MOTT MACDONALD

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

Construction Phase Monthly EM&A Report No.21 (For September 2017)

October 2017

Airport Authority Hong Kong

20/F AIA Kowloon Tower
Landmark East
100 How Ming Street
Kwun Tong
Kowloon
Hong Kong

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

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

Construction Phase Monthly EM&A Report No.21 (For September 2017)

October 2017

Airport Authority Hong Kong

This Monthly EM&A Report No. 21 has been reviewed and certified by the Environmental Team Leader (ETL) in accordance with Condition 3.5 of Environmental Permit No. EP-489/2014.

Certified by: 

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

Date 13 October 2017

AECOM
8/F, Grand Central Plaza, Tower 2,
138 Shatin Rural Committee Road,
Shatin, Hong Kong
香港新界沙田鄉事會路 138 號新城
市中央廣場第 2 座 8 樓
www.aecom.com

+852 3922 9000 tel
+852 2317 7609 fax

Our Ref : 60440482/C/JCHL171013

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

13 October 2017

Dear Sir,

Contract No. 3102
3RS Independent Environmental Checker Consultancy Services

Submission of Monthly EM&A Report No.21 (September 2017)

Reference is made to the Environmental Team's submission of the Monthly EM&A Report No.21 under Condition 3.5 of the Environmental Permit No. EP-489/2014 certified by the ET Leader on 13 October 2017.

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

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

Yours faithfully,
AECOM Asia Co. Ltd.

Jackel Law
Independent Environmental Checker

Contents

Tables

Figures

Appendices

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 21st Construction Phase Monthly EM&A Report for the Project which summarizes the monitoring results and audit findings of the EM&A programme during the reporting period from 1 to 30 September 2017.

Key Activities in the Reporting Period

The key activities of the Project carried out in the reporting period included deep cement mixing (DCM) works, laying of sand blanket and geotextile, seawall construction, horizontal directional drilling (HDD) works, concrete removal works, 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. During the reporting period, the ET conducted 36 sets of construction dust measurements, 20 sets of construction noise measurements, 13 events of water quality measurements, 1 round of terrestrial ecology monitoring on Sheung Sha Chau Island, 2 complete sets of small vessel line-transect surveys and 5 days of land-based theodolite tracking survey effort for Chinese White Dolphin (CWD) monitoring and waste monitoring.

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 Independent Environmental Checker (IEC). Observations have been recorded in the site inspection checklists and provided to the contractors together with the appropriate follow-up actions where necessary.

On the implementation of Marine Mammal Watching Plan (MMWP), dolphin observers were deployed by the contractors for laying of open sea silt curtain and laying of silt curtains for sand blanket in accordance with the plan. On the implementation of Dolphin Exclusion Zone (DEZ) Plan, dolphin observers at 13 to 16 dolphin observation stations were deployed for continuous monitoring of the DEZ by all contractors for DCM works and seawall construction in accordance with the DEZ Plan. Trainings for the proposed dolphin observers were provided by the ET prior to the aforementioned works, with the training records kept by the ET. From the contractors' MMWP observation records and DEZ monitoring records, no dolphin or other marine mammals were observed within or around the silt curtains, whilst there was one record of dolphin sighting within the DEZ of DCM works in this reporting period. Audits of acoustic decoupling for construction vessels were also carried out by the ET.

On the implementation of the Marine Travel Routes and Management Plan for High Speed Ferries of SkyPier (the SkyPier Plan), the daily movements of all SkyPier high speed ferries (HSFs) in September 2017 were in the range of 70 to 87 daily movements, which are within the maximum daily cap of 125 daily movements. A total of 580 HSF movements under the SkyPier Plan were recorded in the reporting period. All HSFs had travelled through the Speed Control Zone (SCZ) with average speeds under 15 knots (9.6 to 14.1 knots), which were 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 investigation or actions accordingly.

On the implementation of the Marine Travel Routes and Management Plan for Construction and Associated Vessel (MTRMP-CAV), the Marine Surveillance System (MSS) automatically recorded the deviation case such as speeding, entering no entry zone, not traveling through the designated gate. 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, entry from non-designated gates, and entering no-entry zones were reviewed by ET. All the concerned captains were reminded by the contractor's Marine Traffic Control Centre (MTCC) representative to comply with the requirements of the MTRMP-CAV. ET reminded contractors that all vessels shall avoid entering the no-entry zone, in particular the Brothers Marine Park. 3-month rolling programmes for construction vessel activities, which ensures the proposed vessels are necessary and minimal through good planning, were also received from contractors.

Results of Impact Monitoring

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

No exceedance of the Action or Limit Levels in relation to construction dust, construction noise, construction waste, and CWD monitoring was recorded in the reporting period.

The water quality monitoring results for DO, turbidity, total alkalinity, and chromium obtained during the reporting period did not trigger their corresponding Action and Limit Levels stipulated in the EM&A programme for triggering the relevant investigation and follow-up procedures under the programme if being exceeded. For SS and nickel, some of the testing results exceeded the relevant Action or Limit Levels, and the corresponding investigations were conducted accordingly. The investigation findings concluded that the exceedances were not due to the Project.

The monthly terrestrial ecology monitoring on Sheung Sha Chau observed that HDD works were conducted at the daylighting location and there was no encroachment upon the egretry area nor any significant disturbance to the egrets foraging at Sheung Sha Chau by the works.

Summary of Upcoming Key Issues

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

Advanced Works:

Contract P560 (R) Aviation Fuel Pipeline Diversion Works

- HDD works; and
- Stockpiling of excavated materials from HDD operation.

DCM Works:

Contract 3201 to 3205 DCM Works

- Laying of sand blanket;
- DCM works; and
- Seawall construction.

Reclamation Works:

Contract 3206 Main Reclamation Works

- Laying of sand blanket; and
- Prefabricated Vertical Drain (PVD) installation.

Airfield Works:

Contract 3301 North Runway Crossover Taxiway

- CLP cable ducting work.

Terminal 2 Expansion Works:

Contract 3501 Antenna Farm and Sewage Pumping Station

- Excavation and piling works.

Contract 3502 Terminal 2 Automated People Mover (APM) Depot Modification Works

- Removal of existing concrete.

APM works:

Contract 3602 Existing APM System Modification Works

- Site office establishment.

Airport Support Infrastructure & Logistic Works:

Contract 3801 APM and BHS Tunnels on Existing Airport Island

- Erection of hoarding.

The key environmental issues will be associated with construction dust, construction noise, water quality, construction waste management, CWD and terrestrial ecology on Sheung Sha Chau. The implementation of required mitigation measures by the contractor will be monitored by the ET.

		
Photo Shooting for CWD Photo Identification	DEZ Monitoring by Dolphin Observer	Dolphin Observer Training

Summary Table

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

	Yes	No	Details	Analysis / Recommendation / Remedial Actions
Exceedance of Limit Level^		✓	No exceedance of project-related limit level was recorded.	Nil
Exceedance of Action Level^		✓	No exceedance of project-related action level was recorded.	Nil
Complaints Received	✓		A complaint on sand filling materials was received on 5 Sep 2017.	Investigation details of the complaint is presented in S7.8.1.
Notification of any summons and status of prosecutions		✓	No notifications of summons or prosecution were received.	Nil
Changes that affect the EM&A		✓	There were no changes to the construction works that may affect the EM&A	Nil

Remark: ^Only exceedance of Action or Limit Level related to Project works is counted as Breaches 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. The Manual is available on the Project's dedicated website (accessible at: **http://env.threerunwaysystem.com/en/index.html**). 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 existing 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 21st Construction Phase Monthly EM&A Report for the Project which summarizes the key findings of the EM&A programme during the reporting period from 1 to 30 September 2017.

1.3 Project Organisation

The Project's organization 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 have been updated and is presented in **Table 1.1**.

Table 1.1: Contact Information of Key Personnel

Party	Position	Name	Telephone
Project Manager's Representative (Airport Authority Hong Kong)	Principal Manager, Environment	Lawrence Tsui	2183 2734

Party	Position	Name	Telephone
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	Keith Chau	2972 1721
Independent Environmental Checker (IEC) (AECOM Asia Company Limited)	Independent Environmental Checker	Jackel Law	3922 9376
	Deputy Independent Environmental Checker	Roy Man	3922 9376
Advanced Works:			
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 Works:			
Contract 3201 DCM (Package 1) (Penta-Ocean-China State-Dong-Ah Joint Venture)	Project Director	Tsugunari Suzuki	9178 9689
	Environmental Officer	Alan Tam	6119 3107
Contract 3202 DCM (Package 2) (Samsung-BuildKing Joint Venture)	Project Manager	Ilkwon Nam	9643 3117
	Environmental Officer	Dickson Mak	9525 8408
Contract 3203 DCM (Package 3) (Sambo E&C Co., Ltd)	Project Manager	Eric Kan	9014 6758
	Environmental Officer	David Hung	9765 6151
Contract 3204 DCM (Package 4) (CRBC-SAMBO Joint Venture)	Project Manager	Kyung-Sik Yoo	9683 8697
	Environmental Officer	Kanny Cho	6799 8226
Contract 3205 DCM (Package 5) (Bachy Soletanche - Sambo Joint Venture)	Deputy Project Director	Min Park	9683 0765
	Environmental Officer	Margaret Chung	9130 3696
Reclamation Works:			
Contract 3206 (ZHEC-CCCC-CDC Joint Venture)	Project Manager	Kim Chuan Lim	3693 2288
	Environmental Officer	Kwai Fung Wong	3693 2252
Terminal 2 Expansion Works:			

Party	Position	Name	Telephone
Contract 3501 Antenna Farm and Sewage Pumping Station (Build King Construction Ltd.)	Project Manager	Osbert Sit	9079 7030
	Environmental Officer	Kelvin Cheung	9305 6081
Contract 3502 Terminal 2 APM Depot Modification Works (Build King Construction Ltd.)	Project Manager	Kivin Cheng	9380 3635
	Environmental Officer	Chun Pong Chan	9187 7118
Automated People Mover Works:			
Contract 3602 Existing APM System Modification Works (Niigata Transys Co., Ltd.)	Project Manager	Kunihiro Tatecho	9755 0351
	Environmental Officer	Arthur Wong	9170 3394
Airport Support Infrastructure and Logistic Works:			
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 DCM works, laying of sand blanket and geotextile, seawall construction, HDD works, concrete removal works, piling and excavation works.

1.5 Summary of EM&A Programme Requirements

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

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

Parameters	Status
Air Quality	
Baseline Monitoring	The baseline air quality monitoring result has been reported in Baseline Monitoring Report and submitted to EPD under EP Condition 3.4.
Impact Monitoring	On-going
Noise	
Baseline Monitoring	The baseline noise monitoring result has been reported in Baseline Monitoring Report and submitted to EPD under EP Condition 3.4.
Impact Monitoring	On-going
Water Quality	
General Baseline Water Quality Monitoring for reclamation, water jetting and field joint works	The baseline water quality monitoring result has been reported in Baseline Water Quality Monitoring Report and submitted to EPD under EP Condition 3.4.
General Impact Water Quality Monitoring for reclamation, water jetting and field joint works	On-going

Parameters	Status
Initial Intensive Deep Cement Mixing (DCM) Water Quality Monitoring	Completed in May 2017 and data analysis in-progress.
Early/ Regular DCM Water Quality Monitoring	On-going
Waste Management	
Waste Monitoring	On-going
Land Contamination	
Supplementary Contamination Assessment Plan (CAP)	To be submitted with the relevant construction works.
Contamination Assessment Report (CAR) for Golf Course	The CAR for Golf Course was submitted to EPD.
Terrestrial Ecology	
Pre-construction Egretry Survey Plan	The Egretry Survey Plan was submitted and approved by EPD under EP Condition 2.14.
Ecological Monitoring	On-going
Marine Ecology	
Pre-Construction Phase Coral Dive Survey	The Coral Translocation Plan was submitted and approved by EPD under EP Condition 2.12.
Coral Translocation	The coral translocation was completed.
Post-Translocation Coral Monitoring	On-going
Chinese White Dolphins (CWD)	
Vessel Survey, Land-based Theodolite Tracking and Passive Acoustic Monitoring (PAM)	
Baseline Monitoring	Baseline CWD results were reported in the CWD Baseline Monitoring Report and submitted to EPD in accordance with EP Condition 3.4.
Impact Monitoring	On-going
Landscape & Visual	
Baseline Monitoring	The baseline landscape & visual monitoring result has been reported in Baseline Monitoring Report and submitted to EPD under EP Condition 3.4.
Impact Monitoring	On-going
Environmental Auditing	
Regular site inspection	On-going
Marine Mammal Watching Plan (MMWP) implementation measures	On-going
Dolphin Exclusion Zone Plan (DEZP) 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, ecology, 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. In order to enhance environmental awareness and closely monitor the environmental performance of the contractors, environmental briefings and regular environmental management meetings were conducted.

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

2.1 Monitoring Stations

Air quality monitoring was conducted at 2 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

2.2 Monitoring Requirements and Schedule

In accordance with the Manual, baseline 1-hour total suspended particulate (TSP) levels at the two air quality monitoring stations were established as presented in the Baseline Monitoring Report. Impact 1-hour TSP monitoring was conducted for three times every 6 days. 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**.

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

Table 2.2: Action and Limit Levels for 1-hour TSP

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

2.3 Monitoring Equipment

Portable direct reading dust meter was used to carry out the 1-hour TSP monitoring. Details of equipment 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-001 (Serial No. 934393)	26 Oct 2016	Monthly EM&A Report No. 20, Appendix E
	SIBATA LD-3B-002 (Serial No. 974350)	26 Oct 2016	
	SIBATA LD-3B-003 (Serial No. 276018)	26 Oct 2016	

2.4 Monitoring Methodology

2.4.1 Measuring Procedure

The measurement procedures involved in the impact 1-hr TSP monitoring can be summarised as follows:

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

2.4.2 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 B of the Construction Phase Monthly EM&A Report No. 11, and the calibration certificates for portable direct reading dust meter listed in **Table 2.3** are still valid.

2.5 Analysis and Interpretation of Monitoring Results

The monitoring results for 1-hour TSP are summarized in **Table 2.4**. Detailed impact monitoring results are presented in **Appendix D**.

Table 2.4: Summary of 1-hour TSP Monitoring Results

Monitoring Station	1-hr TSP Concentration Range (μg/m^3)	Action Level (μg/m^3)	Limit Level (μg/m^3)
AR1A	9 – 48	306	500
AR2	12 – 52	298	

No exceedance of the Action or Limit Level was recorded 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.

3 Noise Monitoring

3.1 Monitoring Stations

Noise monitoring was conducted at 5 representative monitoring stations in the vicinity of noise sensitive receivers in Tung Chung and villages in North Lantau in accordance with the Manual. **Figure 2.1** shows the locations of the monitoring stations and these are described in **Table 3.1** below. As described in Section 4.3.3 of the Manual, monitoring at NM2 will commence when the future residential buildings in Tung Chung West Development become occupied.

Table 3.1: Locations of Impact Noise Monitoring Stations

Monitoring Station	Location	Type of measurement
NM1A	Man Tung Road Park	Free field
NM2(1)	Tung Chung West Development	To be determined
NM3A	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.

3.2 Monitoring Requirements and Schedule

In accordance with the Manual, baseline noise levels at the noise monitoring stations were established as presented in the Baseline Monitoring Report. Impact noise monitoring was conducted once per week in the form of 30-minute measurements of L_{eq}, L_{10} and L_{90} levels recorded at each monitoring station between 0700 and 1900 on normal weekdays. 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**. The construction noise monitoring schedule involved in the reporting period is provided in **Appendix C**.

Table 3.2: Action and Limit Levels for Construction Noise

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	75 dB(A)(i)

Note: (i) Reduced to 70dB(A) for school and 65dB(A) during school examination periods.

3.3 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 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	B&K 2238 (Serial No. 2800932)	17 Jul 2017	Monthly EM&A Report No. 19, Appendix E
	B&K 2238 (Serial No. 2381580)	8 Sep 2016	Monthly EM&A Report No. 9, Appendix B
	B&K 2238 (Serial No. 2808432)	30 Aug 2017	**Appendix E**
	B&K 2238 (Serial No. 2684503)	30 Aug 2017	**Appendix E**
Acoustic Calibrator	B&K 4231 (Serial No. 3003246)	16 May 2017	Monthly EM&A Report No. 17, Appendix D
	B&K 4231 (Serial No. 3004068)	17 Jul 2017	Monthly EM&A Report No. 19, Appendix E

3.4 Monitoring Methodology

3.4.1 Monitoring Procedure

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

a. The sound level meter was set on a tripod at least a height of 1.2 m above the ground for free-field measurements at monitoring stations NM1A, NM4, NM5 and NM6. A correction of +3 dB(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 1 dB(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.

3.4.2 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 still valid. The calibration certificates of the integrated sound level meters used in this reporting period are provided in **Appendix E**.

3.5 Analysis and Interpretation of Monitoring Results

The construction noise monitoring results are summarized in **Table 3.4** and the detailed monitoring data are provided in **Appendix D**.

Table 3.4: Summary of Construction Noise Monitoring Results

Monitoring Station	Noise Level Range, dB(A) $L_{eq\ (30\ mins)}$	Limit Level, dB(A) $L_{eq\ (30\ mins)}$
NM1A[(i)]	71 – 72	75
NM3A	57 – 62	75
NM4[(i)]	66 – 66	70[(ii)]
NM5[(i)]	58 – 59	75
NM6[(i)]	66 – 71	75

Notes: (i) +3 dB(A) Façade correction included;

(ii) Reduced to 65 dB(A) during school examination periods at NM4. No school examination took place in the reporting period.

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 road traffic noise at NM1A, helicopter and aircraft noise at NM3A, aircraft noise and student activities at NM4, aircraft and helicopter noise at NM5, and noise from aircraft, helicopter, marine vessel, and construction activities from other projects at NM6 in this reporting period.

No exceedance of the Action or Limit Level was recorded at all monitoring stations in the reporting period.

4 Water Quality Monitoring

4.1 Monitoring Stations

Water quality monitoring was conducted at a total of 22 water quality monitoring stations, comprising 12 impact (IM) stations, 7 sensitive receiver (SR) stations and 3 control stations in the vicinity of water quality sensitive receivers around the airport island in accordance with the Manual. **Table 4.1** describes the details of the monitoring stations**. Figure 3.1** shows the locations of the monitoring stations.

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

Monitoring Station	Description	Coordinates		Parameters
		Easting	Northing	
C1	Control	804247	815620	DO, pH, Temperature, Salinity, Turbidity, SS, Total Alkalinity, Heavy Metals[2]
C2	Control	806945	825682	
C3[3]	Control	817803	822109	
IM1	Impact	806458	818351	
IM2	Impact	806193	818852	
IM3	Impact	806019	819411	
IM4	Impact	805039	819570	
IM5	Impact	804924	820564	
IM6	Impact	805828	821060	
IM7	Impact	806835	821349	
IM8	Impact	807838	821695	
IM9	Impact	808811	822094	
IM10	Impact	809838	822240	
IM11	Impact	810545	821501	
IM12	Impact	811519	821162	
SR1[1]	Future Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities (HKBCF) Seawater Intake for cooling	812586	820069	DO, pH, Temperature, Salinity, Turbidity, SS
SR2[3]	Planned marine park / hard corals at The Brothers / Tai Mo To	814166	821463	
SR3	Sha Chau and Lung Kwu Chau Marine Park / fishing and spawning grounds in North Lantau	807571	822147	
SR4A	Sha Lo Wan	807810	817189	
SR5A	San Tau Beach SSSI	810696	816593	
SR6	Tai Ho Bay, Near Tai Ho Stream SSSI	814663	817899	
SR7	Ma Wan Fish Culture Zone (FCZ)	823742	823636	
SR8[4]	Seawater Intake for cooling at Hong Kong International Airport (East)	811418 (from July 2017 onwards)	820246	

Notes:
[1] The seawater intakes of SR1 for the future HKBCF is not yet in operation, hence no water quality impact monitoring was conducted at this station. The future permanent location for SR1 during impact monitoring is subject to finalisation after the HKBCF seawater is commissioned.

(2) Details of selection criteria for the two heavy metals for early 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) The monitoring location for SR8 is subject to further changes due to silt curtain arrangements and the progressive relocation of this seawater intake.

4.2 Monitoring Requirements and Schedule

In accordance with the Manual, baseline water quality levels at the abovementioned representative water quality monitoring stations were established as presented in the Baseline Water Quality Monitoring Report.

General water quality monitoring and early regular DCM water quality monitoring were conducted three days per week, at mid-flood and mid-ebb tides, at the 22 water quality monitoring stations during the reporting period. The sea conditions varied from calm to rough, and the weather conditions varied from sunny to rainy during the monitoring period.

The water quality monitoring schedule for the reporting period is updated and provided in **Appendix C**. The ebb tide monitoring session on 30 September 2017 was cancelled due to hoisting Thunderstorm Signal and adverse sea condition.

4.2.1 Action and Limit Levels for Water Quality Monitoring

The Action and Limit Levels for 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 presented in **Table 4.2**. The control and impact stations during flood tide and ebb tide for general water quality monitoring and regular DCM monitoring are presented in **Table 4.3**.

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

Parameters	Action Level (AL)		Limit Level (LL)	
Action and Limit Levels for general water quality monitoring and regular DCM monitoring (excluding SR1& SR8)				
DO in mg/L (Surface, Middle & Bottom)	Surface and Middle 4.5 mg/L		Surface and Middle 4.1 mg/L 5 mg/L for Fish Culture Zone (SR7) only	
	Bottom 3.4 mg/L		Bottom 2.7 mg/L	
Suspended Solids (SS) in mg/L	23	or 120% of upstream control station at the same tide of the same day, whichever is higher	37	or 130% of upstream control station at the same tide of the same day, whichever is higher
Turbidity in NTU	22.6		36.1	
Total Alkalinity in ppm	95		99	
Representative Heavy Metals for early regular DCM monitoring (Chromium)	0.2		0.2	
Representative Heavy Metals for early regular DCM monitoring (Nickel)	3.2		3.6	
Action and Limit Levels SR1				
SS (mg/l)	To be determined prior to its commissioning		To be determined prior to its commissioning	

Parameters	Action Level (AL)	Limit Level (LL)
Action and Limit Levels SR8		
SS (mg/l)	52	60

Notes:

(1) For DO measurement, non-compliance occurs when monitoring result is lower than the limits.

(2) For parameters other than DO, non-compliance of water quality results when monitoring results is higher than the limits.

(3) Depth-averaged results are used unless specified otherwise.

(4) Details of selection criteria for the two heavy metals for early regular DCM monitoring refer to the Detailed Plan on Deep Cement Mixing available on the dedicated 3RS website (**http://env.threerunwaysystem.com/en/ep-submissions.html**)

(5) The Action and Limit Levels for the two representative heavy metals chosen will be the same as that for the intensive DCM monitoring.

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

Control Station	Impact Stations
Flood Tide	
C1	IM1, IM2, IM3, IM4, IM5, IM6, IM7, IM8, SR3
SR2^1	IM7, IM8, IM9, IM10, IM11, IM12, SR1A, SR3, SR4A, SR5A, SR6, SR8
Ebb Tide	
C1	SR4A, SR5A, SR6
C2	IM1, IM2, IM3, IM4, IM5, IM6, IM7, IM8, IM9, IM10, IM11, IM12, SR1A, SR2, SR3, SR7, SR8

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

4.3 Monitoring Equipment

Table 4.4 summarises the equipment used for monitoring of specific water quality parameters under the impact 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 ProDSS (Serial No. 15M101244)	16 Jun 2017	Monthly EM&A Report No. 18, Appendix D
	YSI ProDSS (Serial No. 16J101716)	12 Sep 2017	**Appendix E**
	YSI ProDSS (Serial No. 17E102521)	12 Sep 2017	
	YSI 6920 V2 (Serial No. 00019CB2)	12 Sep 2017	
	YSI 6920 V2 (Serial No. 000109DF)	12 Sep 2017	
Digital Titrator (measurement of total alkalinity)	Titrette Digital Burette 50ml Class A (Serial No.10N65665)	19 Jun 2017	Monthly EM&A Report No. 18, Appendix D
	Titrette Digital Burette 50ml Class A (Serial No.10N64701)	18 Sep 2017	**Appendix E**

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

4.4 Monitoring Methodology

4.4.1 Measuring Procedure

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

The water samples for all monitoring parameters were collected, stored, preserved and analysed according to the Standard Methods, APHA 22nd ed. and/or other methods as agreed by the EPD. In-situ measurements at monitoring locations including temperature, pH, DO, turbidity, salinity 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 ºC without being frozen), delivered to the laboratory within 24 hours of collection.

4.4.2 Maintenance and Calibration

Calibration of In-situ Instruments

All in-situ monitoring instrument were 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 suspended solids (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. Calibration certificates updated in the reporting period are provided in **Appendix E**.

4.4.3 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
Suspended Solid (SS)	Analytical Balance	APHA 2540D	2 mg/L
Heavy Metals			
Chromium (Cr)	ICP-MS	USEPA 6020A	0.2 µg/L
Nickel (Ni)	ICP-MS	USEPA 6020A	0.2 µg/L

4.5 Analysis and Interpretation of Monitoring Results

4.5.1 Summary of Monitoring Results

The water quality monitoring results for DO, turbidity, total alkalinity, and chromium obtained during the reporting period did not trigger their corresponding Action and Limit Levels stipulated in the EM&A programme for triggering the relevant investigation and follow-up procedures under the programme if being exceeded. For SS and nickel, some of the testing results exceeded the relevant Action or Limit Levels, and the corresponding investigations were conducted accordingly. It should be noted that Severe Tropical Storm Mawar hit Hong Kong during the reporting period. The water quality monitoring results might be affected by this weather event. Detailed analysis of the exceedances are presented in **Section 4.5.2**.

4.5.2 Summary of Findings for Investigation of Exceedances

During the reporting period, water quality monitoring was conducted at 12 IM stations, 7 SR stations, and 3 control stations 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).

During the monitoring period, testing results exceeding the corresponding Action or Limit Levels were recorded on 5 monitoring days. Details of the exceedance cases are presented below.

Findings for SS Exceedances (Mid-Ebb Tide)

Table 4.7 presents a 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	SR2	SR3	SR4A	SR5A	SR6	SR7	SR8
02/09/2017																			
05/09/2017																			
07/09/2017																			
09/09/2017																			
12/09/2017																			
14/09/2017																			
16/09/2017																			
19/09/2017																			
21/09/2017																			
23/09/2017																			
26/09/2017																			
28/09/2017																			
No. of Exceedance	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0

Note: Detailed results are presented in **Appendix D**.	
Legend:	
	No exceedance of Action and Limit Level
	Exceedance of Action Level recorded 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

An exceedance of Action Level was recorded on one monitoring day. As the exceedance occurred at a station located downstream of the Project, which might be affected by Project's construction activities, exceedance investigation was carried out.

As part of the investigation on downstream exceedance event, details of the Project's marine construction activities on the concerned monitoring day was collected, as well as any observations during the monitoring. The findings are summarized in **Table 4.8.**

Table 4.8: Summary of Findings from Investigations of SS Exceedances

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	Exceedance due to Project
09/09/2017	DCM works Sand blanket laying	Around 500m	Silt curtain deployed	No	No	No

* This refers to the approximate distance between the marine construction works and the nearest monitoring stations with exceedance.

According to the investigation findings, it was confirmed that both DCM and sand blanket laying activities were operating normally with silt curtains deployed as additional measures. The silt curtains were maintained properly.

For the exceedance at IM11 on 9 September 2017, the exceedance appeared to be an isolated case with no observable temporal and spatial trend to indicate any effect due to Project activities. As there is no evidence of SS release due to project activities from site observations and all

mitigation measures were carried out properly, the exceedance was possibly due to natural fluctuation in the vicinity of the monitoring station, and considered not due to the Project.

Findings for SS Exceedances (Mid-Flood Tide)

Table 4.9 presents a summary of the SS compliance status at IM and SR stations during mid-ebb tide for the reporting period

Table 4.9: Summary of SS Compliance Status (Mid-Flood Tide)

	IM1	IM2	IM3	IM4	IM5	IM6	IM7	IM8	IM9	IM10	IM11	IM12	SR3	SR4A	SR5A	SR6	SR7	SR8
02/09/2017																		
05/09/2017																		
07/09/2017																		
09/09/2017																		
12/09/2017																		
14/09/2017																		
16/09/2017																		
19/09/2017																		
21/09/2017																		
23/09/2017																		
26/09/2017																		
28/09/2017																		
30/09/2017																		
No. of Exceedance	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0

Note: Detailed results are presented in **Appendix D**.	
Legend:	
	No exceedance of Action and Limit Level
	Exceedance of Action Level recorded at monitoring station located upstream of the Project based on dominant tidal flow
	Upstream station with respect to the Project during the respective tide based on dominant tidal flow

An exceedance of Action Level was recorded on one monitoring day. However, the exceedance occurred at a monitoring station which was located upstream of the Project during flood tide, that would unlikely be affected by the Project. Therefore, the exceedance was possibly due to natural fluctuation in the vicinity of the monitoring station, and considered not due to the Project.

Findings for Nickel Exceedances (Mid-Flood Tide)

Table 4.10 presents a summary of the nickel compliance status at IM stations during mid-flood tide for the reporting period.

Table 4.10: Summary of Nickel Compliance Status (Mid-Flood Tide)

	IM1	IM2	IM3	IM4	IM5	IM6	IM7	IM8	IM9	IM10	IM11	IM12
02/09/2017												
05/09/2017												
07/09/2017												
09/09/2017												
12/09/2017												
14/09/2017												
16/09/2017												
19/09/2017												
21/09/2017												
23/09/2017												
26/09/2017												
28/09/2017												
30/09/2017												
No. of Exceedanc	0	0	0	0	0	0	0	5	3	2	0	0

Note: Detailed results are presented in **Appendix D**.	
Legend:	
	No exceedance of Action and Limit Level
	Exceedance of Action Level recorded at monitoring station located downstream of the Project based on dominant tidal flow
	Exceedance of Limit Level recorded 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

Exceedances of Action or Limit Levels were recorded on five monitoring days. Standby Signal No. 1 was in force when exceedances were recorded on 2 September 2017. As the exceedances occurred at stations located downstream of the Project, exceedance investigation on the exceedance events was carried out.

As part of the investigation on downstream exceedance events, details of the Project's marine construction activities on concerned monitoring days were collected, as well as any observations during the monitoring. The findings are summarized in **Table 4.11**.

Table 4.11: Summary of Findings from Investigations of Nickel Exceedances

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	Exceedance due to Project
02/09/2017	DCM works	Around 500m	Silt curtain deployed	No	No	No
05/09/2017	DCM works Sand blanket laying	Around 500m	Silt curtain deployed	No	No	No
09/09/2017	DCM works Sand blanket laying	Around 500m	Silt curtain deployed	No	No	No

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	Exceedance due to Project
12/09/2017	DCM works Sand blanket laying	Around 500m	Silt curtain deployed	No	No	No
14/09/2017	DCM works Sand blanket laying	Around 500m	Silt curtain deployed	No	No	No

* This refers to the approximate distance between the marine construction works and the nearest monitoring stations with exceedance.

According to the investigation findings, it was confirmed that both DCM and sand blanket laying activities were operating normally with silt curtains deployed as additional measures. The silt curtains were maintained properly.

For the exceedances at IM8 on 9 and 14 September 2017, the exceedances appeared to be an isolated case with no observable spatial trend to indicate any effect due to Project activities. No exceedance was recorded at other downstream monitoring stations, including IM7 and IM9, which were also located around 500 m from active DCM works during the same tide. Based on these findings, the exceedance was considered not due to the Project.

For the exceedances at IM8 to IM10 on 2, 5 and 12 September 2017, it is noted that no SS exceedance was recorded in the same tide and the concentration (5 – 13 mg/L) was well below the Action and Limit Levels. Nickel is a representative heavy metal that indicates the potential for release of contaminants from Contaminated Mud Pits (CMPs) due to the disturbance of marine sediment within CMP by DCM activities. Elevated nickel concentrations due to these activities should be associated with similar elevated SS levels. However, the low SS levels at impact stations indicates that the active DCM works had limited or insignificant effect on downstream water quality. Based on these findings the exceedances were considered not due to the Project and may be due to natural fluctuation or other sources not related to the Project.

Conclusions

Based on the findings of the exceedance investigations, it is concluded that the exceedances were not due to the Project. Hence no SR was adversely affected by the Project. All required actions under the Event and Action Plan were followed. Exceedances appeared to be due to natural fluctuation or other sources not related to the Project.

Nevertheless, recognising that the IM stations represent a ‘first line of defence’, the non-project related exceedances identified at IM stations were attended to as a precautionary measure. 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 for DCM works and sand blanket laying works properly as recommended in the Manual.

5 Waste Management

5.1 Monitoring Requirements

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. 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 including provision of drip trays and proper chemical waste storage, as well as regular segregation and removal of waste. The contractors had taken actions to implement the recommended measures.

Based on the updated information, 75kg and 7800L of chemical waste were collected by licensed chemical waste collector in August 2017.

According to the Contractor's information, about 614m^3 of excavated materials were produced from the HDD launching site under P560(R) in the reporting period. The generated excavated materials were temporarily stored at the stockpiling area. The excavated material will be reused in the Project.

In addition, metal and paper were recycled in the reporting month. Around 137 tonnes of general refuse was disposed of to the designated landfill, 2kg and 1200L of chemical waste were collected by licensed chemical waste collector in September 2017. Besides, around 25 m^3 of Construction and Demolition (C&D) materials was reused in another contract.

No exceedances of the Action or Limit Levels were recorded in the reporting period.

6 Chinese White Dolphin Monitoring

6.1 CWD Monitoring Requirements

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

The small vessel line-transect survey as proposed in the Manual should be conducted at a frequency of two full surveys per month while land-based theodolite tracking should be conducted at a frequency of one day per month per station during the construction phase. In addition to the land-based theodolite tracking required for impact monitoring as stipulated in the Manual, supplemental theodolite tracking surveys have also been conducted during the implementation for the SkyPier HSF diversion and speed control in order to assist in monitoring the effectiveness of these measures, i.e. in total twice per month at the Sha Chau station and three times per month at the Lung Kwu Chau station.

The Action Level (AL) and Limit Level (LL) 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 AL and LL for CWD monitoring were summarized in **Table 6.1**.

Table 6.1: Derived Values of Action Level (AL) and Limit Level (LL) for Chinese White Dolphin Monitoring

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

[Notes for **Table 6.1** (referring to the baseline monitoring report):
*Action Level – running quarterly STG & ANI will be calculated from the three preceding survey months. For CWD monitoring for September 2017, data from 1 July 2017 to 30 September 2017 will be used to calculate the running quarterly encounter rates STG & ANI;

^Limit Level – two consecutive running quarters mean both the running quarterly encounter rates of the preceding month August 2017 (calculated by data from June 2017 to August 2017) and the running quarterly encounter rates of this month (calculated by data from July 2017 to September 2017).

AL and/or LL will be exceeded 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 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
		NEL			
1S	813525	820900	6N	818568	824433
1N	813525	824657	7S	819532	821420
2S	814556	818449	7N	819532	824209
2N	814559	824768	8S	820451	822125
3S	815542	818807	8N	820451	823671
3N	815542	824882	9S	821504	822371
4S	816506	819480	9N	821504	823761
4N	816506	824859	10S	822513	823268
5S	817537	820220	10N	822513	824321
5N	817537	824613	11S	823477	823402
6S	818568	820735	11N	823477	824613
		NWL			
1S	804671	814577	5S	808504	821735
1N	804671	831404	5N	808504	828602
2Sb	805475	815457	6S	809490	822075
2Nb	805476	818571	6N	809490	825352
2Sa	805476	820770	7S	810499	822323
2Na	805476	830562	7N	810499	824613
3S	806464	821033	8S	811508	821839
3N	806464	829598	8N	811508	824254
4S	807518	821395	9S	812516	821356
4N	807518	829230	9N	812516	824254
		AW			
1W	804733	818205	2W	805045	816912
1E	806708	818017	2E	805960	816633
		WL			
1W	800600	805450	7W	800400	811450
1E	801760	805450	7E	802400	811450
2W	800300	806450	8W	800800	812450
2E	801750	806450	8E	802900	812450
3W	799600	807450	9W	801500	813550
3E	801500	807450	9E	803120	813550
4W	799400	808450	10W	801880	814500
4E	801430	808450	10E	803700	814500
5W	799500	809450	11W	802860	815500
5E	801300	809450	12S/11E	803750	815500
6W	799800	810450	12N	803750	818500
6E	801400	810450			
		SWL			
1S	802494	803961	6S	807467	801137
1N	802494	806174	6N	807467	808458
2S	803489	803280	7S	808553	800329

Waypoint	Easting	Northing	Waypoint	Easting	Northing
2N	803489	806720	7N	808553	807377
3S	804484	802509	8S	809547	800338
3N	804484	807048	8N	809547	807396
4S	805478	802105	9S	810542	800423
4N	805478	807556	9N	810542	807462
5S	806473	801250	10S	811446	801335
5N	806473	808458	10N	811446	809436

6.2.2 Land-based Theodolite Tracking

Land-based theodolite tracking 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 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 crossing 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 pair. 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 15-20 m vessel with a flying bridge observation platform about 4 to 5 m 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 and began to survey on effort again.

Focal follows of dolphins were conducted 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 involved the boat following (at an appropriate distance to minimize 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

Land-based monitoring 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 (>1-3 km, 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 2-3 km 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 11th, 12th, 13th, 14th, 18th, 19th, 20th and 21st September 2017, covering all transects in NEL, NWL, AW, WL and SWL survey areas for twice.

A total of around 443.95 km of survey effort was collected from these surveys, with around 88.93% of the total survey effort 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**.

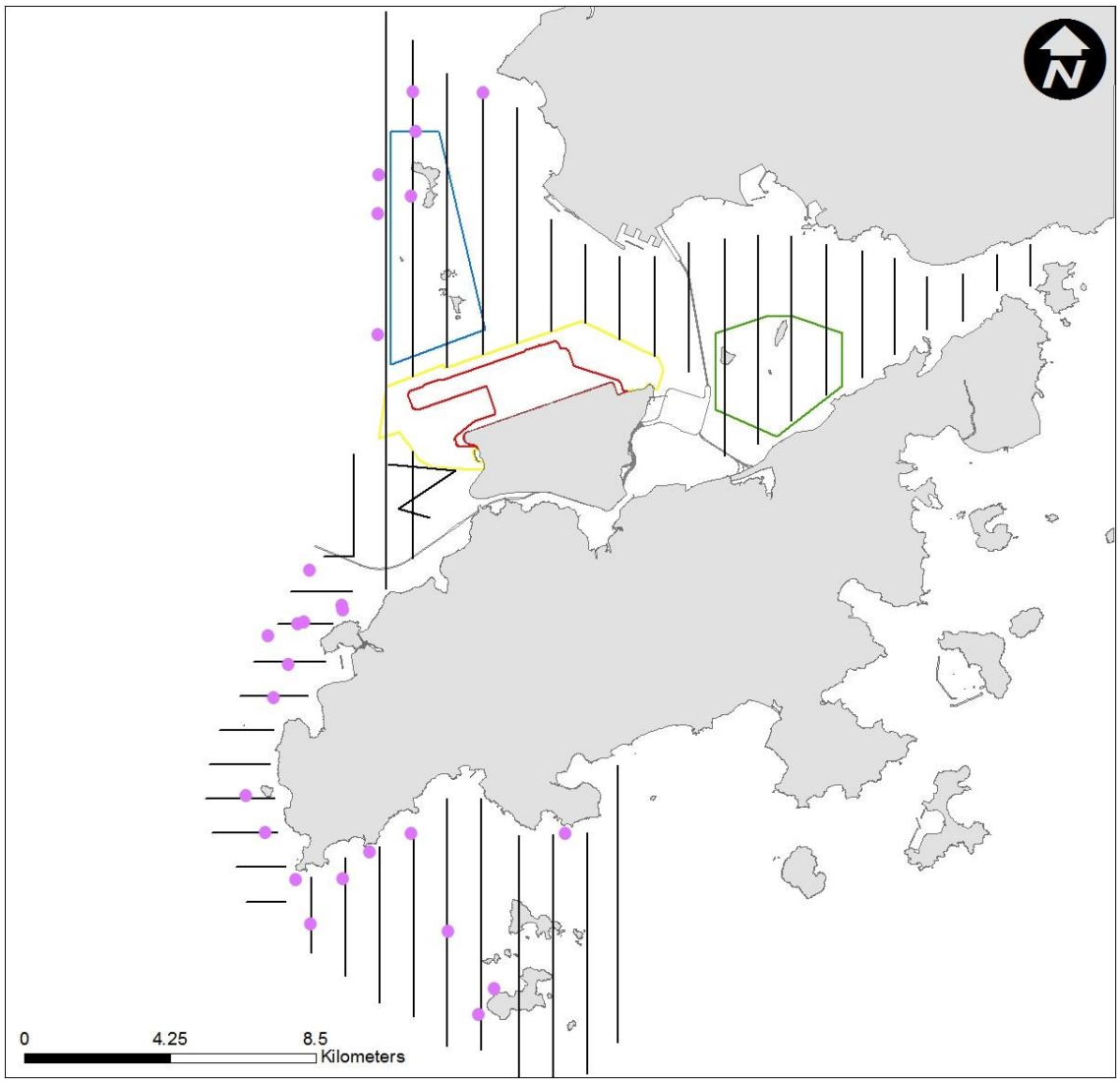
Sighting Distribution

In September 2017, 26 groups of CWDs with 79 individuals were sighted. Amongst these sightings, 21 groups of CWDs with 70 animals were recorded during on-effort search under favourable weather conditions (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 September 2017 is illustrated in **Figure 6.3**. There were seven sightings of CWDs recorded in NWL, with the majority of these sightings recorded around Lung Kwu Chau, while one sighting located near Black Point and another located at the southwestern corner of Sha Chau and Lung Kwu Chau Marine Park. In WL, CWDs were recorded from Tai O to the waters around Tsin Yue Wan Camp Site. In SWL, CWD sightings were recorded along the coastal waters Fan Lau to Lo Kei Wan with a few sightings located around Soko Islands. No sightings of CWDs were recorded in NEL and also the vicinity of or within the 3RS land-formation footprint.

Figure 6.3: Sightings Distribution of Chinese White Dolphins

[Pink circle: Sighting locations of CWD, Black line: Vessel survey transects, Blue polygon: Sha Chau and Lung Kwu Chau Marine Park (SCLKCMP), Green polygon: Brothers Marine Park (BMP) Red polygon: 3RS land-formation footprint, Yellow line: 3RS temporary works area boundary]



Remarks: Please note that there are 26 pink circles on the map indicating the sighting locations of CWD. Some of them were very close to each other and therefore appear overlapped on this distribution map.

Encounter Rate

Two types of dolphin encounter rates were calculated based on the data from September 2017. They included the number of dolphin sightings per 100 km survey effort (STG) and total number of dolphins per 100 km survey effort (ANI) in the whole survey area (i.e. NEL, NWL, AW, WL and SWL). In the calculation of dolphin encounter rates, only survey data collected under favourable weather condition (i.e. Beaufort Sea State 3 or below with favourable visibility) were used. The formulae used for calculation of the encounter rates are shown below:

Encounter Rate by Number of Dolphin Sightings (STG)

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

Encounter Rate by Number of Dolphins (ANI)

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

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

In September 2017, a total of around 394.79 km of survey effort were conducted under Beaufort Sea State 3 or below with favourable visibility, whilst a total number of 21 on-effort sightings with a total number of 70 dolphins from on-effort sightings were obtained under such condition. Calculation of the encounter rates in September 2017 are shown in **Appendix D**.

For the running quarter of the reporting period (i.e., from July 2017 to September 2017), a total of around 1136.95 km of survey effort were conducted under Beaufort Sea State 3 or below with favourable visibility, whilst a total number of 76 on-effort sightings and a total number of 227 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 September 2017 and during the running quarter are presented in **Table 6.4** below and compared with the Action Level. The running quarterly encounter rates STG and ANI did not trigger the Action Level (i.e., remained above the Action Level).

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

	Encounter Rate (STG)	Encounter Rate (ANI)
September 2017	5.32	17.73
Running Quarter from July 2017 to September 2017*	6.68	19.97
Action Level	Running quarterly* < 1.86	Running quarterly* < 9.35

*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 July 2017 to September 2017, containing six sets of transect surveys for all monitoring areas.

Group Size

In September 2017, 26 groups of CWDs with 79 individuals were sighted, and the average group size of CWDs was 3.04 individuals per group. The number of sightings with small group size (i.e. 1-2 individuals) was 13 while that of medium group size (i.e. 3-9) was 12. One large CWD group (i.e. 10 or more individuals) was recorded in this reporting period.

Activities and Association with Fishing Boats

Five out of 26 sightings of CWDs were recorded engaging in feeding activities in September 2017, whilst none of these sightings were associated with operating fishing boat.

Mother-calf Pair

In September 2017, three sightings of CWDs were recorded with the presence of mother-and-unspotted juvenile or mother-and-spotted juvenile pairs. These three sightings were recorded in NWL and WL.

6.4.2 Photo Identification

In September 2017, a total number of 33 different CWD individuals were identified for totally 43 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/mm/yyyy)	Sighting Group No.	Area	Individual ID	Date of Sighting (dd/mm/yyyy)	Sighting Group No.	Area
NLMM005	18/09/2017	2	NWL	SLMM036	20/09/2017	3	SWL
NLMM019	12/09/2017	4	WL	SLMM037	20/09/2017	1	SWL
		5	WL	SLMM050	20/09/2017	1	SWL
	18/09/2017	1	NWL			2	SWL
NLMM020	12/09/2017	4	WL	SLMM054	19/09/2017	8	SWL
		5	WL	WLMM011	20/09/2017	3	SWL
	18/09/2017	1	NWL	WLMM019	19/09/2017	2	WL
NLMM022	18/09/2017	1	NWL	WLMM027	20/09/2017	3	SWL
NLMM023	12/09/2017	5	WL	WLMM028	19/09/2017	6	WL
	18/09/2017	1	NWL	WLMM029	19/09/2017	6	WL
NLMM037	18/09/2017	3	NWL	WLMM032	19/09/2017	6	WL
NLMM042	18/09/2017	1	NWL	WLMM046	19/09/2017	1	WL
NLMM051	19/09/2017	1	WL	WLMM049	20/09/2017	1	SWL
NLMM052	18/09/2017	1	NWL	WLMM053	18/09/2017	1	NWL
	20/09/2017	1	SWL	WLMM056	20/09/2017	1	SWL
NLMM053	18/09/2017	1	NWL	WLMM079	12/09/2017	3	WL
SLMM012	20/09/2017	1	SWL	WLMM096	19/09/2017	1	WL
		2	SWL	WLMM100	12/09/2017	3	WL
SLMM015	11/09/2017	2	SWL	WLMM101	19/09/2017	1	WL
SLMM017	11/09/2017	2	SWL	WLMM102	19/09/2017	1	WL
	20/09/2017	1	SWL	WLMM103	19/09/2017	2	WL
		2	SWL				

6.4.3 Land-based Theodolite Tracking

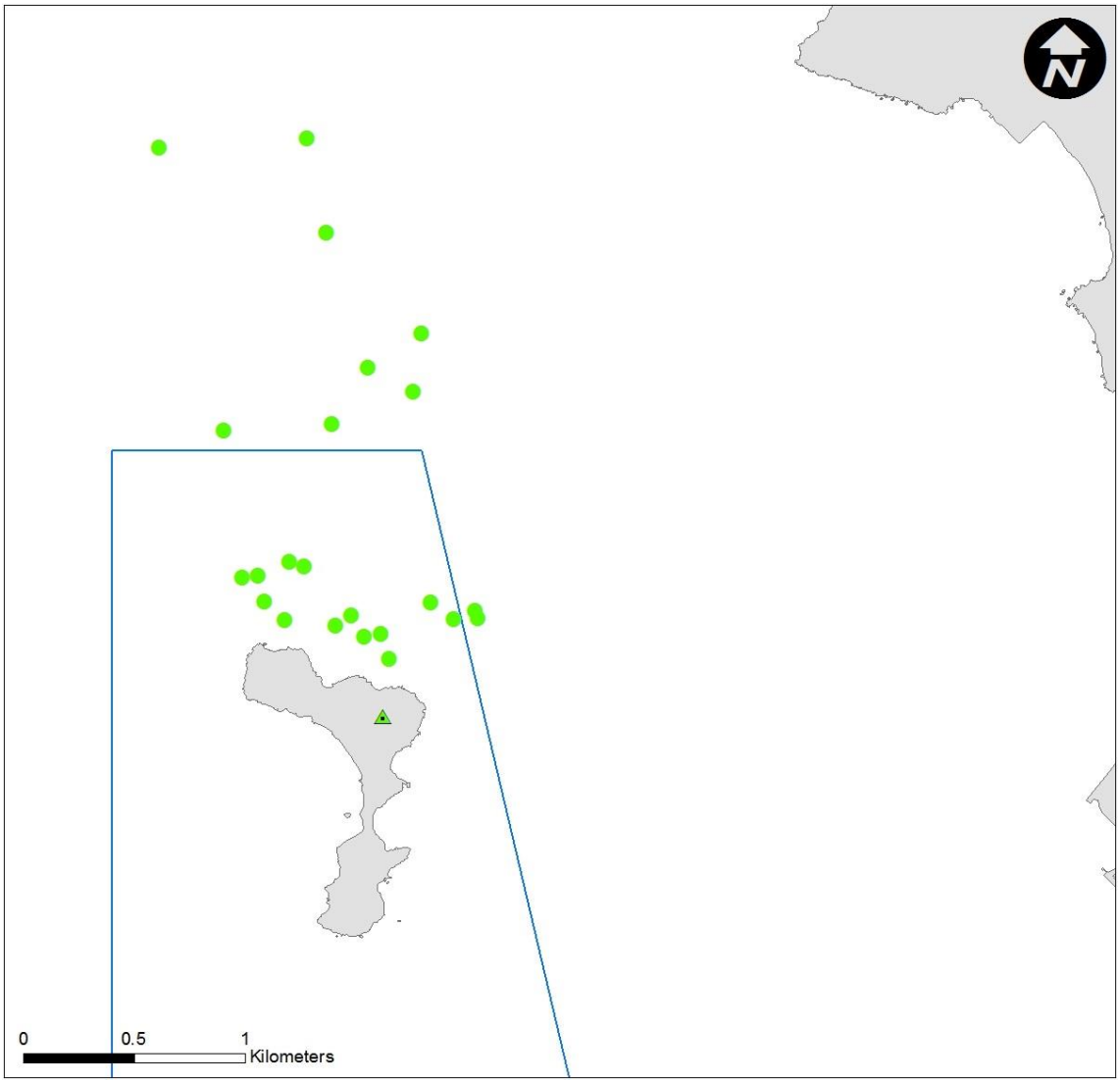
Survey Effort

Land-based theodolite tracking surveys were conducted at LKC on 6th, 18th and 27th September 2017 and at SC on 22nd and 28th September 2017, with a total of five days of land-based theodolite tracking survey effort accomplished in this reporting period. A total number of 23 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 September 2017 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	3	18:00	23	1.28
Sha Chau	2	12:00	0	0
TOTAL	**5**	**30:00**	**23**	**0.77**

Figure 6.4: Plots of First Sightings of All CWD Groups obtained from Land-based Stations
[Green triangle: LKC station; Green circle: CWD group off LKC; Blue line: SCLKCMP boundary]



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) has been remained underwater and positioned at south of Sha Chau Island inside the SCLKCMP with 20% duty cycle (**Figure 6.5**). The EAR deployment is generally for 4-6 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 specialized 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 two months, PAM results could not be reported in monthly intervals.

6.6 Site Audit for CWD-related Mitigation Measures

During the reporting period, silt curtains were in place by the contractors for sand blanket laying works, in which dolphin observers were deployed by each contractor in accordance with the Marine Mammal Watching Plan (MMWP). Teams of at least two dolphin observers were deployed at 13 to 16 dolphin observation stations by the contractors for continuous monitoring of the Dolphin Exclusion Zone (DEZ) by all contractors 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 470 individuals being trained and the training records kept by the ET. Observations were recorded on DEZ monitoring in this reporting period during site inspection by the ET and IEC. The contractors had taken actions to implement the recommended measures. From the contractors' MMWP observation records and DEZ monitoring records, no dolphin or other marine mammals were observed within or around the silt curtains, whilst there was one record of dolphin sighting within the DEZ of DCM works in this reporting period. According to the contractor's site record, relevant DCM works were suspended in the dolphin sighting event until the DEZ was clear of dolphin for a continuous period of 30 minutes. The contractor's record was also audited by the ET during site inspection. Details for the implementation of DEZ during the incident of dolphin sighting within the DEZ of DCM works are mentioned in **Section 7.4**.

Audits of acoustic decoupling 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 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 five 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

Weekly site inspections of construction works were carried out by the ET to audit 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. Observations have been recorded in the site inspection checklists and provided to the contractors together with the appropriate follow-up actions where necessary.

The key observations from site inspection and associated recommendations were related to display of licenses and permits at works area, provision and maintenance of drip trays, proper implementation of noise mitigation measures and dust suppression measures, as well as regular segregation of waste. In addition, recommendations were also provided during site inspection on barges, which included provision of drip trays and chemical waste storage, implementation of dust suppression and runoff prevention measures, implementation of silt plume mitigation and prevention measures, ensuring the effectiveness of silt curtains, and implementation of wastewater collection and treatment.

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**.

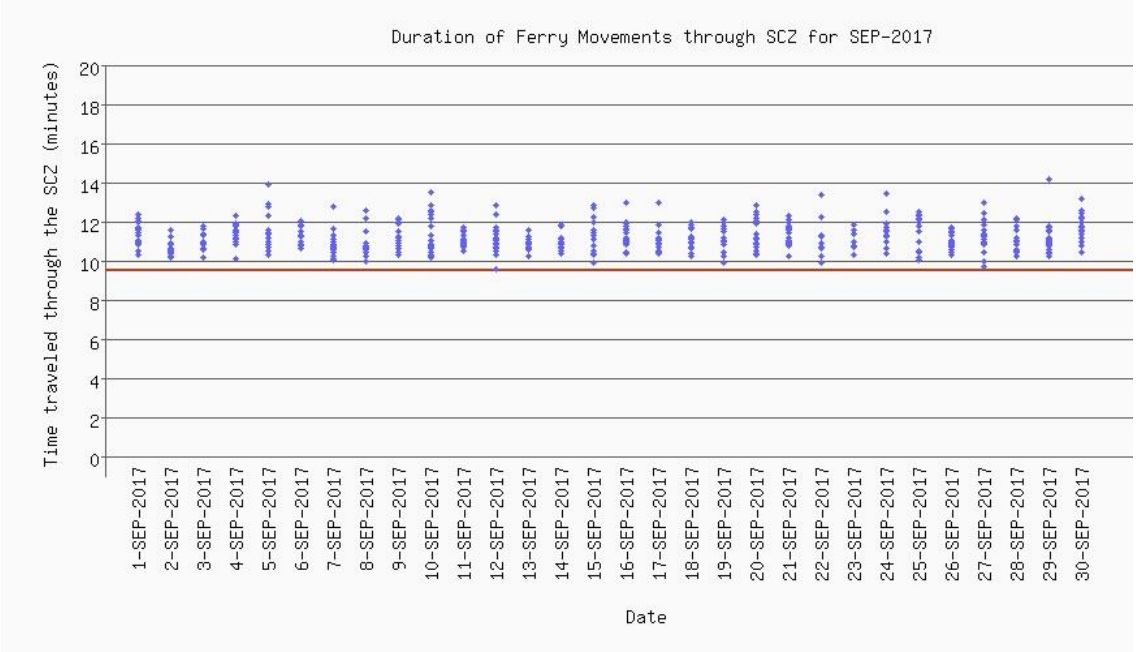
7.2 Audit of Route Diversion and Speed Control of the SkyPier High Speed Ferries

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 (ACE) 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 implementing the mitigation measure of requiring high speed ferries (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 summarized in **Table 7.1**. The daily movements of all SkyPier HSFs in September 2017 (i.e., 70 to 87 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, 580 ferry movements between HKIA SkyPier and Zhuhai / Macau were recorded in September 2017 and the data are presented in **Appendix H**. No vessel was operated to/from Zhuhai in September 2017 as the pier facility in Zhuhai was damaged due to typhoon in late August 2017. The time spent by the SkyPier HSFs travelling through the SCZ in September 2017 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 September 2017



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.

One case of minor deviation from the diverted route recorded on 27 August 2017 was followed up after receiving information from the FO. ET's investigation found that the minor route deviation was due to avoiding floating objects to ensure safety. After that, the HSF had returned to the normal route following the SkyPier Plan.

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

Requirements in the SkyPier Plan	1 September to 30 September 2017
Total number of ferry movements recorded and audited	580
Use diverted route and enter / leave SCZ through Gate Access Points	No deviation
Speed control in speed control zone	The average speeds taken within the SCZ of all HSFs were within 15 knots (9.6 knots to 14.1 knots), which complied with the SkyPier Plan. The time used by HSFs to travel through SCZ is presented in **Figure 7.1**.
Daily Cap (including all SkyPier HSFs)	70 to 87 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:

- Four 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.
- Two skipper training sessions were held by contractor's Environmental Officer. Competency test was subsequently conducted with the trained skippers by ET.
- 15 skippers were trained by ET and 3 skippers were trained by contractor's Environmental Officer in September 2017. In total, 750 skippers were trained from August 2016 to September 2017.
- The Marine Surveillance System (MSS) automatically recorded deviation cases such as speeding, entering no entry zone, not traveling through the designated gate. ET conducted checking to ensure the MSS records deviation cases accurately.
- Deviations such as speeding in the works area, entering from non-designated gates and entering no-entry zones were identified. All the concerned contractors were reminded to comply with the requirements of the MTRMP-CAV during the bi-weekly MTCC audit.
- 3-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.

The IEC of the Project had performed audit on the compliance of the requirements as part of the EM&A programme.

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 Updated EM&A 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 has been notified on one record of dolphin sighting within the DEZ of DCM works by the contractor. ET has checked the dolphin sighting record and the contractor's site record to audit the implementation of DEZ. Dolphin sighting within the DEZ was recorded on 20 September 2017. The sighting was recorded from a DEZ monitoring station on DCM barge working at Area F1 (geographical coordinates: 22°19.498N, 113°56.135E; refer to Figure 1.2 for the location of works area), with the dolphin group being sighted at 15:04 within the DEZ for once only. DCM installation works on DCM barges within the DEZ were ceased by the contractor, and not resumed until the DEZ was clear of dolphin for a continuous period of at least 30 minutes in accordance with the DEZ Plan.

7.5 Ecological Monitoring

In accordance with the Manual, ecological monitoring shall be undertaken monthly at the Horizontal Directional Drilling (HDD) daylighting location on Sheung Sha Chau Island during the HDD construction works period from August to March to identify and evaluate any impacts with appropriate actions taken as required to address and minimise any adverse impact found. During the reporting period, the monthly ecological monitoring at the HDD daylighting location on Sheung Sha Chau observed that HDD works were ongoing under the Contract P560(R) at the daylighting location, and there was no encroachment of any works upon the egretry area nor any significant disturbance to the egrets on the island by the works. Sign of late nursery activities by two Little

Egrets were observed on trees located at the previously identified egretry area where it is at the southern side of Sheung Sha Chau Island. At the HDD daylighting location, neither nest nor breeding activity of bird were found during the monthly ecological monitoring and weekly site inspections in the reporting period. The site photos and location map regarding the monthly ecological monitoring for the HDD works and egretry area are provided in **Appendix D** for reference.

7.6 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	Accepted / approved by EPD
2.4	Management Organizations	
2.5	Construction Works Schedule and Location Plans	
2.7	Marine Park Proposal	
2.8	Marine Ecology Conservation Plan	
2.9	Marine Travel Routes and Management Plan for Construction and Associated Vessels	
2.10	Marine Travel Routes and Management Plan for High Speed Ferries of SkyPier	
2.11	Marine Mammal Watching Plan	
2.12	Coral Translocation Plan	
2.13	Fisheries Management Plan	
2.14	Egretry Survey Plan	
2.15	Silt Curtain Deployment Plan	
2.16	Spill Response Plan	
2.17	Detailed Plan on Deep Cement Mixing	
2.19	Waste Management Plan	
3.1	Updated EM&A Manual	
3.4	Baseline Monitoring Reports	

7.7 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**.

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

7.8.1 Complaints

During the reporting period, a complaint related to sand filling materials of Contract 3206 was received on 5 September 2017. Apart from the investigation conducted by AA under the contractual aspect, investigation on environmental aspect was also conducted by the ET in accordance with the Complaint Management Plan of the Project. Regarding environmental aspect, a maximum of 10% fines content should be adopted for sand blanket in accordance with the EP condition 2.26. The ET had checked and would continue to check the test reports on

particle size distribution of sand materials and to witness sand sampling of the Project on a regular basis. To date, no non-compliance against the EP condition of a maximum of 10% fines content was identified.

7.8.2 Notifications of Summons or Status of Prosecution

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

7.8.3 Cumulative Statistics

Cumulative statistics on complaints, notifications of summons and status of prosecutions are summarized 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

- HDD works; and
- Stockpiling of excavated materials from HDD operation.

DCM Works:

Contract 3201 to 3205 DCM Works

- Laying of sand blanket and geotextile;
- DCM works; and
- Seawall construction

Reclamation Works:

Contract 3206 Main Reclamation Works

- Laying of sand blanket; and
- PVD installation.

Terminal 2 Expansion Works:

Contract 3501 Antenna Farm and Sewage Pumping Station

- Excavation and piling works.

Contract 3502 Terminal 2 APM Depot Modification Works

- Removal of existing concrete.

APM Works:

Contract 3602 Existing APM System Modification Works

- Site office establishment.

Airport Support Infrastructure & Logistic Works:

Contract 3801 APM and BHS Tunnels on Existing Airport Island

- Erection of hoarding.

Airfield Works Contract:

Contract 3301 North Runway Crossover Taxiway

- CLP cable ducting work.

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 laying of sand blankets and DCM works;
- DEZ monitoring for ground improvement works (DCM works and PVD installation) and implementation of MMWP for silt curtain deployment by the contractors' dolphin observers;
- 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**.

9 Conclusion and Recommendation

The key activities of the Project carried out in the reporting period included DCM works, laying of sand blanket and geotextile, seawall construction, HDD works, concrete removal works, piling and excavation works.

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

No exceedance of the Action or Limit Levels in relation to construction dust, construction noise, construction waste and CWD monitoring was recorded in the reporting period.

The water quality monitoring results for DO, turbidity, total alkalinity, and chromium obtained during the reporting period did not trigger their corresponding Action and Limit Levels stipulated in the EM&A programme for triggering the relevant investigation and follow-up procedures under the programme if being exceeded. For SS and nickel, some of the testing results exceeded the relevant Action or Limit Levels, and the corresponding investigations were conducted accordingly. The investigation findings concluded that the exceedances were not due to the Project.

The monthly terrestrial ecology monitoring on Sheung Sha Chau Island observed that HDD works were conducted at the daylighting location and there was no encroachment upon the egretry area nor any significant disturbance to the egrets at Sheung Sha Chau by the works.

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. Observations have been recorded in the site inspection checklists which have been provided to the contractors together with the appropriate follow-up actions where necessary.

On the implementation of MMWP, dolphin observers were deployed by the contractors for laying of open sea silt curtain and laying of silt curtains for sand blanket in accordance with the plan. On the implementation of DEZ Plan, dolphin observers at 13 to 16 dolphin observation stations were deployed for continuous monitoring of the DEZ by all contractors for DCM works and seawall construction in accordance with the DEZ Plan. Trainings for the proposed dolphin observers were provided by the ET prior to the aforementioned works, with the training records kept by the ET. From the contractors' MMWP observation records and DEZ monitoring records, no dolphin or other marine mammals were observed within or around the silt curtains, whilst there was one record of dolphin sighting within the DEZ of DCM works in this reporting period. DCM works were suspended in the dolphin sighting events until the DEZ was clear of dolphin for a continuous period of 30 minutes. The contractor's record was checked by the ET during site inspection. Audits of acoustic decoupling for construction vessels were also carried out by the ET.

On the implementation of the Marine Travel Routes and Management Plan for High Speed Ferries of SkyPier (the SkyPier Plan), the daily movements of all SkyPier high speed ferries (HSFs) in September 2017 were in the range of 70 to 87 daily movements, which are within the maximum daily cap of 125 daily movements. A total of 580 HSF movements under the SkyPier Plan were recorded in the reporting period. All HSFs had travelled through the Speed Control Zone (SCZ) with average speeds under 15 knots (9.6 to 14.1 knots), which were 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 investigation or actions accordingly.

On the implementation of the MTRMP-CAV, the MSS automatically recorded the deviation case such as speeding, entering no entry zone, not traveling through the designated gate. 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, entry from non-designated gates, and entering no-entry zones 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. ET reminded contractors that all vessels shall avoid entering the no-entry zone, in particular the Brothers Marine Park. 3-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

824000 N
822000 N
820000 N
818000 N
804000 E
806000 E
808000 E
810000 E
812000 E
814000 E

Contract P560 (R)-
Daylighting
Location

RECLAMATION WORKS AREA
(please refer to Figure 1.2)

LEGEND:
- LAND FORMATION
- TEMPORARY WORKS AREA BOUNDARY
- KEY CONSTRUCTION ACTIVITIES

Contract 3801 - Works Area

Contract 3501 - Works Area

Contract 3602 - Works Area

Contract 3502 - Works Area

Contract 3201- 3206
and AAHK Site
Offices

Contract P560 (R)-
Launching Site

Contract P560 (R) - Site Office

Contract 3501 - Stockpiling Area

Contract P560 (R) - Stockpiling Area

0 250 500 750 1000 m
1 : 30 000 SCALE BAR

Rev.	Date	Description	Checked
A	31AUG15	FIRST ISSUE	DC

香港國際機場 HONG KONG INTERNATIONAL AIRPORT
Airport Authority HKIA Tower, 1 Sky Plaza Road, Hong Kong International Airport, Lantau, Hong Kong
Tel : (852) 2188 7111 Fax : (852) 2324 0717

Mott MacDonald

Title

LOCATIONS OF KEY CONSTRUCTION ACTIVITIES IN THIS REPORTING PERIOD

Consultant's Signatures for Approval		Date
Design	DC	31AUG15
Checkers	DC	31AUG15
Design Supervisor	EC	31AUG15
Authorised Representative	JFP	31AUG15

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

Drawing No.

FIGURE 1.1

Scale at A3 1 : 30000

Rev. A

Filename: J:\355482\REPORT\ENV\CWSLP\FIG 1.dgn

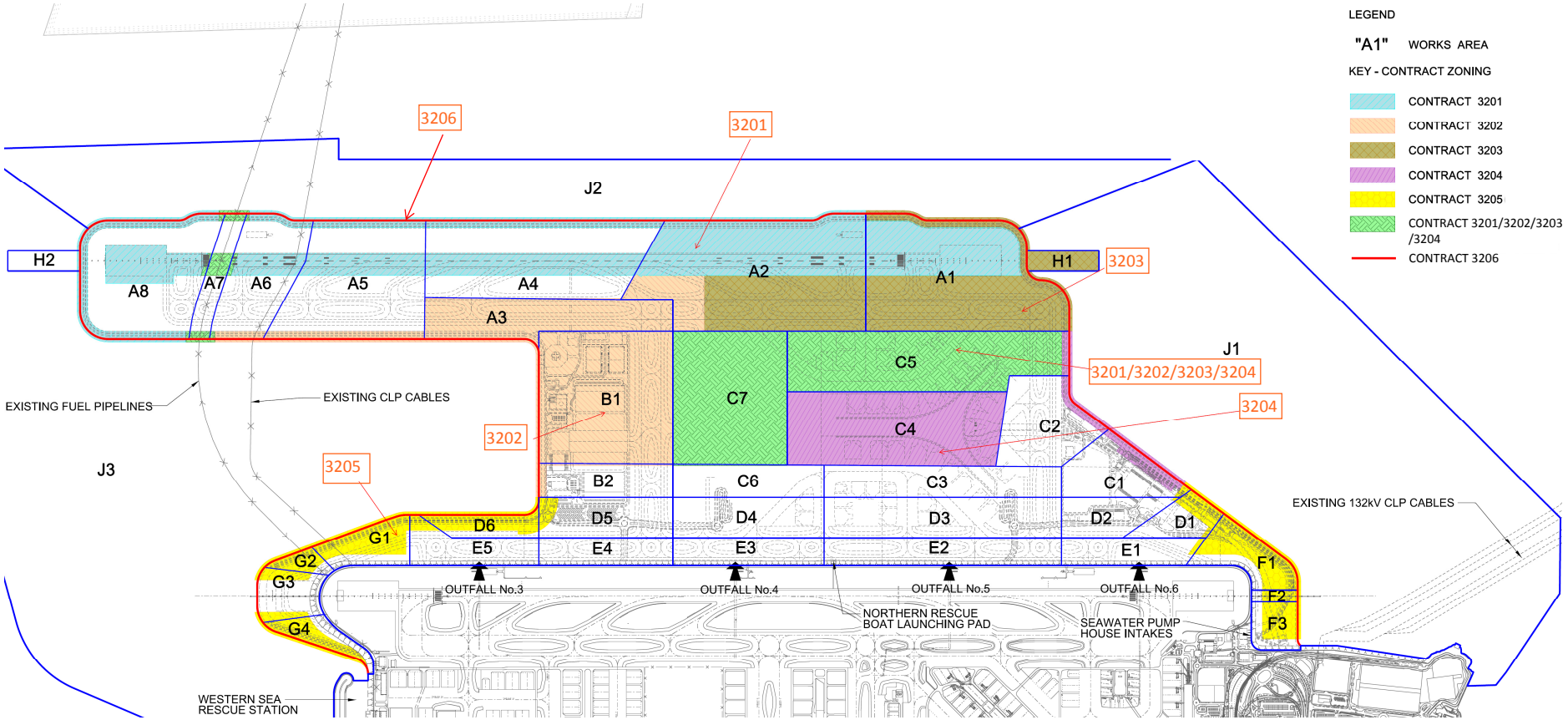


FIGURE 1.2- LOCATIONS OF RECLAMATION WORKS AREA

LEGEND:

- RECLAMATION AREA
- NOISE MONITORING STATION (UPDATED EM&A MANUAL)
- AIR QUALITY MONITORING STATION (UPDATED EM&A MANUAL)
- CHEK LAP KOK WIND STATION

806000 E
808000 E
810000 E
812000 E
814000 E
820000 N
818000 N

NM1A AR1A
NM2
NM3A
NM4
NM5 AR2
NM6

0 200 400 600 800 1000 m
1 : 22 500 SCALE BAR

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

香港國際機場 HONG KONG INTERNATIONAL AIRPORT
Airport Authority HKIA Tower, 1 Sky Plaza Road, Hong Kong International Airport, Lantau, Hong Kong
Tel : (852) 2181 7111 Fax : (852) 2824 0717

Mott MacDonald

Title

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

Consultant's Signatures for Approval		Date
Design	AM	11FEB16
Checkers	AM / TK	11FEB16
Approver	EC	11FEB16

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

Drawing No.

FIGURE 2.1

Scale at A3 1 : 22500

Rev. C

Filename: J:\355482\REPORT\ENV\EMA\160211\FIG 2.1.dgn

805000 E
810000 E
815000 E
820000 E
825000 N
820000 N
815000 N
HKSAR BOUNDARY
C1
C2
C3
IM1
IM2
IM3
IM4
IM5
IM6
IM7
IM8
IM9
IM10
IM11
IM12
SR2
SR3
SR4A
SR5A
SR6
SR7
SR8

LEGEND:
- LAND FORMATION FOOTPRINT
- 500m ENVELOPE
- IMPACT STATION
- SENSITIVE RECEIVER
- CONTROL STATION

0 500 1000 1500 2000 m
1 : 60 000 SCALE BAR

Rev.	Date	Description	Checked
A	02DEC15	FIRST ISSUE	DC
B	04MAY16	GENERAL REVISION	RO
C	06JUN16	GENERAL REVISION	LC
D	02AUG17	GENERAL REVISION	RO
E	10OCT17	GENERAL REVISION	PL

香港 HONG KONG INTERNATIONAL AIRPORT 國際機場
Airport Authority HKIA Tower, 1 Sky Plaza Road, Hong Kong International Airport, Lantau, Hong Kong
Tel : (852) 2188 7111 Fax : (852) 2824 0717

MOTT MACDONALD

Title

WATER QUALITY MONITORING STATIONS

Consultant's Signatures for Approval		Date
Design	DC	10OCT17
Checkers	DC / TK	10OCT17
Approver	EC	10OCT17

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

Drawing No.

FIGURE 3.1

Scale at A3 1 : 60000

Rev. E

Filename: J:\355482\REPORT\ENV\EMA\171010\FIG 3.1.dgn

800000 E
805000 E
810000 E
815000 E
820000 E
825000 E
830000 E
835000 E
840000 E
845000 E
830000 N
825000 N
820000 N
815000 N
810000 N
805000 N

NORTHWEST LANTAU
NORTHEAST LANTAU
SOUTHWEST LANTAU
AIRPORT WEST
WEST LANTAU

LEGEND:
- HKSAR BOUNDARY
- LAND FORMATION FOOTPRINT
- 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

0 1 2 3 4 km
1 : 125 000 SCALE BAR

Rev.	Date	Description	Checked
A	02DEC15	FIRST ISSUE	JC
B	27JUL16	GENERAL REVISION	JT
C	06FEB17	GENERAL REVISION	JT
D	01MAR17	GENERAL REVISION	JT

香港國際機場 HONG KONG INTERNATIONAL AIRPORT
Airport Authority HKIA Tower, 1 Sky Plaza Road, Hong Kong International Airport, Lantau, Hong Kong
Tel : (852) 2188 7111 Fax : (852) 2824 0717

MOTT MACDONALD

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

Consultant's Signatures for Approval		Date
Design	JC	01MAR17
Checkers	JC / TK	01MAR17
Approver	EC	01MAR17

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

Drawing No. FIGURE 6.1

Scale at A3 1 : 125000

Rev. D

Filename: J:\355482\REPORT\ENV\EMA\170301\MCL-P132-EMA-10-003.dgn

804000 E
806000 E
808000 E
810000 E
812000 E
814000 E
816000 E
818000 E
820000 N
822000 N
824000 N
826000 N

E
D

RAMSTON ROAD

沙洲及龍鼓洲海岸公園
SHA CHAU AND LUNG KWU CHAU MARINE PARK

HKSAR BOUNDARY

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

0 500 1000 1500 2000 m
1 : 45,000 SCALE BAR

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

香港國際機場 HONG KONG INTERNATIONAL AIRPORT
Airport Authority HKIA Tower, 1 Sky Plaza Road, Hong Kong International Airport, Lantau, Hong Kong
Tel : (852) 2188 7111 Fax : (852) 2824 0717

MOTT MACDONALD

Title

LAND BASED DOLPHIN MONITORING IN BASELINE AND CONSTRUCTION PHASES

Consultant's Signatures for Approval		Date
Design	JC	06FEB17
Checkers	JC / TK	06FEB17
Approver	EC	06FEB17

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

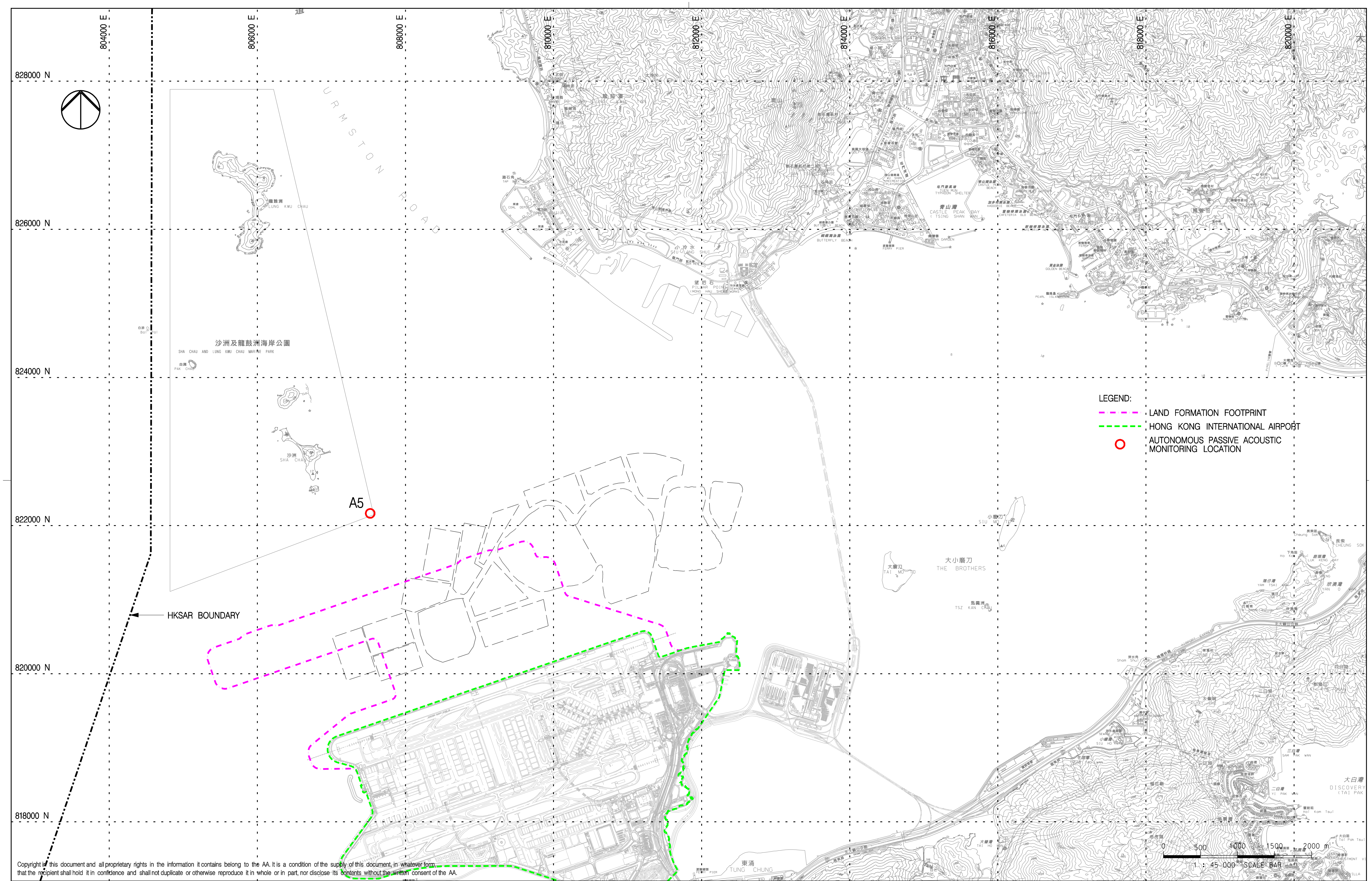
Drawing No.

FIGURE 6.2

Scale at A3 1 : 45000

Rev. B

Filename: J:\355482\REPORT\ENV\EMA\170206\MCL-P132-EMA-10-004.dgn


804000 E
806000 E
808000 E
810000 E
812000 E
814000 E
816000 E
818000 E
820000 E
828000 N
826000 N
824000 N
822000 N
820000 N
818000 N
URMSTON ROAD
沙洲及龍鼓洲海岸公園
SHA CHAU AND LUNG KWU CHAU MARINE PARK
A5
HKSAR BOUNDARY
大小磨刀
THE BROTHERS
LEGEND:
LAND FORMATION FOOTPRINT
HONG KONG INTERNATIONAL AIRPORT
AUTONOMOUS PASSIVE ACOUSTIC MONITORING LOCATION
0 500 1000 1500 2000 m
1 : 45 000 SCALE BAR

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

香港國際機場 HONG KONG INTERNATIONAL AIRPORT

Airport Authority HKIA Tower, 1 Sky Plaza Road, Hong Kong International Airport, Lantau, Hong Kong
Tel: (852) 2188 7111 Fax: (852) 2824 0717

MOTT MACDONALD

Title

LOCATION FOR AUTONOMOUS PASSIVE ACOUSTIC MONITORING

Consultant's Signatures for Approval		Date
Design	JC	10OCT17
Checkers	JC / TK	10OCT17
Approver	EC	10OCT17

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

Drawing No. FIGURE 6.5

Scale at A3 1 : 45000

Rev. B

Filename: J:\355482\REPORT\ENV\EMA\171010\FIG 6.5.dgn

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.
3201	Deep Cement Mixing (Package 1)	Penta-Ocean-China State-Dong-Ah Joint Venture	The works covered by the Contract 3201, 3202, 3203, 3204 and 3205 comprise ground improvement of seabed using Deep Cement Mixing (DCM) method, the major construction activities including without limitation the following • Geophysical surveys; • Supply and placing of geotextile and sand blanket under seawalls; • Supply, maintenance, installation and removal of silt curtain systems; • Preliminary construction trails; • Supply and installation of DCM clusters within the works areas; and • Coring, sampling and testing of DCM treated soils and reporting works.
3202	Deep Cement Mixing (Package 2)	Samsung-BuildKing Joint Venture	
3203	Deep Cement Mixing (Package 3)	Sambo E&C Co.,Ltd	
3204	Deep Cement Mixing (Package 4)	CRBC-SAMBO Joint Venture	
3205	Deep Cement Mixing (Package 5)	Bachy Soletanche- Sambo Joint Venture	

Contract No.	Contract Title	Contractor	Key Construction Activities
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 • Site clearance and demolition; • Geotechnical and ground improvement works; • Seawall construction; • Marine and land filling works; and • Civil works.
3501	Antenna Farm and Sewage Pumping Station	Build King Construction Limited	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: • Civil and structural engineering works; • Building services works; • Architectural builder's works and finishes; • Trenchless excavation for sewage rising mains; and • All associated works.
3502	Terminal 2 APM Depot Modification Works	Build King Construction Limited	The works covered by the Contract 3502 comprise the modification of the existing Automatic People Mover (APM) Depot in the basement of T2, for the APM line running between T1 East Hall, West Hall and Midfield Concourse. The major construction activities include without limitation the following: • Removal of the existing steel guide rails; • Removal of the existing mass concrete fill and re-construction of the reinforced concrete fill; • Construction of separation walls and walkways; • Removal of re-provision of existing building services and airport systems; and • All associated testing and commissioning works.

Contract No.	Contract Title	Contractor	Key Construction Activities
3602	Existing APM System Modification Works	Niigata Transys Co., Ltd.	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: • Modification of existing APM depot and APM cars; • Modification of existing T1 & T2 tunnels; and • Preparation of new APM depot.
3801	APM and BHS Tunnels on Existing Airport Island	China State Construction Engineering (HK) Ltd.	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: • Construction of APM and BHS tunnels; • Construction of ventilation building and associated infrastructure; and • Construction, testing and commissioning of sewerage pumping station; and • Civil and structural engineering works.

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

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

EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
			Air Quality Impact – Construction Phase		
5.2.6.2	2.1	-	**Dust Control Measures** § Water spraying for 12 times a day or once every two hours for 24-hour working at all active works area.	Within construction site / Duration of the construction phase	I
5.2.6.3	2.1	-	§ Covering of at least 80% of the stockpiling area by impervious sheets. Water spraying of all dusty materials immediately prior to any loading transfer operation so as to keep the dusty material wet during material handling.	Within construction site / Duration of the construction phase	I
5.2.6.4	2.1	-	Dust control practices as stipulated in the Air Pollution Control (Construction Dust) Regulation should be adopted. These practices include: Good Site Management § Good site management is important to help reducing potential air quality impact down to an acceptable level. As a general guide, the Contractor should maintain high standard of housekeeping to prevent emission of fugitive dust. Loading, unloading, handling and storage of raw materials, wastes or by-products should be carried out in a manner so as to minimise the release of visible dust emission. Any piles of materials accumulated on or around the work areas should be cleaned up regularly. Cleaning, repair and maintenance of all plant facilities within the work areas should be carried out in a manner minimising generation of fugitive dust emissions. The material should be handled properly to prevent fugitive dust emission before cleaning.	Within construction site / Duration of the construction phase	I
			Disturbed Parts of the Roads § Each and every main temporary access should be paved with concrete, bituminous hardcore materials or metal plates and kept clear of dusty materials; or § Unpaved parts of the road should be sprayed with water or a dust suppression chemical so as to keep the entire road surface wet.	Within construction site / Duration of the construction phase	I
			Exposed Earth § Exposed earth should be properly treated by compaction, hydroseeding, vegetation planting or seating with latex, vinyl, bitumen within six months after the last construction activity on the site or part of the site where the exposed earth lies.	Within construction site / Duration of the construction phase	N/A

EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
			Loading, Unloading or Transfer of Dusty Materials § All dusty materials should be sprayed with water immediately prior to any loading or transfer operation so as to keep the dusty material wet.	Within construction site / Duration of the construction phase	I
			Debris Handling § Any debris should be covered entirely by impervious sheeting or stored in a debris collection area sheltered on the top and the three sides; and § Before debris is dumped into a chute, water should be sprayed so that it remains wet when it is dumped.	Within construction site / Duration of the construction phase	I
			Transport of Dusty Materials § Vehicle used for transporting dusty materials/spoils should be covered with tarpaulin or similar material. The cover should extend over the edges of the sides and tailboards.	Within construction site / Duration of the construction phase	I
			Wheel washing § Vehicle wheel washing facilities should be provided at each construction site exit. Immediately before leaving the construction site, every vehicle should be washed to remove any dusty materials from its body and wheels.	Within construction site / Duration of the construction phase	I
			Use of vehicles § The speed of the trucks within the site should be controlled to about 10km/hour in order to reduce adverse dust impacts and secure the safe movement around the site; § Immediately before leaving the construction site, every vehicle should be washed to remove any dusty materials from its body and wheels; and § Where a vehicle leaving the construction site is carrying a load of dusty materials, the load should be covered entirely by clean impervious sheeting to ensure that the dusty materials do not leak from the vehicle.	Within construction site / Duration of the construction phase	I
			Site hoarding § Where a site boundary adjoins a road, street, service lane or other area accessible to the public, hoarding of not less than 2.4m high from ground level should be provided along the entire length of that portion of the site boundary except for a site entrance or exit.	Within construction site / Duration of the construction phase	I
5.2.6.5	2.1	-	**Best Practices for Concrete Batching Plant** The relevant best practices for dust control as stipulated in the Guidance Note on the Best Practicable Means for Cement Works (Concrete Batching Plant) BPM 3/2 as well as in the future Specified Process licence should be adopted. The best practices are recommended to be applied to both the land based and floating concrete batching plants. Best practices include: Cement and other dusty materials	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?^
			§ The loading, unloading, handling, transfer or storage of cement, pulverised fuel ash (PFA) and/or other equally dusty materials shall be carried in a totally enclosed system acceptable to EPD. All dust-laden air or waste gas generated by the process operations shall be properly extracted and vented to fabric filtering system to meet the required emission limit; § Cement, PFA and/or other equally dusty materials shall be stored in storage silo fitted with audible high level alarms to warn of over-filling. The high-level alarm indicators shall be interlocked with the material filling line such that in the event of the silo approaching an overfilling condition, an audible alarm will operate, and after 1 minute or less the material filling line will be closed; § Vents of all silos shall be fitted with fabric filtering system to meet the required emission limit; § Vents of cement/PFA weighing scale shall be fitted with fabric filtering system to meet the required emission limit; and § Seating of pressure relief valves of all silos shall be checked, and the valves re-seated if necessary, before each delivery.		
			Other raw materials § The loading, unloading, handling, transfer or storage of other raw materials which may generate airborne dust emissions such as crushed rock, sand, stone aggregate, shall be carried out in such a manner to prevent or minimize dust emissions; § The materials shall be adequately wetted prior to and during the loading, unloading and handling operations. Manual or automatic water spraying system shall be provided at all unloading areas, stock piles and material discharge points; § All receiving hoppers for unloading relevant materials shall be enclosed on three sides up to 3 m above the unloading point. In no case shall these hoppers be used as the material storage devices; § The belt conveyor for handling materials shall be enclosed on top and two sides with a metal board at the bottom to eliminate any dust emission due to wind-whipping effect. Other type of enclosure will also be accepted by EPD if it can be demonstrated that the proposed enclosure can achieve same performance; § All conveyor transfer points shall be totally enclosed. Openings for the passage of conveyors shall be fitted with adequate flexible seals; § Scrapers shall be provided at the turning points of all conveyors to remove dust adhered to the belt surface; § Conveyors discharged to stockpiles of relevant materials shall be arranged to minimize free fall as far as practicable. All free falling transfer points from conveyors to stockpiles shall be enclosed with chute(s) and water sprayed; § Aggregates with a nominal size less than or equal to 5 mm should be stored in totally enclosed structure such as storage bin and should not be handled in open area. Where there is sufficient buffer area surrounding the concrete batching plant, ground stockpiling may be used;	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?^
			§ The stockpile shall be enclosed at least on top and three sides and with flexible curtain to cover the entrance side; § Aggregates with a nominal size greater than 5 mm should preferably be stored in a totally enclosed structure. If open stockpiling is used, the stockpile shall be enclosed on three sides with the enclosure wall sufficiently higher than the top of the stockpile to prevent wind whipping; and § The opening between the storage bin and weighing scale of the materials shall be fully enclosed.		
			Loading of materials for batching § Concrete truck shall be loaded in such a way as to minimise airborne dust emissions. The following control measures shall be implemented: (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 (b) If truck mixing batching or other types of batching method is used, effective dust control measures acceptable to EPD shall be adopted. The dust control measures must have been demonstrated to EPD that they are capable to collect and vent all dust-laden air generated by the material loading/mixing to dust arrestment plant to meet the required emission limit. § The loading bay shall be totally enclosed during the loading process.	Within Concrete Batching Plant / Duration of the construction phase	N/A
			Vehicles § All practicable measures shall be taken to prevent or minimize the dust emission caused by vehicle movement; and § All access and route roads within the premises shall be paved and adequately wetted.	Within Concrete Batching Plant / Duration of the construction phase	N/A
			Housekeeping § A high standard of housekeeping shall be maintained. All spillages or deposits of materials on ground, support structures or roofs shall be cleaned up promptly by a cleaning method acceptable to EPD. Any dumping of materials at open area shall be prohibited.	Within Concrete Batching Plant / Duration of the construction phase	N/A
5.2.6.6	2.1	-	**Best Practices for Asphaltic Concrete Plant** The relevant best practices for dust control as stipulated in the Guidance Note on the Best Practicable Means for Tar and Bitumen Works (Asphaltic Concrete Plant) BPM 15 (94) as well as in the future Specified Process licence should be adopted. These include: Design of Chimney § The chimney shall not be less than 3 metres plus the building height or 8 metres above ground level, whichever is the greater; § The efflux velocity of gases from the main chimney shall not be less than 12 m/s at full load condition;	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?^
			§ The flue gas exit temperature shall not be less than the acid dew point; and § Release of the chimney shall be directed vertically upwards and not be restricted or deflected.		
			Cold feed side § The aggregates with a nominal size less than or equal to 5 mm shall be stored in totally enclosed structure such as storage bin and shall not be handled in open area; § Where there is sufficient buffer area surrounding the plant, ground stockpiling may be used. The stockpile shall be enclosed at least on top and three sides and with flexible curtain to cover the entrance side. If these aggregates are stored above the feeding hopper, they shall be enclosed at least on top and three sides and be wetted on the surface to prevent wind-whipping; § The aggregates with a nominal size greater than 5 mm should preferably be stored in totally enclosed structure. Aggregates stockpile that is above the feeding hopper shall be enclosed at least on top and three sides. If open stockpiling is used, the stockpiles shall be enclosed on three sides with the enclosure wall sufficiently higher than the top of the stockpile to prevent wind whipping; § Belt conveyors shall be enclosed on top and two sides and provided with a metal board at the bottom to eliminate any dust emission due to the wind-whipping effect. Other type of enclosure will also be accepted by EPD if it can be demonstrated that the proposed enclosure can be achieve the same performance; § Scrapers shall be provided at the turning points of all belt conveyors inside the chute of the transfer points to remove dust adhered to the belt surface; § All conveyor transfer points shall be totally enclosed. Openings for the passages of conveyors shall be fitted with adequate flexible seals; and § All materials returned from dust collection system shall be transferred in enclosed system and shall be stored inside bins or enclosures.	Within Concrete Batching Plant / Duration of the construction phase	N/A
			Hot feed side § The inlet and outlet of the rotary dryer shall be enclosed and ducted to a dust extraction and collection system such as a fabric filter. The particulate and gaseous concentration at the exhaust outlet of the dust collector shall not exceed the required limiting values; § The bucket elevator shall be totally enclosed and the air be extracted and ducted to a dust collection system to meet the required particulates limiting value; § All vibratory screens shall be totally enclosed and dust tight with close-fitted access inspection opening. Gaskets shall be installed to seal off any cracks and edges of any inspection openings; § Chutes for carrying hot material shall be rigid and preferably fitted with abrasion resistant plate inside. They shall be inspected daily for leakages;	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?^
			§ All hot bins shall be totally enclosed and dust tight with close-fitted access inspection opening. Gaskets shall be installed to seal off any cracks and edges of any inspection openings. The air shall be extracted and ducted to a dust collection system to meet the required particulates limiting value; and § Appropriate control measures shall be adopted in order to meet the required bitumen emission limit as well as the ambient odour level (2 odour units).		
			Material transportation § The loading, unloading, handling, transfer or storage of other raw materials which may generate airborne dust emissions such as crushed rocks, sands, stone aggregates, reject fines, shall be carried out in such a manner as to minimize dust emissions; § Roadways from the entrance of the plant to the product loading points and/or any other working areas where there are regular movements of vehicles shall be paved or hard surfaced; and § Haul roads inside the Works shall be adequately wetted with water and/or chemical suppressants by water trucks or water sprayers.	Within Concrete Batching Plant / Duration of the construction phase	N/A
			Control of emissions from bitumen decanting § The heating temperature of the particular bitumen type and grade shall not exceed the corresponding temperature limit of the same type listed in Appendix 1 of the Guidance Note; § Tamper-free high temperature cut-off device shall be provided to shut off the fuel supply or electricity in case the upper limit for bitumen temperature is reached; § Proper chimney for the discharge of bitumen fumes shall be provided at high level; § The emission of bitumen fumes shall not exceed the required emission limit; and 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.	Within Concrete Batching Plant / Duration of the construction phase	N/A
			Liquid fuel § The receipt, handling and storage of liquid fuel shall be carried out so as to prevent the release of emissions of organic vapours and/or other noxious and offensive emissions to the air.	Within Concrete Batching Plant / Duration of the construction phase	N/A
			Housekeeping § A high standard of housekeeping shall be maintained. Waste material, spillage and scattered piles gathered beneath belt conveyors, inside and around enclosures shall be cleared frequently. The minimum clearing frequency is on a weekly basis.	Within Concrete Batching Plant / Duration of the construction phase	N/A
5.2.6.7	2.1	-	**Best Practices for Rock Crushing Plants** 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:	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?^
			Crushers § The outlet of all primary crushers, and both inlet and outlet of all secondary and tertiary crushers, if not installed inside a reasonably dust tight housing, shall be enclosed and ducted to a dust extraction and collection system such as a fabric filter; § The inlet hopper of the primary crushers shall be enclosed on top and 3 sides to contain the emissions during dumping of rocks from trucks. The rock while still on the trucks shall be wetted before dumping; § Water sprayers shall be installed and operated in strategic locations at the feeding inlet of crushers; and § Crusher enclosures shall be rigid and be fitted with self-closing doors and close-fitting entrances and exits. Where conveyors pass through the crusher enclosures, flexible covers shall be installed at entries and exits of the conveyors to the enclosure.		
			Vibratory screens and grizzlies § All vibratory screens shall be totally enclosed in a housing. Screenhouses shall be rigid and reasonably dust tight with self-closing doors or close-fitted entrances and exits for access. Where conveyors pass through the screenhouse, flexible covers shall be installed at entries and exits of the conveyors to the housing. Where containment of dust within the screenhouse structure is not successful then a dust extraction and collection system shall be provided; and § All grizzlies shall be enclosed on top and 3 sides and sufficient water sprayers shall be installed at their feeding and outlet areas.	Within Concrete Batching Plant / Duration of the construction phase	N/A
			Belt conveyors § Except for those conveyors which are placed within a totally enclosed structure such as a screenhouse or those erected at the ground level, all conveyors shall be totally enclosed with windshield on top and 2 sides; § Effective belt scraper such as the pre-cleaner blades made by hard wearing materials and provided with pneumatic tensioner, or equivalent device, shall be installed at the head pulley of designated conveyor as required to dislodge fine dust particles that may adhere to the belt surface and to reduce carry-back of fine materials on the return belt. Bottom plates shall also be provided for the conveyor unless it has been demonstrated that the corresponding belt scraper is effective and well maintained to prevent falling material from the return belt; and § Except for those transfer points which are placed within a totally enclosed structure such as a screenhouse, all transfer points to and from conveyors shall be enclosed. Where containment of dust within the enclosure is not successful, then water sprayers shall be provided. Openings for any enclosed structure for the passage of conveyors shall be fitted with flexible seals.	Within Concrete Batching Plant / Duration of the construction phase	N/A

EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
			Storage piles and bins § Where practicable, free falling transfer points from conveyors to stockpiles shall be fitted with flexible curtains or be enclosed with chutes designed to minimize the drop height. Water sprays shall also be used where required. § The surface of all surge piles and stockpiles of blasted rocks or aggregates shall be kept sufficiently wet by water spraying wherever practicable; § All open stockpiles for aggregates of size in excess of 5 mm shall be kept sufficiently wet by water spraying where practicable; or § The stockpiles of aggregates 5 mm in size or less shall be enclosed on 3 sides or suitably located to minimize wind-whipping. Save for fluctuations in stock or production, the average stockpile shall stay within the enclosure walls and in no case the height of the stockpile shall exceed twice the height of the enclosure walls. § Scattered piles gathered beneath belt conveyors, inside and around enclosures shall be cleared regularly.	Within Concrete Batching Plant / Duration of the construction phase	N/A
			Rock drilling equipment § Appropriate dust control equipment such as a dust extraction and collection system shall be used during rock drilling activities.	Within Concrete Batching Plant / Duration of the construction phase	N/A
			Hazard to Human Life – Construction Phase		
Table 6.40	3.2	-	§ Precautionary measures should be established to request barges to move away during typhoons.	Construction Site / Construction Period	I
Table 6.40	3.2	-	§ An appropriate marine traffic management system should be established to minimize risk of ship collision.	Construction Site / Construction Period	I
Table 6.40	3.2	-	§ Location of all existing hydrant networks should be clearly identified prior to any construction works.	Construction Site / Construction Period	N/A
			Noise Impact – Construction Phase		
7.5.6	4.3	-	**Good Site Practice** Good site practice and noise management can significantly reduce the impact of construction site activities on nearby NSRs. The following package of measures should be followed during each phase of construction: § only well-maintained plant to be operated on-site and plant should be serviced regularly during the construction works; § machines and plant that may be in intermittent use to be shut down between work periods or should be throttled down to a minimum;	Within the Project site / During construction phase / Prior to commencement of operation	I

EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
			§ plant known to emit noise strongly in one direction, should, where possible, be orientated to direct noise away from the NSRs; § mobile plant should be sited as far away from NSRs as possible; and § material stockpiles and other structures to be effectively utilised, where practicable, to screen noise from on-site construction activities.		
7.5.6	4.3	-	**Adoption of QPME** § QPME should be adopted as far as applicable.	Within the Project site / During construction phase / Prior to commencement of operation	I
7.5.6	4.3	-	**Use of Movable Noise Barriers** § Movable noise barriers should be placed along the active works area and mobile plants to block the direct line of sight between PME and the NSRs.	Within the Project site / During construction phase / Prior to commencement of operation	I
7.5.6	4.3	-	**Use of Noise Enclosure/ Acoustic Shed** § Noise enclosure or acoustic shed should be used to cover stationary PME such as air compressor and generator.	Within the Project site / During construction phase / Prior to commencement of operation	I
			Water Quality Impact – Construction Phase		

EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
8.8.1.2 and 8.8.1.3	5.1	2.26	**Marine Construction Activities** <u>General Measures to be Applied to All Works Areas</u> § Barges or hoppers shall not be filled to a level which will cause overflow of materials or pollution of water during loading or transportation; § Use of Lean Material Overboard (LMOB) systems shall be prohibited; § Excess materials shall be cleaned from the decks and exposed fittings of barges and hopper dredgers before the vessels are moved; § Plants should not be operated with leaking pipes and any pipe leakages shall be repaired quickly; § Adequate freeboard shall be maintained on barges to reduce the likelihood of decks being washed by wave action; § All vessels shall be sized such that adequate clearance is maintained between vessels and the sea bed at all states of the tide to ensure that undue turbidity is not generated by turbulence from vessel movement or propeller wash; § The works shall not cause foam, oil, grease, litter or other objectionable matter to be present in the water within and adjacent to the works site; and § For ground improvement activities including DCM, the wash water from cleaning of the drilling shaft should be appropriately treated before discharge. The Contractor should ensure the waste water meets the WPCO/TM requirements before discharge. No direct discharge of contaminated water is permitted.	Within construction site / Duration of the construction phase	I
			<u>Specific Measures to be Applied to All Works Areas</u> § The daily maximum production rates shall not exceed those assumed in the water quality assessment in the EIA report; § A maximum of 10 % fines content to be adopted for sand blanket and 20 % fines content for marine filling below +2.5 mPD prior to substantial completion of seawall (until end of Year 2017) shall be specified in the works contract document;	Within construction site / Duration of the construction phase	I
			§ An advance seawall of at least 200m to be constructed (comprising either rows of contiguous permanent steel cells completed above high tide mark or partially completed seawalls with rock core to high tide mark and filter layer on the inner side) prior to commencement of marine filling activities;		N/A
			§ Closed grab dredger shall be used to excavate marine sediment; § Silt curtains surrounding the closed grab dredger shall be deployed in accordance with the Silt Curtain Deployment Plan; and		N/A *(The arrangement of silt curtain has been modified. The details can be referred to Silt Curtain Deployment Plan)
			§ The Silt Curtain Deployment Plan shall be implemented.		I

EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
			Specific Measures to be Applied to Land Formation Activities prior to Commencement of Marine Filling Works	Within construction site / Duration of the construction phase	NA *(The arrangement of silt curtain has been modified. The details can be referred to Silt Curtain Deployment Plan)
			§ Double layer 'Type III' silt curtains to be applied around the active eastern works areas prior to commencement of sand blanket laying activities. The silt curtains shall be configured to minimise SS release during ebb tides. A silt curtain efficiency test shall be conducted to validate the performance of the silt curtains;		
			§ Double layer silt curtains to enclose WSRs C7a and silt screens installed at the intake points for both WSR C7a and C8 prior to commencement of construction; and		For C7a, I For C8, N/A *(The requirement of silt curtain / screen has been modified. The details can be referred to Silt Curtain Deployment Plan)
			§ The silt curtains and silt screens should be regularly checked and maintained.		I
			Specific Measures to be Applied to Land Formation Activities during Marine Filling Works	Within construction site / Duration of the construction phase	N/A *(The arrangement of silt curtain has been modified. The details can be referred to Silt Curtain Deployment Plan)
			§ Double layer '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;		
			§ Double layer silt curtains to be applied at the south-western opening prior to commencement of marine filling activities;		N/A *(The arrangement of silt curtain has been modified. The details can be referred to Silt Curtain Deployment Plan)
			§ Double layer silt curtain to enclose WSR C7a and silt screens installed at the intake points for both WSR C7a and C8 prior to commencement of marine filling activities; and		N/A *(The requirement of silt curtain / screen has been modified. The details can be referred to Silt Curtain Deployment Plan)
			§ The silt curtains and silt screens should be regularly checked and maintained.		N/A

EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
			Specific Measures to be Applied to the Field Joint Excavation Works for the Submarine Cable Diversion § Only closed grabs designed and maintained to avoid spillage shall be used and should seal tightly when operated. Excavated materials shall be disposed at designated marine disposal area in accordance with the Dumping and Sea Ordinance (DASO) permit conditions; and § Silt curtains surrounding the closed grab dredger to be deployed as a precautionary measure.	Within construction site / Duration of the construction phase	N/A
8.8.1.4	5.1	-	**Modification of the Existing Seawall** § Silt curtains shall be deployed around the seawall modification activities to completely enclose the active works areas, and care should be taken to avoid splashing of rockfill / rock armour into the surrounding marine environment. For the connecting sections with the existing outfalls, works for these connection areas should be undertaken during the dry season in order that individual drainage culvert cells may be isolated for interconnection works.	At the existing northern seawall / Duration of the construction phase	N/A
8.8.1.5	5.1	-	**Construction of New Stormwater Outfalls and Modifications to Existing Outfalls** § During operation of the temporary drainage channel, runoff control measures such as bunding or silt fence shall be provided on both sides of the channel to prevent accumulation and release of SS via the temporary channel. Measures should also be taken to minimise the ingress of site drainage into the culvert excavations.	Within construction site / Duration of the construction phase	N/A
8.8.1.6 8.8.1.7	5.1	2.27	**Piling Activities for Construction of New Runway Approach Lights and HKIAAA Marker Beacons** Silt curtains shall be deployed around the piling activities to completely enclose the piling works and care should be taken to avoid spillage of excavated materials into the surrounding marine environment. For construction of the eastern approach lights at the CMPs § Ground improvement via DCM using a close-spaced layout shall be completed prior to commencement of piling works; § Steel casings shall be installed to enclose the excavation area prior to commencement of excavation; § The excavated materials shall be removed using a closed grab within the steel casings; § No discharge of the cement mixed materials into the marine environment will be allowed; and § Excavated materials shall be treated and reused on-site.	Within construction site / Duration of the construction phase	N/A
8.8.1.8	5.1	-	**Construction of Site Runoff and Drainage** The site practices outlined in ProPECC Note PN 1/94 should be followed as far as practicable in order to minimise surface runoff and the chance of erosion. The following measures are recommended: § Install perimeter cut-off drains to direct off-site water around the site and implement internal drainage, erosion and sedimentation control facilities. Channels, earth bunds or sand bag barriers should be provided on site to direct storm water to silt removal facilities. The design of the temporary on-site	Within construction site / Duration of the construction phase	I

EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
			drainage system should be undertaken by the Contractors prior to the commencement of construction (for works areas located on the existing Airport island) or as soon as the new land is completed (for works areas located on the new landform);		
			§ Sand/silt removal facilities such as sand/silt traps and sediment basins should be provided to remove sand/silt particles from runoff to meet the requirements of the TM-DSS standards under the WPCO. The design of efficient silt removal facilities should make reference to the guidelines in Appendix A1 of ProPECC Note PN 1/94. Sizes may vary depending upon the flow rate. The detailed design of the sand/silt traps should be undertaken by the Contractors prior to the commencement of construction;		I
			§ All drainage facilities and erosion and sediment control structures should be regularly inspected and maintained to ensure proper and efficient operation at all times and particularly during rainstorms. Deposited silt and grit should be regularly removed, at the onset of and after each rainstorm to ensure that these facilities are functioning properly;		I
			§ Measures should be taken to minimize the ingress of site drainage into excavations. If excavation of trenches in wet periods is necessary, they should be dug and backfilled in short sections wherever practicable. Water pumped out from foundation excavations should be discharged into storm drains via silt removal facilities;		N/A
			§ 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		N/A
			§ All vehicles and plant should be cleaned before leaving a construction site to ensure no earth, mud, debris and the like is deposited by them on roads. An adequately designed and sited wheel washing facility should be provided at construction site exits. Wash-water should have sand and silt settled out and removed regularly to ensure the continued efficiency of the process. The section of access road leading to, and exiting from, the wheel-wash bay to the public road should be paved with sufficient backfall toward the wheel-wash bay to prevent vehicle tracking of soil and silty water to public roads and drains. All washwater should be treated according to the requirements of the TM-DSS standards under the WPCO prior to discharge.		I
8.8.1.9	5.1	-	**Sewage Effluent from Construction Workforce** § Temporary sanitary facilities, such as portable chemical toilets, should be employed on-site where necessary to handle sewage from the workforce. A licensed contractor should be employed to provide appropriate and adequate portable toilets and be responsible for appropriate disposal and maintenance.	Within construction site / During construction phase	I
8.8.1.10 8.8.1.11	5.1		**General Construction Activities** § Construction solid waste, debris and refuse generated on-site should be collected, handled and disposed of properly to avoid entering any nearby storm water drain. Stockpiles of cement and other construction materials should be kept covered when not being used; and	Within construction site / During construction phase	I

EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
			§ Oils and fuels should only be stored in designated areas which have pollution prevention facilities. To prevent spillage of fuels and solvents to any nearby storm water drain, all fuel tanks and storage areas should be provided with locks and be sited on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank. The bund should be drained of rainwater after a rain event.		
8.8.1.12 8.8.1.13	5.1	2.28	**Drilling Activities for the Submarine Aviation Fuel Pipelines** To prevent potential water quality impacts at Sha Chau, the following measures shall be applied: § A 'zero-discharge' policy shall be applied for all activities to be conducted at Sha Chau; § No bulk storage of chemicals shall be permitted; and § A containment pit shall be constructed around the drill holes. This containment pit shall be lined with impermeable lining and bunded on the outside to prevent inflow from off-site areas.	Within construction site / During construction phase	I
			At the airport island side of the drilling works, the following measures shall be applied for treatment of wastewater: § During pipe cleaning, appropriate desilting or sedimentation device should be provided on site for treatment before discharge. The Contractor should ensure discharge water from the sedimentation tank meet the WPCO/TM requirements before discharge; and § Drilling fluid used in drilling activities should be reconditioned and reused as far as possible. Temporary enclosed storage locations should be provided on-site for any unused chemicals that needs to be transported away after all the related construction activities are completed. The requirements in ProPECC Note PN 1/94 should be adhered to in the handling and disposal of bentonite slurries.	Within construction site / During construction phase	I
			Waste Management Implication – Construction Phase		
10.5.1.1	7.1	-	Opportunities to minimise waste generation and maximise the reuse of waste materials generated by the project have been incorporated where possible into the planning, design and construction stages, and the following measures have been recommended: § The relevant construction methods (particularly for the tunnel works) and construction programme have been carefully planned and developed to minimise the extent of excavation and to maximise the on-site reuse of inert C&D materials generated by the project as far as practicable. Temporary stockpiling areas will also be provided to facilitate on-site reuse of inert C&D materials;	Project Site Area / During design and construction phase	I
			§ Priority should be given to collect and reuse suitable inert C&D materials generated from other concurrent projects and the Government's PFRF as fill materials for the proposed land formation works;		I
			§ Only non-dredged ground improvement methods should be adopted in order to completely avoid the need for dredging and disposal of marine sediment for the proposed land formation work;		I
			§ Excavation work for constructing the APM tunnels, BHS tunnels and airside tunnels will not be down to the CMPs beneath the fill materials in order to avoid excavating any sediments; and		N/A

EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
			§ For the marine sediments expected to be excavated from the piling works of TRC, APM & BHS tunnels, airside tunnels and other facilities on the proposed land formation area, piling work of marine sections of the approach lights and HKIAAA beacons, basement works for some of T2 expansion area and excavation works for the proposed APM depot should be treated and reused on-site as backfilling materials, although required treatment level / detail and the specific re-use mode are under development.		N/A
10.5.1.1	7.1	-	The following good site practices should be performed during the construction activities include: § Nomination of an approved person, such as a site manager, to be responsible for good site practices, arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site; § Training of site personnel in proper waste management and chemical waste handling procedures; § Provision of sufficient waste disposal points and regular collection for disposal; § Appropriate measures to minimise windblown litter and dust during transportation of waste by either covering trucks by tarpaulin/ similar material or by transporting wastes in enclosed containers. The cover should be extended over the edges of the sides and tailboards; § Stockpiles of C&D materials should be kept wet or covered by impervious sheets to avoid wind-blown dust; § All dusty materials including C&D materials should be sprayed with water immediately prior to any loading transfer operation so as to keep the dusty material wet during material handling at the barging points/ stockpile areas; § C&D materials to be delivered to and from the project site by barges or by trucks should be kept wet or covered to avoid wind-blown dust; § The speed of the trucks including dump trucks carrying C&D or waste materials within the site should be controlled to about 10 km/hour in order to reduce the adverse dust impact and secure the safe movement around the site; and § To avoid or minimise dust emission during transport of C&D or waste materials within the site, each and every main temporary access should be paved with concrete, bituminous hardcore materials or metal plates and kept clear of dusty materials. Unpaved parts of the road should be sprayed with water or a dust suppression chemical so as to keep the entire road surface wet.	Project Site Area / Construction Phase	I
10.5.1.3	7.1	-	The following practices should be performed to achieve waste reduction include: § Use of steel or aluminium formworks and falseworks for temporary works as far as practicable; § Adoption of repetitive design to allow reuse of formworks as far as practicable; § Segregation and storage of different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal;	Project Site Area / Construction Phase	I

EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
			§ Encourage collection of aluminium cans, PET bottles and paper by providing separate labelled bins to enable these wastes to be segregated from other general refuse generated by the work force; § Any unused chemicals or those with remaining functional capacity should be collected for reused as far as practicable; § Proper storage and site practices to minimise the potential for damage or contamination of construction materials; and § Plan and stock construction materials carefully to minimise amount of waste generated and avoid unnecessary generation of waste.		
10.5.1.5	7.1		§ Inert and non-inert C&D materials should be handled and stored separately to avoid mixing the two types of materials.	Project Site Area / Construction Phase	I
10.5.1.5	7.1	-	§ Any recyclable materials should be segregated from the non-inert C&D materials for collection by reputable licensed recyclers whereas the non-recyclable waste materials should be disposed of at the designated landfill site by a reputable licensed waste collector.	Project Site Area / Construction Phase	I
10.5.1.6	7.1	-	§ A trip-ticket system promulgated shall be developed in order to monitor the off-site delivery of surplus inert C&D materials that could not be reused on-site for the proposed land formation work at the PFRF and to control fly tipping.	Project Site Area / Construction Phase	I
10.5.1.6	7.1	2.32	§ The Contractor should prepare and implement a Waste Management Plan detailing various waste arising and waste management practices.	Construction Phase	I
10.5.1.16	7.1	-	The following mitigation measures are recommended during excavation and treatment of the sediments: § On-site remediation should be carried out in an enclosed area in order to minimise odour/dust emissions; § The loading, unloading, handling, transfer or storage of treated and untreated sediment should be carried out in such a manner to prevent or minimise dust emissions; § All practical measures, including but not limited to speed control for vehicles, should be taken to minimise dust emission; § Good housekeeping should be maintained at all times at the sediment treatment facility and storage area; § Treated and untreated sediment should be clearly separated and stored separately; and § Surface runoff from the enclosed area should be properly collected and stored separately, and then properly treated to levels in compliance with the relevant effluent standards as required by the Water Pollution Control Ordinance before final discharge.	Project Site Area / Construction Phase	N/A
10.5.1.18	7.1	-	The marine sediments to be removed from the cable field joint area would be disposed of at the designated disposal sites to be allocated by the MFC. The following mitigation measures should be strictly	Project Site Area / Construction Phase	N/A

EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
			followed to minimise potential impacts on water quality during transportation of the sediments requiring Type 1 disposal: § Bottom opening of barges shall be fitted with tight fitting seals to prevent leakage of material; § Monitoring of the barge loading shall be conducted to ensure that loss of material does not take place during transportation. Transport barges or vessels shall be equipped with automatic self-monitoring devices as specified by EPD; and § Barges or hopper barges shall not be filled to a level that would cause the overflow of materials or sediment laden water during loading or transportation.		
10.5.1.19	7.1	-	Contractor should register with the EPD as a chemical waste producer and to follow the relevant guidelines. The following measures should be implemented: § Good quality containers compatible with the chemical wastes should be used; § Incompatible chemicals should be stored separately; § Appropriate labels must be securely attached on each chemical waste container indicating the corresponding chemical characteristics of the chemical waste, such as explosive, flammable, oxidizing, irritant, toxic, harmful, corrosive, etc.; and § The contractor will use a licensed collector to transport and dispose of the chemical wastes at the approved Chemical Waste Treatment Centre or other licensed recycling facilities, in accordance with the Waste Disposal (Chemical Waste) (General) Regulation.	Project Site Area / Construction Phase	I
10.5.1.20	7.1	-	§ General refuse should be stored in enclosed bins or compaction units separated from inert C&D material. A reputable waste collector should be employed by the contractor to remove general refuse from the site for disposal at designated landfill sites. An enclosed and covered area should be provided to reduce the occurrence of 'wind blown' light material.	Project Site Area / Construction Phase	I
10.5.1.21	7.1	-	§ The construction contractors will be required to regularly check and clean any refuse trapped or accumulated along the newly constructed seawall. Such refuse will then be stored and disposed of together with the general refuse.	Project Site Area / Construction Phase	N/A
			Land Contamination – Construction Phase		
11.10.1.2 to 11.10.1.3	8.1	2.32	For areas inaccessible during site reconnaissance survey § Further site reconnaissance would be conducted once the areas are accessible in order to identify any land contamination concern for the areas.	Project Site Area inaccessible during site reconnaissance / Prior to Construction Phase	I
			§ Subject to further site reconnaissance findings, a supplementary Contamination Assessment Plan (CAP) for additional site investigation (SI) (if necessary) may be prepared and submitted to EPD for endorsement prior to the commencement of SI at these areas.		I

EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
			§ 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.		N/A
			§ Should remediation be required, Remediation Action Plan (RAP) and Remediation Report (RR) will be prepared for EPD's approval prior to commencement of the proposed remediation and any construction works respectively.		N/A
11.8.1.2	8.1	-	If contaminated soil is identified, the following mitigation measures are for the excavation and transportation of contaminated materials (if any): § To minimize the incidents of construction workers coming in contact with any contaminated materials, bulk earth-moving excavation equipment should be employed; § Contact with contaminated materials can be minimised by wearing appropriate clothing and personal protective equipment such as gloves and masks (especially when working directly with contaminated material), provision of washing facilities and prohibition of smoking and eating on site; § Stockpiling of contaminated excavated materials on site should be avoided as far as possible; § The use of any contaminated soil for landscaping purpose should be avoided unless pre-treatment was carried out; § Vehicles containing any excavated materials should be suitably covered to reduce dust emissions and/or release of contaminated wastewater; § Truck bodies and tailgates should be sealed to prevent any discharge; § Only licensed waste haulers should be used to collect and transport contaminated material to treatment/disposal site and should be equipped with tracking system to avoid fly tipping; § Speed control for trucks carrying contaminated materials should be exercised. 8km/h is the recommended speed limit; § Strictly observe all relevant regulations in relation to waste handling, such as Waste Disposal Ordinance (Cap 354), Waste Disposal (Chemical Waste) (General) Regulation (Cap 354) and obtain all necessary permits where required; and § Maintain records of waste generation and disposal quantities and disposal arrangements.	Project Site Area / Construction Phase	N/A
			Terrestrial Ecological – Construction Phase		
12.10.1.1	9.2	2.14	**Pre-construction Egretry Survey** § Conduct ecological survey for Sha Chau egretry to update the latest boundary of the egretry.	Breeding season (April - July) prior to commencement of HDD drilling works at HKIA	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	**Avoidance and Minimisation of Direct Impact to Egretry** § The daylighting location will avoid direct encroachment to the Sheung Sha Chau egretry. The daylighting location and mooring of flat top barge, if required, will be kept away from the egretry; § In any event, controls such as demarcation of construction site boundary and confining the lighting within the site will be practised to minimise disturbance to off-site habitat at Sheung Sha Chau Island; and § The containment pit at the daylighting location shall be covered or camouflaged.	During construction phase at Sheung Sha Chau Island	I
12.7.2.5	9.1	2.30	**Preservation of Nesting Vegetation** § The proposed daylighting location and the arrangement of connecting pipeline will avoid the need of tree cutting, therefore the trees that are used by ardeids for nesting will be preserved.	During construction phase at Sheung Sha Chau Island	I
12.7.2.4 and 12.7.2.6	9.1	2.30	**Timing the Pipe Connection Works outside Ardeid's Breeding Season** § All HDD and related construction works on Sheung Sha Chau Island will be scheduled outside the ardeids' breeding season (between April and July). No night-time construction work will be allowed on Sheung Sha Chau Island during all seasons.	During construction phase at Sheung Sha Chau Island	I
12.10.1.1	9.3	-	**Ecological Monitoring** § During the HDD construction works period from August to March, ecological monitoring will be undertaken monthly at the HDD daylighting location on Sheung Sha Chau Island to identify and evaluate any impacts with appropriate actions taken as required to address and minimise any adverse impact found.	at Sheung Sha Chau Island	I
			Marine Ecological Impact – Pre-construction Phase		
13.11.4.1	10.2.2	-	§ Pre-construction phase Coral Dive Survey.	HKIAAA artificial seawall	I
			Marine Ecological Impact – Construction Phase		
13.11.1.3 to 13.11.1.6	-	-	**Minimisation of Land Formation Area** § Minimise the overall size of the land formation needed for the additional facilities to minimise the overall loss of habitat for marine resources, especially the CWD population.	Land formation footprint / during detailed design phase to completion of construction	I
13.11.1.7 to 13.11.1.10	-	2.31	**Use of Construction Methods with Minimal Risk/Disturbance** § Use of non-dredge method for the main land formation and ancillary works including the diversion of the aviation fuel pipeline to the AFRF;	During construction phase at marine works area	I
			§ Use of Deep Cement Mixing (DCM) method instead of conventional seabed dredging for the land formation works to reduce the risk of negative impacts through the elevation of suspended solids and contaminants on CWDs, fisheries and the marine environment;		I

EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
			§ Use of bored piling in short duration to form the new approach lights and marker beacons for the new runway;		N/A
			§ Avoid bored piling during CWD peak calving season (Mar to Jun);		I
			§ Prohibition of underwater percussive piling; and		I
			§ Use of horizontal directional drilling (HDD) method and water jetting methods for placement of submarine cables and pipelines to minimise the disturbance to the CWDs and other marine ecological resources.		I
13.11.2.1 to 13.11.2.7	-	-	**Mitigation for Indirect Disturbance due to Deterioration of Water Quality** § Water quality mitigation measures during construction phases include consideration of alternative construction methods, deployment of silt curtain and good site practices;	All works area during the construction phase	I
			§ Alternative construction methods including use of non-dredge methods for ground improvement (e.g. Deep Cement Mixing (DCM), prefabricated vertical drains (PVD), sand compaction piles, steel cells, stone columns and vertical sand drains);		I
			§ Use of bored piling in short duration to form the new approach lights and marker beacons for the new runway; and		N/A
			Use of horizontal directional drilling (HDD) method and water jetting methods for placement of undersea cables and pipelines to minimise the disturbance to the CWDs and other marine ecological resources.		I
13.11.1.12	-	-	**Strict Enforcement of No-Dumping Policy** § A policy prohibiting dumping of wastes, chemicals, oil, trash, plastic, or any other substance that would potentially be harmful to dolphins and/or their habitat in the work area; § Mandatory educational programme of the no-dumpling policy be made available to all construction site personnel for all project-related works; § Fines for infractions should be implemented; and § Unscheduled, on-site audits shall be implemented.	All works area during the construction phase	I
13.11.1.13	-	-	**Good Construction Site Practices** § Regular inspection of the integrity and effectiveness of all silt curtains and monitoring of effluents to ensure that any discharge meets effluent discharge guidelines; § Keep the number of working or stationary vessels present on-site to the minimum anytime; and § Unscheduled, on-site audits for all good site practice restrictions should be conducted, and fines or penalties sufficient to be an effective deterrent need to be levied against violators.	All works area during the construction phase	I
13.11.1.3 to 13.11.1.6	-	-	**Minimisation of Land Formation Area** § Minimise the overall size of the land formation needed for the additional facilities to minimise the overall loss of habitat for marine resources, especially the CWD population.	Land formation footprint / during detailed design phase	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	-	**SkyPier High Speed Ferries' Speed Restrictions and Route Diversions** § SkyPier HSFs operating to / from Zhuhai and Macau would divert north of SCLKC Marine Park with a 15 knot speed limit to apply for the part-journeys that cross high CWD abundance grid squares as indicatively shown in **Drawing No. MCL/P132/EIA/13-023** of the EIA Report. Both the alignment of the northerly route and the portion of routings to be subject to the speed limit of 15 knots shall be finalised prior to commencement of construction based on the future review of up-to-date CWD abundance and EM&A data and taking reference to changes in total SkyPier HSF numbers; and § A maximum of 10 knots will be enforced through the designated SCLKC Marine Park area at all times.	Area between the footprint and SCLKC Marine Park during construction phase	I
			Other mitigation measures § The ET will audit various parameters including actual daily numbers of HSFs, compliance with the 15-knot speed limit in the speed control zone and diversion compliance for SkyPier HSFs operating to / from Zhuhai and Macau; and § The effectiveness of the CWD mitigation measures after implementation of initial six month SkyPier HSF diversion and speed restriction will be reviewed.	Area between the footprint and SCLKC Marine Park during construction phase	I
13.11.5.14 to 13.11.5.18	10.3.1	2.31	**Dolphin Exclusion Zone** § Establishment of a 24 hr Dolphin Exclusion Zone (DEZ) with a 250 m radius around the land formation works areas;	Marine waters around land formation works area during construction phase	I
			§ A DEZ would also be implemented during ground improvement works (e.g. DCM), water jetting works for submarine cables diversion, open trench dredging at the field joint locations and seawall construction; and		I
			§ A DEZ would also be implemented during bored piling work but as a precautionary measure only.		N/A
13.11.5.19	10.4	2.31	**Acoustic Decoupling of Construction Equipment** § Air compressors and other noisy equipment that must be mounted on steel barges should be acoustically-decoupled to the greatest extent feasible, for instance by using rubber or air-filled tyres; and § Specific acoustic decoupling measures shall be specified during the detailed design of the project for use during the land formation works.	Around coastal works area during construction phase	I
13.11.5.20	10.6.1	2.29	**Spill Response Plan** § 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.	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?^
13.11.5.21 to 13.11.5.23	10.6.1	-	**Construction Vessel Speed Limits and Skipper Training** § A speed limit of 10 knots should be strictly observed for construction vessels at areas with the highest CWD densities; and § Vessels traversing through the work areas should be required to use predefined and regular routes (which would presumably become known to resident dolphins) to reduce disturbance to cetaceans due to vessel movements. Specific marine routes shall be specified by the Contractor prior to construction commencing.	All areas north and west of Lantau Island during construction phase	I
			Fisheries Impact – Construction Phase		
14.9.1.2 to 14.9.1.5	-		**Minimisation of Land Formation Area** § Minimise the overall size of the land formation needed for the additional facilities to minimise the overall loss of habitat for fisheries resources.	Land formation footprint / during detailed design phase to completion of construction	I
14.9.1.6	-	-	**Use of Construction Methods with Minimal Risk/Disturbance** § Use of non-dredge method for the main land formation and ancillary works including the diversion of the aviation fuel pipeline to the AFRF;	During construction phase at marine works area	I
			§ Use of Deep Cement Mixing (DCM) method instead of conventional seabed dredging for the land formation works to reduce the risk of negative impacts through the elevation of suspended solids and contaminants on fisheries and the marine environment;		I
			§ Use of bored piling in short duration to form the new approach lights and marker beacons for the new runway; and		N/A
			§ Use of horizontal directional drilling (HDD) method and water jetting methods for placement of undersea cables and pipelines to minimise the disturbance to fisheries resources.		I
14.9.1.11	-		**Strict Enforcement of No-Dumping Policy** § A policy prohibiting dumping of wastes, chemicals, oil, trash, plastic, or any other substance that would potentially be harmful to dolphins and/or their habitat in the work area; § Mandatory educational programme of the no-dumpling policy be made available to all construction site personnel for all project-related works; § Fines for infractions should be implemented; and § Unscheduled, on-site audits shall be implemented.	All works area during the construction phase	I
14.9.1.12	-		**Good Construction Site Practices** § Regular inspection of the integrity and effectiveness of all silt curtains and monitoring of effluents to ensure that any discharge meets effluent discharge guidelines; § Keep the number of working or stationary vessels present on-site to the minimum anytime; and	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?^
			§ Unscheduled, on-site audits for all good site practice restrictions should be conducted, and fines or penalties sufficient to be an effective deterrent need to be levied against violators.		
14.9.1.13 to 14.9.1.18	-		**Mitigation for Indirect Disturbance due to Deterioration of Water Quality** § Water quality mitigation measures during construction phases include consideration of alternative construction methods, deployment of silt curtain and good site practices;	All works area during the construction phase	I
			§ Alternative construction methods including use of non-dredge methods for ground improvement (e.g. Deep Cement Mixing (DCM), prefabricated vertical drains (PVD), sand compaction piles, steel cells, stone columns and vertical sand drains);		I
			§ Use of bored piling in short duration to form the new approach lights and marker beacons for the new runway; and		N/A
			§ Use of horizontal directional drilling (HDD) method and water jetting methods for placement of undersea cables and pipelines to minimise the disturbance to fisheries resources.		I
			Landscape and Visual Impact – Construction Phase		
Table 15.6	12.3	-	**CM1 -** The construction area and contractor's temporary works areas should be minimised to avoid impacts on adjacent landscape.	All works areas for duration of works; Upon handover and completion of works.	I
Table 15.6	12.3	-	**CM2 -** Reduction of construction period to practical minimum.	All works areas for duration of works; Upon handover and completion of works.	I
Table 15.6	12.3	-	**CM3 -** Phasing of the construction stage to reduce visual impacts during the construction phase.	All works areas for duration of works; Upon handover and completion of works.	I
Table 15.6	12.3	-	**CM4 -** Construction traffic (land and sea) including construction plants, construction vessels and barges should be kept to a practical minimum.	All works areas for duration of works; Upon handover and completion of works.	I
Table 15.6	12.3	-	**CM5 -** Erection of decorative mesh screens or construction hoardings around works areas in visually unobtrusive colours.	All works areas for duration of works; Upon handover and completion of works. –	I

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

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

Sep-17

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1 Site Inspection	**2** WQ General & Regular DCM mid-ebb: 10:32 mid-flood: 17:58
3	**4** AR1A, AR2 NM1A, NM3A, NM4, NM5	**5** Site Inspection NM6 WQ General & Regular DCM mid-ebb: 12:30 mid-flood: 19:20	**6** Site Inspection CWD Survey (Land-based)	**7** Site Inspection WQ General & Regular DCM mid-ebb: 13:39 mid-flood: 07:12	**8** Site Inspection AR1A, AR2	**9** WQ General & Regular DCM mid-ebb: 14:52 mid-flood: 08:40
10	**11** CWD Survey (Vessel)	**12** Site Inspection CWD Survey (Vessel) NM6 WQ General & Regular DCM mid-ebb: 17:13 mid-flood: 11:36	**13** Site Inspection CWD Survey (Vessel)	**14** Site Inspection CWD Survey (Vessel) AR1A, AR2 NM1A, NM3A, NM4, NM5 WQ General & Regular DCM mid-ebb: 07:03 mid-flood: 14:49	**15** Site Inspection Ecological Monitoring	**16** WQ General & Regular DCM mid-ebb: 09:51 mid-flood: 17:13
17	**18** CWD Survey (Vessel, Land-based) NM6	**19** Site Inspection CWD Survey (Vessel) WQ General & Regular DCM mid-ebb: 12:26 mid-flood: 19:04	**20** Site Inspection CWD Survey (Vessel) AR1A, AR2 NM1A, NM3A, NM4, NM5	**21** Site Inspection CWD Survey (Vessel) WQ General & Regular DCM mid-ebb: 13:46 mid-flood: 07:22	**22** Site Inspection CWD Survey (Land-based)	**23** WQ General & Regular DCM mid-ebb: 14:53 mid-flood: 08:45
24	**25**	**26** Site Inspection AR1A, AR2 NM1A, NM3A, NM4, NM5 WQ General & Regular DCM mid-ebb: 16:43 mid-flood: 11:06	**27** Site Inspection CWD Survey (Land-based)	**28** Site Inspection CWD Survey (Land-based) NM6 WQ General & Regular DCM mid-ebb: 06:05 mid-flood: 18:39	**29** Site Inspection AR1A, AR2	**30** WQ General & Regular DCM mid-ebb: 08:41^ mid-flood: 16:50

Notes:

CWD - Chinese White Dolphin

Air quality and Noise Monitoring Station

NM1A/AR1A - Man Tung Road Park
NM3A - Site Office
NM4 - Ching Chung Hau Po Woon Primary School
NM5/AR2 - Village House, Tin Sum
NM6 - House No. 1, Sha Lo Wan

WQ - Water Quality
DCM - Deep Cemenet Mixing
* Rescheduled due to adverse weather
^ Cancelled due to adverse weather

Tentative Monitoring Schedule of Next Reporting Period

Oct-17

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	**2**	**3** Site Inspection NM6 WQ General & Regular DCM mid-ebb: 11:17 mid-flood: 18:09	**4** AR1A, AR2 NM1A, NM3A, NM4, NM5	**5** WQ General & Regular DCM mid-ebb: 12:34 mid-flood: 18:55	**6** Site Inspection	**7** WQ General & Regular DCM mid-ebb: 13:51 mid-flood: 07:49
8	**9** CWD Survey (Vessel) NM6	**10** Site Inspection CWD Survey (Land-based) AR1A, AR2 NM1A, NM3A, NM4, NM5 WQ General & Regular DCM mid-ebb: 16:10 mid-flood: 10:34	**11** Site Inspection CWD Survey (Land-based)	**12** Site Inspection CWD Survey (Vessel) WQ General & Regular DCM mid-ebb: 18:19 mid-flood: 13:08	**13** Site Inspection CWD Survey (Vessel)	**14** WQ General & Regular DCM mid-ebb: 08:15 mid-flood: 16:00
15	**16** CWD Survey (Vessel) AR1A, AR2 NM1A, NM3A, NM4, NM5	**17** Site Inspection CWD Survey (Vessel) NM6 WQ General & Regular DCM mid-ebb: 11:22 mid-flood: 17:56	**18** Site Inspection CWD Survey (Vessel)	**19** Site Inspection CWD Survey (Vessel, Land-based) WQ General & Regular DCM mid-ebb: 12:44 mid-flood: 18:45	**20** Site Inspection CWD Survey (Land-based) AR1A, AR2	**21** WQ General & Regular DCM mid-ebb: 13:55 mid-flood: 08:00
22	**23** CWD Survey (Vessel, Land-based)	**24** Site Inspection NM6 WQ General & Regular DCM mid-ebb: 15:40 mid-flood: 10:05	**25** Site Inspection	**26** Site Inspection AR1A, AR2 NM1A, NM3A, NM4, NM5 Ecological Monitoring WQ General & Regular DCM mid-ebb: 17:06 mid-flood: 12:10	**27** Site Inspection	**28** WQ General & Regular DCM mid-ebb: 06:07 mid-flood: 18:50
29	**30** NM6	**31** Site Inspection WQ General & Regular DCM mid-ebb: 09:43 mid-flood: 16:51				

Notes:

CWD - Chinese White Dolphin

Air quality and Noise Monitoring Station

NM1A/AR1A - Man Tung Road Park
NM3A - Site Office
NM4 - Ching Chung Hau Po Woon Primary School
NM5/AR2 - Village House, Tin Sum
NM6 - House No. 1, Sha Lo Wan

WQ - Water Quality
DCM - Deep Cemenet Mixing

Appendix D. Monitoring Results

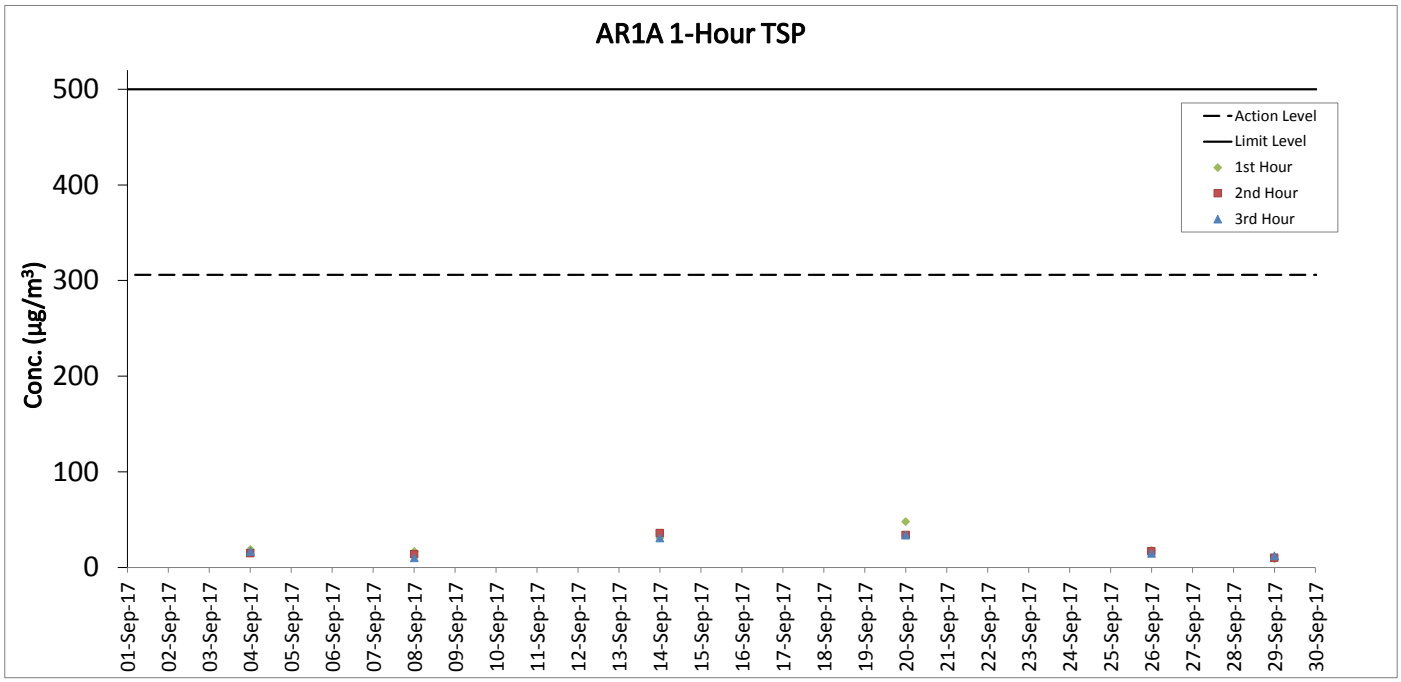
Air Quality Monitoring Results

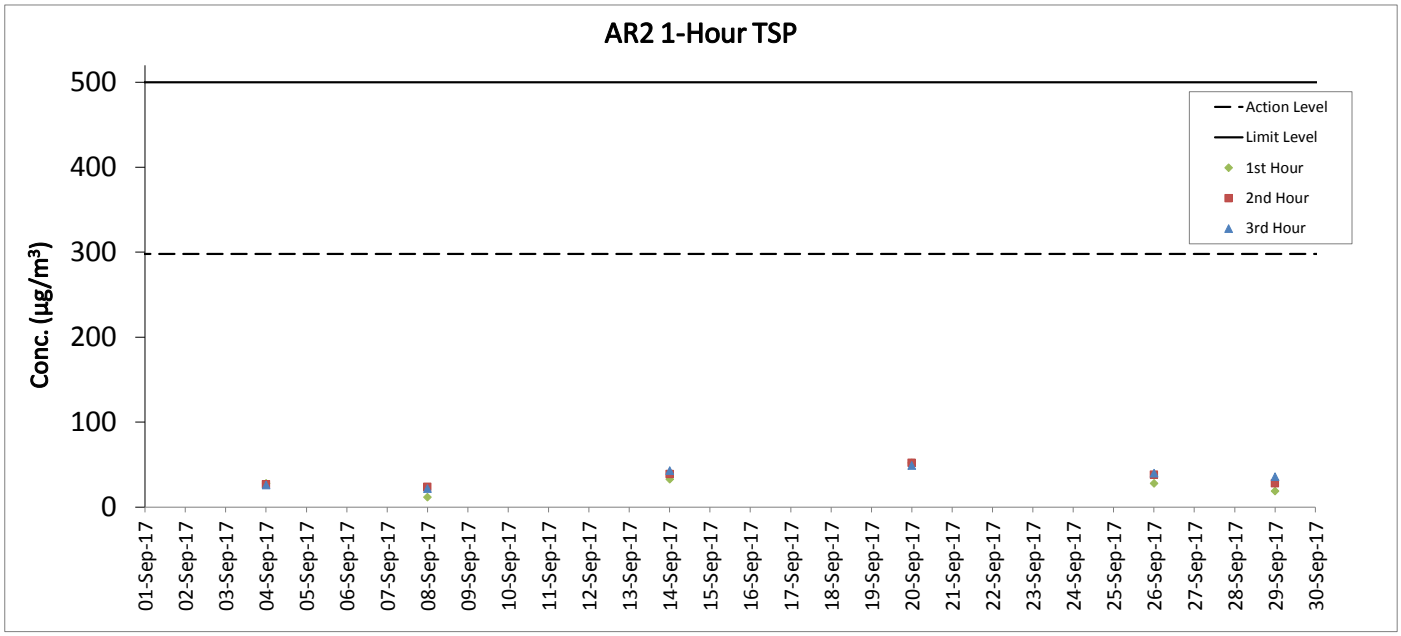
1-hour TSP Results
Station: AR1A- Man Tung Road Park

Date	Time	Weather	Wind Speed (m/s)	Wind Direction (deg)	1-hr TSP ($\mu g/m^3$)	Action Level ($\mu g/m^3$)	Limit Level ($\mu g/m^3$)
04-Sep-17	13:00	Rainy	7.9	229	19	306	500
04-Sep-17	14:00	Rainy	7.3	231	15	306	500
04-Sep-17	15:00	Rainy	3.8	254	17	306	500
08-Sep-17	13:25	Sunny	2.3	32	17	306	500
08-Sep-17	14:25	Sunny	2.4	15	14	306	500
08-Sep-17	15:25	Sunny	1.9	29	10	306	500
14-Sep-17	13:00	Sunny	5.0	118	31	306	500
14-Sep-17	14:00	Sunny	6.9	124	36	306	500
14-Sep-17	15:00	Sunny	7.6	126	31	306	500
20-Sep-17	13:00	Sunny	3.5	264	48	306	500
20-Sep-17	14:00	Sunny	2.0	290	34	306	500
20-Sep-17	15:00	Sunny	1.5	284	34	306	500
26-Sep-17	13:00	Sunny	3.0	298	18	306	500
26-Sep-17	14:00	Sunny	3.0	297	17	306	500
26-Sep-17	15:00	Sunny	3.2	293	15	306	500
29-Sep-17	13:00	Sunny	5.9	125	9	306	500
29-Sep-17	14:00	Sunny	6.5	126	10	306	500
29-Sep-17	15:00	Sunny	6.8	125	12	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 ($\mu g/m^3$)	Action Level ($\mu g/m^3$)	Limit Level ($\mu g/m^3$)
04-Sep-17	09:05	Rainy	12.0	223	28	298	500
04-Sep-17	10:05	Rainy	10.7	229	27	298	500
04-Sep-17	11:05	Rainy	11.9	224	26	298	500
08-Sep-17	09:00	Fine	1.6	139	12	298	500
08-Sep-17	10:00	Fine	4.0	280	24	298	500
08-Sep-17	11:00	Fine	2.7	294	22	298	500
14-Sep-17	09:00	Sunny	6.1	78	33	298	500
14-Sep-17	10:00	Sunny	6.9	72	39	298	500
14-Sep-17	11:00	Sunny	5.6	67	43	298	500
20-Sep-17	09:10	Fine	2.9	52	52	298	500
20-Sep-17	10:10	Fine	3.3	47	52	298	500
20-Sep-17	11:10	Fine	3.4	104	49	298	500
26-Sep-17	09:05	Sunny	3.7	130	28	298	500
26-Sep-17	10:05	Sunny	2.0	133	38	298	500
26-Sep-17	11:05	Sunny	3.9	274	40	298	500
29-Sep-17	09:00	Sunny	4.2	118	19	298	500
29-Sep-17	10:00	Sunny	4.8	41	28	298	500
29-Sep-17	11:00	Sunny	4.3	115	36	298	500


AR1A 1-Hour TSP
Conc. (µg/m³)
500
400
300
200
100
0
Action Level
Limit Level
1st Hour
2nd Hour
3rd Hour
01-Sep-17
02-Sep-17
03-Sep-17
04-Sep-17
05-Sep-17
06-Sep-17
07-Sep-17
08-Sep-17
09-Sep-17
10-Sep-17
11-Sep-17
12-Sep-17
13-Sep-17
14-Sep-17
15-Sep-17
16-Sep-17
17-Sep-17
18-Sep-17
19-Sep-17
20-Sep-17
21-Sep-17
22-Sep-17
23-Sep-17
24-Sep-17
25-Sep-17
26-Sep-17
27-Sep-17
28-Sep-17
29-Sep-17
30-Sep-17


AR2 1-Hour TSP
Conc. (µg/m³)
500
400
300
200
100
0
Action Level
Limit Level
1st Hour
2nd Hour
3rd Hour
01-Sep-17
02-Sep-17
03-Sep-17
04-Sep-17
05-Sep-17
06-Sep-17
07-Sep-17
08-Sep-17
09-Sep-17
10-Sep-17
11-Sep-17
12-Sep-17
13-Sep-17
14-Sep-17
15-Sep-17
16-Sep-17
17-Sep-17
18-Sep-17
19-Sep-17
20-Sep-17
21-Sep-17
22-Sep-17
23-Sep-17
24-Sep-17
25-Sep-17
26-Sep-17
27-Sep-17
28-Sep-17
29-Sep-17
30-Sep-17

Noise Monitoring Results

Noise Measurement Results
Station: NM1A- Man Tung Road Park

Date	Weather	Time	Measured L_{10} dB(A)	Measured L_{90} dB(A)	$L_{eq(30mins)}$ dB(A)
04-Sep-17	Cloudy	14:17	70.0	58.0	71
04-Sep-17	Cloudy	14:22	71.5	59.0	
04-Sep-17	Cloudy	14:27	73.5	58.5	
04-Sep-17	Cloudy	14:32	71.5	58.0	
04-Sep-17	Cloudy	14:37	73.0	59.5	
04-Sep-17	Cloudy	14:42	69.5	57.5	
14-Sep-17	Sunny	13:10	71.0	53.5	71
14-Sep-17	Sunny	13:15	71.5	54.5	
14-Sep-17	Sunny	13:20	72.0	55.5	
14-Sep-17	Sunny	13:25	70.5	55.5	
14-Sep-17	Sunny	13:30	72.0	56.0	
14-Sep-17	Sunny	13:35	72.0	56.5	
20-Sep-17	Sunny	13:09	71.0	55.5	71
20-Sep-17	Sunny	13:14	72.0	56.0	
20-Sep-17	Sunny	13:19	68.5	55.5	
20-Sep-17	Sunny	13:24	72.5	56.5	
20-Sep-17	Sunny	13:29	71.0	56.5	
20-Sep-17	Sunny	13:34	72.0	56.0	
26-Sep-17	Sunny	13:35	72.5	56.0	72
26-Sep-17	Sunny	13:40	72.0	55.5	
26-Sep-17	Sunny	13:45	72.0	55.5	
26-Sep-17	Sunny	13:50	72.0	54.5	
26-Sep-17	Sunny	13:55	71.5	54.0	
26-Sep-17	Sunny	14:00	69.5	54.5	

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

Noise Measurement Results
Station: NM3A- Site Office

Date	Weather	Time	Measured L_{10} dB(A)	Measured L_{90} dB(A)	$L_{eq(30mins)}$ dB(A)
04-Sep-17	Cloudy	10:18	64.5	60.5	62
04-Sep-17	Cloudy	10:23	63.5	60.5	
04-Sep-17	Cloudy	10:28	63.5	60.5	
04-Sep-17	Cloudy	10:33	63.5	60.5	
04-Sep-17	Cloudy	10:38	64.0	61.0	
04-Sep-17	Cloudy	10:43	63.0	61.0	
14-Sep-17	Sunny	11:25	69.5	62.0	61
14-Sep-17	Sunny	11:30	66.0	62.0	
14-Sep-17	Sunny	11:35	66.5	62.0	
14-Sep-17	Sunny	11:40	65.5	62.0	
14-Sep-17	Sunny	11:45	68.0	62.0	
14-Sep-17	Sunny	11:50	70.0	62.0	
20-Sep-17	Sunny	10:12	65.0	60.5	57
20-Sep-17	Sunny	10:17	67.0	61.0	
20-Sep-17	Sunny	10:22	66.5	61.0	
20-Sep-17	Sunny	10:27	65.5	61.0	
20-Sep-17	Sunny	10:32	68.5	61.0	
20-Sep-17	Sunny	10:37	68.0	61.0	
26-Sep-17	Sunny	09:23	65.5	61.0	61
26-Sep-17	Sunny	09:28	70.0	61.5	
26-Sep-17	Sunny	09:33	67.0	61.5	
26-Sep-17	Sunny	09:38	67.5	61.0	
26-Sep-17	Sunny	09:43	70.0	61.0	
26-Sep-17	Sunny	09:48	68.0	61.5	

Noise Measurement Results
Station: NM4- Ching Chung Hau Po Won Primary School

Date	Weather	Time	Measured L_{10} dB(A)	Measured L_{90} dB(A)	$L_{eq(30mins)}$ dB(A)
04-Sep-17	Cloudy	14:30	63.0	60.0	66
04-Sep-17	Cloudy	14:35	65.0	60.5	
04-Sep-17	#REF!	14:40	65.0	61.0	
04-Sep-17	Cloudy	14:45	63.5	61.5	
04-Sep-17	Cloudy	14:50	64.0	61.0	
04-Sep-17	Cloudy	14:55	63.0	60.5	
14-Sep-17	Sunny	13:25	64.0	60.0	66
14-Sep-17	Sunny	13:30	62.5	60.0	
14-Sep-17	Sunny	13:35	65.5	61.0	
14-Sep-17	Sunny	13:40	65.0	60.5	
14-Sep-17	Sunny	13:45	63.0	60.5	
14-Sep-17	Sunny	13:50	65.0	60.0	
20-Sep-17	Fine	14:10	65.5	61.5	66
20-Sep-17	Fine	14:15	64.0	60.0	
20-Sep-17	Fine	14:20	65.0	59.5	
20-Sep-17	Fine	14:25	64.5	60.0	
20-Sep-17	Fine	14:30	64.5	61.0	
20-Sep-17	Fine	14:35	63.0	60.5	
26-Sep-17	Sunny	14:15	64.5	60.5	66
26-Sep-17	Sunny	14:20	66.5	61.5	
26-Sep-17	Sunny	14:25	65.0	60.5	
26-Sep-17	Sunny	14:30	64.0	60.5	
26-Sep-17	Sunny	14:35	64.0	60.5	
26-Sep-17	Sunny	14:40	62.5	59.5	

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

Noise Measurement Results
Station: NM5- Village House, Tin Sum

Date	Weather	Time	Measured L_{10} dB(A)	Measured L_{90} dB(A)	$L_{eq(30mins)}$ dB(A)
04-Sep-17	Cloudy	09:15	60.6	47.5	58
04-Sep-17	Cloudy	09:20	60.5	48.5	
04-Sep-17	Cloudy	09:25	58.0	48.5	
04-Sep-17	Cloudy	09:30	57.0	46.5	
04-Sep-17	Cloudy	09:35	60.0	46.5	
04-Sep-17	Cloudy	09:40	56.5	47.5	
14-Sep-17	Sunny	09:25	59.0	51.5	59
14-Sep-17	Sunny	09:30	59.5	51.0	
14-Sep-17	Sunny	09:35	57.5	50.5	
14-Sep-17	Sunny	09:40	58.5	51.0	
14-Sep-17	Sunny	09:45	59.0	50.5	
14-Sep-17	Sunny	09:50	58.5	50.5	
20-Sep-17	Fine	10:05	59.0	50.5	59
20-Sep-17	Fine	10:10	58.5	51.5	
20-Sep-17	Fine	10:15	62.5	53.0	
20-Sep-17	Fine	10:20	60.0	52.5	
20-Sep-17	Fine	10:25	58.5	52.0	
20-Sep-17	Fine	10:30	63.5	52.0	
26-Sep-17	Sunny	10:05	54.0	47.0	58
26-Sep-17	Sunny	10:10	51.0	46.5	
26-Sep-17	Sunny	10:15	58.5	48.5	
26-Sep-17	Sunny	10:20	57.0	48.5	
26-Sep-17	Sunny	10:25	53.5	48.0	
26-Sep-17	Sunny	10:30	59.5	49.0	

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

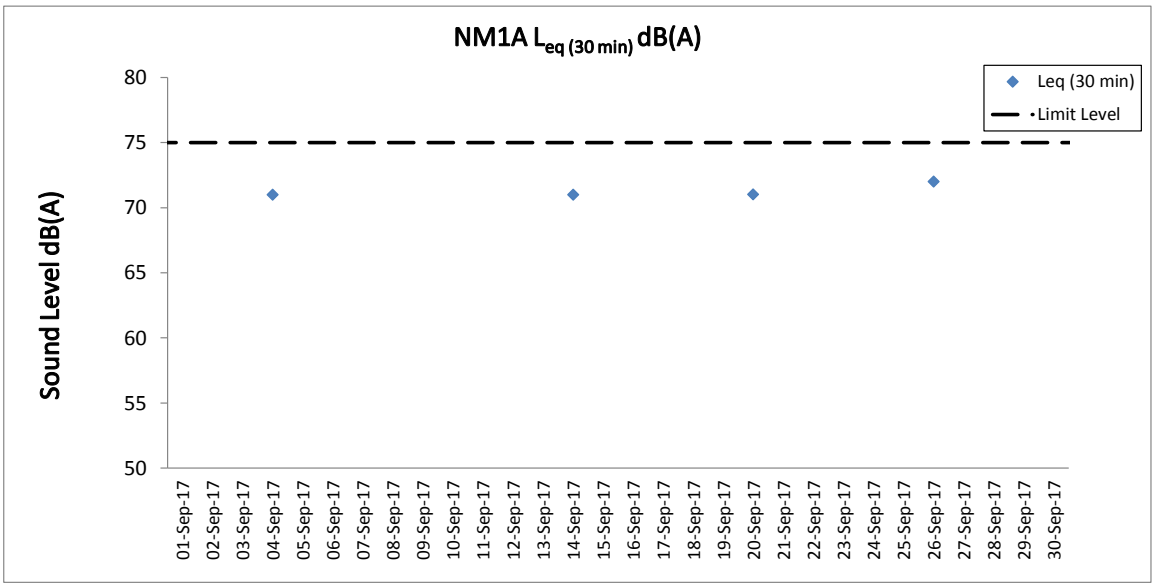
Noise Measurement Results

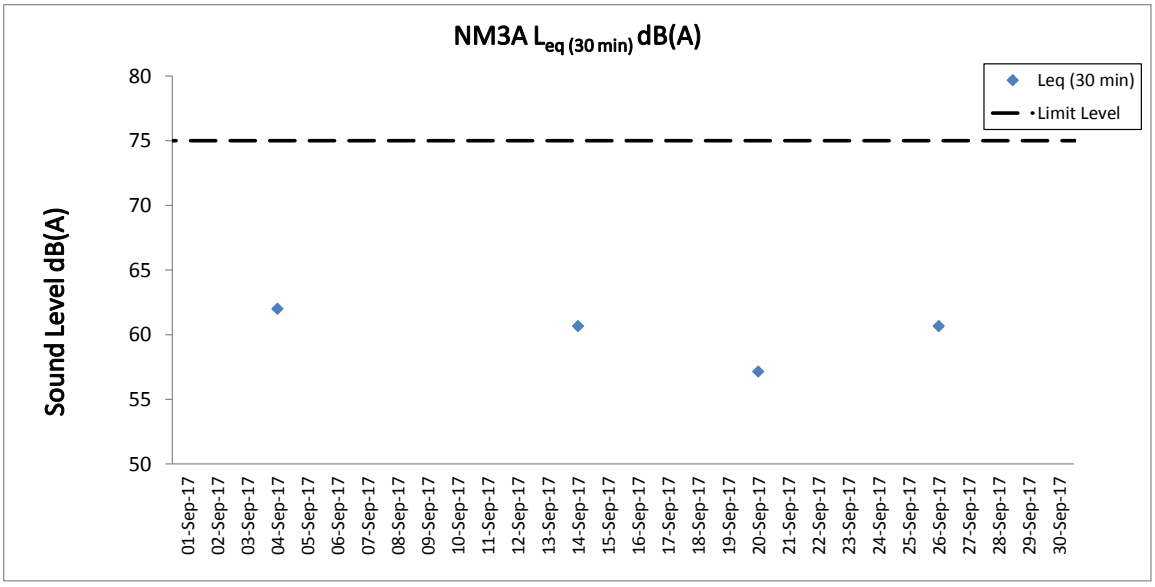
Station: NM6- House No.1 Sha Lo Wan

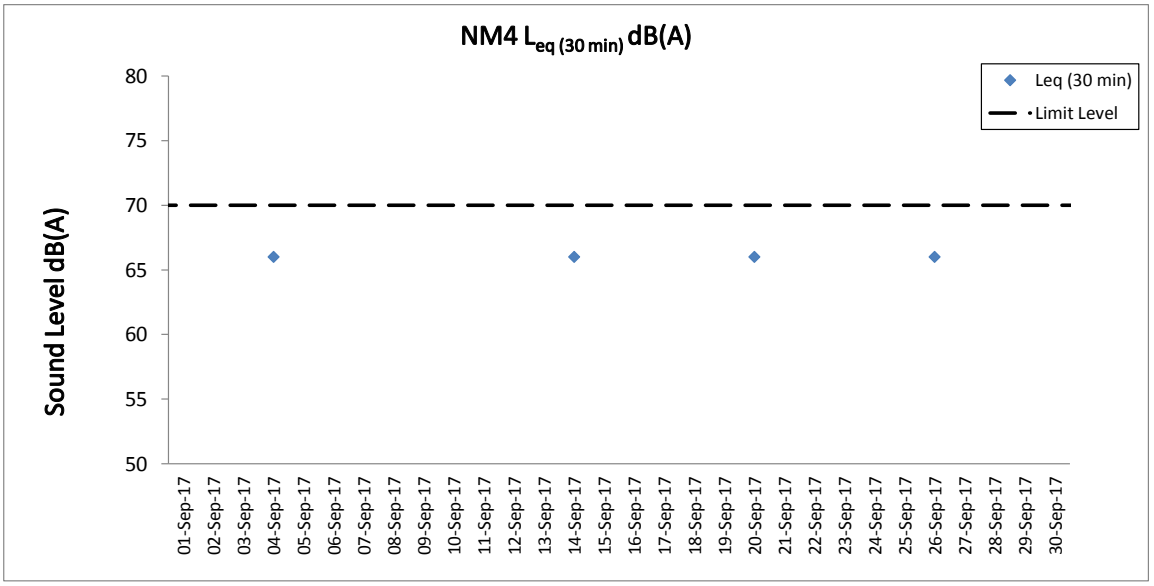
Date	Weather	Time	Measured L_{10} dB(A)	Measured L_{90} dB(A)	$L_{eq(30mins)}$ dB(A)
05-Sep-17	Cloudy	09:42	73.5	54.0	71
05-Sep-17	Cloudy	09:47	75.5	54.0	
05-Sep-17	Cloudy	09:52	76.0	54.5	
05-Sep-17	Cloudy	09:57	75.0	52.0	
05-Sep-17	Cloudy	10:02	74.0	52.0	
05-Sep-17	Cloudy	10:07	74.0	52.5	
12-Sep-17	Sunny	09:40	72.5	49.0	70
12-Sep-17	Sunny	09:45	76.0	51.5	
12-Sep-17	Sunny	09:50	71.5	50.0	
12-Sep-17	Sunny	09:55	70.0	47.5	
12-Sep-17	Sunny	10:00	68.0	46.5	
12-Sep-17	Sunny	10:05	75.0	50.0	
18-Sep-17	Sunny	09:41	71.5	55.0	66
18-Sep-17	Sunny	09:46	68.5	52.5	
18-Sep-17	Sunny	09:51	74.0	57.0	
18-Sep-17	Sunny	09:56	72.5	61.0	
18-Sep-17	Sunny	10:01	72.5	61.5	
18-Sep-17	Sunny	10:06	67.5	61.0	
28-Sep-17	Sunny	09:39	73.0	51.0	70
28-Sep-17	Sunny	09:44	75.5	59.5	
28-Sep-17	Sunny	09:49	70.0	57.5	
28-Sep-17	Sunny	09:54	71.0	57.5	
28-Sep-17	Sunny	09:59	63.0	49.5	
28-Sep-17	Sunny	10:04	74.0	48.0	

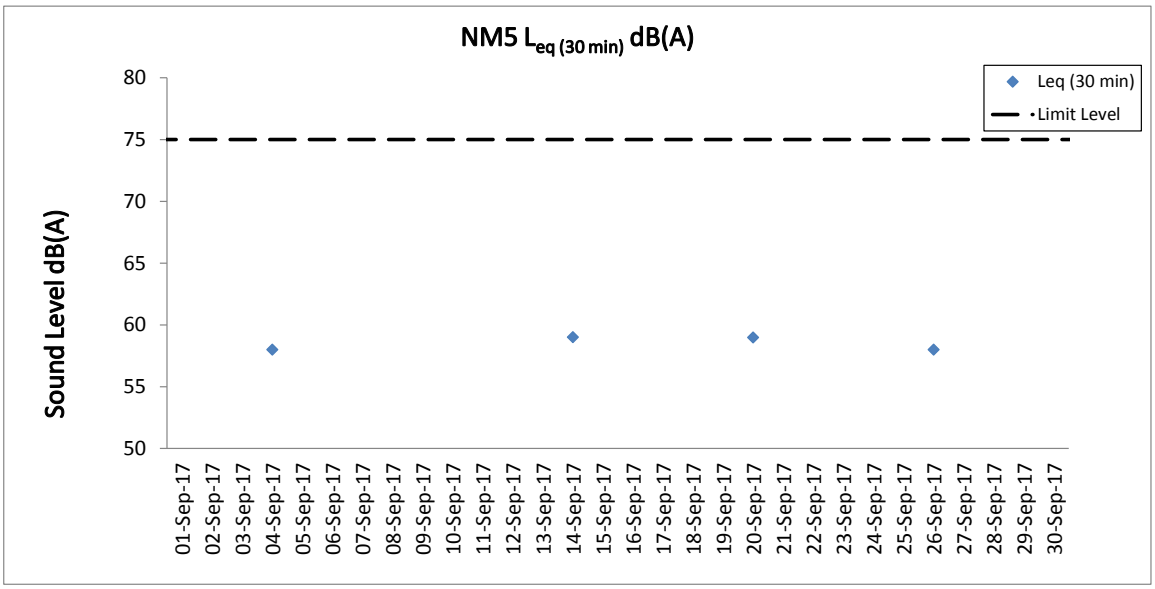
Remarks:

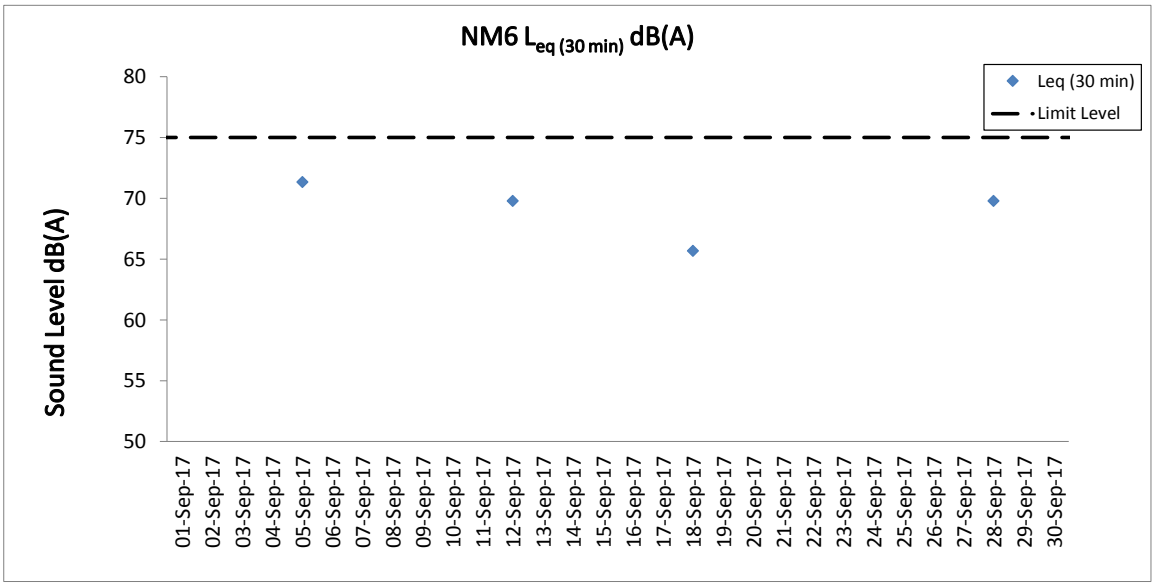
+3dB (A) correction was applied to free-field measurement.


NM1A $L_{eq\ (30\ min)}$ dB(A)
Sound Level dB(A)
80
75
70
65
60
55
50
Leq (30 min)
Limit Level
01-Sep-17
02-Sep-17
03-Sep-17
04-Sep-17
05-Sep-17
06-Sep-17
07-Sep-17
08-Sep-17
09-Sep-17
10-Sep-17
11-Sep-17
12-Sep-17
13-Sep-17
14-Sep-17
15-Sep-17
16-Sep-17
17-Sep-17
18-Sep-17
19-Sep-17
20-Sep-17
21-Sep-17
22-Sep-17
23-Sep-17
24-Sep-17
25-Sep-17
26-Sep-17
27-Sep-17
28-Sep-17
29-Sep-17
30-Sep-17


NM3A $L_{eq\ (30\ min)}$ dB(A)
Sound Level dB(A)
80
75
70
65
60
55
50
Leq (30 min)
Limit Level
01-Sep-17
02-Sep-17
03-Sep-17
04-Sep-17
05-Sep-17
06-Sep-17
07-Sep-17
08-Sep-17
09-Sep-17
10-Sep-17
11-Sep-17
12-Sep-17
13-Sep-17
14-Sep-17
15-Sep-17
16-Sep-17
17-Sep-17
18-Sep-17
19-Sep-17
20-Sep-17
21-Sep-17
22-Sep-17
23-Sep-17
24-Sep-17
25-Sep-17
26-Sep-17
27-Sep-17
28-Sep-17
29-Sep-17
30-Sep-17


NM4 $L_{eq\ (30\ min)}$ dB(A)
Sound Level dB(A)
80
75
70
65
60
55
50
Leq (30 min)
Limit Level
01-Sep-17
02-Sep-17
03-Sep-17
04-Sep-17
05-Sep-17
06-Sep-17
07-Sep-17
08-Sep-17
09-Sep-17
10-Sep-17
11-Sep-17
12-Sep-17
13-Sep-17
14-Sep-17
15-Sep-17
16-Sep-17
17-Sep-17
18-Sep-17
19-Sep-17
20-Sep-17
21-Sep-17
22-Sep-17
23-Sep-17
24-Sep-17
25-Sep-17
26-Sep-17
27-Sep-17
28-Sep-17
29-Sep-17
30-Sep-17


NM5 Leq (30 min) dB(A)
Sound Level dB(A)
80
75
70
65
60
55
50
Leq (30 min)
Limit Level
01-Sep-17
02-Sep-17
03-Sep-17
04-Sep-17
05-Sep-17
06-Sep-17
07-Sep-17
08-Sep-17
09-Sep-17
10-Sep-17
11-Sep-17
12-Sep-17
13-Sep-17
14-Sep-17
15-Sep-17
16-Sep-17
17-Sep-17
18-Sep-17
19-Sep-17
20-Sep-17
21-Sep-17
22-Sep-17
23-Sep-17
24-Sep-17
25-Sep-17
26-Sep-17
27-Sep-17
28-Sep-17
29-Sep-17
30-Sep-17


NM6 Leq (30 min) dB(A)
Sound Level dB(A)
80
75
70
65
60
55
50
Leq (30 min)
Limit Level
01-Sep-17
02-Sep-17
03-Sep-17
04-Sep-17
05-Sep-17
06-Sep-17
07-Sep-17
08-Sep-17
09-Sep-17
10-Sep-17
11-Sep-17
12-Sep-17
13-Sep-17
14-Sep-17
15-Sep-17
16-Sep-17
17-Sep-17
18-Sep-17
19-Sep-17
20-Sep-17
21-Sep-17
22-Sep-17
23-Sep-17
24-Sep-17
25-Sep-17
26-Sep-17
27-Sep-17
28-Sep-17
29-Sep-17
30-Sep-17

Water Quality Monitoring Results

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

Water Quality Monitoring

Water Quality Monitoring Results on 02 September 17 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
C1	Cloudy	Moderate	10:38	8.6	Surface	1.0	0.6	218	28.0	28.0	7.6	7.6	13.8	13.9	87.1	87.0	6.3	6.2	6.9	7.1	3	4	83	89	815624	804234	<0.2	<0.2	2.8	1.9
						1.0	0.6	237	28.0		7.6		13.9		86.9		6.3		6.9		3		83				<0.2		2.5	
					Middle	4.3	0.5	234	27.6	27.6	7.7	7.7	19.2	19.2	83.9	83.9	6.0		6.7		3		89				<0.2		2.3	
						4.3	0.6	240	27.6		7.7		19.2		83.9		6.0		6.7		3		89				<0.2		2.2	
					Bottom	7.6	0.5	211	26.2	26.2	7.7	7.7	30.4	30.5	74.9	74.9	5.1	5.1	7.7		5		93				<0.2		0.8	
						7.6	0.5	218	26.2		7.7		30.5		74.8		5.1		7.9		6		94				<0.2		0.8	
C2	Cloudy	Moderate	12:01	11.3	Surface	1.0	1.0	166	28.3	28.3	7.6	7.6	15.5	15.5	75.7	75.7	5.4	5.1	13.2	12.1	6	7	86	89	825662	806962	<0.2	<0.2	2.9	3.0
						1.0	1.0	168	28.3		7.6		15.5		75.7		5.4		13.2		5		85				<0.2		3.0	
					Middle	5.7	0.6	169	26.7	26.7	7.7	7.7	28.9	28.9	68.4	68.4	4.7		9.3		7		90				<0.2		2.9	
						5.7	0.6	183	26.7		7.7		28.9		68.4		4.7		9.3		8		91				<0.2		2.9	
					Bottom	10.3	0.3	148	26.6	26.6	7.7	7.7	29.6	29.6	69.7	69.7	4.7	4.7	13.7		7		92				<0.2		3.1	
						10.3	0.3	149	26.6		7.7		29.6		69.7		4.7		13.7		6		92				<0.2		2.9	
C3	Cloudy	Moderate	09:26	12.4	Surface	1.0	0.2	73	27.8	27.8	7.8	7.8	21.7	21.7	92.0	92.0	6.4	5.9	5.6	5.1	4	3	88	91	822122	817783	<0.2	<0.2	2.1	1.9
						1.0	0.2	76	27.8		7.8		21.7		92.0		6.4		5.6		2		87				<0.2		1.8	
					Middle	6.2	0.1	64	27.0	27.0	7.8	7.8	27.2	27.2	78.6	78.6	5.4		5.0		3		91				<0.2		1.8	
						6.2	0.1	67	27.0		7.8		27.2		78.5		5.4		5.0		3		91				<0.2		2.0	
					Bottom	11.4	2.2	293	26.4	26.4	7.7	7.7	30.7	30.7	75.9	75.9	5.1	5.1	4.6		3		93				<0.2		1.8	
						11.4	2.2	309	26.4		7.7		30.7		75.9		5.1		4.6		3		94				<0.2		1.9	
IM1	Cloudy	Moderate	11:01	6.7	Surface	1.0	0.5	193	27.3	27.3	7.7	7.7	21.6	21.6	78.7	78.7	5.5	5.1	7.2	9.2	3	5	81	87	818370	806447	<0.2	<0.2	2.9	1.8
						1.0	0.5	203	27.3		7.7		21.6		78.7		5.5		7.1		3		81				<0.2		2.6	
					Middle	3.4	0.3	178	26.0	26.0	7.7	7.7	30.4	30.4	67.7	67.7	4.6		8.3		6		86				<0.2		2.0	
						3.4	0.3	189	26.0		7.7		30.4		67.7		4.6		8.3		7		87				<0.2		1.6	
					Bottom	5.7	0.3	165	26.0	26.0	7.7	7.7	30.7	30.8	66.7	66.7	4.6	4.6	12.0		6		94				<0.2		0.9	
						5.7	0.3	170	26.0		7.7		30.8		66.7		4.6		12.4		5		94				<0.2		0.9	
IM2	Cloudy	Moderate	11:22	8.2	Surface	1.0	0.8	199	28.1	28.2	7.7	7.7	15.5	15.5	88.5	88.4	6.3	5.6	6.8	9.7	5	5	81	88	818842	806180	<0.2	<0.2	2.6	2.1
						1.0	0.8	214	28.2		7.7		15.5		88.2		6.3		6.8		5		81				<0.2		2.5	
					Middle	4.1	0.5	210	26.6	26.6	7.7	7.7	26.7	26.7	69.9	69.9	4.8		8.5		4		88				<0.2		2.6	
						4.1	0.5	219	26.6		7.7		26.7		69.9		4.8		8.5		4		89				<0.2		2.4	
					Bottom	7.2	0.4	195	26.0	26.0	7.7	7.7	30.4	30.5	68.2	68.4	4.7	4.7	13.8		7		93				<0.2		1.2	
						7.2	0.4	196	26.0		7.7		30.5		68.5		4.7		13.8		7		94				<0.2		1.1	
IM3	Cloudy	Moderate	11:31	8.1	Surface	1.0	0.7	208	28.3	28.3	7.6	7.6	15.3	15.3	84.9	85.0	6.1	6.2	7.3	11.0	5	8	81	87	819416	805999	<0.2	<0.2	2.4	2.0
						1.0	0.7	222	28.3		7.6		15.3		85.0		6.1		7.2		3		81				<0.2		2.9	
					Middle	4.1	0.6	219	28.0	28.0	7.7	7.7	17.6	17.6	87.5	87.4	6.2		6.3		5		86				<0.2		2.3	
						4.1	0.6	237	28.0		7.7		17.6		87.2		6.2		6.3		4		87				<0.2		2.2	
					Bottom	7.1	0.4	196	26.1	26.1	7.7	7.7	29.6	29.6	68.3	68.4	4.7	4.7	19.3		17		92				<0.2		1.1	
						7.1	0.4	197	26.1		7.7		29.6		68.5		4.7		19.5		16		92				<0.2		1.0	
IM4	Cloudy	Moderate	11:42	7.8	Surface	1.0	0.7	196	28.2	28.2	7.6	7.6	16.2	16.2	80.7	80.5	5.8	5.6	7.6	11.6	4	5	81	86	819571	805036	<0.2	<0.2	3.7	2.5
						1.0	0.8	197	28.1		7.6		16.2		80.3		5.7		7.6		4		81				<0.2		3.6	
					Middle	3.9	0.4	210	27.4	27.4	7.7	7.7	21.3	21.3	76.6	76.4	5.4		8.5		4		87				<0.2		2.5	
						3.9	0.5	216	27.4		7.7		21.3		76.2		5.4		8.6		5		87				<0.2		2.5	
					Bottom	6.8	0.4	184	26.2	26.2	7.7	7.7	28.9	29.0	68.0	68.0	4.7	4.7	17.8		7		91				<0.2		1.3	
						6.8	0.4	193	26.2		7.7		29.0		68.0		4.7		19.3		7		91				<0.2		1.6	
IM5	Cloudy	Moderate	11:58	6.4	Surface	1.0	0.8	195	28.1	28.1	7.5	7.5	15.8	15.8	71.6	71.5	5.1	4.9	8.4	10.6	6	6	81	89	820553	804908	<0.2	<0.2	3.0	2.2
						1.0	0.8	195	28.0		7.5		15.8		71.4		5.1		8.4		6		81				<0.2		2.9	
					Middle	3.2	0.6	211	26.6	26.6	7.6	7.6	27.1	27.1	67.8	67.9	4.7		9.5		5		92				<0.2		2.6	
						3.2	0.6	217	26.6		7.6		27.0		68.0		4.7		9.6		5		92				<0.2		2.5	
					Bottom	5.4	0.4	216	26.1	26.1	7.7	7.7	29.3	29.3	66.8	66.9	4.6	4.6	13.6		6		93				<0.2		1.1	
						5.4	0.4	233	26.1		7.7		29.3		66.9		4.6		13.9		6		93				<0.2		1.2	
IM6	Cloudy	Moderate	12:06	6.6	Surface	1.0	0.5	209	28.4	28.4	7.7	7.7	16.5	16.6	91.3	91.5	6.5	5.6	7.0	8.0	4	5	79	86	821078	805840	<0.2	<0.2	2.8	2.4
						1.0	0.5	210	28.3		7.7		16.7		91.7		6.5		7.1		6		79				<0.2		2.7	
					Middle	3.3	0.4	254	27.0	27.0	7.6	7.6	26.9	26.9	68.9	68.9	4.7		8.2		5		89				<0.2		2.4	
						3.3	0.4	268	27.0		7.6		26.8		68.9		4.7		8.2		5		89				<0.2		2.5	
					Bottom	5.6	0.2	245	26.5	26.5	7.6	7.6	27.5	27.5	68.0	68.2	4.7	4.7	8.7		4		91				<0.2		2.0	
						5.6	0.2	266	26.5		7.6		27.4		68.3		4.7		8.8		4		91				<0.2		2.1	
IM7	Cloudy	Moderate	12:15	7.8	Surface	1.0	0.4	209	28.4	28.4	7.7	7.7	16.4	16.4	81.8	81.1	5.8	5.1	7.4	9.2	3	4	81	89	821362	806840	<0.2	<0.2	2.7	2.1
						1.0	0.4	216	28.4		7.7		16.4		80.4		5.7		7.5		4		81				<0.2		2.8	
					Middle	3.9	0.4	249	26.4	26.4	7.6	7.6	28.0	28.0	65.5	65.6	4.5		10.0		4		91				<0.2		2.4	
						3.9	0.4	251	26.4		7.6		28.0		65.7		4.5		9.9		3		91				<0.2		2.4	
					Bottom	6.8	0.2	264	26.0	26.1	7.7	7.7	30.5	30.1	67.1	67.3	4.6	4.6	10.4		7		93				<0.2		1.0	
						6.8	0.3	289	26.1		7.7		29.7		67.4		4.6		10.2		5		94				<0.2		1.1	
IM8	Cloudy	Moderate	11:22	8.2	Surface	1.0	0.4	200	28.4	28.4	7.7	7.7	14.5	14.5	72.0	71.8	5.2	4.9	9.7	10.7	3	3	85	89	821703	807827	<0.2	<0.2	3.5	3.2
						1.0	0.4	207	28.4		7.7		14.5		71.6		5.1		9.7		3		84				<0.2		3.3	
					Middle	4.1	0.2	211	26.9	26.9	7.7	7.7	27.1	27.1	69.0	69.0	4.7		9.9		3		91				<0.2		2.9	
						4.1	0.2	218	26.9		7.7		27.1		69.0		4.7		9.9		3		91				<0.2		2.7	
					Bottom	7.2	0.2	228	26.4	26.4	7.7	7.7	28.7	28.7	69.7	69.7	4.8	4.8	12.4		4		92				<0.2		3.2	
						7.2	0.2	241	26.4		7.7		28.7		69.7		4.8		12.4		3		93				<0.2		3.4	

DA: Depth-Averaged

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

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

Expansion of Hong Kong International Airport into a Three-Runway System
Water Quality Monitoring
Water Quality Monitoring Results on 02 September 17 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
IM9	Cloudy	Moderate	11:15	7.4	Surface	1.0	0.4	148	28.2	28.2	7.7	7.7	17.0	17.0	74.9	74.9	5.3	4.9	8.8	10.9	3	3	85	90	822093	808823	<0.2	<0.2	3.0	3.0
						1.0	0.5	148	28.2		7.7		17.0		74.9		5.3		8.8		3		85				<0.2		3.2	
					Middle	3.7	0.3	141	26.8	26.8	7.7	7.7	27.6	27.6	66.2	66.2	4.5		10.6		3		92				<0.2		3.4	
						3.7	0.3	142	26.8		7.7		27.6		66.2		4.5		10.6		4		92				<0.2		2.9	
					Bottom	6.4	0.1	122	26.4	26.4	7.7	7.7	28.7	28.7	67.8	67.8	4.7	4.7	13.4		3		93				<0.2		2.7	
						6.4	0.2	131	26.4		7.7		28.7		67.8		4.7		13.4		3		94				<0.2		2.8	
IM10	Cloudy	Moderate	11:06	8.4	Surface	1.0	0.6	119	28.3	28.3	7.7	7.7	18.6	18.6	80.9	80.9	5.7	5.2	8.4	11.7	3	3	86	89	822246	809836	<0.2	<0.2	3.2	3.1
						1.0	0.6	123	28.3		7.7		18.6		80.9		5.7		8.4		2		85				<0.2		3.0	
					Middle	4.2	0.4	95	27.0	27.0	7.7	7.7	25.9	25.9	68.7	68.7	4.7		10.7		2		88				<0.2		3.2	
						4.2	0.4	99	27.0		7.7		25.9		68.7		4.7		10.7		4		89				<0.2		2.9	
					Bottom	7.4	0.3	79	26.4	26.4	7.6	7.6	28.7	28.7	77.7	77.7	5.3	5.3	16.0		4		93				<0.2		3.0	
						7.4	0.3	79	26.4		7.6		28.7		77.7		5.3		16.0		3		92				<0.2		3.1	
IM11	Cloudy	Moderate	10:45	8.5	Surface	1.0	0.5	110	28.4	28.4	7.7	7.7	15.9	15.9	81.3	81.3	5.8	5.5	8.8	15.3	3	4	84	88	821486	810540	<0.2	<0.2	3.0	2.8
						1.0	0.5	120	28.4		7.7		15.9		81.3		5.8		8.8		3		84				<0.2		2.9	
					Middle	4.3	0.3	100	27.7	27.7	7.7	7.7	21.9	21.9	74.9	74.9	5.2		9.8		4		86				<0.2		2.8	
						4.3	0.3	104	27.7		7.7		21.9		74.9		5.2		9.8		4		87				<0.2		2.8	
					Bottom	7.5	0.2	89	26.5	26.5	7.7	7.7	28.2	28.2	72.5	72.6	5.0	5.0	27.4		6		92				<0.2		2.7	
						7.5	0.2	93	26.5		7.7		28.2		72.7		5.0		27.4		5		92				<0.2		2.8	
IM12	Cloudy	Moderate	10:34	9.0	Surface	1.0	0.4	82	28.0	28.0	7.7	7.7	16.1	16.1	72.5	72.5	5.2	4.9	10.6	12.8	3	4	84	88	821167	811500	<0.2	<0.2	3.1	2.8
						1.0	0.5	86	28.0		7.7		16.1		72.5		5.2		10.6		3		84				<0.2		2.7	
					Middle	4.5	0.5	106	27.1	27.1	7.7	7.7	24.9	24.9	65.6	65.6	4.5		12.4		4		87				<0.2		2.5	
						4.5	0.5	115	27.1		7.7		24.9		65.6		4.5		12.4		4		88				<0.2		2.7	
					Bottom	8.0	0.2	79	26.5	26.5	7.7	7.7	28.3	28.3	65.0	65.0	4.5	4.5	15.5		4		91				<0.2		2.6	
						8.0	0.2	80	26.5		7.7		28.3		65.0		4.5		15.5		4		91				<0.2		2.9	
SR2	Cloudy	Moderate	09:57	4.8	Surface	1.0	0.4	71	28.0	28.0	7.7	7.7	18.7	18.7	86.5	86.5	6.1	6.1	6.3	5.0	4	4	88	90	821479	814155	<0.2	<0.2	2.7	2.6
						1.0	0.4	72	28.0		7.7		18.7		86.5		6.1		6.3		4		89				<0.2		2.4	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	3.8	0.1	9	27.6	27.6	7.7	7.7	23.2	23.2	85.5	85.5	5.9	5.9	3.7		3		90				<0.2		2.8	
						3.8	0.1	9	27.6		7.7		23.2		85.5		5.9		3.7		4		91				<0.2		2.4	
SR3	Cloudy	Moderate	11:29	8.5	Surface	1.0	0.6	179	28.5	28.5	7.7	7.7	14.3	14.3	77.7	77.7	5.6	5.0	10.1	12.6	7	7	-	-	822161	807575	-	-	-	-
						1.0	0.6	192	28.5		7.7		14.3		77.7		5.6		10.1		6		-				-		-	
					Middle	4.3	0.2	206	26.5	26.5	7.7	7.7	28.3	28.3	64.3	64.3	4.4		14.1		6		-				-		-	
						4.3	0.2	221	26.5		7.7		28.3		64.3		4.4		14.1		8		-				-		-	
					Bottom	7.5	0.0	316	26.4	26.4	7.7	7.7	28.9	28.9	65.4	65.4	4.5	4.5	13.7		8		-				-		-	
						7.5	0.0	333	26.4		7.7		28.9		65.4		4.5		13.7		7		-				-		-	
SR4A	Cloudy	Calm	10:16	8.7	Surface	1.0	0.1	67	27.5	27.5	7.7	7.7	21.1	21.1	86.4	86.4	6.1	5.5	7.6	11.2	5	7	-	-	817185	807790	-	-	-	-
						1.0	0.1	69	27.5		7.7		21.1		86.3		6.1		7.6		6		-				-		-	
					Middle	4.4	0.2	70	26.3	26.3	7.7	7.7	29.4	29.4	72.3	72.2	5.0		7.3		5		-				-		-	
						4.4	0.2	70	26.3		7.7		29.4		72.1		4.9		7.5		4		-				-		-	
					Bottom	7.7	0.2	77	26.1	26.1	7.6	7.6	30.1	30.1	66.4	66.5	4.5	4.6	19.4		11		-				-		-	
						7.7	0.2	82	26.1		7.6		30.0		66.6		4.6		17.5		9		-				-		-	
SR5A	Cloudy	Calm	09:58	4.6	Surface	1.0	0.1	191	28.2	28.2	7.9	7.9	18.7	18.7	109.0	108.8	7.7	7.7	8.2	10.6	6	5	-	-	816606	810687	-	-	-	-
						1.0	0.1	195	28.2		7.9		18.7		108.6		7.6		8.2		5		-				-		-	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	3.6	0.1	328	27.7	27.7	7.7	7.7	23.0	23.0	87.2	87.3	6.0	6.1	13.0		4		-				-		-	
						3.6	0.1	348	27.7		7.7		23.0		87.3		6.1		13.0		6		-				-		-	
SR6	Cloudy	Calm	09:26	4.8	Surface	1.0	0.1	46	28.3	28.3	7.8	7.8	18.8	18.8	105.6	105.4	7.4	7.4	8.2	9.8	4	5	-	-	817898	814675	-	-	-	-
						1.0	0.1	50	28.3		7.8		18.8		105.2		7.4		8.2		5		-				-		-	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	3.8	0.0	157	26.9	26.9	7.5	7.5	25.2	25.2	71.2	71.2	4.9	4.9	11.3		6		-				-		-	
						3.8	0.0	163	26.9		7.5		25.2		71.2		4.9		11.3		6		-				-		-	
SR7	Cloudy	Moderate	08:48	16.2	Surface	1.0	0.2	71	27.5	27.5	7.8	7.8	22.7	22.7	85.7	85.7	6.0	5.4	4.9	5.2	2	3	-	-	823622	823754	-	-	-	-
						1.0	0.2	77	27.5		7.8		22.7		85.7		6.0		4.9		2		-				-		-	
					Middle	8.1	0.1	282	26.2	26.2	7.7	7.7	31.6	31.6	69.7	69.7	4.7		6.0		3		-				-		-	
						8.1	0.1	296	26.2		7.7		31.6		69.7		4.7		6.0		3		-				-		-	
					Bottom	15.2	0.1	282	26.1	26.1	7.7	7.7	32.5	32.5	70.0	70.0	4.7	4.7	4.8		3		-				-		-	
						15.2	0.1	289	26.1		7.7		32.5		70.0		4.7		4.7		3		-				-		-	
SR8	Cloudy	Moderate	10:24	4.7	Surface	1.0	-	-	28.1	28.1	7.7	7.7	17.0	17.0	83.7	83.7	5.9	5.9	8.1	13.5	3	3	-	-	820246	811418	-	-	-	-
						1.0	-	-	28.1		7.7		17.0		83.7		5.9		8.1		3		-				-		-	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	3.7	-	-	27.3	27.3	7.6	7.6	25.2	25.2	83.6	83.6	5.8	5.8	18.9		3		-				-		-	
						3.7	-	-	27.3		7.6		25.2		83.6		5.8		18.9		2		-				-		-	

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

Expansion of Hong Kong International Airport into a Three-Runway System
Water Quality Monitoring
Water Quality Monitoring Results on 02 September 17 during Mid-Flood Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity(NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)	
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA
C1	Rainy	Moderate	18:01	8.4	Surface	1.0	0.3	59	28.4	28.4	7.6	7.6	15.9	16.0	82.8	82.6	5.9	5.3	8.8	27.2	4	7	86	90	815627	804237	<0.2	<0.2	2.6	2.2
						1.0	0.3	63	28.4		7.6		16.1		82.3		5.9		9.2		4		86				<0.2		2.7	
					Middle	4.2	0.3	22	26.2	26.2	7.7	7.7	30.1	30.1	68.5	68.5	4.7		21.2		7		92				<0.2		1.9	
						4.2	0.3	22	26.2		7.7		30.1		68.5		4.7		21.4		8		91				<0.2		1.7	
					Bottom	7.4	0.3	27	26.1	26.1	7.7	7.7	31.0	31.0	71.4	71.9	4.9	4.9	52.9		7		93				<0.2		1.9	
						7.4	0.3	27	26.1		7.7		31.0		72.3		4.9		49.9		9		94				<0.2		2.2	
C2	Cloudy	Rough	16:12	11.5	Surface	1.0	0.4	191	28.7	28.7	7.5	7.5	15.8	15.8	66.6	66.6	4.7	4.6	14.5	15.3	8	7	85	89	825686	806945	<0.2	<0.2	5.0	5.3
						1.0	0.4	202	28.7		7.5		15.8		66.6		4.7		14.5		7		84				<0.2		5.6	
					Middle	5.8	0.2	332	26.8	26.8	7.6	7.6	27.1	27.1	65.5	65.5	4.5		15.4		6		91				<0.2		5.4	
						5.8	0.2	352	26.8		7.6		27.1		65.5		4.5		15.4		7		90				<0.2		5.3	
					Bottom	10.5	0.4	338	26.7	26.7	7.6	7.6	28.7	28.7	67.2	67.2	4.6	4.6	15.9		7		91				<0.2		5.4	
						10.5	0.4	343	26.7		7.6		28.7		67.2		4.6		15.9		6		92				<0.2		4.8	
C3	Rainy	Moderate	18:28	12.1	Surface	1.0	0.3	237	27.6	27.6	7.8	7.8	24.5	24.5	89.3	89.3	6.1	5.7	7.5	9.5	2	3	89	92	822102	817790	<0.2	<0.2	1.7	1.7
						1.0	0.3	251	27.6		7.8		24.5		89.3		6.1		7.5		3		88				<0.2		1.6	
					Middle	6.1	0.4	257	26.8	26.8	7.8	7.8	28.4	28.4	77.7	77.7	5.3		9.5		4		93				<0.2		1.8	
						6.1	0.5	275	26.8		7.8		28.4		77.7		5.3		9.5		2		93				<0.2		1.8	
					Bottom	11.1	0.2	251	26.4	26.4	7.7	7.7	30.9	30.9	75.2	75.2	5.1	5.1	11.5		2		94				<0.2		1.6	
						11.1	0.2	266	26.4		7.7		30.9		75.2		5.1		11.5		3		95				<0.2		1.6	
IM1	Rainy	Moderate	17:34	7.3	Surface	1.0	0.7	346	27.9	27.9	7.7	7.7	20.1	20.0	84.0	83.8	5.9	5.7	8.7	13.1	6	6	84	86	818348	806439	<0.2	<0.2	2.2	2.0
						1.0	0.7	318	27.9		7.7		19.9		83.6		5.9		8.8		6		84				<0.2		2.5	
					Middle	3.7	0.7	344	27.5	27.5	7.7	7.7	22.1	22.1	78.5	78.4	5.5		9.7		6		86				<0.2		1.9	
						3.7	0.7	351	27.5		7.7		22.1		78.3		5.5		9.8		6		86				<0.2		2.3	
					Bottom	6.3	0.3	351	26.8	26.8	7.7	7.7	25.9	26.2	71.7	71.6	5.0	5.0	20.3		6		89				<0.2		1.7	
						6.3	0.3	323	26.7		7.7		26.4		71.4		4.9		21.5		7		89				<0.2		1.5	
IM2	Rainy	Moderate	17:25	8.1	Surface	1.0	0.7	332	28.0	28.0	7.8	7.8	20.2	20.2	94.0	93.9	6.6	5.9	8.7	17.2	4	10	84	87	818859	806187	<0.2	<0.2	2.1	1.7
						1.0	0.7	348	28.0		7.8		20.2		93.7		6.6		8.7		4		84				<0.2		2.0	
					Middle	4.1	0.6	353	26.8	26.9	7.7	7.7	26.9	26.8	75.6	76.0	5.2		15.8		9		86				<0.2		2.0	
						4.1	0.6	325	27.0		7.7		26.7		76.4		5.2		16.0		9		86				<0.2		1.9	
					Bottom	7.1	0.2	27	26.1	26.1	7.7	7.7	29.9	30.0	65.5	65.6	4.5	4.5	26.6		17		92				<0.2		1.1	
						7.1	0.2	27	26.1		7.7		30.0		65.6		4.5		27.1		16		91				<0.2		1.0	
IM3	Rainy	Moderate	17:13	8.4	Surface	1.0	0.6	346	28.2	28.2	7.8	7.8	18.7	18.7	93.8	93.6	6.6	5.7	10.5	17.0	6	10	81	87	819395	806006	<0.2	<0.2	2.3	1.8
						1.0	0.6	356	28.2		7.8		18.7		93.4		6.6		10.5		7		81				<0.2		2.4	
					Middle	4.2	0.5	1	26.4	26.4	7.7	7.7	28.1	28.2	70.0	69.9	4.8		17.8		7		88				<0.2		2.2	
						4.2	0.5	1	26.4		7.7		28.3		69.7		4.8		17.5		9		89				<0.2		1.9	
					Bottom	7.4	0.3	30	26.1	26.1	7.7	7.7	29.7	29.8	69.3	69.7	4.7	4.8	22.8		16		91				<0.2		0.9	
						7.4	0.3	32	26.1		7.7		29.8		70.0		4.8		23.1		17		91				<0.2		0.8	
IM4	Rainy	Rough	17:02	7.6	Surface	1.0	0.5	326	27.4	27.4	7.7	7.7	21.9	21.9	82.6	82.3	5.8	5.2	9.7	21.6	5	7	84	87	819588	805046	<0.2	<0.2	1.8	1.4
						1.0	0.5	346	27.4		7.7		21.9		82.0		5.7		9.9		7		84				<0.2		1.6	
					Middle	3.8	0.3	340	26.5	26.5	7.7	7.7	27.1	27.2	67.8	67.8	4.7		14.3		8		85				<0.2		1.8	
						3.8	0.4	358	26.5		7.7		27.2		67.7		4.7		14.6		9		86				<0.2		1.7	
					Bottom	6.6	0.3	340	26.0	26.0	7.7	7.7	30.4	30.4	65.2	65.4	4.5	4.5	40.1		7		91				<0.2		0.9	
						6.6	0.3	313	26.0		7.7		30.4		65.5		4.5		40.9		8		92				<0.2		0.8	
IM5	Rainy	Rough	16:48	6.6	Surface	1.0	0.3	320	28.3	28.3	7.6	7.6	17.0	17.0	84.8	84.7	6.0	5.4	10.3	18.9	9	9	85	89	820544	804916	<0.2	<0.2	2.6	2.3
						1.0	0.3	339	28.3		7.6		17.0		84.5		6.0		10.3		9		86				<0.2		2.6	
					Middle	3.3	0.3	347	27.0	27.0	7.6	7.6	24.8	24.9	68.7	68.6	4.8		15.3		10		89				<0.2		2.2	
						3.3	0.3	347	26.9		7.6		25.0		68.5		4.8		15.0		9		89				<0.2		2.2	
					Bottom	5.6	0.4	354	26.4	26.4	7.6	7.6	27.7	27.7	66.2	66.4	4.6	4.6	31.9		9		91				<0.2		2.0	
						5.6	0.4	326	26.4		7.6		27.7		66.6		4.6		30.8		8		91				<0.2		2.2	
IM6	Rainy	Rough	16:38	6.4	Surface	1.0	0.4	313	28.3	28.3	7.6	7.6	16.5	16.5	79.4	79.2	5.6	5.4	10.9	11.0	8	8	84	87	821052	805811	<0.2	<0.2	3.6	2.9
						1.0	0.4	318	28.3		7.6		16.5		78.9		5.6		10.8		7		84				<0.2		3.3	
					Middle	3.2	0.2	331	27.5	27.5	7.6	7.6	21.6	21.6	73.3	73.2	5.1		10.3		8		88				<0.2		2.7	
						3.2	0.2	338	27.5		7.6		21.6		73.0		5.1		10.6		8		88				<0.2		2.7	
					Bottom	5.4	0.3	341	27.0	27.1	7.6	7.6	24.5	24.4	70.1	70.2	4.9	4.9	11.7		8		90				<0.2		2.6	
						5.4	0.3	314	27.1		7.6		24.3		70.3		4.9		11.4		9		90				<0.2		2.2	
IM7	Rainy	Rough	16:26	7.6	Surface	1.0	0.4	256	28.1	28.2	7.6	7.6	17.7	17.7	76.9	76.8	5.4	5.2	11.4	15.4	10	10	83	88	821341	806818	<0.2	<0.2	3.0	2.6
						1.0	0.4	279	28.2		7.5		17.7		76.6		5.4		11.5		12		84				<0.2		2.9	
					Middle	3.8	0.3	272	27.2	27.2	7.6	7.6	23.5	23.5	69.8	69.8	4.9		12.5		10		88				<0.2		1.5	
						3.8	0.3	296	27.2		7.6		23.5		69.8		4.9		12.6		9		88				<0.2		3.1	
					Bottom	6.6	0.1	82	26.8	26.8	7.6	7.6	26.2	26.2	66.9	67.0	4.6	4.6	22.8		11		91				<0.2		1.7	
						6.6	0.1	86	26.8		7.6		26.2		67.0		4.6		21.7		10		91				<0.2		3.3	
IM8	Cloudy	Rough	16:40	8.1	Surface	1.0	0.2	229	29.4	29.4	7.7	7.7	11.2	11.2	78.5	78.5	5.6	5.4	19.4	20.3	7	7	82	87	821689	807833	<0.2	<0.2	5.4	**4.9**
						1.0	0.2	251	29.4		7.7		11.2		78.5		5.6		19.4		8		83				<0.2		4.6	
					Middle	4.1	0.2	222	28.1	28.1	7.6	7.6	20.1	20.1	74.7	74.7	5.2		14.0		6		88				<0.2		4.6	
						4.1	0.2	241	28.1		7.6		20.1		74.7		5.2		14.0		7		89				<0.2		4.8	
					Bottom	7.1	0.2	104	27.1	27.1	7.6	7.6	25.1	25.1	67.1	67.1	4.6	4.6	27.4		6		91				<0.2		4.8	
						7.1	0.2	109	27.1		7.6		25.1		67.1		4.6		27.4		8		91				<0.2		4.9	

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

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

Water Quality Monitoring

Water Quality Monitoring Results on 02 September 17 during Mid-Flood Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity(NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)	
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA
IM9	Rainy	Rough	16:47	7.1	Surface	1.0	0.1	105	29.3	29.3	7.8	7.8	12.7	12.7	94.5	94.5	6.8	6.4	11.7	12.8	6	6	84	88	822104	808816	<0.2	<0.2	4.4	**4.3**
						1.0	0.1	105	29.3		7.8		12.7		94.5		6.8		11.7		6		85				<0.2		4.2	
					Middle	3.6	0.1	43	28.6	28.6	7.7	7.7	17.8	17.8	85.4	85.4	6.0		12.3		6		87				<0.2		4.3	
						3.6	0.1	45	28.6		7.7		17.8		85.4		6.0		12.3		6		87				<0.2		4.2	
					Bottom	6.1	0.1	325	27.1	27.1	7.7	7.7	25.7	25.7	88.4	88.4	6.1	6.1	14.4		7		91				<0.2		4.2	
						6.1	0.1	351	27.1		7.7		25.7		88.4		6.1		14.4		7		91				<0.2		4.3	
IM10	Rainy	Rough	16:55	7.2	Surface	1.0	0.3	5	29.0	29.0	7.8	7.8	15.6	15.6	87.1	87.1	6.2	5.4	11.8	15.9	5	6	86	89	822240	809851	<0.2	<0.2	3.2	3.3
						1.0	0.3	5	29.0		7.8		15.6		87.1		6.2		11.8		6		85				<0.2		3.4	
					Middle	3.6	0.4	320	27.0	27.0	7.7	7.7	24.6	24.6	66.5	66.5	4.6		15.9		7		89				<0.2		3.1	
						3.6	0.4	325	27.0		7.7		24.6		66.5		4.6		15.9		6		89				<0.2		3.1	
					Bottom	6.2	0.2	303	26.8	26.8	7.7	7.7	26.7	26.7	67.4	67.4	4.6	4.6	19.9		6		91				<0.2		3.8	
						6.2	0.3	331	26.8		7.7		26.7		67.4		4.6		19.9		6		92				<0.2		3.3	
IM11	Rainy	Rough	17:12	7.5	Surface	1.0	0.1	337	28.6	28.6	7.8	7.8	17.0	17.0	91.2	91.2	6.4	5.9	10.3	11.8	5	5	86	88	821502	810552	<0.2	<0.2	2.8	2.8
						1.0	0.1	351	28.6		7.8		17.0		91.2		6.4		10.3		5		85				<0.2		2.6	
					Middle	3.8	0.5	289	27.7	27.7	7.7	7.7	22.4	22.4	76.8	76.8	5.3		11.5		4		87				<0.2		2.8	
						3.8	0.5	290	27.7		7.7		22.4		76.8		5.3		11.5		4		87				<0.2		3.0	
					Bottom	6.5	0.3	325	26.9	26.9	7.7	7.7	27.6	27.6	78.4	78.4	5.4	5.4	13.6		6		93				<0.2		2.8	
						6.5	0.3	340	26.9		7.7		27.6		78.4		5.4		13.6		7		92				<0.2		2.9	
IM12	Rainy	Rough	17:20	8.7	Surface	1.0	0.3	267	28.8	28.8	7.9	7.9	16.3	16.3	94.9	94.9	6.7	5.8	11.0	16.7	5	5	85	90	821155	811502	<0.2	<0.2	2.8	2.8
						1.0	0.3	285	28.8		7.9		16.3		94.9		6.7		11.0		5		86				<0.2		2.7	
					Middle	4.4	0.6	271	27.0	27.0	7.7	7.7	27.3	27.3	72.0	72.0	4.9		16.5		6		90				<0.2		2.8	
						4.4	0.6	294	27.0		7.7		27.3		72.0		4.9		16.5		4		90				<0.2		2.7	
					Bottom	7.7	0.2	276	26.6	26.6	7.7	7.7	28.6	28.6	71.0	71.0	4.9	4.9	22.5		5		93				<0.2		2.8	
						7.7	0.2	290	26.6		7.7		28.6		71.0		4.9		22.5		5		94				<0.2		2.8	
SR2	Rainy	Rough	17:45	4.8	Surface	1.0	0.2	312	28.2	28.2	8.0	8.0	20.5	20.5	91.0	91.0	6.3	6.3	12.7	15.3	7	6	88	91	821454	814168	<0.2	<0.2	2.2	2.0
						1.0	0.2	343	28.2		8.0		20.5		91.0		6.3		12.7		7		89				<0.2		2.1	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	3.8	0.1	100	26.8	26.8	7.7	7.7	28.6	28.6	74.5	74.5	5.1	5.1	17.8		5		93				<0.2		1.9	
						3.8	0.1	104	26.8		7.7		28.6		74.5		5.1		17.8		6		94				<0.2		1.9	
SR3	Cloudy	Rough	16:32	8.5	Surface	1.0	0.4	202	29.3	29.3	7.6	7.6	12.2	12.2	80.8	80.8	5.8	5.4	12.5	14.6	7	7	-	-	822149	807560	-	-	-	-
						1.0	0.4	212	29.3		7.6		12.2		80.8		5.8		12.5		8		-				-		-	
					Middle	4.3	0.2	247	27.6	27.6	7.6	7.6	22.5	22.5	70.0	70.0	4.9		13.5		7		-				-		-	
						4.3	0.2	266	27.6		7.6		22.5		70.0		4.9		13.5		7		-				-		-	
					Bottom	7.5	0.2	104	26.9	26.9	7.6	7.6	27.2	27.2	68.6	68.6	4.7	4.7	17.8		7		-				-		-	
						7.5	0.2	104	26.9		7.6		27.2		68.6		4.7		17.8		6		-				-		-	
SR4A	Rainy	Moderate	18:21	9.0	Surface	1.0	0.1	44	28.4	28.4	7.8	7.8	17.0	17.0	99.4	99.5	7.0	7.2	11.9	14.7	10	12	-	-	817184	807795	-	-	-	-
						1.0	0.1	45	28.4		7.8		17.0		99.5		7.0		11.9		10		-				-		-	
					Middle	4.5	0.2	251	27.8	27.8	7.9	7.9	23.0	23.0	105.0	105.0	7.3		15.0		12		-				-		-	
						4.5	0.2	258	27.8		7.9		22.9		105.0		7.3		14.9		14		-				-		-	
					Bottom	8.0	0.2	261	27.2	27.2	7.7	7.7	24.8	25.0	81.7	81.1	5.7	5.7	16.6		14		-				-		-	
						8.0	0.2	269	27.1		7.7		25.2		80.5		5.6		18.1		13		-				-		-	
SR5A	Cloudy	Moderate	18:39	4.3	Surface	1.0	0.2	296	28.3	28.3	8.0	8.0	21.1	21.1	129.6	129.6	9.0	9.0	10.2	13.4	7	8	-	-	816606	810700	-	-	-	-
						1.0	0.2	323	28.3		8.0		21.1		129.6		9.0		10.5		6		-				-		-	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	3.3	0.1	317	27.7	27.7	7.8	7.8	23.4	23.4	99.8	99.9	6.9	6.9	16.2		8		-				-		-	
						3.3	0.1	342	27.7		7.8		23.4		100.0		6.9		16.5		9		-				-		-	
SR6	Cloudy	Moderate	19:04	4.8	Surface	1.0	0.0	128	28.2	28.2	7.9	7.9	18.7	18.7	113.3	113.2	8.0	8.0	8.9	16.0	6	8	-	-	817903	814679	-	-	-	-
						1.0	0.0	132	28.2		7.9		18.7		113.0		7.9		9.0		7		-				-		-	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	3.8	0.0	31	27.2	27.2	7.6	7.6	24.6	24.6	72.2	72.8	5.0	5.1	23.0		10		-				-		-	
						3.8	0.0	33	27.2		7.6		24.5		73.4		5.1		22.9		8		-				-		-	
SR7	Rainy	Moderate	19:02	16.8	Surface	1.0	0.0	173	27.0	27.0	7.8	7.8	27.4	27.4	80.2	80.2	5.5	5.2	8.0	9.8	5	6	-	-	823619	823761	-	-	-	-
						1.0	0.0	187	27.0		7.8		27.4		80.2		5.5		8.0		6		-				-		-	
					Middle	8.4	0.0	164	26.5	26.5	7.8	7.8	30.3	30.3	72.2	72.2	4.9		10.4		6		-				-		-	
						8.4	0.0	180	26.5		7.8		30.3		72.2		4.9		10.4		7		-				-		-	
					Bottom	15.8	0.1	106	26.3	26.3	7.8	7.8	31.6	31.6	71.8	71.8	4.9	4.9	11.1		6		-				-		-	
						15.8	0.1	112	26.3		7.8		31.6		71.8		4.9		11.1		7		-				-		-	
SR8	Rainy	Rough	17:29	4.3	Surface	1.0	0.0	0	28.1	28.1	7.7	7.7	21.3	21.3	80.5	80.5	5.6	5.6	13.5	14.9	8	8	-	-	820246	811418	-	-	-	-
						1.0	0.0	0	28.1		7.7		21.3		80.5		5.6		13.5		7		-				-		-	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	3.3	0.0	0	27.4	27.4	7.7	7.7	25.5	25.5	84.1	84.1	5.8	5.8	16.3		9		-				-		-	
						3.3	0.0	0	27.4		7.7		25.5		84.1		5.8		16.3		8		-				-		-	

DA: Depth-Averaged

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

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

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

Water Quality Monitoring

Water Quality Monitoring Results on 05 September 17 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
C1	Cloudy	Rough	12:34	8.7	Surface	1.0	0.7	219	27.9	27.9	7.7	7.7	19.7	19.7	85.9	85.7	6.0	5.7	7.6	24.7	6	6	91	91	815628	804257	<0.2	<0.2	1.7	1.4
						1.0	0.8	230	27.9		7.7		19.6		85.5		6.0		7.6		7		91				<0.2		1.6	
					Middle	4.4	0.8	211	27.1	27.1	7.7	7.7	23.0	23.0	77.1	77.1	5.4		10.3		7		88				<0.2		1.2	
						4.4	0.9	229	27.1		7.7		23.0		77.1		5.4		10.3		6		88				<0.2		1.3	
					Bottom	7.7	0.5	222	26.6	26.6	7.7	7.7	29.7	29.7	69.0	69.2	4.7	4.7	56.3		6		93				<0.2		1.3	
						7.7	0.5	233	26.6		7.7		29.7		69.4		4.7		56.1		6		94				<0.2		1.2	
C2	Cloudy	Moderate	13:58	11.0	Surface	1.0	1.3	169	28.7	28.7	7.4	7.4	16.2	16.2	74.4	74.4	5.3	5.2	22.0	50.4	8	19	86	89	825680	806933	<0.2	<0.2	2.4	2.6
						1.0	1.4	174	28.7		7.4		16.2		74.4		5.3		22.0		8		86				<0.2		2.6	
					Middle	5.5	0.9	167	27.6	27.6	7.5	7.5	20.1	20.1	72.7	72.7	5.1		49.8		7		89				<0.2		2.0	
						5.5	0.9	177	27.6		7.5		20.1		72.7		5.1		49.8		6		88				<0.2		2.1	
					Bottom	10.0	0.3	179	27.4	27.4	7.6	7.6	23.1	23.1	71.5	71.5	5.0	5.0	79.3		45		93				<0.2		3.3	
						10.0	0.4	188	27.4		7.6		23.1		71.5		5.0		79.3		41		94				<0.2		3.3	
C3	Cloudy	Moderate	11:32	11.7	Surface	1.0	0.3	135	27.4	27.4	7.5	7.5	23.3	23.3	76.9	76.9	5.3	5.3	6.5	5.3	9	9	90	92	822126	817802	<0.2	<0.2	2.0	2.1
						1.0	0.3	144	27.4		7.5		23.3		76.9		5.3		6.5		9		89				<0.2		2.1	
					Middle	5.9	0.1	99	27.3	27.3	7.5	7.5	24.3	24.3	74.5	74.5	5.2		5.6		9		91				<0.2		2.4	
						5.9	0.2	100	27.3		7.5		24.3		74.5		5.2		5.6		8		92				<0.2		2.3	
					Bottom	10.7	0.4	31	27.0	27.0	7.5	7.5	26.4	26.4	75.5	75.5	5.2	5.2	3.9		10		96				<0.2		1.8	
						10.7	0.4	32	27.0		7.5		26.4		75.5		5.2		3.9		11		96				<0.2		1.7	
IM1	Cloudy	Rough	12:58	7.4	Surface	1.0	0.8	194	27.2	27.3	7.7	7.7	23.5	22.5	73.5	73.3	5.1	4.9	19.3	24.7	8	14	87	87	818365	806454	<0.2	<0.2	2.2	1.7
						1.0	0.9	205	27.3		7.7		21.5		73.1		5.1		19.4		7		87				<0.2		2.1	
					Middle	3.7	0.5	192	26.7	26.7	7.7	7.7	26.7	26.7	68.1	68.1	4.7		28.8		11		80				<0.2		1.7	
						3.7	0.5	206	26.7		7.7		26.6		68.1		4.7		28.6		10		80				<0.2		1.6	
					Bottom	6.4	0.1	265	26.6	26.6	7.7	7.7	28.9	29.0	67.3	67.3	4.6	4.6	25.7		24		95				<0.2		1.1	
						6.4	0.1	279	26.6		7.7		29.0		67.3		4.6		26.1		24		95				<0.2		1.2	
IM2	Cloudy	Moderate	13:07	8.4	Surface	1.0	0.7	210	28.0	28.0	7.6	7.6	18.3	18.3	85.3	85.3	6.0	5.7	8.2	28.8	7	13	85	90	818855	806204	<0.2	<0.2	2.0	1.7
						1.0	0.8	223	28.0		7.6		18.3		85.2		6.0		8.1		5		85				<0.2		2.0	
					Middle	4.2	0.7	213	27.1	27.2	7.7	7.7	22.0	22.0	77.1	77.2	5.4		12.6		7		89				<0.2		2.0	
						4.2	0.8	216	27.2		7.7		22.0		77.2		5.4		12.5		6		89				<0.2		2.0	
					Bottom	7.4	0.4	195	26.8	26.8	7.7	7.7	26.1	26.1	70.5	70.6	4.9	4.9	66.2		28		97				<0.2		1.2	
						7.4	0.5	195	26.8		7.7		26.1		70.6		4.9		65.1		26		97				<0.2		1.2	
IM3	Cloudy	Moderate	13:18	8.2	Surface	1.0	0.7	216	27.9	27.9	7.6	7.6	18.5	18.5	84.7	84.5	6.0	5.8	8.3	14.0	8	9	87	92	819412	806014	<0.2	<0.2	1.9	1.8
						1.0	0.7	224	27.9		7.6		18.5		84.3		6.0		8.4		7		87				<0.2		1.9	
					Middle	4.1	0.9	226	27.6	27.6	7.6	7.6	19.4	19.4	78.8	78.8	5.6		10.4		10		91				<0.2		2.0	
						4.1	0.9	230	27.6		7.6		19.3		78.8		5.6		10.6		8		91				<0.2		1.9	
					Bottom	7.2	0.6	222	26.9	26.9	7.7	7.7	24.5	24.5	71.6	71.6	5.0	5.0	23.0		10		99				<0.2		1.5	
						7.2	0.6	239	26.9		7.7		24.4		71.6		5.0		23.0		10		99				<0.2		1.8	
IM4	Cloudy	Moderate	13:26	7.7	Surface	1.0	0.7	199	27.8	27.8	7.6	7.6	18.8	18.8	83.4	83.3	5.9	5.7	17.7	26.1	6	10	87	90	819577	805044	<0.2	<0.2	2.0	1.8
						1.0	0.7	203	27.8		7.6		18.8		83.2		5.9		17.8		6		87				<0.2		2.0	
					Middle	3.9	0.5	207	27.3	27.3	7.6	7.6	21.7	21.7	76.9	76.9	5.4		15.3		11		97				<0.2		1.9	
						3.9	0.5	209	27.3		7.6		21.7		76.9		5.4		15.4		11		97				<0.2		1.8	
					Bottom	6.7	0.2	206	26.8	26.8	7.7	7.7	25.8	25.9	69.8	69.9	4.8	4.8	45.3		12		87				<0.2		1.7	
						6.7	0.2	225	26.8		7.7		25.9		69.9		4.8		45.1		14		87				<0.2		1.6	
IM5	Cloudy	Moderate	13:43	6.5	Surface	1.0	1.0	214	27.8	27.8	7.6	7.6	18.1	18.1	83.9	83.9	6.0	5.7	10.3	23.0	7	12	86	92	820576	804934	<0.2	<0.2	2.1	1.9
						1.0	1.1	229	27.8		7.6		18.1		83.9		6.0		10.4		8		86				<0.2		2.3	
					Middle	3.3	0.8	221	27.2	27.2	7.6	7.6	21.7	21.6	75.1	75.1	5.3		23.2		15		94				<0.2		1.8	
						3.3	0.9	232	27.2		7.6		21.5		75.1		5.3		22.8		14		94				<0.2		1.7	
					Bottom	5.5	0.7	222	27.1	27.1	7.6	7.6	22.5	22.5	73.7	73.7	5.2	5.2	35.7		15		95				<0.2		1.8	
						5.5	0.7	239	27.1		7.6		22.5		73.7		5.2		35.7		14		95				<0.2		1.8	
IM6	Cloudy	Moderate	13:54	6.4	Surface	1.0	0.5	225	27.9	27.9	7.6	7.6	18.8	18.9	82.5	82.3	5.8	5.6	11.0	16.6	6	7	87	94	821054	805812	<0.2	<0.2	2.0	2.0
						1.0	0.5	242	27.9		7.6		18.9		82.1		5.8		9.8		5		88				<0.2		1.9	
					Middle	3.2	0.6	228	27.3	27.3	7.6	7.6	21.1	21.2	75.5	75.5	5.3		14.4		7		97				<0.2		2.1	
						3.2	0.6	245	27.3		7.6		21.2		75.4		5.3		14.6		7		97				<0.2		2.0	
					Bottom	5.4	0.5	241	27.0	27.0	7.6	7.6	23.3	23.4	72.1	72.2	5.0	5.0	24.8		9		96				<0.2		2.0	
						5.4	0.6	263	27.0		7.6		23.5		72.2		5.0		25.2		8		96				<0.2		2.2	
IM7	Cloudy	Moderate	14:06	7.4	Surface	1.0	0.9	226	27.4	27.4	7.6	7.6	20.4	20.3	76.5	76.5	5.4	5.3	12.9	36.4	8	9	91	94	821337	806843	<0.2	<0.2	2.3	2.2
						1.0	0.9	227	27.4		7.6		20.2		76.5		5.4		12.6		9		91				<0.2		2.2	
					Middle	3.7	0.7	230	27.3	27.3	7.6	7.6	21.7	21.7	74.5	74.5	5.2		39.9		7		97				<0.2		2.2	
						3.7	0.8	233	27.3		7.6		21.7		74.4		5.2		39.3		8		97				<0.2		2.2	
					Bottom	6.4	0.5	228	27.2	27.2	7.6	7.6	21.9	21.9	74.2	74.3	5.2	5.2	57.7		10		94				<0.2		2.2	
						6.4	0.5	233	27.2		7.6		21.9		74.3		5.2		56.0		11		94				<0.2		2.0	
IM8	Cloudy	Rough	13:23	8.0	Surface	1.0	0.7	189	28.0	28.0	7.6	7.6	18.2	18.2	79.5	79.5	5.6	5.5	13.8	19.5	7	8	85	89	821681	807823	<0.2	<0.2	2.6	2.6
						1.0	0.7	191	28.0		7.6		18.2		79.5		5.6		13.8		8		86				<0.2		2.6	
					Middle	4.0	0.6	206	27.5	27.5	7.6	7.6	20.5	20.5	76.3	76.3	5.4		20.3		8		88				<0.2		2.5	
						4.0	0.6	212	27.5		7.6		20.5		76.3		5.4		20.3		8		89				<0.2		2.7	
					Bottom	7.0	0.4	216	27.4	27.4	7.6	7.6	21.8	21.8	77.4	77.4	5.4	5.4	24.5		8		92				<0.2		2.5	
						7.0	0.4	228	27.4		7.6		21.8		77.4		5.4		24.5		9		91				<0.2		2.5	

