



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

Construction Phase Monthly EM&A Report No.49  
(For January 2020)

February 2020

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**This Monthly EM&A Report No. 49 has been reviewed and certified by**

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

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

**Certified by:**

A handwritten signature in black ink, appearing to read 'Terence Kong', written in a cursive style.

---

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

**Date**

12 February 2020



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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

14 February 2020

Dear Sir,

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

**Submission of Monthly EM&A Report No. 49 (January 2020)**

Reference is made to the Environmental Team's submission of the Monthly EM&A Report No. 49 under Condition 3.5 of the Environmental Permit No. EP-489/2014 certified by the ET Leader on 14 February 2020.

We write to verify the captioned submission in accordance with the requirement stipulated in Condition 3.5 of EP-489/2014.

Should you have any query, please feel free to contact the undersigned at 3922 9376.

Yours faithfully,  
AECOM Asia Co. Ltd.

Jackel Law  
Independent Environmental Checker

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# Abbreviations

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

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 49<sup>th</sup> Construction Phase Monthly EM&A Report for the Project which summarises the monitoring results and audit findings of the EM&A programme during the reporting period from 1 to 31 January 2020.

## **Key Activities in the Reporting Period**

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

## **EM&A Activities Conducted in the Reporting Period**

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

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

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

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

		
<p>Enhanced Design of Wheel Washing Facility to prevent run-off of wash water</p>	<p>Impact Noise Monitoring Conducted by ET at Sha Lo Wan</p>	<p>Construction Noise Permit Checking Conducted by ET</p>

### **Results of Impact Monitoring**

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

Monitoring results of construction dust, construction noise, 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) and nickel, 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 and nickel, 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.

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

#### **Advanced Works:**

##### **Contract P560 (R) Aviation Fuel Pipeline Diversion Works**

- Stockpiling of compressed materials

#### **DCM Works:**

##### **Contract 3205 DCM works**

- DCM works

#### **Reclamation Works:**

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

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

#### **Airfield Works:**

##### **Contract 3301 North Runway Crossover Taxiway**



- Cable ducting works;
- Subgrade compaction and paving works;
- Drainage construction works;
- Operation of aggregate mixing facility; and
- Precast of duct bank and fabrication of steel works.

**Contract 3302 Eastern Vehicular Tunnel Advance Works**

- Cable laying and ducting works;
- Trench excavation works;
- Backfilling and reinstatement works;
- Piling and structure works; and
- Site establishment.

**Contract 3303 Third Runway and Associated Works**

- Plant and equipment mobilisation
- Footing and utilities work;
- Preparation works for box culvert construction; and
- Site establishment.

**Third Runway Concourse and Integrated Airport Centres Works:****Contract 3402 New Integrated Airport Centres Enabling Works**

- Potable water and seawater works;
- Footing construction;
- Road works; and
- Sewerage and pipe works.

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

- Site establishment; and
- Foundation works.

**Terminal 2 Expansion Works:****Contract 3501 Antenna Farm and Sewage Pumping Station**

- Site clearance.

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

- Site establishment;
- Excavation works
- Utilities, drainage, and road work; and
- Piling and structure works.

**Automated People Mover (APM) Works:****Contract 3602 Existing APM System Modification Works**

- Modification works at APM depot.

**Airport Support Infrastructure & Logistic Works:****Contract 3721 Construction Support Infrastructure Works**

- Site clearance and establishment;
- Excavation for utilities works; and

- Construction of utilities.

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

- Construction of temporary traffic steel deck;
- Cofferdam installation for box culvert;
- Rising main installation;
- Drilling and grouting works;
- Piling and foundation works; and
- Site clearance.

### Summary Table

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

	Yes	No	Details	Analysis / Recommendation / Remedial Actions
Breach of Limit Level <sup>^</sup>		√	No breach of Limit Level was recorded.	Nil
Breach of Action Level <sup>^</sup>		√	No breach of Action Level was recorded.	Nil
Complaint Received		√	No construction activities-related complaint was received	Nil
Notification of any summons and status of prosecutions		√	No notification of summons or prosecution was received.	Nil
Change that affect the EM&A		√	There was no change to the construction works that may affect the EM&A.	Nil

Note:

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

# 1 Introduction

## 1.1 Background

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

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

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

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

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

## 1.2 Scope of this Report

This is the 49<sup>th</sup> Construction Phase Monthly EM&A Report for the Project which summarises the key findings of the EM&A programme during the reporting period from 1 to 31 January 2020.

## 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**.

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

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

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

**Advanced Works:**

Party	Position	Name	Telephone
Contract P560(R) Aviation Fuel Pipeline Diversion Works (Langfang Huayuan Mechanical and Electrical Engineering Co., Ltd.)	Project Manager	Wei Shih	2117 0566
	Environmental Officer	Lyn Liu	5172 6543

**Deep Cement Mixing (DCM) Works:**

Party	Position	Name	Telephone
Contract 3205 DCM (Package 5) (Bachy Soletanche - Sambo Joint Venture)	Deputy Project Director	Min Park	9683 0765
	Environmental Officer	William Chan	5408 3045

**Reclamation Works:**

Party	Position	Name	Telephone
Contract 3206 Main Reclamation Works (ZHEC-CCCC-CDC Joint Venture)	Project Manager	Kim Chuan Lim	3763 1509
	Environmental Officer	Kwai Fung Wong	3763 1452

**Airfield Works:**

Party	Position	Name	Telephone
Contract 3301 North Runway Crossover Taxiway (FJT-CHEC-ZHEC Joint Venture)	Deputy Project Director	Kin Hang Chung	9800 0048
	Environmental Officer	Joe Wong	6182 0351



Party	Position	Name	Telephone
Contract 3302 Eastern Vehicular Tunnel Advance Works (China Road and Bridge Corporation)	Project Manager	Wan Cheung Lee	6100 6075
	Environmental Officer	Dennis Ho	5645 0563
Contract 3303 Third Runway and Associated Works (SAPR Joint Venture)	Project Manager	Andrew Keung	6277 6628
	Environmental Officer	Pan Fong	9436 9435

#### Third Runway Concourse and Integrated Airport Centres Works:

Party	Position	Name	Telephone
Contract 3402 New Integrated Airport Centres Enabling Works (Wing Hing Construction Co., Ltd.)	Contract Manager	Michael Kan	9206 0550
	Environmental Officer	Lisa He	5374 3418
Contract 3403 New Integrated Airport Centres Building and Civil Works (Sun Fook Kong Construction Limited)	Project Manager	Alice Leung	9220 3162
	Environmental Officer	Alpha Chia	9626 1114

#### Terminal 2 (T2) Expansion Works:

Party	Position	Name	Telephone
Contract 3501 Antenna Farm and Sewage Pumping Station (Build King Construction Ltd.)	Contracts Manager	Vincent Kwan	9833 1313
	Environmental Officer	Edward Tam	9287 8270
Contract 3503 Terminal 2 Foundation and Substructure Works (Leighton – Chun Wo Joint Venture)	Project Manager	Eric Wu	3973 1718
	Environmental Officer	Malcolm Leung	3973 0850

#### Automated People Mover (APM) Works:

Party	Position	Name	Telephone
Contract 3602 Existing APM System Modification Works (Niigata Transys Co., Ltd.)	Project Manager	Kunihiro Tatecho	9755 0351
	Environmental Officer	Yolanda Gao	5399 3509

#### Baggage Handling System (BHS) Works:

Party	Position	Name	Telephone
Contract 3603 3RS Baggage Handling System (VISH Consortium)	Project Manager	Andy Ng	9102 2739
	Environmental Officer	Eric Ha	9215 3432

**Airport Support Infrastructure and Logistic Works:**

Party	Position	Name	Telephone
Contract 3721 Construction Support Infrastructure Works (China State Construction Engineering (Hong Kong) Ltd.)	Site Agent	Thomas Lui	9011 5340
	Environmental Officer	Gary Hong	6015 0795
Contract 3801 APM and BHS Tunnels on Existing Airport Island (China State Construction Engineering (Hong Kong) Ltd.)	Project Manager	Tony Wong	9642 8672
	Environmental Officer	Fredrick Wong	9842 2703

**1.4 Summary of Construction Works**

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

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

**1.5 Summary of EM&A Programme Requirements**

The status for all environmental aspects are presented in **Table 1.2**. The EM&A requirements remained unchanged during the reporting period and details can be referred to Table 1.2 of the Construction Phase Monthly EM&A Report No. 1.

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

Parameters	Status
<b>Air Quality</b>	
Baseline Monitoring	The baseline air quality monitoring result has been reported in Baseline Monitoring Report and submitted to EPD under EP Condition 3.4.
Impact Monitoring	On-going
<b>Noise</b>	
Baseline Monitoring	The baseline noise monitoring result has been reported in Baseline Monitoring Report and submitted to EPD under EP Condition 3.4.
Impact Monitoring	On-going
<b>Water Quality</b>	
General Baseline Water Quality Monitoring for reclamation, water jetting and field joint works	The baseline water quality monitoring result has been reported in Baseline Water Quality Monitoring Report and submitted to EPD under EP Condition 3.4.
General Impact Water Quality Monitoring for reclamation, water jetting and field joint works	On-going
Initial Intensive Deep Cement Mixing (DCM) Water Quality Monitoring	The Initial Intensive DCM Monitoring Report was submitted and approved by EPD in accordance with the Detailed Plan on DCM.
Regular DCM Water Quality Monitoring	On-going
<b>Waste Management</b>	



Parameters	Status
Waste Monitoring	On-going
<b>Land Contamination</b>	
Supplementary Contamination Assessment Plan (CAP)	The Supplementary CAP was submitted to EPD pursuant to EP Condition 2.20.
Contamination Assessment Report (CAR) for Golf Course	The CAR for Golf Course was submitted to EPD.
Contamination Assessment Report (CAR) for Terminal 2 Emergency Power Supply System No.1 (Volume 1)	The CAR for Terminal 2 Emergency Power Supply System No.1 (Volume 1) was submitted to EPD pursuant to EP Condition 1.9.
<b>Terrestrial Ecology</b>	
Pre-construction Egret Survey Plan	The Egret Survey Plan was submitted and approved by EPD under EP Condition 2.14.
Ecological Monitoring	The terrestrial ecological monitoring at Sheung Sha Chau was completed in January 2019.
<b>Marine Ecology</b>	
Pre-Construction Phase Coral Dive Survey	The Coral Translocation Plan was submitted and approved by EPD under EP Condition 2.12.
Coral Translocation	The coral translocation was completed.
Post-Translocation Coral Monitoring	The post-translocation monitoring programme according to the Coral Translocation Plan was completed in April 2018.
<b>Chinese White Dolphins (CWD)</b>	
<b>Vessel Survey, Land-based Theodolite Tracking and Passive Acoustic Monitoring (PAM)</b>	
Baseline Monitoring	Baseline CWD results were reported in the CWD Baseline Monitoring Report and submitted to EPD in accordance with EP Condition 3.4.
Impact Monitoring	On-going
<b>Landscape &amp; Visual</b>	
Landscape & Visual Plan	The Landscape & Visual Plan was submitted to EPD under EP Condition 2.18
Baseline Monitoring	The baseline landscape & visual monitoring result has been reported in Baseline Monitoring Report and submitted to EPD under EP Condition 3.4.
Impact Monitoring	On-going
<b>Environmental Auditing</b>	
Regular site inspection	On-going
Marine Mammal Watching Plan (MMWP) implementation measures	On-going
Dolphin Exclusion Zone (DEZ) Plan implementation measures	On-going
SkyPier High Speed Ferries (HSF) implementation measures	On-going
Construction and Associated Vessels Implementation measures	On-going
Complaint Hotline and Email channel	On-going
Environmental Log Book	On-going

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

The EM&A programme also involved weekly site inspections and related auditing conducted by the ET for checking the implementation of the required environmental mitigation measures recommended in the approved EIA Report. To promote the environmental awareness and enhance the environmental performance of the contractors, environmental trainings and regular

environmental management meetings were conducted during the reporting period, which are summarised as below:

- Two skipper training sessions provided by ET: 8 and 22 January 2020;
- One Environmental briefing on EP and EM&A requirements of the 3RS provided by ET;
- Ten environmental management meetings for EM&A review with works contracts: 9, 13, 14, 15, 20, 21, 22, 24 and 30 January 2020.

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

## 2 Air Quality Monitoring

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

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

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

### 2.1 Action and Limit Levels

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

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

Monitoring Station	Action Level ( $\mu\text{g}/\text{m}^3$ )	Limit Level ( $\mu\text{g}/\text{m}^3$ )
AR1A	306	500
AR2	298	

### 2.2 Monitoring Equipment

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

**Table 2.3: Air Quality Monitoring Equipment**

Equipment	Brand and Model	Last Calibration Date	Calibration Certificate Provided in
Portable direct reading dust meter (Laser dust monitor)	SIBATA LD-3B-2 (Serial No. 296098)	24 Oct 2019	Monthly EM&A Report No. 46, Appendix E
	SIBATA LD-3B-1 (Serial No. 597337)	19 Sep 2019	Monthly EM&A Report No. 45, Appendix D

### 2.3 Monitoring Methodology

#### 2.3.1 Measuring Procedure

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

- a. The portable direct reading dust meter was mounted on a tripod at a height of 1.2m above the ground.



- b. Prior to the measurement, the equipment was set up for 1 minute span check and 6 second background check.
- c. The one hour dust measurement was started. Site conditions and dust sources at the nearby area were recorded on a record sheet.
- d. When the measurement completed, the “Count” reading per hour was recorded for result calculation.

### 2.3.2 Maintenance and Calibration

The portable direct reading dust meter is calibrated every year against high volume sampler (HVS) to check the validity and accuracy of the results measured by direct reading method. The calibration record of the HVS provided in Appendix E of the Construction Phase Monthly EM&A Report No. 46, and the calibration certificates of portable direct reading dust meters listed in **Table 2.3** are valid in the reporting period.

## 2.4 Summary of Monitoring Results

The air quality monitoring schedule involved in the reporting period is provided in **Appendix C**.

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

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

Monitoring Station	1-hr TSP Concentration Range ( $\mu\text{g}/\text{m}^3$ )	Action Level ( $\mu\text{g}/\text{m}^3$ )	Limit Level ( $\mu\text{g}/\text{m}^3$ )
AR1A	11 - 175	306	500
AR2	17 - 89	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 from Project and other activities was observed at the monitoring stations during impact air quality monitoring. It is considered that the monitoring work in the reporting period is effective and there was no adverse impact attributable to the Project activities.

## 3 Noise Monitoring

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

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

Monitoring Station	Location	Type of measurement
NM1A	Man Tung Road Park	Free field
NM2 <sup>(1)</sup>	Tung Chung West Development	To be determined
NM3A <sup>(2)</sup>	Site Office	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) <sup>(1)</sup>

Note:

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

### 3.2 Monitoring Equipment

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

**Table 3.3: Noise Monitoring Equipment**

Equipment	Brand and Model	Last Calibration Date	Calibration Certificate Provided in
Integrated Sound Level Meter	NTi XL2 (Serial No. A2A-14829-E0)	14 Jul 2019	Monthly EM&A Report No. 43, Appendix D
	Rion NL-52 (Serial No. 01287679)	21 Sep 2019	Monthly EM&A Report No. 45, Appendix D
Acoustic Calibrator	Casella CEL-120/1 (Serial No. 2383737)	21 Sep 2019	Monthly EM&A Report No. 45, Appendix D
	Castle GA607 (Serial No. 040162)	14 Jul 2019	Monthly EM&A Report No. 43, Appendix D

### 3.3 Monitoring Methodology

#### 3.3.1 Monitoring Procedure

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

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

#### 3.3.2 Maintenance and Calibration

The maintenance and calibration procedures are summarised below:

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

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

### 3.4 Summary of Monitoring Results

The noise monitoring schedule involved in the reporting period is provided in **Appendix C**.

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



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

Monitoring Station	Noise Level Range, dB(A)	Limit Level, dB(A)
	Leq (30 mins)	Leq (30 mins)
NM1A <sup>(1)</sup>	68 - 72	75
NM4 <sup>(1)</sup>	61 - 66	70 <sup>(2)</sup>
NM5 <sup>(1)</sup>	56 - 64	75
NM6 <sup>(1)</sup>	67 - 71	75

Notes:

- (1) +3dB(A) Façade correction included;
- (2) Reduced to 65dB(A) during school examination periods at NM4. No school examination took place during this reporting period.

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

### 3.5 Conclusion

As the construction activities were far away from the monitoring stations, major sources of noise dominating the monitoring stations observed during the construction noise impact monitoring were traffic noise near NM1A, school activities at NM4 and aircraft noise near NM1A, NM5 and NM6 during this reporting period. It is considered that the monitoring work during the reporting period was effective and there was no adverse impact attributable to the Project activities.

## 4 Water Quality Monitoring

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

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

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



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

## Notes:

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

#### 4.1 Action and Limit Levels

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

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

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

Notes:

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

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

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

Note:

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

## 4.2 Monitoring Equipment

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

**Table 4.4: Water Quality Monitoring Equipment**

Equipment	Brand and Model	Last Calibration Date	Calibration Certificate Provided in
Multifunctional Meter (measurement of DO, pH, temperature, salinity and turbidity)	YSI 6920V2 (Serial No. 0001C6A7)	28 Oct 2019	Monthly EM&A Report No. 46, Appendix E
	YSI 6920V2 (Serial No. 00019CB2)	28 Oct 2019	
	YSI 6920V2 (Serial No. 0001C6A7)	20 Jan 2020	<b>Appendix E</b>
	YSI 6920V2 (Serial No. 00019CB2)	20 Jan 2020	
	YSI ProDSS (Serial No. 17H105557)	23 Dec 2019	
	YSI ProDSS (Serial No. 16H104234)	23 Dec 2019	
	YSI ProDSS (Serial No. 17E100747)	23 Dec 2019	
Digital Titrator (measurement of total alkalinity)	Titrette Digital Burette 50ml Class A (Serial No. 10N64701)	9 Dec 2019	Monthly EM&A Report No. 48, Appendix D

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

**Table 4.5: Other Monitoring Equipment**

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

## 4.3 Monitoring Methodology

### 4.3.1 Measuring Procedure

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

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

### 4.3.2 Maintenance and Calibration

#### Calibration of In-situ Instruments

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



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

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

#### 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
<b>Heavy Metals</b>			
Chromium (Cr)	ICP-MS	USEPA 6020A	0.2µg/L
Nickel (Ni)	ICP-MS	USEPA 6020A	0.2µg/L

#### 4.4 Summary of Monitoring Results

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

The water quality monitoring results for all parameters, except SS and nickel, obtained during the reporting period were within their corresponding Action and Limit Levels. The detailed monitoring results are presented in **Appendix D**.

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

**Table 4.7** presents the summary of the SS compliance status at IM and SR stations during mid-ebb tide for the reporting period.

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

	IM1	IM2	IM3	IM4	IM5	IM6	IM7	IM8	IM9	IM10	IM11	IM12	SR1A	SR2	SR3	SR4A	SR5A	SR6A	SR7	SR8	
02/01/2020																					
04/01/2020																					
07/01/2020																					
09/01/2020																					
11/01/2020																					
14/01/2020																					
16/01/2020																					
18/01/2020																					
21/01/2020																					
23/01/2020																					
25/01/2020																					
28/01/2020																					
30/01/2020																					
No. of result triggering Action or Limit Level	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0

Monitoring results triggered the corresponding Action Levels on 14 January 2020. Both cases at IM5 and IM10 were located upstream of the Project during ebb tide and would unlikely be affected by the Project.

Table 4.8 presents the summary of the nickel compliance status at IM stations during mid-ebb tide for the reporting period.

**Table 4.8: Summary of Nickel Compliance Status (Mid-Ebb Tide)**

	IM1	IM2	IM3	IM4	IM5	IM6	IM7	IM8	IM9	IM10	IM11	IM12
02/01/2020												
04/01/2020												
07/01/2020	D											
09/01/2020												
11/01/2020												
14/01/2020												
16/01/2020												
18/01/2020												
21/01/2020												
23/01/2020												
25/01/2020												
28/01/2020												
30/01/2020												
No. of result triggering Action or Limit Level	1	0	0	0	0	0	0	0	0	0	0	0

Note: Detailed results are presented in Appendix D.

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

A nickel monitoring result triggered the corresponding Action Level on 7 January 2020. Investigation focusing on the case was carried out. Details of the Project's marine construction activities and site observations on the concerned monitoring day were collected. Findings were summarised in **Table 4.9**

**Table 4.9: Summary of Findings from Investigation of Nickel Monitoring Results**

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
7/1/2020	DCM works	Around 1km	Localised and enhanced silt curtain deployed	No	No	No

The investigation confirmed that DCM works were operating normally on 7 January 2020 with localised and enhanced silt curtains deployed. The silt curtains were maintained properly and checked by ET regularly.

Nickel is a representative heavy metal that indicates the potential for release of contaminants from contaminated mud pits due to the disturbance of marine sediment within it by DCM activities. In this reporting period, no marine DCM works was conducted in the contaminated mud pit areas. There was also no silt plume observed at the monitoring station during monitoring and mitigation measures were properly implemented. Therefore, the incident was considered not due to the Project.

#### 4.5 Conclusion

During the reporting period, it is noted that the vast majority of monitoring results were within their corresponding Action and Limit Levels, while only a minor number of results triggered the corresponding Action Levels, and investigations were conducted accordingly.

Based on the investigation findings, all 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. The 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 during weekly site inspection and regular environmental management meetings. These include maintaining mitigation measures properly for reclamation works including DCM works, marine filling, and seawall construction as recommended in the Manual.



## 5 Waste Management

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

### 5.1 Action and Limit Levels

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

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

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

### 5.2 Waste Management Status

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

Recommendations made included provision and maintenance of proper chemical waste storage area, as well as handling, segregation, and regular disposal of general refuse. The contractors had taken actions to implement the recommended measures.

Based on updated information provided by contractors, construction waste generated in the reporting period is summarised in **Table 5.2**.

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.

**Table 5.2: Construction Waste Statistics**

	C&D <sup>(1)</sup> Material Stockpiled for Reuse or Recycle (m <sup>3</sup> )	C&D Material Reused in the Project (m <sup>3</sup> )	C&D Material Reused in other Projects (m <sup>3</sup> )	C&D Material Transferred to Public Fill <sup>(4)</sup> (m <sup>3</sup> )	Chemical Waste (kg)	Chemical Waste (L)	General Refuse (tonne)
January 2020 <sup>(2)(3)</sup>	808	34,625	0	5,341	150	4,704	894

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.
- (4) C&D materials not suitable for reuse on-site included asphalt waste and sediment slurry was transferred to public fill during the reporting period.

## 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. Additional survey effort for theodolite tracking at LKC station has been discontinued since January 2020 as it would no longer be necessary to maintain the additional survey for review of the SkyPier Plan.

### 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 <sup>(3)</sup>	Running quarterly <sup>(1)</sup> STG < 1.86 & ANI < 9.35
Limit Level <sup>(3)</sup>	Two consecutive running quarterly <sup>(2)</sup> (3-month) STG < 1.86 & ANI < 9.35

Notes: (referring to the baseline monitoring report)

- (1) Action Level – running quarterly STG & ANI will be calculated from the three 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 follow the waypoints set for construction phase monitoring as proposed in the Manual and 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
<b>NEL</b>					
1S	813525	820900	6N	818568	824433
1N	813525	824657	7S	819532	821420
2S	814556	818449	7N	819532	824209
2N	814559	824768	8S	820451	822125
3S	815542	818807	8N	820451	823671
3N	815542	824882	9S	821504	822371
4S	816506	819480	9N	821504	823761
4N	816506	824859	10S	822513	823268
5S	817537	820220	10N	822513	824321
5N	817537	824613	11S	823477	823402
6S	818568	820735	11N	823477	824613
<b>NWL</b>					
1S	804671	814577	5S	808504	821735
1N	804671	831404	5N	808504	828602
2Sb	805475	815457	6S	809490	822075
2Nb	805476	818571	6N	809490	825352
2Sa	805476	820770	7S	810499	822323
2Na	805476	830562	7N	810499	824613
3S	806464	821033	8S	811508	821839
3N	806464	829598	8N	811508	824254
4S	807518	821395	9S	812516	821356
4N	807518	829230	9N	812516	824254
<b>AW</b>					
1W	804733	818205	2W	805045	816912
1E	806708	818017	2E	805960	816633
<b>WL</b>					
1W	800600	805450	7W	800400	811450
1E	801760	805450	7E	802400	811450
2W	800300	806450	8W	800800	812450
2E	801750	806450	8E	802900	812450
3W	799600	807450	9W	801500	813550
3E	801500	807450	9E	803120	813550
4W	799400	808450	10W	801880	814500
4E	801430	808450	10E	803700	814500
5W	799500	809450	11W	802860	815500
5E	801300	809450	12S/11E	803750	815500
6W	799800	810450	12N	803750	818500
6E	801400	810450			
<b>SWL</b>					
1S	802494	803961	6S	807467	801137
1N	802494	806174	6N	807467	808458
2S	803489	803280	7S	808553	800329
2N	803489	806720	7N	808553	807377
3S	804484	802509	8S	809547	800338
3N	804484	807048	8N	809547	807396
4S	805478	802105	9S	810542	800423
4N	805478	807556	9N	810542	807462

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

### 6.2.2 Land-based Theodolite Tracking Survey

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

**Table 6.3: Land-based Theodolite Survey Station Details**

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

## 6.3 CWD Monitoring Methodology

### 6.3.1 Small Vessel Line-transect Survey

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

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

As mentioned in **Section 6.2.1**, the transects covered NEL, NWL covering the AW, WL and SWL areas as proposed in the Manual and are consistent with the AFCD long-term monitoring programme (except AW). There are two types of transect lines:

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

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

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

During on-effort survey periods, the survey team recorded effort data including time, position (waypoints), weather conditions (Beaufort sea state and visibility) and distance travelled in each



series with assistance of a handheld GPS device. The GPS device also continuously and automatically logged data including time, position (latitude and longitude) and vessel speed throughout the entire survey.

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

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

### 6.3.2 Photo Identification

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

When CWDs were observed, the survey team was taken off-effort, the dolphins were approached and photographed for photo-ID information (using a Canon 7D [or similar] camera and long 300 mm+ telephoto lens). The survey team attempted to photo 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 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 6, 7, 10, 13, 15, 16, 17 and 22 January 2020, covering all transects in NEL, NWL, AW, WL and SWL survey areas for twice.

A total of around 451.33 km of survey effort was collected from these surveys and around 92.0% of the survey effort was being conducted under favourable weather condition (i.e. Beaufort Sea State 3 or below with favourable visibility). Details of the survey effort are given in **Appendix D**.

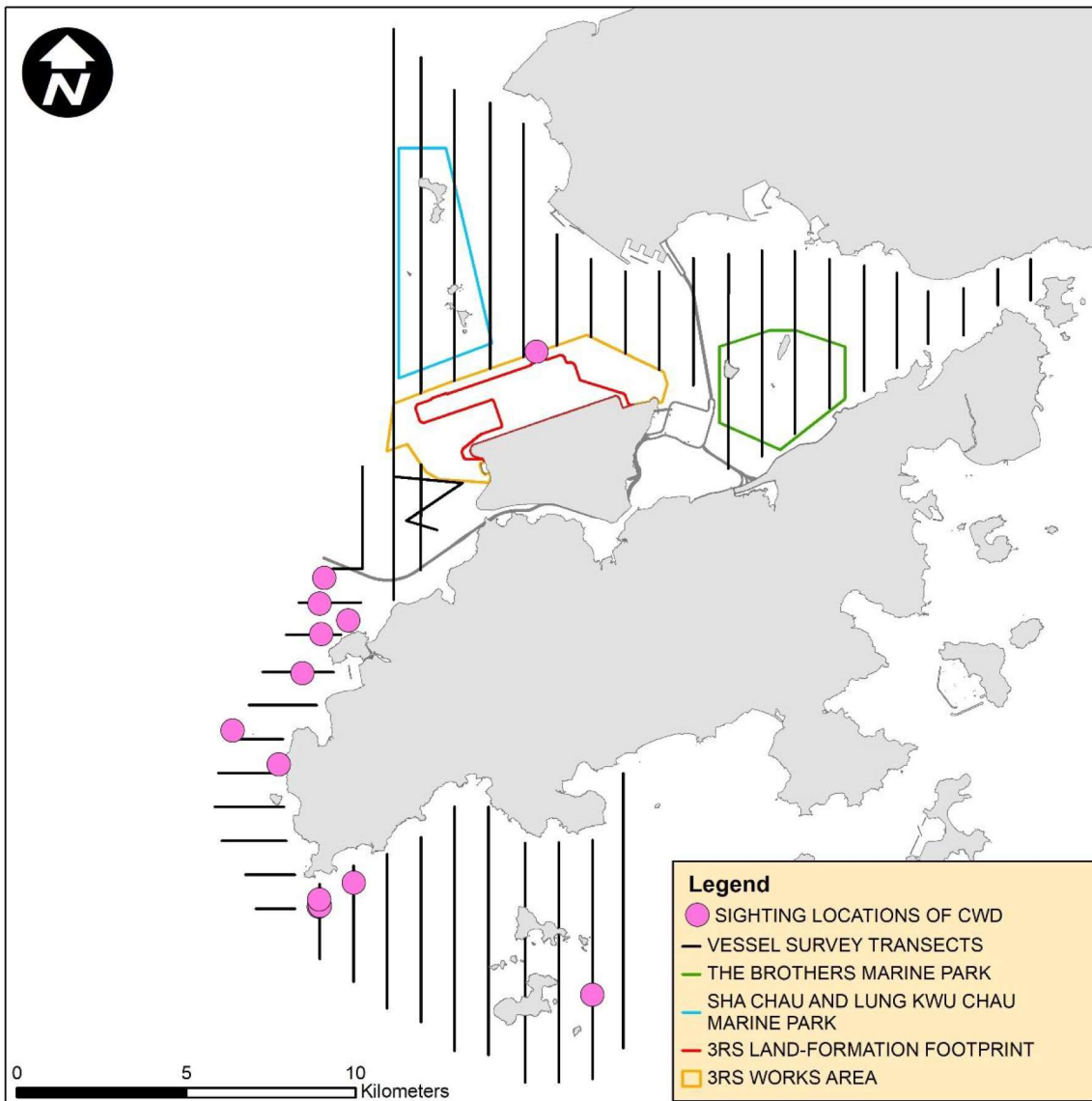
#### Sighting Distribution

In January 2020, 13 sightings with 53 dolphins were sighted. Amongst these sightings, 12 sightings with 47 dolphins are on-effort sightings under favourable weather condition (i.e. Beaufort Sea State 3 or below with favourable visibility). Details of cetacean sightings are presented in **Appendix D**.

Distribution of all CWD sightings recorded in January 2020 is illustrated in **Figure 6.3**. In NWL, there was one CWD sighting recorded at north of the 3RS works boundary. In WL, CWD sightings distributed from Tai O to Peaked Hill. In SWL, most CWD sightings were located at the coastal waters around Fan Lau with a single sighting recorded east to Soko Island. No sightings of CWD were recorded in NEL survey area.



**Figure 6.3: Sightings Distribution of Chinese White Dolphins**



Remarks: Please note that there are 13 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

**Encounter Rate**

Two types of dolphin encounter rates were calculated based on the data from January 2020. They included the number of dolphin sightings per 100 km survey effort (STG) and total number of dolphins per 100 km survey effort (ANI) in the whole survey area (i.e. NEL, NWL, AW, WL and SWL). In the calculation of dolphin encounter rates, only survey data collected under favourable weather condition (i.e. Beaufort Sea State 3 or below with favourable visibility) were used. The formulae used for calculation of the encounter rates are shown below:

Encounter Rate by Number of Dolphin Sightings (STG)

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

### Encounter Rate by Number of Dolphins (ANI)

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

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

In January 2020, a total of around 415.15 km of survey effort were conducted under Beaufort Sea State 3 or below with favourable visibility, whilst a total number of 12 on-effort sightings with 47 dolphins were sighted under such condition. Calculation of the encounter rates in January 2020 are shown in **Appendix D**.

For the running quarter of the reporting period (i.e., from November 2019 to January 2020), a total of around 1284.77 km of survey effort were conducted under Beaufort Sea State 3 or below with favourable visibility, whilst a total number of 34 on-effort sightings and a total number of 101 dolphins from on-effort sightings were obtained under such condition. Calculation of the running quarterly encounter rates are shown in **Appendix D**.

The STG and ANI of CWD in the whole survey area (i.e. NEL, NWL, AW, WL and SWL) during the month of January 2020 and during the running quarter are presented in **Table 6.4** below and compared with the Action Level. The running quarterly encounter rate STG remains above the Action Level but the running quarterly encounter rate ANI is below the Action Level. Nevertheless, the overall 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 2020	2.89	11.32
Running Quarter from November 2019 to January 2020 <sup>(1)</sup>	2.65	7.86
Action Level	Running quarterly <sup>(1)</sup> STG < 1.86 & ANI < 9.35	

Note: (1) Running quarterly encounter rates STG & ANI were calculated from data collected in the reporting period and the two preceding survey months, i.e. the data from November 2019 to January 2020, 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 2020, 13 groups with 53 dolphins were sighted, and the average group size of CWDs was 4.1 dolphins per group. Sightings with medium group size (i.e. 3-9 dolphins) were dominant. No CWD sighting with large group size (i.e. 10 or more dolphins) was recorded.

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

Two sightings of CWD was recorded engaging in feeding activities in January 2020. None of these sightings were observed in association with operating fishing boat.

### **Mother-calf Pair**

In January 2020, one CWD sighting was recorded with the presence of mother-and-unspotted juvenile pair.



### 6.4.2 Photo Identification

In January 2020, a total number of 27 different CWD individuals were identified for total 38 times. A summary of photo identification works is presented in **Table 6.5**. Representative photos of these individuals are given in **Appendix D**.

**Table 6.5: Summary of Photo Identification**

Individual ID	Date of Sighting (dd-mmm-yy)	Sighting Group No.	Area	Individual ID	Date of Sighting (dd-mmm-yy)	Sighting Group No.	Area
NLMM004	16-Jan-20	1	NWL	WLMM003	10-Jan-20	1	WL
SLMM003	10-Jan-20	3	WL		15-Jan-20	3	WL
	22-Jan-20	6	SWL	WLMM005	15-Jan-20	3	WL
SLMM007	15-Jan-20	1	WL	WLMM006	15-Jan-20	3	WL
		2	WL	WLMM009	15-Jan-20	3	WL
SLMM012	22-Jan-20	5	SWL	WLMM018	15-Jan-20	4	WL
SLMM014	7-Jan-20	3	SWL	WLMM028	15-Jan-20	1	WL
SLMM022	15-Jan-20	1	WL			2	WL
		2	WL	WLMM056	7-Jan-20	2	SWL
SLMM023	15-Jan-20	4	WL			3	SWL
SLMM027	10-Jan-20	3	WL	WLMM065	15-Jan-20	3	WL
SLMM037	7-Jan-20	2	SWL	WLMM079	7-Jan-20	4	SWL
SLMM049	7-Jan-20	3	SWL	WLMM109	10-Jan-20	3	WL
SLMM050	15-Jan-20	4	WL	WLMM114	7-Jan-20	3	SWL
SLMM052	10-Jan-20	3	WL		10-Jan-20	2	WL
	15-Jan-20	2	WL	WLMM150	15-Jan-20	1	WL
SLMM053	7-Jan-20	3	SWL				
SLMM058	15-Jan-20	1	WL				
WLMM001	10-Jan-20	1	WL				
		3	WL				
	15-Jan-20	1	WL				
	22-Jan-20	6	SWL				

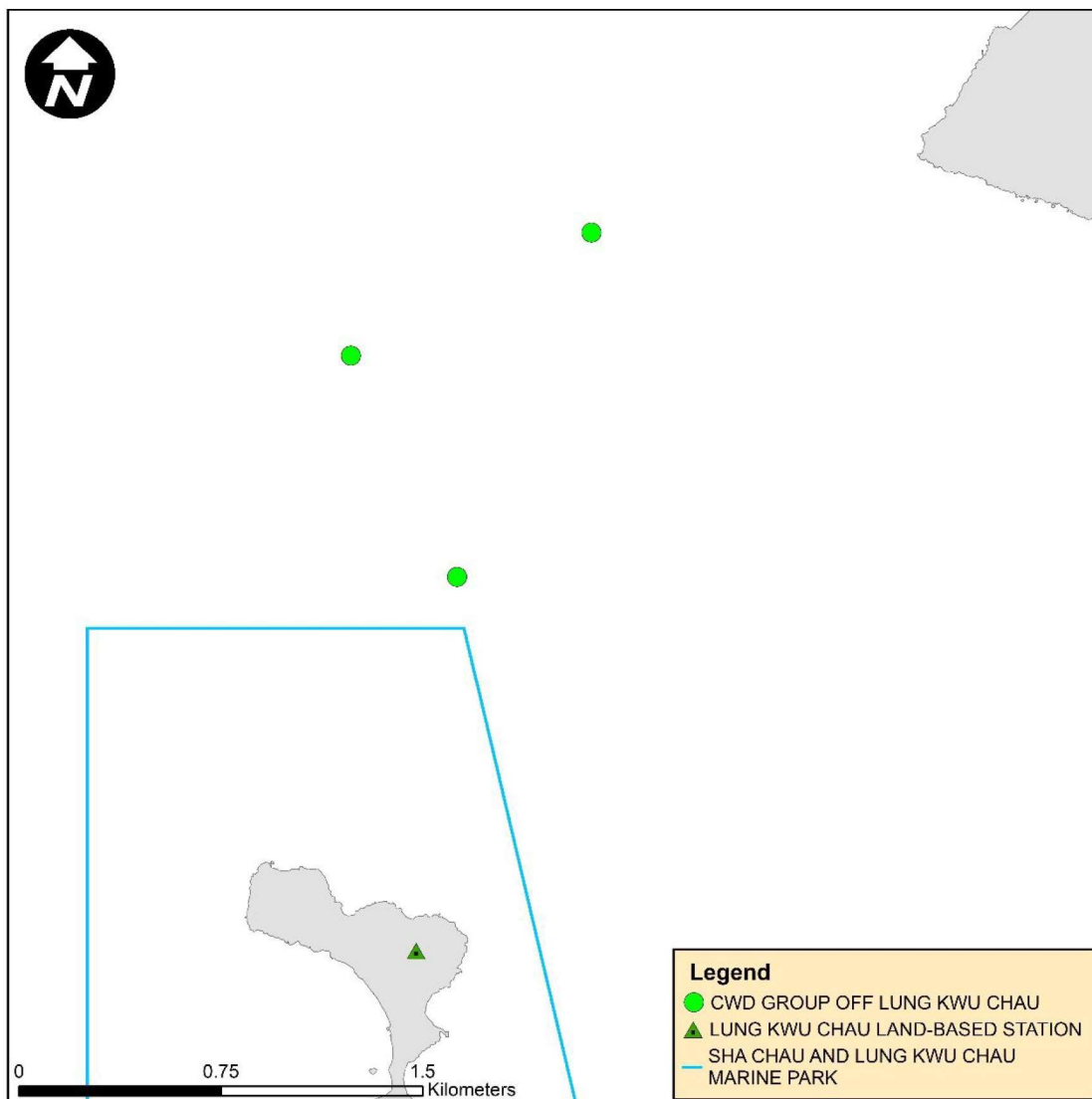
### 6.4.3 Land-based Theodolite Tracking Survey

#### Survey Effort

Land-based theodolite tracking surveys were conducted at SC on 8 January 2020 and at LKC on 14 January 2020, with a total of two days of land-based theodolite tracking survey effort accomplished in this reporting period. Three CWD groups were tracked at LKC station during the surveys. Information of survey effort and CWD groups sighted during these land-based theodolite tracking surveys are presented in **Table 6.6**. Details of the survey effort and CWD groups tracked are presented in **Appendix D**. The first sighting locations of CWD groups tracked at LKC station during land-based theodolite tracking surveys in January 2020 were depicted in **Figure 6.4**. No CWD group was sighted from SC station in this reporting month.

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

Land-based Station	No. of Survey Sessions	Survey Effort (hh:mm)	No. of CWD Groups Sighted	CWD Group Sighting per Survey Hour
Lung Kwu Chau	1	6:00	3	0.50
Sha Chau	1	6:00	0	0
<b>TOTAL</b>	<b>2</b>	<b>12:00</b>	<b>3</b>	<b>0.25</b>

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

## 6.5 Progress Update on Passive Acoustic Monitoring

Underwater acoustic monitoring using Passive Acoustic Monitoring (PAM) should be undertaken during land formation related construction works. In this reporting period, the Ecological Acoustic Recorder (EAR) was retrieved on 7 January 2020 and subsequently redeployed and positioned at south of Sha Chau Island inside the SCLKCMP with 20% duty cycle (**Figure 6.5**). The EAR deployment is generally for 6 weeks prior to data retrieval for analysis. Acoustic data is reviewed to give an indication of CWDs occurrence patterns and to obtain anthropogenic noise information simultaneously. Analysis (by a specialised team of acousticians) involved manually browsing through every acoustic recording and logging the occurrence of dolphin signals. All data will be re-played by computer as well as listened to by human ears for accurate assessment of dolphin group presence. As the period of data collection and analysis takes more than four months, PAM results could not be reported in monthly intervals but report for supplementing the annual CWD monitoring analysis.

## 6.6 Site Audit for CWD-related Mitigation Measures

During the reporting period, silt curtains were in place by the contractor for marine filling, in which dolphin observers were deployed by contractor in accordance with the MMWP. Overall, 3 to 8 dolphin observation stations and teams of at least two dolphin observers were deployed by the contractors for continuous monitoring of the DEZ for DCM works and seawall construction 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 679 individuals being trained and the training records kept by the ET. From the contractors' MMWP observation records, no dolphin or other marine mammals were observed within or around the silt curtains. As for DEZ monitoring records, no dolphin or other marine mammals were observed within or around the DEZs in this reporting month. These contractors' records were also audited by the ET during site inspection.

Audits of acoustic decoupling measures for construction vessels were carried out during weekly site inspection and the observations are summarised in **Section 7.1**. Audits of SkyPier high speed ferries route diversion and speed control and construction vessel management are presented in **Section 7.2** and **Section 7.3** respectively.

## 6.7 Timing of Reporting CWD Monitoring Results

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

## 6.8 Summary of CWD Monitoring

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



## 7 Environmental Site Inspection and Audit

### 7.1 Environmental Site Inspection

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

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

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

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

Implementation of applicable landscape and visual mitigation measures (reference to the environmental protection measures CM1 – CM10 in **Appendix B**) was monitored regularly in accordance with the Manual. No non-conformity was recorded during the reporting period. Based on the latest Contractors' submitted records, a cumulative total of 231 and 8 trees were retained and transplanted. The Contractors' performance on existing trees maintenance and protection measures on retained and transplanted trees were regularly checked by the ET. In case of non-conformity, specific recommendations would be made, and actions will be carried out according to the Event and Action Plan.

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



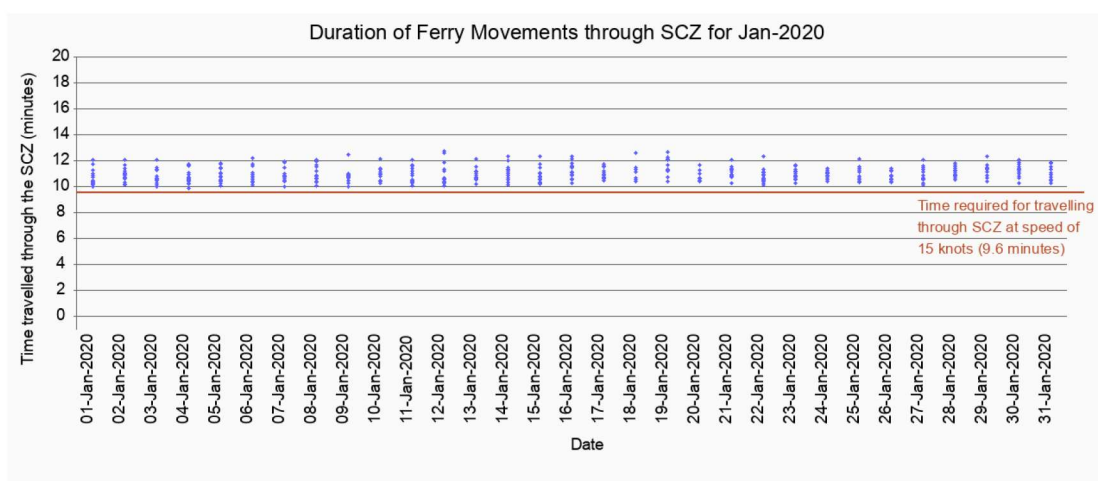
## 7.2 Audit of SkyPier High Speed Ferries

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

Key audit findings for the SkyPier HSFs travelling to/from Zhuhai and Macau against the requirements of the SkyPier Plan during the reporting period are summarised in **Table 7.1**. The daily movements of all SkyPier HSFs in this reporting period (i.e., 74 to 94 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.

In total, 511 ferry movements between HKIA SkyPier and Zhuhai / Macau were recorded in January 2020 and the data are presented in **Appendix H**. The time spent by the SkyPier HSFs travelling through the SCZ in January 2020 were presented in **Figure 7.1**. It will take 9.6 minutes to travel through the SCZ when the SkyPier HSFs adopt the maximum allowable speed of 15 knots within the SCZ. **Figure 7.1** shows that all of the SkyPier HSFs spent more than 9.6 minutes to travel through the SCZ.

**Figure 7.1: Duration of the SkyPier HSFs travelling through the SCZ for January 2020**



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

As reported in the Construction Phase Monthly EM&A Report No. 48, one ferry was recorded with minor route deviations on 11 December 2019. ET's investigation found that the deviation was due to strong tidal wave and current.

**Table 7.1: Summary of Key Audit Findings against the SkyPier Plan**

Requirements in the SkyPier Plan	1 to 31 January 2020
Total number of ferry movements recorded and audited	511
Use diverted route and enter / leave SCZ through Gate Access Points	0 deviation
Speed control in speed control zone	The average speeds of all HSFs travelling through the SCZ ranged from 10.7 to 13.8 knots. All HSFs had travelled through the SCZ with average speeds under 15 knots in compliance with the SkyPier Plan. The time used by HSFs to travel through SCZ is presented in <b>Figure 7.1</b> .
Daily Cap (including all SkyPier HSFs)	74-94 daily movements (within the maximum daily cap - 125 daily movements).

### 7.3 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 November 2016 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:

- Two skipper training sessions were held for contractors' concerned skippers of relevant construction vessels to familiarize them with the predefined routes; general education on local cetaceans; guidelines for avoiding adverse water quality impact; the required environmental practices / measures while operating construction and associated vessels under the Project; and guidelines for operating vessels safely in the presence of CWDs. The list of all trained skippers was properly recorded and maintained by ET.
- Six skipper training session 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, 18 skippers were trained by ET and 7 skippers were trained by contractors' Environmental Officers. In total, 1309 skippers were trained from August 2016 to January 2020.
- The MSS automatically recorded deviation cases such as speeding, entering no entry zone and not travelling through the designated gate. ET conducted checking to ensure the MSS records deviation cases accurately.
- Deviations such as speeding in the works area, entered no entry zone, and entering from non-designated gates were identified. All the concerned contractors were reminded to comply with the requirements of the MTRMP-CAV during the bi-weekly MTCC audit.
- Three-month rolling programmes (one month record and three months forecast) for construction vessel activities were received from the contractors in order to help maintain the number of construction and associated vessels on site to a practicable minimal level.

### 7.4 Implementation of Dolphin Exclusion Zone

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



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

## 7.5 Status of Submissions under Environmental Permits

The current status of submissions under the EP up to the reporting period is presented in **Table 7.2**.

**Table 7.2: 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	Accepted / approved by EPD
2.11	Marine Mammal Watching Plan	
2.12	Coral Translocation Plan	
2.13	Fisheries Management Plan	
2.14	Egret Survey Plan	
2.15	Silt Curtain Deployment Plan	
2.16	Spill Response Plan	
2.17	Detailed Plan on Deep Cement Mixing	
2.18	Landscape & Visual Plan	Submitted to EPD
2.19	Waste Management Plan	
2.20	Supplementary Contamination Assessment Plan	Accepted / approved by EPD
3.1	Updated EM&A Manual	
3.4	Baseline Monitoring Reports	

## 7.6 Compliance with Other Statutory Environmental Requirements

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

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

### 7.7.1 Complaints

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

### 7.7.2 Notifications of Summons or Status of Prosecution

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

### 7.7.3 Cumulative Statistics

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



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

### 8.1 Construction Programme for the Coming Reporting Period

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

#### **Advanced Works:**

##### **Contract P560 (R) Aviation Fuel Pipeline Diversion Works**

- Stockpiling of compressed materials

#### **DCM Works:**

##### **Contract 3205 DCM works**

- DCM works

#### **Reclamation Works:**

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

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

#### **Airfield Works:**

##### **Contract 3301 North Runway Crossover Taxiway**

- Cable ducting works;
- Subgrade compaction and paving works;
- Drainage construction works;
- Operation of aggregate mixing facility; and
- Precast of duct bank and fabrication of steel works.

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

- Cable laying and ducting works;
- Trench excavation works;
- Backfilling and reinstatement works
- Piling and structure works; and
- Site establishment.

##### **Contract 3303 Third Runway and Associated Works**

- Plant and equipment mobilisation
- Footing and utilities work
- Preparation works for box culvert construction; and
- Site establishment.

#### **Third Runway Concourse and Integrated Airport Centres Works:**

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

- Potable water and seawater works;
- Footing construction;
- Road works; and
- Sewerage and pipe works.

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

- Site establishment; and
- Foundation works.

**Terminal 2 Expansion Works:****Contract 3501 Antenna Farm and Sewage Pumping Station**

- Site clearance.

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

- Site establishment;
- Excavation works
- Utilities, drainage, and road work; and
- Piling and structure works.

**Automated People Mover (APM) Works:****Contract 3602 Existing APM System Modification Works**

- Modification works at APM depot.

**Airport Support Infrastructure & Logistic Works:****Contract 3721 Construction Support Infrastructure Works**

- Site clearance and establishment;
- Excavation for utilities works; and
- Construction of utilities.

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

- Construction of temporary traffic steel deck;
- Cofferdam installation for box culvert;
- Rising main installation;
- Drilling and grouting works;
- Piling and foundation works; and
- Site clearance.

**8.2 Key Environmental Issues for the Coming Reporting Period**

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

- Generation of dust from construction works and stockpiles;
- Noise from operating equipment and machinery on-site;
- Generation of site surface runoffs and wastewater from activities on-site;
- Water quality from DCM works and marine filling;
- DEZ monitoring for ground improvement works (DCM works) and seawall construction;
- Implementation of MMWP for silt curtain deployment;

- Sorting, recycling, storage and disposal of general refuse and construction waste;
- Management of chemicals and avoidance of oil spillage on-site; and
- Acoustic decoupling measures for equipment on marine vessels.

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

### 8.3 Monitoring Schedule for the Coming Reporting Period

A tentative schedule of the planned environmental monitoring work in the next reporting period is provided in **Appendix C**.

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

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



## 9 Conclusion and Recommendation

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

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

Monitoring results of construction dust, construction noise, 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 and nickel, obtained during the reporting period were within the corresponding Action and Limit Levels stipulated in the EM&A programme. Relevant investigations and follow-up actions will be conducted according to the EM&A programme if the corresponding Action and Limit Levels are triggered. For SS and nickel, 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, the daily movements of all SkyPier HSFs in January 2020 were in the range of 74 to 94 daily movements, which are within the maximum daily cap of 125 daily movements. A total of 511 HSF movements under the SkyPier Plan were recorded in the reporting period. The average speeds of all HSFs travelling through the SCZ ranged from 10.7 to 13.8 knots. All HSFs had travelled through the SCZ with average speeds under 15 knots in compliance with the SkyPier Plan. In summary, the ET and IEC have audited the HSF movements against the SkyPier Plan and conducted follow up investigations or actions accordingly.

On the implementation of MTRMP-CAV, the MSS automatically recorded the deviation case such as speeding, entering no entry zone and not travelling through the designated gates. ET conducted checking to ensure the MSS records all deviation cases accurately. Training has been provided for the concerned skippers to facilitate them in familiarising with the requirements of the MTRMP-CAV. Deviations including speeding in the works area, entered no entry zone, and entry from non-designated gates were reviewed by ET. All the concerned captains were reminded by the contractor's MTCC representative to comply with the requirements of the MTRMP-CAV. The ET reminded contractors that all vessels shall avoid entering the no-entry zone, in particular the Brothers Marine Park and the Sha Chau & Lung Kwu Chau Marine Park. Three-month rolling

programmes for construction vessel activities, which ensures the proposed vessels are necessary and minimal through good planning, were also received from contractors.

# Figures



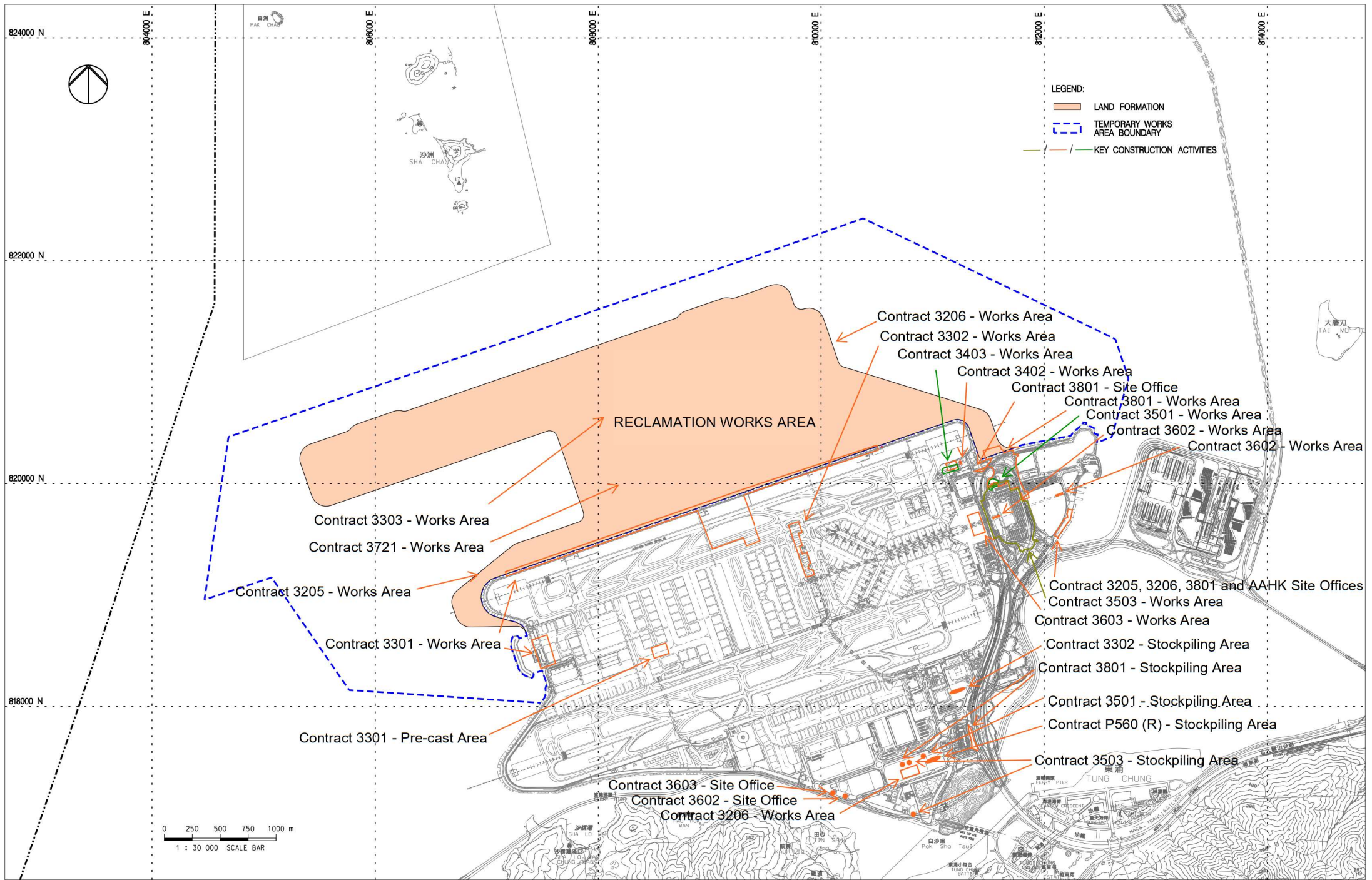


FIGURE 1.1 LOCATIONS OF KEY CONSTRUCTION ACTIVITIES

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



80000 E.

80000 E.

81000 E.

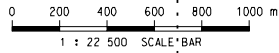
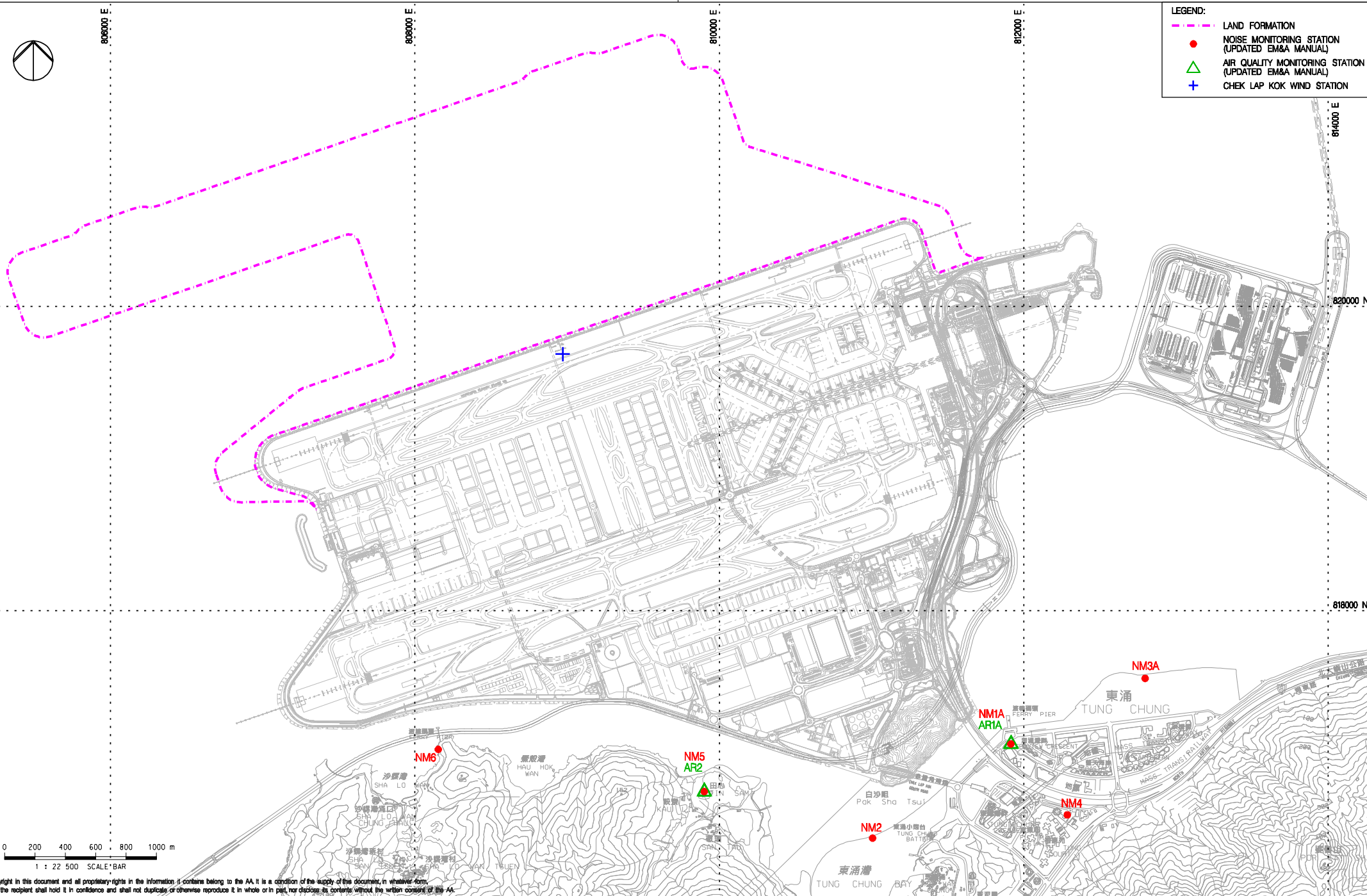
82000 E.

84000 E.

82000 N.

81800 N.

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



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

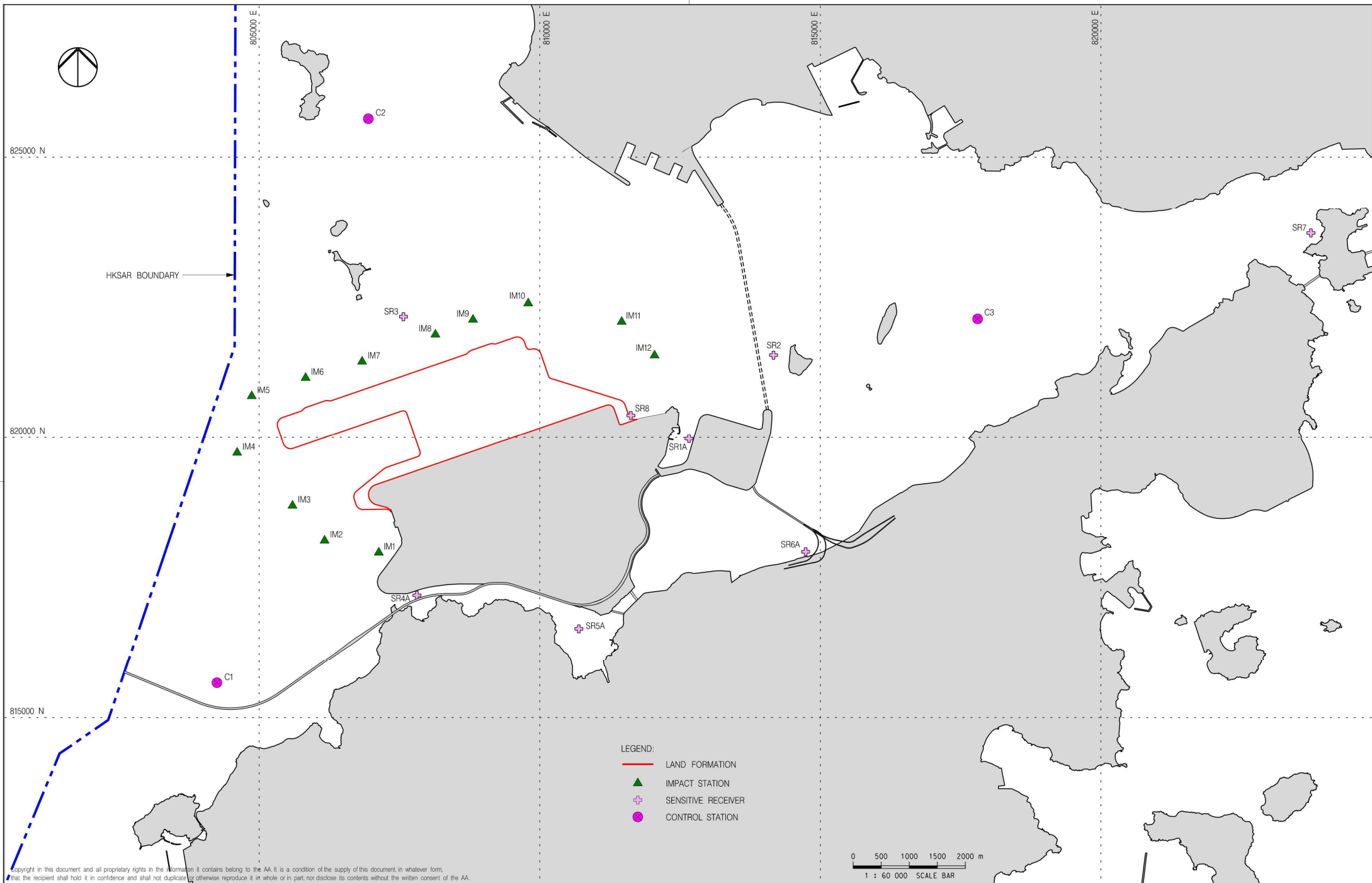


Title  
LOCATIONS OF AIR AND NOISE MONITORING STATIONS AND CHEK LAP KOK WIND STATION

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

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





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A	21AUG19	FIRST ISSUE	VL

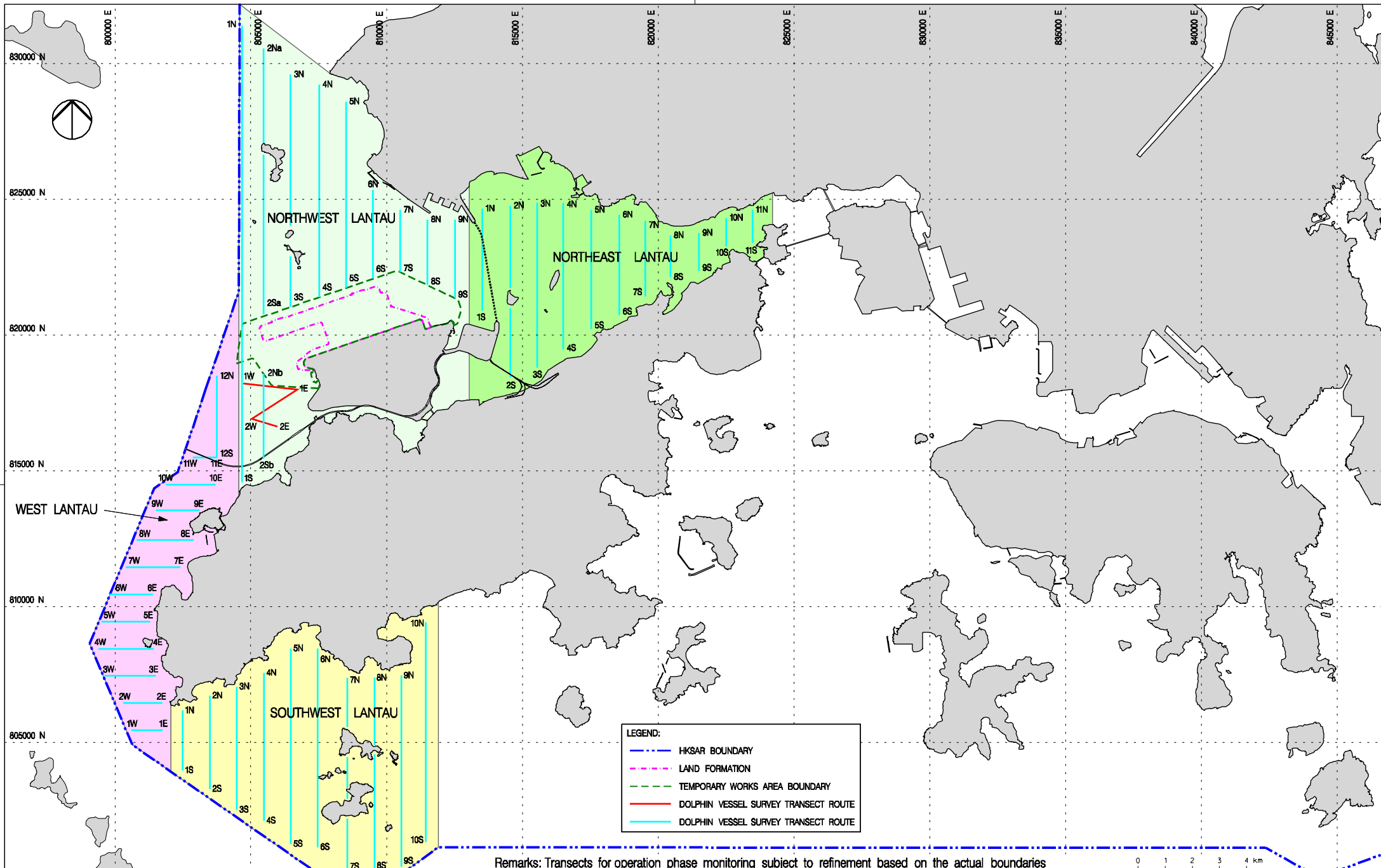


Title  
**WATER QUALITY MONITORING STATIONS**

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

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

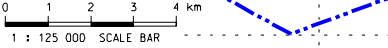




**LEGEND:**

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

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



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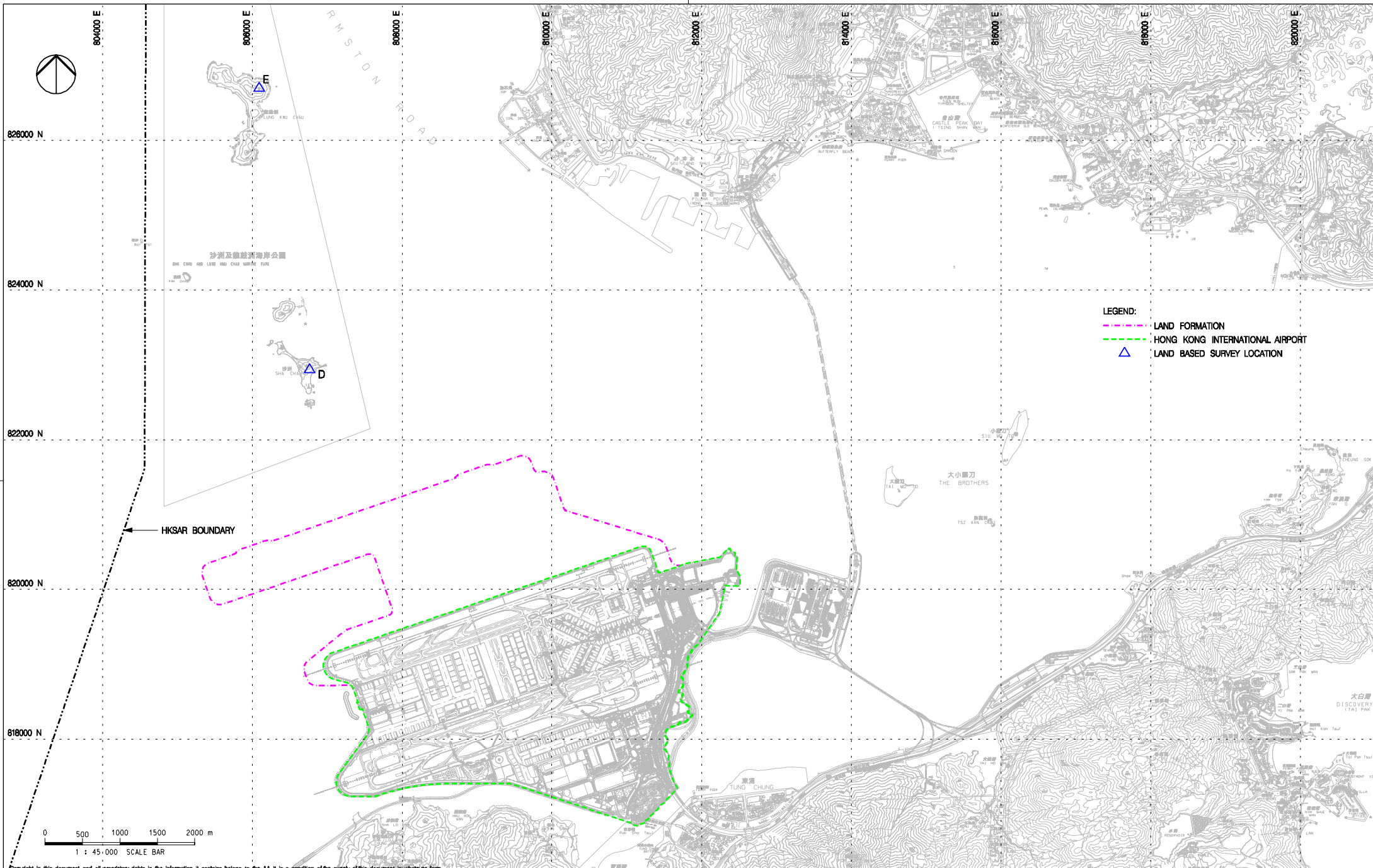
Rev.	Date	Description	Checked
B	27JUL16	GENERAL REVISION	JT
C	06FEB17	GENERAL REVISION	JT
D	01MAR17	GENERAL REVISION	JT
E	29OCT18	GENERAL REVISION	SH
F	04APR19	GENERAL REVISION	SH



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

Consultant's Signatures for Approval		Date
Design	JC	04APR19
Checkers	JC / TK	04APR19
Approver	EC	04APR19

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



- LEGEND:**
- - - LAND FORMATION
  - - - HONG KONG INTERNATIONAL AIRPORT
  - ▲ LAND BASED SURVEY LOCATION

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B	06FEB17	GENERAL REVISION	JC
C	29OCT18	GENERAL REVISION	SH



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

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

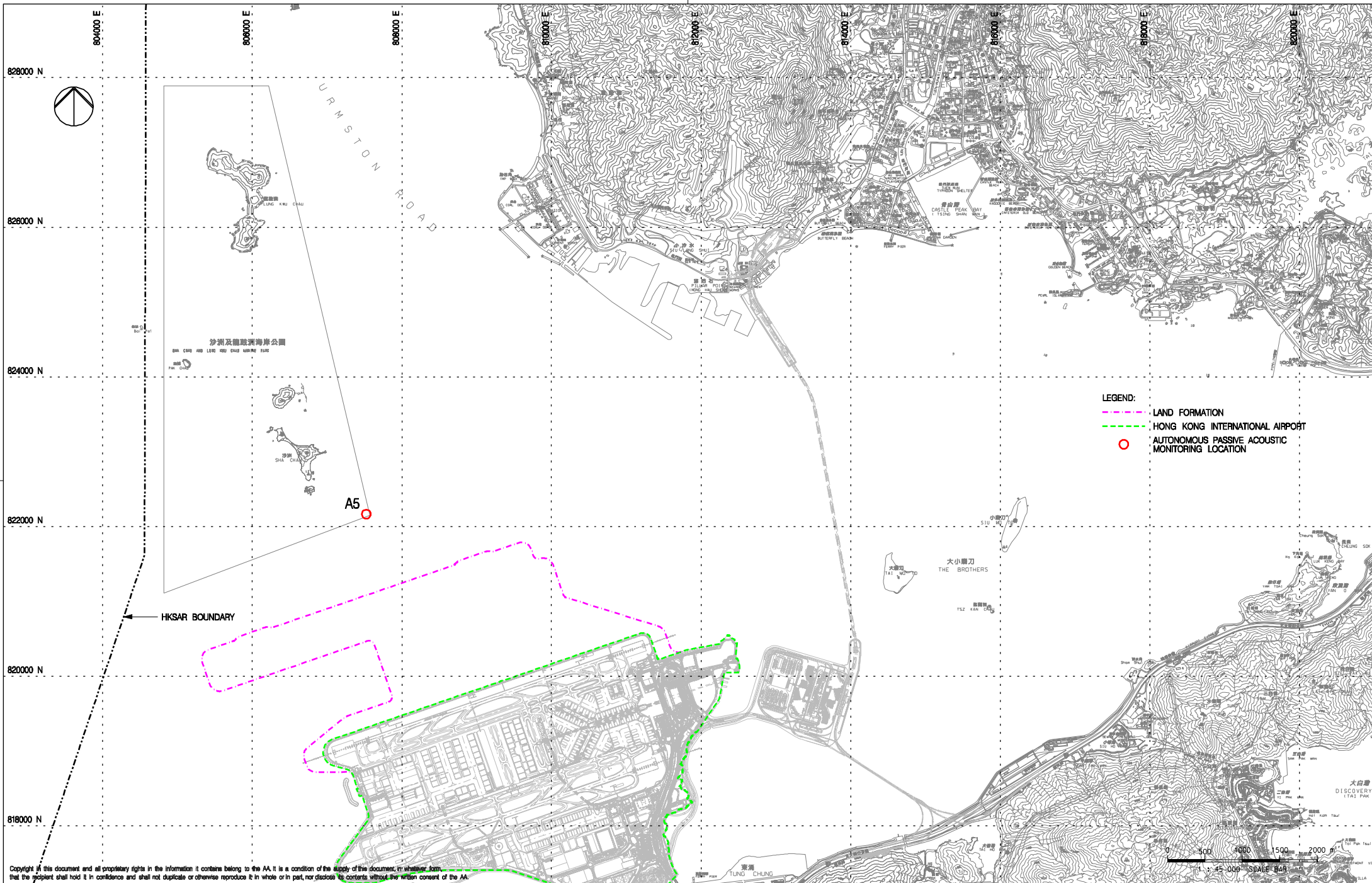
**EXPANSION OF HONG KONG INTERNATIONAL AIRPORT  
 INTO A THREE-RUNWAY SYSTEM**

Drawing No. **FIGURE 6.2**

Scale at A3 **1 : 45000**

Rev. **C**





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A	29AUG17	FIRST ISSUE	JT
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C	29OCT18	GENERAL REVISION	SH



Title  
**LOCATION FOR AUTONOMOUS PASSIVE ACOUSTIC MONITORING**

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

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



# Appendix A. Contract Description

## Contract Description

Contract No.	Contract Title	Contractor	Key Construction Activities
P560 (R)	Aviation Fuel Pipeline Diversion Works	Langfang Huayuan Mechanical and Electrical Engineering Co., Ltd.	Diversion of the existing submarine aviation fuel pipelines will use a horizontal directional drilling (HDD) method forming two rock drill holes by drilling through bedrock from a launching site located at the west of the airport island to a daylighting point adjacent to the offshore receiving platform at Sha Chau. Two new pipelines will be installed through the drilled tunnels. The total length is approximately 5 km. Drilling works will proceed from the HDD launching site at the airport island.
3205	Deep Cement Mixing (Package 5)	Bachy Soletanche- Sambo Joint Venture	The works covered by the Contract 3205 comprise ground improvement of seabed using Deep Cement Mixing (DCM) method, the major construction activities including without limitation the following <ul style="list-style-type: none"> <li>• Geophysical surveys;</li> <li>• Supply and placing of geotextile and sand blanket under seawalls;</li> <li>• Supply, maintenance, installation and removal of silt curtain systems;</li> <li>• Preliminary construction trails;</li> <li>• Supply and installation of DCM clusters within the works areas; and</li> <li>• Coring, sampling and testing of DCM treated soils and reporting works.</li> </ul>
3206	Reclamation Contract	ZHEC-CCCC-CDC Joint Venture	The works covered by the Contract 3206 comprise the formation of approximately 650 hectares of land north of the existing airport island for the project, the major construction activities including without limitation the following <ul style="list-style-type: none"> <li>• Site clearance and demolition;</li> <li>• Geotechnical and ground improvement works;</li> <li>• Seawall construction;</li> <li>• Marine and land filling works; and</li> <li>• Civil works.</li> </ul>
3301	North Runway Crossover Taxiway	FJT-CHEC-ZHEC Joint Venture	The works covered by the Contract 3301 comprise the construction of a new dual taxiway across the existing north runway and utility services and cable

Contract No.	Contract Title	Contractor	Key Construction Activities
			ducting systems. The major construction activities include without limitation the following: <ul style="list-style-type: none"> <li>• Construction of a new dual taxiway;</li> <li>• Cable ducting works;</li> <li>• Extension of existing portable water supply system; and</li> <li>• All associated works.</li> </ul>
3302	Eastern Vehicular Tunnel Advance Works	China Road and Bridge Corporation	The works covered by the Contract 3302 comprise the design and construction of the first section of the new Eastern Vehicular Tunnel and a Road Tunnel Plant Building. The major construction activities include without limitation the following: <ul style="list-style-type: none"> <li>• Foundation and structural works;</li> <li>• Cast-in / Underground electrical &amp; mechanical works and utility services; and</li> <li>• All associated testing and commissioning works.</li> </ul>
3303	Third Runway and Associated Works	SAPR Joint Venture	The works covered by the Contract 3303 comprise all elements of permanent works and temporary works required for the completion, commissioning and operation of the new North Runway and existing South Runway following the closure of the existing North Runway. The major construction activities include without limitation the following: <ul style="list-style-type: none"> <li>• New runway, taxiways, and associated works;</li> <li>• Infrastructure works;</li> <li>• Construction of ancillary buildings and facilities;</li> <li>• Set up of various airport systems; and</li> <li>• All associated testing and commissioning works.</li> </ul>
3402	New Integrated Airport Centers Enabling Works	Wing Hing Construction Co., Ltd.	The works covered by the Contract 3402 comprise the enabling works for the new Integrated Airport Centers. The major construction activities include without limitation the following: <ul style="list-style-type: none"> <li>• Site clearance and demolition;</li> <li>• Building services works;</li> <li>• Utilities diversion and installation works;</li> <li>• Roadworks including associated facilities; and</li> <li>• All associated testing and commissioning works.</li> </ul>



<b>Contract No.</b>	<b>Contract Title</b>	<b>Contractor</b>	<b>Key Construction Activities</b>
3403	New Integrated Airport Centres – Building and Civil Works	Sun Fook Kong Construction Limited	<p>The works covered by the Contract 3403 comprise the construction of a new Integrated Airport Centre (IAC) and a number of ancillary facilities and Additions and Alteration (A&amp;A) works for converting the existing IAC into a back-up IAC, including without limitation the following:</p> <ul style="list-style-type: none"> <li>• Site clearance and demolition;</li> <li>• Building structure and envelope;</li> <li>• Building Services and Airport Systems; and</li> <li>• Utilities division and installations.</li> </ul>
3501	Antenna Farm and Sewage Pumping Station	Build King Construction Limited	<p>The works covered by the Contract 3501 comprise the construction of antenna farm and sewage pumping station. The major construction activities include without limitation the following:</p> <ul style="list-style-type: none"> <li>• Civil and structural engineering works;</li> <li>• Building services works;</li> <li>• Architectural builder's works and finishes;</li> <li>• Trenchless excavation for sewage rising mains; and</li> <li>• All associated works.</li> </ul>
3503	Terminal 2 Foundation and Substructure Works	Leighton - Chun Wo Joint Venture	<p>The works covered by the Contract 3503 comprise the foundations for the new T2 terminal, two annex buildings and associated viaducts, construction of the new T2 basement and south annex building structures, diaphragm walls, utility services and other advance works.</p> <p>The major construction activities include without limitation the following:</p> <ul style="list-style-type: none"> <li>• Re-configuration and demolition of existing utilities and structures;</li> <li>• Pile foundations for the expanded T2 Terminal Building, South Annex Building, and North Annex Building;</li> <li>• Construction of new South Annex Building;</li> <li>• Diversion and provisions of utilities; and</li> <li>• All associated testing and commissioning works.</li> </ul>
3602	Existing APM System Modification Works	Niigata Transys Co., Ltd.	<p>The works covered by the Contract 3602 comprise the detailed design, supply, manufacture, fabrication, implementation, testing and commissioning of the following modification works of the existing APM systems:</p> <ul style="list-style-type: none"> <li>• Modification of existing APM depot and APM cars;</li> <li>• Modification of existing T1 &amp; T2 tunnels; and</li> <li>• Preparation of new APM depot.</li> </ul>

<b>Contract No.</b>	<b>Contract Title</b>	<b>Contractor</b>	<b>Key Construction Activities</b>
3603	3RS Baggage Handling System	VISH Consortium	The works covered by the Contract 3603 comprise the design, supply, manufacture, delivery, installation, testing and commissioning of the high-speed baggage handling system.
3721	Construction Support Infrastructure Works	China State Construction Engineering (Hong Kong) Limited	The works covered by the Contract 3721 comprise the construction of the infrastructure works and building facilities on the reclaimed land formation. The major construction activities include without limitation the following: <ul style="list-style-type: none"> <li>• Project site road;</li> <li>• Utilities;</li> <li>• Cargo loading quays; and</li> <li>• Security fencing and hoarding.</li> </ul>
3801	APM and BHS Tunnels on Existing Airport Island	China State Construction Engineering (Hong Kong) Limited	The works covered by the Contract 3801 comprise the construction of the APM and Baggage Handling System (BHS) tunnels on existing airport island. The major construction activities include without limitation the following: <ul style="list-style-type: none"> <li>• Construction of APM and BHS tunnels;</li> <li>• Construction of ventilation building and associated infrastructure; and</li> <li>• Construction, testing and commissioning of sewerage pumping station; and</li> <li>• Civil and structural engineering works.</li> </ul>

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



# Environmental Mitigation Implementation Schedule (EMIS) for Construction Phase

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

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

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



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

EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
			<ul style="list-style-type: none"> <li>▪ The flue gas exit temperature shall not be less than the acid dew point; and</li> <li>▪ Release of the chimney shall be directed vertically upwards and not be restricted or deflected.</li> </ul>		
			<p>Cold feed side</p> <ul style="list-style-type: none"> <li>▪ The aggregates with a nominal size less than or equal to 5 mm shall be stored in totally enclosed structure such as storage bin and shall not be handled in open area;</li> <li>▪ Where there is sufficient buffer area surrounding the plant, ground stockpiling may be used. The stockpile shall be enclosed at least on top and three sides and with flexible curtain to cover the entrance side. If these aggregates are stored above the feeding hopper, they shall be enclosed at least on top and three sides and be wetted on the surface to prevent wind-whipping;</li> <li>▪ The aggregates with a nominal size greater than 5 mm should preferably be stored in totally enclosed structure. Aggregates stockpile that is above the feeding hopper shall be enclosed at least on top and three sides. If open stockpiling is used, the stockpiles shall be enclosed on three sides with the enclosure wall sufficiently higher than the top of the stockpile to prevent wind whipping;</li> <li>▪ Belt conveyors shall be enclosed on top and two sides and provided with a metal board at the bottom to eliminate any dust emission due to the wind-whipping effect. Other type of enclosure will also be accepted by EPD if it can be demonstrated that the proposed enclosure can be achieve the same performance;</li> <li>▪ Scrapers shall be provided at the turning points of all belt conveyors inside the chute of the transfer points to remove dust adhered to the belt surface;</li> <li>▪ All conveyor transfer points shall be totally enclosed. Openings for the passages of conveyors shall be fitted with adequate flexible seals; and</li> <li>▪ All materials returned from dust collection system shall be transferred in enclosed system and shall be stored inside bins or enclosures.</li> </ul>	<p>Within Concrete Batching Plant / Duration of the construction phase</p>	N/A
			<p>Hot feed side</p> <ul style="list-style-type: none"> <li>▪ The inlet and outlet of the rotary dryer shall be enclosed and ducted to a dust extraction and collection system such as a fabric filter. The particulate and gaseous concentration at the exhaust outlet of the dust collector shall not exceed the required limiting values;</li> <li>▪ The bucket elevator shall be totally enclosed and the air be extracted and ducted to a dust collection system to meet the required particulates limiting value;</li> <li>▪ All vibratory screens shall be totally enclosed and dust tight with close-fitted access inspection opening. Gaskets shall be installed to seal off any cracks and edges of any inspection openings;</li> <li>▪ Chutes for carrying hot material shall be rigid and preferably fitted with abrasion resistant plate inside. They shall be inspected daily for leakages;</li> </ul>	<p>Within Concrete Batching Plant / Duration of the construction phase</p>	N/A

EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
			<ul style="list-style-type: none"> <li>▪ All hot bins shall be totally enclosed and dust tight with close-fitted access inspection opening. Gaskets shall be installed to seal off any cracks and edges of any inspection openings. The air shall be extracted and ducted to a dust collection system to meet the required particulates limiting value; and</li> <li>▪ Appropriate control measures shall be adopted in order to meet the required bitumen emission limit as well as the ambient odour level (2 odour units).</li> </ul>		
			<p>Material transportation</p> <ul style="list-style-type: none"> <li>▪ The loading, unloading, handling, transfer or storage of other raw materials which may generate airborne dust emissions such as crushed rocks, sands, stone aggregates, reject fines, shall be carried out in such a manner as to minimize dust emissions;</li> <li>▪ Roadways from the entrance of the plant to the product loading points and/or any other working areas where there are regular movements of vehicles shall be paved or hard surfaced; and</li> <li>▪ Haul roads inside the Works shall be adequately wetted with water and/or chemical suppressants by water trucks or water sprayers.</li> </ul>	Within Concrete Batching Plant / Duration of the construction phase	N/A
			<p>Control of emissions from bitumen decanting</p> <ul style="list-style-type: none"> <li>▪ The heating temperature of the particular bitumen type and grade shall not exceed the corresponding temperature limit of the same type listed in Appendix 1 of the Guidance Note;</li> <li>▪ Tamper-free high temperature cut-off device shall be provided to shut off the fuel supply or electricity in case the upper limit for bitumen temperature is reached;</li> <li>▪ Proper chimney for the discharge of bitumen fumes shall be provided at high level;</li> <li>▪ The emission of bitumen fumes shall not exceed the required emission limit; and</li> </ul> <p>The air-to-fuel ratio shall be properly controlled to allow complete combustion of the fuel. The fuel burners, if any, shall be maintained properly and free from carbon deposits in the burner nozzles.</p>	Within Concrete Batching Plant / Duration of the construction phase	N/A
			<p>Liquid fuel</p> <ul style="list-style-type: none"> <li>▪ The receipt, handling and storage of liquid fuel shall be carried out so as to prevent the release of emissions of organic vapours and/or other noxious and offensive emissions to the air.</li> </ul>	Within Concrete Batching Plant / Duration of the construction phase	N/A
			<p>Housekeeping</p> <ul style="list-style-type: none"> <li>▪ A high standard of housekeeping shall be maintained. Waste material, spillage and scattered piles gathered beneath belt conveyors, inside and around enclosures shall be cleared frequently. The minimum clearing frequency is on a weekly basis.</li> </ul>	Within Concrete Batching Plant / Duration of the construction phase	N/A
5.2.6.7	2.1	-	<p><b>Best Practices for Rock Crushing Plants</b></p> <p>The relevant best practices for dust control as stipulated in the Guidance Note on the Best Practicable Means for Mineral Works (Stone Crushing Plant) BPM 11/1 (95) as well as in the future Specified Process licence should be adopted. These include:</p>	Within Concrete Batching Plant / Duration of the construction phase	N/A



EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
			<p>Crushers</p> <ul style="list-style-type: none"> <li>▪ The outlet of all primary crushers, and both inlet and outlet of all secondary and tertiary crushers, if not installed inside a reasonably dust tight housing, shall be enclosed and ducted to a dust extraction and collection system such as a fabric filter;</li> <li>▪ The inlet hopper of the primary crushers shall be enclosed on top and 3 sides to contain the emissions during dumping of rocks from trucks. The rock while still on the trucks shall be wetted before dumping;</li> <li>▪ Water sprayers shall be installed and operated in strategic locations at the feeding inlet of crushers; and</li> <li>▪ Crusher enclosures shall be rigid and be fitted with self-closing doors and close-fitting entrances and exits. Where conveyors pass through the crusher enclosures, flexible covers shall be installed at entries and exits of the conveyors to the enclosure.</li> </ul>		
			<p>Vibratory screens and grizzlies</p> <ul style="list-style-type: none"> <li>▪ All vibratory screens shall be totally enclosed in a housing. Screenhouses shall be rigid and reasonably dust tight with self-closing doors or close-fitted entrances and exits for access. Where conveyors pass through the screenhouse, flexible covers shall be installed at entries and exits of the conveyors to the housing. Where containment of dust within the screenhouse structure is not successful then a dust extraction and collection system shall be provided; and</li> <li>▪ All grizzlies shall be enclosed on top and 3 sides and sufficient water sprayers shall be installed at their feeding and outlet areas.</li> </ul>	<p>Within Concrete Batching Plant / Duration of the construction phase</p>	<p>N/A</p>
			<p>Belt conveyors</p> <ul style="list-style-type: none"> <li>▪ Except for those conveyors which are placed within a totally enclosed structure such as a screenhouse or those erected at the ground level, all conveyors shall be totally enclosed with windshield on top and 2 sides;</li> <li>▪ Effective belt scraper such as the pre-cleaner blades made by hard wearing materials and provided with pneumatic tensioner, or equivalent device, shall be installed at the head pulley of designated conveyor as required to dislodge fine dust particles that may adhere to the belt surface and to reduce carry-back of fine materials on the return belt. Bottom plates shall also be provided for the conveyor unless it has been demonstrated that the corresponding belt scraper is effective and well maintained to prevent falling material from the return belt; and</li> <li>▪ 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.</li> </ul>	<p>Within Concrete Batching Plant / Duration of the construction phase</p>	<p>N/A</p>

EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
			<p>Storage piles and bins</p> <ul style="list-style-type: none"> <li>Where practicable, free falling transfer points from conveyors to stockpiles shall be fitted with flexible curtains or be enclosed with chutes designed to minimize the drop height. Water sprays shall also be used where required.</li> <li>The surface of all surge piles and stockpiles of blasted rocks or aggregates shall be kept sufficiently wet by water spraying wherever practicable;</li> <li>All open stockpiles for aggregates of size in excess of 5 mm shall be kept sufficiently wet by water spraying where practicable; or</li> <li>The stockpiles of aggregates 5 mm in size or less shall be enclosed on 3 sides or suitably located to minimize wind-whipping. Save for fluctuations in stock or production, the average stockpile shall stay within the enclosure walls and in no case the height of the stockpile shall exceed twice the height of the enclosure walls.</li> <li>Scattered piles gathered beneath belt conveyors, inside and around enclosures shall be cleared regularly.</li> </ul>	Within Concrete Batching Plant / Duration of the construction phase	N/A
			<p>Rock drilling equipment</p> <ul style="list-style-type: none"> <li>Appropriate dust control equipment such as a dust extraction and collection system shall be used during rock drilling activities.</li> </ul>	Within Concrete Batching Plant / Duration of the construction phase	N/A
<b>Hazard to Human Life – Construction Phase</b>					
Table 6.40	3.2	-	<ul style="list-style-type: none"> <li>Precautionary measures should be established to request barges to move away during typhoons.</li> </ul>	Construction Site / Construction Period	I
Table 6.40	3.2	-	<ul style="list-style-type: none"> <li>An appropriate marine traffic management system should be established to minimize risk of ship collision.</li> </ul>	Construction Site / Construction Period	I
Table 6.40	3.2	-	<ul style="list-style-type: none"> <li>Location of all existing hydrant networks should be clearly identified prior to any construction works.</li> </ul>	Construction Site / Construction Period	I
<b>Noise Impact – Construction Phase</b>					
7.5.6	4.3	-	<p><b>Good Site Practice</b></p> <p>Good site practice and noise management can significantly reduce the impact of construction site activities on nearby NSRs. The following package of measures should be followed during each phase of construction:</p> <ul style="list-style-type: none"> <li>only well-maintained plant to be operated on-site and plant should be serviced regularly during the construction works;</li> <li>machines and plant that may be in intermittent use to be shut down between work periods or should be throttled down to a minimum;</li> </ul>	Within the Project site / During construction phase / Prior to commencement of operation	I

EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
			<ul style="list-style-type: none"> <li>plant known to emit noise strongly in one direction, should, where possible, be orientated to direct noise away from the NSRs;</li> <li>mobile plant should be sited as far away from NSRs as possible; and</li> <li>material stockpiles and other structures to be effectively utilised, where practicable, to screen noise from on-site construction activities.</li> </ul>		
7.5.6	4.3	-	<b>Adoption of QPME</b> <ul style="list-style-type: none"> <li>QPME should be adopted as far as applicable.</li> </ul>	Within the Project site / During construction phase / Prior to commencement of operation	I
7.5.6	4.3	-	<b>Use of Movable Noise Barriers</b> <ul style="list-style-type: none"> <li>Movable noise barriers should be placed along the active works area and mobile plants to block the direct line of sight between PME and the NSRs.</li> </ul>	Within the Project site / During construction phase / Prior to commencement of operation	I
7.5.6	4.3	-	<b>Use of Noise Enclosure/ Acoustic Shed</b> <ul style="list-style-type: none"> <li>Noise enclosure or acoustic shed should be used to cover stationary PME such as air compressor and generator.</li> </ul>	Within the Project site / During construction phase / Prior to commencement of operation	I
<b>Water Quality Impact – Construction Phase</b>					

EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
8.8.1.2 and 8.8.1.3	5.1	2.26	<p><b>Marine Construction Activities</b></p> <p><u>General Measures to be Applied to All Works Areas</u></p> <ul style="list-style-type: none"> <li>▪ Barges or hoppers shall not be filled to a level which will cause overflow of materials or pollution of water during loading or transportation;</li> <li>▪ Use of Lean Material Overboard (LMOB) systems shall be prohibited;</li> <li>▪ Excess materials shall be cleaned from the decks and exposed fittings of barges and hopper dredgers before the vessels are moved;</li> <li>▪ Plants should not be operated with leaking pipes and any pipe leakages shall be repaired quickly;</li> <li>▪ Adequate freeboard shall be maintained on barges to reduce the likelihood of decks being washed by wave action;</li> <li>▪ All vessels shall be sized such that adequate clearance is maintained between vessels and the sea bed at all states of the tide to ensure that undue turbidity is not generated by turbulence from vessel movement or propeller wash;</li> <li>▪ The works shall not cause foam, oil, grease, litter or other objectionable matter to be present in the water within and adjacent to the works site; and</li> <li>▪ For ground improvement activities including DCM, the wash water from cleaning of the drilling shaft should be appropriately treated before discharge. The Contractor should ensure the waste water meets the WPCO/TM requirements before discharge. No direct discharge of contaminated water is permitted.</li> </ul>	Within construction site / Duration of the construction phase	I
			<p><u>Specific Measures to be Applied to All Works Areas</u></p> <ul style="list-style-type: none"> <li>▪ The daily maximum production rates shall not exceed those assumed in the water quality assessment in the EIA report;</li> <li>▪ A maximum of 10 % fines content to be adopted for sand blanket and 20 % fines content for marine filling below +2.5 mPD prior to substantial completion of seawall (until end of Year 2017) shall be specified in the works contract document;</li> </ul>	Within construction site / Duration of the construction phase	I
			<ul style="list-style-type: none"> <li>▪ An advance seawall of at least 200m to be constructed (comprising either rows of contiguous permanent steel cells completed above high tide mark or partially completed seawalls with rock core to high tide mark and filter layer on the inner side) prior to commencement of marine filling activities;</li> <li>▪ Closed grab dredger shall be used to excavate marine sediment;</li> <li>▪ Silt curtains surrounding the closed grab dredger shall be deployed in accordance with the Silt Curtain Deployment Plan; and</li> </ul>		I
			<ul style="list-style-type: none"> <li>▪ The Silt Curtain Deployment Plan shall be implemented.</li> </ul>		<p>N/A</p> <p>*(The arrangement of silt curtain has been modified. The details can be referred to Silt Curtain Deployment Plan)</p>
					I



EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
			<p><u>Specific Measures to be Applied to Land Formation Activities prior to Commencement of Marine Filling Works</u></p> <ul style="list-style-type: none"> <li>Double layer 'Type III' silt curtains to be applied around the active eastern works areas prior to commencement of sand blanket laying activities. The silt curtains shall be configured to minimise SS release during ebb tides. A silt curtain efficiency test shall be conducted to validate the performance of the silt curtains;</li> </ul>	Within construction site / Duration of the construction phase	<p>N/A</p> <p>*(The arrangement of silt curtain has been modified. The details can be referred to Silt Curtain Deployment Plan)</p>
			<ul style="list-style-type: none"> <li>Double layer silt curtains to enclose WSRs C7a and silt screens installed at the intake points for both WSR C7a and C8 prior to commencement of construction; and</li> </ul>		<p>For C7a, I</p> <p>For C8, I</p> <p>*(The requirement of silt curtain / screen has been modified. The details can be referred to Silt Curtain Deployment Plan)</p>
			<ul style="list-style-type: none"> <li>The silt curtains and silt screens should be regularly checked and maintained.</li> </ul>		I
			<p><u>Specific Measures to be Applied to Land Formation Activities during Marine Filling Works</u></p> <ul style="list-style-type: none"> <li>Double layer 'Type II' or 'Type III' silt curtains to be applied around the eastern openings between partially completed seawalls prior to commencement of marine filling activities. The silt curtains shall be configured to minimise SS release during ebb tides;</li> </ul>	Within construction site / Duration of the construction phase	<p>I</p> <p>*(The arrangement of silt curtain has been modified. The details can be referred to Silt Curtain Deployment Plan)</p>
			<ul style="list-style-type: none"> <li>Double layer silt curtains to be applied at the south-western opening prior to commencement of marine filling activities;</li> </ul>		<p>N/A</p> <p>*(The arrangement of silt curtain has been modified. The details can be referred to Silt Curtain Deployment Plan)</p>
			<ul style="list-style-type: none"> <li>Double layer silt curtain to enclose WSR C7a and silt screens installed at the intake points for both WSR C7a and C8 prior to commencement of marine filling activities; and</li> </ul>		<p>N/A</p> <p>*(The requirement of silt curtain / screen has been modified. The details can be referred to Silt Curtain Deployment Plan)</p>
			<ul style="list-style-type: none"> <li>The silt curtains and silt screens should be regularly checked and maintained.</li> </ul>		I

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

EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
			<p>drainage system should be undertaken by the Contractors prior to the commencement of construction (for works areas located on the existing Airport island) or as soon as the new land is completed (for works areas located on the new landform);</p> <hr/> <ul style="list-style-type: none"> <li>▪ Sand/silt removal facilities such as sand/silt traps and sediment basins should be provided to remove sand/silt particles from runoff to meet the requirements of the TM-DSS standards under the WPCO. The design of efficient silt removal facilities should make reference to the guidelines in Appendix A1 of ProPECC Note PN 1/94. Sizes may vary depending upon the flow rate. The detailed design of the sand/silt traps should be undertaken by the Contractors prior to the commencement of construction;</li> </ul> <hr/> <ul style="list-style-type: none"> <li>▪ All drainage facilities and erosion and sediment control structures should be regularly inspected and maintained to ensure proper and efficient operation at all times and particularly during rainstorms. Deposited silt and grit should be regularly removed, at the onset of and after each rainstorm to ensure that these facilities are functioning properly;</li> </ul> <hr/> <ul style="list-style-type: none"> <li>▪ Measures should be taken to minimize the ingress of site drainage into excavations. If excavation of trenches in wet periods is necessary, they should be dug and backfilled in short sections wherever practicable. Water pumped out from foundation excavations should be discharged into storm drains via silt removal facilities;</li> </ul> <hr/> <ul style="list-style-type: none"> <li>▪ In the event that contaminated groundwater is identified at excavation areas, this should be treated on-site using a suitable wastewater treatment process. The effluent should be treated according to the requirements of the TM-DSS standards under the WPCO prior to discharge to foul sewers or collected for proper disposal off-site. No direct discharge of contaminated groundwater is permitted; and</li> </ul> <hr/> <ul style="list-style-type: none"> <li>▪ All vehicles and plant should be cleaned before leaving a construction site to ensure no earth, mud, debris and the like is deposited by them on roads. An adequately designed and sited wheel washing facility should be provided at construction site exits. Wash-water should have sand and silt settled out and removed regularly to ensure the continued efficiency of the process. The section of access road leading to, and exiting from, the wheel-wash bay to the public road should be paved with sufficient backfall toward the wheel-wash bay to prevent vehicle tracking of soil and silty water to public roads and drains. All washwater should be treated according to the requirements of the TM-DSS standards under the WPCO prior to discharge.</li> </ul>		I
8.8.1.9	5.1	-	<p><b>Sewage Effluent from Construction Workforce</b></p> <ul style="list-style-type: none"> <li>▪ Temporary sanitary facilities, such as portable chemical toilets, should be employed on-site where necessary to handle sewage from the workforce. A licensed contractor should be employed to provide appropriate and adequate portable toilets and be responsible for appropriate disposal and maintenance.</li> </ul>	Within construction site / During construction phase	I
8.8.1.10 8.8.1.11	5.1		<p><b>General Construction Activities</b></p> <ul style="list-style-type: none"> <li>▪ Construction solid waste, debris and refuse generated on-site should be collected, handled and disposed of properly to avoid entering any nearby storm water drain. Stockpiles of cement and other construction materials should be kept covered when not being used; and</li> </ul>	Within construction site / During 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?^
8.8.1.12 8.8.1.13	5.1	2.28	<ul style="list-style-type: none"> <li>▪ Oils and fuels should only be stored in designated areas which have pollution prevention facilities. To prevent spillage of fuels and solvents to any nearby storm water drain, all fuel tanks and storage areas should be provided with locks and be sited on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank. The bund should be drained of rainwater after a rain event.</li> </ul> <p><b>Drilling Activities for the Submarine Aviation Fuel Pipelines</b></p> <p>To prevent potential water quality impacts at Sha Chau, the following measures shall be applied:</p> <ul style="list-style-type: none"> <li>▪ A 'zero-discharge' policy shall be applied for all activities to be conducted at Sha Chau;</li> <li>▪ No bulk storage of chemicals shall be permitted; and</li> <li>▪ A containment pit shall be constructed around the drill holes. This containment pit shall be lined with impermeable lining and bunded on the outside to prevent inflow from off-site areas.</li> </ul>	Within construction site / During construction phase	I
			<p>At the airport island side of the drilling works, the following measures shall be applied for treatment of wastewater:</p> <ul style="list-style-type: none"> <li>▪ During pipe cleaning, appropriate desilting or sedimentation device should be provided on site for treatment before discharge. The Contractor should ensure discharge water from the sedimentation tank meet the WPCO/TM requirements before discharge; and</li> <li>▪ Drilling fluid used in drilling activities should be reconditioned and reused as far as possible. Temporary enclosed storage locations should be provided on-site for any unused chemicals that needs to be transported away after all the related construction activities are completed. The requirements in ProPECC Note PN 1/94 should be adhered to in the handling and disposal of bentonite slurries.</li> </ul>	Within construction site / During construction phase	I
<b>Waste Management Implication – Construction Phase</b>					
10.5.1.1	7.1	-	<p>Opportunities to minimise waste generation and maximise the reuse of waste materials generated by the project have been incorporated where possible into the planning, design and construction stages, and the following measures have been recommended:</p> <ul style="list-style-type: none"> <li>▪ The relevant construction methods (particularly for the tunnel works) and construction programme have been carefully planned and developed to minimise the extent of excavation and to maximise the on-site reuse of inert C&amp;D materials generated by the project as far as practicable. Temporary stockpiling areas will also be provided to facilitate on-site reuse of inert C&amp;D materials;</li> <li>▪ Priority should be given to collect and reuse suitable inert C&amp;D materials generated from other concurrent projects and the Government's PFRF as fill materials for the proposed land formation works;</li> <li>▪ Only non-dredged ground improvement methods should be adopted in order to completely avoid the need for dredging and disposal of marine sediment for the proposed land formation work;</li> <li>▪ Excavation work for constructing the APM tunnels, BHS tunnels and airside tunnels will not be down to the CMPs beneath the fill materials in order to avoid excavating any sediments; and</li> </ul>	Project Site Area / During design and construction phase	I
					I
					I
					I



EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
			<ul style="list-style-type: none"> <li>▪ For the marine sediments expected to be excavated from the piling works of TRC, APM &amp; BHS tunnels, airside tunnels and other facilities on the proposed land formation area, piling work of marine sections of the approach lights and 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.</li> </ul>		I
10.5.1.1	7.1	-	<p>The following good site practices should be performed during the construction activities include:</p> <ul style="list-style-type: none"> <li>▪ Nomination of an approved person, such as a site manager, to be responsible for good site practices, arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site;</li> <li>▪ Training of site personnel in proper waste management and chemical waste handling procedures;</li> <li>▪ Provision of sufficient waste disposal points and regular collection for disposal;</li> <li>▪ Appropriate measures to minimise windblown litter and dust during transportation of waste by either covering trucks by tarpaulin/ similar material or by transporting wastes in enclosed containers. The cover should be extended over the edges of the sides and tailboards;</li> <li>▪ Stockpiles of C&amp;D materials should be kept wet or covered by impervious sheets to avoid wind-blown dust;</li> <li>▪ All dusty materials including C&amp;D materials should be sprayed with water immediately prior to any loading transfer operation so as to keep the dusty material wet during material handling at the barging points/ stockpile areas;</li> <li>▪ C&amp;D materials to be delivered to and from the project site by barges or by trucks should be kept wet or covered to avoid wind-blown dust;</li> <li>▪ The speed of the trucks including dump trucks carrying C&amp;D or waste materials within the site should be controlled to about 10 km/hour in order to reduce the adverse dust impact and secure the safe movement around the site; and</li> <li>▪ To avoid or minimise dust emission during transport of C&amp;D or waste materials within the site, each and every main temporary access should be paved with concrete, bituminous hardcore materials or metal plates and kept clear of dusty materials. Unpaved parts of the road should be sprayed with water or a dust suppression chemical so as to keep the entire road surface wet.</li> </ul>	Project Site Area / Construction Phase	I
10.5.1.3	7.1	-	<p>The following practices should be performed to achieve waste reduction include:</p> <ul style="list-style-type: none"> <li>▪ Use of steel or aluminium formworks and falseworks for temporary works as far as practicable;</li> <li>▪ Adoption of repetitive design to allow reuse of formworks as far as practicable;</li> <li>▪ Segregation and storage of different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal;</li> </ul>	Project Site Area / Construction Phase	I

EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
			<ul style="list-style-type: none"> <li>Encourage collection of aluminium cans, PET bottles and paper by providing separate labelled bins to enable these wastes to be segregated from other general refuse generated by the work force;</li> <li>Any unused chemicals or those with remaining functional capacity should be collected for reused as far as practicable;</li> <li>Proper storage and site practices to minimise the potential for damage or contamination of construction materials; and</li> <li>Plan and stock construction materials carefully to minimise amount of waste generated and avoid unnecessary generation of waste.</li> </ul>		
10.5.1.5	7.1		<ul style="list-style-type: none"> <li>Inert and non-inert C&amp;D materials should be handled and stored separately to avoid mixing the two types of materials.</li> </ul>	Project Site Area / Construction Phase	I
10.5.1.5	7.1	-	<ul style="list-style-type: none"> <li>Any recyclable materials should be segregated from the non-inert C&amp;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.</li> </ul>	Project Site Area / Construction Phase	I
10.5.1.6	7.1	-	<ul style="list-style-type: none"> <li>A trip-ticket system promulgated shall be developed in order to monitor the off-site delivery of surplus inert C&amp;D materials that could not be reused on-site for the proposed land formation work at the PFRF and to control fly tipping.</li> </ul>	Project Site Area / Construction Phase	I
10.5.1.6	7.1	2.32	<ul style="list-style-type: none"> <li>The Contractor should prepare and implement a Waste Management Plan detailing various waste arising and waste management practices.</li> </ul>	Construction Phase	I
10.5.1.16	7.1	-	<p>The following mitigation measures are recommended during excavation and treatment of the sediments:</p> <ul style="list-style-type: none"> <li>On-site remediation should be carried out in an enclosed area in order to minimise odour/dust emissions;</li> <li>The loading, unloading, handling, transfer or storage of treated and untreated sediment should be carried out in such a manner to prevent or minimise dust emissions;</li> <li>All practical measures, including but not limited to speed control for vehicles, should be taken to minimise dust emission;</li> <li>Good housekeeping should be maintained at all times at the sediment treatment facility and storage area;</li> <li>Treated and untreated sediment should be clearly separated and stored separately; and</li> <li>Surface runoff from the enclosed area should be properly collected and stored separately, and then properly treated to levels in compliance with the relevant effluent standards as required by the Water Pollution Control Ordinance before final discharge.</li> </ul>	Project Site Area / Construction Phase	I I I I I
10.5.1.18	7.1	-	<p>The marine sediments to be removed from the cable field joint area would be disposed of at the designated disposal sites to be allocated by the MFC. The following mitigation measures should be strictly</p>	Project Site Area / Construction Phase	N/A

EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
			<p>followed to minimise potential impacts on water quality during transportation of the sediments requiring Type 1 disposal:</p> <ul style="list-style-type: none"> <li>Bottom opening of barges shall be fitted with tight fitting seals to prevent leakage of material;</li> <li>Monitoring of the barge loading shall be conducted to ensure that loss of material does not take place during transportation. Transport barges or vessels shall be equipped with automatic self-monitoring devices as specified by EPD; and</li> <li>Barges or hopper barges shall not be filled to a level that would cause the overflow of materials or sediment laden water during loading or transportation.</li> </ul>		
10.5.1.19	7.1	-	<p>Contractor should register with the EPD as a chemical waste producer and to follow the relevant guidelines. The following measures should be implemented:</p> <ul style="list-style-type: none"> <li>Good quality containers compatible with the chemical wastes should be used;</li> <li>Incompatible chemicals should be stored separately;</li> <li>Appropriate labels must be securely attached on each chemical waste container indicating the corresponding chemical characteristics of the chemical waste, such as explosive, flammable, oxidizing, irritant, toxic, harmful, corrosive, etc.; and</li> <li>The contractor will use a licensed collector to transport and dispose of the chemical wastes at the approved Chemical Waste Treatment Centre or other licensed recycling facilities, in accordance with the Waste Disposal (Chemical Waste) (General) Regulation.</li> </ul>	Project Site Area / Construction Phase	I
10.5.1.20	7.1	-	<ul style="list-style-type: none"> <li>General refuse should be stored in enclosed bins or compaction units separated from inert C&amp;D material. A reputable waste collector should be employed by the contractor to remove general refuse from the site for disposal at designated landfill sites. An enclosed and covered area should be provided to reduce the occurrence of 'wind blown' light material.</li> </ul>	Project Site Area / Construction Phase	I
10.5.1.21	7.1	-	<ul style="list-style-type: none"> <li>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.</li> </ul>	Project Site Area / Construction Phase	I
<b>Land Contamination – Construction Phase</b>					
11.10.1.2 to 11.10.1.3	8.1	2.32	<p>For areas inaccessible during site reconnaissance survey</p> <ul style="list-style-type: none"> <li>Further site reconnaissance would be conducted once the areas are accessible in order to identify any land contamination concern for the areas.</li> </ul>	Project Site Area inaccessible during site reconnaissance / Prior to Construction Phase	I
			<ul style="list-style-type: none"> <li>Subject to further site reconnaissance findings, a supplementary Contamination Assessment Plan (CAP) for additional site investigation (SI) (if necessary) may be prepared and submitted to EPD for endorsement prior to the commencement of SI at these areas.</li> </ul>		I

EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
			<ul style="list-style-type: none"> <li>After completion of SI, the Contamination Assessment Report (CAR) will be prepared and submitted to EPD for approval prior to start of the proposed construction works at the golf course, the underground and above-ground fuel storage tank areas, emergency power generation units, airside petrol filling station and fuel tank room.</li> </ul>		I *(CAR for golf course and Terminal 2 Emergency Power Supply System No.1)
			<ul style="list-style-type: none"> <li>Should remediation be required, Remediation Action Plan (RAP) and Remediation Report (RR) will be prepared for EPD's approval prior to commencement of the proposed remediation and any construction works respectively.</li> </ul>		N/A
11.8.1.2	8.1	-	<p>If contaminated soil is identified, the following mitigation measures are for the excavation and transportation of contaminated materials (if any):</p> <ul style="list-style-type: none"> <li>To minimize the incidents of construction workers coming in contact with any contaminated materials, bulk earth-moving excavation equipment should be employed;</li> <li>Contact with contaminated materials can be minimised by wearing appropriate clothing and personal protective equipment such as gloves and masks (especially when working directly with contaminated material), provision of washing facilities and prohibition of smoking and eating on site;</li> <li>Stockpiling of contaminated excavated materials on site should be avoided as far as possible;</li> <li>The use of any contaminated soil for landscaping purpose should be avoided unless pre-treatment was carried out;</li> <li>Vehicles containing any excavated materials should be suitably covered to reduce dust emissions and/or release of contaminated wastewater;</li> <li>Truck bodies and tailgates should be sealed to prevent any discharge;</li> <li>Only licensed waste haulers should be used to collect and transport contaminated material to treatment/disposal site and should be equipped with tracking system to avoid fly tipping;</li> <li>Speed control for trucks carrying contaminated materials should be exercised. 8km/h is the recommended speed limit;</li> <li>Strictly observe all relevant regulations in relation to waste handling, such as Waste Disposal Ordinance (Cap 354), Waste Disposal (Chemical Waste) (General) Regulation (Cap 354) and obtain all necessary permits where required; and</li> <li>Maintain records of waste generation and disposal quantities and disposal arrangements.</li> </ul>	Project Site Area / Construction Phase	N/A
<b>Terrestrial Ecological – Construction Phase</b>					
12.10.1.1	9.2	2.14	<p><b>Pre-construction Egretty Survey</b></p> <ul style="list-style-type: none"> <li>Conduct ecological survey for Sha Chau egretty to update the latest boundary of the egretty.</li> </ul>	Breeding season (April - July) prior to commencement of	I



EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
12.7.2.3 and 12.7.2.6	9.1	2.30	<b>Avoidance and Minimisation of Direct Impact to Egret</b> <ul style="list-style-type: none"> <li>The daylighting location will avoid direct encroachment to the Sheung Sha Chau egret. The daylighting location and mooring of flat top barge, if required, will be kept away from the egret;</li> <li>In any event, controls such as demarcation of construction site boundary and confining the lighting within the site will be practised to minimise disturbance to off-site habitat at Sheung Sha Chau Island; and</li> <li>The containment pit at the daylighting location shall be covered or camouflaged.</li> </ul>	During construction phase at Sheung Sha Chau Island	
12.7.2.5	9.1	2.30	<b>Preservation of Nesting Vegetation</b> <ul style="list-style-type: none"> <li>The proposed daylighting location and the arrangement of connecting pipeline will avoid the need of tree cutting, therefore the trees that are used by ardeids for nesting will be preserved.</li> </ul>	During construction phase at Sheung Sha Chau Island	
12.7.2.4 and 12.7.2.6	9.1	2.30	<b>Timing the Pipe Connection Works outside Ardeid's Breeding Season</b> <ul style="list-style-type: none"> <li>All HDD and related construction works on Sheung Sha Chau Island will be scheduled outside the ardeids' breeding season (between April and July). No night-time construction work will be allowed on Sheung Sha Chau Island during all seasons.</li> </ul>	During construction phase at Sheung Sha Chau Island	
12.10.1.1	9.3	-	<b>Ecological Monitoring</b> <ul style="list-style-type: none"> <li>During the HDD construction works period from August to March, ecological monitoring will be undertaken monthly at the HDD daylighting location on Sheung Sha Chau Island to identify and evaluate any impacts with appropriate actions taken as required to address and minimise any adverse impact found.</li> </ul>	at Sheung Sha Chau Island	
<b>Marine Ecological Impact – Pre-construction Phase</b>					
13.11.4.1	10.2.2	-	<ul style="list-style-type: none"> <li>Pre-construction phase Coral Dive Survey.</li> </ul>	HKIAAA artificial seawall	
<b>Marine Ecological Impact – Construction Phase</b>					
13.11.1.3 to 13.11.1.6	-	-	<b>Minimisation of Land Formation Area</b> <ul style="list-style-type: none"> <li>Minimise the overall size of the land formation needed for the additional facilities to minimise the overall loss of habitat for marine resources, especially the CWD population.</li> </ul>	Land formation footprint / during detailed design phase to completion of construction	
13.11.1.7 to 13.11.1.10	-	2.31	<b>Use of Construction Methods with Minimal Risk/Disturbance</b> <ul style="list-style-type: none"> <li>Use of non-dredge method for the main land formation and ancillary works including the diversion of the aviation fuel pipeline to the AFRF;</li> <li>Use of Deep Cement Mixing (DCM) method instead of conventional seabed dredging for the land formation works to reduce the risk of negative impacts through the elevation of suspended solids and contaminants on CWDs, fisheries and the marine environment;</li> </ul>	During construction phase at marine works area	

EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
			<ul style="list-style-type: none"> <li>Use of bored piling in short duration to form the new approach lights and marker beacons for the new runway;</li> </ul>		N/A
			<ul style="list-style-type: none"> <li>Avoid bored piling during CWD peak calving season (Mar to Jun);</li> </ul>		I
			<ul style="list-style-type: none"> <li>Prohibition of underwater percussive piling; and</li> </ul>		I
			<ul style="list-style-type: none"> <li>Use of horizontal directional drilling (HDD) method and water jetting methods for placement of submarine cables and pipelines to minimise the disturbance to the CWDs and other marine ecological resources.</li> </ul>		I
13.11.2.1 to 13.11.2.7	-	-	<p><b>Mitigation for Indirect Disturbance due to Deterioration of Water Quality</b></p> <ul style="list-style-type: none"> <li>Water quality mitigation measures during construction phases include consideration of alternative construction methods, deployment of silt curtain and good site practices;</li> <li>Alternative construction methods including use of non-dredge methods for ground improvement (e.g. Deep Cement Mixing (DCM), prefabricated vertical drains (PVD), sand compaction piles, steel cells, stone columns and vertical sand drains);</li> <li>Use of bored piling in short duration to form the new approach lights and marker beacons for the new runway; and</li> </ul> <p>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.</p>	All works area during the construction phase	I
					I
					N/A
					I
13.11.1.12	-	-	<p><b>Strict Enforcement of No-Dumping Policy</b></p> <ul style="list-style-type: none"> <li>A policy prohibiting dumping of wastes, chemicals, oil, trash, plastic, or any other substance that would potentially be harmful to dolphins and/or their habitat in the work area;</li> <li>Mandatory educational programme of the no-dumping policy be made available to all construction site personnel for all project-related works;</li> <li>Fines for infractions should be implemented; and</li> <li>Unscheduled, on-site audits shall be implemented.</li> </ul>	All works area during the construction phase	I
13.11.1.13	-	-	<p><b>Good Construction Site Practices</b></p> <ul style="list-style-type: none"> <li>Regular inspection of the integrity and effectiveness of all silt curtains and monitoring of effluents to ensure that any discharge meets effluent discharge guidelines;</li> <li>Keep the number of working or stationary vessels present on-site to the minimum anytime; and</li> <li>Unscheduled, on-site audits for all good site practice restrictions should be conducted, and fines or penalties sufficient to be an effective deterrent need to be levied against violators.</li> </ul>	All works area during the construction phase	I
13.11.1.3 to 13.11.1.6	-	-	<p><b>Minimisation of Land Formation Area</b></p> <ul style="list-style-type: none"> <li>Minimise the overall size of the land formation needed for the additional facilities to minimise the overall loss of habitat for marine resources, especially the CWD population.</li> </ul>	Land formation footprint / during detailed design phase	I

EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
				to completion of construction	
13.11.5.4 to 13.11.5.13	10.3.1	-	<p><b>SkyPier High Speed Ferries' Speed Restrictions and Route Diversions</b></p> <ul style="list-style-type: none"> <li>SkyPier HSFs operating to / from Zhuhai and Macau would divert north of SCLKC Marine Park with a 15 knot speed limit to apply for the part-journeys that cross high CWD abundance grid squares as indicatively shown in <b>Drawing No. MCL/P132/EIA/13-023</b> of the EIA Report. Both the alignment of the northerly route and the portion of routings to be subject to the speed limit of 15 knots shall be finalised prior to commencement of construction based on the future review of up-to-date CWD abundance and EM&amp;A data and taking reference to changes in total SkyPier HSF numbers; and</li> <li>A maximum of 10 knots will be enforced through the designated SCLKC Marine Park area at all times.</li> </ul> <p><b>Other mitigation measures</b></p> <ul style="list-style-type: none"> <li>The ET will audit various parameters including actual daily numbers of HSFs, compliance with the 15-knot speed limit in the speed control zone and diversion compliance for SkyPier HSFs operating to / from Zhuhai and Macau; and</li> <li>The effectiveness of the CWD mitigation measures after implementation of initial six month SkyPier HSF diversion and speed restriction will be reviewed.</li> </ul>	Area between the footprint and SCLKC Marine Park during construction phase	
13.11.5.14 to 13.11.5.18	10.3.1	2.31	<p><b>Dolphin Exclusion Zone</b></p> <ul style="list-style-type: none"> <li>Establishment of a 24 hr Dolphin Exclusion Zone (DEZ) with a 250 m radius around the land formation works areas;</li> <li>A DEZ would also be implemented during ground improvement works (e.g. DCM), water jetting works for submarine cables diversion, open trench dredging at the field joint locations and seawall construction; and</li> <li>A DEZ would also be implemented during bored piling work but as a precautionary measure only.</li> </ul>	Marine waters around land formation works area during construction phase	
					N/A
13.11.5.19	10.4	2.31	<p><b>Acoustic Decoupling of Construction Equipment</b></p> <ul style="list-style-type: none"> <li>Air compressors and other noisy equipment that must be mounted on steel barges should be acoustically-decoupled to the greatest extent feasible, for instance by using rubber or air-filled tyres; and</li> <li>Specific acoustic decoupling measures shall be specified during the detailed design of the project for use during the land formation works.</li> </ul>	Around coastal works area during construction phase	
13.11.5.20	10.6.1	2.29	<p><b>Spill Response Plan</b></p> <ul style="list-style-type: none"> <li>An oil and hazardous chemical spill response plan is proposed to be established during the construction phase as a precautionary measure so that appropriate actions to prevent or reduce risks to CWDs can be undertaken in the event of an accidental spillage.</li> </ul>	Construction phase	

EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
13.11.5.21 to 13.11.5.23	10.6.1	-	<b>Construction Vessel Speed Limits and Skipper Training</b> <ul style="list-style-type: none"> <li>A speed limit of 10 knots should be strictly observed for construction vessels at areas with the highest CWD densities; and</li> <li>Vessels traversing through the work areas should be required to use predefined and regular routes (which would presumably become known to resident dolphins) to reduce disturbance to cetaceans due to vessel movements. Specific marine routes shall be specified by the Contractor prior to construction commencing.</li> </ul>	All areas north and west of Lantau Island during construction phase	I
<b>Fisheries Impact – Construction Phase</b>					
14.9.1.2 to 14.9.1.5	-	-	<b>Minimisation of Land Formation Area</b> <ul style="list-style-type: none"> <li>Minimise the overall size of the land formation needed for the additional facilities to minimise the overall loss of habitat for fisheries resources.</li> </ul>	Land formation footprint / during detailed design phase to completion of construction	I
14.9.1.6	-	-	<b>Use of Construction Methods with Minimal Risk/Disturbance</b> <ul style="list-style-type: none"> <li>Use of non-dredge method for the main land formation and ancillary works including the diversion of the aviation fuel pipeline to the AFRF;</li> <li>Use of Deep Cement Mixing (DCM) method instead of conventional seabed dredging for the land formation works to reduce the risk of negative impacts through the elevation of suspended solids and contaminants on fisheries and the marine environment;</li> <li>Use of bored piling in short duration to form the new approach lights and marker beacons for the new runway; and</li> <li>Use of horizontal directional drilling (HDD) method and water jetting methods for placement of undersea cables and pipelines to minimise the disturbance to fisheries resources.</li> </ul>	During construction phase at marine works area	I  I  N/A  I
14.9.1.11	-	-	<b>Strict Enforcement of No-Dumping Policy</b> <ul style="list-style-type: none"> <li>A policy prohibiting dumping of wastes, chemicals, oil, trash, plastic, or any other substance that would potentially be harmful to dolphins and/or their habitat in the work area;</li> <li>Mandatory educational programme of the no-dumping policy be made available to all construction site personnel for all project-related works;</li> <li>Fines for infractions should be implemented; and</li> <li>Unscheduled, on-site audits shall be implemented.</li> </ul>	All works area during the construction phase	I
14.9.1.12	-	-	<b>Good Construction Site Practices</b> <ul style="list-style-type: none"> <li>Regular inspection of the integrity and effectiveness of all silt curtains and monitoring of effluents to ensure that any discharge meets effluent discharge guidelines;</li> <li>Keep the number of working or stationary vessels present on-site to the minimum anytime; and</li> </ul>	All works area during the construction phase	I



EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
			<ul style="list-style-type: none"> <li>▪ Unscheduled, on-site audits for all good site practice restrictions should be conducted, and fines or penalties sufficient to be an effective deterrent need to be levied against violators.</li> </ul>		
14.9.1.13 to 14.9.1.18	-		<p><b>Mitigation for Indirect Disturbance due to Deterioration of Water Quality</b></p> <ul style="list-style-type: none"> <li>▪ Water quality mitigation measures during construction phases include consideration of alternative construction methods, deployment of silt curtain and good site practices;</li> <li>▪ Alternative construction methods including use of non-dredge methods for ground improvement (e.g. Deep Cement Mixing (DCM), prefabricated vertical drains (PVD), sand compaction piles, steel cells, stone columns and vertical sand drains);</li> <li>▪ Use of bored piling in short duration to form the new approach lights and marker beacons for the new runway; and</li> <li>▪ Use of horizontal directional drilling (HDD) method and water jetting methods for placement of undersea cables and pipelines to minimise the disturbance to fisheries resources.</li> </ul>	All works area during the construction phase	
					N/A
<b>Landscape and Visual Impact – Construction Phase</b>					
Table 15.6	12.3	-	<b>CM1</b> - The construction area and contractor’s temporary works areas should be minimised to avoid impacts on adjacent landscape.	All works areas for duration of works; Upon handover and completion of works.	
Table 15.6	12.3	-	<b>CM2</b> - Reduction of construction period to practical minimum.	All works areas for duration of works; Upon handover and completion of works.	
Table 15.6	12.3	-	<b>CM3</b> - Phasing of the construction stage to reduce visual impacts during the construction phase.	All works areas for duration of works; Upon handover and completion of works.	
Table 15.6	12.3	-	<b>CM4</b> - Construction traffic (land and sea) including construction plants, construction vessels and barges should be kept to a practical minimum.	All works areas for duration of works; Upon handover and completion of works.	
Table 15.6	12.3	-	<b>CM5</b> - Erection of decorative mesh screens or construction hoardings around works areas in visually unobtrusive colours.	All works areas for duration of works; Upon handover and completion of works. –	

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

EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
<b>Health Impact – Aircraft Emissions</b>					
Not applicable.					
<b>Health Impact – Aircraft Noise</b>					
Not applicable.					

Notes:

I= implemented where applicable;

N/A= not applicable to the construction works implemented during the reporting month.

^ Checked by ET through site inspection and record provided by the Contractor.

## **Appendix C. Monitoring Schedule**



# **Monitoring Schedule of This Reporting Period**

# Jan-20

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			<b>1</b>	<b>2</b> Site Inspection  WQ General & Regular DCM mid-ebb: 05:05 mid-flood: 13:04	<b>3</b> Site Inspection  AR1A, AR2	<b>4</b>  WQ General & Regular DCM mid-ebb: 06:36 mid-flood: 14:20
<b>5</b>	<b>6</b> CWD Survey (Vessel)	<b>7</b> Site Inspection CWD Survey (Vessel)  WQ General & Regular DCM mid-ebb: 10:16 mid-flood: 15:55	<b>8</b> CWD Survey (Land-based) AR1A, AR2 NM1A, NM4, NM5, NM6	<b>9</b> Site Inspection  WQ General & Regular DCM mid-ebb: 12:00 mid-flood: 17:13	<b>10</b> Site Inspection CWD Survey (Vessel)	<b>11</b>  WQ General & Regular DCM mid-ebb: 13:31 mid-flood: 08:21
<b>12</b>	<b>13</b> CWD Survey (Vessel) AR1A, AR2 NM1A, NM4, NM5, NM6	<b>14</b> Site Inspection CWD Survey (Land-based)  WQ General & Regular DCM mid-ebb: 15:49 mid-flood: 10:29	<b>15</b> CWD Survey (Vessel)	<b>16</b> Site Inspection CWD Survey (Vessel)  WQ General & Regular DCM mid-ebb: 17:39 mid-flood: 11:59	<b>17</b> Site Inspection CWD Survey (Vessel)	<b>18</b>  AR1A, AR2  WQ General & Regular DCM mid-ebb: 06:40 mid-flood: 13:37
<b>19</b>	<b>20</b>	<b>21</b> Site Inspection  WQ General & Regular DCM mid-ebb: 10:55 mid-flood: 16:00	<b>22</b> Site Inspection CWD Survey (Vessel)	<b>23</b> Site Inspection  WQ General & Regular DCM mid-ebb: 12:31 mid-flood: 17:26	<b>24</b> Site Inspection  AR1A, AR2 NM1A, NM4, NM5, NM6	<b>25</b>  WQ General & Regular DCM mid-ebb: 13:43 mid-flood: 08:31
<b>26</b>	<b>27</b>	<b>28</b>  WQ General & Regular DCM mid-ebb: 15:25 mid-flood: 10:03	<b>29</b> Site Inspection  NM4, NM6	<b>30</b> Site Inspection  AR1A, AR2 NM1A, NM5  WQ General & Regular DCM mid-ebb: 16:33 mid-flood: 10:48	<b>31</b> Site Inspection	
<p><b>Notes:</b></p> <p>CWD - Chinese White Dolphin</p> <p>Air quality and Noise Monitoring Station</p> <p>WQ - Water Quality DCM - Deep Cement Mixing</p> <p>NM1A/AR1A - Man Tung Road Park NM4 - Ching Chung Hau Po Woon Primary School NM5/AR2 - Village House, Tin Sum NM6 - House No. 1, Sha Lo Wan</p>						

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

# Feb-20

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						<b>1</b>  WQ General & Regular DCM mid-ebb: 18:16 mid-flood: 11:47
<b>2</b>	<b>3</b>	<b>4</b> Site Inspection  WQ General & Regular DCM mid-ebb: 08:21 mid-flood: 13:56	<b>5</b>  AR1A, AR2 NM1A, NM4, NM5, NM6	<b>6</b> Site Inspection  WQ General & Regular DCM mid-ebb: 10:56 mid-flood: 15:56	<b>7</b> Site Inspection	<b>8</b>  WQ General & Regular DCM mid-ebb: 12:36 mid-flood: 17:46
<b>9</b>	<b>10</b> CWD Survey (Vessel)	<b>11</b> Site Inspection CWD Survey (Vessel) AR1A, AR2 NM1A, NM4, NM5, NM6  WQ General & Regular DCM mid-ebb: 14:44 mid-flood: 09:15	<b>12</b> CWD Survey (Land-based)	<b>13</b> Site Inspection CWD Survey (Land-based)  WQ General & Regular DCM mid-ebb: 16:12 mid-flood: 10:25	<b>14</b> Site Inspection CWD Survey (Vessel)	<b>15</b>  WQ General & Regular DCM mid-ebb: 18:06 mid-flood: 11:41
<b>16</b>	<b>17</b> CWD Survey (Vessel) AR1A, AR2 NM1A, NM4, NM5, NM6	<b>18</b> Site Inspection CWD Survey (Vessel)  WQ General & Regular DCM mid-ebb: 09:41 mid-flood: 14:27	<b>19</b> Site Inspection	<b>20</b> Site Inspection CWD Survey (Vessel)  WQ General & Regular DCM mid-ebb: 11:46 mid-flood: 16:33	<b>21</b> Site Inspection CWD Survey (Vessel)	<b>22</b>  AR1A, AR2  WQ General & Regular DCM mid-ebb: 12:57 mid-flood: 18:04
<b>23</b>	<b>24</b> CWD Survey (Vessel)	<b>25</b> Site Inspection  WQ General & Regular DCM mid-ebb: 14:24 mid-flood: 08:50	<b>26</b>	<b>27</b> Site Inspection  WQ General & Regular DCM mid-ebb: 15:16 mid-flood: 09:22	<b>28</b> Site Inspection  AR1A, AR2 NM1A, NM4, NM5, NM6	<b>29</b>  WQ General & Regular DCM mid-ebb: 16:24 mid-flood: 10:03
		<b>Notes:</b> Contract Number - Site Inspection CWD - Chinese White Dolphin  Air quality and Noise Monitoring Station  WQ - Water Quality DCM - Deep Cement Mixing				
			NM1A/AR1A - Man Tung Road Park NM4 - Ching Chung Hau Po Woon Primary School NM5/AR2 - Village House, Tin Sum NM6 - House No. 1, Sha Lo Wan			



## **Appendix D. Monitoring Results**

# **Air Quality Monitoring Results**

**1-hour TSP Results**

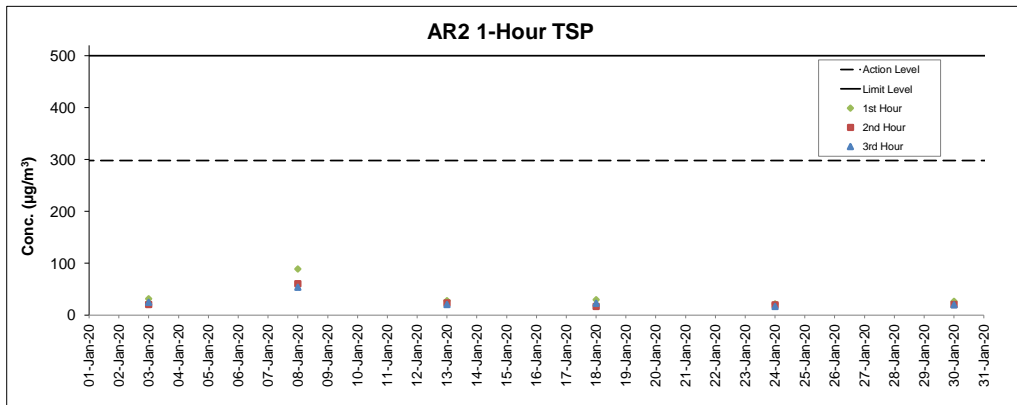
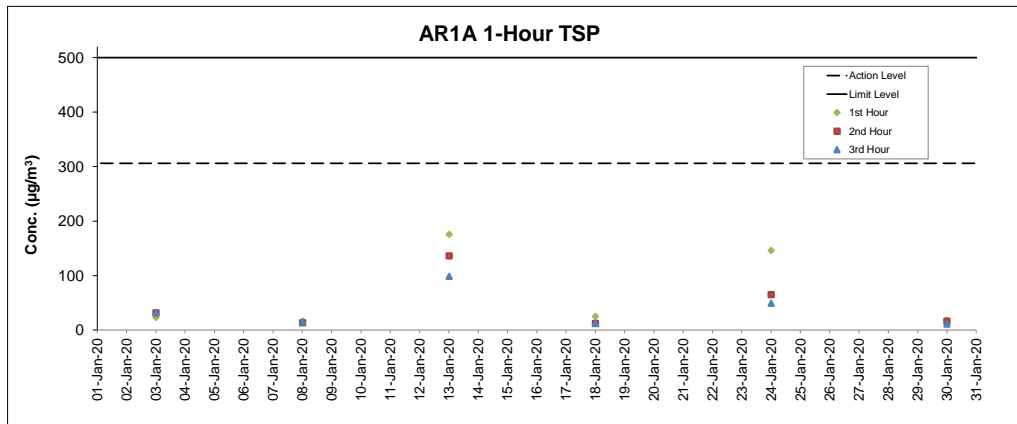
**Station: AR1A- Man Tung Road Park**

Date	Time	Weather	Wind Speed (m/s)	Wind Direction (deg)	1-hr TSP ( $\mu\text{g}/\text{m}^3$ )	Action Level ( $\mu\text{g}/\text{m}^3$ )	Limit Level ( $\mu\text{g}/\text{m}^3$ )
03-Jan-20	13:15	Sunny	3.9	256	23	306	500
03-Jan-20	14:15	Sunny	4.2	257	31	306	500
03-Jan-20	15:15	Sunny	4.4	253	32	306	500
08-Jan-20	13:30	Sunny	3.9	53	16	306	500
08-Jan-20	14:30	Sunny	8.1	102	13	306	500
08-Jan-20	15:30	Sunny	7.2	111	15	306	500
13-Jan-20	14:22	Cloudy	3.3	315	175	306	500
13-Jan-20	15:22	Cloudy	2.5	266	136	306	500
13-Jan-20	16:22	Cloudy	1.4	Variable	98	306	500
18-Jan-20	13:55	Cloudy	3.9	292	25	306	500
18-Jan-20	14:55	Cloudy	3.3	314	12	306	500
18-Jan-20	15:55	Cloudy	2.5	319	12	306	500
24-Jan-20	9:00	Sunny	4.2	48	146	306	500
24-Jan-20	10:00	Sunny	3.3	68	65	306	500
24-Jan-20	11:00	Sunny	5.8	77	49	306	500
30-Jan-20	13:24	Sunny	5.3	342	17	306	500
30-Jan-20	14:24	Sunny	5.0	357	16	306	500
30-Jan-20	15:24	Sunny	5.0	345	11	306	500

**1-hour TSP Results**

**Station: AR2- Village House, Tin Sum**

Date	Time	Weather	Wind Speed (m/s)	Wind Direction (deg)	1-hr TSP ( $\mu\text{g}/\text{m}^3$ )	Action Level ( $\mu\text{g}/\text{m}^3$ )	Limit Level ( $\mu\text{g}/\text{m}^3$ )
03-Jan-20	9:30	Sunny	5.0	62	32	298	500
03-Jan-20	10:30	Sunny	4.2	70	21	298	500
03-Jan-20	11:30	Sunny	2.8	56	25	298	500
08-Jan-20	9:38	Sunny	5.3	44	89	298	500
08-Jan-20	10:38	Sunny	3.1	25	61	298	500
08-Jan-20	11:38	Sunny	5.3	56	54	298	500
13-Jan-20	9:32	Cloudy	3.9	43	28	298	500
13-Jan-20	10:32	Cloudy	2.5	39	24	298	500
13-Jan-20	11:32	Cloudy	3.3	38	21	298	500
18-Jan-20	9:31	Cloudy	4.2	54	30	298	500
18-Jan-20	10:31	Cloudy	2.8	54	17	298	500
18-Jan-20	11:31	Cloudy	2.2	5	23	298	500
24-Jan-20	9:22	Cloudy	3.9	63	22	298	500
24-Jan-20	10:22	Cloudy	4.2	79	20	298	500
24-Jan-20	11:22	Cloudy	5.8	83	17	298	500
30-Jan-20	9:23	Sunny	7.8	29	27	298	500
30-Jan-20	10:23	Sunny	6.7	0.1	21	298	500
30-Jan-20	11:23	Sunny	6.4	343	20	298	500



**Notes**

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

## Noise Monitoring Results



### Noise Measurement Results

#### Station: NM1A- Man Tung Road Park

Date	Weather	Time	Measured L <sub>10</sub> dB(A)	Measured L <sub>50</sub> dB(A)	L <sub>eq(30mins)</sub> dB(A)
08-Jan-20	Sunny	13:44	66.2	48.9	68
08-Jan-20	Sunny	13:49	69.8	50.1	
08-Jan-20	Sunny	13:54	68.0	49.9	
08-Jan-20	Sunny	13:59	68.9	49.9	
08-Jan-20	Sunny	14:04	68.2	51.2	
08-Jan-20	Sunny	14:09	69.1	52.7	
13-Jan-20	Cloudy	14:30	73.0	54.4	72
13-Jan-20	Cloudy	14:35	73.2	54.7	
13-Jan-20	Cloudy	14:40	73.0	54.9	
13-Jan-20	Cloudy	14:45	72.8	54.8	
13-Jan-20	Cloudy	14:50	73.1	54.3	
13-Jan-20	Cloudy	14:55	73.1	53.7	
24-Jan-20	Sunny	9:15	71.6	52.9	72
24-Jan-20	Sunny	9:20	73.3	53.6	
24-Jan-20	Sunny	9:25	73.4	52.4	
24-Jan-20	Sunny	9:30	71.1	53.8	
24-Jan-20	Sunny	9:35	73.9	54.3	
24-Jan-20	Sunny	9:40	74.6	54.7	
30-Jan-20	Sunny	14:35	68.9	57.2	71
30-Jan-20	Sunny	14:40	69.7	60.8	
30-Jan-20	Sunny	14:45	68.9	59.2	
30-Jan-20	Sunny	14:50	68.6	60.4	
30-Jan-20	Sunny	14:55	72.3	57.8	
30-Jan-20	Sunny	15:00	72.5	54.6	

Remarks:

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

### Noise Measurement Results

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

Date	Weather	Time	Measured L <sub>10</sub> dB(A)	Measured L <sub>50</sub> dB(A)	L <sub>eq(30mins)</sub> dB(A)
08-Jan-20	Sunny	14:09	58.9	55.9	62
08-Jan-20	Sunny	14:14	59.7	56.1	
08-Jan-20	Sunny	14:19	60.1	56.4	
08-Jan-20	Sunny	14:24	61.1	56.2	
08-Jan-20	Sunny	14:29	60.2	56.4	
08-Jan-20	Sunny	14:34	61.2	55.6	
13-Jan-20	Sunny	14:43	62.4	57.5	64
13-Jan-20	Sunny	14:48	62.7	58.3	
13-Jan-20	Sunny	14:53	64.9	58.4	
13-Jan-20	Sunny	14:58	61.2	57.7	
13-Jan-20	Sunny	15:03	61.7	57.3	
13-Jan-20	Sunny	15:08	62.2	57.9	
24-Jan-20	Cloudy	13:31	69.4	67.6	66
24-Jan-20	Cloudy	13:36	66.4	66.1	
24-Jan-20	Cloudy	13:41	64.0	64.2	
24-Jan-20	Cloudy	13:46	60.0	60.2	
24-Jan-20	Cloudy	13:51	63.2	62.7	
24-Jan-20	Cloudy	13:56	58.0	59.3	
29-Jan-20	Cloudy	13:57	61.1	54.2	61
29-Jan-20	Cloudy	14:02	58.6	53.4	
29-Jan-20	Cloudy	14:07	58.9	53.8	
29-Jan-20	Cloudy	14:12	59.9	54.0	
29-Jan-20	Cloudy	14:17	61.4	54.8	
29-Jan-20	Cloudy	14:22	61.2	55.1	

Remarks:

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

### Noise Measurement Results

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

Date	Weather	Time	Measured L <sub>10</sub> dB(A)	Measured L <sub>90</sub> dB(A)	L <sub>eq(30mins)</sub> dB(A)
08-Jan-20	Sunny	9:41	56.6	49.3	56
08-Jan-20	Sunny	9:46	55.7	49.0	
08-Jan-20	Sunny	9:51	56.7	47.9	
08-Jan-20	Sunny	9:56	55.8	47.7	
08-Jan-20	Sunny	10:01	56.6	48.8	
08-Jan-20	Sunny	10:06	55.2	48.3	
13-Jan-20	Sunny	10:37	66.6	49.9	64
13-Jan-20	Sunny	10:42	57.9	49.1	
13-Jan-20	Sunny	10:47	53.5	49.0	
13-Jan-20	Sunny	10:52	54.3	48.7	
13-Jan-20	Sunny	10:57	70.3	50.2	
13-Jan-20	Sunny	11:02	56.0	47.9	
24-Jan-20	Cloudy	10:40	50.2	42.3	57
24-Jan-20	Cloudy	10:45	48.2	40.1	
24-Jan-20	Cloudy	10:50	47.4	41.2	
24-Jan-20	Cloudy	10:55	54.2	45.0	
24-Jan-20	Cloudy	11:00	57.0	46.2	
24-Jan-20	Cloudy	11:05	59.3	46.5	
30-Jan-20	Cloudy	10:48	58.5	48.8	58
30-Jan-20	Cloudy	10:53	57.9	48.9	
30-Jan-20	Cloudy	10:58	57.7	50.5	
30-Jan-20	Cloudy	11:03	55.9	50.0	
30-Jan-20	Cloudy	11:08	59.0	51.0	
30-Jan-20	Cloudy	11:13	56.9	50.0	

Remarks:

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

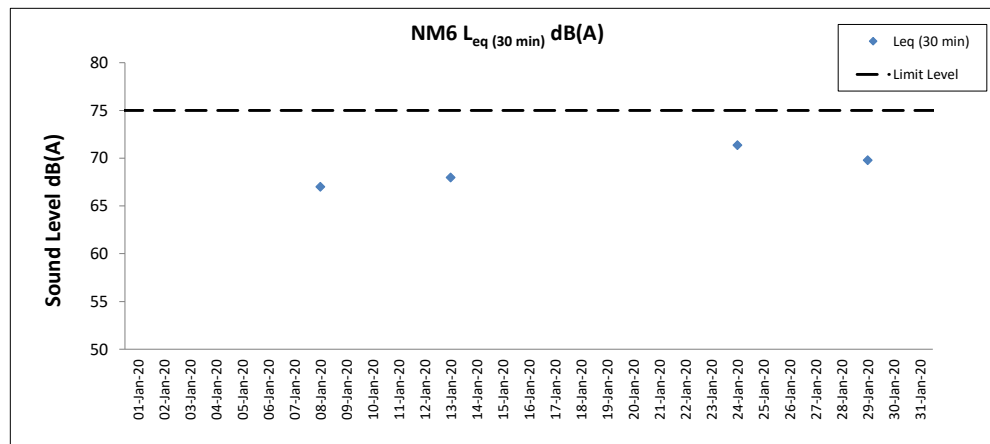
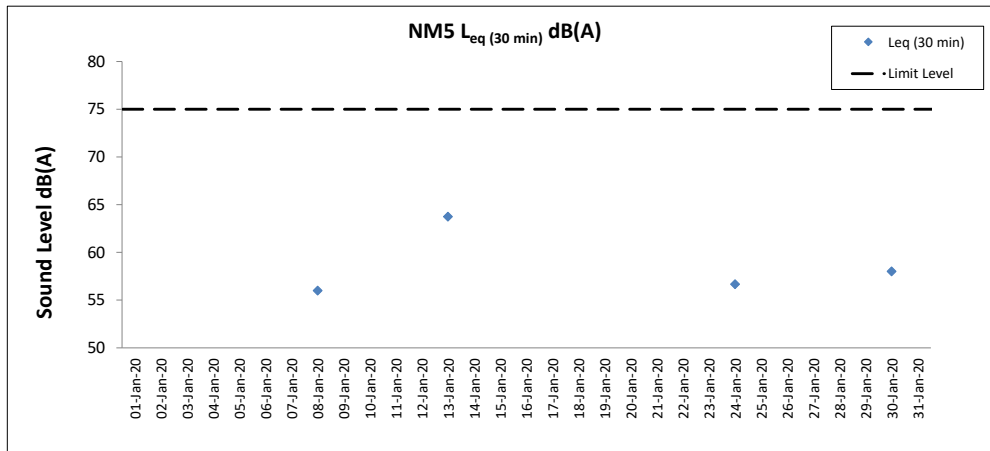
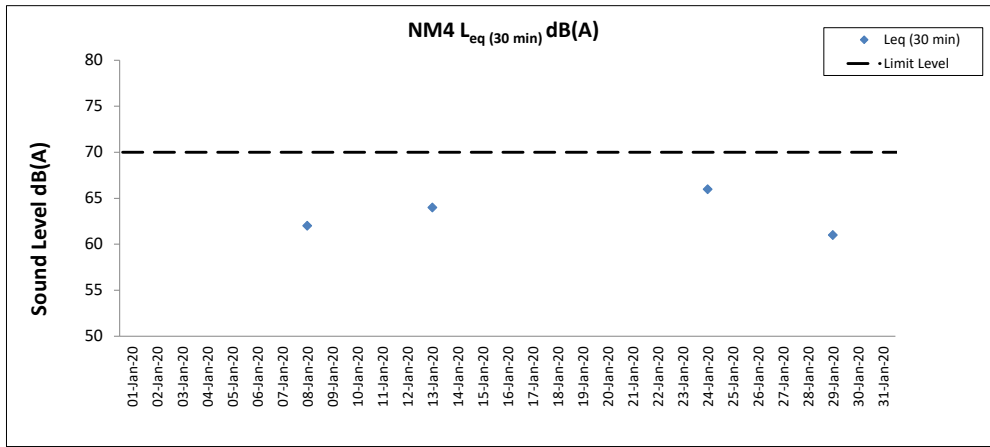
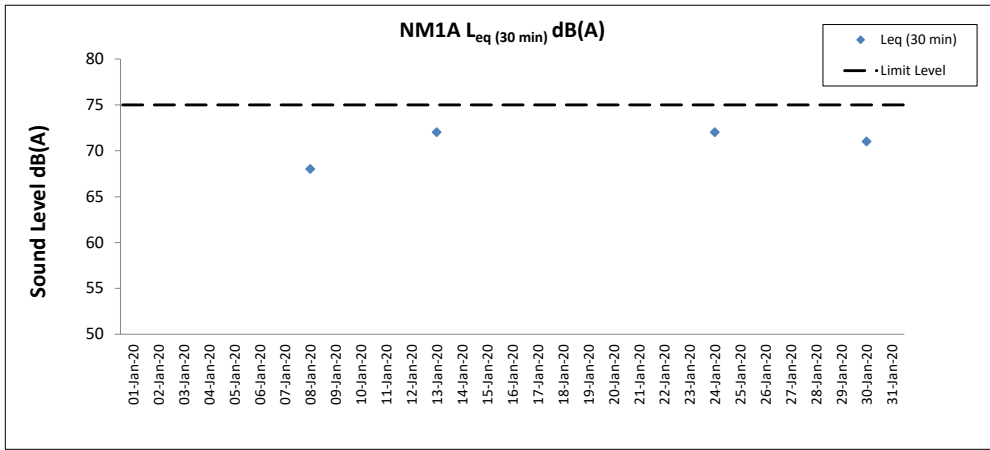
### Noise Measurement Results

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

Date	Weather	Time	Measured L <sub>10</sub> dB(A)	Measured L <sub>90</sub> dB(A)	L <sub>eq(30mins)</sub> dB(A)
08-Jan-20	Sunny	15:42	62.1	47.9	67
08-Jan-20	Sunny	15:47	69.8	52.9	
08-Jan-20	Sunny	15:52	65.3	53.2	
08-Jan-20	Sunny	15:57	66.6	50.4	
08-Jan-20	Sunny	16:02	64.6	49.7	
08-Jan-20	Sunny	16:07	69.6	52.5	
13-Jan-20	Cloudy	15:41	74.7	48.3	68
13-Jan-20	Cloudy	15:46	74.3	48.1	
13-Jan-20	Cloudy	15:51	73.4	49.4	
13-Jan-20	Cloudy	15:56	70.0	54.4	
13-Jan-20	Cloudy	16:01	60.2	48.0	
13-Jan-20	Cloudy	16:06	66.6	48.9	
24-Jan-20	Cloudy	15:45	73.5	52.4	71
24-Jan-20	Cloudy	15:50	75.2	49.6	
24-Jan-20	Cloudy	15:55	72.5	50.4	
24-Jan-20	Cloudy	16:00	75.0	54.3	
24-Jan-20	Cloudy	16:05	71.4	47.6	
24-Jan-20	Cloudy	16:10	70.5	48.2	
29-Jan-20	Cloudy	15:46	68.6	58.2	70
29-Jan-20	Cloudy	15:51	75.5	57.5	
29-Jan-20	Cloudy	15:56	60.1	52.8	
29-Jan-20	Cloudy	16:01	75.3	57.1	
29-Jan-20	Cloudy	16:06	74.6	58.8	
29-Jan-20	Cloudy	16:11	76.9	55.2	

Remarks:

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



**Notes**

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

## **Water Quality Monitoring Results**



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

**Water Quality Monitoring Results on 02 January 20 during Mid-Ebb Tide**

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity(NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)				
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA	
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA	Value
C1	Fine	Moderate	05:21	8.4	Surface	1.0	0.3	124	19.5	19.5	8.0	8.0	31.3	31.3	101.4	101.4	7.8	7.8	9.2	8	8	86	86	88	815621	804256	<0.2	1.1	1.1	1.1			
						1.0	0.3	125	19.5	19.5	8.0	8.0	31.3	31.3	101.3	101.3	7.8	7.8	9.6	9	9	85	85	88	815621	804256	<0.2	1.1	1.1	1.1			
					Middle	4.2	0.3	130	19.5	19.5	8.0	8.0	31.7	31.7	101.0	101.0	7.8	7.8	7.4	7	7	89	89	88	815621	804256	<0.2	1.1	1.1	1.1	1.1		
						4.2	0.3	132	19.5	19.5	8.0	8.0	31.7	31.7	101.1	101.1	7.8	7.8	7.4	8	8	89	89	88	815621	804256	<0.2	1.1	1.1	1.1	1.1		
					Bottom	7.4	0.2	117	19.5	19.5	8.0	8.0	31.9	31.9	101.1	101.1	7.8	7.8	8.6	8	8	90	90	89	815621	804256	<0.2	1.1	1.1	1.1	1.1	1.1	
						7.4	0.2	118	19.5	19.5	8.0	8.0	31.9	31.9	101.1	101.1	7.8	7.8	8.6	7	7	90	90	89	815621	804256	<0.2	1.1	1.1	1.1	1.1	1.1	
C2	Fine	Moderate	05:44	10.6	Surface	1.0	0.1	132	20.4	20.4	7.9	7.9	30.2	30.2	92.2	92.2	7.0	7.0	1.4	4	4	85	85	88	825705	806928	<0.2	2.0	2.0	2.0			
						1.0	0.1	135	20.4	20.4	7.9	7.9	30.2	30.2	92.2	92.2	7.0	7.0	1.4	4	4	86	86	88	825705	806928	<0.2	2.0	2.0	2.0			
					Middle	5.3	0.3	140	20.4	20.4	7.9	7.9	31.1	31.1	91.9	91.9	6.9	6.9	2.4	5	5	88	88	88	825705	806928	<0.2	2.0	2.0	2.0	2.0		
						5.3	0.4	147	20.4	20.4	7.9	7.9	31.1	31.1	91.9	91.9	6.9	6.9	2.4	6	6	89	89	88	825705	806928	<0.2	2.1	2.1	2.1			
					Bottom	9.6	0.3	135	20.4	20.4	7.8	7.8	31.1	31.1	93.7	93.7	7.0	7.0	4.6	5	5	90	90	89	825705	806928	<0.2	2.0	2.0	2.0	2.0		
						9.6	0.3	152	20.4	20.4	7.8	7.8	31.1	31.1	93.7	93.7	7.0	7.0	4.6	6	6	90	90	89	825705	806928	<0.2	2.0	2.0	2.0	2.0		
C3	Fine	Moderate	04:08	11.9	Surface	1.0	0.2	110	20.1	20.1	7.8	7.8	31.9	31.9	92.8	92.8	7.0	7.0	2.4	7	7	85	85	88	822101	817786	<0.2	1.2	1.2	1.2			
						1.0	0.2	111	20.1	20.1	7.8	7.8	31.9	31.9	92.8	92.8	7.0	7.0	2.4	6	6	86	86	88	822101	817786	<0.2	1.0	1.0	1.0			
					Middle	6.0	0.2	123	20.1	20.1	7.8	7.8	32.0	32.0	92.8	92.8	7.0	7.0	3.7	9	9	88	88	88	822101	817786	<0.2	1.0	1.0	1.0	1.0		
						6.0	0.2	125	20.1	20.1	7.8	7.8	32.0	32.0	92.8	92.8	7.0	7.0	3.7	8	8	87	87	88	822101	817786	<0.2	1.1	1.1	1.1			
					Bottom	10.9	0.2	124	20.1	20.1	7.8	7.8	32.2	32.2	91.8	91.8	6.9	6.9	7.7	9	9	91	91	89	822101	817786	<0.2	1.1	1.1	1.1	1.1		
						10.9	0.2	124	20.1	20.1	7.8	7.8	32.2	32.2	91.8	91.8	6.9	6.9	7.7	8	8	91	91	89	822101	817786	<0.2	1.1	1.1	1.1	1.1		
IM1	Fine	Moderate	05:39	5.3	Surface	1.0	0.1	174	19.6	19.6	8.0	8.0	31.4	31.4	100.2	100.3	7.7	7.7	6.1	7	7	86	86	88	817960	807109	<0.2	1.1	1.1	1.1			
						1.0	0.1	156	19.6	19.6	8.0	8.0	31.4	31.4	100.3	100.3	7.7	7.7	6.3	7	7	86	86	88	817960	807109	<0.2	1.2	1.2	1.2			
					Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
					Bottom	4.3	0.2	178	19.6	19.6	8.0	8.0	31.5	31.5	100.6	100.6	7.8	7.8	7.3	8	8	90	90	89	817960	807109	<0.2	1.1	1.1	1.1	1.1		
						4.3	0.2	167	19.6	19.6	8.0	8.0	31.5	31.5	100.6	100.6	7.8	7.8	7.1	9	9	90	90	89	817960	807109	<0.2	1.1	1.1	1.1	1.1		
IM2	Fine	Moderate	05:46	6.8	Surface	1.0	0.2	123	19.7	19.7	8.0	8.0	31.0	31.0	98.3	98.3	7.6	7.6	6.5	5	5	86	86	88	818144	806172	<0.2	1.1	1.1	1.1			
						1.0	0.2	124	19.7	19.7	8.0	8.0	31.0	31.0	98.3	98.3	7.6	7.6	6.5	4	4	87	87	88	818144	806172	<0.2	1.2	1.2	1.2			
					Middle	3.4	0.2	116	19.7	19.7	8.0	8.0	31.0	31.0	98.4	98.4	7.6	7.6	11.3	6	6	88	88	88	818144	806172	<0.2	1.1	1.1	1.1	1.1		
						3.4	0.2	120	19.7	19.7	8.0	8.0	31.0	31.0	98.4	98.4	7.6	7.6	11.3	6	6	89	89	88	818144	806172	<0.2	1.1	1.1	1.1			
					Bottom	5.8	0.2	137	19.7	19.7	8.0	8.0	31.1	31.1	98.6	98.6	7.6	7.6	21.5	9	9	90	90	89	818144	806172	<0.2	1.1	1.1	1.1	1.1		
						5.8	0.2	139	19.7	19.7	8.0	8.0	31.1	31.1	98.7	98.7	7.6	7.6	20.8	9	9	90	90	89	818144	806172	<0.2	1.2	1.2	1.2			
IM3	Fine	Moderate	05:54	7.1	Surface	1.0	0.3	136	19.7	19.7	8.0	8.0	31.0	31.0	98.5	98.5	7.6	7.6	6.8	8	8	86	86	88	818768	805593	<0.2	1.0	1.0	1.0			
						1.0	0.4	138	19.7	19.7	8.0	8.0	31.0	31.0	98.5	98.5	7.6	7.6	6.8	7	7	86	86	88	818768	805593	<0.2	1.0	1.0	1.0			
					Middle	3.6	0.3	142	19.7	19.7	8.0	8.0	31.0	31.0	98.4	98.4	7.6	7.6	8.8	8	8	88	88	88	818768	805593	<0.2	1.1	1.1	1.1	1.1		
						3.6	0.3	158	19.7	19.7	8.0	8.0	31.0	31.0	98.5	98.5	7.6	7.6	8.8	8	8	87	87	88	818768	805593	<0.2	1.1	1.1	1.1			
					Bottom	6.1	0.2	136	19.7	19.7	8.0	8.0	31.0	31.0	98.9	98.9	7.6	7.6	9.7	8	8	90	90	89	818768	805593	<0.2	1.1	1.1	1.1	1.1		
						6.1	0.2	141	19.7	19.7	8.0	8.0	31.0	31.0	99.0	99.0	7.6	7.6	9.7	9	9	90	90	89	818768	805593	<0.2	1.1	1.1	1.1	1.1		
IM4	Fine	Moderate	06:01	6.9	Surface	1.0	0.4	142	19.7	19.7	8.0	8.0	30.9	30.9	98.8	98.8	7.6	7.6	5.8	6	6	86	86	88	819730	804620	<0.2	1.1	1.1	1.1			
						1.0	0.5	146	19.7	19.7	8.0	8.0	30.9	30.9	98.8	98.8	7.6	7.6	5.8	5	5	86	86	88	819730	804620	<0.2	1.1	1.1	1.1			
					Middle	3.5	0.4	148	19.7	19.7	8.0	8.0	30.9	30.9	99.1	99.1	7.7	7.7	6.3	7	7	88	88	88	819730	804620	<0.2	1.1	1.1	1.1			
						3.5	0.4	132	19.7	19.7	8.0	8.0	30.9	30.9	99.1	99.1	7.6	7.6	6.3	8	8	89	89	88	819730	804620	<0.2	1.1	1.1	1.1			
					Bottom	5.9	0.4	140	19.7	19.7	8.0	8.0	30.9	30.9	99.6	99.6	7.7	7.7	8.4	10	10	90	90	89	819730	804620	<0.2	1.1	1.1	1.1	1.1		
						5.9	0.4	158	19.7	19.7	8.0	8.0	30.9	30.9	99.9	99.9	7.7	7.7	8.4	9	9	90	90	89	819730	804620	<0.2	1.1	1.1	1.1	1.1		
IM5	Fine	Moderate	06:07	7.3	Surface	1.0	0.7	201	19.7	19.7	8.0	8.0	31.0	31.0	98.7	98.8	7.6	7.6	8.2	8	8	85	85	88	820721	804885	<0.2	1.1	1.1	1.1			
						1.0	0.7	211	19.7	19.7	8.0	8.0	31.0	31.0	98.8	98.8	7.6	7.6	8.2	7	7	86	86	88	820721	804885	<0.2	1.1	1.1	1.1			
					Middle	3.7	0.6	191	19.7	19.7	8.0	8.0	31.1	31.1	98.7	98.7	7.6	7.6	7.5	8	8	88	88	88	820721	804885	<0.2	1.1	1.1	1.1			
						3.7	0.6	188	19.7	19.7	8.0	8.0																					

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

Water Quality Monitoring Results on 02 January 20 during Mid-Ebb Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity (NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)						
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA			
IM9	Fine	Moderate	05:14	7.5	Surface	1.0	0.2	161	20.2	20.2	7.8	7.8	30.7	30.7	93.5	93.5	7.1	1.2	5	85	88	822095	808826	<0.2	1.6	1.6									
						1.0	0.2	168	20.2	20.2	7.8	7.8	30.7	30.7	93.5	93.5	7.1	1.2	5	86	88														
						3.8	0.1	174	20.2	20.2	7.8	7.8	31.1	31.1	94.0	94.0	7.1	1.6	6	87	90														
					Middle	3.8	0.1	155	20.2	20.1	7.8	7.8	31.4	31.4	96.3	96.3	7.3	3.8	6	90	91														
						6.5	0.1	148	20.1	20.1	7.8	7.8	31.4	31.4	96.3	96.3	7.3	3.8	6	91	91														
						1.0	0.3	123	20.2	20.2	7.8	7.8	30.8	30.8	92.7	92.7	7.0	1.4	6	86	86														
IM10	Fine	Moderate	05:08	7.7	Surface	1.0	0.3	133	20.2	20.2	7.8	7.8	31.0	31.0	93.0	93.0	7.0	1.4	7	87	88	822361	809794	<0.2	1.7	1.6									
						3.9	0.5	135	20.2	20.2	7.8	7.8	31.0	31.0	93.0	93.0	7.0	1.1	7	87	87														
						3.9	0.5	153	20.2	20.2	7.8	7.8	31.0	31.0	93.0	93.0	7.0	1.1	7	87	87														
					Middle	6.7	0.3	132	20.1	20.1	7.8	7.8	31.5	31.5	93.2	93.2	7.0	2.5	8	90	91														
						6.7	0.3	138	20.1	20.1	7.8	7.8	31.5	31.5	93.2	93.2	7.0	2.5	8	91	91														
						1.0	0.3	135	20.1	20.1	7.8	7.8	31.6	31.6	94.3	94.3	7.1	2.6	6	86	86														
IM11	Fine	Moderate	04:58	7.9	Surface	1.0	0.3	139	20.0	20.0	7.8	7.8	31.7	31.7	94.2	94.2	7.1	4.4	8	87	88	822074	811474	<0.2	1.2	1.2									
						4.0	0.3	136	20.0	20.0	7.8	7.8	31.7	31.7	94.2	94.2	7.1	4.4	8	87	87														
						4.0	0.3	137	20.0	20.0	7.8	7.8	31.7	31.7	94.2	94.2	7.1	4.4	7	87	87														
					Middle	6.9	0.2	133	20.0	20.0	7.8	7.8	31.7	31.7	94.8	94.8	7.2	5.1	8	90	90														
						6.9	0.2	134	20.0	20.0	7.8	7.8	31.7	31.7	94.8	94.8	7.2	5.1	8	90	90														
						1.0	0.3	127	20.0	20.0	7.8	7.8	31.7	31.7	95.2	95.2	7.2	3.9	8	86	86														
IM12	Fine	Moderate	04:52	8.3	Surface	1.0	0.3	129	20.0	20.0	7.8	7.8	31.7	31.7	95.2	95.2	7.2	3.9	7	86	88	821451	812043	<0.2	1.2	1.2									
						4.2	0.3	126	19.9	19.9	7.9	7.9	31.8	31.8	95.0	95.0	7.2	9.0	8	88	89														
						4.2	0.3	127	19.9	19.9	7.9	7.9	31.8	31.8	95.0	95.0	7.2	9.0	8	89	91														
					Middle	7.3	0.2	125	19.9	19.9	7.8	7.8	31.9	31.9	94.9	94.9	7.2	9.6	8	91	91														
						7.3	0.2	127	19.9	19.9	7.8	7.8	31.9	31.9	94.9	94.9	7.2	9.6	8	90	90														
						1.0	-	-	19.9	19.9	7.8	7.8	31.9	31.9	96.5	96.5	7.3	2.6	6	-	-														
SR1A	Fine	Moderate	04:37	5.2	Surface	1.0	-	-	19.9	19.9	7.8	7.8	31.9	31.9	96.5	96.5	7.3	2.6	5	-	-	819977	812659	-	-	-									
						2.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-												
						2.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-												
					Middle	4.2	-	-	19.9	19.9	7.8	7.8	32.0	32.0	96.8	96.8	7.3	2.5	6	-	-	-	-												
						4.2	-	-	19.9	19.9	7.8	7.8	32.0	32.0	96.8	96.8	7.3	2.5	6	-	-	-	-												
						1.0	0.2	129	19.9	19.9	7.8	7.8	31.9	31.9	96.6	96.6	7.3	2.1	5	86	86														
SR2	Fine	Moderate	04:26	4.8	Surface	1.0	0.3	123	19.9	19.9	7.8	7.8	31.9	31.9	96.6	96.6	7.3	2.1	6	86	88	821472	814161	<0.2	1.1	1.1									
						3.8	0.3	134	19.8	19.8	7.8	7.8	32.0	32.0	100.4	100.4	7.6	2.7	6	89	90														
						3.8	0.3	135	19.8	19.8	7.8	7.8	32.0	32.0	100.4	100.4	7.6	2.7	7	90	90														
					Middle	1.0	0.1	180	20.2	20.2	7.8	7.8	30.5	30.5	93.6	93.6	7.1	1.9	4	-	-	-	-												
						4.2	0.1	174	20.2	20.2	7.8	7.8	31.0	31.0	93.6	93.6	7.1	2.7	5	-	-	-	-												
						4.2	0.1	181	20.2	20.2	7.8	7.8	31.0	31.0	93.6	93.6	7.1	2.7	4	-	-	-	-												
SR3	Fine	Moderate	05:25	8.3	Surface	1.0	0.1	180	20.2	20.2	7.8	7.8	30.5	30.5	93.6	93.6	7.1	1.9	4	-	-	822125	807583	-	-	-									
						4.2	0.1	174	20.2	20.2	7.8	7.8	31.0	31.0	93.6	93.6	7.1	2.7	5	-	-	-													
						4.2	0.1	181	20.2	20.2	7.8	7.8	31.0	31.0	93.6	93.6	7.1	2.7	4	-	-	-													
					Middle	7.3	0.2	142	20.2	20.2	7.8	7.8	31.2	31.2	95.4	95.4	7.2	3.0	6	-	-	-	-												
						7.3	0.2	154	20.2	20.2	7.8	7.8	31.2	31.2	95.4	95.4	7.2	3.0	6	-	-	-	-												
						1.0	0.3	87	19.8	19.8	7.9	7.9	30.6	30.6	97.5	97.5	7.5	6.6	7	-	-	-	-												
SR4A	Fine	Moderate	04:59	8.8	Surface	1.0	0.3	88	19.8	19.8	7.9	7.9	30.6	30.6	97.5	97.5	7.5	6.7	8	-	-	817197	807804	-	-	-									
						4.4	0.2	64	19.8	19.8	7.9	7.9	30.6	30.6	97.9	97.9	7.6	7.2	9	-	-	-													
						4.4	0.3	67	19.8	19.8	7.9	7.9	30.6	30.6	98.0	98.0	7.6	7.2	9	-	-	-													
					Middle	7.8	0.2	75	19.6	19.6	7.9	7.9	31.2	31.2	98.7	98.7	7.6	8.6	9	-	-	-	-												
						7.8	0.2	77	19.6	19.6	7.9	7.9	31.2	31.2	98.7	98.7	7.6	8.7	10	-	-	-	-												
						1.0	0.1	67	19.8	19.8	7.9	7.9	30.7	30.7	96.9	96.9	7.5	3.8	4	-	-	-	-												
SR5A	Fine	Moderate	04:43	4.3	Surface	1.0	0.1	72	19.8	19.8	7.9	7.9	30.7	30.7	96.9	96.9	7.5	3.9	4	-	-	816603	810676	-	-	-									
						3.3	0.1	112	19.8	19.8	7.9	7.9	30.7	30.7	96.9	96.9	7.5	4.6	5	-	-	-	-												
						3.3	0.1	121	19.9	19.9	7.9	7.9	30.7	30.7	96.9	96.9	7.5	4.6	4	-	-	-	-												
					Middle	1.0	0.0	142	20.0	20.0	7.9	7.9	30.9	30.9	93.5	93.5	7.2	7.1	5	-	-	-	-												
						1.0	0.0	147	20.0	20.0	7.9	7.9	30.9	30.9	93.5	93.5	7.2	7.3	6	-	-	-	-												
						3.2	0.0	78	20.0	20.0	7.9	7.8																							

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

Water Quality Monitoring Results on 02 January 20 during Mid-Flood Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity(NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)			
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA
C1	Fine	Moderate	12:30	8.4	Surface	1.0	0.3	39	19.9	19.9	8.0	8.0	31.8	31.8	101.5	101.5	7.8	7.7	9.0	8.6	6	7	86	87	88	815596	804259	<0.2	1.0	1.1		
						1.0	0.3	42	19.9	19.9	8.0	8.0	31.8	31.8	101.4	101.3	7.7	7.7	9.1	6.6	7	7	87	87	88			<0.2	1.2	1.1		
						4.2	0.2	42	19.9	19.9	8.0	8.0	31.8	31.8	101.3	101.3	7.7	7.7	6.6	6.6	7	7	87	87	88			<0.2	1.1	1.1		
					Middle	4.2	0.3	44	19.9	19.9	8.0	8.0	31.8	31.8	101.3	101.3	7.7	7.7	6.6	6.6	7	7	87	87	88			<0.2	1.1	1.1		
						4.2	0.3	44	19.9	19.9	8.0	8.0	31.8	31.8	101.3	101.3	7.7	7.7	6.6	6.6	7	7	87	87	88			<0.2	1.1	1.1		
						7.4	0.3	29	19.9	19.9	8.0	8.0	31.9	31.9	101.4	101.4	7.7	7.7	10.0	10.0	7	7	90	90	88			<0.2	1.1	1.1		
C2	Fine	Moderate	11:19	10.6	Surface	1.0	0.2	345	20.4	20.4	7.8	7.8	30.4	30.4	91.4	91.4	6.9	6.9	2.3	3.7	6	5	86	86	88	825694	806947	<0.2	1.8	1.9		
						1.0	0.2	317	20.4	20.4	7.8	7.8	30.4	30.4	91.4	91.4	6.9	6.9	2.3	3.9	5	6	86	87	88			<0.2	1.9	2.0		
						5.3	0.2	69	20.4	20.4	7.9	7.9	31.1	31.1	91.5	91.5	6.9	6.9	3.9	3.9	6	6	89	89	88			<0.2	2.0	2.0		
					Middle	5.3	0.2	74	20.4	20.4	7.9	7.9	31.1	31.1	91.5	91.5	6.9	6.9	3.9	3.9	6	6	87	87	88			<0.2	2.0	2.0		
						9.6	0.1	59	20.4	20.4	7.9	7.9	31.1	31.1	91.2	91.2	6.9	6.9	5.0	5.0	7	7	90	90	88			<0.2	1.8	1.8		
						9.6	0.1	63	20.4	20.4	7.9	7.9	31.1	31.1	91.2	91.2	6.9	6.9	5.0	5.0	6	6	91	91	88			<0.2	1.9	1.9		
C3	Fine	Moderate	13:10	11.5	Surface	1.0	0.1	178	20.2	20.2	7.9	7.9	32.2	32.2	91.3	91.3	6.8	6.8	1.3	4.8	5	6	86	87	88	822124	817790	<0.2	0.9	0.9		
						1.0	0.1	180	20.2	20.2	7.9	7.9	32.2	32.2	91.3	91.3	6.8	6.8	1.3	4.5	6	7	87	88	88			<0.2	1.0	1.0		
						5.8	0.1	259	20.2	20.2	7.9	7.9	32.7	32.7	89.9	89.9	6.7	6.7	4.5	4.5	7	7	89	89	88			<0.2	1.0	1.0		
					Middle	5.8	0.1	266	20.2	20.2	7.9	7.9	32.7	32.7	89.9	89.9	6.7	6.7	4.5	4.5	7	7	89	89	88			<0.2	1.0	1.0		
						10.5	0.1	313	20.2	20.2	7.9	7.9	32.7	32.7	90.4	90.4	6.8	6.8	8.5	8.5	8	8	90	90	88			<0.2	1.1	1.1		
						10.5	0.1	332	20.2	20.2	7.9	7.9	32.7	32.7	90.4	90.4	6.8	6.8	8.5	8.5	7	7	90	90	88			<0.2	0.9	0.9		
IM1	Fine	Moderate	12:08	5.5	Surface	1.0	0.1	351	19.9	19.9	8.0	8.0	31.5	31.5	101.2	101.2	7.7	7.7	7.5	8.0	6	7	86	85	88	817961	807128	<0.2	1.1	1.1		
						1.0	0.1	323	19.9	19.9	8.0	8.0	31.5	31.5	101.4	101.4	7.8	7.8	7.7	8.4	6	7	85	85	88			<0.2	1.1	1.1		
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
					Middle	4.5	0.2	342	19.9	19.9	8.0	8.0	31.5	31.5	102.1	102.2	7.8	7.8	8.4	8.4	8	8	90	90	88			<0.2	1.0	1.0		
						4.5	0.2	315	19.9	19.9	8.0	8.0	31.5	31.5	102.2	102.2	7.8	7.8	8.4	8.4	8	8	90	90	88			<0.2	1.0	1.0		
						1.0	0.2	39	20.0	20.0	8.0	8.0	31.5	31.5	100.7	100.7	7.7	7.7	3.4	3.4	5	6	86	86	88			<0.2	1.1	1.1		
IM2	Fine	Moderate	12:01	7.2	Surface	1.0	0.2	41	20.0	20.0	8.0	8.0	31.5	31.5	100.7	100.7	7.7	7.7	3.4	6.3	4	4	86	86	88	818170	806147	<0.2	1.0	1.0		
						3.6	0.2	9	19.9	19.9	8.0	8.0	31.5	31.5	100.8	100.9	7.7	7.7	5.8	5.8	6	6	88	88	88			<0.2	1.0	1.0		
						3.6	0.2	9	19.9	19.9	8.0	8.0	31.5	31.5	100.9	100.9	7.7	7.7	5.8	5.8	7	7	89	89	88			<0.2	1.0	1.0		
					Middle	6.2	0.2	355	19.9	19.9	8.0	8.0	31.5	31.5	101.0	101.0	7.7	7.7	9.8	9.8	8	8	90	90	88			<0.2	1.1	1.1		
						6.2	0.2	327	19.9	19.9	8.0	8.0	31.5	31.5	101.0	101.0	7.7	7.7	9.8	9.8	7	7	90	90	88			<0.2	1.0	1.0		
						1.0	0.3	10	20.0	20.0	8.0	8.0	31.3	31.3	99.7	99.7	7.6	7.6	6.5	6.5	4	4	86	87	88			<0.2	1.2	1.1		
IM3	Fine	Moderate	11:54	7.1	Surface	1.0	0.3	10	20.0	20.0	8.0	8.0	31.3	31.3	99.7	99.7	7.6	7.6	6.5	8.1	3	5	86	87	88	818760	805603	<0.2	1.0	1.1		
						1.0	0.3	10	20.0	20.0	8.0	8.0	31.3	31.3	99.7	99.7	7.6	7.6	6.5	8.8	4	5	87	88	88			<0.2	1.0	1.0		
						3.6	0.2	336	20.0	20.0	8.0	8.0	31.3	31.3	99.6	99.6	7.6	7.6	8.8	8.8	5	5	88	88	88			<0.2	1.0	1.0		
					Middle	6.1	0.2	342	19.9	19.9	8.0	8.0	31.3	31.3	100.7	100.7	7.7	7.7	9.1	9.1	7	7	90	90	88			<0.2	1.2	1.2		
						6.1	0.2	315	19.9	19.9	8.0	8.0	31.3	31.3	100.9	100.9	7.7	7.7	9.1	9.1	7	7	90	90	88			<0.2	1.1	1.1		
						1.0	0.4	355	20.0	20.0	8.0	8.0	31.1	31.1	99.6	99.6	7.6	7.6	9.4	9.4	4	4	86	86	88			<0.2	1.2	1.0		
IM4	Fine	Moderate	11:46	7.3	Surface	1.0	0.5	331	19.9	19.9	8.0	8.0	31.1	31.1	99.6	99.6	7.6	7.6	9.4	8.8	4	4	86	86	88	819707	804590	<0.2	1.0	1.0		
						3.7	0.4	351	19.9	19.9	8.0	8.0	31.3	31.3	100.0	100.0	7.7	7.7	9.4	9.4	4	4	88	88	88			<0.2	1.0	1.0		
						3.7	0.4	359	19.9	19.9	8.0	8.0	31.3	31.3	100.0	100.0	7.7	7.7	9.4	9.4	4	4	88	88	88			<0.2	1.0	1.0		
					Middle	6.3	0.4	4	19.9	19.9	8.0	8.0	31.3	31.3	100.1	100.2	7.7	7.7	7.7	7.7	5	5	90	90	88			<0.2	1.0	1.0		
						6.3	0.4	4	19.9	19.9	8.0	8.0	31.3	31.3	100.2	100.2	7.7	7.7	7.7	7.7	5	5	90	90	88			<0.2	1.1	1.1		
						1.0	0.6	20	20.0	20.0	8.0	8.0	31.0	31.0	98.7	98.7	7.6	7.6	5.8	5.8	5	5	87	85	88			<0.2	1.1	1.0		
IM5	Fine	Moderate	11:38	7.3	Surface	1.0	0.6	20	20.0	20.0	8.0	8.0	31.0	31.0	98.7	98.7	7.6	7.6	5.8	6.7	5	5	85	85	88	820727	804850	<0.2	1.0	1.0		
						1.0	0.6	20	20.0	20.0	8.0	8.0	31.0	31.0	98.7	99.0	7.6	7.6	5.8	6.4	5	5	85	89	88			<0.2	1.0	1.0		
						3.7	0.5	23	20.0	20.0	8.0	8.0	31.0	31.0	98.9	99.0	7.6	7.6	6.4	6.4	5	5	89	88	88			<0.2	1.1	1.1		
					Middle	3.7	0.5	25	20.0	20.0	8.0	8.0	31.0	31.0	99.0	99.0	7.6	7.6	6.4	6.4	5	5	88	88	88			<0.2	1.1	1.1		
						6.3	0.4	19	20.0	20.0	7.9	7.9	31.0	31.0	100.4	100.5	7.7	7.7	7.8	7.8	5	5	90	90	88			<0.2	1.1	1.1		
						6.3	0.4	19	20.0	20.0	7.9	7.9	31.0	31.0	100.6	100.6	7.7	7.7	7.8	7.8	5	5	90	90	88			<0.2	1.2	1.2		
IM6	Fine	Moderate	11:31	7.5	Surface	1.0	0.1	244	19.9	19.9	8.0	8.0																				

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

**Water Quality Monitoring Results on 02 January 20 during Mid-Flood Tide**

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity (NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)					
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA		
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA	Value	DA
IM9	Fine	Moderate	11:48	6.6	Surface	1.0	0.4	278	20.0	20.0	7.8	7.8	31.5	31.5	96.5	96.5	7.3	7.3	4.1	7	7	86	86	88	822116	808823	<0.2	1.5	1.5	1.5				
						1.0	0.4	281	20.0	20.0	7.8	7.8	31.5	31.5	96.5	96.5	7.3	7.3	4.1	7	7	85	85	88	822116	808823	<0.2	1.4	1.4	1.5				
					Middle	3.3	0.4	277	19.9	19.9	7.8	7.8	31.8	31.8	96.8	96.8	7.3	7.3	4.4	7	7	88	88	87	87	88	822116	808823	<0.2	1.4	1.4	1.5	1.5	
						3.3	0.4	279	19.9	19.9	7.8	7.8	31.8	31.8	96.8	96.8	7.3	7.3	5.4	7	7	87	87	89	89	88	822116	808823	<0.2	1.4	1.4	1.5	1.5	
					Bottom	5.6	0.3	288	20.0	20.0	7.8	7.8	31.7	31.7	98.3	98.3	7.4	7.4	3.6	6	6	89	89	90	90	90	88	822116	808823	<0.2	1.5	1.5	1.5	1.5
						5.6	0.3	307	20.0	20.0	7.8	7.8	31.7	31.7	98.3	98.3	7.4	7.4	3.6	7	7	90	90	91	91	91	88	822116	808823	<0.2	1.5	1.5	1.5	1.5
IM10	Fine	Moderate	11:56	6.4	Surface	1.0	0.4	293	20.0	20.0	7.8	7.8	31.7	31.7	95.9	95.9	7.2	7.2	3.0	7	7	86	86	88	822387	809791	<0.2	1.1	1.1	1.1	1.1			
						1.0	0.5	306	20.0	20.0	7.8	7.8	31.7	31.7	95.9	95.9	7.2	7.2	3.0	7	7	86	86	88	88	822387	809791	<0.2	1.1	1.1	1.1	1.1		
					Middle	3.2	0.4	298	20.0	20.0	7.8	7.8	31.7	31.7	96.6	96.6	7.3	7.3	4.4	8	8	88	88	87	87	88	822387	809791	<0.2	1.1	1.1	1.1	1.1	
						3.2	0.5	309	20.0	20.0	7.8	7.8	31.7	31.7	96.6	96.6	7.3	7.3	4.4	9	9	87	87	89	89	88	822387	809791	<0.2	1.1	1.1	1.1	1.1	
					Bottom	5.4	0.3	300	20.0	20.0	7.8	7.8	31.7	31.7	98.6	98.6	7.4	7.4	7.3	9	9	90	90	91	91	91	88	822387	809791	<0.2	1.1	1.1	1.1	1.1
						5.4	0.4	305	20.0	20.0	7.8	7.8	31.7	31.7	98.6	98.6	7.4	7.4	7.3	9	9	91	91	92	92	92	88	822387	809791	<0.2	1.0	1.0	1.0	1.0
IM11	Fine	Moderate	12:08	6.6	Surface	1.0	0.4	310	20.0	20.0	8.0	8.0	31.8	31.8	95.3	95.3	7.2	7.2	2.7	9	9	86	86	88	822038	811475	<0.2	1.0	1.0	1.0	1.0			
						1.0	0.4	328	20.0	20.0	8.0	8.0	31.8	31.8	95.3	95.3	7.2	7.2	2.7	9	9	86	86	88	88	822038	811475	<0.2	1.0	1.0	1.0	1.0		
					Middle	3.3	0.3	301	20.0	20.0	8.0	8.0	31.8	31.8	96.0	96.0	7.2	7.2	3.5	8	8	88	88	87	87	88	822038	811475	<0.2	1.0	1.0	1.0	1.0	
						3.3	0.4	321	20.0	20.0	8.0	8.0	31.8	31.8	96.0	96.0	7.2	7.2	3.5	7	7	89	89	90	90	88	822038	811475	<0.2	1.0	1.0	1.0	1.0	
					Bottom	5.6	0.3	298	19.9	19.9	7.9	7.9	31.9	31.9	96.5	96.5	7.3	7.3	3.9	6	6	90	90	91	91	91	88	822038	811475	<0.2	1.0	1.0	1.0	1.0
						5.6	0.3	319	19.9	19.9	7.9	7.9	31.9	31.9	96.5	96.5	7.3	7.3	3.9	6	6	90	90	91	91	91	88	822038	811475	<0.2	1.1	1.1	1.1	1.1
IM12	Fine	Moderate	12:14	8.0	Surface	1.0	0.1	212	19.9	19.9	7.9	7.9	32.0	32.0	95.2	95.2	7.2	7.2	2.8	8	8	86	86	88	821451	812051	<0.2	1.0	1.0	1.0	1.0			
						1.0	0.1	224	19.9	19.9	7.9	7.9	32.0	32.0	95.2	95.2	7.2	7.2	2.8	7	7	87	87	88	88	821451	812051	<0.2	1.0	1.0	1.0	1.0		
					Middle	4.0	0.2	263	19.9	19.9	7.9	7.9	32.2	32.2	94.8	94.8	7.1	7.1	4.2	8	8	88	88	87	87	88	821451	812051	<0.2	1.0	1.0	1.0	1.0	
						4.0	0.2	276	19.9	19.9	7.9	7.9	32.2	32.2	94.8	94.8	7.1	7.1	4.2	8	8	87	87	89	89	88	821451	812051	<0.2	1.0	1.0	1.0	1.0	
					Bottom	7.0	0.2	270	19.9	19.9	7.9	7.9	32.2	32.2	95.4	95.4	7.2	7.2	5.0	10	10	90	90	91	91	91	88	821451	812051	<0.2	1.0	1.0	1.0	1.0
						7.0	0.2	271	19.9	19.9	7.9	7.9	32.2	32.2	95.4	95.4	7.2	7.2	5.0	9	9	91	91	92	92	92	88	821451	812051	<0.2	1.1	1.1	1.1	1.1
SR1A	Fine	Moderate	12:32	5.3	Surface	1.0	-	-	20.1	20.1	7.9	7.9	32.1	32.1	95.7	95.7	7.2	7.2	3.0	8	8	-	-	-	819982	812657	-	-	-	-	-			
						1.0	-	-	20.1	20.1	7.9	7.9	32.1	32.1	95.7	95.7	7.2	7.2	3.0	8	8	-	-	-	-	819982	812657	-	-	-	-	-		
					Middle	2.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	819982	812657	-	-	-	-	-	
						2.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	819982	812657	-	-	-	-	-	
					Bottom	4.3	-	-	20.0	20.0	7.9	7.9	32.1	32.1	98.0	98.0	7.4	7.4	3.3	9	9	-	-	-	-	-	819982	812657	-	-	-	-	-	
						4.3	-	-	20.0	20.0	7.9	7.9	32.1	32.1	98.0	98.0	7.4	7.4	3.3	8	8	-	-	-	-	-	819982	812657	-	-	-	-	-	
SR2	Fine	Moderate	12:45	4.8	Surface	1.0	0.2	214	20.0	20.0	7.9	7.9	32.0	32.0	95.9	95.9	7.2	7.2	3.3	8	8	87	87	89	821479	814184	<0.2	1.0	1.0	1.0	1.0			
						1.0	0.2	227	20.0	20.0	7.9	7.9	32.0	32.0	95.9	95.9	7.2	7.2	3.3	9	9	88	88	88	88	821479	814184	<0.2	1.0	1.0	1.0	1.0		
					Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	821479	814184	<0.2	1.0	1.0	1.0	1.0	
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	821479	814184	<0.2	1.0	1.0	1.0	1.0	
					Bottom	3.8	0.1	300	20.0	20.0	7.8	7.8	32.0	32.0	96.9	96.9	7.3	7.3	6.2	9	9	90	90	90	90	90	88	821479	814184	<0.2	1.0	1.0	1.0	1.0
						3.8	0.1	304	20.0	20.0	7.8	7.8	32.0	32.0	96.9	96.9	7.3	7.3	6.2	10	10	90	90	90	90	90	88	821479	814184	<0.2	0.9	0.9	0.9	0.9
SR3	Fine	Moderate	11:38	8.2	Surface	1.0	0.3	278	20.3	20.3	7.8	7.8	30.5	30.5	92.9	92.9	7.0	7.0	1.3	6	6	-	-	-	822127	807588	-	-	-	-	-			
						1.0	0.3	293	20.3	20.3	7.8	7.8	30.5	30.5	92.9	92.9	7.0	7.0	1.3	5	5	-	-	-	-	822127	807588	-	-	-	-	-		
					Middle	4.1	0.4	269	20.3	20.3	7.8	7.8	30.8	30.8	92.4	92.4	7.0	7.0	1.8	8	8	-	-	-	-	822127	807588	-	-	-	-	-		
						4.1	0.4	291	20.3	20.3	7.8	7.8	30.8	30.8	92.4	92.4	7.0	7.0	1.8	7	7	-	-	-	-	822127	807588	-	-	-	-	-		
					Bottom	7.2	0.3	273	20.2	20.2	7.8	7.8	31.1	31.1	93.3	93.3	7.0	7.0	3.4	9	9	-	-	-	-	822127	807588	-	-	-	-	-		
						7.2	0.3	288	20.2	20.2	7.8	7.8	31.1	31.1	93.3	93.3	7.0	7.0	3.4	8	8	-	-	-	-	822127	807588	-	-	-	-	-		
SR4A	Fine	Moderate	12:53	8.7	Surface	1.0	0.2	88	19.9	19.9	8.0	8.0	31.3	31.3	100.1	100.1	7.7	7.7	9.8	7	7	-	-	-	817198	807819	-	-	-	-	-			
						1.0	0.2	92	19.9	19.9	8.0	8.0	31.3	31.3	100.1	100.1	7.7	7.7	9.8	6	6	-	-	-	-	817198	807819	-	-	-	-	-		
					Middle	4.4	0.1	53	19.9	19.9																								

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

Water Quality Monitoring

Water Quality Monitoring Results on 04 January 20 during Mid-Ebb Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity(NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)			
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA
C1	Sunny	Rough	06:05	7.5	Surface	1.0	0.3	127	20.4	20.4	7.7	7.7	31.0	31.0	97.1	97.0	7.3	7.3	12.0	11.4	3	2	83	88	815639	804246	<0.2	1.5	1.4	1.6		
						1.0	0.3	129	20.4	20.4	7.7	7.7	31.0	31.0	96.9	96.3	7.2	7.2	11.9	11.4	2	2	83	88	<0.2	1.6	1.4	1.6				
						3.8	0.3	122	20.2	20.2	7.7	7.7	31.3	31.3	96.1	96.3	7.2	7.2	8.4	8.5	2	2	88	88	<0.2	0.9	1.4	1.6				
					3.8	0.3	133	20.2	20.2	7.7	7.7	31.3	31.3	96.4	96.3	7.3	7.3	8.5	8.5	2	2	88	88	<0.2	1.1	1.4	1.6					
					6.5	0.2	119	20.1	20.1	7.8	7.8	31.4	31.4	95.3	95.4	7.2	7.2	13.8	13.9	3	2	91	92	<0.2	1.7	1.4	1.6					
					6.5	0.2	121	20.1	20.1	7.8	7.8	31.4	31.4	95.4	95.4	7.2	7.2	13.9	13.9	2	2	92	92	<0.2	1.5	1.4	1.6					
C2	Sunny	Moderate	07:25	7.6	Surface	1.0	0.1	141	20.7	20.7	7.7	7.7	28.0	28.0	95.0	95.0	7.2	7.1	5.2	6.3	2	3	83	84	825690	806929	<0.2	1.8	1.9	1.7		
						1.0	0.1	148	20.7	20.7	7.7	7.7	28.0	28.0	95.0	95.0	7.2	7.1	5.2	6.3	3	3	84	88	<0.2	1.7	1.9	1.7				
						3.8	0.3	150	20.2	20.2	7.7	7.7	30.6	30.6	92.6	92.6	7.0	7.0	7.3	7.3	3	3	88	89	<0.2	2.0	1.9	1.7				
					3.8	0.3	142	20.2	20.2	7.7	7.7	30.6	30.6	92.5	92.7	7.0	7.0	7.3	7.3	3	4	89	92	<0.2	1.8	1.9	1.7					
					6.6	0.3	144	20.3	20.3	7.8	7.8	31.2	31.2	92.7	92.7	7.0	7.0	6.4	6.4	4	3	92	92	<0.2	2.0	1.9	1.7					
					6.6	0.3	156	20.3	20.3	7.8	7.8	31.2	31.2	92.7	92.7	7.0	7.0	6.4	6.4	3	3	92	92	<0.2	2.0	1.9	1.7					
C3	Sunny	Moderate	05:23	11.7	Surface	1.0	0.2	120	20.1	20.1	7.7	7.7	31.9	31.9	94.6	94.6	7.1	7.1	6.5	7.0	3	4	84	84	822116	817812	<0.2	1.6	1.7	1.6		
						1.0	0.2	138	20.1	20.1	7.7	7.7	31.9	31.9	94.6	94.6	7.1	7.1	6.6	7.0	4	3	84	89	<0.2	1.8	1.7	1.6				
						5.9	0.2	131	20.1	20.1	7.7	7.7	31.9	31.9	93.6	93.6	7.0	7.0	5.4	5.7	3	3	89	89	<0.2	1.8	1.7	1.6				
					5.9	0.2	137	20.1	20.1	7.7	7.7	31.9	31.9	93.6	93.6	7.0	7.0	5.7	5.7	3	4	89	91	<0.2	1.6	1.7	1.6					
					10.7	0.2	143	20.1	20.1	7.7	7.7	32.1	32.1	93.1	93.2	7.0	7.0	8.7	8.9	4	4	91	91	<0.2	1.9	1.7	1.6					
					10.7	0.2	157	20.1	20.1	7.7	7.7	32.1	32.1	93.3	93.3	7.0	7.0	8.9	8.9	4	4	91	91	<0.2	1.7	1.7	1.6					
IM1	Sunny	Moderate	06:27	5.2	Surface	1.0	0.1	112	20.3	20.3	7.7	7.7	31.1	31.1	96.0	96.0	7.2	7.2	11.2	10.4	2	3	83	83	817937	807137	<0.2	1.5	1.6	1.4		
						1.0	0.1	120	20.3	20.3	7.7	7.7	31.1	31.1	96.0	96.0	7.2	7.2	11.2	10.4	2	3	83	83	<0.2	1.4	1.6	1.4				
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
					4.2	0.2	126	20.1	20.1	7.8	7.8	31.4	31.4	95.6	95.7	7.2	7.2	9.6	9.6	4	3	88	88	<0.2	1.7	1.6	1.6					
					4.2	0.2	133	20.2	20.2	7.8	7.8	31.4	31.4	95.7	95.7	7.2	7.2	9.6	9.6	3	3	88	88	<0.2	1.6	1.6	1.6					
					4.2	0.2	133	20.2	20.2	7.8	7.8	31.4	31.4	95.7	95.7	7.2	7.2	9.6	9.6	3	3	88	88	<0.2	1.6	1.6	1.6					
IM2	Sunny	Moderate	06:35	7.6	Surface	1.0	0.2	121	20.6	20.6	7.7	7.7	30.8	30.8	96.0	96.0	7.2	7.2	8.1	11.2	3	3	84	84	818161	806168	<0.2	1.6	1.5	1.6		
						1.0	0.3	128	20.6	20.6	7.8	7.8	30.8	30.8	96.0	96.0	7.2	7.2	8.2	11.2	3	3	84	87	<0.2	1.6	1.5	1.6				
						3.8	0.2	132	20.3	20.3	7.8	7.8	31.0	31.0	95.5	95.5	7.2	7.2	10.9	10.8	2	3	86	88	<0.2	1.5	1.5	1.6				
					3.8	0.2	141	20.3	20.3	7.8	7.8	31.0	31.0	95.4	95.4	7.2	7.2	10.8	10.8	2	3	86	88	<0.2	1.5	1.5	1.6					
					6.6	0.2	120	20.0	20.0	7.8	7.8	31.4	31.4	95.5	95.6	7.2	7.2	14.6	14.7	3	4	88	88	<0.2	1.4	1.5	1.6					
					6.6	0.2	132	20.0	20.0	7.8	7.8	31.4	31.4	95.6	95.6	7.2	7.2	14.7	14.7	4	4	88	88	<0.2	1.5	1.5	1.6					
IM3	Sunny	Moderate	06:42	7.8	Surface	1.0	0.3	129	20.7	20.7	7.7	7.7	30.9	30.9	95.9	95.9	7.2	7.2	7.1	7.7	5	4	84	85	818785	805591	<0.2	0.8	1.4	1.0		
						1.0	0.3	123	20.7	20.7	7.7	7.7	30.9	30.9	95.9	95.9	7.2	7.2	7.2	7.7	6	3	85	88	<0.2	1.0	1.4	1.0				
						3.9	0.3	128	20.6	20.6	7.7	7.7	30.9	30.9	95.0	95.0	7.1	7.1	7.5	7.5	3	3	88	88	<0.2	1.7	1.4	1.0				
					3.9	0.3	129	20.6	20.6	7.7	7.7	30.9	30.9	95.0	95.0	7.1	7.1	7.5	7.5	3	3	88	89	<0.2	1.6	1.4	1.0					
					6.8	0.2	131	20.4	20.4	7.7	7.7	31.1	31.1	93.8	93.7	7.1	7.1	8.5	8.5	3	3	89	87	<0.2	1.6	1.4	1.0					
					6.8	0.3	135	20.4	20.4	7.7	7.7	31.1	31.1	93.6	93.6	7.0	7.0	8.5	8.5	3	3	87	87	<0.2	1.6	1.4	1.0					
IM4	Sunny	Moderate	06:51	7.5	Surface	1.0	0.4	243	20.4	20.4	7.8	7.8	30.2	30.2	97.3	97.3	7.3	7.3	8.0	7.1	3	3	84	85	819744	804620	<0.2	1.6	1.6	1.6		
						1.0	0.5	249	20.4	20.4	7.8	7.8	30.2	30.2	97.3	97.3	7.3	7.3	8.0	7.1	4	3	85	87	<0.2	1.6	1.6	1.6				
						3.8	0.4	138	20.4	20.4	7.8	7.8	30.7	30.7	96.2	96.1	7.2	7.2	5.2	5.3	3	3	87	86	<0.2	1.6	1.6	1.6				
					3.8	0.4	139	20.4	20.4	7.8	7.8	30.7	30.7	96.0	96.0	7.2	7.2	5.3	5.3	3	3	86	89	<0.2	1.6	1.6	1.6					
					6.5	0.4	132	20.3	20.3	7.8	7.8	30.8	30.8	96.0	96.1	7.2	7.3	8.1	8.1	3	3	89	90	<0.2	1.6	1.6	1.6					
					6.5	0.4	135	20.3	20.3	7.8	7.8	30.8	30.8	96.2	96.1	7.3	7.3	8.1	8.1	3	3	90	90	<0.2	1.5	1.6	1.6					
IM5	Sunny	Moderate	07:01	7.7	Surface	1.0	0.7	207	20.4	20.4	7.8	7.8	30.5	30.5	96.4	96.4	7.3	7.3	8.2	8.9	4	4	84	83	820712	804884	<0.2	1.6	1.4	1.0		
						1.0	0.7	211	20.4	20.4	7.8	7.8	30.5	30.5	96.4	96.4	7.3	7.3	8.3	8.6	4	3	83	87	<0.2	1.4	1.0	0.9				
						3.9	0.6	212	20.3	20.3	7.8	7.8	30.6	30.6	95.7	95.7	7.2	7.2	8.6	8.6	3	4	87	86	<0.2	0.9	1.0	0.9				
					3.9	0.6	203	20.3	20.3	7.8	7.8	30.6	30.6	95.7	95.7	7.2	7.2	8.6	8.6	4	3	86	88	<0.2	1.0	1.0	0.9					
					6.7	0.4	189	20.3	20.3	7.8	7.8	30.7	30.7	95.9	95.9	7.2	7.2	9.7	9.7	3	4	90	88	<0.2	1.7	1.0	0.9					
					6.7	0.4	192	20.3	20.3	7.8	7.8	30.7	30.7	95.8	95.9	7.2	7.2	9.7	9.7	4	4	88	88	<0.2	1.7	1.0	0.9					
IM6	Sunny	Moderate	07:09	8.0	Surface	1.0	0.3	204	20.4	20.4	7.8	7.8	30.3	30.3	96.6	96.7	7.3	7.3	4.1	6.4	2	3	84	85	821068	805837	<0.2	1.7	1.4	1.0		
						1.0	0.3	194	20.4	20.4	7.8	7.8	30.3	30.3	96.7	96.6	7.3	7.3	4.2	6.4	3	3	85	89	<0.2	1.7	1.4					



