

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

Construction Phase Monthly EM&A Report No. 73 (For January 2022)

February 2022

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

Construction Phase Monthly EM&A Report No. 73 (For January 2022)

February 2022

This Monthly EM&A Report No. 73 has been reviewed and certified by the Environmental Team Leader (ETL) in accordance with

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

Certified by:

Terence Kong

Environmental Team Leader (ETL) Mott MacDonald Hong Kong Limited

Date 14 February 2022



AECOM

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By Email

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

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

14 February 2022

Dear Sir,

Contract No. 3102 3RS Independent Environmental Checker Consultancy Services

Submission of Monthly EM&A Report No. 73 (January 2022)

Reference is made to the Environmental Team's submission of the Monthly EM&A Report No. 73 under Condition 3.5 of the Environmental Permit No. EP-489/2014 certified by the ET Leader on 14 February 2022.

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.

while

Jackel Law

Independent Environmental Checker

Contents

Abb	oreviat	ions		1		
Exe	ecutive	summar	у	3		
1	Intro	duction		9		
	1.1	Backgrou	und	9		
	1.2	_	this Report	9		
	1.3	-	Organisation	9		
	1.4	Summary	y of Construction Works	13		
	1.5	Summary	y of EM&A Programme Requirements	13		
2	Air (Quality Mo	onitoring	17		
	2.1	Action ar	nd Limit Levels	17		
	2.2	Monitorin	ng Equipment	17		
	2.3	Monitorin	ng Methodology	17		
		2.3.1	Measuring Procedure	17		
		2.3.2	Maintenance and Calibration	18		
	2.4	Summary	y of Monitoring Results	18		
	2.5	Conclusion	on	18		
3	Noise Monitoring					
	3.1	Action ar	nd Limit Levels	19		
	3.2	Monitorin	ng Equipment	19		
	3.3	Monitorin	ng Methodology	20		
		3.3.1	Monitoring Procedure	20		
		3.3.2	Maintenance and Calibration	20		
	3.4	Summary	20			
	3.5	Conclusion	on	21		
4	Wat	er Quality	Monitoring	22		
	4.1	Action ar	nd Limit Levels	23		
	4.2	Monitorin	ng Equipment	25		
	4.3	Monitorin	ng Methodology	25		
		4.3.1	Measuring Procedure	25		
		4.3.2	Maintenance and Calibration	26		
		4.3.3	Laboratory Measurement / Analysis	26		
	4.4	Summary	26			
	4.5	Conclusion	on	28		
5	Waste Management					
	5.1	Action ar	nd Limit Levels	29		

	5.2	Waste M	lanagement Status	29			
	5.3	Marine S	Sediment Management	30			
6	Chir	ese Whit	te Dolphin Monitoring	31			
	6.1	Action a	nd Limit Levels	31			
	6.2	CWD Mo	onitoring Transects and Stations	31			
		6.2.1	Small Vessel Line-transect Survey	31			
		6.2.2	Land-based Theodolite Tracking Survey	33			
	6.3	CWD Mo	onitoring Methodology	33			
		6.3.1	Small Vessel Line-transect Survey	33			
		6.3.2	Photo Identification	34			
		6.3.3	Land-based Theodolite Tracking Survey	34			
	6.4	Monitorii	ng Results and Observations	35			
		6.4.1	Small Vessel Line-transect Survey	35			
		6.4.2	Photo Identification	38			
		6.4.3	Land-based Theodolite Tracking Survey	38			
	6.5	Progress	s Update on Passive Acoustic Monitoring	39			
	6.6	Site Aud	lit for CWD-related Mitigation Measures	39			
	6.7	Timing o	of reporting CWD Monitoring Results	39			
	6.8	Summar	ry of CWD Monitoring	39			
7	Env	ronmenta	al Site Inspection and Audit	40			
	7.1	Environr	mental Site Inspection	40			
	7.2	Landsca	pe and Visual Mitigation Measures	40			
	7.3	Land Co	ontamination Assessment	48			
	7.4	Audit of	SkyPier High Speed Ferries	48			
	7.5	Audit of	Construction and Associated Vessels	49			
	7.6	Impleme	entation of Dolphin Exclusion Zone	50			
	7.7	Status o	f Submissions under Environmental Permits	50			
	7.8	Complia	nce with Other Statutory Environmental Requirements	50			
	7.9	Analysis and Interpretation of Complaints, Notification of Summons and Status of Prosecutions					
		7.9.1	Complaints	51 51			
		7.9.2	Notifications of Summons or Status of Prosecution	51			
		7.9.3	Cumulative Statistics	51			
8	Futu	re Key Is	ssues and Other EIA & EM&A Issues	52			
	8.1	Construc	ction Programme for the Coming Reporting Period	52			
	8.2	Key Environmental Issues for the Coming Reporting Period					
	8.3	Monitoring Schedule for the Coming Reporting Period					
	8.4		of the Key Assumptions Adopted in the EIA Report	55 55			
9	Con	clusion a	nd Recommendation	56			

Tables

Table 1.1: Contact Information of Key Personnel	10
Table 1.2: Summary of Status of All Environmental Aspects under the Updated EM&A Manual	13
Table 2.1: Locations of Impact Air Quality Monitoring Stations	17
Table 2.2: Action and Limit Levels of Air Quality Monitoring	17
Table 2.3: Air Quality Monitoring Equipment	17
Table 2.4: Summary of Air Quality Monitoring Results	18
Table 3.1: Locations of Impact Noise Monitoring Stations	19
Table 3.2: Action and Limit Levels for Noise Monitoring	19
Table 3.3: Noise Monitoring Equipment	20
Table 3.4: Summary of Construction Noise Monitoring Results	21
Table 4.1: Monitoring Locations of Impact Water Quality Monitoring	22
Table 4.2: Action and Limit Levels for General Water Quality Monitoring and Regular DCM	
Monitoring	24
Table 4.3: The Control and Impact Stations during Flood Tide and Ebb Tide for General	
Water Quality Monitoring and Regular DCM Monitoring	24
Table 4.4: Water Quality Monitoring Equipment	25
Table 4.5: Other Monitoring Equipment	25
Table 4.6: Laboratory Measurement/ Analysis of SS and Heavy Metals	26
Table 4.7: Summary of SS Compliance Status (Mid-Ebb Tide)	27
Table 4.8: Summary of Findings from Investigation of SS Monitoring Result	27
Table 5.1: Action and Limit Levels for Construction Waste	29
Table 5.2: Construction Waste Statistics	30
Table 6.1: Derived Values of Action and Limit Levels for Chinese White Dolphin Monitoring	31
Table 6.2: Coordinates of Transect Lines in NEL, NWL, AW, WL and SWL Survey Areas	32
Table 6.3: Land-based Theodolite Survey Station Details	33
Table 6.4: Comparison of CWD Encounter Rates of the Whole Survey Area with Action	07
Levels	37
Table 6.5: Summary of Photo Identification	38
Table 6.6: Summary of Survey Effort and CWD Group of Land-based Theodolite Tracking Table 7.1: Landscape and Visual – Construction Phase Audit Summary	39 41
·	41
Table 7.2: Examples of Landscape and Visual Mitigation Measures in the Reporting Period	42
Table 7.3: Monitoring Programme for Landscape and Visual Table 7.4: Event and Action Plan for Landscape and Visual	43
Table 7.4. Event and Action Flam of Landscape and visual Table 7.5: Summary of the Number of Retained, Transplanted and To-be-transplanted	43
Transplanted and To-be-transplanted Trees in the Reporting Period	44
Table 7.6: Summary of the Transplanted Trees Updated in the Reporting Period	45
Table 7.7: Photos of the Existing Transplanted Trees Inspected in this Reporting Month	47
Table 7.8: Summary of Key Audit Findings against the SkyPier Plan	49
Table 7.9: Status of Submissions under Environmental Permit	50

Figures

Figure 1.1	Locations of Key Construction Activities
Figure 1.2	Latest Layout of the Enhanced Silt Curtain
Figure 2.1	Locations of Air and Noise Monitoring Stations and Chek Lap Kok Wind Station
Figure 4.1a	Water Quality Monitoring Stations (before 25 January 2022)
Figure 4.1b	Water Quality Monitoring Stations (on and after 25 January 2022)
Figure 6.1	Vessel based Dolphin Monitoring Transects in Construction, Post- construction and Operation Phases
Figure 6.2	Land based Dolphin Monitoring in Baseline and Construction Phases
Figure 6.3	Sightings Distribution of Chinese White Dolphins
Figure 6.5	Location for Autonomous Passive Acoustic Monitoring

Appendices

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

Abbreviations

3RS	Three-Runway System		
AAHK	Airport Authority Hong Kong		
AECOM	AECOM Asia Company Limited		
AFCD	Agriculture, Fisheries and Conservation Department		
AIS	Automatic Information System		
ANI	Encounter Rate of Number of Dolphins		
APM	Automated People Mover		
AW	Airport West		
BHS	Baggage Handling System		
C&D	Construction and Demolition		
CAP	Contamination Assessment Plan		
CAR	Contamination Assessment Report		
СТСС	Construction Traffic Control Centre		
CWD	Chinese White Dolphin		
DCM	Deep Cement Mixing		
DEZ	Dolphin Exclusion Zone		
DO	Dissolved Oxygen		
EIA	Environmental Impact Assessment		
EM&A	Environmental Monitoring & Audit		
EP	Environmental Permit		
EPD	Environmental Protection Department		
EPSS	Emergency Power Supply Systems		
ET	Environmental Team		
FCZ Fish Culture Zone			
HKBCF	Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary		
	Crossing Facilities		
HKIA	Hong Kong International Airport		
HOKLAS	Hong Kong Laboratory Accreditation Scheme		
HSF	High Speed Ferry		
HVS	High Volume Sampler		
IEC	Independent Environmental Checker		
LKC	Lung Kwu Chau		
MMHK	Mott MacDonald Hong Kong Limited		
MMWP	Marine Mammal Watching Plan		
MSS	Maritime Surveillance System		
MTRMP-CAV	Marine Travel Routes and Management Plan for		
	Construction and Associated Vessel		
NEL	Northeast Lantau		
NWL	Northwest Lantau		
PAM	Passive Acoustic Monitoring		
PM	Project Manager		
SC	Sha Chau		
SCZ	Speed Control Zone		
SCLKCMP	Sha Chau and Lung Kwu Chau Marine Park		
SS	Suspended Solids		
SSSI	Site of Special Scientific Interest		
STG	Encounter Rate of Number of Dolphin Sightings		

SWL	Southwest Lantau	
T2	Terminal 2	
The Project	The Expansion of Hong Kong International Airport into a	
	Three-Runway System	
The SkyPier Plan	Marine Travel Routes and Management Plan for High	
	Speed Ferries of SkyPier	
The Manual	The Updated EM&A Manual	
TSP	Total Suspended Particulates	
WL	West Lantau	
WMP	Waste Management Plan	

Executive summary

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

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

This is the 73rd Construction Phase Monthly EM&A Report for the Project which summarises the monitoring results and audit findings of the EM&A programme during the reporting period from 1 to 31 January 2022.

Key Activities in the Reporting Period

The key activities of the Project carried out in the reporting period are located in reclamation areas and existing airport island respectively. Works in the reclamation areas included seawall construction, filling and ground improvement works, together with runway, concourse and associated works. Land-based works on existing airport island involved mainly airfield works, Terminal 2 expansion works, modification and tunnel work for Automated People Mover (APM) and Baggage Handling System (BHS), and preparation work for utilities, with activities include road and drainage works, cable ducting, demolition, piling, and excavation works.

EM&A Activities Conducted in the Reporting Period

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

Monitoring Activities	Number of Sessions
1-hour Total Suspended Particulates (TSP) air quality monitoring	36
Noise monitoring	18
Water quality monitoring	14
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



Land-based Theodolite Tracking Survey for CWD at Sha Chau



Automatic Wheel Washing Facilities Maintained by Contractor



Inspection of Contractor's Wastewater Treatment Facility by ET

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, construction waste, and CWD did not trigger the corresponding Action and Limit Levels in the reporting period.

The water quality monitoring results for all parameters, except suspended solids (SS), obtained during the reporting period were within the corresponding Action and Limit Levels stipulated in the EM&A programme. Relevant investigation and follow-up actions will be conducted according to the EM&A programme if the corresponding Action and Limit Levels are triggered. For SS, some of the testing results triggered the relevant Action Levels, and the corresponding investigations were conducted accordingly. The investigation findings revealed that the cases were not related to the Project. To conclude, the construction activities in the reporting period did not introduce adverse impact to all water quality sensitive receivers.

Summary of Upcoming Key Issues

Reclamation Works:

Contract 3206 Main Reclamation Works

- Seawall construction; and
- Backfilling works.

Airfield Works

Contract 3301 North Runway Crossover Taxiway

- Cabling works; and
- Stockpiling.

Contract 3302 Eastern Vehicular Tunnel Advance Works

- Construction of tunnel structure;
- Pipe and drainage diversion works;
- Excavation and lateral support systems installation; and
- Stockpiling.

Contract 3303 Third Runway and Associated Works

- Architectural, Builder's and Finishing works;
- Footing and utilities work;
- Box culvert construction;

- Piling work;
- · Operation of asphalt plant; and
- Cable laying and ducting works.

Contract 3305 Airfield Ground Lighting System

- Cabling works;
- Network installation; and
- Genset installation.

Contract 3306 Observation Facility Control System Supporting Interim 2RS and 3RS

- Equipment installation;
- Cabling works; and
- Installation of temporary site accommodation.

Contract 3307 Fire Training Facility

- Architectural, Builder's and Finishing works;
- Drainage and utilities works; and
- Building construction.

Contract 3308 Foreign Object Debris Detection System

- Site formation; and
- Foreign Object Debris Tower installation.

Contract 3310 North Runway Modification Works

- Cutter soil mixing;
- Deep cement mixing; and
- Pre-boring.

Third Runway Concourse:

Contract 3403 New Integrated Airport Centres Building and Civil Works

- Architectural, Builder's Work and Finishing works;
- Steel frame installation;
- Road and drainage works;
- Backfilling; and
- Underground utilities construction.

Contract 3404 Integrated Airport Control System

- Equipment installation; and
- Cable laying.

Contract 3405 Third Runway Concourse Foundation and Substructure Works

- Sheet piling and bored piling;
- Excavation and backfilling; and
- Road formation.

Contract 3408 Third Runway Concourse and Apron Works

- Site setup works; and
- Excavation and lateral support works.

Terminal 2 Expansion:

Contract 3508 Terminal 2 Expansion Works

- Excavation and footing construction;
- Bridge demolition;

- Piling works;
- Drainage works;
- Temporary road construction;
- TBM mobilization; and
- Architectural, Builder's Work and Finishing works.

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

Contract 3601 New Automated People Mover System (TRC Line)

- Pull out test for guideway;
- Guidebeam installation; and
- Concreting work.

Contract 3602 Existing APM System Modification Works

- Car modification; and
- Concrete plinth and stitch construction.

Contract 3603 Baggage Handling System (BHS)

BHS installation.

Construction Support (Facilities):

Contract 3721 Construction Support Infrastructure Works

- Laying of drainage pipes and ducts;
- Site clearance;
- Paving works; and
- Road works.

Contract 3723 Construction Support Facilities

- Clearance works; and
- Footing works.

Airport Support Infrastructure:

Contract 3801 APM and BHS Tunnels on Existing Airport Island

- Excavation;
- Parapet wall construction; and
- Rebar fixing and formwork erection.

Contract 3802 APM and BHS Tunnels and Related Works

- Wall and slab construction;
- Installation of dewatering well;
- Deep jet mixing;
- Pipe pile and sheet pile works; and
- Excavation and lateral supports.

Construction Support (Services / Licences):

Contract 3901A Concrete Batching Facility

- Operation of concrete batching plant;
- Material conveyor belt construction; and
- Testing and commissioning for conveyor belt.

Contract 3901B Concrete Batching Facility

Operation of concrete batching plant; and

• Testing and commissioning for conveyor belt.

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^		$\sqrt{}$	No breach of Limit Level was recorded.	Nil
Breach of Action Level^		V	No breach of Action Level was recorded.	Nil
Complaint Received		V	No construction activities-related complaint was received during the reporting period.	Nil
Notification of any summons and status of prosecutions		√	No notification of summons nor prosecution was received.	Nil
Change that affect the EM&A	V		Starting from 25 Jan 2022, 6 water quality impact monitoring stations and 3 sensitive receiver stations were terminated, with the impact monitoring stations relocated back to their original locations and minor adjustment for one of the impact monitoring stations.	Nil

Note:

[^] Only triggering of Action or Limit Level found related to Project works is counted as Breach of Action or Limit Level.

1 Introduction

1.1 Background

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

Airport Authority Hong Kong (AAHK) commissioned Mott MacDonald Hong Kong Limited (MMHK) to undertake the role of Environmental Team (ET) for carrying out the Environmental Monitoring & Audit (EM&A) works during the construction phase of the Project in accordance with the Updated EM&A Manual (the Manual) submitted under EP Condition 3.1¹. AECOM Asia Company Limited (AECOM) was employed by AAHK as the Independent Environmental Checker (IEC) for the Project.

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

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

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

1.2 Scope of this Report

This is the 73rd Construction Phase Monthly EM&A Report for the Project which summarises the key findings of the EM&A programme during the reporting period from 1 to 31 January 2022.

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	Heidi Yu	2828 5704
	Team Leaders	Ken Wong	2828 5817
Independent Environmental Checker (IEC) (AECOM Asia Company Limited)	Independent Environmental Checker	Jackel Law	3922 9376
	Deputy Independent Environmental Checker	Roy Man	3922 9141
Reclamation Works:			
Party	Position	Name	Telephone
Contract 3206 Main Reclamation Works (ZHEC-CCCC-CDC Joint	Project Manager	Alan Mong	3763 1352
Venture)	Environmental Officer	Zhang Bin Wang	3763 1451
Airfield Works:			
Party	Position	Name	Telephone
Contract 3301 North Runway Crossover	Deputy Project Director	Kin Hang Chung	9800 0048
Taxiway (FJT-CHEC-ZHEC Joint Venture)	Environmental Officer	Joe Wong	6182 0351
Contract 3302 Eastern Vehicular Tunnel Advance Works	Project Manager	Dickey Yau	5699 4503
(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 3305 Airfield Ground Lighting System	Project Manager	Allam Al-Turk	2944 9725
(ADB Safegate Hong Kong Limited)	Environmental Officer	Calvin Sze	9205 9277
Contract 3306 Observation Facility Control System	Project Director	Dennis Yam	9551 9920
Supporting Interim 2RS and 3RS (Chinney Alliance Engineering Limited)	Environmental Officer	Richard Liu	9216 8990
Contract 3307 Fire Training Facility	Project Manager	Chris Wong	6110 1157
(Paul Y. Construction Company Limited)	Environmental Officer	Albert Chan	9700 1083

-	B ***	Maria	-
Party	Position	Name	Telephone
Contract 3308 Foreign Object Debris Detection	Project Manager	Jeffrey Yau	9873 7422
System (DAS Aviation Services Group)	Environmental Officer	Terry Siu	9141 2511
Contract 3310 North Runway Modification	Project Manager	Kingsley Chiang	9424 8437
Works (China State Construction Engineering (Hong Kong) Ltd.)	Environmental Officer	Federick Wong	9842 2703
hird Runway Concou	se:		
Party	Position	Name	Telephone
Contract 3403 New Integrated Airport Centres Building and Civil Works	Project Manager	Alice Leung	9220 3162
Sun Fook Kong Construction Limited)	Environmental Officer	Ray Cheung	9785 1566

Party	Position	Name	Telephone
Contract 3403 New Integrated Airport Centres Building and Civil Works	Project Manager	Alice Leung	9220 3162
(Sun Fook Kong Construction Limited)	Environmental Officer	Ray Cheung	9785 1566
Contract 3404 Integrated Airport Control System (Shun Hing Systems	Project Manager	Andy Ng	9102 2739
Integration Co., Ltd.)	Environmental Officer	Richard Ng	9802 9577
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
Contract 3408 Third Runway Concourse and Apron Works (Beijing Urban	Assistant Project Manager	Qian Zhang	5377 7976
Construction Group Company Limited and Chevalier (Construction) Company Limited Joint Venture)	Environmental Officer	Malcolm Leung	7073 7559

Terminal 2 (T2) Expansion:

Party	Position	Name	Telephone
Contract 3508 Terminal 2 Expansion Works (Gammon Engineering & Construction Company Limited)	Project Director	Richard Ellis	6201 5637
	Environmental Officer	Fanny Law	6184 4650

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

Party	Position	Name	Telephone
CRRC Puzhen Bombardier Transportation Bystems Limited and CRRC Nanjing Puzhen Co., Ltd. Joint Venture)	Environmental Officer	P L Wong	9143 2185
Contract 3602 Existing APM System Modification	Project Manager	Kunihiro Tatecho	9755 0351
Works (Niigata Transys Co., Ltd.)	Environmental Officer	Carrie Kwan	9276 0551
Contract 3603 3RS Baggage Handling System	Project Manager	КСНо	9272 9626
(VISH Consortium)	Environmental Officer	Eric Ha	9215 3432
onstruction Support (F	Facilities):		
Party	Position	Name	Telephone
Contract 3721 Construction Support Infrastructure Works (China State Construction	Site Agent	Thomas Lui	9011 5340
Engineering (Hong Kong) Ltd.)	Environmental Officer	Gary Yeung	9042 1720
Contract 3723 Eastern Support Area – Construction Support	Deputy Project Director	Philip Kong	9337 8700
Facilities (Tapbo Construction Company Limited and Konwo Modular House Ltd. Joint Venture.)	Environmental Officer	Eddie Suen	6338 8862
Contract 3728 Minor Site Works	Contract Manager	C K Liu	9194 8739
(Shun Yuen Construction Company Limited)	Environmental Officer	KFLi	9086 1793
Contract 3733 Emergency Repair Service	Project Manager	Michael Kan	9206 0550
(Wing Hing Construction Co., Ltd.)	SHE Manager	Mike Leung	6628 2550
sirport Support Infrastr	ucture:		
Party	Position	Name	Telephone
Contract 3801 APM and BHS Tunnels on Existing	Project Manager	Kingsley Chiang	9424 8437
Airport Island (China State Construction Engineering (Hong Kong) Ltd.)	Environmental Officer	Eunice Kwok	9243 1331

Party	Position	Name	Telephone
Contract 3802 APM and BHS Tunnels and Related Works	Project Director	John Adams	6111 6989
(Gammon Construction Limited)	Environmental Officer	Phoebe Ng	9869 1105

Construction Support (Services / Licences):

Party	Position	Name	Telephone
Contract 3901A Concrete Batching Facility	Project Manager	Benedict Wong	9553 2806
(K. Wah Concrete Company Limited)	Environmental Officer	C P Fung	9874 2872
Contract 3901B Concrete Batching Facility	Senior Project Manager	Gabriel Chan	2435 3260
(Gammon Construction Limited)	Environmental Officer	Rex Wong	2695 6319

1.4 Summary of Construction Works

The key activities of the Project carried out in the reporting period are located in reclamation areas and existing airport island respectively. Works in the reclamation areas included seawall construction, filling and ground improvement works, together with runway, concourse and associated works. Land-based works on existing airport island involved mainly airfield works, Terminal 2 expansion works, modification and tunnel work for Automated People Mover (APM) and Baggage Handling System (BHS), and preparation work for utilities, with activities include road and drainage works, cable ducting, demolition, 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.

1.5 Summary of EM&A Programme Requirements

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

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

Parameters	EM&A Requirements	Status
Air Quality		
Baseline Monitoring	At least 14 consecutive days before commencement of construction work	The baseline air quality monitoring result has been reported in Baseline Monitoring Report and submitted to EPD under EP Condition 3.4.
Impact Monitoring	At least 3 times every 6 days	On-going
Noise		
Baseline Monitoring	Daily for a period of at least two weeks prior to the commencement of construction works	The baseline noise monitoring result has been reported in Baseline Monitoring Report and submitted to EPD under EP Condition 3.4.
Impact Monitoring	Weekly	On-going
Water Quality		
General Baseline Water Quality Monitoring for reclamation, water jetting and field joint works	Three days per week, at mid-flood and mid-ebb tides, for at least four weeks prior to the commencement of marine works.	The baseline water quality monitoring result has been reported in Baseline Water Quality Monitoring Report and submitted to EPD under EP Condition 3.4.

Parameters	EM&A Requirements	Status
General Impact Water Quality Monitoring for reclamation, water jetting and field joint works	Three days per week, at mid-flood and mid-ebb tides.	On-going for reclamation works. General impact water quality monitoring for water jetting works was completed on 23 May 2017.
Initial Intensive Deep Cement Mixing (DCM) Water Quality Monitoring	At least four weeks	The Initial Intensive DCM Monitoring Report was submitted and approved by EPD in accordance with the Detailed Plan on DCM.
Regular DCM Water Quality Monitoring	Three times per week until completion of DCM works.	On-going (starting from 11 Jan 2022)
Sewerage and Sewage Tre	eatment	
Methodology for carrying out annual sewage flow monitoring for concerned gravity sewer	Methodology to be prepared and submitted to EPD one year before the scheduled commencement of operation of the proposed third runway	The proposed methodology of the annual sewage flow monitoring was approved by EPD. The annual flow monitoring has been started since June 2021.
Details of the routine H ₂ S monitoring system for the sewerage system of 3RS	Details to be prepared and submitted to EPD at least one year before commencement of the operation of 3RS	The details of the routine H ₂ S monitoring system will be prepared and submitted to EPD at least one year before commencement of operation of 3RS.
Waste Management		
Waste Monitoring	At least weekly	On-going
Land Contamination		
Supplementary Contamination Assessment Plan (CAP)	At least 3 months before commencement of any soil remediation works.	The Supplementary CAP was submitted and approved by EPD under EP Condition 2.20.
Contamination Assessment Report (CAR) for Golf Course	CAR to be submitted for golf course	The CAR for Golf Course was submitted and accepted by EPD.
Contamination Assessment Reports (CAR) for Terminal 2 Emergency Power Supply Systems	CAR to be submitted for Terminal 2 Emergency Power Supply Systems	The CARs for Terminal 2 Emergency Power Supply Systems were submitted and accepted by EPD.
Terrestrial Ecology		
Pre-construction Egretry Survey Plan	Once per month in the breeding season between April and July, prior to the commencement of HDD drilling works.	The Egretry Survey Plan was submitted and approved by EPD under EP Condition 2.14.
Ecological Monitoring	Monthly monitoring during the HDD construction works period from August to March.	The terrestrial ecological monitoring at Sheung Sha Chau was completed in January 2019.
Marine Ecology		
Pre-Construction Phase Coral Dive Survey	Prior to marine construction works	The Coral Translocation Plan was submitted and approved by EPD under EP Condition 2.12.
Coral Translocation	-	The coral translocation was completed.
Post-Translocation Coral Monitoring	As per an enhanced monitoring programme based on the Coral Translocation Plan	The post-translocation monitoring programme according to the Coral Translocation Plan was completed in April 2018.
Chinese White Dolphins (CWD)	
Baseline Monitoring	6 months of baseline surveys before the commencement of land formation related construction works. Vessel line transect surveys: Two full surveys per month; Land-based theodolite tracking surveys: Two days per month at the Sha Chau station and two days per month at the	Baseline CWD results were reported in the CWD Baseline Monitoring Report and submitted to EPD in accordance with EP Condition 3.4.

Parameters	EM&A Requirements	Status
	Passive Acoustic Monitoring (PAM): For the whole duration of baseline period.	
Impact Monitoring	Vessel line transect surveys: Two full surveys per month; Land-based theodolite tracking surveys: One day per month at the Sha Chau station and one day per month at the Lung Kwu Chau station; and PAM: For the whole duration for land formation related construction works.	On-going
Landscape & Visual		
Landscape & Visual Plan	At least 3 months before the commencement of construction works on the formed land of the Project.	The Landscape & Visual Plan was submitted and approved by EPD under EP Condition 2.18
Baseline Monitoring	One-off survey within the Project site boundary prior to commencement of any construction works	The baseline landscape & visual monitoring result has been reported in Baseline Monitoring Report and submitted to EPD under EP Condition 3.4.
Impact Monitoring	Weekly	On-going
Environmental Auditing		
Regular site inspection	Weekly	On-going
Marine Mammal Watching Plan (MMWP) implementation measures	Monitor and check	On-going
Dolphin Exclusion Zone (DEZ) Plan implementation measures	Monitor and check	On-going
SkyPier High Speed Ferries (HSF) implementation measures	Monitor and check	On-going
Construction and Associated Vessels Implementation measures	Monitor and check	On-going
Silt Curtain Deployment Plan implementation measures	Monitor and check	On-going
Spill Response Plan implementation measures	Monitor and check	On-going
Complaint Hotline and Email channel	Construction phase	On-going
Environmental Log Book	Construction phase	On-going

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

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

• Eighteen environmental management meetings for EM&A review with works contracts: 6, 7, 11, 12, 13, 18, 19, 21, 25, 26, 27 and 28 January.

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 ${f Appendix} \ {f A}.$

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 2021	Monthly EM&A Report No. 70, Appendix E
	SIBATA LD-3B-1 (Serial No. 597337)	10 May 2021	Monthly EM&A Report No. 65, 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 D of Construction Phase Monthly EM&A Report No. 65, 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	18 - 163	306	500
AR2	30 - 158	298	

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

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

2.5 Conclusion

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

3 Noise Monitoring

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

Table 3.1: Locations of Impact Noise Monitoring Stations

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

Note:

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

3.1 Action and Limit Levels

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

Table 3.2: Action and Limit Levels for Noise Monitoring

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

Note:

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

3.2 Monitoring Equipment

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

Table 3.3: Noise Monitoring Equipment

Equipment	Brand and Model	Last Calibration Date	Calibration Certificate Provided in
Integrated Sound Level Meter	Rion NL-52 (Serial No. 00998505)	20 Mar 2021	Monthly EM&A Report No. 63, Appendix E
	Rion NL-52 (Serial No. 01287679)	20 Jun 2021	Monthly EM&A Report No. 66, Appendix D
Acoustic Calibrator	Casella CEL-120/1 (Serial No. 2383737)	20 Jun 2021	Monthly EM&A Report No. 66, Appendix D
	Castle GA607 (Serial No. 040162)	20 Mar 2021	Monthly EM&A Report No. 63, Appendix E

3.3 Monitoring Methodology

3.3.1 Monitoring Procedure

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

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

3.3.2 Maintenance and Calibration

The maintenance and calibration procedures are summarised below:

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

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

3.4 Summary of Monitoring Results

The noise monitoring schedule involved in the reporting period is provided in **Appendix 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⁾	58 - 59	75
NM4 ⁽¹⁾	61 - 62	70 ⁽²⁾
NM5 ⁽¹⁾⁽³⁾	53 - 66	75
NM6 ⁽¹⁾⁽³⁾	63 - 68	75

Notes:

- (1) +3dB(A) Façade correction included;
- (2) Reduced to 65dB(A) during school examination periods at NM4. School examination took place from 10 to 14 January during this reporting period.
- (3) Some of the noise measurement results were higher than the baseline monitoring levels. In order to reduce the influence of non-Project related noise on the monitoring results, these measurement results were corrected with reference to the baseline monitoring levels.

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

3.5 Conclusion

As the construction activities were far away from the monitoring stations, major sources of noise dominating the monitoring stations observed during the construction noise impact monitoring were traffic noise near NM1A 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). With the resumption of DCM works, the regular DCM monitoring was conducted from 11 January 2022 onwards. In view of the progress of 3RS land formation with majority of seawall completion, reduction of IM and SR stations for impact water quality monitoring was proposed to EPD with approval granted on 22 December 2022. The reduction of IM and SR stations was effective from 25 January 2022, in which the remaining IM stations were relocated back to their original locations, with slight modifications to the location of IM2. Table 4.1 describes the details of the monitoring stations. Figure 4.1a shows the locations of the monitoring stations before the reduction of IM and SR stations, and Figure 4.1b shows the locations of the remaining monitoring stations on and after 25 January 2022.

Table 4.1: Monitoring Locations of Impact Water Quality Monitoring

Monitoring Station	Description	Coordinates			Parameters	
		Eas	sting	Nort	hing	
		Before 25 Jan 2022	After 25 Jan 2022	Before 25 Jan 2022	After 25 Jan 2022	
C1	Control Station	804247	804247	815620	815620	<u>General</u>
C2	Control Station	806945	806945	825682	825682	Parameters
C3 ⁽³⁾	Control Station	817803	817803	822109	822109	DO, pH, Temperature,
IM1 ⁽⁸⁾	Impact Station	807132	806458	817949	818351	Salinity,
IM2 ⁽⁸⁾	Impact Station	806166	806236	818163	819183	Turbidity, SS
IM3	Impact Station	805594	N/A ⁽⁷⁾	818784	N/A ⁽⁷⁾	DCM
IM4	Impact Station	804607	N/A ⁽⁷⁾	819725	N/A ⁽⁷⁾	Parameters
IM5	Impact Station	804867	N/A ⁽⁷⁾	820735	N/A ⁽⁷⁾	Total Alkalinity, Heavy Metals ⁽²⁾
IM6	Impact Station	805828	N/A ⁽⁷⁾	821060	N/A ⁽⁷⁾	- ⊓eavy ivietais ⁻ ⁄
IM7 ⁽⁸⁾	Impact Station	806835	806835	821349	821349	
IM8	Impact Station	808140	N/A ⁽⁷⁾	821830	N/A ⁽⁷⁾	
IM9	Impact Station	808811	N/A ⁽⁷⁾	822094	N/A ⁽⁷⁾	-
IM10 ⁽⁸⁾	Impact Station	809794	809838	822385	822240	-
IM11 ⁽⁸⁾	Impact Station	811460	810545	822057	821501	-
IM12 ⁽⁸⁾	Impact Station	812046	811519	821459	821162	-
SR1A ⁽¹⁾	Hong Kong- Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities (HKBCF) Seawater Intake for cooling	812660	812660	819977	819977	General Parameters DO, pH, Temperature, Salinity, Turbidity, SS
SR2	Planned marine park / hard corals at The	814166	814166	821463	821463	<u>General</u> <u>Parameters</u>

Monitoring Station	Description	Coordinates				Parameters
			sting	Nort	rthing	
		Before 25 Jan 2022	After 25 Jan 2022	Before 25 Jan 2022	After 25 Jan 2022	
	Brothers / Tai Mo To					DO, pH, Temperature, Salinity, Turbidity, SS DCM Parameters Total Alkalinity, Heavy Metals ⁽²⁾⁽⁴⁾
SR3	Sha Chau and Lung Kwu Chau Marine Park / fishing and spawning grounds in North Lantau	807571	807571	822147	822147	General Parameters DO, pH, Temperature, Salinity, Turbidity, SS
SR4A	Sha Lo Wan	807810	807810	817189	817189	=
SR5A	San Tau Beach SSSI	810696	N/A ⁽⁷⁾	816593	N/A ⁽⁷⁾	-
SR6A ⁽⁵⁾	Tai Ho Bay, Near Tai Ho Stream SSSI	814739	N/A ⁽⁷⁾	817963	N/A ⁽⁷⁾	-
SR7	Ma Wan Fish Culture Zone (FCZ)	823742	N/A ⁽⁷⁾	823636	N/A ⁽⁷⁾	-
SR8 ⁽⁶⁾	Seawater Intake for cooling at Hong Kong International Airport (East)	811623	811623	820390	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.
- (7) In view of the progress of 3RS land formation with majority of seawall completion, these monitoring stations for impact water quality monitoring were terminated from 25 January 2022 onwards.
- (8) With the seawall completion and removal of enhanced open sea silt curtains, these monitoring stations were relocated back to their original locations. For IM2, there was minor adjustment of the monitoring location.

4.1 Action and Limit Levels

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

control and impact stations during ebb tide and flood tide for general water quality monitoring and regular DCM monitoring are presented in **Table 4.3**.

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

Parameters		Action Level (AL)		Limit Level (LL)	
Action and L (excluding S	imit Levels for genera	I water quality mor	nitoring and regular	DCM monitoring	
General	DO in mg/l (Surface,	Surface and Middle	!	Surface and Middle	
Water Quality Monitoring	/Middle & Bottom)	4.5mg/l		4.1mg/l 5mg/l for Fish Culture Zone (SR7) only	
		Bottom		Bottom	
		3.4mg/l		2.7mg/l	
	Suspended Solids (SS) in mg/l)23	upstream control station at the same tide of the same	37	or 130% of upstream control
	Turbidity in NTU	22.6		36.1	station at the same
Regular DCM	Total Alkalinity in ppm	95		99	day, whichever is
Monitoring	Representative Heavy Metals for regular DCM monitoring (Chromium) in µg/l		higher	0.2 high	higher
	Representative Heavy Metals for regular DCM monitoring (Nickel) in µg/I		_	3.6	_
Action and L	imit Levels SR1A				
SS (mg/l))		33		42	
Action and L	imit 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/epsubmissions.html)
- (5) The Action and Limit Levels for the two representative heavy metals chosen will be the same as that for the intensive DCM monitoring.

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

Control Station	Impact Stations
Flood Tide	
C1	IM1, IM2, IM3 ⁽²⁾ , IM4 ⁽²⁾ , IM5 ⁽²⁾ , IM6 ⁽²⁾ , IM7, IM8 ⁽²⁾ , SR3
SR2 ⁽¹⁾	IM7, IM8 ⁽²⁾ , IM9 ⁽²⁾ , IM10, IM11, IM12, SR1A, SR3, SR4A, SR5A ⁽²⁾ , SR6A ⁽²⁾ , SR8
Ebb Tide	
C1	SR4A, SR5A ⁽²⁾ , SR6A ⁽²⁾
C2	IM1, IM2, IM3 $^{(2)}$, IM4 $^{(2)}$, IM5 $^{(2)}$, IM6 $^{(2)}$, IM7, IM8 $^{(2)}$, IM9 $^{(2)}$, IM10, IM11, IM12, SR1A, SR2, SR3, SR7 $^{(2)}$, SR8

Note:

- (1) As per findings of Baseline Water Quality Monitoring Report, the control reference has been changed from C3 to SR2 from 1 September 2016 onwards.
- (2) The general water quality monitoring and regular DCM monitoring at IM3, IM4, IM5, IM6, IM8, IM9, SR5A, SR6A & SR7 were terminated from 25 January 2022 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,	YSI ProDSS (Serial No. 21G105356)	24 Dec 2021	Monthly EM&A Report No. 72, Appendix D
temperature, salinity and turbidity)	YSI ProDSS (Serial No. 15M100005) ⁽¹⁾	22 Oct 2021	Monthly EM&A Report No. 70, Appendix E
	YSI ProDSS (Serial No. 16H104233)	26 Nov 2021	Monthly EM&A Report No. 71, Appendix E
	YSI ProDSS (Serial No. 16H104234)	26 Nov 2021	Monthly EM&A Report No. 71, Appendix E
	YSI ProDSS (Serial No. 17E100747)	24 Dec 2021	Monthly EM&A Report No. 72, Appendix D
Digital Titrator (measurement of total alkalinity)	Titrette Bottle-top Burette, 50ml (Serial No. 10N64701)	7 Jan 2022	Appendix D

Note:

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.

The monitoring equipment was not used in the reporting period after the expiry date of the calibration certificate (21 Jan 2022).

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, except SS, obtained during the reporting period were within their corresponding Action and Limit Levels. The detailed monitoring results are presented in **Appendix C**.

For SS, some of the testing results triggered the corresponding Action Levels, and investigations were conducted accordingly.

Table 4.7 present the summary of the SS compliance status at IM and SR stations during midebb tide for the reporting period.

| IM1 | IM2 | IM3 | IM4 | IM5 | IM6 | IM7 | IM8 | IM9 | IM10 | IM11 | IM12 | SR1A | SR2 | SR3 | SR4A | SR5A | SR6A | SR7 | SR8 01/01/2022 04/01/2022 06/01/2022 08/01/2022 11/01/2022 13/01/2022 15/01/2022 18/01/2022 20/01/2022 22/01/2022 25/01/2022 27/01/2022 29/01/2022 31/01/2022 No. of result triggering 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 1 1 1 Action or Limit Level

Table 4.7: Summary of SS Compliance Status (Mid-Ebb Tide)

Note: Deta	illed results are presented in Appendix C .
Legend:	
	The monitoring results were within the corresponding Action and Limit Levels
	Monitoring result triggered the Action Level at monitoring station located upstream of the Project based on dominant tidal flow
D	Monitoring result triggered the Action Level at monitoring station located downstream of the Project based on dominant tidal flow
	Upstream station with respect to the Project during the respective tide based on dominant tidal flow
	These monitoring stations were terminated starting from 25 January 2022, and no sampling were conducted at these monitoring stations.

Monitoring results triggered the corresponding Action Levels on two monitoring days. One case occurred at IM5 which was located upstream of the Project during ebb tide and would unlikely be affected by the Project.

In accordance with Event and Action Plan stipulated in the Manual, IEC and Contractor were informed when the corresponding Action Levels were triggered.

Investigations focusing on the cases which occurred at IM1, IM2, IM3 & IM4 that were located downstream of the Project during ebb tide were carried out. Details of the Project's marine construction activities and site observations of the concerned monitoring days were collected. Findings were summarized in **Table 4.8**.

Table 4.8: Summary of Findings from Investigation of SS Monitoring Result

Date	Marine construction works nearby	Approximate distance from marine construction works	Status of water quality measures (if applicable)	Construction vessels in the vicinity	Turbidity / Silt plume observed near the monitoring station	Action or Limit Level triggered due to Project
04/01/2022	No marine construction works	Not applicable	Not applicable	No	No	No
08/01/2022	No marine construction works	Not applicable	Not applicable	No	No	No

The investigation confirmed that no marine construction works were undertaken during the concerned monitoring days. No muddy water discharges from outfalls of the reclaimed land were observed.

For SS results recorded at IM1, IM2, IM3 and IM4 on 4 and 8 January 2022 triggering the corresponding Action Levels, it is noted that no marine construction works were undertaken during the concerned monitoring days. No silt plume, construction vessel, spillage incident or specific observation at outfalls were observed in the vicinity when monitoring was undertaken at these monitoring stations. Therefore, the cases were considered unlikely due to the Project.

4.5 Conclusion

During the reporting period, it is noted that most of the monitoring results were within their corresponding Action and Limit Levels, while some SS measurement results triggered the corresponding Action Level, investigations were conducted accordingly.

Based on the investigation findings, the results that triggered the corresponding Action Levels were not due to the Project. Therefore, the Project did not cause adverse impact at the water quality sensitive receivers. All required actions under the Event and Action Plan were followed. These cases appeared to be due to natural fluctuation or other sources not related to the Project.

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 as recommended in the Manual during weekly site inspection and regular environmental management meetings.

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**. 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

		Reused in the Project	C&D Material Reused in other Projects (m³)	Transferred to	Chemical Waste (kg)	Chemical Waste (I)	General Refuse (tonne)
January 2022 (2)(3)	53,747	13,880	9,741	6,668	400	1,800	4,274

Notes:

- (1) C&D refers to Construction and Demolition.
- (2) Metals, paper and/or plastics were recycled in the reporting period.
- (3) The data was based on the information provided by contractors up to the submission date of this Monthly EM&A Report, and might be updated in the forthcoming Monthly EM&A Report.

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

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 guarterly ⁽²⁾ (3-month) STG < 1.86 & ANI < 9.35

Notes: (referring to the baseline monitoring report)

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

6.2 CWD Monitoring Transects and Stations

6.2.1 Small Vessel Line-transect Survey

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

The planned vessel survey transect lines following the waypoints set for construction phase monitoring as proposed in the Manual are depicted in **Figure 6.1** with the waypoint coordinates of all transect lines given in **Table 6.2**, which are subject to on-site refinement based on the actual survey conditions and constraints.

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

Waypoint	Easting	Northing	Waypoint	Easting	Northing
		NE	≣L		
1S	813525	820900	6N	818568	824433
1N	813525	824657	7S	819532	821420
2S	814556	818449	7N	819532	824209
2N	814559	824768	8S	820451	822125
3S	815542	818807	8N	820451	823671
3N	815542	824882	9S	821504	822371
4S	816506	819480	9N	821504	823761
4N	816506	824859	10S	822513	823268
5S	817537	820220	10N	822513	824321
5N	817537	824613	11S	823477	823402
6S	818568	820735	11N	823477	824613
		NV	VL		
1S	804671	814577	5S	808504	821735
1N	804671	831404	5N	808504	828602
2Sb	805475	815457	6S	809490	822075
2Nb	805476	818571	6N	809490	825352
2Sa	805476	820770	7S	810499	822323
2Na	805476	830562	7N	810499	824613
3S	806464	821033	8S	811508	821839
3N	806464	829598	8N	811508	824254
4S	807518	821395	9S	812516	821356
4N	807518	829230	9N	812516	824254
		A	W		
1W	804733	818205	2W	805045	816912
1E	806708	818017	2E	805960	816633
		W	/L		
1W	800600	805450	7W	800400	811450
1E	801760	805450	7E	802400	811450
2W	800300	806450	8W	800800	812450
2E	801750	806450	8E	802900	812450
3W	799600	807450	9W	801500	813550
3E	801500	807450	9E	803120	813550
4W	799400	808450	10W	801880	814500
4E	801430	808450	10E	803700	814500
5W	799500	809450	11W	802860	815500
5E	801300	809450	12S/11E	803750	815500
6W	799800	810450	12N	803750	818500
6E	801400	810450			
		SV	VL		
1S	802494	803961	6S	807467	801137
1N	802494	806174	6N	807467	808458
2S	803489	803280	7S	808553	800329
2N	803489	806720	7N	808553	807377
3S	804484	802509	8S	809547	800338
3N	804484	807048	8N	809547	807396
48	805478	802105	9S	810542	800423
4N	805478	807556	9N	810542	807462
	333473	33.000	108	811446	801335

Waypoint	Easting	Northing	Waypoint	Easting	Northing
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 favourable conditions of Beaufort 0-3 and visibility of approximately 1200 m or beyond were used for analysis of the CWD encounter rates.

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

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

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

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

6.3.2 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 3, 4, 5, 10, 11, 12, 13 and 19 January 2022, covering all transects in NEL, NWL, AW, WL and SWL survey areas for twice.

A total of around 436.63 km of survey effort was collected from these surveys and 416.29 km 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 January 2022, 22 sightings with 84 dolphins were sighted. All these sightings were on-effort records under favourable weather condition (i.e. Beaufort Sea State 3 or below with favourable visibility). Details of cetacean sightings are presented in **Appendix C**.

Distribution of all CWD sightings recorded in January 2022 is illustrated in **Figure 6.3**. In WL, CWD groups were recorded along waters off north of Tai O to north of Fan Lau. In SWL, two CWD groups were recorded at waters off Fan Lau Tung Wan. In NWL, the CWD groups were spotted at waters near Sha Chau and Lung Kwu Chau. One CWD sighting was also spotted in AW. There was no CWD sighting recorded in NEL survey area during the reporting period.

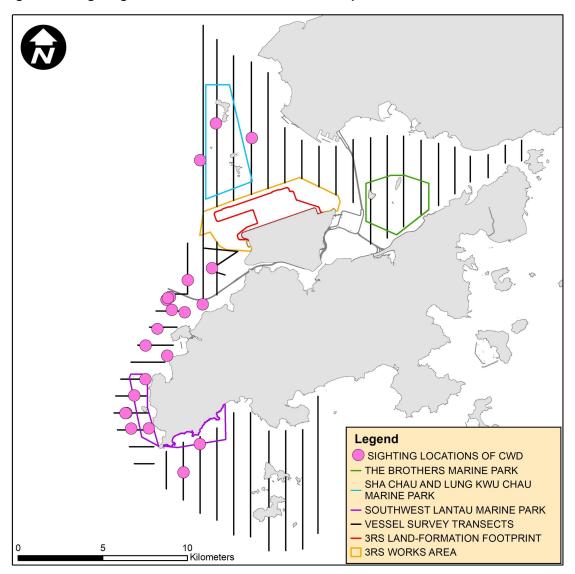


Figure 6.3: Sightings Distribution of Chinese White Dolphins

Remarks: (1) Please note that there are 22 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 January 2022, a total of around 416.29 km of survey effort were conducted under Beaufort Sea State 3 or below with favourable visibility, whilst a total number of 22 on-effort sightings with 84 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 November 2021 to January 2022), a total of around 1163.76 km of survey effort were conducted under Beaufort Sea State 3 or below with favourable visibility, whilst a total number of 36 on-effort sightings and a total number of 133 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 January 2022 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)
January 2022	5.28	20.18
Running Quarter from November 2021 to January 2022 ⁽¹⁾	3.09	11.43
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 November 2021 to January 2022, 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 January 2022, 22 groups of 84 dolphins in total were sighted, and the average group size of CWDs was 3.8 dolphins per group. CWD sightings with medium group size (i.e. 3-9 dolphins) were dominant. One CWD sighting with large group size (i.e. 10 or more dolphins) was recorded in WL during this reporting month.

Activities and Association with Fishing Boats

Eight CWD sightings were recorded engaging in feeding activities in January 2022. Five CWD groups were observed associated with operating gill-netter, including four groups at the waters off Yi O and one group near Sham Wat.

Mother-calf Pair

In January 2022, there were four CWD sightings recorded with mother-and-unspotted juvenile pair(s). All four sightings were recorded in WL survey area.

6.4.2 Photo Identification

In January 2022, a total number of 30 different CWD individuals were identified for totally 47 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	Individual ID	Date of Sighting (dd-mmm- yy)	Sighting Group No.	Area
NLMM016	3-Jan-22	3	NWL	WLMM001	5-Jan-22	10	WL
NLMM063	3-Jan-22	3	NWL			13	WL
NLMM082	3-Jan-22	2	NWL		13-Jan-22	3	SWL
NLMM083	3-Jan-22	2	NWL	WLMM003	5-Jan-22	7	WL
SLMM007	5-Jan-22	10	WL			8	WL
		13	WL			13	WL
	10-Jan-22	3	WL	WLMM027	3-Jan-22	2	NWL
	19-Jan-22	2	SWL		5-Jan-22	2	WL
SLMM010	10-Jan-22	3	WL	WLMM065	3-Jan-22	3	NWL
SLMM012	5-Jan-22	13	WL		5-Jan-22	5	WL
SLMM029	10-Jan-22	3	WL			6	WL
SLMM030	5-Jan-22	1	AW	WLMM067	5-Jan-22	11	WL
SLMM037	5-Jan-22	13	WL		19-Jan-22	2	SWL
	13-Jan-22	3	SWL	WLMM073	5-Jan-22	7	WL
SLMM044	5-Jan-22	8	WL	WLMM079	10-Jan-22	2	WL
		13	WL	WLMM095	5-Jan-22	4	WL
SLMM049	5-Jan-22	13	WL	WLMM114	13-Jan-22	3	SWL
SLMM052	5-Jan-22	10	WL	WLMM118	5-Jan-22	7	WL
SLMM055	5-Jan-22	2	WL			13	WL
		5	WL	WLMM131	3-Jan-22	2	NWL
SLMM064	19-Jan-22	2	SWL	WLMM141	10-Jan-22	3	WL
SLMM073	5-Jan-22	10	WL	WLMM165	5-Jan-22	2	WL
		13	WL	WLMM171	5-Jan-22	13	WL
	10-Jan-22	3	WL		ı	ı	

6.4.3 Land-based Theodolite Tracking Survey

Survey Effort

Land-based theodolite tracking surveys were conducted at SC on 17 January 2022 and at LKC on 24 January 2022, with a total of two days of land-based theodolite tracking survey effort accomplished in this reporting period. No CWD group was tracked during the reporting period. Information of survey effort and CWD groups are presented in **Table 6.6**. Details of the survey effort are presented in **Appendix C**.

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

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. Both C-POD and F-POD are considered as effective PAM devices in detecting CWD occurrence, and F-POD was the main PAM device deployed where feasible. During this reporting period, the F-POD was retrieved on 10 January 2022 and subsequently re-deployed underwater and positioned at south of Sha Chau Island inside the SCLKCMP (**Figure 6.5**). 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, 1 to 2 dolphin observation stations and teams of at least two dolphin observers were deployed by the contractors for continuous monitoring of the DEZ for DCM and seawall construction related 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 704 individuals being trained and the training records kept by the ET. From the contractors' DEZ monitoring records, no dolphin or other marine mammals were observed within or around the DEZs in this reporting month. These contractors' records were also audited by the ET during site inspection.

Audits of acoustic decoupling measures for construction vessels were carried out during weekly site inspection and the observations are summarised in **Section 7.1**. Audits of SkyPier high speed ferries route diversion and speed control and construction vessel management are presented in **Section 7.4** and **Section 7.5** respectively.

6.7 Timing of reporting CWD Monitoring Results

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

6.8 Summary of CWD Monitoring

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

7 Environmental Site Inspection and Audit

7.1 Environmental Site Inspection

Site inspections of the construction works were carried out on a weekly basis to monitor the implementation of proper environmental pollution control and mitigation measures for the Project. The weekly site inspection schedule of the construction works is provided in **Appendix 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 was given when necessary to ensure the construction workforce were familiar with relevant procedures, and to maintain good environmental performance on site. Regular toolbox talks on environmental issues were organised for the construction workforce by the contractors to ensure understanding and proper implementation of environmental protection and pollution control mitigation measures.

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

7.2 Landscape and Visual Mitigation Measures

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

The implementation status of the environmental protection measures is summarized below in **Table 7.1**. Examples of landscape and visual mitigation measures are shown in **Table 7.2**. The

contractor's works areas

monitoring programme for detailed design, construction, establishment works and long term management (10 years) stages is presented in **Table 7.3**. Event and Action Plan for Landscape and Visual impacts is stated in **Table 7.4**.

Table 7.1: Landscape and Visual – Construction Phase Audit Summary

Landscape and Visual Mitigation Measures during Construction	Implementation Status	Relevant Contract(s) in the Reporting Period
CM1- The construction area and contractor's temporary works areas shall be minimised to avoid impacts on adjacent landscape.	The implementation of mitigation measures was checked by ET during weekly site inspection and reported by the Contractors during the monthly Environmental Management Meetings. Implementation of the measures	All works 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 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	Tree Protection Specifications were provided in the relevant Contract Specifications respectively for implementation by the Contractors under the Project. The Contractors' performance on the implementation of the tree maintenance and protection measures were observed and checked by the ET weekly during construction period.	3302, 3503, 3508, 3602, 3801 3802 (To be implemented)

Landscape and Visual Mitigation Measures during Construction

Implementation Status

Relevant Contract(s) in the Reporting Period

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 were provided in the relevant Contract Specifications respectively for implementation by the Contractors under the Project where trees would unavoidably be affected by the construction works.

3503, 3508, 3801

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 was currently monitored by ET annually.

CM10 – 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.

3303

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



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



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



Control of night-time lighting 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)



General view of advanced hydroseeding around taxiways and runways (CM10)

In accordance with the Updated EM&A Manual, all existing trees shall be protected carefully during construction. Trees unavoidably affected by the works shall be transplanted where practical. In this reporting period, the cumulative total number of retained and transplanted trees under the Project remained unchanged (i.e. 52 and 26 respectively) comparing to the previous reporting period. Details of the retained trees, transplanted trees and to-be-transplanted trees under the Project are summarized in **Table 7.5**.

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

Table 7.3: Monitoring Programme for Landscape and Visual

Stage	Monitoring Task	Monitoring Report	Form of Approval	Frequency
Detailed Design	Checking of design works against the recommendations of the landscape and visual impact assessments within the EIA shall be undertaken during detailed design and tender stage, to ensure that they fulfil the intention of the mitigation measures. Any changes to the design, including design changes on site shall also be checked.	Report by AAHK / PM confirming that the design conforms to requirements of EP.	Approved by Client	At the end of the Detailed Design Phase
Construction	Checking of the contractor's operations during the construction period.	Report on Contractor's compliance, by ET	Counter signature of report by IEC	Weekly
Establishment Works	Checking of the planting works during the twelve-month Establishment Period after completion of each batch of transplanting works.	Report on Contractor's compliance, by ET	Counter signature of report by IEC	Every two months
Long Term Management (10 year)	Monitoring of the long-term management of the planting works in the period up to 10 years after completion of each batch of transplanting works.	Report on Compliance by ET or Maintenance Agency as appropriate	Counter signature of report by Management Agency	Annually

Table 7.4: Event and Action Plan for Landscape and Visual

Event Action Level	Action				
	ET	IEC	AAHK / PM	Contractor	
Design Check	Check final design conforms to the requirements of EP and prepare report.	Check report. Recommend remedial design if necessary.	Undertake remedial design if necessary.		
Non-conformity on one occasion	Identify source. Inform IEC and AAHK / PM.	Check report. Check Contractor's working method.	Notify Contractor. Ensure remedial	Amend working methods to prevent	

Event Action Level		Action		
	Discuss remedial actions with IEC, AAHK / PM and Contractor. Monitor remedial actions until rectification has been completed.	Discuss with ET and Contractor on possible remedial measures. Advise AAHK / PM on effectiveness of proposed remedial measures. Check implementation of remedial measures.	measures are properly implemented.	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.)	Transplanted (nos.)		To-be-transplanted
		Establishment Period	Maintenanc e Period	(nos.)
3302	9	0	0	0
3503	0	0	9	0
3508 ⁽¹⁾	24	12	0	0
3602	2	0	0	0
3801	17	0	5 ⁽²⁾	0
Sub-total	52	12	14	0
Provisional				
Contract	Retain (nos.)	Transplanted (nos.)		To-be-transplanted (nos.)
3508 ⁽¹⁾	51	0		10
Sub-total	51	0		10
Grand Total	103	26	1	10

Notes:

- (1) As some of the site areas have been handed over to Contract 3508, Contractor of Contract 3508 is currently managing the trees that are located within their site area. Existing trees to be managed by Contract 3508 is subject to change after initial tree surveys for each batch of site areas have been conducted by the Contractor.
- (2) Three transplanted trees (CT1194, CT1794 and CT1795) were subsequently felled after transplantation. Please refer to **Table 7.6** for details.

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

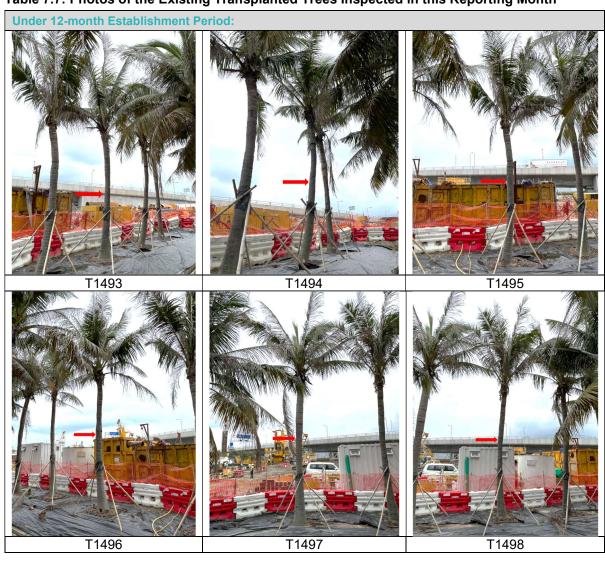
Table 7.6: Summary of the Transplanted Trees Updated in the Reporting Period

Tree ID	Transplant Date	Management Stage	Management Agency	Remarks	
CT276 3 May	3 May 2018	Establishment period 4 May 2018 – May 2019	Contract 3801	Next inspection will be conducted in February 2022. Photos of the last inspection in February 2021 can be	
		Long Term Management period Jun 2019 – May 2028	Southern Landside Petrol Filling Station	referred to Table 7.7 of the Construction Phase Monthly EM&A Report No.62.	
CT1253	1253 4 May 2018	Establishment period 5 May 2018 – May 2019	Contract 3801	_	
	Long Term Management period Jun 2019 – May 2028	Southern Landside Petrol Filling Station	_		
T835 2	22 Jan 2020	Establishment period 23 Jan 2020 – Jan 2021	Contract 3503	Next inspection will be conducted in February 2022. Photos of the last	
		Long Term Management period Feb 2021 – Jan 2030	_	inspection in February 2021 can be referred to Table 7.7 of the Construction Phase Monthly EM&A Report No.62.	
T836	13 Dec 2019	Establishment period 14 Dec 2020 – Jan 2021	Contract 3503	_	
		Long Term Management period Feb 2021 – Jan 2030		_	
T838	38 22 Jan 2020	Establishment period 23 Jan 2020 – Jan 2021	Contract 3503		
		Long Term Management period Feb 2021 – Jan 2030			
T812	21 Dec 2020	Establishment period 22 Dec 2020 – Dec 2021	Contract 3503	Next inspection will be conducted in December 2022. Photos of the last inspection in December 2021 can be referred to Table 7.7 of the Construction Phase Monthly EM& Report No.72.	
		Long Term Management period Jan 2022 – Dec 2031			
T814	20 Dec 2020	Establishment period 21 Dec 2020 – Dec 2021 Long Term Management period Jan 2022 – Dec 2031	Contract 3503		
T815	15 Dec 2020	Establishment period 16 Dec 2020 – Dec 2021 Long Term Management period Jan 2022 – Dec 2031	Contract 3503		
T829	18 Dec 2020	Establishment period 19 Dec 2020 – Dec 2021 Long Term Management period Jan 2022 – Dec 2031	Contract 3503	-	

Tree ID	Transplant Date	Management Stage	Management Agency	Remarks
T830	14 Dec 2020	Establishment period	Contract 3503	
		15 Dec 2020 – Dec 2021		
		Long Term Management period		
		Jan 2022 – Dec 2031		_
T831	19 Dec 2020	Establishment period 20 Dec 2020 – Dec 2021 Long Term Management period	Contract 3503	
		Jan 2022 – Dec 2031		
T1493	6 Jul 2021	Establishment period 7 Jul 2021 – Jul 2022	Contract 3508	Next inspection will be conducted in March 2022. Photos of the last inspection in January 2022 were shown in Table 7.7 .
T1494	6 Jul 2021	Establishment period 7 Jul 2021 – Jul 2022	Contract 3508	
T1495	10 Jul 2021	Establishment period 11 Jul 2021 – Jul 2022	Contract 3508	_
T1496	5 Jul 2021	Establishment period 6 Jul 2021 – Jul 2022	Contract 3508	_
T1497	5 Jul 2021	Establishment period 6 Jul 2021 – Jul 2022	Contract 3508	_
T1498	29 Jun 2021	Establishment period 30 Jun 2021 – Jul 2022	Contract 3508	_
T1499	29 Jun 2021	Establishment period 30 Jun 2021 – Jul 2022	Contract 3508	_
T1500	30 Jun 2021	Establishment period 1 Jul 2021 – Jul 2022	Contract 3508	_
T1501	30 Jun 2021	Establishment period 1 Jul 2021 – Jul 2022	Contract 3508	_
T1502	5 Jul 2021	Establishment period 6 Jul 2021 – Jul 2022	Contract 3508	_
T1503	6 Jul 2021	Establishment period 7 Jul 2021 – Jul 2022	Contract 3508	_
T1504	24 Jun 2021	Establishment period 25 Jun 2021 – Jul 2022	Contract 3508	_
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 4 May 2018 – May 2019	Contract 3801	NA
		Long Term Management period	AsiaWorld-Expo	The tree within the land parcel was acquired by the government for construction of emergency hospita

Tree ID	Transplant Date	Management Stage	Management Agency	Remarks
		Jun 2019 – May 2028		to handle COVID19 pandemic at AsiaWorld-Expo. The tree was felled in late 2020.
CT1795	3 May 2018	Establishment period 4 May 2018 – May 2019	Contract 3801	NA
		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.

Table 7.7: Photos of the Existing Transplanted Trees Inspected in this Reporting Month





7.3 Land Contamination Assessment

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

According to the approved supplementary CAP, there are 3 remaining locations where site reappraisal / additional site investigation are proposed. Based on the latest construction information, there is no development programme for these locations at this stage. As such, the status of site re-appraisal/ additional site investigation shall be further updated upon latest development programme is available.

7.4 Audit of SkyPier High Speed Ferries

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

committed to implement the mitigation measure of requiring HSFs of SkyPier travelling between HKIA and Zhuhai / Macau to start diverting the route with associated speed control across the area, i.e. Speed Control Zone (SCZ), with high CWD abundance. The route diversion and speed restriction at the SCZ have been implemented since 28 December 2015.

Due to the COVID-19 pandemic, all SkyPier HSF services to/from Zhuhai and Macau have been suspended from 25 March 2020 until further notice. No ferry movement between HKIA SkyPier and Zhuhai and Macau was recorded in January 2022. 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., 3 to 4 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 Q1 to Q2 2022. 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 31 January 2022
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	3 to 4 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:

- Seven skipper training sessions were held by contractors' Environmental Officers.
 Competency tests were subsequently conducted with the trained skippers by ET. The list of all trained skippers was properly recorded and maintained by ET.
- In this reporting period, 7 skippers were trained by contractors' Environmental Officers. In total, 1845 skippers were trained from August 2016 to January 2022.
- The MSS automatically recorded deviation cases such as speeding, entering no entry zone and not travelling through the designated gate. ET conducted checking to ensure the MSS records deviation cases accurately.
- Deviations such as speeding in the works area, entered no entry zone, and entering from non-designated gates were identified. All the concerned contractors were reminded to comply with the requirements of the MTRMP-CAV during the bi-weekly Construction Traffic Control Centre (CTCC) audit.
- Three-month rolling programmes (one month record and three months forecast) for construction vessel activities were received from the contractors in order to help maintain the number of construction and associated vessels on site to a practicable minimal level.

7.6 Implementation of Dolphin Exclusion Zone

The DEZ Plan was submitted in accordance with EP Condition 3.1 (v) requirement and Section 10.3 of the Manual, and approved in April 2016 by EPD. The 24-hour DEZs with a 250m radius for marine works were established and implemented by the contractors for DCM and seawall construction according to their Method Statement for DEZ Monitoring that followed the specifications and requirements of the DEZ Plan.

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

7.7 Status of Submissions under Environmental Permits

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

Table 7.9: Status of Submissions under Environmental Permit

EP Condition	Submission	Status
2.1	Complaint Management Plan	
2.4	Management Organizations	-
2.5	Construction Works Schedule and Location Plans	
2.7	Marine Park Proposal	
2.8	Marine Ecology Conservation Plan	
2.9	Marine Travel Routes and Management Plan for Construction and Associated Vessels	
2.10	Marine Travel Routes and Management Plan for High Speed Ferries of SkyPier	
2.11	Marine Mammal Watching Plan	Accepted /
2.12	Coral Translocation Plan	approved by EPD
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	_
2.19	Waste Management Plan	_
2.20	Supplementary Contamination Assessment Plan	_
3.1	Updated EM&A Manual	_
3.4	Baseline Monitoring Reports	

7.8 Compliance with Other Statutory Environmental Requirements

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

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

7.9.1 Complaints

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

7.9.2 Notifications of Summons or Status of Prosecution

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

7.9.3 Cumulative Statistics

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

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

8.1 Construction Programme for the Coming Reporting Period

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

Reclamation Works:

Contract 3206 Main Reclamation Works

- Seawall construction; and
- Backfilling works.

Airfield Works:

Contract 3301 North Runway Crossover Taxiway

- Cabling works; and
- Stockpiling.

Contract 3302 Eastern Vehicular Tunnel Advance Works

- Construction of tunnel structure;
- Pipe and drainage diversion works;
- Excavation and lateral support systems installation; and
- Stockpiling.

Contract 3303 Third Runway and Associated Works

- Architectural, Builder's and Finishing works;
- Footing and utilities work;
- Box culvert construction;
- Piling work;
- Operation of asphalt plant; and
- Cable laying and ducting works.

Contract 3305 Airfield Ground Lighting System

- Cabling works;
- Network installation; and
- Genset installation.

Contract 3306 Observation Facility Control System Supporting Interim 2RS and 3RS

- Equipment installation;
- Cabling works; and
- Installation of temporary site accommodation.

Contract 3307 Fire Training Facility

- Architectural, Builder's and Finishing works;
- Drainage and utilities works; and
- Building construction.

Contract 3308 Foreign Object Debris Detection System

Site formation; and

Foreign Object Debris Tower installation.

Contract 3310 North Runway Modification Works

- Cutter soil mixing;
- Deep cement mixing; and
- Pre-boring.

Third Runway Concourse:

Contract 3403 New Integrated Airport Centres Building and Civil Works

- Architectural, Builder's Work and Finishing works;
- Steel frame installation;
- Road and drainage works;
- Backfilling; and
- Underground utilities construction.

Contract 3404 Integrated Airport Control System

- Equipment installation; and
- Cable laying.

Contract 3405 Third Runway Concourse Foundation and Substructure Works

- Sheet piling and bored piling;
- Excavation and backfilling; and
- Road formation.

Contract 3408 Third Runway Concourse and Apron Works

- Site setup works; and
- Excavation and lateral support works.

Terminal 2 Expansion:

Contract 3508 Terminal 2 Expansion Works

- Excavation and footing construction;
- Bridge demolition;
- Piling works;
- Drainage works;
- Temporary road construction;
- TBM mobilization; and
- Architectural, Builder's Work and Finishing works.

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

Contract 3601 New Automated People Mover System (TRC Line)

- Pull out test for guideway;
- Guidebeam installation; and
- Concreting work.

Contract 3602 Existing APM System Modification Works

- Car modification: and
- Concrete plinth and stitch construction.

Contract 3603 Baggage Handling System (BHS)

BHS installation.

Construction Support (Facilities):

Contract 3721 Construction Support Infrastructure Works

- Laying of drainage pipes and ducts;
- Site clearance;
- Paving works; and
- Road works.

Contract 3723 Construction Support Facilities

- Clearance works; and
- Footing works.

<u>Airport Support Infrastructure:</u>

Contract 3801 APM and BHS Tunnels on Existing Airport Island

- Excavation;
- Parapet wall construction; and
- Rebar fixing and formwork erection.

Contract 3802 APM and BHS Tunnels and Related Works

- Wall and slab construction;
- Installation of dewatering well;
- Deep jet mixing
- Pipe pile and sheet pile works; and
- Excavation and lateral supports.

Construction Support (Services / Licenses):

Contract 3901A Concrete Batching Facility

- Operation of concrete batching plant;
- Material conveyor belt construction; and
- Testing and commissioning for conveyor belt.

Contract 3901B Concrete Batching Facility

- Operation of concrete batching plant; and
- Testing and commissioning for conveyor belt.

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;
- 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 are located in reclamation areas and existing airport island respectively. Works in the reclamation areas included seawall construction, filling and ground improvement works, together with runway, concourse and associated works. Land-based works on existing airport island involved mainly airfield works, Terminal 2 expansion works, modification and tunnel work for Automated People Mover (APM) and Baggage Handling System (BHS), and preparation work for utilities, with activities include road and drainage works, cable ducting, demolition, 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, construction waste, and CWD did not trigger the corresponding Action and Limit Levels during the reporting period.

The water quality monitoring results for all parameters, except SS, obtained during the reporting period were within the corresponding Action and Limit Levels stipulated in the EM&A programme. Relevant investigation and follow-up actions will be conducted according to the EM&A programme if the corresponding Action and Limit Levels are triggered. For SS, some of the testing results triggered the relevant Action Levels, and the corresponding investigations were conducted accordingly. The investigation findings concluded that the cases were not related to the Project. To conclude, the construction activities in the reporting period did not introduce adverse impact to all water quality sensitive receivers.

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 3 to 4 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. Trainings have been provided for the concerned skippers to facilitate them in familiarising with the requirements of the MTRMP-CAV. Deviations including speeding in the works area, entered no entry zone, and entry from non-designated gates were reviewed by ET. All the concerned captains were reminded by the contractor's CTCC representative to comply with the requirements of the MTRMP-CAV. The ET reminded contractors that all vessels shall avoid entering the no-entry zone, in particular the Brothers Marine Park and the Sha Chau & Lung Kwu Chau Marine Park. Three-month rolling programmes for construction vessel activities, which ensures the proposed vessels are necessary and minimal through good planning, were also received from contractors.