DA: Depth-Averaged

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

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

Expansion of Hong Kong International Airport into a Three-Runway System
Water Quality Monitoring
Water Quality Monitoring Results on 05 September 17 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
IM9	Cloudy	Rough	13:15	7.2	Surface	1.0	0.6	158	27.8	27.8	7.6	7.6	18.5	18.5	78.6	78.6	5.6	5.6	12.2	13.7	8	9	87	89	822074	808800	<0.2	<0.2	2.5	2.5
						1.0	0.6	170	27.8		7.6		18.5		78.6		5.6		12.2		7		86				<0.2		2.4	
					Middle	3.6	0.5	162	27.6	27.6	7.6	7.6	19.4	19.4	77.1	77.1	5.5		13.5		9		88				<0.2		2.7	
						3.6	0.5	165	27.6		7.6		19.4		77.1		5.5		13.5		9		89				<0.2		2.5	
					Bottom	6.2	0.3	160	27.5	27.5	7.6	7.6	21.3	21.3	77.8	77.8	5.5	5.5	15.3		11		92				<0.2		2.4	
						6.2	0.3	163	27.5		7.6		21.3		77.8		5.5		15.3		11		92				<0.2		2.6	
IM10	Cloudy	Rough	13:06	7.2	Surface	1.0	0.8	140	27.9	27.9	7.5	7.5	18.2	18.2	79.7	79.7	5.7	5.6	11.4	12.1	8	8	87	89	822232	809845	<0.2	<0.2	2.5	2.4
						1.0	0.9	150	27.9		7.5		18.2		79.7		5.7		11.4		9		87				<0.2		2.3	
					Middle	3.6	0.7	134	27.7	27.7	7.5	7.5	20.0	20.0	78.5	78.5	5.5		11.3		9		88				<0.2		2.4	
						3.6	0.7	141	27.7		7.5		20.0		78.5		5.5		11.3		9		89				<0.2		2.4	
					Bottom	6.2	0.4	105	27.5	27.5	7.6	7.6	21.1	21.1	77.4	77.4	5.4	5.4	13.5		7		91				<0.2		2.3	
						6.2	0.4	113	27.5		7.6		21.1		77.4		5.4		13.5		7		91				<0.2		2.3	
IM11	Cloudy	Rough	12:46	8.0	Surface	1.0	0.6	119	28.1	28.1	7.5	7.5	17.5	17.5	79.5	79.5	5.6	5.5	12.3	17.5	7	7	87	89	821492	810548	<0.2	<0.2	2.2	2.2
						1.0	0.7	119	28.1		7.5		17.5		79.5		5.6		12.3		6		87				<0.2		2.0	
					Middle	4.0	0.6	103	27.6	27.6	7.5	7.5	19.9	19.9	77.0	77.0	5.4		17.9		7		88				<0.2		2.2	
						4.0	0.6	108	27.6		7.5		19.9		77.0		5.4		17.9		9		89				<0.2		2.3	
					Bottom	7.0	0.4	91	27.5	27.5	7.6	7.6	20.6	20.6	77.6	77.6	5.5	5.5	22.2		6		91				<0.2		2.2	
						7.0	0.4	92	27.5		7.6		20.6		77.6		5.5		22.2		7		92				<0.2		2.2	
IM12	Cloudy	Rough	12:37	9.1	Surface	1.0	0.7	117	27.9	27.9	7.5	7.5	18.0	18.0	81.0	81.0	5.7	5.7	10.2	12.3	7	7	88	91	821172	811537	<0.2	<0.2	2.3	2.4
						1.0	0.8	118	27.9		7.5		18.0		81.0		5.7		10.2		6		89				<0.2		2.2	
					Middle	4.6	0.6	107	27.5	27.5	7.5	7.5	19.9	19.9	79.4	79.4	5.6		13.9		7		91				<0.2		2.4	
						4.6	0.6	109	27.5		7.5		19.9		79.4		5.6		13.9		6		91				<0.2		2.5	
					Bottom	8.1	0.4	89	27.5	27.5	7.5	7.5	20.6	20.6	83.3	83.3	5.9	5.9	12.7		8		92				<0.2		2.3	
						8.1	0.5	93	27.5		7.5		20.6		83.3		5.9		12.7		10		92				<0.2		2.4	
SR2	Cloudy	Moderate	12:01	4.7	Surface	1.0	0.5	64	27.7	27.7	7.5	7.5	19.5	19.5	80.2	80.2	5.7	5.7	8.4	8.1	7	8	88	90	821470	814185	<0.2	<0.2	2.1	2.3
						1.0	0.6	66	27.7		7.5		19.5		80.2		5.7		8.4		7		89				<0.2		2.5	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	3.7	0.3	35	27.5	27.5	7.5	7.5	20.9	20.9	81.3	81.3	5.7	5.7	7.7		10		91				<0.2		2.2	
						3.7	0.3	35	27.5		7.5		20.9		81.3		5.7		7.7		8		91				<0.2		2.3	
SR3	Cloudy	Rough	13:27	8.6	Surface	1.0	0.8	184	28.0	28.0	7.6	7.6	17.8	17.8	79.7	79.7	5.7	5.6	11.6	24.2	8	8	-	-	822134	807581	-	-	-	-
						1.0	0.9	190	28.0		7.6		17.8		79.7		5.7		11.6		8		-				-		-	
					Middle	4.3	0.7	187	27.7	27.7	7.6	7.6	19.3	19.3	77.2	77.2	5.5		15.5		8		-				-		-	
						4.3	0.7	197	27.7		7.6		19.3		77.2		5.5		15.5		8		-				-		-	
					Bottom	7.6	0.3	227	27.4	27.4	7.6	7.6	23.0	23.0	76.5	76.5	5.3	5.3	45.4		8		-				-		-	
						7.6	0.3	242	27.4		7.6		23.0		76.5		5.3		45.4		10		-				-		-	
SR4A	Cloudy	Calm	12:07	9.8	Surface	1.0	0.2	61	27.1	27.1	7.6	7.6	24.9	25.0	68.4	68.4	4.7	4.7	19.3	28.1	9	17	-	-	817192	807824	-	-	-	-
						1.0	0.2	65	27.1		7.6		25.0		68.3		4.7		19.7		9		-				-		-	
					Middle	4.9	0.3	61	26.6	26.6	7.7	7.7	28.4	28.5	66.5	66.5	4.6		23.6		20		-				-		-	
						4.9	0.3	62	26.6		7.7		28.5		66.5		4.6		23.6		20		-				-		-	
					Bottom	8.8	0.1	51	26.6	26.6	7.7	7.7	29.2	29.2	66.8	67.0	4.6	4.6	40.5		23		-				-		-	
						8.8	0.1	52	26.6		7.7		29.2		67.1		4.6		41.6		21		-				-		-	
SR5A	Cloudy	Calm	11:42	5.4	Surface	1.0	0.1	51	27.4	27.4	7.6	7.6	20.7	20.7	77.8	77.8	5.5	5.5	15.2	16.7	10	12	-	-	816590	810683	-	-	-	-
						1.0	0.1	51	27.4		7.6		20.7		77.8		5.5		15.2		11		-				-		-	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	4.4	0.1	81	27.3	27.3	7.6	7.6	21.1	21.2	78.7	78.8	5.5	5.6	18.2		14		-				-		-	
						4.4	0.1	81	27.3		7.6		21.2		78.8		5.6		18.2		13		-				-		-	
SR6	Cloudy	Calm	11:17	4.8	Surface	1.0	0.1	63	28.0	28.0	7.6	7.6	19.2	19.2	83.6	83.6	5.9	5.9	8.4	11.7	7	7	-	-	817890	814680	-	-	-	-
						1.0	0.1	68	28.0		7.6		19.2		83.5		5.9		8.6		6		-				-		-	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	3.8	0.2	64	27.3	27.3	7.6	7.6	21.1	21.1	79.6	79.7	5.6	5.6	14.6		7		-				-		-	
						3.8	0.2	65	27.3		7.6		21.1		79.7		5.6		15.2		8		-				-		-	
SR7	Cloudy	Moderate	10:47	16.0	Surface	1.0	0.6	76	27.1	27.1	7.6	7.6	25.7	25.7	75.4	75.4	5.2	5.1	6.8	5.4	8	8	-	-	823654	823723	-	-	-	-
						1.0	0.7	80	27.1		7.6		25.7		75.4		5.2		6.8		8		-				-		-	
					Middle	8.0	0.1	20	26.9	26.9	7.6	7.6	27.6	27.6	72.3	72.3	5.0		5.2		8		-				-		-	
						8.0	0.1	21	26.9		7.6		27.6		72.3		5.0		5.2		9		-				-		-	
					Bottom	15.0	0.2	353	26.8	26.8	7.6	7.6	28.5	28.5	71.6	71.6	4.9	4.9	4.2		8		-				-		-	
						15.0	0.2	325	26.8		7.6		28.5		71.6		4.9		4.2		8		-				-		-	
SR8	Cloudy	Moderate	12:27	4.5	Surface	1.0	-	-	28.2	28.2	7.5	7.5	19.4	19.4	81.4	81.4	5.7	5.7	11.0	12.0	6	7	-	-	820246	811418	-	-	-	-
						1.0	-	-	28.2		7.5		19.4		81.4		5.7		11.0		7		-				-		-	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	3.5	-	-	27.6	27.6	7.4	7.4	21.4	21.4	82.7	82.7	5.8	5.8	12.9		8		-				-		-	
						3.5	-	-	27.6		7.4		21.4		82.7		5.8		12.9		8		-				-		-	

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

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

Water Quality Monitoring

Water Quality Monitoring Results on 05 September 17 during Mid-Flood Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity(NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)	
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA
C1	Cloudy	Moderate	18:54	8.4	Surface	1.0	0.4	35	27.7	27.7	7.6	7.6	19.8	19.8	77.2	77.2	5.4	5.2	16.3	42.1	10	19	90	93	815609	804249	<0.2	<0.2	2.3	2.0
						1.0	0.4	35	27.6		7.6		19.8		77.2		5.4		16.6		12		90				<0.2		2.4	
					Middle	4.2	0.5	32	27.1	27.1	7.7	7.7	24.0	24.1	72.1	72.1	5.0		24.1		13		93				<0.2		1.8	
						4.2	0.5	34	27.1		7.7		24.1		72.1		5.0		24.4		14		94				<0.2		2.1	
					Bottom	7.4	0.6	29	26.9	27.0	7.7	7.7	25.3	25.3	71.1	71.2	4.9	4.9	89.0		32		96				<0.2		1.6	
						7.4	0.6	31	27.0		7.7		25.3		71.3		4.9		81.9		30		97				<0.2		1.5	
C2	Cloudy	Moderate	17:35	10.9	Surface	1.0	0.7	182	28.4	28.4	7.3	7.3	14.0	14.0	70.4	70.4	5.1	5.0	18.6	23.9	7	14	88	90	825677	806957	<0.2	<0.2	4.3	3.6
						1.0	0.7	196	28.4		7.3		14.0		70.4		5.1		18.6		8		87				<0.2		4.2	
					Middle	5.5	0.3	184	27.7	27.7	7.4	7.4	18.7	18.7	67.0	67.0	4.8		28.0		9		89				<0.2		3.8	
						5.5	0.4	198	27.7		7.4		18.7		67.0		4.8		28.0		9		89				<0.2		3.7	
					Bottom	9.9	0.0	304	27.5	27.5	7.4	7.4	21.9	21.9	68.8	68.8	4.8	4.8	25.1		24		94				<0.2		2.7	
						9.9	0.0	332	27.5		7.4		21.9		68.8		4.8		25.1		26		93				<0.2		2.6	
C3	Cloudy	Moderate	19:39	12.5	Surface	1.0	0.4	232	27.6	27.6	7.6	7.6	21.3	21.3	76.3	76.3	5.3	5.2	10.7	16.1	5	6	90	93	822101	817786	<0.2	<0.2	2.1	2.0
						1.0	0.4	238	27.6		7.6		21.3		76.3		5.3		10.7		5		90				<0.2		1.9	
					Middle	6.3	0.6	251	27.3	27.3	7.6	7.6	24.5	24.5	73.4	73.4	5.1		14.2		4		93				<0.2		1.8	
						6.3	0.6	275	27.3		7.6		24.5		73.4		5.1		14.2		6		93				<0.2		2.2	
					Bottom	11.5	0.5	273	27.0	27.0	7.6	7.6	27.1	27.1	72.6	72.6	5.0	5.0	23.3		9		96				<0.2		2.0	
						11.5	0.6	298	27.0		7.6		27.1		72.6		5.0		23.3		7		96				<0.2		1.9	
IM1	Cloudy	Moderate	18:33	7.5	Surface	1.0	0.2	32	27.9	27.9	7.6	7.6	19.6	19.6	79.5	79.6	5.6	5.7	16.2	25.0	10	15	84	89	818363	806445	<0.2	<0.2	2.3	1.8
						1.0	0.2	33	27.9		7.6		19.6		79.7		5.6		16.4		9		84				<0.2		2.0	
					Middle	3.8	0.3	15	27.9	27.9	7.7	7.7	20.5	20.6	80.9	80.9	5.7		19.1		13		89				<0.2		1.9	
						3.8	0.3	15	27.9		7.7		20.6		80.9		5.7		19.5		12		90				<0.2		1.9	
					Bottom	6.5	0.4	347	27.8	27.8	7.7	7.7	21.8	21.8	80.5	80.6	5.6	5.6	38.6		25		93				<0.2		1.4	
						6.5	0.4	319	27.8		7.7		21.8		80.6		5.6		40.0		23		94				<0.2		1.5	
IM2	Cloudy	Moderate	18:27	7.8	Surface	1.0	0.2	260	28.0	28.0	7.6	7.6	17.8	17.8	80.2	80.2	5.7	5.6	13.2	17.7	11	15	86	90	818844	806196	<0.2	<0.2	2.3	2.2
						1.0	0.2	270	28.0		7.6		17.8		80.1		5.7		13.4		10		86				<0.2		2.3	
					Middle	3.9	0.2	329	27.8	27.8	7.6	7.6	20.6	20.6	77.4	77.5	5.4		19.1		16		89				<0.2		2.3	
						3.9	0.2	356	27.8		7.6		20.6		77.5		5.4		19.0		14		89				<0.2		2.2	
					Bottom	6.8	0.3	355	27.6	27.6	7.6	7.6	21.2	21.2	78.1	78.4	5.5	5.5	20.7		18		94				<0.2		2.0	
						6.8	0.3	327	27.6		7.6		21.2		78.7		5.5		20.6		20		94				<0.2		1.9	
IM3	Cloudy	Moderate	18:19	8.1	Surface	1.0	0.2	244	28.1	28.1	7.5	7.5	15.9	15.9	78.0	78.0	5.6	5.6	15.0	23.8	12	20	87	91	819402	806028	<0.2	<0.2	2.9	2.3
						1.0	0.2	261	28.1		7.5		15.9		78.0		5.6		15.3		12		87				<0.2		2.8	
					Middle	4.1	0.2	295	28.0	28.0	7.6	7.6	17.7	17.7	78.7	78.7	5.6		21.1		16		91				<0.2		2.5	
						4.1	0.3	315	28.0		7.6		17.7		78.7		5.6		21.0		17		91				<0.2		2.7	
					Bottom	7.1	0.3	348	27.7	27.7	7.6	7.6	20.6	20.6	75.6	75.6	5.3	5.3	35.1		32		95				<0.2		1.6	
						7.1	0.3	320	27.7		7.6		20.5		75.5		5.3		35.5		31		96				<0.2		1.5	
IM4	Cloudy	Moderate	18:10	7.0	Surface	1.0	0.4	292	27.9	27.9	7.5	7.5	17.2	17.2	76.6	76.6	5.5	5.5	19.1	30.8	18	19	88	92	819585	805027	<0.2	<0.2	2.5	2.5
						1.0	0.4	305	27.9		7.5		17.2		76.6		5.5		19.2		16		89				<0.2		2.5	
					Middle	3.5	0.3	290	27.9	27.9	7.6	7.6	17.5	17.5	76.3	76.3	5.4		26.2		19		92				<0.2		2.5	
						3.5	0.3	303	27.9		7.6		17.5		76.3		5.4		25.4		20		92				<0.2		2.4	
					Bottom	6.0	0.2	299	27.7	27.7	7.6	7.6	18.6	18.6	76.9	77.1	5.5	5.5	47.4		20		94				<0.2		2.5	
						6.0	0.3	312	27.7		7.6		18.5		77.2		5.5		47.4		18		94				<0.2		2.7	
IM5	Cloudy	Moderate	17:57	6.2	Surface	1.0	0.5	288	27.8	27.8	7.5	7.5	17.3	17.3	74.0	74.0	5.3	5.3	22.2	33.6	16	23	86	90	820551	804916	<0.2	<0.2	2.6	2.7
						1.0	0.5	290	27.8		7.5		17.3		74.0		5.3		22.3		14		86				<0.2		2.7	
					Middle	3.1	0.4	284	27.7	27.7	7.5	7.5	17.9	17.9	73.0	73.1	5.2		36.4		24		91				<0.2		2.6	
						3.1	0.4	287	27.7		7.5		17.9		73.1		5.2		36.4		26		91				<0.2		2.7	
					Bottom	5.2	0.3	282	27.7	27.7	7.5	7.5	18.1	18.1	73.9	74.1	5.3	5.3	41.9		30		93				<0.2		2.6	
						5.2	0.3	287	27.7		7.5		18.1		74.2		5.3		42.1		28		94				<0.2		2.7	
IM6	Cloudy	Moderate	17:49	6.1	Surface	1.0	0.5	272	27.9	27.9	7.5	7.5	16.8	16.8	73.9	73.8	5.3	5.3	16.1	29.2	10	18	89	93	821069	805823	<0.2	<0.2	2.8	2.7
						1.0	0.6	288	27.9		7.5		16.8		73.6		5.3		16.5		10		89				<0.2		3.2	
					Middle	3.1	0.5	283	27.7	27.7	7.5	7.5	18.1	18.1	72.4	72.4	5.2		30.9		16		94				<0.2		2.7	
						3.1	0.5	283	27.7		7.5		18.0		72.4		5.2		31.0		16		94				<0.2		2.4	
					Bottom	5.1	0.4	282	27.7	27.7	7.5	7.5	18.2	18.2	73.5	73.7	5.2	5.3	40.1		26		95				<0.2		2.6	
						5.1	0.5	309	27.7		7.5		18.2		73.9		5.3		40.3		28		95				<0.2		2.6	
IM7	Cloudy	Moderate	17:40	7.5	Surface	1.0	0.6	233	27.9	27.9	7.5	7.5	16.8	16.8	73.1	73.2	5.2	5.2	19.6	29.6	16	20	91	94	821345	806815	<0.2	<0.2	3.0	2.7
						1.0	0.6	242	27.9		7.5		16.8		73.2		5.2		19.6		16		91				<0.2		2.8	
					Middle	3.8	0.6	240	27.7	27.7	7.5	7.5	18.0	18.0	72.0	72.0	5.1		30.3		17		96				<0.2		2.7	
						3.8	0.6	243	27.7		7.5		17.9		72.0		5.1		29.7		16		97				<0.2		2.9	
					Bottom	6.5	0.5	252	27.7	27.7	7.5	7.5	18.4	18.4	74.4	74.8	5.3	5.3	39.4		30		94				<0.2		2.4	
						6.5	0.5	262	27.7		7.5		18.4		75.1		5.3		38.8		27		94				<0.2		2.6	
IM8	Cloudy	Moderate	17:58	7.4	Surface	1.0	0.6	203	28.5	28.5	7.4	7.4	15.3	15.3	73.9	73.9	5.3	5.2	15.4	22.1	9	13	87	89	821709	807852	<0.2	<0.2	3.9	3.5
						1.0	0.6	217	28.5		7.4		15.3		73.9		5.3		15.4		6		87				<0.2		3.5	
					Middle	3.7	0.5	218	28.0	28.0	7.4	7.4	17.5	17.5	71.2	71.2	5.1		18.8		10		89				<0.2		3.8	3.5
						3.7	0.5	239	28.0		7.4		17.5		71.2		5.1		18.8		8		88				<0.2		3.5	
					Bottom	6.4	0.3	249	27.9	27.9	7.5	7.5	18.1	18.1	73.1	73.1	5.2	5.2	32.0		22		92				<0.2		3.0	
						6.4	0.3	250	27.9		7.5		18.1		73.1		5.2		32.0		22		93				<0.2		3.0	

DA: Depth-Averaged

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

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

Expansion of Hong Kong International Airport into a Three-Runway System
Water Quality Monitoring
Water Quality Monitoring Results on 05 September 17 during Mid-Flood Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity(NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)	
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA
IM9	Cloudy	Moderate	18:06	6.4	Surface	1.0	0.2	197	28.5	28.5	7.4	7.4	14.9	14.9	74.5	74.5	5.3	5.3	15.4	18.5	6	9	87	90	822078	808798	<0.2	<0.2	3.7	3.5
						1.0	0.2	204	28.5		7.4		14.9		74.5		5.3		15.4		8		87				<0.2		3.2	
					Middle	3.2	0.1	304	28.0	28.0	7.5	7.5	17.8	17.8	73.5	73.5	5.2		19.0		8		89				<0.2		3.2	
						3.2	0.1	305	28.0		7.5		17.8		73.5		5.2		19.0		7		90				<0.2		3.6	
					Bottom	5.4	0.2	353	28.0	28.0	7.4	7.4	18.3	18.3	78.6	78.6	5.6	5.6	21.0		10		92				<0.2		3.5	
						5.4	0.2	325	28.0		7.4		18.3		78.6		5.6		21.0		12		92				<0.2		3.5	
IM10	Cloudy	Moderate	18:13	6.2	Surface	1.0	0.2	272	28.7	28.7	7.5	7.5	15.1	15.1	77.9	77.9	5.6	5.6	13.7	16.4	6	6	86	90	822236	809850	<0.2	<0.2	3.2	3.3
						1.0	0.2	297	28.7		7.5		15.1		77.9		5.6		13.7		7		87				<0.2		3.6	
					Middle	3.1	0.3	303	28.1	28.1	7.5	7.5	17.4	17.4	77.0	77.0	5.5		17.3		5		88				<0.2		3.5	
						3.1	0.3	323	28.1		7.5		17.4		77.0		5.5		17.3		7		89				<0.2		3.1	
					Bottom	5.2	0.3	329	28.0	28.0	7.5	7.5	18.7	18.7	80.2	80.2	5.7	5.7	18.1		6		93				<0.2		3.3	
						5.2	0.3	337	28.0		7.5		18.7		80.2		5.7		18.1		7		94				<0.2		2.8	
IM11	Cloudy	Moderate	18:32	7.1	Surface	1.0	0.3	304	28.5	28.5	7.5	7.5	15.2	15.2	79.6	79.6	5.7	5.7	13.3	20.4	5	5	87	91	821486	810525	<0.2	<0.2	2.9	3.1
						1.0	0.3	330	28.5		7.5		15.2		79.6		5.7		13.3		4		88				<0.2		3.4	
					Middle	3.6	0.4	301	28.2	28.2	7.6	7.6	17.8	17.8	78.5	78.5	5.6		17.8		4		91				<0.2		3.1	
						3.6	0.4	310	28.2		7.6		17.8		78.5		5.6		17.8		5		91				<0.2		3.2	
					Bottom	6.1	0.4	296	28.0	28.0	7.6	7.6	18.8	18.8	78.7	78.7	5.6	5.6	30.0		6		94				<0.2		2.9	
						6.1	0.4	303	28.0		7.6		18.8		78.7		5.6		30.0		6		93				<0.2		2.9	
IM12	Cloudy	Moderate	18:41	7.6	Surface	1.0	0.6	284	28.3	28.3	7.6	7.6	17.5	17.5	81.3	81.3	5.7	5.7	12.3	16.5	5	7	88	90	821181	811532	<0.2	<0.2	3.3	2.5
						1.0	0.6	302	28.3		7.6		17.5		81.3		5.7		12.3		6		87				<0.2		2.8	
					Middle	3.8	0.7	281	28.2	28.2	7.6	7.6	19.5	19.5	80.7	80.7	5.7		14.6		6		89				<0.2		2.8	
						3.8	0.8	302	28.2		7.6		19.5		80.7		5.7		14.6		5		89				<0.2		2.7	
					Bottom	6.6	0.5	281	28.1	28.1	7.6	7.6	21.6	21.6	80.4	80.4	5.6	5.6	22.6		10		93				<0.2		1.8	
						6.6	0.5	287	28.1		7.6		21.6		80.4		5.6		22.6		10		92				<0.2		1.8	
SR2	Cloudy	Moderate	19:14	4.5	Surface	1.0	0.1	339	27.9	27.9	7.6	7.6	20.1	20.1	78.0	78.0	5.5	5.5	19.6	20.8	5	5	90	91	821475	814150	<0.2	<0.2	2.4	2.3
						1.0	0.1	350	27.9		7.6		20.1		78.0		5.5		19.6		3		89				<0.2		2.6	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	3.5	0.2	171	27.7	27.7	7.6	7.6	21.6	21.6	78.1	78.1	5.5	5.5	21.9		5		91				<0.2		2.2	
						3.5	0.2	180	27.7		7.6		21.6		78.1		5.5		21.9		5		92				<0.2		2.0	
SR3	Cloudy	Moderate	17:53	8.0	Surface	1.0	0.6	191	28.2	28.2	7.4	7.4	16.8	16.8	70.5	70.5	5.0	5.0	18.5	22.1	7	10	-	-	822150	807579	-	-	-	-
						1.0	0.6	201	28.2		7.4		16.8		70.5		5.0		18.5		7		-				-		-	
					Middle	4.0	0.3	213	27.9	27.9	7.4	7.4	17.8	17.8	69.5	69.5	4.9		22.4		8		-				-		-	
						4.0	0.3	224	27.9		7.4		17.8		69.5		4.9		22.4		8		-				-		-	
					Bottom	7.0	0.3	251	27.8	27.8	7.4	7.4	18.8	18.8	73.2	73.2	5.2	5.2	25.5		16		-				-		-	
						7.0	0.3	262	27.8		7.4		18.8		73.2		5.2		25.5		15		-				-		-	
SR4A	Cloudy	Calm	19:15	8.1	Surface	1.0	0.2	225	27.7	27.7	7.6	7.6	21.5	21.6	77.6	77.6	5.4	5.4	21.5	22.4	16	22	-	-	817203	807818	-	-	-	-
						1.0	0.2	226	27.7		7.6		21.6		77.6		5.4		21.4		18		-				-		-	
					Middle	4.1	0.2	224	27.6	27.6	7.6	7.6	21.9	21.9	75.9	75.9	5.3		20.2		24		-				-		-	
						4.1	0.2	238	27.6		7.6		21.9		75.8		5.3		20.9		22		-				-		-	
					Bottom	7.1	0.1	206	27.5	27.5	7.6	7.6	22.2	22.2	75.1	75.3	5.2	5.3	25.4		24		-				-		-	
						7.1	0.1	226	27.5		7.6		22.2		75.4		5.3		25.1		26		-				-		-	
SR5A	Cloudy	Calm	19:34	5.1	Surface	1.0	0.2	292	27.8	27.8	7.6	7.6	21.1	21.1	78.2	78.2	5.5	5.5	17.9	19.4	6	12	-	-	816588	810676	-	-	-	-
						1.0	0.3	318	27.8		7.6		21.1		78.2		5.5		18.2		6		-				-		-	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	4.1	0.2	323	27.7	27.7	7.6	7.6	21.5	21.5	80.8	81.3	5.6	5.7	20.5		17		-				-		-	
						4.1	0.2	336	27.7		7.6		21.5		81.8		5.7		20.8		18		-				-		-	
SR6	Rainy	Calm	20:05	5.4	Surface	1.0	0.1	241	27.7	27.7	7.6	7.6	19.7	19.7	79.9	79.9	5.6	5.6	15.8	18.8	9	14	-	-	817914	814668	-	-	-	-
						1.0	0.1	241	27.7		7.6		19.7		79.9		5.6		15.8		9		-				-		-	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	4.4	0.0	199	27.7	27.7	7.6	7.6	20.2	20.2	81.7	82.0	5.7	5.8	21.9		19		-				-		-	
						4.4	0.0	213	27.7		7.6		20.2		82.3		5.8		21.8		19		-				-		-	
SR7	Cloudy	Moderate	20:13	15.6	Surface	1.0	0.1	211	27.2	27.2	7.7	7.7	25.2	25.2	73.4	73.4	5.1	5.0	12.7	15.2	9	9	-	-	823616	823727	-	-	-	-
						1.0	0.1	226	27.2		7.7		25.2		73.4		5.1		12.7		9		-				-		-	
					Middle	7.8	0.0	221	27.1	27.1	7.7	7.7	26.5	26.5	71.3	71.3	4.9		16.6		10		-				-		-	
						7.8	0.0	232	27.1		7.7		26.5		71.3		4.9		16.6		8		-				-		-	
					Bottom	14.6	0.1	70	26.9	26.9	7.7	7.7	28.9	28.9	72.4	72.4	4.9	4.9	16.2		9		-				-		-	
						14.6	0.1	75	26.9		7.7		28.9		72.4		4.9		16.2		8		-				-		-	
SR8	Cloudy	Moderate	18:50	4.7	Surface	1.0	0.0	0	28.8	28.8	7.5	7.5	15.5	15.5	83.1	83.1	5.9	5.9	19.6	18.4	7	6	-	-	820246	811418	-	-	-	-
						1.0	0.0	0	28.8		7.5		15.5		83.1		5.9		19.6		6		-				-		-	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	3.7	0.0	0	28.9	28.9	7.5	7.5	17.6	17.6	86.0	86.0	6.0	6.0	17.2		6		-				-		-	
						3.7	0.0	0	28.9		7.5		17.6		86.0		6.0		17.2		6		-				-		-	

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

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

Water Quality Monitoring

Water Quality Monitoring Results on 07 September 17 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
C1	Rainy	Moderate	13:12	8.9	Surface	1.0	0.6	43	27.8	27.8	7.6	7.6	20.0	20.0	73.9	73.9	5.2	5.1	9.8	27.2	9	11	88	91	815626	804236	<0.2	<0.2	1.4	1.4
						1.0	0.6	45	27.8		7.6		19.9		73.8		5.2		9.9		11		89				<0.2		1.0	
					Middle	4.5	0.8	42	27.7	27.7	7.7	7.7	24.5	24.4	72.3	72.3	5.0		16.9		9		91				<0.2		1.1	
						4.5	0.8	42	27.7		7.7		24.3		72.2		5.0		16.8		9		92				<0.2		1.4	
					Bottom	7.9	0.5	35	27.4	27.5	7.7	7.7	27.1	27.0	71.2	71.3	4.8	4.9	55.7		12		93				<0.2		1.8	
						7.9	0.6	38	27.5		7.7		26.9		71.3		4.9		54.0		14		94				<0.2		1.7	
C2	Cloudy	Moderate	11:55	12.5	Surface	1.0	0.5	357	28.5	28.5	7.4	7.4	15.1	15.1	67.5	67.5	4.8	4.8	10.3	20.4	11	18	88	90	825689	806927	<0.2	<0.2	2.2	1.8
						1.0	0.5	328	28.5		7.4		15.1		67.5		4.8		10.3		10		88				<0.2		2.0	
					Middle	6.3	0.4	359	28.1	28.1	7.5	7.5	19.6	19.6	68.3	68.3	4.8		14.3		13		89				<0.2		1.8	
						6.3	0.5	330	28.1		7.5		19.6		68.3		4.8		14.4		14		90				<0.2		1.8	
					Bottom	11.5	0.4	352	27.9	27.9	7.5	7.5	21.3	21.3	71.1	71.1	5.0	5.0	36.4		28		94				<0.2		1.5	
						11.5	0.4	324	27.9		7.5		21.3		71.1		5.0		36.4		30		93				<0.2		1.6	
C3	Cloudy	Moderate	13:53	11.6	Surface	1.0	0.5	266	28.1	28.1	7.6	7.6	20.6	20.6	71.5	71.5	5.0	5.0	10.5	10.5	10	10	90	93	822128	817803	<0.2	<0.2	1.6	1.5
						1.0	0.6	269	28.1		7.6		20.6		71.4		5.0		10.6		10		90				<0.2		1.7	
					Middle	5.8	0.6	257	27.9	27.9	7.6	7.6	22.7	22.7	71.3	71.4	4.9		10.3		9		93				<0.2		1.5	
						5.8	0.6	282	27.9		7.6		22.7		71.4		4.9		10.2		10		93				<0.2		1.5	
					Bottom	10.6	0.5	265	27.8	27.8	7.6	7.6	23.5	23.5	72.8	72.9	5.0	5.0	10.6		9		96				<0.2		1.4	
						10.6	0.5	283	27.8		7.6		23.4		72.9		5.0		10.8		11		96				<0.2		1.3	
IM1	Rainy	Moderate	12:54	7.8	Surface	1.0	0.7	11	27.8	27.8	7.7	7.7	22.4	22.4	71.6	71.6	5.0	5.0	9.7	20.0	6	9	89	91	818339	806451	<0.2	<0.2	1.8	1.4
						1.0	0.8	11	27.8		7.7		22.4		71.6		5.0		9.8		7		89				<0.2		1.8	
					Middle	3.9	0.7	14	27.7	27.7	7.7	7.7	23.5	23.5	71.8	71.8	5.0		15.4		7		91				<0.2		1.5	
						3.9	0.8	14	27.7		7.7		23.5		71.8		5.0		15.4		8		91				<0.2		1.5	
					Bottom	6.8	0.5	356	27.6	27.6	7.7	7.7	25.0	25.0	72.5	72.7	5.0	5.0	34.9		13		93				<0.2		1.0	
						6.8	0.5	328	27.6		7.7		25.0		72.8		5.0		34.5		11		94				<0.2		0.9	
IM2	Rainy	Moderate	12:47	8.9	Surface	1.0	0.6	12	27.8	27.8	7.7	7.7	22.5	22.5	71.9	71.9	5.0	5.0	12.1	16.9	5	8	86	89	818871	806184	<0.2	<0.2	1.0	1.3
						1.0	0.7	12	27.8		7.7		22.5		71.9		5.0		12.1		5		86				<0.2		1.0	
					Middle	4.5	0.7	17	27.8	27.8	7.7	7.7	22.6	22.6	71.8	71.8	5.0		14.9		9		88				<0.2		1.1	
						4.5	0.7	17	27.8		7.7		22.6		71.8		5.0		14.9		10		89				<0.2		1.1	
					Bottom	7.9	0.4	3	27.6	27.6	7.7	7.7	25.0	25.0	72.7	72.7	5.0	5.0	23.8		10		91				<0.2		1.8	
						7.9	0.5	3	27.6		7.7		25.0		72.7		5.0		23.8		10		92				<0.2		1.7	
IM3	Rainy	Moderate	12:39	9.2	Surface	1.0	0.6	9	27.9	27.9	7.7	7.7	22.0	22.0	71.6	71.5	5.0	5.0	11.5	22.4	4	9	86	89	819412	806016	<0.2	<0.2	1.6	1.3
						1.0	0.7	9	27.9		7.7		22.0		71.4		5.0		11.5		5		86				<0.2		1.5	
					Middle	4.6	0.6	18	27.8	27.8	7.7	7.7	22.5	22.5	70.5	70.5	4.9		13.6		8		89				<0.2		1.3	
						4.6	0.6	18	27.8		7.7		22.5		70.5		4.9		13.7		7		89				<0.2		1.3	
					Bottom	8.2	0.4	21	27.4	27.4	7.7	7.7	26.7	26.7	69.6	69.7	4.7	4.8	42.0		13		93				<0.2		0.9	
						8.2	0.4	22	27.4		7.7		26.7		69.7		4.8		41.8		15		93				<0.2		1.0	
IM4	Rainy	Moderate	12:29	8.3	Surface	1.0	0.6	9	27.9	27.9	7.6	7.6	19.9	19.9	71.5	71.5	5.0	5.0	10.7	19.5	5	6	86	90	819570	805019	<0.2	<0.2	1.2	1.3
						1.0	0.6	9	27.9		7.6		19.9		71.4		5.0		10.8		6		86				<0.2		1.2	
					Middle	4.2	0.6	13	27.9	27.9	7.6	7.6	20.5	20.5	71.2	71.2	5.0		13.1		5		91				<0.2		1.2	
						4.2	0.7	14	27.9		7.6		20.5		71.2		5.0		13.6		6		91				<0.2		1.3	
					Bottom	7.3	0.4	4	27.4	27.4	7.7	7.7	26.6	26.6	70.2	70.2	4.8	4.8	34.3		6		93				<0.2		1.4	
						7.3	0.4	4	27.4		7.7		26.6		70.2		4.8		34.3		6		94				<0.2		1.4	
IM5	Cloudy	Moderate	12:17	7.5	Surface	1.0	0.8	11	27.9	27.9	7.6	7.6	20.4	20.4	71.1	71.1	5.0	5.0	11.5	18.0	6	7	86	89	820546	804921	<0.2	<0.2	1.4	1.1
						1.0	0.9	11	27.9		7.6		20.4		71.0		5.0		11.6		5		87				<0.2		1.3	
					Middle	3.8	0.8	16	27.8	27.9	7.6	7.6	21.9	21.4	70.8	70.9	4.9		16.4		6		90				<0.2		1.1	
						3.8	0.8	16	27.9		7.6		20.8		70.9		5.0		15.7		6		90				<0.2		1.1	
					Bottom	6.5	0.4	8	27.8	27.8	7.7	7.7	22.9	22.0	70.7	70.8	4.9	5.0	26.0		10		91				<0.2		0.8	
						6.5	0.5	8	27.8		7.6		21.1		70.8		5.0		26.6		11		91				<0.2		0.8	
IM6	Cloudy	Moderate	12:10	7.7	Surface	1.0	0.6	36	27.8	27.8	7.7	7.7	22.0	22.0	70.7	70.7	4.9	4.9	16.3	23.4	12	11	86	89	821079	805834	<0.2	<0.2	1.0	1.1
						1.0	0.6	39	27.8		7.7		22.0		70.7		4.9		16.4		11		86				<0.2		1.0	
					Middle	3.9	0.4	32	27.6	27.7	7.7	7.7	23.9	23.8	69.5	69.6	4.8		21.6		11		89				<0.2		1.1	
						3.9	0.4	33	27.7		7.7		23.7		69.6		4.8		21.5		12		89				<0.2		1.1	
					Bottom	6.7	0.3	31	27.5	27.5	7.7	7.7	25.1	25.1	69.3	69.3	4.8	4.8	32.2		11		93				<0.2		1.3	
						6.7	0.3	32	27.5		7.7		25.0		69.3		4.8		32.5		10		93				<0.2		1.3	
IM7	Cloudy	Moderate	12:00	8.6	Surface	1.0	0.5	47	27.9	27.9	7.7	7.7	22.0	21.6	71.2	71.2	4.9	5.0	14.7	18.6	14	15	83	89	821335	806850	<0.2	<0.2	1.1	1.2
						1.0	0.5	47	27.9		7.7		21.2		71.2		5.0		14.9		16		84				<0.2		1.1	
					Middle	4.3	0.5	35	27.7	27.7	7.7	7.7	23.2	23.2	71.7	71.8	5.0		19.4		15		89				<0.2		1.1	
						4.3	0.6	37	27.7		7.7		23.2		71.8		5.0		19.5		16		89				<0.2		1.3	
					Bottom	7.6	0.3	49	27.7	27.7	7.7	7.7	23.6	23.7	73.6	74.1	5.1	5.1	21.2		14		93				<0.2		1.4	
						7.6	0.3	51	27.7		7.7		23.8		74.5		5.1		22.1		14		94				<0.2		1.2	
IM8	Cloudy	Moderate	12:21	8.8	Surface	1.0	0.3	15	28.3	28.3	7.5	7.5	16.2	16.2	68.0	68.0	4.8	4.9	12.8	17.8	9	9	87	90	821683	807831	<0.2	<0.2	1.9	1.7
						1.0	0.3	16	28.3		7.5		16.2		68.0		4.8		12.9		8		87				<0.2		2.0	
					Middle	4.4	0.4	5	28.3	28.3	7.6	7.6	16.5	16.5	68.9	69.0	4.9		14.6		9		88				<0.2		1.8	
						4.4	0.5	5	28.3		7.6		16.5		69.0		4.9		14.6		8		89				<0.2		1.8	
					Bottom	7.8	0.3	8	28.3	28.3	7.6	7.6	18.0	18.0	70.6	70.6	5.0	5.0	25.8		11		93				<0.2		1.4	
						7.8	0.4	8	28.3		7.6		18.0		70.6		5.0		25.8		11		93				<0.2		1.4	

DA: Depth-Averaged

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

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

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

Water Quality Monitoring

Water Quality Monitoring Results on 07 September 17 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
IM9	Rainy	Moderate	12:28	7.7	Surface	1.0	0.4	350	28.3	28.3	7.5	7.5	16.1	16.1	70.8	70.8	5.0	5.0	12.0	19.2	5	9	86	89	822106	808817	<0.2	<0.2	2.3	1.9
						1.0	0.4	322	28.3		7.5		16.1		70.8		5.0		12.0		4		87				<0.2		2.1	
					Middle	3.9	0.3	338	28.3	28.3	7.6	7.6	17.6	17.6	69.3	69.3	4.9		18.9		5		89				<0.2		2.0	
						3.9	0.3	338	28.3		7.6		17.6		69.3		4.9		19.0		5		89				<0.2		2.0	
					Bottom	6.7	0.4	322	28.3	28.3	7.7	7.7	18.3	18.3	70.4	70.4	5.0	5.0	26.7		17		92				<0.2		1.5	
						6.7	0.4	353	28.3		7.7		18.3		70.4		5.0		26.3		16		93				<0.2		1.5	
IM10	Rainy	Moderate	12:38	8.3	Surface	1.0	0.8	302	28.3	28.3	7.6	7.6	18.4	18.4	70.4	70.4	5.0	5.0	11.0	22.0	3	6	87	90	822242	809829	<0.2	<0.2	2.3	2.3
						1.0	0.9	323	28.3		7.6		18.4		70.4		5.0		11.0		4		87				<0.2		2.4	
					Middle	4.2	0.7	304	28.2	28.2	7.6	7.6	20.5	20.5	70.4	70.4	4.9		23.3		4		88				<0.2		2.6	
						4.2	0.7	315	28.2		7.6		20.5		70.4		4.9		23.4		6		89				<0.2		2.5	
					Bottom	7.3	0.6	310	28.1	28.1	7.7	7.7	21.5	21.5	72.4	72.5	5.0	5.0	31.9		8		93				<0.2		2.2	
						7.3	0.6	314	28.1		7.7		21.5		72.5		5.0		31.1		9		93				<0.2		1.9	
IM11	Rainy	Moderate	12:55	8.9	Surface	1.0	0.8	286	28.3	28.3	7.6	7.6	18.7	18.7	71.8	71.8	5.0	5.0	11.2	19.7	9	9	86	91	821512	810546	<0.2	<0.2	2.0	1.7
						1.0	0.8	297	28.3		7.6		18.7		71.7		5.0		11.2		10		87				<0.2		2.2	
					Middle	4.5	0.8	284	28.3	28.3	7.6	7.6	19.3	19.3	71.6	71.6	5.0		12.9		10		91				<0.2		1.6	
						4.5	0.8	297	28.3		7.6		19.3		71.6		5.0		12.9		8		92				<0.2		1.6	
					Bottom	7.9	0.6	296	28.0	28.0	7.6	7.6	22.1	22.1	73.9	74.0	5.1	5.1	35.2		9		94				<0.2		1.4	
						7.9	0.6	311	28.0		7.6		22.0		74.0		5.1		34.9		10		93				<0.2		1.6	
IM12	Rainy	Moderate	13:02	9.4	Surface	1.0	0.9	270	28.4	28.4	7.6	7.6	18.2	18.2	71.8	71.8	5.1	5.1	12.1	15.7	8	9	88	90	821175	811537	<0.2	<0.2	1.8	1.7
						1.0	0.9	283	28.4		7.6		18.2		71.8		5.1		12.2		8		88				<0.2		1.8	
					Middle	4.7	0.8	274	28.2	28.2	7.6	7.6	19.9	20.0	71.6	71.6	5.0		14.4		8		88				<0.2		1.5	
						4.7	0.9	284	28.2		7.6		20.0		71.5		5.0		14.5		9		88				<0.2		1.6	
					Bottom	8.4	0.6	279	28.1	28.1	7.6	7.6	21.4	21.5	71.1	71.1	4.9	4.9	20.4		10		92				<0.2		1.8	
						8.4	0.6	294	28.1		7.6		21.5		71.1		4.9		20.6		9		93				<0.2		1.9	
SR2	Rainy	Moderate	13:34	4.5	Surface	1.0	0.1	289	28.2	28.2	7.6	7.6	19.4	19.4	72.0	72.0	5.0	5.0	15.0	16.5	8	13	89	90	821459	814147	<0.2	<0.2	1.7	1.6
						1.0	0.1	299	28.2		7.6		19.4		72.0		5.0		15.2		7		89				<0.2		1.8	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	3.5	0.1	253	28.1	28.1	7.6	7.6	20.6	20.6	72.5	72.6	5.1	5.1	17.8		18		91				<0.2		1.4	
						3.5	0.1	257	28.1		7.6		20.6		72.6		5.1		17.9		19		92				<0.2		1.5	
SR3	Cloudy	Moderate	12:17	9.2	Surface	1.0	0.3	9	28.3	28.3	7.5	7.5	16.9	16.9	68.2	68.3	4.8	4.9	13.7	15.1	8	10	-	-	822165	807567	-	-	-	-
						1.0	0.3	9	28.3		7.5		16.9		68.3		4.8		13.8		8		-				-		-	
					Middle	4.6	0.3	1	28.3	28.3	7.6	7.6	17.5	17.5	68.8	68.9	4.9		15.7		7		-				-		-	
						4.6	0.4	1	28.3		7.6		17.5		68.9		4.9		15.8		8		-				-		-	
					Bottom	8.2	0.2	353	28.2	28.2	7.6	7.6	18.1	18.1	71.1	71.2	5.0	5.0	15.7		14		-				-		-	
						8.2	0.2	354	28.2		7.6		18.1		71.2		5.0		15.8		15		-				-		-	
SR4A	Rainy	Moderate	13:37	9.2	Surface	1.0	0.5	249	28.0	28.0	7.6	7.6	21.5	21.5	73.2	73.2	5.1	5.1	15.4	19.4	16	18	-	-	817169	807813	-	-	-	-
						1.0	0.5	273	28.0		7.6		21.5		73.1		5.1		15.5		16		-				-		-	
					Middle	4.6	0.4	252	28.0	28.0	7.6	7.6	21.7	21.7	72.7	72.7	5.0		17.7		17		-				-		-	
						4.6	0.5	277	28.0		7.6		21.7		72.7		5.0		17.7		17		-				-		-	
					Bottom	8.2	0.3	255	27.6	27.6	7.7	7.7	25.7	25.7	71.0	71.3	4.9	4.9	25.2		21		-				-		-	
						8.2	0.3	264	27.6		7.7		25.7		71.5		4.9		25.1		22		-				-		-	
SR5A	Cloudy	Calm	13:55	3.6	Surface	1.0	0.4	293	28.0	28.0	7.6	7.6	21.1	21.1	75.6	75.7	5.3	5.3	15.2	16.3	9	10	-	-	816586	810713	-	-	-	-
						1.0	0.4	312	28.0		7.6		21.1		75.7		5.3		15.2		10		-				-		-	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	2.6	0.4	297	28.0	28.0	7.6	7.6	21.2	21.2	79.3	79.4	5.5	5.5	17.3		11		-				-		-	
						2.6	0.4	314	28.0		7.6		21.2		79.5		5.5		17.3		10		-				-		-	
SR6	Cloudy	Calm	14:32	4.0	Surface	1.0	0.1	272	28.0	28.0	7.5	7.5	20.0	20.0	73.6	73.6	5.2	5.2	11.2	11.6	9	12	-	-	817884	814661	-	-	-	-
						1.0	0.1	293	28.0		7.5		20.0		73.6		5.2		11.2		10		-				-		-	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	3.0	0.1	288	27.9	27.9	7.5	7.5	20.5	20.5	75.5	75.6	5.3	5.3	11.9		15		-				-		-	
						3.0	0.1	290	27.9		7.5		20.5		75.7		5.3		11.9		15		-				-		-	
SR7	Cloudy	Moderate	14:20	17.3	Surface	1.0	0.1	233	28.1	28.1	7.5	7.5	20.5	20.6	72.5	72.5	5.1	5.1	8.3	7.2	5	5	-	-	823655	823741	-	-	-	-
						1.0	0.1	239	28.1		7.5		20.6		72.5		5.1		8.3		4		-				-		-	
					Middle	8.7	0.3	189	28.1	28.1	7.5	7.5	21.1	21.1	72.5	72.5	5.0		7.5		5		-				-		-	
						8.7	0.3	189	28.1		7.5		21.1		72.5		5.0		7.4		4		-				-		-	
					Bottom	16.3	0.1	209	28.0	28.0	7.5	7.5	21.6	21.6	73.0	73.9	5.1	5.2	5.8		6		-				-		-	
						16.3	0.1	229	28.0		7.5		21.6		74.7		5.2		5.6		6		-				-		-	
SR8	Rainy	Moderate	13:13	4.1	Surface	1.0	-	-	28.6	28.6	7.5	7.5	17.6	17.6	73.0	73.0	5.1	5.1	15.5	17.3	8	7	-	-	820246	811418	-	-	-	-
						1.0	-	-	28.6		7.5		17.6		72.9		5.1		15.6		7		-				-		-	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	3.1	-	-	28.4	28.4	7.5	7.5	17.9	17.9	72.9	73.0	5.1	5.1	19.1		7		-				-		-	
						3.1	-	-	28.4		7.5		17.9		73.0		5.1		19.1		7		-				-		-	

DA: Depth-Averaged

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

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

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

Water Quality Monitoring

Water Quality Monitoring Results on 07 September 17 during Mid-Flood Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity(NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)	
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA
C1	Cloudy	Moderate	07:07	8.8	Surface	1.0	0.6	229	28.0	28.0	7.7	7.7	22.9	22.3	75.0	74.8	5.2	5.0	8.8	23.2	4	10	81	86	815611	804266	<0.2	<0.2	1.9	1.4
						1.0	0.6	250	27.9		7.7		21.6		74.6		5.2		9.1		6		82				<0.2		1.7	
					Middle	4.4	0.8	202	27.4	27.4	7.8	7.8	27.9	28.0	71.0	71.1	4.8		13.2		9		86				<0.2		1.4	
						4.4	0.8	211	27.4		7.8		28.0		71.1		4.8		13.4		8		86				<0.2		1.5	
					Bottom	7.8	0.5	217	27.2	27.2	7.8	7.8	29.9	30.0	72.6	73.0	4.9	4.9	46.4		15		91				<0.2		1.0	
						7.8	0.5	223	27.2		7.8		30.0		73.3		4.9		48.4		16		92				<0.2		1.1	
C2	Cloudy	Moderate	08:00	12.5	Surface	1.0	0.8	172	28.2	28.2	7.5	7.5	19.8	19.8	68.0	68.0	4.8	4.8	16.7	15.8	5	7	86	89	825670	806932	<0.2	<0.2	2.7	2.2
						1.0	0.8	186	28.2		7.5		19.8		68.0		4.8		16.7		5		85				<0.2		3.0	
					Middle	6.3	0.6	170	28.0	28.0	7.5	7.5	20.9	20.9	68.3	68.3	4.8		17.5		6		88				<0.2		2.1	
						6.3	0.6	173	28.0		7.5		20.9		68.3		4.8		17.4		5		89				<0.2		2.1	
					Bottom	11.5	0.4	157	28.0	28.0	7.5	7.5	21.4	21.4	68.9	69.0	4.8	4.8	13.3		10		92				<0.2		1.6	
						11.5	0.4	172	28.0		7.5		21.4		69.0		4.8		13.1		9		92				<0.2		1.7	
C3	Fine	Moderate	05:59	11.8	Surface	1.0	0.5	111	28.0	28.0	7.7	7.7	23.2	23.2	71.7	71.7	4.9	4.9	12.8	12.9	4	5	89	92	822099	817802	<0.2	<0.2	1.9	1.7
						1.0	0.5	121	28.0		7.7		23.2		71.7		4.9		12.6		3		90				<0.2		2.2	
					Middle	5.9	0.2	107	27.9	27.9	7.7	7.7	23.9	23.9	71.5	71.6	4.9		12.9		6		91				<0.2		1.8	
						5.9	0.3	108	27.9		7.7		23.9		71.6		4.9		12.9		6		91				<0.2		1.8	
					Bottom	10.8	0.2	68	27.9	27.9	7.7	7.7	24.1	24.1	72.1	72.1	4.9	5.0	13.2		6		95				<0.2		1.4	
						10.8	0.2	68	27.9		7.7		24.1		72.1		5.0		13.2		7		96				<0.2		1.3	
IM1	Cloudy	Moderate	07:25	7.7	Surface	1.0	0.3	183	27.8	27.8	7.7	7.7	23.5	23.5	74.5	74.4	5.1	5.1	8.7	12.9	4	10	86	89	818361	806440	<0.2	<0.2	1.3	1.4
						1.0	0.4	188	27.8		7.7		23.5		74.2		5.1		8.8		6		86				<0.2		1.6	
					Middle	3.9	0.4	179	27.7	27.7	7.7	7.7	25.3	25.3	73.1	73.1	5.0		10.5		8		88				<0.2		1.4	
						3.9	0.4	182	27.7		7.7		25.3		73.0		5.0		11.3		8		89				<0.2		1.6	
					Bottom	6.7	0.2	173	27.3	27.3	7.8	7.8	28.8	28.8	72.4	73.7	4.9	5.0	19.5		16		91				<0.2		1.4	
						6.7	0.2	182	27.3		7.8		28.8		75.0		5.1		18.6		16		91				<0.2		1.3	
IM2	Cloudy	Moderate	07:32	9.3	Surface	1.0	0.4	205	27.9	27.9	7.7	7.7	22.8	22.9	74.9	74.9	5.2	5.0	9.0	15.1	11	10	86	89	818870	806200	<0.2	<0.2	1.4	1.3
						1.0	0.4	218	27.9		7.7		22.9		74.8		5.2		9.1		10		87				<0.2		1.4	
					Middle	4.7	0.4	205	27.4	27.4	7.7	7.7	27.3	27.3	70.8	70.8	4.8		17.6		11		88				<0.2		1.1	
						4.7	0.4	214	27.4		7.7		27.3		70.8		4.8		17.4		11		89				<0.2		1.2	
					Bottom	8.3	0.2	189	27.3	27.3	7.8	7.8	28.6	28.6	70.7	70.8	4.8	4.8	18.7		9		93				<0.2		1.5	
						8.3	0.2	207	27.3		7.8		28.6		70.9		4.8		18.8		9		93				<0.2		1.4	
IM3	Cloudy	Moderate	07:39	8.9	Surface	1.0	0.2	217	27.9	27.9	7.7	7.7	22.6	22.6	74.4	74.5	5.2	5.1	9.2	25.4	10	10	86	89	819425	806010	<0.2	<0.2	1.3	1.5
						1.0	0.2	237	27.9		7.7		22.5		74.5		5.2		9.4		8		86				<0.2		1.5	
					Middle	4.5	0.4	189	27.6	27.6	7.7	7.7	26.4	26.4	71.7	71.8	4.9		17.7		11		89				<0.2		1.4	
						4.5	0.5	204	27.6		7.7		26.3		71.8		4.9		17.7		10		89				<0.2		1.5	
					Bottom	7.9	0.2	219	27.4	27.4	7.7	7.7	27.9	27.9	72.6	72.9	4.9	5.0	49.4		9		92				<0.2		1.7	
						7.9	0.2	228	27.4		7.7		27.8		73.1		5.0		48.9		10		92				<0.2		1.6	
IM4	Cloudy	Moderate	07:53	8.4	Surface	1.0	0.3	187	28.2	28.2	7.7	7.7	23.9	23.8	77.2	77.2	5.3	5.1	8.5	18.8	10	10	84	89	819554	805038	<0.2	<0.2	2.0	2.0
						1.0	0.3	200	28.2		7.7		23.7		77.1		5.3		8.6		10		85				<0.2		1.9	
					Middle	4.2	0.5	170	27.5	27.5	7.8	7.8	27.4	27.4	72.0	72.1	4.9		15.0		9		89				<0.2		2.0	
						4.2	0.5	180	27.5		7.8		27.4		72.1		4.9		15.4		9		89				<0.2		2.1	
					Bottom	7.4	0.4	172	27.3	27.3	7.7	7.7	27.8	27.9	73.2	73.6	5.0	5.0	31.1		10		93				<0.2		1.9	
						7.4	0.5	175	27.3		7.7		28.0		73.9		5.0		34.1		9		94				<0.2		2.0	
IM5	Cloudy	Moderate	08:05	7.5	Surface	1.0	0.2	142	28.0	28.0	7.7	7.7	25.1	25.1	75.5	75.4	5.1	5.0	8.3	21.0	9	9	86	89	820576	804905	<0.2	<0.2	1.9	2.0
						1.0	0.2	150	28.0		7.7		25.0		75.3		5.1		8.4		8		86				<0.2		1.9	
					Middle	3.8	0.1	145	27.5	27.5	7.8	7.8	27.4	27.4	71.4	71.4	4.8		11.6		10		88				<0.2		2.1	
						3.8	0.2	154	27.5		7.8		27.4		71.3		4.8		11.8		10		89				<0.2		2.1	
					Bottom	6.5	0.1	144	27.3	27.3	7.8	7.8	28.7	28.7	72.1	72.6	4.9	4.9	44.1		9		91				<0.2		1.9	
						6.5	0.1	144	27.3		7.8		28.7		73.0		4.9		41.7		10		91				<0.2		1.9	
IM6	Cloudy	Moderate	08:14	7.5	Surface	1.0	0.2	146	28.1	28.1	7.7	7.7	23.8	23.8	73.2	73.2	5.0	4.9	13.4	17.7	14	18	85	88	821071	805813	<0.2	<0.2	1.9	1.8
						1.0	0.2	159	28.1		7.7		23.8		73.1		5.0		13.5		14		85				<0.2		2.1	
					Middle	3.8	0.3	168	27.5	27.5	7.7	7.7	26.3	26.3	71.0	71.0	4.8		17.5		20		87				<0.2		1.8	
						3.8	0.4	180	27.5		7.7		26.3		71.0		4.8		17.5		20		87				<0.2		1.8	
					Bottom	6.5	0.2	130	27.4	27.4	7.7	7.7	27.1	27.1	71.2	71.2	4.9	4.9	22.0		19		91				<0.2		1.6	
						6.5	0.2	130	27.4		7.7		27.1		71.2		4.9		22.0		20		92				<0.2		1.6	
IM7	Cloudy	Moderate	08:23	9.0	Surface	1.0	0.2	99	27.7	27.7	7.7	7.7	24.7	24.7	72.9	72.9	5.0	5.0	15.8	26.4	8	14	87	91	821349	806840	<0.2	<0.2	2.6	2.0
						1.0	0.3	104	27.7		7.7		24.7		72.9		5.0		16.1		8		88				<0.2		2.6	
					Middle	4.5	0.3	135	27.6	27.6	7.7	7.7	25.1	25.1	72.1	72.2	4.9		20.0		15		91				<0.2		2.0	
						4.5	0.3	141	27.6		7.7		25.1		72.2		4.9		20.4		15		91				<0.2		1.8	
					Bottom	8.0	0.2	61	27.5	27.5	7.7	7.7	26.4	26.4	70.7	70.8	4.8	4.8	42.7		19		94				<0.2		1.6	
						8.0	0.2	63	27.5		7.7		26.4		70.8		4.8		43.1		19		95				<0.2		1.6	
IM8	Cloudy	Moderate	07:33	8.6	Surface	1.0	0.3	142	28.2	28.2	7.6	7.6	20.7	20.7	71.5	71.5	5.0	5.1	14.7	15.7	5	8	85	88	821682	807851	<0.2	<0.2	2.9	2.7
						1.0	0.4	145	28.2		7.6		20.7		71.5		5.0		14.7		6		85				<0.2		2.8	
					Middle	4.3	0.3	94	28.1	28.1	7.7	7.7	22.5	22.5	73.4	73.5	5.1		15.9		8		88				<0.2		2.7	
						4.3	0.3	97	28.1		7.7		22.4		73.5		5.1		16.0		8		88				<0.2		2.5	
					Bottom	7.6	0.3	73	27.9	27.9	7.7	7.7	24.5	24.5	75.2	75.3	5.1	5.2	16.3		11		90				<0.2		2.4	
						7.6	0.3	75	27.9		7.7		24.5		75.3		5.2		16.3		12		91				<0.2		2.7	

DA: Depth-Averaged

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

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

Expansion of Hong Kong International Airport into a Three-Runway System
Water Quality Monitoring
Water Quality Monitoring Results on 07 September 17 during Mid-Flood Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity(NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)	
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA
IM9	Cloudy	Moderate	07:25	7.6	Surface	1.0	0.4	159	28.5	28.5	7.6	7.6	19.2	19.2	70.4	70.5	4.9	4.9	11.3	22.0	8	11	86	89	822085	808804	<0.2	<0.2	2.8	2.5
						1.0	0.4	174	28.5		7.6		19.2		70.5		4.9		11.3		7		86				<0.2		2.6	
					Middle	3.8	0.3	135	28.0	28.0	7.7	7.7	22.3	22.3	70.0	70.1	4.8		19.3		8		88				<0.2		2.7	
						3.8	0.3	143	28.0		7.7		22.3		70.1		4.8		19.4		7		89				<0.2		2.4	
					Bottom	6.6	0.3	64	27.8	27.8	7.7	7.7	24.6	24.6	72.9	73.0	5.0	5.0	35.4		16		91				<0.2		2.2	
						6.6	0.4	66	27.8		7.7		24.6		73.0		5.0		35.1		18		92				<0.2		2.2	
IM10	Cloudy	Moderate	07:17	6.6	Surface	1.0	0.8	118	28.1	28.1	7.6	7.6	21.2	21.2	70.5	70.5	4.9	4.9	14.4	22.1	6	16	87	89	822240	809845	<0.2	<0.2	2.2	2.0
						1.0	0.8	129	28.1		7.6		21.2		70.5		4.9		14.4		5		87				<0.2		2.4	
					Middle	3.3	0.5	104	28.0	28.0	7.6	7.6	21.8	21.8	70.1	70.1	4.9		21.1		5		88				<0.2		2.2	
						3.3	0.5	109	28.0		7.6		21.8		70.1		4.9		21.3		6		88				<0.2		2.1	
					Bottom	5.6	0.5	95	27.9	27.9	7.7	7.7	23.4	23.4	72.6	72.7	5.0	5.0	30.7		35		91				<0.2		1.6	
						5.6	0.5	101	27.9		7.7		23.4		72.7		5.0		30.5		37		91				<0.2		1.7	
IM11	Cloudy	Moderate	07:01	8.2	Surface	1.0	0.7	118	28.8	28.8	7.6	7.6	18.5	18.5	72.4	72.4	5.1	5.0	11.3	19.3	8	8	86	88	821518	810543	<0.2	<0.2	2.1	2.1
						1.0	0.7	123	28.8		7.6		18.5		72.3		5.0		11.3		7		87				<0.2		1.9	
					Middle	4.1	0.5	97	28.2	28.2	7.7	7.7	21.3	21.3	72.7	72.7	5.0		17.3		7		88				<0.2		2.2	
						4.1	0.5	104	28.2		7.7		21.3		72.7		5.0		17.4		7		88				<0.2		2.0	
					Bottom	7.2	0.4	76	28.1	28.1	7.7	7.7	24.2	24.2	79.5	79.5	5.4	5.4	30.2		9		90				<0.2		2.2	
						7.2	0.5	82	28.1		7.7		24.1		79.5		5.4		28.5		7		91				<0.2		2.0	
IM12	Cloudy	Moderate	06:55	7.4	Surface	1.0	0.8	115	28.3	28.3	7.6	7.6	20.2	20.2	71.6	71.6	5.0	5.1	14.0	19.0	7	7	88	90	821163	811535	<0.2	<0.2	2.1	2.2
						1.0	0.9	119	28.3		7.6		20.2		71.6		5.0		14.0		8		88				<0.2		2.3	
					Middle	3.7	0.7	96	28.3	28.3	7.7	7.7	20.7	20.7	72.7	72.7	5.1		18.4		7		90				<0.2		2.3	
						3.7	0.7	105	28.3		7.7		20.6		72.7		5.1		18.4		6		90				<0.2		2.7	
					Bottom	6.4	0.5	73	28.2	28.2	7.8	7.8	22.5	22.5	75.2	75.3	5.2	5.2	24.8		6		92				<0.2		2.0	
						6.4	0.5	75	28.2		7.8		22.5		75.4		5.2		24.3		7		92				<0.2		1.8	
SR2	Fine	Moderate	06:21	4.4	Surface	1.0	0.6	73	28.2	28.2	7.7	7.7	21.7	21.7	74.1	74.2	5.1	5.1	20.8	20.4	4	9	88	89	821481	814147	<0.2	<0.2	2.8	2.4
						1.0	0.6	75	28.2		7.7		21.6		74.2		5.1		20.9		4		88				<0.2		2.5	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	3.4	0.4	74	28.2	28.2	7.7	7.7	22.2	22.2	83.8	84.0	5.8	5.8	20.1		12		90				<0.2		2.1	
						3.4	0.4	80	28.2		7.7		22.2		84.2		5.8		19.8		15		91				<0.2		2.1	
SR3	Cloudy	Moderate	07:38	9.2	Surface	1.0	0.4	176	28.3	28.3	7.6	7.6	19.2	19.2	70.3	70.3	4.9	4.9	13.5	16.8	5	7	-	-	822143	807555	-	-	-	-
						1.0	0.4	188	28.3		7.6		19.2		70.3		4.9		13.7		6		-				-		-	
					Middle	4.6	0.2	140	28.0	28.0	7.6	7.6	21.8	21.9	71.2	71.3	4.9		17.9		4		-				-		-	
						4.6	0.2	148	28.0		7.6		21.9		71.3		4.9		18.0		4		-				-		-	
					Bottom	8.2	0.2	73	28.0	28.0	7.7	7.7	22.6	22.6	74.6	74.7	5.2	5.2	18.8		10		-				-		-	
						8.2	0.2	73	28.0		7.7		22.6		74.8		5.2		18.7		11		-				-		-	
SR4A	Cloudy	Calm	06:46	8.4	Surface	1.0	0.2	66	28.0	28.0	7.7	7.7	23.2	23.2	75.7	75.7	5.2	5.0	11.2	22.4	15	14	-	-	817197	807795	-	-	-	-
						1.0	0.2	70	28.0		7.7		23.2		75.7		5.2		11.2		14		-				-		-	
					Middle	4.2	0.2	69	27.4	27.4	7.7	7.7	27.3	27.3	69.0	69.0	4.7		25.3		13		-				-		-	
						4.2	0.3	70	27.4		7.7		27.3		68.9		4.7		25.1		13		-				-		-	
					Bottom	7.4	0.2	55	27.4	27.4	7.7	7.7	27.8	27.8	69.1	69.2	4.7	4.7	30.5		14		-				-		-	
						7.4	0.2	55	27.4		7.7		27.8		69.2		4.7		30.9		15		-				-		-	
SR5A	Cloudy	Calm	06:30	3.4	Surface	1.0	0.0	15	28.4	28.4	7.6	7.6	21.5	21.5	73.8	73.8	5.1	5.1	12.6	15.1	10	13	-	-	816612	810694	-	-	-	-
						1.0	0.0	15	28.4		7.6		21.5		73.7		5.1		12.8		11		-				-		-	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	2.4	0.0	14	28.1	28.1	7.6	7.6	22.0	22.0	72.2	72.3	5.0	5.0	17.5		16		-				-		-	
						2.4	0.0	14	28.1		7.6		22.0		72.4		5.0		17.6		16		-				-		-	
SR6	Cloudy	Calm	06:07	4.0	Surface	1.0	0.1	71	28.4	28.4	7.6	7.6	19.1	19.1	75.1	75.2	5.3	5.3	13.8	13.8	7	8	-	-	817902	814675	-	-	-	-
						1.0	0.1	71	28.4		7.6		19.1		75.2		5.3		13.9		6		-				-		-	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	3.0	0.1	74	28.1	28.1	7.6	7.6	21.0	21.0	77.9	77.9	5.4	5.4	13.7		8		-				-		-	
						3.0	0.1	77	28.1		7.6		21.0		77.9		5.4		13.7		10		-				-		-	
SR7	Fine	Moderate	05:31	15.4	Surface	1.0	0.9	66	28.4	28.4	7.6	7.6	20.8	20.8	75.8	75.8	5.2	5.2	9.9	9.7	6	6	-	-	823645	823757	-	-	-	-
						1.0	0.9	69	28.4		7.6		20.8		75.7		5.2		9.9		8		-				-		-	
					Middle	7.7	0.4	34	28.2	28.2	7.6	7.6	22.1	22.1	75.2	75.2	5.2		9.8		6		-				-		-	
						7.7	0.5	36	28.2		7.6		22.1		75.2		5.2		9.7		6		-				-		-	
					Bottom	14.4	0.4	8	28.2	28.2	7.6	7.6	22.4	22.4	77.4	77.5	5.3	5.3	9.3		6		-				-		-	
						14.4	0.4	8	28.2		7.6		22.4		77.6		5.3		9.3		6		-				-		-	
SR8	Fine	Moderate	06:45	4.3	Surface	1.0	0.0	0	28.6	28.6	7.6	7.6	21.0	21.0	75.8	75.9	5.2	5.2	15.7	16.1	7	7	-	-	820246	811418	-	-	-	-
						1.0	0.0	0	28.6		7.6		21.0		75.9		5.2		15.8		8		-				-		-	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	3.3	0.0	0	28.5	28.5	7.7	7.7	21.7	21.7	82.6	82.8	5.7	5.7	16.4		8		-				-		-	
						3.3	0.0	0	28.5		7.7		21.6		83.0		5.7		16.3		6		-				-		-	

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

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

Water Quality Monitoring

Water Quality Monitoring Results on 09 September 17 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
C1	Rainy	Moderate	14:18	9.1	Surface	1.0	0.4	235	28.3	28.3	7.6	7.6	19.7	19.8	76.4	76.1	5.3	5.0	8.5	13.0	6	6	89	91	815620	804230	<0.2	<0.2	2.2	1.9
						1.0	0.4	255	28.3		7.6		19.8		75.7		5.3		8.7		5		89				<0.2		2.0	
					Middle	4.6	0.8	201	27.7	27.7	7.7	7.7	27.2	27.2	69.5	69.6	4.7		14.1		5		91				<0.2		2.2	
						4.6	0.8	208	27.7		7.7		27.2		69.6		4.7		14.4		5		91				<0.2		2.1	
					Bottom	8.1	0.5	214	27.5	27.5	7.8	7.8	28.9	28.9	70.2	70.3	4.7	4.7	16.2		6		94				<0.2		1.6	
						8.1	0.6	219	27.5		7.7		28.9		70.3		4.7		16.2		6		94				<0.2		1.5	
C2	Rainy	Rough	13:07	11.8	Surface	1.0	0.5	158	29.0	29.0	7.4	7.4	17.5	17.5	66.5	66.5	4.7	4.6	4.9	3.3	5	6	88	91	825679	806953	<0.2	<0.2	3.7	3.6
						1.0	0.5	168	29.0		7.4		17.5		66.5		4.7		4.9		6		88				<0.2		3.9	
					Middle	5.9	0.5	168	28.3	28.3	7.5	7.5	20.7	20.7	65.1	65.1	4.5		3.9		6		91				<0.2		3.8	
						5.9	0.5	172	28.3		7.5		20.7		65.1		4.5		3.9		6		91				<0.2		3.2	
					Bottom	10.8	0.2	137	28.2	28.2	7.5	7.5	23.2	23.2	66.6	66.6	4.6	4.6	1.2		7		94				<0.2		3.4	
						10.8	0.2	140	28.2		7.5		23.2		66.6		4.6		1.2		8		93				<0.2		3.3	
C3	Rainy	Moderate	15:34	12.0	Surface	1.0	0.8	86	28.6	28.6	7.7	7.7	20.2	20.2	70.5	70.5	4.9	4.9	8.0	8.1	7	8	88	91	822104	817803	<0.2	<0.2	2.4	2.8
						1.0	0.8	94	28.6		7.7		20.2		70.5		4.9		8.0		9		89				<0.2		2.8	
					Middle	6.0	0.6	42	28.4	28.4	7.7	7.7	22.5	22.5	70.0	70.0	4.8		8.4		7		91				<0.2		2.9	
						6.0	0.6	42	28.4		7.7		22.5		70.0		4.8		8.4		9		91				<0.2		2.8	
					Bottom	11.0	0.3	82	28.4	28.4	7.7	7.7	22.5	22.5	74.3	74.3	5.1	5.1	7.8		7		93				<0.2		2.8	
						11.0	0.3	82	28.4		7.7		22.5		74.3		5.1		7.8		8		94				<0.2		2.8	
IM1	Cloudy	Moderate	14:00	7.8	Surface	1.0	0.2	177	28.3	28.3	7.7	7.7	20.8	20.8	73.7	73.4	5.1	5.0	9.5	13.0	7	7	86	91	818358	806446	<0.2	<0.2	2.2	2.0
						1.0	0.3	177	28.2		7.7		20.8		73.1		5.1		9.7		8		87				<0.2		2.0	
					Middle	3.9	0.3	185	28.0	28.0	7.7	7.7	24.0	24.0	72.2	72.2	4.9		10.7		7		92				<0.2		1.6	
						3.9	0.3	197	28.0		7.7		24.0		72.1		4.9		10.8		7		92				<0.2		1.7	
					Bottom	6.8	0.2	161	27.6	27.6	7.7	7.7	27.5	27.5	75.8	76.7	5.1	5.2	18.8		7		93				<0.2		2.2	
						6.8	0.2	167	27.6		7.7		27.4		77.5		5.2		18.3		7		94				<0.2		2.2	
IM2	Cloudy	Moderate	13:55	9.0	Surface	1.0	0.2	181	28.2	28.2	7.7	7.7	21.8	21.9	74.0	73.8	5.1	5.0	9.2	12.9	6	9	84	89	818868	806196	<0.2	<0.2	2.2	1.7
						1.0	0.2	194	28.1		7.7		21.9		73.6		5.1		9.4		5		84				<0.2		2.0	
					Middle	4.5	0.2	207	27.8	27.8	7.7	7.7	25.7	25.7	71.1	71.1	4.8		11.8		8		89				<0.2		1.8	
						4.5	0.2	226	27.8		7.7		25.6		71.1		4.8		11.9		7		89				<0.2		1.8	
					Bottom	8.0	0.2	182	27.6	27.6	7.7	7.7	27.4	27.4	73.8	73.9	5.0	5.0	17.5		12		94				<0.2		1.1	
						8.0	0.2	189	27.6		7.7		27.4		74.0		5.0		17.5		13		94				<0.2		1.2	
IM3	Cloudy	Moderate	13:48	8.8	Surface	1.0	0.1	253	28.1	28.1	7.7	7.7	22.3	22.3	73.5	73.5	5.1	5.1	9.0	15.8	8	12	86	90	819394	806032	<0.2	<0.2	1.9	1.6
						1.0	0.2	274	28.1		7.7		22.2		73.5		5.1		9.2		8		86				<0.2		2.0	
					Middle	4.4	0.2	196	28.0	28.0	7.7	7.7	23.7	23.7	72.6	72.7	5.0		13.7		7		91				<0.2		1.6	
						4.4	0.3	207	28.0		7.7		23.7		72.7		5.0		13.8		8		92				<0.2		1.5	
					Bottom	7.8	0.0	220	27.7	27.7	7.7	7.7	27.2	27.3	74.5	75.1	5.0	5.1	24.4		20		93				<0.2		1.4	
						7.8	0.0	230	27.7		7.7		27.3		75.6		5.1		24.7		22		94				<0.2		1.3	
IM4	Cloudy	Moderate	13:40	8.5	Surface	1.0	0.3	186	28.6	28.6	7.7	7.7	22.2	22.3	76.7	76.6	5.3	5.1	10.4	13.4	6	8	88	92	819570	805020	<0.2	<0.2	2.1	1.7
						1.0	0.3	194	28.6		7.7		22.3		76.4		5.2		10.7		6		89				<0.2		2.1	
					Middle	4.3	0.5	173	28.0	28.0	7.7	7.7	25.2	25.2	73.4	73.4	5.0		13.5		8		92				<0.2		1.8	
						4.3	0.5	188	28.0		7.7		25.2		73.4		5.0		13.6		9		92				<0.2		1.7	
					Bottom	7.5	0.4	166	27.9	27.9	7.7	7.7	25.6	25.7	76.3	77.0	5.2	5.3	15.9		9		94				<0.2		1.2	
						7.5	0.5	167	27.9		7.7		25.7		77.7		5.3		16.1		11		94				<0.2		1.4	
IM5	Rainy	Moderate	13:28	7.6	Surface	1.0	0.2	173	28.3	28.3	7.7	7.7	24.2	24.2	76.3	76.2	5.2	5.0	11.3	22.1	10	11	86	90	820565	804942	<0.2	<0.2	1.5	1.6
						1.0	0.2	179	28.3		7.7		24.2		76.1		5.2		11.5		10		87				<0.2		1.6	
					Middle	3.8	0.3	161	28.0	28.0	7.7	7.7	25.2	25.3	70.0	70.0	4.8		17.2		10		91				<0.2		1.4	
						3.8	0.3	165	28.0		7.7		25.3		70.0		4.8		17.3		12		91				<0.2		1.7	
					Bottom	6.6	0.2	171	27.7	27.7	7.7	7.7	27.1	27.1	69.0	69.1	4.7	4.7	37.5		14		93				<0.2		1.6	
						6.6	0.2	184	27.7		7.7		27.1		69.1		4.7		37.5		12		94				<0.2		1.7	
IM6	Rainy	Moderate	13:20	7.9	Surface	1.0	0.0	61	28.4	28.4	7.7	7.7	22.6	22.6	74.8	74.9	5.1	5.0	11.6	21.9	9	11	86	90	821044	805847	<0.2	<0.2	2.1	2.0
						1.0	0.0	65	28.4		7.7		22.5		74.9		5.1		11.6		9		87				<0.2		2.0	
					Middle	4.0	0.2	163	28.1	28.1	7.7	7.7	24.0	24.0	72.2	72.2	4.9		19.8		8		89				<0.2		2.1	
						4.0	0.2	170	28.1		7.7		24.0		72.1		4.9		19.8		9		89				<0.2		2.3	
					Bottom	6.9	0.2	141	27.9	27.9	7.7	7.7	25.4	25.4	72.0	72.2	4.9	4.9	34.3		16		94				<0.2		1.9	
						6.9	0.3	154	27.9		7.7		25.3		72.4		4.9		34.3		14		94				<0.2		1.7	
IM7	Rainy	Rough	13:09	9.1	Surface	1.0	0.2	67	28.3	28.3	7.6	7.6	21.2	21.2	75.7	75.6	5.2	5.1	12.2	17.4	8	11	83	89	821330	806831	<0.2	<0.2	2.3	2.1
						1.0	0.2	70	28.3		7.6		21.2		75.5		5.2		12.3		7		84				<0.2		2.3	
					Middle	4.6	0.3	114	28.1	28.1	7.7	7.7	23.1	23.1	72.5	72.5	5.0		15.1		13		89				<0.2		2.1	
						4.6	0.3	122	28.1		7.7		23.1		72.5		5.0		15.0		12		89				<0.2		2.1	
					Bottom	8.1	0.2	91	28.0	28.0	7.7	7.7	24.4	24.4	77.5	77.6	5.3	5.3	24.9		14		94				<0.2		2.0	
						8.1	0.2	99	28.0		7.7		24.3		77.7		5.3		24.7		12		94				<0.2		2.0	
IM8	Rainy	Rough	13:53	8.3	Surface	1.0	0.3	151	28.8	28.8	7.6	7.6	19.4	19.4	71.5	71.5	5.0	5.0	7.4	8.6	11	13	90	91	821692	807836	<0.2	<0.2	3.5	3.4
						1.0	0.3	151	28.8		7.6		19.4		71.5		5.0		7.4		10		89				<0.2		3.6	
					Middle	4.2	0.2	137	28.5	28.5	7.6	7.6	20.8	20.8	70.5	70.5	4.9		8.9		12		91				<0.2		3.1	
						4.2	0.3	138	28.5		7.6		20.8		70.5		4.9		8.9		14		91				<0.2		3.4	
					Bottom	7.3	0.2	36	28.3	28.3	7.6	7.6	23.4	23.4	72.6	72.6	5.0	5.0	9.4		16		94				<0.2		3.5	
						7.3	0.3	38	28.3		7.6		23.4		72.6		5.0		9.4		14		93				<0.2		3.2	

DA: Depth-Averaged

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

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

Expansion of Hong Kong International Airport into a Three-Runway System
Water Quality Monitoring
Water Quality Monitoring Results on 09 September 17 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
IM9	Rainy	Rough	14:01	7.6	Surface	1.0	0.5	150	29.0	29.0	7.6	7.6	18.0	18.0	72.4	72.4	5.1	5.0	10.5	20.4	9	8	88	91	822111	808829	<0.2	<0.2	2.6	2.5
						1.0	0.5	157	29.0		7.6		18.0		72.4		5.1		10.5		9		88				<0.2		2.6	
					Middle	3.8	0.4	135	28.5	28.5	7.7	7.7	21.2	21.2	69.7	69.7	4.8		20.7		8		91				<0.2		2.4	
						3.8	0.4	145	28.5		7.7		21.2		69.7		4.8		20.7		7		92				<0.2		2.5	
					Bottom	6.6	0.3	86	28.4	28.4	7.7	7.7	22.6	22.6	73.3	73.3	5.0	5.0	30.1		8		93				<0.2		2.7	
						6.6	0.3	89	28.4		7.7		22.6		73.3		5.0		30.1		7		93				<0.2		2.4	
IM10	Rainy	Rough	14:08	6.8	Surface	1.0	0.6	119	28.8	28.8	7.6	7.6	18.9	18.9	70.3	70.3	4.9	4.9	9.9	14.0	4	8	87	89	822220	809839	<0.2	<0.2	3.2	3.4
						1.0	0.7	128	28.8		7.6		18.9		70.3		4.9		9.9		6		87				<0.2		3.0	
					Middle	3.4	0.6	111	28.6	28.6	7.6	7.6	20.4	20.4	70.0	70.0	4.8		13.3		8		88				<0.2		3.3	
						3.4	0.6	118	28.6		7.6		20.4		70.0		4.8		13.3		10		89				<0.2		3.7	
					Bottom	5.8	0.5	99	28.5	28.5	7.7	7.7	21.4	21.4	76.0	76.0	5.3	5.3	18.9		9		91				<0.2		3.6	
						5.8	0.5	101	28.5		7.7		21.4		76.0		5.3		18.9		9		92				<0.2		3.6	
IM11	Rainy	Rough	14:23	8.3	Surface	1.0	0.6	111	28.7	28.7	7.6	7.6	18.9	18.9	70.1	70.1	4.9	4.9	9.4	21.6	5	28	88	90	821488	810535	<0.2	<0.2	3.7	3.8
						1.0	0.7	119	28.7		7.6		18.9		70.1		4.9		9.4		5		88				<0.2		3.7	
					Middle	4.2	0.4	99	28.6	28.6	7.7	7.7	21.1	21.1	71.6	71.6	4.9		18.8		9		91				<0.2		3.8	
						4.2	0.5	108	28.6		7.7		21.1		71.6		4.9		18.8		10		91				<0.2		3.8	
					Bottom	7.3	0.4	75	28.5	28.5	7.7	7.7	21.4	21.4	72.0	72.0	5.0	5.0	36.7		71		92				<0.2		4.0	
						7.3	0.4	81	28.5		7.7		21.4		72.0		5.0		36.7		67		92				<0.2		3.9	
IM12	Rainy	Moderate	14:30	8.3	Surface	1.0	0.9	103	28.9	28.9	7.6	7.6	18.7	18.7	71.8	71.8	5.0	5.0	10.9	21.2	5	16	87	90	821167	811503	<0.2	<0.2	2.6	2.5
						1.0	0.9	109	28.9		7.6		18.7		71.8		5.0		10.9		7		88				<0.2		2.9	
					Middle	4.2	0.8	100	28.6	28.6	7.7	7.7	20.4	20.4	70.6	70.6	4.9		15.8		9		90				<0.2		2.7	
						4.2	0.8	105	28.6		7.7		20.4		70.6		4.9		15.8		8		90				<0.2		3.0	
					Bottom	7.3	0.4	87	28.6	28.6	7.8	7.8	21.6	21.6	71.5	71.5	4.9	4.9	37.0		34		91				<0.2		2.0	
						7.3	0.4	95	28.6		7.8		21.6		71.5		4.9		37.0		34		92				<0.2		1.9	
SR2	Rainy	Moderate	14:54	4.8	Surface	1.0	0.5	77	28.6	28.6	7.6	7.6	19.3	19.3	73.1	73.1	5.1	5.1	7.3	7.4	4	5	89	91	821465	814181	<0.2	<0.2	2.7	2.5
						1.0	0.5	82	28.6		7.6		19.3		73.1		5.1		7.3		4		89				<0.2		2.6	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	3.8	0.3	64	28.5	28.5	7.7	7.7	22.0	22.0	73.1	73.1	5.0	5.0	7.5		6		92				<0.2		2.4	
						3.8	0.3	70	28.5		7.7		22.0		73.1		5.0		7.5		5		92				<0.2		2.2	
SR3	Rainy	Rough	13:46	9.1	Surface	1.0	0.3	155	28.8	28.8	7.5	7.5	18.1	18.1	69.5	69.5	4.9	4.9	5.8	6.5	6	9	-	-	822159	807583	-	-	-	-
						1.0	0.3	165	28.8		7.5		18.1		69.5		4.9		5.8		7		-				-		-	
					Middle	4.6	0.2	168	28.4	28.4	7.7	7.7	21.5	21.5	69.5	69.5	4.8		7.8		8		-				-		-	
						4.6	0.2	183	28.4		7.7		21.5		69.5		4.8		7.8		10		-				-		-	
					Bottom	8.1	0.2	167	28.3	28.3	7.6	7.6	23.0	23.0	72.5	72.5	5.0	5.0	5.8		11		-				-		-	
						8.1	0.2	176	28.3		7.6		23.0		72.5		5.0		5.8		11		-				-		-	
SR4A	Rainy	Moderate	14:40	8.7	Surface	1.0	0.4	76	28.4	28.4	7.6	7.6	21.1	21.1	76.8	76.7	5.3	5.5	12.8	18.3	14	15	-	-	817172	807812	-	-	-	-
						1.0	0.4	78	28.4		7.6		21.1		76.6		5.3		13.4		15		-				-		-	
					Middle	4.4	0.4	71	28.4	28.4	7.6	7.6	21.7	21.7	79.7	81.9	5.5		15.7		14		-				-		-	
						4.4	0.4	77	28.3		7.6		21.6		84.1		5.8		14.6		13		-				-		-	
					Bottom	7.7	0.3	70	27.7	27.7	7.7	7.7	26.7	26.7	72.3	72.8	4.9	5.0	26.6		18		-				-		-	
						7.7	0.3	73	27.7		7.7		26.7		73.3		5.0		26.6		16		-				-		-	
SR5A	Rainy	Moderate	15:01	4.2	Surface	1.0	0.1	4	28.4	28.4	7.6	7.6	21.0	21.0	76.7	76.7	5.3	5.3	10.6	14.3	10	11	-	-	816601	810696	-	-	-	-
						1.0	0.1	4	28.4		7.6		21.0		76.6		5.3		10.8		9		-				-		-	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	3.2	0.1	341	28.4	28.4	7.6	7.6	21.7	21.7	72.6	72.9	5.0	5.0	18.2		12		-				-		-	
						3.2	0.1	353	28.4		7.6		21.7		73.1		5.0		17.6		11		-				-		-	
SR6	Cloudy	Moderate	15:27	4.4	Surface	1.0	0.1	59	28.5	28.5	7.6	7.6	20.9	20.9	76.8	76.8	5.3	5.3	8.9	11.7	8	10	-	-	817893	814672	-	-	-	-
						1.0	0.1	61	28.5		7.6		20.9		76.7		5.3		9.2		7		-				-		-	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	3.4	0.1	63	28.3	28.3	7.6	7.6	21.6	21.6	77.5	78.2	5.4	5.5	14.3		12		-				-		-	
						3.4	0.1	65	28.3		7.6		21.6		78.9		5.5		14.4		13		-				-		-	
SR7	Cloudy	Moderate	16:03	15.1	Surface	1.0	0.8	55	28.5	28.5	7.7	7.7	21.5	21.5	75.4	75.4	5.2	5.0	6.3	5.4	7	8	-	-	823651	823737	-	-	-	-
						1.0	0.8	56	28.5		7.7		21.5		75.4		5.2		6.3		7		-				-		-	
					Middle	7.6	0.3	18	28.3	28.3	7.7	7.7	23.3	23.3	71.9	71.9	4.8		5.6		8		-				-		-	
						7.6	0.4	19	28.3		7.7		23.3		71.9		4.8		5.6		6		-				-		-	
					Bottom	14.1	0.3	34	28.2	28.2	7.6	7.6	23.7	23.7	69.7	69.7	4.8	4.8	4.2		8		-				-		-	
						14.1	0.3	34	28.2		7.6		23.7		69.7		4.8		4.2		10		-				-		-	
SR8	Rainy	Moderate	14:38	4.4	Surface	1.0	-	-	28.9	28.9	7.6	7.6	20.5	20.5	72.3	72.3	5.0	5.0	14.1	14.9	8	9	-	-	820246	811418	-	-	-	-
						1.0	-	-	28.9		7.6		20.5		72.3		5.0		14.1		10		-				-		-	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	3.4	-	-	28.5	28.5	7.6	7.6	21.4	21.4	76.4	76.4	5.3	5.3	15.6		10		-				-		-	
						3.4	-	-	28.5		7.6		21.4		76.4		5.3		15.6		9		-				-		-	

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

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

Water Quality Monitoring

Water Quality Monitoring Results on 09 September 17 during Mid-Flood Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity(NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)	
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA
C1	Fine	Calm	08:53	9.3	Surface	1.0	0.5	40	28.2	28.2	7.6	7.6	20.7	20.7	71.5	71.5	5.0	4.9	12.3	43.8	4	12	86	91	815636	804239	<0.2	<0.2	2.6	2.2
						1.0	0.6	43	28.2		7.6		20.7		71.5		5.0		12.4		2		87				<0.2		2.5	
					Middle	4.7	0.7	43	27.9	27.9	7.7	7.7	24.8	24.8	70.1	70.1	4.8		44.6		8		91				<0.2		2.3	
						4.7	0.8	45	27.9		7.7		24.8		70.1		4.8		44.4		8		91				<0.2		2.2	
					Bottom	8.3	0.6	40	27.8	27.9	7.7	7.7	25.9	25.9	70.0	70.1	4.8	4.8	78.2		23		94				<0.2		1.8	
						8.3	0.6	43	27.9		7.7		25.8		70.1		4.8		70.8		24		94				<0.2		1.7	
C2	Cloudy	Moderate	09:39	12.3	Surface	1.0	0.5	344	29.1	29.1	7.4	7.4	14.9	14.9	65.3	65.3	4.6	4.5	7.8	20.0	4	7	87	89	825678	806949	<0.2	<0.2	3.1	3.4
						1.0	0.5	351	29.1		7.4		14.9		65.3		4.6		7.8		3		87				<0.2		3.1	
					Middle	6.2	0.5	7	28.4	28.4	7.5	7.5	18.4	18.4	62.7	62.7	4.4		19.1		3		89				<0.2		3.7	
						6.2	0.5	7	28.4		7.5		18.4		62.7		4.4		19.1		4		90				<0.2		3.7	
					Bottom	11.3	0.6	348	28.3	28.3	7.5	7.5	20.9	20.9	62.7	62.7	4.3	4.3	33.0		14		91				<0.2		3.4	
						11.3	0.6	355	28.3		7.5		20.9		62.7		4.3		33.0		16		92				<0.2		3.6	
C3	Cloudy	Moderate	07:32	11.5	Surface	1.0	0.5	268	28.5	28.5	7.6	7.6	20.1	20.1	69.8	69.8	4.9	4.9	4.5	4.4	6	9	90	92	822115	817798	<0.2	<0.2	2.9	2.4
						1.0	0.6	275	28.5		7.6		20.1		69.8		4.9		4.5		7		89				<0.2		2.6	
					Middle	5.8	0.8	263	28.2	28.2	7.6	7.6	22.0	22.0	68.9	68.9	4.8		4.4		8		92				<0.2		2.4	
						5.8	0.9	270	28.2		7.6		22.0		68.9		4.8		4.4		9		92				<0.2		2.2	
					Bottom	10.5	0.6	271	28.0	28.0	7.6	7.6	24.6	24.6	69.3	69.3	4.7	4.7	4.3		11		94				<0.2		2.2	
						10.5	0.6	274	28.0		7.6		24.6		69.3		4.7		4.3		10		93				<0.2		2.3	
IM1	Cloudy	Moderate	09:11	7.7	Surface	1.0	0.8	11	28.2	28.2	7.6	7.6	21.1	21.1	70.2	70.2	4.9	4.9	9.1	21.1	8	15	86	89	818355	806454	<0.2	<0.2	2.0	2.0
						1.0	0.8	11	28.2		7.6		21.1		70.2		4.9		9.3		9		86				<0.2		2.0	
					Middle	3.9	0.8	10	28.2	28.2	7.6	7.6	21.5	21.5	69.6	69.6	4.8		12.2		8		88				<0.2		2.1	
						3.9	0.8	10	28.2		7.6		21.5		69.6		4.8		12.9		7		89				<0.2		2.1	
					Bottom	6.7	0.6	359	28.1	28.1	7.7	7.7	23.0	23.0	70.3	70.3	4.8	4.8	41.6		31		93				<0.2		1.8	
						6.7	0.6	330	28.1		7.7		23.0		70.3		4.8		41.3		29		94				<0.2		1.7	
IM2	Cloudy	Moderate	09:17	8.8	Surface	1.0	0.7	11	28.4	28.4	7.6	7.6	20.4	20.4	69.8	69.8	4.9	4.8	9.3	28.9	6	6	86	89	818841	806205	<0.2	<0.2	2.3	2.2
						1.0	0.7	12	28.4		7.6		20.4		69.7		4.8		9.4		6		86				<0.2		2.4	
					Middle	4.4	0.7	23	28.2	28.2	7.6	7.6	21.0	21.0	69.2	69.2	4.8		11.2		6		89				<0.2		2.2	
						4.4	0.7	23	28.2		7.6		21.0		69.2		4.8		11.3		7		89				<0.2		2.1	
					Bottom	7.8	0.4	20	28.1	28.1	7.7	7.7	23.4	23.4	70.1	70.2	4.8	4.8	66.4		7		91				<0.2		2.1	
						7.8	0.4	21	28.1		7.7		23.4		70.3		4.8		65.9		6		91				<0.2		2.2	
IM3	Cloudy	Moderate	09:25	9.0	Surface	1.0	0.6	20	28.4	28.4	7.6	7.6	19.7	19.7	68.8	68.8	4.8	4.8	9.8	31.8	6	8	87	91	819391	806011	<0.2	<0.2	2.3	2.4
						1.0	0.7	20	28.4		7.6		19.6		68.8		4.8		9.8		7		87				<0.2		2.5	
					Middle	4.5	0.7	26	28.2	28.2	7.6	7.6	20.5	20.5	68.8	68.8	4.8		11.2		7		91				<0.2		2.4	
						4.5	0.7	27	28.2		7.6		20.5		68.8		4.8		11.2		8		91				<0.2		2.5	
					Bottom	8.0	0.5	25	28.0	28.0	7.7	7.7	24.0	24.0	69.9	69.9	4.8	4.8	73.2		10		94				<0.2		2.2	
						8.0	0.5	25	28.0		7.7		24.0		69.9		4.8		75.7		9		94				<0.2		2.3	
IM4	Cloudy	Moderate	09:35	8.6	Surface	1.0	0.7	-	28.4	28.4	7.6	7.6	19.1	19.1	69.6	69.6	4.9	4.9	10.7	32.8	9	9	86	92	819581	805034	<0.2	<0.2	2.4	2.6
						1.0	0.7	-	28.4		7.6		19.1		69.5		4.9		10.8		8		86				<0.2		2.4	
					Middle	4.3	0.7	5	28.3	28.3	7.6	7.6	19.6	19.6	69.9	69.9	4.9		18.0		9		94				<0.2		2.6	
						4.3	0.7	5	28.3		7.6		19.6		69.9		4.9		18.6		9		94				<0.2		2.6	
					Bottom	7.6	0.6	-	28.0	28.1	7.6	7.6	23.2	23.2	70.3	70.3	4.8	4.8	69.3		11		95				<0.2		2.8	
						7.6	0.6	-	28.1		7.6		23.2		70.3		4.8		69.4		10		95				<0.2		2.6	
IM5	Cloudy	Moderate	09:44	7.5	Surface	1.0	0.9	9	28.4	28.4	7.6	7.6	19.0	19.1	69.3	69.3	4.9	4.9	9.9	38.8	5	13	84	90	820567	804929	<0.2	<0.2	2.5	2.5
						1.0	1.0	9	28.4		7.6		19.1		69.3		4.9		9.9		4		84				<0.2		2.8	
					Middle	3.8	0.7	19	28.3	28.3	7.6	7.6	19.9	19.9	69.7	69.7	4.9		17.6		7		91				<0.2		2.5	
						3.8	0.7	19	28.3		7.6		19.9		69.7		4.9		17.6		5		92				<0.2		2.5	
					Bottom	6.5	0.5	12	28.0	28.0	7.7	7.7	23.1	23.2	69.9	69.9	4.8	4.8	88.8		30		95				<0.2		2.2	
						6.5	0.5	12	28.0		7.7		23.2		69.9		4.8		89.0		29		95				<0.2		2.6	
IM6	Cloudy	Moderate	09:53	7.1	Surface	1.0	0.5	18	28.3	28.3	7.7	7.7	20.8	20.8	69.3	69.3	4.8	4.8	16.3	26.3	11	19	88	93	821040	805809	<0.2	<0.2	2.3	2.3
						1.0	0.6	18	28.2		7.7		20.8		69.3		4.8		16.7		11		89				<0.2		2.3	
					Middle	3.6	0.6	28	28.2	28.2	7.7	7.7	21.5	21.6	69.4	69.5	4.8		25.5		14		94				<0.2		3.0	
						3.6	0.6	30	28.2		7.7		21.6		69.5		4.8		25.1		13		94				<0.2		2.3	
					Bottom	6.1	0.4	40	28.1	28.1	7.7	7.7	22.2	22.2	74.5	74.6	5.1	5.2	37.2		34		96				<0.2		1.9	
						6.1	0.5	40	28.1		7.7		22.2		74.7		5.2		37.1		33		96				<0.2		1.9	
IM7	Cloudy	Moderate	09:55	8.8	Surface	1.0	0.9	32	28.3	28.3	7.7	7.7	20.8	20.8	69.0	69.1	4.8	4.8	16.9	29.2	9	16	90	92	821346	806839	<0.2	<0.2	2.4	2.2
						1.0	1.0	34	28.3		7.7		20.8		69.1		4.8		16.7		10		89				<0.2		2.3	
					Middle	4.4	0.7	28	28.2	28.2	7.8	7.8	21.2	21.2	68.7	68.7	4.8		23.1		16		91				<0.2		2.2	
						4.4	0.8	30	28.2		7.8		21.1		68.7		4.8		23.2		16		92				<0.2		2.3	
					Bottom	7.8	0.5	43	28.1	28.1	7.7	7.7	22.3	22.3	68.6	68.6	4.7	4.7	47.8		22		96				<0.2		2.0	
						7.8	0.5	46	28.1		7.7		22.3		68.5		4.7		47.7		23		96				<0.2		2.0	
IM8	Cloudy	Moderate	09:12	8.4	Surface	1.0	0.4	27	28.6	28.6	7.5	7.5	16.7	16.7	66.3	66.3	4.7	4.7	15.8	24.4	13	23	88	89	821679	807856	<0.2	<0.2	3.8	3.7
						1.0	0.4	29	28.6		7.5		16.7		66.3		4.7		15.8		14		88				<0.2		3.7	
					Middle	4.2	0.4	24	28.6	28.6	7.5	7.5	17.0	17.0	66.1	66.1	4.7		24.8		13		89				<0.2		4.0	3.7
						4.2	0.4	25	28.6		7.5		17.0		66.1		4.7		24.8		13		88				<0.2		3.9	
					Bottom	7.4	0.4	10	28.6	28.6	7.5	7.5	17.3	17.3	69.7	69.7	4.9	4.9	32.5		43		91				<0.2		3.5	
						7.4	0.4	10	28.6		7.5		17.3		69.7		4.9		32.5		41		91				<0.2		3.3	

DA: Depth-Averaged

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

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

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

Water Quality Monitoring

Water Quality Monitoring Results on 09 September 17 during Mid-Flood Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity(NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)	
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA
IM9	Cloudy	Moderate	09:04	7.5	Surface	1.0	0.3	347	28.6	28.6	7.6	7.6	17.4	17.4	65.1	65.1	4.6	4.6	10.4	11.0	11	11	88	90	822112	808797	<0.2	<0.2	3.1	3.3
						1.0	0.3	355	28.6		7.6		17.4		65.1		4.6		10.4		10		88				<0.2		3.4	
					Middle	3.8	0.3	345	28.6	28.6	7.6	7.6	17.5	17.5	64.9	64.9	4.6		11.2		12		89				<0.2		3.1	
						3.8	0.3	317	28.6		7.6		17.5		64.9		4.6		11.2		11		90				<0.2		3.4	
					Bottom	6.5	0.3	335	28.5	28.5	7.6	7.6	17.6	17.6	65.8	65.8	4.6	4.6	11.3		12		91				<0.2		3.4	
						6.5	0.3	338	28.5		7.6		17.6		65.8		4.6		11.3		12		91				<0.2		3.2	
IM10	Cloudy	Moderate	08:51	7.5	Surface	1.0	0.8	311	28.6	28.6	7.5	7.5	18.1	18.1	67.6	67.6	4.7	4.7	6.8	20.0	8	10	89	91	822251	809848	<0.2	<0.2	3.2	3.1
						1.0	0.8	340	28.6		7.5		18.1		67.6		4.7		6.8		7		89				<0.2		3.4	
					Middle	3.8	0.7	300	28.6	28.6	7.5	7.5	18.7	18.7	67.3	67.3	4.7		11.1		6		90				<0.2		3.4	
						3.8	0.8	321	28.6		7.5		18.7		67.3		4.7		11.1		8		91				<0.2		2.9	
					Bottom	6.5	0.5	302	28.4	28.4	7.6	7.6	20.7	20.7	68.9	68.9	4.8	4.8	42.2		15		93				<0.2		2.6	
						6.5	0.5	327	28.4		7.6		20.7		68.9		4.8		42.2		15		92				<0.2		2.8	
IM11	Cloudy	Moderate	08:33	8.1	Surface	1.0	0.7	290	28.6	28.6	7.5	7.5	18.3	18.3	68.0	68.0	4.8	4.8	8.9	21.8	7	25	90	92	821490	810552	<0.2	<0.2	2.5	2.3
						1.0	0.7	299	28.6		7.5		18.3		68.0		4.8		8.9		6		89				<0.2		2.6	
					Middle	4.1	0.6	285	28.4	28.4	7.6	7.6	21.2	21.2	68.4	68.4	4.7		22.2		9		92				<0.2		2.6	
						4.1	0.7	295	28.4		7.6		21.2		68.4		4.7		22.2		8		92				<0.2		2.5	
					Bottom	7.1	0.5	284	28.3	28.3	7.6	7.6	21.4	21.4	71.9	72.0	5.0	5.0	34.4		57		94				<0.2		1.8	
						7.1	0.5	290	28.3		7.6		21.4		72.1		5.0		34.4		60		93				<0.2		1.9	
IM12	Cloudy	Moderate	08:25	8.8	Surface	1.0	0.7	270	28.6	28.6	7.5	7.5	18.5	18.5	67.9	67.9	4.8	4.8	7.9	22.4	7	6	89	91	821147	811530	<0.2	<0.2	2.4	2.6
						1.0	0.8	292	28.6		7.5		18.5		67.9		4.8		7.9		6		90				<0.2		2.6	
					Middle	4.4	0.8	271	28.3	28.3	7.6	7.6	21.2	21.2	68.3	68.3	4.7		21.9		6		91				<0.2		2.7	
						4.4	0.8	296	28.3		7.6		21.2		68.3		4.7		21.9		5		92				<0.2		2.7	
					Bottom	7.8	0.5	274	28.3	28.3	7.6	7.6	21.9	21.9	69.4	69.4	4.8	4.8	37.4		6		93				<0.2		2.5	
						7.8	0.5	285	28.3		7.6		21.9		69.4		4.8		37.4		6		93				<0.2		2.8	
SR2	Cloudy	Moderate	07:53	4.3	Surface	1.0	0.2	355	28.4	28.4	7.6	7.6	20.5	20.5	68.5	68.5	4.8	4.8	7.6	6.9	8	13	90	92	821474	814160	<0.2	<0.2	3.0	2.9
						1.0	0.2	327	28.4		7.6		20.5		68.5		4.8		7.6		9		89				<0.2		3.0	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	3.3	0.6	147	28.3	28.3	7.6	7.6	21.7	21.7	70.1	70.1	4.8	4.8	6.1		18		94				<0.2		2.6	
						3.3	0.6	154	28.3		7.6		21.7		70.1		4.8		6.1		18		93				<0.2		2.8	
SR3	Cloudy	Moderate	09:18	9.1	Surface	1.0	0.4	6	28.7	28.7	7.4	7.4	15.6	15.6	65.7	65.7	4.7	4.7	8.9	10.4	6	9	-	-	822142	807565	-	-	-	-
						1.0	0.4	6	28.7		7.4		15.6		65.7		4.7		8.9		8		-				-		-	
					Middle	4.6	0.6	17	28.6	28.6	7.5	7.5	16.5	16.5	64.4	64.4	4.6		11.0		7		-				-		-	
						4.6	0.6	17	28.6		7.5		16.5		64.4		4.6		11.0		9		-				-		-	
					Bottom	8.1	0.2	21	28.5	28.5	7.5	7.5	18.5	18.5	66.0	66.0	4.6	4.6	11.4		12		-				-		-	
						8.1	0.2	21	28.5		7.5		18.5		66.0		4.6		11.4		13		-				-		-	
SR4A	Fine	Calm	08:29	8.8	Surface	1.0	0.5	248	28.3	28.3	7.6	7.6	21.7	21.7	72.5	72.5	5.0	5.0	16.4	22.1	19	20	-	-	817171	807811	-	-	-	-
						1.0	0.5	266	28.3		7.6		21.7		72.4		5.0		16.7		19		-				-		-	
					Middle	4.4	0.4	248	28.3	28.3	7.6	7.6	21.8	21.8	71.6	71.6	5.0		22.2		18		-				-		-	
						4.4	0.4	256	28.3		7.6		21.8		71.6		4.9		22.4		18		-				-		-	
					Bottom	7.8	0.2	262	28.2	28.2	7.6	7.6	22.2	22.2	71.7	71.8	5.0	5.0	27.9		21		-				-		-	
						7.8	0.2	269	28.2		7.6		22.1		71.9		5.0		27.2		22		-				-		-	
SR5A	Fine	Calm	08:14	4.6	Surface	1.0	0.4	304	28.2	28.2	7.5	7.5	21.4	21.4	71.0	71.1	4.9	4.9	17.0	18.5	11	11	-	-	816604	810696	-	-	-	-
						1.0	0.4	318	28.2		7.5		21.4		71.1		4.9		17.6		11		-				-		-	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	3.6	0.3	313	28.2	28.2	7.5	7.5	21.4	21.4	72.2	72.4	5.0	5.0	19.7		11		-				-		-	
						3.6	0.3	330	28.2		7.5		21.4		72.5		5.0		19.7		12		-				-		-	
SR6	Fine	Calm	07:52	3.7	Surface	1.0	0.2	259	28.2	28.2	7.5	7.5	20.5	20.5	70.3	70.3	4.9	4.9	13.3	16.9	12	13	-	-	817893	814644	-	-	-	-
						1.0	0.3	278	28.2		7.5		20.5		70.2		4.9		13.5		12		-				-		-	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	2.7	0.2	258	28.1	28.1	7.5	7.5	21.1	21.1	68.6	68.8	4.8	4.8	20.5		14		-				-		-	
						2.7	0.2	264	28.1		7.5		21.1		69.0		4.8		20.2		13		-				-		-	
SR7	Cloudy	Moderate	07:03	15.0	Surface	1.0	0.1	257	28.4	28.4	7.5	7.5	20.8	20.8	76.6	76.6	5.3	5.0	3.6	2.4	6	7	-	-	823640	823760	-	-	-	-
						1.0	0.1	272	28.4		7.5		20.8		76.6		5.3		3.6		8		-				-		-	
					Middle	7.5	0.1	261	28.3	28.3	7.5	7.5	22.3	22.3	68.1	68.1	4.7		2.1		6		-				-		-	
						7.5	0.1	272	28.3		7.5		22.3		68.1		4.7		2.1		6		-				-		-	
					Bottom	14.0	0.1	161	28.0	28.0	7.5	7.5	24.2	24.2	69.0	69.0	4.7	4.7	1.5		7		-				-		-	
						14.0	0.1	169	28.0		7.5		24.2		69.0		4.7		1.5		8		-				-		-	
SR8	Cloudy	Moderate	08:16	4.3	Surface	1.0	0.0	0	28.7	28.7	7.5	7.5	17.6	17.6	68.9	68.9	4.8	4.8	13.4	14.2	10	10	-	-	820246	811418	-	-	-	-
						1.0	0.0	0	28.7		7.5		17.6		68.9		4.8		13.4		9		-				-		-	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	3.3	0.0	0	28.5	28.5	7.5	7.5	18.5	18.5	71.3	71.3	5.0	5.0	15.0		10		-				-		-	
						3.3	0.0	0	28.5		7.5		18.5		71.3		5.0		15.0		12		-				-		-	

