8.1 31.3 117. 2.6 4.5 18.4 2.6 6 0.3 8.1 9.1 . 31.3 SR4A 8.1 31.3 116.8 817175 807810 Sunny Moderate 10:36 9.0 Middle 18.4 4.5 18.4 8.1 31.3 116. 2.6 6 0.4 8.0 0.3 18.4 8.1 31.3 9.0 2.5 2.5 8.1 115.8 115.8 9.0 9 Rottom 18.4 31.3 8.0 0.3 18.4 1.0 0.1 291 18.5 8.1 31.1 8.4 3.8 4 108.1 18.5 8.1 31.1 107.9 Surface 1.0 0.1 300 18.5 8.1 31.1 107. 8.4 3.7 6 SR5A 10:16 3.7 Middle 816575 810682 Moderate Sunny 2.7 0.1 290 18.5 8.6 4.1 Bottom 18.5 8.1 31.1 110.9 8.6 0.1 305 18.5 8.1 31.1 8.6 4.0 1.0 0.1 259 18.4 8.1 31.0 3.3 4 Surface 18.4 8.1 31.0 113.5 1.0 0.1 270 18.4 8.1 31.0 113. 8.9 3.4 5 SR6A Sunny Moderate 09:47 Middle 817986 814738 3.0 0.1 250 18.4 8.7 3.4 5 Bottom 8.1 31.0 111.3 8.7 3.0 0.1 258 18.4 8 1 31 (3.4 6 1.0 0.4 22 18.3 8.3 29.5 9.0 1.2 8.3 113.9 Surface 29.5 1.0 0.4 22 18.3 8.3 29.5 9.0 1.3 4 9.5 0.3 44 18.3 8.2 29.7 8.8 3.2 5 5 SR7 Sunny Calm 09:12 19.0 Middle 8.2 29.7 111.2 823644 823733 9.5 0.4 45 18.3 8.2 29.7 8.8 3.3 18.0 0.3 64 18.2 8.2 29.8 109.2 8.6 4.2 6 Bottom 18.2 8.2 29.8 109.2 8.6 18.0 0.3 64 18.2 8.2 29.8 109. 8.6 4.2 7 1.0 18.7 8.3 28.8 118.4 9.3 1.5 8 Surface 18.7 8.3 28.8 118.4 1.0 18.6 8.3 28.8 118.3 9.3 1.6 7 9.3 . . 811605 820391 SR8 Sunny Calm 10:42 3.8 Middle -2.8 18.6 2.4 7 8.3 28.8 116.8 9.2 Bottom 18.6 8.3 28.8 116.7 9.2

DA: Depth-Averaged

Water Quality Monitoring Results on 04 February 21 during Mid-Ebb Tide Turbidity(NTU) Suspended Solids Total Alkalinity DO Saturation Dissolved Chromium Salinity (ppt) Coordinate Coordinate Nickel (µg/L) Weather Sampling Water Water Temperature (°C) Monitoring Current Speed Oxvaen (mg/L) (maga) Sampling Depth (m) HK Grid HK Grid Station Direction Condition Time Depth (m) (m/s) Average Value Average Average Value Average Value DA Value DA Value DA Value DA (Northing) Value DA Value DA Condition Value Value (Easting) 18.8 0.2 1.0 229 18.8 2.9 <2 4.4 41 0.2 213 18.4 8.4 32.7 124.6 9.6 2 88 <0.2 0.8 124.4 804244 C1 Sunny Moderate 17:46 8.4 32.8 815640 8.0 4.1 0.2 228 18.4 8.4 32.8 124.2 9.6 4.5 3 89 <0.2 0.8 7.2 0.2 190 18.3 8.3 33.1 116.3 9.0 5.3 4 90 <0.2 0.8 Bottom 8.3 33.1 116.1 9.0 7.2 0.2 200 18.3 8.3 33.1 115 9 9.0 5.3 5 91 <0.2 0.9 1.0 0.3 80 19.1 8.3 27.7 9.5 1.8 87 < 0.2 1.6 Surface 8.3 27.7 121.2 <0.2 1.0 0.3 81 19.1 8.3 9.5 1.8 2 86 1.5 6.3 0.3 78 19.0 8.4 28.7 9.6 2.2 3 89 89 <0.2 1.4 C2 Fine Moderate 16:37 12.5 Middle 8.4 28.7 122.7 89 825658 806946 79 0.3 19.0 8.4 28.7 9.6 11.5 0.4 18.7 8.4 3.3 2 1.4 99 29.7 122. 9.6 91 <0.2 Bottom 18.8 8.4 29.6 122.6 9.6 3.1 9.6 1.5 11.5 0.4 105 18.8 8.4 29.6 91 <0.2 0.4 18.7 1.0 8.3 88 1.3 29.5 9.2 < 0.2 Surface 18.7 8.3 29.5 117.8 1.2 1.0 18.7 117. 1.7 4 88 <0.2 0.4 78 8.3 29.5 9.2 89 1.8 0.9 18.5 8.7 4 <0.2 5.9 5.9 90 90 0.4 8.3 30.0 C3 Fine Moderate 18:42 11.8 Middle 18.5 8.3 30.0 110.4 90 822107 817804 1.0 18.5 8.6 0.4 8.3 30.0 5 <0.2 0.9 10.8 0.3 111 18.3 8.3 30.3 8.5 2.1 92 108.0 8.3 8.5 Bottom 18.3 30.3 108.0 10.8 0.3 111 18.3 8.3 30.3 108.0 8.5 2.1 4 93 <0.2 0.9 0.1 189 18.7 4 8.4 9.7 <0.2 0.8 Surface 18.7 8.4 31.7 125.7 1.0 0.1 199 18.7 8.4 31.7 125.6 9.7 2.9 4 87 <0.2 0.8 9.7 807128 IM1 Sunny Calm 17:25 5.0 Middle 89 817965 0.8 4.0 0.1 182 18.6 8.4 9.5 4.5 4 91 <0.2 0.7 Bottom 18.6 8.4 31.9 122.5 9.5 4.0 0.1 187 18.6 8.4 31.9 9.5 4.5 0.8 0.1 169 18.4 8.4 31.9 9.7 9.7 5 88 <0.2 0.7 Surface 18.4 8.4 31.9 125.3 1.0 0.1 181 18.4 4.1 4 89 <0.2 0.7 0.8 0.7 3.5 0.1 180 18.4 4.3 5 <0.2 <0.2 <0.2 8.4 9.5 90 123.0 806161 Sunnv Moderate 17:18 Middle 8.4 32.2 818157 0.1 181 18.4 4.4 4 3.5 5.9 0.1 241 18.4 8.4 32.3 9.3 5.9 5 93 Bottom 18.4 8.4 32.3 120.4 9.3 93 5.9 0.1 247 18.4 8.4 32 3 6.0 6 93 <0.2 0.7 0.6 1.0 0.1 172 18.4 8.4 32.0 124 9.6 2.4 4 88 <0.2 Surface 8.4 32.0 124.1 1.0 0.1 185 18.4 8.4 32.1 9.6 2.4 3 88 <0.2 0.7 0.7 0.7 0.7 3.6 0.1 153 18.4 8.4 9.6 4.1 4 90 <0.2 IM3 Sunny Moderate 17:11 7.1 Middle 8.4 123.5 818766 805572 91 92 <0.2 3.6 0.1 166 18.4 8.4 4.2 6.1 5.0 4 0.1 159 18.3 8.4 32.4 9.3 119.5 9.3 32.4 5.0 5 6.1 0.1 174 18.3 8.4 93 <0.2 2.7 1.0 0.1 225 18.5 8.4 32.2 122 9.5 9.5 3 85 <0.2 0.6 Surface 18.5 8.4 32.2 122.5 86 1.0 18.5 8.4 4 <0.2 0.2 244 32 2 4.7 4.2 198 4 5 88 0.8 0.1 18.4 8.4 32.3 9.4 <0.2 IM4 Sunny Moderate 17:02 Middle 18.4 8.3 32.3 121.9 819718 804616 9.4 4.7 88 4.2 0.1 205 18.4 8.3 32.3 4.8 4.5 4 7.3 7.3 0.1 203 18.4 8.3 8.3 9.4 91 <0.2 0.7 9.4 Rottom 18.4 8.3 32.3 120.9 18.4 0.1 215 90 < 0.2 0.7 1.0 0.2 256 18.4 1.2 5 85 8.4 32.0 121. 9.4 <0.2 Surface 18.4 8.4 32.0 121.3 1.0 8.4 9.4 6 <0.2 0.7 0.2 281 18.4 1.2 86 3.5 0.1 299 18.4 9.4 4.4 5 86 <0.2 0.7 8.4 32.0 IM5 16:52 8.4 32.0 120.5 87 820736 804845 0.7 Sunny Moderate Middle 18.4 3.5 327 18.4 8.4 4.6 4 88 < 0.2 0.7 0.1 32.0 5.5 <0.2 0.7 89 5.9 0.0 275 295 18.4 8.4 9.2 4 8.4 32.0 118.8 9.2 Bottom 18.4 32.0 5.9 0.0 18.4 8.4 1.3 1.3 1.3 1.9 1.0 0.2 231 18.7 8.4 30.3 124.0 9.7 3 89 <0.2 Surface 18.7 8.4 30.4 124.0 1.0 0.2 236 18.7 8.4 30.5 123.9 9.6 1.9 3 87 <0.2 3.7 0.1 236 18.6 8.4 31.4 4.4 4 89 <0.2 16:43 7.4 Middle 18.6 8.4 31.4 123.1 821064 805838 IM6 Sunny Moderate 3.7 0.1 254 18.6 8.4 31.4 123. 9.6 4.6 5 90 <0.2 1.3 6.4 0.1 221 18.5 8.4 120.2 9.3 5.4 5 92 <0.2 1.4 Bottom 18.5 8.4 31.6 120.1 9.3 1.3 6.4 0.1 18.5 8.4 31.6 4 238 1.0 0.2 235 18.7 8.4 29.7 122. 9.6 1.5 88 <0.2 1.2 Surface 18.7 8.4 29.8 122.6 1.0 0.2 237 18.7 8.4 29.9 122.0 9.6 1.6 3 88 <0.2 1.4 <0.2 1.2 4.3 0.1 176 18.5 8.4 31.4 9.5 4.3 3 90 122.2 IM7 Sunny Moderate 16:36 Middle 8.4 31.4 122.2 821331 806821 4.3 0.1 179 18.5 8.4 31.4 9.5 4.2 4 91 7.6 0.1 185 18.5 8.4 31.4 9.3 5.7 4 92 <0.2 1.3 Bottom 8.4 31.4 119.3 9.3 7.6 0.1 185 18.5 8.4 31.4 110 5.7 5 92 <0.2 1.3 1.0 0.3 111 19.0 8.3 28.1 121. 9.5 2.3 2 87 < 0.2 1.4 121.6 Surface 8.3 28.1 1.3 1.0 0.3 114 19.0 8.3 28.1 121.8 9.6 2.3 3 88 <0.2 39 0.3 89 18.8 8.4 29.5 124.6 9.8 9.7 2.4 3 89 89 <0.2 1.4 IM8 Fine Moderate 16:51 7.7 Middle 18.8 8.4 29.5 124.6 89 821845 808143 3.9 0.4 91 18.8 8.4 29.5 124.6 2.4 < 0.2 6.7 0.3 72 18.7 8.4 30.0 123 9.7 3.3 2 92 <0.2 1.4 8.4 Bottom 18.7 30.0 123.7 9.7 18.7

DA: Depth-Averaged

Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Water Quality Monitoring Results on 04 February 21 during Mid-Ebb Tide DO Saturation Suspended Solids Total Alkalinity Chromium Salinity (ppt) Turbidity(NTU) Coordinate Coordinate Nickel (µg/L) Weather Sampling Water Water Temperature (°C) Monitoring Speed Current Oxvaen (mg/L) (ppm) Sampling Depth (m) HK Grid HK Grid Station Direction Time (m/s) Average Average Value Average Value DA Value DA Value DA Value DA Value DA Value DA Condition Condition Depth (m) Value Value Average Value (Northing) (Easting) 18.9 0.2 Surface 8.4 28.1 121.2 1.0 82 18.9 2.0 2.1 1.3 3.5 0.2 56 18.9 8.4 29.0 125. 9.8 3 89 <0.2 124.9 808832 IM9 Fine Moderate 16:57 7.0 8.4 29.0 822086 3.5 0.2 59 18.8 8.4 29.0 124.8 9.8 2.1 2 90 <0.2 1.4 6.0 0.1 104 18.7 8.4 29.8 122.5 9.6 2.8 2 91 <0.2 1.4 Bottom 8.4 29.8 122.5 9.6 6.0 0.1 112 18.7 8.4 29.8 122.4 9.6 2.8 2 91 <0.2 1.3 1.0 0.6 98 18.9 8.3 28.3 9.2 1.8 < 0.2 1.3 Surface 8.3 28.4 117.4 1.0 0.6 99 18.9 8.3 28.4 9.2 1.8 <2 87 <0.2 1.3 4.0 0.6 85 18.8 8.3 28.5 9.1 1.9 2 89 89 <0.2 1.3 IM10 Moderate 17:04 7.9 Middle 8.3 28.5 116.2 822389 809796 8.3 < 0.2 4.0 0.6 85 18.8 28.5 9.1 6.9 0.6 18.8 8.3 2 1.4 98 28.5 9.1 1.9 91 < 0.2 Bottom 18.8 8.3 28.5 115.7 9.1 1.4 6.9 0.6 102 18.8 8.3 19 91 28.5 115 **-**0 2 0.5 19.1 1.0 1.9 88 8.3 28.4 9.3 1.3 Surface 19.1 8.3 28.4 118.5 1.0 1.8 87 1.4 0.5 111 19.1 8.3 28.4 118. 9.3 2 <0.2 92 1.9 0.2 1.4 18.8 9.0 3 90 89 3.9 0.4 8.3 29.0 IM11 Fine Moderate 17:14 7.8 Middle 8.3 29.0 115.1 89 822072 811465 18.8 0.5 94 8.3 29.0 1.4 6.8 0.4 90 18.7 8.3 29.3 8.8 2.0 3 91 <0.2 18.7 8.3 111.8 8.8 Bottom 29.3 6.8 0.4 90 18.7 8.3 29.3 8.8 2.0 3 91 <0.2 1.6 0.4 18.9 <0.2 8.3 29.1 Surface 18.9 8.3 116.3 29.1 1.0 0.4 148 18.9 8.3 29.1 116.3 1.8 3 86 <0.2 1.5 4.8 0.4 156 18.8 1.8 3 89 <0.2 1.4 8.3 29.1 9.1 812050 IM12 Fine Moderate 17:20 9.6 Middle 18.8 8.3 29.1 115.6 821459 4.8 18.7 8.3 1.7 90 <0.2 1.3 0.4 166 3 8.6 0.3 122 18.7 8.3 29.2 9.0 3.1 <2 91 <0.2 1.3 18.8 8.3 115.0 9.0 Rottom 29.2 8.6 0.3 122 18.8 8.3 114 9.0 3.2 1.4 18.9 8.3 29.1 2.1 3 9.0 Surface 18.9 8.3 114.4 29.1 1.0 18.9 9.0 2.2 3 2.4 Fine Calm 18:02 Middle 819982 812656 2.4 3.7 18.9 8.4 29.1 8.9 2.6 4 Bottom 18.9 8.4 29.1 113.2 8.9 3.7 18.9 8.4 29 1 113 8.9 2.7 4 1.0 0.1 69 18.8 8.3 29.1 114.6 9.0 89 <0.2 1.3 Surface 18.8 8.3 29.1 114.7 1.0 0.1 75 18.8 8.3 29.1 114.7 9.0 2.1 4 88 < 0.2 1.3 9.0 SR2 Moderate 18:21 5.0 Middle 821448 814180 4 0 1.8 91 0.2 qq 18.6 8.3 29.6 8.9 3 <0.2 11 112.8 8.9 Bottom 4 0 107 18.6 83 29.6 19 3 0.3 91 r0 2 1.0 1.0 0.3 117 19 1 8.4 27.8 123.7 9.7 9.7 1.8 2 Surface 8.4 27.8 123.8 19 1 8.4 27 A 3 1.0 0.3 120 123 1.8 5.0 2.1 3 0.2 124 19.1 8.4 28.3 124.5 9.7 SR3 Moderate 16:45 Middle 19.1 124.5 822128 807553 5.0 19.1 8.4 3 0.2 130 8.9 0.2 98 18.7 8.4 8.4 121.1 9.5 3.1 3.1 3 Bottom 18.7 8.4 30.0 9.5 18.7 8.9 0.2 98 1.0 18.7 0.3 56 8.4 31.9 129.9 10.0 2.6 3 Surface 18.7 8.4 31.9 130.0 10.0 1.0 0.3 57 18.7 8.4 31.9 130. 2.7 3 4.6 63 18.6 4.6 3 0.3 8.4 . 32.0 129.6 SR4A 18:07 8.4 32.0 129.5 817172 807791 Fine Calm 9.1 Middle 18.6 4.6 18.6 8.4 4.7 3 0.3 66 32.0 129. 5.8 8.1 0.3 18.6 8.4 9.6 9.6 3 8.4 32.0 124.6 124.2 9.6 Rottom 18.6 32.0 8.1 0.3 18.6 8.4 1.0 0.0 19.2 8.3 31.4 1.6 6 118. 9.1 19.2 8.3 31.4 118.6 Surface 1.0 0.0 19.1 8.3 31.4 118. 9.1 1.6 6 SR5A 4.0 Middle 816608 810686 Fine Calm 18:24 3.0 0.1 18.8 9.1 3.2 6 Bottom 18.8 8.3 31.7 117.4 9.1 0.1 18.8 8.3 31.7 9.0 3.3 3.0 1.0 0.0 110 19.0 8.4 30.8 112.0 3.4 Surface 19.0 8.4 30.8 112.6 1.0 0.0 113 19.0 8.4 30.8 112. 8.7 3.5 7 SR6A Fine Calm 18:53 4.6 Middle 817965 814726 3.6 0.0 88 19.0 8.4 30.8 8.6 3.7 6 Bottom 8.4 30.8 111.7 8.6 3.6 0.0 94 19.0 8.4 30.8 8.6 3.8 7 1.0 0.4 86 18.5 8.3 30.0 8.8 17 112.2 Surface 8.3 30.0 1.0 0.4 92 18.5 8.3 30.0 8.8 1.6 2 8.0 0.3 73 18.5 8.3 30.0 8.7 1.6 4 SR7 Fine Moderate 19:14 16.0 Middle 8.3 30.0 111.5 823627 823737 8.0 0.4 75 18.5 8.3 30.0 8.7 1.6 15.0 0.2 10 18.4 8.3 30.2 109.1 8.6 1.9 3 Bottom 18.4 8.3 30.2 109.1 15.0 0.2 10 18.4 8.3 30.2 109. 8.6 1.8 4 1.0 18.8 8.3 29.1 9.1 2.4 2 Surface 18.8 8.3 29.1 115.5 1.0 18.8 8.3 29.1 115. 9.0 2.4 2 --820397 811645 SR8 Fine Moderate 17:31 4.8 Middle -3.8 18.7 2.7 4 8.3 29.1 113.2 8.9 18.7 8.3 29.1 113.2 8.9

DA: Depth-Average

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

Water Quality Monitoring Water Quality Monitoring Results on 04 February 21 during Mid-Flood Tide DO Saturation Suspended Solids Total Alkalinity Chromium Salinity (ppt) Turbidity(NTU) Coordinate Coordinate Nickel (µg/L) Weather Sampling Water Water Temperature (°C) Monitoring Current Speed Oxvaen (mg/L) (maga) Sampling Depth (m) HK Grid HK Grid Station Direction Condition Time Depth (m) (m/s) Average Average Value Average Value DA Value DA Value DA Value DA (Northing) Value DA Value DA Condition Value Value Average Value (Easting) 18.2 0.4 Surface 18.2 8.3 32.3 116.9 1.0 0.4 41 18.2 32.3 116. 9.1 2.1 88 <0.2 0.7 18.1 9.0 3.9 5 0.7 91 <0.2 C1 8.3 32.5 115.0 804251 12:01 8.6 Middle 18 1 90 815625 Sunny Moderate 0.7 18.1 8.3 32.5 114.9 8.9 4.0 6 91 <0.2 0.6 0.4 7.6 0.4 35 18.1 8.3 32.6 114.0 8.9 5.8 5 92 <0.2 0.7 8.9 Bottom 18 1 8.3 32.6 113.9 8.9 5.9 0.9 18.1 32.6 <0.2 7.6 0.4 8.3 6 92 1.0 19.2 1.8 87 0.4 < 0.2 8.4 1.0 Surface 19.2 8.4 27.3 119.4 19.1 9.4 1.8 2.3 2 2 2 86 1.0 0.4 8.4 <0.2 89 1.6 6.2 0.4 18.8 8.3 9.1 28.3 C2 Fine Moderate 13:10 124 Middle 18.8 8.3 28.3 116.1 89 825696 806950 28.3 9.1 2.3 89 <0.2 6.2 0.4 31 18.8 8.3 11.4 0.3 37 18.8 8.4 114.5 9.0 2.6 2 90 <0.2 1.6 28.4 8.4 114.5 9.0 Bottom 18.8 28.4 11.4 0.3 37 18.8 8.4 28.4 2.5 2 91 <0.2 1.6 0.5 18.7 8.3 1.7 88 <0.2 1.2 Surface 18.7 8.3 29.1 111.3 1.0 0.5 280 18.7 8.3 29.1 8.7 1.7 3 87 <0.2 1.2 1.3 5.6 259 18.5 1.7 2 91 91 <0.2 0.5 8.3 29.3 108. 8.5 C3 817815 Fine Moderate 10:46 Middle 18.5 8.3 29.3 108.2 822132 1.3 5.6 0.5 18.5 8.3 1.7 10.1 0.4 264 18.4 8.3 29.7 106.2 8.4 2.2 <2 93 <0.2 1.3 Bottom 18.5 8.3 29.7 106.2 8.4 10.1 0.4 289 18.5 8.3 29.7 106 8.4 2.2 3.7 <2 93 <0.2 1.2 1.0 0.2 18.6 8.3 31.4 85 <0.2 1.0 Surface 18.6 8.3 31.4 117.1 1.0 18.6 8.3 31.4 117. 9.1 3.7 3 86 <0.2 1.1 0.2 IM1 Sunny Calm 12:20 5.2 Middle 817925 4.2 0.1 330 18.4 8.4 32.0 118 9.2 5.3 90 < 0.2 1.0 Bottom 18.4 8.4 32.0 118.1 9.2 4.2 0.1 340 18.4 8.4 32.0 1177 9.1 5.3 2 90 <0.2 1.0 1.0 18 18.4 3.5 85 0.3 8.4 31.7 124.2 9.7 6 < 0.2 0.9 Surface 8.4 31.7 124.5 1.0 0.4 18 18.4 8.4 31.8 124.7 9.7 3.6 5 86 <0.2 0.8 3.5 0.3 342 18.3 8.4 32.1 9.8 4.0 7 88 <0.2 0.9 IM2 Moderate 12:28 7.0 Middle 8.4 32.1 125.5 818159 806160 <0.2 0.8 0.9 0.9 3.5 0.3 345 18.3 8.4 9.8 4.1 6 89 5.7 6 6.0 0.2 326 18.2 8.4 32.2 9.6 90 <0.2 8.4 32.2 123.2 9.6 6.0 9.6 5.8 0.2 338 18.2 8.4 32.2 6 91 <0.2 123 1.0 0.4 346 18.3 8.4 31.8 94 2.3 85 < 0.2 0.9 Surface 8.4 31.8 121.3 1.0 2.4 86 <0.2 0.2 0.2 <0.2 0.4 351 18.3 8.4 9.4 6 31.9 1.0 0.9 0.9 4.0 3.6 0.3 18.2 9.4 6 89 340 8.4 31.9 IM3 Sunny Moderate 12:36 7.2 Middle 18.2 8.4 31.9 121.0 88 818768 805598 18.2 18.2 6 4.1 89 90 3.6 0.3 352 8.4 31.9 9.4 5.2 6.2 0.3 304 8.4 32.0 118. 9.3 118.8 Rottom 18.2 8.4 32.0 9.3 6.2 0.3 305 18.2 8.4 32.0 118.7 9.2 5.2 6 90 <0.2 1.0 1.0 0.6 18.3 1.1 8.4 31.5 116.2 9.1 2.3 4 88 <0.2 Surface 18.3 8.4 31.6 116.2 1.0 0.6 18.3 8.4 2.3 4 88 <0.2 1.1 4.3 4.6 4 90 <0.2 0.9 0.6 352 18.2 8.4 9.0 IM4 Moderate 12:46 8.6 Middle 18.2 8.4 31.7 115.5 819730 804618 Sunny 4.3 0.6 353 349 18.2 8.4 9.0 4.6 5 7 91 <0.2 0.5 5.4 91 18.2 8.4 8.9 8.4 113.9 Bottom 18.2 31.7 8.9 7.6 0.5 321 18.2 5.5 6 <0.2 1.2 1.0 1.0 0.8 19 18.3 8.4 31.6 2.6 8 86 <0.2 118.2 9.2 Surface 18.3 8.4 31.6 118.2 1.0 19 18.3 9.2 2.7 8 86 <0.2 0.8 9.2 3.5 0.7 18 18.3 4.4 7 89 <0.2 1.0 8.4 9.1 IM5 12:55 7.0 Middle 18.3 8.4 31.7 116.6 820743 804877 Sunny Moderate 3.5 0.8 18.3 4.6 <0.2 6 1.5 6.0 0.6 18.3 8.4 9.0 5.2 5.2 91 <0.2 18.3 8.4 31.7 115.4 9.0 Bottom 8.4 31.7 6.0 0.6 18.3 91 < 0.2 1.0 0.1 278 18.8 8.4 29.5 1.8 4 86 <0.2 1.6 1.6 Surface 8.4 29.6 118.7 1.0 0.1 293 18.8 8.4 29.7 118 9.3 1.9 3 86 <0.2 1.6 3.8 0.2 70 18.6 8.4 30.6 4.3 5 89 <0.2 Sunny Moderate 13:02 Middle 18.6 8.4 30.7 117.7 821073 805841 4.1 <0.2 3.8 0.2 83 18.6 8.4 30.7 117 9.2 6 89 9.0 5.2 5.3 1.6 6.6 0.3 71 18.6 8.4 6 90 <0.2 115.9 9.0 6.6 0.3 74 18.6 8.4 6 91 1.6 1.5 1.0 0.1 278 18.8 8.4 29.0 2.2 3 86 <0.2 Surface 18.8 8.4 120.0 94 2.2 4.7 87 1.0 0.1 305 18.8 84 29 1 119 3 <0.2 5 1.6 4.4 102 89 <0.2 0.2 18.6 8.4 29.5 118.6 9.3 IM7 Moderate 13:10 Middle 18.6 8.4 29.7 118.5 821353 806849 Sunny 4.9 89 4.4 0.2 103 18.6 8.4 29.8 118. 4 7.8 0.2 124 18.5 8.4 31.2 116. 9.1 5.4 4 90 <0.2 1.5 Bottom 18.5 8.4 31.2 116.5 7.8 0.2 135 18.5 8.4 5.4 5 <0.2 1.6 1.0 0.2 113 19.0 8.3 27.8 116.0 9.2 1.9 4 86 < 0.2 1.6 Surface 19.0 8.3 27.9 116.5 27.9 1.4 19.0 8.3 87 <0.2 1.0 0.2 119 1.9 4 4.0 8.3 8.9 2.0 4 89 <0.2 1.4 0.1 109 18.8 28.4 113.0 8.3 28.4 113.6 821833 808122 IM8 Fine Moderate 12:37 7.9 Middle 18.8 89 1.5 2.0 89 1.5 8.9 4.0 0.1 109 18.8 8.3 28.4 3 1.4 6.9 0.1 119 18.8 8.3 28.5 2.1 91 <0.2 112. 8.9 3 18.8 8.3 28.5 112.7 8.9 Rottom

DA: Depth-Average

Water Quality Monitoring Results on 04 February 21 during Mid-Flood Tide DO Saturation Suspended Solids Total Alkalinity Chromium Salinity (ppt) Turbidity(NTU) Coordinate Coordinate Nickel (µg/L) Weather Sampling Water Water Temperature (°C) Monitoring Speed Current Oxvaen (mg/L) (ppm) Sampling Depth (m) HK Grid HK Grid Station Direction Time (m/s) Average Average Value Average Value DA Value DA Value DA Value DA (Northing) Value DA Value DA Condition Condition Depth (m) Value Value Average Value (Easting) 18.8 0.1 Surface 8.3 28.5 1.0 0.1 102 18.8 2.3 3.6 0.1 35 18.7 8.3 28.5 8.9 5 89 <0.2 1.2 113.2 808797 IM9 Fine Moderate 12:31 7.1 8.3 28.5 2.3 822085 3.6 0.1 35 18.7 8.3 28.5 113.2 8.9 2.3 4 89 <0.2 1.1 6.1 0.1 12 18.7 8.3 28.5 112.9 8.9 2.3 4 91 <0.2 1.3 Bottom 8.3 28.5 112.9 8.9 6.1 0.1 12 18.7 8.3 28.5 112 9 8.9 2.3 5 91 <0.2 1.1 2.5 1.0 0.5 294 18.8 8.3 28.7 113. 9.0 4 86 < 0.2 1.3 Surface 8.3 28.7 113.8 1.0 0.6 297 18.8 8.3 28.7 9.0 2.5 3 86 <0.2 1.1 4.2 0.5 293 18.7 8.3 28.7 8.9 2.6 2.6 5 89 90 <0.2 1.2 IM10 Moderate 12:24 8.3 Middle 8.3 28.7 113.4 822405 809787 4.2 0.5 297 18.7 8.3 < 0.2 28.7 8.9 7.3 0.4 18.8 5 1.2 293 8.4 28.6 8.8 2.6 92 < 0.2 Bottom 18.8 8.4 28.6 112.0 8.8 7.3 6 1.1 0.4 18.8 8.4 8.8 2.5 91 306 28.6 **-**0 2 1.0 0.5 18.7 8.3 8.9 1.1 Surface 18.7 8.3 29.1 113.0 1.2 1.0 18.7 2.3 7 0.5 301 8.3 29.1 8.9 86 <0.2 89 1.0 18.7 2.4 5 6 4.0 8.9 90 90 <0.2 0.4 282 292 8.3 29.1 IM11 Fine Moderate 12:13 8.0 Middle 18.7 8.3 29.1 112.8 89 822069 811451 4.0 18.7 0.4 8.3 1.1 7.0 0.4 280 18.7 8.3 29.1 8.8 2.3 5 91 <0.2 18.7 111.9 8.8 Bottom 8.3 29.1 7.0 0.4 299 18.7 8.3 29.1 8.8 2.2 5 91 <0.2 1.1 0.6 18.6 <0.2 8.8 4 8.3 29.1 Surface 18.6 8.3 111.7 29.1 1.0 0.6 277 18.6 8.3 29.1 8.8 2.4 5 87 <0.2 1.1 4.3 0.6 279 18.6 8.8 2.7 5 90 <0.2 1.1 8.3 29.1 111.4 821461 812038 IM12 Fine Moderate 12:07 8.6 Middle 18.6 8.3 29.1 4.3 18.6 8.3 8.8 2.8 5 90 <0.2 1.1 0.6 282 0.5 280 18.6 8.3 29.1 8.7 3.1 8 92 <0.2 18.6 8.3 29 1 111.0 8.7 Rottom 7.6 0.5 290 18.6 8.3 29.1 8.7 3.1 1.1 18.7 8.3 29.1 8.4 1.9 5 Surface 18.7 8.3 29.1 107.0 1.0 18.7 8.4 2.0 4 2.5 Fine Calm 11:24 Middle 819973 812656 2.5 4 0 18.7 8.3 29.1 8.4 1.9 6 Bottom 18.7 8.3 29.1 106.8 8.4 4 0 18.7 83 29 1 106 8.4 19 6 1.0 0.2 354 18.6 8.3 29.1 8.8 2.7 6 89 <0.2 1.0 Surface 18.6 8.3 29.1 111.4 1.0 0.2 326 18.6 8.3 29.1 8.8 2.6 5 89 < 0.2 1.1 8.8 SR2 Moderate 11:07 4.6 Middle 821456 814176 3.6 357 18.6 2.5 91 0.2 8.3 29.1 8.8 3 <0.2 1.1 111.2 Bottom 328 18.6 83 29 1 4 3.6 0.2 91 r0 2 1.0 1.0 0.0 51 18 9 8.4 27.6 120. 9.5 9.5 1.8 4 Surface 8.4 27.6 120.3 18.9 8.4 27.6 1.8 5 1.0 0.0 54 4.9 2.0 1.9 3 0.1 38 18.8 8.3 28.1 9.2 SR3 Moderate 12:50 9.7 Middle 18.8 8.3 116.5 822167 807567 4.9 18.8 8.3 0.1 38 28.1 3 8.7 0.1 18.8 18.8 8.4 8.4 28.2 114.6 9.0 3.1 3.1 Bottom 18.8 8.4 28.2 9.0 8.7 0.1 28.2 1.0 0.0 300 18.4 8.3 31.7 8.7 2.1 4 Surface 18.4 8.3 31.7 111.8 1.0 8.7 5 0.0 309 18.4 8.3 31.7 111. 2.3 4.6 4.6 0.0 68 18.4 8.7 5 31.7 . 8.3 SR4A 8.3 31.7 111.7 817172 807795 Sunny Calm 11:36 9.2 Middle 18.4 4.6 68 18.4 8.3 31.7 4.6 4 0.0 5.6 5.7 8.2 0.0 358 18.3 8.3 31.7 8.6 6 5 8.3 110.9 8.6 Bottom 18.3 31.7 0.0 329 18.3 8.3 1.0 0.2 301 18.5 8.3 31.3 2.6 5 107.2 8.3 Surface 18.5 8.3 31.3 107.3 1.0 0.2 322 18.5 8.3 8.3 2.6 5 SR5A 3.8 Middle 816577 810695 Sunny Calm 11:18 2.8 0.2 302 18.5 8.3 4.8 Bottom 18.5 8.3 31.3 107.0 8.3 2.8 305 18.5 8.3 31.3 8.3 4.8 0.2 1.0 0.1 281 18.3 8.4 30.8 3.6 Surface 18.3 8.4 30.8 107.3 1.0 0.1 286 18.3 8.4 30.8 107. 8.4 3.7 5 SR6A Sunny Calm 10:34 3.7 Middle 817977 814753 2.7 0.1 301 18.3 8.4 30.9 8.3 5.1 6 Bottom 8.4 30.9 106.3 8.3 2.7 0.1 322 18.3 8.4 30.9 5.0 7 1.0 0.1 231 18.4 8.3 29.5 108.6 8.6 17 8.3 108.6 Surface 29.5 1.0 0.1 247 18.4 8.3 29.5 108.5 8.6 1.7 5 79 0.2 235 18.4 8.3 29.5 107.9 8.5 1.5 5 5 SR7 Moderate 10:17 15.7 Middle 8.3 29.5 107.9 823625 823724 Fine 7.9 0.2 237 18.4 8.3 29.5 8.5 1.5 14.7 0.2 221 18.4 8.3 29.5 106.6 8.4 2.4 6 Bottom 18.4 8.3 29.5 106.6 14.7 0.2 223 18.4 8.3 29.5 106. 8.4 2.3 7 1.0 19.0 8.3 28.6 8.9 2.1 4 Surface 19.0 8.3 28.6 113.8 1.0 19.0 8.3 28.6 8.9 2.1 4 . . 820381 811632 SR8 Fine Moderate 11:57 4.9 Middle -3.9 18.7 2.1 6 8.3 28.6 8.8 Bottom 18.8 8.3 28.6 111.6 8.8

DA: Depth-Averaged

Water Quality Monitoring Results on 06 February 21 during Mid-Ebb Tide Turbidity(NTU) Suspended Solids Total Alkalinity DO Saturation Dissolved Chromium Salinity (ppt) Coordinate Coordinate Nickel (µg/L) Weather Sampling Water Water Temperature (°C) Monitoring Current Speed Oxvaen (mg/L) (maga) Sampling Depth (m) HK Grid HK Grid Station Direction Condition Time Depth (m) (m/s) Average Value Average Average Value Average Value DA Value DA Value DA Value DA (Northing) Value DA Value DA Condition Value Value (Easting) 18.1 0.2 8.3 1.0 233 18.2 9.4 5.0 <2 5.6 0.9 41 0.2 212 18.6 8.3 32.4 122.7 9.5 3 88 <0.2 08:22 122.7 815628 804255 C1 Sunny Moderate 8.3 32.4 0.9 4.1 0.2 230 18.6 8.3 32.4 122.7 9.5 5.6 2 89 <0.2 0.8 7.2 0.2 207 18.5 8.3 32.5 119.2 9.2 6.2 4 92 <0.2 0.9 Bottom 8.3 32.5 119.2 9.2 7.2 0.2 216 18.5 8.3 32.5 119 2 92 6.2 4 93 <0.2 0.9 19.0 1.0 0.2 135 8.3 27.6 123.2 2.4 85 < 0.2 1.7 Surface 8.3 27.6 123.2 <0.2 1.0 0.2 148 19.0 8.3 27.6 123. 9.7 2.4 3 86 1.7 5.8 0.5 154 19.0 8.3 28.8 9.0 2.0 2 87 86 <0.2 1.6 C2 Fine Moderate 09:41 11.5 Middle 8.3 28.8 115.3 825687 806957 5.8 0.5 158 8.3 19.0 28.8 9.0 10.5 0.5 144 18.8 8.2 2 1.2 29.2 108. 8.5 3.0 89 < 0.2 Bottom 18.8 8.2 29.2 108.9 8.5 8.5 3.0 1.2 10.5 0.5 153 18.8 8.2 108 9 89 <0.2 29.2 1.0 0.4 286 18.6 8.3 86 8.8 < 0.2 Surface 18.6 8.3 29.3 112.2 1.0 1.0 314 1.7 86 <0.2 0.4 18.6 8.3 29.3 112. 8.8 3 88 1.8 1.0 18.7 8.7 <0.2 3 88 88 5.8 257 271 8.2 29.8 C3 Cloudy Moderate 06:59 11.5 Middle 8.2 29.8 110.6 88 822088 817799 18.7 0.2 8.2 29.8 1.1 10.5 0.1 120 18.6 8.2 29.9 8.5 1.8 2 91 <0.2 108.5 8.2 8.5 Bottom 18.6 29.9 108.5 10.5 0.1 127 18.6 8.2 29.9 108.5 8.5 1.8 3 90 <0.2 1.0 0.1 18.5 31.8 5.6 8.3 <2 <0.2 122.8 9.5 Surface 18.5 8.3 31.8 122.8 1.0 0.1 200 18.5 8.3 31.8 122.7 9.5 5.4 <2 89 <0.2 0.9 9.5 807155 IM1 Moderate 08:45 4.2 Middle 817961 Sunny 3.2 0.1 212 18.5 8.3 9.4 5.4 2 92 <0.2 0.9 Bottom 18.5 8.3 31.9 121.1 9.4 3.2 0.1 228 18.5 8.3 31.9 9.4 5.4 0.9 0.1 168 18.4 8.3 31.2 9.6 9.6 5.0 <2 85 <0.2 1.0 Surface 18.4 8.3 31.2 122.6 1.0 0.1 178 18.4 5.1 <2 86 <0.2 1.0 0.9 1.0 3.1 0.1 170 18.6 5.1 2 <0.2 <0.2 <0.2 89 125.7 806165 Sunnv Moderate 08:52 Middle 8.3 32.0 818155 3.1 18.6 5.1 2 90 92 0.1 5.2 0.1 142 18.6 8.3 32.2 9.5 5.6 Bottom 18.6 8.3 32.2 123.3 9.5 5.2 0.1 143 18.6 83 32.2 5.6 4 93 <0.2 0.9 1.0 1.0 0.2 145 18.7 8.3 31.7 9.8 5.2 3 86 <0.2 Surface 8.3 31.7 126.6 1.0 0.2 158 18.7 8.3 31.7 9.8 5.2 2 87 < 0.2 0.9 0.9 0.9 0.9 3.3 0.1 143 18.6 8.3 5.3 <2 90 <0.2 IM3 Sunny Moderate 09:00 6.5 Middle 8.3 125.3 818785 805594 <0.2 3.3 0.1 153 18.6 6.0 <2 91 <2 94 5.5 0.1 182 18.7 8.3 32.2 9.3 5.9 121.2 9.3 5.9 0.1 18.7 83 32.2 -2 <0.2 5.5 186 93 1.0 0.4 178 18.8 8.3 30.2 125.9 9.8 5.0 <2 88 <0.2 1.3 Surface 18.8 8.3 30.2 125.9 1.0 83 5.0 <2 88 0.4 180 18.8 30.3 < 0.2 <2 <2 3.8 158 6.4 92 92 1.3 0.2 18.7 8.3 31.9 9.4 <0.2 IM4 Sunny Moderate 09:12 7.6 Middle 18.7 8.3 31.9 121.5 819708 804604 9.4 18.7 6.4 166 8.3 3.8 0.3 31.9 7.1 7.0 <2 <2 6.6 0.1 137 140 18.7 8.3 8.3 32.0 9.2 93 94 <0.2 1.3 Rottom 18.7 8.3 32.0 119.6 9.2 18.7 6.6 0.1 < 0.2 1.5 1.0 0.3 193 19.0 4.7 87 8.3 29.2 129.0 10.1 8 <0.2 Surface 19.0 8.3 29.3 128.9 197 8.3 29.3 10.0 4.7 <0.2 1.5 1.0 0.3 19.0 128. 8 87 3.6 0.3 201 18.8 4.8 3 88 <0.2 1.5 9.8 8.3 29.8 125.7 IM5 09:21 7.2 8.3 29.8 125.7 820742 804868 Sunny Moderate Middle 18.8 3.6 205 18.8 8.3 29.8 4.9 3 88 < 0.2 1.5 0.3 125. 1.5 6.1 <0.2 6.2 0.3 183 18.7 8.3 31.7 9.4 <2 2 91 8.3 121.0 121.6 94 Bottom 18.7 31.7 0.3 193 18.7 8.3 6.0 <0.2 1.6 1.6 1.5 1.0 0.1 208 19.0 8.3 9.9 4.6 5 87 <0.2 29.1 126.5 Surface 19.0 8.3 29.1 126.5 1.0 0.1 208 19.0 8.3 29.1 126. 9.9 4.7 5 86 <0.2 3.5 0.2 217 18.8 8.3 29.9 5.0 5 <0.2 123.4 09:32 7.0 Middle 18.8 8.3 29.9 123.4 821037 805835 IM6 Sunny Moderate 3.5 222 18.8 8.3 29.9 123.4 9.6 5.1 4 90 <0.2 1.5 0.2 6.0 0.1 204 18.7 8.3 121.5 9.4 5.7 3 92 <0.2 1.5 Bottom 18.7 8.3 31.5 121.5 9.4 0.1 219 18.7 8.3 5.7 1.4 1.0 0.1 192 19.0 8.3 29.2 128.4 4.7 84 <0.2 1.5 Surface 19.0 8.3 29.2 128.4 1.0 0.1 205 19.0 8.3 29.2 128. 10.0 4.7 3 86 <0.2 1.5 89 1.5 4.0 0.1 171 18.9 9.7 5.1 3 <0.2 29.6 IM7 Sunny Moderate 09:42 Middle 18.9 8.3 29.6 124.4 821361 806848 4.0 0.1 180 18.9 8.3 124. 9.7 5.1 3 90 <0.2 6.9 0.1 179 18.7 8.3 31.3 9.3 6.3 <2 93 <0.2 1.6 8.3 31.3 120.1 9.3 6.9 0.1 185 18.7 8.3 31 3 5.7 94 <0.2 1.5 1.0 0.1 165 19.0 8.4 27.5 125.: 9.9 2.1 85 < 0.2 1.5 Surface 8.4 27.5 125.2 1.3 1.0 0.2 174 19.0 8.4 27.5 125.1 9.9 2.1 3 86 <0.2 1.4 3.7 0.0 130 19.0 8.3 28.2 122.3 9.6 2.4 3 87 87 <0.2 IM8 Fine Moderate 09:10 7.3 Middle 19.0 8.3 28.2 122.2 87 821827 808136 3.7 0.0 139 19.0 8.3 28.2 9.6 2.5 < 0.2 6.3 0.1 116 19.0 8.3 28.8 9.4 3.0 4 89 <0.2 1.5 8.3 Bottom 19.0 28.8 119.6 9.4 19.0

DA: Depth-Averaged

Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Water Quality Monitoring Results on 06 February 21 during Mid-Ebb Tide DO Saturation Suspended Solids Total Alkalinity Chromium Salinity (ppt) Turbidity(NTU) Coordinate Coordinate Nickel (µg/L) Weather Sampling Water Water Temperature (°C) Monitoring Speed Current Oxvaen (mg/L) (ppm) Sampling Depth (m) HK Grid HK Grid Station Direction Time (m/s) Average Average Value DA Value DA Value DA Value DA Value DA Value DA Condition Condition Depth (m) Value Value Average Value Average Value (Northing) (Easting) 0.2 19.0 Surface 8.4 27.5 125.2 1.0 0.2 131 19.0 2.0 3.2 3.4 0.1 120 19 1 8.3 28.0 123. 9.7 2 87 <0.2 1.4 09:03 123.2 808817 IM9 Fine Moderate 8.3 28.0 822074 3.4 0.2 126 19.1 8.3 28.0 123.0 9.6 3.4 2 87 <0.2 1.3 5.8 0.2 98 19.1 8.3 28.2 119.1 9.3 4.1 4 89 <0.2 1.3 Bottom 19.1 8.3 28.2 119.1 9.3 5.8 0.2 qq 19 1 8.3 28.2 119 0 93 4.0 4 89 <0.2 1.4 1.0 0.3 129 19.1 8.3 28.0 123. 3.4 86 < 0.2 1.5 Surface 8.3 28.0 123.4 1.0 0.4 134 19.1 8.3 28.0 9.7 3.5 3 86 <0.2 1.4 3.5 0.3 123 19.1 8.3 28.1 9.6 3.2 3 87 86 <0.2 1.4 IM10 Moderate 08:55 6.9 Middle 8.3 28.1 122.5 822369 809816 3.5 <0.2 0.3 126 19.1 8.3 28.1 122. 9.6 5.9 19.1 8.3 5 1.3 0.3 116 28.1 120. 9.4 2.5 89 < 0.2 Bottom 19.1 8.3 28.1 120.2 9.4 4 1.4 5.9 0.3 19 1 8.3 94 2.5 90 122 28 1 120 **-**0 2 1.0 0.5 19.1 1.8 8.4 1.5 Surface 19.1 8.4 27.7 127.0 1.5 1.0 27.7 10.0 1.8 <2 86 0.5 125 19.1 8.4 126. < 0.2 9.8 1.8 4 87 87 1.4 119 19.0 9.7 4.0 0.4 8.3 28.0 <0.2 IM11 Fine Moderate 08:40 8.0 Middle 8.3 28.0 122.8 87 822052 811445 1.5 4.0 130 19.0 9.6 0.5 8.3 28.0 5 1.6 7.0 0.1 104 18.9 8.3 29.2 8.8 2.2 89 <0.2 112.5 112.5 8.8 Bottom 18.9 8.3 29.2 7.0 0.1 113 18.9 8.3 29.2 112.5 8.8 2.2 4 89 <0.2 1.4 0.4 18.9 4 <0.2 8.3 28.2 1.5 Surface 18.9 8.3 120.2 28.2 1.0 0.4 90 18.9 8.3 28.3 120.1 9.4 2.0 4 85 <0.2 1.6 4.4 0.2 84 19.0 8.8 2.2 3 87 <0.2 1.7 8.3 29.1 812052 IM12 Fine Moderate 08:31 8.8 Middle 19.0 8.3 29.1 112.0 821469 4.4 19.0 8.3 3 87 <0.2 1.6 0.2 0.1 18.8 8.2 29.5 8.5 2.2 90 <0.2 1.5 109. 18.8 8.2 109.3 8.6 Rottom 29.4 7.8 0.1 96 18.8 8.2 29.4 8.6 2.2 1.7 1.0 18.8 8.3 28.9 8.6 4 Surface 18.8 8.3 28.9 110.1 1.0 18.8 8.6 2.2 4 2.4 Cloudy Calm 07:44 Middle 819975 812659 2.4 3.7 18.9 8.3 29.2 8.1 2.2 3 Bottom 18.9 8.3 29.2 103.8 8.1 3.7 18.8 83 29 1 8 1 2.2 1.0 0.2 19 18.8 8.2 29.2 8.8 85 <0.2 1.0 Surface 18.8 8.2 29.2 111.8 1.0 0.2 20 18.8 8.2 29.2 8.7 2.2 2 85 < 0.2 1.1 SR2 Cloudy Moderate 07:25 4.0 Middle 821455 814161 3.0 2.3 89 0.2 17 18.7 8.2 29.2 8.6 4 <0.2 11 109.9 Bottom 18.7 3 11 3.0 0.2 18 8.2 29.2 109 89 r0 2 1.0 0.3 183 19.0 8.3 27.6 123.9 9.8 9.7 1.9 <2 Surface 8.3 27.6 123.8 83 27.6 1.0 0.3 192 19.0 123 2.0 -2 4.2 2.3 2.2 <2 2 0.1 208 19.0 8.3 28.1 120. 9.4 SR3 Moderate 09:17 Middle 19.0 8.3 28.1 120.4 822166 807565 9.4 4.2 221 8.3 28.2 0.1 19.0 7.3 0.1 20 18.9 18.9 8.3 8.3 9.3 9.2 3.0 2 Bottom 18.9 8.3 29.5 118.4 9.3 0.1 20 29.5 1.0 18.5 0.1 62 8.3 32.1 120.0 9.3 5.3 3 Surface 18.5 8.3 32.1 120.6 1.0 9.3 5.3 5.7 0.1 66 18.5 8.3 32.1 120. 4 3.8 0.1 18.6 2 9.3 . 8.3 32.3 SR4A 08:00 8.3 32.3 121.0 817171 807802 Sunny Calm 7.5 Middle 18.6 3.8 40 18.6 8.3 5.8 3 0.1 32.3 5.7 6.5 0.1 18.6 8.3 2 66 8.3 32.3 119.8 119.8 9.2 9.2 18.6 32.3 Rottom 6.5 0.1 18.6 8.3 5.8 1.0 0.0 228 18.8 8.2 31.5 5.5 2 107. 8.3 18.8 8.2 31.5 107.9 Surface 1.0 0.0 246 18.8 8.2 31.5 8.3 5.5 3 SR5A 07:40 3.3 Middle 816602 810703 Calm Sunny 2.3 0.0 217 18.8 8.3 5.6 Bottom 18.8 8.2 31.7 107.1 8.3 219 18.8 31.7 8.3 5.6 0.0 <2 1.0 0.0 58 18.7 8.2 30.8 6.4 Surface 18.7 8.2 30.8 111.5 1.0 0.0 58 18.7 8.2 30.8 8.7 6.4 5 SR6A Sunny Calm 07:09 3.8 Middle 817975 814742 2.8 0.0 85 18.7 30.8 8.7 6.3 4 Bottom 18.7 8.2 30.8 111.3 8.7 2.8 0.0 85 18.7 30.8 6.3 4 1.0 0.6 61 18.6 8.3 29.7 8.7 17 110.8 Surface 29.7 1.0 0.7 63 18.6 8.3 29.8 110 8.7 1.8 4 77 0.2 14 18.5 8.3 30.1 109.0 8.5 1.8 3 SR7 Cloudy Moderate 06:18 15.4 Middle 8.3 30.1 109.0 823619 823736 7.7 0.2 14 18.5 8.3 30.1 109.0 8.5 1.7 2 14.4 0.2 55 18.5 8.2 30.4 106.6 8.3 1.9 2 Bottom 8.2 30.4 106.6 8.3 14.4 0.2 59 18.4 8.2 30.4 106. 8.3 1.9 1.0 19.0 8.3 29.1 8.8 2.4 4 Surface 19.0 8.3 29.1 112.8 1.0 19.0 8.3 29.1 112.7 8.8 2.6 3 . . 08:19 820397 811628 SR8 Cloudy Moderate 4.3 Middle -3.3 18.9 3.2 2 8.3 29.2 8.7 18.9 8.3 29.2 111.4 8.7