Figures

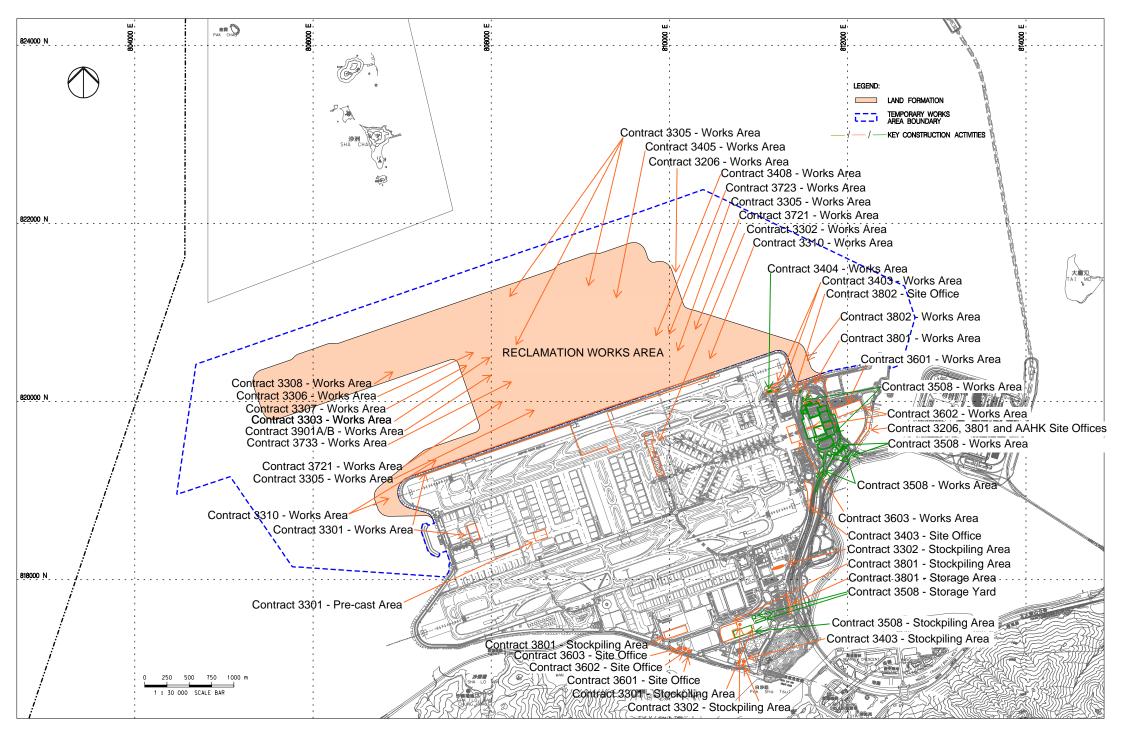
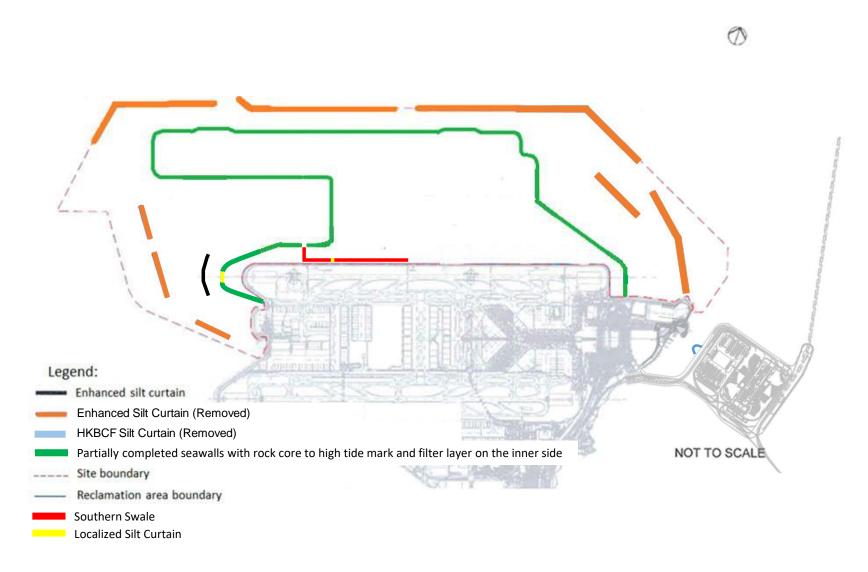
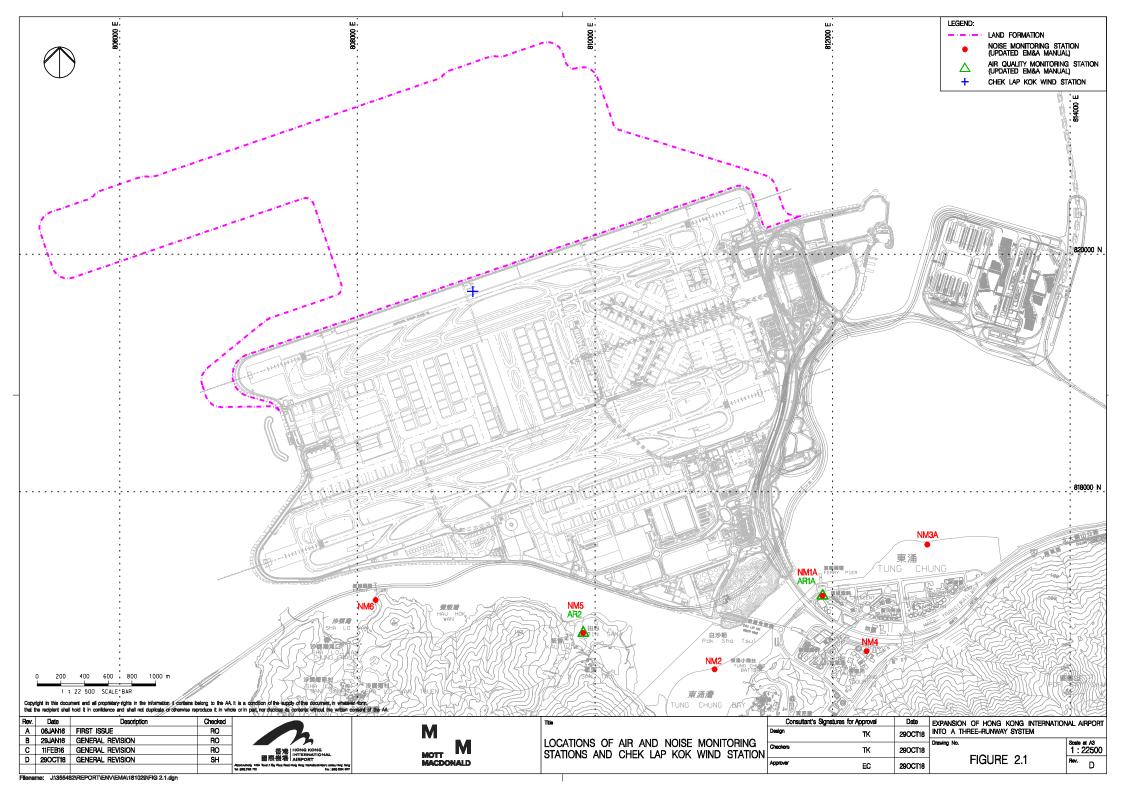


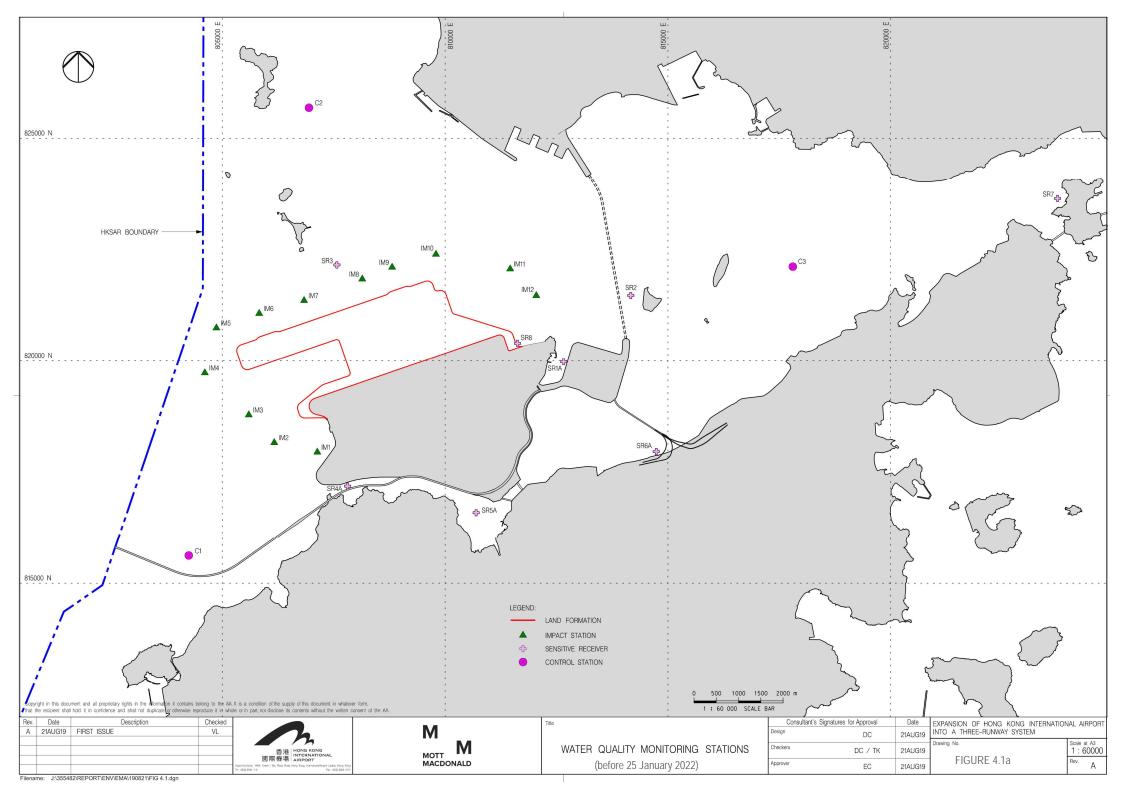
FIGURE 1.1 LOCATIONS OF KEY CONSTRUCTION ACTIVITIES

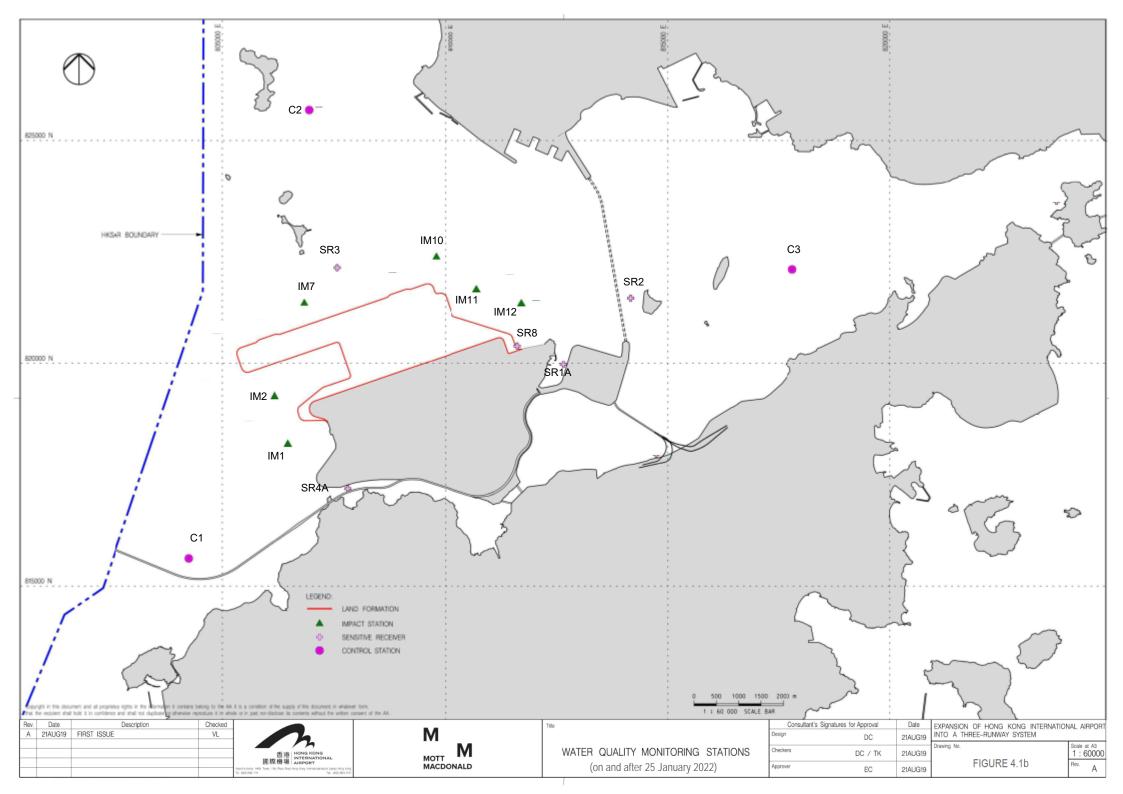
Figure 1.2

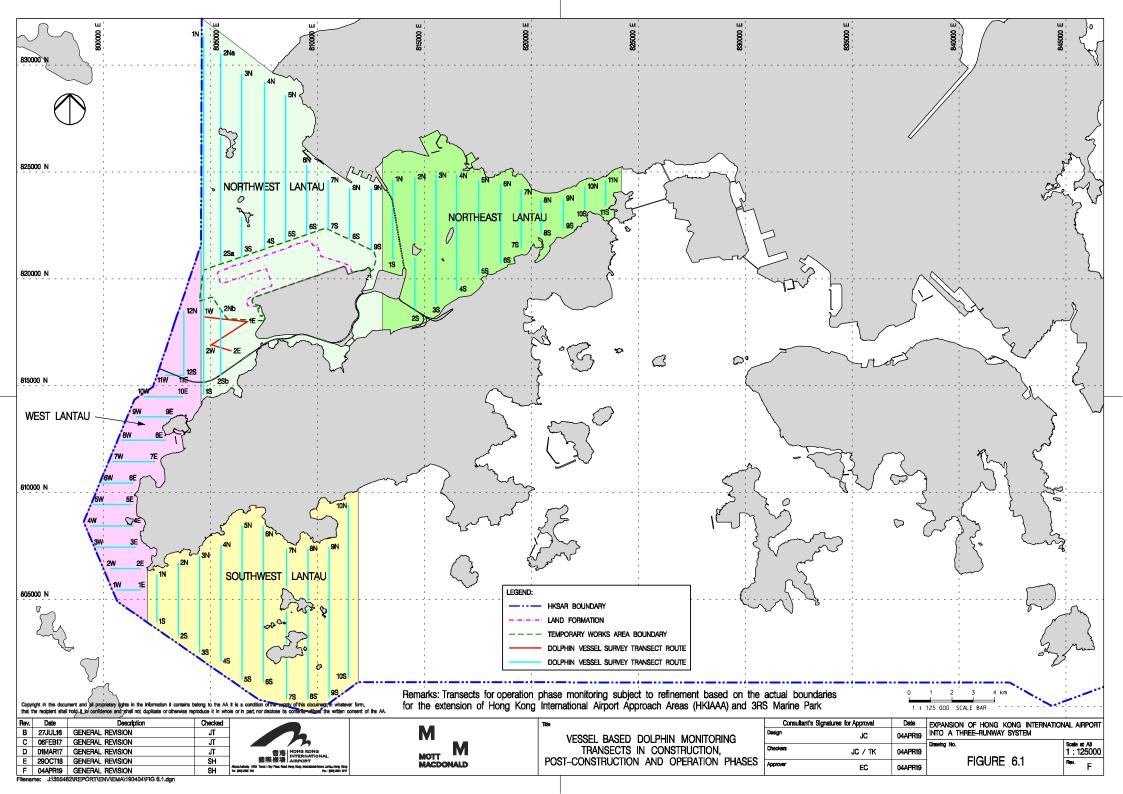
<u>Latest layout of the silt curtain with 3RS reclamation land area</u>

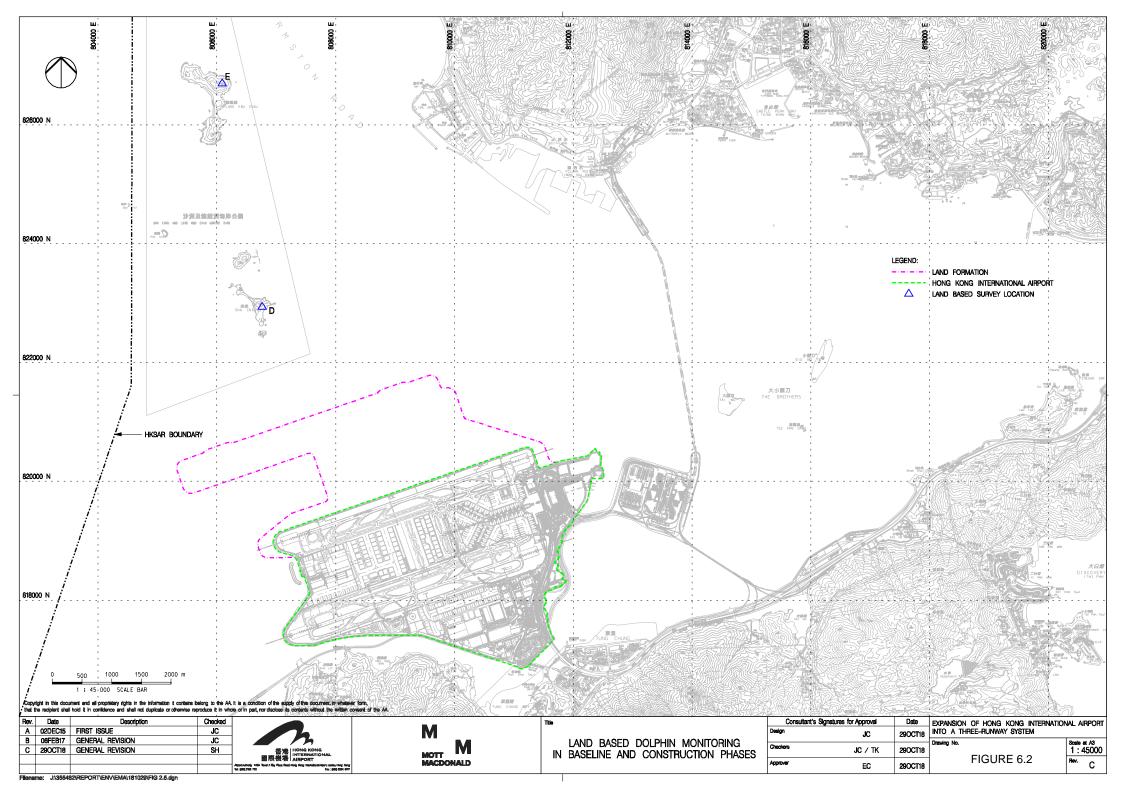


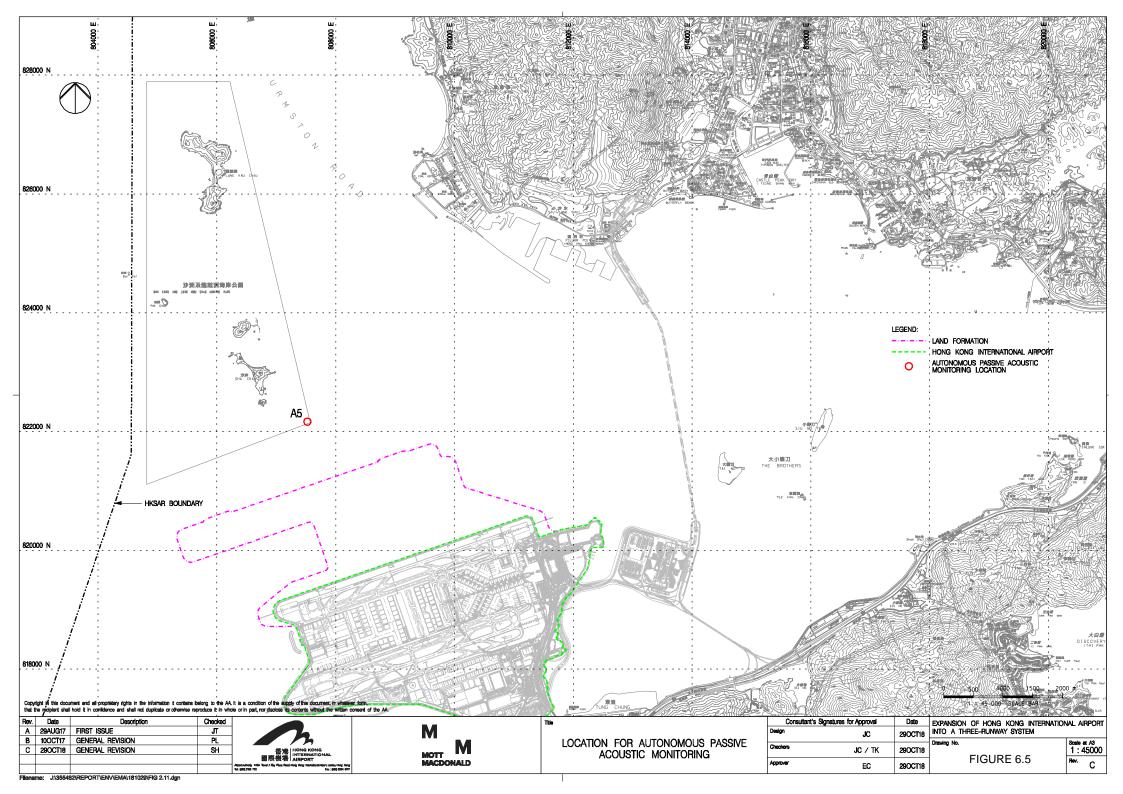












Appendix A. Environmental Mitigation Implementation Schedule (EMIS) for Construction Phase



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



EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion	Mitigation Measures Implemented?^
				of measures	
			Loading, Unloading or Transfer of Dusty Materials	Within construction	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.	site / Duration of the construction phase	
			Debris Handling	Within construction	1
			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	site / Duration of the construction phase	
			■ Before debris is dumped into a chute, water should be sprayed so that it remains wet when it is dumped.		
			Transport of Dusty Materials	Within construction	1
			 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. 	site / Duration of the construction phase	
			Wheel washing	Within construction	1
			 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. 	site / Duration of the construction phase	
			Use of vehicles	Within construction	I
			 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; 	site / Duration of the construction phase	
			 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	Within construction	1
			• 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.	site / Duration of the construction phase	
5.2.6.5	2.1	-	Best Practices for Concrete Batching Plant	Within Concrete	1
			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:	Batching Plant / Duration of the construction phase	
			Cement and other dusty materials		



EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures	Mitigation Measures Implemented?^
				Timing of completion of measures	
			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	1
			 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, stockpiles 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 of measures	Mitigation Measures Implemented?^
			• 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	1
			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	
			 All access and route roads within the premises shall be paved and adequately wetted. 	construction phase	
			Housekeeping	Within Concrete	l
			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	1
			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:	Batching Plant / Duration of the construction phase	
			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	Mitigation Measures
				Timing of completion of 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	1
			 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 construction phase	
			• Where there is sufficient buffer area surrounding the plant, ground stockpiling may be used. The stockpile shall be enclosed at least on top and three sides and with flexible curtain to cover the entrance side. If these aggregates are stored above the feeding hopper, they shall be enclosed at least on top and three sides and be wetted on the surface to prevent wind-whipping;		
			• The aggregates with a nominal size greater than 5 mm should preferably be stored in totally enclosed structure. Aggregates stockpile that is above the feeding hopper shall be enclosed at least on top and three sides. If open stockpiling is used, the stockpiles shall be enclosed on three sides with the enclosure wall sufficiently higher than the top of the stockpile to prevent wind whipping;		
			• Belt conveyors shall be enclosed on top and two sides and provided with a metal board at the bottom to eliminate any dust emission due to the wind-whipping effect. Other type of enclosure will also be accepted by EPD if it can be demonstrated that the proposed enclosure can be achieve the same performance;		
			 Scrapers shall be provided at the turning points of all belt conveyors inside the chute of the transfer points to remove dust adhered to the belt surface; 		
			 All conveyor transfer points shall be totally enclosed. Openings for the passages of conveyors shall be fitted with adequate flexible seals; and 		
			 All materials returned from dust collection system shall be transferred in enclosed system and shall be stored inside bins or enclosures. 		
			Hot feed side	Within Concrete	1
			• 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; 		
			• 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		



EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion	Mitigation Measures Implemented?^
				of measures	
			 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	1
			• 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 Batching Plant / Duration of the	1
			■ The heating temperature of the particular bitumen type and grade shall not exceed the corresponding temperature limit of the same type listed in Appendix 1 of the Guidance Note;		
			 Tamper-free high temperature cut-off device shall be provided to shut off the fuel supply or electricity in case the upper limit for bitumen temperature is reached; 	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	1
			 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	1
			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 as there was
			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	no rock crushing plant at this stag
			Crushers		



EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures	Mitigation Measures Implemented?^
				Timing of completion of measures	implementeu:
			• 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 as there was
			• 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		no rock crushing plant at this stage
			 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 as there was
			 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	no rock crushing plant at this stage
			■ 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.		
			Storage piles and bins	Within Concrete	N/A as there was
			 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	no rock crushing plant at this stage



EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures	Mitigation Measures
				Timing of completion of measures	Implemented?^
			 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; and		
			• Scattered piles gathered beneath belt conveyors, inside and around enclosures shall be cleared regularly.		
			Rock drilling equipment	Within Concrete	N/A as there was
			 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	no rock crushing plant at this stage
			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	I
Table 6.40	3.2	-	• An appropriate marine traffic management system should be established to minimize risk of ship collision.	Construction Site / Construction Period	I
Table 6.40	3.2	-	■ Location of all existing hydrant networks should be clearly identified prior to any construction works.	Construction Site / Construction Period	I
			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	ı
			 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; 		
			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. 		



EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?
7.5.6	4.3	-	Adoption of QPME ■ QPME should be adopted as far as applicable.	Within the Project site / During construction phase / Prior to commencement of operation	I
7.5.6	4.3	-	 Use of Movable Noise Barriers Movable noise barriers should be placed along the active works area and mobile plants to block the direct line of sight between PME and the NSRs. 	Within the Project site / During construction phase / Prior to commencement of operation	I
7.5.6	4.3	 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	I	
			Water Quality Impact – Construction Phase		
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 	Within construction site / Duration of the construction phase	1
			 Excess thaterials shall be cleaned from the decks and exposed littings 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 seabed at all states of the tide to ensure that undue turbidity is not generated by turbulence from vessel movement or propeller wash; 		
			■ The works shall not cause foam, oil, grease, litter or other objectionable matter to be present in the water within and adjacent to the works site; and		
			• For ground improvement activities including DCM, the wash water from cleaning of the drilling shaft should be appropriately treated before discharge. The Contractor should ensure the wastewater meets the WPCO/TM requirements before discharge. No direct discharge of contaminated water is permitted.		



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 All Works Areas The daily maximum production rates shall not exceed those assumed in the water quality assessment in the EIA report;	Within construction site / Duration of the construction phase	I – For marine filling
			 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; 		C – Completed in Nov 2020 for sand blanket
			• 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;		C – Completed in May 2018
			■ Closed grab dredger shall be used to excavate marine sediment;		1
			 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 Silt Curtain Deployment Plan)
			■ The Silt Curtain Deployment Plan shall be implemented.		I
			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;	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)
			 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 		I – For C7a
					C – Completed in Dec 2021 for C8
					*(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	Mitigation Measures Implemented?^
				Timing of completion of measures	implemented:
			 Specific Measures to be Applied to Land Formation Activities during Marine Filling Works Double layer 'Type II' or 'Type III' silt curtains to be applied around the eastern openings between partially completed seawalls prior to commencement of marine filling activities. The silt curtains shall be configured to minimise SS release during ebb tides; 	Within construction site / Duration of the construction phase	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 filling activities; 		N/A (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 C7a and C8 prior to commencement of marine filling activities; and 		I – For C7a
					C – Completed in Dec 2021 for C8
					(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 the Field Joint Excavation Works for the Submarine Cable Diversion	Within construction	N/A – the field
			 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 	site / Duration of the construction phase	joint excavation works for the submarine cable
			Silt curtains surrounding the closed grab dredger to be deployed as a precautionary measure.		diversion will no longer be conducted anymore
8.8.1.4	5.1	-	Modification of the Existing Seawall	At the existing	I
			• 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.	northern seawall / Duration of the construction phase	



EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
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	I
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	C – For approach lights N/A for marker beacons as HKIAAA Marker Beacons would be replaced by buoys
			 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. 		C – Completed in Oct 2021
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:	construction phase –	
		erosion and sedimentation control fac provided on site to direct storm water to system should be undertaken by the C areas located on the existing Airport is	• Install perimeter cut-off drains to direct off-site water around the site and implement internal drainage, erosion and sedimentation control facilities. Channels, earth bunds or sandbag barriers should be provided on site to direct storm water to silt removal facilities. The design of the temporary on-site drainage system should be undertaken by the Contractors prior to the commencement of construction (for works areas located on the existing Airport island) or as soon as the new land is completed (for works areas located on the new landform);		I
			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



EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
			• 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;		I
			• 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;	_	ı
			■ In the event that contaminated groundwater is identified at excavation areas, this should be treated onsite 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		ı
			• 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.		I
			 Open stockpiles of construction materials or construction wastes on-site should be covered with tarpaulin or similar fabric during rainstorms. Measures should be taken to prevent the construction materials, soil, silt or debris from washing away into the drainage system; 		I
			 Manholes (including newly constructed ones) should be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris being washed into the drainage system and to prevent stormwater runoff being directed into foul sewers; and 		I
			Precautionary measures should be taken at any time of the year when rainstorms are likely. Actions to be taken when a rainstorm is imminent or forecasted are summarized in Appendix A2 of ProPECC Note PN 1/94. This includes actions to be taken during and/or after rainstorms. Particular attention should be paid to the control of silty surface runoff during storm events.		1
8.8.1.9	5.1	-	Sewage Effluent from Construction Workforce Temporary sanitary facilities, such as portable chemical toilets, should be employed on-site where necessary to handle sewage from the workforce. A licensed contractor should be employed to provide appropriate and adequate portable toilets and be responsible for appropriate disposal and maintenance.	Within construction site / During construction phase	I



EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures	Mitigation Measures Implemented?^
				Timing of completion of measures	implemented:
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	
			• 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	C - Completed in
8.8.1.13			To prevent potential water quality impacts at Sha Chau, the following measures shall be applied:	site / During	Jan 2019
			 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 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	C – Completed in Jan 2019
			 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:		
			• The relevant construction methods (particularly for the tunnel works) and construction programme have been carefully planned and developed to minimise the extent of excavation and to maximise the on-site reuse of inert C&D materials generated by the project as far as practicable. Temporary stockpiling areas will also be provided to facilitate on-site reuse of inert C&D materials;	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; 		1



EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
			 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; 		1
			 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 	-	I
			• 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 /	I
			 Use of steel or aluminium formworks and falseworks for temporary works as far as practicable; 	Construction Phase	



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



EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
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 followed to minimise potential impacts on water quality during transportation of the sediments requiring Type 1 disposal:	Project Site Area / Construction Phase	N/A – the field joint excavation works for the
			 Bottom opening of barges shall be fitted with tight fitting seals to prevent leakage of material; 		submarine cable
			 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 		diversion will no longer be conducted anymore
			 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. 		anymore
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 'windblown' 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	I
			Land Contamination – Construction Phase		
11.10.1.2 to 11.10.1.3	8.1	2.32	For areas inaccessible during site reconnaissance survey Further site reconnaissance would be conducted once the areas are accessible in order to identify any land contamination concern for the areas.	Project Site Area inaccessible during site reconnaissance / Prior to Construction Phase	I



EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
			 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. 		C – Completed in Jan 2018
			 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 were submitted to EPD)
			 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 as no remediation was required.
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): To minimize the incidents of construction workers coming in contact with any contaminated materials, bulk	Construction Phase	N/A as no contaminated soil was found.
			 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. 		



EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
			Terrestrial Ecological – Construction Phase		
12.10.1.1	9.2	2.14	Pre-construction Egretry Survey ■ Conduct ecological survey for Sha Chau egretry to update the latest boundary of the egretry.	Breeding season (April - July) prior to commencement of HDD drilling works at HKIA	C – Completed in Jan 2019
12.7.2.3	9.1	2.30	Avoidance and Minimisation of Direct Impact to Egretry	During construction	C – Completed in
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	Jan 2019
			• 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	C – Completed in Jan 2019
			• 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	C – Completed in Jan 2019
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	C – Completed in
			 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	Jan 2019
			Marine Ecological Impact – Pre-construction Phase		
13.11.4.1	10.2.2		■ Pre-construction phase Coral Dive Survey.	HKIAAA artificial seawall	C – Completed in Jan 2016
			Marine Ecological Impact – Construction Phase		
13.11.1.3	-	-	Minimisation of Land Formation Area	Land formation	1
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	



EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
13.11.1.7 to 13.11.1.10	-	2.31	Use of Construction Methods with Minimal Risk/Disturbance ■ Use of non-dredge method for the main land formation and ancillary works including the diversion of the aviation fuel pipeline to the AFRF;	During construction phase at marine works area	C – Completed in Jan 2019 for diversion of aviation fuel pipeline
			 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; 		I
			 Use of bored piling in short duration to form the new approach lights and marker beacons for the new runway; 		C – Completed in Oct 2021 for new approach lights
			 Avoid bored piling during CWD peak calving season (Mar to Jun); 		N/A for marker beacons as HKIAAA Marker Beacons would be replaced by buoys
			■ 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. 		C – Completed in Jan 2019 for HDD works
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 	-	C – Completed in Oct 2021 for new approach lights
			 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. 	-	C – Completed in Jan 2019 for HDD works
13.11.1.12	-	-	Strict Enforcement of No-Dumping Policy	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?^
			 A policy prohibiting dumping of wastes, chemicals, oil, trash, plastic, or any other substance that would potentially be harmful to dolphins and/or their habitat in the work area; 		
			 Mandatory educational programme of the no-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
13.11.1.3 to 13.11.1.6	-	-	 Minimisation of Land Formation Area Minimise the overall size of the land formation needed for the additional facilities to minimise the overall loss of habitat for marine resources, especially the CWD population. 	Land formation footprint / during detailed design phase to completion of construction	1
13.11.5.4	10.3.1	-	SkyPier High Speed Ferries' Speed Restrictions and Route Diversions	Area between the	1
to 13.11.5.13			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	footprint and SCLKC Marine Park during construction phase	
			• A maximum of 10 knots will be enforced through the designated SCLKC Marine Park area at all times.		
			Other mitigation measures	Area between the	
			 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 	footprint and SCLKC Marine Park during construction phase	1
			 The effectiveness of the CWD mitigation measures after implementation of initial six month SkyPier HSF diversion and speed restriction will be reviewed. 		C – Completed ir Sep 2016
13.11.5.14	10.3.1	2.31	Dolphin Exclusion Zone	Marine waters around	
to 13.11.5.18			 Establishment of a 24 hr Dolphin Exclusion Zone (DEZ) with a 250 m radius around the land formation works areas; 	land formation works area during construction phase	1



EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion	Mitigation Measures Implemented?^
				of measures	
			 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 		I
			■ A DEZ would also be implemented during bored piling work but as a precautionary measure only.		C – Completed in Oct 2021 for the bored piling work of New approach lights
13.11.5.19	10.4	2.31	Acoustic Decoupling of Construction Equipment	Around coastal works	1
			 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 	area during construction phase	
			 Specific acoustic decoupling measures shall be specified during the detailed design of the project for use during the land formation works. 		
13.11.5.20	10.6.1	2.29	Spill Response Plan	Construction phase	1
			• 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	1
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 (as currently indicated by the 1x1km grid squares in Figure 6 of Appendix 13.2 of EIA report). 	west of Lantau Island during construction phase	
			 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. 		
			Fisheries Impact – Construction Phase		
14.9.1.2 to	-		Minimisation of Land Formation Area	Land formation	1
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	C – Completed in
			 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	Jan 2019 for diversion of aviation fuel pipeline



EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
			 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; 		1
			 Use of bored piling in short duration to form the new approach lights and marker beacons for the new runway; and 		C – Completed in Oct 2021 for new approach lights
					N/A for marker beacons as HKIAAA Marker Beacons would be replaced by buoys
			 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. 		C – Completed in Jan 2019 for HDD works
14.9.1.11	-		Strict Enforcement of No-Dumping Policy	All works area during	1
			 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. 		
14.9.1.12	-		Good Construction Site Practices	All works area during	1
			 Regular inspection of the integrity and effectiveness of all silt curtains and monitoring of effluents to ensure that any discharge meets effluent discharge guidelines; 	the construction phase	
			 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. 		
14.9.1.13	-		Mitigation for Indirect Disturbance due to Deterioration of Water Quality	All works area during	1
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	
			• 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



EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
			 Use of bored piling in short duration to form the new approach lights and marker beacons for the new runway; and 		C – Completed in Oct 2021 for new approach lights N/A for marker beacons as HKIAAA Marker Beacons would be replaced by buoys
			 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. 		C – Completed on Jan 2019 for HDD work
			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;	I
				Upon handover and completion of works.	
Table 15.6	12.3	-	CM2 - Reduction of construction period to practical minimum.	All works areas for duration of works;	I
				Upon handover and completion of works.	
Table 15.6	12.3	-	CM3 - Phasing of the construction stage to reduce visual impacts during the construction phase.	All works areas for duration of works;	1
				Upon handover and completion of works.	
Table 15.6	12.3	-	CM4 - Construction traffic (land and sea) including construction plants, construction vessels and barges should be kept to a practical minimum.	All works areas for duration of works;	1
				Upon handover and completion of works.	
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;	I
				Upon handover and completion of works. – may be disassembled in phases.	



EIA Ref. EM&A Ref.		EP Condition	Environmental Protection Measures	Location / Duration of measures	Mitigation Measures
				Timing of completion of measures	Implemented?^
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	I
			completion of works.		
Table 15.6 12.3 -	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;	I
			Upon handover and completion of works. – may be disassembled in phases.		
Table 15.6 12.3 -	12.3	-	Specification shall be provided in the Contract Specification. Under this specification, the Contractor shall	All existing trees to be retained;	1
		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.	Upon handover and completion of works.		
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	All existing trees to be affected by the works;	1
		necessary tree root and crown preparation periods shall be allowed in the project programme.	Upon handover and completion of works.		
Table 15.6 12.3	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;	I
				Upon handover and completion of works.	
			Cultural Heritage Impact – Construction Phase		
			Not applicable to the construction stage of this project.	-	-
			Health Impact – Aircraft Emissions		
			Not applicable to the construction stage of this project.		



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

Notes:

[&]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 and on-going where applicable.

[&]quot; N/A" Not applicable to the construction works implemented during the reporting month. "^" Checked by ET through site inspection and record provided by the Contractor.

Appendix B. Monitoring Schedule

Monitoring Schedule of This Reporting Period

Jan-22

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Sunday	Monday	luesuay		Thursday	rnuay	Saturday
						WQ General mid-ebb: 12:02
						mid-flood: 17:04
2	3	4	5	6	7	8
	Site Inspection	Site Inspection	Site Inspection	Site Inspection	Site Inspection	
	CWD Survey (Vessel)	CWD Survey (Vessel)	CWD Survey (Vessel)			
	AR1A, AR2		2112 22115, (12222.)			AR1A, AR2
	NM1A, NM5	NM4, NM6				
		WQ General		WQ General		WQ General
		mid-ebb: 14:27		mid-ebb: 16:01		mid-ebb: 17:54
	10	mid-flood: 09:18		mid-flood: 10:45	4.4	mid-flood: 12:16
9	10 Site Inspection	11 Site Inspection	12 Site Inspection	13 Site Inspection	14 Site Inspection	15
	Oite inspection	Oite inspection	One mapecuon	Oite inspection	Oite inspection	
	CWD Survey (Vessel)	CWD Survey (Vessel)	CWD Survey (Vessel)		4B44 4B0	
				NM4, NM6	AR1A, AR2 NM1A, NM5	
					,	
		WQ General & Regular DCM		WQ General & Regular DCM		WQ General & Regular DCM
		mid-ebb: 07:07 mid-flood: 14:19		mid-ebb: 09:54 mid-flood: 15:18		mid-ebb: 11:39 mid-flood: 06:57
16	17	18	19	20	21	22
	Site Inspection	Site Inspection	Site Inspection	Site Inspection	Site Inspection	
	CWD Survey (Land-based)		CWD Survey (Vessel)	CWD Survey (Vessel)		
			2112 22115, (12222.)	AR1A, AR2		
		NM4, NM6		NM1A, NM5		
		WQ General & Regular DCM		WQ General & Regular DCM		WQ General & Regular DCM
		mid-ebb: 13:2		mid-ebb: 14:37		mid-ebb: 15:55
00		mid-flood: 08:3		mid-flood: 09:31		mid-flood: 10:33
23	24 Site Inspection	25 Site Inspection	26 Site Inspection	Site Inspection	28 Site Inspection	29
	Cité inspection	Cite inspection	Cité inspession	Cite inspection	Cité inspection	
	CWD Survey (Land-based)		4B44 4B0			
		NM4, NM6	AR1A, AR2 NM1A, NM5			
			,			
		WQ General & Regular DCM		WQ General & Regular DCM		WQ General & Regular DCM
		mid-ebb: 05:29 mid-flood: 12:20	1	mid-ebb: 08:03 mid-flood: 13:53		mid-ebb: 11:04 mid-flood: 15:49
30	31	Notes:	-			,,,,,
	Site Inspection					
		CWD - Chinese White Dolphin	NM1A/AR1A - Man Tung Road Park			
	AR1A, AR2	Air more life and Maria Mariania Chating	NM4 - Ching Chung Hau Po Woon Pr	imary School		
	NM1A, NM5	Air quality and Noise Monitoring Station	NM5/AR2 - Village House, Tin Sum	-		
	WQ General & Regular DCM	WQ - Water Quality	NM6 - House No. 1, Sha Lo Wan			
	mid-ebb: 12:4					
	mid-flood: 07:3					

Tentative Monitoring Schedule of Next Reporting Period

Feb-22

			I ON ZZ			
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1	2	3	4 Site Inspection	5
					NM4, NM6	AR1A, AR2
					WQ General & Regular DCM mid-ebb: 15:36	
6	7 Site Inspection	8 Site Inspection	9	10 Site Inspection	mid-flood: 10:06 11 Site Inspection	12
	CWD Survey (Vessel)	CWD Survey (Vessel)	CWD Survey (Vessel)	CWD Survey (Vessel)	CWD Survey (Land-based) AR1A, AR2	
WQ General & Regular DCM		WQ General & Regular DCM	NM4, NM6	WQ General & Regular DCM	NM1A, NM5	WQ General & Regular DCM
mid-ebb: 16:59 mid-flood: 11:04		mid-ebb: 05:11 mid-flood: 11:49		mid-ebb: 21:21 mid-flood: 08:32		mid-ebb: 23:08 mid-flood: 10:48
13	14 Site Inspection	15 Site Inspection	16	17 Site Inspection	18 Site Inspection	19
	CWD Survey (Vessel)	CWD Survey (Vessel)	CWD Survey (Vessel, Land-based) NM4, NM6	CWD Survey (Vessel) AR1A, AR2 NM1A, NM5		
		WQ General & Regular DCM mid-ebb: 12:41	·	WQ General & Regular DCM mid-ebb: 13:45		WQ General & Regular DCM mid-ebb: 14:49
		mid-flood: 07:36		mid-flood: 08:26		mid-flood: 09:13
20	21 Site Inspection	Site Inspection	23	24 Site Inspection	25 Site Inspection	26
		NM4, NM6	AR1A, AR2 NM1A, NM5			
		WQ General & Regular DCM mid-ebb: 16:50 mid-flood: 10:33		WQ General & Regular DCM mid-ebb: 06:11 mid-flood: 11:47		WQ General & Regular DCM mid-ebb: 21:55 mid-flood: 09:14
27	28 Site Inspection	mia-100d: 10:33		mid-100d: 11:47		mid-1100d: U9:14
		Notes: Contract Number - Site Inspection CWD - Chinese White Dolphin				
		Air quality and Noise Monitoring Station	NM1A/AR1A - Man Tung Road Park NM4 - Ching Chung Hau Po Woon Prima NM5/AR2 - Village House, Tin Sum	ary School		
		WQ - Water Quality DCM - Deep Cement Mixing	NM6 - House No. 1, Sha Lo Wan			

Appendix C. Monitoring Results

tt MacDonald Expansion of Hong Kong International Airport into a Three-Runway System
ir Ovelity Meniterine Deculte
air Quality Monitoring Results

1-hour TSP Results

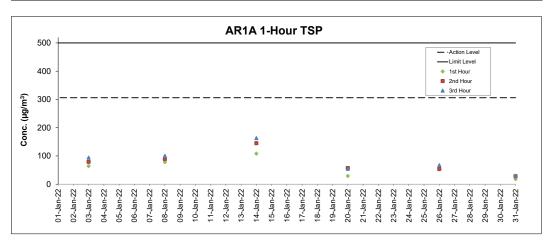
Station: AR1A- Man Tung Road Park

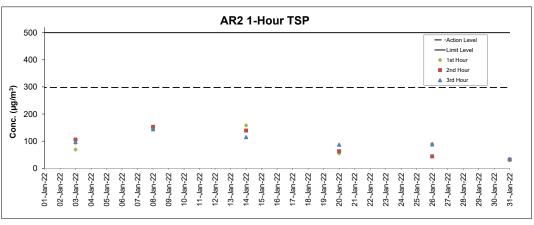
Date	Time	Weather	Wind Speed (m/s)	Wind Direction	1-hr TSP (μg/m³)	Action Level	Limit Level
				(deg)	,	(μg/m³)	(μg/m³)
03-Jan-22	12:55	Sunny	4.2	248	64	306	500
03-Jan-22	13:55	Sunny	3.9	259	79	306	500
03-Jan-22	14:55	Sunny	3.3	272	94	306	500
08-Jan-22	7:59	Fine	3.3	50	78	306	500
08-Jan-22	8:59	Fine	1.9	69	89	306	500
08-Jan-22	9:59	Fine	1.7	15	100	306	500
14-Jan-22	8:27	Overcast	8.3	86	108	306	500
14-Jan-22	9:27	Overcast	9.2	90	145	306	500
14-Jan-22	10:27	Overcast	7.8	90	163	306	500
20-Jan-22	7:39	Overcast	4.2	83	29	306	500
20-Jan-22	8:39	Overcast	5.3	90	57	306	500
20-Jan-22	9:39	Overcast	4.2	107	54	306	500
26-Jan-22	9:18	Overcast	6.1	97	52	306	500
26-Jan-22	10:18	Overcast	6.4	104	54	306	500
26-Jan-22	11:18	Overcast	6.1	84	67	306	500
31-Jan-22	7:32	Fine	4.7	4	18	306	500
31-Jan-22	8:32	Fine	6.1	50	28	306	500
31-Jan-22	9:32	Fine	6.7	44	30	306	500

1-hour TSP Results

Station: AR2- Village House, Tin Sum

Date	Time	Weather	Wind Speed (m/s)	Wind Direction (deg)	1-hr TSP (μg/m³)	Action Level (μg/m³)	Limit Level (μg/m³)
03-Jan-22	8:37	Sunny	4.7	87	69	298	500
03-Jan-22	9:37	Sunny	4.2	91	106	298	500
03-Jan-22	10:37	Sunny	4.2	83	96	298	500
08-Jan-22	12:14	Fine	3.6	323	144	298	500
08-Jan-22	13:14	Fine	3.3	259	153	298	500
08-Jan-22	14:14	Fine	3.1	254	144	298	500
14-Jan-22	12:46	Overcast	7.8	93	158	298	500
14-Jan-22	13:46	Overcast	7.2	98	139	298	500
14-Jan-22	14:46	Overcast	8.9	91	115	298	500
20-Jan-22	12:13	Sunny	4.2	341	55	298	500
20-Jan-22	13:13	Sunny	3.9	333	63	298	500
20-Jan-22	14:13	Sunny	3.6	267	87	298	500
26-Jan-22	13:35	Sunny	5.0	83	90	298	500
26-Jan-22	14:35	Sunny	4.2	87	44	298	500
26-Jan-22	15:35	Sunny	3.3	25	88	298	500
31-Jan-22	12:16	Fine	3.3	47	30	298	500
31-Jan-22	13:16	Fine	3.9	42	32	298	500
31-Jan-22	14:16	Fine	4.4	1	34	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/CC requirements as stipulated in the EM&A Manual were carried out during measurement.

Noise Monitoring Results	

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	Ι Δ
Date	weather	Time	L ₁₀ dB(A)	$\mathbf{L}_{90} dB(A)$	L _{eq(30mins)} dB(A) ^
03-Jan-22	Sunny	14:20	56.0	48.5	
03-Jan-22	Sunny	14:25	60.4	49.2	
03-Jan-22	Sunny	14:30	54.3	49.0	58
03-Jan-22	Sunny	14:35	58.4	50.4	36
03-Jan-22	Sunny	14:40	55.0	48.3	
03-Jan-22	Sunny	14:45	55.8	48.3	
14-Jan-22	Overcast	08:30	62.8	52.7	
14-Jan-22	Overcast	08:35	57.2	50.8	
14-Jan-22	Overcast	08:40	58.4	51.4	59
14-Jan-22	Overcast	08:45	56.3	51.0	39
14-Jan-22	Overcast	08:50	56.8	51.1	
14-Jan-22	Overcast	08:55	61.7	53.3	
20-Jan-22	Overcast	07:43	55.4	52.1	
20-Jan-22	Overcast	07:48	63.0	53.3	
20-Jan-22	Overcast	07:53	57.7	52.2	59
20-Jan-22	Overcast	07:58	56.0	52.1	39
20-Jan-22	Overcast	08:03	56.7	50.7	
20-Jan-22	Overcast	08:08	57.0	52.3	
26-Jan-22	Overcast	11:21	58.1	52.5	
26-Jan-22	Overcast	11:26	59.7	51.0	
26-Jan-22	Overcast	11:31	59.3	48.5	58
26-Jan-22	Overcast	11:36	55.9	48.8	30
26-Jan-22	Overcast	11:41	56.4	50.3	
26-Jan-22	Overcast	11:46	56.0	49.3	
31-Jan-22	Fine	07:37	55.7	50.6	
31-Jan-22	Fine	07:42	57.6	51.1	
31-Jan-22	Fine	07:47	57.1	52.2	58
31-Jan-22	Fine	07:52	56.6	52.1	58
31-Jan-22	Fine	07:57	57.0	53.6	
31-Jan-22	Fine	08:02	59.4	53.4	1

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

Noise Measurement Results

Station: NM4- Ching Chung Hau Po Woon Primary School

Data	Weather	T	Measured	Measured	
Date	weather	Time	L ₁₀ dB(A)	L ₉₀ dB(A)	L _{eq(30mins)} dB(A) ^
04-Jan-22	Sunny	14:08	59.1	54.3	
04-Jan-22	Sunny	14:13	61.0	55.6	
04-Jan-22	Sunny	14:18	61.3	56.2	62
04-Jan-22	Sunny	14:23	63.4	57.8	02
04-Jan-22	Sunny	14:28	59.7	54.9	
04-Jan-22	Sunny	14:33	61.4	56.0	
13-Jan-22	Fine	08:43	60.5	57.3	
13-Jan-22	Fine	08:48	61.5	57.0	
13-Jan-22	Fine	08:53	59.2	55.4	62
13-Jan-22	Fine	08:58	61.7	55.2	62
13-Jan-22	Fine	09:03	62.0	58.2	
13-Jan-22	Fine	09:08	62.0	57.9	
18-Jan-22	Fine	14:33	60.2	54.5	
18-Jan-22	Fine	14:38	59.6	55.4	
18-Jan-22	Fine	14:43	61.2	55.5	61
18-Jan-22	Fine	14:48	59.1	54.7	01
18-Jan-22	Fine	14:53	60.8	55.7	
18-Jan-22	Fine	14:58	60.5	53.6	
25-Jan-22	Fine	13:18	59.9	55.7	
25-Jan-22	Fine	13:23	58.3	55.0	
25-Jan-22	Fine	13:28	59.5	54.8	61
25-Jan-22	Fine	13:33	59.4	55.2] 01
25-Jan-22	Fine	13:38	61.4	54.8	
25-Jan-22	Fine	13:43	61.1	56.8	

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

Noise Measurement Results

Station: NM5- Village House, Tin Sum

Date	Weather	Time	Measured	Measured	1
Date	weather	Time	L ₁₀ dB(A)	L ₉₀ dB(A)	L _{eq(30mins)} dB(A) ^
03-Jan-22	Sunny	09:20	51.6	46.1	
03-Jan-22	Sunny	09:25	51.5	45.7	
03-Jan-22	Sunny	09:30	51.4	46.7	57
03-Jan-22	Sunny	09:35	50.3	46.1	37
03-Jan-22	Sunny	09:40	57.3	46.4	
03-Jan-22	Sunny	09:45	51.0	48.1	
14-Jan-22	Overcast	12:45	56.0	48.9	
14-Jan-22	Overcast	12:50	54.8	47.5	
14-Jan-22	Overcast	12:55	56.3	48.2	61*
14-Jan-22	Overcast	13:00	54.2	48.4	61
14-Jan-22	Overcast	13:05	56.0	49.6	
14-Jan-22	Overcast	13:10	72.3	49.6	
20-Jan-22	Sunny	12:15	49.1	45.6	
20-Jan-22	Sunny	12:20	54.6	46.3	
20-Jan-22	Sunny	12:25	50.6	44.0	53
20-Jan-22	Sunny	12:30	52.5	44.6	33
20-Jan-22	Sunny	12:35	46.8	44.0	
20-Jan-22	Sunny	12:40	47.3	44.1	
26-Jan-22	Overcast	14:09	52.8	49.2	
26-Jan-22	Overcast	14:14	55.1	50.3	
26-Jan-22	Overcast	14:19	64.7	53.9	66*
26-Jan-22	Overcast	14:24	73.2	55.1	00
26-Jan-22	Overcast	14:29	71.9	49.7	
26-Jan-22	Overcast	14:34	56.2	49.4	
31-Jan-22	Fine	12:17	56.9	47.1	
31-Jan-22	Fine	12:22	53.2	46.6	
31-Jan-22	Fine	12:27	53.8	46.5	55
31-Jan-22	Fine	12:32	50.1	47.5] 33
31-Jan-22	Fine	12:37	52.1	46.2	
31-Jan-22	Fine	12:42	57.0	44.6	

Noise Measurement Results

Station: NM6- House No.1 Sha Lo Wan

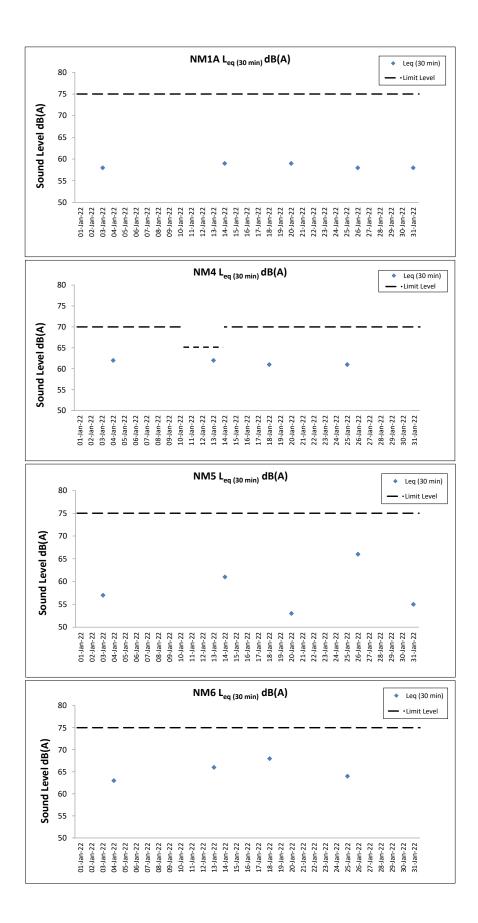
Date	Weather	Time	Measured	Measured	Ι 40(Δ) Δ
Date	Weather	Time	L ₁₀ dB(A)	L ₉₀ dB(A)	L _{eq(30mins)} dB(A) ^
04-Jan-22	Sunny	15:39	63.3	48.3	
04-Jan-22	Sunny	15:44	57.2	45.8	
04-Jan-22	Sunny	15:49	56.2	47.3	63
04-Jan-22	Sunny	15:54	66.6	47.5	03
04-Jan-22	Sunny	15:59	62.7	46.2	
04-Jan-22	Sunny	16:04	62.9	45.5	
13-Jan-22	Fine	15:42	64.8	57.9	
13-Jan-22	Fine	15:47	74.4	60.7	
13-Jan-22	Fine	15:52	69.1	61.0	66*
13-Jan-22	Fine	15:57	72.5	60.0	00
13-Jan-22	Fine	16:02	66.3	59.7	
13-Jan-22	Fine	16:07	69.8	61.0	
18-Jan-22	Fine	15:47	69.5	55.6	
18-Jan-22	Fine	15:52	68.6	54.6	
18-Jan-22	Fine	15:57	65.5	49.3	68
18-Jan-22	Fine	16:02	63.4	45.6	08
18-Jan-22	Fine	16:07	56.8	45.5	
18-Jan-22	Fine	16:12	68.3	49.2	
25-Jan-22	Fine	15:41	62.2	47.8	
25-Jan-22	Fine	15:46	49.6	43.6	
25-Jan-22	Fine	15:51	58.8	45.0	64
25-Jan-22	Fine	15:56	72.2	50.0	04
25-Jan-22	Fine	16:01	59.1	50.4	
25-Jan-22	Fine	16:06	53.9	48.4	

Remarks:

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

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

^{(*) 13}dB (A) correction in Leq(30mins) dB(A) was applied to free-field measurement.
(*) The measurement result was corrected with reference to the baseline monitoring levels.



Notes

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

Water	Quality	Monitor	ing Res	sults	

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

Expansion of Hong Kong International Airport into a Three-Runway System Water Quality Monitoring Water Quality Monitoring Results on 01 January 22 during

01 January 22 during Mid-Ebb Tide

Water Qua	lity Monit	oring Resu	ılts on		01 January 22	during Mid-	-Ebb Tid	е																
Monitoring	Weather	Sea	Sampling	Water	Sampling Dep	th (m)	Current Speed	Current	Water Te	emperature (°C)		pH	Salir	nity (ppt)	DOS	Saturation (%)	Disso		Turbidity	(NTU)	Suspende (mg		Coordinate HK Grid	Coordinate HK Grid
Station	Condition	Condition	Time	Depth (m)	Camping Dep	ar (iii <i>)</i>	(m/s)	Direction	Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	(Northing)	(Easting)
					Surface	1.0	0.4	167	18.5	18.5	8.2	8.2	32.5	32.5	90.6	90.6	7.0		9.2		6			
						1.0 3.9	0.4	179 155	18.5 18.5		8.2		32.5 32.4		90.6 90.6		7.0	7.0	9.2 9.8	-	5			1
C1	Fine	Calm	11:41	7.8	Middle	3.9	0.4	162	18.1	18.3	8.2	8.2	32.4	32.4	90.6	90.6	7.0		9.8	9.9	6	6	815609	804229
					Bottom	6.8	0.3	144	18.6	18.4	8.2	8.2	32.4	32.4	90.8	90.8	7.0	7.0	10.8	i	7			1
					Bottom	6.8	0.3	145	18.1	10.4	8.2	0.2	32.4	32.4	90.8	30.0	7.0	7.0	10.8		6			
					Surface	1.0	0.5	172	18.5	18.5	8.1	8.1	32.4	32.4	94.0 94.4	94.2	7.3		1.5		11			1
						1.0 6.4	0.5 0.4	182 161	18.5 18.5		8.1 8.1		32.4		95.6		7.3 7.4	7.4	1.5 2.3		11 10			1
C2	Fine	Calm	12:35	12.8	Middle	6.4	0.4	172	18.5	18.5	8.1	8.1	32.4	32.4	95.8	95.7	7.4		2.3	2.5	11	10	825675	806922
					Bottom	11.8	0.3	149	18.5	18.5	8.1	8.1	32.4	32.4	96.6	96.9	7.5	7.5	3.9		10			1
						11.8	0.4	161	18.5		8.1		32.4		97.1		7.5		3.7		9			
					Surface	1.0	0.3	103 105	19.0 19.0	19.0	8.1	8.1	33.2 33.2	33.2	89.5 89.5	89.5	6.8		6.9 6.9	-	9			1
C3	_		40.47	40.0		6.0	0.3	114	19.0	19.0	8.1	8.1	33.2	33.2	90.2	90.2	6.9	6.9	7.4	7.4	9	10	200005	047000
C3	Fine	Calm	10:47	12.0	Middle	6.0	0.3	119	19.0	19.0	8.1	8.1	33.2	33.2	90.2		6.9		7.4	7.4	10	10	822095	817803
					Bottom	11.0 11.0	0.3	113	19.0 19.0	19.0	8.1	8.1	33.2	33.2	91.2	91.4	7.0	7.0	8.0		12			1
						11.0	0.3	120 156	19.0		8.1 8.2		32.4		91.5 90.8		7.0 7.0		8.1 7.4		12 10			+
					Surface	1.0	0.2	167	18.5	18.5	8.2	8.2	32.4	32.4	90.8		7.0		7.5		9			1
IM1	Fine	Calm	12:00	4.6	Middle	-	-		-		-	_	-	_	-	_	-	7.0	-	7.9	-	9	817945	807111
	1 1110	Callii	12.00	4.0	Wildelic	-	-		-	_	-		-	_	-		-		-	7.5	-	3	017343	007111
					Bottom	3.6	0.2	144 149	18.5 18.5	18.5	8.1	8.1	32.5 32.5	32.5	90.7	90.7	7.0	7.0	8.4 8.4	-	9			1
						1.0	0.2	157	18.5		8.2		32.4		90.6		7.0		3.9		7			
					Surface	1.0	0.3	163	18.5	18.5	8.2	8.2	32.4	32.4	90.6	90.6	7.0	7.0	3.9	i	7			1
IM2	Fine	Calm	12:07	6.2	Middle	3.1	0.2	161	18.5	18.5	8.2	8.1	32.4	32.4	90.6	90.6	7.0	7.0	5.2	5.2	9	8	818183	806175
						3.1	0.2	174	18.5		8.1		32.4		90.6		7.0		5.2		8	_		
					Bottom	5.2 5.2	0.2	168 171	18.5 18.5	18.5	8.1	8.1	32.4 32.4	32.4	90.7	90.7	7.0	7.0	6.6	-	9			1
					Surface	1.0	0.3	183	18.1	18.1	8.1	8.1	32.4	32.4	90.6	90.6	7.0		9.2		9			
					Surface	1.0	0.3	199	18.1	10.1	8.2	0.1	32.4	32.4	90.6	90.6	7.0	7.0	9.2		10			1
IM3	Fine	Calm	12:13	6.4	Middle	3.2	0.2	188	18.1	18.3	8.2	8.2	32.4	32.4	90.7	90.7	7.0		9.9	10.0	9	9	818762	805601
						3.2 5.4	0.2	203 190	18.5 18.5		8.2		32.4 32.4		90.7		7.0 7.0		9.9 10.9	-	9			1
					Bottom	5.4	0.2	196	18.5	18.5	8.2	8.2	32.4	32.4	90.7	90.7	7.0	7.0	10.8	1	9			1
					Surface	1.0	0.3	201	18.6	18.6	8.2	8.2	32.4	32.4	90.5	90.5	7.0		9.1		7			
						1.0	0.3	203	18.6		8.2		32.4		90.5		7.0	7.0	9.1	-	7			1
IM4	Fine	Calm	12:23	8.0	Middle	4.0 4.0	0.2	222 223	18.6 18.6	18.6	8.2	8.1	32.4	32.3	90.5	90.5	7.0		10.6 10.6	10.2	8	8	819705	804625
					D. //	7.0	0.2	201	18.6	40.4	8.1		32.3	32.3	90.6	90.6	7.0	7.0	10.8		9			1
					Bottom	7.0	0.2	212	18.1	18.4	8.1	8.1	32.3	32.3	90.6		7.0	7.0	10.8		8			
					Surface	1.0	0.3	200	18.6	18.5	8.2	8.2	32.3	32.3	90.5	90.5	7.0		8.0		8			
						1.0 3.8	0.3	216 197	18.4 18.4		8.2 8.1		32.3 32.4		90.5 90.5		7.0 7.0	7.0	8.0 9.1		7			1
IM5	Fine	Calm	12:32	7.6	Middle	3.8	0.3	200	18.6	18.5	8.1	8.1	32.4	32.4	90.5		7.0		9.1	9.0	9	8	820716	804845
					Bottom	6.6	0.2	188	18.6	18.6	8.1	8.1	32.4	32.4	90.5	90.5	7.0	7.0	9.8	j	9			1
					Sottom	6.6	0.2	202	18.6	.5.0	8.2	3.1	32.4	52.7	90.5	50.5	7.0		9.8		8			
					Surface	1.0	0.4	205 207	18.4 18.4	18.4	8.1	8.1	32.4	32.4	90.3	90.3	7.0		9.2 9.1	4	9			I
	_					3.4	0.4	210	18.4		8.2	H	32.4		90.3		7.0	7.0	10.2	ł	9	_		l
IM6	Fine	Calm	12:40	6.8	Middle	3.4	0.4	217	18.6	18.5	8.2	8.2	32.3	32.3	90.4	90.4	7.0		10.2	10.0	10	9	821052	805808
					Bottom	5.8	0.3	209	18.6	18.6	8.2	8.2	32.3	32.3	90.4	90.4	7.0	7.0	10.9		7			1
						5.8 1.0	0.3	221 221	18.6 18.6		8.2		32.3		90.4		7.0		10.8 6.7		8			
					Surface	1.0	0.4	241	18.6	18.6	8.2	8.2	32.4	32.4	90.4	90.4	7.0		6.8		9			1
IM7	Fine	Calm	12:48	8.0	Middle	4.0	0.4	218	18.6	18.6	8.2	8.2	32.4	32.4	90.4	90.4	7.0	7.0	8.4	8.2	8	7	821329	806843
IIVI /	FIIIE	Callii	12.40	0.0	iviluule	4.0	0.4	229	18.6	10.0	8.2	0.2	32.4	32.4	90.4		7.0		8.6	0.2	7	'	02 1328	000043
					Bottom	7.0	0.3	213	18.6	18.5	8.1	8.1	32.4	32.4	90.4	90.4	7.0	7.0	9.3	1	6			1
			<u> </u>			7.0 1.0	0.3	219 49	18.4 18.5		8.1 8.2		32.4 32.7		90.4 92.2		7.0 7.1		9.3	 	6 10			
					Surface	1.0	0.2	50	18.5	18.5	8.2	8.2	32.7	32.7	92.3	92.3	7.1	7.2	3.1	1	9			I
IM8	Fine	Calm	12:12	8.0	Middle	4.0	0.2	59	18.5	18.5	8.2	8.2	32.8	32.8	93.6	93.7	7.2	1.2	4.5	4.4	9	10	821834	808125
						4.0	0.2	64	18.5		8.2		32.8		93.8		7.2		4.4		9			
					Bottom	7.0 7.0	0.3	74 80	18.4 18.5	18.5	8.2	8.2	32.8	32.8	94.8 95.2	95.0	7.3 7.4	7.4	5.7 5.6	1	10 11			
DA: Depth-Aver	aned		1	<u> </u>	1	1.0	V.3	JU	10.0	<u> </u>	0.2	1	UZ.0		υ υ. Ζ		1.4		J.U					

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 01 January 22 during

01 January 22 during Mid-Ebb Tide

Water Qua	lity Monit	oring Resu	ılts on		01 January 22	during Mid-	Ebb Tid	е														
Monitoring	Weather	Sea	Sampling	Water	Sampling Depth	ı (m)	Current Speed	Current	Water Te	emperature (°C)	pH	Salinity (ppt)		aturation (%)	Dissol Oxyg		Turbidity(NTU)	Suspende (mg/		Coordinate HK Grid	Coordinate HK Grid
Station	Condition	Condition	Time	Depth (m)			(m/s)	Direction	Value	Average	Value Average		Value	Average	Value	DA	Value	DA	Value	DA	(Northing)	(Easting)
					Surface	1.0	0.3	57	18.3	18.3	8.2	32.9	94.4	94.6	7.3	ļ	5.0		14			
						1.0 3.7	0.3	60 65	18.3 18.0		8.2	33.0	94.7 95.7		7.3	7.4	5.1 6.7		15 12			
IM9	Fine	Calm	12:06	7.4	Middle	3.7	0.4	68	17.9	18.0	8.2	33.2	95.9	95.8	7.5	ŀ	6.9	6.4	13	12	822085	808826
					Bottom	6.4	0.3	65	17.6	17.6	8.2 8.2	33.5 33.6	97.4	97.6	7.6	7.6	7.3		10			
					DOLLOTT	6.4	0.3	67	17.5	17.0	8.2	33.6	97.8	97.0	7.6	7.0	7.4		9			
					Surface	1.0	0.5	74	18.5	18.5	8.2	33.0	92.1	92.2	7.1		7.2		11			
						1.0	0.5	74	18.5		8.2	33.0	92.3		7.1	7.2	7.1		10			
IM10	Fine	Calm	12:00	8.2	Middle	4.1 4.1	0.5 0.5	77 83	18.5 18.5	18.5	8.2 8.2	33.0 33.0	93.4 93.7	93.6	7.2	ŀ	8.5 8.5	8.2	12 11	11	822400	809787
					Bottom	7.2	0.4	91	18.5	18.5	8.2 8.2	33.0 33.0	95.4	95.6	7.3	7.4	9.0		11			
					BOHOM	7.2	0.4	95	18.5	16.5	8.2	33.0	95.8	95.0	7.4	7.4	9.1		12			
					Surface	1.0	0.1	127	18.6	18.6	8.2 8.2	33.1	92.3	92.4	7.1		5.2		10			
						1.0 3.6	0.1	136 127	18.6 18.5		8.2	33.1	92.4 94.1		7.1 7.2	7.2	5.2 6.9		9 10			
IM11	Fine	Calm	11:51	7.2	Middle	3.6	0.2	137	18.5	18.5	8.2	33.0 33.0	94.1	94.2	7.3	-	6.8	6.6	11	10	822055	811448
					Bottom	6.2	0.1	105	18.5	18.5	8.2 8.2	33.0 33.0	95.6	95.8	7.4	7.4	7.7		11			
					DOLLOTT	6.2	0.1	114	18.5	16.5	8.2	33.0	95.9	95.6	7.4	7.4	7.7		10			
					Surface	1.0	0.1	133	18.6	18.6	8.2	33.1	91.7	91.8	7.0		7.0		11			
						1.0	0.1	139	18.6		8.2	33.1	91.8		7.1	7.1	7.1		10			
IM12	Fine	Calm	11:45	9.4	Middle	4.7	0.2	120 129	18.6 18.6	18.6	8.2 8.2	33.1 33.1	92.9 93.1	93.0	7.1 7.2	-	8.1 8.2	8.1	10 11	11	821452	812067
						8.4	0.2	111	18.6	40.0	8.2	22.1	95.8	05.0	7.4		9.0		12			
					Bottom	8.4	0.2	116	18.6	18.6	8.2	33.1	96.0	95.9	7.4	7.4	9.1		12			
					Surface	1.0	-	-	18.6	18.6	8.2	33.0 33.0	91.5	91.7	7.0		1.1		8			
						1.0 2.5	-	•	18.6		8.2	33.0	91.9		7.1	7.1	1.1		7			
SR1A	Fine	Calm	11:22	5.0	Middle	2.5	-	- :	-	-	-	-	-	-		-		2.0	-	9	819975	812654
					Bottom	4.0	-	-	18.6	18.6	8.2	33.0	93.6	93.8	7.2	7.0	2.9		10			
					DOLLOTT	4.0	-		18.6	10.0	8.2	33.0	93.9	93.6	7.2	7.2	2.9		9			
					Surface	1.0	0.2	29	18.6	18.6	8.2	33.1	96.5	96.5	7.4		7.9		5			
						1.0	0.2	30	18.6		8.2	33.1	96.5		7.4	7.4	7.9		5			
SR2	Fine	Calm	11:10	4.6	Middle		-		- :	-	-	-	-	-		-		8.4		5	821445	814168
					Bottom	3.6	0.2	18	18.6	18.6	8.2 8.2	33.1 33.1	99.0	99.2	7.6	7.6	9.0		5			
					BOROTT	3.6	0.2	19	18.6	16.0	8.2	33.1	99.3	99.2	7.6	7.0	8.9		6			
					Surface	1.0	0.4	73	18.6	18.6	8.2 8.2	32.4 32.4	91.3	91.3	7.0	-	3.9		6			
						1.0 4.6	0.4	75 77	18.6 18.5		8.2	32.4	91.3 92.8		7.1	7.1	4.0 5.9		7 6			
SR3	Fine	Calm	12:17	9.2	Middle	4.6	0.4	77	18.5	18.5	8.1	32.5	93.0	92.9	7.2	F	6.0	5.7	5	6	822153	807584
					Bottom	8.2	0.3	64	18.5	18.5	8.1 8.1	32.5	94.7	94.9	7.3	7.3	7.2		5			
					Dottoili	8.2	0.3	68	18.5	10.5	8.1	32.5	95.0	34.3	7.3	1.5	7.2		5			
					Surface	1.0	0.4	76 76	18.1 18.6	18.4	8.2 8.2	32.4 32.4	90.9	90.9	7.0		5.1 5.1		8 7			
						4.4	0.4	79	18.6		0.0	22.4	91.0		7.0	7.0	5.1		8			
SR4A	Fine	Calm	11:21	8.8	Middle	4.4	0.4	83	18.6	18.6	8.2	32.4 32.4	91.1	91.1	7.0	f	5.9	5.9	7	7	817165	807795
					Bottom	7.8	0.4	101	18.6	18.6	8.2	32.4	91.2	91.3	7.0	7.0	6.8		7			
					Dottom	7.8	0.4	106	18.6	10.0	8.2	32.3	91.3	01.0	7.0	7.0	6.9		6			
					Surface	1.0 1.0	0.3	111 119	18.6 18.2	18.4	8.2 8.2	32.3 32.3	91.8 91.9	91.9	7.1 7.1	-	4.9 5.0		7 6			
						1.0	-	-	10.2		-		91.9		-	7.1	5.0		-	_		
SR5A	Fine	Calm	11:05	5.0	Middle	-	-		-	•	-	-	-	-	-	-	-	5.6	-	7	816597	810691
					Bottom	4.0	0.2	137	18.2	18.4	8.2 8.1	32.3	92.3	92.4	7.1	7.1	6.3		8			
					======	4.0	0.2	138	18.6		8.1	32.3	92.4		7.1		6.3		7			
					Surface	1.0 1.0	0.3	146 155	18.6 18.1	18.4	8.2 8.1	32.3 32.3	93.0 93.1	93.1	7.2 7.2		7.0 7.2		7			
0004	-	0.1	40.40	4.7	1402 "	-	-	-	-			-			-	7.2		7.	-	,	047074	04.4700
SR6A	Fine	Calm	10:18	4.7	Middle	-	-		-	-	-	-	-	-	-	ľ	-	7.5	-	7	817971	814738
					Bottom	3.7	0.2	149	18.1	18.1	8.1	32.4	93.5	93.7	7.2	7.3	7.9		6			
			1			3.7 1.0	0.2	155 99	18.1 19.2		8.2	32.5	93.8		7.3		7.9 2.1		7			
					Surface	1.0	0.6	108	19.2	19.2	8.0	33.2	86.8 86.9	86.9	6.6	ŀ	2.1		7			
SR7	Fine	Calm	10:22	16.0	Middle	8.0	0.4	99	19.2	19.2	8.0 8.0	33.2 33.2	87.4	87.5	6.6	6.6	3.1	3.0	7	7	823626	823743
JK/	rine	Cdlffi	10:22	10.0	iviidale	8.0	0.4	104	19.2	13.2	8.0	33.2	87.5	07.0	6.6		3.1	J.U	6	- 1	023020	023/43
					Bottom	15.0	0.3	86	19.2	19.2	7.9 7.9	33.2	88.3	88.5	6.7	6.7	3.9		6			
			<u> </u>			15.0 1.0	0.3	90	19.2 18.6		7.9	33.2	88.6 88.4		6.7		3.9 5.3		7			
					Surface	1.0	-	-	18.6	18.6	8.2	33.0	88.4	88.4	6.8	<u>.</u> }	5.2		9			
SR8	Fine	Calm	11:32	5.0	Middle	-	-	-	-			-	-		-	6.8	-	6.5	-	7	820401	811639
SNO	FIIIE	Callii	11.32	5.0	Milutie	-	-	-	-	-	-		-	-	-		-	0.5	-	′	020401	011039
1					Bottom	4.0	-		18.6	18.6	8.2 8.2	33.0 33.0	88.8	88.9	6.8	6.8	7.7		6			
						4.0	-	-	18.6		8.2	33.0	88.9		6.8		7.8		5			

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

Water Quality Monitoring Results on 01 January 22 during Mid-Flood Tide Current Speed DO Saturation Dissolved Suspended Solids Weather Water Water Temperature (°C) Salinity (ppt) Turbidity(NTU) Coordinate Coordinate Monitoring Oxygen (mg/L) Sampling Depth (m) HK Grid HK Grid (Northing) Condition Time Depth (m) (m/s) Value Average Value Average Value Average Value Average Value DA Value DA Value DA Condition 18.5 1.0 0.4 31 8.2 32.4 90.6 Surface 8.2 32.4 90.7 1.0 0.4 33 18.5 8.2 32.4 90.7 7.0 7.8 6 3.9 0.4 27 18.6 8.2 32.4 90.7 7.0 9.3 7 804267 C1 Misty Moderate 16:20 7.8 Middle 18.6 8.2 32.4 90.7 815631 3.9 0.4 27 18.6 8.2 32.4 90.7 7.0 9.3 8 6.8 0.5 18 18.6 8.2 32.4 90.8 7.0 10.1 7 18.6 8.2 32.4 90.8 Bottom 6.8 0.5 18.6 32.4 10.1 18.5 0.2 4.2 Surface 18.5 8.2 8.2 32.5 32.5 93.1 0.2 18.5 4.3 6.0 0.3 14 18.5 6.2 C2 Fine 15:21 12.0 Middle 8.2 33.0 93.8 825695 806932 6.0 0.3 14 18.5 8.2 33.0 93.8 72 6.4 11.0 0.4 32 18.4 8.3 33.1 94.3 7.0 6 Bottom 18.4 8.3 33.1 94.4 7.3 11.0 0.4 18.4 8.3 33.1 94.4 7.3 7.1 1.0 0.3 299 19.1 8.2 33.2 93.1 1.5 Surface 19.1 8.2 33.2 93.2 320 1.5 5 1.0 0.4 19.1 8.2 33.2 93.3 2.2 5.6 0.4 300 19.1 8.2 33.2 95.3 7.3 6 8.2 33.2 95.5 817791 Middle 19 1 822111 C3 Fine Calm 16:57 112 8.2 2.2 5.6 0.4 317 19.1 33.2 95.6 5 3.7 10.2 0.4 294 19.1 8.2 33.1 33.1 96.3 96.8 7.3 6 Bottom 19.1 8.2 96.6 7.4 10.2 0.4 302 19.1 8.2 33.1 7.4 3.7 1.0 0.1 37 18.1 8.2 32.4 90.8 5.9 Surface 18.1 8.2 32.4 90.8 32.4 1.0 0.1 37 18.1 8.2 90.8 7.0 6.0 8 IM1 Misty Moderate 16:00 4.6 Middle 817956 807134 3.6 58 18.5 7.6 0.1 8.2 32.5 90.7 7.0 8 Bottom 18.5 8.2 32.5 90.7 3.6 8.2 32.5 7.0 0.1 59 18.5 90.6 7.5 7 45 18.5 8.8 32 6 Surface 18.5 8.2 32.6 90.5 1.0 18.4 8.2 8.8 0.2 45 32.6 90.5 8 18.5 9.9 3.3 0.2 33 32.5 90.5 7.0 7 8.1 15:54 Middle 8.1 32.5 90.6 818150 806178 IM2 Mistv Moderate 6.6 18.5 3.3 18.5 9.9 0.2 33 6 5.6 0.2 40 18.5 10.8 5 Bottom 18.5 8.2 32.5 90.7 5.6 0.2 43 18.5 8.2 32.5 90.7 7.0 10.8 6 1.0 0.2 17 18.5 Surface 8.2 32.4 1.0 0.2 51 18.5 8.2 32.4 90.6 7.0 5.8 9 8.2 8.2 7.2 7.2 3.4 0.2 39 18.5 32.4 90.7 7.0 8 IM3 Mistv Moderate 15:48 6.8 Middle 18.5 8.2 32.4 90.7 818782 805614 18.5 32.4 9 34 0.2 41 5.8 8.3 8.3 0.2 40 8.2 8.2 32.4 32.4 7.0 7.0 8 18.6 90.7 Bottom 18.6 8.2 32.4 90.8 18.6 5.8 0.2 90.8 0.3 18.5 32.5 8.8 8 8.2 8.2 32.5 Surface 18.5 90.8 1.0 0.3 49 18.5 8.1 32.5 90.8 8.8 9 4.2 0.3 49 18.5 8.2 32.5 32.4 32.4 90.8 90.9 10.2 IM4 15:39 8.4 Middle 18.5 90.9 819737 804587 Misty Moderate 4.2 0.3 53 18.5 8.1 7.0 10.2 9 7.4 0.3 47 18.5 8.2 32.4 10.8 Bottom 18.5 8.2 32.4 91.1 74 0.3 50 18.5 8.2 32.4 91 1 7.0 10.8 7 1.0 0.3 52 18.1 8.2 32.4 91.3 7.1 8.8 11 Surface 18.1 8.2 32.4 91.3 1.0 0.3 52 18.1 8.2 32.4 91.3 7.1 8.8 10.2 10 4.0 0.3 56 18.1 8.2 32.4 91.4 7.1 8 15:32 8.2 804865 IM5 Misty Moderate 8.0 Middle 18.1 32.4 91.4 820724 4.0 0.3 59 18.1 8.2 32.5 91.4 10.2 9 7.0 60 18.1 0.3 8.1 32.5 91.4 10.8 8 Bottom 18 1 8.2 32.5 91.4 0.3 64 18.1 1.0 0.4 38 18.5 32.5 4.2 10 8.2 Surface 18.5 8.2 32.5 91.7 0.4 40 18.5 4.2 11 0.3 41 18.5 5.1 9 15:25 Middle 32.4 92.1 821039 805820 Misty Moderate 8.2 3.5 0.3 44 18.5 8.2 32.4 92 1 7 1 5.2 8 6.0 0.3 48 18.5 8.2 32.4 92.3 7.1 6.2 8 Bottom 8.2 32.4 92.4 6.0 0.3 48 18.5 6.3 8.2 8.2 1.0 0.4 34 18.4 32.5 93.7 6.7 9 Surface 18.4 8.2 32.5 93.7 32.5 18.3 93.7 6.7 1.0 0.4 35 7.3 8 7.1 4.1 0.3 18.3 8.2 7.3 8 9 32.6 94.7 IM7 Misty Moderate 15:19 8.2 Middle 18.3 8.2 32.6 96.5 15 821348 806833 18.3 7.2 0.3 0.4 18.2 32.7 98.6 7.9 28 Bottom 18.2 8.1 32.6 98.7 0.4 42 18.2 8.1 32.6 98.7 7.7 8.0 27 1.0 0.2 43 18.6 8.2 32.6 92.2 4.2 10 Surface 18.6 8.2 32.6 92.3 1.0 0.2 43 18.5 8.2 32.6 92.3 7.1 4.2 9 3.9 0.2 30 18.4 8.2 33.0 94.4 7.3 5.7 9 808133 IM8 Fine Calm 15:39 7.8 Middle 18.4 8.2 33.0 94.5 821832 39 0.2 30 18.4 8.2 33.0 94.5 7.3 5.8 g 8.2 8.2 6.8 0.0 354 18.2 33.2 95.7 7.4 6.2 8 Bottom 18.2 8.2 33.2 95.8 7.4 326 18.2