DA: Depth-Averaged

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

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

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

Water Quality Monitoring

Water Quality Monitoring Results on 12 September 17 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
C1	Cloudy	Moderate	17:00	8.8	Surface	1.0	0.3	256	29.4	29.4	7.9	7.9	19.9	19.9	82.6	82.6	5.7	5.7	2.9	4.6	4	8	87	92	815628	804235	<0.2	<0.2	2.1	1.5
						1.0	0.3	281	29.4		7.9		19.9		82.6		5.7		2.9		5		88				<0.2		2.0	
					Middle	4.4	0.5	218	28.9	28.9	7.9	7.9	22.4	22.4	81.9	81.9	5.6		4.6		7		93				<0.2		1.5	
						4.4	0.5	239	28.9		7.9		22.4		81.9		5.6		4.6		7		93				<0.2		1.6	
					Bottom	7.8	0.4	226	28.2	28.2	7.9	7.9	28.5	28.5	74.6	74.8	5.0	5.0	6.2		12		95				<0.2		0.8	
						7.8	0.4	228	28.2		7.9		28.5		75.0		5.0		6.2		11		94				<0.2		0.8	
C2	Cloudy	Moderate	15:34	12.3	Surface	1.0	0.2	108	31.5	31.5	7.6	7.6	13.3	13.4	81.5	81.7	5.6	5.5	3.8	8.3	5	11	84	86	825675	806957	<0.2	<0.2	3.2	2.4
						1.0	0.2	108	31.5		7.6		13.4		81.9		5.6		3.7		4		84				<0.2		3.2	
					Middle	6.2	0.0	237	29.8	29.8	7.6	7.6	17.4	17.4	78.1	78.2	5.4		9.1		12		86				<0.2		2.4	
						6.2	0.0	257	29.8		7.6		17.4		78.2		5.4		9.0		12		86				<0.2		2.6	
					Bottom	11.3	0.4	183	28.9	28.9	7.7	7.7	25.2	25.2	73.6	73.7	4.9	5.0	11.9		16		87				<0.2		1.6	
						11.3	0.4	196	28.9		7.7		25.1		73.7		5.0		12.1		16		88				<0.2		1.4	
C3	Cloudy	Moderate	18:00	11.7	Surface	1.0	0.2	136	29.3	29.3	7.8	7.8	19.5	19.5	82.9	82.9	5.7	5.6	2.3	7.9	3	3	89	90	822096	817813	<0.2	<0.2	2.5	2.0
						1.0	0.2	137	29.3		7.8		19.5		82.9		5.7		2.3		2		90				<0.2		2.2	
					Middle	5.9	0.1	329	29.1	29.1	7.8	7.8	20.7	20.7	80.0	80.1	5.5		2.4		2		90				<0.2		2.0	
						5.9	0.2	353	29.1		7.8		20.7		80.1		5.5		2.4		3		91				<0.2		1.9	
					Bottom	10.7	0.1	20	29.1	29.1	7.8	7.8	21.1	21.1	82.4	82.4	5.6	5.6	18.7		2		89				<0.2		1.8	
						10.7	0.1	20	29.1		7.8		21.1		82.3		5.6		19.1		3		89				<0.2		1.8	
IM1	Cloudy	Moderate	16:43	7.5	Surface	1.0	0.4	184	29.9	29.9	7.9	7.9	16.5	16.5	86.9	86.9	6.0	5.9	4.5	6.6	5	6	86	89	818351	806462	<0.2	<0.2	1.7	2.0
						1.0	0.4	186	29.9		7.9		16.5		86.9		6.0		4.5		4		87				<0.2		2.0	
					Middle	3.8	0.3	179	29.4	29.4	7.9	7.9	19.1	19.1	84.5	84.4	5.8		9.3		6		90				<0.2		2.0	
						3.8	0.3	180	29.4		7.9		19.1		84.3		5.8		9.2		6		89				<0.2		2.1	
					Bottom	6.5	0.2	181	29.1	29.1	7.9	7.9	20.8	20.8	81.4	81.4	5.6	5.6	5.9		8		92				<0.2		2.3	
						6.5	0.2	186	29.1		7.9		20.8		81.4		5.6		5.9		8		92				<0.2		2.0	
IM2	Cloudy	Moderate	16:37	8.3	Surface	1.0	0.4	213	30.5	30.5	7.9	7.9	16.5	16.5	88.5	88.5	6.1	6.1	3.5	5.0	3	4	86	89	818854	806208	<0.2	<0.2	2.3	2.2
						1.0	0.4	227	30.5		7.9		16.5		88.4		6.1		3.5		2		87				<0.2		2.3	
					Middle	4.2	0.1	237	30.4	30.4	7.9	7.9	16.5	16.5	88.0	88.0	6.0		4.8		3		88				<0.2		2.3	
						4.2	0.1	245	30.4		7.9		16.5		87.9		6.0		4.8		2		87				<0.2		2.2	
					Bottom	7.3	0.0	354	29.1	29.1	7.8	7.8	20.9	20.9	80.2	80.4	5.5	5.5	6.5		8		92				<0.2		2.2	
						7.3	0.0	326	29.1		7.8		20.9		80.5		5.5		6.7		8		92				<0.2		1.8	
IM3	Cloudy	Moderate	16:30	8.8	Surface	1.0	0.2	197	30.1	30.1	7.9	7.9	15.9	15.9	86.1	86.1	6.0	5.9	3.2	4.3	4	4	86	88	819401	806007	<0.2	<0.2	2.4	2.0
						1.0	0.2	201	30.1		7.9		15.9		86.1		6.0		3.2		5		85				<0.2		2.3	
					Middle	4.4	0.2	226	29.5	29.5	7.9	7.9	18.6	18.6	83.4	83.4	5.8		3.5		4		89				<0.2		2.0	
						4.4	0.2	234	29.5		7.9		18.6		83.3		5.7		3.5		4		88				<0.2		2.0	
					Bottom	7.8	0.1	141	29.1	29.1	7.9	7.9	20.7	20.7	80.2	80.5	5.5	5.5	6.2		4		91				<0.2		1.6	
						7.8	0.1	142	29.1		7.9		20.7		80.7		5.5		6.2		5		91				<0.2		1.7	
IM4	Cloudy	Moderate	16:21	8.1	Surface	1.0	0.3	224	29.9	29.9	7.9	7.9	16.9	16.9	84.6	84.5	5.8	5.8	2.6	4.2	5	6	86	88	819583	805034	<0.2	<0.2	2.3	2.2
						1.0	0.3	244	29.9		7.9		16.9		84.4		5.8		2.6		6		86				<0.2		2.1	
					Middle	4.1	0.2	186	29.7	29.7	7.9	7.9	17.4	17.4	83.1	83.1	5.7		4.2		7		88				<0.2		2.4	
						4.1	0.2	187	29.7		7.9		17.4		83.1		5.7		4.2		6		89				<0.2		2.3	
					Bottom	7.1	0.3	156	29.4	29.4	7.9	7.9	18.9	18.9	82.1	82.2	5.7	5.7	5.8		6		91				<0.2		1.9	
						7.1	0.3	164	29.4		7.9		18.9		82.2		5.7		5.8		7		90				<0.2		2.2	
IM5	Rainy	Moderate	16:17	8.2	Surface	1.0	0.2	238	28.9	28.9	7.8	7.8	21.7	21.7	77.9	77.9	5.3	5.5	25.8	11.5	6	11	86	89	820560	804921	<0.2	<0.2	2.2	2.2
						1.0	0.3	240	28.9		7.8		21.7		77.8		5.3		25.8		6		86				<0.2		2.2	
					Middle	4.1	0.2	176	29.6	29.6	7.7	7.7	17.5	17.5	81.8	81.9	5.7		5.0		5		89				<0.2		2.1	
						4.1	0.2	177	29.6		7.7		17.5		81.9		5.7		5.0		5		89				<0.2		2.4	
					Bottom	7.2	0.1	120	30.3	30.3	7.7	7.7	15.1	15.1	86.1	86.2	6.0	6.0	3.6		21		91				<0.2		2.3	
						7.2	0.1	127	30.3		7.7		15.1		86.3		6.0		3.6		20		91				<0.2		2.2	
IM6	Rainy	Moderate	16:09	6.3	Surface	1.0	0.2	178	29.1	29.1	7.8	7.8	21.6	21.6	79.6	79.6	5.4	5.5	12.2	8.6	4	10	86	88	821075	805813	<0.2	<0.2	2.4	2.3
						1.0	0.2	186	29.0		7.8		21.6		79.6		5.4		12.0		4		86				<0.2		2.1	
					Middle	3.2	0.2	134	29.5	29.5	7.8	7.8	19.3	19.3	81.7	81.8	5.6		10.8		13		88				<0.2		2.3	
						3.2	0.2	145	29.5		7.8		19.3		81.9		5.6		11.1		12		88				<0.2		2.2	
					Bottom	5.3	0.1	137	30.9	30.9	7.7	7.8	14.6	14.6	90.1	90.1	6.2	6.2	2.7		13		91				<0.2		2.5	
						5.3	0.1	137	30.9		7.8		14.6		90.1		6.2		2.7		13		91				<0.2		2.2	
IM7	Rainy	Moderate	16:00	6.9	Surface	1.0	0.2	186	28.9	28.9	7.8	7.8	23.3	23.3	77.1	77.3	5.2	5.6	14.4	10.3	5	14	84	88	821353	806847	<0.2	<0.2	2.3	2.3
						1.0	0.3	187	28.9		7.8		23.3		77.4		5.2		14.5		5		84				<0.2		2.2	
					Middle	3.5	0.1	165	30.3	30.3	7.7	7.7	16.3	16.3	87.5	87.6	6.0		13.0		8		89				<0.2		2.4	
						3.5	0.1	167	30.3		7.7		16.3		87.7		6.0		12.6		6		89				<0.2		2.2	
					Bottom	5.9	0.1	82	30.5	30.6	7.8	7.8	17.3	17.3	87.1	87.3	5.9	6.0	3.7		29		91				<0.2		2.1	
						5.9	0.1	89	30.6		7.8		17.3		87.4		6.0		3.7		28		92				<0.2		2.5	
IM8	Cloudy	Moderate	16:31	8.3	Surface	1.0	0.3	161	29.7	29.7	7.6	7.6	16.2	16.2	79.3	79.4	5.5	5.4	3.1	5.7	5	7	79	85	821691	807852	<0.2	<0.2	2.8	2.6
						1.0	0.3	164	29.7		7.6		16.2		79.4		5.5		3.1		4		79				<0.2		2.8	
					Middle	4.2	0.2	141	29.5	29.5	7.6	7.6	16.2	16.2	76.2	76.3	5.3		3.1		4		84				<0.2		2.8	
						4.2	0.2	145	29.5		7.6		16.2		76.3		5.3		3.2		5		84				<0.2		2.7	
					Bottom	7.3	0.2	38	28.9	28.9	7.7	7.7	20.0	20.0	75.4	75.4	5.2	5.2	10.7		12		91				<0.2		2.2	
						7.3	0.2	38	28.9		7.7		20.0		75.4		5.2		10.9		13		91				<0.2		2.2	

DA: Depth-Averaged

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

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

Expansion of Hong Kong International Airport into a Three-Runway System
Water Quality Monitoring
Water Quality Monitoring Results on 12 September 17 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
IM9	Cloudy	Moderate	16:39	7.2	Surface	1.0	0.3	146	30.6	30.6	7.7	7.7	13.7	13.7	85.3	85.4	5.9	5.8	3.1	4.9	4	5	86	89	822110	808798	<0.2	<0.2	2.5	2.8
						1.0	0.3	154	30.6		7.7		13.7		85.5		5.9		3.2		4		87				<0.2		2.4	
					Middle	3.6	0.3	131	30.0	30.0	7.6	7.6	14.8	14.8	81.7	81.8	5.7		7.1		3		89				<0.2		3.0	
						3.6	0.3	134	30.0		7.6		14.8		81.8		5.7		7.1		4		89				<0.2		2.8	
					Bottom	6.2	0.2	83	29.3	29.3	7.6	7.6	17.9	17.9	76.6	76.7	5.3	5.3	4.4		7		91				<0.2		2.7	
						6.2	0.2	84	29.3		7.6		17.9		76.8		5.3		4.5		8		91				<0.2		3.2	
IM10	Cloudy	Moderate	16:47	6.7	Surface	1.0	0.5	122	30.4	30.4	7.7	7.7	14.6	14.6	86.5	86.5	6.0	5.7	3.1	5.3	4	7	81	87	822226	809832	<0.2	<0.2	3.2	2.6
						1.0	0.6	124	30.4		7.7		14.6		86.5		6.0		3.0		3		81				<0.2		2.8	
					Middle	3.4	0.5	111	29.5	29.5	7.6	7.6	16.9	16.9	77.0	77.2	5.4		2.9		3		88				<0.2		2.8	
						3.4	0.5	118	29.5		7.6		16.9		77.3		5.4		2.8		4		88				<0.2		2.6	
					Bottom	5.7	0.3	80	29.1	29.1	7.7	7.7	19.0	19.0	75.8	75.8	5.2	5.2	10.2		13		90				<0.2		2.1	
						5.7	0.3	86	29.1		7.7		19.0		75.7		5.2		9.8		14		91				<0.2		2.2	
IM11	Cloudy	Moderate	17:02	8.0	Surface	1.0	0.6	115	30.3	30.3	7.7	7.7	14.8	14.8	85.9	86.0	6.0	5.9	3.4	8.9	4	8	80	87	821488	810562	<0.2	<0.2	2.9	2.5
						1.0	0.6	119	30.3		7.7		14.8		86.1		6.0		3.5		5		81				<0.2		2.8	
					Middle	4.0	0.4	89	29.8	29.8	7.7	7.7	15.6	15.6	81.6	81.7	5.7		3.7		5		89				<0.2		2.5	
						4.0	0.4	92	29.8		7.7		15.6		81.7		5.7		3.8		7		89				<0.2		2.5	
					Bottom	7.0	0.2	86	29.5	29.5	7.8	7.8	17.7	17.7	79.9	79.9	5.5	5.5	19.4		13		91				<0.2		2.1	
						7.0	0.2	88	29.5		7.8		17.7		79.9		5.5		19.7		15		91				<0.2		2.3	
IM12	Cloudy	Moderate	17:09	8.7	Surface	1.0	0.5	107	30.1	30.1	7.7	7.7	14.7	14.7	85.8	85.9	6.0	6.0	3.2	5.1	5	8	84	87	821153	811535	<0.2	<0.2	3.2	2.6
						1.0	0.5	107	30.1		7.7		14.7		85.9		6.0		3.2		6		84				<0.2		2.7	
					Middle	4.4	0.4	100	30.0	30.0	7.7	7.7	14.8	14.8	84.1	84.2	5.9		3.3		7		84				<0.2		2.6	
						4.4	0.4	107	30.0		7.7		14.8		84.2		5.9		3.3		8		84				<0.2		2.5	
					Bottom	7.7	0.2	115	29.6	29.6	7.8	7.8	17.7	17.7	81.0	81.0	5.6	5.6	9.0		10		93				<0.2		2.2	
						7.7	0.2	118	29.6		7.8		17.7		81.0		5.6		8.7		11		94				<0.2		2.3	
SR2	Cloudy	Moderate	17:40	4.3	Surface	1.0	0.4	82	29.7	29.7	7.7	7.7	15.8	15.8	85.9	86.0	6.0	6.0	2.9	4.0	6	7	86	87	821465	814163	<0.2	<0.2	2.4	2.6
						1.0	0.4	84	29.7		7.7		15.8		86.1		6.0		2.9		6		86				<0.2		2.3	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	3.3	0.3	63	29.6	29.6	7.7	7.7	16.4	16.4	80.7	80.8	5.6	5.6	5.2		8		88				<0.2		2.8	
						3.3	0.3	69	29.6		7.7		16.4		80.8		5.6		5.1		9		89				<0.2		2.7	
SR3	Rainy	Moderate	16:25	8.2	Surface	1.0	0.2	172	29.8	29.8	7.6	7.6	14.8	14.8	77.5	77.6	5.4	5.3	4.0	5.6	4	8	-	-	822130	807573	-	-	-	-
						1.0	0.3	174	29.8		7.6		14.8		77.6		5.4		4.0		6		-				-		-	
					Middle	4.1	0.3	194	29.4	29.4	7.6	7.6	16.5	16.5	75.2	75.2	5.2		3.1		4		-				-		-	
						4.1	0.3	207	29.4		7.6		16.5		75.2		5.2		3.2		6		-				-		-	
					Bottom	7.2	0.1	52	28.9	28.9	7.7	7.7	20.1	20.1	74.2	74.2	5.1	5.1	9.6		14		-				-		-	
						7.2	0.1	54	28.9		7.7		20.1		74.2		5.1		9.7		16		-				-		-	
SR4A	Cloudy	Calm	17:23	8.4	Surface	1.0	0.1	73	30.1	30.1	7.9	7.9	18.5	18.5	87.4	87.4	6.0	5.9	3.5	9.5	9	16	-	-	817201	807798	-	-	-	-
						1.0	0.1	74	30.1		7.9		18.5		87.3		6.0		3.5		8		-				-		-	
					Middle	4.2	0.2	82	29.9	29.9	7.9	7.9	18.9	18.9	85.8	85.7	5.9		8.8		8		-				-		-	
						4.2	0.2	89	29.9		7.9		18.9		85.6		5.8		8.8		10		-				-		-	
					Bottom	7.4	0.1	87	28.5	28.5	7.9	7.9	26.2	26.2	76.1	76.2	5.1	5.1	16.3		30		-				-		-	
						7.4	0.1	87	28.5		7.9		26.2		76.2		5.1		16.3		31		-				-		-	
SR5A	Cloudy	Calm	17:40	3.6	Surface	1.0	0.2	292	30.1	30.1	7.9	7.9	19.3	19.3	91.5	91.5	6.2	6.2	3.3	4.3	11	11	-	-	816585	810708	-	-	-	-
						1.0	0.2	298	30.1		7.9		19.3		91.5		6.2		3.3		10		-				-		-	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	2.6	0.1	298	29.9	29.9	7.9	7.9	19.9	19.9	90.9	91.3	6.2	6.2	5.2		11		-				-		-	
						2.6	0.2	320	29.9		7.9		19.9		91.6		6.2		5.2		11		-				-		-	
SR6	Cloudy	Calm	18:03	4.1	Surface	1.0	0.1	61	29.7	29.7	7.9	7.9	19.1	19.1	89.3	89.5	6.1	6.1	1.9	3.4	10	9	-	-	817885	814679	-	-	-	-
						1.0	0.1	66	29.7		7.9		19.1		89.7		6.1		1.9		8		-				-		-	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	3.1	0.0	80	29.5	29.5	7.9	7.9	19.5	19.5	90.5	90.5	6.2	6.2	4.8		9		-				-		-	
						3.1	0.0	84	29.5		7.9		19.5		90.5		6.2		4.8		8		-				-		-	
SR7	Cloudy	Moderate	18:30	19.7	Surface	1.0	0.3	99	29.4	29.4	7.8	7.8	18.9	18.9	87.3	87.4	6.0	6.0	1.4	2.9	5	5	-	-	823654	823727	-	-	-	-
						1.0	0.3	100	29.4		7.8		18.9		87.4		6.0		1.4		5		-				-		-	
					Middle	9.9	0.0	313	29.5	29.5	7.8	7.8	19.6	19.6	85.8	85.9	5.9		5.4		5		-				-		-	
						9.9	0.0	341	29.5		7.8		19.6		86.0		5.9		5.4		6		-				-		-	
					Bottom	18.7	0.1	38	28.8	28.8	7.8	7.8	23.9	23.9	80.4	80.5	5.4	5.5	1.8		4		-				-		-	
						18.7	0.1	41	28.8		7.8		23.9		80.6		5.5		1.8		4		-				-		-	
SR8	Cloudy	Moderate	17:16	4.0	Surface	1.0	-	-	30.2	30.2	7.8	7.8	15.0	15.0	87.8	87.8	6.1	6.1	5.2	4.9	9	9	-	-	820246	811418	-	-	-	-
						1.0	-	-	30.2		7.8		15.0		87.8		6.1		5.1		8		-				-		-	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	3.0	-	-	30.2	30.2	7.8	7.8	15.9	15.9	86.8	86.9	6.0	6.0	4.7		9		-				-		-	
						3.0	-	-	30.2		7.8		15.9		86.9		6.0		4.7		10		-				-		-	

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

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

Water Quality Monitoring

Water Quality Monitoring Results on 12 September 17 during Mid-Flood Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity(NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)	
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA
C1	Sunny	Calm	11:26	8.6	Surface	1.0	0.5	28	29.8	29.8	7.8	7.8	17.1	17.1	79.6	79.6	5.5	5.5	2.2	4.0	7	10	87	89	815619	804237	<0.2	<0.2	3.1	2.4
						1.0	0.5	28	29.8		7.8		17.1		79.6		5.5		2.5		6		86				<0.2		2.9	
					Middle	4.3	0.7	28	29.7	29.7	7.8	7.8	17.4	17.4	80.2	80.1	5.5		3.5		9		88				<0.2		2.5	
						4.3	0.8	28	29.7		7.8		17.4		80.0		5.5		3.3		11		89				<0.2		2.3	
					Bottom	7.6	0.5	20	29.3	29.3	7.9	7.9	22.5	22.5	78.1	78.3	5.3	5.3	6.4		14		92				<0.2		1.6	
						7.6	0.5	20	29.3		7.9		22.5		78.4		5.3		6.2		13		92				<0.2		1.7	
C2	Cloudy	Moderate	12:43	12.2	Surface	1.0	0.2	-	31.0	31.0	7.6	7.6	11.3	11.3	80.7	80.9	5.6	5.6	5.0	11.9	8	12	81	82	825691	806946	<0.2	<0.2	3.5	3.0
						1.0	0.3	-	31.0		7.6		11.3		81.0		5.7		5.1		10		81				<0.2		3.6	
					Middle	6.1	0.3	11	29.5	29.5	7.6	7.6	16.5	16.5	78.9	79.1	5.5		17.3		8		84				<0.2		2.8	
						6.1	0.3	11	29.5		7.6		16.5		79.2		5.5		17.3		8		85				<0.2		2.6	
					Bottom	11.2	0.3	357	29.3	29.3	7.6	7.6	18.9	18.9	75.5	75.7	5.2	5.2	13.4		18		79				<0.2		2.7	
						11.2	0.3	328	29.3		7.6		18.9		75.8		5.2		13.3		19		79				<0.2		2.5	
C3	Cloudy	Moderate	10:27	11.5	Surface	1.0	0.4	262	29.3	29.3	7.7	7.7	18.8	18.8	81.3	81.3	5.6	5.6	1.9	3.0	6	7	89	87	822101	817822	<0.2	<0.2	3.0	2.7
						1.0	0.4	286	29.3		7.7		18.8		81.3		5.6		2.0		6		89				<0.2		2.9	
					Middle	5.8	0.6	267	29.2	29.2	7.7	7.7	19.0	19.0	79.6	79.7	5.5		4.7		6		85				<0.2		2.6	
						5.8	0.6	275	29.2		7.7		19.0		79.7		5.5		4.8		6		85				<0.2		2.7	
					Bottom	10.5	0.4	280	29.0	29.0	7.7	7.7	20.8	20.8	77.1	77.2	5.3	5.3	2.2		9		88				<0.2		2.3	
						10.5	0.5	307	29.0		7.7		20.8		77.2		5.3		2.2		8		88				<0.2		2.4	
IM1	Sunny	Moderate	11:45	7.6	Surface	1.0	0.7	355	29.9	29.9	7.9	7.9	18.9	18.9	83.9	84.0	5.7	5.7	2.7	4.1	6	7	87	89	818351	806474	<0.2	<0.2	2.2	2.8
						1.0	0.7	327	29.9		7.9		18.9		84.0		5.7		2.6		6		87				<0.2		2.8	
					Middle	3.8	0.6	356	29.8	29.8	7.9	7.9	18.9	18.9	82.8	82.7	5.7		3.6		6		88				<0.2		2.9	
						3.8	0.7	328	29.8		7.9		18.9		82.6		5.6		3.5		6		88				<0.2		2.9	
					Bottom	6.6	0.6	356	29.8	29.8	7.9	7.9	19.0	19.0	78.6	78.6	5.4	5.4	6.2		8		92				<0.2		3.2	
						6.6	0.6	328	29.8		7.9		19.0		78.6		5.4		6.2		8		91				<0.2		2.7	
IM2	Sunny	Moderate	11:51	8.7	Surface	1.0	0.5	1	29.4	29.4	7.8	7.8	18.4	18.4	80.0	80.1	5.5	5.5	2.5	4.0	7	8	87	89	818844	806210	<0.2	<0.2	2.4	2.4
						1.0	0.6	1	29.4		7.8		18.4		80.2		5.5		2.5		7		87				<0.2		2.4	
					Middle	4.4	0.6	6	29.4	29.4	7.8	7.8	18.5	18.5	79.0	79.3	5.5		3.2		9		89				<0.2		2.5	
						4.4	0.7	6	29.4		7.8		18.5		79.5		5.5		3.2		7		88				<0.2		2.4	
					Bottom	7.7	0.5	352	29.5	29.5	7.8	7.8	18.7	18.7	80.9	81.3	5.6	5.6	6.1		7		91				<0.2		2.4	
						7.7	0.5	324	29.4		7.8		18.7		81.7		5.6		6.2		8		91				<0.2		2.4	
IM3	Sunny	Moderate	11:57	8.6	Surface	1.0	0.4	26	29.7	29.7	7.8	7.8	17.9	17.9	82.4	82.4	5.7	5.8	1.7	3.7	6	7	87	89	819420	806035	<0.2	<0.2	2.6	2.5
						1.0	0.5	28	29.7		7.8		17.9		82.3		5.7		1.6		6		86				<0.2		2.6	
					Middle	4.3	0.5	44	29.4	29.4	7.8	7.8	18.7	18.7	83.6	83.7	5.8		2.8		7		88				<0.2		2.5	
						4.3	0.6	47	29.4		7.8		18.7		83.8		5.8		2.8		7		89				<0.2		2.5	
					Bottom	7.6	0.3	22	29.3	29.3	7.8	7.8	19.0	19.0	79.1	79.4	5.5	5.5	6.7		9		91				<0.2		2.6	
						7.6	0.3	23	29.3		7.8		19.0		79.6		5.5		6.6		8		91				<0.2		2.4	
IM4	Sunny	Moderate	12:06	7.9	Surface	1.0	0.5	-	29.6	29.6	7.8	7.8	16.0	16.0	79.0	79.3	5.5	5.5	2.0	4.0	7	6	87	89	819565	805052	<0.2	<0.2	2.9	2.9
						1.0	0.5	-	29.5		7.8		16.0		79.5		5.5		2.0		7		87				<0.2		3.1	
					Middle	4.0	0.6	1	29.3	29.3	7.8	7.8	16.9	16.9	76.8	76.8	5.4		3.3		6		88				<0.2		2.9	
						4.0	0.6	1	29.3		7.8		16.9		76.7		5.4		3.2		6		89				<0.2		2.8	
					Bottom	6.9	0.2	350	29.5	29.5	7.8	7.8	17.1	17.1	76.6	76.7	5.3	5.3	6.7		7		91				<0.2		2.8	
						6.9	0.2	322	29.5		7.8		17.1		76.8		5.3		6.8		5		90				<0.2		2.7	
IM5	Sunny	Moderate	12:16	7.0	Surface	1.0	0.7	353	29.3	29.3	7.8	7.8	17.0	17.0	78.0	78.0	5.4	5.4	1.8	3.1	7	8	86	89	820546	804939	<0.2	<0.2	2.7	2.8
						1.0	0.7	325	29.3		7.8		17.0		78.0		5.4		1.8		7		86				<0.2		3.0	
					Middle	3.5	0.6	5	29.3	29.3	7.8	7.8	17.4	17.4	77.2	77.4	5.4		3.5		7		89				<0.2		2.8	
						3.5	0.7	5	29.3		7.8		17.4		77.6		5.4		3.5		7		89				<0.2		2.9	
					Bottom	6.0	0.4	358	29.4	29.4	7.8	7.8	18.0	18.0	77.9	78.2	5.4	5.4	4.1		8		91				<0.2		2.5	
						6.0	0.4	329	29.4		7.8		18.0		78.4		5.4		4.1		9		90				<0.2		2.6	
IM6	Sunny	Moderate	12:23	7.2	Surface	1.0	0.3	350	29.7	29.7	7.8	7.8	15.6	15.6	80.6	80.7	5.6	5.6	3.4	9.1	7	14	87	89	821042	805827	<0.2	<0.2	3.3	2.7
						1.0	0.3	322	29.7		7.8		15.6		80.8		5.6		3.3		7		87				<0.2		3.2	
					Middle	3.6	0.3	26	29.4	29.4	7.8	7.9	17.4	17.4	80.5	80.7	5.6		14.2		13		89				<0.2		2.7	
						3.6	0.3	27	29.4		7.9		17.4		80.8		5.6		13.9		12		88				<0.2		2.6	
					Bottom	6.2	0.2	357	29.3	29.3	7.9	7.9	19.4	19.4	79.0	79.4	5.4	5.5	9.7		21		92				<0.2		2.2	
						6.2	0.2	328	29.3		7.9		19.4		79.7		5.5		9.8		22		91				<0.2		2.2	
IM7	Sunny	Moderate	12:30	8.5	Surface	1.0	0.3	348	29.9	29.9	7.7	7.7	11.8	11.8	78.5	78.7	5.6	5.6	3.2	4.8	6	10	83	85	821345	806839	<0.2	<0.2	3.2	3.2
						1.0	0.3	320	29.9		7.7		11.8		78.9		5.6		3.2		8		83				<0.2		3.5	
					Middle	4.3	0.5	6	29.9	29.9	7.7	7.8	12.0	12.0	78.0	79.6	5.5		4.8		9		85				<0.2		3.5	
						4.3	0.5	6	29.9		7.8		12.0		81.2		5.8		4.8		7		84				<0.2		3.3	
					Bottom	7.5	0.2	7	29.7	29.7	7.9	7.9	15.9	15.9	79.6	79.7	5.5	5.6	6.4		14		89				<0.2		3.0	
						7.5	0.2	7	29.7		7.9		15.9		79.8		5.6		6.4		15		88				<0.2		2.7	
IM8	Cloudy	Moderate	12:16	8.2	Surface	1.0	0.2	45	30.6	30.6	7.7	7.7	10.9	11.0	81.7	81.8	5.8	5.7	4.5	6.0	5	7	77	81	821706	807827	<0.2	<0.2	3.8	3.5
						1.0	0.2	49	30.6		7.7		11.0		81.8		5.8		4.6		6		78				<0.2		3.8	
					Middle	4.1	0.3	28	30.1	30.1	7.6	7.6	11.1	11.1	77.7	77.7	5.5		6.8		7		81				<0.2		3.6	
						4.1	0.3	30	30.1		7.6		11.1		77.7		5.5		6.9		6		81				<0.2		3.5	
					Bottom	7.2	0.2	81	29.6	29.6	7.6	7.6	13.7	13.7	75.6	75.9	5.3	5.4	6.4		8		83				<0.2		3.3	
						7.2	0.2	84	29.6		7.6		13.7		76.1		5.4		6.5		8		84				<0.2		3.1	

DA: Depth-Averaged

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

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

Expansion of Hong Kong International Airport into a Three-Runway System
Water Quality Monitoring
Water Quality Monitoring Results on 12 September 17 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) Value	Water Temperature (°C) Average	pH Value	pH Average	Salinity (ppt) Value	Salinity (ppt) Average	DO Saturation (%) Value	DO Saturation (%) Average	Dissolved Oxygen Value	Dissolved Oxygen DA	Turbidity(NTU) Value	Turbidity(NTU) DA	Suspended Solids (mg/L) Value	Suspended Solids (mg/L) DA	Total Alkalinity (ppm) Value	Total Alkalinity (ppm) DA	Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L) Value	Chromium (µg/L) DA	Nickel (µg/L) Value	Nickel (µg/L) DA
IM9	Cloudy	Moderate	12:07	7.1	Surface	1.0	0.3	37	30.3	30.3	7.6	7.6	12.1	12.1	80.3	80.5	5.7	5.6	3.9	10.5	7	7	80	86	822095	808824	<0.2	<0.2	3.4	3.3
						1.0	0.4	39	30.3		7.6		12.1		80.6		5.7		4.1		6		81				<0.2		3.3	
					Middle	3.6	0.3	18	29.8	29.8	7.7	7.7	12.3	12.3	78.0	78.0	5.5		4.7		6		85				<0.2		3.2	
						3.6	0.3	18	29.7		7.7		12.3		78.0		5.5		4.6		6		85				<0.2		3.2	
					Bottom	6.1	0.2	308	29.6	29.6	7.6	7.6	12.7	12.7	79.9	79.8	5.7	5.7	22.7		7		90				<0.2		3.1	
						6.1	0.3	334	29.6		7.6		12.7		79.7		5.7		23.0		7		92				<0.2		3.4	
IM10	Cloudy	Moderate	11:57	6.5	Surface	1.0	0.5	333	30.0	30.0	7.7	7.7	14.5	14.5	81.9	82.2	5.7	5.7	3.2	10.0	4	5	84	88	822246	809823	<0.2	<0.2	3.3	3.2
						1.0	0.5	349	30.0		7.7		14.5		82.4		5.8		3.2		5		84				<0.2		3.3	
					Middle	3.3	0.5	313	29.8	29.8	7.6	7.6	15.1	15.1	79.6	79.6	5.6		2.8		5		91				<0.2		3.3	
						3.3	0.5	331	29.7		7.6		15.1		79.6		5.6		2.8		5		91				<0.2		3.2	
					Bottom	5.5	0.4	317	29.5	29.5	7.7	7.7	15.8	15.8	80.9	81.0	5.7	5.7	24.0		6		89				<0.2		3.0	
						5.5	0.4	324	29.5		7.7		15.8		81.0		5.7		23.9		4		89				<0.2		3.0	
IM11	Cloudy	Moderate	11:37	7.6	Surface	1.0	0.6	297	29.4	29.6	7.7	7.7	16.7	16.7	81.6	81.6	5.7	5.6	4.9	8.2	3	7	78	87	821513	810533	<0.2	<0.2	2.7	2.6
						1.0	0.6	322	29.8		7.7		16.7		81.5		5.6		4.9		3		78				<0.2		3.0	
					Middle	3.8	0.5	300	29.9	29.9	7.7	7.7	16.8	16.8	80.9	80.9	5.6		7.9		4		91				<0.2		2.8	
						3.8	0.5	306	29.9		7.7		16.8		80.9		5.6		8.1		4		92				<0.2		2.7	
					Bottom	6.6	0.3	318	29.3	29.3	7.7	7.7	19.8	19.8	80.9	81.0	5.6	5.6	11.7		15		90				<0.2		2.4	
						6.6	0.3	324	29.3		7.7		19.8		81.1		5.6		11.8		13		91				<0.2		2.2	
IM12	Cloudy	Moderate	11:29	8.0	Surface	1.0	0.7	272	29.8	29.8	7.7	7.7	16.0	16.0	81.2	81.3	5.7	5.7	2.4	8.9	2	13	83	85	821145	811510	<0.2	<0.2	2.8	2.7
						1.0	0.8	285	29.7		7.7		16.0		81.3		5.7		2.3		2		84				<0.2		2.9	
					Middle	4.0	0.6	285	29.4	29.4	7.7	7.7	18.2	18.2	81.3	81.4	5.6		4.4		4		84				<0.2		3.0	
						4.0	0.6	305	29.4		7.7		18.2		81.5		5.6		4.4		4		84				<0.2		2.9	
					Bottom	7.0	0.3	297	29.2	29.2	7.7	7.7	21.0	21.0	76.9	76.9	5.3	5.3	19.8		30		88				<0.2		2.2	
						7.0	0.3	309	29.2		7.7		21.0		76.9		5.3		19.8		33		89				<0.2		2.5	
SR2	Cloudy	Moderate	10:52	4.2	Surface	1.0	0.1	271	29.5	29.5	7.7	7.7	16.9	16.9	81.3	81.6	5.7	5.7	2.8	3.8	5	5	83	86	821475	814155	<0.2	<0.2	2.8	2.7
						1.0	0.1	287	29.5		7.7		16.9		81.8		5.7		2.8		3		84				<0.2		2.8	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	3.2	0.0	207	29.3	29.3	7.7	7.7	18.0	18.0	79.9	80.0	5.5	5.5	4.8		7		88				<0.2		2.7	
						3.2	0.0	210	29.3		7.7		18.0		80.1		5.5		4.9		6		88				<0.2		2.6	
SR3	Cloudy	Moderate	12:23	8.7	Surface	1.0	0.2	25	30.2	30.2	7.6	7.6	11.0	11.0	79.0	79.1	5.6	5.7	5.4	6.2	3	4	-	-	822132	807581	-	-	-	-
						1.0	0.3	25	30.2		7.6		11.0		79.1		5.6		5.4		4		-				-		-	
					Middle	4.4	0.3	18	30.0	30.0	7.5	7.5	11.1	11.1	79.7	79.7	5.7		8.6		5		-				-		-	
						4.4	0.3	18	29.9		7.5		11.1		79.6		5.7		8.6		4		-				-		-	
					Bottom	7.7	0.2	61	29.7	29.7	7.5	7.5	12.4	12.4	76.1	76.2	5.4	5.4	4.7		5		-				-		-	
						7.7	0.3	62	29.7		7.5		12.4		76.2		5.4		4.6		5		-				-		-	
SR4A	Sunny	Calm	11:04	8.8	Surface	1.0	0.3	232	29.4	29.4	7.9	7.9	21.0	21.0	81.1	81.2	5.5	5.6	3.1	4.5	10	12	-	-	817204	807806	-	-	-	-
						1.0	0.3	244	29.4		7.9		21.0		81.2		5.5		3.0		10		-				-		-	
					Middle	4.4	0.1	250	29.5	29.5	8.0	8.0	21.0	21.0	83.2	83.2	5.7		3.7		10		-				-		-	
						4.4	0.1	267	29.5		8.0		21.0		83.2		5.7		3.7		10		-				-		-	
					Bottom	7.8	0.2	252	29.6	29.6	8.0	8.0	21.2	21.2	80.0	80.0	5.4	5.4	6.7		16		-				-		-	
						7.8	0.2	273	29.6		8.0		21.2		80.0		5.4		6.6		15		-				-		-	
SR5A	Sunny	Calm	10:48	3.4	Surface	1.0	0.2	303	29.9	29.9	7.9	7.9	19.6	19.6	82.9	82.9	5.7	5.7	2.3	4.4	6	6	-	-	816588	810704	-	-	-	-
						1.0	0.2	307	29.8		7.9		19.6		82.9		5.6		2.2		5		-				-		-	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	2.4	0.2	312	29.8	29.8	7.9	7.9	19.7	19.7	81.5	81.5	5.6	5.6	6.5		6		-				-		-	
						2.4	0.2	341	29.8		7.9		19.7		81.4		5.5		6.6		6		-				-		-	
SR6	Sunny	Calm	10:24	4.1	Surface	1.0	0.2	282	29.9	29.9	7.8	7.8	18.1	18.1	83.4	83.4	5.7	5.7	2.4	4.3	7	7	-	-	817899	814656	-	-	-	-
						1.0	0.2	284	29.9		7.8		18.1		83.3		5.7		2.3		7		-				-		-	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	3.1	0.1	305	30.0	30.0	7.8	7.8	18.1	18.1	83.6	83.8	5.7	5.7	6.2		6		-				-		-	
						3.1	0.1	330	30.0		7.8		18.1		83.9		5.7		6.4		8		-				-		-	
SR7	Cloudy	Moderate	09:51	15.5	Surface	1.0	0.1	210	29.5	29.5	7.7	7.7	18.8	18.8	83.8	83.8	5.8	5.7	2.7	3.5	2	3	-	-	823629	823756	-	-	-	-
						1.0	0.1	230	29.5		7.7		18.8		83.8		5.8		2.7		3		-				-		-	
					Middle	7.8	0.1	198	29.1	29.1	7.7	7.7	19.6	19.6	79.7	79.7	5.5		4.7		4		-				-		-	
						7.8	0.1	206	29.1		7.7		19.6		79.7		5.5		4.7		4		-				-		-	
					Bottom	14.5	0.0	82	28.8	28.8	7.7	7.7	22.9	22.9	77.3	77.3	5.3	5.3	3.1		4		-				-		-	
						14.5	0.0	89	28.8		7.7		22.9		77.3		5.3		3.1		3		-				-		-	
SR8	Cloudy	Moderate	11:19	3.9	Surface	1.0	0.0	0	30.2	30.2	7.7	7.7	14.6	14.6	84.3	84.4	5.9	5.9	4.8	6.8	5	9	-	-	820246	811418	-	-	-	-
						1.0	0.0	0	30.2		7.7		14.6		84.4		5.9		4.6		4		-				-		-	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	2.9	0.0	0	29.9	29.9	7.6	7.6	14.8	14.8	82.5	82.5	5.8	5.8	8.9		12		-				-		-	
						2.9	0.0	0	29.9		7.6		14.8		82.5		5.8		8.8		14		-				-		-	

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

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

Water Quality Monitoring

Water Quality Monitoring Results on 14 September 17 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
C1	Cloudy	Moderate	07:21	9.3	Surface	1.0	0.7	207	28.3	28.3	8.0	8.0	22.5	22.5	84.1	84.1	5.8	5.7	8.8	10.9	2	5	97	96	815613	804229	<0.2	<0.2	1.2	1.3
						1.0	0.7	216	28.3		8.0		22.5		84.1		5.8		8.8		4		97				<0.2		1.3	
					Middle	4.7	0.6	203	28.3	28.3	8.0	8.0	22.6	22.6	81.8	81.7	5.6		10.5		5		94				<0.2		1.5	
						4.7	0.6	222	28.3		8.0		22.6		81.5		5.6		10.6		6		94				<0.2		1.4	
					Bottom	8.3	0.5	216	28.1	28.1	7.9	7.9	27.1	27.1	65.7	65.8	4.4	4.4	13.5		7		98				<0.2		1.2	
						8.3	0.6	223	28.1		7.9		27.1		65.9		4.4		13.3		6		98				<0.2		1.2	
C2	Sunny	Moderate	08:11	11.8	Surface	1.0	0.9	158	29.0	29.0	7.8	7.8	17.4	17.4	65.3	65.2	4.6	4.5	13.2	15.9	5	10	87	90	825665	806952	<0.2	<0.2	2.5	2.1
						1.0	1.0	166	29.0		7.8		17.4		65.1		4.5		13.4		3		87				<0.2		2.3	
					Middle	5.9	0.7	158	28.8	28.8	7.8	7.8	20.9	20.9	63.4	63.4	4.3		17.4		13		91				<0.2		1.9	
						5.9	0.8	162	28.8		7.8		20.9		63.4		4.4		17.3		13		90				<0.2		1.9	
					Bottom	10.8	0.5	163	28.7	28.7	7.8	7.8	23.3	23.6	67.6	67.8	4.6	4.6	16.9		14		91				<0.2		2.0	
						10.8	0.5	165	28.7		7.8		23.8		68.0		4.6		16.9		14		92				<0.2		1.9	
C3	Fine	Moderate	05:56	12.5	Surface	1.0	0.2	116	28.6	28.6	7.8	7.8	21.6	21.6	78.2	78.2	5.4	5.3	2.5	2.6	4	5	87	89	822107	817796	<0.2	<0.2	1.7	1.9
						1.0	0.2	126	28.6		7.8		21.6		78.1		5.4		2.4		6		87				<0.2		2.0	
					Middle	6.3	0.2	101	28.6	28.6	7.8	7.8	21.9	21.9	75.2	75.2	5.2		2.4		7		89				<0.2		2.0	
						6.3	0.2	109	28.6		7.8		21.9		75.2		5.2		2.5		5		90				<0.2		1.9	
					Bottom	11.5	0.2	32	28.6	28.6	7.8	7.8	23.2	23.3	76.5	77.6	5.2	5.3	3.0		5		92				<0.2		1.9	
						11.5	0.2	33	28.6		7.8		23.3		78.6		5.3		2.7		5		91				<0.2		2.0	
IM1	Cloudy	Moderate	07:46	7.6	Surface	1.0	0.7	188	28.3	28.3	7.9	7.9	20.7	20.8	80.1	79.7	5.6	5.2	6.6	7.8	5	5	91	90	818370	806455	<0.2	<0.2	1.8	1.6
						1.0	0.7	193	28.3		7.9		20.8		79.2		5.5		6.4		5		91				<0.2		1.7	
					Middle	3.8	0.5	166	28.3	28.3	7.9	7.9	25.0	25.0	71.0	70.8	4.8		7.3		6		91				<0.2		1.6	
						3.8	0.5	170	28.3		7.9		24.9		70.6		4.8		7.2		5		91				<0.2		1.8	
					Bottom	6.6	0.2	156	28.2	28.2	7.9	7.9	26.4	26.4	67.3	67.4	4.5	4.5	9.6		6		89				<0.2		1.2	
						6.6	0.3	159	28.2		7.9		26.4		67.4		4.5		9.6		5		89				<0.2		1.3	
IM2	Cloudy	Moderate	07:54	8.4	Surface	1.0	0.6	190	28.4	28.4	7.9	7.9	20.8	20.8	81.4	81.3	5.6	5.4	6.2	7.7	5	5	87	89	818867	806191	<0.2	<0.2	1.9	1.8
						1.0	0.6	196	28.4		7.9		20.8		81.2		5.6		6.2		3		87				<0.2		1.9	
					Middle	4.2	0.5	198	28.4	28.4	7.9	7.9	22.7	22.7	75.4	75.1	5.2		7.2		6		86				<0.2		1.9	
						4.2	0.6	212	28.4		7.9		22.7		74.7		5.1		7.3		4		87				<0.2		1.8	
					Bottom	7.4	0.3	177	28.3	28.3	7.9	7.9	25.4	25.6	68.7	68.7	4.7	4.7	9.5		4		93				<0.2		1.6	
						7.4	0.3	180	28.2		7.9		25.8		68.7		4.6		9.8		5		93				<0.2		1.4	
IM3	Cloudy	Moderate	08:02	8.7	Surface	1.0	0.7	206	28.4	28.4	7.9	7.9	20.8	20.8	80.6	80.5	5.6	5.4	6.1	8.4	5	4	91	91	819423	806018	<0.2	<0.2	1.8	1.8
						1.0	0.7	212	28.4		7.9		20.7		80.4		5.6		6.2		4		91				<0.2		1.8	
					Middle	4.4	0.5	195	28.4	28.4	7.9	7.9	22.0	22.0	76.3	76.3	5.3		7.6		3		89				<0.2		1.8	
						4.4	0.6	214	28.4		7.9		22.0		76.2		5.2		7.7		4		89				<0.2		1.8	
					Bottom	7.7	0.4	187	28.3	28.3	7.9	8.0	25.4	25.4	72.3	72.7	4.9	5.0	11.4		3		92				<0.2		1.8	
						7.7	0.4	189	28.3		8.0		25.4		73.1		5.0		11.2		5		92				<0.2		1.7	
IM4	Cloudy	Moderate	08:10	7.9	Surface	1.0	0.6	194	28.4	28.4	7.9	7.9	20.8	20.8	81.4	81.3	5.6	5.6	6.3	7.0	4	4	91	92	819579	805044	<0.2	<0.2	1.8	1.8
						1.0	0.6	203	28.4		7.9		20.8		81.2		5.6		6.4		3		91				<0.2		1.9	
					Middle	4.0	0.5	188	28.4	28.4	7.9	7.9	20.8	20.8	79.7	79.3	5.5		6.6		3		93				<0.2		1.8	
						4.0	0.5	202	28.4		7.9		20.8		78.9		5.5		6.7		5		94				<0.2		1.7	
					Bottom	6.9	0.5	187	28.4	28.4	7.9	7.9	22.3	22.3	74.9	74.8	5.2	5.2	7.9		6		92				<0.2		1.8	
						6.9	0.5	193	28.4		7.9		22.2		74.6		5.1		8.0		4		92				<0.2		1.8	
IM5	Cloudy	Moderate	08:26	6.9	Surface	1.0	0.9	215	28.6	28.6	7.9	7.9	18.2	18.2	80.6	80.6	5.6	5.4	6.5	9.8	3	4	91	93	820563	804915	<0.2	<0.2	2.0	2.0
						1.0	0.9	231	28.6		7.9		18.2		80.5		5.6		6.5		4		92				<0.2		1.9	
					Middle	3.5	0.7	211	28.6	28.6	7.9	7.9	20.2	19.8	74.2	74.1	5.1		7.5		3		93				<0.2		2.0	
						3.5	0.8	229	28.6		7.9		19.4		73.9		5.1		7.7		3		94				<0.2		2.0	
					Bottom	5.9	0.7	218	28.1	28.1	7.9	7.9	26.5	26.6	64.6	64.8	4.4	4.4	15.2		4		93				<0.2		2.0	
						5.9	0.7	221	28.1		7.9		26.6		64.9		4.4		15.1		4		92				<0.2		2.0	
IM6	Cloudy	Moderate	08:37	6.8	Surface	1.0	0.7	209	28.7	28.7	7.9	7.9	18.7	18.7	78.3	78.2	5.5	5.2	6.6	7.8	3	4	91	92	821047	805846	<0.2	<0.2	2.0	1.8
						1.0	0.8	214	28.7		7.9		18.7		78.1		5.4		6.6		2		91				<0.2		2.0	
					Middle	3.4	0.5	209	28.6	28.6	7.9	7.9	21.2	21.2	73.0	72.9	5.0		7.6		4		91				<0.2		1.7	
						3.4	0.5	225	28.6		7.9		21.2		72.7		5.0		7.7		4		92				<0.2		1.7	
					Bottom	5.8	0.5	218	28.4	28.4	7.9	7.9	23.6	23.7	69.9	70.0	4.8	4.8	9.0		5		93				<0.2		1.5	
						5.8	0.5	238	28.3		7.9		23.7		70.0		4.8		9.2		6		93				<0.2		1.6	
IM7	Cloudy	Moderate	08:49	8.0	Surface	1.0	0.5	235	28.6	28.6	7.9	7.9	19.6	19.7	73.3	73.1	5.1	4.8	7.9	10.7	3	4	91	93	821356	806816	<0.2	<0.2	2.2	2.0
						1.0	0.5	248	28.6		7.9		19.8		72.9		5.1		7.9		3		92				<0.2		2.1	
					Middle	4.0	0.2	229	28.4	28.4	7.9	7.9	24.4	24.4	64.1	64.1	4.4		10.5		5		92				<0.2		1.9	
						4.0	0.2	249	28.4		7.9		24.4		64.1		4.4		10.6		4		93				<0.2		2.0	
					Bottom	7.0	0.3	229	28.2	28.2	7.9	7.9	25.6	25.6	63.2	63.3	4.3	4.3	13.7		4		93				<0.2		1.8	
						7.0	0.3	251	28.2		7.9		25.6		63.3		4.3		13.8		4		94				<0.2		2.0	
IM8	Sunny	Moderate	07:38	8.4	Surface	1.0	0.5	207	28.9	28.9	7.9	7.9	19.0	19.0	77.0	76.9	5.3	5.3	4.8	6.4	2	3	88	91	821697	807851	<0.2	<0.2	2.2	2.0
						1.0	0.5	209	28.9		7.9		19.0		76.8		5.3		4.8		2		87				<0.2		2.2	
					Middle	4.2	0.2	216	28.9	28.9	7.9	7.9	19.2	19.2	75.3	75.3	5.2		6.4		5		91				<0.2		2.0	
						4.2	0.2	233	28.8		7.9		19.2		75.2		5.2		6.5		3		91				<0.2		1.9	
					Bottom	7.4	0.1	45	28.6	28.6	8.0	8.0	26.1	26.1	81.5	81.8	5.5	5.5	7.9		3		93				<0.2		1.8	
						7.4	0.1	45	28.6		8.0		26.0		82.0		5.5		7.9		3		94				<0.2		2.0	

DA: Depth-Averaged

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

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

Expansion of Hong Kong International Airport into a Three-Runway System
Water Quality Monitoring
Water Quality Monitoring Results on 14 September 17 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
IM9	Sunny	Moderate	07:31	7.7	Surface	1.0	0.4	185	29.0	29.0	7.9	7.9	19.4	19.4	73.2	73.2	5.1	5.0	5.2	6.6	2	3	88	91	822112	808809	<0.2	<0.2	2.0	2.0
						1.0	0.5	192	29.0		7.9		19.4		73.1		5.0		5.3		4		89				<0.2		2.0	
					Middle	3.9	0.3	162	28.8	28.8	7.9	7.9	20.6	20.6	72.2	72.3	5.0		7.0		4		92				<0.2		2.4	
						3.9	0.3	168	28.7		7.9		20.6		72.3		5.0		7.0		2		91				<0.2		2.3	
					Bottom	6.7	0.1	134	28.6	28.6	8.0	8.0	25.5	25.5	79.0	79.3	5.3	5.3	7.5		4		93				<0.2		1.7	
						6.7	0.1	138	28.6		7.9		25.5		79.5		5.3		7.4		4		93				<0.2		1.8	
IM10	Sunny	Moderate	07:23	6.8	Surface	1.0	0.5	149	28.9	28.9	7.8	7.8	19.4	19.4	74.7	74.7	5.2	5.0	4.7	8.6	4	5	87	90	822247	809819	<0.2	<0.2	1.8	1.7
						1.0	0.5	151	28.9		7.8		19.4		74.7		5.2		4.8		2		86				<0.2		2.0	
					Middle	3.4	0.3	118	28.6	28.6	7.9	7.9	24.3	24.3	69.5	70.0	4.7		11.0		5		90				<0.2		1.7	
						3.4	0.4	124	28.6		7.9		24.3		70.4		4.8		11.2		7		90				<0.2		1.8	
					Bottom	5.8	0.3	103	28.6	28.6	7.9	7.9	24.9	24.9	79.1	79.4	5.3	5.4	10.0		6		92				<0.2		1.5	
						5.8	0.3	109	28.6		7.9		24.9		79.6		5.4		10.0		6		92				<0.2		1.5	
IM11	Sunny	Moderate	07:04	8.7	Surface	1.0	0.3	124	28.7	28.7	7.9	7.9	20.5	20.5	78.2	78.1	5.4	5.4	7.1	9.6	3	5	88	91	821498	810552	<0.2	<0.2	1.7	1.6
						1.0	0.4	133	28.7		7.9		20.5		78.0		5.4		7.2		4		89				<0.2		1.6	
					Middle	4.4	0.3	122	28.7	28.7	8.1	8.1	21.4	21.4	77.5	77.5	5.3		10.1		4		91				<0.2		2.0	
						4.4	0.3	133	28.7		8.1		21.4		77.5		5.3		10.2		3		92				<0.2		1.6	
					Bottom	7.7	0.3	122	28.6	28.6	8.0	8.0	22.7	22.7	81.3	81.5	5.5	5.6	11.5		7		92				<0.2		1.4	
						7.7	0.3	132	28.6		8.0		22.7		81.6		5.6		11.5		9		93				<0.2		1.4	
IM12	Sunny	Moderate	06:55	9.3	Surface	1.0	0.3	124	28.6	28.6	7.9	7.9	20.8	20.9	81.6	81.6	5.6	5.6	4.2	4.5	4	5	88	90	821162	811499	<0.2	<0.2	1.9	1.8
						1.0	0.3	134	28.6		7.9		20.9		81.6		5.6		4.2		4		87				<0.2		1.8	
					Middle	4.7	0.3	113	28.6	28.6	7.9	7.9	21.1	21.1	81.4	81.4	5.6		4.7		3		89				<0.2		2.0	
						4.7	0.4	115	28.6		7.9		21.1		81.4		5.6		4.7		3		90				<0.2		1.8	
					Bottom	8.3	0.2	87	28.6	28.6	8.0	8.0	22.0	22.0	86.0	86.2	5.9	5.9	4.5		8		91				<0.2		1.6	
						8.3	0.2	94	28.6		8.0		22.0		86.4		5.9		4.4		7		92				<0.2		1.7	
SR2	Fine	Moderate	06:22	4.7	Surface	1.0	0.2	111	28.6	28.6	7.9	7.9	21.9	21.9	69.6	69.5	4.8	4.8	4.9	5.5	3	4	86	89	821478	814149	<0.2	<0.2	1.5	1.5
						1.0	0.2	111	28.6		7.9		21.9		69.4		4.8		5.0		5		87				<0.2		1.6	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	3.7	0.2	119	28.6	28.6	7.8	7.8	24.0	24.0	71.5	71.7	4.8	4.9	6.0		4		91				<0.2		1.5	
						3.7	0.2	122	28.6		7.8		24.0		71.8		4.9		5.9		5		92				<0.2		1.5	
SR3	Sunny	Moderate	07:45	8.9	Surface	1.0	0.5	187	28.8	28.8	7.9	7.9	18.7	18.7	77.2	77.1	5.4	5.1	5.1	7.4	4	3	-	-	822155	807583	-	-	-	-
						1.0	0.5	191	28.8		7.9		18.7		77.0		5.4		5.1		2		-				-		-	
					Middle	4.5	0.2	223	28.8	28.8	7.9	7.9	20.0	20.1	70.3	70.3	4.9		8.0		3		-				-		-	
						4.5	0.2	240	28.8		7.9		20.1		70.2		4.8		8.2		3		-				-		-	
					Bottom	7.9	0.1	10	28.5	28.5	7.9	7.9	25.1	25.1	77.0	77.3	5.2	5.2	9.0		4		-				-		-	
						7.9	0.1	10	28.5		7.9		25.1		77.6		5.2		8.9		2		-				-		-	
SR4A	Cloudy	Moderate	07:00	9.8	Surface	1.0	0.1	264	28.2	28.2	7.9	7.9	22.3	22.3	81.9	81.9	5.7	5.2	5.8	7.7	6	8	-	-	817188	807791	-	-	-	-
						1.0	0.1	289	28.2		7.9		22.3		81.8		5.6		5.7		6		-				-		-	
					Middle	4.9	0.2	89	28.3	28.3	7.9	7.9	25.1	25.1	70.1	70.0	4.8		6.8		6		-				-		-	
						4.9	0.2	94	28.3		7.9		25.1		69.9		4.7		6.1		5		-				-		-	
					Bottom	8.8	0.1	97	28.2	28.2	7.9	7.9	25.7	25.7	69.3	69.6	4.7	4.7	11.0		14		-				-		-	
						8.8	0.1	105	28.2		7.9		25.7		69.8		4.7		10.9		13		-				-		-	
SR5A	Cloudy	Moderate	06:41	5.6	Surface	1.0	0.1	7	28.7	28.7	7.9	7.9	20.6	20.6	80.1	79.8	5.5	5.5	4.7	4.4	6	7	-	-	816583	810714	-	-	-	-
						1.0	0.1	7	28.7		7.9		20.6		79.5		5.5		4.8		5		-				-		-	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	4.6	0.0	288	28.8	28.8	7.8	7.8	22.8	22.8	74.6	75.4	5.1	5.2	3.9		7		-				-		-	
						4.6	0.0	310	28.8		7.8		22.8		76.2		5.2		4.1		8		-				-		-	
SR6	Cloudy	Moderate	06:14	4.8	Surface	1.0	0.1	221	28.4	28.4	7.8	7.8	20.5	20.5	78.6	78.4	5.5	5.5	4.4	7.2	4	5	-	-	817912	814666	-	-	-	-
						1.0	0.1	240	28.4		7.8		20.5		78.1		5.4		4.3		5		-				-		-	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	3.8	0.1	75	28.6	28.6	7.8	7.8	23.3	23.3	56.8	56.8	3.9	3.9	9.9		6		-				-		-	
						3.8	0.1	75	28.6		7.8		23.3		56.8		3.9		10.0		6		-				-		-	
SR7	Fine	Moderate	05:20	20.0	Surface	1.0	0.3	74	28.4	28.4	7.9	7.9	23.2	23.2	76.7	76.7	5.2	5.1	1.2	3.7	4	4	-	-	823636	823728	-	-	-	-
						1.0	0.3	79	28.4		7.9		23.2		76.6		5.2		1.2		4		-				-		-	
					Middle	10.0	0.2	80	28.4	28.4	7.8	7.8	25.6	25.6	74.4	74.4	5.0		3.8		4		-				-		-	
						10.0	0.2	82	28.4		7.8		25.6		74.3		5.0		3.8		3		-				-		-	
					Bottom	19.0	0.5	109	28.4	28.4	7.8	7.8	25.9	25.9	74.1	74.4	5.0	5.0	6.0		5		-				-		-	
						19.0	0.5	118	28.4		7.8		25.9		74.6		5.0		6.1		5		-				-		-	
SR8	Fine	Calm	06:47	4.4	Surface	1.0	-	-	28.9	28.9	7.9	7.9	21.8	21.8	76.5	76.5	5.2	5.2	6.8	7.0	2	3	-	-	820246	811418	-	-	-	-
						1.0	-	-	28.9		7.9		21.8		76.5		5.2		6.8		4		-				-		-	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	3.4	-	-	28.7	28.7	7.9	7.9	21.9	21.9	78.2	78.3	5.3	5.4	7.2		3		-				-		-	
						3.4	-	-	28.7		7.9		21.9		78.3		5.4		7.1		4		-				-		-	

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

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

Water Quality Monitoring

Water Quality Monitoring Results on 14 September 17 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) Value	Water Temperature (°C) Average	pH Value	pH Average	Salinity (ppt) Value	Salinity (ppt) Average	DO Saturation (%) Value	DO Saturation (%) Average	Dissolved Oxygen Value	Dissolved Oxygen DA	Turbidity(NTU) Value	Turbidity(NTU) DA	Suspended Solids (mg/L) Value	Suspended Solids (mg/L) DA	Total Alkalinity (ppm) Value	Total Alkalinity (ppm) DA	Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L) Value	Chromium (µg/L) DA	Nickel (µg/L) Value	Nickel (µg/L) DA
C1	Cloudy	Moderate	14:23	8.7	Surface	1.0	0.2	86	28.9	28.9	7.9	7.9	18.5	18.5	83.7	83.7	5.8	5.8	7.3	12.5	5	6	88	92	815633	804235	<0.2	<0.2	2.1	1.9
						1.0	0.2	87	28.9		7.9		18.5		83.7		5.8		7.5		4		89				<0.2		2.1	
					Middle	4.4	0.3	13	28.6	28.6	7.9	7.9	21.8	21.9	83.0	83.0	5.7		9.3		5		91				<0.2		2.0	
						4.4	0.3	13	28.6		7.9		21.9		82.9		5.7		9.6		5		91				<0.2		1.9	
					Bottom	7.7	0.2	24	28.3	28.3	7.9	7.9	25.2	25.2	81.9	82.0	5.6	5.6	20.7		8		95				<0.2		1.7	
						7.7	0.2	24	28.3		7.9		25.2		82.1		5.6		20.6		9		95				<0.2		1.6	
C2	Cloudy	Moderate	13:05	11.4	Surface	1.0	0.3	195	29.5	29.5	7.6	7.6	15.8	15.8	61.9	61.9	4.6	4.6	7.6	6.5	6	7	89	92	825675	806954	<0.2	<0.2	4.1	3.7
						1.0	0.3	203	29.5		7.6		15.8		61.9		4.6		7.6		5		89				<0.2		4.5	
					Middle	5.7	0.1	9	29.1	29.1	7.6	7.6	18.9	18.9	61.8	61.8	4.6		6.4		8		92				<0.2		4.0	
						5.7	0.1	9	29.1		7.6		18.9		61.8		4.6		6.4		6		91				<0.2		4.1	
					Bottom	10.4	0.3	333	28.9	28.9	7.6	7.6	21.0	21.0	64.9	65.0	4.4	4.5	5.4		7		94				<0.2		2.9	
						10.4	0.3	335	28.9		7.6		21.0		65.1		4.5		5.4		7		95				<0.2		2.8	
C3	Cloudy	Moderate	15:18	11.7	Surface	1.0	0.3	259	28.9	28.9	8.2	8.2	22.8	22.8	74.6	74.5	5.1	4.7	3.9	4.7	7	6	88	91	822111	817818	<0.2	<0.2	1.7	1.6
						1.0	0.3	276	28.9		8.2		22.8		74.4		5.1		3.7		5		89				<0.2		1.7	
					Middle	5.9	0.4	244	28.5	28.5	8.1	8.1	24.6	24.7	64.2	64.2	4.3		4.5		6		90				<0.2		1.4	
						5.9	0.4	256	28.5		8.1		24.7		64.2		4.3		4.5		6		91				<0.2		1.6	
					Bottom	10.7	0.2	285	28.1	28.1	7.9	7.9	27.8	27.8	67.5	67.7	4.5	4.5	5.9		6		94				<0.2		1.4	
						10.7	0.2	313	28.1		7.9		27.8		67.8		4.5		5.8		6		94				<0.2		1.5	
IM1	Cloudy	Moderate	14:02	7.4	Surface	1.0	0.5	2	28.8	28.8	8.0	8.0	23.0	23.0	93.0	92.9	6.3	6.2	7.8	11.8	6	7	89	91	818344	806453	<0.2	<0.2	1.4	1.4
						1.0	0.5	2	28.8		8.0		23.0		92.8		6.3		7.8		7		89				<0.2		1.5	
					Middle	3.7	0.4	9	28.6	28.6	8.0	8.0	23.9	23.9	90.0	89.8	6.1		8.0		6		91				<0.2		1.5	
						3.7	0.4	9	28.6		8.0		23.9		89.6		6.1		8.1		6		91				<0.2		1.5	
					Bottom	6.4	0.4	4	28.3	28.3	8.0	8.0	25.1	25.1	77.2	77.4	5.2	5.2	19.3		8		94				<0.2		1.4	
						6.4	0.4	4	28.3		8.0		25.1		77.5		5.2		19.6		6		94				<0.2		1.3	
IM2	Cloudy	Moderate	13:55	8.0	Surface	1.0	0.2	319	28.9	28.9	8.0	8.0	20.9	20.8	86.7	86.8	6.0	6.0	8.3	13.6	5	6	87	91	818835	806204	<0.2	<0.2	2.7	1.8
						1.0	0.2	324	28.9		8.0		20.7		86.8		6.0		8.3		4		86				<0.2		2.6	
					Middle	4.0	0.3	357	28.7	28.7	8.0	8.0	23.6	23.7	87.5	87.4	5.9		11.9		7		91				<0.2		1.4	
						4.0	0.3	328	28.7		8.0		23.7		87.3		5.9		12.2		8		92				<0.2		1.5	
					Bottom	7.0	0.3	7	28.3	28.3	7.9	7.9	25.0	25.0	70.1	70.3	4.8	4.8	20.5		7		94				<0.2		1.4	
						7.0	0.3	7	28.3		7.9		25.0		70.4		4.8		20.4		7		94				<0.2		1.4	
IM3	Cloudy	Moderate	13:46	8.7	Surface	1.0	0.2	318	29.0	29.0	7.9	7.9	19.9	20.0	82.6	82.6	5.7	5.6	8.2	15.0	4	4	89	91	819393	806018	<0.2	<0.2	2.9	2.2
						1.0	0.2	337	28.9		7.9		20.1		82.5		5.7		8.4		3		89				<0.2		2.9	
					Middle	4.4	0.3	10	28.5	28.5	8.0	8.0	23.6	23.6	79.4	79.3	5.4		11.9		4		91				<0.2		1.9	
						4.4	0.3	10	28.5		8.0		23.6		79.2		5.4		12.1		4		91				<0.2		2.2	
					Bottom	7.7	0.2	31	28.3	28.3	7.9	7.9	25.0	25.0	69.9	70.0	4.7	4.8	24.8		4		94				<0.2		1.7	
						7.7	0.2	33	28.3		7.9		25.0		70.0		4.8		24.7		6		94				<0.2		1.6	
IM4	Cloudy	Moderate	13:35	7.6	Surface	1.0	0.4	301	29.0	29.0	7.9	7.9	19.3	19.4	77.7	77.6	5.4	5.1	9.2	15.7	3	5	91	94	819558	805044	<0.2	<0.2	3.0	2.2
						1.0	0.4	310	29.0		7.9		19.4		77.4		5.4		9.1		2		91				<0.2		2.9	
					Middle	3.8	0.2	325	28.5	28.5	7.9	7.9	22.3	22.3	70.2	70.2	4.8		14.5		5		94				<0.2		1.8	
						3.8	0.2	350	28.5		7.9		22.3		70.2		4.8		14.8		4		94				<0.2		2.0	
					Bottom	6.6	0.2	18	28.2	28.2	7.9	7.9	24.9	24.9	65.1	65.2	4.4	4.4	23.3		7		96				<0.2		1.7	
						6.6	0.2	18	28.2		7.9		24.9		65.2		4.4		23.4		7		96				<0.2		1.6	
IM5	Cloudy	Moderate	13:23	6.8	Surface	1.0	0.3	347	29.2	29.2	7.8	7.8	17.5	17.6	74.1	74.0	5.2	5.0	9.5	11.9	4	6	89	91	820571	804908	<0.2	<0.2	2.8	2.3
						1.0	0.3	319	29.2		7.8		17.6		73.9		5.1		9.5		2		89				<0.2		2.8	
					Middle	3.4	0.4	9	28.7	28.7	7.9	7.9	20.9	20.9	69.1	69.1	4.8		12.0		8		90				<0.2		2.1	
						3.4	0.4	9	28.7		7.9		20.9		69.1		4.8		12.1		6		91				<0.2		2.1	
					Bottom	5.8	0.3	9	28.6	28.6	7.9	7.9	22.0	22.1	68.7	68.8	4.7	4.7	14.1		9		93				<0.2		1.9	
						5.8	0.3	9	28.6		7.9		22.1		68.9		4.7		14.3		7		94				<0.2		2.2	
IM6	Cloudy	Moderate	13:15	6.5	Surface	1.0	0.3	314	29.1	29.1	7.7	7.7	16.7	16.7	72.2	72.3	5.1	5.0	8.4	11.3	4	6	89	93	821040	805828	<0.2	<0.2	3.7	3.2
						1.0	0.3	343	29.1		7.7		16.6		72.3		5.1		8.5		6		90				<0.2		3.7	
					Middle	3.3	0.3	341	28.9	28.9	7.8	7.8	19.1	19.1	70.7	70.7	4.9		13.4		4		93				<0.2		3.3	
						3.3	0.3	358	28.9		7.8		19.0		70.6		4.9		13.6		4		94				<0.2		3.3	
					Bottom	5.5	0.2	353	28.7	28.7	7.8	7.8	20.6	20.7	68.8	68.8	4.8	4.8	11.9		8		96				<0.2		2.6	
						5.5	0.3	325	28.7		7.8		20.7		68.8		4.8		12.1		10		96				<0.2		2.4	
IM7	Cloudy	Moderate	13:07	7.9	Surface	1.0	0.4	268	29.2	29.2	7.7	7.7	16.2	16.2	70.8	70.8	5.0	4.9	8.7	9.9	4	3	89	91	821364	806818	<0.2	<0.2	3.7	3.1
						1.0	0.4	287	29.2		7.7		16.2		70.8		5.0		8.7		4		89				<0.2		3.7	
					Middle	4.0	0.3	292	28.9	28.9	7.7	7.7	18.4	18.4	67.9	67.8	4.7		8.2		2		92				<0.2		3.0	
						4.0	0.3	317	28.9		7.7		18.4		67.7		4.7		8.4		3		92				<0.2		2.9	
					Bottom	6.9	0.1	226	28.7	28.7	7.8	7.8	20.6	20.9	64.2	64.8	4.4	4.5	12.2		3		93				<0.2		2.7	
						6.9	0.1	231	28.6		7.8		21.2		65.3		4.5		13.1		2		93				<0.2		2.5	
IM8	Cloudy	Moderate	13:29	7.8	Surface	1.0	0.3	191	29.5	29.5	7.7	7.7	15.0	15.0	69.9	69.9	4.9	4.9	6.4	6.3	3	5	89	91	821696	807821	<0.2	<0.2	3.4	<u>3.6</u>
						1.0	0.3	200	29.4		7.7		15.0		69.8		4.9		6.4		3		88				<0.2		3.4	
					Middle	3.9	0.2	245	29.2	29.2	7.7	7.7	17.1	17.2	70.1	70.2	4.9		6.2		2		92				<0.2		3.5	
						3.9	0.2	261	29.2		7.7		17.2		70.2		4.9		6.2		4		91				<0.2		4.1	
					Bottom	6.8	0.2	228	29.2	29.2	7.7	7.7	18.9	18.9	76.8	77.2	5.3	5.3	6.2		8		93				<0.2		3.7	
						6.8	0.2	246	29.2		7.7		18.9		77.5		5.3		6.3		8		94				<0.2		3.5	

DA: Depth-Averaged

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

<u>Value exceeding Action Level is underlined</u>; **<u>Value exceeding Limit Level is bolded and underlined</u>**

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

Water Quality Monitoring

Water Quality Monitoring Results on 14 September 17 during Mid-Flood Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity(NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)	
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA
IM9	Cloudy	Moderate	13:38	7.1	Surface	1.0	0.1	183	29.6	29.6	7.8	7.8	15.7	15.7	71.9	71.9	5.0	5.0	6.3	7.3	3	4	88	91	822108	808808	<0.2	<0.2	3.0	3.0
						1.0	0.1	184	29.6		7.8		15.7		71.9		5.0		6.3		5		88				<0.2		3.0	
					Middle	3.6	0.1	200	29.4	29.4	7.7	7.7	18.5	18.5	72.2	72.3	5.0		6.9		4		91				<0.2		3.0	
						3.6	0.1	212	29.4		7.7		18.5		72.4		5.0		7.0		4		91				<0.2		3.3	
					Bottom	6.1	0.1	27	29.4	29.4	7.7	7.7	19.3	19.3	81.2	81.5	5.6	5.6	8.6		4		94				<0.2		2.8	
						6.1	0.1	29	29.4		7.7		19.3		81.8		5.6		8.8		6		93				<0.2		3.1	
IM10	Cloudy	Moderate	13:46	7.2	Surface	1.0	0.1	310	29.4	29.4	7.9	7.9	17.5	17.5	79.0	78.9	5.5	5.4	8.0	7.3	7	7	87	90	822251	809851	<0.2	<0.2	3.0	2.9
						1.0	0.1	329	29.4		7.9		17.5		78.7		5.5		8.2		5		87				<0.2		3.0	
					Middle	3.6	0.2	342	29.3	29.3	7.9	7.9	17.9	17.9	76.0	76.0	5.3		7.9		6		90				<0.2		2.8	
						3.6	0.2	315	29.3		7.9		17.9		75.9		5.3		7.7		6		90				<0.2		2.9	
					Bottom	6.2	0.3	332	29.0	29.1	7.9	7.9	21.1	21.1	80.9	82.8	5.5	5.7	5.8		9		94				<0.2		2.8	
						6.2	0.3	359	29.1		7.9		21.1		84.6		5.8		5.9		7		93				<0.2		2.8	
IM11	Cloudy	Moderate	14:04	8.3	Surface	1.0	0.2	307	29.4	29.4	8.1	8.1	18.7	18.7	84.8	84.5	5.8	5.7	4.8	5.7	5	6	87	89	821520	810546	<0.2	<0.2	2.7	2.5
						1.0	0.2	323	29.4		8.1		18.7		84.1		5.8		4.9		5		87				<0.2		2.6	
					Middle	4.2	0.3	307	29.1	29.1	8.0	8.0	19.2	19.3	81.8	81.7	5.6		6.2		8		88				<0.2		2.4	
						4.2	0.3	308	29.1		8.0		19.3		81.6		5.6		6.3		6		89				<0.2		2.4	
					Bottom	7.3	0.4	303	28.9	28.9	8.0	8.0	22.2	22.1	87.5	87.7	6.0	6.0	6.0		6		92				<0.2		2.3	
						7.3	0.4	331	28.9		8.0		22.0		87.9		6.0		5.7		6		91				<0.2		2.3	
IM12	Cloudy	Moderate	14:13	6.9	Surface	1.0	0.3	289	29.2	29.2	8.1	8.1	19.4	19.4	83.8	83.7	5.8	5.6	4.7	6.0	8	8	87	89	821149	811524	<0.2	<0.2	2.2	2.2
						1.0	0.3	293	29.1		8.1		19.4		83.6		5.8		4.8		8		86				<0.2		2.3	
					Middle	3.5	0.4	281	28.9	28.9	8.1	8.1	20.4	20.5	78.5	78.4	5.4		5.9		9		89				<0.2		2.4	
						3.5	0.4	298	28.9		8.1		20.5		78.3		5.4		6.0		7		89				<0.2		2.1	
					Bottom	5.9	0.3	287	28.6	28.6	8.1	8.1	23.7	23.8	83.2	83.5	5.6	5.7	7.2		10		91				<0.2		2.0	
						5.9	0.3	289	28.6		8.1		23.8		83.7		5.7		7.2		8		92				<0.2		2.0	
SR2	Cloudy	Moderate	14:51	5.1	Surface	1.0	0.4	328	29.0	29.0	8.1	8.1	21.4	21.4	84.4	84.4	5.8	5.8	6.2	8.4	6	7	87	90	821448	814171	<0.2	<0.2	1.8	1.8
						1.0	0.4	336	29.0		8.1		21.4		84.3		5.8		6.3		7		87				<0.2		1.9	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	4.1	0.2	339	28.9	28.9	8.1	8.1	22.0	22.0	85.9	86.1	5.9	5.9	10.6		8		92				<0.2		1.8	
						4.1	0.2	352	28.9		8.1		22.0		86.3		5.9		10.6		6		93				<0.2		1.8	
SR3	Cloudy	Moderate	13:24	8.6	Surface	1.0	0.4	178	29.5	29.5	7.7	7.7	14.2	14.1	66.2	66.2	4.7	4.6	6.8	6.4	8	8	-	-	822139	807551	-	-	-	-
						1.0	0.5	178	29.5		7.7		14.0		66.1		4.7		6.7		8		-				-		-	
					Middle	4.3	0.2	240	29.3	29.3	7.7	7.7	17.5	17.5	64.0	64.0	4.4		6.2		8		-				-		-	
						4.3	0.2	250	29.3		7.7		17.5		63.9		4.4		6.2		8		-				-		-	
					Bottom	7.6	0.1	262	29.0	29.0	7.7	7.7	20.3	20.3	66.0	66.2	4.5	4.6	6.2		7		-				-		-	
						7.6	0.1	280	29.0		7.7		20.3		66.3		4.6		6.2		7		-				-		-	
SR4A	Cloudy	Moderate	14:43	9.2	Surface	1.0	0.1	82	28.9	28.9	8.0	8.0	21.5	21.5	94.6	94.2	6.5	6.2	8.9	11.9	6	7	-	-	817175	807814	-	-	-	-
						1.0	0.1	82	28.9		8.0		21.5		93.8		6.4		9.0		6		-				-		-	
					Middle	4.6	0.1	76	28.8	28.8	8.0	8.0	22.1	22.1	86.0	86.0	5.9		10.6		5		-				-		-	
						4.6	0.1	80	28.8		8.0		22.1		85.9		5.9		10.6		7		-				-		-	
					Bottom	8.2	0.2	58	28.5	28.5	7.9	7.9	24.0	24.0	78.2	78.6	5.3	5.4	15.8		10		-				-		-	
						8.2	0.2	61	28.5		7.9		24.0		79.0		5.4		16.5		8		-				-		-	
SR5A	Cloudy	Moderate	15:01	5.2	Surface	1.0	0.1	302	29.0	29.0	8.0	8.0	21.8	21.8	92.6	92.0	6.3	6.3	9.3	10.8	7	8	-	-	816604	810684	-	-	-	-
						1.0	0.1	305	29.0		8.0		21.8		91.3		6.2		9.5		7		-				-		-	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	4.2	0.1	326	28.7	28.7	7.9	7.9	22.5	22.5	83.8	83.9	5.7	5.7	12.2		7		-				-		-	
						4.2	0.1	357	28.7		7.9		22.5		83.9		5.7		12.2		9		-				-		-	
SR6	Cloudy	Moderate	15:27	4.7	Surface	1.0	0.2	251	28.9	28.9	7.9	7.9	21.2	21.2	89.5	89.5	6.1	6.1	9.6	13.3	14	13	-	-	817907	814665	-	-	-	-
						1.0	0.2	272	28.9		7.9		21.2		89.4		6.1		9.5		13		-				-		-	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	3.7	0.0	55	28.9	28.9	7.9	7.9	22.1	22.1	79.1	79.2	5.4	5.4	16.9		12		-				-		-	
						3.7	0.0	57	28.9		7.9		22.1		79.3		5.4		17.0		13		-				-		-	
SR7	Cloudy	Moderate	15:54	16.8	Surface	1.0	0.1	261	28.3	28.3	8.1	8.1	26.2	26.3	71.3	71.3	5.0	5.0	4.8	4.6	6	6	-	-	823650	823757	-	-	-	-
						1.0	0.1	282	28.3		8.1		26.3		71.3		5.0		4.8		7		-				-		-	
					Middle	8.4	0.1	203	28.1	28.1	8.0	8.0	27.2	27.3	72.1	72.2	5.0		5.0		5		-				-		-	
						8.4	0.1	205	28.1		8.0		27.3		72.3		5.0		5.1		5		-				-		-	
					Bottom	15.8	0.1	293	28.2	28.2	7.9	7.9	27.4	27.4	77.8	78.0	5.2	5.2	3.8		6		-				-		-	
						15.8	0.2	307	28.2		7.9		27.4		78.2		5.2		3.8		6		-				-		-	
SR8	Cloudy	Moderate	14:22	4.5	Surface	1.0	0.0	0	29.0	29.0	8.1	8.1	19.5	19.5	79.2	79.2	5.5	5.5	10.0	11.0	5	6	-	-	820246	811418	-	-	-	-
						1.0	0.0	0	29.0		8.1		19.5		79.2		5.5		10.3		6		-				-		-	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	3.5	0.0	0	28.8	28.8	8.1	8.1	21.5	21.5	84.8	85.0	5.8	5.8	11.9		7		-				-		-	
						3.5	0.0	0	28.8		8.1		21.5		85.2		5.8		11.8		7		-				-		-	

DA: Depth-Averaged

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

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

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

Water Quality Monitoring

Water Quality Monitoring Results on 16 September 17 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
C1	Cloudy	Moderate	10:07	8.8	Surface	1.0	0.7	198	29.1	29.1	7.7	7.7	12.9	12.9	83.6	83.6	6.0	5.5	16.0	19.5	5	4	87	88	815608	804254	<0.2	<0.2	1.9	2.1
						1.0	0.7	199	29.1		7.7		12.9		83.5		6.0		16.0		4		87				<0.2		2.3	
					Middle	4.4	0.7	198	28.3	28.3	7.8	7.8	25.3	25.3	72.1	72.1	4.9		18.3		3		86				<0.2		2.3	
						4.4	0.7	215	28.3		7.8		25.3		72.1		4.9		18.4		3		86				<0.2		2.5	
					Bottom	7.8	0.5	210	28.2	28.2	7.8	7.8	27.0	27.0	70.2	70.3	4.7	4.7	24.6		4		91				<0.2		1.6	
						7.8	0.5	211	28.2		7.8		27.0		70.3		4.7		23.9		3		92				<0.2		1.7	
C2	Cloudy	Moderate	11:27	11.2	Surface	1.0	1.3	168	30.0	30.0	7.7	7.7	11.4	11.4	68.5	68.5	4.9	4.5	8.4	12.4	5	5	84	88	825678	806939	<0.2	<0.2	3.1	3.0
						1.0	1.3	171	30.0		7.7		11.4		68.5		4.9		8.4		6		83				<0.2		3.0	
					Middle	5.6	0.7	166	28.6	28.6	7.9	7.9	25.3	25.3	59.5	59.5	4.0		12.5		5		89				<0.2		2.9	
						5.6	0.8	169	28.6		7.9		25.3		59.5		4.0		12.5		5		89				<0.2		3.0	
					Bottom	10.2	0.3	146	28.5	28.5	7.8	7.8	25.8	25.8	58.5	58.5	3.9	3.9	16.2		5		91				<0.2		3.0	
						10.2	0.3	154	28.5		7.8		25.8		58.5		3.9		16.2		4		92				<0.2		3.0	
C3	Cloudy	Moderate	08:47	12.3	Surface	1.0	0.2	104	29.1	29.1	7.5	7.5	19.2	19.2	77.1	77.1	5.3	5.2	4.0	7.0	3	3	88	91	822110	817809	<0.2	<0.2	3.1	2.8
						1.0	0.2	107	29.1		7.5		19.2		77.1		5.3		4.0		3		89				<0.2		2.7	
					Middle	6.2	0.3	58	29.0	29.0	7.5	7.5	21.9	21.9	74.4	74.4	5.1		5.8		3		91				<0.2		2.9	
						6.2	0.3	62	29.0		7.5		21.9		74.4		5.1		5.8		4		91				<0.2		2.7	
					Bottom	11.3	0.3	85	28.3	28.3	7.4	7.4	26.3	26.3	70.0	70.0	4.7	4.7	11.2		3		94				<0.2		2.7	
						11.3	0.3	91	28.3		7.4		26.3		70.0		4.7		11.2		4		94				<0.2		2.4	
IM1	Cloudy	Moderate	10:33	7.0	Surface	1.0	0.7	212	28.9	28.9	7.8	7.8	18.3	18.3	79.8	79.8	5.6	5.2	15.8	19.3	4	5	91	91	818341	806474	<0.2	<0.2	2.4	2.0
						1.0	0.7	232	28.9		7.8		18.3		79.8		5.6		15.8		4		91				<0.2		2.0	
					Middle	3.5	0.4	207	28.3	28.3	7.8	7.8	25.2	25.2	71.4	71.4	4.8		20.0		5		89				<0.2		2.0	
						3.5	0.4	222	28.3		7.8		25.1		71.3		4.8		20.3		5		89				<0.2		1.9	
					Bottom	6.0	0.1	193	28.2	28.2	7.9	7.9	26.3	26.3	71.4	71.5	4.8	4.8	22.1		5		94				<0.2		2.0	
						6.0	0.2	205	28.2		7.9		26.3		71.5		4.8		22.0		6		94				<0.2		1.9	
IM2	Cloudy	Moderate	10:42	8.4	Surface	1.0	0.8	189	29.4	29.4	7.7	7.7	14.1	14.1	81.2	81.1	5.7	5.5	16.0	18.4	5	6	86	89	818842	806185	<0.2	<0.2	2.8	2.4
						1.0	0.8	202	29.4		7.7		14.0		81.0		5.7		16.0		5		86				<0.2		2.8	
					Middle	4.2	0.7	198	28.7	28.7	7.9	7.9	20.5	20.5	76.0	75.9	5.2		17.3		4		87				<0.2		2.7	
						4.2	0.7	200	28.7		7.9		20.4		75.8		5.2		17.3		4		88				<0.2		2.8	
					Bottom	7.4	0.4	183	28.4	28.4	7.8	7.8	23.8	23.9	72.7	72.8	5.0	5.0	21.9		10		92				<0.2		1.6	
						7.4	0.5	191	28.4		7.8		23.9		72.8		5.0		22.1		10		92				<0.2		1.6	
IM3	Cloudy	Moderate	10:52	8.2	Surface	1.0	0.8	194	29.4	29.4	7.7	7.7	13.5	13.5	78.3	78.4	5.6	5.5	17.4	18.1	4	5	82	87	819405	805999	<0.2	<0.2	2.8	2.6
						1.0	0.8	212	29.4		7.7		13.4		78.4		5.6		17.4		5		92				<0.2		3.0	
					Middle	4.1	0.7	211	29.1	29.1	7.7	7.7	16.4	16.4	77.6	77.6	5.4		16.4		6		89				<0.2		2.4	
						4.1	0.7	230	29.1		7.7		16.4		77.6		5.4		16.4		6		89				<0.2		2.4	
					Bottom	7.2	0.6	204	28.8	28.8	7.8	7.8	19.8	20.0	74.8	74.9	5.2	5.2	20.4		5		86				<0.2		2.4	
						7.2	0.6	214	28.8		7.8		20.1		75.0		5.2		20.5		5		86				<0.2		2.4	
IM4	Cloudy	Moderate	11:01	7.6	Surface	1.0	0.7	207	29.3	29.4	7.7	7.7	13.5	13.5	76.4	76.4	5.4	5.3	18.4	20.6	5	7	86	89	819571	805031	<0.2	<0.2	2.5	2.3
						1.0	0.8	216	29.4		7.7		13.5		76.3		5.4		18.4		5		86				<0.2		2.6	
					Middle	3.8	0.5	228	28.6	28.6	7.8	7.8	21.3	21.3	74.1	74.1	5.1		21.0		6		87				<0.2		2.3	
						3.8	0.5	250	28.6		7.8		21.2		74.1		5.1		21.1		7		88				<0.2		2.4	
					Bottom	6.6	0.4	203	28.4	28.4	7.8	7.8	24.2	24.2	71.8	71.9	4.9	4.9	22.3		10		92				<0.2		1.9	
						6.6	0.4	218	28.4		7.8		24.2		71.9		4.9		22.5		9		92				<0.2		1.9	
IM5	Cloudy	Moderate	11:15	7.4	Surface	1.0	0.5	215	28.9	28.9	7.7	7.7	19.1	19.1	68.5	68.5	4.8	4.6	17.9	19.2	3	6	84	87	820578	804918	<0.2	<0.2	2.8	2.2
						1.0	0.5	231	28.9		7.7		19.0		68.4		4.7		18.0		3		84				<0.2		2.7	
					Middle	3.7	0.3	268	28.4	28.4	7.7	7.7	23.5	23.5	65.6	65.6	4.5		19.9		6		83				<0.2		2.1	
						3.7	0.3	270	28.4		7.7		23.5		65.6		4.5		19.9		5		83				<0.2		2.1	
					Bottom	6.4	0.3	267	28.4	28.4	7.7	7.7	23.6	23.6	66.3	66.4	4.5	4.5	19.6		9		95				<0.2		1.6	
						6.4	0.3	267	28.4		7.7		23.6		66.5		4.5		19.6		7		95				<0.2		1.6	
IM6	Cloudy	Moderate	11:22	7.3	Surface	1.0	0.5	233	29.0	29.0	7.7	7.7	17.8	17.8	69.3	69.3	4.8	4.7	17.5	19.4	3	6	89	89	821048	805836	<0.2	<0.2	2.8	2.0
						1.0	0.6	235	29.0		7.7		17.7		69.2		4.8		17.5		4		89				<0.2		2.6	
					Middle	3.7	0.4	262	28.4	28.4	7.8	7.8	23.3	23.3	66.9	67.0	4.6		20.4		6		91				<0.2		1.8	
						3.7	0.4	276	28.4		7.8		23.3		67.0		4.6		20.4		6		92				<0.2		1.8	
					Bottom	6.3	0.4	270	28.4	28.4	7.8	7.8	23.5	23.5	68.5	68.6	4.7	4.7	20.2		9		87				<0.2		1.5	
						6.3	0.4	295	28.4		7.8		23.5		68.6		4.7		20.2		8		87				<0.2		1.4	
IM7	Cloudy	Moderate	11:29	8.0	Surface	1.0	0.6	202	29.2	29.2	7.7	7.7	16.6	16.6	70.7	70.7	5.0	4.8	17.6	19.9	4	5	82	87	821352	806817	<0.2	<0.2	2.6	2.1
						1.0	0.7	214	29.2		7.7		16.6		70.7		4.9		17.7		4		82				<0.2		2.5	
					Middle	4.0	0.3	230	28.5	28.5	7.8	7.8	23.0	23.0	67.5	67.5	4.6		21.2		5		90				<0.2		2.1	
						4.0	0.4	237	28.5		7.8		23.0		67.5		4.6		21.2		5		90				<0.2		2.1	
					Bottom	7.0	0.3	248	28.4	28.4	7.8	7.8	23.5	23.5	68.5	68.5	4.7	4.7	20.7		5		88				<0.2		1.7	
						7.0	0.3	272	28.4		7.8		23.5		68.5		4.7		20.7		4		88				<0.2		1.5	
IM8	Cloudy	Moderate	10:53	8.0	Surface	1.0	0.7	179	30.0	30.0	8.0	8.0	9.4	9.4	72.6	72.6	5.2	5.0	9.1	10.6	5	3	82	87	821683	807842	<0.2	<0.2	3.2	3.0
						1.0	0.7	188	30.0		8.0		9.4		72.6		5.2		9.1		3		81				<0.2		2.9	
					Middle	4.0	0.3	230	28.7	28.7	8.1	8.1	22.6	22.6	69.5	69.5	4.7		11.2		3		89				<0.2		2.9	
						4.0	0.3	239	28.7		8.1		22.6		69.5		4.7		11.2		3		88				<0.2		2.9	
					Bottom	7.0	0.3	234	28.7	28.7	8.1	8.1	23.1	23.1	72.0	72.0	4.9	4.9	11.6		3		91				<0.2		2.9	
						7.0	0.3	244	28.7		8.1		23.1		72.0		4.9		11.6		3		90				<0.2		3.1	

DA: Depth-Averaged

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

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

Expansion of Hong Kong International Airport into a Three-Runway System
Water Quality Monitoring
Water Quality Monitoring Results on 16 September 17 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
IM9	Cloudy	Moderate	10:45	7.0	Surface	1.0	0.6	155	29.7	29.7	8.0	8.0	10.8	10.8	72.1	72.1	5.2	5.1	8.4	10.5	2	3	82	87	822097	808820	<0.2	<0.2	2.9	2.9
						1.0	0.6	163	29.7		8.0		10.8		72.1		5.2		8.4		2		82				<0.2		3.0	
					Middle	3.5	0.4	133	28.9	28.9	8.0	8.0	21.7	21.7	70.9	70.9	4.9		10.0		2		88				<0.2		3.2	
						3.5	0.4	137	28.9		8.0		21.7		70.9		4.9		10.0		3		89				<0.2		2.8	
					Bottom	6.0	0.3	128	28.9	28.9	8.0	8.0	23.0	23.0	79.8	79.8	5.4	5.4	13.2		4		91				<0.2		2.7	
						6.0	0.3	137	28.9		8.0		23.0		79.8		5.4		13.2		2		91				<0.2		2.7	
IM10	Cloudy	Moderate	10:37	6.4	Surface	1.0	0.7	130	29.8	29.8	7.9	7.9	12.0	12.0	74.8	74.8	5.3	5.0	7.9	11.0	<2	**≤2**	83	88	822242	809830	<0.2	<0.2	3.7	3.2
						1.0	0.7	138	29.8		7.9		12.0		74.8		5.3		7.9		<2		84				<0.2		3.6	
					Middle	3.2	0.5	110	28.7	28.7	8.0	8.0	22.1	22.1	68.1	68.1	4.7		12.3		<2		90				<0.2		3.0	
						3.2	0.6	117	28.7		8.0		22.1		68.1		4.7		12.3		<2		89				<0.2		2.8	
					Bottom	5.4	0.4	105	28.7	28.7	8.1	8.1	23.2	23.2	71.5	71.5	4.9	4.9	12.9		<2		91				<0.2		2.9	
						5.4	0.4	106	28.7		8.1		23.2		71.5		4.9		12.9		<2		91				<0.2		2.9	
IM11	Cloudy	Moderate	10:16	8.0	Surface	1.0	0.6	105	29.5	29.5	8.0	8.0	14.7	14.7	74.6	74.6	5.3	5.2	8.2	10.3	<2	5	87	89	821487	810526	<0.2	<0.2	2.6	2.6
						1.0	0.6	109	29.5		8.0		14.7		74.6		5.3		8.2		<2		87				<0.2		2.7	
					Middle	4.0	0.4	97	29.1	29.1	8.0	8.0	17.5	17.5	71.1	71.1	5.0		10.6		5		88				<0.2		2.7	
						4.0	0.4	103	29.1		8.0		17.5		71.1		5.0		10.6		5		89				<0.2		2.7	
					Bottom	7.0	0.2	91	28.9	28.9	8.1	8.1	21.1	21.1	71.6	71.6	4.9	4.9	12.2		8		91				<0.2		2.5	
						7.0	0.2	96	28.9		8.1		21.1		71.6		4.9		12.2		8		92				<0.2		2.6	
IM12	Cloudy	Moderate	10:05	8.5	Surface	1.0	0.5	98	29.5	29.5	7.8	7.8	14.1	14.1	76.9	76.9	5.4	5.2	7.2	10.3	2	8	87	89	821157	811532	<0.2	<0.2	2.4	2.2
						1.0	0.6	107	29.5		7.8		14.1		76.9		5.4		7.2		3		88				<0.2		2.4	
					Middle	4.3	0.7	110	29.2	29.2	7.8	7.8	18.0	18.0	71.6	71.6	5.0		10.5		3		90				<0.2		2.2	
						4.3	0.7	110	29.2		7.8		18.0		71.6		5.0		10.5		3		89				<0.2		2.2	
					Bottom	7.5	0.3	101	28.7	28.7	7.6	7.6	23.1	23.1	67.1	67.1	4.6	4.6	13.2		20		91				<0.2		1.9	
						7.5	0.3	105	28.7		7.6		23.1		67.1		4.6		13.2		19		91				<0.2		1.8	
SR2	Cloudy	Moderate	09:24	4.5	Surface	1.0	0.4	73	29.5	29.5	7.4	7.4	15.4	15.4	75.0	75.0	5.3	5.3	4.9	5.0	2	2	88	91	821453	814172	<0.2	<0.2	3.3	3.2
						1.0	0.4	74	29.5		7.4		15.4		75.0		5.3		4.9		2		88				<0.2		3.5	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	3.5	0.2	69	29.2	29.2	7.4	7.4	19.2	19.2	71.3	71.3	4.9	4.9	5.1		2		93				<0.2		3.0	
						3.5	0.2	73	29.2		7.4		19.2		71.3		4.9		5.1		3		94				<0.2		3.1	
SR3	Cloudy	Moderate	10:59	8.2	Surface	1.0	0.6	179	30.8	30.8	8.0	8.0	5.3	5.3	91.2	91.2	6.6	5.6	8.6	9.2	4	4	-	-	822141	807568	-	-	-	-
						1.0	0.6	196	30.8		8.0		5.3		91.2		6.6		8.6		4		-				-		-	
					Middle	4.1	0.2	206	28.8	28.8	8.1	8.1	22.4	22.4	67.8	67.8	4.6		9.8		4		-				-		-	
						4.1	0.2	222	28.8		8.1		22.4		67.8		4.6		9.8		5		-				-		-	
					Bottom	7.2	0.0	316	28.8	28.8	8.1	8.1	22.8	22.8	71.3	71.3	4.9	4.9	9.1		3		-				-		-	
						7.2	0.0	318	28.8		8.1		22.8		71.3		4.9		9.1		3		-				-		-	
SR4A	Cloudy	Calm	09:45	9.6	Surface	1.0	0.2	83	28.8	28.8	7.8	7.8	16.5	16.5	82.7	82.7	5.8	5.4	15.1	23.3	4	5	-	-	817203	807806	-	-	-	-
						1.0	0.3	88	28.8		7.8		16.5		82.6		5.8		15.1		3		-				-		-	
					Middle	4.8	0.3	73	28.3	28.3	7.8	7.8	24.7	24.7	72.0	72.0	4.9		24.5		4		-				-		-	
						4.8	0.3	73	28.3		7.8		24.7		72.0		4.9		24.6		4		-				-		-	
					Bottom	8.6	0.2	74	28.3	28.3	7.8	7.8	24.8	24.8	73.2	73.3	5.0	5.0	30.1		6		-				-		-	
						8.6	0.2	79	28.3		7.8		24.8		73.3		5.0		30.1		7		-				-		-	
SR5A	Cloudy	Calm	09:26	5.2	Surface	1.0	0.0	44	28.7	28.7	7.8	7.8	19.5	19.5	85.1	85.0	5.9	5.9	15.3	16.1	3	4	-	-	816606	810710	-	-	-	-
						1.0	0.0	48	28.7		7.8		19.5		84.9		5.9		15.4		5		-				-		-	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	4.2	0.0	346	28.7	28.7	7.8	7.8	21.7	21.7	79.7	79.9	5.5	5.5	16.8		5		-				-		-	
						4.2	0.0	318	28.7		7.8		21.7		80.1		5.5		17.0		4		-				-		-	
SR6	Cloudy	Moderate	09:00	4.6	Surface	1.0	0.1	82	28.7	28.7	7.7	7.7	18.7	18.7	81.3	81.5	5.7	5.7	14.1	17.9	4	3	-	-	817883	814669	-	-	-	-
						1.0	0.1	85	28.7		7.7		18.7		81.6		5.7		14.2		4		-				-		-	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	3.6	0.1	88	29.1	29.1	7.8	7.8	21.2	21.2	90.9	90.9	6.2	6.2	21.7		3		-				-		-	
						3.6	0.1	95	29.1		7.8		21.2		90.9		6.2		21.7		2		-				-		-	
SR7	Cloudy	Moderate	08:06	16.2	Surface	1.0	0.3	95	29.0	29.0	7.4	7.4	19.5	19.5	79.8	79.8	5.5	5.2	2.7	4.3	2	2	-	-	823623	823759	-	-	-	-
						1.0	0.3	99	29.0		7.4		19.5		79.8		5.5		2.7		3		-				-		-	
					Middle	8.1	0.3	288	28.9	28.9	7.4	7.4	20.2	20.2	69.9	69.9	4.8		3.5		2		-				-		-	
						8.1	0.3	313	28.9		7.4		20.2		69.9		4.8		3.5		3		-				-		-	
					Bottom	15.2	0.8	287	27.6	27.6	7.4	7.4	30.2	30.2	62.3	62.3	4.2	4.2	6.8		2		-				-		-	
						15.2	0.8	299	27.6		7.4		30.2		62.3		4.2		6.8		2		-				-		-	
SR8	Cloudy	Moderate	09:53	4.2	Surface	1.0	-	-	29.4	29.4	7.8	7.8	14.6	14.6	80.2	80.2	5.7	5.7	6.5	7.1	3	3	-	-	820246	811418	-	-	-	-
						1.0	-	-	29.4		7.8		14.6		80.2		5.7		6.5		2		-				-		-	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	3.2	-	-	29.5	29.5	7.7	7.7	17.3	17.3	79.3	79.3	5.5	5.5	7.6		3		-				-		-	
						3.2	-	-	29.5		7.7		17.3		79.3		5.5		7.6		3		-				-		-	

