



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

Construction Phase Monthly EM&A Report No.22  
(For October 2017)

November 2017

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**

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**This Monthly EM&A Report No. 22 has been reviewed and certified by**

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

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

**Certified by:**

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

---

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

**Date**

14 November 2017

Our Ref : 60440482/C/JCHL171114

**By Email**

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

Attn: Mr. Lawrence Tsui, Principal Manager

14 November 2017

Dear Sir,

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

**Submission of Monthly EM&A Report No.22 (October 2017)**

Reference is made to the Environmental Team's submission of the Monthly EM&A Report No.22 under Condition 3.5 of the Environmental Permit No. EP-489/2014 certified by the ET Leader on 14 November 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



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# 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 22<sup>nd</sup> 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 31 October 2017.

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

The key activities of the Project carried out in the reporting period included reclamation works and land-side works. Reclamation works included deep cement mixing (DCM) works, laying of sand blanket, seawall construction and prefabricated vertical drain (PVD) installation. Land-side works included horizontal directional drilling (HDD) works, site office establishment, cable ducting, 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 30 sets of construction dust measurements, 21 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 15 to 19 dolphin observation stations were deployed for continuous monitoring of the DEZ by all contractors for ground improvement works (DCM works and PVD installation) 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 or

the DEZs in this reporting month. 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 October 2017 were in the range of 1 to 87 daily movements, which are within the maximum daily cap of 125 daily movements. A total of 693 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 (9.3 to 14.0 knots), which were in compliance with the SkyPier Plan. Two ferry movements with minor deviation from the diverted route are under investigation by ET. The investigation result will be presented in the next monthly EM&A report. 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, chromium, and nickel 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, some of the testing results exceeded the relevant Action 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 egret 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; and
- Precast of duct bank and fabrication of steel works.

**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.

		
<p>Terrestrial Ecological Monitoring</p>	<p>Environmental Training provided by the Contractor</p>	<p>Land-based theodolite tracking survey for CWD at Sha Chau</p>

### **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 <sup>^</sup>		✓	No exceedance of project-related limit level was recorded.	Nil
Exceedance of Action Level <sup>^</sup>		✓	No exceedance of project-related action level was recorded.	Nil
Complaints Received		✓	No construction activities-related complaint was received.	Nil
Notification of any summons and status of prosecutions		✓	No notification of summon or prosecution was received.	Nil
Changes that affect the EM&A		✓	There was no change to the construction works that may affect the EM&A	Nil

Remark: <sup>^</sup>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 22<sup>nd</sup> 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 31 October 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
<b>Advanced Works:</b>			
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
<b>Deep Cement Mixing (DCM) Works:</b>			
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
<b>Reclamation Works:</b>			
Contract 3206 (ZHEC-CCCC-CDC Joint Venture)	Project Manager	Kim Chuan Lim	3693 2288
	Environmental Officer	Kwai Fung Wong	3693 2252
<b>Airfield Works</b>			

Party	Position	Name	Telephone
Contract 3301 North Runway Crossover Taxiway (FJT-CHEC-ZHEC Joint Venture)	Project Manager	Kin Hang Chung	9412 1386
<b>Terminal 2 (T2) Expansion Works:</b>			
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
<b>Automated People Mover (APM) Works:</b>			
Contract 3602 Existing APM System Modification Works (Niigata Transys Co., Ltd.)	Project Manager	Kunihiro Tatecho	9755 0351
	Environmental Officer	Arthur Wong	9170 3394
<b>Airport Support Infrastructure and Logistic Works:</b>			
Contract 3801 APM and BHS Tunnels on Existing Airport Island (China State Construction Engineering (Hong Kong) Ltd.)	Project Manager	Tony Wong	9642 8672
	Environmental Officer	Fredrick Wong	9842 2703

## 1.4 Summary of Construction Works

The key activities of the Project carried out in the reporting period included reclamation works and land-side works. Reclamation works included deep cement mixing (DCM) works, laying of sand blanket, seawall construction and prefabricated vertical drain (PVD) installation. Land-side works included horizontal directional drilling (HDD) works, site office establishment, cable ducting, 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
<b>Air Quality</b>	
Baseline Monitoring	The baseline air quality monitoring result has been reported in Baseline Monitoring Report and submitted to EPD under EP Condition 3.4.
Impact Monitoring	On-going
<b>Noise</b>	
Baseline Monitoring	The baseline noise monitoring result has been reported in Baseline Monitoring Report and submitted to EPD under EP Condition 3.4.
Impact Monitoring	On-going

Parameters	Status
<b>Water Quality</b>	
General Baseline Water Quality Monitoring for reclamation, water jetting and field joint works	The baseline water quality monitoring result has been reported in Baseline Water Quality Monitoring Report and submitted to EPD under EP Condition 3.4.
General Impact Water Quality Monitoring for reclamation, water jetting and field joint works	On-going
Initial Intensive Deep Cement Mixing (DCM) Water Quality Monitoring	Completed in May 2017 and data analysis in-progress.
Early/ Regular DCM Water Quality Monitoring	On-going
<b>Waste Management</b>	
Waste Monitoring	On-going
<b>Land Contamination</b>	
Supplementary Contamination Assessment Plan (CAP)	The Supplementary CAP was submitted to EPD pursuant to EP condition 2.20.
Contamination Assessment Report (CAR) for Golf Course	The CAR for Golf Course was submitted to EPD.
<b>Terrestrial Ecology</b>	
Pre-construction Egret Survey Plan	The Egret Survey Plan was submitted and approved by EPD under EP Condition 2.14.
Ecological Monitoring	On-going
<b>Marine Ecology</b>	
Pre-Construction Phase Coral Dive Survey	The Coral Translocation Plan was submitted and approved by EPD under EP Condition 2.12.
Coral Translocation	The coral translocation was completed.
Post-Translocation Coral Monitoring	On-going
<b>Chinese White Dolphins (CWD)</b>	
<b>Vessel Survey, Land-based Theodolite Tracking and Passive Acoustic Monitoring (PAM)</b>	
Baseline Monitoring	Baseline CWD results were reported in the CWD Baseline Monitoring Report and submitted to EPD in accordance with EP Condition 3.4.
Impact Monitoring	On-going
<b>Landscape &amp; Visual</b>	
Baseline Monitoring	The baseline landscape & visual monitoring result has been reported in Baseline Monitoring Report and submitted to EPD under EP Condition 3.4.
Impact Monitoring	On-going
<b>Environmental Auditing</b>	
Regular site inspection	On-going
Marine Mammal Watching Plan (MMWP) implementation measures	On-going
Dolphin Exclusion Zone 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, terrestrial 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 ( $\mu\text{g}/\text{m}^3$ )	Limit Level ( $\mu\text{g}/\text{m}^3$ )
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)	11 Oct 2017	<b>Appendix E</b>
	SIBATA LD-3B-002 (Serial No. 974350)	11 Sep 2017	
	SIBATA LD-3B-003 (Serial No. 276018)	11 Sep 2017	

## 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 is provided in **Appendix E**. The calibration certificates of portable direct reading dust meters listed in **Table 2.3** are also provided in **Appendix E**.

## 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 ( $\mu\text{g}/\text{m}^3$ )	Action Level ( $\mu\text{g}/\text{m}^3$ )	Limit Level ( $\mu\text{g}/\text{m}^3$ )
AR1A	17 – 70	306	500
AR2	21 – 93	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 <sup>(1)</sup>	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) <sup>(i)</sup>

Note: <sup>(i)</sup> 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. 2808432)	30 Aug 2017	Monthly EM&A Report No. 21, Appendix E
	B&K 2238 (Serial No. 2684503)	30 Aug 2017	Monthly EM&A Report No. 21, 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.

### 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)	Limit Level, dB(A)
	<i>L<sub>eq</sub></i> (30 mins)	<i>L<sub>eq</sub></i> (30 mins)
NM1A <sup>(i)</sup>	72	75
NM3A	61	75
NM4 <sup>(i)</sup>	60 – 65	70 <sup>(ii)</sup>
NM5 <sup>(i)</sup>	53 – 58	75
NM6 <sup>(i)</sup>	66 – 70	75

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

(ii) Reduced to 65 dB(A) during school examination periods at NM4. School examination took place from 23 to 27 October 2017 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, aircraft noise at NM3A, road traffic 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 <sup>(2)</sup>
C2	Control	806945	825682	
C3 <sup>(3)</sup>	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 <sup>(1)</sup>	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 <sup>(3)</sup>	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 <sup>(4)</sup>	Seawater Intake for cooling at Hong Kong International Airport (East)	811418	820246	
		(from July 2017 onwards)		

Notes:

<sup>(1)</sup> 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.

<sup>(2)</sup> 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.

<sup>(3)</sup> 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.

<sup>(4)</sup> 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**.

### 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)	
<b>Action and Limit Levels for general water quality monitoring and regular DCM monitoring (excluding SR1&amp; SR8)</b>				
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	
<b>Action and Limit Levels SR1</b>				
SS (mg/l)	To be determined prior to its commissioning		To be determined prior to its commissioning	

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

Notes:

- (1) For DO measurement, non-compliance occurs when monitoring result is lower than the limits.
- (2) For parameters other than DO, non-compliance of water quality results when monitoring results is higher than the limits.
- (3) Depth-averaged results are used unless specified otherwise.
- (4) Details of selection criteria for the two heavy metals for 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
<b>Flood Tide</b>	
C1	IM1, IM2, IM3, IM4, IM5, IM6, IM7, IM8, SR3
SR2 <sup>†</sup>	IM7, IM8, IM9, IM10, IM11, IM12, SR1A, SR3, SR4A, SR5A, SR6, SR8
<b>Ebb Tide</b>	
C1	SR4A, SR5A, SR6
C2	IM1, IM2, IM3, IM4, IM5, IM6, IM7, IM8, IM9, IM10, IM11, IM12, SR1A, SR2, SR3, SR7, SR8

<sup>†</sup> 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. 16J101716)	12 Sep 2017	Monthly EM&A Report No. 21, 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.10N64701)	18 Sep 2017	Monthly EM&A Report No. 21, 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 22<sup>nd</sup> ed. and/or other methods as agreed by the EPD. In-situ measurements at monitoring locations including temperature, pH, DO, turbidity, salinity and water depth were collected by equipment listed in **Table 4.4** and **Table 4.5**. Water samples for heavy metals and SS analysis were stored in high density polythene bottles with no preservative added, packed in ice (cooled to 4 °C without being frozen), delivered to the laboratory within 24 hours of collection.

### 4.4.2 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.

### 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
<b>Heavy Metals</b>			
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, chromium, and nickel 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, some of the testing results exceeded the relevant Action Levels, and the corresponding investigations were conducted accordingly. It should be noted that Severe Typhoon Khanun 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 3 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	
03/10/2017																				
05/10/2017																				
07/10/2017																				
10/10/2017																				
12/10/2017																				
14/10/2017																				
17/10/2017																				
19/10/2017																				
21/10/2017																				
24/10/2017																				
26/10/2017																				
28/10/2017																				
31/10/2017																				
No. of Exceedance	0	0	0	0	1	1	0	0	1	0	2	0	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
	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

Exceedances of Action Level was recorded on three monitoring days. As some of the exceedances occurred at a station located downstream of the Project, which might be affected by Project's construction activities, exceedance investigation focused on these events was carried out.

As part of the investigation on downstream exceedance events, details of the Project's marine construction activities on the concerned monitoring days were 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
19/10/2017	DCM works Sand blanket laying	Around 500m	Silt curtain deployed	No	No	No
24/10/2017	DCM works	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 IM11 on 19 and 24 October 2017, the exceedances appeared to be isolated cases with no observable temporal and spatial trend to indicate any effect due to Project activities. As there was no evidence of SS release due to project activities from site observations and all mitigation measures were carried out properly, the exceedances were 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-flood 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	
03/10/2017																			
05/10/2017																			
07/10/2017																			
10/10/2017																			
12/10/2017																			
14/10/2017																			
17/10/2017																			
19/10/2017																			
21/10/2017																			
24/10/2017																			
26/10/2017																			
28/10/2017																			
31/10/2017																			
No. of Exceedance	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0

Note: Detailed results are presented in <b>Appendix D</b> .	
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.

**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 and maintenance of drip trays, as well as regular segregation and removal of waste. The contractors had taken actions to implement the recommended measures.

Based on the updated information, 200kg and 1,200L of chemical waste were collected by licensed chemical waste collector, and around 138 tonnes of general refuse was disposed of to the designated landfill in September 2017. Also, around 20m<sup>3</sup> of Construction and Demolition (C&D) materials was reused in another contract in September 2017.

According to the Contractor's information, about 371m<sup>3</sup> of excavated materials were produced from the HDD and excavation works 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 149 tonnes of general refuse was disposed of to the designated landfill, 30kg and 11,400L of chemical waste were collected by licensed chemical waste collector in October 2017. Besides, around 50m<sup>3</sup> of Construction and Demolition (C&D) materials was reused in another contract and around 3m<sup>3</sup> of C&D material was disposed of as public fill in the reporting period.

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 October 2017, data from 1 August 2017 to 31 October 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 September 2017 (calculated by data from July 2017 to September 2017) and the running quarterly encounter rates of this month (calculated by data from August 2017 to October 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
<b>NEL</b>					
1S	813525	820900	6N	818568	824433
1N	813525	824657	7S	819532	821420
2S	814556	818449	7N	819532	824209
2N	814559	824768	8S	820451	822125
3S	815542	818807	8N	820451	823671
3N	815542	824882	9S	821504	822371
4S	816506	819480	9N	821504	823761
4N	816506	824859	10S	822513	823268
5S	817537	820220	10N	822513	824321
5N	817537	824613	11S	823477	823402
6S	818568	820735	11N	823477	824613
<b>NWL</b>					
1S	804671	814577	5S	808504	821735
1N	804671	831404	5N	808504	828602
2Sb	805475	815457	6S	809490	822075
2Nb	805476	818571	6N	809490	825352
2Sa	805476	820770	7S	810499	822323
2Na	805476	830562	7N	810499	824613
3S	806464	821033	8S	811508	821839
3N	806464	829598	8N	811508	824254
4S	807518	821395	9S	812516	821356
4N	807518	829230	9N	812516	824254
<b>AW</b>					
1W	804733	818205	2W	805045	816912
1E	806708	818017	2E	805960	816633
<b>WL</b>					
1W	800600	805450	7W	800400	811450
1E	801760	805450	7E	802400	811450
2W	800300	806450	8W	800800	812450
2E	801750	806450	8E	802900	812450
3W	799600	807450	9W	801500	813550
3E	801500	807450	9E	803120	813550
4W	799400	808450	10W	801880	814500
4E	801430	808450	10E	803700	814500
5W	799500	809450	11W	802860	815500
5E	801300	809450	12S/11E	803750	815500
6W	799800	810450	12N	803750	818500
6E	801400	810450			
<b>SWL</b>					
1S	802494	803961	6S	807467	801137
1N	802494	806174	6N	807467	808458
2S	803489	803280	7S	808553	800329

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 same location of the survey line where dolphins were spotted as far as practicable 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 9<sup>th</sup>, 18<sup>th</sup>, 19<sup>th</sup>, 23<sup>rd</sup>, 24<sup>th</sup>, 25<sup>th</sup>, 26<sup>th</sup> and 27<sup>th</sup> October 2017, covering all transects in NEL, NWL, AW, WL and SWL survey areas for twice.

A total of around 457.94 km of survey effort was collected from these surveys, with around 91.30% 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

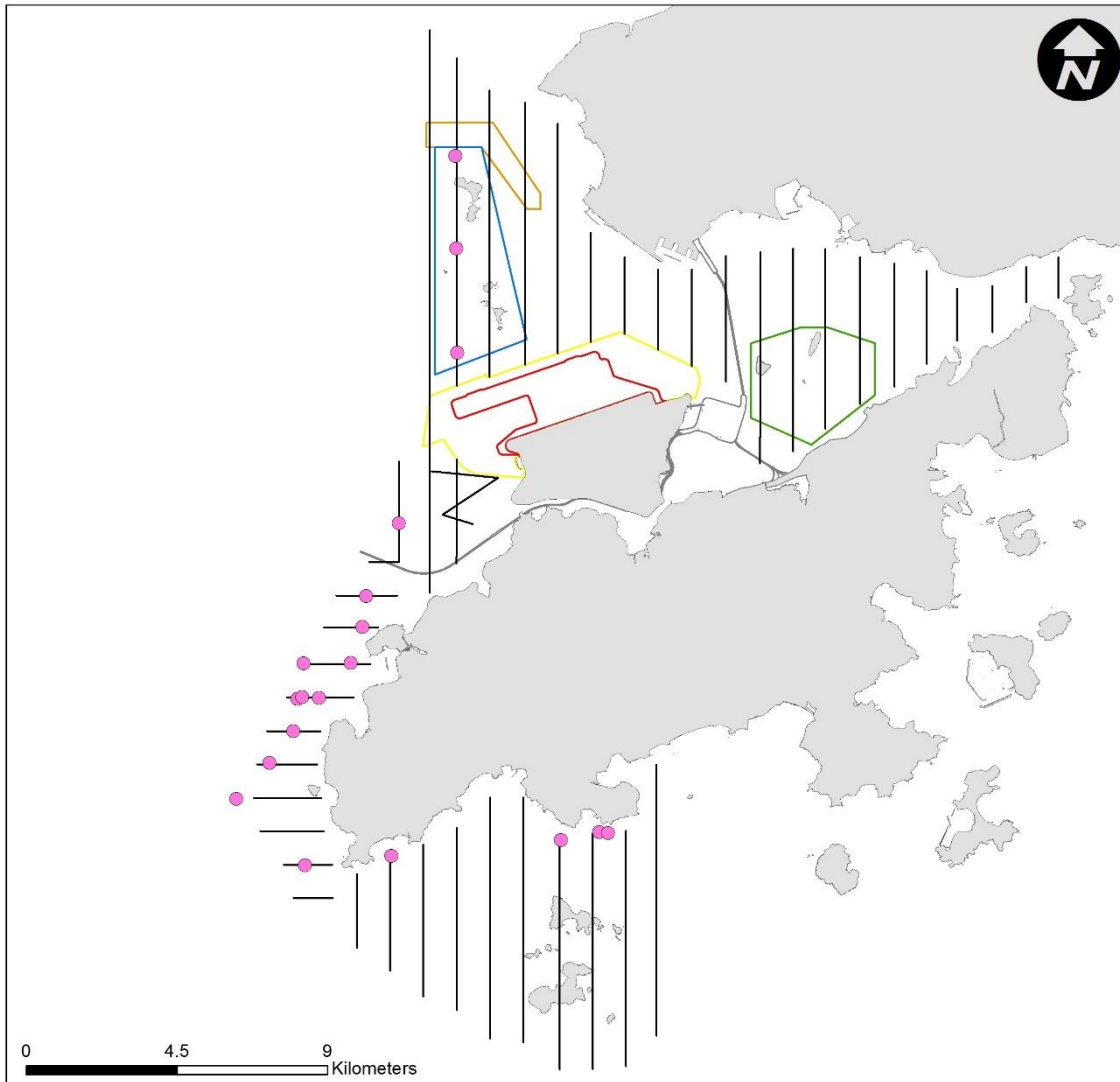
In October 2017, 19 sightings of CWDs with 67 individuals were sighted. All these sightings were recorded during on-effort search under favourable weather conditions (i.e. Beaufort Sea State 3 or below with favourable visibility). Details of cetacean sightings are presented in **Appendix D**.

Distribution of all CWD sightings recorded in October 2017 is illustrated in **Figure 6.3**. In NWL, three sightings of CWD were recorded within SCLKCMP. In WL, CWDs were recorded from northern part of the survey area to Fan Lau, with more sightings located around Tai O and Yi O. In SWL, there were four CWD sightings recorded in coastal waters, one was recorded around Fan Lau Tung Wan while others were found at Lo Kei Wan. 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 19 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 October 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)

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



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

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

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

In October 2017, a total of around 418.11 km of survey effort were conducted under Beaufort Sea State 3 or below with favourable visibility, whilst a total number of 19 on-effort sightings with a total number of 67 dolphins from on-effort sightings were obtained under such condition. Calculation of the encounter rates in October 2017 are shown in **Appendix D**.

For the running quarter of the reporting period (i.e., from August 2017 to October 2017), a total of around 1170.33 km of survey effort were conducted under Beaufort Sea State 3 or below with favourable visibility, whilst a total number of 69 on-effort sightings and a total number of 223 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 October 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)
October 2017	4.54	16.02
Running Quarter from August 2017 to October 2017*	5.90	19.05
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 August 2017 to October 2017, containing six sets of transect surveys for all monitoring areas.

### **Group Size**

In October 2017, 19 groups of CWDs with 67 individuals were sighted, and the average group size of CWDs was 3.53 individuals per group. Sightings with medium group size (i.e. 3-9) was dominated. No sighting with large group size (i.e. 10 or more individuals) was recorded in this reporting period.

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

Eight out of 19 sightings of CWDs were recorded engaging in feeding activities in October 2017. Amongst these eight sightings, two were associated with operating gillnetter in WL and SWL whilst another one was associated with operating shrimp trawler near Hong Kong boundary in WL.

### **Mother-calf Pair**

In October 2017, five sightings of CWDs were recorded with the presence of mother-and-spotted calf or mother-and-unspotted juvenile pairs. Four of these sightings were recorded in WL while the remaining one was recorded in SWL.

### 6.4.2 Photo Identification

In October 2017, a total number of 33 different CWD individuals were identified for totally 39 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
NLMM002	25/10/2017	1	NWL	WLMM030	25/10/2017	2	NWL
NLMM010	25/10/2017	1	NWL	WLMM054	26/10/2017	1	WL
NLMM015	27/10/2017	3	WL	WLMM056	27/10/2017	1	WL
NLMM027	25/10/2017	1	NWL	WLMM062	26/10/2017	5	WL
NLMM028	25/10/2017	1	NWL	WLMM065	26/10/2017	4	WL
NLMM033	25/10/2017	2	NWL			6	WL
NLMM051	25/10/2017	2	NWL		27/10/2017	2	WL
SLMM015	19/10/2017	2	SWL	WLMM066	26/10/2017	4	WL
SLMM018	23/10/2017	2	SWL			6	WL
SLMM021	19/10/2017	2	SWL		27/10/2017	2	WL
SLMM023	26/10/2017	8	WL	WLMM075	27/10/2017	2	WL
SLMM030	19/10/2017	1	SWL	WLMM091	26/10/2017	7	WL
	26/10/2017	1	WL	WLMM093	26/10/2017	7	WL
SLMM031	26/10/2017	10	SWL	WLMM094	26/10/2017	7	WL
SLMM037	26/10/2017	2	WL	WLMM100	24/10/2017	1	NWL
WLMM019	24/10/2017	1	NWL	WLMM104	26/10/2017	2	WL
	25/10/2017	1	NWL	WLMM105	26/10/2017	8	WL
WLMM021	27/10/2017	1	WL	WLMM106	26/10/2017	8	WL
WLMM026	26/10/2017	1	WL	WLMM107	26/10/2017	8	WL
WLMM027	26/10/2017	1	WL				

### 6.4.3 Land-based Theodolite Tracking

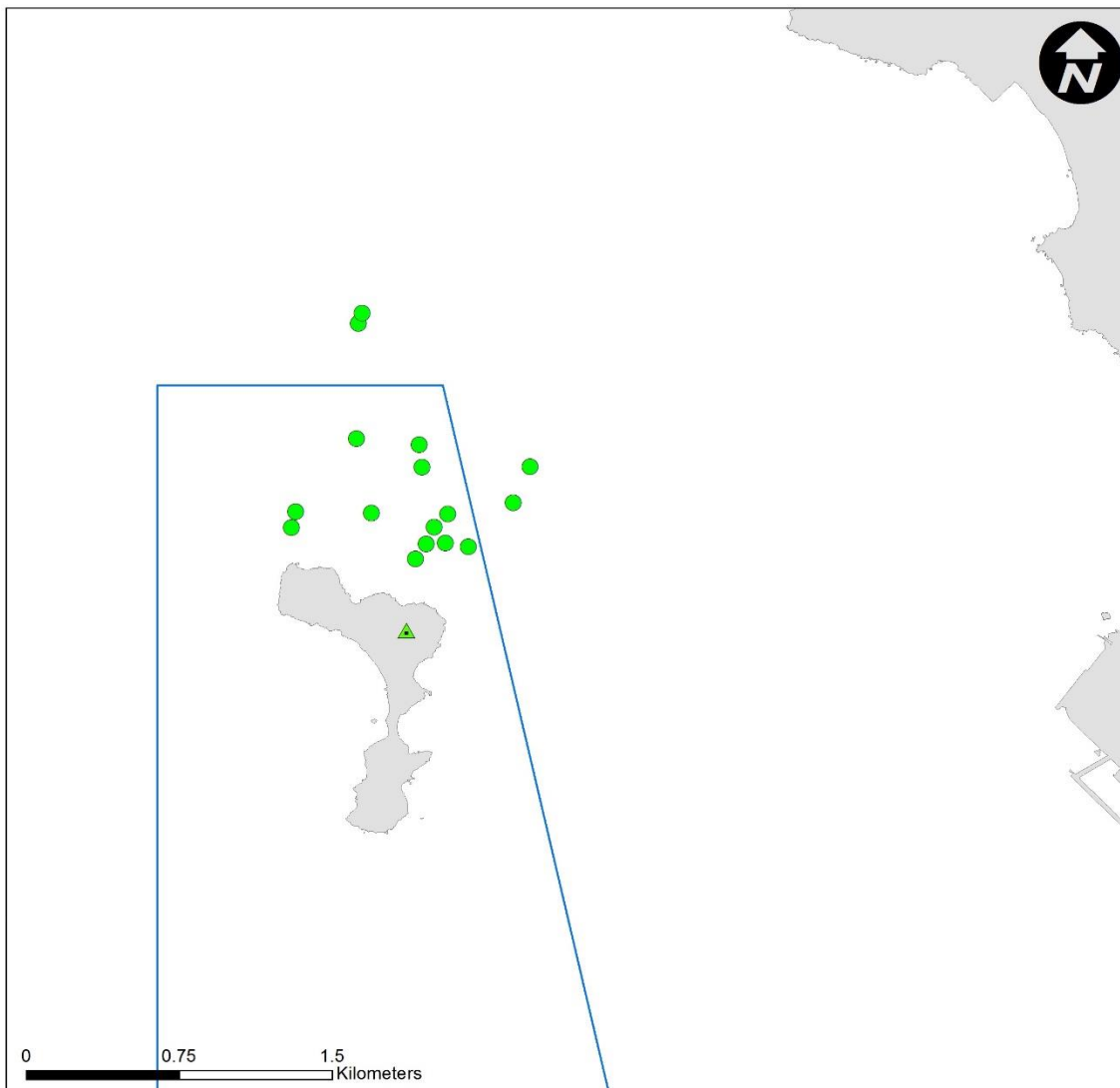
#### Survey Effort

Land-based theodolite tracking surveys were conducted at LKC on 20<sup>th</sup>, 23<sup>rd</sup> and 27<sup>th</sup> October 2017 and at SC on 25<sup>th</sup> and 27<sup>th</sup> October 2017, with a total of five days of land-based theodolite tracking survey effort accomplished in this reporting period. A total number of 16 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 October 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	16	0.89
Sha Chau	2	12:00	0	0
<b>TOTAL</b>	<b>5</b>	<b>30:00</b>	<b>16</b>	<b>0.53</b>

**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 retrieved and re-deployed on 6 October 2017 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 15 to 19 dolphin observation stations by the contractors for continuous monitoring of the Dolphin Exclusion Zone (DEZ) by all contractors for ground improvement works (DCM works and PVD installation) 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 493 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 or the DEZs in this reporting month. These contractors' records were also audited by the ET during site inspection.

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, dust suppression, wastewater treatment, tree protection, and runoff prevention measures, as well as regular segregation and disposal of waste. In addition, recommendations were also provided during site inspection on barges, which included provision and maintenance of drip trays and chemical storage area, implementation of dust suppression, acoustic decoupling, 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

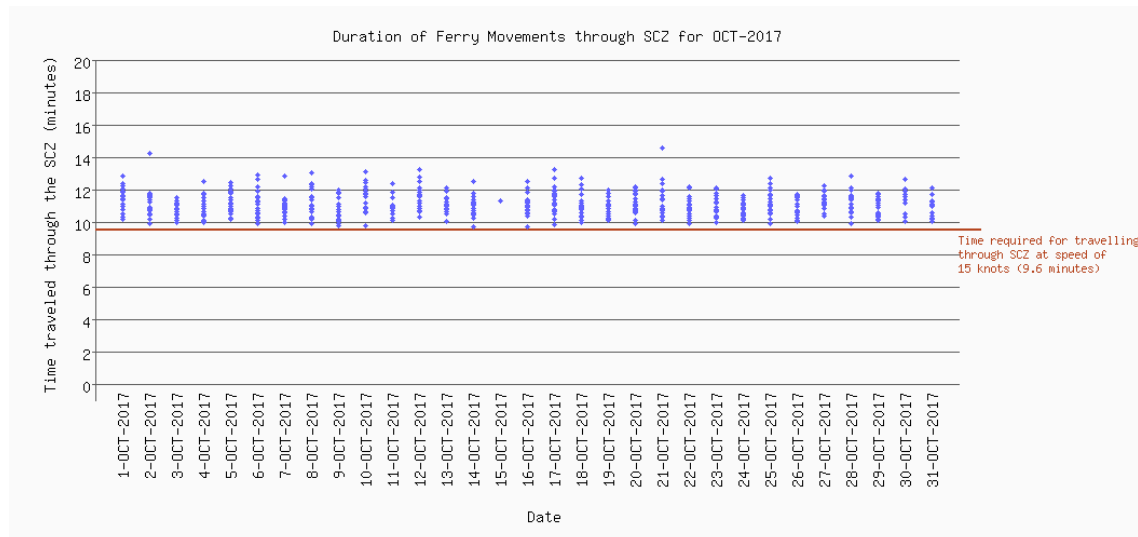
The Marine Travel Routes and Management Plan for High Speed Ferries of SkyPier (the SkyPier Plan) was submitted to the Advisory Council on the Environment (ACE) for comment and subsequently submitted to and approved by EPD in November 2015 under EP Condition 2.10. The approved SkyPier Plan is available 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 October 2017 (i.e., 1 to 87 daily movements) were within the maximum daily cap of 125 daily movements. There was only one ferry movement on 15 October 2017 due to typhoon. Status of compliance with the annual daily average of 99 movements will be further reviewed in the annual EM&A Report.

In total, 693 ferry movements between HKIA SkyPier and Zhuhai / Macau were recorded in October 2017 and the data are presented in **Appendix H**. The time spent by the SkyPier HSFs travelling through the SCZ in October 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 October 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.

Two ferries were recorded with minor deviation from the diverted route on 7 and 30 October 2017. Notices were sent to the ferry operator (FO) and the cases are under investigation by ET. The investigation result will be presented in the next monthly EM&A report.

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

Requirements in the SkyPier Plan	1 October to 31 October 2017
Total number of ferry movements recorded and audited	693
Use diverted route and enter / leave SCZ through Gate Access Points	2 deviations, which are under investigation.
Speed control in speed control zone	The average speeds taken within the SCZ of all HSFs were within 15 knots (9.3 knots to 14.0 knots), which complied with the SkyPier Plan. The time used by HSFs to travel through SCZ is presented in <b>Figure 7.1</b> .
Daily Cap (including all SkyPier HSFs)	1 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.

- One skipper training session was held by contractor's Environmental Officer. Competency test was subsequently conducted with the trained skipper by ET.
- 20 skippers were trained by ET and 1 skipper was trained by contractor's Environmental Officer in October 2017. In total, 771 skippers were trained from August 2016 to October 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 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 that no dolphin sightings were recorded within the DEZ by the contractors. ET has checked the relevant records by the contractors to audit the implementation of DEZ. 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.

#### 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 egret area nor any significant disturbance to the egrets on the island by the works. No signs of nursery activities were observed. 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 egret 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	
2.4	Management Organizations	
2.5	Construction Works Schedule and Location Plans	
2.7	Marine Park Proposal	
2.8	Marine Ecology Conservation Plan	
2.9	Marine Travel Routes and Management Plan for Construction and Associated Vessels	
2.10	Marine Travel Routes and Management Plan for High Speed Ferries of SkyPier	Accepted / approved by EPD
2.11	Marine Mammal Watching Plan	
2.12	Coral Translocation Plan	
2.13	Fisheries Management Plan	
2.14	Egretty 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

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

### 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;
- DCM works; and
- Seawall construction

#### **Reclamation Works:**

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

- Laying of sand blanket; and
- PVD installation.

#### **Airfield Works Contract:**

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

- CLP cable ducting work; and
- Precast of duct bank and fabrication of steel works.

#### **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.

## 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 seawall construction; 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 reclamation works and land-side works. Reclamation works included DCM works, laying of sand blanket, seawall construction and PVD installation. Land-side works included HDD works, site office establishment, cable ducting, 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, chromium, and nickel 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, some of the testing results exceeded the relevant Action 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 egret 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.