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

	Weather	Sea	Sampling	Water	01 January 22	during Mid	Current		Water Te	emperature (°C)		pН	Salir	nity (ppt)	DO S	Saturation	Disso		Turbidity	(NITLI)	Suspended		Coordinate	Coordin
Monitoring Station					Sampling Dep	th (m)	Speed	Current Direction	-					1		(%)	Оху			_	(mg/L		HK Grid	HK Gr
	Condition	Condition	Time	Depth (m)			(m/s)		Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	(Northing)	(Eastir
					Surface	1.0	0.1	59 62	18.5 18.5	18.5	8.2	8.2	32.7 32.7	32.7	90.9	91.0	7.0 7.0		4.0 4.1		9			
	_					3.7	0.1	2	18.4		8.2		32.8		92.5		7.1	7.1	5.1	1	18			
IM9	Fine	Calm	15:45	7.4	Middle	3.7	0.1	2	18.4	18.4	8.2	8.2	32.8		92.6	92.6	7.1		5.1	5.0	19	16	822109	808
					Bottom	6.4	0.1	52	18.3	18.3	8.2	8.2	33.0		93.7	93.7	7.2	7.3	6.0		19			
						6.4 1.0	0.1	53 319	18.2		8.2		33.0		93.7		7.3		5.9 4.5		19 14			
					Surface	1.0	0.4	319 350	18.5 18.5	18.5	8.2	8.2	32.7 32.8		91.3 91.3	91.3	7.0 7.0		4.5	-	13			
11.40	-		45.54	7.0		3.9	0.4	318	18.4	40.4	8.2	0.0	32.8		91.3	04.4	7.0	7.0	5.3		15		000000	
IM10	Fine	Calm	15:51	7.8	Middle	3.9	0.4	339	18.4	18.4	8.2	8.2	32.8		91.4	91.4	7.1		5.4	5.4	16	15	822386	809
					Bottom	6.8	0.3	315	18.4	18.4	8.2	8.2	32.9	32.9	92.7	92.8	7.2	7.2	6.3		17			
						6.8	0.4	323	18.4		8.2		32.9		92.9		7.2		6.3		17			
					Surface	1.0	0.2	298 302	18.8 18.8	18.8	8.2 8.2	8.2	33.1	33.1	92.1 92.2	92.2	7.1		3.0		19 18			
IM11	-	Calm	40.00			4.4	0.2	291	18.8	40.0	8.2		33.1		93.5	00.0	7.2	7.2	4.3	١	14		000000	
IM11	Fine	Calm	16:00	8.8	Middle	4.4	0.3	306	18.8	18.8	8.2	8.2	33.1	33.1	93.6	93.6	7.2		4.4	4.4	13	17	822066	811
					Bottom	7.8	0.3	302	18.7	18.7	8.1	8.1	33.1		94.7	94.8	7.3	7.3	5.7		18			
						7.8 1.0	0.3	310 253	18.7 18.8		8.1		33.1	_	94.9		7.3 7.0		5.8 5.8		18 16			
					Surface	1.0	0.4	264	18.8	18.8	8.2	8.2	33.1	33.1	91.4	91.4	7.0		6.0	4	17			
IM12	Fi	Calm	40.05	0.4	Middle	4.7	0.3	247	18.7	18.7	8.2	0.0	33.1	33.1	92.8	92.9	7.1	7.1	7.3	7.1	16	16	821436	812
IIVI 12	Fine	Calm	16:05	9.4	Middle	4.7	0.4	247	18.7	10.7	8.2	8.2	33.1	33.1	93.0	92.9	7.1		7.3	7.1	15	10	02 1430	012
					Bottom	8.4	0.3	253	18.7	18.7	8.2	8.2	33.1	33.1	95.4	95.6	7.3	7.3	8.0		15			
						8.4 1.0	0.4	264	18.7 18.8		8.2		33.1 33.0		95.8 92.6		7.3		8.0 4.5		15 15			_
					Surface	1.0		-	18.8	18.8	8.2	8.2	33.0		92.6	92.6	7.1		4.5	1	22			
SR1A	Fine	Calm	16:22	5.3	Middle	2.7	-	-	-		-	-	-	-	-	-	-	7.1	-	4.9	-	21	819971	812
SKIA	Fille	Califi	10.22	5.5	Wildlie	2.7	-	-	-		-	-	-		-		-		-	4.5	-	21	019971	012
					Bottom	4.3 4.3	-	-	18.8 18.8	18.8	8.2	8.2	33.0 33.0	33.0	93.4 93.6	93.5	7.2 7.2	7.2	5.3 5.3	1	22			
						1.0	0.4	323	18.6		8.2		33.0		93.6		7.3		3.9		15			+
					Surface	1.0	0.4	347	18.6	18.6	8.2	8.2	33.1	33.0	94.9	94.9	7.3	7.3	3.4	1	16			
SR2	Fine	Calm	16:38	5.0	Middle	-			-		-		-				-	7.3		4.1	-	15	821446	814
0.42	10	Cami	10.00	0.0	middio	-	-	-	-		-		-		-		-		-		-		021110	0
					Bottom	4.0	0.4	320 341	18.1 18.0	18.1	8.2	8.2	33.4	33.4	97.6 98.1	97.9	7.6 7.6	7.6	4.6 4.5		14 15			
						1.0	0.4	35	18.4		8.2		32.8		93.0		7.2		7.0		19			_
					Surface	1.0	0.1	35	18.4	18.4	8.2	8.2	32.8		93.0	93.0	7.2	7.2	7.1		24			
SR3	Fine	Calm	15:35	8.8	Middle	4.4	0.1	27	18.3	18.3	8.2	8.2	33.0	33.0	93.8	93.9	7.2	1.2	8.5	8.2	28	19	822150	807
						4.4 7.8	0.1	29 39	18.3 18.3		8.2		33.0 33.0		93.9 95.4		7.3 7.4		8.4 9.2		17 12			
					Bottom	7.8	0.2	40	18.3	18.3	8.2 8.2	8.2	33.0	33.0	95.4	95.5	7.4	7.4	9.2	-	15			
					Surface	1.0	0.4	222	18.5	18.5	8.2	8.2	32.4	32.4	90.6	90.6	7.0		8.0		31			\vdash
					Surface	1.0	0.4	228	18.5	16.5	8.2	0.2	32.4		90.6	90.6	7.0	7.0	8.1		9			
SR4A	Misty	Moderate	16:38	9.6	Middle	4.8	0.3	198	18.5	18.5	8.2	8.2	32.4		90.6	90.6	7.0		9.0	9.3	8	16	817201	807
						4.8 8.6	0.3	213 213	18.5 18.5		8.2 8.2		32.4 32.4		90.6 90.6		7.0 7.0		9.1 10.7	-	9			
					Bottom	8.6	0.3	226	18.5	18.5	8.2	8.2	32.4		90.6	90.6	7.0	7.0	10.6	-	31			
					Surface	1.0	0.3	219	18.2	18.2	8.2	8.2	32.4		90.6	90.7	7.0		7.8		17			
					Curiaco	1.0	0.3	240	18.2	10.2	8.2	0.2	32.4	OL. 1	90.7	00.7	7.0	7.0	7.9		25			
SR5A	Misty	Moderate	16:53	4.6	Middle	-	-	-	-	-	-	-	-	-	-		-		-	8.7	-	15	816571	810
						3.6	0.2	200	18.2		8.2		32.4		90.7		7.0		9.5	-	9			
					Bottom	3.6	0.2	207	18.5	18.4	8.2	8.2	32.4		90.6	90.7	7.0	7.0	9.6		8			
					Surface	1.0	0.2	209	18.6	18.6	8.2	8.2	32.4		90.6	90.6	7.0		5.9		6			
						1.0	0.2	215	18.6		8.2		32.4		90.6		7.0	7.0	5.9	1	7			
SR6A	Misty	Moderate	17:22	4.0	Middle	- :	-	-		-	-	-	-	-	-		-		-	6.6	-	13	817964	814
					Detter	3.0	0.1	199	18.6	40.6	8.2	0.0	32.4	20.4	90.6	90.6	7.0	7.0	7.3		18			
					Bottom	3.0	0.1	216	18.5	18.6	8.2	8.2	32.4	32.4	90.6	90.6	7.0	7.0	7.3	<u></u>	19			<u></u>
					Surface	1.0	0.1	31	19.2	19.2	8.2	8.2	33.2		89.5	89.6	6.8		1.0	1	12			
						1.0 8.0	0.1	32 52	19.1 19.2		8.2		33.2 33.2		89.6 90.4		6.8	6.9	1.1	4	17 24			
SR7	Fine	Calm	17:27	16.0	Middle	8.0	0.1	52	19.2	19.2	8.2	8.2	33.2	33.2	90.4	90.6	6.9		1.3	1.5	22	14	823631	823
					Bottom	15.0	0.1	65	19.2	19.2	8.2	8 2	33.2	32.7	91.1	91.3	6.9	6.9	2.2	1	5			
					Bottom	15.0	0.1	69	19.2	19.2	8.2	8.2	33.2	33.2	91.4	91.3	6.9	0.9	2.2		5			
					Surface	1.0	-	-	18.8	18.8	8.2	8.2	33.0	33.0	95.0	95.1	7.3		3.5	1	7			
						1.0	-	-	18.7		8.2		33.0		95.1		7.3	7.3	3.5	4	8 -			
SR8	Fine	Calm	16:11	4.6	Middle	-	-	-	-	-	-	-	-	-	-		-		-	4.1	-	7	820413	811
	1				Bottom	3.6			18.7	18.7	8.2	8.2	32.9	32.9	96.5	96.7	7.4	7.4	4.9	1	6			
	1				Dottom	3.6	-	-	18.7	16.7	8.2	6.2	32.9		96.8	90.7	7.4	1.4	4.7	1	7			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 boiled and underlined

Water Quality Monitoring Water Quality Monitoring Results on 04 January 22 during Mid-Ebb Tide Curren DO Saturation Dissolved Weather Water Water Temperature (°C) Salinity (ppt) Turbidity(NTU) Coordinate Coordinate Monitoring Current Oxygen (mg/L) Sampling Depth (m) HK Grid HK Grid Direction Condition Time Depth (m) (m/s) Value Average Value Average Value Average Value DA Value DA Value DA (Northing) (Easting) Condition 19.9 1.0 0.3 233 8.2 33.5 Surface 33.5 1.0 0.3 240 19.9 8.2 33.5 101 7 7.6 25 7.6 4.1 0.3 228 19.9 8.1 33.5 101.8 7.6 8.7 31 32 C1 Fine Calm 13:57 8.2 Middle 19.9 8.1 33.5 101.8 29 815632 804264 101.8 4.1 0.3 231 19.9 8.1 33.5 7.6 8.8 0.3 218 20.2 8.1 33.2 102.6 7.6 9.6 31 20.3 8.1 33.2 102.7 7.7 Bottom 7.2 0.3 219 20.3 134 0.2 19.1 8.2 5.4 Surface 19.1 8.2 31.4 91.6 1.0 0.2 136 19.1 5.5 7.0 6.0 133 19.2 6.6 C2 12:45 12.0 Middle 31.6 91.6 825699 806930 Moderate 6.0 0.3 133 19.2 8.2 31.6 91.6 6.6 9 11.0 0.4 123 18.9 8.2 32.0 90.2 11.8 8 Bottom 32.0 90.2 6.9 11.0 0.4 126 18.9 8.2 32.0 90.2 6.9 11.8 32.4 32.4 1.0 0.3 71 19.1 8.2 89.5 4.7 8 Surface 19.1 8.2 32.4 89.5 89.4 8.2 6.8 4.6 9 1.0 0.3 72 19.1 4.5 6.3 0.3 81 19.1 8.2 32.5 88.2 6.7 9 8.2 88.2 C3 Middle 191 32.5 822128 817810 Fine Moderate 14:51 12.5 q 88.2 88 19.1 8.2 32.5 4.5 10 6.3 0.3 11.5 4.9 10 0.3 19.1 8.2 32.6 32.6 32.6 89.1 6.8 6.8 Bottom 19.1 8.2 89.1 83 19.1 5.0 1.0 0.1 201 19.7 8.1 33.1 9.4 8 Surface 19.7 8.1 33.1 102.3 1.0 0.1 211 19.7 8.1 33.0 102.3 7.7 9.5 9 7.7 IM1 Fine Calm 13:37 4.8 Middle 817964 807153 3.8 199 0.1 19.6 8.1 33.0 103.4 7.8 10.0 8 19.6 8.1 7.8 Bottom 33.0 103.6 217 3.8 19.6 10.0 0.1 5.0 5.1 1.0 0.2 198 19.8 8.1 32.8 30 Surface 101.5 19.8 8.1 32.8 1.0 0.2 211 19.7 7.6 3.3 0.2 213 19.5 6.5 31 32.9 13:31 Middle 8.1 32.9 101.6 818157 806146 IM2 Fine Calm 6.6 19.5 32 3.3 0.2 213 19.5 6.5 32 7.4 5.6 220 19.5 32 Bottom 19.5 8.1 32.9 103.0 7.8 8.1 32.0 103.2 7.8 33 5.6 0.1 230 19.5 1.0 0.3 199 19.6 8.1 32.9 32.9 99.7 99.6 5.4 Surface 8.1 32.9 99.7 1.0 0.3 208 19.6 7.5 5.5 38 34 34 3.4 0.3 201 19.6 8.1 32.9 99.8 7.5 6.4 IM3 Fine Calm 13:24 6.8 Middle 19.6 8.1 32.9 99.9 6.6 35 818796 805581 3.4 0.3 215 19.6 32.9 99.9 6.4 5.8 206 0.3 19.6 8.0 34 32.9 32.9 7.7 8.1 102.0 7.7 Bottom 19.6 8.1 32.9 102.1 5.8 19.6 8.1 7.9 33 0.3 218 0.3 213 19.7 32.8 32.8 7.4 8.1 8.1 101.1 101.0 Surface 19.7 8.1 32.8 101.1 1.0 0.3 220 19.7 7.6 7.5 30 4.3 0.3 214 19.6 32.9 100.9 8.5 27 Middle 8.1 32.9 101.0 819719 804596 Fine Calm 13:16 28 4.3 0.3 220 19.7 8.1 32.8 8.4 28 7.6 0.3 226 20.1 8.1 9.3 25 Bottom 20.2 8.1 32.4 101.9 7.6 7.6 0.3 230 20.2 8.1 32.4 102 0 7.6 9.4 26 1.0 0.3 225 19.6 8.1 32.7 99.1 8.2 31 Surface 19.6 8.1 32.7 99.1 1.0 0.3 227 19.6 8.1 32.8 99.0 7.5 8.2 32 7.5 3.5 0.3 231 19.6 8.1 32.8 99.0 7.5 9.2 30 30 804882 IM5 13:08 7.0 Middle 19.6 8.1 32.8 99.0 820743 Fine Calm 31 3.5 240 19.6 9.3 0.3 32.8 19.5 6.0 0.3 228 8.1 32.8 99.9 100.0 10.1 30 Bottom 19.5 8.1 32.8 100.0 7.6 0.3 19.5 10.0 230 Surface 8.1 32.9 100.4 1.0 0.3 231 19.7 7.3 19 3.5 0.3 238 19.7 32.9 100.8 8.4 19 13:02 Middle 32.9 100.8 821047 805810 Calm 8.1 3.5 0.3 254 19.7 8.1 32.9 100.8 8.5 20 8.1 8.1 32.7 7.6 7.6 6.0 0.4 240 20.0 9.4 22 Bottom 20.1 8.1 32.7 101.5 7.6 9.5 6.0 0.4 249 20.1 22 1.0 0.4 241 19.8 7.0 17 8.1 33.0 99.6 Surface 19.8 8.1 33.0 99.6 8.1 7.1 1.0 0.4 242 19.8 33.0 99.5 7.5 16 4.2 8.8 0.3 16 8.1 33.0 IM7 Fine Calm 12:54 8.4 Middle 197 8.1 33.0 99.5 18 821346 806849 267 19.7 33.0 99.5 8.7 17 4.2 0.3 8.1 7.4 0.4 246 19.8 9.6 8.1 33.0 21 Bottom 19.9 8.1 32.9 101.1 7.6 7.4 0.4 270 19.9 8.1 32.9 9.6 22 1.0 0.2 19.1 8.2 31.8 92.2 6.8 Surface 19.1 8.2 31.8 92.2 1.0 0.2 52 19.1 8.2 31.8 92.1 7.1 6.9 11 91.5 91.4 3.9 0.3 62 19.1 8.2 32.0 7.0 10.5 11 808117 IM8 Fine Rough 13:13 7.8 Middle 19.1 8.2 32.0 91.5 11 821816

32 N

32.2

32.2

90.7

90.8

7.0

7.0

10.9

19.5

12

10

8.2

8.2

8.2

19.0

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 3.9

6.8

Bottom

0.3

0.4

64

19.1

19.0

Water Quality Monitoring

Water Quality Monitoring Results on 04 January 22 during Mid-Ebb Tide Curren DO Saturation Dissolved Weather Water Water Temperature (°C) Salinity (ppt) Turbidity(NTU) Coordinate Coordinate Monitoring Oxygen Current (mg/L) Sampling Depth (m) HK Grid HK Grid Direction Condition Time Depth (m) (m/s) Value Average Value Average Value Average Value Average Value DA Value DA Value DA (Northing) (Easting) Condition 19.0 1.0 0.3 49 8.2 31.8 90.8 Surface 8.2 31.8 1.0 0.3 52 19.0 8.2 31.8 90.8 7.0 7.1 11 7.0 3.8 0.3 54 19.0 8.2 32.0 91.0 7.0 10.9 11 IM9 Fine Rough 13:19 7.5 Middle 19.0 8.2 32.0 91.0 12 822097 808807 3.8 0.3 58 19.0 8.2 32.0 91.0 7.0 11.3 12 6.5 0.3 69 19.0 8.2 32.1 91.5 7.0 17.5 13 19.0 8.2 32.1 91.5 7.0 Bottom 6.5 0.3 19.0 16.9 14 113 0.3 5.8 12 Surface 19.0 8.2 8.2 31.7 91.5 1.0 0.3 124 19.0 5.8 12 3.6 112 18.8 IM10 13:26 7.2 Middle 31.8 89.5 12 822406 809775 Rough 3.6 0.3 119 18.8 8.2 31.8 89.5 6.9 7.1 12 6.2 0.2 120 18.8 8.2 32.0 90.5 6.8 12 Bottom 8.2 32.0 90.6 7.0 6.2 0.2 131 18.8 8.2 32.0 90.6 6.7 11 32.3 32.3 91.0 91.0 1.0 0.2 61 19.0 8.2 7.4 13 Surface 19.0 8.2 32.3 91.0 7.5 13 1.0 0.2 61 19.0 8.2 7.5 4.3 0.2 53 19.0 8.2 32.3 90.8 7.0 12 8.2 90.8 Middle 19.0 32.3 811437 IM11 Fine Moderate 13:36 8.6 13 822076 4.3 58 19.0 8.2 32.3 7.5 13 0.2 7.0 9.1 13 0.2 19.0 8.2 32.2 32.2 90.7 7.0 Bottom 19.0 8.2 90.7 7.6 19.0 9.1 12 1.0 0.1 303 19.0 8.2 32.3 6.8 12 Surface 19.0 8.2 32.3 90.8 1.0 0.1 314 19.0 8.2 32.3 90.8 7.0 6.8 13 4.6 0.0 126 19.0 8.2 90.6 6.8 12 IM12 Moderate 13:46 9.2 Middle 8.2 32.3 90.6 12 821442 812057 4.6 0.0 134 19.0 8.2 32.3 90.6 6.9 6.9 13 8.2 0.1 68 18.9 8.2 32.2 90.5 6.9 9.1 10 Bottom 18.9 8.2 32.2 90.5 6.9 32.2 90.5 8.2 0.1 74 18.9 8.2 6.9 9.0 11 1.0 19.0 90.3 Surface 19.0 8.2 32.2 90.3 1.0 7.2 9 19.0 8.2 32.2 90.3 6.9 6.9 2.6 SR1A 14:18 5.2 Middle 819976 812665 Fine Moderate 2.6 4.2 18.9 8.2 8.6 Bottom 18.9 8.2 32.3 90.1 6.9 4.2 18.9 8.2 32.3 90.1 6.9 8.5 10 1.0 19.0 90.9 11 Surface 8.2 1.0 0.1 98 19.0 7.0 5.3 12 SR2 Fine Moderate 14:31 4.9 Middle 821454 814171 3.9 0.1 95 19.0 32.3 32.3 91.1 91.1 7.0 7.0 5.6 10 8.2 7.0 Bottom 19.0 8.2 32.3 91.1 5.6 3.9 0.2 96 19.0 8.2 0.3 19.1 6.8 12 31.6 91.8 Surface 19.1 8.2 1.0 0.3 149 19.1 31.6 91.7 7.1 13 4.5 0.3 125 19.0 8.2 31.8 31.8 90.7 9.6 12 SR3 Rough 8.9 Middle 90.7 822145 807561 Fine 13:05 19.0 4.5 0.3 132 19.0 8.2 7.0 9.7 13 7.9 0.4 114 18.9 16.5 10 Bottom 8.2 32.0 90.3 6.9 79 0.4 123 18.9 8.2 32.0 90.4 6.9 16.1 11 1.0 0.4 79 19.9 8.2 33.5 101.7 7.6 7.1 13 Surface 19.9 8.2 33.5 101.7 1.0 0.4 83 19.9 8.2 33.5 101 7 7.6 7.0 12 7.6 4.5 0.4 89 19.9 8.1 33.5 101.8 7.6 8.6 12 SR4A 807797 Fine Calm 14:19 9.0 Middle 19.9 8.1 33.5 101.8 13 817212 4.5 0.4 19.9 8.1 33.5 101.8 7.6 8.6 13 8.0 19.8 14 0.3 8.1 33.2 102.6 7.6 9.3 Bottom 20.0 8.1 33.2 102.6 7.6 0.3 104 20.1 1.0 0.2 111 19.7 8.2 32.7 99.7 7.5 9.1 13 Surface 19.7 8.2 32.7 99.7 1.0 0.2 119 19.7 9.1 14 SR5A 14:37 3.2 Middle 816609 810699 Calm 22 32.7 99.7 99.8 0.2 108 19.6 8.2 10.1 13 Bottom 8.2 32.7 99.8 7.5 0.2 113 19.6 10.0

130

142

113

118

86

91

84

86

57

62

19.9

19.9

19.8

19.8

19.1

19.1

19.1

19 1

19 1

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8.4 32.2

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32.5

32.6

32.7

32.7

32.1

100.8

100.8

87.4

86.5

86.5

86.7

86.7

91.1

91.0

32.2 88.4

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100.3

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7.0 7.0

88.5 6.8 6.8

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4 0

3.7

3.8

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8

13

12

12

817980

823639

820380

814744

823747

811619

1.0

1.0

3.0

1.0

1.0

8.0

8.0

15.0

15.0

1.0

1.0

4.1

4.1

Surface

Middle

Bottom

Surface

Middle

Bottom

Surface

Middle

0.2

0.2

0.1

0.7

0.8

0.6

0.6

0.2

0.3

DA: Depth-Averaged

SR6A

SR7

SR8

Fine

Fine

Fine

Calm

Rough

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

15:09

15:22

13:53

4.0

16.0

Water Qua		toring Resi	ults on		04 January 22	during Mid	-Flood T	ide																
Monitoring	Weather	Sea	Sampling	Water	Sampling Dep	4h ()	Current Speed	Current	Water Te	emperature (°C)		pН	Salin	ity (ppt)		aturation (%)	Disso		Turbidity	(NTU)	Suspende (mg		Coordinate HK Grid	Coordin HK Gr
Station	Condition	Condition	Time	Depth (m)	Sampling Dep	ui (m)	(m/s)	Direction	Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	(Northing)	(Eastir
					Surface	1.0	0.4	23 25	19.4 19.4	19.4	8.1 8.1	8.1	32.5 32.5	32.5	99.1 99.2	99.2	7.5 7.5		8.0 8.1		9			
C1	Fine	Calm	09:28	7.6	Middle	3.8	0.4	28	19.5	19.5	8.1	8.1	32.8	32.8	100.1	100.2	7.6	7.6	9.5	9.2	10	11	815634	8042
					Bottom	3.8 6.6	0.4	28 31	19.5 19.5	19.5	8.1 8.1	8.1	32.9 33.0	33.0	100.3 101.5	101.6	7.6 7.7	7.7	9.5 10.1	-	9			
						6.6 1.0	0.5 0.3	31 334	19.5 18.7		8.1 8.1		33.0 30.9		101.7 90.5		7.7 7.0	1.1	10.1 5.1		14 8			
					Surface	1.0	0.3	351	18.7	18.7	8.1	8.1	30.9	30.9	90.5	90.5	7.0	7.0	5.1		7			
C2	Fine	Moderate	10:04	11.5	Middle	5.8 5.8	0.4	346 351	18.7 18.7	18.7	8.2	8.2	31.3 31.3	31.3	89.4 89.4	89.4	6.9 6.9		6.5 6.6	6.9	7	7	825696	8069
					Bottom	10.5 10.5	0.4	13 14	18.7 18.7	18.7	8.2 8.2	8.2	31.8 31.8	31.8	89.4 89.4	89.4	6.9	6.9	9.1 9.3		6 7			
					Surface	1.0	0.3	254	18.8	18.8	8.1	8.1	32.1	32.1	89.2	89.2	6.9		6.3		11			
C3	Fine	Moderate	08:05	11.1	Middle	1.0 5.6	0.3	274 247	18.8 18.8	18.8	8.1 8.1	8.1	32.1 32.2	32.2	89.1 88.8	88.8	6.9	6.9	6.4 11.6	11.3	12 9	10	822091	8177
C3	rille	Widderate	08.03	11.1		5.6 10.1	0.2	261 267	18.8 18.8		8.1 8.2		32.2 32.2		88.8 89.2		6.8		11.6 16.3	11.3	10 9	10	622091	01//
					Bottom	10.1	0.3	277	18.8	18.8	8.2	8.2	32.2	32.2	89.3	89.3	6.9	6.9	15.7		10			
					Surface	1.0	0.1	48 49	19.6 19.6	19.6	8.1 8.1	8.1	33.0 33.0	33.0	98.9 98.8	98.9	7.5 7.5	7.5	7.5 7.6	-	13 12			
IM1	Fine	Calm	09:47	4.2	Middle	-	-	- :	-	-	-	-	-	-	-	-	-	7.5	-	7.9	-	12	817943	80713
					Bottom	3.2	0.1	52	19.5	19.5	8.1	8.1	33.0	33.0	99.3	99.4	7.5	7.5	8.2		10			
					Surface	3.2 1.0	0.1	55 51	19.5 19.3	19.3	8.1 8.1	8.1	33.0 32.8	32.8	99.4 97.7	97.7	7.5 7.4		8.2 7.5		13			
	_					1.0 3.1	0.2	52 52	19.3 19.3		8.1 8.1		32.8 32.8		97.7 97.8		7.4 7.4	7.4	7.6 8.1		12 13			
IM2	Fine	Calm	09:53	6.2	Middle	3.1	0.2	52	19.3	19.3	8.1	8.1	32.8	32.8	99.0	98.4	7.5		8.1	8.2	12	13	818158	8061
					Bottom	5.2 5.2	0.1 0.1	46 49	19.3 19.3	19.3	8.1 8.1	8.1	32.8 32.8	32.8	100.9 101.5	101.2	7.7	7.7	9.1 9.1		13 14			
					Surface	1.0	0.3	38 41	19.3 19.3	19.3	8.1 8.1	8.1	32.9 32.9	32.9	98.0 98.2	98.1	7.4 7.5		5.1 5.2		11			
IM3	Fine	Calm	09:59	6.6	Middle	3.3 3.3	0.3	46 46	19.3 19.3	19.3	8.1 8.1	8.1	32.8 32.8	32.8	99.5 99.6	99.6	7.6 7.6	7.5	6.5 6.5	6.4	15 14	14	818792	80557
					Bottom	5.6	0.2	49	19.3	19.3	8.1	8.1	32.8	32.8	101.0	101.2	7.7	7.7	7.6		15			
					Surface	5.6 1.0	0.2	49 32	19.3 19.3	19.3	8.1 8.1	8.1	32.8 32.8	32.8	101.3 98.0	98.1	7.7 7.4		7.6 6.7		16 13			
						1.0 4.0	0.3	34 44	19.3 19.3		8.1 8.1		32.8 32.8		98.1 99.0		7.5 7.5	7.5	6.6 7.1		12 12			
IM4	Fine	Calm	10:07	8.0	Middle	4.0	0.3	44	19.3	19.3	8.1	8.1	32.8	32.8	99.4	99.2	7.5		7.0	7.3	11	12	819701	80459
					Bottom	7.0 7.0	0.3	37 39	19.3 19.3	19.3	8.1 8.1	8.1	32.8 32.8	32.8	100.8	101.0	7.7 7.7	7.7	8.1 8.1		11 10			
					Surface	1.0	0.4	28 28	19.3 19.3	19.3	8.1 8.1	8.1	32.8 32.8	32.8	97.5 97.6	97.6	7.4 7.4		8.4 8.5		12 12			
IM5	Fine	Calm	10:13	6.2	Middle	3.1	0.3	38	19.3	19.3	8.1	8.1	32.8	32.8	98.1	98.2	7.4	7.4	9.4	9.3	13	15	820716	80485
					Bottom	3.1 5.2	0.3	39 42	19.3 19.3	19.3	8.1 8.1	8.1	32.8 32.8	32.8	98.2 99.5	99.7	7.5 7.6	7.6	9.5 10.0		13 21			
						5.2 1.0	0.3	42 26	19.3 19.6		8.1 8.1		32.8 33.0		99.8 99.9		7.6 7.5	7.0	10.0 7.4		21 14			
					Surface	1.0	0.4	27	19.6	19.6	8.1	8.1	33.0	33.0	100.1	100.0	7.6	7.6	7.5		13			
IM6	Fine	Calm	10:20	7.0	Middle	3.5 3.5	0.3	32 32	19.6 19.6	19.6	8.1 8.1	8.1	33.0 32.9	33.0	100.8 100.9	100.9	7.6 7.6		8.7 8.8	8.5	13 14	14	821072	80582
					Bottom	6.0	0.3	30 30	19.6 19.6	19.6	8.1 8.1	8.1	32.9 32.9	32.9	101.5	101.6	7.7	7.7	9.4 9.5	-	14 14			
					Surface	1.0	0.4	22	19.5 19.5	19.5	8.1	8.1	32.5 32.5	32.5	98.7 98.7	98.7	7.5 7.5		6.0 5.9		10			
IM7	Fine	Calm	10:28	8.2	Middle	4.1	0.4	30	19.6	19.6	8.1	8.1	32.9	32.9	100.2	100.3	7.6	7.6	6.7	6.9	10	10	821333	8068
	1 110	Guill	10.20	0.2		4.1 7.2	0.4	32 25	19.6 19.6		8.1 8.1		32.9 32.9		100.3		7.6 7.7		6.8 7.9	0.0	11 10	10	021000	0000
					Bottom	7.2	0.3	26	19.6	19.6	8.1	8.1	32.9	32.9	102.2	102.2	7.7	7.7	7.8		10			
					Surface	1.0	0.0	152 154	18.8 18.8	18.8	8.2	8.2	31.7 31.7	31.7	89.5 89.5	89.5	6.9	6.9	10.1 10.1	1	14 13			
IM8	Fine	Moderate	09:39	7.3	Middle	3.7 3.7	0.0	261 281	18.7 18.7	18.7	8.2	8.2	31.8 31.8	31.8	89.0 89.0	89.0	6.9	0.0	10.6 10.6	10.5	15 16	15	821808	80814
					Bottom	6.3	0.1	218	18.7	18.7	8.2	8.2	31.9	31.9	89.2	89.3	6.9	6.9	11.0		16			
A: Depth-Ave		l	1			6.3	0.1	219	18.7		8.2	L	31.9		89.3	<u> </u>	6.9		10.9		15			

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 04 January 22 during I

04 January 22 during Mid-Flood Tide

Monitoring Station	Weather Condition Fine	Sea Condition	Sampling Time	Water Depth (m)	Sampling Dep	th (m)	Current Speed	Current	Water Te	emperature (°C)		pH	Salin	ity (ppt)		aturation (%)	Diss		Turbidity	(NTU)	Suspende (mg/	d Solids	Coordinate	Coordinat
IM9		Condition	Time	Depth (m)	, , ,						_					(,0)	OAy	yon			(mg/	-)	HK Grid	HK Grid
	Fine						(m/s)	Direction	Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	(Northing)	(Easting)
	Fine				Surface	1.0	0.2	279	18.7	18.7	8.2	8.2	31.9	31.9	88.9	88.9	6.9		11.8		18			
	Fine					1.0 3.6	0.2	292 269	18.7 18.7		8.2 8.2		31.9 31.9		88.9 89.0		6.9	6.9	11.8 12.2	ļ	17 18			
IM10		Moderate	09:34	7.1	Middle	3.6	0.2	279	18.7	18.7	8.2	8.2	31.9	31.9	89.1	89.1	6.9		12.2	11.9	17	18	822094	808825
IM10					Bottom	6.1	0.1	247	18.7	18.7	8.2	8.2	31.9	31.9	89.8	89.9	6.9	6.9	11.4		18			
IM10					Dottoili	6.1	0.1	259	18.7	10.7	8.2	0.2	31.9	51.5	89.9	03.3	6.9	0.3	12.0	لــــــا	18			
IM10					Surface	1.0	0.5	299 308	18.7 18.7	18.7	8.2	8.2	31.9 31.9	31.9	89.3 89.3	89.3	6.9		11.8 11.8	ļ	18 19			
IM10	Fine	Moderate	00.00	7.0	Middle	3.8	0.5	307	18.7	40.7	8.2		31.9	04.0	89.2	00.0	6.9	6.9	12.4	13.1	18	40	000404	000700
	rine	Moderate	09:26	7.6	Middle	3.8	0.5	328	18.7	18.7	8.2	8.2	31.9	31.9	89.2	89.2	6.9		12.5	13.1	19	18	822401	809796
11					Bottom	6.6	0.5	300	18.7	18.7	8.2	8.2	32.0	32.0	89.2	89.2	6.9	6.9	15.0] [17			
						6.6 1.0	0.5	327 287	18.7 18.7		8.2 8.2		32.0 32.0		89.2 89.6		6.9		15.1 10.6	\vdash	17 16			-
					Surface	1.0	0.4	310	18.7	18.7	8.2	8.2	32.0	32.0	89.6	89.6	6.9		10.5		16			
IM11	Fine	Moderate	09:18	8.8	Middle	4.4	0.4	291	18.8	18.8	8.2	8.2	32.1	32.1	89.2	89.2	6.9	6.9	12.1	11.9	15	14	822067	811464
	1 110	Moderate	00.10	0.0	Middlo	4.4	0.4	291	18.8	10.0	8.2		32.1		89.2		6.9		12.0		14		OLLOO!	011101
					Bottom	7.8 7.8	0.4	287 303	18.8 18.8	18.8	8.2	8.2	32.1	32.1	89.6 89.6	89.6	6.9	6.9	13.0		13 12			
					Surface	1.0	0.5	295	18.8	18.8	8.2	8.2	32.4	32.4	89.9	89.9	6.9		9.6	\vdash	15			
					Surface	1.0	0.5	298	18.8	10.0	8.2	0.2	32.4	32.4	89.9	69.9	6.9	6.9	9.6] [14			
IM12	Fine	Moderate	09:11	9.0	Middle	4.5	0.5	296	18.8	18.8	8.2	8.2	32.4	32.4	89.9	89.9	6.9	0.0	12.6	13.0	14	15	821446	812041
						4.5 8.0	0.5	297 298	18.8 18.8		8.2		32.4 32.4		89.9 90.3		6.9		12.6 16.8		15 15			
					Bottom	8.0	0.4	319	18.8	18.8	8.2	8.2	32.4	32.4	90.4	90.4	6.9	6.9	16.8		15			
					Surface	1.0	-	-	18.8	18.8	8.2	8.2	32.3	32.3	89.3	89.3	6.9		4.0		12			
						1.0	-	-	18.8		8.2		32.3		89.3		6.9	6.9	4.0		11			
SR1A	Fine	Calm	08:40	4.8	Middle	2.4	-	-	-	-	-	-	-	-		-	-		-	5.0	-	11	819980	812659
					D-#	3.8	-	-	18.8	40.0	8.2	8.2	32.3	32.3	88.8	88.9	6.8	6.8	6.0		10			
					Bottom	3.8	-		18.8	18.8	8.2	0.2	32.3	32.3	88.9	00.9	6.8	0.0	5.9		11			
					Surface	1.0	0.3	330	18.8	18.8	8.2	8.2	32.3	32.3	90.0	90.1	6.9		8.8		12			
						1.0	0.3	337	18.8		8.2		32.3		90.1		6.9	6.9	8.5	ļ	12			
SR2	Fine	Rough	08:25	4.6	Middle	-	-	-	-	-	-	-	-	-	-	-	-		-	11.1	-	13	821485	814148
					Bottom	3.6	0.3	328	18.8	18.8	8.2	8.2	32.3	32.3	92.1	92.3	7.1	7.1	13.7] [13			
						3.6 1.0	0.3	333	18.8 18.8		8.2		32.3 31.3		92.4 90.2		7.1 7.0		13.3 6.2	\vdash	14 9			
					Surface	1.0	0.1	2	18.8	18.8	8.1	8.1	31.3	31.3	90.2	90.2	7.0		6.2	} }	10			
SR3	Fine	Moderate	09:44	8.7	Middle	4.4	0.1	9	18.7	18.7	8.1	8.1	31.4	31.4	89.3	89.3	6.9	7.0	10.7	11.0	10	9	822123	807578
SKS	rine	Moderate	09.44	0.7	Middle	4.4	0.2	9	18.7	10.7	8.1	0.1	31.4	31.4	89.3	69.3	6.9		10.6	11.0	9	9	022123	60/5/6
					Bottom	7.7	0.1	21 21	18.7 18.7	18.7	8.2	8.2	31.5 31.5	31.5	89.6 89.6	89.6	6.9	6.9	16.1 16.1	ļ	9			
+						1.0	0.1	201	19.5		8.1		33.1		98.2		7.4		6.8	\vdash	13			
					Surface	1.0	0.4	210	19.5	19.5	8.1	8.1	33.1	33.1	98.2	98.2	7.4	7.4	6.8		13			
SR4A	Fine	Calm	09:07	8.4	Middle	4.2	0.3	225	19.4	19.4	8.1	8.1	33.1	33.1	98.1	98.1	7.4	7.4	7.3	7.8	14	13	817173	807797
						4.2 7.4	0.3	242 267	19.4 19.4		8.1 8.1		33.1 33.1		98.1 98.9		7.4 7.5		7.3 9.2	∤	13 14			
					Bottom	7.4	0.3	269	19.4	19.4	8.1	8.1	33.1	33.1	99.0	99.0	7.5	7.5	9.2	} }	13			
					Surface	1.0	0.2	229	19.4	19.4	8.1	8.1	33.3	33.3	98.4	98.4	7.4		8.0		13			†
					Ourlace	1.0	0.2	244	19.4	10.4	8.1	0.1	33.3	33.5	98.4	30.4	7.4	7.4	8.1] [12			
SR5A	Fine	Calm	08:50	4.2	Middle	-	-	-	-	-	-	-	-	-		-	-		-	8.7	-	12	816588	810713
					Bottom	3.2	0.2	241	19.4	19.4	8.1	0.4	33.2	33.2	98.6	00.6	7.5	7.5	9.5	1 1	11			
					DOLLOTT	3.2	0.2	245	19.4	19.4	8.1	8.1	33.2	33.2	98.6	98.6	7.5	7.5	9.4		12			
					Surface	1.0 1.0	0.1 0.1	218 230	19.4 19.4	19.4	8.1	8.1	33.2	33.2	98.7 98.8	98.8	7.5 7.5		8.5 8.4	.	13 12			
						1.0	-	230	19.4		0.1		33.2		90.0		7.5	7.5	0.4	∤	12			
SR6A	Fine	Calm	08:22	3.2	Middle	-	-	-	-	-	-	-	-	-	-	-	-		-	9.0	-	13	817944	814716
					Bottom	2.2	0.1	208	19.4	19.4	8.1	8.1	33.2	33.2	99.1	99.2	7.5	7.5	9.5] [12			
						2.2 1.0	0.1	220 19	19.4 18.9		8.1		33.2		99.2 88.6		7.5		9.4	\vdash	13			<u> </u>
					Surface	1.0	0.3	20	18.9	18.9	8.1	8.1	32.4	32.4	88.6	88.6	6.8		6.1		11			
SR7	Fine	Moderate	07:37	15.6	Middle	7.8	0.3	24	18.9	18.9	8.1	8.1	32.5	32.5	88.2	88.2	6.8	6.8	11.8	12.5	10	11	823657	823722
J	10	WOOD BIO	57.57	.5.0	wadie	7.8	0.3	25	18.9	.0.0	8.1	5.1	32.5	O2.0	88.2	55.2	6.8		11.2]	11		020007	020,22
					Bottom	14.6 14.6	0.3	23 23	18.9 18.9	18.9	8.1	8.1	32.5 32.5	32.5	88.1 88.1	88.1	6.8	6.8	20.0 19.9	∤	9			
-					6*	1.0	-	- 23	19.3	40.0	8.2	0.0	31.9	24.0	90.4	00.5	6.9		7.1	\vdash	12			
					Surface	1.0	-	-	19.3	19.3	8.2	8.2	31.9	31.9	90.5	90.5	6.9	6.9	7.1]	12			
SR8	Fine	Moderate	09:03	4.9	Middle	-	-	-	-	-	-		-	-		-	-	0.0	-	10.2	-	12	820396	811638
- 1						3.9	-	-	18.7		8.2		32.0		90.1		7.0	-	13.4		12		- · · · · ·	
			1		Bottom	3.9	-	-	18.7	18.7	8.2	8.2	32.0	32.0	90.1	90.1	7.0	7.0	13.4		13			

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

06 January 22 during Mid-Ehb Tide

Water Qua	lity Monit	toring Resu	ults on		06 January 22	during Mid-	-Ebb Tide	9																
Monitoring	Weather	Sea	Sampling	Water	Sampling Dep	th (m)	Current Speed	Current	Water Te	emperature (°C)		pН	Salin	ity (ppt)		aturation (%)	Dissol Oxyg		Turbidity	(NTU)	Suspende (mg/		Coordinate HK Grid	Coordinate HK Grid
Station	Condition	Condition	Time	Depth (m)	Camping Dep	ar (m)	(m/s)	Direction	Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	(Northing)	(Easting)
					Surface	1.0	0.3	224 241	20.0	20.0	8.1	8.1	31.8 31.8	31.8	102.4 102.4	102.4	7.7		7.3 7.3		6 7			
C1	Fine	Rough	15:23	7.8	Middle	3.9	0.2	220	19.8 19.8	19.8	8.1	8.1	32.1 32.1	32.1	99.3	99.3	7.5	7.6	8.6 8.6	8.5	6 7	7	815629	804231
					Bottom	6.8	0.1	234	19.8	19.8	8.1	8.1	32.4	32.4	99.1	99.1	7.5	7.5	9.4		7			
					Surface	6.8 1.0	0.1	247 166	19.8 19.5	19.5	8.1 8.1	8.1	32.4 30.5	30.5	99.1 93.3	93.2	7.5 7.2		9.5 3.6		8 6			
C2	o	Moderate	44.04	40.0		1.0 6.1	0.3	168 154	19.5 19.3		8.1		30.5 30.8		93.1 91.1	91.1	7.1 7.0	7.1	3.7 4.8		5 7		825662	806939
C2	Cloudy	Moderate	14:31	12.2	Middle	6.1 11.2	0.2	156 160	19.3 19.2	19.3	8.2 8.2	8.2	30.9 31.2	30.9	91.0 90.9		7.0		4.9 10.4	6.4	6 7	6	825662	806939
					Bottom	11.2	0.2	164	19.2	19.2	8.2	8.2	31.2	31.2	91.0	91.0	7.0	7.0	10.9		6			
					Surface	1.0	0.3	134 135	19.3 19.3	19.3	8.2	8.2	32.4 32.4	32.4	87.2 87.1	87.2	6.6	6.7	4.3 4.6		6 5			
C3	Cloudy	Moderate	16:33	12.3	Middle	6.2	0.2	111 121	19.2 19.2	19.2	8.2	8.2	32.4 32.4	32.4	87.9 88.2	88.1	6.7	0.7	7.3 7.5	7.6	5	5	822091	817816
					Bottom	11.3 11.3	0.3	104 111	19.2	19.2	8.2	8.2	32.4 32.4	32.4	89.4 89.6	89.5	6.0	6.8	10.7		5			
					Surface	1.0	0.1	142	20.2	20.2	8.1	8.1	32.5	32.5	100.2	100.3	7.5		10.4		7			
IM1	Fine	Moderate	15:12	5.1	Middle	1.0	0.1	152	20.2	-	8.1	-	32.5	-	100.3		7.5	7.5	10.4	9.9	7	7	817938	807135
IIVI I	rille	Woderate	10.12	5.1		4.1	0.1	- 156	20.3		8.1		32.6		101.2		7.6		9.4	9.9	- 6	,	01/930	007133
					Bottom	4.1	0.1	164 141	20.3	20.3	8.1	8.1	32.6	32.6	101.3	101.3	7.6	7.6	9.4		7			
					Surface	1.0	0.2	142	20.1	20.1	8.1 8.1	8.1	32.2 32.3	32.2	101.1 101.1	101.1	7.6 7.6	7.6	6.1		6			
IM2	Fine	Rough	15:05	6.9	Middle	3.5 3.5	0.2	121 122	20.0	20.0	8.1	8.1	32.3 32.2	32.2	99.5 99.6	99.6	7.5 7.5	ŀ	7.6 7.6	8.9	8 7	7	818160	806172
					Bottom	5.9 5.9	0.1 0.1	135 137	19.9 19.9	19.9	8.1	8.1	32.3 32.3	32.3	97.3 97.3	97.3	7.3 7.3	7.3	12.9 13.0		7			
					Surface	1.0	0.3	131 142	20.1	20.1	8.1 8.1	8.1	32.2 32.2	32.2	101.7 101.7	101.7	7.6 7.6		5.9 5.9		6 7			
IM3	Fine	Rough	14:59	7.1	Middle	3.6	0.3	122	20.0	20.0	8.1	8.1	32.3	32.3	99.0	99.0	7.5	7.6	6.0	6.2	7	7	818791	805586
					Bottom	3.6 6.1	0.3	133 127	20.0 19.9	19.9	8.1 8.1	8.1	32.3 32.4	32.4	99.0 97.3	97.3	7.5 7.3	7.3	6.1 6.6		8			
						6.1 1.0	0.2	136 139	19.9 20.1		8.1 8.1		32.4 31.8	31.8	97.3 99.3	99.3	7.3 7.5	7.0	6.6 7.0		7			
					Surface	1.0 3.8	0.1 0.1	139 198	20.1	20.1	8.1 8.1	8.1	31.8 32.3		99.3 98.4		7.5 7.4	7.5	7.0 8.9		5 8			
IM4	Fine	Rough	14:40	7.5	Middle	3.8	0.1	199	20.0	20.0	8.1	8.1	32.3	32.3	98.4	98.4	7.4		9.0	8.5	7	7	819732	804600
					Bottom	6.5 6.5	0.2	192 209	20.1	20.1	8.1	8.1	32.6 32.6	32.6	98.0 98.0	98.0	7.4	7.4	9.5 9.5		7			
					Surface	1.0	0.1	168 171	20.1	20.1	8.1	8.1	31.9 31.9	31.9	99.7 99.7	99.7	7.5 7.5	7.5	7.2 7.3		8 7			
IM5	Fine	Rough	14:34	7.9	Middle	4.0 4.0	0.2	184 189	20.0	20.0	8.1 8.1	8.1	32.3 32.3	32.3	98.7 98.7	98.7	7.4 7.4	7.5	9.2 9.1	8.4	9	10	820726	804866
					Bottom	6.9	0.2	191	20.1	20.1	8.1	8.1	32.4	32.4	99.0	99.0	7.4	7.4	8.9		12			
					Surface	6.9 1.0	0.2	204 146	20.1	20.0	8.1 8.1	8.1	32.4 32.2	32.2	99.0 98.6	98.6	7.4 7.4		8.9 8.8		13 7			
IM6	Fine	Rough	14:26	7.6	Middle	1.0 3.8	0.2	153 162	20.0	20.0	8.1 8.1	8.1	32.2 32.3	32.3	98.6 98.5	98.5	7.4	7.4	8.8 9.4	9.3	8	9	821080	805838
livio	rille	Rougii	14.20	7.0		3.8 6.6	0.2 0.2	168 184	20.0 20.1		8.1 8.1		32.4 32.4		98.5 99.3		7.4 7.5		9.4 9.8	9.5	7	9	621000	000000
					Bottom	6.6	0.2	198	20.1	20.1	8.1	8.1	32.4	32.4	99.5	99.4	7.5	7.5	9.8		12			
					Surface	1.0	0.3	108 116	20.1	20.1	8.1	8.1	32.6 32.6	32.6	99.4 99.4	99.4	7.4 7.4	7.4	9.9 9.9		7			
IM7	Fine	Rough	14:20	8.4	Middle	4.2	0.3	111 118	20.1	20.1	8.1	8.1	32.6 32.6	32.6	99.4 99.4	99.4	7.4 7.4	}	10.3 10.3	10.5	7	9	821338	806819
					Bottom	7.4 7.4	0.2	117 117	20.1	20.1	8.1 8.1	8.1	32.6 32.6	32.6	100.1	100.1	7.5 7.5	7.5	11.4 11.4		12 12			
					Surface	1.0	0.3	113 119	19.2	19.2	8.2 8.2	8.2	30.9 30.9	30.9	90.1	90.1	6.9		6.8		6			
IM8	Cloudy	Moderate	15:00	7.8	Middle	3.9	0.3	123	19.2 19.3	19.4	8.2	8.2	31.4	31.5	90.2	90.2	6.9	6.9	11.9	10.2	5 6	6	821823	808144
******					Bottom	3.9 6.8	0.2	127 133	19.4 19.5	19.5	8.2 8.2	8.2	31.5 31.9	31.9	90.2 90.4	90.4	6.9 6.9	6.9	11.6 12.1	1	6	-		
DA: Depth-Aver					Bottom	6.8	0.3	137	19.5	19.5	8.2	8.2	31.9	31.9	90.4	90.4	6.9	0.9	12.2	1	5			

DA: Depth-Averaged

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

Value exceeding Action Level is underlined; Value exceeding Limit Level is bolded and underlined

Water Quality Monitoring

Water Quality Monitoring Results on 06 January 22 during Mid-Ebb Tide Curren DO Saturation Dissolved Weather Water Water Temperature (°C) Salinity (ppt) Turbidity(NTU) Coordinate Coordinate Monitoring Oxygen Current (mg/L) Sampling Depth (m) HK Grid HK Grid Direction Condition Time Depth (m) (m/s) Value Average Value Average Value Average Value Average Value DA Value DA Value DA (Northing) (Easting) Condition 1.0 0.2 120 19.4 8.1 30.9 91.8 10.6 Surface 30.9 1.0 0.2 129 19.4 8.1 30.9 91.8 7.0 10.3 3.8 0.2 141 19.3 8.1 30.9 91.8 7.1 7.3 5 5 IM9 Cloudy Moderate 15:06 7.5 Middle 19.3 8.1 30.9 91.8 822096 808811 149 3.8 0.2 19.3 8.1 30.9 91.8 7.1 7.4 6.5 0.3 146 19.2 8.1 30.9 92.4 7.1 8.4 5 19.2 8.1 30.9 92.5 7.1 Bottom 6.5 0.3 147 19.2 8.9 19.5 0.2 8.2 7.8 Surface 19.5 8.2 31.6 91.0 0.2 154 19.4 6.9 8.0 6.9 3.7 158 19.3 9.7 15:12 7.3 Middle 31.7 90.7 822371 809802 Cloudy Moderate 0.2 165 19.3 8.2 31.7 90.7 6.9 9.8 6 6.3 0.3 167 19.3 8.2 91.2 10.7 5 Bottom 31.7 91.3 7.0 6.3 0.3 173 19.4 8.2 31.7 91.3 10.9 90.6 90.6 1.0 0.1 148 19.4 9.7 Surface 19.4 8.2 31.6 90.6 162 6.9 9.7 5 1.0 0.1 19.4 11.3 4.3 0.1 156 19.3 8.2 31.6 90.3 6.9 6 8.2 31.6 90.3 Middle 193 811469 IM11 Cloudy Moderate 15:23 8.5 6 822039 90.3 11.7 4.3 159 19.3 8.2 31.6 0.1 15.8 0.2 160 19.3 8.2 31.6 31.6 31.6 90.6 6.9 6.9 8 6.9 Bottom 19.3 8.2 90.7 7.5 168 19.3 15.5 1.0 0.2 161 19.4 8.2 10.7 5 Surface 19.4 8.2 31.7 90.9 1.0 0.2 174 19.4 8.2 31.7 90.9 6.9 10.9 4.4 0.1 162 19.4 8.2 91.3 11.7 IM12 Cloudy Moderate 15:31 8.8 Middle 8.2 31.7 91.4 821480 812057 44 0.1 175 19.4 8.2 31.7 91.5 7.0 12.0 5 172 7.8 0.2 19.3 8.2 31.7 92.2 7.0 14.2 5 Bottom 19.3 8.2 31.7 92.3 7.1 7.8 177 31.7 92.4 0.2 19.3 8.2 71 14.6 6 1.0 19.6 91.4 6.3 Surface 19.6 8.2 31.9 91.4 1.0 19.6 8.2 31.9 91.4 6.9 6.4 4 6.9 2.6 5.1 Middle 819981 812664 SR1A Cloudy Moderate 15:58 2.6 4.1 19.6 8.2 6.6 Bottom 19.6 8.2 31.9 91.9 7.0 31.9 4.1 19.6 8.2 92.0 7.0 6.5 135 1.0 0.2 19.5 92.2 92.3 7.4 Surface 31.6 1.0 0.2 145 19.5 7.0 7.4 7 SR2 Cloudy Moderate 16:12 3.9 Middle 821447 814165 2.9 7.8 7.8 0.2 159 19.5 31.6 31.6 92.4 92.5 7.0 7.0 8.2 31.6 92.5 7.0 Bottom 19.5 8.2 168 2.9 0.2 19.5 0.3 19.6 9.0 92.3 6 92.3 Surface 19.6 8.2 31.1 1.0 0.3 158 19.6 31.2 92.2 9.3 6 4.4 0.2 155 19.6 31.6 31.6 31.6 91.9 7.0 7.0 12.8 SR3 14:55 8.8 Middle 8.2 91.9 822167 807579 Cloudy Moderate 19.6 44 0.2 170 19.6 8.2 12.8 7.8 0.2 162 19.6 15.8 Bottom 8.2 31.8 92.1 7.0 7.8 0.2 172 19.6 8.2 31.8 92.1 15.7 5 1.0 0.3 49 20.2 8.1 32.5 100.7 7.9 6 Surface 20.2 8.1 32.5 100.7 1.0 0.4 52 20.2 8.1 32.5 100.7 7.5 7.9 7 7.5 5.1 0.3 47 20.1 8.1 32.5 99.4 7.5 8.6 7 807825 SR4A Fine Rough 15:37 10.1 Middle 20.1 8.1 32.5 99.4 817203 5.1 0.3 51 20.1 8.1 32.5 99.4 8.7 6 9.1 49 10.6 0.2 20.1 8.1 32.5 32.5 99.5 99.6 Bottom 20.1 8.1 32.5 99.6 7.5 0.2 20.1 1.0 0.1 81 20.4 32.8 5.2 8.1 98.6 Surface 20.4 8.1 32.8 98.6 1.0 20.4 5.2 SR5A 15:51 4.7 Middle 816599 810696 Moderate 3.7 0.1 94 20.3 8 1 32.8 98.9 7.9 9 Bottom 20.3 8.1 32.8 99.0 7.4 99 1 3.7 0.1 100 20.3 8.1 7.9 182 1.0 0.1 20.7 8.1 32.5 102.1 7.6 6.7 9 Surface 20.7 8.1 32.5 102.1 187 20.7 102.1 7.6 1.0 0.1 8.1 32.5 6.8 8 7.6 SR6A Fine Moderate 16:17 4.9 Middle 817970 814726 3.9 0.0 175 20.2 Bottom 20.2 8.2 32.7 98.1 7.3 3.9 0.0 181 20.2 8.2 32.7 98.1 7.3 9.7 1.0 0.3 99 19.3 8.2 32.6 85.5 3.6 6 Surface 19.3 8.2 32.6 85.5 1.0 0.3 103 19.3 8.2 32.6 85.5 6.5 3.7 6 6.6 8.2 0.2 107 19.3 8.2 32.6 86.3 6.6 4.6 6 823725 SR7 Cloudy Moderate 17:01 16.4 Middle 19.3 8.2 32.6 86.5 823638 32.6 86.6 8.2 0.2 113 19.3 8.2 6.6 47 5 15.4 0.3 141 19.3 8.2 32.6 88.3 6.7 49 5 Bottom 19.3 8.2 32.6 88.5 6.7 15.4 149 19.3 5.0 0.3 8.2 32.6 88.6 1.0 19.7 8.2 31.5 92.4 7.0 19.7 Surface 8.2 31.5 92.4 1.0 19.7 92.3 7.0 8 8.2 7.0 7.0 811637 4.0 Middle 820408 SR8 Cloudy Moderate 15:38 31.5 92.6

19.6

19.6

8.2

8.2 31.5

92.7 7.0

6.7

7.1

6

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

3.0

Water Quality Monitoring Water Quality Monitoring Results on 06 January 22 during Mid-Flood Tide Curren DO Saturation Dissolved Weather Water Water Temperature (°C) Salinity (ppt) Turbidity(NTU) Coordinate Coordinate Monitoring Oxygen Current (mg/L) Sampling Depth (m) HK Grid HK Grid Direction Condition Time Depth (m) (m/s) Value Average Value Average Value Average Value DA Value DA Value DA (Northing) (Easting) Condition 19.9 1.0 0.5 55 8.1 32.4 99.2 6.0 Surface 32.4 1.0 0.5 57 19.9 8.1 32.4 99.2 7.5 6.0 14 7.5 3.6 0.5 49 19.9 8.1 32.5 98.3 7.4 8.3 6 7 C1 Sunny Rough 11:09 7.1 Middle 19.9 8.1 32.5 98.3 815620 804226 3.6 0.5 52 19.9 8.1 32.5 98.3 7.4 8.3 6.1 0.4 52 19.9 8.1 32.6 98.4 7.4 9.9 6 19.9 8.1 32.6 98.5 7.4 Bottom 6.1 0.4 19.9 9.9 0.5 19.4 4.3 Surface 19.4 8.1 30.4 30.4 92.7 1.0 0.5 19.4 4.4 6.1 41 19.2 5.4 C2 Moderate 12:08 12.1 Middle 30.7 90.8 825696 806959 Cloudy 6.1 0.5 43 19.2 8.1 30.7 90.8 5.4 5 0.5 22 19.3 8.1 31.1 92.2 12.9 5 Bottom 8.1 31.1 92.3 7.1 11.1 0.5 22 19.3 8.1 31.1 92 4 12.9 31.8 31.8 1.0 0.4 222 19.3 8.1 89.2 4.9 Surface 19.3 8.1 31.8 89.2 89.1 6.8 4.9 5 1.0 0.4 241 19.3 7.6 5.4 0.4 249 19.2 8.1 31.9 88.1 6.7 5 8.1 31.9 88.1 Middle 19.2 817819 C3 Cloudy Moderate 10:11 10.7 5 822094 5.4 0.4 19.2 8.1 31.9 88.1 7.9 5 251 218 6.7 9.9 9.7 0.3 19.2 8.1 31.9 31.9 31.9 87.2 4 87.2 6.7 Bottom 19.2 8.1 9.7 224 19.2 9.9 1.0 0.1 355 20.2 8.1 32.7 10.3 Surface 20.2 8.1 32.7 100.4 1.0 0.1 327 20.2 8.1 32.7 100.4 7.5 10.4 7.5 IM1 Moderate 11:25 4.8 Middle 817950 807130 3.8 349 20.0 0.1 8.1 32.9 100.7 7.6 11.3 Bottom 20.0 8.1 32.8 100.8 7.6 32.8 321 20.0 100.8 7.6 3.8 0.1 8.1 11.3 8 7.6 7.6 0.3 32.4 Surface 20.1 8.1 32.4 97.9 1.0 20.1 6 0.3 18 32.4 7.3 7.3 19.9 8.6 7 3.4 0.2 17 32.4 97.3 7.3 8.1 11:33 6.7 Middle 19.9 8.1 32.4 97.3 818185 806149 IM2 Sunny Moderate 3.4 18 19.9 8.7 8 0.2 5.7 0.2 19.9 10.5 Bottom 19.9 8.1 32.4 97.3 7.3 5.7 0.3 19.9 8.1 32.4 97.3 10.6 1.0 0.3 357 19.8 32.3 32.3 96.2 96.2 Surface 1.0 0.3 328 19.9 8 1 6.7 8 3.5 0.3 19.8 8.1 32.3 96.1 5.9 8 IM3 Sunny Moderate 11:41 6.9 Middle 19.8 8.1 32.3 96.1 6.7 818777 805572 5.8 3.5 0.3 19.8 8 1 32.3 96.1 9 5.9 7.7 7.7 10 11 349 32.3 32.3 96.3 96.3 7.3 7.3 0.2 19.8 8.1 7.3 Bottom 19.8 8.1 32.3 96.3 5.9 0.2 321 19.8 8.1 0.5 20.0 7.5 8.1 32.3 6 8.1 32.3 97.2 Surface 20.0 1.0 0.6 326 20.0 32.3 7.6 3.9 0.5 352 19.8 32.3 32.3 32.3 95.6 95.6 8.8 IM4 Rough 11:51 7.8 Middle 8.0 95.6 819744 804609 Sunny 19.8 3.9 0.5 355 19.8 8.0 7.2 8.8 8 6.8 0.4 353 19.8 32.3 9.6 Bottom 8.0 32.3 95.8 7.2 6.8 0.4 359 19.8 8.0 32.3 95.8 72 9.6 11 1.0 0.8 349 19.9 8.1 32.2 97.1 97.1 9.0 7 Surface 19.9 8.1 32.2 97.1 1.0 0.8 321 19.9 8.1 32.2 7.3 9.0 8 7.3 4.2 0.7 352 19.9 8.1 32.3 96.6 7.3 9.4 10 96.6 804847 IM5 Sunny Rough 11:58 8.3 Middle 19.9 8.1 32.3 820730 4.2 0.8 359 19.9 8.1 32.3 96.6 9.4 9 7.3 19.8 10.6 0.6 356 8.1 32.3 32.3 96.6 96.6 9 Bottom 19.8 8.1 32.3 96.6 7.3 7.3 0.7 328 19.8 1.0 0.1 349 20.1 6.6 8.0 31.8 99.4 8 Surface 20.1 8.0 31.8 99.4 1.0 0.1 321 20.1 6.6 3.6 20.0 8.6 8 12:05 7.2 Middle 32.2 98.3 821036 805827 Sunny Rough 8.1 3.6 0.1 26 20.0 8.1 32.2 98.3 8.6 9 98.2 98.2 6.2 0.2 44 20.1 8.1 32.6 7.4 9.7 9 Bottom 20.1 8.1 32.6 98.2 7.4 6.2 0.2 45 20.1 8.1 9.7 118 1.0 0.1 20.2 8.1 32.7 100.3 12.2 8 Surface 20.2 8.1 32.7 100.3 128 100.3 12.1 1.0 0.1 20.2 8.1 32.7 7.5 9 3.7 13.7 0.1 134 20.2 7.5 8 7 8.1 32.7 99.9 IM7 Sunny Rough 12:12 7.3 Middle 20.2 8.1 32.7 99.9 821341 806828 13.7 20.2 6.3 0.1 126 20.1 12.7 Bottom 20.1 8.1 32.7 99.9 7.5 6.3 0.1 135 20.1 8.1 32.7 99.9 7.5 12.7 1.0 0.2 269 19.4 30.9 91.2 6.5 5 Surface 19.4 8.1 30.9 91.2 1.0 0.2 284 19.4 8.1 30.9 91.2 7.0 6.4 6 7.0 3.8 0.2 278 19.2 8.1 30.9 90.6 7.0 8.5 5 808163 IM8 Cloudy Moderate 11:43 7.6 Middle 19.2 8.1 30.9 90.6 821845 90.6 3.8 0.2 296 19.2 8.1 30.9 7.0 8.7 6 6.6 0.2 303 19.2 8.1 31.0 91.5 7.0 11.9 5 Bottom 19.2 8.1 31.0 91.6 7.0

315

19.2

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 Water Quality Monitoring Results on 06 January 22 during Mid-Flood Tide Curren DO Saturation Dissolved Weather Water Water Temperature (°C) Salinity (ppt) Turbidity(NTU) Coordinate Coordinate Monitoring Oxygen Current (mg/L) Sampling Depth (m) HK Grid HK Grid Direction Condition Time Depth (m) (m/s) Value Average Value Average Value Average Value Average Value DA Value DA Value DA (Northing) (Easting) Condition 19.3 1.0 0.2 250 31.0 90.7 Surface 31.0 1.0 0.2 262 19.3 8.1 31.0 90.6 7.0 7.8 7.0 3.6 0.2 266 19.2 8.1 31.0 90.3 6.9 10.0 5 IM9 Cloudy Moderate 11:38 7.1 Middle 19.2 8.1 31.0 90.3 822074 808793 3.6 0.2 290 19.2 8.1 31.0 90.3 6.9 10.0 4 6.1 0.2 271 19.2 8.1 31.0 90.7 7.0 10.8 4 19.2 8.1 31.0 90.7 7.0 Bottom 6.1 0.2 273 19.2 10.8 244 19.4 0.3 8.2 7.4 Surface 19.4 8.2 31.2 91.5 1.0 0.3 257 19.4 7.4 4.1 251 19.2 13.2 6 5 11:31 Middle 31.4 90.2 12.7 822367 809792 Cloudy Moderate 41 0.2 272 19.2 8.2 31.4 90.2 6.9 14.9 7.1 0.2 263 19.2 8.2 31.4 91.4 16.3 6 Bottom 31.4 91.5 7.0 7.1 0.2 281 19.2 8.2 31.4 91.5 16.9 6 90.7 90.6 6.9 1.0 0.2 301 19.3 10.8 4 Surface 19.3 8.2 31.5 90.7 5 1.0 0.2 305 19.3 11.1 4.0 0.2 322 19.2 8.2 31.6 89.9 6.9 11.6 4 8.2 31.6 89.9 Middle 19.2 811437 IM11 Cloudy Moderate 11:22 8.0 5 822056 31.6 89.9 4.0 19.2 8.2 11.1 5 0.2 335 0.2 298 19.2 8.2 31.6 31.6 31.6 90.3 6.9 6.9 12.2 6 6.9 Bottom 19.2 8.2 90.4 7.0 309 19.2 12.6 1.0 0.1 321 19.3 8.2 11.0 6 Surface 19.3 8.2 31.6 89.9 1.0 0.1 332 19.3 8.2 31.6 89.9 6.9 10.7 4.4 0.1 341 19.2 8.2 89.7 11.8 5 IM12 Cloudy Moderate 11:17 8.7 Middle 19.2 8.2 31.6 89.7 821449 812052 44 0.1 351 19.2 8.2 31.6 89.6 6.9 11.2 6 7.7 335 0.1 19.2 8.2 31.6 88.8 6.8 15.1 5 Bottom 19.2 8.2 31.6 88.8 6.8 77 308 31.6 88.8 0.1 19.2 8.2 6.8 15.1 6 1.0 19.4 88.88 6.8 96 Surface 19.4 8.2 31.9 88.8 1.0 10.3 5 19.4 8.2 31.9 88.7 6.8 6.8 2.6 5.2 Middle 819975 812660 SR1A Cloudy Moderate 10:46 2.6 4.2 19.4 15.3 Bottom 19.4 8.2 31.8 88.4 6.7 31.8 4.2 19.4 8.2 88.4 6.7 15.6 1.0 0.2 219 19.2 90.3 13.2 Surface 31.6 1.0 0.2 237 19.2 6.9 13.4 5 SR2 Cloudy Moderate 10:30 4.4 Middle 821476 814142 3.4 11.9 12.2 0.2 241 19.2 31.6 31.6 91.7 91.8 7.0 7.0 8.2 31.6 91.8 7.0 Bottom 19.2 8.2 3.4 0.2 253 19.2 0.4 19.3 30.7 90.8 7.8 19.3 8.1 30.7 90.8 Surface 1.0 0.4 23 19.2 30.7 8.0 4.4 0.4 47 19.1 30.7 90.2 11.2 SR3 8.8 Middle 8.1 90.2 822154 807573 Cloudy Moderate 11:49 19.1 30.8 7.0 44 0.4 50 19.1 8.1 11.0 6 7.8 0.5 52 19.1 12.2 Bottom 8.1 30.8 91.1 7.0 7.8 0.5 56 19.1 8.1 30.8 91 1 7.0 12.1 5 1.0 0.3 65 20.1 8.1 32.8 98.7 9.7 18 Surface 20.1 8.1 32.8 98.7 1.0 0.3 67 20.1 8.1 32.8 98.7 7.4 9.8 17 7.4 5.0 0.3 58 20.0 8.1 32.8 98.8 7.4 9.9 13 807826 98.8 SR4A Sunny Moderate 10:50 9.9 Middle 20.0 8.1 32.8 15 817199 5.0 0.3 63 20.0 8.1 32.8 98.8 9.9 14 8.9 10.4 13 0.3 62 20.0 8.1 32.8 98.9 98.9 7.4 Bottom 20.0 8.1 32.8 98.9 7.4 0.3 20.0 1.0 20.0 12.3 0.1 8.0 32.8 96.3 7.2 16 Surface 8.0 32.8 96.3 1.0 20.0 12.3 15 SR5A 10:33 3.7 Middle 816602 810677 Sunny Moderate 27 32.8 15 0.1 28 20.0 8.0 96.3 13.0 Bottom 20.0 8.0 32.8 96.3 7.2 96.3 0.1 20.0 13.1 14 273 1.0 0.1 20.0 8.0 32.7 96.1 7.2 8.6 16 Surface 20.0 8.0 32.7 96.1 7.2 15 287 8.0 32.7 96.1 8.7 1.0 0.1 20.0 72 SR6A Sunny Moderate 10:05 3.9 Middle 817985 814746

2.9

2.9

1.0

1.0

8.3

8.3

15.5

15.5

1.0

1.0

3.8

3.8

Bottom

Surface

Middle

Bottom

Surface

Middle

0.1

0.4

0.4

0.5

0.5

0.5

0.5

280

287

181

198

190

201

187

188

19.9

19.9

19.2

19.2

19.2

19.2

19.2

19.2

19.3

19.2

19.2

19.3

19.9

19.2

19.2

19.2

19.3

8.0

8.1

8.1

8.1

8.2

8.0

8.1

8.1

8.1

8.1

8 1

8.2

8.2

8.2

32.7

32.1

32.1

32.1

31.4

32.7

32.1

32.1

32.1

32.1

32.1

32.1

31.4

8.2 31.6

95.5

87.8

87.8

87.8

86.9

84.7 6.5

95.5

87.8

87.8

87.8

87.8

87.8

87.8

87.0

86.8

31.6 84.8

11.9

11.9

12.8

12.8

11.7

12.4

12.9

12.9

7.6

7.7

12.8

7.2

6.7

6.7

6.5

7.2

6.7

6.7

6.7

6.7

6.7

15

16

5

4

5

5

5

5

5

5

823754

811617

823645

820405

DA: Depth-Averaged

SR7

SR8

Cloudy

Cloudy

Moderate

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

09:44

11:09

16.5

Water Quality Monitoring

Water Quality Monitoring Results on 08 January 22 during Mid-Ebb Tide Curren DO Saturation Dissolved Weather Water Water Temperature (°C) Salinity (ppt) Turbidity(NTU) Coordinate Coordinate Monitoring Oxygen Current (mg/L) Sampling Depth (m) HK Grid HK Grid Direction Condition Time Depth (m) (m/s) Value Average Value Average Value Average Value Average Value DA Value DA Value DA (Northing) (Easting) Condition 20.5 1.0 0.3 252 8.1 30.6 94.4 Surface 30.6 1.0 0.3 259 20.5 8.1 30.6 94.4 71 5.3 17 7.0 4.2 0.3 230 246 20.3 8.1 30.9 91.3 6.9 6.6 20 20 C1 Cloudy Moderate 17:23 8.3 Middle 20.3 8.1 30.9 91.3 22 815629 804265 4.2 91.3 0.3 20.3 8.1 30.9 6.9 6.6 7.3 0.3 225 20.3 8.1 31.2 91.1 6.9 7.4 30 20.3 8.1 31.2 91.1 6.9 Bottom 7.3 0.3 241 20.3 19.2 0.3 6.3 Surface 19.2 8.1 30.8 89.9 14 0.3 19.2 6.4 13 5.8 171 19.3 7.8 17 C2 Moderate 19:14 11.5 Middle 30.9 90.7 17 825688 806944 Cloudy 5.8 0.3 172 19.3 8.1 30.9 90.7 7.0 7.9 18 10.5 0.2 194 19.3 8.1 30.9 91.8 8.4 21 Bottom 8.1 30.9 91.9 7.1 10.5 0.2 196 19.3 8.1 30.9 92.0 8.5 21 1.0 0.6 71 19.2 8.1 88.4 9.1 13 Surface 19.2 8.1 31.7 88.5 88.5 6.8 9.5 13 1.0 0.6 75 19.2 10.1 6.1 0.3 82 19.2 8.1 31.8 88.6 6.8 11 8.1 31.8 88.7 Middle 19.2 817815 C3 Cloudy Moderate 16:45 12 1 11 822094 88.7 6.8 84 19.2 8.1 31.8 10.1 11 6.1 0.4 11.1 0.3 19.2 8.1 31.8 31.8 89.5 89.6 6.9 30.0 9 6.9 Bottom 19.2 8.1 31.8 89.6 19.2 28.8 1.0 0.2 202 20.7 8.1 92.2 8.4 27 Surface 20.7 8.1 31.3 92.3 1.0 0.2 210 20.7 8.1 31.3 92.3 6.9 8.4 26 6.9 IM1 Cloudy Moderate 17:12 5.4 Middle 817964 807110 223 7.0 4.4 0.2 20.8 8.1 31.4 93.2 7.4 22 8.1 93.3 7.0 Bottom 20.8 31.4 23 244 44 0.2 20.8 7.4 1.0 0.4 190 20.6 8.1 31.0 4.0 26 27 Surface 20.6 8.1 31.0 93.1 1.0 203 20.6 4.1 0.4 7.0 3.6 0.3 176 20.5 6.9 5.6 24 Middle 8.1 31.0 91.6 22 818171 806178 IM2 Cloudy Moderate 17:05 7.2 20.5 3.6 185 20.5 5.6 23 0.3 6.2 0.2 151 20.4 31.1 89.3 89.3 10.9 15 Bottom 20.4 8.0 31.1 89.3 6.7 8.0 6.7 6.2 0.2 153 20.4 11 0 14 22 22 1.0 0.2 200 31.0 31.0 93.7 93.7 Surface 8.1 31.0 93.7 1.0 0.2 213 20.6 8.1 3.9 91.0 91.0 18 17 3.8 0.2 206 20.5 8.1 31.1 6.9 4.0 IM3 Cloudy Moderate 16:59 7.5 Middle 20.5 8.1 31.1 91.0 42 17 818772 805612 4.1 3.8 0.2 207 20.5 6.5 136 20.4 4.6 12 0.1 31.2 31.2 6.7 8.1 89.3 6.7 Bottom 20.4 8.1 31.2 89.3 138 20.4 8.1 89.3 4.6 12 6.5 0.1 0.4 184 20.6 30.6 30.6 91.3 91.3 5.0 11 Surface 20.6 8.0 30.6 91.3 1.0 0.4 201 20.6 8.0 6.9 5.0 4.1 0.3 179 20.5 90.4 90.4 6.9 13 Middle 31.1 90.4 819732 804599 Cloudy Moderate 16:40 8.0 4.1 0.3 186 20.5 8.0 31.1 6.8 7.0 13 7.5 7.5 7.1 0.3 188 20.6 90.0 Bottom 8.0 31.4 90.0 6.8 0.3 201 20.6 8.0 31.4 90 N 6.8 14 1.0 0.2 241 20.6 8.0 30.7 91.7 6.9 5.2 Surface 20.6 8.0 30.7 91.7 1.0 0.2 244 20.6 8.0 30.7 91.7 6.9 5.3 7 6.9 3.9 0.1 162 20.5 8.0 31.1 90.7 6.8 7.2 10 804870 IM5 16:34 7.7 Middle 20.5 8.0 31.1 90.7 10 820715 Cloudy Moderate 3.9 0.1 164 7.1 10 20.5 8.0 6.8 31.1 124 20.6 6.9 11 6.7 0.1 8.0 31.2 31.2 91.0 91.0 6.8 Bottom 20.6 8.0 31.2 91.0 6.8 0.1 125 20.6 Surface 8.0 31.0 90.6 1.0 0.2 170 20.5 90.6 6.8 6.8 3.9 0.3 125 20.5 8.0 90.5 6.8 7.4 11 16:26 Middle 31.1 90.5 821041 805825 Cloudy Moderate 8.0 3.9 0.3 134 20.5 8.0 31.2 90.5 6.8 7.4 11 8.0 31.2 31.2 31.2 91.3 91.5 6.9 6.8 0.2 98 20.6 7.8 12 Bottom 20.6 8.0 91.4 6.9 7.8 6.8 0.2 107 20.6 12 1.0 255 20.6 7.9 0.1 8.1 31.4 91.4 6.9 12 Surface 20.6 8.1 31.4 91.4 91.4 31.4 1.0 0.1 278 20.6 8.1 6.9 7.9 11 4.2 189 8.3 0.1 20.6 11 8.1 31.4 IM7 Cloudy Moderate 16:20 8.3 Middle 20.6 8.1 31.4 91.4 821361 806855 199 20.6 31.4 91.4 8.3 11 4.2 0.1 8.1 0.2 181 20.6 9.4 8.1 31.4 92.1 10 Bottom 20.6 8.1 31.4 92.1 6.9 7.3 0.2 181 20.6 8.1 31.4 92.1 9.4 10 1.0 0.2 109 19.2 8.1 30.8 90.7 15.9 10 Surface 19.2 8.1 30.8 90.8 1.0 0.2 114 19.2 8.1 30.8 90.8 7.0 16.0 9 3.9 0.2 91 19.2 8.1 30.8 92.6 7.1 16.2 7 808123 IM8 Cloudy Moderate 18:02 7.7 Middle 19.2 8.1 30.8 92.9 821831 93.2 7 3.9 0.3 93 19.2 8.1 30.8 72 14 9 19.2 6.7 0.2 59 94.3 82 30.8 18.1

19.2

19.2

64

8.2

30.8

94.5

7.3

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

Bottom

Water Quality Monitoring Results on 08 January 22 during Mid-Ebb Tide Curren DO Saturation Dissolved Weather Water Water Temperature (°C) Salinity (ppt) Turbidity(NTU) Coordinate Coordinate Monitoring Oxygen Current (mg/L) Sampling Depth (m) HK Grid HK Grid Direction Condition Time Depth (m) (m/s) Value Average Value Average Value Average Value Average Value DA Value DA Value DA (Northing) (Easting) Condition 1.0 0.5 100 19.2 30.8 90.2 10.2 Surface 30.8 1.0 0.5 100 19.2 8.1 30.8 90.2 6.9 10.3 11 7.0 3.8 0.5 89 19.2 8.1 30.8 91.1 7.0 13.3 9 IM9 Cloudy Moderate 17:31 7.6 Middle 19.2 8.1 30.8 91.2 822098 808795 3.8 0.5 91 19.2 8.1 30.9 91.3 7.0 13.1 9 6.6 0.4 72 19.1 8.1 30.9 93.8 7.2 24.5 8 19.1 8.1 30.8 93.9 7.2 Bottom 6.6 0.4 19.1 22.9 114 0.8 6.6 Surface 19 1 8.1 30.9 30.9 90.6 14 1.0 0.8 123 19.1 6.5 14 7.0 4.0 110 19.2 8.5 12 17:20 8.0 Middle 30.9 89.0 12 822391 809779 Cloudy Moderate 4 0 0.8 118 19.2 8.1 30.9 89 N 6.9 8.5 12 7.0 0.5 98 19.2 8.1 90.2 6.9 34.9 9 Bottom 31.1 90.4 7.0 7.0 0.5 107 19.2 8.1 31.1 90.5 7.0 34.7 31.3 31.3 1.0 0.8 107 19.2 89.0 96 8 Surface 19.2 8.1 31.3 89.0 89.0 9.7 6.8 6 1.0 0.8 110 19.2 10.6 3.5 0.7 106 19.2 8.1 31.3 89.2 6.9 8 89.3 811472 Middle 192 8.1 31.3 IM11 Cloudy Moderate 17:14 7.0 q 822058 31.3 89.3 0.8 112 19.2 8.1 10.6 9 3.5 10 6.0 0.4 108 19.2 8.1 31.3 31.3 31.3 91.0 91.1 7.0 9.8 7.0 Bottom 19.2 8.1 91.1 6.0 0.4 115 19.2 9.9 10 1.0 0.7 107 19.1 8.2 9.3 8 Surface 19.1 8.2 31.4 89.6 1.0 0.8 107 19.1 8.2 31.4 89.6 6.9 9.4 4.4 0.6 105 19.1 8.2 31.4 89.2 13.4 8 IM12 Cloudy Moderate 17:04 8.8 Middle 8.2 31.4 89.2 821463 812029 44 0.6 111 19.1 8.2 31.4 89.1 6.9 12.5 7.8 0.3 90 19.1 8.2 31.4 89.0 6.8 12.4 Bottom 19.1 8.2 31.4 89.0 6.8 7.8 31.4 89 N 0.3 97 19.1 8.2 6.8 12.4 1.0 8.7 19.1 Surface 19.1 8.1 31.6 90.1 1.0 19.1 11 8.1 31.6 90.1 6.9 9.2 6.9 2.7 Middle 13 819978 812660 SR1A Cloudy Moderate 16:52 5.4 2.7 4.4 19.1 13.3 14 Bottom 19.1 8.1 31.5 92.0 7.1 4.4 19.1 8.1 31.5 92 N 71 13.1 14 1.0 19.0 96.5 96.8 Surface 31.4 1.0 0.3 69 19.0 31.4 7.4 15.8 10 SR2 Cloudy Moderate 16:51 4.5 Middle 821444 814147 3.5 0.1 27 19.0 31.4 31.4 98.7 99.2 7.6 7.6 22.9 8.2 99.0 7.6 Bottom 19.0 8.2 31.4 0.1 19.0 8.2 22.6 142 19.1 30.8 90.8 9.1 11 8.1 30.8 90.9 Surface 19.1 1.0 152 19.1 30.8 90.9 9.2 11 4.1 0.2 118 19.1 30.8 30.8 30.8 93.4 13.5 12 SR3 18:42 8.2 Middle 8.1 93.5 822126 807556 Cloudy Moderate 19.1 7.2 4 1 0.2 121 19.1 8.1 13.4 12 7.2 0.2 80 19.1 94.8 36.3 Bottom 8.1 30.8 95.0 7.3 0.2 85 19.1 8.1 30.8 95.2 34.1 14 1.0 0.2 76 20.7 8.1 31.3 92.7 5.9 15 Surface 20.7 8.1 31.3 92.7 1.0 0.2 81 20.7 8.1 31.3 92.7 7.0 5.9 15 7.0 4.9 0.1 79 20.6 8.1 31.3 91.4 6.9 6.6 13 807794 SR4A Cloudy Moderate 17:37 9.7 Middle 20.6 8.1 31.3 91.4 13 817195 4.9 0.1 83 20.6 8.1 31.3 91.4 6.9 6.7 14 8.7 12 0.2 20.6 8.1 31.3 31.3 91.5 91.6 6.9 8.6 Bottom 20.6 8.1 31.3 91.6 6.9 0.2 20.6 1.0 0.0 20.9 3.2 8.0 31.6 90.6 6.8 15 Surface 20.9 8.0 31.6 90.6 1.0 0.0 47 20.9 3.2 15 SR5A 17:51 Middle 816610 810685 Cloudy Moderate 2.9 343 90.9 0.1 20.8 8.0 31.6 6.8 5.9 14 Bottom 8.0 31.6 91.0 6.8 29 0.1 353 20.8 6.8 5.9 14 344 1.0 0.1 21.2 8.1 31.3 94.1 7.0 4.7 9 Surface 21.2 8.1 31.3 94.1 94.1 7.0 1.0 0.1 316 21.2 8.1 31.3 4.8 9 7 N SR6A Cloudy Moderate 18:17 4.7 Middle 817971 814750 0.1 20.7 11 Bottom 20.7 8.1 31.5 90.1 6.7 3.7 15 20.7 8.1 31.5 90.1 6.7 7.7 11 1.0 1.1 68 19.1 87.2 3.4 11 Surface 7.9 31.9 87.2 1.0 1.1 74 19.1 7.9 31.9 87.2 6.7 3.4 12 6.7 8.2 0.6 73 19.2 7.9 32.0 86.4 6.6 3.9 11 823734 SR7 Cloudy Moderate 16:37 16.4 Middle 19.2 7.9 32.0 86.4 823618 32 N 86.4 8.2 0.7 78 19.2 7 9 6.6 3.9 11 15.4 0.4 16 19.2 7.9 32.0 86.4 6.6 15.7 8 Bottom 19.2 7.9 32.0 86.4 6.6 15.4 19.2 7.9 6.6 15.8 0.5 32.0 86.4 1.0 19.4 8.2 31.5 89.0 6.8 6.5 8 Surface 19.4 8.2 31.5 88.9 1.0 19.3 88.8 6.8 6.5 8 8.2 6.8 811631 16:57 4.6 Middle 820397 SR8 Cloudy Moderate 8.3 3.6 19.0 8.3 31.4 31.4 83.0 82.9 6.4 29.1 10 6.4 3.6 19.0