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

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

Water Quality Monitoring

Water Quality Monitoring Results on 16 September 17 during Mid-Flood Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity(NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)	
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA
C1	Cloudy	Moderate	16:47	8.2	Surface	1.0	0.3	28	30.1	30.1	7.8	7.8	15.2	15.2	80.0	79.9	5.6	5.3	18.3	23.8	5	7	87	89	815636	804247	<0.2	<0.2	2.2	1.9
						1.0	0.3	29	30.1		7.8		15.2		79.7		5.5		18.6		5		87				<0.2		2.0	
					Middle	4.1	0.5	19	28.6	28.6	7.8	7.8	23.1	23.4	73.2	73.3	5.0		24.3		6		86				<0.2		2.1	
						4.1	0.5	20	28.6		7.8		23.7		73.4		5.0		24.4		5		86				<0.2		2.0	
					Bottom	7.2	0.5	23	28.4	28.4	7.8	7.8	24.8	24.9	72.2	72.3	4.9	4.9	28.5		9		93				<0.2		1.4	
						7.2	0.5	23	28.4		7.8		24.9		72.4		4.9		28.4		9		93				<0.2		1.4	
C2	Cloudy	Moderate	15:32	11.2	Surface	1.0	0.4	194	30.0	30.0	7.0	7.0	12.9	12.9	61.0	61.0	4.3	4.1	11.2	9.3	12	12	84	88	825672	806957	<0.2	<0.2	3.3	3.4
						1.0	0.4	199	30.0		7.0		12.9		61.0		4.3		11.2		12		83				<0.2		3.3	
					Middle	5.6	0.3	7	28.8	28.8	7.1	7.1	22.5	22.5	57.9	57.9	3.9		7.8		12		89				<0.2		3.0	
						5.6	0.3	7	28.8		7.1		22.5		57.9		3.9		7.8		12		89				<0.2		3.4	
					Bottom	10.2	0.4	319	28.6	28.6	7.2	7.2	25.3	25.3	60.8	60.8	4.1	4.1	8.8		11		91				<0.2		3.6	
						10.2	0.4	320	28.6		7.2		25.3		60.8		4.1		8.8		12		92				<0.2		3.6	
C3	Cloudy	Moderate	17:36	11.5	Surface	1.0	0.3	237	29.2	29.2	7.8	7.8	20.8	20.8	76.4	76.4	5.2	4.9	6.8	9.2	3	4	88	91	822092	817815	<0.2	<0.2	2.3	2.4
						1.0	0.3	245	29.2		7.8		20.8		76.4		5.2		6.8		2		89				<0.2		2.5	
					Middle	5.8	0.4	257	28.6	28.6	7.8	7.8	24.7	24.7	67.9	67.9	4.6		9.2		4		91				<0.2		2.5	
						5.8	0.5	280	28.6		7.8		24.7		67.9		4.6		9.2		5		91				<0.2		2.8	
					Bottom	10.5	0.2	251	28.0	28.0	7.6	7.6	28.0	28.0	66.1	66.1	4.4	4.4	11.5		4		95				<0.2		2.1	
						10.5	0.2	261	28.0		7.6		28.0		66.1		4.4		11.5		3		94				<0.2		2.0	
IM1	Cloudy	Moderate	16:27	7.0	Surface	1.0	0.3	334	29.9	29.9	7.8	7.8	16.3	16.3	86.6	86.6	6.0	5.9	17.3	22.4	4	5	90	92	818364	806463	<0.2	<0.2	2.2	2.1
						1.0	0.3	344	29.9		7.8		16.3		86.6		6.0		17.4		4		90				<0.2		2.0	
					Middle	3.5	0.4	337	29.7	29.7	7.9	7.9	17.6	17.6	83.9	83.9	5.8		19.1		5		91				<0.2		2.0	
						3.5	0.5	310	29.7		7.9		17.5		83.9		5.8		19.5		5		91				<0.2		2.0	
					Bottom	6.0	0.3	346	28.7	28.8	7.8	7.8	22.9	22.5	76.2	76.6	5.2	5.3	30.6		6		94				<0.2		2.1	
						6.0	0.3	318	28.8		7.8		22.0		77.0		5.3		30.7		6		94				<0.2		2.2	
IM2	Cloudy	Moderate	16:19	7.8	Surface	1.0	0.2	317	30.1	30.1	7.8	7.8	14.9	14.9	84.4	84.4	5.9	5.9	17.6	20.3	5	7	85	88	818853	806200	<0.2	<0.2	2.4	2.3
						1.0	0.2	329	30.1		7.8		14.8		84.4		5.9		17.7		6		85				<0.2		2.4	
					Middle	3.9	0.3	358	29.3	29.3	7.8	7.8	18.4	18.4	83.2	83.2	5.8		19.7		8		86				<0.2		2.0	
						3.9	0.3	329	29.3		7.8		18.4		83.2		5.8		19.7		6		87				<0.2		2.1	
					Bottom	6.8	0.4	39	28.9	28.9	7.8	7.8	21.2	21.3	79.4	79.4	5.4	5.4	23.4		6		92				<0.2		2.2	
						6.8	0.4	40	28.9		7.8		21.4		79.4		5.4		23.6		8		92				<0.2		2.4	
IM3	Cloudy	Moderate	16:11	8.1	Surface	1.0	0.2	297	30.0	30.0	7.7	7.7	13.5	13.5	78.1	78.1	5.5	5.4	19.0	21.4	6	8	87	91	819419	806015	<0.2	<0.2	2.8	2.4
						1.0	0.2	306	30.0		7.7		13.5		78.1		5.5		19.0		5		88				<0.2		2.5	
					Middle	4.1	0.3	359	29.3	29.3	7.8	7.8	17.9	17.9	75.5	75.5	5.2		21.0		8		91				<0.2		2.3	
						4.1	0.3	330	29.3		7.8		17.9		75.5		5.2		21.0		8		91				<0.2		2.5	
					Bottom	7.1	0.3	26	28.9	28.9	7.8	7.8	20.3	20.4	72.3	72.3	5.0	5.0	24.2		10		94				<0.2		2.0	
						7.1	0.3	26	28.9		7.8		20.4		72.2		5.0		24.1		9		94				<0.2		2.3	
IM4	Cloudy	Moderate	16:01	7.4	Surface	1.0	0.3	306	29.4	29.4	7.7	7.7	16.4	16.4	71.0	71.0	5.0	4.9	21.8	22.5	9	11	86	90	819570	805022	<0.2	<0.2	2.5	2.2
						1.0	0.3	307	29.4		7.7		16.4		71.0		5.0		21.8		8		86				<0.2		2.6	
					Middle	3.7	0.3	348	29.0	29.0	7.8	7.8	19.3	19.3	69.0	69.0	4.8		20.5		10		91				<0.2		2.1	
						3.7	0.3	320	29.0		7.8		19.3		69.0		4.8		20.4		11		91				<0.2		2.3	
					Bottom	6.4	0.4	9	28.7	28.7	7.8	7.8	21.4	21.3	70.4	70.4	4.8	4.8	25.1		13		93				<0.2		1.9	
						6.4	0.4	9	28.7		7.8		21.2		70.4		4.8		25.2		14		94				<0.2		2.0	
IM5	Cloudy	Moderate	15:48	6.3	Surface	1.0	0.3	313	29.8	29.8	7.6	7.6	15.1	15.2	75.7	75.6	5.3	5.1	18.1	18.7	7	7	86	89	820571	804931	<0.2	<0.2	2.7	2.5
						1.0	0.3	340	29.8		7.6		15.2		75.5		5.3		18.2		6		86				<0.2		2.6	
					Middle	3.2	0.2	325	29.4	29.4	7.7	7.7	17.3	17.3	70.6	70.7	4.9		18.9		6		88				<0.2		2.4	
						3.2	0.2	326	29.4		7.7		17.3		70.7		4.9		18.9		7		89				<0.2		2.5	
					Bottom	5.3	0.2	326	29.1	29.1	7.6	7.6	18.8	18.7	69.3	69.6	4.8	4.8	19.2		8		91				<0.2		2.4	
						5.3	0.2	333	29.1		7.6		18.6		69.8		4.8		19.1		7		92				<0.2		2.2	
IM6	Cloudy	Moderate	15:40	6.0	Surface	1.0	0.5	318	29.8	29.8	7.6	7.6	14.5	14.5	72.6	72.6	5.1	5.0	19.1	18.7	6	7	88	91	821042	805816	<0.2	<0.2	2.5	2.5
						1.0	0.6	323	29.8		7.6		14.5		72.6		5.1		19.1		7		89				<0.2		2.7	
					Middle	3.0	0.4	316	29.2	29.2	7.6	7.6	18.3	18.3	68.7	68.7	4.8		18.0		7		91				<0.2		2.2	
						3.0	0.4	330	29.2		7.6		18.3		68.7		4.8		18.1		6		92				<0.2		2.4	
					Bottom	5.0	0.3	320	29.0	29.0	7.6	7.6	19.9	19.9	67.9	68.1	4.7	4.7	19.0		8		93				<0.2		2.4	
						5.0	0.3	335	29.0		7.6		19.9		68.2		4.7		18.9		6		94				<0.2		2.5	
IM7	Cloudy	Moderate	15:32	7.3	Surface	1.0	0.3	243	29.7	29.7	7.6	7.6	14.4	14.4	72.1	72.1	5.1	5.0	19.6	18.7	9	9	84	87	821332	806819	<0.2	<0.2	2.6	2.5
						1.0	0.3	255	29.7		7.6		14.4		72.1		5.1		19.7		8		84				<0.2		2.6	
					Middle	3.7	0.3	264	29.5	29.5	7.6	7.6	15.9	15.9	70.2	70.2	4.9		18.6		9		87				<0.2		2.5	
						3.7	0.3	283	29.5		7.6		15.9		70.2		4.9		18.5		9		87				<0.2		2.4	
					Bottom	6.3	0.1	250	29.1	29.1	7.6	7.6	19.3	19.3	67.0	67.1	4.6	4.6	17.8		7		91				<0.2		2.2	
						6.3	0.1	251	29.1		7.6		19.3		67.2		4.6		18.0		9		91				<0.2		2.4	
IM8	Cloudy	Moderate	15:57	7.7	Surface	1.0	0.3	219	30.5	30.5	7.2	7.2	12.2	12.2	76.7	76.7	5.4	5.2	10.2	11.6	8	8	82	85	821713	807827	<0.2	<0.2	3.3	3.3
						1.0	0.3	234	30.5		7.2		12.2		76.7		5.4		10.2		9		83				<0.2		3.0	
					Middle	3.9	0.2	252	30.3	30.3	7.2	7.2	13.1	13.1	71.9	71.9	5.0		10.9		8		83				<0.2		3.9	
						3.9	0.2	255	30.3		7.2		13.1		71.9		5.0		10.9		7		84				<0.2		3.6	
					Bottom	6.7	0.1	211	29.4	29.4	7.2	7.2	18.9	18.9	68.7	68.7	4.7	4.7	13.7		7		88				<0.2		2.8	
						6.7	0.1	215	29.4		7.2		18.9		68.7		4.7		13.7		9		87				<0.2		3.2	

DA: Depth-Averaged

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

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

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

Water Quality Monitoring

Water Quality Monitoring Results on 16 September 17 during Mid-Flood Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity(NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)	
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA
IM9	Cloudy	Moderate	16:05	6.5	Surface	1.0	0.1	230	30.6	30.6	7.6	7.6	12.8	12.8	78.8	78.8	5.5	5.5	9.8	11.7	8	7	81	83	822077	808825	<0.2	<0.2	3.3	3.4
						1.0	0.1	242	30.6		7.6		12.8		78.8		5.5		9.8		7		81				<0.2		3.3	
					Middle	3.3	0.1	346	30.4	30.4	7.5	7.5	13.5	13.5	76.8	76.8	5.4		11.9		7		82				<0.2		3.2	
						3.3	0.1	318	30.4		7.5		13.5		76.7		5.4		11.9		7		82				<0.2		3.4	
					Bottom	5.5	0.1	87	30.2	30.2	7.5	7.5	14.2	14.2	74.3	74.3	5.2	5.2	13.5		8		85				<0.2		3.8	
						5.5	0.1	90	30.2		7.5		14.2		74.3		5.2		13.5		7		84				<0.2		3.1	
IM10	Cloudy	Moderate	16:12	6.9	Surface	1.0	0.2	11	30.5	30.5	7.8	7.8	14.1	14.1	78.2	78.2	5.4	5.2	8.7	9.1	6	7	84	87	822240	809855	<0.2	<0.2	2.9	2.9
						1.0	0.3	11	30.5		7.8		14.1		78.2		5.4		8.7		6		85				<0.2		3.1	
					Middle	3.5	0.3	353	29.9	29.9	7.8	7.8	15.6	15.6	70.5	70.5	4.9		8.9		7		86				<0.2		2.8	
						3.5	0.3	325	29.9		7.8		15.6		70.5		4.9		8.9		7		86				<0.2		2.8	
					Bottom	5.9	0.2	356	29.3	29.3	7.8	7.8	19.6	19.6	69.4	69.4	4.8	4.8	9.6		8		91				<0.2		2.9	
						5.9	0.2	328	29.3		7.8		19.6		69.4		4.8		9.6		8		92				<0.2		2.6	
IM11	Cloudy	Moderate	16:30	6.1	Surface	1.0	0.1	37	30.4	30.4	8.0	8.0	14.2	14.2	81.3	81.3	5.7	5.7	8.3	9.2	7	6	86	89	821519	810538	<0.2	<0.2	2.7	2.7
						1.0	0.1	38	30.4		8.0		14.2		81.3		5.7		8.3		6		85				<0.2		2.5	
					Middle	3.1	0.3	327	30.1	30.1	8.0	8.0	16.0	16.0	81.0	81.0	5.6		8.7		7		88				<0.2		2.6	
						3.1	0.3	353	30.1		8.0		16.0		81.0		5.6		8.7		5		89				<0.2		3.1	
					Bottom	5.1	0.6	324	29.6	29.6	8.0	8.0	20.7	20.7	80.7	80.7	5.5	5.5	10.6		6		92				<0.2		2.8	
						5.1	0.6	349	29.6		8.0		20.7		80.7		5.5		10.6		7		92				<0.2		2.7	
IM12	Cloudy	Moderate	16:37	8.2	Surface	1.0	0.4	280	30.0	30.0	8.2	8.2	16.5	16.5	87.7	87.7	6.1	5.8	8.1	9.6	5	6	87	90	821143	811532	<0.2	<0.2	2.8	2.7
						1.0	0.4	294	30.0		8.2		16.5		87.7		6.1		8.1		6		87				<0.2		2.9	
					Middle	4.1	0.5	280	29.3	29.3	8.1	8.1	22.3	22.3	79.0	79.1	5.4		10.8		6		89				<0.2		2.9	
						4.1	0.5	296	29.3		8.1		22.2		79.1		5.4		10.5		6		90				<0.2		2.6	
					Bottom	7.2	0.1	304	28.6	28.6	8.0	8.0	24.0	24.0	68.0	68.1	4.6	4.6	9.9		7		93				<0.2		2.5	
						7.2	0.1	309	28.6		8.0		24.0		68.2		4.6		9.9		8		93				<0.2		2.6	
SR2	Cloudy	Moderate	17:12	4.6	Surface	1.0	0.5	304	29.8	29.8	8.0	8.0	18.3	18.3	93.1	93.1	6.4	6.4	6.9	8.2	9	9	88	90	821476	814156	<0.2	<0.2	2.8	3.0
						1.0	0.5	330	29.8		8.0		18.3		93.1		6.4		6.9		9		89				<0.2		2.6	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	3.6	0.2	283	29.8	29.8	7.9	7.9	18.8	18.8	93.2	93.2	6.4	6.4	9.5		9		91				<0.2		3.2	
						3.6	0.2	310	29.8		7.9		18.8		93.2		6.4		9.5		9		91				<0.2		3.4	
SR3	Cloudy	Moderate	15:50	8.0	Surface	1.0	0.3	229	30.4	30.4	7.1	7.1	12.9	12.9	77.8	77.8	5.4	5.2	8.8	11.4	5	7	-	-	822155	807580	-	-	-	-
						1.0	0.3	234	30.4		7.1		12.9		77.8		5.4		8.8		6		-				-		-	
					Middle	4.0	0.1	266	29.9	29.9	7.1	7.1	16.0	16.0	72.0	72.0	5.0		8.1		8		-				-		-	
						4.0	0.2	278	29.9		7.1		16.0		72.0		5.0		8.1		9		-				-		-	
					Bottom	7.0	0.2	228	29.5	29.5	7.1	7.1	18.8	18.8	73.5	73.5	5.1	5.1	17.2		7		-				-		-	
						7.0	0.2	245	29.5		7.1		18.8		73.5		5.1		17.2		8		-				-		-	
SR4A	Cloudy	Moderate	17:09	8.7	Surface	1.0	0.0	109	29.9	29.9	7.9	7.9	18.1	18.1	96.2	96.2	6.6	6.6	17.4	19.3	14	15	-	-	817186	807801	-	-	-	-
						1.0	0.0	109	29.9		7.9		18.1		96.2		6.6		17.4		12		-				-		-	
					Middle	4.4	0.1	240	29.5	29.5	7.9	7.9	20.4	20.4	95.0	95.1	6.5		18.9		16		-				-		-	
						4.4	0.2	254	29.5		7.9		20.4		95.1		6.5		18.9		15		-				-		-	
					Bottom	7.7	0.2	270	29.4	29.4	7.9	7.9	20.5	20.5	94.0	94.0	6.4	6.4	21.6		15		-				-		-	
						7.7	0.2	296	29.4		7.9		20.5		94.0		6.4		21.6		16		-				-		-	
SR5A	Cloudy	Moderate	17:26	4.7	Surface	1.0	0.1	284	29.8	29.8	8.0	8.0	19.8	19.8	115.2	115.2	7.8	7.8	17.4	18.6	9	8	-	-	816575	810700	-	-	-	-
						1.0	0.1	309	29.8		8.0		19.8		115.1		7.8		17.4		9		-				-		-	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	3.7	0.1	330	29.5	29.5	7.9	7.9	20.4	20.4	104.7	104.9	7.1	7.2	19.7		7		-				-		-	
						3.7	0.2	342	29.5		7.9		20.4		105.0		7.2		19.8		8		-				-		-	
SR6	Cloudy	Moderate	17:51	4.1	Surface	1.0	0.1	255	29.8	29.8	7.9	7.9	16.5	16.5	99.2	99.2	6.9	6.9	16.0	19.1	5	6	-	-	817885	814657	-	-	-	-
						1.0	0.1	269	29.8		7.9		16.5		99.1		6.9		16.1		6		-				-		-	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	3.1	0.1	149	29.6	29.6	7.8	7.8	18.1	18.1	94.2	94.3	6.5	6.5	22.2		6		-				-		-	
						3.1	0.1	151	29.6		7.8		18.1		94.3		6.5		22.1		6		-				-		-	
SR7	Cloudy	Moderate	18:09	16.2	Surface	1.0	0.1	180	28.6	28.6	7.8	7.8	25.3	25.3	72.0	72.0	4.9	5.1	6.8	10.3	5	7	-	-	823645	823745	-	-	-	-
						1.0	0.1	190	28.6		7.8		25.3		72.0		4.9		6.8		6		-				-		-	
					Middle	8.1	0.2	208	28.1	28.1	7.6	7.6	27.3	27.3	75.8	75.8	5.2		12.8		8		-				-		-	
						8.1	0.2	215	28.1		7.6		27.3		75.8		5.2		12.8		6		-				-		-	
					Bottom	15.2	0.2	174	27.8	27.8	7.5	7.5	29.4	29.4	67.2	67.2	4.5	4.5	11.2		7		-				-		-	
						15.2	0.2	178	27.8		7.5		29.4		67.2		4.5		11.2		8		-				-		-	
SR8	Cloudy	Moderate	16:47	4.2	Surface	1.0	0.0	0	29.5	29.5	8.2	8.2	17.8	17.8	74.8	74.8	5.2	5.2	13.0	15.3	7	6	-	-	820246	811418	-	-	-	-
						1.0	0.0	0	29.5		8.2		17.8		74.8		5.2		13.0		7		-				-		-	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	3.2	0.0	0	29.2	29.2	8.2	8.2	20.3	20.3	76.2	76.2	5.2	5.2	17.6		5		-				-		-	
						3.2	0.0	0	29.2		8.2		20.3		76.2		5.2		17.6		6		-				-		-	

DA: Depth-Averaged

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

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

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

Water Quality Monitoring

Water Quality Monitoring Results on 19 September 17 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
C1	Fine	Moderate	12:31	8.8	Surface	1.0	0.7	241	29.7	29.7	8.1	8.1	21.5	21.5	76.8	76.8	5.2	5.0	12.5	25.9	5	6	72	74	815625	804244	<0.2	<0.2	1.2	1.2
						1.0	0.7	257	29.7		8.1		21.5		76.8		5.2		12.6		4		71				<0.2		1.2	
					Middle	4.4	0.7	236	29.1	29.1	8.1	8.1	25.4	25.4	70.7	70.7	4.7		18.9		4		74				<0.2		1.3	
						4.4	0.7	247	29.1		8.1		25.4		70.7		4.7		19.0		4		73				<0.2		1.2	
					Bottom	7.8	0.5	244	28.9	28.9	8.0	8.0	26.0	26.0	69.8	69.8	4.7	4.7	46.3		9		76				<0.2		1.2	
						7.8	0.5	259	28.9		8.0		26.0		69.8		4.7		46.1		9		75				<0.2		1.3	
C2	Sunny	Moderate	13:49	10.4	Surface	1.0	1.2	171	30.4	30.4	7.7	7.7	18.4	18.4	82.9	82.9	5.6	5.4	14.6	24.6	7	12	69	72	825675	806933	<0.2	<0.2	2.3	2.4
						1.0	1.2	183	30.4		7.7		18.4		82.9		5.6		14.6		7		70				<0.2		2.3	
					Middle	5.2	0.9	165	29.8	29.8	7.7	7.7	19.9	19.9	75.6	75.6	5.1		24.1		7		72				<0.2		2.6	
						5.2	1.0	169	29.8		7.7		19.9		75.6		5.1		24.1		7		73				<0.2		2.5	
					Bottom	9.4	0.5	171	28.9	28.9	7.7	7.7	24.2	24.2	71.2	71.2	4.8	4.8	35.2		21		75				<0.2		2.3	
						9.4	0.6	174	28.9		7.7		24.2		71.2		4.8		35.2		20		75				<0.2		2.1	
C3	Sunny	Moderate	11:22	13.4	Surface	1.0	0.4	71	29.1	29.1	7.8	7.8	24.3	24.3	78.4	78.4	5.3	5.2	6.5	9.2	4	6	71	74	822114	817802	<0.2	<0.2	1.7	1.9
						1.0	0.4	74	29.0		7.8		24.3		78.4		5.3		6.5		6		72				<0.2		2.1	
					Middle	6.7	0.3	83	28.5	28.5	7.8	7.8	25.9	25.9	75.3	75.3	5.1		10.4		6		73				<0.2		2.1	
						6.7	0.3	89	28.5		7.8		25.9		75.3		5.1		10.4		7		74				<0.2		2.0	
					Bottom	12.4	0.4	88	28.2	28.2	7.8	7.8	27.4	27.4	73.7	73.7	4.9	4.9	10.8		7		76				<0.2		1.7	
						12.4	0.4	90	28.2		7.8		27.4		73.7		4.9		10.8		7		76				<0.2		1.5	
IM1	Fine	Moderate	12:54	7.5	Surface	1.0	0.7	203	29.5	29.5	7.8	7.8	22.7	22.7	76.1	76.1	5.1	4.9	12.3	20.3	6	9	74	75	818364	806460	<0.2	<0.2	1.2	1.3
						1.0	0.7	203	29.5		7.8		22.7		76.1		5.1		12.3		6		73				<0.2		1.3	
					Middle	3.8	0.6	195	29.0	29.0	7.8	7.8	25.2	25.2	69.2	69.2	4.6		18.8		7		74				<0.2		1.4	
						3.8	0.6	210	29.0		7.8		25.2		69.2		4.6		18.9		7		74				<0.2		1.3	
					Bottom	6.5	0.4	186	28.9	28.9	7.8	7.8	25.6	25.6	69.8	69.8	4.7	4.7	29.7		13		77				<0.2		1.4	
						6.5	0.5	191	28.9		7.8		25.6		69.8		4.7		29.7		13		77				<0.2		1.3	
IM2	Fine	Moderate	13:01	8.3	Surface	1.0	0.7	208	29.5	29.5	7.8	7.8	23.1	23.1	76.7	76.7	5.2	5.1	13.8	22.0	8	8	74	76	818857	806185	<0.2	<0.2	1.4	1.2
						1.0	0.7	217	29.5		7.8		23.1		76.7		5.2		13.8		8		73				<0.2		1.3	
					Middle	4.2	0.5	202	29.1	29.1	7.8	7.8	24.3	24.3	72.6	72.7	4.9		15.9		8		76				<0.2		1.2	
						4.2	0.6	218	29.1		7.8		24.3		72.7		4.9		15.9		8		76				<0.2		1.3	
					Bottom	7.3	0.5	199	29.0	29.0	7.8	7.8	25.0	25.0	71.6	71.6	4.8	4.8	36.1		8		78				<0.2		1.1	
						7.3	0.5	207	29.0		7.8		25.0		71.6		4.8		36.2		7		78				<0.2		1.1	
IM3	Fine	Moderate	13:09	8.4	Surface	1.0	0.8	192	29.6	29.6	7.8	7.8	22.2	22.3	77.0	77.0	5.2	5.0	13.5	22.0	10	9	74	76	819403	806019	<0.2	<0.2	1.4	1.4
						1.0	0.9	197	29.6		7.8		22.3		77.0		5.2		13.6		10		74				<0.2		1.4	
					Middle	4.2	0.6	197	29.3	29.3	7.8	7.8	23.9	23.9	72.0	72.0	4.8		20.0		9		76				<0.2		1.1	
						4.2	0.6	213	29.3		7.8		23.9		72.0		4.8		20.0		10		76				<0.2		1.2	
					Bottom	7.4	0.5	195	29.0	29.0	7.8	7.8	25.2	25.2	71.4	71.5	4.8	4.8	32.7		9		79				<0.2		1.5	
						7.4	0.5	208	29.0		7.8		25.2		71.5		4.8		32.1		8		78				<0.2		1.5	
IM4	Fine	Moderate	13:18	7.6	Surface	1.0	0.8	180	29.7	29.7	7.8	7.8	21.6	21.7	80.3	80.3	5.4	5.3	13.7	20.6	5	7	75	76	819582	805033	<0.2	<0.2	1.5	1.5
						1.0	0.8	196	29.7		7.8		21.7		80.3		5.4		13.8		4		74				<0.2		1.4	
					Middle	3.8	0.7	185	29.5	29.5	7.8	7.8	23.2	23.2	77.7	77.7	5.2		17.4		8		76				<0.2		1.2	
						3.8	0.8	200	29.5		7.8		23.2		77.7		5.2		17.4		9		76				<0.2		1.2	
					Bottom	6.6	0.6	185	29.1	29.1	7.8	7.8	24.9	24.9	75.9	75.9	5.1	5.1	30.7		8		79				<0.2		1.8	
						6.6	0.6	192	29.1		7.8		24.9		75.9		5.1		30.7		7		78				<0.2		2.0	
IM5	Fine	Moderate	13:33	6.2	Surface	1.0	1.0	224	29.8	29.8	7.9	7.9	21.6	21.6	85.1	85.1	5.7	5.3	11.9	22.3	4	5	74	77	820560	804914	<0.2	<0.2	2.0	1.8
						1.0	1.1	244	29.8		7.9		21.6		85.1		5.7		11.9		5		74				<0.2		1.7	
					Middle	3.1	0.7	239	29.1	29.1	7.9	7.9	24.2	24.2	70.8	70.8	4.8		15.9		6		78				<0.2		1.8	
						3.1	0.7	250	29.1		7.9		24.2		70.8		4.8		15.9		6		77				<0.2		1.8	
					Bottom	5.2	0.5	256	29.0	29.0	7.8	7.8	24.9	24.9	69.5	69.6	4.7	4.7	39.2		4		79				<0.2		1.6	
						5.2	0.5	256	29.0		7.8		24.9		69.6		4.7		38.8		5		79				<0.2		1.7	
IM6	Fine	Moderate	13:40	7.0	Surface	1.0	1.0	237	30.5	30.5	7.7	7.7	20.9	20.9	86.1	86.1	5.8	5.4	14.4	21.4	7	8	74	76	821069	805812	<0.2	<0.2	1.9	1.9
						1.0	1.1	260	30.5		7.7		20.9		86.0		5.8		14.5		7		73				<0.2		1.9	
					Middle	3.5	0.8	249	29.3	29.3	7.8	7.8	22.6	22.6	72.6	72.6	4.9		17.5		8		75				<0.2		1.9	
						3.5	0.8	260	29.3		7.8		22.6		72.6		4.9		17.6		7		76				<0.2		1.9	
					Bottom	6.0	0.5	268	29.1	29.1	7.8	7.8	23.6	23.6	70.6	70.6	4.8	4.8	32.2		10		78				<0.2		2.0	
						6.0	0.5	293	29.1		7.8		23.6		70.6		4.8		32.1		10		77				<0.2		1.9	
IM7	Fine	Moderate	13:53	8.3	Surface	1.0	0.9	208	30.6	30.6	7.8	7.8	20.9	20.9	84.7	84.7	5.7	5.4	14.9	22.1	8	9	74	75	821354	806823	<0.2	<0.2	2.1	1.9
						1.0	0.9	214	30.6		7.8		20.9		84.6		5.7		15.0		8		74				<0.2		1.9	
					Middle	4.2	0.7	220	29.5	29.5	7.8	7.8	22.2	22.2	73.9	73.9	5.0		20.1		8		75				<0.2		1.8	
						4.2	0.7	233	29.5		7.8		22.2		73.9		5.0		20.2		8		75				<0.2		1.8	
					Bottom	7.3	0.5	227	29.1	29.1	7.8	7.8	23.7	23.7	70.8	70.9	4.8	4.8	31.3		12		77				<0.2		1.8	
						7.3	0.5	238	29.1		7.8		23.7		70.9		4.8		31.3		12		77				<0.2		1.8	
IM8	Sunny	Moderate	13:14	8.3	Surface	1.0	0.7	193	29.7	29.7	7.8	7.8	21.1	21.1	87.4	87.4	5.9	5.5	10.9	13.8	8	8	71	73	821705	807825	<0.2	<0.2	1.9	1.9
						1.0	0.8	194	29.7		7.8		21.1		87.4		5.9		10.9		8		71				<0.2		1.7	
					Middle	4.2	0.6	201	29.0	29.0	7.8	7.8	22.7	22.7	74.5	74.5	5.1		13.5		7		73				<0.2		1.9	
						4.2	0.6	216	29.0		7.8		22.7		74.5		5.1		13.5		7		73				<0.2		2.0	
					Bottom	7.3	0.4	235	28.8	28.8	7.8	7.8	24.1	24.1	81.8	81.8	5.5	5.5	17.0		9		75				<0.2		1.8	
						7.3	0.4	244	28.8		7.8		24.1		81.8		5.5		17.0		8		75				<0.2		1.9	

DA: Depth-Averaged

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

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

Expansion of Hong Kong International Airport into a Three-Runway System
Water Quality Monitoring
Water Quality Monitoring Results on 19 September 17 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
IM9	Sunny	Moderate	13:04	7.1	Surface	1.0	0.6	161	29.6	29.6	7.8	7.8	20.8	20.8	78.9	78.9	5.4	5.1	10.1	16.7	5	7	71	73	822111	808796	<0.2	<0.2	1.9	2.3
						1.0	0.7	164	29.6		7.8		20.8		78.9		5.4		10.1		7		71				<0.2		1.9	
					Middle	3.6	0.5	152	28.9	28.9	7.8	7.8	23.1	23.1	70.9	70.9	4.8		16.6		7		73				<0.2		2.9	
						3.6	0.5	156	28.9		7.8		23.1		70.9		4.8		16.6		9		73				<0.2		2.8	
					Bottom	6.1	0.3	134	28.8	28.8	7.8	7.8	23.8	23.8	73.2	73.2	5.0	5.0	23.5		8		76				<0.2		2.3	
						6.1	0.3	141	28.8		7.8		23.8		73.2		5.0		23.5		8		75				<0.2		2.0	
IM10	Sunny	Moderate	13:03	6.8	Surface	1.0	0.7	157	29.3	29.3	7.8	7.8	21.3	21.3	75.7	75.7	5.1	5.0	14.6	19.7	7	9	72	73	822252	809837	<0.2	<0.2	2.0	2.2
						1.0	0.7	161	29.3		7.8		21.3		75.7		5.1		14.6		8		71				<0.2		2.0	
					Middle	3.4	0.5	151	28.9	28.9	7.8	7.8	22.9	22.9	71.3	71.3	4.8		19.6		8		73				<0.2		2.9	
						3.4	0.5	157	28.9		7.8		22.9		71.3		4.8		19.6		7		73				<0.2		2.8	
					Bottom	5.8	0.2	145	28.9	28.9	7.8	7.8	23.4	23.4	76.6	76.6	5.2	5.2	25.0		13		75				<0.2		1.8	
						5.8	0.3	151	28.9		7.8		23.4		76.6		5.2		25.0		13		75				<0.2		1.6	
IM11	Sunny	Moderate	12:37	8.4	Surface	1.0	0.7	122	29.6	29.6	7.8	7.8	21.2	21.2	82.1	82.1	5.6	5.6	8.8	12.1	7	8	71	73	821514	810531	<0.2	<0.2	2.1	1.9
						1.0	0.8	124	29.6		7.8		21.2		82.1		5.6		8.8		7		71				<0.2		1.8	
					Middle	4.2	0.5	102	29.5	29.5	7.8	7.8	21.4	21.4	81.8	81.8	5.5		10.9		6		73				<0.2		1.8	
						4.2	0.5	108	29.5		7.8		21.4		81.8		5.5		10.9		6		73				<0.2		2.0	
					Bottom	7.4	0.4	80	29.0	29.0	7.9	7.9	23.4	23.4	74.9	74.9	5.1	5.1	16.5		9		75				<0.2		1.7	
						7.4	0.4	82	29.0		7.9		23.4		74.9		5.1		16.5		11		75				<0.2		1.7	
IM12	Sunny	Moderate	12:26	9.1	Surface	1.0	0.8	104	29.6	29.6	7.8	7.8	21.4	21.4	80.4	80.4	5.4	5.3	10.1	17.1	5	7	70	73	821161	811510	<0.2	<0.2	1.7	2.1
						1.0	0.9	111	29.6		7.8		21.4		80.4		5.4		10.1		6		71				<0.2		1.7	
					Middle	4.6	0.6	92	29.1	29.1	7.8	7.8	22.8	22.8	77.0	77.0	5.2		15.6		6		73				<0.2		2.5	
						4.6	0.7	100	29.1		7.8		22.8		77.0		5.2		15.6		8		73				<0.2		2.3	
					Bottom	8.1	0.5	82	29.0	29.0	7.8	7.8	23.5	23.5	77.4	77.4	5.2	5.2	25.6		7		75				<0.2		2.2	
						8.1	0.5	85	29.0		7.8		23.5		77.4		5.2		25.6		8		75				<0.2		2.0	
SR2	Sunny	Moderate	11:52	3.8	Surface	1.0	0.6	97	29.3	29.3	7.8	7.8	23.2	23.2	80.7	80.7	5.4	5.4	10.9	13.3	9	9	71	72	821478	814185	<0.2	<0.2	1.6	1.6
						1.0	0.6	102	29.3		7.8		23.2		80.7		5.4		10.9		9		71				<0.2		1.7	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	2.8	0.4	103	28.9	28.9	7.8	7.8	24.1	24.1	76.9	76.9	5.2	5.2	15.6		9		74				<0.2		1.4	
						2.8	0.4	107	28.9		7.8		24.1		76.9		5.2		15.6		8		73				<0.2		1.5	
SR3	Sunny	Moderate	13:20	8.8	Surface	1.0	0.8	181	29.8	29.8	7.7	7.7	20.0	20.0	78.5	78.5	5.3	5.2	11.6	17.9	5	8	-	-	822166	807580	-	-	-	-
						1.0	0.8	186	29.8		7.7		20.0		78.5		5.3		11.6		4		-				-		-	
					Middle	4.4	0.6	188	29.0	29.0	7.8	7.8	22.7	22.7	73.1	73.1	5.0		19.2		6		-				-		-	
						4.4	0.6	199	29.0		7.8		22.7		73.1		5.0		19.2		8		-				-		-	
					Bottom	7.8	0.4	209	29.0	29.0	7.8	7.8	22.6	22.6	74.2	74.2	5.0	5.0	23.0		11		-				-		-	
						7.8	0.5	221	29.0		7.8		22.6		74.2		5.0		23.0		11		-				-		-	
SR4A	Fine	Moderate	12:10	9.7	Surface	1.0	0.4	74	29.1	29.1	7.8	7.8	23.3	23.3	81.4	81.6	5.5	5.1	17.2	22.2	12	13	-	-	817206	807815	-	-	-	-
						1.0	0.4	78	29.1		7.8		23.3		81.7		5.5		17.3		12		-				-		-	
					Middle	4.9	0.3	64	29.0	29.0	7.8	7.8	24.3	24.3	69.8	69.8	4.7		25.5		11		-				-		-	
						4.9	0.3	69	29.0		7.8		24.3		69.8		4.7		25.6		13		-				-		-	
					Bottom	8.7	0.3	61	29.0	29.0	7.8	7.8	24.4	24.4	70.7	70.7	4.8	4.8	23.8		15		-				-		-	
						8.7	0.3	61	29.0		7.8		24.4		70.7		4.8		23.8		16		-				-		-	
SR5A	Fine	Moderate	11:52	5.5	Surface	1.0	0.0	330	29.6	29.6	8.0	8.0	22.8	22.8	97.8	97.7	6.6	6.6	9.6	9.4	5	6	-	-	816608	810707	-	-	-	-
						1.0	0.0	344	29.6		8.0		22.8		97.6		6.6		9.6		4		-				-		-	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	4.5	0.1	127	29.3	29.3	7.9	7.9	23.6	23.6	82.5	82.6	5.6	5.6	9.2		6		-				-		-	
						4.5	0.1	136	29.3		7.9		23.6		82.7		5.6		9.2		7		-				-		-	
SR6	Fine	Moderate	11:26	5.1	Surface	1.0	0.2	58	29.5	29.5	7.8	7.8	22.8	22.8	94.0	93.7	6.3	6.3	6.5	5.7	8	8	-	-	817908	814681	-	-	-	-
						1.0	0.2	60	29.5		7.8		22.8		93.4		6.3		6.5		7		-				-		-	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	4.1	0.2	71	29.1	29.1	7.8	7.8	23.8	23.8	74.9	74.9	5.0	5.0	4.8		9		-				-		-	
						4.1	0.2	73	29.1		7.8		23.8		74.9		5.0		4.8		9		-				-		-	
SR7	Sunny	Moderate	10:41	16.8	Surface	1.0	0.5	358	28.4	28.4	7.8	7.8	26.5	26.5	78.2	78.2	5.2	5.0	4.6	6.6	4	6	-	-	823639	823723	-	-	-	-
						1.0	0.5	329	28.4		7.8		26.5		78.2		5.2		4.6		6		-				-		-	
					Middle	8.4	0.5	346	28.3	28.3	7.8	7.8	26.9	26.9	71.7	71.7	4.8		5.8		5		-				-		-	
						8.4	0.5	359	28.3		7.8		26.9		71.7		4.8		5.8		5		-				-		-	
					Bottom	15.8	0.4	8	28.1	28.1	7.8	7.8	27.8	27.8	70.1	70.1	4.7	4.7	9.4		8		-				-		-	
						15.8	0.5	8	28.1		7.8		27.8		70.1		4.7		9.4		6		-				-		-	
SR8	Sunny	Moderate	12:25	4.6	Surface	1.0	-	-	29.6	29.6	7.8	7.8	21.5	21.5	83.0	83.0	5.6	5.6	12.2	12.5	7	6	-	-	820246	811418	-	-	-	-
						1.0	-	-	29.6		7.8		21.5		83.0		5.6		12.2		6		-				-		-	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	3.6	-	-	29.2	29.2	7.8	7.8	22.5	22.5	87.2	87.2	5.9	5.9	12.7		6		-				-		-	
						3.6	-	-	29.2		7.8		22.5		87.2		5.9		12.7		6		-				-		-	

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

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

Water Quality Monitoring

Water Quality Monitoring Results on 19 September 17 during Mid-Flood Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity(NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)	
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA
C1	Fine	Moderate	18:49	8.4	Surface	1.0	0.5	33	29.5	29.5	8.1	8.1	23.4	23.4	74.1	74.0	5.0	5.0	18.4	22.5	16	16	71	74	815633	804262	<0.2	<0.2	1.4	1.3
						1.0	0.6	35	29.5		8.1		23.4		73.9		5.0		18.3		15		72				<0.2		1.3	
					Middle	4.2	0.5	36	29.4	29.4	8.1	8.1	23.9	23.9	73.3	73.3	4.9		20.9		17		73				<0.2		1.3	
						4.2	0.5	37	29.4		8.1		23.8		73.3		4.9		20.8		16		73				<0.2		1.4	
					Bottom	7.4	0.6	29	29.3	29.3	7.9	7.9	24.4	24.4	72.1	72.2	4.8	4.8	28.4		16		76				<0.2		1.3	
						7.4	0.6	30	29.3		7.9		24.3		72.3		4.8		28.3		17		76				<0.2		1.3	
C2	Sunny	Moderate	17:21	10.4	Surface	1.0	0.6	169	29.7	29.7	7.6	7.6	17.2	17.2	65.6	65.6	4.5	4.5	19.9	33.7	11	17	71	74	825673	806930	<0.2	<0.2	3.9	3.6
						1.0	0.7	183	29.7		7.6		17.2		65.6		4.5		19.9		12		71				<0.2		4.0	
					Middle	5.2	0.3	208	29.2	29.2	7.6	7.6	20.7	20.7	64.2	64.2	4.4		33.8		15		74				<0.2		4.0	
						5.2	0.3	215	29.2		7.6		20.7		64.2		4.4		33.8		15		74				<0.2		3.9	
					Bottom	9.4	0.3	287	28.8	28.8	7.7	7.7	23.8	23.8	66.0	66.0	4.5	4.5	47.3		22		76				<0.2		2.7	
						9.4	0.3	300	28.8		7.7		23.8		66.0		4.5		47.3		24		75				<0.2		3.1	
C3	Cloudy	Moderate	19:28	12.3	Surface	1.0	0.6	263	28.9	28.9	7.8	7.8	24.2	24.2	75.3	75.3	5.1	5.0	13.4	21.2	6	7	72	74	822116	817790	<0.2	<0.2	1.6	1.4
						1.0	0.6	268	28.9		7.8		24.2		75.3		5.1		13.4		6		72				<0.2		1.5	
					Middle	6.2	0.7	260	28.5	28.5	7.8	7.8	26.8	26.8	72.2	72.2	4.8		20.9		6		75				<0.2		1.4	
						6.2	0.7	283	28.5		7.8		26.8		72.2		4.8		20.9		7		74				<0.2		1.4	
					Bottom	11.3	0.5	262	28.4	28.4	7.8	7.8	26.8	26.8	73.5	73.5	4.9	4.9	29.3		8		76				<0.2		1.2	
						11.3	0.6	262	28.4		7.8		26.8		73.5		4.9		29.3		8		76				<0.2		1.1	
IM1	Fine	Moderate	18:26	7.0	Surface	1.0	0.7	14	29.6	29.6	7.7	7.7	22.4	22.4	76.6	76.6	5.2	5.1	16.6	19.5	8	8	73	75	818331	806463	<0.2	<0.2	1.7	1.7
						1.0	0.7	14	29.6		7.7		22.4		76.5		5.2		16.8		9		73				<0.2		1.7	
					Middle	3.5	0.7	5	29.5	29.5	7.7	7.7	23.3	23.3	74.7	74.7	5.0		20.0		8		75				<0.2		1.6	
						3.5	0.8	5	29.5		7.7		23.2		74.7		5.0		20.2		9		75				<0.2		1.7	
					Bottom	6.0	0.6	355	29.4	29.4	7.6	7.6	23.4	23.4	74.6	74.6	5.0	5.0	21.6		9		76				<0.2		1.6	
						6.0	0.7	327	29.4		7.6		23.4		74.6		5.0		21.8		7		76				<0.2		1.8	
IM2	Fine	Moderate	18:18	8.3	Surface	1.0	0.5	350	29.5	29.5	7.7	7.7	23.5	23.5	78.3	78.3	5.3	5.2	21.4	22.1	12	13	73	75	818858	806196	<0.2	<0.2	1.4	1.3
						1.0	0.5	322	29.5		7.7		23.5		78.3		5.3		21.4		11		73				<0.2		1.3	
					Middle	4.2	0.5	341	29.4	29.4	7.7	7.7	23.7	23.7	75.7	75.7	5.1		20.4		14		75				<0.2		1.2	
						4.2	0.6	344	29.4		7.7		23.7		75.7		5.1		20.6		14		76				<0.2		1.2	
					Bottom	7.3	0.4	336	29.4	29.4	7.7	7.7	23.6	23.6	75.9	75.9	5.1	5.1	24.2		14		77				<0.2		1.2	
						7.3	0.4	343	29.4		7.7		23.6		75.9		5.1		24.4		12		77				<0.2		1.2	
IM3	Fine	Moderate	18:07	8.1	Surface	1.0	0.2	292	29.9	29.9	8.0	8.0	19.7	19.7	74.2	74.2	5.0	5.1	18.3	19.2	11	11	73	76	819411	805999	<0.2	<0.2	2.2	2.3
						1.0	0.2	301	29.9		8.0		19.7		74.2		5.0		18.3		10		74				<0.2		2.3	
					Middle	4.1	0.3	318	29.8	29.8	8.1	8.1	21.9	21.9	75.7	75.7	5.1		19.1		12		76				<0.2		2.2	
						4.1	0.3	331	29.8		8.1		21.9		75.7		5.1		19.1		10		76				<0.2		2.4	
					Bottom	7.1	0.3	335	29.5	29.5	8.1	8.1	23.4	23.4	74.1	74.2	5.0	5.0	20.1		11		79				<0.2		2.4	
						7.1	0.3	308	29.5		8.0		23.4		74.2		5.0		20.2		11		79				<0.2		2.4	
IM4	Fine	Moderate	17:58	7.2	Surface	1.0	0.4	309	29.9	29.9	7.8	7.8	19.9	19.9	72.1	72.1	4.9	4.9	20.2	21.3	20	21	74	75	819587	805031	<0.2	<0.2	2.4	2.3
						1.0	0.4	322	29.9		7.8		19.8		72.1		4.9		20.3		18		74				<0.2		2.3	
					Middle	3.6	0.3	315	29.9	29.9	8.0	8.0	19.8	19.8	71.8	71.8	4.9		21.1		21		75				<0.2		2.3	
						3.6	0.4	345	29.9		8.0		19.8		71.8		4.9		21.2		22		75				<0.2		2.2	
					Bottom	6.2	0.3	316	29.8	29.8	7.9	7.9	20.1	20.1	70.1	70.1	4.8	4.8	22.5		22		77				<0.2		2.2	
						6.2	0.3	338	29.8		7.9		20.1		70.1		4.8		22.5		23		77				<0.2		2.1	
IM5	Fine	Moderate	17:45	6.4	Surface	1.0	0.3	304	29.8	29.8	7.9	7.9	20.0	20.1	68.7	68.7	4.7	4.7	20.1	21.4	19	19	72	75	820556	804918	<0.2	<0.2	2.4	2.3
						1.0	0.3	305	29.8		7.9		20.1		68.7		4.7		20.3		20		72				<0.2		2.2	
					Middle	3.2	0.3	326	29.7	29.7	7.9	7.9	20.3	20.3	68.7	68.7	4.7		21.5		19		76				<0.2		2.5	
						3.2	0.3	353	29.7		7.9		20.3		68.6		4.7		21.6		18		76				<0.2		2.3	
					Bottom	5.4	0.4	339	29.7	29.7	7.7	7.7	20.4	20.4	69.7	69.7	4.7	4.7	22.3		19		78				<0.2		2.4	
						5.4	0.4	355	29.7		7.7		20.4		69.7		4.7		22.3		18		78				<0.2		2.1	
IM6	Fine	Moderate	17:32	6.0	Surface	1.0	0.5	285	29.8	29.8	7.9	7.9	19.4	19.4	67.0	67.0	4.6	4.6	19.5	21.6	14	16	73	75	821040	805829	<0.2	<0.2	2.2	2.4
						1.0	0.5	307	29.8		7.9		19.4		66.9		4.6		19.6		13		73				<0.2		2.3	
					Middle	3.0	0.5	283	29.7	29.7	7.8	7.8	20.5	20.5	66.3	66.3	4.5		22.1		15		75				<0.2		2.6	
						3.0	0.5	307	29.7		7.8		20.5		66.3		4.5		22.1		15		75				<0.2		2.4	
					Bottom	5.0	0.4	287	29.7	29.7	7.8	7.8	20.5	20.5	66.5	66.5	4.5	4.5	23.2		19		77				<0.2		2.5	
						5.0	0.4	293	29.7		7.8		20.5		66.5		4.5		23.3		21		77				<0.2		2.4	
IM7	Fine	Moderate	17:20	7.2	Surface	1.0	0.5	233	29.9	29.9	7.8	7.8	19.0	19.0	66.9	66.9	4.6	4.6	19.6	21.4	15	16	74	75	821351	806822	<0.2	<0.2	2.3	2.5
						1.0	0.6	250	29.9		7.8		19.0		66.9		4.6		19.6		14		74				<0.2		2.5	
					Middle	3.6	0.5	239	29.7	29.7	7.7	7.7	20.1	20.1	66.4	66.4	4.5		20.8		17		75				<0.2		2.4	
						3.6	0.5	254	29.7		7.7		20.0		66.4		4.5		20.8		18		75				<0.2		2.6	
					Bottom	6.2	0.3	251	29.7	29.7	7.6	7.6	20.7	20.7	67.1	67.1	4.6	4.6	23.8		16		77				<0.2		2.6	
						6.2	0.3	255	29.7		7.6		20.7		67.1		4.6		23.9		16		77				<0.2		2.5	
IM8	Sunny	Moderate	17:44	7.6	Surface	1.0	0.5	209	30.2	30.2	7.6	7.6	15.7	15.7	75.6	75.6	5.2	5.0	14.2	17.7	8	9	71	73	821706	807847	<0.2	<0.2	3.2	2.9
						1.0	0.5	218	30.2		7.6		15.7		75.6		5.2		14.2		7		72				<0.2		3.1	
					Middle	3.8	0.4	232	29.5	29.5	7.7	7.7	19.6	19.5	69.1	69.2	4.7		16.8		7		73				<0.2		3.1	
						3.8	0.4	241	29.5		7.7		19.4		69.2		4.7		16.8		7		73				<0.2		2.9	
					Bottom	6.6	0.2	281	29.4	29.4	7.7	7.7	20.9	20.9	72.3	72.3	4.9	4.9	22.2		11		75				<0.2		2.5	
						6.6	0.2	282	29.4		7.7		20.9		72.3		4.9		22.2		11		74				<0.2		2.8	

DA: Depth-Averaged

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

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

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

Water Quality Monitoring

Water Quality Monitoring Results on 19 September 17 during Mid-Flood Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity(NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)	
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA
IM9	Cloudy	Moderate	17:52	6.6	Surface	1.0	0.3	222	30.0	30.0	7.7	7.7	18.0	18.0	75.9	75.9	5.2	5.2	18.4	20.3	10	12	71	73	822101	808814	<0.2	<0.2	2.8	2.8
						1.0	0.3	228	30.0		7.7		18.0		75.9		5.2		18.4		9		71				<0.2		2.8	
					Middle	3.3	0.1	271	29.6	29.6	7.7	7.7	20.2	20.2	74.9	74.9	5.1		21.0		13		73				<0.2		3.0	
						3.3	0.1	282	29.6		7.7		20.2		74.9		5.1		21.0		14		73				<0.2		2.8	
					Bottom	5.6	0.1	280	29.5	29.5	7.7	7.7	20.9	20.9	78.5	78.5	5.3	5.3	21.5		14		75				<0.2		2.6	
						5.6	0.2	301	29.5		7.7		20.9		78.5		5.3		21.5		14		74				<0.2		2.7	
IM10	Cloudy	Moderate	18:01	6.8	Surface	1.0	0.4	297	29.8	29.8	7.7	7.7	18.7	18.7	77.0	77.0	5.3	5.1	16.6	20.3	10	11	71	73	822238	809856	<0.2	<0.2	2.6	2.6
						1.0	0.4	303	29.8		7.7		18.7		76.9		5.3		16.7		11		71				<0.2		2.4	
					Middle	3.4	0.4	304	29.5	29.5	7.7	7.7	20.5	20.5	72.6	72.6	4.9		18.7		10		73				<0.2		2.7	
						3.4	0.4	323	29.5		7.7		20.5		72.6		4.9		18.7		11		73				<0.2		2.6	
					Bottom	5.8	0.4	322	29.3	29.3	7.7	7.7	21.9	21.9	73.0	73.0	5.0	5.0	25.6		11		75				<0.2		2.8	
						5.8	0.4	354	29.3		7.7		21.9		73.0		5.0		25.6		12		75				<0.2		2.5	
IM11	Cloudy	Moderate	18:18	7.5	Surface	1.0	0.4	298	29.8	29.8	7.8	7.8	19.4	19.4	81.0	81.0	5.5	5.4	16.2	22.6	7	8	72	73	821481	810543	<0.2	<0.2	2.7	2.4
						1.0	0.5	326	29.8		7.8		19.4		81.0		5.5		16.2		7		71				<0.2		2.6	
					Middle	3.8	0.4	302	29.6	29.6	7.7	7.7	20.6	20.6	78.0	78.0	5.3		22.7		8		73				<0.2		2.4	
						3.8	0.5	314	29.6		7.7		20.6		78.0		5.3		22.7		8		73				<0.2		2.3	
					Bottom	6.5	0.4	293	29.6	29.6	7.7	7.7	20.7	20.7	80.0	80.0	5.4	5.4	28.8		7		75				<0.2		2.3	
						6.5	0.4	314	29.6		7.7		20.7		80.0		5.4		28.8		9		75				<0.2		2.3	
IM12	Cloudy	Moderate	18:27	8.3	Surface	1.0	0.6	279	29.5	29.5	7.8	7.8	20.9	20.9	91.7	91.7	6.2	6.3	14.0	18.8	9	9	72	74	821145	811519	<0.2	<0.2	2.2	2.1
						1.0	0.6	284	29.5		7.8		20.9		91.7		6.2		14.0		9		72				<0.2		2.2	
					Middle	4.2	0.7	281	29.5	29.5	7.9	7.9	22.2	22.2	93.9	93.9	6.3		15.8		10		73				<0.2		2.2	
						4.2	0.8	286	29.5		7.9		22.2		93.9		6.3		15.8		10		74				<0.2		2.2	
					Bottom	7.3	0.6	278	29.5	29.5	7.9	7.9	23.3	23.3	91.3	91.3	6.1	6.1	26.7		9		75				<0.2		2.0	
						7.3	0.7	282	29.5		7.9		23.3		91.3		6.1		26.7		9		75				<0.2		1.8	
SR2	Cloudy	Moderate	19:03	4.0	Surface	1.0	0.1	283	29.2	29.2	7.8	7.8	22.7	22.7	80.7	80.7	5.5	5.5	21.5	22.1	15	17	71	73	821450	814161	<0.2	<0.2	1.9	1.9
						1.0	0.1	304	29.2		7.8		22.7		80.7		5.5		21.5		16		72				<0.2		2.2	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	3.0	0.1	236	29.2	29.2	7.8	7.8	22.8	22.8	82.0	82.0	5.6	5.6	22.6		18		74				<0.2		1.7	
						3.0	0.1	253	29.2		7.8		22.8		82.0		5.6		22.6		19		74				<0.2		1.8	
SR3	Sunny	Moderate	17:39	8.4	Surface	1.0	0.6	193	30.1	30.1	7.6	7.6	16.5	16.5	73.6	73.6	5.1	4.9	10.0	17.2	8	11	-	-	822161	807580	-	-	-	-
						1.0	0.6	197	30.1		7.6		16.5		73.6		5.1		10.2		9		-				-		-	
					Middle	4.2	0.3	230	29.5	29.5	7.6	7.6	19.6	19.6	69.1	69.1	4.7		16.6		12		-				-		-	
						4.2	0.4	238	29.5		7.6		19.6		69.1		4.7		16.6		13		-				-		-	
					Bottom	7.4	0.3	271	29.3	29.3	7.7	7.7	21.1	21.1	76.2	76.2	5.2	5.2	24.8		12		-				-		-	
						7.4	0.3	283	29.3		7.7		21.1		76.2		5.2		24.8		13		-				-		-	
SR4A	Fine	Moderate	19:07	9.1	Surface	1.0	0.0	232	29.6	29.6	7.9	7.9	23.1	23.1	94.3	94.3	6.3	6.4	20.5	21.7	16	16	-	-	817188	807812	-	-	-	-
						1.0	0.0	248	29.6		7.9		23.1		94.3		6.3		20.8		17		-				-		-	
					Middle	4.6	0.0	117	29.6	29.6	7.9	7.9	23.1	23.1	95.5	95.5	6.4		21.3		17		-				-		-	
						4.6	0.0	121	29.6		7.9		23.1		95.5		6.4		21.1		16		-				-		-	
					Bottom	8.1	0.0	169	29.6	29.6	7.7	7.7	23.2	23.2	95.6	95.4	6.4	6.4	23.1		15		-				-		-	
						8.1	0.0	176	29.6		7.7		23.1		95.2		6.4		23.5		15		-				-		-	
SR5A	Fine	Moderate	19:24	5.6	Surface	1.0	0.2	352	29.5	29.5	8.0	8.0	23.3	23.3	96.4	96.5	6.5	6.5	19.8	19.8	16	16	-	-	816576	810706	-	-	-	-
						1.0	0.2	324	29.5		7.9		23.3		96.5		6.5		19.7		15		-				-		-	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	4.6	0.2	356	29.5	29.5	7.7	7.7	23.4	23.4	96.6	96.6	6.5	6.5	20.0		16		-				-		-	
						4.6	0.2	328	29.5		7.7		23.4		96.6		6.5		19.7		17		-				-		-	
SR6	Fine	Moderate	19:51	4.8	Surface	1.0	0.1	233	29.5	29.5	7.8	7.8	22.4	22.4	86.9	87.0	5.9	5.9	15.2	18.2	15	16	-	-	817885	814662	-	-	-	-
						1.0	0.1	252	29.5		7.8		22.4		87.0		5.9		15.0		15		-				-		-	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	3.8	0.0	112	29.5	29.5	7.6	7.6	23.1	23.1	89.0	89.2	6.0	6.0	21.7		15		-				-		-	
						3.8	0.0	113	29.5		7.5		23.0		89.3		6.0		21.0		17		-				-		-	
SR7	Cloudy	Moderate	20:06	16.2	Surface	1.0	0.4	162	28.5	28.5	7.8	7.8	26.4	26.4	80.0	80.0	5.4	5.1	12.8	18.2	8	9	-	-	823630	823729	-	-	-	-
						1.0	0.4	173	28.5		7.8		26.4		80.0		5.4		12.8		8		-				-		-	
					Middle	8.1	0.1	211	28.3	28.3	7.8	7.8	27.6	27.6	69.8	69.8	4.7		17.9		11		-				-		-	
						8.1	0.1	229	28.3		7.8		27.6		69.8		4.7		17.9		10		-				-		-	
					Bottom	15.2	0.3	133	28.2	28.2	7.8	7.8	28.3	28.3	71.4	71.4	4.8	4.8	23.8		9		-				-		-	
						15.2	0.3	134	28.2		7.8		28.3		71.4		4.8		23.8		10		-				-		-	
SR8	Cloudy	Moderate	18:35	4.6	Surface	1.0	0.0	0	30.1	30.1	7.8	7.8	19.9	19.9	84.9	84.9	5.8	5.8	17.8	22.0	11	11	-	-	820246	811418	-	-	-	-
						1.0	0.0	0	30.1		7.8		19.9		84.9		5.8		17.8		12		-				-		-	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	3.6	0.0	0	29.5	29.5	7.8	7.8	21.9	21.9	90.5	90.5	6.1	6.1	26.1		10		-				-		-	
						3.6	0.0	0	29.5		7.8		21.9		90.5		6.1		26.1		10		-				-		-	

DA: Depth-Averaged

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

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

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

Water Quality Monitoring

Water Quality Monitoring Results on 21 September 17 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
C1	Cloudy	Moderate	13:09	9.1	Surface	1.0	0.5	207	29.1	29.1	8.0	8.0	23.8	23.8	75.7	75.8	5.1	5.1	4.5	16.7	6	9	92	95	815613	804240	<0.2	<0.2	1.5	1.2
						1.0	0.5	210	29.1		8.0		23.8		75.8		5.1		4.5		6		92				<0.2		1.5	
					Middle	4.6	0.4	220	28.9	28.9	8.1	8.1	25.2	25.2	73.9	73.9	5.0		11.1		7		95				<0.2		1.1	
						4.6	0.4	235	28.9		8.1		25.2		73.9		5.0		11.3		6		95				<0.2		1.0	
					Bottom	8.1	0.4	219	28.8	28.8	8.1	8.1	26.2	26.2	71.8	71.8	4.8	4.8	34.7		15		98				<0.2		1.0	
						8.1	0.5	234	28.8		8.1		26.2		71.8		4.8		34.3		13		98				<0.2		0.9	
C2	Sunny	Moderate	12:03	12.8	Surface	1.0	0.5	172	30.1	30.1	7.8	7.8	19.3	19.3	67.6	67.6	4.6	4.6	10.6	16.3	7	12	89	92	825679	806947	<0.2	<0.2	2.4	1.9
						1.0	0.5	186	30.1		7.8		19.3		67.6		4.6		10.6		6		89				<0.2		2.6	
					Middle	6.4	0.4	165	29.3	29.3	7.9	7.9	23.1	23.1	67.1	67.1	4.5		17.6		11		92				<0.2		2.0	
						6.4	0.4	171	29.3		7.9		23.1		67.1		4.5		17.6		10		92				<0.2		1.9	
					Bottom	11.8	0.3	126	29.2	29.2	7.9	7.9	24.7	24.7	66.9	66.9	4.5	4.5	20.7		18		94				<0.2		1.3	
						11.8	0.3	130	29.2		7.9		24.7		66.9		4.5		20.7		18		93				<0.2		1.4	
C3	Sunny	Moderate	13:54	12.4	Surface	1.0	0.5	101	29.6	29.6	7.9	7.9	23.6	23.6	72.8	72.8	4.9	4.9	11.2	12.4	10	9	91	94	822106	817787	<0.2	<0.2	1.4	1.5
						1.0	0.5	107	29.6		7.9		23.6		72.8		4.9		11.2		9		92				<0.2		1.5	
					Middle	6.2	0.3	86	29.5	29.5	7.9	7.9	24.0	24.0	72.5	72.5	4.8		11.9		10		94				<0.2		1.4	
						6.2	0.3	92	29.5		7.9		24.0		72.5		4.8		11.9		9		94				<0.2		1.4	
					Bottom	11.4	0.4	42	29.2	29.2	7.9	7.9	25.2	25.2	76.0	76.0	5.1	5.1	14.2		10		96				<0.2		1.4	
						11.4	0.4	45	29.2		7.9		25.2		76.0		5.1		14.2		8		96				<0.2		1.6	
IM1	Cloudy	Moderate	12:52	8.0	Surface	1.0	0.3	170	29.1	29.1	8.0	8.0	24.7	24.7	73.7	73.7	4.9	4.9	5.8	9.5	4	5	92	95	818370	806457	<0.2	<0.2	1.1	1.2
						1.0	0.3	184	29.1		8.0		24.7		73.6		4.9		5.9		4		92				<0.2		1.1	
					Middle	4.0	0.3	164	29.0	29.0	8.0	8.0	25.3	25.3	71.6	71.6	4.8		9.2		5		95				<0.2		1.4	
						4.0	0.3	168	29.0		8.0		25.3		71.5		4.8		9.4		6		94				<0.2		1.3	
					Bottom	7.0	0.2	161	28.9	28.9	8.0	8.0	25.7	25.7	71.4	71.4	4.8	4.8	13.5		6		99				<0.2		1.2	
						7.0	0.3	172	28.9		8.0		25.7		71.4		4.8		13.4		6		98				<0.2		1.2	
IM2	Cloudy	Moderate	12:46	8.8	Surface	1.0	0.4	177	29.4	29.4	8.0	8.0	24.5	24.6	74.6	74.5	5.0	4.9	6.7	10.2	5	8	94	96	818843	806188	<0.2	<0.2	0.8	1.0
						1.0	0.4	184	29.4		8.0		24.6		74.3		5.0		7.0		5		93				<0.2		0.8	
					Middle	4.4	0.3	171	29.0	29.0	8.0	8.0	25.5	25.5	71.1	71.1	4.8		10.3		6		96				<0.2		1.1	
						4.4	0.3	187	29.0		8.0		25.5		71.1		4.8		10.4		5		95				<0.2		1.1	
					Bottom	7.8	0.2	185	28.9	28.9	8.0	8.0	25.8	25.8	71.0	71.1	4.8	4.8	13.5		13		100				<0.2		1.1	
						7.8	0.2	202	28.9		8.0		25.8		71.1		4.8		13.5		13		99				<0.2		1.2	
IM3	Cloudy	Moderate	12:39	9.0	Surface	1.0	0.3	163	29.1	29.1	8.0	8.0	25.3	25.3	73.8	73.8	4.9	4.9	11.4	12.3	10	11	95	97	819400	806026	<0.2	<0.2	1.0	1.0
						1.0	0.3	163	29.1		8.0		25.3		73.8		4.9		11.4		10		95				<0.2		1.0	
					Middle	4.5	0.3	179	29.0	29.0	8.0	8.0	25.4	25.4	72.6	72.6	4.9		12.3		8		97				<0.2		0.9	
						4.5	0.3	194	29.0		8.0		25.4		72.6		4.9		12.3		9		96				<0.2		0.9	
					Bottom	8.0	0.2	178	28.9	28.9	8.0	8.0	25.7	25.7	72.5	72.5	4.8	4.8	13.0		14		99				<0.2		1.0	
						8.0	0.3	182	28.9		8.0		25.7		72.5		4.8		13.1		14		98				<0.2		1.1	
IM4	Cloudy	Moderate	12:32	8.4	Surface	1.0	0.4	159	29.1	29.1	8.1	8.1	25.2	25.2	73.7	73.7	4.9	4.8	8.0	14.5	8	9	94	97	819554	805045	<0.2	<0.2	0.9	0.9
						1.0	0.4	167	29.1		8.1		25.2		73.6		4.9		8.0		8		94				<0.2		1.0	
					Middle	4.2	0.3	171	28.8	28.8	8.1	8.1	26.1	26.1	70.8	70.8	4.7		16.0		8		98				<0.2		1.1	
						4.2	0.4	185	28.8		8.1		26.1		70.8		4.7		16.1		10		98				<0.2		1.0	
					Bottom	7.4	0.2	188	28.8	28.8	8.1	8.1	26.6	26.6	71.3	71.3	4.8	4.8	19.6		11		99				<0.2		0.8	
						7.4	0.2	197	28.8		8.1		26.6		71.3		4.8		19.5		11		100				<0.2		0.8	
IM5	Cloudy	Moderate	12:22	7.7	Surface	1.0	0.3	176	29.0	29.0	8.0	8.0	25.5	25.5	73.7	73.7	4.9	4.9	10.5	18.2	9	12	94	97	820571	804911	<0.2	<0.2	0.8	1.0
						1.0	0.3	182	29.0		8.0		25.5		73.7		4.9		10.5		9		94				<0.2		1.0	
					Middle	3.9	0.3	171	28.9	28.9	8.1	8.1	25.9	25.9	72.4	72.4	4.8		17.8		10		96				<0.2		1.0	
						3.9	0.3	175	28.9		8.1		25.9		72.4		4.8		17.8		8		96				<0.2		1.0	
					Bottom	6.7	0.2	156	28.8	28.8	8.0	8.0	26.1	26.1	72.7	72.8	4.9	4.9	26.3		19		100				<0.2		1.0	
						6.7	0.3	169	28.8		8.0		26.1		72.8		4.9		26.0		17		99				<0.2		0.9	
IM6	Cloudy	Moderate	12:13	7.7	Surface	1.0	0.3	141	29.2	29.2	8.0	8.0	24.9	24.9	73.2	73.2	4.9	4.9	10.8	15.5	4	11	93	95	821078	805822	<0.2	<0.2	1.1	1.1
						1.0	0.3	154	29.2		8.0		24.9		73.2		4.9		10.9		4		93				<0.2		1.1	
					Middle	3.9	0.2	134	29.0	29.0	8.0	8.0	25.4	25.4	72.2	72.2	4.8		17.7		8		95				<0.2		1.1	
						3.9	0.2	141	29.0		8.0		25.4		72.2		4.8		17.7		7		94				<0.2		1.1	
					Bottom	6.7	0.1	101	28.9	28.9	8.0	8.0	26.0	26.0	71.3	71.3	4.8	4.8	18.0		21		98				<0.2		1.0	
						6.7	0.1	110	28.9		8.0		26.0		71.3		4.8		18.0		20		97				<0.2		0.9	
IM7	Cloudy	Moderate	12:05	9.1	Surface	1.0	0.1	129	29.2	29.2	8.0	8.0	24.6	24.6	72.5	72.5	4.9	4.9	16.8	21.9	14	19	94	96	821347	806830	<0.2	<0.2	1.2	1.1
						1.0	0.1	134	29.2		8.0		24.6		72.5		4.9		16.8		14		94				<0.2		1.2	
					Middle	4.6	0.2	97	28.9	28.9	8.0	8.0	25.6	25.6	71.5	71.6	4.8		21.6		18		96				<0.2		1.1	
						4.6	0.2	98	28.9		8.0		25.6		71.6		4.8		21.4		17		95				<0.2		1.1	
					Bottom	8.1	0.2	93	28.9	28.9	8.0	8.0	25.6	25.6	71.5	71.6	4.8	4.8	27.4		26		99				<0.2		0.8	
						8.1	0.2	101	28.9		8.0		25.6		71.6		4.8		27.4		27		98				<0.2		0.9	
IM8	Sunny	Moderate	12:28	8.2	Surface	1.0	0.3	117	29.7	29.7	7.9	7.9	21.7	21.7	71.1	71.1	4.8	4.9	12.2	17.5	8	11	91	93	821709	807848	<0.2	<0.2	2.2	1.6
						1.0	0.3	117	29.7		7.9		21.7		71.1		4.8		12.2		6		91				<0.2		2.1	
					Middle	4.1	0.3	65	29.4	29.4	8.0	8.0	24.3	24.3	73.0	73.1	4.9		14.8		12		93				<0.2		1.5	
						4.1	0.3	66	29.4		8.0		24.3		73.1		4.9		14.8		12		94				<0.2		1.5	
					Bottom	7.2	0.3	64	29.3	29.3	8.0	8.0	25.3	25.3	75.9	75.9	5.1	5.1	25.6		14		96				<0.2		1.0	
						7.2	0.3	68	29.3		8.0		25.3		75.9		5.1		25.6		14		95				<0.2		1.1	

DA: Depth-Averaged

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

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

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

Water Quality Monitoring

Water Quality Monitoring Results on 21 September 17 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
IM9	Sunny	Moderate	12:35	7.7	Surface	1.0	0.4	105	29.9	29.9	7.9	7.9	21.8	21.8	71.3	71.3	4.8	4.8	15.2	20.9	5	11	89	93	822103	808822	<0.2	<0.2	1.9	1.7
						1.0	0.5	105	29.9		7.9		21.8		71.3		4.8		15.2		5		90				<0.2		1.9	
					Middle	3.9	0.4	100	29.4	29.4	8.0	8.0	24.2	24.2	71.7	71.7	4.8		21.0		11		93				<0.2		1.7	
						3.9	0.4	106	29.4		8.0		24.2		71.7		4.8		21.0		12		94				<0.2		1.6	
					Bottom	6.7	0.3	73	29.3	29.3	8.0	8.0	25.2	25.2	74.0	74.1	4.9	4.9	26.6		15		96				<0.2		1.5	
						6.7	0.3	77	29.3		8.0		25.2		74.1		4.9		26.6		16		96				<0.2		1.4	
IM10	Sunny	Moderate	12:42	7.1	Surface	1.0	0.6	127	29.8	29.8	7.9	7.9	21.3	21.3	70.8	70.8	4.8	4.8	15.2	19.4	11	13	90	93	822242	809854	<0.2	<0.2	2.2	1.8
						1.0	0.6	139	29.8		7.9		21.3		70.8		4.8		15.2		9		91				<0.2		2.0	
					Middle	3.6	0.5	96	29.4	29.4	7.9	7.9	23.3	23.3	71.1	71.1	4.8		20.4		12		94				<0.2		1.8	
						3.6	0.6	96	29.4		7.9		23.3		71.1		4.8		20.4		13		94				<0.2		1.8	
					Bottom	6.1	0.4	82	29.3	29.3	8.0	8.0	25.0	25.0	75.5	75.5	5.0	5.0	22.5		16		95				<0.2		1.5	
						6.1	0.4	87	29.3		8.0		25.0		75.5		5.0		22.5		16		95				<0.2		1.4	
IM11	Sunny	Moderate	12:59	6.4	Surface	1.0	0.6	115	29.7	29.7	7.9	7.9	22.1	22.1	71.9	71.9	4.8	4.9	14.3	17.6	11	21	91	94	821513	810556	<0.2	<0.2	1.5	1.5
						1.0	0.6	122	29.7		7.9		22.1		71.9		4.8		14.3		13		92				<0.2		1.7	
					Middle	3.2	0.6	108	29.6	29.6	8.0	8.0	22.5	22.5	74.3	74.3	5.0		18.3		15		94				<0.2		1.7	
						3.2	0.6	110	29.6		8.0		22.5		74.3		5.0		18.3		14		94				<0.2		1.8	
					Bottom	5.4	0.5	93	29.5	29.5	8.0	8.0	24.0	24.0	78.3	78.3	5.2	5.2	20.1		34		96				<0.2		1.1	
						5.4	0.5	93	29.5		8.0		24.0		78.3		5.2		20.1		37		97				<0.2		1.2	
IM12	Sunny	Moderate	13:05	9.3	Surface	1.0	0.7	105	29.8	29.8	8.0	8.0	22.0	22.0	73.0	73.0	4.9	4.9	7.8	12.8	11	16	90	92	821143	811515	<0.2	<0.2	2.0	1.6
						1.0	0.7	111	29.8		8.0		22.0		73.0		4.9		7.8		10		90				<0.2		1.8	
					Middle	4.7	0.6	88	29.6	29.6	8.0	8.0	23.5	23.5	73.4	73.4	4.9		12.2		12		92				<0.2		1.6	
						4.7	0.7	95	29.6		8.0		23.5		73.4		4.9		12.2		12		92				<0.2		1.6	
					Bottom	8.3	0.5	81	29.5	29.5	8.0	8.0	23.9	23.9	76.5	76.5	5.1	5.1	18.3		26		95				<0.2		1.2	
						8.3	0.5	81	29.5		8.0		23.9		76.5		5.1		18.3		25		94				<0.2		1.1	
SR2	Sunny	Moderate	13:35	5.1	Surface	1.0	0.6	76	29.5	29.5	8.0	8.0	22.9	22.9	74.2	74.2	5.0	5.0	11.4	12.5	14	15	92	93	821443	814165	<0.2	<0.2	1.7	1.6
						1.0	0.6	78	29.5		8.0		22.9		74.2		5.0		11.4		14		91				<0.2		1.5	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	4.1	0.4	68	29.5	29.5	8.0	8.0	23.4	23.4	77.2	77.2	5.2	5.2	13.5		15		94				<0.2		1.4	
						4.1	0.4	72	29.5		8.0		23.4		77.2		5.2		13.5		16		94				<0.2		1.6	
SR3	Sunny	Moderate	12:22	9.5	Surface	1.0	0.3	157	29.6	29.6	7.9	7.9	22.1	22.1	70.3	70.3	4.7	4.8	12.8	13.9	9	19	-	-	822156	807562	-	-	-	-
						1.0	0.3	166	29.6		7.9		22.1		70.3		4.7		12.8		11		-				-		-	
					Middle	4.8	0.3	94	29.4	29.4	7.9	7.9	23.6	23.6	72.2	72.2	4.8		13.2		20		-				-		-	
						4.8	0.3	100	29.4		7.9		23.6		72.2		4.8		13.2		18		-				-		-	
					Bottom	8.5	0.3	54	29.3	29.3	8.0	8.0	25.3	25.3	74.2	74.2	4.9	4.9	15.8		28		-				-		-	
						8.5	0.4	57	29.3		8.0		25.3		74.2		4.9		15.8		29		-				-		-	
SR4A	Cloudy	Moderate	13:30	9.3	Surface	1.0	0.4	66	29.5	29.5	8.0	8.0	23.0	23.0	76.4	76.4	5.1	5.0	6.8	16.0	9	9	-	-	817208	807808	-	-	-	-
						1.0	0.4	67	29.5		8.0		23.0		76.3		5.1		6.9		8		-				-		-	
					Middle	4.7	0.4	75	29.2	29.2	8.0	8.0	23.8	23.8	73.2	73.2	4.9		15.4		10		-				-		-	
						4.7	0.4	82	29.2		8.0		23.8		73.2		4.9		15.5		9		-				-		-	
					Bottom	8.3	0.2	67	29.1	29.1	8.0	8.0	24.4	24.4	72.8	72.8	4.9	4.9	25.9		9		-				-		-	
						8.3	0.2	69	29.1		8.0		24.4		72.8		4.9		25.7		9		-				-		-	
SR5A	Cloudy	Moderate	13:46	5.4	Surface	1.0	0.1	71	29.3	29.3	8.0	8.0	23.4	23.4	75.2	75.2	5.1	5.1	13.4	15.6	8	10	-	-	816589	810690	-	-	-	-
						1.0	0.1	73	29.3		8.0		23.4		75.2		5.1		13.5		9		-				-		-	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	4.4	0.1	105	29.2	29.2	8.0	8.0	24.1	24.1	74.9	74.9	5.0	5.0	17.8		12		-				-		-	
						4.4	0.1	106	29.2		8.0		24.1		74.9		5.0		17.8		12		-				-		-	
SR6	Cloudy	Moderate	14:08	4.2	Surface	1.0	0.2	68	29.7	29.7	8.0	8.0	22.4	22.4	80.1	80.1	5.4	5.4	5.9	9.9	7	7	-	-	817917	814667	-	-	-	-
						1.0	0.2	73	29.7		8.0		22.4		80.1		5.4		5.9		7		-				-		-	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	3.2	0.1	58	29.2	29.2	8.0	8.0	23.1	23.1	79.5	79.5	5.4	5.4	13.9		8		-				-		-	
						3.2	0.1	59	29.2		8.0		23.1		79.5		5.4		13.9		6		-				-		-	
SR7	Sunny	Moderate	14:21	16.3	Surface	1.0	0.9	77	29.7	29.7	7.9	7.9	23.3	23.3	78.0	78.0	5.2	5.0	9.3	10.0	6	6	-	-	823622	823752	-	-	-	-
						1.0	0.9	82	29.6		7.9		23.3		78.0		5.2		9.3		6		-				-		-	
					Middle	8.2	0.4	73	29.3	29.3	7.9	7.9	24.7	24.7	72.1	72.1	4.8		10.1		6		-				-		-	
						8.2	0.5	75	29.3		7.9		24.7		72.1		4.8		10.1		5		-				-		-	
					Bottom	15.3	0.2	81	29.1	29.1	7.9	7.9	25.6	25.6	72.1	72.1	4.8	4.8	10.5		7		-				-		-	
						15.3	0.3	86	29.1		7.9		25.6		72.1		4.8		10.5		6		-				-		-	
SR8	Sunny	Moderate	13:13	4.2	Surface	1.0	-	-	29.8	29.8	7.9	7.9	22.6	22.6	73.5	73.5	4.9	4.9	18.2	19.2	9	9	-	-	820246	811418	-	-	-	-
						1.0	-	-	29.8		7.9		22.6		73.5		4.9		18.2		7		-				-		-	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	3.2	-	-	29.6	29.6	7.9	7.9	22.9	22.9	77.3	77.4	5.2	5.2	20.2		11		-				-		-	
						3.2	-	-	29.6		7.9		22.9		77.5		5.2		20.2		10		-				-		-	

DA: Depth-Averaged

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

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

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

Water Quality Monitoring

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

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity(NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)	
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA
C1	Cloudy	Moderate	07:35	9.0	Surface	1.0	0.7	43	29.0	29.0	8.0	8.0	24.9	24.9	73.0	73.0	4.9	4.9	18.6	22.6	17	22	93	96	815627	804264	<0.2	<0.2	1.1	1.1
						1.0	0.8	45	29.0		8.0		24.9		73.0		4.9		18.3		17		94				<0.2		1.0	
					Middle	4.5	0.6	36	28.9	28.9	8.0	8.0	25.3	25.3	72.3	72.3	4.8		22.4		20		96				<0.2		1.2	
						4.5	0.7	36	28.9		8.0		25.3		72.3		4.8		22.4		21		96				<0.2		1.4	
					Bottom	8.0	0.6	39	28.9	28.9	8.0	8.0	25.5	25.5	72.2	72.2	4.8	4.8	26.8		27		98				<0.2		1.1	
						8.0	0.6	39	28.9		8.0		25.5		72.2		4.8		26.8		29		98				<0.2		1.0	
C2	Cloudy	Moderate	08:34	12.7	Surface	1.0	0.4	356	29.7	29.7	7.7	7.7	18.7	18.7	64.2	64.2	4.4	4.4	7.3	13.9	6	6	89	91	825693	806930	<0.2	<0.2	2.6	2.4
						1.0	0.4	328	29.7		7.7		18.7		64.2		4.4		7.3		6		90				<0.2		2.4	
					Middle	6.4	0.5	342	29.6	29.6	7.8	7.8	20.5	20.5	64.3	64.3	4.4		12.5		7		91				<0.2		2.5	
						6.4	0.5	344	29.6		7.8		20.5		64.3		4.4		12.5		6		91				<0.2		2.6	
					Bottom	11.7	0.4	13	29.5	29.5	7.8	7.8	21.7	21.7	65.3	65.3	4.4	4.4	22.0		6		92				<0.2		2.1	
						11.7	0.4	13	29.5		7.8		21.7		65.3		4.4		22.0		7		92				<0.2		2.4	
C3	Cloudy	Moderate	06:33	12.3	Surface	1.0	0.7	266	29.4	29.4	8.0	8.0	22.7	22.7	71.0	71.0	4.8	4.7	9.2	11.6	8	11	91	93	822105	817798	<0.2	<0.2	1.6	1.5
						1.0	0.7	276	29.4		8.0		22.7		71.0		4.8		9.2		9		91				<0.2		1.7	
					Middle	6.2	0.7	258	29.3	29.3	7.9	7.9	23.8	23.8	69.2	69.2	4.6		12.2		9		94				<0.2		1.4	
						6.2	0.8	266	29.3		7.9		23.8		69.2		4.6		12.2		8		93				<0.2		1.5	
					Bottom	11.3	0.4	271	29.0	29.0	7.9	7.9	25.5	25.5	68.5	68.5	4.6	4.6	13.5		17		96				<0.2		1.3	
						11.3	0.4	282	29.0		7.9		25.5		68.5		4.6		13.5		17		95				<0.2		1.2	
IM1	Cloudy	Moderate	07:51	7.8	Surface	1.0	0.8	351	29.1	29.1	8.0	8.0	23.6	23.6	73.9	73.9	5.0	5.0	5.7	14.9	6	9	92	96	818361	806442	<0.2	<0.2	1.3	1.5
						1.0	0.9	359	29.1		8.0		23.6		73.9		5.0		5.7		4		92				<0.2		1.3	
					Middle	3.9	0.8	356	29.1	29.1	8.0	8.0	23.9	23.9	73.2	73.2	4.9		9.0		6		96				<0.2		1.7	
						3.9	0.9	328	29.1		8.0		23.9		73.1		4.9		9.0		5		96				<0.2		1.7	
					Bottom	6.8	0.6	353	29.1	29.1	8.0	8.0	24.6	24.6	72.8	72.8	4.9	4.9	30.4		18		99				<0.2		1.4	
						6.8	0.6	325	29.1		8.0		24.6		72.8		4.9		29.8		16		99				<0.2		1.3	
IM2	Cloudy	Moderate	07:57	8.8	Surface	1.0	0.8	28	29.0	29.0	8.0	8.0	22.9	22.9	73.9	73.9	5.0	4.9	8.3	17.9	6	9	94	97	818835	806190	<0.2	<0.2	1.6	1.4
						1.0	0.8	29	29.0		8.0		22.9		73.9		5.0		8.4		6		95				<0.2		1.5	
					Middle	4.4	0.6	28	29.1	29.1	8.0	8.0	24.5	24.5	72.0	72.1	4.8		18.3		6		96				<0.2		1.3	
						4.4	0.7	30	29.1		8.0		24.5		72.1		4.8		18.1		6		97				<0.2		1.3	
					Bottom	7.8	0.4	32	29.1	29.1	8.0	8.0	24.7	24.7	72.2	72.2	4.8	4.8	27.2		14		101				<0.2		1.1	
						7.8	0.5	32	29.1		8.0		24.7		72.2		4.8		27.2		13		101				<0.2		1.3	
IM3	Cloudy	Moderate	08:04	9.2	Surface	1.0	0.6	22	29.1	29.1	8.0	8.0	22.4	22.4	73.1	73.1	5.0	5.0	7.2	20.7	5	6	95	98	819418	806022	<0.2	<0.2	2.0	1.5
						1.0	0.6	24	29.1		8.0		22.4		73.1		5.0		7.2		5		96				<0.2		1.5	
					Middle	4.6	0.7	29	29.1	29.1	8.0	8.0	24.2	24.2	72.2	72.2	4.9		20.5		5		97				<0.2		1.5	
						4.6	0.7	29	29.1		8.0		24.2		72.1		4.9		20.6		6		98				<0.2		1.4	
					Bottom	8.2	0.4	29	29.1	29.1	8.0	8.0	24.6	24.6	73.1	73.1	4.9	4.9	34.4		7		99				<0.2		1.3	
						8.2	0.4	31	29.1		8.0		24.6		73.1		4.9		34.4		7		100				<0.2		1.3	
IM4	Cloudy	Moderate	08:13	8.4	Surface	1.0	0.6	20	29.2	29.2	8.0	8.0	22.3	22.3	72.3	72.3	4.9	4.9	10.3	17.3	9	10	95	98	819560	805023	<0.2	<0.2	1.4	1.5
						1.0	0.7	20	29.2		8.0		22.3		72.3		4.9		10.3		9		95				<0.2		1.6	
					Middle	4.2	0.6	23	29.1	29.1	8.0	8.0	23.1	23.1	72.3	72.3	4.9		18.6		7		99				<0.2		1.5	
						4.2	0.7	23	29.1		8.0		23.1		72.3		4.9		18.8		7		99				<0.2		1.6	
					Bottom	7.4	0.5	19	29.0	29.0	8.0	8.0	24.6	24.6	72.5	72.5	4.9	4.9	22.9		13		101				<0.2		1.6	
						7.4	0.5	20	29.0		8.0		24.6		72.5		4.9		22.9		14		101				<0.2		1.3	
IM5	Cloudy	Moderate	08:23	7.7	Surface	1.0	0.8	14	29.2	29.2	8.0	8.0	21.8	21.8	71.5	71.5	4.9	4.9	8.0	19.4	7	10	94	97	820560	804923	<0.2	<0.2	1.7	1.6
						1.0	0.8	14	29.2		8.0		21.8		71.5		4.9		8.0		6		95				<0.2		1.5	
					Middle	3.9	0.7	28	29.2	29.2	8.0	8.0	22.7	22.7	71.6	71.7	4.9		18.8		6		96				<0.2		1.5	
						3.9	0.7	30	29.2		8.0		22.7		71.7		4.9		18.8		7		97				<0.2		1.6	
					Bottom	6.7	0.5	25	29.1	29.1	8.0	8.0	23.9	23.9	72.0	72.0	4.9	4.9	31.5		16		101				<0.2		1.5	
						6.7	0.5	25	29.1		8.0		23.9		72.0		4.9		31.5		16		101				<0.2		1.7	
IM6	Cloudy	Moderate	08:32	7.3	Surface	1.0	0.5	5	29.2	29.2	8.0	8.0	22.3	22.3	71.5	71.5	4.8	4.8	16.5	21.8	10	11	93	96	821078	805847	<0.2	<0.2	1.8	1.8
						1.0	0.5	5	29.2		8.0		22.3		71.5		4.8		16.7		9		94				<0.2		1.9	
					Middle	3.7	0.5	14	29.1	29.1	8.0	8.0	23.5	23.5	71.2	71.2	4.8		20.9		9		95				<0.2		2.0	
						3.7	0.5	14	29.1		8.0		23.5		71.2		4.8		20.9		8		96				<0.2		1.9	
					Bottom	6.3	0.4	32	29.1	29.1	8.0	8.0	23.8	23.8	71.5	71.5	4.8	4.8	27.8		16		98				<0.2		1.7	
						6.3	0.5	34	29.1		8.0		23.8		71.5		4.8		27.9		15		98				<0.2		1.6	
IM7	Cloudy	Moderate	08:41	9.0	Surface	1.0	0.9	44	29.2	29.2	8.0	8.0	22.8	22.8	72.8	72.8	4.9	4.9	13.3	18.5	5	6	95	97	821354	806823	<0.2	<0.2	1.6	1.6
						1.0	0.9	45	29.2		8.0		22.8		72.8		4.9		13.3		6		95				<0.2		1.8	
					Middle	4.5	0.7	44	29.1	29.1	8.0	8.0	23.6	23.6	71.5	71.5	4.8		17.4		5		96				<0.2		1.5	
						4.5	0.8	47	29.1		8.0		23.6		71.5		4.8		17.4		6		96				<0.2		1.6	
					Bottom	8.0	0.5	28	29.1	29.1	8.0	8.0	23.8	23.8	72.2	72.2	4.9	4.9	24.9		8		99				<0.2		1.6	
						8.0	0.6	29	29.1		8.0		23.8		72.2		4.9		24.9		7		100				<0.2		1.6	
IM8	Cloudy	Moderate	08:10	8.8	Surface	1.0	0.3	359	29.6	29.6	7.9	7.9	20.3	20.3	69.6	69.6	4.7	4.8	13.2	18.6	4	17	90	92	821700	807838	<0.2	<0.2	2.5	2.2
						1.0	0.3	330	29.6		7.9		20.3		69.6		4.7		13.2		5		91				<0.2		2.4	
					Middle	4.4	0.5	-	29.5	29.5	7.9	7.9	21.2	21.2	70.1	70.1	4.8		16.6		18		92				<0.2		2.3	
						4.4	0.5	-	29.5		7.9		21.2		70.1		4.8		16.6		20		93				<0.2		2.2	
					Bottom	7.8	0.5	19	29.5	29.5	7.9	7.9	21.6	21.6	71.3	71.3	4.8	4.8	25.9		25		92				<0.2		2.0	
						7.8	0.5	19	29.5		7.9		21.6		71.3		4.8		25.9		27		93				<0.2		1.9	

DA: Depth-Averaged

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

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

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

Water Quality Monitoring

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

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity(NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)	
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA
IM9	Cloudy	Moderate	08:02	7.8	Surface	1.0	0.2	6	29.6	29.6	8.0	8.0	19.9	19.9	66.9	66.9	4.6	4.7	10.8	17.1	7	17	91	92	822094	808797	<0.2	<0.2	2.7	2.4
						1.0	0.2	6	29.6		8.0		19.9		66.9		4.6		10.8		5		90				<0.2		2.6	
					Middle	3.9	0.2	352	29.6	29.6	7.9	7.9	20.2	20.2	68.3	68.3	4.7		14.5		18		92				<0.2		2.3	
						3.9	0.2	324	29.6		7.9		20.2		68.3		4.7		14.5		19		92				<0.2		2.3	
					Bottom	6.8	0.3	307	29.6	29.6	7.8	7.8	20.7	20.7	72.6	72.6	4.9	4.9	25.9		26		94				<0.2		2.1	
						6.8	0.3	324	29.6		7.8		20.7		72.6		4.9		25.9		26		94				<0.2		2.2	
IM10	Cloudy	Moderate	07:54	7.2	Surface	1.0	0.7	309	29.5	29.5	7.9	7.9	21.9	21.9	71.6	71.6	4.8	4.9	13.3	18.3	5	11	90	91	822255	809819	<0.2	<0.2	2.0	1.9
						1.0	0.7	312	29.5		7.9		21.9		71.6		4.8		13.3		5		89				<0.2		2.1	
					Middle	3.6	0.6	308	29.4	29.4	7.9	7.9	22.5	22.5	72.2	72.2	4.9		17.0		10		91				<0.2		1.8	
						3.6	0.6	314	29.4		7.9		22.5		72.2		4.9		17.0		11		91				<0.2		1.8	
					Bottom	6.2	0.5	317	29.4	29.4	7.9	7.9	22.7	22.7	75.0	75.0	5.1	5.1	24.6		16		92				<0.2		1.8	
						6.2	0.5	325	29.4		7.9		22.7		75.0		5.1		24.6		16		93				<0.2		1.9	
IM11	Cloudy	Moderate	07:38	7.8	Surface	1.0	0.7	287	29.4	29.4	7.9	7.9	22.1	22.1	70.8	70.8	4.8	4.8	10.3	18.3	6	11	90	92	821512	810558	<0.2	<0.2	2.0	1.8
						1.0	0.7	298	29.4		7.9		22.1		70.8		4.8		10.3		6		89				<0.2		1.9	
					Middle	3.9	0.7	294	29.4	29.4	7.9	7.9	22.9	22.9	70.6	70.6	4.8		15.9		11		91				<0.2		1.7	
						3.9	0.7	311	29.4		7.9		22.9		70.6		4.8		15.9		12		92				<0.2		1.6	
					Bottom	6.8	0.5	294	29.4	29.4	7.9	7.9	23.0	23.0	71.9	71.9	4.8	4.8	28.8		15		93				<0.2		1.8	
						6.8	0.6	312	29.4		7.9		23.0		71.9		4.8		28.8		15		94				<0.2		1.5	
IM12	Cloudy	Moderate	07:26	8.2	Surface	1.0	0.8	271	29.3	29.3	7.9	7.9	22.7	22.7	71.6	71.6	4.8	4.8	11.6	17.7	9	12	89	91	821168	811505	<0.2	<0.2	1.4	1.5
						1.0	0.8	274	29.3		7.9		22.7		71.6		4.8		11.6		8		89				<0.2		1.4	
					Middle	4.1	0.7	261	29.3	29.3	7.9	7.9	22.8	22.8	71.1	71.1	4.8		15.8		8		91				<0.2		1.6	
						4.1	0.8	271	29.3		7.9		22.8		71.1		4.8		15.8		9		91				<0.2		1.6	
					Bottom	7.2	0.6	264	29.3	29.3	8.0	8.0	23.3	23.3	71.0	71.0	4.8	4.8	25.6		19		93				<0.2		1.4	
						7.2	0.6	274	29.3		8.0		23.3		71.0		4.8		25.6		20		93				<0.2		1.4	
SR2	Cloudy	Moderate	06:54	4.6	Surface	1.0	0.5	77	29.4	29.4	7.9	7.9	22.7	22.7	70.6	70.6	4.8	4.8	8.8	11.6	21	24	91	91	821446	814181	<0.2	<0.2	1.8	1.7
						1.0	0.5	77	29.4		7.9		22.7		70.6		4.8		8.8		22		90				<0.2		1.5	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	3.6	0.4	74	29.4	29.4	7.9	7.9	22.9	22.9	72.5	72.6	4.9	4.9	14.3		26		91				<0.2		1.7	
						3.6	0.4	77	29.4		7.9		22.9		72.7		4.9		14.3		26		92				<0.2		1.6	
SR3	Cloudy	Moderate	08:15	9.6	Surface	1.0	0.4	30	29.6	29.6	7.8	7.8	19.2	19.2	68.8	68.8	4.7	4.7	12.4	18.8	9	8	-	-	822137	807575	-	-	-	-
						1.0	0.4	30	29.6		7.8		19.2		68.8		4.7		12.4		7		-				-		-	
					Middle	4.8	0.6	22	29.5	29.5	7.9	7.9	20.8	20.8	68.7	68.7	4.7		17.4		8		-				-		-	
						4.8	0.6	22	29.5		7.9		20.8		68.7		4.7		17.4		7		-				-		-	
					Bottom	8.6	0.5	12	29.5	29.5	7.9	7.9	21.3	21.3	69.9	69.9	4.7	4.7	26.6		8		-				-		-	
						8.6	0.5	13	29.5		7.9		21.3		69.9		4.7		26.6		7		-				-		-	
SR4A	Cloudy	Moderate	07:12	9.0	Surface	1.0	0.5	246	29.2	29.2	8.0	8.0	22.9	22.9	76.0	76.0	5.1	5.1	13.8	15.4	16	16	-	-	817172	807815	-	-	-	-
						1.0	0.5	250	29.2		8.0		22.9		76.0		5.1		13.8		15		-				-		-	
					Middle	4.5	0.4	255	29.2	29.2	8.0	8.0	22.9	22.9	76.0	76.0	5.1		14.0		15		-				-		-	
						4.5	0.4	258	29.2		8.0		22.9		76.0		5.1		14.0		15		-				-		-	
					Bottom	8.0	0.2	266	29.2	29.2	8.0	8.0	22.9	22.9	77.8	77.8	5.3	5.3	18.3		18		-				-		-	
						8.0	0.2	287	29.2		8.0		22.9		77.8		5.3		18.3		18		-				-		-	
SR5A	Cloudy	Moderate	06:56	4.9	Surface	1.0	0.4	302	29.0	29.0	8.0	8.0	22.9	22.9	75.5	75.5	5.1	5.1	12.7	15.0	13	14	-	-	816582	810704	-	-	-	-
						1.0	0.5	331	29.0		8.0		22.9		75.5		5.1		12.7		14		-				-		-	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	3.9	0.4	308	29.0	29.0	8.0	8.0	22.9	22.9	79.1	79.2	5.4	5.4	17.2		14		-				-		-	
						3.9	0.4	316	29.0		8.0		22.9		79.2		5.4		17.2		14		-				-		-	
SR6	Cloudy	Moderate	06:28	4.4	Surface	1.0	0.2	233	29.1	29.1	7.9	7.9	21.2	21.2	76.9	77.0	5.3	5.3	14.5	14.6	15	15	-	-	817889	814674	-	-	-	-
						1.0	0.2	248	29.1		7.9		21.2		77.0		5.3		14.5		15		-				-		-	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	3.4	0.2	263	29.1	29.1	7.9	7.9	21.8	21.8	74.6	74.6	5.1	5.1	14.7		14		-				-		-	
						3.4	0.2	282	29.1		7.9		21.8		74.6		5.1		14.7		15		-				-		-	
SR7	Cloudy	Moderate	06:02	16.2	Surface	1.0	0.3	156	29.3	29.3	7.9	7.9	23.5	23.5	78.0	78.0	5.3	5.1	6.5	8.8	6	7	-	-	823623	823740	-	-	-	-
						1.0	0.3	165	29.3		7.9		23.5		78.0		5.3		6.5		7		-				-		-	
					Middle	8.1	0.5	167	29.3	29.3	7.9	7.9	23.7	23.7	71.5	71.5	4.8		8.8		7		-				-		-	
						8.1	0.5	168	29.3		7.9		23.7		71.5		4.8		8.8		6		-				-		-	
					Bottom	15.2	0.4	168	29.0	29.0	7.9	7.9	25.6	25.6	68.2	68.2	4.6	4.6	11.1		8		-				-		-	
						15.2	0.4	173	29.0		7.9		25.6		68.2		4.6		11.1		8		-				-		-	
SR8	Cloudy	Moderate	07:16	4.0	Surface	1.0	0.0	0	29.5	29.5	7.9	7.9	21.1	21.1	71.7	71.7	4.9	4.9	16.2	17.5	14	18	-	-	820246	811418	-	-	-	-
						1.0	0.0	0	29.5		7.9		21.1		71.7		4.9		16.2		15		-				-		-	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	3.0	0.0	0	29.5	29.5	7.9	7.9	21.5	21.5	76.3	76.4	5.2	5.2	18.8		23		-				-		-	
						3.0	0.0	0	29.5		7.9		21.5		76.5		5.2		18.8		21		-				-		-	

DA: Depth-Averaged

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

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

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

Water Quality Monitoring

Water Quality Monitoring Results on 23 September 17 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
C1	Fine	Moderate	14:23	9.0	Surface	1.0	0.4	222	29.5	29.5	8.0	8.0	22.9	22.9	78.3	78.3	5.3	5.2	3.8	9.7	6	7	92	94	815600	804259	<0.2	<0.2	1.4	1.3
						1.0	0.4	239	29.5		8.0		22.9		78.3		5.3		3.8		7		92				<0.2		1.4	
					Middle	4.5	0.3	193	29.1	29.1	8.1	8.1	24.7	24.7	76.0	76.0	5.1		6.9		7		94				<0.2		1.3	
						4.5	0.3	199	29.1		8.1		24.7		76.0		5.1		6.9		8		94				<0.2		1.3	
					Bottom	8.0	0.4	208	28.8	28.8	8.1	8.1	26.6	26.6	73.2	73.2	4.9	4.9	18.5		7		97				<0.2		1.1	
						8.0	0.4	210	28.8		8.1		26.6		73.2		4.9		18.3		7		96				<0.2		1.1	
C2	Sunny	Moderate	13:09	12.1	Surface	1.0	0.3	178	30.2	30.2	7.8	7.8	19.6	19.6	69.4	69.4	4.7	4.6	5.6	4.5	7	8	91	94	825671	806955	<0.2	<0.2	2.4	2.3
						1.0	0.3	182	30.2		7.8		19.6		69.4		4.7		5.6		5		90				<0.2		2.4	
					Middle	6.1	0.3	172	29.4	29.4	7.9	7.9	23.3	23.3	66.9	66.9	4.5		5.8		9		93				<0.2		2.4	
						6.1	0.3	181	29.4		7.9		23.3		66.9		4.5		5.8		8		94				<0.2		2.3	
					Bottom	11.1	0.2	140	29.3	29.3	7.9	7.9	25.3	25.3	67.0	67.0	4.5	4.5	2.1		9		96				<0.2		2.3	
						11.1	0.2	146	29.3		7.9		25.3		67.0		4.5		2.1		9		97				<0.2		2.2	
C3	Sunny	Moderate	15:10	12.2	Surface	1.0	0.3	75	29.9	29.9	7.9	7.9	22.9	22.9	73.4	73.4	4.9	4.8	10.0	10.8	6	10	93	96	822097	817785	<0.2	<0.2	1.6	1.6
						1.0	0.3	77	29.9		7.9		22.9		73.4		4.9		10.0		8		94				<0.2		1.6	
					Middle	6.1	0.2	88	29.3	29.3	7.9	7.9	25.3	25.3	69.9	69.9	4.7		14.7		10		97				<0.2		1.6	
						6.1	0.2	96	29.3		7.9		25.3		69.9		4.7		14.7		10		96				<0.2		1.6	
					Bottom	11.2	0.2	61	29.2	29.2	7.9	7.9	25.8	25.8	73.0	73.0	4.9	4.9	7.7		15		98				<0.2		1.7	
						11.2	0.2	66	29.2		7.9		25.8		73.0		4.9		7.7		13		99				<0.2		1.7	
IM1	Fine	Moderate	14:05	7.7	Surface	1.0	0.1	158	29.4	29.4	8.0	8.0	23.2	23.2	77.6	77.6	5.2	5.1	3.9	9.3	7	8	94	96	818341	806471	<0.2	<0.2	1.4	1.3
						1.0	0.1	173	29.4		8.0		23.1		77.5		5.2		3.9		5		94				<0.2		1.4	
					Middle	3.9	0.2	171	28.9	28.9	8.0	8.0	25.5	25.5	72.5	72.5	4.9		8.6		6		95				<0.2		1.4	
						3.9	0.2	181	28.9		8.0		25.5		72.5		4.9		8.7		6		95				<0.2		1.4	
					Bottom	6.7	0.1	163	28.9	28.9	8.0	8.0	25.8	25.8	72.4	72.4	4.8	4.8	15.5		10		99				<0.2		1.0	
						6.7	0.1	170	28.9		8.0		25.8		72.4		4.8		15.4		12		99				<0.2		1.0	
IM2	Fine	Moderate	13:59	8.7	Surface	1.0	0.1	225	29.3	29.3	8.0	8.0	23.5	23.6	77.3	77.3	5.2	5.0	4.5	10.5	8	10	94	96	818870	806193	<0.2	<0.2	1.3	1.2
						1.0	0.1	234	29.3		8.0		23.6		77.2		5.2		4.6		9		93				<0.2		1.3	
					Middle	4.4	0.1	183	28.9	28.9	8.0	8.0	25.8	25.8	71.4	71.4	4.8		11.1		7		96				<0.2		1.4	
						4.4	0.1	186	28.9		8.0		25.8		71.4		4.8		11.2		7		95				<0.2		1.4	
					Bottom	7.7	0.2	192	28.9	28.9	8.0	8.0	25.9	25.9	71.4	71.4	4.8	4.8	16.0		14		99				<0.2		1.0	
						7.7	0.2	210	28.9		8.0		25.9		71.4		4.8		15.8		13		99				<0.2		1.0	
IM3	Fine	Moderate	13:51	8.8	Surface	1.0	0.0	169	29.3	29.3	8.0	8.0	23.5	23.5	77.1	77.1	5.2	5.1	4.2	11.5	5	7	93	96	819418	805999	<0.2	<0.2	1.1	1.2
						1.0	0.0	172	29.3		8.0		23.5		77.1		5.2		4.2		6		93				<0.2		1.1	
					Middle	4.4	0.1	159	29.1	29.1	8.0	8.0	25.1	25.1	73.3	73.3	4.9		9.2		6		96				<0.2		1.4	
						4.4	0.2	168	29.1		8.0		25.1		73.3		4.9		9.3		6		96				<0.2		1.2	
					Bottom	7.8	0.1	210	28.9	28.9	8.0	8.0	25.8	25.8	72.1	72.2	4.8	4.8	21.0		9		100				<0.2		1.3	
						7.8	0.1	210	28.9		8.0		25.8		72.2		4.8		21.0		8		99				<0.2		1.2	
IM4	Fine	Moderate	13:44	8.3	Surface	1.0	0.4	177	29.5	29.5	8.0	8.0	25.2	25.2	75.7	75.7	5.0	4.9	6.7	10.5	9	11	94	96	819554	805040	<0.2	<0.2	1.0	1.1
						1.0	0.4	194	29.5		8.0		25.2		75.6		5.0		6.8		11		94				<0.2		1.1	
					Middle	4.2	0.2	167	28.9	28.9	8.1	8.1	26.1	26.1	71.3	71.3	4.8		10.3		9		95				<0.2		1.0	
						4.2	0.2	173	28.9		8.1		26.1		71.3		4.8		10.4		10		95				<0.2		1.1	
					Bottom	7.3	0.2	157	28.9	28.9	8.1	8.1	26.4	26.4	71.5	71.5	4.8	4.8	14.4		14		99				<0.2		1.0	
						7.3	0.2	162	28.9		8.1		26.4		71.5		4.8		14.5		14		98				<0.2		1.1	
IM5	Fine	Moderate	13:33	7.5	Surface	1.0	0.3	189	29.2	29.2	8.0	8.0	25.0	25.0	73.6	73.6	4.9	4.9	8.9	9.8	8	10	93	96	820551	804941	<0.2	<0.2	1.2	1.2
						1.0	0.3	189	29.2		8.0		25.0		73.5		4.9		8.9		10		94				<0.2		1.2	
					Middle	3.8	0.3	184	29.1	29.1	8.0	8.0	25.2	25.2	72.2	72.2	4.8		10.6		10		96				<0.2		1.2	
						3.8	0.3	200	29.1		8.0		25.2		72.2		4.8		10.6		10		95				<0.2		1.2	
					Bottom	6.5	0.2	185	29.0	29.0	8.0	8.0	25.9	25.9	73.5	73.5	4.9	4.9	9.8		9		99				<0.2		1.2	
						6.5	0.2	202	29.0		8.0		25.9		73.5		4.9		9.8		10		98				<0.2		1.3	
IM6	Fine	Moderate	13:21	7.0	Surface	1.0	0.2	116	29.5	29.5	8.0	8.0	24.4	24.4	75.3	75.3	5.0	5.0	6.6	10.1	8	11	93	96	821060	805846	<0.2	<0.2	1.4	1.4
						1.0	0.2	118	29.5		8.0		24.4		75.3		5.0		6.6		10		94				<0.2		1.4	
					Middle	3.5	0.1	105	29.1	29.1	8.0	8.0	25.2	25.2	73.1	73.1	4.9		9.2		12		97				<0.2		1.4	
						3.5	0.1	111	29.1		8.0		25.2		73.1		4.9		9.3		13		96				<0.2		1.4	
					Bottom	6.0	0.2	126	29.0	29.0	8.0	8.0	25.5	25.5	71.9	71.9	4.8	4.8	14.3		12		99				<0.2		1.2	
						6.0	0.2	131	29.0		8.0		25.5		71.9		4.8		14.3		11		99				<0.2		1.4	
IM7	Fine	Moderate	13:11	9.0	Surface	1.0	0.2	234	29.4	29.4	8.0	8.0	24.4	24.4	73.7	73.7	4.9	4.9	11.0	16.8	12	15	94	96	821333	806841	<0.2	<0.2	1.4	1.4
						1.0	0.2	244	29.4		8.0		24.4		73.7		4.9		11.1		13		94				<0.2		1.4	
					Middle	4.5	0.1	64	29.0	29.0	8.0	8.0	25.1	25.1	71.2	71.2	4.8		15.7		17		97				<0.2		1.4	
						4.5	0.1	65	29.0		8.0		25.1		71.2		4.8		15.8		16		96				<0.2		1.4	
					Bottom	8.0	0.2	58	29.0	29.0	8.0	8.0	25.5	25.5	71.3	71.3	4.8	4.8	23.7		15		98				<0.2		1.4	
						8.0	0.2	62	29.0		8.0		25.5		71.3		4.8		23.6		15		97				<0.2		1.4	
IM8	Sunny	Moderate	13:33	8.9	Surface	1.0	0.3	141	29.9	29.9	7.9	7.9	21.3	21.3	71.5	71.5	4.8	4.8	12.2	21.0	12	12	91	94	821700	807826	<0.2	<0.2	1.9	2.0
						1.0	0.3	150	29.9		7.9		21.3		71.5		4.8		12.2		11		91				<0.2		1.9	
					Middle	4.5	0.2	94	29.3	29.3	8.0	8.0	24.9	24.9	70.9	70.9	4.7		22.4		11		94				<0.2		2.2	
						4.5	0.2	99	29.3		8.0		24.9		70.9		4.7		22.4		13		93				<0.2		2.1	
					Bottom	7.9	0.2	73	29.3	29.3	7.9	7.9	25.1	25.1	74.2	74.2	4.9	4.9	28.5		13		96				<0.2		2.0	
						7.9	0.2	77	29.3		7.9		25.1		74.2		4.9		28.5		12		97				<0.2		1.9	