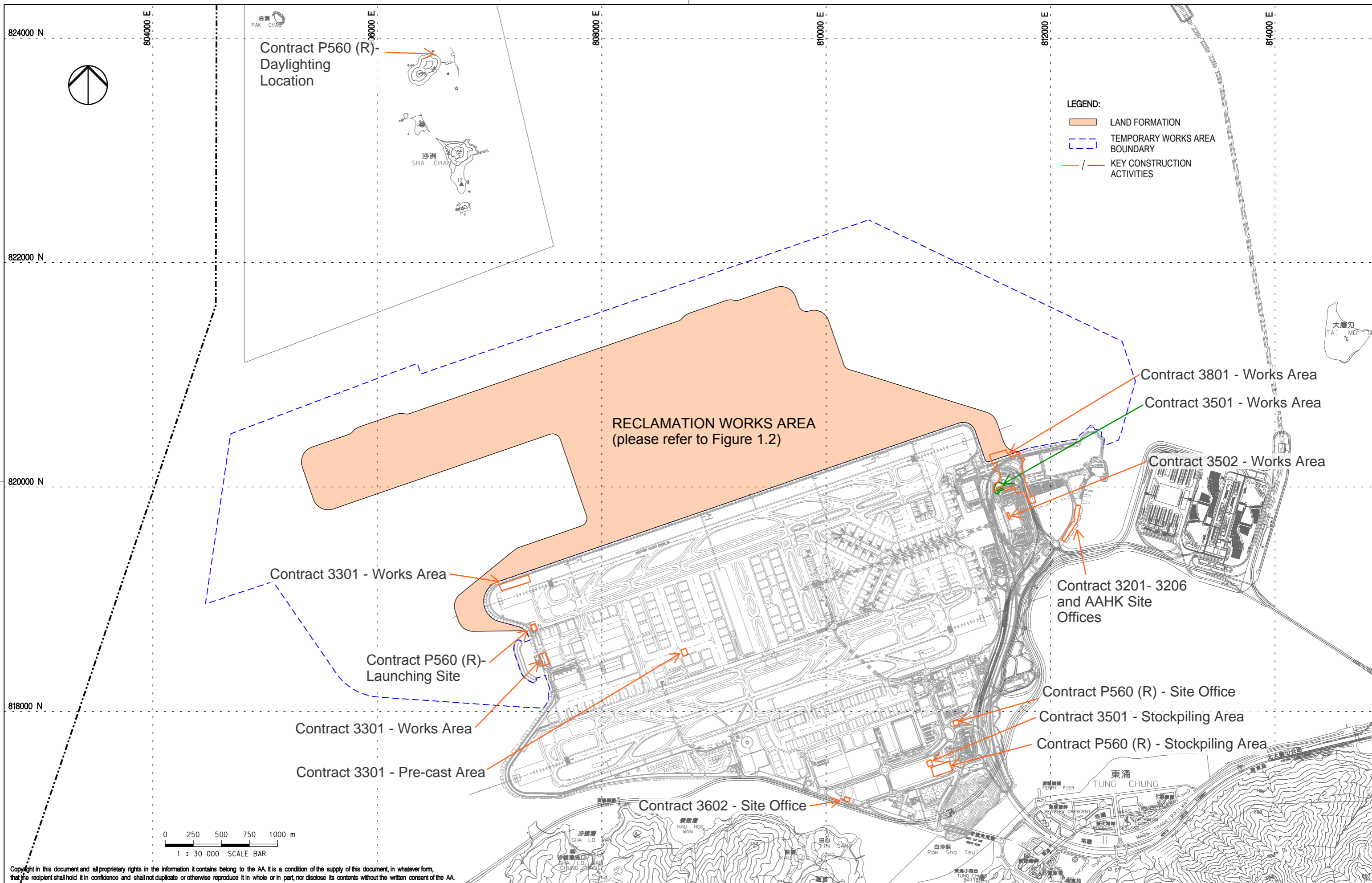
On the implementation of MMWP, dolphin observers were deployed by the contractors for laying of open sea silt curtain and laying of silt curtains for sand blanket in accordance with the plan. On the implementation of DEZ Plan, dolphin observers at 15 to 19 dolphin observation stations were deployed for continuous monitoring of the DEZ by all contractors for ground improvement works (DCM works and PVD installation) 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 or the DEZs in this reporting month. 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 October 2017 were in the range of 1 to 87 daily movements, which are within the maximum daily cap of 125 daily movements. A total of 693 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 (9.3 to 14.0 knots), which were in compliance with the SkyPier Plan. Two ferry movements with minor deviation from the diverted route are under investigation by ET. The investigation result will be presented in the next monthly EM&A report. 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



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Rev.	Date	Description	Checked
A	31AUG15	FIRST ISSUE	DC



Title  
LOCATIONS OF KEY CONSTRUCTION ACTIVITIES

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



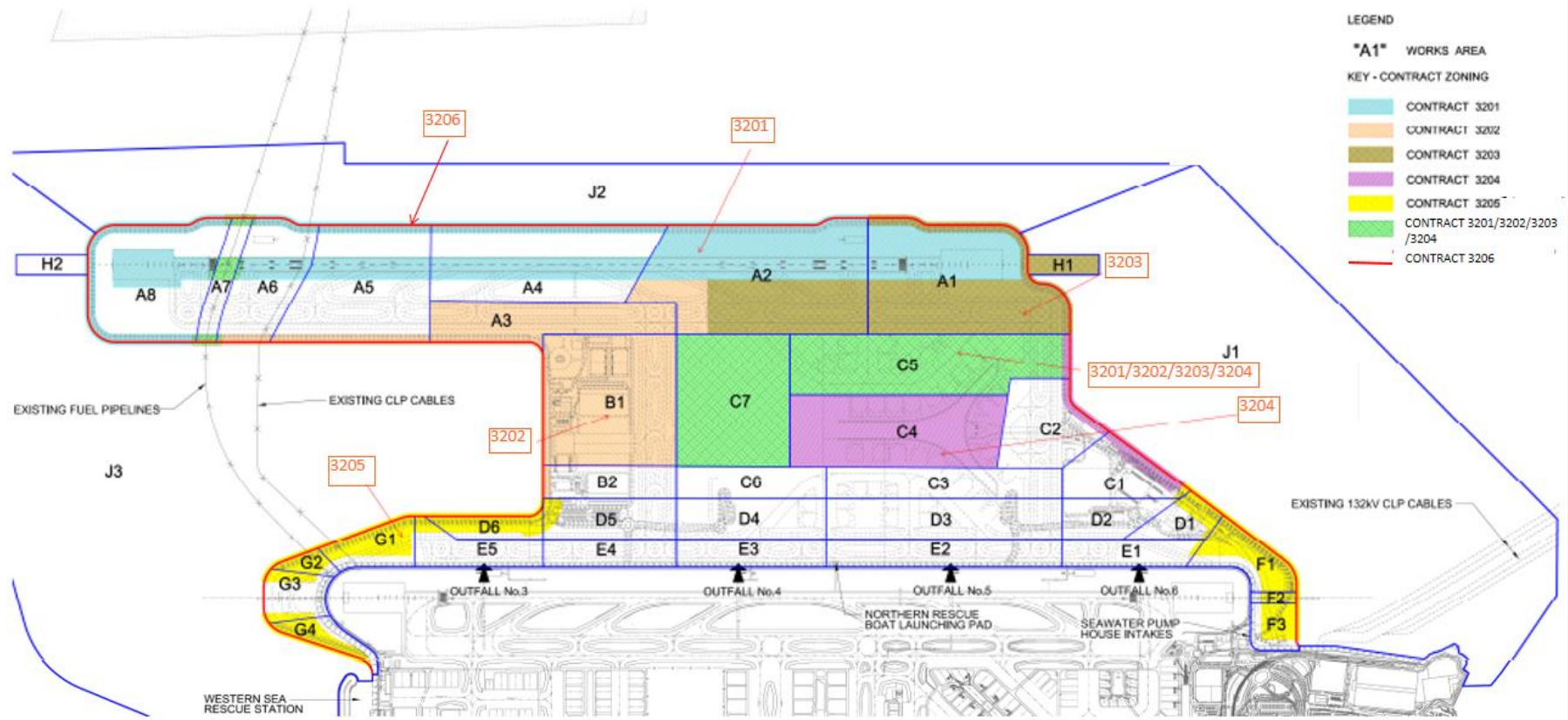


FIGURE 1.2- LOCATIONS OF RECLAMATION WORKS AREA



808000 E.

808000 E.

810000 E.

812000 E.

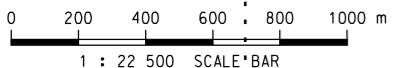
814000 E.

820000 N.

818000 N.

**LEGEND:**

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



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A	06JAN16	FIRST ISSUE	RO
B	29JAN16	GENERAL REVISION	RO
C	11FEB16	GENERAL REVISION	RO

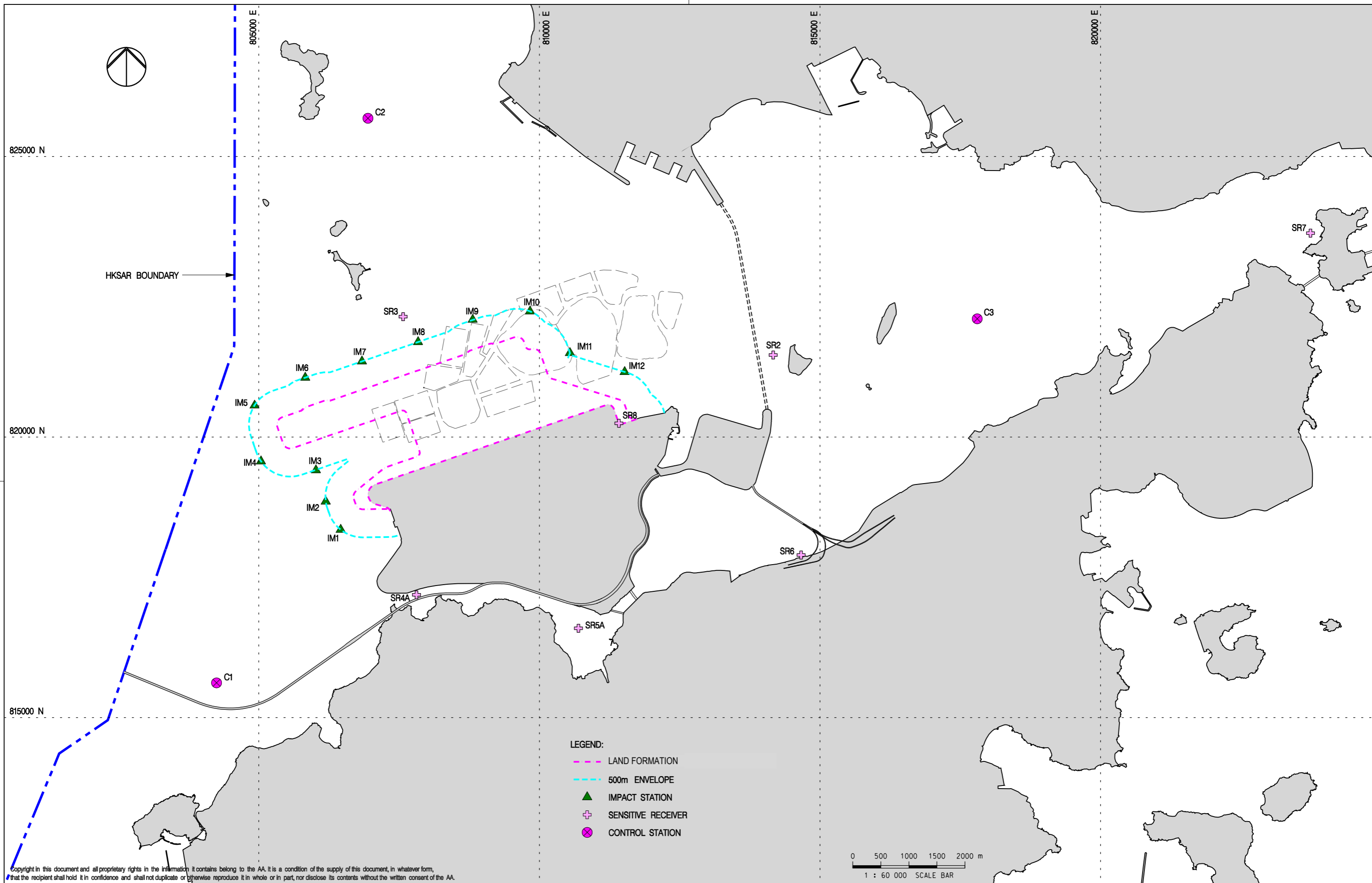


Title  
**LOCATIONS OF AIR AND NOISE MONITORING STATIONS AND CHEK LAP KOK WIND STATION**

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		Scale at A3
Drawing No.	<b>FIGURE 2.1</b>	1 : 22500
Rev.	C	

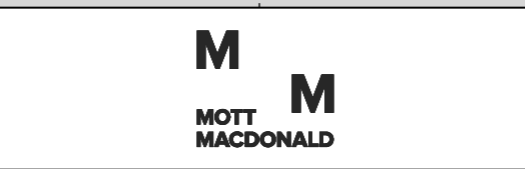




- LEGEND:
- LAND FORMATION
  - 500m ENVELOPE
  - ▲ IMPACT STATION
  - + SENSITIVE RECEIVER
  - CONTROL STATION

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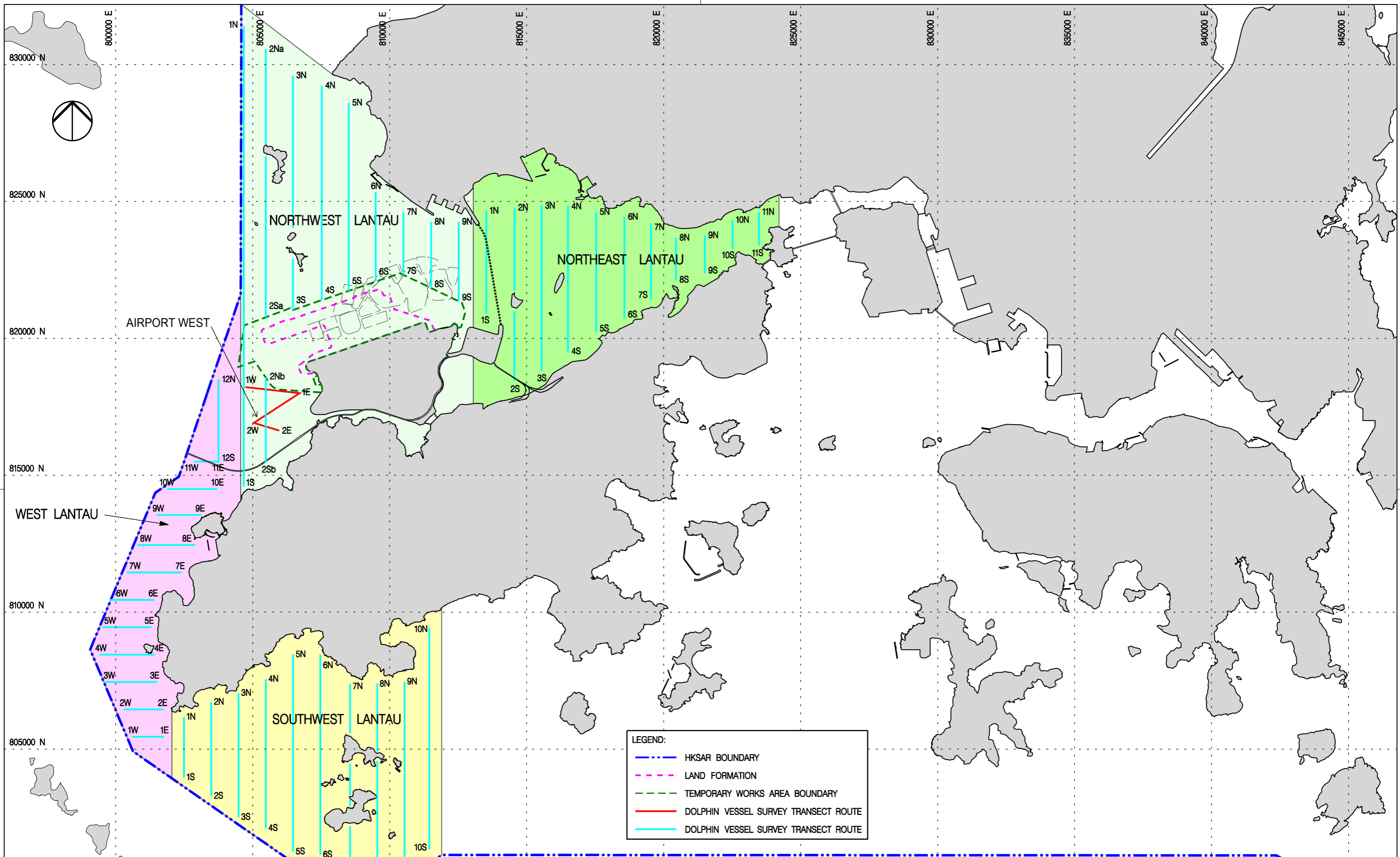
Rev.	Date	Description	Checked
A	02DEC15	FIRST ISSUE	DC
B	04MAY16	GENERAL REVISION	RO
C	06JUN16	GENERAL REVISION	LC
D	02AUG17	GENERAL REVISION	RO



Title  
**WATER QUALITY MONITORING STATIONS**

Consultant's Signatures for Approval		Date
Design	DC	02AUG17
Checkers	DC / TK	02AUG17
Approver	EC	02AUG17

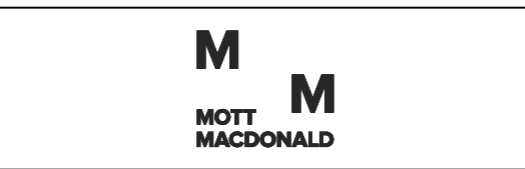
EXPANSION OF HONG KONG INTERNATIONAL AIRPORT INTO A THREE-RUNWAY SYSTEM		Scale at A3
Drawing No.	<b>FIGURE 3.1</b>	1 : 60000
Rev.	D	



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

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

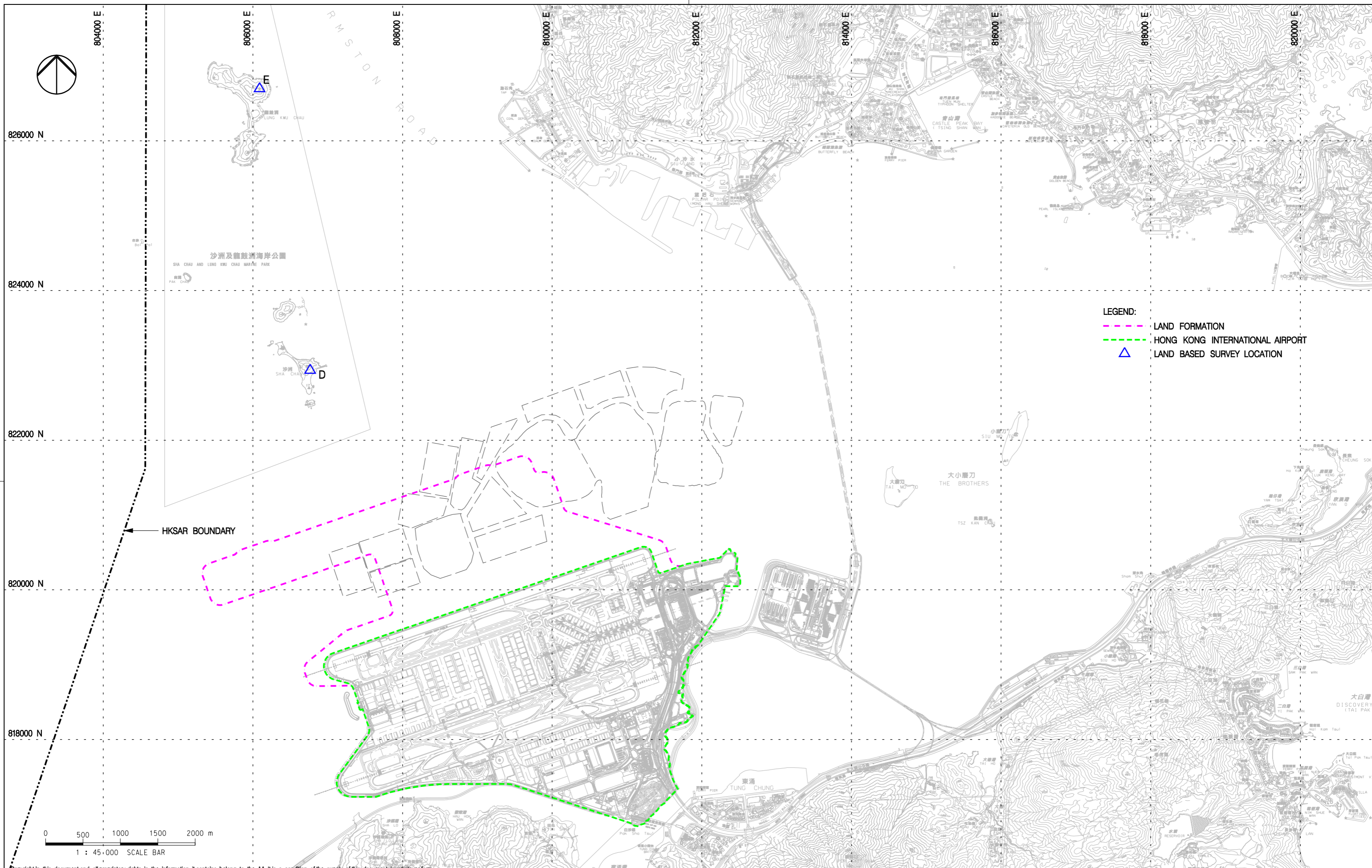


Title  
VESSEL BASED DOLPHIN MONITORING  
TRANSECTS IN CONSTRUCTION,  
POST-CONSTRUCTION AND OPERATION PHASES

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





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

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A	02DEC15	FIRST ISSUE	JC
B	06FEB17	GENERAL REVISION	JC

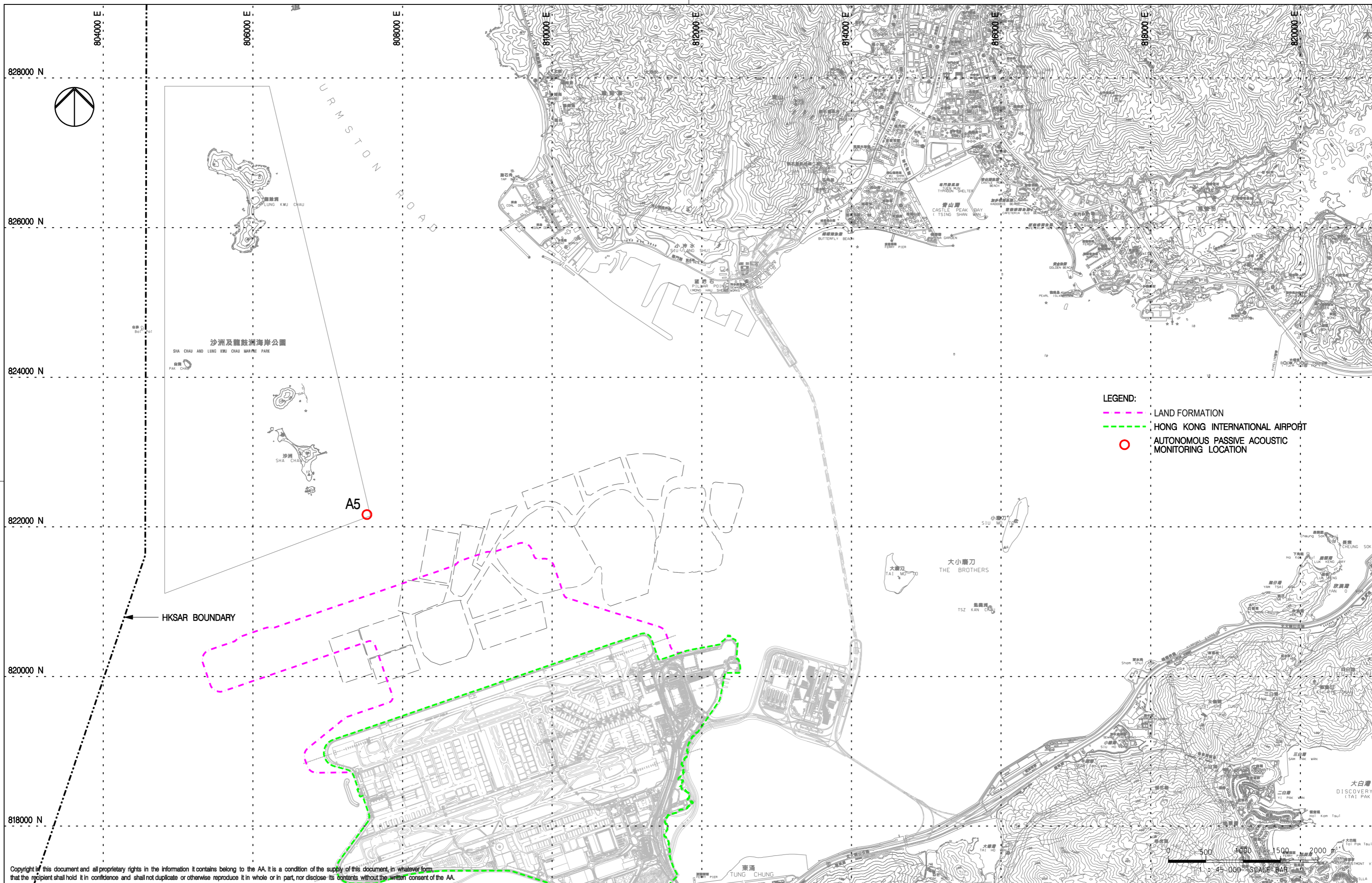


Title  
**LAND BASED DOLPHIN MONITORING  
 IN BASELINE AND CONSTRUCTION PHASES**

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.	Scale at A3 1 : 45000
<b>FIGURE 6.2</b>	Rev. B





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Rev.	Date	Description	Checked
A	29AUG17	FIRST ISSUE	JT



Title  
**LOCATION FOR AUTONOMOUS PASSIVE ACOUSTIC MONITORING**

Consultant's Signatures for Approval		Date
Design	JC	29AUG17
Checkers	JC / TK	29AUG17
Approver	EC	29AUG17

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

# 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	<p>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</p> <ul style="list-style-type: none"> <li>• Geophysical surveys;</li> <li>• Supply and placing of geotextile and sand blanket under seawalls;</li> <li>• Supply, maintenance, installation and removal of silt curtain systems;</li> <li>• Preliminary construction trails;</li> <li>• Supply and installation of DCM clusters within the works areas; and</li> <li>• Coring, sampling and testing of DCM treated soils and reporting works.</li> </ul>
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	<p>The works covered by the Contract 3206 comprise the formation of approximately 650 hectares of land north of the existing airport island for the project, the major construction activities including without limitation the following</p> <ul style="list-style-type: none"> <li>• Site clearance and demolition;</li> <li>• Geotechnical and ground improvement works;</li> <li>• Seawall construction;</li> <li>• Marine and land filling works; and</li> <li>• Civil works.</li> </ul>
3301	North Runway Crossover Taxiway	FJT-CHEC-ZHEC Joint Venture	<p>The works covered by the Contract 3301 comprise the construction of a new dual taxiway across the existing north runway and utility services and cable ducting systems. The major construction activities include without limitation the following:</p> <ul style="list-style-type: none"> <li>• Construction of a new dual taxiway;</li> <li>• Cable ducting works;</li> <li>• Extension of existing portable water supply system; and</li> <li>• All associated works.</li> </ul>
3501	Antenna Farm and Sewage Pumping Station	Build King Construction Limited	<p>The works covered by the Contract 3501 comprise the construction of antenna farm and sewage pumping station. The major construction activities include without limitation the following:</p> <ul style="list-style-type: none"> <li>• Civil and structural engineering works;</li> <li>• Building services works;</li> <li>• Architectural builder's works and finishes;</li> <li>• Trenchless excavation for sewage rising mains; and</li> <li>• All associated works.</li> </ul>
3502	Terminal 2 APM Depot Modification Works	Build King Construction Limited	<p>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:</p> <ul style="list-style-type: none"> <li>• Removal of the existing steel guide rails;</li> <li>• Removal of the existing mass concrete fill and re-construction of the reinforced concrete fill;</li> <li>• Construction of separation walls and walkways;</li> </ul>



Contract No.	Contract Title	Contractor	Key Construction Activities
			<ul style="list-style-type: none"> <li>• Removal of re-provision of existing building services and airport systems; and</li> <li>• All associated testing and commissioning works.</li> </ul>
3602	Existing APM System Modification Works	Niigata Transys Co., Ltd.	<p>The works covered by the Contract 3602 comprise the detailed design, supply, manufacture, fabrication, implementation, testing and commissioning of the following modification works of the existing APM systems:</p> <ul style="list-style-type: none"> <li>• Modification of existing APM depot and APM cars;</li> <li>• Modification of existing T1 &amp; T2 tunnels; and</li> <li>• Preparation of new APM depot.</li> </ul>
3801	APM and BHS Tunnels on Existing Airport Island	China State Construction Engineering (HK) Ltd.	<p>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:</p> <ul style="list-style-type: none"> <li>• Construction of APM and BHS tunnels;</li> <li>• Construction of ventilation building and associated infrastructure; and</li> <li>• Construction, testing and commissioning of sewerage pumping station; and</li> <li>• Civil and structural engineering works.</li> </ul>



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

## 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?^
<b>Air Quality Impact – Construction Phase</b>					
5.2.6.2	2.1	-	<b>Dust Control Measures</b> § 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: <b>Good Site Management</b> § 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
			<b>Disturbed Parts of the Roads</b> § 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
			<b>Exposed Earth</b> § Exposed earth should be properly treated by compaction, hydroseeding, vegetation planting or seeding with latex, vinyl, bitumen within six months after the last construction activity on the site or part of the site where the exposed earth lies.	Within construction site / Duration of the construction phase	N/A

EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
			<p>Loading, Unloading or Transfer of Dusty Materials</p> <p>§ All dusty materials should be sprayed with water immediately prior to any loading or transfer operation so as to keep the dusty material wet.</p>	Within construction site / Duration of the construction phase	I
			<p>Debris Handling</p> <p>§ 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</p> <p>§ Before debris is dumped into a chute, water should be sprayed so that it remains wet when it is dumped.</p>	Within construction site / Duration of the construction phase	I
			<p>Transport of Dusty Materials</p> <p>§ 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.</p>	Within construction site / Duration of the construction phase	I
			<p>Wheel washing</p> <p>§ 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.</p>	Within construction site / Duration of the construction phase	I
			<p>Use of vehicles</p> <p>§ 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;</p> <p>§ Immediately before leaving the construction site, every vehicle should be washed to remove any dusty materials from its body and wheels; and</p> <p>§ 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.</p>	Within construction site / Duration of the construction phase	I
			<p>Site hoarding</p> <p>§ 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.</p>	Within construction site / Duration of the construction phase	I
5.2.6.5	2.1	-	<p><b>Best Practices for Concrete Batching Plant</b></p> <p>The relevant best practices for dust control as stipulated in the Guidance Note on the Best Practicable Means for Cement Works (Concrete Batching Plant) BPM 3/2 as well as in the future Specified Process licence should be adopted. The best practices are recommended to be applied to both the land based and floating concrete batching plants. Best practices include:</p> <p>Cement and other dusty materials</p>	Within Concrete Batching Plant / Duration of the construction phase	N/A

EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
			<p>§ 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;</p> <p>§ 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;</p> <p>§ Vents of all silos shall be fitted with fabric filtering system to meet the required emission limit;</p> <p>§ Vents of cement/PFA weighing scale shall be fitted with fabric filtering system to meet the required emission limit; and</p> <p>§ Seating of pressure relief valves of all silos shall be checked, and the valves re-seated if necessary, before each delivery.</p>		
			<p>Other raw materials</p> <p>§ 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;</p> <p>§ 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;</p> <p>§ 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;</p> <p>§ 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;</p> <p>§ All conveyor transfer points shall be totally enclosed. Openings for the passage of conveyors shall be fitted with adequate flexible seals;</p> <p>§ Scrapers shall be provided at the turning points of all conveyors to remove dust adhered to the belt surface;</p> <p>§ 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;</p> <p>§ Aggregates with a nominal size less than or equal to 5 mm should be stored in totally enclosed structure such as storage bin and should not be handled in open area. Where there is sufficient buffer area surrounding the concrete batching plant, ground stockpiling may be used;</p>	<p>Within Concrete Batching Plant / Duration of the construction phase</p>	<p>N/A</p>

EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
			<p>§ The stockpile shall be enclosed at least on top and three sides and with flexible curtain to cover the entrance side;</p> <p>§ 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</p> <p>§ The opening between the storage bin and weighing scale of the materials shall be fully enclosed.</p>		
			<p>Loading of materials for batching</p> <p>§ Concrete truck shall be loaded in such a way as to minimise airborne dust emissions. The following control measures shall be implemented:</p> <p>(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</p> <p>(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.</p> <p>§ The loading bay shall be totally enclosed during the loading process.</p>	Within Concrete Batching Plant / Duration of the construction phase	N/A
			<p>Vehicles</p> <p>§ All practicable measures shall be taken to prevent or minimize the dust emission caused by vehicle movement; and</p> <p>§ All access and route roads within the premises shall be paved and adequately wetted.</p>	Within Concrete Batching Plant / Duration of the construction phase	N/A
			<p>Housekeeping</p> <p>§ 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.</p>	Within Concrete Batching Plant / Duration of the construction phase	N/A
5.2.6.6	2.1	-	<p><b>Best Practices for Asphaltic Concrete Plant</b></p> <p>The relevant best practices for dust control as stipulated in the Guidance Note on the Best Practicable Means for Tar and Bitumen Works (Asphaltic Concrete Plant) BPM 15 (94) as well as in the future Specified Process licence should be adopted. These include:</p> <p>Design of Chimney</p> <p>§ The chimney shall not be less than 3 metres plus the building height or 8 metres above ground level, whichever is the greater;</p> <p>§ The efflux velocity of gases from the main chimney shall not be less than 12 m/s at full load condition;</p>	Within Concrete Batching Plant / Duration of the construction phase	N/A

EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
			<p>§ The flue gas exit temperature shall not be less than the acid dew point; and</p> <p>§ Release of the chimney shall be directed vertically upwards and not be restricted or deflected.</p>		
			<p>Cold feed side</p> <p>§ 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;</p> <p>§ 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;</p> <p>§ 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;</p> <p>§ 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;</p> <p>§ 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;</p> <p>§ All conveyor transfer points shall be totally enclosed. Openings for the passages of conveyors shall be fitted with adequate flexible seals; and</p> <p>§ All materials returned from dust collection system shall be transferred in enclosed system and shall be stored inside bins or enclosures.</p>	<p>Within Concrete Batching Plant / Duration of the construction phase</p>	<p>N/A</p>
			<p>Hot feed side</p> <p>§ 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;</p> <p>§ 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;</p> <p>§ 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;</p> <p>§ Chutes for carrying hot material shall be rigid and preferably fitted with abrasion resistant plate inside. They shall be inspected daily for leakages;</p>	<p>Within Concrete Batching Plant / Duration of the construction phase</p>	<p>N/A</p>

EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
			<p>§ 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</p> <p>§ Appropriate control measures shall be adopted in order to meet the required bitumen emission limit as well as the ambient odour level (2 odour units).</p>		
			<p>Material transportation</p> <p>§ 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;</p> <p>§ 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</p> <p>§ Haul roads inside the Works shall be adequately wetted with water and/or chemical suppressants by water trucks or water sprayers.</p>	Within Concrete Batching Plant / Duration of the construction phase	N/A
			<p>Control of emissions from bitumen decanting</p> <p>§ 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;</p> <p>§ 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;</p> <p>§ Proper chimney for the discharge of bitumen fumes shall be provided at high level;</p> <p>§ The emission of bitumen fumes shall not exceed the required emission limit; and</p> <p>The air-to-fuel ratio shall be properly controlled to allow complete combustion of the fuel. The fuel burners, if any, shall be maintained properly and free from carbon deposits in the burner nozzles.</p>	Within Concrete Batching Plant / Duration of the construction phase	N/A
			<p>Liquid fuel</p> <p>§ 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.</p>	Within Concrete Batching Plant / Duration of the construction phase	N/A
			<p>Housekeeping</p> <p>§ 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.</p>	Within Concrete Batching Plant / Duration of the construction phase	N/A
5.2.6.7	2.1	-	<p><b>Best Practices for Rock Crushing Plants</b></p> <p>The relevant best practices for dust control as stipulated in the Guidance Note on the Best Practicable Means for Mineral Works (Stone Crushing Plant) BPM 11/1 (95) as well as in the future Specified Process licence should be adopted. These include:</p>	Within Concrete Batching Plant / Duration of the construction phase	N/A

EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
			<p>Crushers</p> <p>§ 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;</p> <p>§ 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;</p> <p>§ Water sprayers shall be installed and operated in strategic locations at the feeding inlet of crushers; and</p> <p>§ Crusher enclosures shall be rigid and be fitted with self-closing doors and close-fitting entrances and exits. Where conveyors pass through the crusher enclosures, flexible covers shall be installed at entries and exits of the conveyors to the enclosure.</p>		
			<p>Vibratory screens and grizzlies</p> <p>§ 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</p> <p>§ All grizzlies shall be enclosed on top and 3 sides and sufficient water sprayers shall be installed at their feeding and outlet areas.</p>	Within Concrete Batching Plant / Duration of the construction phase	N/A
			<p>Belt conveyors</p> <p>§ 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;</p> <p>§ 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</p> <p>§ 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.</p>	Within Concrete Batching Plant / Duration of the construction phase	N/A



EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
			<p>Storage piles and bins</p> <p>§ 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.</p> <p>§ The surface of all surge piles and stockpiles of blasted rocks or aggregates shall be kept sufficiently wet by water spraying wherever practicable;</p> <p>§ All open stockpiles for aggregates of size in excess of 5 mm shall be kept sufficiently wet by water spraying where practicable; or</p> <p>§ 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.</p> <p>§ Scattered piles gathered beneath belt conveyors, inside and around enclosures shall be cleared regularly.</p>	<p>Within Concrete Batching Plant / Duration of the construction phase</p>	N/A
			<p>Rock drilling equipment</p> <p>§ Appropriate dust control equipment such as a dust extraction and collection system shall be used during rock drilling activities.</p>	<p>Within Concrete Batching Plant / Duration of the construction phase</p>	N/A
<b>Hazard to Human Life – Construction Phase</b>					
Table 6.40	3.2	-	§ Precautionary measures should be established to request barges to move away during typhoons.	Construction Site / Construction Period	I
Table 6.40	3.2	-	§ An appropriate marine traffic management system should be established to minimize risk of ship collision.	Construction Site / Construction Period	I
Table 6.40	3.2	-	§ Location of all existing hydrant networks should be clearly identified prior to any construction works.	Construction Site / Construction Period	I
<b>Noise Impact – Construction Phase</b>					
7.5.6	4.3	-	<p><b>Good Site Practice</b></p> <p>Good site practice and noise management can significantly reduce the impact of construction site activities on nearby NSRs. The following package of measures should be followed during each phase of construction:</p> <p>§ only well-maintained plant to be operated on-site and plant should be serviced regularly during the construction works;</p> <p>§ machines and plant that may be in intermittent use to be shut down between work periods or should be throttled down to a minimum;</p>	<p>Within the Project site / During construction phase / Prior to commencement of operation</p>	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	-	<b>Adoption of QPME</b> § 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	-	<b>Use of Movable Noise Barriers</b> § 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	-	<b>Use of Noise Enclosure/ Acoustic Shed</b> § 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
<b>Water Quality Impact – Construction Phase</b>					

EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
8.8.1.2 and 8.8.1.3	5.1	2.26	<p><b>Marine Construction Activities</b></p> <p><u>General Measures to be Applied to All Works Areas</u></p> <p>§ Barges or hoppers shall not be filled to a level which will cause overflow of materials or pollution of water during loading or transportation;</p> <p>§ Use of Lean Material Overboard (LMOB) systems shall be prohibited;</p> <p>§ Excess materials shall be cleaned from the decks and exposed fittings of barges and hopper dredgers before the vessels are moved;</p> <p>§ Plants should not be operated with leaking pipes and any pipe leakages shall be repaired quickly;</p> <p>§ Adequate freeboard shall be maintained on barges to reduce the likelihood of decks being washed by wave action;</p> <p>§ 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;</p> <p>§ 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</p> <p>§ 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.</p>	Within construction site / Duration of the construction phase	I
			<p><u>Specific Measures to be Applied to All Works Areas</u></p> <p>§ The daily maximum production rates shall not exceed those assumed in the water quality assessment in the EIA report;</p> <p>§ 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;</p>	Within construction site / Duration of the construction phase	I
			<p>§ 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;</p>		N/A
			<p>§ Closed grab dredger shall be used to excavate marine sediment;</p> <p>§ Silt curtains surrounding the closed grab dredger shall be deployed in accordance with the Silt Curtain Deployment Plan; and</p>		N/A *(The arrangement of silt curtain has been modified. The details can be referred to Silt Curtain Deployment Plan)
			<p>§ The Silt Curtain Deployment Plan shall be implemented.</p>		I

EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
			<u>Specific Measures to be Applied to Land Formation Activities prior to Commencement of Marine Filling Works</u>	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
			<u>Specific Measures to be Applied to Land Formation Activities during Marine Filling Works</u>	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?^
			<p><u>Specific Measures to be Applied to the Field Joint Excavation Works for the Submarine Cable Diversion</u></p> <p>§ 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</p> <p>§ Silt curtains surrounding the closed grab dredger to be deployed as a precautionary measure.</p>	Within construction site / Duration of the construction phase	N/A
8.8.1.4	5.1	-	<p><b>Modification of the Existing Seawall</b></p> <p>§ 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.</p>	At the existing northern seawall / Duration of the construction phase	N/A
8.8.1.5	5.1	-	<p><b>Construction of New Stormwater Outfalls and Modifications to Existing Outfalls</b></p> <p>§ 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.</p>	Within construction site / Duration of the construction phase	N/A
8.8.1.6 8.8.1.7	5.1	2.27	<p><b>Piling Activities for Construction of New Runway Approach Lights and HKIAAA Marker Beacons</b></p> <p>Silt curtains shall be deployed around the piling activities to completely enclose the piling works and care should be taken to avoid spillage of excavated materials into the surrounding marine environment.</p> <p><u>For construction of the eastern approach lights at the CMPs</u></p> <p>§ Ground improvement via DCM using a close-spaced layout shall be completed prior to commencement of piling works;</p> <p>§ Steel casings shall be installed to enclose the excavation area prior to commencement of excavation;</p> <p>§ The excavated materials shall be removed using a closed grab within the steel casings;</p> <p>§ No discharge of the cement mixed materials into the marine environment will be allowed; and</p> <p>§ Excavated materials shall be treated and reused on-site.</p>	Within construction site / Duration of the construction phase	N/A
8.8.1.8	5.1	-	<p><b>Construction of Site Runoff and Drainage</b></p> <p>The site practices outlined in ProPECC Note PN 1/94 should be followed as far as practicable in order to minimise surface runoff and the chance of erosion. The following measures are recommended:</p> <p>§ 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</p>	Within construction site / Duration of the construction phase	I

EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
			<p>drainage system should be undertaken by the Contractors prior to the commencement of construction (for works areas located on the existing Airport island) or as soon as the new land is completed (for works areas located on the new landform);</p> <hr/> <p>§ 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;</p> <hr/> <p>§ 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;</p> <hr/> <p>§ 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;</p> <hr/> <p>§ 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</p> <hr/> <p>§ 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.</p>		I
8.8.1.9	5.1	-	<p><b>Sewage Effluent from Construction Workforce</b></p> <p>§ 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.</p>	Within construction site / During construction phase	I
8.8.1.10 8.8.1.11	5.1		<p><b>General Construction Activities</b></p> <p>§ 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</p>	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?^
			<p>§ 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.</p>		
8.8.1.12 8.8.1.13	5.1	2.28	<p><b>Drilling Activities for the Submarine Aviation Fuel Pipelines</b></p> <p>To prevent potential water quality impacts at Sha Chau, the following measures shall be applied:</p> <p>§ A 'zero-discharge' policy shall be applied for all activities to be conducted at Sha Chau;</p> <p>§ No bulk storage of chemicals shall be permitted; and</p> <p>§ 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.</p>	Within construction site / During construction phase	I
			<p>At the airport island side of the drilling works, the following measures shall be applied for treatment of wastewater:</p> <p>§ 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</p> <p>§ 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.</p>	Within construction site / During construction phase	I
<b>Waste Management Implication – Construction Phase</b>					
10.5.1.1	7.1	-	<p>Opportunities to minimise waste generation and maximise the reuse of waste materials generated by the project have been incorporated where possible into the planning, design and construction stages, and the following measures have been recommended:</p> <p>§ The relevant construction methods (particularly for the tunnel works) and construction programme have been carefully planned and developed to minimise the extent of excavation and to maximise the on-site reuse of inert C&amp;D materials generated by the project as far as practicable. Temporary stockpiling areas will also be provided to facilitate on-site reuse of inert C&amp;D materials;</p> <p>§ Priority should be given to collect and reuse suitable inert C&amp;D materials generated from other concurrent projects and the Government's PFRF as fill materials for the proposed land formation works;</p> <p>§ 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;</p> <p>§ 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</p>	Project Site Area / During design and construction phase	I       N/A

EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
			<p>§ For the marine sediments expected to be excavated from the piling works of TRC, APM &amp; BHS tunnels, airside tunnels and other facilities on the proposed land formation area, piling work of marine sections of the approach lights and HKIAAAA 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.</p>		N/A
10.5.1.1	7.1	-	<p>The following good site practices should be performed during the construction activities include:</p> <p>§ 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;</p> <p>§ Training of site personnel in proper waste management and chemical waste handling procedures;</p> <p>§ Provision of sufficient waste disposal points and regular collection for disposal;</p> <p>§ 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;</p> <p>§ Stockpiles of C&amp;D materials should be kept wet or covered by impervious sheets to avoid wind-blown dust;</p> <p>§ All dusty materials including C&amp;D materials should be sprayed with water immediately prior to any loading transfer operation so as to keep the dusty material wet during material handling at the barging points/ stockpile areas;</p> <p>§ C&amp;D materials to be delivered to and from the project site by barges or by trucks should be kept wet or covered to avoid wind-blown dust;</p> <p>§ The speed of the trucks including dump trucks carrying C&amp;D or waste materials within the site should be controlled to about 10 km/hour in order to reduce the adverse dust impact and secure the safe movement around the site; and</p> <p>§ To avoid or minimise dust emission during transport of C&amp;D or waste materials within the site, each and every main temporary access should be paved with concrete, bituminous hardcore materials or metal plates and kept clear of dusty materials. Unpaved parts of the road should be sprayed with water or a dust suppression chemical so as to keep the entire road surface wet.</p>	Project Site Area / Construction Phase	I
10.5.1.3	7.1	-	<p>The following practices should be performed to achieve waste reduction include:</p> <p>§ Use of steel or aluminium formworks and falseworks for temporary works as far as practicable;</p> <p>§ Adoption of repetitive design to allow reuse of formworks as far as practicable;</p> <p>§ 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;</p>	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?^
			<p>§ 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;</p> <p>§ Any unused chemicals or those with remaining functional capacity should be collected for reused as far as practicable;</p> <p>§ Proper storage and site practices to minimise the potential for damage or contamination of construction materials; and</p> <p>§ Plan and stock construction materials carefully to minimise amount of waste generated and avoid unnecessary generation of waste.</p>		
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	-	<p>The following mitigation measures are recommended during excavation and treatment of the sediments:</p> <p>§ On-site remediation should be carried out in an enclosed area in order to minimise odour/dust emissions;</p> <p>§ 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;</p> <p>§ All practical measures, including but not limited to speed control for vehicles, should be taken to minimise dust emission;</p> <p>§ Good housekeeping should be maintained at all times at the sediment treatment facility and storage area;</p> <p>§ Treated and untreated sediment should be clearly separated and stored separately; and</p> <p>§ 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.</p>	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?^
			<p>followed to minimise potential impacts on water quality during transportation of the sediments requiring Type 1 disposal:</p> <p>§ Bottom opening of barges shall be fitted with tight fitting seals to prevent leakage of material;</p> <p>§ 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</p> <p>§ 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.</p>		
10.5.1.19	7.1	-	<p>Contractor should register with the EPD as a chemical waste producer and to follow the relevant guidelines. The following measures should be implemented:</p> <p>§ Good quality containers compatible with the chemical wastes should be used;</p> <p>§ Incompatible chemicals should be stored separately;</p> <p>§ 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</p> <p>§ 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.</p>	Project Site Area / Construction Phase	I
10.5.1.20	7.1	-	<p>§ General refuse should be stored in enclosed bins or compaction units separated from inert C&amp;D material. A reputable waste collector should be employed by the contractor to remove general refuse from the site for disposal at designated landfill sites. An enclosed and covered area should be provided to reduce the occurrence of 'wind blown' light material.</p>	Project Site Area / Construction Phase	I
10.5.1.21	7.1	-	<p>§ 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.</p>	Project Site Area / Construction Phase	N/A
<b>Land Contamination – Construction Phase</b>					
11.10.1.2 to 11.10.1.3	8.1	2.32	<p>For areas inaccessible during site reconnaissance survey</p> <p>§ Further site reconnaissance would be conducted once the areas are accessible in order to identify any land contamination concern for the areas.</p>	Project Site Area inaccessible during site reconnaissance / Prior to Construction Phase	I
			<p>§ 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.</p>		I

EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
			<p>§ 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.</p>		I *(CAR for golf course)
			<p>§ 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.</p>		N/A
11.8.1.2	8.1	-	<p>If contaminated soil is identified, the following mitigation measures are for the excavation and transportation of contaminated materials (if any):</p> <p>§ To minimize the incidents of construction workers coming in contact with any contaminated materials, bulk earth-moving excavation equipment should be employed;</p> <p>§ 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;</p> <p>§ Stockpiling of contaminated excavated materials on site should be avoided as far as possible;</p> <p>§ The use of any contaminated soil for landscaping purpose should be avoided unless pre-treatment was carried out;</p> <p>§ Vehicles containing any excavated materials should be suitably covered to reduce dust emissions and/or release of contaminated wastewater;</p> <p>§ Truck bodies and tailgates should be sealed to prevent any discharge;</p> <p>§ 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;</p> <p>§ Speed control for trucks carrying contaminated materials should be exercised. 8km/h is the recommended speed limit;</p> <p>§ 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</p> <p>§ Maintain records of waste generation and disposal quantities and disposal arrangements.</p>	Project Site Area / Construction Phase	N/A
<b>Terrestrial Ecological – Construction Phase</b>					
12.10.1.1	9.2	2.14	<p><b>Pre-construction Egretty Survey</b></p> <p>§ Conduct ecological survey for Sha Chau egretty to update the latest boundary of the egretty.</p>	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	<p><b>Avoidance and Minimisation of Direct Impact to Egret</b></p> <p>§ The daylighting location will avoid direct encroachment to the Sheung Sha Chau egret. The daylighting location and mooring of flat top barge, if required, will be kept away from the egret;</p> <p>§ 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</p> <p>§ The containment pit at the daylighting location shall be covered or camouflaged.</p>	During construction phase at Sheung Sha Chau Island	
12.7.2.5	9.1	2.30	<p><b>Preservation of Nesting Vegetation</b></p> <p>§ 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.</p>	During construction phase at Sheung Sha Chau Island	
12.7.2.4 and 12.7.2.6	9.1	2.30	<p><b>Timing the Pipe Connection Works outside Ardeid's Breeding Season</b></p> <p>§ 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.</p>	During construction phase at Sheung Sha Chau Island	
12.10.1.1	9.3	-	<p><b>Ecological Monitoring</b></p> <p>§ 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.</p>	at Sheung Sha Chau Island	
<b>Marine Ecological Impact – Pre-construction Phase</b>					
13.11.4.1	10.2.2	-	§ Pre-construction phase Coral Dive Survey.	HKIAAA artificial seawall	
<b>Marine Ecological Impact – Construction Phase</b>					
13.11.1.3 to 13.11.1.6	-	-	<p><b>Minimisation of Land Formation Area</b></p> <p>§ 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.</p>	Land formation footprint / during detailed design phase to completion of construction	
13.11.1.7 to 13.11.1.10	-	2.31	<p><b>Use of Construction Methods with Minimal Risk/Disturbance</b></p> <p>§ Use of non-dredge method for the main land formation and ancillary works including the diversion of the aviation fuel pipeline to the AFRF;</p> <p>§ 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;</p>	During construction phase at marine works area	

EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Mitigation Measures Implemented?^
			§ 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	-	-	<b>Mitigation for Indirect Disturbance due to Deterioration of Water Quality</b> § 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	-	-	<b>Strict Enforcement of No-Dumping Policy</b> § A policy prohibiting dumping of wastes, chemicals, oil, trash, plastic, or any other substance that would potentially be harmful to dolphins and/or their habitat in the work area; § Mandatory educational programme of the no-dumping policy be made available to all construction site personnel for all project-related works; § Fines for infractions should be implemented; and § Unscheduled, on-site audits shall be implemented.	All works area during the construction phase	I
13.11.1.13	-	-	<b>Good Construction Site Practices</b> § 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	-	-	<b>Minimisation of Land Formation Area</b> § 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	-	<p><b>SkyPier High Speed Ferries' Speed Restrictions and Route Diversions</b></p> <p>§ SkyPier HSFs operating to / from Zhuhai and Macau would divert north of SCLKC Marine Park with a 15 knot speed limit to apply for the part-journeys that cross high CWD abundance grid squares as indicatively shown in <b>Drawing No. MCL/P132/EIA/13-023</b> of the EIA Report. Both the alignment of the northerly route and the portion of routings to be subject to the speed limit of 15 knots shall be finalised prior to commencement of construction based on the future review of up-to-date CWD abundance and EM&amp;A data and taking reference to changes in total SkyPier HSF numbers; and</p> <p>§ A maximum of 10 knots will be enforced through the designated SCLKC Marine Park area at all times.</p> <p><b>Other mitigation measures</b></p> <p>§ 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</p> <p>§ The effectiveness of the CWD mitigation measures after implementation of initial six month SkyPier HSF diversion and speed restriction will be reviewed.</p>	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	<p><b>Dolphin Exclusion Zone</b></p> <p>§ Establishment of a 24 hr Dolphin Exclusion Zone (DEZ) with a 250 m radius around the land formation works areas;</p> <p>§ 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</p> <p>§ A DEZ would also be implemented during bored piling work but as a precautionary measure only.</p>	Marine waters around land formation works area during construction phase	I
					I
					N/A
13.11.5.19	10.4	2.31	<p><b>Acoustic Decoupling of Construction Equipment</b></p> <p>§ 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</p> <p>§ Specific acoustic decoupling measures shall be specified during the detailed design of the project for use during the land formation works.</p>	Around coastal works area during construction phase	I
13.11.5.20	10.6.1	2.29	<p><b>Spill Response Plan</b></p> <p>§ 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.</p>	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	-	<p><b>Construction Vessel Speed Limits and Skipper Training</b></p> <p>§ A speed limit of 10 knots should be strictly observed for construction vessels at areas with the highest CWD densities; and</p> <p>§ 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.</p>	All areas north and west of Lantau Island during construction phase	I
<b>Fisheries Impact – Construction Phase</b>					
14.9.1.2 to 14.9.1.5	-	-	<p><b>Minimisation of Land Formation Area</b></p> <p>§ Minimise the overall size of the land formation needed for the additional facilities to minimise the overall loss of habitat for fisheries resources.</p>	Land formation footprint / during detailed design phase to completion of construction	I
14.9.1.6	-	-	<p><b>Use of Construction Methods with Minimal Risk/Disturbance</b></p> <p>§ Use of non-dredge method for the main land formation and ancillary works including the diversion of the aviation fuel pipeline to the AFRF;</p> <p>§ 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;</p> <p>§ Use of bored piling in short duration to form the new approach lights and marker beacons for the new runway; and</p> <p>§ 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.</p>	During construction phase at marine works area	I    I  N/A  I
14.9.1.11	-	-	<p><b>Strict Enforcement of No-Dumping Policy</b></p> <p>§ 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;</p> <p>§ Mandatory educational programme of the no-dumping policy be made available to all construction site personnel for all project-related works;</p> <p>§ Fines for infractions should be implemented; and</p> <p>§ Unscheduled, on-site audits shall be implemented.</p>	All works area during the construction phase	I
14.9.1.12	-	-	<p><b>Good Construction Site Practices</b></p> <p>§ Regular inspection of the integrity and effectiveness of all silt curtains and monitoring of effluents to ensure that any discharge meets effluent discharge guidelines;</p> <p>§ Keep the number of working or stationary vessels present on-site to the minimum anytime; and</p>	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	-		<p><b>Mitigation for Indirect Disturbance due to Deterioration of Water Quality</b></p> <p>§ Water quality mitigation measures during construction phases include consideration of alternative construction methods, deployment of silt curtain and good site practices;</p> <p>§ 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);</p> <p>§ Use of bored piling in short duration to form the new approach lights and marker beacons for the new runway; and</p> <p>§ 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.</p>	All works area during the construction phase	
					N/A
<b>Landscape and Visual Impact – Construction Phase</b>					
Table 15.6	12.3	-	<b>CM1</b> - The construction area and contractor's temporary works areas should be minimised to avoid impacts on adjacent landscape.	All works areas for duration of works; Upon handover and completion of works.	
Table 15.6	12.3	-	<b>CM2</b> - Reduction of construction period to practical minimum.	All works areas for duration of works; Upon handover and completion of works.	
Table 15.6	12.3	-	<b>CM3</b> - Phasing of the construction stage to reduce visual impacts during the construction phase.	All works areas for duration of works; Upon handover and completion of works.	
Table 15.6	12.3	-	<b>CM4</b> - Construction traffic (land and sea) including construction plants, construction vessels and barges should be kept to a practical minimum.	All works areas for duration of works; Upon handover and completion of works.	
Table 15.6	12.3	-	<b>CM5</b> - Erection of decorative mesh screens or construction hoardings around works areas in visually unobtrusive colours.	All works areas for duration of works; Upon handover and completion of works. –	



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

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

Notes:

I= implemented where applicable;

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

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

## **Appendix C. Monitoring Schedule**

# **Monitoring Schedule of This Reporting Period**

# 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 Site Inspection  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  AR1A, AR2 NM1A, NM3A, NM4, NM5  WQ General & Regular DCM mid-ebb: 16:10 mid-flood: 10:34	11	12 Site Inspection   WQ General & Regular DCM mid-ebb: 18:19 mid-flood: 13:08	13 Site Inspection	14   WQ General & Regular DCM mid-ebb: 08:15 mid-flood: 16:00
15	16  AR1A, AR2 NM1A, NM3A, NM4, NM5	17 Site Inspection  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)  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 CWD Survey (Vessel)  NM6  WQ General & Regular DCM mid-ebb: 15:40 mid-flood: 10:05	25 Site Inspection CWD Survey (Vessel, Land-based)	26 Site Inspection CWD Survey (Vessel, Land-based) AR1A, AR2 NM1A, NM3A, NM4, NM5  WQ General & Regular DCM mid-ebb: 17:06 mid-flood: 12:10	27 Site Inspection CWD Survey (Vessel, Land-based)  Ecological Monitoring	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				
<p><b>Notes:</b></p> <p>CWD - Chinese White Dolphin</p> <p>Air quality and Noise Monitoring Station</p> <p>WQ - Water Quality DCM - Deep Cement Mixing</p> <p>NM1A/AR1A - Man Tung Road Park NM3A - Site Office NM4 - Ching Chung Hau Po Woon Primary School NM5/AR2 - Village House, Tin Sum NM6 - House No. 1, Sha Lo Wan</p>						

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

# Nov-17

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			<b>1</b> Site Inspection AR1A, AR2 NM1A, NM3A, NM4, NM5	<b>2</b> Site Inspection CWD Survey (Land-based)  WQ General & Regular DCM mid-ebb: 11:20 mid-flood: 17:41	<b>3</b> Site Inspection CWD Survey (Vessel)	<b>4</b>  WQ General & Regular DCM mid-ebb: 12:47 mid-flood: 06:55
<b>5</b>	<b>6</b> CWD Survey (Vessel)	<b>7</b> Site Inspection CWD Survey (Vessel) AR1A, AR2 NM1A, NM3A, NM4, NM5  WQ General & Regular DCM mid-ebb: 15:11 mid-flood: 09:39	<b>8</b> Site Inspection	<b>9</b> Site Inspection  NM6  WQ General & Regular DCM mid-ebb: 16:59 mid-flood: 11:43	<b>10</b> Site Inspection CWD Survey (Land-based)	<b>11</b>  WQ General & Regular DCM mid-ebb: 06:10 mid-flood: 14:31
<b>12</b>	<b>13</b> CWD Survey (Vessel) AR1A, AR2 NM1A, NM3A, NM4, NM5	<b>14</b> Site Inspection CWD Survey (Land-based)  WQ General & Regular DCM mid-ebb: 10:07 mid-flood: 16:45	<b>15</b> Site Inspection CWD Survey (Vessel, Land-based)	<b>16</b> Site Inspection CWD Survey (Vessel)  NM6  WQ General & Regular DCM mid-ebb: 11:43 mid-flood: 05:49	<b>17</b> Site Inspection  AR1A, AR2	<b>18</b>  WQ General & Regular DCM mid-ebb: 13:01 mid-flood: 07:20
<b>19</b>	<b>20</b> CWD Survey (Vessel)	<b>21</b> Site Inspection CWD Survey (Vessel)  NM6  WQ General & Regular DCM mid-ebb: 14:45 mid-flood: 09:20	<b>22</b> Site Inspection CWD Survey (Land-based)	<b>23</b> Site Inspection  AR1A, AR2 NM1A, NM3A, NM4, NM5 Ecological Monitoring WQ General & Regular DCM mid-ebb: 15:57 mid-flood: 10:44	<b>24</b> Site Inspection	<b>25</b>  WQ General & Regular DCM mid-ebb: 04:34 mid-flood: 16:56
<b>26</b>	<b>27</b>  NM6	<b>28</b> Site Inspection  WQ General & Regular DCM mid-ebb: 07:34 mid-flood: 15:19	<b>29</b>  AR1A, AR2 NM1A, NM3A, NM4, NM5	<b>30</b> Site Inspection  WQ General & Regular DCM mid-ebb: 09:51 mid-flood: 16:22		
<b>Notes:</b> CWD - Chinese White Dolphin Air quality and Noise Monitoring Station WQ - Water Quality DCM - Deep Cement Mixing  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						



## **Appendix D. Monitoring Results**

# **Air Quality Monitoring Results**

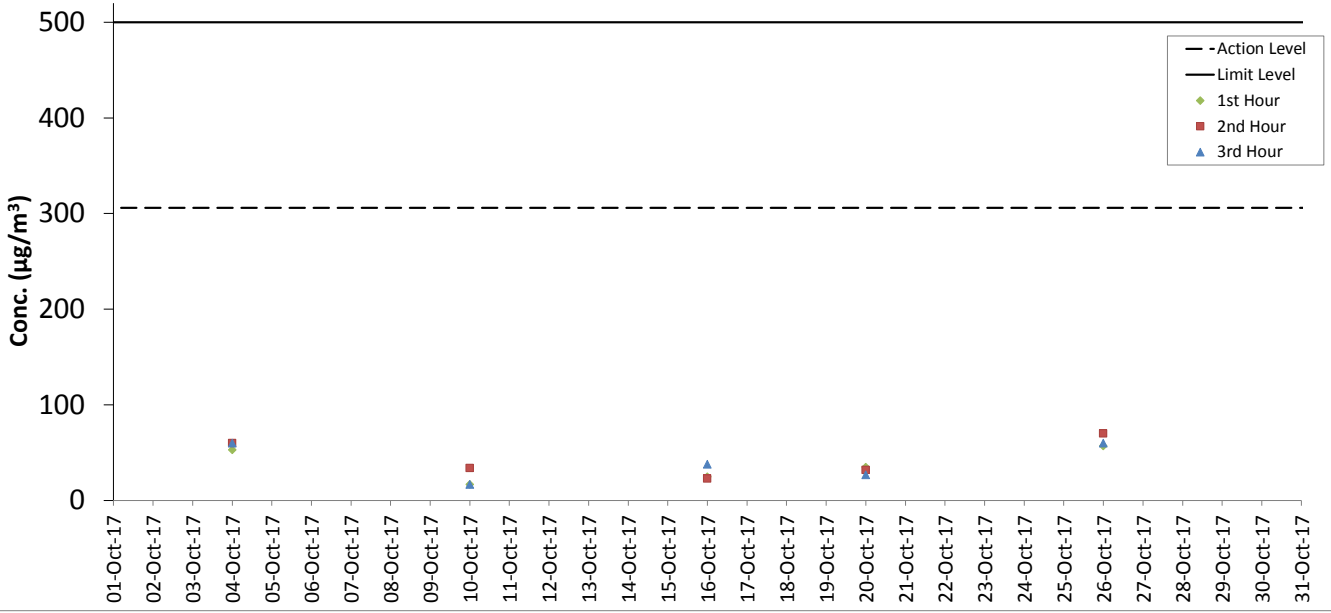
**1-hour TSP Results****Station: AR1A- Man Tung Road Park**

Date	Time	Weather	Wind Speed (m/s)	Wind Direction (deg)	1-hr TSP ( $\mu\text{g}/\text{m}^3$ )	Action Level ( $\mu\text{g}/\text{m}^3$ )	Limit Level ( $\mu\text{g}/\text{m}^3$ )
04-Oct-17	13:10	Fine	10.6	80	53	306	500
04-Oct-17	14:10	Fine	5.6	111	60	306	500
04-Oct-17	15:10	Fine	5.3	123	60	306	500
10-Oct-17	13:00	Sunny	8.2	103	17	306	500
10-Oct-17	14:00	Sunny	9.1	85	34	306	500
10-Oct-17	15:00	Sunny	8.2	96	17	306	500
16-Oct-17	13:00	Cloudy	6.9	105	25	306	500
16-Oct-17	14:00	Cloudy	5.2	72	23	306	500
16-Oct-17	15:00	Cloudy	5.3	66	38	306	500
20-Oct-17	13:00	Sunny	4.7	312	35	306	500
20-Oct-17	14:00	Sunny	4.9	328	32	306	500
20-Oct-17	15:00	Sunny	6.3	317	27	306	500
26-Oct-17	13:00	Sunny	1.8	296	57	306	500
26-Oct-17	14:00	Sunny	4.4	288	70	306	500
26-Oct-17	15:00	Sunny	4.0	282	60	306	500