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 08 January 22 during

08 January 22 during Mid-Flood Tide

	ity worm	toring Resu	แเร บแ		08 January 22	during Mid	-Flood I	ide																
Monitoring	Weather	Sea	Sampling	Water	Sampling Dep	oth (m)	Current Speed	Current	Water Te	emperature (°C)		pН	Salir	nity (ppt)		aturation (%)	Disso Oxy		Turbidity	(NTU)	Suspende (mg.		Coordinate HK Grid	Coordinate HK Grid
Station	Condition	Condition	Time	Depth (m)	Camping Dep	zar (iii)	(m/s)	Direction	Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	(Northing)	(Easting)
					Surface	1.0	0.7	42	19.9	19.9	8.0	8.0	31.2	31.2	91.2	91.2	7.0		4.0		11			
						1.0 4.1	0.7	43 34	19.9 19.9		8.0		31.2		91.2 90.3		7.0 6.9	7.0	4.0 6.3		11 15			
C1	Cloudy	Moderate	11:39	8.2	Middle	4.1	0.0	35	19.9	19.9	8.0	8.0	31.3	31.3	90.3	90.3	6.9		6.3	6.1	14	14	815606	804267
					Bottom	7.2	0.6	40	19.9	19.9	8.0	8.0	31.4	31.4	90.4	90.5	6.9	6.9	7.9		16			
					Bottom	7.2	0.7	40	19.9	19.9	8.0	0.0	31.4	31.4	90.5	90.5	6.9	0.9	7.9		15			
					Surface	1.0	0.6	11	19.3 19.3	19.3	8.1	8.1	30.7	30.7	89.5 89.5	89.5	6.9		5.0 5.1		15 16		1	
						5.9	0.6	8	19.3		8.2		30.7		89.8		6.9	6.9	6.9	l	15			
C2	Cloudy	Moderate	10:31	11.7	Middle	5.9	0.6	8	19.3	19.3	8.2	8.2	30.9	30.9	89.9	89.9	6.9		7.0	7.0	15	15	825681	806925
					Bottom	10.7	0.3	351	19.3	19.3	8.2	8.2	30.9	30.9	91.5	91.6	7.0	7.0	8.9		13			
						10.7	0.4	323 264	19.3 19.3		8.2		30.9		91.7		7.0 6.7		8.9 4.1		13 16			
					Surface	1.0	0.7	265	19.3	19.3	8.2	8.2	31.8	31.8	87.4 87.3	87.4	6.7		4.1		16			
C3	Clt-		12:36	12.1	Middle	6.1	0.8	265	19.2	19.2	8.2	8.2	31.9	31.9	87.2	87.3	6.7	6.7	11.0	10.7	13	40	000000	817791
C3	Cloudy	Moderate	12:30	12.1	Middle	6.1	0.9	281	19.2	19.2	8.2	0.2	31.9	31.9	87.3	67.3	6.7		11.6	10.7	13	13	822099	617791
					Bottom	11.1	0.5	269	19.2	19.2	8.2	8.2	31.9	31.9	88.5	88.7	6.8	6.8	16.6	1	8			
						11.1	0.6	293 10	19.2 20.2		8.2		31.9 31.5		88.9 92.4		6.8 7.0		16.4 8.3		9			
IM1 Cloudy				Surface	1.0	0.3	10	20.2	20.2	8.1	8.1	31.5	31.5	92.4	92.4	7.0	7.0	8.4		12				
	Cloudy	Moderate	11:55	5.2	Middle	-	-			-		-	-	-		-	7.0	-	9.8	-	13	817933	807153	
	Oloudy	Moderato			madio	-	-	-	-		-		- 04.7		-		-		-	0.0	-	.0	017000	007.100
					Bottom	4.2	0.2	5	20.0	20.0	8.1 8.1	8.1	31.7	31.6	92.7 92.8	92.8	7.0 7.1	7.1	11.3 11.3	-	12 12			
				0.7	1.0	0.4	0	20.0	20.4	8.0		31.2	04.0	89.9	00.0	6.8		5.6		15				
					Surface	1.0	0.4	0	20.1	20.1	8.0	8.0	31.2	31.2	89.9	89.9	6.8	6.8	5.6		15			
IM2 Cloudy Mode	Moderate	12:03	6.9	Middle	3.5	0.4	8	19.9	19.9	8.1	8.1	31.2	31.2	89.3	89.3	6.8	0.0	6.6	6.9	13	13	818151	806177	
					3.5 5.9	0.4	8 358	19.9 19.9		8.1 8.1		31.2 31.2		89.3 89.3		6.8		6.7 8.5		12 10				
					Bottom	5.9	0.3	329	19.9	19.9	8.1	8.1	31.2	31.2	89.3	89.3	6.8	6.8	8.6		10			
				Surface	1.0		88.2	88.2	6.7		4.7		17											
					Ourlace	1.0	0.4	340	19.9	10.0	8.0	0.0	31.1	51.1	88.2	00.2	6.7	6.7	4.7		17			
IM3 Cloudy	Cloudy	Moderate	12:11	7.2	Middle	3.6 3.6	0.4	335 344	19.8 19.8	19.8	8.0	8.0	31.1	31.1	88.1 88.1	88.1	6.7		3.9	4.7	15 15	14	818779	805588
					D. //	6.2	0.4	339	19.8	40.0	8.0		31.1	04.4	88.3	00.0	6.8		5.7	-	10			
					Bottom	6.2	0.4	312	19.8	19.8	8.0	8.0	31.1	31.1	88.3	88.3	6.8	6.8	5.7		10			
					Surface	1.0	0.9	344	20.0	20.0	8.0	8.0	31.1	31.1	89.3	89.2	6.8		5.5		16			
						1.0 3.9	1.0 0.7	359 342	20.0 19.8		8.0	-	31.1		89.1 87.6		6.8	6.8	5.6 6.8	-	17 14			
IM4	Cloudy	Moderate	12:21	7.8	Middle	3.9	0.7	315	19.8	19.8	8.0	8.0	31.1	31.1	87.6	87.6	6.7		6.8	6.7	14	15	819722	804608
					Bottom	6.8	0.6	335	19.8	19.8	8.0	8.0	31.1	31.1	87.8	87.8	6.7	6.7	7.6		13			
					Dottom	6.8	0.6	343	19.8	10.0	8.0	0.0	31.1	01.1	87.8	07.0	6.7	0.7	7.6		13			
					Surface	1.0	0.9 1.0	10 10	19.9 19.9	19.9	8.0	8.0	31.0	31.0	89.1 89.1	89.1	6.8		7.0 7.0	-	14 14			
	<u>.</u>					4.1	0.9	9	19.9		8.0		31.1		88.6		6.8	6.8	7.4	1	16			
IM5	Cloudy	Moderate	12:28	8.1	Middle	4.1	0.9	9	19.9	19.9	8.0	8.0	31.1	31.1	88.6	88.6	6.8		7.4	7.7	16	16	820738	804850
					Bottom	7.1	0.8	9	19.8	19.8	8.0	8.0	31.1	31.1	88.6	88.6	6.8	6.8	8.6		19			
						7.1 1.0	0.8	9 50	19.8		8.0		31.1		88.6 91.4		6.8 7.0		8.6 4.6		19 20			
					Surface	1.0	0.1	51	20.1	20.1	8.0	8.0	30.6	30.6	91.4	91.4	7.0	7.0	4.6		19			
IM6	Cloudy	Moderate	12:35	7.5	Middle	3.8	0.3	37	20.0	20.0	8.1	8.1	31.0	31.0	90.3	90.3	6.9	7.0	6.6	6.3	17	17	821074	805805
IM6 Cloudy	Woderate	12.00	1.5	Wildle	3.8	0.4	40	20.0	20.0	8.1	0.1	31.0	31.0	90.3	30.3	6.9		6.6	0.5	17	.,	021074	003003	
				Bottom	6.5	0.4	44 44	20.1	20.1	8.1	8.1	31.4	31.4	90.2	90.2	6.8	6.8	7.7		14 14				
 					Surface	1.0	0.4	223	20.1	20.2	8.1	0.4	31.5	24.5	92.3	00.0	7.0		10.2		12			
					Surface	1.0	0.1	244	20.2	20.2	8.1	8.1	31.5	31.5	92.3	92.3	7.0	7.0	10.1		12			
IM7 CI	Cloudy	Moderate	12:42	7.5	Middle	3.8	0.2	115	20.2	20.2	8.1	8.1	31.5	31.5	91.9	91.9	7.0	7.0	11.7	10.8	10	10	821372	806852
						3.8 6.5	0.2 126 20.2 20.1 00.4		8.1 8.1	-	31.5 31.5		91.9 91.9		7.0		11.7 10.7	-	10 9					
					Bottom	6.5	0.2	95	20.1	20.1	8.1	8.1	31.5	31.5	91.9	91.9	7.0	7.0	10.7		8			
					Surface	1.0	0.2	73	19.2	19.2	8.1	8.1	31.0	31.0	89.5	89.5	6.9		7.2		10			
					Guilage	1.0	0.2	77	19.2	10.2	8.1	0.1	31.0	31.0	89.4	00.0	6.9	6.9	7.4	1	10			
IM8	Cloudy	Moderate	10:57	7.2	Middle	3.6	0.2	74 77	19.2 19.2	19.2	8.1 8.1	8.1	31.1	31.1	89.4 89.5	89.5	6.9		9.1 9.2	9.0	12 12	12	821807	808147
						6.2	0.2	76	19.2	40.0	8.2		31.1	04.0	90.6	00.7	7.0	7.0	10.6	1	13			
					Bottom	6.2	0.1	76	19.1	19.2	8.2	8.2	31.2	31.2	90.8	90.7	7.0	7.0	10.6	<u> </u>	13			

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Water Quality Monitoring Results on 08 January 22 during Mid-Flood Tide Curren DO Saturation Dissolved Weather Water Water Temperature (°C) Salinity (ppt) Turbidity(NTU) Coordinate Coordinate Monitoring Oxygen Current (mg/L) Sampling Depth (m) HK Grid HK Grid Direction Condition Time Depth (m) (m/s) Value Average Value Average Value Average Value Average Value DA Value DA Value DA (Northing) (Easting) Condition 1.0 0.3 81 19.1 8.2 31 4 Surface 31.4 1.0 0.3 84 19.1 8.2 31.4 91.8 71 7.8 3.4 0.3 79 19.1 8.2 31.4 92.9 9.0 11 IM9 Cloudy Moderate 11:04 6.7 Middle 19.1 8.2 31.4 93.0 822090 808815 93.1 3.4 0.3 81 19.1 8.2 31.4 7.2 9.0 11 5.7 0.2 71 19.1 8.2 31.4 95.3 7.3 11.2 12 19.1 8.2 31.4 95.5 7.3 Bottom 0.2 19.1 10.3 12 304 19.2 7.2 Surface 19.2 8.2 31.4 90.5 11 0.7 306 19.2 7.5 11 3.7 0.6 301 19.1 8.6 11:11 7.3 Middle 31.4 90.6 822395 809783 Cloudy Moderate 3.7 0.6 301 19.1 8.2 31.4 90.6 8.8 9 6.3 0.5 302 19.1 8.2 31.4 91.4 10.1 8 Bottom 31.4 91.5 7.0 6.3 0.5 310 19.1 8.2 31.4 91.5 10.1 8 31.6 31.6 91.3 91.3 1.0 0.7 300 19.3 8.2 8.7 8 Surface 19.3 8.2 31.6 91.3 9.1 1.0 0.7 328 19.3 11.7 3.5 0.6 302 19.1 8.2 31.6 91.2 9 8.2 31.6 91.3 Middle 191 811482 IM11 Cloudy Moderate 11:24 6.9 10 822038 91.3 31.6 11.8 19.1 8.2 9 3.5 0.6 305 13 5.9 0.4 310 19.1 8.2 31.6 31.5 91.9 92.0 7.1 13.3 92.0 7.1 Bottom 19.1 8.2 5.9 0.4 340 19.1 12.6 13 1.0 0.8 281 19.2 8.2 8.8 30 Surface 19.2 8.2 31.6 89.5 1.0 0.8 293 19.2 8.2 31.6 89.5 6.9 8.9 29 4.1 0.7 279 19.2 8.2 89.6 9.6 25 24 IM12 Cloudy Moderate 11:32 8.2 Middle 19.2 8.2 31.7 89.7 23 821464 812057 4.1 0.7 279 19.2 8.2 31.7 89.7 6.9 9.9 277 7.2 0.6 19.2 8.2 31.7 91.2 7.0 12.7 14 Bottom 19.2 8.2 31.7 91.3 7.0 72 0.7 297 31.7 91.3 19.2 8.2 7.0 12.8 13 1.0 19.3 89 4 6.8 6.7 Surface 19.3 8.2 31.6 89.5 1.0 6.7 6 19.3 8.2 31.6 89.5 6.8 6.8 2.4 Middle 819978 812662 SR1A Cloudy Moderate 12:02 4.8 2.4 3.8 19.4 Bottom 19.5 8.2 31.5 90.9 6.9 31.5 91.0 3.8 19.5 8.2 6.9 5.5 1.0 0.2 341 19.3 90.9 Surface 31.5 1.0 0.2 347 19.3 7.0 10.2 10 SR2 Cloudy Moderate 12:16 4.2 Middle 821446 814154 3.2 11.7 11.7 0.2 351 19.3 31.5 31.5 31.5 91.6 91.7 7.0 7.0 8.2 91.7 7.0 Bottom 19.3 8.2 0.2 323 19.3 0.3 19.2 7.4 12 90.1 30.7 90.1 Surface 19.2 8.1 1.0 0.3 74 19.2 30.7 90.1 7.8 12 4.3 0.2 73 19.1 30.7 30.7 30.7 90.2 90.3 7.0 7.0 10.9 16 SR3 10:52 8.5 Middle 8.1 90.3 822163 807573 Cloudy Moderate 19.1 4.3 0.2 75 19.1 8.1 11.0 15 7.5 0.2 55 19.1 18 Bottom 8.2 30.8 90.8 7.0 7.5 0.2 58 19.1 8.2 30.8 90.8 7.0 11.4 18 1.0 0.1 142 20.1 8.1 31.6 90.7 6.9 7.7 10 Surface 20.1 8.1 31.6 90.7 1.0 0.1 149 20.1 8.1 31.6 90.7 6.9 7.8 10 6.9 4.6 0.1 83 20.0 8.1 31.6 90.8 6.9 7.9 11 90.8 807801 SR4A Cloudy Moderate 11:20 9.2 Middle 20.0 8.1 31.6 817205 4.6 0.1 86 20.0 8.1 31.6 90.8 6.9 7.9 11 109 12 8.2 0.1 20.0 8.1 31.6 31.6 90.9 6.9 8.4 Bottom 20.0 8.1 31.6 90.9 6.9 118 20.0 1.0 0.1 255 20.0 10.3 8.0 31.6 88.3 6.7 10 Surface 8.0 31.6 88.3 1.0 278 20.0 10.3 11 SR5A 11:03 Middle 816594 810678 Cloudy Moderate 2.5 296 88.3 88.3 13 0.1 20.0 8.0 31.6 11.0 Bottom 20.0 8.0 31.6 88.3 6.7 2.5 0.1 299 20.0 11.1 227 1.0 0.1 20.0 8.0 31.5 88.1 6.7 6.6 8 Surface 20.0 8.0 31.5 88.1 247 8.0 31.5 88.1 6.7 6.7 1.0 0.1 20.0 8 6.7 SR6A Cloudy Moderate 10:35 42 Middle 817966 814754 0.0 233 19.9 9.9 Bottom 19.9 8.0 31.5 87.5 6.7 3.2 0.0 244 19.9 8.0 31.5 87.5 6.7 9.9 1.0 0.2 108 19.4 32.2 85.9 3.1 13 Surface 8.1 32.2 85.9 1.0 0.2 118 19.3 8.1 32.2 85.9 6.5 3.1 13 6.5 8.2 0.2 67 19.3 8.1 32.3 85.7 6.5 5.4 15 823735 SR7 Cloudy Moderate 13:07 16.4 Middle 19.3 8.1 32.3 85.7 823651 32.3 85.7 8.2 0.2 71 19.3 8.1 6.5 5.4 15 15.4 0.3 33 19.3 8.2 32.3 87.4 6.7 6.0 18 Bottom 19.3 8.2 32.3 87.6 6.7 15.4 5.9 17 0.4 33 19.3 8.2 32.3 1.0 19.2 8.2 31.6 89.0 6.8 8.0 15 Surface 19.2 8.2 31.6 88.9 1.0 19.2 88.7 6.8 8.2 15 8.2 6.8 811637 11:41 4.2 Middle 21 820400 SR8 Cloudy Moderate 3.2 19.2 8.2 8.2 31.5 31.5 86.4 86.3 6.6 6.6 10.0 26 19.2

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

11 January 22 during Mid-Ebb Tide

Bottom

Surface

Middle

Bottom

Surface

Middle

Bottom

Surface

Middle

Bottom

Surface

Middle

Bottom

7.0

1.0

1.0

3.7

3.7

6.4

6.4

1.0

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Water Quality Monitoring Results on Total Alkalinity Coordinate Coordinate Current Speed DO Saturation Dissolved Suspended Solids Weather Sampling Water Water Temperature (°C) Salinity (ppt) Turbidity(NTU) Nickel (µg/L) Monitoring Oxygen (mg/L) (µg/L) Current Sampling Depth (m) HK Grid HK Grid Value DA Value DA Condition Time Depth (m) (m/s) Value Average Value Average Value Average Value Average Value DA Value DA Value DA Value DA (Northing) (Easting) Condition 0.2 1.0 196 19.3 32.9 103.8 7.9 6.9 82 <0.2 0.8 Surface 8.1 104.0 1.0 0.2 202 19.3 8.1 32.9 104 1 7.9 6.9 6 82 <0.2 0.7 3.8 0.2 203 19.3 8.1 32.8 104.5 7.9 7.2 7.3 5 86 86 <0.2 0.8 C1 Misty Moderate 07:40 7.6 Middle 19.3 8.1 32.8 104.7 815606 804242 < 0.2 0.8 3.8 0.2 221 19.3 8.1 32.8 104.8 8.0 6 6.6 0.2 221 19.3 8.0 32.7 105.3 8.0 8.4 7 89 <0.2 0.7 19.3 8.0 32.7 105.5 8.0 Bottom 6.6 0.2 234 19.2 8.5 0.8 1.0 19.0 0.1 83 Surface 19.0 8.1 31.8 88.8 6.8 31.8 1.0 0.2 278 19.0 31.8 88.8 6.8 2.6 83 0.7 5.4 0.2 265 19.0 2.8 6 87 0.7 08:41 10.8 Middle 88.2 825701 806946 0.7 Cloudy Rough 8.1 31.8 5.4 0.2 280 19.0 8.1 31.8 88 1 6.8 2.8 5 87 <0.2 9.8 0.2 273 19.2 8.1 32.0 86.7 6.6 6.1 4 90 <0.2 0.8 Bottom 19.2 8.1 32.0 86.8 6.6 9.8 0.2 280 19.2 32.0 86.8 6.6 6.0 89 < 0.2 0.8 1.0 0.1 166 19.1 8.1 32.1 86.3 6.6 1.3 4 84 < 0.2 0.6 Surface 19.1 8.1 32.1 86.3 179 19.1 8.1 86.3 6.6 1.3 5 84 0.7 1.0 0.1 32.1 <0.2 1.3 87 6.0 0.1 207 19.1 8.1 32.2 85.8 6.6 5 <0.2 0.7 85.8 19 1 8.1 32.2 822107 817802 C3 Cloudy Rough 06:29 12 0 Middle 87 <0.2 87 32.2 85.8 1.4 <0.2 0.7 6.0 0.1 215 19.1 8.1 6.6 4 6.4 2.9 91 0.7 11.0 0.1 270 19.2 8.1 32.5 84.2 6.4 4 <0.2 Bottom 19.2 8.1 32.5 84.3 0.1 290 19.2 8.1 32.5 84.3 6.4 2.8 4 91 1.0 0.3 314 19.4 8.1 33.1 7.6 6.4 83 0.8 Surface 19.4 8.1 33.1 100.0 1.0 0.3 337 19.4 8.1 33.1 100.0 7.6 6.5 6 83 <0.2 0.8 IM1 Misty Moderate 07:53 4.2 Middle 817956 807118 3.2 19.3 7.8 0.2 311 8.1 33.1 100.7 7.6 91 <0.2 0.8 8.1 Bottom 19.3 33.1 100.8 7.6 322 7.8 3.2 0.2 8.1 19.3 33 1 0.8 8.1 8.1 1.0 0.1 356 19 4 33.2 101 0 3.4 85 < 0.2 0.8 8.1 Surface 19.4 33.2 101.0 356 19.4 33.2 3.5 84 <0.2 0.7 1.0 0.1 6 3.1 0.0 19.3 7.8 4.3 6 86 <0.2 0.8 8.1 33.2 102.6 8.1 33.2 102.8 818168 806142 IM2 Mistv Moderate 08:00 6.2 Middle 19.3 < 0.2 3.1 0.0 19.3 8.1 7.8 4.3 86 0.8 60 33.2 5.2 5.2 0.1 19.3 6 90 <0.2 0.8 104.5 Bottom 19.3 8.1 33.2 104.6 33.2 7.0 5.2 0.1 36 19.3 8.1 90 <0.2 0.9 19.4 1.0 0.2 142 33.0 33.0 5.7 84 <0.2 Surface 8.1 33.0 101.0 1.0 0.2 151 19.4 8 1 101 1 77 5.7 8 84 0.8 87 87 <0.2 0.8 3.3 0.3 120 19.4 8.1 33.0 102.1 102.4 7.7 6.9 7 IM3 Mistv Moderate 08:07 6.6 Middle 19.4 8.1 33.0 102.3 87 818783 805581 <n 2 0.8 7.8 6.8 3.3 0.3 125 19.3 118 5.6 0.1 7.2 90 <0.2 0.8 19.3 8.1 33.2 106.3 8.1 Bottom 19.3 8.1 33.2 1066 8 1 5.6 19.3 8.1 33.2 106.8 8.1 7.3 90 0.1 122 <0.2 0.8 0.3 163 19.3 32.4 6.6 82 0.8 Surface 19.3 8.1 32.4 100.4 1.0 0.3 178 19.3 8.1 32.4 100.4 7.6 6.6 6 82 <0.2 0.8 4.0 0.5 154 19.3 8.1 32.4 7.0 6 86 <0.2 0.8 Middle 8.1 102.9 819725 804624 Misty Moderate 08:18 8.0 32.4 4.0 0.5 157 19.3 8.1 32.4 103.1 7.9 7.1 6 86 <0.2 0.7 7.0 0.3 135 19.3 32.4 104.9 8.0 7.2 89 0.7

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821076

821339

821836

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7.1

7.1

7 1

7.1

7.6

DA: Depth-Averaged

IM5

IM7

IM8

Mistv

Misty

Misty

Cloudy

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

08:13

08:26

08:34

08:42

Moderate

Moderate

Moderate

Rough

7.4

7.0

8.0

7.1

Note: The DCM monitoring was resumed starting from 11 January 2022.

Water Quality Monitoring Results on 11 January 22 during Mid-Ebb Tide Total Alkalinity Coordinate Coordinate Current Speed DO Saturation Dissolved Suspended Solids Weather Sampling Water Water Temperature (°C) Salinity (ppt) Turbidity(NTU) Nickel (µg/L) Monitoring Oxygen (mg/L) (µg/L) Current Sampling Depth (m) HK Grid HK Grid Value DA Value DA Condition Condition Time Depth (m) (m/s) Value Average Value Average Value Average Value Average Value DA Value DA Value DA Value DA (Northing) (Easting) 18.9 1.0 0.1 291 90.5 47 83 <0.2 0.8 Surface 8.2 1.0 0.1 299 18.9 8.2 31.6 90.5 7.0 4.8 82 <0.2 0.8 3.4 0.1 256 18.9 8.2 316 90.5 7.0 5.0 7 87 <0.2 0.8 IM9 Cloudy Rough 08:07 6.7 Middle 18.9 8.2 31.6 90.5 822103 808791 < 0.2 0.8 3.4 0.1 277 18.9 8.2 31.6 90.5 7.0 5.0 6 86 5.7 0.1 258 18.9 8.2 31.6 90.7 7.0 5.2 6 89 <0.2 0.8 18.9 8.2 31.6 90.7 7.0 Bottom 0.1 274 18.9 5.2 90 0.9 298 18.9 1.0 0.1 6.9 4.3 82 0.8 Surface 18.9 8.2 8.2 31.6 89.8 31.6 1.0 319 18.9 89.8 6.9 4.3 83 0.8 3.3 0.1 320 18.9 4.3 7 87 0.7 08:00 6.6 Middle 89.9 822398 809776 Cloudy Rough 8.2 31.6 3.3 0.1 342 18.9 8.2 31.6 89.9 6.9 4.4 86 <0.2 5.6 0.1 317 18.9 8.2 31.6 90.2 7.0 4.9 5 89 <0.2 0.7 Bottom 18.9 8.2 31.6 90.2 7.0 5.6 0.1 325 18.9 316 90.2 7.0 4.9 89 < 0.2 0.8 1.0 0.1 298 19.0 8.1 31.8 6.7 2.2 82 < 0.2 0.8 Surface 19.0 8.1 31.8 87.0 19.0 8.1 31.8 87.0 6.7 2.2 7 83 0.9 1.0 0.1 307 <0.2 86 87 3.8 0.1 293 19.0 8.1 31.8 86.7 6.7 4 <0.2 0.8 86.7 07:49 19.0 8.1 31.8 822034 811449 IM11 Cloudy Rough 7.5 Middle 86 <0.2 <0.2 8.1 31.8 86.6 0.8 3.8 0.1 297 19.0 2.4 5 87.3 6.7 6.7 89 1.0 6.5 0.1 286 19.1 8.2 32.0 32.0 87.2 4 <0.2 Bottom 19.1 8.2 6.5 0.1 287 19.1 8.2 32.0 87.3 6.7 3.8 4 89 0.8 1.0 0.2 157 19.0 8.1 31.8 6.7 2.9 83 0.8 Surface 19.0 8.1 31.8 87.0 1.0 0.2 169 19.0 8.1 31.8 87 N 6.7 3.0 5 82 <0.2 0.8 4.5 0.1 220 19.0 6.7 3.1 5 87 <0.2 0.8 IM12 Cloudy Rough 07:41 8.9 Middle 8.2 31.8 87.4 821479 812066 4.5 0.1 230 19.0 8.2 31.8 87.4 6.7 3.1 6 86 0.8 7.9 <0.2 0.1 262 19.0 8.2 31.8 89.1 6.8 4.0 8 90 0.8 Bottom 19.0 8.2 31.8 89.3 6.9 79 270 8.2 3.9 <0.2 0.1 19.0 31.8 89.4 6.9 89 0.9 18.8 3.8 8.1 Surface 18.8 8.1 31.6 87.3 1.0 18.8 8.1 31.6 87.3 6.7 3.8 4 6.7 2.5 . 07:07 4.9 Middle 819977 812657 SR1A Cloudy Moderate 2.5 3.9 18.9 3.3 5 Bottom 18.9 8.2 31.6 88.4 6.8 3.9 18.9 8.2 31.6 88.4 6.8 3.3 1.0 0.1 323 18.9 4 84 <0.2 0.8 Surface 8.1 31.7 1.0 0.1 338 18.9 8.1 31.7 87.8 6.8 2.3 5 84 <0.2 0.8 SR2 Cloudy Rough 06:51 4.5 Middle 821458 814146 <n : 0.8 0.8 3.5 0.1 324 19.0 4.8 4 88 <0.2 8.2 8.2 31.8 88.1 88.2 6.8 6.8 Bottom 19.0 31.8 19.0 8.2 31.8 88.3 6.8 4.8 < 0.2 3.5 0.1 337 88 0.8 230 18.9 3.6 18.9 8.2 31.5 90.6 Surface 1.0 0.1 230 18.9 90.6 7.0 3.6 4.2 0.1 257 18.9 3.8 -SR3 08:20 8.4 Middle 8.2 90.6 822167 807583 Cloudy Rough 18.9 31.5 7.0 4.2 0.1 278 18.9 8.2 31.5 90.6 3.8 5 7.4 0.1 224 18.9 7.0 4.1 Bottom 8.2 31.5 91.0 7.0 7.4 0.1 226 18.9 8.2 31.5 91 0 7.0 41 6 1.0 0.2 269 19.5 8.1 32.9 98.7 7.5 3.7 Surface 8.1 32.9 98.8 1.0 0.2 291 19.5 8.1 32.9 98.8 7.5 3.8 6 4.4 0.2 261 19.5 8.1 32.9 99.4 7.5 4.0 6 07:13 807792 SR4A Misty Moderate 8.8 Middle 19.5 8.1 32.9 99.5 817204 4.4 0.2 265 19.5 8.1 32.9 99.6 7.5 4.1 7 7.8 268 19.5 5.4 6 0.2 8.1 32.9 100.8 7.6 Bottom 19.5 8.1 32.9 100.9 271 19.5 5.4 1.0 0.2 330 19.4 32.8 5.2 8.1 99.8 7.6 Surface 19.4 8.1 32.8 99.8 1.0 0.3 341 19.4 5.2 06:57 4.4 Middle 816586 810713 Misty Moderate 3.4 308 105.9 5 0.2 19.3 8 1 32.8 6.0 Bottom 8.1 32.8 8.1 34 329 19.3 8 1 8 1 6.1 170 1.0 0.1 19.6 7.9 32.2 94.1 7.1 8.1 6 Surface 19.6 7.9 32.2 94.2 7.9 94.2 182 32.2 7.1 1.0 0.1 19.6 8.2 6 ---SR6A Misty Moderate 06:28 32 Middle 817944 814718 2.2 0.1 180 19.6 9.1 Bottom 19.6 7.9 32.2 95.9 7.3 2.2 0.1 197 19.6 7.9 96.0 7.3 9.1 1.0 0.0 287 19.1 6.4 1.2 Surface 8.0 32.6 83.7 1.0 0.0 313 19.1 8.0 32.6 83.7 6.4 1.2 4 8.1 0.0 319 19.1 8.0 32.6 83.6 6.4 1.3 3 823747 SR7 Cloudy Rough 06:00 16.2 Middle 19.1 8.0 32.6 83.6 823654 32.6 8 1 0.0 324 19.1 8.0 83.6 6.4 13 4 15.2 0.1 50 19 1 8.0 326 84.2 6.4 1.4 3 Bottom 19.1 8.0 32.6 84.3 6.4 19.1 8.0 32 6 1.4 4 15.2 0.1 53 84.3 6.4 1.0 19.2 8.3 31.4 90.5 6.9 3.8 6 8.3 Surface 19.2 31.4 90.4 19.2 8.3 31.4 6.9 3.7 6 1.0 90.3 6.9 -811610 07:33 5.0 820380 SR8 Cloudy Moderate Middle 31.7 87.8 87.9 6.8 5.4 6.8 5.6 4.0 19.1 8.2 31.7 4 4.0 19.1 4

DA: Depth-Averaged

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

Value exceeding Action Level is underlined; Value exceeding Limit Level is bolded and underlined

Water Quality Monitoring Water Quality Monitoring Results on 11 January 22 during Mid-Flood Tide Total Alkalinity Coordinate Coordinate Current Speed DO Saturation Dissolved Suspended Solids Weather Sampling Water Water Temperature (°C) Salinity (ppt) Turbidity(NTU) Nickel (µg/L) Monitoring Oxygen (mg/L) (µg/L) Current Sampling Depth (m) HK Grid HK Grid Value DA Value DA Condition Time Depth (m) (m/s) Average Value Average Value Average Value Average Value DA Value DA Value DA Value DA (Northing) (Easting) Condition Value 1.0 0.4 34 19.4 33.1 6.2 <0.2 0.9 Surface 8.1 1.0 0.4 35 19.4 8.1 33.2 101.8 77 6.6 3 84 <0.2 0.9 87 87 4.1 0.2 47 19.4 8 1 33.2 7.7 7.8 4 <0.2 0.8 C1 Misty Moderate 13:36 8.2 Middle 19.4 8.1 33.2 102.3 815607 804256 < 0.2 0.9 7.8 4.1 0.2 51 19.4 8.1 33.2 102.4 7.7 4 0.3 19.4 8.1 33.2 104.0 7.9 8.2 4 91 <0.2 0.9 19.4 8.1 33.2 104.2 7.9 Bottom 0.3 19.4 8.2 0.9 19.0 1.0 0.2 2.0 83 0.8 Surface 19.0 8.2 8.2 91.0 31.6 1.0 0.2 324 19.0 7.0 2.0 82 0.7 0.3 312 18.9 6.9 2.2 4 5 87 0.8 12:37 Middle 8.2 89.8 825690 806950 C2 Fine Rough 31.7 <0.2 5.6 0.3 335 18.9 8.2 31.7 89.7 6.9 2.2 87 <0.2 0.9 10.1 0.3 318 19.2 8.1 32.0 88.2 6.8 6.3 4 90 <0.2 0.8 Bottom 19.2 8.1 32.0 88.4 6.8 10.1 0.4 334 19.2 8.1 32.0 88.6 6.8 6.2 90 < 0.2 0.8 1.0 0.3 273 19.3 8.2 32.7 84.3 6.4 1.8 83 < 0.2 0.6 Surface 19.3 8.2 32.7 84.3 8.2 32.7 84.3 6.4 1.8 6 84 0.6 1.0 0.3 273 19.3 <0.2 88 6.2 0.3 275 19.3 8.2 32.7 84.0 6.4 5 <0.2 0.5 8.2 84.1 14:48 19.3 32.7 822090 817813 C3 Fine Moderate 12 4 Middle 88 < 0.2 <0.2 8.2 32.7 84.1 2.7 0.5 0.3 279 19.3 6.4 6 6.2 84.8 6.4 6.5 91 0.5 11.4 0.3 271 19.3 8.2 32.7 84.7 6 <0.2 Bottom 19.3 8.2 32.7 11.4 0.3 280 19.3 8.2 32.7 84.8 6.5 3.3 91 1.0 0.1 277 19.6 8.1 33.1 103.1 5.5 82 0.8 Surface 19.6 8.1 33.1 103.3 1.0 0.1 282 19.6 8.1 33.1 103.4 7.8 5.4 6 82 <0.2 0.9 IM1 Misty Moderate 13:15 4.8 Middle 87 817944 807132 3.8 19.5 6.2 <0.2 0.1 13 8.1 33.1 105.9 8.0 6 91 1.0 Bottom 19.5 8.1 33.1 106.4 8.1 8.1 33.2 6.3 92 <0.2 3.8 0.1 13 19.5 106.8 8.1 0.8 19.4 6.2 8 1 33.2 83 0.8 Surface 19.4 8.1 33.2 101.7 314 8.1 33.2 101.7 6.1 83 1.0 0.1 19.4 6 <0.2 0.8 7.9 3.0 0.1 356 19.4 8.1 33.2 102.2 7.7 6 90 <0.2 0.9 13:09 8.1 33.2 102.4 818150 806173 IM2 Mistv Moderate 6.0 Middle 19.4 89 < 0.2 3.0 328 19.4 7.8 8.0 90 0.1 0.9 5.0 0.1 19.4 8.5 6 93 <0.2 0.9 Bottom 19.4 8.1 33.2 103.2 5.0 0.1 19.4 8.1 33.2 103.3 7.8 8.5 93 <0.2 0.9 1.0 0.1 19.4 Surface 8.1 1.0 0.1 31 19.4 8.1 33.0 7.8 7.9 6 82 <0.2 0.8 7.8 7.8 6 7 87 92 <0.2 0.9 3.4 0.0 104 19.4 8.1 33.1 103.4 8.4 IM3 Mistv Moderate 13:03 6.8 Middle 19.4 8.1 33.1 103.5 87 818793 805595 <0.2 0.9 0.0 33 1 8.5 3.4 112 19.4 5.8 0.1 351 104.4 7.9 7 90 <0.2 0.8 19.3 8.1 33.1 104.2 9.0 Bottom 19 4 8.1 33 1 7.9 5.8 19.4 8.1 104. 0.1 323 33.1 9.0 6 90 <0.2 0.8 0.1 19.4 32.4 4.1 83 0.8 100.3 8.1 100.3 Surface 19.4 32.4 1.0 0.1 19.4 32.4 100.3 7.6 4.1 83 <0.2 0.9 <0.2 4.2 0.1 19.4 5.4 86 0.8 12:54 8.4 Middle 8.1 100.6 819743 804600 IM4 Misty Moderate 19.4 32.4 < 0.2 0.9 4.2 0.1 25 19.4 8.1 32.4 100.7 7.7 5.5 6 86 7.4 0.2 28 19.4 32.4 102.7 7.8 6.9 90 <0.2 0.9 Bottom 19.4 8.1 32.4 102.9 7.8 74 0.2 28 19.4 8.1 32.4 103.0 7.8 6.9 6 90 <0.2 0.8 1.0 0.2 11 19.5 8.1 32.9 102.1 7.7 5.7 6 83 <0.2 1.0 Surface 8.1 32.9 102.2 5.9 6.6 1.0 0.2 11 19.5 8.1 33.0 102 2 7.7 5 83 <0.2 0.8 3.8 0.2 22 19.4 8.1 33.0 102.4 7.8 5 87 <0.2 0.8 8.1 820714 804884 IM5 Misty Moderate 12:46 7.6 Middle 194 33.0 102.5 <0.3 87 3.8 0.2 23 19.4 8.1 33.1 102.5 7.8 6.8 6 <0.2 0.8 6.6 324 19.4 7.0 92 <0.2 0.2 8.1 33.1 104.6 7.9 6 0.8 Bottom 8.1 33.1 104.7 19.4 6.6 330 19.4 7.1 92 1.0 0.3 46 19.4 32.3 4.1 85 <0.2 8.1 101.6 0.9 Surface 19.4 8.1 32.3 101.7 0.3 48 19.4 4.2 85 0.8 3.4 0.1 105 19.4 7.8 5.8 89 <0.2 1.0 12:39 Middle 102.7 821053 805836 Misty Moderate 8.1 3.4 0.1 115 19.4 8.1 32.3 7.8 5.8 6 7 88 104.9 5.8 0.1 42 19.4 8.1 32.3 104 7.5 91 <0.2 0.9 Bottom 8.0 32.3 8.0 5.8 0.1 19.4 8.0 7.5 91 0.8 67 1.0 0.1 19.5 8.1 32.2 102.8 7.8 5.1 82 < 0.2 0.8 Surface 19.5 8.1 32.2 102.8 8.1 32.3 102.8 7.8 5.2 82 1.0 0.1 71 19.5 8 <0.2 0.9 87 87 0.9 4.2 0.1 46 19.4 8.1 7.9 6.1 8 <0.2 32.2 103.5 IM7 Misty Moderate 12:35 8.4 Middle 194 8.1 32.2 103.6 821328 806852 < 0.2 6.1 8 19.4 7.4 0.1 168 19.4 104.5 7.2 90 <0.2 0.8 32.2 Bottom 19.4 8.1 32.2 104.6 8.0 7.4 0.1 179 19.4 8.1 104.6 8.0 7.1 90 1.0 0.1 285 18.9 90.5 7.0 3.9 8 82 <0.2 0.9 Surface 18.9 8.2 31.6 90.5 1.0 0.1 287 18.9 8.2 31.6 90.5 7.0 3.9 81 <0.2 0.8 18.9 <0.2 3.8 0.1 256 8.2 316 90.3 7.0 4.6 7 86 0.9 IM8 Fine Moderate 13:03 7.5 Middle 18.9 8.2 31.6 90.3 821841 808135 <0.2 0.9 82 3.8 0.1 279 18.9 8.2 31.6 90.3 7.0 47 8 0.8 <0.2 8.2 7.0 6.5 0.1 289 18.9 31.6 90.8 4.2 9 89 0.9 Bottom 18.9 8.2 31.6 90.8 7.0

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18.9

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 11 January 22 during Mid-Flood Tide Total Alkalinity Coordinate Coordinate Current DO Saturation Dissolved Suspended Solids Weather Sampling Water Water Temperature (°C) Salinity (ppt) Turbidity(NTU) Nickel (µg/L) Monitoring Oxygen (mg/L) (µg/L) Current Sampling Depth (m) HK Grid HK Grid Value DA Value DA Condition Condition Time Depth (m) (m/s) Value Average Value Average Value Average Value Average Value DA Value DA Value DA Value DA (Northing) (Easting) 19.0 1.0 0.1 265 88.9 6.8 4 0 82 < 0.2 0.9 Surface 8.2 31.7 88.9 1.0 0.1 280 19.0 8.2 31.7 88.9 6.8 3.9 8 81 <0.2 0.8 6.8 3.6 0.2 240 19.0 8.2 31.7 88.8 6.8 4.9 8 85 86 <0.2 0.9 IM9 Fine Moderate 13:09 7.2 Middle 19.0 8.2 31.7 88.8 822113 808806 < 0.2 3.6 0.2 251 19.0 8.2 31.7 88.8 6.8 4.9 8 6.2 0.2 244 19.0 8.2 31.7 90.0 6.9 4.9 8 89 <0.2 1.0 19.0 8.2 31.7 90.1 6.9 Bottom 6.2 0.2 252 19.0 5.0 1.0 0.5 82 Surface 19.1 8.2 8.2 31.8 87.4 1.0 1.0 0.5 321 19.1 6.7 4.7 81 <0.2 1.0 4.2 0.5 291 19.1 6.7 4.7 7 86 87 0.9 13:18 8.3 Middle 87.6 822361 809785 Moderate 31.8 <0.2 42 0.5 320 19.1 8.2 31.8 87.6 6.7 4.7 <0.2 1.0 7.3 0.5 293 19.1 8.2 31.8 87.8 6.7 6.2 7 90 <0.2 1.0 Bottom 19.1 8.2 31.8 87.9 6.7 7.3 0.5 304 19.1 31.8 87.9 6.7 6.2 8 89 < 0.2 1.1 1.0 0.4 288 19.1 8.2 31.8 6.7 4.1 8 82 < 0.2 0.9 87.7 Surface 19.1 8.2 31.8 87.7 0.5 19.1 8.2 31.8 6.7 4.1 7 81 0.9 1.0 315 <0.2 86 86 5.2 7 4.2 0.4 290 19.1 8.2 31.8 87.2 6.7 <0.2 1.1 8.2 87.2 13:30 19 1 31.8 822041 811446 IM11 Fine Moderate 8.4 Middle 86 <0.2 <0.2 1.0 8.2 31.8 87.2 5.3 7 4.2 0.4 312 19.1 90 1.0 7.4 0.4 295 19.1 8.2 31.8 88.1 88.2 6.8 6.8 <0.2 Bottom 19.1 8.2 31.8 7.4 0.4 316 19.0 8.2 31.8 88.3 6.8 6.6 90 0.9 1.0 0.5 299 19.1 8.2 6.8 2.5 81 0.8 Surface 19.1 8.2 31.9 88.4 1.0 0.5 321 19.1 8.2 31.9 88.4 6.8 2.5 8 82 <0.2 0.8 4.5 0.5 299 19.1 6.7 4.4 7 86 <0.2 <0.2 0.9 IM12 Fine Moderate 13:37 9.0 Middle 19.1 8.2 32.0 87.6 821472 812048 87 4.5 0.5 303 19.1 8.2 32.0 87.6 6.7 44 8 0.9 8.0 <0.2 0.5 295 19.1 8.2 32.0 88.0 6.7 7.2 5 89 0.9 Bottom 19.1 8.2 32.0 88.0 6.7 8.0 0.5 312 19.1 8.2 32.0 88.0 7 1 <0.2 6.7 6 90 0.8 19.1 3.9 8.1 6.8 Surface 19.1 8.1 31.6 87.9 1.0 3.9 19.1 8.1 31.6 6.7 8 6.8 2.6 . SR1A 14:03 5.2 Middle 819974 812655 Fine Calm 2.6 4.2 19.0 3.5 8 Bottom 19.0 8.1 31.7 87.6 6.7 4.2 19.0 8.1 31.7 87.6 6.7 3.5 8 1.0 0.1 241 19.3 3.3 <0.2 0.8 Surface 8.2 1.0 0.1 251 19.3 8.2 32.2 87.0 6.6 3.3 7 85 <0.2 0.8 SR2 Fine Moderate 14:27 4.8 Middle 821447 814178 <n : 0.8 3.8 3.9 3.9 88 0.8 0.1 250 19.2 5 <0.2 8.2 8.2 32.2 87.2 87.3 87.3 6.7 6.7 Bottom 19.2 32.2 3.8 19.2 8.2 0.1 261 89 <0.2 0.9 137 18.9 4.6 18.9 8.2 31.6 91.6 Surface 1.0 0.1 143 18.9 91.6 7.1 4.5 4.4 0.0 235 18.8 6.5 --SR3 12:57 8.7 Middle 8.2 91.4 822139 807563 Fine Moderate 18.8 31.6 4.4 0.0 251 18.8 8.2 316 91 4 7.1 6.4 7.7 0.1 269 18.8 7.1 7.1 6 Bottom 18.8 8.2 31.6 92.1 77 0.1 280 18.8 8.2 31.6 92 1 7 1 7 1 6 1.0 0.1 196 19.5 8.1 32.8 99.3 7.5 6.8 Surface 8.1 32.8 99.4 1.0 0.1 213 19.5 8.1 32.8 99 4 7.5 6.9 7.2 5 4.5 0.1 116 19.5 8.1 32.8 99.7 7.5 6 13:55 807788 SR4A Misty Moderate 9.0 Middle 19.5 8.1 32.8 99.8 817206 7.2 4.5 0.1 122 19.5 8.1 32.8 99.8 7.6 7 8.0 0.0 19.5 9.3 6 63 8.1 32.8 100.5 7.6 Bottom 19.5 8.1 32.8 102.0 19.5 1.0 0.1 337 19.5 32.6 7.0 8.1 104.0 7.9 Surface 19.5 8.1 32.6 104.2 1.0 352 19.5 7.0 14:11 Middle 816585 810705 Misty Moderate 26 106.5 5 0.1 19.4 8 1 32.6 106 8.6 Bottom 19.5 8.1 32.6 8.1 26 0.1 19.5 8 1 106.8 8 1 8.5 193 1.0 0.0 19.2 8.1 32.8 100.5 7.6 6.1 4 Surface 19.2 8.1 32.8 100.5 8.1 32.8 100.5 7.6 6.1 1.0 0.0 205 19.2 5 --SR6A Misty Moderate 14:57 4.0 Middle 817947 814731 3.0 0.0 158 19.2 7.9 Bottom 19.2 8.1 32.8 100.5 7.7 3.0 0.0 170 19.2 8.1 32.8 100.5 7.7 7.6 1.0 0.1 81 19.3 6.4 2.2 4 Surface 8.2 32.8 84.8 1.0 0.1 86 19.3 8.2 32.8 84.8 6.4 2.2 5 19.3 8.3 0.1 88 8.2 32.8 84 6 6.4 2.8 5 SR7 Fine Moderate 15:24 16.6 Middle 19.3 8.2 32.8 84.6 823636 823728 8.2 32.8 8.3 0.1 89 19.3 84.6 6.4 29 4 15.6 0.0 19.3 8.2 32.8 86.1 6.5 3.0 4 Bottom 19.3 8.2 32.8 86.2 6.6 15.6 19.3 8.2 32.8 6.6 3.0 0.0 86.2 1.0 19.2 8.2 31.6 90.4 6.9 3.1 4 8.2 Surface 19.2 31.6 90.4 19.2 8.2 31.6 6.9 3.2 5 1.0 90.4 -6.9 -811621 13:46 5.1 820399 SR8 Fine Moderate Middle 31.7 90.4 90.5 6.9 7.0 5.0 4 9 4.1 19.0 8.2 31.7 4 4.1 19.0

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 13 January 22 during Mid-Ebb Tide Total Alkalinity Coordinate Coordinate Current Speed DO Saturation Dissolved Suspended Solids Weather Sampling Water Water Temperature (°C) Salinity (ppt) Turbidity(NTU) Nickel (µg/L) Monitoring Oxygen (mg/L) (µg/L) Current Sampling Depth (m) HK Grid HK Grid Value DA Value DA Condition Time Depth (m) (m/s) Value Average Value Average Value Average Value Average Value DA Value DA Value DA Value DA (Northing) (Easting) Condition 0.2 18.8 1.0 168 93.8 5.1 < 0.2 0.4 Surface 33.3 1.0 0.3 174 18.8 8.2 33.3 93.8 7.2 5.2 9 45 <0.2 0.4 4.3 0.3 172 18.8 8.2 33.3 93.8 7.2 5.2 7 48 48 <0.2 0.6 C1 Cloudy Moderate 09:31 8.5 Middle 18.8 8.2 33.3 93.8 815618 804250 < 0.2 0.5 7 4.3 0.3 186 18.8 8.2 33.3 93.8 7.2 5.2 7.5 0.3 155 18.7 8.2 33.3 94.0 7.2 5.3 54 <0.2 0.5 18.7 8.2 33.3 94.1 7.2 Bottom 0.3 164 18.7 5.3 1.0 19.5 0.1 42 Surface 19.5 8.1 8.1 32.5 87.4 6.6 1.0 136 19.5 32.5 6.6 2.1 43 0.7 0.1 124 19.5 2.6 5 48 0.8 10:54 10.1 Middle 87.0 825679 806947 Moderate 8.1 5.1 0.1 133 19.5 8.1 32.6 87 N 6.6 2.7 4 48 <0.2 0.8 9.1 0.0 198 19.5 8.0 32.6 87.2 6.6 2.6 3 52 <0.2 0.8 Bottom 19.5 8.0 32.6 87.2 6.6 9.1 0.0 200 19.4 32.6 87.2 6.6 26 4 52 < 0.2 0.9 1.0 0.2 303 19.7 8.1 33.1 85.3 6.4 9.9 44 < 0.2 0.8 Surface 19.7 8.1 33.1 85.3 19.7 8.1 85.3 6.4 9.8 4 44 0.7 1.0 0.2 329 33.1 <0.2 1.4 48 5.8 0.2 301 19.8 8.1 33.2 84.5 6.3 5 <0.2 0.8 84.5 19.8 8.1 33.2 822099 817783 C3 Cloudy Rough 08:54 116 Middle 48 <0.2 48 <0.2 84.5 1.4 0.8 5.8 0.2 19.8 8.1 33.2 6.3 6 311 6.3 6.3 2.3 51 10.6 0.2 304 19.8 8.1 33.2 84.4 6 <0.2 0.8 Bottom 19.8 8.1 33.2 84.4 10.6 0.2 328 19.8 8.1 33.2 84.4 6.3 2.3 52 1.0 0.0 168 18.6 8.2 33.1 92.7 4.3 48 0.5 Surface 18.6 8.2 33.1 92.8 1.0 0.0 179 18.6 8.2 33.1 92.8 7.1 4.3 46 <0.2 0.5 Cloudy IM1 Moderate 09:52 4.7 Middle 817929 807143 3.7 172 18.5 7.2 0.1 8.2 33.1 93.3 4.2 6 50 <0.2 0.5 8.2 Bottom 18.5 33.1 93.4 7.2 8.2 3.7 174 4.1 0.1 18.5 0.6 8.2 8.2 3.6 1.0 0.1 149 18.5 33.1 94.0 43 < 0.2 0.6 8.2 Surface 18.5 33.1 94.0 149 18.5 33.1 48 <0.2 0.5 1.0 0.1 5 3.3 0.0 152 18.5 7.2 4.2 4 48 <0.2 0.5 8.2 33.1 94.0 10:00 8.2 94.0 818146 806168 IM2 Cloudy Moderate 6.5 Middle 18.5 33.1 < 0.2 3.3 0.0 157 18.5 7.2 4.2 50 0.4 5.5 0.1 166 18.5 94.7 6.7 6 51 <0.2 0.5 Bottom 18.5 8.2 33.1 94.8 177 8.2 33.1 7.3 7.0 5.5 0.1 18.5 50 <0.2 0.4 1.0 0.1 157 18.5 3.0 42 <0.2 Surface 8.2 33.1 1.0 0.1 163 18.5 8.2 33.1 93.5 72 3.2 5 42 0.6 45 44 <0.2 0.5 3.4 0.1 162 18.6 8.2 33.1 93.6 7.2 4.1 4 IM3 Cloudy Moderate 10:09 6.8 Middle 18.6 8.2 33.1 93.6 818813 805597 <0.2 0.5 172 177 33.2 93 6 4.3 4 3.4 0.1 18.6 5.8 5.7 0.1 18.6 5 50 <0.2 0.5 8.2 7.2 7.2 33.2 94.0 94.1 Bottom 18.6 8.2 33.2 72 5.8 18.6 8.2 33.2 5.9 4 0.1 185 48 <0.2 0.4 162 33.1 3.9 44 0.5 Surface 18.5 8.2 33.1 93.8 1.0 0.1 176 18.5 8.2 33.1 93.8 7.2 3.9 4 42 <0.2 0.4 4.3 157 18.5 8.2 33.1 7.2 4.7 5 45 <0.2 0.5 10:19 Middle 8.2 33.1 94.0 819733 804623 Cloudy Moderate 4.3 0.1 164 18.5 8.2 33.1 94.0 7.2 4.9 4 46 <0.2 0.6 7.5 0.1 149 18.5 7.3 6.9 48 0.5 Bottom 8.2 33.2 95.3 7.5 0.1 157 18.5 8.2 33.2 95.3 7.3 6.9 6 49 <0.2 0.6

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32 7

92 7

92.7

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92 6

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805841

806851

808146

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821341

821827

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0.8 <0.2

0.9

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DA: Depth-Averaged

Cloudy

Cloudy

Cloudy

Cloudy

IM5

IM7

IM8

Moderate

Moderate

Moderate

Rough

10:28

10:37

10:46

10:30

8.0

7.3

8.3

7.7

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 1.0

1.0

4.0

4.0

7.0

1.0

3.7

3.7

6.3

6.3

1.0

1.0

4.2

4.2

7.3

1.0

3.9

3.9

6.7

Surface

Middle

Bottom

Surface

Middle

Bottom

Surface

Middle

Bottom

Surface

Middle

Bottom

0.2

0.2

0.2

0.2

0.2

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0.2

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0.1

200

215

212

215

228

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213

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230

208

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236

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252

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254

102

105

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224

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Water Quality Monitoring Water Quality Monitoring Results on 13 January 22 during Mid-Ebb Tide Total Alkalinity Coordinate Coordinate Current Speed DO Saturation Dissolved Suspended Solids Weather Sampling Water Water Temperature (°C) Salinity (ppt) Turbidity(NTU) Nickel (µg/L) Monitoring Oxygen (mg/L) (µg/L) Current Sampling Depth (m) HK Grid HK Grid Value DA Value DA Condition Condition Time Depth (m) (m/s) Value Average Value Average Value Average Value Average Value DA Value DA Value DA Value DA (Northing) (Easting) 0.2 1.0 110 19.1 32.7 90.5 6.9 3.3 <0.2 1.0 Surface 8.1 32.7 90.5 1.0 0.2 112 19.1 8.1 32.7 90.5 6.9 3.3 4 44 <0.2 1.0 6.9 3.9 0.2 109 19.1 8 1 32.7 90.5 6.9 3.7 4 48 48 <0.2 0.8 IM9 Cloudy Rough 10:24 7.8 Middle 19.1 8.1 32.7 90.5 822101 808797 < 0.2 110 5 3.9 0.2 19.1 8.1 32.7 90.5 6.9 3.7 6.8 0.2 105 19.1 8.1 32.7 90.6 6.9 4.8 4 51 <0.2 0.9 19.1 8.1 32.7 90.6 6.9 Bottom 6.8 0.2 109 19.1 4.9 0.8 1.0 19.4 3.4 44 0.8 Surface 0.1 194 8.1 8.1 32.6 86.7 6.6 1.0 0.1 19.4 32.6 86.7 3.4 46 0.8 6.6 4.1 0.1 19.4 4.1 4 48 0.9 10:16 Middle 8.1 86.3 822361 809810 Cloudy Rough 41 0.1 19.4 8.1 32.7 86.3 6.6 4.1 5 49 <0.2 0.8 0.1 19.3 8.1 32.7 86.4 6.6 4.1 3 51 <0.2 0.9 Bottom 19.3 8.1 32.7 86.4 6.6 7.1 0.1 19.3 8.1 32.7 86.4 6.6 4.2 52 < 0.2 0.9 1.0 0.0 254 19.4 8.1 32.7 6.6 3.4 41 < 0.2 1.0 87.4 Surface 19.4 8.1 32.7 19.4 8.1 32.7 87.4 6.6 3.4 42 0.8 1.0 0.0 260 5 <0.2 3.8 0.0 319 19.4 8.1 32.7 87.3 6.6 5 49 <0.2 0.8 87.3 194 8.1 32.7 822080 811462 IM11 Cloudy Rough 10:07 7.6 Middle 48 <0.2 50 <0.2 8.1 32.7 87.3 0.8 3.8 0.0 328 19.4 6.6 3.6 4 51 0.7 6.6 0.0 90 19.4 8.1 32.7 87.2 6.6 6.6 4.1 5 5 <0.2 Bottom 19.4 8.1 32.7 6.6 0.0 19.4 8.1 32 7 87.2 6.6 4.2 52 0.9 1.0 0.1 238 19.5 8.1 32.7 6.5 2.9 45 0.9 Surface 19.5 8.1 32.7 86.0 1.0 0.2 259 19.5 8.1 32.7 86.0 6.5 2.9 4 45 <0.2 0.9 4.3 217 19.5 32.8 6.5 3.4 5 48 <0.2 0.9 IM12 Cloudy Rough 09:59 8.5 Middle 8.1 32.8 85.7 821454 812068 4.3 0.1 227 19.5 8 1 32.8 85.7 6.5 3.5 4 48 0.8 204 <0.2 7.5 0.0 19.5 8.1 32.8 85.8 6.5 4.1 3 53 0.8 Bottom 19.5 8.1 32.8 85.8 6.5 0.0 221 8.1 32.8 85.8 <0.2 7.5 19.5 6.5 41 4 54 0.8 19.2 22 8 1 85.1 Surface 19.2 8.0 32.3 85.1 1.0 19.2 2.2 3 8.0 32.3 85.1 6.5 6.5 2.1 . 09:32 4.1 Middle -819973 812664 SR1A Cloudy Moderate 2.1 3.1 19.1 8.0 2.4 3 Bottom 19.1 8.0 32.3 85.4 6.5 3.1 19.1 8.0 32.3 85.4 6.5 2.4 4 1.0 0.2 315 19.4 2.8 44 <0.2 0.9 Surface 8.1 1.0 0.2 326 19.4 8.1 32.8 85.9 6.5 2.8 4 45 <0.2 1.0 SR2 Cloudy Moderate 09:16 4.5 Middle 821457 814186 <n : 0.9 0.2 51 0.9 3.5 314 3.3 4 <0.2 19.4 8.1 32.8 86.0 86.0 6.5 6.5 Bottom 19 4 8.1 32.8 19.4 8.1 32.8 86.0 6.5 53 3.5 0.2 326 3.3 <0.2 0.8 100 19.3 3.1 6.8 8.1 89.5 Surface 19.3 32.6 1.0 0.1 100 19.3 32.6 89.5 6.8 3.2 4.1 0.1 111 19.3 3.1 --SR3 Rough 10:35 8.1 Middle 8.1 89.7 822165 807563 Fine 19.3 32.6 4 1 0.1 118 19.3 8.1 32.6 89.7 6.8 3.1 4 7.1 0.0 92 19.2 89.8 2.9 3 Bottom 19.2 8.1 32.6 89.9 6.8 7 1 0.0 100 19.2 8.1 32.7 89.9 6.8 29 3 1.0 0.3 111 18.4 8.2 32.7 91.5 7.1 3.6 Surface 8.2 32.7 91.5 1.0 0.3 113 18.4 8.2 32.7 91.5 7.1 3.6 7 4.5 0.4 128 18.5 8.2 32.9 92.1 7.1 5.6 6 8.2 807803 SR4A Cloudy Moderate 09:10 8.9 Middle 18.5 32.9 92.1 817181 4.5 0.4 128 18.5 8.2 32.9 92.1 7.1 5.7 7 7.9 132 18.5 6.6 6 0.3 8.2 33.0 93.0 7.2 Bottom 18.5 8.2 93.1 72 33.0 143 18.5 1.0 0.1 132 18.1 3.6 8.2 32.1 93.3 7.3 Surface 18.1 8.2 32.1 93.5 1.0 142 18.1 7.3 3.6 08:52 3.2 Middle 816600 810698 Cloudy Calm 22 122 3.6 7 0.1 18.1 8.2 32.1 95.6 7.5 Bottom 8.2 32.1 95.7 7.5 2.2 0.1 128 18.1 8.2 95.8 7.5 3.6 141 18.8 1.0 0.1 8.1 32.4 83.7 6.4 5.2 5 Surface 18.8 8.1 32.4 83.8 154 8.1 32.4 83.9 1.0 0.1 18.8 6.4 5.4 6 64 --SR6A Cloudy Calm 08:24 3.8 Middle 817961 814746 2.8 0.1 132 18.8 6.2 Bottom 18.8 8.1 32.4 84.7 6.5 2.8 0.1 144 18.8 8.1 32.4 84.7 6.5 6.4 1.0 0.1 105 19.8 85.2 6.4 1.2 Surface 8.2 33.3 85.2 1.0 0.1 112 19.8 8.2 33.3 85.2 6.4 1.2 4 19.8 8.2 0.1 100 8.2 33.3 85.1 6.4 1.3 3 SR7 Cloudy Moderate 08:25 16.3 Middle 19.8 8.2 33.3 85.1 823642 823726 8.2 0.1 102 19.8 8.2 33.3 85.1 6.4 14 4 15.3 0.1 19.8 8.2 33.3 85.1 6.4 1.5 3 Bottom 19.8 8.2 33.3 85.1 6.4 8.2 33.3 1.5 15.3 0.1 81 19.8 6.4 4 1.0 19.5 8.1 32.7 6.6 3.2 4 8.1 Surface 19.5 32.7 86.4 19.5 8.1 32.7 6.5 3.2 3 1.0 86.3 6.6 -09:51 4.4 820399 811630 SR8 Cloudy Moderate Middle 32.9 85.9 86.0 6.5 6.5 4.4 4.4 3.4 19.5 8.1 32.9 3

8.1

19.5

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

3.4

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 13 January 22 during I

13 January 22 during Mid-Flood Tide

Monitoring Station Co	Veather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling De	oth (m)	Current Speed	Current	Water Ten	nperature (°C)	1	pН	Salin	ity (ppt)		aturation %)	Dissol Oxyg		Turbidity(NTU)	Suspende				Coordinate	Coordinate	Chromium (µg/L)	Nickel (µg/L
Co		Condition	Time	Depth (m)	Oamping Do										(70)	Oxyg	en		(mg	<i>µ</i> ∟)	(ppi	****	HK Grid	HK Grid	(P9/L)	
	Cloudy					, ,	(m/s)	Direction	Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value DA	Value	DA	Value	DA	(Northing)	(Easting)	Value DA	Value DA
	Cloudy				Surface	1.0	0.4 0.4	47 48	18.9 18.9	18.9	8.3 8.3	8.3	33.4 33.4		96.3 96.3	96.3	7.3 7.3		3.8	5 5		48 47				<0.2 <0.2	0.7
C1 C		Moderate	14:36	7.8	Middle	3.9	0.4	35	18.9	18.9	8.2	8.2	33.4	33.4	96.5	96.6	7.4	7.4	5.5 5.9	5	5	52	51	815626	804226	<0.2	0.7
					Bottom	3.9 6.8	0.4	37 40	18.9 18.8	18.8	8.2 8.3	8.3	33.4 33.3	33.3	96.6 98.2	98.4	7.4 7.5	7.5	6.1 8.2	6		51 54				<0.2	0.7
						6.8 1.0	0.3	40 280	18.8 19.5		8.3 8.1		33.3 32.4		98.6 88.4		7.5 6.7	7.0	8.2 1.9	5 5		53 41				<0.2 <0.2	0.8
					Surface	1.0 5.7	0.1 0.1	302 338	19.5 19.5	19.5	8.1 8.1	8.1	32.4 32.6	32.4	88.3 86.9	88.4	C 7	6.7	1.9	5 5		41 45				<0.2	0.8
C2	Fine	Moderate	13:33	11.4	Middle	5.7	0.1	338	19.5	19.5	8.1	8.1	32.6	32.0	86.9	86.9	6.6	F	2.5	6	5	46	46	825696	806942	<0.2	0.8
					Bottom	10.4 10.4	0.2 0.2	321 336	19.5 19.5	19.5	8.1 8.1	8.1	32.8 32.8	32.0	85.7 85.7	85.7	6.5 6.5	6.5	5.7 5.7	6 5		50 50				<0.2 <0.2	0.8
					Surface	1.0	0.3	245 256	19.8 19.8	19.8	8.1 8.1	8.1	33.3		86.3 86.3	86.3	6.5	6.5	1.1	3 4	-	46 46				<0.2 <0.2	0.8
C3	Fine	Rough	15:31	12.6	Middle	6.3 6.3	0.4	254 275	19.8 19.8	19.8	8.1 8.1	8.1	33.3 33.3		86.1 86.1	86.1	6.5 6.5	0.5	1.3 1.3	3	4	48 50	49	822091	817788	<0.2 <0.2	0.8
					Bottom	11.6 11.6	0.3	257 261	19.7	19.7	8.1	8.1	33.3	33.3	86.1 86.2	86.2	CE	6.5	1.6	5		51 52				<0.2	0.8
					Surface	1.0	0.0	55	18.5	18.5	8.2	8.2	33.0	33.0	96.5	96.6	7.4		3.9	7		48				<0.2	0.4
IM1 C	Cloudy	Moderate	14:54	5.3	Middle	1.0	0.0	57 -	18.5	-	8.2		33.0	-	96.7	-	-	7.4	3.9	- 8	8	50	51	817968	807143	<0.2 - <0.2	0.5
	. ,				Bottom	4.3	0.0	67	18.5	18.5	8.3	8.3	33.0	33.0	98.7	98.9	7.6	7.6	9.4	7		- 53				<0.2	0.4
					Surface	4.3 1.0	0.0	67 44	18.5 18.6		8.3 8.2		33.0 33.1		99.0 96.7		7.6 7.4	7.0	9.5 2.9	8 5		51 44				<0.2 <0.2	0.4
						1.0 3.4	0.0 0.1	44 50	18.6 18.6	18.6	8.2 8.2	8.2	33.1 33.1	33.1	96.6 97.0	90.7	7.4 7.5	7.5	3.0 7.3	6 5		46 46				<0.2	0.5
IM2 C	Cloudy	Moderate	15:01	6.7	Middle	3.4	0.1	52 53	18.6	18.6	8.2	8.2	33.1	33.1	97.1 98.9	97.1	7.5	ļ	7.0 7.0	5	5	48 49	47	818154	806157	<0.2 <0.2 <0.2	0.7 0.7 0.7
					Bottom	5.7	0.0	53	18.6	18.6	8.2	8.2	33.1	33.1	99.1	99.0	7.6	7.6	11.7	5		50				<0.2	0.6
					Surface	1.0	0.1	67 69	18.6 18.6	18.6	8.2	8.2	33.0 33.0		97.3 97.3	97.3	7.5 7.5	7.5	2.0	7		43 42				<0.2	0.5
IM3 C	Cloudy	Moderate	15:07	7.1	Middle	3.6 3.6	0.1	59 60	18.6 18.6	18.6	8.2 8.2	8.2	33.1 33.1		98.2 98.5	98.4	7.5 7.6		4.7 4.9	6 7	6	45 44	45	818799	805572	<0.2 <0.2	0.5 0.6
					Bottom	6.1 6.1	0.1 0.1	62 67	18.6 18.6	18.6	8.3 8.3	8.3	33.1		100.6	100.7	7.7	7.7	6.6 6.6	6 5		48 49				<0.2 <0.2	0.6
					Surface	1.0	0.1	59 64	18.6	18.6	8.2	8.2	33.1	33.1	96.7 96.7	96.7	7.4	-	2.4	5		44				<0.2	0.4
IM4 C	Cloudy	Moderate	15:16	8.8	Middle	4.4 4.4	0.2	72	18.7	18.7	8.2 8.2	8.2	33.2	33.2	95.8 95.9	95.9	7.3	7.4	5.1 5.2 4.5	5	7	47 46	47	819729	804624	<0.2	0.5
					Bottom	7.8	0.2	76 65	18.7 18.7	18.7	8.2	8.2	33.2	33.2	96.4	96.5	7.4	7.4	5.9	6 9		49				<0.2	0.6
					Surface	7.8 1.0	0.1	66 43	18.7 18.6	18.6	8.2 8.2	8.2	33.2 33.1	33.1	96.6 96.1	96.2	7.4 7.4		5.9 5.0	9 12		50 43				<0.2 <0.2	0.6
IM5 C			45.00		Middle	1.0 4.2	0.2	46 52	18.6 18.6		8.2 8.2		33.1 33.1		96.2 96.8		7.4	7.4	5.2 6.1	13 11	40	44 46	47	000700	004000	<0.2	0.5
IM5 C	Cloudy	Moderate	15:23	8.4		4.2 7.4	0.2	54 44	18.6 18.6	18.6	8.2 8.3	8.2	33.1 33.1	33.1	97.0 99.1	96.9	7.5		6.1 6.3 7.1	12 11	12	46 51	47	820730	804888	<0.2 <0.2 <0.2	0.5 0.5 0.4
					Bottom	7.4	0.2	45	18.6	18.6	8.3	8.3	33.1	33.1	99.2	99.2	7.6	7.6	7.1	11		52				<0.2	0.5
					Surface	1.0	0.2	39	18.6	18.6	8.2	8.2	33.1 33.1	33.1	95.3 95.4	95.4	7.3 7.3	7.4	5.2	7		42				<0.2	0.4
IM6 C	Cloudy	Moderate	15:29	7.5	Middle	3.8	0.2	40 43	18.6 18.6	18.6	8.2 8.2	8.2	33.1 33.1	33.1	96.3 96.5	96.4	7.4		5.3 5.3	4	5	48 46	47	821056	805834	<0.2 <0.2	0.5
					Bottom	6.5 6.5	0.2	45 45	18.5 18.5	18.5	8.3 8.3	8.3	33.1 33.0		98.6 98.8	98.7	7.6	7.6	5.5	4		52 50				<0.2	0.5
					Surface	1.0	0.2	29 29	18.5	18.5	8.2	8.2	32.5 32.5	32.5	95.1 95.2	95.2	7.3	ļ	2.2	7		42 41				<0.2	0.4
IM7 C	Cloudy	Moderate	15:36	8.6	Middle	4.3	0.3	31	18.5	18.5	8.2	8.2	32.7 32.7	32.7	97.3 97.5	97.4	7.5 7.5	7.4	3.1 29	7	7	48	47	821328	806825	<0.2 <0.2 <0.2	0.5
					Bottom	4.3 7.6	0.3	33 28	18.5 18.5	18.5	8.2 8.2	8.2	32.8	32.8	99.5	99.7	7.7	7.7	3.2	8	1	49				<0.2	0.5
					Surface	7.6 1.0	0.3	29 152	18.5 19.3	19.3	8.2 8.1	8.1	32.8 32.6	32.6	99.9 91.3	91.3	6.9		3.5 2.4	5		51 45				<0.2 <0.2	0.6
1840	Fine.	Madaada	42.52	7.0		1.0 3.8	0.2 0.1	155 164	19.3 19.3		8.1 8.1		32.6 32.6	32.0	91.3 90.9		6.9 6.9	6.9	2.4	6		46 48	40	004000	000440	<0.2 <0.2	1.0 0.8
IM8	Fine	Moderate	13:53	7.6	Middle	3.8 6.6	0.1	164	19.3	19.3	8.1	8.1	32.6 32.6	32.0	90.8	90.9	6.9		2.5 2.5 4.0	7	6	48	49	821839	808116	<0.2 <0.2 <0.2	0.8 0.9 0.7
DA: Depth-Averaged					Bottom	6.6	0.0	242	19.2	19.2	8.1	8.1	32.6		90.4	90.4	6.9	6.9	4.1	6		53				<0.2	0.8

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

Water Quality Monitoring Water Quality Monitoring Results on 13 January 22 during Mid-Flood Tide Total Alkalinity Coordinate Coordinate Current DO Saturation Dissolved Suspended Solids Weather Sampling Water Water Temperature (°C) Salinity (ppt) Turbidity(NTU) Nickel (µg/L) Monitoring Oxygen (mg/L) (µg/L) Current Sampling Depth (m) HK Grid HK Grid Value DA Value DA Condition Condition Time Depth (m) (m/s) Value Average Value Average Value Average Value Average Value DA Value DA Value DA Value DA (Northing) (Easting) 1.0 0.1 112 19.2 32.6 90.9 6.9 2.3 < 0.2 0.8 Surface 8.1 32.6 1.0 0.1 112 19.2 8.1 32.6 90.9 6.9 2.3 8 46 <0.2 0.9 6.9 3.7 0.0 121 19.2 8.1 32.6 90.6 6.9 2.6 7 49 49 <0.2 0.7 IM9 Fine Moderate 13:58 7.4 Middle 19.2 8.1 32.6 90.6 822090 808795 < 0.2 3.7 122 6 0.0 19.2 8.1 32.6 90.6 6.9 2.6 6.4 0.0 330 19.1 8.1 32.6 90.6 6.9 2.3 6 52 <0.2 0.8 19.1 8.1 32.6 90.7 6.9 Bottom 6.4 0.0 355 19.1 0.9 1.0 19.3 0.2 6.9 3.8 46 Surface 19.3 8.1 8.1 32.6 90.7 1.0 0.2 292 19.3 32.6 90.7 6.9 3.9 9 46 <0.2 0.8 6.9 3.8 0.2 306 19.2 2.1 6 47 0.7 IM10 14:06 7.5 Middle 90.4 822403 809781 Fine Rough 8.1 <0.2 3.8 0.2 308 19.2 8.1 32.6 90.3 6.9 2.0 48 <0.2 6.5 0.2 300 19.2 8.1 32.6 89.9 6.9 2.6 6 52 <0.2 0.8 Bottom 19.2 8.1 32.6 89.9 6.9 6.5 0.2 306 19.2 8.1 32.6 89.9 6.9 26 52 < 0.2 0.8 1.0 0.3 267 19.5 8.1 32.8 6.6 1.7 41 < 0.2 0.8 87.7 Surface 19.5 8.1 32.8 1.8 19.5 8.1 32.8 87.7 6.6 6 41 0.8 1.0 0.4 268 <0.2 1.9 0.7 4.0 0.3 266 19.5 8.1 32.8 87.4 6.6 6 46 <0.2 8.1 87.4 14:17 19.5 32.8 822066 811469 IM11 Fine Rough 79 Middle 46 <0.2 46 <0.2 8.1 32.8 87.3 1.9 0.9 4.0 0.3 271 19.5 6.6 5 49 0.7 6.9 0.3 268 19.5 8.1 32.8 32.8 87.0 87.0 6.6 2.0 5 5 <0.2 Bottom 19.5 8.1 6.9 0.3 288 19.5 8.1 32.8 87.0 6.6 2.1 50 0.8 1.0 0.4 243 19.6 8.1 32.8 6.6 2.1 45 0.8 Surface 19.6 8.1 32.8 86.8 1.0 0.4 249 19.6 8.1 32.8 86.8 6.6 2.1 46 <0.2 0.8 <0.2 <0.2 <0.2 44 0.3 243 19.5 86.4 6.5 2.4 49 0.7 IM12 Fine Rough 14:24 8.8 Middle 8.1 32.8 86.4 821437 812028 44 0.3 251 19.5 8 1 32.8 86.4 6.5 2.5 6 49 0.8 7.8 251 0.2 19.5 8.1 32.8 86.0 6.5 3.9 5 53 0.7 Bottom 19.5 8.1 32.8 86.0 6.5 7.8 0.2 262 32.8 86 N 3.9 <0.2 0.8 19.5 8.1 6.5 4 53 19.4 2.5 8.1 324 86.9 6.6 Surface 19.4 8.1 32.4 86.9 1.0 2.5 7 19.4 8.1 32.4 86.9 6.6 6.6 2.5 . SR1A 14:53 4.9 Middle 819981 812659 Fine Moderate 2.5 3.9 19.4 3.1 5 Bottom 19.4 8.1 32.5 86.7 6.6 3.9 19.4 8.1 32.5 86.7 6.6 3.1 1.0 0.2 324 19.6 2.6 4 41 <0.2 0.8 Surface 8.1 1.0 0.2 324 19.6 8.1 32.9 86.5 6.5 2.6 3 41 <0.2 0.8 SR2 Fine Rough 15:08 5.1 Middle 821473 814170 <n : 0.8 0.2 2.7 48 0.9 4.1 326 86.9 6.6 3 <0.2 19.6 8.1 33.0 86.8 6.6 Bottom 196 8.1 33.0 4.1 19.6 8.1 86.9 49 < 0.2 0.7 0.2 357 2.8 305 19.4 32.6 1.4 19.4 8.1 32.6 91.1 Surface 1.0 0.1 322 19.4 32.6 91.1 6.9 1.4 3.8 0.1 267 19.4 1.9 --SR3 13:48 7.5 Middle 8.1 90.8 822145 807559 Fine Moderate 19.4 32.6 90.7 3.8 0.1 288 19.4 8.1 32.6 6.9 1.9 6 6.5 0.1 354 19.3 32.8 90.6 3.7 6 Bottom 19.3 8.1 32.8 90.6 6.9 6.5 0.1 326 19.3 8.1 32.8 90.6 6.9 3.7 5 1.0 0.1 299 18.4 8.2 32.9 94.3 7.3 3.7 Surface 8.2 32.9 94.4 1.0 0.1 311 18.4 8.2 32.9 94 4 7.3 3.7 6 4.6 0.1 286 18.4 8.2 33.0 94.5 7.3 4.2 6 14:16 8.2 817188 807794 SR4A Cloudy Moderate 9.2 Middle 18.4 33.0 94.5 4.6 0.1 311 18.4 8.2 33.0 94.5 7.3 4.2 7 8.2 279 18.4 4.9 0.1 8.2 33.0 96.3 7.4 Bottom 8.2 33.0 96.5 18 4 7.5 305 18.4 4.8 1.0 0.1 325 18.4 32.1 7.4 6.0 8.2 96.0 8 Surface 18.4 8.2 32.1 96.1 1.0 347 18.4 6.2 13:59 Middle 816574 810712 Cloudy Moderate 2.8 0.0 8 300 18.4 8.2 32.1 96.9 7.5 3.4 Bottom 8.2 32.1 97.1 7.5 2.8 0.0 325 18.4 8.2 7.5 32 8.2 8.2 1.0 0.0 333 18.7 32.1 86.0 6.6 5.9 10 Surface 18.7 8.2 32.1 85.9 85.8 18.7 32.2 6.1 1.0 0.0 349 6.6 9 6.6 --SR6A Cloudy Moderate 13:34 4.8 Middle 817946 814759 6.6 3.8 0.0 326 18.7 9.8 Bottom 18.7 8.2 32.3 85.3 3.8 0.0 345 18.7 8.2 32.3 85.4 6.6 1.0 0.2 120 19.7 6.5 1.2 6 Surface 8.2 33.3 86.4 1.0 0.2 121 19.7 8.2 33.3 86.4 6.5 1.2 6 6.5 8.8 0.2 106 19.7 8.2 33.3 86.1 6.5 1.7 5 SR7 Fine Rough 16:04 17.6 Middle 19.7 8.2 33.3 86.1 823615 823739 107 8.8 0.2 19.7 8.2 33.3 86.1 6.5 16 6 1.6 1.5 16.6 0.2 111 19.7 8.1 33.3 86.1 6.5 5 Bottom 19.7 8.1 33.3 86.1 6.5 16.6 0.2 19.7 8.1 33.3 6.5 113 1.0 19.7 8.1 32.7 89.9 6.8 3.2 5 19.7 8.1 Surface 32.7 89.9 19.7 8.1 32.7 89.8 6.8 3.2 5 1.0 --811621 14:32 5.4 820405 SR8 Fine Moderate Middle 32.8 88.3 88.3 6.7 6.7 3.3 6.7 3.3 4.4 19.5 8.1 32.8 32.8