DA: Depth-Average

Water Quality Monitoring Results on 06 February 21 during Mid-Flood Tide DO Saturation Dissolved Suspended Solids Total Alkalinity Chromium Salinity (ppt) Turbidity(NTU) Coordinate Coordinate Nickel (µg/L) Weather Sampling Water Water Temperature (°C) Monitoring Current Speed Oxvaen (mg/L) (maga) Sampling Depth (m) HK Grid HK Grid Station Direction Condition Time Depth (m) (m/s) Average Value Average Average Value Average Value DA Value DA Value DA Value DA Value DA Value DA Condition Value Value (Northing) (Easting) 0.3 19.0 Surface 19.0 8.3 31.6 124.8 1.0 0.3 33 18.9 31.6 124.9 9.6 4.8 <2 <0.2 0.9 18.7 126.7 5.3 0.8 0.3 92 <0.2 C1 8.3 32.2 126.6 804236 13:10 8.5 Middle 18.7 815611 Sunny Moderate 0.9 18.7 8.3 32.2 126. 9.7 2 93 <0.2 0.9 0.3 34 5.2 7.5 0.4 30 18.6 8.3 32.4 122. 9.5 10.4 3 95 <0.2 0.8 9.5 Bottom 18.6 8.3 32.4 122.9 0.8 18.6 32.4 11.4 7.5 0.4 8.3 95 < 0.2 1.0 0.3 19.2 1.9 85 2.0 1.8 1.8 1.9 < 0.2 8.4 26.2 Surface 19.2 8.4 26.2 140.1 1.9 19.2 86 1.0 0.3 322 8.4 26.2 4 <0.2 19.0 89 5.6 0.4 8.3 9.2 3 28.6 C2 Fine Moderate 11:55 11.2 Middle 19.0 8.3 28.6 117.3 88 825705 806950 28.6 9.2 1.8 3 88 <0.2 5.6 0.4 29 19.0 8.3 10.2 0.4 346 19.0 8.2 8.7 2.9 3 91 <0.2 1.8 28.9 8.2 28.9 112.0 8.8 Bottom 19.0 10.2 0.5 347 19.0 8.2 28.9 2.8 2 91 <0.2 1.7 0.3 241 19.1 8.3 1.7 <0.2 1.0 Surface 19.1 8.3 29.4 121.8 1.0 0.3 244 19.1 8.3 29.4 9.4 1.7 2 87 <0.2 1.0 2.0 1.0 6.4 0.4 18.5 8.6 <2 <2 89 89 <0.2 252 8.3 30.3 C3 12.7 109.6 817798 Fine Moderate 14:27 Middle 18.5 8.3 30.3 89 822115 1.0 0.4 261 18.5 8.3 11.7 0.4 266 18.6 8.3 30.3 8.4 2.3 2 91 <0.2 Bottom 18.6 8.3 30.3 108.0 8.4 11.7 0.4 273 18.6 8.3 30.3 108 8.4 2.3 <2 92 1.0 1.0 0.2 19.0 8.3 4.9 <2 88 <0.2 0.9 Surface 19.0 8.3 31.4 122.9 1.0 10 19.0 8.3 31.4 123. 9.5 4.9 <2 89 <0.2 0.8 0.2 807119 IM1 Sunny Moderate 12:47 Middle 817968 0.9 3.8 0.1 18.7 8.3 32.1 125.6 9.7 6.3 <2 qη < 0.2 1.0 Bottom 18.7 8.3 32.1 125.6 9.7 3.8 0.1 15 18.7 8.3 32 1 125 6 9.7 6.4 <2 91 <0.2 0.9 1.0 0.2 19.1 8.3 31.7 10.4 5.0 <2 87 < 0.2 0.9 Surface 8.3 31.7 136.1 1.0 0.2 19.1 8.3 31.7 136.3 10.5 5.1 <2 88 <0.2 0.9 5.6 3.4 0.2 18.7 8.3 32.1 10.5 <2 92 <0.2 0.9 IM2 Moderate 12:38 6.7 Middle 8.3 32.1 135.7 <2 92 818180 806142 5.5 <0.2 0.9 0.9 0.8 3.4 0.3 18.7 8.3 10.5 <2 92 8.4 <2 5.7 0.2 353 18.7 83 32.3 130 (10.1 95 <0.2 18.7 8.3 32.3 130.6 5.7 18.7 10.0 0.2 325 8.3 32.3 8.4 -2 95 <0.2 130 5 1.0 0.2 333 18 9 83 31.8 134 2 10.3 5.0 -2 87 < 0.2 0.8 Surface 8.3 31.8 134.3 1.0 5.0 <2 <2 87 0.2 349 18.9 8.3 134. 10.3 <0.2 31.8 4.9 4.9 6.1 0.9 346 18.7 91 <0.2 3.5 0.2 8.3 32.1 134 10.4 IM3 Sunny Moderate 12:30 6.9 Middle 18.7 8.3 32.1 134.5 <2 818773 805599 0.9 <2 <2 18.7 10.4 91 96 0.9 3.5 0.2 356 8.3 134 <0.2 18.7 5.9 0.2 351 8.3 32.2 129. 10.0 Rottom 18.7 8.3 32.2 129.1 5.9 0.2 323 18.7 8.3 32.2 129.0 9.9 6.3 <2 95 <0.2 0.8 1.0 0.3 356 18.9 1.2 8.3 31.3 126.4 9.8 5.0 2 86 <0.2 Surface 18.9 8.3 31.3 126.4 0.3 328 18.9 8.3 5.0 3 87 <0.2 1.2 5.1 90 <0.2 1.1 3.8 18.7 2 0.3 8.3 31.8 127. 9.8 IM4 Moderate 12:19 7.5 Middle 18.7 8.3 31.7 127.2 819707 804602 Sunny 3.8 18.7 8.3 9.8 5.1 2 <2 91 <0.2 0.3 6.5 0.3 5.7 95 1.1 18.6 8.3 9.6 124.6 124.6 Bottom 18.6 8.3 32.1 9.6 6.5 0.3 18.6 8.3 124.6 9.6 5.8 <2 95 <0.2 1.1 1.6 1.6 1.0 0.2 338 18.8 8.3 30.7 5.1 88 <0.2 126.3 9.8 <2 Surface 18.9 8.3 30.7 126.3 0.3 359 18.9 30.7 126. 9.8 5.1 <2 89 <0.2 3.6 0.3 354 18.8 5.6 5.7 <2 92 <0.2 1.5 8.3 9.5 IM5 12:09 7.2 Middle 18.8 8.3 31.6 123.5 820736 804865 Sunny Moderate 3.6 18.8 <2 92 <0.2 0.3 326 2 1.5 6.2 0.3 359 18.8 8.3 8.3 31.8 9.4 6.2 93 <0.2 18.8 8.3 31.8 121.8 9.4 Bottom 6.2 0.3 330 18.8 93 < 0.2 1.0 0.2 277 19.2 8.3 29.0 4.5 <2 86 <0.2 1.6 Surface 19.2 8.3 29.0 128.6 10.0 1.0 0.2 294 19.2 8.3 4.4 <2 87 <0.2 1.7 3.5 0.1 300 18.9 4.6 <2 92 <0.2 Sunny Moderate 12:01 Middle 18.9 8.3 29.5 127.3 821058 805826 4.6 <0.2 3.5 0.1 314 18.9 8.3 29.5 127 <2 93 9.6 5.1 5.1 1.7 5.9 0.1 62 18.7 8.3 31.4 <2 94 <0.2 124.6 9.6 59 0.1 64 18.7 83 2 95 1.6 1.6 1.0 0.3 248 19.0 8.3 29.1 128. 10.0 4.5 87 <0.2 Surface 19.1 128.5 4.5 2 1.0 0.3 263 19 1 83 29 1 128 88 <0.2 4.6 1.8 4.0 247 90 <0.2 0.3 19.0 8.3 29.2 128.4 10.0 IM7 Moderate 11:56 7.9 Middle 19.0 8.3 128.4 821364 806840 Sunny <2 90 4.0 0.3 268 19.0 8.3 29.2 128. 4.6 9.4 6.9 0.0 254 18.7 8.3 31.2 121. 5.0 <2 94 <0.2 1.6 Bottom 18.7 8.3 31.2 121.9 6.9 0.0 278 18.7 8.3 4.9 94 <0.2 1.5 1.0 0.1 206 19.6 8.4 27.6 139.6 10.9 2.0 3 86 < 0.2 1.6 Surface 19.6 8.4 27.6 139.7 27.6 10.9 1.6 8.4 <0.2 1.0 0.1 206 19.6 139. 2.0 3 86 27.7 10.8 2.1 2 88 <0.2 1.6 3.5 0.1 234 19.5 8.4 138.3 19.5 8.4 27.7 138.3 821837 808150 IM8 Fine Moderate 12:22 7.0 Middle 88 1.6 2.0 10.8 88 3.5 0.1 249 19.5 8.4 27.7 138. 2 2.0 1.7 6.0 0.1 240 19.2 8.4 27.9 <2 90 <0.2 129. 10.1 19.2 8.4 27.9 129.0 Rottom 10.1

Calm: Small or no wave: Moderate: Between calm and rough: Rough: White capped or rougher

Water Quality Monitoring Results on 06 February 21 during Mid-Flood Tide DO Saturation Suspended Solids Total Alkalinity Chromium Salinity (ppt) Turbidity(NTU) Coordinate Coordinate Nickel (µg/L) Weather Sampling Water Water Temperature (°C) Monitoring Speed Current Oxvaen (mg/L) (ppm) Sampling Depth (m) HK Grid HK Grid Station Direction Time (m/s) Average Average Value Average Value DA Value DA Value DA Value DA (Northing) Value DA Value DA Condition Condition Depth (m) Value Value Average Value (Easting) 19.6 0.2 Surface 8.4 27.7 145.0 1.0 320 19.6 144.9 2.1 1.6 3.5 0.2 306 19.3 8.4 27.7 131. 10.3 2.0 4 88 <0.2 131.0 808822 IM9 Fine Moderate 12:29 8.4 27.7 822094 3.5 0.2 308 19.3 8.4 27.7 131.0 10.3 2.0 4 89 <0.2 1.5 5.9 0.2 302 19.2 8.4 28.0 121.9 9.5 1.9 5 91 <0.2 1.5 Bottom 19.2 8.4 28.0 121.9 9.5 5.9 0.2 320 19.2 8.4 28.0 121.9 9.5 1.9 5 91 <0.2 1.5 1.0 0.4 311 19.4 8.4 27.9 9.9 2.0 86 < 0.2 1.6 Surface 8.4 27.9 127.4 1.0 0.4 333 19.4 8.4 27.9 9.9 2.0 2 85 <0.2 1.5 4.0 0.4 308 19.1 8.3 28.3 9.5 2.3 2 89 89 <0.2 1.4 IM10 Moderate 12:37 7.9 Middle 8.3 28.3 121.8 822397 809798 327 8.3 <0.2 4.0 0.4 19.1 28.3 9.5 6.9 0.3 19.1 8.3 2.6 2 1.6 300 28.5 9.1 91 < 0.2 Bottom 8.3 28.5 115.8 9.0 1.6 6.9 0.3 313 19 1 8.3 28.5 115 91 **-**0 2 0.4 283 19.5 1.9 1.0 8.4 28.2 < 0.2 1.4 Surface 8.4 28.2 136.4 1.3 1.0 284 10.6 1.9 <2 < 0.2 0.4 19.5 8.4 28.2 136. 86 1.8 1.3 19.2 19.2 4 89 89 3.8 0.4 286 303 8.4 28.3 10.1 <0.2 IM11 Fine Moderate 12:49 7.6 Middle 19.2 8.4 28.3 129.4 89 822058 811446 0.4 8.4 28.3 0.3 1.4 6.6 0.5 287 19.0 8.4 28.8 9.3 2.2 6 91 119.2 19.1 8.4 119.2 9.3 Bottom 28.8 6.6 0.6 314 19.1 8.4 28.8 119.2 9.3 2.1 6 91 0.3 1.5 0.4 19.7 1.8 4 8.4 <0.2 28.1 Surface 19.7 8.4 129.3 28.1 1.0 0.4 315 19.7 8.4 28.1 129.3 1.8 3 86 <0.2 1.7 4.5 0.4 297 19.1 8.4 9.7 1.8 3 88 <0.2 1.4 28.4 124.3 821482 812054 IM12 Fine Moderate 12:57 8.9 Middle 19.1 8.4 28.4 124.3 4.5 19.1 8.4 1.8 3 88 <0.2 0.5 300 28.4 124. 0.3 296 19.0 8.4 29.0 2.7 90 <0.2 1.4 9.1 19.0 8.4 29.0 116.8 9 1 Rottom 7.9 0.3 302 19.0 8.4 29.0 116. 9.1 2.7 <2 1.4 1.0 19.7 8.4 27.8 <2 125. 9.7 Surface 19.7 8.4 27.8 125.4 1.0 19.7 8.4 1.7 <2 2.3 812661 Fine Calm 13:42 Middle 819981 2.3 3.5 19.4 8.4 28.6 9.2 2.1 <2 Bottom 19.4 8.4 28.6 117.9 9.2 3.5 19.4 8.4 28.6 117 92 2.1 <2 1.0 0.2 107 19.0 8.4 29.3 122. 9.5 2.1 4 87 <0.2 1.1 Surface 19.0 8.4 29.3 122.3 1.0 0.2 110 19.0 8.4 29.3 9.5 2.2 4 87 < 0.2 1.1 SR2 Moderate 14:00 4.4 Middle 821439 814179 3.4 19 1 2.1 3 89 0.1 94 8.4 29.3 9.4 <0.2 11 121.1 Bottom 2.1 3.4 0.1 19 1 8.4 29.3 3 12 94 89 r0 2 1.0 0.1 222 19.3 8.4 27.6 136.6 10.7 19 <2 Surface 8.4 27.6 136.6 1.0 19.3 8.4 27.6 19 0.1 225 <2 2 <2 4.2 237 1.8 0.1 19.0 8.3 28.0 9.8 SR3 Moderate 12:17 Middle 19.0 8.3 28.0 124.9 822150 807562 9.8 1.8 4.2 256 8.3 0.1 19.0 4 7.4 0.2 261 19.1 19.1 8.3 28.3 121.6 9.5 2.1 Bottom 19.1 8.3 28.3 9.5 0.2 281 28.3 1.0 148 19.1 0.1 8.3 32.0 121. 9.3 5.2 2 Surface 19.1 8.3 32.0 121.1 1.0 159 19.1 9.3 5.2 5.1 0.1 8.3 2 4.2 0.1 69 18.8 4 9.3 . 8.3 32.1 SR4A 13:31 8.3 32.1 121.1 817174 807818 Sunny Calm 8.3 Middle 18.8 4.2 18.8 8.3 9.3 5.1 3 0.1 72 32.1 5.0 5.0 7.3 0.1 73 18.7 8.3 4 8.3 32.1 120.0 9.3 9.3 Bottom 18.7 32.1 0.1 18.7 8.3 1.0 0.1 319 19.3 8.2 31.4 8.4 6.2 <2 109.6 19.3 8.2 31.4 109.6 Surface 1.0 0.1 336 19.3 8.2 31.4 8.4 6.2 <2 SR5A 3.6 Middle 816573 810710 Sunny Calm 13:48 2.6 0.1 330 19.2 8.6 6.5 Bottom 19.2 8.3 31.5 111.6 8.6 0.1 331 19.2 8.3 31.5 8.5 6.5 2.6 1.0 0.1 249 19.3 8.3 30.5 6.9 Surface 19.3 8.3 30.5 123.5 1.0 0.1 254 19.3 8.3 30.6 123.4 9.5 6.8 2 SR6A Sunny Calm 14:18 4.1 Middle 817985 814751 3.1 0.0 283 19.0 8.3 30.6 9.5 8.0 3 Bottom 8.3 30.6 122.8 9.5 3.1 0.0 295 19.0 8.3 30.6 7.6 3 1.0 0.0 116 18.6 8.2 30.4 8.8 1.9 <2 112.8 Surface 30.4 1.0 0.0 125 18.6 8.2 30.4 8.8 1.9 <2 7.8 0.1 184 18.5 8.2 30.7 8.7 1.8 <2 2 SR7 Fine Moderate 15:12 15.6 Middle 8.2 30.7 111.6 823623 823745 7.8 0.1 196 18.5 8.2 30.7 8.7 1.8 14.6 0.1 76 18.5 8.2 30.8 109.4 8.5 1.9 3 Bottom 8.2 30.8 109.4 14.6 0.1 80 18.5 8.2 30.8 109. 8.5 1.8 2 1.0 20.0 8.3 28.0 9.5 3.2 <2 Surface 20.0 8.3 28.0 123.9 1.0 20.0 8.3 28.0 124.0 9.6 3.2 <2 -. 820402 811621 SR8 Fine Moderate 13:08 3.9 Middle <2 -2.9 19.7 2.8 <2 8.4 28.0 125.0 9.7 19.7 Bottom 8.4 28.0 125.1 9.7

DA: Depth-Averaged

Water Quality Monitoring Results on 09 February 21 during Mid-Ebb Tide Turbidity(NTU) Suspended Solids Total Alkalinity DO Saturation Dissolved Chromium Salinity (ppt) Coordinate Coordinate Nickel (µg/L) Weather Sampling Water Water Temperature (°C) Monitoring Current Speed Oxvaen (mg/L) (maga) Sampling Depth (m) HK Grid HK Grid Station Direction Condition Time Depth (m) (m/s) Average Value Average Average Value Average Value DA Value DA Value DA Value DA (Northing) Value DA Value DA Condition Value Value (Easting) 18.8 0.2 8.4 31.9 1.0 0.2 261 18.7 1.3 4.6 41 0.1 214 18.7 8.4 32.2 118 6 9.1 4 88 <0.2 0.9 118.5 815621 804233 C1 Cloudy Moderate 12:26 8.4 32.2 4.1 0.1 216 18.6 8.4 32.3 118.4 9.1 4.8 5 88 <0.2 0.7 7 1 0.0 168 18.5 8.4 32.9 112.5 8.7 5.7 4 90 <0.2 0.8 Bottom 8.4 32.9 112.4 8.7 7.1 0.0 178 18.5 8.4 32.9 1123 8.7 5.7 3 90 <0.2 0.8 1.0 0.3 165 19.4 8.2 28.6 125. 5.3 87 < 0.2 0.7 Surface 8.2 28.6 125.0 <0.2 0.7 1.0 0.3 173 19.4 8.2 28.7 124.8 9.7 5.3 5 88 9.3 5.7 0.2 175 19.2 8.2 8.9 5.7 6.4 5 4 89 90 <0.2 0.7 C2 Cloudy Rough 13:04 11.4 Middle 8.2 29.3 115.0 825687 806938 0.2 191 8.2 19.2 29.3 8.9 0.6 10.4 0.2 19.2 6.6 4 160 8.1 29.3 8.8 91 < 0.2 Bottom 19.2 8.1 29.3 113.7 8.8 4 10.4 0.2 170 19.2 8.1 8.8 6.5 92 <0.2 29.3 1.0 18.9 0.1 8.1 4 0.6 30.3 8.8 < 0.2 Surface 18.9 8.1 30.3 112.8 0.6 1.0 329 4.9 3 84 <0.2 0.1 18.8 8.1 30.3 112. 8.8 8.5 8.5 0.6 0.7 0.6 8.6 3 <0.2 18.8 89 89 5.9 8.1 30.4 C3 Cloudy Moderate 10:49 11.7 Middle 8.1 30.4 110.3 88 822119 817799 0.6 18.8 0.0 8.1 30.4 2 <0.2 10.7 0.1 81 18.8 8.1 30.4 8.5 9.9 93 109.6 8.1 109.6 8.5 Bottom 18.8 30.4 10.7 0.1 84 18.8 8.1 30.4 109.5 8.5 9.4 3 94 <0.2 0.6 0.1 186 18.9 118.3 1.6 4 8.4 31.3 <0.2 0.8 9.1 Surface 18.9 8.4 31.3 118.1 1.0 0.1 195 18.9 8.4 31.3 117.9 9.1 1.7 3 85 <0.2 0.9 807124 IM1 Cloudy Calm 12:53 5.0 Middle 817926 4.0 0.1 152 18.9 8.4 8.6 2.6 4 89 <0.2 0.9 111.7 Bottom 18.9 8.4 31.4 8.6 4.0 0.1 163 18.9 8.4 31.3 8.6 2.5 4 89 0.9 0.1 168 18.9 8.4 31.5 9.2 1.9 6 85 <0.2 0.8 Surface 18.9 8.4 31.5 119.0 1.0 0.1 169 18.9 2.0 6 86 <0.2 0.8 0.9 0.8 3.5 0.2 131 18.8 3.4 6 87 <0.2 <0.2 <0.2 8.4 9.0 116.6 806159 Cloudy Moderate 13:00 Middle 8.4 31.7 818148 18.8 5 5 3.5 0.2 135 6.0 0.2 127 18.7 8.4 32.0 8.6 3.8 90 Bottom 18.8 8.4 31.9 111.6 8.6 3.5 6.0 0.2 136 18.8 8.4 31.9 8.6 4 89 <0.2 0.8 0.8 1.0 0.1 198 18.9 8.4 31.4 9.3 1.9 6 85 <0.2 Surface 8.4 31.4 120.0 1.0 0.1 216 18.9 8.4 31.4 9.2 2.0 7 86 <0.2 0.9 3.6 0.1 152 18.8 8.4 31.8 4.4 7 88 <0.2 IM3 Cloudy Moderate 13:06 7.1 Middle 118.1 818793 805616 87 90 <0.2 3.6 0.1 165 18.8 8.4 4.6 6 6.1 4 0.8 0.1 116 18.7 8.4 31.9 116 9.0 5.9 116.4 5.6 5 6.1 0.1 18.7 8.4 <0.2 124 31 9 116 90 1.0 0.3 183 19.0 8.4 30.9 120. 9.3 2.0 4 87 <0.2 0.7 Surface 19.0 8.4 30.9 120.7 1.0 8.4 2.3 4 qq <0.2 0.3 185 19.0 30.9 120 4.2 170 6.0 4 88 0.7 0.3 19.0 8.4 31.1 9.2 <0.2 IM4 Cloudy Moderate 13:15 Middle 19.0 8.4 119.2 819713 804606 6.0 4 88 4.2 186 18.9 8.4 31.2 0.3 4 7.4 0.2 153 164 18.8 18.8 8.4 8.4 31.6 9.0 6.6 6.6 90 91 <0.2 1.0 Rottom 18.8 8.4 31.6 117.1 9.0 0.2 < 0.2 0.9 1.0 1.0 19.1 87 0.2 226 8.5 30.9 122.4 9.4 2.1 4 <0.2 Surface 19.1 8.5 30.9 122.3 1.0 30.9 9.4 5 <0.2 0.2 242 19.0 8.5 122. 2.2 5.2 88 3.9 225 19.0 9.3 4 89 <0.2 0.8 0.2 8.4 31.2 121.3 IM5 13:23 7.7 19.0 8.4 31.2 121.1 820711 804883 Cloudy Moderate Middle 90 3.9 19.0 8.4 31.2 9.3 5.5 4 90 < 0.2 0.8 0.2 235 6.9 <0.2 0.8 92 92 6.7 0.2 183 18.9 8.4 31.5 5 8.4 118. 118.7 9.2 9.2 Bottom 18 9 31.5 0.2 187 18.9 8.4 0.9 0.9 0.8 0.8 85 1.0 0.2 249 19.1 8.4 30.8 9.4 5.5 3 <0.2 121. Surface 19.1 8.4 30.8 121.2 1.0 0.2 273 19.1 8.4 30.9 121. 9.3 5.5 3 86 <0.2 3.7 0.1 222 19.0 8.4 9.2 6.3 3 88 <0.2 13:29 7.3 Middle 19.0 8.4 31.3 119.8 821040 805819 IM6 Cloudy Moderate 3.7 0.1 231 19.0 8.4 31.4 119. 9.2 6.4 4 89 <0.2 0.7 6.3 0.2 157 18.9 8.4 9.1 6.5 4 90 <0.2 Bottom 18.9 8.4 31.5 118.4 9.1 18.9 8.4 9.1 6.5 0.2 1.0 0.1 267 19.2 8.5 30.5 5.2 85 <0.2 0.8 122. Surface 19.2 8.5 30.5 122.5 1.0 0.1 270 19.2 8.5 30.5 122.4 9.4 5.4 5 84 <0.2 0.9 0.8 4.3 0.0 153 19.1 30.9 9.3 6.5 6 87 <0.2 IM7 Cloudy Moderate 13:34 Middle 8.4 31.0 121.1 821366 806820 <0.2 4.3 0.0 159 19.1 8.4 31.0 9.3 6.6 6 86 7.6 0.1 142 19.0 8.4 31.2 9.2 6.8 7 89 <0.2 0.8 Bottom 8.4 31.2 120.0 9.2 7.6 0.1 153 19.0 8.4 31.2 6.8 6 89 <0.2 0.8 1.0 0.1 209 19.4 8.2 28.4 123. 9.6 5.2 4 85 < 0.2 0.6 123.5 Surface 28.4 0.6 1.0 0.1 218 19.4 8.2 28.4 123.4 9.6 5.2 4 85 <0.2 4 0 0.0 306 19.3 8.2 28.8 119.9 9.3 5.7 5 4 89 89 <0.2 0.6 IM8 Cloudy Moderate 12:38 7.9 Middle 19.3 8.2 28.8 119.7 89 821825 808155 4.0 0.0 319 19.3 8.2 28.9 119.4 9.3 5.8 < 0.2 6.9 0.1 65 19.2 8.2 29.2 9.0 6.2 6 92 <0.2 0.6 8.2 Bottom 19.2 29.2 115.5 9.0 19.2

DA: Depth-Averaged

Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Water Quality Monitoring Results on 09 February 21 during Mid-Ebb Tide DO Saturation Suspended Solids Total Alkalinity Chromium Salinity (ppt) Turbidity(NTU) Coordinate Coordinate Nickel (µg/L) Weather Sampling Water Water Temperature (°C) Monitoring Speed Current Oxvaen (mg/L) (ppm) Sampling Depth (m) HK Grid HK Grid Station Direction Time (m/s) Average Average Value DA Value DA Value DA Value DA Value DA Value DA Condition Condition Depth (m) Value Value Average Value Average Value (Northing) (Easting) 19.4 0.3 Surface 8.2 28.5 19.4 5.4 5.9 3.6 0.3 80 19.4 8.2 28.7 120. 9.4 5 88 <0.2 0.6 120.8 808812 IM9 Cloudy Moderate 12:32 7.2 8.2 28.7 6.2 822086 0.6 3.6 0.3 87 19.3 8.2 28.8 120.7 9.4 6.1 5 89 <0.2 0.6 6.2 0.2 73 19.3 8.2 29.1 114.8 8.9 7.1 5 92 <0.2 0.6 Bottom 19.3 8.2 29.1 114.7 8.9 6.2 0.3 77 19.3 8.2 29.1 1145 8.9 7.2 4 92 <0.2 0.6 1.0 0.4 117 19.4 8.2 28.6 118.4 9.2 5.5 4 < 0.2 0.6 Surface 8.2 28.4 121.0 1.0 0.4 119 19.4 8.2 28.2 9.6 5.2 5 87 <0.2 0.6 3.3 0.4 115 19.4 8.2 28.7 9.3 6.3 5 88 89 <0.2 0.6 IM10 Cloudy Moderate 12:25 6.5 Middle 8.2 28.8 119.3 822403 809812 3.3 8.2 < 0.2 0.4 116 19.3 28.8 9.3 5.5 0.3 19.3 8.2 5 0.5 101 29.0 9.1 6.9 92 < 0.2 Bottom 19.3 8.2 29.0 117.6 0.6 9.1 5.5 0.3 108 19.3 8.2 6.9 6 93 29 N **-**0 2 1.0 0.6 123 19.4 8.2 5.4 28.8 4 0.6 Surface 19.4 8.2 28.8 117.1 0.6 1.0 9.1 5.4 85 < 0.2 0.6 128 19.3 8.2 28.9 116 4 0.6 0.6 0.6 5.2 5.2 19.3 9.0 4 91 91 <0.2 3.9 125 132 IM11 Cloudy Moderate 12:12 7.8 Middle 19.3 8.2 29.2 115.6 90 822059 811456 0.6 19.3 5 0.5 8.2 29.2 6.8 0.3 137 19.2 8.2 29.3 8.9 5.3 5 93 <0.2 114.0 8.2 114.5 8.9 Bottom 19.2 29.2 6.8 0.3 143 19.2 8.2 29.2 114.4 8.9 5.7 5 94 <0.2 0.6 0.5 19.5 5.1 <0.2 8.2 28.2 124.1 0.6 Surface 19.5 8.2 28.2 124.1 1.0 0.6 122 19.4 8.2 28.2 124.0 9.6 5.1 6 86 <0.2 0.6 4.6 0.4 19.3 9.1 5.2 6 89 <0.2 0.6 8.2 29.1 812023 IM12 Cloudy Moderate 12:04 9.2 Middle 19.3 8.2 29.1 116.4 821445 115 19.3 5.2 6 89 <0.2 4.6 0.4 8.2 8.2 0.2 108 19.2 8.2 29.3 8.8 5.2 6 91 <0.2 0.5 192 8.2 113.6 8.8 Rottom 29.3 8.2 0.2 113 19.2 8.2 8.8 5.2 0.6 19.3 8.1 29.2 8.5 5.6 5 Surface 19.3 8.1 109.3 29.2 1.0 19.3 8.5 5.5 4 2.6 Cloudy Moderate 11:30 Middle 819976 812662 2.6 41 19.2 8.1 29.3 109.4 8.5 6.4 6 Bottom 19.2 8.1 29.3 109.3 8.5 41 19.2 8 1 29.3 109 8.5 6.4 5 1.0 0.2 52 19.2 8.2 29.3 117 9.1 5.2 88 <0.2 0.6 Surface 19.2 8.2 29.3 117.1 1.0 0.2 55 19.2 8.2 29.3 117.1 9.1 5.2 4 88 < 0.2 0.5 SR2 Cloudy Moderate 11:14 4.1 Middle 821471 814168 3.1 5.2 5.2 90 0.6 0.2 40 19.2 8.2 29.3 9.0 6 <0.2 116.5 Bottom 3.1 41 19.2 4 0.6 0.2 8.2 29.3 91 r0 2 1.0 0.2 196 19.4 8.2 28.6 120.7 9.4 9.4 5.1 5 Surface 8.2 28.6 120.6 1.0 8.2 5.1 6 0.2 211 19.4 28.7 4.4 5.4 4 0.1 136 19.4 8.2 28.8 119.7 9.3 SR3 Cloudy 12:44 8.7 Middle 19.4 8.2 119.1 5.6 822161 807557 Rough 9.2 5 146 8.2 4.4 0.1 19.4 28.9 7.7 0.1 44 19.4 19.3 8.2 28.9 9.2 5.6 5.6 4 5 Bottom 19.4 8.2 28.9 118.1 9.2 0.1 28.9 1.0 18.9 0.2 76 8.5 31.2 9.0 5.2 4 Surface 18.9 8.5 31.2 116.8 1.0 9.0 0.2 79 18.9 8.5 31.2 116. 5.3 4 4.6 18.8 5.1 5 0.2 85 8.9 . 8.5 31.3 114.9 SR4A 8.5 31.3 114.8 817192 807828 Cloudy Calm 12:05 9.1 Middle 18.8 4.6 18.8 8.5 31.3 114. 5.3 5 0.3 90 6.8 6.7 8.1 0.3 18.8 8.5 31.4 8.7 8.5 112. 112.6 8.7 6 18.8 31.4 Rottom 8.1 0.3 18.8 8.5 1.0 0.1 330 19.3 8.4 4.9 5 30.9 105.3 8.1 19.3 8.4 30.9 105.2 Surface 1.0 0.1 351 19.3 8.4 30.9 8.1 5.0 5 SR5A 3.3 Middle 816611 810683 Cloudy Calm 11:01 2.3 0.1 329 19.3 30.9 7.9 5.4 5 Bottom 19.3 8.3 30.9 103.3 7.9 0.1 345 19.3 8.3 30.9 7.9 1.0 0.0 99 19.0 8.5 31.0 112.8 4.5 10 Surface 19.0 8.5 31.0 112.7 1.0 0.0 106 19.0 8.5 31.0 112. 8.7 4.8 11 SR6A Cloudy Calm 10:29 4.2 Middle 817948 814741 3.2 0.0 108 19.0 8.6 6.3 8 Bottom 8.5 31.0 111.7 8.6 3.2 0.0 116 19.0 8.5 31 (8.6 6.3 a 1.0 0.1 6 18.7 8.0 30.6 109.9 8.5 49 10 109.9 Surface 30.6 1.0 0.1 6 18.7 8.0 30.6 109.8 8.5 4.9 11 8.4 0.1 80 18.7 8.0 30.7 108.9 8.5 5.0 10 SR7 Cloudy Moderate 10:16 16.7 Middle 18.7 8.0 30.7 108.8 823636 823765 5.1 8.4 0.1 80 18.7 8.0 30.7 108.7 8.5 9 15.7 0.1 86 18.7 8.0 30.8 107. 8.4 5.0 6 Bottom 18.7 8.0 30.8 107.7 15.7 0.1 89 18.7 8.0 30.8 107. 8.4 5.0 7 1.0 19.3 8.2 29.2 113. 8.8 6.4 6 Surface 19.3 8.2 29.2 113.0 1.0 19.3 8.2 29.2 112.7 8.7 6.7 5 . . 820384 811612 SR8 Cloudy Moderate 11:54 4.4 Middle -3.4 19.2 6.8 5 8.2 29.3 110.6 8.6 19.2 8.2 29.3 110.4 8.6

DA: Depth-Averaged

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

Water Quality Monitoring Water Quality Monitoring Results on 09 February 21 during Mid-Flood Tide Turbidity(NTU) Suspended Solids Total Alkalinity DO Saturation Chromium Salinity (ppt) Coordinate Coordinate Nickel (µg/L) Weather Sampling Water Water Temperature (°C) Monitoring Current Speed Oxvaen (mg/L) (maga) Sampling Depth (m) HK Grid HK Grid Station Direction Condition Time Depth (m) (m/s) Average Average Value Average Value DA Value DA Value DA Value DA (Northing) Value DA Value DA Condition Value Value Average Value (Easting) 18.8 0.2 Surface 18.8 8.4 31.8 120.6 1.0 0.3 45 18.8 31.8 120. 9.3 2.7 6 88 0.3 3.3 4.4 5 0.3 4.8 0.3 90 C1 84 33.1 112.0 804232 16:00 91 Middle 18.5 815601 27 Cloudy Moderate 0.3 18.5 8.4 33.1 8.6 4.4 6 90 0.3 4.6 0.4 8.1 0.3 45 18.5 8.4 32.9 8.7 5.0 5 93 <0.2 1.6 113. 8.4 113.2 8.7 Bottom 18.5 32.9 5.0 1.4 18.5 32.9 <0.2 8.1 0.3 46 8.4 4 93 1.0 0.1 19.5 5.6 86 0.6 0.6 0.6 < 0.2 8.3 Surface 19.5 8.3 27.8 129.7 5.5 5.4 19.5 10.1 87 1.0 0.1 248 203 8.3 4 <0.2 4 5.7 0.1 19.5 8.2 9.9 90 28.2 C2 Cloudy Rough 14:58 11.4 Middle 19.5 8.2 28.2 126.6 90 825666 806930 0.6 223 8.2 28.3 126. 9.8 5.4 4 90 <0.2 5.7 0.1 19.4 10.4 0.2 27 19.3 8.2 119.4 9.3 5.4 5 92 <0.2 0.6 28.9 8.2 119.3 Bottom 19.3 29.0 9.3 10.4 0.2 28 19.3 8.2 29.0 5.3 6 92 <0.2 0.6 0.4 277 19.0 8.1 4.8 86 <0.2 0.5 Surface 19.0 8.1 30.1 120.5 1.0 0.4 299 19.0 8.1 30.1 9.4 4.8 6 87 <0.2 0.6 120. 0.6 5.7 0.4 269 18.9 8.1 8.9 4.7 6 88 89 <0.2 30.3 114.3 C3 17:16 114.2 817826 Cloudy Moderate 11.3 Middle 18.9 8.1 30.3 89 822114 0.5 0.4 295 18.9 4.8 0.5 10.3 0.2 288 18.7 30.6 8.4 4.9 4 93 <0.2 Bottom 18.7 8.1 30.6 108.0 8.4 10.3 0.2 307 18.7 8.1 30.6 108 8.4 4.9 5 93 <0.2 1.0 0.1 305 18.9 8.4 31.4 2.8 <0.2 1.1 Surface 18.9 8.4 31.5 118.4 1.0 0.1 321 18.9 8.4 31.5 118. 9.1 2.9 4 87 <0.2 1.1 807129 IM1 Cloudy Calm 15:40 5.3 Middle 817947 43 0.1 39 18.7 8.4 32.0 8.9 4.8 4 92 < 0.2 13 Bottom 18.7 8.4 32.0 115.9 8.9 4.3 0.1 39 18.7 8.4 32.0 115.8 8.9 4.6 5 93 <0.2 1.4 300 1.0 0.1 18.9 8.4 31.4 9.3 2.3 8 86 < 0.2 1.0 Surface 8.4 31.5 120.5 1.0 0.1 319 18.9 8.4 31.5 120.4 9.3 2.4 2.7 7 87 <0.2 1.1 3.8 0.1 324 18.7 8.4 31.9 9.2 5 90 <0.2 1.1 IM2 Cloudy Moderate 15:33 7.6 Middle 8.4 31.9 118.5 89 818158 806183 3.8 0.1 328 18.7 8.4 9.1 2.6 6 90 <0.2 1.0 4 1.0 6.6 0.3 37 18.7 8.4 32.2 8.7 5.3 91 <0.2 8.4 32.1 112.6 8.7 8.7 5.6 5 6.6 0.3 39 18.7 8.4 32.0 91 <0.2 0.6 0.6 1.0 0.8 0.9 1.0 0.1 316 18 9 8.4 31 4 120 : 93 16 85 < 0.2 Surface 8.4 31.4 120.7 1.0 1.6 2.7 85 0.1 343 18.9 8.4 31.4 120. 9.3 4 <0.2 3.7 0.2 18.8 9.3 3 88 <0.2 345 8.4 31.5 IM3 Cloudy Moderate 15:26 7.3 Middle 18.8 8.4 31.6 119.7 88 818785 805614 0.8 3 3 2.8 5.1 3.7 18.8 18.7 88 89 0.2 317 8.4 31.6 9.2 <0.2 6.3 0.2 36 8.4 32.0 114. 8.8 Rottom 18.7 8.4 31.9 113.7 8.8 6.3 0.2 37 18.7 8.4 31.9 8.8 5.2 <0.2 0.9 90 0.9 1.0 333 18.9 0.1 8.4 31.3 119.4 9.2 3.4 4 86 <0.2 Surface 18.9 8.4 31.4 119.3 0.1 334 18.9 8.4 9.2 3.6 5 87 <0.2 0.8 0.9 0.8 1.0 4.3 5.3 88 <0.2 18.8 3 0.2 26 8.4 118.4 9.1 IM4 Moderate 15:17 8.5 Middle 18.8 8.4 31.7 118.3 819702 804589 Cloudy 4.3 18.8 8.4 5.4 4 88 <0.2 0.2 0.2 4.5 3 91 18.8 8.4 8.7 8.4 112.5 8.7 Bottom 18.8 31.7 7.5 0.2 18.8 8.4 4.6 <0.2 346 0.8 1.0 0.1 19.0 8.5 31.1 1.8 87 <0.2 120.5 9.3 3 Surface 19.0 8.4 31.1 120.5 1.0 0.2 349 19.0 120. 1.9 4 88 <0.2 4.0 0.1 338 19.0 3.8 3 89 <0.2 0.9 8.4 9.3 IM5 15:10 7.9 Middle 19.0 8.4 31.3 120.0 820757 804870 Cloudy Moderate 4.0 347 19.0 3.9 <0.2 0.1 4.3 4 0.9 6.9 0.1 23 18.9 8.4 31.5 9.1 92 91 <0.2 18.9 8.4 31.5 118.3 9.1 Bottom 8.4 31.5 6.9 0.1 18.9 118 < 0.2 1.0 0.0 269 19.0 8.5 31.1 3.5 4 89 <0.2 0.8 Surface 8.5 31.1 120.2 1.0 0.0 295 19.0 8.5 31 1 9.2 3.6 4 89 <0.2 0.6 3.8 0.0 10 19.0 8.5 31.3 5.8 4 90 <0.2 Cloudy Moderate 15:03 Middle 19.0 8.5 31.3 118.7 821052 805818 <0.2 3.8 0.0 10 19.0 8.5 31.3 118 9.1 5.8 3 90 9.0 6.3 0.7 6.5 0.1 155 19.0 8.5 3 91 <0.2 117.0 9.0 6.5 0.1 167 19.0 8.5 31 2 91 0.8 0.7 0.8 0.7 9.5 1.0 0.0 325 19.2 8.5 30.5 123. 3.6 87 <0.2 Surface 19.2 8.5 123.1 3.8 4.5 1.0 0.0 353 19.2 8.5 30.5 123 3 88 <0.2 3 4.3 0.1 110 90 <0.2 19.1 8.5 30.9 121.3 9.3 IM7 Moderate 14:58 Middle 19.1 8.5 121.0 821351 806812 Cloudy 90 4.3 0.1 111 19.1 8.5 31.0 4.7 3 7.5 0.1 92 19.0 8.5 31.2 118. 9.1 5.6 3 92 <0.2 0.5 Bottom 19.0 8.5 31.2 118.6 7.5 0.1 97 19.0 5.6 4 <0.2 0.5 1.0 0.1 251 19.3 8.2 28.8 122. 9.5 5.4 4 88 < 0.2 0.6 Surface 19.3 8.2 28.8 122.4 28.8 9.5 8.2 5.5 <0.2 1.0 0.1 257 19.3 122. 3 88 8.2 9.3 6.2 4 90 <0.2 0.7 4.0 0.1 205 19.3 29.1 119.6 19.3 8.2 119.4 821843 808132 IM8 Cloudy Moderate 15:24 7.9 Middle 29.1 90 0.6 91 9.3 6.2 4.0 0.1 222 19.3 8.2 5 7.1 92 0.6 6.9 0.0 256 19.2 8.2 29.2 4 <0.2 115.4 9.0

19.2

8.2

29.2

115.0

9.0

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

Rottom

Water Quality Monitoring Results on 09 February 21 during Mid-Flood Tide DO Saturation Dissolved Suspended Solids Total Alkalinity Chromium Salinity (ppt) Turbidity(NTU) Coordinate Coordinate Nickel (µg/L) Weather Sampling Water Water Temperature (°C) Monitoring Speed Current Oxvaen (mg/L) (ppm) Sampling Depth (m) HK Grid HK Grid Station Direction Time (m/s) Average Average Value Average Value DA Value DA Value DA Value DA Value DA Value DA Condition Condition Depth (m) Value Value Average Value (Northing) (Easting) 19.3 0.2 Surface 8.2 28.7 259 19.3 9.4 5.4 3.6 0.2 238 19.3 8.2 28.8 119.8 9.3 5.3 3 88 <0.2 0.5 119.7 808800 IM9 Cloudy Moderate 15:31 8.2 28.8 822079 3.6 0.3 244 19.3 8.2 28.8 119.5 9.3 5.3 3 88 <0.2 0.6 6.2 0.1 223 19.3 8.2 29.0 116.4 9.0 5.4 3 92 <0.2 0.6 Bottom 19.3 8.2 29.0 116.0 9.0 6.2 0.1 241 19.3 8.2 29 N 115.6 9.0 5.5 4 93 <0.2 0.6 1.0 0.4 299 19.3 8.2 28.9 116. 9.1 5.2 84 < 0.2 0.6 Surface 8.2 28.9 116.7 <0.2 1.0 0.4 318 19.3 8.2 28.9 116. 9.0 5.2 4 85 0.6 4.1 0.3 296 19.3 8.2 8.8 5.2 5.2 2 89 90 <0.2 0.6 IM10 Cloudy Moderate 15:38 8.1 Middle 8.2 29.0 113.8 822368 809793 4.1 307 8.2 <0.2 0.3 19.3 29.0 8.8 7.1 19.3 8.2 2 0.6 0.3 300 29.0 8.6 5.3 93 < 0.2 Bottom 19.3 8.2 29.0 111.2 8.6 0.5 5.3 7 1 0.3 312 19.3 8.2 8.6 94 29 N **-**0 2 1.0 0.4 19.3 8.2 88 9.1 0.5 Surface 19.3 8.2 29.0 116.5 0.4 1.0 307 5.1 88 <0.2 0.4 19.3 8.2 29.0 116. 9.0 3 9.0 0.6 0.6 0.5 5.1 5.2 <0.2 19.3 9.0 3 89 89 4.0 0.3 291 307 IM11 Cloudy Moderate 15:52 7.9 Middle 8.2 29.1 115.4 90 822055 811436 0.6 4.0 19.3 0.4 8.2 6.9 0.3 287 19.3 8.2 29.2 8.9 5.1 3 92 <0.2 114.0 8.2 113.8 8.9 Bottom 19.3 29.2 6.9 0.3 302 19.3 8.2 29.2 113.6 8.8 5.1 4 93 <0.2 0.7 0.4 19.3 <0.2 8.2 28.9 0.6 Surface 19.3 8.2 28.9 119.3 1.0 0.4 278 19.3 8.2 28.9 119.1 9.3 5.1 3 88 <0.2 0.6 0.7 4.6 0.3 277 19.3 9.1 5.9 3 89 <0.2 8.2 29.2 812050 IM12 Cloudy Moderate 16:01 9.1 Middle 19.3 8.2 29.2 116.6 821445 19.3 6.3 4 90 92 <0.2 4.6 289 8.2 0.3 8.1 0.3 272 19.3 8.2 29.3 9.0 8.0 4 <0.2 0.5 19.3 8.2 115.6 9.0 Rottom 29.3 8.1 0.3 285 19.2 8.2 29.3 9.0 8.5 0.6 19.3 8.1 29.2 8.4 5.2 3 Surface 19.3 8.1 29.2 108.1 1.0 19.3 8.4 5.2 4 2.6 Cloudy Moderate 16:35 5.2 Middle 819978 812654 2.6 4.2 19.2 8.1 29.2 8.3 5.2 3 Bottom 19.2 8.1 29.2 106.5 8.3 4.2 19.2 8 1 29.2 106 83 5.3 1.0 0.0 51 19.2 8.2 29.3 9.1 5.1 89 <0.2 0.5 Surface 19.2 8.2 29.3 116.9 1.0 0.0 53 19.2 8.2 29.3 116.7 9.1 5.1 3 89 < 0.2 0.6 SR2 Cloudy Moderate 16:51 4.3 Middle 821462 814174 33 92 0.6 0.0 48 19.2 8.2 29.3 8.8 11 1 4 <0.2 113.3 Bottom 11.7 33 0.0 52 19.2 8.2 3 0.6 29.3 92 r0 2 1.0 0.2 272 19.3 8.2 28.8 121. 9.4 9.4 5.3 4 Surface 19.3 8.2 28.8 121.2 8.2 19.3 1.0 0.2 284 28 9 5.4 4 4.2 298 5.6 5.6 5 4 0.1 19.3 8.2 29.1 9.3 SR3 Cloudy 15:17 Middle 19.3 119.9 822148 807563 Rough 4.2 8.2 0.1 303 19.3 29.2 5 5 7.4 0.1 359 19.2 19.2 8.2 117.9 9.2 5.8 5.8 Bottom 19.2 8.2 29.2 9.2 0.1 330 29.2 1.0 18.9 0.1 219 8.4 31.2 114.8 8.9 3.4 3 Surface 18.9 8.4 31.2 114.6 1.0 8.8 0.1 228 18.9 8.4 31.2 114.4 3.6 3 4.5 0.1 18.9 6.2 3 233 8.4 31.4 8.7 . SR4A 16:22 8.4 31.4 111.9 817186 807802 Cloudy Calm 9.0 Middle 18.9 4.5 234 18.8 8.4 31.4 8.6 6.4 2 0.1 7.7 8.0 0.1 18.8 8.4 31.5 2 136 8.4 111.3 8.6 8.6 Bottom 18.8 31.5 8.0 0.1 141 18.8 8.4 7.8 4.7 1.0 0.0 157 19.0 8.4 31.1 5 8.6 19.0 8.4 31.1 111.7 Surface 1.0 0.0 169 19.0 8.4 31.1 8.6 4.5 5 SR5A 4.0 Middle 816578 810698 Cloudy Calm 16:39 3.0 0.1 195 19.0 109.1 8.4 6.1 3 Bottom 19.0 8.4 31.1 109.0 8.4 0.1 199 19.0 31.1 8.4 6.0 3.0 1.0 0.1 205 19.1 8.4 30.9 114.7 4.7 Surface 19.1 8.4 30.9 114.5 1.0 0.1 209 19.1 8.4 30.9 114.3 8.8 4.7 4 SR6A Cloudy Calm 17:10 Middle 817976 814761 3.7 0.1 125 19.1 8.4 30.9 8.6 5.3 4 Bottom 19.1 8.4 30.9 111.6 8.6 3.7 0.1 133 19.1 8.4 30.9 8.6 5.4 4 1.0 0.1 342 18.8 8.1 30.6 8.6 4.8 4 110.9 Surface 8.1 30.6 1.0 0.1 358 18.8 8.1 30.6 110 8.6 4.8 3 8 1 0.2 82 18.7 8.1 30.7 109.6 8.5 5.0 5.0 3 SR7 Cloudy Moderate 17:54 16.2 Middle 8.1 30.7 109.6 823622 823719 8.1 0.2 84 18.7 8.1 30.7 109.5 8.5 15.2 0.2 64 18.7 8.1 30.8 108.6 8.4 5.1 6 Bottom 18.7 8.1 30.8 108.6 15.2 0.2 64 18.7 8.1 30.8 108. 8.4 5.1 5 1.0 19.3 8.2 28.9 118.6 9.2 5.5 6 Surface 19.3 8.2 28.9 118.5 5.5 1.0 19.3 8.2 28.9 118.4 9.2 5 . . 811626 820385 SR8 Cloudy Moderate 16:13 4.3 Middle -3.3 19.3 9.7 4 8.2 28.9 112.8 8.8 Bottom 19.3 8.2 28.9 112.5 8.8

DA: Depth-Averaged

Water Quality Monitoring Results on 11 February 21 during Mid-Ebb Tide Turbidity(NTU) Suspended Solids Total Alkalinity DO Saturation Chromium Salinity (ppt) Coordinate Coordinate Nickel (µg/L) Weather Sampling Water Water Temperature (°C) Monitoring Current Speed Oxvaen (mg/L) (maga) Sampling Depth (m) HK Grid HK Grid Station Direction Value DA Condition Time Depth (m) (m/s) Average Value Average Average Value Average Value DA Value DA Value DA (Northing) Value DA Value DA Condition Value Value (Easting) 18.5 0.2 8.5 30.6 111.2 1.0 213 18.5 30.6 2.9 3.4 4.2 0.0 200 18.3 8.4 31.7 100.3 7.8 4 88 <0.2 0.9 100.2 804264 C1 Cloudy Moderate 12:46 8.4 31.8 815633 0.9 4.2 0.0 204 18.3 8.4 31.8 100.0 7.8 3.5 4 89 <0.2 0.9 7.3 0.0 165 18.2 8.4 33.1 97.8 7.6 4.7 4 91 <0.2 0.8 Bottom 8.4 33.1 97.9 7.6 7.3 0.0 170 18.2 8.4 33.1 97.9 7.6 4.6 4 91 <0.2 0.9 19.0 1.0 0.2 315 8.4 28.3 109.7 8.6 3.6 4 86 < 0.2 0.6 Surface 8.4 28.3 109.7 <0.2 1.0 0.2 330 19.0 8.4 28.3 109. 8.6 3.6 4 86 0.8 5.9 0.3 17 18.7 8.4 29.0 8.3 4.5 4.5 4 89 90 <0.2 0.8 C2 Cloudy Moderate 11:33 11.8 Middle 8.4 29.0 105.3 825678 806930 5.9 17 18.7 0.3 8.4 29.1 8.3 10.8 0.4 18.6 8.4 5.0 6 92 0.9 28 29.5 103. 8.1 < 0.2 Bottom 18.6 8.4 29.4 103.7 8.1 5.0 10.8 0.5 29 18.6 8.4 92 <0.2 29.4 103 (1.0 0.4 18.7 8.3 4 86 0.6 30.1 8.3 < 0.2 Surface 18.7 8.3 30.1 106.8 2.9 9.2 9.2 0.6 1.0 18.7 4 86 <0.2 0.4 86 8.3 30.1 106. 8.3 82 0.6 0.7 0.8 0.6 18.7 4 89 90 <0.2 8.1 5.8 0.3 8.3 30.2 104. C3 Cloudy Moderate 13:45 11.6 Middle 18.7 8.3 30.2 103.9 89 822119 817825 0.7 18.7 0.4 8.3 30.2 3 <0.2 10.6 0.3 57 18.7 8.3 30.4 8.0 3.7 91 18.7 8.3 8.0 Bottom 30.4 103.0 10.6 0.3 57 18.7 8.3 30.4 102.9 8.0 3.3 3 92 <0.2 0.6 0.0 18.4 3.9 8.4 31.5 108.7 <0.2 0.7 8.5 Surface 18.4 8.4 31.5 108.3 1.0 0.0 117 18.4 8.4 31.5 107.9 8.4 3.9 5 85 <0.2 0.7 8.5 807115 IM1 Cloudy Moderate 12:24 5.0 Middle 817937 4.0 0.0 18.3 8.4 31.6 8.0 3.8 4 89 <0.2 0.7 Bottom 18.3 8.4 31.6 102 9 8.0 4.0 0.0 78 18.3 8.4 31.6 8.0 3.8 0.7 0.1 105 18.4 8.4 30.9 8.5 3.4 5 84 <0.2 0.8 Surface 18.4 8.4 30.9 108.5 1.0 0.1 113 18.4 8.5 3.4 5 85 <0.2 0.8 0.8 0.9 3.5 0.1 278 18.4 4.2 5 87 <0.2 <0.2 <0.2 8.4 101.4 806173 Cloudy Moderate 12:16 Middle 8.4 31.6 818182 18.3 4.2 5 5 3.5 0.1 303 5.9 0.1 250 18.3 8.4 7.8 5.0 91 Bottom 18.3 8.4 31.9 100.7 7.9 7.9 5.9 0.1 253 18.3 8.4 31 9 4.8 4 91 <0.2 0.8 0.8 1.0 0.1 31 18.4 8.4 30.9 108.9 3.2 4 85 <0.2 Surface 8.4 30.9 108.9 1.0 0.1 31 18.4 8.4 30.9 108. 8.5 3.2 4 85 <0.2 0.6 0.6 0.7 0.8 3.6 0.1 324 18.4 8.4 4.0 4 87 <0.2 IM3 Cloudy Moderate 12:09 7.1 Middle 104.5 818794 805613 4 88 90 <0.2 3.6 0.1 355 18.4 8.4 104. 4.0 271 4 61 0.2 18.2 8.4 32.0 98.7 7.7 4.5 7.7 98.9 4.4 3 6.1 0.2 18.2 8.4 32.0 <0.2 283 91 1.0 0.2 18.4 8.4 31.2 105.6 8.2 8.2 3.3 3 84 <0.2 0.8 Surface 18.4 8.4 31.2 105.4 85 1.0 8.4 3.4 4 <0.2 0.2 18.4 31.2 3.8 4.2 322 4 86 87 0.8 0.1 18.3 8.4 31.5 7.9 <0.2 IM4 Cloudy Moderate 11:58 Middle 18.3 8.4 31.5 101.2 87 819730 804596 4 4.2 338 18.3 8.4 31.5 0.1 6 5 0.8 7.3 0.1 302 18.3 18.3 8.4 8.4 31.9 100. 7.8 7.8 4.4 4.4 90 <0.2 Rottom 18.3 8.4 31.9 100.3 7.8 0.1 306 90 < 0.2 0.8 1.0 0.3 18.4 3.5 85 17 8.4 31.3 106. 8.3 3 <0.2 Surface 18.4 8.4 31.3 106.5 1.0 18.4 8.4 8.3 3.5 3.7 <0.2 0.7 0.3 31.2 106. 2 85 3.9 0.3 18.4 7.9 2 87 <0.2 0.7 8.4 31.5 IM5 11:49 7.7 8.4 31.5 101.3 820744 804850 Cloudy Moderate Middle 18.4 3.9 18.4 8.4 31.5 3.8 2 88 < 0.2 0.8 0.3 <0.2 1.2 6.7 7.7 0.2 18.3 8.4 31.8 99.5 99.5 4.0 2 <2 91 8.4 99.5 7.7 Bottom 18.3 31.8 0.2 18.3 8.4 4.0 18.7 1.4 84 1.0 1.0 0.1 281 8.4 30.3 8.5 3 <0.2 109.0 Surface 18.7 8.4 30.3 108.9 1.0 0.1 301 18.7 8.4 30.3 8.5 1.4 3 84 <0.2 3.7 0.0 92 18.5 8.4 31.1 8.1 2.9 2 87 <0.2 1.1 7.3 Middle 18.5 8.4 31.1 103.5 821083 805816 IM6 Cloudy Moderate 11:41 3.7 0.0 96 18.5 8.4 31.1 103.3 8.1 3.0 2 87 <0.2 1.1 1.0 6.3 0.1 43 18.4 8.4 99.7 7.8 2.1 <2 90 <0.2 Bottom 18.4 8.4 31.5 99.7 7.8 0.1 18.4 8.4 31.6 99.6 7.8 <2 45 1.0 0.1 303 18.8 8.4 29.7 108.0 8.4 1.5 84 <0.2 1.1 Surface 18.8 8.4 29.7 107.9 1.0 0.2 319 18.8 8.4 29.8 107. 8.4 1.6 3 85 <0.2 1.2 2.3 1.2 4.3 0.1 63 18.4 8.4 31.5 97.5 7.6 3 87 <0.2 IM7 Cloudy Moderate 11:34 8.5 Middle 8.4 31.5 97.3 821361 806835 <0.2 4.3 0.1 64 18.3 8.4 31.6 97.1 7.6 3 88 7.5 0.0 41 18.3 8.4 32.2 96.1 7.5 1.5 3 91 <0.2 1.2 8.4 32.1 96.2 7.5 7.5 0.0 42 18.3 8.4 96.2 7.5 1.6 91 <0.2 1.3 1.0 0.1 55 18.9 8.4 28.3 8.8 3.9 <2 83 < 0.2 0.8 111.8 Surface 8.4 28.4 0.9 1.0 0.1 60 18.9 8.4 28.4 8.8 4.0 2 84 <0.2 3.8 0.3 62 18.6 8.3 29.3 105.2 8.3 5.7 5.9 3 89 90 <0.2 0.8 IM8 Cloudy Moderate 12:00 7.6 Middle 18.6 8.3 29.3 104.9 821830 808127 3.8 0.3 65 18.6 8.3 29.4 104.5 8.2 < 0.2 6.6 0.2 55 18.5 8.3 29.7 8.1 7.0 4 91 <0.2 0.8 8.3 Bottom 18.5 29.7 103.6 18.5