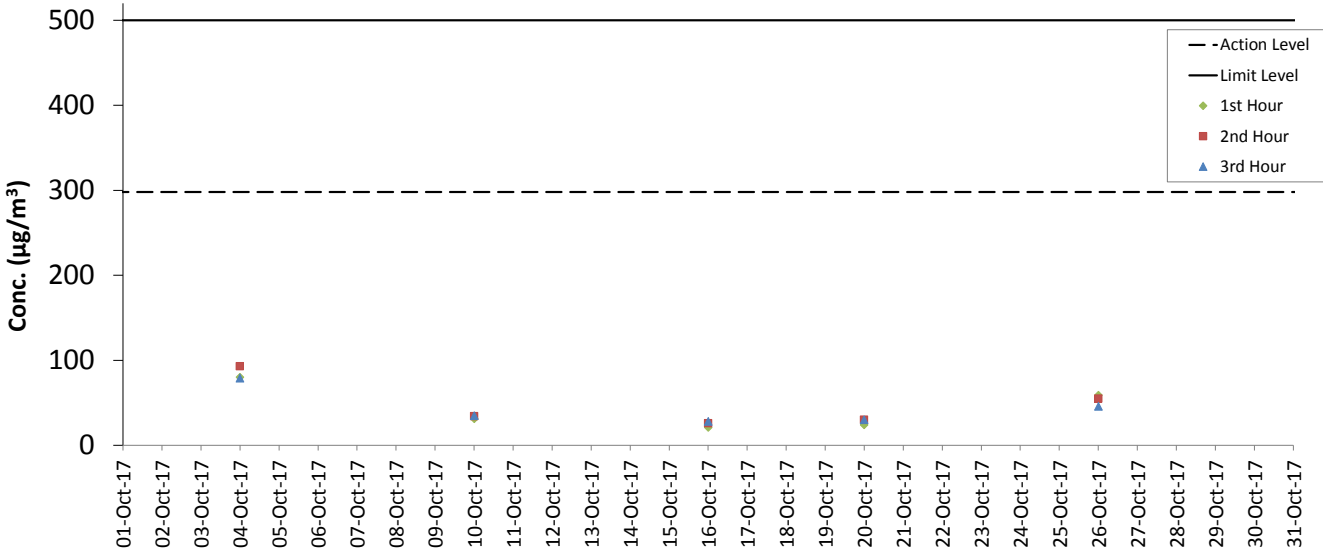
**1-hour TSP Results****Station: AR2- Village House, Tin Sum**

Date	Time	Weather	Wind Speed (m/s)	Wind Direction (deg)	1-hr TSP ( $\mu\text{g}/\text{m}^3$ )	Action Level ( $\mu\text{g}/\text{m}^3$ )	Limit Level ( $\mu\text{g}/\text{m}^3$ )
04-Oct-17	09:05	Fine	5.1	70	80	298	500
04-Oct-17	10:05	Fine	6.5	108	93	298	500
04-Oct-17	11:05	Fine	8.0	113	79	298	500
10-Oct-17	09:10	Sunny	7.2	84	31	298	500
10-Oct-17	10:10	Sunny	7.9	72	34	298	500
10-Oct-17	11:10	Sunny	7.2	70	35	298	500
16-Oct-17	08:45	Cloudy	6.0	106	21	298	500
16-Oct-17	09:45	Cloudy	5.3	98	26	298	500
16-Oct-17	10:45	Cloudy	6.3	116	28	298	500
20-Oct-17	09:00	Sunny	4.3	13	24	298	500
20-Oct-17	10:00	Sunny	3.7	5	30	298	500
20-Oct-17	11:00	Sunny	3.8	355	30	298	500
26-Oct-17	08:45	Sunny	3.2	78	59	298	500
26-Oct-17	09:45	Sunny	2.3	51	55	298	500
26-Oct-17	10:45	Sunny	2.1	58	46	298	500

AR1A 1-Hour TSP



AR2 1-Hour TSP



# Noise Monitoring Results

## Noise Measurement Results

### Station: NM1A- Man Tung Road Park

Date	Weather	Time	Measured L <sub>10</sub> dB(A)	Measured L <sub>90</sub> dB(A)	L <sub>eq(30mins)</sub> dB(A)
04-Oct-17	Fine	14:10	73.5	57.0	72
04-Oct-17	Fine	14:15	72.5	55.5	
04-Oct-17	Fine	14:20	72.0	57.0	
04-Oct-17	Fine	14:25	71.5	55.5	
04-Oct-17	Fine	14:30	71.5	55.5	
04-Oct-17	Fine	14:35	71.0	55.5	
10-Oct-17	Sunny	13:05	72.5	56.0	72
10-Oct-17	Sunny	13:10	72.5	55.5	
10-Oct-17	Sunny	13:15	73.5	58.0	
10-Oct-17	Sunny	13:20	71.0	57.0	
10-Oct-17	Sunny	13:25	71.5	56.5	
10-Oct-17	Sunny	13:30	73.5	58.5	
16-Oct-17	Cloudy	13:17	73.0	57.0	72
16-Oct-17	Cloudy	13:22	70.5	54.5	
16-Oct-17	Cloudy	13:27	72.0	58.5	
16-Oct-17	Cloudy	13:32	72.5	58.0	
16-Oct-17	Cloudy	13:37	71.5	56.5	
16-Oct-17	Cloudy	13:42	73.5	58.0	
26-Oct-17	Sunny	13:06	71.5	54.5	72
26-Oct-17	Sunny	13:11	72.5	55.0	
26-Oct-17	Sunny	13:16	70.5	53.5	
26-Oct-17	Sunny	13:21	71.5	53.5	
26-Oct-17	Sunny	13:26	75.0	59.5	
26-Oct-17	Sunny	13:31	73.0	60.5	

Remarks:

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

## Noise Measurement Results

### Station: NM3A- Site Office

Date	Weather	Time	Measured L <sub>10</sub> dB(A)	Measured L <sub>90</sub> dB(A)	L <sub>eq(30mins)</sub> dB(A)
04-Oct-17	Sunny	09:14	68.5	62.0	61
04-Oct-17	Sunny	09:19	67.5	62.0	
04-Oct-17	Sunny	09:24	66.5	62.0	
04-Oct-17	Sunny	09:29	66.0	62.0	
04-Oct-17	Sunny	09:34	68.5	62.0	
04-Oct-17	Sunny	09:39	68.0	62.0	
10-Oct-17	Sunny	10:10	68.0	62.0	61
10-Oct-17	Sunny	10:15	67.5	62.0	
10-Oct-17	Sunny	10:20	65.5	62.0	
10-Oct-17	Sunny	10:25	69.0	62.0	
10-Oct-17	Sunny	10:30	68.5	62.0	
10-Oct-17	Sunny	10:35	67.5	63.0	
16-Oct-17	Cloudy	09:15	69.0	61.0	61
16-Oct-17	Cloudy	09:20	68.5	61.0	
16-Oct-17	Cloudy	09:25	67.0	61.0	
16-Oct-17	Cloudy	09:30	67.0	61.0	
16-Oct-17	Cloudy	09:35	67.5	61.5	
16-Oct-17	Cloudy	09:40	71.0	61.0	
26-Oct-17	Sunny	09:20	69.0	59.0	61
26-Oct-17	Sunny	09:25	69.5	59.0	
26-Oct-17	Sunny	09:30	64.0	58.5	
26-Oct-17	Sunny	09:35	67.0	58.5	
26-Oct-17	Sunny	09:40	70.5	59.5	
26-Oct-17	Sunny	09:45	67.5	59.0	

## Noise Measurement Results

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

Date	Weather	Time	Measured L <sub>10</sub> dB(A)	Measured L <sub>90</sub> dB(A)	L <sub>eq(30mins)</sub> dB(A)
04-Oct-17	Cloudy	13:45	66.0	61.5	65
04-Oct-17	Cloudy	13:50	63.5	60.0	
04-Oct-17	#REF!	13:55	62.0	59.0	
04-Oct-17	Cloudy	14:00	62.5	59.0	
04-Oct-17	Cloudy	14:05	61.5	59.0	
04-Oct-17	Cloudy	14:10	61.5	59.0	
10-Oct-17	Sunny	13:30	66.5	63.0	64
10-Oct-17	Sunny	13:35	67.0	63.0	
10-Oct-17	Sunny	13:40	67.0	63.0	
10-Oct-17	Sunny	13:45	68.5	64.0	
10-Oct-17	Sunny	13:50	67.0	63.5	
10-Oct-17	Sunny	13:55	66.0	61.5	
16-Oct-17	Cloudy	13:35	66.0	61.0	60
16-Oct-17	Cloudy	13:40	66.0	62.0	
16-Oct-17	Cloudy	13:45	64.0	61.5	
16-Oct-17	Cloudy	13:50	64.5	61.5	
16-Oct-17	Cloudy	13:55	64.0	61.5	
16-Oct-17	Cloudy	14:00	65.5	62.0	
26-Oct-17	Sunny	13:35	61.5	58.5	64
26-Oct-17	Sunny	13:40	64.0	60.5	
26-Oct-17	Sunny	13:45	63.5	59.0	
26-Oct-17	Sunny	13:50	62.0	59.0	
26-Oct-17	Sunny	13:55	62.5	58.0	
26-Oct-17	Sunny	14:00	62.0	59.0	

Remarks:

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

## Noise Measurement Results

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

Date	Weather	Time	Measured L <sub>10</sub> dB(A)	Measured L <sub>90</sub> dB(A)	L <sub>eq(30mins)</sub> dB(A)
04-Oct-17	Fine	10:05	61.5	48.0	53
04-Oct-17	Fine	10:10	59.0	49.0	
04-Oct-17	Fine	10:15	56.5	49.5	
04-Oct-17	Fine	10:20	58.5	50.0	
04-Oct-17	Fine	10:25	55.5	51.0	
04-Oct-17	Fine	10:30	62.5	51.0	
10-Oct-17	Sunny	09:35	58.5	49.0	53
10-Oct-17	Sunny	09:40	56.5	49.0	
10-Oct-17	Sunny	09:45	55.0	50.0	
10-Oct-17	Sunny	09:50	58.0	51.5	
10-Oct-17	Sunny	09:55	60.5	51.5	
10-Oct-17	Sunny	10:00	60.0	51.5	
16-Oct-17	Cloudy	10:34	54.0	46.5	58
16-Oct-17	Cloudy	10:39	61.0	48.0	
16-Oct-17	Cloudy	10:44	55.0	47.0	
16-Oct-17	Cloudy	10:49	57.5	46.5	
16-Oct-17	Cloudy	10:54	52.0	47.0	
16-Oct-17	Cloudy	10:59	56.0	46.0	
26-Oct-17	Sunny	09:50	59.0	47.0	57
26-Oct-17	Sunny	09:55	60.5	48.0	
26-Oct-17	Sunny	10:00	55.0	49.0	
26-Oct-17	Sunny	10:05	55.5	48.0	
26-Oct-17	Sunny	10:10	51.5	49.0	
26-Oct-17	Sunny	10:15	60.5	47.5	

Remarks:

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



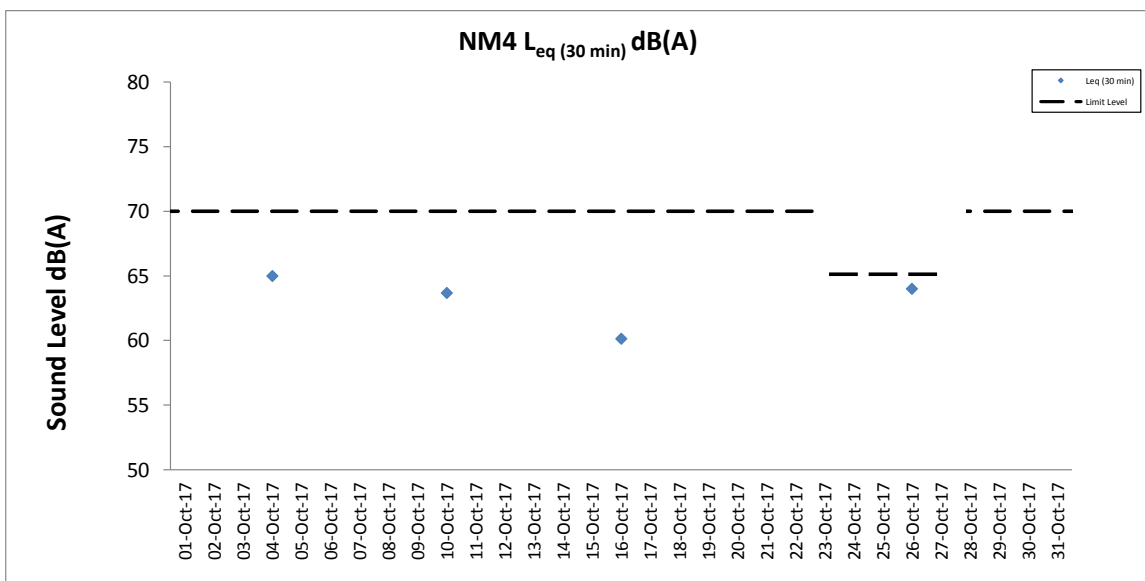
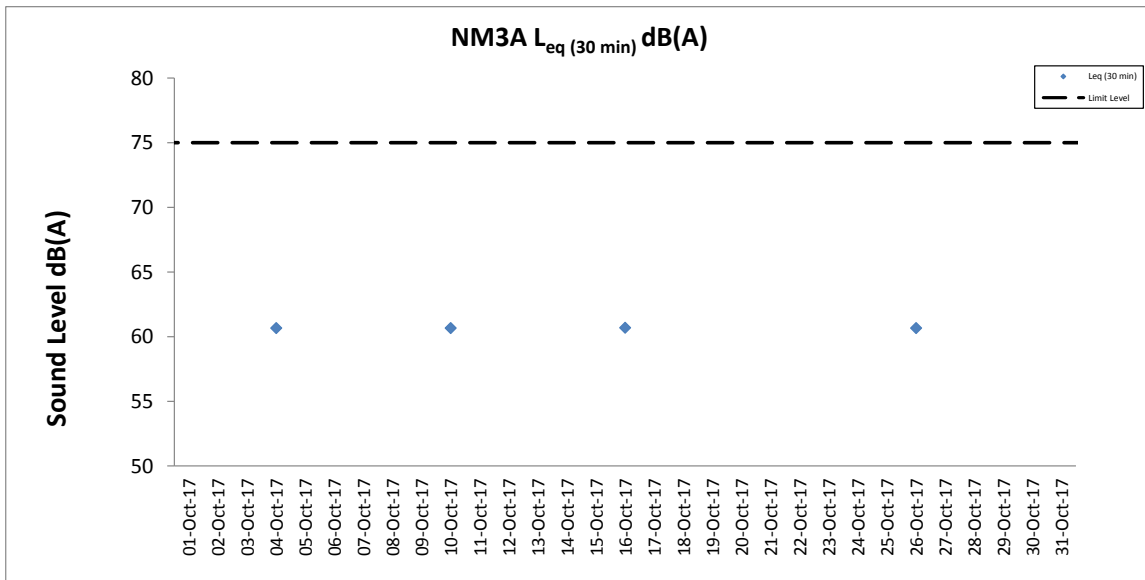
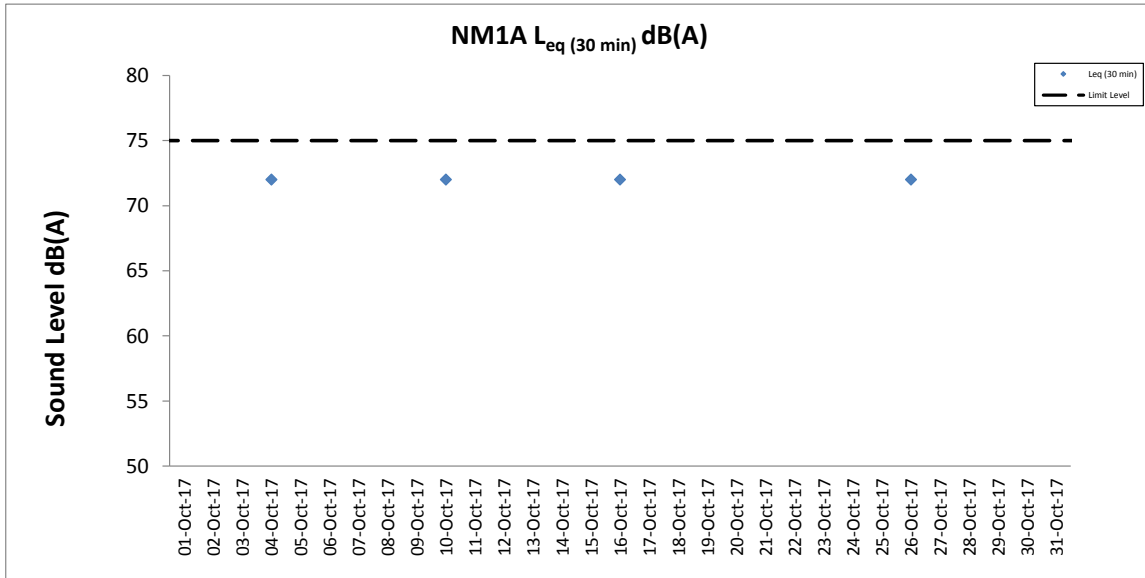
## Noise Measurement Results

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

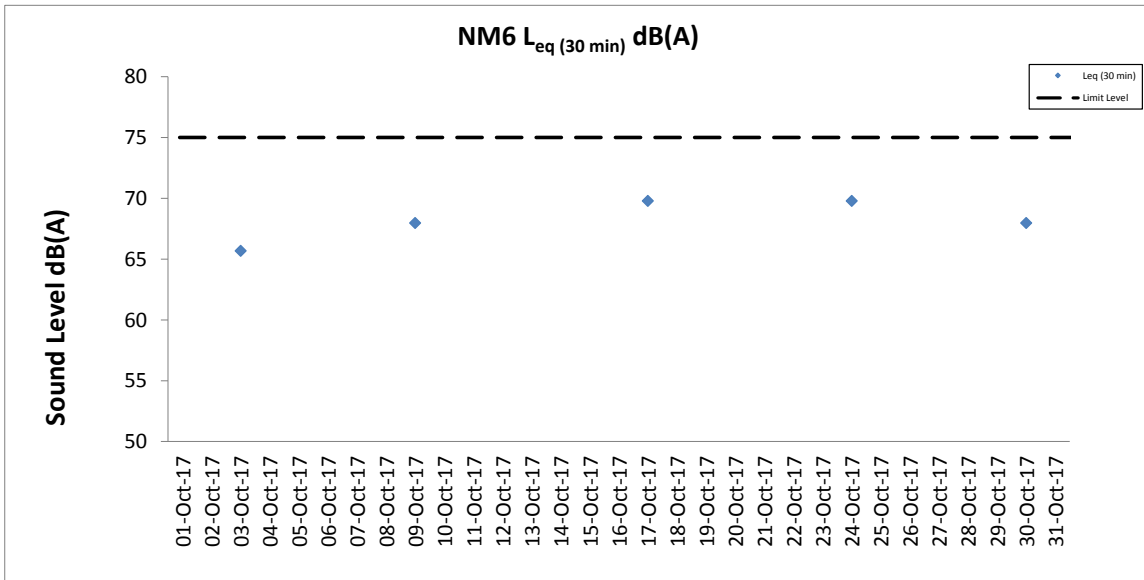
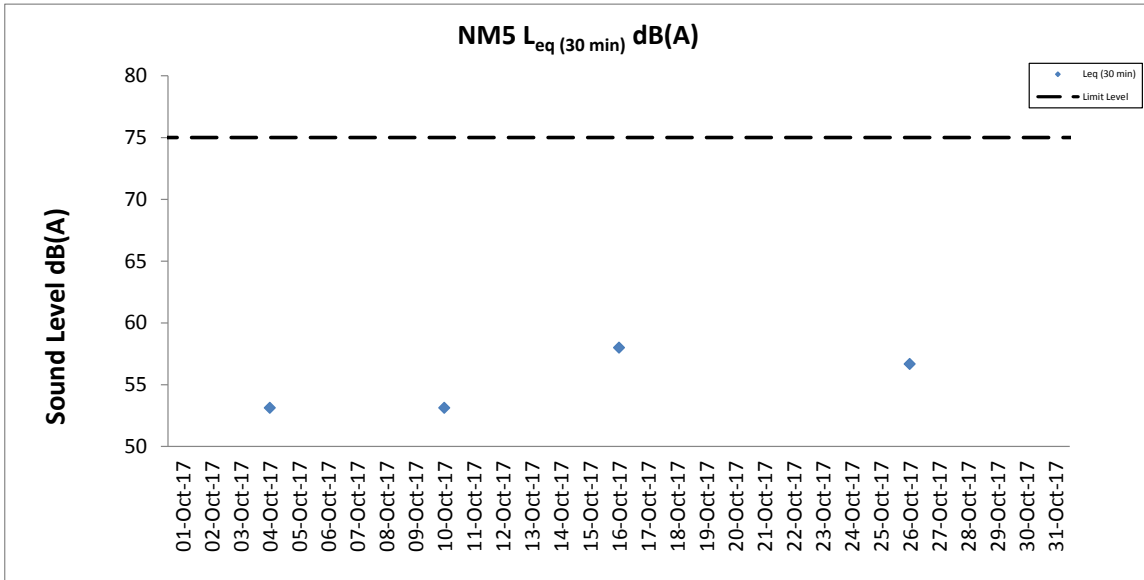
Date	Weather	Time	Measured L <sub>10</sub> dB(A)	Measured L <sub>90</sub> dB(A)	L <sub>eq(30mins)</sub> dB(A)
03-Oct-17	Sunny	09:55	65.5	52.0	66
03-Oct-17	Sunny	10:00	68.0	52.0	
03-Oct-17	Sunny	10:05	72.0	52.0	
03-Oct-17	Sunny	10:10	69.0	50.5	
03-Oct-17	Sunny	10:15	69.0	52.0	
03-Oct-17	Sunny	10:20	74.5	53.0	
09-Oct-17	Fine	09:38	69.5	57.5	68
09-Oct-17	Fine	09:43	73.0	56.0	
09-Oct-17	Fine	09:48	73.0	56.0	
09-Oct-17	Fine	09:53	73.5	55.5	
09-Oct-17	Fine	09:58	70.0	54.5	
09-Oct-17	Fine	10:03	72.0	54.5	
17-Oct-17	Cloudy	09:39	74.5	64.0	70
17-Oct-17	Cloudy	09:44	73.0	57.5	
17-Oct-17	Cloudy	09:49	72.5	56.5	
17-Oct-17	Cloudy	09:54	70.0	56.5	
17-Oct-17	Cloudy	09:59	72.5	56.5	
17-Oct-17	Cloudy	10:04	74.5	59.5	
24-Oct-17	Sunny	09:40	72.5	57.5	70
24-Oct-17	Sunny	09:45	74.0	57.5	
24-Oct-17	Sunny	09:50	76.5	60.0	
24-Oct-17	Sunny	09:55	72.5	57.0	
24-Oct-17	Sunny	10:00	70.2	54.0	
24-Oct-17	Sunny	10:05	72.5	56.0	
30-Oct-17	Sunny	09:38	73.5	54.0	68
30-Oct-17	Sunny	09:43	67.5	54.5	
30-Oct-17	Sunny	09:48	73.0	56.5	
30-Oct-17	Sunny	09:53	71.0	56.5	
30-Oct-17	Sunny	09:58	77.0	57.0	
30-Oct-17	Sunny	10:03	63.5	57.0	

Remarks:

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



Note: Limit Level at NM4 reduced to 65 dB(A) during school examinaion period from 23 to 27 October 2017.



## **Water Quality Monitoring Results**

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

**Water Quality Monitoring**

**Water Quality Monitoring Results on 03 October 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	Value	DA	Value	DA
C1	Cloudy	Moderate	11:10	8.6	Surface	1.0	0.6	235	30.0	30.0	8.0	8.0	24.2	24.2	88.1	88.1	5.8	5.6	5.2	12.3	6	7	75	78	815630	804257	<0.2	1.3	<0.2	1.2		
						1.0	0.7	251	30.0		8.0	8.0	24.2	24.2	88.1	88.1	5.8		5.2		5		76				<0.2	1.2				
					Middle	4.3	0.5	209	29.7	29.7	8.0	8.0	27.9	27.9	82.6	82.6	5.4	5.3	9.9	5.3	9.9	5.3	9	7	78	78	815630	804257	<0.2	1.4	<0.2	1.2
						4.3	0.5	222	29.7	29.7	8.0	8.0	27.9	27.9	82.6	82.6	5.4		9.9		5		78		<0.2				1.4			
					Bottom	7.6	0.3	208	29.7	29.7	8.0	8.0	28.3	28.3	80.9	80.9	5.3	5.3	21.9	5.3	21.9	5.3	9	7	81	78	815630	804257	<0.2	1.2	<0.2	1.4
						7.6	0.4	223	29.7	29.7	8.0	8.0	28.3	28.3	80.9	80.9	5.3		21.9		9		82		<0.2				1.1			
C2	Fine	Moderate	12:31	11.1	Surface	1.0	1.0	166	30.7	30.7	7.8	7.8	19.6	19.6	88.4	88.4	5.9	5.5	5.3	16.2	4	5	73	75	825683	806963	<0.2	2.1	<0.2	2.0		
						1.0	1.0	176	30.7		7.8	7.8	19.6	19.6	88.4	88.4	5.9		5.2		5		73				<0.2	2.3				
					Middle	5.6	0.8	168	30.1	30.1	7.9	7.9	23.6	23.6	76.7	76.7	5.1	5.1	22.1	4.8	22.1	4.8	3	5	75	75	825683	806963	<0.2	2.0	<0.2	2.2
						5.6	0.8	180	30.1	30.1	7.9	7.9	23.6	23.6	76.7	76.7	5.1		22.2		4		75		<0.2				2.2			
					Bottom	10.1	0.3	158	29.8	29.8	7.9	7.9	26.5	26.5	73.4	73.4	4.8	4.8	21.1	4.8	21.1	4.8	6	5	77	77	825683	806963	<0.2	1.9	<0.2	1.9
						10.1	0.4	163	29.8	29.8	7.9	7.9	26.5	26.5	73.4	73.4	4.8		21.1		6		77		<0.2				1.9			
C3	Fine	Moderate	10:16	12.3	Surface	1.0	0.5	52	30.1	30.1	7.9	7.9	24.0	24.0	85.4	85.4	5.7	5.3	6.0	7.3	5	6	73	75	822117	817790	<0.2	1.0	<0.2	1.2		
						1.0	0.6	54	30.1		7.9	7.9	24.0	24.0	85.4	85.4	5.7		6.0		6		73				<0.2	1.0				
					Middle	6.2	0.3	78	29.6	29.6	7.9	7.9	26.9	26.9	75.0	75.0	4.9	4.9	7.8	4.9	7.8	4.9	5	6	75	75	822117	817790	<0.2	1.3	<0.2	1.5
						6.2	0.3	83	29.6	29.6	7.9	7.9	26.9	26.9	75.0	75.0	4.9		7.9		5		75		<0.2				1.5			
					Bottom	11.3	0.3	86	29.5	29.5	7.9	7.9	27.7	27.7	74.7	74.7	4.9	4.9	8.1	4.9	8.1	4.9	6	6	77	77	822117	817790	<0.2	1.2	<0.2	1.3
						11.3	0.3	89	29.5	29.5	7.9	7.9	27.7	27.7	74.7	74.7	4.9		8.1		6		77		<0.2				1.3			
IM1	Cloudy	Moderate	11:31	7.4	Surface	1.0	0.5	184	29.8	29.8	8.0	8.0	24.9	24.9	82.7	82.7	5.5	5.4	6.9	11.4	4	7	75	77	818339	806439	<0.2	1.6	<0.2	1.4		
						1.0	0.5	198	29.8		8.0	8.0	24.9	24.9	82.7	82.7	5.5		6.9		5		75				<0.2	1.2				
					Middle	3.7	0.4	185	29.7	29.7	8.0	8.0	26.7	26.7	79.7	79.7	5.2	5.2	10.9	5.2	10.9	5.2	6	7	77	77	818339	806439	<0.2	1.2	<0.2	1.2
						3.7	0.4	200	29.7	29.7	8.0	8.0	26.7	26.7	79.7	79.7	5.2		10.9		5		77		<0.2				1.2			
					Bottom	6.4	0.2	156	29.7	29.7	8.0	8.0	27.3	27.3	79.7	79.7	5.2	5.2	16.5	5.2	16.5	5.2	12	7	78	78	818339	806439	<0.2	0.8	<0.2	0.8
						6.4	0.2	156	29.7	29.7	8.0	8.0	27.3	27.3	79.7	79.7	5.2		16.5		11		78		<0.2				0.8			
IM2	Cloudy	Moderate	11:39	8.3	Surface	1.0	0.6	215	30.0	30.0	8.0	8.0	22.4	22.4	88.1	88.1	5.9	5.6	5.9	14.6	3	8	75	77	818853	806197	<0.2	1.5	<0.2	1.4		
						1.0	0.6	231	30.0		8.0	8.0	22.4	22.4	88.1	88.1	5.9		5.9		4		75				<0.2	1.4				
					Middle	4.2	0.4	199	29.7	29.7	8.0	8.0	26.3	26.3	80.6	80.6	5.3	5.3	13.4	5.3	13.4	5.3	4	8	77	77	818853	806197	<0.2	1.4	<0.2	1.3
						4.2	0.4	212	29.7	29.7	8.0	8.0	26.3	26.3	80.6	80.6	5.3		13.4		6		79		<0.2				1.4			
					Bottom	7.3	0.3	190	29.6	29.6	8.0	8.0	26.9	26.9	80.3	80.3	5.3	5.3	24.5	5.3	24.5	5.3	15	8	78	78	818853	806197	<0.2	0.8	<0.2	0.8
						7.3	0.3	196	29.6	29.6	8.0	8.0	26.9	26.9	80.3	80.3	5.3		24.5		16		79		<0.2				0.8			
IM3	Cloudy	Moderate	11:46	8.2	Surface	1.0	0.5	199	30.1	30.1	8.0	8.0	22.7	22.7	90.2	90.2	6.0	5.9	5.0	8.8	4	5	75	77	819426	806014	<0.2	1.6	<0.2	1.6		
						1.0	0.5	201	30.1		8.0	8.0	22.7	22.7	90.2	90.2	6.0		5.0		4		75				<0.2	1.6				
					Middle	4.1	0.3	205	29.8	29.8	8.0	8.0	24.4	24.4	85.7	85.7	5.7	5.7	6.7	5.7	6.7	5.7	4	5	77	77	819426	806014	<0.2	1.6	<0.2	1.6
						4.1	0.3	219	29.8	29.8	8.0	8.0	24.4	24.4	85.7	85.7	5.7		6.7		4		77		<0.2				1.6			
					Bottom	7.2	0.4	194	29.6	29.6	8.0	8.0	27.0	27.0	81.2	81.2	5.3	5.3	14.7	5.3	14.7	5.3	6	8	79	79	819426	806014	<0.2	0.9	<0.2	0.9
						7.2	0.4	195	29.6	29.6	8.0	8.0	27.0	27.0	81.2	81.2	5.3		14.7		8		79		<0.2				0.8			
IM4	Sunny	Moderate	11:53	7.6	Surface	1.0	0.7	206	29.9	29.9	7.9	7.9	23.3	23.3	86.1	86.1	5.7	5.6	8.4	17.7	6	8	75	77	819554	805028	<0.2	1.3	<0.2	1.3		
						1.0	0.7	223	29.9		7.9	7.9	23.3	23.3	86.1	86.1	5.7		8.4		6		75				<0.2	1.4				
					Middle	3.8	0.6	202	29.8	29.8	8.0	8.0	24.8	24.8	81.3	81.3	5.4	5.4	16.6	5.4	16.6	5.4	7	8	77	77	819554	805028	<0.2	1.3	<0.2	1.3
						3.8	0.6	211	29.8	29.8	8.0	8.0	24.8	24.8	81.3	81.3	5.4		16.6		5		77		<0.2				1.2			
					Bottom	6.6	0.4	182	29.6	29.6	8.0	8.0	27.0	27.0	80.6	80.6	5.3	5.3	28.0	5.3	28.0	5.3	14	8	79	79	819554	805028	<0.2	1.0	<0.2	1.0
						6.6	0.4	193	29.6	29.6	8.0	8.0	27.0	27.0	80.6	80.6	5.3		28.0		12		79		<0.2				1.0			
IM5	Sunny	Moderate	12:05	6.6	Surface	1.0	0.6	190	30.7	30.7	7.9	7.9	20.8	20.8	85.2	85.2	5.7	5.4	8.0	20.2	3	10	74	76	820572	804909	<0.2	1.8	<0.2	1.6		
						1.0	0.6	203	30.7		7.9	7.9	20.8	20.8	85.2	85.2	5.7		8.0		4		73				<0.2	1.5				
					Middle	3.3	0.5	209	29.6	29.6	8.0	8.0	26.7	26.7	78.0	78.0	5.1	5.1	20.0	5.1	20.0	5.1	5	10	77	76	820572	804909	<0.2	1.6	<0.2	1.6
						3.3	0.6	225	29.6	29.6	8.0	8.0	26.7	26.7	78.0	78.0	5.1		20.0		4		76		<0.2				1.6			
					Bottom	5.6	0.4	208	29.6	29.6	8.0	8.0	27.0	27.0	79.2	79.2	5.2	5.2	32.7	5.2	32.7	5.2	20	10	77	78	820572	804909	<0.2	0.8	<0.2	0.8
						5.6	0.5	209	29.6	29.6	8.0	8.0	27.0	27.0	79.2	79.2	5.2		32.7		21		78		<0.2				0.8			
IM6	Sunny	Moderate	12:13	6.6	Surface	1.0	0.7	213	30.2	30.2	7.9	7.9	21.6	21.6	88.1	88.1	5.9	5.8	5.1	8.2	6	13	73	76	821040	805831	<0.2	2.0	<0.2	1.6		
						1.0	0.7	232	30.2		7.9	7.9	21.6	21.6	8																	