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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 44

Water Quality Monitoring Results on 15 January 22 during Mid-Ebb Tide Total Alkalinity Coordinate Coordinate Current Speed DO Saturation Dissolved Suspended Solids Weather Sampling Water Water Temperature (°C) Salinity (ppt) Turbidity(NTU) Nickel (µg/L) Monitoring Oxygen (mg/L) (µg/L) Current Sampling Depth (m) HK Grid HK Grid Value DA Value DA Condition Time Depth (m) (m/s) Value Average Value Average Value Average Value Average Value DA Value DA Value DA Value DA (Northing) (Easting) Condition 1.0 0.1 55 19.7 33.7 95.4 6.1 < 0.2 0.8 Surface 33.7 1.0 0.1 57 19.7 8.2 33.7 95.2 7 1 6.2 6 47 <0.2 0.8 4.1 0.2 78 19.6 8.2 33.8 94.4 7.1 8.1 7 53 51 <0.2 0.5 C1 Cloudy Moderate 11:22 8.2 Middle 19.6 8.2 33.8 94.4 815601 804244 < 0.2 79 6 4.1 0.2 19.6 8.2 33.8 94.4 7.1 8.3 0.1 69 19.6 8.2 33.8 94.6 7.1 10.1 7 54 <0.2 0.5 19.6 8.2 33.8 94.6 Bottom 0.1 19.6 10.6 54 1.0 312 18.3 0.3 4.2 45 Surface 18.3 8.2 8.2 32.2 91.9 1.0 0.3 325 18.3 32.2 4.3 45 0.8 4.9 0.1 18.2 7.1 5.3 5 5 48 0.8 10:25 9.8 Middle 8.2 91.8 825678 806967 C2 Fine Rough 4.9 0.1 99 18.2 8.2 32.2 91.8 7 1 5.3 49 <0.2 0.9 8.8 0.2 145 18.2 8.2 32.2 92.2 7.2 7.2 6 51 <0.2 0.9 Bottom 18.2 8.2 32.2 92.3 7.2 8.8 0.2 149 18.2 32.2 92.3 7.2 7.3 52 < 0.2 0.7 1.0 0.1 132 18.9 8.2 33.0 88.4 6.8 1.1 4 44 < 0.2 0.9 Surface 18.9 8.2 33.0 88.4 1.0 18.9 8.2 33.0 88.3 6.8 4 45 0.8 1.0 0.1 143 <0.2 1.5 48 5.8 0.2 136 18.7 8.2 33.0 87.1 6.7 5 <0.2 0.7 8.2 87.1 18.7 33.0 822106 817818 C3 Fine Rough 12:18 11.5 Middle 49 <0.2 48 <0.2 8.2 33.0 87.1 1.6 0.9 5.8 0.2 140 18.7 5 53 10.5 0.2 129 18.7 8.2 33.0 87.2 6.7 2.1 5 5 <0.2 0.8 Bottom 18.7 8.2 33.0 87.3 6.7 10.5 0.2 130 18.7 8.2 33.0 87.3 6.7 2.1 53 1.0 0.0 320 19.1 8.2 33.7 7.2 5.4 10 48 0.5 Surface 19.1 8.2 33.7 95.1 1.0 0.0 342 19.1 8.2 33.7 95.1 7.2 10 51 <0.2 0.5 Cloudy IM1 Moderate 11:04 4.9 Middle 817928 807125 3.9 19.2 0.0 313 8.2 33.6 96.3 7.3 6.6 8 54 <0.2 0.5 8.2 Bottom 19.2 33.6 96.5 7.3 8.2 3.9 320 6.5 0.0 19.2 33 6 0.5 8.2 8.2 1.0 0.1 359 19.4 33.8 95.0 95.0 6.4 10 44 < 0.2 0.5 Surface 19.4 8.2 33.8 95.0 330 19.4 33.8 6.4 9 47 <0.2 0.6 1.0 0.1 3.3 0.1 19.4 7.2 7.8 9 47 <0.2 0.5 8.2 33.8 94.9 10:57 Middle 8.2 94.9 818147 806174 IM2 Cloudy Moderate 6.6 19.4 33.8 < 0.2 3.3 19.3 94.8 7.2 7.5 9 48 <0.2 0.4 0.1 5.6 0.1 19.3 14.8 49 <0.2 0.5 95.5 95.8 Bottom 19.3 8.2 33.8 95.7 7.2 8.2 33.8 5.6 0.1 1/ 19.3 7.2 15.2 51 <0.2 0.6 1.0 0.1 303 19.2 33.7 33.7 94.8 7.4 43 <0.2 Surface 8.2 33.7 94.8 1.0 0.1 328 19.2 8.2 94.8 72 7.6 11 43 0.5 8.9 9.2 45 45 <0.2 0.6 3.6 0.1 347 19.2 8.2 33.7 94.7 7.2 IM3 Cloudy Moderate 10:51 7.2 Middle 19.2 8.2 33.7 94.8 818799 805571 <0.2 0.5 94.8 11 3.6 0.1 319 19.2 35 10.8 10 6.2 0.1 19.1 7.2 49 <0.2 0.4 8.2 33.7 95.7 95.8 Bottom 19.1 8.2 33.7 7.3 6.2 19.1 8.2 33.7 95.9 10.9 10 50 0.5 0.1 <0.2 0.2 19.3 8.7 11 44 0.4 Surface 19.3 8.2 33.8 95.3 1.0 0.2 339 19.3 8.2 33.8 95.2 7.2 9.0 11 43 <0.2 0.5 4.3 0.2 19.2 8.2 33.8 7.2 10.7 10 47 <0.2 0.6 10:41 Middle 8.2 95.6 819728 804590 Cloudy Moderate 8.6 33.8 4.3 0.2 19.2 8.2 33.8 95.7 72 11.0 10 46 <0.2 0.5 7.6 0.1 19.1 11.6 10 50 0.5 Bottom 19.1 8.2 33.8 97.0 7.6 0.1 19 1 8.2 33.8 97 1 7.4 11.7 10 51 <0.2 0.5 1.0 0.2 19.1 8.2 33.6 93.7 7.1 7.0 10 43 < 0.2 0.4 Surface 19.1 8.2 33.6 93.7 1.0 0.2 15 19.1 8.2 33.6 93.7 7.1 7.0 10 44 < 0.2 0.4

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33.4

33.4

32.2

32.3

32.3

32.8

33.6

33.6

33.1

33.4

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33.3

33.4

32.2

32.3

32.8

93.9

94.0

96.1

93.0

93.2

93.3

94 1

92.1

92.2

92.6

92.6

91.7

91.7

91.0

91.0

94.0

96.3

93.0

93.3

94.2

92.2

92.6

92.6

91.7

91.0

91.1

7.1

7.1

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7.1

7.1

7 1

7.2

7.0

7.0

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7.1

7.1

7.1

7 1

7.0

7.1

7.2

7.3

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7.7

7.7

4.7

4.8

5.8

6.0

6.5

3.9

4.0

6.3

6.5

7.2

7.4

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3.1

3.7

3.7

5.0

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47

52

52

43

43

48 47

52

51

42

42

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50

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46

48

48

52

820745

821036

821341

821825

<0.2

<0.2

<0.2

<0.2

< 0.2

<0.2

<0.2

<0.2

<0.2

<0.2

<0.2

<0.2

<0.2

<0.2

<0.2

< 0.2

804875

805845

806822

808151

0.5

0.4

0.5

0.5

0.5

0.4

0.4

0.4

0.5

0.4

0.5

0.6

0.7 <0.2

0.7

0.6

0.7

< 0.2

DA: Depth-Averaged

Cloudy

Cloudy

Cloudy

Fine

IM5

IM7

IM8

Moderate

Moderate

Moderate

Rough

10:32

10:25

10:20

10:48

7.4

7.2

8.5

8.1

Middle

Bottom

Surface

Middle

Bottom

Surface

Middle

Bottom

Surface

Middle

Bottom

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 3.7

3.7

6.4

6.4

1.0

3.6

3.6

6.2

6.2

1.0

1.0

4.3

4.3

7.5

1.0

1.0

4.1

41

0.2

0.2

0.2

0.0

0.0

0.1

0.1

0.1

0.1

0.1

0.1

0.1

0.1

0.2

0.2

0.1

0.2

0.2

0.2

31

31

205

208

140

90

96

259

262

164

134

134

94

104

113

121

119

151

137

19.1

19.1

19.0

19.0

19.0

19.0

19.0

19.0

19.0

19.0

19.1

19.0

18.9

18.9

18.9

18.4

18.4

18.3

18.3

18.3

Water Quality Monitoring Results on 15 January 22 during Mid-Ebb Tide Total Alkalinity Coordinate Coordinate Current Speed DO Saturation Dissolved Suspended Solids Weather Sampling Water Water Temperature (°C) Salinity (ppt) Turbidity(NTU) Nickel (µg/L) Monitoring Oxygen (mg/L) (µg/L) Current Sampling Depth (m) HK Grid HK Grid Value DA Value DA Condition Condition Time Depth (m) (m/s) Value Average Value Average Value Average Value Average Value DA Value DA Value DA Value DA (Northing) (Easting) 18.4 1.0 0.3 94 32.4 3.0 <0.2 0.7 Surface 8.2 32.4 1.0 0.3 101 18.4 8.2 32.4 91 1 7 1 3.1 6 42 <0.2 0.8 4.0 0.2 98 18.3 8.2 32.6 90.9 7.0 3.2 5 48 48 <0.2 0.7 IM9 Fine Rough 10:54 7.9 Middle 18.3 8.2 32.6 90.9 822100 808806 < 0.2 0.7 104 5 4.0 0.2 18.3 8.2 32.6 90.9 7.0 6.9 0.2 95 18.2 8.2 32.8 91.2 7.1 4.6 5 51 <0.2 0.7 18.3 8.2 32.8 91.3 Bottom 6.9 0.2 103 18.3 18.4 1.0 0.1 2.4 44 0.6 Surface 18.4 8.2 8.2 32.6 92.5 1.0 46 18.4 32.6 92.5 7.2 2.4 45 0.6 4.1 0.2 18.3 2.6 49 0.6 11:01 8.2 Middle 8.2 91.7 822405 809797 0.7 Fine Rough <0.2 41 0.2 53 18.3 8.2 32.7 91.7 7 1 2.6 6 50 <0.2 7.2 0.2 89 18.3 8.2 32.7 90.9 7.0 4.0 6 51 <0.2 0.7 Bottom 18.3 8.2 32.7 91.0 7.0 72 0.2 94 18.3 32.7 91.0 7.0 4.1 52 < 0.2 0.7 1.0 0.1 188 18.5 8.2 32.8 88.7 6.8 3.7 43 < 0.2 0.7 Surface 18.5 8.2 32.8 88.7 18.5 8.2 32.8 88.7 6.8 3.7 6 44 0.7 1.0 0.1 193 <0.2 3.8 48 4.2 0.1 202 18.5 8.2 32.8 89.4 6.9 6 <0.2 0.8 8.2 89.4 11:11 18.5 32.8 822062 811436 IM11 Fine Rough 8.4 Middle 48 < 0.2 49 <0.2 8.2 32.8 89.4 3.8 0.7 4.2 0.1 214 18.5 6.9 6 51 0.7 7.4 0.1 18.5 8.2 32.8 90.0 90.1 6.9 6.9 5.1 6 <0.2 Bottom 18.5 8.2 32.8 7.4 0.1 202 18.5 8.2 32.8 6.9 5.1 51 1.0 0.2 202 18.6 8.2 32.9 6.8 3.1 41 Surface 18.6 8.2 32.9 88.5 1.0 0.2 207 18.6 8.2 32.9 88.5 6.8 3.2 6 42 <0.2 0.7 <0.2 <0.2 <0.2 4.5 0.1 199 18.6 88.3 6.8 3.5 6 46 0.7 IM12 Fine Rough 11:17 9.0 Middle 8.2 32.9 88.3 821457 812022 4.5 0.1 206 18.6 8.2 32.9 88.3 6.8 3.5 5 46 0.7 167 18.6 8.0 0.1 8.2 32.9 88.5 6.8 3.6 5 49 0.7 Bottom 18.6 8.2 32.9 88.5 6.8 169 8.2 32.9 88.5 3.7 <0.2 0.7 8.0 0.1 18.6 6.8 5 50 18.3 3.2 8.2 89 4 Surface 18.3 8.2 32.5 89.4 1.0 8.2 3.2 18.3 32.5 89.4 6.9 4 6.9 2.4 . 11:44 4.7 Middle 819974 812658 SR1A Fine Moderate 2.4 3.7 18.3 3.6 5 Bottom 18.3 8.2 32.6 89.6 6.9 3.7 18.3 8.2 32.6 89.6 6.9 3.6 1.0 0.2 18.8 45 <0.2 0.6 Surface 8.2 1.0 0.2 101 18.8 8.2 32.9 89.2 6.8 2.7 6 45 <0.2 0.7 SR2 Fine Rough 11:58 4.9 Middle 821467 814165 <n : 0.7 3.6 3.7 48 0.7 3.9 0.1 89 18.7 5 <0.2 8.2 8.2 32.9 89.4 89.5 6.9 6.9 Bottom 18.7 32.9 18.7 8.2 32.9 89.5 6.9 0.6 3.9 0.1 48 <0.2 126 18.4 3.2 18.4 8.2 91.8 Surface 32.3 1.0 0.1 129 18.4 91.8 7.1 3.2 4 4.2 0.0 157 18.3 3.5 --SR3 Rough 10:43 8.3 Middle 8.2 92.3 822125 807563 Fine 18.3 32.4 4.2 0.0 164 18.3 8.2 32.4 92.3 7.2 3.5 5 7.3 0.2 118 18.2 33.1 7.2 7.4 6 Bottom 18.2 8.2 33.1 93.6 7.2 7.3 0.2 128 18.2 8.2 33.1 93.6 7.2 7.4 6 1.0 0.3 68 19.4 8.2 33.8 94.9 7.2 5.1 6 Surface 8.2 33.8 94.9 5.2 6.3 1.0 0.3 73 19.3 8.2 33.8 94.8 7.2 6 4.7 0.3 69 19.3 8.2 33.7 94.8 7.2 6 11:42 8.2 807829 SR4A Cloudy Moderate 9.4 Middle 19.3 33.7 94.8 817211 4.7 0.3 70 19.3 8.2 33.7 94.8 7.2 6.3 7 8.4 19.3 6.6 8 0.2 69 8.2 33.7 95.1 7.2 Bottom 19.3 8.2 33.7 95.1 72 8.4 0.3 73 19.3 1.0 0.1 18.9 5.6 8.1 32.9 94.2 7.2 Surface 18.9 8.1 32.9 94.3 1.0 18.9 5.7 11:57 Middle 816601 810711 Cloudy Moderate 2.8 7 0.1 18.9 8 1 32.9 94.7 7.2 6.3 Bottom 8.1 32.9 94.8 7.2 2.8 18.9 8 1 72 6.5 1.0 0.0 48 19.4 8.1 32.9 91.3 6.9 5.3 6 Surface 19.4 8.1 32.9 91.3 91.3 8.1 32.9 5.3 1.0 0.0 50 19.4 6.9 6 6.9 --SR6A Cloudy Moderate 12:38 4.7 Middle 817948 814756 3.7 0.0 19.4 6.3 Bottom 19.4 8.1 32.9 92.3 7.0 3.7 0.0 19.4 8.1 32.9 92.3 7.0 6.3 1.0 0.0 325 18.7 8.2 6.7 1.9 6 Surface 8.2 33.0 87.5 1.0 0.0 339 18.7 8.2 33.0 87.5 6.7 1.9 6 6.9 0.0 79 18.7 8.2 33.0 87.3 6.7 2.7 4 SR7 Fine Rough 12:47 13.8 Middle 18.7 8.2 33.0 87.3 823643 823765 27 6.9 0.0 80 18.7 8.2 33.0 87.3 6.7 5 12.8 0.0 290 18.7 8.2 33.0 87.6 6.7 2.4 4 Bottom 18.7 8.2 33.0 87.7 6.7 12.8 18.7 8.2 33.0 6.7 0.0 314 2.4 4 1.0 18.7 8.2 32.7 93.1 3.0 5 8.2 Surface 18.8 32.7 93.1 18.8 8.2 32.7 7.2 3.0 5 1.0 93.1 -811637 11:24 5.1 820368 SR8 Fine Moderate Middle 92.6 7.1 7.1 5.2 4.1 18.5 8.2 32.7 92.5 6 8.2 4.1 18.5

DA: Depth-Averaged

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

Value exceeding Action Level is underlined; Value exceeding Limit Level is bolded and underlined

Water Quality Monitoring Results on 15 January 22 during Mid-Flood Tide Total Alkalinity Coordinate Coordinate Current Speed DO Saturation Dissolved Suspended Solids Weather Sampling Water Water Temperature (°C) Salinity (ppt) Turbidity(NTU) Nickel (µg/L) Monitoring Oxygen (mg/L) (µg/L) Current Sampling Depth (m) HK Grid HK Grid Value DA Value DA Condition Time Depth (m) (m/s) Average Value Average Value Average Value Average Value DA Value DA Value DA Value DA (Northing) (Easting) Condition Value 0.3 1.0 20 19.6 33.9 94.6 14.8 <0.2 0.5 Surface 8.2 33.9 1.0 0.3 21 19.6 8.2 33.9 94.6 7 1 14.8 11 48 <0.2 0.5 3.6 0.3 21 19.6 8.2 33.9 94.6 7.1 14.8 13 52 51 <0.2 0.5 C1 Cloudy Moderate 07:16 7.2 Middle 19.6 8.2 33.9 94.6 13 52 815603 804236 < 0.2 0.5 12 3.6 0.3 21 19.6 8.2 33.9 94.6 7.1 14.6 6.2 0.3 28 19.5 8.2 33.9 94.9 7.1 15.7 15 57 <0.2 0.5 19.5 8.2 33.9 Bottom 95.0 6.2 0.3 19.5 15.7 16 56 18.4 1.0 0.2 6.9 2.5 43 0.8 Surface 18.4 8.2 8.2 32.2 89.3 1.0 0.2 322 18.4 8.2 32.2 89.3 6.9 2.5 6 43 0.6 4.8 0.2 345 18.4 3.4 5 47 0.7 08:33 9.6 Middle 8.2 89.2 825669 806968 0.7 C2 Fine Rough <0.2 4.8 0.2 317 18.4 8.2 32.2 89.2 6.9 3.4 47 <0.2 8.6 0.2 336 18.4 8.2 32.2 89.4 6.9 3.2 5 52 <0.2 0.6 Bottom 18.4 8.2 32.2 89.4 6.9 8.6 0.2 354 18.4 32.2 89.4 6.9 3.2 52 < 0.2 0.7 1.0 0.3 281 18.7 8.2 32.9 86.7 6.7 2.6 42 < 0.2 0.7 Surface 18.7 8.2 32.9 86.7 18.7 8.2 32.9 86.7 6.7 2.6 43 0.8 1.0 0.3 282 5 <0.2 49 5.2 0.4 271 18.7 8.2 32.9 86.8 6.7 5 <0.2 0.7 8.2 86.8 18.7 32 9 822099 817784 C3 Fine Rough 06:44 10.3 Middle 48 <0.2 49 8.2 32.9 86.8 <0.2 0.7 5.2 0.4 287 18.7 2.6 5 277 87.4 6.7 2.7 52 9.3 0.4 18.7 8.2 32.9 87.3 5 <0.2 0.8 Bottom 18.7 8.2 32.9 6.7 9.3 0.4 277 18.7 8.2 32.9 87 4 6.7 2.8 53 1.0 0.1 19.1 8.2 33.7 7.2 5.6 51 0.5 Surface 19.1 8.2 33.7 94.5 1.0 0.1 19.1 8.2 33.7 94.6 7.2 5.7 8 49 <0.2 0.4 IM1 Cloudy Moderate 07:35 5.0 Middle 52 817950 807111 4.0 19.1 5.9 13 <0.2 0.1 18 8.2 33.7 95.8 7.3 53 0.4 Bottom 19.1 8.2 33.7 95.9 7.3 19.1 8.2 33.7 96 N 7.3 6.0 <0.2 4 0 0.1 19 14 55 0.4 19.0 341 8.2 46 0.4 Surface 19.0 8.2 33.7 93.6 0.2 314 19.0 8.2 7.1 11.3 12 51 1.0 93.6 <0.2 0.5 17.5 15 3.3 0.1 348 19.0 8.2 33.7 93.6 7.1 52 <0.2 0.4 07:45 8.2 33.7 93.6 818182 806169 IM2 Cloudy Moderate 6.5 Middle 19.0 52 < 0.2 3.3 320 7.1 19.6 15 53 <0.2 0.1 19.0 0.4 5.5 0.1 342 19.0 14.7 15 55 <0.2 0.4 Bottom 19.0 8.2 33.6 94.1 5.5 0.2 315 19.0 8.2 33.6 94.1 72 15.8 15 54 <0.2 0.5 1.0 0.2 315 18.9 11.3 45 0.4 Surface 8.2 33.6 1.0 0.2 340 18.9 8.2 33.6 03.6 7 1 11.3 14 45 <0.2 0.5 8.2 12.3 12.2 12 12 48 48 <0.2 0.5 3.4 0.2 318 18.9 33.6 93.9 7.1 IM3 Cloudy Moderate 07:52 6.8 Middle 18.9 8.2 33.6 94.0 13 818777 805574 <0.2 0.5 0.2 18.9 33 6 94 0 72 3.4 320 12.8 13.0 11 5.8 0.2 316 8.2 8.2 7.2 7.2 53 < 0.2 0.5 18.9 33.6 94.5 Bottom 18.9 8.2 33.6 94.5 72 5.8 18.9 11 51 0.2 342 33.6 <0.2 0.4 0.3 332 18.9 33.7 14.5 16 47 0.4 8.2 94.1 8.2 94.1 Surface 18.9 33.7 1.0 0.3 305 18.9 33.7 7.2 14.7 17 45 <0.2 0.4 <0.2 4.0 0.3 334 18.9 15.2 17 48 0.4 08:00 Middle 8.2 33.7 94.2 819730 804628 IM4 Cloudy Moderate 8.0 18.9 <0.2 94.2 4.0 0.3 356 18.9 8.2 33.7 7.2 15.3 17 50 0.4 15.6 15.6 7.0 0.3 337 18.9 33.7 94.7 7.2 17 51 <0.2 0.4 Bottom 18.9 8.2 33.7 94.8 7.2 7.0 0.3 310 18.9 8.2 33.7 94.9 7.2 17 52 <0.2 0.4 1.0 0.4 344 18.9 8.2 33.4 92.7 7.1 8.2 21 49 <0.2 0.3 Surface 8.2 33.4 92.7 8.2 9.3 20 19 1.0 0.4 316 18.9 8.2 33.4 92.7 7.1 50 <0.2 0.5 0.4 4.1 0.3 351 18.9 8.2 33.4 92.5 7.0 51 <0.2 8.2 820750 804861 IM5 Cloudy Moderate 08:08 8.1 Middle 18.9 33.4 92.5 <0.3 51 19 4.1 0.4 357 18.9 8.2 33.4 92.5 7.0 9.4 <0.2 0.4 7.1 0.4 354 18.9 9.9 16 56 <0.2 0.4 8.2 33.4 92.9 7.1 Bottom 18.9 8.2 33.4 93.0 326 18.9 16 57

8.2

8.2

8.1

8 1

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8.2

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8.2

18.9

19.0

18.9

18.9

18.3

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33.1

33.3

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32.8

32.8

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32.5

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32.5

32.5

32.8

92.4

92.8

93.5

92.0 92.0

92.8

89.9

90.0

89.9

89.9

90.3

33.1

33.4

32.8

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32.5

32.8

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13.7

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5.2

10.7

11.3

14.3

15.3

4.2

4.3

5.3

5.3

6.9

7.1

7.1

7 1

7.1

7.1

7.0

7.1

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7.0

7.0

7.0

7.0

7.0

7.0

92.4

92.8

93.6

92.0

92.8

93.2

90.0

89.9

90.4

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9

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49

50

52 52

56

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52 51

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44

48

49

54 54 52

12

821080

821330

821824

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< 0.2

<0.2

805845

806853

808147

0.5

0.6

0.5

0.4

0.4

0.4

0.4

0.4

0.4

0.6

0.7

0.6

0.7

0.6

0.7

0.7

DA: Depth-Averaged

IM7

IM8

Cloudy

Cloudy

Fine

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

08:16

08:25

08:10

7.6

7.9

7.3

Moderate

Moderate

Rough

1.0

3.8

3.8

6.6

6.6

1.0

1.0

4.0

6.9

6.9

1.0

1.0

3.7

3.7

6.3

Surface

Middle

Bottom

Surface

Middle

Bottom

Surface

Middle

Bottom

0.1

0.1

0.1

0.1

0.1

0.1

0.1

0.1

0.1

0.1

0.2

0.1

0.1

0.1

0.1

0.1

317

344

83

282

285

176

114

119

41

43

111

114

100

105

87

18.9

18.9

18.9

18.9

18.9

18.9

19.0

18.9

18.9

18.9

18.9

18.3

18.3

18.3

18.3

18.2

18.2

Water Quality Monitoring Results on 15 January 22 during Mid-Flood Tide Total Alkalinity Coordinate Coordinate Current DO Saturation Dissolved Suspended Solids Weather Sampling Water Water Temperature (°C) Salinity (ppt) Turbidity(NTU) Nickel (µg/L) Monitoring Oxygen (mg/L) (µg/L) Current Sampling Depth (m) HK Grid HK Grid Value DA Value DA Condition Condition Time Depth (m) (m/s) Value Average Value Average Value Average Value Average Value DA Value DA Value DA Value DA (Northing) (Easting) 0.0 18.2 1.0 160 32.8 90.1 7.0 43 < 0.2 0.8 Surface 8.2 32.8 1.0 0.0 163 18.2 8.2 32.8 90.1 7.0 4.3 12 41 <0.2 0.6 3.4 0.0 39 18.2 8.2 32.8 90.1 7.0 4.4 10 48 48 <0.2 0.7 IM9 Fine Rough 08:04 6.7 Middle 18.2 8.2 32.8 90.1 10 47 822072 808803 < 0.2 10 3.4 0.0 41 18.2 8.2 32.8 90.1 7.0 4.4 5.7 0.0 183 18.2 8.2 32.8 90.5 7.0 4.0 53 <0.2 0.8 18.2 8.2 32.8 90.6 7.0 Bottom 0.0 185 18.2 4.0 0.6 18.2 1.0 0.4 6.9 3.8 43 0.8 Surface 18.2 8.2 8.2 32 7 89.4 1.0 0.4 325 18.2 32.7 89.4 6.9 3.9 8 44 <0.2 0.7 3.8 0.5 288 18.2 3.7 8 49 0.6 IM10 07:58 7.5 Middle 8.2 89.3 822399 809810 <0.2 Fine Rough 3.8 0.5 297 18.2 8.2 32.7 89.3 6.9 3.7 8 48 <0.2 6.5 0.4 293 18.2 8.2 32.7 89.4 6.9 4.0 6 52 <0.2 0.7 Bottom 18.2 8.2 32.7 89.4 6.9 6.5 0.5 300 18.2 32.7 89.4 6.9 4.0 53 < 0.2 0.8 7.2 7.2 8.5 1.0 0.3 267 18.5 8.2 32.8 6.8 10 41 < 0.2 0.7 87.5 Surface 18.5 8.2 32.8 18.5 8.2 32.8 87.5 6.8 41 0.6 1.0 0.3 293 8 <0.2 48 3.9 0.2 302 18.5 8.2 32.8 87.4 6.7 8 <0.2 0.8 8.2 87.4 811474 07:49 18.5 32.8 822075 IM11 Fine Moderate 7.8 Middle < 0.2 8.2 49 <0.2 32.8 87.4 8.5 0.8 3.9 0.2 316 18.5 8 32.8 87.5 8 51 0.7 6.8 0.3 283 18.5 8.2 32.8 87.6 6.8 6.8 9.5 <0.2 Bottom 18.5 8.2 6.8 0.3 284 18.5 8.2 32.8 87.6 6.8 9.5 51 0.8 1.0 0.4 273 18.4 8.2 32.8 6.5 4.4 44 Surface 18.4 8.2 32.8 84.4 1.0 0.5 292 18.4 8.2 32.8 84.4 6.5 4.4 6 44 <0.2 0.6 4.2 0.4 276 18.4 6.4 4.7 8 49 <0.2 0.6 IM12 Fine Moderate 07:44 8.4 Middle 8.2 32.8 83.4 821437 812060 4.2 0.4 301 18.4 8.2 32.8 83.4 6.4 4.7 8 50 0.7 7.4 7.9 <0.2 0.4 262 18.4 8.2 32.8 81.3 6.3 8 51 0.7 Bottom 18.4 8.2 32.8 81.3 6.3 7.4 288 8.2 32.8 7.8 52 <0.2 0.6 0.4 18.4 81.2 6.3 q 18.1 2.3 8.1 86.6 Surface 18.1 8.1 32.5 86.6 1.0 18.1 2.3 8.1 32.5 86.5 6.7 8 6.7 2.5 SR1A 07:17 4.9 Middle -812656 Fine Moderate 819982 2.5 3.9 18.2 2.4 9 Bottom 18.2 8.1 32.5 86.6 6.7 3.9 18.2 8.1 32.5 86.6 6.7 2.4 9 1.0 0.1 18.4 45 <0.2 0.7 Surface 8.2 1.0 0.1 19 18.4 8.2 32.8 88.2 6.8 5.8 9 45 <0.2 0.6 SR2 Fine Rough 07:03 4.7 Middle 821462 814149 <0.2 3.7 57 7.1 11 0.7 0.1 18.4 7.0 7.0 49 <0.2 8.2 8.2 32.8 90.1 90.3 Bottom 18.4 32.8 7.0 3.7 18.4 8.2 32.8 90.4 7.1 10 0.7 0.1 58 48 <0.2 1.0 18.3 3.4 18.3 8.2 32.3 89.7 Surface 1.0 0.1 18.3 89.7 7.0 3.4 8 4.0 0.1 18.3 3.7 --SR3 Rough 08:15 7.9 Middle 8.2 89.6 822128 807578 Fine 18.3 32.3 4.0 0.1 61 18.3 8.2 32.3 89.6 6.9 3.7 6 6.9 0.0 321 18.3 32.7 4.2 6 Bottom 18.3 8.2 32.7 89.9 6.9 0.0 326 18.3 8.2 32.7 89.9 7.0 43 6 1.0 0.2 91 18.8 8.2 33.4 92.6 7.1 7.4 13 Surface 8.2 33.4 92.6 7.5 7.4 1.0 0.2 99 18.8 8.2 33.4 92.5 7.1 13 4.5 0.2 74 18.9 8.2 33.5 92.7 7.1 15 06:55 8.2 92.7 817192 807818 SR4A Cloudy Moderate 8.9 Middle 18.9 33.5 15 8.2 7.3 4.5 0.2 80 18.9 33.5 92.7 7.1 7.9 18.9 6.8 16 0.2 69 8.2 33.5 92.8 7.1 Bottom 18.9 8.2 33.5 92.8 18.8 16 1.0 0.0 16 18.6 8.0 32.8 4.3 12 91.1 7.0 Surface 18.6 8.0 32.8 91.2 1.0 0.0 18.6 4.4 12 06:36 3.7 Middle 816588 810706 Cloudy Moderate 2.7 4.8 10 0.0 18.6 8.0 32.8 92.9 7.2 Bottom 18.6 8.0 32.8 93.0 7.2 0.0 18.6 8.0 72 5.0 181 1.0 0.0 19.0 8.1 32.9 86.4 6.6 10.3 8 Surface 19.0 8.1 32.9 86.4 181 19.0 8.1 32.9 86.4 10.9 8 1.0 0.0 6.6 6.6 --SR6A Cloudy Moderate 06:10 4.7 Middle 817975 814739 3.7 0.0 188 19.1 14.9 6.6 Bottom 19.1 8.2 32.9 86.6 6.6 3.7 0.0 198 19.1 8.2 32.9 86.6 6.6 13.7 1.0 0.2 45 18.7 86.2 6.6 2.6 6 Surface 8.2 33.0 86.3 1.0 0.2 45 18.7 8.2 33.0 86.3 6.6 2.6 6 6.6 9.2 0.1 53 18.7 8.2 33.0 86.3 6.6 2.4 6 SR7 Fine Rough 06:18 18.4 Middle 18.7 8.2 33.0 86.4 823644 823729 92 0.2 56 18.7 8.2 33.0 86.4 6.6 2.5 7 17.4 0.2 30 18.7 8.2 33.0 86.5 6.6 2.3 8 Bottom 18.7 8.2 33.0 86.6 6.6 17.4 0.2 18.7 8.2 33.0 6.6 30 86.6 2.4 18.4 1.0 8.2 32.7 90.2 3.1 8.2 Surface 18.4 32.7 90.2 18.4 8.2 32.7 7.0 3.1 8 1.0 90.1 --811621 07:37 4.1 820409 SR8 Fine Calm Middle 32.7 89.8 89.9 7.0 7.0 3.4 3.1 18.2 8.2 32.7 10 8.2 3.1 18.2

DA: Depth-Averaged

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 18 January 22 during I

18 January 22 during Mid-Ebb Tide

Water Qua	lity Monit	oring Resu	ults on		18 January 22	during Mid	I-Ebb Tide	<u>e </u>																								
Monitoring	Weather	Sea	Sampling	Water	Sampling De	pth (m)	Current Speed	Current	Water Te	mperature (°C)	pН	Salin	ty (ppt)		aturation %)	Dissol Oxyg		Turbidity(NTU)	Suspende (mg.		Total Al		Coordinate HK Grid	Coordinate HK Grid	Chromium (µg/L)	Nicke	el (µg/L)			
Station	Condition	Condition	Time	Depth (m)		. , ,	(m/s)	Direction	Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA	(Northing)	(Easting)	Value DA	A Value	DA			
					Surface	1.0	0.2	42 45	19.2 19.2	19.2	8.2	8.2	31.8	31.9	95.5 95.4	95.5	7.3		6.1		12 13		47 47				<0.2	1.3				
C1	Cloudy	Moderate	12:48	8.2	Middle	4.1 4.1	0.2	42 45	19.2 19.2	19.2	8.2 8.2	8.2	32.3 32.3	32.3	95.4 95.4	95.4	7.3	7.3	6.7 6.8	9.8	12 11	12	50 51	50	815610	804236	<0.2	.2 1.1				
					Bottom	7.2	0.0	345	19.2	19.2	8.2	8.2	32.4	32.4	96.3	96.4	7.4	7.4	16.8		11		51				<0.2	1.0	Ť			
					Surface	7.2 1.0	0.0	317 332	19.2 18.7	18.7	8.2 8.2	8.2	32.4 31.7	31.7	96.5 91.6	91.6	7.4 7.1		16.2 3.4		12 10		52 44				<0.2 <0.2	1.1				
C2	Cloudy	Moderate	11:42	11.4	Middle	1.0 5.7	0.3	305 331	18.7 18.6	18.6	8.2 8.2	8.2	31.7 32.0	32.0	91.6 92.2	92.2	7.1	7.1	3.4 4.4	6.6	9 10	10	44 46	46	825693	806938	<0.2	1.0	1.0			
02	Cloudy	Woderate	11.42	11.4			Bottom		5.7 10.4	0.4	305 36	18.6 18.6		8.2 8.2		32.0 32.5		92.2 93.4		7.1 7.2		4.4 12.1	0.0	9 11	10	46 49	40	023033	000330	<0.2	1.0	
						10.4 1.0	0.3	37 100	18.6 18.7	18.6	8.2 8.2	8.2	32.5 32.6	32.5	93.5 89.4	93.5	7.2 6.9	7.2	11.9 2.3		12 11		49 44		igwdown		<0.2	0.8				
					Surface	1.0	0.4	108	18.7	18.7	8.2	8.2	32.6	32.6	89.3	89.4	6.9	6.8	2.3		12		45				<0.2	0.7	T			
C3	Cloudy	Moderate	13:39	11.6	Middle	5.8 5.8	0.3	94 96	18.7 18.7	18.7	8.2 8.2	8.2	32.8 32.8	32.8	86.8 86.8	86.8	6.7		2.0	2.8	11 11	10	47 47	47	822105	817804	<0.2	0.7	0.7			
					Bottom	10.6 10.6	0.3	81 82	18.7 18.7	18.7	8.2	8.2	32.9 32.9	32.9	86.7 86.9	86.8	6.7	6.7	3.9 3.9	-	9		49 49				<0.2	0.6				
					Surface	1.0 1.0	0.0	300 319	19.3 19.3	19.3	8.2 8.2	8.2	32.9 32.9	32.9	94.5 94.5	94.5	7.2 7.2		6.8 7.0		11 10		49 49				<0.2 <0.2	1.0				
IM1	Cloudy	Moderate	12:29	5.2	Middle	-	-	-	-	-	-	-	-		-	-	-	7.2	-	7.4		11	-	50	817952	807142	- <0.2		1.0			
					Bottom	4.2	0.1	0	19.3	19.3	8.2	8.2	33.0	33.0	95.4	95.5	7.2	7.3	7.8		11		51				<0.2	0.9				
					Surface	4.2 1.0	0.1	0 341	19.3 19.3	19.3	8.2 8.2	8.2	33.0 32.5	32.6	95.6 94.4	94.4	7.3 7.2		7.8 9.6		12 11		52 45				<0.2 <0.2	1.0 0.9				
IM2	Cloudy	Moderate	12:22	7.2	Middle	1.0 3.6	0.0	358 351	19.3 19.3	19.3	8.2 8.2	8.2	32.6 32.9	32.9	94.4 94.5	94.6	7.2	7.2	10.0 10.4	12.0	10 11	10	47 47	48	818186	806149	<0.2	0.9				
IIVIZ	IM2 Cloudy Mod	Woderate	12.22	1.2		3.6 6.2	0.0	323 356	19.3 19.3		8.2 8.2		32.9 32.8		94.7 95.6		7.2 7.3		11.4 15.3	12.0	10 10	10	48 50	40	010100	000149	<0.2	1.0				
					Bottom	6.2	0.0	328 10	19.3 19.3	19.3	8.2	8.2	32.8 32.3	32.8	95.8 94.6	95.7	7.3 7.2	7.3	15.1 7.1		9		51 44		\square		<0.2	0.8				
					Surface	1.0	0.2	10	19.3	19.3	8.2	8.2	32.4	32.4	94.5	94.6	7.2	7.2	7.3		13		43				<0.2	1.1	Ī			
IM3	Cloudy	Moderate	12:14	7.6	Middle	3.8 3.8	0.2	347 319	19.3 19.3	19.3	8.2	8.2	32.8 32.8	32.8	94.0 94.0	94.0	7.1 7.1		9.0 9.1	8.8	11 10	11	46 45	46	818806	805613	<0.2	1.1	1.1			
					Bottom	6.6 6.6	0.2	296 324	19.3 19.3	19.3	8.2	8.2	32.9 32.9	32.9	95.1 95.4	95.3	7.2	7.2	10.2 10.0	H	11 10		49 50				<0.2	1.1				
					Surface	1.0	0.4	357 357	19.3 19.3	19.3	8.2	8.2	32.5 32.5	32.5	94.7 94.7	94.7	7.2	7.0	9.6 9.8	-	12 11		44 44				<0.2	0.9				
IM4	Cloudy	Moderate	12:05	8.4	Middle	4.2 4.2	0.4	342 315	19.3 19.3	19.3	8.2 8.2	8.2	32.7 32.7	32.7	94.9 94.9	94.9	7.2 7.2	7.2	11.9 12.1	12.0	10 11	11	48 47	47	819715	804615	<0.2	.2 1.0				
					Bottom	7.4	0.3	343 345	19.3	19.3	8.2	8.2	32.8 32.8	32.8	96.5 96.6	96.6	7.3	7.3	14.3		11		50 50				<0.2	0.9	Ī			
					Surface	1.0	0.6	24	19.3	19.3	8.2	8.2	32.6	32.6	94.9	94.9	7.2		9.2		10		44				<0.2	1.0				
IM5	Cloudy	Moderate	11:57	7.8	Middle	1.0 3.9	0.6	25 21	19.3 19.3	19.3	8.2 8.2	8.2	32.6 32.7	32.7	94.8 95.0	95.0	7.2 7.2	7.2	9.3 10.3	10.1	11 17	15	45 47	48	820742	804844	<0.2	0.9	1.0			
	Cloudy	Woderate	11.07	7.0	Bottom	3.9 6.8	0.5	22	19.3 19.3	19.3	8.2 8.2	8.2	32.7 32.7	32.7	95.0 95.6	95.7	7.2	7.3	10.3		16 16	10	47 52	-10	020742	001011	<0.2	1.0				
						6.8 1.0	0.4	21 33	19.3 19.3		8.2 8.2		32.7 32.7		95.8 94.3		7.3 7.2	1.3	10.7 5.9		17 9		53 44		\vdash		<0.2 <0.2	0.9				
					Surface	1.0 3.5	0.2	34	19.3 19.3	19.3	8.2 8.2	8.2	32.7 32.8	32.7	94.4 95.0	94.4	7.2 7.2	7.2	6.0 6.4		8		43 49				<0.2	1.0	7			
IM6	Cloudy	Moderate	11:49	7.0	Middle	3.5	0.2	47	19.3	19.3	8.2	8.2	32.8	32.8	95.2	95.1	7.2		6.5	6.4	9	10	47	48	821060	805833	<0.2	1.0	1.0			
					Bottom	6.0	0.3	48 48	19.3 19.3	19.3	8.2 8.2	8.2	32.9 32.9	32.9	96.2 96.4	96.3	7.3	7.3	6.8 6.8		13 14		53 51				<0.2 <0.2	0.9 1.0				
					Surface	1.0	0.1	8	19.4 19.4	19.4	8.3 8.3	8.3	32.5 32.5	32.5	93.6 93.6	93.6	7.1	7.1	5.2 5.3	F	14 13		43 42		ı 7		<0.2	0.8				
IM7	Cloudy	Moderate	11:42	8.4	Middle	4.2 4.2	0.1	68 70	19.4 19.4	19.4	8.3 8.3	8.3	32.8 32.8	32.8	93.9 94.0	94.0	7.1 7.1	7.1	6.0	5.8	13 12	13	49 51	48	821352	806818	<0.2	0.0	1.0			
					Bottom	7.4	0.2	75 82	19.4	19.4	8.3	8.3	33.0 33.0	33.0	95.1 95.2	95.2	7.2	7.2	6.1	ļ	12		50 52				<0.2	1.2	Ī			
					Surface	1.0	0.2	48	18.6	18.6	8.2	8.2	31.8	31.8	91.8	91.8	7.1		3.3		8		44				<0.2	0.8				
IM8	Cloudy	Moderate	12:05	7.8	Middle	1.0	0.2	49 49	18.6 18.6	18.6	8.2 8.2	8.2	31.8 32.1	32.1	91.8 92.2	92.3	7.1	7.1	3.3 3.9	5.7	7	8	43 46	46	821806	808152	<0.2	0.9	0.9			
	Oloudy	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	12.00		Bottom	3.9 6.8	0.2	50 72	18.6 18.6	18.6	8.2 8.2	8.2	32.1 32.6	32.6	92.3 92.9	92.9	7.1 7.2	7.2	3.9 10.0	-	8		46 48		32.000	555.52	<0.2	0.8				
DA: Depth-Aver					Bottom	6.8	0.3	75	18.6	18.6	8.2	8.2	32.6	32.6	92.9	92.9	7.2	7.2	10.1		9		49				<0.2	0.8				

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

Water Quality Monitoring Results on 18 January 22 during Mid-Ebb Tide Total Alkalinity Coordinate Coordinate Current Speed DO Saturation Dissolved Suspended Solids Weather Sampling Water Water Temperature (°C) Salinity (ppt) Turbidity(NTU) Nickel (µg/L) Monitoring Oxygen (mg/L) (µg/L) Current Sampling Depth (m) HK Grid HK Grid Value DA Value DA Condition Condition Time Depth (m) (m/s) Average Value Average Value Average Value Average Value DA Value DA Value DA Value DA (Northing) (Easting) Value 18.6 1.0 0.4 68 31.8 91.6 43 <0.2 0.8 Surface 8.2 1.0 0.4 69 18.6 8.2 31.8 91.6 7 1 3.1 10 44 <0.2 0.9 3.8 0.4 72 18.6 8.2 31.8 91.6 7.1 3.2 10 46 46 <0.2 0.8 IM9 Cloudy Moderate 12:11 7.5 Middle 18.6 8.2 31.8 91.6 822100 808796 < 0.2 0.9 74 3.8 0.4 18.6 8.2 31.8 91.6 7.1 3.2 9 6.5 0.3 68 18.6 8.2 31.9 91.7 7.1 3.4 9 48 <0.2 0.9 18.6 8.2 31.9 Bottom 91.8 6.5 0.3 18.6 3.4 48 1.0 18.6 1.0 0.5 2.5 43 Surface 18.6 8.2 8.2 92.3 31.9 1.0 0.5 18.6 92.2 2.4 43 0.8 3.7 0.5 18.6 7.1 2.9 6 7 46 47 0.7 12:18 7.4 Middle 8.2 92.2 822382 809770 0.7 Cloudy Moderate <0.2 3.7 0.5 86 18.6 8.2 32.1 92.2 7 1 3.0 <0.2 6.4 0.3 97 18.7 8.2 32.3 92.6 3.7 7 49 <0.2 0.7 Bottom 18.7 8.2 32.3 92.7 6.4 0.3 100 18.7 32.3 92.7 7.1 3.7 6 48 < 0.2 0.6 1.0 0.1 112 18.7 8.2 32.5 7.1 3.5 14 43 < 0.2 0.7 Surface 18.7 8.2 32.5 92.0 18.7 8.2 32.5 92.0 7.1 3.5 4.0 13 44 0.6 1.0 0.1 112 <0.2 46 10 0.7 4.0 0.1 83 18.7 8.2 32.5 92.0 7.1 <0.2 8.2 92.0 12:27 18.7 32.5 822074 811472 IM11 Cloudy Moderate 8.0 Middle 10 46 <0.2 92.0 <0.2 8.2 32.5 4.1 0.8 4.0 0.1 85 18.7 9 126 92.2 7.1 48 0.1 18.7 8.2 32.5 92.1 3.8 6 <0.2 0.9 Bottom 18.7 8.2 32.5 0.1 137 18.7 8.2 32.5 92.2 7.1 3.8 48 1.0 0.2 166 18.7 8.2 32.5 92.4 3.2 43 0.8 Surface 18.7 8.2 32.5 92.4 1.0 0.2 168 18.7 8.2 32.5 92.4 7.1 3.2 6 43 <0.2 0.8 47 158 18.7 7.1 3.3 46 <0.2 0.6 IM12 Cloudy Moderate 12:33 9.3 Middle 8.2 32.5 92.0 821440 812041 47 4.7 0.2 169 18.7 8.2 32.5 92.0 7.1 3.4 6 0.6 <0.2 8.3 0.2 148 18.7 8.2 32.5 91.7 7.1 4.0 7 48 0.5 Bottom 18.7 8.2 32.5 91.8 0.2 154 8.2 32.5 41 <0.2 8.3 18.7 91.8 7 1 8 49 0.6 18.6 8.2 326 Surface 18.6 8.2 32.6 92.0 1.0 8.2 7.5 18.6 32.6 92.0 7.1 16 2.6 . 13:06 -819979 812660 SR1A Cloudy Calm 5.1 Middle 2.6 4.1 18.6 12.7 15 Bottom 18.6 8.2 32.6 92.6 4.1 18.6 8.2 32.6 92.6 7 1 12.8 16 1.0 0.2 18.7 45 <0.2 0.6 Surface 8.2 1.0 0.2 56 18.7 8.2 32.5 91.8 7.1 3.5 11 45 <0.2 0.6 SR2 Cloudy Moderate 13:20 4.9 Middle 821456 814148 <n : 0.6 0.2 10 47 0.6 3.9 42 18.7 4.1 <0.2 8.2 8.2 32.5 91.6 7.1 Bottom 18.7 32.5 91.6 18.7 8.2 32.5 4.2 0.6 3.9 0.2 48 <0.2 0.4 18.6 5.0 18.6 8.2 92.7 Surface 32.2 1.0 0.4 18.6 92.7 7.2 5.1 10 4.5 0.3 18.6 8.6 -SR3 12:00 9.0 Middle 8.2 92.9 822140 807576 Cloudy Moderate 18.6 32.5 4.5 0.4 18.6 8.2 32.5 92.9 7.2 8.6 10 8.0 0.3 64 18.6 32.5 93.3 7.2 14.3 Bottom 18.6 8.2 32.5 93.4 7.2

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32.9

32.9

32.9

32.9

32.5

32.5

32.5

93.4

96.1

96.2

96.6

96.7

98.1

96.7

98 1

94.4

94.6

96.2

85.0

85.0

85.1

85.2

85.8

93.1

93.1

93.2

32.5

32.7

32.9

33.0

33.0

33.1

33.1

32.9

32.9

32.9

32.5

7.2

7.3

7.3

7.3

7.4

7.5

7.3

7.4

7.4

7.4

7.2

7.2

7.3

6.5

6.5

6.5

6.6

6.6

7.2

93.3 7.2 7.2 3.9

6.5

7.4

7.3

6.5

6.6

96.2

96.7

98.2

96.9

98.0

94.5

96.1

85.0

85.2

85.9

93.1

14 1

6.4

6.5 7.3

7.4

8.2

7.1

7.1

7.3

7.3

8.2

8.8

14.2

14.2

2.7

2.6

3.2

3.2

46

4.6

3.5

3.5

8

9

10 11

10

11

11

10

10

11

14

14

16

15

9

8

6

6

5

8

9

-

15

817187

816616

817984

823657

820380

807817

810710

814733

823729

811605

-

-

SR4A

SR6A

SR7

SR8

Cloudy

Cloudy

Cloudy

Cloudy

Cloudy

Moderate

Moderate

Moderate

Moderate

Moderate

13:08

13:24

14:05

14:08

12:42

8.6

42

16.2

4.9

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

8.0

1.0

1.0

4.3

4.3

7.6

1.0

26

26

1.0

1.0

3.2

3.2

1.0

1.0

8.1

8 1

15.2

15.2 1.0

1.0

3.9

3.9

Surface

Middle

Bottom

Surface

Middle

Bottom

Surface

Middle

Bottom

Surface

Middle

Bottom

Surface

Middle

0.3

0.3

0.3

0.2

0.2

0.2

0.1

0.1

0.1

0.1

0.1

0.1

0.1

0.2

0.3

0.2

0.2

0.2

0.2

70

94

99

71

58

58

114

123

123

133

123

124

133

69

66

68

64

18.6

19.3

19.3

19.3

19.3

19.2

19.2

19.3

19.3

19.3

19.3

19.3

19.2

19.2

18.7

18.7

18.7

18.7

18.6

18.6

18.7

18.7

18.7

18.7

116 19.3

Value exceeding Action Level is underlined; Value exceeding Limit Level is bolded and underlined

Water Quality Monitoring Water Quality Monitoring Results on 18 January 22 during Mid-Flood Tide Total Alkalinity Coordinate Coordinate Current Speed DO Saturation Dissolved Suspended Solids Weather Sampling Water Water Temperature (°C) Salinity (ppt) Turbidity(NTU) Nickel (µg/L) Oxygen (mg/L) (µg/L) Current Sampling Depth (m) HK Grid HK Grid Value DA Value DA Condition Time Depth (m) (m/s) Value Average Value Average Value Average Value Average Value DA Value DA Value DA Value DA (Northing) (Easting) Condition 1.0 0.4 50 19.3 32.8 <0.2 0.9 Surface 1.0 0.4 54 19.3 8.2 32.8 94.4 7.2 14.1 14 46 <0.2 0.8 4.0 0.3 50 19.3 8.2 32.8 94.6 7.2 11.8 15 49 49 <0.2 0.8 1.0 C1 Cloudy Moderate 08:14 8.0 Middle 19.3 8.2 32.8 94.7 15 815605 804262 < 0.2 14 4.0 0.3 51 19.3 8.2 32.8 94.7 7.2 12.0 7.0 0.3 48 19.2 8.2 32.6 96.8 7.4 12.2 16 53 <0.2 0.8 19.2 8.2 32.6 96.9 Bottom 0.3 19.2 12.1 16 0.8 1.0 0.3 2.4 43 Surface 18.7 8.1 8.1 91.7 31.5 1.0 0.3 317 18.7 2.4 11 44 0.9 0.3 350 18.7 7.1 2.6 6 5 46 0.8 09:22 Middle 91.2 825693 806967 Cloudy Moderate 8.1 31.5 5.9 0.4 359 18.7 8.1 31.5 91.2 7 1 2.7 46 <0.2 1.0 10.8 0.4 10 18.6 8.2 31.7 91.4 12.2 5 49 <0.2 0.9 Bottom 18.6 8.2 31.7 91.5 7.1 10.8 0.4 10 18.6 31.7 91.5 12.1 48 < 0.2 0.9 257 1.0 0.4 18.7 8.2 32.4 4.4 43 < 0.2 0.8 Surface 18.7 8.2 32.4 92.2 7.1 4.4 18.7 8.2 32.4 92.2 8 43 0.9 1.0 0.4 262 <0.2 4.9 5.4 0.4 256 18.7 8.2 32.4 92.3 7.1 9 46 <0.2 0.9 8.2 92.3 07:19 18.7 32.4 822090 817807 C3 Cloudy Moderate 10.7 Middle 46 < 0.2 92.3 46 <0.2 8.2 32.4 4.9 0.7 5.4 0.4 259 18.7 8 7.2 8.9 273 10 49 0.6 0.4 18.7 8.2 32.6 93.4 7.2 <0.2 Bottom 18.7 8.2 32.6 93.5 9.7 0.4 297 18.7 8.2 32.6 93.5 7.2 8.9 49 1.0 0.3 10 19.3 8.2 33.0 8.4 14 49 0.8 Surface 19.3 8.2 33.0 95.8 1.0 0.3 10 19.3 8.2 33.1 95.8 7.3 8.5 9 47 <0.2 0.8 Cloudy IM1 Moderate 08:30 5.1 Middle 50 817959 807141 4.1 0.2 19.3 8.9 <0.2 8.2 33.1 97.4 7.4 8 51 0.9 Bottom 19.3 8.2 33.1 97.7 7.4 0.2 19.2 8.2 33.1 97.9 9.0 52 <0.2 41 7.4 q 0.8 358 0.3 19.3 9.9 44 94 6 0.8 Surface 19.3 8.2 32.9 94.6 0.3 329 19.3 8.2 7.2 9.9 45 1.0 94.6 8 <0.2 0.9 10.9 3.1 0.3 359 19.3 8.2 32.9 95.1 7.2 9 49 <0.2 0.9 08:35 8.2 32.9 95.2 818178 806169 IM2 Cloudy Moderate 6.2 Middle 19.3 < 0.2 3.1 330 11.0 49 0.3 19.3 5.2 0.2 355 19.2 12.2 9 52 <0.2 0.8 Bottom 19.2 8.2 33.0 97.1 5.2 0.2 327 19.2 8.2 33.0 97 1 7.4 12.4 51 0.8 1.0 0.3 19.3 12.6 43 Surface 8.2 1.0 0.3 323 19.3 8.2 32.7 7 1 12.1 12 43 <0.2 0.8 8.2 12 13 45 45 <0.2 0.8 3.2 0.3 342 19.3 32.8 32.8 93.4 93.4 7.1 15.0 IM3 Cloudy Moderate 08:43 6.4 Middle 19.3 8.2 32.8 93.4 12 818779 805600 <n 2 0.8 15.1 3.2 0.3 315 19.3 17.0 16.1 13 12 0.7 5.4 0.3 340 8.2 8.2 7.1 7.1 49 19.3 32.8 93.3 93.3 < 0.2 Bottom 19.3 8.2 32.8 49 0.3 355 19.3 32.8 <0.2 0.7 0.5 350 19.3 32.6 12.5 16 45 0.8 8.2 8.2 93.0 Surface 19.3 32.6 1.0 0.6 322 19.3 7.1 12.9 17 43 <0.2 0.8 46 47 <0.2 3.9 0.5 347 19.3 14.7 15 0.7 08:51 7.8 Middle 8.2 93.5 819744 804619 Cloudy Moderate 19.3 32.6 < 0.2 93.5 0.8 3.9 0.5 319 19.3 8.2 32.6 7.1 14.9 14 15.5 15.5 6.8 0.4 339 19.2 32.7 7.3 14 49 0.8 Bottom 8.2 32.7 96.0 6.8 0.4 355 19.2 8.2 32.7 96 1 7.3 15 50 <0.2 0.9 1.0 0.7 12 19.3 8.2 32.8 93.5 7.1 9.0 15 47 <0.2 0.8 Surface 8.2 32.8 93.5 9.2 9.9 1.0 0.8 12 19.3 8.2 32.8 93.5 7.1 14 47 <0.2 0.8 14 4.1 0.7 19.3 8.2 32.8 93.9 7.1 49 <0.2 0.9 8.2 820745 804884 IM5 Cloudy Moderate 08:57 8.1 Middle 19.3 32.8 93.9 <0.3 4.1 0.7 19.3 8.2 32.8 93.9 7.1 10.1 15 49 <0.2 0.8 7.1 19.3 10.6 11 54 <0.2 0.7 0.5 8.2 32.8 95.6 7.3 Bottom 19.3 8.2 32.8 95.8 19.3 10.5 10 55 1.0 0.2 19.4 9.3 <0.2 0.9 8.2 33.0 94.6 7.2 Surface 8.2 33.0 94.7 0.2 19.3 7.2 9.5 10 47 1.0 3.5 0.2 19.3 10.3 10 50 50 <0.2 0.8 09:04 Middle 821079 805831 Cloudy Moderate 8.2 3.5 0.2 58 19.3 8.2 95.8 7.3 10.3 11 56 5.9 0.2 19.3 8.2 33.1 96.8 7.3 10.8 11 51 < 0.2 0.9 Bottom 8.2 33.1 96.9 7.3 5.9 0.2 19.3 8.2 10.7 11 51 0.8 141 44 1.0 0.1 19.3 8.1 32.1 92.2 6.2 12 < 0.2 0.8 Surface 19.3 8.1 32.1 92.2 8.1 32.1 92.2 7.0 47 147 11 1.0 0.1 19.3 6.4 <0.2 0.8 7.7 12 1.2 108 48 49 4.0 0.1 19.3 8.1 32.1 7.1 <0.2 92.6 IM7 Cloudy Moderate 09:12 8.0 Middle 19.3 8.1 32.1 92.7 821340 806837 < 0.2 8.2 19.3 0.1 19.2 32.1 94.3 9.7 11 52 <0.2 1.2 Bottom 19.2 8.1 32.1 94.4 7.2 7.0 0.1 105 19.2 8.1 32.1 7.2 9.8 11 1.0 0.0 182 18.6 4.0 8 43 <0.2 1.1 Surface 18.6 8.2 32.0 91.4 1.0 0.0 182 18.6 8.2 32.0 91.4 7.1 4.0 43 <0.2 1.1 18.6 <0.2 3.7 0.0 87 8.2 32.0 91.5 7.1 3.9 7 46 1.2 IM8 Cloudy Moderate 08:55 7.3 Middle 18.6 8.2 32.0 91.5 821846 808155 <0.2 92 32.0 46 3.7 0.0 18.6 8.2 91.5 7 1 3.8 6 11

8.2

8.2

18.5

32.0

32.0

92.1

7.1

7.1

92.2

3.7

7

48

<0.2

1.0

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 6.3

Bottom

0.0

248

262

18.5

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

Water Quality Monitoring Results on 18 January 22 during Mid-Flood Tide Turbidity(NTU) Suspended Solids Total Alkalinity (ppm) (ppm) HK Grid HK Grid HK Grid HK Grid (Easting) DO Saturation (%) Dissolved Oxygen Current Speed Chromium (µg/L) Weather Sea Sampling Water Water Temperature (°C) Salinity (ppt) Nickel (µg/L) Current Direction Sampling Depth (m) Depth (m) (m/s) Average Value Average Value Average Value Average Value DA Value DA Value DA Condition Time Value

					Surface	1.0	0.3	236 247	18.6 18.6	18.6	8.2	8.2	32.1 32.1	32.1	91.5	7.1	5.3 5.3	11		44			<0.2	0.8
IM9	Cloudy	Moderate	08:50	6.8	Middle	3.4	0.3	235	18.6	18.6	8.2	8.2	32.1	32.1	91.6	7.1 7.1	6.3	6.4	11	46 4	822087	808799	40 O	<0.2 0.9 0.9
livi9	Cloudy	Woderate	06:50	0.0	Middle	3.4	0.3	235	18.6	10.0	8.2	0.2	32.1	32.1	91.6	7.1	6.4	12	- ' '	45	022007	000799	<0.2	0.9
					Bottom	5.8	0.2	242	18.6	18.6	8.2	8.2	32.1	32.1	92.1 92.2	7.1 7.1	7.5	10		48			<0.2	0.9
						5.8 1.0	0.2	263 301	18.6 18.6		8.2 8.2		32.1 32.3		92.2	7.1	7.6 7.7	11 12		49 43			<0.2 <0.2	1.0
					Surface	1.0	0.5	320	18.6	18.6	8.2	8.2	32.3	32.3	92.2	7.1 7.1	7.7	13		44			<0.2	0.8
IM10	Cloudy	Moderate	08:43	7.4	Middle	3.7	0.5	288	18.6	18.6	8.2	8.2	32.3	32.3	92.2	7.1	8.6	8.7	12	46 4	822380	809789	<0.2	<0.2 0.8 0.8
						3.7 6.4	0.5	310 295	18.6 18.6		8.2 8.2		32.3 32.3		92.2	7.1	8.5 9.7	12		45			<0.2	0.8
					Bottom	6.4	0.5	303	18.6	18.6	8.2	8.2	32.3	32.3	92.7	7.2	9.8	12		48			<0.2	0.8
					Surface	1.0	0.6	277	18.6	18.6	8.2	8.2	32.4	32.4	93.1	7.2	5.9	10 9		43			<0.2	0.7
						1.0 3.8	0.7	280 282	18.6 18.7		8.2 8.2		32.4 32.5		93.1	7.2 7.2	5.9 6.6	10		44 45			<0.2	0.8
IM11	Cloudy	Moderate	08:33	7.6	Middle	3.8	0.6	286	18.7	18.7	8.2	8.2	32.5	32.5	93.1	7.2	6.7	6.8	10	46	822033	811448	<0.2	<0.2 0.8 0.8
					Bottom	6.6	0.5	286	18.7	18.7	8.2	8.2	32.7	32.7	93.3 93.4	7.2 7.2	7.9	11		48			<0.2	0.7
						6.6 1.0	0.5	310 291	18.7 18.7		8.2 8.2		32.7 32.6		93.4	7.2 7.2 7.2	7.9 7.7	10 13		48 43			<0.2 <0.2	0.8
					Surface	1.0	0.6	297	18.7	18.7	8.2	8.2	32.6	32.6	93.0 93.0	7.2 7.2	7.8	12	İ	43			<0.2	0.7
IM12	Cloudy	Moderate	08:27	8.5	Middle	4.3	0.5	290	18.7	18.7	8.2	8.2	32.6	32.6	93.0 93.0	7.2	7.9	8.8 12	12	46 4	821452	812029	<0.2	<0.2 0.7 0.7
	,					4.3 7.5	0.6	304 292	18.7 18.7		8.2 8.2		32.6 32.6		93.0	7.2	7.9 10.8	11		45 48			<0.2	0.7
					Bottom	7.5	0.5	317	18.7	18.7	8.2	8.2	32.6	32.6	93.4	7.2	10.6	12		48			<0.2	0.7
					Surface	1.0	-	-	18.5	18.5	8.2	8.2	32.6	32.6	89.4	6.9	2.2	5		-			-	-
						1.0 2.3	-	-	18.5		8.2		32.6		89.4	6.9	2.3	6		-			-	
SR1A	Cloudy	Moderate	07:53	4.6	Middle	2.3	-	-	-	-	-	-	-	-	-	-	-	3.1	5	-	819979	812659	-	- - -
					Bottom	3.6	-		18.6	18.6	8.2	8.2	32.6	32.6	91.8 91.9	7.1 7.1	3.9	4		-			-	-
						3.6 1.0	0.1	25	18.6 18.6		8.2 8.2		32.6 32.6		92.0	7.1	3.9 7.5	5 12		44			<0.2	0.7
					Surface	1.0	0.1	25	18.6	18.6	8.2	8.2	32.6	32.6	93.3	7.2 7.2	7.5	13		44			<0.2	0.7
SR2	Cloudy	Moderate	07:38	4.1	Middle	-	-	-	-	-	-		-	-		-	-	10.1	12	- 4	821469	814181	-	<0.2 - 0.7
						3.1	0.1	- 31	18.7		8.2		32.6		93.9	7.2 7.0	12.6	12		47			<0.2	0.7
					Bottom	3.1	0.1	31	18.7	18.7	8.2	8.2	32.6	32.6	94.0	7.2 7.2	12.7	12		47			<0.2	0.7
					Surface	1.0	0.1	350	18.6	18.6	8.2	8.2	31.8	31.8	91.2	7.1	4.2	6		-			-	-
						1.0 4.4	0.1	354 321	18.6 18.6		8.2 8.2		31.8 31.8		91.2	7.1 7.1	4.2 3.9	6 8		-			-	-
SR3	Cloudy	Moderate	09:01	8.7	Middle	4.4	0.1	351	18.6	18.6	8.2	8.2	31.8	31.8	91.1	7.1	3.8	4.0 7	7	-	822157	807552	-	
					Bottom	7.7	0.1	336	18.6 18.6	18.6	8.2	8.2	31.8 31.8	31.8	91.6 91.7	7.1 7.1	3.8	7 8		-			-	-
						7.7 1.0	0.1	309 321	19.4		8.2 8.2		33.0		02.5	7.1	3.8 7.8	13		-			-	
					Surface	1.0	0.1	335	19.4	19.4	8.2	8.2	33.0	33.0	93.5	7.1 7.1	7.8	14		-			-	-
SR4A	Cloudy	Moderate	07:56	8.7	Middle	4.4	0.1	324	19.4	19.4	8.2	8.2	33.0	33.0	93.9 94.0	7.1	6.4	6.9	15		817207	807830	-	
					B. #	4.4 7.7	0.1	347 258	19.4 19.4	40.4	8.2 8.2		33.0 33.1	00.4	94.0	7.0	6.5 6.5	15					-	-
					Bottom	7.7	0.1	259	19.4	19.4	8.2	8.2	33.1	33.1	94.8	7.2 7.2	6.5	15		-			-	
					Surface	1.0	0.2	292 298	19.3 19.3	19.3	8.2	8.2	33.1	33.1	94.7	7.2	4.7	15 14		-			-	-
0054			07.44	4.5		1.0	0.2	- 290	19.3		- 0.2		33.1		94.7	7.2	4.7				040574	040000	-	-
SR5A	Cloudy	Calm	07:41	4.5	Middle	-	-	-	-	•	-	-	-	-	- 1	-	-	4.8	14	- '	816574	810682	-	
					Bottom	3.5 3.5	0.1	286 311	19.3	19.3	8.2	8.2	33.1	33.1	95.4 95.4	7.2 7.2	4.9 4.9	13		-			-	-
					Surface	1.0	0.1	281	19.2	19.2	8.0	8.0	33.1	33.1	90.9 91.0	6.9	4.2	13		-			-	-
					Surface	1.0	0.1	300	19.2	19.2	8.0	0.0	33.1	33.1	91.1	6.9	4.1	12		-			-	-
SR6A	Cloudy	Calm	07:13	3.7	Middle	-	-	- :	-	-	-	-	-	-		-		9.6	13		817978	814762	-	
					Bottom	2.7	0.1	280	19.1	19.1	8.0	8.0	33.1	33.1	92.4 92.5	7.0 7.0	15.0	12	ł	-			-	-
					BOLLOTT	2.7	0.1	307	19.1	19.1	8.0	0.0	33.1	33.1	92.6	7.0	15.1	13		-			-	-
					Surface	1.0	0.3	45 45	18.7 18.7	18.7	8.1	8.1	32.7	32.7	88.9 88.9	6.8	3.6	7		-			1	-
SR7	Cloudy	Moderate	06:52	15.6	Middle	7.8	0.3	43	18.7	18.7	8.1	8.1	32.7	32.7	88.5	6.8	4.6	6.5	7	-	823615	823748	-	<u> </u>
JIV.	Cioudy	ivioueiate	00.52	15.0	Wildrie	7.8	0.3	45	18.7	10.7	8.1	0.1	32.7	32.1	88.5	6.8	4.6	7	,	- '	023015	023140	-	
					Bottom	14.6 14.6	0.3	37 37	18.7 18.7	18.7	8.1 8.1	8.1	32.7 32.7	32.7	88.3 88.3	6.8	11.4 11.4	7 8		-			-	-
			<u> </u>		Surface	1.0	-	-	18.7	18.7	8.2	8.2	32.2	32.2	92.6	7.1	4.6	14		-		1	+-	-
					Guriace	1.0	-		18.7	10.7	8.2	0.2	32.2	JZ.Z	92.6	7.1 7.1	4.6	13		-			-	-
SR8	Cloudy	Moderate	08:19	4.5	Middle	-	-	-	-	-	-	-	-	-	-	-	-	5.0	12		820400	811629	-	
					Bottom	3.5	-		18.6	18.6	8.2	8.2	32.3	32.3	93.3 93.4	7.2 7.2	5.3	10		-			-	
DA D # :	L				Dottom	3.5	-	-	18.6	10.0	8.2	0.2	32.3	JZ.J	93.4	7.2	5.3	11		-			-	-
DA: Depth-Ave	aged				/hite canned or rougher																			

20 January 22 during Mid-Ebb Tide

Montrolling Station Weather Condition Time Depth (m) Sampling Depth (m) Current (m/s) Current (m	Dissolved Oxygen Value DA 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 7.4 7.4 7.4 7.4 7.4 7.4 7.4 7.4 7.4 7.4	6.2 6.3 8.5 8.4 8.5 8.6 5.0 5.1 5.3 5.4 5.7 5.5 1.9 1.9 2.7 2.7 2.5	(mg/L) Value 9 10 7 8 5 6 111		n) Cool HK DA (Noi	rdinate Coordinate HK Grid HK Grid (Easting) 5596 804254	Value DA Value DA
Condition Cond	8.0 8.0 8.0 8.0 8.0 8.0 7.4 7.4 7.4 7.4 7.4 7.4 7.4 7.4 7.4 7.4	6.2 6.3 8.5 8.4 8.5 8.6 5.0 5.1 5.3 5.4 5.7 5.5 1.9 1.9 1.9 2.7 2.7 3.0	9 10 7 8 5 6 11 12 11 12 10 11 7	8 84 84 87 87 91 91 44 44 48 48 52 53	87 81	rthing) (Easting) 5596 804254	Value DA Value DA
C1	8.0 8.0 8.0 8.0 8.0 7.4 7.4 7.4 7.4 7.4 7.4 7.4 7.4 7.0 7.0 7.0 7.0 7.0 7.0 7.0	6.3 8.5 8.4 8.5 8.6 5.0 5.1 5.3 5.4 5.7 5.5 1.9 1.9 2.7 2.7 2.7 3.0	10 7 8 5 6 11 12 11 12 10 11 7 6	84 87 87 91 91 91 44 44 48 48 48 52 53			CO 2 CO 2
C1 Misty Moderate 13:53 8.0 Middle 4.0 0.1 323 18.7 18.7 8.2 8.2 33.4 33.5 104.0 104.1 18.7 8.2 8.2 33.6 33.6 104.0 104.9 104.9 104.1 18.7 8.2 8.2 8.2 33.6 104.0 104.9	8.0 8.0 8.0 8.0 8.0 7.4 7.4 7.4 7.4 7.4 7.4 7.4 7.4	8.5 8.4 8.5 8.6 5.0 5.1 5.3 5.4 5.7 5.5 1.9 2.7 2.7 3.0	7 8 5 6 11 12 11 12 10 11 7 6	8 87 87 91 91 91 44 44 44 48 52 53			<0.2
Bottom 7.0 0.0 7 18.7 18.7 8.2 8.2 33.5 104.2	8.0 8.0 7.4 7.4 7.4 7.4 7.4 7.4 7.4 7.4	8.5 8.6 5.0 5.1 5.3 5.4 5.7 5.5 1.9 1.9 2.7 2.5 3.0	5 6 11 12 11 12 11 10 11 7 6	91 91 44 44 48 48 52 53	48 82		<0.2 0.8 <0.2 0.9 <0.2 0.7 <0.2 0.9 <0.2 0.9
C2 Cloudy Moderate 12.53 12.0 Middle 12.53 12.53 12.0 Middle 12.53 12.53 12.0 Middle 12.53 12.	8.0 7.4 7.4 7.4 7.4 7.4 7.4 7.4 7.4	5.0 5.1 5.3 5.4 5.7 5.5 1.9 1.9 2.7 2.7 2.7 3.0	11 12 11 12 10 11 7	11 44 48 48 52 53	48 82	25682 806923	<0.2 0.9 <0.2 0.9
C2	7.4 7.4 7.4 7.4 7.4 7.4 7.4 7.6 6.9 6.9 7.0 7.0 7.0 7.0 7.0 7.0 7.0	5.1 5.3 5.4 5.7 5.5 1.9 1.9 2.7 2.7 3.0	11 12 10 11 7 6	11 48 48 52 53	48 82	5682 806923	<0.2 0.9
C2 Cloudy Moderate 12.55 12.0 Moderate 12.55 12.0 Moderate 12.55 12.0 Moderate 12.55 12.0 Moderate 14.32 Bottom 11.0 0.1 1435 18.3 18.3 18.3 8.2 8.2 32.0 32.0 32.0 95.2 95.2	7.4 7.4 7.4 6.9 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.9 7.9	5.4 5.7 5.5 1.9 2.7 2.7 3.0	12 10 11 7 6	48 52 53	48 82	5682 806923	
C3 Cloudy Moderate 14:32 11.4 Middle 5.7 0.1 46 18.6 8.2 8.2 32.0 32.0 99.2 99.2 11.4 Middle 5.7 0.1 46 18.6 8.2 8.2 32.7 32.7 99.3 99.4 99.4 99.4 99.4 11.4 Middle 5.7 0.1 46 18.6 8.2 8.2 32.7 32.7 99.3 99.4 99.4 99.4 11.4 Middle 5.7 0.1 46 18.6 8.2 8.2 32.7 32.7 99.3 99.4 99.4 11.4 Middle 5.7 0.1 46 18.6 8.2 8.2 32.7 32.7 99.3 99.4 99.4 11.4 Middle 5.7 0.1 46 18.6 8.2 8.2 32.7 32.7 99.3 99.4 11.4 Middle 5.7 0.1 46 18.6 8.2 8.2 32.7 32.7 99.3 99.4 11.4 Middle 5.7 0.1 46 18.6 8.2 8.2 32.7 32.7 99.3 99.4 11.4 Middle 5.7 0.1 46 18.6 8.2 8.2 32.7 32.7 99.3 99.4 11.4 Middle 5.7 0.1 46 18.7 18.7 18.7 8.2 8.2 32.6 32.6 91.2 91.3 11.4 Middle 5.7 0.1 18.7 18.7 18.7 8.2 8.2 32.6 32.6 32.6 91.2 91.3 11.4 Middle 5.7 0.1 18.7 18.7 18.7 8.2 8.2 32.6 32.6 32.6 91.2 91.3 11.4 Middle 5.7 0.1 18.7 18.7 18.7 8.2 8.2 32.6 32.6 32.6 91.2 91.3 11.4 Middle 5.7 0.1 18.7 18.7 18.7 8.2 8.2 32.6 32.6 32.6 91.2 91.3 11.4 Middle 5.7 0.1 18.7 18.7 18.7 8.2 8.2 32.6 32.6 32.6 32.6 91.2 91.3 11.4 Middle 5.7 0.1 18.7 18.7 18.7 8.2 8.2 32.6 32.6 32.6 91.2 91.3 11.4 Middle 5.7 0.1 18.7 18.7 18.7 8.2 8.2 32.6 32.6 32.6 91.2 91.3 11.4 Middle 5.7 0.1 18.7 18.7 18.7 8.2 8.2 32.6 32.6 32.6 91.2 91.3 11.4 Middle 5.7 0.1 18.7 18.7 18.7 8.2 8.2 32.6 32.6 32.6 91.2 91.3 11.4 Middle 5.7 0.1 18.7 18.7 18.7 8.2 8.2 32.6 32.6 32.6 91.2 91.3 11.4 Middle 5.7 0.1 18.7 18.7 18.7 8.2 8.2 32.6 32.6 32.6 32.7 91.3 11.4 Middle 5.7 0.1 18.7 18.7 18.7 8.2 8.2 32.6 32.6 32.7 92.7 92.7 92.7 92.7 92.7 92.7 92.7 9	7.4 6.9 6.9 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0	5.5 1.9 1.9 2.7 2.7 3.0	11 7 6	53			<0.2 0.9 0.9
C3 Cloudy Moderate 14:32 11.4 Middle 5.7 0.1 45 18.6 18.6 8.2 8.2 32.7 90.4 90.4 90.4 18.6 18.6 8.2 8.2 32.7 90.4 90.4 90.4 18.6 18.6 8.2 8.2 32.7 90.4 90.4 18.6 18.6 8.2 8.2 32.7 90.4 90.4 18.6 18.6 8.2 8.2 32.7 90.4 90.4 18.6 18.6 8.2 8.2 18.2 18.2 18.2 18.2 18.2 18.2 1	7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0	1.9 2.7 2.7 3.0	6	4.5			<0.2 0.9 <0.2 0.9
Miles Mile	7.0 7.0 7.0 7.0 7.0 7.0 7.9 7.9	2.7 2.7 3.0	0	46			<0.2 0.8 <0.2 0.9
Bottom 10.4 0.2 51 18.7 18.7 8.2 8.2 32.6 32.6 91.2 91.3 91.3 Surface 1.0 0.1 187 19.2 19.2 8.1 8.1 32.8 32.8 104.3 104	7.0 7.0 7.9 7.9	3.0	8	8 49 50	49 82	2090 817818	<0.2 <0.2 0.9 0.9 <0.2 0.9
Surface 1.0 0.1 187 19.2 19.2 8.1 8.1 32.8 32.8 104.3 104.3 104.3 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11	7.9		9	51 52			<0.2 0.9 <0.2 0.8
IM1 Misty Moderate 13:33 4.6 Middle		4.1	9	82			<0.2 0.9
20 04 020 04		- 49	10	9 -	87 81	7966 807136	<0.2 0.9 - <0.2 0.9
Bottom 3.0 0.1 221 19.3 19.4 6.1 8.1 32.0 32.6 105.9 106.1	8.0 8.1		- 8	91			<0.2 0.9
3.6 0.1 227 19.4 8.1 32.5 106.2	7.9	5.5 7.7	7 8	92 46			<0.2 1.0 <0.2 1.0
Surface 1.0 0.1 110 19.1 19.1 8.2 0.2 32.8 32.0 103.8 103.9	7.9 8.0		8	46			<0.2 0.9
IM2 Missy Modelate 13.27 0.0 Middle 3.3 0.0 72 18.9 10.9 8.2 0.2 32.8 32.0 104.5 104.3	8.0	8.8 9.1	12	11 87 91	76 81	8155 806143	<0.2 <0.2 0.8 0.9 <0.2 0.9 0.9
Bottom 5.6 0.0 112 18.6 18.6 8.2 8.2 33.0 33.0 106.5	8.2	9.1	13	93			<0.2 0.9
Surface 1.0 0.1 19 19.0 19.0 8.2 8.2 32.9 32.9 104.2 104.2 104.2	8.0 8.0 8.0	6.1	9 10	82 82			<0.2 0.7 <0.2 0.8
IM3 Misty Moderate 13:21 7.0 Middle 3.5 0.1 46 18.9 18.9 18.9 8.2 8.2 32.9 103.5 103.5 103.5	7.9 7.9	7.1 7.2	8	9 87 92	87 81	8780 805591	<0.2 <0.2 <0.2 0.9 0.8
Bottom 6.0 0.1 3 18.9 18.9 8.2 3.2 3.2 32.9 104.0 104.1	8.0	8.3 8.3	8 7	90 90			<0.2 0.8 <0.2 0.8
Surface 1.0 0.1 63 18.9 18.9 8.2 8.2 32.8 103.4	7.9	7.4 7.5	10	83 83			<0.2 0.9 <0.2 0.9
IMM Mich, Moderate 13:13 86 Middle 4.3 0.0 353 18.8 18.8 8.2 8.2 32.8 32.8 103.1 103.2	7.9	8.6 8.7	10	10 90	89 81	9744 804597	<0.2 <0.2 0.8 0.9
HINT HINSU MICHIGAR 12.10 MICHIGAN 14.3 0.0 325 18.8 18.8 8.2 32.9 32.9 104.0 104.1 103.2 103.2 103.2 104.1 103.2 103.2 103.2 104.0 104.1 103.2 103.2 104.0 104.1 103.2 103.2 104.0 104.1 103.2 103.2 104.0 104.1 103.2 103.2 104.0 104.1 103.2 103.2 104.0 104.1 103.2 103.2 104.0 104.1 103.2 103.2 104.0 104.1 103.2 103.2 104.0 104.1 103.2 103.2 104.0 104.1 103.2 103.2 104.0 104.1 103.2 104.1 103.2 104.1	7.9 8.0 8.0	8.5 10.0	11 9	90			<0.2 0.9 <0.2 1.0
7.6 0.1 349 18.8 8.2 32.9 104.2 Surface 1.0 0.2 341 18.9 48.0 8.2 8.2 32.6 32.6 101.9 101.9	7.8	9.9 7.7	10 10	95 44			<0.2 0.8 <0.2 0.8
1.0 0.2 314 18.9 8.2 32.6 101.8	7.8 7.8		9	44 87	74		<0.2 0.8 <0.2 0.7 0.8
mod missy moderate 13.00 6.2 missue 4.1 0.3 326 18.8 10.0 8.2 0.2 32.7 32.7 102.0 102.0	7.8	8.6	11 15	12 87 90	74 82	0726 804869	<0.2 <0.2 0.7 0.8 <0.2 <0.2 0.7 0.8 <0.2 <0.2 0.7 0.8 <0.2 <0.2 0.7 0.8 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2
7.2 0.2 357 18.8 10.0 8.2 0.2 32.7 103.5 103.5	7.9	9.1	15	90			<0.2 0.8
Surface 1.0 0.1 273 19.0 19.1 8.2 8.2 32.8 102.2 102.2	7.8 7.8 7.8	2.6	7	46 46			<0.2 0.8 <0.2 0.8
IM6 Misty Moderate 12:59 7.4 Middle 3.7 0.2 263 19.0 19.0 8.2 8.2 32.8 32.8 102.3 102.4 100.4 -	7.8	3.4 3.5	5 6	6 89	75 82	1041 805813	<0.2 <0.2 <0.2 0.8 0.8
Bottom 6.4 0.1 224 18.9 18.9 8.2 3.2 32.8 103.2 103.3 103.1 103.4 103.1 103.4 103.1	7.9 7.9	4.6	5 6	91 91			<0.2 0.8 <0.2 0.7
Surface 1.0 0.2 137 19.0 19.0 8.2 8.2 32.8 32.8 102.9 102.9 10.0 0.2 139 19.0 8.2 8.2 32.8 32.8 102.9 102.9	7.9 7.9	2.7	8 7	44			<0.2 0.9 <0.2 0.9
M7 Michy Moderate 12:53 8.4 Middle 4.2 0.1 134 19.0 19.0 8.2 8.3 32.8 32.8 102.7 102.7	7.8	3.8	8	7 87	74 82	1326 806845	<0.2
HILD HOUSE 12.5 0.4 HILD HOUSE 12.5 0.4 HILD HOUSE 13.6 HILD H	7.8 7.8 7.8	3.8 4.7	5	90			<0.2 0.7
7.4 0.1 199 19.0 8.3 32.9 102.0 Surface 1.0 0.2 19 18.4 18.4 8.2 8.2 31.9 31.9 55.0 scn	7.8	5.3	6 10	90 44			<0.2 0.7 <0.2 0.8
Surface 1.0 0.2 20 18.4 16.4 8.2 0.2 31.9 31.9 95.0 95.0	7.4 7.4		11 9	46 48	40		<0.2 0.8
mo Cooly modelate 13.10 7.0 model 3.8 0.2 24 18.3 16.3 8.2 0.2 31.9 31.9 35.4 30.4			10	10 48	48 82	1840 808156	<0.2 <0.2 0.9 0.8 <0.2 0.8
Bottom 6.6 0.1 60 18.3 18.3 6.2 8.2 31.9 31.9 97.7 97.7 DA: Depth-Averaged	7.4 7.4 7.6 7.6	5.3	10	51			<0.2 0.9