DA: Depth-Averaged

Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Water Quality Monitoring Results on 11 February 21 during Mid-Ebb Tide DO Saturation Dissolved Suspended Solids Total Alkalinity Chromium Salinity (ppt) Turbidity(NTU) Coordinate Coordinate Nickel (µg/L) Weather Sampling Water Water Temperature (°C) Monitoring Speed Current Oxvaen (mg/L) (ppm) Sampling Depth (m) HK Grid HK Grid Station Direction Time (m/s) Average Average Value Average Value DA Value DA Value DA Value DA Value DA Value DA Condition Condition Depth (m) Value Value Average Value (Northing) (Easting) 18.9 0.3 Surface 8.4 28.3 67 18.9 8.4 3.6 4.7 3.5 0.4 62 18.6 8.3 29.5 8.1 <2 89 <0.2 0.7 103.0 808830 IM9 Cloudy Moderate 12:06 8.3 29.5 822107 8.0 3.5 0.4 66 18.6 8.3 29.5 102.9 8.1 4.7 2 89 <0.2 0.7 5.9 0.2 53 18.5 8.3 29.7 101.9 8.0 4.8 2 91 <0.2 0.8 Bottom 8.3 29.7 101.9 8.0 5.9 0.3 55 18.5 8.3 29.7 101.8 8.0 4.9 2 91 <0.2 0.8 1.0 0.4 85 18.9 8.4 28.4 8.3 3.4 <2 85 < 0.2 0.8 Surface 8.3 28.7 103.7 1.0 0.4 90 18.8 8.3 28.9 8.0 3.2 <2 85 <0.2 0.7 3.7 0.4 81 18.8 8.3 28.9 8.0 3.2 <2 <2 89 89 <0.2 0.7 IM10 Cloudy Moderate 12:13 7.4 Middle 8.3 29.1 102.2 822376 809776 8.3 <0.2 0.4 86 18.7 29.2 8.0 6.4 0.3 18.6 8.3 3.5 2 0.7 80 29.4 102. 8.0 95 < 0.2 Bottom 18.6 8.3 29.4 102.3 8.0 0.7 3.5 6.4 18.6 8.3 8.0 91 0.4 80 29.3 102 **-**0 2 1.0 0.2 18.7 3.3 <2 83 8.3 29.6 8.3 0.6 Surface 18.7 8.3 29.6 105.6 0.6 1.0 18.7 3.3 <2 84 0.2 125 8.3 29.6 105. 8.3 < 0.2 83 18.7 3.3 <2 <2 0.7 8.2 90 91 <0.2 3.9 8.3 29.6 104 IM11 Cloudy Moderate 12:26 7.8 Middle 8.3 29.6 104.9 88 822047 811462 0.7 107 18.7 0.3 8.3 29.6 0.8 6.8 0.2 99 18.6 8.3 29.6 8.1 3.2 2 91 <0.2 103.7 8.1 Bottom 18.6 8.3 29.6 6.8 0.2 104 18.6 8.3 29.6 103.7 8.1 3.2 2 91 <0.2 0.7 0.2 18.7 3.3 <2 <0.2 8.3 29.6 8.4 0.8 Surface 18.7 8.3 106.8 29.6 1.0 0.2 124 18.7 8.3 29.6 106.7 8.4 3.3 <2 85 <0.2 0.9 0.8 4.2 18.7 8.2 3.2 <2 86 <0.2 0.2 8.3 29.6 104.7 812039 IM12 Cloudy Moderate 12:32 8.4 Middle 18.7 8.3 29.6 104.7 <2 821445 4.2 7.4 117 18.7 8.3 3.2 <2 <2 89 <0.2 0.2 29.6 0.2 104 18.7 8.3 29.6 3.1 92 <0.2 0.8 8.1 18.7 8.3 29.6 103.8 8 1 Rottom 7.4 0.2 108 18.7 8.3 29.6 103. 8.1 3.2 <2 0.7 18.6 8.3 29.3 3.3 4 99.0 7.8 Surface 18.6 8.3 99.0 29.3 1.0 18.6 7.8 3.3 4 2.6 Cloudy Moderate 13:08 Middle 819972 812656 2.6 41 18.6 8.3 29.4 99.3 7.8 9.5 4 Bottom 18.6 8.3 29.4 99.3 7.8 7.8 41 18.6 83 29.4 99.3 9.8 4 1.0 0.2 86 18.7 8.3 29.7 105.3 8.2 3.6 89 <0.2 0.7 Surface 18.7 8.3 29.7 105.2 1.0 0.2 94 18.7 8.3 29.7 105. 8.2 3.6 2 89 < 0.2 0.7 SR2 Cloudy Moderate 13:24 4.3 Middle 821455 814153 33 3.7 92 0.8 0.2 88 18.7 8.3 29.7 8.2 3 <0.2 104.2 8.2 Bottom 3.7 33 18.7 29.7 104 0.8 0.2 93 83 4 92 r0 2 1.0 0.3 146 18 9 8.4 28.2 8.7 3.7 4 Surface 8.4 28.3 110.1 8.6 8.4 41 5 1.0 0.4 158 18.9 28.4 4.3 5.3 3 0.3 112 18.7 8.3 29.3 8.2 SR3 Cloudy Moderate 11:54 Middle 18.7 8.3 103.8 822129 807589 5.5 18.6 8.3 4.3 0.3 123 29.4 7.6 7.6 0.4 86 18.6 18.6 8.3 8.3 29.4 103.2 8.1 5.9 6.0 2 Bottom 18.6 8.3 29.4 8.1 0.4 92 29.3 1.0 0.3 82 18.5 8.5 30.9 8.8 3.4 6 Surface 18.5 8.5 30.9 112.5 8.8 1.0 0.3 85 18.4 8.5 31.0 112. 3.4 6 4.6 18.4 3.9 5 0.2 31.4 . 8.4 8.2 SR4A 8.4 31.4 105.2 817192 807798 Cloudy Calm 13:09 9.1 Middle 18.4 4.6 18.4 8.4 31.4 8.2 3.9 5 0.2 8.1 18.3 8.5 31.5 3.8 4 0.2 104.5 104.6 8.1 8.2 18.4 8.5 31.5 Rottom 8.1 0.2 18.4 8.5 104. 8.2 1.0 0.0 232 18.4 8.4 31.2 7.6 2.1 3 97.9 18.4 8.4 31.2 98.0 Surface 1.0 0.0 249 18.4 8.4 98.0 7.6 2.1 4 SR5A 3.4 Middle 816597 810687 Cloudy Calm 13:26 2.4 0.0 114 18.3 97.8 7.6 2.1 4 Bottom 18.3 8.4 31.3 97.8 7.6 0.0 119 18.3 31.3 97.7 7.6 2.1 2.4 1.0 0.0 351 18.5 8.5 30.7 106.0 3.6 4 Surface 18.5 8.5 30.7 106.0 1.0 0.0 323 18.5 8.5 30.8 105.9 8.3 3.5 3 SR6A Cloudy Calm 14:09 4.5 Middle 817976 814719 3.5 0.0 302 18.5 30.8 8.2 5.5 3 Bottom 8.5 30.8 105.6 8.2 3.5 0.0 310 18.5 8.5 30.8 5.3 3 1.0 0.3 73 18.6 8.3 30.4 8.0 2.9 4 103.0 Surface 8.3 30.4 1.0 0.3 79 18.6 8.3 30.4 102.9 8.0 2.9 4 8 1 0.2 73 18.6 8.3 30.5 101 7.9 3.0 3 SR7 Cloudy Moderate 14:31 16.2 Middle 8.3 30.5 101.6 823626 823733 8.1 0.2 78 18.6 8.3 30.5 7.9 3.0 15.2 0.1 50 18.6 8.3 30.5 7.9 3.2 2 Bottom 8.3 30.5 101.3 15.2 0.1 51 18.6 8.3 30.5 7.9 3.2 1.0 18.8 8.4 29.4 105.4 8.2 4.7 3 Surface 18.8 8.4 29.4 105.3 1.0 18.8 8.4 29.5 105.1 8.2 4.6 3 -. 811621 820409 SR8 Cloudy Moderate 12:44 4.4 Middle -3.4 18.6 9.1 2 8.4 29.4 103.5 8.1 18.6 8.4 29.4 103.5 8.1

DA: Depth-Average

Water Quality Monitoring Results on 11 February 21 during Mid-Flood Tide Turbidity(NTU) Suspended Solids Total Alkalinity DO Saturation Dissolved Chromium Salinity (ppt) Coordinate Coordinate Nickel (µg/L) Weather Sampling Water Water Temperature (°C) Monitoring Current Speed Oxvaen (mg/L) (maga) Sampling Depth (m) HK Grid HK Grid Station Direction Condition Time Depth (m) (m/s) Average Average Value Average Value DA Value DA Value DA Value DA (Northing) Value DA Value DA Condition Value Value Average Value (Easting) 18.4 0.4 Surface 18.4 8.5 30.4 104.9 1.0 0.4 39 18.4 30.4 104.8 8.2 4.3 <0.2 0.9 18.4 3.9 88 0.9 <0.2 C1 84 30.9 102.7 804229 08:26 7.8 Middle 18.4 815639 Cloudy Moderate 88 0.9 18.4 8.4 30.9 8.0 4.0 4 88 <0.2 0.8 3.9 0.4 33 0.9 6.8 0.3 26 18.3 8.5 31.5 100. 7.9 5.5 5 91 <0.2 79 18.3 8.5 31.5 100.8 Rottom 5.2 18.3 6.8 0.3 8.5 31.5 4 91 < 0.2 1.0 0.3 19.0 85 0.8 0.9 1.1 1.1 < 0.2 8.4 Surface 19.0 8.4 27.9 109.2 3.8 19.0 8.6 86 1.0 0.4 324 8.4 <0.2 2 88 5.9 0.5 18.9 8.4 28.5 8.3 C2 Cloudy Moderate 09:39 11.8 Middle 18.9 8.4 28.5 106.3 5.2 89 825673 806933 28.5 8.3 5.8 3 89 <0.2 5.9 0.5 16 18.9 8.4 10.8 0.3 18.9 8.4 105.9 8.3 6.0 3 91 <0.2 1.1 28.6 8.4 28.6 105.9 8.3 Bottom 18.9 10.8 0.3 18.9 8.4 28.6 8.3 6.0 2 92 <0.2 0.6 18.7 8.3 29.8 4.4 <0.2 1.1 Surface 18.7 8.3 29.9 102.7 1.0 0.6 291 18.7 8.3 29.9 8.0 4.4 2 86 <0.2 1.0 5.5 5.6 1.1 6.0 18.7 3 90 89 <0.2 0.5 286 8.3 30.1 8.0 C3 07:16 101.9 817817 Cloudy Moderate 11.9 Middle 18.7 8.3 30.1 89 822107 1.1 0.5 295 18.7 8.3 1.0 10.9 0.3 289 18.6 8.3 30.1 7.9 5.3 4 91 <0.2 Bottom 18.6 8.3 30.1 101.0 7.9 10.9 0.3 296 18.6 8.3 30 1 7 9 5.5 4 92 1.0 0.1 18.3 8.4 31.4 5.2 <0.2 1.1 Surface 18.3 8.4 31.4 101.3 1.0 0.1 18.3 8.4 31.4 101 7.9 5.1 8 86 <0.2 1.1 807136 IM1 Cloudy Moderate 08:46 Middle 817940 3.7 0.1 356 18.2 8.4 31.9 98.2 7.7 2.7 89 < 0.2 1.0 Bottom 8.4 31.9 98.2 7.7 3.7 0.1 328 18.2 8.4 31.9 98.2 77 2.8 7 90 <0.2 0.9 1.0 18.4 0.3 8.4 31.3 8.0 4.9 84 < 0.2 1.0 Surface 8.4 31.3 102.3 1.0 0.3 12 18.4 8.4 31.3 102.2 8.0 5.0 6 85 <0.2 0.9 5.5 3.4 0.3 359 18.4 8.4 31.5 100. 7.8 7 86 <0.2 0.9 IM2 Cloudy Moderate 08:55 6.7 Middle 8.4 31.5 100.2 818144 806145 0.9 5.5 87 <0.2 0.9 0.9 0.9 3.4 0.3 330 18.4 8.4 31.5 7.8 8 5.7 0.2 327 18.2 8.4 32 1 98.3 7.6 5.9 9 90 <0.2 8.4 32.1 98.3 7.6 5.7 10 0.2 333 18.2 8.4 32.2 98.2 7.6 6.0 91 <0.2 1.0 0.3 358 18.5 8.4 31.2 102.8 8.0 5.2 84 < 0.2 0.9 Surface 8.4 31.2 102.7 5.2 5.2 5.8 5.9 1.0 7 85 0.4 329 18.5 8.4 8.0 <0.2 31.2 0.8 0.7 0.7 18.4 7 87 87 90 <0.2 3.5 0.3 337 8.4 31.5 100. 7.8 IM3 Cloudy Moderate 09:03 7.0 Middle 18.4 8.4 31.5 100.5 87 818786 805580 8 7 3.5 0.3 348 18.4 8.4 100. 7.8 <0.2 18.2 6.0 0.3 317 8.4 32.2 98.5 7.7 5.6 Rottom 18.2 8.4 32.2 98.5 7.7 6.0 0.3 342 18.2 8.4 32.2 98.4 7.7 5.5 8 90 <0.2 0.8 0.9 1.0 0.5 356 18.5 84 8.4 31.0 103.6 8.1 4.2 9 <0.2 Surface 18.5 8.4 31.0 103.6 0.5 328 18.5 8.4 4.3 84 <0.2 4.1 4.6 88 <0.2 0.9 0.4 18.5 9 8.4 31.2 8.0 IM4 Moderate 09:13 8.2 Middle 18.5 8.4 31.2 102.2 819716 804609 Cloudy 4.1 0.4 18.5 8.4 8.0 4.7 88 <0.2 8 0.4 18.4 5.6 9 91 0.9 8.4 7.9 8.4 101 2 Bottom 18.4 31.3 7.9 7.2 0.5 18.4 8.4 5.5 8 <0.2 0.8 0.9 1.0 0.7 18.5 8.4 31.0 3.9 84 <0.2 102.6 8.0 Surface 18.5 8.4 31.0 102.6 1.0 0.8 18.5 4.0 84 <0.2 3.7 0.7 18.4 4.5 7 8 86 <0.2 0.9 8.4 7.8 09:22 IM5 7.4 Middle 18.4 8.4 31.5 100.3 820721 804846 Cloudy Moderate 3.7 0.7 18.4 4.6 <0.2 8 0.8 6.4 0.5 18.3 8.5 31.7 99.0 7.7 5.2 5.1 90 <0.2 18.3 8.5 31.7 99.0 7.7 Bottom 6.4 0.6 18 18.3 8.5 99.0 < 0.2 1.0 0.1 23 18.7 8.4 30.1 1.6 5 84 <0.2 1.0 8.4 Surface 8.4 30.2 107.5 1.0 0.1 18.6 8.4 30.2 8.4 1.7 6 84 <0.2 1.1 3.7 0.1 43 18.5 8.4 30.8 8.0 2.5 6 87 <0.2 Cloudy Moderate 09:30 Middle 18.5 8.4 30.8 103.0 821073 805847 2.5 <0.2 3.7 0.1 45 18.5 8.4 30.9 8.0 6 87 2.3 1.1 6.3 0.1 50 18.3 8.4 31.8 7 90 <0.2 31.8 98.2 63 0.1 18.3 8.4 31.8 6 91

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102.2

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106.3 8.3

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821325

821832

1.0

1.1

1.1

1.1

0.9

0.9

0.8

0.9

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806830

808133

IM8

IM7

Calm: Small or no wave: Moderate: Between calm and rough: Rough: White capped or rougher

09:09

7.6

09:40

Moderate

Moderate

Cloudy

Cloudy

1.0

1.0

4.5

4.5

7.9

7.9

1.0

1.0

3.8

3.8

6.6

Surface

Middle

Bottom

Surface

Middle

Rottom

0.2

0.2

0.2

0.2

0.2

0.2

0.1

0.1

0.1

0.2

0.1

150

154

132

138

142

154

95

99

84

86

18.7

18.7

18.6

18.6

18.3

18.3

18.9

18.9

18.9

18.9

18.9

Water Quality Monitoring Results on 11 February 21 during Mid-Flood Tide Turbidity(NTU) Suspended Solids Total Alkalinity DO Saturation Dissolved Chromium Salinity (ppt) Coordinate Coordinate Nickel (µg/L) Weather Sampling Water Water Temperature (°C) Monitoring Speed Current Oxvaen (mg/L) (ppm) Sampling Depth (m) HK Grid HK Grid Station Direction Time (m/s) Average Average Value Average Value DA Value DA Value DA Value DA Value DA Value DA Condition Condition Depth (m) Value Value Average Value (Northing) (Easting) 18.8 0.2 Surface 8.4 28.3 106.4 18.8 8.4 3.9 4.8 4 3.5 0.2 67 18.8 8.3 28.6 8.2 4 89 <0.2 0.8 08:59 103.7 IM9 Cloudy Moderate 8.3 28.6 822098 808805 3.5 0.2 72 18.8 8.3 28.6 103.7 8.2 4.8 4 89 <0.2 0.8 5.9 0.1 87 18.7 8.3 28.8 103.3 8.1 3.5 6 92 <0.2 0.8 Bottom 8.3 28.8 103.3 5.9 0.1 89 18.7 8.3 28.8 103.2 8.1 3.5 6 93 <0.2 0.9 1.0 0.5 335 18.7 8.3 29.2 8.0 3.8 86 < 0.2 0.8 Surface 8.3 29.2 102.5 <0.2 1.0 0.5 338 18.7 8.3 29.2 8.0 3.8 6 87 0.9 3.5 0.4 331 18.7 8.3 8.0 4.1 5 6 89 89 <0.2 0.8 Cloudy IM10 Moderate 08:52 7.0 Middle 8.3 29.3 102.2 822361 809777 3.5 331 18.7 8.3 4.2 0.4 29.3 8.0 6.0 0.3 18.6 8.3 4.2 5 5 0.9 327 29.4 102. 8.0 91 < 0.2 Bottom 8.3 29.4 102.2 8.0 6.0 18.6 8.3 29.4 102 8.0 4.3 92 0.4 332 **-**0 2 1.0 0.5 4.0 314 18.6 8.3 29.6 8.1 0.9 Surface 8.3 29.6 103.9 0.8 1.0 4.0 4 86 <0.2 0.5 333 18.6 8.3 29.6 8.1 4.5 0.9 0.9 0.9 <0.2 18.6 8.1 4 89 89 3.8 0.4 318 8.3 29.6 IM11 Cloudy Moderate 08:42 7.6 Middle 8.3 29.6 103.4 88 822076 811457 0.9 18.6 4 0.4 343 8.3 29.6 <0.2 6.6 0.4 318 18.6 8.3 29.6 5.2 4 90 103. 8.1 103.3 8.1 Bottom 18.6 8.3 29.6 6.6 0.4 345 18.5 8.3 29.6 103.3 8.1 5.2 4 90 <0.2 0.9 0.4 18.6 4 <0.2 0.8 8.3 29.6 Surface 18.6 8.3 29.6 103.5 1.0 0.5 284 18.6 8.3 29.6 5.2 4 86 <0.2 0.8 0.9 4.4 0.5 274 18.6 8.1 6.9 3 89 <0.2 8.3 29.6 821477 812054 IM12 Cloudy Moderate 08:36 8.7 Middle 18.6 8.3 29.6 103.3 4.4 18.6 8.3 7.0 3 90 <0.2 0.5 277 29.6 0.4 279 18.6 8.3 29.7 9.1 <2 92 <0.2 0.9 8.1 18.6 8.3 29.7 103.1 8 1 Rottom 7.7 0.4 291 18.6 8.3 29.7 8.1 8.9 0.9 1.0 18.6 8.3 29.3 3.1 4 7.6 7.6 Surface 18.6 8.3 97.1 29.3 1.0 18.6 3.1 4 2.5 Cloudy Moderate 07:59 Middle 819975 812660 2.5 3.9 18.6 8.3 29.3 96.3 7.6 3.1 4 Bottom 18.6 8.3 29.3 96.2 7.6 7.6 3.9 18.6 83 29.3 96.1 3.2 4 1.0 0.2 114 18.6 8.3 29.6 8.0 6.3 4 88 <0.2 0.9 Surface 18.6 8.3 29.6 101.9 1.0 0.2 120 18.6 8.3 29.6 101. 8.0 6.6 4 89 < 0.2 1.0 8.0 SR2 Cloudy Moderate 07:38 4.0 Middle 821470 814149 3.0 105 18.6 6.5 90 0.1 8.3 29.6 8.0 7.9 6 <0.2 0.9 101.3 8.0 Bottom 106 18.5 83 29.6 6.2 5 0.9 3.0 0.1 91 r0 2 1.0 0.1 48 19.0 8.4 28.0 106.8 8.4 8.4 3.6 4 Surface 8.4 28.0 106.7 8.4 3.5 1.0 0.1 52 19.0 28.0 4 4.2 4.0 5 5 0.1 45 18.9 8.4 28.1 104.8 8.2 SR3 Cloudy Moderate 09:17 Middle 18.9 8.4 104.8 822130 807567 4.0 4.2 18.9 8.4 104. 0.2 46 28.1 5 6 7.4 0.1 18.9 18.9 8.4 8.4 28.2 104. 104.5 8.2 4.1 4.1 Bottom 18.9 8.4 28.2 8.2 104. 0.1 54 28.2 1.0 1.4 0.2 70 18.3 8.4 31.1 94.1 7.4 5 Surface 18.3 8.4 31.1 94.1 1.0 74 94.1 7.4 1.4 0.2 18.3 8.4 31.1 4 4.4 64 18.1 2.6 4 0.3 8.4 7.5 . 32.2 95.9 SR4A 08:01 8.4 32.2 95.9 817172 807828 Cloudy Calm 8.8 Middle 18.1 4.4 0.4 67 18.1 8.4 95.9 2.6 4 32.2 7.4 7.8 0.3 63 18.1 8.4 95.4 95.4 2.5 2.5 3 8.4 32.3 95.4 7.4 Rottom 18.1 32.3 7.8 0.3 68 18.1 8.4 1.0 0.1 306 18.4 8.4 30.9 7.3 7.3 1.3 3 93.2 18.4 8.4 30.9 93.2 Surface 1.0 0.1 320 18.4 8.4 93.2 1.3 3 SR5A 07:42 3.1 Middle 816603 810696 Cloudy Calm 2.1 0.1 308 18.3 30.9 92.8 7.3 1.5 <2 Bottom 18.3 8.4 30.9 92.8 7.3 0.1 319 18.3 30.9 92.8 7.3 1.5 2.1 1.0 0.0 161 18.4 8.4 30.7 99.5 7.8 2.4 Surface 18.4 8.4 30.7 99.5 1.0 0.0 167 18.4 8.4 30.7 99.5 7.8 2.5 4 SR6A Cloudy Calm 07:14 4.4 Middle 817949 814744 3.4 0.0 182 18.4 8.4 30.8 99.6 7.8 2.8 5 8.4 30.8 99.6 7.8 3.4 0.0 182 18.4 8.4 30.8 99.6 2.9 4 1.0 0.3 80 18.7 8.3 29.9 8.0 4.0 103.0 Surface 29.9 1.0 0.3 80 18.7 8.3 29.9 102.9 8.0 4.1 4 8 1 0.3 73 18.7 8.3 30.1 101.8 8.0 7.2 4 SR7 Cloudy Moderate 06:46 16.2 Middle 18.7 8.3 30.1 101.7 823627 823737 8.2 8.1 0.3 74 18.7 8.3 30.1 7.9 4 15.2 0.3 50 18.7 8.2 30.2 7.9 8.2 6 Bottom 18.7 8.2 30.2 100.6 15.2 0.3 51 18.7 8.2 30.2 7.8 8.9 6 1.0 18.7 8.3 29.2 8.0 4.6 3 Surface 18.7 8.3 29.3 101.5 1.0 18.7 8.3 29.3 101.4 8.0 4.9 4 . . 820412 811637 SR8 Cloudy Moderate 08:25 4.4 Middle -3.4 18.6 5.1 4 8.3 29.5 7.9 Bottom 18.6 8.3 29.5 101.4 8.0

DA: Depth-Averaged

Water Quality Monitoring Results on 13 February 21 during Mid-Ebb Tide Turbidity(NTU) Suspended Solids Total Alkalinity DO Saturation Dissolved Chromium Salinity (ppt) Coordinate Coordinate Nickel (µg/L) Weather Sampling Water Water Temperature (°C) Monitoring Current Speed Oxvaen (mg/L) (maga) Sampling Depth (m) HK Grid HK Grid Station Direction Condition Time Depth (m) (m/s) Average Value Average Average Value Average Value DA Value DA Value DA Value DA Value DA Value DA Condition Value Value (Northing) (Easting) 16.5 0.2 8.2 30.7 1.0 251 16.4 30.7 1.3 <2 0.9 1.0 43 0.2 230 16.4 8.2 31.0 118 1 9.6 4.6 <2 89 <0.2 118.0 804261 C1 Cloudy Moderate 13:50 8.2 31.1 <2 90 815626 0.9 4.3 0.2 251 16.3 8.2 31.1 117 0 9.6 4.8 <2 89 <0.2 0.9 7.6 0.2 239 16.2 8.2 31.8 112.0 9.1 5.7 <2 92 <0.2 0.9 Bottom 16.2 8.2 31.8 111.9 7.6 0.2 249 16.2 8.2 31.8 111 8 9.1 5.7 <2 93 <0.2 0.9 19.3 1.0 3.1 317 8.4 28.1 109. 8.6 0.8 85 < 0.2 1.0 Surface 8.4 28.1 109.9 <0.2 1.0 3.2 325 19.3 8.4 28.1 109. 8.6 0.8 4 85 0.9 1.0 6.2 3.1 329 19.1 8.4 28.6 8.3 1.7 3 86 87 <0.2 C2 Cloudy Moderate 12:45 12.3 Middle 8.4 28.6 105.5 825678 806932 6.2 331 19.1 8.4 28.7 8.2 11.3 3.2 19.0 8.4 2.2 3 0.9 333 29.2 103. 8.1 90 < 0.2 Bottom 19.0 8.4 29.2 103.9 8.1 11.3 3.4 335 19.0 8.4 90 <0.2 29.2 103 0.3 18.8 1.0 8.3 0.1 4 30.2 8.3 < 0.2 0.9 Surface 18.8 8.3 30.2 107.0 0.8 1.0 0.1 4 90 <0.2 0.3 96 18.8 8.3 30.2 106. 8.3 82 18.7 6.5 6.5 3 89 90 <0.2 0.9 1.0 6.0 8.1 8.3 30.4 104 C3 Cloudy Moderate 14:57 12.0 Middle 8.3 30.4 104.1 822121 817790 0.9 18.7 0.3 73 8.3 30.4 0.9 11.0 0.2 77 19.0 8.3 29.8 8.0 0.5 3 93 <0.2 19.0 8.3 103.2 8.0 Bottom 29.8 11.0 0.3 77 19.0 8.3 29.8 103.1 8.0 0.5 3 93 <0.2 1.0 0.1 200 16.6 8.2 30.1 9.6 <2 <0.2 0.9 Surface 16.6 8.2 30.1 117.6 1.0 0.2 206 16.6 8.2 30.1 117.4 9.6 1.7 <2 86 <0.2 1.0 9.6 807111 IM1 Cloudy Moderate 13:30 5.6 Middle 89 817946 4.6 0.1 205 16.6 8.2 30.2 9.1 2.6 <2 91 <0.2 0.8 111.2 Bottom 16.6 8.2 30.2 9.1 4.6 0.1 225 16.6 8.2 30.2 9.0 2.5 <2 0.9 0.2 192 16.6 8.2 30.3 9.6 9.6 1.9 <2 87 <0.2 0.9 Surface 16.6 8.2 30.3 118.5 1.0 0.2 207 16.6 30.4 2.0 <2 87 <0.2 1.0 0.9 1.0 3.6 0.2 189 16.5 3.4 <2 91 <0.2 <0.2 <0.2 8.2 9.5 116.1 806155 Cloudy Moderate 13:23 Middle 8.2 30.6 818142 <2 <2 3.6 0.2 6.1 0.2 176 16.4 8.2 30.8 9.1 3.8 92 Bottom 16.5 8.2 30.8 111.1 9.1 9.0 3.5 1.0 6.1 0.2 178 16.5 8.2 30.7 <2 92 <0.2 1.0 0.3 166 16.6 8.2 30.2 9.7 1.9 <2 85 <0.2 0.8 Surface 8.2 30.2 119.5 1.0 0.3 174 16.6 8.2 30.3 9.7 2.0 <2 86 <0.2 0.9 0.9 4.0 0.2 160 16.5 8.2 30.6 4.4 3 89 <0.2 IM3 Cloudy Moderate 13:16 Middle 8.2 117.6 818801 805570 3 <0.2 4.0 0.3 165 16.5 30.6 4.6 89 153 9.5 9.4 90 0.8 7.0 0.2 16.4 8.2 30.7 5.9 115.9 5.6 7.0 0.2 16.4 8.2 30.7 3 <0.2 164 115 90 1.0 0.6 194 16.7 8.2 29.7 120.2 9.8 2.0 <2 87 <0.2 1.0 Surface 16.7 8.2 29.7 120.2 87 1.0 16.7 8.2 29 R 2.3 <2 0.6 205 <0.2 3.9 187 16.7 6.0 <2 <2 88 89 1.0 0.5 8.2 29.9 9.7 <0.2 IM4 Cloudy Moderate 13:06 7.7 Middle 16.7 8.2 30.0 118.7 819725 804605 6.0 9.6 191 16.6 8.2 30.1 3.9 0.5 2 6.7 0.4 198 16.5 16.5 8.2 8.2 30.5 116. 9.5 9.5 6.6 6.6 92 <0.2 1.1 Rottom 16.5 8.2 30.5 116.6 9.5 6.7 0.4 208 92 < 0.2 0.9 1.0 0.6 16.8 88 205 8.3 29.7 121.9 9.9 2.1 <2 <0.2 Surface 16.8 8.3 29.7 121.8 16.7 8.3 29.7 9.9 <0.2 0.9 1.0 0.6 213 121. 2.2 5.2 <2 89 3.7 0.6 200 16.7 <2 90 <0.2 1.0 9.8 8.2 30.0 120.7 IM5 13:00 7.4 16.7 8.2 30.0 120.6 820730 804887 Cloudy Moderate Middle 90 3.7 209 16.7 8.2 30.1 5.5 <2 91 < 0.2 1.0 0.6 120. 6.9 <0.2 1.1 6.4 0.5 197 16.6 8.2 30.3 118.2 9.6 9.6 <2 <2 92 92 8.2 118.2 9.6 Bottom 16.6 30.3 6.4 0.5 209 16.6 8.2 1.0 1.0 0.5 234 16.8 8.2 29.6 9.8 5.5 <2 89 0.2 120.8 Surface 16.8 8.2 29.7 120.7 1.0 0.6 236 16.8 8.2 29.7 9.8 5.5 <2 90 0.3 3.9 0.5 242 16.7 8.2 30.1 6.3 2 <0.2 1.0 12:53 7.8 Middle 16.7 8.2 30.1 119.3 821055 805806 IM6 Cloudy Moderate 3.9 0.5 264 16.7 8.2 30.2 119. 9.7 6.4 2 91 <0.2 6.8 0.3 246 16.6 8.2 30.3 9.6 6.5 4 92 <0.2 1.0 Bottom 16.6 8.2 30.3 117.9 9.6 6.8 0.4 259 16.6 9.6 6.5 4 1.0 1.0 0.3 254 16.9 8.3 29.3 9.9 5.2 <2 88 0.2 1.2 Surface 16.9 8.3 29.3 122.0 1.0 0.3 267 16.9 8.3 29.3 121. 9.9 5.4 <2 88 0.2 1.2 <0.2 1.0 4.1 0.3 243 16.8 9.8 6.5 <2 91 29.8 IM7 Cloudy Moderate 12:46 Middle 16.8 8.2 29.8 120.6 821332 806835 4.1 0.3 245 16.8 8.2 9.8 6.6 <2 91 7.1 0.2 260 16.7 8.2 30.0 9.7 6.8 <2 92 <0.2 1.0 8.2 30.0 119.5 9.7 7 1 0.2 282 16.7 8.2 30.0 6.8 <2 93 <0.2 1.0 1.0 23 143 19 1 8.4 28.6 8.7 11 85 < 0.2 1.0 8.4 112.0 Surface 28.6 1.1 1.0 2.4 143 19 1 8.4 28.6 8.7 1.2 7 86 <0.2 41 23 156 19.0 8.3 29.2 105.4 8.2 3.0 6 86 87 <0.2 1.1 IM8 Cloudy Moderate 13:12 8.1 Middle 19.0 8.3 29.2 105.1 87 821821 808162 4.1 2.4 159 19.0 8.3 29.2 104.7 8.2 3.1 < 0.2 7.1 2.4 150 18.9 8.3 29.5 8.1 4.2 6 89 <0.2 1.0 8.3 Bottom 18.9 29.5 103.8 18.9

DA: Depth-Averaged

Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Water Quality Monitoring Results on 13 February 21 during Mid-Ebb Tide DO Saturation Suspended Solids Total Alkalinity Chromium Salinity (ppt) Turbidity(NTU) Coordinate Coordinate Nickel (µg/L) Weather Sampling Water Water Temperature (°C) Monitoring Speed Current Oxvaen (mg/L) (ppm) Sampling Depth (m) HK Grid HK Grid Station Direction Time (m/s) Average Average Value Average Value DA Value DA Value DA Value DA Value DA Value DA Condition Condition Depth (m) Value Value Average Value (Northing) (Easting) 1.7 19.1 Surface 8.4 28.5 1.0 1.7 243 19.1 8.4 0.8 0.9 3.8 1.8 235 19.0 8.3 29.2 8.0 1.9 6 87 <0.2 103.2 808814 IM9 Cloudy Moderate 13:18 8.3 29.2 822077 3.8 1.9 246 19.0 8.3 29.2 103.1 8.0 2.0 6 87 <0.2 0.9 6.6 1.6 237 18.9 8.3 29.3 102.1 8.0 2.0 6 89 <0.2 1.0 Bottom 18.9 8.3 29.4 102.1 8.0 6.6 1.8 256 18.9 8.3 29.4 102.0 8.0 2.1 6 89 <0.2 0.9 1.0 1.4 19.1 8.4 28.7 105. 8.2 0.5 88 < 0.2 1.1 Surface 8.3 28.8 103.9 1.0 1.6 22 19.1 8.3 28.9 8.0 0.5 7 89 <0.2 1.1 3.8 1.5 13 19.1 8.3 8.0 0.5 6 90 90 <0.2 1.1 IM10 Cloudy Moderate 13:26 7.5 Middle 8.3 29.0 102.4 822369 809783 3.8 1.7 13 < 0.2 19.0 8.3 29.1 8.0 6.5 1.7 19.0 8.3 6 1.0 18 29.2 102. 8.0 0.8 93 < 0.2 Bottom 19.0 8.3 29.2 102.6 8.0 5 1.0 6.5 17 18 19.0 8.3 8.0 0.8 93 29.3 102 **-**0 2 1.0 1.2 19.0 88 0.9 8.3 8.2 Surface 8.3 29.3 105.8 1.0 0.5 88 1.3 293 19.0 8.3 29.3 105. 8.2 6 < 0.2 82 0.5 0.9 1.0 19.0 8.2 6 90 90 <0.2 4.4 286 289 8.3 IM11 Cloudy Moderate 13:39 8.7 Middle 8.3 29.3 105.1 90 822070 811472 1.0 19.0 4.4 1.2 8.3 7 1.1 7.7 1.1 299 19.0 8.3 29.4 8.1 0.4 91 <0.2 103. 103.9 8.1 Bottom 19.0 8.3 29.4 7.7 1.1 319 19.0 8.3 29.4 103.9 8.1 0.4 8 91 <0.2 1.0 0.3 19.0 9 <0.2 8.3 29.3 0.9 Surface 19.0 8.3 107.0 29.3 1.0 0.3 129 19.0 8.3 29.4 106.9 8.3 0.5 9 90 <0.2 1.0 4.8 0.3 112 19.0 0.4 8 91 <0.2 1.0 8.3 29.4 104.9 8.2 812067 IM12 Cloudy Moderate 13:44 9.6 Middle 19.0 8.3 29.4 104.9 821462 4.8 19.0 8.3 0.4 92 94 <0.2 0.9 113 0.3 104. 8.6 0.3 115 19.0 8.3 29.5 0.4 <0.2 8.1 19.0 8.3 104.0 8 1 Rottom 29.5 0.3 119 19.0 8.3 29.5 103. 0.4 1.2 8.6 19.0 8.3 29.3 0.5 4 99.2 Surface 19.0 8.3 99.4 29.3 1.0 18.9 7.8 0.5 4 2.2 Cloudy Calm 14:17 Middle 819981 812657 2.2 3.3 18.9 8.3 29.3 99.5 7.8 0.6 3 Bottom 19.0 8.3 29.2 99.2 7.8 7.7 3.3 19.0 83 29.0 98.9 0.6 4 1.0 0.3 90 19.0 8.3 29.5 8.2 0.8 4 90 <0.2 0.9 Surface 19.0 8.3 29.5 105.4 1.0 0.4 97 19.0 8.3 29.5 105. 8.2 0.8 4 90 < 0.2 0.9 SR2 Cloudy 14:36 4.7 Middle 821477 814189 3.7 0.9 92 0.3 90 19.0 8.3 29.5 8.1 5 <0.2 1.0 104.4 8.1 Bottom 3.7 92 19.0 83 29.4 104 0.9 5 1.0 0.3 92 r0 2 1.0 2.9 154 19 1 8.4 28.5 8.6 8.6 0.9 3 Surface 8.4 28.6 110.3 19 1 8.4 1.0 3.0 160 28 6 0.9 4 4.5 2.8 143 2.6 2.7 3 19.0 8.3 29.2 8.1 SR3 Moderate 13:06 Middle 19.0 8.3 104.0 822166 807560 8.1 154 19.0 8.3 4.5 3.0 8.0 2.6 140 18.9 18.9 8.3 8.3 103.4 8.1 3.1 2 Bottom 18.9 8.3 29.3 8.1 140 8.0 2.7 29.3 1.0 0.2 16.6 65 8.3 30.0 116. 9.5 5.2 <2 Surface 16.6 8.3 30.0 116.3 9.5 1.0 0.2 67 16.6 8.3 30.0 116. 5.3 <2 4.3 58 16.5 5.1 <2 0.1 9.3 . 8.3 30.2 SR4A 14:12 8.3 30.2 114.3 817212 807827 Cloudy Moderate 8.5 Middle 16.5 4.3 59 16.5 8.3 30.2 114. 9.3 5.3 <2 0.1 6.8 6.7 7.5 0.1 16.5 8.3 30.2 <2 <2 80 8.3 112.1 9.2 9.2 16.5 30.2 Rottom 0.1 16.5 8.3 1.0 0.2 316 17.0 8.2 4.9 <2 29.7 104. 8.5 17.0 8.2 29.7 104.7 Surface 1.0 0.2 328 17.0 8.2 8.5 5.0 <2 SR5A 3.3 Middle 816612 810681 Cloudy Calm 14:29 2.3 0.2 319 17.0 29.7 8.4 5.4 Bottom 17.0 8.1 29.7 102.8 8.4 17.0 8.1 8.3 0.2 323 1.0 0.2 16.7 8.3 29.8 4.5 Surface 16.7 8.3 29.8 112.2 1.0 0.2 21 16.7 8.3 29.8 112. 9.1 4.8 3 SR6A Cloudy Calm 14:59 4.1 Middle 817968 814751 3.1 0.1 20 16.7 8.3 9.1 6.3 4 Bottom 8.3 29.8 111.2 9.1 3.1 0.1 21 16.7 8.3 20.8 6.3 4 1.0 0.4 85 18.7 8.3 30.6 8.0 0.1 103.2 Surface 30.6 1.0 0.4 87 18.7 8.3 30.6 103 1 8.0 0.1 4 7.8 0.4 86 18.7 8.3 30.7 101.8 7.9 0.2 3 SR7 Cloudy Moderate 15:43 15.6 Middle 8.3 30.7 101.8 823644 823763 7.8 0.4 86 18.7 8.3 30.7 7.9 0.2 14.6 0.3 95 18.8 8.3 30.3 7.9 0.5 2 Bottom 8.3 30.3 101.5 14.6 0.3 97 18.8 8.3 30.3 7.9 0.5 1.0 19.1 8.4 29.2 105.0 8.2 1.9 4 Surface 19.1 8.4 29.2 105.5 1.0 19.1 8.4 29.2 105. 8.2 1.8 4 . -820403 811632 SR8 Cloudy Calm 13:56 5.0 Middle -4.0 19.0 4.0 4 8.4 29.1 103. 8.1 19.0 8.4 29.1 103.7

DA: Depth-Averaged

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

Water Quality Monitoring Water Quality Monitoring Results on 13 February 21 during Mid-Flood Tide Turbidity(NTU) Suspended Solids Total Alkalinity DO Saturation Dissolved Chromium Salinity (ppt) Coordinate Coordinate Nickel (µg/L) Weather Sampling Water Water Temperature (°C) Monitoring Current Speed Oxvaen (mg/L) (maga) Sampling Depth (m) HK Grid HK Grid Station Direction Value DA Condition Time Depth (m) (m/s) Average Average Value Average Value DA Value DA Value DA Value DA Value DA Condition Value Value Average Value (Northing) (Easting) 18.5 0.7 Surface 18.5 8.2 30.7 120.1 1.0 0.7 43 18.5 30.7 120. 9.4 2.7 <2 87 <0.2 1.0 0.6 18.2 8.7 4.4 1.0 3 88 <0.2 C1 8.2 31.9 111.5 804248 09:15 8.8 Middle 18.2 89 815600 Cloudy Moderate 1 0 18.2 8.2 31.9 8.7 4.4 3 89 <0.2 1.0 0.7 35 0.9 7.8 0.6 40 18.2 8.2 31.7 112. 8.8 5.0 4 91 <0.2 112.7 8.8 Bottom 18.2 8.2 31.7 8.8 5.0 7.8 18.2 8.2 0.7 40 31.7 4 91 < 0.2 1.0 0.6 19.2 1.0 85 < 0.2 8.4 1.0 Surface 19.2 8.4 28.2 109.4 19.2 8.5 1.0 2.9 85 1.0 0.6 8.4 <0.2 19.1 5 88 0.9 6.1 0.5 8.4 28.9 8.3 106.5 C2 Cloudy Moderate 10:25 122 Middle 19.1 8.4 28.9 89 825662 806938 28.9 8.3 3.0 5 88 <0.2 6.1 0.6 8 19.1 8.4 11.2 0.3 351 19.1 8.4 106.1 8.3 3.3 3 93 <0.2 1.1 29.0 8.4 29.0 106.1 8.3 Bottom 19.1 11.2 0.4 323 19.1 8.4 29.0 8.3 3.2 4 92 <0.2 0.7 18.8 8.3 1.7 4 88 <0.2 1.0 Surface 18.8 8.3 30.1 102.9 1.0 0.7 265 18.8 8.3 30.1 8.0 1.7 4 89 <0.2 1.1 2.7 4 1.0 5.8 0.8 18.8 7.9 85 85 <0.2 265 8.3 30.3 C3 08:01 102.1 822131 817790 Cloudy Moderate 11.6 Middle 18.8 8.3 30.3 87 1.0 0.9 281 18.8 8.3 1.0 10.6 0.5 269 18.7 8.3 30.3 7.9 2.5 3 87 <0.2 Bottom 18.7 8.3 30.3 101.2 7.9 10.6 0.6 293 18.7 8.3 30.3 7 9 2.8 3 87 1.0 0.3 18.6 8.2 2.8 <2 86 <0.2 1.0 Surface 18.6 8.2 30.3 117.9 1.0 0.3 18.6 8.2 30.4 117. 9.2 2.9 <2 85 <0.2 0.9 807116 IM1 Cloudy Moderate 09:43 5.5 Middle 817956 4.5 0.2 18.4 8.2 30.8 9.0 4.8 <2 90 < 0.2 Bottom 18.4 8.2 30.8 115.4 9.0 4.5 0.2 18.4 8.2 30.8 115.3 9.0 4.6 <2 90 <0.2 1.1 1.0 0.4 18.6 8.2 30.3 9.4 2.3 3 86 < 0.2 1.2 Surface 8.2 30.3 120.0 1.0 0.4 18.6 8.2 30.3 119.9 9.4 2.4 2.7 2 86 <0.2 1.1 3.7 0.4 18.4 8.2 30.7 9.3 2 88 <0.2 0.9 IM2 Cloudy Moderate 09:50 7.3 Middle 8.2 30.8 118.0 818163 806156 <0.2 0.9 0.9 0.9 3.7 0.4 18.4 8.2 30.8 9.2 2.6 88 6.3 0.3 358 18.4 8.2 31.0 8.8 5.3 <2 90 <0.2 18.4 8.2 30.9 112.1 8.8 6.3 8.7 5.6 0.3 329 18.4 8.2 -2 ٩n <0.2 30.9 1.0 0.4 340 18.6 8.2 30.2 94 16 -2 85 < 0.2 11 Surface 8.2 30.2 120.2 1.0 1.0 1.6 2.7 <2 87 0.4 340 18.6 8.2 120. 9.4 <0.2 30.3 1.0 4.0 0.4 18.5 9.3 <2 88 87 335 8.2 30.4 119. <0.2 IM3 Cloudy Moderate 09:56 7.9 Middle 18.5 8.2 30.4 119.2 <2 88 818802 805612 3.0 5.1 <2 <2 4.0 1.1 0.9 0.4 344 18.5 119 9.3 <0.2 6.9 0.4 18.4 339 8.2 30.8 8.9 90 Rottom 18.4 8.2 30.8 113.2 8.9 6.9 0.4 312 18.4 8.2 30.7 8.8 5.2 <2 91 0.9 <0.2 0.9 1.0 0.9 344 18.6 8.2 30.2 118.9 9.3 3.4 <2 89 <0.2 Surface 18.6 8.2 30.2 118.8 1.0 18.6 8.2 9.3 3.6 <2 100 <0.2 5.3 89 <0.2 1.0 3.9 0.7 342 18.5 <2 8.2 30.5 9.2 IM4 Moderate 10:05 7.8 Middle 18.5 8.2 30.5 117.8 <2 819719 804589 Cloudy 3.9 0.8 315 18.5 5.4 <2 <2 89 <0.2 8.2 6.8 0.6 335 18.5 4.5 0.9 8.2 8.8 112.0 Bottom 18.5 8.2 30.5 8.8 6.8 0.6 343 18.5 8.2 30.5 4.6 <2 <0.2 1.0 0.8 1.0 0.9 18.7 8.3 29.9 1.8 <2 88 <0.2 120.0 9.4 Surface 18.7 8.2 29.9 120.0 18.7 8.2 9.4 1.9 <2 89 <0.2 1.0 3.8 0.9 18.7 3.8 <2 90 91 <0.2 0.9 8.2 9.3 IM5 10:13 7.5 Middle 18.7 8.2 30.1 119.5 820721 804852 Cloudy Moderate 3.8 18.7 3.9 <2 <0.2 0.9 <2 <2 1.0 6.5 0.8 18.6 8.2 8.2 30.3 9.2 4.3 4.3 93 <0.2 18.6 8.2 117.8 9.2 Bottom 30.3 6.5 0.8 18.6 30.3 93 < 0.2 1.0 0.1 50 18.7 8.3 29.9 9.4 3.5 <2 84 <0.2 0.9 Surface 8.3 29.9 119.7 1.0 0.1 51 18.7 8.3 29.9 119 9.3 3.6 <2 84 <0.2 0.9 3.9 0.3 37 18.7 8.3 30.1 5.8 <2 87 <0.2 Cloudy Moderate 10:19 Middle 18.7 8.3 30.1 118.2 821062 805850 <0.2 3.9 0.4 40 18.7 8.3 30.1 118. 9.2 5.8 <2 88 0.9 6.7 0.4 44 18.7 8.3 30.1 9.1 6.3 <2 88 <0.2 116.5 9.1 6.7 0.4 44 18.7 83 6.2 -2 89 0.8 1.0 0.1 223 18.9 8.3 29.3 9.6 3.6 <2 83 <0.2 Surface 18.9 122.6 9.6 3.8 4.5 1.0 0.1 244 18.9 83 29.3 <2 83 <0.2 0.9 4.2 0.2 115 <2 85 <0.2 18.8 8.3 29.8 120.7 9.4 IM7 Moderate 10:24 8.3 Middle 18.8 8.3 120.5 821348 806827 Cloudy 84 4.2 0.2 126 18.8 8.3 29.8 9.4 4.7 <2 7.3 0.2 92 18.7 8.3 30.0 118. 9.2 5.6 <2 88 <0.2 0.9 Bottom 18.7 8.3 30.0 118.1 9.2 7.3 0.2 95 18.7 8.3 5.6 <2 87 <0.2 0.9 1.0 0.2 73 19.2 8.4 28.2 106.0 8.3 8.3 1.2 8 88 < 0.2 0.9 Surface 19.2 8.4 28.2 106.5 8.4 28.3 1.0 0.2 77 19.2 106. 1.3 8 88 < 0.2 74 19.1 28.5 2.1 7 88 <0.2 0.9 3.8 0.2 8.4 105.2 8.2 19.1 8.4 28.5 105.2 821824 808136 IM8 Cloudy Moderate 09:54 7.5 Middle 89 0.9

8.4

8.4

19.1

2.1

2.0

89

90

0.9

<0.2

6

6

8.2

8.2

8.2

104.5

105.