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

Water Quality Monitoring

Water Quality Monitoring Results on **03 October 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	DA	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA
C1	Cloudy	Calm	17:43	8.5	Surface	1.0	0.5	39	30.4	7.9	7.9	22.7	22.7	84.2	84.2	5.6	9.3	6	74	7	74	6	74	815611	804264	<0.2	1.4	1.3		
						1.0	0.5	41	30.4	7.9	7.9	22.7	22.7	84.2	84.2	5.6	9.3	7	75	7	75	6	75	6	75	<0.2	1.5			
						4.3	0.6	35	29.8	8.0	8.0	26.1	26.1	81.2	81.2	5.3	16.0	6	78	6	78	6	78	6	78	<0.2	1.5			
					4.3	0.6	37	29.8	8.0	8.0	26.1	26.1	81.2	81.2	5.3	16.0	6	77	6	77	6	77	6	77	<0.2	1.4				
					7.5	0.5	38	29.9	7.9	7.9	26.5	26.5	82.8	82.8	5.4	20.1	10	79	10	79	10	79	10	79	<0.2	1.0				
					7.5	0.6	38	29.9	7.9	7.9	26.5	26.5	82.8	82.8	5.4	20.1	11	79	11	79	11	79	11	79	<0.2	0.9				
C2	Fine	Moderate	16:28	11.0	Surface	1.0	0.7	182	30.4	7.7	7.7	19.9	19.9	72.8	72.8	4.9	7.6	4	73	4	73	4	73	825695	806938	<0.2	3.0	2.7		
						1.0	0.7	199	30.4	7.7	7.7	19.9	19.9	72.8	72.8	4.9	7.6	4	74	4	74	4	74	4	74	<0.2	3.0			
						5.5	0.3	184	30.2	7.8	7.8	23.6	23.8	71.3	71.3	4.7	11.7	4	75	4	75	4	75	4	75	<0.2	3.0			
					5.5	0.4	196	30.2	7.8	7.8	23.9	23.9	71.3	71.3	4.7	11.9	5	76	5	76	5	76	5	76	<0.2	2.9				
					10.0	0.0	304	30.1	7.8	7.8	24.6	24.6	72.5	72.5	4.8	15.0	6	77	6	77	6	77	6	77	<0.2	2.2				
					10.0	0.0	312	30.1	7.8	7.8	24.6	24.6	72.5	72.5	4.8	15.0	6	78	6	78	6	78	6	78	<0.2	2.1				
C3	Fine	Moderate	18:28	11.4	Surface	1.0	0.6	249	30.2	7.9	7.9	24.8	24.8	83.9	83.9	5.5	5.0	4	74	5	74	4	74	822100	817795	<0.2	1.1	1.1		
						1.0	0.6	262	30.2	7.9	7.9	24.8	24.8	83.9	83.9	5.5	5.0	5	74	5	74	5	74	5	74	<0.2	1.1			
						5.7	0.5	257	29.7	7.9	7.9	27.3	27.3	72.7	72.7	4.8	10.7	4	75	4	75	4	75	4	75	<0.2	1.1			
					5.7	0.6	281	29.7	7.9	7.9	27.3	27.3	72.7	72.7	4.8	10.8	6	76	6	76	6	76	6	76	<0.2	1.2				
					10.4	0.3	268	29.6	7.9	7.9	27.3	27.3	73.1	73.2	4.8	18.3	7	78	7	78	7	78	7	78	<0.2	1.1				
					10.4	0.3	276	29.6	7.9	7.9	27.3	27.3	73.2	73.2	4.8	18.2	6	78	6	78	6	78	6	78	<0.2	1.1				
IM1	Sunny	Moderate	17:20	7.1	Surface	1.0	0.3	359	30.2	8.0	8.0	23.5	23.5	87.0	87.0	5.8	12.6	10	75	10	75	10	75	818332	806464	<0.2	1.4	1.3		
						1.0	0.3	330	30.2	8.0	8.0	23.5	23.5	87.0	87.0	5.8	12.6	10	75	10	75	10	75	10	75	<0.2	1.2			
						3.6	0.3	351	30.3	8.0	8.0	23.7	23.7	87.8	87.8	5.8	18.1	10	77	10	77	10	77	10	77	<0.2	1.2			
					3.6	0.3	323	30.3	8.0	8.0	23.7	23.7	87.8	87.8	5.8	18.5	11	77	11	77	11	77	11	77	<0.2	1.2				
					6.1	0.4	350	30.3	8.0	8.0	23.9	23.9	87.1	87.1	5.8	14.0	12	78	12	78	12	78	12	78	<0.2	1.3				
					6.1	0.4	353	30.3	8.0	8.0	23.8	23.9	87.1	87.1	5.8	14.1	11	78	11	78	11	78	11	78	<0.2	1.4				
IM2	Sunny	Moderate	17:12	7.8	Surface	1.0	0.2	294	30.4	7.9	7.9	21.7	21.7	84.8	84.8	5.7	8.6	7	75	7	75	7	75	818861	806189	<0.2	2.1	1.7		
						1.0	0.2	309	30.4	7.9	7.9	21.7	21.7	84.8	84.8	5.7	8.6	6	76	6	76	6	76	6	76	<0.2	2.0			
						3.9	0.3	3	30.2	7.9	7.9	23.5	23.5	83.1	83.1	5.5	15.0	10	78	10	78	10	78	10	78	<0.2	1.5			
					3.9	0.3	3	30.2	7.9	7.9	23.5	23.5	83.1	83.1	5.5	15.0	9	77	9	77	9	77	9	77	<0.2	1.5				
					6.8	0.3	10	30.1	7.9	7.9	25.4	25.4	82.8	82.8	5.4	19.1	11	80	11	80	11	80	11	80	<0.2	1.7				
					6.8	0.3	10	30.1	7.9	7.9	25.4	25.4	82.8	82.8	5.4	19.1	13	79	13	79	13	79	13	79	<0.2	1.6				
IM3	Sunny	Moderate	17:03	8.2	Surface	1.0	0.2	221	30.4	7.9	7.9	20.5	20.5	83.6	83.6	5.6	9.4	10	74	9	74	10	74	819419	806028	<0.2	1.7	1.8		
						1.0	0.2	229	30.4	7.9	7.9	20.5	20.5	83.6	83.6	5.6	9.4	9	74	9	74	9	74	9	74	<0.2	1.7			
						4.1	0.1	309	30.2	7.9	7.9	23.5	23.5	81.8	81.8	5.4	18.4	11	75	11	75	11	75	11	75	<0.2	1.8			
					4.1	0.1	335	30.2	7.9	7.9	23.5	23.5	81.8	81.8	5.4	18.4	12	76	12	76	12	76	12	76	<0.2	1.8				
					7.2	0.2	17	30.0	7.9	7.9	24.6	24.6	81.6	81.6	5.4	22.5	10	78	10	78	10	78	10	78	<0.2	1.9				
					7.2	0.2	17	30.0	7.9	7.9	24.6	24.6	81.6	81.6	5.4	22.5	11	78	11	78	11	78	11	78	<0.2	1.8				
IM4	Sunny	Moderate	16:55	7.1	Surface	1.0	0.3	309	30.4	7.8	7.8	20.5	20.5	85.5	85.5	5.7	8.7	8	73	7	73	8	73	819553	805048	<0.2	1.8	1.8		
						1.0	0.3	317	30.4	7.8	7.8	20.5	20.5	85.5	85.5	5.7	8.7	7	73	7	73	7	73	7	73	<0.2	1.9			
						3.6	0.4	327	30.4	7.9	7.9	21.0	21.0	85.4	85.4	5.7	14.7	15	75	15	75	15	75	15	75	<0.2	1.8			
					3.6	0.4	349	30.4	7.9	7.9	21.0	21.0	85.4	85.4	5.7	14.7	13	75	13	75	13	75	13	75	<0.2	1.8				
					6.1	0.4	335	30.3	7.9	7.9	22.0	22.0	85.6	85.6	5.7	19.8	15	77	15	77	15	77	15	77	<0.2	1.9				
					6.1	0.4	347	30.3	7.9	7.9	22.0	22.0	85.6	85.6	5.7	19.8	13	77	13	77	13	77	13	77	<0.2	1.8				
IM5	Sunny	Moderate	16:43	6.3	Surface	1.0	0.2	324	30.3	7.8	7.8	21.1	21.1	82.7	82.7	5.5	12.2	10	73	10	73	10	73	820556	804910	<0.2	1.7	1.8		
						1.0	0.2	354	30.3	7.8	7.8	21.1	21.1	82.7	82.7	5.5	12.2	10	74	10	74	10	74	10	74	<0.2	1.6			
						3.2	0.3	352	30.3	7.8	7.8	21.4	21.4	82.9	82.9	5.6	16.9	14	75	14	75	14	75	14	75	<0.2	1.6			
					3.2	0.3	324	30.3	7.8	7.8	21.4	21.4	82.9	82.9	5.6	16.9	13	75	13	75	13	75	13	75	<0.2	1.8				
					5.3	0.3	-	30.1	7.8	7.8	22.2	22.2	82.1	82.1	5.5	29.0	14	78	14	78	14	78	14	78	<0.2	2.0				
					5.3	0.3	-	30.1	7.8	7.8	22.2	22.2	82.1	82.1	5.5	29.0	14	77	14	77	14	77	14	77	<0.2	1.8				
IM6	Sunny	Moderate	16:35	6.2	Surface	1.0	0.4	280	30.2	7.8	7.8	20.9	20.9	77.1	77.1	5.2	9.0	8	73	6	73	8	73	821044	805846	<0.2	1.8	1.8		
						1.0	0.4	307	30.2	7.8	7.8	20.9	20.9	77.1	77.1	5.2	9.0	6	73	6	73	6	73	6	73	<0.2	2.0			
						3.1	0.3	289	30.2	7.8	7.8	20.9	20.9	77.5	77.5	5.2	10.1	18	75	18	75	18	75	18	75	<0.2	1.7			
					3.1	0.3	292	30.2	7.8	7.8	20.9	20.9	77.5	77.5	5.2	10.1	17	75	17	75	17	75	17	75	<0.2	1.8				
					5.2	0.3	294	30.2	7.8	7.8	21.0	21.0	79.1	79.1	5.3	13.4	20	77	20	77	20	77	20	77	<0.2	1.8				
					5.2	0.3	309	30.2	7.8	7.8	21.0	21.0	79.1	79.1	5.3	13.4	20	77	20	77	20	77	20	77	<0.2	1.8				

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

Water Quality Monitoring

Water Quality Monitoring Results on 03 October 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	Value	DA	Value	DA	Value	DA
IM9	Fine	Moderate	17:00	6.7	Surface	1.0	0.2	227	30.8	7.7	7.7	18.2	18.2	82.5	82.5	5.6	6.8	8.0	9	74	74	74	74	822078	808822	<0.2	<0.2	2.2	2.4							
						1.0	0.2	239	30.8	7.7	7.7	18.2	18.2	82.5	82.5	5.6	6.8	8.0	9	74	74	74	74	74	74	<0.2	<0.2	2.7	2.4							
					Middle	3.4	0.2	284	30.6	7.8	7.8	20.2	20.2	81.7	81.7	5.5	8.2	14.5	8	76	76	76	76	76	76	<0.2	<0.2	2.1	2.4							
						3.4	0.2	293	30.6	7.8	7.8	20.2	20.2	81.7	81.7	5.5	8.2	14.5	8	76	76	76	76	76	76	<0.2	<0.2	2.1	2.4							
					Bottom	5.7	0.2	303	30.4	7.8	7.8	21.4	21.4	81.9	81.9	5.5	8.8	14.5	8	77	77	77	77	77	77	<0.2	<0.2	2.6	2.4							
						5.7	0.3	328	30.4	7.8	7.8	21.4	21.4	81.9	81.9	5.5	8.8	14.5	8	78	78	78	78	78	78	<0.2	<0.2	2.6	2.4							
IM10	Fine	Moderate	17:09	7.7	Surface	1.0	0.3	278	30.5	7.8	7.8	21.5	21.5	83.6	83.6	5.6	7.0	14.5	8	73	73	73	73	822242	809843	<0.2	<0.2	2.2	2.0							
						1.0	0.3	295	30.5	7.8	7.8	21.5	21.5	83.6	83.6	5.6	7.1	14.5	8	74	74	74	74	74	74	<0.2	<0.2	2.1	2.0							
					Middle	3.9	0.3	304	30.3	7.8	7.8	22.5	22.5	82.9	82.9	5.5	13.3	14.5	8	76	76	76	76	76	76	<0.2	<0.2	1.8	2.0							
						3.9	0.3	322	30.3	7.8	7.8	22.5	22.5	82.8	82.8	5.5	13.3	14.5	8	76	76	76	76	76	76	<0.2	<0.2	1.6	2.0							
					Bottom	6.7	0.3	327	30.3	7.8	7.8	22.6	22.6	82.8	82.8	5.5	22.9	14.5	8	78	78	78	78	78	78	<0.2	<0.2	2.1	2.0							
						6.7	0.3	345	30.3	7.8	7.8	22.6	22.6	82.8	82.8	5.5	23.2	14.5	8	78	78	78	78	78	78	<0.2	<0.2	1.9	2.0							
IM11	Fine	Moderate	17:24	7.5	Surface	1.0	0.3	304	30.8	7.9	7.9	21.0	21.0	90.7	90.7	6.0	6.7	15.3	5	74	74	74	74	821513	810543	<0.2	<0.2	1.9	1.9							
						1.0	0.3	320	30.8	7.9	7.9	21.0	21.0	90.6	90.6	6.0	6.9	15.3	5	74	74	74	74	74	74	<0.2	<0.2	1.8	1.9							
					Middle	3.8	0.4	301	30.4	7.9	7.9	22.9	22.9	87.9	87.9	5.8	13.5	15.3	5	75	75	75	75	75	75	<0.2	<0.2	1.9	1.9							
						3.8	0.4	316	30.4	7.9	7.9	22.9	22.9	87.9	87.9	5.8	13.5	15.3	5	76	76	76	76	76	76	<0.2	<0.2	1.8	1.9							
					Bottom	6.5	0.4	296	30.3	7.9	7.9	23.2	23.2	84.4	84.4	5.6	25.2	15.3	5	78	78	78	78	78	78	<0.2	<0.2	2.1	1.9							
						6.5	0.4	299	30.3	7.9	7.9	23.2	23.2	84.4	84.4	5.6	25.8	15.3	4	78	78	78	78	78	78	<0.2	<0.2	2.0	1.9							
IM12	Fine	Moderate	17:34	8.3	Surface	1.0	0.6	284	30.8	8.0	8.0	22.7	22.7	110.2	110.2	7.3	9.8	18.0	4	74	74	74	74	821161	811517	<0.2	<0.2	1.7	1.5							
						1.0	0.6	294	30.8	8.0	8.0	22.7	22.7	110.1	110.1	7.3	10.1	18.0	5	74	74	74	74	74	74	<0.2	<0.2	1.6	1.5							
					Middle	4.2	0.7	281	30.4	8.0	8.0	23.7	23.7	99.0	99.0	6.5	15.4	18.0	4	76	76	76	76	76	76	<0.2	<0.2	1.4	1.5							
						4.2	0.7	306	30.4	8.0	8.0	23.7	23.7	98.9	98.9	6.5	15.3	18.0	4	77	77	77	77	77	77	<0.2	<0.2	1.4	1.5							
					Bottom	7.3	0.5	281	30.2	7.9	7.9	24.0	24.0	88.0	88.0	5.8	28.5	18.0	4	78	78	78	78	78	78	<0.2	<0.2	1.5	1.5							
						7.3	0.6	293	30.2	7.9	7.9	24.0	24.0	88.0	88.0	5.8	28.9	18.0	5	78	78	78	78	78	78	<0.2	<0.2	1.5	1.5							
SR2	Fine	Moderate	18:02	4.6	Surface	1.0	0.4	312	30.3	7.9	7.9	23.8	23.8	85.8	85.8	5.7	15.4	19.1	9	74	74	74	74	821465	814180	<0.2	<0.2	1.6	1.4							
						1.0	0.4	342	30.3	7.9	7.9	23.8	23.8	85.8	85.8	5.7	15.4	19.1	10	74	74	74	74	74	74	<0.2	<0.2	1.5	1.4							
					Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
					Bottom	3.6	0.3	313	30.2	7.9	7.9	24.1	24.1	84.7	84.7	5.6	22.9	19.1	9	76	76	76	76	76	76	76	<0.2	<0.2	1.3	1.4						
						3.6	0.3	314	30.2	7.9	7.9	24.1	24.1	84.7	84.7	5.6	22.7	19.1	8	76	76	76	76	76	76	76	<0.2	<0.2	1.3	1.4						
SR3	Fine	Moderate	16:47	8.2	Surface	1.0	0.4	195	30.5	7.7	7.7	19.8	19.8	77.7	77.7	5.2	6.4	8.5	5	-	-	-	-	822148	807569	-	-	-	-							
						1.0	0.4	203	30.5	7.7	7.7	19.8	19.8	77.7	77.7	5.2	6.4	8.5	5	-	-	-	-	-	-	-	-	-	-	-	-					
					Middle	4.1	0.2	232	30.4	7.8	7.8	22.2	22.2	77.6	77.6	5.2	8.6	8.5	4	-	-	-	-	-	-	-	-	-	-	-	-	-				
						4.1	0.2	249	30.4	7.8	7.8	22.2	22.2	77.6	77.6	5.2	8.6	8.5	4	-	-	-	-	-	-	-	-	-	-	-	-	-				
					Bottom	7.2	0.2	235	30.3	7.8	7.8	22.4	22.4	78.1	78.1	5.2	10.4	8.5	4	-	-	-	-	-	-	-	-	-	-	-	-	-				
						7.2	0.2	245	30.3	7.8	7.8	22.4	22.4	78.1	78.1	5.2	10.5	8.5	6	-	-	-	-	-	-	-	-	-	-	-	-	-				
SR4A	Cloudy	Calm	18:02	8.2	Surface	1.0	0.1	181	30.3	8.0	8.0	24.0	24.0	106.9	106.9	7.1	18.9	21.3	14	-	-	-	-	817187	807795	-	-	-	-							
						1.0	0.1	184	30.3	8.0	8.0	24.0	24.0	106.9	106.9	7.1	18.9	21.3	14	-	-	-	-	-	-	-	-	-	-	-						
					Middle	4.1	0.1	231	30.3	8.0	8.0	24.0	24.0	104.7	104.7	6.9	20.3	21.3	19	-	-	-	-	-	-	-	-	-	-	-	-					
						4.1	0.1	234	30.3	8.0	8.0	24.0	24.0	104.7	104.7	6.9	20.4	21.3	21	-	-	-	-	-	-	-	-	-	-	-						
					Bottom	7.2	0.0	13	30.3	8.0	8.0	24.1	24.1	102.6	102.6	6.8	24.8	21.3	19	-	-	-	-	-	-	-	-	-	-	-						
						7.2	0.0	14	30.3	8.0	8.0	24.1	24.1	102.6	102.6	6.8	24.7	21.3	20	-	-	-	-	-	-	-	-	-	-							
SR5A	Cloudy	Calm	18:19	4.8	Surface	1.0	0.2	295	30.4	8.0	8.0	23.8	23.8	107.0	107.0	7.1	17.4	17.7	12	-	-	-	-	816576	810687	-	-	-	-							
						1.0	0.3	311	30.4	8.0	8.0	23.8	23.8	107.0	107.0	7.1	17.4	17.7	13	-	-	-	-	-	-	-	-	-								
					Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
					Bottom	3.8	0.2	310	30.4	8.0	8.0	23.9	23.9	105.9	105.9	7.0	18.0	17.7	14	-	-	-	-	-	-	-	-	-	-							
						3.8	0.2	322	30.4	8.0	8.0	23.9	23.9	105.9	105.9	7.0	18.0	17.7	15	-	-	-	-	-	-	-	-	-								
SR6	Cloudy	Calm	18:42	4.6	Surface	1.0	0.0	310	30.3	8.0	8.0	22.9	22.9	98.2	98.2	6.5	18.7	20.1	16	-	-	-	-	817880	814654	-	-	-	-							
						1.0	0.0	314	30.3	8.0	8.0	22.9	22.9	98.2	98.2	6.5	18.7	20.1	16	-	-	-	-	-	-	-	-									



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

Water Quality Monitoring

Water Quality Monitoring Results on 05 October 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	DA	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA	Value	DA	Value	DA
C1	Sunny	Moderate	12:46	9.1	Surface	1.0	0.7	212	29.9	29.9	8.0	8.0	28.7	28.7	94.7	94.7	6.1	6.1	6.9	6.9	8	7	92	92	815614	804229	<0.2	<0.2	0.4	0.5						
						1.0	0.7	212	29.9	29.9	8.0	8.0	28.7	28.7	94.7	94.7	6.1	6.1	6.9	6.9	8	7	92	92	<0.2	<0.2	0.5	0.5								
					Middle	4.6	1.0	210	29.7	29.7	8.0	8.0	28.8	28.8	91.9	91.9	6.0	6.0	10.8	10.8	6	6	93	93	<0.2	<0.2	0.6	0.6								
						4.6	1.1	210	29.7	29.7	8.0	8.0	28.8	28.8	91.8	91.8	6.0	6.0	11.0	11.0	6	6	94	94	<0.2	<0.2	0.6	0.6								
					Bottom	8.1	0.6	250	29.6	29.6	8.0	8.0	29.5	29.5	87.0	87.0	5.6	5.6	26.0	26.0	6	6	94	94	<0.2	<0.2	0.6	0.6								
						8.1	0.6	250	29.6	29.6	8.0	8.0	29.5	29.5	87.1	87.1	5.6	5.6	25.5	25.5	6	6	94	94	<0.2	<0.2	0.5	0.5								
C2	Sunny	Rough	13:59	11.2	Surface	1.0	1.7	178	30.3	30.3	7.8	7.8	22.3	22.3	85.3	85.3	5.7	5.7	8.9	8.9	5	7	91	91	825672	806931	<0.2	<0.2	1.5	1.5						
						1.0	1.7	186	30.3	30.3	7.8	7.8	22.3	22.3	85.3	85.3	5.7	5.7	8.9	8.9	5	7	92	92	<0.2	<0.2	1.7	1.7								
					Middle	5.6	1.3	172	30.3	30.3	7.8	7.8	22.7	22.7	81.8	81.8	5.4	5.4	32.5	32.5	14	14	94	94	<0.2	<0.2	1.6	1.6								
						5.6	1.3	172	30.3	30.3	7.8	7.8	22.7	22.7	81.8	81.8	5.4	5.4	32.5	32.5	13	13	95	95	<0.2	<0.2	1.4	1.4								
					Bottom	10.2	0.5	174	30.0	30.0	7.8	7.8	25.0	25.0	81.5	81.5	5.4	5.4	53.8	53.8	46	46	97	97	<0.2	<0.2	1.4	1.4								
						10.2	0.5	180	30.0	30.0	7.8	7.8	25.0	25.0	81.5	81.5	5.4	5.4	53.8	53.8	47	47	96	96	<0.2	<0.2	1.4	1.4								
C3	Sunny	Moderate	11:48	12.9	Surface	1.0	0.4	109	30.1	30.1	7.9	7.9	25.3	25.3	79.7	79.7	4.8	4.8	8.0	8.0	6	6	94	94	822092	817798	<0.2	<0.2	1.0	0.9						
						1.0	0.5	116	30.1	29.7	7.9	7.9	25.3	25.3	79.7	79.7	4.8	4.8	8.0	8.0	6	6	94	94	<0.2	<0.2	1.0	1.0								
					Middle	6.5	0.4	19	29.7	29.7	7.9	7.9	27.2	27.2	76.6	76.6	4.6	4.6	8.3	8.3	6	6	96	96	<0.2	<0.2	0.9	0.9								
						6.5	0.4	20	29.7	29.7	7.9	7.9	27.2	27.2	76.6	76.6	4.6	4.6	8.3	8.3	5	5	96	96	<0.2	<0.2	1.0	1.0								
					Bottom	11.9	0.3	47	29.6	29.6	7.9	7.9	28.0	28.0	71.2	71.2	4.3	4.3	14.1	14.1	8	8	98	98	<0.2	<0.2	0.7	0.7								
						11.9	0.3	48	29.6	29.6	7.9	7.9	28.0	28.0	71.2	71.2	4.3	4.3	14.1	14.1	9	9	99	99	<0.2	<0.2	0.8	0.8								
IM1	Sunny	Moderate	13:07	7.4	Surface	1.0	0.9	196	29.8	29.8	8.0	8.0	28.1	28.1	88.7	88.7	5.8	5.8	9.6	9.6	7	7	92	92	818337	806445	<0.2	<0.2	0.6	0.6						
						1.0	1.0	211	29.8	29.6	8.0	8.0	28.1	28.1	88.6	88.6	5.8	5.8	9.6	9.6	7	7	92	92	<0.2	<0.2	0.6	0.6								
					Middle	3.7	0.7	195	29.6	29.6	8.0	8.0	29.2	29.2	86.2	86.2	5.6	5.6	14.2	14.2	6	6	94	94	<0.2	<0.2	0.7	0.7								
						3.7	0.7	199	29.6	29.6	8.0	8.0	29.2	29.2	86.2	86.2	5.6	5.6	14.2	14.2	7	7	95	95	<0.2	<0.2	0.7	0.7								
					Bottom	6.4	0.3	268	29.6	29.6	8.0	8.0	29.3	29.3	86.5	86.5	5.6	5.6	21.3	21.3	14	14	96	96	<0.2	<0.2	0.5	0.5								
						6.4	0.3	288	29.6	29.6	8.0	8.0	29.3	29.3	86.5	86.5	5.6	5.6	21.2	21.2	13	13	96	96	<0.2	<0.2	0.4	0.4								
IM2	Sunny	Moderate	13:13	8.3	Surface	1.0	1.0	193	30.1	30.1	8.0	8.0	25.4	25.4	90.2	90.1	5.9	5.9	7.7	7.9	5	4	92	92	818835	806197	<0.2	<0.2	1.2	1.1						
						1.0	1.0	210	30.1	29.7	8.0	8.0	25.4	25.4	90.0	90.0	5.9	5.9	7.9	7.9	4	4	92	92	<0.2	<0.2	1.1	1.1								
					Middle	4.2	0.9	200	29.7	29.7	8.0	8.0	28.5	28.5	87.8	87.8	5.7	5.7	12.1	12.2	5	5	94	94	<0.2	<0.2	1.2	1.2								
						4.2	1.0	219	29.7	29.7	8.0	8.0	28.5	28.5	87.8	87.8	5.7	5.7	12.2	12.2	5	5	94	94	<0.2	<0.2	1.1	1.1								
					Bottom	7.3	0.2	165	29.7	29.7	8.0	8.0	29.0	29.0	86.7	86.7	5.6	5.6	21.6	21.6	14	14	97	97	<0.2	<0.2	0.5	0.5								
						7.3	0.2	165	29.7	29.7	8.0	8.0	29.0	29.0	86.7	86.7	5.6	5.6	21.6	21.6	16	16	97	97	<0.2	<0.2	0.6	0.6								
IM3	Fine	Moderate	13:22	8.2	Surface	1.0	0.9	203	30.0	30.0	8.0	8.0	26.3	26.3	88.2	88.2	5.8	5.8	9.8	9.8	7	7	92	92	819398	806008	<0.2	<0.2	1.2	1.0						
						1.0	0.9	218	30.0	29.8	8.0	8.0	26.3	26.3	88.2	88.2	5.8	5.8	9.8	9.8	7	7	92	92	<0.2	<0.2	1.0	1.0								
					Middle	4.1	1.0	214	29.8	29.8	8.0	8.0	27.9	27.9	87.3	87.3	5.7	5.7	14.6	14.6	8	8	94	94	<0.2	<0.2	0.9	0.9								
						4.1	1.0	220	29.8	29.7	8.0	8.0	27.9	27.9	87.3	87.3	5.7	5.7	14.6	14.6	9	9	94	94	<0.2	<0.2	1.2	1.2								
					Bottom	7.2	0.5	211	29.7	29.7	8.0	8.0	28.7	28.7	87.0	87.0	5.6	5.6	26.5	26.5	18	18	96	96	<0.2	<0.2	0.6	0.6								
						7.2	0.5	212	29.7	29.7	8.0	8.0	28.7	28.7	86.9	86.9	5.6	5.6	26.3	26.3	19	19	96	96	<0.2	<0.2	0.4	0.4								
IM4	Fine	Moderate	13:28	7.8	Surface	1.0	0.8	181	29.9	29.9	8.0	8.0	27.0	27.0	88.9	88.9	5.8	5.8	11.4	11.4	12	12	92	92	819583	805056	<0.2	<0.2	0.7	0.7						
						1.0	0.9	182	29.9	29.8	8.0	8.0	27.0	27.0	88.9	88.9	5.8	5.8	11.4	11.4	12	12	91	91	<0.2	<0.2	0.7	0.7								
					Middle	3.9	0.6	188	29.8	29.8	8.0	8.0	27.8	27.8	87.4	87.4	5.7	5.7	16.4	16.4	11	11	94	94	<0.2	<0.2	0.6	0.6								
						3.9	0.6	201	29.8	29.8	8.0	8.0	27.8	27.8	87.4	87.4	5.7	5.7	16.4	16.4	11	11	94	94	<0.2	<0.2	0.7	0.7								
					Bottom	6.8	0.4	203	29.6	29.6	8.0	8.0	28.5	28.5	85.2	85.2	5.5	5.5	26.5	26.5	12	12	96	96	<0.2	<0.2	0.7	0.7								
						6.8	0.4	208	29.6	29.6	8.0	8.0	28.5	28.5	85.2	85.2	5.5	5.5	26.5	26.5	11	11	97	97	<0.2	<0.2	0.7	0.7								
IM5	Fine	Moderate	13:41	6.9	Surface	1.0	0.9	198	29.9	29.9	8.0	8.0	25.7	25.7	87.6	87.6	5.8	5.8	10.6	10.6	5	6	93	93	820557	804920	<0.2	<0.2	1.0	1.0						
						1.0	0.9	213	29.9	29.6	8.0	8.0	25.7	25.7	87.6	87.6	5.8	5.8	10.6	10.6	6	6	92	92	<0.2	<0.2	1.0	1.0								
					Middle	3.5	1.0	208	29.6	29.6	8.0	8.0	28.0	28.0	89.7	89.7	5.9	5.9	15.0	15.0	6	6	95	95	<0.2	<0.2	0.9	0.9								
						3.5	1.0	219	29.6	29.6	8.0	8.0	28.0	28.0	89.7	89.7	5.9	5.9	15.0	15.0	6	6	95	95	<0.2	<0.2	1.0	1.0								
					Bottom	5.9	0.7	215	29.6	29.6	8.0	8.0	28.3	28.3	86.2	86.2	5.6	5.6	30.2	30.2	12	12	98	98	<0.2	<0.2	0.9	0.9								
						5.9	0.7	221	29.6	29.6	8.0	8.0	28.3	28.3	86.3	86.3	5.6	5.6	30.2	30.2	12	12	98	98	<0.2	<0.2	0.8	0.8								
IM6	Fine	Moderate	13:54	6.6	Surface																															