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

Water Quality Monitoring Results on 20 January 22 during Mid-Ebb Tide Total Alkalinity Coordinate Coordinate Current Speed DO Saturation Dissolved Suspended Solids Weather Sampling Water Water Temperature (°C) Salinity (ppt) Turbidity(NTU) Nickel (µg/L) Monitoring Oxygen (mg/L) (µg/L) Current Sampling Depth (m) HK Grid HK Grid Value DA Value DA Condition Condition Time Depth (m) (m/s) Average Value Average Value Average Value Average Value DA Value DA Value DA Value DA (Northing) (Easting) Value 18.5 1.0 11.0 26 94.3 47 <0.2 0.7 Surface 8.2 94.4 1.0 11.4 26 18.5 8.2 31.9 94.4 7.3 4.7 8 44 <0.2 0.8 3.8 0.1 61 18.4 8.2 31.9 95.8 7.4 4.5 8 46 47 <0.2 0.7 IM9 Cloudy Moderate 13:21 7.6 Middle 18.4 8.2 31.9 95.9 822105 808802 < 0.2 3.8 0.1 64 18.4 8.2 31.9 96.0 7.4 4.5 9 6.6 0.1 92 18.6 8.2 31.7 97.0 7.5 4.4 4 48 <0.2 0.8 18.6 8.2 31.7 97.2 7.5 Bottom 6.6 0.1 18.6 4.5 49 0.9 1.0 18.6 0.1 3.5 45 Surface 18.6 8.2 8.2 93.9 31.9 1.0 0.2 18.6 93.9 7.3 3.4 46 0.8 3.9 0.1 18.4 7.3 3.3 47 0.8 13:26 7.8 Middle 8.2 94.0 822374 809816 Cloudy Moderate 31.9 3.9 0.1 56 18.4 8.2 31.9 94.0 7.3 3.3 8 49 <0.2 0.9 6.8 0.1 61 18.4 8.2 32.0 95.3 7.4 3.4 10 51 <0.2 1.0 Bottom 18.4 8.2 32.0 95.4 7.4 6.8 0.1 61 18.4 32.0 95.5 7.4 3.4 11 52 < 0.2 0.8 1.0 0.2 33 18.6 8.2 32.1 95.0 7.3 3.9 6 44 < 0.2 0.7 Surface 18.6 8.2 32.1 95.0 47 18.6 8.2 32.1 95.0 7.3 3.9 7 0.9 1.0 0.2 33 <0.2 4.2 4.1 0.1 16 18.5 8.2 32.1 95.4 7.4 6 49 <0.2 0.7 8.2 95.5 13:34 18.5 32.1 822045 811445 IM11 Cloudy Moderate 8.2 Middle <0.2 95.6 48 <0.2 8.2 32.1 4.2 0.7 4.1 0.1 18.5 7.6 4.2 52 0.8 0.1 18.5 8.2 32.1 97.5 8 <0.2 Bottom 18.5 8.2 32.1 97.6 0.1 18.5 8.2 32 1 97.7 7.6 4.2 52 1.0 0.1 18.6 8.2 32.1 93.5 7.2 3.3 44 0.8 Surface 18.6 8.2 32.1 93.5 1.0 0.1 38 18.6 8.2 32.1 93.4 7.2 3.4 8 45 <0.2 0.8 46 0.1 18.5 93.2 7.2 4.3 9 47 <0.2 0.8 IM12 Cloudy Moderate 13:39 9.1 Middle 8.2 32.1 93.2 821442 812056 4.6 0.1 18.5 8.2 32.1 93.2 72 44 8 47 0.9 10 <0.2 8.1 0.1 46 18.5 8.2 32.1 94.1 7.3 4.9 48 0.8 Bottom 18.5 8.2 32.1 94.2 7.3 47 8.2 32.1 94.2 <0.2 8 1 0.1 18.5 7.3 5.0 q 49 0.9 18.5 2.9 8.2 98.3 Surface 18.5 8.2 32.2 98.4 1.0 18.5 8.2 2.9 32.2 98.4 7.6 5 2.6 . 14:03 Middle 819979 812657 SR1A Cloudy Moderate 5.1 2.6 4.1 18.5 2.4 6 Bottom 18.5 8.3 32.2 100.0 7.8 4.1 18.5 8.3 32.2 100.1 7.8 2.4 1.0 0.1 18.5 3.4 46 <0.2 0.9 Surface 18.5 8.2 1.0 0.1 17 18.5 8.2 32.2 96.8 7.5 3.5 8 47 <0.2 0.9 SR2 Cloudy Moderate 14:14 4.6 Middle 821481 814162 <n : 0.9 0.8 3.6 0.1 18.8 32.0 31.9 7.5 7.6 3.2 48 <0.2 38 8.3 8.3 98.1 Bottom 18.9 32.0 98.3 7.6 3.6 18.9 8.3 98.4 < 0.2 0.1 3.3 8 49 0.9 0.2 128 18.5 4.5 8.2 94.7 Surface 18.5 31.9 1.0 0.2 130 18.5 94.7 7.3 4.6 8 4.4 0.1 147 18.5 6.6 -SR3 13:12 8.7 Middle 8.2 95.3 822159 807589 Cloudy Moderate 18.5 31.9 4.4 0.1 159 18.5 8.2 31.9 95.3 7.4 7.1 7.7 0.1 111 18.5 97 4 7.6 9.7 7 Bottom 18.5 8.2 31.9 97.5 77 0.1 116 18.5 8.2 31.9 97.6 7.6 99 7 1.0 0.4 65 19.2 8.1 32.8 104.4 8.0 3.6 Surface 8.1 32.8 104.4 1.0 0.4 65 19.1 8.1 32.8 104 4 8.0 3.5 4.6 7 4.2 0.3 73 19.1 8.1 32.8 104.9 8.0 8 817176 807801 SR4A Misty Moderate 14:13 8.4 Middle 19.1 8.1 32.8 105.1 32.7 4.2 0.3 79 19.1 8.1 105.2 8.0 4.6 7 7.4 79 18.9 5.6 5 0.3 8.1 32.9 106.4 8.1 Bottom 8.1 106.6 8.2 18.9 33.0 7.4 18.9 1.0 0.0 13 19.7 8.1 33.1 105.5 8.0 Surface 19.7 8.1 33.1 105.6 1.0 13 19.7 7.2 8 14:28 3.2 Middle 816613 810681 Misty Moderate 22 105.6 8 0.1 351 19.5 8.2 33.1 8.0 Bottom 19.5 8.2 33.1 8.0 2.2 0.1 354 19.5 8.2 8.0 8.1 134 19.7 1.0 0.1 8.1 33.0 105.3 7.9 5.0 6 Surface 19.7 8.1 33.0 105.3 33.0 105.3 7 134 19.7 8.1 7.9 5.0 1.0 0.1 --SR6A Misty Moderate 15:15 4.4 Middle 817985 814737 3.4 0.0 19.7 6.9 Bottom 19.7 8.1 32.7 105.4 8.0 3.4 0.0 42 19.7 8.1 32.7 105.4 8.0 6.8 1.0 0.2 29 18.6 6.8 2.2 6 Surface 8.2 32.6 88.1 1.0 0.2 18.6 8.2 32.6 88.0 6.8 2.2 5 6.8 8 1 0.2 18.5 8.2 32.7 87.6 6.8 3.1 4 SR7 Cloudy Moderate 14:57 16.2 Middle 18.5 8.2 32.7 87.6 823639 823723 52 32.7 8 1 0.2 18.5 8.2 87.5 6.8 3.1 5 3.2 15.2 0.1 67 18.5 8.2 32.7 87.9 6.8 4 Bottom 18.5 8.2 32.7 88.0 6.8 18.5 8.2 32.7 6.8 15.2 0.1 88 1 1.0 18.6 8.3 32.0 98.8 7.6 2.8 8 8.3 Surface 18.6 32.0 98.8 18.6 8.3 32.0 98.8 7.6 2.8 7 1.0 -811600 13:45 4.1 820374 SR8 Cloudy Moderate Middle 31.7 99.3 99.4 7.6 7.6 2.9 3.1 18.9 8.3 31.7 7 3.1 19.0 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

Water Quality Monitoring Water Quality Monitoring Results on 20 January 22 during Mid-Flood Tide Total Alkalinity Coordinate Coordinate Current Speed DO Saturation Dissolved Suspended Solids Weather Sampling Water Water Temperature (°C) Salinity (ppt) Turbidity(NTU) Nickel (µg/L) Monitoring Oxygen (mg/L) (µg/L) Current Sampling Depth (m) HK Grid HK Grid Value DA Value DA Condition Time Depth (m) (m/s) Value Average Value Average Value Average Value Average Value DA Value DA Value DA Value DA (Northing) (Easting) Condition 1.0 0.4 53 18.7 32.9 7.9 5.4 <0.2 0.7 Surface 103.1 1.0 0.4 53 18.7 8.1 32.9 103.1 7.9 5.4 21 78 <0.2 0.7 3.8 0.5 47 18.7 8 1 32.9 103.3 7.9 6.4 21 22 86 86 <0.2 0.8 C1 Misty Moderate 09:44 7.6 Middle 18.7 8.1 32.9 103.3 23 815622 804263 < 0.2 0.8 3.8 0.5 48 18.7 8.1 32.9 103.3 7.9 6.4 26 27 6.6 0.3 45 18.7 8.1 32.9 104.6 8.0 7.0 89 <0.2 0.8 18.7 8.1 32.9 104.8 8.0 Bottom 6.6 0.4 48 18.7 104.9 90 0.8 1.0 18.5 0.3 45 0.9 Surface 18.5 8.2 8.2 31.7 92.1 1.0 0.3 18.5 31.7 92.1 7.2 2.9 15 44 0.9 5.9 0.3 13 18.4 7.2 4.3 8 48 0.9 10:40 Middle 8.2 92.3 825668 806948 Cloudy Moderate 31.8 <0.2 5.9 0.3 13 18.4 8.2 31.8 92.3 7.2 4.4 48 <0.2 10.8 0.3 35 18.4 8.2 31.8 94.6 7.3 6.6 16 53 <0.2 0.9 Bottom 18.4 8.2 31.8 94.7 7.4 10.8 0.3 38 18.4 31.8 94.8 7.4 6.5 15 52 < 0.2 0.8 1.0 0.5 252 18.4 8.2 32.2 91.5 7.1 4.1 8 44 < 0.2 0.8 Surface 18.4 8.2 32.2 91.5 18.4 8.2 32.2 91.5 7.1 4.1 9 46 0.8 1.0 0.5 273 <0.2 6.3 49 5.6 0.5 252 18.4 8.2 32.3 91.1 7.1 8 <0.2 0.9 8.2 91.1 18.4 32.3 822086 817789 C3 Cloudy Moderate 08:19 11 2 Middle 10 49 < 0.2 47 <0.2 8.2 32.3 91.1 0.9 5.6 0.5 273 18.4 6.3 9 7.4 11.2 14 54 0.7 10.2 0.4 262 18.4 8.2 32.3 96.1 7.4 <0.2 Bottom 18.4 8.2 32.3 96.1 10.2 0.4 284 18.4 8.2 32.3 96.1 7.4 11.9 13 52 0.8 1.0 0.1 348 18.9 8.1 32.9 102.8 5.8 46 0.6 Surface 18.9 8.1 32.9 102.9 1.0 0.1 320 18.9 8.1 32.9 103.0 7.9 5.7 8 46 <0.2 0.8 IM1 Misty Moderate 10:02 4.6 Middle 67 817968 807113 0.2 3.6 338 18.9 6.8 11 87 0.2 0.1 8.1 32.9 103.5 7.9 0.8 Bottom 18.9 8.1 32.9 103.6 7.9 3.6 8.1 32.9 103.6 87 0.2 0.8 0.1 311 18.9 7 9 6.8 10 0.3 18.8 6.6 8 1 326 46 0.8 Surface 18.8 8.1 32.6 103.0 0.3 8.1 6.6 10 45 1.0 18.8 32.6 103.0 0.2 0.8 7.5 10 3.2 0.3 353 18.7 8.1 32.7 103.4 7.9 86 0.2 0.6 10:09 8.1 32.7 103.5 818162 806160 0.2 IM2 Mistv Moderate 6.4 Middle 18.7 3.2 325 18.7 7.5 10 86 0.3 0.2 5.4 0.2 351 18.7 8.3 10 90 <0.2 0.7 Bottom 18.7 8.1 32.6 105.1 5.4 0.2 356 18.7 8.1 32.6 105.2 8.1 8.2 11 90 <0.2 0.8 1.0 0.3 337 18.8 46 Surface 8.1 1.0 0.3 310 18.8 8.1 32.5 102 7.9 7.1 9 46 <0.2 8.0 7.9 7.9 8.3 8.2 87 87 0.2 0.7 3.3 0.3 341 18.8 8.1 32.7 IM3 Mistv Moderate 10:16 6.6 Middle 18.8 8.1 32.7 103.1 818779 805586 0.2 0.7 103 : 10 3.3 0.3 314 18.8 12 11 5.6 0.2 340 18.7 104.8 8.0 9.0 9.1 90 0.7 8.1 32.7 104.6 < 0.2 Bottom 18.7 8.1 32.7 8.1 18.7 8.1 32.7 104.9 0.2 313 90 <0.2 0.6 0.6 18.9 32.6 6.3 82 0.8 100.1 9 8.1 32.7 100.1 Surface 18.9 1.0 18.9 32.7 100.1 7.7 6.2 10 82 <0.2 0.8 <0.2 4.1 0.6 354 18.9 7.1 10 90 0.8 10:25 8.2 Middle 8.1 32.7 100.8 819734 804594 IM4 Misty Moderate 18.9 < 0.2 0.8 4 1 0.6 326 18.9 8.1 32.7 100.9 7.7 7.1 11 90 7.2 0.5 350 18.9 32.7 7.9 8.4 10 91 <0.2 0.8 Bottom 18.9 8.1 32.7 103.3 7.9 72 0.5 322 18.9 8.1 32.7 79 8.5 11 91 <0.2 0.8 1.0 0.8 16 18.9 8.1 32.8 100.7 7.7 4.9 11 43 <0.2 0.7 Surface 8.1 32.8 100.8 1.0 0.8 16 18.9 8.1 32.8 100.8 7.7 4.8 10 43 <0.2 0.9 5.0 10 3.3 0.8 18 18.9 8.1 32.8 102.4 7.8 88 <0.2 0.8 820730 804853 IM5 Misty Moderate 10:31 6.6 Middle 18.9 8.1 32.8 102.6 <0.3 17 87 3.3 0.9 18 18.9 8.1 32.8 102.7 7.9 5.1 <0.2 0.7 5.6 0.7 18.9 6.7 15 91 <0.2 0.9 20 8.1 32.7 104.0 8.0 Bottom 18.9 8.1 32.7 104.3 8.0 18.9 6.7 16 91 1.0 0.3 18.8 32.9 3.6 8.1 102.2 7.8 45 0.3 0.9 Surface 18.8 8.1 32.9 0.3 18.8 7.8 3.6 45 0.9 3.6 0.2 18.8 7.9 4.5 86 87 <0.2 0.8 10:39 7.2 Middle 102.9 821041 805850 0.2 Misty Moderate 8.2 3.6 0.2 18.8 8.2 32.9 79 4.4 6 45 6.2 0.2 18.8 8.2 32.9 103 5 7.9 5.5 6 91 <0.2 0.7 Bottom 8.2 32.9 103.6 7.9 6.2 0.2 18.8 8.2 7.9 5.5 91 0.8 128 19.1 1.0 0.2 8.1 32.7 99.9 7.6 3.2 4 42 <0.2 0.8 Surface 19 1 8.1 32.7 99.9 32.7 99.9 8.1 7.6 3.3 43 1.0 0.2 131 19.1 5 <0.2 0.9 88 0.8 125 4.8 7 4.2 0.2 19.0 8.1 32.7 7.7 <0.2 100.4 IM7 Misty Moderate 10:46 8.4 Middle 19.0 8.1 32.7 100.5 821359 806841 < 0.2 4.9 8 0.2 19.0 100.5 7.4 0.2 127 19.0 32.7 5.9 90 <0.2 0.8 Bottom 19.0 8.1 32.7 102.1 7.8 7.4 0.3 138 19.0 8.1 32.7 7.8 5.9 90 1.0 0.0 42 18.4 91.0 5.6 44 <0.2 0.7 Surface 18.4 8.2 31.9 91.0 1.0 0.0 42 18.4 8.2 31.9 91.0 7.1 5.6 10 45 <0.2 0.8 <0.2 3.8 0.1 27 18.3 8.2 31.9 91.1 7.1 5.5 10 48 0.9 IM8 Cloudy Moderate 10:17 7.5 Middle 18.3 8.2 31.9 91.2 821829 808143 <0.2 0.8 49 3.8 0.1 28 18.3 8.2 31.9 91.2 7 1 5.5 q 0.8 <0.2 273 285 8.2 7.2 6.5 0.0 18.3 31.9 92.6 5.4 9 51 0.8 Bottom 18.3 8.2 31.9 92.7 7.2 18.3

DA: Depth-Averaged

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

Water Quality Monitoring Results on 20 January 22 during Mid-Flood Tide Total Alkalinity Coordinate Coordinate Current DO Saturation Dissolved Suspended Solids Weather Sampling Water Water Temperature (°C) Salinity (ppt) Turbidity(NTU) Nickel (µg/L) Monitoring Oxygen (mg/L) (µg/L) Current Sampling Depth (m) HK Grid HK Grid Value DA Value DA Condition Condition Time Depth (m) (m/s) Value Average Value Average Value Average Value Average Value DA Value DA Value DA Value DA (Northing) (Easting) 18.3 1.0 0.1 267 92.4 7.2 42 < 0.2 0.7 Surface 8.2 92.4 1.0 0.1 276 18.3 8.2 31.9 92.4 7.2 7.3 10 43 <0.2 0.8 3.6 0.1 233 18.3 8.2 31.9 92.8 7.2 9.0 9 45 46 <0.2 0.9 IM9 Cloudy Moderate 10:13 7.2 Middle 18.3 8.3 31.9 92.8 822073 808830 < 0.2 3.6 0.1 252 18.3 8.3 31.9 92.8 7.2 9.7 8 6.2 0.1 237 18.2 8.3 31.9 94.1 7.3 11.1 8 48 <0.2 0.5 18.2 8.3 31.9 94.2 7.3 Bottom 6.2 0.1 246 18.2 11.3 49 0.6 18.3 1.0 0.4 8.9 43 Surface 18.3 8.2 8.2 92.1 31.9 1.0 0.4 353 18.3 7.2 9.2 13 43 <0.2 0.6 3.5 0.4 321 18.2 10.1 11 48 47 0.2 0.8 10:06 6.9 Middle 8.2 92.4 47 822389 809787 0.2 Cloudy Moderate 31.9 3.5 0.5 344 18.2 8.2 31.9 92.4 7.2 10.4 12 0.2 0.8 5.9 0.3 328 18.2 8.2 31.9 93.1 7.3 10.3 12 52 <0.2 0.8 Bottom 18.2 8.2 31.9 93.2 7.3 5.9 0.3 334 18.2 31.9 93.2 7.3 10.2 11 51 < 0.2 0.9 1.0 0.6 320 18.3 8.2 32.0 92.3 7.2 8.0 10 43 < 0.2 0.7 92.3 Surface 18.3 8.2 32.0 18.3 8.2 32.0 92.3 7.2 8.1 44 0.8 1.0 0.6 351 9 <0.2 48 3.8 0.5 315 18.3 8.2 32.0 92.3 7.2 9.6 9 <0.2 0.8 8.2 92.3 18.3 32.0 822040 811454 IM11 Cloudy Moderate 09:57 7.6 Middle 10 48 < 0.2 92.3 47 <0.2 8.2 32.0 10 0.7 3.8 0.5 332 18.3 9.6 92.6 7.2 7.2 11.4 10 52 0.7 6.6 0.3 324 18.3 8.2 32.0 92.6 <0.2 Bottom 18.3 8.2 32.0 6.6 0.4 324 18.3 8.2 32.0 92.6 7.2 11.4 11 51 0.8 1.0 0.2 288 18.3 8.2 32.0 92.1 7.2 9.8 15 47 Surface 18.3 8.2 32.0 92.1 1.0 0.2 308 18.3 8.2 32.0 92.1 7.2 10.0 14 46 <0.2 0.8 47 0.2 280 18.3 91.9 7.1 10.4 15 48 <0.2 <0.2 0.9 Cloudy IM12 Moderate 09:50 9.4 Middle 8.2 32.0 91.9 14 821467 812042 4.7 0.2 285 18.3 8.2 32.0 91.9 7.1 10.5 14 49 0.8 270 10.6 <0.2 8.4 0.2 18.3 8.2 32.0 92.2 7.2 13 52 0.9 Bottom 18.3 8.2 32.0 92.3 7.2 0.2 287 8.2 32.0 92.3 72 51 <0.2 8.4 18.3 13.6 14 1.0 18.3 2.9 8.2 94 2 Surface 18.3 8.2 32.2 94.3 1.0 8.2 32.2 7.3 3.0 11 18.3 7.3 2.9 08:51 5.7 Middle 819975 812659 SR1A Cloudy Moderate 2.9 4.7 18.3 3.4 10 Bottom 18.3 8.2 32.2 95.7 7.4 4.7 18.3 8.2 32.2 95.8 7.4 3.4 11 1.0 0.1 18.2 9.3 48 0.8 Surface 8.2 31.9 1.0 0.1 81 18.2 8.2 31.9 93.7 7.3 9.3 5 49 0.2 0.9 SR2 Cloudy Moderate 08:38 3.9 Middle 821445 814171 0.2 0.8 9.9 10.0 53 0.8 2.9 0.1 82 18.2 7.4 7.5 6 <0.2 8.2 8.2 31.9 95.5 95.8 95.7 Bottom 18.2 31.9 7.5 18.2 8.2 52 < 0.2 2.9 0.1 82 0.8 0.0 18.5 4.4 18.5 8.2 91.5 Surface 31.8 1.0 0.0 18.4 31.8 91.5 7.1 4.5 4.4 0.1 93 18.4 5.4 -SR3 10:23 8.8 Middle 8.2 91.7 822154 807553 Cloudy Moderate 18.4 31.8 91.7 4.4 0.1 18.4 8.2 31.8 7.1 5.6 5 7.8 0.1 75 18.4 7.3 7.2 Bottom 18.4 8.2 31.8 93.8 7.8 0.1 80 18.4 8.2 31.8 93.8 7.3 7.4 4 1.0 0.2 99 18.9 8.1 33.0 101.1 7.7 3.8 8 Surface 8.1 33.0 101.1 1.0 0.2 105 18.9 8.1 33.0 101.1 7.7 3.8 9

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8.1

8.1

8.1

8.0

7.9

8.1

8.1

8.1

8.2

8.2

18.9

18.9

18.9

18.9

18.8

18.5

18.5

18.2

33.0

33.0

33.0

33.1

33.1

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33.1

33.0

32.4

32.5

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32.0

32.0

33.0

33.0

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33.1

33.0

32.4

32.5

32.5

32.0

101.4

101.4

102.4

103.1

104.2

101.8

87.9

87.3

87.3

87.8

87.8

96.0

96.1

32.0 96.9

101.4

102.6

103.2

104.4

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97.0 7.5 7.6 6.2

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11

11

15

16

13

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807828

810709

814748

823742

811603

-

-

817199

816575

817965

823638

820411

DA: Depth-Averaged

SR4A

SR6A

SR7

SR8

Misty

Misty

Misty

Cloudy

Cloudy

Moderate

Moderate

Moderate

Moderate

Moderate

09:23

09:06

08:26

07:52

09:43

8.8

3.2

4.0

16.5

4.6

Middle

Bottom

Surface

Middle

Bottom

Surface

Middle

Bottom

Surface

Middle

Bottom

Surface

Middle

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

4.4

4.4

7.8

1.0

1.0

22

2.2

1.0

1.0

3.0

3.0

1.0

1.0

8.3

8.3

15.5

15.5

1.0

1.0

3.6

3.6

0.1

0.1

0.1

0.1

0.0

0.0

0.0

0.0

0.0

0.0

0.2

0.2

0.2

0.2

0.2

0.2

79

85

40

288

288

292

296

277

293

281

295

52

55

73

18.9

18.9

18.9

18.9

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18.9

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18.8

18.5

18.5

18.5

18.5

18.5

18.5

18.2

18.2

18.2

18.2

18.9

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

22 January 22 during Mid-Ehb Tide

Water Qua	lity Monite	oring Res	ults on		22 January 22	during Mid-	Ebb Tid	e																	
Monitoring	Weather	Sea	Sampling	Water	Sampling De	epth (m)	Current Speed	Current	Water Te	emperature (°C)		pН	Salin	ity (ppt)		aturation %)	Dissolved Oxygen	Turbidity(NTU)	Suspende (mg		Total Alkalinity (ppm)	Coordinate HK Grid	Coordinate HK Grid	Chromium (µg/L)	Nickel (µg/L)
Station	Condition	Condition	Time	Depth (m)			(m/s)	Direction	Value	Average		Averag		Average	Value	Average	Value DA	Value DA	Value	DA	Value DA	(Northing)	(Easting)	Value DA	
					Surface	1.0	0.1 0.1	184 191	18.8 18.8	18.8	8.2	8.2	32.8 32.8	32.8	103.2 103.1	103.2	7.9 7.9 7.9	4.8	8 9		84 84			<0.2 <0.2	0.9
C1	Misty	Moderate	15:11	7.6	Middle	3.8	0.1	192 210	18.8 18.8	18.8	8.2	8.2	32.9 32.9	32.9	103.2 103.3	103.3	7.9	5.1 5.1 5.3	7	8	87 87	815616	804261	<0.2 <0.2	0.8
					Bottom	6.6 6.6	0.2	206 224	18.7 18.7	18.7	8.2	8.2	33.0 33.0	33.0	105.0 105.2	105.1	8.1 8.1	6.1 6.1	7		91 91			<0.2 <0.2	0.8
					Surface	1.0	0.0	8	18.6 18.6	18.6	8.2	8.2	31.3	31.3	94.6 94.5	94.6	7.3 7.3 7.3	2.8	3		44			<0.2	1.1
C2	Fine	Rough	14:12	8.3	Middle	4.2	0.3	48 52	18.5 18.5	18.5	8.2 8.3	8.3	31.6 31.6	31.6	94.3 94.4	94.4	7.3 7.3	2.4 2.5 3.6	4	4	48 48	825671	806950	<0.2 <0.2	1.0 1.1
					Bottom	7.3 7.3	0.3	58 62	18.4 18.4	18.4	8.2 8.2	8.2	31.9 31.9	31.9	94.3 94.4	94.4	7.3 7.3	5.6 5.6	4		51 51			<0.2 <0.2	1.1
					Surface	1.0 1.0	0.3	120 120	18.5 18.5	18.5	8.2 8.2	8.2	32.1 32.1	32.1	92.8 92.8	92.8	7.2	1.8	3		44 44			<0.2 <0.2	1.1
СЗ	Fine	Rough	16:09	11.9	Middle	6.0 6.0	0.3	119 120	18.6 18.6	18.6	8.2 8.2	8.2	32.2 32.2	32.2	91.6 91.6	91.6	7.2 7.1 7.1	1.8 1.8	3	3	48 48	822087	817785	<0.2 <0.2	1.1
					Bottom	10.9	0.3	108 116	18.5	18.5	8.2	8.2	32.3 32.3	32.3	90.4	90.4	7.0 7.0	2.0	3 4		51 51			<0.2	1.0
					Surface	1.0	0.1	177 188	19.0	19.0	8.1 8.1	8.1	32.7 32.7	32.7	104.1	104.1	8.0	5.4 5.5	7		82 82			<0.2	0.7
IM1	Misty	Moderate	14:53	5.0	Middle	-	-	-	-	-	-	-	-		-	-	- 8.0	- 6.0	-	9	- 85	817957	807128	- <0.2	
					Bottom	4.0	0.1	185 201	18.9	18.9	8.1 8.1	8.1	32.8 32.8	32.8	104.2	104.3	8.0 8.0	6.6	11		87			<0.2	0.8
					Surface	1.0	0.1	127	18.9	18.9	8.1 8.1	8.1	32.7 32.7	32.7	102.7 102.6	102.7	7.9	6.9 7.1	9		46 46			<0.2 <0.2	0.9
IM2	Misty	Moderate	14:46	7.0	Middle	3.5 3.5	0.0	76 76	18.9	18.9	8.1 8.1	8.1	32.7	32.7	102.8	102.9	7.9 7.9 7.9	8.0 8.1 7.8	10	10	87 87 75	818172	806149	<0.2 <0.2 <0.2	0.0
					Bottom	6.0 6.0	0.1	137 138	18.7	18.7	8.1 8.1	8.1	32.8 32.9	32.9	105.2 105.4	105.3	8.1 8.1 8.1	8.4 8.5	11 10		91			<0.2	0.7
					Surface	1.0 1.0	0.1	320 338	18.9	18.9	8.1 8.1	8.1	32.7 32.7	32.7	103.4 103.4	103.4	7.9	6.8 6.8	10		44 44			<0.2 <0.2	0.8
IM3	Misty	Moderate	14:39	7.0	Middle	3.5 3.5	0.1	346 349	18.9	18.9	8.1 8.1	8.1	32.7 32.7	32.7	103.7	103.8	7.9 7.9 8.0	7.2 7.3 7.6	9	9	91 76	818800	805597	<0.2 <0.2 <0.2	0.6
					Bottom	6.0	0.1	12	18.7	18.7	8.2	8.2	32.9	32.9	105.5	105.6	8.1 8.1 8.1	8.7 8.8	9		94			<0.2	0.6
					Surface	1.0	0.2	264 289	19.0	19.0	8.1 8.1	8.1	32.6 32.6	32.6	103.5	103.6	7.9	4.1 4.1	13 12		83			<0.2 <0.2 <0.2	0.6 0.6
IM4	Misty	Moderate	14:30	7.6	Middle	3.8	0.1	308	18.9	18.9	8.2	8.2	32.7 32.7	32.7	104.2 104.4	104.3	8.0 8.0	5.8 5.6	11	10	90 89	819739	804608	<0.2 <0.2 <0.2	0.0
					Bottom	3.8 6.6	0.1	316 325	18.9	18.8	8.2	8.2	32.8	32.8	105.1	105.2	8.1 8.1	5.8 6.7	10 8 7		95			<0.2 <0.2 <0.2	0.6
					Surface	6.6 1.0	0.1	344 354	18.8	18.9	8.2	8.1	32.8	32.7	105.3	101.2	7.7	6.7 4.3	6		95 46			<0.2	0.6
IM5	Misty	Moderate	14:23	8.4	Middle	1.0 4.2	0.2	326 2	18.9	18.9	8.1	8.1	32.7 32.6	32.6	101.2	101.2	7.7 7.7 7.7	5.4 5.3	7 8	8	46 88 75	820716	804877	<0.2 <0.2 <0.2	0.7
					Bottom	4.2 7.4	0.2	13	18.9	19.0	8.1	8.1	32.6 32.6	32.6	101.2	103.1	7.9	5.3 6.1	9		90			<0.2	0.7
					Surface	7.4 1.0	0.2	13 250	19.0 19.1	19.1	8.1	8.1	32.6 32.5	32.5	103.2	100.9	7.9	6.1 2.3	6 14		90 46			<0.2	0.8
IM6	Misty	Moderate	14:16	7.6	Middle	1.0 3.8	0.1 0.1	252 242	19.1 19.1	19.1	8.1 8.1	8.1	32.5 32.6	32.6	100.9 100.5	100.5	7.7 7.7	2.3 3.3 3.2	14 14	14	45 88 75	821064	805816	<0.2 <0.2 <0.2	0.8
					Bottom	3.8 6.6	0.1 0.1	251 290	19.1 19.1	19.1	8.1 8.1	8.1	32.6 32.7	32.7	100.5 101.9	102.1	7.7 7.8 7.8	3.3 4.2	14 13		88 91			<0.2	0.7
					Surface	6.6 1.0	0.1	308 241	19.1 19.1	19.1	8.1 8.2	8.2	32.7 32.5	32.6	102.2 101.9	101.9	7.8	4.1 3.4	13 9		91 47			<0.2 <0.2	0.8
IM7	Misty	Moderate	14:11	8.4	Middle	1.0 4.2	0.2 0.1	257 237	19.1 19.0	19.0	8.2 8.2	8.2	32.6 32.7	32.7	101.9 102.0	102.1	7.8 7.8	3.5 4.9 4.4	9 10	10	47 88 75	821348	806826	<0.2 <0.2 <0.2	0.6
	,				Bottom	4.2 7.4	0.1 0.1	248 166	19.0 19.0	19.0	8.2 8.2	8.2	32.7 32.6	32.6	102.1 103.5	103.6	7.8 7.9 7.9	5.0	10 12	-	90			<0.2	0.8
			 		Surface	7.4 1.0	0.1	178 69	19.0 18.5	18.5	8.2	8.2	32.6 31.6	31.6	103.7 93.9	93.9	7.9	5.0 3.4	12 3		90 44			<0.2 <0.2	0.8 1.1
IM8	Fine	Rough	14:43	8.1	Middle	1.0 4.1	0.3	69 65	18.5 18.4	18.4	8.2 8.2	8.2	31.6 31.8	31.8	93.8 93.6	93.6	7.3 7.3	3.4 8.2 6.5	3 4	4	44 48 48	821817	808146	<0.2 <0.2 <0.2	1.0
livio	riie	Nough	14.43	0.1		4.1 7.1	0.4	67 64	18.4 18.4		8.2 8.2		31.8 31.9		93.6 93.6		7.3 7.3	8.2 7.9	4	-	48 52	021017	000140	<0.2 <0.2	1.0
DA: Depth-Ave			1		Bottom	7.1	0.2	67	18.4	18.4	8.2	8.2	31.9	31.9	93.6	93.6	7.3 7.3	7.9	4		52			<0.2	1.0

22 January 22 during Mid-Ebb Tide

Water Qua	lity Monit	oring Resu	lts on		22 January 22	during Mid-Eb	b Tide																	
Monitoring	Weather	Sea	Sampling	Water	Sampling De	-	rrent peed Current	Water 1	emperature (°C)		pН	Salinity (ppt)	DO	Saturation (%)	Dissolved Oxygen	Turb	idity(NTU)	Suspende (mg		Total Alkalinity (ppm)	Coordinate HK Grid	Coordinate HK Grid	Chromiur (µg/L)	Nickel (μg/L)
Station	Condition	Condition	Time	Depth (m)			m/s) Direction	Value	Average	Value	Average	Value Average	Valu	e Average	Value DA	Valu	ue DA	Value	DA	Value DA	(Northing)	(Easting)	Value D	A Value DA
					Surface		0.3 71 0.3 72	18.7 18.7	18.7	8.2 8.2	8.2	31.3 31.3	93.:		7.2	1.8		3		40			<0.2	1.2
IM9	Fine	Rough	14:48	8.0	Middle	4.0	0.3 65	18.5	18.5	8.2	8.2	31.6	92.3	92.3	7.2	3.9	3.5	4	4	47	822114	808828	<0.2	0 1.1 44
					5 "		0.3 69 0.3 64	18.5 18.5	40.5	8.2 8.2		31.6 31.8 31.8	92.	,	7.2 7.2 7.2	3.9 4.9		4		47 51			<0.2	1.2
					Bottom	7.0	0.4 69 0.4 74	18.5 18.7	18.5	8.2	8.2	31.8	92.	3 92.0	7.2 7.2	4.9)	4		51 44			<0.2	1.0
					Surface	1.0	0.5 78	18.7	18.7	8.2	8.2	31.3 31.3	93.		7.2	1.6	6	4		44			<0.2	1.0
IM10	Fine	Rough	14:55	8.5	Middle		0.5 84 0.5 84	18.5 18.5	18.5	8.2	8.2	31.7 31.7	92.		7.2	1.9		4	4	47 48	822381	809772	<0.2	1.1 1.1
					Bottom	7.5	0.2 102	18.5	18.5	8.2	8.2	32.0	92.	926	7.2	2.5	5	4		52			<0.2	1.2
					Surface		0.2 111 0.3 108	18.5 18.5	18.5	8.2 8.2	8.2	32.0 32.0	92.	-	7.2 7.2	2.5	_	3		52 42			<0.2	1.2
							0.3 109 0.3 112	18.5 18.4		8.2 8.2		32.0	93.3	2	7.2 7.2	2.2	7	3		42 49 47			<0.2 <0.2	1.1
IM11	Fine	Rough	15:05	9.8	Middle	4.9	0.3 118	18.4	18.4	8.2	8.2	32.0	92.	92.9	7.2	2.7	7 2.9	3	3	49	822051	811452	<0.2	1.3
					Bottom		0.3 106 0.3 110	18.4 18.4	18.4	8.2	8.2	32.0 32.0	92.		7.2 7.2	3.8		3		51 51			<0.2	1.0
					Surface		0.2 97	18.4	18.4	8.2	8.2	32.0 32.0	93.		7.3	2.4		3		42 42			<0.2	1.2
IM12	Fine	Rough	15:10	8.1	Middle	4.1	0.2 102 0.3 100	18.4 18.4	18.4	8.2 8.2	8.2	32.0	93.3	93.3	7.3 7.2	2.7	28	3 4	4	49	821458	812026	<0.2	1.1
							0.3 108 0.2 102	18.4 18.4		8.2 8.2		32.0	93.3	3	7.2	3.2	7	4		49 52			<0.2	1.1
					Bottom	7.1	0.2 104	18.4	18.4	8.2	8.2	32.0	93.	93.2	7.2	3.2	2	4		52			<0.2	1.1
					Surface	1.0		18.5 18.5	18.5	8.2	8.2	32.0 32.0	93.		7.2 7.2 7.2	1.9		4		-			-	-
SR1A	Fine	Moderate	15:35	5.3	Middle	2.7 2.7		-	-	-			÷	-	- 1.2	-	1.9	-	4		819979	812659		
					Bottom	4.3		18.5	18.5	8.2	8.2	32.0	94.		7.3 7.3	1.8		4		-			-	-
					Surface	4.3 1.0	0.2 46	18.5 18.5	18.5	8.2	8.2	32.0 32.0 32.0 32.0	94.	1	7.3 7.2	1.8		3 5		43			<0.2	1.1
							0.2 49	18.5	10.5	8.2	0.2	32.0	93.	1 93.1	7.2	2.1		3		44			<0.2	1.0
SR2	Fine	Moderate	15:49	4.7	Middle	-		-	-	-	-	- 1	-	-	-	-	2.1	-	4	- 46	821485	814161	-	- 1.1
					Bottom		0.2 51 0.2 55	18.5 18.5	18.5	8.2	8.2	32.0 32.0	93.		7.2 7.2	2.1		3		49 49			<0.2	1.1
					Surface	1.0	0.1 58 0.1 59	18.6 18.6	18.6	8.2	8.2	31.4 31.4	94.0	946	7.3 7.3	1.8	3	4		-			-	-
SR3	Fine	Rough	14:38	8.5	Middle	4.3	0.2 65	18.5	18.5	8.2 8.2	8.2	31.7	94.	946	7.3	3.2	2 20	5	5		822165	807571	-	-
O NO	1 1110	rtougn	14.00	0.0			0.2 70 0.3 65	18.5 18.4		8.2 8.2		31.7	94.)	7.3 7.4	3.2 6.2	2	5 5	Ü	-	022100	007071	-	-
					Bottom	7.5	0.3 68	18.4	18.4	8.2	8.2	31.9	94.	7 94.7	7.4	6.3	3	5		-			-	-
					Surface		0.2 83 0.2 87	19.0 19.0	19.0	8.1	8.1	32.7 32.7	104		8.0 8.0 8.0	3.6		9		-			-	-
SR4A	Misty	Moderate	15:31	8.8	Middle		0.2 76 0.2 78	19.0 19.0	19.0	8.2 8.2	8.2	32.8 32.8	105		8.0 8.1	4.2		9	9		817193	807798		
					Bottom	7.8	0.2 60	18.6	18.6	8.2	8.2	33.1	106	3 106.4	8.2 8.2	5.9)	9		-			-	-
					Surface		0.2 65 0.1 27	18.5 19.2	19.2	8.2		33.2 32.8 32.8	106		8.2	6.0 3.1		7					-	-
					Surface	1.0	0.1 27	19.2	19.2	8.1	8.1	32.8	106	1 100.0	8.1	3.0	_	8		-			-	-
SR5A	Misty	Moderate	15:46	3.2	Middle	-		-	-	Ė	-	-	Ė	-	-	1	3.8		6	-	816594	810678	Ė.	
					Bottom		0.1 32 0.1 33	19.2 19.2	19.2	8.1	8.1	32.7 32.7	106		8.1 8.1	4.5		5		-			-	-
					Surface	1.0	0.0 42 0.0 44	19.2 19.2	19.2	8.1 8.1	8.1	32.8 32.8	104	6 104 7	8.0	5.9		7 8		-			-	-
SR6A	Misty	Moderate	16:30	4.0	Middle	-		19.2		-	_		104.		8.0	- 0.0	6.0	-	8		817956	814721		. L.
O'NO'N	moty	Moderate	10.00	4.0		3.0	 0.0 44	19.2		8.1		32.8	105	0	8.0	6.0		- 8	Ü	-	011000	011121	-	-
					Bottom	3.0	0.0 46	19.2	19.2	8.1	8.1	32.8	105	1 105.1	8.0	6.1		8		-			-	-
					Surface	1.0	0.6 95 0.7 97	18.5 18.5	18.5	8.2	8.2	32.4 32.4	88.		6.8 6.8 6.8	1.5	5	3		-			-	-
SR7	Fine	Rough	16:34	15.4	Middle	7.7	0.5 91 0.5 97	18.5 18.5	18.5	8.2 8.2	8.2	32.5 32.5	87.i		6.8	1.7	1.8	3	3		823627	823727		
					Bottom	14.4	0.3 75	18.5	18.5	8.2	8.2	32.5	88.	2 88.3	6.8	2.1		3		-			-	-
-						14.4 1.0	0.3 80	18.5 18.6		8.2 8.2		32.5	94.	3	6.8 7.3	2.1		3		-	1	1	-	-
					Surface	1.0	: :	18.6	18.6	8.2	8.2	32.0 32.0	94.		7.3 7.3	2.0	2	3		-			-	-
SR8	Fine	Moderate	15:16	5.1	Middle	-		-	-	Ė	-	-	-	-	-	-	2.4	-	3	-	820373	811628	- '	
					Bottom	4.1 4.1		18.5 18.5	18.5	8.2	8.2	32.0 32.0	95. 95.		7.4 7.4	2.7		3		-			-	-

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

22 January 22 during Mid-Flood Tide

Water Qua	lity Monit	toring Resi	ults on		22 January 22	during Mid-Flood T	ide																
Monitoring	Weather	Sea	Sampling	Water	Sampling D	Current Speed	Current	Water Te	emperature (°C)		ЭΗ	Salinity (ppt)	DO Saturation (%)	n Dissolve Oxyger	ed n	Turbidity(NTI		nded Solids mg/L)	Total Alkalinity (ppm)	Coordinate HK Grid	Coordinate HK Grid	Chromium (µg/L)	Nickel (µg/L)
Station	Condition	Condition	Time	Depth (m)	Sumpang 2	(m/s)	Direction	Value	Average	Value	Average		Value Avera	•	DA	Value D		DA	Value DA	(Northing)	(Easting)	Value DA	
					Surface	1.0 0.5 1.0 0.5	35 37	18.9 18.9	18.9	8.1 8.1	8.1	32.8 32.8	103.1 103.1		3.0	4.3	5		78 77			<0.2	0.9
C1	Misty	Moderate	10:14	7.2	Middle	3.6 0.5 3.6 0.5	30 31	18.8 18.8	18.8	8.1 8.1	8.1	32.8 32.8	104.7 105.0			5.8 5.8	6 6	6	86 86	815636	804241	<0.2 <0.2	2 0.8 0.9
					Bottom	6.2 0.4 6.2 0.5	28 30	18.4 18.4	18.4	8.1 8.1	8.1	33.1 33.2 33.1	106.4 106.5	5 8.2 8	3.2	6.8 6.8	8		90			<0.2 <0.2	0.8
					Surface	1.0 0.2 1.0 0.3	318 321	18.7 18.7	18.7	8.1 8.1	8.1	31.0 31.0	92.4 92.4			2.2	5 5		45 45			<0.2 <0.2	1.0
C2	Cloudy	Rough	11:41	8.9	Middle	4.5 0.2 4.5 0.2	354 326	18.6 18.6	18.6	8.1	8.1	31.1 31.1	91.4 91.		7.2	2.3 3		5	47 47 48	825703	806938	<0.2 <0.2	4.4
					Bottom	7.9 0.2 7.9 0.2	1 1	18.6	18.6	8.1 8.1	8.1	31.1 31.2 31.1	91.4 91.5		7.1	4.3	4		52 52			<0.2	1.1
					Surface	1.0 0.6	245	18.5	18.5	8.2	8.2	32.1 32.1 32.1	91.2	7.1	1	3.9	3		43			<0.2	1.1
СЗ	Cloudy	Moderate	09:39	10.5	Middle	1.0 0.6 5.3 0.5	264 243	18.5 18.5	18.5	8.2 8.2	8.2	32.1	91.2 91.3 91.	7.1	7.1	3.9 7.2 7	1 3	3	47	822125	817799	<0.2 <0.2 <0.2	1.0 1.2 1.1
	,				Bottom	5.3 0.6 9.5 0.3	266 248	18.5 18.5	18.5	8.2 8.2	8.2	32.1	91.7	7.1	7.1	7.2	3		48 52			<0.2	1.1
					Surface	9.5 0.3 1.0 0.2	272 12	18.5 19.0	19.0	8.2 8.1	8.1	32.1 32.7 _{32.7}	91.7 104.4 ₁₀₄	7.1 5 8.0	1	10.3 5.6	8		52 73			<0.2 <0.2	0.7
IM1	Misty	Moderate	10:31	5.2	Middle	1.0 0.2	13	19.0	-	8.1	-	32.7	104.5		3.0	5.7	8 -	8	73 - 78	817965	807143	<0.2 - <0.2	0.8
	wilsty	Woodrate	10.51	5.2	Bottom	4.2 0.2	- 13	18.9	18.9	8.1	8.1	32.7 32.7	105.0	4 8.0	3.0	6.1	7	- "	83	017303	007143	<0.2	0.9
					Surface	4.2 0.2 1.0 0.2	13	18.9 18.9	18.9	8.1 8.1	8.1	32.7 32.7 32.7	105.1 103.3 103	8.0	5.0	6.1 5.4	7		83 45			<0.2 <0.2	1.0 0.7
						1.0 0.2 3.4 0.2	1 358	18.9 18.9		8.1 8.1		32.7	103.4	7.9	7.9	5.4	11		45			<0.2	0.7
IM2	Misty	Moderate	10:37	6.8	Middle	3.4 0.2 5.8 0.3	329 5	18.9 18.9	18.9	8.1	8.1	32.7	103.8	8.0		6.8 8.0	9 9	10	87 87 89	818160	806175	<0.2 <0.2 <0.2	2 0.8 0.7 0.7
					Bottom	5.8 0.3 1.0 0.3	5 354	18.9	18.9	8.1	8.1	32.7	104.8	8.0	3.0	7.9	8		89 46			<0.2	0.8
					Surface	1.0 0.3	326 341	18.9	18.9	8.1	8.1	32.6	103.1	7.9 7	7.9	6.1	15		46			<0.2	0.8
IM3	Misty	Moderate	10:42	7.0	Middle	3.5 0.3 3.5 0.3	314	18.9	18.9	8.1	8.1	32.6 32.6	103.4	7.9		7.3	14	13	87 87	818797	805608	<0.2	0.9
					Bottom	6.0 0.3 6.0 0.3	333 344	18.9 18.9	18.9	8.1 8.1	8.1	32.7 32.7 32.7	104.3 104.7	8.0	3.0	8.9	11		90 90			<0.2	1.0
					Surface	1.0 0.5 1.0 0.5	355 327	18.9 18.9	18.9	8.1 8.1	8.1	32.6 32.6	100.9	7.7	7.7	7.2	11		82 83			<0.2	0.8
IM4	Misty	Moderate	10:50	8.8	Middle	4.4 0.5 4.4 0.5	357 328	18.9 18.9	18.9	8.1 8.1	8.1	32.6 32.5	101.1	2 7.7		8.8 9.0	10	10	86 86 85	819716	804600	<0.2 <0.2	0.8
					Bottom	7.8 0.4 7.8 0.4	351 323	18.9 18.9	18.9	8.1 8.1	8.1	32.6 32.6	101.4 101.4	4 7.8 7	7.8	9.5 9.6	9		86 86			<0.2 <0.2	0.8
					Surface	1.0 0.7 1.0 0.7	20 20	19.0 19.0	19.0	8.1 8.1	8.1	32.6 32.6	100.5 100.5	7.7	7.7	4.2	8		69 69			<0.2 <0.2	0.8
IM5	Misty	Moderate	10:57	7.8	Middle	3.9 0.6 3.9 0.7	25 27	19.0 19.0	19.0	8.1 8.1	8.1	32.6 32.6	100.7 100.8			5.1 5.1	3 9 10	9	87 87	820758	804875	<0.2 <0.2	2 0.9 0.8
					Bottom	6.8 0.7 6.8 0.7	26 28	19.0 19.0	19.0	8.1 8.1	8.1	32.6 32.6	102.0 102.1	1 7.8 7	7.8	6.7 6.7	10 10		91 91			<0.2 <0.2	0.8
					Surface	1.0 0.2 1.0 0.2	84 91	19.0 19.0	19.0	8.1 8.1	8.1	32.8 32.8	102.9 102.9	9 7.9	ŀ	7.9 7.9	7		46 45			<0.2 <0.2	0.8
IM6	Misty	Moderate	11:03	7.4	Middle	3.7 0.3 3.7 0.3	87 90	19.0	19.0	8.1	8.1	32.8 32.8	103.6 103.7	/	7.9	8.5 8.6		8	87 87	821039	805830	<0.2 <0.2	0.0
					Bottom	6.4 0.2	77	19.0	19.0	8.1 8.1	8.1	32.7 32.7 32.7	104.2 104.4	0.0	3.0	9.1	10		91			<0.2	0.9
					Surface	6.4 0.2 1.0 0.0 1.0 0.0	95 09	19.0 19.2 19.2	19.2	8.1	8.1	32.1 32.1 32.1	99.6	7.6		3.2 3.3	11 10	+	43			<0.2 <0.2 <0.2	0.8 0.7 0.9
IM7	Misty	Moderate	11:11	8.2	Middle	4.1 0.1	98 96	19.2	19.2	8.1 8.1	8.1	32.2	99.6	7.6	7.6	4.3	4 9	9	88 74	821346	806835	<0.2	0.9
					Bottom	4.1 0.1 7.2 0.1	96 103	19.2 19.1	19.1	8.1 8.1	8.1	32.2	101.8	7.6	7.8	4.3 5.6	9 7		90			<0.2	0.8
					Surface	7.2 0.1 1.0 0.1	111 273	19.1 18.5	18.5	8.1 8.2	8.2	32.3	93.3	7.8		5.6 2.2	7 6		91 40			<0.2 <0.2	1.1
IM8	Cloudy	Rough	11:06	8.1	Middle	1.0 0.1 4.1 0.1	290 299	18.5 18.4	18.4	8.2 8.2	8.2	31.3	92.3	7.2 7	7.2	2.2 2.8 2	7 9	8	40 47 46	821831	808163	<0.2 <0.2 <0.2	1.1 2 1.0 1.1
livio	Cidudy	Nough	11.00	0.1		4.1 0.1 7.1 0.1	326 270	18.4 18.4		8.2 8.2		31.7	92.3	7.2	7.0	2.8	9		47 52	021031	000103	<0.2 <0.2	1.0
DA: Depth-Ave					Bottom	7.1 0.1	283	18.4	18.4	8.2	8.2	31.8	92.2 92.	7.2	7.2	2.9	9		52			<0.2	1.1

22 January 22 during Mid-Flood Tide

Water Qua	lity Monit	oring Resu	ilts on		22 January 22	during Mid-Floo	d Tide																	
Monitoring	Weather	Sea	Sampling	Water	Sampling De	pth (m) Curr	ed Current	Water Te	emperature (°C)		рН	Salinit	ty (ppt)	DO Satura (%)	ation	Dissolved Oxygen	Turbidity(N	U) Sus	ended Solid: (mg/L)	Total Alkalinity (ppm)	Coordinate HK Grid	Coordinate HK Grid	Chromium (µg/L)	Nickel (µg/L)
Station	Condition	Condition	Time	Depth (m)		(m		Value	Average	Value	Average		Average	Value Ave		alue DA		DA Val	ie DA	Value DA	(Northing)	(Easting)	Value DA	
					Surface	1.0 0. 1.0 0.	2 281	18.4 18.4	18.4	8.2	8.2	31.8	31.8	92.5		7.2 7.2 7.2	3.7	5		44			<0.2	1.1
IM9	Cloudy	Rough	11:02	7.8	Middle	3.9 0. 3.9 0.		18.4 18.4	18.4	8.2 8.2	8.2	31.8 31.8	31.8	92.6 92.6		7.2	4.7	5.0	- 8	47 47	822090	808805	<0.2	2 1.1 1.1
					Bottom	6.8 0. 6.8 0.		18.4 18.4	18.4	8.2 8.2	8.2	31.8	31.8	92.9 92.9		7.2 7.2	6.7	10		51 52			<0.2 <0.2	1.0
					Surface	1.0 O.	303	18.4	18.4	8.2	8.2	31.9	31.9	92.1 9		7.2	6.0	7		40			<0.2	1.3
IM10	Cloudy	Rough	10:55	9.2	Middle	4.6 0. 4.6 0.	286	18.4	18.4	8.2 8.2	8.2	31.9 31.9	31.9	04.0	11 9	7.2 7.1 7.1	7.0	5.8		47 47 46	822373	809811	<0.2	1.1
					Bottom	8.2 0.	3 288	18.4	18.4	8.2	8.2	31.8	31.8	91.8 g	11.8	7.1	7.5	5		52			<0.2	1.1
					Surface	8.2 0. 1.0 0.	278	18.4 18.4	18.4	8.2 8.2	8.2	31.8 31.9	31.9	91.8 93.0	3.0	7.1	7.5 5.3	5		52 43			<0.2 <0.2	1.2
IM11	Cloudy	Rough	10:45	8.5	Middle	1.0 0. 4.3 0.		18.4 18.4	18.4	8.2 8.2	8.2	31.9 31.9	31.9	93.0		7.2 7.2	5.2 6.8	6.5	6	44 48 48	822033	811471	<0.2 <0.2 <0.	1.2 2 1.1 1.1
IIVITI	Cloudy	Rough	10.45	6.5		4.3 0. 7.5 0.		18.4 18.4		8.2 8.2		31.9 31.9		93.0		7.2	6.9 7.3	7.5	_ °	48 51	622033	611471	<0.2	1.1
					Bottom	7.5 0. 1.0 0.	308	18.4	18.4	8.2	8.2	31.9 32.0	31.9	93.2	13.2	7.2 7.2 7.2	7.3	7		51			<0.2	1.1
					Surface	1.0 0.	310	18.4	18.4	8.2	8.2	32.0	32.0	92.5	12.5	7.2	9.5	6		40			<0.2	1.2
IM12	Cloudy	Moderate	10:39	9.1	Middle	4.6 0. 4.6 0.	323	18.4 18.4	18.4	8.2 8.2	8.2	32.0 32.0	32.0	92.5	2.5	7.2	9.5	3.4 6		44 44	821473	812030	<0.2	1.3
					Bottom	8.1 0. 8.1 0.		18.4 18.4	18.4	8.2	8.2	32.0 32.0	32.0	92.6 92.6	2.0	7.2 7.2	6.2	5		48 48			<0.2 <0.2	1.2
					Surface	1.0 - 1.0 -	-	18.5 18.5	18.5	8.2 8.2	8.2	32.0 32.0	32.0	91.2 91.1		7.1 7.1 7.1	2.1	2		-			-	-
SR1A	Cloudy	Calm	10:11	4.6	Middle	2.3 - 2.3 -	-	-	-	-	-	-	-	-	-	- '.1	-	2.2	3		819980	812654	-	
					Bottom	3.6 - 3.6 -	-	18.5 18.5	18.5	8.2 8.2	8.2	32.0 32.0	32.0	91.3 91.4		7.1 7.1	2.4	3		-			-	-
					Surface	1.0 0. 1.0 0.		18.3	18.3	8.2 8.2	8.2	32.0 32.0	32.0	02.4	13.4	7.3	6.7	5		44 44			<0.2	1.2
SR2	Cloudy	Moderate	09:59	5.1	Middle	1.0 0.		-		-	-	-		-		7.3	6.7	0.4	4	- 46	821461	814156	- <0.2	2 - 12
					Bottom	4.1 0.		18.3	18.3	8.2	8.2	32.0	32.0	93.7		7.3 7.3	12.2	3		47			<0.2	1.1
					Surface	4.1 0. 1.0 0.	221	18.3 18.6	18.6	8.2 8.1	8.1	32.0 31.1	31.1	93.8 92.0	20	7.3	12.2 1.7	5		-			<0.2	1.1
SR3	Cloudy	Rough	11:12	9.1	Middle	1.0 0. 4.6 0.	254	18.6 18.6	18.6	8.1 8.1	8.1	31.1 31.1	31.1	91.6	11.6	7.2 7.1	1.8	9 4	4	-	822162	807569	-	-
Orto	Cloudy	rtougii	11.12	3.1	Bottom	4.6 0. 8.1 0.		18.6 18.6	18.6	8.1 8.1	8.1	31.1 31.2	31.2	91.6		7.1 7.1 7.1	1.9 2.1	3		-	022102	007303	-	-
						8.1 0. 1.0 0.		18.6 19.1		8.1 8.1		31.2 32.7		91.3		7.1 7.1 7.8	2.1 3.1	3		-			-	-
					Surface	1.0 0. 4.4 0.	271	19.1	19.1	8.1	8.1	32.7 32.7	32.7	101.6	01.0	7.8 7.8	3.1	5		-			-	-
SR4A	Misty	Moderate	09:53	8.8	Middle	4.4 0. 7.8 0.	263	19.1	19.1	8.1 8.1	8.1	32.7 32.7	32.7	101.9	01.9	7.8	4.7	1.5	5		817203	807817		-
					Bottom	7.8 0.	259	19.1	19.1	8.1	8.1	32.7	32.7	103.1	03.0	7.9	5.6	5		-			-	-
					Surface	1.0 0. 1.0 0.		19.1 19.1	19.1	8.1 8.1	8.1	32.8 32.8	32.8	103.3	03.2	7.9 7.9 7.9	4.7	5		-			-	-
SR5A	Misty	Moderate	09:36	3.2	Middle		-	-	-	-	-	-	-	-	-	-	-	i.1	- 6	-	816604	810698	-	-
					Bottom	2.2 0. 2.2 0.		19.1 19.1	19.1	8.1 8.1	8.1	32.8 32.8	32.8	104.6 104.9		8.0	5.6 5.6	6		-			-	-
					Surface	1.0 0. 1.0 0.		19.1 19.1	19.1	8.0	8.0	32.9 32.9	32.9	99.2 99.3		7.6 7.6	4.6 4.6	10		-			-	-
SR6A	Misty	Moderate	09:10	4.2	Middle		-	-	-	-	-	-	-	-		7.6		1.9	9		817981	814727		
					Bottom	3.2 0.	2 249	19.1	19.1	8.0	8.0	32.9 32.9	32.9	400.0		7.6 7.7	5.2	9		-			-	-
					Surface	1.0 0.	2 37	19.0	18.5	8.1	8.1	32.3	32.3	89.4	19.4	6.9	3.6	3		-				
SR7	Cloudy	Moderate	09:11	14.7	Middle	1.0 0. 7.4 0.	44	18.5 18.5	18.5	8.1 8.1	8.1	32.3 32.3	32.3	89.4 89.3	19.3	6.9 6.9	3.6 4.9	1.6	3		823638	823758	<u>.</u>	
	,				Bottom	7.4 0. 13.7 0.	2 35	18.5 18.5	18.5	8.1 8.1	8.1	32.3 32.3	32.3	89.3 89.4	19.4	6.9 6.9	4.9 5.2	3	\exists	-			-	-
						13.7 0. 1.0 -	2 36	18.5 18.4		8.1 8.2		32.3 31.9		89.4		6.9 7.2	5.3 2.9	3	1-	-			-	+ -
					Surface	1.0 -		18.4	18.4	8.2	8.2	31.9	31.9	93.0	13.0	7.2	2.8	3		-			-	-
SR8	Cloudy	Calm	10:32	4.5	Middle	3.5		18.4	-	8.2	-	31.9	-	93.2	- -	7.2	2.9	2.9	4	-	820380	811618	-	-
					Bottom	3.5		18.4	18.4	8.2	8.2	31.9	31.9	93.2		7.2 7.2	2.9	5		-				-

during Mid-Ebb Tide

Satish Condision Condision Time Depth (m) Depth (m) (m) De	Water Qua	lity Wonit	oring Resu	its on		25 January 22	during Mid-Ebb Tid	е																					
Salor Condition of the poly of	Monitoring	Weather	Sea	Sampling	Water		Speed	Current	Water Te	mperature (°C)	р	Н	Salin	ity (ppt)					Turbidity(NTU)									Nickel (µg/L)
Clearly Rough Ro	Station	Condition	Condition	Time	Depth (m)	Sampling De	ptn (m)	Direction	Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value DA
C1 Cloudy Rough 0525 7.8 Midde 3.0 0.5 280 190 190 11 0.5 1.8 1.3 23 23 101 191 0.7 7 7 7 8.8 8 8 8 8 8 8 8 8 8 8 8 8 8 8						Surface				19.0		8.1				101.1					7							ı T	
Cloudy Moderate																		7.7										.	
Bottom B	C1	Cloudy	Rough	05:25	7.8	Middle				19.0		8.1				101.0		_		5.9		8		48	815613	804231		<0.2	
Californ																				F				ŀ				ı F	
Californ						Bottom				19.0		8.1	32.3	32.3	101.0	101.0		7.7		F				ŀ			<0.2	ı F	
Case Couly Moderate Coul										40.0											3							$\overline{}$	
Column Moderate						Surface				19.2		8.0		30.0		99.5		7.6										ı İ	
Second S	C2	Cloudy	Moderate	06:48	11.1	Middle	5.6 0.4	155		10.4		8.0		31.0		07.8		7.0	2.7	3.7	3	4	48	18	825677	806062		1 -0 2	1.1
C3 Cloudy Moderate D5.01 02	Cloudy	Moderate	00.40	11.1	ivildule		149		19.4	8.0	0.0		31.0		31.0				5.7	3	4		40	023011	000302		J ~0.2	1.0	
Figure F						Bottom				19.3		8.0	31.5	31.5		96.6	7.4	7.4									<0.2		
C3 Plouly Moderate B 10																												-	
Cloudy Moderate Property Moderate Property						Surface				18.5		8.0		31.6		90.0				_							<0.2	1	1.3
Bottom 10.2																		7.0		-				ŀ				, ,	1.2
Bottom 10.2	C3	Cloudy	Moderate	05:07	11.2	Middle				18.6		8.0		31.7		89.3				2.9		3		48	822092	817819		<0.2	1.4 1.3
Moderate No.																				-								, l	1.3
Middle 1.0 0.4 195 19.0 19.0 19.0 8.1 8.1 32.0 32.0 10.4 10.4 7.7 7.7 7.7 7.8 3.8 3.8 4.5 6.1 4.5 5.0 4.5						Bottom				18.6		8.0		31.8		89.3		6.9		-							<0.2	, F	1.2
Middle Moderate D5:45 A						0				40.0		0.4		20.0		400.4													
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$						Suпасе	1.0 0.4			19.0		8.1	32.0			100.4		77		f	5			İ				ı İ	1.1
Bottom Side Side Side Side Side Side Side Side	IM1	Cloudy	Moderate	05:45	6.1	Middle	3.1 0.5	199	19.0	10.0	8.1	Ω 1	32.0			100.4		7.7	3.7	15	6	6		47	818345	806451	<0.2	1 -0 2	1.0
Moderate Moderate	IIVII	Cloudy	Woderate	03.43	0.1	ivildule				19.0		0.1				100.4				4.5		U		41	010343	000431		1 -0.2	
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$						Bottom				19.0		8.1	32.3			100.7		7.7									<0.2	4 I	
Moderate Discription Cloudy Cloudy Cloudy																													
Moderate Display Cloudy Moderate Display Cloudy Moderate Display Cloudy Moderate Display Cloudy Moderate Display Cloudy Moderate Display Cloudy Moderate Display Cloudy Moderate Display Cloudy Moderate Display Cloudy C						Surface				19.1		8.1				101.7				_								1	1.2
Moderate Cloudy Mode											-							7.8		-				ŀ				, ,	
Bottom 5.6 0.6 202 19.1 19.1 19.1 8.2 8.2 13.1 10.0 10.0 10.0 10.0 10.0 10.0 10.0	IM2	Cloudy	Moderate	05:53	6.6	Middle				19.1		8.2	32.1			102.1		+		3.7		4		47	819189	806225		<0.2	
Soliding Soliding																				-								, F	
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$						Bottom				19.1	8.2	8.2	32.1	32.1	102.0	102.0		7.8		F				ŀ			<0.2	ı F	
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$						0				40.0		0.4				400.4												T	1.2
IM7 Cloudy Moderate 06:16 7.7 Middle 3.9 0.4 196 19.2 19.2 8.1 8.1 31.3 31.3 100.0 100.1 7.7 7.7 6.8 5.1 7 6.8 5.1 7 6.8 6.8 6.7 0.4 190 19.2 19.2 8.1 8.1 31.3 31.3 100.2 100.2 100.2 7.7 7.7 6.8 6.8 6.7 0.4 190 19.2 19.2 8.1 8.1 8.1 8.1 8.1 8.1 8.1 8.1 8.1 8.1						Бипасе				19.3		8.1				100.1	7.7	77						İ			<0.2	ı İ	1.1
Bottom 6.7 0.4 190 19.2 19.2 19.2 8.1 8.1 31.3 100.2 100.2 7.7 7.7 6.8 5 48 < 0.2 1.1 < 0.2 1.1	IM7	Cloudy	Moderate	06:16	7.7	Middle	3.9 0.4	196		10.2	8.1	Ω 1				100.1	7.7	1.1	4.6	5.1	7	6		47	821337	806844		ا م	1.2
6.7 0.4 197 19.2 19.2 8.1 0.1 31.4 10.2 100.2 100.2 7.7 1.1 6.8 6 49 < 1.1	IIVI /	Cloudy	wouerate	00.10	1.1	iviluule		195		19.2	8.1	0.1				100.1				J. I	6	U		41	021337	000044		0.2	
8.1 31.4 100.2 7.7 6.8 6 49 < <0.2 1.1						Bottom				19.2		8.1				100.2		7.7									<0.2	4	
	<u></u>						6.7 0.4	197	19.2		8.1		31.4		100.2		7.7		6.8		6		49		<u> </u>		<0.2		1.1

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 Note: Monitoring at IM3, IM4, IM5, IM6, IM8, IM9, SR5A, SR6A, SR7 were terminated after 25 January 2022.

during Mid-Ebb Tide

water Qua	iity wioiiit	Utiliy Kest	iilo oii		25 January 22	auring Mia-	LDD IIUC																					
Monitoring	Weather	Sea	Sampling	Water	Sampling D	enth (m)	Current Speed	Current	Water Te	mperature (°C)		pН	Salin	ity (ppt)		aturation (%)	Dissolved Oxygen	Turbidity((NTU)	Suspended (mg/l		Total Alkalinity		rdinate CGrid	Coordinate HK Grid	Chromium (µg/L)	Nickel	(µg/L)
Station	Condition	Condition	Time	Depth (m)	Sampling D	epiii (iii)	(m/s)	Direction	Value	Average	Value	Avera	ge Value	Average	Value	Average	Value DA	Value	DA	Value	DA	Value DA		rthing)	(Easting)	Value DA	A Value	DA
					Surface	1.0	0.3	141 135	18.7 18.6	18.7	8.1 8.1	8.1	30.5 30.5	30.5	93.1 93.1	93.1	7.3 7.3 7.3	1.8 1.7		3		47 46				<0.2 <0.2	1.2	
IM10	Cloudy	Moderate	06:47	6.5	Middle	3.3	0.3	143 136	18.6 18.6	18.6	8.1	8.1	30.5 30.5	30.5	93.1 93.1	93.1	7.3 7.3	1.9 1.9	2.0	5 4	5	48 49	82	22252	809840	<0.2 <0.2	.2 1.2	1.2
					Bottom	5.5 5.5	0.3	160 167	18.6 18.6	18.6	8.1	8.1	30.5 30.5	30.5	94.3 94.6	94.5	7.4 7.4	2.4		6 7		52 51				<0.2	1.3	
					Surface	1.0	0.3	121	18.6 18.6	18.6	8.1	8.1	30.6	30.6	92.6 92.6	92.6	7.2	1.7		3 4		46 45				<0.2	1.3	
IM11	Cloudy	Moderate	06:39	7.1	Middle	3.6 3.6	0.3	121 114	18.6 18.6	18.6	8.1	8.1	30.6	30.6	92.5 92.5	92.5	7.2 7.2	1.4 1.4	3.1	3	3	48 49	9 82	21506	810556	<0.2 <0.2	12	1.3
					Bottom	6.1	0.3	141	18.6 18.6	18.6	8.1	8.1	30.7	30.7	92.5 92.6	92.6	7.2 7.2	6.1		3		51 52				<0.2	1.2	l
					Surface	1.0	0.3	117	18.6 18.6	18.6	8.1	8.1	30.6 30.6	30.6	92.8 92.8	92.8	7.2	1.5		4 5		46 47				<0.2	1.2	
IM12	Cloudy	Moderate	06:30	8.0	Middle	4.0	0.4	108	18.6	18.6	8.1	8.1	30.7	30.7	92.7 92.7	92.7	7.2 7.2 7.2	1.8	2.0	5 4	4	48 48	82	21159	811532	<0.2 <0.2	12	1.2
					Bottom	7.0	0.4	110	18.6 18.6	18.6	8.1	8.1	30.7	30.7	92.7 92.7	92.7	7.2 7.2 7.2	2.5		3		51				<0.2	1.3	ł
					Surface	1.0	0.0	85 81	18.6 18.6	18.6	8.1	8.1	31.0 31.0	31.0	91.7 91.7	91.7	7.1	1.7		3 4		-				-	-	1
SR1A	Cloudy	Moderate	05:53	5.1	Middle	2.6	0.0	96 99	-	-	-	-	-	-	-	-	7.1	-	3.1	-	4		8	19971	812657	-	-	-
					Bottom	4.1	0.0	70 68	18.7	18.7	8.1	8.1	31.2	31.2	92.5 92.7	92.6	7.2 7.2	4.4	-	5		-				-	-	ł
					Surface	1.0	0.5	41 39	18.6 18.6	18.6	8.1	8.1	31.0 31.0	31.0	92.3 92.4	92.4	7.2	2.8	-	2 2		48 47				<0.2	1.2	-
SR2	Cloudy	Moderate	05:36	4.2	Middle	-	0.6	18	-	-	-	-	-		-		7.2	-	3.1	-	3	- 47	7 82	21451	814186	- <0.		1.2
					Bottom	3.2	0.6	43	18.6 18.6	18.6	8.1	8.1	31.0	31.0	94.0 94.4	94.2	7.3 7.3	3.3	-	3		47				<0.2	1.0	ł
					Surface	1.0	0.5	193 191	19.5 19.5	19.5	8.0	8.0	30.6	30.6	101.3	101.3	7.8	2.6	-	3 4		-				-	-	-
SR3	Cloudy	Moderate	06:26	8.4	Middle	4.2	0.4	200	19.4	19.4	8.1 8.1	8.1	31.1	31.1	99.9	99.9	7.8 7.7 7.7	3.3	4.4	3 2	3	-	82	22147	807558		-	-
					Bottom	7.4	0.5	177 179	19.3	19.3	8.1	8.1	31.3	31.3	99.6 99.6	99.6	7.6 7.6 7.6	7.2		<2 <2		-				-	-	ł
					Surface	1.0	0.0	46 40	19.0 19.0	19.0	8.1	8.1	32.1	32.1	101.4 101.4	101.4	7.8	4.1		7		-				-	-	
SR4A	Cloudy	Calm	05:04	9.0	Middle	4.5 4.5	0.1	30 32	19.1	19.1	8.0	8.0	32.0	32.0	101.2	101.2	7.8 7.8 7.8	4.0	4.3	6	6		8	17203	807799	-	-	-
					Bottom	8.0 8.0	0.0	35 36	19.0	19.0	8.0	8.0	32.1	32.1	101.3	101.3	7.8 7.8 7.8	4.8		5		-				-	-	1
					Surface	1.0 1.0	-	-	18.9 19.0	19.0	8.2 8.2	8.2	20.0	30.8	89.0 88.5	88.8	6.9	2.9		<2 <2		-				-	-	
SR8	Cloudy	Moderate	06:16	4.0	Middle	-	-	-	-	-	-	-	-	-	-	-	6.9	-	6.5	-	3		82	20394	811623		-	-
					Bottom	3.0	-	-	18.8	18.8	8.4	8.4	30.6	30.5	82.1 78.2	80.2	6.4 6.3	10.1	-	3		=				-	-	1
DA: Denth-Ave	I .		1		I .	0.0	-		10.0		J U.7	1	1 00.0		10.2		U. I	10.2		U								

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: Monitoring at IM3, IM4, IM5, IM6, IM8, IM9, SR5A, SR6A, SR7 were terminated after 25 January 2022.