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

Water Quality Monitoring Results on 04 January 20 during Mid-Ebb Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity (NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)			
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA
IM9	Sunny	Moderate	06:53	7.5	Surface	1.0	0.2	188	20.4	20.4	7.8	7.8	30.5	30.5	96.7	96.7	7.3	2.7	3	83	88	822103	808804	<0.2	2.1	<0.2	2.2					
						1.0	0.2	172	20.4	20.4	7.8	7.8	30.5	30.5	96.7	7.3	2.8	3	83	88												
						3.8	0.1	179	20.3	20.3	7.8	7.8	30.6	30.6	96.0	96.0	7.3	1.2	3	89	89											
					3.8	0.1	184	20.3	20.3	7.8	7.8	30.6	30.6	96.0	7.3	1.2	3	89	89													
					6.5	0.1	182	20.3	20.3	7.8	7.8	30.7	30.7	96.2	96.3	7.3	3.0	6	92	92												
					6.5	0.1	175	20.3	20.3	7.8	7.8	30.7	30.7	96.4	96.4	7.3	3.1	6	92	92												
IM10	Sunny	Moderate	06:45	7.3	Surface	1.0	0.3	173	20.5	20.5	7.8	7.8	30.2	30.2	97.9	97.9	7.4	4.7	4	86	86	822362	809801	<0.2	2.1	<0.2	1.7					
						1.0	0.3	175	20.5	20.5	7.8	7.8	30.2	30.2	97.9	7.4	4.8	3	86	86												
						3.7	0.5	181	20.4	20.4	7.8	7.8	30.7	30.7	96.2	96.2	7.3	4.3	4	88	88											
					3.7	0.5	164	20.4	20.4	7.8	7.8	30.7	30.7	96.2	7.3	4.2	3	89	89													
					6.3	0.3	182	20.3	20.3	7.7	7.7	30.8	30.8	96.3	96.4	7.3	3.9	3	91	91												
					6.3	0.3	176	20.3	20.3	7.7	7.7	30.8	30.8	96.4	96.4	7.3	3.9	3	91	91												
IM11	Sunny	Moderate	06:33	7.5	Surface	1.0	0.3	173	20.7	20.7	7.7	7.7	30.8	30.8	95.9	95.9	7.2	5.2	3	85	85	822070	811483	<0.2	2.1	<0.2	2.1					
						1.0	0.3	179	20.7	20.7	7.7	7.7	30.8	30.8	96.0	7.2	5.1	3	86	86												
						3.8	0.3	163	20.6	20.6	7.7	7.7	31.0	31.0	94.9	95.0	7.1	3.8	2	88	88											
					3.8	0.3	169	20.6	20.6	7.7	7.7	31.0	31.0	95.0	7.1	3.8	2	88	88													
					6.5	0.2	184	20.4	20.4	7.7	7.7	31.1	31.1	94.8	94.9	7.1	2.6	3	91	91												
					6.5	0.2	174	20.4	20.4	7.7	7.7	31.1	31.1	94.9	94.9	7.1	2.7	2	92	92												
IM12	Sunny	Moderate	06:26	8.2	Surface	1.0	0.3	171	20.6	20.6	7.7	7.7	30.8	30.8	96.3	96.3	7.2	2.8	3	83	83	821475	812050	<0.2	2.1	<0.2	2.1					
						1.0	0.3	176	20.6	20.6	7.7	7.7	30.8	30.8	96.3	7.2	2.8	3	84	84												
						4.1	0.3	167	20.3	20.3	7.7	7.7	31.0	31.0	95.7	95.8	7.2	2.3	2	88	88											
					4.1	0.3	182	20.3	20.3	7.7	7.7	31.0	31.0	95.9	95.8	7.2	2.3	3	89	89												
					7.2	0.2	151	20.0	20.0	7.8	7.8	31.5	31.4	95.3	95.3	7.2	4.1	2	91	91												
					7.2	0.2	165	20.0	20.0	7.8	7.8	31.4	31.4	95.2	95.2	7.2	4.1	3	91	91												
SR1A	Sunny	Moderate	05:59	4.5	Surface	1.0	-	-	20.5	20.5	7.7	7.7	31.0	31.0	96.2	96.2	7.2	7.5	3	-	-	819977	812656	-	-	-	-					
						1.0	-	-	20.5	20.5	7.7	7.7	31.0	31.0	96.2	7.2	7.6	3	-	-												
						2.3	-	-	-	-	-	-	-	-	-	7.2	-	3	-	-												
					2.3	-	-	-	-	-	-	-	-	-	-	-	3	-	-													
					3.5	-	-	20.2	20.2	7.8	7.8	31.3	31.3	95.2	95.3	7.2	10.2	3	-	-												
					3.5	-	-	20.2	20.2	7.8	7.8	31.3	31.3	95.4	95.4	7.2	10.2	2	-	-												
SR2	Sunny	Moderate	05:47	3.7	Surface	1.0	0.3	132	20.3	20.3	7.7	7.7	31.1	31.1	96.3	96.3	7.3	9.9	3	83	83	821455	814153	<0.2	2.1	<0.2	2.1					
						1.0	0.3	136	20.3	20.3	7.7	7.7	31.1	31.1	96.3	7.3	9.8	2	84	84												
						-	-	-	-	-	-	-	-	-	-	7.3	-	3	-	-												
					-	-	-	-	-	-	-	-	-	-	-	-	3	-	-													
					2.7	0.3	142	20.2	20.2	7.8	7.8	31.3	31.3	95.9	95.9	7.2	8.5	3	89	89												
					2.7	0.3	143	20.2	20.2	7.8	7.8	31.3	31.3	95.9	95.9	7.2	8.3	3	90	90												
SR3	Sunny	Moderate	07:05	8.5	Surface	1.0	0.1	189	20.3	20.3	7.7	7.7	29.6	29.6	96.6	96.5	7.3	5.2	2	-	-	822162	807594	-	-	-	-					
						1.0	0.1	180	20.3	20.3	7.7	7.7	29.6	29.6	96.3	96.3	7.3	5.2	2	-	-											
						4.3	0.1	170	20.3	20.3	7.8	7.8	30.4	30.4	95.7	95.8	7.2	3.8	3	-	-											
					4.3	0.1	173	20.3	20.3	7.8	7.8	30.4	30.4	95.9	95.8	7.3	3.9	2	-	-												
					7.5	0.2	161	20.2	20.2	7.8	7.8	30.8	30.8	97.0	97.1	7.3	4.6	<2	-	-												
					7.5	0.2	168	20.2	20.2	7.8	7.8	30.8	30.8	97.1	97.1	7.3	4.5	<2	-	-												
SR4A	Sunny	Moderate	05:46	10.1	Surface	1.0	0.3	97	20.3	20.3	7.7	7.7	31.2	31.2	96.3	96.3	7.3	7.1	2	-	-	817209	807798	-	-	-	-					
						1.0	0.4	105	20.3	20.3	7.7	7.7	31.2	31.2	96.2	7.2	7.2	2	-	-												
						5.1	0.2	66	20.1	20.1	7.7	7.7	31.4	31.4	95.0	95.0	7.2	7.5	2	-	-											
					5.1	0.2	72	20.1	20.1	7.7	7.7	31.4	31.4	95.0	7.2	7.6	2	-	-													
					9.1	0.2	70	20.1	20.1	7.7	7.7	31.5	31.5	94.7	94.8	7.1	9.2	2	-	-												
					9.1	0.2	76	20.1	20.1	7.7	7.7	31.5	31.5	94.9	94.8	7.2	9.3	2	-	-												
SR5A	Sunny	Moderate	05:28	4.1	Surface	1.0	0.1	68	23.7	23.7	8.5	8.5	29.8	29.8	98.0	98.0	7.0	5.5	3	-	-	816610	810673	-	-	-	-					
						1.0	0.1	72	23.7	23.7	8.5	8.5	29.8	29.8	98.0	7.0	5.6	3	-	-												
						-	-	-	-	-	-	-	-	-	-	7.0	-	3	-	-												
					-	-	-	-	-	-	-	-	-	-	-	-	3	-	-													
					3.1	0.1	112	24.0	24.0	8.5	8.5	31.0	31.0	99.7	99.7	7.0	6.2	3	-	-												
					3.1	0.1	119	24.0	24.0	8.5	8.5	31.0	31.0	99.7	7.0	6.2	2	-	-													
SR6A	Sunny	Moderate	04:53	4.6	Surface	1.0	0.0	141	20.2	20.2	7.9	7.9	32.0	32.0	94.4	94.4	7.1	4.1	3	-	-	817968	814727	-	-	-	-					
						1.0	0.0	146	20.2	20.2	7.9	7.9	32.0	32.0	94.4	7.1	4.2	4	-	-												
						-	-	-	-	-	-	-	-	-	-	7.1	-	3	-	-												
					-	-	-	-	-	-	-	-	-	-	-	-	3	-	-													
					3.6	0.0	79	20.1	20.1	7.9	7.9	32.2	32.2	91.8	91.9	6.9	5.4	<2	-	-												
					3.6	0.0	82	20.1	20.1	7.9	7.9	32.2	32.2	91.9	6.9	5.5	<2	-	-													
SR7	Sunny	Moderate	04:53	16.4	Surface	1.0	0.1	330	20.1	20.1	7.7	7.7	32.1	32.1	92.5	92.6	7.0	2.5	2	-	-	823623	823736	-	-	-	-					
						1.0	0.1	357	20.1	20.1	7.7	7.7	32.1	32.1	92.6	7.0	2.6	3	-	-												
						8.2	0.1	126	20.2	20.2	7.7	7.7	32.4	32.4	91.0	91.1	6.8	5.4	4	-	-											
					8.2	0.1	135	20.2	20.2	7.7	7.7	32.4	32.4	91.1	6.8	5.5	3	-	-													
					15.4	0.1	166	20.2	20.2	7.7	7.7	32.4	32.4	90.7	90.8	6.8	6.3	4	-	-												
					15.4	0.1	168	20.2	20.2	7.7	7.7	32.4	32.4	90.9	6.8	6.4	3	-	-													
SR8	Sunny	Moderate	06:13	4.1	Surface	1.0	-	-	20.4	20.4	7.7	7.7	31.0	31.0	97.0	97.1	7.3	5.2	3	-	-	820370	811638	-	-	-	-					
						1.0	-	-	20.4	20.4	7.7	7.7	31.0	31.0	97.2	7.3	5.3	3	-	-												
						-	-	-	-	-	-	-	-	-	-	-	-	4	-	-												
					-	-	-	-	-	-	-	-	-	-	-	-	4	-	-													
					3.1	-	-	20.2	20.2	7.8	7.8	31.3	31.3	96.0	96.0	7.2	6.7	4	-	-												
					3.1	-	-	20.2	20.2	7.8	7.8	31.3	31.3																			

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

Water Quality Monitoring Results on 04 January 20 during Mid-Flood Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity (NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)			
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA
C1	Sunny	Rough	13:37	7.1	Surface	1.0	0.3	6	20.7	20.7	7.9	7.9	31.1	31.1	98.2	98.2	7.3	11.6	4	83	4	83	88	815613	804257	<0.2	1.8	<0.2	1.8			
						1.0	0.4	6	20.7	20.7	7.9	7.9	31.1	31.1	98.1	98.1	7.3	11.8	4	84	4	84	88	815613	804257	<0.2	1.9	<0.2	1.9			
						3.6	0.4	23	20.4	20.4	7.9	7.9	31.3	31.3	96.4	96.4	7.2	8.5	4	88	4	88	88	815613	804257	<0.2	1.8	<0.2	1.8			
					3.6	0.4	23	20.4	20.4	7.9	7.9	31.3	31.3	96.4	96.4	7.2	8.5	4	91	4	91	88	815613	804257	<0.2	1.7	<0.2	1.7				
					6.1	0.3	20	20.2	20.2	7.9	7.9	31.8	31.8	96.3	96.3	7.2	9.6	4	91	4	91	88	815613	804257	<0.2	1.8	<0.2	1.8				
					6.1	0.3	21	20.2	20.2	7.9	7.9	31.8	31.8	96.7	96.7	7.3	9.5	4	92	4	92	88	815613	804257	<0.2	1.8	<0.2	1.8				
C2	Sunny	Calm	12:50	8.3	Surface	1.0	0.1	247	20.8	20.8	7.7	7.7	27.9	27.9	94.5	94.5	7.2	6.3	2	85	2	85	89	825698	806936	<0.2	3.6	<0.2	3.6			
						1.0	0.1	253	20.8	20.8	7.7	7.7	27.9	27.9	94.5	94.5	7.2	6.2	2	85	2	85	89	825698	806936	<0.2	3.6	<0.2	3.6			
						4.2	0.2	326	20.2	20.2	7.8	7.8	30.8	30.8	92.0	92.0	7.0	7.1	3	90	3	90	89	825698	806936	<0.2	2.8	<0.2	2.8			
					4.2	0.2	338	20.2	20.2	7.8	7.8	30.8	30.8	91.9	91.9	6.9	7.2	3	90	3	90	89	825698	806936	<0.2	2.8	<0.2	2.8				
					7.3	0.3	347	20.3	20.3	7.8	7.8	31.2	31.2	91.9	91.9	6.9	8.3	2	91	2	91	89	825698	806936	<0.2	2.8	<0.2	2.8				
					7.3	0.3	319	20.3	20.3	7.8	7.8	31.2	31.2	92.2	92.2	6.9	8.4	3	92	3	92	89	825698	806936	<0.2	2.9	<0.2	2.9				
C3	Sunny	Calm	15:17	10.5	Surface	1.0	0.5	280	20.2	20.2	7.9	7.9	32.0	32.0	94.0	94.0	7.1	8.0	2	83	2	83	88	822125	817811	<0.2	1.3	<0.2	1.3			
						1.0	0.5	296	20.2	20.2	7.9	7.9	32.0	32.0	94.0	94.0	7.1	8.2	2	84	2	84	88	822125	817811	<0.2	1.3	<0.2	1.3			
						5.3	0.5	276	20.2	20.2	7.9	7.9	32.5	32.5	90.7	90.7	6.8	9.3	2	88	2	88	88	822125	817811	<0.2	1.3	<0.2	1.3			
					5.3	0.5	282	20.2	20.2	7.9	7.9	32.5	32.5	90.6	90.6	6.8	9.6	2	89	2	89	88	822125	817811	<0.2	1.3	<0.2	1.3				
					9.5	0.3	294	20.2	20.2	7.9	7.9	32.7	32.7	91.7	91.7	6.9	2.8	2	91	2	91	88	822125	817811	<0.2	1.3	<0.2	1.3				
					9.5	0.3	297	20.2	20.2	7.9	7.9	32.7	32.7	91.7	91.7	6.9	2.5	3	91	3	91	88	822125	817811	<0.2	1.3	<0.2	1.3				
IM1	Sunny	Moderate	13:19	4.7	Surface	1.0	0.2	10	20.5	20.5	7.9	7.9	31.2	31.2	97.6	97.6	7.3	7.6	6	88	6	88	90	817965	807128	<0.2	1.5	<0.2	1.5			
						1.0	0.3	10	20.5	20.5	7.9	7.9	31.2	31.2	97.4	97.4	7.3	7.7	7	88	7	88	90	817965	807128	<0.2	1.5	<0.2	1.5			
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
					3.7	0.2	342	20.2	20.2	7.9	7.9	31.3	31.3	96.3	96.3	7.3	8.2	8	91	8	91	89	817965	807128	<0.2	1.4	<0.2	1.4				
					3.7	0.2	357	20.2	20.2	7.9	7.9	31.3	31.3	96.3	96.3	7.3	8.2	8	92	8	92	89	817965	807128	<0.2	1.5	<0.2	1.5				
					1.0	0.1	344	20.7	20.7	7.8	7.8	30.8	30.8	97.3	97.3	7.3	9.2	7	85	7	85	87	818170	806183	<0.2	1.5	<0.2	1.5				
IM2	Sunny	Moderate	13:12	8.1	Surface	1.0	0.1	316	20.7	20.7	7.8	7.8	31.0	31.0	95.7	95.7	7.2	9.3	6	84	6	84	87	818170	806183	<0.2	1.5	<0.2	1.5			
						4.1	0.1	354	20.4	20.4	7.8	7.8	31.0	31.0	95.7	95.7	7.2	11.4	5	87	5	87	87	818170	806183	<0.2	1.5	<0.2	1.5			
						4.1	0.1	326	20.4	20.4	7.8	7.8	31.0	31.0	95.6	95.6	7.2	11.3	5	87	5	87	87	818170	806183	<0.2	1.5	<0.2	1.5			
					7.1	0.1	17	20.4	20.4	7.8	7.8	31.0	31.0	95.9	95.9	7.2	9.0	4	87	4	87	87	818170	806183	<0.2	1.5	<0.2	1.5				
					7.1	0.1	17	20.4	20.4	7.8	7.8	31.0	31.0	96.0	96.0	7.2	9.0	5	89	5	89	87	818170	806183	<0.2	1.5	<0.2	1.5				
					1.0	0.1	312	20.4	20.4	7.8	7.8	30.6	30.6	98.2	98.2	7.4	15.4	6	85	6	85	87	818769	805613	<0.2	1.5	<0.2	1.5				
IM3	Sunny	Moderate	13:06	7.7	Surface	1.0	0.1	312	20.4	20.4	7.8	7.8	30.6	30.6	98.2	98.2	7.4	15.4	5	84	5	84	87	818769	805613	<0.2	1.4	<0.2	1.4			
						3.9	0.1	19	20.2	20.2	7.8	7.8	30.7	30.7	97.2	97.2	7.3	12.5	5	87	5	87	87	818769	805613	<0.2	1.4	<0.2	1.4			
						3.9	0.2	19	20.2	20.2	7.8	7.8	30.7	30.7	97.3	97.3	7.3	12.8	5	86	5	86	87	818769	805613	<0.2	1.3	<0.2	1.3			
					6.7	0.2	46	20.2	20.2	7.8	7.8	30.7	30.7	97.0	97.0	7.3	11.7	4	89	4	89	87	818769	805613	<0.2	1.4	<0.2	1.4				
					6.7	0.2	46	20.2	20.2	7.8	7.8	30.7	30.7	97.1	97.1	7.3	11.8	4	90	4	90	87	818769	805613	<0.2	1.4	<0.2	1.4				
					6.7	0.2	46	20.2	20.2	7.8	7.8	30.7	30.7	97.1	97.1	7.3	11.8	3	90	3	90	87	818769	805613	<0.2	1.4	<0.2	1.4				
IM4	Sunny	Moderate	12:57	7.4	Surface	1.0	0.1	352	20.6	20.6	7.8	7.8	30.2	30.2	98.0	98.0	7.4	10.2	3	85	3	85	87	819732	804604	<0.2	1.5	<0.2	1.5			
						1.0	0.1	358	20.6	20.6	7.8	7.8	30.2	30.2	98.0	98.0	7.4	10.2	4	84	4	84	87	819732	804604	<0.2	1.4	<0.2	1.4			
						3.7	0.0	348	20.4	20.4	7.8	7.8	30.4	30.4	97.2	97.2	7.3	13.8	4	87	4	87	87	819732	804604	<0.2	1.4	<0.2	1.4			
					3.7	0.0	320	20.4	20.4	7.8	7.8	30.4	30.4	97.0	97.0	7.3	13.7	4	88	4	88	87	819732	804604	<0.2	1.4	<0.2	1.4				
					6.4	0.1	337	20.3	20.3	7.8	7.8	30.6	30.6	97.6	97.6	7.4	12.4	4	89	4	89	87	819732	804604	<0.2	1.4	<0.2	1.4				
					6.4	0.1	343	20.3	20.3	7.8	7.8	30.6	30.6	97.6	97.6	7.4	12.4	4	88	4	88	87	819732	804604	<0.2	1.4	<0.2	1.4				
IM5	Sunny	Moderate	12:50	7.7	Surface	1.0	0.0	348	20.5	20.5	7.7	7.7	29.9	29.9	98.4	98.4	7.4	9.0	7	84	7	84	87	820734	804877	<0.2	1.5	<0.2	1.5			
						1.0	0.0	320	20.5	20.5	7.7	7.7	29.9	29.9	98.4	98.4	7.4	9.0	7	85	7	85	87	820734	804877	<0.2	1.4	<0.2	1.4			
						3.9	0.0	351	20.5	20.5	7.7	7.7	30.5	30.5	97.5	97.5	7.4	11.3	7	87	7	87	87	820734	804877	<0.2	1.4	<0.2	1.4			
					3.9	0.0	353	20.5	20.5	7.7	7.7	30.5	30.5	97.4	97.4	7.3	11.3	7	86	7	86	87	820734	804877	<0.2	1.4	<0.2	1.4				
					6.7	0.0	347	20.3	20.3	7.8	7.8	30.6	30.6	97.8	97.8	7.4	11.6	8	89	8	89	87	820734	804877	<0.2	1.4	<0.2	1.4				
					6.7	0.0	319	20.3	20.3	7.8	7.8	30.6	30.6	97.7	97.7	7.4	11.5	8	88	8	88	87	820734	804877	<0.2	1.4	<0					

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

Water Quality Monitoring Results on 04 January 20 during Mid-Flood Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity (NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)			
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA
IM9	Sunny	Calm	13:31	6.9	Surface	1.0	0.3	268	20.4	20.4	7.8	7.8	30.6	30.6	97.6	97.7	7.4	7.4	2.7	4	83	88	822077	808817	<0.2	2.1	1.9	1.9				
						1.0	0.4	283	20.4	20.4	7.8	7.8	30.6	30.6	97.7	97.7	7.4	7.4	2.7	5	84	88			<0.2	1.9						
						3.5	0.3	266	20.2	20.2	7.8	7.8	30.7	30.7	97.5	97.6	7.4	7.4	3.4	5	89	89			<0.2	1.8						
					Middle	3.5	0.3	284	20.2	20.2	7.8	7.8	30.7	30.7	97.6	97.6	7.4	7.4	3.4	6	89	89					<0.2	1.8				
						5.9	0.2	251	20.2	20.2	7.8	7.8	30.7	30.7	97.4	97.5	7.4	7.4	3.9	6	91	91					<0.2	1.9				
						5.9	0.2	260	20.2	20.2	7.8	7.8	30.7	30.7	97.5	97.5	7.4	7.4	3.9	6	91	91					<0.2	1.8				
IM10	Sunny	Calm	13:41	8.9	Surface	1.0	0.5	314	20.7	20.7	7.8	7.8	30.8	30.8	97.4	97.4	7.3	7.3	2.1	5	83	88	822376	809811	<0.2	1.9	1.9	1.9				
						1.0	0.5	326	20.7	20.7	7.8	7.8	30.8	30.8	97.4	97.4	7.3	7.3	2.0	5	84	88			<0.2	1.8						
						4.5	0.5	298	20.4	20.4	7.8	7.8	31.0	31.0	96.0	96.0	7.2	7.2	2.8	4	88	88			<0.2	1.9						
					Middle	4.5	0.6	321	20.4	20.4	7.8	7.8	31.0	31.0	96.0	96.0	7.2	7.2	2.8	4	89	89					<0.2	1.9				
						7.9	0.4	332	20.4	20.4	7.8	7.8	31.0	31.0	95.8	95.9	7.2	7.2	6.2	3	91	91					<0.2	1.8				
						7.9	0.5	341	20.4	20.4	7.8	7.8	31.0	31.0	95.9	95.9	7.2	7.2	6.3	3	92	92					<0.2	1.9				
IM11	Sunny	Calm	13:56	8.0	Surface	1.0	0.5	271	20.6	20.6	7.9	7.9	31.2	31.2	97.7	97.7	7.3	7.3	1.6	4	84	88	822062	811448	<0.2	1.8	1.7	1.7				
						1.0	0.5	281	20.6	20.6	7.9	7.9	31.2	31.2	97.7	97.7	7.3	7.3	1.7	3	85	89			<0.2	1.7						
						4.0	0.5	285	20.3	20.3	7.9	7.9	31.2	31.2	97.3	97.3	7.3	7.3	2.6	2	89	89			<0.2	1.7						
					Middle	4.0	0.5	311	20.3	20.3	7.8	7.8	31.2	31.2	97.2	97.3	7.3	7.3	2.7	2	89	89					<0.2	1.8				
						7.0	0.4	286	20.2	20.2	7.9	7.9	31.3	31.3	96.5	96.5	7.3	7.3	3.4	2	91	91					<0.2	1.7				
						7.0	0.4	310	20.2	20.2	7.9	7.9	31.3	31.3	96.5	96.5	7.3	7.3	3.4	2	91	91					<0.2	1.7				
IM12	Sunny	Calm	14:05	7.8	Surface	1.0	0.4	249	20.7	20.7	7.9	7.9	31.1	31.1	98.3	98.4	7.3	7.3	1.6	2	83	88	821438	812028	<0.2	1.7	1.7	1.7				
						1.0	0.5	258	20.7	20.7	7.9	7.9	31.1	31.1	98.4	98.4	7.4	7.4	1.6	3	84	88			<0.2	1.6						
						3.9	0.3	260	20.4	20.4	7.9	7.9	31.3	31.3	96.4	96.4	7.2	7.2	2.5	4	88	88			<0.2	1.7						
					Middle	3.9	0.3	279	20.4	20.4	7.9	7.9	31.3	31.3	96.3	96.3	7.2	7.2	2.5	4	88	88					<0.2	1.7				
						6.8	0.4	261	20.1	20.1	7.9	7.9	31.9	31.9	94.7	94.7	7.1	7.1	5.7	6	91	91					<0.2	1.6				
						6.8	0.4	284	20.1	20.1	7.9	7.9	31.9	31.9	94.7	94.7	7.1	7.1	5.6	3	92	92					<0.2	1.6				
SR1A	Sunny	Calm	14:40	4.6	Surface	1.0	-	-	20.7	20.7	7.9	7.9	31.1	31.1	97.6	97.6	7.3	7.3	2.3	5	-	-	819980	812665	-	-	-	-				
						1.0	-	-	20.7	20.7	7.9	7.9	31.1	31.1	97.6	97.6	7.3	7.3	2.4	5	-	-										
						2.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-								
					Middle	2.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-								
						3.6	-	-	20.4	20.4	7.9	7.9	31.8	31.8	95.5	95.5	7.1	7.1	4.8	5	-	-	-	-								
						3.6	-	-	20.4	20.4	7.9	7.9	31.8	31.8	95.5	95.5	7.1	7.1	4.8	4	-	-	-	-								
SR2	Sunny	Calm	14:52	5.2	Surface	1.0	0.4	321	20.4	20.4	7.9	7.9	31.9	31.9	93.7	93.8	7.0	7.0	2.5	5	85	88	821467	814147	<0.2	1.4	1.3	1.3				
						1.0	0.4	336	20.4	20.4	7.9	7.9	31.9	31.9	93.8	93.8	7.0	7.0	2.5	4	86	86			<0.2	1.3						
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-								
					Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-								
						4.2	0.3	325	20.3	20.3	7.9	7.9	31.9	31.9	93.8	93.9	7.0	7.0	3.8	4	88	88					<0.2	1.3				
						4.2	0.3	333	20.3	20.3	7.9	7.9	31.9	31.9	93.9	93.9	7.0	7.0	3.8	6	89	89					<0.2	1.3				
SR3	Sunny	Calm	13:12	7.8	Surface	1.0	0.1	238	20.5	20.5	7.7	7.7	30.1	30.1	98.4	98.5	7.4	7.4	7.1	3	-	-	822164	807558	-	-	-	-				
						1.0	0.1	238	20.5	20.5	7.7	7.7	30.1	30.1	98.6	98.6	7.4	7.4	7.1	3	-	-										
						3.9	0.1	286	20.5	20.5	7.7	7.7	30.5	30.5	97.7	97.7	7.4	7.4	10.4	4	-	-										
					Middle	3.9	0.1	293	20.5	20.5	7.7	7.7	30.5	30.5	97.6	97.6	7.4	7.4	10.4	4	-	-	-	-								
						6.8	0.1	264	20.3	20.3	7.8	7.8	30.6	30.6	97.0	97.1	7.3	7.3	9.8	4	-	-	-	-								
						6.8	0.1	279	20.3	20.3	7.8	7.8	30.6	30.6	97.1	97.1	7.3	7.3	9.8	5	-	-	-	-								
SR4A	Sunny	Calm	14:16	10.5	Surface	1.0	0.1	233	20.5	20.5	7.9	7.9	31.9	31.9	96.6	96.6	7.2	7.2	11.9	7	-	-	817196	807804	-	-	-	-				
						1.0	0.1	244	20.5	20.5	7.9	7.9	31.9	31.9	96.6	96.6	7.2	7.2	12.0	6	-	-										
						5.3	0.1	242	20.7	20.7	7.9	7.9	31.1	31.1	98.9	98.9	7.4	7.4	15.1	7	-	-										
					Middle	5.3	0.1	260	20.7	20.7	7.9	7.9	31.1	31.1	98.8	98.8	7.4	7.4	15.1	7	-	-	-	-								
						9.5	0.1	246	20.5	20.5	7.8	7.8	31.8	31.8	98.3	98.7	7.4	7.4	14.8	6	-	-	-	-								
						9.5	0.1	249	20.5	20.5	7.8	7.8	31.8	31.8	99.0	99.0	7.4	7.4	14.9	7	-	-	-	-								
SR5A	Sunny	Calm	14:35	4.2	Surface	1.0	0.2	231	20.7	20.7	7.9	7.9	31.1	31.1	99.9	99.8	7.5	7.5	7.4	3	-	-	816569	810679	-	-	-	-				
						1.0	0.2	248	20.7	20.7	7.9	7.9	31.1	31.1	99.7	99.7	7.5	7.5	7.5	4	-	-										
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-								
					Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-								
						3.2	0.2	239	20.5	20.5	7.9	7.9	31.5	31.5	98.4	98.4	7.4	7.4	6.4	3	-	-	-	-								
						3.2	0.2	250	20.5	20.5	7.9	7.9	31.5	31.5	98.4	98.4	7.4	7.4	6.5	3	-	-	-	-								
SR6A	Sunny	Calm	15:14	4.9	Surface	1.0	0.1	346	20.4	20.4	7.9	7.9	31.8	31.8	94.9	94.																

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

Water Quality Monitoring Results on 07 January 20 during Mid-Ebb Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity(NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)						
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA	Value	DA	
C1	Fine	Rough	10:06	8.2	Surface	1.0	0.2	242	20.9	20.9	8.1	8.1	30.2	30.2	101.9	101.9	7.6	7.6	4.7	4.7	4	4	87	87	89	815623	804259	<0.2	3.5	3.1	3.5				
						1.0	0.2	254	20.9	20.9	8.1	8.1	30.1	30.1	101.8	101.8	7.6	7.6	4.8	4.8	4	4	87	87	87	815623	804259	<0.2	3.4	3.1	3.4				
					Middle	4.1	0.2	210	21.0	21.0	8.1	8.1	30.3	30.3	102.3	102.2	7.6	7.6	5.0	5.0	5	5	5	5	89	89	89	815623	804259	<0.2	2.3	3.1	2.3		
						4.1	0.2	218	20.9	20.9	8.1	8.1	30.4	30.4	102.0	102.0	7.6	7.6	5.0	5.0	5	5	5	5	89	89	89	815623	804259	<0.2	2.3	3.1	2.3		
					Bottom	7.2	0.1	221	21.0	21.1	8.1	8.1	30.0	30.0	100.8	100.8	7.5	7.5	6.3	6.3	7	7	6	6	90	90	90	815623	804259	<0.2	3.4	3.1	3.4		
						7.2	0.1	230	21.1	21.1	8.1	8.1	29.9	29.9	100.7	100.7	7.5	7.5	6.3	6.3	6	6	6	6	90	90	90	815623	804259	<0.2	3.4	3.1	3.4		
C2	Fine	Moderate	11:18	11.2	Surface	1.0	0.4	156	20.7	20.7	8.0	8.0	28.1	28.2	92.2	92.1	7.0	7.0	2.0	2.0	4	4	85	85	88	825676	806924	<0.2	2.8	2.8	2.8				
						1.0	0.5	171	20.7	20.7	8.0	8.0	28.2	28.2	92.0	92.0	7.0	7.0	2.0	2.0	3	3	86	86	88	825676	806924	<0.2	2.8	2.8	2.8				
					Middle	5.6	0.2	171	20.5	20.5	8.0	8.0	30.9	30.9	90.9	90.9	6.8	6.8	2.2	2.2	3	3	4	4	87	87	87	825676	806924	<0.2	2.8	2.8	2.8		
						5.6	0.2	181	20.5	20.5	8.0	8.0	30.9	30.9	90.8	90.8	6.8	6.8	2.2	2.2	4	4	87	87	87	825676	806924	<0.2	2.8	2.8	2.8				
					Bottom	10.2	0.3	149	20.5	20.5	8.0	8.0	31.6	31.6	91.6	91.7	6.8	6.8	5.6	5.6	5	5	5	5	90	90	90	825676	806924	<0.2	2.8	2.8	2.8		
						10.2	0.3	151	20.5	20.5	8.0	8.0	31.6	31.6	91.7	91.7	6.9	6.9	5.7	5.7	5	5	5	5	90	90	90	825676	806924	<0.2	2.9	2.8	2.9		
C3	Fine	Moderate	09:32	11.3	Surface	1.0	0.2	139	20.4	20.4	8.0	8.0	31.9	31.9	93.0	93.0	7.0	7.0	1.5	1.5	4	4	86	86	88	822121	817793	<0.2	2.3	2.4	2.3				
						1.0	0.2	151	20.4	20.4	8.0	8.0	31.9	31.9	92.9	92.9	6.9	6.9	1.5	1.5	4	4	86	86	88	822121	817793	<0.2	2.3	2.4	2.3				
					Middle	5.7	0.2	121	20.4	20.4	8.0	8.0	32.1	32.1	91.8	91.8	6.9	6.9	1.7	1.7	5	5	4	4	87	87	87	822121	817793	<0.2	2.4	2.4	2.4		
						5.7	0.2	131	20.4	20.4	8.0	8.0	32.1	32.1	91.8	91.8	6.9	6.9	1.7	1.7	4	4	87	87	87	822121	817793	<0.2	2.5	2.4	2.5				
					Bottom	10.3	0.1	29	20.3	20.3	8.0	8.0	32.5	32.5	92.8	93.0	6.9	7.0	2.5	2.5	6	6	5	5	90	90	90	822121	817793	<0.2	2.4	2.4	2.4		
						10.3	0.1	30	20.3	20.3	8.0	8.0	32.5	32.5	93.1	93.1	7.0	7.0	2.5	2.5	5	5	5	5	90	90	90	822121	817793	<0.2	2.4	2.4	2.4		
IM1	Fine	Calm	10:27	4.2	Surface	1.0	0.1	237	21.2	21.2	8.1	8.1	29.8	29.8	102.5	102.5	7.6	7.6	5.1	5.1	4	4	83	83	83	817970	807140	<0.2	3.4	3.5	3.4				
						1.0	0.1	250	21.2	21.2	8.1	8.1	29.8	29.8	102.5	102.5	7.6	7.6	5.2	5.2	4	4	84	84	83	817970	807140	<0.2	3.3	3.5	3.3				
					Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	86	817970	807140	<0.2	-	3.5	-
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	86	817970	807140	<0.2	-	3.5
					Bottom	3.2	0.1	199	21.4	21.4	8.1	8.1	29.8	29.8	102.3	102.3	7.6	7.6	5.7	5.7	6	6	6	6	88	88	88	817970	807140	<0.2	3.5	3.5	3.5		
						3.2	0.2	206	21.4	21.4	8.1	8.1	29.8	29.8	102.3	102.3	7.6	7.6	5.8	5.8	6	6	6	6	88	88	88	817970	807140	<0.2	3.6	3.5	3.6		
IM2	Fine	Calm	10:34	6.5	Surface	1.0	0.1	145	21.2	21.2	8.1	8.1	29.4	29.4	101.9	101.8	7.6	7.6	4.8	4.8	5	5	84	84	84	818173	806142	<0.2	3.6	3.4	3.6				
						1.0	0.1	152	21.1	21.1	8.1	8.1	29.4	29.4	101.6	101.6	7.6	7.6	4.8	4.8	6	6	84	84	84	818173	806142	<0.2	3.4	3.4	3.4				
					Middle	3.3	0.1	184	20.9	20.9	8.1	8.1	28.8	28.8	101.1	101.2	7.6	7.6	5.4	5.4	6	6	7	7	87	87	87	818173	806142	<0.2	3.4	3.4	3.4		
						3.3	0.1	190	20.9	20.9	8.1	8.1	28.8	28.8	101.2	101.2	7.6	7.6	5.7	5.7	7	7	87	87	87	818173	806142	<0.2	3.3	3.4	3.3				
					Bottom	5.5	0.1	185	21.0	21.1	8.1	8.1	29.1	29.0	101.6	101.6	7.6	7.6	5.8	5.8	8	8	8	8	89	89	89	818173	806142	<0.2	3.3	3.4	3.3		
						5.5	0.1	193	21.1	21.1	8.1	8.1	29.0	29.0	101.6	101.6	7.6	7.6	5.6	5.6	8	8	8	8	89	89	89	818173	806142	<0.2	3.3	3.4	3.3		
IM3	Fine	Calm	10:43	6.6	Surface	1.0	0.1	154	20.9	20.9	8.1	8.1	29.3	29.3	101.4	101.4	7.6	7.6	4.6	4.6	5	5	85	85	85	818793	805611	<0.2	2.6	2.6	2.6				
						1.0	0.2	162	20.9	20.9	8.1	8.1	29.3	29.3	101.4	101.4	7.6	7.6	4.7	4.7	5	5	85	85	85	818793	805611	<0.2	2.7	2.6	2.7				
					Middle	3.3	0.1	151	21.0	21.0	8.1	8.1	29.7	29.7	101.7	101.7	7.6	7.6	4.5	4.5	6	6	6	6	88	88	88	818793	805611	<0.2	2.6	2.6	2.6		
						3.3	0.1	158	21.0	21.0	8.1	8.1	29.7	29.7	101.6	101.6	7.6	7.6	5.1	5.1	7	7	88	88	88	818793	805611	<0.2	2.6	2.6	2.6				
					Bottom	5.6	0.1	175	22.3	22.3	8.1	8.1	29.5	29.5	103.6	103.6	7.6	7.6	5.1	5.1	8	8	8	8	89	89	89	818793	805611	<0.2	2.5	2.6	2.5		
						5.6	0.1	185	22.3	22.3	8.1	8.1	29.5	29.5	103.6	103.6	7.6	7.6	5.2	5.2	7	7	90	90	90	818793	805611	<0.2	2.6	2.6	2.6				
IM4	Fine	Moderate	10:53	7.0	Surface	1.0	0.4	185	21.3	21.3	8.1	8.1	28.5	28.5	101.9	101.9	7.7	7.7	3.4	3.4	6	6	84	84	84	819713	804592	<0.2	2.7	2.7	2.7				
						1.0	0.4	190	21.3	21.3	8.1	8.1	28.5	28.5	101.9	101.9	7.7	7.7	3.3	3.3	5	5	84	84	84	819713	804592	<0.2	2.7	2.7	2.7				
					Middle	3.5	0.2	165	21.2	21.2	8.0	8.0	26.7	26.7	101.5	101.5	7.7	7.7	4.7	4.7	4	4	88	88	88	819713	804592	<0.2	2.6	2.6	2.6				
						3.5	0.2	167	21.2	21.2	8.0	8.0	26.7	26.7	101.5	101.5	7.7	7.7	5.1	5.1	4	4	88	88	88	819713	804592	<0.2	2.6	2.6	2.6				
					Bottom	6.0	0.1	155	21.2	21.2	8.1	8.1	26.8	26.8	101.4	101.4	7.7	7.7	5.9	5.9	3	3	90	90	90	819713	804592	<0.2	2.7	2.7	2.7				
						6.0	0.1	170	21.2	21.2	8.1	8.1	26.8	26.8	101.3	101.3	7.7	7.7	6.2	6.2	3	3	90	90	90	819713	804592	<0.2	2.7	2.7	2.7				
IM5	Fine	Moderate	11:03	6.5	Surface	1.0	0.4	204	21.6	21.6	8.0	8.0	27.2	27.3	101.9	101.8	7.7	7.7	4.2	4.2	2	2	84	84	84	820713	804849	<0.2	2.6	2.7	2.6				
						1.0	0.4	220	21.6	21.6	8.0																								

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

Water Quality Monitoring Results on 07 January 20 during Mid-Ebb Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity (NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)			
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA
IM9	Fine	Moderate	10:47	6.8	Surface	1.0	0.2	94	20.8	20.8	8.0	8.0	27.9	28.0	95.5	95.5	7.3	1.8	6	86	88	822083	808814	<0.2	2.6	2.6	2.6					
						1.0	0.2	99	20.8	20.8	8.0	8.0	28.1	28.0	95.4	7.2	1.9	5	86	88	<0.2	2.6	2.6									
						3.4	0.1	118	20.6	20.6	8.0	8.0	29.2	29.2	95.4	7.2	2.6	4	88	88	<0.2	2.6	2.6									
					Middle	3.4	0.1	127	20.6	20.6	8.0	8.0	29.3	29.2	95.4	7.2	2.9	4	89	88	<0.2	2.6	2.6									
						5.8	0.2	83	20.4	20.4	8.0	8.0	30.8	30.8	95.3	7.2	4.6	3	90	88	<0.2	2.4	2.4									
						5.8	0.2	89	20.4	20.4	8.0	8.0	30.7	30.8	95.3	7.2	4.6	4	90	88	<0.2	2.5	2.5									
IM10	Fine	Moderate	10:40	7.2	Surface	1.0	0.3	93	20.9	20.9	8.0	8.0	27.8	27.8	96.1	96.1	7.3	1.5	6	85	88	822383	809813	<0.2	2.5	2.5						
						1.0	0.4	96	20.9	20.9	8.0	8.0	27.8	27.8	96.1	7.3	1.5	4	86	88	<0.2	2.4	2.4									
						3.6	0.3	70	20.7	20.7	8.0	8.0	29.6	29.6	94.4	7.1	2.7	4	88	88	<0.2	2.5	2.5									
					Middle	3.6	0.3	75	20.7	20.7	8.0	8.0	29.5	29.6	94.3	7.1	2.9	5	87	88	<0.2	2.5	2.5									
						6.2	0.3	90	20.5	20.5	8.0	8.0	31.1	31.1	93.5	7.0	4.6	4	90	88	<0.2	2.5	2.5									
						6.2	0.3	94	20.5	20.5	8.0	8.0	31.1	31.1	93.6	7.0	4.6	3	90	88	<0.2	2.6	2.6									
IM11	Fine	Moderate	10:28	7.9	Surface	1.0	0.5	82	20.9	20.9	8.0	8.0	27.4	27.4	96.8	96.7	7.4	1.8	4	86	88	822060	811454	<0.2	2.5	2.5						
						1.0	0.5	83	20.9	20.9	8.0	8.0	27.4	27.4	96.6	7.4	1.9	4	87	88	<0.2	2.6	2.6									
						4.0	0.2	29	20.7	20.7	8.0	8.0	29.0	29.0	95.6	7.2	2.6	3	87	88	<0.2	2.6	2.6									
					Middle	4.0	0.3	30	20.7	20.7	8.0	8.0	29.0	29.0	95.6	7.2	2.5	3	88	88	<0.2	2.5	2.5									
						6.9	0.2	51	20.5	20.5	8.0	8.0	31.2	31.2	95.5	7.2	3.0	2	90	88	<0.2	2.6	2.6									
						6.9	0.2	55	20.6	20.6	8.0	8.0	30.9	31.1	96.0	7.2	3.0	3	90	88	<0.2	2.6	2.6									
IM12	Fine	Moderate	10:20	8.0	Surface	1.0	0.4	91	20.8	20.8	8.0	8.0	27.3	27.3	95.9	95.8	7.3	2.4	4	86	88	821479	812025	<0.2	2.3	2.3						
						1.0	0.4	91	20.7	20.8	8.0	8.0	27.4	27.3	95.6	7.3	2.4	5	85	88	<0.2	2.3	2.3									
						4.0	0.1	83	20.5	20.5	8.0	8.0	31.2	31.2	94.1	7.1	2.8	4	88	88	<0.2	2.3	2.3									
					Middle	4.0	0.1	90	20.5	20.5	8.0	8.0	31.3	31.2	94.1	7.1	2.8	2	87	88	<0.2	2.3	2.3									
						7.0	0.1	35	20.5	20.5	8.0	8.0	31.6	31.6	94.2	7.1	2.9	4	90	88	<0.2	2.4	2.4									
						7.0	0.1	37	20.5	20.5	8.0	8.0	31.6	31.6	94.3	7.1	2.9	3	90	88	<0.2	2.3	2.3									
SR1A	Fine	Moderate	10:05	5.0	Surface	1.0	-	-	20.6	20.6	8.0	8.0	31.1	31.2	94.0	94.0	7.0	3.1	5	-	-	819978	812657	-	-	-	-					
						1.0	-	-	20.6	20.6	8.0	8.0	31.2	31.2	93.9	7.0	3.4	6	-	-	-	-	-	-	-	-						
						2.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
					Middle	2.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						4.0	-	-	20.5	20.5	8.0	8.0	31.6	31.6	93.9	7.0	5.6	5	-	-	-	-	-	-	-	-	-	-	-	-		
						4.0	-	-	20.5	20.5	8.0	8.0	31.6	31.6	94.0	7.0	5.6	5	-	-	-	-	-	-	-	-	-	-	-	-		
SR2	Fine	Moderate	09:53	4.9	Surface	1.0	0.1	61	20.6	20.6	8.0	8.0	31.4	31.4	94.5	94.5	7.1	2.7	4	86	88	821477	814152	<0.2	2.4	2.3						
						1.0	0.1	66	20.5	20.5	8.0	8.0	31.4	31.4	94.4	7.1	2.7	4	86	88	<0.2	2.2	2.2									
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
					Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						3.9	0.1	83	20.5	20.5	8.0	8.0	31.5	31.5	94.7	7.1	2.8	6	90	88	<0.2	2.4	2.4									
						3.9	0.1	90	20.5	20.5	8.0	8.0	31.5	31.5	94.8	7.1	2.9	6	90	88	<0.2	2.2	2.2									
SR3	Fine	Moderate	10:58	8.3	Surface	1.0	0.2	169	20.8	20.9	8.0	8.0	27.2	27.2	95.2	95.3	7.3	1.7	5	-	-	822128	807569	-	-	-	-					
						1.0	0.2	176	20.9	20.9	8.0	8.0	27.2	27.2	95.3	7.3	1.7	5	-	-	-	-	-	-	-	-	-					
						4.2	0.1	140	20.6	20.6	8.0	8.0	30.1	30.1	94.5	7.1	2.8	4	-	-	-	-	-	-	-	-	-					
					Middle	4.2	0.1	143	20.5	20.5	8.0	8.0	30.1	30.1	94.7	7.1	3.2	5	-	-	-	-	-	-	-	-	-	-	-			
						7.3	0.2	93	20.3	20.3	8.0	8.0	31.2	31.3	95.2	7.2	5.5	2	-	-	-	-	-	-	-	-	-	-				
						7.3	0.2	102	20.3	20.3	8.0	8.0	31.3	31.3	95.2	7.2	5.8	3	-	-	-	-	-	-	-	-	-	-				
SR4A	Fine	Calm	09:44	8.3	Surface	1.0	0.2	96	20.7	20.7	8.1	8.1	29.8	29.9	101.2	101.2	7.6	5.8	7	-	-	817172	807815	-	-	-	-					
						1.0	0.2	105	20.7	20.7	8.1	8.1	29.9	29.9	101.1	101.1	7.6	5.8	7	-	-	-	-	-	-	-	-					
						4.2	0.1	85	20.7	20.7	8.1	8.1	29.9	29.9	100.8	100.8	7.6	6.5	8	-	-	-	-	-	-	-	-					
					Middle	4.2	0.1	85	20.7	20.7	8.1	8.1	29.9	29.9	100.8	100.8	7.6	6.7	7	-	-	-	-	-	-	-	-	-				
						7.3	0.1	54	20.8	20.8	8.1	8.1	30.0	30.0	100.9	100.8	7.6	7.1	8	-	-	-	-	-	-	-	-					
						7.3	0.1	54	20.8	20.8	8.1	8.1	30.0	30.0	100.7	100.7	7.6	7.1	8	-	-	-	-	-	-	-	-					
SR5A	Fine	Calm	09:25	4.7	Surface	1.0	0.1	190	21.1	21.1	8.0	8.0	29.7	29.7	98.9	98.9	7.4	8.1	7	-	-	816586	810709	-	-	-	-					
						1.0	0.1	207	21.0	21.0	8.0	8.0	29.7	29.7	98.9	98.9	7.4	8.0	6	-	-	-	-	-	-	-						
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
					Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
						3.7	0.1	174	21.1	21.1	8.0	8.0	29.8	29.8	98.7	98.7	7.4	6.1	8	-	-	-	-	-	-	-	-					
						3.7	0.1	185	21.1	21.1	8.0	8.0	29.8	29.8	98.6	98.6	7.4	6.0	8	-	-	-	-	-	-	-	-					
SR6A	Fine	Calm	09:00	3.3	Surface	1.0	0.1	277	20.6	20.6	8.0	8.0	29.4	29.4	97.3	97.3	7.4	8.2	19	-	-	817950	814717	-	-	-	-					
						1.0	0.1	293	20.6	20.6	8.0	8.0	29.4	29.4	97.3	7.4	8.1	20	-	-	-	-	-	-	-							
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
					Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
						2.3	0.1	257	20.9	20.9	8.1	8.1	29.2	29.2	98.4	98.5	7.4	7.6	7	-	-	-	-	-	-							
						2.3	0.1	279	20.9	20.9	8.1	8.1	29.2	29.2	98.5	98.5	7.4	7.8	6	-	-	-	-	-								
SR7	Fine	Moderate	08:57	16.3	Surface	1.0	0.2	306	20.3	20.3	8.0	8.0	32.6	32.6	88.1	88.1	6.6	2.0	5	-	-	8										



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

Water Quality Monitoring Results on 07 January 20 during Mid-Flood Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity(NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)			
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA
C1	Fine	Moderate	15:09	8.1	Surface	1.0	0.1	44	21.9	21.9	8.1	8.1	29.0	29.0	102.8	102.8	7.6	7.6	4.9	6.5	8	7	84	87	815601	804264	<0.2	3.5	<0.2	3.4		
						1.0	0.1	43	21.9	8.1	8.1	29.0	29.0	102.7	102.7	7.6	7.6	4.9	6.5	8	7	84	87	815601	804264	<0.2	3.4	<0.2	3.4			
						4.1	0.1	58	22.1	22.2	8.1	8.1	28.6	28.6	103.3	103.3	7.6	7.6	6.0	6.5	7	7	88	88	815601	804264	<0.2	3.4	<0.2	3.4		
					Middle	4.1	0.1	57	22.2	22.4	8.1	8.1	28.5	28.5	103.6	103.6	7.6	7.6	6.1	6.5	7	7	88	88	815601	804264	<0.2	3.4	<0.2	3.3		
						7.1	0.1	18	22.4	22.4	8.1	8.1	29.4	29.4	104.3	104.3	7.6	7.6	8.1	7.6	5	5	90	90	815601	804264	<0.2	3.3	<0.2	3.5		
						7.1	0.1	19	22.4	22.4	8.1	8.1	29.4	29.4	104.3	104.3	7.6	7.6	8.8	7.6	5	5	90	90	815601	804264	<0.2	3.5	<0.2	3.5		
C2	Fine	Moderate	14:19	11.4	Surface	1.0	0.2	16	20.8	20.8	8.0	8.0	28.0	28.0	92.7	92.7	7.1	6.9	1.9	3.7	5	5	85	88	825673	806924	<0.2	2.7	<0.2	2.8		
						1.0	0.2	18	20.8	20.8	8.0	8.0	27.9	27.9	92.5	92.5	7.0	6.9	1.9	3.7	4	5	86	88	825673	806924	<0.2	2.8	<0.2	2.8		
						5.7	0.2	15	20.5	20.5	8.0	8.0	30.9	31.0	89.5	89.4	6.7	6.7	3.2	4.8	4	5	88	87	825673	806924	<0.2	2.8	<0.2	2.8		
					Middle	5.7	0.2	16	20.5	20.5	8.0	8.0	31.0	31.0	89.3	89.3	6.7	6.7	3.6	4.8	5	5	87	87	825673	806924	<0.2	2.8	<0.2	2.8		
						10.4	0.4	17	20.5	20.5	8.0	8.0	31.6	31.6	89.0	89.0	6.7	6.7	5.8	5.0	5	5	90	90	825673	806924	<0.2	2.8	<0.2	2.8		
						10.4	0.4	18	20.5	20.5	8.0	8.0	31.6	31.6	89.0	89.0	6.7	6.7	5.7	5.0	4	5	90	90	825673	806924	<0.2	2.7	<0.2	2.7		
C3	Fine	Moderate	16:11	11.7	Surface	1.0	0.1	221	20.6	20.6	8.0	8.0	31.7	31.7	93.5	93.4	7.0	6.9	2.0	2.4	3	3	86	88	822115	817790	<0.2	2.3	<0.2	2.3		
						1.0	0.1	232	20.6	20.4	8.0	8.0	31.8	32.0	93.2	91.2	7.0	6.8	2.0	2.4	3	3	85	88	822115	817790	<0.2	2.3	<0.2	2.3		
						5.9	0.1	248	20.4	20.4	8.0	8.0	32.0	32.0	91.3	91.1	6.8	6.8	2.4	2.9	3	3	88	87	822115	817790	<0.2	2.3	<0.2	2.3		
					Middle	5.9	0.1	262	20.4	20.4	8.0	8.0	32.1	32.1	91.1	91.1	6.8	6.8	2.5	2.9	3	3	87	87	822115	817790	<0.2	2.3	<0.2	2.3		
						10.7	0.2	252	20.4	20.4	8.0	8.0	32.2	32.1	93.1	93.4	7.0	7.0	2.9	2.8	4	4	90	90	822115	817790	<0.2	2.4	<0.2	2.4		
						10.7	0.2	261	20.4	20.4	8.0	8.0	32.1	32.1	93.6	93.6	7.0	7.0	2.8	2.8	4	4	90	90	822115	817790	<0.2	2.4	<0.2	2.4		
IM1	Fine	Calm	14:45	4.4	Surface	1.0	0.1	78	21.7	21.7	8.1	8.1	29.3	29.3	103.0	103.0	7.6	7.6	3.8	7.5	4	7	85	88	817947	807125	<0.2	4.0	<0.2	4.0		
						1.0	0.1	78	21.7	21.7	8.1	8.1	29.3	29.3	103.0	103.0	7.6	7.6	4.2	7.5	5	7	85	88	817947	807125	<0.2	4.0	<0.2	4.0		
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
					Middle	3.4	0.1	89	21.7	21.7	8.1	8.1	29.1	29.1	103.1	103.1	7.7	7.7	10.9	7.5	8	7	90	90	817947	807125	<0.2	4.0	<0.2	4.0		
						3.4	0.1	78	21.7	21.7	8.1	8.1	29.1	29.1	103.1	103.1	7.7	7.7	11.0	7.5	9	7	90	90	817947	807125	<0.2	4.0	<0.2	4.0		
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IM2	Fine	Calm	14:39	6.8	Surface	1.0	0.2	356	21.8	21.9	8.1	8.1	28.8	28.7	102.0	102.2	7.6	7.7	5.1	5.7	5	5	87	88	818158	806171	<0.2	3.9	<0.2	3.9		
						1.0	0.2	359	21.9	22.0	8.1	8.1	28.7	28.7	102.3	102.3	7.6	7.7	5.1	5.7	5	5	88	88	818158	806171	<0.2	3.9	<0.2	3.9		
						3.4	0.1	338	22.0	22.0	8.1	8.1	27.5	27.5	103.5	103.4	7.7	7.7	5.6	5.7	5	5	88	88	818158	806171	<0.2	3.9	<0.2	3.9		
					Middle	3.4	0.1	311	21.9	21.4	8.1	8.1	27.6	28.7	103.3	101.7	7.7	7.6	5.6	7.6	5	5	88	88	818158	806171	<0.2	3.9	<0.2	3.8		
						5.8	0.1	284	21.4	21.4	8.1	8.1	28.8	28.7	101.7	101.7	7.6	7.6	6.2	7.5	6	6	90	91	818158	806171	<0.2	3.8	<0.2	3.9		
						5.8	0.1	290	21.4	21.4	8.1	8.1	28.7	28.7	101.7	101.7	7.6	7.6	6.3	7.5	6	6	91	91	818158	806171	<0.2	3.9	<0.2	3.9		
IM3	Fine	Moderate	14:37	6.9	Surface	1.0	0.2	344	22.4	22.4	8.0	8.0	27.2	27.2	103.1	103.3	7.7	7.7	3.3	3.4	3	4	88	88	818786	805598	<0.2	4.7	<0.2	4.6		
						1.0	0.2	350	22.4	22.2	8.0	8.1	27.2	27.2	103.4	103.4	7.7	7.7	3.3	3.4	3	4	88	88	818786	805598	<0.2	4.7	<0.2	4.6		
						3.5	0.1	316	22.3	22.2	8.1	8.1	28.5	26.5	103.4	103.3	7.7	7.7	3.2	3.4	4	4	89	89	818786	805598	<0.2	2.7	<0.2	2.7		
					Middle	3.5	0.1	316	22.1	22.2	8.1	8.1	28.6	26.5	103.1	103.1	7.7	7.7	3.3	3.4	4	4	89	89	818786	805598	<0.2	2.7	<0.2	2.7		
						5.9	0.0	247	21.8	21.9	8.0	8.0	28.8	28.8	101.4	101.4	7.5	7.5	3.7	7.5	5	5	91	91	818786	805598	<0.2	2.4	<0.2	2.4		
						5.9	0.0	248	21.9	21.9	8.0	8.0	28.7	28.8	101.7	101.7	7.5	7.5	3.6	7.5	6	6	91	91	818786	805598	<0.2	2.2	<0.2	2.2		
IM4	Fine	Moderate	14:30	7.1	Surface	1.0	0.0	22	22.0	22.0	8.0	8.0	26.0	26.1	102.6	102.5	7.7	7.7	4.2	6.6	3	4	83	87	819721	804604	<0.2	2.7	<0.2	2.7		
						1.0	0.0	22	21.9	21.8	8.0	8.0	26.1	26.1	102.3	102.3	7.7	7.7	4.3	6.6	3	4	84	87	819721	804604	<0.2	2.7	<0.2	2.7		
						3.6	0.1	26	21.7	21.8	8.0	8.0	27.6	27.5	101.4	101.6	7.6	7.6	3.7	6.6	4	4	87	87	819721	804604	<0.2	2.5	<0.2	2.5		
					Middle	3.6	0.1	28	21.9	21.8	8.0	8.0	27.5	27.5	101.8	101.8	7.6	7.6	3.8	6.6	5	4	87	87	819721	804604	<0.2	2.5	<0.2	2.5		
						6.1	0.1	327	21.4	21.4	8.1	8.1	27.8	27.8	101.4	101.4	7.6	7.6	11.7	7.6	5	5	91	91	819721	804604	<0.2	2.3	<0.2	2.3		
						6.1	0.1	343	21.4	21.4	8.1	8.1	27.8	27.8	101.4	101.4	7.6	7.6	11.9	7.6	5	5	91	91	819721	804604	<0.2	2.4	<0.2	2.4		
IM5	Fine	Moderate	14:25	6.7	Surface	1.0	0.2	281	21.7	21.8	8.0	8.0	25.8	25.8	102.1	102.1	7.7	7.8	3.8	4.8	3	3	88	88	820748	804884	<0.2	2.7	<0.2	2.7		
						1.0	0.2	303	21.8	21.8	8.0	8.0	25.8	25.8	102.1	102.1	7.7	7.8	4.2	4.8	3	3	88	88	820748	804884	<0.2	2.9	<0.2	2.9		
						3.4	0.2	274	21.7	21.7	8.0	8.0	25.3	25.3	102.2	102.2	7.8	7.8	4.4	4.8	3	3	87	87	820748	804884	<0.2	2.7	<0.2	2.7		
					Middle	3.4	0.2	282	21.7	21.7	8.0	8.0	25.3	25.3	102.1	102.1	7.8	7.8	4.7	4.8	3	3	88	88	820748	804884	<0.2	2.6	&lt			

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

Water Quality Monitoring Results on 07 January 20 during Mid-Flood Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity (NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)			
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA
IM9	Fine	Moderate	14:48	7.0	Surface	1.0	0.3	287	21.0	21.0	8.0	8.0	27.9	27.9	97.3	97.3	7.4	7.4	2.1	3	87	88	88	88	88	822104	808808	<0.2	2.8	<0.2	2.8	
						1.0	0.3	288	21.0	8.0	8.0	27.9	27.9	97.2	97.2	7.4	7.4	1.8	2	86	86	88	88									
						3.5	0.4	279	20.6	20.6	8.0	8.0	28.2	28.2	96.0	95.8	7.3	7.3	4.9	4	88	88										
					3.5	0.4	280	20.6	20.6	8.0	8.0	28.2	28.2	95.8	95.8	7.3	7.3	5.1	5	88	88											
					6.0	0.2	285	20.7	20.8	8.0	8.0	30.4	30.3	95.2	95.2	7.1	7.1	7.0	3	90	90											
					6.0	0.2	289	20.8	20.8	8.0	8.0	30.2	30.3	95.2	95.2	7.1	7.1	6.8	5	90	90											
IM10	Fine	Moderate	14:55	7.3	Surface	1.0	0.5	290	20.9	20.9	8.0	8.0	28.5	28.6	96.1	96.0	7.3	7.3	1.7	2	86	87	87	87	88	822367	809795	<0.2	2.8	<0.2	2.8	
						1.0	0.5	291	20.8	20.8	8.0	8.0	28.6	28.6	95.9	95.5	7.3	7.3	1.7	2	87	88										
						3.7	0.3	284	20.7	20.7	8.0	8.0	29.3	29.3	95.5	95.6	7.2	7.2	1.9	4	88	88										
					3.7	0.3	287	20.7	20.7	8.0	8.0	29.4	29.4	95.6	95.6	7.2	7.2	2.0	3	87	87											
					6.3	0.3	276	20.9	21.0	8.0	8.0	29.7	29.7	95.9	96.1	7.2	7.2	2.4	4	90	90											
					6.3	0.3	278	21.0	21.0	8.0	8.0	29.6	29.6	96.2	96.2	7.2	7.2	2.3	5	90	90											
IM11	Fine	Moderate	15:04	7.0	Surface	1.0	0.1	224	21.3	21.3	8.0	8.0	28.3	28.3	97.9	97.7	7.4	7.4	1.7	3	86	86	86	86	88	822077	811467	<0.2	2.6	<0.2	2.6	
						1.0	0.1	242	21.2	21.2	8.0	8.0	28.4	28.4	97.4	97.4	7.3	7.3	1.7	3	86	86										
						3.5	0.1	250	20.7	20.7	8.0	8.0	29.5	29.5	94.8	94.8	7.2	7.2	2.0	2	88	88										
					3.5	0.2	263	20.7	20.7	8.0	8.0	29.5	29.5	94.7	94.7	7.2	7.2	2.0	3	89	89											
					6.0	0.2	285	20.7	20.7	8.0	8.0	29.9	29.9	94.9	94.9	7.1	7.1	2.7	4	90	90											
					6.0	0.3	286	20.7	20.7	8.0	8.0	29.9	29.9	94.9	94.9	7.2	7.2	2.7	3	90	90											
IM12	Fine	Moderate	15:11	7.5	Surface	1.0	0.1	244	20.8	20.8	8.0	8.0	29.0	29.1	95.6	95.5	7.2	7.2	2.8	4	86	85	85	85	88	821458	812066	<0.2	2.6	<0.2	2.6	
						1.0	0.1	262	20.8	20.8	8.0	8.0	29.2	29.1	95.4	95.4	7.2	7.2	3.1	4	86	86										
						3.8	0.1	253	20.6	20.6	8.0	8.0	30.9	30.9	94.3	94.4	7.1	7.1	4.0	3	87	87										
					3.8	0.1	276	20.6	20.6	8.0	8.0	30.9	30.9	94.4	94.4	7.1	7.1	4.0	3	88	88											
					6.5	0.2	158	20.8	20.8	8.0	8.0	30.9	30.8	95.1	95.3	7.1	7.1	3.8	3	90	90											
					6.5	0.2	165	20.9	20.9	8.0	8.0	30.8	30.8	95.4	95.3	7.1	7.1	3.7	3	90	90											
SR1A	Fine	Moderate	15:36	5.1	Surface	1.0	-	-	20.9	20.9	8.0	8.0	29.1	29.1	97.9	97.9	7.4	7.4	1.9	2	-	-	-	-	88	819981	812659	-	-	-	-	
						1.0	-	-	20.9	20.9	8.0	8.0	29.2	29.1	97.8	97.8	7.4	7.4	2.0	<2	-	-										
						2.6	-	-	-	-	-	-	-	-	-	-	-	7.4	2.0	-	-											
					2.6	-	-	-	-	-	-	-	-	-	-	-	-	-	2.0	3	-	-										
					4.1	-	-	20.7	20.7	8.0	8.0	30.5	30.5	97.0	97.0	7.3	7.3	2.1	4	-	-											
					4.1	-	-	20.7	20.7	8.0	8.0	30.5	30.5	97.0	97.0	7.3	7.3	2.1	4	-	-											
SR2	Fine	Moderate	15:52	4.9	Surface	1.0	0.2	222	20.9	20.9	8.0	8.0	29.1	29.2	98.1	98.0	7.4	7.4	2.0	3	87	86	86	86	88	821481	814143	<0.2	2.5	<0.2	2.5	
						1.0	0.2	231	20.8	20.8	8.0	8.0	29.3	29.2	97.9	97.9	7.4	7.4	2.0	2	-	-										
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.0	2	-	-									
					3.9	0.1	218	20.7	20.8	8.0	8.0	30.2	30.0	97.5	97.6	7.3	7.3	2.1	2	90	90											
					3.9	0.1	219	20.8	20.8	8.0	8.0	29.9	29.9	97.7	97.7	7.3	7.3	2.0	2	90	90											
					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	-	-									
SR3	Fine	Moderate	14:38	8.4	Surface	1.0	0.4	12	21.0	21.0	8.0	8.0	27.2	27.2	96.4	96.3	7.3	7.3	1.9	2	-	-	-	-	88	822166	807591	-	-	-	-	
						1.0	0.4	13	21.0	21.0	8.0	8.0	27.2	27.2	96.2	96.3	7.3	7.3	2.0	2	-	-										
						4.2	0.3	15	20.5	20.5	8.0	8.0	30.6	30.6	95.0	95.0	7.2	7.2	3.7	2	-	-										
					4.2	0.3	16	20.4	20.4	8.0	8.0	30.7	30.6	95.0	95.0	7.2	7.2	4.0	<2	-	-											
					7.4	0.3	17	20.3	20.3	8.0	8.0	31.6	31.6	95.0	95.0	7.1	7.1	6.3	3	-	-											
					7.4	0.3	17	20.3	20.3	8.0	8.0	31.5	31.6	95.0	95.0	7.1	7.1	5.9	3	-	-											
SR4A	Fine	Calm	15:35	8.4	Surface	1.0	0.1	238	22.5	22.5	8.1	8.1	29.2	29.2	104.0	103.9	7.6	7.6	5.0	4	-	-	-	-	88	817170	807789	-	-	-	-	
						1.0	0.1	233	22.4	22.4	8.1	8.1	29.2	29.2	103.8	103.8	7.6	7.6	4.9	5	-	-										
						4.2	0.2	289	22.3	22.3	8.1	8.1	29.0	29.0	103.5	103.5	7.6	7.6	5.4	7	-	-										
					4.2	0.2	268	22.3	22.3	8.1	8.1	29.0	29.0	103.4	103.4	7.6	7.6	5.2	6	-	-											
					7.4	0.3	275	21.2	21.2	8.1	8.1	30.2	30.2	101.3	101.4	7.6	7.6	7.0	8	-	-											
					7.4	0.3	277	21.2	21.2	8.1	8.1	30.2	30.2	101.4	101.4	7.6	7.6	6.9	8	-	-											
SR5A	Fine	Calm	15:48	4.3	Surface	1.0	0.2	281	22.1	22.1	8.1	8.1	29.8	29.8	103.0	103.0	7.6	7.6	6.5	9	-	-	-	-	88	816605	810704	-	-	-	-	
						1.0	0.2	288	22.1	22.1	8.1	8.1	29.8	29.8	102.9	102.9	7.6	7.6	6.4	9	-	-										
						-	-	-	-	-	-	-	-	-	-	-	-	-	7.6	6.4	9	-	-									
					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	-	-										
					3.3	0.1	288	22.3	22.3	8.1	8.1	29.8	29.8	101.0	100.9	7.4	7.4	7.1	8	-	-											
					3.3	0.1	294	22.3	22.3	8.1	8.1	29.8	29.8	100.8	100.8	7.4	7.4	7.0	8	-	-											
SR6A	Fine	Calm	16:21	4.0	Surface	1.0	0.1	252	24.7	24.7	8.1	8.1	29.8	29.8	107.2	107.2	7.5	7.5	7.0	8	-	-	-	-	88	817950	814753	-	-	-	-	
						1.0	0.1	265	24.7	24.7	8.1	8.1	29.8	29.8	107.1	107.1	7.5	7.5	6.8	7	-	-										
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.2	7	-	-									
					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	-	-										
					3.0	0.1	287	24.7	24.7	8.1	8.1	29.6	29.6	107.2	107.2	7.5	7.5	9.5	7	-	-											
					3.0	0.1	292	24.7	24.7	8.1	8.1	29.7	29.6	107.2	107.2	7.5	7.5	9.4	7	-	-											
SR7	Fine	Moderate	16:38	16.3	Surface	1.0	0.1	289	20.5	20.5	8.0	8.0	32.2	32.2	92.7	92.6	6.9	6.9	1.5	2	-	-	-	-	88	823637	823748	-	-	-	-	
						1.0	0.1	298	20.5	20.5	8.0	8.0	32.2	32.2	92.4	92.6	6.9	6.9	1.6	<2	-	-										
						8.2	0.1	248	20.4	20.4	8.0	8.0	32.4	32.4	90.6	90.6	6.8	6.8	1.8	3	-	-										
					8.2	0.1	249	20.4	20.4	8.0	8.0	32.4	32.4	90.5	90.5	6.8	6.8	1.9	3	-	-											
					15.3	0.1	294																									



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

Water Quality Monitoring Results on 09 January 20 during Mid-Ebb Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity (NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)			
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA
IM9	Cloudy	Moderate	11:57	7.2	Surface	1.0	0.1	65	20.6	20.6	8.0	8.0	30.4	30.4	96.9	96.9	7.3	7.3	10.7	13	85	87	822108	808821	<0.2	1.6	<0.2	1.5				
						1.0	0.1	70	20.6	20.6	8.0	8.0	30.4	30.4	96.9	96.9	7.3	7.3	10.8	13	85	87	822108	808821	<0.2	1.5	<0.2	1.4				
						3.6	0.2	52	20.5	20.5	8.1	8.1	30.5	30.6	97.0	97.0	7.3	7.3	10.1	13	85	87	822108	808821	<0.2	1.4	<0.2	1.5				
					Middle	3.6	0.2	56	20.5	20.5	8.1	8.1	30.6	30.6	97.0	97.0	7.3	7.3	9.6	14	86	87	822108	808821	<0.2	1.4	<0.2	1.4				
						6.2	0.2	95	20.3	20.3	8.1	8.1	31.3	31.3	98.3	98.3	7.4	7.4	8.6	15	89	89	822108	808821	<0.2	1.4	<0.2	1.4				
						6.2	0.2	95	20.3	20.3	8.1	8.1	31.3	31.3	99.0	99.0	7.4	7.4	8.6	15	89	89	822108	808821	<0.2	1.4	<0.2	1.4				
IM10	Cloudy	Moderate	11:53	7.3	Surface	1.0	0.1	11	20.6	20.6	8.0	8.0	30.7	30.7	95.5	95.5	7.2	7.2	4.6	11	85	87	822363	809808	<0.2	1.3	<0.2	1.3				
						1.0	0.1	11	20.6	20.6	8.0	8.0	30.8	30.8	95.3	95.3	7.2	7.2	4.5	11	85	87	822363	809808	<0.2	1.3	<0.2	1.3				
						3.7	0.1	28	20.6	20.6	8.0	8.0	31.0	31.0	94.5	94.6	7.1	7.1	4.3	6	86	87	822363	809808	<0.2	1.2	<0.2	1.2				
					Middle	3.7	0.1	29	20.5	20.5	8.0	8.0	31.0	31.0	94.6	94.6	7.1	7.1	4.4	5	86	87	822363	809808	<0.2	1.2	<0.2	1.2				
						6.3	0.1	19	20.5	20.5	8.0	8.0	31.0	31.0	95.6	95.8	7.2	7.2	4.4	5	89	89	822363	809808	<0.2	1.2	<0.2	1.3				
						6.3	0.1	19	20.5	20.5	8.0	8.0	31.0	31.0	95.9	95.9	7.2	7.2	4.3	6	89	89	822363	809808	<0.2	1.3	<0.2	1.3				
IM11	Cloudy	Moderate	11:42	9.1	Surface	1.0	0.1	131	20.5	20.5	8.0	8.0	31.3	31.3	93.3	93.3	7.0	7.0	5.0	7	85	87	822038	811458	<0.2	1.2	<0.2	1.2				
						1.0	0.1	142	20.5	20.5	8.0	8.0	31.3	31.3	93.2	93.2	7.0	7.0	5.1	6	85	87	822038	811458	<0.2	1.2	<0.2	1.2				
						4.6	0.1	154	20.5	20.5	8.0	8.0	31.4	31.4	92.6	92.7	6.9	6.9	5.3	6	87	87	822038	811458	<0.2	1.2	<0.2	1.3				
					Middle	4.6	0.1	165	20.5	20.5	8.0	8.0	31.4	31.4	92.7	92.7	6.9	6.9	5.6	6	87	87	822038	811458	<0.2	1.3	<0.2	1.3				
						8.1	0.1	210	20.5	20.5	8.0	8.0	31.5	31.5	94.8	94.8	7.1	7.1	6.5	6	88	88	822038	811458	<0.2	1.3	<0.2	1.3				
						8.1	0.1	213	20.5	20.5	8.0	8.0	31.5	31.5	95.0	95.0	7.1	7.1	6.7	6	88	88	822038	811458	<0.2	1.3	<0.2	1.3				
IM12	Cloudy	Moderate	11:36	7.8	Surface	1.0	0.2	240	20.6	20.6	8.0	8.0	31.3	31.3	94.0	94.0	7.0	7.0	3.8	5	84	86	821461	812029	<0.2	1.3	<0.2	1.3				
						1.0	0.2	263	20.6	20.6	8.0	8.0	31.3	31.3	94.0	94.0	7.0	7.0	3.8	6	84	86	821461	812029	<0.2	1.3	<0.2	1.3				
						3.9	0.2	271	20.6	20.6	8.0	8.0	31.3	31.3	93.8	93.8	7.0	7.0	4.0	6	85	86	821461	812029	<0.2	1.3	<0.2	1.3				
					Middle	3.9	0.2	288	20.6	20.6	8.0	8.0	31.3	31.3	93.8	93.8	7.0	7.0	4.0	5	86	86	821461	812029	<0.2	1.3	<0.2	1.3				
						6.8	0.3	235	20.6	20.6	8.0	8.0	31.4	31.4	95.8	95.9	7.2	7.2	4.1	5	88	88	821461	812029	<0.2	1.2	<0.2	1.2				
						6.8	0.3	255	20.6	20.6	8.0	8.0	31.4	31.4	96.0	96.0	7.2	7.2	4.1	5	88	88	821461	812029	<0.2	1.3	<0.2	1.3				
SR1A	Cloudy	Calm	11:17	5.1	Surface	1.0	-	-	20.7	20.7	8.0	8.0	30.9	30.9	94.6	94.7	7.1	7.1	4.0	6	-	-	819974	812656	-	-	-	-				
						1.0	-	-	20.6	20.6	8.0	8.0	30.9	30.9	94.7	94.7	7.1	7.1	4.0	5	-	-	819974	812656	-	-	-	-				
						2.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	819974	812656	-	-	-	-		
					Middle	2.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	819974	812656	-	-	-	-		
						4.1	-	-	20.6	20.6	8.0	8.0	31.0	31.0	96.5	96.6	7.2	7.2	4.3	4	-	-	-	-	819974	812656	-	-	-	-		
						4.1	-	-	20.6	20.6	8.0	8.0	31.0	31.0	96.7	96.7	7.3	7.3	4.3	4	-	-	-	-	819974	812656	-	-	-	-		
SR2	Cloudy	Moderate	11:07	4.9	Surface	1.0	0.2	23	20.5	20.5	8.0	8.0	31.5	31.5	94.0	94.1	7.0	7.0	3.3	4	84	86	821444	814176	<0.2	1.1	<0.2	1.1				
						1.0	0.2	23	20.5	20.5	8.0	8.0	31.6	31.6	94.2	94.2	7.0	7.0	3.4	4	85	86	821444	814176	<0.2	1.0	<0.2	1.0				
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	821444	814176	<0.2	1.1	<0.2	1.1		
					Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	821444	814176	<0.2	1.1	<0.2	1.1		
						3.9	0.2	15	20.5	20.5	8.0	8.0	31.6	31.6	95.9	96.1	7.2	7.2	3.8	4	87	88	821444	814176	<0.2	1.1	<0.2	1.1				
						3.9	0.2	16	20.5	20.5	8.0	8.0	31.6	31.6	96.3	96.3	7.2	7.2	3.9	4	88	88	821444	814176	<0.2	1.1	<0.2	1.1				
SR3	Cloudy	Moderate	12:07	9.2	Surface	1.0	0.0	353	20.6	20.6	8.1	8.0	30.3	30.3	97.7	97.8	7.4	7.4	5.9	5	-	-	822144	807594	-	-	-	-				
						1.0	0.0	325	20.6	20.6	8.0	8.0	30.3	30.3	97.9	97.9	7.4	7.4	5.9	5	-	-	822144	807594	-	-	-	-				
						4.6	0.1	83	20.2	20.2	8.0	8.0	30.5	30.6	99.7	99.9	7.6	7.6	5.7	5	-	-	822144	807594	-	-	-	-				
					Middle	4.6	0.1	83	20.1	20.2	8.0	8.0	30.6	30.6	100.0	100.0	7.6	7.6	5.6	6	-	-	822144	807594	-	-	-	-				
						8.2	0.2	73	20.3	20.3	8.1	8.1	31.4	31.4	97.3	97.4	7.3	7.3	6.6	7	-	-	822144	807594	-	-	-	-				
						8.2	0.3	78	20.3	20.3	8.1	8.1	31.4	31.4	97.4	97.4	7.3	7.3	6.6	6	-	-	822144	807594	-	-	-	-				
SR4A	Cloudy	Rough	11:07	9.6	Surface	1.0	0.3	86	20.0	20.0	8.1	8.1	29.6	29.6	100.3	100.3	7.7	7.7	7.9	6	-	-	817194	807797	-	-	-	-				
						1.0	0.3	91	20.0	20.0	8.1	8.1	29.6	29.6	100.3	100.3	7.7	7.7	7.9	6	-	-	817194	807797	-	-	-	-				
						4.8	0.3	77	20.1	20.1	8.1	8.1	29.5	29.5	100.2	100.2	7.6	7.6	7.2	7	-	-	817194	807797	-	-	-	-				
					Middle	4.8	0.3	82	20.1	20.1	8.1	8.1	29.5	29.5	100.2	100.2	7.6	7.6	7.2	7	-	-	817194	807797	-	-	-	-				
						8.6	0.2	68	20.0	20.0	8.1	8.1	29.6	29.6	100.5	100.5	7.7	7.7	11.5	9	-	-	817194	807797	-	-	-	-				
						8.6	0.2	72	20.0	20.0	8.1	8.1	29.6	29.6	100.5	100.5	7.7	7.7	11.5	8	-	-	817194	807797	-	-	-	-				
SR5A	Cloudy	Rough	10:49	3.9	Surface	1.0	0.1	43	20.7	20.7	8.1	8.1	29.1	29.1	98.4	98.4	7.4	7.4	6.0	8	-	-	816583	810710	-	-	-	-				
						1.0	0.1	46	20.7	20.7	8.1	8.1	29.1	29.1	98.4	98.4	7.4	7.4	6.1	8	-	-	816583	810710	-	-	-	-				
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	816583	810710	-	-	-	-		
					Middle	-																										

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

Water Quality Monitoring Results on 09 January 20 during Mid-Flood Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity(NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)							
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA				
C1	Fine	Rough	16:54	6.9	Surface	1.0	0.1	14	20.2	20.2	8.2	8.2	30.3	30.3	101.9	101.9	7.7	7.7	7.1	7.1	13	13	83	83	88	815640	804250	<0.2	1.3	<0.2	1.3					
						1.0	0.1	15	20.2	20.2	8.2	8.2	30.3	30.3	101.9	101.9	7.7	7.7	7.0	7.0	14	14	83	83				<0.2	1.2		<0.2	1.2				
						3.5	0.1	19	20.2	20.2	8.2	8.2	30.2	30.2	102.0	102.0	7.7	7.7	7.2	7.2	13	13	88	88				<0.2	1.3		<0.2	1.3				
					5.9	0.1	18	20.2	20.2	8.2	8.2	30.3	30.3	102.0	102.0	7.7	7.7	7.2	7.2	12	12	91	91	<0.2				1.3	<0.2		1.3					
					5.9	0.1	19	20.2	20.2	8.2	8.2	30.3	30.3	102.0	102.0	7.7	7.7	13.5	13.5	11	11	92	92	<0.2				1.3	<0.2		1.3					
					1.0	0.1	15	20.6	20.6	8.0	8.0	29.7	29.7	94.5	94.5	7.1	7.1	3.0	3.0	4	4	84	84	<0.2				1.6	<0.2		1.6					
C2	Cloudy	Moderate	15:30	12.6	Surface	1.0	0.1	16	20.6	20.6	8.0	8.0	30.1	30.1	94.1	94.1	7.1	7.1	5.1	5.1	6	6	89	89	88	825695	806963	<0.2	1.6	<0.2	1.7					
						6.3	0.2	15	20.6	20.6	8.0	8.0	30.1	30.1	94.1	94.1	7.1	7.1	5.1	5.1	7	7	89	89				<0.2	1.7		<0.2	1.7				
						6.3	0.2	16	20.6	20.6	8.0	8.0	30.1	30.1	94.1	94.1	7.1	7.1	5.2	5.2	7	7	89	89				<0.2	1.7		<0.2	1.7				
					11.6	0.4	17	20.6	20.6	8.0	8.0	30.5	30.5	94.7	94.7	7.1	7.1	6.9	6.9	8	8	90	90	<0.2				1.7	<0.2		1.7					
					11.6	0.4	18	20.6	20.6	8.0	8.0	30.6	30.6	95.1	95.1	7.1	7.1	7.0	7.0	8	8	90	90	<0.2				1.7	<0.2		1.7					
					1.0	0.1	221	20.4	20.5	8.0	8.0	32.0	32.0	90.0	90.0	6.7	6.7	2.1	2.1	<2	<2	85	85	<0.2				1.0	<0.2		1.0					
C3	Cloudy	Moderate	17:23	11.2	Surface	1.0	0.1	226	20.5	20.5	8.0	8.0	32.0	32.0	89.9	89.9	6.7	6.7	2.3	2.3	3	3	86	86	88	822111	817814	<0.2	1.1	<0.2	1.1					
						5.6	0.1	237	20.5	20.5	8.0	8.0	32.3	32.3	89.7	89.7	6.7	6.7	5.1	5.1	2	2	88	88				<0.2	1.1		<0.2	1.1				
						5.6	0.1	247	20.5	20.5	8.0	8.0	32.3	32.3	89.8	89.8	6.7	6.7	5.5	5.5	2	2	88	88				<0.2	1.0		<0.2	1.0				
					10.2	0.2	250	20.5	20.5	8.0	8.0	32.3	32.3	91.0	91.0	6.8	6.8	6.5	6.5	2	2	89	89	<0.2				1.2	<0.2		1.2					
					10.2	0.2	258	20.5	20.5	8.0	8.0	32.3	32.3	91.4	91.4	6.8	6.8	6.4	6.4	2	2	90	90	<0.2				1.1	<0.2		1.1					
					1.0	0.1	89	20.1	20.1	8.2	8.2	30.0	30.0	101.5	101.5	7.7	7.7	9.0	9.0	8	8	83	83	<0.2				1.0	<0.2		1.0					
IM1	Fine	Rough	16:37	4.9	Surface	1.0	0.1	87	20.1	20.1	8.2	8.2	30.0	30.0	101.5	101.5	7.7	7.7	9.0	9.0	9	9	88	88	87	817938	807123	<0.2	1.1	<0.2	1.1					
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				-	-		-	-	-	-	-	-
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				-	-		-	-	-	-	-	-
					3.9	0.1	80	20.1	20.1	8.2	8.2	30.0	30.0	101.8	101.8	7.8	7.8	7.2	7.2	11	11	88	88	<0.2				1.1	<0.2		1.1					
					3.9	0.1	86	20.1	20.1	8.2	8.2	30.0	30.0	101.8	101.8	7.8	7.8	7.1	7.1	10	10	88	88	<0.2				1.1	<0.2		1.1					
					1.0	0.2	350	20.1	20.1	8.2	8.2	30.0	30.0	101.8	101.8	7.7	7.7	7.2	7.2	14	14	83	83	<0.2				1.1	<0.2		1.1					
IM2	Fine	Rough	16:29	7.4	Surface	1.0	0.2	354	20.1	20.1	8.2	8.2	30.0	30.0	101.8	101.8	7.7	7.7	7.2	7.2	13	13	84	84	88	818172	806174	<0.2	0.9	<0.2	0.9					
						3.7	0.1	342	20.1	20.1	8.2	8.2	30.0	30.0	101.7	101.7	7.7	7.7	7.3	7.3	15	15	88	88				<0.2	1.0		<0.2	1.0				
						3.7	0.1	347	20.1	20.1	8.2	8.2	30.0	30.0	101.6	101.6	7.7	7.7	7.3	7.3	15	15	88	88				<0.2	0.9		<0.2	0.9				
					6.4	0.1	283	20.1	20.1	8.2	8.2	30.0	30.0	101.6	101.6	7.7	7.7	7.5	7.5	15	15	91	91	<0.2				0.9	<0.2		0.9					
					6.4	0.1	300	20.1	20.1	8.2	8.2	30.0	30.0	101.7	101.7	7.7	7.7	7.5	7.5	15	15	92	92	<0.2				0.9	<0.2		0.9					
					1.0	0.2	336	20.1	20.1	8.2	8.2	30.1	30.1	101.7	101.7	7.7	7.7	9.5	9.5	16	16	83	83	<0.2				1.2	<0.2		1.2					
IM3	Fine	Rough	16:17	7.2	Surface	1.0	0.2	341	20.1	20.1	8.2	8.2	30.1	30.1	101.7	101.7	7.7	7.7	9.5	9.5	16	16	84	84	88	818777	805610	<0.2	1.1	<0.2	1.1					
						3.6	0.1	310	20.1	20.1	8.2	8.2	30.0	30.0	101.7	101.7	7.7	7.7	7.8	7.8	15	15	88	88				<0.2	1.2		<0.2	1.2				
						3.6	0.1	312	20.1	20.1	8.2	8.2	30.0	30.0	101.7	101.7	7.7	7.7	7.8	7.8	16	16	88	88				<0.2	1.2		<0.2	1.2				
					6.2	0.0	243	20.1	20.1	8.2	8.2	30.1	30.1	101.8	101.8	7.7	7.7	8.4	8.4	16	16	91	91	<0.2				1.2	<0.2		1.2					
					6.2	0.0	257	20.1	20.1	8.2	8.2	30.1	30.1	101.8	101.8	7.7	7.7	8.4	8.4	16	16	92	92	<0.2				1.2	<0.2		1.2					
					1.0	0.0	23	20.1	20.1	8.2	8.2	30.0	30.0	101.1	101.1	7.7	7.7	9.3	9.3	15	15	83	83	<0.2				1.0	<0.2		1.0					
IM4	Fine	Rough	16:08	7.9	Surface	1.0	0.0	23	20.1	20.1	8.2	8.2	30.0	30.0	101.1	101.1	7.7	7.7	9.1	9.1	16	16	83	83	87	819737	804618	<0.2	1.0	<0.2	1.0					
						4.0	0.1	20	20.1	20.1	8.2	8.2	30.2	30.2	101.5	101.5	7.7	7.7	9.0	9.0	18	18	88	88				<0.2	1.2		<0.2	1.2				
						4.0	0.1	20	20.1	20.1	8.2	8.2	30.2	30.2	101.5	101.5	7.7	7.7	9.1	9.1	18	18	88	88				<0.2	1.2		<0.2	1.2				
					6.9	0.1	334	20.1	20.1	8.2	8.2	30.1	30.1	101.9	101.9	7.7	7.7	9.7	9.7	18	18	91	91	<0.2				1.2	<0.2		1.2					
					6.9	0.1	350	20.1	20.1	8.2	8.2	30.1	30.1	101.9	101.9	7.7	7.7	9.7	9.7	19	19	91	91	<0.2				1.2	<0.2		1.2					
					1.0	0.2	28	20.2	20.2	8.1	8.1	29.6	29.6	101.3	101.3	7.7	7.7	11.7	11.7	13	13	81	81	<0.2				1.0	<0.2		1.0					
IM5	Fine	Rough	15:57	8.0	Surface	1.0	0.2	30	20.2	20.2	8.1	8.1	29.6	29.6	101.3	101.3	7.7	7.7	11.7	11.7	14	14	83	83	87	820735	804883	<0.2	1.1	<0.2	1.1					
						4.0	0.1	27	20.2	20.2	8.1	8.1	29.4	29.4	101.2	101.2	7.7	7.7	11.9	11.9	17	17	87	87				<0.2	1.2		<0.2	1.2				
						4.0	0.2	28	20.2	20.2	8.1	8.1	29.4	29.4	101.1	101.1	7.7	7.7	11.9	11.9	16	16	87	87				<0.2	1.2		<0.2	1.2				
					7.0	0.1	34	20.3	20.3	8.1	8.1	29.3	29.3	101.8	101.8	7.8	7.8	8.3	8.3	19	19	92	92	<0.2				1.3	<0.2		1.3					
					7.0	0.1	36	20.2	20.3	8.1	8.1	29.3	29.3	101.9	101.9	7.8	7.8	8.3	8.3	18	18	92	92	<0.2				1.2	<0.2		1.2					
					1.0	0.2	25	20.3	20.3	8.1	8.1	28.5	28.5	99.8	99.8	7.6	7.6	6.0	6.0	17	17	83	83	<0.2				1.2	<0.2		1.2					
IM6	Fine	Rough	15:47	7.8	Surface	1.0	0.2	25	20.3	20.3	8.1	8.1	28.5	28.5	99.8	99.8	7.6	7.6	6.0	6.0	17	17	84	84	88</											