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

Water Quality Monitoring

Water Quality Monitoring Results on 05 October 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	DA	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA	Value	DA	Value	DA
IM9	Sunny	Moderate	13:17	7.3	Surface	1.0	0.9	162	30.2	7.9	7.9	23.6	23.6	83.2	83.2	5.5	5.5	7.9	3	92	94	822078	808825	<0.2	<0.2	1.3	1.3									
						1.0	0.9	163	30.2	7.9	7.9	23.6	23.6	83.2	83.2	5.5	5.5	7.9	3	91	94	<0.2	<0.2	1.1	1.1											
					Middle	3.7	0.6	161	30.0	30.0	7.9	7.9	25.8	25.8	84.1	84.1	5.5	5.5	14.1	5	94	94	<0.2	<0.2	1.1	1.1										
						3.7	0.6	175	30.0	30.0	7.9	7.9	25.8	25.8	84.1	84.1	5.5	5.5	14.1	6	94	94	<0.2	<0.2	1.1	1.1										
					Bottom	6.3	0.3	162	29.9	29.9	8.0	8.0	27.6	27.6	86.1	86.1	5.6	5.6	17.7	14	96	96	<0.2	<0.2	0.7	0.7										
						6.3	0.3	162	29.9	29.9	8.0	8.0	27.6	27.6	86.1	86.1	5.6	5.6	17.7	13	96	96	<0.2	<0.2	0.7	0.7										
IM10	Sunny	Moderate	13:09	7.6	Surface	1.0	1.0	137	30.0	7.9	7.9	23.4	23.4	83.3	83.3	5.5	5.5	4.3	5	91	94	822225	809838	<0.2	<0.2	1.2	1.1									
						1.0	1.0	138	30.0	7.9	7.9	23.4	23.4	83.3	83.3	5.5	5.5	4.3	4	91	94	<0.2	<0.2	1.1	1.1											
					Middle	3.8	0.7	126	30.0	30.0	7.9	7.9	25.8	25.8	83.1	83.1	5.5	5.5	14.8	8	94	94	<0.2	<0.2	1.2	1.1										
						3.8	0.7	133	30.0	30.0	7.9	7.9	25.8	25.8	83.1	83.1	5.5	5.5	14.8	10	93	94	<0.2	<0.2	1.1	1.1										
					Bottom	6.6	0.5	113	29.9	29.9	8.0	8.0	26.9	26.9	84.5	84.5	5.5	5.5	13.0	17	96	96	<0.2	<0.2	0.8	0.8										
						6.6	0.5	123	29.9	29.9	8.0	8.0	26.9	26.9	84.5	84.5	5.5	5.5	13.0	18	96	96	<0.2	<0.2	0.8	0.8										
IM11	Sunny	Moderate	12:55	8.4	Surface	1.0	0.7	121	30.3	7.9	7.9	23.7	23.7	87.4	87.4	5.8	5.8	5.7	5	92	94	821502	810526	<0.2	<0.2	1.2	1.0									
						1.0	0.7	130	30.3	7.9	7.9	23.7	23.7	87.4	87.4	5.8	5.8	5.7	4	92	94	<0.2	<0.2	1.1	1.1											
					Middle	4.2	0.6	119	30.1	30.1	8.0	8.0	25.4	25.4	87.2	87.2	5.7	5.7	19.8	14	94	94	<0.2	<0.2	1.1	1.1										
						4.2	0.6	119	30.1	30.1	8.0	8.0	25.4	25.4	87.2	87.2	5.7	5.7	19.8	13	95	96	<0.2	<0.2	1.2	0.7										
					Bottom	7.4	0.5	96	30.0	30.0	8.0	8.0	26.6	26.6	86.9	86.9	5.7	5.7	32.6	47	96	96	<0.2	<0.2	0.8	0.8										
						7.4	0.5	99	30.0	30.0	8.0	8.0	26.6	26.6	86.9	86.9	5.7	5.7	32.6	51	97	97	<0.2	<0.2	0.8	0.8										
IM12	Sunny	Moderate	12:45	9.3	Surface	1.0	0.8	106	30.2	7.9	7.9	24.6	24.6	89.1	89.1	5.9	5.9	8.0	10	92	94	821165	811537	<0.2	<0.2	1.2	1.1									
						1.0	0.8	108	30.2	7.9	7.9	24.6	24.6	89.1	89.1	5.9	5.9	8.0	10	93	94	<0.2	<0.2	1.1	1.1											
					Middle	4.7	0.7	98	30.2	30.2	7.9	7.9	25.0	25.0	88.5	88.5	5.8	5.8	14.3	9	94	94	<0.2	<0.2	1.2	1.1										
						4.7	0.7	101	30.2	30.2	7.9	7.9	25.0	25.0	88.5	88.5	5.8	5.8	14.3	11	94	94	<0.2	<0.2	1.1	1.1										
					Bottom	8.3	0.3	75	30.0	30.0	8.0	8.0	26.6	26.6	89.1	89.1	5.8	5.8	37.9	14	96	96	<0.2	<0.2	1.0	1.0										
						8.3	0.3	81	30.0	30.0	8.0	8.0	26.6	26.6	89.1	89.1	5.8	5.8	37.9	16	96	96	<0.2	<0.2	1.0	1.0										
SR2	Sunny	Moderate	12:16	5.1	Surface	1.0	0.7	75	30.0	7.9	7.9	24.9	24.9	79.6	79.6	5.3	5.3	15.7	7	92	94	821452	814161	<0.2	<0.2	1.0	1.1									
						1.0	0.7	77	30.0	7.9	7.9	24.9	24.9	79.6	79.6	5.3	5.3	15.7	7	92	94	<0.2	<0.2	1.1	1.1											
					Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
					Bottom	4.1	0.4	45	29.8	29.8	7.9	7.9	25.7	25.7	77.4	77.4	5.1	5.1	29.4	20	96	96	<0.2	<0.2	1.1	1.1										
						4.1	0.4	46	29.8	29.8	7.9	7.9	25.7	25.7	77.4	77.4	5.1	5.1	29.4	21	97	97	<0.2	<0.2	1.1	1.1										
SR3	Sunny	Moderate	13:31	8.8	Surface	1.0	1.1	176	30.2	7.9	7.9	23.3	23.3	85.2	85.2	5.7	5.7	7.1	4	-	-	822150	807565	-	-	-	-									
						1.0	1.2	189	30.2	7.9	7.9	23.3	23.3	85.2	85.2	5.7	5.7	7.1	5	-	-	-	-	-	-	-	-									
					Middle	4.4	0.8	196	30.0	30.0	7.9	7.9	25.4	25.4	85.3	85.3	5.6	5.6	14.7	12	-	-	-	-	-	-	-	-								
						4.4	0.8	210	30.0	30.0	7.9	7.9	25.4	25.4	85.3	85.3	5.6	5.6	14.7	12	-	-	-	-	-	-	-	-								
					Bottom	7.8	0.5	217	29.9	29.9	8.0	8.0	28.2	28.2	86.1	86.1	5.6	5.6	17.2	28	-	-	-	-	-	-	-	-								
						7.8	0.5	221	29.9	29.9	8.0	8.0	28.2	28.2	86.1	86.1	5.6	5.6	17.0	30	-	-	-	-	-	-	-	-								
SR4A	Sunny	Moderate	12:27	10.1	Surface	1.0	0.2	51	29.8	29.8	8.0	8.0	28.5	28.5	87.8	87.8	5.7	5.7	13.4	12	-	-	817203	807807	-	-	-	-								
						1.0	0.2	54	29.8	29.8	8.0	8.0	28.5	28.5	87.8	87.8	5.7	5.7	13.5	13	-	-	-	-	-	-										
					Middle	5.1	0.2	39	29.6	29.6	8.0	8.0	28.9	28.9	86.5	86.5	5.6	5.6	16.2	16	-	-	-	-	-	-	-									
						5.1	0.2	40	29.6	29.6	8.0	8.0	28.9	28.9	86.5	86.5	5.6	5.6	16.3	16	-	-	-	-	-	-	-									
					Bottom	9.1	0.1	52	29.6	29.6	8.0	8.0	29.2	29.2	85.7	85.7	5.6	5.6	22.5	18	-	-	-	-	-	-	-									
						9.1	0.1	53	29.6	29.6	8.0	8.0	29.2	29.2	85.7	85.7	5.6	5.6	22.4	18	-	-	-	-	-	-	-									
SR5A	Sunny	Moderate	12:11	4.5	Surface	1.0	0.1	5	30.0	30.0	7.9	7.9	24.7	24.7	87.3	87.3	5.8	5.8	9.7	8	-	-	816581	810712	-	-	-	-								
						1.0	0.1	5	30.0	30.0	7.9	7.9	24.7	24.7	87.2	87.2	5.8	5.8	9.7	9	-	-	-	-	-	-										
					Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-								
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-								
					Bottom	3.5	0.0	78	29.7	29.7	8.0	8.0	26.0	26.0	85.4	85.4	5.6	5.6	15.6	23	-	-	-	-	-	-	-									
						3.5	0.0	79	29.7	29.7	8.0	8.0	26.0	26.0	85.4	85.4	5.6	5.6	15.6	23	-	-	-	-	-	-	-									
SR6	Sunny	Moderate	11:47	5.1	Surface	1.0	0.2	81	29.7	29.7	7.9	7.9	24.2	24.2	87.3	87.3	5.8	5.8	8.6	7	-	-	817899	814655	-	-	-	-								
						1.0	0.2	81	29.7	29.7	7.9	7.9	24.2	24.2	87.2	87.2	5.8	5.8	8.7	8	-	-	-	-	-	-										
					Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-									
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-									
					Bottom	4.1	0.1	76	29.7	29.7	7.9	7.9	24.7	24.7	83.1	83.1	5.5	5.5	15.6	9	-	-	-	-	-	-	-									
						4.1	0.1	76	29.7	29.7	7.9	7.9	24.7	24.7	83.1	83.1	5.5	5.5	15.6	7	-	-	-	-	-	-	-									
SR7	Sunny	Moderate	10:58	16.1	Surface	1.0	0.4	40	29.6	29.6	7.8	7.8	27.9	27.9	81.2	81.2	5.3	5.3	5.5	10	-	-	823640	823738	-	-	-	-								
						1.0	0.4																													

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

Water Quality Monitoring

Water Quality Monitoring Results on 05 October 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	Value	DA
									Value	DA	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA
C1	Fine	Moderate	18:13	8.6	Surface	1.0	0.9	209	29.8	8.0	8.0	25.3	25.4	85.9	85.9	5.7	5.7	10.4	10	91	94	815612	804233	<0.2	<0.2	1.0	1.0					
						1.0	1.0	212	29.8	29.8	8.0	8.0	25.4	25.4	85.9	85.9	5.7	5.7	10.5	11	91	94	<0.2	<0.2	1.0	1.0						
					Middle	4.3	0.8	214	29.8	29.8	8.0	8.0	27.7	27.7	86.0	86.0	5.6	5.6	14.6	9	94	93	<0.2	<0.2	1.1	1.1						
						4.3	0.8	229	29.8	29.8	8.0	8.0	27.7	27.7	86.0	86.0	5.6	5.6	14.7	10	93	96	<0.2	<0.2	1.0	1.0						
					Bottom	7.6	0.5	210	29.7	29.7	8.0	8.0	28.5	28.5	87.4	87.4	5.7	5.7	28.6	10	96	96	<0.2	<0.2	1.1	1.1						
						7.6	0.6	215	29.7	29.7	8.0	8.0	28.5	28.5	87.5	87.5	5.7	5.7	28.6	11	96	96	<0.2	<0.2	1.1	1.1						
C2	Sunny	Rough	17:13	16.3	Surface	1.0	1.6	177	30.5	7.8	7.8	20.6	20.6	77.9	77.9	5.2	5.2	12.3	6	93	95	825691	806960	<0.2	<0.2	1.4	1.4					
						1.0	1.7	184	30.5	30.5	7.8	7.8	20.6	20.6	77.9	77.9	5.2	5.2	12.3	6	92	95	<0.2	<0.2	2.2	2.2						
					Middle	8.2	1.2	172	30.1	30.1	7.8	7.8	23.1	23.1	73.6	73.6	4.9	4.9	20.3	16	95	94	<0.2	<0.2	1.6	1.6						
						8.2	1.3	176	30.1	30.1	7.8	7.8	23.1	23.1	73.6	73.6	4.9	4.9	20.3	15	94	96	<0.2	<0.2	1.1	1.1						
					Bottom	15.3	0.5	172	30.1	30.1	7.8	7.8	24.2	24.2	74.1	74.1	4.9	4.9	33.0	26	96	97	<0.2	<0.2	1.1	1.1						
						15.3	0.5	178	30.1	30.1	7.8	7.8	24.2	24.2	74.1	74.1	4.9	4.9	33.0	27	97	97	<0.2	<0.2	1.2	1.2						
C3	Cloudy	Moderate	19:18	12.6	Surface	1.0	0.5	295	29.9	7.9	7.9	25.8	25.8	75.4	75.4	5.0	5.0	8.7	4	94	94	822097	817793	<0.2	<0.2	0.7	0.7					
						1.0	0.5	313	29.9	29.9	7.9	7.9	25.8	25.8	75.4	75.4	5.0	5.0	8.7	6	94	96	<0.2	<0.2	0.9	0.9						
					Middle	6.3	0.4	267	29.7	29.7	7.9	7.9	27.3	27.3	73.4	73.4	4.8	4.8	13.6	6	96	96	<0.2	<0.2	0.9	0.9						
						6.3	0.4	268	29.7	29.7	7.9	7.9	27.3	27.3	73.4	73.4	4.8	4.8	13.6	7	96	98	<0.2	<0.2	0.7	0.7						
					Bottom	11.6	0.2	297	29.7	29.7	7.9	7.9	27.3	27.3	77.0	77.0	5.0	5.0	19.6	17	98	99	<0.2	<0.2	0.5	0.5						
						11.6	0.2	300	29.7	29.7	7.9	7.9	27.3	27.3	77.0	77.0	5.0	5.0	19.6	18	99	99	<0.2	<0.2	0.6	0.6						
IM1	Fine	Moderate	17:54	7.2	Surface	1.0	1.0	181	29.8	8.0	8.0	28.0	28.0	88.7	88.7	5.8	5.8	10.8	11	91	93	818345	806475	<0.2	<0.2	0.5	0.5					
						1.0	1.1	182	29.8	29.8	8.0	8.0	28.0	28.0	88.7	88.7	5.8	5.8	10.8	12	91	94	<0.2	<0.2	0.5	0.5						
					Middle	3.6	0.9	181	29.8	29.8	8.0	8.0	28.5	28.5	86.7	86.7	5.6	5.6	14.5	10	94	93	<0.2	<0.2	0.8	0.8						
						3.6	1.0	190	29.8	29.8	8.0	8.0	28.5	28.5	86.7	86.7	5.6	5.6	14.6	11	94	96	<0.2	<0.2	0.8	0.8						
					Bottom	6.2	0.5	190	29.8	29.8	8.0	8.0	28.5	28.5	87.2	87.2	5.7	5.7	23.1	11	96	95	<0.2	<0.2	0.6	0.6						
						6.2	0.6	205	29.8	29.8	8.0	8.0	28.5	28.5	87.3	87.3	5.7	5.7	23.0	12	95	95	<0.2	<0.2	0.7	0.7						
IM2	Fine	Moderate	17:48	8.0	Surface	1.0	1.2	215	29.8	7.9	7.9	25.4	25.4	85.3	85.3	5.6	5.6	14.0	14	91	94	818852	806182	<0.2	<0.2	1.4	1.4					
						1.0	1.2	234	29.8	29.8	7.9	7.9	25.4	25.4	85.3	85.3	5.6	5.6	14.3	13	91	94	<0.2	<0.2	1.3	1.3						
					Middle	4.0	1.2	218	29.8	29.8	8.0	8.0	26.6	26.6	85.3	85.4	5.6	5.6	18.7	14	94	94	<0.2	<0.2	1.1	1.1						
						4.0	1.2	235	29.8	29.8	8.0	8.0	26.6	26.6	85.4	85.4	5.6	5.6	18.8	13	94	96	<0.2	<0.2	1.2	1.2						
					Bottom	7.0	0.9	213	29.7	29.7	8.0	8.0	28.3	28.3	85.3	85.4	5.6	5.6	28.7	16	96	96	<0.2	<0.2	1.3	1.3						
						7.0	1.0	218	29.7	29.7	8.0	8.0	28.3	28.3	85.4	85.4	5.6	5.6	28.7	15	96	96	<0.2	<0.2	1.1	1.1						
IM3	Fine	Moderate	17:41	8.2	Surface	1.0	1.1	211	30.0	7.9	7.9	23.1	23.1	83.1	83.1	5.5	5.5	13.6	16	91	93	819429	806027	<0.2	<0.2	1.6	1.6					
						1.0	1.2	217	30.0	30.0	7.9	7.9	23.1	23.1	83.1	83.1	5.5	5.5	13.7	18	91	93	<0.2	<0.2	1.4	1.4						
					Middle	4.1	1.1	210	29.9	29.9	7.9	7.9	24.8	24.8	84.0	84.0	5.6	5.6	16.2	17	91	93	<0.2	<0.2	1.5	1.5						
						4.1	1.1	210	29.9	29.9	7.9	7.9	24.8	24.8	84.0	84.0	5.6	5.6	16.3	16	93	96	<0.2	<0.2	1.7	1.7						
					Bottom	7.2	0.8	215	29.8	29.8	8.0	8.0	27.3	27.3	85.6	85.6	5.6	5.6	25.1	16	96	95	<0.2	<0.2	1.5	1.5						
						7.2	0.9	220	29.8	29.8	8.0	8.0	27.3	27.3	85.6	85.6	5.6	5.6	25.2	16	95	95	<0.2	<0.2	1.2	1.2						
IM4	Fine	Moderate	17:34	7.5	Surface	1.0	1.1	207	30.0	7.9	7.9	23.0	23.0	82.7	82.7	5.5	5.5	12.4	17	91	94	819571	805033	<0.2	<0.2	1.2	1.2					
						1.0	1.2	211	30.0	30.0	7.9	7.9	23.0	23.0	82.7	82.7	5.5	5.5	12.3	16	91	94	<0.2	<0.2	1.3	1.3						
					Middle	3.8	1.1	199	30.0	30.0	7.9	7.9	23.1	23.1	82.3	82.3	5.5	5.5	18.4	15	94	94	<0.2	<0.2	1.5	1.5						
						3.8	1.1	217	30.0	30.0	7.9	7.9	23.1	23.1	82.3	82.3	5.5	5.5	18.4	15	94	96	<0.2	<0.2	1.6	1.6						
					Bottom	6.5	1.0	189	29.9	29.9	7.9	7.9	23.9	23.9	83.2	83.2	5.5	5.5	28.8	16	96	95	<0.2	<0.2	1.4	1.4						
						6.5	1.0	201	29.9	29.9	7.9	7.9	23.9	23.9	83.3	83.3	5.5	5.5	28.5	15	95	95	<0.2	<0.2	1.2	1.2						
IM5	Fine	Moderate	17:24	6.6	Surface	1.0	0.9	228	30.0	7.8	7.8	22.9	22.9	79.9	79.9	5.3	5.3	18.8	18	91	94	820561	804941	<0.2	<0.2	1.5	1.5					
						1.0	0.9	233	30.0	30.0	7.8	7.8	22.9	22.9	79.9	79.9	5.3	5.3	18.9	19	91	94	<0.2	<0.2	1.6	1.6						
					Middle	3.3	1.0	238	30.0	30.0	7.8	7.8	23.0	23.0	80.4	80.4	5.4	5.4	22.3	20	94	93	<0.2	<0.2	1.7	1.7						
						3.3	1.1	254	30.0	30.0	7.8	7.8	23.0	23.0	80.4	80.4	5.4	5.4	22.4	17	93	96	<0.2	<0.2	1.5	1.5						
					Bottom	5.6	0.9	248	30.0	30.0	7.8	7.8	22.9	22.9	83.5	83.5	5.6	5.6	22.9	17	96	96	<0.2	<0.2	1.6	1.6						
						5.6	0.9	269	30.0	30.0	7.8	7.8	22.9	22.9	83.6	83.6	5.6	5.6	22.7	18	96	96	<0.2	<0.2	1.6	1.6						
IM6	Fine	Moderate	17:18	6.5	Surface	1.0	0.5	228	30.0	7.8	7.8	22.9	22.9	77.5	77.5	5.2	5.2	12.4	15	92	94	821062	805830	<0.2	<0.2	1.6	1.6					
						1.0	0.6	233	29.9	30.0	7.8	7.8	22.9	22.9	77.5	77.5	5.2	5.2	12.4	16	91	93	<0.2	<0.2	1.8	1.8						
					Middle	3.3	0.7	227	29.9	29.9	7.9	7.9	23.4	23.4	77.6	77.6	5.2	5.2	18.6	14	93	94	<0.2	<0.2	2.2	2.2						
						3.3	0.8	227	29.9	29.9	7.9	7.9	23.4	23.4	77.6	77.6	5.2	5.2	18.6	15	94	96	<0.2	<0.2	2.0	2.0						
					Bottom	5.5	0.5	235	29.9	29.9	7.																					

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

Water Quality Monitoring

Water Quality Monitoring Results on **05 October 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	DA	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	
									Value	DA	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value
IM9	Cloudy	Rough	17:50	7.0	Surface	1.0	0.6	170	30.2			7.8	7.8	22.6	22.6	80.6	80.6	5.4		10.8		8	90			<0.2	1.1	1.1			
						1.0	0.7	176	30.2	30.2	7.8	7.8	22.6	22.6	80.6	80.6	5.4	5.4	10.8	8	91			<0.2	1.1						
					Middle	3.5	0.3	185	30.2	30.2	7.8	7.8	23.8	23.8	80.9	80.9	5.4		15.0	9	94			<0.2	1.1						
						3.5	0.3	195	30.2	30.2	7.8	7.8	23.8	23.8	80.9	80.9	5.4		15.0	9	94			<0.2	1.2						
					Bottom	6.0	0.2	185	30.1	30.1	7.9	7.9	24.2	24.2	86.0	86.0	5.7	5.7	14.3	19	96			<0.2	1.1						
						6.0	0.2	200	30.1	30.1	7.9	7.9	24.2	24.2	86.0	86.0	5.7	5.7	14.3	21	96			<0.2	0.9						
IM10	Cloudy	Rough	17:59	7.4	Surface	1.0	0.8	144	30.2			7.8	7.8	22.8	22.8	81.4	81.4	5.4		9.0		8	92			<0.2	1.2	1.2			
						1.0	0.9	152	30.2	30.2	7.8	7.8	22.8	22.8	81.4	81.4	5.4	5.4	9.0	7	91			<0.2	1.3						
					Middle	3.7	0.5	132	30.1	30.1	7.9	7.9	23.9	23.9	80.5	80.5	5.3		11.7	9	93			<0.2	1.3						
						3.7	0.6	144	30.1	30.1	7.9	7.9	23.9	23.9	80.5	80.5	5.3		11.7	9	94			<0.2	1.2						
					Bottom	6.4	0.4	105	30.1	30.1	7.9	7.9	24.4	24.4	83.4	83.4	5.5	5.5	27.8	16	96			<0.2	1.1						
						6.4	0.4	109	30.1	30.1	7.9	7.9	24.4	24.4	83.4	83.4	5.5	5.5	27.8	16	96			<0.2	1.0						
IM11	Cloudy	Moderate	18:14	8.1	Surface	1.0	0.5	137	30.1			7.9	7.9	23.9	23.9	84.6	84.6	5.6		9.1		6	93			<0.2	1.4	1.4			
						1.0	0.6	145	30.1	30.1	7.9	7.9	23.9	23.9	84.6	84.6	5.6	5.6	9.1	8	94			<0.2	1.4						
					Middle	4.1	0.3	103	30.2	30.2	7.9	7.9	24.2	24.2	84.6	84.6	5.6		16.8	7	95			<0.2	1.4						
						4.1	0.3	108	30.2	30.2	7.9	7.9	24.2	24.2	84.6	84.6	5.6		16.8	8	96			<0.2	1.5						
					Bottom	7.1	0.2	74	30.2	30.2	7.9	7.9	25.0	25.0	86.7	86.7	5.7	5.7	37.6	31	97			<0.2	1.2						
						7.1	0.2	78	30.2	30.2	7.9	7.9	25.0	25.0	86.7	86.7	5.7	5.7	37.6	30	97			<0.2	1.2						
IM12	Cloudy	Moderate	18:25	8.4	Surface	1.0	0.4	110	30.1			7.9	7.9	24.2	24.2	89.5	89.5	5.9		6.9		5	93			<0.2	1.5	1.4			
						1.0	0.4	118	30.1	30.1	7.9	7.9	24.2	24.2	89.5	89.5	5.9	5.9	6.9	5	94			<0.2	1.7						
					Middle	4.2	0.3	60	30.0	30.0	7.9	7.9	24.6	24.6	88.9	88.9	5.9		11.1	13	96			<0.2	1.3						
						4.2	0.3	65	30.0	30.0	7.9	7.9	24.6	24.6	88.9	88.9	5.9		11.1	12	96			<0.2	1.4						
					Bottom	7.4	0.2	349	30.1	30.1	7.9	7.9	25.7	25.7	84.8	84.8	5.6	5.6	36.0	38	98			<0.2	1.4						
						7.4	0.2	321	30.1	30.1	7.9	7.9	25.7	25.7	84.8	84.8	5.6	5.6	36.0	40	99			<0.2	1.3						
SR2	Cloudy	Moderate	18:52	4.6	Surface	1.0	0.2	63	30.0			7.9	7.9	24.9	24.9	84.4	84.4	5.6		16.8		18	93			<0.2	1.0	1.2			
						1.0	0.2	66	30.0	30.0	7.9	7.9	24.9	24.9	84.4	84.4	5.6	5.6	16.8	18	94			<0.2	1.4						
					Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-
					Bottom	3.6	0.2	68	29.9	29.9	7.9	7.9	25.1	25.1	85.8	85.8	5.7	5.7	25.5	19	97			<0.2	1.1						
						3.6	0.2	72	29.9	29.9	7.9	7.9	25.1	25.1	85.8	85.8	5.7	5.7	25.5	18	97			<0.2	1.4						
SR3	Sunny	Rough	17:36	8.6	Surface	1.0	1.1	186	30.4			7.8	7.8	21.6	21.6	77.9	77.9	5.2		14.4		8	-			-	-	-			
						1.0	1.2	193	30.4	30.4	7.8	7.8	21.6	21.6	77.9	77.9	5.2	5.1	14.4	6	-			-	-						
					Middle	4.3	0.7	204	30.2	30.2	7.8	7.8	23.3	23.3	75.8	75.8	5.0		22.0	11	-			-	-						
						4.3	0.7	221	30.2	30.2	7.8	7.8	23.3	23.3	75.8	75.8	5.0		22.0	11	-			-	-						
					Bottom	7.6	0.5	236	30.1	30.1	7.8	7.8	23.6	23.6	76.6	76.6	5.1	5.1	27.0	29	-			-	-						
						7.6	0.5	245	30.1	30.1	7.8	7.8	23.6	23.6	76.6	76.6	5.1	5.1	27.0	28	-			-	-						
SR4A	Fine	Moderate	18:31	8.2	Surface	1.0	1.0	267	29.8			8.0	8.0	25.6	25.6	88.9	88.9	5.9		16.9		13	-			-	-	-			
						1.0	1.0	289	29.8	29.8	8.0	8.0	25.6	25.6	88.9	88.9	5.9	5.9	16.9	13	-			-	-						
					Middle	4.1	1.0	267	29.8	29.8	8.0	8.0	25.9	25.9	88.6	88.6	5.8		20.6	15	-			-	-						
						4.1	1.0	288	29.8	29.8	8.0	8.0	25.9	25.9	88.6	88.6	5.8		20.8	16	-			-	-						
					Bottom	7.2	0.9	268	29.9	29.9	8.0	8.0	26.2	26.2	88.7	88.8	5.8	5.8	28.3	15	-			-	-						
						7.2	0.9	278	29.9	29.9	8.0	8.0	26.2	26.2	88.8	88.8	5.8	5.8	28.4	14	-			-	-						
SR5A	Fine	Moderate	18:48	5.0	Surface	1.0	0.7	290	29.8			8.0	8.0	25.3	25.3	87.8	87.8	5.8		15.6		13	-			-	-	-			
						1.0	0.7	298	29.8	29.8	8.0	8.0	25.3	25.3	87.8	87.8	5.8	5.8	15.6	14	-			-	-						
					Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
					Bottom	4.0	0.5	297	29.8	29.8	8.0	8.0	25.3	25.3	88.9	88.9	5.9	5.9	18.1	13	-			-	-						
						4.0	0.6	314	29.8	29.8	8.0	8.0	25.3	25.3	88.9	88.9	5.9	5.9	18.0	12	-			-	-						
SR6	Fine	Moderate	19:12	4.5	Surface	1.0	0.2	228	29.7			7.9	7.9	25.2	25.2	83.3	83.3	5.5		13.4		13	-			-	-	-			
						1.0	0.2	231	29.7	29.7	7.9	7.9	25.2	25.2	83.3	83.3	5.5	5.5	13.5	13	-			-	-						
					Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-		
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-		
					Bottom	3.5	0.2	250	29.7	29.7	7.9	7.9	25.7	25.7	77.6	77.6	5.1	5.1	14.7	12	-			-	-						
						3.5	0.2	267	29.7	29.7	7.9	7.9	25.7	25.7	77.6	77.6	5.1	5.1	14.6	12	-			-	-						
SR7	Cloudy	Moderate	19:53	16.5	Surface	1.0	0.2	210	29.7			7.9	7.9	27.3	27.3	79.9	79.9	5.2		9.6		4	-			-	-	-			
						1.0	0.2	218	29.7	29.7	7.9	7.9	27.3	27.3	79.9	79.9	5.2	5.2	9.6	4	-			-	-						
					Middle	8.3	0.1	102	29.6	29.6	7.9	7.9	28.0	28.0	78.6	78.6	5.1		16.6	10	-			-	-						
						8.3	0.1	107	29.6	29.6	7.9	7.9	28.0	28.0	78.6	78.6	5.1		16.6	12	-			-	-						
					Bottom	15.5	0.2	54	29.6	29.6	7.9	7.9	28.2	28.2	72.8	72.8	4.7	4.7													