104.5

28.8

28.8

8.4

Calm: Small or no wave: Moderate: Between calm and rough: Rough: White capped or rougher

3.8

6.5

Rottom

0.2

0.1

77

76

19.1

19.1

Water Quality Monitoring Results on 13 February 21 during Mid-Flood Tide DO Saturation Dissolved Suspended Solids Total Alkalinity Chromium Salinity (ppt) Turbidity(NTU) Coordinate Coordinate Nickel (µg/L) Weather Sampling Water Water Temperature (°C) Monitoring Speed Current Oxvaen (mg/L) (ppm) Sampling Depth (m) HK Grid HK Grid Station Direction Time (m/s) Average Average Value Average Value DA Value DA Value DA Value DA Value DA Value DA Condition Condition Depth (m) Value Value Average Value (Northing) (Easting) 0.3 19.1 Surface 8.4 28.4 84 19.1 1.1 2.0 3.7 0.3 79 19 1 8.3 28.7 8.1 6 89 <0.2 0.9 09:45 103.9 808828 IM9 Cloudy Moderate 8.3 28.7 822105 3.7 0.3 81 19.1 8.3 28.7 103.9 8.1 2.1 6 90 <0.2 0.9 6.3 0.2 71 19.0 8.3 29.0 103.5 8.1 0.7 5 90 <0.2 1.1 Bottom 8.3 29.0 103.5 6.3 0.2 75 19.0 8.3 29 N 103.4 8.1 0.7 5 91 <0.2 1.1 1.0 0.7 304 19.1 8.3 28.7 102.0 8.0 1.0 88 < 0.2 0.9 Surface 8.3 28.9 102.7 1.0 0.7 306 19.1 8.3 29.0 8.0 1.0 5 88 <0.2 1.0 3.6 0.6 301 19.0 8.3 8.0 1.3 7 88 89 <0.2 0.9 IM10 Cloudy Moderate 09:38 7.2 Middle 8.3 29.1 102.4 822404 809781 0.6 301 8.3 3.6 19.0 29.1 8.0 0.5 19.0 8.3 1.4 8 6.2 302 29.2 102. 8.0 91 < 0.2 Bottom 8.3 29.1 102.4 8.0 1.0 8 6.2 0.5 310 19.0 8.3 8.0 1.6 92 29 N 102 **-**0 2 1.0 0.7 300 19.0 8.3 1.3 8.1 Surface 8.3 29.2 104.1 1.0 1.0 0.7 328 8.1 1.2 5 87 <0.2 19.0 8.3 29.2 104. 1.8 1.1 6 <0.2 19.0 8.1 89 89 4.1 302 305 8.3 29.4 IM11 Cloudy Moderate 09:27 8.2 Middle 8.3 29.4 103.6 89 822036 811466 4.1 0.6 19.0 8.3 29.4 1.1 7.2 0.4 310 18.9 8.3 29.4 2.4 6 91 <0.2 103. 8.1 103.5 8.1 Bottom 18.9 8.3 29.4 7.2 0.4 340 18.9 8.3 29.4 103.5 8.1 2.4 6 92 <0.2 1.2 0.8 19.1 <0.2 1.2 8.3 28.9 Surface 19.1 8.3 28.9 103.7 1.0 0.8 293 19.0 8.3 28.9 8.1 2.5 6 89 <0.2 1.1 4.4 0.7 279 19.0 4.1 6 88 <0.2 1.2 8.3 29.4 8.1 812067 IM12 Cloudy Moderate 09:21 8.7 Middle 19.0 8.3 29.4 103.5 821444 <0.2 4.4 0.7 19.0 8.3 4.3 6 89 279 0.6 277 18.9 8.3 29.5 6.3 6 91 <0.2 1.2 8.1 18 9 8.3 103.3 8 1 Rottom 29.5 7.7 0.7 297 18.9 8.3 29.5 8.1 6.2 1.0 1.0 19.0 8.3 29.2 0.3 2 7.6 7.6 Surface 19.0 8.3 97.3 29.2 1.0 19.0 0.3 2 2.5 Cloudy Calm 08:44 Middle 819974 812665 2.5 3.9 18.9 8.3 29.3 96.5 7.5 0.4 3 Bottom 18.9 8.3 29.3 96.4 7.5 7.5 3.9 18.9 83 29.3 96.3 0.4 1.0 0.2 341 18.9 8.3 29.5 102.1 8.0 3.6 84 <0.2 1.0 Surface 18.9 8.3 29.5 102.1 1.0 0.2 347 18.9 8.3 29.5 7.9 3.8 3 84 < 0.2 1.1 8.0 SR2 Cloudy Moderate 08:24 4.3 Middle 821481 814146 33 351 3.5 88 0.2 18.9 8.3 29.5 7.9 3 <0.2 0.9 101.5 7.9 Bottom 3.5 33 0.2 18.9 29.5 3 1.0 323 83 89 r0 2 1.0 0.3 72 19.2 8.4 28.3 8.4 8.3 0.8 2 Surface 19.2 8.4 28.3 106.9 8.4 1.0 0.3 74 19.2 28.3 0.8 4.5 73 8.2 8.2 1.2 3 0.2 19.2 8.4 28.5 SR3 Cloudy Moderate 10:03 Middle 19.2 8.4 28.5 105.0 822131 807559 1.2 8.4 4.5 0.2 75 19.2 28.5 3 7.9 7.9 0.2 55 19.2 19.1 8.4 8.4 28.5 104. 104.7 8.2 1.3 Bottom 19.2 8.4 28.5 8.2 0.2 58 28.5 1.0 18.6 0.1 142 8.2 30.0 114. 8.9 3.4 <2 Surface 18.6 8.2 30.0 114.1 1.0 149 8.9 0.1 18.6 8.2 30.1 113. 3.6 <2 4.2 0.1 83 18.6 6.2 <2 8.7 . 8.2 30.2 SR4A 08:54 8.2 30.2 111.4 817201 807820 Cloudy Calm 8.4 Middle 18.6 4.2 18.5 8.2 30.2 6.4 <2 0.1 86 7.7 7.4 0.1 109 18.5 8.2 30.3 8.7 <2 <2 8.2 110.8 8.7 Rottom 18.5 30.3 7.4 0.1 118 18.5 8.2 8.7 7.8 4.7 1.0 0.1 255 18.7 8.2 8.7 <2 29.9 18.7 8.2 29.9 111.2 Surface 1.0 0.1 278 18.7 8.2 29.9 8.7 4.5 <2 SR5A 07:51 3.2 Middle 816609 810691 Cloudy Calm 2.2 0.1 296 18.7 29.9 8.5 6.1 <2 Bottom 18.7 8.2 29.9 108.5 8.5 0.1 299 18.7 8.5 6.0 <2 2.2 1.0 0.1 227 18.8 8.2 29.7 114.3 8.9 4.7 Surface 18.8 8.2 29.7 114.0 1.0 0.1 247 18.8 8.2 29.7 113.7 8.9 4.7 <2 SR6A Cloudy Calm 07:19 3.9 Middle <2 817955 814744 2.9 0.0 233 18.8 8.7 5.3 <2 Bottom 8.2 29.7 111.1 8.7 2.9 0.0 244 18.8 20.7 5.4 <2 1.0 0.2 108 18.7 8.3 30.3 103.2 8.0 1.3 103.2 Surface 8.3 30.3 1.0 0.2 118 18.7 8.3 30.3 103.1 8.0 1.3 2 79 0.2 67 18.7 8.3 30.4 102.0 7.9 4.5 3 SR7 Cloudy Moderate 07:32 15.7 Middle 8.3 30.4 101.9 823656 823729 7.9 0.2 71 18.7 8.3 30.4 7.9 4.5 14.7 0.3 33 18.7 8.2 30.5 100.8 7.8 5.4 3 Bottom 18.7 8.2 30.5 100.8 14.7 0.4 33 18.7 8.2 30.5 100. 7.8 5.3 3 1.0 19.0 8.3 29.2 101. 7.9 1.8 3 Surface 19.0 8.3 29.2 101.7 7.9 1.0 19.0 8.3 29.3 101.0 1.9 3 . . 811629 820383 SR8 Cloudy Calm 09:11 5.1 Middle -4.1 18.9 2.3 8.3 29.4 7.9 3 18.9 8.3 29.4 101.6 7.9

DA: Depth-Averaged

Water Quality Monitoring Results on 16 February 21 during Mid-Ebb Tide Turbidity(NTU) Suspended Solids Total Alkalinity DO Saturation Chromium Salinity (ppt) Coordinate Coordinate Nickel (µg/L) Weather Sampling Water Water Temperature (°C) Monitoring Current Speed Oxvaen (mg/L) (maga) Sampling Depth (m) HK Grid HK Grid Station Direction Condition Time Depth (m) (m/s) Average Value Average Average Value Average Value DA Value DA Value DA Value DA (Northing) Value DA Value DA Condition Value Value (Easting) 19.3 0.2 114.5 1.0 189 19.2 114. 1.9 41 0.3 230 19.0 8.2 32.9 107.2 8.2 2.6 3 88 <0.2 0.9 107.3 804231 C1 Fine Moderate 15:25 8.2 32.9 815602 4.1 0.3 249 19.0 8.2 32.9 107. 8.2 2.6 3 89 <0.2 0.9 7.2 0.3 228 18.9 8.2 33.2 101.8 7.8 3.2 3 91 <0.2 1.0 Bottom 8.2 33.2 101.8 7.8 7.2 0.3 239 18.9 8.2 33.2 101.8 7.8 3.1 4 91 <0.2 0.9 20.2 1.0 0.0 208 8.4 27.3 119.: 9.2 3.1 87 < 0.2 1.5 Surface 8.4 27.4 119.3 87 <0.2 1.0 0.0 228 20.1 8.4 27.4 119. 9.2 3.2 4 1.4 5.7 0.2 117 19.6 8.4 28.4 8.7 5.5 5.8 4 89 90 <0.2 1.5 C2 Fine Moderate 14:16 11.4 Middle 8.4 28.5 112.4 825670 806962 0.3 119 8.7 19.6 8.4 28.5 10.4 0.3 19.6 8.4 6.0 4 92 1.6 82 29.1 8.5 < 0.2 Bottom 19.6 8.4 29.1 110.6 8.5 8.5 4 1.6 10.4 0.3 19.6 8.4 5.8 92 <0.2 84 29 1 1.0 0.4 19.7 4 8.3 3.2 86 29.4 < 0.2 1.2 Surface 19.7 8.3 29.5 113.2 1.0 1.0 113. 8.7 3.2 5 87 <0.2 0.4 60 19.6 8.3 29.5 1.2 3.4 3.3 5 4 <0.2 6.0 19.4 8.1 90 91 8.3 104 C3 Fine Moderate 16:22 11.9 Middle 8.3 29.7 104.9 89 822128 817795 0.3 19.4 8.3 <0.2 1.0 10.9 0.2 86 19.2 8.3 30.3 98.6 7.6 3.4 3 91 8.3 7.6 Bottom 19.2 30.3 98.7 10.9 0.2 88 19.2 8.3 30.3 98.7 7.6 3.4 4 91 <0.2 1.1 0.1 184 20.2 1.5 8.3 31.1 119.4 9.0 <0.2 Surface 20.2 8.3 31.1 119.5 1.0 0.1 202 20.2 8.3 31.1 119.6 9.0 1.6 6 86 <0.2 1.1 9.0 807145 IM1 Fine Moderate 15:05 5.0 Middle 817936 4.0 0.1 178 19.4 8.3 31.4 9.2 2.9 3 89 <0.2 1.2 Bottom 19.5 8.3 31.4 120.2 9.2 4.0 0.1 194 19.5 8.3 31.4 120.4 9.2 2.8 88 1.2 0.1 210 20.1 8.2 31.3 8.4 2.5 85 <0.2 1.5 1.5 Surface 20.1 8.2 31.3 111.1 1.0 0.1 226 20.0 8.4 2.6 3 85 <0.2 1.0 3.5 0.1 186 19.1 3.1 3 87 <0.2 <0.2 <0.2 8.2 8.1 8.2 105.6 806185 Fine Moderate 14:57 Middle 31.9 818177 0.1 19.1 3.0 4 3.5 192 6.0 0.1 101 19.0 8.2 32.7 7.9 4.6 5 90 Bottom 19.0 8.2 32.7 102.8 7.9 1.3 6.0 0.1 105 19.0 8.2 32.7 4.6 4 90 <0.2 1.0 0.1 204 19.3 8.2 31.7 8.2 4.1 4 85 <0.2 1.3 Surface 8.2 31.7 1.0 0.1 217 19.3 8.2 31.7 8.2 4.0 3 85 < 0.2 1.2 1.3 3.7 0.1 65 19.4 8.2 8.0 3.1 3 87 <0.2 IM3 Moderate 14:50 7.3 Middle 8.2 105.7 818801 805571 <0.2 3.7 0.1 71 19.5 3.0 88 63 4.5 3 90 1.4 0.1 115 19.0 8.2 32.6 7.9 4.7 0.1 125 19.0 8.2 32.6 3 <0.2 63 89 3.2 3.2 1.0 0.1 230 19.6 8.2 31.7 108.8 8.3 8.3 3 84 <0.2 1.2 Surface 19.7 8.2 31.6 108.8 1.0 19.7 8.2 31.6 108 3 85 0.1 236 < 0.2 4.2 200 8.0 3.4 3.5 3 87 1.4 0.0 19.2 8.2 32.3 104 <0.2 IM4 Moderate 14:38 Middle 19.2 8.2 32.3 104.4 819738 804621 88 4.2 0.0 19.2 8.2 32.3 216 4 7.4 0.1 161 166 19.1 19.1 8.2 8.3 32.4 32.4 7.9 3.9 3.8 90 <0.2 1.5 7.9 Rottom 19.1 8.2 32.4 103.6 0.1 90 < 0.2 1.5 1.0 0.1 251 19.7 1.0 84 8.3 29.8 119.7 9.2 2 <0.2 Surface 19.7 8.2 29.8 119.6 1.0 19.7 8.2 29.8 9.2 3 85 <0.2 1.6 0.1 259 119. 1.0 3.9 0.1 341 19.1 2.0 4 87 <0.2 1.5 8.1 8.2 31.9 105.7 IM5 14:30 7.8 8.2 31.9 105.7 820712 804879 Fine Moderate Middle 19.1 3.9 314 19.1 8.2 31.9 8.1 1.9 4 88 < 0.2 1.5 0.1 1.4 2.5 2.5 90 90 <0.2 6.8 0.1 19.1 8.3 104. 8.0 4 86 8.3 32.1 104.5 8.0 Bottom 19 1 32.1 6.8 0.1 19.1 8.3 <0.2 1.7 1.6 1.5 0.7 85 1.0 0.1 221 20.1 8.2 9.1 2 <0.2 29.1 118.5 Surface 20.1 8.2 29.1 118.4 1.0 0.1 233 20.1 8.2 118. 9.1 0.7 3 85 <0.2 3.8 0.1 52 19.3 8.2 8.4 1.6 3 87 <0.2 14:22 7.6 Middle 19.3 8.2 31.2 109.3 821063 805825 IM6 Fine Moderate 3.8 0.1 52 19.3 8.2 31.2 109.4 8.4 1.6 4 88 <0.2 1.4 6.6 0.1 119 19.2 8.2 105.1 8.1 2.6 3 90 <0.2 1.3 Bottom 19.2 8.2 31.5 105.1 8.1 6.6 0.1 121 19.2 1.4 1.0 0.1 318 19.8 8.2 29.3 119.7 1.1 85 <0.2 1.4 Surface 19.8 8.2 29.3 119.6 1.0 0.1 340 19.8 8.2 29.3 119. 9.2 1.1 5 85 <0.2 1.5 1.5 4.4 0.1 91 19.3 8.3 2.0 4 87 <0.2 108. IM7 Fine Moderate 14:16 Middle 19.3 8.2 31.0 108.4 821363 806838 <0.2 4.4 0.1 97 19.3 8.2 31.0 108 8.3 2.1 4 87 7.8 0.2 124 19.2 8.2 31.2 8.2 3.7 4 89 <0.2 1.5 8.2 31.2 107.2 8.2 7.8 0.2 128 19.2 8.2 31.2 3.6 4 90 <0.2 1.5 1.0 0.4 69 20.0 8.4 28.1 9.1 3.7 6 86 < 0.2 1.5 8.4 117.6 Surface 28.1 1.7 1.0 0.4 73 20.0 8.4 28.1 9.1 3.7 6 85 <0.2 39 0.3 83 19.7 8.4 28.8 114 8.9 5.3 5.5 4 90 91 <0.2 1.4 1.5 IM8 Fine Moderate 14:40 7.7 Middle 19.7 8.4 28.9 114.8 89 821839 808157 3.9 0.3 86 19.7 8.4 28.9 114.6 8.8 < 0.2 6.7 0.2 48 19.5 8.4 29.5 108.8 8.4 8.0 2 91 <0.2 1.3 8.4 Bottom 19.6 29.5 108.8 8.4 19.6

DA: Depth-Averaged

Calm: Small or no wave: Moderate: Between calm and rough: Rough: White capped or rougher

Water Quality Monitoring Results on 16 February 21 during Mid-Ebb Tide DO Saturation Suspended Solids Total Alkalinity Chromium Salinity (ppt) Turbidity(NTU) Coordinate Coordinate Nickel (µg/L) Weather Sampling Water Water Temperature (°C) Monitoring Speed Current Oxvaen (mg/L) (ppm) Sampling Depth (m) HK Grid HK Grid Station Direction Time (m/s) Average Value Average Value DA Value DA Value DA Value DA Value DA Value DA Condition Condition Depth (m) Value Average Value Average Value (Northing) (Easting) 0.4 20.3 Surface 8.4 27.7 1.0 0.4 20.3 2.8 3.8 1.4 3.5 0.4 78 199 8.4 28.2 118 8 9.2 3 90 <0.2 118.8 808809 IM9 Fine Moderate 14:46 7.0 8.4 28.2 822072 3.5 0.4 78 19.9 8.4 28.2 118.8 9.2 3.8 3 90 <0.2 1.4 6.0 0.3 62 19.6 8.4 29.2 111.9 8.6 5.3 4 92 <0.2 1.3 Bottom 8.4 29.2 111.9 8.6 6.0 0.4 66 19.6 8.4 29.2 111 9 8.6 5.3 4 92 <0.2 1.3 1.0 0.6 121 20.2 8.4 27.6 118.3 9.1 3.0 86 < 0.2 1.4 Surface 8.4 27.6 118.2 1.0 0.6 129 20.2 8.4 27.6 118. 9.1 3.2 3 86 <0.2 1.5 3.8 0.5 118 19.7 8.4 28.4 8.6 5.0 2 89 90 <0.2 1.5 IM10 Moderate 14:54 7.6 Middle 8.4 28.5 111.5 822381 809801 4.9 <0.2 3.8 0.5 125 19.7 8.4 28.5 8.6 6.6 19.6 8.3 2 1.5 0.3 104 28.9 109. 8.5 5.1 95 <0.2 Bottom 8.3 28.9 109.4 8.5 1.6 6.6 106 19.6 8.3 8.5 5.1 92 0.4 28 9 109 4 **-**0 2 0.7 1.0 20.2 8.4 9.1 1.2 Surface 8.4 27.5 118.3 1.2 1.0 119 2.8 84 0.7 20.2 8.4 27.5 118. 9.1 2 < 0.2 9.0 1.3 8.9 3.4 120 130 19.7 3 91 91 <0.2 3.9 8.4 28.3 114. IM11 Fine Moderate 15:07 7.8 Middle 8.4 28.3 114.3 89 822062 811473 19.7 0.6 8.4 28.3 1.6 6.8 0.4 118 19.5 8.3 29.2 8.1 3.1 4 92 <0.2 104.6 104.7 8.1 Bottom 19.5 8.3 29.2 6.8 0.4 127 19.5 8.3 29.2 104.7 8.1 3.1 4 92 <0.2 1.6 0.6 19.9 3.1 4 8.4 <0.2 1.4 27.9 Surface 19.9 8.4 28.0 116.9 1.0 0.6 118 19.9 8.4 28.1 3.1 5 86 <0.2 1.3 4.5 0.4 109 19.7 8.7 3.2 5 87 <0.2 1.2 8.4 28.7 812068 IM12 Fine Moderate 15:14 8.9 Middle 19.7 8.3 28.7 112.5 821450 4.5 19.7 8.3 4 90 <0.2 1.4 0.4 114 0.2 114 19.5 8.3 29.0 3.5 5 91 <0.2 1.3 8.1 195 8.3 29.0 104.7 8 1 Rottom 7.9 0.2 124 19.5 8.3 104. 8.1 3.6 1.3 19.9 8.4 28.8 8.8 5 Surface 19.9 8.4 28.8 114.1 1.0 19.8 8.4 8.8 3.7 6 2.8 Fine Moderate 15:49 Middle 819977 812664 2.8 4.5 19.8 8.4 28.8 108. 8.4 6.0 4 Bottom 19.8 8.4 28.8 108.6 8.4 4.5 19.8 8.4 28.8 108 8.4 6.2 1.0 0.5 88 20.2 8.4 27.8 118.6 9.1 2.7 90 <0.2 1.2 Surface 20.2 8.4 27.8 118.6 1.0 0.5 95 20.2 8.4 27.8 118.5 9.1 2.7 2 90 < 0.2 1.2 SR2 Moderate 16:03 4.3 Middle 821460 814156 33 5.8 91 0.3 83 19.8 8.4 28.7 8.7 4 <0.2 1.4 112.1 8.7 Bottom 33 19.8 8.4 28.7 6.0 3 14 0.3 85 91 r0 2 1.0 0.2 117 20.0 8.4 27.7 9.1 9.1 3.1 3 Surface 8.4 27.7 117.6 8.4 27 A 3.2 1.0 0.2 128 20.0 4.6 8.6 8.5 4.8 3 0.2 96 19.7 8.4 28.6 SR3 Moderate 14:35 Middle 19.7 8.4 28.7 110.6 822152 807587 4.9 19.7 8.4 3 4.6 0.2 98 8.1 0.2 60 19.7 19.7 8.4 8.4 109.6 6.4 3 Bottom 19.7 8.4 29.3 8.4 8.1 0.2 64 29.3 1.0 0.2 75 19.6 8.2 31.2 116. 8.9 4.1 3 Surface 19.6 8.2 31.3 116.3 1.0 8.9 0.2 78 19.5 8.2 116. 4.3 2 4.6 59 19.2 5.6 3 0.2 8.1 . 8.2 31.5 SR4A 8.2 31.6 105.6 817188 807799 Fine Calm 15:47 9.2 Middle 19.2 4.6 19.2 8.2 5.6 3 0.2 62 8.2 0.3 19.0 8.2 7.9 6.3 6.3 4 73 8.2 32.1 102.8 79 19.0 32.1 Rottom 0.3 19.0 8.2 1.0 0.1 244 20.5 8.3 31.0 3.7 6 8.9 20.5 8.3 31.0 117.7 Surface 1.0 0.1 259 20.4 8.3 8.9 3.6 6 SR5A 3.4 Middle 816593 810717 Fine Calm 16:04 2.4 0.1 226 20.0 8.4 2.9 5 Bottom 20.0 8.3 31.0 110.5 8.4 229 20.0 8.3 8.4 3.0 2.4 0.1 1.0 0.0 20.1 8.3 30.5 8.9 5.3 Surface 20.1 8.3 30.5 117.9 1.0 0.0 8 20.1 8.3 30.5 117. 8.9 5.2 6 SR6A Fine Calm 16:45 4.1 Middle 817979 814722 3.1 0.0 20.1 8.3 30.5 8.8 5.8 6 Bottom 8.3 30.5 116.5 8.8 3.1 0.0 34 20.1 8.3 30.5 8.8 5.7 1.0 0.6 71 19.9 8.3 29.6 8.6 2.8 112.8 Surface 29.6 1.0 0.6 75 19.9 8.3 29.6 8.6 2.8 4 83 0.3 45 19.4 8.3 30.1 105.1 8.1 3.1 5 5 SR7 Moderate 16:51 16.5 Middle 8.3 30.1 105.1 823653 823751 Fine 8.3 0.3 47 19.4 8.3 30.1 105.1 8.1 3.1 15.5 0.3 13 19.4 8.3 30.1 104.3 8.0 3.0 5 Bottom 8.3 30.1 104.3 8.0 15.5 0.3 14 19.5 8.3 30.1 104. 8.0 3.0 5 1.0 20.3 8.4 28.7 8.7 4.4 5 Surface 20.3 8.4 28.7 113.4 8.7 1.0 20.3 8.4 28.7 4.4 6 . . 811629 820403 SR8 Fine Moderate 15:24 4.0 Middle -3.0 19.7 4.5 5 8.4 28.8 109.9 8.5 19.7 8.4 28.8 110.0 8.5

DA: Depth-Average

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

Water Quality Monitoring Water Quality Monitoring Results on 16 February 21 during Mid-Flood Tide DO Saturation Dissolved Suspended Solids Total Alkalinity Chromium Salinity (ppt) Turbidity(NTU) Coordinate Coordinate Nickel (µg/L) Weather Sampling Water Water Temperature (°C) Monitoring Current Speed Oxvaen (mg/L) (maga) Sampling Depth (m) HK Grid HK Grid Station Direction Condition Time Depth (m) (m/s) Average Value Average Average Value Average Value DA Value DA Value DA Value DA (Northing) Value DA Value DA Condition Value Value (Easting) 18.9 0.4 Surface 18.9 8.1 32.6 102.5 1.0 0.4 40 18.9 32.6 102.4 7.9 8.3 86 <0.2 0.9 0.4 7.8 9.8 88 1.0 5 <0.2 C1 8 1 326 101.4 804251 10:40 83 Middle 18.8 88 815596 Fine Moderate 0.9 18.8 8.1 32.6 7.8 9.6 5 89 <0.2 0.9 0.5 0.9 7.3 0.4 26 18.8 8.2 32.7 100. 7.7 11.7 7 91 <0.2 8.2 100.2 7.7 Bottom 18.8 32.7 18.8 8.2 32.7 11.4 7.3 0.4 91 < 0.2 1.0 0.3 19.6 3.3 86 < 0.2 8.4 1.7 Surface 19.6 8.4 27.2 112.7 19.6 8.8 3.4 3.4 86 1.0 0.3 44 8.4 <0.2 6.0 4 1.5 0.3 19.6 8.4 27.5 89 8.6 C2 Fine Moderate 11:37 11.9 Middle 19.6 8.4 27.5 110.3 89 825670 806925 1.6 27.5 8.6 3.6 5 90 <0.2 6.0 0.3 19.6 8.4 10.9 0.3 333 19.6 8.4 108.1 8.4 4.1 6 92 0.3 1.6 28.0 8.4 28.0 108.1 Bottom 19.6 8.4 10.9 0.3 333 19.6 8.4 28.0 4.1 7 92 0.3 1.6 1.0 0.6 19.4 8.3 3.1 86 <0.2 1.3 8.3 107.0 Surface 19.4 8.3 29.1 3.2 3.7 3.8 1.0 0.6 279 19.4 8.3 8.3 3 87 <0.2 1.4 4 1.3 5.7 0.5 19.3 7.9 91 90 <0.2 260 8.3 29.8 C3 09:18 102.0 817788 Fine Moderate 11.4 Middle 19.3 8.3 29.8 90 822085 1.3 0.6 279 19.3 1.2 10.4 0.4 259 19.3 8.3 29.8 7.8 9.1 5 92 <0.2 Bottom 19.3 8.3 29.8 101.0 7.8 10.4 0.4 268 19.3 8.3 29.8 7.8 9.1 5 <0.2 1.0 0.1 341 19.3 8.2 31.8 3.4 86 <0.2 0.9 Surface 19.3 8.1 31.8 105.0 1.0 0.1 314 19.3 8.1 31.8 8.0 3.4 5 86 <0.2 0.9 807152 IM1 Fine Moderate 10:59 Middle 817956 4 0 0.1 298 18.9 8.1 32.1 8.0 5.6 4 89 < 0.2 0.9 Bottom 8.1 32.1 103.7 8.0 4.0 0.1 305 18 9 8.1 32 1 103.7 8.0 5.2 4 90 <0.2 0.9 85 1.0 0.3 19 19.4 8.2 31.0 8.5 4.3 4 < 0.2 0.8 Surface 8.2 30.9 110.9 1.0 0.3 19 19.4 8.2 30.9 110.8 8.5 4.2 4 85 <0.2 0.8 0.9 0.9 0.9 0.9 5.9 3.6 0.3 357 19.1 8.2 31.6 8.0 5 87 <0.2 IM2 Moderate 11:07 7.1 Middle 8.2 31.6 103.9 818152 806162 87 3.6 0.3 328 19.1 8.2 31.6 8.0 5.9 5 0.3 7 0.2 6.1 0.2 328 19.0 8.2 31.8 7.9 71 90 8.2 31.8 102.8 7.9 6.1 7.9 72 0.2 349 19.0 8.2 31.8 102 6 ٩n <0.2 1.0 0.3 346 19.5 8.2 31 1 108 5 83 47 4 84 <0.2 0.9 Surface 8.2 31.1 108.5 1.0 4.7 5 85 0.4 318 19.5 8.2 108. 8.3 <0.2 31.1 5.5 5.6 6.7 1.0 3.6 0.3 8.2 5 87 87 89 <0.2 332 19.0 31.6 102. 7.9 IM3 Fine Moderate 11:14 7.2 Middle 19.0 8.2 31.7 102.6 87 818768 805574 5 6 19.0 19.0 7.9 1.0 3.6 0.3 343 <0.2 6.2 0.2 314 8.2 32.0 7.8 101.7 Rottom 19.0 8.2 31.9 7.8 6.2 0.3 337 19.0 8.2 31.9 7.8 6.7 6 <0.2 0.8 89 0.9 1.0 0.5 350 19.2 8.2 31.3 106.7 8.2 6.2 7 85 <0.2 Surface 19.2 8.2 31.3 106.7 1.0 0.5 322 19.2 8.2 8.2 6.3 8 85 <0.2 1.0 0.9 0.8 6.7 7 86 <0.2 4.2 0.4 358 19.1 8.2 31.6 104.6 8.0 IM4 Fine Moderate 11:24 8.4 Middle 19.1 8.2 31.6 104.6 819718 804623 4.2 7.4 0.4 329 19.1 8.2 8.0 6.8 87 <0.2 0.4 7.2 5 89 19.0 8.2 31.6 8.0 Bottom 19.0 8.2 31.6 103.5 8.0 7.4 0.4 19.0 8.2 31.6 7.4 6 89 <0.2 0.9 0.9 1.0 0.8 19.4 8.2 31.1 5.4 4 84 <0.2 108.1 8.3 Surface 19.4 8.2 31.1 108.1 1.0 19.3 8.2 108.0 8.3 5.2 5 85 <0.2 0.8 3.9 0.7 22 19.2 5.9 6 86 <0.2 0.9 8.2 31.2 8.2 IM5 Moderate 11:31 7.7 Middle 19.2 8.2 31.2 106.4 820731 804858 0.9 Fine 3.9 0.7 19.2 6.1 87 <0.2 7.1 1.0 0.6 19.2 8.2 8.2 31.3 8.1 6 7 88 <0.2 19.2 8.2 31.3 105.4 8.1 Bottom 6.7 0.6 17 19.2 89 < 0.2 1.0 0.1 314 19.6 8.2 29.2 1.6 84 <0.2 1.1 8.9 Surface 8.2 29.2 115.3 1.0 0.1 328 19.6 8.2 29.2 8.9 1.7 7 85 <0.2 1.4 3.8 0.2 53 19.4 8.6 2.7 5 86 <0.2 Fine Moderate 11:40 Middle 19.4 8.2 30.3 112.3 821054 805827 <0.2 3.8 0.2 57 19.4 8.2 30.3 8.6 2.9 6 87 4.0 4.1 1.5 6.5 0.2 60 19.3 8.2 30.9 8.5 8.5 4 89 <0.2 110.4 8.5 6.5 0.3 61 193 8.2 30.0 4 89 1.5 1.6 1.0 0.0 232 19.7 8.2 29.1 9.0 1.9 85 <0.2 Surface 19.7 117.0 9.0 2.2 3.3 1.0 0.0 235 19.6 82 29 2 116 4 85 <0.2 3 87 1.5 4.4 0.2 125 <0.2 19.4 8.2 30.0 112.9 8.7 IM7 Moderate 11:49 8.7 Middle 19.4 8.2 112.8 821352 806821 87 4.4 0.2 128 19.4 8.2 30.2 8.7 3.4 3 7.7 0.2 114 19.3 8.3 31.0 108. 8.3 4.6 2 89 <0.2 1.4 Bottom 19.3 8.3 31.0 108.5 8.3 7.7 0.2 115 19.3 8.3 4.5 <0.2 1.5

8.4

8.4

8.4

8.4

8.4

19.7

19.6

19.5

27.6

27.6

27.9

28.2

27.6

28.0

28.2

108.

108.

107.

8.4

8.4

8.4

8.7

8.7

8.5

8.4

8.3

8.3

111.7

108.7

107.1

3.3

3.4

3.8

3.9

3.8

3

4

4

4

3

86

87

90

91

90

91

< 0.2

< 0.2

<0.2

<0.2

808137

821841

1.6

1.6

1.6

1.6

1.6

DA: Depth-Average

IM8

Fine

Moderate

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

11:09

7.6

1.0

1.0

3.8

3.8

6.6

Surface

Middle

Rottom

0.2

0.2

0.2

0.2

0.1

48

49

51

52

109

19.7

19.7

19.6

19.6

19.5

Water Quality Monitoring Results on 16 February 21 during Mid-Flood Tide Turbidity(NTU) Suspended Solids Total Alkalinity DO Saturation Dissolved Chromium Salinity (ppt) Coordinate Coordinate Nickel (µg/L) Weather Sampling Water Water Temperature (°C) Monitoring Speed Current Oxvaen (mg/L) (ppm) Sampling Depth (m) HK Grid HK Grid Station Direction Time (m/s) Average Average Value Average Value DA Value DA Value DA Value DA Value DA Value DA Condition Condition Depth (m) Value Value Average Value (Northing) (Easting) 19.6 0.2 Surface 8.4 110.9 1.0 19.6 3.4 4 3.6 1.6 3.6 0.2 31 19.5 8.4 28.3 109.2 8.5 4 89 <0.2 109.1 808829 IM9 Fine Moderate 11:00 7.1 8.4 28.3 822104 3.6 0.2 32 19.5 8.4 28.3 109.0 8.5 3.6 5 90 <0.2 1.5 6.1 0.1 14 19.5 8.4 28.3 107.0 8.3 3.7 6 92 <0.2 1.6 Bottom 8.4 28.3 107.0 8.3 6.1 0.1 14 19.5 8.4 28.3 106.9 8.3 3.7 5 92 <0.2 1.6 19.6 1.0 0.4 300 8.4 28.5 108.5 8.4 5.3 < 0.2 1.6 Surface 8.4 28.5 108.5 1.0 0.4 324 19.6 8.4 28.5 108.4 8.4 5.3 7 87 <0.2 1.6 3.8 0.4 301 19.5 8.4 28.5 8.4 6.0 6 89 90 <0.2 1.6 IM10 Moderate 10:52 7.6 Middle 8.4 28.5 107.8 822407 809780 3.8 308 6.4 < 0.2 0.4 19.5 8.4 28.6 8.3 6.6 0.3 19.5 5.7 6 7 1.7 301 8.4 28.6 106. 8.3 91 < 0.2 Bottom 19.5 8.4 28.6 106.4 8.3 5.5 1.5 6.6 0.3 312 19.5 8.4 106.2 8.2 92 28.6 **-**0 2 0.6 1.0 19.5 8.3 4.8 28.9 8.4 1.4 Surface 19.5 8.3 28.9 108.5 1.5 1.0 293 5.0 87 < 0.2 0.6 19.5 8.3 28.9 108. 8.4 6 5.3 1.5 8.3 6 19.5 90 90 <0.2 4.0 270 289 8.3 28.9 IM11 Fine Moderate 10:41 8.0 Middle 8.3 28.9 107.5 89 822070 811478 4.0 19.5 0.5 8.3 28.9 7 <0.2 1.4 7.0 0.4 270 19.4 8.3 28.9 106.6 8.3 5.2 91 106.6 8.3 Bottom 19.4 8.3 28.9 7.0 0.4 272 19.4 8.3 28.9 106.5 8.3 5.2 6 91 <0.2 1.4 0.4 19.5 <0.2 28.8 9 8.3 8.4 Surface 19.5 8.3 28.8 108.1 1.0 0.5 302 19.5 8.3 28.8 8.4 6.6 9 87 <0.2 1.4 4.6 0.4 277 19.5 8.3 7.0 8 90 <0.2 1.5 8.3 28.8 812068 IM12 Fine Moderate 10:33 9.2 Middle 19.5 8.3 28.8 107.6 821466 4.6 19.5 8.3 7.1 91 <0.2 0.5 283 28.8 8.2 0.4 281 19.5 8.3 28.8 8.2 91 <0.2 1.5 8.3 195 8.3 28.8 106.7 8.3 Rottom 8.2 0.4 304 19.5 8.3 28.8 106. 8.3 8.3 1.4 19.6 8.3 28.8 8.2 3.4 4 Surface 19.6 8.3 28.8 105.9 1.0 19.6 8.2 3.5 4 2.8 Fine Moderate 09:57 Middle 819974 812656 2.8 4.5 19.6 8.3 28.8 8.0 3.8 3 Bottom 19.6 8.3 28.8 103.6 8.0 4.5 19.6 83 28.8 8.0 3.8 4 1.0 0.2 132 19.4 8.3 28.7 8.4 4.5 6 89 <0.2 1.2 Surface 19.4 8.3 28.7 1.0 0.2 132 19.4 8.3 28.7 107. 8.4 4.4 5 90 < 0.2 1.3 SR2 Moderate 09:42 3.8 Middle 821466 814175 2.8 137 91 0.2 19.4 8.3 28.8 8.2 5.1 4 <0.2 1.3 105.9 8.2 Bottom 105.6 5.1 2.8 146 19.4 83 28.8 4 13 0.2 92 r0 2 1.0 0.1 41 19.7 8.4 27.5 113.4 8.8 3.2 3 Surface 19.7 8.4 27.5 113.2 19.7 8.4 27.5 3.2 4 1.0 0.1 44 6.2 6.5 7.7 7.9 4.4 8.6 8.5 3 0.1 15 19.6 8.4 27.5 SR3 Moderate 11:17 Middle 19.6 8.4 110.0 822124 807585 4.4 8.4 0.1 15 19.6 3 7.8 0.0 229 19.5 19.5 8.4 8.4 28.1 8.3 Bottom 19.5 8.4 28.1 107.1 8.3 0.0 241 28.1 1.0 0.0 74 19.6 8.1 31.1 103.1 7.9 3.1 4 Surface 19.6 8.1 31.1 103.1 1.0 76 31.1 7.9 4 0.0 19.6 8.1 103. 3.1 4.5 0.1 19.4 7.9 3.4 4 8.1 31.1 . SR4A 10:14 8.1 31.1 102.6 817191 807803 Fine Calm 9.0 Middle 19.4 4.5 19.4 8.1 31.1 3.5 4 0.1 8.0 0.1 19.1 8.2 31.6 7.8 7.8 4.4 4 95 8.2 101.5 7.8 Rottom 19 1 31.6 8.0 0.2 19.1 8.2 4.4 1.0 0.2 285 19.5 8.1 7.9 3.4 6 30.9 103.7 Surface 19.5 8.1 30.9 103.7 1.0 0.2 285 19.5 8.1 30.9 7.9 3.3 6 SR5A 09:56 3.2 Middle 816611 810673 Fine Calm 2.2 0.1 290 19.5 30.9 102. 7.8 3.6 4 Bottom 19.5 8.1 30.9 102.3 7.8 0.1 296 19.5 8.1 30.9 7.8 3.7 2.2 1.0 0.1 253 19.4 8.2 30.5 2.6 4 Surface 19.4 8.2 30.5 108.6 1.0 0.1 258 19.4 8.2 30.5 108.0 8.3 2.7 4 SR6A Fine Calm 09:19 4.1 Middle 817942 814733 3.1 0.0 211 19.4 30.5 8.3 2.7 6 Bottom 19.4 8.2 30.5 108.6 8.3 3.1 0.0 217 19.4 30.5 2.7 5 1.0 0.3 4 19.4 8.3 29.1 108.3 8.4 2.9 108.3 Surface 29.1 1.0 0.3 4 19.4 8.3 29.1 108.3 8.4 2.9 2 8 1 0.3 34 19.4 8.3 29.1 107.6 8.3 2.8 4 SR7 Moderate 08:48 16.2 Middle 8.3 29.1 107.5 823656 823737 Fine 8.1 0.3 36 19.4 8.3 29.1 8.3 2.9 4 15.2 0.3 12 19.4 8.3 29.2 106.3 8.2 2.9 4 Bottom 8.3 29.2 106.4 8.2 15.2 0.3 19.4 8.3 29.2 106.4 8.2 2.9 5 1.0 19.6 8.4 28.6 108.3 8.4 4.3 3 Surface 19.6 8.4 28.7 108.2 1.0 19.5 8.4 28.7 108.1 8.4 4.4 4 . . 811626 820384 SR8 Fine Moderate 10:24 4.2 Middle -3.2 19.5 6.6 3 8.4 28.7 106.8 8.3 Bottom 19.5 8.4 28.7 106.8 8.3

DA: Depth-Averaged

Water Quality Monitoring Results on 18 February 21 during Mid-Ebb Tide Turbidity(NTU) Suspended Solids Total Alkalinity DO Saturation Dissolved Chromium Salinity (ppt) Coordinate Coordinate Nickel (µg/L) Weather Sampling Water Water Temperature (°C) Monitoring Current Speed Oxvaen (mg/L) (maga) Sampling Depth (m) HK Grid HK Grid Station Direction Value DA Condition Time Depth (m) (m/s) Average Value Average Average Value Average Value DA Value DA Value DA (Northing) Value DA Value DA Condition Value Value (Easting) 19.8 0.2 8.3 30.1 112.0 1.0 129 19.8 30.1 0.4 43 0.2 111 19.5 8.3 31 4 110. 8.5 1.8 6 90 <0.2 0.9 110.9 804251 C1 Cloudy Calm 16:45 8.3 31.4 90 815607 0.9 4.3 0.2 112 19.4 8.3 31.4 110.8 8.5 1.8 7 90 <0.2 0.9 7.6 0.2 104 19.4 8.3 31.6 106.7 8.2 3.8 7 91 <0.2 0.8 Bottom 8.3 31.6 106.9 8.2 7.6 0.2 110 19.4 8.3 31.6 107 1 8.2 3.3 7 92 <0.2 0.7 20.3 1.0 0.1 8.3 29.8 117. 8.9 2.3 84 < 0.2 1.2 Surface 8.3 29.8 117.2 <0.2 1.0 0.1 22 20.3 8.3 29.8 8.9 2.3 5 84 1.3 6.5 0.1 78 19.9 8.2 30.8 8.5 4.4 4.4 7 87 87 <0.2 1.3 C2 Fine Moderate 15:35 13.0 Middle 8.2 30.8 111.8 825664 806964 8.2 0.1 84 19.9 30.8 8.5 12.0 0.2 19.9 8.2 4.9 7 1.2 70 30.8 8.5 90 < 0.2 111.4 Bottom 19.9 8.2 30.8 8.5 12.0 8.5 6 1.2 0.3 76 19 9 8.2 30.8 49 90 <0.2 1.0 0.3 19.8 85 8.3 4 30.8 8.5 < 0.2 1.2 Surface 19.8 8.3 30.8 111.3 1.1 1.0 1.7 5 86 <0.2 0.3 56 19.8 8.3 30.8 8.5 82 1.1 7.9 7.9 2.0 5 4 89 89 <0.2 19.5 6.3 69 8.2 31.8 C3 Fine Moderate 17:45 12.5 Middle 8.2 31.8 103.7 89 822113 817785 19.5 0.3 8.2 31.8 5 <0.2 1.0 11.5 0.2 77 19.5 8.2 31.9 7.9 2.0 91 103.4 19.5 8.2 103.4 7.9 Bottom 31.9 11.5 0.2 79 19.5 8.2 31.9 103.4 7.9 2.1 4 91 <0.2 1.0 0.2 115 19.8 4 8.3 <0.2 0.8 30.0 8.3 Surface 19.8 8.3 30.0 108.7 1.0 0.2 123 19.8 8.3 30.0 108.4 8.3 4.6 3 89 <0.2 0.8 8.3 807138 IM1 Cloudy Calm 16:24 5.2 Middle 90 817925 4.2 0.2 19.7 8.3 30.2 7.9 7.9 13.2 5 92 <0.2 0.8 Bottom 19.7 8.3 30.1 103.3 7.9 4.2 0.2 105 19.7 8.3 30.1 14.5 0.7 0.4 19.9 8.3 30.6 8.5 5 89 <0.2 0.7 Surface 19.9 8.3 30.6 111.8 1.0 0.4 87 19.9 30.6 8.5 1.2 6 89 <0.2 0.8 0.8 0.8 3.6 0.4 19.9 8.5 1.0 6 <0.2 <0.2 <0.2 8.3 90 111.1 806157 Cloudy Calm 16:17 Middle 8.3 30.6 818176 0.4 19.8 1.0 6 7 3.6 6.2 0.3 80 19.7 8.3 30.7 8.4 1.3 91 Bottom 19.7 8.3 30.7 109.6 8.4 8.4 6.2 0.4 80 19.7 83 30.7 1.3 6 91 <0.2 0.8 1.0 1.0 0.3 65 19.9 8.3 30.5 8.4 1.0 5 89 <0.2 Surface 8.3 30.5 110.7 1.0 0.3 67 19.9 8.3 30.5 8.4 0.9 6 89 <0.2 0.9 3.7 0.4 62 19.8 8.3 30.6 8.4 1.1 6 90 <0.2 IM3 Cloudy 16:10 7.4 Middle 8.3 109.7 818763 805596 90 91 <0.2 3.7 0.4 63 19.8 30.6 8.4 1.0 7 6.4 2.5 6 7 0.8 0.2 53 19.5 8.3 31.0 105 8.1 106.0 6.4 0.2 19.5 83 31.0 106 <0.2 56 92 1.0 0.1 55 19.9 8.3 30.5 8.5 8.5 11 6 87 <0.2 1.0 Surface 19.9 8.3 30.5 111.1 83 30.5 1.1 5 88 <0.2 1.0 0.1 58 199 4.1 8.4 8.4 1.3 5 89 89 0.9 0.3 62 19.8 8.3 30.6 <0.2 IM4 Cloudy Calm 16:00 8.2 Middle 19.8 8.3 30.6 110.5 819718 804606 1.4 4.1 8.3 30.6 0.3 65 19.8 1.7 5 5 7.2 0.2 55 19.7 19.8 8.3 30.7 109. 8.4 8.4 91 91 <0.2 1.0 8.4 Rottom 19.8 8.3 30.7 109.7 30.7 0.2 < 0.2 1.1 1.0 0.3 146 0.9 87 20.0 8.3 29.4 113. 8.7 3 <0.2 Surface 20.0 8.3 29.5 113.3 1.0 159 8.3 29.6 8.6 0.9 <0.2 1.2 0.3 20.0 113. 4 88 4.0 112 19.7 3.3 4 89 <0.2 1.2 0.3 8.1 8.3 30.6 IM5 15:51 19.7 8.3 30.6 105.3 820737 804868 Cloudy Calm 8.0 Middle 89 4.0 0.4 120 19.6 8.3 30.6 3.4 5 89 < 0.2 1.2 <0.2 1.2 4.8 4.5 7.0 0.4 19.6 8.2 30.7 104.7 104.9 8.0 6 91 86 8.2 8.0 Bottom 19.6 30.7 0.4 19.6 8.2 1.3 1.2 1.0 0.2 315 19.9 8.3 29.3 8.8 4 87 <0.2 Surface 19.9 8.3 29.4 114.0 1.0 0.2 330 19.8 8.3 29.5 8.7 1.3 5 87 <0.2 1.2 3.8 0.3 17 19.6 8.3 30.2 8.2 3.1 6 88 <0.2 15:43 7.6 Middle 19.6 8.3 30.2 106.3 89 821083 805827 IM6 Cloudy Calm 3.8 0.3 17 19.6 8.3 30.2 106. 8.1 3.2 89 <0.2 1.2 6.6 0.4 19.6 8.2 30.3 105.3 8.1 3.6 90 <0.2 Bottom 19.6 8.2 30.3 105.3 8.1 6.6 0.5 19.6 8.1 3.7 1.0 0.3 20.0 8.3 28.7 8.9 0.4 85 <0.2 1.3 Surface 20.0 8.3 28.7 116.0 1.0 0.3 324 20.0 8.3 28.8 115. 8.9 0.4 7 85 <0.2 1.2 1.2 4.4 0.5 16 19.8 8.4 2.3 6 87 <0.2 IM7 Cloudy Calm 15:35 Middle 19.8 8.3 29.6 109.3 821365 806816 4.4 0.5 19.8 8.3 29.7 8.4 2.4 7 88 <0.2 7.7 0.3 19.7 8.3 29.9 8.3 2.9 7 92 <0.2 1.2 8.3 29.9 108.1 8.3 77 0.3 19.7 8.3 29.9 83 3.0 8 91 <0.2 1.3 1.0 0.3 89 20.3 8.3 29.8 9.1 2.3 6 84 < 0.2 1.2 119.5 Surface 8.3 29.8 1.3 1.0 0.3 93 20.3 8.3 29.8 119.3 9.1 2.3 6 84 <0.2 4 0 0.2 67 199 8.3 30.9 114 8 8.7 3.0 7 88 <0.2 1.2 IM8 Fine Moderate 16:01 7.9 Middle 8.3 30.9 114.8 87 821831 808139 1.2 8.7 88 4.0 0.2 72 19.9 8.3 30.9 114.7 3.0 < 0.2 6.9 0.3 84 19.8 8.2 31.4 112.6 8.5 4.2 6 90 <0.2 1.3 8.2 Bottom 19.8 31.4 112.6 8.5 0.3 19.8

DA: Depth-Averaged

Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Water Quality Monitoring Results on 18 February 21 during Mid-Ebb Tide DO Saturation Suspended Solids Total Alkalinity Chromium Salinity (ppt) Turbidity(NTU) Coordinate Coordinate Nickel (µg/L) Weather Sampling Water Water Temperature (°C) Monitoring Speed Current Oxvaen (mg/L) (ppm) Sampling Depth (m) HK Grid HK Grid Station Direction Time (m/s) Average Value DA Value DA Value DA Value DA Value DA Value DA Condition Condition Depth (m) Value Average Value Average Value Average Value (Northing) (Easting) 0.2 Surface 8.3 29.7 1.0 80 20.3 2.0 84 4 0 0.2 70 20.0 8.3 30.6 114 8.7 7 88 <0.2 1.3 114.4 808806 IM9 Fine Moderate 16:06 8.3 30.6 822117 4.0 0.2 74 20.0 8.3 30.6 114.3 8.7 2.7 6 87 <0.2 1.2 7.0 0.2 88 19.8 8.2 31.3 112.0 8.5 3.8 6 90 <0.2 1.2 Bottom 19.8 8.2 31.3 112.0 8.5 7.0 0.2 92 19.8 8.2 31.3 112 0 8.5 3.8 5 90 <0.2 1.1 1.0 0.3 90 20.1 8.3 29.9 115. 8.8 2.6 84 < 0.2 1.2 Surface 8.3 29.9 115.7 1.0 0.3 94 20.1 8.3 29.9 115. 8.8 2.6 5 84 <0.2 1.3 4.3 0.2 96 19.8 8.2 30.9 8.5 3.7 4 5 88 87 <0.2 1.2 IM10 Moderate 16:13 8.6 Middle 8.2 30.9 112.1 822400 809798 4.3 103 8.2 < 0.2 0.2 19.8 30.9 8.5 7.6 8.2 5 1.2 0.2 81 19.8 31.1 8.5 4.2 89 < 0.2 Bottom 19.8 8.2 31.1 111.3 8.5 1.2 7.6 0.2 88 19.8 8.2 31 1 8.5 4.2 4 90 **-**0 2 1.0 123 1.9 0.2 19.9 4 8.3 29.8 8.4 1.2 Surface 8.3 29.8 110.1 1.2 1.0 1.9 4 85 0.2 127 19.9 8.3 29.8 8.4 < 0.2 83 1.2 2.0 4 5 19.8 8.1 88 89 <0.2 4.5 30.2 IM11 Fine Moderate 16:23 9.0 Middle 8.2 30.2 105.8 88 822073 811474 1.2 4.5 19.8 0.2 122 8.2 30.2 1.3 8.0 0.1 146 19.7 8.2 30.9 2.1 4 90 <0.2 104.4 8.0 19.7 8.2 8.0 Bottom 30.9 104.4 8.0 0.2 153 19.7 8.2 30.9 104.3 8.0 2.0 4 90 <0.2 1.2 0.2 151 19.9 5 <0.2 1.2 8.3 29.8 8.6 Surface 19.9 8.3 111.8 29.8 1.0 0.2 164 19.9 8.3 29.8 8.6 1.9 4 85 <0.2 1.2 4.9 143 19.9 8.1 2.4 4 89 <0.2 1.2 0.1 8.3 30.3 106. 812043 IM12 Fine Moderate 16:29 9.7 Middle 19.9 8.2 30.3 106.7 821456 5 4.9 157 19.9 2.4 88 <0.2 1.2 0.1 8.2 0.1 132 19.6 8.2 2.5 90 <0.2 1.2 7.8 19.6 8.2 31.4 102.2 7.8 Rottom 8.7 0.1 132 19.6 8.2 31.4 2.5 4 1.3 20.2 8.3 30.3 2.2 4 8.3 Surface 20.2 8.3 108.9 30.3 1.0 20.2 30.3 8.2 2.2 4 2.7 Fine Calm 17:10 5.3 Middle 819979 812662 2.7 43 19.8 8.2 30.6 106. 8.1 2.5 4 Bottom 19.8 8.2 30.6 106.1 8.1 4.3 19.8 8.2 30.6 106 8 1 4 1.0 0.2 46 19.9 8.3 30.0 8.8 6 87 <0.2 1.1 Surface 19.9 8.3 30.0 115.4 1.0 0.2 47 19.9 8.3 30.0 115. 8.8 2.3 5 87 < 0.2 1.1 SR2 Moderate 17:26 4.9 Middle 821474 814145 3.9 89 0.2 37 199 8.3 30.3 8.6 44 5 <0.2 1.2 112.5 Bottom 4.5 19 9 83 30.3 5 11 39 0.2 38 89 r0 2 1.0 0.2 184 20.1 8.3 29.7 121. 9.3 1.9 4 Surface 8.3 29.7 121.7 83 5 1.0 0.2 188 20.1 29.7 121 2.0 4.8 8.8 8.7 2.5 2.5 5 0.2 178 19.9 8.3 30.1 114.8 SR3 Moderate 15:54 Middle 19.9 8.3 30.1 114.7 822136 807574 4.8 188 19.9 8.3 30.1 0.2 114. 5 5 8.5 0.2 135 19.9 19.9 8.2 8.2 31.3 111.9 8.5 3.8 Bottom 19.9 8.2 31.3 8.5 8.5 0.2 136 1.0 0.2 86 19.8 8.3 30.2 106.3 8.1 3.2 5 Surface 19.8 8.3 30.2 106.2 8.1 1.0 0.2 91 19.7 8.3 30.2 106. 3.3 3.7 6 4.1 19.5 6 0.2 8.0 . 8.3 30.5 SR4A 17:08 8.3 30.5 104.9 817176 807830 Cloudy Calm 8.2 Middle 19.5 4.1 19.5 8.3 30.5 104. 3.6 5 0.2 85 7.2 19.5 8.2 104. 3.6 3.7 0.2 88 30.5 104.5 8.0 8.0 19.5 8.2 30.5 Rottom 0.2 19.5 8.2 8 1.0 0.4 79 20.3 8.3 2.0 5 29.5 107. 8.2 20.3 8.3 29.5 107.0 Surface 1.0 0.4 20.2 8.3 29.6 1.8 6 86 SR5A 17:24 3.2 Middle 816607 810682 Cloudy Calm 2.2 0.3 20.2 29.6 8.1 1.7 5 Bottom 20.2 8.3 29.6 105.7 8.1 0.3 60 20.1 8.3 8.0 1.8 2.2 1.0 0.3 20.4 8.4 28.7 3.2 Surface 20.4 8.4 28.7 112.8 1.0 0.3 78 20.4 8.4 28.7 112. 8.6 3.2 7 SR6A Cloudy Calm 17:53 4.2 Middle 817956 814742 3.2 0.1 50 20.3 8.4 28.8 8.3 4.5 9 Bottom 8.4 28.8 109.0 8.3 3.2 0.1 54 20.3 8.4 28.8 4.6 10 1.0 0.3 45 20.0 8.2 31.2 8.5 17 111.8 Surface 31.2 1.0 0.3 46 20.0 8.2 31.2 8.5 1.7 5 8 1 0.3 40 19.8 8.2 31.7 107 8.1 17 4 5 SR7 Fine Moderate 18:16 16.1 Middle 8.2 31.7 107.5 823647 823732 1.7 8.1 0.3 43 19.8 8.2 31.7 107. 8.2 15.1 0.2 12 19.6 8.2 31.8 106.4 8.1 1.7 4 Bottom 8.2 31.8 106.5 15.1 0.2 12 19.6 8.2 31.9 106. 8.1 1.7 5 1.0 20.2 8.3 30.4 107. 8.1 3.6 Surface 20.1 8.2 30.4 107.3 107. 1.0 20.1 8.2 30.4 8.1 3.6 6 . -811629 820401 SR8 Fine Moderate 16:40 5.2 Middle -4.2 19.8 4.3 7 8.2 30.5 105.7 8.1 19.8 8.2 30.5 105.7

DA: Depth-Averaged

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

Water Quality Monitoring Water Quality Monitoring Results on 18 February 21 during Mid-Flood Tide Turbidity(NTU) Suspended Solids Total Alkalinity DO Saturation Chromium Salinity (ppt) Coordinate Coordinate Nickel (µg/L) Weather Sampling Water Water Temperature (°C) Monitoring Current Speed Oxvaen (mg/L) (maga) Sampling Depth (m) HK Grid HK Grid Station Direction Condition Time Depth (m) (m/s) Average Average Value Average Value DA Value DA Value DA Value DA (Northing) Value DA Value DA Condition Value Value Average Value (Easting) 19.4 0.4 0.8 Surface 19.4 8.3 30.7 106.7 1.0 0.5 308 19.4 30.8 106.6 8.2 3.2 88 <0.2 0.7 274 19.2 7.7 5.4 0.8 0.5 100.8 89 <0.2 C1 8.2 31.6 100.8 804266 11.21 84 Middle 19.2 89 815642 Cloudy Moderate 5.2 0.8 284 19.2 8.2 31.6 7.7 5.4 5 89 <0.2 0.8 0.5 100. 7.4 0.4 279 19.2 8.2 31.6 100.4 7.7 6.9 6 90 <0.2 0.7 8.2 7.7 Bottom 19.2 31.6 100.4 7.0 0.7 7.4 19.2 8.2 0.4 281 31.6 6 91 < 0.2 1.0 0.3 350 1.9 20.3 83 < 0.2 8.3 Surface 20.3 8.3 29.4 117.2 1.1 8.9 1.9 3.5 84 1.0 0.3 359 342 20.3 8.3 29.4 4 <0.2 19.7 4 1.3 6.4 0.3 8.3 8.4 87 29.8 C2 Fine Moderate 12:31 12.8 Middle 19.7 8.3 29.8 109.7 87 825688 806954 8.3 29.8 109. 8.4 3.5 5 87 <0.2 6.4 0.3 345 19.7 11.8 0.3 344 19.7 8.3 8.4 3.7 6 90 <0.2 1.3 29.9 109.2 8.3 109.2 8.4 Bottom 19.7 29.9 11.8 0.3 316 19.7 8.3 29.9 109.2 3.7 5 90 <0.2 1.4 1.0 0.5 19.6 8.2 1.8 4 <0.2 1.9 Surface 19.6 8.2 30.6 104.1 1.0 0.5 278 19.6 8.2 30.6 104.1 8.0 1.8 5 85 <0.2 2.0 5 2.0 6.2 0.5 267 19.5 7.6 2.3 88 88 <0.2 8.2 31.3 99.1 C3 10:18 817781 Fine Moderate 12.4 Middle 19.5 8.2 31.3 99.2 88 822104 1.7 0.5 19.5 11.4 0.4 275 19.4 8.2 98.9 7.5 3.6 4 91 <0.2 1.3 Bottom 19.4 8.1 31.9 98.9 7.5 11.4 0.5 292 19.4 8.1 31.9 98.0 7.5 3.2 5 1.3 1.0 0.5 314 19.8 8.3 2.4 86 <0.2 0.9 Surface 19.8 8.3 29.9 104.8 1.0 319 19.7 8.3 29.9 104.0 8.0 2.5 4 86 <0.2 0.9 0.5 807121 IM1 Cloudy Moderate 11:41 5.1 Middle 817937 41 0.4 314 19.6 8.3 30.0 7.9 6.6 87 < 0.2 0.9 Bottom 8.3 30.0 103.2 7.9 41 0.4 324 19.6 8.3 30.1 103.2 79 6.7 3 87 <0.2 0.9 1.0 335 0.5 19.7 8.3 29.9 8.4 1.3 4 87 < 0.2 0.9 Surface 8.3 29.9 109.2 1.0 0.5 346 19.7 8.3 29.9 109.3 8.4 1.3 4 87 <0.2 0.9 3.5 0.4 331 19.5 8.3 30.3 106. 8.2 5.4 4 89 <0.2 0.9 IM2 Cloudy Moderate 11:48 7.0 Middle 8.3 30.3 106.4 89 818149 806178 5.5 <0.2 0.9 1.0 0.9 3.5 0.4 347 19.5 8.3 30.3 8.2 3 89 5.8 3 6.0 0.3 327 19.5 83 30.3 106 8.1 91 <0.2 8.3 30.3 106.0 6.0 329 8.1 5.7 0.4 19.5 8.3 105 91 <0.2 30.3 2.2 2.5 4.0 1.0 0.2 72 196 83 30.0 8.2 85 < 0.2 0.9 Surface 8.3 30.1 107.2 1.0 3 86 78 8.3 30.1 <0.2 0.3 19.6 8.2 0.8 3.6 67 3 87 <0.2 0.2 19.5 8.3 30.2 8.1 IM3 Cloudy Moderate 11:55 7.2 Middle 19.5 8.3 30.2 105.9 88 818774 805617 0.9 4.0 4.5 19.5 19.5 8.1 3 88 91 8.0 3.6 0.2 68 8.3 <0.2 6.2 0.1 87 8.3 30.2 8.1 Rottom 19.5 8.3 30.2 105.2 6.2 0.1 19.4 8.3 30.2 105.1 8.1 4.2 4 <0.2 0.9 90 91 0.9 1.0 0.1 19.5 95 8.3 30.2 106.7 8.2 2.4 3 86 <0.2 Surface 19.5 8.3 30.2 106.6 1.0 0.1 19.5 8.3 2.7 3 87 <0.2 0.8 0.9 0.9 19.4 3.9 4 89 <0.2 4.2 84 0.1 8.3 30.3 8.1 IM4 Moderate 12:05 8.4 Middle 19.4 8.3 30.3 105.5 819718 804630 Cloudy 4.2 7.4 19.4 8.3 4.0 3 89 <0.2 0.2 30.3 0.1 19.4 4.0 91 8.3 30.3 8.1 8 1 Bottom 194 8.3 30.3 105.1 7.4 0.1 19.4 8.3 4.0 <0.2 0.9 0.9 1.0 0.6 11 19.7 8.3 30.0 2.3 4 87 <0.2 108.3 8.3 Surface 19.7 8.3 30.0 108.2 11 19.6 8.3 2.6 3 87 <0.2 0.7 3.8 0.6 19.6 3.7 3 88 <0.2 0.8 8.3 8.2 IM5 Moderate 12:12 7.6 Middle 19.6 8.3 30.1 107.2 820743 804882 Cloudy 3.8 0.7 19.6 4.1 <0.2 5 0.9 6.6 0.5 19.6 8.3 8.3 30.2 8.2 6.3 90 <0.2 19.6 8.3 106.7 8.2 Bottom 30.2 6.6 0.5 17 19.6 30.2 91 < 0.2 1.0 0.1 300 19.8 8.3 28.9 1.3 4 87 <0.2 0.9 Surface 8.3 28.9 109.8 1.0 0.1 323 19.8 8.3 8.4 1.4 4 88 <0.2 0.8 3.8 0.1 19.7 8.2 2.8 4 88 <0.2 Cloudy Moderate 12:19 Middle 19.7 8.3 29.5 106.7 821082 805837 <0.2 3.8 0.1 19.7 8.3 29.6 8.2 3.1 3 89 3.8 0.9 6.6 0.1 342 19.7 8.3 29.8 8.1 8.1 3 91 <0.2 106.0 8.1 6.6 0.1 315 19.7 83 29.8 4 91 1.2 1.0 0.1 48 19.9 8.3 28.2 8.8 0.5 4 89 <0.2 Surface 19.9 114.2 8.8 1.0 0.1 48 199 83 28.2 0.6 4 89 <0.2 3 1.3 4.4 2.5 90 <0.2 0.1 45 19.7 8.3 29.4 108.1 8.3 IM7 Moderate 12:28 Middle 19.7 8.3 107.9 821368 806858 Cloudy

8.3

8.3

8.3

8.3

8.3

8.3

8.3

8.3

19.7

19.9

19.7

19.7

29.5

29.7

29.7

29.6

29.6

29.7

29.8

29.7

29.6

29.7

29.8

113.