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

Water Quality Monitoring Results on 11 January 20 during Mid-Ebb Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity (NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)			
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA
C1	Fine	Rough	13:19	7.1	Surface	1.0	0.1	211	20.5	20.5	8.0	8.0	30.0	30.0	98.8	98.8	7.5	5.1	11	83	11	83	89	815596	804263	<0.2	2.9	3.0	3.0			
						1.0	0.1	211	20.5	20.5	8.0	8.0	30.0	30.0	98.8	98.8	7.5	5.1	11	84	11	84	89	815596	804263	<0.2	2.9	3.0	3.0			
					Middle	3.6	0.1	216	20.5	20.5	8.1	8.1	31.4	31.4	98.8	98.8	7.4	6.3	7.0	6.3	11	88	11	88	89	815596	804263	<0.2	2.9	3.0	3.0	
						3.6	0.1	224	20.5	20.5	8.1	8.1	31.4	31.4	98.7	98.7	7.4	6.4	12	91	12	91	89	815596	804263	<0.2	2.9	3.0	3.0			
					Bottom	6.1	0.1	249	20.5	20.5	8.1	8.1	31.7	31.7	98.3	98.3	7.4	9.4	11	92	11	92	89	815596	804263	<0.2	2.9	3.0	3.0			
						6.1	0.1	251	20.5	20.5	8.1	8.1	31.7	31.7	98.2	98.2	7.3	9.4	11	93	11	93	89	815596	804263	<0.2	2.9	3.0	3.0			
C2	Sunny	Moderate	11:47	11.5	Surface	1.0	0.1	181	20.9	20.9	8.0	8.0	26.7	26.7	87.3	87.3	6.6	4.8	8	89	8	89	91	825662	806929	<0.2	2.4	2.6	2.3			
						1.0	0.1	199	20.9	20.9	8.0	8.0	26.7	26.7	87.3	87.3	6.6	4.8	8	89	8	89	91	825662	806929	<0.2	2.4	2.6	2.3			
					Middle	5.8	0.0	167	20.9	20.9	8.0	8.0	26.8	26.8	87.7	87.7	6.6	5.1	9	91	9	91	91	825662	806929	<0.2	2.2	2.3	2.2			
						5.8	0.0	183	20.9	20.9	8.0	8.0	26.8	26.8	87.7	87.7	6.6	5.1	9	91	9	91	91	825662	806929	<0.2	2.2	2.3	2.2			
					Bottom	10.5	0.1	164	20.9	20.9	8.0	8.0	26.8	26.8	88.0	88.0	6.6	5.6	11	94	11	94	91	825662	806929	<0.2	2.2	2.3	2.2			
						10.5	0.1	168	20.9	20.9	8.0	8.0	26.8	26.8	88.0	88.0	6.6	5.7	11	93	11	93	91	825662	806929	<0.2	2.2	2.3	2.2			
C3	Sunny	Moderate	13:43	10.8	Surface	1.0	0.3	150	21.4	21.4	8.1	8.1	30.1	30.1	85.7	85.7	6.4	3.3	8	88	8	88	89	822123	817807	<0.2	1.3	1.2	1.1			
						1.0	0.3	155	21.4	21.4	8.1	8.1	30.1	30.1	85.6	85.6	6.4	3.3	10	87	10	87	89	822123	817807	<0.2	1.3	1.2	1.1			
					Middle	5.4	0.3	154	20.8	20.8	8.1	8.1	30.2	30.2	84.4	84.4	6.3	3.7	3.5	10	89	10	89	89	822123	817807	<0.2	1.1	1.0	1.2		
						5.4	0.3	166	20.8	20.8	8.1	8.1	30.2	30.2	84.4	84.4	6.3	3.8	10	89	10	89	89	822123	817807	<0.2	1.1	1.0	1.2			
					Bottom	9.8	0.2	142	21.2	21.2	8.1	8.1	30.1	30.1	85.4	85.4	6.4	3.4	11	91	11	91	91	822123	817807	<0.2	1.2	1.1	1.2			
						9.8	0.2	150	21.2	21.2	8.1	8.1	30.1	30.1	85.7	85.7	6.4	3.3	11	92	11	92	91	822123	817807	<0.2	1.2	1.1	1.2			
IM1	Fine	Rough	12:51	4.2	Surface	1.0	0.0	111	20.5	20.5	8.1	8.1	31.8	31.8	99.9	99.9	7.5	4.3	10	83	10	83	88	817936	807113	<0.2	2.7	2.6	3.1			
						1.0	0.0	118	20.5	20.5	8.1	8.1	31.8	31.8	99.9	99.9	7.5	4.3	11	84	11	84	88	817936	807113	<0.2	2.7	2.6	3.1			
					Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	4.9	-	-	-	-	-	-	88	817936	807113	<0.2	-	-	-
						-	-	-	-	-	-	-	-	-	-	-	-	-	4.9	-	-	-	-	-	-	-	88	817936	807113	<0.2	-	-
					Bottom	3.2	0.1	283	20.5	20.5	8.1	8.1	31.9	31.9	100.3	100.3	7.5	5.5	8	91	8	91	88	817936	807113	<0.2	3.1	3.0	3.0			
						3.2	0.1	297	20.5	20.5	8.1	8.1	31.9	31.9	100.2	100.2	7.5	5.5	9	92	9	92	88	817936	807113	<0.2	3.1	3.0	3.0			
IM2	Fine	Rough	12:44	7.3	Surface	1.0	0.1	125	20.7	20.7	8.0	8.0	30.6	30.6	100.8	100.8	7.6	4.8	9	82	9	82	87	818159	806184	<0.2	2.9	3.0	3.2			
						1.0	0.1	136	20.7	20.7	8.0	8.0	30.6	30.6	100.7	100.7	7.6	4.8	9	83	9	83	87	818159	806184	<0.2	2.9	3.0	3.2			
					Middle	3.7	0.1	100	20.5	20.5	8.0	8.0	31.5	31.5	98.6	98.7	7.4	7.6	6.7	11	88	11	88	87	818159	806184	<0.2	3.0	3.0	3.0		
						3.7	0.1	101	20.5	20.5	8.0	8.0	31.5	31.5	98.7	98.7	7.4	7.6	12	88	12	88	87	818159	806184	<0.2	3.0	3.0	3.0			
					Bottom	6.3	0.1	176	20.4	20.4	8.1	8.1	31.9	31.9	98.3	98.4	7.4	7.8	12	91	12	91	87	818159	806184	<0.2	3.6	3.6	3.6			
						6.3	0.1	191	20.4	20.4	8.1	8.1	31.9	31.9	98.4	98.4	7.4	7.8	12	92	12	92	87	818159	806184	<0.2	3.6	3.6	3.6			
IM3	Fine	Rough	12:35	7.6	Surface	1.0	0.1	212	20.7	20.7	8.0	8.0	29.6	29.6	99.1	99.1	7.5	6.1	12	81	12	81	87	818775	805588	<0.2	3.0	3.1	2.7			
						1.0	0.1	223	20.7	20.7	8.0	8.0	29.6	29.6	99.1	99.1	7.5	6.2	12	82	12	82	87	818775	805588	<0.2	3.0	3.1	2.7			
					Middle	3.8	0.1	189	20.5	20.5	8.0	8.0	31.5	31.5	98.4	98.5	7.4	8.5	8.2	13	88	13	88	87	818775	805588	<0.2	2.1	2.1	2.1		
						3.8	0.1	190	20.5	20.5	8.0	8.0	31.5	31.5	98.5	98.5	7.4	8.6	12	89	12	89	87	818775	805588	<0.2	2.1	2.1	2.1			
					Bottom	6.6	0.1	123	20.5	20.5	8.0	8.0	31.7	31.7	97.4	97.5	7.3	9.8	14	91	14	91	87	818775	805588	<0.2	3.1	3.1	3.1			
						6.6	0.1	124	20.5	20.5	8.0	8.0	31.7	31.7	97.5	97.5	7.3	9.9	14	92	14	92	87	818775	805588	<0.2	3.1	3.1	3.1			
IM4	Fine	Rough	12:27	6.9	Surface	1.0	0.1	287	20.7	20.7	8.0	8.0	30.0	30.0	100.5	100.6	7.6	4.7	7	82	7	82	86	819742	804618	<0.2	3.5	3.7	3.0			
						1.0	0.1	310	20.7	20.7	8.0	8.0	30.0	30.0	100.6	100.6	7.6	4.8	7	81	7	81	86	819742	804618	<0.2	3.5	3.7	3.0			
					Middle	3.5	0.0	216	20.5	20.5	8.0	8.0	31.0	31.0	98.3	98.1	7.4	7.5	7.6	8	88	8	88	86	819742	804618	<0.2	2.4	2.5	2.8		
						3.5	0.0	228	20.5	20.5	8.0	8.0	31.0	31.0	97.9	98.1	7.4	7.6	9	88	9	88	86	819742	804618	<0.2	2.4	2.5	2.8			
					Bottom	5.9	0.0	262	20.5	20.5	8.0	8.0	31.4	31.4	96.9	96.8	7.3	10.1	8	88	8	88	86	819742	804618	<0.2	2.8	2.8	2.8			
						5.9	0.0	266	20.5	20.5	8.0	8.0	31.4	31.4	96.7	96.8	7.2	10.8	8	89	8	89	86	819742	804618	<0.2	2.8	2.8	2.8			
IM5	Fine	Rough	12:18	7.3	Surface	1.0	0.2	218	20.6	20.6	8.0	8.0	30.6	30.6	98.6	98.6	7.4	7.9	9	84	9	84	87	820743	804890	<0.2	2.2	2.2	2.3			
						1.0	0.2	205	20.5	20.5	8.0	8.0	30.6	30.6	98.5	98.5	7.4	7.9	9	83	9	83	87	820743	804890	<0.2	2.2	2.2	2.3			
					Middle	3.7	0.1	203	20.5	20.5	8.0	8.0	31.6	31.6	98.1	98.1	7.3	3.9	5.5	11	89	11	89	87	820743	804890	<0.2	2.4	2.3	2.3		
						3.7	0.1	202	20.5	20.5	8.0	8.0	31.6	31.6	98.0	98.1	7.3	3.9	10	89	10	89	87	820743	804890	<0.2	2.3	2.3	2.3			
					Bottom	6.3	0.1	174	20.5	20.5	8.0	8.0	31.6	31.6	97.8	97.9	7.3	4.6	12	87	12	87	86	820743	804890	<0.2	2.3	2.3	2.4			
						6.3	0.1	175	20.5	20.5	8.0	8.0																				

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

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

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity (NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)			
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA
IM9	Sunny	Moderate	12:21	7.6	Surface	1.0	0.2	132	20.9	20.9	8.0	8.0	27.2	27.2	87.9	88.0	6.6	6.7	10.1	16	86	86	88	88	822104	808810	<0.2	2.0	2.0	2.0		
						1.0	0.2	141	20.9	20.9	8.0	8.0	27.2	27.2	88.0	88.0	6.7	6.7	10.1	16	86	86	88	88	822104	808810	<0.2	2.0	2.0	2.0		
						3.8	0.2	144	20.9	20.9	8.1	8.1	27.4	27.4	88.6	88.6	6.7	6.7	11.8	18	89	89	88	88	822104	808810	<0.2	2.1	2.0	2.0		
					Bottom	3.8	0.2	145	20.9	20.9	8.1	8.1	27.4	27.4	88.6	88.6	6.7	6.7	11.8	18	89	89	88	88	822104	808810	<0.2	1.9	2.0	2.0	2.0	
						6.6	0.3	101	20.9	20.9	8.1	8.1	27.5	27.5	89.6	89.7	6.7	6.7	14.5	18	90	90	88	88	822104	808810	<0.2	2.0	2.0	2.0	2.0	
						6.6	0.3	108	20.9	20.9	8.1	8.1	27.5	27.5	89.7	89.7	6.7	6.7	14.4	18	91	91	88	88	822104	808810	<0.2	1.9	2.0	2.0	2.0	
IM10	Sunny	Moderate	12:29	8.4	Surface	1.0	0.3	123	20.9	20.9	8.0	8.0	27.2	27.2	86.8	86.8	6.6	6.5	8.3	9	87	87	89	89	822391	809778	<0.2	2.1	2.0	2.0		
						1.0	0.3	129	20.9	20.9	8.0	8.0	27.2	27.2	86.7	86.7	6.5	6.5	8.3	8	87	87	89	89	822391	809778	<0.2	2.0	2.0	2.0		
						4.2	0.3	108	21.0	21.0	8.0	8.0	27.2	27.2	86.8	86.9	6.5	6.5	9.1	9	89	89	89	89	822391	809778	<0.2	2.0	2.0	2.0		
					Middle	4.2	0.3	113	21.0	21.0	8.0	8.0	27.2	27.2	86.9	86.9	6.5	6.5	9.1	9	89	89	89	89	822391	809778	<0.2	2.0	2.0	2.0	2.0	
						7.4	0.2	109	21.0	21.0	8.0	8.0	27.2	27.2	89.0	89.2	6.7	6.7	9.7	10	91	91	89	89	822391	809778	<0.2	2.0	2.0	2.0	2.0	
						7.4	0.2	111	21.0	21.0	8.0	8.0	27.2	27.2	89.3	89.3	6.7	6.7	9.7	10	91	91	89	89	822391	809778	<0.2	2.0	2.0	2.0	2.0	
IM11	Sunny	Moderate	12:41	8.9	Surface	1.0	0.4	136	20.7	20.7	8.1	8.1	29.1	29.1	84.9	84.8	6.4	6.4	10.1	10	86	86	88	88	822069	811441	<0.2	1.4	1.3	1.3		
						1.0	0.4	132	20.7	20.7	8.1	8.1	29.1	29.1	84.7	84.7	6.3	6.3	9.2	11	88	88	88	88	822069	811441	<0.2	1.3	1.3	1.3		
						4.5	0.5	109	20.8	20.8	8.1	8.1	29.0	29.0	83.7	83.7	6.3	6.3	9.2	12	88	88	88	88	822069	811441	<0.2	1.4	1.4	1.4		
					Middle	4.5	0.5	122	20.8	20.8	8.1	8.1	29.0	29.0	83.7	83.7	6.3	6.3	9.2	12	88	88	88	88	822069	811441	<0.2	1.4	1.4	1.4		
						7.9	0.4	124	20.8	20.8	8.1	8.1	29.1	29.1	84.2	84.2	6.3	6.3	9.9	15	90	90	88	88	822069	811441	<0.2	1.2	1.2	1.2		
						7.9	0.4	139	20.8	20.8	8.1	8.1	29.1	29.1	84.4	84.4	6.3	6.3	9.9	16	90	90	88	88	822069	811441	<0.2	1.3	1.3	1.3		
IM12	Sunny	Moderate	12:49	8.3	Surface	1.0	0.4	135	20.8	20.8	8.1	8.1	29.2	29.2	85.5	85.4	6.4	6.4	5.1	12	86	86	88	88	821465	812063	<0.2	1.4	1.3	1.3		
						1.0	0.5	133	20.8	20.8	8.1	8.1	29.2	29.2	85.4	85.4	6.4	6.4	5.1	12	86	86	88	88	821465	812063	<0.2	1.3	1.3	1.3		
						4.2	0.5	119	20.7	20.7	8.1	8.1	29.2	29.2	84.3	84.3	6.3	6.3	5.9	13	88	88	88	88	821465	812063	<0.2	1.3	1.3	1.3		
					Middle	4.2	0.5	118	20.7	20.7	8.1	8.1	29.2	29.2	84.3	84.3	6.3	6.3	5.9	14	89	89	88	88	821465	812063	<0.2	1.4	1.4	1.4		
						7.3	0.4	129	20.7	20.7	8.1	8.1	29.2	29.2	84.9	84.9	6.3	6.3	5.4	16	90	90	88	88	821465	812063	<0.2	1.4	1.4	1.4		
						7.3	0.4	125	20.7	20.7	8.1	8.1	29.2	29.2	85.2	85.1	6.4	6.4	5.4	16	91	91	88	88	821465	812063	<0.2	1.3	1.3	1.3		
SR1A	Sunny	Moderate	13:13	5.6	Surface	1.0	-	-	20.7	20.7	8.1	8.1	29.5	29.5	84.6	84.6	6.4	6.4	5.3	8	-	-	-	-	819972	812665	-	-	-	-		
						1.0	-	-	20.7	20.7	8.1	8.1	29.5	29.5	84.5	84.5	6.4	6.4	5.3	7	-	-	-	-	819972	812665	-	-	-	-		
						2.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	819972	812665	-	-	-	-
					Middle	2.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	819972	812665	-	-	-	-
						2.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	819972	812665	-	-	-	-
						4.6	-	-	20.5	20.5	8.1	8.1	29.5	29.5	82.3	82.3	6.1	6.1	5.5	11	-	-	-	-	-	-	819972	812665	-	-	-	-
Bottom	4.6	-	-	20.5	20.5	8.1	8.1	29.5	29.5	82.3	82.3	6.1	6.1	5.5	11	-	-	-	-	-	-	819972	812665	-	-	-	-					
	4.6	-	-	20.5	20.5	8.1	8.1	29.5	29.5	82.3	82.3	6.1	6.1	5.5	11	-	-	-	-	-	-	819972	812665	-	-	-	-					
	4.6	-	-	20.5	20.5	8.1	8.1	29.5	29.5	82.3	82.3	6.1	6.1	5.5	11	-	-	-	-	-	-	819972	812665	-	-	-	-					
SR2	Sunny	Moderate	13:22	4.6	Surface	1.0	0.4	87	20.7	20.7	8.1	8.1	29.4	29.4	85.4	85.3	6.4	6.4	4.4	9	86	86	88	88	821482	814181	<0.2	1.2	1.2	1.2		
						1.0	0.4	91	20.7	20.7	8.1	8.1	29.4	29.4	85.1	85.1	6.4	6.4	4.4	10	85	85	88	88	821482	814181	<0.2	1.2	1.2	1.2		
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	821482	814181	<0.2	1.2	1.2	1.2
					Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	821482	814181	<0.2	1.2	1.2	1.2
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	821482	814181	<0.2	1.2	1.2	1.2
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	821482	814181	<0.2	1.2	1.2	1.2
Bottom	3.6	0.3	65	20.6	20.6	8.1	8.1	29.4	29.4	83.5	83.6	6.3	6.3	6.3	11	87	87	88	88	821482	814181	<0.2	1.3	1.3	1.3							
	3.6	0.3	65	20.6	20.6	8.1	8.1	29.4	29.4	83.6	83.6	6.3	6.3	6.3	11	87	87	88	88	821482	814181	<0.2	1.3	1.3	1.3							
	3.6	0.3	65	20.6	20.6	8.1	8.1	29.4	29.4	83.6	83.6	6.3	6.3	6.3	11	87	87	88	88	821482	814181	<0.2	1.2	1.2	1.2							
SR3	Sunny	Moderate	12:07	8.8	Surface	1.0	0.3	209	20.8	20.8	8.0	8.0	27.5	27.5	85.5	85.5	6.5	6.5	8.9	10	-	-	-	-	822145	807580	-	-	-	-		
						1.0	0.3	174	20.8	20.8	8.0	8.0	27.5	27.5	85.5	85.5	6.5	6.5	8.9	11	-	-	-	-	822145	807580	-	-	-	-		
						4.4	0.3	162	20.8	20.8	8.1	8.1	28.0	28.0	86.1	86.1	6.5	6.5	10.9	10	-	-	-	-	822145	807580	-	-	-	-		
					Middle	4.4	0.3	168	20.8	20.8	8.1	8.1	28.0	28.0	86.1	86.1	6.5	6.5	10.9	11	-	-	-	-	822145	807580	-	-	-	-		
						7.8	0.3	182	20.8	20.8	8.1	8.1	27.6	27.6	87.0	87.1	6.6	6.6	8.7	11	-	-	-	-	822145	807580	-	-	-	-		
						7.8	0.3	178	20.8	20.8	8.1	8.1	27.6	27.6	87.1	87.1	6.6	6.6	8.7	11	-	-	-	-	822145	807580	-	-	-	-		
SR4A	Fine																															

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

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

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity(NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)				
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA	
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA	Value
C1	Sunny	Moderate	08:16	7.2	Surface	1.0	0.7	44	20.5	20.5	7.9	7.9	31.6	31.6	98.3	98.3	7.4	5.3	7.4	5.1	12	12	83	83	88	815597	804241	<0.2	2.9	3.1	3.0		
						1.0	0.7	44	20.5	20.5	7.9	7.9	31.6	31.6	98.2	98.2	7.4	5.1	7.4	5.1	11	11	84	84	88			<0.2	3.0				
						3.6	0.7	50	20.5	20.5	8.0	8.0	31.7	31.7	97.5	97.6	7.3	5.4	7.3	5.4	10	10	87	87	88			<0.2	3.4				
					3.6	0.8	53	20.5	20.5	8.0	8.0	31.7	31.7	97.7	97.7	7.3	5.3	7.3	5.3	12	12	88	88	88			<0.2	3.5					
					6.2	0.6	38	20.5	20.5	8.0	8.0	31.7	31.7	97.3	97.3	7.3	6.7	7.3	6.7	12	12	91	91	92			<0.2	3.0					
					6.2	0.6	41	20.5	20.5	8.0	8.0	31.7	31.7	97.3	97.3	7.3	6.8	7.3	6.8	13	13	92	92	92			<0.2	3.0					
C2	Sunny	Moderate	09:51	11.0	Surface	1.0	0.3	345	20.8	20.8	8.0	8.0	26.8	26.8	82.4	82.4	6.3	5.1	6.3	5.1	5	5	90	90	88	825679	806946	<0.2	2.2	1.8	2.1		
						1.0	0.3	317	20.8	20.8	8.0	8.0	26.8	26.8	82.4	82.4	6.3	5.1	6.3	5.1	6	6	90	90	88			<0.2	2.1				
						5.5	0.3	1	20.8	20.8	8.0	8.0	26.9	26.9	81.6	81.6	6.2	5.5	6.2	5.5	9	9	92	92	88			<0.2	1.1				
					5.5	0.3	1	20.8	20.8	8.0	8.0	26.9	26.9	81.6	81.6	6.2	5.5	6.2	5.5	8	8	92	92	88			<0.2	1.1					
					10.0	0.4	25	20.8	20.8	8.0	8.0	26.9	26.9	83.8	83.8	6.4	5.7	6.4	5.7	9	9	94	94	88			<0.2	2.0					
					10.0	0.4	26	20.8	20.8	8.0	8.0	26.9	26.9	83.7	83.7	6.4	5.8	6.4	5.8	9	9	94	94	88			<0.2	2.1					
C3	Sunny	Moderate	07:52	10.8	Surface	1.0	0.5	271	20.4	20.4	8.1	8.1	29.4	29.4	84.9	84.9	6.4	6.5	6.4	6.5	11	11	88	88	88	822111	817806	<0.2	1.4	1.3	1.3		
						1.0	0.6	281	20.4	20.4	8.1	8.1	29.4	29.4	84.8	84.8	6.4	6.5	6.4	6.5	12	12	88	88	88			<0.2	1.3				
						5.4	0.5	271	20.5	20.5	8.1	8.1	29.4	29.4	84.5	84.5	6.3	5.5	6.3	5.5	12	12	92	92	88			<0.2	1.3				
					5.4	0.5	289	20.5	20.5	8.1	8.1	29.4	29.4	84.5	84.5	6.3	5.5	6.3	5.5	12	12	93	93	88			<0.2	1.2					
					9.8	0.4	271	20.4	20.4	8.1	8.1	29.4	29.4	84.5	84.5	6.3	7.8	6.4	7.8	14	14	93	93	88			<0.2	1.3					
					9.8	0.4	279	20.4	20.4	8.1	8.1	29.4	29.4	84.6	84.6	6.4	7.8	6.4	7.8	13	13	93	93	88			<0.2	1.3					
IM1	Sunny	Moderate	08:39	4.5	Surface	1.0	0.1	9	20.5	20.5	8.0	8.0	31.6	31.6	98.7	98.7	7.4	7.2	7.4	7.1	10	10	83	83	86	817970	807137	<0.2	1.9	2.0	2.0		
						1.0	0.1	9	20.5	20.5	8.0	8.0	31.6	31.6	98.7	98.7	7.4	7.1	7.4	7.1	10	10	84	84	86			<0.2	2.0				
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
					3.5	0.2	14	20.5	20.5	8.1	8.1	32.1	32.1	99.0	99.1	7.4	8.1	7.4	8.1	11	11	88	88	86			<0.2	2.0					
					3.5	0.2	15	20.5	20.5	8.1	8.1	32.1	32.1	99.2	99.2	7.4	8.1	7.4	8.1	11	11	88	88	86			<0.2	2.1					
					1.0	0.3	12	20.5	20.5	7.9	7.9	31.2	31.2	98.4	98.5	7.4	6.6	7.4	6.6	12	12	83	83	87	818168	806177	<0.2	2.0	2.1	2.0			
IM2	Sunny	Moderate	08:48	6.8	Surface	1.0	0.3	12	20.5	20.5	7.9	7.9	31.2	31.2	98.6	98.6	7.4	6.6	7.4	6.6	11	11	84	84	87	818168	806177	<0.2	1.9	2.1	2.0		
						1.0	0.3	12	20.5	20.5	7.9	7.9	31.2	31.2	98.5	98.5	7.4	6.6	7.4	6.6	11	11	84	84	87			<0.2	2.0				
						3.4	0.2	23	20.5	20.5	7.9	7.9	31.7	31.7	98.0	98.1	7.3	8.3	7.3	8.3	12	12	87	87	87			<0.2	1.9				
					3.4	0.2	23	20.5	20.5	7.9	7.9	31.7	31.7	98.1	98.1	7.3	8.4	7.3	8.4	12	12	89	89	87			<0.2	1.9					
					5.8	0.2	342	20.5	20.5	7.9	7.9	32.0	32.0	99.4	99.5	7.4	10.7	7.4	10.7	12	12	90	90	87			<0.2	2.5					
					5.8	0.2	345	20.5	20.5	7.9	7.9	32.0	32.0	99.5	99.5	7.4	10.8	7.4	10.8	13	13	89	89	87			<0.2	2.5					
IM3	Sunny	Moderate	08:55	7.5	Surface	1.0	0.4	357	20.5	20.5	7.9	7.9	31.3	31.3	98.1	98.1	7.4	5.4	7.4	5.4	12	12	83	83	88	818763	805584	<0.2	2.3	2.1	2.2		
						1.0	0.4	328	20.5	20.5	7.9	7.9	31.3	31.3	97.9	97.9	7.3	5.4	7.3	5.4	12	12	85	85	88			<0.2	2.2				
						3.8	0.3	351	20.5	20.5	7.9	7.9	31.5	31.5	97.4	97.4	7.3	6.2	7.3	6.2	11	11	88	88	88			<0.2	2.0				
					3.8	0.3	340	20.5	20.5	7.9	7.9	31.5	31.5	97.4	97.4	7.3	6.2	7.3	6.2	10	10	87	87	88			<0.2	2.0					
					6.5	0.3	340	20.5	20.5	7.9	7.9	31.7	31.7	97.9	97.9	7.3	11.1	7.3	11.1	11	11	91	91	88			<0.2	2.2					
					6.5	0.4	313	20.5	20.5	7.9	7.9	31.7	31.7	97.8	97.9	7.3	11.2	7.3	11.2	10	10	91	91	88			<0.2	2.1					
IM4	Sunny	Moderate	09:02	7.7	Surface	1.0	0.6	347	20.5	20.5	7.9	7.9	30.3	30.4	98.7	98.7	7.4	4.2	7.4	4.2	9	9	83	83	87	819709	804624	<0.2	1.8	2.3	1.9		
						1.0	0.6	352	20.5	20.5	7.9	7.9	30.4	30.4	98.6	98.6	7.4	4.3	7.4	4.3	9	9	83	83	87			<0.2	1.9				
						3.9	0.5	345	20.5	20.5	7.9	7.9	31.3	31.3	98.6	98.6	7.4	5.5	7.4	5.5	9	9	88	88	87			<0.2	2.7				
					3.9	0.5	317	20.5	20.5	7.9	7.9	31.3	31.3	98.5	98.6	7.4	5.6	7.4	5.6	10	10	87	87	87			<0.2	2.6					
					6.7	0.4	333	20.5	20.5	7.9	7.9	31.5	31.5	100.1	100.2	7.5	8.7	7.5	8.7	10	10	90	90	87			<0.2	2.4					
					6.7	0.4	348	20.5	20.5	7.9	7.9	31.5	31.5	100.2	100.2	7.5	8.9	7.5	8.9	10	10	89	89	87			<0.2	2.3					
IM5	Sunny	Moderate	09:10	7.4	Surface	1.0	0.7	26	20.5	20.5	7.9	7.9	31.4	31.4	97.3	97.3	7.3	9.9	7.3	9.9	14	14	83	83	87	820741	804852	<0.2	1.7	1.6	1.7		
						1.0	0.7	26	20.5	20.5	7.9	7.9	31.4	31.4	97.2	97.3	7.3	9.9	7.3	9.9	14	14	83	83	87			<0.2	1.6				
						3.7	0.7	22	20.5	20.5	7.9	7.9	31.6	31.6	98.1	98.0	7.3	5.7	7.3	5.7	14	14	87	87	87			<0.2	1.1				
					3.7	0.7	22	20.5	20.5	7.9	7.9	31.6	31.6	97.9	98.0	7.3	5.8	7.3	5.8	14	14	89	89	87			<0.2	1.0					
					6.4	0.5	29	20.5	20.5	8.0	8.0	31.7	31.7	97.8	97.9	7.3	11.5	7.3	11.5	14	14	90	90	87			<0.2	2.1					
					6.4	0.5	30	20.5	20.5	8.0	8.0	31.7	31.7	97.9	97.9	7.3	11.7	7.3	11.7	15	15	89	89	87			<0.2	2.0					
IM6	Sunny	Moderate	09:17	7.8	Surface	1.0	0.4	130	20.5	20.5	8.0	8.0	31.5	31.5	97.8	97.9	7.3																

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

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

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity(NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)			
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA
IM9	Sunny	Moderate	09:17	7.5	Surface	1.0	0.3	65	20.8	20.8	8.0	8.0	26.9	26.9	84.1	84.1	6.4	6.4	7.3	9	87	90	87	87	822093	808791	<0.2	2.0	<0.2	2.0		
						1.0	0.3	65	20.8	8.0	8.0	26.9	26.9	84.1	84.1	6.4	6.4	7.3	8	86	90	86	86									
						3.8	0.2	63	20.7	20.7	8.0	8.0	27.0	27.0	84.8	84.8	6.5	6.5	8.6	9	90	90	90	90								
					3.8	0.2	68	20.7	8.0	8.0	27.0	27.0	84.9	84.9	6.5	6.5	8.5	8	90	90	90	90										
					6.5	0.1	124	20.7	20.7	8.0	8.0	27.4	27.4	85.6	85.6	6.5	6.5	11.1	11	94	94	94	94									
					6.5	0.1	136	20.7	20.7	8.0	8.0	27.4	27.4	85.7	85.7	6.5	6.5	11.2	10	93	93	93	93									
IM10	Sunny	Moderate	09:10	8.0	Surface	1.0	0.4	348	20.7	20.7	8.0	8.0	27.4	27.4	85.1	85.1	6.4	6.4	7.6	8	86	86	86	86	822392	809797	<0.2	1.9	<0.2	1.9		
						1.0	0.4	320	20.7	20.7	8.0	8.0	27.4	27.4	85.1	85.1	6.4	6.4	7.6	9	85	85	85	85								
						4.0	0.4	345	20.7	20.7	8.0	8.0	27.6	27.6	84.8	84.8	6.4	6.4	8.1	9	85	85	85	85								
					4.0	0.4	317	20.7	20.7	8.0	8.0	27.6	27.6	84.8	84.8	6.4	6.4	8.1	9	86	86	86	86									
					7.0	0.4	320	20.6	20.6	8.1	8.1	27.9	27.9	84.9	84.9	6.4	6.4	12.2	10	96	96	96	96									
					7.0	0.4	337	20.6	20.6	8.1	8.1	27.9	27.9	85.0	85.0	6.4	6.4	12.2	10	97	97	97	97									
IM11	Sunny	Moderate	08:57	8.8	Surface	1.0	0.4	295	20.5	20.5	8.1	8.1	28.8	28.8	84.7	84.7	6.4	6.4	7.4	10	86	86	86	86	822058	811457	<0.2	1.5	<0.2	1.5		
						1.0	0.5	305	20.5	20.5	8.1	8.1	28.8	28.8	84.7	84.7	6.4	6.4	7.4	10	85	85	85	85								
						4.4	0.4	304	20.5	20.5	8.1	8.1	29.0	29.0	84.7	84.7	6.4	6.4	9.5	12	90	90	90	90								
					4.4	0.5	333	20.5	20.5	8.1	8.1	29.0	29.0	84.7	84.7	6.4	6.4	9.5	12	90	90	90	90									
					7.8	0.3	306	20.5	20.5	8.1	8.1	29.1	29.1	84.6	84.6	6.4	6.4	11.9	12	94	94	94	94									
					7.8	0.4	318	20.5	20.5	8.1	8.1	29.1	29.1	84.7	84.7	6.4	6.4	12.0	13	93	93	93	93									
IM12	Sunny	Moderate	08:50	8.6	Surface	1.0	0.5	273	20.6	20.6	8.1	8.1	28.6	28.6	85.2	85.2	6.4	6.4	7.1	8	89	89	89	89	821481	812044	<0.2	1.4	<0.2	1.4		
						1.0	0.5	296	20.6	20.6	8.1	8.1	28.6	28.6	85.2	85.2	6.4	6.4	7.3	8	89	89	89	89								
						4.3	0.5	290	20.6	20.6	8.1	8.1	28.7	28.7	85.2	85.2	6.4	6.4	7.6	10	93	93	93	93								
					4.3	0.5	295	20.6	20.6	8.1	8.1	28.7	28.7	85.2	85.2	6.4	6.4	7.6	9	93	93	93	93									
					7.6	0.4	295	20.5	20.5	8.1	8.1	28.9	28.9	85.7	85.7	6.5	6.5	11.2	11	95	95	95	95									
					7.6	0.4	307	20.5	20.5	8.1	8.1	28.9	28.9	85.9	85.9	6.5	6.5	11.2	12	95	95	95	95									
SR1A	Sunny	Moderate	08:34	5.1	Surface	1.0	-	-	20.5	20.5	8.1	8.1	28.5	28.5	85.3	85.3	6.4	6.4	6.9	8	-	-	-	-	819982	812656	-	-	-	-		
						1.0	-	-	20.5	20.5	8.1	8.1	28.5	28.5	85.3	85.3	6.4	6.4	6.8	9	-	-	-	-								
						2.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-								
					2.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-									
					4.1	-	0	20.5	20.5	8.1	8.1	28.6	28.6	84.9	84.9	6.4	6.4	10.1	8	-	-	-	-									
					4.1	-	0	20.5	20.5	8.1	8.1	28.6	28.6	84.9	84.9	6.4	6.4	10.2	9	-	-	-	-									
SR2	Sunny	Moderate	08:22	4.6	Surface	1.0	0.2	3	20.6	20.6	8.1	8.1	29.0	29.0	85.4	85.4	6.4	6.4	10.5	14	89	89	89	89	821464	814148	<0.2	2.0	<0.2	2.0		
						1.0	0.2	3	20.6	20.6	8.1	8.1	29.0	29.0	85.3	85.3	6.4	6.4	10.5	15	88	88	88	88								
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-								
					3.6	0.2	6	20.5	20.5	8.1	8.1	29.2	29.2	85.2	85.2	6.4	6.4	14.6	18	91	91	91	91									
					3.6	0.2	6	20.5	20.5	8.1	8.1	29.2	29.2	85.3	85.3	6.4	6.4	14.5	17	91	91	91	91									
					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-									
SR3	Sunny	Moderate	09:32	9.1	Surface	1.0	0.2	58	20.8	20.8	8.0	8.0	26.9	26.9	82.6	82.7	6.3	6.3	5.8	5	-	-	-	-	822149	807594	-	-	-	-		
						1.0	0.2	59	20.8	20.8	8.0	8.0	26.9	26.9	82.7	82.7	6.3	6.3	5.8	5	-	-	-	-								
						4.6	0.3	70	20.7	20.7	8.1	8.1	27.4	27.4	84.8	84.8	6.5	6.5	8.0	6	-	-	-	-								
					4.6	0.3	74	20.7	20.7	8.1	8.1	27.4	27.4	84.8	84.8	6.5	6.5	8.0	8	-	-	-	-									
					8.1	0.4	66	20.6	20.6	8.1	8.1	27.3	27.3	87.3	87.3	6.6	6.6	8.6	9	-	-	-	-									
					8.1	0.4	70	20.6	20.6	8.1	8.1	27.3	27.3	87.3	87.3	6.6	6.6	8.5	9	-	-	-	-									
SR4A	Sunny	Moderate	07:48	9.2	Surface	1.0	0.4	279	20.5	20.5	8.0	8.0	32.1	32.1	99.4	99.5	7.4	7.4	4.7	8	-	-	-	-	817190	807796	-	-	-	-		
						1.0	0.4	286	20.5	20.5	8.0	8.0	32.1	32.1	99.5	99.5	7.4	7.4	4.7	8	-	-	-	-								
						4.6	0.4	286	20.5	20.5	8.0	8.0	32.1	32.1	99.3	99.3	7.4	7.4	5.6	9	-	-	-	-								
					4.6	0.4	292	20.5	20.5	8.0	8.0	32.1	32.1	99.3	99.3	7.4	7.4	8	8	-	-	-	-									
					8.2	0.4	260	20.5	20.5	8.0	8.0	32.1	32.1	98.6	98.7	7.4	7.4	8.5	9	-	-	-	-									
					8.2	0.4	265	20.5	20.5	8.0	8.0	32.1	32.1	98.8	98.8	7.4	7.4	8.6	8	-	-	-	-									
SR5A	Sunny	Moderate	07:29	4.8	Surface	1.0	0.0	219	20.5	20.5	8.0	8.0	31.9	31.9	97.1	97.1	7.3	7.3	5.3	11	-	-	-	-	816589	810680	-	-	-	-		
						1.0	0.0	220	20.5	20.5	8.0	8.0	31.9	31.9	97.0	97.0	7.2	7.2	5.3	12	-	-	-	-								
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-								
					3.8	0.0	211	20.5	20.5	8.0	8.0	31.9	31.9	98.1	98.1	7.3	7.3	5.4	9	-	-	-	-									
					3.8	0.0	205	20.5	20.5	8.0	8.0	31.9	31.9	98.0	98.0	7.3	7.3	5.4	9	-	-	-	-									
					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-									
SR6A	Sunny	Moderate	07:03	4.0	Surface	1.0	0.1	231	20.4	20.4	7.9	7.9	31.8	31.8	92.7	92.7	6.9	6.9	3.2	5	-	-	-	-	817966	814715	-	-	-	-		
						1.0	0.1	236	20.4	20.4	7.9	7.9	31.8	31.8	92.7	92.7	6.9	6.9	3.2	6	-	-	-	-								
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-								
					3.0	0.1	238	20.4	20.4	8.0	8.0	31.8	31.8	93.1	93.1	7.0	7.0	5.0	5	-	-	-	-									
					3.0	0.1	241	20.4	20.4	8.0	8.0	31.8	31.8	93.1	93.1	7.0	7.0	5.1	6	-	-	-	-									
					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-									
SR7	Sunny	Moderate	07:24	14.5	Surface	1.0	0.2	209	20.3	20.3	8.0	8.0	29.9	29.9	83.6	83.6	6.3	6.3	9.0	10	-	-	-	-	823652	823760	-	-	-			



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

Water Quality Monitoring

Water Quality Monitoring Results on 14 January 20 during Mid-Ebb Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)	Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity (NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)						
								Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA			
C1	Fine	Rough	16:05	8.2	Surface	1.0	0.1	214	20.4	20.4	8.1	8.1	29.9	29.9	98.8	99.0	7.5	7.5	4.8	4.8	16	16	84	89	815605	804256	<0.2	2.0	<0.2	1.8				
						1.0	0.1	222	20.4	8.1	8.1	29.9	29.9	99.2	99.2	7.5	7.6	4.8	4.8	15	15	86	89	<0.2			1.9	<0.2	1.7					
					4.1	0.1	223	20.7	20.8	8.1	8.1	29.9	29.9	101.2	101.5	7.6	7.6	4.6	4.9	17	16	89	90	<0.2			1.7	<0.2	1.7					
					4.1	0.1	236	20.8	20.3	8.1	8.1	29.9	29.9	101.7	101.7	7.6	7.6	4.9	4.9	16	16	90	93	<0.2			1.7	<0.2	1.6					
					7.2	0.0	245	20.3	20.3	8.1	8.1	29.2	29.2	99.0	99.0	7.5	7.6	14.7	14.7	17	16	93	94	<0.2			1.7	<0.2	1.6					
					7.2	0.0	257	20.2	20.3	8.1	8.1	29.2	29.2	99.0	99.0	7.6	7.6	14.7	14.7	16	16	94	94	<0.2			1.6	<0.2	1.6					
C2	Fine	Rough	14:05	10.9	Surface	1.0	0.1	141	20.4	20.4	7.9	7.9	29.7	29.7	95.3	95.4	7.2	7.2	2.4	2.4	9	9	83	86	825698	806959	<0.2	1.1	<0.2	1.2				
						1.0	0.1	150	20.4	20.3	7.9	7.9	29.7	29.8	95.4	94.0	7.2	7.2	2.4	2.6	8	10	82	86			<0.2	1.2	<0.2	1.1				
					5.5	0.0	161	20.3	20.3	7.9	7.9	29.8	29.8	94.0	94.1	7.1	7.1	2.7	2.7	10	10	86	86	<0.2			1.2	<0.2	1.2					
					5.5	0.0	173	20.3	20.3	7.9	7.9	29.8	29.8	94.1	94.1	7.1	7.1	2.7	2.7	10	10	86	86	<0.2			1.2	<0.2	1.2					
					9.9	0.1	169	20.3	20.3	7.9	7.9	30.0	30.0	94.3	94.4	7.1	7.2	3.5	3.3	10	11	90	90	<0.2			1.2	<0.2	1.2					
					9.9	0.1	172	20.3	20.3	7.9	7.9	30.0	30.0	94.5	94.4	7.2	7.2	3.3	3.3	11	11	90	90	<0.2			1.2	<0.2	1.2					
C3	Fine	Moderate	15:48	10.7	Surface	1.0	0.3	156	20.3	20.3	7.9	7.9	32.2	32.2	94.6	94.6	7.1	7.1	2.8	2.8	11	11	83	87	822115	817798	<0.2	1.1	<0.2	1.2				
						1.0	0.3	165	20.3	20.3	7.9	7.9	32.2	32.2	94.5	94.6	7.1	7.1	2.8	2.8	11	11	83	87			<0.2	1.2	<0.2	1.1				
					5.4	0.3	154	20.1	20.1	7.9	7.9	32.3	32.3	94.0	94.0	7.1	7.1	5.8	6.3	10	11	87	87	<0.2			1.1	<0.2	1.2					
					5.4	0.3	157	20.1	20.1	7.9	7.9	32.3	32.3	94.0	94.0	7.1	7.1	6.3	6.3	11	11	87	87	<0.2			1.2	<0.2	1.1					
					9.7	0.2	148	20.1	20.1	8.0	8.0	32.3	32.3	96.1	96.1	7.2	7.2	7.8	7.7	9	9	90	91	<0.2			1.2	<0.2	1.2					
					9.7	0.2	154	20.1	20.1	8.0	8.0	32.3	32.3	96.0	96.1	7.2	7.2	7.7	7.7	8	8	91	91	<0.2			1.1	<0.2	1.1					
IM1	Fine	Moderate	15:41	4.5	Surface	1.0	0.0	115	20.2	20.2	8.1	8.1	29.2	29.2	99.0	99.1	7.6	7.6	11.6	11.6	15	14	89	91	817945	807117	<0.2	1.8	<0.2	1.7				
						1.0	0.0	121	20.2	20.2	8.1	8.1	29.2	29.2	99.1	99.1	7.6	7.6	11.6	11.6	14	14	89	89			<0.2	1.7	<0.2	1.7				
					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-
					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-
					3.5	0.1	280	20.2	20.3	8.1	8.1	29.2	29.1	99.6	99.9	7.6	7.6	10.5	10.5	13	13	92	93	<0.2			1.7	<0.2	1.6					
					3.5	0.1	304	20.3	20.3	8.1	8.1	29.1	29.1	100.1	100.1	7.6	7.6	10.5	10.5	13	13	93	93	<0.2			1.6	<0.2	1.6					
IM2	Fine	Moderate	15:34	6.7	Surface	1.0	0.2	124	20.2	20.2	8.1	8.1	29.1	29.1	99.4	99.5	7.6	7.6	12.2	12.1	16	15	84	89	818176	806148	<0.2	1.7	<0.2	1.6				
						1.0	0.2	126	20.2	20.2	8.1	8.1	29.1	29.1	99.6	99.5	7.6	7.6	12.1	12.1	15	15	85	88			<0.2	1.6	<0.2	1.6				
					3.4	0.1	100	20.1	20.1	8.1	8.1	29.1	29.1	100.7	100.9	7.7	7.7	11.1	11.1	18	17	88	89	<0.2			1.5	<0.2	1.5					
					3.4	0.1	109	20.1	20.1	8.1	8.1	29.1	29.1	101.1	101.1	7.7	7.7	11.1	11.1	17	17	89	89	<0.2			1.6	<0.2	1.6					
					5.7	0.1	172	19.8	19.8	8.1	8.1	29.3	29.3	102.0	102.1	7.8	7.9	10.6	10.6	19	20	92	93	<0.2			1.6	<0.2	1.6					
					5.7	0.1	177	19.7	19.7	8.1	8.1	29.4	29.3	102.1	102.1	7.9	7.9	10.6	10.6	20	20	93	93	<0.2			1.6	<0.2	1.6					
IM3	Fine	Moderate	15:27	6.8	Surface	1.0	0.1	207	20.1	20.1	8.1	8.1	29.1	29.1	98.6	98.7	7.5	7.5	16.1	16.1	17	18	88	91	818775	805586	<0.2	1.5	<0.2	1.5				
						1.0	0.1	223	20.1	20.1	8.1	8.1	29.0	29.0	98.7	98.7	7.5	7.5	16.1	16.1	18	18	88	88			<0.2	1.5	<0.2	1.5				
					3.4	0.1	182	20.2	20.2	8.1	8.1	29.0	29.0	99.1	99.2	7.6	7.6	12.7	12.8	21	21	92	92	<0.2			1.4	<0.2	1.4					
					3.4	0.1	189	20.2	20.2	8.1	8.1	29.0	29.0	99.3	99.3	7.6	7.6	12.8	12.8	21	21	92	92	<0.2			1.3	<0.2	1.3					
					5.8	0.1	124	20.3	20.3	8.1	8.1	29.1	29.1	100.5	100.7	7.7	7.7	11.3	11.3	21	20	93	94	<0.2			1.3	<0.2	1.3					
					5.8	0.1	134	20.3	20.3	8.1	8.1	29.1	29.1	100.9	100.9	7.7	7.7	11.3	11.3	20	20	94	94	<0.2			1.3	<0.2	1.3					
IM4	Fine	Moderate	15:18	7.8	Surface	1.0	0.1	201	20.0	20.0	8.1	8.1	29.0	29.0	98.7	98.7	7.6	7.6	15.3	14.9	19	19	86	90	819702	804589	<0.2	1.3	<0.2	1.2				
						1.0	0.1	198	20.0	20.0	8.1	8.1	29.0	29.0	98.7	98.7	7.6	7.6	14.9	15.1	19	17	87	90			<0.2	1.2	<0.2	1.2				
					3.9	0.0	197	20.0	20.0	8.1	8.1	29.0	29.0	99.0	99.1	7.6	7.6	15.2	15.2	17	16	90	91	<0.2			1.5	<0.2	1.5					
					3.9	0.0	199	20.0	20.0	8.1	8.1	29.0	29.0	99.1	99.1	7.6	7.6	15.2	15.2	16	16	91	91	<0.2			1.5	<0.2	1.5					
					6.8	0.0	183	20.0	20.0	8.1	8.1	29.0	29.0	99.3	99.3	7.6	7.6	14.7	14.5	16	17	94	93	<0.2			1.5	<0.2	1.4					
					6.8	0.0	192	20.0	20.0	8.1	8.1	29.0	29.0	99.3	99.3	7.6	7.6	14.5	14.5	17	17	93	93	<0.2			1.4	<0.2	1.4					
IM5	Fine	Rough	15:10	6.5	Surface	1.0	0.2	202	20.3	20.3	8.1	8.1	28.2	28.2	98.2	98.3	7.5	7.5	8.6	8.7	24	25	85	89	820742	804858	<0.2	1.3	<0.2	1.2				
						1.0	0.2	203	20.3	20.3	8.1	8.1	28.2	28.2	98.3	98.3	7.5	7.6	8.7	8.8	25	25	86	89			<0.2	1.2	<0.2	1.2				
					3.3	0.1	203	20.2	20.3	8.1	8.1	28.2	28.2	98.6	98.7	7.6	7.6	8.7	8.8	25	25	89	90	<0.2			1.2	<0.2	1.2					
					3.3	0.2	206	20.3	20.3	8.1	8.1	28.2	28.2	98.8	98.8	7.6	7.6	8.8	8.8	25	25	90	90	<0.2			1.2	<0.2	1.2					
					5.5	0.1	198	20.3	20.3	8.1	8.1	28.1	28.1	101.6	101.9	7.8	7.8	7.9	7.9	25	25	92	92	<0.2			1.2	<0.2	1.2					
					5.5	0.1	187	20.3	20.3	8.1	8.1	28.1	28.1	102.1	101.9	7.8	7.8	7.9	7.9	26	26	93	93	<0.2			1.2	<0.2	1.2					
IM6	Fine	Rough	15:02	6.8	Surface	1.0	0.1	284	20.2	20.2	8.1	8.1	28.1	28.1	98.1	98.3	7.5	7.5	9.7	9.6	10	9	87	90	821055	805811	<0.2	1.2	<0					

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

Water Quality Monitoring

Water Quality Monitoring Results on 14 January 20 during Mid-Ebb Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity (NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)							
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA	Value	DA	Value	DA
IM9	Fine	Rough	14:42	6.7	Surface	1.0	0.2	212	20.2	20.2	7.9	7.9	30.7	30.7	95.9	96.0	7.3	7.3	7.3	7.3	19	83	87	822103	808819	<0.2	1.3	1.3	1.3							
						1.0	0.2	219	20.2	7.9	7.9	30.7	30.7	96.0	96.0	7.3	7.5	7.5	7.5	20	83	87	822103	808819	<0.2	1.3	1.3	1.3								
					Middle	3.4	0.2	236	20.1	20.1	7.9	7.9	30.7	30.7	96.8	96.9	7.3	7.3	8.9	8.8	20	86	87	822103	808819	<0.2	1.1	1.1	1.1							
						3.4	0.3	225	20.1	20.1	7.9	7.9	30.7	30.7	97.0	97.0	7.3	7.3	8.8	8.8	19	87	87	822103	808819	<0.2	1.2	1.2	1.2							
					Bottom	5.7	0.3	209	20.1	20.1	7.9	7.9	30.8	30.7	97.5	97.6	7.4	7.4	12.5	12.3	20	90	91	822103	808819	<0.2	1.4	1.4	1.4							
						5.7	0.3	212	20.1	20.1	7.9	7.9	30.7	30.7	97.7	97.7	7.4	7.4	12.3	12.3	21	91	91	822103	808819	<0.2	1.1	1.1	1.1							
IM10	Fine	Rough	14:49	7.0	Surface	1.0	0.3	188	20.0	20.0	8.0	8.0	31.2	31.2	96.9	96.9	7.3	7.3	5.7	5.7	24	83	87	822380	809806	<0.2	1.2	1.2	1.2							
						1.0	0.3	176	20.0	20.0	8.0	8.0	31.2	31.2	96.9	96.9	7.3	7.5	5.5	5.5	24	82	87	822380	809806	<0.2	1.1	1.1	1.1							
					Middle	3.5	0.3	180	20.0	20.0	8.0	8.0	31.2	31.2	96.9	97.0	7.3	7.3	7.6	7.6	25	87	87	822380	809806	<0.2	1.1	1.1	1.1							
						3.5	0.3	188	20.0	20.0	8.0	8.0	31.2	31.2	97.0	97.0	7.3	7.3	8.1	8.1	26	87	87	822380	809806	<0.2	1.2	1.2	1.2							
					Bottom	6.0	0.2	169	20.0	20.0	8.0	8.0	31.2	31.2	99.0	99.1	7.5	7.5	8.7	8.7	27	91	91	822380	809806	<0.2	1.2	1.2	1.2							
						6.0	0.2	170	20.0	20.0	8.0	8.0	31.2	31.2	99.2	99.2	7.5	7.5	8.7	8.7	28	90	90	822380	809806	<0.2	1.2	1.2	1.2							
IM11	Fine	Rough	15:02	8.3	Surface	1.0	0.4	167	20.1	20.1	8.0	8.0	31.2	31.2	96.0	96.0	7.3	7.3	8.6	8.6	17	83	87	822079	811459	<0.2	1.3	1.3	1.3							
						1.0	0.4	169	20.1	20.1	8.0	8.0	31.2	31.2	96.0	96.0	7.2	7.3	9.0	9.0	18	83	87	822079	811459	<0.2	1.3	1.3	1.3							
					Middle	4.2	0.5	183	20.1	20.1	8.0	8.0	31.3	31.3	96.5	96.5	7.3	7.3	10.9	10.9	17	87	87	822079	811459	<0.2	1.3	1.3	1.3							
						4.2	0.5	169	20.1	20.1	8.0	8.0	31.3	31.3	96.5	96.5	7.3	7.3	11.1	11.1	18	87	87	822079	811459	<0.2	1.5	1.5	1.5							
					Bottom	7.3	0.4	158	20.1	20.1	8.0	8.0	31.3	31.3	96.9	97.0	7.3	7.3	14.8	14.7	19	91	91	822079	811459	<0.2	1.4	1.4	1.4							
						7.3	0.4	171	20.1	20.1	8.0	8.0	31.3	31.3	97.0	97.0	7.3	7.3	14.7	14.7	18	91	91	822079	811459	<0.2	1.3	1.3	1.3							
IM12	Fine	Rough	15:08	8.5	Surface	1.0	0.5	158	20.2	20.2	7.9	7.9	31.2	31.2	95.8	95.7	7.2	7.2	9.0	9.0	13	82	83	821448	812042	<0.2	1.1	1.1	1.1							
						1.0	0.5	163	20.2	20.2	7.9	7.9	31.2	31.2	95.6	95.6	7.2	7.2	9.1	9.1	14	83	86	821448	812042	<0.2	1.0	1.0	1.0							
					Middle	4.3	0.5	163	20.2	20.2	7.9	7.9	31.2	31.2	95.7	95.6	7.2	7.2	10.5	10.2	13	86	87	821448	812042	<0.2	1.2	1.2	1.2							
						4.3	0.5	165	20.2	20.2	7.9	7.9	31.2	31.2	95.5	95.5	7.2	7.2	10.2	10.2	14	87	90	821448	812042	<0.2	1.2	1.2	1.2							
					Bottom	7.5	0.4	159	20.1	20.1	8.0	8.0	31.2	31.2	97.3	97.6	7.4	7.4	11.5	11.5	14	90	91	821448	812042	<0.2	1.4	1.4	1.4							
						7.5	0.4	164	20.1	20.1	8.0	8.0	31.2	31.2	97.9	97.9	7.4	7.4	11.1	11.1	13	91	91	821448	812042	<0.2	1.2	1.2	1.2							
SR1A	Fine	Moderate	15:20	4.2	Surface	1.0	-	-	20.1	20.1	8.0	8.0	31.3	31.3	95.5	95.7	7.2	7.2	5.6	5.6	11	-	-	819982	812657	-	-	-	-							
						1.0	-	-	20.1	20.1	8.0	8.0	31.3	31.3	95.9	95.7	7.2	7.2	5.7	5.7	13	-	-	819982	812657	-	-	-	-							
					Middle	2.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.8	13	-	-	-	-	-	-				
						2.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13	-	-	-	-	-	-				
					Bottom	3.2	-	-	20.1	20.1	8.0	8.0	31.3	31.3	95.9	96.0	7.2	7.2	6.0	6.0	14	-	-	-	-	14	-	-	-	-	-	-				
						3.2	-	-	20.1	20.1	8.0	8.0	31.3	31.3	96.0	96.0	7.2	7.2	6.0	6.0	14	-	-	-	-	14	-	-	-	-	-	-				
SR2	Fine	Moderate	15:27	4.1	Surface	1.0	0.4	80	20.2	20.2	8.0	8.0	31.3	31.3	97.0	97.1	7.3	7.3	6.9	7.1	13	83	83	821454	814157	<0.2	1.3	1.3	1.3							
						1.0	0.4	87	20.2	20.2	8.0	8.0	31.3	31.3	97.1	97.1	7.3	7.3	7.1	7.1	13	83	86	821454	814157	<0.2	1.2	1.2	1.2							
					Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.3	14	-	85	821454	814157	<0.2	1.2	1.2			
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14	-	-	-	-	-	-				
					Bottom	3.1	0.3	67	20.1	20.1	8.0	8.0	31.3	31.3	98.4	98.7	7.4	7.5	7.7	7.3	14	86	86	821454	814157	<0.2	1.1	1.1	1.1							
						3.1	0.3	69	20.4	20.4	8.0	8.0	31.3	31.3	98.9	98.9	7.5	7.5	7.3	7.3	14	86	86	821454	814157	<0.2	1.2	1.2	1.2							
SR3	Fine	Rough	14:30	8.1	Surface	1.0	0.3	126	20.4	20.4	7.9	7.9	30.2	30.2	95.1	95.1	7.2	7.2	4.2	4.2	12	-	-	822165	807558	-	-	-	-							
						1.0	0.3	128	20.4	20.4	7.9	7.9	30.2	30.2	95.1	95.1	7.2	7.2	4.2	4.2	12	-	-	822165	807558	-	-	-	-							
					Middle	4.1	0.3	131	20.3	20.3	7.9	7.9	30.2	30.2	95.2	95.3	7.2	7.2	4.9	4.9	13	-	-	-	12	-	-	-	-	-	-					
						4.1	0.3	134	20.3	20.3	7.9	7.9	30.2	30.2	95.2	95.3	7.2	7.2	4.9	4.9	12	-	-	-	12	-	-	-	-	-	-					
					Bottom	7.1	0.3	121	20.3	20.3	7.9	7.9	30.2	30.2	96.9	96.9	7.3	7.3	5.8	5.8	12	-	-	-	-	12	-	-	-	-	-	-				
						7.1	0.3	122	20.3	20.3	7.9	7.9	30.2	30.2	97.0	97.0	7.3	7.3	6.2	6.2	13	-	-	-	-	13	-	-	-	-	-	-				
SR4A	Fine	Calm	16:31	9.1	Surface	1.0	0.3	79	21.2	21.2	8.1	8.1	30.4	30.4	101.5	101.5	7.6	7.6	5.5	5.5	6	-	-	817169	807789	-	-	-	-							
						1.0	0.3	83	21.2	21.2	8.1	8.1	30.4	30.4	101.4	101.4	7.6	7.6	5.6	5.6	5	-	-	817169	807789	-	-	-	-							
					Middle	4.6	0.2	85	21.2	21.3	8.1	8.1	30.2	30.2	100.7	100.7	7.5	7.5	3.8	3.8	7	-	-	-	7	-	-	-	-	-	-					
						4.6	0.2	85	21.3	21.3	8.1	8.1	30.2	30.2	100.7	100.7	7.5	7.5	3.7	3.7	7	-	-	-	7	-	-	-	-	-	-					
					Bottom	8.1	0.2	54	20.3	20.3	8.1	8.1	30.1	30.1	98.4	98.4	7.5	7.5	5.9	5.9	7	-	-	-	-	7	-	-	-	-	-	-				
						8.1	0.2	58	20.3	20.3	8.1	8.1	30.1	30.1	98.3	98.4	7.5	7.5	6.3	6.3	8	-	-	-	-	8	-	-	-	-	-	-				
SR5A	Fine	Calm	16:46	4.7	Surface	1.0	0.1	15	20.2	20.2	8.1	8.1	32.2	32.2	95.0</																					

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

Water Quality Monitoring

Water Quality Monitoring Results on 14 January 20 during Mid-Flood Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)	Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity (NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)						
								Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA			
C1	Fine	Moderate	10:29	8.2	Surface	1.0	0.7	49	19.2	19.2	8.1	8.1	29.2	29.2	100.1	100.2	7.8	7.7	9.5	9.8	10	10	87	91	815617	804223	<0.2	1.9	1.7					
						1.0	0.7	0	19.2	19.2	8.1	8.1	29.2	29.2	100.3	100.3	7.8	7.7	9.7	9.8	9	9	88	91	815617	804223	<0.2	2.0	1.7					
						4.1	0.7	55	19.4	19.4	8.1	8.1	29.2	29.2	98.2	98.2	7.6	7.6	9.5	9.8	9	9	90	91	815617	804223	<0.2	2.0	1.7					
					Middle	4.1	0.7	58	19.4	19.4	8.1	8.1	29.2	29.2	98.2	98.2	7.6	7.6	9.6	9.8	10	10	90	91	815617	804223	<0.2	2.0	1.7					
						7.2	0.6	41	19.3	19.4	8.1	8.1	29.2	29.2	98.8	98.8	7.7	7.7	10.3	10.3	10	10	94	91	815617	804223	<0.2	1.3	1.7					
						7.2	0.6	41	19.4	19.4	8.1	8.1	29.2	29.2	99.2	99.2	7.7	7.7	10.2	10.2	10	10	94	91	815617	804223	<0.2	1.2	1.7					
					C2	Fine	Rough	11:07	11.0	Surface	1.0	0.3	323	20.4	20.4	7.9	7.9	29.8	29.8	94.2	94.3	7.1	7.1	2.5	3.6	8	8	86	90	825666	806943	<0.2	1.7	1.4
											1.0	0.4	326	20.4	20.4	7.9	7.9	29.8	29.8	94.3	94.3	7.2	7.2	2.5	3.6	8	8	86	90	825666	806943	<0.2	1.8	1.4
											5.5	0.3	328	20.3	20.3	7.9	7.9	29.8	29.8	94.1	94.3	7.1	7.1	3.0	3.6	7	7	90	90	825666	806943	<0.2	1.1	1.4
Middle	5.5	0.4	357	20.3						20.3	7.9	7.9	29.8	29.8	94.4	94.4	7.2	7.2	3.0	3.6	7	7	90	90	825666	806943	<0.2	1.1	1.4					
	10.0	0.3	350	20.3						20.3	7.9	7.9	30.0	30.0	93.8	93.8	7.1	7.1	5.1	5.0	9	9	94	90	825666	806943	<0.2	1.3	1.4					
	10.0	0.3	322	20.3						20.3	7.9	7.9	30.0	30.0	93.7	93.7	7.1	7.1	5.0	5.0	8	8	93	90	825666	806943	<0.2	1.3	1.4					
C3	Fine	Moderate	09:23	10.5						Surface	1.0	0.5	251	20.2	20.2	7.9	7.9	31.2	31.2	95.3	95.1	7.2	7.2	5.1	8.3	11	11	85	89	822095	817787	<0.2	1.4	1.2
											1.0	0.5	269	20.2	20.2	7.9	7.9	31.2	31.2	94.9	94.5	7.2	7.2	5.3	8.3	11	11	85	89	822095	817787	<0.2	1.2	1.2
											5.3	0.0	251	20.2	20.2	7.9	7.9	31.3	31.3	94.4	94.5	7.1	7.1	8.0	8.3	10	10	89	89	822095	817787	<0.2	1.2	1.2
					Middle	5.3	0.0	254	20.2	20.2	7.9	7.9	31.3	31.3	94.5	94.5	7.1	7.1	8.1	8.3	11	11	89	89	822095	817787	<0.2	1.1	1.2					
						9.5	0.4	254	20.2	20.2	7.9	7.9	31.4	31.4	94.1	94.2	7.1	7.1	11.7	11.3	12	12	92	89	822095	817787	<0.2	1.1	1.2					
						9.5	0.4	272	20.2	20.2	7.9	7.9	31.4	31.4	94.2	94.2	7.1	7.1	11.3	11.3	12	12	92	89	822095	817787	<0.2	1.1	1.2					
					IM1	Fine	Calm	10:47	4.4	Surface	1.0	0.1	12	19.4	19.4	8.1	8.1	29.1	29.1	98.1	98.1	7.6	7.6	10.0	9.1	10	10	88	90	817969	807152	<0.2	1.2	1.2
											1.0	0.1	12	19.4	19.4	8.1	8.1	29.1	29.1	98.1	98.1	7.6	7.6	9.8	9.1	11	11	89	90	817969	807152	<0.2	1.3	1.2
											-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Middle	-	-	-	-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	3.4	0.2	17	19.8						19.8	8.1	8.1	28.9	28.9	99.2	99.3	7.6	7.7	8.4	7.7	8.4	9.1	13	12	90	91	817969	807152	<0.2	1.2	1.2			
	3.4	0.2	17	19.7						19.7	8.1	8.1	28.9	28.9	99.4	99.4	7.7	7.7	8.4	7.7	8.4	9.1	13	12	91	91	817969	807152	<0.2	1.2	1.2			
IM2	Fine	Moderate	10:55	6.6						Surface	1.0	0.3	17	19.9	19.9	8.1	8.1	28.9	28.9	98.2	98.2	7.6	7.6	10.3	9.5	10	10	86	91	818178	806183	<0.2	1.2	1.2
											1.0	0.3	18	19.8	19.8	8.1	8.1	28.9	28.9	98.2	98.2	7.6	7.6	9.8	9.5	11	11	87	91	818178	806183	<0.2	1.1	1.2
											3.3	0.2	23	19.8	19.8	8.1	8.1	28.9	28.9	98.3	98.4	7.6	7.6	9.2	9.5	13	12	92	91	818178	806183	<0.2	1.1	1.2
					Middle	3.3	0.2	24	19.8	19.8	8.1	8.1	28.9	28.9	98.5	98.4	7.6	7.6	9.2	9.5	12	12	93	91	818178	806183	<0.2	1.3	1.2					
						5.6	0.2	342	19.8	19.8	8.1	8.1	28.8	28.8	99.3	99.4	7.7	7.7	9.1	9.1	14	14	95	91	818178	806183	<0.2	1.2	1.2					
						5.6	0.2	315	19.8	19.8	8.1	8.1	28.8	28.8	99.4	99.4	7.7	7.7	9.1	9.1	14	14	95	91	818178	806183	<0.2	1.4	1.2					
					IM3	Fine	Moderate	11:02	6.7	Surface	1.0	0.4	354	19.7	19.7	8.1	8.1	28.9	28.9	98.5	98.6	7.6	7.6	10.4	9.6	15	16	86	91	818776	805607	<0.2	1.2	1.2
											1.0	0.4	326	19.7	19.7	8.1	8.1	28.9	28.9	98.7	98.6	7.6	7.6	10.5	9.6	16	16	87	91	818776	805607	<0.2	1.2	1.2
											3.4	0.3	342	19.7	19.7	8.1	8.1	28.9	28.9	99.4	99.6	7.7	7.7	9.3	9.6	16	16	90	91	818776	805607	<0.2	1.1	1.2
Middle	3.4	0.4	315	19.7						19.7	8.1	8.1	28.9	28.9	99.7	99.7	7.7	7.7	9.4	9.6	16	16	91	91	818776	805607	<0.2	1.1	1.2					
	5.7	0.4	349	19.6						19.6	8.1	8.1	28.8	28.8	100.2	100.3	7.7	7.7	9.2	9.2	17	17	95	91	818776	805607	<0.2	1.2	1.2					
	5.7	0.4	351	19.6						19.6	8.1	8.1	28.8	28.8	100.4	100.4	7.8	7.8	9.2	9.2	17	17	95	91	818776	805607	<0.2	1.2	1.2					
IM4	Fine	Moderate	11:10	7.6						Surface	1.0	0.6	350	20.1	20.1	8.1	8.1	28.3	28.3	97.8	97.8	7.5	7.5	15.5	14.9	10	9	87	91	819744	804602	<0.2	1.2	1.3
											1.0	0.6	351	20.1	20.1	8.1	8.1	28.3	28.3	97.8	97.8	7.5	7.5	15.3	14.9	11	9	87	91	819744	804602	<0.2	1.3	1.3
											3.8	0.5	348	20.1	20.1	8.1	8.1	28.4	28.4	97.9	98.0	7.5	7.5	15.0	14.9	9	9	91	91	819744	804602	<0.2	1.4	1.3
					Middle	3.8	0.5	357	20.1	20.1	8.1	8.1	28.4	28.4	98.0	98.0	7.5	7.5	14.9	14.9	9	9	91	91	819744	804602	<0.2	1.2	1.3					
						6.6	0.4	333	20.0	20.0	8.1	8.1	28.3	28.3	99.4	99.4	7.6	7.6	14.3	14.3	9	9	96	91	819744	804602	<0.2	1.2	1.3					
						6.6	0.4	358	20.0	20.0	8.1	8.1	28.3	28.3	100.4	99.9	7.7	7.7	14.3	14.3	8	8	95	91	819744	804602	<0.2	1.2	1.3					
					IM5	Fine	Moderate	11:17	6.4	Surface	1.0	0.7	25	20.1	20.1	8.1	8.1	28.3	28.3	97.6	97.7	7.5	7.5	17.1	14.7	6	8	87	91	820739	804890	<0.2	1.1	1.2
											1.0	0.7	25	20.1	20.1	8.1	8.1	28.3	28.3	97.7	97.7	7.5	7.5	15.9	14.7	6	8	88	91	820739	804890	<0.2	1.3	1.2
											3.2	0.7	27	20.1	20.1	8.1	8.1	28.4	28.4	98.3	98.4	7.6	7.6	14.8	14.7	9	9	92	91	820739	804890	<0.2	1.1	1.2
Middle	3.2	0.7	29	20.0						20.1	8.1	8.1	28.4	28.4	98.4	98.4	7.6	7.6	14.0	14.0	8	8	92	91	820739	804890	<0.2	1.3	1.2					
	5.4	0.5	21	19.9						19.9	8.1	8.1	28.3	28.3	98.1	98.1	7.6	7.6	13.2	13.3	9	9	95	91	820739	804890	<0.2	1.2	1.2					
	5.4	0.5	21	19.9						19.9	8.1	8.1	28.1	28.2	98.0	98.1	7.6	7.6																

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

Water Quality Monitoring

Water Quality Monitoring Results on 14 January 20 during Mid-Flood Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity (NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)								
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA					
IM9	Fine	Rough	10:34	6.5	Surface	1.0	0.6	258	20.1	20.1	7.9	7.9	30.6	30.6	96.4	96.2	7.3	7.3	6.1	7.4	19	20	86	90	822082	808803	<0.2	<0.2	1.1	1.2							
						1.0	0.6	284	20.1	7.9	7.9	30.6	30.6	96.0	96.2	7.3	7.3	6.0	7.4	19	20	85	89	<0.2			<0.2	1.1	1.1								
						3.3	0.5	260	20.1	7.9	7.9	30.6	30.6	95.5	95.6	7.3	7.3	6.7	7.4	20	20	90	89	<0.2			<0.2	1.1	1.2								
					Middle	3.3	0.5	260	20.1	7.9	7.9	30.6	30.6	95.7	95.7	7.3	7.3	6.5	7.4	20	20	89	89	<0.2			<0.2	1.1	1.1								
						5.5	0.4	260	20.1	7.9	7.9	30.6	30.6	97.0	97.3	7.4	7.4	9.9	7.4	20	20	93	93	<0.2			<0.2	1.1	1.1								
						5.5	0.5	261	20.1	7.9	7.9	30.6	30.6	97.6	97.3	7.4	7.4	9.5	7.4	21	20	94	94	<0.2			<0.2	1.1	1.2								
					IM10	Fine	Rough	10:29	6.8	Surface	1.0	0.6	288	20.2	20.2	7.9	7.9	30.4	30.4	95.7	95.9	7.3	7.3	7.3			7.5	16	18	86	90	822393	809795	<0.2	<0.2	1.1	1.2
											1.0	0.6	296	20.2	7.9	7.9	30.4	30.4	96.0	96.9	7.3	7.3	7.5	7.4			16	18	86	90	<0.2			<0.2	1.1	1.1	
											3.4	0.5	294	20.2	7.9	7.9	30.4	30.4	96.7	96.9	7.3	7.3	11.4	7.4			18	18	90	89	<0.2			<0.2	1.1	1.1	
Middle	3.4	0.5	315	20.2						7.9	7.9	30.4	30.4	97.1	96.9	7.4	7.4	11.0	7.4	19	21	89	93	<0.2	<0.2	1.1	1.1										
	5.8	0.5	296	20.2						7.9	7.9	30.4	30.4	98.2	98.6	7.4	7.4	11.3	7.5	21	20	93	94	<0.2	<0.2	1.1	1.2										
	5.8	0.5	296	20.2						7.9	7.9	30.4	30.4	99.0	98.6	7.5	7.5	11.3	7.5	20	20	94	94	<0.2	<0.2	1.2	1.3										
IM11	Fine	Rough	10:19	8.2						Surface	1.0	0.6	297	20.1	20.1	7.9	7.9	30.9	30.9	95.3	95.4	7.2	7.2	6.5	7.3	10	13	85	89	822058	811470			<0.2	<0.2	1.1	1.2
											1.0	0.7	312	20.1	7.9	7.9	30.9	30.9	95.4	95.9	7.2	7.2	6.9	7.3	11	13	86	89	<0.2					<0.2	1.1	1.1	
											4.1	0.6	300	20.1	8.0	8.0	31.1	31.1	95.8	95.9	7.2	7.2	7.3	7.4	13	14	89	90	<0.2					<0.2	1.1	1.2	
					Middle	4.1	0.6	316	20.1	8.0	8.0	31.1	31.1	95.9	95.9	7.3	7.3	7.7	7.4	14	14	90	93	<0.2	<0.2	1.1	1.1										
						7.2	0.5	299	20.1	8.0	8.0	31.1	31.1	95.9	96.1	7.3	7.3	9.3	7.3	14	15	93	93	<0.2	<0.2	1.1	1.2										
						7.2	0.5	317	20.1	8.0	8.0	31.1	31.1	96.2	96.1	7.3	7.3	9.0	7.4	15	14	93	93	<0.2	<0.2	1.1	1.1										
					IM12	Fine	Rough	10:12	8.4	Surface	1.0	0.6	288	20.1	20.1	8.0	8.0	31.0	31.0	95.3	95.5	7.2	7.2	5.0	7.3	13	14	86	90			821464	812062	<0.2	<0.2	1.2	1.2
											1.0	0.6	309	20.1	8.0	8.0	31.0	31.0	95.6	96.2	7.2	7.2	5.1	7.3	14	14	85	89	<0.2					<0.2	1.2	1.2	
											4.2	0.5	290	20.0	8.0	8.0	31.2	31.2	96.1	96.2	7.3	7.3	8.1	7.4	14	16	90	89	<0.2					<0.2	1.2	1.3	
Middle	4.2	0.5	304	20.0						8.0	8.0	31.3	31.2	96.2	96.2	7.3	7.3	8.8	7.4	14	16	89	94	<0.2	<0.2	1.2	1.1										
	7.4	0.4	290	20.0						8.0	8.0	31.4	31.4	98.2	98.4	7.4	7.4	10.3	7.4	16	16	94	94	<0.2	<0.2	1.1	1.1										
	7.4	0.4	290	20.0						8.0	8.0	31.4	31.4	98.5	98.4	7.4	7.4	10.4	7.4	16	16	94	94	<0.2	<0.2	1.1	1.3										
SR1A	Fine	Calm	09:57	4.1						Surface	1.0	-	-	20.1	20.1	7.9	7.9	31.2	31.2	96.1	96.1	7.3	7.3	5.4	7.3	13	14	-	-	819979	812663			-	-	-	-
											1.0	-	-	20.1	20.1	7.9	7.9	31.2	31.2	96.1	96.1	7.3	7.3	5.3	7.3	13	14	-	-					-	-		
											2.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					-	-	-	-
					Middle	2.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-				
						3.1	-	-	20.1	20.1	7.9	7.9	31.2	31.2	96.8	97.0	7.3	7.3	5.8	7.3	15	14	-	-	-	-	-	-									
						3.1	-	-	20.1	20.1	7.9	7.9	31.2	31.2	97.2	97.0	7.3	7.3	5.9	7.3	14	14	-	-	-	-											
					SR2	Fine	Moderate	09:43	4.0	Surface	1.0	0.4	321	20.0	20.0	7.9	7.9	31.3	31.3	98.0	98.0	7.4	7.4	5.1	7.4	14	14	85	85			821449	814177	<0.2	<0.2	1.7	1.6
											1.0	0.4	352	20.0	7.9	7.9	31.3	31.3	98.0	98.0	7.4	7.4	5.0	7.4	14	14	85	85	<0.2					<0.2	1.6	1.6	
											-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					-	-	-	-
Middle	-	-	-	-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
	3.0	0.3	322	20.0						7.9	7.9	31.3	31.3	99.0	99.3	7.5	7.5	5.0	7.5	13	13	90	90	<0.2	<0.2	1.1	1.1										
	3.0	0.3	329	20.0						7.9	7.9	31.3	31.3	99.6	99.3	7.5	7.5	4.9	7.5	13	13	90	90	<0.2	<0.2	1.1	1.1										
SR3	Fine	Rough	10:48	7.9						Surface	1.0	0.1	273	20.3	20.3	7.9	7.9	30.2	30.2	94.5	94.6	7.2	7.2	5.6	7.2	9	11	-	-	822158	807594			-	-	-	-
											1.0	0.1	284	20.3	7.9	7.9	30.2	30.2	94.7	95.7	7.2	7.2	5.7	7.2	8	11	-	-	-					-			
											4.0	0.1	288	20.3	7.9	7.9	30.2	30.2	95.7	95.7	7.2	7.2	6.2	7.2	11	12	-	-	-					-			
					Middle	4.0	0.1	312	20.3	7.9	7.9	30.2	30.2	95.6	95.7	7.2	7.2	6.3	7.2	12	12	-	-	-	-												
						6.9	0.0	173	20.3	7.9	7.9	30.2	30.2	96.7	97.3	7.3	7.3	6.4	7.4	12	13	-	-	-	-												
						6.9	0.0	175	20.3	7.9	7.9	30.2	30.2	97.5	97.1	7.4	7.4	6.3	7.4	13	13	-	-	-	-												
					SR4A	Fine	Calm	10:07	9.0	Surface	1.0	0.4	285	19.5	19.5	8.1	8.1	29.2	29.2	96.3	96.3	7.4	7.4	9.8	7.5	10	12	-	-			817211	807798	-	-	-	-
											1.0	0.4	287	19.5	8.1	8.1	29.2	29.2	96.3	96.5	7.4	7.4	9.8	7.5	11	12	-	-	-					-			
											4.5	0.4	279	19.6	8.1	8.1	29.1	29.1	96.5	96.5	7.5	7.5	8.3	7.5	12	13	-	-	-					-			
Middle	4.5	0.4	286	19.6						8.1	8.1	29.1	29.1	96.5	96.5	7.5	7.5	9.1	7.5	13	13	-	-	-	-												
	8.0	0.4	268	19.8						8.1	8.1	29.1	29.1	97.3	97.3	7.5	7.5	8.3	7.5	13	13	-	-	-	-												
	8.0	0.4	266	19.8						8.1	8.1	29.1	29.1	97.3	97.3	7.5	7.5	8.3	7.5	13	13	-	-	-	-												
SR5A	Fine	Calm	09:50	4.8						Surface	1.0	0.0	211	19.0	19.0	8.1	8.1	29.4	29.4	95.2	95.2	7.4	7.4	7.3	7.4	12	12	-	-	816610	810702			-	-	-	-
											1.0	0.0	227	19.0	8.1	8.1	29.4	29.4	95.2	95.2	7.4	7.4	7.2	7.4	11	12	-	-	-					-			
											-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					-	-	-	-
					Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-					
						3.8	0.0	217	19.3	8.1	8.1	29.3	29.3	95.7	95.8	7.4	7.4	9.4	7.4	12	12	-	-	-	-												
						3.8	0.0	231	19.3	8.1	8.1	29.3	29.3	95.8	95.8	7.4	7.4	9.2	7.4	12	12	-	-	-	-												
					SR6A	Fine	Calm	09:24	3.6	Surface	1.0	0.1																									

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

Water Quality Monitoring Results on 16 January 20 during Mid-Ebb Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity(NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)									
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA	Value	DA				
C1	Cloudy	Moderate	17:13	8.7	Surface	1.0	0.1	211	20.9	20.9	8.0	8.0	31.2	31.2	99.5	99.7	7.4	5.3	11	87	88	88	88	88	88	88	815634	804237	<0.2	1.2	1.2	1.2						
						1.0	0.1	221	20.9	20.9	8.0	8.0	31.2	31.2	99.9	99.9	7.5	5.3	12	86	88	88	88	88	88	88	88	88	88	88	88	88	88	88				
					Middle	4.4	0.1	217	21.2	21.3	8.0	8.0	31.2	31.1	101.7	102.0	7.6	4.3	13	89	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	
						4.4	0.1	232	21.3	21.3	8.0	8.0	31.1	31.1	102.2	102.2	7.6	4.6	13	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	
					Bottom	7.7	0.1	243	20.8	20.8	8.0	8.0	30.5	30.5	98.7	98.7	7.4	7.4	14	90	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	
						7.7	0.1	261	20.7	20.7	8.0	8.0	30.5	30.5	98.7	98.7	7.4	7.4	15	90	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	
C2	Cloudy	Moderate	15:59	11.8	Surface	1.0	0.1	184	20.5	20.5	7.9	7.9	29.3	29.3	94.9	94.9	7.2	1.6	8	85	85	85	85	85	85	85	825663	806941	<0.2	2.0	2.0	2.0						
						1.0	0.1	166	20.5	20.5	7.9	7.9	29.3	29.3	94.9	94.9	7.2	1.6	9	86	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85		
					Middle	5.9	0.0	191	20.4	20.4	7.9	7.9	29.5	29.5	94.4	94.4	7.2	2.1	9	87	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88
						5.9	0.0	183	20.4	20.4	7.9	7.9	29.5	29.5	94.4	94.4	7.2	2.1	10	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88
					Bottom	10.8	0.1	167	20.4	20.4	7.9	7.9	29.6	29.6	94.1	94.1	7.1	7.1	10	90	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88
						10.8	0.1	172	20.4	20.4	7.9	7.9	29.6	29.6	94.1	94.1	7.1	7.1	10	90	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88
C3	Cloudy	Moderate	18:13	11.2	Surface	1.0	0.3	157	20.3	20.3	7.9	7.9	31.7	31.7	96.1	96.1	7.2	2.5	16	86	85	85	85	85	85	85	822115	817803	<0.2	1.1	1.1	1.1						
						1.0	0.3	165	20.3	20.3	7.9	7.9	31.7	31.7	96.1	96.1	7.2	2.5	16	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85		
					Middle	5.6	0.3	150	20.2	20.2	7.9	7.9	31.8	31.8	94.9	94.9	7.1	9.0	15	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88
						5.6	0.3	155	20.2	20.2	7.9	7.9	31.8	31.8	94.9	94.9	7.1	9.0	14	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88
					Bottom	10.2	0.2	144	20.1	20.1	7.9	7.9	31.8	31.8	96.0	96.0	7.2	6.2	14	89	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88
						10.2	0.2	151	20.1	20.1	7.9	7.9	31.8	31.8	96.0	96.0	7.2	6.2	15	90	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88
IM1	Cloudy	Moderate	16:49	5.4	Surface	1.0	0.0	116	20.7	20.7	8.1	8.1	30.4	30.4	99.7	99.7	7.5	9.8	9	86	87	87	87	87	87	87	817926	807129	<0.2	1.2	1.2	1.2						
						1.0	0.0	116	20.7	20.7	8.1	8.1	30.4	30.4	99.8	99.8	7.5	9.8	9	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87			
					Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
					Bottom	4.4	0.1	280	20.7	20.8	8.1	8.1	30.4	30.4	100.1	100.4	7.6	7.6	12	90	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	
						4.4	0.1	280	20.8	20.8	8.1	8.1	30.3	30.3	100.6	100.6	7.6	10.2	12	90	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88
IM2	Cloudy	Moderate	16:42	7.0	Surface	1.0	0.1	104	20.7	20.7	8.0	8.0	30.3	30.3	99.1	99.2	7.5	7.8	9	86	85	85	85	85	85	85	818141	806153	<0.2	1.1	1.1	1.1						
						1.0	0.1	105	20.7	20.7	8.0	8.0	30.3	30.3	99.3	99.3	7.5	7.8	10	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85			
					Middle	3.5	0.1	100	20.6	20.6	8.0	8.0	30.3	30.3	101.4	101.6	7.7	6.4	11	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	
						3.5	0.1	105	20.6	20.6	8.0	8.0	30.3	30.3	101.8	101.8	7.7	6.4	12	89	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	
					Bottom	6.0	0.1	173	20.3	20.3	8.0	8.0	30.5	30.6	102.5	102.6	7.8	10.3	14	90	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	
						6.0	0.1	176	20.2	20.2	8.0	8.0	30.6	30.6	102.6	102.6	7.8	10.3	14	91	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	
IM3	Cloudy	Moderate	16:35	7.3	Surface	1.0	0.1	200	20.6	20.6	8.0	8.0	30.3	30.3	98.3	98.4	7.4	9.4	13	86	85	85	85	85	85	85	818755	805590	<0.2	1.1	1.1	1.1						
						1.0	0.1	208	20.6	20.6	8.1	8.1	30.3	30.3	98.4	98.4	7.4	9.4	13	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85			
					Middle	3.7	0.1	182	20.7	20.7	8.1	8.1	30.3	30.3	99.8	99.9	7.5	10.3	16	90	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	
						3.7	0.1	198	20.7	20.7	8.1	8.1	30.3	30.3	100.0	100.0	7.5	10.3	15	90	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	
					Bottom	6.3	0.1	129	20.8	20.8	8.1	8.1	30.4	30.3	101.0	101.2	7.6	11.0	16	90	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	
						6.3	0.1	135	20.8	20.8	8.1	8.1	30.3	30.3	101.4	101.4	7.6	11.0	15	91	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	
IM4	Cloudy	Moderate	16:26	7.5	Surface	1.0	0.1	279	20.5	20.5	8.1	8.1	30.3	30.3	98.4	98.4	7.5	7.5	17	86	87	87	87	87	87	87	819724	804608	<0.2	1.1	1.1	1.1						
						1.0	0.1	302	20.5	20.5	8.1	8.1	30.3	30.3	98.4	98.4	7.5	7.5	18	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87				
					Middle	3.8	0.0	196	20.5	20.5	8.1	8.1	30.3	30.3	99.7	99.7	7.5	8.9	16	89	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88		
						3.8	0.0	201	20.5	20.5	8.1	8.1	30.3	30.3	99.8	99.7	7.6	8.9	17	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87		
					Bottom	6.5	0.0	203	20.5	20.5	8.1	8.1	30.3	30.3	99.8	99.8	7.6																					





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

Water Quality Monitoring Results on 16 January 20 during Mid-Flood Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity(NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)						
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA			
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA	Value	DA	
C1	Cloudy	Moderate	12:14	8.8	Surface	1.0	0.7	49	19.7	19.7	8.0	8.0	30.4	30.4	100.6	100.7	7.7	7.7	9.2	9.2	14	14	86	86	88	815629	804242	<0.2	<0.2	1.1	1.1				
						1.0	0.8	53	19.7	8.0	8.0	30.4	30.4	100.8	100.8	7.7	7.7	6.6	6.6	15	15	86	86	<0.2				<0.2	1.1	1.1					
						4.4	0.7	42	19.9	19.9	8.0	8.0	30.4	30.4	97.9	97.9	7.5	7.5	8.9	8.9	13	13	88	88				<0.2	<0.2	1.1	1.1				
					4.4	0.8	42	19.9	19.9	8.0	8.0	30.4	30.4	97.9	97.9	7.5	7.5	8.9	8.9	12	12	87	87	<0.2				<0.2	1.1	1.1					
					7.8	0.6	31	19.8	19.9	8.0	8.0	30.4	30.4	99.5	99.5	7.6	7.6	10.8	10.8	9	9	90	90	<0.2				<0.2	1.1	1.1					
					7.8	0.6	32	19.9	19.9	8.0	8.0	30.4	30.4	99.9	99.9	7.6	7.6	10.7	10.7	9	9	89	89	<0.2				<0.2	1.1	1.1					
C2	Cloudy	Moderate	13:13	11.6	Surface	1.0	0.1	300	20.5	20.5	7.9	7.9	29.3	29.3	95.1	95.1	7.2	7.2	1.6	1.6	7	7	85	85	88	825690	806934	<0.2	<0.2	2.2	2.2				
						1.0	0.1	301	20.5	20.5	7.9	7.9	29.3	29.3	95.1	95.1	7.2	7.2	1.6	1.6	7	7	86	86				<0.2	<0.2	2.2	2.2				
						5.8	0.2	46	20.4	20.4	7.9	7.9	29.6	29.6	96.3	96.3	7.3	7.3	2.1	2.1	7	7	88	88				<0.2	<0.2	2.1	2.1				
					5.8	0.2	46	20.4	20.4	7.9	7.9	29.6	29.6	96.3	96.3	7.3	7.3	2.1	2.1	7	7	88	88	<0.2				<0.2	2.1	2.1					
					10.6	0.2	49	20.4	20.4	7.9	7.9	29.7	29.7	97.7	97.7	7.4	7.4	1.6	1.6	7	7	90	90	<0.2				<0.2	2.1	2.1					
					10.6	0.2	51	20.4	20.4	7.9	7.9	29.7	29.7	97.7	97.7	7.4	7.4	1.6	1.6	8	8	90	90	<0.2				<0.2	2.2	2.2					
C3	Cloudy	Moderate	11:02	11.6	Surface	1.0	0.4	231	20.2	20.2	7.8	7.8	31.2	31.2	96.3	96.3	7.3	7.3	5.5	5.5	5	5	86	86	88	822112	817787	<0.2	<0.2	1.1	1.1				
						1.0	0.4	250	20.2	20.2	7.8	7.8	31.2	31.2	96.3	96.3	7.3	7.3	5.5	5.5	6	6	87	87				<0.2	<0.2	1.2	1.2				
						5.8	0.3	223	20.2	20.2	7.8	7.8	31.3	31.3	95.3	95.3	7.2	7.2	6.6	6.6	6	6	88	88				<0.2	<0.2	1.2	1.2				
					5.8	0.4	237	20.2	20.2	7.8	7.8	31.3	31.3	95.3	95.3	7.2	7.2	6.6	6.6	6	6	89	89	<0.2				<0.2	1.0	1.0					
					10.6	0.3	236	20.2	20.2	7.8	7.8	31.3	31.3	95.4	95.4	7.2	7.2	6.8	6.8	8	8	90	90	<0.2				<0.2	1.2	1.2					
					10.6	0.3	252	20.2	20.2	7.8	7.8	31.3	31.3	95.4	95.4	7.2	7.2	6.8	6.8	8	8	90	90	<0.2				<0.2	1.1	1.1					
IM1	Cloudy	Moderate	12:32	5.2	Surface	1.0	0.1	12	19.9	19.9	8.0	8.0	30.4	30.4	97.8	97.8	7.5	7.5	9.4	9.4	9	9	86	86	88	817945	807132	<0.2	<0.2	1.1	1.1				
						1.0	0.1	12	19.9	19.9	8.0	8.0	30.4	30.4	97.8	97.8	7.5	7.5	9.1	9.1	9	9	86	86				<0.2	<0.2	1.1	1.1				
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				-	-	-	-	-	-	-	-
					4.2	0.2	15	20.3	20.3	8.0	8.0	30.1	30.1	99.9	100.0	7.6	7.6	8.9	8.9	11	11	90	90	<0.2				<0.2	1.1	1.1					
					4.2	0.2	15	20.2	20.2	8.0	8.0	30.1	30.1	100.1	100.1	7.6	7.6	8.9	8.9	11	11	90	90	<0.2				<0.2	1.1	1.1					
					1.0	0.3	17	20.4	20.4	8.0	8.0	30.1	30.1	97.9	97.9	7.4	7.4	9.7	9.7	10	10	86	86	<0.2				<0.2	1.0	1.0					
IM2	Cloudy	Moderate	12:40	7.3	Surface	1.0	0.3	17	20.3	20.3	8.0	8.0	30.1	30.1	99.0	99.0	7.5	7.5	9.7	9.7	12	12	88	88	88	818146	806161	<0.2	<0.2	1.1	1.1				
						3.7	0.2	21	20.3	20.3	8.0	8.0	30.1	30.1	99.0	99.0	7.5	7.5	9.7	9.7	12	12	88	88				<0.2	<0.2	1.1	1.1				
						3.7	0.2	21	20.3	20.3	8.0	8.0	30.1	30.1	99.2	99.2	7.5	7.5	9.7	9.7	12	12	87	87				<0.2	<0.2	1.1	1.1				
					6.3	0.2	340	20.3	20.3	8.0	8.0	30.1	30.1	99.8	99.8	7.6	7.6	8.8	8.8	13	13	90	90	<0.2				<0.2	1.1	1.1					
					6.3	0.2	345	20.3	20.3	8.0	8.0	30.1	30.1	99.9	99.9	7.6	7.6	8.8	8.8	13	13	90	90	<0.2				<0.2	1.1	1.1					
					1.0	0.4	356	20.2	20.2	8.0	8.0	30.1	30.1	98.2	98.3	7.5	7.5	9.8	9.8	12	12	86	86	<0.2				<0.2	1.0	1.0					
IM3	Cloudy	Moderate	12:47	7.5	Surface	1.0	0.4	359	20.2	20.2	8.0	8.0	30.1	30.1	98.4	98.4	7.5	7.5	9.8	9.8	13	13	86	86	88	818779	805588	<0.2	<0.2	1.1	1.1				
						3.8	0.3	351	20.2	20.2	8.0	8.0	30.1	30.1	100.1	100.2	7.6	7.6	9.8	9.8	13	13	89	89				<0.2	<0.2	1.1	1.1				
						3.8	0.4	323	20.2	20.2	8.0	8.0	30.2	30.2	100.4	100.4	7.6	7.6	9.9	9.9	14	14	88	88				<0.2	<0.2	1.1	1.1				
					6.5	0.4	344	20.1	20.1	8.0	8.0	30.1	30.1	100.7	100.7	7.7	7.7	8.9	8.9	15	15	90	90	<0.2				<0.2	1.1	1.1					
					6.5	0.4	316	20.1	20.1	8.0	8.0	30.1	30.1	100.9	100.9	7.7	7.7	8.9	8.9	15	15	90	90	<0.2				<0.2	1.1	1.1					
					1.0	0.6	350	20.6	20.6	8.0	8.0	29.6	29.6	97.5	97.5	7.4	7.4	14.9	14.9	14	14	87	87	<0.2				<0.2	1.1	1.1					
IM4	Cloudy	Moderate	12:55	7.1	Surface	1.0	0.6	322	20.6	20.6	8.0	8.0	29.6	29.6	97.5	97.5	7.4	7.4	14.6	14.6	15	15	86	86	89	819708	804591	<0.2	<0.2	1.1	1.1				
						3.6	0.5	332	20.6	20.6	8.0	8.0	29.6	29.6	98.6	98.6	7.5	7.5	15.5	15.5	14	14	88	88				<0.2	<0.2	1.1	1.1				
						3.6	0.5	333	20.6	20.6	8.0	8.0	29.6	29.6	98.7	98.6	7.5	7.5	15.4	15.4	14	14	89	89				<0.2	<0.2	1.1	1.1				
					6.1	0.4	341	20.5	20.5	8.0	8.0	29.6	29.6	99.9	100.4	7.6	7.6	14.0	14.0	12	12	90	90	<0.2				<0.2	1.1	1.1					
					6.1	0.4	314	20.5	20.5	8.0	8.0	29.6	29.6	100.9	100.4	7.7	7.7	14.0	14.0	12	12	91	91	<0.2				<0.2	1.1	1.1					
					1.0	0.7	22	20.6	20.6	8.0	8.0	29.6	29.6	97.3	97.4	7.4	7.4	11.5	11.5	9	9	86	86	<0.2				<0.2	1.0	1.0					
IM5	Cloudy	Moderate	13:02	7.6	Surface	1.0	0.7	23	20.6	20.6	8.0	8.0	29.6	29.6	97.4	97.4	7.4	7.4	10.2	10.2	9	9	86	86	88	820732	804851	<0.2	<0.2	1.1	1.1				
						3.8	0.7	18	20.6	20.6	8.0	8.0	29.6	29.6	99.0	99.0	7.5	7.5	10.3	10.3	9	9	88	88				<0.2	<0.2	1.0	1.0				
						3.8	0.7	19	20.5	20.6	8.0	8.0	29.6	29.6	99.1	99.0	7.5	7.5	9.5	9.5	9	9	87	87				<0.2	<0.2	1.1	1.1				
					6.6	0.5	26	20.4	20.4	8.0	8.0	29.5	29.4	98.6	98.6	7.5	7.5	12.9	12.9	10	10	90	90	<0.2				<0.2	1.1	1.1					
					6.6	0.5	26	20.4	20.4	8.0	8.0	29.4	29.4	98.5	98.5	7.5	7.5	13.0	13.0	10	10	90	90	<0.2				<0.2	1.0	1.0					
					1.0	0.4	135	20.6	20.6	8.0	8.0	29.6	29.6	96.7	96.7	7.4	7.4	9.1	9.1	10	10	85	85	<0.2				<0.2	1.1	1.1					
IM6	Cloudy	Moderate	13:08	7.7	Surface	1.0	0.4	146	20.6	20.6	8.0	8.0	29.6	29.6	96.7	96.7	7.4	7.4	9.3	9.3	11	11	87	87											

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

**Water Quality Monitoring Results on 16 January 20 during Mid-Flood Tide**

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity(NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)			
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA
IM9	Cloudy	Moderate	12:38	7.0	Surface	1.0	0.5	284	20.3	20.3	7.9	7.9	30.0	30.0	96.3	96.3	7.3	5.3	10	86	88	822085	808825	<0.2	2.4	2.5	2.5					
						1.0	0.5	304	20.3	20.3	7.9	7.9	30.0	30.0	96.3	96.3	7.3	5.3	10	85	88											
					Middle	3.5	0.5	287	20.3	20.3	7.9	7.9	30.1	30.1	96.0	96.0	7.3	6.7	9	87	88											
						3.5	0.5	291	20.3	20.3	7.9	7.9	30.1	30.1	96.0	96.0	7.3	6.7	9	87	88											
					Bottom	6.0	0.4	287	20.3	20.3	7.9	7.9	30.1	30.1	98.5	98.5	7.5	7.6	6	90	88											
						6.0	0.4	314	20.3	20.3	7.9	7.9	30.1	30.1	98.5	98.5	7.5	7.6	6	89	88											
IM10	Cloudy	Moderate	12:31	7.1	Surface	1.0	0.4	293	20.4	20.4	7.9	7.9	30.2	30.2	95.1	95.1	7.2	6.1	12	86	88	822393	809810	<0.2	1.7	1.7	1.7					
						1.0	0.5	298	20.4	20.4	7.9	7.9	30.2	30.2	95.1	95.1	7.2	6.1	13	85	88											
					Middle	3.6	0.4	296	20.4	20.4	7.9	7.9	30.2	30.2	95.0	95.0	7.2	7.3	13	88	88											
						3.6	0.5	318	20.4	20.4	7.9	7.9	30.2	30.2	95.0	95.0	7.2	7.3	14	87	88											
					Bottom	6.1	0.4	299	20.4	20.4	7.9	7.9	30.2	30.2	94.5	94.5	7.2	8.1	13	90	88											
						6.1	0.4	308	20.4	20.4	7.9	7.9	30.2	30.2	94.5	94.5	7.2	8.1	14	90	88											
IM11	Cloudy	Moderate	12:20	7.3	Surface	1.0	0.5	284	20.3	20.3	7.9	7.9	30.5	30.5	96.7	96.7	7.3	5.9	14	86	88	822073	811440	<0.2	1.2	1.2	1.3					
						1.0	0.5	303	20.3	20.3	7.9	7.9	30.5	30.5	97.5	97.5	7.4	6.5	13	89	88											
					Middle	3.7	0.4	292	20.3	20.3	7.9	7.9	30.5	30.5	97.5	97.5	7.4	6.6	14	88	88											
						3.7	0.5	312	20.3	20.3	7.9	7.9	30.5	30.5	97.5	97.5	7.4	6.6	14	90	88											
					Bottom	6.3	0.3	292	20.3	20.3	7.9	7.9	30.5	30.5	99.7	99.7	7.5	6.9	15	90	88											
						6.3	0.3	314	20.3	20.3	7.9	7.9	30.5	30.5	99.7	99.7	7.5	6.9	15	90	88											
IM12	Cloudy	Moderate	12:12	8.2	Surface	1.0	0.3	269	20.3	20.3	7.9	7.9	30.8	30.8	96.1	96.1	7.3	3.5	9	85	88	821442	812030	<0.2	1.4	1.5	1.5					
						1.0	0.4	293	20.3	20.3	7.9	7.9	30.8	30.8	96.1	96.1	7.3	3.5	9	86	88											
					Middle	4.1	0.3	273	20.3	20.3	7.9	7.9	30.8	30.8	96.2	96.2	7.3	4.6	9	88	88											
						4.1	0.3	283	20.3	20.3	7.9	7.9	30.8	30.8	96.2	96.2	7.3	4.6	10	87	88											
					Bottom	7.2	0.3	276	20.3	20.3	7.9	7.9	30.9	30.9	96.2	96.2	7.3	6.3	10	90	88											
						7.2	0.3	276	20.3	20.3	7.9	7.9	30.9	30.9	96.2	96.2	7.3	6.3	10	90	88											
SR1A	Cloudy	Moderate	11:44	5.2	Surface	1.0	-	-	20.1	20.1	7.8	7.8	31.0	31.0	97.8	97.8	7.4	4.6	10	-	-	819977	812655	-	-	-	-					
						1.0	-	-	20.1	20.1	7.8	7.8	31.0	31.0	97.8	97.8	7.4	4.6	10	-	-											
					Middle	2.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-			
						2.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-			
					Bottom	4.2	-	-	20.1	20.1	7.8	7.8	31.0	31.0	97.8	97.8	7.4	4.7	11	-	-	-	-	-	-	-		-	-			
						4.2	-	-	20.1	20.1	7.8	7.8	31.0	31.0	97.8	97.8	7.4	4.7	12	-	-	-	-	-	-	-		-	-			
SR2	Cloudy	Moderate	11:28	4.4	Surface	1.0	0.3	244	20.1	20.1	7.8	7.8	31.0	31.0	98.0	98.0	7.4	4.7	16	86	88	821463	814189	<0.2	1.0	1.0	1.0					
						1.0	0.3	252	20.1	20.1	7.8	7.8	31.0	31.0	98.0	98.0	7.4	4.7	17	86	88											
					Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-			
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-			
					Bottom	3.4	0.2	262	20.1	20.1	7.8	7.8	31.0	31.0	99.6	99.6	7.5	4.7	18	90	88											
						3.4	0.2	273	20.1	20.1	7.8	7.8	31.0	31.0	99.6	99.6	7.5	4.7	18	90	88											
SR3	Cloudy	Moderate	12:48	8.0	Surface	1.0	0.5	278	20.3	20.3	7.9	7.9	30.0	30.0	95.5	95.5	7.2	9.0	12	-	-	822134	807569	-	-	-	-					
						1.0	0.5	288	20.3	20.3	7.9	7.9	30.0	30.0	95.5	95.5	7.2	9.0	12	-	-											
					Middle	4.0	0.5	270	20.3	20.3	7.9	7.9	30.0	30.0	95.4	95.4	7.2	10.7	8	-	-	-	-									
						4.0	0.5	285	20.3	20.3	7.9	7.9	30.0	30.0	95.4	95.4	7.2	10.7	8	-	-	-	-									
					Bottom	7.0	0.5	272	20.3	20.3	7.9	7.9	30.0	30.0	95.3	95.3	7.2	13.6	7	-	-	-	-									
						7.0	0.5	291	20.3	20.3	7.9	7.9	30.0	30.0	95.3	95.3	7.2	13.6	6	-	-	-	-									
SR4A	Cloudy	Moderate	11:52	8.4	Surface	1.0	0.4	279	20.0	20.0	8.0	8.0	30.5	30.5	96.8	96.8	7.4	9.5	15	-	-	817208	807826	-	-	-	-					
						1.0	0.4	282	20.0	20.0	8.0	8.0	30.5	30.5	96.8	96.8	7.4	9.5	14	-	-											
					Middle	4.2	0.4	282	20.1	20.1	8.0	8.0	30.3	30.3	96.2	96.2	7.3	7.7	13	-	-	-	-									
						4.2	0.4	286	20.1	20.1	8.0	8.0	30.3	30.3	96.2	96.2	7.3	8.4	14	-	-	-	-									
					Bottom	7.4	0.4	266	20.3	20.3	8.0	8.0	30.4	30.4	98.0	98.0	7.4	8.8	13	-	-	-	-									
						7.4	0.4	268	20.3	20.3	8.0	8.0	30.4	30.4	98.0	98.0	7.4	8.8	13	-	-	-	-									
SR5A	Cloudy	Moderate	11:35	4.6	Surface	1.0	0.0	211	19.5	19.5	8.0	8.0	30.6	30.6	95.7	95.7	7.4	7.0	6	-	-	816598	810700	-	-	-	-					
						1.0	0.0	205	19.5	19.5	8.0	8.0	30.6	30.6	95.7	95.7	7.4	6.9	7	-	-											
					Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-			
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-			
					Bottom	3.6	0.0	210	19.8	19.8	8.0	8.0	30.6	30.6	95.4	95.4	7.3	8.8	7	-	-	-	-									
						3.6	0.0	223	19.8	19.8	8.0	8.0	30.6	30.6	95.5	95.5	7.3	8.5	7	-	-	-	-									
SR6A	Cloudy	Moderate	11:09	4.3	Surface	1.0	0.1	231	20.2	20.2	8.0	8.0	30.5	30.5	96.7	96.7	7.4	8.8	8	-	-	817952	814729	-	-	-	-					
						1.0	0.1	247	20.2	20.2	8.0	8.0	30.5	30.5	96.8	96.8	7.4	8.8	8	-	-											
					Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-			
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-			
					Bottom	3.3	0.1	236	20.3	20.3	7.9	7.9	30.6	30.6	96.7	96.7	7.3	8.6	9	-	-	-	-									
						3.3	0.1	245	20.3	20.3	7.9	7.9	30.6	30.6	96.7	96.7	7.3	8.6	9	-	-	-	-									
SR7	Cloudy	Moderate	10:28	16.8	Surface	1.0	0.6	204	20.1	20.1	7.8	7.8	31.8	31.8	95.0	95.0	7.2	1.2	5	-	-	823636	823728	-	-	-	-					
						1.0	0.6	216	20.1	20.1	7.8	7.8	31.8	31.8	95.0	95.0	7.2	1.2	6	-	-											
					Middle	8.4	0.4	208	20.1	20.1	7.8	7.8	32.0	32.0	94.4	94.4	7.1	2.1	6	-	-	-	-									
						8.4	0.4	213	20.1	20.1	7.8	7.8	32.0	32.0	94.4	94.4	7.1	2.1	5	-	-	-	-									
					Bottom	15.8	0.2	243	20.1	20.1	7.8	7.8	32.0	32.0	93.8	93.																