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

Water Quality Monitoring

Water Quality Monitoring Results on 07 October 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	DA	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA		
C1	Cloudy	moderate	13:14	9.0	Surface	1.0	0.9	215	29.7	8.0	8.0	28.2	28.2	92.0	92.0	6.0	5.9	6.3	11.0	7	12	91	94	815607	804239	<0.2	<0.2	0.6	0.4			
						1.0	1.0	227	29.7	8.0	8.0	28.2	28.2	91.9	92.0	6.0	5.9	6.3	11.0	7	12	91	94	815607	804239	<0.2	<0.2	0.6	0.4			
					Middle	4.5	1.0	224	29.4	29.4	8.0	8.0	28.9	28.9	88.4	88.4	88.4	88.4	5.8	5.8	8.5	11.0	9	12	94	94	815607	804239	<0.2	<0.2	0.5	0.4
						4.5	1.0	228	29.4	29.4	8.0	8.0	28.9	28.9	88.3	88.4	88.3	88.4	5.8	5.8	8.6	11.0	7	12	94	94	815607	804239	<0.2	<0.2	0.5	0.4
					Bottom	8.0	0.7	239	29.2	29.2	8.0	8.0	30.0	30.0	86.2	86.2	86.2	86.2	5.6	5.6	18.0	11.0	19	12	97	97	815607	804239	<0.2	<0.2	0.2	0.4
						8.0	0.7	251	29.2	29.2	8.0	8.0	30.0	30.0	86.2	86.2	86.2	86.2	5.6	5.6	18.0	11.0	20	12	97	97	815607	804239	<0.2	<0.2	0.2	0.4
C2	Fine	Moderate	12:10	11.9	Surface	1.0	1.4	182	30.1	7.8	7.8	23.3	23.3	83.9	83.9	5.6	5.6	10.1	17.5	8	10	94	96	825689	806949	<0.2	<0.2	1.6	1.6			
						1.0	1.4	196	30.1	30.1	7.8	7.8	23.3	23.3	83.9	83.9	5.6	5.6	10.3	17.5	9	10	93	96	825689	806949	<0.2	<0.2	1.7	1.6		
					Middle	6.0	0.8	193	30.0	30.0	7.9	7.9	24.0	24.0	82.2	82.2	82.2	82.2	5.5	5.5	18.9	17.5	9	10	96	96	825689	806949	<0.2	<0.2	1.6	1.6
						6.0	0.9	206	30.0	30.0	7.9	7.9	23.9	24.0	82.2	82.2	82.2	82.2	5.5	5.5	19.1	17.5	8	10	95	96	825689	806949	<0.2	<0.2	1.6	1.6
					Bottom	10.9	0.5	215	29.8	29.8	7.9	7.9	26.4	26.4	77.5	77.5	77.5	77.5	5.1	5.1	23.5	17.5	12	10	97	98	825689	806949	<0.2	<0.2	1.4	1.4
						10.9	0.6	218	29.8	29.8	7.9	7.9	26.3	26.4	77.5	77.5	77.5	77.5	5.1	5.1	23.0	17.5	11	10	98	98	825689	806949	<0.2	<0.2	1.4	1.4
C3	Fine	Moderate	13:51	12.4	Surface	1.0	0.3	102	30.0	7.9	7.9	26.4	26.4	81.7	81.7	5.3	5.1	12.2	18.3	13	19	92	93	822117	817806	<0.2	<0.2	0.7	0.7			
						1.0	0.4	104	30.0	30.0	7.9	7.9	26.4	26.4	81.7	81.7	5.3	5.1	12.2	18.3	15	19	91	94	822117	817806	<0.2	<0.2	0.9	0.7		
					Middle	6.2	0.2	63	29.7	29.7	7.9	7.9	27.5	27.5	75.8	75.8	75.8	75.8	5.0	5.0	15.6	18.3	18	19	94	93	822117	817806	<0.2	<0.2	0.8	0.7
						6.2	0.3	64	29.7	29.7	7.9	7.9	27.5	27.5	75.7	75.8	75.7	75.8	5.0	5.0	15.4	18.3	19	19	93	95	822117	817806	<0.2	<0.2	0.6	0.7
					Bottom	11.4	0.5	60	29.7	29.7	7.9	7.9	27.7	27.7	76.0	76.1	76.0	76.1	5.0	5.0	27.2	18.3	25	19	95	95	822117	817806	<0.2	<0.2	0.7	0.6
						11.4	0.5	62	29.7	29.7	7.9	7.9	27.7	27.7	76.1	76.1	76.1	76.1	5.0	5.0	27.3	18.3	24	19	95	95	822117	817806	<0.2	<0.2	0.6	0.6
IM1	Cloudy	moderate	12:57	8.0	Surface	1.0	1.1	176	29.5	29.5	8.0	8.0	28.4	28.5	89.6	89.6	5.8	5.8	10.8	15.3	12	15	94	96	818344	806444	<0.2	<0.2	0.4	0.5		
						1.0	1.2	190	29.5	29.5	8.0	8.0	28.5	28.5	89.5	89.6	5.8	5.8	10.9	15.3	13	15	94	96	818344	806444	<0.2	<0.2	0.5	0.5		
					Middle	4.0	0.6	171	29.3	29.3	8.0	8.0	29.4	29.4	87.4	87.5	87.4	87.5	5.7	5.7	13.8	15.3	15	15	96	96	818344	806444	<0.2	<0.2	0.6	0.5
						4.0	0.6	179	29.3	29.3	8.0	8.0	29.4	29.4	87.5	87.5	87.5	87.5	5.7	5.7	13.7	15.3	16	15	96	96	818344	806444	<0.2	<0.2	0.6	0.5
					Bottom	7.0	0.2	210	29.2	29.2	8.0	8.0	29.7	29.7	87.1	87.2	87.1	87.2	5.7	5.7	21.3	15.3	15	15	97	97	818344	806444	<0.2	<0.2	0.4	0.4
						7.0	0.2	230	29.2	29.2	8.0	8.0	29.7	29.7	87.2	87.2	87.2	87.2	5.7	5.7	21.1	15.3	16	15	97	97	818344	806444	<0.2	<0.2	0.4	0.4
IM2	Cloudy	moderate	12:52	9.0	Surface	1.0	1.2	210	29.5	29.5	8.0	8.0	28.4	28.4	90.8	90.8	5.9	5.9	9.2	12.7	12	17	93	95	818870	806199	<0.2	<0.2	0.4	0.4		
						1.0	1.3	230	29.5	29.5	8.0	8.0	28.4	28.4	90.8	90.8	5.9	5.9	9.2	12.7	13	17	94	95	818870	806199	<0.2	<0.2	0.5	0.4		
					Middle	4.5	1.2	213	29.5	29.5	8.0	8.0	28.7	28.7	90.2	90.2	90.2	90.2	5.9	5.9	9.3	12.7	12	17	95	95	818870	806199	<0.2	<0.2	0.6	0.5
						4.5	1.3	228	29.5	29.5	8.0	8.0	28.7	28.7	90.2	90.2	90.2	90.2	5.9	5.9	9.3	12.7	12	17	96	95	818870	806199	<0.2	<0.2	0.6	0.5
					Bottom	8.0	0.8	200	29.2	29.2	8.0	8.0	29.9	29.9	86.9	86.9	86.9	86.9	5.6	5.6	19.5	12.7	26	17	97	97	818870	806199	<0.2	<0.2	0.3	0.3
						8.0	0.8	212	29.2	29.2	8.0	8.0	29.9	29.9	86.9	86.9	86.9	86.9	5.6	5.6	19.6	12.7	26	17	97	97	818870	806199	<0.2	<0.2	0.3	0.3
IM3	Cloudy	moderate	12:43	9.1	Surface	1.0	1.0	204	29.6	29.6	8.0	8.0	28.5	28.5	92.0	92.0	6.0	6.0	8.4	12.8	8	9	91	92	819396	806025	<0.2	<0.2	0.5	0.5		
						1.0	1.0	206	29.6	29.6	8.0	8.0	28.5	28.5	92.0	92.0	6.0	6.0	8.3	12.8	8	9	92	94	819396	806025	<0.2	<0.2	0.5	0.5		
					Middle	4.6	1.0	210	29.6	29.6	8.0	8.0	28.6	28.6	90.8	90.8	90.8	90.8	5.9	5.9	8.9	12.8	11	9	94	94	819396	806025	<0.2	<0.2	0.6	0.5
						4.6	1.0	216	29.6	29.6	8.0	8.0	28.6	28.6	90.7	90.7	90.7	90.7	5.9	5.9	8.9	12.8	10	9	94	94	819396	806025	<0.2	<0.2	0.5	0.4
					Bottom	8.1	0.6	206	29.2	29.2	8.0	8.0	29.9	29.9	87.2	87.2	87.2	87.2	5.7	5.7	21.2	12.8	9	9	96	96	819396	806025	<0.2	<0.2	0.4	0.4
						8.1	0.7	209	29.2	29.2	8.0	8.0	29.9	29.9	87.2	87.2	87.2	87.2	5.7	5.7	21.2	12.8	9	9	96	96	819396	806025	<0.2	<0.2	0.4	0.4
IM4	Cloudy	moderate	12:35	8.3	Surface	1.0	0.6	193	29.8	29.8	8.0	8.0	28.7	28.7	90.6	90.6	5.9	5.8	10.6	16.5	10	11	94	96	819553	805050	<0.2	<0.2	0.4	0.4		
						1.0	0.6	211	29.8	29.8	8.0	8.0	28.7	28.7	90.6	90.6	5.9	5.8	10.6	16.5	10	11	94	96	819553	805050	<0.2	<0.2	0.4	0.4		
					Middle	4.2	0.6	200	29.4	29.4	8.0	8.0	29.4	29.4	87.6	87.6	87.6	87.6	5.7	5.7	14.2	16.5	11	11	96	96	819553	805050	<0.2	<0.2	0.3	0.4
						4.2	0.6	210	29.4	29.4	8.0	8.0	29.3	29.3	87.6	87.6	87.6	87.6	5.7	5.7	14.3	16.5	9	11	96	96	819553	805050	<0.2	<0.2	0.4	0.4
					Bottom	7.3	0.7	215	29.2	29.2	8.0	8.0	29.9	29.9	86.0	86.1	86.0	86.1	5.6	5.6	24.6	16.5	14	11	97	97	819553	805050	<0.2	<0.2	0.4	0.4
						7.3	0.8	215	29.2	29.2	8.0	8.0	29.9	29.9	86.2	86.2	86.2	86.2	5.6	5.6	24.4	16.5	14	11	97	97	819553	805050	<0.2	<0.2	0.4	0.4
IM5	Cloudy	moderate	12:24	7.6	Surface	1.0	1.3	201	29.8	29.8	8.0	8.0	27.8	27.8	91.0	91.0	5.9	5.8	14.8	17.7	18	21	94	96	820568	804919	<0.2	<0.2	0.6	0.6		
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Expansion of Hong Kong International Airport into a Three-Runway System

Water Quality Monitoring

Water Quality Monitoring Results on 07 October 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	DA	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA	Value	DA	Value	DA
IM9	Fine	Moderate	12:42	7.9	Surface	1.0	0.9	155	30.2	7.9	7.9	24.7	24.7	87.2	87.2	5.7	5.8	10.1	19.0	11	13	94	95	822092	808816	<0.2	<0.2	1.0	0.9							
						1.0	0.9	156	30.2	7.9	7.9	24.7	24.7	87.2	87.2	5.7	5.8	10.1	19.0	9	13	93	95	<0.2	<0.2	1.0	0.9									
					Middle	4.0	0.6	155	29.8	8.0	8.0	27.7	27.7	88.9	88.9	5.8	5.8	19.0	19.0	12	13	95	95	<0.2	<0.2	1.0	0.9									
						4.0	0.6	163	29.8	8.0	8.0	27.7	27.7	88.9	88.9	5.8	5.8	19.0	19.0	13	13	95	95	<0.2	<0.2	1.0	0.9									
					Bottom	6.9	0.3	146	29.7	8.0	8.0	28.5	28.5	88.8	88.8	5.8	5.8	27.9	27.9	16	17	97	98	<0.2	<0.2	1.0	0.9									
						6.9	0.3	150	29.7	8.0	8.0	28.5	28.5	88.8	88.8	5.8	5.8	27.6	27.6	16	17	97	98	<0.2	<0.2	1.0	0.9									
IM10	Fine	Moderate	12:50	7.6	Surface	1.0	1.1	133	30.2	7.9	7.9	24.7	24.7	88.1	88.1	5.8	5.8	8.6	15.1	10	17	93	95	822238	809819	<0.2	<0.2	1.4	1.1							
						1.0	1.2	141	30.2	7.9	7.9	24.7	24.7	88.1	88.1	5.8	5.8	8.7	15.1	9	17	93	95	<0.2	<0.2	1.3	1.1									
					Middle	3.8	0.9	127	30.0	7.9	7.9	25.8	25.8	88.3	88.3	5.8	5.8	15.1	15.1	8	17	95	95	<0.2	<0.2	1.3	1.1									
						3.8	1.0	131	30.0	7.9	7.9	25.8	25.8	88.3	88.3	5.8	5.8	15.4	15.4	8	17	95	95	<0.2	<0.2	1.4	1.1									
					Bottom	6.6	0.5	107	29.7	8.0	8.0	28.0	28.0	89.1	89.1	5.8	5.8	21.4	21.4	33	33	98	98	<0.2	<0.2	0.7	0.7									
						6.6	0.5	115	29.7	8.0	8.0	28.0	28.0	89.1	89.1	5.8	5.8	21.1	21.1	31	31	98	98	<0.2	<0.2	0.7	0.7									
IM11	Fine	Moderate	13:01	8.4	Surface	1.0	0.8	122	30.0	8.0	8.0	25.7	25.7	87.1	87.1	5.7	5.7	12.9	18.8	16	17	94	96	821482	810539	<0.2	<0.2	1.0	1.0							
						1.0	0.9	131	30.0	8.0	8.0	25.7	25.7	87.1	87.1	5.7	5.7	12.9	18.8	15	17	93	96	<0.2	<0.2	1.0	1.0									
					Middle	4.2	0.6	111	29.7	8.0	8.0	26.6	26.6	85.7	85.7	5.6	5.6	17.6	17.6	14	17	96	96	<0.2	<0.2	1.0	1.0									
						4.2	0.6	114	29.7	8.0	8.0	26.7	26.7	85.7	85.7	5.6	5.6	17.6	17.6	15	17	96	96	<0.2	<0.2	1.0	1.0									
					Bottom	7.4	0.5	104	29.7	8.0	8.0	27.5	27.5	86.8	86.8	5.7	5.7	25.8	25.8	21	20	98	98	<0.2	<0.2	0.9	0.9									
						7.4	0.5	110	29.7	8.0	8.0	27.5	27.5	86.8	86.8	5.7	5.7	25.8	25.8	20	20	98	98	<0.2	<0.2	1.0	1.0									
IM12	Fine	Moderate	13:09	9.4	Surface	1.0	0.9	117	30.0	7.9	7.9	25.4	25.4	87.0	87.0	5.7	5.7	9.3	14.9	10	12	92	94	821144	811516	<0.2	<0.2	1.0	1.0							
						1.0	0.9	117	30.0	7.9	7.9	25.4	25.4	86.9	86.9	5.7	5.7	9.4	14.9	11	12	92	94	<0.2	<0.2	1.0	1.0									
					Middle	4.7	0.8	98	29.8	7.9	7.9	25.8	25.9	84.3	84.3	5.6	5.6	12.6	12.6	13	12	94	94	<0.2	<0.2	1.0	1.0									
						4.7	0.8	105	29.8	7.9	7.9	25.9	25.9	84.3	84.3	5.6	5.6	12.7	12.7	12	12	94	94	<0.2	<0.2	1.0	1.0									
					Bottom	8.4	0.5	88	29.7	8.0	8.0	26.6	26.6	86.1	86.2	5.7	5.7	22.7	22.9	12	12	96	96	<0.2	<0.2	1.0	0.9									
						8.4	0.5	88	29.7	8.0	8.0	26.6	26.6	86.2	86.2	5.7	5.7	22.9	22.9	12	12	96	96	<0.2	<0.2	0.9	0.9									
SR2	Fine	Moderate	13:32	5.1	Surface	1.0	0.7	71	30.1	7.9	7.9	25.0	25.0	85.8	85.8	5.6	5.7	9.6	14.0	13	13	93	93	821451	814160	<0.2	<0.2	1.1	1.0							
						1.0	0.7	75	30.1	7.9	7.9	24.9	25.0	85.8	85.8	5.7	5.7	9.5	14.0	13	13	93	93	<0.2	<0.2	1.0	1.0									
					Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
					Bottom	4.1	0.5	44	29.8	7.9	7.9	26.1	26.1	85.0	85.0	5.6	5.6	18.5	18.5	13	13	95	94	<0.2	<0.2	1.0	1.0									
						4.1	0.5	48	29.8	7.9	7.9	26.1	26.1	85.0	85.0	5.6	5.6	18.5	18.5	13	13	94	94	<0.2	<0.2	1.0	1.0									
SR3	Fine	Moderate	12:29	9.6	Surface	1.0	0.7	203	30.2	7.9	7.9	23.5	23.5	87.9	88.0	5.7	5.7	9.6	19.8	6	10	-	-	822163	807560	-	-	-	-							
						1.0	0.7	204	30.2	7.9	7.9	23.5	23.5	88.0	88.0	5.7	5.7	9.7	19.8	8	10	-	-	-	-	-	-	-	-							
					Middle	4.8	0.4	219	29.7	8.0	8.0	28.0	28.0	88.0	88.0	5.7	5.7	20.4	20.5	8	10	-	-	-	-	-	-	-	-	-	-					
						4.8	0.4	221	29.7	8.0	8.0	28.0	28.0	88.0	88.0	5.7	5.7	20.5	20.5	7	10	-	-	-	-	-	-	-	-	-						
					Bottom	8.6	0.2	307	29.6	8.0	8.0	28.0	28.0	86.2	86.2	5.7	5.7	29.6	29.6	16	14	-	-	-	-	-	-	-	-	-	-					
						8.6	0.2	329	29.6	8.0	8.0	28.0	28.0	86.2	86.2	5.7	5.7	29.0	29.0	14	14	-	-	-	-	-	-	-	-	-						
SR4A	Sunny	moderate	13:35	8.6	Surface	1.0	0.1	206	29.5	8.0	8.0	28.4	28.4	88.1	88.1	5.8	5.8	12.9	19.3	10	16	-	-	817206	807809	-	-	-	-							
						1.0	0.1	211	29.5	8.0	8.0	28.4	28.4	88.1	88.1	5.8	5.8	13.0	19.3	9	16	-	-	-	-	-	-	-								
					Middle	4.3	0.1	255	29.4	8.0	8.0	28.9	28.9	86.9	86.9	5.7	5.7	21.3	21.4	12	11	-	-	-	-	-	-	-	-							
						4.3	0.1	277	29.4	8.0	8.0	28.9	28.9	86.9	86.9	5.7	5.7	21.4	21.4	11	11	-	-	-	-	-	-	-								
					Bottom	7.6	0.1	215	29.3	8.0	8.0	29.1	29.1	86.0	86.0	5.6	5.6	23.6	23.6	27	25	-	-	-	-	-	-	-	-							
						7.6	0.1	226	29.3	8.0	8.0	29.1	29.1	86.0	86.0	5.6	5.6	23.6	23.6	25	25	-	-	-	-	-	-	-								
SR5A	Sunny	moderate	13:53	5.5	Surface	1.0	0.1	31	29.8	7.9	7.9	26.3	26.3	90.4	90.4	5.9	5.9	10.6	13.2	10	11	-	-	816609	810709	-	-	-	-							
						1.0	0.1	32	29.8	7.9	7.9	26.3	26.3	90.4	90.4	5.9	5.9	10.7	13.2	9	11	-	-	-	-	-	-									
					Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-								
					Bottom	4.5	0.1	283	29.6	8.0	8.0	27.3	27.3	90.1	90.2	5.9	5.9	15.8	15.5	12	13	-	-	-	-	-	-	-								
						4.5	0.1	307	29.6	8.0	8.0	27.3	27.3	90.3	90.2	5.9	5.9	15.5	15.5	13	13	-	-	-	-	-	-									
SR6	Sunny	moderate	14:20	4.2	Surface	1.0	0.2	97	29.8	7.9	7.9	25.9	25.9	86.9	86.9	5.7	5.7	10.8	15.9	8	10	-	-	817897	814671	-	-	-	-							
						1.0	0.2	97	29.8	7.9	7.9	25.9	25.9	86.8	86.9	5.7	5.7	11.3	15.9	7	10	-	-	-	-	-	-									
					Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-								
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-								
					Bottom	3.2	0.1	70	29.4	7.9	7.9	26.1	26.1	83.8	84.																					

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

Water Quality Monitoring

Water Quality Monitoring Results on 07 October 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	DA	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA	Value	DA	Value	DA
C1	Cloudy	Rough	07:47	8.3	Surface	1.0	0.8	28	29.3	8.0	8.0	27.7	27.7	86.9	86.9	5.7	5.7	13.6	13	89	89	94	815602	804236	<0.2	<0.2	0.5	0.5								
						1.0	0.8	29	29.3	29.3	8.0	8.0	27.7	27.7	86.9	86.9	5.7	5.7	13.8	14	90	94	94	<0.2	<0.2	0.5	0.5									
						4.2	0.6	26	29.3	29.3	8.0	8.0	27.8	27.8	86.9	86.9	5.7	5.7	18.3	15	94	94	94	<0.2	<0.2	0.6	0.6									
					Middle	4.2	0.6	27	29.3	29.3	8.0	8.0	27.8	27.8	86.8	86.9	5.7	5.7	18.2	15	94	94	94	<0.2	<0.2	0.6	0.6									
						7.3	0.4	29	29.3	29.3	8.0	8.0	28.6	28.6	86.5	86.5	5.7	5.7	17.5	16	97	97	97	<0.2	<0.2	0.6	0.6									
						7.3	0.4	29	29.3	29.3	8.0	8.0	28.6	28.6	86.6	86.6	5.7	5.7	17.5	17	97	97	97	<0.2	<0.2	0.6	0.6									
C2	Fine	Moderate	08:17	12.3	Surface	1.0	1.9	13	29.9	29.9	7.7	7.7	21.9	21.9	77.8	77.8	5.2	5.2	9.3	8	94	825681	806964	<0.2	<0.2	1.7	1.7									
						1.0	2.0	13	29.9	29.9	7.7	7.7	21.9	21.9	77.7	77.8	5.2	5.2	9.4	9	95	96	96	<0.2	<0.2	1.6	1.6									
						6.2	1.5	11	30.1	30.1	7.8	7.8	24.1	24.1	73.8	73.8	4.9	4.9	14.1	9	96	96	96	<0.2	<0.2	1.6	1.6									
					Middle	6.2	1.6	11	30.1	30.1	7.8	7.8	24.1	24.1	73.8	73.8	4.9	4.9	14.3	9	97	99	99	<0.2	<0.2	1.6	1.6									
						11.3	0.7	11	30.0	30.0	7.8	7.8	24.8	24.8	74.9	74.9	4.9	4.9	27.0	11	99	99	99	<0.2	<0.2	1.1	1.1									
						11.3	0.8	11	30.0	30.0	7.8	7.8	24.8	24.8	74.9	74.9	4.9	4.9	27.0	12	99	99	99	<0.2	<0.2	1.1	1.1									
C3	Fine	Moderate	06:36	11.9	Surface	1.0	0.5	35	29.8	29.8	7.9	7.9	26.2	26.2	81.4	81.4	5.4	5.4	9.9	11	92	822126	817783	<0.2	<0.2	1.1	1.1									
						1.0	0.5	35	29.8	29.8	7.9	7.9	26.2	26.2	81.3	81.4	5.4	5.4	10.1	10	93	96	96	<0.2	<0.2	1.2	1.2									
						6.0	0.0	29	29.8	29.8	7.9	7.9	26.4	26.4	78.8	78.8	5.2	5.2	16.5	11	96	96	96	<0.2	<0.2	1.3	1.3									
					Middle	6.0	0.0	31	29.8	29.8	7.9	7.9	26.4	26.4	78.8	78.8	5.2	5.2	16.7	11	97	98	98	<0.2	<0.2	1.3	1.3									
						10.9	0.2	21	29.7	29.7	7.9	7.9	27.7	27.7	76.0	76.1	5.0	5.0	24.2	15	98	98	98	<0.2	<0.2	0.8	0.8									
						10.9	0.2	22	29.7	29.7	7.9	7.9	27.7	27.7	76.1	76.1	5.0	5.0	24.2	15	98	98	98	<0.2	<0.2	1.0	1.0									
IM1	Cloudy	Rough	08:06	7.7	Surface	1.0	1.0	18	29.3	29.3	7.9	7.9	26.0	26.0	84.9	84.9	5.6	5.6	12.3	13	91	818332	806467	<0.2	<0.2	0.7	0.7									
						1.0	1.0	18	29.3	29.3	7.9	7.9	26.0	26.0	84.9	84.9	5.6	5.6	12.3	13	92	96	96	<0.2	<0.2	0.8	0.8									
						3.9	0.8	17	29.4	29.4	7.9	7.9	26.3	26.3	84.4	84.4	5.6	5.6	14.0	13	96	96	96	<0.2	<0.2	0.9	0.9									
					Middle	3.9	0.8	17	29.4	29.4	7.9	7.9	26.3	26.3	84.4	84.4	5.6	5.6	14.0	12	96	96	96	<0.2	<0.2	0.9	0.9									
						6.7	0.6	19	29.4	29.4	8.0	8.0	28.1	28.1	84.7	84.7	5.6	5.6	15.9	15	97	97	97	<0.2	<0.2	0.9	0.9									
						6.7	0.7	19	29.3	29.4	8.0	8.0	28.0	28.1	84.7	84.7	5.6	5.6	15.9	15	97	97	97	<0.2	<0.2	0.9	0.9									
IM2	Cloudy	Rough	08:14	8.7	Surface	1.0	0.9	24	29.4	29.4	7.9	7.9	25.2	25.2	83.8	83.9	5.6	5.6	12.1	13	94	818838	806173	<0.2	<0.2	1.1	1.1									
						1.0	0.9	24	29.4	29.4	7.9	7.9	25.2	25.2	83.9	83.9	5.6	5.6	12.2	14	94	96	96	<0.2	<0.2	1.0	1.0									
						4.4	0.9	23	29.4	29.4	7.9	7.9	25.8	25.8	84.3	84.3	5.6	5.6	13.6	14	96	96	96	<0.2	<0.2	0.8	0.8									
					Middle	4.4	0.9	23	29.4	29.4	7.9	7.9	25.8	25.8	84.3	84.3	5.6	5.6	13.7	13	96	96	96	<0.2	<0.2	0.9	0.9									
						7.7	0.8	25	29.4	29.4	7.9	7.9	26.3	26.3	84.4	84.4	5.6	5.6	16.0	16	99	99	99	<0.2	<0.2	1.0	1.0									
						7.7	0.8	26	29.4	29.4	7.9	7.9	26.3	26.3	84.4	84.4	5.6	5.6	16.2	16	99	99	99	<0.2	<0.2	0.9	0.9									
IM3	Cloudy	Rough	08:23	8.8	Surface	1.0	1.1	29	29.4	29.4	7.9	7.9	25.0	25.0	83.4	83.5	5.6	5.6	11.1	13	92	819403	806000	<0.2	<0.2	0.8	0.8									
						1.0	1.2	30	29.4	29.4	7.9	7.9	25.0	25.0	83.5	83.5	5.6	5.6	11.2	13	92	96	96	<0.2	<0.2	1.0	1.0									
						4.4	1.0	27	29.4	29.4	7.9	7.9	25.1	25.1	83.3	83.3	5.5	5.5	12.3	12	96	96	96	<0.2	<0.2	1.0	1.0									
					Middle	4.4	1.0	29	29.4	29.4	7.9	7.9	25.1	25.1	83.2	83.2	5.5	5.5	12.2	12	96	96	96	<0.2	<0.2	1.1	1.1									
						7.8	0.9	26	29.4	29.4	7.9	7.9	26.5	26.4	83.5	83.5	5.5	5.5	16.4	14	99	99	99	<0.2	<0.2	1.3	1.3									
						7.8	1.0	28	29.4	29.4	7.9	7.9	26.2	26.4	83.4	83.5	5.5	5.5	15.8	15	98	98	98	<0.2	<0.2	1.4	1.4									
IM4	Cloudy	Rough	08:33	8.3	Surface	1.0	0.8	12	29.4	29.4	7.9	7.9	26.0	26.0	86.0	86.0	5.7	5.7	13.1	11	94	819567	805040	<0.2	<0.2	1.0	1.0									
						1.0	0.9	13	29.4	29.4	7.9	7.9	26.0	26.0	86.0	86.0	5.7	5.7	13.3	10	94	96	96	<0.2	<0.2	0.9	0.9									
						4.2	0.8	14	29.4	29.4	7.9	7.9	26.6	26.6	85.7	85.7	5.7	5.7	22.2	16	96	96	96	<0.2	<0.2	0.8	0.8									
					Middle	4.2	0.8	14	29.4	29.4	7.9	7.9	26.6	26.6	85.7	85.7	5.7	5.7	21.8	14	96	96	96	<0.2	<0.2	1.0	1.0									
						7.3	0.8	15	29.4	29.4	7.9	7.9	27.9	27.9	86.9	86.9	5.7	5.7	22.5	16	98	98	98	<0.2	<0.2	0.7	0.7									
						7.3	0.8	16	29.4	29.4	7.9	7.9	27.9	27.9	87.0	87.0	5.7	5.7	22.7	16	98	98	98	<0.2	<0.2	0.8	0.8									
IM5	Cloudy	Rough	08:43	8.0	Surface	1.0	1.0	25	29.1	29.1	7.9	7.9	24.9	24.9	90.8	90.8	6.1	6.1	15.3	14	93	820553	804925	<0.2	<0.2	0.8	0.8									
						1.0	1.0	27	29.1	29.1	7.9	7.9	24.9	24.9	90.8	90.8	6.1	6.1	15.3	15	94	96	96	<0.2	<0.2	0.9	0.9									
						4.0	0.9	30	29.3	29.3	7.9	7.9	25.5	25.5	89.9	89.9	6.0	6.0	19.3	15	96	96	96	<0.2	<0.2	0.8	0.8									
					Middle	4.0	0.9	31	29.3	29.3	7.9	7.9	25.5	25.5	89.9	89.9	6.0	6.0	19.3	16	96	96	96	<0.2	<0.2	1.0	1.0									
						7.0	0.8	30	29.5	29.5	7.9	7.9	26.1	26.1	83.9	83.9	5.6	5.6	20.6	15	98	98	98	<0.2	<0.2	1.0	1.0									
						7.0	0.9	31	29.5	29.5	7.9	7.9	26.1	26.1	84.0	84.0	5.6	5.6	20.4	16	98	98	98	<0.2	<0.2	0.7	0.7									
IM6	Cloudy	Rough	08:52	7.3	Surface	1.0	0.9	24	29.6	29.6	7.9	7.9	23.3	23.3	81.4	81.5	5.5	5.5	10.0	10	94	821057	805819	<0.2	<0.2	1.5	1.5									
						1.0	1.0	25	29.6	29.6	7.9	7.9	23.3	23.3	81.5	81.5	5.5	5.5	10.2	10	94	96	96	<0.2	<0.2	1.4	1.4									
						3.7	0.8	24	29.5	29.5	7.9	7.9	25.5	25.5	83.7	83.8	5.6	5.6	14.9	10	96	96	96	<0.2	<0.2	1.4	1.4									





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

Water Quality Monitoring

Water Quality Monitoring Results on 10 October 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)							
					Surface	Middle			Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA	Value	DA	Value	DA
C1	Fine	Moderate	15:21	8.9	Surface	1.0	0.3	221	29.3	7.9	7.9	28.5	28.5	93.3	93.3	6.1	6.0	6.2	5	94	815613	804235	<0.2	0.4	0.4											
						1.0	0.4	223	29.3	7.9	7.9	28.5	28.5	93.3	93.3	6.1	6.0	6.2	5	95																
					Middle	4.5	0.2	235	29.1	7.9	7.9	28.9	28.9	89.7	89.7	5.9	8.8	5	96																	
						4.5	0.2	252	29.1	7.9	7.9	28.9	28.9	89.6	89.7	5.9	8.9	3	96																	
					Bottom	7.9	0.2	224	28.9	7.9	7.9	30.0	30.0	88.3	88.3	5.8	11.9	5	98																	
						7.9	0.2	231	28.9	7.9	7.9	30.0	30.0	88.3	88.3	5.8	12.0	5	98																	
C2	Sunny	Rough	14:32	11.8	Surface	1.0	0.1	54	30.1	7.8	7.8	23.2	23.2	86.3	86.3	5.7	5.6	11.3	6	92	825678	806934	<0.2	1.7	1.3											
						1.0	0.1	56	30.1	7.8	7.8	23.2	23.2	86.3	86.3	5.7	11.3	6	91																	
					Middle	5.9	0.1	257	29.6	7.9	7.9	26.8	26.8	81.9	82.0	5.4	28.5	7	93																	
						5.9	0.1	265	29.6	7.9	7.9	26.8	26.8	82.0	82.0	5.4	28.5	7	94																	
					Bottom	10.8	0.1	217	29.6	7.9	7.9	27.1	27.1	86.1	86.1	5.7	43.6	46	96																	
						10.8	0.1	237	29.6	7.9	7.9	27.1	27.1	86.1	86.1	5.7	43.6	49	96																	
C3	Sunny	Moderate	16:26	12.4	Surface	1.0	0.2	79	29.8	7.9	7.9	27.4	27.4	86.1	86.1	5.6	5.5	4.1	4	94	822118	817787	<0.2	0.5	0.5											
						1.0	0.2	84	29.8	7.9	7.9	27.4	27.4	86.1	86.1	5.6	4.1	6	93																	
					Middle	6.2	0.2	79	29.6	7.9	7.9	27.6	27.6	82.8	82.8	5.4	7.1	4	96																	
						6.2	0.2	80	29.6	7.9	7.9	27.6	27.6	82.8	82.8	5.4	7.1	4	97																	
					Bottom	11.4	0.2	93	29.6	7.9	7.9	27.9	27.9	86.0	86.0	5.6	8.4	10	98																	
						11.4	0.2	99	29.6	7.9	7.9	27.9	27.9	86.0	86.0	5.6	8.4	10	99																	
IM1	Fine	Moderate	15:09	7.9	Surface	1.0	0.2	234	29.2	7.9	7.9	28.0	28.0	90.3	90.3	5.9	5.9	11.3	10	91	818362	806465	<0.2	0.5	0.5											
						1.0	0.3	245	29.2	7.9	7.9	28.0	28.0	90.3	90.3	5.9	11.3	10	91																	
					Middle	4.0	0.1	166	29.1	7.9	7.9	28.4	28.4	89.4	89.4	5.9	13.1	9	94																	
						4.0	0.1	176	29.1	7.9	7.9	28.4	28.4	89.3	89.3	5.9	13.2	9	94																	
					Bottom	6.9	0.1	158	28.9	7.9	7.9	29.6	29.6	88.1	88.2	5.8	23.1	9	96																	
						6.9	0.1	172	28.9	7.9	7.9	29.6	29.6	88.2	88.2	5.8	23.1	9	96																	
IM2	Fine	Moderate	15:03	8.7	Surface	1.0	0.1	251	29.2	7.9	7.9	28.0	28.0	91.4	91.4	6.0	6.0	9.6	8	92	818860	806185	<0.2	0.6	0.5											
						1.0	0.1	269	29.2	7.9	7.9	28.0	28.0	91.4	91.4	6.0	9.7	9	92																	
					Middle	4.4	0.0	33	29.2	7.9	7.9	28.4	28.4	90.2	90.2	5.9	12.8	8	94																	
						4.4	0.0	33	29.2	7.9	7.9	28.4	28.4	90.1	90.2	5.9	13.0	8	94																	
					Bottom	7.7	0.1	95	28.9	7.9	7.9	29.6	29.6	86.9	86.9	5.7	24.7	8	96																	
						7.7	0.1	97	28.9	7.9	7.9	29.6	29.6	86.9	86.9	5.7	25.0	8	97																	
IM3	Fine	Moderate	14:55	9.1	Surface	1.0	0.2	284	29.3	7.9	7.9	28.1	28.1	92.6	92.6	6.1	6.1	7.5	7	91	819428	806012	<0.2	0.5	0.4											
						1.0	0.2	289	29.3	7.9	7.9	28.1	28.1	92.6	92.6	6.1	7.6	8	91																	
					Middle	4.6	0.1	17	29.2	7.9	7.9	28.5	28.5	90.8	90.8	6.0	11.7	6	94																	
						4.6	0.1	18	29.2	7.9	7.9	28.5	28.5	90.8	90.8	6.0	11.8	7	94																	
					Bottom	8.1	0.3	73	28.9	7.9	7.9	29.5	29.5	86.7	86.7	5.7	18.0	12	96																	
						8.1	0.3	73	28.9	7.9	7.9	29.5	29.5	86.7	86.7	5.7	18.3	13	97																	
IM4	Fine	Moderate	14:47	8.5	Surface	1.0	0.2	300	29.3	7.9	7.9	28.4	28.4	92.5	92.5	6.1	6.0	7.8	6	92	819562	805028	<0.2	0.5	0.4											
						1.0	0.2	305	29.3	7.9	7.9	28.4	28.4	92.4	92.4	6.1	7.8	7	91																	
					Middle	4.3	0.1	21	29.2	7.9	7.9	28.6	28.6	90.8	90.8	5.9	11.3	5	94																	
						4.3	0.1	21	29.2	7.9	7.9	28.6	28.6	90.8	90.8	5.9	11.5	5	94																	
					Bottom	7.5	0.1	35	28.8	7.9	7.9	29.6	29.6	87.0	87.0	5.7	23.4	15	96																	
						7.5	0.1	36	28.8	7.9	7.9	29.6	29.6	87.0	87.0	5.7	23.4	14	97																	
IM5	Fine	Moderate	14:42	7.5	Surface	1.0	0.3	325	29.3	7.9	7.9	28.3	28.3	92.9	92.9	6.1	6.0	8.4	8	93	820572	804913	<0.2	0.3	0.5											
						1.0	0.3	335	29.3	7.9	7.9	28.3	28.3	92.8	92.8	6.1	8.5	7	94																	
					Middle	3.8	0.3	306	29.2	7.9	7.9	28.4	28.4	90.7	90.7	5.9	11.3	7	96																	
						3.8	0.3	316	29.2	7.9	7.9	28.4	28.4	90.7	90.7	5.9	11.4	8	96																	
					Bottom	6.5	0.1	318	29.0	7.9	7.9	28.9	28.9	88.5	88.5	5.8	19.8	9	97																	
						6.5	0.1	342	29.0	7.9	7.9	28.9	28.9	88.5	88.5	5.8	19.8	9	97																	
IM6	Fine	Moderate	14:33	7.3	Surface	1.0	0.1	29	29.3	7.9	7.9	28.1	28.1	90.8	90.8	6.0	6.0	14.5	14	94	821064	805844	<0.2	0.8	0.5											
						1.0	0.1	31	29.3	7.9	7.9	28.1	28.1	90.8	90.8	6.0	14.5	14	94																	
					Middle	3.7	0.2	57	29.2	7.9	7.9	28.3	28.3	90.0	90.0	5.9	16.9	14	96																	
						3.7	0.2	57	29.2	7.9	7.9	28.3	28.3	90.0	90.0	5.9	17.0	15	96																	
					Bottom	6.3	0.3	66	28.9	7.9	7.9	29.0	29.0	86.5	86.5	5.7	21.2	14	99																	
						6.3	0.3	70	28.9	7.9	7.9	29.0	29.0	86.5	86.5	5.7	21.7	13	99																	
IM7	Fine	Moderate	14:25	8.1	Surface	1.0	0.0	312	29.3	7.9	7.9	27.5	27.5	91.8	91.8	6.0	6.0	12.2	8	94	821360	806817	<0.2	0.4	0.5											
						1.0	0.0	316	29.3	7.9	7.9	27.5	27.5	91.7	91.7	6.0	12.3	10	94																	
					Middle	4.1	0.1	30	29.3	7.9	7.9	27.5	27.5	90.5	90.5	6.0	15.7	15	96																	
						4.1	0.1	32	29.3	7.9	7.9	27.5	27.5	90.5	90.5	6.0	15.8	13	96																	
					Bottom	7.1	0.2	63	29.1	7.9	7.9	27.9	27.9	89.1	89.2	5.9	22.4	16	98																	
						7.1	0.2	66	29.1	7.9	7.9	27.9	27.9	89.2	89.2	5.9	22.3	16	98																	
IM8	Sunny	Rough	15:01	8.5	Surface	1.0	0.1	91	29.5	7.9	7.9	27.5	27.5	89.5	89.5	5.9	5.9	10.7	8	92	821689	807826	<0.2	0.8	0.7											
						1.0	0.1	97	29.5	7.9	7.9	27.5	27.5	89.5	89.5	5.9	10.7	8	92																	
					Middle	4.3	0.1	67	29.4	7.9	7.9	27.6	27.6	89.6	89.6	5.9	17.7	8	94																	
						4.3	0.1	72	29.4	7.9	7.9	27.6	27.6	89.6	89.6	5.9	17.7	8	93																	
					Bottom	7.5	0.2	63	29.4	7.9	7.9	27.6	27.6	91.4	91.4	6.0	22.9	16	96																	
						7.5	0.2	66	29.4	7.9	7.9	27.6	27.6	91.4	91.4	6.0	22.9	16	96																	