110.4

109.

8.3

8.3

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8.3

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8.2

8.7 8.7

8.5

8.5

8.4

8.2

8.4

107.1

113.5

110.4

109.3

2.8

3.1

1.7

1.8

1.8

1.8

1.9

3.3

4

2

3

3

4

3

3

90

91

83

83

86

86

89

86

821839

<0.2

<0.2

< 0.2

<0.2

<0.2

<0.2

808136

1.3

1.3

1.0

1.2

1.4

1.4

1.4

1.3

IM8

Fine

Moderate

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

12:08

8.4

4.4

7.8

7.8

1.0

1.0

4.2

4.2

7.4

Bottom

Surface

Middle

Rottom

0.2

0.1

0.1

0.2

0.2

0.1

0.1

0.1

46

51

121

122

124

132

56

19.7

19.7

19.7

19.9

19.9

19.7

19.7

19.7

Water Quality Monitoring Results on 18 February 21 during Mid-Flood Tide DO Saturation Dissolved Suspended Solids Total Alkalinity Chromium Salinity (ppt) Turbidity(NTU) Coordinate Coordinate Nickel (µg/L) Weather Sampling Water Water Temperature (°C) Monitoring Speed Current Oxvaen (mg/L) (ppm) Sampling Depth (m) HK Grid HK Grid Station Direction Time (m/s) Average Average Value Average Value DA Value DA Value DA Value DA (Northing) Value DA Value DA Condition Condition Depth (m) Value Value Average Value (Easting) 19.9 0.1 Surface 8.3 1.0 0.1 131 19.9 2.4 2.6 3.8 0.1 150 199 8.3 29.8 106.6 8.2 2 86 <0.2 1.2 106.6 808794 IM9 Fine Moderate 12:02 7.5 8.3 29.8 822071 3.8 0.1 160 19.8 8.3 29.8 106.6 8.2 2.7 2 87 <0.2 1.2 6.5 0.1 149 19.8 8.3 29.8 106.5 8.2 3.4 2 90 <0.2 1.3 Bottom 8.3 29.8 106.5 8.2 6.5 0.1 155 19.8 8.3 29.8 106.5 8.2 3.4 2 89 <0.2 1.3 1.0 0.4 325 20.0 8.3 29.9 110.6 8.4 2.4 4 84 < 0.2 1.2 Surface 8.3 29.9 110.5 1.0 0.5 327 20.0 8.3 29.9 110.4 8.4 2.4 3 84 <0.2 1.1 4.0 0.5 342 353 19.9 8.3 30.0 8.2 3.2 3 87 87 <0.2 1.2 IM10 Moderate 11:55 7.9 Middle 8.3 108.0 822392 809776 0.5 8.3 4.0 19.9 30.0 108. 8.3 6.9 0.4 19.8 8.2 3 1.2 338 30.0 106.5 8.1 3.3 90 < 0.2 Bottom 19.8 8.2 30.0 106.5 8.1 1.3 6.9 0.4 19.8 8.2 106.4 3.4 90 345 30.0 **-**0 2 1.0 0.6 19.7 8.2 84 30.3 8.2 1.2 Surface 19.7 8.2 30.3 107.1 1.0 1.0 19.7 2.1 < 0.2 0.6 333 8.2 30.3 107. 8.2 3 84 1.2 19.7 8.2 8.0 2.2 3 88 87 <0.2 4.3 328 355 104 IM11 Fine Moderate 11:43 8.5 Middle 19.7 8.2 30.3 104.9 87 822047 811474 4.3 19.7 0.6 8.2 30.3 <0.2 1.2 7.5 0.5 311 19.7 8.2 30.6 104.3 8.0 2.3 4 90 19.7 8.2 8.0 Bottom 30.6 104.3 7.5 0.5 317 19.7 8.2 30.6 104.2 8.0 2.3 3 90 <0.2 1.2 0.4 19.9 84 <0.2 1.2 8.2 30.3 8.3 Surface 19.9 8.2 108.3 30.3 1.0 0.4 303 19.9 8.2 30.3 108.2 8.3 2.1 3 84 <0.2 1.2 4.7 0.4 290 19.8 2.6 3 88 <0.2 1.1 8.2 30.4 106. 8.2 821448 812068 IM12 Fine Moderate 11:38 9.4 Middle 19.8 8.2 30.4 106.8 4.7 19.8 87 <0.2 1.1 0.4 306 8.2 30.4 8.4 0.4 281 19.7 8.2 30.5 4.2 5 90 <0.2 8.1 197 8.2 105.8 8 1 Rottom 30.5 8.4 0.4 287 19.7 8.2 30.5 105. 8.1 4.2 4 1.1 19.9 8.2 30.1 7.8 7.8 2.5 3 Surface 19.9 8.2 102.8 30.1 1.0 19.9 30.1 2.5 3 2.6 Fine Calm 10:57 Middle 819980 812665 2.6 41 19.8 8.2 30.1 7.9 2.6 2 Bottom 19.8 8.2 30.1 103.3 7.9 7.9 41 19.8 8.2 30.1 2.7 1.0 0.2 231 19.7 8.2 30.3 8.2 3.5 86 <0.2 1.2 Surface 19.7 8.2 30.3 1.0 0.2 237 19.7 8.2 30.3 8.2 3.4 3 86 < 0.2 1.1 SR2 Moderate 10:40 4.7 Middle 821467 814171 246 3.7 3.9 89 0.2 19.7 8.2 30.3 8.2 4 <0.2 11 107.0 8.2 Bottom 3.7 3.9 19.7 8.2 30.3 106 4 11 0.2 262 89 r0 2 1.0 0.1 76 20.0 8.3 29.6 114 (8.7 8.7 2.0 3 Surface 8.3 29.6 114.0 83 2.0 2 1.0 0.1 80 20.0 29.6 4.7 2.1 3 0.1 54 19.8 8.3 29.7 8.4 SR3 Moderate 12:14 9.3 Middle 19.8 29.7 109.7 822132 807580 4.7 8.4 8.3 29.7 0.1 55 19.8 3 8.3 8.3 0.2 19.8 19.8 8.3 8.3 29.8 29.8 108.3 3.0 8.3 Bottom 19.8 8.3 29.8 0.2 1.0 19.7 1.8 0.2 114 8.3 29.5 100.2 7.7 5 Surface 19.7 8.3 29.5 100.3 29.5 5 1.0 0.2 115 19.7 8.3 1.8 4.1 0.1 108 19.7 1.7 5 . 8.3 29.5 SR4A 8.3 29.5 100.5 817166 807826 Cloudy Moderate 10:58 Middle 19.7 4.1 110 19.7 8.3 1.7 4 0.2 7.7 2.1 1.8 7.1 0.1 105 19.5 8.3 4 29.5 100.2 7.7 Rottom 19.5 8.3 29.5 0.1 115 19.5 8.3 29.5 3 1.0 0.6 288 19.9 8.3 7.7 2.5 4 29.3 100.6 Surface 19.9 8.3 29.3 100.6 1.0 0.6 309 19.9 8.3 29.3 7.7 2.5 4 SR5A 3.1 Middle 816591 810718 Cloudy Calm 10:40 2.1 0.3 289 19.8 29.3 100.: 2.7 5 Bottom 19.8 8.2 29.3 100.3 7.7 0.3 294 19.8 7.7 2.7 2.1 1.0 0.3 80 19.8 8.3 28.6 7.9 3.2 Surface 19.8 8.3 28.6 102.7 1.0 0.3 83 19.8 8.3 28.7 102.0 7.9 3.3 6 SR6A Cloudy Calm 10:11 3.9 Middle 817965 814731 2.9 0.3 50 19.8 8.3 7.9 4.0 6 Bottom 8.3 28.7 102.1 7.9 2.9 0.3 51 19.8 8.3 28.7 3.9 5 1.0 0.2 343 19.5 8.2 31 1 7.9 1.8 103.2 Surface 31.1 1.0 0.2 344 19.5 8.2 31.1 103.1 7.9 1.8 3 7.8 0.2 358 19.4 8.1 31.8 98.6 7.5 2.2 3 SR7 Moderate 09:48 15.6 Middle 8.1 31.8 98.5 823612 823731 Fine 7.8 0.2 329 19.4 8.1 31.8 98.4 7.5 14.6 0.2 366 19.4 8.1 31.9 97.1 7.4 2.2 3 Bottom 8.1 31.9 97.2 14.6 0.2 337 19.4 8.1 31.9 97.2 7.4 2.2 1.0 19.9 8.3 29.9 107. 8.2 4.0 3 Surface 19.9 8.3 29.9 107.4 107. 1.0 19.9 8.3 29.9 8.2 4.1 4 . . 811626 820404 SR8 Fine Moderate 11:28 5.2 Middle -4.2 19.8 5.4 6 8.2 30.1 105.8 8.1 Bottom 19.8 8.2 30.1 105.9 8.1

DA: Depth-Averaged

Water Quality Monitoring Results on 20 February 21 during Mid-Ebb Tide Turbidity(NTU) Suspended Solids Total Alkalinity DO Saturation Dissolved Chromium Salinity (ppt) Coordinate Coordinate Nickel (µg/L) Weather Sampling Water Water Temperature (°C) Monitoring Current Speed Oxvaen (mg/L) (maga) Sampling Depth (m) HK Grid HK Grid Station Direction Condition Time Depth (m) (m/s) Average Value Average Average Value Average Value DA Value DA Value DA Value DA (Northing) Value DA Value DA Condition Value Value (Easting) 19.9 0.2 8.3 30.4 121.0 1.0 0.2 199 19.8 0.7 <2 1.1 4 0 0.1 199 19.5 8.3 31.3 8.5 2 88 <0.2 1.5 110.7 804268 C1 Cloudy Calm 19:13 8.3 31.3 815608 4.0 0.1 207 19.5 8.3 31.3 110 8.4 1.2 2 87 <0.2 1.4 7.0 0.1 255 19.5 8.3 31.5 108.0 8.2 1.9 2 89 <0.2 1.4 Bottom 8.3 31.5 108.1 8.3 7.0 0.1 270 19.5 8.3 31.5 108.2 8.3 1.9 2 89 <0.2 1.4 135 20.0 1.0 0.2 8.3 29.1 118.5 9.1 1.3 85 < 0.2 2.0 Surface 8.3 29.2 118.2 <0.2 1.0 0.2 142 20.0 8.3 29.3 9.0 1.3 3 85 2.0 2.2 2.1 2.1 6.0 0.5 154 19.7 8.2 30.6 7.9 1.8 4 88 88 <0.2 C2 Cloudy Moderate 17:58 12.0 Middle 8.2 30.6 102.7 825673 806965 6.0 0.5 166 8.2 7.8 19.7 30.7 102. 0.5 144 19.5 8.2 2.3 4 11.0 31.2 99.1 7.6 91 < 0.2 Bottom 19.6 8.2 31.2 99.5 7.6 2.1 7.6 4 11.0 0.5 154 19.6 8.2 31.2 99.8 92 <0.2 1.0 0.4 286 19.7 1.4 2.0 2.2 2.0 2.1 2.1 8.1 84 8.5 < 0.2 Surface 19.7 8.1 31.5 111.4 1.0 111. 1.4 2 84 <0.2 0.4 302 19.6 8.1 31.5 8.5 8 N 2.6 2.7 87 88 <0.2 257 265 19.4 7.5 7.5 3 5.9 8.1 98.7 C3 Cloudy Moderate 19:44 11.8 Middle 8.1 32.1 98.6 88 822092 817796 98.5 0.2 19.4 8.1 10.8 0.1 120 19.4 8.1 32.2 98.4 7.5 2.7 3 92 <0.2 8.1 7.7 Bottom 19.4 32.2 100.2 10.8 0.1 124 19.4 8.1 32.2 102.0 7.8 2.5 4 93 <0.2 2.1 0.0 157 20.3 0.1 8.3 29.4 114.3 8.7 <0.2 1.8 Surface 20.3 8.3 29.4 114.2 1.0 0.0 159 20.3 8.3 29.4 114.1 8.7 0.1 3 88 <0.2 1.8 8.7 807110 IM1 Cloudy Calm 18:51 4.2 Middle 89 817962 3.2 0.1 169 20.4 8.3 29.5 8.5 0.3 2 90 <0.2 1.7 Bottom 20.4 8.3 29.5 112.2 8.5 3.2 0.1 183 20.4 8.3 29.5 8.5 0.3 1.8 0.1 194 20.1 8.3 29.5 9.0 0.2 86 <0.2 1.6 1.6 Surface 20.1 8.3 29.5 117.5 1.0 0.1 208 20.1 0.2 3 87 <0.2 3.3 0.1 224 20.1 8.9 0.4 3 <0.2 <0.2 <0.2 1.6 1.6 8.3 90 116.2 806158 Cloudy Calm 18:45 Middle 8.3 29.6 818166 0.1 237 0.4 3 3.3 20.1 5.6 0.1 200 19.8 8.3 30.4 7.9 4.9 90 Bottom 19.8 8.3 30.4 103.9 8.0 8.0 1.6 5.6 0.1 202 19.8 83 30.4 4.6 3 90 <0.2 8.7 8.7 1.0 0.0 326 20.0 8.3 29.8 114 0.5 3 86 <0.2 1.6 Surface 8.3 29.8 114.2 1.0 0.0 326 20.0 8.3 29.9 0.6 3 85 <0.2 1.6 1.6 1.6 3.6 0.0 237 19.9 8.3 30.0 8.6 1.0 3 87 <0.2 IM3 Cloudy 18:37 7.2 Middle 112.8 818800 805613 <0.2 3.6 0.0 243 19.9 30.1 1.0 88 2.8 <2 90 1.6 6.2 0.0 51 19.8 8.3 30.4 105 8.1 105.7 0.0 52 19.8 83 30.4 105 -2 <0.2 6.2 90 1.0 0.2 190 20.0 8.3 29.9 121. 9.2 0.5 2 86 <0.2 1.5 Surface 8.3 29.9 121.3 1.0 83 0.5 3 86 0.2 207 20.0 29 9 < 0.2 4.1 185 1.1 3 88 89 1.5 0.1 19.9 8.3 30.1 9.0 <0.2 IM4 Cloudy Calm 18:27 8.2 Middle 19.9 8.3 117.2 819734 804605 1.1 4.1 0.1 195 19.9 8.3 30.1 2 7.2 0.1 169 19.7 19.7 8.3 8.3 30.3 112.2 8.6 2.4 90 <0.2 1.5 Rottom 19.7 8.3 30.3 8.6 0.1 170 90 < 0.2 1.5 1.0 0.3 86 235 20.1 8.3 29.6 9.0 0.1 3 <0.2 Surface 20.1 8.3 29.6 117.5 1.0 244 29.6 8.9 <0.2 1.6 0.3 20.1 8.3 117. 0.1 2 86 3.9 226 19.9 1.1 3 88 <0.2 1.5 0.2 8.7 8.3 29.9 114.1 IM5 18:17 7.8 19.9 8.3 29.9 114.2 820725 804886 Cloudy Calm Middle 3.9 248 19.9 8.3 30.0 114. 1.2 2 88 < 0.2 1.5 0.2 1.9 177 5.5 4.9 <0.2 6.8 0.1 19.7 8.3 30.2 113. 8.7 8.7 3 90 91 8.3 113.5 87 Bottom 197 30.2 6.8 0.1 183 19.7 8.3 <0.2 1.6 1.6 1.6 1.0 0.2 243 20.3 8.3 27.5 9.5 0.6 3 86 <0.2 123.4 Surface 20.3 8.3 27.5 123.2 1.0 0.2 262 20.2 8.3 27.6 123. 9.5 0.6 3 87 <0.2 3.8 0.2 238 20.0 8.3 29.8 8.5 2.2 89 <0.2 18:09 7.6 Middle 20.0 8.3 29.8 111.2 89 821081 805809 IM6 Cloudy Calm 3.8 0.3 250 20.0 8.3 29.8 8.5 2.2 2 89 <0.2 1.6 6.6 0.1 264 19.9 8.3 29.9 109.7 8.4 2.6 2 90 <0.2 1.7 Bottom 20.0 8.3 29.9 109.7 8.4 6.6 0.1 20.0 8.3 1.8 283 1.0 0.3 337 20.4 8.4 26.9 136.2 0.6 85 <0.2 1.9 Surface 20.4 8.4 26.9 136.0 1.0 0.4 359 20.4 8.4 26.9 135. 10.5 0.7 <2 86 <0.2 1.9 88 1.8 4.1 0.3 325 19.9 8.3 8.5 2.6 3 <0.2 IM7 Cloudy Calm 18:01 8.2 Middle 8.3 29.9 110.3 821336 806850 <0.2 4.1 0.3 352 19.8 8.3 8.4 2.6 2 87 7.2 0.3 271 19.8 8.3 30.2 8.3 2.9 90 <0.2 1.9 8.3 30.2 108.9 8.3 7.2 0.3 274 19.8 8.3 30.2 2.9 90 <0.2 1.9 1.0 0.2 217 20.3 8.3 28.3 125. 9.6 1.9 82 < 0.2 2.0 125.8 Surface 8.3 28.4 2.1 1.0 0.2 229 20.2 8.3 28.5 125.7 9.6 2.0 5 83 <0.2 3.8 0.1 211 19.8 8.3 30.2 114 9 8.8 5.1 4 88 89 <0.2 2.2 IM8 Cloudy Moderate 18:22 7.6 Middle 8.2 30.3 114.5 87 821833 808150 3.8 0.1 213 19.7 8.2 30.5 114.1 8.7 5.3 < 0.2 6.6 0.0 68 19.6 8.1 31.7 105. 8.0 8.3 3 91 <0.2 2.1 8.1 Bottom 19.6 31.7 105.0 8.0 19.6

DA: Depth-Averaged

Calm: Small or no wave: Moderate: Between calm and rough: Rough: White capped or rougher

Water Quality Monitoring Results on 20 February 21 during Mid-Ebb Tide DO Saturation Suspended Solids Total Alkalinity Chromium Salinity (ppt) Turbidity(NTU) Coordinate Coordinate Nickel (µg/L) Weather Sampling Water Water Temperature (°C) Monitoring Speed Current Oxvaen (mg/L) (ppm) Sampling Depth (m) HK Grid HK Grid Station Direction Time (m/s) Average Value DA Value DA Value DA Value DA Value DA Value DA Condition Condition Depth (m) Value Average Value Average Value Average Value (Northing) (Easting) 0.1 20.2 Surface 8.2 28.1 0.1 228 20.1 9.4 2.3 84 2.2 3.5 0.1 290 19.8 8.2 30.6 8.5 2 87 <0.2 110.3 808818 IM9 Cloudy Moderate 18:26 8.1 30.7 822071 3.5 0.1 296 19.8 8.1 30.8 109.4 8.3 3.1 3 88 <0.2 2.2 6.0 0.1 358 19.7 8.1 31.3 105.8 8.0 3.4 3 91 <0.2 2.2 Bottom 8.1 31.3 105.9 6.0 0.1 329 19.7 8.1 31.3 106.0 8.1 3.5 4 92 <0.2 2.1 1.0 0.2 59 20.1 8.3 28.1 116.9 9.0 2.0 83 < 0.2 2.1 Surface 8.3 28.1 116.7 1.0 0.2 59 20.0 8.3 28.1 116.4 9.0 2.1 2 84 <0.2 2.2 3.6 0.1 77 19.7 8.1 30.3 7.8 2.5 2 88 88 <0.2 2.1 IM10 Cloudy Moderate 18:32 7.2 Middle 8.1 30.3 101.6 822368 809811 3.6 0.1 82 19.7 8.1 30.3 7.8 19.7 2.1 6.2 0.1 124 8.1 30.7 7.7 2.5 4 91 < 0.2 Bottom 19.7 8.1 30.7 101.4 2.1 7.7 6.2 0.1 125 19.7 8.1 30.7 2.5 4 90 101 **-**0 2 1.0 0.2 20.1 2.1 2.0 2.0 2.1 2.1 8.2 81 9.3 Surface 8.2 29.3 121.0 1.0 2.0 0.2 96 20.1 8.2 29.3 9.2 2 82 < 0.2 2.1 89 89 8.2 8.2 3 <0.2 4.1 19.6 IM11 Cloudy Moderate 18:40 8.2 Middle 8.2 30.8 107.1 87 822072 811449 4.1 0.1 19.6 8.2 30.8 7.2 0.1 314 19.5 8.1 31.1 95.8 7.3 2.0 3 91 <0.2 8.1 7.3 Bottom 19.5 31.1 95.8 7.2 0.1 340 19.5 8.1 31.1 95.8 7.3 2.0 2 92 <0.2 2.1 0.2 20.2 1.8 83 <0.2 8.3 29.6 124.3 <2 Surface 20.2 8.3 29.6 124.2 1.0 0.2 103 20.2 8.3 29.6 124.1 9.4 1.9 <2 83 <0.2 2.0 4.6 19.7 8.4 5.1 <2 84 <0.2 1.9 0.1 8.1 31.0 812054 IM12 Moderate 18:45 9.1 Middle 19.7 8.1 31.0 109.2 821451 Cloudy 19.7 8.1 5.3 <2 2 87 <0.2 1.8 4.6 0.1 8.3 8.1 0.1 129 19.6 8.1 31.0 7.9 5.6 91 <0.2 1.9 19.6 8.1 31.0 103.6 7.9 Rottom 8.1 0.1 137 19.6 8.1 31.0 7.9 6.0 1.8 19.9 8.1 30.6 2.3 3 8.3 Surface 19.9 8.1 30.6 108.5 1.0 19.8 30.6 8.2 2.4 4 2.6 Cloudy Moderate 19:15 5.2 Middle 819978 812660 2.6 4.2 19.7 8.1 30.9 7.9 2.7 3 Bottom 19.7 8.1 30.9 103.1 7.9 7.9 4.2 19.7 8 1 30.9 2.7 3 1.0 0.1 16 19.7 8.2 31.0 8.4 1.8 4 87 <0.2 1.9 Surface 19.7 8.2 31.0 108.6 1.0 0.1 16 19.7 8.2 31.0 106.5 8.1 1.8 4 89 < 0.2 2.0 SR2 Cloudy Moderate 19:27 4.7 Middle 821451 814187 3.7 339 90 2.3 0.1 19.6 8.2 8.1 1.8 3 <0.2 105.5 8.1 Bottom 3.7 19.5 31.2 105 16 3 22 0.1 348 8.2 91 r0 2 1.0 0.0 246 20.0 8.3 29.4 124.5 9.5 9.4 2.2 4 Surface 8.3 29.5 124.0 83 2.4 4 1.0 0.0 246 20.0 29.6 4.4 194 3.0 3.3 4 0.1 19.8 8.2 30.9 108.3 8.2 SR3 Cloudy Moderate 18:16 Middle 108.1 822137 807559 3 4.4 198 19.7 8.2 0.1 31.0 108 7.8 0.1 258 19.9 19.9 8.2 31.6 31.6 106.9 8.1 4.4 4.1 4 Bottom 19.9 8.2 31.6 8.1 0.1 269 1.0 161 0.1 20.3 8.3 29.5 8.6 0.8 3 Surface 20.3 8.3 29.5 113.7 169 29.5 8.6 1.0 0.1 20.3 8.3 113.0 0.9 3 4.3 0.1 186 1.5 3 20.2 . 8.3 29.7 112.0 8.5 SR4A 19:32 8.3 29.7 112.0 817165 807794 Cloudy Calm 8.6 Middle 20.2 4.3 191 8.3 8.5 1.6 3 0.1 20.1 7.6 0.1 184 8.3 2.0 1.8 2 20.0 29.9 108.4 8.3 8.3 20.0 8.3 29.9 108.7 Rottom 7.6 0.1 199 20.0 8.3 29.9 109. 1.0 0.1 124 20.2 8.2 7.4 2.4 3 30.1 98.0 20.2 8.2 97.9 Surface 30.1 1.0 0.1 135 20.1 8.2 97.8 7.4 2.6 3 SR5A 3.4 Middle 816601 810717 Cloudy Calm 19:49 2.4 0.1 20.1 7.4 2.6 Bottom 20.1 8.2 30.1 97.8 7.4 0.1 115 20.1 30.1 97.9 7.4 2.5 2.4 1.0 0.0 336 20.5 8.4 29.2 114.5 2.8 Surface 20.5 8.4 29.2 114.6 1.0 0.0 309 20.5 8.4 29.2 114.6 8.7 2.8 3 SR6A Cloudy Calm 20:16 3.2 Middle 817958 814723 2.2 0.1 16 20.4 8.4 114.8 8.7 3.5 3 Bottom 8.4 29.2 114.8 8.7 2.2 0.1 16 20.4 8.4 11/1 3.5 3 1.0 0.6 61 19.7 8.1 32.0 108.0 8.2 1.6 108.0 Surface 8.1 32.0 1.0 0.6 66 19.7 8.1 32.0 107 9 8.2 1.6 3 8.2 0.2 14 19.5 8.1 32.4 100.5 7.6 17 2 SR7 Cloudy Moderate 20:12 16.4 Middle 8.1 32.4 100.5 823643 823733 1.7 8.2 0.2 15 19.5 8.1 32.4 100.4 7.6 15.4 0.2 55 19.5 8.1 32.4 100.7 7.6 1.7 3 Bottom 8.1 32.4 100.8 15.4 0.2 55 19.5 8.1 32.4 100. 1.7 1.0 19.9 8.2 30.7 102.7 7.8 4.7 3 Surface 19.9 8.2 30.7 102.6 1.0 19.9 8.2 30.7 102.4 7.8 4.6 3 . . 811605 SR8 Cloudy Moderate 18:54 3.7 Middle 820385 -2.7 19.9 4.5 3 8.2 30.8 101. 7.7 19.9 8.2 30.8 101.1 7.7

DA: Depth-Average

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

Water Quality Monitoring Water Quality Monitoring Results on 20 February 21 during Mid-Flood Tide DO Saturation Dissolved Suspended Solids Total Alkalinity Chromium Salinity (ppt) Turbidity(NTU) Coordinate Coordinate Nickel (µg/L) Weather Sampling Water Water Temperature (°C) Monitoring Current Speed Oxvaen (mg/L) (maga) Sampling Depth (m) HK Grid HK Grid Station Direction Condition Time Depth (m) (m/s) Average Average Value Average Value DA Value DA Value DA Value DA (Northing) Value DA Value DA Condition Value Value Average Value (Easting) 0.3 19.8 Surface 19.8 8.3 29.7 111.2 1.0 0.4 39 19.7 29.8 111. 8.5 0.1 <2 <0.2 1.2 19.6 1.5 87 1.2 0.3 <0.2 C1 8.2 30.7 110.0 804253 Calm 11:50 7.8 Middle 19.6 815634 Cloudy 87 13 19.6 8.2 30.8 8.4 1.6 3 86 <0.2 1.3 3.9 0.3 109. 6.8 0.3 31 19.5 8.2 31.3 104. 8.0 3.6 3.5 3 89 <0.2 1.4 8.0 Bottom 19.5 8.2 31.3 104.6 1.3 19.5 8.2 6.8 0.3 31.3 104. 89 < 0.2 1.0 0.3 20.1 1.8 85 2.2 2.2 2.3 2.3 <2 < 0.2 8.3 Surface 20.1 8.3 28.4 126.9 1.8 9.8 <2 <2 86 1.0 0.3 322 20.1 8.3 28.4 <0.2 5.6 0.4 19.8 8.3 9.5 89 29.9 123. 123.0 C2 Sunny Moderate 13:11 11.2 Middle 19.8 8.3 30.0 89 825676 806952 2.3 8.3 30.1 9.4 2.2 <2 89 <0.2 5.6 0.4 29 19.8 122. 2.4 10.2 0.4 346 19.7 8.1 107.5 8.2 2.0 2 93 <0.2 30.3 8.1 107.7 8.3 Bottom 19.7 30.2 10.2 0.4 318 19.7 8.1 30.2 8.3 2.0 3 93 <0.2 2.2 0.3 241 19.7 8.2 1.3 <2 84 <0.2 2.3 107.4 Surface 19.7 8.2 30.8 1.0 0.3 244 19.7 8.2 30.8 8.2 1.4 <2 85 <0.2 2.4 1.5 2 2.3 5.9 19.4 8.1 7.6 89 89 <0.2 0.4 252 31.5 C3 817791 Sunnv Moderate 10:38 11.8 Middle 19.4 8.1 31.5 99.0 88 822089 2.2 0.4 19.4 10.8 0.4 266 19.5 99.3 7.6 2.3 3 <0.2 2.1 Bottom 19.5 8.1 31.8 99.4 7.6 10.8 0.4 286 19.5 8.1 31.8 99.5 7.6 2.3 2 <0.2 1.0 0.1 19.8 8.3 0.3 4 87 <0.2 1.2 Surface 19.8 8.3 30.0 106.1 1.0 19.8 8.3 30.0 106.0 8.1 0.3 3 87 <0.2 1.2 0.1 807109 IM1 Cloudy Calm 12:09 4.6 Middle 817954 3.6 0.0 340 19.7 8.2 30.4 7.9 2.0 4 89 < 0.2 1.2 Bottom 19.7 8.2 30.4 103.7 7.9 3.6 0.0 350 19.7 8.2 30.4 103.6 79 1.9 3 89 <0.2 1.2 19.8 1.0 0.4 8.3 30.2 8.5 0.5 6 85 < 0.2 1.4 Surface 8.3 30.2 111.1 1.0 0.4 19.7 8.3 30.2 110.8 8.5 0.5 5 86 <0.2 1.3 3.4 0.3 344 19.6 8.3 30.4 108. 8.3 3.0 5 87 <0.2 1.2 IM2 Cloudy Calm 12:18 6.8 Middle 8.3 30.4 108.1 818175 806184 1.3 <0.2 1.3 1.2 1.2 3.4 0.3 316 19.6 8.3 30.4 8.3 3.1 6 86 5 5.8 0.3 308 19.6 83 30.4 8.2 4.2 89 <0.2 8.3 30.4 107.2 8.2 42 5.8 0.4 315 19.6 8.3 30.4 107 8.2 6 89 <0.2 1.0 0.3 354 19.2 83 29.9 8.8 0.1 86 < 0.2 1.0 Surface 8.3 29.9 113.6 1.2 1.0 358 86 0.3 19.2 8.3 113.4 8.8 0.1 4 <0.2 29.9 1.2 1.2 1.3 337 4.4 5 88 <0.2 3.5 0.2 19.5 8.3 30.4 109. 8.4 IM3 Cloudy Calm 12:24 7.0 Middle 19.5 8.3 30.4 109.0 88 818786 805592 5 5 5 4.9 5.2 19.5 19.5 88 3.5 0.2 310 8.3 30.4 108. 8.4 <0.2 89 6.0 0.2 331 8.3 30.4 108. 8.3 Rottom 19.5 8.3 30.4 108.2 8.3 6.0 0.2 345 19.5 8.3 30.4 108.2 8.3 5.0 1.4 90 <0.2 1.0 0.9 0.2 345 19.7 8.3 29.9 113.3 8.7 2.1 5 85 <0.2 Surface 19.8 8.3 29.9 113.1 0.3 317 19.8 8.3 2.0 4 85 <0.2 2.1 4 87 <0.2 0.9 4.2 321 19.7 0.2 8.3 30.5 8.4 IM4 Cloudy Calm 12:34 8.4 Middle 19.7 8.3 30.5 109.3 819712 804587 2.3 2.7 2.5 4.2 7.4 19.7 8.3 8.3 5 88 <0.2 0.2 323 335 0.2 19.7 3 4 90 0.8 8.3 30.5 8.3 Bottom 197 8.3 30.5 108.6 8.3 7.4 0.2 356 19.7 8.3 30.5 <0.2 0.9 358 1.0 0.4 19.9 8.3 30.2 1.3 4 86 <0.2 1.1 8.5 Surface 19.9 8.3 111.9 30.2 1.0 329 19.9 8.5 1.4 3 85 <0.2 0.5 3.8 0.3 345 19.7 2.3 3 87 <0.2 1.1 8.3 8.5 12:42 IM5 Calm 7.6 Middle 19.7 8.3 30.4 111.2 820715 804851 Cloudy 3.8 19.7 2.4 88 <0.2 0.3 2 0.9 6.6 0.3 343 19.7 8.3 8.3 30.4 8.4 4.2 89 <0.2 19.7 8.3 109.3 8.4 Bottom 30.4 6.6 0.3 316 19.7 30.4 89 < 0.2 1.0 0.5 359 20.0 8.4 26.1 0.1 4 85 <0.2 1.0 Surface 8.4 26.1 124.9 1.0 0.6 330 20.0 8.4 26.1 124 9.7 0.1 4 86 <0.2 0.9 3.8 0.5 19.9 8.3 28.3 8.8 0.7 5 88 <0.2 Cloudy Calm 12:53 Middle 19.9 8.3 28.3 114.0 821038 805808 0.8 <0.2 3.8 0.5 19.9 8.3 28.3 113. 8.8 5 87 3.9 1.0 6.6 0.4 19.8 8.3 30.4 104. 8.0 5 89 <0.2 104.5 8.0 6.6 0.4 19.8 83 30.3 6 89 10.0 9.9 0.9 1.0 0.1 210 20.2 8.4 26.1 128. 1.2 5 85 <0.2 Surface 20.2 8.4 128.1 5 5 1.0 0.1 213 20.1 84 26.4 127 1.2 87 <0.2 1.5 1.0 4.2 89 <0.2 0.1 48 19.8 8.3 27.8 115.2 8.9 IM7 Cloudy Calm 13:04 8.4 Middle 19.8 8.3 114.9 821362 806848 89 4.2 0.1 48 19.8 8.3 27.9 114.0 8.9 1.6 5 7.4 0.2 82 19.7 8.3 30.2 105. 8.0 3.5 3 90 <0.2 0.9 Bottom 19.7 8.3 30.1 105.2 7.4 0.3 19.7 8.3 30.1 3.4 <0.2 0.9 1.0 0.1 298 19.8 8.3 29.0 8.5 8.4 2.3 4 86 < 0.2 2.2 1.9 Surface 19.8 8.3 29.1 109.7 19.8 8.3 29.1 <0.2 1.0 0.1 298 108. 2.3 3 86 4.0 8.1 29.5 7.9 2.4 4 91 <0.2 1.9 0.1 287 19.8 103.0 8.1 29.5 103.1 821834 808160 IM8 Sunny Moderate 12:47 8.0 Middle 19.8 90 7.9 90 2.5 2.4 4.0 0.1 301 19.8 8.1 3 7.0 2.9 2.9 92 2.2 0.2 50 19.6 8.1 31.0 7.7 <0.2 100. 3 19.6 8.1 31.0 100.5 7.7 Rottom

DA: Depth-Average

Water Quality Monitoring Results on 20 February 21 during Mid-Flood Tide DO Saturation Dissolved Suspended Solids Total Alkalinity Chromium Salinity (ppt) Turbidity(NTU) Coordinate Coordinate Nickel (µg/L) Weather Sampling Water Water Temperature (°C) Monitoring Speed Current Oxvaen (mg/L) (ppm) Sampling Depth (m) HK Grid HK Grid Station Direction Time (m/s) Average Average Value Average Value DA Value DA Value DA Value DA Value DA Value DA Condition Condition Depth (m) Value Value Average Value (Northing) (Easting) 19.8 0.1 Surface 8.3 28.6 116.6 2.2 2.1 2.0 1.0 0.1 57 19.8 114. 2.0 3.8 0.1 299 19.7 8.2 29.2 108.2 8.3 2.4 3 89 <0.2 106.4 808794 IM9 Sunny Moderate 12:40 7.5 8.2 29.3 822099 3.8 0.1 299 19.7 8.2 29.3 104.6 8.0 2.5 2 89 <0.2 6.5 0.1 278 19.6 8.1 30.0 98.9 7.6 2.8 3 92 <0.2 2.2 Bottom 19.6 8.1 30.0 99.6 7.7 6.5 0.1 296 19.6 8.1 30.0 100.3 77 3.0 2 93 <0.2 2.2 1.0 0.4 304 19.9 8.3 29.3 116.3 8.9 1.6 85 < 0.2 2.2 Surface 8.2 29.3 116.2 <0.2 1.0 0.4 330 19.8 8.2 29.4 116.0 8.9 1.6 4 86 2.2 4.3 0.3 309 19.7 8.2 8.3 2.1 4 89 89 <0.2 2.1 IM10 Sunny Moderate 12:33 8.6 Middle 8.2 30.1 108.1 822407 809790 4.3 323 8.2 <0.2 0.3 19.7 30.1 8.3 7.6 19.6 8.2 3 2.1 0.3 299 30.6 100. 7.7 2.3 91 < 0.2 Bottom 19.6 8.2 30.6 100.9 2.2 7.7 7.6 0.3 317 19.6 8.2 30.6 2.3 92 100 9 **-**0 2 1.0 0.3 2.2 19.8 8.2 29.9 Surface 19.8 8.2 29.9 113.9 1.0 113. 8.7 1.5 4 85 <0.2 0.4 303 19.8 8.2 29.9 2.2 2.2 2.1 1.8 3 <0.2 19.7 8.5 89 88 4.0 0.3 300 310 8.2 30.0 IM11 Sunnv Moderate 11:51 8.0 Middle 8.2 30.0 111.0 88 822062 811461 4.0 19.7 0.4 8.2 30.0 <0.2 7.0 0.3 304 19.6 8.1 30.8 98.7 7.5 2.8 4 89 8.1 98.7 7.5 Bottom 19.6 30.8 7.0 0.3 327 19.6 8.1 30.8 98.7 7.5 2.8 3 89 <0.2 2.1 0.3 20.1 4 <0.2 8.9 Surface 20.2 8.2 116.3 29.7 1.0 0.3 313 20.2 8.2 29.7 116.1 8.8 1.2 3 85 <0.2 2.0 2.2 2.2 2.1 4.1 0.3 294 19.5 7.7 2.9 2 88 <0.2 8.1 30.8 100. 812029 IM12 Moderate 11:45 8.2 Middle 19.5 8.1 30.8 100.5 821437 Sunny 4.1 19.5 8.1 2.9 89 <0.2 0.4 307 30.8 0.2 289 19.5 8.1 30.9 97.9 7.5 7.5 4.4 3 91 <0.2 195 8.1 97.9 7.5 Rottom 30.9 7.2 0.2 305 19.5 8.1 30.9 97.0 4.5 2.0 19.6 8.2 30.3 8.2 2.6 3 Surface 19.6 8.2 106.5 30.4 1.0 19.6 30.4 8.1 2.7 4 2.6 Sunnv Moderate 11:13 Middle 819970 812665 2.6 4.2 19.5 8.1 30.6 7.8 2.9 3 Bottom 19.5 8.1 30.6 102.4 7.9 7.9 4.2 19.5 8 1 30.6 3.0 2 2.1 1.0 0.1 266 19.5 8.2 30.3 8.6 1.6 6 87 <0.2 Surface 19.5 8.2 30.3 111.6 1.0 0.1 283 19.5 8.2 30.3 8.6 1.6 7 88 < 0.2 8.6 SR2 Sunny Moderate 10:58 4.3 Middle 821473 814148 33 322 89 0.1 19.4 8.2 30.5 8.2 1.8 5 <0.2 2.1 106.2 8.2 Bottom 106 33 19.4 30.5 1.8 2.0 0.2 336 8.2 4 90 r0 2 1.0 0.1 307 19.8 8.3 28.3 116.4 9.0 1.8 5 Surface 19.8 8.3 28.3 116.2 83 1.8 1.0 0.1 335 19.8 28.3 4 4.3 2.8 2.9 3 0.1 48 19.7 8.1 30.6 7.9 SR3 Moderate 12:53 Middle 19.7 8.1 30.7 103.6 822165 807552 4.3 19.7 8.1 30.7 0.1 52 7.6 7.6 0.2 30 19.6 19.6 8.1 8.1 31.3 97.6 7.4 4.0 2 7.4 Bottom 19.6 8.1 31.3 97.4 0.2 1.0 19.7 0.9 0.1 242 8.2 30.2 100. 7.7 2 Surface 19.7 8.2 30.2 100.5 1.0 7.7 0.1 261 19.7 8.2 30.2 100. 0.9 4.4 0.1 253 19.7 0.4 3 . 8.2 30.3 SR4A 8.2 30.3 100.7 817203 807787 Cloudy Calm 11:26 8.8 Middle 19.7 4.4 19.7 30.3 0.4 2 0.1 253 8.2 0.9 7.8 0.1 263 265 19.6 8.2 30.3 7.7 3 8.2 100.1 7.7 Rottom 19.6 30.3 7.8 0.1 19.6 8.2 7.7 1.0 0.1 331 19.8 8.2 7.4 2.5 3 29.9 97.2 19.8 8.2 29.9 97.2 Surface 1.0 0.1 349 19.8 8.2 29.9 97.1 7.4 2.6 3 SR5A 11:07 3.2 Middle 816581 810705 Cloudy Calm 2.2 0.1 313 19.7 29.9 96.8 7.4 3.8 2 Bottom 19.7 8.2 29.9 96.8 7.4 0.1 325 19.7 96.8 7.4 3.5 2.2 1.0 0.1 201 19.6 8.3 29.3 101.7 7.8 2.4 Surface 19.6 8.3 29.3 101.5 1.0 0.1 215 19.6 8.3 29.3 101.3 7.8 2.7 6 SR6A Cloudy Calm 10:41 3.4 Middle 817981 814720 2.4 0.1 223 19.5 8.3 7.8 4.6 4 8.3 29.3 101.1 7.8 2.4 0.1 232 19.6 8.3 5.0 5 1.0 0.0 116 19.6 8.1 31.3 106.7 8.1 1.4 4 106.7 Surface 8.1 31.3 1.0 0.0 116 19.6 8.1 31.3 106.6 8.1 1.3 4 83 0.1 184 19.3 8.1 31.9 95.4 7.3 6.0 4 SR7 Sunny Moderate 10:09 16.5 Middle 8.1 32.0 95.3 823624 823725 8.3 0.1 198 19.3 8.1 32.0 95.2 7.3 6.3 4 15.5 0.1 76 19.3 8.1 32.3 94.9 7.2 3.3 4 Bottom 19.3 8.1 32.3 95.0 15.5 0.1 79 19.3 8.1 95.0 3.5 4 1.0 20.0 8.2 29.2 8.5 4.7 5 Surface 20.0 8.2 29.2 111.6 4.7 1.0 20.0 8.2 29.2 8.5 4 . . 820395 811632 SR8 Sunny Moderate 11:35 4.0 Middle -3.0 19.5 2.3 3 8.2 30.0 104.5 8.0 Bottom 19.5 8.2 30.0 104.5 8.0

DA: Depth-Averaged

Water Quality Monitoring Results on 23 February 21 during Mid-Ebb Tide Turbidity(NTU) Suspended Solids Total Alkalinity DO Saturation Chromium Salinity (ppt) Coordinate Coordinate Nickel (µg/L) Weather Sampling Water Water Temperature (°C) Monitoring Speed Current Oxvaen (mg/L) (maga) Sampling Depth (m) HK Grid HK Grid Station Direction Condition Time Depth (m) (m/s) Average Value Average Average Value Average Value DA Value DA Value DA Value DA (Northing) Value DA Value DA Condition Value Value (Easting) 20.7 0.1 8.3 112.4 1.0 0.1 215 20.7 2.1 <2 2.6 42 0.1 222 19.8 8.3 30.8 8.0 2 88 <0.2 1.2 22:22 105.6 804243 C1 Cloudy Moderate 8.3 30.8 815606 4.2 0.1 236 19.8 8.3 30.8 105.6 8.0 2.6 2 88 <0.2 1.2 7.3 0.0 190 19.6 8.3 31.2 100.1 7.6 4.0 2 91 <0.2 1.3 Bottom 8.3 31.2 100.1 7.6 7.3 0.0 204 19.6 8.3 31.2 100.0 7.6 3.7 2 92 <0.2 1.3 10 1.0 0.2 88 20.7 8.3 26.7 122. 9.4 2.1 86 < 0.2 2.0 Surface 8.3 26.7 122.5 <0.2 1.0 0.2 92 20.7 8.3 26.8 122. 9.4 2.3 9 87 2.2 2.0 2.0 2.2 5.8 0.2 78 19.9 8.2 30.6 7.9 2.3 8 89 90 <0.2 C2 Fine Moderate 21:30 11.5 Middle 8.2 30.7 102.7 89 825675 806962 5.8 8.2 <0.2 0.2 82 19.9 30.7 10.5 19.9 8.2 7.5 8 0.1 46 30.7 98.2 2.2 91 < 0.2 Bottom 19.9 8.2 30.6 98.4 7.5 2.1 7.5 10.5 0.1 19 9 8.2 30.5 98.6 22 91 <0.2 46 1.0 0.3 20.9 2.4 8.2 4 88 28.8 8.4 < 0.2 Surface 8.2 28.8 111.3 1.6 2.0 2.1 1.0 110. 5 88 <0.2 0.3 101 20.9 8.2 28.8 8.4 2.2 2.1 2.2 5 4 <0.2 19.5 7.2 91 92 5.5 8.1 32.6 95.0 94.9 C3 Fine Moderate 23:24 11.0 Middle 8.1 32.6 95.0 90 822117 817789 2.3 19.5 0.2 8.1 32.6 88 5 10.0 0.1 74 19.6 8.1 32.5 95.6 7.2 2.4 91 <0.2 8.1 7.2 Bottom 19.6 32.5 95.8 10.0 0.1 79 19.6 8.1 32.5 95.9 7.2 2.4 5 90 <0.2 2.1 0.1 179 21.7 8.4 27.9 8.8 <2 <0.2 1.2 Surface 21.7 8.4 27.9 117.2 1.0 0.1 191 21.7 8.4 27.9 8.8 2.1 <2 86 <0.2 1.2 8.8 807112 IM1 Cloudy Moderate 22:01 5.0 Middle 817932 4.0 0.1 224 20.3 8.3 29.5 7.9 7.9 4.6 4 88 <0.2 Bottom 20.3 8.3 29.5 104.1 7.9 4.0 0.1 241 20.3 8.3 29.5 104 4.8 88 1.1 0.1 21.3 8.4 28.4 9.0 2.0 3 84 <0.2 1.2 Surface 21.3 8.4 28.4 121.7 1.0 0.1 219 21.2 9.3 2.0 2 83 <0.2 1.3 1.2 1.1 3.5 0.1 287 20.4 2.5 3 <0.2 <0.2 <0.2 8.4 9.2 86 806177 Cloudy Moderate 21:53 Middle 8.4 29.1 121.1 818155 308 2.6 3 3.5 0.1 20.3 5.9 0.1 260 20.1 8.3 29.9 8.5 4.1 88 Bottom 20.1 8.3 29.9 111.9 8.5 8.5 11 5.9 0.1 275 20.1 83 29.9 3.9 3 89 <0.2 1.0 0.0 91 21.6 8.3 27.8 8.8 1.4 5 84 <0.2 1.2 Surface 8.3 27.8 118.0 1.0 0.0 94 21.6 8.3 27.8 8.9 1.4 4 83 < 0.2 1.2 1.2 3.5 0.1 211 20.5 8.4 28.9 9.0 1.7 3 85 <0.2 IM3 Cloudy Moderate 21:44 7.0 Middle 118.1 818794 805600 217 20.5 <0.2 3.5 0.1 8.4 28.9 1.7 86 2.3 2 89 1.1 6.0 0.1 8.3 30.0 8.5 112.0 239 1.2 0.1 30.0 2 6.0 20.1 83 88 **∠**0.2 1.0 0.1 34 21 1 8.3 27.9 116 4 8.8 1.2 3 83 <0.2 1.6 Surface 21.2 8.3 27.9 116.5 83 27.8 116 1.2 3 84 1.0 0.1 35 21.2 < 0.2 2.3 2.2 5.7 5.8 4.1 298 <2 <2 86 86 1.3 0.1 20.3 8.3 29.5 8.9 <0.2 IM4 Cloudy Moderate 21:34 8.2 Middle 29.5 116.3 819722 804607 8.8 4.1 307 8.3 0.1 20.3 29.5 <2 <2 1.4 7.2 0.1 241 20.0 8.3 8.3 30.4 104. 8.0 88 <0.2 Rottom 20.0 8.3 30.4 105.0 8.0 30.4 0.1 252 20.0 89 < 0.2 1.4 1.0 0.2 83 13 20.7 8.3 28.4 115. 8.8 2.2 3 <0.2 Surface 20.7 8.3 28.4 115.2 1.0 28.4 8.7 3 <0.2 1.5 0.2 13 20.6 8.3 115. 2.3 3.2 84 3.6 354 2 86 <0.2 1.4 0.2 20.4 8.1 8.3 29.2 106.9 21:25 7.1 8.3 29.2 106.9 820719 804889 IM5 Cloudy Moderate Middle 20.4 3.6 326 20.4 8.3 106. 8.1 3.3 3 86 < 0.2 1.5 0.2 1.4 3.9 3.8 89 <0.2 6.1 0.2 332 353 20.4 8.3 29.3 3 8.3 105. 105.7 8.0 8.0 Bottom 20.4 29.3 0.2 8.3 29.3 <0.2 1.6 1.6 1.5 168 1.5 1.0 0.0 21.1 8.3 8.9 3 84 <0.2 26.3 Surface 21.1 8.3 26.3 116.5 1.0 0.0 170 21.1 8.3 26.3 8.9 1.6 3 84 <0.2 3.6 0.1 154 20.4 8.3 8.2 2.5 3 87 <0.2 28.7 21:16 7.2 Middle 20.4 8.3 28.7 108.0 821067 805804 IM6 Cloudy Moderate 3.6 0.1 155 20.4 8.3 28.7 107. 8.2 2.6 3 86 <0.2 1.6 0.9 6.2 0.1 20.4 8.3 29.1 102.2 7.8 3.9 4 89 <0.2 Bottom 20.4 8.3 29.1 102.2 7.8 0.1 8.3 7.8 3.9 20.4 1.0 0.1 195 21.4 8.4 25.2 9.3 1.5 85 <0.2 0.9 Surface 21.4 8.4 25.2 120.9 1.0 0.1 204 21.4 8.4 25.2 120. 9.2 1.5 4 84 <0.2 1.0 1.0 4.2 0.1 138 20.6 27.7 8.4 2.0 5 87 <0.2 IM7 Cloudy Moderate 21:10 Middle 20.6 8.3 27.7 110.4 821343 806850 4.2 0.1 139 20.5 8.3 27.8 8.4 2.1 4 87 <0.2 7.4 0.1 142 20.4 8.3 29.0 7.9 2.9 5 89 <0.2 8.3 29.0 103.6 7.9 7.4 0.1 144 20.4 8.3 7 0 2.9 4 89 <0.2 1.0 1.0 0.1 56 20.9 8.2 26.9 9.1 2.1 11 86 < 0.2 2.3 119.0 Surface 26.9 2.5 1.0 0.1 60 20.8 8.2 27.0 118.8 9.1 2.2 12 87 <0.2 4 0 0.2 70 20.4 8.1 29.3 105.6 8.0 2.7 2.7 11 11 89 90 <0.2 2.3 IM8 Fine Moderate 21:53 8.0 Middle 20.4 8.1 29.4 105.5 89 821814 808133 2.3 4.0 0.2 72 20.4 8.1 29.4 105.4 8.0 < 0.2 7.0 0.2 86 20.3 8.1 29.8 104.4 7.9 3.3 10 90 <0.2 2.3 8.1 Bottom 20.3 29.7 104.4 7.9