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

Water Quality Monitoring

Water Quality Monitoring Results on 18 January 20 during Mid-Ebb Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity(NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)							
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA	Value	DA	Value	DA
C1	Cloudy	Rough	06:09	7.1	Surface	1.0	0.1	211	20.0	20.0	7.8	7.8	30.9	30.9	95.4	95.4	7.2	2.4	2	2	84	84	<0.2	1.0	1.0	1.0	<0.2	1.0								
						1.0	0.1	220	20.0	20.0	7.8	7.8	30.9	30.9	95.3	95.3	7.2	2.4	2	2	85	85	<0.2	1.0	1.0											
					Middle	3.6	0.1	225	20.0	20.0	7.8	7.8	31.0	31.0	95.3	95.3	7.2	4.6	4	4	88	88	<0.2	1.0	1.0	0.9										
						3.6	0.1	230	20.0	20.0	7.8	7.8	31.0	31.0	95.2	95.2	7.2	4.7	4	4	88	88	<0.2	1.0	1.0	1.0										
					Bottom	6.1	0.1	231	20.0	20.0	7.8	7.8	31.0	31.0	95.0	95.0	7.2	4.9	2	2	91	91	<0.2	1.0	1.0	1.0										
						6.1	0.1	236	20.0	20.0	7.8	7.8	31.0	31.0	95.0	95.0	7.2	5.0	2	2	91	91	<0.2	1.0	1.0	1.0										
C2	Cloudy	Rough	07:43	8.5	Surface	1.0	0.1	202	20.4	20.4	7.8	7.8	30.1	30.1	98.5	98.5	7.4	5.4	4	4	83	83	<0.2	1.5	1.5	1.5	<0.2	1.5								
						1.0	0.1	212	20.4	20.4	7.8	7.8	30.1	30.1	98.4	98.4	7.4	5.6	5	5	84	84	<0.2	1.5	1.5											
					Middle	4.3	0.0	188	20.2	20.2	7.8	7.8	30.5	30.5	98.1	98.2	7.4	5.1	5	5	88	88	<0.2	1.5	1.5	1.5										
						4.3	0.0	191	20.2	20.2	7.8	7.8	30.5	30.5	98.2	98.2	7.4	5.2	5	5	88	88	<0.2	1.5	1.5	1.5										
					Bottom	7.5	0.1	169	20.2	20.2	7.9	7.9	30.9	30.9	99.6	99.7	7.5	4.6	6	6	91	91	<0.2	1.5	1.5	1.5										
						7.5	0.1	174	20.2	20.2	7.9	7.9	30.9	30.9	99.7	99.7	7.5	4.8	5	5	92	92	<0.2	1.5	1.5	1.5										
C3	Cloudy	Rough	05:45	11.1	Surface	1.0	0.3	157	20.0	20.0	7.8	7.8	31.7	31.7	94.2	94.3	7.1	3.5	5	5	83	83	<0.2	1.0	1.0	1.0	<0.2	1.0								
						1.0	0.3	166	20.0	20.0	7.8	7.8	31.7	31.7	94.3	94.3	7.1	3.6	5	5	84	84	<0.2	1.0	1.0											
					Middle	5.6	0.3	142	20.0	20.0	7.8	7.8	31.9	31.9	93.6	93.6	7.1	4.7	4	4	89	89	<0.2	1.0	1.0	1.0										
						5.6	0.3	145	20.0	20.0	7.8	7.8	31.9	31.9	93.5	93.5	7.0	4.8	4	4	89	89	<0.2	1.0	1.0	1.0										
					Bottom	10.1	0.2	144	20.1	20.1	7.9	7.9	32.2	32.2	93.0	93.0	7.0	5.1	4	4	91	91	<0.2	1.0	1.0	1.0										
						10.1	0.2	150	20.1	20.1	7.9	7.9	32.2	32.2	93.0	93.0	7.0	5.2	3	3	92	92	<0.2	1.0	1.0	1.1										
IM1	Cloudy	Rough	06:37	4.6	Surface	1.0	0.0	111	19.9	19.9	7.8	7.8	30.7	30.7	98.9	99.0	7.5	2.7	6	6	83	83	<0.2	1.0	1.0	1.0	<0.2	1.0								
						1.0	0.0	119	19.9	19.9	7.8	7.8	30.7	30.7	99.0	99.0	7.5	2.7	5	5	84	84	<0.2	1.0	1.0											
					Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-				
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-				
					Bottom	3.6	0.1	282	19.9	19.9	7.8	7.8	30.7	30.7	99.5	99.5	7.6	4.2	4	4	91	91	<0.2	1.0	1.0	1.0										
						3.6	0.1	304	19.9	19.9	7.8	7.8	30.7	30.7	99.4	99.4	7.6	4.2	4	4	91	91	<0.2	1.0	1.0	1.0										
IM2	Cloudy	Rough	06:42	6.5	Surface	1.0	0.1	125	19.9	19.9	7.8	7.8	30.5	30.5	98.3	98.3	7.5	5.7	2	2	83	83	<0.2	1.0	1.0	1.0	<0.2	1.0								
						1.0	0.1	130	19.9	19.9	7.8	7.8	30.5	30.5	98.3	98.3	7.5	5.7	2	2	84	84	<0.2	1.0	1.0											
					Middle	3.3	0.1	100	19.8	19.8	7.7	7.7	30.6	30.6	97.6	97.6	7.4	9.3	2	2	87	87	<0.2	1.0	1.0	1.1										
						3.3	0.1	104	19.8	19.8	7.7	7.7	30.6	30.6	97.6	97.6	7.4	9.4	2	2	87	87	<0.2	1.0	1.0	1.1										
					Bottom	5.5	0.1	172	19.8	19.8	7.7	7.7	30.6	30.6	97.3	97.3	7.4	10.2	3	3	91	91	<0.2	1.0	1.0	1.0										
						5.5	0.1	186	19.8	19.8	7.7	7.7	30.6	30.6	97.2	97.2	7.4	10.5	2	2	91	91	<0.2	1.0	1.0	1.0										
IM3	Cloudy	Rough	06:46	6.8	Surface	1.0	0.1	204	19.9	19.9	7.8	7.8	30.5	30.5	98.4	98.4	7.5	6.4	4	4	79	79	<0.2	1.0	1.0	1.0	<0.2	1.0								
						1.0	0.1	204	19.9	19.9	7.8	7.8	30.5	30.5	98.3	98.3	7.5	6.5	5	5	83	83	<0.2	1.0	1.0											
					Middle	3.4	0.1	188	19.8	19.8	7.8	7.8	30.6	30.6	97.6	97.6	7.4	8.1	3	3	88	88	<0.2	1.1	1.1	1.1										
						3.4	0.1	204	19.8	19.8	7.8	7.8	30.6	30.6	97.6	97.6	7.4	8.1	4	4	88	88	<0.2	1.0	1.0	0.9										
					Bottom	5.8	0.1	122	19.8	19.8	7.8	7.8	30.6	30.6	97.8	97.8	7.5	8.6	3	3	91	91	<0.2	1.0	1.0	1.0										
						5.8	0.1	132	19.8	19.8	7.8	7.8	30.6	30.6	97.7	97.7	7.4	8.6	2	2	91	91	<0.2	1.0	1.0	1.0										
IM4	Cloudy	Rough	06:53	7.8	Surface	1.0	0.1	274	19.9	19.9	7.8	7.8	30.5	30.5	98.3	98.2	7.5	4.5	5	5	83	83	<0.2	1.0	1.0	1.0	<0.2	1.0								
						1.0	0.1	275	19.9	19.9	7.8	7.8	30.5	30.5	98.1	98.1	7.5	4.5	4	4	84	84	<0.2	1.0	1.0											
					Middle	3.9	0.0	216	19.8	19.8	7.8	7.8	30.5	30.5	97.8	97.8	7.5	6.4	3	3	88	88	<0.2	1.0	1.0	1.0										
						3.9	0.0	208	19.8	19.8	7.8	7.8	30.5	30.5	97.7	97.7	7.5	6.4	3	3	88	88	<0.2	1.0	1.0	1.0										
					Bottom	6.8	0.0	262	19.8	19.8	7.8	7.8	30.6	30.6	97.5	97.5	7.4	14.3	3	3	91	91	<0.2	1.0	1.0	1.0										
						6.8	0.0	266	19.8	19.8	7.8	7.8	30.6	30.6	97.5	97.5	7.4	14.4	3	3	92	92	<0.2	1.0	1.0	1.0										
IM5	Cloudy	Rough	07:07	7.7	Surface	1.0	0.2	202	20.0	20.0	7.8	7.8	30.6	30.6	99.4	99.4	7.6	2.5	3	3	83	83	<0.2	1.0	1.0	1.0	<0.2	1.0								
						1.0	0.2	223	20.0	20.0	7.8	7.8	30.6	30.6	99.4	99.4	7.6	2.5	3	3	84	84	<0.2	1.0	1.0											
					Middle	3.9	0.1	237	19.9	19.9	7.8	7.8	30.6	30.6	99.0	98.9	7.5	3.5	2	2	85	85	<0.2	1.1	1.1	1.1										
						3.9	0.2	218	19.9	19.9	7.8	7.8	30.6	30.6	98.8	98.9	7.5	3.6	2	2	87	87	<0.2	1.0	1.0	1.0										
					Bottom	6.7	0.1	221	19.9	19.9	7.8	7.8	30.6	30.6	98.8	98.9	7.5	6.3	3	3	91	91	<0.2	1.0	1.0	1.0										
						6.7	0.1	202	19.9	19.9	7.8	7.8	30.6	30.6	98.9	98.9	7.5	6.3	2	2	91	91	<0.2	1.0	1.0	1.0										
IM6	Cloudy	Rough	07:13	7.5	Surface	1.0	0.1	286	20.0	20.0	7.8	7.8	30.5	30.5	99.0	99.1	7.5	1.7	5	5	83	83	<0.2	1.0	1.0	1.0	<0.2	1.0								
						1.0	0.1	298	20.0	20.0	7.8	7.8	30.6	30.6	99.2	99.1	7.5	1.8	4	4	83	83	<0.2	1.0	1.0											
					Middle	3.8	0.1	265	19.9	19.9	7.8	7.8	30.5	30.5	98.8	98.8	7.5	2.5	4	4	87	87	<0.2	1.0	1.0	1.0										
						3.8	0.1	280	19.9	19.9	7.8	7.8	30.5	30.5	98.7	98.8	7.5	2.6	4	4	88	88	<0.2	1.0	1.0	1.0										
					Bottom	6.5	0.1	288	19.9	19.9	7.8	7.8	30.6	30.6	98.7	98.7	7.5	3.1	4	4	91	91	<0.2	1.2	1.2	1.2										
						6.5	0.1	313	19.9	19.9	7.8	7.8	30.6	30.6	98.7	98.7	7.5	3.2	3	3	92	92	<0.2	1												

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

Water Quality Monitoring Results on 18 January 20 during Mid-Ebb Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity(NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)			
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA
IM9	Cloudy	Rough	07:10	7.5	Surface	1.0	0.2	192	19.9	19.9	7.8	7.8	30.6	30.6	99.6	99.6	7.6	3.8	7	83	87	822108	808813	<0.2	1.3	1.3						
						1.0	0.2	195	19.9	19.9	7.8	7.8	30.6	30.6	99.6	99.6	7.6	3.8	7	84	87	88										
						3.8	0.2	198	19.9	19.9	7.8	7.8	30.6	30.6	99.1	99.3	7.5	4.2	7	87	88											
					3.8	0.2	201	19.9	19.9	7.8	7.8	30.6	30.6	99.4	99.3	7.6	4.2	7	88	91												
					6.5	0.3	209	19.9	19.9	7.8	7.8	30.6	30.6	100.1	100.2	7.6	5.6	9	91	91												
					6.5	0.3	211	19.9	19.9	7.8	7.8	30.6	30.6	100.2	100.2	7.6	5.6	10	91	91												
IM10	Cloudy	Rough	07:00	7.6	Surface	1.0	0.3	183	19.8	19.8	7.8	7.8	30.5	30.5	98.3	98.3	7.5	5.4	8	83	88	822382	809796	<0.2	1.3	1.3						
						1.0	0.3	186	19.8	19.8	7.8	7.8	30.5	30.5	98.3	98.3	7.5	5.4	8	84	88											
						3.8	0.3	196	19.8	19.8	7.8	7.8	30.6	30.6	97.4	97.4	7.4	7.8	10	89	91											
					3.8	0.3	182	19.8	19.8	7.8	7.8	30.6	30.6	97.4	97.4	7.4	7.8	10	89	91												
					6.6	0.2	189	19.8	19.8	7.8	7.8	30.6	30.6	97.3	97.2	7.4	7.5	10	91	91												
					6.6	0.2	179	19.8	19.8	7.8	7.8	30.6	30.6	97.1	97.1	7.4	7.5	12	91	91												
IM11	Cloudy	Rough	06:48	7.5	Surface	1.0	0.4	169	19.9	19.9	7.7	7.7	30.5	30.5	98.0	98.0	7.5	5.0	12	83	87	822055	811468	<0.2	1.2	1.2						
						1.0	0.4	171	19.9	19.9	7.7	7.7	30.5	30.5	97.9	97.9	7.5	5.0	12	83	88											
						3.8	0.5	180	19.8	19.8	7.7	7.7	30.6	30.6	97.6	97.7	7.4	8.5	12	88	88											
					3.8	0.5	184	19.8	19.8	7.7	7.7	30.6	30.6	97.7	97.7	7.5	8.6	12	88	91												
					6.5	0.4	182	19.8	19.8	7.8	7.8	30.6	30.6	97.1	97.1	7.4	11.1	10	91	91												
					6.5	0.4	189	19.8	19.8	7.8	7.8	30.6	30.6	97.2	97.2	7.4	11.2	10	91	91												
IM12	Cloudy	Rough	06:41	7.1	Surface	1.0	0.4	166	19.8	19.8	7.7	7.7	30.5	30.5	98.1	98.1	7.5	6.6	9	83	88	821458	812068	<0.2	1.3	1.3						
						1.0	0.5	169	19.8	19.8	7.7	7.7	30.5	30.5	98.1	98.1	7.5	6.7	9	85	88											
						3.6	0.5	154	19.8	19.8	7.7	7.7	30.5	30.5	97.8	97.8	7.5	8.6	9	88	88											
					3.6	0.5	155	19.8	19.8	7.7	7.7	30.5	30.5	97.7	97.7	7.5	8.6	9	88	91												
					6.1	0.4	150	19.8	19.8	7.7	7.7	30.6	30.6	97.9	97.9	7.5	13.3	9	91	91												
					6.1	0.4	152	19.8	19.8	7.7	7.7	30.6	30.6	97.9	97.9	7.5	13.9	9	91	91												
SR1A	Cloudy	Rough	06:21	5.8	Surface	1.0	-	-	20.0	20.0	7.8	7.8	30.9	30.9	97.0	97.1	7.4	2.4	8	-	-	819971	812665	-	-	-						
						1.0	-	-	20.0	20.0	7.8	7.8	30.9	30.9	97.1	97.1	7.4	2.5	8	-	-											
						2.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-										
					2.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-											
					4.8	-	-	20.1	20.1	7.9	7.9	31.3	31.3	94.9	95.0	7.2	9.8	9	-	-												
					4.8	-	-	20.1	20.1	7.9	7.9	31.3	31.3	95.1	95.1	7.2	9.8	9	-	-												
SR2	Cloudy	Rough	06:08	5.9	Surface	1.0	0.4	165	20.0	20.0	7.9	7.9	30.8	30.8	98.1	98.0	7.4	2.5	6	84	87	821460	814173	<0.2	1.0	1.2						
						1.0	0.4	149	20.0	20.0	7.9	7.9	30.8	30.8	97.8	97.8	7.4	2.6	6	84	88											
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-										
					4.9	0.3	162	20.0	20.0	7.9	7.9	30.8	30.8	99.2	99.3	7.5	1.5	5	90	91												
					4.9	0.3	164	20.0	20.0	7.9	7.9	30.8	30.8	99.3	99.3	7.5	1.4	5	91	91												
					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-											
SR3	Cloudy	Rough	07:22	7.3	Surface	1.0	0.3	149	20.4	20.4	7.8	7.8	30.7	30.7	100.1	100.2	7.6	2.3	5	-	-	822149	807579	-	-	-						
						1.0	0.3	151	20.4	20.4	7.8	7.8	30.7	30.7	100.2	100.2	7.6	2.3	4	-	-											
						3.7	0.3	131	20.0	20.0	7.8	7.8	30.7	30.7	99.5	99.5	7.6	1.4	5	-	-											
					3.7	0.3	140	20.0	20.0	7.8	7.8	30.7	30.7	99.5	99.5	7.6	1.4	4	-	-												
					6.3	0.3	144	20.0	20.0	7.8	7.8	30.7	30.7	98.8	98.8	7.5	3.1	5	-	-												
					6.3	0.3	165	20.0	20.0	7.8	7.8	30.7	30.7	98.7	98.7	7.5	3.3	4	-	-												
SR4A	Cloudy	Rough	05:40	10.3	Surface	1.0	0.2	78	20.0	20.0	7.7	7.7	30.8	30.8	97.0	97.0	7.4	1.4	2	-	-	817206	807795	-	-	-						
						1.0	0.3	81	20.0	20.0	7.7	7.7	30.8	30.8	96.9	96.9	7.4	1.5	3	-	-											
						5.2	0.2	80	20.0	20.0	7.8	7.8	30.8	30.8	96.0	96.1	7.3	1.9	3	-	-											
					5.2	0.2	80	20.0	20.0	7.8	7.8	30.8	30.8	96.1	96.1	7.3	1.9	3	-	-												
					9.3	0.2	55	20.0	20.0	7.8	7.8	30.8	30.8	96.5	96.7	7.3	3.4	3	-	-												
					9.3	0.2	55	20.0	20.0	7.8	7.8	30.8	30.8	96.8	96.8	7.3	3.5	2	-	-												
SR5A	Cloudy	Rough	05:27	4.5	Surface	1.0	0.1	11	19.9	19.9	7.8	7.8	31.7	31.7	94.3	94.4	7.1	3.2	3	-	-	816609	810717	-	-	-						
						1.0	0.1	11	19.9	19.9	7.8	7.8	31.7	31.7	94.4	94.4	7.1	3.2	4	-	-											
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-										
					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-											
					3.5	0.1	15	20.0	20.0	7.8	7.8	31.8	31.8	94.1	94.2	7.1	4.1	5	-	-												
					3.5	0.1	15	20.0	20.0	7.8	7.8	31.8	31.8	94.2	94.2	7.1	4.2	6	-	-												
SR6A	Cloudy	Rough	04:59	4.7	Surface	1.0	0.0	18	19.8	19.8	7.7	7.7	32.3	32.3	94.5	94.6	7.1	3.8	4	-	-	817980	814729	-	-	-						
						1.0	0.0	18	19.8	19.8	7.7	7.7	32.3	32.3	94.6	94.6	7.1	3.9	3	-	-											
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-										
					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-											
					3.7	0.0	38	19.8	19.8	7.7	7.7	32.3	32.3	94.1	94.1	7.1	8.5	7	-	-												
					3.7	0.0	39	19.8	19.8	7.7	7.7	32.3	32.3	94.1	94.1	7.1	8.6	7	-	-												
SR7	Cloudy	Rough	05:09	15.2	Surface	1.0	0.4	33	19.8	19.8	7.8	7.8	32.4	32.4	94.5	94.5	7.1	2.0	3	-	-	823631	823751	-	-	-						
						1.0	0.4	34	19.8	19.8	7.8	7.8	32.4	32.4	94.4	94.4	7.1	2.1	4	-	-											
						7.6	0.4	42	19.9	19.9	7.8	7.8	32.4	32.4	93.9	93.9	7.1	2.5	4	-	-											
					7.6	0.4	43	19.9	19.9	7.8	7.8	32.4	32.4	93.9	93.9	7.1	2.6	3	-	-												
					14.2	0.3	31	19.9	19.9	7.8	7.8	32.5	32.5	93.3	93.3	7.0	3.4	4	-	-												
					14.2	0.3	31	19.9	19.9	7.8	7.8	32.5	32.5	93.3	93.3	7.0	3.5	3	-	-												
SR8	Cloudy	Rough	06:32	5.0	Surface	1.0	-	-	19.9	19.9	7.8	7.8	30.7	30.7	99.1	99.2	7.5	3.0	6	-	-	820380	811640	-	-	-						
						1.0	-	-	19.9	19.9	7.8	7.8	30.7	30.7	99.2	99.2	7.6	3.1	6	-	-											
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-										
					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-											
					4.0	-	-	19.9	19.8	7.8	7.8																					



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

Water Quality Monitoring Results on 18 January 20 during Mid-Flood Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity(NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)				
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA	
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA	Value
C1	Fine	Moderate	13:32	7.6	Surface	1.0	0.7	49	20.2	20.2	7.9	7.9	31.2	31.2	96.2	96.2	7.3	7.3	5.7	3	83	83	88	88	815621	804235	<0.2	1.7	1.7	1.7			
						1.0	0.7	51	20.2	20.2	7.9	7.9	31.2	31.2	96.2	96.2	7.3	7.3	6.0	3	84	84	88	88			<0.2	1.7	1.7				
						3.8	0.8	55	20.2	20.2	7.9	7.9	31.4	31.4	95.8	95.8	7.2	7.2	12.1	3	88	88	88	88			<0.2	1.8	1.8				
					Middle	3.8	0.8	59	20.2	20.2	7.9	7.9	31.4	31.4	95.8	95.8	7.2	7.2	12.2	3	88	88	88	88			<0.2	1.8	1.8				
						6.6	0.6	36	20.2	20.2	7.9	7.9	31.4	31.4	96.1	96.1	7.2	7.2	8.8	3	92	92	88	88			<0.2	1.6	1.6				
						6.6	0.6	39	20.2	20.2	7.9	7.9	31.4	31.4	96.2	96.2	7.3	7.3	8.9	3	92	92	88	88			<0.2	1.7	1.7				
C2	Fine	Rough	11:55	9.6	Surface	1.0	0.1	330	20.5	20.5	7.8	7.8	30.1	30.1	98.6	98.7	7.4	7.4	2.2	4	84	84	88	88	825689	806950	<0.2	1.9	1.9	1.5			
						1.0	0.1	346	20.5	20.5	7.8	7.8	30.1	30.1	98.7	98.7	7.5	7.4	2.3	3	84	84	89	89			<0.2	1.7	1.7				
						4.8	0.1	91	20.2	20.2	7.8	7.8	30.7	30.7	96.8	96.7	7.3	7.3	5.5	2	89	89	88	88			<0.2	1.5	1.5				
					Middle	4.8	0.1	94	20.2	20.2	7.8	7.8	30.7	30.7	96.5	96.5	7.3	7.3	5.6	3	89	89	88	88			<0.2	1.4	1.4				
						8.6	0.1	167	20.2	20.2	7.8	7.8	31.3	31.3	96.5	96.5	7.3	7.3	12.3	3	91	91	88	88			<0.2	1.3	1.3				
						8.6	0.1	183	20.2	20.2	7.8	7.8	31.3	31.3	96.5	96.5	7.3	7.3	12.6	3	91	91	88	88			<0.2	1.3	1.3				
C3	Fine	Rough	14:00	11.3	Surface	1.0	0.2	322	20.0	20.0	7.9	7.9	32.8	32.8	95.6	95.6	7.2	7.1	2.6	4	87	87	89	89	822088	817803	<0.2	1.3	1.3	1.4			
						1.0	0.2	331	20.0	20.0	7.9	7.9	32.8	32.8	95.5	95.5	7.2	7.1	2.7	4	87	87	89	89			<0.2	1.4	1.4				
						5.7	0.1	321	20.0	20.0	7.9	7.9	32.8	32.8	93.9	93.9	7.0	7.0	1.4	3	88	88	88	88			<0.2	1.3	1.3				
					Middle	5.7	0.1	328	20.0	20.0	7.9	7.9	32.8	32.8	93.9	93.9	7.0	7.0	1.5	3	89	89	88	88			<0.2	1.4	1.4				
						10.3	0.1	4	19.9	19.9	7.9	7.9	32.8	32.8	94.4	94.2	7.1	7.1	1.7	3	91	91	88	88			<0.2	1.4	1.4				
						10.3	0.1	4	20.0	20.0	7.9	7.9	32.8	32.8	93.9	93.9	7.0	7.0	1.5	3	92	92	88	88			<0.2	1.4	1.4				
IM1	Fine	Moderate	13:04	4.8	Surface	1.0	0.1	12	20.2	20.2	7.9	7.9	30.9	30.9	98.2	98.1	7.4	7.4	3.7	7	81	81	86	86	817949	807155	<0.2	1.5	1.5	1.6			
						1.0	0.1	12	20.2	20.2	7.9	7.9	30.9	30.9	98.0	98.0	7.4	7.4	3.8	6	81	81	86	86			<0.2	1.6	1.6				
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
					Middle	3.8	0.2	14	20.1	20.1	7.9	7.9	31.1	31.1	96.1	96.1	7.3	7.3	4.7	4	91	91	86	86			<0.2	1.6	1.6				
						3.8	0.2	14	20.1	20.1	7.9	7.9	31.1	31.1	96.0	96.0	7.3	7.3	4.8	5	92	92	86	86			<0.2	1.7	1.7				
						1.0	0.3	21	20.1	20.1	7.8	7.8	30.8	30.8	97.9	97.9	7.4	7.4	2.5	9	83	83	88	88			<0.2	1.7	1.7				
IM2	Fine	Moderate	12:50	7.5	Surface	1.0	0.3	21	20.1	20.1	7.8	7.8	30.8	30.8	97.8	97.8	7.4	7.4	2.5	8	84	84	88	88	818163	806161	<0.2	1.7	1.7	1.7			
						3.8	0.2	23	20.1	20.1	7.8	7.8	30.8	30.8	96.8	96.8	7.3	7.3	3.6	8	88	88	88	88			<0.2	1.7	1.7				
						3.8	0.2	25	20.1	20.1	7.8	7.8	30.8	30.8	96.8	96.8	7.3	7.3	3.6	7	88	88	88	88			<0.2	1.7	1.7				
					Middle	6.5	0.2	340	20.0	20.0	7.9	7.9	30.8	30.8	97.2	97.3	7.4	7.4	5.2	7	91	91	88	88			<0.2	1.5	1.5				
						6.5	0.2	313	20.0	20.0	7.9	7.9	30.8	30.8	97.3	97.3	7.4	7.4	5.3	7	91	91	88	88			<0.2	1.6	1.6				
						1.0	0.4	354	20.1	20.1	7.9	7.9	30.6	30.6	101.1	101.1	7.7	7.7	2.6	6	84	84	88	88			<0.2	1.5	1.5				
IM3	Fine	Moderate	12:40	7.8	Surface	1.0	0.4	354	20.1	20.1	7.9	7.9	30.6	30.6	101.0	101.0	7.7	7.7	2.7	6	84	84	88	88	818793	805593	<0.2	1.6	1.6	1.7			
						3.9	0.3	342	20.0	20.0	7.9	7.9	30.6	30.6	100.2	100.2	7.6	7.6	3.7	6	88	88	88	88			<0.2	1.6	1.6				
						3.9	0.4	350	20.0	20.0	7.9	7.9	30.6	30.6	100.2	100.2	7.6	7.6	3.7	7	88	88	88	88			<0.2	1.8	1.8				
					Middle	6.8	0.3	344	20.0	20.0	7.9	7.9	30.6	30.6	99.9	99.9	7.6	7.6	6.2	6	91	91	88	88			<0.2	1.8	1.8				
						6.8	0.3	316	20.0	20.0	7.9	7.9	30.6	30.6	99.9	99.9	7.6	7.6	6.1	7	92	92	88	88			<0.2	1.8	1.8				
						1.0	0.6	342	19.9	19.9	7.8	7.8	30.6	30.6	100.0	100.0	7.6	7.6	4.5	9	83	83	88	88			<0.2	1.7	1.7				
IM4	Fine	Moderate	12:33	8.0	Surface	1.0	0.7	351	19.9	19.9	7.8	7.8	30.6	30.6	99.8	99.7	7.6	7.6	3.7	9	83	83	87	87	819703	804588	<0.2	1.7	1.7	1.7			
						4.0	0.5	350	19.9	19.9	7.8	7.8	30.6	30.6	98.7	98.7	7.6	7.6	3.4	8	88	88	88	88			<0.2	1.9	1.9				
						4.0	0.5	355	19.9	19.9	7.8	7.8	30.6	30.6	98.7	98.7	7.6	7.6	3.4	8	88	88	88	88			<0.2	1.7	1.7				
					Middle	7.0	0.4	333	19.9	19.9	7.8	7.8	30.6	30.6	98.8	98.9	7.5	7.5	4.3	7	91	91	88	88			<0.2	1.5	1.5				
						7.0	0.4	358	19.9	19.9	7.8	7.8	30.6	30.6	98.9	98.9	7.5	7.5	4.4	6	92	92	88	88			<0.2	1.6	1.6				
						1.0	0.7	21	20.0	20.0	7.9	7.9	30.6	30.6	101.3	101.4	7.7	7.7	3.2	5	79	79	88	88			<0.2	1.6	1.6				
IM5	Fine	Moderate	12:25	8.2	Surface	1.0	0.8	22	20.0	20.0	7.9	7.9	30.6	30.6	101.4	101.4	7.7	7.7	3.1	5	80	80	86	86	820725	804850	<0.2	1.6	1.6	1.6			
						4.1	0.7	29	19.9	19.9	7.9	7.9	30.6	30.6	100.0	100.0	7.6	7.6	4.8	5	88	88	88	88			<0.2	1.6	1.6				
						4.1	0.7	31	19.9	19.9	7.9	7.9	30.6	30.6	99.9	99.9	7.6	7.6	4.9	5	88	88	88	88			<0.2	1.6	1.6				
					Middle	7.2	0.5	34	20.0	20.0	8.0	8.0	30.7	30.7	99.4	99.3	7.6	7.6	5.8	6	91	91	88	88			<0.2	1.7	1.7				
						7.2	0.5	34	20.0	20.0	8.0	8.0	30.7	30.7	99.2	99.3	7.5	7.5	5.8	6	91	91	88	88			<0.2	1.6	1.6				
						1.0	0.4	331	20.5	20.5	7.8	7.8	30.1	30.1	98.2	98.3	7.4	7.4	3.6	4	84	84	88	88			<0.2	1.6	1.6				
IM6	Fine	Moderate	12:05	7.6	Surface	1.0	0.4	333	20.5	20.5	7.8																						

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

Water Quality Monitoring Results on 18 January 20 during Mid-Flood Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity (NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)					
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA		
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA	Value	DA
IM9	Fine	Rough	12:31	7.4	Surface	1.0	0.4	279	20.0	20.0	7.9	7.9	30.6	30.6	100.4	100.5	7.6	7.6	4.4	4.4	8	8	85	85	88	822112	808818	<0.2	1.1	<0.2	1.1			
						1.0	0.4	294	20.0	20.0	7.9	7.9	30.6	30.6	100.6	100.6	7.6	7.6	6.6	6.6	9	9	85	85				<0.2	1.1					
						3.7	0.4	285	20.0	20.0	7.9	7.9	30.6	30.6	100.1	100.2	7.6	7.6	4.4	4.4	8	8	88	88				<0.2	1.2					
					3.7	0.4	304	20.0	20.0	7.9	7.9	30.6	30.6	100.2	100.2	7.6	7.6	7.9	7.9	9	9	89	89	<0.2				1.1						
					6.4	0.3	283	20.0	20.0	7.9	7.9	30.6	30.6	100.2	100.2	7.6	7.6	4.1	4.1	9	9	91	91	<0.2				1.2						
					6.4	0.3	284	20.0	20.0	7.9	7.9	30.6	30.6	100.2	100.2	7.6	7.6	3.9	3.9	10	10	92	92	<0.2				1.1						
IM10	Fine	Rough	12:41	7.6	Surface	1.0	0.4	298	20.2	20.2	7.9	7.9	30.8	30.8	98.5	98.5	7.5	7.5	2.2	2.2	7	7	80	80	87	822380	809776	<0.2	1.1	<0.2	1.1			
						1.0	0.4	310	20.2	20.2	7.9	7.9	30.8	30.8	98.5	98.5	7.5	7.5	2.2	2.2	7	7	83	83				<0.2	1.1					
						3.8	0.3	303	20.1	20.1	7.9	7.9	30.8	30.8	97.8	97.8	7.4	7.4	4.2	4.2	6	6	87	87				<0.2	1.1					
					3.8	0.3	316	20.1	20.1	7.9	7.9	30.8	30.8	97.6	97.6	7.4	7.4	4.4	4.4	7	7	88	88	<0.2				1.1						
					6.6	0.2	313	20.0	20.0	7.9	7.9	30.8	30.8	97.9	97.9	7.4	7.4	7.9	7.9	8	8	91	91	<0.2				1.0						
					6.6	0.2	318	20.0	20.0	7.9	7.9	30.8	30.8	97.7	97.7	7.5	7.5	7.9	7.9	8	8	91	91	<0.2				1.0						
IM11	Fine	Rough	12:55	8.5	Surface	1.0	0.5	300	20.2	20.2	7.9	7.9	30.9	30.9	97.7	97.7	7.4	7.4	1.7	1.7	5	5	83	83	87	822049	811477	<0.2	1.0	<0.2	1.0			
						1.0	0.5	304	20.2	20.2	7.9	7.9	30.9	30.9	97.6	97.6	7.4	7.4	1.8	1.8	4	4	84	84				<0.2	1.0					
						4.3	0.5	310	20.1	20.1	7.9	7.9	31.1	31.1	95.8	95.8	7.2	7.2	5.0	5.0	7	7	88	88				<0.2	1.0					
					4.3	0.5	312	20.1	20.1	7.9	7.9	31.1	31.1	95.6	95.6	7.2	7.2	4.8	4.8	7	7	89	89	<0.2				1.1						
					7.5	0.4	305	20.1	20.1	7.9	7.9	31.2	31.2	94.4	94.4	7.1	7.1	6.8	6.8	8	8	90	90	<0.2				0.9						
					7.5	0.4	318	20.1	20.1	7.9	7.9	31.2	31.2	94.2	94.2	7.1	7.1	6.9	6.9	9	9	90	90	<0.2				1.0						
IM12	Fine	Rough	13:03	7.9	Surface	1.0	0.3	273	20.2	20.2	7.9	7.9	31.2	31.2	97.1	97.1	7.3	7.3	1.5	1.5	6	6	87	87	89	821478	812065	<0.2	1.0	<0.2	1.0			
						1.0	0.3	273	20.2	20.2	7.9	7.9	31.2	31.2	97.0	97.0	7.3	7.3	1.6	1.6	5	5	87	87				<0.2	1.0					
						4.0	0.3	275	20.2	20.2	7.9	7.9	31.3	31.3	96.5	96.5	7.3	7.3	5.3	5.3	7	7	88	88				<0.2	0.9					
					4.0	0.3	279	20.2	20.2	7.9	7.9	31.3	31.3	96.6	96.6	7.3	7.3	5.5	5.5	7	7	89	89	<0.2				0.9						
					6.9	0.2	271	20.2	20.2	7.9	7.9	31.3	31.3	96.4	96.4	7.3	7.3	5.7	5.7	20	20	91	91	<0.2				0.6						
					6.9	0.2	278	20.2	20.2	7.9	7.9	31.3	31.3	96.5	96.5	7.3	7.3	5.8	5.8	22	22	91	91	<0.2				0.7						
SR1A	Fine	Rough	13:24	3.5	Surface	1.0	-	-	20.2	20.2	7.9	7.9	31.2	31.2	98.2	98.2	7.4	7.4	2.2	2.2	6	6	-	-	819977	812653	-	-	-	-				
						1.0	-	-	20.2	20.2	7.9	7.9	31.2	31.2	98.1	98.1	7.4	7.4	2.2	2.2	7	7	-	-			-	-						
						1.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-		-	-	-	-	-
					1.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-		-	-	-	-	-
					2.5	-	-	20.2	20.2	7.9	7.9	31.2	31.2	98.2	98.2	7.4	7.4	2.1	2.1	6	6	-	-	-			-	-		-	-	-	-	
					2.5	-	-	20.2	20.2	7.9	7.9	31.2	31.2	98.1	98.1	7.4	7.4	2.2	2.2	6	6	-	-	-			-	-		-	-	-	-	
SR2	Fine	Rough	13:36	4.8	Surface	1.0	0.1	304	20.4	20.4	7.8	7.8	31.4	31.4	98.9	98.9	7.4	7.4	1.5	1.5	7	7	86	86	87	821460	814181	<0.2	0.7	<0.2	0.7			
						1.0	0.1	331	20.4	20.4	7.8	7.8	31.4	31.4	98.9	98.9	7.4	7.4	1.6	1.6	7	7	86	86				<0.2	0.6					
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				-	-		-	-	-	-
					3.8	0.0	347	20.3	20.3	7.8	7.8	31.5	31.5	98.8	98.8	7.4	7.4	1.5	1.5	4	4	88	88	<0.2				0.7						
					3.8	0.0	319	20.4	20.4	7.8	7.8	31.4	31.4	98.9	98.9	7.4	7.4	1.6	1.6	5	5	89	89	<0.2				0.6						
					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				-	-		-	-	-	-
SR3	Fine	Rough	12:16	7.1	Surface	1.0	0.3	260	20.0	20.0	8.0	8.0	30.6	30.6	100.7	100.7	7.7	7.7	2.9	2.9	4	4	-	-	822156	807581	-	-	-	-				
						1.0	0.3	260	20.0	20.0	8.0	8.0	30.6	30.6	100.6	100.6	7.6	7.6	2.9	2.9	4	4	-	-										
						3.6	0.3	250	19.9	19.9	8.1	8.1	30.6	30.6	99.7	99.7	7.6	7.6	3.6	3.6	4	4	-	-										
					3.6	0.3	273	19.9	19.9	8.1	8.1	30.6	30.6	99.8	99.8	7.6	7.6	3.7	3.7	4	4	-	-											
					6.1	0.2	246	19.9	19.9	8.2	8.2	30.7	30.7	99.6	99.6	7.6	7.6	4.8	4.8	3	3	-	-											
					6.1	0.3	265	19.9	19.9	8.2	8.2	30.7	30.7	99.6	99.6	7.6	7.6	4.7	4.7	3	3	-	-											
SR4A	Fine	Moderate	13:57	10.8	Surface	1.0	0.4	280	20.0	20.0	7.9	7.9	32.8	32.8	95.0	95.1	7.1	7.1	3.4	3.4	4	4	-	-	817196	807806	-	-	-	-				
						1.0	0.4	282	20.0	20.0	7.9	7.9	32.8	32.8	95.1	95.1	7.1	7.1	3.5	3.5	4	4	-	-										
						5.4	0.4	285	19.9	19.9	7.9	7.9	32.8	32.8	94.2	94.2	7.1	7.1	1.0	1.0	4	4	-	-										
					5.4	0.4	287	19.9	19.9	7.9	7.9	32.8	32.8	94.1	94.1	7.1	7.1	1.0	1.0	4	4	-	-											
					9.8	0.4	267	19.9	19.9	7.9	7.9	32.8	32.8	94.2	94.2	7.1	7.1	1.3	1.3	3	3	-	-											
					9.8	0.4	268	19.9	19.9	7.9	7.9	32.8	32.8	94.2	94.2	7.1	7.1	1.4	1.4	4	4	-	-											
SR5A	Fine	Moderate	14:06	3.4	Surface	1.0	0.0	214	20.2	20.2	7.9	7.9	31.2	31.2	98.0	98.0	7.4	7.4	1.9	1.9	3	3	-	-	816595	810719	-	-	-	-				
						1.0	0.0	215	20.2	20.2	7.9	7.9	31.2	31.2	98.0	98.0	7.4	7.4	1.8	1.8	4	4	-	-										
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-		-	-			
					2.4	0.0	211	20.2	20.2	7.9	7.9	31.2	31.2	98.0	98.0	7.4	7.4	2.1	2.1	4	4	-	-											
					2.4	0.0	208	20.2	20.2	7.9	7.9	31.2	31.2	97.9	97.9	7.4	7.4	2.2	2.2	5	5	-	-											
					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-		-				
SR6A	Fine	Moderate	14:19	3.8	Surface	1.0	0.1	231	20.3	20.3	7.8	7.8	31.4	31.4	98.3	98.3	7.4	7.4	1.7	1.7	4	4	-	-	817969	814759	-	-	-	-				
						1.0	0.1	243	20.3	20.3	7.8	7.8	31.4																					

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

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

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity (NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)					
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA	Value	DA
C1	Fine	Rough	10:47	8.4	Surface	1.0	0.1	219	19.3	19.3	8.0	8.0	33.4	33.4	107.9	108.0	8.2	8.1	2.3	9	80	80	83	815629	804246	<0.2	1.3	1.0	1.0					
						1.0	0.1	233	19.3	19.2	8.0	8.0	33.4	33.4	108.0	8.2	8.1	2.4	9	80	80	<0.2	1.4	1.0	1.0									
						4.2	0.0	186	19.2	19.2	8.0	8.0	33.5	33.5	105.0	8.0	8.0	3.5	7	84	84	<0.2	1.0	1.0	1.0									
					Middle	4.2	0.0	186	19.2	19.2	8.0	8.0	33.5	33.5	104.9	7.9	8.0	3.5	6	83	83	<0.2	1.0	1.0	1.0									
						7.4	0.0	92	19.2	19.2	8.0	8.0	33.6	33.6	105.2	8.0	8.0	3.8	6	86	86	<0.2	0.7	0.7	0.7									
						7.4	0.0	94	19.2	19.2	8.0	8.0	33.6	33.6	104.6	7.9	8.0	3.6	6	87	87	<0.2	0.7	0.7	0.7									
C2	Cloudy	Moderate	11:31	11.2	Surface	1.0	0.2	147	19.7	19.7	8.1	8.1	31.4	31.4	101.3	101.3	7.7	7.7	2.3	4	85	85	87	825676	806960	<0.2	1.0	1.0	1.0					
						1.0	0.2	154	19.7	19.6	8.1	8.1	31.4	31.4	101.3	7.7	7.7	2.3	3	85	85	<0.2	1.1	1.0	1.0									
						5.6	0.3	156	19.5	19.6	8.1	8.1	32.1	32.1	100.1	7.6	7.6	3.8	4	87	87	<0.2	1.0	1.0	1.0									
					Middle	5.6	0.3	158	19.6	19.6	8.1	8.1	32.1	32.1	100.0	7.6	7.6	3.9	3	86	86	<0.2	1.0	1.0	1.0									
						10.2	0.2	161	19.6	19.6	8.1	8.1	32.2	32.2	100.7	7.6	7.6	4.7	3	90	90	<0.2	0.9	0.9	0.9									
						10.2	0.2	171	19.6	19.6	8.1	8.1	32.2	32.2	100.9	7.6	7.6	4.6	4	89	89	<0.2	1.0	1.0	1.0									
C3	Cloudy	Moderate	09:38	12.0	Surface	1.0	0.1	282	19.7	19.7	8.1	8.1	33.0	33.0	95.6	95.6	7.2	7.2	2.2	2	85	85	88	822114	817780	<0.2	0.5	0.5	0.5					
						1.0	0.1	287	19.7	19.7	8.1	8.1	33.0	33.0	95.6	7.2	7.2	2.2	3	86	86	<0.2	0.6	0.6	0.6									
						6.0	0.1	307	19.7	19.7	8.1	8.1	32.9	32.9	94.7	7.1	7.1	2.3	3	87	87	<0.2	0.6	0.6	0.6									
					Middle	6.0	0.1	325	19.7	19.7	8.1	8.1	32.9	32.9	94.7	7.1	7.1	7.3	4	88	88	<0.2	0.6	0.6	0.6									
						11.0	0.1	304	19.7	19.7	8.1	8.1	32.9	32.9	95.3	7.2	7.2	3.6	4	89	89	<0.2	0.4	0.4	0.4									
						11.0	0.1	311	19.7	19.7	8.1	8.1	32.9	32.9	95.4	7.2	7.2	3.8	3	90	90	<0.2	0.4	0.4	0.4									
IM1	Fine	Moderate	11:09	4.6	Surface	1.0	0.1	147	19.3	19.3	8.1	8.1	33.1	33.1	111.9	111.9	8.5	8.5	2.2	8	81	81	84	817941	807149	<0.2	1.3	1.4	1.4					
						1.0	0.1	157	19.3	19.3	8.1	8.1	33.1	33.1	111.9	8.5	8.5	2.2	7	81	81	<0.2	1.2	1.2	1.2									
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
					Middle	3.6	0.1	150	19.3	19.3	8.1	8.1	33.1	33.1	109.4	8.3	8.3	2.0	7	87	87	<0.2	1.5	1.5	1.5									
						3.6	0.1	150	19.3	19.3	8.1	8.1	33.1	33.1	108.5	8.2	8.2	1.9	6	87	87	<0.2	1.6	1.6	1.6									
						1.0	0.0	137	19.3	19.3	8.1	8.1	33.1	33.1	110.3	8.4	8.4	4.7	10	81	81	<0.2	1.2	1.2	1.2									
IM2	Fine	Moderate	11:17	6.6	Surface	1.0	0.0	149	19.3	19.3	8.1	8.1	33.1	33.1	109.8	109.8	8.3	8.3	4.8	9	81	81	84	818146	806173	<0.2	1.2	1.2	1.2					
						3.3	0.1	158	19.2	19.2	8.1	8.1	33.2	33.2	108.6	8.2	8.2	5.8	7	84	84	<0.2	1.2	1.2	1.2									
						3.3	0.1	170	19.2	19.2	8.1	8.1	33.2	33.2	108.6	8.2	8.2	5.9	8	84	84	<0.2	1.1	1.1	1.1									
					Middle	5.6	0.1	155	19.2	19.2	8.1	8.1	33.2	33.2	108.4	8.2	8.2	7.1	7	87	87	<0.2	1.1	1.1	1.1									
						5.6	0.1	169	19.2	19.2	8.1	8.1	33.2	33.2	108.5	8.2	8.2	7.1	7	87	87	<0.2	1.1	1.1	1.1									
						1.0	0.1	196	19.3	19.3	8.1	8.1	33.1	33.1	111.6	8.5	8.5	2.3	7	80	80	<0.2	1.6	1.6	1.6									
IM3	Fine	Moderate	11:24	6.5	Surface	1.0	0.1	202	19.3	19.3	8.1	8.1	33.1	33.1	111.3	111.3	8.4	8.4	2.2	7	81	81	84	818766	805578	<0.2	1.7	1.6	1.6					
						3.3	0.1	153	19.3	19.3	8.1	8.1	33.1	33.1	109.9	8.3	8.3	2.7	7	85	85	<0.2	1.6	1.6	1.6									
						3.3	0.1	167	19.3	19.3	8.1	8.1	33.1	33.1	109.8	8.3	8.3	2.6	7	85	85	<0.2	1.5	1.5	1.5									
					Middle	5.5	0.1	171	19.2	19.2	8.1	8.1	33.2	33.2	107.6	8.2	8.2	3.4	7	88	88	<0.2	1.5	1.5	1.5									
						5.5	0.1	185	19.2	19.2	8.1	8.1	33.2	33.2	107.2	8.1	8.1	3.1	6	87	87	<0.2	1.5	1.5	1.5									
						1.0	0.3	203	19.5	19.5	8.1	8.1	32.7	32.7	112.9	8.6	8.6	1.4	6	82	82	<0.2	1.5	1.5	1.5									
IM4	Fine	Moderate	11:33	7.4	Surface	1.0	0.3	207	19.5	19.5	8.1	8.1	32.7	32.7	113.0	113.0	8.6	8.6	1.4	6	81	81	84	819746	804622	<0.2	1.4	1.3	1.3					
						3.7	0.3	192	19.4	19.4	8.1	8.1	32.7	32.7	112.0	8.5	8.5	1.4	7	85	85	<0.2	1.4	1.4	1.4									
						3.7	0.3	195	19.4	19.4	8.1	8.1	32.7	32.7	111.9	8.5	8.5	1.4	7	85	85	<0.2	1.4	1.4	1.4									
					Middle	6.4	0.2	167	19.3	19.3	8.1	8.1	33.0	33.0	106.1	8.1	8.1	2.7	9	88	88	<0.2	1.2	1.2	1.2									
						6.4	0.2	179	19.3	19.3	8.1	8.1	33.0	33.0	106.4	8.1	8.1	2.6	8	88	88	<0.2	1.1	1.1	1.1									
						1.0	0.3	190	19.4	19.4	8.1	8.1	32.8	32.8	110.9	8.4	8.4	2.8	7	81	81	<0.2	1.4	1.4	1.4									
IM5	Fine	Moderate	11:41	6.8	Surface	1.0	0.3	205	19.4	19.4	8.1	8.1	32.8	32.8	110.6	110.6	8.4	8.4	3.0	6	81	81	84	820734	804877	<0.2	1.4	1.4	1.4					
						3.4	0.3	191	19.3	19.3	8.1	8.1	32.8	32.8	109.1	8.3	8.3	3.0	8	84	84	<0.2	1.5	1.5	1.5									
						3.4	0.3	199	19.3	19.3	8.1	8.1	32.8	32.8	109.0	8.3	8.3	3.0	7	85	85	<0.2	1.3	1.3	1.3									
					Middle	5.8	0.2	187	19.3	19.3	8.0	8.0	32.8	32.8	107.8	8.2	8.2	3.5	7	87	87	<0.2	1.3	1.3	1.3									
						5.8	0.2	195	19.3	19.3	8.1	8.1	32.8	32.8	107.3	8.2	8.2	3.6	8	88	88	<0.2	1.3	1.3	1.3									
						1.0	0.3	229	19.5	19.5	8.0	8.0	32.3	32.3	112.4	8.5	8.5	1.3	4	82	82	<0.2	1.6	1.6	1.6									
IM6	Fine	Moderate	11:50	6.6	Surface	1.0	0.3	237	19.5	19.5	8.0	8.0	32.3	32.3	112.7	112.6	8.5	8.5	1.3	4	82	82	85	821058	805838	<0.2	1.5	1.5	1.5					
						3.3	0.3	212	19.4	19.4	8.1	8.1	32.5	32.5	110.9	8.4	8.4	1.9	7	86	86	<0.2	1.5	1.5	1.5									
						3.3	0.3	231	19.4	19.4	8.1	8.1	32.5	32.5	110.9	8.4	8.4	1.9	7	85	85	<0.2	1.5	1.5	1.5									
					Middle	5.6	0.2	197	19.3	19.3	8.1	8.1	32.9	32.9	107.9	8.2	8.2	3.1	8	88	88	<0.2	1.4	1.4	1.4									
						5.6	0.2	213	19.3	19.3	8.1	8.1	32.9	32.9	108.2	8.2	8.2	3.1	7	89	89	<0.2	1.4	1.4	1.4									
						1.0	0.1	203	19.6	19.6	8.0	8.0	32.1	32.1	110.2	8.4	8.4	1.2	4	82	82	<0.2	1.3	1.3	1.3									
IM7	Fine	Moderate	11:58	7.4	Surface	1.0	0.1	213	19.6	19.6	8.0	8.0	32.2	32.1	110.7	110.5	8.4	8.4	1.3	5	82	82	85	82										

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

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

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity(NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)										
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA							
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA	Value	DA					
IM9	Cloudy	Moderate	10:53	7.3	Surface	1.0	0.2	88	19.6	19.6	8.2	8.2	31.7	31.7	106.3	106.4	8.1	2.6	7	86	87	87	87	87	87	87	822093	808829	<0.2	0.9	1.0	1.0							
						1.0	0.2	89	19.6	8.2	8.2	31.7	31.7	106.5	106.4	8.1	2.8	7	85	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87			
						3.7	0.3	91	19.4	19.4	8.2	8.2	32.2	32.2	107.1	107.1	8.2	4.1	6	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87		
					Middle	3.7	0.3	96	19.4	19.4	8.2	8.2	32.2	32.2	107.1	107.1	8.2	4.3	7	86	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87		
						6.3	0.2	92	19.3	19.3	8.2	8.2	32.6	32.6	106.8	106.7	8.1	5.4	5	82	82	82	82	82	82	82	82	82	82	82	82	82	82	82	82	82	82	82	
						6.3	0.3	96	19.3	19.3	8.2	8.2	32.6	32.6	106.6	106.6	8.1	5.4	4	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	
IM10	Cloudy	Moderate	10:44	7.5	Surface	1.0	0.3	68	19.6	19.6	8.2	8.2	31.7	31.7	102.1	102.1	7.8	5.0	6	85	85	85	85	85	85	85	822386	809807	<0.2	1.0	0.9	0.9							
						1.0	0.3	69	19.6	19.6	8.2	8.2	31.7	31.7	102.0	102.0	7.8	5.0	6	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85		
						3.8	0.3	73	19.5	19.5	8.2	8.2	31.8	31.8	101.3	101.3	7.7	7.0	6	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	
					Middle	3.8	0.3	78	19.5	19.5	8.2	8.2	31.8	31.8	101.3	101.3	7.7	7.1	6	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	
						6.5	0.2	90	19.5	19.5	8.2	8.2	32.0	32.0	101.0	101.0	7.7	7.7	6	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
						6.5	0.2	90	19.5	19.5	8.2	8.2	32.0	32.0	101.0	101.0	7.7	7.7	6	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
IM11	Cloudy	Moderate	10:33	8.1	Surface	1.0	0.2	106	19.6	19.6	8.2	8.2	32.2	32.2	100.8	100.8	7.6	3.2	5	86	86	86	86	86	86	86	822039	811446	<0.2	0.8	0.9	0.9							
						1.0	0.2	114	19.6	19.6	8.2	8.2	32.2	32.2	100.7	100.7	7.6	3.1	6	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87			
						4.1	0.2	93	19.6	19.6	8.2	8.2	32.2	32.2	100.7	100.7	7.6	3.1	5	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85		
					Middle	4.1	0.2	94	19.6	19.6	8.2	8.2	32.2	32.2	100.7	100.7	7.6	3.1	6	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	
						7.1	0.1	96	19.6	19.6	8.1	8.1	32.2	32.2	100.9	100.9	7.7	3.2	5	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	
						7.1	0.1	96	19.6	19.6	8.1	8.1	32.2	32.2	100.9	100.9	7.7	3.3	6	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	
IM12	Cloudy	Moderate	10:27	8.8	Surface	1.0	0.1	115	19.6	19.6	8.2	8.2	32.2	32.2	100.4	100.4	7.6	6.7	7	85	85	85	85	85	85	85	821435	812033	<0.2	0.5	0.7	0.7							
						1.0	0.1	123	19.6	19.6	8.2	8.2	32.2	32.2	100.3	100.3	7.6	6.4	8	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85			
						4.4	0.1	126	19.6	19.6	8.1	8.1	32.2	32.2	100.0	100.0	7.6	2.7	8	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87			
					Middle	4.4	0.1	127	19.6	19.6	8.1	8.1	32.2	32.2	100.0	100.0	7.6	2.8	7	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86		
						7.8	0.1	126	19.6	19.6	8.1	8.1	32.2	32.2	100.1	100.1	7.6	2.8	8	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89		
						7.8	0.1	133	19.6	19.6	8.1	8.1	32.2	32.2	100.2	100.2	7.6	2.9	8	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89		
SR1A	Cloudy	Moderate	10:11	5.0	Surface	1.0	-	-	19.5	19.6	8.1	8.1	31.8	31.8	99.0	99.1	7.5	4.1	4	-	-	-	-	-	-	-	819976	812666	-	-	-	-							
						1.0	-	-	19.6	19.6	8.1	8.1	31.8	31.8	99.1	99.1	7.5	4.5	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
						2.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
					Middle	2.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
						4.0	-	-	19.6	19.6	8.1	8.1	32.0	32.0	99.9	100.0	7.6	6.4	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
						4.0	-	-	19.6	19.6	8.1	8.1	32.0	32.0	100.1	100.1	7.6	6.8	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
SR2	Cloudy	Moderate	09:59	4.6	Surface	1.0	0.1	329	19.6	19.6	8.1	8.1	32.4	32.4	96.6	96.7	7.3	2.2	3	85	85	85	85	85	85	85	821475	814142	<0.2	0.7	0.7	0.7							
						1.0	0.1	335	19.6	19.6	8.1	8.1	32.4	32.4	96.7	96.7	7.3	2.2	3	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86				
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
					Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
						3.6	0.1	334	19.6	19.6	8.1	8.1	32.4	32.4	98.0	98.1	7.4	2.2	3	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89			
						3.6	0.1	343	19.6	19.6	8.1	8.1	32.4	32.4	98.2	98.1	7.4	2.3	3	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89			
SR3	Cloudy	Moderate	11:03	8.3	Surface	1.0	0.0	146	19.5	19.5	8.2	8.2	31.8	31.8	107.6	107.7	8.2	2.6	3	-	-	-	-	-	-	-	822134	807589	-	-	-	-							
						1.0	0.0	148	19.5	19.5	8.2	8.2	31.9	31.9	107.8	107.9	8.2	2.8	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
						4.2	0.2	73	19.3	19.3	8.2	8.2	32.5	32.5	107.9	107.9	8.2	4.0	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
					Middle	4.2	0.2	76	19.3	19.3	8.2	8.2	32.5	32.5	107.9	107.9	8.2	4.1	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
						7.3	0.2	45	19.2	19.2	8.2	8.2	32.7	32.7	106.7	106.6	8.1	5.1	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
						7.3	0.2	48	19.2	19.2	8.2	8.2	32.7	32.7	106.4	106.4	8.1	5.3	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
SR4A	Fine	Calm	10:25	8.6	Surface	1.0	0.2	71	19.2	19.2	8.0	8.0	33.2	33.2	111.9	111.9	8.5	2.7	7	-	-	-	-																

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

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

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity(NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)					
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA		
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA	Value	DA
C1	Fine	Rough	15:26	8.2	Surface	1.0	0.1	14	19.7	19.7	8.1	8.1	32.9	32.9	112.5	112.5	8.5	8.5	1.7	1.7	10	10	82	82	85	815629	804257	<0.2	2.2	<0.2	2.1			
						1.0	0.1	13	19.7	19.4	8.1	8.1	32.9	32.9	112.4	112.4	8.5	8.5	1.7	1.7	10	10	82	82				<0.2	2.2					
						4.1	0.1	18	19.4	19.4	8.1	8.1	33.1	33.1	115.9	115.8	8.8	8.8	5.2	5.2	8	8	86	86				<0.2	2.2					
					4.1	0.1	19	19.4	19.4	8.1	8.1	33.1	33.1	115.7	115.7	8.8	8.8	5.3	5.3	8	8	85	85	<0.2				2.0						
					7.2	0.1	19	19.3	19.3	8.1	8.1	33.2	33.2	115.0	115.0	8.7	8.8	5.4	5.4	8	8	88	88	<0.2				1.8						
					7.2	0.1	20	19.3	19.3	8.1	8.1	33.2	33.2	115.7	115.7	8.8	8.8	5.5	5.5	7	7	89	89	<0.2				1.9						
C2	Cloudy	Moderate	14:19	11.4	Surface	1.0	0.1	16	19.7	19.7	8.2	8.2	31.4	31.4	101.1	101.1	7.7	7.7	2.4	2.4	4	4	85	85	87	825676	806943	<0.2	0.7	<0.2	0.6			
						1.0	0.1	16	19.7	19.5	8.2	8.2	31.4	31.4	101.1	101.1	7.7	7.7	2.5	2.5	4	4	84	84				<0.2	0.6					
						5.7	0.2	16	19.5	19.5	8.2	8.2	32.1	32.1	100.1	100.0	7.6	7.6	3.5	3.5	6	6	87	87				<0.2	0.6					
					5.7	0.2	15	19.5	19.5	8.2	8.2	32.1	32.1	99.9	99.9	7.6	7.6	3.5	3.5	6	6	86	86	<0.2				0.7						
					10.4	0.4	17	19.6	19.6	8.1	8.1	32.2	32.2	100.0	100.0	7.6	7.6	6.6	6.6	6	6	90	90	<0.2				0.7						
					10.4	0.4	18	19.6	19.6	8.1	8.1	32.1	32.1	100.1	100.1	7.6	7.6	6.6	6.6	6	6	89	89	<0.2				0.7						
C3	Cloudy	Moderate	16:39	12.1	Surface	1.0	0.1	277	19.8	19.8	8.1	8.1	32.7	32.7	95.7	95.7	7.2	7.2	2.2	2.2	3	3	86	86	88	822093	817808	<0.2	1.1	<0.2	1.1			
						1.0	0.1	281	19.7	19.7	8.1	8.1	32.7	32.7	95.6	95.6	7.2	7.2	2.3	2.3	3	3	85	85				<0.2	1.1					
						6.1	0.1	241	19.7	19.7	8.1	8.1	32.8	32.8	95.1	95.2	7.2	7.2	3.0	3.0	3	3	87	87				<0.2	1.2					
					6.1	0.1	252	19.7	19.7	8.1	8.1	32.8	32.8	95.2	95.2	7.2	7.2	3.1	3.1	4	4	88	88	<0.2				1.1						
					11.1	0.2	263	19.7	19.7	8.1	8.1	32.8	32.8	95.6	95.7	7.2	7.2	2.9	2.9	5	5	90	90	<0.2				1.1						
					11.1	0.2	269	19.7	19.7	8.1	8.1	32.8	32.8	95.8	95.8	7.2	7.2	2.9	2.9	4	4	90	90	<0.2				1.2						
IM1	Fine	Moderate	14:59	4.5	Surface	1.0	0.1	19	19.4	19.4	8.1	8.1	33.2	33.2	114.3	114.2	8.6	8.6	4.0	4.0	12	12	80	80	84	817962	807111	<0.2	1.8	<0.2	1.8			
						1.0	0.1	18	19.4	19.4	8.1	8.1	33.2	33.2	114.1	114.1	8.6	8.6	4.0	4.0	12	12	81	81				<0.2	1.8					
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				-	-	-	-	-	-	-
					3.5	0.1	18	19.4	19.4	8.2	8.2	33.2	33.2	109.1	108.9	8.3	8.3	4.0	4.0	11	11	88	88	<0.2				1.8						
					3.5	0.1	19	19.4	19.4	8.2	8.2	33.2	33.2	108.6	108.6	8.2	8.3	4.1	4.1	12	12	87	87	<0.2				1.8						
					3.5	0.1	19	19.4	19.4	8.2	8.2	33.2	33.2	108.6	108.6	8.2	8.3	4.1	4.1	12	12	87	87	<0.2				1.8						
IM2	Fine	Rough	14:53	6.5	Surface	1.0	0.2	351	19.4	19.4	8.1	8.1	33.2	33.2	117.6	117.5	8.9	8.9	2.4	2.4	11	11	81	81	84	818163	806158	<0.2	1.9	<0.2	1.6			
						1.0	0.2	323	19.4	19.4	8.1	8.1	33.2	33.2	117.4	117.4	8.9	8.9	2.5	2.5	12	12	81	81				<0.2	1.7					
						3.3	0.1	327	19.4	19.4	8.1	8.1	33.2	33.2	113.9	114.0	8.6	8.6	2.6	2.6	12	12	84	84				<0.2	1.7					
					3.3	0.1	355	19.4	19.4	8.1	8.1	33.2	33.2	114.1	114.1	8.6	8.6	2.6	2.6	12	12	84	84	<0.2				1.8						
					5.5	0.1	289	19.3	19.3	8.1	8.1	33.2	33.2	112.3	112.3	8.5	8.5	2.8	2.8	13	13	87	87	<0.2				2.5						
					5.5	0.1	289	19.3	19.3	8.1	8.1	33.2	33.2	112.2	112.2	8.5	8.5	2.7	2.7	13	13	87	87	<0.2				2.5						
IM3	Fine	Rough	14:45	6.4	Surface	1.0	0.2	341	19.4	19.4	8.1	8.1	33.0	33.0	119.1	119.0	9.0	9.0	1.4	1.4	9	9	81	81	84	818785	805600	<0.2	2.4	<0.2	2.3			
						1.0	0.2	314	19.4	19.4	8.1	8.1	33.0	33.0	118.8	118.8	9.0	9.0	1.5	1.5	9	9	81	81				<0.2	2.3					
						3.2	0.1	319	19.4	19.4	8.1	8.1	33.0	33.0	117.0	116.9	8.9	8.9	1.5	1.5	10	10	84	84				<0.2	2.3					
					3.2	0.1	322	19.4	19.4	8.1	8.1	33.0	33.0	116.8	116.8	8.8	8.8	1.5	1.5	9	9	84	84	<0.2				2.2						
					5.4	0.1	244	19.4	19.4	8.1	8.1	33.1	33.1	113.5	113.5	8.6	8.6	2.0	2.0	11	11	87	87	<0.2				2.3						
					5.4	0.1	245	19.4	19.4	8.1	8.1	33.1	33.1	113.0	113.3	8.6	8.6	2.0	2.0	10	10	87	87	<0.2				2.3						
IM4	Fine	Rough	14:37	7.3	Surface	1.0	0.0	25	19.5	19.5	8.0	8.0	32.4	32.4	111.7	111.8	8.5	8.5	1.6	1.6	7	7	80	80	83	819738	804612	<0.2	2.0	<0.2	2.2			
						1.0	0.0	27	19.5	19.5	8.0	8.0	32.4	32.4	111.8	111.8	8.5	8.5	1.6	1.6	6	6	80	80				<0.2	2.2					
						3.7	0.1	21	19.5	19.5	8.0	8.0	32.5	32.5	110.7	110.7	8.4	8.4	2.3	2.3	7	7	84	84				<0.2	1.9					
					3.7	0.1	21	19.5	19.5	8.0	8.0	32.5	32.5	110.6	110.7	8.4	8.4	2.4	2.4	8	8	83	83	<0.2				1.9						
					6.3	0.1	325	19.4	19.4	8.0	8.0	32.8	32.8	109.4	109.4	8.3	8.3	3.9	3.9	8	8	86	86	<0.2				1.5						
					6.3	0.1	344	19.4	19.4	8.0	8.0	32.8	32.8	109.3	109.3	8.3	8.3	3.9	3.9	8	8	87	87	<0.2				1.5						
IM5	Fine	Moderate	14:29	6.4	Surface	1.0	0.2	277	19.6	19.6	8.0	8.0	32.4	32.4	110.0	109.9	8.3	8.3	1.8	1.8	7	7	83	83	88	820728	804845	<0.2	2.6	<0.2	2.6			
						1.0	0.2	297	19.6	19.6	8.0	8.0	32.4	32.4	109.8	109.8	8.3	8.3	1.8	1.8	6	6	86	86				<0.2	2.6					
						3.2	0.2	358	19.4	19.4	8.0	8.0	32.7	32.7	107.4	107.3	8.2	8.2	3.1	3.1	9	9	87	87				<0.2	2.5					
					3.2	0.2	339	19.3	19.3	8.0	8.0	32.7	32.7	107.2	107.3	8.1	8.1	3.1	3.1	8	8	88	88	<0.2				2.4						
					5.4	0.1	36	19.3	19.3	8.0	8.0	32.8	32.8	105.8	105.9	8.0	8.1	3.0	3.0	10	10	91	91	<0.2				2.2						
					5.4	0.1	38	19.3	19.3	8.0	8.0	32.8	32.8	106.0	106.0	8.1	8.1	3.0	3.0	9	9	91	91	<0.2				2.2						
IM6	Fine	Rough	14:21	6.4	Surface	1.0	0.2	240	19.5	19.5	8.0	8.0	32.4	32.4	111.9	111.8	8.5	8.5	1.6	1.6	8	8	81	81	84	821083	805810	<0.2	2.3	<0.2	2.1			
						1.0	0.2	258	19.5	19.5	8.0	8.0	32.4	32.4	111.7	111.7	8.5	8.5	1.7	1.7	9	9	81	81				<0.2	2.1					
						3.2	0.1	356	19.5	19.5	8.0	8.0	32.5	32.5	111.3	111.3	8.4	8.4	2.2	2.2	6	6	84	84				<0.2	2.0					
					3.2	0.1	359	19.5	19.5	8.0	8.0	32.5	32.5	110.9	111.1	8.4	8.4	2.2	2.2	7	7	85	85	<0.2				1.8						
					5.4	0.1	338	19.4	19.4	8.1	8.1	32.8																						





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

Water Quality Monitoring Results on 23 January 20 during Mid-Ebb Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity(NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)							
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA	Value	DA		
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA	Value	DA	Value	DA
C1	Fine	Moderate	11:26	7.8	Surface	1.0	0.1	15	19.8	19.8	8.0	8.0	31.5	31.5	118.9	119.0	9.0	2.6	6	85	85	86	85	85	85	815610	804264	<0.2	1.3	1.3	1.4					
						1.0	0.1	15	19.8	19.8	8.0	8.0	31.5	31.5	119.0	9.0	2.6	6	85	85	86	85	85	85	85	85	85	85	85	85	85	85	85			
					Middle	3.9	0.0	337	19.7	19.7	8.0	8.0	32.5	32.5	115.0	114.9	8.7	3.6	8	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	
						3.9	0.0	349	19.7	19.7	8.0	8.0	32.5	32.5	114.8	8.7	3.6	8	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	
					Bottom	6.8	0.1	257	19.7	19.7	8.0	8.0	33.1	33.1	111.9	112.0	8.4	5.3	9	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88
						6.8	0.1	260	19.7	19.7	8.0	8.0	33.1	33.1	112.0	8.4	5.3	9	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88
C2	Fine	Moderate	13:22	12.3	Surface	1.0	0.3	50	20.0	20.0	8.2	8.2	30.7	30.7	106.1	106.2	8.1	2.5	7	85	85	85	85	85	85	825668	806947	<0.2	1.5	1.5	1.5					
						1.0	0.3	54	20.0	20.0	8.2	8.2	30.7	30.7	106.3	8.1	2.7	6	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86		
					Middle	6.2	0.3	45	19.9	19.9	8.2	8.2	31.6	31.6	110.3	110.3	8.3	4.3	8	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	
						6.2	0.3	47	19.9	19.9	8.2	8.2	31.6	31.6	110.3	8.3	4.3	8	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	
					Bottom	11.3	0.2	26	19.8	19.8	8.3	8.3	32.4	32.4	112.1	112.1	8.5	13.2	8	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88
						11.3	0.2	28	19.8	19.8	8.3	8.3	32.4	32.4	112.0	8.5	12.8	9	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	
C3	Fine	Moderate	11:21	11.8	Surface	1.0	0.1	79	19.8	19.8	8.1	8.1	32.6	32.6	98.6	98.6	7.4	6.6	6	85	85	85	85	85	85	822120	817811	<0.2	0.9	0.9	0.9					
						1.0	0.1	79	19.8	19.8	8.1	8.1	32.6	32.6	98.5	7.4	7.1	7	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86			
					Middle	5.9	0.2	104	19.8	19.8	8.1	8.1	32.7	32.7	97.7	97.7	7.4	11.7	8	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	
						5.9	0.2	105	19.8	19.8	8.1	8.1	32.7	32.7	97.7	7.4	11.7	8	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	
					Bottom	10.8	0.2	52	19.8	19.8	8.1	8.1	32.7	32.7	98.0	98.1	7.4	12.1	9	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	
						10.8	0.2	56	19.8	19.8	8.1	8.1	32.7	32.7	98.1	7.4	11.6	8	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	
IM1	Fine	Moderate	11:37	4.9	Surface	1.0	0.0	40	20.1	20.1	8.1	8.1	32.4	32.4	120.1	120.1	9.0	2.9	7	86	86	86	86	86	86	817929	807136	<0.2	0.9	0.9	1.0					
						1.0	0.0	40	20.1	20.1	8.1	8.1	32.4	32.4	120.0	9.0	2.9	7	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86			
					Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
					Bottom	3.9	0.1	228	20.0	20.0	8.1	8.1	33.1	33.1	118.5	118.4	8.9	3.8	6	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	
						3.9	0.1	228	20.0	20.0	8.1	8.1	33.1	33.1	118.2	8.9	3.8	6	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	
IM2	Sunny	Moderate	11:46	6.8	Surface	1.0	0.1	163	20.0	20.0	8.0	8.0	31.4	31.4	120.5	120.4	9.1	2.5	7	85	85	85	85	85	85	818151	806148	<0.2	1.1	1.1	1.2					
						1.0	0.1	175	20.0	20.0	8.0	8.0	31.4	31.4	120.3	9.1	2.5	7	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86			
					Middle	3.4	0.1	222	19.7	19.7	8.0	8.0	33.1	33.1	115.5	115.6	8.7	3.9	8	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87		
						3.4	0.1	234	19.7	19.7	8.0	8.0	33.1	33.1	115.7	8.7	3.9	7	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88		
					Bottom	5.8	0.2	240	19.7	19.7	8.1	8.1	33.3	33.3	114.4	114.4	8.6	5.4	9	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89		
						5.8	0.2	261	19.7	19.7	8.1	8.1	33.3	33.3	114.4	8.6	5.4	8	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90		
IM3	Sunny	Moderate	11:55	6.7	Surface	1.0	0.0	254	19.9	19.9	8.0	8.0	31.8	31.8	118.1	118.1	8.9	2.8	7	85	85	85	85	85	85	818774	805594	<0.2	1.2	1.2	1.4					
						1.0	0.0	275	19.9	19.9	8.0	8.0	31.8	31.8	118.0	8.9	2.9	6	85	85	85	85	85	85	85	85	85	85	85	85	85	85				
					Middle	3.4	0.0	272	19.7	19.7	8.0	8.0	32.6	32.6	114.7	114.8	8.7	5.8	8	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86		
						3.4	0.0	275	19.7	19.7	8.0	8.0	32.6	32.6	114.8	8.7	5.9	7	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87			
					Bottom	5.7	0.0	254	19.7	19.7	8.0	8.0	33.1	33.1	112.5	112.5	8.5	7.3	9	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89		
						5.7	0.0	261	19.7	19.7	8.0	8.0	33.1	33.1	112.5	8.5	7.4	9	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89		
IM4	Sunny	Moderate	12:03	7.6	Surface	1.0	0.1	189	19.8	19.8	8.0	8.0	32.3	32.3	118.6	118.7	8.9	3.6	8	85	85	85	85	85	85	819744	804593	<0.2	1.4	1.4	1.5					
						1.0	0.1	189	19.8	19.8	8.0	8.0	32.3	32.3	118.7	9.0	3.7	7	85	85	85	85	85	85	85	85	85	85	85	85	85					
					Middle	3.8	0.1	187	19.7	19.7	8.0	8.0	32.7	32.7	114.3	114.3	8.6	6.2	8	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87		
						3.8	0.1	190	19.7	19.7	8.0	8.0	32.7	32.7	114.3	8.6	5.9	8	87	87	87	87	87	87	87	87	87	87	87	87	87	87				
					Bottom	6.6	0.2	218	19.7	19.7	8.0	8.0	33.0	33.0	112.9	112.9	8.5	5.8	8	89	89	89	89	89	89	89	89	89	89	89	89	89	89			
						6.6	0.2	218	19.7	19.7	8.0	8.0	33.0	33.0	112.9	8.5	5.8	8	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89			
IM5	Sunny	Moderate	12:24	7.0	Surface	1.0	0.2	62	19.9	19.9	8.0	8.0	32.5	32.5	117.9	117.9	8.9	3.6	6	86	86	86	86	86	86	820731	804871	<0.2	1.4	1.4						
						1.0	0.2	67	19.9	19.9																										

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

Water Quality Monitoring Results on 23 January 20 during Mid-Ebb Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity (NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)						
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA			
IM9	Fine	Moderate	12:32	7.0	Surface	1.0	0.2	131	20.1	20.1	8.1	8.1	29.8	29.8	102.5	102.5	7.8	7.8	2.3	5	85	85	88	88	88	822074	808802	<0.2	1.4	<0.2	1.5				
						1.0	0.2	141	20.1	20.0	8.1	8.1	29.8	29.8	102.5	102.5	7.8	7.8	2.4	6	85	85	88	88											
					Middle	3.5	0.2	124	20.0	20.0	8.2	8.2	30.7	30.7	102.8	102.8	7.8	7.8	2.8	5	88	88	89	89											
						3.5	0.2	129	20.0	20.0	8.2	8.2	30.7	30.7	102.8	102.8	7.8	7.8	2.9	6	89	89	89	89											
					Bottom	6.0	0.2	117	20.0	20.0	8.2	8.2	30.9	30.9	102.6	102.6	7.8	7.8	3.5	7	89	89	90	90											
						6.0	0.2	120	20.0	20.0	8.2	8.2	30.9	30.9	102.4	102.4	7.8	7.8	3.5	6	90	90	90	90											
IM10	Fine	Moderate	12:25	7.4	Surface	1.0	0.2	130	20.0	20.0	8.2	8.2	31.5	31.5	107.6	107.6	8.1	8.1	2.7	7	85	85	88	88	88	822362	809814	<0.2	0.7	<0.2	0.6				
						1.0	0.2	132	20.0	19.9	8.2	8.2	31.6	31.6	107.4	107.4	8.1	8.1	2.7	8	86	86													
					Middle	3.7	0.2	123	19.9	19.9	8.2	8.2	31.9	31.9	106.0	106.0	8.0	8.0	3.1	7	88	88	89	89											
						3.7	0.2	129	19.9	19.9	8.2	8.2	31.9	31.9	105.8	105.8	8.0	8.0	3.1	8	88	88													
					Bottom	6.4	0.2	106	19.9	19.9	8.2	8.2	32.1	32.1	104.2	104.2	7.9	7.9	4.4	8	89	89	90	90											
						6.4	0.2	111	19.9	19.9	8.2	8.2	32.1	32.1	104.2	104.2	7.9	7.9	4.4	9	90	90													
IM11	Fine	Moderate	12:16	8.3	Surface	1.0	0.3	109	19.9	19.9	8.2	8.2	32.1	32.1	108.6	108.6	8.2	8.2	5.2	5	84	84	88	88	88	822036	811460	<0.2	1.5	<0.2	1.5				
						1.0	0.4	109	19.9	19.9	8.2	8.2	32.1	32.1	108.6	108.6	8.2	8.2	5.3	6	85	85													
					Middle	4.2	0.3	109	19.9	19.9	8.2	8.2	32.1	32.1	108.3	108.3	8.2	8.2	5.6	6	88	88	89	89											
						4.2	0.4	112	19.9	19.9	8.2	8.2	32.1	32.1	108.3	108.3	8.2	8.2	5.8	5	89	89													
					Bottom	7.3	0.2	99	19.9	19.9	8.2	8.2	32.1	32.1	107.9	107.9	8.1	8.1	5.1	5	89	89	90	90											
						7.3	0.2	105	19.9	19.9	8.2	8.2	32.1	32.1	107.9	107.9	8.1	8.1	5.0	6	90	90													
IM12	Fine	Moderate	12:10	8.8	Surface	1.0	0.2	80	19.9	19.9	8.2	8.2	32.1	32.1	109.5	109.5	8.3	8.3	3.8	4	85	85	88	88	87	821460	812065	<0.2	0.7	<0.2	0.7				
						1.0	0.2	83	19.9	19.9	8.2	8.2	32.1	32.1	109.4	109.4	8.3	8.3	3.8	5	85	85													
					Middle	4.4	0.4	94	19.9	19.9	8.2	8.2	32.1	32.1	108.9	108.9	8.2	8.2	4.5	6	87	87	88	88											
						4.4	0.4	102	19.9	19.9	8.2	8.2	32.1	32.1	108.9	108.9	8.2	8.2	4.6	7	88	88													
					Bottom	7.8	0.4	63	19.8	19.8	8.2	8.2	32.2	32.2	108.2	108.2	8.2	8.2	5.7	7	89	89	90	90											
						7.8	0.4	68	19.8	19.8	8.2	8.2	32.2	32.2	108.1	108.1	8.2	8.2	5.5	6	90	90													
SR1A	Fine	Calm	11:50	4.8	Surface	1.0	-	-	19.9	19.9	8.2	8.2	32.3	32.3	110.6	110.6	8.3	8.3	3.2	7	-	-	-	-	819981	812663	-	-	-	-					
						1.0	-	-	19.9	19.9	8.2	8.2	32.3	32.3	110.5	110.5	8.3	8.3	3.2	6	-	-													
					Middle	2.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	
						2.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	
					Bottom	3.8	-	-	19.8	19.8	8.2	8.2	32.3	32.3	110.0	110.1	8.3	8.3	3.9	6	-	-	-	-											
						3.8	-	-	19.8	19.8	8.2	8.2	32.3	32.3	110.1	110.1	8.3	8.3	3.8	7	-	-	-	-											
SR2	Fine	Moderate	11:40	4.2	Surface	1.0	0.2	84	19.9	19.9	8.2	8.2	32.3	32.3	109.3	109.3	8.2	8.2	3.7	6	81	81	84	84	84	821453	814155	<0.2	0.7	<0.2	0.7				
						1.0	0.2	85	19.9	19.9	8.2	8.2	32.3	32.3	109.2	109.2	8.2	8.2	3.5	4	82	82													
					Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				-	-	-	-	-	-	-	-
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				-	-	-	-	-	-	-	-
					Bottom	3.2	0.2	28	19.9	19.9	8.2	8.2	32.3	32.3	107.2	107.1	8.1	8.1	3.7	7	87	87													
						3.2	0.2	29	19.9	19.9	8.2	8.2	32.3	32.3	107.0	107.0	8.1	8.1	3.7	6	87	87													
SR3	Fine	Moderate	13:05	9.0	Surface	1.0	0.4	118	20.0	20.0	8.2	8.2	30.2	30.3	108.2	108.3	8.2	8.2	2.6	7	-	-	-	-	822165	807582	-	-	-	-					
						1.0	0.4	121	20.0	20.0	8.2	8.2	30.3	30.3	108.4	108.4	8.2	8.2	2.8	6	-	-													
					Middle	4.5	0.3	111	19.9	19.9	8.2	8.2	31.1	31.2	110.9	111.0	8.4	8.4	5.2	6	-	-													
						4.5	0.3	116	19.9	19.9	8.2	8.2	31.2	31.2	111.1	111.1	8.4	8.4	5.5	5	-	-													
					Bottom	8.0	0.3	114	19.8	19.8	8.3	8.3	32.4	32.4	110.9	110.7	8.4	8.4	9.6	4	-	-													
						8.0	0.3	124	19.8	19.8	8.3	8.3	32.4	32.4	110.5	110.5	8.3	8.3	9.5	5	-	-													
SR4A	Fine	Calm	11:15	8.7	Surface	1.0	0.2	356	19.8	19.8	7.9	7.9	32.5	32.5	118.3	118.4	8.9	8.9	3.4	5	-	-	-	-	817166	807794	-	-	-	-					
						1.0	0.2	328	19.8	19.8	7.9	7.9	32.5	32.5	118.4	118.4	8.9	8.9	3.4	6	-	-													
					Middle	4.4	0.2	342	19.7	19.7	7.9	7.9	32.8	32.8	116.0	116.0	8.7	8.7	4.0	7	-	-													
						4.4	0.2	350	19.7	19.7	7.9	7.9	32.8	32.8	115.9	115.9	8.7	8.7	4.0	7	-	-													
					Bottom	7.7	0.1	10	19.7	19.7	7.9	7.9	33.1	33.1	114.3	114.4	8.6	8.6	5.0	7	-	-													
						7.7	0.1	10	19.7	19.7	7.9	7.9	33.1	33.1	114.4	114.4	8.6	8.6	5.0	8	-	-													
SR5A	Fine	Calm	11:14	3.6	Surface	1.0	0.1	269	20.0	20.0	7.8	7.8	32.8	32.8	110.1	110.1	8.3	8.3	5.8	10	-	-	-	-	816601	810702	-	-	-	-					
						1.0	0.1	293	20.0	20.0	7.8	7.8	32.8	32.8	110.0	110.0	8.2	8.2	5.9	10	-	-													
					Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-		
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-		
					Bottom	2.6	0.1	0	20.0	20.0	7.9	7.9	32.8	32.8	108.8	108.7	8.2	8.2	4.6	14	-	-													
						2.6	0.1	0	20.0	20.0	7.9	7.9	32.8	32.8	108.6	108.6	8.2	8.2	4.6	15	-	-													
SR6A	Fine	Calm	11:05	3.9	Surface	1.0	0.1	157	20.0	20.0	7.8	7.8	32.6	32.6	106.8	106.7	8.0	8.0	1.8	8	-	-	-	-	817966	814743	-	-	-	-					
						1.0	0.1	162	20.0	20.0	7.8	7.8	32.6	32.6	106.7	106.7	8.0	8.0	1.9	8	-	-													
					Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-		
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-			
					Bottom	2.9	0.1	124	20.0	20.0	7.8	7.8	32.7	32.7	105.6	105.5	7.9	7.9	1.7	7	-	-													
						2.9	0.1	124	20.0	20.0	7.8	7.8	32.7	32.7	105.4	105.4	7.9	7.9	1.7	8	-	-													
SR7																																			

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

Water Quality Monitoring Results on 23 January 20 during Mid-Flood Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity(NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)				
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA	
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA	Value
C1	Cloudy	Moderate	17:44	7.7	Surface	1.0	0.3	10	20.3	20.3	8.1	8.1	30.8	30.8	130.1	130.0	9.8	1.5	9	85	85	85	85	86	86	815618	804251	<0.2	1.1	1.1	1.2		
						1.0	0.3	10	20.3	20.3	8.1	8.1	30.8	30.8	129.9	9.8	1.5	9	85	85	85	85	86	86	86	86	815618	804251	<0.2	1.1	1.1	1.2	
						3.9	0.4	32	19.8	19.8	8.1	8.1	32.1	32.1	117.5	8.9	2.3	9	86	86	86	86	86	86	86	86	815618	804251	<0.2	1.1	1.1	1.2	
					3.9	0.4	35	19.8	19.8	8.1	8.1	32.1	32.1	117.5	8.9	2.3	9	86	86	86	86	86	86	86	86	86	86	815618	804251	<0.2	1.1	1.1	1.2
					6.7	0.2	21	19.7	19.7	8.1	8.1	32.8	32.8	111.8	8.4	3.9	11	88	88	88	88	88	88	88	88	88	88	815618	804251	<0.2	1.1	1.1	1.2
					6.7	0.3	22	19.7	19.7	8.1	8.1	32.8	32.8	112.1	8.5	4.0	11	88	88	88	88	88	88	88	88	88	88	815618	804251	<0.2	1.1	1.1	1.2
C2	Fine	Moderate	15:41	11.8	Surface	1.0	0.4	311	20.1	20.1	8.2	8.2	30.7	30.7	107.7	107.8	8.2	2.6	4	86	86	86	86	86	86	825677	806964	<0.2	1.4	1.4	1.6		
						1.0	0.4	321	20.1	20.1	8.2	8.2	30.7	30.7	107.8	8.2	2.6	3	86	86	86	86	86	86	86	86	825677	806964	<0.2	1.4	1.4	1.6	
						5.9	0.3	36	20.0	20.0	8.2	8.2	30.9	31.0	110.4	8.4	3.6	5	88	88	88	88	88	88	88	88	825677	806964	<0.2	1.6	1.6	1.6	
					5.9	0.3	37	20.0	20.0	8.2	8.2	31.1	31.0	110.6	8.4	3.9	4	88	88	88	88	88	88	88	88	825677	806964	<0.2	1.6	1.6	1.6		
					10.8	0.3	340	19.8	19.8	8.2	8.2	32.0	32.0	109.6	8.3	8.6	5	89	89	89	89	89	89	89	89	89	89	825677	806964	<0.2	1.6	1.6	1.6
					10.8	0.3	313	19.8	19.8	8.2	8.2	32.0	32.0	109.2	8.2	8.8	5	90	90	90	90	90	90	90	90	90	90	825677	806964	<0.2	1.6	1.6	1.6
C3	Fine	Moderate	17:26	11.2	Surface	1.0	0.5	280	20.4	20.4	8.2	8.2	32.5	32.5	109.7	109.6	8.2	2.0	7	85	85	85	85	85	85	822089	817820	<0.2	1.2	1.2	1.1		
						1.0	0.5	299	20.3	20.3	8.2	8.2	32.5	32.5	109.5	8.2	2.0	6	85	85	85	85	85	85	85	85	822089	817820	<0.2	1.2	1.2	1.1	
						5.6	0.5	265	20.1	20.1	8.2	8.2	32.5	32.5	106.2	106.1	8.0	2.1	8	88	88	88	88	88	88	88	88	822089	817820	<0.2	0.9	0.9	1.1
					5.6	0.5	267	20.1	20.1	8.2	8.2	32.5	32.5	106.0	106.0	8.0	2.2	8	88	88	88	88	88	88	88	88	822089	817820	<0.2	1.2	1.2	1.1	
					10.2	0.5	287	19.8	19.8	8.2	8.2	32.8	32.8	99.8	99.9	7.5	2.6	8	89	89	89	89	89	89	89	89	822089	817820	<0.2	1.2	1.2	1.1	
					10.2	0.5	292	19.8	19.8	8.2	8.2	32.8	32.8	100.0	100.0	7.5	2.5	9	89	89	89	89	89	89	89	89	822089	817820	<0.2	1.1	1.1	1.1	
IM1	Cloudy	Moderate	17:36	4.9	Surface	1.0	0.2	12	20.1	20.1	8.1	8.1	31.5	31.5	129.8	9.8	2.0	5	86	86	86	86	86	86	86	817961	807128	<0.2	1.6	1.6	1.7		
						1.0	0.2	12	20.1	20.1	8.1	8.1	31.5	31.5	130.0	9.8	2.0	6	86	86	86	86	86	86	86	86	817961	807128	<0.2	1.7	1.7	1.7	
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
					3.9	0.2	333	20.0	20.0	8.1	8.1	31.6	31.6	127.2	9.6	2.4	8	87	87	87	87	87	87	87	87	87	87	817961	807128	<0.2	1.6	1.6	1.8
					3.9	0.2	338	20.0	20.0	8.1	8.1	31.6	31.6	127.2	9.6	2.4	8	88	88	88	88	88	88	88	88	88	88	817961	807128	<0.2	1.8	1.8	1.8
					1.0	0.1	332	20.0	20.0	8.1	8.1	32.0	32.0	125.6	9.5	2.4	5	86	86	86	86	86	86	86	86	86	86	817961	807128	<0.2	1.8	1.8	1.8
IM2	Cloudy	Moderate	17:27	7.4	Surface	1.0	0.1	332	20.0	20.0	8.1	8.1	32.0	32.0	125.3	9.4	2.4	5	86	86	86	86	86	86	86	818170	806164	<0.2	1.8	1.8	1.8		
						1.0	0.1	332	20.0	20.0	8.1	8.1	32.0	32.0	125.3	9.4	2.4	5	86	86	86	86	86	86	86	86	818170	806164	<0.2	1.8	1.8	1.8	
						3.7	0.1	351	19.8	19.8	8.1	8.1	32.5	32.5	122.5	9.2	2.8	6	88	88	88	88	88	88	88	88	818170	806164	<0.2	1.8	1.8	1.8	
					3.7	0.1	323	19.8	19.8	8.1	8.1	32.5	32.5	122.5	9.2	2.7	5	88	88	88	88	88	88	88	88	818170	806164	<0.2	1.8	1.8	1.8		
					6.4	0.2	19	19.8	19.8	8.2	8.2	32.8	32.8	118.9	9.0	3.3	7	89	89	89	89	89	89	89	89	89	89	818170	806164	<0.2	1.8	1.8	1.8
					6.4	0.2	19	19.8	19.8	8.2	8.2	32.8	32.8	118.8	8.9	3.3	7	89	89	89	89	89	89	89	89	89	89	818170	806164	<0.2	2.0	2.0	2.0
IM3	Cloudy	Moderate	17:18	7.0	Surface	1.0	0.1	313	19.9	19.9	8.1	8.1	32.3	32.3	121.5	121.4	9.2	3.0	5	85	85	85	85	85	85	818771	805617	<0.2	2.1	2.1	2.1		
						1.0	0.1	318	19.9	19.9	8.1	8.1	32.3	32.3	121.3	9.1	3.0	6	85	85	85	85	85	85	85	85	818771	805617	<0.2	2.1	2.1	2.1	
						3.5	0.1	22	19.8	19.8	8.0	8.0	32.7	32.7	116.8	8.8	4.0	5	88	88	88	88	88	88	88	88	818771	805617	<0.2	2.0	2.0	2.1	
					3.5	0.1	22	19.8	19.8	8.0	8.0	32.7	32.7	116.8	8.8	4.0	6	88	88	88	88	88	88	88	88	818771	805617	<0.2	2.1	2.1	2.1		
					6.0	0.2	40	19.7	19.7	8.0	8.0	33.1	33.1	114.6	8.6	5.5	5	89	89	89	89	89	89	89	89	89	89	818771	805617	<0.2	2.0	2.0	2.0
					6.0	0.2	42	19.7	19.7	8.0	8.0	33.1	33.1	114.5	8.6	5.4	5	90	90	90	90	90	90	90	90	90	90	818771	805617	<0.2	2.0	2.0	2.0
IM4	Cloudy	Moderate	16:59	7.9	Surface	1.0	0.1	214	19.9	19.9	8.0	8.0	32.4	32.4	121.3	121.2	9.1	3.1	4	85	85	85	85	85	85	819730	804584	<0.2	2.2	2.2	2.2		
						1.0	0.1	232	19.9	19.9	8.0	8.0	32.4	32.4	121.1	9.1	3.1	4	85	85	85	85	85	85	85	85	819730	804584	<0.2	2.2	2.2	2.2	
						4.0	0.0	287	19.7	19.7	8.0	8.0	32.6	32.6	116.4	8.8	4.2	7	88	88	88	88	88	88	88	88	819730	804584	<0.2	2.1	2.1	2.1	
					4.0	0.0	300	19.7	19.7	8.0	8.0	32.6	32.6	116.4	8.8	4.2	6	88	88	88	88	88	88	88	88	819730	804584	<0.2	2.2	2.2	2.2		
					6.9	0.1	113	19.7	19.7	8.0	8.0	33.0	33.0	114.2	8.6	6.1	6	89	89	89	89	89	89	89	89	89	89	819730	804584	<0.2	2.3	2.3	2.3
					6.9	0.1	123	19.7	19.7	8.0	8.0	33.0	33.0	114.2	8.6	6.1	7	89	89	89	89	89	89	89	89	89	89	819730	804584	<0.2	2.2	2.2	2.2
IM5	Cloudy	Moderate	16:44	7.2	Surface	1.0	0.0	243	20.0	20.0	8.0	8.0	32.3	32.3	123.3	123.3	9.3	2.8	7	85	85	85	85	85	85	820748	804847	<0.2	2.3	2.3	2.3		