during Mid-Flood Tide

Water Qua	iity wioiiit	ornig Resu	113 011		25 January 22	auring wia-	1 1000 11	ue																			
Monitoring	Weather	Sea	Sampling	Water	Sampling D	onth (m)	Current Speed	Current	Water Te	mperature (°C)	р	Н	Salin	ity (ppt)	DO Satu (%)	ration)	Dissolved Oxygen	Turbidity	(NTU)	Suspended (mg/L		Tota Alkalin	ity (Coordinate HK Grid	Coordinate HK Grid	Chromiu (µg/L)	Mickel (µg/L)
Station	Condition	Condition	Time	Depth (m)	Sampling D	spui (iii)	(m/s)	Direction	Value	Average	Value	Average	Value	Average	Value A	verage V	alue DA	Value	DA	Value	DA	Value		(Northing)	(Easting)	Value D	DA Value DA
					Surface	1.0	0.4	33	18.9	18.9	8.1	8.1	32.1	32.1	102.1		7.8	4.5		5		46				<0.2	0.8
					Juliace	1.0	0.4	25	18.9	10.5	8.1	0.1	32.1	52.1	102.1	102.1	7.8	4.6		5		46				<0.2	0.9
C1	Cloudy	Moderate	11:51	8.0	Middle	4.0	0.4	34	18.9	18.9	8.1	8.1	32.1	32.1	102.0		7.8	4.5	5.5	5	6	48	49	815598	804240	<0.2	0.2 0.7 0.9
	,					4.0	0.3	32	18.9		8.1		32.1		101.9		7.8	4.6		6	-	49				<0.2	0.9
					Bottom	7.0	0.4	59	18.9	18.9	8.1	8.1	32.3 32.2	32.2	101.7		7.8	7.2		6		51				<0.2	1.1
						7.0	0.4	61	18.9		8.1				101.7		7.8	7.4		6		51				<0.2	1.1
					Surface	1.0	0.4	350 351	19.3 19.3	19.3	8.0	8.0	30.1	30.1	99.0 98.9		7.6	2.4		<2		46				<0.2 <0.2	1.5
						5.8	0.4	334	19.3				31.2		98.9		7.6		-	<2	-	45				<0.2	1.4
C2	Cloudy	Moderate	10:37	11.6	Middle	5.8	0.5	334	19.4	19.4	8.0	8.0	31.2	31.2	97.6		7.5 7.5	2.6	3.5	3	3	49 48	48	825666	806957	<0.2	0.2 1.4 1.5
				-		10.6	0.4	0	19.3		8.1		31.6		06.4		7.4	5.6	ŀ	3		51				<0.2	1.5
					Bottom	10.6	0.4	6	19.3	19.3	8.1	8.1	31.6	31.6	96.4		7.4	5.6	ŀ	3		51				<0.2	1.4
						1.0	0.4	252	18.6		8.1		31.5		00.1		6.9	0.6		3		48				<0.2	1.1
					Surface	1.0	0.3	252	18.6	18.6	8.1	8.1	31.6	31.6	88.8		2.0	0.7	l l	3		47				<0.2	1.1
C3	Claudu	Madazata	12:01	11.6	Middle	5.8	0.3	243	18.6	18.6	8.1	8.1	32.0	32.0	87.6		6.9	2.0	1.9	4		48	49	822089	817807	<0.2	0.2 1.3 1.2
C3	Cloudy	Moderate	12:01	11.0	ivildale	5.8	0.3	247	18.6	10.0	8.1	0.1	32.0	32.0	87.5	07.0	6.8	2.0	1.9	5	4	49	49	022009	01/00/	<0.2	1.3
					Bottom	10.6	0.3	253	18.6	18.6	8.1	8.1	32.0	32.0	88.4		6.8	3.0		4		53				<0.2	1.1
					Dottom	10.6	0.3	246	18.6	10.0	8.1	0.1	32.0	32.0	88.4		6.8	2.9		5		51				<0.2	1.2
					Surface	1.0	0.3	30	19.0	19.0	8.1	8.1	32.0	32.0	101.8		7.8	4.8		4		45				<0.2	0.9
						1.0	0.3	36	19.0		8.1		32.0		101.8		7.8	4.8		4		46				<0.2	0.9
IM1	Cloudy	Moderate	11:31	6.7	Middle	3.4	0.3	4	19.0	19.0	8.1	8.1	32.0	32.0	101.4		7.8	5.6	5.3	4	4	47	48	819196	806247	<0.2	0.2 1.1 1.0
				-		3.4	0.3	-	19.0		8.1		32.0		101.4		7.8	5.6	-	4		48				<0.2	1.0
					Bottom	5.7 5.7	0.3	356 356	19.1 19.1	19.1	8.1	8.1	32.0 32.0	32.0	101.5		7.8 7.8	5.3 5.3	-	5	•	49 50				<0.2	1.0
						1.0	0.3	16	19.1		8.1		31.7		404.0		7.8	3.6		3		45	_			<0.2	1.4
					Surface	1.0	0.3	15	19.1	19.1	8.1	8.1	31.8	31.7	101.9	101.9	7 Q	3.7	ŀ	2		44				<0.2	1.5
						3.6	0.3	34	19.1		8.1		32.0		101.0		7.8	4.3	F	3		48				<0.2	1.4
IM2	Cloudy	Moderate	11:24	7.2	Middle	3.6	0.3	31	19.1	19.1	8.1	8.1	32.0	32.0	101.8		7.8	4.3	4.7	4	3	47	47	819185	806225	<0.2	0.2
					D-#	6.2	0.4	17	19.1	40.4	8.1	0.4	32.1	00.4	101.2		7 Q	6.0	l l	4		50				<0.2	1.4
					Bottom	6.2	0.4	12	19.1	19.1	8.1	8.1	32.1	32.1	101.3		7.8	6.2	İ	4		50				<0.2	1.4
					Curfoso	1.0	0.2	17	19.5	19.5	8.1	8.1	30.8	30.8	101.5	101.5	7.8	2.6		3		45				<0.2	1.9
					Surface	1.0	0.3	13	19.5	18.5	8.1	0.1	30.8	30.0	101.5	101.0	7.8	2.6	Ī	2		45				<0.2	1.8
IM7	Cloudy	Moderate	11:03	7.9	Middle	4.0	0.3	9	19.3	19.3	8.1	8.1	31.2	31.2	100.8		7.7	3.2	3.1	4	3	47	47	821345	806824	<0.2	0.2
11017	Cicudy	Moderate	11.00	,.9	wildale	4.0	0.3	6	19.3	13.5	8.1	0.1	31.2	01.2	100.8		7.7	3.2	0.1	3	Ŭ	48	7,	021040	000024	<0.2	1.7
					Bottom	6.9	0.2	350	19.3	19.3	8.1	8.1	31.3	31.3	100.6		7.7	3.4	ļ	3	ļ	50				<0.2	1.6
					=	6.9	0.2	345	19.3	****	8.1		31.3		100.6		7.7	3.4		4		49				<0.2	1.8
DA: Depth-Aver																											

DA: Depth-Averaged

during Mid-Flood Tide

Water Qua	iity woilit	oring Resu	iits oii		25 January 22	auring Mia-	rioou ii	ue																		
Monitoring	Weather	Sea	Sampling	Water	Sampling D	lenth (m)	Current Speed	Current	Water Te	mperature (°C))	ρΗ	Salin	ity (ppt)	DO Saturation (%)	Dissolved Oxygen	Turbidity	(NTU)	Suspended mg/L		Total Alkalinity	Coordinate HK Grid	Coordinate HK Grid	Chromiu (µg/L)		el (µg/L)
Station	Condition	Condition	Time	Depth (m)	Gamping B	cepui (iii)	(m/s)	Direction	Value	Average	Value	Average	Value	Average	Value Average	Value DA	Value	DA	Value	DA \	Value DA			Value D	OA Value	DA
					Surface	1.0	0.4 0.4	284 283	18.8 18.8	18.8	8.2 8.2	8.2	30.5 30.5	30.5	93.5 93.5	7.3 7.3 7.3	1.0		3 2		44 45			<0.2	1.3	
IM10	Cloudy	Moderate	10:37	7.4	Middle	3.7	0.4	304 298	18.6 18.6	18.6	8.2 8.2	8.2	30.6 30.6	30.6	92.6 92.6	7.2	1.7	1.5	2	2	49 50	822258	809839	<0.2	0.2	
					Bottom	6.4	0.4	295	18.6	18.6	8.2	8.2	30.6 30.6	30.6	92.5 92.5 92.5	7.2 7.2	1.8		<2		52 51			<0.2	1.3	
					Surface	6.4 1.0	0.3	300 291	18.6 18.7	18.7	8.2	8.2	30.6	30.6	93.3	7.3	1.8		<2 4		45			<0.2	1.2	
			40.40			1.0 3.7	0.4	290 299	18.7 18.6		8.2 8.2		30.6 30.6		93.2	7.3 7.2	1.0		2	_	46		0.4050.4	<0.2	1.2	
IM11	Cloudy	Moderate	10:43	7.4	Middle	3.7 6.4	0.5 0.4	295 259	18.6 18.6	18.6	8.2 8.2	8.2	30.6 30.6	30.6	92.9	7.2	1.3 2.5	1.6	3	3	49 49 51	821483	810531	<0.2	0.2	1.2
					Bottom	6.4	0.5	258	18.6	18.6	8.2	8.2	30.6	30.6	92.7	7.2	2.6		3		52			<0.2	1.1	
					Surface	1.0	0.4	295 301	18.6 18.6	18.6	8.2	8.2	30.8	30.8	91.6 91.5	7.1 7.1 7.1	3.9 4.0	-	3	F	44 45			<0.2	1.3	
IM12	Cloudy	Moderate	10:52	8.0	Middle	4.0	0.5 0.5	292 294	18.6 18.6	18.6	8.2	8.2	30.8	30.8	91.5 91.5	7.1	8.2 8.5	7.8	3	3	47 48	821164	811497	<0.2	0.2 1.1	1.2
					Bottom	7.0	0.5	274 272	18.6	18.6	8.2	8.2	30.8	30.8	91.6 91.6 91.6	7.1 7.1	11.1		2		51			<0.2	1.2	
					Surface	1.0	0.1	202	18.7	18.7	8.1	8.1	31.1	31.1	91.9	7.1	2.0		3		-			-	-	
SR1A	Cloudy	Moderate	11:22	4.3	Middle	1.0 2.2	0.0	198 195	18.7	-	8.1		31.1	_	92.0	7.1 7.1	2.0	2.0	2	3	-	819977	812661	-	_	_
OKIA	Oloudy	Woderate	11.22	4.0		2.2 3.3	0.0	189 186	18.8		- 8.1		31.1		93.3	7.2	2.1	2.0	3	-	-	010077	012001	-	-	-
					Bottom	3.3	0.0	181 247	18.8	18.8	8.1	8.1	31.1	31.1	93.5	7.2 7.2 7.2	2.0		2		- 48			- <0.2	1.3	1
					Surface	1.0	0.1	247	18.7 18.7	18.7	8.1	8.1	31.0	31.0	92.9 93.0 93.0	7.2	1.8		2		48			<0.2	1.3	
SR2	Cloudy	Moderate	11:37	4.5	Middle	-	0.1	272 271	-	-	-	-	-	-		-	-	1.7	-	2	50	821457	814174	- <(0.2	1.2
					Bottom	3.5 3.5	0.0	264 265	18.7 18.7	18.7	8.1	8.1	30.9	30.9	93.4 93.6	7.3 7.3	1.6	-	2	-	52 52			<0.2	1.1	
					Surface	1.0	0.4	353 348	19.5 19.5	19.5	8.1 8.1	8.1	30.9 30.9	30.9	101.3 101.3	7.7	3.2 3.2		<2 <2		-			-	-	T
SR3	Cloudy	Moderate	10:56	8.5	Middle	4.3	0.4	349	19.4	19.4	8.1	8.1	31.1	31.1	100.5	7.7	4.0	4.2	2	2	-	822139	807552	-		-
					Bottom	4.3 7.5	0.4	351 327	19.4 19.4	19.4	8.1 8.1	8.1	31.1 31.2	31.2	99.9 100.0	7.7	4.0 5.3	-	3	-	-			-	-	-
						7.5 1.0	0.4	329 149	19.4 19.2		8.1 8.1		31.2 32.0		100.0	7.7	5.5 4.0		6		-			-	-	1
					Surface	1.0	0.1	142 136	19.2 19.2	19.2	8.1 8.1	8.1	32.0	32.0	100.4	7.7 7.6	4.0		7		-			-	-	1
SR4A	Cloudy	Calm	12:10	9.1	Middle	4.6	0.1	137	19.2	19.2	8.1	8.1	32.0 32.0	32.0	100.0	7.6	4.0	4.0	5	5		817180	807791	-	-	
					Bottom	8.1 8.1	0.0	151 143	19.2 19.2	19.2	8.1 8.1	8.1	32.0 32.0	32.0	99.9 99.9	7.6 7.6	3.9 4.0		3 4		-			-	-	-
					Surface	1.0	-	-	18.8 18.8	18.8	8.3 8.3	8.3	30.6 30.6	30.6	92.2 92.0 92.1	7.2	7.8 8.7	-	2 2		-			-	-	1
SR8	Cloudy	Moderate	10:58	4.0	Middle	-	-	-	-	-	-	-	-	-		7.2	-	7.4	-	2		820413	811611	-		1 -
					Bottom	3.0	-	-	18.7	18.7	8.3	8.3	30.5	30.5	90.6	7.0	6.4	1	3		-			-	-	1
DA: Denth-Ave						3.0	-	-	18.7		8.3		30.5		90.4	7.0	6.5		2		-		1	-		1

during Mid-Ebb Tide

Monitoring	Weather	Sea	Sampling	Water	Sampling De	oth (m)	Current Speed	Current	Water Te	mperature (°C)	pН		Salin	ty (ppt)		aturation %)	Disso		Turbidity	(NTU)	Suspende (mg		Total Alkalinity	Coordinate HK Grid	Coordinate HK Grid	Chromiu (µg/L)	m Nickel (μg
Station	Condition	Condition	Time	Depth (m)	Sampling De	pui (iii)	(m/s)	Direction	Value	Average	Value Av	verage	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value DA	(Northing)	(Easting)	Value	DA Value D
					Surface	1.0	0.3	213	19.0	19.0	8.1	8.1	32.5	32.5	103.3	103.3	7.9		3.7		3		48			<0.2	1.5
						1.0	0.3	208	19.0		8.1		32.5		103.2		7.9	7.9	3.8	1	3		47			<0.2	1.4
C1	Cloudy	Moderate	07:27	8.3	Middle	4.2	0.3	196	19.0 19.0	19.0	8.1	8.1	32.7 32.7	32.7	102.6 102.6	102.6	7.8 7.8	L	4.9	5.3	2	3	49 50	815638	804252	<0.2	<0.2 1.6 1
						7.3	0.3	201	19.0		8.1		32.8		102.6		7.9		4.9 6.9	-	2		52			<0.2	1.5
					Bottom	7.3	0.3	233	19.0	19.0	8.1	8.1	32.7	32.7	103.8	103.7	7.9	7.9	7.8		2		52			<0.2	1.6
					0(1.0	0.2	169	19.4	40.4	8.0	0.0	31.5	04.0	97.3	07.0	7.4		2.4		<2		52			<0.2	1.0
					Surface	1.0	0.3	164	19.4	19.4	8.0	8.0	31.6	31.6	97.1	97.2	7.4	7.4	2.4	Ť	<2		52			<0.2	0.9
C2	Cloudy	Moderate	08:50	11.2	Middle	5.6	0.2	183	19.4	19.4	8.0	8.0	32.1	32.1	96.1	96.1	7.3	7.4	2.4	2.6	2	2	91 78	825686	806922	<0.2	<0.2 0.9 1
02	Cloudy	Woderate	00.50	11.2	Wilddle	5.6	0.2	184	19.4	15.4	8.0	0.0	32.1	JZ. 1	96.0	30.1	7.3		2.5	2.0	2		91	023000	000322	<0.2	1.0
					Bottom	10.2	0.2	162	19.3	19.3	8.1	8.1	32.3	32.3	96.0	96.1	7.3	7.3	2.8		3		90			<0.2	1.0
						10.2	0.2	166	19.3		8.1		32.3		96.1		7.3		2.8		3		90			<0.2	1.0
					Surface	1.0	0.1	15	18.7	18.7	8.0	8.0	31.7	31.7	89.7 89.7	89.7	6.9	l l	1.1	ł	<2		44			<0.2	1.2
						1.0 6.0	0.0	12 15	18.7 18.7		0.0		31.7		88.1		6.8	6.9	1.1		<2 2		86 72			<0.2 <0.2	4.2
C3	Misty	Calm	07:53	12.0	Middle	6.0	0.1	16	18.7	18.7	8.0	8.0	31.9	31.9	88.0	88.1	6.8	H	1.1	1.2	2	2	86 72	822087	817820	<0.2	<0.2 1.3 1
						11.0	0.1	5	18.6		8.0		32.0		89.3		6.9		1.3	1	2		86			<0.2	1.1
					Bottom	11.0	0.1	7	18.7	18.7	8.0	8.0	32.0	32.0	89.6	89.5	6.9	6.9	1.3	+	3		86			<0.2	1.2
					Surface	1.0	0.3	182	19.2	19.2	8.1	8.1	32.2	32.2	103.5	103.5	7.9		3.8		3		47			<0.2	0.9
					Surface	1.0	0.3	189	19.2	15.2	8.1	0.1	32.3	52.2	103.4	100.0	7.9	7.9	3.9		3		46			<0.2	0.8
IM1	Cloudy	Moderate	07:47	6.5	Middle	-	0.3	185	-	_	-	_	-	_	-	_	-	7.5	-	6.6	3	3	- 49	818335	806444	<0.2	<0.2 1.0 0
	, ,					-	0.3	182	-		-		-		-		-				3		-			<0.2	
					Bottom	5.5	0.3	197	19.1	19.1	8.1	8.1	32.4 32.4	32.4	102.1	102.2	7.8	7.8	9.1	ļ	3		50 51			<0.2	0.9
						5.5 1.0	0.3	192 202	19.1 19.2		8.1		32.4		102.2		7.8 7.9		9.6		2		46			<0.2	0.8
					Surface	1.0	0.3	194	19.2	19.2	8.1	8.1	32.3	32.2	103.3	103.3	7.9	-	3.8	ł	3		46			<0.2	0.8
						3.7	0.3	205	19.1		0.1		32.3		102.3		7.8	7.9	4.0	ł	3		47			-O 2	0.0
IM2	Cloudy	Moderate	07:53	7.4	Middle	3.7	0.4	207	19.1	19.1	8.1	8.1	32.4	32.3	102.3	102.3	7.8		4.2	4.6	3	3	49 48	819178	806224	<0.2	<0.2 0.8 0
					D. #	6.4	0.4	239	19.1	19.1	Ω 1	0.4	32.5	00.5	101.7	404.7	7.8	7.0	5.9		3		50			<0.2	1.1
					Bottom	6.4	0.4	240	19.1	19.1	8.1	8.1	32.5	32.5	101.7	101.7	7.8	7.8	6.0	İ	3		50			<0.2	1.0
					Surface	1.0	0.3	228	19.5	19.5	8.1	8.1	31.2	31.2	102.2	102.2	7.8		2.2		4		46			<0.2	0.9
					Guilace	1.0	0.3	227	19.5	15.5	8.1	0.1	31.2	01.2	102.1	102.2	7.8	7.8	2.2		4	[46			<0.2	0.8
IM7	Cloudy	Moderate	08:22	8.0	Middle	4.0	0.3	231	19.3	19.3	8.1	8.1	31.8	31.8	100.2	100.2	7.7		3.3	3.9	3	3	48 48	821356	806846	<0.2	<0.2 0.9 1
	,					4.0	0.3	236	19.3		8.1		31.8		100.2		7.7		3.5		3	-	48			<0.2	
					Bottom	7.0	0.3	243	19.2	19.2	8.1	8.1	32.1 32.1	32.1	100.0	100.0	7.6 7.6	7.6	6.1	1	<2	}	50 50			<0.2	1.4
DA: Denth-Aver						7.0	0.3	249	19.2		8.1		32.1		100.0		7.6		6.1	1	<2		50			<0.2	1.3

DA: Depth-Averaged

durina Mid-Ebb Tide

vater Qua	iity wonit	oring Resi	iits on		27 January 22	auring Mia	-EDD 110	е																					
Monitorina	Weather	Sea	Sampling	Water			Current Speed	Current	Water To	emperature (°C)		Η	Salir	ity (ppt)	DO Sati		Disso		urbidity(NTU)	Suspende (mg/		Tot Alkali		Coordinate	Coordinate	Chrom (µg/l		Nickel (μg/L
Station	Condition	Condition	Time	Depth (m)	Sampling De	pth (m)	(m/s)	Direction	Value	Average	Value	Average	Value	Average	Value A		Value	_	Value DA	Value	DA	Value		HK Grid (Northing)	HK Grid (Easting)	Value	DA	Value	DA
					Surface	1.0	0.1	240 243	18.8 18.8	18.8	8.2	8.2	30.9	30.9	93.9 93.8	93.9	7.3 7.3		1.0	4		49 49				<0.2		1.3	_
IM10	Misty	Calm	09:22	7.4	Middle	3.7	0.1	250 252	18.7	18.7	8.2 8.2	8.2	31.0 31.0	31.0	93.7 93.7	93.7	7.3	7.3	2.2	4	4	86 86	75	822238	809819	<0.2	<0.2	1.3	1.
					Bottom	6.4	0.2	256 251	18.7	18.7	8.2 8.2	8.2	31.0 31.0	31.0	95.4 95.6	95.5	7.4	7.4	3.2	3		89 89				<0.2	 	1.4	
					Surface	1.0	0.1	261 256	18.7	18.7	8.2 8.2	8.2	31.0 31.0	31.0	94.3 94.3	94.3	7.3		1.0	3		52 52				<0.2		1.3	
IM11	Misty	Calm	09:14	7.6	Middle	3.8	0.1	272 273	18.7	18.7	8.2	8.2	31.0 31.0	31.0	94.4		7.3	7.3	1.5	3	3	87 87	76	821504	810554	<0.2	<0.2	1.1	1
					Bottom	6.6 6.6	0.1	236 230	18.5 18.5	18.5	8.1	8.1	31.1	31.2	95.2 98.1	96.7	7.4	7.5	1.8	3 2		90				<0.2	 	1.1	
					Surface	1.0	0.0	282 284	18.7 18.7	18.7	8.2 8.2	8.2	31.1 31.1	31.1	93.2 93.1		7.2 7.2		1.0	3		45 46				<0.2		1.2	
IM12	Misty	Calm	09:06	8.4	Middle	4.2 4.2	0.1 0.1	262 260	18.7 18.7	18.7	8.2 8.2	8.2	31.2 31.2	31.2	93.2 93.2	93.2	7.2 7.2		1.2 1.2	3	3	86 86	73	821178	811500	<0.2	<0.2	1.3	1
					Bottom	7.4 7.4	0.1 0.1	280 279	18.7 18.7	18.7	8.2 8.2	8.2	31.2 31.2	31.2	93.7 93.8	93.8	7.3 7.3		1.8	2		87 87				<0.2 <0.2	 	1.4	
					Surface	1.0	0.1 0.1	178 170	18.8 18.8	18.8	8.1 8.1	8.1	31.3 31.4	31.3	92.1 92.3		7.1 7.1		1.1	2		1 1				-		-	
SR1A	Misty	Calm	08:31	5.0	Middle	2.5 2.5	0.0	176 171	-	_	-	-	-	-		-	-	7.1	1.4	-	3	-	-	819978	812655	-	-	-	-
					Bottom	4.0	0.0	158 157	18.8 18.7	18.8	8.1 8.1	8.1	31.4 31.4	31.4	93.1 93.2	93.2	7.2 7.2		1.7	3		-				-	<u> </u>	-	
					Surface	1.0	0.1 0.1	20 13	18.7 18.7	18.7	8.2	8.2	31.4 31.4	31.4	93.7 93.7		7.3 7.3		1.1	3		43 44				<0.2 <0.2		1.4	
SR2	Misty	Calm	08:17	5.0	Middle	-	0.1	37 39	-	-	-	-	-	-	-	-	-		1.2	-	3	-	65	821456	814179	-	<0.2	-	1
					Bottom	4.0	0.2	30 25	18.5 18.5	18.5	8.2 8.2	8.2	31.6 31.6	31.6	98.2 98.4		7.6 7.6	7.6	1.3	<2 <2		87 87				<0.2	<u> </u>	1.4	
					Surface	1.0	0.3	171 174	19.5 19.5	19.5	8.0 8.1	8.0	31.0	31.0	102.3	102.3	7.8 7.8	7.8	2.2	3		-				-		-	
SR3	Cloudy	Moderate	08:30	8.4	Middle	4.2	0.3	176 182	19.4 19.4	19.4	8.1	8.1	31.7	31.7	100.4	100.4	7.7		2.6	2	2	-	-	822151	807561	-	- '	-	-
					Bottom	7.4	0.3	201 195	19.4 19.4	19.4	8.1	8.1	31.8	31.8	100.5	100.6	7.7	7.7	3.0	2		-				-	<u> </u>	-	
					Surface	1.0	0.0	315 314	19.2 19.2	19.2	8.0	8.0	32.2	32.2	103.8	103.6	7.9	7.9	3.5	3		-				-	 	-	
SR4A	Cloudy	Moderate	07:08	8.7	Middle	4.4	0.0	287 289	19.1	19.1	8.0	8.0	32.3	32.3	103.7	103.7	7.9		3.6	4	4	-	-	817188	807821	-	_ ! 	-	
					Bottom	7.7	0.0	309 310	19.1	19.1	8.0	8.0	32.2	32.2	103.6		7.9	7.9	3.6	4		-				-	<u> </u>	-	
					Surface	1.0	-	-	18.9 18.8	18.9	8.2	8.2	31.3	31.3	94.1	94.1	7.3		1.5	7 6		-				-	 	-	
SR8	Misty	Calm	08:50	5.0	Middle	-	-	-		-	-	-	-	-		-	-		1.9	-	8	-	-	820410	811624	-	_	-	
A: Depth-Ave					Bottom	4.0	-	-	18.7 18.7	18.7	8.2 8.2	8.2	31.4 31.4	31.4	94.5 94.6	94.6	7.3 7.3		2.2	9		-				-		-	

during Mid-Flood Tide

Monitoring	Weather	Sea	Sampling	Water	21 January 22	during wild-r	Current Speed	Current	Water Te	mperature (°C)	pH		Salinit	y (ppt)	DO Sat		Disso		Turbidity((NTU)	Suspende (mg/		Total Alkalinity	Coordinate	Coordinate	Chromiu (µg/L)	m Nickel (µg
Station	Condition	Condition	Time	Depth (m)	Sampling De	ptn (m)	(m/s)	Direction	Value	Average	Value Ave	erage '	Value	Average	Value	Average \	/alue	DA	Value	DA	Value	DA	Value DA	HK Grid (Northing)	HK Grid (Easting)	Value	DA Value D
					Surface	1.0 1.0	0.3	42 34	19.0 19.0	19.0	8.1		32.8 32.8	32.8	102.7 102.6		7.8 7.8		5.7 5.8		3		47 46			<0.2 <0.2	1.3
C1	Cloudy	Moderate	13:22	8.2	Middle	4.1	0.3	49 55	18.9	18.9	Ω 1	2.1	33.0 33.1	33.0	102.0	102.0	7.8 7.8	7.8	7.5 7.8	9.5	3	3	47 49	815616	804259	-O 2	<0.2 1.5 1
					Bottom	7.2	0.4	39 35	18.9	18.9	Ω 1	2.1	33.1	33.1	102.9	102.0	7.9	7.9	15.2 15.2		3	=	52 51			<0.2	1.6
					Surface	1.0	0.4	345 338	19.6 19.6	19.6	Q 1	2 1	30.9	30.9	104.4	104.4	8.0		2.1		4 3	-	47			<0.2	0.8
C2	Cloudy	Moderate	12:09	11.6	Middle	5.8 5.8	0.4	358 356	19.4 19.4	19.4	0.1	2 1	32.0 32.0	32.0	96.9	00.0	7.4 7.4	7.7	2.3	2.7	3	3	82 83 74	825689	806939	-O 2	0.2 0.8 0
					Bottom	10.6 10.6	0.4	6	19.4 19.4	19.4	8.1	2.1	32.3 32.3	32.3	96.0 96.0	06.0	7.3	7.3	3.5		2	-	91			0.2	1.0
					Surface	1.0	0.2	248 244	18.7 18.7	18.7	0.2	3.2	31.9 31.9	31.9	90.0 89.9		7.0 6.9	7.0	1.3 1.2		2 2		51 51			<0.2 <0.2	1.4
C3	Misty	Calm	13:34	12.0	Middle	6.0 6.0	0.3	240 234	18.7 18.7	18.7	8.2		32.0 32.0	32.0	90.2 90.2	00.2	7.0 7.0	7.0	2.6 2.7	2.3	3 2	3	85 85	822132	817817	-O 2	<0.2 1.4 1
					Bottom	11.0 11.0	0.3	241 236	19.1 19.2	19.2	8.2		31.7 31.6	31.7	91.3 91.6		7.0 7.0	7.0	3.1 3.1		4		87 87			<0.2	1.4
					Surface	1.0 1.0	0.2	4 359	19.3 19.3	19.3	8.1		32.3 32.3	32.3	107.8 107.8		8.2 8.2	0.0	2.9 2.9		5 4		46 47			<0.2	1.4
IM1	Cloudy	Moderate	13:04	6.9	Middle		0.3	23 20	-		-	-	-	-	-		-	8.2	-	6.1	3	3	- 68	819195	806219	-O 2	<0.2 1.3 1
					Bottom	5.9 5.9	0.2	39 45	19.1 19.1	19.1	8.1		32.4 32.4	32.4	103.0 103.0		7.9 7.9	7.9	9.5 9.2		2	-	89 89			<0.2	1.2
					Surface	1.0	0.3	11 12	19.4 19.4	19.4	8.1		32.3 32.3	32.3	105.4 105.2		8.0		2.8 2.9		<2 <2		46 46			<0.2 <0.2	1.0
IM2	Cloudy	Moderate	12:58	6.9	Middle	3.5 3.5	0.2	18 23	19.2 19.1	19.2	0.1	2 1	32.4 32.4	32.4	103.7 103.7	103.7	7.9 7.9	8.0	5.1 5.1	6.0	<2 <2	<2	47 49	819174	806247	40.0	<0.2 1.0 1
					Bottom	5.9 5.9	0.3	35 27	19.1 19.1	19.1	8.1		32.4 32.4	32.4	103.8 103.9		7.9 7.9	7.9	10.1 10.0		<2 <2	-	50 50			<0.2	0.8
					Surface	1.0	0.2	354 351	19.7 19.7	19.7	8.1	3 1	30.8	30.8	105.2 105.3	105.3	8.0	7.0	1.9 1.9		<2 <2		45 46			<0.2 <0.2	0.8
IM7	Cloudy	Moderate	12:38	7.9	Middle	4.0 4.0	0.2	5 2	19.5 19.5	19.5	8.1		31.4 31.4	31.4	102.6 102.4	102.5	7.8 7.8	7.9	2.2	2.2	<2 <2	<2	47 48	821344	806830	<0.2	<0.2 0.8 0
					Bottom	6.9 6.9	0.2	1 6	19.4 19.4	19.4	8.1		31.7 31.7	31.7	102.2 102.3		7.8 7.8	7.8	2.6 2.6		<2 <2		50 50			<0.2	0.8

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

during Mid-Flood Tide

water Qua	ity wonit	oring Resu	its on		27 January 22	auring Mia-F	1000 11	lue																		
Monitoring	Weather	Sea	Sampling	Water	Sampling De	anth (m)	Current Speed	Current	Water Te	mperature (°C)	pН	Salir	nity (ppt)		aturation (%)	Dissolved Oxygen	Turbidity	(NTU)	Suspended (mg/L		Total Alkalinity	Coordinate HK Grid	Coordinate HK Grid	Chromiu (µg/L)	n Nickel	l (µg/L)
Station	Condition	Condition	Time	Depth (m)	Sampling De	epui (iii)	(m/s)	Direction	Value	Average	Value Averag	e Value	Average	Value	Average	Value DA	Value	DA	Value	DA	Value DA	(Northing)	(Easting)	Value	DA Value	DA
					Surface	1.0	0.4 0.4	278 279	18.9 18.9	18.9	8.2 8.2	30.7 30.7	30.7	95.3 95.2	95.3	7.4	1.1 1.0		<2 <2		52 52			<0.2 <0.2	1.2	
IM10	Misty	Calm	12:18	8.4	Middle	4.2	0.3	296	18.8	18.8	8.2	30.8	30.8	94.3	94.3	7.3	1.2	1.2	<2	2	89 77	822249	809819	<0.2	1.3	
	,					4.2	0.4	294	18.8		8.2	30.8		94.2		7.3	1.2		<2		89			<0.2	1.4	-
					Bottom	7.4	0.3	314 312	18.8 18.8	18.8	8.3	30.9	30.9	94.4	94.4	7.3 7.3	1.3		2		90			<0.2	1.4	-
					Surface	1.0	0.4	295	18.8	18.8	8.2 8.2	30.9	30.9	95.1	95.0	7.4	1.8		3		62			<0.2	1.3	
					Surface	1.0	0.4	290	18.8	10.0	8.2	30.9	30.9	94.9	95.0	7.4 7.4	1.8		3		63			<0.2	1.4	
IM11	Misty	Calm	12:26	8.2	Middle	4.1 4.1	0.3	288 283	18.8 18.8	18.8	8.2 8.2	30.9	30.9	94.5 94.4	94.5	7.3	2.5	2.7	2	2	78 78	821522	810549	<0.2	0.2	1.3
						7.2	0.4	280	18.8		0.2	30.9		95.3		7.4	3.9	-	2		84			<0.2	1.4	
					Bottom	7.2	0.4	273	18.9	18.9	8.2	30.9	30.9	95.6	95.5	7.4 7.4	3.9		2		85			<0.2	1.2	
					Surface	1.0	0.3	293	18.8	18.8	8.2 8.2	31.1	31.1	94.2	94.2	7.3	1.1		<2		48			<0.2	1.4	
						1.0 4.3	0.3	296 264	18.8 18.8		8.2	31.1 31.1		94.2 94.6		7.3 7.3	1.2 1.9	-	<2 2		48 86 74			<0.2	1.3	
IM12	Misty	Calm	12:33	8.6	Middle	4.3	0.3	265	18.8	18.8	8.2	31.1	31.1	94.6	94.6	7.3	1.9	1.8	2	2	86 74	821181	811520	<0.2	0.2	1.3
					Bottom	7.6	0.4	298	18.8	18.8	8.2	31.1	31.1	95.2	95.3	7.4	2.4		3		88			<0.2	1.2	
					Dottom	7.6	0.4	295	18.8	10.0	8.2	31.1	01.1	95.3	30.0	7.4	2.3		3		88			<0.2	1.2	
					Surface	1.0	0.0	206 204	19.0 19.0	19.0	8.2 8.2	30.8	30.8	98.7 98.6	98.7	7.6	1.1	-	<2 <2		-			-	-	-
0044		0.1	10.51	5 0	A41.4.0	2.5	0.0	189	-		-	-		-		7.6	-	4.7	-	.0	-	040075	040004	-	-	
SR1A	Misty	Calm	12:51	5.0	Middle	2.5	0.0	187	-	-		-	-	-	-	-	-	1.7	-	<2	-	819975	812661	-	-	1 -
					Bottom	4.0	0.0	198	19.1	19.1	8.2	30.7	30.7	98.6	98.6	7.6 7.6	2.2		<2		-			-	-	
						4.0 1.0	0.1	200 269	19.1 18.9		8.2	30.7		98.5 95.8		7.6 7.0 7.4	2.2 5.4		<2 2		74			<0.2	1.4	-
					Surface	1.0	0.0	264	18.9	18.9	8.2	31.4	31.4	95.9	95.9	7.4	5.3		2		74			<0.2	1.3	
SR2	Misty	Calm	13:10	5.2	Middle	-	0.1	242	-	_		-	_	-	_	7.4	-	5.7	-	2	- 83	821452	814175		<0.2	1.3
0.12	iiiioty	ou	10.10	0.2	madio	-	0.1	243	-		-	-		-		-	-	-	-	-	-	02.102	011110	-	-	
					Bottom	4.2	0.0	240 234	19.1 19.1	19.1	8.2	31.3	31.3	97.2 97.5	97.4	7.5 7.5	6.0	-	3		92 92			<0.2	1.2	-
					Surface	1.0	0.3	332	19.7	19.7	8.1 8.1	30.9	30.9	108.4	108.4	8.3	2.0		2		-				-	
					Surrace	1.0	0.3	327	19.7	19.7	8.1	30.9	30.9	108.4	100.4	8.3 8.1	2.0		2		-			-	-	
SR3	Cloudy	Moderate	12:31	8.4	Middle	4.2	0.2	346	19.5	19.5	8.1	31.5	31.5	101.8	101.8	7.8	2.2	2.2	<2	2		822137	807585	-		
						4.2 7.4	0.2	343 347	19.5 19.5		8.1	31.5 31.6		101.8 101.6		7.8	2.3	-	<2 <2		-			-	-	-
					Bottom	7.4	0.3	345	19.5	19.5	8.1	31.6	31.6	101.7	101.7	7.8	2.5		<2		-			-	-	1
	İ				Surface	1.0	0.0	135	19.4	19.4	8.1	32.2	32.2	106.0	105.9	8.1	3.3		4		-			-	-	
						1.0	0.0	137	19.4		8.1	32.2		105.8		8.0	3.3		3		-			-	-	4
SR4A	Cloudy	Moderate	13:41	8.5	Middle	4.3	0.0	120 116	19.3 19.3	19.3	8.1	32.2 32.3	32.2	103.9	103.9	7.9	3.3	3.3	2 <2	3		817203	807792	-		-
					Bottom	7.5	0.0	125	19.3	19.3	8.1	32.3	32.3	104.1	104.2	7.9 7.9	3.3		2		-			-	-	1
					DOLLOTTI	7.5	0.1	120	19.3	19.3	8.1	32.3	32.3	104.2	104.2	7.9	3.2		2		-	1		-	-	1
					Surface	1.0		-	19.0	19.0	8.2	30.9	30.9	97.2	97.2	7.5	1.0		<2		-			-	-	4
						1.0	-	-	19.0		8.2	30.9		97.1		7.5	1.0		<2 -		-			-	-	-
SR8	Misty	Calm	12:39	4.8	Middle	-	-	-	-	-	-		-	-	-	-	-	1.2	-	<2	-	820395	811645	-		1 -
					Bottom	3.8	-	-	19.1	19.1	8.2	30.8	30.8	97.3	97.4	7.5	1.5		<2		-			-	-	1
DA: Depth-Aver					20110111	3.8	-	-	19.1		8.2	30.8	00.0	97.5	J	7.5	1.5		<2		-			-		Ш
DA: Denth-Aver																										

29 January 22 during Mid-Ebb Tide

Water Qua	lity wonite	oring Resi	lits on		29 January 22	during Mid-		е																			
Monitoring	Weather	Sea	Sampling	Water	Sampling De	nth (m)	Current Speed	Current	Water Te	emperature (°C)	р	Н	Salir	nity (ppt)		aturation (%)	Disso Oxy		Turbidity(NT		nded Solids mg/L)	Total Alkalinity	Coordinate HK Grid	Coordinate HK Grid	Chromiun (µg/L)	n Nicke	el (µg/L)
Station	Condition	Condition	Time	Depth (m)	Sampling De	pui (iii)	(m/s)	Direction	Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value D	\ Value	DA	Value DA	(Northing)	(Easting)	Value D	A Value	DA
					Surface	1.0	0.1	9	19.1	19.1	8.1	8.1	32.4	32.4	104.7	104.6	8.0		4.7	4		46			<0.2	1.1	
						1.0	0.1	14	19.0		8.1		32.5		104.5		8.0	8.0	4.7	5		45			<0.2	1.0	1
C1	Misty	Calm	10:50	9.0	Middle	4.5	0.1	27	19.0 19.0	19.0	8.1	8.1	32.7 32.7	32.7	105.0	105.2	8.0		5.1 5.0	4 6	- 5	86 86	815605	804254	<0.2	.2 1.2	1.2
						8.0	0.1	34 11	18.8		8.1		32.7						6.4	5		87			<0.2	1.1	+
					Bottom	8.0	0.1	3	18.7	18.8	8.1	8.1	32.9	32.9	105.8 105.9	105.9	8.1 8.1	8.1	6.5	6		87			<0.2	1.2	†
					Cunface	1.0	0.1	327	19.5	19.5	8.0	0.0	32.1	32.1	100.6	100.6	7.6		1.5	6		44			<0.2	1.2	†
					Surface	1.0	0.1	322	19.5	19.5	8.0	8.0	32.1	32.1	100.5	100.6	7.6	7.6	1.5	5		44			<0.2	1.2	
C2	Misty	Calm	12:04	12.2	Middle	6.1	0.1	353	19.6	19.7	8.0	8.0	32.1	32.1	100.8	100.9	7.6	7.0	2.5	5	5	78 71	825686	806929	<0.2	1.2	
						6.1	0.2	357	19.7		8.0		32.1		100.9		7.6		2.6	5		79			<0.2	1.2	1
					Bottom	11.2 11.2	0.1	321 325	19.8 19.8	19.8	8.0	8.0	32.0 32.0	32.0	101.8 102.6	102.2	7.7 7.8	7.8	3.9 3.9	3		91 91			<0.2	1.0 0.9	4
						1.0	0.2	261	18.6		8.0		32.1		86.3		6.7		0.5	3		50			<0.2	1.4	
					Surface	1.0	0.1	262	18.6	18.6	8.0	8.0	32.1	32.1	86.3	86.3	6.7		0.5	4		48			<0.2	1.5	†
62	Claudu	Moderate	09:53	11.4	Middle	5.7	0.1	256	18.6	18.6	8.0	8.0	32.1	32.1	86.1	86.1	6.6	6.7	0.6	5	_ ,	51 50	822104	817811	<0.2 <0		
C3	Cloudy	woderate	09.53	11.4	Middle	5.7	0.1	262	18.6	10.0	8.0	6.0	32.1	32.1	86.1	00.1	6.6		0.6	4	4	50	022104	01/011	<0.2	1.5	1.5
					Bottom	10.4	0.1	242	18.6	18.6	8.0	8.0	32.2	32.2	85.2	85.3	6.6	6.6	5.6	4		51			<0.2	1.5	
						10.4	0.1	240	18.6		8.0		32.2		85.3		6.6		5.9	5		52			<0.2	1.5	
					Surface	1.0	0.0	16 21	19.2 19.2	19.2	8.1	8.1	32.3 32.3	32.3	104.3	104.3	8.0		6.4	2	_	52 53			<0.2	0.9	+
						3.4	0.0	16	19.2		8.1		32.4		104.2		7.9	8.0	7.2	2	-	07			-O 2		+
IM1	Misty	Calm	11:09	6.8	Middle	3.4	0.1	12	19.2	19.2	8.1	8.1	32.4	32.4	103.7	103.7	7.9		7.4	3	3	87 77	818344	806473	<0.2 <0	.2 1.0	0.9
					Dattana	5.8	0.0	14	19.1	19.1	8.1	8.1	32.5	32.5	103.6	103.5	7.9	7.9	8.1	4		90			<0.2	0.9	†
					Bottom	5.8	0.1	18	19.1	19.1	8.1	0.1	32.5	32.5	103.4	103.5	7.9	7.9	8.1	5		90			<0.2	0.9	1
					Surface	1.0	0.0	262	19.3	19.3	8.1	8.1	32.2	32.2	104.3	104.3	8.0		2.0	4		49			<0.2	0.9	
						1.0	0.1	254	19.3		8.1		32.2		104.2		7.9	8.0	2.1	3		49			<0.2	1.0	4
IM2	Misty	Calm	11:16	7.8	Middle	3.9	0.0	284 283	19.3 19.3	19.3	8.1	8.1	32.2 32.2	32.2	104.3		8.0		3.5 3.5	5 6	- 5	87 87	819186	806231	<0.2 <0.2	.2 1.1	1.1
						6.8	0.0	283	19.3		8.1		32.2						5.0	6		88			<0.2	1.0	+
					Bottom	6.8	0.0	264	19.2	19.2	8.1	8.1	32.3	32.3	106.2 106.4	106.3	8.1 8.1	8.1	5.0	6		89			<0.2	1.3	†
			i i		Surface	1.0	0.1	278	19.5	19.5	8.1	8.1	31.4	31.4	104.7		8.0		2.2	7		53			<0.2	1.2	
					Surface	1.0	0.1	274	19.4	19.5	8.1	0.1	31.5	31.4	104.5		8.0	8.0	2.3	6		55			<0.2	1.2	1
IM7	Misty	Calm	11:37	8.8	Middle	4.4	0.1	278	19.3	19.3	8.1	8.1	32.0	32.0	103.5	103.5	7.9	0.0	3.4	5	5	91 79	821346	806857	<0.2	2 1.4	1.2
	50			2.0		4.4	0.1	277	19.3	. 5.0	8.1		32.0	52.0	103.5		7.9		3.5	4		91	12.10.10	223001	<0.2	1.2	1
					Bottom	7.8	0.1	265 266	19.3 19.3	19.3	8.1	8.1	32.1	32.1	103.8	103.9	7.9 7.9	7.9	4.7	5		91 91			<0.2	1.1	1
DA: Depth-Ave						7.8	0.1	200	19.3	ļ	8.1		32.1	L	104.0		7.9		4.8	4		91	1	1	<0.2	1.2	

DA: Depth-Averaged

29 January 22 during Mid-Ebb Tide

water Qua	nty wonte	Jilliy Kest	iilo oii		29 January 22	auring Mia-	ווו עמב	-																			
Monitoring	Weather	Sea	Sampling	Water	Sampling De	anth (m)	Current Speed	Current	Water Te	emperature (°C)	pН	Sa	inity (ppt)		aturation (%)	Dissolv Oxyge		Turbidity(N	NTU)	Suspende (mg		Total Alkalinity	Coordinate HK Grid	Coordinate HK Grid	Chromium (µg/L)	n Nicke	(µg/L)
Station	Condition	Condition	Time	Depth (m)	Sampling De	spur (III)	(m/s)	Direction	Value	Average	Value Av	erage Val	e Averag	e Value	Average	Value	DA	Value	DA	Value	DA	Value DA	(Northing)	(Easting)	Value DA	A Value	DA
					Surface	1.0	0.2 0.2	282 288	18.9 18.8	18.9	8.2	8.2 30.		95.3 95.2	95.3	7.4		1.4 1.6	L	3		48			<0.2 <0.2	1.4	 [
IM10	Cloudy	Moderate	11:21	7.6	Middle	3.8	0.2	262 255	18.8 18.8	18.8	0.2	8.2 30.	30.9	95.4 95.4	95.4	7.4	7.4	2.3	2.2	2	3	48 49	822221	809835	<0.2	1.5	1.5
					Bottom	6.6	0.2	264	18.8	18.8	8.2	8 2 30.	30.9	96.6	96.6	7.5	7.5	2.6		2		50			<0.2	1.6	ŀ
						6.6	0.2	257	18.8		8.2	30.		96.6		7.5		2.6		2		51			<0.2	1.6	
					Surface	1.0	0.2	273 266	18.9 18.9	18.9	8.2	8.2 30.		93.6 93.6	93.6	7.3	7.3	0.7	-	<2 <2		47			<0.2 <0.2	1.5 1.5	i İ
IM11	Cloudy	Moderate	11:11	8.3	Middle	4.2	0.3	294	18.8	18.8	8.2	8.2		93.9	93.9	7.3	1.3	0.5	0.7	3	3	48 49	821500	810542	<0.2	.2 1.6	1.5
					Dettem	7.3	0.2	298 289	18.8 18.8	18.8	8.2	31.		93.9 94.4	94.5	7.3	7.3	0.5	-	3		49 50			<0.2	1.7	i
					Bottom	7.3	0.2	295	18.8	10.0	8.2	8.2	31.3	94.5	94.5	7.3	7.3	1.0		3		50			<0.2	1.5	
					Surface	1.0	0.2	292	18.9 18.8	18.9	8.2	8.2 30.		94.6	94.6	7.3		0.4	_	3		46 46			<0.2 <0.2	1.5	r
						4.5	0.2	289 294	18.8		8.2 8.2	21		93.4		7.3	7.3	0.4		5		48			<0.2	17	í
IM12	Cloudy	Moderate	11:02	9.0	Middle	4.5	0.2	292	18.8	18.8	8.2	8.2		93.3	93.4	7.2	ŀ	0.6	0.7	4	4	48 48	821150	811526	<0.2 <0.2	.2 1.6	1.6
					Bottom	8.0	0.2	296	18.8	18.8	8.2	8.2		93.5	93.6	7.2	7.2	1.2		4		48			<0.2	1.5	ı
					Dottom	8.0	0.3	294	18.8		8.2	31.		93.6	00.0	7.2		1.2		5		50			<0.2	1.5	
					Surface	1.0	0.1 0.1	184 189	18.8 18.8	18.8	8.2	8.2 31.		93.6 93.6	93.6	7.2		1.0		5		-			-	-	í
SR1A	Cloudy	Moderate	10:31	5.0	Middle	2.5	0.0	180	-	_	-			-		-	7.2	-	1.1	-	5	-	819972	812659	-	-	1 _
OI (II) (Oloudy	Woderate	10.01	0.0	Wildelic	2.5	0.1	185	-		-	-		-		-		-		-	Ü	-	010012	012000	-	-	ŀ
					Bottom	4.0	0.1	190 190	18.7 18.7	18.7	8.1	8.1 31.		95.2 95.4	95.3	7.4	7.4	1.2	-	5		-			-	-	ſ
						1.0	0.0	250	18.8	40.0	8.1	31		93.6		7.2		0.6		2		47			<0.2	1.5	_
					Surface	1.0	0.0	244	18.8	18.8	8.1	8.1		93.6	93.6	7.2	7.2	0.6		3		46			<0.2	1.5	1
SR2	Cloudy	Moderate	10:16	5.1	Middle	-	0.0	244	-	-	-		-	-	-	-		-	0.5	-	3	- 48	821459	814159	- <0.:	.2 -	1.5
						4.1	0.0	248 238	18.7		8.1	31.		94.8		7.3		0.4	-	3		49			<0.2	1.4	ſ
					Bottom	4.1	0.0	232	18.7	18.7	8.1	8.1		95.1	95.0	7.4	7.4	0.4		4		49			<0.2	1.4	i
					Surface	1.0	0.1	322	19.5	19.5	8.1	8.1 31.		103.1	103.0	7.9		2.9		4		-			-	-	
					Guriace	1.0	0.1	327	19.5	10.0	8.1	31.		102.9	100.0	7.9	7.9	2.9		3		-			-	-	ŀ
SR3	Misty	Calm	11:45	9.2	Middle	4.6	0.0	305 305	19.4 19.4	19.4	8.1	8.1 31.		102.3	102.3	7.8	ŀ	3.3	3.5	3	3		822159	807575		-	
					D.#	8.2	0.1	301	19.5	40.0	8.0	31	,	103.1	400.0	7.8	7.0	4.4		3		-			-	-	ı
					Bottom	8.2	0.1	305	19.6	19.6	8.0	8.0 31.		103.2	103.2	7.8	7.8	4.3		2		-			-	-	
					Surface	1.0	0.0	288	19.2	19.2	8.1	8.0 32.		104.4	104.4	8.0		2.7		6		-			-	-	
						1.0 4.7	0.1	293 292	19.2 19.2		8.0	32.		104.3 104.4		8.0	8.0	2.8 3.1		7		-			-	-	ſ
SR4A	Misty	Calm	10:31	9.4	Middle	4.7	0.0	292	19.2	19.2	8.0	8.0 32.		104.4	104.4	8.0	ł	3.1	3.6	7	7		817205	807822	-	-	 i
					Bottom	8.4	0.0	260	19.2	19.2	9.0	8.0 32.	323	105.6	105.7	0.1	8.1	5.0		7		-			-	-	1
					Dottom	8.4	0.0	254	19.2	10.2	8.0	32.	;	105.7	103.7	8.1	U. I	4.9		8		-				-	-
					Surface	1.0	-	-	18.8 18.8	18.8	8.3	8.3 31.		94.5 94.5	94.5	7.3	ł	1.3 2.0	-	5		-			-	-	ſ
000	01	Madaget	10.55		Mala	-	-		-		-	-		-		-	7.3	-	4.0	-	-	-	000400	044000	-	-	ı
SR8	Cloudy	Moderate	10:55	4.1	Middle	-	-	-	-	•	-	-	-	-	-	-		-	4.0	-	5	-	820402	811623	-	-	- 1
					Bottom	3.1	-	-	18.8	18.8	8.3	8.3		95.6	95.7	7.4	7.4	6.1		5		-			-	-	ŀ
DΔ: Denth-Ave						3.1	-	-	18.8		8.3	31.	1	95.8		7.4		6.5		5		-				<u> </u>	

DA: Depth-Averaged

Water Quality Monitoring
Water Quality Monitoring Results on 29 January 22 during Mid-Flood Tide

Water Qua	lity Monito	oring Resi	lits on		29 January 22	during Mid-	riooa ii	iae																				
Monitoring	Weather	Sea	Sampling	Water	Sampling De	nth (m)	Current Speed	Current	Water Te	emperature (°C)	р	Н	Salii	nity (ppt)		aturation (%)	Disso Oxy		Turbidity(N	TU)	Suspended mg/l		Total Alkalinity	Coordinate HK Grid	Coordinate HK Grid	Chromiun (µg/L)	Nicke	l (µg/L)
Station	Condition	Condition	Time	Depth (m)	Sampling De	pui (iii)	(m/s)	Direction	Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value DA	(Northing)	(Easting)	Value DA	A Value	DA
					Surface	1.0	0.3	30 22	19.2 19.1	19.2	8.1	8.1	32.3 32.4	32.3	108.7 108.5	108.6	8.3 8.3	8.2	6.2 6.1		6		51 52			<0.2 <0.2	1.0	
C1	Misty	Calm	15:12	8.6	Middle	4.3 4.3	0.3	24 24	19.0 19.1	19.1	8.1 8.1	8.1	32.7 32.7	32.7	104.2		8.0	8.2	7.1	6.9	3	4	85 85 75	815642	804240	<0.2	4.4	1.0
					Bottom	7.6 7.6	0.2	57 59	19.3	19.3	8.1	8.1	32.4 32.3	32.4	105.6 105.8		8.0	8.0	7.5		3		87 87			<0.2	1.0	[
					Surface	1.0	0.3	356 3	19.6 19.6	19.6	8.0	8.0	30.0 30.0	30.0	104.8	104.8	8.0		1.1		4		46 46			<0.2 <0.2	1.0	
C2	Misty	Calm	14:05	12.2	Middle	6.1	0.3	332 333	19.5	19.5	8.0	8.0	32.3 32.2	32.3	100.0	100.1	7.6 7.6	7.8	1.6	1.8	4 5	4	87 87 74	825689	806924	<0.2 <0.2	16	1.4
					Bottom	11.2	0.3	349 350	19.6	19.6	8.0	8.0	32.1 32.0	32.1	101.7	102.0	7.7	7.8	2.8		5		90			<0.2	1.5	1
					Surface	1.0	0.2	279 281	18.8	18.8	8.2 8.2	8.2	31.7 31.7	31.7	92.1 92.1	92.1	7.1 7.1		0.5 0.5		6 7		48 47			<0.2 <0.2	1.5	_
C3	Cloudy	Moderate	15:23	11.2	Middle	5.6 5.6	0.2	265 266	18.7	18.7	8.1	8.1	32.1 32.1	32.1	87.3 87.3	87.3	6.7	6.9	1.8	2.6	5	5	49 48 49	822105	817797	<0.2 <0.2	4.5	1.5
					Bottom	10.2	0.2	283 286	18.6	18.6	8.1	8.1	32.1 32.1	32.1	87.9 88.0	88.0	6.8	6.8	5.8		4		51 52			<0.2	1.5	-
					Surface	1.0	0.2	19 26	19.4 19.4	19.4	8.1 8.1	8.1	32.3 32.3	32.3	104.9 104.8	104.9	8.0		4.4 4.5		8		48			<0.2 <0.2	1.6 1.4	
IM1	Misty	Calm	14:53	7.8	Middle	3.9 3.9	0.2	18 10	19.2 19.2	19.2	8.1 8.1	8.1	32.4 32.4	32.4	104.0 103.9	104.0	7.9 7.9	8.0	E 1	5.2	7	6	86 86 74	819170	806257	<0.2	1.0	1.4
					Bottom	6.8 6.8	0.2	24 28	19.4 19.4	19.4	8.0	8.0	32.3 32.2	32.2	103.2 103.1	103.2	7.8 7.8	7.8	6.1 6.1		4 5		88 88			<0.2	1.6 1.6	ĺ
					Surface	1.0 1.0	0.2 0.2	14 9	19.3 19.3	19.3	8.1 8.1	8.1	32.2 32.2	32.2	105.0 104.8	104.9	8.0 8.0		5.4 5.4		5		63 62			<0.2 <0.2	1.6 1.7	
IM2	Misty	Calm	14:48	7.6	Middle	3.8 3.8	0.2	358 356	19.2 19.2	19.2	8.1 8.1	8.1	32.3 32.3	32.3	104.1 104.3	104.2	7.9 8.0	8.0	6.5	6.4	3	4	78 79	819165	806243	<0.2	1.6	1.6
					Bottom	6.6 6.6	0.2	23 26	19.5 19.6	19.6	8.1 8.1	8.1	32.1 32.1	32.1	106.0 106.2	106.1	8.0 8.1	8.1	7.3 7.2		3		85 85			<0.2	1.5 1.6	-
					Surface	1.0	0.2	2 6	19.5 19.5	19.5	8.1 8.1	8.1	31.4 31.4	31.4	106.5 106.4	106.5	8.1 8.1	8.1	1.7	H	4 5		52 52			<0.2 <0.2	1.3	
IM7	Misty	Calm	14:30	8.6	Middle	4.3 4.3	0.2	22 16	19.4 19.4	19.4	8.1 8.1	8.1	31.9 31.9	31.9	105.0 104.9	105.0	8.0	0.1	2.1	2.3	4 5	5	89 89	821359	806858	<0.2	4.4	1.2
					Bottom	7.6 7.6	0.1 0.1	5 2	19.7 19.7	19.7	8.1 8.0	8.0	31.8 31.7	31.7	104.2 104.4	104.3	7.9 7.9	7.9	3.2 3.2		5 4		90 90			<0.2	0.9 1.0	į l
DΔ· Denth-Ave																												

DA: Depth-Averaged

Water Quality Monitoring
Water Quality Monitoring Results on 29 January 22 during Mid-Flood Tide

Water Qua	ity Monit	oring Resu	ılts on		29 January 22	during Mid-Fl	ood Tide																			
Monitoring	Weather	Sea	Sampling	Water	Sampling De			rrent	er Temperature (°C) p	Н	Salir	nity (ppt)		aturation (%)	Dissolv Oxyg		Turbidity(NTU)	Suspende (mg		Total Alkalinity	Coordinate HK Grid	Coordinate HK Grid	Chromii (µg/L	
Station	Condition	Condition	Time	Depth (m)			(m/s) Dir	val	ue Average	Value	Average	e Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value D			Value	DA Value DA
					Surface	1.0		88 18		8.2	8.2	30.7	30.7	96.7	96.7	7.5		1.0		3		46			<0.2	1.5
						1.0 3.6		87 18 11 18	.8	8.2		30.7		96.6 96.0		7.5 7.4	7.5	1.0	ŀ	3		46			<0.2	1.5
IM10	Cloudy	Moderate	14:11	7.1	Middle	3.6		109 18		8.2	8.2	31.1	31.1	96.0	96.1	7.4	-	1.6	1.5	4	4	48 48	822246	809854	<0.2	<0.2 1.4 1.5
						6.1		94 18	7	8.2		31.1		96.8		7.5		1.8	H	5		50			<0.2	1.5
					Bottom	6.1			18.7	8.2	8.2	31.1	31.1	97.0	96.9	7.5	7.5	1.8		4		51			<0.2	1.4
					Surface	1.0		74 18		8.2	8.2	30.4	30.4	95.8	95.7	7.4		0.6		3		47			<0.2	1.6
					Guridee	1.0		74 18	.9	8.2	0.2	30.5	00.4	95.6	50.7	7.4	7.4	0.7		2		47			<0.2	1.5
IM11	Cloudy	Moderate	14:17	7.8	Middle	3.9		88 18		8.2	8.2	30.8	30.8	94.9	94.9	7.4		1.1	1.0	4	3	48 49	821509	810557	<0.2	<0.2 1.6 1.6
						3.9 6.8		85 18 03 18	0	8.2 8.2		30.9 31.0		94.9 96.4		7.4 7.5		1.1	-	3		48 50			<0.2	1.5
					Bottom	6.8		103 18		8.2	8.2	31.0	31.0	96.9	96.7	7.5	7.5	1.3	-	4		51			<0.2	1.6
					Cunface	1.0		82 19	0	8.2	8.2	30.4	30.4	95.8	95.7	7.4		0.3		4		47			<0.2	1.6
					Surface	1.0	0.3	76 18		8.2	8.2	30.5	30.4	95.6	95.7	7.4	7.4	0.3		3		47			<0.2	1.4
IM12	Cloudy	Moderate	14:24	8.7	Middle	4.4		63 18		8.2	8.2	31.1	31.2	95.2	95.3	7.4	7.4	0.9	1.1	4	4	48 49	821153	811513	<0.2	<0.2 1.5 1.5
2	O.ouuy	modorato		0	middio	4.4		59 18	.8	8.2	0.2	31.2	012	95.3	00.0	7.4		1.0		5		48	021100	011010	<0.2	1.6
					Bottom	7.7		98 18	.8 18.8	8.2	8.2	31.3	31.3	96.1 96.3	96.2	7.4	7.5	1.8 2.3		5 4		50 51			<0.2	1.6
						1.0		15 18	Q	8.2		31.4		95.9		7.4		0.6		3		-				1.5
					Surface	1.0		20 18		8.2	8.2	31.4	31.4	96.2	96.1	7.4		0.6	H	2		-			-	-
SR1A	Claudu	Madausta	14:50	4.9	Middle	2.5		29 -		-		-		-		-	7.4	-	0.6	-	3	-	819973	812654	-	-
SKIA	Cloudy	Moderate	14:50	4.9	Middle	2.5	0.0	26 -	-	-		-	-	-	-	-		-	0.0	-	3	-	019973	012004	-	-
					Bottom	3.9		100 18		8.1	8.1	31.4	31.4	96.7	96.8	7.5	7.5	0.6		3		-			-	-
						3.9		05 18	.9	8.1		31.4		96.9		7.5		0.5		2		-			-	-
					Surface	1.0		57 18 58 18	18.9	8.2	8.2	31.1	31.1	96.2 96.3	96.3	7.4	_	0.6	-	4		47			<0.2	1.5
						-		27 -		-		-		-		-	7.5	-	-	-						
SR2	Cloudy	Moderate	15:03	4.3	Middle	-		22 -		-	-	-	-	-	-	-		-	0.9	-	5	- 49	821460	814177	- "	<0.2 - 1.5
					Bottom	3.3		4 18		8.2	8.2	31.1	31.1	97.2	97.3	7.5	7.5	1.2		5		51			<0.2	1.5
					Bottom	3.3		2 18	.9	8.2	0.2	31.1	01.1	97.3	37.0	7.5	7.0	1.2		5		50			<0.2	1.6
					Surface	1.0			.5 19.5	8.1	8.1	31.2	31.3	103.2	103.1	7.9	ŀ	1.8	ŀ	3		-			-	-
						1.0		36 19 40 19	1	8.1 8.1		31.3 31.7		102.9 102.6		7.9 7.8	7.9	1.8 2.6	ŀ	3		-			-	-
SR3	Misty	Calm	14:23	8.8	Middle	4.4		38 19		8.1	8.1	31.7	31.7	102.6	102.6	7.8	-	2.7	2.7	4	3	-	822139	807549	-	
					Dettens	7.8		53 19	6	8.1	0.0	31.6	24.6	102.7	102.7	7.8	7.0	3.7	ļ.	2		-			-	-
					Bottom	7.8	0.2	45 19	.7	8.0	8.0	31.5	31.6	102.7	102.7	7.8	7.8	3.7		3		-			-	-
					Surface	1.0			.2 19.2	8.1	8.1	32.3	32.3	107.8	107.8	8.2	I	3.1	Ţ	5		-			-	-
						1.0		27 19	.2	8.1		32.3	52.5	107.8		8.2	8.3	3.2	L	4		-			-	-
SR4A	Misty	Calm	15:32	9.0	Middle	4.5 4.5		14 19 19 19		8.1	8.1	32.4 32.4	32.4	108.4	108.5	8.3	F	4.9 4.9	4.5	4 5	5		817177	807789	-	
						4.5 8.0		45 19	2	8.1		32.4		108.8		0.2		5.3	H	5		-			-	-
					Bottom	8.0		43 19		8.1	8.1	32.3	32.3	108.9	108.9	8.3	8.3	5.3	ļ-	4		-				-
	İ				Surface	1.0		- 19		8.2	0.2	31.0	31.0	97.1	97.1	7.5		0.4	İ	4		-	İ		-	-
					Surface	1.0	-	- 19	.2	8.2	8.2	31.0	31.0	97.0	97.1	7.5	7.5	0.4		4		-			-	-
SR8	Cloudy	Moderate	14:30	4.2	Middle	-				-	-	-	l -	-	_	-	7.5	-	0.5	-	4		820406	811642	-	
5.10	3.000,	.nouorato			maaro	-				-		-		-		-		-	5.5	-		-	320.00	0	-	-
					Bottom	3.2		- 19 - 19		8.2	8.2	31.2	31.2	97.3 97.4	97.4	7.5	7.5	0.5	ŀ	3		-			-	-
DA: Denth-Aver			II			3.2	-	- 19	.u	0.2		31.2	l	91.4		7.5		0.0		ა		<u> </u>		1		

DA: Depth-Averaged

Water Quality Monitoring
Water Quality Monitoring Results on 31 January 22 during Mid-Ebb Tide

Water Qua	lity Monit	oring Resi	lits on		31 January 22	during Mid-	-Epp IIde)																			
Monitoring	Weather	Sea	Sampling	Water	Sampling De	epth (m)	Current Speed	Current	Water Te	emperature (°C)	р	ЭΗ	Salin	ity (ppt)		aturation %)	Dissolved Oxygen	Turbidity	(NTU)	Suspende (mg		Total Alkalinity	Coordinate HK Grid	Coordinate HK Grid	Chromiu (µg/L)	m Nickel	l (µg/L)
Station	Condition	Condition	Time	Depth (m)		-pu: ()	(m/s)	Direction	Value	Average	Value	Average	Value	Average	Value	Average	Value DA	Value	DA	Value	DA	Value DA	(Northing)	(Easting)	Value [A Value	DA
					Surface	1.0	0.1 0.1	206 198	17.0 16.9	17.0	8.1 8.1	8.1	31.1	31.1	100.9 100.7	100.8	8.1 8.1 8.0	8.5 8.5		4 5		47			<0.2	1.0	
C1	Cloudy	Moderate	13:47	8.3	Middle	4.2 4.2	0.1 0.1	217 215	16.8 16.9	16.9	8.1	8.1	31.5 31.5	31.5	96.4 96.5	96.5	7.8 7.8	9.4 9.4	9.2	4 5	5	49 48	815626	804241	-0.2	0.2 1.2	1.1
					Bottom	7.3	0.1	175 181	17.1	17.1	8.1	8.1	31.2	31.2	97.8 98.0	97.9	7.9 7.9	9.9	•	6		51			<0.2	1.1	-
					Surface	1.0	0.1	106 111	17.4 17.4	17.4	8.1 8.1	8.1	28.8	28.8	97.0 96.9	97.0	7.9	3.4		5		46 46			<0.2 <0.2	1.0	
C2	Cloudy	Moderate	12:40	11.8	Middle	5.9	0.0	126 123	17.3	17.3	8.1	8.1	31.1 31.0	31.0	92.2 92.3	92.3	7.4 7.4	3.9	4.1	6	6	48 49	825669	806956	<0.2	0.2	1.1
					Bottom	10.8	0.0	137	17.4	17.4	8.1	8.0	30.9 30.8	30.8	93.9 94.4	94.2	7.5 7.6	5.1 5.1	+	6	1	51			<0.2	1.2	1
					Surface	1.0	0.3	82 78	17.0	17.0	8.1 8.1	8.1	31.7 31.7	31.7	99.4 99.4	99.4	7.9	5.5 5.5		6		46 46			<0.2 <0.2	1.6	
С3	Cloudy	Moderate	14:03	11.6	Middle	5.8 5.8	0.3	77	16.9 16.9	16.9	8.1	8.1	32.1 32.1	32.1	94.6 94.6	94.6	7.5 7.5	7.2	7.4	6	6	48 49 49	822090	817806	-0.2	1.5	1.4
					Bottom	10.6 10.6	0.3	95 88	16.8	16.8	8.1	8.1	32.1 32.1	32.1	95.2 95.3	95.2	7.6 7.6	9.2		6		51			<0.2	1.1	1
					Surface	1.0	0.0	117 115	17.2	17.2	8.1	8.1	31.0	31.0	97.1 97.0	97.1	7.8	6.8		5 4		47			<0.2	1.1	
IM1	Cloudy	Moderate	13:28	7.0	Middle	3.5	0.0	132	17.0 17.0	17.0	8.1	8.1	31.2	31.2	96.2 96.1	96.2	7.7 7.7	7.5 7.5	7.5	4 5	5	48 48	818345	806436	40 O	0.2	1.1
					Bottom	6.0	0.0	112	17.2	17.2	8.0	8.0	31.0 31.0	31.0	95.4 95.3	95.4	7.7	8.4		6	1	50			<0.2	1.1	Į
					Surface	1.0	0.0	83 77	17.1 17.1	17.1	8.1	8.1	31.0 31.0	31.0	97.2 97.0	97.1	7.8	7.7		5		47 46			<0.2 <0.2	1.0	
IM2	Cloudy	Moderate	13:23	6.9	Middle	3.5 3.5	0.1	73 67	17.0 17.0	17.0	8.1	8.1	31.1	31.1	96.3 96.5	96.4	7.8 7.8 7.8	8.8 9.0	8.7	5	6	49 49	819186	806221	<0.2	0.2 1.0	1.0
					Bottom	5.9 5.9	0.1	74 74	17.3 17.4	17.4	8.1	8.1	30.9	30.9	98.2 98.4	98.3	7.9 7.9	9.6 9.6	İ	6		51			<0.2	0.9	[
					Surface	1.0	0.3	61 57	17.3 17.3	17.3	8.1	8.1	30.2 30.2	30.2	98.7 98.6	98.7	7.9	4.0		7		47 46			<0.2 <0.2	0.9	
IM7	Cloudy	Moderate	13:05	7.9	Middle	4.0 4.0	0.3	65 68	17.2 17.2	17.2	8.1	8.1	30.6	30.6	97.2 97.1	97.2	7.8 7.8	4.4	4.6	7	7	49 48 49	821350	806838	<0.2	0.2	1.1
					Bottom	6.9	0.2	46 50	17.5 17.5	17.5	8.1	8.1	30.5	30.5	96.4 96.6	96.5	7.7 7.7	5.5 5.5	†	6	1	51			<0.2	1.2	-
DA: Depth-Ave	rogod				*												· · · · · · · · · · · · · · · · · · ·										

DA: Depth-Averaged

Water Quality Monitoring
Water Quality Monitoring Results on 31 January 22 during Mid-Ebb Tide

Water Qua	lity Monit	oring Resi	lits on		31 January 22	during Mid-	-Epp Ha	9																					
Monitoring	Weather	Sea	Sampling	Water	Sampling D	enth (m)	Current Speed	Current	Water Te	mperature (°C)	pН	Salin	ity (ppt)	DO Satu (%)		Disso Oxy		Turbidity(N	NTU)	Suspende (mg/		To Alka	otal alinity	Coordinate HK Grid	Coordinate HK Grid	Chromit (µg/L)		el (µg/L)
Station	Condition	Condition	Time	Depth (m)	Sampling L	repair (iii)	(m/s)	Direction	Value	Average	Value	Average	Value	Average	Value A	verage	Value	DA	Value	DA	Value	DA	Value	DA	(Northing)	(Easting)	Value	DA Value	e DA
					Surface	1.0 1.0	0.2	44	17.0	17.0	8.1	8.1	30.7 30.7	30.7	98.8	98.7	7.9 7.9		6.4		7		48 47				<0.2 <0.2	1.4	
						3.7	0.1	38 44	17.0 16.9		8.1 8.1		31.1		98.7 98.1		7.9	7.9	6.5 7.0		6 7	_	50				-0.2	1.0	-
IM10	Cloudy	Moderate	12:51	7.4	Middle	3.7	0.1	42	16.9	16.9	8.1	8.1	31.1	31.1	98.3	98.2	7.9		7.1	6.9	6	6	50	50	822241	809845	<0.2	1.0	I '''
					Bottom	6.4	0.1	25	16.9	16.9	8.2	8.2	31.1	31.1	98.9	99.0	7.9	8.0	7.2		5		54				<0.2	1.0	
						6.4 1.0	0.1	20 62	16.9 17.1		8.2	1	31.1		99.1 97.9		8.0 7.9		7.2 6.1		6 9		52 47				<0.2	1.1	
					Surface	1.0	0.1	55	17.1	17.1	8.1	8.1	30.5	30.4	97.7	97.8	7.8	7.8	6.1	-	8		47	1			<0.2	1.2	
IM11	Cloudy	Moderate	12:57	7.8	Middle	3.9	0.1	93	17.0	17.0	8.1	8.1	30.8	30.8	97.0	97.0	7.8	7.0	6.5	6.4	8	8	49	49	821478	810528	<0.2	<0.2	
	,					3.9	0.1	97	17.0		8.1		30.9		97.0		7.8 7.9		6.5 6.6	-	7 8	_	48 51				<0.2	1.2	
					Bottom	6.8	0.2	86 80	17.0 17.0	17.0	8.1	8.1	31.0	31.0	98.5	98.7	7.9	7.9	6.7	-	7		51	+			<0.2	1.1	
					Surface	1.0	0.1	72	17.2	17.2	8.1	8.1	30.4	30.4	07.0	97.8	7.9		5.7		5		47				<0.2	1.0	
					Surface	1.0	0.1	68	17.1	17.2	8.1	0.1	30.5	30.4	97.7	37.0	7.8	7.8	5.7		6		47				<0.2	1.0	
IM12	Cloudy	Moderate	13:04	8.9	Middle	4.5 4.5	0.2	89 83	17.0 17.0	17.0	8.1 8.1	8.1	31.1	31.2	97.3	97.3	7.8	-	6.3	6.5	7 6	6	49 50	50	821144	811513	<0.2	<0.2	
						7.9	0.2	110	17.0	47.0	8.1		31.3		08.2		7.9		7.3	+	6		52	1			<0.2	1.2	
					Bottom	7.9	0.2	113	17.0	17.0	8.1	8.1	31.3	31.3	98.4	98.3	7.9	7.9	7.7		7		52				<0.2	1.3	
					Surface	1.0	-	2	17.1	17.1	8.1	8.1	31.4	31.4	98.0	98.1	7.8		6.0		7		-				-	-	4
						1.0	0.0	7	17.1		8.1		31.4		98.3		7.9	7.9	6.0	-	8		-	- 1			-	-	+
SR1A	Cloudy	Moderate	13:30	5.1	Middle	-	-	-	-	-	-	-	-	-	-	-	-	_	-	6.0	-	7	-	-	819981	812657	-	-	
					Bottom	4.1	0.0	22	17.1	17.1	8.1	8.1	31.4	31.4	98.8	98.9	7.9	7.9	6.0		7		-				-	-	I
						1.0	0.1	28 69	17.1		8.1		31.4		99.0		7.9 7.9		5.9 6.1		7		48				<0.2	1.1	+
					Surface	1.0	0.1	65	17.1 17.1	17.1	8.1	8.1	31.1	31.1	98.3 98.4	98.3	7.9	}	6.1	-	6		47	1			<0.2	1.0	
SR2	Cloudy	Moderate	13:43	4.2	Middle	-	-	-	-	_	-	_	-	_	-	_	-	7.9	-	6.4	-	5	-	49	821459	814176		<0.2	1.1
0142	Oloudy	Woderate	10.40	7.2	Wildele	-	-	-	-		-		-		-		-		-	0.4	-	0	-		021400	014170	-	-	
					Bottom	3.2	0.1	73 66	17.1 17.1	17.1	8.1 8.1	8.1	31.1	31.1	99.3	99.3	7.9 8.0	8.0	6.6	-	4		50 51	- 1			<0.2	1.1	
					Surface	1.0	0.1	60	17.3	17.3	8.1	8.1	30.0	30.0	05.4	95.3	7.7		4.1	İ	4		-				-	-	+
					Surface	1.0	0.1	64	17.3	17.3	8.1	0.1	30.1	30.0	95.1	95.5	7.7	7.7	4.1		5		-				-	-]
SR3	Cloudy	Moderate	12:58	8.4	Middle	4.2	0.1	50 56	17.2 17.2	17.2	8.1 8.1	8.1	30.5	30.5	94.8	94.8	7.6		5.0 5.0	5.0	5 6	5	-	-	822148	807554	-		
						7.4	0.2	76	17.4		8.1		30.5		Q4 Q		7.6		6.0	-	6		-	1			-	-	+
					Bottom	7.4	0.1	75	17.5	17.5	8.1	8.1	30.3	30.4	94.9	94.9	7.6	7.6	6.0		5		-				-	-	1
					Surface	1.0	0.0	74	17.0	17.0	8.2	8.2	31.0	31.0	100.0	100.0	8.1		5.4		5		-				-	-	1
						1.0 4.4	0.0	80 73	17.0 17.0		8.2 8.1		31.0 31.1		100.0		8.1	8.1	5.5 7.2	-	4 5		-	- 1			-	-	4
SR4A	Cloudy	Moderate	14:07	8.8	Middle	4.4	0.0	77	17.0	17.0	8.1	8.1	31.1	31.1	100.8	100.7	8.1	_	7.3	6.8	6	5	-	-	817178	807825	-	-	+ -
					Bottom	7.8	0.0	72	17.1	17.1	8.1	8.1	31.1	31.1	101.0	101.1	8.1	8.1	7.7		5		-	1			-	-	1
						7.8	0.1	78	17.1		8.1	1	31.0		101.1		8.1		7.6		6		-				-	-	4
					Surface	1.0	-	-	17.4 17.4	17.4	8.1 8.1	8.1	31.0	31.0	99.2	99.1	7.9 7.9	-	5.8 5.8	ŀ	6 7		-	1			-	-	+
SR8	Cloudy	Moderate	13:10	4.2	Middle	-	-	-	-		-		-		-		-	7.9	-	5.9	-	6	-	† l	820369	811602	-	-	†
one.	Cloudy	woderate	13:10	4.2	ivildale	-	-	-	-	-	-	-	-	-	-	-	-		-	5.9	-	О	-] -	020309	011002	-	-] -
					Bottom	3.2	-	-	17.2 17.2	17.2	8.1	8.1	31.2	31.2	99.4	99.4	7.9	7.9	6.0	-	4 5		-	1			-	-	4
DA: Danth Aug			11		1	3.2		-	11.2		0.1	<u> </u>	31.2		99.5		1.9		0.0		Ð					l	1 - 1		

DA: Depth-Averaged

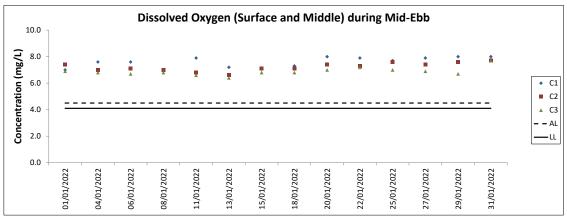
during Mid-Flood Tide

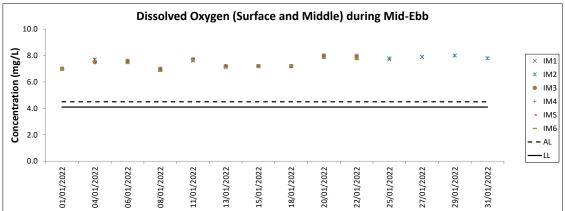
Water Que	unty Would	oring Resu	iita oii		31 January 22	auring wia-	1 1000 11	ue																		
Monitoring	Weather	Sea	Sampling	Water	Sampling De	oth (m)	Current Speed	Current	Water Te	emperature (°C)	p	Н	Salir	ity (ppt)	DO S	aturation (%)	Dissolved Oxygen	Turbidity	y(NTU)	Suspende (mg		Total Alkalinity	Coordinate HK Grid	Coordinate HK Grid	Chromium (µg/L)	Nickel (µg/L)
Station	Condition	Condition	Time	Depth (m)	odinpinig Do	pur ()	(m/s)	Direction	Value	Average	Value	Average	Value	Average	Value	Average	Value DA	Value	DA	Value	DA	Value DA	(Northing)	(Easting)	Value DA	Value DA
					Surface	1.0	0.2	42	16.9	16.9	8.1	8.1	31.2	31.2	91.7	91.6	7.4	7.0		6		46			<0.2	1.0
					Surface	1.0	0.3	36	16.8	10.5	8.1	0.1	31.2	31.2	91.5	31.0	7.4 7.4	7.0		7		47			<0.2	1.2
C1	Cloudy	Moderate	07:50	8.4	Middle	4.2	0.3	32	16.8	16.8	8.1	8.1	31.5	31.5	92.0	92.2	7.4	7.4	7.7	6	6	48 48 49	815641	804264	<0.2	2 0.7 1.0
0.	Cioudy	Woderate	01.00	0.4	Wilddie	4.2	0.3	26	16.8	10.0	8.1	0.1	31.5	01.0	92.3	52.Z	7.5	7.3	1	7	ľ		010041	004204	<0.2	
					Bottom	7.4	0.2	32	16.6	16.6	8.1	8.1	31.7	31.7	92.8	92.9	7.5	8.8		4		52			<0.2	1.1
						7.4	0.2	33	16.5		8.1		31.7	*	92.9		7.5	8.8		5		52			<0.2	1.2
					Surface	1.0	0.3	354	17.3	17.3	8.0	8.0	30.9	30.9	87.6	87.6	7.0	3.9		4		45			<0.2	8.0
						1.0	0.3	349	17.3		8.0		30.9		87.5		7.0 7.0	3.8		5		46			<0.2	0.9
C2	Cloudy	Moderate	09:04	11.6	Middle	5.8	0.3	356	17.4	17.5	8.0	8.0	30.9	30.9	87.8	87.9	7.0	4.9	5.0	5	5	49 48	825666	806966	<0.2	2 0.9 0.9
	,					5.8	0.3	353	17.5		8.0		30.9		87.9	****	7.0	4.9	1	6		48			<0.2	1.0
					Bottom	10.6	0.3	2	17.6	17.6	8.0	8.0	30.8	30.8	88.8	89.2	7.1 7.2	6.2		6		51			<0.2	0.9
						10.6	0.3	354	17.6	-	8.0		30.8		89.6		7.2	6.2		5		51			<0.2	0.9
					Surface	1.0	0.4	268	17.2	17.2	8.1	8.1	32.1	32.1	89.5	89.5	7.1	5.9	1	6		48			<0.2	1.1
						1.0	0.5	261	17.2		8.1		32.1		89.5		7.1 7.1	5.9	1	7		49			<0.2	1.1
C3	Cloudy	Moderate	07:23	11.6	Middle	5.8	0.5	266	17.2	17.2	8.1	8.1	32.1	32.1	89.3	89.3	7.1	6.0	6.4	5	6	50 50	822116	817825	<0.2	2 1.0 1.0
	,					5.8	0.5	265	17.2		8.1		32.1		89.3		7.1	6.0	1	6		51			<0.2	1.0
					Bottom	10.6	0.4	255	17.2	17.2	8.0	8.0	32.2	32.2	88.4	88.5	7.0 7.0	7.3	1	5		52			<0.2	0.8
						10.6	0.4	259	17.2						88.5		7.0	7.3	1	6		52			<0.2	0.9
					Surface	1.0	0.2	26	17.0	17.0	8.1	8.1	31.1	31.1	91.3	91.3	7.4	8.7	1	5	-	46			<0.2	1.0
						1.0 3.1	0.2	19	17.0				31.1 31.2		91.2		7.4 7.3	8.7 9.7	1	5	-	46			<0.2	
IM1	Cloudy	Moderate	08:09	6.2	Middle	3.1	0.2	11	17.0 17.0	17.0	8.1	8.1	31.2	31.2	90.7	90.7	7.3	9.7	9.0	_	5	48 48	818345	806452	<0.2	2 0.9 0.9
						5.2	0.1	9 35					_				7.3	8.5	+	5	-	51			<0.2	0.8
					Bottom	5.2	0.2	32	16.9 16.9	16.9	8.1	8.1	31.3	31.3	90.6	90.5	7.3 7.3	8.5	+	5	-	52			<0.2	0.8
	+ +					1.0	0.3	353	17.1				30.9		91.3		7.4	4.4	1	4		47			<0.2	0.8
					Surface	1.0	0.2	359	17.1	17.1	8.1	8.1	30.9	30.9	91.3	91.3	7.3	4.4	+	4		46			<0.2	0.8
						3.7	0.2	15	17.1		8.1		31.0		91.3		7.4	5.8	+	6		49			<0.2	1.0
IM2	Cloudy	Moderate	08:16	7.3	Middle	3.7	0.2	17	17.1	17.1	8.1	8.1	31.0	31.0	91.5	91.4	7.4	5.8	5.8	5	5	48 49	819180	806256	<0.2 <0.2	2 0.9 0.8
						6.3	0.2	357	17.0		8.1		31.0		93.2		7.5	7.3	+	6		51			<0.2	0.8
					Bottom	6.3	0.2	350	17.0	17.0	8.1	8.1	31.1	31.1	93.4	93.3	7.5 7.5	7.3	+	7		51			<0.2	0.7
						1.0	0.1	332	17.3		8.1		30.2		91.7		7.4	4.5	1	4		46			<0.2	0.8
					Surface	1.0	0.2	325	17.3	17.3	8.1	8.1	30.2	30.2	91.7	91.6	7.4	4.6	+	5	1	46			<0.2	0.8
	1					4.0	0.2	345	17.1		8.1		30.8		90.5		7.4 7.4	5.8	+	5	1	40			-0.2	1.2
IM7	Cloudy	Moderate	08:37	8.0	Middle	4.0	0.2	342	17.1	17.1	8.1	8.1	30.8	30.8	90.5	90.5	7.3	5.8	5.8	6	6	48 48	821342	806827	<0.2 <0.2	2 1.3 1.1
	1					7.0	0.2	328	17.1		8.1		30.9		90.8		7.3	7.0	+	7	1	51			<0.2	1.2
					Bottom	7.0	0.2	325	17.1	17.1	8.1	8.1	30.8	30.8	91.0	90.9	7.3 7.3	7.1	+	6	1	50			<0.2	1.2
DA: Depth-Ave	raged					1	· •	020	1	1	5		, 55.5	<u> </u>	00			<u> </u>	1		1		1	1	, U.L.	