DA: Depth-Averaged

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

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

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

Water Quality Monitoring

Water Quality Monitoring Results on 23 September 17 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
IM9	Sunny	Moderate	13:42	7.7	Surface	1.0	0.4	120	30.0	30.0	7.9	7.9	20.9	20.9	73.5	73.5	5.0	4.9	10.0	18.6	8	8	92	94	822081	808824	<0.2	<0.2	2.3	2.2
						1.0	0.4	120	30.0		7.9		20.9		73.5		5.0		10.0		7		91				<0.2		2.2	
					Middle	3.9	0.4	86	29.5	29.5	7.9	7.9	24.0	24.0	72.4	72.4	4.8		15.4		8		94				<0.2		2.2	
						3.9	0.4	90	29.5		7.9		24.0		72.4		4.8		15.4		7		94				<0.2		2.2	
					Bottom	6.7	0.4	66	29.4	29.4	7.9	7.9	24.6	24.6	74.3	74.3	5.0	5.0	30.4		8		96				<0.2		2.2	
						6.7	0.4	72	29.4		7.9		24.6		74.3		5.0		30.4		8		95				<0.2		2.1	
IM10	Sunny	Moderate	13:49	7.3	Surface	1.0	0.5	120	29.8	29.8	7.9	7.9	21.7	21.7	72.4	72.4	4.9	5.0	11.9	20.1	10	11	91	92	822250	809853	<0.2	<0.2	1.9	2.0
						1.0	0.5	123	29.8		7.9		21.7		72.4		4.9		11.9		9		91				<0.2		2.0	
					Middle	3.7	0.5	102	29.5	29.5	8.0	8.0	22.2	22.2	73.4	73.4	5.0		22.4		10		93				<0.2		2.1	
						3.7	0.6	111	29.5		8.0		22.2		73.4		5.0		22.4		12		86				<0.2		2.0	
					Bottom	6.3	0.4	85	29.4	29.4	8.0	8.0	24.5	24.5	75.2	75.2	5.0	5.0	26.0		14		96				<0.2		2.0	
						6.3	0.5	86	29.4		8.0		24.5		75.2		5.0		26.0		13		97				<0.2		2.0	
IM11	Sunny	Moderate	14:06	8.4	Surface	1.0	0.5	113	30.3	30.3	8.0	8.0	21.5	21.5	75.7	75.7	5.1	5.0	10.5	17.6	8	8	91	94	821492	810543	<0.2	<0.2	2.0	2.1
						1.0	0.5	122	30.3		8.0		21.5		75.7		5.1		10.5		6		92				<0.2		2.0	
					Middle	4.2	0.4	102	29.7	29.7	8.1	8.1	22.9	22.9	73.0	73.0	4.9		15.9		8		94				<0.2		1.9	
						4.2	0.4	107	29.7		8.1		22.9		73.0		4.9		15.9		9		94				<0.2		2.2	
					Bottom	7.4	0.3	74	29.5	29.5	8.0	8.0	24.3	24.3	75.1	75.2	5.0	5.0	26.5		10		98				<0.2		2.1	
						7.4	0.3	81	29.5		8.0		24.3		75.2		5.0		26.5		8		96				<0.2		2.3	
IM12	Sunny	Moderate	14:14	9.2	Surface	1.0	0.5	114	30.1	30.1	8.0	8.0	21.9	21.9	75.4	75.4	5.1	5.0	10.6	15.3	13	12	91	94	821156	811535	<0.2	<0.2	2.1	2.1
						1.0	0.5	114	30.1		8.0		21.9		75.4		5.1		10.6		12		92				<0.2		1.9	
					Middle	4.6	0.6	91	29.6	29.6	8.0	8.0	23.3	23.3	73.2	73.2	4.9		15.6		12		95				<0.2		2.2	
						4.6	0.6	97	29.6		8.0		23.3		73.2		4.9		15.6		12		94				<0.2		2.2	
					Bottom	8.2	0.4	82	29.5	29.5	8.0	8.0	23.9	23.9	74.5	74.5	5.0	5.0	19.8		12		96				<0.2		2.0	
						8.2	0.5	87	29.5		8.0		23.9		74.5		5.0		19.8		12		97				<0.2		2.0	
SR2	Sunny	Moderate	14:48	4.7	Surface	1.0	0.5	92	30.1	30.1	7.9	7.9	22.2	22.2	76.4	76.4	5.1	5.1	11.3	17.6	16	15	94	95	821465	814169	<0.2	<0.2	2.1	2.0
						1.0	0.5	98	30.1		7.9		22.2		76.4		5.1		11.3		15		93				<0.2		2.0	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	3.7	0.2	63	29.6	29.6	7.9	7.9	23.5	23.5	75.6	75.6	5.1	5.1	23.9		15		97				<0.2		2.0	
						3.7	0.2	63	29.6		7.9		23.5		75.6		5.1		23.9		14		97				<0.2		2.0	
SR3	Sunny	Moderate	13:29	9.5	Surface	1.0	0.3	161	29.8	29.8	7.8	7.8	20.7	20.7	70.9	70.9	4.8	4.9	8.7	9.2	9	11	-	-	822153	807586	-	-	-	-
						1.0	0.3	173	29.8		7.8		20.7		70.9		4.8		8.7		8		-				-		-	
					Middle	4.8	0.2	100	29.6	29.6	7.9	7.9	23.2	23.2	72.7	72.7	4.9		9.5		8		-				-		-	
						4.8	0.2	104	29.6		7.9		23.2		72.7		4.9		9.5		9		-				-		-	
					Bottom	8.5	0.3	59	29.4	29.4	7.9	7.9	24.8	24.8	73.1	73.1	4.9	4.9	9.5		15		-				-		-	
						8.5	0.4	59	29.4		7.9		24.8		73.1		4.9		9.5		16		-				-		-	
SR4A	Fine	Moderate	14:45	8.7	Surface	1.0	0.4	78	29.3	29.3	8.0	8.0	24.4	24.4	73.9	73.9	4.9	4.9	13.8	21.4	10	13	-	-	817199	807809	-	-	-	-
						1.0	0.4	84	29.3		8.0		24.4		73.9		4.9		13.8		11		-				-		-	
					Middle	4.4	0.3	81	29.2	29.2	8.0	8.0	24.7	24.7	72.1	72.1	4.8		19.6		12		-				-		-	
						4.4	0.3	88	29.2		8.0		24.7		72.1		4.8		19.8		14		-				-		-	
					Bottom	7.7	0.1	76	29.1	29.1	8.0	8.0	24.9	24.9	71.9	71.9	4.8	4.8	30.6		17		-				-		-	
						7.7	0.1	78	29.1		8.0		24.9		71.9		4.8		30.6		15		-				-		-	
SR5A	Fine	Moderate	15:01	5.0	Surface	1.0	0.1	9	29.8	29.8	8.0	8.0	23.3	23.3	77.6	77.6	5.2	5.2	10.0	11.8	14	14	-	-	816604	810708	-	-	-	-
						1.0	0.1	9	29.8		8.0		23.3		77.6		5.2		10.1		13		-				-		-	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	4.0	0.0	72	29.5	29.5	8.0	8.0	23.5	23.5	76.5	76.5	5.1	5.1	13.4		14		-				-		-	
						4.0	0.0	74	29.5		8.0		23.5		76.5		5.1		13.5		16		-				-		-	
SR6	Fine	Moderate	15:25	4.5	Surface	1.0	0.1	61	29.7	29.7	8.0	8.0	22.7	22.7	79.4	79.4	5.3	5.3	5.6	10.3	10	9	-	-	817887	814682	-	-	-	-
						1.0	0.1	64	29.7		8.0		22.7		79.3		5.3		5.7		9		-				-		-	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	3.5	0.2	60	29.3	29.3	7.9	7.9	23.3	23.3	73.8	73.9	5.0	5.0	14.9		8		-				-		-	
						3.5	0.2	64	29.3		7.9		23.3		73.9		5.0		15.0		8		-				-		-	
SR7	Sunny	Moderate	15:45	16.5	Surface	1.0	0.6	86	29.5	29.5	8.0	8.0	25.0	25.0	79.5	79.5	5.4	5.0	8.3	8.3	7	8	-	-	823624	823752	-	-	-	-
						1.0	0.6	86	29.5		8.0		25.0		79.5		5.4		8.3		6		-				-		-	
					Middle	8.3	0.3	59	29.4	29.4	8.0	8.0	25.6	25.6	69.8	69.8	4.6		8.8		7		-				-		-	
						8.3	0.3	60	29.4		8.0		25.6		69.8		4.6		8.8		8		-				-		-	
					Bottom	15.5	0.4	33	29.4	29.4	7.9	7.9	25.7	25.7	72.9	72.9	4.8	4.8	7.8		11		-				-		-	
						15.5	0.4	34	29.4		7.9		25.7		72.9		4.8		7.8		10		-				-		-	
SR8	Sunny	Moderate	14:23	4.8	Surface	1.0	-	-	30.1	30.1	7.9	7.9	22.6	22.6	72.1	72.1	4.8	4.8	14.4	15.3	13	15	-	-	820246	811418	-	-	-	-
						1.0	-	-	30.1		7.9		22.6		72.1		4.8		14.4		15		-				-		-	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	3.8	-	-	29.5	29.5	8.0	8.0	23.1	23.1	73.4	73.4	4.9	4.9	16.1		17		-				-		-	
						3.8	-	-	29.5		8.0		23.1		73.4		4.9		16.1		15		-				-		-	

DA: Depth-Averaged

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

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

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

Water Quality Monitoring

Water Quality Monitoring Results on 23 September 17 during Mid-Flood Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity(NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)	
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA
C1	Cloudy	Moderate	08:49	8.8	Surface	1.0	0.6	44	29.0	29.0	8.0	8.0	24.0	24.0	73.6	73.6	5.0	4.9	10.8	15.2	11	10	92	95	815605	804243	<0.2	<0.2	1.7	1.6
						1.0	0.6	45	29.0		8.0		24.0		73.6		5.0		10.9		10		93				<0.2		1.6	
					Middle	4.4	0.7	42	29.0	29.0	8.0	8.0	25.9	25.9	70.6	70.6	4.7		14.4		10		95				<0.2		1.6	
						4.4	0.7	46	29.0		8.0		25.9		70.6		4.7		14.4		9		95				<0.2		1.7	
					Bottom	7.8	0.6	42	29.0	29.0	8.0	8.0	26.1	26.1	71.4	71.4	4.8	4.8	20.3		10		97				<0.2		1.4	
						7.8	0.7	42	29.0		8.0		26.1		71.4		4.8		20.6		11		98				<0.2		1.3	
C2	Cloudy	Moderate	09:24	12.3	Surface	1.0	0.6	347	29.7	29.7	7.7	7.7	18.4	18.4	65.9	65.9	4.5	4.4	10.1	16.0	6	9	91	94	825679	806939	<0.2	<0.2	2.8	2.8
						1.0	0.6	319	29.7		7.7		18.4		65.9		4.5		10.1		7		90				<0.2		2.9	
					Middle	6.2	0.5	7	29.7	29.7	7.8	7.8	20.4	20.4	63.4	63.4	4.3		16.1		10		94				<0.2		2.8	
						6.2	0.5	7	29.7		7.8		20.4		63.4		4.3		16.1		10		94				<0.2		2.6	
					Bottom	11.3	0.4	343	29.6	29.6	7.8	7.8	23.1	23.1	67.8	67.8	4.6	4.6	21.7		10		96				<0.2		2.8	
						11.3	0.4	346	29.6		7.8		23.1		67.8		4.6		21.7		9		97				<0.2		2.7	
C3	Cloudy	Moderate	07:31	11.3	Surface	1.0	0.5	273	29.4	29.4	7.9	7.9	22.7	22.7	69.3	69.3	4.7	4.7	3.4	5.9	12	11	94	96	822099	817821	<0.2	<0.2	1.6	1.7
						1.0	0.5	287	29.4		7.9		22.7		69.3		4.7		3.4		12		93				<0.2		1.7	
					Middle	5.7	0.6	268	29.3	29.3	7.9	7.9	24.7	24.7	68.9	68.9	4.6		6.2		12		96				<0.2		1.8	
						5.7	0.7	292	29.3		7.9		24.7		68.9		4.6		6.2		11		95				<0.2		1.6	
					Bottom	10.3	0.5	269	29.3	29.3	7.9	7.9	25.4	25.4	71.2	71.2	4.7	4.7	8.2		11		98				<0.2		1.6	
						10.3	0.5	295	29.3		7.9		25.4		71.2		4.7		8.2		10		99				<0.2		1.6	
IM1	Cloudy	Moderate	09:06	7.8	Surface	1.0	0.7	4	29.1	29.1	8.0	8.0	23.7	23.7	73.2	73.2	4.9	4.9	8.7	15.4	6	8	95	97	818365	806457	<0.2	<0.2	1.3	1.5
						1.0	0.8	4	29.1		8.0		23.7		73.2		4.9		8.8		6		94				<0.2		1.4	
					Middle	3.9	0.7	8	29.1	29.1	8.0	8.0	23.9	23.9	71.9	71.9	4.8		16.2		8		96				<0.2		1.5	
						3.9	0.7	8	29.1		8.0		23.9		71.9		4.8		16.4		10		96				<0.2		1.5	
					Bottom	6.8	0.5	5	29.1	29.1	8.0	8.0	24.9	24.9	71.5	71.5	4.8	4.8	21.0		8		101				<0.2		1.6	
						6.8	0.5	5	29.1		8.0		24.9		71.5		4.8		21.1		10		100				<0.2		1.6	
IM2	Cloudy	Moderate	09:11	8.4	Surface	1.0	0.7	6	29.0	29.0	8.0	8.0	23.0	23.0	74.0	74.0	5.0	4.9	9.1	20.9	9	9	94	97	818844	806206	<0.2	<0.2	1.9	1.6
						1.0	0.7	6	29.0		8.0		23.0		74.0		5.0		9.2		8		94				<0.2		1.8	
					Middle	4.2	0.7	18	29.1	29.1	8.0	8.0	24.5	24.5	70.9	70.9	4.8		22.1		10		96				<0.2		1.4	
						4.2	0.7	19	29.1		8.0		24.5		70.9		4.8		22.4		9		96				<0.2		1.4	
					Bottom	7.4	0.5	17	29.1	29.1	8.0	8.0	25.0	25.0	70.5	70.5	4.7	4.7	31.1		11		99				<0.2		1.5	
						7.4	0.5	18	29.1		8.0		25.0		70.5		4.7		31.4		9		100				<0.2		1.6	
IM3	Cloudy	Moderate	09:18	8.9	Surface	1.0	0.5	17	29.1	29.1	8.0	8.0	22.8	22.8	72.6	72.6	4.9	4.9	9.4	16.3	9	10	94	97	819391	806032	<0.2	<0.2	1.7	1.8
						1.0	0.6	17	29.1		8.0		22.8		72.6		4.9		9.4		8		94				<0.2		1.6	
					Middle	4.5	0.6	21	29.1	29.1	8.0	8.0	24.2	24.2	71.3	71.3	4.8		17.6		12		97				<0.2		1.8	
						4.5	0.6	21	29.1		8.0		24.2		71.3		4.8		17.5		10		97				<0.2		1.9	
					Bottom	7.9	0.4	21	29.1	29.1	8.0	8.0	25.3	25.3	70.2	70.3	4.7	4.7	21.9		12		100				<0.2		1.8	
						7.9	0.4	21	29.1		8.0		25.3		70.3		4.7		21.9		10		100				<0.2		1.8	
IM4	Cloudy	Moderate	09:26	8.3	Surface	1.0	0.5	-	29.2	29.2	8.0	8.0	22.0	22.0	72.6	72.6	4.9	4.9	9.1	15.9	8	10	94	97	819581	805023	<0.2	<0.2	2.1	2.1
						1.0	0.5	-	29.2		8.0		22.0		72.5		4.9		9.2		8		95				<0.2		2.2	
					Middle	4.2	0.6	15	29.1	29.1	8.0	8.0	24.1	24.1	71.1	71.1	4.8		16.8		10		95				<0.2		2.2	
						4.2	0.6	15	29.1		8.0		24.0		71.1		4.8		16.9		8		96				<0.2		2.1	
					Bottom	7.3	0.4	20	29.0	29.0	8.0	8.0	24.5	24.5	72.0	72.1	4.8	4.8	21.7		13		99				<0.2		2.0	
						7.3	0.5	21	29.0		8.0		24.5		72.1		4.8		21.6		12		100				<0.2		2.1	
IM5	Cloudy	Moderate	09:36	7.4	Surface	1.0	0.8	8	29.2	29.2	8.0	8.0	22.1	22.1	71.9	71.9	4.9	4.8	11.9	15.5	10	11	94	96	820573	804935	<0.2	<0.2	2.3	2.1
						1.0	0.8	8	29.2		8.0		22.1		71.9		4.9		11.9		10		94				<0.2		2.4	
					Middle	3.7	0.7	14	29.1	29.1	8.0	8.0	23.9	23.9	70.1	70.1	4.7		14.7		10		96				<0.2		2.2	
						3.7	0.8	14	29.1		8.0		23.9		70.1		4.7		14.6		10		97				<0.2		2.1	
					Bottom	6.4	0.5	20	29.1	29.1	8.0	8.0	24.0	24.0	70.6	70.6	4.8	4.8	20.3		13		98				<0.2		1.8	
						6.4	0.6	20	29.1		8.0		24.0		70.6		4.8		19.8		15		99				<0.2		1.9	
IM6	Cloudy	Moderate	09:44	7.3	Surface	1.0	0.4	16	29.2	29.2	8.0	8.0	22.5	22.5	72.1	72.1	4.9	4.9	13.4	20.8	15	19	94	97	821060	805835	<0.2	<0.2	2.0	2.1
						1.0	0.5	17	29.2		8.0		22.5		72.1		4.9		13.4		13		95				<0.2		2.0	
					Middle	3.7	0.4	23	29.2	29.2	8.0	8.0	23.0	23.0	71.8	71.8	4.9		18.0		15		96				<0.2		1.8	
						3.7	0.4	25	29.2		8.0		23.0		71.8		4.9		18.0		13		96				<0.2		1.7	
					Bottom	6.3	0.3	44	29.1	29.1	8.0	8.0	23.3	23.3	71.7	71.7	4.8	4.8	30.8		30		99				<0.2		2.5	
						6.3	0.3	47	29.1		8.0		23.3		71.7		4.8		31.0		28		100				<0.2		2.5	
IM7	Cloudy	Moderate	09:53	8.6	Surface	1.0	0.5	47	29.2	29.2	8.0	8.0	22.2	22.2	71.8	71.8	4.9	4.9	10.8	14.5	15	16	95	97	821341	806852	<0.2	<0.2	1.8	2.0
						1.0	0.5	48	29.2		8.0		22.2		71.8		4.9		10.6		14		95				<0.2		2.0	
					Middle	4.3	0.5	35	29.2	29.2	8.0	8.0	23.1	23.1	70.7	70.7	4.8		13.9		18		97				<0.2		2.0	
						4.3	0.6	37	29.2		8.0		23.1		70.7		4.8		14.0		16		97				<0.2		2.1	
					Bottom	7.6	0.3	49	29.1	29.1	8.0	8.0	23.8	23.8	70.2	70.2	4.7	4.7	19.4		16		99				<0.2		2.0	
						7.6	0.3	53	29.1		8.0		23.7		70.2		4.7		18.4		18		99				<0.2		1.9	
IM8	Cloudy	Moderate	09:01	8.6	Surface	1.0	0.4	-	29.5	29.5	7.9	7.9	19.8	19.8	69.4	69.4	4.7	4.7	13.0	13.9	10	12	90	94	821689	807837	<0.2	<0.2	2.4	2.4
						1.0	0.4	-	29.5		7.9		19.8		69.4		4.7		13.0		11		91				<0.2		2.4	
					Middle	4.3	0.4	9	29.6	29.6	7.9	7.9	20.1	20.1	69.1	69.1	4.7		14.0		10		94				<0.2		2.3	
						4.3	0.4	9	29.6		7.9		20.1		69.1		4.7		14.0		11		94				<0.2		2.6	
					Bottom	7.6	0.3	356	29.6	29.6	7.9	7.9	20.4	20.4	71.1	71.1	4.8	4.8	14.7		14		97				<0.2		2.5	
						7.6	0.3	328	29.6		7.9		20.4		71.1		4.8		14.7		13		96				<0.2		2.4	

DA: Depth-Averaged

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

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

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

Water Quality Monitoring

Water Quality Monitoring Results on 23 September 17 during Mid-Flood Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity(NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)	
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA
IM9	Cloudy	Moderate	08:54	7.4	Surface	1.0	0.3	320	29.6	29.6	7.8	7.8	20.5	20.5	68.9	68.9	4.7	4.8	16.7	18.2	18	21	90	94	822105	808829	<0.2	<0.2	2.3	2.3
						1.0	0.4	336	29.6		7.8		20.5		68.9		4.7		16.7		19		91				<0.2		2.2	
					Middle	3.7	0.4	326	29.6	29.6	7.8	7.8	20.5	20.5	70.0	70.0	4.8		18.8		19		95				<0.2		2.5	
						3.7	0.4	356	29.6		7.8		20.5		70.0		4.8		18.8		20		94				<0.2		2.3	
					Bottom	6.4	0.3	321	29.6	29.6	7.9	7.9	20.6	20.6	72.1	72.1	4.9	4.9	19.2		24		96				<0.2		2.1	
						6.4	0.4	336	29.6		7.9		20.6		72.1		4.9		19.2		24		96				<0.2		2.1	
IM10	Cloudy	Moderate	08:47	7.0	Surface	1.0	0.7	305	29.6	29.6	7.8	7.8	21.2	21.2	70.4	70.4	4.8	4.8	11.9	18.1	8	10	91	94	822251	809822	<0.2	<0.2	2.2	2.2
						1.0	0.8	314	29.6		7.8		21.2		70.4		4.8		11.9		8		91				<0.2		2.3	
					Middle	3.5	0.6	310	29.5	29.5	7.9	7.9	22.3	22.3	69.7	69.7	4.7		18.5		8		93				<0.2		2.3	
						3.5	0.6	338	29.5		7.9		22.3		69.7		4.7		18.5		10		94				<0.2		2.2	
					Bottom	6.0	0.5	311	29.5	29.5	7.9	7.9	22.4	22.4	71.7	71.7	4.8	4.8	23.9		12		97				<0.2		2.2	
						6.0	0.6	324	29.5		7.9		22.4		71.7		4.8		23.9		12		96				<0.2		2.2	
IM11	Rainy	Moderate	08:29	7.8	Surface	1.0	0.7	286	29.5	29.5	7.8	7.8	20.8	20.8	71.5	71.5	4.9	4.9	13.5	21.9	10	10	91	94	821490	810546	<0.2	<0.2	2.1	2.1
						1.0	0.7	303	29.5		7.8		20.8		71.5		4.9		13.5		9		91				<0.2		2.4	
					Middle	3.9	0.5	289	29.5	29.5	7.9	7.9	22.0	22.0	70.5	70.5	4.8		24.0		10		93				<0.2		2.0	
						3.9	0.6	290	29.5		7.9		22.0		70.5		4.8		24.0		9		94				<0.2		2.0	
					Bottom	6.8	0.4	288	29.5	29.5	7.9	7.9	22.7	22.7	70.9	70.9	4.8	4.8	28.3		11		96				<0.2		2.0	
						6.8	0.4	290	29.5		7.9		22.7		70.9		4.8		28.3		10		97				<0.2		2.1	
IM12	Rainy	Moderate	08:23	8.4	Surface	1.0	0.9	278	29.5	29.5	7.8	7.8	21.2	21.2	71.4	71.4	4.8	4.8	16.7	21.9	6	9	91	94	821155	811501	<0.2	<0.2	2.1	2.2
						1.0	0.9	284	29.5		7.8		21.2		71.4		4.8		16.7		8		92				<0.2		2.0	
					Middle	4.2	0.8	279	29.5	29.5	7.9	7.9	22.7	22.7	70.6	70.6	4.8		22.3		11		93				<0.2		2.3	
						4.2	0.8	301	29.5		7.9		22.7		70.6		4.8		22.3		10		94				<0.2		2.2	
					Bottom	7.4	0.7	283	29.5	29.5	7.9	7.9	23.0	23.0	71.0	71.0	4.8	4.8	26.8		9		96				<0.2		2.1	
						7.4	0.7	303	29.5		7.9		23.0		71.0		4.8		26.8		10		96				<0.2		2.2	
SR2	Cloudy	Moderate	07:53	4.6	Surface	1.0	0.3	120	29.5	29.5	7.9	7.9	22.7	22.7	71.2	71.2	4.8	4.8	17.9	20.9	9	11	93	95	821452	814177	<0.2	<0.2	1.9	2.0
						1.0	0.3	126	29.5		7.9		22.7		71.2		4.8		17.9		8		94				<0.2		1.8	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	3.6	0.3	122	29.4	29.4	7.9	7.9	23.2	23.2	73.4	73.4	4.9	4.9	23.9		13		95				<0.2		2.2	
						3.6	0.3	131	29.4		7.9		23.2		73.4		4.9		23.9		12		96				<0.2		2.2	
SR3	Cloudy	Moderate	09:06	9.0	Surface	1.0	0.4	16	29.6	29.6	7.8	7.8	19.5	19.5	68.8	68.8	4.7	4.7	17.1	18.9	19	19	-	-	822164	807573	-	-	-	-
						1.0	0.4	17	29.6		7.8		19.5		68.8		4.7		17.1		17		-				-		-	
					Middle	4.5	0.4	15	29.6	29.6	7.9	7.9	20.0	20.0	68.7	68.7	4.7		18.8		18		-				-		-	
						4.5	0.4	15	29.6		7.9		20.0		68.7		4.7		18.8		17		-				-		-	
					Bottom	8.0	0.4	7	29.6	29.6	7.9	7.9	20.2	20.2	70.8	70.8	4.8	4.8	20.8		21		-				-		-	
						8.0	0.4	7	29.6		7.9		20.2		70.8		4.8		20.8		20		-				-		-	
SR4A	Cloudy	Moderate	08:28	9.3	Surface	1.0	0.4	240	29.2	29.2	8.0	8.0	23.6	23.6	73.7	73.7	5.0	5.0	10.8	14.5	14	17	-	-	817187	807797	-	-	-	-
						1.0	0.5	255	29.2		8.0		23.6		73.7		5.0		10.8		15		-				-		-	
					Middle	4.7	0.4	252	29.2	29.2	8.0	8.0	23.7	23.7	73.3	73.3	4.9		14.1		19		-				-		-	
						4.7	0.4	276	29.2		8.0		23.7		73.3		4.9		14.1		17		-				-		-	
					Bottom	8.3	0.3	253	29.2	29.2	8.0	8.0	23.8	23.8	73.9	73.9	5.0	5.0	18.7		20		-				-		-	
						8.3	0.3	267	29.2		8.0		23.8		73.9		5.0		18.7		19		-				-		-	
SR5A	Cloudy	Moderate	08:12	4.9	Surface	1.0	0.3	297	29.2	29.2	7.9	7.9	22.7	22.7	75.0	75.0	5.1	5.1	10.7	12.6	15	17	-	-	816578	810704	-	-	-	-
						1.0	0.3	326	29.2		7.9		22.7		75.0		5.1		10.7		14		-				-		-	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	3.9	0.2	310	29.2	29.2	7.9	7.9	22.6	22.6	75.8	75.8	5.1	5.1	14.5		18		-				-		-	
						3.9	0.2	338	29.2		7.9		22.6		75.8		5.1		14.6		20		-				-		-	
SR6	Cloudy	Moderate	07:42	4.0	Surface	1.0	0.3	253	29.2	29.2	7.9	7.9	22.7	22.7	69.8	69.8	4.7	4.7	7.0	10.7	12	11	-	-	817880	814665	-	-	-	-
						1.0	0.3	254	29.2		7.9		22.7		69.8		4.7		6.9		11		-				-		-	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	3.0	0.2	267	29.2	29.2	7.9	7.9	22.9	22.9	72.8	73.0	4.9	4.9	14.5		11		-				-		-	
						3.0	0.2	287	29.2		7.9		22.9		73.1		4.9		14.5		10		-				-		-	
SR7	Cloudy	Moderate	07:02	16.2	Surface	1.0	0.2	211	29.4	29.4	7.8	7.8	22.9	22.9	79.0	79.0	5.4	5.1	2.5	5.8	7	10	-	-	823639	823733	-	-	-	-
						1.0	0.2	221	29.4		7.8		22.9		79.0		5.4		2.5		9		-				-		-	
					Middle	8.1	0.4	203	29.5	29.5	7.8	7.8	23.7	23.7	69.6	69.6	4.7		6.6		11		-				-		-	
						8.1	0.4	208	29.5		7.8		23.7		69.6		4.7		6.6		11		-				-		-	
					Bottom	15.2	0.0	309	29.3	29.3	7.8	7.8	25.4	25.4	69.3	69.3	4.6	4.6	8.3		11		-				-		-	
						15.2	0.0	330	29.3		7.8		25.4		69.3		4.6		8.3		12		-				-		-	
SR8	Rainy	Moderate	08:15	4.1	Surface	1.0	0.0	0	29.7	29.7	7.8	7.8	20.8	20.8	71.7	71.7	4.9	4.9	15.2	19.1	12	12	-	-	820246	811418	-	-	-	-
						1.0	0.0	0	29.7		7.8		20.8		71.7		4.9		15.2		11		-				-		-	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	3.1	0.0	0	29.5	29.5	7.9	7.9	21.4	21.4	71.7	71.7	4.9	4.9	23.0		12		-				-		-	
						3.1	0.0	0	29.5		7.9		21.4		71.7		4.9		23.0		11		-				-		-	

DA: Depth-Averaged

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

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

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

Water Quality Monitoring

Water Quality Monitoring Results on 26 September 17 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
C1	Fine	Moderate	16:13	8.6	Surface	1.0	0.2	250	30.3	30.3	8.1	8.1	18.5	18.5	91.0	90.9	6.2	5.8	5.7	9.6	3	4	75	77	815600	804261	<0.2	<0.2	2.3	1.9
						1.0	0.2	263	30.3		8.1		18.5		90.7		6.2		5.7		3		75				<0.2		2.2	
					Middle	4.3	0.1	122	29.1	29.1	8.1	8.1	26.7	26.7	81.5	81.5	5.4		7.6		3		77				<0.2		1.1	
						4.3	0.1	124	29.1		8.1		26.7		81.4		5.4		7.7		5		77				<0.2		1.1	
					Bottom	7.6	0.1	204	29.0	29.0	8.1	8.1	27.9	27.9	80.0	80.0	5.3	5.3	15.4		5		79				<0.2		2.3	
						7.6	0.1	207	29.0		8.1		27.9		80.0		5.3		15.4		5		78				<0.2		2.3	
C2	Sunny	Moderate	15:00	11.6	Surface	1.0	0.2	202	30.8	30.8	7.7	7.7	16.3	16.3	75.8	75.8	5.2	5.1	2.4	6.0	3	5	72	74	825672	806953	<0.2	<0.2	3.1	2.9
						1.0	0.2	216	30.8		7.7		16.3		75.8		5.2		2.4		3		72				<0.2		3.2	
					Middle	5.8	0.1	125	30.1	30.1	7.7	7.7	18.5	18.5	73.7	73.7	5.0		5.4		3		73				<0.2		2.7	
						5.8	0.1	135	30.1		7.7		18.5		73.7		5.0		5.5		4		74				<0.2		2.9	
					Bottom	10.6	0.1	186	30.0	30.0	7.7	7.7	19.9	19.9	75.7	75.8	5.1	5.2	10.2		7		76				<0.2		2.8	
						10.6	0.1	201	30.0		7.7		19.9		75.9		5.2		10.1		8		76				<0.2		2.8	
C3	Sunny	Moderate	16:50	12.0	Surface	1.0	0.2	117	30.1	30.1	7.8	7.8	22.1	22.2	80.4	80.3	5.4	5.3	3.8	4.0	4	4	72	73	822097	817806	<0.2	<0.2	2.2	1.9
						1.0	0.2	125	30.1		7.8		22.2		80.1		5.4		3.8		4		72				<0.2		2.3	
					Middle	6.0	0.1	103	29.9	29.9	7.8	7.8	22.9	22.9	77.5	77.5	5.2		4.1		5		73				<0.2		1.7	
						6.0	0.1	109	29.9		7.8		22.9		77.5		5.2		3.8		3		73				<0.2		1.9	
					Bottom	11.0	0.0	57	29.8	29.8	7.8	7.8	24.4	24.4	78.7	78.8	5.2	5.2	4.2		3		75				<0.2		1.8	
						11.0	0.0	58	29.8		7.8		24.4		78.9		5.2		4.2		4		75				<0.2		1.7	
IM1	Fine	Moderate	15:49	7.4	Surface	1.0	0.2	216	30.5	30.5	8.0	8.0	20.5	20.5	86.7	86.7	5.8	5.5	6.1	19.1	6	5	75	76	818354	806450	<0.2	<0.2	2.6	2.2
						1.0	0.2	234	30.5		8.0		20.5		86.6		5.8		6.3		6		75				<0.2		2.4	
					Middle	3.7	0.2	185	29.2	29.2	8.0	8.0	23.5	23.5	76.5	76.5	5.2		16.6		6		76				<0.2		1.8	
						3.7	0.2	185	29.2		8.0		23.5		76.5		5.2		16.7		4		76				<0.2		1.8	
					Bottom	6.4	0.2	138	29.1	29.1	8.0	8.0	24.7	24.7	77.2	77.2	5.2	5.2	34.5		4		77				<0.2		2.3	
						6.4	0.2	151	29.1		8.0		24.7		77.2		5.2		34.5		5		76				<0.2		2.2	
IM2	Fine	Moderate	15:44	8.3	Surface	1.0	0.2	234	29.8	29.8	8.0	8.0	21.2	21.3	81.7	81.6	5.5	5.4	7.9	16.3	2	5	75	77	818838	806204	<0.2	<0.2	2.2	2.0
						1.0	0.2	244	29.8		8.0		21.3		81.5		5.5		8.1		2		75				<0.2		2.3	
					Middle	4.2	0.1	168	29.2	29.2	8.0	8.0	23.7	23.7	76.8	76.8	5.2		15.6		8		77				<0.2		1.7	
						4.2	0.1	183	29.2		8.0		23.7		76.8		5.2		15.7		7		77				<0.2		1.6	
					Bottom	7.3	0.1	169	29.1	29.1	8.0	8.0	24.4	24.4	76.0	76.1	5.1	5.1	25.4		6		78				<0.2		2.1	
						7.3	0.1	183	29.1		8.0		24.4		76.2		5.1		24.9		7		77				<0.2		1.9	
IM3	Fine	Moderate	15:37	8.7	Surface	1.0	0.0	185	30.1	30.1	8.0	8.0	20.8	20.8	84.9	84.5	5.7	5.5	5.4	9.5	2	3	75	76	819393	806006	<0.2	<0.2	2.0	2.0
						1.0	0.0	201	30.1		8.0		20.8		84.0		5.7		5.8		2		74				<0.2		2.1	
					Middle	4.4	0.0	31	29.3	29.3	8.0	8.0	22.6	22.6	78.7	78.7	5.3		10.0		2		76				<0.2		2.1	
						4.4	0.0	32	29.3		8.0		22.6		78.6		5.3		10.1		3		76				<0.2		2.3	
					Bottom	7.7	0.1	101	29.2	29.2	8.0	8.0	23.6	23.6	77.8	77.8	5.2	5.2	12.9		5		78				<0.2		1.6	
						7.7	0.1	105	29.2		8.0		23.6		77.8		5.2		12.9		6		77				<0.2		1.7	
IM4	Fine	Moderate	15:29	7.9	Surface	1.0	0.0	229	30.9	30.9	8.0	8.0	19.8	19.8	87.9	87.8	5.9	5.5	6.9	14.4	2	9	75	76	819552	805044	<0.2	<0.2	2.3	2.0
						1.0	0.0	232	30.9		8.0		19.8		87.7		5.9		7.0		2		75				<0.2		2.5	
					Middle	4.0	0.0	265	29.2	29.2	8.0	8.0	24.0	24.0	76.6	76.6	5.1		18.1		3		76				<0.2		2.2	
						4.0	0.0	281	29.2		8.0		24.0		76.6		5.1		18.2		4		76				<0.2		2.2	
					Bottom	6.9	0.0	48	29.1	29.1	8.0	8.0	24.3	24.3	77.4	77.4	5.2	5.2	18.0		19		78				<0.2		1.4	
						6.9	0.0	52	29.1		8.0		24.3		77.4		5.2		18.1		21		78				<0.2		1.6	
IM5	Fine	Moderate	15:19	7.0	Surface	1.0	0.0	326	30.2	30.2	8.0	8.0	20.4	20.4	85.2	85.2	5.7	5.5	5.0	8.2	4	8	75	76	820555	804938	<0.2	<0.2	2.3	1.9
						1.0	0.0	328	30.2		8.0		20.4		85.1		5.7		5.0		4		75				<0.2		2.3	
					Middle	3.5	0.1	274	29.3	29.3	8.0	8.0	22.7	22.7	78.7	78.7	5.3		9.0		6		76				<0.2		1.7	
						3.5	0.1	298	29.3		8.0		22.6		78.7		5.3		9.0		8		76				<0.2		1.8	
					Bottom	6.0	0.0	320	29.2	29.2	8.0	8.0	23.8	23.8	77.6	77.7	5.2	5.2	10.5		11		78				<0.2		1.5	
						6.0	0.0	337	29.2		8.0		23.8		77.7		5.2		10.5		12		77				<0.2		1.5	
IM6	Fine	Moderate	15:12	7.0	Surface	1.0	0.0	272	30.5	30.5	7.9	7.9	17.3	17.3	82.7	82.7	5.6	5.5	5.1	8.7	4	4	75	77	821074	805822	<0.2	<0.2	3.0	2.4
						1.0	0.0	297	30.5		7.9		17.3		82.7		5.6		5.1		5		75				<0.2		3.1	
					Middle	3.5	0.1	174	29.7	29.7	8.0	8.0	21.5	21.5	80.1	80.1	5.4		6.7		4		77				<0.2		2.2	
						3.5	0.1	185	29.7		8.0		21.5		80.0		5.4		6.8		4		77				<0.2		2.3	
					Bottom	6.0	0.1	181	29.2	29.2	8.0	8.0	23.8	23.8	76.3	76.3	5.1	5.1	14.1		4		78				<0.2		2.0	
						6.0	0.2	197	29.2		8.0		23.8		76.3		5.1		14.2		3		78				<0.2		1.9	
IM7	Fine	Moderate	15:04	8.2	Surface	1.0	0.2	175	30.2	30.2	7.9	7.9	17.9	17.9	80.4	80.4	5.5	5.5	6.1	9.6	3	5	75	76	821364	806824	<0.2	<0.2	2.9	2.4
						1.0	0.2	175	30.2		7.9		17.9		80.4		5.5		6.1		4		75				<0.2		2.6	
					Middle	4.1	0.1	106	29.7	29.7	8.0	8.0	21.6	21.6	79.6	79.6	5.4		8.3		4		76				<0.2		2.6	
						4.1	0.1	114	29.7		8.0		21.6		79.6		5.4		8.3		5		76				<0.2		2.7	
					Bottom	7.2	0.2	111	29.3	29.3	8.0	8.0	23.4	23.4	77.0	77.0	5.2	5.2	14.5		6		77				<0.2		1.8	
						7.2	0.2	111	29.3		8.0		23.4		77.0		5.2		14.5		5		77				<0.2		1.8	
IM8	Sunny	Moderate	15:24	8.3	Surface	1.0	0.2	138	30.1	30.1	7.7	7.8	19.1	19.1	77.8	77.9	5.3	5.3	6.4	5.9	4	8	71	73	821712	807846	<0.2	<0.2	3.0	2.6
						1.0	0.2	149	30.0		7.8		19.1		78.0		5.3		6.5		4		72				<0.2		3.2	
					Middle	4.2	0.1	72	29.9	29.9	7.8	7.8	20.6	20.6	78.6	78.8	5.3		6.3		5		74				<0.2		2.6	
						4.2	0.1	75	29.9		7.8		20.6		79.0		5.3		6.1		6		73				<0.2		2.5	
					Bottom	7.3	0.2	81	29.9	29.9	7.8	7.8	21.5	21.5	79.6	79.7	5.4	5.4	5.0		15		75				<0.2		2.1	
						7.3	0.2	84	29.9		7.8		21.4		79.7		5.4		5.2		13		75				<0.2		2.2	

DA: Depth-Averaged

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

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

Expansion of Hong Kong International Airport into a Three-Runway System
Water Quality Monitoring
Water Quality Monitoring Results on 26 September 17 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
IM9	Sunny	Moderate	15:31	7.3	Surface	1.0	0.3	134	30.2	30.2	7.6	7.6	18.2	18.1	74.3	74.6	5.1	5.2	6.0	9.7	5	8	71	73	822101	808810	<0.2	<0.2	3.6	2.9
						1.0	0.3	141	30.2		7.6		18.0		74.8		5.1		6.5		3		72				<0.2		3.4	
					Middle	3.7	0.3	121	29.8	29.8	7.8	7.8	20.7	20.7	76.6	76.6	5.2		10.6		5		73				<0.2		2.8	
						3.7	0.3	124	29.7		7.8		20.7		76.6		5.2		10.7		5		73				<0.2		3.0	
					Bottom	6.3	0.2	92	29.6	29.6	7.8	7.8	22.9	22.9	78.2	78.3	5.3	5.3	12.4		14		74				<0.2		2.2	
						6.3	0.2	95	29.6		7.8		22.9		78.3		5.3		12.1		13		75				<0.2		2.1	
IM10	Sunny	Moderate	15:40	7.2	Surface	1.0	0.4	159	30.7	30.7	7.6	7.6	17.3	17.3	75.4	75.4	5.1	5.1	5.6	10.3	4	7	72	74	822237	809846	<0.2	<0.2	4.0	3.2
						1.0	0.4	165	30.7		7.6		17.3		75.4		5.1		5.8		3		72				<0.2		3.6	
					Middle	3.6	0.4	133	29.8	29.8	7.7	7.7	20.7	20.8	73.9	73.9	5.0		11.9		3		73				<0.2		3.5	
						3.6	0.4	134	29.8		7.7		20.8		73.9		5.0		12.1		5		74				<0.2		3.6	
					Bottom	6.2	0.3	121	29.6	29.6	7.7	7.7	22.0	22.0	76.4	76.5	5.2	5.2	13.2		12		75				<0.2		2.1	
						6.2	0.3	132	29.6		7.7		22.0		76.6		5.2		13.0		12		76				<0.2		2.2	
IM11	Sunny	Moderate	15:55	7.1	Surface	1.0	0.4	144	30.8	30.8	7.6	7.6	16.9	16.9	76.0	76.0	5.2	5.2	5.3	10.4	4	5	70	72	821493	810535	<0.2	<0.2	3.6	3.1
						1.0	0.5	153	30.8		7.6		16.9		75.9		5.2		5.4		4		70				<0.2		3.6	
					Middle	3.6	0.3	110	30.1	30.1	7.7	7.7	19.3	19.3	75.2	75.2	5.1		10.5		3		72				<0.2		3.1	
						3.6	0.3	110	30.1		7.7		19.2		75.2		5.1		10.7		5		72				<0.2		2.9	
					Bottom	6.1	0.2	110	29.7	29.7	7.8	7.8	21.1	21.1	76.1	76.1	5.2	5.2	15.3		6		73				<0.2		2.7	
						6.1	0.2	117	29.7		7.8		21.1		76.1		5.2		15.2		8		73				<0.2		2.8	
IM12	Sunny	Moderate	16:02	8.9	Surface	1.0	0.4	116	30.7	30.7	7.7	7.7	17.1	17.1	78.3	78.3	5.3	5.3	7.2	9.1	5	7	71	73	821160	811523	<0.2	<0.2	3.4	3.0
						1.0	0.5	123	30.7		7.7		17.1		78.3		5.3		7.3		4		71				<0.2		3.2	
					Middle	4.5	0.3	117	30.0	30.0	7.8	7.8	19.2	19.2	78.3	78.4	5.3		10.1		7		73				<0.2		2.7	
						4.5	0.3	123	30.0		7.8		19.2		78.4		5.3		10.0		9		73				<0.2		3.0	
					Bottom	7.9	0.1	100	29.7	29.7	7.7	7.7	20.7	20.8	78.9	78.9	5.3	5.4	9.9		8		74				<0.2		3.1	
						7.9	0.1	109	29.7		7.7		20.8		78.9		5.4		9.9		9		75				<0.2		2.8	
SR2	Sunny	Moderate	16:31	4.2	Surface	1.0	0.4	93	30.0	30.0	7.7	7.7	19.1	19.1	80.7	80.7	5.5	5.5	5.3	5.4	5	6	70	72	821451	814178	<0.2	<0.2	3.1	2.8
						1.0	0.4	95	30.0		7.7		19.1		80.7		5.5		5.3		6		71				<0.2		2.9	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	3.2	0.4	96	30.0	30.0	7.7	7.7	20.0	20.0	83.7	83.8	5.7	5.7	5.4		5		72				<0.2		2.5	
						3.2	0.4	104	30.0		7.7		20.0		83.9		5.7		5.5		6		73				<0.2		2.6	
SR3	Sunny	Moderate	15:19	8.8	Surface	1.0	0.1	151	29.9	29.9	7.6	7.6	19.2	19.2	71.5	71.6	4.9	4.9	8.8	12.1	4	4	-	-	822162	807585	-	-	-	-
						1.0	0.2	151	29.9		7.6		19.1		71.6		4.9		9.0		3		-				-		-	
					Middle	4.4	0.1	144	29.7	29.7	7.7	7.7	20.8	20.8	71.5	71.5	4.8		12.7		3		-				-		-	
						4.4	0.1	150	29.7		7.7		20.8		71.5		4.9		12.8		3		-				-		-	
					Bottom	7.8	0.1	116	29.7	29.7	7.7	7.7	21.3	21.3	72.3	72.4	4.9	4.9	14.7		4		-				-		-	
						7.8	0.2	127	29.7		7.7		21.3		72.4		4.9		14.7		6		-				-		-	
SR4A	Fine	Moderate	16:33	7.5	Surface	1.0	0.2	84	30.1	30.1	8.0	8.0	20.1	20.1	88.0	87.9	6.0	5.6	9.4	16.2	4	14	-	-	817199	807811	-	-	-	-
						1.0	0.2	88	30.1		8.0		20.1		87.8		5.9		9.6		5		-				-		-	
					Middle	3.8	0.2	89	29.3	29.3	8.0	8.0	23.0	23.0	78.2	78.2	5.3		20.9		18		-				-		-	
						3.8	0.3	96	29.3		8.0		23.0		78.2		5.3		21.0		18		-				-		-	
					Bottom	6.5	0.1	72	29.2	29.2	8.0	8.0	23.9	23.9	77.5	77.5	5.2	5.2	18.0		20		-				-		-	
						6.5	0.1	75	29.2		8.0		23.9		77.5		5.2		18.1		20		-				-		-	
SR5A	Fine	Moderate	16:49	5.0	Surface	1.0	0.1	86	30.8	30.8	8.0	8.0	22.7	22.7	93.0	93.0	6.1	6.1	8.4	10.6	7	7	-	-	816600	810705	-	-	-	-
						1.0	0.2	93	30.8		8.0		22.7		92.9		6.1		8.5		7		-				-		-	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	4.0	0.1	100	30.3	30.3	8.0	8.0	23.5	23.5	90.0	90.0	6.0	6.0	12.8		7		-				-		-	
						4.0	0.1	106	30.3		8.0		23.5		90.0		6.0		12.8		7		-				-		-	
SR6	Fine	Moderate	17:13	4.0	Surface	1.0	0.1	93	29.9	29.9	8.0	8.0	23.1	23.1	87.5	87.5	5.8	5.8	8.1	8.8	7	7	-	-	817914	814657	-	-	-	-
						1.0	0.1	93	29.9		8.0		23.1		87.5		5.8		8.1		6		-				-		-	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	3.0	0.1	54	29.5	29.5	8.0	8.0	23.9	23.9	86.3	86.3	5.8	5.8	9.4		7		-				-		-	
						3.0	0.1	57	29.5		8.0		23.9		86.3		5.8		9.4		6		-				-		-	
SR7	Sunny	Moderate	17:18	18.2	Surface	1.0	0.2	86	30.2	30.2	7.8	7.8	23.8	23.8	80.4	80.3	5.3	5.2	3.3	3.4	<2	2	-	-	823635	823751	-	-	-	-
						1.0	0.2	89	30.2		7.8		23.8		80.2		5.3		3.4		<2		-				-		-	
					Middle	9.1	0.1	138	29.9	29.9	7.8	7.8	24.4	24.5	77.0	77.0	5.1		3.6		<2		-				-		-	
						9.1	0.1	147	29.9		7.8		24.5		76.9		5.1		3.6		<2		-				-		-	
					Bottom	17.2	0.1	225	29.7	29.7	7.8	7.8	25.0	25.0	78.6	78.7	5.2	5.2	3.4		2		-				-		-	
						17.2	0.2	238	29.7		7.8		25.0		78.7		5.2		3.3		2		-				-		-	
SR8	Sunny	Calm	16:09	4.2	Surface	1.0	-	-	31.0	31.0	7.7	7.7	20.5	20.5	84.5	84.5	5.6	5.6	8.4	9.1	8	8	-	-	820246	811418	-	-	-	-
						1.0	-	-	30.9		7.7		20.5		84.5		5.6		8.5		7		-				-		-	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	3.2	-	-	30.9	30.9	7.7	7.7	21.0	21.0	85.0	85.1	5.7	5.7	9.8		9		-				-		-	
						3.2	-	-	30.9		7.7		21.0		85.1		5.7		9.8		8		-				-		-	

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

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

Water Quality Monitoring

Water Quality Monitoring Results on 26 September 17 during Mid-Flood Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity(NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)	
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA
C1	Fine	Moderate	10:51	8.5	Surface	1.0	0.3	50	29.8	29.8	7.9	7.9	20.2	20.2	82.6	82.6	5.6	5.5	5.9	14.3	4	7	75	77	815618	804246	<0.2	<0.2	1.5	2.1
						1.0	0.3	52	29.8		7.9		20.2		82.6		5.6		5.9		4		75				<0.2		1.5	
					Middle	4.3	0.2	25	29.5	29.5	7.9	7.9	21.3	21.3	79.8	79.8	5.4		9.9		5		77				<0.2		2.5	
						4.3	0.3	27	29.5		7.9		21.3		79.8		5.4		9.9		3		78				<0.2		2.4	
					Bottom	7.5	0.3	34	29.1	29.1	8.0	8.0	25.5	25.5	77.6	77.6	5.2	5.2	27.2		13		79				<0.2		2.3	
						7.5	0.3	35	29.1		8.0		25.5		77.6		5.2		26.9		14		79				<0.2		2.3	
C2	Sunny	Moderate	12:00	11.4	Surface	1.0	0.1	31	29.9	29.9	7.6	7.6	17.6	17.7	71.7	71.8	4.9	5.0	7.6	9.6	4	5	73	74	825698	806937	<0.2	<0.2	3.7	3.2
						1.0	0.1	31	29.9		7.6		17.7		71.8		4.9		7.6		4		73				<0.2		3.6	
					Middle	5.7	0.3	44	29.7	29.7	7.7	7.7	20.2	20.2	73.2	73.3	5.0		9.2		4		74				<0.2		2.9	
						5.7	0.3	48	29.7		7.7		20.2		73.3		5.0		9.3		4		75				<0.2		3.3	
					Bottom	10.4	0.2	1	29.6	29.6	7.7	7.7	20.6	20.6	75.6	75.7	5.1	5.2	11.9		7		75				<0.2		2.7	
						10.4	0.2	1	29.6		7.7		20.6		75.7		5.2		11.9		7		76				<0.2		2.7	
C3	Sunny	Moderate	10:00	11.6	Surface	1.0	0.4	253	29.7	29.7	7.9	7.9	22.4	22.4	76.4	76.4	5.1	5.1	4.2	4.3	4	4	70	73	822122	817804	<0.2	<0.2	2.0	2.1
						1.0	0.4	277	29.7		7.9		22.4		76.3		5.1		4.2		4		70				<0.2		2.0	
					Middle	5.8	0.5	246	29.4	29.4	7.9	7.9	23.3	23.3	74.8	74.8	5.0		4.8		4		73				<0.2		2.1	
						5.8	0.5	267	29.4		7.9		23.3		74.8		5.0		4.9		6		73				<0.2		2.4	
					Bottom	10.6	0.5	251	29.4	29.4	7.9	7.9	23.9	23.9	75.1	75.2	5.0	5.0	3.9		4		75				<0.2		2.0	
						10.6	0.6	269	29.4		7.9		23.9		75.2		5.0		3.8		4		75				<0.2		1.9	
IM1	Fine	Moderate	11:10	7.2	Surface	1.0	0.4	348	29.4	29.4	8.0	8.0	22.2	22.2	80.3	80.3	5.4	5.4	7.0	14.5	6	8	75	76	818334	806438	<0.2	<0.2	2.3	2.0
						1.0	0.4	320	29.4		8.0		22.2		80.3		5.4		7.1		4		75				<0.2		2.2	
					Middle	3.6	0.5	-	29.2	29.2	8.0	8.0	23.5	23.5	78.9	78.9	5.3		11.4		5		76				<0.2		2.0	
						3.6	0.5	-	29.2		8.0		23.5		78.9		5.3		11.4		6		77				<0.2		1.9	
					Bottom	6.2	0.3	348	29.1	29.1	8.0	8.0	24.6	24.6	77.7	77.7	5.2	5.2	25.2		13		77				<0.2		1.6	
						6.2	0.3	350	29.1		8.0		24.6		77.7		5.2		25.1		13		78				<0.2		2.0	
IM2	Fine	Moderate	11:15	8.2	Surface	1.0	0.2	359	29.4	29.4	8.0	8.0	21.9	21.9	80.2	80.2	5.4	5.4	6.8	14.1	9	8	75	77	818849	806197	<0.2	<0.2	2.3	1.9
						1.0	0.2	330	29.4		8.0		21.9		80.2		5.4		6.8		7		75				<0.2		2.4	
					Middle	4.1	0.4	17	29.2	29.2	8.0	8.0	23.3	23.3	78.2	78.2	5.3		9.9		7		78				<0.2		2.0	
						4.1	0.5	17	29.2		8.0		23.3		78.2		5.3		9.9		7		78				<0.2		1.7	
					Bottom	7.2	0.3	355	29.1	29.1	8.0	8.0	24.7	24.7	77.0	77.0	5.2	5.2	25.7		8		79				<0.2		1.6	
						7.2	0.3	358	29.1		8.0		24.7		77.0		5.2		25.7		9		79				<0.2		1.6	
IM3	Fine	Moderate	11:23	8.5	Surface	1.0	0.2	331	29.4	29.4	8.0	8.0	21.7	21.7	78.9	78.9	5.3	5.3	7.8	15.1	5	7	75	77	819407	806011	<0.2	<0.2	3.1	2.4
						1.0	0.2	353	29.4		8.0		21.7		78.9		5.3		7.8		5		75				<0.2		2.9	
					Middle	4.3	0.4	5	29.2	29.2	8.0	8.0	23.5	23.5	77.7	77.7	5.2		10.8		7		77				<0.2		1.7	
						4.3	0.4	5	29.2		8.0		23.5		77.7		5.2		10.8		8		78				<0.2		1.8	
					Bottom	7.5	0.2	33	29.1	29.1	8.0	8.0	24.4	24.4	77.0	77.0	5.2	5.2	26.9		9		78				<0.2		2.3	
						7.5	0.2	34	29.1		8.0		24.4		77.0		5.2		26.7		8		78				<0.2		2.4	
IM4	Fine	Moderate	11:30	7.7	Surface	1.0	0.2	316	29.3	29.3	8.0	8.0	22.5	22.5	76.5	76.5	5.2	5.2	9.3	16.3	8	8	75	77	819581	805046	<0.2	<0.2	2.1	2.1
						1.0	0.2	324	29.3		8.0		22.5		76.5		5.2		9.3		8		76				<0.2		2.1	
					Middle	3.9	0.3	351	29.2	29.2	8.0	8.0	23.1	23.1	76.0	76.0	5.1		13.2		7		77				<0.2		2.3	
						3.9	0.3	356	29.2		8.0		23.1		76.0		5.1		13.3		7		77				<0.2		2.5	
					Bottom	6.7	0.3	343	29.0	29.0	8.0	8.0	25.4	25.4	75.5	75.5	5.0	5.0	26.2		8		79				<0.2		1.8	
						6.7	0.3	316	29.0		8.0		25.4		75.5		5.0		26.2		8		79				<0.2		1.9	
IM5	Fine	Moderate	11:39	6.9	Surface	1.0	0.5	18	29.4	29.4	8.0	8.0	21.8	21.8	77.1	77.1	5.2	5.2	9.5	16.1	5	8	75	77	820562	804916	<0.2	<0.2	3.4	2.5
						1.0	0.5	18	29.4		8.0		21.8		77.1		5.2		9.5		4		75				<0.2		3.5	
					Middle	3.5	0.4	29	29.3	29.3	8.0	8.0	22.4	22.4	76.3	76.3	5.2		16.1		10		76				<0.2		2.0	
						3.5	0.4	31	29.3		8.0		22.4		76.3		5.2		16.1		9		77				<0.2		2.0	
					Bottom	5.9	0.3	13	29.1	29.1	8.0	8.0	25.0	25.0	75.5	75.5	5.1	5.1	22.6		8		78				<0.2		1.9	
						5.9	0.3	13	29.1		8.0		25.0		75.5		5.1		22.5		10		78				<0.2		2.0	
IM6	Fine	Moderate	11:48	6.8	Surface	1.0	0.3	1	30.3	30.3	7.8	7.8	15.3	15.3	75.5	75.5	5.2	5.2	9.5	15.5	3	10	75	77	821062	805847	<0.2	<0.2	3.8	3.1
						1.0	0.4	1	30.3		7.8		15.3		75.5		5.2		9.5		3		76				<0.2		3.9	
					Middle	3.4	0.2	14	29.3	29.3	8.0	8.0	21.5	21.5	75.4	75.4	5.1		14.6		10		77				<0.2		3.1	
						3.4	0.2	14	29.3		8.0		21.5		75.4		5.1		14.5		10		78				<0.2		3.1	
					Bottom	5.8	0.2	26	29.2	29.2	8.0	8.0	23.7	23.7	75.1	75.1	5.1	5.1	22.5		17		79				<0.2		2.4	
						5.8	0.2	26	29.2		8.0		23.7		75.1		5.1		22.5		19		79				<0.2		2.5	
IM7	Fine	Moderate	11:58	8.3	Surface	1.0	0.1	356	30.0	30.0	7.8	7.8	15.9	15.9	72.8	72.8	5.0	5.2	6.1	12.6	4	8	75	76	821345	806831	<0.2	<0.2	3.8	3.0
						1.0	0.1	328	30.0		7.8		15.9		72.8		5.0		6.1		2		75				<0.2		3.4	
					Middle	4.2	0.2	22	29.6	29.6	7.9	7.9	18.5	18.5	76.4	76.4	5.3		11.9		11		76				<0.2		2.9	
						4.2	0.2	22	29.6		7.9		18.5		76.4		5.3		11.9		11		77				<0.2		2.9	
					Bottom	7.3	0.3	77	29.3	29.3	8.0	8.0	22.0	22.0	75.9	75.9	5.2	5.2	19.7		11		77				<0.2		2.5	
						7.3	0.3	78	29.3		8.0		22.0		75.9		5.1		19.8		10		78				<0.2		2.3	
IM8	Sunny	Moderate	11:32	8.0	Surface	1.0	0.1	341	30.2	30.2	7.6	7.6	16.2	16.3	72.4	72.4	5.0	5.1	5.6	5.7	2	3	72	74	821690	807818	<0.2	<0.2	3.3	3.1
						1.0	0.1	348	30.2		7.6		16.4		72.4		5.0		5.5		3		73				<0.2		3.3	
					Middle	4.0	0.1	66	30.0	30.0	7.6	7.6	17.2	17.3	73.8	74.1	5.1		6.0		3		74				<0.2		3.2	
						4.0	0.1	66	30.0		7.6		17.3		74.3		5.1		6.1		3		74				<0.2		3.2	
					Bottom	7.0	0.1	131	30.1	30.2	7.6	7.6	17.6	17.6	81.2	81.8	5.6	5.6	5.4		4		75				<0.2		2.6	
						7.0	0.1	139	30.2		7.6		17.6		82.3		5.6		5.4		4		75				<0.2		2.7	

DA: Depth-Averaged

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

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

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

Water Quality Monitoring

Water Quality Monitoring Results on 26 September 17 during Mid-Flood Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity(NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)	
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA
IM9	Sunny	Moderate	11:25	7.1	Surface	1.0	0.1	22	30.3	30.3	7.6	7.6	16.4	16.4	75.0	75.0	5.2	5.2	4.3	4.8	3	3	71	73	822083	808815	<0.2	<0.2	3.1	3.0
						1.0	0.1	23	30.3		7.6		16.4		75.0		5.2		4.3		2		72				<0.2		3.2	
					Middle	3.6	0.1	39	30.1	30.1	7.6	7.6	16.8	16.8	74.1	74.1	5.1		4.7		3		73				<0.2		3.0	
						3.6	0.1	42	30.1		7.6		16.8		74.1		5.1		4.7		2		73				<0.2		3.1	
					Bottom	6.1	0.1	14	30.0	30.0	7.7	7.7	17.7	17.7	77.8	77.9	5.3	5.4	5.4		6		74				<0.2		3.0	
						6.1	0.1	15	30.0		7.7		17.7		77.9		5.4		5.4		4		74				<0.2		2.8	
IM10	Sunny	Moderate	11:16	6.5	Surface	1.0	0.4	301	30.1	30.1	7.7	7.7	18.5	18.5	77.7	77.7	5.3	5.3	9.7	17.4	3	14	74	74	822221	809829	<0.2	<0.2	2.8	2.5
						1.0	0.4	303	30.1		7.7		18.5		77.7		5.3		10.7		3		73				<0.2		2.9	
					Middle	3.3	0.4	306	29.6	29.6	7.8	7.8	20.7	20.7	77.1	77.1	5.2		18.1		5		74				<0.2		2.5	
						3.3	0.4	335	29.6		7.8		20.7		77.1		5.2		18.0		7		74				<0.2		2.5	
					Bottom	5.5	0.3	306	29.6	29.6	7.8	7.8	21.0	21.0	79.6	79.7	5.4	5.4	24.0		33		75				<0.2		2.0	
						5.5	0.4	314	29.6		7.8		21.0		79.7		5.4		23.6		32		76				<0.2		2.0	
IM11	Sunny	Moderate	11:01	8.1	Surface	1.0	0.3	275	29.8	29.8	7.8	7.8	19.6	19.6	77.5	77.5	5.3	5.3	7.7	14.9	4	4	71	73	821506	810548	<0.2	<0.2	2.9	2.7
						1.0	0.4	275	29.8		7.8		19.6		77.5		5.3		7.9		4		71				<0.2		2.8	
					Middle	4.1	0.4	275	29.5	29.5	7.8	7.8	21.8	21.8	76.4	76.4	5.2		12.8		2		73				<0.2		2.7	
						4.1	0.4	280	29.5		7.8		21.8		76.4		5.2		12.7		2		73				<0.2		2.9	
					Bottom	7.1	0.3	277	29.5	29.5	7.8	7.8	22.1	22.1	78.6	78.7	5.3	5.3	24.2		5		75				<0.2		2.3	
						7.1	0.3	288	29.5		7.8		22.1		78.7		5.3		24.3		6		75				<0.2		2.3	
IM12	Sunny	Moderate	10:53	7.2	Surface	1.0	0.4	265	29.7	29.7	7.8	7.8	19.9	19.9	78.6	78.6	5.4	5.3	5.5	15.2	2	4	72	73	821150	811501	<0.2	<0.2	2.8	2.4
						1.0	0.5	277	29.7		7.8		19.8		78.6		5.4		5.5		3		72				<0.2		2.7	
					Middle	3.6	0.5	250	29.5	29.5	7.8	7.8	22.0	22.0	76.7	76.7	5.2		9.9		5		73				<0.2		2.5	
						3.6	0.5	268	29.5		7.8		22.0		76.7		5.2		10.1		4		74				<0.2		2.4	
					Bottom	6.2	0.4	252	29.4	29.4	7.8	7.8	23.2	23.2	76.8	76.8	5.2	5.2	30.5		3		74				<0.2		2.0	
						6.2	0.4	267	29.4		7.8		23.2		76.8		5.2		29.6		4		75				<0.2		2.2	
SR2	Sunny	Moderate	10:23	4.5	Surface	1.0	0.3	318	29.7	29.7	7.8	7.8	22.0	22.0	76.2	76.2	5.1	5.1	10.4	14.1	5	9	71	73	821474	814154	<0.2	<0.2	2.4	2.3
						1.0	0.3	320	29.7		7.8		21.9		76.2		5.1		10.5		4		71				<0.2		2.3	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	3.5	0.1	300	29.5	29.5	7.8	7.8	23.2	23.2	76.6	77.0	5.1	5.2	17.8		14		74				<0.2		2.2	
						3.5	0.1	321	29.5		7.8		23.2		77.4		5.2		17.8		14		74				<0.2		2.2	
SR3	Sunny	Moderate	11:38	8.6	Surface	1.0	0.1	196	30.4	30.4	7.6	7.6	15.4	15.5	69.5	69.4	4.8	4.8	4.8	4.7	4	4	-	-	822165	807567	-	-	-	-
						1.0	0.1	215	30.3		7.6		15.5		69.3		4.8		4.8		4		-				-		-	
					Middle	4.3	0.0	11	30.0	30.0	7.6	7.6	17.6	17.6	68.9	69.0	4.7		4.6		4		-				-		-	
						4.3	0.0	11	30.0		7.6		17.6		69.0		4.7		4.6		4		-				-		-	
					Bottom	7.6	0.1	192	30.0	30.0	7.6	7.6	18.3	18.3	75.1	75.2	5.1	5.2	4.6		4		-				-		-	
						7.6	0.1	208	30.0		7.6		18.3		75.3		5.2		4.6		4		-				-		-	
SR4A	Fine	Moderate	10:30	9.1	Surface	1.0	0.5	266	29.3	29.3	8.0	8.0	24.0	24.0	80.0	80.0	5.4	5.4	13.2	17.6	9	14	-	-	817195	807826	-	-	-	-
						1.0	0.5	287	29.3		8.0		24.0		80.0		5.4		13.2		10		-				-		-	
					Middle	4.6	0.3	266	29.2	29.2	8.0	8.0	24.1	24.1	79.0	79.0	5.3		17.4		13		-				-		-	
						4.6	0.3	287	29.2		8.0		24.1		79.0		5.3		17.6		14		-				-		-	
					Bottom	8.1	0.2	255	29.1	29.1	8.0	8.0	24.7	24.7	78.2	78.3	5.2	5.3	22.1		18		-				-		-	
						8.1	0.2	261	29.1		8.0		24.7		78.3		5.3		22.1		18		-				-		-	
SR5A	Fine	Moderate	10:14	4.7	Surface	1.0	0.3	290	29.2	29.2	7.9	7.9	23.5	23.5	81.7	81.7	5.5	5.5	11.7	13.1	10	11	-	-	816601	810691	-	-	-	-
						1.0	0.3	309	29.2		7.9		23.5		81.7		5.5		11.7		11		-				-		-	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	3.7	0.2	308	29.2	29.2	7.9	7.9	23.5	23.5	84.0	84.0	5.7	5.7	14.5		12		-				-		-	
						3.7	0.2	312	29.2		7.9		23.5		84.0		5.7		14.5		12		-				-		-	
SR6	Fine	Moderate	09:49	3.8	Surface	1.0	0.2	257	29.3	29.3	7.9	7.9	22.3	22.3	77.9	78.0	5.3	5.3	15.6	15.2	14	14	-	-	817885	814679	-	-	-	-
						1.0	0.2	280	29.3		7.9		22.3		78.0		5.3		15.8		15		-				-		-	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	2.8	0.2	282	29.2	29.2	7.9	7.9	23.0	23.0	77.8	77.9	5.3	5.3	14.8		14		-				-		-	
						2.8	0.2	305	29.2		7.9		23.0		77.9		5.3		14.7		13		-				-		-	
SR7	Sunny	Moderate	09:24	26.2	Surface	1.0	0.1	255	29.6	29.6	7.8	7.8	23.2	23.2	75.4	75.4	5.1	5.1	3.8	6.3	4	4	-	-	823618	823731	-	-	-	-
						1.0	0.1	260	29.5		7.8		23.2		75.4		5.1		3.8		4		-				-		-	
					Middle	13.1	0.2	204	29.4	29.4	7.8	7.8	23.7	23.7	74.0	74.0	5.0		5.1		4		-				-		-	
						13.1	0.2	222	29.4		7.8		23.7		74.0		5.0		5.0		4		-				-		-	
					Bottom	25.2	0.3	202	29.4	29.4	7.8	7.8	24.3	24.3	74.7	74.8	5.0	5.0	10.0		5		-				-		-	
						25.2	0.3	207	29.4		7.8		24.3		74.8		5.0		10.0		5		-				-		-	
SR8	Sunny	Calm	10:45	4.2	Surface	1.0	0.0	0	30.0	30.0	7.7	7.7	19.3	19.3	80.1	80.1	5.4	5.4	12.8	17.7	8	15	-	-	820246	811418	-	-	-	-
						1.0	0.0	0	30.0		7.7		19.3		80.1		5.4		12.8		8		-				-		-	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	3.2	0.0	0	29.6	29.6	7.8	7.8	20.3	20.3	79.0	79.1	5.4	5.4	22.6		22		-				-		-	
						3.2	0.0	0	29.6		7.8		20.3		79.1		5.4		22.7		21		-				-		-	

DA: Depth-Averaged

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

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

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

Water Quality Monitoring

Water Quality Monitoring Results on 28 September 17 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
C1	Fine	Moderate	05:58	8.9	Surface	1.0	0.4	214	29.9	29.9	7.8	7.8	14.9	15.0	86.3	85.9	6.0	5.7	3.8	5.4	3	4	81	85	815622	804236	<0.2	<0.2	2.8	2.4
						1.0	0.4	214	29.9		7.8		15.1		85.4		6.0		3.8		3		82				<0.2		3.1	
					Middle	4.5	0.3	228	29.4	29.4	7.9	7.9	25.4	25.4	80.4	80.3	5.3		4.3		4		84				<0.2		2.8	
						4.5	0.4	242	29.4		7.9		25.3		80.2		5.3		4.5		4		85				<0.2		3.3	
					Bottom	7.9	0.3	209	29.2	29.2	7.9	7.9	28.8	28.8	78.9	79.2	5.2	5.2	7.9		6		88				<0.2		1.0	
						7.9	0.3	228	29.2		7.9		28.8		79.4		5.2		8.1		4		88				<0.2		1.2	
C2	Cloudy	Moderate	07:23	11.2	Surface	1.0	0.8	164	30.0	30.0	7.8	7.8	13.9	13.9	70.6	70.6	5.0	4.8	8.4	14.8	5	6	75	77	825690	806960	<0.2	<0.2	2.6	2.0
						1.0	0.8	177	30.0		7.8		13.9		70.6		5.0		8.4		5		75				<0.2		2.8	
					Middle	5.6	0.5	166	29.6	29.6	7.9	7.9	24.9	24.9	67.2	67.2	4.5		14.7		7		77				<0.2		2.0	
						5.6	0.5	167	29.6		7.9		24.9		67.2		4.5		14.7		6		77				<0.2		1.7	
					Bottom	10.2	0.5	173	29.5	29.5	7.9	7.9	25.7	25.7	68.1	68.1	4.5	4.5	21.4		7		79				<0.2		1.4	
						10.2	0.5	178	29.5		7.9		25.7		68.1		4.5		21.4		7		79				<0.2		1.4	
C3	Cloudy	Moderate	05:04	12.4	Surface	1.0	0.1	144	30.0	30.0	7.9	7.9	19.2	19.2	80.2	80.2	5.5	5.3	1.9	2.8	3	5	77	79	822118	817785	<0.2	<0.2	2.1	1.8
						1.0	0.1	146	30.0		7.9		19.2		80.2		5.5		1.9		4		77				<0.2		2.2	
					Middle	6.2	0.2	8	30.1	30.1	7.9	7.9	21.6	21.6	74.6	74.6	5.0		2.6		3		79				<0.2		2.2	
						6.2	0.2	8	30.1		7.9		21.6		74.6		5.0		2.6		4		78				<0.2		2.1	
					Bottom	11.4	0.1	83	29.5	29.5	8.0	8.0	28.4	28.4	74.9	74.9	4.9	4.9	3.8		7		81				<0.2		1.0	
						11.4	0.1	84	29.5		8.0		28.4		74.9		4.9		3.8		9		80				<0.2		1.0	
IM1	Fine	Moderate	06:22	7.2	Surface	1.0	0.4	199	29.6	29.6	7.9	7.9	22.7	22.7	78.2	78.3	5.3	5.2	8.1	6.9	9	10	89	90	818357	806458	<0.2	<0.2	1.6	1.4
						1.0	0.4	203	29.6		7.9		22.6		78.3		5.3		7.8		10		90				<0.2		1.6	
					Middle	3.6	0.2	195	29.2	29.2	7.9	7.9	27.8	27.8	77.1	77.1	5.1		6.2		10		91				<0.2		1.3	
						3.6	0.2	205	29.2		7.9		27.8		77.0		5.1		6.4		9		93				<0.2		2.0	
					Bottom	6.2	0.1	141	29.1	29.1	7.9	7.9	28.3	28.3	77.4	77.5	5.1	5.1	6.4		10		89				<0.2		0.8	
						6.2	0.1	144	29.1		7.9		28.3		77.5		5.1		6.6		10		89				<0.2		0.9	
IM2	Fine	Moderate	06:28	8.4	Surface	1.0	0.5	213	30.0	30.0	7.8	7.8	16.6	16.6	79.3	79.3	5.5	5.3	5.8	8.3	5	9	72	83	818844	806183	<0.2	<0.2	2.6	1.6
						1.0	0.6	226	30.0		7.8		16.6		79.3		5.5		5.8		5		72				<0.2		2.6	
					Middle	4.2	0.3	195	29.2	29.2	7.9	7.9	26.9	26.9	77.4	77.4	5.1		9.0		10		86				<0.2		1.2	
						4.2	0.4	207	29.2		7.9		26.9		77.4		5.1		9.1		11		87				<0.2		1.2	
					Bottom	7.4	0.2	178	29.1	29.1	7.9	7.9	28.5	28.5	80.8	80.8	5.3	5.3	10.0		12		90				<0.2		0.9	
						7.4	0.2	184	29.1		7.9		28.5		80.8		5.3		10.0		12		90				<0.2		1.0	
IM3	Fine	Moderate	06:37	7.5	Surface	1.0	0.5	218	30.0	30.0	7.7	7.7	15.5	15.5	79.2	79.2	5.5	5.3	5.3	8.5	5	9	82	83	819428	806014	<0.2	<0.2	2.2	1.6
						1.0	0.6	238	30.0		7.7		15.5		79.2		5.5		5.3		6		82				<0.2		2.4	
					Middle	3.8	0.4	220	29.5	29.5	7.8	7.8	23.2	23.2	76.6	76.6	5.1		8.4		9		84				<0.2		1.5	
						3.8	0.4	229	29.5		7.8		23.2		76.6		5.1		8.4		10		84				<0.2		1.5	
					Bottom	6.5	0.2	237	29.2	29.2	7.9	7.9	27.9	27.9	79.1	79.1	5.2	5.2	11.9		13		83				<0.2		0.9	
						6.5	0.2	240	29.2		7.9		27.9		79.1		5.2		11.9		12		83				<0.2		0.9	
IM4	Fine	Moderate	06:45	7.4	Surface	1.0	0.5	197	29.9	29.9	7.7	7.7	13.2	13.2	82.2	82.2	5.8	5.6	6.0	12.9	5	8	83	86	819575	805021	<0.2	<0.2	2.6	2.0
						1.0	0.5	205	29.9		7.7		13.2		82.1		5.8		6.1		3		83				<0.2		2.5	
					Middle	3.7	0.3	213	29.6	29.6	7.9	7.9	20.5	20.5	78.3	78.3	5.3		15.3		9		88				<0.2		1.9	
						3.7	0.3	230	29.6		7.9		20.5		78.3		5.3		15.3		7		88				<0.2		1.9	
					Bottom	6.4	0.3	179	29.2	29.2	7.9	7.9	27.7	27.7	80.7	80.7	5.3	5.3	17.4		12		88				<0.2		1.4	
						6.4	0.3	195	29.2		7.9		27.7		80.7		5.3		17.4		12		88				<0.2		1.5	
IM5	Fine	Moderate	07:00	6.5	Surface	1.0	0.6	196	30.0	30.0	7.7	7.7	14.1	13.8	76.6	76.0	5.4	5.2	4.5	9.3	4	4	85	87	820569	804909	<0.2	<0.2	2.7	2.3
						1.0	0.6	208	29.9		7.7		13.4		75.4		5.3		4.5		4		85				<0.2		2.4	
					Middle	3.3	0.5	203	29.8	29.8	7.7	7.7	19.7	19.7	73.1	73.1	5.0		5.2		3		86				<0.2		2.1	
						3.3	0.5	205	29.8		7.7		19.7		73.1		5.0		5.2		3		86				<0.2		2.1	
					Bottom	5.5	0.3	211	29.2	29.2	7.9	7.9	27.3	27.3	75.3	75.4	5.0	5.0	18.2		4		89				<0.2		2.1	
						5.5	0.4	226	29.2		7.9		27.3		75.4		5.0		18.2		4		89				<0.2		2.1	
IM6	Fine	Moderate	07:13	6.7	Surface	1.0	0.4	194	29.9	29.9	7.7	7.7	11.3	11.3	80.3	80.3	5.7	5.3	5.2	7.5	3	4	77	82	821056	805815	<0.2	<0.2	2.5	2.1
						1.0	0.4	201	29.9		7.7		11.3		80.3		5.7		5.2		2		77				<0.2		2.2	
					Middle	3.4	0.2	219	29.6	29.6	7.7	7.7	21.2	21.2	72.5	72.5	4.9		6.9		5		84				<0.2		1.9	
						3.4	0.2	230	29.6		7.7		21.2		72.5		4.9		7.0		4		84				<0.2		1.9	
					Bottom	5.7	0.1	225	29.3	29.3	7.8	7.8	25.4	25.4	73.3	73.3	4.9	4.9	10.4		5		85				<0.2		2.0	
						5.7	0.1	231	29.3		7.8		25.4		73.3		4.9		10.4		4		85				<0.2		2.0	
IM7	Fine	Moderate	07:21	8.1	Surface	1.0	0.3	219	29.8	29.8	7.7	7.7	19.6	19.6	73.2	73.2	5.0	5.0	5.5	7.2	4	6	77	83	821331	806815	<0.2	<0.2	2.4	1.8
						1.0	0.3	226	29.8		7.7		19.6		73.1		5.0		5.5		3		77				<0.2		2.2	
					Middle	4.1	0.2	234	29.5	29.5	7.7	7.7	22.8	22.8	72.5	72.5	4.9		6.9		6		84				<0.2		1.8	
						4.1	0.2	248	29.5		7.7		22.8		72.5		4.9		6.9		6		85				<0.2		1.7	
					Bottom	7.1	0.1	165	29.2	29.2	7.8	7.8	26.4	26.4	73.7	73.7	4.9	4.9	9.2		7		87				<0.2		1.3	
						7.1	0.1	181	29.2		7.8		26.4		73.7		4.9		9.2		9		87				<0.2		1.4	
IM8	Cloudy	Moderate	06:49	8.0	Surface	1.0	0.4	193	30.5	30.5	7.9	7.9	14.3	14.3	78.3	78.3	5.4	5.2	3.7	5.0	3	5	76	79	821691	807846	<0.2	<0.2	2.6	1.9
						1.0	0.4	208	30.5		7.9		14.3		78.3		5.4		3.7		3		76				<0.2		2.4	
					Middle	4.0	0.2	229	29.9	29.9	7.9	7.9	22.1	22.1	74.6	74.6	5.0		4.6		4		78				<0.2		1.8	
						4.0	0.2	249	29.9		7.9		22.1		74.6		5.0		4.6		3		77				<0.2		1.6	
					Bottom	7.0	0.0	154	29.6	29.6	8.1	8.1	25.6	25.6	75.8	75.8	5.0	5.0	6.6		6		83				<0.2		1.5	
						7.0	0.0	161	29.6		8.1		25.6		75.8		5.0		6.6		8		82				<0.2		1.3	

DA: Depth-Averaged

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

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

Expansion of Hong Kong International Airport into a Three-Runway System
Water Quality Monitoring
Water Quality Monitoring Results on 28 September 17 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
IM9	Cloudy	Moderate	06:41	7.0	Surface	1.0	0.3	165	30.5	30.5	7.9	7.9	15.3	15.2	81.8	81.8	5.6	5.4	4.4	5.2	6	6	76	78	822108	808794	<0.2	<0.2	2.5	1.9
						1.0	0.3	173	30.5		7.9		15.1		81.8		5.6		4.5		6		75				<0.2		2.4	
					Middle	3.5	0.1	142	29.9	29.9	7.9	7.9	21.1	21.1	75.5	75.5	5.1		4.5		5		78				<0.2		1.7	
						3.5	0.1	142	29.9		7.9		21.1		75.5		5.1		4.5		5		78				<0.2		1.7	
					Bottom	6.0	0.1	77	29.7	29.7	8.0	8.0	24.1	24.1	77.5	77.5	5.2	5.2	6.6		6		80				<0.2		1.4	
						6.0	0.1	77	29.7		8.0		24.1		77.5		5.2		6.6		6		81				<0.2		1.4	
IM10	Cloudy	Moderate	06:34	7.2	Surface	1.0	0.3	137	30.4	30.4	7.9	7.9	12.7	12.7	81.6	81.6	5.7	5.4	4.2	4.9	4	4	75	77	822241	809852	<0.2	<0.2	2.6	2.2
						1.0	0.4	141	30.4		7.9		12.7		81.6		5.7		4.2		4		75				<0.2		2.6	
					Middle	3.6	0.3	113	30.0	30.0	7.9	7.9	21.4	21.4	75.3	75.3	5.1		4.9		3		77				<0.2		2.1	
						3.6	0.3	122	30.0		7.9		21.4		75.3		5.1		4.9		3		77				<0.2		2.1	
					Bottom	6.2	0.3	91	29.8	29.8	7.9	7.9	24.0	24.0	77.5	77.5	5.2	5.2	5.7		3		78				<0.2		1.8	
						6.2	0.3	95	29.8		7.9		24.0		77.5		5.2		5.7		4		79				<0.2		1.7	
IM11	Cloudy	Moderate	06:16	7.4	Surface	1.0	0.4	108	30.1	30.1	7.9	7.9	15.7	15.7	82.3	82.3	5.7	5.4	4.0	9.5	4	6	75	78	821490	810560	<0.2	<0.2	2.3	1.9
						1.0	0.4	118	30.1		7.9		15.7		82.3		5.7		4.0		3		76				<0.2		2.2	
					Middle	3.7	0.2	91	29.8	29.8	8.0	8.0	22.4	22.4	75.2	75.2	5.0		10.2		4		78				<0.2		2.1	
						3.7	0.2	96	29.8		8.0		22.4		75.2		5.0		10.2		5		77				<0.2		2.0	
					Bottom	6.4	0.0	110	29.7	29.7	8.0	8.0	23.8	23.8	77.8	77.8	5.2	5.2	14.2		8		80				<0.2		1.5	
						6.4	0.0	111	29.7		8.0		23.8		77.8		5.2		14.2		10		81				<0.2		1.3	
IM12	Cloudy	Moderate	06:07	8.9	Surface	1.0	0.4	91	30.4	30.4	7.9	7.9	17.6	17.6	77.1	77.1	5.3	5.1	3.2	8.2	2	3	76	77	821145	811518	<0.2	<0.2	2.3	2.0
						1.0	0.4	93	30.4		7.9		17.6		77.1		5.3		3.2		3		76				<0.2		2.4	
					Middle	4.5	0.4	119	29.8	29.8	8.0	8.0	22.5	22.5	72.7	72.7	4.9		8.0		2		77				<0.2		2.0	
						4.5	0.4	119	29.8		8.0		22.5		72.7		4.9		8.0		2		77				<0.2		2.0	
					Bottom	7.9	0.2	111	29.7	29.7	8.0	8.0	23.6	23.6	74.2	74.2	5.0	5.0	13.3		5		79				<0.2		1.5	
						7.9	0.2	121	29.7		8.0		23.6		74.2		5.0		13.3		6		78				<0.2		1.5	
SR2	Cloudy	Moderate	05:31	4.8	Surface	1.0	0.3	52	30.5	30.5	7.9	7.9	18.6	18.6	80.9	80.9	5.5	5.5	2.0	2.1	5	4	77	79	821463	814180	<0.2	<0.2	2.2	2.1
						1.0	0.3	56	30.5		7.9		18.6		80.9		5.5		2.0		4		78				<0.2		2.2	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	3.8	0.3	55	30.4	30.4	7.9	7.9	21.4	21.4	81.7	81.7	5.5	5.5	2.1		2		80				<0.2		1.8	
						3.8	0.3	56	30.4		7.9		21.4		81.7		5.5		2.1		3		80				<0.2		2.0	
SR3	Cloudy	Moderate	06:56	8.5	Surface	1.0	0.6	173	30.5	30.5	7.9	7.9	14.1	14.1	77.3	77.3	5.4	5.2	5.3	8.2	5	5	-	-	822147	807559	-	-	-	-
						1.0	0.6	181	30.5		7.9		14.1		77.3		5.4		5.3		3		-				-		-	
					Middle	4.3	0.1	232	29.7	29.7	8.0	8.0	23.9	23.9	75.2	75.2	5.0		8.7		4		-				-		-	
						4.3	0.1	247	29.7		8.0		23.9		75.2		5.0		8.7		3		-				-		-	
					Bottom	7.5	0.2	61	29.5	29.5	8.1	8.1	27.3	27.3	76.5	76.5	5.0	5.0	10.7		6		-				-		-	
						7.5	0.2	63	29.5		8.1		27.3		76.5		5.0		10.7		6		-				-		-	
SR4A	Fine	Moderate	05:36	8.5	Surface	1.0	0.0	68	29.9	29.9	7.8	7.8	19.8	19.8	80.4	80.1	5.5	5.2	4.7	7.8	4	5	-	-	817207	807816	-	-	-	-
						1.0	0.0	69	29.9		7.8		19.8		79.8		5.4		5.0		5		-				-		-	
					Middle	4.3	0.1	72	29.2	29.2	7.9	7.9	27.3	27.3	74.5	74.5	4.9		8.0		3		-				-		-	
						4.3	0.1	75	29.2		7.9		27.3		74.4		4.9		8.2		4		-				-		-	
					Bottom	7.5	0.1	67	29.2	29.2	7.9	7.9	27.7	27.7	74.9	75.1	4.9	5.0	10.5		7		-				-		-	
						7.5	0.1	73	29.2		7.9		27.7		75.3		5.0		10.6		9		-				-		-	
SR5A	Fine	Calm	05:14	5.2	Surface	1.0	0.0	44	30.0	30.0	7.8	7.8	20.0	20.0	86.7	86.6	5.9	5.9	4.9	7.4	4	5	-	-	816574	810700	-	-	-	-
						1.0	0.0	45	30.0		7.8		20.0		86.4		5.9		5.0		4		-				-		-	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	4.2	0.0	346	29.3	29.3	7.8	7.8	26.2	26.3	75.1	75.3	5.0	5.0	9.9		6		-				-		-	
						4.2	0.0	318	29.3		7.8		26.3		75.5		5.0		9.9		6		-				-		-	
SR6	Fine	Calm	04:42	4.9	Surface	1.0	0.1	61	30.2	30.2	7.7	7.7	19.0	19.0	89.8	89.9	6.1	6.1	3.3	4.3	4	4	-	-	817917	814666	-	-	-	-
						1.0	0.1	65	30.2		7.7		19.0		89.9		6.1		3.4		4		-				-		-	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	3.9	0.1	71	30.5	30.5	7.7	7.7	20.3	20.3	91.6	91.7	6.1	6.1	5.2		4		-				-		-	
						3.9	0.1	75	30.5		7.7		20.2		91.7		6.1		5.4		5		-				-		-	
SR7	Cloudy	Moderate	04:27	15.7	Surface	1.0	0.3	79	30.3	30.3	7.9	7.9	19.4	19.4	88.8	88.8	6.0	5.7	2.3	3.6	3	4	-	-	823631	823746	-	-	-	-
						1.0	0.3	85	30.3		7.9		19.4		88.8		6.0		2.3		5		-				-		-	
					Middle	7.9	1.0	-	30.0	30.0	7.9	7.9	20.9	20.9	79.2	79.2	5.3		3.7		3		-				-		-	
						7.9	1.0	-	30.0		7.9		20.9		79.2		5.3		3.7		3		-				-		-	
					Bottom	14.7	1.1	64	29.4	29.4	8.0	8.0	29.5	29.5	79.8	79.8	5.2	5.2	4.9		4		-				-		-	
						14.7	1.1	69	29.4		8.0		29.5		79.8		5.2		4.9		3		-				-		-	
SR8	Cloudy	Moderate	05:59	4.0	Surface	1.0	-	-	30.2	30.2	7.9	7.9	18.0	18.0	81.6	81.6	5.6	5.6	3.4	3.4	3	5	-	-	820246	811418	-	-	-	-
						1.0	-	-	30.2		7.9		18.0		81.6		5.6		3.4		4		-				-		-	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	3.0	-	-	30.4	30.4	7.9	7.9	18.6	18.6	81.7	81.7	5.5	5.5	3.4		5		-				-		-	
						3.0	-	-	30.4		7.9		18.6		81.7		5.5		3.4		6		-				-		-	

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

Expansion of Hong Kong International Airport into a Three-Runway System
Water Quality Monitoring
Water Quality Monitoring Results on 28 September 17 during Mid-Flood Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity(NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)	
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA
C1	Fine	Moderate	18:10	8.8	Surface	1.0	0.0	125	30.5	30.5	7.9	7.9	15.3	15.3	96.3	96.3	6.6	5.9	4.4	6.6	5	6	81	84	815619	804239	<0.2	<0.2	0.5	1.1
						1.0	0.0	130	30.5		7.9		15.3		96.3		6.6		4.4		5		81				<0.2		0.5	
					Middle	4.4	0.1	58	29.3	29.3	7.9	7.9	27.8	27.8	78.3	78.3	5.1		5.4		4		84				<0.2		0.8	
						4.4	0.1	61	29.3		7.9		27.8		78.3		5.1		5.4		4		84				<0.2		0.7	
					Bottom	7.8	0.1	40	29.1	29.1	7.9	7.9	29.5	29.5	77.4	77.4	5.0	5.0	9.9		10		86				<0.2		2.1	
						7.8	0.1	40	29.1		7.9		29.5		77.4		5.0		9.9		9		86				<0.2		2.0	
C2	Sunny	Moderate	16:58	12.3	Surface	1.0	0.2	283	30.5	30.5	8.0	8.0	16.6	16.6	77.9	77.9	5.3	5.2	3.5	6.6	5	6	75	77	825662	806936	<0.2	<0.2	2.3	2.1
						1.0	0.2	310	30.5		8.0		16.6		77.9		5.3		3.5		6		75				<0.2		2.5	
					Middle	6.2	0.2	335	30.2	30.2	7.9	7.9	20.5	20.5	75.3	75.3	5.1		4.1		5		77				<0.2		2.4	
						6.2	0.2	308	30.2		7.9		20.5		75.3		5.1		4.1		4		77				<0.2		2.2	
					Bottom	11.3	0.2	92	29.6	29.6	8.0	8.0	25.9	25.9	72.2	72.2	4.8	4.8	12.2		7		79				<0.2		1.5	
						11.3	0.2	95	29.6		8.0		25.9		72.2		4.8		12.2		6		79				<0.2		1.4	
C3	Cloudy	Moderate	19:01	12.3	Surface	1.0	0.3	114	31.0	31.0	8.1	8.1	18.7	18.7	92.5	92.5	6.2	5.8	2.4	3.7	4	5	75	79	822090	817809	<0.2	<0.2	2.2	1.6
						1.0	0.3	123	31.0		8.1		18.7		92.5		6.2		2.4		3		76				<0.2		2.4	
					Middle	6.2	0.3	269	30.1	30.1	8.1	8.1	25.6	25.6	80.9	80.9	5.3		3.0		4		79				<0.2		1.9	
						6.2	0.3	276	30.1		8.1		25.6		80.8		5.3		3.1		6		79				<0.2		1.7	
					Bottom	11.3	0.1	307	29.5	29.5	8.1	8.1	29.0	29.0	80.9	81.0	5.3	5.3	5.7		8		83				<0.2		0.7	
						11.3	0.1	337	29.5		8.1		29.0		81.1		5.3		5.7		6		82				<0.2		0.7	
IM1	Fine	Moderate	17:49	7.4	Surface	1.0	0.1	163	30.9	30.9	7.9	7.9	14.9	14.9	100.0	100.0	6.9	5.9	5.4	12.5	4	6	89	90	818360	806476	<0.2	<0.2	2.7	2.4
						1.0	0.1	171	30.9		7.9		14.9		100.0		6.9		5.4		4		89				<0.2		2.8	
					Middle	3.7	0.1	98	29.3	29.3	7.9	7.9	26.2	26.2	74.7	74.7	4.9		13.9		5		91				<0.2		2.8	
						3.7	0.1	106	29.3		7.9		26.2		74.6		4.9		14.2		5		91				<0.2		2.5	
					Bottom	6.4	0.1	118	29.2	29.2	7.9	7.9	27.7	27.7	74.1	74.1	4.9	4.9	18.1		9		89				<0.2		1.8	
						6.4	0.1	123	29.2		7.9		27.7		74.1		4.9		18.1		7		89				<0.2		1.9	
IM2	Fine	Moderate	17:43	8.5	Surface	1.0	0.2	224	30.8	30.8	7.9	7.9	15.2	15.2	98.6	98.6	6.8	5.9	5.6	10.4	3	5	75	83	818853	806192	<0.2	<0.2	3.0	2.3
						1.0	0.2	239	30.8		7.9		15.1		98.5		6.8		5.6		4		75				<0.2		2.8	
					Middle	4.3	0.1	36	29.3	29.3	7.9	7.9	27.4	27.4	74.6	74.6	4.9		12.3		5		86				<0.2		1.6	
						4.3	0.1	39	29.3		7.9		27.4		74.6		4.9		12.3		6		86				<0.2		1.7	
					Bottom	7.5	0.1	300	29.2	29.2	7.9	7.9	28.2	28.2	75.5	75.5	5.0	5.0	13.2		6		88				<0.2		2.4	
						7.5	0.1	305	29.2		7.9		28.2		75.5		5.0		13.2		5		88				<0.2		2.4	
IM3	Fine	Moderate	17:35	8.6	Surface	1.0	0.1	284	30.8	30.8	7.9	7.9	14.6	14.6	102.0	102.0	7.0	6.0	5.1	10.4	4	4	81	83	819415	806012	<0.2	<0.2	2.7	2.3
						1.0	0.1	287	30.8		7.9		14.6		101.9		7.0		5.2		4		82				<0.2		2.5	
					Middle	4.3	0.1	57	29.2	29.2	7.9	7.9	27.2	27.2	74.0	74.0	4.9		13.4		4		83				<0.2		1.7	
						4.3	0.1	58	29.2		7.9		27.2		74.0		4.9		13.4		5		84				<0.2		1.8	
					Bottom	7.6	0.1	4	29.2	29.2	7.9	7.9	28.1	28.1	75.3	75.3	4.9	4.9	12.5		4		85				<0.2		2.5	
						7.6	0.1	4	29.2		7.9		28.1		75.3		4.9		12.5		4		85				<0.2		2.7	
IM4	Fine	Moderate	17:25	7.6	Surface	1.0	0.0	20	30.7	30.7	7.9	7.9	15.1	15.1	95.8	95.8	6.6	5.8	4.5	9.7	4	4	77	83	819563	805040	<0.2	<0.2	2.6	1.9
						1.0	0.0	20	30.7		7.9		15.1		95.7		6.6		4.5		3		77				<0.2		2.6	
					Middle	3.8	0.1	337	29.3	29.3	7.9	7.9	26.7	26.7	74.1	74.0	4.9		9.2		3		85				<0.2		1.8	
						3.8	0.1	355	29.3		7.9		26.6		73.9		4.9		9.5		3		85				<0.2		1.8	
					Bottom	6.6	0.1	14	29.2	29.2	7.9	7.9	28.0	28.0	73.3	73.3	4.8	4.8	15.1		6		87				<0.2		1.2	
						6.6	0.1	14	29.2		7.9		28.0		73.3		4.8		15.2		6		87				<0.2		1.4	
IM5	Fine	Moderate	17:13	7.1	Surface	1.0	0.0	283	31.3	31.3	7.9	7.9	13.7	13.8	94.5	93.6	6.5	5.8	5.8	14.7	5	5	86	87	820572	804926	<0.2	<0.2	2.8	2.4
						1.0	0.0	297	31.3		7.9		13.9		92.7		6.4		5.9		4		86				<0.2		3.0	
					Middle	3.6	0.1	-	29.3	29.4	7.9	7.9	26.8	26.7	76.7	76.9	5.1		8.5		5		88				<0.2		2.4	
						3.6	0.1	-	29.4		7.9		26.6		77.1		5.1		8.8		6		88				<0.2		2.3	
					Bottom	6.1	0.2	25	29.3	29.3	7.9	7.9	27.5	27.5	81.7	81.9	5.4	5.4	29.5		5		87				<0.2		2.1	
						6.1	0.2	26	29.3		7.9		27.5		82.1		5.4		29.7		5		88				<0.2		1.6	
IM6	Fine	Moderate	17:04	6.9	Surface	1.0	0.0	90	30.9	30.9	7.9	7.9	15.5	15.5	99.9	99.8	6.8	6.1	5.3	22.5	6	6	85	87	821063	805817	<0.2	<0.2	2.3	2.0
						1.0	0.0	90	30.9		7.9		15.5		99.7		6.8		5.5		4		85				<0.2		2.3	
					Middle	3.5	0.1	323	29.7	29.7	7.9	7.9	23.6	23.7	81.5	81.5	5.4		25.9		4		86				<0.2		2.4	
						3.5	0.1	339	29.7		7.9		23.7		81.5		5.4		25.7		4		86				<0.2		2.4	
					Bottom	5.9	0.1	35	29.5	29.5	7.9	7.9	25.0	25.0	77.8	77.8	5.2	5.2	36.2		8		89				<0.2		1.4	
						5.9	0.2	35	29.5		7.9		25.0		77.8		5.2		36.2		8		89				<0.2		1.4	
IM7	Fine	Moderate	16:57	8.2	Surface	1.0	0.2	191	30.6	30.6	7.8	7.8	16.3	16.3	84.3	84.0	5.8	5.4	7.3	12.0	6	8	78	83	821365	806854	<0.2	<0.2	2.4	2.1
						1.0	0.2	200	30.6		7.8		16.3		83.7		5.7		7.4		5		78				<0.2		2.4	
					Middle	4.1	0.1	194	30.0	30.0	7.7	7.7	20.7	20.7	74.0	74.0	5.0		10.0		6		84				<0.2		2.2	
						4.1	0.1	201	30.0		7.7		20.6		74.0		5.0		10.1		6		84				<0.2		2.1	
					Bottom	7.2	0.1	135	29.6	29.6	7.8	7.8	23.1	23.0	71.8	71.9	4.8	4.8	18.5		12		85				<0.2		1.6	
						7.2	0.1	141	29.6		7.8		22.9		71.9		4.8		18.5		12		86				<0.2		1.6	
IM8	Sunny	Moderate	17:26	8.4	Surface	1.0	0.1	153	30.9	30.9	8.0	8.0	15.5	15.5	88.3	88.3	6.0	5.5	7.8	9.7	3	5	75	79	821696	807846	<0.2	<0.2	2.4	2.1
						1.0	0.1	157	30.9		8.0		15.5		88.3		6.0		7.8		5		76				<0.2		2.3	
					Middle	4.2	0.1	72	30.1	30.1	7.9	7.9	20.5	20.5	73.9	73.9	5.0		6.5		6		80				<0.2		2.3	
						4.2	0.1	73	30.1		7.9		20.5		73.9		5.0		6.5		4		79				<0.2		2.6	
					Bottom	7.4	0.1	39	29.6	29.6	8.1	8.1	25.2	25.2	77.1	77.2	5.1	5.1	14.9		6		83				<0.2		1.5	
						7.4	0.1	42	29.6		8.1		25.2		77.3		5.1		14.9		7		82				<0.2		1.6	

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

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

Water Quality Monitoring

Water Quality Monitoring Results on 28 September 17 during Mid-Flood Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity(NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)	
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA
IM9	Sunny	Moderate	17:34	7.2	Surface	1.0	0.1	109	31.0	31.0	7.9	7.9	15.5	15.5	84.4	84.4	5.8	5.6	6.2	6.5	4	4	76	78	822078	808805	<0.2	<0.2	2.5	2.1
						1.0	0.1	110	31.0		7.9		15.5		84.4		5.8		6.2		3		75				<0.2		2.5	
					Middle	3.6	0.0	62	30.3	30.3	7.9	7.9	19.1	19.1	78.9	78.9	5.3		6.8		3		78				<0.2		2.4	
						3.6	0.0	63	30.3		7.9		19.1		78.9		5.3		6.8		3		78				<0.2		2.2	
					Bottom	6.2	0.1	44	29.9	29.9	7.9	7.9	22.9	22.9	83.7	83.7	5.6	5.6	6.6		4		80				<0.2		1.6	
						6.2	0.1	44	29.9		7.9		22.9		83.7		5.6		6.6		4		80				<0.2		1.6	
IM10	Sunny	Moderate	17:42	6.5	Surface	1.0	0.1	136	30.9	30.9	8.0	8.0	15.0	15.0	88.8	88.8	6.1	6.0	4.4	4.5	2	3	75	79	822232	809826	<0.2	<0.2	2.5	2.1
						1.0	0.1	148	30.9		8.0		15.0		88.8		6.1		4.4		3		76				<0.2		2.5	
					Middle	3.3	0.1	265	30.5	30.5	8.0	8.0	18.4	18.4	85.2	85.2	5.8		3.9		3		79				<0.2		1.9	
						3.3	0.1	266	30.5		8.0		18.4		85.2		5.8		3.9		2		79				<0.2		2.2	
					Bottom	5.5	0.1	296	30.1	30.1	8.0	8.0	22.6	22.6	87.0	87.0	5.8	5.8	5.2		4		81				<0.2		1.8	
						5.5	0.1	296	30.1		8.0		22.6		87.0		5.8		5.2		3		81				<0.2		1.7	
IM11	Sunny	Moderate	18:00	7.8	Surface	1.0	0.1	120	30.6	30.6	8.0	8.0	14.8	14.8	81.3	81.3	5.6	5.4	7.3	8.2	4	4	75	78	821500	810544	<0.2	<0.2	3.0	2.6
						1.0	0.1	120	30.6		8.0		14.8		81.3		5.6		7.3		4		76				<0.2		2.9	
					Middle	3.9	0.0	48	30.1	30.1	8.0	8.0	20.8	20.8	76.6	76.6	5.2		6.7		4		78				<0.2		3.0	
						3.9	0.0	49	30.1		8.0		20.8		76.6		5.2		6.7		4		78				<0.2		2.9	
					Bottom	6.8	0.1	340	29.8	29.8	8.0	8.0	24.3	24.3	79.6	79.8	5.3	5.3	10.6		4		79				<0.2		1.7	
						6.8	0.1	343	29.8		8.0		24.3		79.9		5.3		10.6		3		80				<0.2		1.9	
IM12	Sunny	Moderate	18:08	9.0	Surface	1.0	0.2	117	30.6	30.6	8.1	8.1	15.3	15.3	77.0	77.0	5.3	4.9	8.1	11.8	3	5	75	79	821154	811510	<0.2	<0.2	3.2	2.3
						1.0	0.2	120	30.6		8.1		15.3		77.0		5.3		8.1		3		76				<0.2		2.9	
					Middle	4.5	0.1	78	29.7	29.7	8.0	8.0	24.2	24.2	68.4	68.4	4.5		11.6		4		79				<0.2		2.6	
						4.5	0.1	80	29.7		8.0		24.2		68.4		4.5		11.6		4		79				<0.2		2.5	
					Bottom	8.0	0.1	244	29.6	29.6	8.0	8.0	25.9	25.9	70.6	70.6	4.7	4.7	15.7		8		82				<0.2		1.2	
						8.0	0.1	263	29.6		8.0		25.9		70.6		4.7		15.7		9		82				<0.2		1.4	
SR2	Cloudy	Moderate	18:39	4.7	Surface	1.0	0.1	72	31.0	31.0	8.1	8.1	14.6	14.6	91.7	91.7	6.3	6.3	4.7	4.6	3	3	75	77	821457	814167	<0.2	<0.2	2.6	2.5
						1.0	0.1	76	31.0		8.1		14.6		91.7		6.3		4.7		3		76				<0.2		2.7	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-	3	-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	3.7	0.1	49	30.2	30.4	8.0	8.0	23.0	22.2	85.5	86.8	5.7	5.8	4.7		2		79				<0.2		2.4	
						3.7	0.1	50	30.5		8.0		21.4		88.0		5.9		4.1		3		79				<0.2		2.4	
SR3	Sunny	Moderate	17:19	8.5	Surface	1.0	0.1	163	30.9	30.9	7.9	7.9	13.9	13.9	79.8	79.8	5.5	5.2	6.0	7.8	4	4	-	-	822149	807577	-	-	-	-
						1.0	0.1	164	30.9		7.9		13.9		79.8		5.5		6.0		4		-				-		-	
					Middle	4.3	0.1	209	30.1	30.1	7.9	7.9	21.0	21.0	73.5	73.5	4.9		8.2		4		-				-		-	
						4.3	0.1	213	30.1		7.9		21.0		73.5		4.9		8.2		3		-				-		-	
					Bottom	7.5	0.1	322	29.7	29.7	8.0	8.0	24.4	24.4	74.7	74.7	5.0	5.0	9.2		3		-				-		-	
						7.5	0.1	344	29.7		8.0		24.4		74.7		5.0		9.2		4		-				-		-	
SR4A	Fine	Moderate	18:31	9.1	Surface	1.0	0.0	109	30.8	30.8	7.9	7.9	19.5	19.4	97.8	97.8	6.6	5.7	8.2	19.3	9	9	-	-	817190	807819	-	-	-	-
						1.0	0.0	118	30.8		7.9		19.3		97.7		6.6		8.1		9		-				-		-	
					Middle	4.6	0.1	240	29.4	29.4	7.9	7.9	25.9	25.9	72.7	72.8	4.8		20.1		9		-				-		-	
						4.6	0.2	240	29.4		7.9		25.9		72.8		4.8		20.4		8		-				-		-	
					Bottom	8.1	0.2	270	29.3	29.3	7.8	7.8	26.5	26.5	75.6	75.6	5.0	5.0	29.7		9		-				-		-	
						8.1	0.2	274	29.3		7.8		26.5		75.6		5.0		29.1		8		-				-		-	
SR5A	Fine	Moderate	18:50	5.2	Surface	1.0	0.1	284	31.2	31.2	8.0	8.0	19.0	19.0	111.6	110.8	7.5	7.4	7.6	9.3	5	5	-	-	816608	810705	-	-	-	-
						1.0	0.1	288	31.2		8.0		19.0		110.0		7.3		7.6		4		-				-		-	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	4.2	0.1	330	30.2	30.2	7.8	7.8	22.2	22.2	87.7	88.1	5.8	5.9	11.2		5		-				-		-	
						4.2	0.1	333	30.2		7.8		22.1		88.5		5.9		10.9		5		-				-		-	
SR6	Fine	Moderate	19:16	4.6	Surface	1.0	0.1	255	30.3	30.4	7.8	7.8	19.8	19.8	95.8	95.4	6.5	6.5	8.8	13.3	9	9	-	-	817901	814649	-	-	-	-
						1.0	0.1	273	30.4		7.8		19.8		95.0		6.4		8.9		9		-				-		-	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	3.6	0.1	149	30.2	30.2	7.7	7.7	20.6	20.6	82.3	82.5	5.5	5.6	17.9		8		-				-		-	
						3.6	0.1	150	30.2		7.7		20.6		82.6		5.6		17.7		9		-				-		-	
SR7	Cloudy	Moderate	19:32	16.8	Surface	1.0	0.2	68	30.3	30.3	8.1	8.1	23.7	23.7	83.7	83.7	5.5	5.2	1.5	2.5	3	3	-	-	823645	823740	-	-	-	-
						1.0	0.2	69	30.3		8.1		23.7		83.7		5.5		1.5		3		-				-		-	
					Middle	8.4	0.1	113	29.7	29.7	8.1	8.1	28.0	28.0	75.5	75.5	4.9		2.6		4		-				-		-	
						8.4	0.1	116	29.7		8.1		28.0		75.5		4.9		2.6		3		-				-		-	
					Bottom	15.8	0.2	96	29.4	29.4	8.1	8.1	29.9	29.9	76.9	76.9	5.0	5.0	3.5		3		-				-		-	
						15.8	0.2	97	29.4		8.1		29.9		76.9		5.0		3.5		4		-				-		-	
SR8	Cloudy	Moderate	18:15	4.2	Surface	1.0	0.0	0	31.1	31.1	8.0	8.0	15.1	15.1	97.4	97.4	6.7	6.7	6.0	6.4	3	4	-	-	820246	811418	-	-	-	-
						1.0	0.0	0	31.1		8.0		15.1		97.4		6.7		6.0		3		-				-		-	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-		-		-				-		-	
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	3.2	0.0	0	30.8	30.8	8.0	8.0	16.0	16.0	97.9	97.9	6.7	6.7	6.8		4		-				-		-	
						3.2	0.0	0	30.8		8.0		16.0		97.9		6.7		6.8		4		-				-		-	