DA: Depth-Averaged

Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Water Quality Monitoring Results on 23 February 21 during Mid-Ebb Tide DO Saturation Dissolved Suspended Solids Total Alkalinity Chromium Salinity (ppt) Turbidity(NTU) Coordinate Coordinate Nickel (µg/L) Weather Sampling Water Water Temperature (°C) Monitoring Speed Current Oxvaen (mg/L) (ppm) Sampling Depth (m) HK Grid HK Grid Station Direction Time (m/s) Average Value DA Value DA Value DA Value DA Value DA Value DA Condition Condition Depth (m) Value Average Value Average Value Average Value (Northing) (Easting) 22.2 0.3 Surface 8.3 25.1 126.4 45 22.3 1.8 2.3 3.7 0.3 47 20.4 8.1 28.9 100.7 7.7 2.4 6 90 <0.2 100.6 IM9 Fine Moderate 21:58 7.4 8.1 28.9 822070 808825 3.7 0.3 47 20.4 8.1 29.0 100.5 7.7 2.6 6 90 <0.2 2.4 6.4 0.2 69 20.3 8.1 29.3 100.5 7.6 3.0 6 91 <0.2 2.2 Bottom 20.3 8.1 29.3 100.6 7.7 6.4 0.2 69 20.3 8.1 29.3 100.6 77 3.0 6 90 <0.2 2.2 1.0 0.3 21.6 8.2 26.1 118.7 9.0 1.8 4 87 < 0.2 2.2 Surface 8.2 26.1 118.7 1.0 0.3 82 21.6 8.2 26.1 118.6 9.0 1.8 4 87 <0.2 2.2 3.7 0.2 93 20.4 8.1 99.8 7.6 2.3 5 4 90 90 <0.2 2.5 IM10 Moderate 22:04 7.4 Middle 8.1 29.2 99.7 822401 809815 8.1 7.6 < 0.2 0.2 101 29.2 99.5 6.4 8.1 8 2.4 0.1 91 20.1 30.0 95.1 7.2 2.5 91 < 0.2 Bottom 8.1 30.0 95.1 7.2 2.3 7.2 6.4 0.1 qq 20.1 8.1 95.1 2.5 8 91 30.0 **-**0 2 1.0 0.1 1.6 2.3 21.0 8.2 8.7 Surface 8.2 27.1 114.3 1.0 114.3 8.7 1.7 88 0.1 98 20.9 8.2 27.1 5 < 0.2 83 2.3 2.3 2.2 3.0 3.1 5 6 7.8 7.8 91 91 <0.2 3.8 20.1 8.1 30.0 IM11 Fine Moderate 22:15 7.5 Middle 8.1 30.1 102.6 90 822055 811438 2.3 20.1 0.1 89 8.1 30.2 7 6.5 0.1 109 19.9 8.1 30.9 94.6 7.2 4.0 91 <0.2 8.1 94.7 7.2 Bottom 20.0 30.9 6.5 0.1 111 20.0 8.1 30.9 94.7 7.2 4.0 6 92 <0.2 2.2 0.1 20.4 27.8 <0.2 2.2 Surface 20.4 8.2 27.8 112.4 1.0 0.1 117 20.3 8.2 27.9 112.0 8.6 2.6 2 86 <0.2 2.2 2.3 2.3 2.4 4.3 0.1 143 19.9 7.8 3.3 <0.2 8.1 30.8 3 90 812024 IM12 Fine Moderate 22:22 8.6 Middle 19.9 8.1 30.8 102.0 821466 4.3 145 19.9 8.1 3.3 4 91 <0.2 0.1 30.9 0.1 19.8 8.1 30.9 7.7 3.4 3 91 <0.2 19.8 8.1 101.0 77 Rottom 30.9 7.6 0.1 97 19.8 8.1 30.9 3.2 4 2.5 21.1 8.2 26.4 8.9 4 Surface 21.1 8.2 116.3 26.4 1.0 21.0 8.9 2.8 3 2.6 Fine Moderate 22:51 5.2 Middle 819980 812655 2.6 4.2 20.7 8.2 28.7 106. 8.0 3.3 3 Bottom 20.7 8.2 28.6 106.1 8.0 4.2 20.7 8.2 28.6 106 8.0 3.3 1.0 0.1 87 21.3 8.2 27.3 112.9 8.5 3.1 4 86 <0.2 2.2 Surface 21.3 8.2 27.3 112.6 1.0 0.1 90 21.3 8.2 112. 8.5 3.2 3 87 < 0.2 2.2 8.5 SR2 Moderate 23:04 4.6 Middle 821443 814187 3.6 5.5 90 2.2 0.1 92 199 8 1 7.4 4 <0.2 Bottom 31.3 96.7 5.8 19 9 8.1 31 4 3 23 3.6 0.1 94 90 r0 2 1.0 0.1 156 20.9 8.3 26.9 126.4 9.6 9.6 2.0 8 Surface 8.3 26.9 126.1 83 125 7 1.0 0.1 170 20.9 26.9 2.0 4.4 2.5 2.5 8 7 0.1 142 20.3 8.2 29.5 109.1 8.3 SR3 Moderate 21:49 Middle 109.0 822167 807562 8.3 4.4 145 8.2 108. 0.1 20.3 29.6 11 12 7.8 0.2 122 20.3 8.2 8.2 107.8 8.2 2.9 Bottom 20.3 8.2 29.9 8.2 0.2 133 20.3 29.9 1.0 0.2 77 20.8 8.3 28.5 115. 8.7 3.4 <2 Surface 20.8 8.3 28.6 115.0 84 28.7 8.7 3.5 3.7 1.0 0.2 20.7 8.3 114.0 <2 69 2 0.2 20.3 8.0 . 8.3 29.1 104.4 SR4A 8.3 104.4 817177 807801 Cloudy Calm 22:44 9.4 Middle 20.3 29.1 4.7 8.3 104. 3.7 0.2 20.3 3 8.4 20.2 8.3 29.4 7.7 4.4 5 4 0.2 101. 101.2 7.7 Rottom 20.2 8.3 29.4 8.4 0.2 8.3 29.4 7.7 4.4 1.0 0.1 224 21.6 8.3 8.4 2.4 2 27.9 112.6 21.6 8.3 27.9 112.6 Surface 1.0 0.1 230 21.6 8.3 27.9 8.4 2.4 3 SR5A 23:01 3.6 Middle 816603 810702 Cloudy Calm 2.6 0.1 198 21.2 28.1 8.5 2.6 Bottom 21.2 8.3 28.1 111.9 8.5 0.1 215 21.1 8.3 8.4 2.6 2.6 1.0 0.0 126 21.8 8.4 26.2 121.4 9.2 2.5 Surface 21.8 8.4 26.2 121.4 1.0 0.0 128 21.8 8.4 26.2 121. 9.2 2.4 2 SR6A Cloudy Calm 23:46 4.3 Middle 817957 814741 3.3 0.1 86 21.3 8.4 8.8 4.1 3 Bottom 21.4 8.4 26.9 116.3 8.8 3.3 0.1 91 21.4 8.4 26.8 116 2 2 3.8 1.0 0.3 67 20.0 8.1 32.1 102.9 7.8 17 102.9 Surface 8.1 32.1 1.0 0.3 67 19.9 8.1 32.1 102.8 7.7 1.7 4 8.2 0.2 45 19.7 8.1 32.5 96.1 7.3 1.8 6 5 SR7 Moderate 23:55 16.4 Middle 8.1 32.5 96.1 823636 823732 Fine 8.2 0.2 48 19.7 8.1 32.5 96.0 7.3 1.8 15.4 0.2 28 19.5 8.1 33.1 91.1 6.9 4.3 5 Bottom 19.5 8.1 33.1 91.2 6.9 15.4 0.2 29 19.5 8.1 33.1 91.2 6.9 4.3 5 1.0 22.1 8.4 26.6 115.1 8.6 3.8 3 Surface 22.1 8.3 26.7 114.9 114.7 1.0 22.0 8.3 26.7 8.6 3.8 3 . . 811608 SR8 Fine Moderate 22:31 4.6 Middle 820399 -3.6 20.8 2.9 4 8.2 28.3 106.4 8.1 20.9 8.2 28.2 105.8 8.1

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 23 February 21 during Mid-Flood Tide DO Saturation Dissolved Suspended Solids Total Alkalinity Chromium Salinity (ppt) Turbidity(NTU) Coordinate Coordinate Nickel (µg/L) Weather Sampling Water Water Temperature (°C) Monitoring Current Speed Oxvaen (mg/L) (maga) Sampling Depth (m) HK Grid HK Grid Station Direction Condition Time Depth (m) (m/s) Average Average Value Average Value DA Value DA Value DA Value DA (Northing) Value DA Value DA Condition Value Value Average Value (Easting) 20.3 0.1 Surface 20.3 8.3 28.4 109.3 1.0 0.1 60 20.2 28.5 109.3 8.4 2.6 84 <0.2 19.8 7.9 3.4 <2 88 1.4 <0.2 C1 8.2 30.3 104.1 804252 10.58 8.2 Middle 19.8 88 815622 Fine Moderate 4.1 19.8 8.2 30.3 104.0 7.9 3.4 <2 87 <0.2 1.4 0.1 68 7.2 0.1 44 19.7 8.2 30.8 7.8 5.3 <2 91 <0.2 1.3 8.2 101.7 7.8 Bottom 19.7 30.7 7.8 5.1 1.3 19.7 8.2 30.7 <2 7.2 0.1 45 91 < 0.2 1.0 0.2 2.1 2.1 2.5 2.4 20.9 2.0 87 < 0.2 8.3 Surface 20.9 8.3 23.9 125.1 2.0 87 1.0 230 52 20.8 8.3 3 <0.2 20.2 5.8 0.0 8.1 7.7 88 29.1 C2 Fine Moderate 11:43 11.5 Middle 20.2 8.1 29.3 100.4 89 825675 806953 2.3 0.0 29.4 7.6 2.4 3 89 <0.2 5.8 53 20.2 8.1 2.2 10.5 0.1 131 19.7 8.1 31.4 93.6 7.1 4.7 2 90 <0.2 8.1 93.7 Bottom 19.7 31.4 10.5 0.2 142 19.7 8.1 31.4 4.8 2 91 <0.2 2.3 0.1 20.0 7.7 86 <0.2 2.2 Surface 20.0 8.1 30.2 105.3 1.0 0.1 246 20.0 8.1 30.2 8.0 7.8 3 86 <0.2 2.1 5.6 2.2 6.3 0.1 264 8.1 7.3 2 89 89 <0.2 19.6 32.3 95.9 C3 09:35 817801 Sunnv Moderate 12.5 Middle 19.6 8.1 32.3 95.9 88 822106 2.2 0.1 19.6 2.2 11.5 0.1 247 19.6 96.4 7.3 4.7 2 90 <0.2 Bottom 19.6 8.1 32.3 96.5 7.3 11.5 0.1 267 19.6 8.1 32.3 96.5 73 4.9 1.0 0.1 169 20.6 8.3 2.7 <0.2 1.4 Surface 20.6 8.3 28.0 112.8 1.0 0.1 177 20.6 8.3 28.1 112.0 8.6 2.7 3 87 <0.2 1.3 807149 IM1 Fine Moderate 11:21 Middle 817929 3.8 0.1 169 20.4 8.3 28.4 106.2 8.1 3.3 4 90 < 0.2 14 Bottom 20.4 8.3 28.4 106.2 3.8 0.1 174 20.4 8.3 28.4 106.2 8.1 3.3 4 90 <0.2 1.3 2.2 1.0 0.1 20.5 8.3 28.5 113. 8.6 4 84 < 0.2 1.4 Surface 8.3 28.5 113.2 1.0 0.1 22 20.5 8.3 28.5 113.0 8.6 2.2 3 85 <0.2 1.3 3.3 0.1 20 20.4 8.3 29.0 8.5 3 87 <0.2 1.4 IM2 Moderate 11:29 6.6 Middle 8.3 29.0 111.0 818161 806164 1.3 87 <0.2 3.3 0.1 21 20.3 8.3 29.1 8.4 2.9 4 1.3 20.1 3 1.2 5.6 0.0 110 83 29.8 7.9 49 89 <0.2 8.3 29.8 103.7 7.9 5.6 0.0 118 8.3 5.0 89 <0.2 20.1 29.8 103 (1.0 0.0 20.9 83 27 9 114 8 8.7 17 85 < 0.2 13 Surface 8.3 27.9 114.9 1.0 1.7 2 1.4 0.0 8.3 27.9 114.9 8.7 84 <0.2 20.9 3.4 0.1 355 8.7 1.8 2 87 87 89 <0.2 1.2 20.5 8.3 28.7 IM3 Fine Moderate 11:36 6.8 Middle 20.5 8.3 28.7 114.0 87 818794 805609 3 2 3 8.7 1.8 5.5 0.1 1.2 3.4 327 20.4 8.3 <0.2 5.8 286 20.3 8.3 29.2 105. 8.0 Rottom 20.3 8.3 29.2 105.5 8.0 5.8 0.0 308 8.3 105.4 8.0 5.9 <0.2 1.2 20.3 29.2 89 1.0 0.1 331 1.4 84 1.3 21.0 8.3 27.5 114.3 8.7 <2 <0.2 Surface 21.0 8.3 27.5 114.3 1.0 0.1 344 21.0 8.3 1.5 <2 84 <0.2 1.4 4.1 2.5 87 <0.2 1.4 20.4 <2 0.1 8.3 29.1 8.5 IM4 Fine Moderate 11:47 8.1 Middle 20.4 8.3 29.2 111.2 <2 819748 804622 2.6 4.1 0.1 8.3 8.5 <2 <2 87 <0.2 20.3 29.2 0.1 350 20.2 89 1.2 8.3 29.6 7.8 Bottom 20.2 8.3 29.6 103.0 7.8 0.1 357 20.2 8.3 29.6 3.6 <2 89 <0.2 1.3 1.5 1.5 1.0 0.0 324 20.8 8.4 26.6 2.3 2 85 <0.2 119.4 9.1 Surface 20.8 8.4 26.6 119.3 1.0 336 20.8 9.1 2.3 3 85 <0.2 0.0 3.7 0.1 335 3.0 3 87 <0.2 1.4 20.6 8.3 28.0 8.7 IM5 11:57 7.4 Middle 20.6 8.3 28.0 114.0 820715 804879 Fine Moderate 3.7 0.1 335 2.9 87 <0.2 20.6 3 1.7 6.4 0.0 354 20.4 8.3 8.3 29.1 8.1 3.5 3.5 90 <0.2 20.4 8.3 29.1 107.1 8.2 Bottom 6.4 0.0 326 20.4 29 1 89 < 0.2 1.0 0.1 229 20.9 8.3 25.6 8.9 4.1 3 84 <0.2 1.7 Surface 8.3 25.6 115.9 1.0 0.1 240 20.8 8.3 8.9 4.2 4 85 <0.2 1.9 3.5 0.2 251 20.5 28.4 8.1 5.6 4 87 <0.2 Fine Moderate 12:06 Middle 20.5 8.3 28.4 105.7 821039 805832 <0.2 3.5 0.2 258 20.4 8.3 28.5 8.1 5.3 5 88 8.0 5.8 1.7 6.0 0.1 187 20.4 8.3 28.9 4 90 <0.2 105.1 8.0 6.0 0.1 190 20.4 83 28.9 5 90 1.8 2.0 1.8 1.7 1.0 0.1 224 21.1 8.3 25.7 8.8 2.0 3 85 <0.2 Surface 114.1 87 1.0 0.1 228 21.0 83 25.7 114 2.0 3 84 <0.2 4.0 3 87 4.1 0.0 311 <0.2 20.5 8.3 28.1 107.4 8.2 IM7 Moderate 12:14 8.2 Middle 20.5 8.3 28.1 107.3 821330 806838 88 4.1 0.0 321 20.5 8.3 28.1 8.2 4.0 4 7.2 0.1 143 20.4 8.3 28.8 104. 8.0 4.7 3 90 <0.2 1.8 Bottom 20.4 8.3 28.8 104.7 8.0 0.1 148 20.4 8.3 28.8 4.7 4 <0.2 1.0 0.1 89 20.9 8.2 26.2 8.6 4.4 4 85 < 0.2 2.4 Surface 20.9 8.2 26.2 112.7 26.2 8.6 8.2 4.6 <0.2 1.0 0.1 94 20.9 3 85 2.3 107 8.1 27.6 4.4 2 88 <0.2 3.8 0.1 20.4 107. 8.2 8.1 27.6 105.8 821826 808124

20.4

20.3

8.1

8.1

107

80

20.4

20.3

87

88

88

3

2

8.0

7.8

7.8

102.2

104.

102.

29.6

29.6

8.1

4.6

12.4

2.3

2.4

<0.2

IM8

Fine

Moderate

Calm: Small or no wave: Moderate: Between calm and rough: Rough: White capped or rougher

11:17

7.6

Middle

Rottom

3.8

6.6

0.1

0.2

Water Quality Monitoring Results on 23 February 21 during Mid-Flood Tide DO Saturation Dissolved Suspended Solids Total Alkalinity Chromium Salinity (ppt) Turbidity(NTU) Coordinate Coordinate Nickel (µg/L) Weather Sampling Water Water Temperature (°C) Monitoring Speed Current Oxvaen (mg/L) (ppm) Sampling Depth (m) HK Grid HK Grid Station Direction Time (m/s) Average Average Value Average Value DA Value DA Value DA Value DA Value DA Value DA Condition Condition Depth (m) Value Value Average Value (Northing) (Easting) 0.2 Surface 25.3 114.3 1.0 20.9 114. 2.8 4.5 2.2 3.6 0.3 88 20.5 8.2 28.3 105.9 8.1 3 89 <0.2 105.8 808799 IM9 Fine Moderate 11:11 8.1 28.4 822099 3.6 0.3 89 20.5 8.1 28.4 105.7 8.1 4.6 4 89 <0.2 2.3 6.2 0.3 65 20.3 8.1 29.4 103.4 7.9 7.2 3 90 <0.2 2.2 Bottom 20.3 8.1 29.4 103.3 7.9 6.2 0.3 69 20.3 8.1 29.4 103.2 7.8 7.3 4 90 <0.2 2.3 1.0 0.2 112 21.0 8.2 25.5 114.4 8.8 2.7 86 < 0.2 2.1 Surface 8.2 25.6 114.1 <0.2 1.0 0.2 121 20.9 8.2 25.7 113. 8.7 3.0 3 87 2.1 3.8 0.3 90 20.4 8.2 26.9 7.8 6.7 3 89 89 <0.2 2.1 IM10 Moderate 11:04 7.5 Middle 8.2 26.9 100.1 822382 809808 8.2 6.9 < 0.2 3.8 0.3 95 26.9 99.2 6.5 8.0 2 2.1 0.2 103 20.4 29.8 91.4 6.9 8.1 90 < 0.2 Bottom 8.0 29.8 91.6 6.9 2.2 6.5 0.2 110 20.5 8.0 91.8 6.9 8.3 91 29.7 **-**0 2 1.0 0.3 21.5 2.2 2.2 2.3 2.2 2.3 8.2 24.0 8.8 Surface 8.2 24.0 115.1 1.0 115.0 1.6 86 <0.2 0.3 136 21.5 8.2 24.0 8.8 3 8.5 2.1 <0.2 20.2 8.2 3 89 89 3.6 8.1 28.8 IM11 Fine Moderate 10:53 7.2 Middle 8.1 28.8 106.9 89 822074 811478 133 0.2 8.1 28.8 106.7 <0.2 6.2 0.1 32 20.0 8.1 30.4 7.5 2.5 3 90 98.1 8.1 7.5 Bottom 20.0 30.4 98.1 6.2 0.1 33 20.0 8.1 30.4 98.1 7.5 2.5 4 91 <0.2 2.2 0.2 20.3 1.8 <0.2 26.9 8.4 2.3 Surface 20.3 8.2 27.0 108.9 1.0 0.2 131 20.3 8.2 27.0 108.6 8.4 1.9 3 85 <0.2 2.4 2.2 2.1 2.3 4.8 64 2.7 3 88 <0.2 0.1 20.0 8.1 30.4 99.2 812045 IM12 Moderate 10:45 9.5 Middle 20.0 8.1 30.4 99.1 821452 Sunny 4.8 8.1 2.8 3 89 <0.2 0.1 64 30.4 99.0 20.0 8.5 0.1 170 20.0 8.1 30.8 99.6 7.6 3.6 89 <0.2 20.0 8.1 99.7 7.6 Rottom 30.8 8.5 0.1 184 20.0 8.1 30.8 99.8 7.6 3.6 2.2 20.1 8.1 28.1 98.8 3.3 3 7.6 7.6 Surface 20.1 8.1 28.1 98.7 1.0 20.1 98.6 3.4 2 2.6 Sunnv Moderate 10:12 Middle 819973 812659 2.6 41 20.0 8.1 30.7 98.8 7.5 3.6 2 Bottom 20.0 8.1 30.7 98.9 7.5 7.5 41 20.0 8.1 30.7 98.9 3.6 1.0 0.2 20.4 8.2 28.8 108.3 8.2 1.8 85 <0.2 2.2 Surface 20.4 8.2 28.8 108.2 1.0 0.2 20.4 8.2 28.8 108.0 8.2 1.8 3 85 < 0.2 2.2 8.2 SR2 Sunny Moderate 09:57 4.0 Middle 821450 814156 3.0 89 2.2 0.2 20.3 28.9 8.2 19 3 <0.2 106.9 8.2 Bottom 8.2 106.8 19 3 23 3.0 0.2 20.3 28.9 89 r0 2 1.0 0.1 185 20.7 8.2 26.6 8.7 8.7 1.8 3 Surface 8.2 112.8 8.2 1.8 1.0 0.1 198 20.6 26.6 2 3.5 3.7 5.7 5.9 4.4 179 2 0.2 20.3 8.1 29.3 104.5 8.0 7.9 SR3 Moderate 11:24 Middle 8.1 104.5 822166 807589 4.4 191 8.1 29.4 3 0.2 20.3 104 7.7 0.1 55 20.3 8.1 8.1 29.9 30.0 7.9 7.8 2 Bottom 20.3 8.1 29.9 103.5 7.9 0.1 59 20.3 1.0 0.3 75 20.4 8.3 27.9 8.7 2.8 3 Surface 20.4 8.3 27.9 113.6 1.0 27.9 8.7 0.3 80 20.4 8.3 113. 2.8 4 4.3 2.5 4 0.2 20.4 8.4 . 8.3 28.1 SR4A 8.3 28.1 109.5 817196 807806 Fine Calm 10:35 8.5 Middle 20.4 4.3 8.3 28.1 8.4 2.5 3 0.2 20.4 7.5 0.2 8.3 29.0 29.0 7.7 4.1 4 20.3 100.6 100.7 7.7 Rottom 20.3 8.3 29.0 0.2 20.3 8.3 7.7 4.2 1.0 0.0 200 20.6 8.3 27.9 7.5 2.6 2 98.5 Surface 20.6 8.3 27.9 98.4 1.0 0.0 218 8.3 98.2 7.5 2.7 3 20.6 SR5A 10:16 3.4 Middle 816586 810719 Fine Calm 2.4 0.0 298 20.5 28.2 96.3 7.4 3.5 3 Bottom 20.5 8.2 28.2 96.4 7.4 0.0 315 20.5 96.4 7.4 3.5 2.4 1.0 0.0 138 20.7 8.3 26.3 112.2 2.6 Surface 20.7 8.3 26.3 112.1 1.0 0.0 151 20.7 8.3 26.4 112.0 8.6 2.7 4 SR6A Fine Calm 09:47 4.1 Middle 817950 814743 3.1 0.0 194 20.7 8.3 8.2 3.2 Bottom 8.3 27.2 107.8 8.3 3.1 0.0 199 20.7 8.3 3.2 1.0 0.1 253 19.7 8.1 31.8 96.0 1.9 95.9 Surface 8.1 31.9 1.0 0.1 259 19.7 8.1 31.9 95.7 5.3 1.9 3 83 0.0 246 19.6 8.1 32.3 93.6 4.6 2.3 3 SR7 Sunny Moderate 09:05 16.5 Middle 8.1 32.3 93.6 823621 823751 8.3 0.0 251 19.6 8.1 32.3 93.6 4.6 2.3 15.5 0.0 75 19.5 8.1 32.8 93.4 4.3 2.6 3 Bottom 19.5 8.1 32.8 93.5 4.3 15.5 0.0 75 19.5 8.1 32.8 93.5 4.4 2.5 4 1.0 21.1 8.2 25.7 8.6 2.6 4 Surface 21.1 8.2 25.7 109.6 107. 1.0 21.1 8.2 25.8 8.2 2.9 3 . . 820378 811638 SR8 Sunny Moderate 10:35 4.2 Middle -3.2 21.1 3.5 3 8.2 26.2 106.2 8.1 Bottom 21.1 8.2 26.2 106.1

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.

Water Quality Monitoring Results on 25 February 21 during Mid-Ebb Tide Turbidity(NTU) Suspended Solids Total Alkalinity DO Saturation Chromium Salinity (ppt) Coordinate Coordinate Nickel (µg/L) Weather Sampling Water Water Temperature (°C) Monitoring Current Speed Oxvaen (mg/L) (maga) Sampling Depth (m) HK Grid HK Grid Station Direction Condition Time (m/s) Average Value Average Average Value Average Value DA Value DA Value DA Value DA (Northing) Value DA Value DA Condition Depth (m) Value Value (Easting) 20.3 0.1 1.0 0.1 142 20.3 4.2 5.9 4 0 0.1 145 20.1 8.3 30.7 100.9 7.6 4 90 <0.2 0.9 100.9 815621 804230 C1 Cloudy Rough 11:38 8.3 30.7 0.9 4.0 0.1 146 20.1 8.3 30.7 100.9 7.6 5.9 4 89 <0.2 0.9 7.0 0.1 184 20.1 8.3 30.9 100.1 7.6 6.8 6 91 <0.2 0.8 Bottom 8.3 30.9 100.1 7.6 7.0 0.1 194 20.1 8.3 30.9 100.1 7.6 6.8 6 92 <0.2 1.0 1.0 0.1 203 20.4 8.1 28.4 3.3 88 < 0.2 1.5 Surface 8.1 28.4 100.8 <0.2 1.0 0.1 218 20.4 8.1 28.4 100.8 7.7 3.3 9 88 1.6 6.0 0.1 179 20.3 8.1 28.9 99.5 7.6 3.5 6 91 91 <0.2 1.9 C2 Cloudy Moderate 10:25 11.9 Middle 8.1 28.9 99.5 825673 806935 6.0 8.1 7.6 0.1 180 28.9 99.5 10.9 0.3 77 8.1 9.8 5 5 93 2.1 20.2 30.4 98.5 7.5 < 0.2 Bottom 20.2 8.1 30.4 98.5 7.5 2.2 7.5 10.9 0.3 79 8.1 30.4 98.5 9.7 94 <0.2 20.2 1.0 0.3 85 20.2 8.0 2.1 1.2 98.5 7.4 < 0.2 Surface 8.0 31.2 98.5 1.1 1.0 98.5 7.4 2.1 7 85 <0.2 0.3 63 20.2 8.0 31.3 3.0 1.2 6 88 89 <0.2 19.9 7.0 6.3 8.0 92.5 92.5 C3 Cloudy Moderate 13:01 12.6 Middle 8.0 32.0 92.5 89 822102 817795 1.2 19.9 0.2 96 8.0 1.2 11.6 0.2 97 19.9 8.0 32.1 92.7 7.0 6.2 5 93 <0.2 7.0 Bottom 19.9 8.0 32.1 92.8 11.6 0.2 103 19.9 8.0 32.1 92.8 7.0 6.7 6 93 <0.2 1.2 0.0 20.2 8.3 29.8 6 <0.2 0.9 Surface 20.2 8.3 29.9 100.9 1.0 0.0 59 20.2 8.3 29.9 100.7 7.7 3.5 5 87 <0.2 0.8 807113 IM1 Cloudy Moderate 11:16 4.9 Middle 88 817971 3.9 0.1 20.1 8.3 98.4 7.5 7.5 3.5 4 89 <0.2 Bottom 20.1 8.3 30.2 98.5 7.5 3.9 0.1 99 20.1 8.3 30.1 3.6 1.1 0.0 256 20.2 8.3 30.0 4.5 4 85 <0.2 1.3 Surface 20.2 8.3 30.0 101.9 1.0 0.0 276 20.2 4.6 5 85 <0.2 3.5 0.1 64 20.1 5.2 5 88 <0.2 <0.2 <0.2 1.1 8.3 806179 Cloudy Moderate 11:08 Middle 8.3 30.2 101.0 818176 5.2 7.6 6 3.5 0.1 20.1 5.9 0.1 80 20.1 8.3 30.3 7.6 6 90 1.1 Bottom 20.1 8.3 30.3 100.2 7.6 7.6 1.0 5.9 0.1 86 20.1 83 30.3 7.5 7 89 <0.2 1.0 0.1 267 20.1 8.3 30.1 7.8 3.9 85 <0.2 1.1 Surface 8.3 30.1 102.2 1.0 0.1 278 20.1 8.3 30.1 7.8 4.0 7 85 <0.2 1.2 1.2 3.6 0.0 340 20.1 8.3 30.2 4.1 5 88 <0.2 IM3 Cloudy Moderate 11:00 7.1 Middle 8.3 101.6 818784 805594 3.6 0.0 313 20.1 4.2 6 88 6.1 20.1 5.3 5.2 4 90 <0.2 1.2 0.1 22 8.3 30.3 7.7 100.9 7.7 7.7 5 6.1 0.1 22 30.3 20.1 83 100 90 **∠**0.2 1.0 0.1 347 20.2 8.3 30.2 103 7.8 7.8 3.8 7 85 <0.2 1.3 Surface 20.2 8.3 30.2 103.2 83 3.9 7 85 1.0 0.1 319 20.2 30.2 < 0.2 4.1 4.4 6 7 88 1.4 0.1 332 20.1 8.3 30.3 7.7 <0.2 IM4 Cloudy 10:49 8.2 Middle 8.3 101.4 819739 804609 Rough 88 4.4 4.1 347 8.3 30.3 0.1 20.1 5.0 5.0 5 6 7.2 0.1 334 20.1 8.3 30.3 7.7 89 <0.2 1.2 7.7 Rottom 20.1 8.3 30.3 100.9 0.1 339 20.1 90 < 0.2 1.3 1.0 0.2 354 85 20.2 8.3 29.9 101. 7.7 4.8 6 <0.2 Surface 20.2 8.3 29.9 101.3 29.9 7.7 5 <0.2 1.3 1.0 0.2 326 20.2 8.3 4.8 85 3.8 356 20.1 7.7 4.9 6 88 <0.2 1.3 0.2 8.3 30.0 10:39 7.5 8.3 30.0 100.6 820758 804858 IM5 Cloudy Moderate Middle 20.1 3.8 328 8.3 30.0 100. 4.9 5 88 < 0.2 1.4 0.2 20.1 5.0 1.3 7.6 89 <0.2 6.5 0.2 20.1 8.3 30.1 99.7 99.7 7 31 8.3 99.7 Bottom 20.1 30.1 76 6.5 0.2 8.3 <0.2 1.3 1.0 0.1 233 20.4 8.3 7.7 3.9 4 85 <0.2 28.0 101. Surface 20.4 8.3 28.0 101.1 1.0 0.1 20.4 8.3 28.0 101. 7.7 4.0 85 <0.2 242 5 3.7 0.1 67 20.3 8.3 28.8 7.6 5.4 5 88 <0.2 1.4 10:32 7.4 Middle 20.3 8.3 28.8 99.7 821067 805834 IM6 Cloudy Moderate 3.7 0.1 70 20.3 8.3 28.8 99.6 7.6 5.4 6 88 <0.2 1.3 6.4 0.2 20.2 8.2 29.8 98.5 7.5 6.3 89 <0.2 1.4 Bottom 20.2 8.2 29.8 98.5 7.5 6.4 0.2 84 7.5 6.3 1.4 20.2 1.0 0.1 259 20.4 8.3 27.8 100.7 7.7 3.5 85 <0.2 1.3 Surface 20.4 8.3 27.8 100.7 1.0 0.1 271 20.4 8.3 27.8 100.6 7.7 3.7 5 85 <0.2 1.5 4.3 0.2 105 20.3 99.6 7.6 5.1 6 88 <0.2 1.3 IM7 Cloudy Moderate 10:26 8.5 Middle 20.3 8.3 28.7 99.6 821371 806832 1.4 4.3 0.2 111 20.3 8.3 28.7 99.6 7.6 5.3 5 88 <0.2 7.5 0.1 113 20.2 8.2 29.4 98.5 7.5 6.9 6 90 <0.2 1.2 8.2 29.4 98.5 7.5 7.5 0.2 119 20.2 8.2 29.4 98.5 6.9 6 90 <0.2 1.2 1.0 0.1 84 20.4 8.1 29.0 100.8 7.7 3.2 85 < 0.2 2.0 Surface 8.1 29.0 100.8 2.0 1.0 0.1 85 20.4 8.1 29.0 100.7 7.7 3.2 3 86 <0.2 39 0.2 101 20.3 8.1 29.5 99.4 7.6 4.1 5 5 91 92 <0.2 1.6 1.5 IM8 Cloudy Moderate 10:51 7.8 Middle 8.1 29.5 99.4 821851 808119 1.7 3.9 0.2 101 20.3 8.1 29.5 99.3 7.6 4.0 < 0.2 6.8 0.2 74 20.0 8.1 31.1 96.7 7.3 9.7 6 93 <0.2 1.5 8.1 Bottom 20.0 31.1 96.8 7.3 20.0

DA: Depth-Averaged

Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Water Quality Monitoring Results on 25 February 21 during Mid-Ebb Tide DO Saturation Dissolved Suspended Solids Total Alkalinity Chromium Salinity (ppt) Turbidity(NTU) Coordinate Coordinate Nickel (µg/L) Weather Sampling Water Water Temperature (°C) Monitoring Speed Current Oxvaen (mg/L) (ppm) Sampling Depth (m) HK Grid HK Grid Station Direction Time (m/s) Average Value Average Value DA Value DA Value DA Value DA Value DA Value DA Condition Condition Depth (m) Value Average Value Average Value (Northing) (Easting) 0.2 Surface 8.1 28.8 100.9 89 20.5 2.9 4.5 3.7 0.2 99 20.3 8.1 29.6 99.3 7.5 5 90 <0.2 2.0 IM9 Cloudy Moderate 10:57 8.1 29.6 99.3 90 822078 808807 3.7 0.3 102 20.3 8.1 29.6 99.3 7.5 4.5 5 91 <0.2 1.9 6.4 0.2 70 20.0 8.1 31.1 97.3 7.4 5.8 5 92 <0.2 1.8 Bottom 8.1 31.1 97.5 7.4 20.1 6.4 0.2 74 20.1 8.1 31.0 97.6 7.4 5.7 5 92 <0.2 1.9 1.0 0.3 98 20.5 8.1 28.8 99.6 7.6 3.0 87 < 0.2 1.5 Surface 8.1 28.8 99.6 1.0 0.3 99 20.5 8.1 28.8 99.5 7.6 2.9 7 88 <0.2 1.5 4.2 0.3 92 20.3 8.0 30.1 91.6 6.9 3.8 6 91 91 <0.2 1.6 IM10 Cloudy Moderate 11:05 8.3 Middle 8.0 30.1 91.6 822403 809799 8.0 6.9 < 0.2 4.2 0.3 94 30.1 91.5 7.3 5 0.2 97 20.2 8.0 30.3 91.2 6.9 3.1 92 < 0.2 1.5 Bottom 20.2 8.0 30.3 91.3 6.9 1.6 7.3 0.2 101 8.0 91.3 6.9 3.1 6 93 20.2 30.3 **-**0 2 1.0 0.2 20.2 8.1 3.2 84 30.6 1.9 Surface 8.1 30.6 95.5 1.8 1.0 115 95.5 7.2 3.2 0.2 20.2 8.1 30.6 6 85 < 0.2 3.5 3.6 1.6 20.1 7.1 7.1 4 92 92 4.6 8.0 93.9 93.8 <0.2 IM11 Cloudy Moderate 11:16 9.2 Middle 8.0 30.7 93.9 822064 811450 4.6 109 5 0.2 8.0 30.7 5 1.5 8.2 0.2 81 20.1 8.0 30.7 94.7 7.2 5.3 94 <0.2 7.2 Bottom 20.1 8.0 30.7 94.9 8.2 0.2 83 20.1 8.0 30.7 95.1 7.2 5.3 5 98 <0.2 1.5 0.2 20.2 <0.2 1.8 30.6 7.4 Surface 20.2 8.1 97.5 30.6 1.0 0.2 116 20.2 8.1 30.6 97.4 7.4 2.9 4 87 <0.2 1.7 4.7 129 2.9 4 88 <0.2 1.8 0.1 20.2 8.1 30.6 96.6 812068 IM12 Cloudy Moderate 11:22 9.4 Middle 20.2 8.1 30.6 96.6 821445 4.7 8.1 2.9 5 91 <0.2 1.9 0.1 96.5 20.2 30.6 8.4 0.2 153 20.1 8.1 95.4 7.2 3.9 5 92 <0.2 2.2 20.1 8.1 95.4 7.2 Rottom 30.8 8.4 0.2 154 20.1 8.1 30.8 95.3 7.2 4.0 20.3 8.1 30.3 94.1 2.3 3 7.1 Surface 20.3 8.1 94.2 30.3 1.0 20.3 2.4 4 2.8 Cloudy Calm 12:29 5.5 Middle 819975 812665 2.8 4.5 20.2 8.0 30.5 95.0 7.2 3.6 4 Bottom 20.2 8.0 30.5 95.0 7.2 4.5 20.2 8.0 30.5 95.0 72 3.6 5 1.0 0.2 124 20.4 8.1 30.5 99.2 7.5 2.3 91 <0.2 1.1 Surface 20.4 8.1 30.5 99.1 1.0 0.3 131 20.4 8.1 30.5 99.0 7.5 2.3 4 92 < 0.2 1.1 7.5 SR2 Cloudy Moderate 12:42 4.5 Middle 821473 814154 3.5 117 2.9 93 0.2 20.1 8.0 95.4 7.2 4 <0.2 11 7.2 Bottom 31.0 95.5 2.9 3.5 123 5 11 0.3 20.1 8.0 31.0 93 r0 2 1.0 0.2 185 20.4 8.1 28.9 100.2 7.6 7.6 3.4 5 Surface 8.1 28.9 100.1 8 1 100 3.5 1.0 0.2 192 20.4 29 0 6 4.6 114 4.8 4 0.2 20.2 8.1 30.2 98.9 7.5 SR3 Cloudy Moderate 10:45 Middle 20.2 8.1 98.9 822123 807556 4.9 4 121 8.1 30.3 98.9 4.6 0.2 20.2 7.1 7.3 3 8.1 0.2 72 20.1 8.1 30.8 98.7 98.7 7.5 7.5 Bottom 20.1 8.1 30.8 98.7 7.5 8.1 30.8 8.1 0.2 20.1 1.0 0.3 73 20.3 8.3 29.7 101.4 7.7 4.8 6 Surface 20.3 8.3 29.7 101.3 29.7 7.7 1.0 0.3 76 20.3 8.3 101. 4.8 5 4.6 5.2 5 0.2 20.1 7.5 . 8.3 30.0 98.2 SR4A 12:01 8.3 98.2 817188 807787 Cloudy Calm 9.2 Middle 20.1 30.0 4.6 73 8.3 30.0 98.2 7.5 5.1 6 0.2 20.1 7.4 6.0 8.2 0.1 67 20.1 8.3 30.0 97.9 97.9 74 4 20.1 8.3 30.0 Rottom 0.1 8.3 6.0 1.0 0.0 290 20.5 8.2 4.9 5 29.1 92.6 7.0 20.5 8.2 29.1 92.6 Surface 1.0 0.0 20.5 8.2 29.2 92.5 7.0 4.9 6 313 SR5A 12:18 3.4 Middle 816570 810698 Cloudy Calm 2.4 0.0 269 20.3 29.6 92.0 7.0 4.3 Bottom 20.3 8.3 29.6 92.0 7.0 283 20.3 8.3 7.0 4.4 2.4 0.0 1.0 0.0 209 20.5 8.3 28.9 91.4 9.3 10 Surface 20.5 8.3 28.9 91.5 1.0 0.0 227 20.5 8.3 28.9 91.5 7.0 9.3 10 SR6A Cloudy Calm 13:02 4.3 Middle 817953 814739 3.3 0.1 254 20.4 8.3 7.0 10.8 6 Bottom 20.4 8.3 29.0 91.4 7.0 3.3 0.1 266 20.4 8.3 01 / 10.9 7 1.0 0.2 52 20.1 8.0 31.8 97.1 7.3 1.8 97.1 Surface 31.8 1.0 0.2 54 20.1 8.0 31.8 97 1 7.3 1.8 4 8.0 0.1 39 20.0 8.0 31.9 95.1 7.2 2.0 4 SR7 Cloudy Moderate 13:29 15.9 Middle 8.0 31.9 95.1 823651 823748 8.0 0.1 40 20.0 8.0 31.9 95.0 7.2 2.0 4 14.9 0.1 358 20.0 8.0 32.0 94.8 7.2 1.9 4 Bottom 8.0 31.9 94.9 14.9 0.1 358 20.0 8.0 31.9 94.9 1.9 5 1.0 20.6 8.2 30.3 96.0 7.2 8.5 5 Surface 20.6 8.2 30.3 96.0 7.2 1.0 20.6 8.2 30.3 95.9 8.5 6 -. 820371 811646 SR8 Cloudy Moderate 11:33 5.2 Middle -4.2 20.4 8.6 4 8.2 30.4 96.0 7.2 20.5 8.1 30.4 96.1 7.2

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

Water Quality Monitoring Water Quality Monitoring Results on 25 February 21 during Mid-Flood Tide DO Saturation Dissolved Suspended Solids Total Alkalinity Chromium Salinity (ppt) Turbidity(NTU) Coordinate Coordinate Nickel (µg/L) Weather Sampling Water Water Temperature (°C) Monitoring Speed Current Oxvaen (mg/L) (maga) Sampling Depth (m) HK Grid HK Grid Station Direction Condition Time Depth (m) (m/s) Average Average Value Average Value DA Value DA Value DA Value DA (Northing) Value DA Value DA Condition Value Value Average Value (Easting) 0.5 20.1 Surface 20.1 8.3 30.6 102.1 1.0 0.5 41 20.1 30.6 102.0 7.7 6.9 86 <0.2 0.8 0.4 34 20.0 7.7 7.0 0.7 8 89 <0.2 C1 83 30.7 101.6 804226 07:00 84 Middle 20.0 89 815600 Rainy Rough 0.7 8.3 30.7 7.7 7.3 7 89 <0.2 0.7 0.4 20.0 7.4 0.3 32 20.0 8.2 30.9 100. 7.6 8.2 6 91 <0.2 0.7 7.6 Bottom 20.0 8.2 30.9 100.8 7.6 8.3 0.7 7.4 8.2 0.3 20.0 30.9 100. 92 < 0.2 1.0 0.3 87 1.5 1.6 1.5 1.6 20.4 4.0 < 0.2 8.1 Surface 20.4 8.1 28.3 99.8 4.0 8.1 99.7 7.6 88 1.0 0.3 331 20.4 <0.2 342 20.4 8 5.9 0.3 8.1 98.0 7.5 90 28.4 C2 Rainv Moderate 08:36 11.8 Middle 20.4 8.1 28.4 97.9 90 825679 806925 1.5 28.4 97.8 7.5 4.8 7 91 <0.2 5.9 0.3 315 20.4 8.1 10.8 0.2 37 20.0 8.0 30.8 91.4 6.9 7.4 7 92 <0.2 1.4 8.0 91.5 6.9 Bottom 20.1 30.8 10.8 0.2 39 20.1 8.0 30.8 91.5 6.9 7.0 8 92 <0.2 1.4 0.7 96.8 2.2 4 84 <0.2 1.6 Surface 20.1 8.1 31.0 96.7 1.0 0.7 272 20.1 8.1 31.1 96.6 2.2 3 84 <0.2 1.6 5.8 1.5 5.7 0.5 273 8.1 7.1 3 88 88 <0.2 20.0 31.5 94.6 C3 817817 Cloudy Moderate 06:34 11.3 Middle 20.0 8.1 31.5 94.6 87 822096 1.6 0.6 282 20.0 10.3 0.4 271 20.0 94.2 8.6 2 90 <0.2 1.7 Bottom 20.0 8.1 31.6 94.2 7.1 10.3 0.4 294 20.0 8.1 31.6 94.2 7 1 7.7 1.8 1.0 0.2 20.1 8.3 29.9 99.4 4.5 86 <0.2 1.0 Surface 20.1 8.3 29.9 99.4 1.0 20.1 8.3 29.9 99.3 7.6 4.3 5 86 <0.2 0.9 0.2 807153 IM1 Rainv Moderate 07:20 4.6 Middle 817938 0.9 3.6 0.1 20.0 8.2 30.2 97.0 7.4 3.2 90 <0.2 0.7 Bottom 20.0 8.2 30.2 97.0 7.4 3.6 0.2 11 20.0 8.2 30.2 97 N 7.4 3.4 6 90 <0.2 0.8 5.2 1.0 0.2 14 20.2 8.3 29.9 7.7 4 85 < 0.2 0.9 Surface 8.3 29.9 101.2 1.0 0.2 15 20.2 8.3 29.9 101.1 7.7 5.2 5 84 <0.2 0.9 3.3 0.2 20.2 8.3 29.9 100. 7.6 6.4 6 88 <0.2 0.9 IM2 Moderate 07:27 6.6 Middle 8.3 29.9 100.4 818174 806153 0.9 1.0 0.8 1.0 3.3 0.2 20.2 8.3 29.9 7.6 6.6 6 87 <0.2 20.0 6 5.6 0.1 354 83 30.3 99.1 7.5 7.5 7.8 90 <0.2 8.3 30.3 99.1 7.5 5.6 0.1 326 8.3 99 1 8.0 6 89 <0.2 20.0 30.3 1.0 0.2 365 20.2 83 29.9 77 49 6 85 < 0.2 0.9 Surface 8.3 29.9 101.7 1.0 7.7 4.9 0.3 336 20.2 8.3 6 84 <0.2 29.9 5.8 5.9 8.5 0.8 354 7.7 5 88 3.5 0.2 20.2 8.3 30.0 <0.2 IM3 Rainy Moderate 07:36 6.9 Middle 20.2 8.3 30.0 101.3 87 818801 805602 0.8 6 88 8.0 3.5 0.2 326 20.2 8.3 <0.2 89 5.9 0.2 333 20.2 8.3 30.1 100. 7.7 7.7 Rottom 20.2 8.3 30.1 100.9 5.9 0.2 343 8.3 30.1 100.8 7.7 8.3 5 0.8 20.2 89 <0.2 0.7 1.0 0.4 356 20.1 8.3 30.2 101.2 7.7 5.3 6 84 <0.2 Surface 20.1 8.3 30.2 101.2 1.0 0.4 328 20.1 8.3 7.7 5.3 6 84 <0.2 4.1 6.0 88 <0.2 0.7 0.4 342 5 20.1 8.3 30.3 IM4 07:46 8.2 Middle 20.1 8.3 30.3 100.8 819717 804610 Rainv Rough 4.1 0.4 344 20.1 8.3 6.1 87 <0.2 30.3 6 0.4 20.1 6.5 6 89 0.7 8.3 30.3 7.6 100.5 Bottom 20.1 8.3 30.3 7.6 7.2 0.4 331 20.1 8.3 6.4 5 <0.2 0.7 0.8 1.0 0.6 15 20.2 8.3 29.7 6.5 7 84 <0.2 7.7 Surface 20.2 8.3 29.7 101.3 1.0 0.7 7.7 6.5 6 84 <0.2 20.2 3.8 0.6 22 7.6 6 7 88 <0.2 0.9 20.2 8.2 29.8 7.6 IM5 Rough 07:54 7.5 Middle 20.2 8.2 29.8 99.6 820744 804869 Rainy 3.8 20.2 7.7 88 <0.2 0.6 0.9 6.5 0.5 20.2 8.2 8.2 29.9 99.0 7.5 7.5 8.7 89 <0.2 20.2 8.2 99.0 7.5 Bottom 29.9 99.0 6.5 0.5 19 20.2 29 9 8.5 8 89 < 0.2 1.0 0.1 78 20.4 8.3 28.1 3.6 5 83 <0.2 1.2 Surface 8.3 28.1 100.0 1.0 0.1 78 20.4 8.3 28.1 qq q 7.6 3.8 5 84 <0.2 1.2 3.7 0.1 70 20.3 5.4 5 88 <0.2 Rainy Rough 08:03 7.3 Middle 20.3 8.3 29.0 98.5 821072 805824 <0.2 3.7 0.1 73 20.3 8.3 29.1 98.4 7.5 5.5 5 89 6.0 1.2 6.3 0.2 55 20.2 8.2 7.5 7 90 <0.2 98.0 63 0.2 55 20.2 8.2 29.5 89 1.3 1.0 0.1 45 20.5 8.3 27.5 7.7 7.7 3.0 85 <0.2 Surface 20.5 100.5 3.0 3.7 1.0 0.1 46 20.5 83 27 5 100 2 84 <0.2 131 3 1.2 4.2 88 <0.2 0.1 20.3 8.3 28.8 99.3 7.6 IM7 08:14 8.3 Middle 8.3 28.7 99.3 821364 806840 Rainy Rough 88 4.2 0.1 132 20.3 8.3 28.7 99.3 7.6 3.7 4 7.3 0.1 126 20.2 8.2 29.4 98.1 5.9 4 90 <0.2 1.3 Bottom 20.2 8.2 29.4 98.1 7.5 7.3 0.1 136 20.2 29.4 5.9 <0.2 1.2 1.0 0.1 317 20.5 8.1 28.5 7.7 3.2 3 88 < 0.2 1.9 Surface 20.5 8.1 28.5 101.3 7.7 2.0 8.1 28.5 <0.2 1.0 0.1 345 20.5 101 3.2 4 88 2.0 8.1 28.5 7.7 3.3 3 93 92 <0.2 3.9 0.2 320 20.5 100.9 20.5 8.1 28.5 100.9 821835 808136 IM8 Rainy Moderate 08:12 7.7 Middle 1.9 3.3 7.7 3.9 321 8.1 100. 3 0.2 20.5 1.9 6.7 0.1 337 20.5 8.1 28.5 7.6 7.6 3.4 93 <0.2 100. 3 20.5 8.1 28.5 100.3 Rottom 7.6