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

**Water Quality Monitoring Results on 23 January 20 during Mid-Flood Tide**

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity(NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)				
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA	
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA	Value
IM9	Fine	Moderate	16:12	6.8	Surface	1.0	0.1	233	20.2	20.2	8.2	8.2	30.5	30.5	110.8	111.0	8.4	8.4	3.3	3.3	3	3	82	82	84	822114	808829	<0.2	1.4	1.3	1.3		
						1.0	0.1	241	20.2	8.2	8.2	30.6	30.6	111.1	111.1	8.4	8.4	3.6	3.6	3	3	83	83	84	822114	808829	<0.2	1.4	1.3	1.3			
						3.4	0.1	308	19.8	19.8	8.3	8.3	32.1	32.1	110.4	110.2	8.3	8.3	5.3	5.3	4	4	84	84	84	822114	808829	<0.2	1.3	1.3	1.3		
					3.4	0.1	312	19.8	19.8	8.3	8.3	32.1	32.1	110.0	110.0	8.3	8.3	5.2	5.2	3	3	84	84	84	822114	808829	<0.2	1.3	1.3	1.3			
					5.8	0.1	21	19.8	19.8	8.3	8.3	32.3	32.3	107.2	107.1	8.1	8.1	5.7	5.7	4	4	86	86	86	822114	808829	<0.2	1.3	1.3	1.3			
					5.8	0.1	21	19.8	19.8	8.3	8.3	32.3	32.3	106.9	106.9	8.1	8.1	5.5	5.5	5	5	87	87	87	822114	808829	<0.2	1.3	1.3	1.3			
IM10	Fine	Moderate	16:19	7.0	Surface	1.0	0.5	280	20.0	20.0	8.2	8.2	31.3	31.4	111.5	111.5	8.4	8.4	3.3	3.3	7	7	84	84	84	822368	809800	<0.2	1.4	1.4	1.4		
						1.0	0.6	280	19.9	19.9	8.2	8.2	31.4	31.4	111.5	111.5	8.4	8.4	3.3	3.3	7	7	84	84	84	822368	809800	<0.2	1.4	1.4	1.4		
						3.5	0.5	312	19.8	19.8	8.3	8.3	32.1	32.1	109.7	109.6	8.3	8.3	4.7	4.7	6	6	83	83	83	822368	809800	<0.2	1.4	1.4	1.4		
					3.5	0.5	319	19.8	19.8	8.3	8.3	32.1	32.1	109.5	109.5	8.3	8.3	4.9	4.9	5	5	84	84	84	822368	809800	<0.2	1.4	1.4	1.4			
					6.0	0.5	290	19.8	19.8	8.2	8.2	32.3	32.3	107.2	107.1	8.1	8.1	6.4	6.4	4	4	87	87	87	822368	809800	<0.2	1.4	1.4	1.4			
					6.0	0.6	292	19.8	19.8	8.2	8.2	32.3	32.3	107.0	107.0	8.1	8.1	6.5	6.5	4	4	87	87	87	822368	809800	<0.2	1.4	1.4	1.4			
IM11	Fine	Moderate	16:31	8.6	Surface	1.0	0.5	308	20.1	20.1	8.2	8.2	32.1	32.1	110.5	110.4	8.3	8.3	2.5	2.5	7	7	84	84	84	822075	811477	<0.2	1.4	1.4	1.4		
						1.0	0.6	311	20.1	20.1	8.2	8.2	32.1	32.1	110.3	110.3	8.3	8.3	2.5	2.5	7	7	85	85	85	822075	811477	<0.2	1.4	1.4	1.4		
						4.3	0.5	265	19.9	19.9	8.2	8.2	32.2	32.2	109.6	109.6	8.3	8.3	3.8	3.8	8	8	85	85	85	822075	811477	<0.2	1.4	1.4	1.4		
					4.3	0.5	290	19.9	19.9	8.2	8.2	32.2	32.2	109.6	109.6	8.3	8.3	4.2	4.2	7	7	86	86	86	822075	811477	<0.2	1.4	1.4	1.4			
					7.6	0.5	279	19.9	19.9	8.2	8.2	32.2	32.2	109.2	109.2	8.2	8.2	5.3	5.3	6	6	88	88	88	822075	811477	<0.2	1.4	1.4	1.4			
					7.6	0.5	289	19.9	19.9	8.2	8.2	32.2	32.2	109.1	109.1	8.2	8.2	5.2	5.2	6	6	88	88	88	822075	811477	<0.2	1.4	1.4	1.4			
IM12	Fine	Moderate	16:37	8.3	Surface	1.0	0.1	241	20.2	20.2	8.2	8.2	32.1	32.1	115.5	115.4	8.7	8.7	2.5	2.5	7	7	85	85	85	821438	812031	<0.2	0.9	0.9	0.9		
						1.0	0.1	245	20.2	20.2	8.2	8.2	32.1	32.1	115.3	115.3	8.7	8.7	2.5	2.5	7	7	86	86	86	821438	812031	<0.2	0.9	0.9	0.9		
						4.2	0.1	296	19.9	19.9	8.2	8.2	32.1	32.1	108.9	108.7	8.2	8.2	2.8	2.8	7	7	87	87	87	821438	812031	<0.2	0.9	0.9	0.9		
					4.2	0.1	302	19.9	19.9	8.2	8.2	32.1	32.1	108.5	108.5	8.2	8.2	2.9	2.9	6	6	87	87	87	821438	812031	<0.2	1.0	1.0	1.0			
					7.3	0.1	349	19.9	19.9	8.2	8.2	32.2	32.2	106.1	106.1	8.0	8.0	3.6	3.6	6	6	84	84	84	821438	812031	<0.2	0.9	0.9	0.9			
					7.3	0.1	356	19.9	19.9	8.2	8.2	32.2	32.2	106.1	106.1	8.0	8.0	3.6	3.6	6	6	84	84	84	821438	812031	<0.2	1.1	1.1	1.1			
SR1A	Fine	Calm	16:54	4.3	Surface	1.0	-	-	20.1	20.1	8.2	8.2	32.2	32.2	112.2	112.1	8.4	8.4	3.0	3.0	6	6	-	-	-	819972	812657	-	-	-	-		
						1.0	-	-	20.1	20.1	8.2	8.2	32.2	32.2	112.0	112.0	8.4	8.4	3.0	3.0	5	5	-	-	-	819972	812657	-	-	-	-		
						2.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
					2.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
					3.3	-	-	20.0	20.0	8.2	8.2	32.2	32.2	106.7	106.7	8.0	8.0	8.6	8.6	7	7	-	-	-	-	-	819972	812657	-	-	-	-	-
					3.3	-	-	20.0	20.0	8.2	8.2	32.2	32.2	106.6	106.6	8.0	8.0	8.9	8.9	6	6	-	-	-	-	-	819972	812657	-	-	-	-	-
SR2	Fine	Calm	17:06	4.2	Surface	1.0	0.6	316	20.0	20.0	8.3	8.3	32.1	32.1	114.2	114.1	8.6	8.6	2.8	2.8	5	5	81	81	81	821453	814158	<0.2	0.9	0.9	0.9		
						1.0	0.6	330	20.0	20.0	8.3	8.3	32.2	32.2	113.9	113.9	8.6	8.6	2.7	2.7	6	6	82	82	82	821453	814158	<0.2	0.8	0.8	0.8		
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
					3.2	0.4	322	20.0	20.0	8.3	8.3	32.2	32.2	111.3	111.1	8.4	8.4	2.8	2.8	7	7	84	84	84	821453	814158	<0.2	0.9	0.9	0.9			
					3.2	0.4	336	20.0	20.0	8.3	8.3	32.2	32.2	110.8	110.8	8.3	8.3	2.9	2.9	6	6	85	85	85	821453	814158	<0.2	0.8	0.8	0.8			
					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SR3	Fine	Moderate	16:01	8.8	Surface	1.0	0.1	80	20.1	20.1	8.2	8.2	30.5	30.6	109.8	110.0	8.3	8.3	2.8	2.8	3	3	-	-	-	822160	807561	-	-	-	-		
						1.0	0.1	85	20.1	20.1	8.2	8.2	30.6	30.6	110.1	110.1	8.3	8.3	2.9	2.9	3	3	-	-	-	822160	807561	-	-	-	-	-	
						4.4	0.1	298	19.9	19.9	8.3	8.3	31.8	31.8	112.1	112.2	8.5	8.5	5.1	5.1	3	3	-	-	-	822160	807561	-	-	-	-	-	
					4.4	0.1	326	19.9	19.9	8.3	8.3	31.9	31.8	112.2	112.2	8.5	8.5	5.3	5.3	4	4	-	-	-	822160	807561	-	-	-	-	-		
					7.8	0.1	273	19.9	19.9	8.3	8.3	32.3	32.3	111.9	111.7	8.4	8.4	6.6	6.6	6	6	-	-	-	822160	807561	-	-	-	-	-		
					7.8	0.1	294	19.9	19.9	8.3	8.3	32.3	32.3	111.4	111.4	8.4	8.4	6.5	6.5	6	6	-	-	-	822160	807561	-	-	-	-	-		
SR4A	Fine	Calm	17:53	9.2	Surface	1.0	0.1	234	20.3	20.3	8.1	8.1	30.8	30.8	127.3	127.3	9.6	9.6	2.2	2.2	7	7	-	-	-	817178	807809	-	-	-	-		
						1.0	0.1	252	20.3	20.3	8.1	8.1	30.8	30.8	127.3	127.3	9.6	9.6	2.2	2.2	7	7	-	-	-	817178	807809	-	-	-	-	-	
						4.6	0.1	237	19.9	19.9	8.1	8.1	31.6	31.6	120.1	120.0	9.1	9.1	3.9	3.9	8	8	-	-	-	817178	807809	-	-	-	-	-	
					4.6	0.1	251	19.9	19.9	8.1	8.1	31.6	31.6	119.9	119.9	9.1	9.1	4.0	4.0	8	8	-	-	-	817178	807809	-	-	-	-	-		
					8.2	0.1	248	19.8	19.8	8.1	8.1																						

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

Water Quality Monitoring

Water Quality Monitoring Results on 25 January 20 during Mid-Ebb Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)	Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity (NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)					
								Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA		
C1	Fine	Moderate	13:30	7.2	Surface	1.0	0.1	271	20.5	20.5	8.2	8.2	31.5	31.5	116.9	116.8	8.8	8.7	2.6	3	83	88	815610	804243	<0.2	1.0	<0.2	0.9					
						1.0	0.1	285	20.5	8.2	8.2	31.5	31.5	116.7	116.7	8.7	8.7	2.5	4	84	88	<0.2	0.9										
					Middle	3.6	0.0	286	20.3	8.2	8.2	31.5	31.5	114.8	114.7	8.6	8.6	2.5	5	87	88	<0.2	1.0										
						3.6	0.0	292	20.3	8.2	8.2	31.5	31.5	114.7	114.7	8.6	8.6	2.5	5	88	88	<0.2	1.0										
						6.2	0.0	59	20.2	8.2	8.2	31.6	31.6	111.9	112.0	8.4	8.4	4.0	6	91	88	<0.2	1.0										
						6.2	0.0	63	20.2	8.2	8.2	31.6	31.6	112.1	112.1	8.4	8.4	4.1	6	92	88	<0.2	1.1										
C2	Cloudy	Moderate	12:02	8.3	Surface	1.0	0.5	165	20.6	20.6	8.2	8.2	29.4	29.4	110.1	110.2	8.3	8.4	2.1	4	87	88	825684	806957	<0.2	1.6	<0.2	1.6					
						1.0	0.6	163	20.6	20.6	8.2	8.2	29.4	29.4	110.3	110.3	8.4	8.4	2.1	4	86	88	<0.2	1.6									
					Middle	4.2	0.4	153	20.4	20.4	8.2	8.2	29.6	29.6	112.4	112.5	8.5	8.5	2.9	5	88	88	<0.2	1.7									
						4.2	0.4	155	20.4	20.4	8.2	8.2	29.6	29.6	112.5	112.5	8.5	8.5	2.9	5	89	88	<0.2	1.6									
						7.3	0.3	121	20.5	20.5	8.2	8.2	29.8	29.8	113.8	113.8	8.6	8.6	3.2	5	90	88	<0.2	1.6									
						7.3	0.3	118	20.5	20.5	8.2	8.2	29.8	29.8	113.8	113.8	8.6	8.6	3.2	6	89	88	<0.2	1.6									
C3	Cloudy	Moderate	13:42	12.3	Surface	1.0	0.1	177	20.4	20.4	8.2	8.2	32.6	32.6	107.0	107.0	8.0	8.0	1.7	3	83	88	822114	817806	<0.2	0.6	<0.2	0.6					
						1.0	0.1	186	20.4	20.4	8.2	8.2	32.6	32.6	107.0	107.0	8.0	8.0	1.8	4	83	88	<0.2	0.6									
					Middle	6.2	0.1	127	20.0	20.0	8.2	8.2	32.7	32.7	101.6	101.6	7.6	7.6	1.9	5	87	88	<0.2	0.6									
						6.2	0.1	137	20.0	20.0	8.2	8.2	32.7	32.7	101.5	101.5	7.6	7.6	1.9	5	88	88	<0.2	0.6									
						11.3	0.2	141	20.0	20.0	8.2	8.2	32.7	32.7	100.3	100.3	7.5	7.5	2.5	7	91	88	<0.2	0.7									
						11.3	0.2	152	20.0	20.0	8.2	8.2	32.7	32.7	100.3	100.3	7.5	7.5	2.5	8	91	88	<0.2	0.7									
IM1	Fine	Moderate	13:04	4.7	Surface	1.0	0.0	200	20.6	20.6	8.2	8.2	29.9	29.9	114.0	114.1	8.6	8.6	2.5	6	83	88	817967	807149	<0.2	1.0	<0.2	1.0					
						1.0	0.0	213	20.6	20.6	8.2	8.2	29.9	29.9	114.1	114.1	8.6	8.6	2.5	5	84	88	<0.2	1.0									
					Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
						3.7	0.0	212	20.3	20.3	8.2	8.2	31.0	31.0	117.7	117.6	8.9	8.9	3.8	3	91	88	<0.2	1.0									
						3.7	0.0	219	20.3	20.3	8.2	8.2	31.0	31.0	117.5	117.5	8.9	8.9	3.8	3	92	88	<0.2	1.0									
IM2	Fine	Moderate	12:57	7.4	Surface	1.0	0.1	232	20.7	20.7	8.2	8.2	29.5	29.5	116.1	116.3	8.8	8.8	3.6	5	86	88	818139	806156	<0.2	1.1	<0.2	1.2					
						1.0	0.1	251	20.7	20.7	8.2	8.2	29.5	29.5	116.4	116.4	8.8	8.8	3.6	5	87	88	<0.2	1.2									
					Middle	3.7	0.0	243	20.2	20.2	8.3	8.3	31.4	31.4	119.6	119.6	9.0	9.0	5.3	4	87	88	<0.2	1.1									
						3.7	0.0	246	20.2	20.2	8.3	8.3	31.4	31.4	119.6	119.6	9.0	9.0	5.3	4	87	88	<0.2	1.2									
						6.4	0.0	232	20.2	20.2	8.3	8.3	31.4	31.4	119.4	119.4	9.0	9.0	5.4	3	90	88	<0.2	1.2									
						6.4	0.0	221	20.2	20.2	8.3	8.3	31.4	31.4	119.4	119.4	9.0	9.0	5.4	4	90	88	<0.2	1.1									
IM3	Fine	Moderate	12:50	7.3	Surface	1.0	0.1	170	20.6	20.6	8.2	8.2	29.7	29.7	119.2	119.3	9.0	9.0	2.5	6	86	88	818768	805579	<0.2	1.1	<0.2	1.1					
						1.0	0.1	180	20.6	20.6	8.2	8.2	29.8	29.7	119.4	119.3	9.0	9.0	2.5	7	87	88	<0.2	1.1									
					Middle	3.7	0.1	213	20.4	20.4	8.3	8.3	30.3	30.3	119.8	119.8	9.1	9.1	2.6	5	88	88	<0.2	1.2									
						3.7	0.1	214	20.4	20.4	8.3	8.3	30.3	30.3	119.8	119.8	9.1	9.1	2.6	5	89	88	<0.2	1.1									
						6.3	0.1	215	20.2	20.2	8.3	8.3	31.5	31.5	119.5	119.5	9.0	9.0	4.7	4	90	88	<0.2	1.1									
						6.3	0.1	235	20.2	20.2	8.3	8.3	31.5	31.5	119.4	119.5	9.0	9.0	4.7	3	90	88	<0.2	1.1									
IM4	Fine	Moderate	12:37	6.5	Surface	1.0	0.1	132	20.5	20.5	8.3	8.3	31.5	31.5	123.0	123.0	9.2	9.2	2.5	6	85	88	819723	804610	<0.2	1.0	<0.2	1.0					
						1.0	0.1	136	20.5	20.5	8.3	8.3	31.5	31.5	123.0	123.0	9.2	9.2	2.5	5	86	88	<0.2	1.0									
					Middle	3.3	0.2	221	20.4	20.4	8.3	8.3	31.6	31.6	121.5	121.5	9.1	9.1	2.8	5	87	88	<0.2	1.0									
						3.3	0.2	230	20.4	20.4	8.3	8.3	31.6	31.6	121.4	121.4	9.1	9.1	2.8	4	88	88	<0.2	1.1									
						5.5	0.2	213	20.4	20.4	8.3	8.3	31.6	31.6	120.8	120.7	9.1	9.1	3.0	3	90	88	<0.2	1.1									
						5.5	0.2	220	20.4	20.4	8.3	8.3	31.6	31.6	120.6	120.6	9.1	9.1	2.9	2	90	88	<0.2	1.1									
IM5	Fine	Moderate	12:28	7.1	Surface	1.0	0.3	216	20.5	20.5	8.2	8.2	31.5	31.5	117.2	117.2	8.8	8.8	2.3	4	86	88	820712	804861	<0.2	1.0	<0.2	1.0					
						1.0	0.3	205	20.5	20.5	8.2	8.2	31.5	31.5	117.2	117.2	8.8	8.8	2.3	5	85	88	<0.2	1.0									
					Middle	3.6	0.3	187	20.3	20.3	8.2	8.2	31.5	31.5	113.7	113.7	8.5	8.5	3.1	5	88	88	<0.2	1.0									
						3.6	0.3	194	20.3	20.3	8.2	8.2	31.5	31.5	113.6	113.6	8.5	8.5	3.2	4	88	88	<0.2	1.0									
						6.1	0.2	177	20.2	20.2	8.2	8.2	31.6	31.6	110.6	110.6	8.3	8.3	4.0	5	90	88	<0.2	1.1									
						6.1	0.3	180	20.2	20.2	8.2	8.2	31.6	31.6	110.5	110.6	8.3	8.3	4.2	6	90	88	<0.2	1.0									
IM6	Fine	Moderate	12:22	7.3	Surface	1.0	0.1	123	20.6	20.6	8.2	8.2	29.3	29.3	111.1	111.2	8.4	8.4	2.2	4	85	88	821074	805810	<0.2	1.0	<0.2	1.0					
						1.0	0.1	126	20.5	20.5	8.2	8.2	29.3	29.3	111.3	111.3	8.4	8.5	2.2	3	87	88	<0.2	1.0									
					Middle	3.7	0.1	100	20.4	20.4	8.2	8.2	29.5	29.5	112.6	112.7	8.5	8.5	2.7	5	87	88	<0.2	1.0									
						3.7	0.1	100	20.4	20.4	8.2	8.2	29.5	29.5	112.7	112.7	8.5	8.5	2.7	4	89	88	<0.2	1.0									
						6.3	0.1	114	20.5	20.5	8.2	8.2	29.7	29.7	113.6	113.6	8.6	8.6	3.0	5	90	88	<0.2	1.1									
						6.3	0.1	124	20.5	20.5	8.2	8.2	29.7	29.7	113.5	113.6	8.6	8.6	3.1	5	90	88	<0.2	1.0									
IM7	Fine	Moderate	12:06	7.2	Surface	1.0	0.1	208	20.5	20.5	8.2	8.2	29.4	29.4	110.5	110.6	8.4	8.4	2.2	3	86	88	821344	806840	<0.2	0.9	<0.2	0.9					
						1.0	0.1	198	20.5	20.5	8.2	8.2	29.4	29.4	110.6	110.6	8.4	8.5	2.2	2	85	88	<0.2	0.9									
					Middle	3.6	0.1	201	20.4	20.4	8.2	8.2	29.7	29.7	112.1	112.2	8.5	8.5	2.7	3	88												

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

Water Quality Monitoring

Water Quality Monitoring Results on 25 January 20 during Mid-Ebb Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity (NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)			
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA
IM9	Cloudy	Moderate	12:33	8.6	Surface	1.0	0.2	154	20.7	20.7	8.2	8.2	29.5	29.5	116.9	117.0	8.8	8.8	2.5	5	85	87	822079	808793	<0.2	2.1	<0.2	2.1				
						1.0	0.2	164	20.7	8.2	8.2	29.5	29.5	117.1	117.1	8.8	8.8	2.5	5	85	87											
					Middle	4.3	0.2	142	20.2	8.3	8.3	31.5	31.5	120.2	120.2	9.1	9.1	4.2	6	88	89	<0.2	2.0									
						4.3	0.2	147	20.2	8.3	8.3	31.5	31.5	120.2	120.2	9.1	9.1	4.2	7	87	88	<0.2	2.0									
					Bottom	7.6	0.1	132	20.2	8.3	8.3	31.5	31.5	118.2	118.2	8.9	8.9	5.6	8	89	90	<0.2	2.2									
						7.6	0.1	141	20.2	8.3	8.3	31.5	31.5	118.1	118.1	8.9	8.9	5.6	7	90	91	<0.2	2.2									
IM10	Cloudy	Moderate	12:38	7.1	Surface	1.0	0.2	121	20.6	20.6	8.2	8.2	29.7	29.7	116.2	116.3	8.8	8.8	3.5	4	86	89	822385	809799	<0.2	1.5	<0.2	1.7				
						1.0	0.2	129	20.6	8.2	8.2	29.7	29.7	116.3	116.3	8.8	8.8	3.5	4	85	88											
					Middle	3.6	0.2	136	20.2	8.3	8.3	31.4	31.4	120.0	120.0	9.0	9.0	4.7	4	89	90	<0.2	1.5									
						3.6	0.2	138	20.2	8.3	8.3	31.4	31.4	120.0	120.0	9.0	9.0	4.6	5	90	91	<0.2	1.6									
					Bottom	6.1	0.2	144	20.2	8.3	8.3	31.4	31.4	119.1	119.1	9.0	9.0	5.5	5	91	92	<0.2	1.8									
						6.1	0.2	155	20.2	8.3	8.3	31.5	31.4	119.0	119.0	9.0	9.0	5.4	6	90	91	<0.2	2.0									
IM11	Cloudy	Moderate	12:49	8.1	Surface	1.0	0.3	72	20.4	20.4	8.2	8.2	30.2	30.2	112.9	113.0	8.5	8.5	2.8	4	84	88	822064	811482	<0.2	1.6	<0.2	1.7				
						1.0	0.4	73	20.4	8.2	8.2	30.2	30.2	113.0	113.0	8.5	8.5	2.8	3	85	88											
					Middle	4.1	0.3	88	20.3	8.3	8.3	31.2	31.2	114.1	114.1	8.6	8.6	3.5	4	88	89	<0.2	1.6									
						4.1	0.3	89	20.3	8.3	8.3	31.2	31.2	114.0	114.0	8.6	8.6	3.5	3	89	90	<0.2	1.7									
					Bottom	7.1	0.2	90	20.3	8.3	8.3	31.5	31.5	112.8	112.7	8.5	8.5	4.0	4	90	91	<0.2	1.9									
						7.1	0.2	95	20.4	8.3	8.3	31.4	31.5	112.5	112.5	8.4	8.4	4.1	4	89	90	<0.2	1.9									
IM12	Cloudy	Moderate	12:54	7.7	Surface	1.0	0.3	75	20.5	20.5	8.3	8.3	31.5	31.5	123.4	123.3	9.2	9.2	2.5	4	86	88	821461	812042	<0.2	1.0	<0.2	1.0				
						1.0	0.3	78	20.5	8.3	8.3	31.5	31.5	123.2	123.2	9.2	9.2	2.5	4	85	88											
					Middle	3.9	0.3	90	20.4	8.3	8.3	31.6	31.6	121.1	121.0	9.1	9.1	2.8	4	88	89	<0.2	1.0									
						3.9	0.3	95	20.4	8.3	8.3	31.6	31.6	120.8	120.8	9.1	9.1	2.8	4	90	91	<0.2	1.0									
					Bottom	6.7	0.3	80	20.3	8.3	8.3	31.6	31.6	119.7	119.8	9.0	9.0	2.8	5	89	90	<0.2	1.0									
						6.7	0.3	84	20.3	8.3	8.3	31.6	31.6	119.9	119.9	9.0	9.0	2.8	6	90	91	<0.2	1.0									
SR1A	Cloudy	Moderate	13:12	4.9	Surface	1.0	-	-	20.4	20.4	8.3	8.3	31.5	31.5	120.2	120.1	9.0	9.0	2.6	4	-	-	-	-	819978	812659	-	-	-	-		
						1.0	-	-	20.4	20.4	8.3	8.3	31.5	31.5	120.0	120.0	9.0	9.0	2.7	5	-	-										
					Middle	2.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-
						2.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-
					Bottom	3.9	-	-	20.3	20.3	8.3	8.3	31.5	31.5	118.8	118.8	8.9	8.9	2.8	5	-	-	-	-	-	-	-	-			-	-
						3.9	-	-	20.3	20.3	8.3	8.3	31.5	31.5	118.8	118.8	8.9	8.9	2.8	6	-	-	-	-	-	-	-	-			-	-
SR2	Cloudy	Moderate	13:22	4.3	Surface	1.0	0.2	106	20.4	20.4	8.3	8.3	31.4	31.4	120.6	120.6	9.1	9.1	2.5	5	83	86	821473	814168	<0.2	0.8	<0.2	0.8				
						1.0	0.2	111	20.4	8.3	8.3	31.4	31.4	120.6	120.6	9.0	9.0	2.5	4	84	87											
					Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-
					Bottom	3.3	0.1	95	20.3	8.3	8.3	31.7	31.7	117.6	117.6	8.8	8.8	2.9	7	87	88	<0.2	0.8									
						3.3	0.1	100	20.3	8.3	8.3	31.7	31.7	117.5	117.5	8.8	8.8	2.9	6	88	89	<0.2	0.8									
SR3	Cloudy	Moderate	12:20	7.4	Surface	1.0	0.4	100	20.7	20.7	8.2	8.2	28.9	28.9	113.4	113.4	8.6	8.6	1.9	3	-	-	-	-	822167	807591	-	-	-	-		
						1.0	0.5	101	20.7	8.2	8.2	28.9	28.9	113.4	113.4	8.6	8.6	1.9	3	-	-											
					Middle	3.7	0.4	114	20.4	8.2	8.2	29.5	29.5	111.7	111.8	8.5	8.5	2.8	3	-	-	-	-									
						3.7	0.4	115	20.4	8.2	8.2	29.5	29.5	111.9	111.8	8.5	8.5	2.8	4	-	-											
					Bottom	6.4	0.4	105	20.3	8.3	8.3	30.6	30.6	115.5	115.5	8.7	8.7	4.1	2	-	-											
						6.4	0.4	106	20.3	8.3	8.3	30.6	30.6	115.4	115.5	8.7	8.7	4.1	4	-	-											
SR4A	Fine	Moderate	13:59	8.9	Surface	1.0	0.1	92	20.5	20.5	8.3	8.3	31.6	31.6	123.3	123.3	9.2	9.1	2.5	3	-	-	-	-	817189	807831	-	-	-	-		
						1.0	0.1	95	20.5	8.3	8.3	31.6	31.6	123.3	123.3	9.2	9.1	2.6	3	-	-											
					Middle	4.5	0.1	131	20.3	8.3	8.3	31.5	31.5	120.3	120.4	9.0	9.0	2.8	4	-	-											
						4.5	0.1	136	20.3	8.3	8.3	31.5	31.5	120.5	120.4	9.0	9.0	2.7	4	-	-											
					Bottom	7.9	0.1	148	20.3	8.3	8.3	31.6	31.6	120.0	120.0	9.0	9.0	2.8	4	-	-											
						7.9	0.1	120	20.3	8.3	8.3	31.6	31.6	119.9	120.0	9.0	9.0	2.8	5	-	-											
SR5A	Fine	Moderate	14:15	4.1	Surface	1.0	0.1	87	20.5	20.5	8.3	8.3	31.5	31.5	122.2	122.2	9.1	9.1	2.7	4	-	-	-	-	816573	810674	-	-	-	-		
						1.0	0.1	93	20.5	8.3	8.3	31.5	31.5	122.1	122.1	9.1	9.1	2.8	4	-	-											
					Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	
					Bottom	3.1	0.1	113	20.3	8.3	8.3	31.5	31.5	119.6	119.6	9.0	9.0	3.0	6	-	-											
						3.1	0.1	124	20.3	8.3	8.3	31.5	31.5	119.6	119.6	9.0	9.0	3.1	6	-	-											
SR6A	Fine	Moderate	14:47	4.0	Surface	1.0	0.1	124	20.4	20.4	8.3	8.3	31.4	31.4	121.0	121.0	9.1	9.1	2.3	5	-	-	-	-	817959	814746	-	-	-	-		
						1.0	0.1	127	20.4	8.3	8.3	31.4	31.4	121.0	121.0	9.1	9.1	2.3	4	-	-											
					Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	
					Bottom	3.0	0.1	130	20.3	8.3	8.3	31.5	31.5	120.2	120.2	9.0	9.0	2.5	6	-	-											
						3.0	0.1	138	20.3	8.3	8.3	31.5	31.5	120.2	120.2	9.0	9.0	2.5	4	-	-											
SR7	Cloudy	Moderate	14:05	16.2	Surface	1.0	0.1	347	20.1	20.1	8.2	8.2	32.7	32.7	102.1	102.1	7.7	7.6	2.1	6	-	-	-	-	823655	823753	-	-	-	-		
						1.0	0.1																									



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

Water Quality Monitoring

Water Quality Monitoring Results on 25 January 20 during Mid-Flood Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity (NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)									
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA						
C1	Sunny	Moderate	08:13	7.2	Surface	1.0	0.3	11	20.4	20.4	8.3	8.3	31.5	31.5	115.4	115.4	8.7	8.7	2.4	2.4	4	4	83	83	88	815603	804247	<0.2	0.8	<0.2	0.8							
						1.0	0.3	11	20.4	8.3	8.3	31.5	31.5	115.3	115.3	8.7	8.7	2.4	2.4	5	5	84	84	<0.2				0.8										
					Middle	3.6	0.4	28	20.4	8.3	8.3	31.6	31.6	114.8	114.8	8.6	8.6	2.4	2.4	3	3	88	88	<0.2				0.8										
						3.6	0.4	29	20.4	8.3	8.3	31.6	31.6	114.7	114.7	8.6	8.6	2.5	2.5	4	4	88	88	<0.2				0.8										
					Bottom	6.2	0.2	23	20.3	8.3	8.3	31.9	31.9	112.5	112.5	8.4	8.4	4.6	4.6	3	3	92	92	<0.2				0.8										
						6.2	0.2	23	20.3	8.3	8.3	31.9	31.9	112.6	112.6	8.4	8.4	4.6	4.6	3	3	92	92	<0.2				0.8										
C2	Sunny	Moderate	09:22	7.9	Surface	1.0	0.1	329	20.5	20.6	8.2	8.2	29.4	29.4	110.4	110.4	8.4	8.4	2.2	2.2	2	2	87	87	88	825683	806965	<0.2	1.6	<0.2	1.6							
						1.0	0.1	342	20.6	8.2	8.2	29.4	29.4	110.4	110.4	8.4	8.4	2.3	2.3	3	3	85	85	<0.2				1.6										
					Middle	4.0	0.2	22	20.4	8.2	8.2	29.8	29.8	113.3	113.3	8.6	8.6	3.2	3.2	5	5	87	87	<0.2				1.6										
						4.0	0.2	22	20.4	8.2	8.2	29.8	29.8	113.5	113.5	8.6	8.6	3.2	3.2	4	4	89	89	<0.2				1.6										
					Bottom	6.9	0.3	53	20.4	8.2	8.2	30.1	30.1	115.2	115.2	8.7	8.7	3.4	3.4	4	4	90	90	<0.2				1.6										
						6.9	0.4	54	20.4	8.2	8.2	30.1	30.1	115.2	115.2	8.7	8.7	3.5	3.5	5	5	89	89	<0.2				1.6										
C3	Sunny	Moderate	07:19	11.8	Surface	1.0	0.4	260	20.2	20.2	8.2	8.2	31.9	31.9	109.2	109.2	8.2	8.2	2.1	2.1	4	4	83	83	88	822088	817793	<0.2	1.3	<0.2	1.2							
						1.0	0.4	284	20.2	8.2	8.2	31.9	31.9	109.1	109.1	8.2	8.2	2.1	2.1	3	3	83	83	<0.2				1.2										
					Middle	5.9	0.4	260	20.1	8.2	8.2	32.2	32.2	104.7	104.7	7.9	7.9	3.9	3.9	3	3	88	88	<0.2				1.2										
						5.9	0.4	260	20.1	8.2	8.2	32.2	32.2	104.7	104.7	7.9	7.9	3.9	3.9	4	4	88	88	<0.2				1.2										
					Bottom	10.8	0.3	268	20.1	8.2	8.2	32.2	32.2	104.4	104.4	7.8	7.8	8.8	8.8	5	5	91	91	<0.2				1.2										
						10.8	0.3	280	20.1	8.2	8.2	32.2	32.2	104.4	104.4	7.8	7.8	8.9	8.9	5	5	92	92	<0.2				1.2										
IM1	Sunny	Moderate	08:39	5.3	Surface	1.0	0.0	14	20.4	20.4	8.3	8.3	31.3	31.3	117.0	117.0	8.8	8.8	2.8	2.8	4	4	84	84	88	817956	807114	<0.2	0.9	<0.2	1.0							
						1.0	0.0	14	20.4	8.3	8.3	31.3	31.3	117.0	117.0	8.8	8.8	2.8	2.8	4	4	84	84	<0.2				0.9										
					Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				-	-			-	-	-	-	-	-	-
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				-	-			-	-	-	-	-	-	-
					Bottom	4.3	0.2	330	20.3	8.3	8.3	31.5	31.5	115.6	115.6	8.7	8.7	3.3	3.3	5	5	91	91	<0.2				0.8										
						4.3	0.2	341	20.3	8.3	8.3	31.5	31.5	115.6	115.6	8.7	8.7	3.3	3.3	6	6	91	91	<0.2				0.8										
IM2	Sunny	Moderate	08:45	8.1	Surface	1.0	0.1	340	20.3	20.3	8.2	8.2	31.4	31.4	115.0	115.0	8.7	8.7	3.3	3.3	5	5	86	86	88	818149	806172	<0.2	0.9	<0.2	0.9							
						1.0	0.2	346	20.3	8.2	8.2	31.4	31.4	115.0	115.0	8.6	8.6	3.3	3.3	6	6	86	86	<0.2				0.9										
					Middle	4.1	0.1	354	20.2	8.2	8.2	31.4	31.4	112.5	112.5	8.5	8.5	3.1	3.1	5	5	88	88	<0.2				0.9										
						4.1	0.2	326	20.2	8.2	8.2	31.4	31.4	112.5	112.5	8.5	8.5	3.2	3.2	4	4	89	89	<0.2				0.8										
					Bottom	7.1	0.1	18	20.2	8.2	8.2	31.4	31.4	112.3	112.3	8.5	8.5	3.4	3.4	4	4	90	90	<0.2				0.9										
						7.1	0.2	18	20.2	8.2	8.2	31.4	31.4	112.4	112.4	8.5	8.5	3.4	3.4	4	4	90	90	<0.2				0.8										
IM3	Sunny	Moderate	08:52	8.3	Surface	1.0	0.1	320	20.3	20.3	8.2	8.2	31.5	31.5	110.7	110.7	8.3	8.3	2.7	2.7	3	3	86	86	88	818795	805603	<0.2	0.9	<0.2	0.9							
						1.0	0.1	339	20.3	8.2	8.2	31.5	31.5	110.7	110.7	8.3	8.3	2.7	2.7	3	3	87	87	<0.2				0.8										
					Middle	4.2	0.1	23	20.3	8.2	8.2	31.5	31.5	109.8	109.8	8.3	8.3	3.5	3.5	3	3	87	87	<0.2				0.8										
						4.2	0.1	23	20.3	8.2	8.2	31.5	31.5	109.8	109.8	8.3	8.3	3.5	3.5	3	3	87	87	<0.2				0.8										
					Bottom	7.3	0.2	43	20.2	8.2	8.2	31.5	31.5	109.7	109.7	8.2	8.2	3.3	3.3	4	4	90	90	<0.2				0.9										
						7.3	0.2	44	20.2	8.2	8.2	31.5	31.5	109.7	109.7	8.2	8.2	3.4	3.4	4	4	90	90	<0.2				0.9										
IM4	Sunny	Moderate	09:06	7.5	Surface	1.0	0.1	325	20.4	20.4	8.2	8.2	30.8	30.8	115.1	115.0	8.7	8.7	2.6	2.6	3	3	86	86	88	819733	804600	<0.2	1.1	<0.2	1.0							
						1.0	0.1	342	20.4	8.2	8.2	30.7	30.7	114.9	114.9	8.7	8.7	2.6	2.6	4	4	85	85	<0.2				1.1										
					Middle	3.8	0.0	290	20.3	8.3	8.3	31.5	31.5	115.5	115.5	8.7	8.7	3.2	3.2	4	4	87	87	<0.2				1.1										
						3.8	0.0	305	20.3	8.3	8.3	31.5	31.5	115.5	115.5	8.7	8.7	3.2	3.2	2	2	89	89	<0.2				0.9										
					Bottom	6.5	0.1	325	20.3	8.3	8.3	31.5	31.5	114.3	114.3	8.6	8.6	3.6	3.6	2	2	90	90	<0.2				1.0										
						6.5	0.1	329	20.3	8.3	8.3	31.5	31.5	114.2	114.2	8.6	8.6	3.6	3.6	2	2	91	91	<0.2				1.0										
IM5	Sunny	Moderate	09:18	7.8	Surface	1.0	0.0	24	20.6	20.6	8.2	8.2	28.9	28.9	108.2	108.3	8.2	8.2	2.5	2.5	3	3	86	86	88	820738	804848	<0.2	1.1	<0.2	1.1							
						1.0	0.0	25	20.6	8.2	8.2	28.9	28.9	108.3	108.3	8.2	8.2	2.4	2.4	2	2	87	87	<0.2				1.1										
					Middle	3.9	0.0	21	20.3	8.2	8.2	30.3	30.3	110.1	110.2	8.3	8.3	3.4	3.4	3	3	87	87	<0.2				1.1										
						3.9	0.0	22	20.3	8.2	8.2	30.3	30.3	110.2	110.2	8.3	8.3	3.4	3.4	2	2	88	88	<0.2				1.0										
					Bottom	6.8	0.0	311	20.3	8.3	8.3	31.0	31.0	114.5	114.5	8.6	8.6	6.9	6.9	3	3	90	90	<0.2				0.9										
						6.8	0.0	332	20.3	8.3	8.3	31.0	31.0	114.4	114.5	8.6	8.6	6.9	6.9	3	3	90	90	<0.2				1.1										
IM6	Sunny	Moderate	09:26	7.9	Surface	1.0	0.1	332	20.5	20.5	8.2	8.2	29.3	29.3	112.6	112.7	8.5	8.5	2.9	2.9	4	4	85	85	88	821050	805824	<0.2	0.9	<0.2	0.9							
						1.0	0.1	305	20.5	8.2	8.2	29.3	29.3	112.7	112.7	8.5	8.5	2.9	2.9	4	4	86	86	<0.2				0.9										
					Middle	4.0	0.1	54	20.2	8.3	8.3	31.4	31.4	119.1	119.1	9.0	9.0	5.1	5.1	4	4	88	88	<0.2				0.9										
						4.0	0.1	55	20.2	8.3	8.3	31.4	31.4	119.1	119.1	9.0	9.0	5.1	5.1	3	3	87	87	<0.2				1.0										
					Bottom	6.9	0.1	12	20.2	8.3	8.3	31.5	31.5	118.3	118.3	8.9	8.9	5.5	5.5	2	2	90	90	<0.2				1.1										
						6.9	0.1	12	20.2	8.3	8.3	31.5	31.5	118.2	1																							

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

Water Quality Monitoring

Water Quality Monitoring Results on 25 January 20 during Mid-Flood Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity (NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)			
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA
IM9	Sunny	Moderate	08:46	7.5	Surface	1.0	0.2	77	20.5	20.5	8.2	8.2	28.9	28.9	108.2	108.2	8.2	8.2	2.4	2	85	88	88	822098	808834	<0.2	1.6	1.6	1.6			
						1.0	0.2	77	20.5	20.5	8.2	8.2	28.9	28.9	108.2	108.2	8.2	8.2	2.4	3	86	88	88	822098	808834	<0.2	1.5	1.5	1.6			
						3.8	0.1	83	20.3	20.3	8.2	8.2	30.3	30.3	109.3	109.3	8.3	8.3	3.3	3	89	88	88	822098	808834	<0.2	1.6	1.6	1.6			
					Middle	3.8	0.2	84	20.3	20.3	8.2	8.2	30.3	30.3	109.3	109.3	8.3	8.3	3.3	2	88	88	88	822098	808834	<0.2	1.6	1.6	1.6			
						6.5	0.2	87	20.3	20.3	8.3	8.3	31.0	31.0	116.0	116.0	8.7	8.7	6.1	<2	90	88	88	822098	808834	<0.2	1.6	1.6	1.6			
						6.5	0.2	91	20.3	20.3	8.3	8.3	31.0	31.0	115.9	115.9	8.7	8.7	6.1	<2	90	88	88	822098	808834	<0.2	1.6	1.6	1.6			
IM10	Sunny	Moderate	08:36	8.1	Surface	1.0	0.2	9	20.5	20.5	8.2	8.2	29.4	29.4	110.8	110.9	8.4	8.6	2.1	3	86	88	88	822393	809815	<0.2	1.6	1.5	1.6			
						1.0	0.2	9	20.5	20.5	8.2	8.2	29.4	29.4	110.9	110.9	8.4	8.6	2.1	2	87	88	88	822393	809815	<0.2	1.5	1.5	1.6			
						4.1	0.2	331	20.3	20.3	8.3	8.3	31.5	31.5	115.9	115.9	8.7	8.7	3.3	4	87	88	88	822393	809815	<0.2	1.5	1.5	1.6			
					Middle	4.1	0.2	343	20.3	20.3	8.3	8.3	31.5	31.5	115.9	115.9	8.7	8.7	3.3	3	89	88	88	822393	809815	<0.2	1.5	1.5	1.6			
						7.1	0.3	313	20.3	20.3	8.3	8.3	31.5	31.5	114.1	114.1	8.6	8.6	3.6	4	90	88	88	822393	809815	<0.2	1.6	1.6	1.6			
						7.1	0.3	341	20.3	20.3	8.3	8.3	31.5	31.5	114.1	114.1	8.6	8.6	3.6	4	90	88	88	822393	809815	<0.2	1.6	1.6	1.6			
IM11	Sunny	Moderate	08:22	8.2	Surface	1.0	0.1	284	20.3	20.3	8.2	8.2	31.5	31.5	110.9	110.9	8.3	8.3	2.9	3	86	88	88	822078	811460	<0.2	1.3	1.2	1.3			
						1.0	0.2	305	20.3	20.3	8.2	8.2	31.5	31.5	110.9	110.9	8.3	8.3	2.8	2	85	88	88	822078	811460	<0.2	1.2	1.2	1.3			
						4.1	0.1	273	20.3	20.3	8.2	8.2	31.5	31.5	110.3	110.3	8.3	8.3	2.7	4	89	88	88	822078	811460	<0.2	1.3	1.3	1.3			
					Middle	4.1	0.1	287	20.3	20.3	8.2	8.2	31.5	31.5	110.3	110.3	8.3	8.3	2.8	4	89	88	88	822078	811460	<0.2	1.4	1.4	1.3			
						7.2	0.2	284	20.2	20.2	8.2	8.2	31.5	31.5	109.3	109.3	8.2	8.2	3.3	5	90	88	88	822078	811460	<0.2	1.4	1.4	1.4			
						7.2	0.2	310	20.2	20.2	8.2	8.2	31.5	31.5	109.2	109.2	8.2	8.2	3.2	4	90	88	88	822078	811460	<0.2	1.4	1.4	1.4			
IM12	Sunny	Moderate	08:13	8.8	Surface	1.0	0.2	275	20.3	20.3	8.2	8.2	31.4	31.4	114.1	114.1	8.6	8.5	3.1	4	85	88	88	821459	812059	<0.2	1.0	1.0	1.0			
						1.0	0.2	281	20.3	20.3	8.2	8.2	31.4	31.4	114.1	114.1	8.6	8.5	3.1	4	85	88	88	821459	812059	<0.2	1.0	1.0	1.0			
						4.4	0.2	272	20.2	20.2	8.2	8.2	31.4	31.4	112.3	112.3	8.5	8.5	3.2	4	88	88	88	821459	812059	<0.2	1.0	1.0	1.0			
					Middle	4.4	0.2	293	20.2	20.2	8.2	8.2	31.4	31.4	112.3	112.3	8.4	8.4	3.2	4	89	88	88	821459	812059	<0.2	1.0	1.0	1.0			
						7.8	0.1	279	20.2	20.2	8.2	8.2	31.4	31.4	111.0	111.0	8.4	8.4	6.7	5	90	88	88	821459	812059	<0.2	1.0	1.0	1.0			
						7.8	0.1	283	20.2	20.2	8.2	8.2	31.4	31.4	111.0	111.0	8.4	8.4	6.7	5	89	88	88	821459	812059	<0.2	1.0	1.0	1.1			
SR1A	Sunny	Moderate	07:55	5.0	Surface	1.0	-	-	20.4	20.4	8.3	8.3	31.6	31.6	114.7	114.7	8.6	8.6	2.6	2	-	-	-	819974	812665	-	-	-	-			
						1.0	-	-	20.4	20.4	8.3	8.3	31.6	31.6	114.6	114.6	8.6	8.6	2.5	3	-	-	-	819974	812665	-	-	-	-			
						2.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	819974	812665	-	-	-	-	
					Middle	2.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	819974	812665	-	-	-	-	
						4.0	-	-	20.4	20.4	8.3	8.3	31.8	31.8	112.9	112.9	8.5	8.5	3.2	3	-	-	-	-	-	819974	812665	-	-	-	-	
						4.0	-	-	20.4	20.4	8.3	8.3	31.8	31.8	112.8	112.8	8.5	8.5	3.2	2	-	-	-	-	-	819974	812665	-	-	-	-	
SR2	Sunny	Moderate	07:41	5.4	Surface	1.0	0.3	320	20.3	20.3	8.3	8.3	31.4	31.4	114.9	114.9	8.6	8.6	4.9	6	83	88	88	821485	814186	<0.2	1.2	1.2	1.2			
						1.0	0.3	321	20.3	20.3	8.3	8.3	31.4	31.4	114.9	114.9	8.6	8.6	4.9	5	84	88	88	821485	814186	<0.2	1.2	1.2	1.2			
						4.4	0.3	318	20.3	20.3	8.3	8.3	31.4	31.4	113.8	113.8	8.6	8.6	7.0	7	91	88	88	821485	814186	<0.2	1.2	1.2	1.2			
					Middle	4.4	0.3	335	20.3	20.3	8.3	8.3	31.4	31.4	113.8	113.8	8.6	8.6	7.0	7	92	88	88	821485	814186	<0.2	1.2	1.2	1.2			
						7.6	0.3	318	20.3	20.3	8.3	8.3	31.4	31.4	113.8	113.8	8.6	8.6	7.0	7	91	88	88	821485	814186	<0.2	1.2	1.2	1.2			
						7.6	0.3	335	20.3	20.3	8.3	8.3	31.4	31.4	113.8	113.8	8.6	8.6	7.0	7	92	88	88	821485	814186	<0.2	1.2	1.2	1.2			
SR3	Sunny	Moderate	09:01	8.6	Surface	1.0	0.1	53	20.6	20.6	8.2	8.2	28.9	28.9	111.6	111.6	8.5	8.7	1.8	3	-	-	-	822168	807580	-	-	-	-			
						1.0	0.1	56	20.6	20.6	8.2	8.2	28.9	28.9	111.6	111.6	8.5	8.7	1.9	2	-	-	-	822168	807580	-	-	-	-			
						4.3	0.3	82	20.3	20.3	8.3	8.3	30.3	30.3	117.0	117.0	8.9	8.9	2.9	2	-	-	-	822168	807580	-	-	-	-			
					Middle	4.3	0.4	89	20.3	20.3	8.3	8.3	30.3	30.3	117.0	117.0	8.9	8.9	3.0	2	-	-	-	822168	807580	-	-	-	-			
						7.6	0.3	72	20.2	20.2	8.3	8.3	31.4	31.4	117.0	117.0	8.8	8.8	9.8	3	-	-	-	822168	807580	-	-	-	-			
						7.6	0.3	72	20.2	20.2	8.3	8.3	31.4	31.4	117.0	117.0	8.8	8.8	9.9	3	-	-	-	822168	807580	-	-	-	-			
SR4A	Sunny	Moderate	07:44	9.1	Surface	1.0	0.1	239	20.3	20.3	8.2	8.2	31.4	31.4	115.1	115.1	8.7	8.7	5.0	6	-	-	-	817191	807801	-	-	-	-			
						1.0	0.1	251	20.3	20.3	8.2	8.2	31.4	31.4	115.1	115.1	8.7	8.7	5.1	6	-	-	-	817191	807801	-	-	-	-			
						4.6	0.1	241	20.3	20.3	8.2	8.2	31.4	31.4	114.8	114.8	8.6	8.6	5.3	6	-	-	-	817191	807801	-	-	-	-			
					Middle	4.6	0.1	245	20.3	20.3	8.2	8.2	31.4	31.4	114.8	114.8	8.6	8.6	5.3	7	-	-	-	817191	807801	-	-	-	-			
						8.1	0.1	243	20.3	20.3	8.2	8.2	31.4	31.4	114.6	114.6	8.6	8.6	5.1	7	-	-	-	817191	807801	-	-	-	-			
						8.1	0.1	254	20.3	20.3	8.3	8.3	31.4	31.4	114.5	114.5	8.6	8.6	5.1	7	-	-	-	817191	807801	-	-	-	-			
SR5A	Sunny	Moderate	07:29	4.3	Surface	1.0	0.2	231	20.1	20.1	8.2	8.2	32.0	32.0	107.1	107.0																

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

Water Quality Monitoring Results on 28 January 20 during Mid-Ebb Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity(NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)							
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA				
C1	Fine	Rough	14:52	7.8	Surface	1.0	0.1	265	18.6	18.6	8.0	8.0	31.7	31.7	102.1	102.1	7.9	7.9	5.3	7.1	6	8	85	86	815632	804240	<0.2	0.6	<0.2	0.5						
						1.0	0.1	276	18.6	8.0	8.0	31.7	31.7	102.1	102.1	7.9	7.9	5.3	7.1	7	8	84	85	<0.2					0.5							
					Middle	3.9	0.0	288	18.5	18.5	8.0	8.0	31.7	31.7	101.1	101.1	7.8	7.8	6.3	7.1	9	8	86	85					<0.2	0.7						
						3.9	0.0	308	18.5	18.5	8.0	8.0	31.7	31.7	101.0	101.0	7.8	7.8	6.5	7.1	8	8	85	85					<0.2	0.6						
					Bottom	6.8	0.0	56	18.5	18.5	8.0	8.0	31.8	31.8	100.3	100.3	7.8	7.8	9.5	7.8	9	8	87	85					<0.2	0.6						
						6.8	0.0	59	18.5	18.5	8.0	8.0	31.8	31.8	100.3	100.3	7.8	7.8	9.6	7.8	9	8	87	85					<0.2	0.6						
C2	Sunny	Rough	13:45	8.1	Surface	1.0	0.5	166	19.1	19.1	8.0	8.0	31.4	31.4	97.6	97.6	7.5	7.5	2.2	3.0	6	6	82	83	825665	806921	<0.2	1.0	<0.2	0.9						
						1.0	0.5	171	19.1	19.1	8.0	8.0	31.4	31.4	97.5	97.5	2.1	3.0	5	6	83	83	<0.2	1.0												
					Middle	4.1	0.4	150	19.1	19.1	8.0	8.0	31.4	31.4	97.2	97.2	7.5	7.5	2.6	3.0	6	6	87	87					<0.2	0.9						
						4.1	0.4	152	19.1	19.1	8.0	8.0	31.4	31.4	97.2	97.2	7.5	7.5	2.6	3.0	6	6	87	87					<0.2	0.9						
					Bottom	7.1	0.3	113	19.2	19.2	8.0	8.0	31.5	31.5	97.0	97.0	7.4	7.4	4.2	7.4	6	6	91	91					<0.2	0.9						
						7.1	0.3	115	19.2	19.2	8.0	8.0	31.5	31.5	97.0	97.0	7.4	7.4	4.3	7.4	6	6	92	91					<0.2	1.0						
C3	Sunny	Rough	15:48	11.9	Surface	1.0	0.1	168	19.6	19.6	8.0	8.0	33.3	33.3	94.5	94.5	7.1	7.1	2.9	4.4	5	6	82	83	822122	817787	<0.2	1.0	<0.2	0.9						
						1.0	0.1	175	19.6	19.6	8.0	8.0	33.3	33.3	94.5	94.5	7.1	7.1	3.0	4.4	6	6	83	83					<0.2	0.9						
					Middle	6.0	0.1	122	19.6	19.6	8.0	8.0	33.3	33.3	94.2	94.2	7.1	7.1	4.2	7.1	6	6	87	87					<0.2	1.0						
						6.0	0.1	128	19.6	19.6	8.0	8.0	33.3	33.3	94.2	94.2	7.1	7.1	4.2	7.1	7	6	87	87					<0.2	1.0						
					Bottom	10.9	0.2	140	19.6	19.6	8.0	8.0	33.3	33.3	94.0	94.0	7.1	7.1	6.1	7.1	6	6	91	91					<0.2	0.9						
						10.9	0.2	145	19.6	19.6	8.0	8.0	33.3	33.3	94.0	94.0	7.1	7.1	6.1	7.1	7	6	91	91					<0.2	0.9						
IM1	Fine	Moderate	14:42	4.9	Surface	1.0	0.0	209	18.3	18.3	8.1	8.0	31.2	31.2	102.0	102.0	8.0	8.0	5.3	6.1	8	8	86	86	817942	807145	<0.2	0.6	<0.2	0.7						
						1.0	0.0	228	18.3	18.3	8.0	8.0	31.2	31.2	101.9	101.9	8.0	8.0	5.3	6.1	8	8	86	86					<0.2	0.6						
					Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					-	-	-	-	-	-	-	-
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					-	-	-	-	-	-	-	-
					Bottom	3.9	0.0	217	18.3	18.3	8.0	8.0	31.3	31.3	100.1	100.1	7.8	7.8	7.0	7.8	8	8	87	87					<0.2	0.6						
						3.9	0.0	227	18.3	18.3	8.0	8.0	31.3	31.3	100.1	100.1	7.8	7.8	6.9	7.8	9	8	87	87					<0.2	0.6						
IM2	Fine	Rough	14:34	6.8	Surface	1.0	0.1	326	18.4	18.4	8.1	8.1	31.1	31.1	100.8	100.8	7.9	7.9	7.4	9.7	10	11	85	85	818175	806176	<0.2	0.7	<0.2	0.7						
						1.0	0.1	331	18.4	18.4	8.1	8.1	31.1	31.1	100.8	100.8	7.9	7.9	7.4	9.7	10	11	85	85					<0.2	0.7						
					Middle	3.4	0.0	47	18.4	18.4	8.1	8.1	31.1	31.1	100.0	100.0	7.8	7.8	9.0	7.7	11	10	86	87					<0.2	0.7						
						3.4	0.0	51	18.4	18.4	8.1	8.1	31.1	31.1	99.9	99.9	7.8	7.8	9.0	7.7	10	10	87	87					<0.2	0.7						
					Bottom	5.8	0.0	39	18.4	18.4	8.0	8.0	31.3	31.3	99.4	99.4	7.7	7.7	12.6	7.7	13	13	87	87					<0.2	0.6						
						5.8	0.0	39	18.4	18.4	8.0	8.0	31.3	31.3	99.4	99.4	7.7	7.7	12.6	7.7	12	12	88	88					<0.2	0.7						
IM3	Fine	Rough	14:27	6.9	Surface	1.0	0.1	174	18.4	18.4	8.1	8.1	31.1	31.1	100.6	100.6	7.9	7.9	8.2	9.8	11	12	86	85	818770	805606	<0.2	0.7	<0.2	0.6						
						1.0	0.1	175	18.4	18.4	8.0	8.0	31.3	31.3	99.8	99.8	7.8	7.8	8.3	9.8	12	12	85	87					<0.2	0.7						
					Middle	3.5	0.1	216	18.4	18.4	8.0	8.0	31.3	31.3	99.8	99.8	7.8	7.8	9.1	9.8	13	12	87	87					<0.2	0.7						
						3.5	0.1	236	18.4	18.4	8.0	8.0	31.3	31.3	99.8	99.8	7.8	7.8	9.0	9.8	12	12	87	87					<0.2	0.7						
					Bottom	5.9	0.1	220	18.4	18.4	8.0	8.0	31.3	31.3	99.4	99.4	7.7	7.7	12.3	7.7	12	12	88	88					<0.2	0.7						
						5.9	0.1	237	18.4	18.4	8.0	8.0	31.3	31.3	99.4	99.4	7.7	7.7	11.9	7.7	13	13	88	88					<0.2	0.7						
IM4	Fine	Rough	14:17	7.6	Surface	1.0	0.1	131	18.4	18.4	8.1	8.1	30.9	30.9	100.3	100.3	7.8	7.8	8.0	19.2	13	12	84	85	819712	804615	<0.2	0.7	<0.2	0.7						
						1.0	0.1	142	18.4	18.4	8.1	8.1	30.9	30.9	100.3	100.3	7.8	7.8	7.9	19.2	13	12	85	85					<0.2	0.7						
					Middle	3.8	0.2	219	18.4	18.4	8.1	8.1	31.0	31.0	99.2	99.2	7.7	7.7	11.2	7.7	11	12	87	87					<0.2	0.7						
						3.8	0.2	233	18.4	18.4	8.1	8.1	31.0	31.0	99.2	99.2	7.7	7.7	11.1	7.7	12	12	87	87					<0.2	0.7						
					Bottom	6.6	0.2	212	18.4	18.4	8.0	8.0	31.2	31.2	99.0	99.0	7.7	7.7	38.0	7.7	11	12	88	88					<0.2	0.8						
						6.6	0.2	214	18.4	18.4	8.0	8.0	31.2	31.2	99.0	99.0	7.7	7.7	39.0	7.7	12	12	87	87					<0.2	0.7						
IM5	Fine	Rough	14:08	7.1	Surface	1.0	0.3	137	18.5	18.5	8.0	8.0	30.9	30.9	99.3	99.3	7.7	7.7	8.7	10.6	12	13	85	85	820743	804886	<0.2	0.7	<0.2	0.7						
						1.0	0.3	138	18.5	18.5	8.0	8.0	30.9	30.9	99.2	99.2	7.7	7.7	8.9	10.6	12	13	85	85					<0.2	0.7						
					Middle	3.6	0.3	219	18.5	18.5	8.0	8.0	30.9	30.9	99.0	99.0	7.7	7.7	10.5	7.7	12	13	86	86					<0.2	0.7						
						3.6	0.3	214	18.5	18.5	8.0	8.0	30.9	30.9	99.0	99.0	7.7	7.7	10.5	7.7	14	13	86	86					<0.2	0.8						
					Bottom	6.1	0.3	207	18.5	18.5	8.0	8.0	30.9	30.9	98.6	98.6	7.7	7.7	12.5	7.7	14	13	87	87					<0.2	0.8						
						6.1	0.3	208	18.5	18.5	8.0	8.0	30.9	30.9	98.6	98.6	7.7	7.7	12.3	7.7	13	13	87	87					<0.2	0.7						
IM6	Fine	Rough	13:59	6.8	Surface	1.0	0.1	131	18.4	18.4	8.0	8.0	31.1	31.1	99.8	99.8	7.8	7.8	6.2	6.4	12	13	85	85	821056	805848	<0.2	0.7	<0.2	0.6						
						1.0	0.1	132	18.4	18.4	8.0	8.0	31.1	31.1	99.8	99.8	7.8	7.8	6.2	6.4	14	13	85	86					<0.2	0.7						
					Middle	3.4	0.1	204	18.4	18.4	8.0	8.0	31.1	31.1	99.7	99.7	7.8	7.8	6.3	6.4	13	13	86	86					<0.2	0.7						
						3.4	0.1	214	18.4	18.4	8.0	8.0	31.1	31.1	99.7	99.7	7.8	7.8	6.3	6.4	13	13	86	86					<0.2	0.7						
					Bottom	5.8	0.1	232	18.4																											

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

Water Quality Monitoring Results on 28 January 20 during Mid-Ebb Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity (NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)			
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA
IM9	Sunny	Rough	14:20	6.8	Surface	1.0	0.2	151	18.7	18.7	8.0	8.0	31.6	31.6	98.5	98.5	7.6	3.7	11	82	86	822102	808800	<0.2	0.9	0.9	0.9					
						1.0	0.2	153	18.7	18.7	8.0	8.0	31.6	31.6	98.5	98.5	7.6	3.7	10	82	86	822102	808800	<0.2	0.9	0.9	0.9					
						3.4	0.2	144	18.7	18.7	8.0	8.0	31.6	31.6	98.5	98.5	7.6	4.1	10	87	87	822102	808800	<0.2	0.9	0.9	0.9					
					Middle	3.4	0.2	156	18.7	18.7	8.0	8.0	31.6	31.6	98.5	98.5	7.6	4.2	11	90	87	822102	808800	<0.2	0.9	0.9	0.9					
						5.8	0.1	138	18.7	18.7	8.0	8.0	31.7	31.7	98.6	98.6	7.6	5.2	11	90	87	822102	808800	<0.2	0.9	0.9	0.9					
						5.8	0.1	147	18.6	18.6	8.0	8.0	31.7	31.7	98.7	98.7	7.6	5.4	12	90	87	822102	808800	<0.2	1.0	1.0	1.0					
IM10	Sunny	Rough	14:26	7.5	Surface	1.0	0.2	114	18.9	18.9	8.0	8.0	31.9	31.9	97.8	97.8	7.5	6.5	10	83	87	822390	809784	<0.2	1.0	1.0	1.0					
						1.0	0.2	119	18.9	18.9	8.0	8.0	31.9	31.9	97.8	97.8	7.5	6.6	11	83	87	822390	809784	<0.2	0.9	0.9	0.9					
						3.8	0.2	132	18.9	18.9	8.0	8.0	31.8	31.8	97.6	97.6	7.5	9.1	12	88	88	822390	809784	<0.2	0.9	0.9	0.9					
					Middle	3.8	0.2	138	18.9	18.9	8.0	8.0	31.8	31.8	97.6	97.6	7.5	9.1	11	88	88	822390	809784	<0.2	0.9	0.9	0.9					
						6.5	0.1	154	18.8	18.8	8.0	8.0	31.8	31.8	97.6	97.6	7.5	9.4	12	90	90	822390	809784	<0.2	1.0	1.0	1.0					
						6.5	0.2	161	18.8	18.8	8.0	8.0	31.8	31.8	97.7	97.7	7.5	9.5	11	91	91	822390	809784	<0.2	1.0	1.0	1.0					
IM11	Sunny	Rough	14:37	8.7	Surface	1.0	0.3	77	18.9	18.9	8.0	8.0	32.0	32.0	98.2	98.2	7.6	6.2	11	83	86	822039	811483	<0.2	1.0	1.0	1.0					
						1.0	0.3	79	18.9	18.9	8.0	8.0	32.0	32.0	98.2	98.2	7.6	6.2	12	83	86	822039	811483	<0.2	1.0	1.0	1.0					
						4.4	0.3	80	18.9	18.9	8.0	8.0	32.0	32.0	98.0	98.0	7.5	5.8	12	86	86	822039	811483	<0.2	0.9	0.9	0.9					
					Middle	4.4	0.3	81	18.9	18.9	8.0	8.0	32.0	32.0	98.0	98.0	7.5	5.9	13	86	86	822039	811483	<0.2	0.9	0.9	0.9					
						7.7	0.2	95	18.8	18.8	8.0	8.0	31.9	31.9	98.0	98.0	7.5	12.2	13	90	90	822039	811483	<0.2	0.9	0.9	0.9					
						7.7	0.2	95	18.8	18.8	8.0	8.0	32.0	31.9	98.1	98.1	7.6	12.2	12	90	90	822039	811483	<0.2	0.9	0.9	0.9					
IM12	Sunny	Rough	14:44	7.8	Surface	1.0	0.3	78	19.0	19.0	8.0	8.0	32.0	32.0	97.7	97.7	7.5	5.3	8	82	87	821457	812033	<0.2	1.0	1.0	1.0					
						1.0	0.4	81	19.0	19.0	8.0	8.0	32.0	32.0	97.7	97.7	7.5	5.4	8	83	87	821457	812033	<0.2	1.0	1.0	1.0					
						3.9	0.3	99	19.0	19.0	8.0	8.0	32.0	32.0	97.4	97.4	7.5	6.3	8	87	87	821457	812033	<0.2	1.0	1.0	1.0					
					Middle	3.9	0.3	100	19.0	19.0	8.0	8.0	32.0	32.0	97.4	97.4	7.5	6.4	9	87	87	821457	812033	<0.2	1.0	1.0	1.0					
						6.8	0.3	89	19.0	19.0	8.0	8.0	32.0	32.0	97.5	97.5	7.5	10.8	10	90	90	821457	812033	<0.2	1.0	1.0	1.0					
						6.8	0.3	92	19.0	19.0	8.0	8.0	32.0	32.0	97.6	97.6	7.5	10.7	9	91	91	821457	812033	<0.2	1.0	1.0	1.0					
SR1A	Sunny	Rough	15:13	3.4	Surface	1.0	-	-	19.0	19.0	8.0	8.0	32.0	32.0	97.7	97.7	7.5	4.9	10	-	-	819970	812654	-	-	-	-					
						1.0	-	-	19.0	19.0	8.0	8.0	32.0	32.0	97.7	97.7	7.5	5.0	10	-	-	819970	812654	-	-	-	-					
						1.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	819970	812654	-	-	-	-				
					Middle	1.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	819970	812654	-	-	-	-	-		
						2.4	-	-	19.0	19.0	8.0	8.0	32.0	32.0	97.8	97.8	7.5	5.5	12	-	-	-	-	819970	812654	-	-	-	-			
						2.4	-	-	19.0	19.0	8.0	8.0	32.0	32.0	97.8	97.8	7.5	5.5	12	-	-	-	-	819970	812654	-	-	-	-			
SR2	Sunny	Rough	15:26	4.0	Surface	1.0	0.2	100	19.1	19.1	8.0	8.0	32.2	32.2	97.7	97.7	7.5	5.2	9	83	86	821469	814182	<0.2	1.0	1.0	1.0					
						1.0	0.2	105	19.1	19.1	8.0	8.0	32.2	32.2	97.7	97.7	7.5	5.2	8	83	86	821469	814182	<0.2	1.0	1.0	1.0					
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	821469	814182	<0.2	1.0	1.0	1.0				
					Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	821469	814182	<0.2	1.0	1.0	1.0			
						3.0	0.1	92	19.2	19.2	8.0	7.9	32.2	32.2	98.8	98.9	7.6	7.4	12	88	88	821469	814182	<0.2	1.0	1.0	1.0					
						3.0	0.1	93	19.2	19.2	7.9	7.9	32.2	32.2	99.0	99.0	7.6	7.5	12	88	88	821469	814182	<0.2	1.0	1.0	1.0					
SR3	Sunny	Rough	14:10	7.5	Surface	1.0	0.4	104	19.1	19.1	8.0	8.0	31.5	31.5	97.4	97.4	7.5	3.0	7	-	-	822134	807594	-	-	-	-					
						1.0	0.4	104	19.1	19.1	8.0	8.0	31.5	31.5	97.4	97.4	7.5	3.0	6	-	-	822134	807594	-	-	-	-					
						3.8	0.4	111	19.1	19.1	8.0	8.0	31.5	31.5	97.4	97.4	7.5	3.2	6	-	-	822134	807594	-	-	-	-					
					Middle	3.8	0.4	115	19.1	19.1	8.0	8.0	31.5	31.5	97.4	97.4	7.5	3.4	5	-	-	-	822134	807594	-	-	-	-				
						6.5	0.4	102	19.1	19.1	7.9	7.9	31.5	31.4	97.6	97.7	7.5	6.0	5	-	-	-	822134	807594	-	-	-	-				
						6.5	0.4	112	19.1	19.1	7.9	7.9	31.4	31.4	97.8	97.7	7.5	6.2	4	-	-	-	822134	807594	-	-	-	-				
SR4A	Fine	Calm	15:03	9.1	Surface	1.0	0.1	145	18.3	18.3	8.0	8.0	31.4	31.4	101.8	101.8	7.9	6.7	9	-	-	817169	807790	-	-	-	-					
						1.0	0.1	153	18.3	18.3	8.0	8.0	31.4	31.4	101.8	101.8	7.9	6.7	9	-	-	817169	807790	-	-	-	-					
						4.6	0.1	111	18.3	18.3	8.0	8.0	31.4	31.4	101.5	101.5	7.9	5.8	9	-	-	817169	807790	-	-	-	-					
					Middle	4.6	0.1	118	18.3	18.3	8.0	8.0	31.4	31.4	101.5	101.5	7.9	5.8	9	-	-	817169	807790	-	-	-	-					
						8.1	0.1	121	18.2	18.2	8.0	8.0	31.4	31.4	100.8	100.8	7.9	11.0	8	-	-	817169	807790	-	-	-	-					
						8.1	0.1	128	18.2	18.2	8.0	8.0	31.4	31.4	100.8	100.8	7.9	11.1	7	-	-	817169	807790	-	-	-	-					
SR5A	Fine	Calm	15:19	3.6	Surface	1.0	0.1	272	18.4	18.4	8.0	8.0	30.5	30.5	100.0	100.0	7.8	3.9	10	-	-	816612	810704	-	-	-	-					
						1.0	0.2	294	18.4	18.4	8.0	8.0	30.5	30.5	100.0	100.0	7.8	3.9	11	-	-	816612	810704	-	-	-	-					
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	816612	810704	-	-	-	-				
					Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	816612	810704	-	-	-	-			
						2.6	0.1	239	18.4	18.4	8.0	8.0	30.4	30.4	99.9	99.9	7.8	4.1	7	-	-	816612	810704	-	-	-	-					
						2.6	0.1	251	18.4	18.4	8.0	8.0	30.4	30.4	99.9	99.9	7.8															

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

Water Quality Monitoring Results on 28 January 20 during Mid-Flood Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity (NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)				
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA	
C1	Cloudy	Rough	10:05	7.9	Surface	1.0	0.4	46	18.4	18.4	8.0	8.0	31.7	31.7	99.3	99.3	7.7	7.7	9.6	17	17	84	84	86	815603	804224	<0.2	0.6	0.6	0.6			
						1.0	0.4	49	18.4	8.0	8.0	31.7	31.7	99.3	99.3	7.7	7.7	9.6	16	16	85	85											
					Middle	4.0	0.4	43	18.5	18.5	8.0	8.0	31.9	31.9	99.2	99.2	7.7	7.7	11.6	11.6	11.9	17	17	85	85	<0.2	0.6	0.6	0.6				
						4.0	0.4	46	18.5	18.5	8.0	8.0	31.9	31.9	99.2	99.2	7.7	7.7	12.3	12.3	16	16	85	85	<0.2	0.6	0.6	0.6					
					Bottom	6.9	0.4	42	18.4	18.4	8.0	8.0	31.9	31.9	99.6	99.6	7.7	7.7	14.1	14.1	18	18	87	87	88	86	<0.2	0.6	0.6	0.6			
						6.9	0.4	45	18.4	18.4	8.0	8.0	31.9	31.9	99.6	99.6	7.7	7.7	14.5	14.5	18	18	88	88	88	86	<0.2	0.5	0.5	0.5			
C2	Fine	Rough	10:28	9.2	Surface	1.0	0.3	351	19.1	19.1	8.0	8.0	31.3	31.3	97.4	97.4	7.5	7.5	2.6	5	5	83	83	87	825688	806926	<0.2	1.1	1.1	1.1			
						1.0	0.3	356	19.1	19.1	8.0	8.0	31.3	31.3	97.4	97.4	7.5	7.5	2.6	6	6	83	83										
					Middle	4.6	0.4	346	19.2	19.2	8.0	8.0	31.4	31.4	97.0	97.0	7.4	7.4	3.6	7	7	87	87	87	87	<0.2	1.1	1.1	1.1				
						4.6	0.4	318	19.2	19.2	8.0	8.0	31.4	31.4	97.0	97.0	7.4	7.4	3.6	7	7	87	87	87	87	<0.2	1.1	1.1	1.1				
					Bottom	8.2	0.4	355	19.2	19.2	7.9	7.9	31.5	31.5	97.1	97.1	7.4	7.4	5.7	9	9	90	90	90	88	<0.2	1.0	1.0	1.0				
						8.2	0.4	327	19.2	19.2	7.9	7.9	31.5	31.5	97.1	97.1	7.4	7.4	5.6	9	9	91	91	91	88	<0.2	1.0	1.0	1.0				
C3	Fine	Rough	08:51	11.3	Surface	1.0	0.4	264	19.1	19.1	8.0	8.0	32.1	32.1	96.9	96.9	7.4	7.4	2.9	6	6	83	83	87	822126	817793	<0.2	1.0	1.0	1.0			
						1.0	0.4	283	19.1	19.1	8.0	8.0	32.1	32.1	96.9	96.9	7.4	7.4	3.0	5	5	83	83										
					Middle	5.7	0.5	266	19.2	19.2	8.0	8.0	32.2	32.2	96.4	96.4	7.4	7.4	3.0	5	5	86	86	86	86	<0.2	1.1	1.1	1.1				
						5.7	0.5	284	19.2	19.2	8.0	8.0	32.2	32.2	96.3	96.3	7.4	7.4	3.0	6	6	87	87	87	86	<0.2	1.0	1.0	1.0				
					Bottom	10.3	0.4	269	19.5	19.5	7.9	7.9	32.6	32.6	95.9	95.9	7.3	7.3	8.4	6	6	90	90	90	88	<0.2	1.0	1.0	1.0				
						10.3	0.5	269	19.5	19.5	7.9	7.9	32.6	32.6	95.9	95.9	7.3	7.3	8.5	7	7	91	91	91	88	<0.2	1.0	1.0	1.0				
IM1	Cloudy	Moderate	10:26	4.5	Surface	1.0	0.2	20	18.4	18.4	8.0	8.0	31.3	31.3	98.4	98.4	7.7	7.7	8.6	16	16	85	85	86	817946	807129	<0.2	0.6	0.6	0.6			
						1.0	0.2	21	18.4	18.4	8.0	8.0	31.3	31.3	98.4	98.4	7.7	7.7	8.6	17	17	85	85										
					Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
					Bottom	3.5	0.2	26	18.4	18.4	8.0	8.0	31.4	31.4	98.1	98.1	7.6	7.6	14.3	15	15	86	86	86	86	<0.2	0.6	0.6	0.6				
						3.5	0.2	27	18.4	18.4	8.0	8.0	31.4	31.4	98.1	98.1	7.6	7.6	13.8	15	15	86	86	86	86	<0.2	0.6	0.6	0.6				
IM2	Cloudy	Moderate	10:34	6.6	Surface	1.0	0.1	349	18.4	18.4	8.0	8.0	30.9	30.9	99.3	99.3	7.8	7.8	12.7	18	18	85	85	86	818152	806169	<0.2	0.6	0.6	0.6			
						1.0	0.2	350	18.4	18.4	8.0	8.0	30.9	30.9	99.3	99.3	7.8	7.8	12.7	18	18	86	86										
					Middle	3.3	0.2	346	18.4	18.4	8.0	8.0	30.9	30.9	99.3	99.3	7.8	7.8	11.1	24	24	86	86	86	86	<0.2	0.6	0.6	0.6				
						3.3	0.2	318	18.4	18.4	8.0	8.0	30.9	30.9	99.3	99.3	7.8	7.8	11.0	24	24	86	86	86	86	<0.2	0.7	0.7	0.7				
					Bottom	5.6	0.2	351	18.4	18.4	8.0	8.0	30.9	30.9	99.4	99.4	7.8	7.8	13.2	24	24	87	87	87	87	<0.2	0.8	0.8	0.8				
						5.6	0.2	351	18.4	18.4	8.0	8.0	30.9	30.9	99.4	99.4	7.8	7.8	13.6	25	25	87	87	87	87	<0.2	0.8	0.8	0.8				
IM3	Cloudy	Rough	10:42	7.0	Surface	1.0	0.3	348	18.4	18.4	8.0	8.0	30.9	30.9	99.6	99.6	7.8	7.8	8.4	19	19	85	85	85	818805	805597	<0.2	0.9	0.9	0.9			
						1.0	0.3	348	18.4	18.4	8.0	8.0	30.9	30.9	99.6	99.6	7.8	7.8	8.6	19	19	85	85										
					Middle	3.5	0.2	347	18.4	18.4	8.0	8.0	30.9	30.9	99.4	99.4	7.8	7.8	9.9	13	13	85	85	85	85	<0.2	0.8	0.8	0.8				
						3.5	0.2	319	18.4	18.4	8.0	8.0	30.9	30.9	99.4	99.4	7.8	7.8	9.9	14	14	85	85	85	85	<0.2	0.8	0.8	0.8				
					Bottom	6.0	0.2	343	18.4	18.4	8.0	8.0	30.9	30.9	99.5	99.5	7.8	7.8	13.0	14	14	87	87	87	87	<0.2	0.9	0.9	0.9				
						6.0	0.2	349	18.4	18.4	8.0	8.0	30.9	30.9	99.5	99.5	7.8	7.8	13.0	13	13	87	87	87	87	<0.2	0.8	0.8	0.8				
IM4	Cloudy	Rough	10:52	7.5	Surface	1.0	0.4	349	18.5	18.5	8.0	8.0	30.9	30.9	98.8	98.8	7.7	7.7	8.5	12	12	85	85	85	819701	804597	<0.2	0.8	0.8	0.8			
						1.0	0.4	321	18.5	18.5	8.0	8.0	30.9	30.9	98.8	98.8	7.7	7.7	8.7	12	12	85	85										
					Middle	3.8	0.4	347	18.6	18.6	8.0	8.0	30.9	30.9	98.6	98.6	7.7	7.7	10.5	13	13	86	86	86	86	<0.2	0.8	0.8	0.8				
						3.8	0.4	319	18.6	18.6	8.0	8.0	30.9	30.9	98.6	98.6	7.7	7.7	10.5	13	13	85	85	85	85	<0.2	0.8	0.8	0.8				
					Bottom	6.5	0.4	339	18.6	18.6	8.0	8.0	30.9	30.9	98.7	98.7	7.7	7.7	12.7	13	13	87	87	87	87	<0.2	0.9	0.9	0.9				
						6.5	0.4	342	18.6	18.6	8.0	8.0	30.9	30.9	98.7	98.7	7.7	7.7	12.5	13	13	87	87	87	87	<0.2	0.8	0.8	0.8				
IM5	Cloudy	Rough	11:01	7.2	Surface	1.0	0.6	2	18.5	18.5	8.0	8.0	30.9	30.9	99.1	99.1	7.7	7.7	8.0	11	11	86	86	86	820736	804870	<0.2	0.8	0.8	0.8			
						1.0	0.7	2	18.5	18.5	8.0	8.0	30.9	30.9	99.1	99.1	7.7	7.7	8.0	11	11	85	85										
					Middle	3.6	0.6	6	18.5	18.5	8.0	8.0	31.0	31.0	98.9	98.9	7.7	7.7	11.0	11	11	86	86	86	86	<0.2	0.8	0.8	0.8				
						3.6	0.7	6	18.4	18.4	8.0	8.0	31.0	31.0	98.9	98.9	7.7	7.7	10.5	12	12	85	85	85	85	<0.2	0.8	0.8	0.8				
					Bottom	6.2	0.4	11	18.4	18.4	8.0	8.0	31.0	31.0	99.1	99.1	7.7	7.7	12.8	12	12	86	86	86	86	<0.2	0.9	0.9	0.9				
						6.2	0.5	11	18.4	18.4	8.0	8.0	31.0	31.0	99.2	99.2	7.7	7.7	12.9	12	12	87	87	87	87	<0.2	0.8	0.8	0.8				
IM6	Cloudy	Rough	11:09	6.7	Surface	1.0	0.2	38	18.4	18.4	8.0	8.0	31.1	31.1	99.6	99.6	7.8	7.8	6.8	13	13	86	86	86	821071	805824	<0.2	1.0	1.0	1.0			
						1.0	0.2	38	18.4	18.4	8.0	8.0	31.1	31.1	99.6	99.6	7.8	7.8	7.0	13	13	85	85										
					Middle	3.4	0.1	14	18.4	18.4																							

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

Water Quality Monitoring Results on 28 January 20 during Mid-Flood Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity (NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)					
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA		
									Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA	Value	DA
IM9	Fine	Rough	09:59	7.4	Surface	1.0	0.3	267	18.7	18.7	8.0	8.0	31.6	31.6	98.1	98.1	7.6	5.9	7.6	5.9	10	82	86	82	822077	808806	<0.2	1.0	1.0	1.0				
						1.0	0.3	288	18.7	18.7	8.0	8.0	31.6	31.6	98.1	98.1	7.6	5.8	7.6	5.8	9	83	83	83			<0.2	0.9	0.9					
					Middle	3.7	0.2	283	18.7	18.7	8.0	8.0	31.6	31.6	97.9	97.9	7.6	6.3	7.6	6.3	9	86	9	86	86	86			<0.2	1.0	1.0			
						3.7	0.2	295	18.7	18.7	8.0	8.0	31.6	31.6	97.9	97.9	7.6	6.2	7.6	6.2	9	86	9	86	86	86			<0.2	1.0	1.0			
					Bottom	6.4	0.2	259	18.7	18.7	8.0	8.0	31.6	31.6	97.8	97.8	7.6	7.7	7.6	7.7	9	90	9	90	9	90	90			<0.2	1.0	1.0		
						6.4	0.2	275	18.7	18.7	8.0	8.0	31.6	31.6	97.8	97.8	7.6	7.8	7.6	7.8	9	90	9	90	9	90	90			<0.2	1.0	1.0		
IM10	Fine	Rough	09:52	7.2	Surface	1.0	0.6	301	18.7	18.7	8.0	8.0	31.7	31.7	97.9	97.9	7.6	5.2	7.6	5.2	9	83	83	83	822404	809772	<0.2	1.0	1.0	1.0				
						1.0	0.6	302	18.7	18.7	8.0	8.0	31.7	31.7	97.9	97.9	7.6	5.3	7.6	5.3	8	83	8	83	83			<0.2	1.0	1.0				
					Middle	3.6	0.6	303	18.8	18.8	8.0	8.0	31.7	31.7	97.3	97.3	7.5	7.5	7.5	7.5	9	86	9	86	9	86			<0.2	1.0	1.0			
						3.6	0.6	314	18.8	18.8	8.0	8.0	31.7	31.7	97.3	97.3	7.5	7.6	7.5	7.6	10	86	10	86	10	86			<0.2	1.0	1.0			
					Bottom	6.2	0.4	292	18.8	18.8	7.9	7.9	31.7	31.7	97.4	97.4	7.5	7.5	7.5	7.5	10	90	10	90	10	90	90			<0.2	1.1	1.1		
						6.2	0.4	313	18.8	18.8	7.9	7.9	31.7	31.7	97.5	97.5	7.5	8.7	7.5	8.7	9	91	9	91	9	91	91			<0.2	1.0	1.0		
IM11	Fine	Rough	09:43	8.0	Surface	1.0	0.5	295	18.7	18.7	8.0	8.0	31.7	31.7	98.0	98.0	7.6	6.7	7.6	6.7	14	82	14	82	822053	811454	<0.2	1.0	1.0	1.1				
						1.0	0.5	311	18.7	18.7	8.0	8.0	31.7	31.7	98.0	98.0	7.6	6.6	7.6	6.6	14	82	14	82	82			<0.2	1.2	1.2				
					Middle	4.0	0.4	288	18.7	18.7	8.0	8.0	31.7	31.7	97.8	97.8	7.6	7.7	7.6	7.7	14	87	14	87	14	87			<0.2	1.1	1.1			
						4.0	0.5	305	18.7	18.7	8.0	8.0	31.7	31.7	97.8	97.8	7.6	7.9	7.6	7.9	16	87	16	87	16	87			<0.2	1.1	1.1			
					Bottom	7.0	0.3	298	18.7	18.7	8.0	8.0	31.6	31.6	97.7	97.7	7.6	9.6	7.6	9.6	16	91	16	91	16	91	91			<0.2	1.1	1.1		
						7.0	0.3	314	18.7	18.7	8.0	8.0	31.6	31.6	97.7	97.7	7.6	9.7	7.6	9.7	15	92	15	92	15	92	92			<0.2	1.3	1.3		
IM12	Fine	Rough	09:37	8.5	Surface	1.0	0.6	276	19.0	19.0	8.0	8.0	32.0	32.0	97.1	97.1	7.4	8.2	7.4	8.2	14	83	14	83	821465	812047	<0.2	1.1	1.1	1.1				
						1.0	0.6	280	19.0	19.0	8.0	8.0	32.0	32.0	97.1	97.1	7.4	8.1	7.4	8.1	15	83	15	83	83			<0.2	1.1	1.1				
					Middle	4.3	0.6	277	19.0	19.0	8.0	8.0	32.1	32.1	96.8	96.8	7.4	9.2	7.4	9.2	15	86	15	86	15	86			<0.2	1.1	1.1			
						4.3	0.6	293	19.0	19.0	8.0	8.0	32.1	32.1	96.8	96.8	7.4	9.3	7.4	9.3	14	87	14	87	14	87			<0.2	1.0	1.0			
					Bottom	7.5	0.4	284	19.0	19.0	8.0	8.0	32.1	32.1	96.8	96.8	7.4	12.8	7.4	12.8	13	90	13	90	13	90	90			<0.2	1.1	1.1		
						7.5	0.5	304	19.0	19.0	8.0	8.0	32.1	32.1	96.8	96.8	7.4	12.9	7.4	12.9	12	91	12	91	12	91	91			<0.2	1.2	1.2		
SR1A	Fine	Moderate	09:22	3.9	Surface	1.0	-	-	18.8	18.8	8.0	8.0	31.6	31.6	96.0	96.0	7.4	2.7	7.4	2.7	4	-	4	-	819981	812664	-	-	-	-	-			
						1.0	-	-	18.8	18.8	8.0	8.0	31.6	31.6	96.0	96.0	7.4	2.7	7.4	2.7	4	-	4	-	4	-			-	-	-	-		
					Middle	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	
						2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	
					Bottom	2.9	-	-	18.7	18.7	8.0	8.0	31.6	31.6	97.8	97.8	7.6	2.7	7.6	2.7	4	-	4	-	4	-			-	-	-	-	-	-
						2.9	-	-	18.7	18.7	8.0	8.0	31.6	31.6	97.9	97.9	7.6	2.8	7.6	2.8	4	-	4	-	4	-			-	-	-	-	-	-
SR2	Fine	Rough	09:11	4.3	Surface	1.0	0.1	147	18.9	18.9	8.0	8.0	32.1	32.1	96.1	96.1	7.4	9.2	7.4	9.2	14	82	14	82	821461	814184	<0.2	1.2	1.2	1.2				
						1.0	0.1	149	18.9	18.9	8.0	8.0	32.1	32.1	96.1	96.1	7.4	9.3	7.4	9.3	14	82	14	82	82			<0.2	1.2	1.2				
					Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			<0.2	1.2	1.2			
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			<0.2	1.2	1.2			
					Bottom	3.3	0.1	66	18.9	18.9	8.0	7.9	32.1	32.1	96.2	96.3	7.4	10.8	7.4	10.8	14	87	14	87	14	87	87			<0.2	1.2	1.2		
						3.3	0.1	66	18.9	18.9	7.9	7.9	32.1	32.1	96.3	96.3	7.4	10.7	7.4	10.7	15	88	15	88	15	88	88			<0.2	1.2	1.2		
SR3	Fine	Rough	10:10	7.8	Surface	1.0	0.1	10	19.1	19.1	8.0	8.0	31.5	31.5	97.1	97.1	7.5	3.2	7.5	3.2	6	-	6	-	822151	807552	-	-	-	-				
						1.0	0.1	10	19.1	19.1	8.0	8.0	31.5	31.5	97.1	97.1	7.5	3.3	7.5	3.3	6	-	6	-	6	-			-	-	-	-		
					Middle	3.9	0.1	14	19.1	19.1	8.0	8.0	31.5	31.5	97.0	97.0	7.5	3.0	7.5	3.0	8	-	8	-	8	-			-	-	-	-	-	
						3.9	0.1	14	19.1	19.1	8.0	8.0	31.5	31.5	97.0	97.0	7.5	3.0	7.5	3.0	7	-	7	-	7	-			-	-	-	-	-	
					Bottom	6.8	0.1	13	19.0	19.0	7.9	7.9	31.5	31.5	97.1	97.1	7.5	3.5	7.5	3.5	8	-	8	-	8	-			-	-	-	-	-	
						6.8	0.1	13	19.0	19.0	7.9	7.9	31.5	31.5	97.1	97.1	7.5	3.6	7.5	3.6	8	-	8	-	8	-			-	-	-	-	-	
SR4A	Cloudy	Calm	09:42	8.6	Surface	1.0	0.1	287	18.3	18.3	8.0	8.0	30.5	30.5	98.8	98.9	7.8	5.3	7.8	5.3	6	-	6	-	817201	807791	-	-	-	-				
						1.0	0.1	303	18.3	18.3	8.0	8.0	30.5	30.5	98.9	98.9	7.8	5.3	7.8	5.3	7	-	7	-	7	-			-	-	-	-		
					Middle	4.3	0.1	333	18.3	18.3	8.0	8.0	30.5	30.5	99.0	99.1	7.8	5.8	7.8	5.8	7	-	7	-	7	-			-	-	-	-	-	
						4.3	0.1	346	18.3	18.3	8.0	8.0	30.5	30.5	99.1	99.1	7.8	6.0	7.8	6.0	7	-	7	-	7	-			-	-	-	-	-	
					Bottom	7.6	0.1	344	18.2	18.2	8.0	8.0	30.5	30.5	100.0	100.2	7.9	5.9	7.9	5.9	8	-	8	-	8	-			-	-	-	-	-	
						7																												



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

Water Quality Monitoring

Water Quality Monitoring Results on 30 January 20 during Mid-Ebb Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity (NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)					
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA	Value	DA
C1	Sunny	Rough	16:12	7.6	Surface	1.0	0.3	125	18.5	18.5	8.3	8.3	34.1	34.1	102.1	102.1	7.8	7.8	6.9	7	86	86	88	88	815627	804230	<0.2	0.6	<0.2	0.6				
						1.0	0.3	126	18.5	18.5	8.3	8.3	34.1	34.1	102.1	102.1	7.8	7.8	6.9	7	86	86	88	88	815627	804230	<0.2	0.6	<0.2	0.6				
						3.8	0.3	133	18.5	18.5	8.3	8.3	34.2	34.2	102.0	102.1	7.8	7.8	6.9	7	88	88	87	87	815627	804230	<0.2	0.8	<0.2	0.9				
					Middle	3.8	0.3	134	18.5	18.5	8.3	8.3	34.2	34.2	102.1	102.1	7.8	7.8	6.8	8	87	87	88	88	815627	804230	<0.2	0.9	<0.2	0.8				
						6.6	0.2	121	18.5	18.5	8.3	8.3	34.2	34.2	102.9	102.9	7.9	7.9	6.9	8	90	90	88	88	815627	804230	<0.2	0.8	<0.2	0.6				
						6.6	0.2	121	18.5	18.5	8.3	8.3	34.2	34.2	102.9	102.9	7.9	7.9	6.8	8	90	90	88	88	815627	804230	<0.2	0.9	<0.2	0.6				
C2	Fine	Rough	14:50	11.4	Surface	1.0	0.1	132	18.6	18.6	8.1	8.1	31.4	31.4	98.0	98.0	7.6	7.6	2.2	5	86	86	87	87	825664	806930	<0.2	0.8	<0.2	1.0				
						1.0	0.1	149	18.6	18.6	8.1	8.1	31.4	31.4	98.0	98.0	7.6	7.6	2.2	6	86	86	87	87	825664	806930	<0.2	1.0	<0.2	0.7				
						5.7	0.3	146	18.6	18.6	8.1	8.1	31.4	31.4	97.1	97.1	7.5	7.5	2.6	4	88	88	88	88	825664	806930	<0.2	0.8	<0.2	0.6				
					Middle	5.7	0.3	138	18.6	18.6	8.1	8.1	31.4	31.4	97.0	97.0	7.5	7.5	2.8	4	88	88	88	88	825664	806930	<0.2	0.8	<0.2	0.6				
						10.4	0.3	147	18.6	18.6	8.1	8.1	31.4	31.4	96.7	96.7	7.5	7.5	3.9	3	88	88	88	88	825664	806930	<0.2	0.6	<0.2	0.6				
						10.4	0.3	149	18.6	18.6	8.1	8.1	31.4	31.4	96.7	96.7	7.5	7.5	4.0	<2	88	88	88	88	825664	806930	<0.2	0.6	<0.2	0.6				
C3	Fine	Rough	17:13	10.7	Surface	1.0	0.1	124	19.4	19.4	8.1	8.1	32.9	32.9	95.9	95.9	7.3	7.3	1.5	2	88	88	89	89	822090	817825	<0.2	0.4	<0.2	0.5				
						1.0	0.1	122	19.4	19.4	8.1	8.1	32.9	32.9	95.9	95.9	7.3	7.3	1.6	3	88	88	89	89	822090	817825	<0.2	0.5	<0.2	0.4				
						5.4	0.2	131	19.4	19.4	8.1	8.1	32.9	32.9	95.3	95.3	7.2	7.2	1.9	3	89	89	89	89	822090	817825	<0.2	0.4	<0.2	1.0				
					Middle	5.4	0.2	125	19.4	19.4	8.1	8.1	32.9	32.9	95.3	95.3	7.2	7.2	2.0	3	89	89	89	89	822090	817825	<0.2	0.4	<0.2	1.0				
						9.7	0.2	130	19.4	19.4	8.1	8.1	32.9	32.9	96.3	96.5	7.3	7.3	1.9	2	89	89	89	89	822090	817825	<0.2	0.8	<0.2	0.8				
						9.7	0.2	147	19.4	19.4	8.1	8.1	32.9	32.9	96.7	96.7	7.3	7.3	2.1	3	90	90	89	89	822090	817825	<0.2	0.8	<0.2	0.8				
IM1	Sunny	Rough	16:01	5.2	Surface	1.0	0.1	118	18.1	18.1	8.3	8.3	33.7	33.7	104.5	104.5	8.1	8.1	3.5	5	86	87	87	87	817965	807155	<0.2	1.0	<0.2	1.1				
						1.0	0.1	121	18.1	18.1	8.3	8.3	33.7	33.7	104.5	104.5	8.1	8.1	3.5	5	87	87	87	87	817965	807155	<0.2	1.1	<0.2	1.0				
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Bottom	4.2	0.2	124	18.0	18.0	8.3	8.3	33.9	33.9	103.4	103.5	8.0	8.0	4.5	4	88	88	88	88	817965	807155	<0.2	1.0	<0.2	1.0									
	4.2	0.2	128	18.0	18.0	8.3	8.3	33.9	33.9	103.5	103.5	8.0	8.0	4.5	5	88	88	88	88	817965	807155	<0.2	0.9	<0.2	0.8									
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
IM2	Sunny	Rough	15:52	6.9	Surface	1.0	0.2	121	18.4	18.4	8.3	8.3	34.0	34.0	102.9	102.9	7.9	7.9	5.2	8	85	86	87	87	818185	806157	<0.2	0.8	<0.2	0.7				
						1.0	0.2	122	18.4	18.4	8.3	8.3	34.0	34.0	102.9	102.9	7.9	7.9	5.3	8	86	86	87	87	818185	806157	<0.2	0.7	<0.2	0.5				
						3.5	0.2	117	18.3	18.3	8.3	8.3	34.0	34.0	102.1	102.1	7.8	7.8	6.4	8	87	87	87	87	818185	806157	<0.2	0.7	<0.2	1.2				
					Middle	3.5	0.2	130	18.3	18.3	8.3	8.3	34.0	34.0	102.1	102.1	7.8	7.8	6.4	8	87	87	87	87	818185	806157	<0.2	0.7	<0.2	1.2				
						5.9	0.2	136	18.3	18.3	8.3	8.3	34.0	34.0	101.6	101.6	7.8	7.8	9.6	9	89	89	89	89	818185	806157	<0.2	0.7	<0.2	1.1				
						5.9	0.2	132	18.3	18.3	8.3	8.3	34.0	34.0	101.6	101.6	7.8	7.8	9.8	8	89	89	89	89	818185	806157	<0.2	1.1	<0.2	0.9				
IM3	Sunny	Rough	15:44	7.1	Surface	1.0	0.3	146	18.3	18.3	8.3	8.3	34.0	34.0	102.2	102.2	7.9	7.9	5.2	9	85	86	87	87	818760	805605	<0.2	0.6	<0.2	0.4				
						1.0	0.3	158	18.3	18.3	8.3	8.3	34.0	34.0	102.2	102.2	7.8	7.8	5.2	8	86	86	87	87	818760	805605	<0.2	0.4	<0.2	0.5				
						3.6	0.3	132	18.3	18.3	8.3	8.3	34.0	34.0	101.6	101.6	7.8	7.8	5.6	9	87	87	87	87	818760	805605	<0.2	0.5	<0.2	0.5				
					Middle	3.6	0.3	139	18.3	18.3	8.3	8.3	34.0	34.0	101.5	101.5	7.8	7.8	5.7	8	87	87	87	87	818760	805605	<0.2	0.5	<0.2	0.4				
						6.1	0.2	138	18.3	18.3	8.3	8.3	34.0	34.0	100.9	100.9	7.8	7.8	7	7	88	88	88	88	818760	805605	<0.2	0.4	<0.2	0.6				
						6.1	0.2	144	18.3	18.3	8.3	8.3	34.0	34.0	100.9	100.9	7.8	7.8	8.8	8	88	88	88	88	818760	805605	<0.2	0.6	<0.2	0.6				
IM4	Sunny	Rough	15:33	7.4	Surface	1.0	0.4	143	18.0	18.0	8.4	8.4	33.4	33.4	105.0	105.0	8.1	8.1	5.0	8	86	85	87	87	819742	804620	<0.2	0.6	<0.2	0.4				
						1.0	0.4	135	18.0	18.0	8.4	8.4	33.4	33.4	104.9	104.9	8.1	8.1	5.0	7	85	85	87	87	819742	804620	<0.2	0.6	<0.2	0.4				
						3.7	0.4	137	17.9	17.9	8.4	8.4	33.4	33.4	104.1	104.1	8.1	8.1	7.4	9	87	87	87	87	819742	804620	<0.2	0.5	<0.2	0.6				
					Middle	3.7	0.4	138	17.9	17.9	8.4	8.4	33.4	33.4	104.1	104.1	8.1	8.1	7.4	9	86	86	87	87	819742	804620	<0.2	0.5	<0.2	0.6				
						6.4	0.4	141	17.9	17.9	8.3	8.3	33.4	33.4	103.4	103.4	8.0	8.0	10.2	9	89	89	89	89	819742	804620	<0.2	0.6	<0.2	0.7				
						6.4	0.4	159	17.9	17.9	8.3	8.3	33.4	33.4	103.3	103.3	8.0	8.0	10.4	10	89	89	89	89	819742	804620	<0.2	0.7	<0.2	0.7				
IM5	Sunny	Rough	15:24	7.2	Surface	1.0	0.7	192	17.9	17.9	8.4	8.4	33.2	33.2	104.3	104.3	8.1	8.1	6.6	7	85	85	87	87	820717	804871	<0.2	0.9	<0.2	0.6				
						1.0	0.7	191	17.9	17.9	8.4	8.4	33.2	33.2	104.3																			