DA: Depth-Averaged

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

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

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

Water Quality Monitoring

Water Quality Monitoring Results on 30 September 17 during Mid-Flood Tide

Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity(NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)	
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA
C1	Suuny	Moderate	16:09	8.4	Surface	1.0	0.2	62	29.8	29.8	7.9	7.9	19.0	19.0	94.9	94.9	6.5	6.3	2.6	9.2	4	5	93	97	815604	804241	<0.2	<0.2	2.2	1.8
						1.0	0.2	66	29.8		7.9		19.0		94.9		6.5		2.6		4		94				<0.2		2.1	
					Middle	4.2	0.2	32	29.6	29.6	7.9	7.9	21.8	21.8	89.2	89.1	6.0		6.0		4		97				<0.2		2.1	
						4.2	0.3	34	29.6		7.9		21.8		88.9		6.0		6.1		3		97				<0.2		2.0	
					Bottom	7.4	0.2	40	29.2	29.2	7.9	7.9	27.8	27.8	77.6	77.6	5.1	5.1	18.9		9		99				<0.2		1.1	
						7.4	0.2	42	29.2		7.9		27.8		77.6		5.1		18.9		8		99				<0.2		1.2	
C2	Cloudy	Rough	15:08	11.3	Surface	1.0	0.2	114	30.4	30.4	7.7	7.7	17.8	17.8	77.8	77.8	5.3	4.9	3.7	13.7	6	5	91	94	825678	806928	<0.2	<0.2	3.1	3.0
						1.0	0.2	122	30.4		7.7		17.8		77.8		5.3		3.7		4		92				<0.2		3.1	
					Middle	5.7	0.2	326	29.9	29.9	7.8	7.8	26.0	26.0	67.6	67.6	4.4		10.0		5		94				<0.2		2.8	
						5.7	0.2	348	29.9		7.8		26.0		67.6		4.4		10.0		5		95				<0.2		2.8	
					Bottom	10.3	0.3	359	29.7	29.7	7.8	7.8	26.6	26.6	67.5	67.5	4.4	4.4	27.4		4		97				<0.2		2.9	
						10.3	0.3	330	29.7		7.8		26.6		67.5		4.4		27.4		5		96				<0.2		3.2	
C3	Cloudy	Moderate	17:31	12.0	Surface	1.0	0.6	263	29.9	29.9	7.9	7.9	24.9	24.9	97.3	97.3	6.4	5.7	1.8	4.6	2	4	94	97	822121	817784	<0.2	<0.2	1.2	1.1
						1.0	0.6	280	29.9		7.9		24.9		97.3		6.4		1.8		3		94				<0.2		1.2	
					Middle	6.0	0.7	260	29.6	29.6	7.9	7.9	28.2	28.2	74.5	74.5	4.9		4.0		3		97				<0.2		1.1	
						6.0	0.7	283	29.6		7.9		28.2		74.5		4.9		4.0		5		95				<0.2		1.2	
					Bottom	11.0	0.5	262	29.5	29.5	7.9	7.9	29.1	29.1	75.9	75.9	4.9	4.9	7.9		5		101				<0.2		1.0	
						11.0	0.5	271	29.5		7.9		29.1		75.9		4.9		7.9		5		101				<0.2		1.0	
IM1	Fine	Moderate	15:50	7.7	Surface	1.0	0.4	333	29.7	29.7	7.9	7.9	23.1	23.1	88.3	88.3	5.9	5.5	6.9	14.2	5	7	93	96	818365	806475	<0.2	<0.2	1.5	1.4
						1.0	0.4	353	29.7		7.9		23.1		88.3		5.9		6.9		6		93				<0.2		1.5	
					Middle	3.9	0.3	350	29.4	29.4	7.9	7.9	26.5	26.5	76.2	76.2	5.0		13.2		8		96				<0.2		1.5	
						3.9	0.3	322	29.4		7.9		26.5		76.2		5.0		13.2		6		97				<0.2		1.4	
					Bottom	6.7	0.2	352	29.3	29.3	7.9	7.9	28.1	28.1	72.6	72.6	4.8	4.8	22.6		9		98				<0.2		1.3	
						6.7	0.3	324	29.3		7.9		28.1		72.6		4.8		22.6		10		99				<0.2		1.3	
IM2	Fine	Moderate	15:45	8.1	Surface	1.0	0.5	319	29.6	29.6	7.9	7.9	23.5	23.5	86.1	86.1	5.8	5.5	5.6	9.1	7	7	91	94	818833	806203	<0.2	<0.2	1.3	1.3
						1.0	0.5	349	29.6		7.9		23.5		86.1		5.8		5.6		7		91				<0.2		1.4	
					Middle	4.1	0.3	329	29.4	29.4	7.9	7.9	25.2	25.2	77.9	77.9	5.2		7.3		8		94				<0.2		1.2	
						4.1	0.4	350	29.4		7.9		25.2		77.9		5.2		7.3		6		94				<0.2		1.2	
					Bottom	7.1	0.3	328	29.2	29.2	7.9	7.9	28.2	28.2	77.4	77.4	5.1	5.1	14.3		7		96				<0.2		1.2	
						7.1	0.4	335	29.2		7.9		28.2		77.4		5.1		14.3		7		96				<0.2		1.2	
IM3	Fine	Moderate	15:37	8.3	Surface	1.0	0.2	295	29.9	29.9	7.9	7.9	20.2	20.2	93.1	93.1	6.3	5.9	5.4	9.7	6	6	89	93	819420	806003	<0.2	<0.2	1.8	1.8
						1.0	0.2	318	29.9		7.9		20.2		93.1		6.3		5.4		6		89				<0.2		1.9	
					Middle	4.2	0.2	319	29.5	29.5	7.9	7.9	24.9	24.9	81.6	81.6	5.4		9.4		6		93				<0.2		1.8	
						4.2	0.2	345	29.5		7.9		24.9		81.6		5.4		9.4		6		94				<0.2		1.8	
					Bottom	7.3	0.1	349	29.3	29.3	7.9	7.9	28.1	28.1	73.1	73.1	4.8	4.8	14.4		7		97				<0.2		1.7	
						7.3	0.1	321	29.3		7.9		28.1		73.1		4.8		14.4		6		97				<0.2		1.7	
IM4	Fine	Moderate	15:27	8.5	Surface	1.0	0.4	255	29.9	29.9	7.9	7.9	20.1	20.1	87.5	87.5	5.9	5.6	5.6	10.1	6	7	91	94	819571	805022	<0.2	<0.2	2.1	1.9
						1.0	0.5	262	29.9		7.9		20.1		87.5		5.9		5.6		8		91				<0.2		1.9	
					Middle	4.3	0.2	289	29.5	29.5	7.9	7.9	23.8	23.8	78.8	78.8	5.3		9.0		6		94				<0.2		1.6	
						4.3	0.3	316	29.5		7.9		23.8		78.8		5.3		9.0		7		95				<0.2		1.8	
					Bottom	7.5	0.2	350	29.2	29.2	7.9	7.9	28.3	28.3	79.2	79.2	5.2	5.2	15.7		6		96				<0.2		1.8	
						7.5	0.2	357	29.2		7.9		28.3		79.2		5.2		15.7		6		97				<0.2		2.0	
IM5	Fine	Moderate	15:16	7.5	Surface	1.0	0.3	270	29.9	29.9	7.8	7.8	18.7	18.7	90.6	90.6	6.2	5.9	3.7	9.0	4	5	93	96	820544	804940	<0.2	<0.2	2.2	2.2
						1.0	0.4	277	29.9		7.8		18.7		90.5		6.2		3.8		4		94				<0.2		2.2	
					Middle	3.8	0.2	313	29.8	29.8	7.8	7.8	20.3	20.3	81.2	81.2	5.5		8.9		5		96				<0.2		2.4	
						3.8	0.2	339	29.8		7.8		20.3		81.2		5.5		8.9		4		97				<0.2		2.2	
					Bottom	6.5	0.3	336	29.4	29.4	7.9	7.9	25.8	25.8	79.0	79.0	5.2	5.2	14.3		8		98				<0.2		2.0	
						6.5	0.3	309	29.4		7.9		25.8		79.0		5.2		14.3		6		98				<0.2		2.0	
IM6	Cloudy	Moderate	15:09	6.4	Surface	1.0	0.5	265	30.2	30.2	7.8	7.8	16.8	16.8	95.1	95.1	6.5	6.1	4.1	8.8	5	8	91	94	821062	805839	<0.2	<0.2	2.8	2.5
						1.0	0.5	266	30.2		7.8		16.8		95.1		6.5		4.1		4		91				<0.2		2.8	
					Middle	3.2	0.5	287	29.8	29.8	7.9	7.9	20.2	20.2	84.1	84.1	5.7		10.7		8		94				<0.2		2.5	
						3.2	0.5	307	29.8		7.9		20.2		84.1		5.7		10.7		9		94				<0.2		2.3	
					Bottom	5.4	0.1	303	29.7	29.7	7.8	7.8	22.9	22.9	87.9	87.9	5.9	5.9	11.7		10		97				<0.2		2.4	
						5.4	0.1	320	29.7		7.8		22.9		87.9		5.9		11.7		9		97				<0.2		2.1	
IM7	Cloudy	Moderate	15:05	7.6	Surface	1.0	0.4	293	30.2	30.2	7.8	7.8	17.1	17.1	98.4	98.4	6.8	6.1	3.5	3.6	4	5	91	95	821352	806839	<0.2	<0.2	2.7	2.4
						1.0	0.4	321	30.2		7.8		17.1		98.4		6.8		3.5		5		91				<0.2		2.6	
					Middle	3.8	0.3	303	30.0	30.0	7.8	7.8	19.9	19.9	79.3	79.3	5.4		3.1		4		94				<0.2		2.7	
						3.8	0.4	318	30.0		7.8		19.9		79.3		5.4		3.1		5		94				<0.2		2.7	
					Bottom	6.6	0.1	262	29.8	29.8	7.8	7.8	23.5	23.5	78.2	78.2	5.2	5.2	4.3		6		98				<0.2		1.9	
						6.6	0.2	266	29.8		7.8		23.5		78.2		5.2		4.3		5		99				<0.2		1.7	
IM8	Sunny	Rough	15:39	8.2	Surface	1.0	0.2	241	30.7	30.7	7.8	7.8	16.6	16.6	101.5	101.5	6.9	6.1	8.3	7.3	6	6	89	94	821679	807837	<0.2	<0.2	2.1	2.3
						1.0	0.2	242	30.7		7.8		16.6		101.5		6.9		8.3		5		90				<0.2		2.5	
					Middle	4.1	0.1	254	30.4	30.4	7.7	7.7	20.0	20.0	79.2	79.2	5.3		4.4		6		95				<0.2		2.4	
						4.1	0.1	264	30.4		7.7		20.0		79.2		5.3		4.4		7		94				<0.2		2.4	
					Bottom	7.2	0.1	284	29.8	29.8	7.8	7.8	27.6	27.6	75.2	75.2	4.9	4.9	9.2		7		99				<0.2		2.2	
						7.2	0.1	308	29.8		7.8		27.6		75.2		4.9		9.2		6		98				<0.2		2.3	

DA: Depth-Averaged

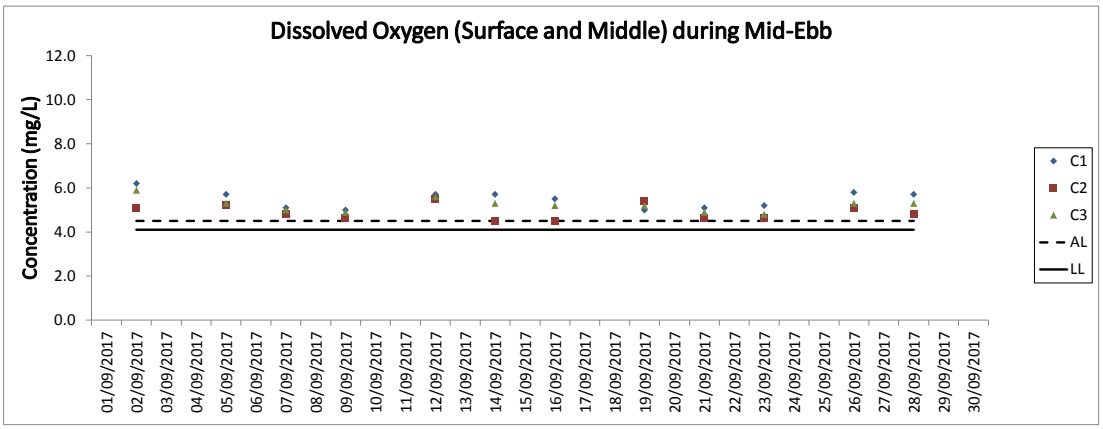
Calm: Small or no wave; Moderate: Between calm and rough; Rough : White capped or rougher

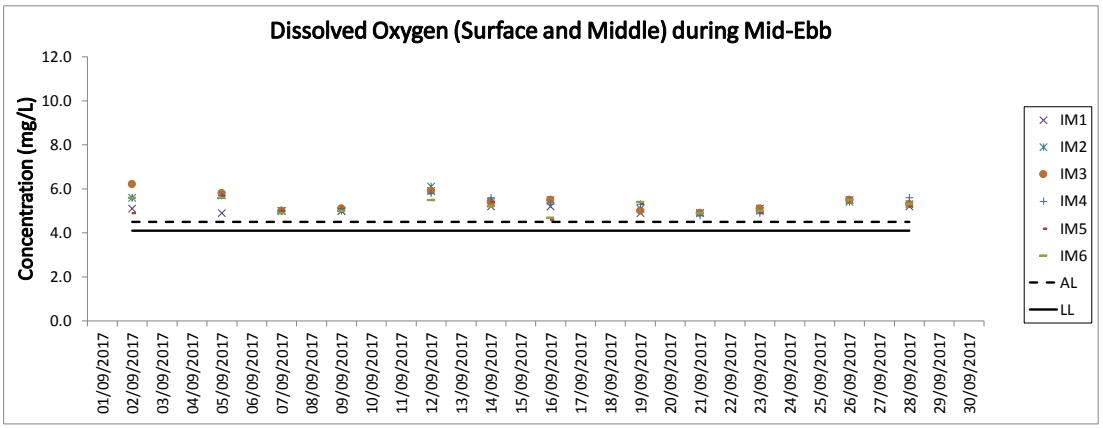
Value exceeding Action Level is underlined; **Value exceeding Limit Level is bolded and underlined**

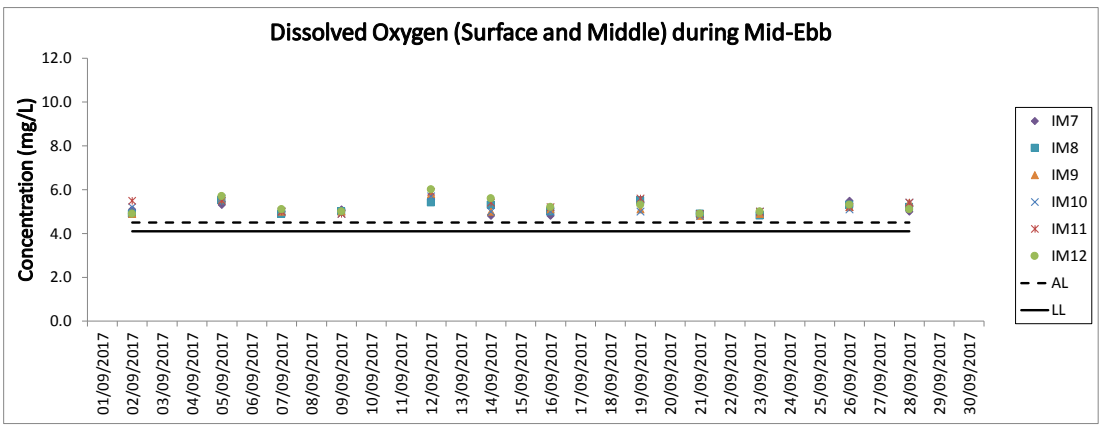
Expansion of Hong Kong International Airport into a Three-Runway System
Water Quality Monitoring
Water Quality Monitoring Results on 30 September 17 during Mid-Flood Tide

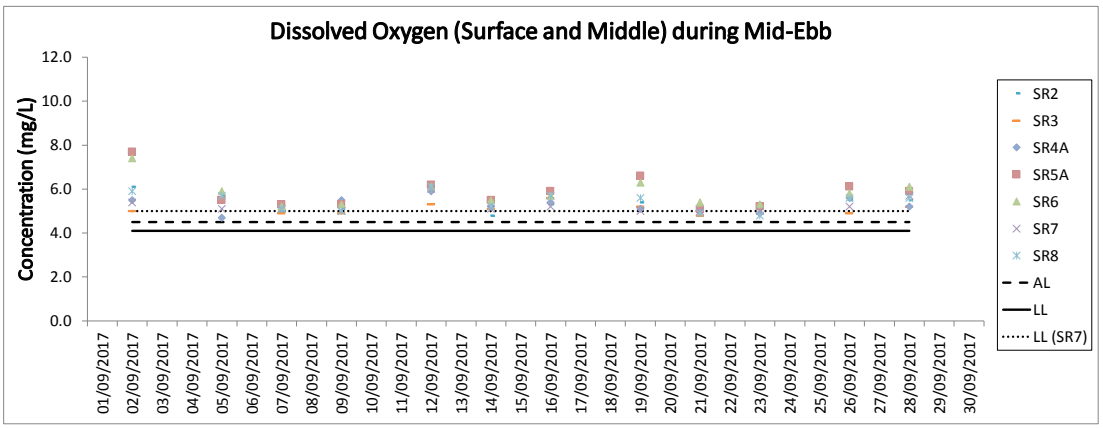
Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity(NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)	
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA
IM9	Sunny	Rough	15:49	6.9	Surface	1.0	0.1	276	30.3	30.3	7.8	7.8	18.2	18.2	97.3	97.3	6.6	6.3	3.4		6		94				<0.2		2.3	
						1.0	0.1	278	30.3		7.8		18.2		97.3		6.6		3.4		5		93				<0.2		2.4	
					Middle	3.5	0.1	253	30.3	30.3	7.8	7.8	18.4	18.4	88.6	88.6	6.0		2.8		6	6	96	96	822085	808807	<0.2	<0.2	2.2	2.2
						3.5	0.1	263	30.3		7.8		18.4		88.6		6.0		2.8		7		96				<0.2		2.0	
					Bottom	5.9	0.1	296	30.3	30.3	7.8	7.8	20.7	20.7	86.4	86.4	5.8	5.8	4.1		6		98				<0.2		2.1	
						5.9	0.1	299	30.3		7.8		20.7		86.4		5.8		4.1		6		99				<0.2		2.0	
IM10	Sunny	Rough	15:58	6.7	Surface	1.0	0.2	328	30.4	30.4	7.8	7.8	19.0	19.0	93.6	93.6	6.3	5.9	2.1		4		92				<0.2		2.1	
						1.0	0.2	340	30.4		7.8		19.0		93.6		6.3		2.1		4		92				<0.2		1.9	
					Middle	3.4	0.2	338	30.3	30.3	7.8	7.8	21.0	21.0	82.6	82.6	5.5		5.1	6.9	6	6	96	96	822256	809826	<0.2	<0.2	2.2	2.0
						3.4	0.2	352	30.3		7.8		21.0		82.6		5.5		5.1		4		96				<0.2		2.2	
					Bottom	5.7	0.2	328	30.1	30.1	7.8	7.8	23.3	23.3	80.2	80.2	5.3	5.3	13.5		7		98				<0.2		1.7	
						5.7	0.2	332	30.1		7.8		23.3		80.2		5.3		13.5		9		99				<0.2		1.6	
IM11	Sunny	Moderate	16:18	8.1	Surface	1.0	0.3	281	30.3	30.3	7.9	7.9	20.1	20.1	92.2	92.2	6.2	5.9	2.6		4		95				<0.2		1.9	
						1.0	0.3	289	30.3		7.9		20.1		92.2		6.2		2.6		5		94				<0.2		2.1	
					Middle	4.1	0.2	308	29.9	29.9	7.9	7.9	23.4	23.4	83.0	83.0	5.5		6.1	6.6	4	4	96	96	821511	810556	<0.2	<0.2	1.8	1.9
						4.1	0.2	315	29.9		7.9		23.4		83.0		5.5		6.1		4		96				<0.2		1.7	
					Bottom	7.1	0.2	292	29.8	29.8	7.9	7.9	24.6	24.6	82.3	82.3	5.5	5.5	11.1		4		98				<0.2		1.8	
						7.1	0.2	301	29.8		7.9		24.6		82.3		5.5		11.1		4		99				<0.2		1.8	
IM12	Sunny	Moderate	16:27	8.5	Surface	1.0	0.4	275	30.1	30.1	8.0	8.0	21.3	21.3	107.2	107.2	7.2	6.5	0.7		4		94				<0.2		1.6	
						1.0	0.4	279	30.1		8.0		21.3		107.2		7.2		0.7		4		94				<0.2		1.6	
					Middle	4.3	0.4	273	29.9	29.9	7.9	7.9	24.2	24.2	85.9	85.9	5.7		6.5	6.8	6	5	96	96	821176	811513	<0.2	<0.2	1.9	1.6
						4.3	0.5	288	29.9		7.9		24.2		85.8		5.7		6.7		6		96				<0.2		1.7	
					Bottom	7.5	0.3	286	29.7	29.7	7.8	7.8	26.5	26.5	76.3	76.3	5.0	5.0	13.1		5		99				<0.2		1.5	
						7.5	0.3	300	29.7		7.8		26.5		76.3		5.0		13.1		6		99				<0.2		1.5	
SR2	Cloudy	Moderate	17:04	4.8	Surface	1.0	0.4	314	30.0	30.0	8.0	8.0	23.0	23.0	113.2	113.2	7.5	7.5	2.3		5		91				<0.2		1.6	
						1.0	0.4	340	30.0		8.0		23.0		113.2		7.5		2.3		6		92				<0.2		1.8	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-	6.0	-	6	-	94	821477	814159	-	<0.2	-	1.6
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	3.8	0.2	265	29.9	29.9	7.9	7.9	24.6	24.6	96.5	96.5	6.4	6.4	9.6		7		96				<0.2		1.4	
						3.8	0.2	273	29.9		7.9		24.6		96.5		6.4		9.6		6		96				<0.2		1.4	
SR3	Cloudy	Rough	15:31	8.6	Surface	1.0	0.3	199	30.6	30.6	7.9	7.9	15.6	15.6	104.0	104.0	7.1	6.2	4.0		6		-				-		-	
						1.0	0.3	202	30.6		7.9		15.6		104.0		7.1		4.0		4		-				-		-	
					Middle	4.3	0.2	254	30.3	30.3	7.8	7.8	21.1	21.1	78.0	78.0	5.2		3.0	3.6	4	5	-	-	822147	807552	-	-	-	-
						4.3	0.2	275	30.3		7.8		21.1		78.0		5.2		3.0		4		-				-		-	
					Bottom	7.6	0.1	129	30.0	30.0	7.8	7.8	24.5	24.5	78.8	78.8	5.2	5.2	3.8		5		-				-		-	
						7.6	0.1	130	30.0		7.8		24.5		78.8		5.2		3.8		6		-				-		-	
SR4A	Suuny	Moderate	16:29	8.0	Surface	1.0	0.1	233	29.9	29.9	8.2	8.2	22.1	22.2	131.1	131.1	8.8	7.6	7.7		10		-				-		-	
						1.0	0.1	251	29.9		8.2		22.2		131.1		8.8		7.7		10		-				-		-	
					Middle	4.0	0.0	138	29.6	29.6	8.0	8.0	23.4	23.4	95.2	95.2	6.4		8.7	10.9	10	10	-	-	817172	807794	-	-	-	-
						4.0	0.0	143	29.6		8.0		23.4		95.2		6.4		8.7		10		-				-		-	
					Bottom	7.0	0.1	215	29.3	29.3	7.9	7.9	26.6	26.6	76.6	76.6	5.1	5.1	16.3		10		-				-		-	
						7.0	0.1	223	29.3		7.9		26.6		76.6		5.1		16.3		10		-				-		-	
SR5A	Suuny	Moderate	16:47	5.0	Surface	1.0	0.2	311	29.9	29.9	8.3	8.3	21.9	21.9	152.7	152.7	10.3	10.3	7.6		12		-				-		-	
						1.0	0.2	322	29.9		8.3		21.9		152.6		10.2		7.6		10		-				-		-	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-	8.3	-	11	-	-	816594	810703	-	-	-	-
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	4.0	0.1	306	29.7	29.7	8.0	8.0	24.0	24.0	99.6	99.6	6.6	6.6	9.0		10		-				-		-	
						4.0	0.1	331	29.7		8.0		24.0		99.6		6.6		9.0		12		-				-		-	
SR6	Suuny	Moderate	17:10	4.5	Surface	1.0	0.0	30	30.0	30.0	8.0	8.0	23.5	23.5	112.1	112.0	7.5	7.5	20.3		21		-				-		-	
						1.0	0.0	32	30.0		8.0		23.5		111.9		7.4		20.5		21		-				-		-	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-	21.4	-	21	-	-	817912	814649	-	-	-	-
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	3.5	0.2	10	29.8	29.8	7.9	7.9	24.1	24.1	86.8	86.8	5.8	5.8	22.3		22		-				-		-	
						3.5	0.2	10	29.8		7.9		24.1		86.8		5.8		22.3		21		-				-		-	
SR7	Cloudy	Moderate	18:04	16.3	Surface	1.0	0.1	180	29.8	29.8	7.9	7.9	27.0	27.0	93.4	93.4	6.1	6.0	1.6		5		-				-		-	
						1.0	0.1	195	29.8		7.9		27.0		93.4		6.1		1.6		6		-				-		-	
					Middle	8.2	0.2	208	29.7	29.7	7.9	7.9	27.8	27.8	88.2	88.2	5.8		4.3	3.8	6	6	-	-	823654	823747	-	-	-	-
						8.2	0.2	226	29.7		7.9		27.8		88.2		5.8		4.3		5		-				-		-	
					Bottom	15.3	0.2	174	29.6	29.6	7.9	7.9	28.9	28.9	87.5	87.5	5.7	5.7	5.4		8		-				-		-	
						15.3	0.2	182	29.6		7.9		28.9		87.5		5.7		5.4		8		-				-		-	
SR8	Sunny	Moderate	16:37	4.5	Surface	1.0	0.0	0	30.5	30.5	7.9	7.9	20.1	20.1	94.3	94.3	6.3	6.3	12.1		11		-				-		-	
						1.0	0.0	0	30.5		7.9		20.1		94.3		6.3		12.1		11		-				-		-	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-		-	19.3	-	11	-	-	820246	811418	-	-	-	-
						-	-	-	-		-		-		-		-		-		-		-				-		-	
					Bottom	3.5	0.0	0	29.9	29.9	7.9	7.9	23.2	23.2	89.9	89.9	6.0	6.0	26.4		10		-				-		-	
						3.5	0.0	0	29.9		7.9		23.2		89.9		6.0		26.4		11		-				-		-	

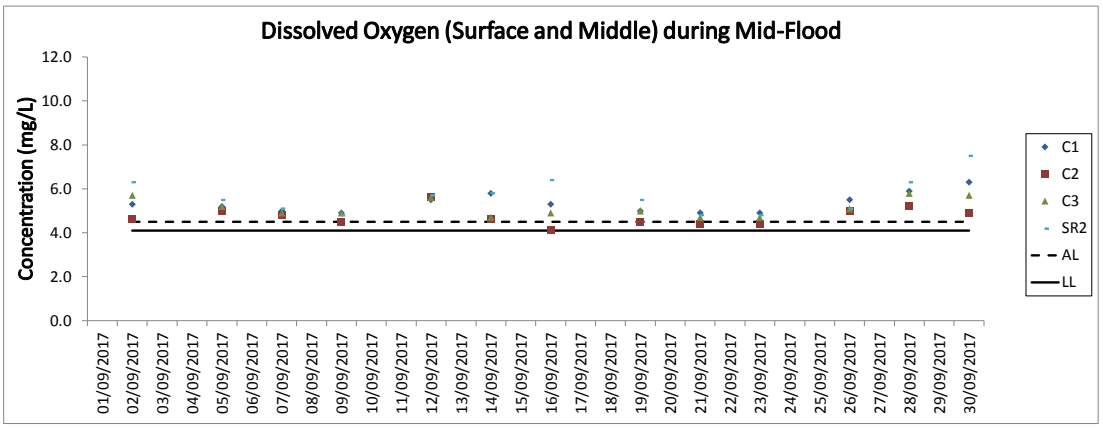
DA: Depth-Averaged
Calm: Small or no wave; Moderate: Between calm and rough; Rough : White capped or rougher
Value exceeding Action Level is underlined; **Value exceeding Limit Level is bolded and underlined**
Note: The ebb tide monitoring session on 30 September 2017 was cancelled due to hoisting Thunderstorm Signal and adverse sea condition.

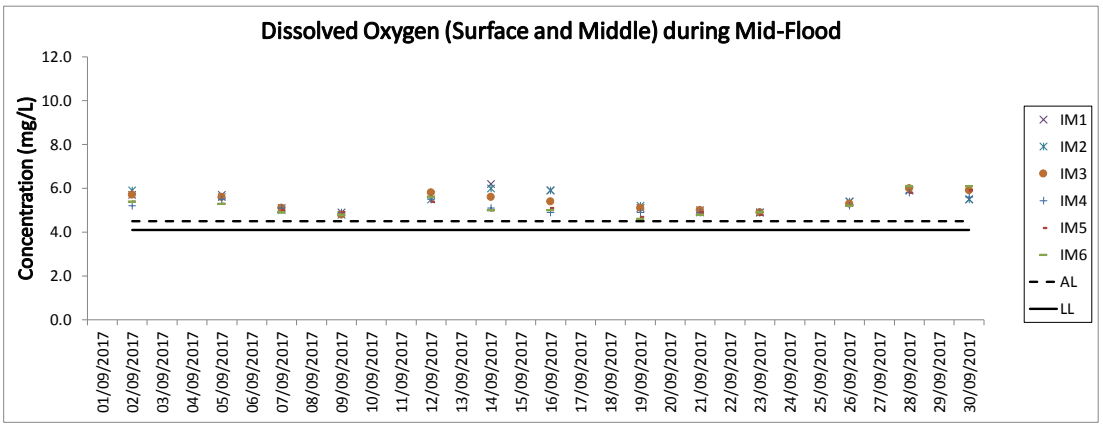

Dissolved Oxygen (Surface and Middle) during Mid-Ebb
Concentration (mg/L)
12.0
10.0
8.0
6.0
4.0
2.0
0.0
01/09/2017
02/09/2017
03/09/2017
04/09/2017
05/09/2017
06/09/2017
07/09/2017
08/09/2017
09/09/2017
10/09/2017
11/09/2017
12/09/2017
13/09/2017
14/09/2017
15/09/2017
16/09/2017
17/09/2017
18/09/2017
19/09/2017
20/09/2017
21/09/2017
22/09/2017
23/09/2017
24/09/2017
25/09/2017
26/09/2017
27/09/2017
28/09/2017
29/09/2017
30/09/2017
C1
C2
C3
AL
LL

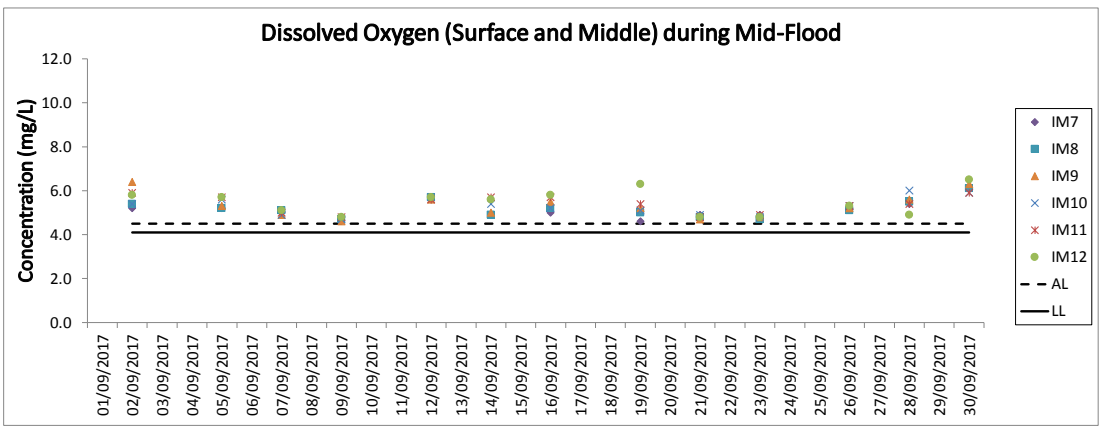

Dissolved Oxygen (Surface and Middle) during Mid-Ebb
Concentration (mg/L)
12.0
10.0
8.0
6.0
4.0
2.0
0.0
01/09/2017
02/09/2017
03/09/2017
04/09/2017
05/09/2017
06/09/2017
07/09/2017
08/09/2017
09/09/2017
10/09/2017
11/09/2017
12/09/2017
13/09/2017
14/09/2017
15/09/2017
16/09/2017
17/09/2017
18/09/2017
19/09/2017
20/09/2017
21/09/2017
22/09/2017
23/09/2017
24/09/2017
25/09/2017
26/09/2017
27/09/2017
28/09/2017
29/09/2017
30/09/2017
IM1
IM2
IM3
IM4
IM5
IM6
AL
LL

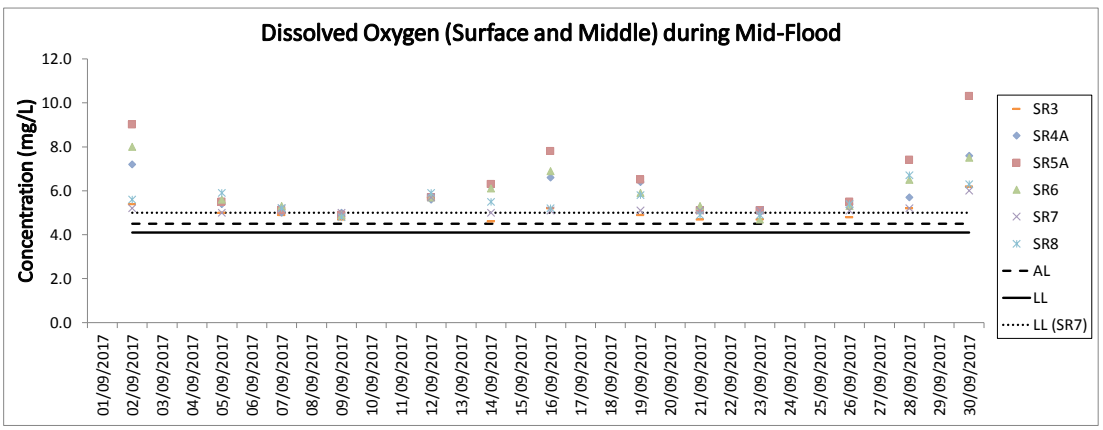

Dissolved Oxygen (Surface and Middle) during Mid-Ebb
Concentration (mg/L)
12.0
10.0
8.0
6.0
4.0
2.0
0.0
01/09/2017
02/09/2017
03/09/2017
04/09/2017
05/09/2017
06/09/2017
07/09/2017
08/09/2017
09/09/2017
10/09/2017
11/09/2017
12/09/2017
13/09/2017
14/09/2017
15/09/2017
16/09/2017
17/09/2017
18/09/2017
19/09/2017
20/09/2017
21/09/2017
22/09/2017
23/09/2017
24/09/2017
25/09/2017
26/09/2017
27/09/2017
28/09/2017
29/09/2017
30/09/2017
IM7
IM8
IM9
IM10
IM11
IM12
AL
LL

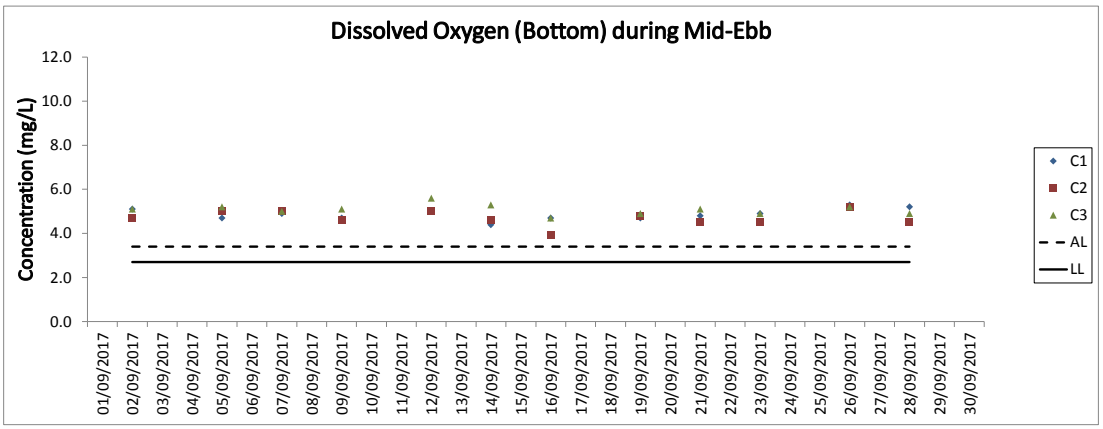

Dissolved Oxygen (Surface and Middle) during Mid-Ebb
Concentration (mg/L)
12.0
10.0
8.0
6.0
4.0
2.0
0.0
01/09/2017
02/09/2017
03/09/2017
04/09/2017
05/09/2017
06/09/2017
07/09/2017
08/09/2017
09/09/2017
10/09/2017
11/09/2017
12/09/2017
13/09/2017
14/09/2017
15/09/2017
16/09/2017
17/09/2017
18/09/2017
19/09/2017
20/09/2017
21/09/2017
22/09/2017
23/09/2017
24/09/2017
25/09/2017
26/09/2017
27/09/2017
28/09/2017
29/09/2017
30/09/2017
SR2
SR3
SR4A
SR5A
SR6
SR7
SR8
AL
LL
LL (SR7)

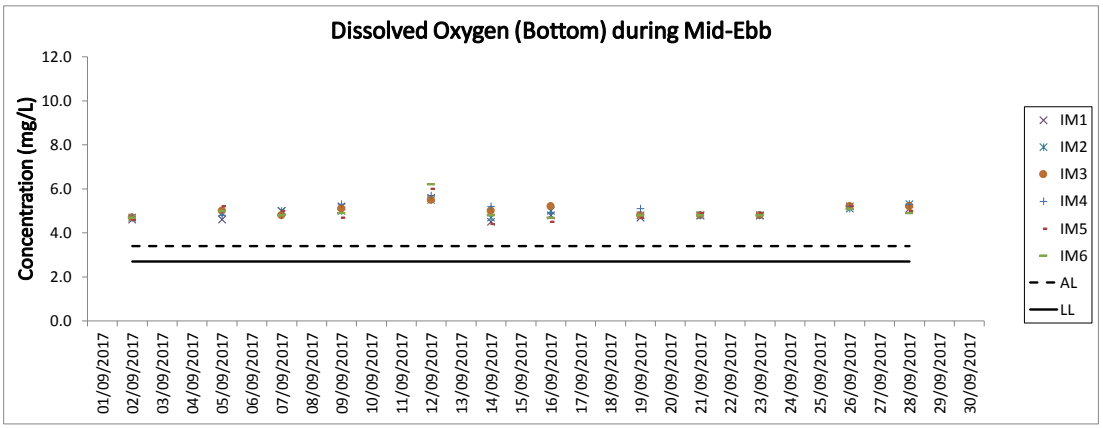

Dissolved Oxygen (Surface and Middle) during Mid-Flood
Concentration (mg/L)
C1
C2
C3
SR2
AL
LL

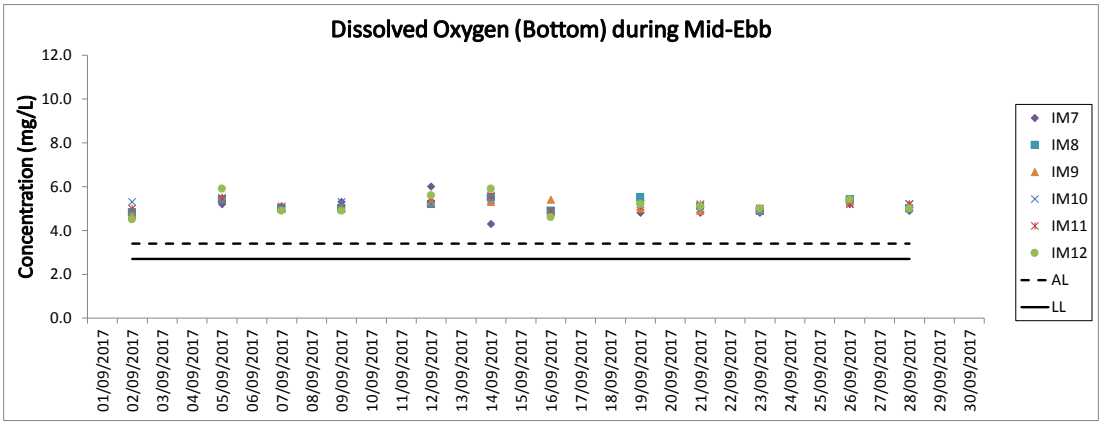

Dissolved Oxygen (Surface and Middle) during Mid-Flood
Concentration (mg/L)
IM1
IM2
IM3
IM4
IM5
IM6
AL
LL

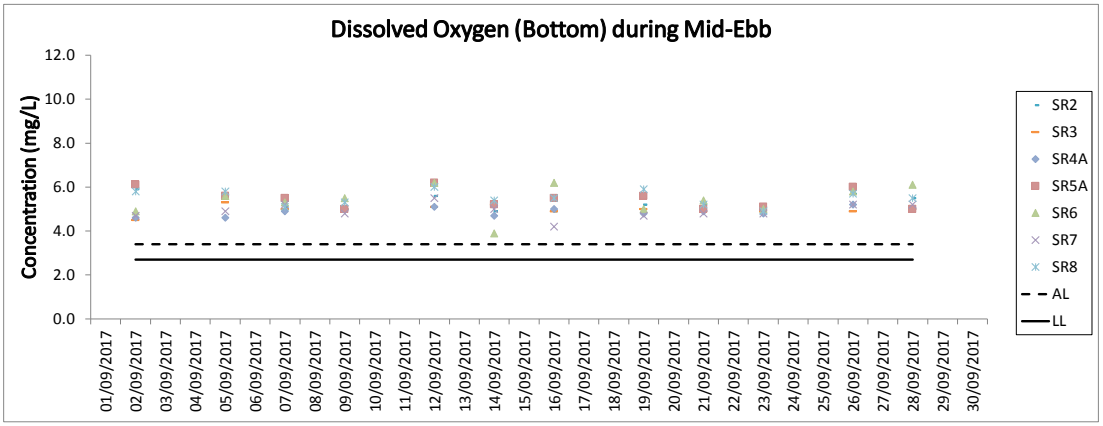

Dissolved Oxygen (Surface and Middle) during Mid-Flood
Concentration (mg/L)
IM7
IM8
IM9
IM10
IM11
IM12
AL
LL

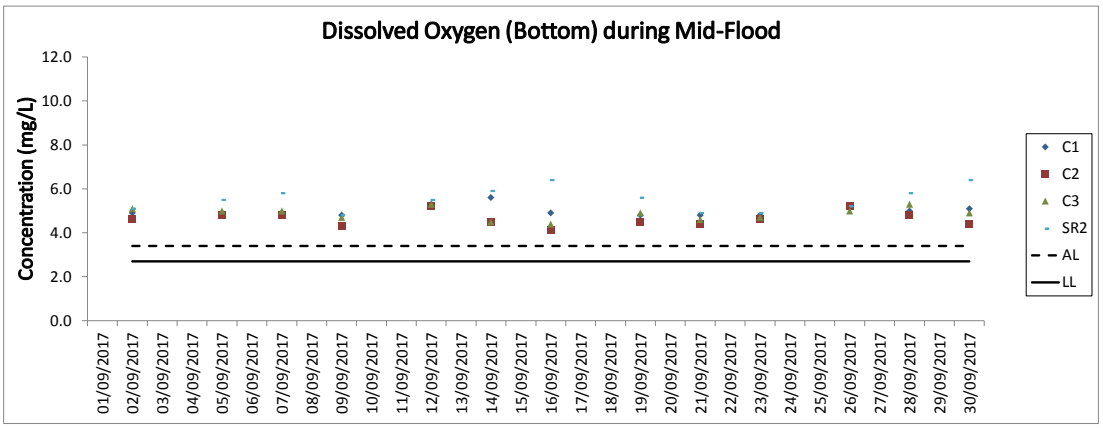

Dissolved Oxygen (Surface and Middle) during Mid-Flood
Concentration (mg/L)
SR3
SR4A
SR5A
SR6
SR7
SR8
AL
LL
LL (SR7)

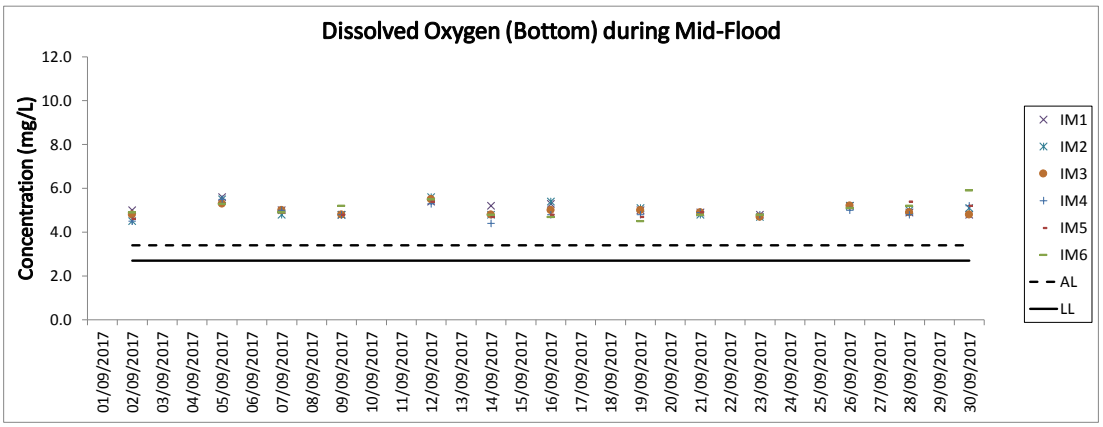

Dissolved Oxygen (Bottom) during Mid-Ebb
Concentration (mg/L)
12.0
10.0
8.0
6.0
4.0
2.0
0.0
01/09/2017
02/09/2017
03/09/2017
04/09/2017
05/09/2017
06/09/2017
07/09/2017
08/09/2017
09/09/2017
10/09/2017
11/09/2017
12/09/2017
13/09/2017
14/09/2017
15/09/2017
16/09/2017
17/09/2017
18/09/2017
19/09/2017
20/09/2017
21/09/2017
22/09/2017
23/09/2017
24/09/2017
25/09/2017
26/09/2017
27/09/2017
28/09/2017
29/09/2017
30/09/2017
C1
C2
C3
AL
LL

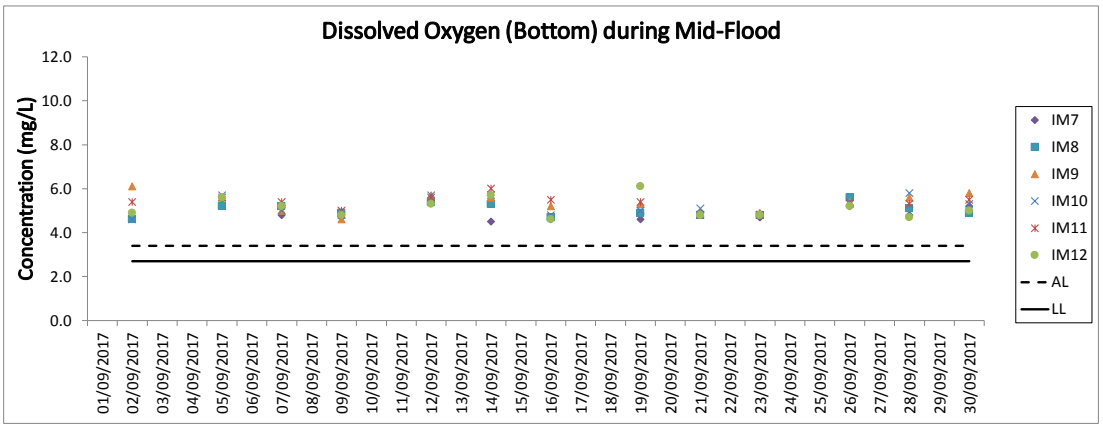

Dissolved Oxygen (Bottom) during Mid-Ebb
Concentration (mg/L)
12.0
10.0
8.0
6.0
4.0
2.0
0.0
01/09/2017
02/09/2017
03/09/2017
04/09/2017
05/09/2017
06/09/2017
07/09/2017
08/09/2017
09/09/2017
10/09/2017
11/09/2017
12/09/2017
13/09/2017
14/09/2017
15/09/2017
16/09/2017
17/09/2017
18/09/2017
19/09/2017
20/09/2017
21/09/2017
22/09/2017
23/09/2017
24/09/2017
25/09/2017
26/09/2017
27/09/2017
28/09/2017
29/09/2017
30/09/2017
IM1
IM2
IM3
IM4
IM5
IM6
AL
LL

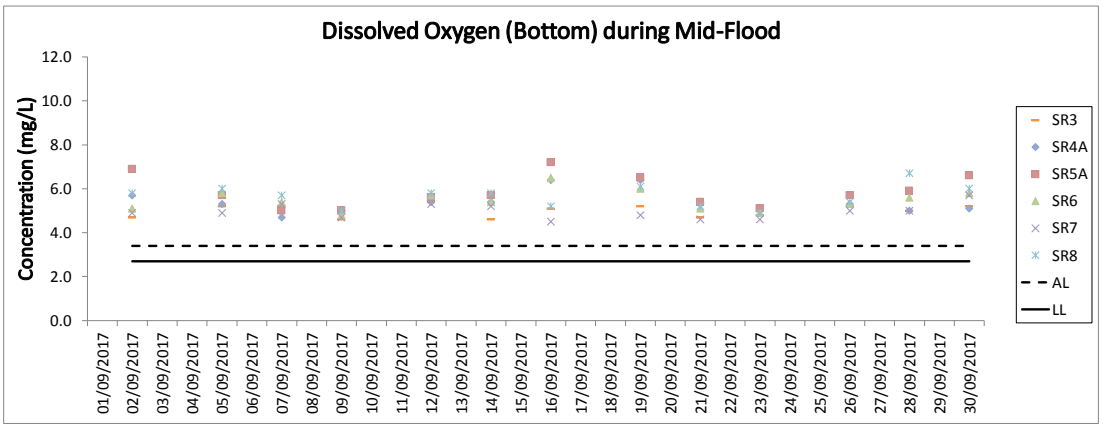

Dissolved Oxygen (Bottom) during Mid-Ebb
Concentration (mg/L)
12.0
10.0
8.0
6.0
4.0
2.0
0.0
01/09/2017
02/09/2017
03/09/2017
04/09/2017
05/09/2017
06/09/2017
07/09/2017
08/09/2017
09/09/2017
10/09/2017
11/09/2017
12/09/2017
13/09/2017
14/09/2017
15/09/2017
16/09/2017
17/09/2017
18/09/2017
19/09/2017
20/09/2017
21/09/2017
22/09/2017
23/09/2017
24/09/2017
25/09/2017
26/09/2017
27/09/2017
28/09/2017
29/09/2017
30/09/2017
IM7
IM8
IM9
IM10
IM11
IM12
AL
LL

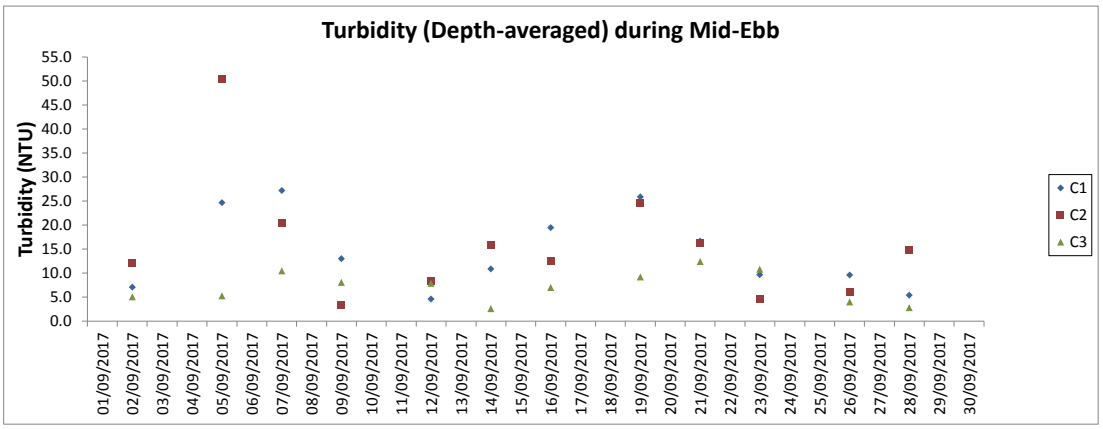

Dissolved Oxygen (Bottom) during Mid-Ebb
Concentration (mg/L)
12.0
10.0
8.0
6.0
4.0
2.0
0.0
01/09/2017
02/09/2017
03/09/2017
04/09/2017
05/09/2017
06/09/2017
07/09/2017
08/09/2017
09/09/2017
10/09/2017
11/09/2017
12/09/2017
13/09/2017
14/09/2017
15/09/2017
16/09/2017
17/09/2017
18/09/2017
19/09/2017
20/09/2017
21/09/2017
22/09/2017
23/09/2017
24/09/2017
25/09/2017
26/09/2017
27/09/2017
28/09/2017
29/09/2017
30/09/2017
SR2
SR3
SR4A
SR5A
SR6
SR7
SR8
AL
LL

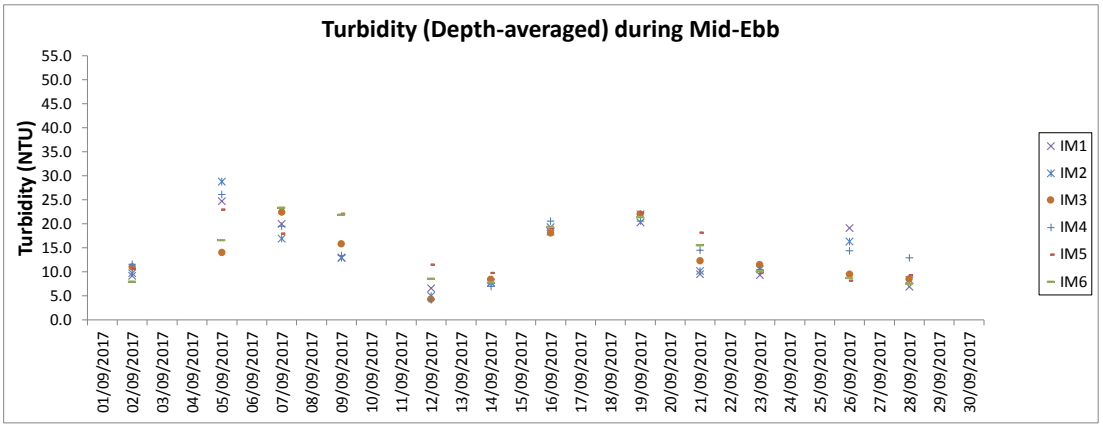

Dissolved Oxygen (Bottom) during Mid-Flood
Concentration (mg/L)
12.0
10.0
8.0
6.0
4.0
2.0
0.0
01/09/2017
02/09/2017
03/09/2017
04/09/2017
05/09/2017
06/09/2017
07/09/2017
08/09/2017
09/09/2017
10/09/2017
11/09/2017
12/09/2017
13/09/2017
14/09/2017
15/09/2017
16/09/2017
17/09/2017
18/09/2017
19/09/2017
20/09/2017
21/09/2017
22/09/2017
23/09/2017
24/09/2017
25/09/2017
26/09/2017
27/09/2017
28/09/2017
29/09/2017
30/09/2017
C1
C2
C3
SR2
AL
LL

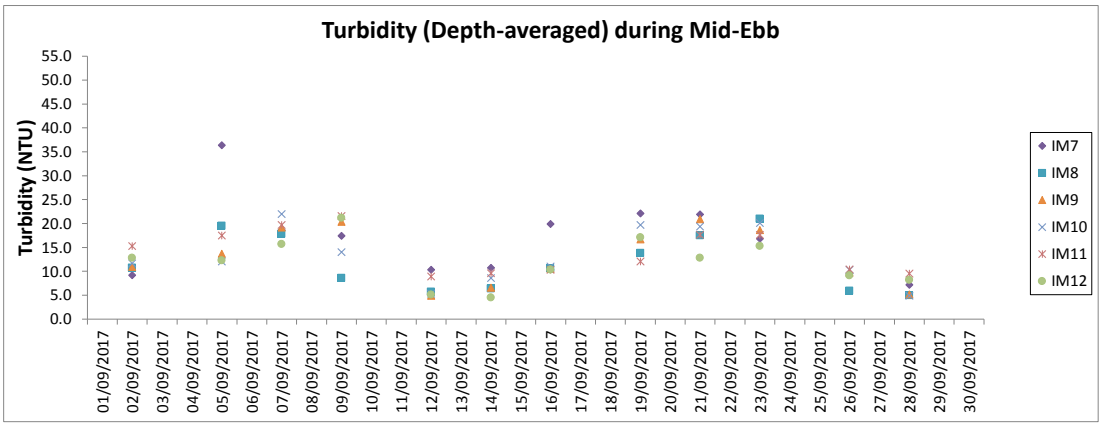

Dissolved Oxygen (Bottom) during Mid-Flood
Concentration (mg/L)
12.0
10.0
8.0
6.0
4.0
2.0
0.0
01/09/2017
02/09/2017
03/09/2017
04/09/2017
05/09/2017
06/09/2017
07/09/2017
08/09/2017
09/09/2017
10/09/2017
11/09/2017
12/09/2017
13/09/2017
14/09/2017
15/09/2017
16/09/2017
17/09/2017
18/09/2017
19/09/2017
20/09/2017
21/09/2017
22/09/2017
23/09/2017
24/09/2017
25/09/2017
26/09/2017
27/09/2017
28/09/2017
29/09/2017
30/09/2017
IM1
IM2
IM3
IM4
IM5
IM6
AL
LL

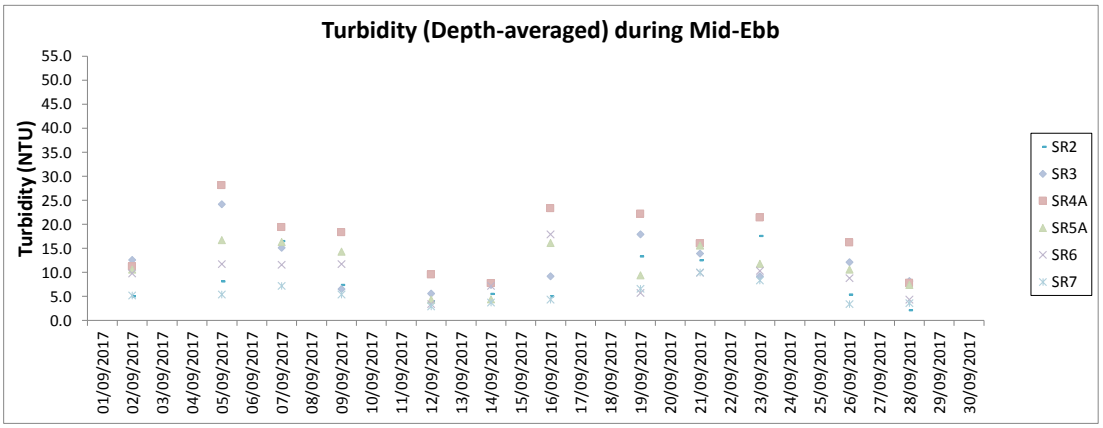

Dissolved Oxygen (Bottom) during Mid-Flood
Concentration (mg/L)
12.0
10.0
8.0
6.0
4.0
2.0
0.0
01/09/2017
02/09/2017
03/09/2017
04/09/2017
05/09/2017
06/09/2017
07/09/2017
08/09/2017
09/09/2017
10/09/2017
11/09/2017
12/09/2017
13/09/2017
14/09/2017
15/09/2017
16/09/2017
17/09/2017
18/09/2017
19/09/2017
20/09/2017
21/09/2017
22/09/2017
23/09/2017
24/09/2017
25/09/2017
26/09/2017
27/09/2017
28/09/2017
29/09/2017
30/09/2017
IM7
IM8
IM9
IM10
IM11
IM12
AL
LL


Dissolved Oxygen (Bottom) during Mid-Flood
Concentration (mg/L)
12.0
10.0
8.0
6.0
4.0
2.0
0.0
01/09/2017
02/09/2017
03/09/2017
04/09/2017
05/09/2017
06/09/2017
07/09/2017
08/09/2017
09/09/2017
10/09/2017
11/09/2017
12/09/2017
13/09/2017
14/09/2017
15/09/2017
16/09/2017
17/09/2017
18/09/2017
19/09/2017
20/09/2017
21/09/2017
22/09/2017
23/09/2017
24/09/2017
25/09/2017
26/09/2017
27/09/2017
28/09/2017
29/09/2017
30/09/2017
SR3
SR4A
SR5A
SR6
SR7
SR8
AL
LL

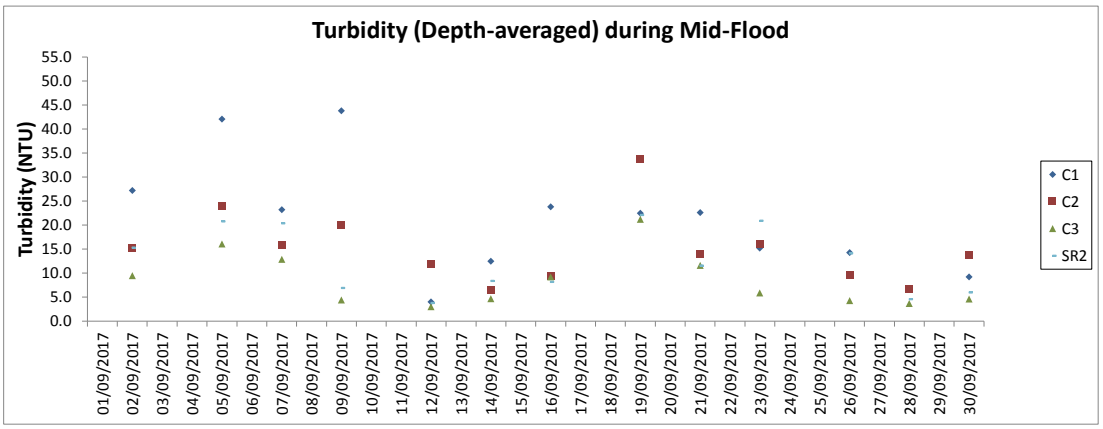


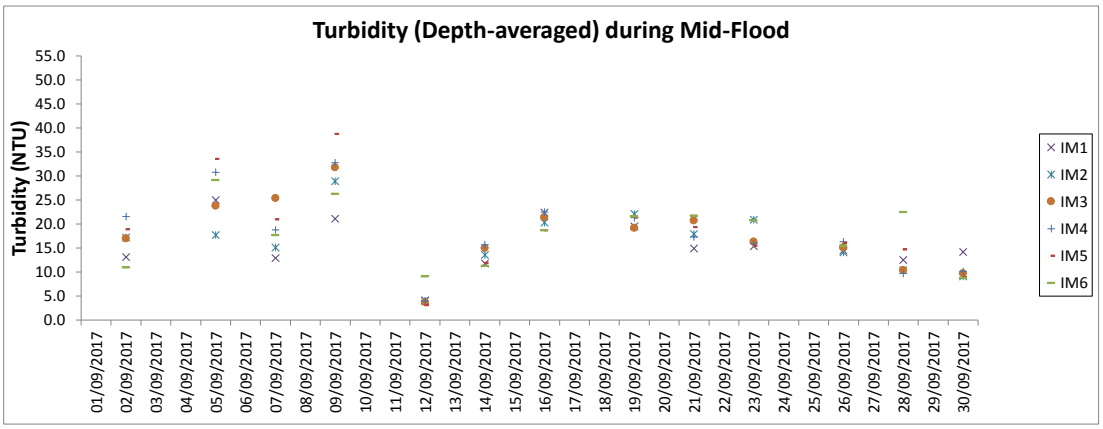


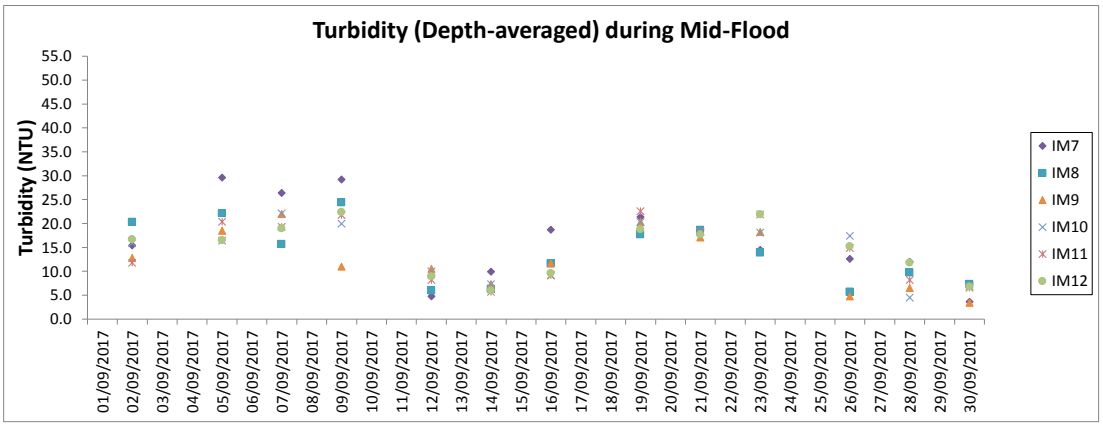


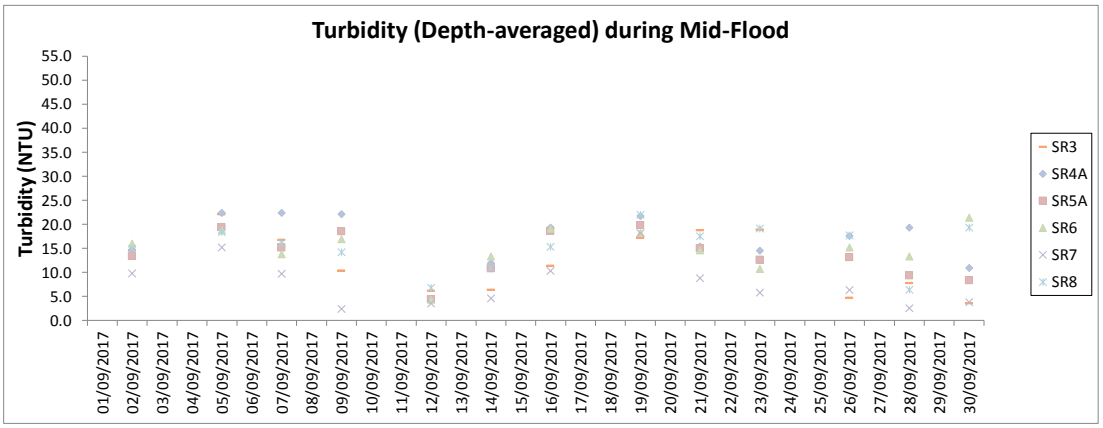


Note: The Action and Limit Level of turbidity can be referred to Table 4.2 of the monthly EM&A report.

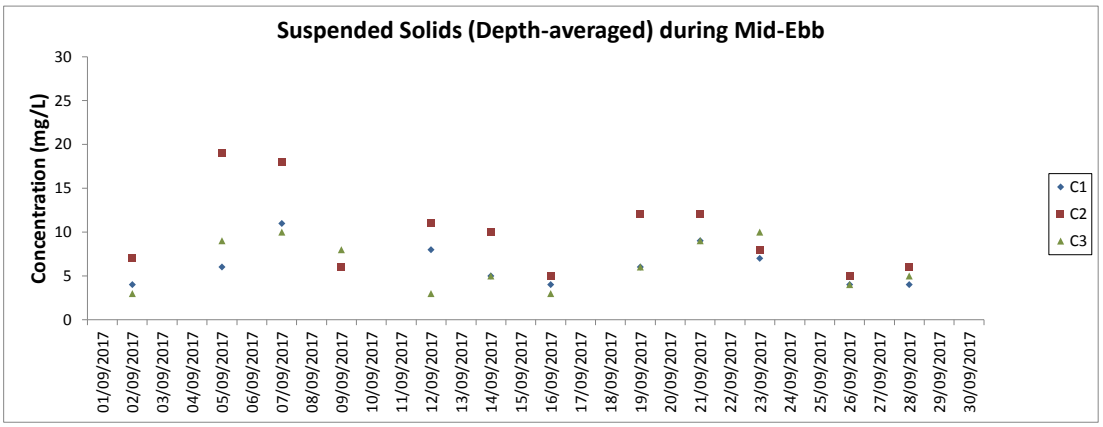


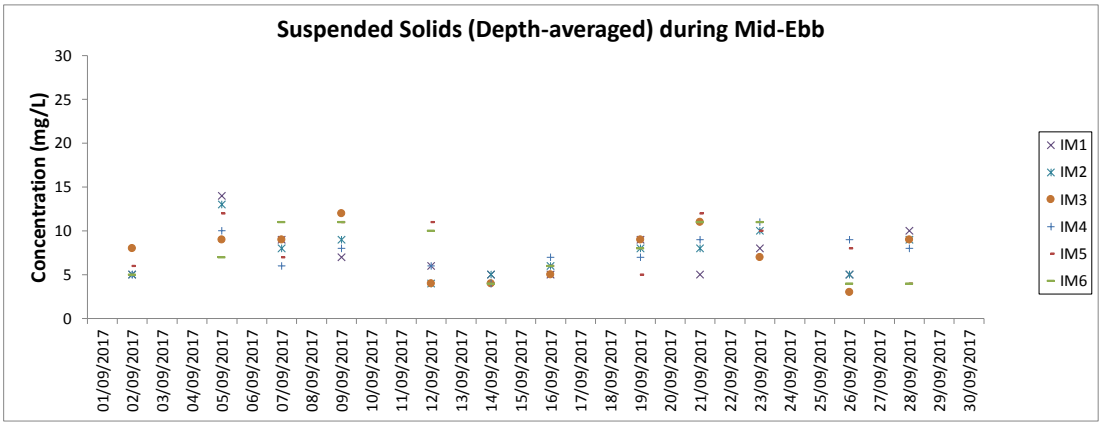


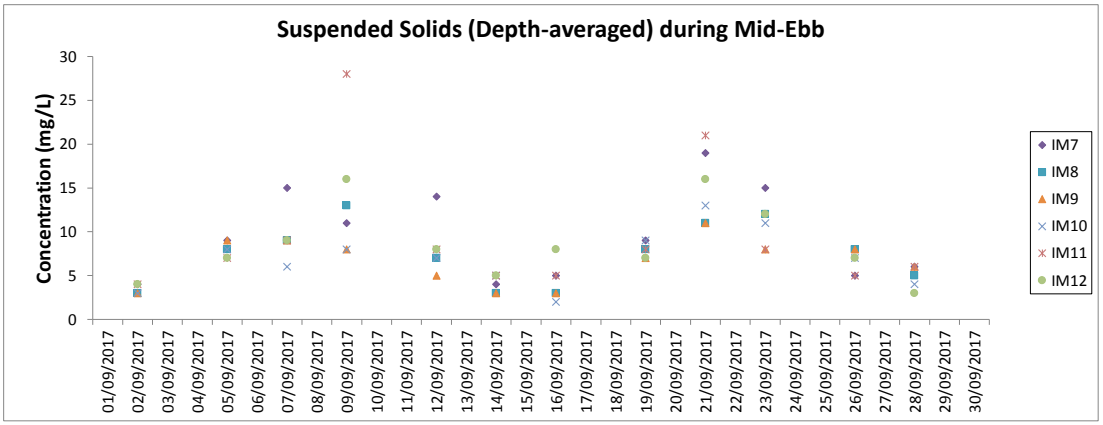


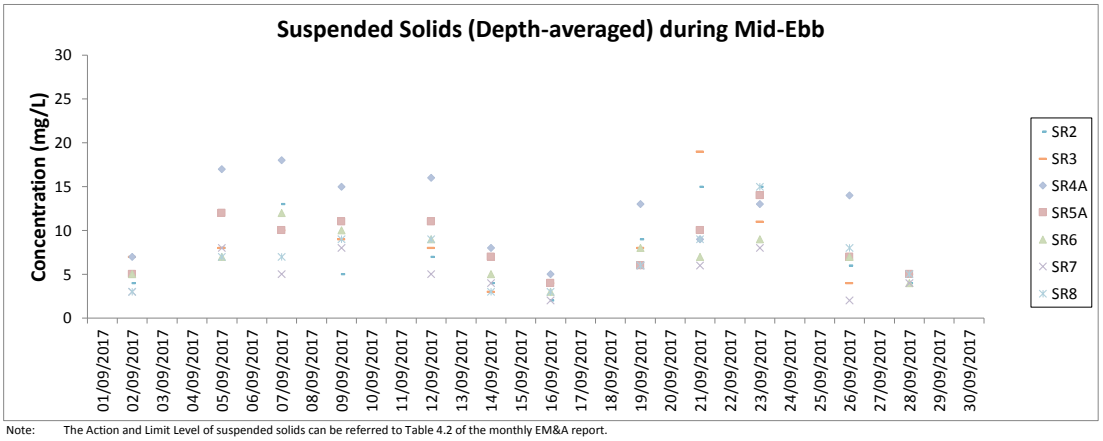


Note: The Action and Limit Level of turbidity can be referred to Table 4.2 of the monthly EM&A report.

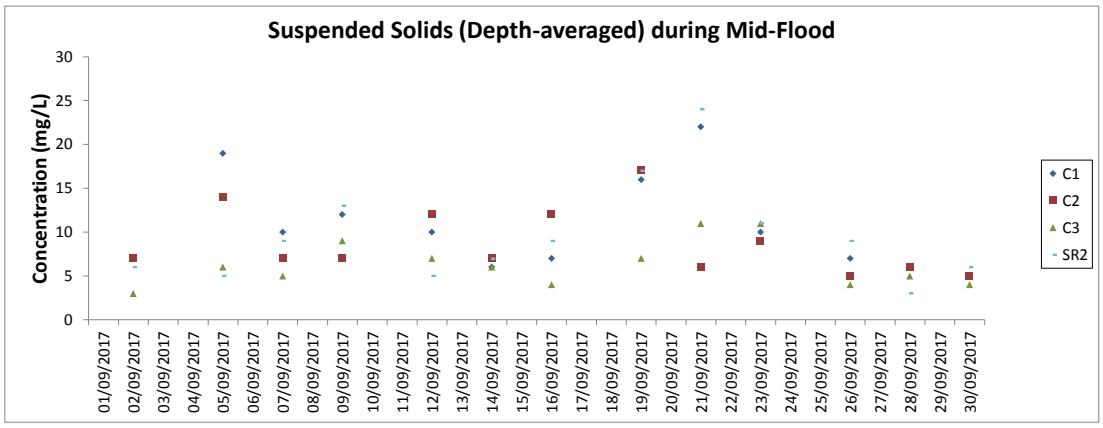


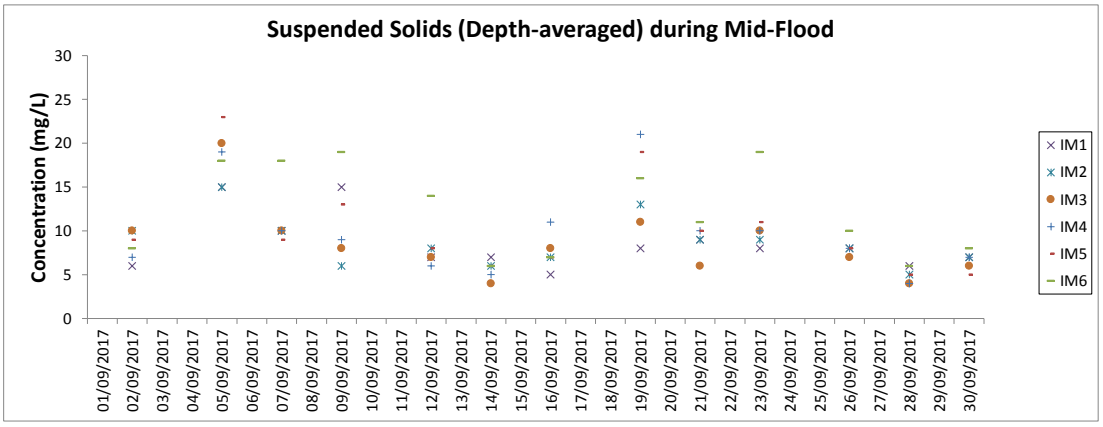


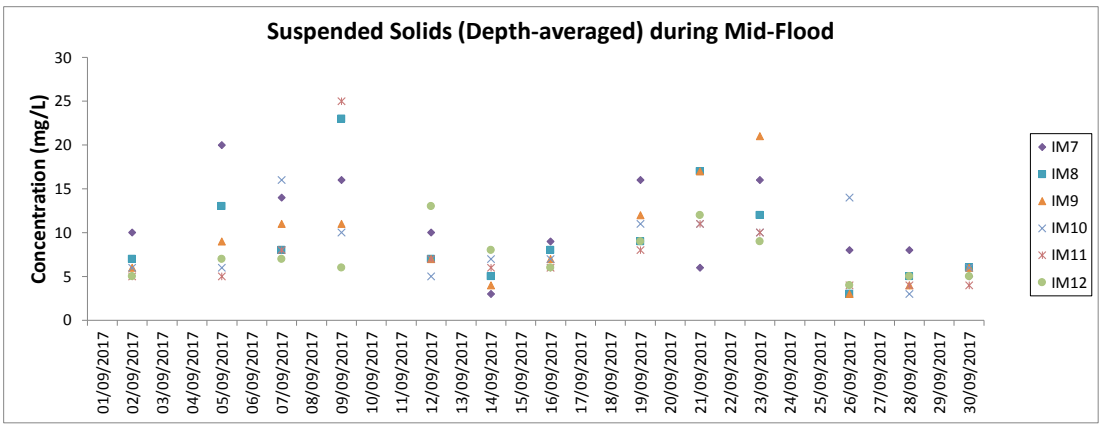


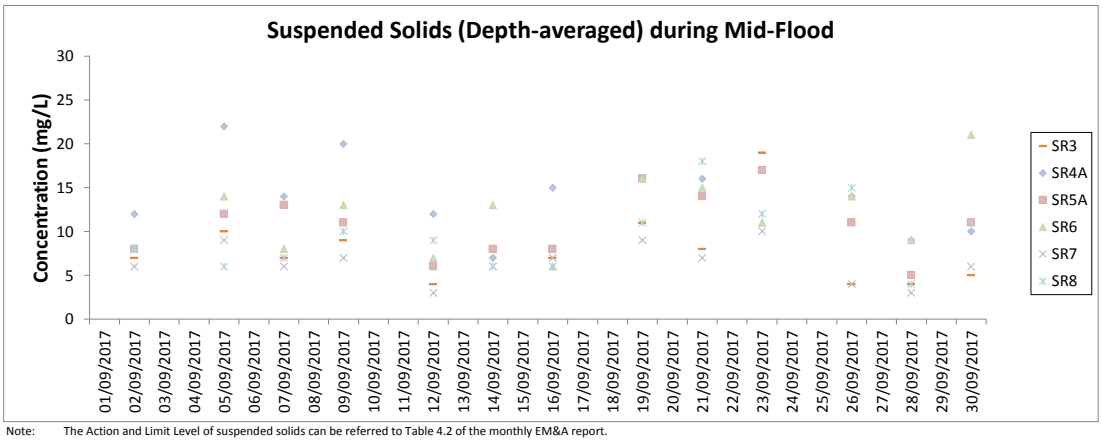


Note: The Action and Limit Level of suspended solids can be referred to Table 4.2 of the monthly EM&A report.

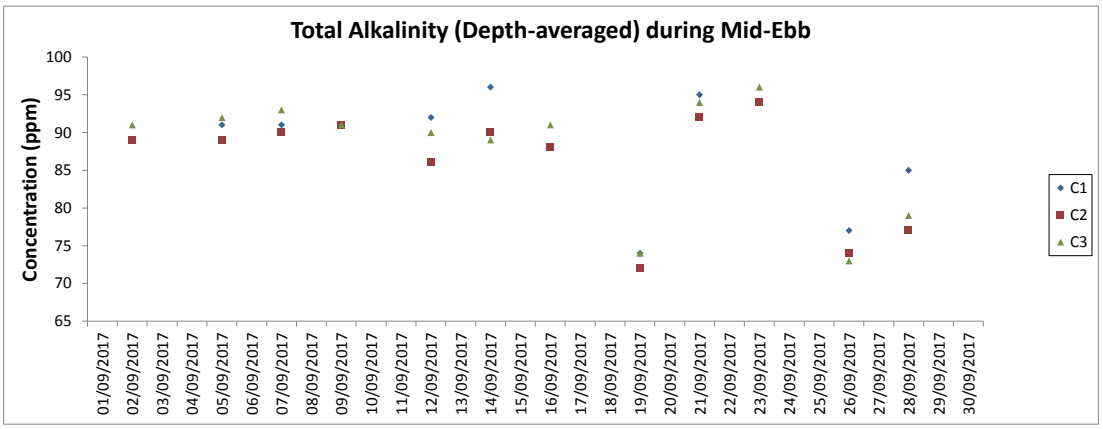


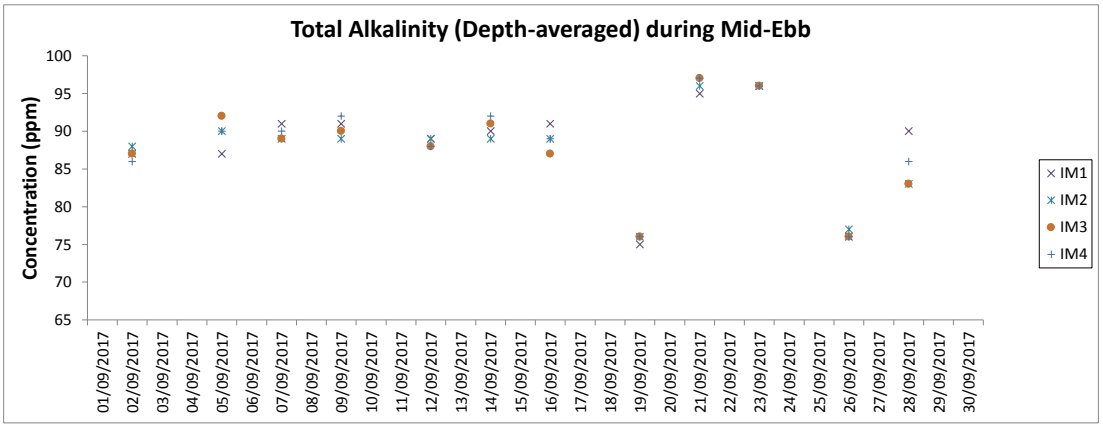


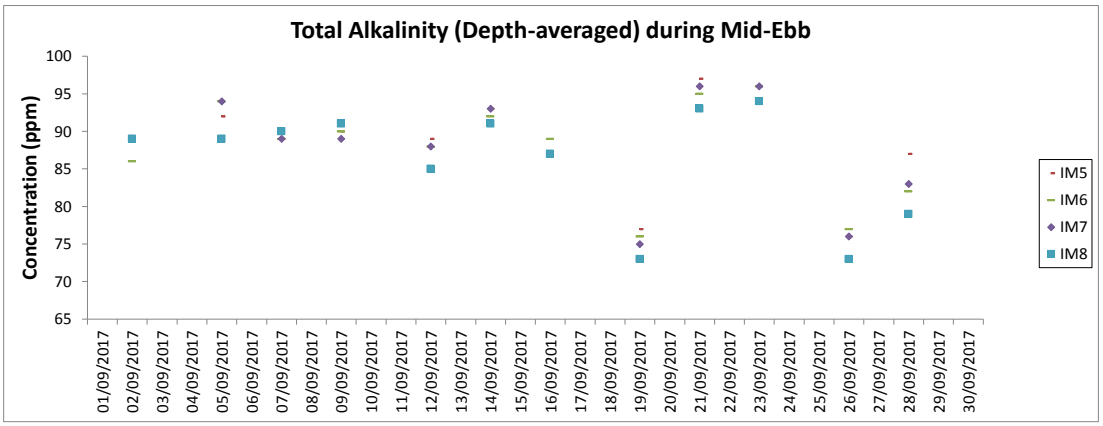


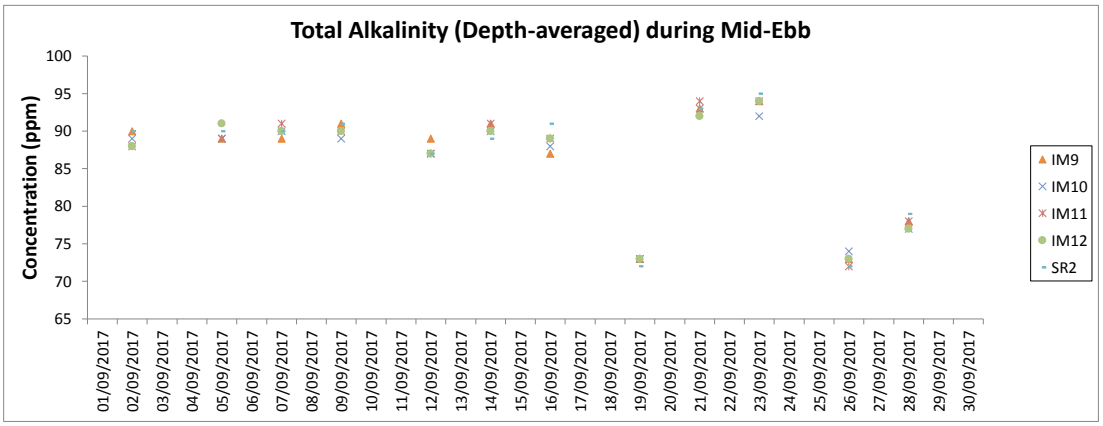


Note: The Action and Limit Level of suspended solids can be referred to Table 4.2 of the monthly EM&A report.

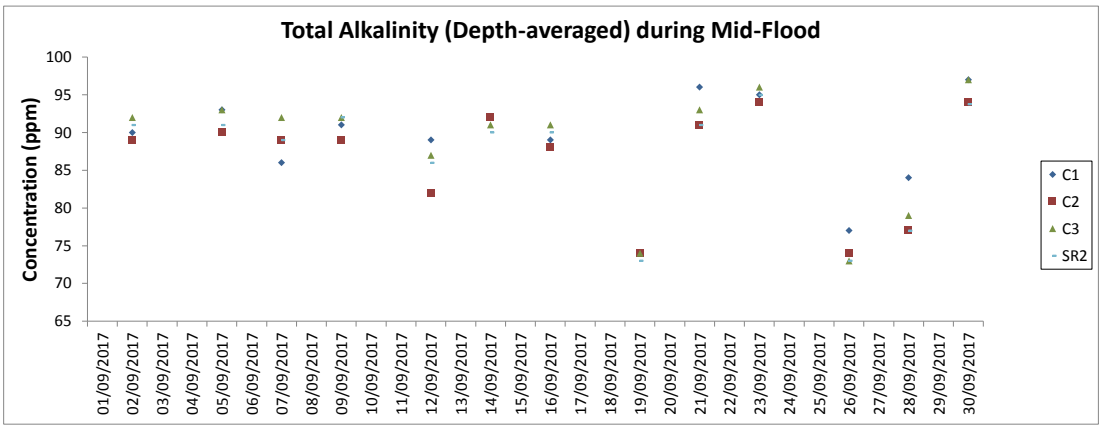


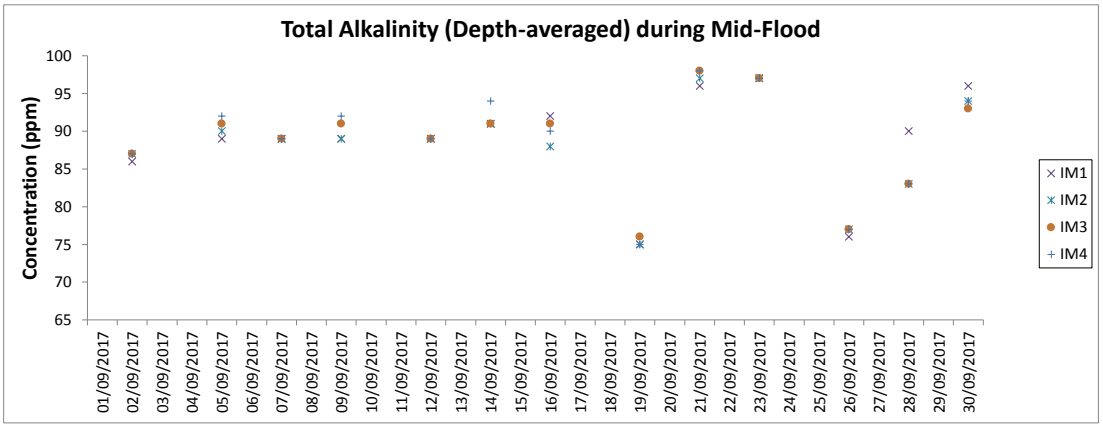


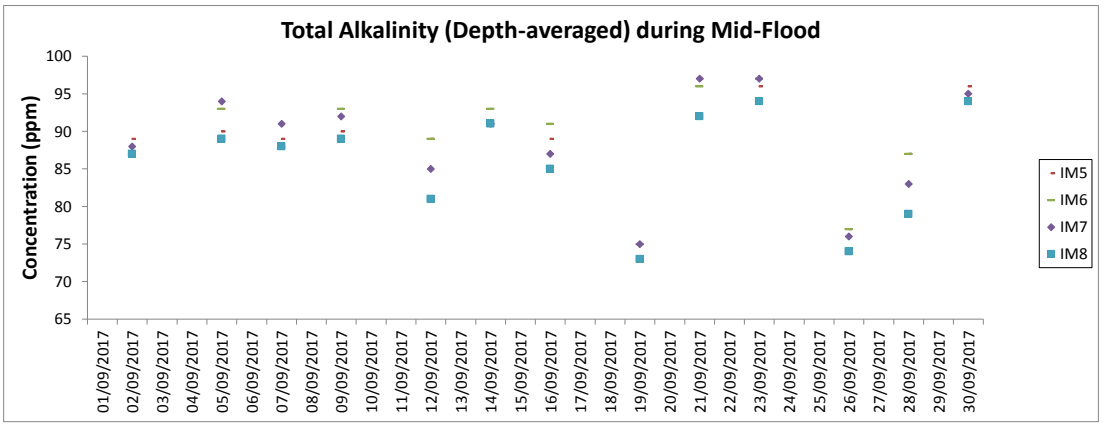


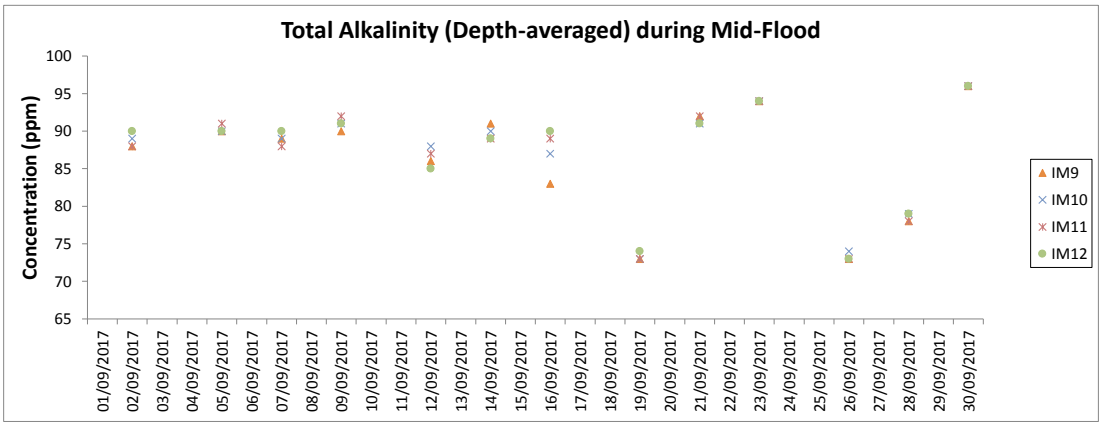


Note: The Action and Limit Level of total alkalinity can be referred to Table 4.2 of the monthly EM&A report.

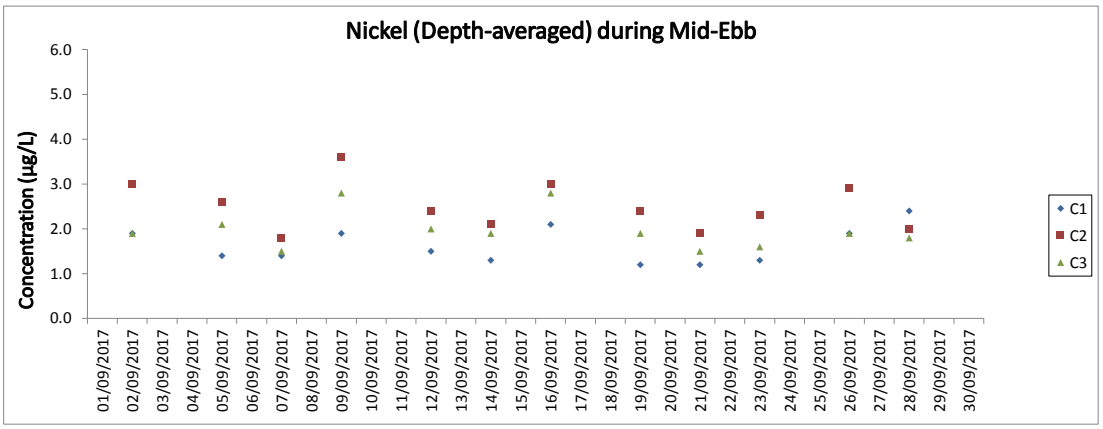


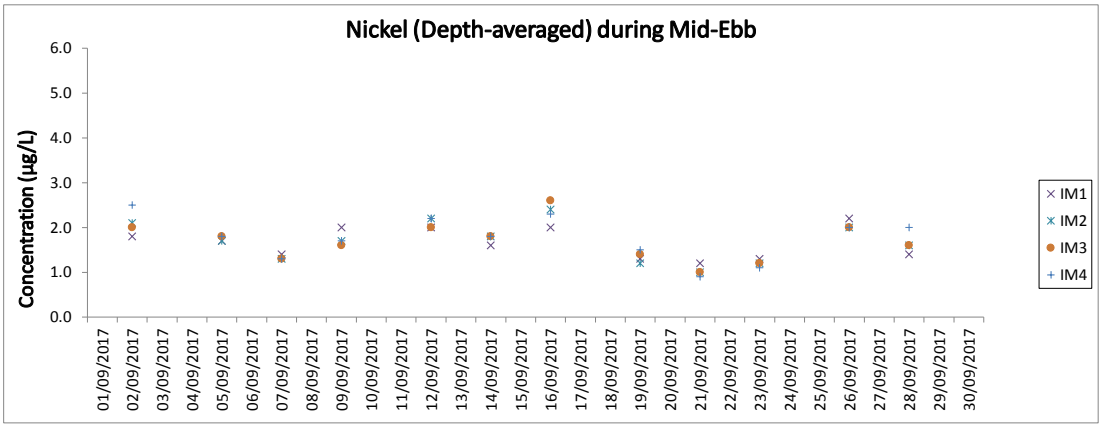


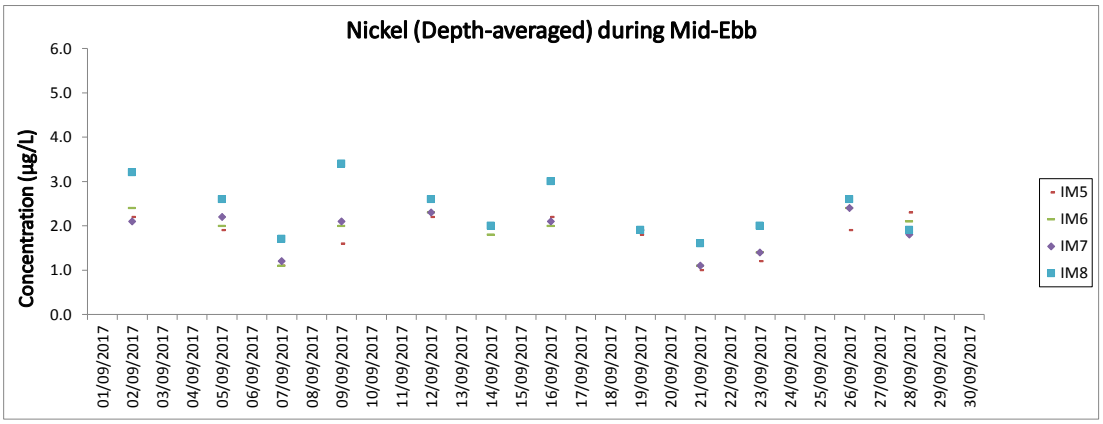


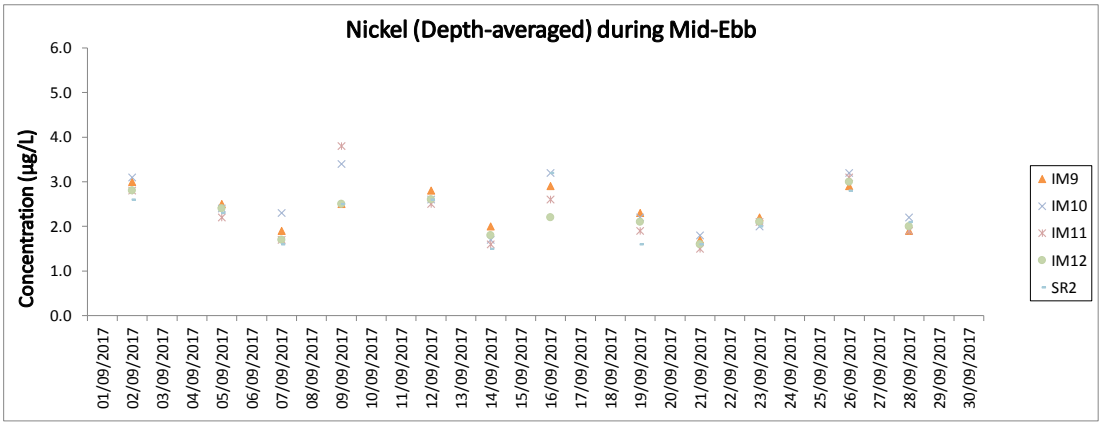


Note: The Action and Limit Level of total alkalinity can be referred to Table 4.2 of the monthly EM&A report.

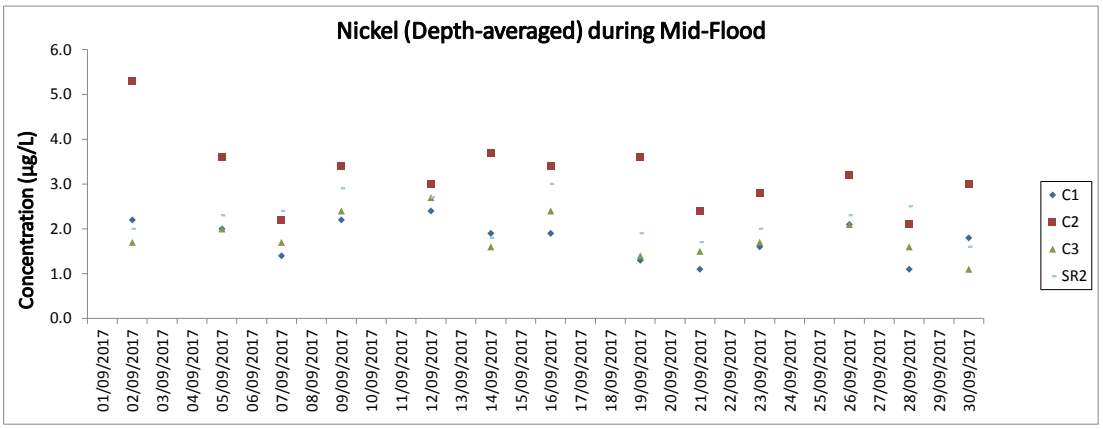


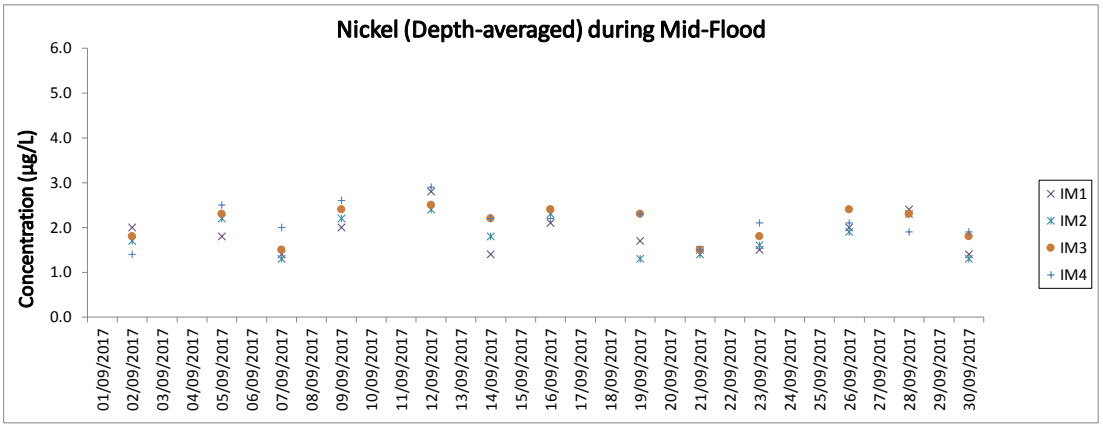


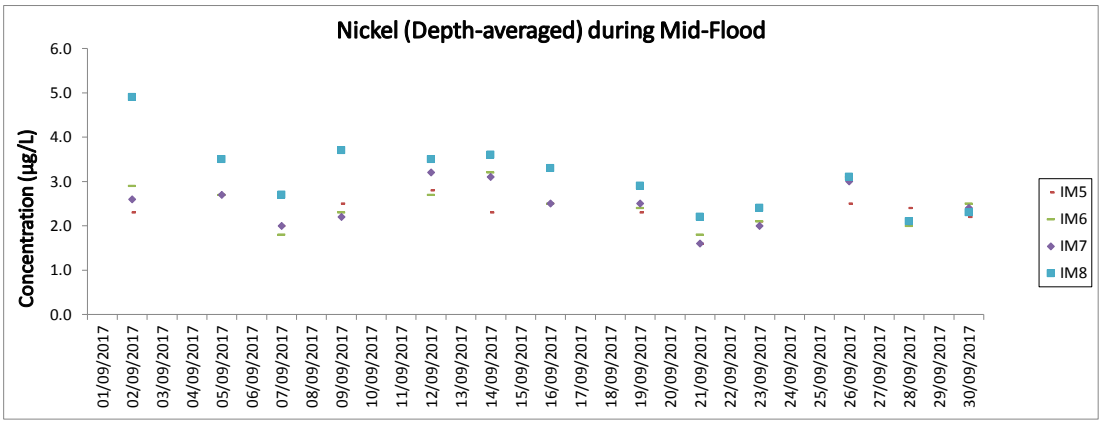


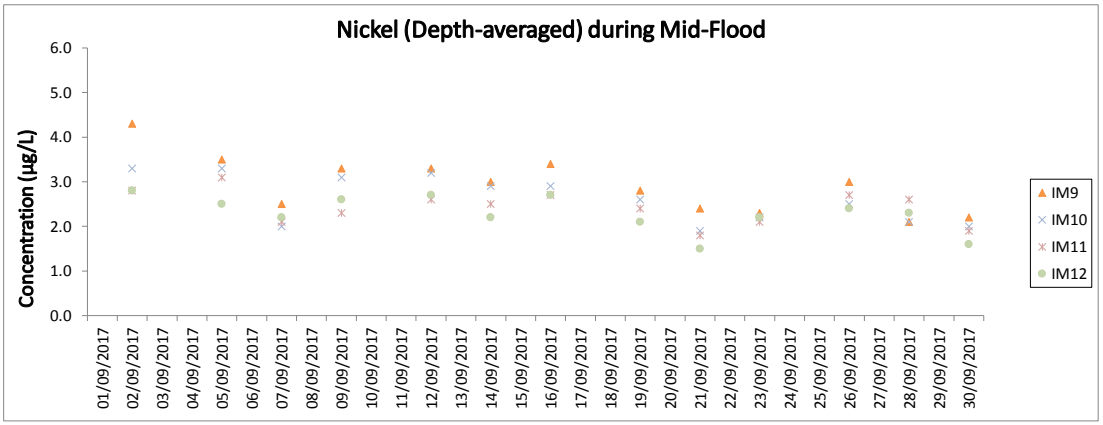


Note: The Action and Limit Level of nickel can be referred to Table 4.2 of the monthly EM&A report.
All chromium results in the reporting period was below the reporting limit 0.2 µg/L.