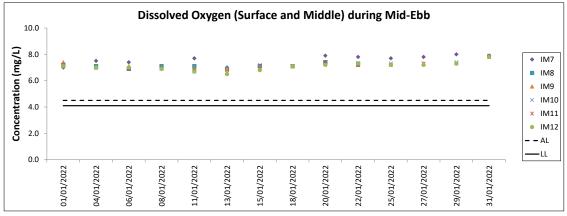
Water Quality Monitoring
Water Quality Monitoring Results on 31 January 22 during Mid-Flood Tide

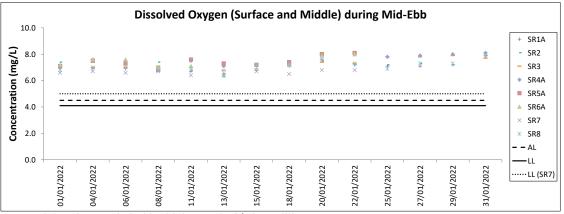
Water Qua	ility Monit	oring Resu	ılts on		31 January 22	during Mid	-Flood Ti	de																			
Monitoring	Weather	Sea	Sampling	Water	Sampling De	enth (m)	Current Speed	Current	Water Te	emperature (°C)	ı	рН	Salin	ity (ppt)		aturation (%)	Dissolved Oxygen	Turbidity	(NTU)	Suspende (mg.		Total Alkalinity		ordinate K Grid	Coordinate HK Grid	Chromium (µg/L)	Nickel (µg/L)
Station	Condition	Condition	Time	Depth (m)	Samping 20	opur (III)	(m/s)	Direction	Value	Average	Value	Average	Value	Average	Value	Average	Value DA	Value	DA	Value	DA	Value DA		orthing)	(Easting)	Value DA	Value DA
					Surface	1.0	0.3	281 287	17.5 17.4	17.5	8.1 8.1	8.1	30.5 30.6	30.6	98.5 98.4	98.5	7.9 7.9	6.9 7.0		5 6		46 46				<0.2 <0.2	1.1
IM10	Cloudy	Moderate	08:41	7.4	Middle	3.7	0.4	285	17.4	17.4	8.1	8.1	30.9	30.9	98.6	98.6	7.9	7.7	7.6	6	5	48 49	9 82	22234	809859	<0.2	2 1.5
					Bottom	3.7 6.4	0.4	284 305	17.4 17.4	17.4	8.1 8.1	8.1	30.9 30.9	30.9	98.6 99.8	99.8	7.9 8.0 8.0	7.7 8.1		5 4		49 51				<0.2	1.4
						6.4 1.0	0.4	311 271	17.4 17.5		8.1		30.9		99.8 96.8		7.7	8.1 6.2		5		52 46				<0.2 <0.2	1.4
					Surface	1.0 4.1	0.4	278 268	17.5 17.4	17.5	8.1	8.1	30.9 31.2	30.9	96.8 97.1	96.8	7.7 7.7	6.2 5.9		5 6		47				<0.2	1.7
IM11	Cloudy	Moderate	08:31	8.1	Middle	4.1	0.4	269	17.4	17.4	8.1	8.1	31.2	31.2	97.1	97.1	7.7	5.9	6.2	6	6	48 48	82	21524	810556	<0.2	1.7
					Bottom	7.1 7.1	0.5 0.5	289 294	17.4 17.4	17.4	8.1	8.1	31.3	31.3	97.6 97.7	97.7	7.8 7.8	6.3 6.4		6		50 51				<0.2 <0.2	1.8
					Surface	1.0 1.0	0.5 0.5	290 294	17.5 17.4	17.5	8.1	8.1	30.8	30.9	97.8 97.7	97.8	7.8	5.8 5.8		6 5		47 47				<0.2 <0.2	2.0
IM12	Cloudy	Moderate	08:22	9.1	Middle	4.6	0.5	303	17.4	17.4	8.1	8.1	31.4	31.4	96.6	96.6	7.7	6.0	6.2	5	6	49 50	0 82	21157	811501	<0.2 <0.2 <0.2	1.5
					Bottom	4.6 8.1	0.5 0.4	309 267	17.4 17.4	17.4	8.1	8.1	31.4 31.4	31.4	96.5 96.7	96.8	7.7	6.0 6.6		6 7		53				<0.2	1.2
						8.1 1.0	0.4	264 200	17.4 17.4		8.1 8.1		31.4		96.8 96.8		7.7	6.7		7		52				<0.2	1.0
					Surface	1.0	-	192	17.4	17.4	8.1	8.1	31.4	31.4	96.8	96.8	7.7	6.4		4		-				-	-
SR1A	Cloudy	Moderate	08:01	5.3	Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	6.5	-	5	-	8	19977	812664		-
					Bottom	4.3	0.0	185 177	17.3 17.3	17.3	8.1	8.1	31.4 31.4	31.4	98.4 98.6	98.5	7.8 7.9	6.6 6.5		6		-				-	-
					Surface	1.0	0.0	251 254	17.4 17.4	17.4	8.1 8.1	8.1	31.4 31.4	31.4	96.8 96.8	96.8	7.7	6.0		5 5		48 49				<0.2 <0.2	1.2
SR2	Cloudy	Moderate	07:46	4.2	Middle	-	-	-	-	-	-	-	-	-	-	-	- 1.1	-	5.9	-	6	- 50	0 82	21444	814188	- <0.2	2 - 1.2
					Bottom	3.2	0.1	259 251	17.3 17.3	17.3	8.1	8.1	31.5 31.5	31.5	98.0 98.3	98.2	7.8 7.8	5.8 5.8		7		51 51				<0.2	1.2
					Surface	1.0	0.1	346	17.3	17.3	8.1	8.1	29.8	29.8	90.1	90.0	7.3	5.2		4		-				-	-
SR3	Claudy	Madazata	08:45	8.6	Middle	1.0 4.3	0.2	342 332	17.3 17.2	17.2	8.1 8.1	8.1	29.9 30.4	30.4	89.9 89.3	89.3	7.3 7.2	5.2 5.7	5.8	5 5	4	-	0,	22170	807585	-	-
SKS	Cloudy	Moderate	06.45	0.0		4.3 7.6	0.2	325 311	17.2 17.3		8.1 8.1		30.5 30.5		89.3 90.1		7.2	5.6 6.7	5.6	4	4	-	02	22170	007505	-	-
					Bottom	7.6	0.2	317	17.4	17.4	8.1	8.1	30.5	30.5	90.2	90.2	7.2	6.7		4		-				-	-
					Surface	1.0	0.0	212 208	17.0 17.0	17.0	8.1	8.1	31.1	31.1	91.4 91.3	91.4	7.4 7.4	5.0 5.1		6 7		-				-	-
SR4A	Cloudy	Moderate	07:31	8.9	Middle	4.5 4.5	0.1	180 179	17.0 17.0	17.0	8.1	8.1	31.1	31.1	91.4 91.4	91.4	7.4	5.4 5.4	5.9	7	7		8	17209	807830		
					Bottom	7.9 7.9	0.0	179 172	17.0 17.0	17.0	8.0	8.0	31.1	31.1	92.6 92.7	92.7	7.5 7.5	7.3 7.2		8		-				-	-
					Surface	1.0	-	-	17.4	17.4	8.2	8.2	31.3	31.3	97.7	97.7	7.8	6.7		6		-					-
SR8	Cloudy	Moderate	08:15	4.2	Middle	1.0	-	-	17.4	_	8.2		31.3	_	97.7		7.8	7.4	7.9	-	6	-	83	20409	811625	-	-
55	Cicacy		55.15			3.2	-	-	17.4	17.4	8.3	0.2	31.3	24.2	98.8	00.0	7.9	8.5		- 6	ŭ	-	02		31.1020	-	-
DA: Denth-Ave					Bottom	3.2	-	-	17.4	17.4	8.3	8.3	31.3	31.3	99.0	98.9	7.9	8.9		6		-				-	

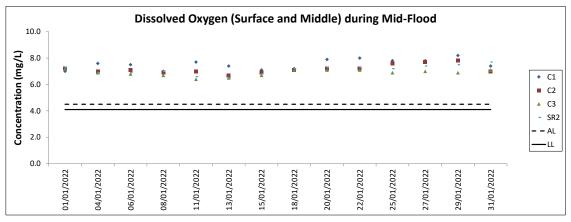
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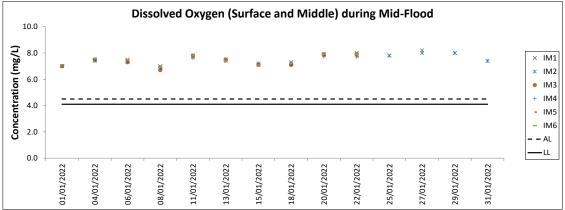


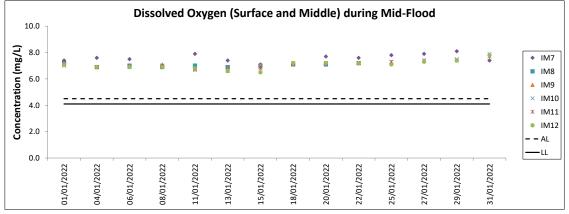


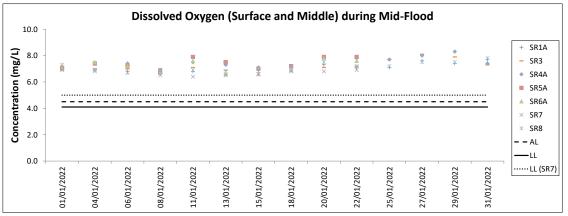


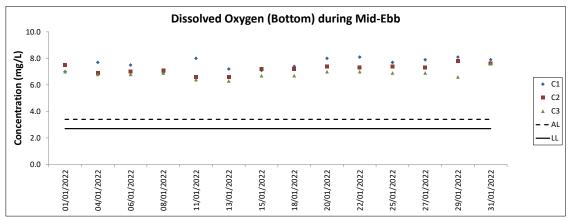


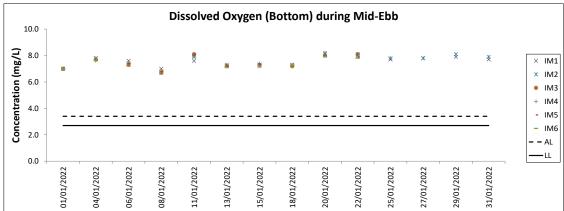


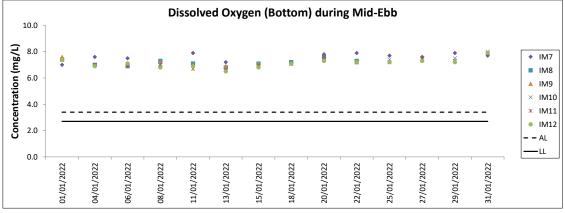


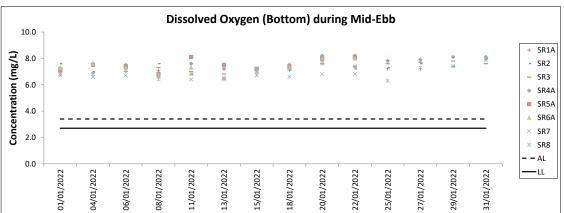


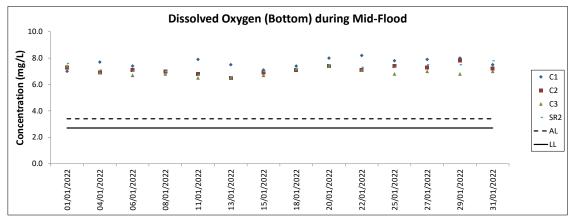


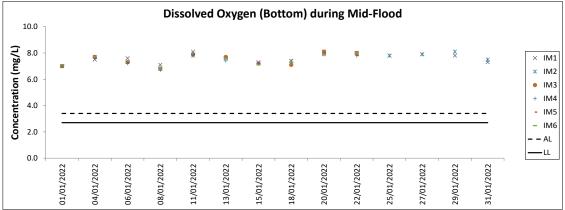


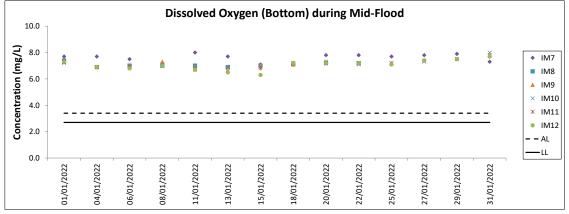


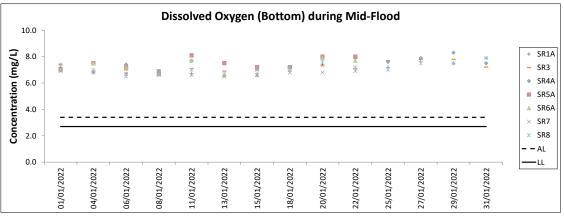


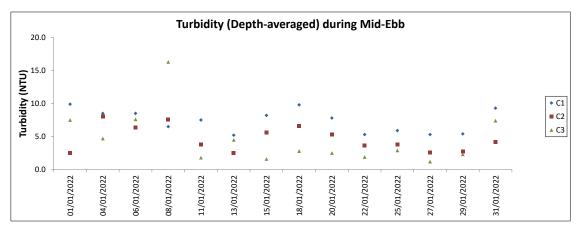


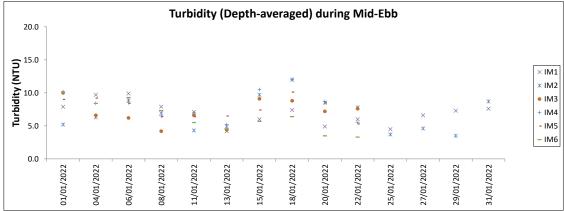


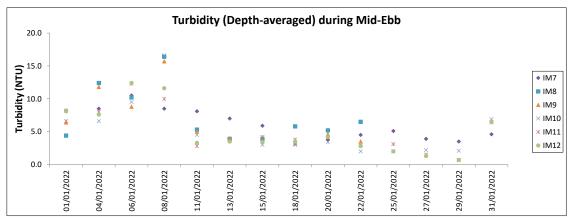


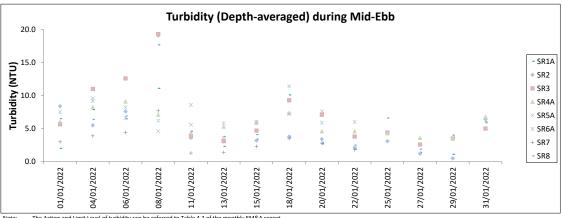


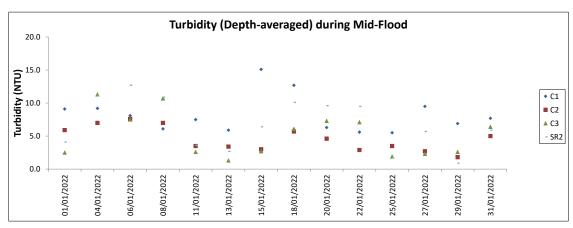


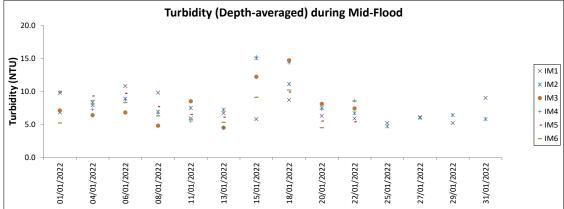


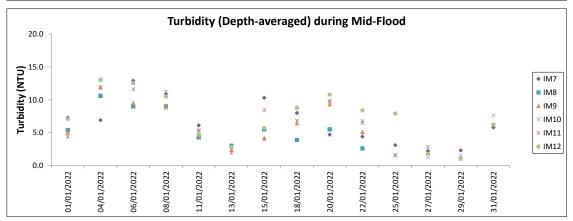


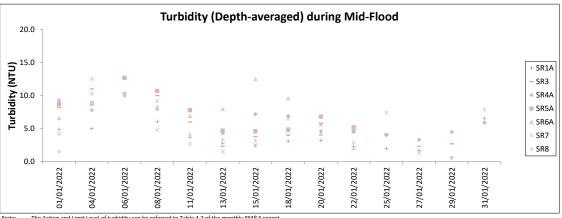




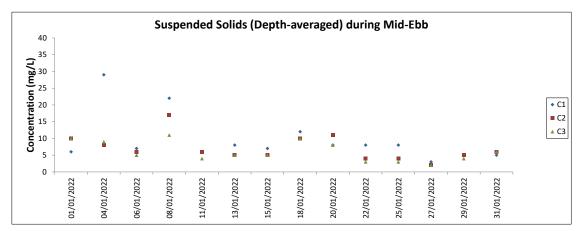


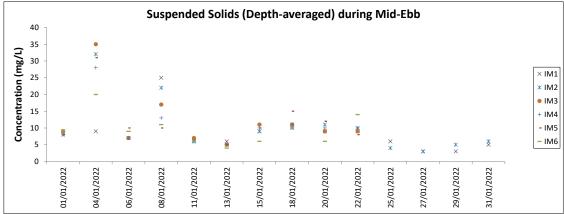


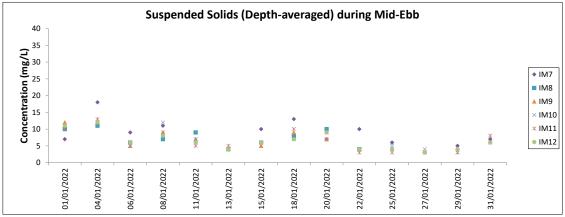


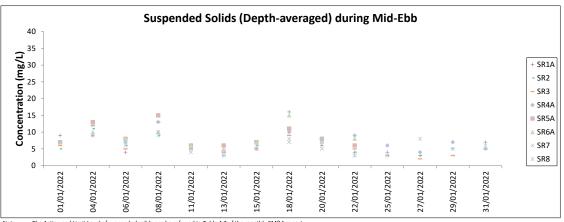


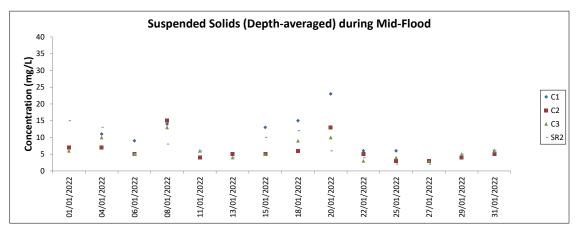
Note: The Action and Limit Level of turbidity can be referred to Table 4.2 of the monthly EM&A report

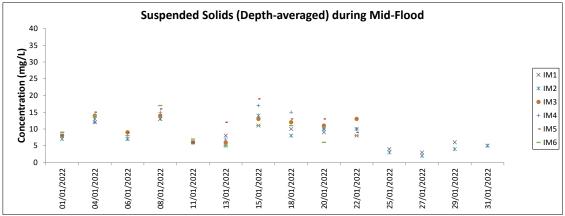


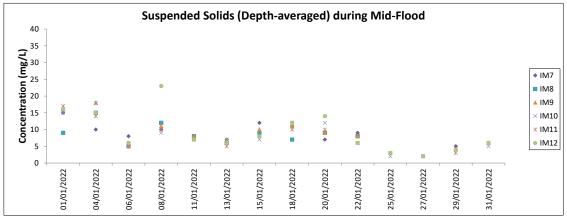


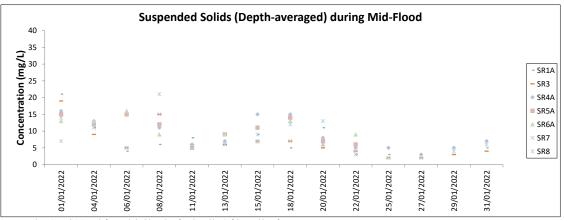


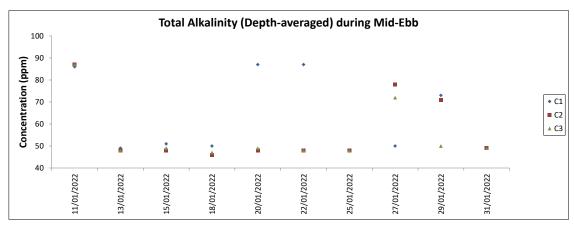


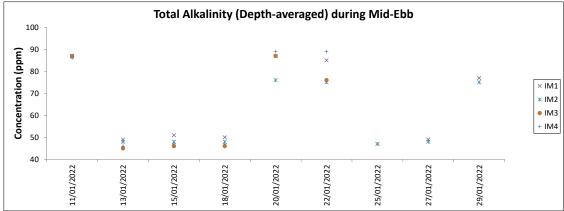


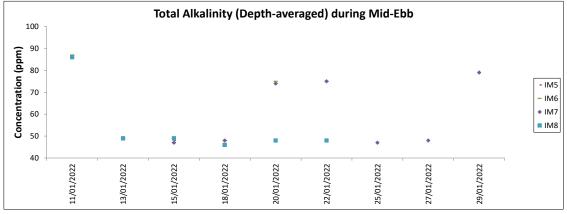


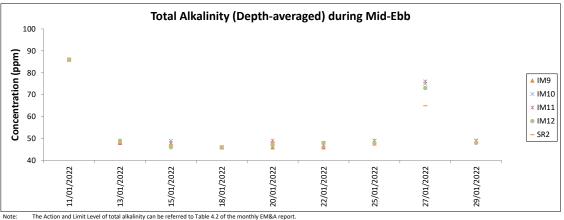


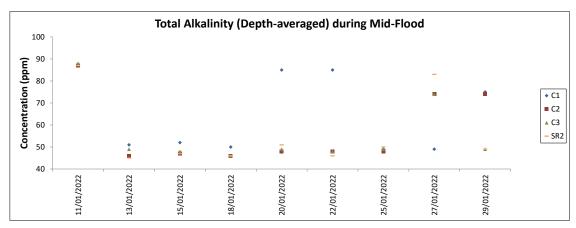


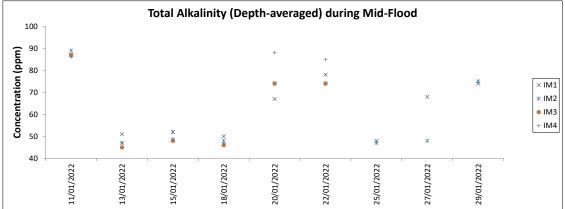


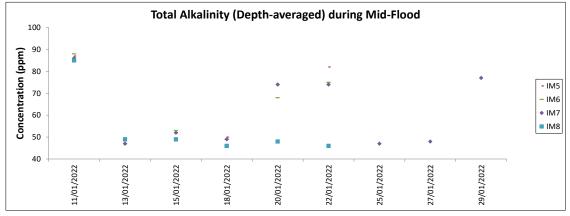


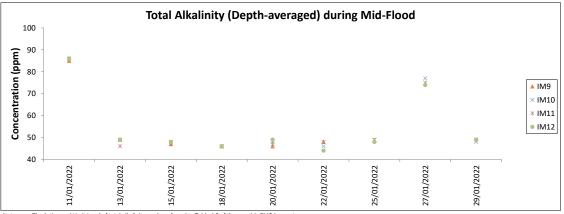


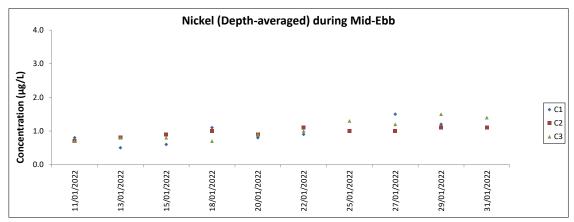


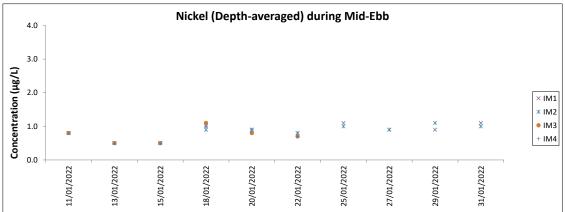


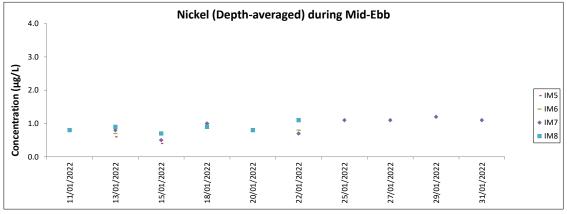


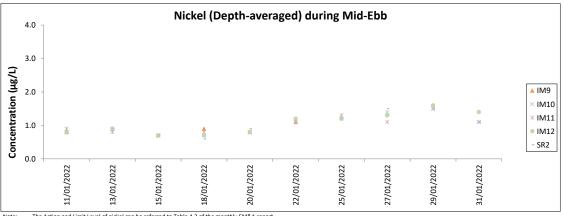


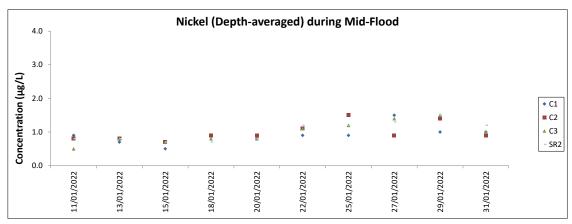


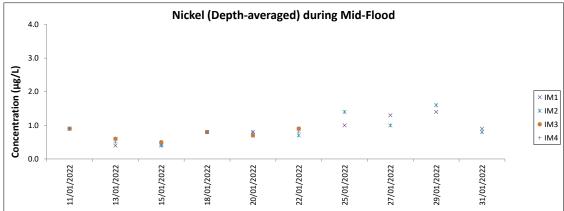


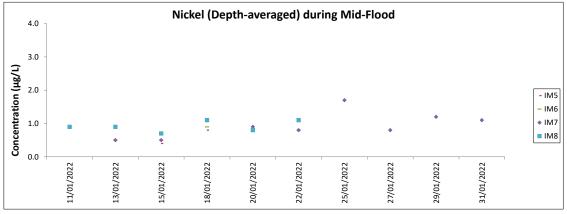


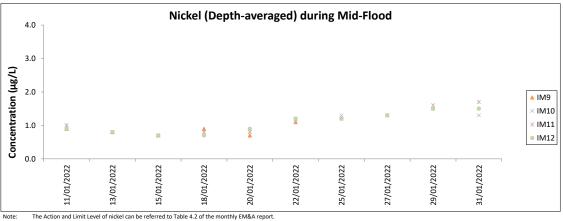


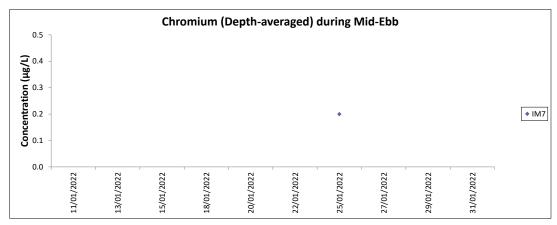


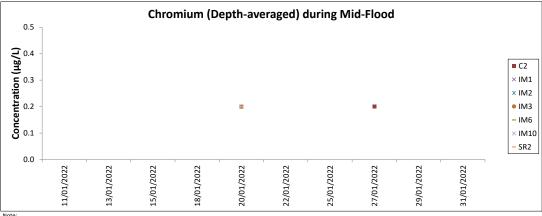












Note:
Monitoring at IM3, IM4, IM5, IM6, IM8, IM9, SR5A, SR6A, SR7 were terminated after 25 January 2022.

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
2-Nov-21	NEL	2	3.500	AUTUMN	32166	3RS ET	Р
2-Nov-21	NEL	3	25.180	AUTUMN	32166	3RS ET	Р
2-Nov-21	NEL	4	8.390	AUTUMN	32166	3RS ET	Р
2-Nov-21	NEL	2	2.700	AUTUMN	32166	3RS ET	S
2-Nov-21	NEL	3	6.030	AUTUMN	32166	3RS ET	S
2-Nov-21	NEL	4	0.900	AUTUMN	32166	3RS ET	S
3-Nov-21	AW	2	2.830	AUTUMN	32166	3RS ET	Р
3-Nov-21	AW	3	1.910	AUTUMN	32166	3RS ET	Р
3-Nov-21	WL	2	13.015	AUTUMN	32166	3RS ET	Р
3-Nov-21	WL	3	4.635	AUTUMN	32166	3RS ET	Р
3-Nov-21	WL	4	2.430	AUTUMN	32166	3RS ET	Р
3-Nov-21	WL	2	5.150	AUTUMN	32166	3RS ET	S
3-Nov-21	WL	3	3.530	AUTUMN	32166	3RS ET	S
3-Nov-21	WL	4	2.100	AUTUMN	32166	3RS ET	S
4-Nov-21	AW	2	4.780	AUTUMN	32166	3RS ET	Р
4-Nov-21	WL	2	15.006	AUTUMN	32166	3RS ET	Р
4-Nov-21	WL	4	4.543	AUTUMN	32166	3RS ET	Р
4-Nov-21	WL	2	6.324	AUTUMN	32166	3RS ET	S
4-Nov-21	WL	4	2.097	AUTUMN	32166	3RS ET	S
5-Nov-21	SWL	3	48.320	AUTUMN	32166	3RS ET	Р
5-Nov-21	SWL	4	6.250	AUTUMN	32166	3RS ET	Р
5-Nov-21	SWL	3	15.130	AUTUMN	32166	3RS ET	S
5-Nov-21	SWL	4	1.000	AUTUMN	32166	3RS ET	S
8-Nov-21	NEL	3	15.680	AUTUMN	32166	3RS ET	Р
8-Nov-21	NEL	4	21.020	AUTUMN	32166	3RS ET	Р
8-Nov-21	NEL	3	5.800	AUTUMN	32166	3RS ET	S
8-Nov-21	NEL	4	4.300	AUTUMN	32166	3RS ET	S
10-Nov-21	NWL	3	47.000	AUTUMN	32166	3RS ET	Р
10-Nov-21	NWL	4	16.600	AUTUMN	32166	3RS ET	Р
10-Nov-21	NWL	3	11.200	AUTUMN	32166	3RS ET	S
10-Nov-21	NWL	4	1.200	AUTUMN	32166	3RS ET	S
11-Nov-21	SWL	2	45.610	AUTUMN	32166	3RS ET	Р
11-Nov-21	SWL	3	8.300	AUTUMN	32166	3RS ET	Р
11-Nov-21	SWL	2	15.490	AUTUMN	32166	3RS ET	S
11-Nov-21	SWL	3	0.500	AUTUMN	32166	3RS ET	S
12-Nov-21	NWL	3	53.300	AUTUMN	32166	3RS ET	Р
12-Nov-21	NWL	4	10.400	AUTUMN	32166	3RS ET	Р
12-Nov-21	NWL	3	9.700	AUTUMN	32166	3RS ET	S
12-Nov-21	NWL	4	1.900	AUTUMN	32166	3RS ET	S
1-Dec-21	NEL	3	6.110	WINTER	32166	3RS ET	Р
1-Dec-21	NEL	4	30.730	WINTER	32166	3RS ET	Р
1-Dec-21	NEL	3	2.210	WINTER	32166	3RS ET	Р
1-Dec-21	NEL	4	7.450	WINTER	32166	3RS ET	S
3-Dec-21	NWL	3	49.900	WINTER	32166	3RS ET	Р
3-Dec-21	NWL	4	14.000	WINTER	32166	3RS ET	Р
3-Dec-21	NWL	3	8.400	WINTER	32166	3RS ET	S
3-Dec-21	NWL	4	3.100	WINTER	32166	3RS ET	S

DATE	AREA	BEAU	KM SEARCHED	SEASON	VESSEL	TYPE	P/S
6-Dec-21	SWL	2	3.350	WINTER	32166	3RS ET	Р
6-Dec-21	SWL	3	50.190	WINTER	32166	3RS ET	Р
6-Dec-21	SWL	2	0.900	WINTER	32166	3RS ET	S
6-Dec-21	SWL	3	14.960	WINTER	32166	3RS ET	S
7-Dec-21	NWL	2	7.900	WINTER	32166	3RS ET	Р
7-Dec-21	NWL	3	53.100	WINTER	32166	3RS ET	Р
7-Dec-21	NWL	4	2.000	WINTER	32166	3RS ET	S
7-Dec-21	NWL	3	12.300	WINTER	32166	3RS ET	Р
13-Dec-21	NEL	2	1.290	WINTER	32166	3RS ET	Р
13-Dec-21	NEL	3	29.980	WINTER	32166	3RS ET	Р
13-Dec-21	NEL	4	5.880	WINTER	32166	3RS ET	Р
13-Dec-21	NEL	2	0.440	WINTER	32166	3RS ET	S
13-Dec-21	NEL	3	8.270	WINTER	32166	3RS ET	S
13-Dec-21	NEL	4	1.040	WINTER	32166	3RS ET	S
15-Dec-21	AW	2	4.940	WINTER	32166	3RS ET	Р
15-Dec-21	WL	2	19.188	WINTER	32166	3RS ET	Р
15-Dec-21	WL	2	10.482	WINTER	32166	3RS ET	S
16-Dec-21	SWL	2	28.760	WINTER	32166	3RS ET	Р
16-Dec-21	SWL	3	26.150	WINTER	32166	3RS ET	Р
16-Dec-21	SWL	2	6.185	WINTER	32166	3RS ET	S
16-Dec-21	SWL	3	8.280	WINTER	32166	3RS ET	S
17-Dec-21	AW	3	4.970	WINTER	32166	3RS ET	Р
17-Dec-21	WL	3	11.890	WINTER	32166	3RS ET	Р
17-Dec-21	WL	4	8.700	WINTER	32166	3RS ET	Р
17-Dec-21	WL	3	6.710	WINTER	32166	3RS ET	S
17-Dec-21	WL	4	4.000	WINTER	32166	3RS ET	S
03-Jan-22	NWL	2	48.340	WINTER	32166	3RS ET	P
03-Jan-22	NWL	3	13.940	WINTER	32166	3RS ET	Р
03-Jan-22	NWL	2	11.440	WINTER	32166	3RS ET	S
04-Jan-22	NEL	2	6.300	WINTER	32166	3RS ET	P
04-Jan-22	NEL	3	23.630	WINTER	32166	3RS ET	Р
04-Jan-22	NEL	4	7.300	WINTER	32166	3RS ET	P
04-Jan-22	NEL	3	7.770	WINTER	32166	3RS ET	S
04-Jan-22	NEL	4	1.800	WINTER	32166	3RS ET	S
05-Jan-22	AW	2	0.800	WINTER	32166	3RS ET	P
05-Jan-22	AW	3	1.770	WINTER	32166	3RS ET	P
05-Jan-22	AW	4	1.920	WINTER	32166	3RS ET	P
05-Jan-22	WL	2	10.474	WINTER	32166	3RS ET	Р
05-Jan-22	WL	2	5.590	WINTER	32166	3RS ET	S
05-Jan-22	WL	3	0.504	WINTER	32166	3RS ET	S
10-Jan-22	AW	2	4.820	WINTER	32166	3RS ET	P
10-Jan-22	WL	2	12.835	WINTER	32166	3RS ET	Р
10-Jan-22	WL	3	6.493	WINTER	32166	3RS ET	Р
10-Jan-22	WL	2	5.225	WINTER	32166	3RS ET	S
10-Jan-22	WL	3	4.587	WINTER	32166	3RS ET	S
11-Jan-22	NEL	2	7.450	WINTER	32166	3RS ET	P
11-Jan-22 11-Jan-22	NEL	3	28.850	WINTER	32166	3RS ET	P
11-Jan-22 11-Jan-22	NEL	4	1.100	WINTER	32166	3RS ET	P
11-Jan-22	NEL	2	3.390	WINTER	32166	3RS ET	S

DATE	AREA	BEAU	KM SEARCHED	SEASON	VESSEL	TYPE	P/S
11-Jan-22	NEL	3	5.510	WINTER	32166	3RS ET	S
11-Jan-22	NEL	4	0.800	WINTER	32166	3RS ET	S
12-Jan-22	NWL	2	12.600	WINTER	32166	3RS ET	Р
12-Jan-22	NWL	3	50.400	WINTER	32166	3RS ET	Р
12-Jan-22	NWL	2	3.300	WINTER	32166	3RS ET	S
12-Jan-22	NWL	3	8.600	WINTER	32166	3RS ET	S
13-Jan-22	SWL	2	38.742	WINTER	32166	3RS ET	Р
13-Jan-22	SWL	3	14.940	WINTER	32166	3RS ET	Р
13-Jan-22	SWL	2	13.268	WINTER	32166	3RS ET	S
13-Jan-22	SWL	3	2.260	WINTER	32166	3RS ET	S
19-Jan-22	SWL	2	26.240	WINTER	32166	3RS ET	Р
19-Jan-22	SWL	3	21.930	WINTER	32166	3RS ET	Р
19-Jan-22	SWL	4	5.500	WINTER	32166	3RS ET	Р
19-Jan-22	SWL	2	10.780	WINTER	32166	3RS ET	S
19-Jan-22	SWL	3	3.510	WINTER	32166	3RS ET	S
19-Jan-22	SWL	4	1.920	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
3-Nov-21	1	1102	CWD	1	WL	2	63	ON	3RS ET	22.2610	113.8531	AUTUMN	NONE	S
3-Nov-21	2	1140	CWD	2	WL	2	229	ON	3RS ET	22.2414	113.8311	AUTUMN	NONE	Р
3-Nov-21	3	1248	CWD	1	WL	4	75	ON	3RS ET	22.1869	113.8395	AUTUMN	NONE	Р
4-Nov-21	1	1038	CWD	3	WL	2	87	ON	3RS ET	22.2664	113.8593	AUTUMN	NONE	S
4-Nov-21	2	1101	CWD	7	WL	2	296	ON	3RS ET	22.2603	113.8428	AUTUMN	NONE	Р
4-Nov-21	3	1154	CWD	6	WL	2	286	ON	3RS ET	22.2244	113.8372	AUTUMN	NONE	S
4-Nov-21	4	1224	CWD	1	WL	2	171	ON	3RS ET	22.2240	113.8236	AUTUMN	NONE	Р
4-Nov-21	5	1242	CWD	5	WL	2	32	ON	3RS ET	22.2142	113.8315	AUTUMN	NONE	Р
5-Nov-21	1	1306	FP	2	SWL	3	95	ON	3RS ET	22.1643	113.8970	AUTUMN	NONE	Р
11-Nov-21	1	1456	CWD	7	SWL	3	375	ON	3RS ET	22.1853	113.8486	AUTUMN	NONE	Р
6-Dec-21	1	1119	FP	1	SWL	3	11	ON	3RS ET	22.1765	113.9280	WINTER	NONE	Р
6-Dec-21	2	1504	CWD	3	SWL	3	22	ON	3RS ET	22.1878	113.8497	WINTER	NONE	Р
7-Dec-21	1	0945	CWD	1	NWL	2	N/A	OFF	3RS ET	22.3983	113.8873	WINTER	NONE	N/A
15-Dec-21	1	1043	CWD	4	WL	2	471	ON	3RS ET	22.2500	113.8357	WINTER	NONE	Р
15-Dec-21	2	1112	CWD	1	WL	2	113	ON	3RS ET	22.2415	113.8315	WINTER	NONE	Р
16-Dec-21	1	1333	CWD	5	SWL	2	134	ON	3RS ET	22.1885	113.8880	WINTER	NONE	Р
16-Dec-21	2	1448	CWD	1	SWL	2	16	ON	3RS ET	22.1989	113.8685	WINTER	NONE	Р
16-Dec-21	3	1507	CWD	3	SWL	2	63	ON	3RS ET	22.1998	113.8622	WINTER	GILLNETTER	S
03-Jan-22	1	0959	CWD	3	NWL	3	868	ON	3RS ET	22.3497	113.8684	WINTER	NONE	Р
03-Jan-22	2	1039	CWD	5	NWL	2	466	ON	3RS ET	22.2726	113.8700	WINTER	GILLNETTER	Р
03-Jan-22	3	1159	CWD	4	NWL	2	130	ON	3RS ET	22.3693	113.8773	WINTER	NONE	Р
03-Jan-22	4	1331	CWD	2	NWL	2	563	ON	3RS ET	22.3616	113.8979	WINTER	NONE	Р
05-Jan-22	1	0946	CWD	1	AW	3	262	ON	3RS ET	22.2919	113.8752	WINTER	NONE	Р
05-Jan-22	2	1024	CWD	5	WL	2	430	ON	3RS ET	22.2854	113.8614	WINTER	GILLNETTER	Р
05-Jan-22	3	1048	CWD	3	WL	2	789	ON	3RS ET	22.2764	113.8512	WINTER	NONE	S
05-Jan-22	4	1052	CWD	3	WL	2	173	ON	3RS ET	22.2749	113.8492	WINTER	NONE	S
05-Jan-22	5	1108	CWD	3	WL	2	295	ON	3RS ET	22.2695	113.8523	WINTER	GILLNETTER	Р
05-Jan-22	6	1115	CWD	1	WL	2	8	ON	3RS ET	22.2683	113.8597	WINTER	GILLNETTER	S
05-Jan-22	7	1125	CWD	7	WL	2	178	ON	3RS ET	22.2593	113.8440	WINTER	NONE	Р
05-Jan-22	8	1143	CWD	3	WL	2	155	ON	3RS ET	22.2502	113.8373	WINTER	NONE	Р
05-Jan-22	9	1159	CWD	1	WL	2	304	ON	3RS ET	22.2448	113.8497	WINTER	GILLNETTER	S
05-Jan-22	10	1233	CWD	4	WL	2	74	ON	3RS ET	22.2323	113.8373	WINTER	NONE	Р

DATE	STG#	TIME	CWD/FP	GP SZ	AREA	BEAU	PSD	EFFORT	TYPE	DEC LAT	DEC LON	SEASON	BOAT ASSOC.	P/S
05-Jan-22	11	1253	CWD	3	WL	2	215	ON	3RS ET	22.2236	113.8309	WINTER	NONE	Р
05-Jan-22	12	1313	CWD	1	WL	2	240	ON	3RS ET	22.2142	113.8264	WINTER	NONE	Р
05-Jan-22	13	1328	CWD	11	WL	2	598	ON	3RS ET	22.2060	113.8393	WINTER	NONE	S
10-Jan-22	1	1017	CWD	1	WL	2	63	ON	3RS ET	22.2759	113.8501	WINTER	NONE	S
10-Jan-22	2	1140	CWD	5	WL	3	331	ON	3RS ET	22.2142	113.8259	WINTER	NONE	Р
10-Jan-22	3	1211	CWD	8	WL	3	103	ON	3RS ET	22.2059	113.8291	WINTER	NONE	Р
13-Jan-22	1	1152	FP	1	SWL	2	40	ON	3RS ET	22.1586	113.9179	WINTER	NONE	Р
13-Jan-22	2	1314	FP	3	SWL	2	261	ON	3RS ET	22.1492	113.8923	WINTER	NONE	S
13-Jan-22	3	1433	CWD	5	SWL	2	366	ON	3RS ET	22.1978	113.8685	WINTER	NONE	Р
19-Jan-22	1	1337	FP	2	SWL	3	43	ON	3RS ET	22.1859	113.8977	WINTER	NONE	Р
19-Jan-22	2	1453	CWD	5	SWL	3	38	ON	3RS ET	22.1827	113.8592	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 416.288 km of survey effort was collected under Beaufort Sea State 3 or below with favourable visibility; total no. of 22 on-effort sightings and total number of 84 dolphins from on-effort sightings were collected under such condition. Calculation of the encounter rates in January 2022 are shown as below:

Encounter Rate by Number of Dolphin Sightings (STG) in January 2022

$$STG = \frac{22}{416.288} \times 100 = 5.28$$

Encounter Rate by Number of Dolphins (ANI) in January 2022

$$ANI = \frac{84}{416.288} \times 100 = 20.18$$

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

A total of 1163.763 km of survey effort was collected under Beaufort Sea State 3 or below with favourable visibility; total no. of 36 on-effort sightings and total number of 133 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)

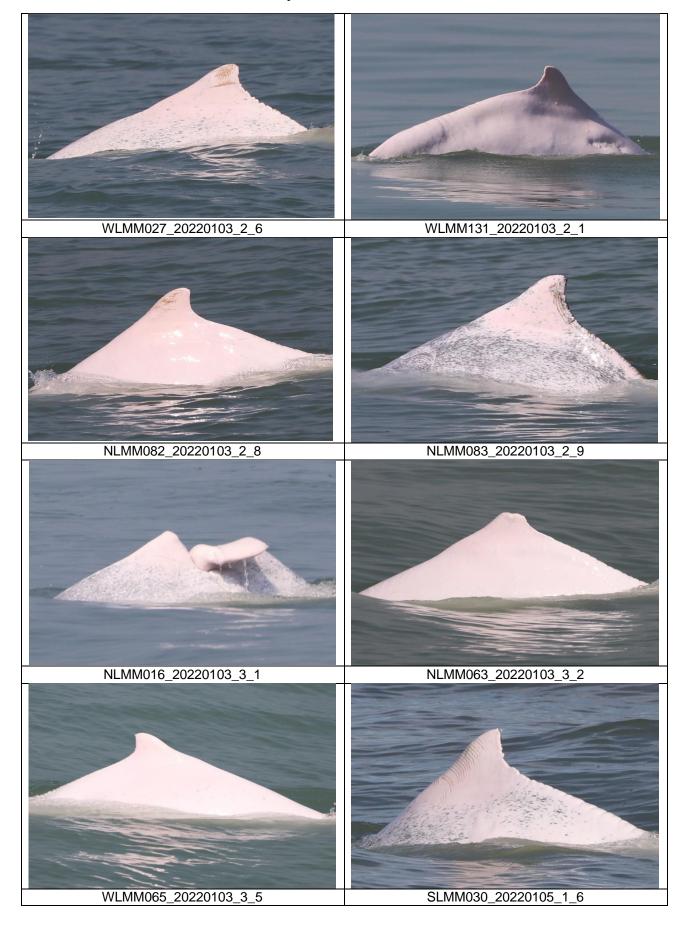
$$STG = \frac{36}{1163.763} \times 100 = 3.09$$

Running Quarterly Encounter Rate by Number of Dolphins (ANI)

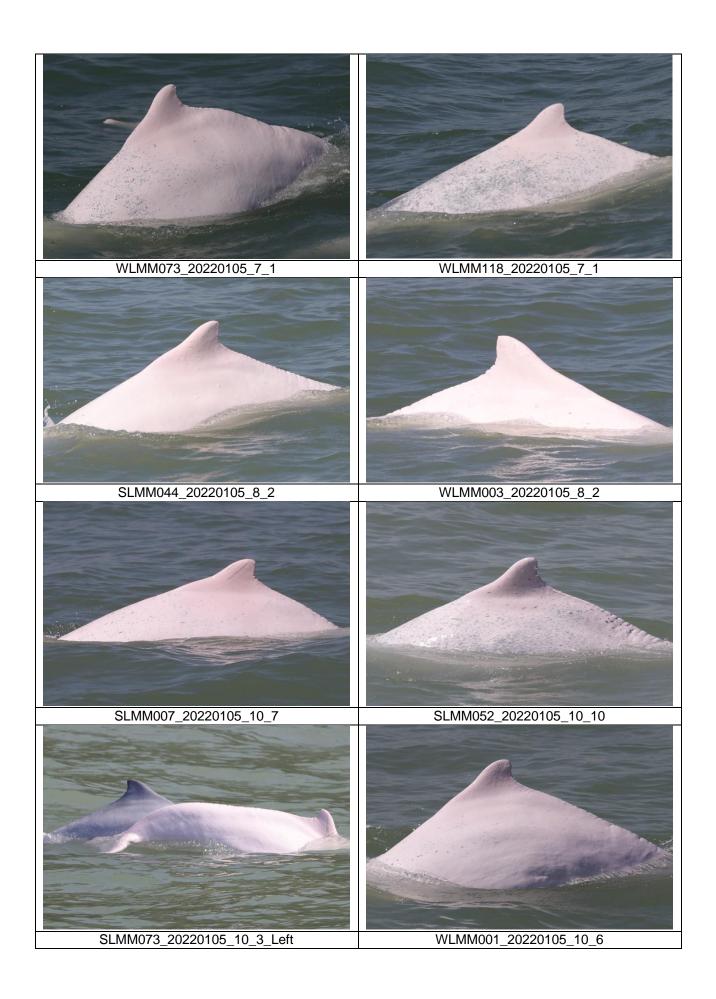
$$ANI = \frac{133}{1163.763} \times 100 = 11.43$$

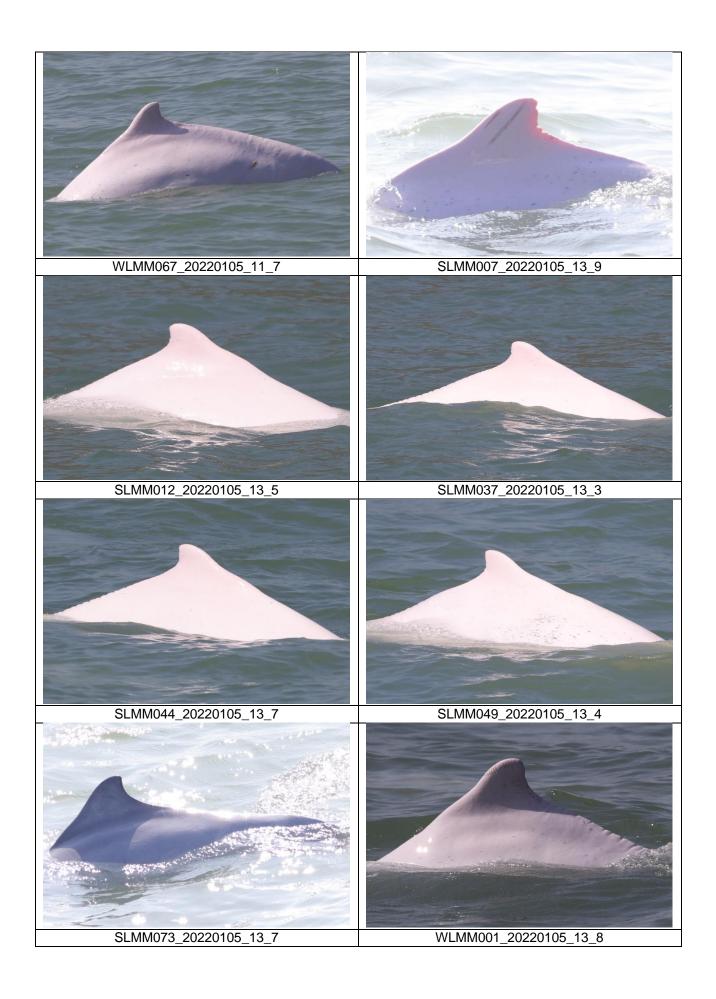
CWD Small Vessel Line-transect Survey

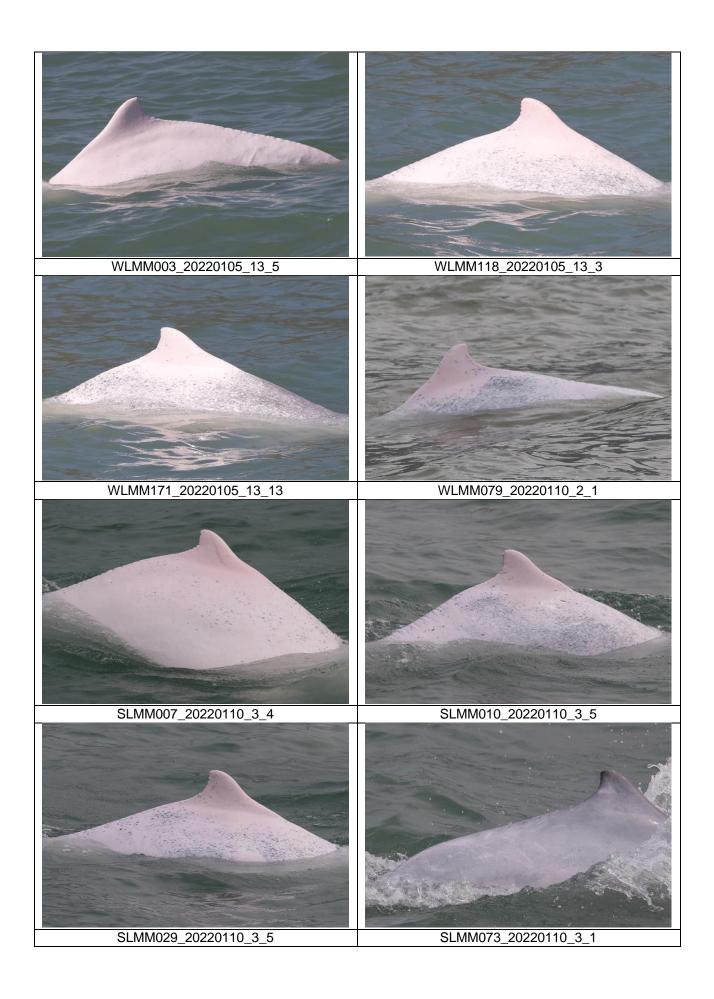
Photo Identification

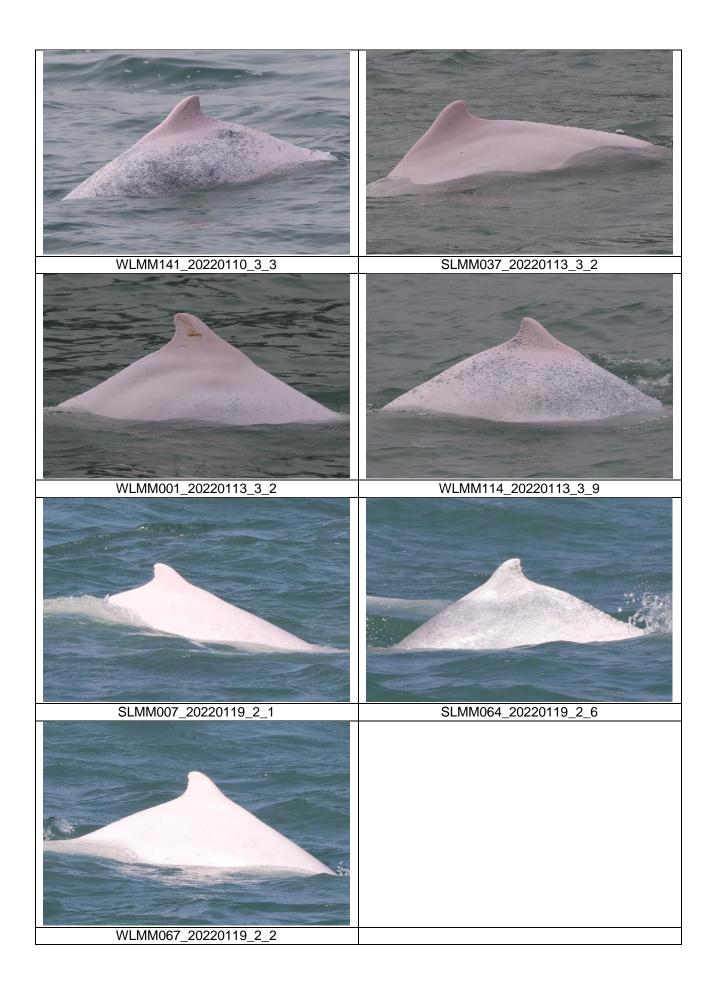












CWD Land-based Theodolite Tracking Survey

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
17/Jan/22	Sha Chau	10:42	16:42	6:00	2	3	0	-
24/Jan/22	Lung Kwu Chau	9:28	15:28	6:00	2	3-4	0	-

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

Appendix D. Calibration Certificates



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

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

REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Test Report No.

: R-BB010018

Date of Issue

: 10 January 2022

Page No.

: 1 of 2

PART A - CUSTOMER INFORMATION

Enovative Environmental Service Ltd.
Flat 2207, Yu Fun House Yu Chui Court, Shatin
New Territories (HK) Hong Kong

Attn:

PART B - SAMPLE INFORMATION

Name of Equipment:

Titrette® bottle-top burette, 50mL

Manufacturer:

BRAND

Serial Number:

10N64701

Date of Received:

06 January 2022 07 January 2022

Date of Calibration :
Date of Next Calibration :

06 April 2022

PART C - REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

Test Parameter

Reference Method

Accuracy Test

In-house Method (Gravimetric Method)

PART D - CALIBRATION RESULT

(1) Accuracy Test

TRIAL	TESTED	RANGE	TESTED	RANGE	TESTED	RANGE	TESTED	RANGE	TESTED	RANGE
	VOLUME	(1-4)	VOLUME	(16-19)	VOLUME	(23-26)	VOLUME	(34-37)	VOLUME	(42-45)
	(INTERNAL)		(INTERNAL)		(INTERNAL)		(INTERNAL)		(INTERNAL)	
No	Weight of	Volume,	Weight of	Volume,	Weight of	Volume,	Weight of	Volume,	Weight of	Volume,
-	Water(g)	V (mL)	Water(g)	V (mL)	Water(g)	V (mL)	Water(g)	V (mL)	Water(g)	V (mL)
1	2.9935	3.0034	2.9886	2.9985	2.9951	3.005	2.9879	2.9978	2.9866	2.9965
2	2.9973	3.0072	2.9919	3.0018	2.9930	3.0029	2.9900	2.9999	2.9934	3.0033
3	2.9867	2.9966	2.9914	3.0013	2.9882	2.9981	2.9932	3.0031	2.9842	2.9940
4	2.9828	2.9926	2.9968	3.0067	2.9984	3.0083	2.9882	2.9981	2.9894	2.9993
5	2.9868	2.9967	2.9873	2.9972	2.9895	2.9994	2.9854	2.9953	2.9894	2.9993
6	2.9892	2.9991	2.9922	3.0021	2.9875	2.9974	2.9867	2.9966	2.9847	2.9945
7	2.9874	2.9973	2.9948	3.0047	2.9910	3.0009	2.9911	3.0010	2.9915	3.0014
8	2.9921	3.0020	2.9837	2.9935	2.9943	3.0042	2.9843	2.9941	2.9897	2.9996
9	2.9924	3.0023	2.9896	2.9995	2.9976	3.0075	2.9835	2.9933	2.9843	2.9941
10	2.9868	2.9967	2.9923	3.0022	2.9922	3.0021	2.9966	3.0065	2.9866	2.9965
Average	2.9895	2.9994	2.9909	3.0007	2.9927	3.0026	2.9887	2.9986	2.988	2.9978
SD	0.0043	0.510	0.0038		0.0037		0.0041		0.0032	
Accuracy	-0.0212		0.0243		0.0852		-0.0482		-0.072	
RSD, %	0.1422		0.125		0.1244		0.1372		0.1062	

Tolerance of Accuracy Test should be less than ± 1.0 (%)

--- CONTINUED ON NEXT PAGE ---

AUTHORIZED SIGNATORY:

Assistant Manager (Chemical Testing)

LEE Chun-ning

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REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Test Report No.

: R-BB010018

Date of Issue

: 10 January 2022

Page No.

: 2 of 2

Acceptance Criteria:

Accuracy: <±1%
Precision (RSD): <1%

Environmental conditions of the calibration:

Water temperature: 24.7°C Relative humidity: 54% Z-Factor: 1.0030 Nominal volume: 3.0ml

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

--- END OF REPORT ---

Appendix E. Status of Environmental Permits and Licenses

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

Contract No.	Description	Location	Permit/ Reference No.	Status
3206	Notification of Construction Work under APCO	Works area of 3206	409237	Receipt acknowledged by EPD on 25 Oct 2016
	Registration as Chemical	Site office of 3206	WPN 5213- 951-Z4035-01	Completion of Registration on 18 Nov 2016
	Waste Producer	Works area of 3206	WPN 5213- 951-Z4035-02	Completion of Registration on 18 Nov 2016
	Construction Noise Permit (General Works)	Works Area of 3206	GW-RS0757- 21	Valid from 6 Oct 2021 to 2 Apr 2022
	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	Works area of 3301	GW-RS0631-21	Valid from 22 Aug 2021 to 21 Feb 2022
	(General Works)	Works area of 3301 (Cable ducting works) (Special Case)	GW-RS0744-21	Valid from 2 Oct 2021 to 29 Mar 2022
3302	Notification of Construction	Works area of 3302	440222	Receipt acknowledged by EPD on 10 Dec 2018
	Work under APCO	Staging area of 3302	2018CES1	Receipt acknowledged by EPD on 21 Dec 2018
			454882	Receipt acknowledged by EPD on 2 Apr 2020
			476068	Receipt acknowledged by EPD on 17 Jan 2022

Contract No.	Description	Location	Permit/ Reference No.	Status
	Registration as Chemical Waste Producer	Works area of 3302	5296-951- C4331-01	Completion of Registration on 4 Jan 2019
	Discharge License under WPCO	Works area of 3302	WT00034539- 2019	Valid from 11 Mar 2020 to 31 Mar 2025
		Works area of 3302	WT00034541- 2019	Valid from 14 Oct 2019 to 31 Oct 2024
	Bill Account for disposal	Works area of 3302	A/C 7032881	Approval granted from EPD on 8 Jan 2019
	Construction Noise Permit (General Works)	Works area of 3302	GW-RS0842-21	Valid from 10 Nov 2021 to 8 May 2022
	(General Works)		GW-RS0501-21 GW-RS1005-21	Superseded by GW-RS1005-21 Valid from 7 Jan 2022 to 6 Jul 2022
			GW-1101000-21	valid from 7 dan 2022 to 0 dai 2022
3303	Notification of Construction Work under APCO	Works area of 3303	445611	Receipt acknowledged by EPD on 27 May 2019
	Specified Process license under APCO	Works area of 3303	L-15-040 (1)	Valid from 29 Mar 2021 to 28 Mar 2025
	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
	WPCO	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-RS0823-21	Valid from 16 Nov 2021 to 15 May 2022
		Works area of 3303 (Reclamation area)	GW-RS0803-21	Valid from 29 Oct 2021 to 26 Apr 2022
3305	Notification of Construction Work under APCO	Works area of 3305	460857	Receipt acknowledged by EPD on 12 Oc 2020
	Registration as Chemical Waste Producer	Works area of 3305	5213-951- A3024-01	Completion of Registration on 13 Nov 2020
	Bill Account for disposal	Works area of 3305	A/C 7035360	Approval granted from EPD on 9 Oc 2019
3306	Registration as Chemical Waste Producer	Works area of 3306	8335-951- C4434-01	Completion of Registration on 1 Apr 2020
	Bill Account for disposal	Works area of 3306	A/C 7035868	Approval granted from EPD on 27 Nov 2019
3307	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

Contract No.	Description	Location	Permit/ Reference No.	Status
	Bill Account for disposal	Works area of 3307	A/C 7037129	Approval granted from EPD on 5 May 2020
	Construction Noise Permit (General Works)	Works area of 3307	GW-RS0562-21	Valid from 6 Aug 2021 to 5 Feb 2022
3308	Bill Account for disposal	Works area of 3308	A/C 7038988	Approval granted from EPD on 24 Nov 2020
	Construction Noise Permit (General Works)	Works area of 3308	GW-RS0655-21	Valid from 2 Sep 2021 to 28 Feb 2022
3310	Notification of Construction Work under APCO	Works area of 3310	474782	Receipt acknowledged by EPD on 10 Dec 2021
	Registration as Chemical Waste Producer	Works area of 3310	5213-951- C4682-01	Completion of Registration on 21 Dec 2021
	Discharge License under WPCO	Works area of 3310	WT00039654- 2021	Valid from 31 Dec 2021 to 31 Dec 2026
	Bill Account for disposal	Works area of 3310	A/C 7042793	Approval granted from EPD on 4 Jan 2022
	Construction Noise Permit (General Works)	Works area of 3310	GW-RS1038-21	Valid from 28 Dec 2021 to 27 Jun 2022
3403	Notification of Construction	Works area of 3403	450860	Receipt acknowledged by EPD on 11 Nov 2019
	Work under APCO	Works area of 3403 (with Area 17 and Area 15)	475369	Receipt acknowledged by EPD on 28 Dec 2021
	Registration as Chemical Waste Producer	Works area of 3403	WPN 5213-951- S4218-01	Completion of Registration on 9 Jan 2020
	Discharge License under WPCO	Works area of 3403	WT00035841- 2020	Valid from 5 Jun 2020 to 30 Jun 2025
	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-RS0653-21	Valid from 4 Sep 2021 to 28 Feb 2022
	Construction Noise Permit (Special Case)	Works area of 3403	GW-RS0909-21	Valid from 1 Dec 2021 to 31 May 2022
3404	Bill Account for disposal	Works area of 3404	A/C 7035158	Approval granted from EPD on 12 Sep 2019
3405	Notification of Construction Work under APCO	Works area of 3405	453447	Receipt acknowledged by EPD on 18 Feb 2020
	Registration as Chemical Waste Producer	Works area of 3405	WPN 5218-951- C4431-01	Completion of Registration on 12 Mar 2020
	Discharge License under WPCO	Works area of 3405	WT00037084- 2020	Valid from 17 Mar 2021 to 31 Mar 2026
	Bill Account for disposal	Works area of 3405	A/C 7036796	Approval granted from EPD on 20 Mar 2020
	Construction Noise Permit (General Works)	Works area of 3405	GW-RS0966-21	Valid from 13 Dec 2021 to 12 Jun 2022

Contract No.	Description	Location	Permit/ Reference No.	Status
3408	Notification of Construction Work under APCO	Works area of 3408	461958	Receipt acknowledged by EPD on 17 Nov 2020
	Registration as Chemical Waste Producer	Works area of 3408	WPN 5218-951- B2621-01	Completion of Registration on 16 Jul 2021
	Discharge License under WPCO	Works area of 3408	WT00038836- 2021	Valid from 27 Sep 2021 to 30 Sep 2026
	Bill Account for disposal	Works area of 3408	A/C 7039063	Approval granted from EPD on 2 Dec 2020
	Construction Noise Permit (General Works)	Works area of 3408	GW-RS0818-21	Valid from 29 Oct 2021 to 31 Mar 2022 Superseded by GW-RS0020-22 on 15 Jan 2022
		Works area of 3408	GW-RS0020-22	Valid from 15 Jan 2022 to 30 Jun 2022
3503	Notification of Construction	Works area of 3503	459394	Receipt acknowledged by EPD on 28 Aug 2020
	Work under APCO	Stockpiling area of 3503	459392	Receipt acknowledged by EPD on 28 Aug 2020
	Bill Account for disposal	Works area of 3503	A/C 7029665	Approval granted from EPD on 27 Dec 2017
3508	Notification of Construction Work under APCO	Works area of 3508	459017	Receipt acknowledged by EPD on 19 Aug 2020
			459469	Receipt acknowledged by EPD on 4 Sep 2020
		Works area of 3508 (Area J)	467132	Receipt acknowledged by EPD on 3 May 2021
	Registration as Chemical Waste Producer	Works area of 3508	WPN-5218-951- G2898-01	Completion of Registration on 28 Sep 2020
	Discharge License under WPCO	Works area of 3508	WT00037209- 2020	Valid from 11 Mar 2021 to 31 Mar 2026
			WT00037523- 2021	Valid from 1 Apr 2021 to 30 Apr 2026
			WT00037225- 2020	Valid from 1 Apr 2021 to 30 Apr 2026
			WT00037549- 2021	Valid from 1 Apr 2021 to 30 Apr 2026
	Bill Account for disposal	Works area of 3508	7038224	Approval granted from EPD on 8 Sep 2020
	Construction Noise Permit (General Works)	Works area of 3508	GW-RS0979-21	Valid from 19 Dec 2021 to 31 May 2022
		Works area of 3508	GW-RS0778-21	Valid from 15 Oct 2021 to 12 Apr 2022
		Works area of 3508 (Area 10)	GW-RS0016-22	Valid from 9 Jan 2022 to 3 Jul 2022
		Works area of 3508 (Special Case)	GW-RS0963-21	Valid from 17 Dec 2021 to 27 May 2022
		Works area of 3508 (Special Case)	GW-RS0862-21	Valid from 13 Nov 2021 to 19 May 2022
		Works area of 3508 (Area 13)	GW-RS0999-21	Valid from 25 Dec 2021 to 31 May 2022

Contract No.	Description	Location	Permit/ Reference No.	Status
3601	Notification of Construction Work under APCO	Works area of 3601	451762	Receipt acknowledged by EPD on 10 Dec 2019
	Registration as Chemical Waste Producer	Works area of 3601	WPN 7119-951- C4421-01	Completion of Registration on 9 Jan 2020
	Bill Account for disposal	Works area of 3601	A/C 7029991	Approval granted from EPD on 1 Feb 2018
	Construction Noise Permit (General Works)	Works area of 3601	GW-RS0899-21	Valid from 1 Dec 2021 to 31 May 2022
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-RS0650-21	Valid from 1 Oct 2021 to 1 Mar 2022
3603	Notification of Construction Work under APCO	Site office of 3603	433604	Receipt acknowledged by EPD on 16 May 2018
	Registration as Chemical Waste	Site office of 3603	5296-951- S4069-01	Completion of Registration on 22 Jan 2018
	Producer	Test Loop Site of 3603	8334-512- S4273-01	Completion of Registration on 17 Sep 2020
	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-RS0878-21	Valid from 24 Nov 2021 to 23 May 2022
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-RS0748-21	Valid from 6 Oct 2021 to 6 Mar 2022
		Works area of 3721	GW-RS0058-22	Valid from 31 Jan 2022 to 30 Jun 2022
3723	Notification of Construction	3723A	464440	Receipt acknowledged by EPD on 9 Feb 2021
	Work under APCO	3723B	464444	Receipt acknowledged by EPD on 9 Feb 2021
		3723A	WPN 5218-951- T3920-01	Completion of Registration on 9 Feb 2021

Contract No.	Description	Location	Permit/ Reference No.	Status
	Registration as Chemical Waste Producer	3723B	WPN 5218-951- T3921-01	Completion of Registration on 9 Feb 2021
	Discharge License under WPCO	Works area of 3723A & 3723B	WT00039451- 2021	Valid from 28 Oct 2021 to 31 Oct 2023
	Bill Account for disposal	Works area of 3723A	A/C 7039755	Approval granted from EPD on 24 Feb 2021
		Works area of 3723B	A/C 7039754	Approval granted from EPD on 24 Feb 2021
	Construction Noise Permit	Works area of 3723A & 3723B	GW-RS0697-21	Valid from 16 Sep 2021 to 13 Mar 2022
	(General Works)	Works area of 3723A & 3723B	GW-RS1013-21	Valid from 14 Jan 2022 to 13 Jul 2022
3728	Registration as Chemical Waste Producer	Works area of 3728	WPN 5111-951- S3467-03	Completion of Registration on 7 May 2021
	Discharge License under WPCO	Works area of 3728	WT00037809- 2021	Valid from 27 Jul 2021 to 31 Jul 2026
	Bill Account for disposal	Works area of 3728	A/C 7039409	Approval granted from EPD on 22 Jar 2021
3733	Notification of Construction Work under APCO	Works area of 3733	472772	Receipt acknowledged by EPD on 18 Oc 2021
	Registration as Chemical Waste Producer	Works area of 3733	474728	Receipt acknowledged by EPD on 9 Dec 2021
	Bill Account for disposal	Works area of 3733	7041945	Approval granted from EPD on 21 Oc 2021
3801	Notification of Construction Work under APCO	Works area of 3801	430372	Receipt acknowledged by EPD on 2 Feb 2018
			435652	Receipt acknowledged by EPD on 16 Ju 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 30 Jul 2019 to 30 Nov 2022
		Stockpiling area of 3801	WT00037354- 2021	Valid from 8 Mar 2021 to 31 Mar 2026
	Bill Account for disposal	Works area of 3801	A/C 7028254	Approval granted from EPD on 3 Jul 2017
	Construction Noise Permit (General Works)	Works area of 3801	GW-RS0634-21	Valid from 27 Aug 2021 to 26 Feb 2022
3802	Notification of Construction Work under APCO	Works area of 3802	458122	Receipt acknowledged by EPD on 14 Ju 2020
		Works area of 3802	WPN 5218-951- G2895-01	Completion of Registration on 28 Aug 2020

Contract No.	Description	Location	Permit/ Reference No.	Status
	Registration as Chemical Waste Producer	Works area of 3802 (Existing Airport)	WPN 5218-951- G2945-01	Completion of Registration on 29 Sep 2020
	Discharge License under	Works area of 3802	WT00037032- 2020	Valid from 25 May 2021 to 31 May 2026
	WPCO	Works area of 3802	WT00039092- 2021	Valid from 30 Nov 2021 to 31 Nov 2026
	Bill Account for disposal	Works area of 3802	A/C 7037575	Approval granted from EPD on 15 Jun 2020
	Construction Noise Permit	Works area of 3802	GW-RS0959-21	Valid from 13 Dec 2021 to 12 Jun 2022
	(General Works)	Works area of 3802	GW-RS0888-21	Valid from 29 Nov 2021 to 19 May 2022
3901A	Notification of Construction Work under APCO	Works area of 3901A	466883	Receipt acknowledged by EPD on 26 Apr 2021
	Air Pollution Control (Furnaces, Ovens and Chimneys) (Installation and Alteration) Regulations	Works area of 3901A	EP/RS/0000443 053	Approval granted on 11 Dec 2020
	Specified Process license under APCO	Works area of 3901A	L-3-261(1)	Valid from 14 Sep 2020 to 13 Sep 2024
	Registration as Chemical Waste Producer	Works area of 3901A	WPN 5218-951- K3400-01	Completion of Registration on 17 Jul 2020
	Landfill disposal of waste concrete from batching plant	Works area of 3901A	EP195/01/18	Valid from 5 May 2021 to 2 Feb 2022
	Bill Account for disposal	Works area of 3901A	A/C 7037889	Approval granted from EPD on 20 Jul 2020
	Construction Noise Permit (General Works)	Works area of 3901A	GW-RS0597-21	Valid from 7 Aug 2021 to 4 Feb 2022
3901B	Notification of Construction Work under APCO	Works area of 3901B	466885	Receipt acknowledged by EPD on 26 Apr 2021
	Air Pollution Control (Furnaces, Ovens and Chimneys) (Installation and Alteration) Regulations	Works area of 3901B	EP/RS/0000438 488	Approval granted on 26 Jun 2020
	Specified Process license under APCO	Works area of 3901B	L-3-262(1)	Valid from 17 Nov 2020 to 16 Nov 2024
	Registration as Chemical Waste Producer	Works area of 3901B	WPN 5218-951- G2880-01	Completion of Registration on 17 Jan 2020
	Bill Account for	Works area of	A/C 7032417	Approval granted from EPD on 13 Nov

Contract No.	Description	Location	Permit/ Reference No.	Status
	Construction Noise Permit (General Works)	Works area of 3901B	GW-RS0702-21	Valid from 16 Sep 2021 to 13 Mar 2022

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	0	0	0	
From 28 December 2015 to end of the reporting period	47	2	2	