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

Water Quality Monitoring

Water Quality Monitoring Results on 30 January 20 during Mid-Ebb Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity (NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)								
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA					
IM9	Fine	Rough	15:56	7.1	Surface	1.0	0.2	171	17.9	17.9	8.1	8.1	31.7	31.7	102.3	102.3	8.0	8.0	4.8	7	85	85	<0.2	<0.2	0.7	0.7	822105	808824	<0.2	<0.2	0.6						
						1.0	0.2	178	17.9	8.1	8.1	31.7	31.7	102.3	102.3	8.0	8.0	4.9	6	86	86	<0.2	<0.2	0.7	0.7												
					Middle	3.6	0.1	172	17.9	17.9	8.1	8.1	31.7	31.7	102.2	102.2	8.0	8.0	4.2	7	86	86	<0.2	<0.2	0.6	0.6											
						3.6	0.1	173	17.9	17.9	8.1	8.1	31.7	31.7	102.2	102.2	8.0	8.0	4.3	7	86	86	<0.2	<0.2	0.5	0.5											
					Bottom	6.1	0.1	136	17.9	17.9	8.1	8.1	31.7	31.7	102.3	102.3	8.0	8.0	6.1	11	88	88	<0.2	<0.2	0.6	0.6											
						6.1	0.1	143	17.9	17.9	8.1	8.1	31.7	31.7	102.3	102.3	8.0	8.0	5.9	12	88	88	<0.2	<0.2	0.6	0.6											
IM10	Fine	Rough	16:02	7.7	Surface	1.0	0.3	160	18.2	18.2	8.1	8.1	31.7	31.7	100.9	100.9	7.9	7.9	4.2	7	85	85	<0.2	<0.2	0.8	0.8	822363	809791	<0.2	<0.2	0.6						
						1.0	0.3	163	18.2	18.2	8.1	8.1	31.7	31.7	100.8	100.8	7.9	7.9	4.2	6	86	86	<0.2	<0.2	0.7	0.7											
					Middle	3.9	0.5	168	18.2	18.2	8.1	8.1	31.7	31.7	100.9	100.9	7.9	7.9	4.8	7	88	88	<0.2	<0.2	0.6	0.6											
						3.9	0.5	165	18.2	18.2	8.1	8.1	31.7	31.7	100.9	100.9	7.9	7.9	4.7	6	88	88	<0.2	<0.2	0.6	0.6											
					Bottom	6.7	0.3	132	18.2	18.2	8.1	8.1	31.7	31.7	101.7	101.7	8.0	8.0	5.2	8	89	89	<0.2	<0.2	0.5	0.5											
						6.7	0.3	138	18.2	18.2	8.1	8.1	31.7	31.7	102.0	102.0	8.0	8.0	5.4	7	90	90	<0.2	<0.2	0.5	0.5											
IM11	Fine	Rough	16:14	8.6	Surface	1.0	0.2	136	18.6	18.6	8.1	8.1	32.0	32.0	99.6	99.6	7.7	7.7	3.5	8	86	86	<0.2	<0.2	0.8	0.8	822079	811444	<0.2	<0.2	0.5						
						1.0	0.2	134	18.6	18.6	8.1	8.1	32.0	32.0	99.6	99.6	7.7	7.7	3.5	7	86	86	<0.2	<0.2	0.6	0.6											
					Middle	4.3	0.3	139	18.6	18.6	8.1	8.1	32.0	32.0	99.4	99.4	7.7	7.7	3.6	6	89	89	<0.2	<0.2	0.5	0.5											
						4.3	0.4	138	18.6	18.6	8.1	8.1	32.0	32.0	99.4	99.4	7.7	7.7	3.7	6	89	89	<0.2	<0.2	0.4	0.4											
					Bottom	7.6	0.2	132	18.6	18.6	8.1	8.1	32.0	32.0	99.6	99.6	7.7	7.7	5.1	5	89	89	<0.2	<0.2	0.5	0.5											
						7.6	0.2	135	18.6	18.6	8.1	8.1	32.0	32.0	99.8	99.7	7.7	7.7	5.1	5	90	90	<0.2	<0.2	0.4	0.4											
IM12	Fine	Rough	16:20	8.3	Surface	1.0	0.3	127	18.5	18.5	8.1	8.1	31.9	31.9	98.8	98.8	7.7	7.7	3.4	6	84	84	<0.2	<0.2	0.4	0.4	821463	812038	<0.2	<0.2	0.5						
						1.0	0.3	128	18.5	18.5	8.1	8.1	31.9	31.9	98.8	98.8	7.7	7.7	3.5	6	85	85	<0.2	<0.2	0.4	0.4											
					Middle	4.2	0.3	126	18.5	18.5	8.1	8.1	31.9	31.9	98.8	98.9	7.7	7.7	3.5	6	86	86	<0.2	<0.2	0.5	0.5											
						4.2	0.3	127	18.5	18.5	8.1	8.1	31.9	31.9	98.9	98.9	7.7	7.7	3.4	5	86	86	<0.2	<0.2	0.5	0.5											
					Bottom	7.3	0.2	125	18.5	18.5	8.1	8.1	31.9	31.9	99.6	99.7	7.7	7.7	3.9	4	88	88	<0.2	<0.2	0.6	0.6											
						7.3	0.2	121	18.5	18.5	8.1	8.1	31.9	31.9	99.8	99.7	7.7	7.7	4.0	5	89	89	<0.2	<0.2	0.6	0.6											
SR1A	Fine	Moderate	16:36	4.9	Surface	1.0	-	-	18.5	18.5	8.1	8.1	31.9	31.9	98.7	98.7	7.6	7.6	3.5	4	-	-	-	-	-	-	819973	812655	-	-	-						
						1.0	-	-	18.5	18.5	8.1	8.1	31.9	31.9	98.7	98.7	7.6	7.6	3.4	4	-	-	-	-													
					Middle	2.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						-	-	-	-	-	-
						2.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						-	-	-	-	-	-
					Bottom	3.9	-	-	18.5	18.5	8.0	8.0	31.9	31.9	98.6	98.6	7.6	7.6	3.6	5	-	-	-	-	-	-						-	-	-	-	-	-
						3.9	-	-	18.5	18.5	8.0	8.0	31.9	31.9	98.6	98.6	7.6	7.6	3.5	6	-	-	-	-	-	-						-	-	-	-	-	-
SR2	Fine	Moderate	16:49	4.6	Surface	1.0	0.2	123	18.6	18.6	8.1	8.1	31.9	31.9	99.5	99.5	7.7	7.7	2.6	4	82	82	<0.2	<0.2	0.6	0.6	821455	814179	<0.2	<0.2	0.5						
						1.0	0.3	134	18.6	18.6	8.1	8.1	31.9	31.9	99.5	99.5	7.7	7.7	2.7	5	82	82	<0.2	<0.2	0.5	0.5											
					Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						-	-	-	-	-	-
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						-	-	-	-	-	-
					Bottom	3.6	0.3	135	18.6	18.6	8.1	8.1	32.0	32.0	100.0	100.1	7.7	7.7	2.7	4	84	84	<0.2	<0.2	0.4	0.4											
						3.6	0.3	141	18.6	18.6	8.1	8.1	32.0	32.0	100.2	100.2	7.7	7.7	2.7	5	84	84	<0.2	<0.2	0.4	0.4											
SR3	Fine	Rough	15:27	8.5	Surface	1.0	0.1	177	18.4	18.4	8.1	8.1	31.6	31.6	100.1	100.1	7.8	7.8	2.3	4	-	-	-	-	-	-	822153	807572	-	-	-						
						1.0	0.1	173	18.4	18.4	8.1	8.1	31.6	31.6	100.1	100.1	7.8	7.8	2.3	4	-	-	-	-													
					Middle	4.3	0.1	173	18.3	18.3	8.1	8.1	31.7	31.7	101.1	101.3	7.9	7.9	2.5	4	-	-	-	-	-	-						-	-	-	-		
						4.3	0.1	178	18.2	18.3	8.1	8.1	31.7	31.7	101.4	101.4	7.9	7.9	2.6	3	-	-	-	-	-	-						-	-	-			
					Bottom	7.5	0.2	134	17.8	17.8	8.1	8.1	31.7	31.7	101.2	101.2	8.0	8.0	2.9	3	-	-	-	-	-	-						-	-	-	-		
						7.5	0.2	141	17.8	17.8	8.1	8.1	31.7	31.7	101.2	101.2	8.0	8.0	2.9	4	-	-	-	-	-	-						-	-	-			
SR4A	Sunny	Moderate	16:23	9.0	Surface	1.0	0.3	86	18.1	18.1	8.4	8.4	33.9	33.9	105.7	105.7	8.2	8.2	3.6	6	-	-	-	-	-	-	817168	807790	-	-	-						
						1.0	0.3	92	18.1	18.1	8.4	8.4	33.9	33.9	105.7	105.7	8.2	8.2	3.6	5	-	-	-	-													
					Middle	4.5	0.2	65	18.0	18.0	8.4	8.4	34.0	34.0	104.5	104.5	8.1	8.1	4.3	5	-	-	-	-	-	-						-	-	-			
						4.5	0.3	68	18.0	18.0	8.4	8.4	34.0	34.0	104.4	104.4	8.1	8.1	4.3	5	-	-	-	-	-	-						-	-				
					Bottom	8.0	0.2	71	18.0	18.0	8.4	8.4	34.0	34.0	103.9	103.9	8.0	8.0	4.4	5	-	-	-	-	-	-						-	-				
						8.0	0.2	72	18.0	18.0	8.4	8.4	34.0	34.0	103.9	103.9	8.0	8.0	4.5	5	-	-	-	-	-	-						-	-				
SR5A	Sunny	Moderate	16:40	3.7	Surface	1.0	0.1	67	17.9	17.9	8.4	8.4	32.4	32.4	107.0	107.0	8.4	8.4	3.4	5	-	-	-	-	-	-	816589	810712	-	-	-						
						1.0	0.1	67	17.9	17.9	8.4	8.4	32.4	32.4	106.9	106.9	8.4	8.4	3.5	4	-	-	-	-													
					Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						-	-	-	-		
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						-	-	-			
					Bottom	2.7	0.1	112	17.7	17.7	8.4	8.4	32.4	32.4	105.0	105.0	8.2	8.2																			

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

Water Quality Monitoring

Water Quality Monitoring Results on 30 January 20 during Mid-Flood Tide

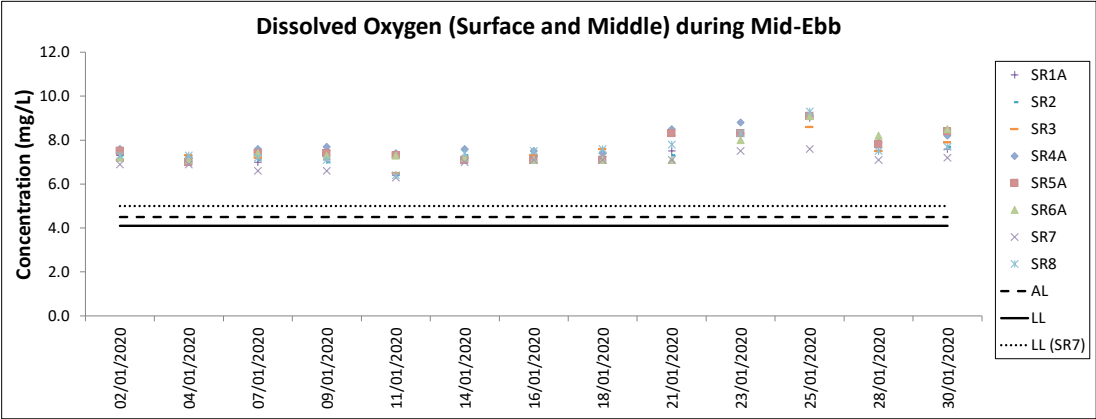
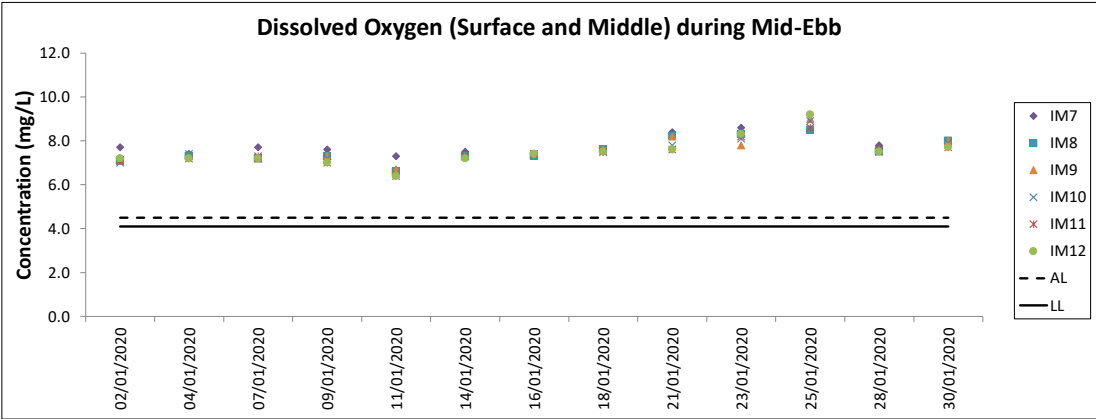
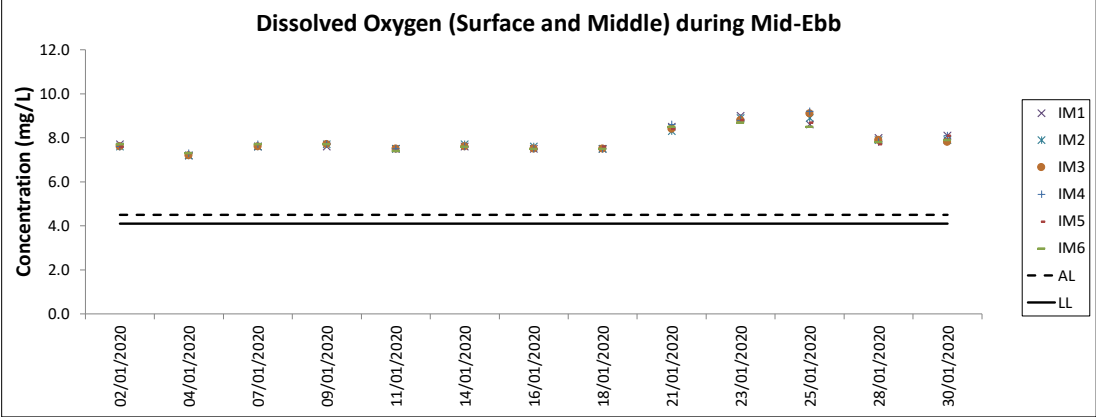
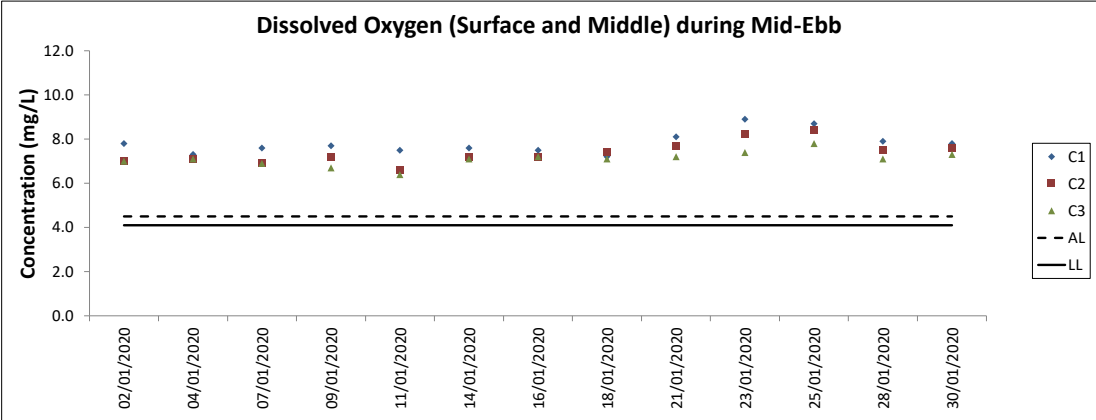
Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity (NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)					
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA	Value	DA
C1	Sunny	Rough	10:40	7.8	Surface	1.0	0.4	57	18.4	18.4	8.4	8.4	34.2	34.2	100.4	100.4	7.7	7.7	5.0	5.0	11	11	86	86	815639	804228	<0.2	<0.2	0.5	0.5				
						1.0	0.4	58	18.4	18.4	8.4	8.4	34.2	34.2	100.4	100.4	7.7	7.7	5.1	5.1	12	12	85	85			<0.2	<0.2	0.3	0.3				
						3.9	0.4	46	18.4	18.4	8.4	8.4	34.2	34.2	100.1	100.1	7.7	7.7	4.9	4.9	11	11	88	88			<0.2	<0.2	0.4	0.4				
					3.9	0.4	46	18.4	18.4	8.4	8.4	34.2	34.2	100.1	100.1	7.7	7.7	5.0	5.0	10	10	88	88			<0.2	<0.2	0.3	0.3					
					6.8	0.4	39	18.5	18.5	8.4	8.4	34.2	34.2	99.8	99.8	7.6	7.6	7.5	7.5	11	11	90	90			<0.2	<0.2	0.5	0.5					
					6.8	0.4	39	18.4	18.4	8.4	8.4	34.2	34.2	99.9	99.9	7.6	7.6	7.9	7.9	11	11	90	90			<0.2	<0.2	0.6	0.6					
C2	Sunny	Rough	11:25	11.1	Surface	1.0	0.3	318	18.6	18.6	8.1	8.1	31.4	31.4	98.3	98.3	7.6	7.6	2.5	2.5	3	3	86	86	825682	806947	<0.2	<0.2	0.7	0.7				
						1.0	0.3	341	18.6	18.6	8.1	8.1	31.4	31.4	98.2	98.2	7.6	7.6	2.6	2.6	4	4	86	86			<0.2	<0.2	0.6	0.6				
						5.6	0.4	336	18.6	18.6	8.1	8.1	31.4	31.4	97.4	97.4	7.6	7.6	4.7	4.7	4	4	87	87			<0.2	<0.2	0.7	0.7				
					5.6	0.4	309	18.6	18.6	8.1	8.1	31.4	31.4	97.3	97.3	7.6	7.6	5.2	5.2	3	3	87	87			<0.2	<0.2	0.7	0.7					
					10.1	0.3	339	18.6	18.6	8.1	8.1	31.5	31.5	97.2	97.2	7.5	7.5	7.4	7.4	3	3	88	88			<0.2	<0.2	0.7	0.7					
					10.1	0.3	350	18.6	18.6	8.1	8.1	31.5	31.5	97.4	97.4	7.6	7.6	7.9	7.9	3	3	89	89			<0.2	<0.2	0.7	0.7					
C3	Sunny	Rough	09:42	10.5	Surface	1.0	0.5	255	18.8	18.8	8.1	8.1	32.1	32.1	96.1	96.1	7.4	7.4	2.8	2.8	4	4	87	87	822093	817808	<0.2	<0.2	0.6	0.6				
						1.0	0.5	278	18.8	18.8	8.1	8.1	32.1	32.1	96.1	96.1	7.4	7.4	2.9	2.9	3	3	88	88			<0.2	<0.2	0.6	0.6				
						5.3	0.4	253	18.8	18.8	8.1	8.1	32.1	32.1	96.0	96.0	7.4	7.4	4.3	4.3	3	3	89	89			<0.2	<0.2	0.5	0.5				
					5.3	0.4	256	18.8	18.8	8.1	8.1	32.1	32.1	96.0	96.0	7.4	7.4	4.9	4.9	4	4	89	89			<0.2	<0.2	0.7	0.7					
					9.5	0.4	258	18.8	18.8	8.1	8.1	32.1	32.1	96.0	96.1	7.4	7.4	6.8	6.8	4	4	90	90			<0.2	<0.2	0.6	0.6					
					9.5	0.4	266	18.8	18.8	8.1	8.1	32.1	32.1	96.1	96.1	7.4	7.4	6.4	6.4	4	4	90	90			<0.2	<0.2	0.7	0.7					
IM1	Sunny	Rough	11:01	4.5	Surface	1.0	0.2	16	17.9	17.9	8.4	8.4	33.5	33.5	101.0	101.0	7.8	7.8	4.3	4.3	7	7	86	86	817957	807122	<0.2	<0.2	0.7	0.7				
						1.0	0.2	16	17.9	17.9	8.4	8.4	33.5	33.5	101.0	101.0	7.8	7.8	4.3	4.3	7	7	87	87			<0.2	<0.2	0.7	0.7				
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
					3.5	0.2	6	18.0	18.0	8.3	8.3	33.6	33.6	100.1	100.1	7.8	7.8	6.7	6.7	8	8	89	89			<0.2	<0.2	0.7	0.7					
					3.5	0.2	6	18.0	18.0	8.3	8.3	33.6	33.6	100.1	100.1	7.8	7.8	6.6	6.6	8	8	88	88			<0.2	<0.2	0.6	0.6					
					1.0	0.3	18	18.1	18.1	8.4	8.4	33.7	33.7	102.0	102.0	7.9	7.9	6.7	6.7	10	10	85	85			<0.2	<0.2	0.8	0.8					
IM2	Sunny	Rough	11:09	6.5	Surface	1.0	0.3	19	18.1	18.1	8.4	8.4	33.7	33.7	102.0	102.0	7.9	7.9	6.8	6.8	11	11	85	85	818178	806168	<0.2	<0.2	0.8	0.8				
						3.3	0.3	13	18.1	18.1	8.4	8.4	33.7	33.7	101.7	101.7	7.9	7.9	8.1	8.1	11	11	87	87			<0.2	<0.2	0.8	0.8				
						3.3	0.3	13	18.1	18.1	8.4	8.4	33.7	33.7	101.7	101.7	7.9	7.9	8.1	8.1	11	11	87	87			<0.2	<0.2	0.6	0.6				
					5.5	0.3	6	18.0	18.0	8.3	8.3	33.7	33.7	101.6	101.7	7.9	7.9	10.6	10.6	12	12	88	88			<0.2	<0.2	0.6	0.6					
					5.5	0.3	6	18.0	18.0	8.3	8.3	33.7	33.7	101.7	101.7	7.9	7.9	10.5	10.5	12	12	89	89			<0.2	<0.2	0.6	0.6					
					1.0	0.3	352	18.0	18.0	8.4	8.4	33.4	33.4	102.5	102.5	8.0	8.0	5.4	5.4	8	8	85	85			<0.2	<0.2	0.8	0.8					
IM3	Sunny	Rough	11:19	6.6	Surface	1.0	0.3	354	18.0	18.0	8.4	8.4	33.4	33.4	102.5	102.5	7.9	7.9	5.4	5.4	8	8	85	85	818772	805572	<0.2	<0.2	1.0	1.0				
						3.3	0.3	353	18.0	18.0	8.4	8.4	33.4	33.4	102.1	102.1	7.9	7.9	6.0	6.0	9	9	86	86			<0.2	<0.2	0.8	0.8				
						3.3	0.3	325	18.0	18.0	8.4	8.4	33.4	33.4	102.1	102.1	7.9	7.9	9.2	9.2	9	9	86	86			<0.2	<0.2	0.7	0.7				
					5.6	0.3	347	18.0	18.0	8.4	8.4	33.4	33.4	101.6	101.6	7.9	7.9	7.8	7.8	10	10	86	86			<0.2	<0.2	0.7	0.7					
					5.6	0.3	319	18.0	18.0	8.4	8.4	33.4	33.4	101.6	101.6	7.9	7.9	7.8	7.8	9	9	88	88			<0.2	<0.2	0.8	0.8					
					1.0	0.4	329	18.0	18.0	8.4	8.4	33.1	33.1	102.7	102.7	8.0	8.0	6.0	6.0	9	9	85	85			<0.2	<0.2	1.2	1.2					
IM4	Sunny	Rough	11:32	7.7	Surface	1.0	0.4	329	18.0	18.0	8.4	8.4	33.1	33.1	102.6	102.6	8.0	8.0	6.0	6.0	9	9	85	85	819712	804622	<0.2	<0.2	1.3	1.3				
						3.9	0.4	357	18.0	18.0	8.4	8.4	33.1	33.1	101.9	101.9	7.9	7.9	6.3	6.3	10	10	86	86			<0.2	<0.2	1.3	1.3				
						3.9	0.4	328	18.0	18.0	8.4	8.4	33.1	33.1	101.9	101.9	7.9	7.9	6.3	6.3	9	9	87	87			<0.2	<0.2	1.2	1.2				
					6.7	0.3	351	18.0	18.0	8.3	8.3	33.1	33.1	102.2	102.2	7.9	7.9	6.9	6.9	9	9	88	88			<0.2	<0.2	0.9	0.9					
					6.7	0.3	352	18.0	18.0	8.3	8.3	33.1	33.1	102.3	102.3	8.0	8.0	7.0	7.0	10	10	87	87			<0.2	<0.2	1.0	1.0					
					1.0	0.6	8	18.0	18.0	8.4	8.4	33.2	33.2	101.9	101.9	7.9	7.9	5.7	5.7	10	10	84	84			<0.2	<0.2	1.4	1.4					
IM5	Sunny	Rough	11:39	6.9	Surface	1.0	0.6	8	18.0	18.0	8.4	8.4	33.2	33.2	101.9	101.9	7.9	7.9	5.7	5.7	9	9	84	84	820751	804884	<0.2	<0.2	1.6	1.6				
						3.5	0.6	11	18.0	18.0	8.4	8.4	33.2	33.2	101.5	101.5	7.9	7.9	6.0	6.0	9	9	87	87			<0.2	<0.2	1.3	1.3				
						3.5	0.6	12	18.0	18.0	8.4	8.4	33.2	33.2	101.5	101.5	7.9	7.9	6.1	6.1	8	8	86	86			<0.2	<0.2	1.1	1.1				
					5.9	0.5	11	18.0	18.0	8.3	8.3	33.2	33.2	101.8	101.9	7.9	7.9	6.7	6.7	8	8	88	88			<0.2	<0.2	1.2	1.2					
					5.9	0.6	11	18.0	18.0	8.3	8.3	33.2	33.2	101.9	101.9	7.9	7.9	6.7	6.7	9	9	88	88			<0.2	<0.2	1.1	1.1					
					1.0	0.1	121	18.2	18.2	8.4	8.4	33.7	33.7	102.6	102.6	7.9	7.9	4.6	4.6	6	6	84	84											

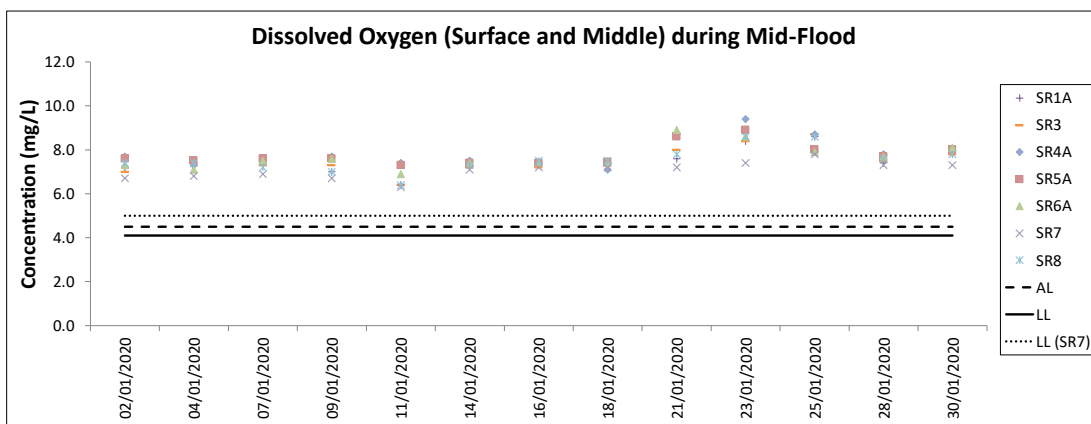
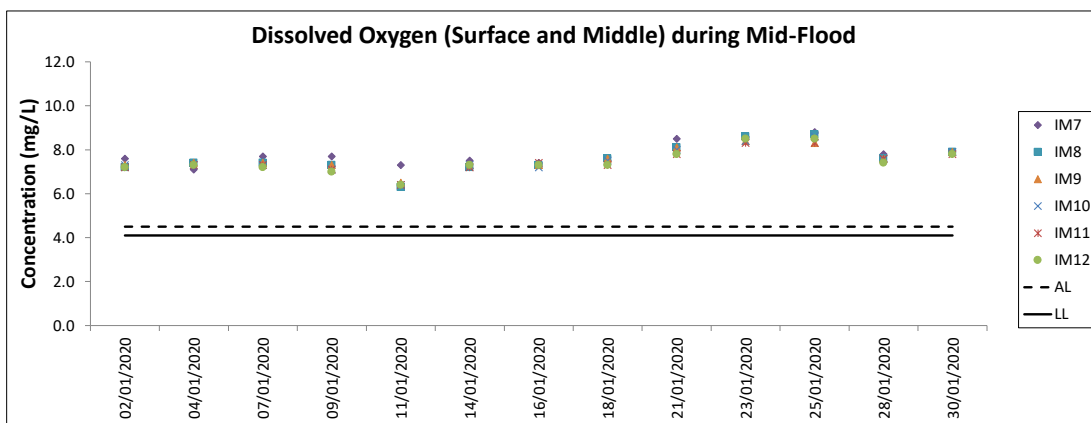
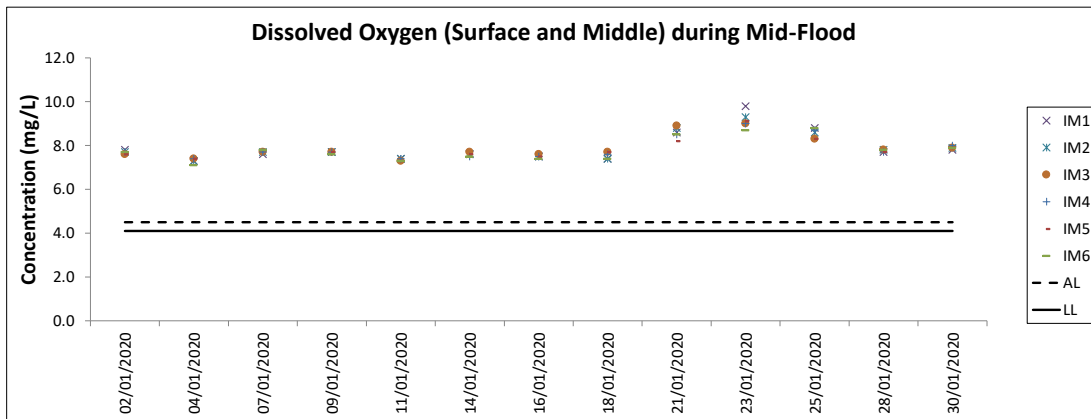
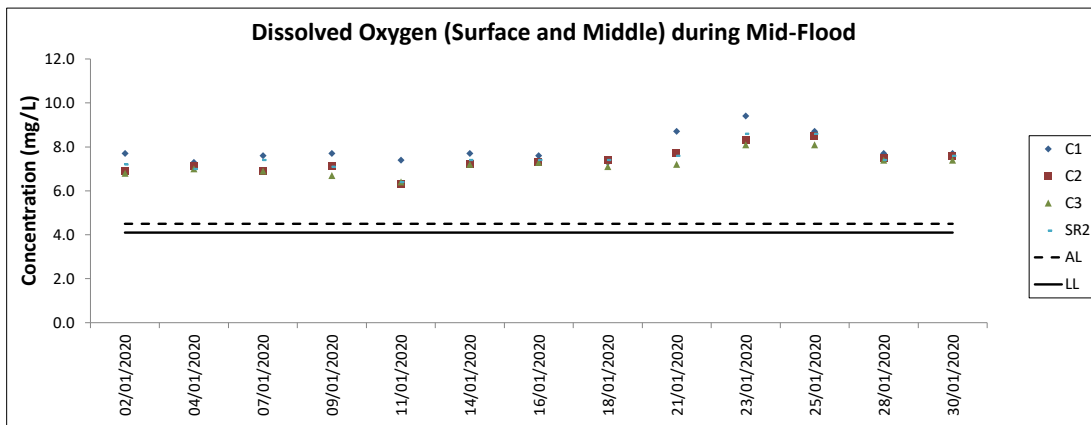
Expansion of Hong Kong International Airport into a Three-Runway System

Water Quality Monitoring

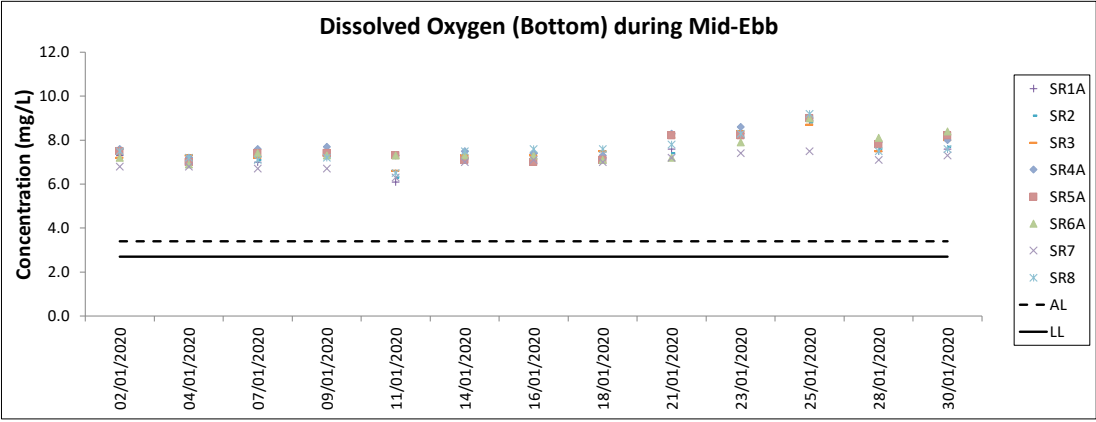
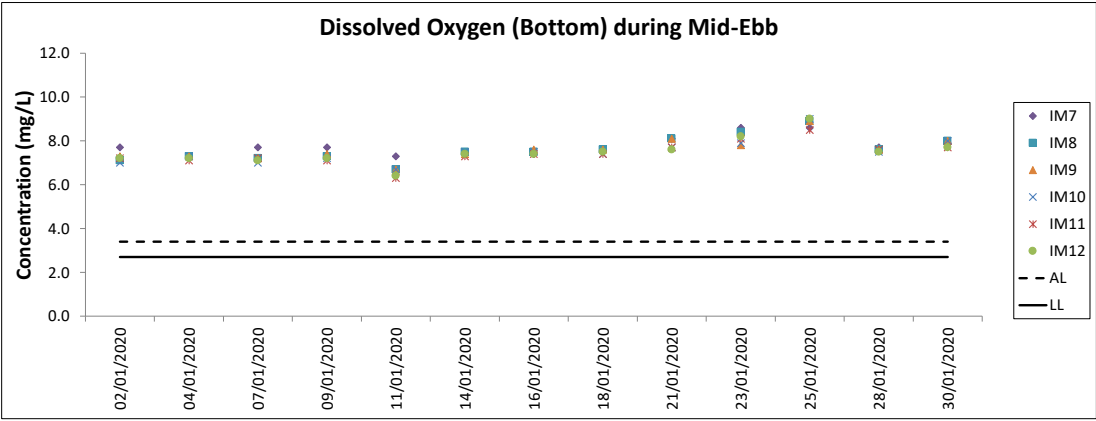
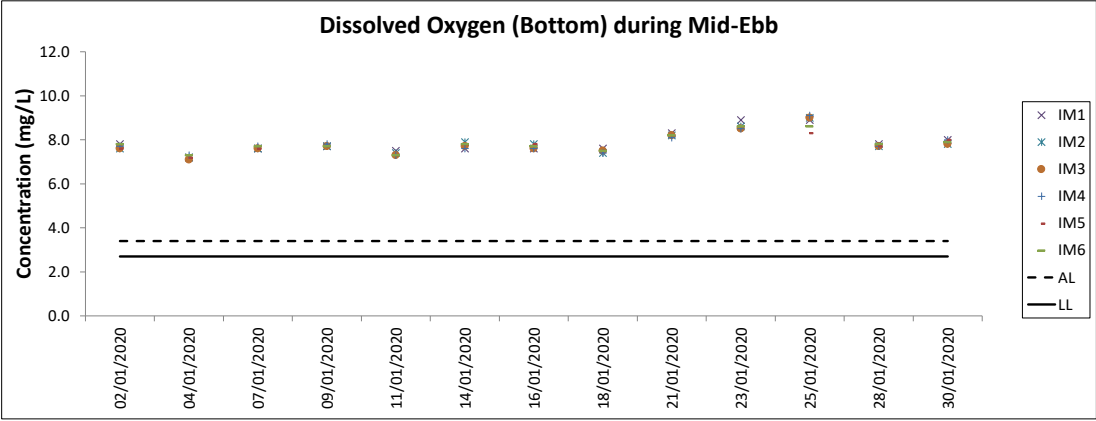
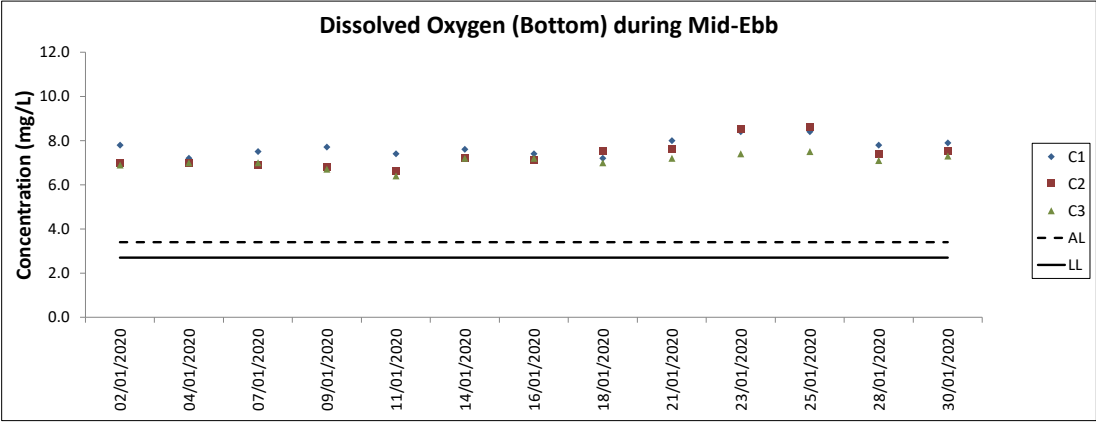
Water Quality Monitoring Results on 30 January 20 during Mid-Flood Tide

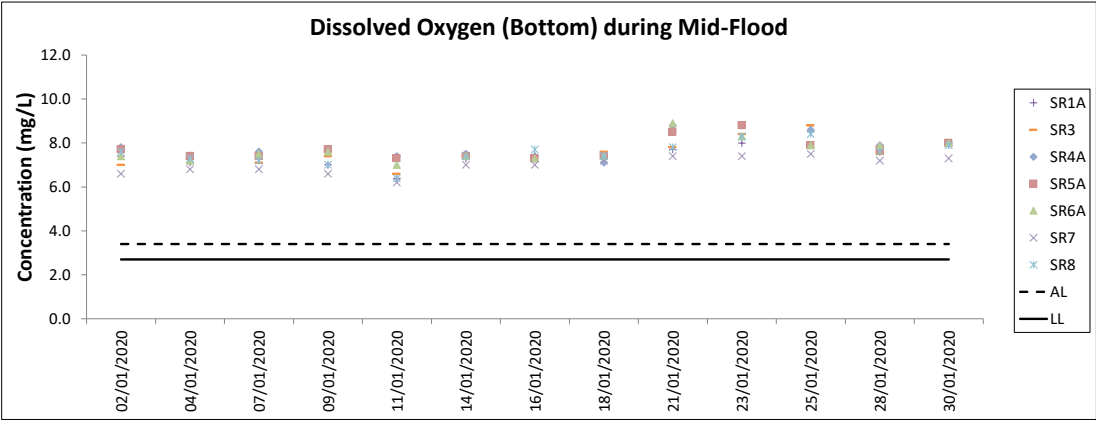
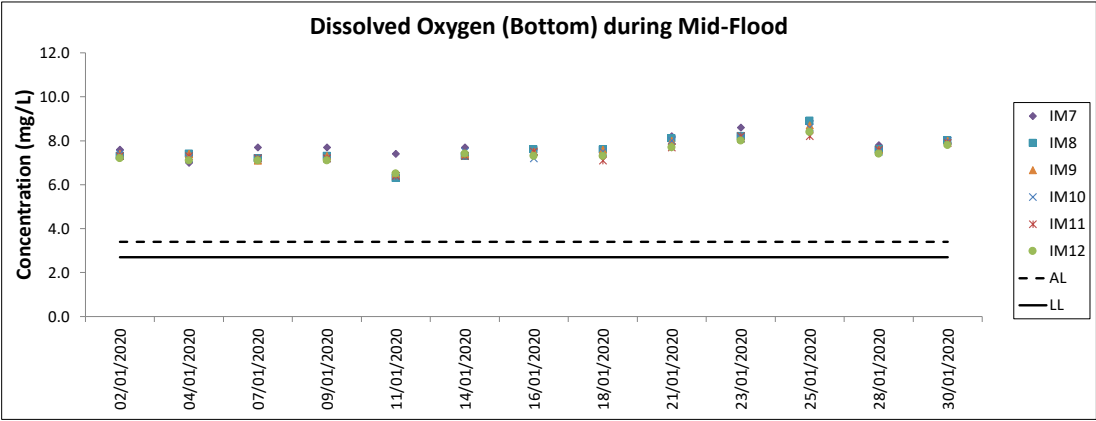
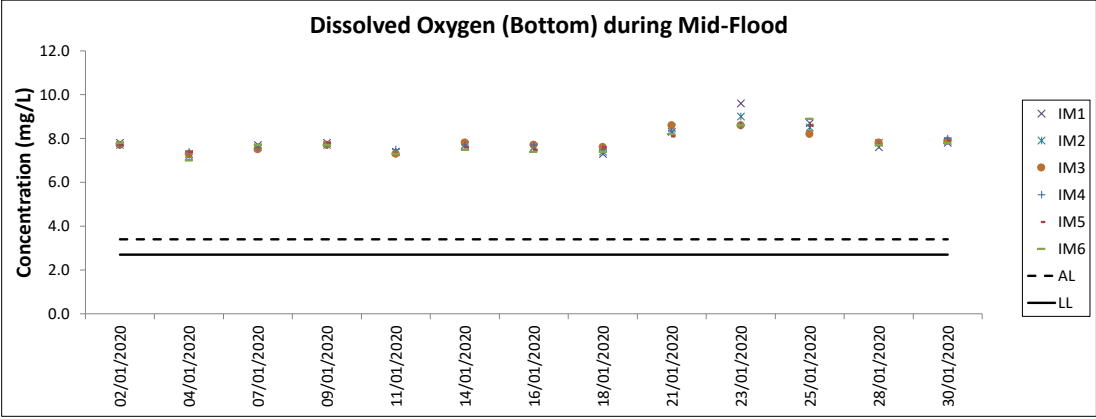
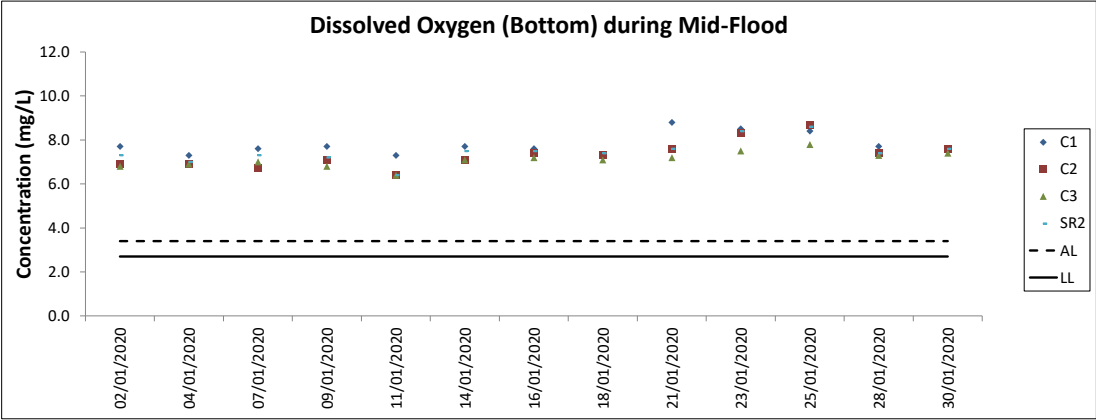
Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity (NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)				
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA	
IM9	Sunny	Moderate	10:52	7.0	Surface	1.0	0.4	277	17.8	17.8	8.1	8.1	31.8	31.8	101.0	101.0	7.9	7.9	5.9	7.8	9	10	85	88	822077	808794	<0.2	<0.2	1.5	1.2			
						1.0	0.5	277	17.8	17.8	8.1	8.1	31.8	31.8	101.0	101.0	7.9	7.9	6.2	7.8	10	10	86	88	<0.2	<0.2	1.3						
					Middle	3.5	0.3	272	17.8	17.8	8.1	8.1	31.7	31.7	101.0	101.0	7.9	7.9	7.7	7.8	9	10	88	89	<0.2	<0.2	1.0						
						3.5	0.4	279	17.8	17.8	8.1	8.1	31.7	31.7	101.1	101.1	7.9	7.9	8.2	7.8	10	10	89	89	<0.2	<0.2	0.8						
					Bottom	6.0	0.3	262	17.8	17.8	8.1	8.1	31.7	31.7	102.0	102.0	8.0	8.0	9.4	7.9	10	9	89	90	<0.2	<0.2	1.3						
						6.0	0.4	282	17.8	17.8	8.1	8.1	31.7	31.7	102.1	102.1	8.0	8.0	9.7	7.9	9	9	90	88	<0.2	<0.2	1.3						
IM10	Sunny	Moderate	10:44	7.4	Surface	1.0	0.5	302	18.0	18.0	8.1	8.1	31.8	31.8	100.6	100.6	7.9	7.9	4.4	5.5	9	9	85	86	822383	809800	<0.2	<0.2	0.7	0.7			
						1.0	0.6	302	18.0	18.0	8.1	8.1	31.8	31.8	100.6	100.6	7.9	7.9	4.4	5.5	10	9	86	87	<0.2	<0.2	0.5						
					Middle	3.7	0.6	302	17.9	17.9	8.1	8.1	31.8	31.8	100.2	100.3	7.9	7.9	5.6	7.8	9	9	87	88	<0.2	<0.2	0.7						
						3.7	0.6	312	17.9	17.9	8.1	8.1	31.8	31.8	100.3	100.3	7.9	7.9	5.8	7.8	8	8	88	88	<0.2	<0.2	0.8						
					Bottom	6.4	0.4	300	17.9	17.9	8.1	8.1	31.8	31.8	101.2	101.3	7.9	8.0	6.3	7.8	8	8	88	88	<0.2	<0.2	0.8						
						6.4	0.4	312	17.9	17.9	8.1	8.1	31.8	31.8	101.4	101.4	8.0	8.0	6.4	7.8	8	8	88	88	<0.2	<0.2	0.8						
IM11	Sunny	Moderate	10:33	8.4	Surface	1.0	0.5	284	17.9	17.9	8.1	8.1	31.8	31.8	100.1	100.1	7.8	7.8	5.0	6.4	10	9	85	85	822047	811452	<0.2	<0.2	0.8	0.9			
						1.0	0.6	293	17.9	17.9	8.1	8.1	31.8	31.8	100.1	100.1	7.8	7.8	5.1	6.4	7	7	87	87	<0.2	<0.2	0.9						
					Middle	4.2	0.5	282	17.9	17.9	8.1	8.1	31.8	31.8	100.0	100.0	7.8	7.8	8.0	7.9	8	8	87	87	<0.2	<0.2	0.8						
						4.2	0.5	288	17.9	17.9	8.1	8.1	31.8	31.8	100.0	100.0	7.8	7.9	8.4	7.9	8	8	87	88	<0.2	<0.2	0.8						
					Bottom	7.4	0.5	294	17.9	17.9	8.1	8.1	31.8	31.8	101.0	101.0	7.9	7.9	8.0	7.9	7	7	88	88	<0.2	<0.2	0.8						
						7.4	0.5	322	17.9	17.9	8.1	8.1	31.8	31.8	101.1	101.1	7.9	7.9	8.0	7.9	8	8	88	88	<0.2	<0.2	0.8						
IM12	Sunny	Moderate	10:28	8.5	Surface	1.0	0.6	282	18.2	18.2	8.1	8.1	31.7	31.7	100.1	100.1	7.8	7.8	2.7	3.6	8	7	84	84	821450	812053	<0.2	<0.2	0.7	0.8			
						1.0	0.6	302	18.2	18.2	8.1	8.1	31.7	31.7	100.1	100.1	7.8	7.8	2.7	3.6	7	7	84	85	<0.2	<0.2	0.8						
					Middle	4.3	0.4	295	18.1	18.1	8.1	8.1	31.8	31.8	99.6	99.6	7.8	7.8	3.5	3.6	7	7	85	85	<0.2	<0.2	0.7						
						4.3	0.5	315	18.1	18.1	8.1	8.1	31.8	31.8	99.6	99.6	7.8	7.8	3.7	3.6	6	5	85	88	<0.2	<0.2	0.8						
					Bottom	7.5	0.2	274	18.0	18.0	8.1	8.1	31.8	31.8	99.5	99.5	7.8	7.8	4.6	3.6	5	5	88	88	<0.2	<0.2	0.7						
						7.5	0.2	280	18.0	18.0	8.1	8.1	31.8	31.8	99.5	99.5	7.8	7.8	4.6	3.6	6	6	88	88	<0.2	<0.2	0.8						
SR1A	Sunny	Moderate	10:13	4.3	Surface	1.0	-	-	17.9	17.9	8.1	8.1	31.4	31.4	99.6	99.7	7.8	7.8	2.1	2.2	5	5	-	-	819982	812662	-	-	-	-			
						1.0	-	-	17.9	17.9	8.1	8.1	31.4	31.4	99.8	99.7	7.8	7.8	2.2	2.2	5	5	-	-	-	-	-	-	-	-			
					Middle	2.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
						2.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
					Bottom	3.3	-	-	17.9	17.9	8.1	8.1	31.4	31.3	100.8	100.9	7.9	7.9	2.2	2.2	5	5	-	-	-	-	-	-	-	-	-	-	-
						3.3	-	-	17.9	17.9	8.1	8.1	31.3	31.3	101.0	100.9	7.9	7.9	2.3	2.3	5	5	-	-	-	-	-	-	-	-	-	-	-
SR2	Sunny	Rough	10:01	4.5	Surface	1.0	0.4	304	18.4	18.4	8.1	8.1	31.9	31.9	97.4	97.4	7.6	7.6	5.1	5.0	7	7	84	84	821478	814184	<0.2	<0.2	1.0	0.9			
						1.0	0.4	328	18.4	18.4	8.1	8.1	31.9	31.9	97.4	97.4	7.6	7.6	5.1	5.0	7	7	84	84	<0.2	<0.2	0.9						
					Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
					Bottom	3.5	0.3	305	18.4	18.4	8.1	8.1	31.9	31.9	97.4	97.5	7.6	7.6	5.0	5.0	5	5	86	86	<0.2	<0.2	0.8						
						3.5	0.4	316	18.4	18.4	8.1	8.1	31.9	31.9	97.5	97.5	7.6	7.6	4.8	4.8	6	6	86	86	<0.2	<0.2	0.7						
SR3	Sunny	Moderate	11:04	8.3	Surface	1.0	0.1	254	18.3	18.3	8.1	8.1	31.7	31.7	99.7	99.8	7.8	7.8	2.6	2.9	6	7	-	-	822144	807573	-	-	-	-			
						1.0	0.1	259	18.3	18.3	8.1	8.1	31.7	31.7	99.8	99.8	7.8	7.8	2.7	2.9	7	7	-	-	-	-	-	-	-	-	-		
					Middle	4.2	0.2	308	18.2	18.2	8.1	8.1	31.8	31.8	99.8	99.8	7.8	7.8	3.0	3.0	6	6	-	-	-	-	-	-	-	-	-	-	
						4.2	0.2	333	18.2	18.2	8.1	8.1	31.8	31.8	99.8	99.8	7.8	7.8	3.0	3.0	6	6	-	-	-	-	-	-	-	-	-		
					Bottom	7.3	0.1	285	18.1	18.1	8.1	8.1	31.7	31.7	100.5	100.6	7.9	7.9	3.0	3.0	8	8	-	-	-	-	-	-	-	-	-	-	
						7.3	0.1	295	18.1	18.1	8.1	8.1	31.7	31.7	100.7	100.7	7.9	7.9	3.0	3.0	9	9	-	-	-	-	-	-	-	-	-		
SR4A	Sunny	Moderate	10:17	8.3	Surface	1.0	0.2	226	17.5	17.5	8.4	8.4	32.6	32.6	102.0	102.0	8.0	8.0	3.3	3.9	6	6	-	-	817176	807800	-	-	-	-			
						1.0	0.2	238	17.5	17.5	8.4	8.4	32.6	32.6	102.0	102.0	8.0	8.0	3.3	3.9	7	6	-	-	-	-	-	-	-	-			
					Middle	4.2	0.1	244	17.5	17.5	8.4	8.4	32.7	32.7	101.5	101.5	8.0	8.0	3.8	3.9	5	6	-	-	-	-	-	-	-	-	-		
						4.2	0.1	267	17.5	17.5	8.4	8.4	32.7	32.7	101.5	101.5	8.0	8.0	3.8	3.9	6	6	-	-	-	-	-	-	-	-			
					Bottom	7.3	0.1	243	17.5	17.5	8.4	8.4	32.8	32.8	101.3	101.3	8.0	8.0	4.5	4.5	6	6	-	-	-	-	-	-	-	-			
						7.3	0.1	244	17.5	17.5	8.4	8.4	32.8	32.8	101.3	101.3	8.0	8.0	4.5	4.5	6	6	-	-	-	-	-	-	-	-			
SR5A	Sunny	Moderate	09:59	3.6	Surface	1.0	0.3	290	17.6	17.6	8.4	8.4	32.3	32.3	101.6	101.6	8.0	8.0	4.9	5.2	8	9	-	-	816607	810697	-	-	-	-			
						1.0	0.3	298	17.6	17.6	8.4	8.4	32.3	32.3	101.6	101.6	8.0	8.0	4.8	5.2	9	9	-	-	-	-	-	-	-				
					Middle	-	-	-																									

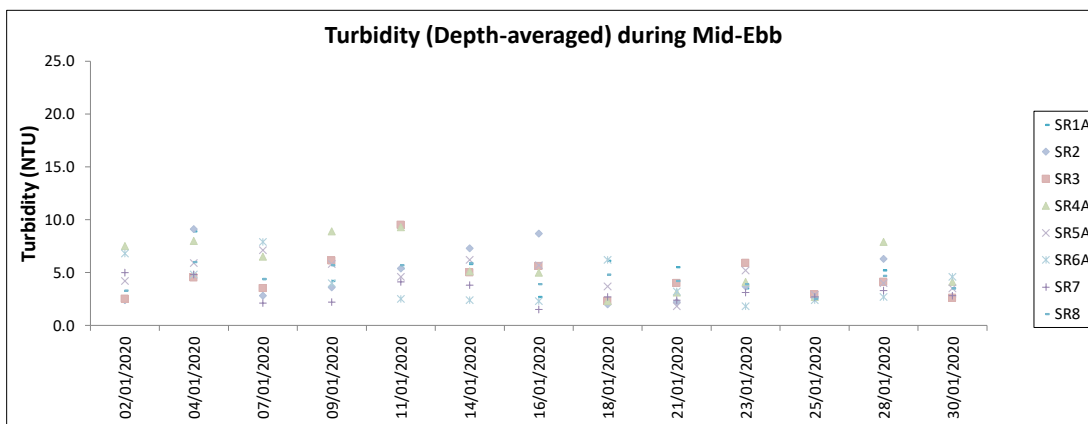
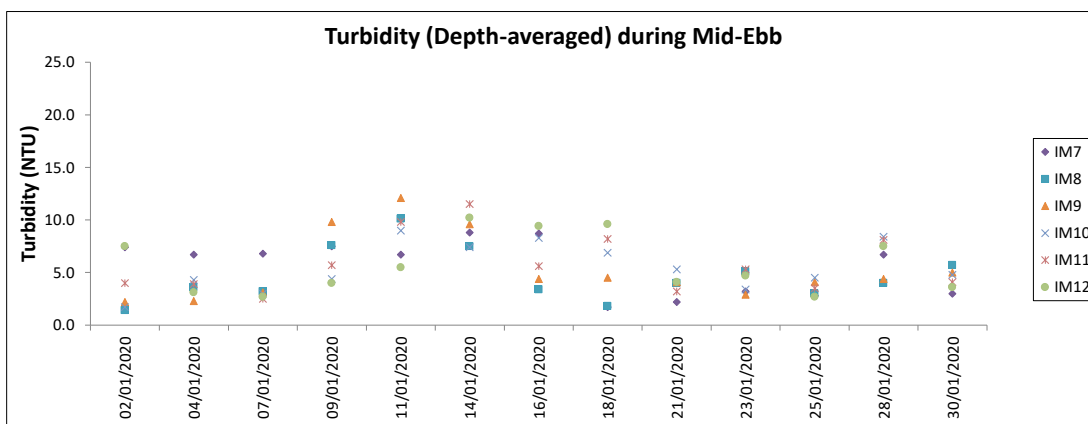
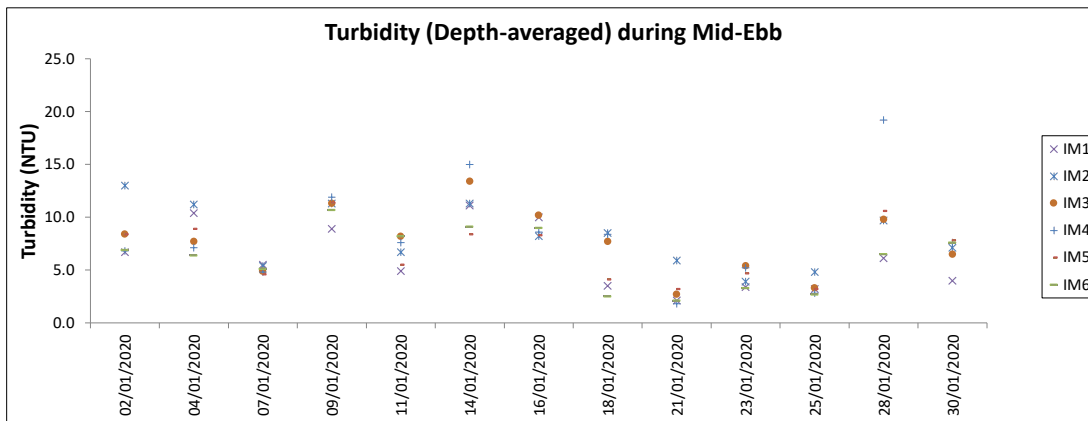
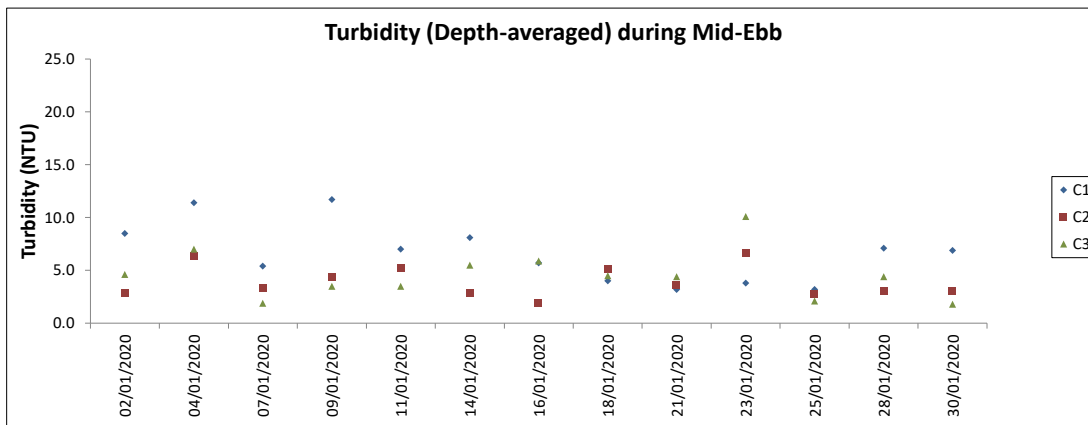




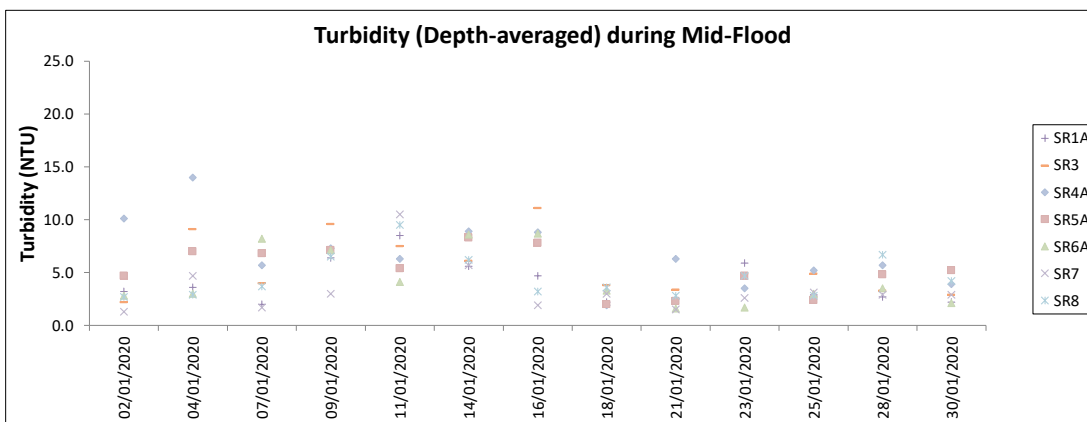
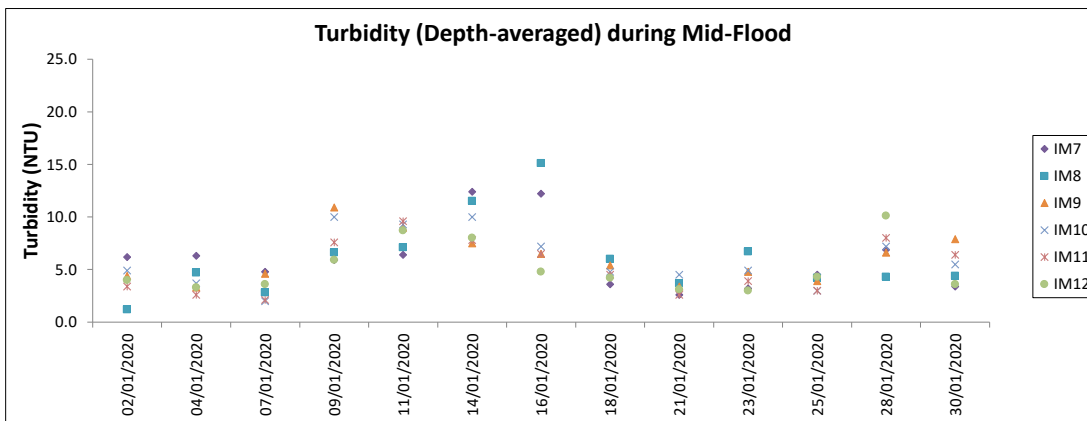
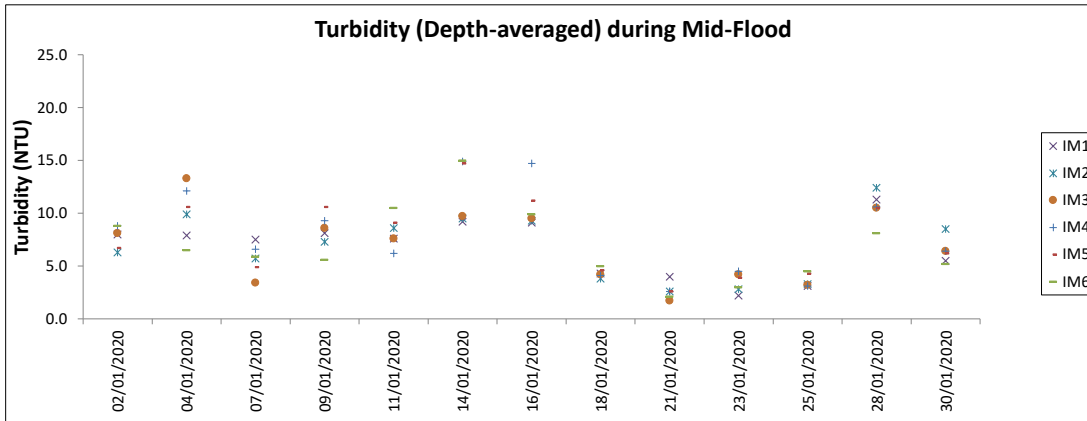
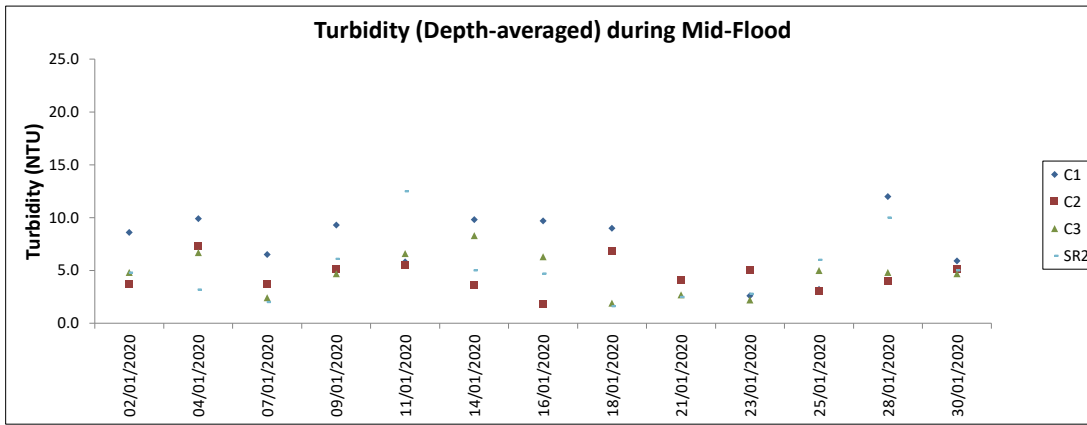




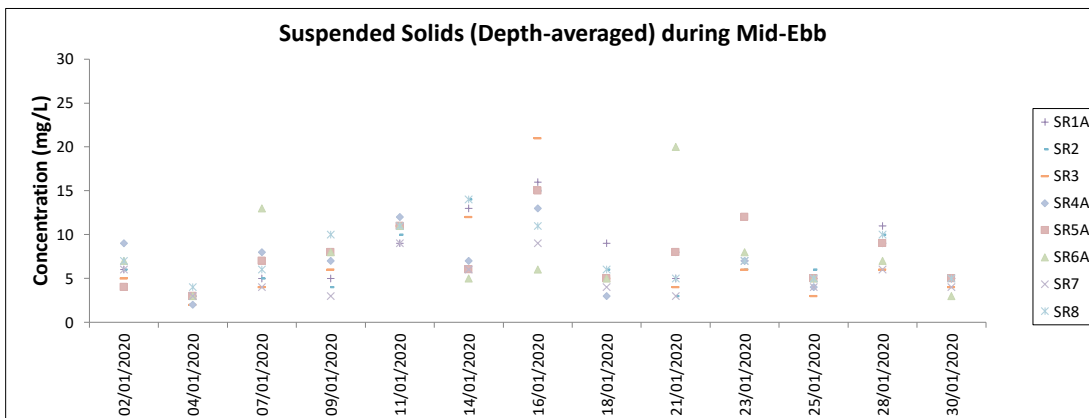
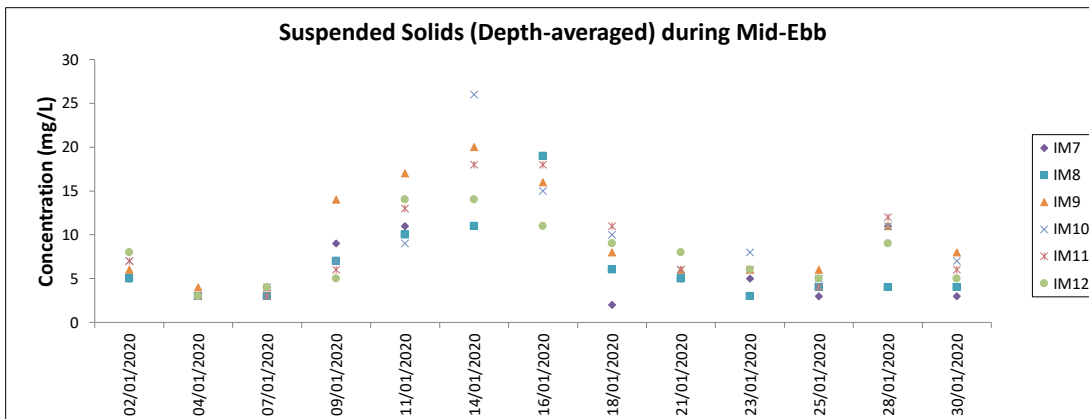
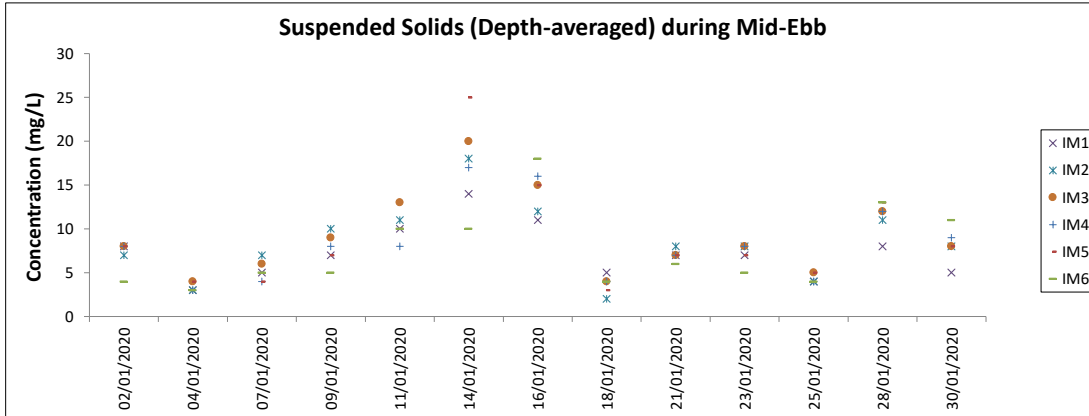
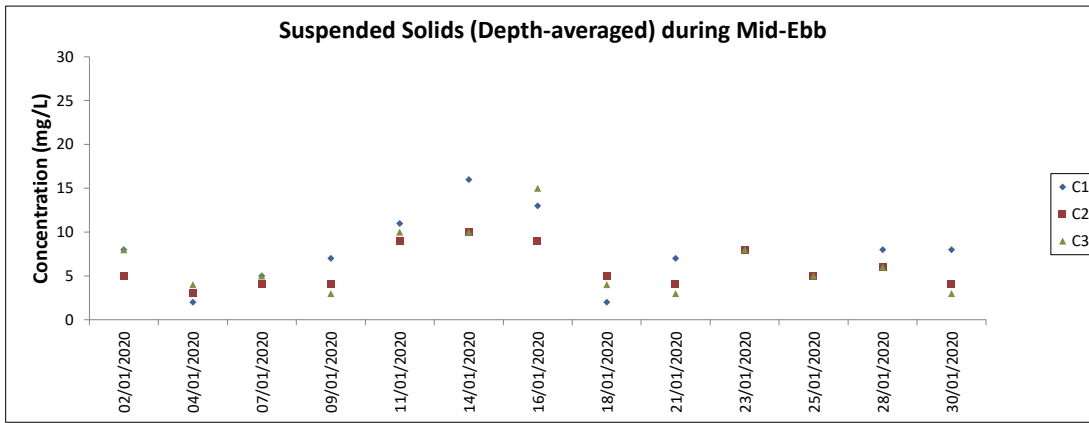




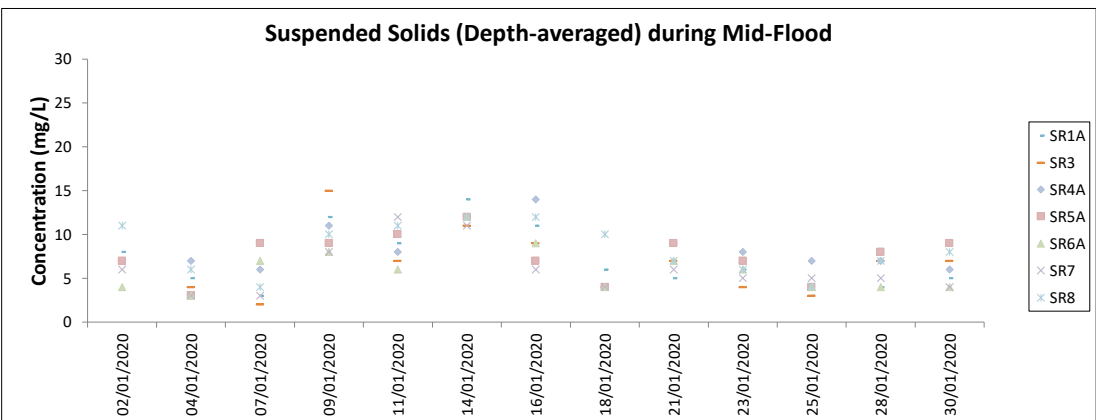
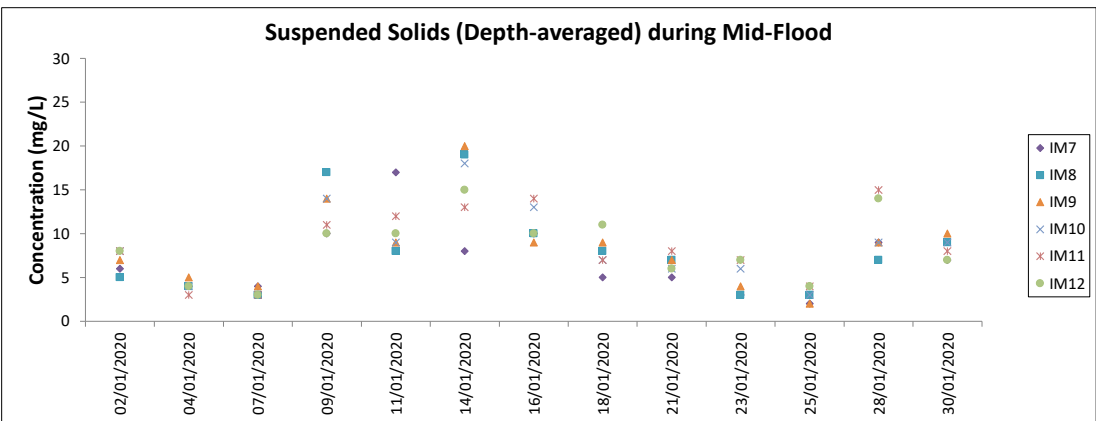
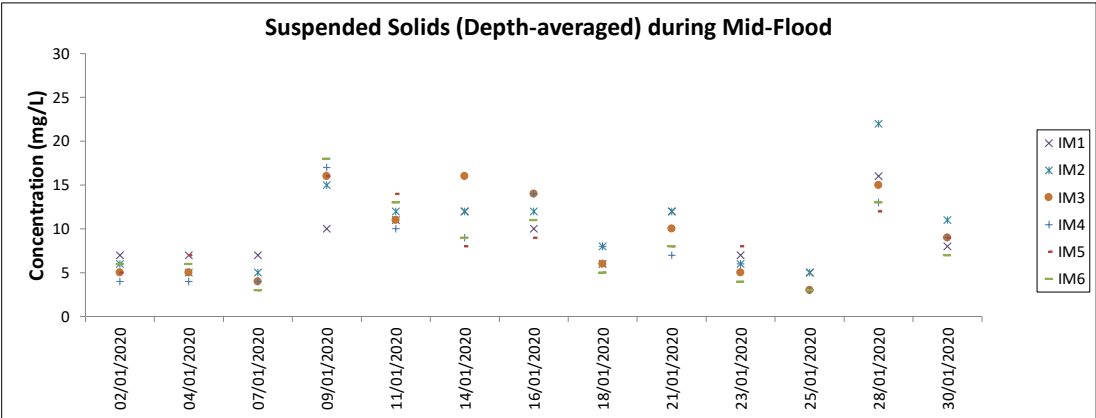
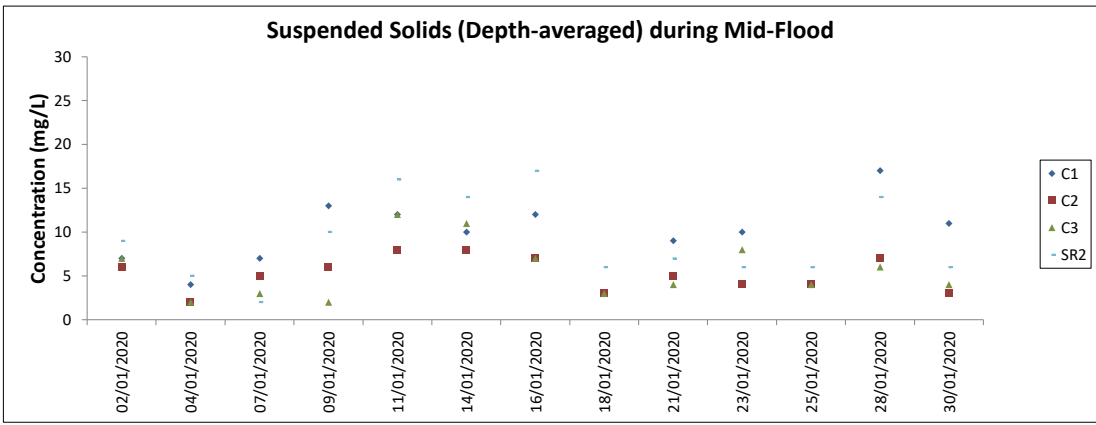
Note: The Action and Limit Level of turbidity can be referred to Table 4.2 of the monthly EM&A report.



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

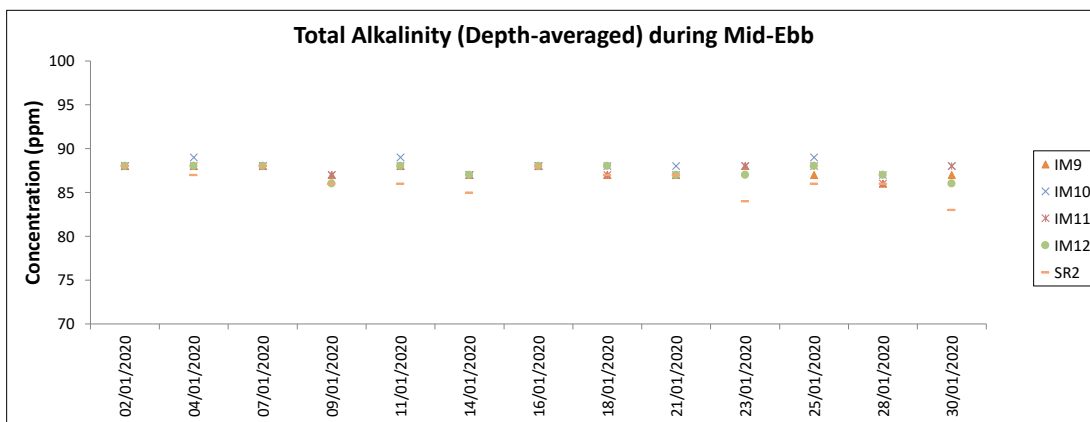
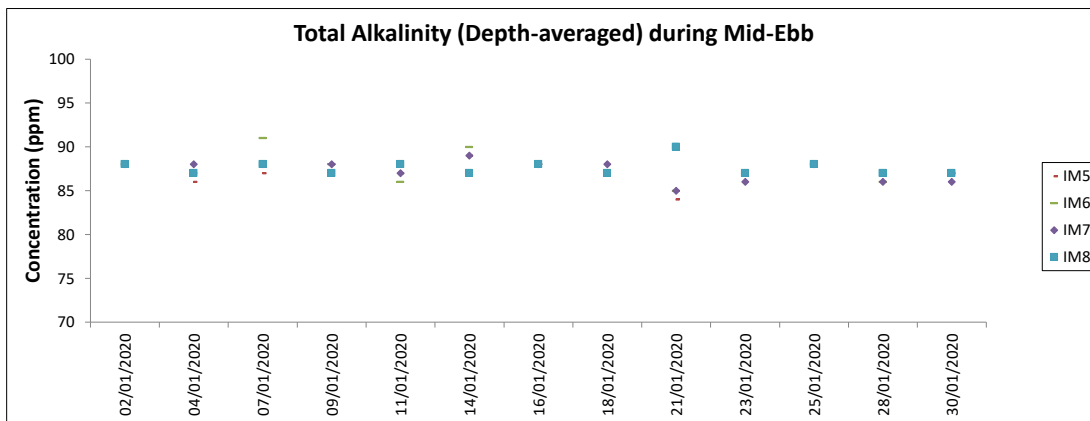
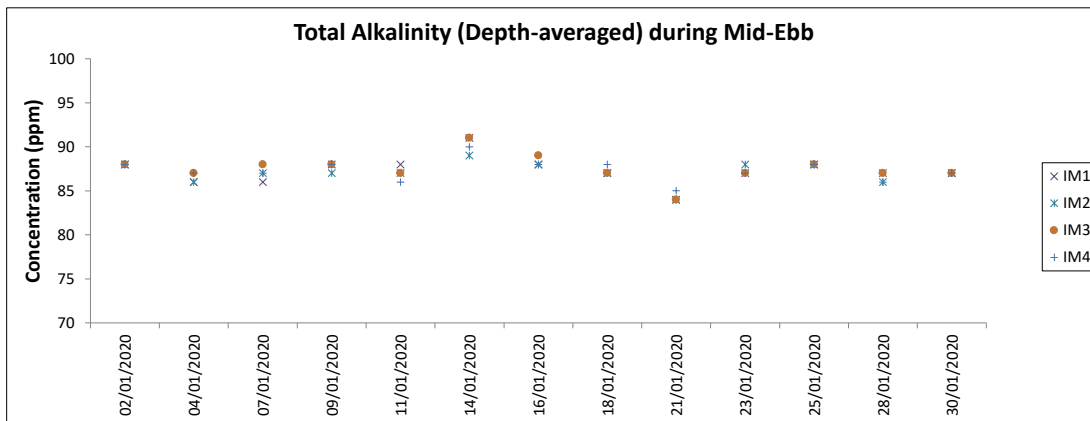
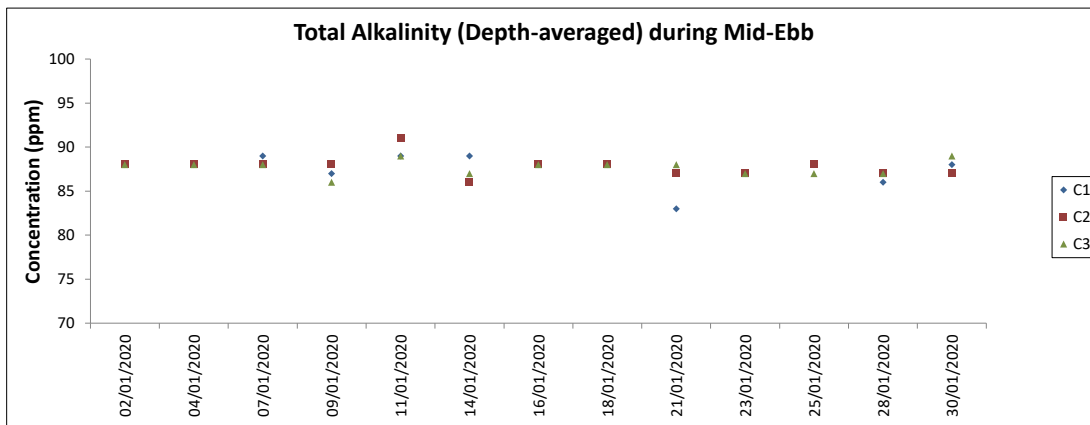


Note: The Action and Limit Level of suspended solids can be referred to Table 4.2 of the monthly EM&A report.

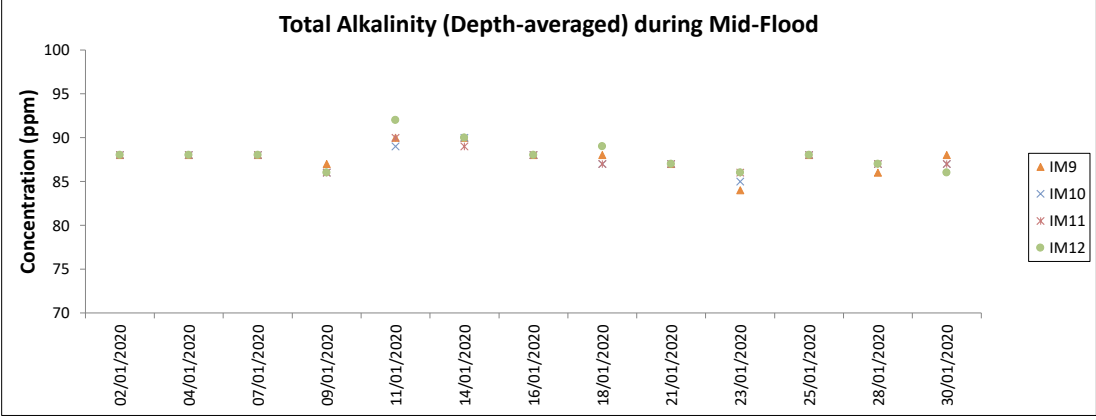
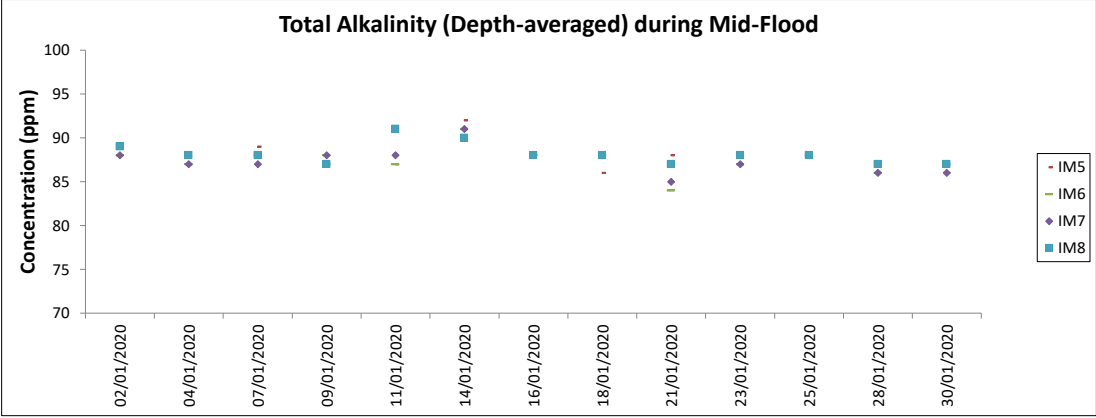
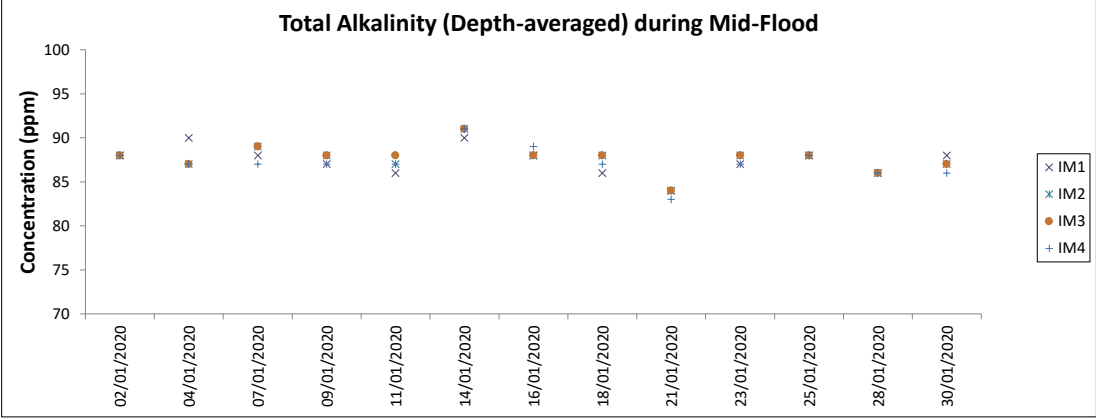
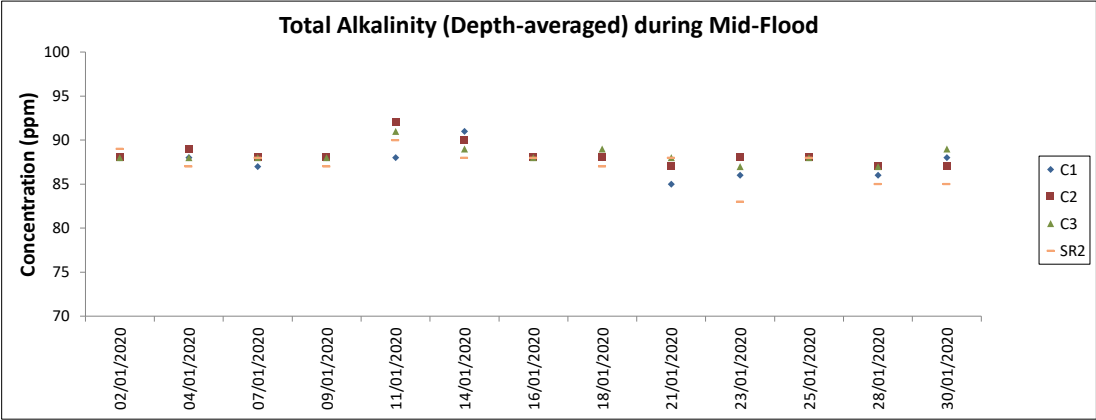


Note: The Action and Limit Level of suspended solids can be referred to Table 4.2 of the monthly EM&A report.

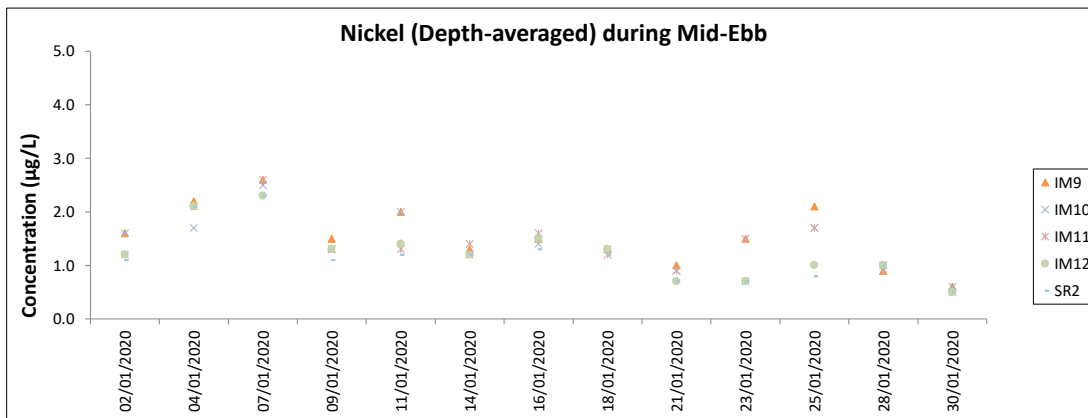
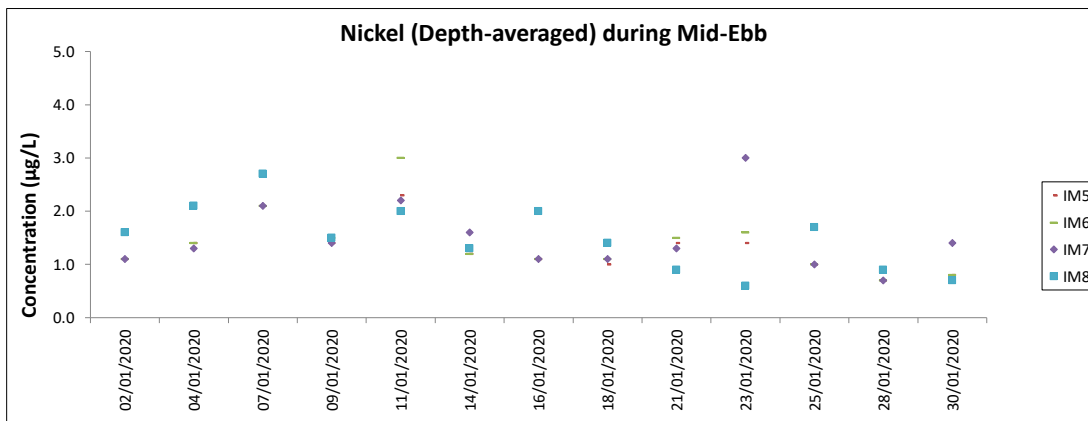
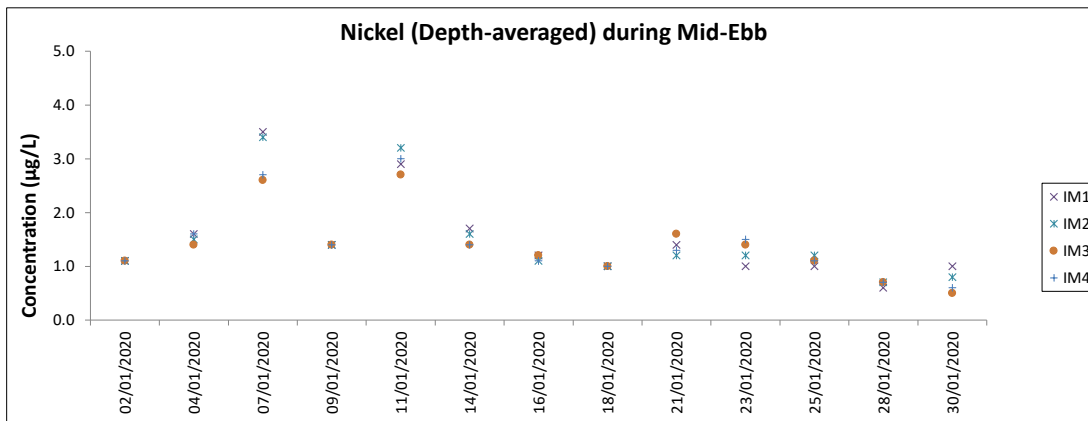
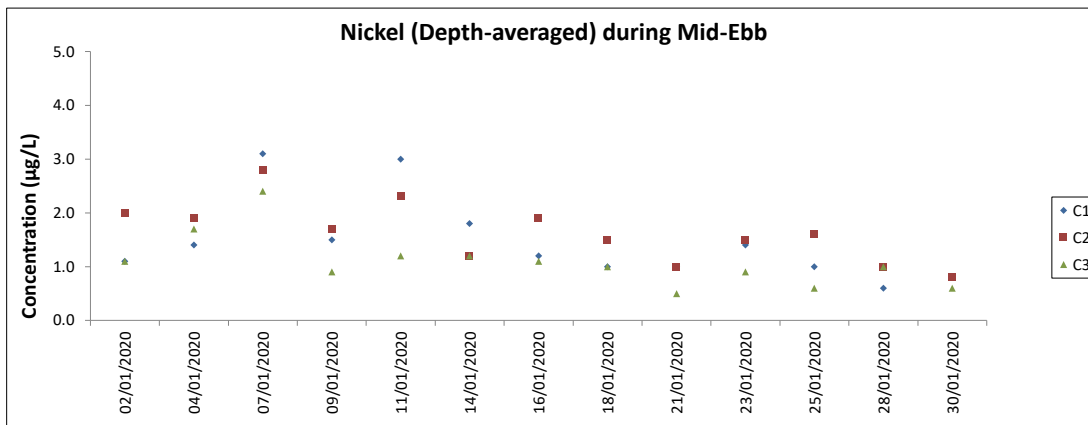




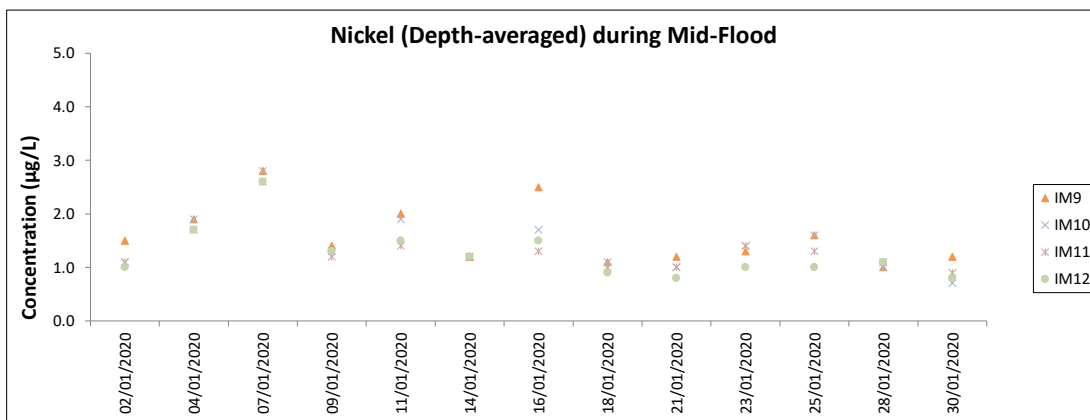
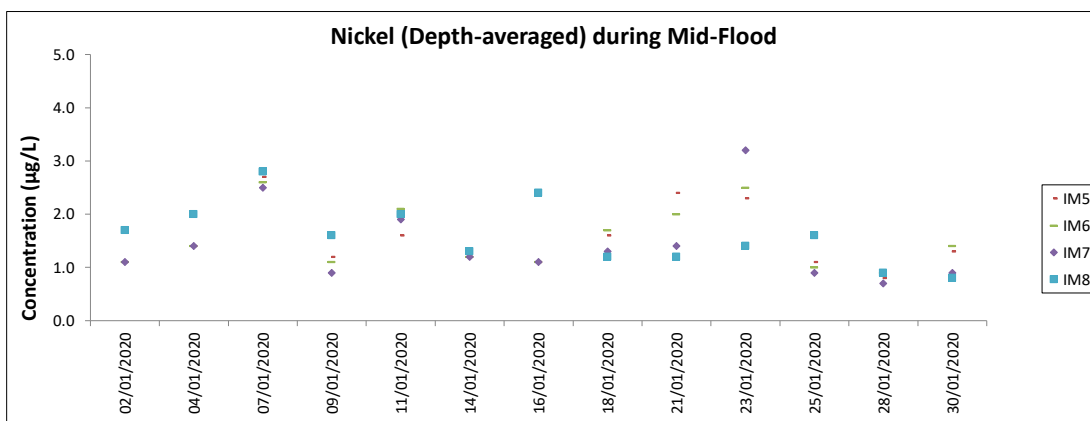
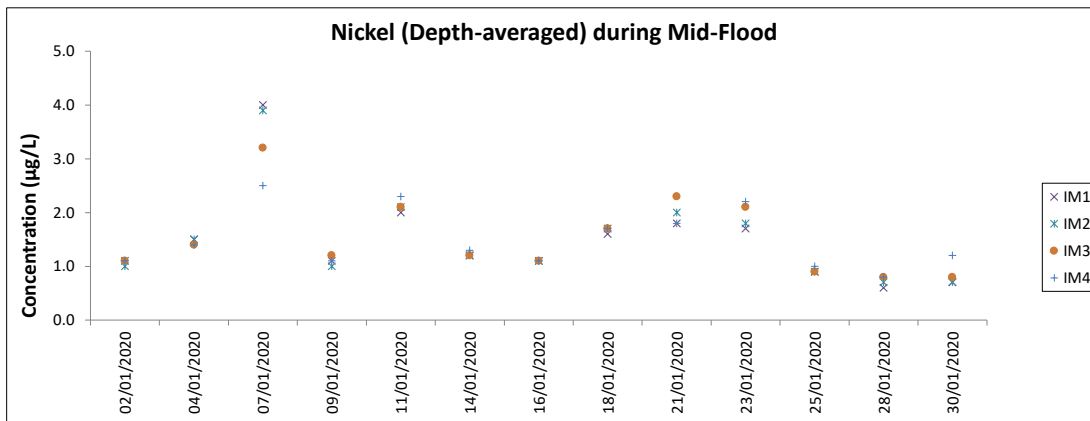
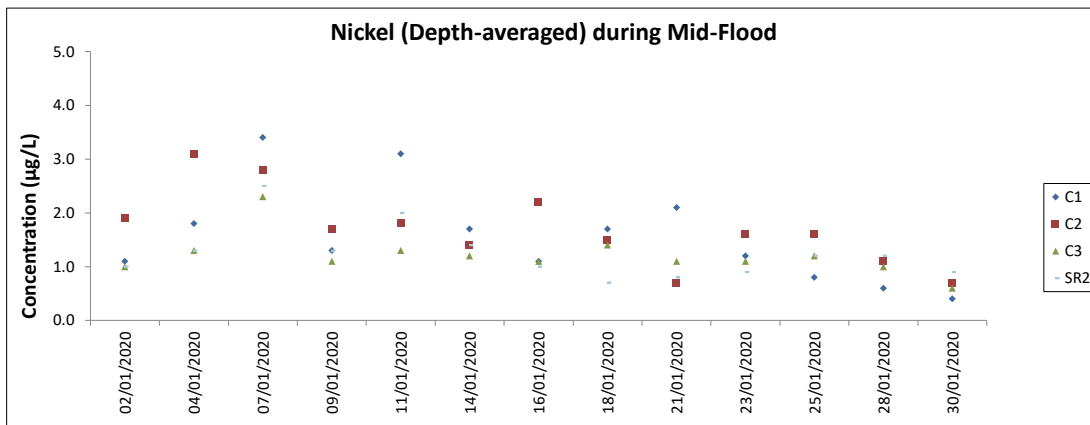
Note: The Action and Limit Level of total alkalinity can be referred to Table 4.2 of the monthly EM&A report.