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

Chinese White Dolphin Monitoring Results

CWD Small Vessel Line-transect Survey — Survey Effort Data

DATE	AREA	BEAU	KM SEARCHED	SEASON	VESSEL	TYPE
11-Jul-17	AW	2	4.860	SUMMER	32166	3RS ET
11-Jul-17	WL	2	12.725	SUMMER	32166	3RS ET
11-Jul-17	WL	3	13.429	SUMMER	32166	3RS ET
11-Jul-17	WL	4	2.400	SUMMER	32166	3RS ET
11-Jul-17	SWL	2	1.616	SUMMER	32166	3RS ET
11-Jul-17	SWL	3	3.150	SUMMER	32166	3RS ET
12-Jul-17	NWL	1	16.730	SUMMER	32166	3RS ET
12-Jul-17	NWL	2	27.170	SUMMER	32166	3RS ET
12-Jul-17	NWL	3	30.520	SUMMER	32166	3RS ET
12-Jul-17	NWL	4	0.700	SUMMER	32166	3RS ET
13-Jul-17	NEL	2	4.253	SUMMER	32166	3RS ET
13-Jul-17	NEL	3	27.477	SUMMER	32166	3RS ET
13-Jul-17	NEL	4	14.770	SUMMER	32166	3RS ET
14-Jul-17	NWL	2	29.960	SUMMER	32166	3RS ET
14-Jul-17	NWL	3	33.840	SUMMER	32166	3RS ET
14-Jul-17	NWL	4	9.330	SUMMER	32166	3RS ET
20-Jul-17	SWL	2	9.500	SUMMER	32166	3RS ET
20-Jul-17	SWL	3	39.350	SUMMER	32166	3RS ET
20-Jul-17	SWL	4	12.780	SUMMER	32166	3RS ET
20-Jul-17	SWL	5	1.030	SUMMER	32166	3RS ET
21-Jul-17	AW	2	3.510	SUMMER	32166	3RS ET
21-Jul-17	AW	3	1.320	SUMMER	32166	3RS ET
21-Jul-17	WL	2	13.854	SUMMER	32166	3RS ET
21-Jul-17	WL	3	10.040	SUMMER	32166	3RS ET
21-Jul-17	WL	4	7.050	SUMMER	32166	3RS ET
21-Jul-17	SWL	3	1.970	SUMMER	32166	3RS ET
21-Jul-17	SWL	4	4.660	SUMMER	32166	3RS ET
25-Jul-17	NEL	2	31.060	SUMMER	32166	3RS ET
25-Jul-17	NEL	3	15.740	SUMMER	32166	3RS ET
26-Jul-17	SWL	2	41.124	SUMMER	32166	3RS ET
26-Jul-17	SWL	3	11.530	SUMMER	32166	3RS ET
26-Jul-17	SWL	4	9.430	SUMMER	32166	3RS ET
04-Aug-17	NWL	1	11.000	SUMMER	32166	3RS ET
04-Aug-17	NWL	2	20.300	SUMMER	32166	3RS ET
04-Aug-17	NWL	3	42.293	SUMMER	32166	3RS ET
04-Aug-17	NWL	4	0.300	SUMMER	32166	3RS ET
08-Aug-17	NWL	3	16.760	SUMMER	32166	3RS ET
08-Aug-17	NWL	4	57.140	SUMMER	32166	3RS ET
08-Aug-17	NWL	5	0.800	SUMMER	32166	3RS ET
09-Aug-17	NEL	2	29.120	SUMMER	32166	3RS ET
09-Aug-17	NEL	3	11.010	SUMMER	32166	3RS ET
09-Aug-17	NEL	4	4.470	SUMMER	32166	3RS ET
09-Aug-17	NEL	5	2.600	SUMMER	32166	3RS ET
14-Aug-17	AW	3	1.820	SUMMER	32166	3RS ET
14-Aug-17	AW	4	2.840	SUMMER	32166	3RS ET
14-Aug-17	WL	3	12.390	SUMMER	32166	3RS ET

DATE	AREA	BEAU	KM SEARCHED	SEASON	VESSEL	TYPE
14-Aug-17	WL	4	20.110	SUMMER	32166	3RS ET
14-Aug-17	SWL	3	12.400	SUMMER	32166	3RS ET
15-Aug-17	SWL	2	24.510	SUMMER	32166	3RS ET
15-Aug-17	SWL	3	29.836	SUMMER	32166	3RS ET
15-Aug-17	SWL	4	0.740	SUMMER	32166	3RS ET
21-Aug-17	SWL	1	2.600	SUMMER	32166	3RS ET
21-Aug-17	SWL	2	48.228	SUMMER	32166	3RS ET
21-Aug-17	SWL	3	7.160	SUMMER	32166	3RS ET
21-Aug-17	SWL	4	1.530	SUMMER	32166	3RS ET
22-Aug-17	AW	0	1.880	SUMMER	32166	3RS ET
22-Aug-17	AW	1	2.410	SUMMER	32166	3RS ET
22-Aug-17	WL	1	9.997	SUMMER	32166	3RS ET
22-Aug-17	WL	2	9.174	SUMMER	32166	3RS ET
22-Aug-17	WL	3	12.400	SUMMER	32166	3RS ET
22-Aug-17	WL	4	0.900	SUMMER	32166	3RS ET
22-Aug-17	SWL	1	1.940	SUMMER	32166	3RS ET
22-Aug-17	SWL	2	0.252	SUMMER	32166	3RS ET
22-Aug-17	SWL	3	3.154	SUMMER	32166	3RS ET
25-Aug-17	NEL	1	1.900	SUMMER	32166	3RS ET
25-Aug-17	NEL	2	34.960	SUMMER	32166	3RS ET
25-Aug-17	NEL	3	9.940	SUMMER	32166	3RS ET
11-Sep-17	SWL	1	9.330	AUTUMN	32166	3RS ET
11-Sep-17	SWL	2	51.970	AUTUMN	32166	3RS ET
12-Sep-17	SWL	3	5.564	AUTUMN	32166	3RS ET
12-Sep-17	SWL	4	1.334	AUTUMN	32166	3RS ET
12-Sep-17	WL	2	23.366	AUTUMN	32166	3RS ET
12-Sep-17	WL	3	8.530	AUTUMN	32166	3RS ET
12-Sep-17	WL	4	0.590	AUTUMN	32166	3RS ET
12-Sep-17	AW	2	4.850	AUTUMN	32166	3RS ET
13-Sep-17	NEL	1	5.293	AUTUMN	32166	3RS ET
13-Sep-17	NEL	2	41.007	AUTUMN	32166	3RS ET
13-Sep-17	NEL	3	1.200	AUTUMN	32166	3RS ET
14-Sep-17	NEL	2	21.130	AUTUMN	32166	3RS ET
14-Sep-17	NEL	3	24.570	AUTUMN	32166	3RS ET
14-Sep-17	NEL	4	1.500	AUTUMN	32166	3RS ET
18-Sep-17	NWL	1	1.020	AUTUMN	32166	3RS ET
18-Sep-17	NWL	2	26.330	AUTUMN	32166	3RS ET
18-Sep-17	NWL	3	19.210	AUTUMN	32166	3RS ET
18-Sep-17	NWL	4	22.550	AUTUMN	32166	3RS ET
19-Sep-17	AW	2	2.890	AUTUMN	32166	3RS ET
19-Sep-17	AW	3	1.840	AUTUMN	32166	3RS ET
19-Sep-17	WL	1	3.460	AUTUMN	32166	3RS ET
19-Sep-17	WL	2	4.998	AUTUMN	32166	3RS ET
19-Sep-17	WL	3	7.760	AUTUMN	32166	3RS ET
19-Sep-17	WL	4	13.081	AUTUMN	32166	3RS ET
19-Sep-17	SWL	2	3.010	AUTUMN	32166	3RS ET
19-Sep-17	SWL	3	3.250	AUTUMN	32166	3RS ET

DATE	AREA	BEAU	KM SEARCHED	SEASON	VESSEL	TYPE
19-Sep-17	SWL	4	5.750	AUTUMN	32166	3RS ET
20-Sep-17	SWL	2	13.420	AUTUMN	32166	3RS ET
20-Sep-17	SWL	3	38.810	AUTUMN	32166	3RS ET
20-Sep-17	SWL	4	4.360	AUTUMN	32166	3RS ET
21-Sep-17	NWL	1	4.500	AUTUMN	32166	3RS ET
21-Sep-17	NWL	2	67.480	AUTUMN	32166	3RS ET

Notes:

CWD monitoring survey data of the two preceding survey months (i.e. July and August 2017) 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.
11-Jul-17	1	1038	CWD	2	WL	2	82	ON	3RS ET	22.2668	113.8592	SUMMER	NONE
11-Jul-17	2	1055	CWD	8	WL	2	19	ON	3RS ET	22.2608	113.8536	SUMMER	NONE
11-Jul-17	3	1133	CWD	2	WL	3	351	ON	3RS ET	22.2498	113.8403	SUMMER	NONE
11-Jul-17	4	1144	CWD	1	WL	2	8	ON	3RS ET	22.2500	113.8500	SUMMER	NONE
11-Jul-17	5	1159	CWD	4	WL	2	726	ON	3RS ET	22.2432	113.8488	SUMMER	NONE
11-Jul-17	6	1216	CWD	1	WL	2	17	ON	3RS ET	22.2414	113.8463	SUMMER	NONE
11-Jul-17	7	1242	CWD	2	WL	3	11	ON	3RS ET	22.2279	113.8378	SUMMER	NONE
11-Jul-17	8	1259	CWD	2	WL	3	196	ON	3RS ET	22.2185	113.8137	SUMMER	NONE
11-Jul-17	9	1318	CWD	2	WL	3	16	ON	3RS ET	22.2143	113.8333	SUMMER	NONE
11-Jul-17	10	1350	CWD	7	WL	4	324	ON	3RS ET	22.1969	113.8397	SUMMER	NONE
11-Jul-17	11	1414	CWD	3	WL	4	157	ON	3RS ET	22.1864	113.8401	SUMMER	NONE
11-Jul-17	12	1435	CWD	4	SWL	2	118	ON	3RS ET	22.1903	113.8499	SUMMER	NONE
11-Jul-17	13	1506	CWD	4	SWL	2	299	ON	3RS ET	22.1883	113.8593	SUMMER	NONE
12-Jul-17	1	0950	CWD	2	NWL	1	70	ON	3RS ET	22.3715	113.8673	SUMMER	NONE
12-Jul-17	2	1316	CWD	1	NWL	3	102	ON	3RS ET	22.3998	113.8983	SUMMER	NONE
14-Jul-17	1	0953	CWD	1	NWL	3	351	ON	3RS ET	22.3615	113.8666	SUMMER	NONE
14-Jul-17	2	1048	CWD	2	NWL	2	890	ON	3RS ET	22.2773	113.8689	SUMMER	NONE
14-Jul-17	3	1210	CWD	1	NWL	2	169	ON	3RS ET	22.3909	113.8780	SUMMER	NONE
20-Jul-17	1	1412	CWD	2	SWL	3	319	ON	3RS ET	22.1776	113.8785	SUMMER	NONE
20-Jul-17	2	1457	CWD	1	SWL	3	2226	ON	3RS ET	22.1900	113.8678	SUMMER	NONE
20-Jul-17	3	1524	CWD	3	WL	2	N/A	OFF	3RS ET	22.2178	113.8339	SUMMER	NONE
21-Jul-17	1	1032	CWD	5	WL	2	20	ON	3RS ET	22.2649	113.8585	SUMMER	NONE
21-Jul-17	2	1131	CWD	2	WL	3	65	ON	3RS ET	22.2318	113.8372	SUMMER	NONE
21-Jul-17	3	1151	CWD	2	WL	2	17	ON	3RS ET	22.2288	113.8383	SUMMER	NONE
21-Jul-17	4	1208	CWD	2	WL	3	190	ON	3RS ET	22.2182	113.8138	SUMMER	NONE
21-Jul-17	5	1223	CWD	2	WL	4	27	ON	3RS ET	22.2139	113.8322	SUMMER	NONE
21-Jul-17	6	1243	CWD	1	WL	4	62	ON	3RS ET	22.2048	113.8383	SUMMER	NONE
21-Jul-17	7	1310	CWD	6	WL	3	27	ON	3RS ET	22.1956	113.8425	SUMMER	NONE
26-Jul-17	1	1026	CWD	1	WL	2	N/A	OFF	3RS ET	22.2362	113.8409	SUMMER	NONE
26-Jul-17	2	1033	CWD	2	WL	2	N/A	OFF	3RS ET	22.2183	113.8339	SUMMER	NONE
26-Jul-17	3	1045	CWD	2	SWL	2	N/A	OFF	3RS ET	22.1948	113.8509	SUMMER	NONE

DATE	STG #	TIME	CWD/FP	GP SZ	AREA	BEAU	PSD	EFFORT	TYPE	DEC LAT	DEC LON	SEASON	BOAT ASSOC.
26-Jul-17	4	1056	CWD	3	SWL	2	252	ON	3RS ET	22.1999	113.8684	SUMMER	NONE
26-Jul-17	5	1301	CWD	7	SWL	2	234	ON	3RS ET	22.2036	113.9083	SUMMER	NONE
26-Jul-17	6	1411	FP	2	SWL	3	87	ON	3RS ET	22.1534	113.9183	SUMMER	NONE
26-Jul-17	7	1437	CWD	2	SWL	3	711	ON	3RS ET	22.2040	113.9181	SUMMER	GILLNET
04-Aug-17	1	1202	CWD	2	NWL	3	41	ON	3RS ET	22.4075	113.8878	SUMMER	NONE
04-Aug-17	2	1322	CWD	3	NWL	3	42	ON	3RS ET	22.3735	113.8980	SUMMER	NONE
04-Aug-17	3	1339	CWD	3	NWL	1	3	ON	3RS ET	22.3782	113.8978	SUMMER	NONE
08-Aug-17	1	1305	CWD	2	NWL	4	N/A	OFF	3RS ET	22.3817	113.8981	SUMMER	NONE
14-Aug-17	1	1121	CWD	1	WL	3	98	ON	3RS ET	22.2321	113.8264	SUMMER	NONE
14-Aug-17	2	1242	CWD	2	WL	4	149	ON	3RS ET	22.1874	113.8301	SUMMER	NONE
14-Aug-17	3	1252	CWD	4	WL	4	N/A	OFF	3RS ET	22.1920	113.8425	SUMMER	NONE
14-Aug-17	4	1316	CWD	1	SWL	3	N/A	OFF	3RS ET	22.1906	113.8491	SUMMER	NONE
15-Aug-17	1	1029	CWD	1	SWL	2	303	ON	3RS ET	22.2108	113.9358	SUMMER	NONE
15-Aug-17	2	1131	CWD	1	SWL	3	182	ON	3RS ET	22.1818	113.9276	SUMMER	NONE
15-Aug-17	3	1255	CWD	5	SWL	2	146	ON	3RS ET	22.1784	113.9041	SUMMER	NONE
15-Aug-17	4	1338	CWD	1	SWL	3	1090	ON	3RS ET	22.1901	113.8967	SUMMER	NONE
15-Aug-17	5	1343	CWD	8	SWL	3	477	ON	3RS ET	22.1853	113.8973	SUMMER	NONE
15-Aug-17	6	1407	CWD	1	SWL	2	783	ON	3RS ET	22.1756	113.8969	SUMMER	NONE
15-Aug-17	7	1455	CWD	3	SWL	2	11	ON	3RS ET	22.1794	113.8876	SUMMER	NONE
21-Aug-17	1	1232	CWD	3	SWL	3	156	ON	3RS ET	22.1673	113.9050	SUMMER	GILLNET
21-Aug-17	2	1333	CWD	2	SWL	2	29	ON	3RS ET	22.1789	113.8982	SUMMER	NONE
21-Aug-17	3	1344	CWD	8	SWL	2	713	ON	3RS ET	22.1741	113.8972	SUMMER	NONE
21-Aug-17	4	1431	CWD	8	SWL	2	174	ON	3RS ET	22.1729	113.8875	SUMMER	NONE
21-Aug-17	5	1516	CWD	3	SWL	2	15	ON	3RS ET	22.1796	113.8786	SUMMER	NONE
21-Aug-17	6	1539	CWD	2	SWL	2	126	ON	3RS ET	22.1665	113.8688	SUMMER	NONE
21-Aug-17	7	1549	CWD	2	SWL	2	28	ON	3RS ET	22.1720	113.8690	SUMMER	NONE
22-Aug-17	1	0943	CWD	1	AW	1	87	ON	3RS ET	22.2965	113.8825	SUMMER	NONE
22-Aug-17	2	1031	CWD	1	WL	1	37	ON	3RS ET	22.2776	113.8518	SUMMER	NONE
22-Aug-17	3	1043	CWD	2	WL	1	6	ON	3RS ET	22.2684	113.8457	SUMMER	NONE
22-Aug-17	4	1059	CWD	2	WL	1	140	ON	3RS ET	22.2656	113.8585	SUMMER	NONE
22-Aug-17	5	1112	CWD	1	WL	1	189	ON	3RS ET	22.2609	113.8550	SUMMER	NONE
22-Aug-17	6	1127	CWD	6	WL	1	84	ON	3RS ET	22.2602	113.8396	SUMMER	NONE

DATE	STG #	TIME	CWD/FP	GP SZ	AREA	BEAU	PSD	EFFORT	TYPE	DEC LAT	DEC LON	SEASON	BOAT ASSOC.
22-Aug-17	7	1202	CWD	4	WL	2	149	ON	3RS ET	22.2419	113.8404	SUMMER	NONE
22-Aug-17	8	1326	CWD	1	WL	3	31	ON	3RS ET	22.1875	113.8419	SUMMER	NONE
22-Aug-17	9	1335	CWD	4	WL	2	376	ON	3RS ET	22.1865	113.8386	SUMMER	NONE
22-Aug-17	10	1408	CWD	3	SWL	3	182	ON	3RS ET	22.1718	113.8533	SUMMER	NONE
22-Aug-17	11	1432	CWD	4	SWL	2	210	ON	3RS ET	22.1748	113.8594	SUMMER	NONE
11-Sep-17	1	1131	CWD	1	SWL	2	83	ON	3RS ET	22.2054	113.9212	AUTUMN	NONE
11-Sep-17	2	1344	CWD	4	SWL	1	780	ON	3RS ET	22.1795	113.8881	AUTUMN	NONE
12-Sep-17	1	1045	CWD	1	SWL	4	93	ON	3RS ET	22.1932	113.8584	AUTUMN	NONE
12-Sep-17	2	1110	CWD	3	SWL	3	N/A	OFF	3RS ET	22.1814	113.8492	AUTUMN	NONE
12-Sep-17	3	1211	CWD	4	WL	2	53	ON	3RS ET	22.2150	113.8309	AUTUMN	NONE
12-Sep-17	4	1347	CWD	3	WL	2	60	ON	3RS ET	22.2608	113.8471	AUTUMN	NONE
12-Sep-17	5	1358	CWD	3	WL	2	107	ON	3RS ET	22.2640	113.8582	AUTUMN	NONE
18-Sep-17	1	1009	CWD	15	NWL	2	248	ON	3RS ET	22.3365	113.8679	AUTUMN	NONE
18-Sep-17	2	1211	CWD	2	NWL	2	151	ON	3RS ET	22.4006	113.8778	AUTUMN	NONE
18-Sep-17	3	1345	CWD	1	NWL	3	65	ON	3RS ET	22.4003	113.8976	AUTUMN	NONE
19-Sep-17	1	1020	CWD	6	WL	1	860	ON	3RS ET	22.2745	113.8488	AUTUMN	NONE
19-Sep-17	2	1106	CWD	4	WL	2	57	ON	3RS ET	22.2652	113.8578	AUTUMN	NONE
19-Sep-17	3	1126	CWD	2	WL	2	428	ON	3RS ET	22.2603	113.8454	AUTUMN	NONE
19-Sep-17	4	1134	CWD	1	WL	3	30	ON	3RS ET	22.2573	113.8371	AUTUMN	NONE
19-Sep-17	5	1145	CWD	1	WL	3	18	ON	3RS ET	22.2497	113.8429	AUTUMN	NONE
19-Sep-17	6	1202	CWD	3	WL	3	73	ON	3RS ET	22.2408	113.8386	AUTUMN	NONE
19-Sep-17	7	1258	CWD	1	WL	4	113	ON	3RS ET	22.2053	113.8363	AUTUMN	NONE
19-Sep-17	8	1420	CWD	1	SWL	2	261	ON	3RS ET	22.2004	113.8659	AUTUMN	NONE
20-Sep-17	1	1215	CWD	7	SWL	2	305	ON	3RS ET	22.1643	113.9011	AUTUMN	NONE
20-Sep-17	2	1332	CWD	5	SWL	3	90	ON	3RS ET	22.1576	113.8969	AUTUMN	NONE
20-Sep-17	3	1434	CWD	3	SWL	2	496	ON	3RS ET	22.2053	113.8777	AUTUMN	NONE
20-Sep-17	4	1534	CWD	3	SWL	3	N/A	OFF	3RS ET	22.1931	113.8450	AUTUMN	NONE
21-Sep-17	1	0952	CWD	1	NWL	2	1308	ON	3RS ET	22.3786	113.8681	AUTUMN	NONE
21-Sep-17	2	1005	CWD	1	NWL	2	N/A	OFF	3RS ET	22.3685	113.8679	AUTUMN	NONE
21-Sep-17	3	1148	CWD	1	NWL	2	284	ON	3RS ET	22.3730	113.8773	AUTUMN	NONE
21-Sep-17	4	1204	CWD	2	NWL	2	124	ON	3RS ET	22.3901	113.8784	AUTUMN	NONE

Abbreviations: STG# = Sighting Number; GP SZ = Dolphin 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

Notes:

CWD monitoring survey data of the two preceding survey months (i.e. July and August 2017) are presented for reference only. No relevant figure or text will be mentioned in the 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 September 2017 encounter rates STG and ANI in the whole survey area (NEL, NWL, AW, WL, SWL):

A total of 394.788 km of survey effort was collected under Beaufort Sea State 3 or below with favourable visibility; total no. of 21 on-effort sightings and total number of 70 dolphins from on-effort sightings were collected under such condition. Calculation of the encounter rates in September 2017 are shown as below:

Encounter Rate by Number of Dolphin Sightings (STG) in September 2017

$$STG = \frac{21}{394.788}\ x\ 100 = 5.32$$

Encounter Rate by Number of Dolphins (ANI) in September 2017

$$ANI = \frac{70}{394.788}\ x\ 100 = 17.73$$

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

A total of 1136.950 km of survey effort was collected under Beaufort Sea State 3 or below with favourable visibility; total no. of 76 on-effort sightings and total number of 227 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)

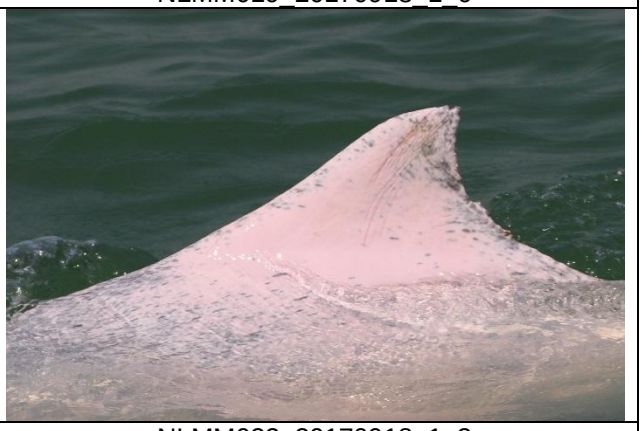
$$STG = \frac{76}{1136.950}\ x\ 100 = 6.68$$

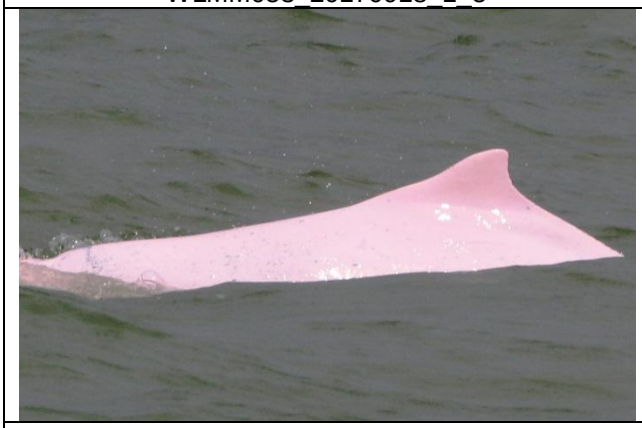
Running Quarterly Encounter Rate by Number of Dolphins (ANI)

$$ANI = \frac{227}{1136.950}\ x\ 100 = 19.97$$

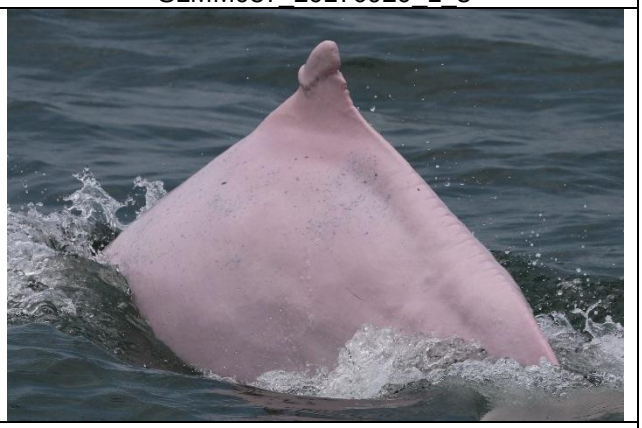
CWD Small Vessel Line-transect Survey **Photo Identification**

	
SLMM015_20170911_2_5	SLMM017_20170911_2_1
	
WLMM079_20170912_3_4	WLMM100_20170912_3_2
	
NLMM019_20170912_4_1	NLMM020_20170912_4_4
	
NLMM019_20170912_5_1	NLMM020_20170912_5_3

	
NLMM023_20170912_5_3	NLMM019_20170918_1_6
	
NLMM020_20170918_1_2	NLMM022_20170918_1_3
	
NLMM023_20170918_1_4	NLMM042_20170918_1_2
	
NLMM052_20170918_1_5	NLMM053_20170918_1_3

	
WLMM053_20170918_1_5	NLMM005_20170918_2_6
	
NLMM037_20170918_3_1	NLMM051_20170919_1_1
	
WLMM046_20170919_1_2	WLMM096_20170919_1_3
	
WLMM101_20170919_1_6	WLMM102_20170919_1_4

	
WLMM019_20170919_2_2	WLMM103_20170919_2_6
	
WLMM028_20170919_6_1	WLMM029_20170919_6_1
	
WLMM032_20170919_6_4	SLMM054_20170919_8_4
	
NLMM052_20170920_1_2	SLMM012_20170920_1_7

	
SLMM017_20170920_1_9	SLMM037_20170920_1_3
	
SLMM050_20170920_1_5	WLMM049_20170920_1_1
	
WLMM056_20170920_1_2	SLMM012_20170920_2_8
	
SLMM017_20170920_2_2	SLMM050_20170920_2_1

	
SLMM036_20170920_3_4	WLMM011_20170920_3_6
	
WLMM027_20170920_3_1	

CWD Land-based Theodolite Tracking

CWD Groups by Survey Date

Date	Station	Start Time	End Time	Duration	Beaufort Range	Visibility	No. of Focal Follow Dolphin Groups Tracked	Dolphin Group Size Range
6/Sep/17	Lung Kwu Chau	8:46	14:26	5:40	2	2-3	13	1-5
18/Sep/17	Lung Kwu Chau	8:42	15:02	6:20	2-3	3	4	1-3
22/Sep/17	Sha Chau	9:11	15:11	6:00	2-3	2	0	N/A
27/Sep/17	Lung Kwu Chau	8:51	14:51	6:00	2-3	3	6	1-4
28/Sep/17	Sha Chau	8:40	14:40	6:00	2	2	0	0

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

Ecological Monitoring

Ecological Monitoring – site photos and location map regarding the monthly ecological monitoring for the egretry area on Sheung Sha Chau and the HDD works

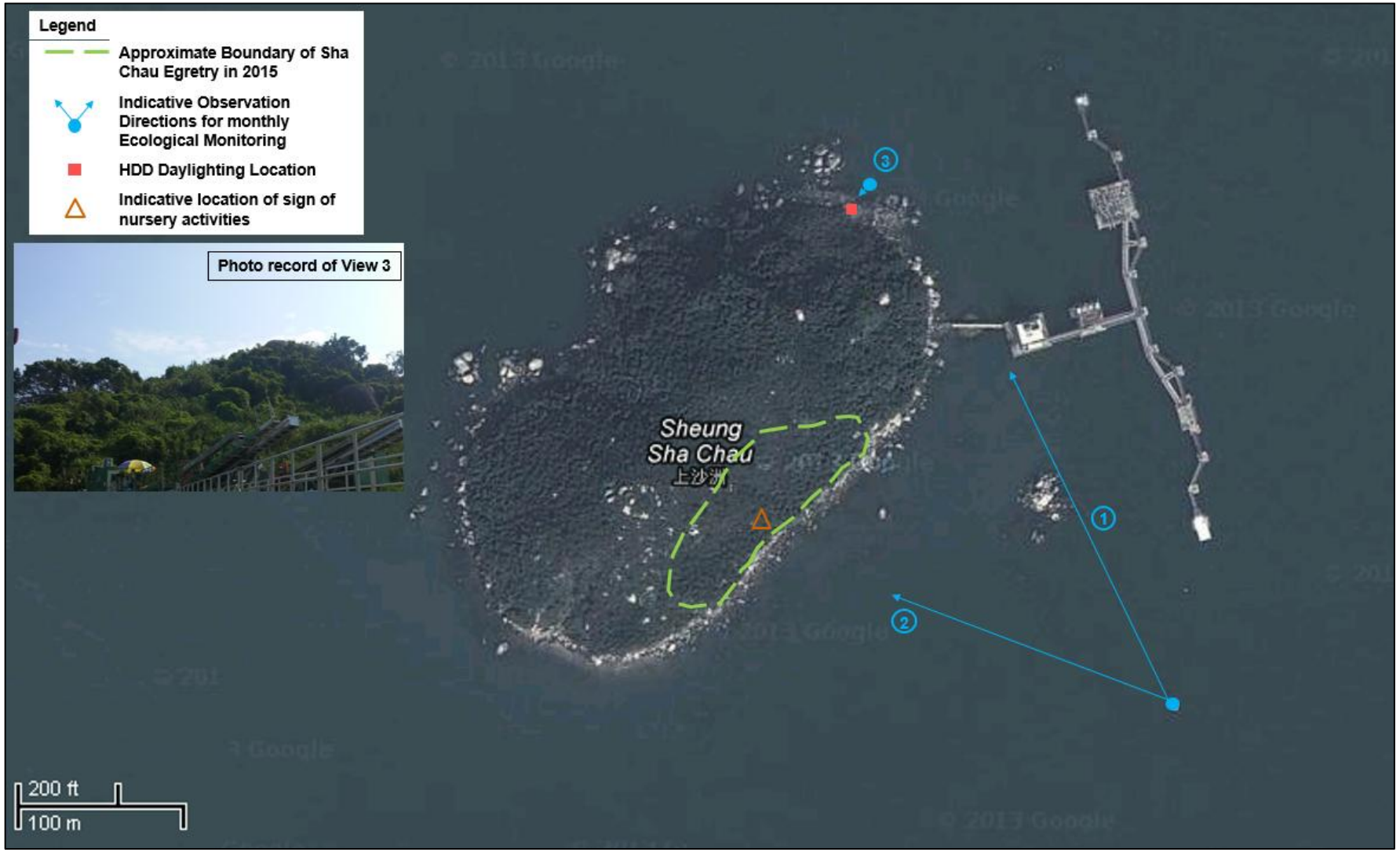
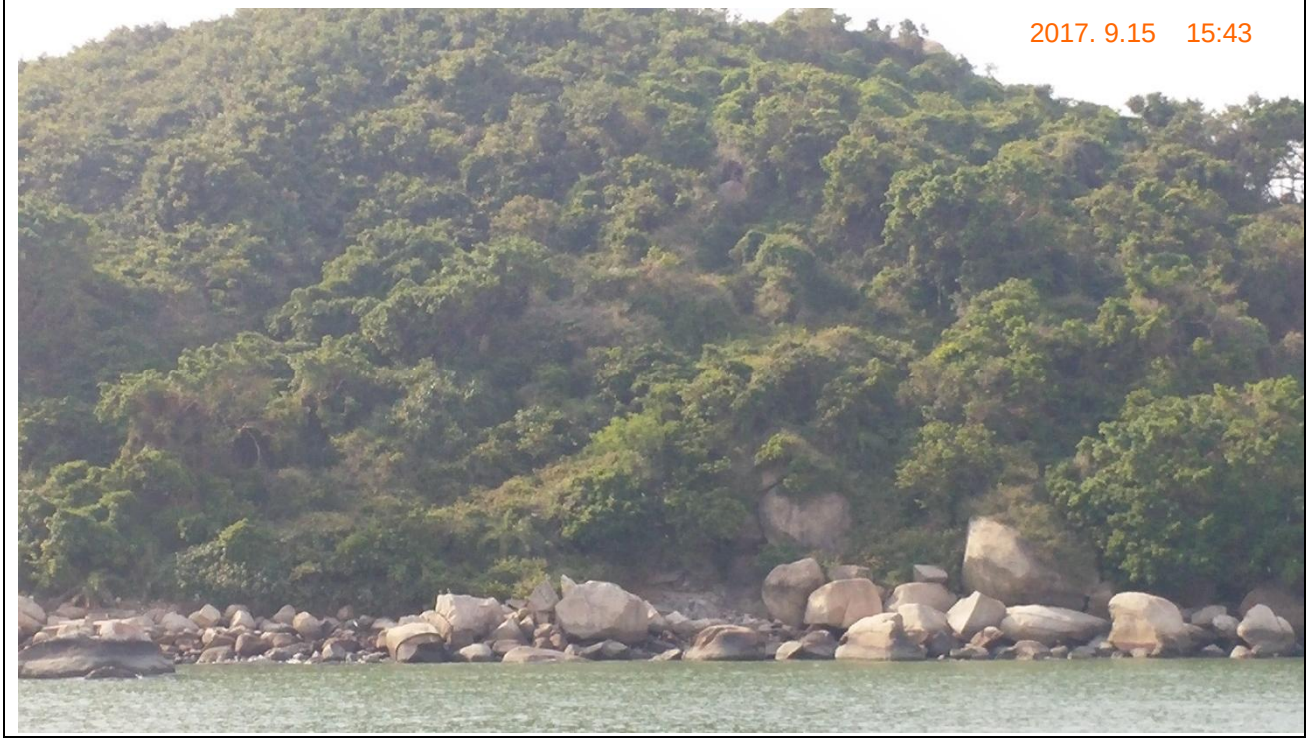


Photo record of View 1

Photo record of View 2



Appendix E. Calibration Certificates

輝創工程有限公司
Sun Creation Engineering Limited
Calibration and Testing Laboratory

Certificate of Calibration
校正證書

Certificate No. : C174927
證書編號

ITEM TESTED / 送檢項目 (Job No. / 序引編號 : IC17-1938)

Date of Receipt / 收件日期 : 18 August 2017

Description / 儀器名稱 : Integrating Sound Level Meter
Manufacturer / 製造商 : Brüel & Kjær
Model No. / 型號 : 2238
Serial No. / 編號 : 2684503
Supplied By / 委託者 : Atkins China Limited
13/F., Wharf T&T Centre, Harbour City,
Tsim Sha Tsui, Kowloon, Hong Kong

TEST CONDITIONS / 測試條件

Temperature / 溫度 : (23 ± 2)°C
Relative Humidity / 相對濕度 : (55 ± 20)%
Line Voltage / 電壓 : ---

TEST SPECIFICATIONS / 測試規範

Calibration check

DATE OF TEST / 測試日期 : 30 August 2017

TEST RESULTS / 測試結果

The results apply to the particular unit-under-test only.
The results do not exceed manufacturer's specification.
The results are detailed in the subsequent page(s).

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

Tested By 測試 : K C Lee, Engineer

Certified By 核證 : H C Chan, Engineer

Date of Issue 簽發日期 : 31 August 2017

Sun Creation Engineering Limited – Calibration & Testing Laboratory
c/o 4/F, Tsing Shan Wan Exchange Building, 1 Hing On Lane, Tuen Mun, New Territories, Hong Kong
輝創工程有限公司 – 校正及檢測實驗所
c/o 香港新界屯門興安里一號青山灣機樓四樓
Tel/電話: 2927 2606 Fax/傳真: 2744 8986 E-mail/電郵: callab@suncreation.com Website/網址: www.suncreation.com

Certificate of Calibration
校正證書

Certificate No. : C174927
證書編號

1. The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 12 hours, and switched on to warm up for over 10 minutes before the commencement of the test.

2. Self-calibration using laboratory acoustic calibrator was performed before the test from 6.1.1.2 to 6.3.2.

3. The results presented are the mean of 3 measurements at each calibration point.

4. Test equipment :

Equipment ID	Description	Certificate No.
CL280	40 MHz Arbitrary Waveform Generator	C170048
CL281	Multifunction Acoustic Calibrator	PA160023

5. Test procedure : MA101N.

6. Results :

6.1 Sound Pressure Level :

6.1.1 Reference Sound Pressure Level

6.1.1.1 Before Self-calibration

UUT Setting				Applied Value		UUT Reading (dB)
Range (dB)	Parameter	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)	
50 - 130	L_{AFP}	A	F	94.00	1	94.1

6.1.1.2 After Self-calibration

UUT Setting				Applied Value		UUT Reading (dB)	IEC 61672 Class 1 Spec. (dB)
Range (dB)	Parameter	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)		
50 - 130	L_{AFP}	A	F	94.00	1	94.1	± 1.1

6.1.2 Linearity

UUT Setting				Applied Value		UUT Reading (dB)
Range (dB)	Parameter	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)	
50 - 130	L_{AFP}	A	F	94.00	1	94.1 (Ref.)
				104.00		104.1
				114.00		114.0

IEC 61672 Class 1 Spec. : ± 0.6 dB per 10 dB step and ± 1.1 dB for overall different.

Sun Creation Engineering Limited – Calibration & Testing Laboratory
c/o 4/F, Tsing Shan Wan Exchange Building, 1 Hing On Lane, Tuen Mun, New Territories, Hong Kong
輝創工程有限公司 – 校正及檢測實驗所
c/o 香港新界屯門興安里一號青山灣機樓四樓
Tel/電話: 2927 2606 Fax/傳真: 2744 8986 E-mail/電郵: callab@suncreation.com Website/網址: www.suncreation.com

Certificate of Calibration
校正證書

Certificate No. : C174927
證書編號

6.2 Time Weighting

UUT Setting				Applied Value		UUT Reading (dB)	IEC 61672 Class 1 Spec. (dB)
Range (dB)	Parameter	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)		
50 - 130	L_{AFP}	A	F	94.00	1	94.1	Ref.
	L_{ASP}		S			94.1	± 0.3

6.3 Frequency Weighting

6.3.1 A-Weighting

UUT Setting				Applied Value		UUT Reading (dB)	IEC 61672 Class 1 Spec. (dB)
Range (dB)	Parameter	Frequency Weighting	Time Weighting	Level (dB)	Freq.		
50 - 130	L_{AFP}	A	F	94.00	63 Hz	67.9	-26.2 ± 1.5
					125 Hz	77.9	-16.1 ± 1.5
					250 Hz	85.5	-8.6 ± 1.4
					500 Hz	90.9	-3.2 ± 1.4
					1 kHz	94.1	Ref.
					2 kHz	95.3	+1.2 ± 1.6
					4 kHz	95.1	+1.0 ± 1.6
					8 kHz	93.0	-1.1 (+2.1 ; -3.1)
					12.5 kHz	89.9	-4.3 (+3.0 ; -6.0)

6.3.2 C-Weighting

UUT Setting				Applied Value		UUT Reading (dB)	IEC 61672 Class 1 Spec. (dB)
Range (dB)	Parameter	Frequency Weighting	Time Weighting	Level (dB)	Freq.		
50 - 130	L_{CFP}	C	F	94.00	63 Hz	93.3	-0.8 ± 1.5
					125 Hz	93.9	-0.2 ± 1.5
					250 Hz	94.1	0.0 ± 1.4
					500 Hz	94.1	0.0 ± 1.4
					1 kHz	94.1	Ref.
					2 kHz	93.9	-0.2 ± 1.6
					4 kHz	93.3	-0.8 ± 1.6
					8 kHz	91.0	-3.0 (+2.1 ; -3.1)
					12.5 kHz	87.9	-6.2 (+3.0 ; -6.0)

輝創工程有限公司
Sun Creation Engineering Limited
Calibration and Testing Laboratory

Certificate of Calibration
校正證書

Certificate No. : C174927
證書編號

Remarks : - UUT Microphone Model No. : 4188 & S/N : 2682524

- Mfr's Spec. : IEC 61672 Class 1

- Uncertainties of Applied Value :

94 dB	: 63 Hz - 125 Hz	: ± 0.35 dB
	250 Hz - 500 Hz	: ± 0.30 dB
	1 kHz	: ± 0.20 dB
	2 kHz - 4 kHz	: ± 0.35 dB
	8 kHz	: ± 0.45 dB
	12.5 kHz	: ± 0.70 dB
104 dB	: 1 kHz	: ± 0.10 dB (Ref. 94 dB)
114 dB	: 1 kHz	: ± 0.10 dB (Ref. 94 dB)

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

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

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

Sun Creation Engineering Limited – Calibration & Testing Laboratory
c/o 4/F, Tsing Shan Wan Exchange Building, 1 Hing On Lane, Tuen Mun, New Territories, Hong Kong
輝創工程有限公司 – 校正及檢測實驗所
c/o 香港新界屯門興安里一號青山灣機樓四樓
Tel/電話: 2927 2606 Fax/傳真: 2744 8986 E-mail/電郵: callab@suncreation.com Website/網址: www.suncreation.com

輝創工程有限公司
Sun Creation Engineering Limited
Calibration and Testing Laboratory

Certificate of Calibration
校正證書

Certificate No. : C174926
證書編號

ITEM TESTED / 送檢項目 (Job No. / 序引編號 : IC17-1938)

Date of Receipt / 收件日期 : 18 August 2017

Description / 儀器名稱 : Integrating Sound Level Meter
Manufacturer / 製造商 : Brüel & Kjær
Model No. / 型號 : 2238
Serial No. / 編號 : 2808432
Supplied By / 委託者 : Atkins China Limited
13/F., Wharf T&T Centre, Harbour City,
Tsim Sha Tsui, Kowloon, Hong Kong

TEST CONDITIONS / 測試條件

Temperature / 溫度 : (23 ± 2)°C
Relative Humidity / 相對濕度 : (55 ± 20)%
Line Voltage / 電壓 : ---

TEST SPECIFICATIONS / 測試規範

Calibration check

DATE OF TEST / 測試日期 : 30 August 2017

TEST RESULTS / 測試結果

The results apply to the particular unit-under-test only.
The results do not exceed manufacturer's specification.
The results are detailed in the subsequent page(s).

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

Tested By 測試 : K C Lee
Engineer

Certified By 核證 : H C Chan
Engineer

Date of Issue 簽發日期 : 31 August 2017

Sun Creation Engineering Limited – Calibration & Testing Laboratory
c/o 4/F, Tsing Shan Wan Exchange Building, 1 Hing On Lane, Tuen Mun, New Territories, Hong Kong
輝創工程有限公司 – 校正及檢測實驗所
c/o 香港新界屯門興安里一號青山灣機樓四樓
Tel/電話: 2927 2606 Fax/傳真: 2744 8986 E-mail/電郵: callab@suncreation.com Website/網址: www.suncreation.com

Certificate of Calibration
校正證書

Certificate No. : C174926
證書編號

1. The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 12 hours, and switched on to warm up for over 10 minutes before the commencement of the test.

2. Self-calibration using laboratory acoustic calibrator was performed before the test from 6.1.1.2 to 6.3.2.

3. The results presented are the mean of 3 measurements at each calibration point.

4. Test equipment :

Equipment ID	Description	Certificate No.
CL280	40 MHz Arbitrary Waveform Generator	C170048
CL281	Multifunction Acoustic Calibrator	PA160023

5. Test procedure : MA101N.

6. Results :

6.1 Sound Pressure Level :

6.1.1 Reference Sound Pressure Level

6.1.1.1 Before Self-calibration

UUT Setting				Applied Value		UUT Reading (dB)
Range (dB)	Parameter	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)	
50 - 130	L_{AFP}	A	F	94.00	1	94.1

6.1.1.2 After Self-calibration

UUT Setting				Applied Value		UUT Reading (dB)	IEC 61672 Class 1 Spec. (dB)
Range (dB)	Parameter	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)		
50 - 130	L_{AFP}	A	F	94.00	1	94.1	± 1.1

6.1.2 Linearity

UUT Setting				Applied Value		UUT Reading (dB)
Range (dB)	Parameter	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)	
50 - 130	L_{AFP}	A	F	94.00	1	94.1 (Ref.)
				104.00		104.0
				114.00		114.0

IEC 61672 Class 1 Spec. : ± 0.6 dB per 10 dB step and ± 1.1 dB for overall different.

Sun Creation Engineering Limited – Calibration & Testing Laboratory
c/o 4/F, Tsing Shan Wan Exchange Building, 1 Hing On Lane, Tuen Mun, New Territories, Hong Kong
輝創工程有限公司 – 校正及檢測實驗所
c/o 香港新界屯門興安里一號青山灣機樓四樓
Tel/電話: 2927 2606 Fax/傳真: 2744 8986 E-mail/電郵: callab@suncreation.com Website/網址: www.suncreation.com

Certificate of Calibration
校正證書

Certificate No. : C174926
證書編號

6.2 Time Weighting

UUT Setting				Applied Value		UUT Reading (dB)	IEC 61672 Class 1 Spec. (dB)
Range (dB)	Parameter	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)		
50 - 130	L_{AFP}	A	F	94.00	1	94.1	Ref.
	L_{ASP}		S			94.1	± 0.3

6.3 Frequency Weighting

6.3.1 A-Weighting

UUT Setting				Applied Value		UUT Reading (dB)	IEC 61672 Class 1 Spec. (dB)
Range (dB)	Parameter	Frequency Weighting	Time Weighting	Level (dB)	Freq.		
50 - 130	L_{AFP}	A	F	94.00	63 Hz	68.0	-26.2 ± 1.5
					125 Hz	77.9	-16.1 ± 1.5
					250 Hz	85.4	-8.6 ± 1.4
					500 Hz	90.8	-3.2 ± 1.4
					1 kHz	94.1	Ref.
					2 kHz	95.3	+1.2 ± 1.6
					4 kHz	95.1	+1.0 ± 1.6
					8 kHz	92.9	-1.1 (+2.1 ; -3.1)
					12.5 kHz	89.8	-4.3 (+3.0 ; -6.0)

6.3.2 C-Weighting

UUT Setting				Applied Value		UUT Reading (dB)	IEC 61672 Class 1 Spec. (dB)
Range (dB)	Parameter	Frequency Weighting	Time Weighting	Level (dB)	Freq.		
50 - 130	L_{CFP}	C	F	94.00	63 Hz	93.4	-0.8 ± 1.5
					125 Hz	94.0	-0.2 ± 1.5
					250 Hz	94.1	0.0 ± 1.4
					500 Hz	94.1	0.0 ± 1.4
					1 kHz	94.1	Ref.
					2 kHz	93.9	-0.2 ± 1.6
					4 kHz	93.9	-0.8 ± 1.6
					8 kHz	91.1	-3.0 (+2.1 ; -3.1)
					12.5 kHz	87.9	-6.2 (+3.0 ; -6.0)

輝創工程有限公司
Sun Creation Engineering Limited
Calibration and Testing Laboratory

Certificate of Calibration
校正證書

Certificate No. : C174926
證書編號

Remarks : - UUT Microphone Model No. : 4188 & S/N : 292904

- Mfr's Spec. : IEC 61672 Class 1

- Uncertainties of Applied Value :

94 dB	: 63 Hz - 125 Hz	: ± 0.35 dB
	250 Hz - 500 Hz	: ± 0.30 dB
	1 kHz	: ± 0.20 dB
	2 kHz - 4 kHz	: ± 0.35 dB
	8 kHz	: ± 0.45 dB
	12.5 kHz	: ± 0.70 dB
104 dB	: 1 kHz	: ± 0.10 dB (Ref. 94 dB)
114 dB	: 1 kHz	: ± 0.10 dB (Ref. 94 dB)

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

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

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

Sun Creation Engineering Limited – Calibration & Testing Laboratory
c/o 4/F, Tsing Shan Wan Exchange Building, 1 Hing On Lane, Tuen Mun, New Territories, Hong Kong
輝創工程有限公司 – 校正及檢測實驗所
c/o 香港新界屯門興安里一號青山灣機樓四樓
Tel/電話: 2927 2606 Fax/傳真: 2744 8986 E-mail/電郵: callab@suncreation.com Website/網址: www.suncreation.com

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. : AG090069
Date of Issue : September 13, 2017

PART A – CUSTOMER INFORMATION

Enovative Environmental Service Ltd.
Rm 811, Hin Pui House,
Hin Keng Estate, Tai Wai
New Territories, Hong Kong
Attn: Mr. Thomas WONG

PART B – DESCRIPTION

Name of Equipment	:	YSI ProDSS (Multi-Parameters)
Manufacturer	:	YSI (a xylem brand)
Serial Number	:	16J101716
Date of Received	:	Sep 12, 2017
Date of Calibration	:	Sep 12, 2017
Date of Next Calibration[a]	:	Dec 12, 2017

PART C – REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

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

PART D – CALIBRATION RESULTS[b,c]

(1) pH at 25°C

Target (pH unit)	Displayed Reading[d] (pH Unit)	Tolerance[e](pH Unit)	Results
4.00	4.04	+0.04	Satisfactory
7.42	7.37	-0.05	Satisfactory
10.01	10.04	+0.03	Satisfactory

Tolerance of pH should be less than ±0.10 (pH unit)

(2) Temperature

Reading of Ref. thermometer (°C)	Displayed Reading (°C)	Tolerance (°C)	Results
16.5	17.2	+0.7	Satisfactory
25.0	25.3	+0.3	Satisfactory
37.0	36.7	-0.3	Satisfactory

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

~ CONTINUED ON NEXT PAGE ~

Remark(s): -

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

APPROVED SIGNATORY :

FUNG Yuen-ching Aries
Laboratory Manager

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. : AG090069
Date of Issue : September 13, 2017

PART D – CALIBRATION RESULTS (Cont'd)

(3) Dissolved Oxygen

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)	Results
8.04	7.98	-0.06	Satisfactory
3.63	3.72	+0.09	Satisfactory
0.01	0.06	+0.05	Satisfactory

Tolerance limit of dissolved oxygen should be less than ±0.20 (mg/L)

(4) Conductivity at 25°C

Expected Reading (µS/cm)	Displayed Reading (µS/cm)	Tolerance (%)	Results
146.9	140.4	-4.4	Satisfactory
1412	1322	-6.4	Satisfactory
12890	12064	-6.4	Satisfactory
58670	57032	-2.8	Satisfactory
111900	107344	-4.1	Satisfactory

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

(5) Salinity

Expected Reading (g/L)	Displayed Reading (g/L)	Tolerance (%)	Results
10	10.17	+1.7	Satisfactory
20	20.20	+1.0	Satisfactory
30	30.07	+2.3	Satisfactory

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

(6) Turbidity

Expected Reading (NTU)	Displayed Reading[f] (NTU)	Tolerance[g](%)	Results
10	9.7	-3.0	Satisfactory
20	19.0	-5.0	Satisfactory
100	101.1	+1.1	Satisfactory
800	814.6	+1.8	Satisfactory

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

~ END OF REPORT ~

Remark(s): -

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

(g) 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.

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. : AG090067
Date of Issue : 13 September 2017

PART A – CUSTOMER INFORMATION

Enovative Environmental Service Ltd.
Rm 811, Hin Pui House,
Hin Keng Estate, Tai Wai
New Territories, Hong Kong
Attn: Mr. Thomas WONG

PART B – DESCRIPTION

Name of Equipment	:	YSI ProDSS (Multi-Parameters)
Manufacturer	:	YSI (a xylem brand)
Serial Number	:	17E102521
Date of Received	:	Sep 12, 2017
Date of Calibration	:	Sep 12, 2017
Date of Next Calibration[a]	:	Dec 12, 2017

PART C – REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

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

PART D – CALIBRATION RESULTS[b,c]

(1) pH at 25°C

Target (pH unit)	Displayed Reading[d] (pH Unit)	Tolerance[e](pH Unit)	Results
4.00	4.09	+0.09	Satisfactory
7.42	7.38	-0.04	Satisfactory
10.01	9.94	-0.07	Satisfactory

Tolerance of pH should be less than ±0.10 (pH unit)

(2) Temperature

Reading of Ref. thermometer (°C)	Displayed Reading (°C)	Tolerance (°C)	Results
16.5	16.9	+0.4	Satisfactory
25.0	25.2	+0.2	Satisfactory
37.0	36.4	-0.6	Satisfactory

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

~ CONTINUED ON NEXT PAGE ~

Remark(s): -

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

APPROVED SIGNATORY : _____
FUNG Yuen-ching Aries
Laboratory Manager

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

CALIBRATION REPORT

Report No. : AG090067
Date of Issue : 13 September 2017

PART D – CALIBRATION RESULTS (Cont'd)

(3) Dissolved Oxygen

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)	Results
8.03	7.95	-0.08	Satisfactory
3.76	3.84	+0.08	Satisfactory
0.02	0.12	+0.10	Satisfactory

Tolerance limit of dissolved oxygen should be less than ±0.20 (mg/L)

(4) Conductivity at 25°C

Conc. of KCl (M)	Expected Reading (µS/cm)	Displayed Reading (µS/cm)	Tolerance (%)	Results
0.001	146.9	151.6	+3.2	Satisfactory
0.01	1,412	1,340	-5.1	Satisfactory
0.1	12,890	12,006	-6.9	Satisfactory
0.5	58,670	57,088	-2.7	Satisfactory
1.0	111,900	105,890	-5.4	Satisfactory

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

(5) Salinity

Expected Reading (g/L)	Displayed Reading (g/L)	Tolerance (%)	Results
10	9.95	-0.5	Satisfactory
20	20.30	+1.5	Satisfactory
30	30.31	+1.0	Satisfactory

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

(6) Turbidity

Expected Reading (NTU)	Displayed Reading[f] (NTU)	Tolerance[g](%)	Results
10	9.6	-4.0	Satisfactory
20	19.3	-3.5	Satisfactory
100	98.7	-1.3	Satisfactory
800	781.2	+2.3	Satisfactory

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

~ END OF REPORT ~

Remark(s): -

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

(g) 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.

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. : AG090070
Date of Issue : 13 September, 2017

PART A – CUSTOMER INFORMATION

Enovative Environmental Service Ltd.
Rm 811, Hin Pui House,
Hin Keng Estate, Tai Wai
New Territories, Hong Kong
Attn: Mr. Thomas WONG

PART B – DESCRIPTION

Name of Equipment	:	YSI 6920 V2 Sonde (Multi-Parameters)
Manufacturer	:	YSI (a xylem brand)
Serial Number	:	00019CB2
Date of Received	:	Sep 12, 2017
Date of Calibration	:	Sep 12, 2017
Date of Next Calibration[a]	:	Dec 12, 2017

PART C – REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

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

PART D – CALIBRATION RESULTS[b,c]

(1) pH at 25°C

Target (pH unit)	Displayed Reading[d] (pH Unit)	Tolerance[e] (pH Unit)	Results
4.00	3.94	-0.06	Satisfactory
7.42	7.37	-0.05	Satisfactory
10.01	9.98	-0.03	Satisfactory

Tolerance of pH should be less than ±0.10 (pH unit)

~ CONTINUED ON NEXT PAGE ~

Remark(s): -

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

APPROVED SIGNATORY :

FUNG Yuen-ching Aries
Laboratory Manager

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. : AG090070
Date of Issue : 13 September, 2017

PART D – CALIBRATION RESULTS (Cont'd)

(2) Temperature

Reading of Ref. thermometer (°C)	Displayed Reading (°C)	Tolerance (°C)	Results
16.5	17.2	+0.7	Satisfactory
25.0	25.3	+0.3	Satisfactory
37.0	36.4	-0.6	Satisfactory

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

(3) Dissolved Oxygen

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)	Results
8.03	8.09	+0.06	Satisfactory
3.89	3.99	+0.10	Satisfactory
0.02	0.11	+0.09	Satisfactory

Tolerance limit of dissolved oxygen should be less than ±0.20 (mg/L)

(4) Conductivity at 25°C

Conc. of KCl (M)	Expected Reading (µS/cm)	Displayed Reading (µS/cm)	Tolerance (%)	Results
0.001	146.9	152.4	+3.7	Satisfactory
0.01	1,412	1,530	+8.4	Satisfactory
0.1	12,890	13,648	+5.9	Satisfactory
0.5	58,670	59,342	+1.1	Satisfactory
1.0	111,900	103,422	-7.6	Satisfactory

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

(5) Salinity

Expected Reading (g/L)	Displayed Reading (g/L)	Tolerance (%)	Results
10	9.95	-0.5	Satisfactory
20	19.91	-0.4	Satisfactory
30	29.77	-0.8	Satisfactory

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

(6) Turbidity

Expected Reading (NTU)	Displayed Reading[f] (NTU)	Tolerance[g](%)	Results
10	10.9	+9.0	Satisfactory
20	20.1	+0.5	Satisfactory
100	108.3	+8.3	Satisfactory
800	819.4	+2.4	Satisfactory

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

~ END OF REPORT ~

Remark(s): -

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

(g) 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.

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. : AG090072
Date of Issue : 14 September 2017

PART A – CUSTOMER INFORMATION

Enovative Environmemtal Service Ltd.
Rm 811, Hin Pui House,
Hin Keng Estate, Tai Wai
New Territories, Hong Kong
Attn: Mr. Thomas WONG

PART B – DESCRIPTION

Name of Equipment	:	YSI 6920 V2 Sonde (Multi-Parameters)
Manufacturer	:	YSI (a xylem brand)
Serial Number	:	000109DF
Date of Received	:	Sep 12, 2017
Date of Calibration	:	Sep 12, 2017 to Sep 14, 2017
Date of Next Calibration[a]	:	Dec 12, 2017

PART C – REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

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

PART D – CALIBRATION RESULTS[b,c]

(1) pH at 25°C

Target (pH unit)	Displayed Reading[d] (pH Unit)	Tolerance[e](pH Unit)	Results
4.00	4.04	+0.04	Satisfactory
7.42	7.45	+0.03	Satisfactory
10.01	10.07	+0.06	Satisfactory

Tolerance of pH should be less than ±0.10 (pH unit)

(2) Temperature

Reading of Ref. thermometer (°C)	Displayed Reading (°C)	Tolerance (°C)	Results
16.5	17.0	+0.5	Satisfactory
25.0	25.5	+0.5	Satisfactory
37.0	36.6	-0.4	Satisfactory

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

~ CONTINUED ON NEXT PAGE ~

Remark(s): -

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

APPROVED SIGNATORY : _____
FUNG Yuen-ching Aries
Laboratory Manager

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. : AG090072
Date of Issue : 14 September 2017

PART D – CALIBRATION RESULTS (Cont'd)

(3) Dissolved Oxygen

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)	Results
8.05	8.11	+0.06	Satisfactory
3.96	4.04	+0.08	Satisfactory
0.03	0.18	+0.15	Satisfactory

Tolerance limit of dissolved oxygen should be less than ±0.20 (mg/L)

(4) Conductivity at 25°C

Conc. of KCl (M)	Expected Reading (µS/cm)	Displayed Reading (µS/cm)	Tolerance (%)	Results
0.001	146.9	152.4	+3.7	Satisfactory
0.01	1,412	1346	-4.7	Satisfactory
0.1	12,890	13382	+3.8	Satisfactory
0.5	58,670	59964	+2.2	Satisfactory
1.0	111,900	108242	-3.3	Satisfactory

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

(5) Salinity

Expected Reading (g/L)	Displayed Reading (g/L)	Tolerance (%)	Results
10	9.92	-0.8	Satisfactory
20	19.88	-0.6	Satisfactory
30	29.79	-0.7	Satisfactory

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

(6) Turbidity[f]

Expected Reading (NTU)	Displayed Reading[g] (NTU)	Tolerance[h] (%)	Results
10	10.2	+2.0	Satisfactory
20	20.8	+4.0	Satisfactory
100	108.4	+8.4	Satisfactory
800	822.0	+2.8	Satisfactory

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

~ END OF REPORT ~

Remark(s): -

(f) Recalibration of specified parameter was conducted on 14 September 2017.

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

(h) 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.

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

CALIBRATION REPORT

Test Report No. : AG090123
Date of Issue : 19 September, 2017

PART A – CUSTOMER INFORMATION

Enovative Environmental Service Ltd.
Rm 811, Hin Pui House,
Hin Keng Estate, Tai Wai
New Territories, Hong Kong
Attn: Mr. Thomas Wong

PART B – SAMPLE INFORMATION

Description of Samples	:	Titrette® bottle-top burette, 50mL
Brand Name	:	BRAND
Model Number	:	6761161
Manufacturer number	:	4760161
Serial Number	:	10N64701
Date of Received	:	Sep 15, 2017
Date of Calibration	:	Sep 18, 2017
Date of Next Calibration[(a)]	:	Dec 18, 2017

PART C – CALIBRATION REQUESTED

Parameter	Reference Method
Accuracy Test	In-house Method (Gravimetric Method)

~ Continued On Next Page ~

Remark(s): -

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

APPROVED SIGNATORY : _____
FUNG Yuen-ching Aries
Laboratory Manager

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

CALIBRATION REPORT

Test Report No. : AG090123
Date of Issue : 19 September, 2017

PART D – RESULT[b],[c]

Water temperature: 22.4 ℃
Relative humidity: 51%
z-Factor: 1.0034

Trial	Nominal volume (mL) at interval				
	3	3	3	3	3
	Range: (1-4)	Range: (16-19)	Range: (23-26)	Range: (34-37)	Range: (42-45)
1	2.9816	2.9866	2.9815	2.9821	2.9814
2	2.9850	2.9852	2.9814	2.9833	2.9881
3	2.9912	2.9830	2.9885	2.9867	2.9889
4	2.9855	2.9867	2.9877	2.9914	2.9808
5	2.9882	2.9843	2.9793	2.9921	2.9883
6	2.9895	2.9908	2.9850	2.9878	2.9878
7	2.9941	2.9909	2.9873	2.9890	2.9822
8	2.9921	2.9891	2.9852	2.9862	2.9892
9	2.9888	2.9902	2.9878	2.9883	2.9858
10	2.9931	2.9921	2.9855	2.9938	2.9818
Average	2.9889	2.9879	2.9849	2.9881	2.9854
Standard deviation	0.0040	0.0031	0.0032	0.0037	0.0035
Calculated volume (mL)	2.9991	2.9980	2.9951	2.9982	2.9956
Error (%)	-0.0309	-0.0650	-0.1644	-0.0590	-0.1473
RSD (%)	0.1320	0.1050	0.1059	0.1243	0.1160

Acceptance Criteria [d]

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

~ END OF REPORT ~

Remark(s): -
[b] The results relate only to the tested sample as received
[c] The performance of the equipment stated in this report is checked with independent reference material and results compared against a calibrated secondary source.
[d] The "acceptance criteria" is applicable for similar equipment used by QPT 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	Launching Site	397150	Receipt acknowledged by EPD on 15 Jan 2016
		Site Office	397151	
		Stockpiling Area	398015	Receipt acknowledged by EPD on 18 Jan 2016
		Sheung Sha Chau	405860	Receipt acknowledged by EPD on 5 Aug 2016
	Construction Noise Permit (General Works)	Launching Site	GW-RS0720-17	Valid from 23 Aug 2017 to 13 Feb 2018
		Sheung Sha Chau	GW-RS0345-17	Valid from 6 Aug 2017 to 29 Oct 2017
		Stockpiling Area	GW-RS0719-17	Valid from 23 Aug 2017 to 13 Feb 2018
	Discharge License under WPCO	Launching Site	WT00024249-2016	Approved on 25 Apr 2016
		Stockpiling Area	WT00024250-2016	Approved on 25 Apr 2016
	Registration as Chemical Waste Producer	Launching Site	WPN 5213-951-L2902-01	Update the Registration on 29 Sep 2017
		Stockpiling Area	WPN 5213-951-L2902-02	Update the Registration on 3 Oct 2016
	Bill Account for disposal		A/C 7023982	Approval granted from EPD on 14 Dec 2015
3201	Notification of Construction Work under APCO	Works area of 3201	406004	Receipt acknowledged by EPD on 10 Aug 2016
	Construction Noise Permit (General Works)	Works area of 3201	GW-RS0666-17	Valid from 7 Aug 2017 to 4 Feb 2017 (Superseded by GW-RS0816-17 on 22 Sep 2017)
			GW-RS0816-17	Valid from 22 Sep 2017 to 19 Mar 2018
	Registration as Chemical Waste Producer	Works area of 3201	WPN 5213-951-P3231-01	Completion of Registration on 9 Sep 2016
	Bill Account for disposal		A/C 7025760	Approval granted from EPD on 31 Aug 2016

Contract No.	Description	Location	Permit/ Reference No.	Status
3202	Notification of Construction Work under APCO	Works area of 3202	407624	Receipt acknowledged by EPD on 15 Sep 2016
	Construction Noise Permit (General Works)	Works area of 3202	GW-RS0613-17	Valid from 19 Jul 2017 to 16 Jan 2018 (Superseded by GW-RS0759-17 on 6 Sep 2017)
		Works area of 3202	GW-RS0759-17	Valid from 6 Sep 2017 to 3 Mar 2018
		Site Office of 3202	GW-RS0469-17	Valid from 2 Jun 2017 to 29 Nov 2017
	Registration as Chemical Waste Producer	Works area of 3202	WPN 5213-951-S3967-01	Completion of Registration on 24 Oct 2016
	Discharge License	Works area of 3202	WT00028293-2017	Valid from 12 Jun 2017 to 30 June 2022
	Bill Account for disposal		A/C 7025739	Approval granted from EPD on 31 August 2016
3203	Notification of Construction Work under APCO	Works area of 3203	407053	Receipt acknowledged by EPD on 2 Sep 2016
	Construction Noise Permit (General Works)	Works area of 3203	GW-RS0323-17	Valid from 19 Apr 2017 to 18 Oct 2017 (Superseded by GW-RS0796-17 on 18 Sep 2017)
		Works area of 3203	GW-RS0796-17	Valid from 18 Sep 2017 to 17 Mar 2018
	Registration as Chemical Waste Producer	Works area of 3203	WPN 5213-951-S3954-01	Update the Registration on 12 Dec 2016
	Discharge License	Works area of 3203	WT00028251-2017	Valid from 9 Jun 2017 to 30 June 2022
	Bill Account for disposal		A/C 7025846	Approval granted from EPD on 9 Sep 2016
3204	Notification of Construction Work under APCO	Works area of 3204	406446	Receipt acknowledged by EPD on 19 Aug 2016
	Construction Noise Permit (General Works)	Works Area of 3204	GW-RS0629-17	Valid from 21 Jul 2017 to 20 Jan 2018 (Superseded by GW-RS0803-17 on 18 Sep 2017)
		Works Area of 3204	GW-RS0803-17	Valid from 18 Sep 2017 to 17 Mar 2018
	Registration as Chemical Waste Producer	Works Area of 3204	WPN 5213-951-C4102-01	Completion of Registration on 15 Sep 2016
		Site Office of 3204	WPN 5213-951-C4102-02	Completion of Registration on 17 Mar 2017
	Discharge License	Works area of 3204	WT00028245-2017	Valid from 5 Jun 2017 to 30 June 2022
	Bill Account for disposal		A/C 7025969	Approval granted from EPD on 21 Sep 2016
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

Contract No.	Description	Location	Permit/ Reference No.	Status
		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-RS0434-17	Valid from 15 May 2017 to 11 Nov 2017 (Superseded by GW-RS0806-17 on 18 Sep 2017)
		Works Area of 3205	GW-RS0806-17	Valid from 18 Sep 2017 to 17 Mar 2018
	Discharge License	Works area of 3205	WT00028370-2017	Valid from 21 Jun 2017 to 30 June 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
	Registration as Chemical Waste Producer	Site office of 3206	WPN 5213-951-Z4035-01	Completion of Registration on 18 Nov 2016
		Works area of 3206	WPN 5213-951-Z4035-02	Completion of Registration on 18 Nov 2016
	Construction Noise Permit (General Works)	Site Office of 3206	GW-RS0511-17	Valid from 14 Jun 2017 to 15 Sep 2017
		Works Area of 3206	GW-RS0589-17	Valid from 12 Jul 2017 to 12 Dec 2017 (Superseded by GW-RS0791-17 on 18 Sep 2017)
		Works Area of 3206	GW-RS0791-17	Valid from 18 Sep 2017 to 10 Mar 2018
		Works Area of 3206	GW-RS0430-17	Valid from 20 May 2017 to 19 Nov 2017
	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
	Bill Account for disposal	Works area of 3301	A/C 7027728	Approval granted from EPD on 8 May 2017
	Construction Noise Permit (General Works)	Works area of 3301	GW-RS0651-17	Valid from 3 Aug 2017 to 31 Jan 2018
		Works area of 3301	GW-RS0712-17	Valid from 24 Aug 2017 to 23 Feb 2018
3501	Notification of Construction Work under APCO	Works area of 3501	417903	Receipt acknowledged by EPD on 13 Jun 2017
	Registration as Chemical Waste Producer	Works area of 3501	WPN 5213-951-B2520-02	Completion of Registration on 25 Jul 2017
	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-RS0667-17	Valid from 21 Aug 2017 to 17 Feb 2018
3502	Notification of Construction Work under APCO	Works area of 3502	417511	Receipt acknowledged by EPD on 2 Jun 2017

Contract No.	Description	Location	Permit/ Reference No.	Status
	Registration as Chemical Waste Producer	Works area of 3502	WPN 5213-951-B2520-01	Completion of Registration on 3 Jul 2017
	Bill Account for disposal	Works area of 3502	A/C 7028050	Approval granted from EPD on 21 Jun 2017
	Construction Noise Permit (General Works)	Works area of 3502	GW-RS0686-17	Valid from 21 Aug 2017 to 20 Feb 2018 (Superseded by GW-RS0784-17 on 15 Sep 2017)
	Construction Noise Permit (General Works)	Works area of 3502	GW-RS0784-17	Valid from 15 Sep 2017 to 10 Mar 2018
3801	Notification of Construction Work under APCO	Works area of 3801	418345	Receipt acknowledged by EPD on 26 Jun 2017
	Registration as Chemical Waste Producer	Works area of 3801	WPN 5296-951-C1169-51	Completion of Registration on 4 Aug 2017
	Bill Account for disposal	Works area of 3801	A/C 7028254	Approval granted from EPD on 3 Jul 2017
	Construction Noise Permit (General Works)	Works area of 3801	GW-RS0780-17	Valid from 13 Sep 2017 to 10 Mar 2018

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

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 Prosecution

Reporting Period	Cumulative Statistics		
	Complaints	Notifications of Summons	Prosecutions
This reporting period	1	0	0
From 28 December 2015 to end of the reporting period	7	1	0

Appendix H. Data of SkyPier HSF Movements to/from Zhuhai and Macau (between 1 and 30 September 2017)

Data of SkyPier HSF Movements to/from Zhuhai and Macau (between 1 and 30 September 2017)

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)
01-Sep	08:25	3A061	YFT	Arrival	11.2	-	-
01-Sep	08:33	8S210	XZM	Arrival	11.7	-	-
01-Sep	09:57	3A062	YFT	Arrival	12.6	-	-
01-Sep	10:37	8S212	XZM	Arrival	13	-	-
01-Sep	11:06	8S121	XZM	Departure	12	-	-
01-Sep	11:20	3A063	YFT	Arrival	12.4	-	-
01-Sep	12:15	3A168	YFT	Departure	12.4	-	-
01-Sep	13:01	3A064	YFT	Arrival	11.3	-	-
01-Sep	13:02	8S215	XZM	Arrival	11.6	-	-
01-Sep	13:23	8S123	XZM	Departure	12.6	-	-
01-Sep	14:18	3A164	YFT	Departure	10.9	-	-
01-Sep	14:59	3A065	YFT	Arrival	11.9	-	-
01-Sep	16:24	3A167	YFT	Departure	12.4	-	-
01-Sep	16:43	8S218	XZM	Arrival	11.7	-	-
01-Sep	16:59	3A067	YFT	Arrival	11.2	-	-
01-Sep	17:01	8S126	XZM	Departure	12.9	-	-
01-Sep	19:32	3A166	YFT	Departure	12.5	-	-
01-Sep	20:56	3A169	YFT	Departure	12.5	-	-
01-Sep	21:05	8S2113	XZM	Arrival	13.2	-	-
01-Sep	22:08	8S522	XZM	Departure	12.3	-	-
02-Sep	08:17	3A061	YFT	Arrival	12.9	-	-
02-Sep	08:26	8S210	XZM	Arrival	12	-	-
02-Sep	10:03	3A062	YFT	Arrival	12.8	-	-
02-Sep	10:43	8S212	XZM	Arrival	11.7	-	-
02-Sep	11:11	8S121	XZM	Departure	12.5	-	-
02-Sep	11:18	3A063	YFT	Arrival	13.1	-	-
02-Sep	12:14	3A168	YFT	Departure	11.7	-	-
02-Sep	12:45	8S215	XZM	Arrival	12.8	-	-
02-Sep	12:56	3A064	YFT	Arrival	12.5	-	-
02-Sep	13:21	8S123	XZM	Departure	12.5	-	-
02-Sep	14:18	3A164	YFT	Departure	13.2	-	-
02-Sep	14:58	3A065	YFT	Arrival	12.2	-	-
02-Sep	16:17	3A167	YFT	Departure	13	<= 5	< 1min
02-Sep	16:45	8S218	XZM	Arrival	12.8	-	-
02-Sep	16:54	3A067	YFT	Arrival	12.5	-	-
02-Sep	17:09	8S126	XZM	Departure	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)
02-Sep	19:01	3A166	YFT	Departure	12.7	-	-
02-Sep	20:58	8S2113	XZM	Arrival	12.9	-	-
02-Sep	21:16	3A169	YFT	Departure	13.4	-	-
02-Sep	22:20	8S522	XZM	Departure	12.9	-	-
03-Sep	08:16	3A061	YFT	Arrival	12.7	-	-
03-Sep	08:31	8S210	XZM	Arrival	13	-	-
03-Sep	09:42	3A062	YFT	Arrival	12.3	-	-
03-Sep	10:46	8S212	XZM	Arrival	12.8	-	-
03-Sep	11:08	8S121	XZM	Departure	13.3	-	-
03-Sep	11:29	3A063	YFT	Arrival	11.5	-	-
03-Sep	12:17	3A168	YFT	Departure	12	-	-
03-Sep	12:40	8S215	XZM	Arrival	12.8	-	-
03-Sep	12:56	3A064	YFT	Arrival	12.4	-	-
03-Sep	13:13	8S123	XZM	Departure	12.4	-	-
03-Sep	14:15	3A164	YFT	Departure	12.5	-	-
03-Sep	15:03	3A065	YFT	Arrival	11.9	-	-
03-Sep	16:19	3A167	YFT	Departure	12	-	-
03-Sep	16:42	8S218	XZM	Arrival	11.5	-	-
03-Sep	16:59	3A067	YFT	Arrival	12.4	-	-
03-Sep	17:13	8S126	XZM	Departure	11.5	-	-
03-Sep	19:28	3A166	YFT	Departure	11.7	-	-
03-Sep	20:59	8S2113	XZM	Arrival	13.3	-	-
03-Sep	20:59	3A169	YFT	Departure	12.5	-	-
03-Sep	22:04	8S522	XZM	Departure	12.9	-	-
04-Sep	08:21	3A061	YFT	Arrival	11.7	-	-
04-Sep	08:28	8S210	XZM	Arrival	12.4	-	-
04-Sep	09:52	3A062	YFT	Arrival	11.5	-	-
04-Sep	10:43	8S212	XZM	Arrival	11.9	-	-
04-Sep	11:05	8S121	XZM	Departure	12.1	-	-
04-Sep	11:12	3A063	YFT	Arrival	11.5	-	-
04-Sep	12:20	3A168	YFT	Departure	11	-	-
04-Sep	12:30	8S215	XZM	Arrival	11.9	-	-
04-Sep	12:53	3A064	YFT	Arrival	12.2	-	-
04-Sep	13:21	8S123	XZM	Departure	12.2	-	-
04-Sep	14:20	3A164	YFT	Departure	11.8	-	-
04-Sep	14:56	3A065	YFT	Arrival	11.5	-	-
04-Sep	16:24	3A167	YFT	Departure	11.4	-	-
04-Sep	16:42	8S218	XZM	Arrival	12	-	-
04-Sep	17:01	3A067	YFT	Arrival	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)
04-Sep	17:04	8S126	XZM	Departure	12.5	-	-
04-Sep	19:07	3A166	YFT	Departure	12.3	-	-
04-Sep	21:03	3A169	YFT	Departure	13.4	-	-
04-Sep	21:03	8S2113	XZM	Arrival	11.5	-	-
05-Sep	08:21	8S210	XZM	Arrival	11.9	-	-
05-Sep	08:40	3A061	YFT	Arrival	10.5	-	-
05-Sep	09:58	3A062	YFT	Arrival	12.4	-	-
05-Sep	10:39	8S212	XZM	Arrival	11.9	-	-
05-Sep	11:00	8S121	XZM	Departure	12.7	-	-
05-Sep	11:21	3A063	YFT	Arrival	12.4	-	-
05-Sep	12:22	3A168	YFT	Departure	10.6	-	-
05-Sep	12:46	8S215	XZM	Arrival	12.1	-	-
05-Sep	13:09	3A064	YFT	Arrival	11.2	-	-
05-Sep	13:25	8S123	XZM	Departure	12.7	-	-
05-Sep	14:25	3A164	YFT	Departure	9.8	-	-
05-Sep	14:58	3A065	YFT	Arrival	12.9	-	-
05-Sep	16:25	3A167	YFT	Departure	11.9	-	-
05-Sep	16:40	8S218	XZM	Arrival	12	-	-
05-Sep	17:06	8S126	XZM	Departure	11.7	-	-
05-Sep	17:07	3A067	YFT	Arrival	11	-	-
05-Sep	19:01	3A166	YFT	Departure	12.5	-	-
05-Sep	20:53	8S2113	XZM	Arrival	12.1	-	-
05-Sep	21:06	3A169	YFT	Departure	13.2	-	-
06-Sep	08:18	3A061	YFT	Arrival	12.6	-	-
06-Sep	08:25	8S210	XZM	Arrival	11.3	-	-
06-Sep	10:12	3A062	YFT	Arrival	12	-	-
06-Sep	10:41	8S212	XZM	Arrival	12.1	-	-
06-Sep	10:56	8S121	XZM	Departure	11.9	-	-
06-Sep	11:14	3A063	YFT	Arrival	11.8	-	-
06-Sep	12:20	3A168	YFT	Departure	11.4	-	-
06-Sep	12:42	8S215	XZM	Arrival	12	-	-
06-Sep	12:54	3A064	YFT	Arrival	12.4	-	-
06-Sep	13:20	8S123	XZM	Departure	12.1	-	-
06-Sep	14:13	3A164	YFT	Departure	12.4	-	-
06-Sep	15:05	3A065	YFT	Arrival	11.3	-	-
06-Sep	16:17	3A167	YFT	Departure	11.5	-	-
06-Sep	16:44	8S218	XZM	Arrival	12.3	-	-
06-Sep	16:52	3A067	YFT	Arrival	12	-	-
06-Sep	17:09	8S126	XZM	Departure	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)
06-Sep	19:02	3A166	YFT	Departure	12.5	-	-
06-Sep	21:04	3A169	YFT	Departure	12.5	<= 5	< 1min
06-Sep	21:05	8S2113	XZM	Arrival	11.1	-	-
07-Sep	08:22	8S210	XZM	Arrival	11.7	-	-
07-Sep	08:23	3A061	YFT	Arrival	12.2	-	-
07-Sep	09:48	3A062	YFT	Arrival	12	-	-
07-Sep	10:32	8S212	XZM	Arrival	13.5	-	-
07-Sep	11:03	8S121	XZM	Departure	13.4	-	-
07-Sep	11:18	3A063	YFT	Arrival	12.9	-	-
07-Sep	12:12	3A168	YFT	Departure	13.1	-	-
07-Sep	12:55	8S215	XZM	Arrival	12.9	-	-
07-Sep	12:59	3A064	YFT	Arrival	13.2	-	-
07-Sep	13:20	8S123	XZM	Departure	12.6	-	-
07-Sep	14:13	3A164	YFT	Departure	13	-	-
07-Sep	14:57	3A065	YFT	Arrival	12.8	-	-
07-Sep	16:17	3A167	YFT	Departure	12.6	-	-
07-Sep	16:51	8S218	XZM	Arrival	13	-	-
07-Sep	17:01	3A067	YFT	Arrival	12.4	-	-
07-Sep	17:15	8S126	XZM	Departure	12.7	-	-
07-Sep	19:00	3A166	YFT	Departure	13.5	-	-
07-Sep	20:58	3A169	YFT	Departure	11.7	-	-
07-Sep	21:04	8S2113	XZM	Arrival	10.6	-	-
08-Sep	08:17	3A061	YFT	Arrival	12.8	-	-
08-Sep	08:33	8S210	XZM	Arrival	12.6	-	-
08-Sep	09:44	3A062	YFT	Arrival	12.6	-	-
08-Sep	10:44	8S212	XZM	Arrival	10.8	-	-
08-Sep	11:02	8S121	XZM	Departure	11.1	-	-
08-Sep	11:13	3A063	YFT	Arrival	12.6	-	-
08-Sep	12:22	3A168	YFT	Departure	12.7	-	-
08-Sep	12:56	8S215	XZM	Arrival	12.8	-	-
08-Sep	12:59	3A064	YFT	Arrival	13	-	-
08-Sep	13:22	8S123	XZM	Departure	12.5	-	-
08-Sep	14:15	3A164	YFT	Departure	12.8	-	-
08-Sep	15:03	3A065	YFT	Arrival	12.8	-	-
08-Sep	16:12	3A167	YFT	Departure	12.7	-	-
08-Sep	16:42	8S218	XZM	Arrival	11.1	-	-
08-Sep	17:06	3A067	YFT	Arrival	13.6	<= 5	< 1min
08-Sep	17:08	8S126	XZM	Departure	13	-	-
08-Sep	18:59	3A166	YFT	Departure	13.3	-	-

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)
08-Sep	20:56	8S2113	XZM	Arrival	13	-	-
08-Sep	21:13	3A169	YFT	Departure	11.8	-	-
09-Sep	08:16	3A061	YFT	Arrival	12	-	-
09-Sep	08:17	8S210	XZM	Arrival	12.4	-	-
09-Sep	10:00	3A062	YFT	Arrival	13.2	-	-
09-Sep	10:43	8S212	XZM	Arrival	11.2	-	-
09-Sep	11:02	8S121	XZM	Departure	11.8	-	-
09-Sep	11:13	3A063	YFT	Arrival	12.1	-	-
09-Sep	12:19	3A168	YFT	Departure	12.1	-	-
09-Sep	12:38	8S215	XZM	Arrival	13	-	-
09-Sep	12:57	3A064	YFT	Arrival	12.5	-	-
09-Sep	13:15	8S123	XZM	Departure	13.2	-	-
09-Sep	14:18	3A164	YFT	Departure	12.4	-	-
09-Sep	14:59	3A065	YFT	Arrival	12.7	-	-
09-Sep	16:22	3A167	YFT	Departure	12.3	-	-
09-Sep	16:42	8S218	XZM	Arrival	11.4	-	-
09-Sep	16:56	3A067	YFT	Arrival	12.1	-	-
09-Sep	17:02	8S126	XZM	Departure	11.2	-	-
09-Sep	19:10	3A166	YFT	Departure	11.4	-	-
09-Sep	21:02	8S2113	XZM	Arrival	11.4	-	-
09-Sep	21:03	3A169	YFT	Departure	13	-	-
09-Sep	21:55	8S522	XZM	Departure	12.6	-	-
10-Sep	08:17	3A061	YFT	Arrival	12.8	-	-
10-Sep	08:36	8S210	XZM	Arrival	10.8	-	-
10-Sep	10:07	3A062	YFT	Arrival	11.5	-	-
10-Sep	10:42	8S212	XZM	Arrival	12.5	-	-
10-Sep	11:00	8S121	XZM	Departure	12.7	-	-
10-Sep	11:15	3A063	YFT	Arrival	10.8	-	-
10-Sep	12:13	3A168	YFT	Departure	11.2	-	-
10-Sep	12:47	8S215	XZM	Arrival	13.2	-	-
10-Sep	12:53	3A064	YFT	Arrival	13	-	-
10-Sep	13:12	8S123	XZM	Departure	13	-	-
10-Sep	14:20	3A164	YFT	Departure	13.2	-	-
10-Sep	15:17	3A065	YFT	Arrival	11	-	-
10-Sep	16:23	3A167	YFT	Departure	10.6	-	-
10-Sep	16:45	8S218	XZM	Arrival	13.3	-	-
10-Sep	17:02	3A067	YFT	Arrival	13.4	-	-
10-Sep	17:15	8S126	XZM	Departure	12.6	-	-
10-Sep	19:07	3A166	YFT	Departure	10.1	-	-

Date	Time [Arrival at / Departure from HKIA SkyPier]	Ferry No.	Connecting Port [XZM - Macao (Maritime Ferry Terminal) YFT – Macao (Taipa) ZUH - 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-Sep	21:09	3A169	YFT	Departure	12.3	-	-
10-Sep	21:09	8S2113	XZM	Arrival	12	-	-
11-Sep	08:17	3A061	YFT	Arrival	11.7	-	-
11-Sep	08:35	8S210	XZM	Arrival	12.6	-	-
11-Sep	10:03	3A062	YFT	Arrival	11.6	-	-
11-Sep	10:32	8S212	XZM	Arrival	12.2	-	-
11-Sep	10:58	8S121	XZM	Departure	12.3	-	-
11-Sep	11:20	3A063	YFT	Arrival	12	-	-
11-Sep	12:17	3A168	YFT	Departure	12.9	-	-
11-Sep	12:52	8S215	XZM	Arrival	11.8	-	-
11-Sep	12:56	3A064	YFT	Arrival	11.8	-	-
11-Sep	13:21	8S123	XZM	Departure	11.6	-	-
11-Sep	14:20	3A164	YFT	Departure	12.2	-	-
11-Sep	14:55	3A065	YFT	Arrival	12.5	-	-
11-Sep	16:21	3A167	YFT	Departure	12.7	-	-
11-Sep	16:51	8S218	XZM	Arrival	12.5	-	-
11-Sep	16:58	3A067	YFT	Arrival	12.3	-	-
11-Sep	17:17	8S126	XZM	Departure	12.3	-	-
11-Sep	19:08	3A166	YFT	Departure	12.6	-	-
11-Sep	20:59	3A169	YFT	Departure	12.2	-	-
11-Sep	21:11	8S2113	XZM	Arrival	12.4	-	-
12-Sep	08:26	3A061	YFT	Arrival	11	-	-
12-Sep	08:29	8S210	XZM	Arrival	12.5	-	-
12-Sep	09:54	3A062	YFT	Arrival	11.8	-	-
12-Sep	10:37	8S212	XZM	Arrival	12.9	-	-
12-Sep	11:07	8S121	XZM	Departure	12.8	-	-
12-Sep	11:22	3A063	YFT	Arrival	12.2	-	-
12-Sep	12:19	3A168	YFT	Departure	12.6	-	-
12-Sep	12:40	8S215	XZM	Arrival	10.6	-	-
12-Sep	13:03	3A064	YFT	Arrival	11.9	-	-
12-Sep	13:24	8S123	XZM	Departure	11.8	-	-
12-Sep	14:26	3A164	YFT	Departure	12.1	-	-
12-Sep	15:01	3A065	YFT	Arrival	12.5	-	-
12-Sep	16:21	3A167	YFT	Departure	12.3	-	-
12-Sep	17:03	8S218	XZM	Arrival	11.5	-	-
12-Sep	17:10	3A067	YFT	Arrival	11.7	-	-
12-Sep	17:38	8S126	XZM	Departure	12.3	-	-
12-Sep	19:07	3A166	YFT	Departure	13.1	-	-
12-Sep	21:02	8S2113	XZM	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)
12-Sep	21:06	3A169	YFT	Departure	14.1	-	-
12-Sep	21:55	8S522	XZM	Departure	11.8	-	-
13-Sep	08:22	3A061	YFT	Arrival	12.5	-	-
13-Sep	08:28	8S210	XZM	Arrival	12.7	-	-
13-Sep	09:43	3A062	YFT	Arrival	12.8	-	-
13-Sep	10:47	8S212	XZM	Arrival	11.7	-	-
13-Sep	11:05	8S121	XZM	Departure	12.2	-	-
13-Sep	11:22	3A063	YFT	Arrival	12.4	-	-
13-Sep	12:15	3A168	YFT	Departure	12.7	-	-
13-Sep	12:48	8S215	XZM	Arrival	12	-	-
13-Sep	12:59	3A064	YFT	Arrival	12.2	-	-
13-Sep	13:15	8S123	XZM	Departure	11.7	-	-
13-Sep	14:17	3A164	YFT	Departure	12.8	-	-
13-Sep	14:54	3A065	YFT	Arrival	12.8	-	-
13-Sep	16:23	3A167	YFT	Departure	12.8	-	-
13-Sep	16:39	8S218	XZM	Arrival	11.7	-	-
13-Sep	17:00	3A067	YFT	Arrival	12.5	-	-
13-Sep	17:00	8S126	XZM	Departure	12.7	-	-
13-Sep	19:00	3A166	YFT	Departure	12.2	-	-
13-Sep	20:59	8S2113	XZM	Arrival	13.2	-	-
13-Sep	21:01	3A169	YFT	Departure	12.7	-	-
14-Sep	08:16	3A061	YFT	Arrival	12.5	-	-
14-Sep	08:37	8S210	XZM	Arrival	11.5	-	-
14-Sep	09:50	3A062	YFT	Arrival	11.5	-	-
14-Sep	10:41	8S212	XZM	Arrival	12.2	-	-
14-Sep	11:06	8S121	XZM	Departure	12.4	-	-
14-Sep	11:17	3A063	YFT	Arrival	12.3	-	-
14-Sep	12:24	3A168	YFT	Departure	12.3	-	-
14-Sep	12:52	3A064	YFT	Arrival	12.9	-	-
14-Sep	13:01	8S215	XZM	Arrival	12.1	-	-
14-Sep	13:44	8S123	XZM	Departure	12.5	-	-
14-Sep	14:14	3A164	YFT	Departure	12.5	-	-
14-Sep	14:56	3A065	YFT	Arrival	12.4	-	-
14-Sep	16:14	3A167	YFT	Departure	12.4	-	-
14-Sep	16:43	8S218	XZM	Arrival	10.4	-	-
14-Sep	16:54	3A067	YFT	Arrival	12.5	-	-
14-Sep	17:13	8S126	XZM	Departure	12.6	-	-
14-Sep	19:07	3A166	YFT	Departure	13.1	-	-
14-Sep	21:04	8S2113	XZM	Arrival	12.6	-	-

Date	Time [Arrival at / Departure from HKIA SkyPier]	Ferry No.	Connecting Port [XZM - Macao (Maritime Ferry Terminal) YFT – Macao (Taipa) ZUH - 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-Sep	21:14	3A169	YFT	Departure	12.7	-	-
15-Sep	08:17	3A061	YFT	Arrival	12	-	-
15-Sep	08:28	8S210	XZM	Arrival	11.3	<= 5	< 1min
15-Sep	09:54	3A062	YFT	Arrival	11.7	-	-
15-Sep	10:41	8S212	XZM	Arrival	12.3	-	-
15-Sep	11:03	8S121	XZM	Departure	11.6	-	-
15-Sep	11:19	3A063	YFT	Arrival	12.8	-	-
15-Sep	12:16	3A168	YFT	Departure	13.1	-	-
15-Sep	12:57	8S215	XZM	Arrival	11.8	-	-
15-Sep	13:00	3A064	YFT	Arrival	12	-	-
15-Sep	13:21	8S123	XZM	Departure	10.6	-	-
15-Sep	14:19	3A164	YFT	Departure	12.6	-	-
15-Sep	14:55	3A065	YFT	Arrival	13.2	-	-
15-Sep	16:17	3A167	YFT	Departure	13.7	-	-
15-Sep	16:43	8S218	XZM	Arrival	10.7	-	-
15-Sep	17:03	3A067	YFT	Arrival	12.2	-	-
15-Sep	17:05	8S126	XZM	Departure	11.1	-	-
15-Sep	19:07	3A166	YFT	Departure	12.9	-	-
15-Sep	21:02	8S2113	XZM	Arrival	13.5	-	-
15-Sep	21:11	3A169	YFT	Departure	11.1	-	-
16-Sep	08:23	3A061	YFT	Arrival	11.7	-	-
16-Sep	08:34	8S210	XZM	Arrival	11.9	-	-
16-Sep	09:58	3A062	YFT	Arrival	12.3	-	-
16-Sep	10:45	8S212	XZM	Arrival	13	-	-
16-Sep	11:06	8S121	XZM	Departure	11.7	-	-
16-Sep	11:22	3A063	YFT	Arrival	12.1	-	-
16-Sep	12:16	3A168	YFT	Departure	12.3	-	-
16-Sep	12:56	8S215	XZM	Arrival	12.3	-	-
16-Sep	13:08	3A064	YFT	Arrival	11.7	-	-
16-Sep	13:18	8S123	XZM	Departure	10.5	-	-
16-Sep	14:14	3A164	YFT	Departure	11.3	-	-
16-Sep	14:59	3A065	YFT	Arrival	11.7	-	-
16-Sep	16:17	3A167	YFT	Departure	11.9	-	-
16-Sep	16:43	8S218	XZM	Arrival	12.4	-	-
16-Sep	17:03	3A067	YFT	Arrival	11.4	-	-
16-Sep	17:14	8S126	XZM	Departure	11.5	-	-
16-Sep	19:07	3A166	YFT	Departure	12.2	-	-
16-Sep	20:59	3A169	YFT	Departure	12.3	-	-
16-Sep	20:59	8S2113	XZM	Arrival	12.5	-	-

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)
16-Sep	21:56	8S522	XZM	Departure	13.1	-	-
17-Sep	08:14	3A061	YFT	Arrival	13.1	-	-
17-Sep	08:25	8S210	XZM	Arrival	12.6	-	-
17-Sep	09:53	3A062	YFT	Arrival	12.9	-	-
17-Sep	10:44	8S212	XZM	Arrival	12.5	-	-
17-Sep	11:06	8S121	XZM	Departure	12.9	-	-
17-Sep	11:25	3A063	YFT	Arrival	13.1	-	-
17-Sep	12:12	3A168	YFT	Departure	13	-	-
17-Sep	12:55	3A064	YFT	Arrival	12.9	-	-
17-Sep	12:56	8S215	XZM	Arrival	11.5	-	-
17-Sep	13:22	8S123	XZM	Departure	11.9	-	-
17-Sep	14:18	3A164	YFT	Departure	12.3	-	-
17-Sep	14:57	3A065	YFT	Arrival	12.5	-	-
17-Sep	16:19	3A167	YFT	Departure	12.9	-	-
17-Sep	16:46	8S218	XZM	Arrival	10.5	-	-
17-Sep	16:58	3A067	YFT	Arrival	12.2	-	-
17-Sep	17:05	8S126	XZM	Departure	12.2	-	-
17-Sep	19:02	3A166	YFT	Departure	13	-	-
17-Sep	20:58	8S2113	XZM	Arrival	13.2	-	-
17-Sep	21:04	3A169	YFT	Departure	12.1	-	-
18-Sep	08:14	3A061	YFT	Arrival	13	-	-
18-Sep	08:40	8S210	XZM	Arrival	11.3	-	-
18-Sep	09:43	3A062	YFT	Arrival	12.5	-	-
18-Sep	10:45	8S212	XZM	Arrival	12.4	-	-
18-Sep	11:12	8S121	XZM	Departure	12.4	-	-
18-Sep	11:17	3A063	YFT	Arrival	13.3	-	-
18-Sep	12:19	3A168	YFT	Departure	12.2	-	-
18-Sep	13:00	3A064	YFT	Arrival	12.1	-	-
18-Sep	13:08	8S215	XZM	Arrival	11.6	-	-
18-Sep	13:34	8S123	XZM	Departure	12.2	-	-
18-Sep	14:19	3A164	YFT	Departure	12.8	-	-
18-Sep	15:02	3A065	YFT	Arrival	12.4	-	-
18-Sep	16:25	3A167	YFT	Departure	11.5	-	-
18-Sep	16:40	8S218	XZM	Arrival	10.8	-	-
18-Sep	16:59	3A067	YFT	Arrival	12	-	-
18-Sep	17:23	8S126	XZM	Departure	12.7	-	-
18-Sep	19:04	3A166	YFT	Departure	11.7	-	-
18-Sep	20:57	8S2113	XZM	Arrival	12.6	-	-
18-Sep	21:08	3A169	YFT	Departure	12.5	-	-

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)
18-Sep	22:13	8S522	XZM	Departure	12.4	-	-
19-Sep	08:14	3A061	YFT	Arrival	12.1	-	-
19-Sep	08:26	8S210	XZM	Arrival	10.5	-	-
19-Sep	09:51	3A062	YFT	Arrival	11.6	-	-
19-Sep	10:37	8S212	XZM	Arrival	11.8	-	-
19-Sep	10:58	8S121	XZM	Departure	12.5	-	-
19-Sep	11:22	3A063	YFT	Arrival	11.5	-	-
19-Sep	12:12	3A168	YFT	Departure	11.3	-	-
19-Sep	12:48	8S215	XZM	Arrival	11.3	-	-
19-Sep	12:55	3A064	YFT	Arrival	13.2	-	-
19-Sep	13:19	8S123	XZM	Departure	12.3	-	-
19-Sep	14:16	3A164	YFT	Departure	12.3	-	-
19-Sep	14:55	3A065	YFT	Arrival	11.7	-	-
19-Sep	16:16	3A167	YFT	Departure	11.2	-	-
19-Sep	16:46	8S218	XZM	Arrival	12.1	-	-
19-Sep	16:59	3A067	YFT	Arrival	12.5	-	-
19-Sep	17:16	8S126	XZM	Departure	12.4	-	-
19-Sep	19:01	3A166	YFT	Departure	11.3	-	-
19-Sep	20:56	8S2113	XZM	Arrival	13	-	-
19-Sep	21:06	3A169	YFT	Departure	13.7	-	-
20-Sep	08:22	3A061	YFT	Arrival	11.3	-	-
20-Sep	08:26	8S210	XZM	Arrival	11.9	-	-
20-Sep	09:47	3A062	YFT	Arrival	12.6	-	-
20-Sep	10:44	8S212	XZM	Arrival	11	-	-
20-Sep	11:09	8S121	XZM	Departure	10.9	-	-
20-Sep	11:24	3A063	YFT	Arrival	12.2	-	-
20-Sep	12:12	3A168	YFT	Departure	12.9	-	-
20-Sep	12:41	8S215	XZM	Arrival	12.7	-	-
20-Sep	12:58	3A064	YFT	Arrival	11.4	-	-
20-Sep	13:15	8S123	XZM	Departure	12.2	-	-
20-Sep	14:16	3A164	YFT	Departure	11	-	-
20-Sep	15:00	3A065	YFT	Arrival	12.4	-	-
20-Sep	16:17	3A167	YFT	Departure	12.6	-	-
20-Sep	16:42	8S218	XZM	Arrival	10.6	-	-
20-Sep	17:03	8S126	XZM	Departure	12.2	-	-
20-Sep	17:10	3A067	YFT	Arrival	11.2	-	-
20-Sep	19:10	3A166	YFT	Departure	12.5	-	-
20-Sep	20:57	8S2113	XZM	Arrival	13.1	-	-
20-Sep	20:57	3A169	YFT	Departure	13.1	-	-

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)
21-Sep	08:17	3A061	YFT	Arrival	12.4	-	-
21-Sep	08:24	8S210	XZM	Arrival	12.5	-	-
21-Sep	09:48	3A062	YFT	Arrival	11.8	-	-
21-Sep	10:50	8S212	XZM	Arrival	11.6	-	-
21-Sep	11:15	8S121	XZM	Departure	12.1	-	-
21-Sep	11:18	3A063	YFT	Arrival	12.3	-	-
21-Sep	12:15	3A168	YFT	Departure	11.9	-	-
21-Sep	12:56	8S215	XZM	Arrival	11.4	-	-
21-Sep	13:04	3A064	YFT	Arrival	12.6	-	-
21-Sep	13:17	8S123	XZM	Departure	11.2	-	-
21-Sep	14:22	3A164	YFT	Departure	12.5	-	-
21-Sep	15:07	3A065	YFT	Arrival	11.5	-	-
21-Sep	16:22	3A167	YFT	Departure	11	-	-
21-Sep	16:48	8S218	XZM	Arrival	11.7	-	-
21-Sep	17:10	3A067	YFT	Arrival	12.3	-	-
21-Sep	17:18	8S126	XZM	Departure	10.2	-	-
21-Sep	19:02	3A166	YFT	Departure	12.3	-	-
21-Sep	21:03	8S2113	XZM	Arrival	12.2	-	-
21-Sep	21:04	3A169	YFT	Departure	12.3	-	-
21-Sep	22:07	8S522	XZM	Departure	13.3	-	-
22-Sep	08:20	3A061	YFT	Arrival	11.3	-	-
22-Sep	08:33	8S210	XZM	Arrival	10.2	-	-
22-Sep	09:55	3A062	YFT	Arrival	12.1	-	-
22-Sep	10:31	8S212	XZM	Arrival	12.7	-	-
22-Sep	11:07	8S121	XZM	Departure	13.2	-	-
22-Sep	11:20	3A063	YFT	Arrival	12	-	-
22-Sep	12:13	3A168	YFT	Departure	12.6	-	-
22-Sep	12:53	8S215	XZM	Arrival	11.1	-	-
22-Sep	12:57	3A064	YFT	Arrival	12.1	-	-
22-Sep	13:22	8S123	XZM	Departure	10.1	-	-
22-Sep	14:12	3A164	YFT	Departure	11.9	-	-
22-Sep	14:57	3A065	YFT	Arrival	13.3	-	-
22-Sep	16:13	3A167	YFT	Departure	12.6	-	-
22-Sep	16:42	8S218	XZM	Arrival	12.9	-	-
22-Sep	16:59	3A067	YFT	Arrival	12.1	-	-
22-Sep	17:02	8S126	XZM	Departure	13	-	-
22-Sep	19:12	3A166	YFT	Departure	13.7	-	-
22-Sep	20:57	8S2113	XZM	Arrival	12.8	-	-
22-Sep	21:09	3A169	YFT	Departure	12.4	-	-

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-Sep	08:17	3A061	YFT	Arrival	12.6	-	-
23-Sep	08:27	8S210	XZM	Arrival	12.8	-	-
23-Sep	09:47	3A062	YFT	Arrival	11.5	-	-
23-Sep	10:41	8S212	XZM	Arrival	12.2	-	-
23-Sep	11:02	8S121	XZM	Departure	12.9	-	-
23-Sep	11:13	3A063	YFT	Arrival	12.6	-	-
23-Sep	12:16	3A168	YFT	Departure	12.7	-	-
23-Sep	12:46	8S215	XZM	Arrival	12.2	-	-
23-Sep	12:56	3A064	YFT	Arrival	12.7	-	-
23-Sep	13:12	8S123	XZM	Departure	12.4	-	-
23-Sep	14:18	3A164	YFT	Departure	13.2	-	-
23-Sep	15:00	3A065	YFT	Arrival	11.9	-	-
23-Sep	16:16	3A167	YFT	Departure	13.2	-	-
23-Sep	16:42	8S218	XZM	Arrival	11.7	-	-
23-Sep	16:58	3A067	YFT	Arrival	12.5	-	-
23-Sep	17:04	8S126	XZM	Departure	12.6	-	-
23-Sep	19:07	3A166	YFT	Departure	11.9	-	-
23-Sep	20:55	3A169	YFT	Departure	12.6	-	-
23-Sep	20:55	8S2113	XZM	Arrival	12.1	-	-
24-Sep	08:17	3A061	YFT	Arrival	11.6	-	-
24-Sep	08:47	8S210	XZM	Arrival	11.6	-	-
24-Sep	09:50	3A062	YFT	Arrival	13.1	-	-
24-Sep	10:39	8S212	XZM	Arrival	12	-	-
24-Sep	11:13	3A063	YFT	Arrival	12	-	-
24-Sep	11:16	8S121	XZM	Departure	12.7	-	-
24-Sep	12:16	3A168	YFT	Departure	12.4	-	-
24-Sep	12:49	8S215	XZM	Arrival	10.1	-	-
24-Sep	12:54	3A064	YFT	Arrival	11.8	-	-
24-Sep	13:17	8S123	XZM	Departure	10.2	-	-
24-Sep	14:12	3A164	YFT	Departure	11.8	-	-
24-Sep	14:57	3A065	YFT	Arrival	12	-	-
24-Sep	16:17	3A167	YFT	Departure	12.1	-	-
24-Sep	16:45	8S218	XZM	Arrival	10.9	-	-
24-Sep	17:11	8S126	XZM	Departure	10.4	-	-
24-Sep	17:12	3A067	YFT	Arrival	12	-	-
24-Sep	19:03	3A166	YFT	Departure	11.4	-	-
24-Sep	21:08	8S2113	XZM	Arrival	12	-	-
24-Sep	21:08	3A169	YFT	Departure	13.2	-	-
25-Sep	08:21	3A061	YFT	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)
25-Sep	08:39	8S210	XZM	Arrival	11.3	-	-
25-Sep	09:51	3A062	YFT	Arrival	11.2	-	-
25-Sep	10:43	8S212	XZM	Arrival	11.9	-	-
25-Sep	11:05	8S121	XZM	Departure	12.1	-	-
25-Sep	11:15	3A063	YFT	Arrival	11	-	-
25-Sep	12:16	3A168	YFT	Departure	10.9	-	-
25-Sep	12:55	3A064	YFT	Arrival	12.9	-	-
25-Sep	13:03	8S215	XZM	Arrival	10.9	-	-
25-Sep	13:36	8S123	XZM	Departure	10.9	-	-
25-Sep	14:12	3A164	YFT	Departure	13.5	-	-
25-Sep	14:58	3A065	YFT	Arrival	11.5	-	-
25-Sep	16:10	3A167	YFT	Departure	11.2	-	-
25-Sep	16:45	8S218	XZM	Arrival	12.4	-	-
25-Sep	16:54	3A067	YFT	Arrival	13.3	-	-
25-Sep	17:25	8S126	XZM	Departure	13	-	-
25-Sep	19:14	3A166	YFT	Departure	11	-	-
25-Sep	21:03	8S2113	XZM	Arrival	10.9	-	-
25-Sep	21:04	3A169	YFT	Departure	11.8	-	-
26-Sep	08:18	3A061	YFT	Arrival	11.7	-	-
26-Sep	08:28	8S210	XZM	Arrival	11.6	-	-
26-Sep	10:04	3A062	YFT	Arrival	12.7	-	-
26-Sep	10:38	8S212	XZM	Arrival	11.8	-	-
26-Sep	11:00	8S121	XZM	Departure	11.7	-	-
26-Sep	11:21	3A063	YFT	Arrival	12	-	-
26-Sep	12:19	3A168	YFT	Departure	12.5	-	-
26-Sep	12:45	8S215	XZM	Arrival	11.8	-	-
26-Sep	13:01	3A064	YFT	Arrival	11.9	-	-
26-Sep	13:18	8S123	XZM	Departure	12.6	-	-
26-Sep	14:15	3A164	YFT	Departure	12.3	-	-
26-Sep	14:54	3A065	YFT	Arrival	12.5	-	-
26-Sep	16:17	3A167	YFT	Departure	12.5	-	-
26-Sep	16:46	8S218	XZM	Arrival	11.6	-	-
26-Sep	16:56	3A067	YFT	Arrival	12.5	-	-
26-Sep	17:07	8S126	XZM	Departure	13	-	-
26-Sep	19:08	3A166	YFT	Departure	12.3	-	-
26-Sep	20:55	8S2113	XZM	Arrival	12.8	-	-
26-Sep	21:06	3A169	YFT	Departure	13.2	-	-
27-Sep	08:16	3A061	YFT	Arrival	12.2	-	-
27-Sep	08:24	8S210	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)
27-Sep	09:54	3A062	YFT	Arrival	12.4	-	-
27-Sep	10:51	8S212	XZM	Arrival	11.2	-	-
27-Sep	11:10	8S121	XZM	Departure	10.5	-	-
27-Sep	11:22	3A063	YFT	Arrival	12	-	-
27-Sep	12:17	3A168	YFT	Departure	13	-	-
27-Sep	12:43	8S215	XZM	Arrival	11.4	-	-
27-Sep	12:57	3A064	YFT	Arrival	10.9	-	-
27-Sep	13:18	8S123	XZM	Departure	10.9	-	-
27-Sep	14:20	3A164	YFT	Departure	11.7	-	-
27-Sep	15:04	3A065	YFT	Arrival	12.4	-	-
27-Sep	16:20	3A167	YFT	Departure	12.5	-	-
27-Sep	16:47	8S218	XZM	Arrival	11.9	-	-
27-Sep	16:58	3A067	YFT	Arrival	12	-	-
27-Sep	17:10	8S126	XZM	Departure	12.4	-	-
27-Sep	19:00	3A166	YFT	Departure	13.6	-	-
27-Sep	21:00	8S2113	XZM	Arrival	13.7	-	-
27-Sep	21:03	3A169	YFT	Departure	14	-	-
28-Sep	08:20	3A061	YFT	Arrival	11.5	-	-
28-Sep	08:33	8S210	XZM	Arrival	11.6	-	-
28-Sep	09:56	3A062	YFT	Arrival	12.1	-	-
28-Sep	10:49	8S212	XZM	Arrival	11.7	-	-
28-Sep	11:17	8S121	XZM	Departure	11.2	-	-
28-Sep	11:20	3A063	YFT	Arrival	12.3	-	-
28-Sep	12:16	3A168	YFT	Departure	13	-	-
28-Sep	12:38	8S215	XZM	Arrival	12.5	-	-
28-Sep	12:58	3A064	YFT	Arrival	11.2	-	-
28-Sep	13:14	8S123	XZM	Departure	12.5	-	-
28-Sep	14:18	3A164	YFT	Departure	12.1	-	-
28-Sep	14:57	3A065	YFT	Arrival	12.3	-	-
28-Sep	16:11	3A167	YFT	Departure	13.3	-	-
28-Sep	16:43	8S218	XZM	Arrival	11.7	-	-
28-Sep	17:00	3A067	YFT	Arrival	11.7	-	-
28-Sep	17:04	8S126	XZM	Departure	12.9	-	-
28-Sep	19:03	3A166	YFT	Departure	12.3	-	-
28-Sep	21:05	8S2113	XZM	Arrival	12.3	-	-
28-Sep	21:06	3A169	YFT	Departure	12.9	-	-
29-Sep	08:20	3A061	YFT	Arrival	12.4	-	-
29-Sep	08:22	8S210	XZM	Arrival	13	-	-
29-Sep	09:59	3A062	YFT	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)
29-Sep	10:47	8S212	XZM	Arrival	11.7	-	-
29-Sep	11:15	3A063	YFT	Arrival	12.4	-	-
29-Sep	11:16	8S121	XZM	Departure	12.2	-	-
29-Sep	12:20	3A168	YFT	Departure	13	-	-
29-Sep	12:42	8S215	XZM	Arrival	12.5	-	-
29-Sep	13:01	3A064	YFT	Arrival	11.6	-	-
29-Sep	13:30	8S123	XZM	Departure	12.3	-	-
29-Sep	14:21	3A164	YFT	Departure	11.8	-	-
29-Sep	15:00	3A065	YFT	Arrival	11.8	-	-
29-Sep	16:19	3A167	YFT	Departure	12.8	-	-
29-Sep	16:39	8S218	XZM	Arrival	9.6	-	-
29-Sep	16:55	3A067	YFT	Arrival	11.5	-	-
29-Sep	17:04	8S126	XZM	Departure	12.6	-	-
29-Sep	19:09	3A166	YFT	Departure	13.1	-	-
29-Sep	20:57	8S2113	XZM	Arrival	12.6	-	-
29-Sep	20:59	3A169	YFT	Departure	12.2	-	-
29-Sep	21:58	8S522	XZM	Departure	13.3	-	-
30-Sep	08:22	3A061	YFT	Arrival	12.6	-	-
30-Sep	08:25	8S210	XZM	Arrival	12.3	-	-
30-Sep	09:52	3A062	YFT	Arrival	12.1	-	-
30-Sep	10:42	8S212	XZM	Arrival	11.6	-	-
30-Sep	11:16	3A063	YFT	Arrival	11.6	-	-
30-Sep	11:19	8S121	XZM	Departure	12.1	-	-
30-Sep	12:20	3A168	YFT	Departure	11.1	-	-
30-Sep	12:56	8S215	XZM	Arrival	11.6	-	-
30-Sep	13:11	3A064	YFT	Arrival	12.3	-	-
30-Sep	13:18	8S123	XZM	Departure	10.8	-	-
30-Sep	14:18	3A164	YFT	Departure	12.6	-	-
30-Sep	15:02	3A065	YFT	Arrival	11.7	-	-
30-Sep	16:19	3A167	YFT	Departure	11.5	-	-
30-Sep	16:41	8S218	XZM	Arrival	11.3	-	-
30-Sep	17:08	3A067	YFT	Arrival	11.9	-	-
30-Sep	17:14	8S126	XZM	Departure	11.1	-	-
30-Sep	19:09	3A166	YFT	Departure	11.8	-	-
30-Sep	21:02	3A169	YFT	Departure	13	-	-
30-Sep	21:10	8S2113	XZM	Arrival	10.3	-	-
30-Sep	21:53	8S522	XZM	Departure	10.9	-	-

Note: No vessel operated to/from Zhuhai (ZUI) in September 2017 as the pier facility was damaged due to typhoon in late August.

Follow-up on instantaneous speeding

Referring to the data of SkyPier HSF movements in September 2017, 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 four HSF movements. The duration of instantaneous speeding of all four HSF movements were less than one minute. The AIS data and ferry operators' responses showed the cases were due to local strong water currents. The captain had reduced speed and maintained the speed at less than 15 knots after the incidents.

One HSF movement with insufficient AIS data was received in September 2017. Vessel captain was also requested to provide the AIS plots to indicate the vessel entered the SCZ though the gate access point with no speeding in the SCZ.