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Water Quality Monitoring Results on 25 February 21 during Mid-Flood Tide DO Saturation Dissolved Suspended Solids Total Alkalinity Chromium Salinity (ppt) Turbidity(NTU) Coordinate Coordinate Nickel (µg/L) Weather Sampling Water Water Temperature (°C) Monitoring Speed Current Oxvaen (mg/L) (ppm) Sampling Depth (m) HK Grid HK Grid Station Direction Time (m/s) Average Average Value Average Value DA Value DA Value DA Value DA Value DA Value DA Condition Condition Depth (m) Value Value Average Value (Northing) (Easting) 0.2 Surface 8.1 28.6 100.4 0.2 313 20.5 7.6 2.9 3.4 4 1.7 3.7 0.1 347 20.5 8.1 28.9 97.6 7.4 3 91 <0.2 08:06 97.5 808822 IM9 Rainv Moderate 8.1 29.0 822101 3.7 0.1 319 20.4 8.1 29.0 97.4 7.4 3.5 2 91 <0.2 1.6 6.4 0.1 356 20.4 8.0 29.2 97.3 7.4 4.3 3 92 <0.2 1.7 Bottom 8.0 29.2 97.4 7.4 6.4 0.1 328 20.4 8.0 29.2 97.5 7.4 4.3 2 93 <0.2 1.6 1.0 0.4 324 20.3 8.1 30.0 97.9 7.4 3.0 87 < 0.2 1.8 Surface 8.1 30.0 97.9 1.0 0.5 330 20.3 8.1 30.1 97.9 7.4 3.0 4 88 <0.2 1.9 3.8 0.3 315 20.2 8.0 30.3 97.2 7.4 3.4 3 91 91 <0.2 1.8 IM10 Rainy Moderate 07:59 7.6 Middle 8.0 30.3 97.2 822392 809772 97.2 7.4 <0.2 3.8 0.4 338 8.0 30.3 6.6 0.3 3.5 3 1.6 310 20.2 8.0 30.3 97.0 7.4 93 < 0.2 Bottom 8.0 30.3 97.0 3.5 1.6 6.6 0.3 315 8.0 97 N 7.4 94 20.2 30.3 **-**0 2 0.3 287 1.0 20.2 8.1 4 84 30.5 96.9 1.5 Surface 8.1 30.5 96.9 3.8 4.7 4.7 1.6 1.0 96.8 7.3 4 85 < 0.2 0.3 306 20.2 8.1 30.5 73 1.6 88 88 20.2 7.2 4 <0.2 3.9 311 8.1 30.6 95.5 95.5 IM11 Rainv Moderate 07:49 7.8 Middle 8.1 30.6 95.5 87 822064 811483 315 4 0.3 8.1 30.6 1.5 6.8 0.2 303 20.2 8.0 30.7 95.3 7.2 5.0 4 89 <0.2 7.2 Bottom 20.2 8.0 30.7 95.3 6.8 0.2 308 20.2 8.0 30.7 95.3 7.2 5.0 3 88 <0.2 1.6 0.3 20.2 3.1 4 84 <0.2 7.4 Surface 20.2 8.0 97.2 30.5 1.0 0.3 287 20.2 8.0 30.5 7.4 3.2 3 84 <0.2 1.5 4.4 0.3 274 96.7 5.5 4 87 <0.2 1.6 20.2 8.0 30.6 812053 IM12 07:43 8.7 Middle 20.2 8.0 30.6 96.7 821460 Rainv Moderate 4.4 8.0 96.7 5.8 3 88 <0.2 1.6 0.3 283 20.2 0.2 294 20.1 8.0 30.7 96.6 7.3 7.3 7.4 91 <0.2 1.5 20.1 8.0 96.6 7.3 Rottom 30.7 7.7 0.2 310 20.1 8.0 30.7 96.6 7.5 1.5 1.0 20.2 8.1 30.0 2.2 <2 91.6 7.0 6.9 Surface 20.2 8.1 91.6 30.1 1.0 20.2 2.2 <2 2.2 Cloudy Calm 07:11 Middle 819971 812660 2.2 3.3 20.2 8.1 30.2 91.7 7.0 2.4 3 Bottom 20.2 8.1 30.2 91.8 7.0 7.0 3.3 20.2 8.1 30.2 91.8 2.4 1.0 0.3 330 20.2 8.1 30.6 97.2 7.4 3.8 87 <0.2 1.5 Surface 20.2 8.1 30.6 97.2 1.0 0.3 304 20.2 8.1 30.6 97.2 7.4 3.9 2 87 < 0.2 1.5 SR2 Cloudy Moderate 06:55 4.5 Middle 821443 814158 3.5 334 41 89 0.2 20.2 8 1 30.6 7.4 3 <0.2 1.6 97.0 Bottom 97.0 41 3.5 8.1 30.6 1.6 0.2 344 20.2 4 89 r0 2 1.0 0.1 359 20.5 8.1 28.4 99.9 99.8 7.6 7.6 3.4 4 Surface 8.1 28.4 99.9 8 1 3.5 5 1.0 0.1 330 20.5 28.4 4.6 4.1 4 0.1 350 20.5 8.1 28.6 99.4 7.6 SR3 Moderate 08:17 Middle 20.5 28.6 99.4 822143 807587 99.4 4.0 4 357 8.1 4.6 0.1 20.5 28.6 4 8.1 0.2 83 20.2 8.1 8.1 30.7 97.6 97.7 7.4 9.4 9.2 Bottom 20.2 8.1 30.7 97.7 7.4 30.7 8.1 0.2 87 20.2 1.0 0.4 74 20.1 8.2 29.7 98.1 7.5 4.9 9 Surface 20.1 8.2 29.6 98.1 74 29.6 98.1 7.5 1.0 0.4 20.1 8.2 4.8 8 4.5 0.4 5.4 8 20.0 7.6 . 8.2 30.1 99.2 SR4A 06:34 8.2 99.2 817200 807790 Cloudy Calm 9.0 Middle 20.0 30.1 4.5 0.4 84 8.2 30.1 99.2 7.6 5.2 8 20.0 98.6 98.6 8.0 0.4 8.2 30.3 7.5 7.5 6.3 6.3 20.0 8.2 98.6 7.5 Rottom 20.0 30.3 8.0 0.4 20.0 8.2 8 1.0 0.1 106 20.5 8.2 28.8 7.0 3.3 9 92.3 20.5 8.2 28.8 92.3 Surface 1.0 0.1 112 20.5 8.2 28.8 7.0 3.3 8 SR5A 06:14 3.2 Middle 816612 810679 Cloudy Calm 2.2 0.1 109 20.5 28.8 92.3 7.0 3.8 Bottom 20.5 8.2 28.8 92.3 7.0 0.1 111 20.5 7.0 3.9 2.2 1.0 0.0 213 20.3 8.2 28.9 92.2 5.0 Surface 20.3 8.2 28.9 92.2 1.0 0.0 229 20.3 8.2 28.9 92.2 7.0 4.8 6 SR6A Cloudy Calm 05:43 4.1 Middle 817978 814760 3.1 0.0 248 20.2 6.9 3.7 5 Bottom 8.2 29.2 90.1 6.9 3.1 0.0 267 20.2 80.0 6.0 3.8 5 1.0 0.1 60 20.0 8.1 31 4 95.4 7.2 2.1 95.4 Surface 8.1 31.4 1.0 0.1 62 20.0 8.1 31.4 95.4 7.2 2.1 2 77 0.3 43 20.0 8.1 31.7 94.2 7.1 2.3 3 SR7 Cloudy Moderate 06:07 15.4 Middle 8.1 31.7 94.2 823624 823723 7.7 7.1 0.3 46 20.0 8.1 31.7 94.1 2.4 4 14.4 0.4 45 19.9 8.1 32.0 93.7 7.1 2.6 3 Bottom 8.1 32.0 93.7 14.4 0.4 46 19.9 8.1 93.7 7.1 2.6 4 1.0 20.3 8.1 30.2 95.9 7.3 4.4 3 Surface 20.3 8.1 30.2 95.9 95.8 1.0 20.3 8.1 30.2 7.3 4.6 2 . . 820381 811642 SR8 Rainy Calm 07:34 4.8 Middle -3.8 20.2 6.1 3 8.1 30.4 95.7 7.2 Bottom 20.2 8.0 30.3 95.8 7.3

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Water Quality Monitoring Results on 27 February 21 during Mid-Ebb Tide Turbidity(NTU) Suspended Solids Total Alkalinity DO Saturation Dissolved Chromium Salinity (ppt) Coordinate Coordinate Nickel (µg/L) Weather Sampling Water Water Temperature (°C) Monitoring Speed Current Oxvaen (mg/L) (maga) Sampling Depth (m) HK Grid HK Grid Station Direction Condition Time Depth (m) (m/s) Average Value Average Average Value Average Value DA Value DA Value DA Value DA (Northing) Value DA Value DA Condition Value Value (Easting) 0.5 27.9 1.0 20.5 99.7 7.6 3.1 4 42 0.5 35 20.2 8.2 30.2 97.2 7.4 5.0 5 89 <0.2 1.3 97.1 804263 C1 Mistv Moderate 12:42 8.2 30.3 815630 4.2 0.5 35 20.2 8.2 30.4 96.9 7.3 4.9 6 89 <0.2 1.2 7.4 0.4 34 20.2 8.1 30.9 97.0 7.3 7.3 6 91 <0.2 1.2 Bottom 20.2 8.1 30.8 97.2 7.4 7.4 0.4 35 20.2 8.1 30.8 97.3 7.4 6.9 7 92 <0.2 1.2 135 10 1.0 0.2 20.5 8.1 29.1 89.6 6.8 10.0 87 < 0.2 1.5 Surface 8.1 29.1 89.6 87 <0.2 1.0 0.2 140 20.5 8.1 29.1 89.5 6.8 10.1 9 1.4 5.9 0.5 154 20.5 8.1 88.1 87.9 6.7 10.8 10 11 89 90 <0.2 1.4 C2 Cloudy Moderate 11:37 11.8 Middle 8.1 29.3 88.0 825659 806961 5.9 0.5 165 8.2 29.3 10.8 0.5 144 8.2 6.5 9.9 14 1.4 20.5 29.4 86.4 92 < 0.2 Bottom 20.5 8.2 29.4 86.2 6.5 6.5 15 1.5 10.8 0.5 153 8.2 29.4 86.0 9.8 92 <0.2 20.5 1.0 0.4 286 20.3 8.0 3.2 84 30.7 85.1 6.4 < 0.2 Surface 8.0 30.7 85.0 3.2 5.0 5.3 1.1 1.0 300 84.9 6.4 84 <0.2 0.4 20.3 8.0 30.8 6 6.3 1.2 87 88 <0.2 257 261 20.2 6.1 4 5.9 8.0 31.5 81.2 C3 Cloudy Moderate 13:39 11.8 Middle 8.0 31.5 81.2 88 822108 817788 1.2 4 0.2 8.0 1.2 10.8 0.1 120 20.1 8.0 31.6 75.4 5.7 6.4 4 91 <0.2 5.7 Bottom 20.1 8.0 31.6 75.2 10.8 0.1 128 20.1 8.0 31.6 74.9 5.6 6.4 3 92 <0.2 1.1 0.2 20.6 4.3 8.2 98.6 <0.2 1.4 28.6 7.5 Surface 20.6 8.2 28.6 98.3 1.0 0.2 20.6 8.2 28.7 98.0 7.5 4.1 7 87 <0.2 1.4 7.5 807109 IM1 Mistv Moderate 12:21 5.0 Middle 88 817964 4.0 0.2 344 20.6 8.2 28.7 98.5 7.5 7.5 4.8 6 90 <0.2 1.5 Bottom 20.6 8.2 28.7 98.6 7.5 4.0 0.2 316 20.6 8.2 28.7 98.7 4.9 1.5 0.1 199 20.6 8.2 28.3 97.9 4.8 6 85 <0.2 1.5 7.5 7.4 Surface 20.6 8.2 28.3 97.8 1.0 0.1 205 20.6 5.0 85 <0.2 1.5 1.4 1.5 3.4 0.2 161 20.7 5.6 6 88 <0.2 <0.2 <0.2 8.2 806152 IM2 Mistv Moderate 12:14 Middle 8.2 28.5 97.3 818172 20.7 6.1 3.4 0.2 5.8 0.2 114 20.6 8.2 28.8 96.5 7.3 8.8 5 90 Bottom 20.6 8.2 28.8 96.6 7.3 7.3 1.4 5.8 0.2 119 20.6 8.2 28.8 96.6 9.2 6 90 <0.2 1.0 0.1 345 20.6 8.2 28.2 98.7 3.8 5 85 <0.2 1.4 Surface 8.2 28.2 98.6 1.0 0.1 348 20.6 8.2 28.3 98.5 7.5 4.2 5 85 <0.2 1.3 1.3 3.5 0.1 81 20.6 8.2 28.5 7.4 5.9 5 88 <0.2 IM3 Misty 12:07 7.0 Middle 818777 805577 <0.2 3.5 0.1 87 20.6 7.4 5.8 6 89 20.6 7.4 6 7 90 1.3 6.0 0.3 106 8.2 28.8 97.1 7.4 97.4 7.1 0.3 115 8.2 28.7 <0.2 6.0 20.6 91 1.0 0.3 21 20.6 8.2 28.5 97.7 7.4 7.4 4.8 5 84 <0.2 1.2 Surface 8.2 28.5 97.6 8.2 97.5 5.1 5 85 1.0 0.3 22 20.6 28.5 < 0.2 4.2 10 6.2 6.4 6 88 89 1.3 0.3 20.6 8.2 28.6 97.2 7.4 <0.2 IM4 Misty Calm 11:58 Middle 8.2 28.6 97.2 819705 804586 7.4 97.1 4.2 8.2 0.3 10 20.6 28.6 6 7.4 0.2 20.5 8.2 8.2 28.8 28.8 96.9 96.9 7.4 10.0 9.8 90 <0.2 1.2 7.4 Rottom 20.5 8.2 28.8 96.9 0.2 20.5 90 < 0.2 1.3 1.0 0.7 6.1 85 216 20.6 8.2 28.5 98.2 7.5 9 <0.2 Surface 20.6 8.2 28.5 98.2 1.0 8.2 28.5 98.2 7.5 <0.2 1.4 0.8 216 20.6 6.1 8 85 3.4 0.7 201 6.1 9 88 <0.2 1.4 20.6 8.2 7.5 28.5 98.1 IM5 8.2 28.5 98.1 820715 804874 Misty Moderate 11:49 Middle 20.6 3.4 0.7 204 8.2 28.5 98.1 6.1 10 88 < 0.2 1.4 20.6 1.4 7.6 7.7 <0.2 5.8 0.4 183 8.2 28.6 28.6 98.1 98.2 7.5 7.5 10 90 20.6 8.2 98.2 7.5 Bottom 20.6 28.6 5.8 0.4 197 20.6 8.2 <0.2 1.3 1.0 0.6 347 20.6 8.2 97.6 7.4 2.8 5 85 <0.2 28.0 Surface 20.6 8.2 28.0 97.2 1.0 0.7 319 8.2 28.0 96.7 7.4 2.9 4 85 <0.2 20.6 1.3 3.7 0.6 350 20.7 8.2 28.5 94.5 7.2 3.6 4 88 <0.2 11:42 7.4 Middle 20.7 8.2 28.5 94.4 821066 805833 IM6 Mistv Calm 3.7 0.6 357 20.6 8.2 28.5 94.2 7.2 3.7 5 88 <0.2 1.3 6.4 0.5 358 20.6 28.8 94.2 7.1 3.5 5 91 <0.2 1.3 Bottom 20.6 8.1 28.8 94.5 7.2 6.4 0.5 329 8.1 94.7 3.5 1.2 20.6 1.0 0.2 275 20.6 8.2 28.2 97.3 7.4 4.0 9 85 <0.2 1.6 Surface 20.6 8.2 28.3 97.3 1.0 0.2 290 20.6 8.2 28.3 97.2 7.4 4.0 8 85 <0.2 1.4 88 4.2 0.2 216 20.6 96.1 7.3 5.0 9 <0.2 1.3 IM7 Misty Calm 11:37 8.4 Middle 20.6 8.2 28.5 96.0 821332 806851 <0.2 1.2 4.2 0.2 231 20.6 8.2 28.5 95.9 5.3 9 88 7.4 0.3 163 20.7 8.2 28.6 95.6 7.3 6.2 10 90 <0.2 1.4 8.2 28.6 95.6 7.3 7.4 0.3 174 20.6 8.2 28.6 95.6 6.2 9 91 <0.2 1.3 1.0 0.3 qq 20.5 8.1 29.1 87.6 6.6 6.8 13 83 < 0.2 87.5 Surface 8.1 29.1 1.4 1.0 0.4 107 20.5 8.1 29.2 87.3 6.6 7.1 12 85 <0.2 39 0.4 78 20.5 8.1 29.8 85.1 6.4 8.6 10 90 90 <0.2 1.4 IM8 Cloudy Moderate 12:00 7.8 Middle 20.5 8.1 29.8 85.0 89 821820 808140 11 3.9 0.4 79 20.5 8.1 29.8 84.9 6.4 8.6 < 0.2 6.8 0.3 46 20.5 8.0 29.8 82.5 6.2 8.4 10 91 <0.2 1.3 8.0 Bottom 20.5 29.8 82.3 6.2 0.3

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Water Quality Monitoring Results on 27 February 21 during Mid-Ebb Tide DO Saturation Dissolved Suspended Solids Total Alkalinity Chromium Salinity (ppt) Turbidity(NTU) Coordinate Coordinate Nickel (µg/L) Weather Sampling Water Water Temperature (°C) Monitoring Speed Current Oxvaen (mg/L) (ppm) Sampling Depth (m) HK Grid HK Grid Station Direction Time (m/s) Average Value Average Value DA Value DA Value DA Value DA Value DA Value DA Condition Condition Depth (m) Value Average Value Average Value (Northing) (Easting) 0.5 Surface 8.1 29.1 90.6 73 20.5 90.5 13 9.3 3.9 0.5 71 20.5 8.1 29.7 89.3 6.8 13 89 <0.2 1.4 89.2 808822 IM9 Cloudy Moderate 12:07 7.7 8.1 29.7 8.3 822109 3.9 0.5 73 20.5 8.1 29.7 89.1 6.7 9.4 13 90 <0.2 1.4 6.7 0.4 54 20.5 8.1 29.7 87.7 6.6 9.1 6 90 <0.2 1.4 20.5 8.1 29.7 87.6 6.6 Bottom 6.7 0.4 56 20.5 8.1 29.7 87.4 6.6 9.0 6 90 <0.2 1.4 1.0 0.5 99 20.5 8.1 29.1 88.3 6.7 85 < 0.2 1.3 Surface 8.1 29.2 88.2 1.0 0.5 104 20.5 8.1 29.2 88.1 6.7 6.9 9 86 <0.2 1.3 3.9 0.4 107 20.5 8.0 85.6 6.5 8.7 8.7 11 12 89 90 <0.2 1.3 Cloudy IM10 Moderate 12:14 7.8 Middle 8.0 29.6 85.5 822381 809810 3.9 8.0 6.5 <0.2 0.4 115 29.6 85.3 6.8 8.0 11 1.4 0.3 111 20.5 29.6 80.6 6.1 8.1 91 < 0.2 Bottom 8.0 29.6 80.4 6.1 1.4 6.8 0.3 118 8.0 80.1 8.2 12 91 20.5 29.6 **-**0 2 0.3 1.0 20.5 3.9 83 8.0 29.9 6.6 1.3 Surface 8.0 29.9 87.6 3.9 4.5 4.5 1.3 1.0 87.5 8 84 0.3 135 20.5 8.0 29.9 6.6 < 0.2 6.5 1.3 6.3 90 91 <0.2 4.3 20.5 8.0 30.0 83.6 IM11 Cloudy Moderate 12:24 8.6 Middle 8.0 30.0 83.5 89 822077 811449 1.3 4.3 143 20.5 83.3 8 0.3 8.0 30.1 1.3 7.6 0.2 142 20.4 8.0 30.2 76.1 5.8 5.8 4.7 6 92 <0.2 Bottom 20.4 8.0 30.2 75.9 7.6 0.2 147 20.4 8.0 30.1 75.6 5.7 4.7 7 96 <0.2 1.4 0.3 20.5 3.4 8.1 8 <0.2 1.3 29.9 6.6 Surface 20.5 8.1 87.6 29.9 1.0 0.3 124 20.5 8.1 29.9 87.5 6.6 3.4 85 <0.2 1.3 4.5 0.3 122 20.4 84.2 6.4 3.7 7 86 <0.2 1.3 8.0 30.2 812022 IM12 Moderate 12:31 8.9 Middle 20.4 8.0 30.2 84.1 821472 Cloudy 4.5 8.0 3.8 8 89 <0.2 1.4 0.3 83.9 6.3 131 20.4 0.3 128 20.4 8.0 30.5 4.1 8 91 <0.2 1.3 82.2 6.2 20.4 8.0 82.0 6.2 Rottom 30.5 7.9 0.3 130 20.4 8.0 30.5 81.8 6.2 4.0 1.4 1.0 20.5 8.0 29.9 84.0 5.6 4 6.3 Surface 20.5 8.0 84.0 29.9 1.0 20.5 84.0 6.3 5.6 4 2.7 Cloudy Moderate 13:05 Middle 819982 812654 2.7 43 20.5 8.0 29.9 82.5 6.2 9.4 4 Bottom 20.5 8.0 29.9 82.5 6.2 4.3 20.5 8.0 29.9 82.4 6.2 9.1 4 1.0 0.4 83 20.4 8.0 30.1 86.2 6.5 4.0 5 89 <0.2 1.2 Surface 20.4 8.0 30.1 86.2 1.0 0.4 89 20.4 8.0 30.1 86.1 6.5 4.0 5 90 < 0.2 1.1 6.5 SR2 Cloudy Moderate 13:19 4.2 Middle 821458 814186 32 3.9 91 0.3 94 20.4 8.0 30.1 5.9 7 <0.2 11 77.5 5.9 Bottom 77.2 3.9 100 30.1 13 32 0.4 20.4 8.0 92 r0 2 1.0 0.3 143 20.6 8.1 28.6 88.8 6.7 4.6 6 Surface 8.1 28.6 88.8 88.7 8 1 4.6 1.0 0.3 154 20.6 28.7 4.4 135 6.6 7.1 6 7 0.2 20.6 8.1 28.9 87.4 SR3 Cloudy Moderate 11:54 Middle 28.9 87.4 822161 807548 87.3 7.6 4.4 146 8.1 0.2 20.6 29.0 14.7 13.1 7.8 0.3 85 20.5 8.1 29.4 84.1 83.0 6.4 7 Bottom 20.5 8.0 29.4 83.6 6.4 7.8 8.0 0.3 87 20.5 29.4 1.0 0.3 68 20.6 8.2 28.3 98.4 7.5 4.8 8 Surface 20.6 8.2 28.4 98.2 28.4 98.0 7.5 1.0 0.3 73 20.6 8.2 5.0 9 4.5 7.4 5.7 8 0.3 68 20.6 97.4 . 8.2 28.4 SR4A 8.2 28.5 97.4 817170 807812 Misty Calm 13:04 9.0 Middle 20.6 4.5 8.2 28.5 97.3 7.4 5.7 8 0.4 72 20.6 5.6 5.6 8.0 0.3 20.6 8.1 97.9 7.5 7.5 7 8.1 28.5 7.5 20.6 28.5 98.0 Rottom 8.0 0.3 28.5 1.0 0.0 310 20.7 8.1 28.6 85.7 6.5 5.7 5 20.7 8.1 28.6 85.8 Surface 1.0 0.0 319 20.7 8.1 28.6 85.8 6.5 5.7 5 SR5A 3.4 Middle 816597 810717 Mistv Calm 13:21 2.4 0.0 355 20.6 28.6 86.9 6.6 6.0 6 Bottom 20.6 8.1 28.6 87.1 6.6 327 8.1 87.2 6.6 6.1 2.4 0.0 20.6 1.0 0.0 207 20.5 8.2 28.0 92.7 5.2 Surface 20.5 8.2 28.0 92.8 1.0 0.0 214 20.5 8.2 28.0 92.9 7.1 5.2 7 SR6A Misty Calm 13:48 4.0 Middle 817940 814739 3.0 0.0 207 20.5 94.3 5.3 6 Bottom 8.2 28.2 94.4 7.2 3.0 0.0 223 20.5 94.4 6.0 1.0 0.6 61 20.2 8.0 31 4 85.9 6.5 2.8 85.9 Surface 31.4 1.0 0.7 63 20.2 8.0 31.4 85.8 6.5 2.8 5 8.4 0.2 14 20.2 8.0 31.5 84.6 6.4 3.0 5 SR7 Cloudy Moderate 14:08 16.8 Middle 8.0 31.5 84.6 823612 823740 8.4 0.2 14 20.2 8.0 31.5 84.5 6.4 3.0 4 15.8 0.2 55 20.2 8.0 31.5 82.9 6.2 3.4 3 Bottom 8.0 31.5 82.9 6.2 15.8 0.2 55 20.2 8.0 31.5 82.8 6.2 3.4 3 1.0 20.7 8.1 29.4 83.2 6.3 4.9 5 Surface 20.7 8.1 29.4 83.2 83.1 1.0 20.7 8.1 29.4 6.3 4.9 4 6.3 . . 820391 811617 SR8 Cloudy Moderate 12:39 4.2 Middle -3.2 20.6 5.7 4.7 4 8.1 29.4 74.9 20.6 8.1 29.4 74.4 5.7

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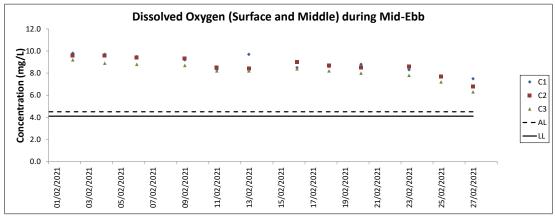
Water Quality Monitoring Results on 27 February 21 during Mid-Flood Tide DO Saturation Dissolved Suspended Solids Total Alkalinity Chromium Salinity (ppt) Turbidity(NTU) Coordinate Coordinate Nickel (µg/L) Weather Sampling Water Water Temperature (°C) Monitoring Speed Current Oxvaen (mg/L) (maga) Sampling Depth (m) HK Grid HK Grid Station Direction Condition Time (m/s) Average Value Average Average Value Average Value DA Value DA Value DA Value DA Value DA Value DA Condition Depth (m) Value Value (Northing) (Easting) 0.2 20.6 Surface 20.6 8.2 28.0 98.2 1.0 0.2 233 20.6 28.0 98.2 7.5 6.1 10 86 <0.2 1.2 138 7.5 9.5 10 1.2 0.1 20.6 28.4 89 <0.2 C1 8.2 28.4 98.1 804259 08:34 84 Middle 20.6 89 815619 Mistv Moderate 10 8.2 28.4 98.1 7.5 9.8 11 89 <0.2 1.2 0.1 142 20.6 7.4 0.1 182 20.6 8.2 28.7 98.0 7.4 10.3 10 91 <0.2 1.8 74 20.6 8.2 28.7 98.0 Rottom 98.0 7.4 1.7 7.4 8.2 28.7 0.1 186 20.6 10.1 10 92 < 0.2 1.0 0.3 350 4.8 20.6 86 < 0.2 8.0 1.3 Surface 20.6 8.0 28.3 86.1 1.4 8.0 86.0 6.5 4.8 7.9 87 1.0 0.3 322 20.6 4 <0.2 1.5 5.9 0.4 20.5 8.0 83.2 6.3 5 89 28.7 C2 Cloudy Moderate 09:20 11.8 Middle 20.5 8.0 28.7 83.1 89 825691 806967 28.7 83.0 6.3 8.3 6 90 <0.2 5.9 0.4 28 20.5 8.0 10.8 0.4 346 20.5 8.0 75.1 5.7 8.8 6 91 <0.2 1.5 28.7 8.0 74.8 5.7 Bottom 20.5 28.7 10.8 0.5 318 20.5 8.0 28.7 74.5 8.9 7 92 <0.2 1.3 0.6 242 20.7 8.1 5.2 <0.2 1.1 Surface 20.7 8.1 29.5 85.6 1.0 0.6 266 20.7 8.1 29.5 85.5 6.5 5.4 3 86 <0.2 1.0 6.5 1.0 6.1 0.7 246 20.7 8.1 2 90 89 <0.2 29.7 83.8 6.3 C3 07:11 817818 Rainv Moderate 12.1 Middle 20.7 8.1 29.7 83.8 89 822120 0.8 20.7 11.1 0.5 252 20.7 8.0 29.7 77.9 5.9 7.5 3 91 <0.2 1.1 Bottom 20.7 8.0 29.7 77.8 5.9 11.1 0.5 254 20.7 8.0 29.7 77.6 5.9 8.1 92 1.2 1.0 0.2 20.6 8.2 28.6 98.0 97.9 5.0 <0.2 1.4 Surface 20.6 8.2 28.6 98.0 1.0 20.6 8.2 28.6 7.4 4.8 6 86 <0.2 1.4 0.2 IM1 Mistv Calm 08:53 5.0 Middle 817959 4 0 0.1 345 20.5 8.1 28.9 97.5 7.4 47 4 qη < 0.2 13 Bottom 20.5 8.1 28.9 97.6 7.4 4.0 0.1 355 20.5 8.1 28.9 97.6 7.4 44 5 91 <0.2 1.3 8.8 11 1.0 0.1 113 20.7 8.2 28.4 97.6 7.4 85 < 0.2 1.3 Surface 8.2 28.4 97.6 1.0 0.1 119 20.7 8.2 28.5 97.6 7.4 9.0 12 85 <0.2 1.3 3.4 0.1 144 20.7 8.2 28.5 97.4 7.4 11.4 11 88 <0.2 1.4 IM2 Misty Calm 09:01 6.8 Middle 8.2 28.5 97.4 818169 806161 <0.2 3.4 0.1 153 20.7 8.2 28.6 97.4 7.4 11.8 10 88 1.4 20.7 11 5.8 0.1 199 8 1 28.6 97.3 7.4 13.6 91 <0.2 1.5 8.1 28.6 97.3 97.3 74 13.9 10 1.5 5.8 0.1 200 8 1 91 <0.2 20.7 28.6 1.0 0.1 54 20.7 8.2 28.3 97 N 7.4 11.6 13 85 < 0.2 1.6 Surface 8.2 28.3 97.0 1.5 1.0 57 97.0 12.0 14 85 0.1 20.7 8.2 7.4 <0.2 28.3 14.8 0.0 113 14 87 <0.2 1.5 3.5 20.7 8.2 28.3 96.7 7.4 IM3 Misty Moderate 09:07 7.0 Middle 20.7 8.2 28.3 96.7 88 818777 805574 13 13 0.0 122 183 96.7 7.4 14.5 88 1.6 3.5 20.7 8.2 <0.2 8.2 16.4 6.0 20.7 28.3 96.7 7.3 90 Rottom 20.7 8.2 28.3 96.7 7.3 6.0 0.0 198 20.7 8.2 28.3 96.7 7.3 16.0 12 91 1.6 <0.2 18.6 1.0 0.1 294 19 1.3 20.7 8.2 28.4 97.2 7.4 84 <0.2 Surface 20.7 8.2 28.4 97.2 1.0 0.1 308 20.7 8.2 28.4 19.1 19 85 <0.2 1.4 4.1 20.3 19 88 <0.2 1.3 120 7.4 0.0 20.7 8.2 28.4 97.1 IM4 09:16 8.2 Middle 20.7 8.2 28.4 97.1 20 88 819702 804615 Mistv Moderate 4.1 0.0 120 20.7 8.2 7.4 20.5 20 21 87 <0.2 28.4 7.2 0.0 20.6 21.8 91 1.3 8.2 28.5 97.0 7.4 97.0 Bottom 20.6 8.2 28.5 7.2 0.0 143 20.6 8.2 28.5 97.0 21.9 21 <0.2 1.4 355 1.4 1.0 0.2 20.7 8.2 96.6 12.6 18 85 <0.2 28.2 7.4 Surface 20.7 8.2 28.2 96.6 1.0 327 20.7 8.2 12.8 17 84 <0.2 0.2 3.8 349 20.7 12.6 17 88 1.4 0.2 8.2 28.2 96.6 <0.2 09:23 IM5 7.6 Middle 20.7 8.2 28.2 96.6 820718 804862 Misty Moderate 3.8 321 20.7 12.4 18 87 <0.2 0.2 1.3 6.6 0.1 20.6 8.1 8.1 28.3 96.4 96.5 14.8 14.8 17 90 <0.2 20.6 8.1 28.3 96.5 7.3 Bottom 6.6 0.2 20.6 28.3 17 < 0.2 1.0 0.1 322 20.7 8.2 27.7 95.8 3.0 5 85 <0.2 1.6 1.6 Surface 8.2 27.7 95.8 1.0 0.1 334 20.7 8.2 95.8 7.3 3.0 5 84 <0.2 1.4 3.5 0.1 322 20.7 95.8 3.3 5 88 <0.2 Misty Moderate 09:31 Middle 20.7 8.2 28.1 95.7 821052 805843 <0.2 3.5 0.1 326 20.7 8.2 28.3 95.5 7.3 3.4 5 88 4.6 4.5 1.6 6.0 0.1 320 20.7 8.2 28.7 95.5 95.6 6 90 <0.2 7.3 6.0 0.1 324 20.6 8.2 28.6 5 90 1.3 1.0 0.1 269 20.6 8.2 28.5 96.8 9.2 12 85 <0.2 Surface 96.8 7 4 9.7 1.0 0.1 283 20.7 82 28.5 12 85 <0.2 11.4 14 1.4 4.3 88 <0.2 0.1 262 20.7 8.2 28.5 96.5 7.3 IM7 Moderate 09:37 Middle 8.2 28.5 96.5 821347 806825 Misty 88 4.3 0.1 284 20.6 8.2 28.5 96.5 7.3 11.3 13 7.6 0.1 244 20.6 8.2 28.6 96.4 11.6 15 91 <0.2 1.3 Bottom 20.6 8.2 28.6 96.5 7.3 7.6 0.1 244 20.6 28.6 96.5 12.0 16 < 0.2 1.3 1.0 0.2 240 20.7 8.0 28.0 87.5 6.7 6.7 4.2 4 86 < 0.2 1.4 Surface 20.7 8.0 28.0 87.4 87.3 1.4 8.0 28.1 1.0 0.2 252 20.7 4.3 3 87 < 0.2 8.0 28.1 82.7 6.3 7.0 4 91 <0.2 1.2 3.9 0.1 46 20.7 20.7 8.0 28.1 82.6 821849 808131 IM8 Cloudy Moderate 08:55 7.7 Middle 90 1.3 82.5 6.3 7.1 90 3.9 0.1 48 20.7 8.0 28.1 3 92 1.2 6.7 0.3 79 20.7 8.0 28.1 81.1 7.3 4 <0.2 6.2 20.7 8.0 28.1 80.9 Rottom 6.2

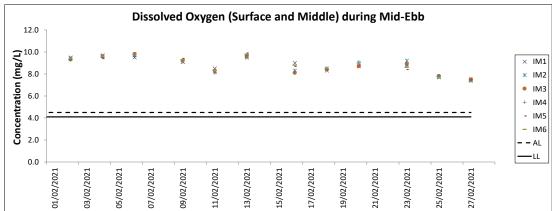
Calm: Small or no wave: Moderate: Between calm and rough: Rough: White capped or rougher

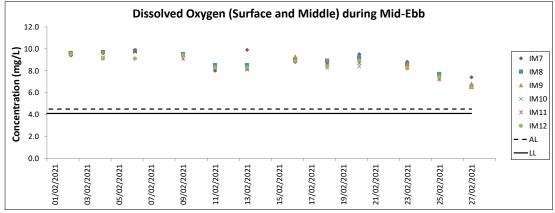
Water Quality Monitoring Results on 27 February 21 during Mid-Flood Tide DO Saturation Dissolved Suspended Solids Total Alkalinity Chromium Salinity (ppt) Turbidity(NTU) Coordinate Coordinate Nickel (µg/L) Weather Sampling Water Water Temperature (°C) Monitoring Speed Current Oxvaen (mg/L) (ppm) Sampling Depth (m) HK Grid HK Grid Station Direction Time (m/s) Average Value Average Average Value Average Value DA Value DA Value DA Value DA Value DA Value DA Condition Condition Depth (m) Value Value (Northing) (Easting) 0.3 Surface 28.3 85.4 1.0 49 20.7 85.3 4.4 6.1 1.3 3.4 0.3 72 20.7 8.0 28.7 82.3 6.2 4 89 <0.2 08:49 82.2 808788 IM9 Cloudy Moderate 8.0 28.7 6.1 822089 3.4 0.3 73 20.7 8.0 28.7 82.1 6.2 6.3 3 90 <0.2 1.2 5.8 0.2 66 20.7 8.0 28.8 81.0 6.1 7.6 4 90 <0.2 1.2 Bottom 8.0 28.8 80.9 5.8 0.2 70 20.7 8.0 28.8 80.8 6.1 7.7 3 91 <0.2 1.3 1.0 0.4 336 20.7 8.0 29.2 86.6 6.6 4.5 85 < 0.2 1.2 Surface 8.0 29.3 82.7 1.0 0.5 356 20.7 8.0 29.4 78.7 6.4 5.0 5 86 <0.2 1.2 3.9 0.4 327 20.7 8.0 29.4 85.1 6.4 5.7 6 5 89 90 <0.2 1.2 Cloudy IM10 Moderate 08:41 7.8 Middle 8.0 29.4 85.0 822388 809812 3.9 8.0 84.8 6.4 6.0 < 0.2 0.4 348 29.4 6.8 0.3 8.0 5 1.2 323 20.7 29.4 79.1 6.0 6.6 92 < 0.2 Bottom 8.0 29.4 78.9 6.0 5 78.7 1.4 6.8 20.7 8.0 29.4 6.0 6.4 92 0.4 346 **-**0 2 0.3 1.0 20.6 8.1 10.8 1.3 29.6 89.0 Surface 8.1 29.6 89.0 1.3 1.0 356 88.9 6.7 11.0 86 < 0.2 0.3 20.6 8.1 29.6 5 1.2 10.8 11.8 5 6 6.6 89 89 <0.2 3.4 0.3 340 20.6 8.0 29.6 87.1 IM11 Cloudy Moderate 08:31 6.8 Middle 8.0 29.6 87.0 88 822065 811479 313 20.6 0.4 8.0 29.6 86.9 <0.2 1.2 5.8 0.3 337 20.6 8.0 29.6 85.6 6.5 13.9 6 90 20.6 6.4 Bottom 8.0 29.6 83.8 5.8 0.3 310 20.6 8.0 29.6 82.0 6.2 14.3 5 90 <0.2 1.3 0.4 20.6 <0.2 8.0 29.8 86.7 4 Surface 20.6 8.0 29.8 86.7 1.0 0.5 314 20.6 8.0 29.8 86.6 6.5 7.1 5 86 <0.2 1.4 4.7 0.4 277 82.4 8.1 5 89 <0.2 1.3 20.6 8.0 29.8 6.2 812024 IM12 Cloudy 08:24 9.4 Middle 20.6 8.0 29.8 81.7 821446 Moderate 4.7 8.0 8.4 4 90 <0.2 1.4 0.4 279 6.1 20.6 29.8 8.4 0.3 276 20.6 8.0 29.8 75.9 5.7 5.7 10.3 3 92 <0.2 1.4 20.6 8.0 75.6 5.7 Rottom 29.8 8.4 0.4 294 20.6 8.0 29.8 75.2 10.2 1.3 20.6 8.0 29.6 77.0 5.8 3.3 3 Surface 20.6 8.0 76.8 29.6 1.0 20.6 76.6 5.8 3.4 2 2.6 Cloudy Moderate 07:52 Middle 819972 812665 2.6 41 20.6 8.0 29.8 66.5 5.0 4.2 3 Bottom 20.6 8.0 29.8 66.3 5.0 5.0 41 20.6 8.0 29.8 66.0 4.2 1.0 0.1 56 20.6 8.1 29.6 83.9 6.3 8.5 88 <0.2 1.1 Surface 20.6 8.1 29.6 83.8 1.0 0.1 59 20.6 8.1 29.6 83.7 6.3 8.8 3 89 < 0.2 1.2 SR2 Cloudy Moderate 07:35 4.1 Middle 821449 814174 3.1 10.5 90 0.1 63 20.6 8 1 29.6 78.4 78.1 5.9 2 <0.2 11 78.3 5.9 Bottom 10.6 3.1 66 8.1 29.6 2 11 0.1 20.6 91 r0 2 1.0 0.1 20.7 8.0 28.0 86.5 6.6 4.8 8 Surface 8.0 28.0 86.4 86.3 1.0 8.0 49 0.1 20.7 28.0 4.4 6.3 7 0.1 11 20.7 8.0 28.1 82.6 6.3 SR3 Cloudy Moderate 09:01 Middle 20.7 28.1 82.5 822147 807549 82.4 6.3 6 4.4 8.0 28.1 0.1 11 20.7 7.7 11.2 10.4 4 5 0.3 62 20.7 8.0 28.1 28.1 80.1 79.9 6.1 Bottom 20.7 8.0 28.1 80.0 6.1 0.3 65 20.7 1.0 0.4 77 20.8 8.2 28.7 89.8 6.8 3.2 4 Surface 20.8 8.2 28.7 89.9 81 8.2 28.7 89.9 6.8 5 1.0 0.4 20.8 3.1 4.1 63 20.7 4.9 5 0.3 7.1 . 8.2 28.8 94.1 SR4A 08:08 8.2 28.8 94.3 817186 807812 Rainy Calm 8.2 Middle 20.7 4.1 64 8.2 28.9 94.4 5.1 4 0.4 20.7 5.4 5.2 7.2 0.3 59 20.7 8.2 8.2 94.6 94.7 7.2 4 8.2 28.9 94.7 7.2 20.7 28.9 Rottom 0.3 20.7 1.0 0.1 338 20.7 8.1 6.8 5.0 5 28.7 90.0 20.7 8.1 28.7 90.1 Surface 1.0 0.1 347 20.7 28.7 90.2 6.8 5.1 5 SR5A 07:49 4.0 Middle 816569 810684 Rainv Calm 3.0 0.0 338 20.7 28.7 90.8 6.9 5.1 3 Bottom 20.7 8.1 28.7 91.0 6.9 347 20.7 8.1 91.1 6.9 5.2 3.0 0.0 1.0 0.0 95 20.7 8.1 28.6 89.0 6.8 4.7 4 Surface 20.7 8.1 28.6 89.0 1.0 0.0 95 20.6 8.1 28.7 89.0 6.8 5.1 3 SR6A Rainy Calm 07:17 3.8 Middle 817947 814730 2.8 0.0 222 20.6 89.4 6.8 7.0 5 Bottom 8.1 28.8 89.6 6.8 2.8 0.0 241 20.6 8 1 28.8 80.7 6.8 5 1.0 0.0 116 20.4 8.0 30.5 92.7 7.0 2.6 4 92.7 Surface 30.5 1.0 0.0 123 20.4 8.0 30.5 92.7 7.0 2.6 3 8 1 0.1 184 20.4 7.9 30.8 91.7 6.9 3.2 3.2 3 SR7 Rainy Moderate 06:36 16.2 Middle 7.9 30.8 91.7 823653 823722 8.1 0.1 198 20.4 7.9 30.8 91.7 6.9 15.2 0.1 76 20.4 7.9 30.8 92.9 7.0 3.2 2 Bottom 7.9 30.8 93.1 15.2 0.1 79 20.4 7.9 30.8 93.2 7.0 3.2 1.0 20.6 8.0 29.2 79.7 6.0 6.9 3 Surface 20.6 8.0 29.2 79.5 1.0 20.6 8.0 29.2 79.3 6.0 7.3 2 -. 08:15 820409 811621 SR8 Cloudy Moderate 4.0 Middle -3.0 20.6 5.8 5.7 6.7 2 8.0 29.4 76.4 Bottom 20.6 8.0 29.4 75.9 5.8

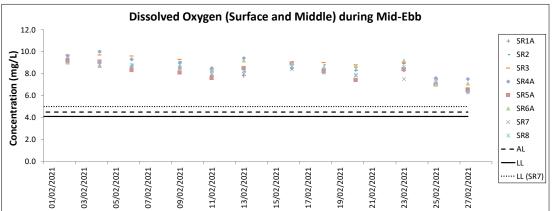
DA: Depth-Averaged

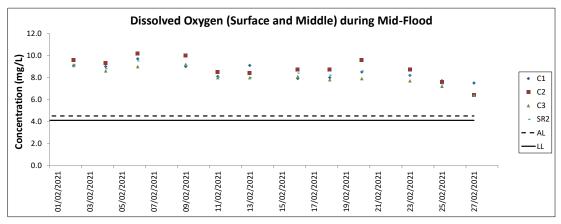
Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher Value exceeding Action Level is underlined: Value exceeding Limit Level is bolded and underlined.

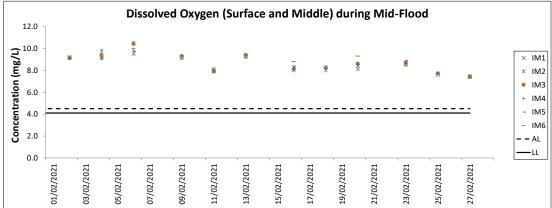


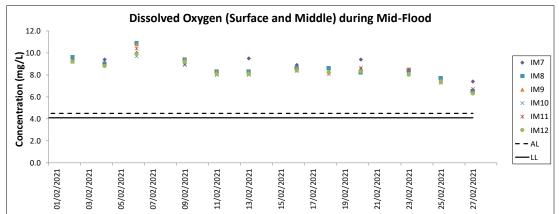


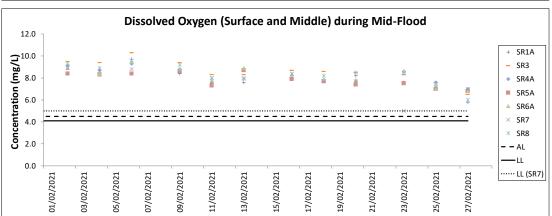


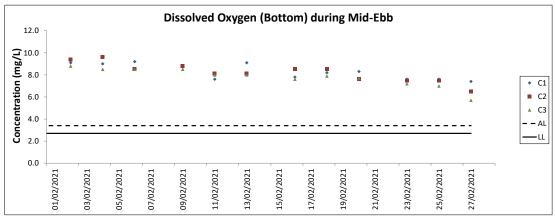


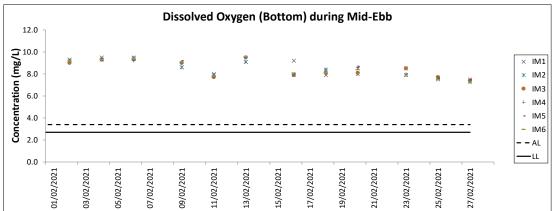


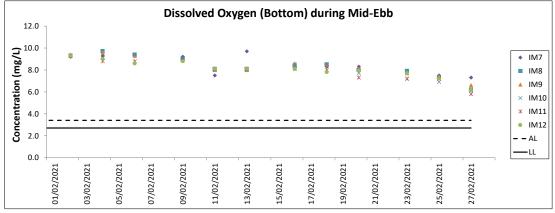


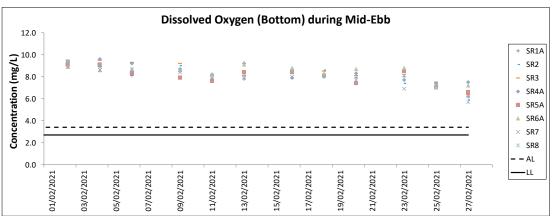


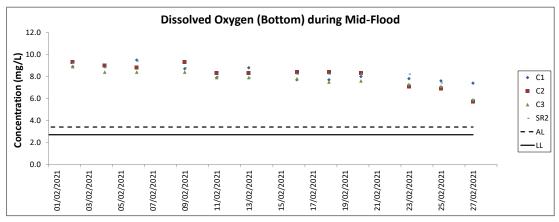


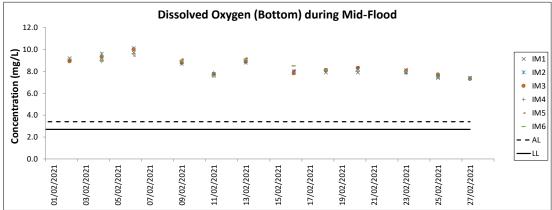


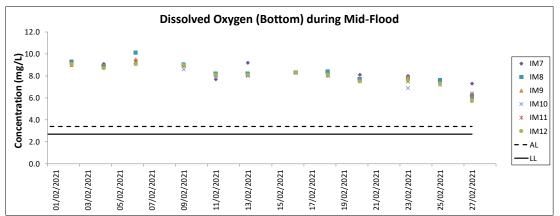


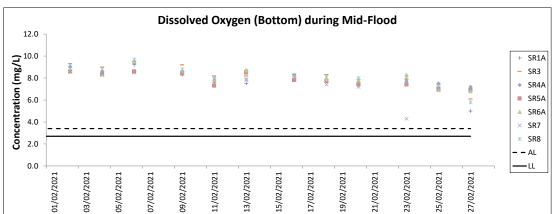


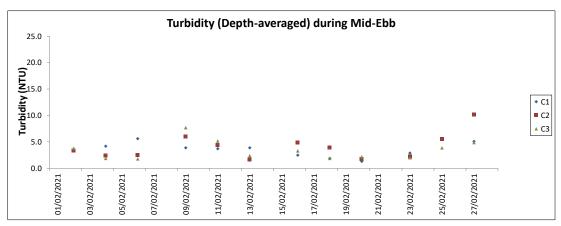


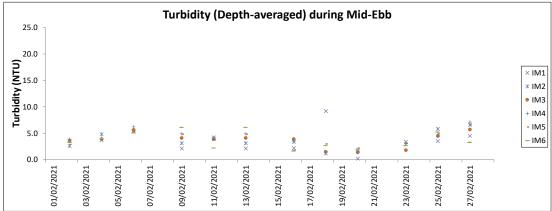


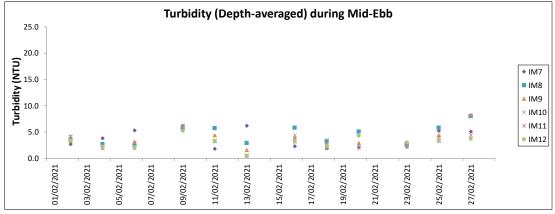


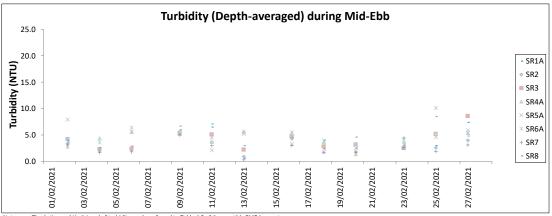




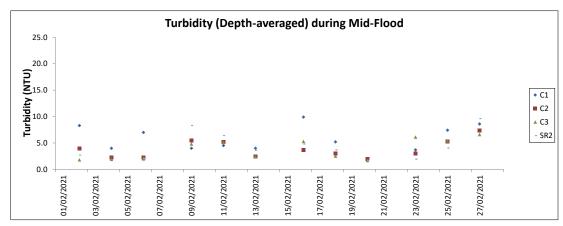


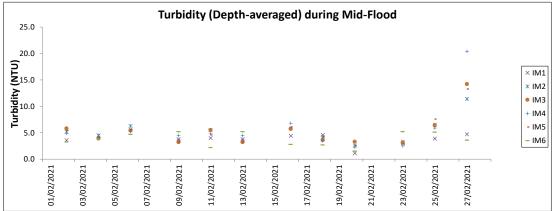


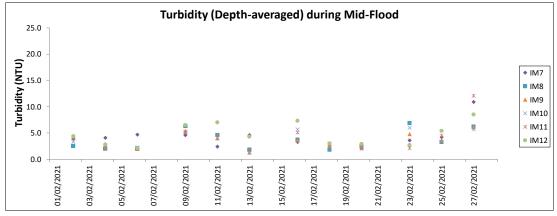


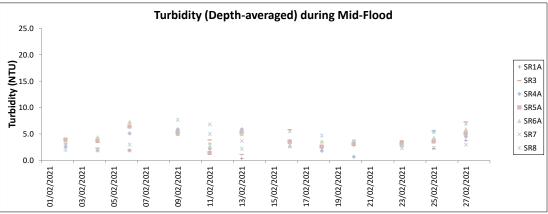


Note: The Action and Limit Level of turbidity can be referred to Table 4.2 of the monthly EM&A report

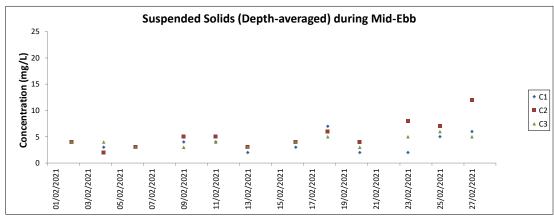


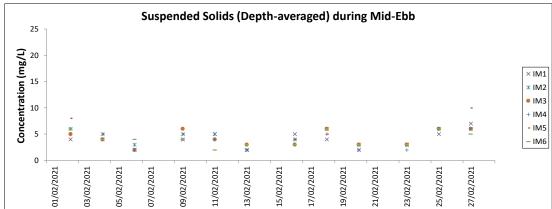


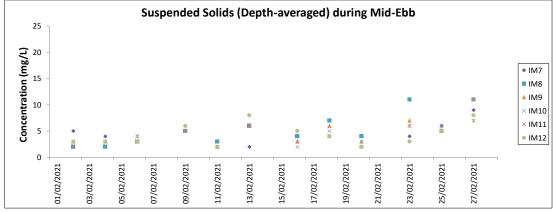


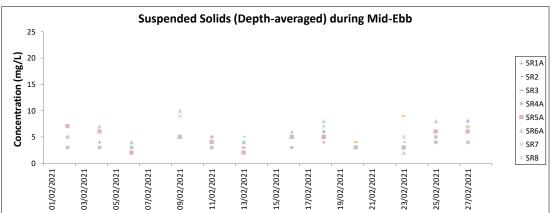


Note: The Action and Limit Level of turbidity can be referred to Table 4.2 of the monthly EM&A report

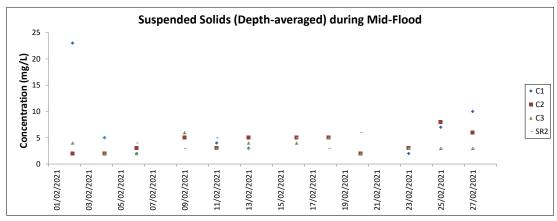


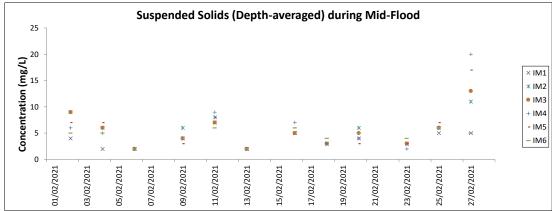


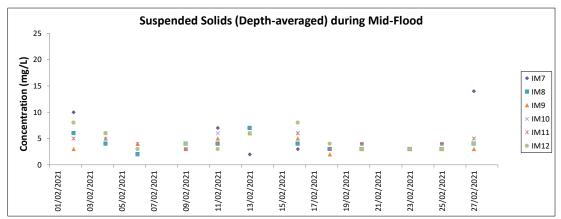


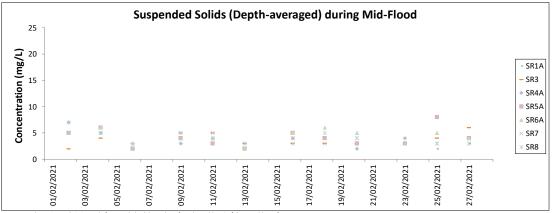


Note: The Action and Limit Level of suspended solids can be referred to Table 4.2 of the monthly EM&A report.