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



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

## **Chinese White Dolphin Monitoring Results**

## CWD Small Vessel Line-transect Survey

## Survey Effort Data

DATE	AREA	BEAU	KM SEARCHED	SEASON	VESSEL	TYPE	P/S
7-Nov-19	NEL	2	5.760	AUTUMN	32166	3RS ET	P
7-Nov-19	NEL	3	27.790	AUTUMN	32166	3RS ET	P
7-Nov-19	NEL	4	3.700	AUTUMN	32166	3RS ET	P
7-Nov-19	NEL	2	2.990	AUTUMN	32166	3RS ET	S
7-Nov-19	NEL	3	7.460	AUTUMN	32166	3RS ET	S
8-Nov-19	NEL	2	11.100	AUTUMN	32166	3RS ET	P
8-Nov-19	NEL	3	25.840	AUTUMN	32166	3RS ET	P
8-Nov-19	NEL	2	6.500	AUTUMN	32166	3RS ET	S
8-Nov-19	NEL	3	4.160	AUTUMN	32166	3RS ET	S
11-Nov-19	NWL	2	56.549	AUTUMN	32166	3RS ET	P
11-Nov-19	NWL	3	2.200	AUTUMN	32166	3RS ET	P
11-Nov-19	NWL	4	2.900	AUTUMN	32166	3RS ET	P
11-Nov-19	NWL	2	11.051	AUTUMN	32166	3RS ET	S
11-Nov-19	NWL	4	0.900	AUTUMN	32166	3RS ET	S
12-Nov-19	AW	3	4.760	AUTUMN	32166	3RS ET	P
12-Nov-19	WL	2	3.570	AUTUMN	32166	3RS ET	P
12-Nov-19	WL	3	14.600	AUTUMN	32166	3RS ET	P
12-Nov-19	WL	4	2.600	AUTUMN	32166	3RS ET	P
12-Nov-19	WL	2	2.990	AUTUMN	32166	3RS ET	S
12-Nov-19	WL	3	5.730	AUTUMN	32166	3RS ET	S
12-Nov-19	WL	4	1.300	AUTUMN	32166	3RS ET	S
13-Nov-19	NWL	2	57.200	AUTUMN	32166	3RS ET	P
13-Nov-19	NWL	3	6.000	AUTUMN	32166	3RS ET	P
13-Nov-19	NWL	2	11.800	AUTUMN	32166	3RS ET	S
21-Nov-19	SWL	2	5.700	AUTUMN	32166	3RS ET	P
21-Nov-19	SWL	3	48.558	AUTUMN	32166	3RS ET	P
21-Nov-19	SWL	2	1.300	AUTUMN	32166	3RS ET	S
21-Nov-19	SWL	3	14.822	AUTUMN	32166	3RS ET	S
22-Nov-19	AW	1	2.900	AUTUMN	32166	3RS ET	P
22-Nov-19	AW	2	2.070	AUTUMN	32166	3RS ET	P
22-Nov-19	WL	2	6.843	AUTUMN	32166	3RS ET	P
22-Nov-19	WL	3	12.828	AUTUMN	32166	3RS ET	P
22-Nov-19	WL	2	1.987	AUTUMN	32166	3RS ET	S
22-Nov-19	WL	3	7.842	AUTUMN	32166	3RS ET	S
29-Nov-19	SWL	2	22.710	AUTUMN	32166	3RS ET	P
29-Nov-19	SWL	3	28.090	AUTUMN	32166	3RS ET	P
29-Nov-19	SWL	4	3.600	AUTUMN	32166	3RS ET	P
29-Nov-19	SWL	2	9.890	AUTUMN	32166	3RS ET	S
29-Nov-19	SWL	3	6.210	AUTUMN	32166	3RS ET	S
9-Dec-19	AW	3	4.860	WINTER	32166	3RS ET	P
9-Dec-19	WL	3	21.298	WINTER	32166	3RS ET	P
9-Dec-19	WL	4	2.800	WINTER	32166	3RS ET	P
9-Dec-19	WL	3	9.102	WINTER	32166	3RS ET	S
9-Dec-19	WL	4	0.900	WINTER	32166	3RS ET	S
10-Dec-19	SWL	2	30.840	WINTER	32166	3RS ET	P
10-Dec-19	SWL	3	23.200	WINTER	32166	3RS ET	P
10-Dec-19	SWL	2	7.990	WINTER	32166	3RS ET	S



DATE	AREA	BEAU	KM SEARCHED	SEASON	VESSEL	TYPE	P/S
10-Dec-19	SWL	3	8.100	WINTER	32166	3RS ET	S
13-Dec-19	NEL	2	1.500	WINTER	32166	3RS ET	P
13-Dec-19	NEL	3	35.350	WINTER	32166	3RS ET	P
13-Dec-19	NEL	4	0.400	WINTER	32166	3RS ET	P
13-Dec-19	NEL	3	10.350	WINTER	32166	3RS ET	S
16-Dec-19	NWL	2	37.711	WINTER	32166	3RS ET	P
16-Dec-19	NWL	3	25.070	WINTER	32166	3RS ET	P
16-Dec-19	NWL	2	8.660	WINTER	32166	3RS ET	S
16-Dec-19	NWL	3	2.860	WINTER	32166	3RS ET	S
17-Dec-19	SWL	2	46.934	WINTER	32166	3RS ET	P
17-Dec-19	SWL	3	8.050	WINTER	32166	3RS ET	P
17-Dec-19	SWL	2	12.746	WINTER	32166	3RS ET	S
17-Dec-19	SWL	3	3.170	WINTER	32166	3RS ET	S
18-Dec-19	AW	1	4.530	WINTER	32166	3RS ET	P
18-Dec-19	WL	1	10.510	WINTER	32166	3RS ET	P
18-Dec-19	WL	2	6.930	WINTER	32166	3RS ET	P
18-Dec-19	WL	1	4.850	WINTER	32166	3RS ET	S
18-Dec-19	WL	2	4.940	WINTER	32166	3RS ET	S
19-Dec-19	NEL	1	2.700	WINTER	32166	3RS ET	P
19-Dec-19	NEL	2	15.000	WINTER	32166	3RS ET	P
19-Dec-19	NEL	3	18.090	WINTER	32166	3RS ET	P
19-Dec-19	NEL	4	1.670	WINTER	32166	3RS ET	P
19-Dec-19	NEL	1	1.300	WINTER	32166	3RS ET	S
19-Dec-19	NEL	2	2.700	WINTER	32166	3RS ET	S
19-Dec-19	NEL	3	6.240	WINTER	32166	3RS ET	S
23-Dec-19	NWL	2	1.830	WINTER	32166	3RS ET	P
23-Dec-19	NWL	3	45.110	WINTER	32166	3RS ET	P
23-Dec-19	NWL	4	17.460	WINTER	32166	3RS ET	P
23-Dec-19	NWL	3	7.300	WINTER	32166	3RS ET	S
23-Dec-19	NWL	4	4.600	WINTER	32166	3RS ET	S
6-Jan-20	NEL	2	17.100	WINTER	32166	3RS ET	P
6-Jan-20	NEL	3	20.610	WINTER	32166	3RS ET	P
6-Jan-20	NEL	2	6.200	WINTER	32166	3RS ET	S
6-Jan-20	NEL	3	3.790	WINTER	32166	3RS ET	S
7-Jan-20	SWL	1	3.200	WINTER	32166	3RS ET	P
7-Jan-20	SWL	2	49.770	WINTER	32166	3RS ET	P
7-Jan-20	SWL	2	15.800	WINTER	32166	3RS ET	S
10-Jan-20	AW	3	4.860	WINTER	32166	3RS ET	P
10-Jan-20	WL	2	10.760	WINTER	32166	3RS ET	P
10-Jan-20	WL	3	5.190	WINTER	32166	3RS ET	P
10-Jan-20	WL	4	5.890	WINTER	32166	3RS ET	P
10-Jan-20	WL	2	4.910	WINTER	32166	3RS ET	S
10-Jan-20	WL	3	0.860	WINTER	32166	3RS ET	S
10-Jan-20	WL	4	2.340	WINTER	32166	3RS ET	S
13-Jan-20	NEL	2	15.540	WINTER	32166	3RS ET	P
13-Jan-20	NEL	3	21.900	WINTER	32166	3RS ET	P
13-Jan-20	NEL	2	4.160	WINTER	32166	3RS ET	S
13-Jan-20	NEL	3	6.200	WINTER	32166	3RS ET	S
15-Jan-20	AW	3	1.170	WINTER	32166	3RS ET	P

DATE	AREA	BEAU	KM SEARCHED	SEASON	VESSEL	TYPE	P/S
15-Jan-20	AW	4	4.000	WINTER	32166	3RS ET	P
15-Jan-20	WL	3	7.366	WINTER	32166	3RS ET	P
15-Jan-20	WL	4	8.390	WINTER	32166	3RS ET	P
15-Jan-20	WL	5	1.550	WINTER	32166	3RS ET	P
15-Jan-20	WL	3	8.514	WINTER	32166	3RS ET	S
15-Jan-20	WL	4	2.110	WINTER	32166	3RS ET	S
16-Jan-20	NWL	2	25.710	WINTER	32166	3RS ET	P
16-Jan-20	NWL	3	36.900	WINTER	32166	3RS ET	P
16-Jan-20	NWL	4	0.300	WINTER	32166	3RS ET	P
16-Jan-20	NWL	2	5.570	WINTER	32166	3RS ET	S
16-Jan-20	NWL	3	5.220	WINTER	32166	3RS ET	S
16-Jan-20	NWL	4	0.200	WINTER	32166	3RS ET	S
17-Jan-20	NWL	2	4.600	WINTER	32166	3RS ET	P
17-Jan-20	NWL	3	49.000	WINTER	32166	3RS ET	P
17-Jan-20	NWL	4	9.300	WINTER	32166	3RS ET	P
17-Jan-20	NWL	2	1.000	WINTER	32166	3RS ET	S
17-Jan-20	NWL	3	9.500	WINTER	32166	3RS ET	S
17-Jan-20	NWL	4	2.100	WINTER	32166	3RS ET	S
22-Jan-20	SWL	1	2.200	WINTER	32166	3RS ET	P
22-Jan-20	SWL	2	47.923	WINTER	32166	3RS ET	P
22-Jan-20	SWL	3	4.200	WINTER	32166	3RS ET	P
22-Jan-20	SWL	2	14.227	WINTER	32166	3RS ET	S
22-Jan-20	SWL	3	1.200	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
11-Nov-19	1	1051	CWD	3	NWL	2	142	ON	3RS ET	22.2844	113.8702	AUTUMN	NONE	P
11-Nov-19	2	1155	CWD	1	NWL	2	112	ON	3RS ET	22.3605	113.8777	AUTUMN	NONE	P
11-Nov-19	3	1339	CWD	2	NWL	2	55	ON	3RS ET	22.3884	113.8980	AUTUMN	NONE	P
12-Nov-19	1	1039	CWD	3	WL	3	20	ON	3RS ET	22.2617	113.8548	AUTUMN	NONE	S
21-Nov-19	1	1113	FP	1	SWL	3	55	ON	3RS ET	22.1514	113.9361	AUTUMN	NONE	P
21-Nov-19	2	1151	CWD	1	SWL	3	23	ON	3RS ET	22.2056	113.9194	AUTUMN	NONE	S
21-Nov-19	3	1223	FP	1	SWL	3	151	ON	3RS ET	22.1518	113.9175	AUTUMN	NONE	P
21-Nov-19	4	1503	CWD	4	SWL	3	50	ON	3RS ET	22.1965	113.8686	AUTUMN	NONE	P
22-Nov-19	1	1020	CWD	1	WL	2	39	ON	3RS ET	22.2694	113.8571	AUTUMN	NONE	P
22-Nov-19	2	1100	CWD	4	WL	3	484	ON	3RS ET	22.2498	113.8460	AUTUMN	NONE	P
22-Nov-19	3	1127	CWD	1	WL	3	988	ON	3RS ET	22.2446	113.8493	AUTUMN	NONE	S
22-Nov-19	4	1145	CWD	3	WL	3	175	ON	3RS ET	22.2377	113.8275	AUTUMN	NONE	S
22-Nov-19	5	1216	CWD	1	WL	3	112	ON	3RS ET	22.2258	113.8375	AUTUMN	NONE	S
22-Nov-19	6	1329	CWD	2	SWL	2	N/A	OFF	3RS ET	22.1948	113.8524	AUTUMN	NONE	N/A
29-Nov-19	1	1321	FP	3	SWL	3	294	ON	3RS ET	22.1638	113.8972	AUTUMN	NONE	P
9-Dec-19	1	1101	CWD	2	WL	3	438	ON	3RS ET	22.2569	113.8371	WINTER	NONE	S
10-Dec-19	1	1114	FP	2	SWL	3	76	ON	3RS ET	22.1592	113.9281	WINTER	NONE	P
10-Dec-19	2	1450	CWD	1	SWL	2	216	ON	3RS ET	22.1958	113.8589	WINTER	GILLNETTER	P
10-Dec-19	3	1526	CWD	3	SWL	2	182	ON	3RS ET	22.1885	113.8492	WINTER	NONE	P
16-Dec-19	1	1033	CWD	1	NWL	3	107	ON	3RS ET	22.3041	113.8700	WINTER	NONE	P
16-Dec-19	2	1213	CWD	2	NWL	2	219	ON	3RS ET	22.3934	113.8876	WINTER	NONE	P
16-Dec-19	3	1227	CWD	3	NWL	2	301	ON	3RS ET	22.3882	113.8871	WINTER	NONE	P
17-Dec-19	1	1132	FP	1	SWL	2	187	ON	3RS ET	22.1704	113.8785	WINTER	NONE	P
17-Dec-19	2	1336	FP	2	SWL	2	199	ON	3RS ET	22.1451	113.9083	WINTER	NONE	P
17-Dec-19	3	1435	FP	2	SWL	2	472	ON	3RS ET	22.1677	113.9269	WINTER	NONE	P
18-Dec-19	1	0954	CWD	2	WL	1	4	ON	3RS ET	22.3045	113.8613	WINTER	NONE	P
18-Dec-19	2	1036	CWD	5	WL	2	107	ON	3RS ET	22.2605	113.8468	WINTER	NONE	P
18-Dec-19	3	1104	CWD	8	WL	1	18	ON	3RS ET	22.2538	113.8347	WINTER	NONE	S
18-Dec-19	4	1153	CWD	1	WL	2	40	ON	3RS ET	22.2232	113.8349	WINTER	NONE	P
18-Dec-19	5	1212	CWD	2	WL	2	5	ON	3RS ET	22.2182	113.8196	WINTER	NONE	S
7-Jan-20	1	1033	FP	1	SWL	2	N/A	OFF	3RS ET	22.2218	113.9359	WINTER	NONE	P
7-Jan-20	2	1123	CWD	2	SWL	2	849	ON	3RS ET	22.1646	113.9274	WINTER	NONE	P

DATE	STG #	TIME	CWD/FP	GP SZ	AREA	BEAU	PSD	EFFORT	TYPE	DEC LAT	DEC LON	SEASON	BOAT ASSOC.	P/S
7-Jan-20	3	1501	CWD	7	SWL	2	715	ON	3RS ET	22.1943	113.8589	WINTER	NONE	P
7-Jan-20	4	1543	CWD	2	SWL	2	26	ON	3RS ET	22.1879	113.8490	WINTER	NONE	P
10-Jan-20	1	1023	CWD	5	WL	2	16	ON	3RS ET	22.2756	113.8503	WINTER	NONE	S
10-Jan-20	2	1052	CWD	3	WL	2	140	ON	3RS ET	22.2643	113.8572	WINTER	NONE	S
10-Jan-20	3	1153	CWD	8	WL	2	579	ON	3RS ET	22.2347	113.8242	WINTER	NONE	S
15-Jan-20	1	1041	CWD	7	WL	3	304	ON	3RS ET	22.2688	113.8490	WINTER	NONE	P
15-Jan-20	2	1109	CWD	5	WL	3	456	ON	3RS ET	22.2607	113.8495	WINTER	NONE	P
15-Jan-20	3	1132	CWD	6	WL	4	12	ON	3RS ET	22.2503	113.8441	WINTER	NONE	P
15-Jan-20	4	1209	CWD	3	WL	3	1864	ON	3RS ET	22.2257	113.8374	WINTER	NONE	S
16-Jan-20	1	1339	CWD	1	NWL	2	861	ON	3RS ET	22.3359	113.9111	WINTER	NONE	S
22-Jan-20	1	1101	FP	1	SWL	2	69	ON	3RS ET	22.1433	113.9273	WINTER	NONE	S
22-Jan-20	2	1115	FP	2	SWL	2	149	ON	3RS ET	22.1671	113.9278	WINTER	NONE	P
22-Jan-20	3	1159	FP	6	SWL	2	39	ON	3RS ET	22.1591	113.9176	WINTER	NONE	P
22-Jan-20	4	1319	FP	1	SWL	2	35	ON	3RS ET	22.1582	113.8978	WINTER	NONE	P
22-Jan-20	5	1517	CWD	2	SWL	2	362	ON	3RS ET	22.1881	113.8492	WINTER	NONE	P
22-Jan-20	6	1531	CWD	2	SWL	2	82	ON	3RS ET	22.1898	113.8490	WINTER	NONE	P

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

Notes:

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

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

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

A total of 415.150 km of survey effort was collected under Beaufort Sea State 3 or below with favourable visibility; total no. of 12 on-effort sightings and total number of 47 dolphins from on-effort sightings were collected under such condition. Calculation of the encounter rates in January 2020 are shown as below:

Encounter Rate by Number of Dolphin Sightings (STG) in January 2020

$$STG = \frac{12}{415.150} \times 100 = 2.89$$

Encounter Rate by Number of Dolphins (ANI) in January 2020

$$ANI = \frac{47}{415.150} \times 100 = 11.32$$

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

A total of 1284.771 km of survey effort was collected under Beaufort Sea State 3 or below with favourable visibility; total no. of 34 on-effort sightings and total number of 101 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)

$$STG = \frac{34}{1284.771} \times 100 = 2.65$$

Running Quarterly Encounter Rate by Number of Dolphins (ANI)

$$ANI = \frac{101}{1284.771} \times 100 = 7.86$$

CWD Small Vessel Line-transect Survey

Photo Identification



SLMM037\_20200107\_2\_6



WLMM056\_20200107\_2\_3



SLMM014\_20200107\_3\_3



SLMM049\_20200107\_3\_4



SLMM053\_20200107\_3\_2



WLMM056\_20200107\_3\_5

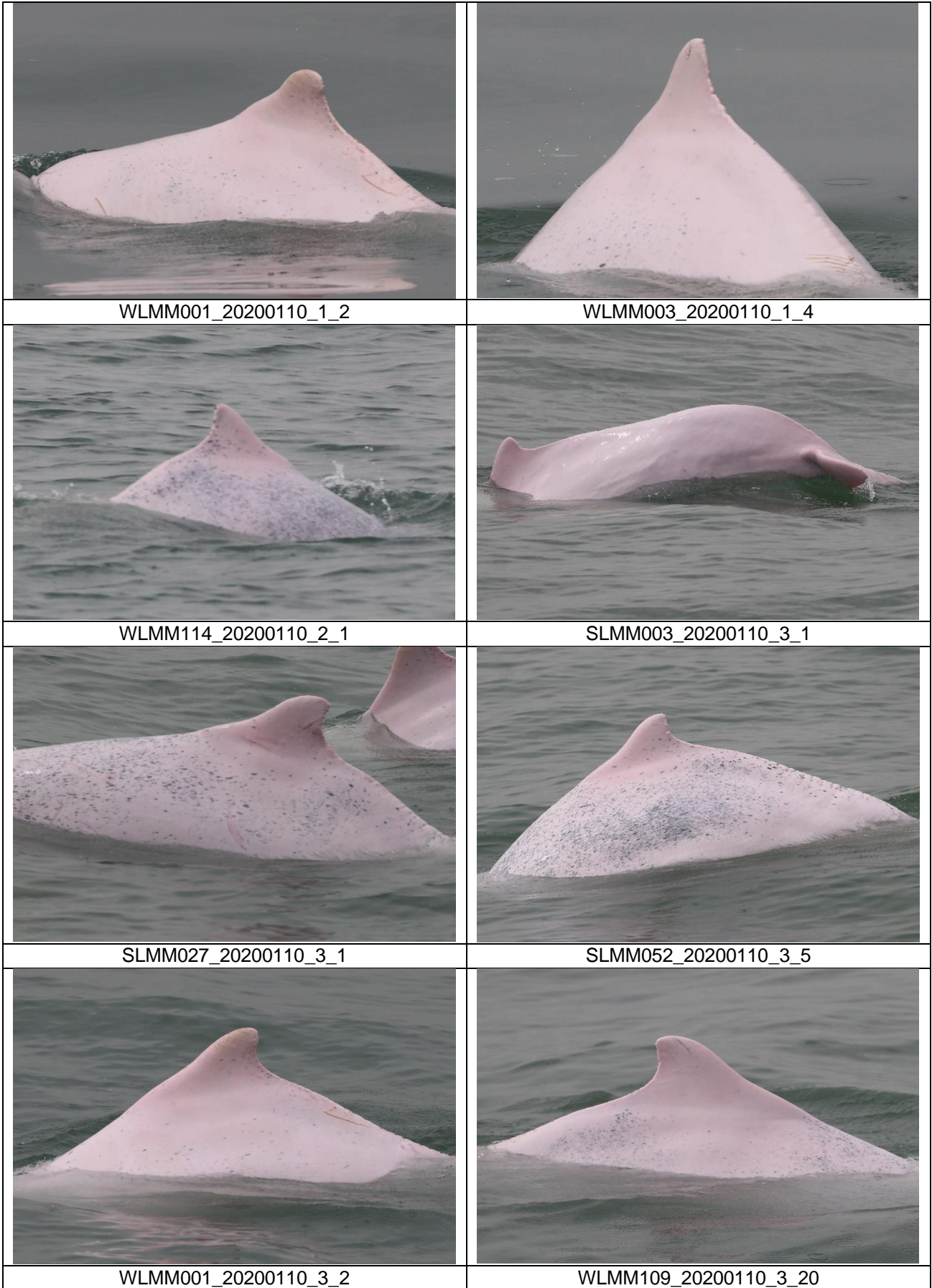


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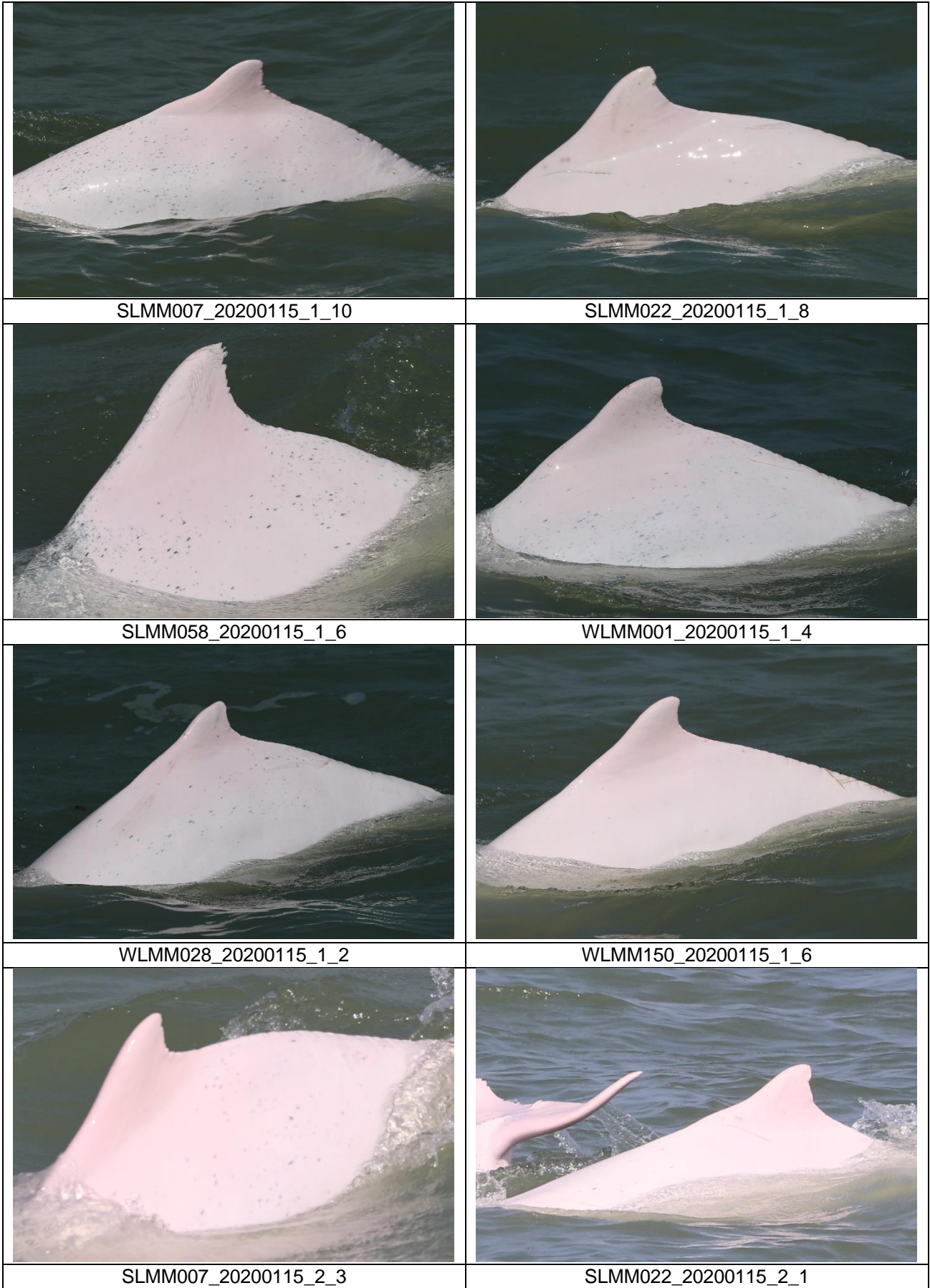


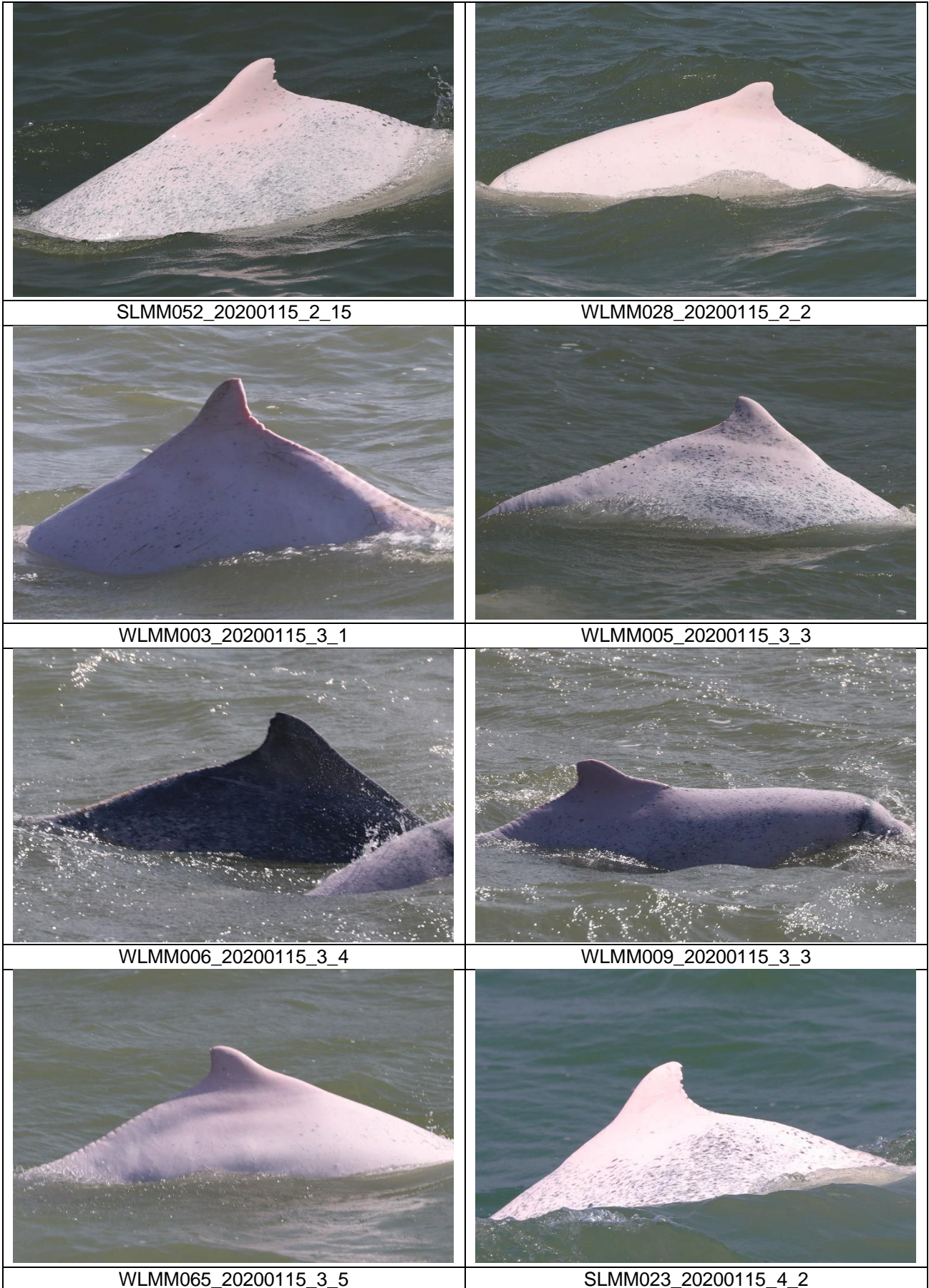
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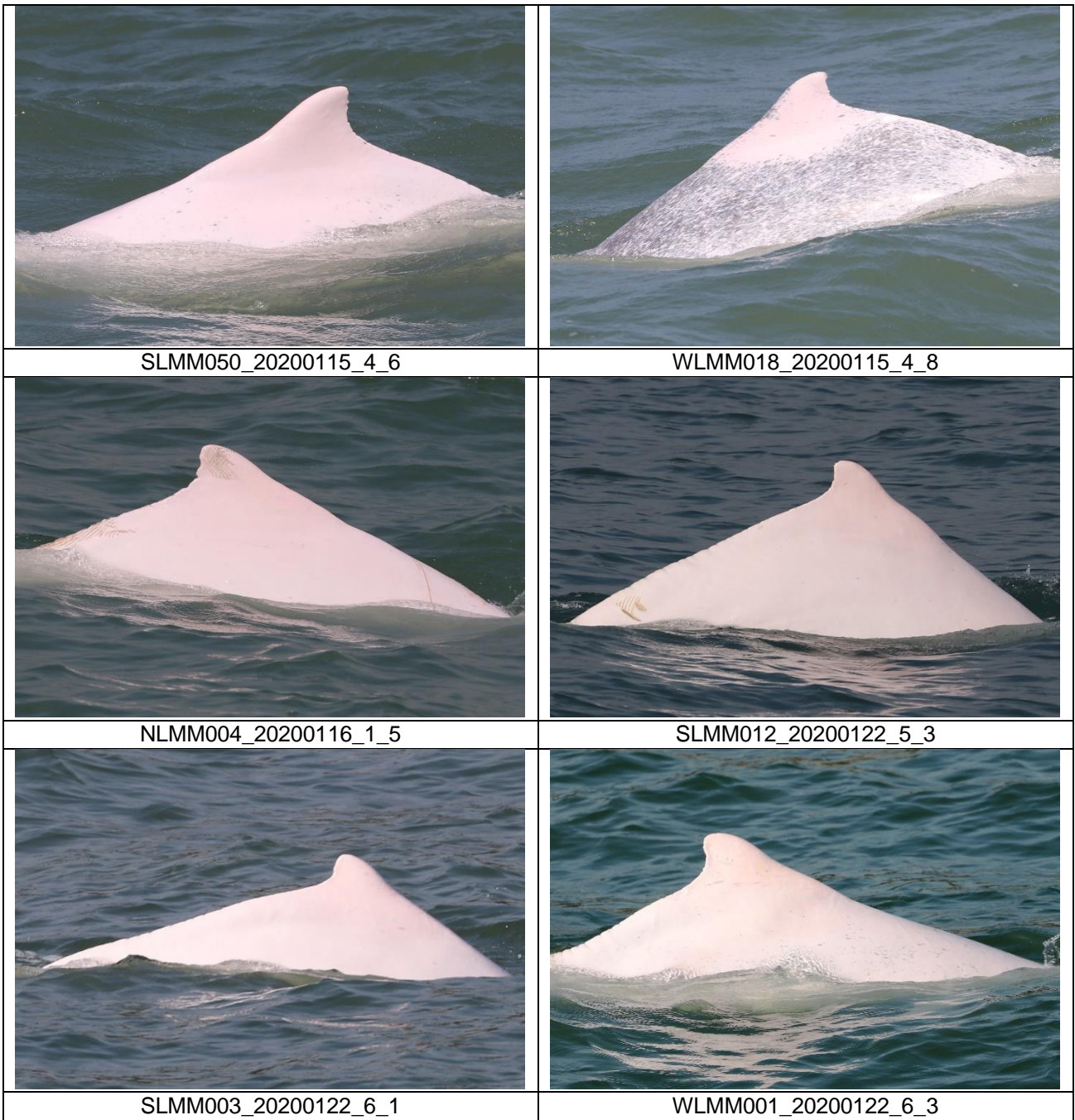












**CWD Land-based Theodolite Tracking Survey****CWD Groups by Survey Date**

<b>Date</b>	<b>Station</b>	<b>Start Time</b>	<b>End Time</b>	<b>Duration</b>	<b>Beaufort Range</b>	<b>Visibility</b>	<b>No. of Focal Follow Dolphin Groups Tracked</b>	<b>Dolphin Group Size Range</b>
8/Jan/20	Sha Chau	8:52	14:52	6:00	2	2-3	0	-
14/Jan/20	Lung Kwu Chau	9:20	15:20	6:00	2-3	2	3	1-3

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

## **Appendix E. Calibration Certificates**



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

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

## REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Report No. : AJ010132  
Date of Issue : 24 January 2019  
Page No. : 1 of 2

### PART A – CUSTOMER INFORMATION

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

### PART B – DESCRIPTION

Name of Equipment : YSI 6920V2 (Multi-Parameters)  
Manufacturer : YSI (a xylem brand)  
Serial Number : 00019CB2  
Date of Received : Jan 20, 2020  
Date of Calibration : Jan 20, 2020  
Date of Next Calibration<sup>(a)</sup> : Apr 20, 2020

### PART C – REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

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

### PART D – CALIBRATION RESULTS<sup>(b,c)</sup>

#### (1) pH at 25°C

Target (pH unit)	Displayed Reading <sup>(d)</sup> (pH Unit)	Tolerance <sup>(e)</sup> (pH Unit)	Results
4.00	4.01	0.01	Satisfactory
7.42	7.36	-0.06	Satisfactory
10.01	9.96	-0.05	Satisfactory

Tolerance of pH should be less than  $\pm 0.20$  (pH unit)

#### (2) Temperature


Reading of Ref. thermometer (°C)	Displayed Reading (°C)	Tolerance (°C)	Results
10.0	10.03	0.0	Satisfactory
20.0	20.06	0.1	Satisfactory
45.0	44.90	-0.1	Satisfactory

Tolerance limit of temperature should be less than  $\pm 2.0$  (°C)

~ CONTINUED ON NEXT PAGE ~

#### Remark(s): -

- <sup>(a)</sup> The "Date of Next Calibration" is recommended according to best practice principals as practiced by QPT or quoted from relevant international standards.  
<sup>(b)</sup> The results relate only to the calibrated equipment as received  
<sup>(c)</sup> The performance of the equipment stated in this report is checked with independent reference material and results compared against a calibrated secondary source.  
<sup>(d)</sup> "Displayed Reading" denotes the figure shown on item under calibration/ checking regardless of equipment precision or significant figures.  
<sup>(e)</sup> The "Tolerance Limit" mentioned is referenced to YSI product specifications.

  
LEE Chun-ning, Desmond  
Senior Chemist





專業化驗有限公司

QUALITY PRO TEST-CONSULT LIMITED

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## REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Report No. : AJ010132  
Date of Issue : 24 January 2019  
Page No. : 2 of 2

### PART D – CALIBRATION RESULTS (Cont'd)

#### (3) Dissolved Oxygen

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)	Results
0.92	1.22	0.30	Satisfactory
4.68	4.66	-0.02	Satisfactory
5.18	5.34	0.16	Satisfactory
8.84	8.96	0.12	Satisfactory

Tolerance limit of dissolved oxygen should be less than  $\pm 0.50$  (mg/L)

#### (4) Conductivity at 25°C

Conc. of KCl (M)	Expected Reading ( $\mu\text{S/cm}$ )	Displayed Reading ( $\mu\text{S/cm}$ )	Tolerance (%)	Results
0.001	146.9	152.9	4.08	Satisfactory
0.01	1412	1391	-1.49	Satisfactory
0.1	12890	12796	-0.73	Satisfactory
0.5	58670	57862	-1.38	Satisfactory
1.0	111900	110894	-0.90	Satisfactory

Tolerance limit of conductivity should be less than  $\pm 10.0$  (%)

#### (5) Salinity

Expected Reading (g/L)	Displayed Reading (g/L)	Tolerance (%)	Results
10	10.05	0.50	Satisfactory
20	19.96	-0.20	Satisfactory
30	30.38	1.27	Satisfactory

Tolerance limit of salinity should be less than  $\pm 10.0$  (%)

#### (6) Turbidity

Expected Reading (NTU)	Displayed Reading <sup>(f)</sup> (NTU)	Tolerance <sup>(g)</sup> (%)	Results
0	0.1	--	Satisfactory
10	9.9	-1.0	Satisfactory
20	19.8	-1.0	Satisfactory
100	98.6	-1.4	Satisfactory
800	789.3	-1.3	Satisfactory

Tolerance limit of turbidity should be less than  $\pm 10.0$  (%)

~ END OF REPORT ~

**Remark(s): -**

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

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





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## REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Report No. : AJ010131  
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### PART A – CUSTOMER INFORMATION

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

### PART B – DESCRIPTION

Name of Equipment : YSI 6920V2 (Multi-Parameters)  
Manufacturer : YSI (a xylem brand)  
Serial Number : 0001C6A7  
Date of Received : Jan 20, 2020  
Date of Calibration : Jan 20, 2020  
Date of Next Calibration<sup>(a)</sup> : Apr 20, 2020

### PART C – REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

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

### PART D – CALIBRATION RESULTS<sup>(b,c)</sup>

#### (1) pH at 25°C

Target (pH unit)	Displayed Reading <sup>(d)</sup> (pH Unit)	Tolerance <sup>(e)</sup> (pH Unit)	Results
4.00	3.99	-0.01	Satisfactory
7.42	7.38	-0.04	Satisfactory
10.01	10.06	0.05	Satisfactory

Tolerance of pH should be less than  $\pm 0.20$  (pH unit)

#### (2) Temperature

Reading of Ref. thermometer (°C)	Displayed Reading (°C)	Tolerance (°C)	Results
10.0	10.04	0.0	Satisfactory
20.0	20.05	0.1	Satisfactory
45.0	44.90	-0.1	Satisfactory

Tolerance limit of temperature should be less than  $\pm 2.0$  (°C)

~ CONTINUED ON NEXT PAGE ~

#### Remark(s): -

- The "Date of Next Calibration" is recommended according to best practice principals as practiced by QPT or quoted from relevant international standards.
- The results relate only to the calibrated equipment as received
- The performance of the equipment stated in this report is checked with independent reference material and results compared against a calibrated secondary source.
- "Displayed Reading" denotes the figure shown on item under calibration/ checking regardless of equipment precision or significant figures.
- The "Tolerance Limit" mentioned is referenced to YSI product specifications.

  
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Senior Chemist



## REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Report No. : AJ010131  
Date of Issue : 24 January 2019  
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### PART D – CALIBRATION RESULTS (Cont'd)

#### (3) Dissolved Oxygen

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)	Results
0.92	1.31	0.39	Satisfactory
4.68	4.68	0.00	Satisfactory
5.18	5.33	0.15	Satisfactory
8.84	8.98	0.14	Satisfactory

Tolerance limit of dissolved oxygen should be less than  $\pm 0.50$  (mg/L)

#### (4) Conductivity at 25°C

Conc. of KCl (M)	Expected Reading ( $\mu\text{S/cm}$ )	Displayed Reading ( $\mu\text{S/cm}$ )	Tolerance (%)	Results
0.001	146.9	153.4	4.42	Satisfactory
0.01	1412	1386	-1.84	Satisfactory
0.1	12890	12784	-0.82	Satisfactory
0.5	58670	57934	-1.25	Satisfactory
1.0	111900	110886	-0.91	Satisfactory

Tolerance limit of conductivity should be less than  $\pm 10.0$  (%)

#### (5) Salinity

Expected Reading (g/L)	Displayed Reading (g/L)	Tolerance (%)	Results
10	9.98	-0.20	Satisfactory
20	20.20	1.00	Satisfactory
30	30.42	1.40	Satisfactory

Tolerance limit of salinity should be less than  $\pm 10.0$  (%)

#### (6) Turbidity

Expected Reading (NTU)	Displayed Reading <sup>(f)</sup> (NTU)	Tolerance <sup>(g)</sup> (%)	Results
0	0.2	--	Satisfactory
10	10.1	1.0	Satisfactory
20	19.8	-1.0	Satisfactory
100	98.7	-1.3	Satisfactory
800	788.4	-1.5	Satisfactory

Tolerance limit of turbidity should be less than  $\pm 10.0$  (%)

~ END OF REPORT ~

**Remark(s): -**

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

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

## Appendix F. Status of Environmental Permits and Licences

	Description		Permit/ Reference No.	Status
EIAO	Environmental Permit		EP-489/2014	Approved on 7 Nov 2014
Contract No.	Description	Location	Permit/ Reference No.	Status
P560 (R)	Notification of Construction Work under APCO	Site Office	397151	Receipt acknowledged by EPD on 15 Jan 2016
		Stockpiling Area	398015	Receipt acknowledged by EPD on 18 Jan 2016
	Discharge License under WPCO	Stockpiling Area	WT00024250-2016	Valid from 25 Apr 2016 to 30 Apr 2021
	Registration as Chemical Waste Producer	Stockpiling Area	WPN 5213-951-L2902-02	Registration was updated on 3 Oct 2016
	Bill Account for disposal		A/C 7023982	Approval granted from EPD on 14 Dec 2015
3205	Notification of Construction Work under APCO	Works area of 3205	409041	Receipt acknowledged by EPD on 19 Oct 2016
	Registration as Chemical Waste Producer	Works Area of 3205	WPN 5213-951-B2502-01	Registration was updated on 25 Sep 2017
		Works Area of 3205	WPN 5111-421-B2509-01	Registration was updated on 25 Sep 2017
	Construction Noise Permit (General Works)	Works Area of 3205	GW-RS1094-19	Valid from 10 Dec 2019 to 9 Jun 2020
	Discharge License under WPCO	Works area of 3205	WT00028370-2017	Valid from 21 Jun 2017 to 30 Jun 2022
	Bill Account for disposal	Works area of 3205	A/C 7026295	Approval granted from EPD on 9 Nov 2016
3206	Notification of Construction Work under APCO	Works area of 3206	409237	Receipt acknowledged by EPD on 25 Oct 2016
		Works area of 3206 (Area 11)	447899	Receipt acknowledged by EPD on 8 Aug 2019
	Registration as Chemical Waste Producer	Site office of 3206	WPN 5213-951-Z4035-01	Completion of Registration on 18 Nov 2016
		Works area of 3206	WPN 5213-951-Z4035-02	Completion of Registration on 18 Nov 2016
		Works Area of 3206 (Area 11)	WPN 5213-951-Z4035-04	Completion of Registration on 4 Sep 2019
	Construction Noise Permit (General Works)	Works Area of 3206	GW-RS1059-19	Superseded by GW-RS1194-19
			GW-RS1194-19	Valid from 7 Jan 2020 to 1 Jul 2020

Contract No.	Description	Location	Permit/ Reference No.	Status
		Works Area of 3206 (Area 11)	GW-RS1170-19	Valid from 2 Jan 2020 to 24 Jun 2020
	Bill Account for disposal	Works area of 3206	A/C 7026398	Approval granted from EPD on 16 Nov 2016
3301	Notification of Construction Work under APCO	Works area of 3301	415821	Receipt acknowledged by EPD on 19 Apr 2017
	Registration as Chemical Waste Producer	Works area of 3301	WPN 5213-951-F2718-02	Completion of Registration on 9 Jun 2017
	Discharge License under WPCO	Works area of 3301	WT00029286-2017	Valid from 20 Sep 2017 to 30 Sep 2022
	Bill Account for disposal	Works area of 3301	A/C 7027728	Approval granted from EPD on 8 May 2017
	Construction Noise Permit (General Works)	Works area of 3301 (Cable ducting works)	GW-RS0858-19	Valid from 30 Sep 2019 to 24 Mar 2020
		Works area of 3301	GW-RS0865-19	Valid until from 12 Oct 2019 to 11 Apr 2020
3302	Notification of Construction Work under APCO	Works area of 3302	440222	Receipt acknowledged by EPD on 10 Dec 2018
		Staging area of 3302	2018CES1	Receipt acknowledged by EPD on 21 Dec 2018
	Registration as Chemical Waste Producer	Works area of 3302	5296-951-C4331-01	Completion of Registration on 4 Jan 2019
	Discharge License under WPCO	Staging 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-RS0595-19	Superseded by GW-RS1162-19
			GW-RS1162-19	Valid from 7 Jan 2020 to 6 Jul 2020
	Construction Noise Permit (Percussive Piling)	Works area of 3302	PP-RS0011-19	Valid until 31 Jan 2020
3303	Notification of Construction Work under APCO	Works area of 3303	445611	Receipt acknowledged by EPD on 27 May 2019
	Registration as Chemical Waste Producer	Works area of 3303	5213-951-S4174-01	Completion of Registration on 17 Jun 2019
	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-RS0764-19	Valid from 29 Aug 2019 to 28 Feb 2020
		Works area of 3303 (Reclamation area)	GW-RS1083-19	Valid from 26 Nov 2019 to 25 May 2020
3402	Notification of Construction Work under APCO	Works area of 3402	440808	Receipt acknowledged by EPD on 31 Dec 2018
		Stockpiling area of 3402	441960	Receipt acknowledged by EPD on 8 Feb 2019

Contract No.	Description	Location	Permit/ Reference No.	Status
	Registration as Chemical Waste Producer	Works area of 3402	WPN 5213-951-W1172-05	Registration was updated on 25 Feb 2019
	Discharge License under WPCO	Works area of 3402	WT00033685-2019	Valid from 20 Jun 2019 to 30 Jun 2024
	Bill Account for disposal	Works area of 3402	A/C 7032577	Approval granted from EPD on 27 Nov 2018
	Construction Noise Permit (General Works)	Works area of 3402	GW-RS0720-19	Superseded by GW-RS1210-19
			GW-RS1210-19	Valid from 15 Jan 2020 to 14 Jul 2020
3403	Notification of Construction Work under APCO	Works area of 3403	448504	Receipt acknowledged by EPD on 28 Aug 2019
	Registration as Chemical Waste Producer	Works area of 3403	WPN 5213-951-S4218-01	Completion of Registration on 9 Jan 2020
	Bill Account for disposal	Works area of 3403	A/C 7035267	Approval granted from EPD on 30 Sep 2019
3501	Notification of Construction Work under APCO	Works area of 3501	434640	Receipt acknowledged by EPD on 13 Jun 2018
	Registration as Chemical Waste Producer	Works area of 3501	WPN 5213-951-B2520-02	Completion of Registration on 25 Jul 2017
	Discharge License under WPCO	Works area of 3501	WT00031400-2018	Valid from 30 Aug 2018 to 31 Aug 2023
	Bill Account for disposal	Works area of 3501	A/C 7028144	Approval granted from EPD on 23 Jun 2017
	Construction Noise Permit (General Works)	Works area of 3501	GW-RS0796-19	Valid from 5 Sep 2019 to 2 Mar 2020
3503	Notification of Construction Work under APCO	Works area of 3503	435180	Receipt acknowledged by EPD on 29 Jun 2018
		Stockpiling area of 3503	439777	Receipt acknowledged by EPD on 26 Nov 2018
	Registration as Chemical Waste Producer	Works area of 3503	WPN 5113-951-L2845-02	Completion of Registration on 8 Jan 2018
	Discharge License under WPCO	Works area of 3503	WT00031258-2018	Valid from 7 Jun 2018 to 30 Jun 2023
		Stockpiling area of 3503	WT00031826-2018	Valid from 18 Sep 2018 to 30 Sep 2023
	Bill Account for disposal	Works area of 3503	A/C 7029665	Approval granted from EPD on 27 Dec 2017
	Construction Noise Permit (General Works)	Works area of 3503	GW-RS0961-19	Superseded by GW-RS1191-19
			GW-RS1191-19	Valid from 8 Jan 2020 to 30 Jun 2020
		Stockpiling area of 3503	GW-RS1012-19	Valid from 14 Nov 2019 to 13 May 2020
		Stockpiling area of 3503	GW-RS1180-19	Valid from 4 Jan 2020 to 30 Jun 2020
3602	Notification of Construction Work under APCO	Works area of 3602	421278	Receipt acknowledged by EPD on 18 Sep 2017



Contract No.	Description	Location	Permit/ Reference No.	Status
	Registration as Chemical Waste Producer	Works area of 3602	WPN 5296-951-N2673-01	Completion of Registration on 9 Oct 2017
		Site office of 3602	WPN 5296-951-N2673-02	Completion of Registration on 11 Dec 2017
	Bill Account for disposal	Works area of 3602	A/C 7028942	Approval granted from EPD on 6 Oct 2017
	Construction Noise Permit (General Works)	Works area of 3602	GW-RS0888-19	Valid from 8 Oct 2019 to 31 Mar 2020
3603	Notification of Construction Work under APCO	Site office of 3603	433604	Receipt acknowledged by EPD on 16 May 2018
	Registration as Chemical Waste Producer	Works area of 3603	WPN 5296-951-S4069-01	Completion of Registration on 22 Jan 2018
	Bill Account for disposal	Works area of 3603	A/C 7030002	Approval granted from EPD on 1 Feb 2018
	Construction Noise Permit (General Works)	Works area of 3603	GW-RS0909-19	Valid from 25 Oct 2019 to 23 Apr 2020
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 705234	Approval granted from EPD on 25 Sep 2019
3801	Notification of Construction Work under APCO	Works area of 3801	418345	Receipt acknowledged by EPD on 26 Jun 2017
			430372	Receipt acknowledged by EPD on 2 Feb 2018
			435652	Receipt acknowledged by EPD on 16 Jul 2018
			450940	Receipt acknowledged by EPD on 13 Nov 2019
	Registration as Chemical Waste Producer	Works area of 3801	WPN 5296-951-C1169-53	Completion of Registration on 14 Aug 2018
	Discharge License under WPCO	Works and stockpiling area of 3801	WT00029535-2017	Valid from 24 Nov 2017 to 30 Nov 2022
	Bill Account for disposal	Works area of 3801	A/C 7028254	Approval granted from EPD on 3 Jul 2017
	Construction Noise Permit (General Works)	Works and stockpiling area of 3801	GW-RS0782-19	Superseded by GW-RS1212-19
			GW-RS1212-19	Valid from 9 Jan 2020 to 8 Jul 2020
		Works area of 3801	GW-RS1126-19	Valid from 27 Dec 2019 to 26 Mar 2020



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

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

		Total no. recorded in the reporting period	Total no. recorded since the project commenced
1-hr TSP	Action	0	0
	Limit	0	0
Noise	Action	0	0
	Limit	0	0
Water	Action	0	0
	Limit	0	0
Waste	Action	0	0
	Limit	0	0
CWD	Action	0	0
	Limit	0	0

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

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

Reporting Period	Cumulative Statistics		
	Complaints	Notifications of Summons	Prosecutions
This reporting period	0	0	0
From 28 December 2015 to end of the reporting period	17	1	1

## **Appendix H. Data of SkyPier HSF Movements to/from Zhuhai and Macau (between 1 and 31 January 2020)**

**Data of SkyPier HSF Movements to/from Zhuhai and Macau (between 1 and 31 January 2020)**

Date	Time [Arrival at / Departure from HKIA SkyPier]	Ferry No.	Connecting Port [XZM - Macao (Maritime Ferry Terminal) YFT - Macao (Taipa) ZUI - Zhuhai Jiuzhou]	Travel Direction [Arrival at / Departure from HKIA SkyPier]	Average Speed within Speed Control Zone (knots)	Extent of Instantaneous Speeding by SkyPier HSFs across SCZ (knots)	Duration of the Instantaneous Speeding (min)
1-Jan	8:25	3A061	YFT	Arrival	12.4	-	-
1-Jan	9:59	3A081	ZUI	Arrival	11.3	-	-
1-Jan	10:16	8S212	XZM	Arrival	11	-	-
1-Jan	10:26	3A181	ZUI	Departure	12.7	-	-
1-Jan	11:06	8S121	XZM	Departure	12.5	-	-
1-Jan	12:41	8S215	XZM	Arrival	12.7	-	-
1-Jan	13:57	3A082	ZUI	Arrival	12.1	-	-
1-Jan	14:11	3A182	ZUI	Departure	13.3	-	-
1-Jan	14:52	3A065	YFT	Arrival	13.4	-	-
1-Jan	16:34	3A167	YFT	Departure	13.6	-	-
1-Jan	16:56	3A067	YFT	Arrival	11.6	-	-
1-Jan	16:59	3A083	ZUI	Arrival	13.2	-	-
1-Jan	17:21	3A183	ZUI	Departure	13.3	-	-
1-Jan	18:07	8S126	XZM	Departure	13	-	-
1-Jan	20:35	3A084	ZUI	Arrival	13.1	-	-
1-Jan	20:45	8S2113	XZM	Arrival	12.8	-	-
1-Jan	20:55	3A185	ZUI	Departure	13.1	-	-
2-Jan	8:26	3A061	YFT	Arrival	12.4	-	-
2-Jan	9:56	3A081	ZUI	Arrival	12.7	-	-
2-Jan	10:16	8S212	XZM	Arrival	12	-	-
2-Jan	10:24	3A181	ZUI	Departure	12.8	-	-
2-Jan	11:01	8S121	XZM	Departure	12.1	-	-
2-Jan	12:47	8S215	XZM	Arrival	12.3	-	-
2-Jan	13:54	3A082	ZUI	Arrival	12.7	-	-
2-Jan	14:12	3A182	ZUI	Departure	13.5	-	-
2-Jan	14:55	3A065	YFT	Arrival	11.3	-	-
2-Jan	16:16	3A167	YFT	Departure	11.7	-	-
2-Jan	16:52	3A067	YFT	Arrival	12.4	-	-
2-Jan	16:53	3A083	ZUI	Arrival	13.2	-	-
2-Jan	17:15	3A183	ZUI	Departure	12.8	-	-
2-Jan	18:19	8S126	XZM	Departure	12.5	-	-
2-Jan	20:33	3A084	ZUI	Arrival	13.4	-	-
2-Jan	20:57	3A185	ZUI	Departure	12.9	-	-
2-Jan	21:04	8S2113	XZM	Arrival	12.2	-	-
3-Jan	8:28	3A061	YFT	Arrival	12.1	-	-
3-Jan	9:57	3A081	ZUI	Arrival	12.8	-	-

Date	Time [Arrival at / Departure from HKIA SkyPier]	Ferry No.	Connecting Port [XZM - Macao (Maritime Ferry Terminal) YFT - Macao (Taipa) ZUI - Zhuhai Jiuzhou]	Travel Direction [Arrival at / Departure from HKIA SkyPier]	Average Speed within Speed Control Zone (knots)	Extent of Instantaneous Speeding by SkyPier HSFs across SCZ (knots)	Duration of the Instantaneous Speeding (min)
3-Jan	10:16	8S212	XZM	Arrival	11.9	-	-
3-Jan	10:28	3A181	ZUI	Departure	13.3	-	-
3-Jan	11:06	8S121	XZM	Departure	12.7	-	-
3-Jan	12:47	8S215	XZM	Arrival	11.8	-	-
3-Jan	13:55	3A082	ZUI	Arrival	12.6	-	-
3-Jan	14:09	3A182	ZUI	Departure	12.7	-	-
3-Jan	14:52	3A065	YFT	Arrival	13	-	-
3-Jan	16:25	3A167	YFT	Departure	13.6	-	-
3-Jan	16:58	3A067	YFT	Arrival	12.8	-	-
3-Jan	17:13	3A083	ZUI	Arrival	12.9	-	-
3-Jan	17:25	3A183	ZUI	Departure	12.4	-	-
3-Jan	18:11	8S126	XZM	Departure	11.3	-	-
3-Jan	20:35	3A084	ZUI	Arrival	13.5	-	-
3-Jan	20:56	3A185	ZUI	Departure	12.8	-	-
3-Jan	21:15	8S2113	XZM	Arrival	11.8	-	-
4-Jan	8:24	3A061	YFT	Arrival	11.7	-	-
4-Jan	9:54	3A081	ZUI	Arrival	12.8	-	-
4-Jan	10:24	8S212	XZM	Arrival	12.3	-	-
4-Jan	10:27	3A181	ZUI	Departure	12.5	-	-
4-Jan	11:06	8S121	XZM	Departure	13	-	-
4-Jan	12:44	8S215	XZM	Arrival	12.4	-	-
4-Jan	13:54	3A082	ZUI	Arrival	12.7	-	-
4-Jan	14:09	3A182	ZUI	Departure	13	-	-
4-Jan	14:58	3A065	YFT	Arrival	11.6	-	-
4-Jan	16:26	3A167	YFT	Departure	11.9	-	-
4-Jan	16:52	3A083	ZUI	Arrival	12.9	-	-
4-Jan	16:52	3A067	YFT	Arrival	13.1	-	-
4-Jan	17:13	3A183	ZUI	Departure	13.3	-	-
4-Jan	18:07	8S126	XZM	Departure	13.8	-	-
4-Jan	20:32	3A084	ZUI	Arrival	13.3	-	-
4-Jan	20:49	8S2113	XZM	Arrival	12.9	-	-
4-Jan	20:57	3A185	ZUI	Departure	12.7	-	-
5-Jan	8:26	3A061	YFT	Arrival	11.9	-	-
5-Jan	9:55	3A081	ZUI	Arrival	13.2	-	-
5-Jan	10:05	8S212	XZM	Arrival	12.1	-	-
5-Jan	10:06	3A181	ZUI	Departure	12.6	-	-
5-Jan	11:02	8S121	XZM	Departure	13	-	-
5-Jan	12:42	8S215	XZM	Arrival	12.3	-	-
5-Jan	13:55	3A082	ZUI	Arrival	12.9	-	-

Date	Time [Arrival at / Departure from HKIA SkyPier]	Ferry No.	Connecting Port [XZM - Macao (Maritime Ferry Terminal) YFT - Macao (Taipa) ZUI - Zhuhai Jiuzhou]	Travel Direction [Arrival at / Departure from HKIA SkyPier]	Average Speed within Speed Control Zone (knots)	Extent of Instantaneous Speeding by SkyPier HSFs across SCZ (knots)	Duration of the Instantaneous Speeding (min)
5-Jan	14:12	3A182	ZUI	Departure	13.1	-	-
5-Jan	14:58	3A065	YFT	Arrival	11.6	-	-
5-Jan	16:28	3A167	YFT	Departure	12.3	-	-
5-Jan	16:54	3A083	ZUI	Arrival	12.9	-	-
5-Jan	16:56	3A067	YFT	Arrival	11.5	-	-
5-Jan	17:13	3A183	ZUI	Departure	13.5	-	-
5-Jan	17:59	8S126	XZM	Departure	12.3	-	-
5-Jan	20:42	3A084	ZUI	Arrival	13	-	-
5-Jan	20:48	8S2113	XZM	Arrival	12.1	-	-
5-Jan	20:57	3A185	ZUI	Departure	12.7	-	-
6-Jan	8:25	3A061	YFT	Arrival	11.6	-	-
6-Jan	9:57	3A081	ZUI	Arrival	12.1	-	-
6-Jan	10:19	8S212	XZM	Arrival	12.6	-	-
6-Jan	10:21	3A181	ZUI	Departure	12	-	-
6-Jan	11:06	8S121	XZM	Departure	13.2	-	-
6-Jan	12:35	8S215	XZM	Arrival	11.9	-	-
6-Jan	13:55	3A082	ZUI	Arrival	12.3	-	-
6-Jan	14:12	3A182	ZUI	Departure	12.6	-	-
6-Jan	14:53	3A065	YFT	Arrival	11.4	-	-
6-Jan	16:24	3A167	YFT	Departure	12.8	-	-
6-Jan	16:54	3A083	ZUI	Arrival	12.5	-	-
6-Jan	16:56	3A067	YFT	Arrival	11.7	-	-
6-Jan	17:27	3A183	ZUI	Departure	13.4	-	-
6-Jan	18:17	8S126	XZM	Departure	13.1	-	-
6-Jan	20:34	3A084	ZUI	Arrival	12.9	-	-
6-Jan	20:54	8S2113	XZM	Arrival	13.1	-	-
6-Jan	20:59	3A185	ZUI	Departure	12.9	-	-
7-Jan	8:27	3A061	YFT	Arrival	13	-	-
7-Jan	9:54	3A081	ZUI	Arrival	12.6	-	-
7-Jan	10:19	8S212	XZM	Arrival	12.7	-	-
7-Jan	10:27	3A181	ZUI	Departure	12.4	-	-
7-Jan	11:01	8S121	XZM	Departure	12.5	-	-
7-Jan	12:36	8S215	XZM	Arrival	13.2	-	-
7-Jan	13:54	3A082	ZUI	Arrival	12.7	-	-
7-Jan	14:11	3A182	ZUI	Departure	12.6	-	-
7-Jan	14:57	3A065	YFT	Arrival	11.4	-	-
7-Jan	16:20	3A167	YFT	Departure	13.1	-	-
7-Jan	16:51	3A067	YFT	Arrival	11.5	-	-
7-Jan	16:54	3A083	ZUI	Arrival	12.7	-	-

Date	Time [Arrival at / Departure from HKIA SkyPier]	Ferry No.	Connecting Port [XZM - Macao (Maritime Ferry Terminal) YFT - Macao (Taipa) ZUI - Zhuhai Jiuzhou]	Travel Direction [Arrival at / Departure from HKIA SkyPier]	Average Speed within Speed Control Zone (knots)	Extent of Instantaneous Speeding by SkyPier HSFs across SCZ (knots)	Duration of the Instantaneous Speeding (min)
7-Jan	17:18	3A183	ZUI	Departure	13.6	-	-
7-Jan	18:00	8S126	XZM	Departure	12.6	-	-
7-Jan	20:34	3A084	ZUI	Arrival	13.1	-	-
7-Jan	20:47	8S2113	XZM	Arrival	11.9	-	-
7-Jan	20:58	3A185	ZUI	Departure	12.9	-	-
8-Jan	8:22	3A061	YFT	Arrival	12.6	-	-
8-Jan	9:57	3A081	ZUI	Arrival	12.6	-	-
8-Jan	10:18	8S212	XZM	Arrival	12.1	-	-
8-Jan	10:26	3A181	ZUI	Departure	12.8	-	-
8-Jan	11:03	8S121	XZM	Departure	11.8	-	-
8-Jan	12:34	8S215	XZM	Arrival	11.7	-	-
8-Jan	13:58	3A082	ZUI	Arrival	11.4	-	-
8-Jan	14:09	3A182	ZUI	Departure	13.1	-	-
8-Jan	14:55	3A065	YFT	Arrival	11.7	-	-
8-Jan	16:15	3A167	YFT	Departure	12.5	-	-
8-Jan	16:56	3A083	ZUI	Arrival	11.8	-	-
8-Jan	16:58	3A067	YFT	Arrival	11	-	-
8-Jan	17:16	3A183	ZUI	Departure	13.5	-	-
8-Jan	18:04	8S126	XZM	Departure	12.3	<= 5	< 1min
8-Jan	20:34	3A084	ZUI	Arrival	13.2	-	-
8-Jan	20:55	3A185	ZUI	Departure	12.8	-	-
8-Jan	21:26	8S2113	XZM	Arrival	13	-	-
9-Jan	8:28	3A061	YFT	Arrival	10.9	-	-
9-Jan	10:01	3A081	ZUI	Arrival	12.6	-	-
9-Jan	10:27	8S212	XZM	Arrival	12.2	-	-
9-Jan	10:41	3A181	ZUI	Departure	13	-	-
9-Jan	11:14	8S121	XZM	Departure	13.2	-	-
9-Jan	12:31	8S215	XZM	Arrival	12.7	-	-
9-Jan	14:01	3A082	ZUI	Arrival	12	-	-
9-Jan	14:16	3A182	ZUI	Departure	11.7	-	-
9-Jan	14:58	3A065	YFT	Arrival	12.4	-	-
9-Jan	16:26	3A167	YFT	Departure	12.7	-	-
9-Jan	16:53	3A067	YFT	Arrival	12.4	-	-
9-Jan	16:54	3A083	ZUI	Arrival	12.4	-	-
9-Jan	17:16	3A183	ZUI	Departure	13.6	-	-
9-Jan	18:13	8S126	XZM	Departure	12.5	-	-
9-Jan	20:33	3A084	ZUI	Arrival	12.8	-	-
9-Jan	20:54	8S2113	XZM	Arrival	12.6	-	-
9-Jan	20:58	3A185	ZUI	Departure	13.2	-	-



Date	Time [Arrival at / Departure from HKIA SkyPier]	Ferry No.	Connecting Port [XZM - Macao (Maritime Ferry Terminal) YFT - Macao (Taipa) ZUI - Zhuhai Jiuzhou]	Travel Direction [Arrival at / Departure from HKIA SkyPier]	Average Speed within Speed Control Zone (knots)	Extent of Instantaneous Speeding by SkyPier HSFs across SCZ (knots)	Duration of the Instantaneous Speeding (min)
10-Jan	8:22	3A061	YFT	Arrival	12	-	-
10-Jan	10:03	3A081	ZUI	Arrival	12.4	-	-
10-Jan	10:22	8S212	XZM	Arrival	11	-	-
10-Jan	10:37	3A181	ZUI	Departure	13	-	-
10-Jan	11:05	8S121	XZM	Departure	11.9	-	-
10-Jan	12:35	8S215	XZM	Arrival	12.5	-	-
10-Jan	13:54	3A082	ZUI	Arrival	12.5	-	-
10-Jan	14:15	3A182	ZUI	Departure	12.6	-	-
10-Jan	15:06	3A065	YFT	Arrival	13.1	-	-
10-Jan	16:20	3A167	YFT	Departure	13.3	-	-
10-Jan	16:59	3A067	YFT	Arrival	12.3	-	-
10-Jan	17:03	3A083	ZUI	Arrival	11.9	-	-
10-Jan	17:19	3A183	ZUI	Departure	13	-	-
10-Jan	18:06	8S126	XZM	Departure	11.2	-	-
10-Jan	20:43	3A084	ZUI	Arrival	12	-	-
10-Jan	20:53	8S2113	XZM	Arrival	11.8	-	-
10-Jan	20:56	3A185	ZUI	Departure	13.2	-	-
11-Jan	8:22	3A061	YFT	Arrival	11.2	-	-
11-Jan	10:05	3A081	ZUI	Arrival	12.9	-	-
11-Jan	10:15	8S212	XZM	Arrival	12.3	-	-
11-Jan	10:35	3A181	ZUI	Departure	13.1	-	-
11-Jan	11:04	8S121	XZM	Departure	12.5	-	-
11-Jan	12:30	8S215	XZM	Arrival	12.5	-	-
11-Jan	13:54	3A082	ZUI	Arrival	13.5	-	-
11-Jan	14:13	3A182	ZUI	Departure	13	-	-
11-Jan	14:55	3A065	YFT	Arrival	11.7	-	-
11-Jan	16:15	3A167	YFT	Departure	11.9	-	-
11-Jan	16:56	3A067	YFT	Arrival	11.9	-	-
11-Jan	16:57	3A083	ZUI	Arrival	13.2	-	-
11-Jan	17:19	3A183	ZUI	Departure	13.2	-	-
11-Jan	18:07	8S126	XZM	Departure	11.7	-	-
11-Jan	20:42	3A084	ZUI	Arrival	13.1	-	-
11-Jan	20:51	8S2113	XZM	Arrival	11.7	-	-
11-Jan	20:56	3A185	ZUI	Departure	12.5	-	-
12-Jan	8:26	3A061	YFT	Arrival	10.8	-	-
12-Jan	9:56	3A081	ZUI	Arrival	12.8	-	-
12-Jan	10:23	8S212	XZM	Arrival	10.7	-	-
12-Jan	10:33	3A181	ZUI	Departure	13	-	-
12-Jan	11:01	8S121	XZM	Departure	13.5	-	-

Date	Time [Arrival at / Departure from HKIA SkyPier]	Ferry No.	Connecting Port [XZM - Macao (Maritime Ferry Terminal) YFT - Macao (Taipa) ZUI - Zhuhai Jiuzhou]	Travel Direction [Arrival at / Departure from HKIA SkyPier]	Average Speed within Speed Control Zone (knots)	Extent of Instantaneous Speeding by SkyPier HSFs across SCZ (knots)	Duration of the Instantaneous Speeding (min)
12-Jan	12:47	8S215	XZM	Arrival	12.1	-	-
12-Jan	14:03	3A082	ZUI	Arrival	13.5	-	-
12-Jan	14:17	3A182	ZUI	Departure	13.1	-	-
12-Jan	14:53	3A065	YFT	Arrival	12	-	-
12-Jan	16:16	3A167	YFT	Departure	13.1	-	-
12-Jan	16:55	3A067	YFT	Arrival	12.8	-	-
12-Jan	16:59	3A083	ZUI	Arrival	13.2	-	-
12-Jan	17:22	3A183	ZUI	Departure	12.9	-	-
12-Jan	18:07	8S126	XZM	Departure	11.5	-	-
12-Jan	20:35	3A084	ZUI	Arrival	13.2	-	-
12-Jan	20:58	8S2113	XZM	Arrival	11.7	-	-
12-Jan	20:59	3A185	ZUI	Departure	13.2	-	-
13-Jan	8:23	3A061	YFT	Arrival	11.5	-	-
13-Jan	10:07	3A081	ZUI	Arrival	12.2	-	-
13-Jan	10:21	8S212	XZM	Arrival	11.2	-	-
13-Jan	10:41	3A181	ZUI	Departure	12.7	-	-
13-Jan	11:04	8S121	XZM	Departure	11.7	-	-
13-Jan	12:33	8S215	XZM	Arrival	11.8	-	-
13-Jan	13:53	3A082	ZUI	Arrival	13.3	-	-
13-Jan	14:14	3A182	ZUI	Departure	12.8	-	-
13-Jan	14:57	3A065	YFT	Arrival	12.1	-	-
13-Jan	16:15	3A167	YFT	Departure	12.2	-	-
13-Jan	16:55	3A083	ZUI	Arrival	13.4	-	-
13-Jan	16:56	3A067	YFT	Arrival	12.5	-	-
13-Jan	17:18	3A183	ZUI	Departure	12.9	-	-
13-Jan	18:09	8S126	XZM	Departure	12.7	-	-
13-Jan	20:39	3A084	ZUI	Arrival	12.4	-	-
13-Jan	20:44	8S2113	XZM	Arrival	12.5	-	-
13-Jan	20:57	3A185	ZUI	Departure	12.8	-	-
14-Jan	8:27	3A061	YFT	Arrival	11.3	-	-
14-Jan	10:05	3A081	ZUI	Arrival	12.8	-	-
14-Jan	10:26	8S212	XZM	Arrival	11.9	-	-
14-Jan	10:48	3A181	ZUI	Departure	13.2	-	-
14-Jan	11:01	8S121	XZM	Departure	12.3	-	-
14-Jan	12:30	8S215	XZM	Arrival	12.9	-	-
14-Jan	13:53	3A082	ZUI	Arrival	13.4	-	-
14-Jan	14:18	3A182	ZUI	Departure	12.1	-	-
14-Jan	14:56	3A065	YFT	Arrival	11	-	-
14-Jan	16:21	3A167	YFT	Departure	11.3	-	-

Date	Time [Arrival at / Departure from HKIA SkyPier]	Ferry No.	Connecting Port [XZM - Macao (Maritime Ferry Terminal) YFT - Macao (Taipa) ZUI - Zhuhai Jiuzhou]	Travel Direction [Arrival at / Departure from HKIA SkyPier]	Average Speed within Speed Control Zone (knots)	Extent of Instantaneous Speeding by SkyPier HSFs across SCZ (knots)	Duration of the Instantaneous Speeding (min)
14-Jan	16:52	3A067	YFT	Arrival	12.2	-	-
14-Jan	16:59	3A083	ZUI	Arrival	11.9	-	-
14-Jan	17:18	3A183	ZUI	Departure	13	-	-
14-Jan	18:05	8S126	XZM	Departure	12.5	-	-
14-Jan	20:40	3A084	ZUI	Arrival	12.7	-	-
14-Jan	20:47	8S2113	XZM	Arrival	12	-	-
14-Jan	20:59	3A185	ZUI	Departure	12.9	-	-
15-Jan	8:27	3A061	YFT	Arrival	12.3	-	-
15-Jan	10:03	3A081	ZUI	Arrival	12.9	-	-
15-Jan	10:18	8S212	XZM	Arrival	11	-	-
15-Jan	10:35	3A181	ZUI	Departure	11.8	-	-
15-Jan	11:11	8S121	XZM	Departure	11.6	-	-
15-Jan	12:34	8S215	XZM	Arrival	12.8	-	-
15-Jan	13:56	3A082	ZUI	Arrival	12.7	-	-
15-Jan	14:13	3A182	ZUI	Departure	13.3	-	-
15-Jan	14:53	3A065	YFT	Arrival	12.3	-	-
15-Jan	16:16	3A167	YFT	Departure	12.6	-	-
15-Jan	16:57	3A067	YFT	Arrival	12.9	-	-
15-Jan	17:06	3A083	ZUI	Arrival	13.3	-	-
15-Jan	17:20	3A183	ZUI	Departure	13.2	-	-
15-Jan	17:59	8S126	XZM	Departure	13.2	-	-
15-Jan	20:37	3A084	ZUI	Arrival	12.4	-	-
15-Jan	20:51	8S2113	XZM	Arrival	12.5	-	-
15-Jan	20:57	3A185	ZUI	Departure	13.2	-	-
16-Jan	8:26	3A061	YFT	Arrival	12.5	-	-
16-Jan	10:04	3A081	ZUI	Arrival	12.5	-	-
16-Jan	10:25	8S212	XZM	Arrival	11.1	-	-
16-Jan	10:42	3A181	ZUI	Departure	12.9	-	-
16-Jan	11:01	8S121	XZM	Departure	11.8	-	-
16-Jan	12:34	8S215	XZM	Arrival	12.2	-	-
16-Jan	14:00	3A082	ZUI	Arrival	12.3	-	-
16-Jan	14:14	3A182	ZUI	Departure	12.8	-	-
16-Jan	14:57	3A065	YFT	Arrival	11.7	-	-
16-Jan	16:15	3A167	YFT	Departure	11.8	-	-
16-Jan	16:53	3A067	YFT	Arrival	12.9	-	-
16-Jan	17:00	3A083	ZUI	Arrival	13.3	-	-
16-Jan	17:18	3A183	ZUI	Departure	11.6	-	-
16-Jan	18:12	8S126	XZM	Departure	12.9	-	-
16-Jan	20:39	3A084	ZUI	Arrival	12.9	-	-

Date	Time [Arrival at / Departure from HKIA SkyPier]	Ferry No.	Connecting Port [XZM - Macao (Maritime Ferry Terminal) YFT - Macao (Taipa) ZUI - Zhuhai Jiuzhou]	Travel Direction [Arrival at / Departure from HKIA SkyPier]	Average Speed within Speed Control Zone (knots)	Extent of Instantaneous Speeding by SkyPier HSFs across SCZ (knots)	Duration of the Instantaneous Speeding (min)
16-Jan	20:49	8S2113	XZM	Arrival	11.5	-	-
16-Jan	21:00	3A185	ZUI	Departure	12.3	-	-
17-Jan	8:27	3A061	YFT	Arrival	11.6	-	-
17-Jan	10:05	3A081	ZUI	Arrival	12.5	-	-
17-Jan	10:21	8S212	XZM	Arrival	11.7	-	-
17-Jan	10:44	3A181	ZUI	Departure	13	-	-
17-Jan	11:09	8S121	XZM	Departure	13	-	-
17-Jan	12:36	8S215	XZM	Arrival	12.3	-	-
17-Jan	14:02	3A082	ZUI	Arrival	11.6	-	-
17-Jan	14:16	3A182	ZUI	Departure	13	-	-
17-Jan	15:09	3A065	YFT	Arrival	12.4	-	-
17-Jan	16:17	3A167	YFT	Departure	12.8	-	-
17-Jan	16:57	3A083	ZUI	Arrival	12.7	-	-
17-Jan	17:01	3A067	YFT	Arrival	11.8	-	-
17-Jan	17:14	3A183	ZUI	Departure	12.5	-	-
17-Jan	18:04	8S126	XZM	Departure	12.7	-	-
17-Jan	20:35	3A084	ZUI	Arrival	12.7	-	-
17-Jan	20:48	8S2113	XZM	Arrival	12.8	-	-
17-Jan	20:58	3A185	ZUI	Departure	12.2	-	-
18-Jan	8:26	3A061	YFT	Arrival	11.9	-	-
18-Jan	10:15	8S212	XZM	Arrival	12.6	-	-
18-Jan	10:19	3A081	ZUI	Arrival	10.9	-	-
18-Jan	10:57	3A181	ZUI	Departure	12.8	-	-
18-Jan	11:09	8S121	XZM	Departure	13.1	-	-
18-Jan	12:43	8S215	XZM	Arrival	11.8	-	-
18-Jan	14:05	3A082	ZUI	Arrival	12.2	-	-
18-Jan	14:18	3A182	ZUI	Departure	13.1	-	-
18-Jan	14:50	3A065	YFT	Arrival	12.5	-	-
18-Jan	16:17	3A167	YFT	Departure	12	-	-
18-Jan	16:44	3A083	ZUI	Arrival	13.2	-	-
18-Jan	16:52	3A067	YFT	Arrival	12.3	-	-
18-Jan	17:27	3A183	ZUI	Departure	12.8	-	-
18-Jan	18:07	8S126	XZM	Departure	13.1	-	-
18-Jan	20:25	3A084	ZUI	Arrival	12.3	-	-
18-Jan	20:54	8S2113	XZM	Arrival	12.6	-	-
18-Jan	20:57	3A185	ZUI	Departure	12.9	-	-
19-Jan	8:25	3A061	YFT	Arrival	12.7	-	-
19-Jan	10:12	3A081	ZUI	Arrival	13.1	-	-
19-Jan	10:16	8S212	XZM	Arrival	12	-	-

Date	Time [Arrival at / Departure from HKIA SkyPier]	Ferry No.	Connecting Port [XZM - Macao (Maritime Ferry Terminal) YFT - Macao (Taipa) ZUI - Zhuhai Jiuzhou]	Travel Direction [Arrival at / Departure from HKIA SkyPier]	Average Speed within Speed Control Zone (knots)	Extent of Instantaneous Speeding by SkyPier HSFs across SCZ (knots)	Duration of the Instantaneous Speeding (min)
19-Jan	10:27	3A181	ZUI	Departure	12.1	-	-
19-Jan	10:57	8S121	XZM	Departure	12.1	-	-
19-Jan	12:37	8S215	XZM	Arrival	12	-	-
19-Jan	13:45	3A082	ZUI	Arrival	13	-	-
19-Jan	14:10	3A182	ZUI	Departure	12.7	-	-
19-Jan	14:54	3A065	YFT	Arrival	11.1	-	-
19-Jan	16:22	3A167	YFT	Departure	11.7	-	-
19-Jan	16:57	3A067	YFT	Arrival	11.2	-	-
19-Jan	16:59	3A083	ZUI	Arrival	12.9	-	-
19-Jan	17:16	3A183	ZUI	Departure	12.7	-	-
19-Jan	18:00	8S126	XZM	Departure	11.3	-	-
19-Jan	20:30	3A084	ZUI	Arrival	12.7**	-	-
19-Jan	20:55	8S2113	XZM	Arrival	11.5	-	-
19-Jan	20:56	3A185	ZUI	Departure	12.7	-	-
20-Jan	8:21	3A061	YFT	Arrival	12.8	-	-
20-Jan	9:42	3A081	ZUI	Arrival	12.8	-	-
20-Jan	10:18	8S212	XZM	Arrival	12.1	-	-
20-Jan	10:20	3A181	ZUI	Departure	13.3**	-	-
20-Jan	11:01	8S121	XZM	Departure	12.4	-	-
20-Jan	12:33	8S215	XZM	Arrival	13	-	-
20-Jan	13:48	3A082	ZUI	Arrival	12.4	-	-
20-Jan	14:08	3A182	ZUI	Departure	12.6	-	-
20-Jan	14:54	3A065	YFT	Arrival	11.7	-	-
20-Jan	16:17	3A167	YFT	Departure	13.1	-	-
20-Jan	16:42	3A083	ZUI	Arrival	12.8	-	-
20-Jan	16:57	3A067	YFT	Arrival	12.9	-	-
20-Jan	17:17	3A183	ZUI	Departure	13	-	-
20-Jan	18:05	8S126	XZM	Departure	13	-	-
20-Jan	20:48	8S2113	XZM	Arrival	12.3	-	-
20-Jan	20:50	3A084	ZUI	Arrival	13	-	-
20-Jan	21:07	3A185	ZUI	Departure	11.7	-	-
21-Jan	8:25	3A061	YFT	Arrival	11.9	-	-
21-Jan	9:58	3A081	ZUI	Arrival	12.7	-	-
21-Jan	10:24	8S212	XZM	Arrival	11.8	-	-
21-Jan	10:33	3A181	ZUI	Departure	12.2	-	-
21-Jan	11:06	8S121	XZM	Departure	11.5	-	-
21-Jan	12:45	8S215	XZM	Arrival	11.8	-	-
21-Jan	13:56	3A082	ZUI	Arrival	12.5	-	-
21-Jan	14:09	3A182	ZUI	Departure	12.2	-	-

Date	Time [Arrival at / Departure from HKIA SkyPier]	Ferry No.	Connecting Port [XZM - Macao (Maritime Ferry Terminal) YFT - Macao (Taipa) ZUI - Zhuhai Jiuzhou]	Travel Direction [Arrival at / Departure from HKIA SkyPier]	Average Speed within Speed Control Zone (knots)	Extent of Instantaneous Speeding by SkyPier HSFs across SCZ (knots)	Duration of the Instantaneous Speeding (min)
21-Jan	14:54	3A065	YFT	Arrival	12.4	-	-
21-Jan	16:13	3A167	YFT	Departure	12.6	-	-
21-Jan	16:53	3A067	YFT	Arrival	12	-	-
21-Jan	16:57	3A083	ZUI	Arrival	12	-	-
21-Jan	17:19	3A183	ZUI	Departure	13.2	-	-
21-Jan	18:03	8S126	XZM	Departure	12	-	-
21-Jan	20:36	3A084	ZUI	Arrival	12.6	-	-
21-Jan	20:55	8S2113	XZM	Arrival	11.5	-	-
21-Jan	21:00	3A185	ZUI	Departure	12.1	-	-
22-Jan	8:24	3A061	YFT	Arrival	11	-	-
22-Jan	9:58	3A081	ZUI	Arrival	12.3	-	-
22-Jan	10:21	8S212	XZM	Arrival	12.2	-	-
22-Jan	10:34	3A181	ZUI	Departure	12.4	-	-
22-Jan	11:09	8S121	XZM	Departure	12.5	-	-
22-Jan	12:39	8S215	XZM	Arrival	12.6	-	-
22-Jan	13:56	3A082	ZUI	Arrival	12.8	-	-
22-Jan	14:11	3A182	ZUI	Departure	12.5	-	-
22-Jan	14:53	3A065	YFT	Arrival	13	-	-
22-Jan	16:20	3A167	YFT	Departure	13.2	-	-
22-Jan	16:52	3A067	YFT	Arrival	13.1	-	-
22-Jan	17:08	3A083	ZUI	Arrival	12	-	-
22-Jan	17:24	3A183	ZUI	Departure	12.7	-	-
22-Jan	18:08	8S126	XZM	Departure	13.5	-	-
22-Jan	20:35	3A084	ZUI	Arrival	12.9	-	-
22-Jan	20:44	8S2113	XZM	Arrival	13.4	-	-
22-Jan	21:08	3A185	ZUI	Departure	12.5	-	-
23-Jan	8:28	3A061	YFT	Arrival	11.7	-	-
23-Jan	10:06	3A081	ZUI	Arrival	12.3	-	-
23-Jan	10:15	8S212	XZM	Arrival	12	-	-
23-Jan	10:44	3A181	ZUI	Departure	12.8	-	-
23-Jan	11:03	8S121	XZM	Departure	12.6	-	-
23-Jan	12:35	8S215	XZM	Arrival	12.1	-	-
23-Jan	13:55	3A082	ZUI	Arrival	12.9	-	-
23-Jan	14:12	3A182	ZUI	Departure	12.5	-	-
23-Jan	14:54	3A065	YFT	Arrival	12.6	-	-
23-Jan	16:15	3A167	YFT	Departure	12.7	-	-
23-Jan	16:58	3A067	YFT	Arrival	11.7	-	-
23-Jan	16:59	3A083	ZUI	Arrival	12.2	-	-
23-Jan	17:29	3A183	ZUI	Departure	13.2	-	-



Date	Time [Arrival at / Departure from HKIA SkyPier]	Ferry No.	Connecting Port [XZM - Macao (Maritime Ferry Terminal) YFT - Macao (Taipa) ZUI - Zhuhai Jiuzhou]	Travel Direction [Arrival at / Departure from HKIA SkyPier]	Average Speed within Speed Control Zone (knots)	Extent of Instantaneous Speeding by SkyPier HSFs across SCZ (knots)	Duration of the Instantaneous Speeding (min)
23-Jan	18:13	8S126	XZM	Departure	12.5	-	-
23-Jan	20:41	3A084	ZUI	Arrival	12.1	-	-
23-Jan	20:48	8S2113	XZM	Arrival	12.5	-	-
23-Jan	21:16	3A185	ZUI	Departure	12.6	-	-
24-Jan	8:24	3A061	YFT	Arrival	12	-	-
24-Jan	9:57	3A081	ZUI	Arrival	12.3	-	-
24-Jan	10:04	8S212	XZM	Arrival	11.5	-	-
24-Jan	10:45	3A181	ZUI	Departure	12.9	-	-
24-Jan	11:03	8S121	XZM	Departure	12.2	-	-
24-Jan	12:31	8S215	XZM	Arrival	12.5	-	-
24-Jan	13:54	3A082	ZUI	Arrival	12.7	-	-
24-Jan	14:09	3A182	ZUI	Departure	12.7	-	-
24-Jan	14:53	3A065	YFT	Arrival	11.9	-	-
24-Jan	16:17	3A167	YFT	Departure	12.3	-	-
24-Jan	16:52	3A067	YFT	Arrival	12.6	-	-
24-Jan	16:57	3A083	ZUI	Arrival	12.1	-	-
24-Jan	17:14	3A183	ZUI	Departure	12.9	-	-
24-Jan	18:13	8S126	XZM	Departure	12.6	-	-
24-Jan	20:40	3A084	ZUI	Arrival	12.3	-	-
24-Jan	20:50	8S2113	XZM	Arrival	12.4	-	-
24-Jan	20:57	3A185	ZUI	Departure	13	-	-
25-Jan	8:24	3A061	YFT	Arrival	12	-	-
25-Jan	10:01	8S212	XZM	Arrival	11.1	-	-
25-Jan	10:01	3A081	ZUI	Arrival	12.2	-	-
25-Jan	10:28	3A181	ZUI	Departure	13.1	-	-
25-Jan	10:58	8S121	XZM	Departure	12.2	-	-
25-Jan	12:36	8S215	XZM	Arrival	12.6	-	-
25-Jan	14:06	3A082	ZUI	Arrival	12.9	-	-
25-Jan	14:19	3A182	ZUI	Departure	12.6	-	-
25-Jan	14:58	3A065	YFT	Arrival	11.3	-	-
25-Jan	16:11	3A167	YFT	Departure	12	-	-
25-Jan	16:57	3A067	YFT	Arrival	11.8	-	-
25-Jan	17:03	3A083	ZUI	Arrival	12.6	-	-
25-Jan	17:20	3A183	ZUI	Departure	12.7	-	-
25-Jan	18:01	8S126	XZM	Departure	12.7	-	-
25-Jan	20:45	3A084	ZUI	Arrival	12.1	-	-
25-Jan	20:48	8S2113	XZM	Arrival	12	-	-
25-Jan	21:03	3A185	ZUI	Departure	13.1	-	-
26-Jan	8:32	3A061	YFT	Arrival	11.6	-	-

Date	Time [Arrival at / Departure from HKIA SkyPier]	Ferry No.	Connecting Port [XZM - Macao (Maritime Ferry Terminal) YFT - Macao (Taipa) ZUI - Zhuhai Jiuzhou]	Travel Direction [Arrival at / Departure from HKIA SkyPier]	Average Speed within Speed Control Zone (knots)	Extent of Instantaneous Speeding by SkyPier HSFs across SCZ (knots)	Duration of the Instantaneous Speeding (min)
26-Jan	10:05	3A081	ZUI	Arrival	11.9	-	-
26-Jan	10:18	8S212	XZM	Arrival	12.3	-	-
26-Jan	10:39	3A181	ZUI	Departure	13.1	-	-
26-Jan	11:00	8S121	XZM	Departure	12.8	-	-
26-Jan	12:41	8S215	XZM	Arrival	12.3	-	-
26-Jan	14:00	3A082	ZUI	Arrival	13.1	-	-
26-Jan	14:19	3A182	ZUI	Departure	12.1	-	-
26-Jan	14:53	3A065	YFT	Arrival	12.9	-	-
26-Jan	16:13	3A167	YFT	Departure	12.5	-	-
26-Jan	16:49	3A067	YFT	Arrival	12.5	-	-
26-Jan	17:17	3A083	ZUI	Arrival	12.9	-	-
26-Jan	17:28	3A183	ZUI	Departure	12.5	-	-
26-Jan	18:10	8S126	XZM	Departure	11.9	-	-
26-Jan	20:40	3A084	ZUI	Arrival	12.1	-	-
26-Jan	20:48	8S2113	XZM	Arrival	12.6	-	-
26-Jan	20:54	3A185	ZUI	Departure	12.6	-	-
27-Jan	8:27	3A061	YFT	Arrival	11.7	-	-
27-Jan	10:02	3A081	ZUI	Arrival	11.9	-	-
27-Jan	10:13	8S212	XZM	Arrival	11.3	-	-
27-Jan	10:34	3A181	ZUI	Departure	13.3	-	-
27-Jan	11:01	8S121	XZM	Departure	12.2	-	-
27-Jan	12:38	8S215	XZM	Arrival	12	-	-
27-Jan	13:59	3A082	ZUI	Arrival	12.5	-	-
27-Jan	14:13	3A182	ZUI	Departure	12.8	-	-
27-Jan	14:57	3A065	YFT	Arrival	12.8	-	-
27-Jan	16:11	3A167	YFT	Departure	11.7	-	-
27-Jan	16:54	3A067	YFT	Arrival	12.8	-	-
27-Jan	17:00	3A083	ZUI	Arrival	12.9	-	-
27-Jan	17:14	3A183	ZUI	Departure	12.9	-	-
27-Jan	18:07	8S126	XZM	Departure	13.4	-	-
27-Jan	20:54	8S2113	XZM	Arrival	13.1	-	-
28-Jan	8:28	3A061	YFT	Arrival	11.8	-	-
28-Jan	10:03	3A081	ZUI	Arrival	11.8	-	-
28-Jan	10:04	8S212	XZM	Arrival	11.7	-	-
28-Jan	10:30	3A181	ZUI	Departure	12.5	-	-
28-Jan	11:00	8S121	XZM	Departure	12.9	-	-
28-Jan	12:36	8S215	XZM	Arrival	12.9	-	-
28-Jan	14:00	3A082	ZUI	Arrival	12.5	-	-
28-Jan	14:14	3A182	ZUI	Departure	12.1	-	-

Date	Time [Arrival at / Departure from HKIA SkyPier]	Ferry No.	Connecting Port [XZM - Macao (Maritime Ferry Terminal) YFT - Macao (Taipa) ZUI - Zhuhai Jiuzhou]	Travel Direction [Arrival at / Departure from HKIA SkyPier]	Average Speed within Speed Control Zone (knots)	Extent of Instantaneous Speeding by SkyPier HSFs across SCZ (knots)	Duration of the Instantaneous Speeding (min)
28-Jan	14:56	3A065	YFT	Arrival	11.9	-	-
28-Jan	16:11	3A167	YFT	Departure	12.2	-	-
28-Jan	16:52	3A067	YFT	Arrival	12.8	-	-
28-Jan	17:07	3A083	ZUI	Arrival	12.6	-	-
28-Jan	17:20	3A183	ZUI	Departure	12.3	-	-
28-Jan	17:56	8S126	XZM	Departure	11.5	-	-
28-Jan	20:56	8S2113	XZM	Arrival	11.2	-	-
29-Jan	8:28	3A061	YFT	Arrival	11	-	-
29-Jan	10:05	8S212	XZM	Arrival	12.2	-	-
29-Jan	10:31	3A081	ZUI	Arrival	11.9	-	-
29-Jan	10:46	3A181	ZUI	Departure	12.7	-	-
29-Jan	12:38	8S215	XZM	Arrival	12	-	-
29-Jan	13:56	3A082	ZUI	Arrival	12.5	-	-
29-Jan	14:11	3A182	ZUI	Departure	12.5	-	-
29-Jan	14:55	3A065	YFT	Arrival	11.6	-	-
29-Jan	16:14	3A167	YFT	Departure	12.2	-	-
29-Jan	16:53	3A067	YFT	Arrival	12.5	-	-
29-Jan	17:00	3A083	ZUI	Arrival	13.1	-	-
29-Jan	17:38	3A183	ZUI	Departure	11.8	-	-
29-Jan	20:41	8S2113	XZM	Arrival	12.5	-	-
30-Jan	8:24	3A061	YFT	Arrival	11.6	-	-
30-Jan	10:08	3A081	ZUI	Arrival	11.8	-	-
30-Jan	10:13	8S212	XZM	Arrival	11.5	-	-
30-Jan	10:36	3A181	ZUI	Departure	12.6	-	-
30-Jan	12:36	8S215	XZM	Arrival	13.2	-	-
30-Jan	13:56	3A082	ZUI	Arrival	12.3	-	-
30-Jan	14:24	3A182	ZUI	Departure	12.7	-	-
30-Jan	14:55	3A065	YFT	Arrival	12.1	-	-
30-Jan	16:16	3A167	YFT	Departure	12.4	-	-
30-Jan	16:56	3A067	YFT	Arrival	12	-	-
30-Jan	17:09	3A083	ZUI	Arrival	12.2	-	-
30-Jan	17:27	3A183	ZUI	Departure	11.9	-	-
30-Jan	20:55	8S2113	XZM	Arrival	11.3	-	-
31-Jan	8:29	3A061	YFT	Arrival	11.5	-	-
31-Jan	10:00	3A081	ZUI	Arrival	12	-	-
31-Jan	10:03	8S212	XZM	Arrival	13	-	-
31-Jan	10:28	3A181	ZUI	Departure	13.2	-	-
31-Jan	12:39	8S215	XZM	Arrival	12.4	-	-
31-Jan	14:02	3A082	ZUI	Arrival	12.3	-	-

Date	Time [Arrival at / Departure from HKIA SkyPier]	Ferry No.	Connecting Port [XZM - Macao (Maritime Ferry Terminal) YFT - Macao (Taipa) ZUI - Zhuhai Jiuzhou]	Travel Direction [Arrival at / Departure from HKIA SkyPier]	Average Speed within Speed Control Zone (knots)	Extent of Instantaneous Speeding by SkyPier HSFs across SCZ (knots)	Duration of the Instantaneous Speeding (min)
31-Jan	14:16	3A182	ZUI	Departure	12.6	-	-
31-Jan	14:51	3A065	YFT	Arrival	12.6	-	-
31-Jan	16:13	3A167	YFT	Departure	12.9	-	-
31-Jan	16:53	3A067	YFT	Arrival	11.5	-	-
31-Jan	17:07	3A083	ZUI	Arrival	13	-	-
31-Jan	17:25	3A183	ZUI	Departure	11.8	-	-
31-Jan	20:42	8S2113	XZM	Arrival	12.4	-	-

\*\* Insufficient or no AIS data for speed calculation.

#### Follow-up on instantaneous speeding

Referring to the data of SkyPier HSF movements in January 2020, instantaneous speeding (i.e. a sudden change in speed at over 15 knots for a short period of time) within the SCZ was recorded from 1 HSF movement of which the duration of instantaneous speeding case was less than 1 minute. The AIS data and ferry operators' response showed the case was due to local strong water. The captain had reduced speed and maintained the speed at less than 15 knots after the incident.