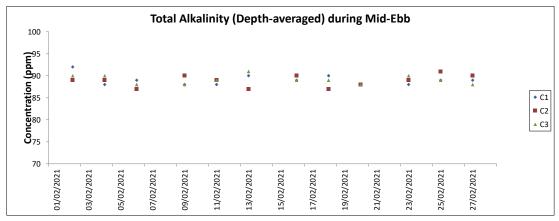


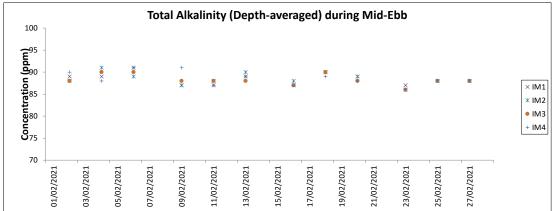


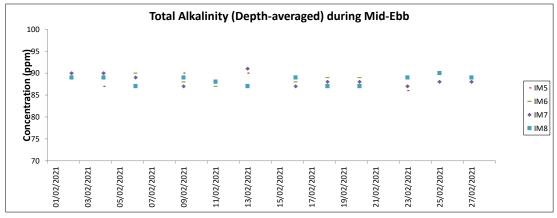


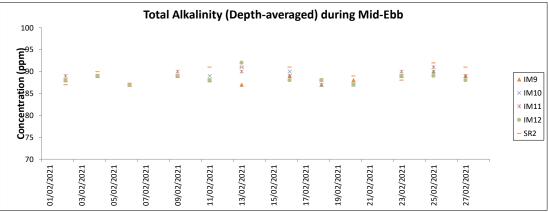


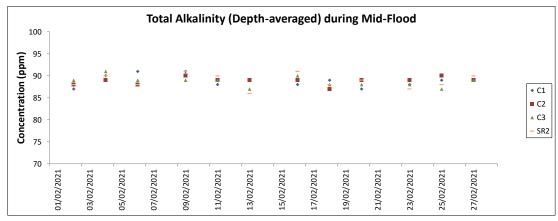
The Action and Limit Level of suspended solids can be referred to Table 4.2 of the monthly EM&A report.

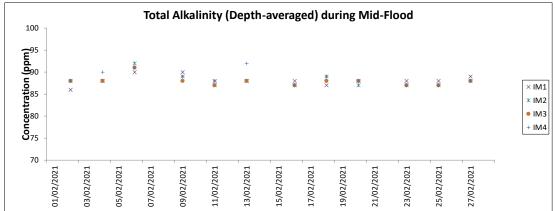


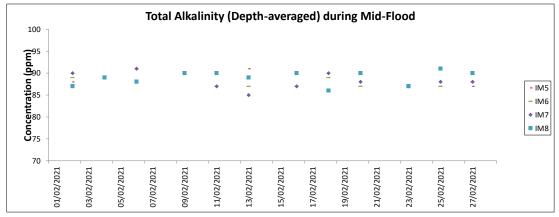


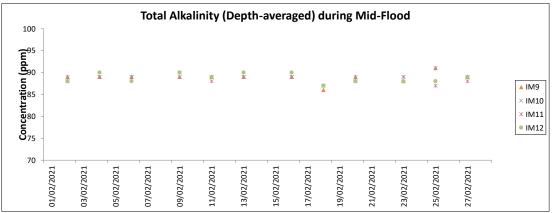


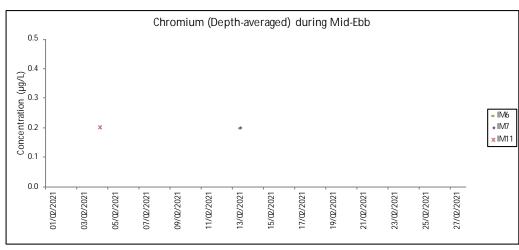


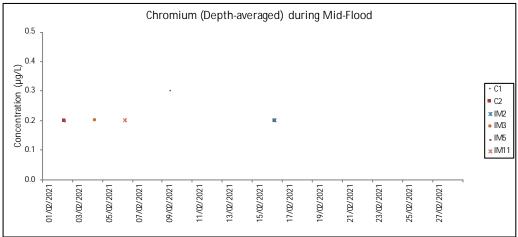




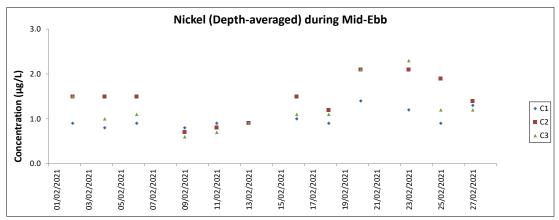


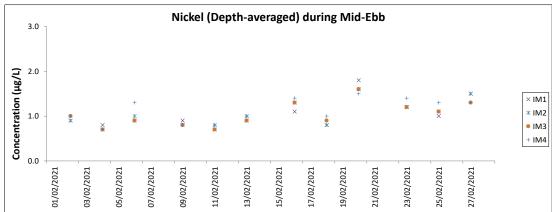


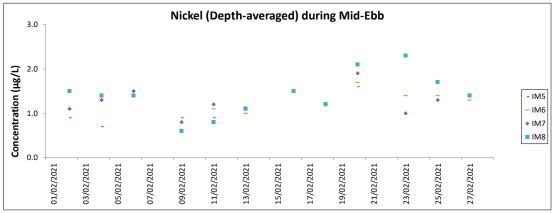


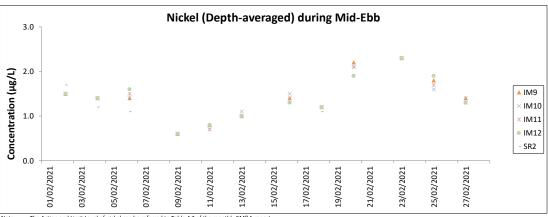


to te: The Action and Limit Level of chromium can be referred to Table 4.2 of the monthly EM&Areport. All other chromium in the reporting period was below the reporting limit 0.2 μ g/L.

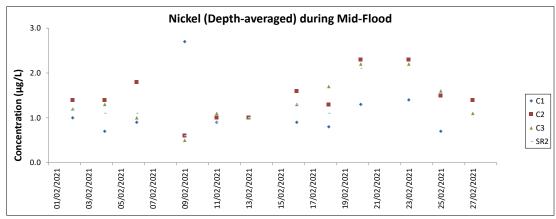


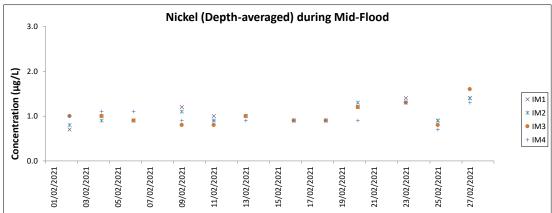


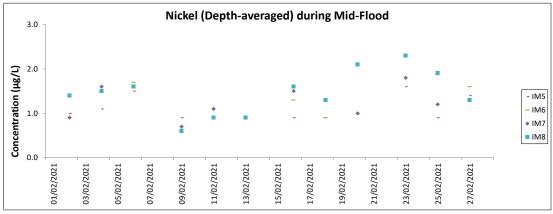


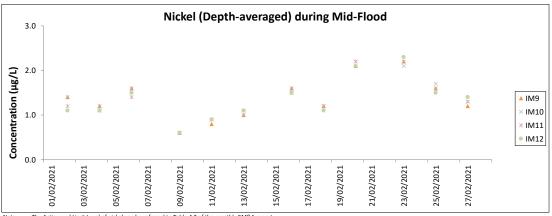


Note: The Action and Limit Level of nickel can be referred to Table 4.2 of the monthly EM&A report









Mott MacDonald Expansion of Hong Kong International Airport into a Three-Runway System
Chinese White Dolphin Monitoring Results

CWD Small Vessel Line-transect Survey

Survey Effort Data

DATE	AREA	BEAU	KM SEARCHED	SEASON	VESSEL	TYPE	P/S
4-Dec-20	NEL	2	1.000	WINTER	32166	3RS ET	Р
4-Dec-20	NEL	3	30.450	WINTER	32166	3RS ET	Р
4-Dec-20	NEL	4	6.100	WINTER	32166	3RS ET	Р
4-Dec-20	NEL	2	1.000	WINTER	32166	3RS ET	S
4-Dec-20	NEL	3	8.450	WINTER	32166	3RS ET	S
9-Dec-20	SWL	2	22.072	WINTER	32166	3RS ET	Р
9-Dec-20	SWL	3	32.643	WINTER	32166	3RS ET	Р
9-Dec-20	SWL	2	8.280	WINTER	32166	3RS ET	S
9-Dec-20	SWL	3	6.717	WINTER	32166	3RS ET	S
10-Dec-20	SWL	2	40.788	WINTER	32166	3RS ET	Р
10-Dec-20	SWL	3	11.922	WINTER	32166	3RS ET	Р
10-Dec-20	SWL	2	13.112	WINTER	32166	3RS ET	S
10-Dec-20	SWL	3	2.693	WINTER	32166	3RS ET	S
11-Dec-20	AW	1	4.850	WINTER	32166	3RS ET	Р
11-Dec-20	WL	1	4.680	WINTER	32166	3RS ET	Р
11-Dec-20	WL	2	10.655	WINTER	32166	3RS ET	Р
11-Dec-20	WL	3	4.566	WINTER	32166	3RS ET	Р
11-Dec-20	WL	1	1.310	WINTER	32166	3RS ET	S
11-Dec-20	WL	2	6.879	WINTER	32166	3RS ET	S
11-Dec-20	WL	3	2.210	WINTER	32166	3RS ET	S
15-Dec-20	NEL	2	8.700	WINTER	32166	3RS ET	Р
15-Dec-20	NEL	3	28.460	WINTER	32166	3RS ET	Р
15-Dec-20	NEL	2	3.900	WINTER	32166	3RS ET	S
15-Dec-20	NEL	3	5.940	WINTER	32166	3RS ET	S
16-Dec-20	AW	3	4.550	WINTER	32166	3RS ET	Р
16-Dec-20	WL	3	13.920	WINTER	32166	3RS ET	Р
16-Dec-20	WL	4	2.060	WINTER	32166	3RS ET	Р
16-Dec-20	WL	5	0.400	WINTER	32166	3RS ET	Р
16-Dec-20	WL	3	11.710	WINTER	32166	3RS ET	S
16-Dec-20	WL	4	1.180	WINTER	32166	3RS ET	S
18-Dec-20	NWL	2	3.100	WINTER	32166	3RS ET	Р
18-Dec-20	NWL	3	39.720	WINTER	32166	3RS ET	Р
18-Dec-20	NWL	4	19.680	WINTER	32166	3RS ET	Р
18-Dec-20	NWL	2	0.200	WINTER	32166	3RS ET	S
18-Dec-20	NWL	3	10.900	WINTER	32166	3RS ET	S
18-Dec-20	NWL	4	1.600	WINTER	32166	3RS ET	S
21-Dec-20	NWL	3	23.100	WINTER	32166	3RS ET	Р
21-Dec-20	NWL	4	40.400	WINTER	32166	3RS ET	Р
21-Dec-20	NWL	2	1.000	WINTER	32166	3RS ET	S
21-Dec-20	NWL	3	6.200	WINTER	32166	3RS ET	S
21-Dec-20	NWL	4	4.300	WINTER	32166	3RS ET	S
11-Jan-21	NEL	2	6.200	WINTER	32166	3RS ET	Р
11-Jan-21	NEL	3	24.380	WINTER	32166	3RS ET	Р
11-Jan-21	NEL	4	6.900	WINTER	32166	3RS ET	Р
11-Jan-21	NEL	2	1.900	WINTER	32166	3RS ET	S
11-Jan-21	NEL	3	7.320	WINTER	32166	3RS ET	S
11-Jan-21	NEL	4	0.500	WINTER	32166	3RS ET	S

DATE	AREA	BEAU	KM SEARCHED	SEASON	VESSEL	TYPE	P/S
12-Jan-21	NEL	2	8.900	WINTER	32166	3RS ET	Р
12-Jan-21	NEL	3	28.460	WINTER	32166	3RS ET	Р
12-Jan-21	NEL	2	2.600	WINTER	32166	3RS ET	S
12-Jan-21	NEL	3	7.040	WINTER	32166	3RS ET	S
15-Jan-21	SWL	2	12.333	WINTER	32166	3RS ET	Р
15-Jan-21	SWL	3	36.540	WINTER	32166	3RS ET	Р
15-Jan-21	SWL	4	0.687	WINTER	32166	3RS ET	Р
15-Jan-21	SWL	2	4.680	WINTER	32166	3RS ET	S
15-Jan-21	SWL	3	11.610	WINTER	32166	3RS ET	S
18-Jan-21	AW	3	4.810	WINTER	32166	3RS ET	Р
18-Jan-21	WL	3	18.290	WINTER	32166	3RS ET	Р
18-Jan-21	WL	4	1.470	WINTER	32166	3RS ET	Р
18-Jan-21	WL	3	9.240	WINTER	32166	3RS ET	S
18-Jan-21	WL	4	1.200	WINTER	32166	3RS ET	S
19-Jan-21	NWL	2	40.189	WINTER	32166	3RS ET	P
19-Jan-21	NWL	3	21.431	WINTER	32166	3RS ET	Р
19-Jan-21	NWL	2	8.240	WINTER	32166	3RS ET	S
19-Jan-21	NWL	3	2.750	WINTER	32166	3RS ET	S
19-Jan-21	NWL	4	0.600	WINTER	32166	3RS ET	S
20-Jan-21	NWL	2	60.280	WINTER	32166	3RS ET	P
20-Jan-21	NWL	3	1.830	WINTER	32166	3RS ET	P
20-Jan-21	NWL	2	11.100	WINTER	32166	3RS ET	S
20-Jan-21	NWL	3	0.490	WINTER	32166	3RS ET	S
26-Jan-21	SWL	2	52.857	WINTER	32166	3RS ET	P
26-Jan-21	SWL	2	13.957	WINTER	32166	3RS ET	S
27-Jan-21	AW	2	4.600	WINTER	32166	3RS ET	Р
27-Jan-21	WL	2	12.824	WINTER	32166	3RS ET	P
27-Jan-21	WL	3	4.560	WINTER	32166	3RS ET	P
27-Jan-21	WL	2	7.273	WINTER	32166	3RS ET	S
27-Jan-21	WL	3	3.305	WINTER	32166	3RS ET	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	Р
9-Feb-21	NEL	3	10.310	WINTER	32166	3RS ET	S
16-Feb-21	AW	3	4.800	WINTER		3RS ET	P
	WL	2		WINTER	32166	3RS ET	P
16-Feb-21			10.372		32166		
16-Feb-21	WL	3	9.920	WINTER	32166	3RS ET	Р
16-Feb-21	WL	2	6.548	WINTER	32166	3RS ET	S

DATE	AREA	BEAU	KM SEARCHED	SEASON	VESSEL	TYPE	P/S
16-Feb-21	WL	3	3.027	WINTER	32166	3RS ET	Ø
17-Feb-21	NWL	2	8.500	WINTER	32166	3RS ET	Р
17-Feb-21	NWL	3	54.950	WINTER	32166	3RS ET	Р
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	Р
22-Feb-21	SWL	2	41.274	WINTER	32166	3RS ET	Р
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	Р
23-Feb-21	SWL	3	2.000	WINTER	32166	3RS ET	Р
23-Feb-21	SWL	2	15.510	WINTER	32166	3RS ET	S
24-Feb-21	NEL	2	1.950	WINTER	32166	3RS ET	Р
24-Feb-21	NEL	3	35.420	WINTER	32166	3RS ET	Р
24-Feb-21	NEL	2	2.960	WINTER	32166	3RS ET	S
24-Feb-21	NEL	3	7.270	WINTER	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
9-Dec-20	1	1117	CWD	1	SWL	2	111	ON	3RS ET	22.1828	113.9277	WINTER	NONE	Р
9-Dec-20	2	1159	CWD	1	SWL	2	59	ON	3RS ET	22.1730	113.9191	WINTER	NONE	Р
9-Dec-20	3	1211	CWD	1	SWL	2	21	ON	3RS ET	22.1702	113.9188	WINTER	NONE	Р
9-Dec-20	4	1224	FP	2	SWL	3	22	ON	3RS ET	22.1562	113.9183	WINTER	NONE	Р
9-Dec-20	5	1247	CWD	2	SWL	2	148	ON	3RS ET	22.1623	113.8987	WINTER	NONE	S
9-Dec-20	6	1351	CWD	1	SWL	3	7	ON	3RS ET	22.1487	113.8958	WINTER	NONE	S
9-Dec-20	7	1516	CWD	3	SWL	3	389	ON	3RS ET	22.2007	113.8678	WINTER	NONE	Р
10-Dec-20	1	1107	FP	1	SWL	2	3	ON	3RS ET	22.1645	113.9276	WINTER	NONE	Р
10-Dec-20	2	1156	FP	1	SWL	2	54	ON	3RS ET	22.1473	113.9180	WINTER	NONE	Р
10-Dec-20	3	1307	FP	1	SWL	2	51	ON	3RS ET	22.1548	113.8975	WINTER	NONE	Р
10-Dec-20	4	1430	CWD	2	SWL	3	53	ON	3RS ET	22.1921	113.8679	WINTER	NONE	Р
10-Dec-20	5	1448	CWD	1	SWL	3	122	ON	3RS ET	22.1991	113.8600	WINTER	NONE	S
10-Dec-20	6	1459	CWD	1	SWL	3	449	ON	3RS ET	22.1951	113.8589	WINTER	NONE	Р
10-Dec-20	7	1535	CWD	4	SWL	3	805	ON	3RS ET	22.1905	113.8490	WINTER	NONE	Р
11-Dec-20	1	1129	CWD	1	WL	2	109	ON	3RS ET	22.2229	113.8213	WINTER	NONE	Р
11-Dec-20	2	1146	CWD	2	WL	2	133	ON	3RS ET	22.2149	113.8312	WINTER	NONE	Р
16-Dec-20	1	0940	CWD	2	AW	3	19	ON	3RS ET	22.2937	113.8775	WINTER	NONE	Р
16-Dec-20	2	1039	CWD	4	WL	3	493	ON	3RS ET	22.2687	113.8538	WINTER	NONE	Р
16-Dec-20	3	1139	CWD	1	WL	3	8	ON	3RS ET	22.2323	113.8307	WINTER	NONE	Р
15-Jan-21	1	1154	FP	2	SWL	3	19	ON	3RS ET	22.1678	113.9182	WINTER	NONE	Р
15-Jan-21	2	1335	CWD	3	SWL	3	789	ON	3RS ET	22.183	113.8875	WINTER	NONE	Р
15-Jan-21	3	1443	CWD	1	SWL	2	652	ON	3RS ET	22.1758	113.8685	WINTER	NONE	Р
18-Jan-21	1	1116	CWD	3	WL	3	336	ON	3RS ET	22.2421	113.8321	WINTER	NONE	Р
18-Jan-21	2	1246	CWD	6	WL	3	45	ON	3RS ET	22.1871	113.8342	WINTER	NONE	Р
19-Jan-21	1	0948	CWD	9	NWL	3	1196	ON	3RS ET	22.3799	113.8698	WINTER	NONE	Р
19-Jan-21	2	1217	CWD	2	NWL	3	278	ON	3RS ET	22.3974	113.8879	WINTER	NONE	Р
19-Jan-21	3	1325	CWD	2	NWL	2	57	ON	3RS ET	22.3703	113.8964	WINTER	NONE	Р
19-Jan-21	4	1412	CWD	3	NWL	2	299	ON	3RS ET	22.3549	113.9074	WINTER	NONE	Р
20-Jan-21	1	1031	CWD	12	NWL	2	212	ON	3RS ET	22.2743	113.8703	WINTER	NONE	Р
20-Jan-21	2	1149	CWD	7	NWL	3	88	ON	3RS ET	22.3515	113.8779	WINTER	NONE	Р
26-Jan-21	1	1216	FP	5	SWL	2	17	ON	3RS ET	22.1549	113.9073	WINTER	NONE	S
26-Jan-21	2	1251	CWD	1	SWL	2	38	ON	3RS ET	22.2080	113.9047	WINTER	GILLNETTER	S

DATE	STG#	TIME	CWD/FP	GP SZ	AREA	BEAU	PSD	EFFORT	TYPE	DEC LAT	DEC LON	SEASON	BOAT ASSOC.	P/S
26-Jan-21	3	1327	FP	3	SWL	2	346	ON	3RS ET	22.1617	113.8975	WINTER	NONE	Р
26-Jan-21	4	1330	FP	2	SWL	2	59	ON	3RS ET	22.1577	113.8978	WINTER	NONE	Р
26-Jan-21	5	1339	FP	1	SWL	2	22	ON	3RS ET	22.1496	113.8918	WINTER	NONE	S
26-Jan-21	6	1348	FP	1	SWL	2	34	ON	3RS ET	22.1644	113.8884	WINTER	NONE	Р
26-Jan-21	7	1512	CWD	1	SWL	2	396	ON	3RS ET	22.1828	113.8596	WINTER	NONE	Р
26-Jan-21	8	1531	CWD	4	SWL	2	725	ON	3RS ET	22.1711	113.8537	WINTER	NONE	S
27-Jan-21	1	1009	CWD	5	WL	2	127	ON	3RS ET	22.2861	113.8613	WINTER	NONE	Р
27-Jan-21	2	1029	CWD	3	WL	2	470	ON	3RS ET	22.2737	113.8491	WINTER	NONE	S
27-Jan-21	3	1038	CWD	5	WL	2	79	ON	3RS ET	22.2694	113.8502	WINTER	NONE	Р
27-Jan-21	4	1208	CWD	1	WL	2	258	ON	3RS ET	22.1962	113.8300	WINTER	NONE	Р
27-Jan-21	5	1221	CWD	7	WL	2	45	ON	3RS ET	22.1960	113.8340	WINTER	NONE	Р
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	Р
5-Feb-21	3	1056	CWD	2	WL	2	817	ON	3RS ET	22.2612	113.8506	WINTER	NONE	Р
5-Feb-21	4	1102	CWD	6	WL	2	424	ON	3RS ET	22.2602	113.8404	WINTER	NONE	Р
5-Feb-21	5	1134	CWD	5	WL	2	698	ON	3RS ET	22.2413	113.8449	WINTER	NONE	Р
5-Feb-21	6	1201	CWD	1	WL	2	130	ON	3RS ET	22.2232	113.8366	WINTER	NONE	Р
5-Feb-21	7	1245	CWD	1	WL	3	231	ON	3RS ET	22.1967	113.8335	WINTER	NONE	Р
8-Feb-21	1	1003	CWD	12	NWL	3	513	ON	3RS ET	22.4049	113.8702	WINTER	NONE	Р
8-Feb-21	2	1102	CWD	1	NWL	3	779	ON	3RS ET	22.3266	113.8699	WINTER	NONE	Р
8-Feb-21	3	1133	CWD	10	NWL	2	893	ON	3RS ET	22.2732	113.8703	WINTER	NONE	Р
8-Feb-21	4	1254	CWD	1	NWL	3	18	ON	3RS ET	22.3571	113.8781	WINTER	NONE	Р
16-Feb-21	1	1001	CWD	3	WL	3	698	ON	3RS ET	22.2962	113.8613	WINTER	NONE	Р
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	Р
16-Feb-21	4	1135	CWD	2	WL	3	275	ON	3RS ET	22.2500	113.8467	WINTER	NONE	Р
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	Р
22-Feb-21	1	1043	FP	8	SWL	1	288	ON	3RS ET	22.1749	113.9366	WINTER	NONE	Р
22-Feb-21	2	1051	FP	3	SWL	1	72	ON	3RS ET	22.1625	113.9363	WINTER	NONE	Р
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	Р

DATE	STG#	TIME	CWD/FP	GP SZ	AREA	BEAU	PSD	EFFORT	TYPE	DEC LAT	DEC LON	SEASON	BOAT ASSOC.	P/S
22-Feb-21	6	1115	FP	1	SWL	1	16	ON	3RS ET	22.1572	113.9274	WINTER	NONE	Р
22-Feb-21	7	1308	FP	5	SWL	2	599	ON	3RS ET	22.1761	113.8972	WINTER	NONE	Р
22-Feb-21	8	1314	FP	2	SWL	2	67	ON	3RS ET	22.1663	113.8972	WINTER	NONE	Р
22-Feb-21	9	1320	FP	6	SWL	2	113	ON	3RS ET	22.1568	113.8974	WINTER	NONE	Р
22-Feb-21	10	1330	FP	2	SWL	2	1	ON	3RS ET	22.1518	113.8876	WINTER	NONE	Р
22-Feb-21	11	1339	FP	3	SWL	2	161	ON	3RS ET	22.1696	113.8878	WINTER	NONE	Р
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	Р
22-Feb-21	14	1442	FP	5	SWL	2	513	ON	3RS ET	22.1793	113.8686	WINTER	NONE	Р
22-Feb-21	15	1446	FP	3	SWL	2	199	ON	3RS ET	22.1848	113.8687	WINTER	NONE	Р
22-Feb-21	16	1449	FP	5	SWL	2	672	ON	3RS ET	22.1891	113.8684	WINTER	NONE	Р
22-Feb-21	17	1456	FP	1	SWL	2	61	ON	3RS ET	22.1966	113.8685	WINTER	NONE	Р
22-Feb-21	18	1508	FP	3	SWL	2	360	ON	3RS ET	22.1849	113.8590	WINTER	NONE	Р
23-Feb-21	1	1042	FP	2	SWL	2	310	ON	3RS ET	22.1774	113.9358	WINTER	NONE	Р
23-Feb-21	2	1304	FP	3	SWL	2	62	ON	3RS ET	22.1668	113.89727	WINTER	NONE	Р
23-Feb-21	3	1310	FP	7	SWL	2	285	ON	3RS ET	22.1643	113.8972	WINTER	NONE	Р
23-Feb-21	4	1314	FP	3	SWL	2	18	ON	3RS ET	22.1587	113.8975	WINTER	NONE	Р
23-Feb-21	5	1430	FP	3	SWL	2	63	ON	3RS ET	22.1743	113.8688	WINTER	NONE	Р

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 408.033 km of survey effort was collected under Beaufort Sea State 3 or below with favourable visibility; total no. of 17 on-effort sightings and total number of 65 dolphins from on-effort sightings were collected under such condition. Calculation of the encounter rates in February 2021 are shown as below:

$$STG = \frac{17}{408.033} \times 100 = 4.17$$

$$ANI = \frac{65}{408,033} \times 100 = 15.93$$

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

A total of 1213.699 km of survey effort was collected under Beaufort Sea State 3 or below with favourable visibility; total no. of 50 on-effort sightings and total number of 167 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)

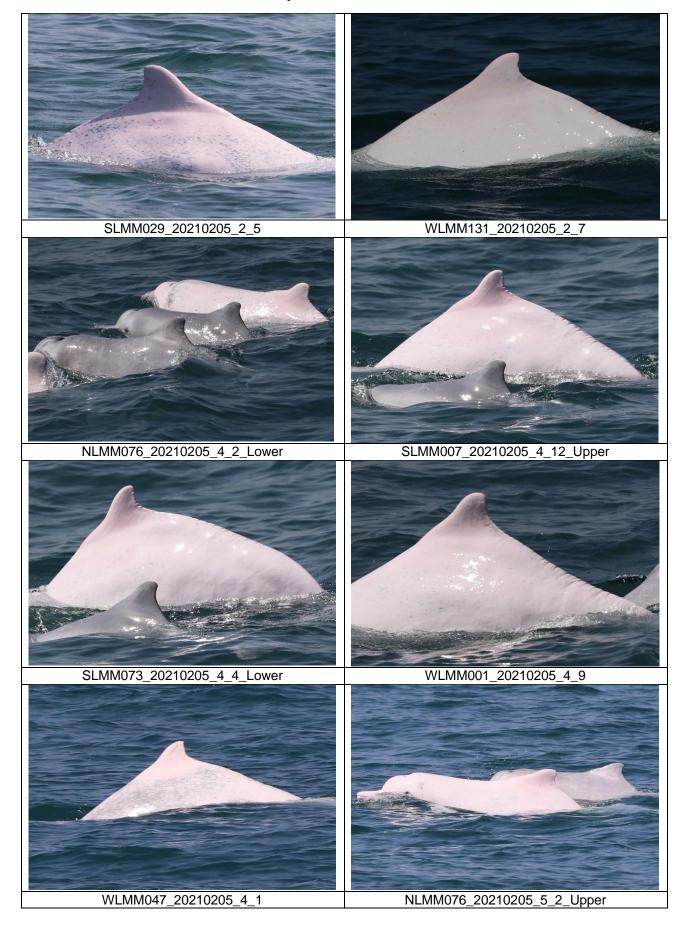
$$STG = \frac{50}{1213.699} \times 100 = 4.12$$

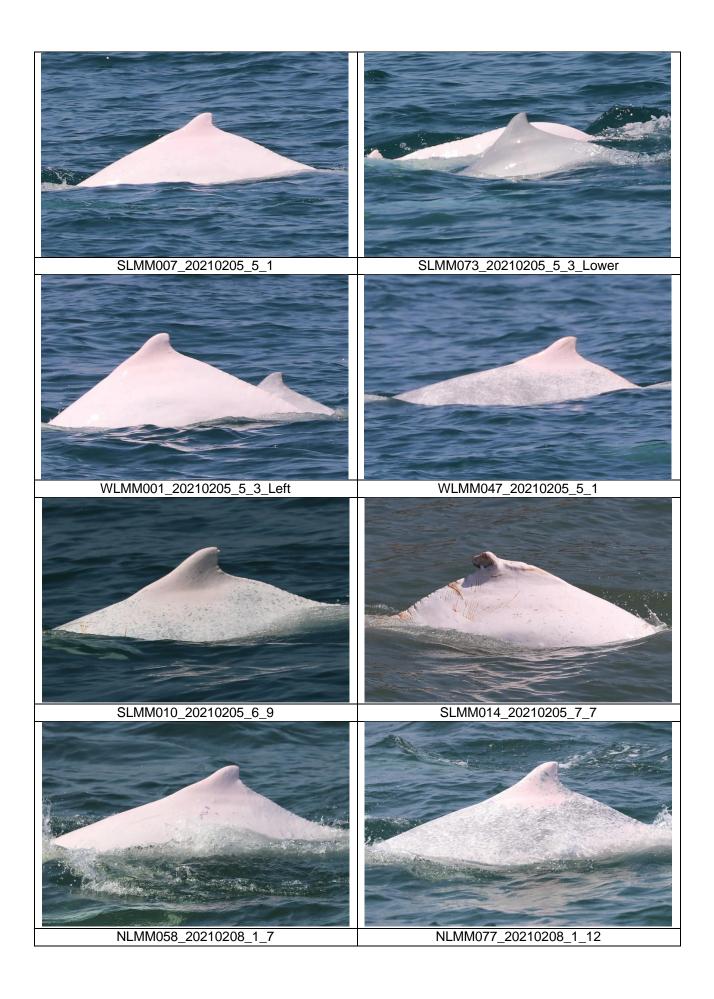
Running Quarterly Encounter Rate by Number of Dolphins (ANI)

$$ANI = \frac{167}{1213.699} \ x \ 100 = 13.76$$

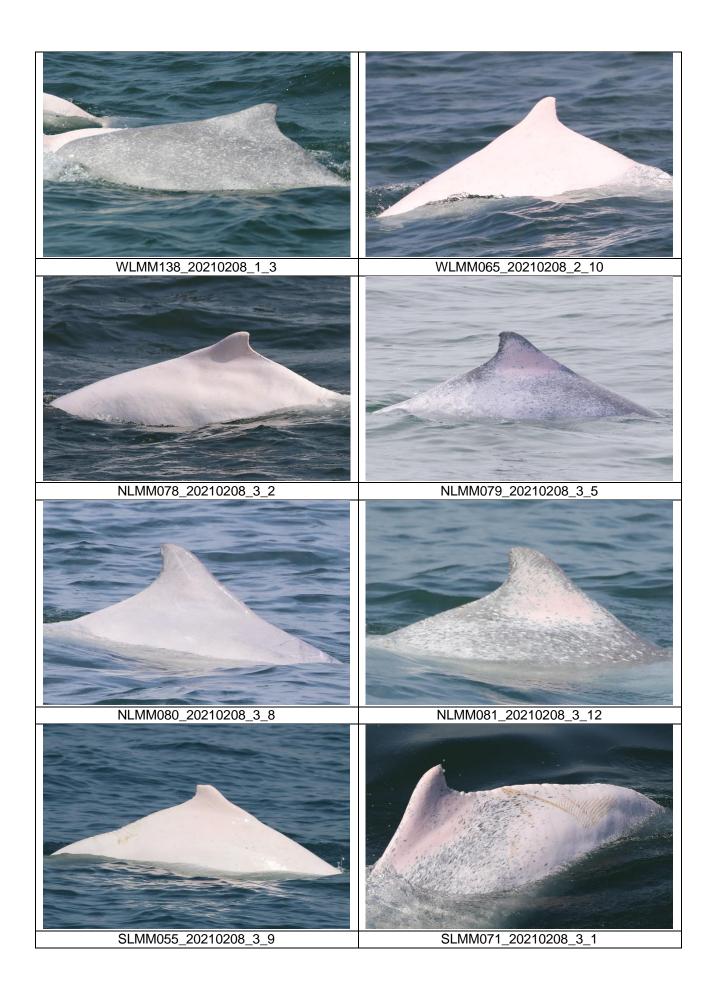
CWD Small Vessel Line-transect Survey

Photo Identification

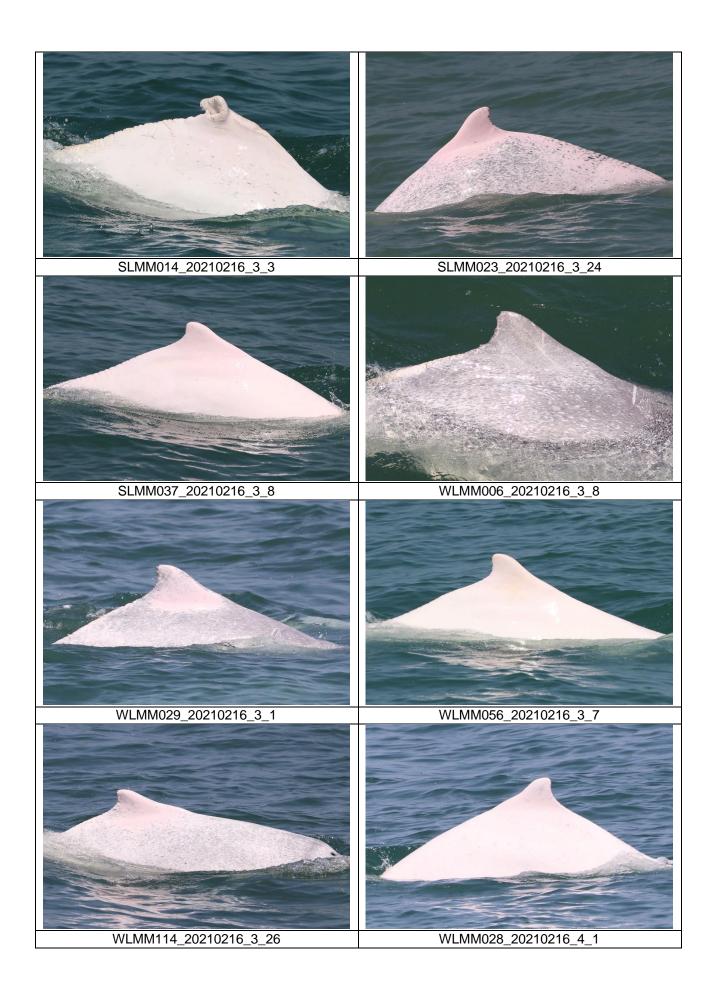


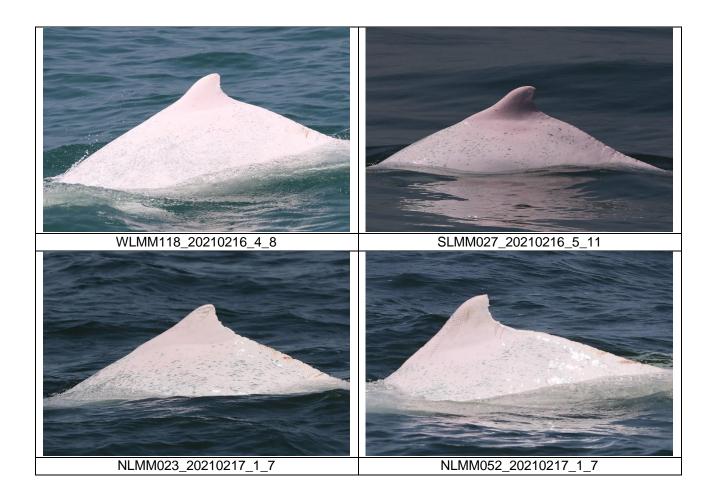












CWD Land-based Theodolite Tracking Survey

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
24/Feb/21	Lung Kwu Chau	8:50	14:50	6:00	2-3	1	1	2
26/Feb/21	Sha Chau	10:44	16:44	6:00	2	2	0	-

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

Appendix D. Calibration Certificates

CALIBRATION REPORT

Test Report No.

: BA030013

Date of Issue

: 26 February 2021

Page No.

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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 - SAMPLE INFORMATION

Description of Samples

Titrette® bottle-top burette, 50mL

Brand Name

BRAND

Model Number

1224B90

Serial Number

1224B90 10N64701

Date of Received

: Feb 25, 2021

Date of Calibration

: Feb 26, 2021

Date of Next Calibration^(a)

May 25, 2021

PART C - CALIBRATION REQUESTED

Parameter(b)

Reference Method

Accuracy Test

In-house Method (Gravimetric Method)

~ CONTINUED ON NEXT PAGE ~

Remark(s): -

⁽d) The "Date of Next Calibration" is recommended according to best practice principals as practiced by QPT or quoted from relevant international standards

⁽b) All chemical and microbiological tests were performed at unit 10-5/F and unit 10-14/F respectively of the company address stated above.



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

CALIBRATION REPORT

Test Report No.

: BA030013

Date of Issue

26 February 2021

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PART D - RESULT(c),(d)

Water temperature: 24.0°C

Environmental conditions of the calibration:

Relative humidity: 64%

Z-Factor: 1.0133

Nominal volume: 3.0ml

Trial	Range: (1-4)	Range: (16-19)	Range: (23-26)	Range: (34-37)	Range: (42-45)
1	2.9865	2.9961	2.9787	3.0361	3.0184
2	2.9890	2.9796	2.9899	3.0193	3.0298
3	2.9875	2.9841	2.9886	3.0239	3.0285
4	2.9875	2.9800	2.9815	3.0198	3.0213
5	2.9865	2.9892	2.9939	3.0291	3.0338
6	2.9846	2.9819	2.9852	3.0217	3.0250
7	2.9830	2.9950	2.9841	3.0350	3.0239
8	2.9769	2.9719	2.9807	3.0115	3.0205
9	2.9812	2.9846	2.9827	3.0244	3.0225
10	2.9865	2.9847	2.9852	3.0245	3.0250
Average (g)	2.9849	2.9847	2.9851	3.0245	3.0249
Standard deviation	0.0036	0.0073	0.0046	0.0000	0.0000
Converted volume (mL)	3.0247	3.0245	3.0249	3.0227	3.0261
Error (%)	0.8246	0.8175	0.8290	0.7577	0.8696
RSD (%)	0.1204	0.2406	0.1530	0.1518	0.1512

Acceptance Criteria (e)

Accuracy (%Error)	< ±1%	<±1%	<±1%	<±1%	<±1%
Precision (%RSD)	< 1%	< 1%	< 1%	< 1%	< 1%

~ END OF REPORT ~

Remark(s): -

(e) The "acceptance criteria" is applicable for similar equipment used by QPT or quoted from relevant international standards.

⁽c) The results relate only to the tested sample as received

⁽⁴⁾ The performance of the equipment stated in this report is checked with independent reference material and results compared against a calibrated secondary source.



REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Report No.

BA030005

Date of Issue

01 March 2021

Page No.

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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

16H104233

Date of Received

Feb 25, 2021 Feb 25, 2021

Date of Calibration Date of Next Calibration(a)

May 24, 2021

PART C – REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

Parameter Reference Method

pH at 25°C APHA 21e 4500-H+ B Dissolved Oxygen APHA 21e 4500-O G

Conductivity at 25°C APHA 21e 2510 B APHA 21e 2520 B Salinity

APHA 21e 2130 B Turbidity

Section 6 of international Accreditation New Zealand Technical Temperature

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	9.90	-0.11	Satisfactory

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

(2) Temperature

Reading of Ref. thermometer	Displayed Reading (°C)	Tolerance (°C)	Results
10	10.0	0.0	Satisfactory
21	20.7	-0.3	Satisfactory
41	40.9	-0.1	Satisfactory

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

~ CONTINUED ON NEXT PAGE ~

Remark(s): -

The "Date of Next Calibration" is recommended according to best practice principals as practiced by QPT or quoted form relevant international standards.

The results relate only to the calibrated equipment as received

The performance of the equipment stated in this report is checked with independent reference material and results compared against a calibrated secondary source.

"Displayed Reading" denotes the figure shown on item under calibration/checking regardless of equipment precision or significant figures.

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



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

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01 March 2021

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PART D - CALIBRATION RESULTS (Cont'd)

(3) Dissolved Oxygen

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)	Results
0.21	0.01	-0.20	Satisfactory
4.55	4.56	0.01	Satisfactory
6.42	6.21	-0.21	Satisfactory
8.78	8.49	-0.29	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 (µS/cm)	Displayed Reading (μS/cm)	Tolerance (%)	Results
0.001	146.9	146.6	-0.20	Satisfactory
0.01	1412	1440	1.98	Satisfactory
0.1	12890	12717	-1.34	Satisfactory
0.5	58670	58394	-0.47	Satisfactory
1.0	111900	112033	0.12	Satisfactory

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

(5) Salinity

Expected Reading (g/L)	Displayed Reading (g/L)	Tolerance (%)	Results
10	9.91	-0.90	Satisfactory
20	19.63	-1.85	Satisfactory
30	30.20	0.67	Satisfactory

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

(6) Turbidity

Expected Reading (NTU)	Displayed Reading ^(f) (NTU)	Tolerance ^(g) (%)	Results
0	0.16	' ''	Satisfactory
10	10.19	1.9	Satisfactory
20	20.36	1.8	Satisfactory
100	99.78	-0.2	Satisfactory
800	798.12	-0.2	Satisfactory

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

Remark(s): -

[~] END OF REPORT ~

[&]quot;Displayed Reading" presents the figures shown on item under calibration/ checking regardless of equipment precision or significant figures.

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



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REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Report No.

BA020021

Date of Issue

03 February 2021

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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

17H105557

Date of Received

Feb 03, 2021

Feb 03, 2021

Date of Calibration Date of Next Calibration(a)

May 02, 2021

PART C – REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

Parameter

Reference Method

pH at 25°C

APHA 21e 4500-H+ B APHA 21e 4500-O G

Dissolved Oxygen 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	4.02	0.02	Satisfactory
7.42	7.44	0.02	Satisfactory
10.01	9.98	-0.03	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	10.0	0.0	Satisfactory
20	20.1	0.1	Satisfactory
40	40.1	0.1	Satisfactory

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

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Remark(s): -

The "Date of Next Calibration" is recommended according to best practice principals as practiced by QPT or quoted form relevant international standards.

The results relate only to the calibrated equipment as received

The performance of the equipment stated in this report is checked with independent reference material and results compared against a calibrated secondary source.

"Displayed Reading" denotes the figure shown on item under calibration/checking regardless of equipment precision or significant figures.

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



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

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PART D - CALIBRATION RESULTS (Cont'd)

(3) Dissolved Oxygen

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)	Results
0.65	0.28	-0.37	Satisfactory
2.38	2.62	0.24	Satisfactory
4.04	4.10	0.06	Satisfactory
7.28	7.40	0.12	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 (μS/cm)	Displayed Reading (μS/cm)	Tolerance (%)	Results
0.001	146.9	139.0	-5.38	Satisfactory
0.01	1412	1337	-5.31	Satisfactory
0.1	12890	12811	-0.61	Satisfactory
0.5	58670	57988	-1.16	Satisfactory
1.0	111900	111419	-0.43	Satisfactory

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

(5) Salinity

Expected Reading (g/L)	Displayed Reading (g/L)	Tolerance (%)	Results
10	9.92	-0.80	Satisfactory
20	20.13	0.65	Satisfactory
30	30.30	1.00	Satisfactory

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

(6) Turbidity

Expected Reading (NTU)	Displayed Reading ^(f) (NTU)	Tolerance ^(g) (%)	Results
0	0.08		Satisfactory
10	9.92	-0.8	Satisfactory
20	19.81	-1.0	Satisfactory
100	99.2	-0.8	Satisfactory
800	796.3	-0.5	Satisfactory

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

~ END OF REPORT ~

[&]quot;Displayed Reading" presents the figures shown on item under calibration/ checking regardless of equipment precision or significant figures.

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REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Report No.

BA030006

Date of Issue

01 March 2021

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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

18A104824

Date of Received

Feb 25, 2021

Date of Calibration

Feb 25, 2021

Date of Next Calibration(a)

May 24, 2021

PART C – REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

Parameter

Reference Method

pH at 25°C

APHA 21e 4500-H+ B APHA 21e 4500-O G

Dissolved Oxygen 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	4.02	0.02	Satisfactory
7.42	7.45	0.03	Satisfactory
10.01	10.09	0.08	Satisfactory

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

(2) Temperature

Reading of Ref. thermometer	Displayed Reading (°C)	Tolerance (°C)	Results
10	10.0	0.0	Satisfactory
21	20.4	-0.6	Satisfactory
41	40.9	-0.1	Satisfactory

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

~ CONTINUED ON NEXT PAGE ~

Remark(s): -

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REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

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PART D - CALIBRATION RESULTS (Cont'd)

(3) Dissolved Oxygen

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)	Results
0.21	0.01	-0.20	Satisfactory
4.55	6.21	1.66	Satisfactory
6.42	4.56	-1.86	Satisfactory
8.78	8.49	-0.29	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 (µS/cm)	Displayed Reading (μS/cm)	Tolerance (%)	Results
0.001	146.9	146.7	-0.14	Satisfactory
0.01	1412	1436	1.70	Satisfactory
0.1	12890	12699	-1.48	Satisfactory
0.5	58670	58421	-0.42	Satisfactory
1.0	111900	111486	-0.37	Satisfactory

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

(5) Salinity

Expected Reading (g/L)	Displayed Reading (g/L)	Tolerance (%)	Results
10	9.88	-1.20	Satisfactory
20	19.84	-0.80	Satisfactory
30	30.52	1.73	Satisfactory

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

(6) Turbidity

Expected Reading (NTU)	Displayed Reading ^(f) (NTU)	Tolerance ^(g) (%)	Results
0	0.11	==:	Satisfactory
10	10.23	2.3	Satisfactory
20	20.45	2.3	Satisfactory
100	102.38	2.4	Satisfactory
800	798.46	-0.2	Satisfactory

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

~ END OF REPORT ~

Remark(s): -

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REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Report No.

BA020020

Date of Issue

03 February 2021

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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

Feb 03, 2021 Feb 03, 2021

Date of Calibration Date of Next Calibration(a)

May 02, 2021

PART C - REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

<u>Parameter</u>

Reference Method

pH at 25°C

APHA 21e 4500-H⁺ B APHA 21e 4500-O G

Dissolved Oxygen 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	7.45	0.03	Satisfactory
10.01	10.01	0.00	Satisfactory

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

(2) Temperature

Reading of Ref. thermometer	Displayed Reading (°C)	Tolerance (°C)	Results
10	10.03	0.03	Satisfactory
20	20.08	0.08	Satisfactory
40	39.89	-0.11	Satisfactory

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

~ CONTINUED ON NEXT PAGE ~

Remark(s): -

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"Displayed Reading" denotes the figure shown on item under calibration/checking regardless of equipment precision or significant figures.

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REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Report No. : BA020020

Date of Issue : 03 February 2021

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PART D - CALIBRATION RESULTS (Cont'd)

(3) Dissolved Oxygen

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)	Results
0.65	0.40	-0.25	Satisfactory
2.38	2.71	0.33	Satisfactory
4.04	4.20	0.16	Satisfactory
7.28	7.52	0.24	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 (µS/cm)	Displayed Reading (μS/cm)	Tolerance (%)	Results
0.001	146.9	153.1	4.22	Satisfactory
0.01	1412	1324	-6.23	Satisfactory
0.1	12890	12836	-0.42	Satisfactory
0.5	58670	58301	-0.63	Satisfactory
1.0	111900	111527	-0.33	Satisfactory

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

(5) Salinity

Expected Reading (g/L)	Displayed Reading (g/L)	Tolerance (%)	Results
10	9.94	-0.60	Satisfactory
20	20.16	0.80	Satisfactory
30	30.28	0.93	Satisfactory

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

(6) Turbidity

Results	Tolerance ^(g) (%)	Displayed Reading ^(f) (NTU)	Expected Reading (NTU)
Satisfactory	7.7	0.0	0
Satisfactory	-1.0	9.9	10
Satisfactory	-1.0	19.8	20
Satisfactory	-1.3	98.7	100
Satisfactory	-0.3	797.2	800

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

~ END OF REPORT ~

Remark(s): -

[&]quot;Displayed Reading" presents the figures shown on item under calibration/ checking regardless of equipment precision or significant figures.

⁽⁸⁾ The "Tolerance Limit" mentioned is the acceptance criteria applicable for similar equipment used by Quality Pro Test-Consult Ltd. or quoted form relevant international standards.

Appendix E. 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	Works area of 3206	409237	Receipt acknowledged by EPD on 25 Oct 2016
	under APCO	Works area of 3206 (Area 11)	447899	Receipt acknowledged by EPD on 8 Aug 2019
	Registration as Chemical Waste	Site office of 3206	WPN 5213-951- Z4035-01	Completion of Registration on 18 Nov 2016
	Producer	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	GW-RS0971-20	Superseded by GW-RS0055-21
		3206	GW-RS0055-21	Valid from 3 Feb 2021 to 30 Jun 2021
		Works Area of 3206 (Area 11)	GW-RS0621-20	Valid from 6 Sep 2020 to 1 Mar 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 area of	GW-RS0740-20	Superseded by GW-RS0118-21
	Works)	3301	GW-RS0118-21	Valid from 24 Feb 2021 to 21 Aug 2021
	Construction Noise Permit (Special Case)	Works area of 3301 (Cable ducting works)	GW-RS0617-20	Valid from 14 Sep 2020 to 13 Mar 2021
3302	Notification of Construction Work	Works area of 3302	440222	Receipt acknowledged by EPD on 10 Dec 2018
	under APCO	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 area of 3302	GW-RS0988-20	Valid from 7 Jan 2021 to 6 July 2021
	Works)		GW-RS0987-20	Valid from 7 Jan 2020 to 6 July 2021
3303	Notification of Construction Work under APCO	Works area of 3303	445611	Receipt acknowledged by EPD on 27 May 2019
	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
		Works area of 3303 (Reclamation area)	GW-RS0015-21	Valid from 14 Jan 2021 to 3 Jul 2021
		Works area of 3303 (South East Quay)	GW-RS0655-20	Valid from 16 Sep 2020 to 6 Mar 2021
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 area of	GW-RS0532-20	Superseded by GW-RS0033-21
	Works)	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
3403	Notification of Construction Work under APCO	Works area of 3403	450860	Receipt acknowledged by EPD on 11 Nov 2019
	Registration as Chemical Waste Producer	Works area of 3403	WPN 5213-951- S4218-01	Completion of Registration on 9 Jan 2020
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Contract No.	Description	Location	Permit/ Reference No.	Status
	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	Works area of 3403	GW-RS0635-20	Valid from 18 Sep 2020 to 17 Mar 2021
	Case)		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
	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
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 8 Jan 2018
	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	GW-RS0789-20	Superseded by GW-RS0054-21
		3503	GW-RS0054-21	Valid from 8 Feb 2021 to 31 Jul 2021
		Stockpiling area of 3503	GW-RS0870-20	Valid from 25 Nov 2020 to 30 Apr 2021
		Works area of	GW-RS0997-20	Valid from 1 Jan 2021 to 28 Feb 2021
		3503 (Special Case)	GW-RS0093-21	Valid from 8 Feb 2021 to 31 Mar 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
	Bill Account for disposal	Works area of 3508	7038224	Approval granted from EPD on 8 Sep 2020
	Construction Noise Permit (General	Works area of 3508	GW-RS0882-20	Valid from 26 Nov 2020 to 23 May 2021
	Works)	Works area of 3508(Area 3)	GW-RS0802-20	Valid from 27 Oct 2020 to 23 Apr 2021
		Works area of 3508	GW-RS0884-20	Valid from 27 Nov 2020 to 25 May 2021

Contract No.	Description	Location	Permit/ Reference No.	Status
		Works area of 3508 (Special Case)	GW-RS0088-21	Valid from 23 Feb 2021 to 15 Apr 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	Works area of 3602	WPN 5296-951- N2673-01	Completion of Registration on 9 Oct 2017
	Producer	Site office of 3602	WPN 5296-951- N2673-02	Completion of Registration on 11 Dec 2017
	Bill Account for disposal	Works area of 3602	A/C 7028942	Approval granted from EPD on 6 Oct 2017
	Construction Noise Permit (General Works)	Works area of 3602	GW-RS0692-20	Valid from 1 Oct 2020 to 30 Mar 2021
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-RS0681-20	Valid from 6 Oct 2020 to 5 Apr 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	Works area of 3722A	458870	Receipt acknowledged by EPD on 14 Aug 2020
	under APCO	Works area of 3722B	458868	Receipt acknowledged by EPD on 14 Aug 2020
		Works area of 3722C	458865	Receipt acknowledged by EPD on 14 Aug 2020
		Works area of 3722D	458866	Receipt acknowledged by EPD on 14 Aug 2020
		Works area of 3722A	WPN 5218-951- T3863-01	Completion of Registration on 18 Mar 2020

Contract No.	Description	Location	Permit/ Reference No.	Status
	Registration as Chemical Waste	Works area of 3722B	WPN 5218-951- T3864-01	Completion of Registration on 18 Mar 2020
	Producer	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-RS0677-20	Valid from 18 Sep 2020 to 14 Mar 2021
3801	Notification of Construction Work	Works area of 3801	418345	Receipt acknowledged by EPD on 26 Jun 2017
	under APCO		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
	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	Valid from 31 Oct 2020 to 27 Apr 2021
	Construction Noise Permit (Special case)	Works area of 3801	GW-RS0633-20	Valid from 10 Sep 2020 to 3 Mar 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	Works area of	GW-RS0972-20	Superseded by GW-RS0053-21
	Permit (General Works)	3802	GW-RS0053-21	Valid from 4 Feb 2021 to 31 Jul 2021
3901A	Notification of Construction Work under APCO	Works area of 3901A	456240	Receipt acknowledged by EPD on 18 May 2020

Contract No.	Description	Location	Permit/ Reference No.	Status
	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
	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-RS0850-20	Superseded by GW-RS0095-21
			GW-RS0095-21	Valid from 19 Feb 2021 to 17 Jul 2021
3901B	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-RS0658-20	Valid from 18 Sep 2020 to 13 Mar 2021

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

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

		Total no. recorded in the reporting period	Total no. recorded since the project commenced
1-hr TSP	Action	0	0
	Limit	0	0
Noise	Action	0	0
	Limit	0	0
Water	Action	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	4	0	0	
From 28 December 2015 to end of the reporting period	34	1	1	