DA: Depth-Averaged

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

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



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

Water Quality Monitoring

Water Quality Monitoring Results on 10 October 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	Value	DA	Value	DA
					Value	DA			Value	DA	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA
C1	Cloudy	Moderate	10:06	8.7	Surface	1.0	0.4	39	29.1	7.9	7.9	27.7	27.7	87.9	87.9	5.8	5.8	13.0	13.0	11	92	96	92	96	815610	804242	<0.2	0.5	0.6	0.6		
						1.0	0.4	39	29.1	7.9	7.9	27.7	27.7	87.9	87.9	5.8	5.8	13.0	13.0	11	92	96	92	96			<0.2	0.5	0.6	0.6		
						4.4	0.5	54	28.9	28.9	7.9	7.9	28.5	28.5	87.0	87.0	5.7	5.7	20.5	20.6	10	96	96	96			96	<0.2	0.6	0.6	0.6	
					4.4	0.5	54	28.9	28.9	7.9	7.9	28.5	28.5	87.0	87.0	5.7	5.7	20.6	20.6	10	96	96	96	96			<0.2	0.6	0.6	0.6		
					7.7	0.5	59	28.9	28.9	7.9	7.9	28.7	28.7	86.7	86.7	5.7	5.7	21.3	21.3	13	99	99	99	99			<0.2	0.7	0.7	0.7		
					7.7	0.5	59	28.9	28.9	7.9	7.9	28.7	28.7	86.8	86.8	5.7	5.7	21.3	21.3	13	99	99	99	99			<0.2	0.5	0.5	0.5		
C2	Fine	Moderate	11:01	11.4	Surface	1.0	0.3	-	29.9	7.8	7.8	22.5	22.5	79.1	79.1	5.3	5.3	8.9	8.9	6	91	95	91	95	825669	806928	<0.2	1.6	1.6	1.2		
						1.0	0.3	-	29.9	29.9	7.8	7.8	22.5	22.5	79.1	79.1	5.3	5.3	8.9	8.9	4	92	95	95			95	<0.2	1.3	1.2	1.2	
						5.7	0.3	359	29.9	29.9	7.8	7.8	24.0	24.0	78.5	78.5	5.2	5.2	15.8	15.8	6	95	95	95			95	<0.2	1.2	0.9	0.9	
					5.7	0.3	330	29.9	29.9	7.8	7.8	24.0	24.0	78.5	78.5	5.2	5.2	15.8	15.8	6	95	95	95	95			<0.2	0.9	0.9	0.9		
					10.4	0.3	321	29.9	29.9	7.8	7.8	25.8	25.8	82.4	82.4	5.4	5.4	10.9	10.9	31	98	98	98	98			<0.2	0.5	0.5	0.5		
					10.4	0.3	344	29.9	29.9	7.8	7.8	25.8	25.8	82.4	82.4	5.4	5.4	10.9	10.9	34	98	98	98	98			<0.2	0.5	0.5	0.5		
C3	Sunny	Moderate	09:20	11.3	Surface	1.0	0.6	263	29.5	29.5	7.9	7.9	26.5	26.5	84.6	84.6	5.6	5.6	9.0	9.0	6	95	94	95	822094	817818	<0.2	0.5	0.6	0.6		
						1.0	0.6	277	29.5	29.5	7.9	7.9	26.5	26.5	84.6	84.6	5.6	5.6	9.0	9.0	6	94	96	96			96	<0.2	0.8	0.8	0.8	
						5.7	0.6	268	29.4	29.4	7.9	7.9	27.1	27.1	82.5	82.5	5.4	5.4	14.1	14.1	6	96	96	96			96	<0.2	0.4	0.4	0.4	
					5.7	0.6	280	29.4	29.4	7.9	7.9	27.1	27.1	82.5	82.5	5.4	5.4	14.1	14.1	7	96	96	96	96			<0.2	0.5	0.5	0.5		
					10.3	0.4	272	29.5	29.5	7.9	7.9	27.9	27.9	84.3	84.3	5.5	5.5	23.3	23.3	6	99	99	99	99			<0.2	0.6	0.6	0.6		
					10.3	0.5	279	29.5	29.5	7.9	7.9	27.9	27.9	84.3	84.3	5.5	5.5	23.3	23.3	8	99	99	99	99			<0.2	0.6	0.6	0.6		
IM1	Cloudy	Moderate	10:23	7.5	Surface	1.0	0.4	20	29.3	29.3	7.9	7.9	25.9	25.9	86.9	86.9	5.8	5.8	12.5	12.5	8	92	94	92	818335	806472	<0.2	0.8	0.6	0.5		
						1.0	0.4	21	29.3	29.3	7.9	7.9	25.9	25.9	86.9	86.9	5.8	5.8	12.6	12.6	9	92	94	94			94	<0.2	0.6	0.6	0.6	
						3.8	0.5	22	28.9	28.9	7.9	7.9	28.4	28.4	85.6	85.6	5.6	5.6	16.7	16.8	23	94	94	94			94	<0.2	0.3	0.3	0.3	
					3.8	0.5	22	28.9	28.9	7.9	7.9	28.4	28.4	85.6	85.6	5.6	5.6	16.8	16.8	22	94	94	94	94			<0.2	0.2	0.2	0.2		
					6.5	0.4	1	28.8	28.8	7.9	7.9	28.8	28.8	85.5	85.5	5.6	5.6	23.0	23.0	25	96	96	96	96			<0.2	0.5	0.5	0.5		
					6.5	0.4	1	28.8	28.8	7.9	7.9	28.8	28.8	85.5	85.5	5.6	5.6	23.0	23.0	27	96	96	96	96			<0.2	0.5	0.5	0.5		
IM2	Cloudy	Moderate	10:32	8.2	Surface	1.0	0.3	16	29.3	29.3	7.9	7.9	25.4	25.4	86.7	86.7	5.8	5.8	10.5	10.5	7	91	94	91	818853	806196	<0.2	0.7	0.8	0.8		
						1.0	0.4	17	29.3	29.3	7.9	7.9	25.4	25.4	86.7	86.7	5.8	5.8	10.6	10.6	8	92	94	94			94	<0.2	0.8	0.8	0.8	
						4.1	0.6	13	29.3	29.3	7.9	7.9	26.0	26.0	86.0	86.0	5.7	5.7	18.9	19.0	10	94	94	94			94	<0.2	0.7	0.7	0.7	
					4.1	0.6	13	29.3	29.3	7.9	7.9	26.0	26.0	86.0	86.0	5.7	5.7	19.0	19.0	10	94	94	94	94			<0.2	0.8	0.8	0.8		
					7.2	0.4	358	28.9	28.9	7.9	7.9	28.8	28.8	85.2	85.2	5.6	5.6	25.5	25.5	11	96	96	96	96			<0.2	0.8	0.8	0.8		
					7.2	0.4	329	28.9	28.9	7.9	7.9	28.8	28.8	85.2	85.2	5.6	5.6	25.9	25.9	12	96	96	96	96			<0.2	0.9	0.9	0.9		
IM3	Cloudy	Moderate	10:40	8.4	Surface	1.0	0.4	19	29.4	29.4	7.9	7.9	25.2	25.2	86.4	86.4	5.8	5.8	11.4	11.4	10	91	94	91	819421	806031	<0.2	1.1	1.1	1.0		
						1.0	0.4	20	29.4	29.4	7.9	7.9	25.2	25.2	86.4	86.4	5.8	5.8	11.5	11.5	10	91	94	94			94	<0.2	0.9	0.9	0.9	
						4.2	0.5	14	29.3	29.3	7.9	7.9	25.7	25.8	85.7	85.7	5.7	5.7	17.3	17.5	12	92	94	94			94	<0.2	1.1	0.8	0.8	
					4.2	0.6	15	29.3	29.3	7.9	7.9	25.8	25.8	85.7	85.7	5.7	5.7	17.5	17.5	12	94	94	94	94			<0.2	0.8	0.8	0.8		
					7.4	0.4	11	29.0	29.0	7.9	7.9	28.4	28.4	85.6	85.6	5.6	5.6	23.0	23.0	10	98	98	98	98			<0.2	0.9	0.9	0.9		
					7.4	0.4	11	29.0	29.0	7.9	7.9	28.4	28.4	85.6	85.6	5.6	5.6	23.2	23.2	12	98	98	98	98			<0.2	0.9	0.9	0.9		
IM4	Cloudy	Moderate	10:47	7.7	Surface	1.0	0.5	356	29.4	29.4	7.9	7.9	25.4	25.4	87.3	87.3	5.8	5.8	12.4	12.4	11	91	94	91	819554	805022	<0.2	0.8	1.0	0.8		
						1.0	0.5	328	29.4	29.4	7.9	7.9	25.4	25.4	87.3	87.3	5.8	5.8	12.5	12.5	9	92	93	93			93	<0.2	0.6	0.6	0.6	
						3.9	0.6	7	29.3	29.3	7.9	7.9	25.6	25.6	86.8	86.8	5.8	5.8	17.9	18.3	12	93	94	94			94	<0.2	0.7	0.7	0.7	
					3.9	0.6	7	29.3	29.3	7.9	7.9	25.6	25.6	86.8	86.8	5.8	5.8	18.3	18.3	13	94	94	94	94			<0.2	0.8	0.8	0.8		
					6.7	0.5	15	29.2	29.2	7.9	7.9	26.3	26.3	85.9	85.9	5.7	5.7	21.0	21.0	13	96	96	96	96			<0.2	0.9	0.9	0.9		
					6.7	0.5	15	29.2	29.2	7.9	7.9	26.3	26.3	85.9	85.9	5.7	5.7	21.1	21.1	12	96	96	96	96			<0.2	0.9	0.9	0.9		
IM5	Cloudy	Moderate	10:57	7.0	Surface	1.0	0.6	20	29.4	29.4	7.9	7.9	25.1	25.1	86.6	86.6	5.8	5.8	12.0	12.0	10	91	94	91	820580	804919	<0.2	0.9	0.8	0.8		
						1.0	0.6	21	29.4	29.4	7.9	7.9	25.1	25.1	86.6	86.6	5.8	5.8	12.0	12.0	10	91	94	94			94	<0.2	0.8	0.8	0.8	
						3.5	0.5	30	29.3	29.3	7.9	7.9	25.3	25.3	86.0	86.0	5.7	5.7	19.5	18.8	12	94	94	94			94	<0.2	0.8	0.8	0.8	
					3.5	0.5	32	29.4	29.4	7.9	7.9	25.3	25.3	86.0	86.0	5.7	5.7	18.8	18.8	11	94	94	94	94			<0.2	0.8	0.8	0.8		
					6.0	0.4	35	29.3	29.3	7.9	7.9	25.6	25.6	85.7	85.7	5.7	5.7	22.4	22.4	22	96	96	96	96			<0.2	0.8	0.8	0.8		
					6.0	0.4	36	29.3	29.3	7.9	7.9	25.6	25.6	85.7	85.7	5.7	5.7	22.6	22.6	23	97	97										

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

Water Quality Monitoring

Water Quality Monitoring Results on 10 October 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 (µg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)							
									Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA	Value	DA	Value	DA
IM9	Sunny	Moderate	10:29	7.2	Surface	1.0	0.2	326	29.7	7.8	7.8	23.8	23.8	85.4	85.4	5.7	5.7	10.2	5.7	10.2	10	93	96	822078	808827	<0.2	<0.2	1.0	1.1							
						1.0	0.2	338	29.7	7.8	7.8	23.8	23.8	85.4	85.4	5.7	5.7	10.2	5.7	10.2	9	93	96	96	822078	808827	<0.2	<0.2	1.1	1.2						
						3.6	0.2	339	29.7	7.8	7.8	23.6	23.6	85.6	85.6	5.7	5.7	11.5	5.7	11.5	10	95	96	96	822078	808827	<0.2	<0.2	1.1	1.1						
						3.6	0.2	312	29.7	7.8	7.8	23.6	23.6	85.6	85.6	5.7	5.7	11.5	5.7	11.5	11	96	96	96	822078	808827	<0.2	<0.2	1.1	1.1						
						6.2	0.2	327	29.7	7.8	7.8	24.1	24.1	87.4	87.4	5.8	5.8	12.5	5.8	12.5	10	98	98	98	822078	808827	<0.2	<0.2	0.9	0.9						
						6.2	0.2	339	29.7	7.8	7.8	24.1	24.1	87.4	87.4	5.8	5.8	12.5	5.8	12.5	10	98	98	98	822078	808827	<0.2	<0.2	0.9	0.9						
IM10	Sunny	Moderate	10:21	6.3	Surface	1.0	0.6	307	29.7	7.8	7.8	25.0	25.0	86.8	86.8	5.8	5.8	14.5	5.8	14.5	8	94	96	822256	809852	<0.2	<0.2	0.8	0.8							
						1.0	0.6	327	29.7	7.8	7.8	25.0	25.0	86.8	86.8	5.8	5.8	14.5	5.8	14.5	7	94	96	96	822256	809852	<0.2	<0.2	0.7	0.7						
						3.2	0.5	315	29.6	7.8	7.8	25.1	25.1	86.2	86.2	5.7	5.7	17.8	5.7	17.8	11	96	97	97	822256	809852	<0.2	<0.2	0.7	0.7						
						3.2	0.6	327	29.6	7.8	7.8	25.1	25.1	86.2	86.2	5.7	5.7	17.8	5.7	17.8	12	97	98	98	822256	809852	<0.2	<0.2	0.7	0.7						
						5.3	0.5	313	29.6	7.8	7.8	25.1	25.1	86.6	86.6	5.7	5.7	20.5	5.7	20.5	12	98	99	99	822256	809852	<0.2	<0.2	0.7	0.8						
						5.3	0.5	314	29.6	7.8	7.8	25.1	25.1	86.6	86.6	5.7	5.7	20.5	5.7	20.5	13	99	99	99	822256	809852	<0.2	<0.2	0.8	0.8						
IM11	Sunny	Moderate	10:08	8.0	Surface	1.0	0.6	286	29.7	7.8	7.8	25.2	25.2	87.2	87.2	5.8	5.8	9.3	5.8	9.3	5	93	96	821511	810552	<0.2	<0.2	0.8	0.8							
						1.0	0.6	290	29.7	7.8	7.8	25.2	25.2	87.2	87.2	5.8	5.8	9.3	5.8	9.3	5	94	96	96	821511	810552	<0.2	<0.2	0.8	0.8						
						4.0	0.5	294	29.5	7.9	7.9	25.9	25.9	85.7	85.7	5.7	5.7	21.3	5.7	21.3	7	96	98	98	821511	810552	<0.2	<0.2	0.9	0.9						
						4.0	0.5	318	29.5	7.9	7.9	25.9	25.9	85.7	85.7	5.7	5.7	21.3	5.7	21.3	8	96	98	98	821511	810552	<0.2	<0.2	0.9	0.6						
						7.0	0.5	295	29.5	7.9	7.9	26.0	26.0	87.1	87.1	5.8	5.8	25.5	5.8	25.5	30	98	99	99	821511	810552	<0.2	<0.2	0.8	0.8						
						7.0	0.5	300	29.5	7.9	7.9	26.0	26.0	87.1	87.1	5.8	5.8	25.5	5.8	25.5	33	99	99	99	821511	810552	<0.2	<0.2	0.8	0.8						
IM12	Sunny	Moderate	10:03	7.6	Surface	1.0	0.7	278	29.6	7.8	7.8	25.1	25.1	87.7	87.7	5.8	5.8	8.7	5.8	8.7	5	93	96	821173	811509	<0.2	<0.2	0.9	0.8							
						1.0	0.7	278	29.6	7.8	7.8	25.1	25.1	87.7	87.7	5.8	5.8	8.7	5.8	8.7	5	94	97	97	821173	811509	<0.2	<0.2	0.8	0.8						
						3.8	0.7	284	29.5	7.9	7.9	25.7	25.7	87.1	87.1	5.8	5.8	13.6	5.8	13.6	4	96	98	98	821173	811509	<0.2	<0.2	0.7	0.7						
						3.8	0.7	301	29.5	7.9	7.9	25.7	25.7	87.1	87.1	5.8	5.8	13.6	5.8	13.6	4	96	98	98	821173	811509	<0.2	<0.2	0.8	0.8						
						6.6	0.5	287	29.4	7.9	7.9	26.1	26.1	87.7	87.7	5.8	5.8	20.8	5.8	20.8	19	98	99	99	821173	811509	<0.2	<0.2	0.6	0.5						
						6.6	0.5	295	29.4	7.9	7.9	26.1	26.1	87.7	87.7	5.8	5.8	20.8	5.8	20.8	18	99	99	99	821173	811509	<0.2	<0.2	0.5	0.5						
SR2	Sunny	Moderate	09:39	4.3	Surface	1.0	0.2	337	29.6	7.9	7.9	25.6	25.6	86.4	86.4	5.7	5.7	16.2	5.7	16.2	13	93	95	821461	814179	<0.2	<0.2	0.6	0.7							
						1.0	0.2	310	29.6	7.9	7.9	25.6	25.6	86.4	86.4	5.7	5.7	16.2	5.7	16.2	14	94	96	96	821461	814179	<0.2	<0.2	0.7	0.7						
						-	0.3	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	821461	814179	<0.2	<0.2	0.8	0.8				
						-	0.3	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	821461	814179	<0.2	<0.2	0.7	0.7			
						3.3	0.2	14	29.5	7.9	7.9	26.0	26.0	88.1	88.1	5.8	5.8	26.5	5.8	26.5	14	97	98	98	821461	814179	<0.2	<0.2	0.7	0.7						
						3.3	0.2	14	29.5	7.9	7.9	26.0	26.0	88.1	88.1	5.8	5.8	26.5	5.8	26.5	16	96	96	96	821461	814179	<0.2	<0.2	1.0	1.0						
SR3	Sunny	Moderate	10:41	8.7	Surface	1.0	0.2	236	29.8	7.8	7.8	22.8	22.8	82.5	82.5	5.5	5.5	7.3	5.5	7.3	12	-	-	822162	807570	-	-	-	-							
						1.0	0.2	248	29.8	7.8	7.8	22.8	22.8	82.5	82.5	5.5	5.5	7.3	5.5	7.3	12	-	-	-	-	822162	807570	-	-	-	-					
						4.4	0.2	236	29.7	7.8	7.8	23.1	23.1	81.3	81.3	5.4	5.4	10.9	5.4	10.9	18	-	-	-	-	822162	807570	-	-	-	-					
						4.4	0.2	253	29.7	7.8	7.8	23.1	23.1	81.3	81.3	5.4	5.4	10.9	5.4	10.9	16	-	-	-	-	822162	807570	-	-	-	-					
						7.7	0.1	254	29.7	7.8	7.8	23.2	23.2	82.5	82.5	5.5	5.5	13.0	5.5	13.0	18	-	-	-	-	822162	807570	-	-	-	-					
						7.7	0.1	260	29.7	7.8	7.8	23.2	23.2	82.5	82.5	5.5	5.5	13.0	5.5	13.0	17	-	-	-	-	822162	807570	-	-	-	-					
SR4A	Cloudy	Calm	09:44	9.4	Surface	1.0	0.2	280	28.9	7.9	7.9	27.1	27.1	86.9	86.9	5.8	5.8	18.2	5.8	18.2	19	-	-	817192	807827	-	-	-	-							
						1.0	0.2	282	28.9	7.9	7.9	27.1	27.1	86.8	86.8	5.8	5.8	18.2	5.8	18.2	18	-	-	-	-	817192	807827	-	-	-	-					
						4.7	-	-	28.8	7.9	7.9	27.2	27.2	86.2	86.2	5.7	5.7	20.7	5.7	20.7	20	-	-	-	-	817192	807827	-	-	-	-					
						4.7	-	-	28.8	7.9	7.9	27.2	27.2	86.2	86.2	5.7	5.7	20.7	5.7	20.7	20	-	-	-	-	817192	807827	-	-	-	-					
						8.4	0.2	282	28.8	7.8	7.8	27.2	27.2	86.4	86.4	5.7	5.7	24.7	5.7	24.7	21	-	-	-	-	817192	807827	-	-	-	-					
						8.4	0.2	297	28.8	7.8	7.8	27.2	27.2	86.4	86.4	5.7	5.7	24.5	5.7	24.5	23	-	-	-	-	817192	807827	-	-	-	-					
SR5A	Cloudy	Calm	09:28	4.6	Surface	1.0	0.2	278	28.9	7.8	7.8	26.6	26.6	86.8	86.8	5.8	5.8	14.5	5.8	14.5	15	-	-	816611	810712	-	-	-	-							
						1.0	0.3	287	28.9	7.8	7.8	26.6	26.6	86.8	86.8	5.8	5.8	14.5	5.8	14.5	16	-	-	-	-	816611	810712	-	-	-	-					
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
						3.6	0.2	272	28.9	7.8	7.8	26.5	26.5	87.0	87.0	5.8	5.8	16.4	5.8	16.4	18	-	-	-	-	816611	810712	-	-	-	-					
						3.6	0.2	283	28.9	7.8	7.8	26.5	26.5	87.1	87.1	5.8	5.8	16.4	5.8	16.4	19	-														

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

Water Quality Monitoring

Water Quality Monitoring Results on 12 October 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	Value	DA	Value	DA	Value	DA
C1	Fine	Rough	18:04	8.8	Surface	1.0	0.2	157	29.3	7.9	7.9	27.0	27.0	94.0	94.0	6.2	3.9	4	91	815636	804263	<0.2	0.7													
						1.0	0.2	171	29.3	7.9	7.9	27.0	27.0	94.0	6.2	3.9	4	91																		
					Middle	4.4	0.1	154	29.3	7.9	7.9	27.0	27.0	93.1	6.1	4.3	5	94																		
						4.4	0.1	168	29.3	7.9	7.9	27.0	27.0	93.0	6.1	4.4	4	94																		
					Bottom	7.8	0.1	206	29.1	7.9	7.9	29.7	29.7	89.9	5.9	7.0	5	96																		
						7.8	0.1	224	29.1	7.9	7.9	29.7	29.7	90.2	5.9	6.9	5	97																		
C2	Sunny	Rough	16:43	12.6	Surface	1.0	0.3	103	29.9	7.8	7.8	22.3	22.3	85.1	85.1	5.7	14.8	4	91	825685	806961	<0.2	2.1													
						1.0	0.3	106	29.9	7.8	7.8	22.3	22.3	85.1	5.7	14.8	5	92																		
					Middle	6.3	0.1	38	29.7	7.8	7.8	25.4	25.4	84.7	5.6	16.2	18	94																		
						6.3	0.1	41	29.7	7.8	7.8	25.4	25.4	84.7	5.6	16.2	16	94																		
					Bottom	11.6	0.2	324	29.7	7.9	7.9	26.5	26.5	86.0	5.7	10.7	24	96																		
						11.6	0.2	354	29.7	7.9	7.9	26.5	26.5	86.0	5.7	10.7	23	96																		
C3	Cloudy	Moderate	18:26	12.0	Surface	1.0	0.4	117	29.7	7.9	7.9	27.9	27.9	85.9	85.9	5.6	4.0	5	95	822125	817816	<0.2	0.4													
						1.0	0.4	117	29.7	7.9	7.9	27.9	27.9	85.9	5.6	4.0	6	94																		
					Middle	6.0	0.3	86	29.7	7.9	7.9	28.1	28.1	85.9	5.6	4.6	5	97																		
						6.0	0.4	89	29.7	7.9	7.9	28.1	28.1	85.9	5.6	4.6	6	96																		
					Bottom	11.0	0.2	87	29.6	7.9	7.9	28.5	28.5	87.1	5.7	5.0	5	99																		
						11.0	0.2	87	29.6	7.9	7.9	28.5	28.5	87.1	5.7	5.0	5	99																		
IM1	Fine	Rough	17:46	7.7	Surface	1.0	0.2	125	29.7	7.9	7.9	25.8	25.8	97.3	97.3	6.4	3.8	5	91	818368	806447	<0.2	0.8													
						1.0	0.2	133	29.7	7.9	7.9	25.8	25.8	97.3	6.4	3.9	4	92																		
					Middle	3.9	0.2	149	29.7	7.9	7.9	26.0	26.0	95.5	6.3	5.0	5	94																		
						3.9	0.2	156	29.7	7.9	7.9	26.0	26.0	95.2	6.3	5.3	4	94																		
					Bottom	6.7	0.1	87	29.2	7.9	7.9	27.8	27.8	90.1	5.9	10.4	4	96																		
						6.7	0.1	88	29.2	7.9	7.9	27.8	27.8	90.4	5.9	10.1	4	97																		
IM2	Fine	Rough	17:40	8.4	Surface	1.0	0.1	107	29.6	7.9	7.9	26.0	26.0	97.7	97.7	6.4	3.5	3	91	818859	806175	<0.2	1.0													
						1.0	0.1	112	29.6	7.9	7.9	26.0	26.0	97.7	6.5	3.5	5	91																		
					Middle	4.2	0.1	59	29.4	7.9	7.9	26.9	26.9	92.7	6.1	7.0	4	94																		
						4.2	0.1	63	29.4	7.9	7.9	26.9	26.9	92.7	6.1	7.0	5	94																		
					Bottom	7.4	0.1	70	29.4	7.9	7.9	26.9	26.9	92.0	6.1	8.0	5	96																		
						7.4	0.1	75	29.4	7.9	7.9	26.9	26.9	92.0	6.1	8.3	7	96																		
IM3	Fine	Rough	17:34	9.1	Surface	1.0	0.1	97	29.7	7.9	7.9	25.8	25.8	96.4	96.4	6.4	3.9	3	90	819414	806021	<0.2	1.0													
						1.0	0.1	102	29.7	7.9	7.9	25.8	25.8	96.4	6.4	3.9	4	90																		
					Middle	4.6	0.2	47	29.4	7.9	7.9	27.1	27.1	93.7	6.2	5.8	4	91																		
						4.6	0.2	51	29.4	7.9	7.9	27.1	27.1	93.5	6.2	6.0	4	91																		
					Bottom	8.1	0.2	82	29.1	7.9	7.9	28.4	28.4	88.1	5.8	19.6	9	94																		
						8.1	0.2	88	29.1	7.9	7.9	28.4	28.4	88.4	5.8	19.0	11	94																		
IM4	Sunny	Rough	17:25	8.2	Surface	1.0	0.3	120	29.5	7.9	7.9	26.6	26.6	95.9	6.3	4.5	6	91	819571	805035	<0.2	0.8														
						1.0	0.3	128	29.5	7.9	7.9	26.5	26.5	95.8	6.3	4.7	5	91																		
					Middle	4.1	0.2	87	29.2	7.9	7.9	28.7	28.6	91.8	6.0	10.7	8	94																		
						4.1	0.2	89	29.3	7.9	7.9	28.5	28.5	92.1	6.0	9.7	6	94																		
					Bottom	7.2	0.2	96	29.1	7.9	7.9	28.9	29.0	89.6	5.9	21.6	19	96																		
						7.2	0.2	99	29.1	7.9	7.9	29.0	29.0	90.0	5.9	22.4	20	96																		
IM5	Sunny	Rough	17:12	6.9	Surface	1.0	0.3	108	29.5	7.9	7.9	26.4	26.4	96.2	96.1	6.4	4.5	7	91	820548	804914	<0.2	1.0													
						1.0	0.4	108	29.5	7.9	7.9	26.4	26.4	96.0	6.3	4.6	7	91																		
					Middle	3.5	0.3	70	29.4	7.9	7.9	27.2	27.3	92.0	6.1	7.3	5	94																		
						3.5	0.3	74	29.4	7.9	7.9	27.4	27.3	91.6	6.0	8.1	5	94																		
					Bottom	5.9	0.2	61	29.1	7.9	7.9	28.9	28.9	89.8	5.9	17.0	6	96																		
						5.9	0.2	61	29.1	7.9	7.9	28.9	28.9	89.9	5.9	17.0	6	96																		
IM6	Sunny	Rough	17:00	6.9	Surface	1.0	0.2	108	29.6	7.9	7.9	25.7	25.7	95.9	95.8	6.3	5.0	4	92	821054	805814	<0.2	1.1													
						1.0	0.2	111	29.6	7.9	7.9	25.7	25.7	95.7	6.3	5.1	6	92																		
					Middle	3.5	0.2	91	29.2	7.9	7.9	27.4	27.4	87.7	5.8	14.4	8	94																		
						3.5	0.2	98	29.2	7.9	7.9	27.4	27.4	87.6	5.8	14.9	9	94																		
					Bottom	5.9	0.1	138	29.1	7.9	7.9	27.8	27.8	86.9	5.7	19.3	8	96																		
						5.9	0.1	147	29.1	7.9	7.9	27.8	27.8	87.0	5.7	18.7	9	96																		
IM7	Sunny	Rough	16:51	8.7	Surface	1.0	0.3	108	30.0	7.8	7.8	21.6	21.6	91.9	92.0	6.2	4.0	4	92	821334	806818	<0.2	1.9													
						1.0	0.3	114	30.0	7.8	7.8	21.6	21.6	92.0	6.2	4.1	4	92																		
					Middle	4.4	0.3	60	29.6	7.9	7.9	25.8	25.8	92.5	6.1	7.4	8	94																		
						4.4	0.3	60	29.6	7.9	7.9	25.7	25.8	92.4	6.1	7.5	8	94																		
					Bottom	7.7	0.2	61	29.2	7.9	7.9	27.2	27.2	88.7	5.9	14.8	7	96																		
						7.7	0.2	64	29.2	7.9	7.9	27.2	27.2	88.7	5.9	14.8	8	96																		
IM8	Cloudy	Rough	17:07	8.7	Surface	1.0	0.3	97	30.3	7.8	7.8	20.9	20.9	90.9	90.9	6.1	5.8	3	92	821697	807832	<0.2	1.8													
						1.0	0.3	97	30.3	7.8	7.8	20.9	20.9	90.9	6.1	6.0	3	92																		
					Middle	4.4	0.3	40	29.9	7.9	7.9	24.9	24.9	89.7	5.9	11.5	4	94																		
						4.4	0.3	43	29.9	7.9	7.9	24.9	24.9	89.7	5.9	11.5	4	94																		
					Bottom	7.7	0.2	84	29.5	7.9	7.9	26.7	26.7	88.9	5.9	18.5	6	96																		
						7.7	0.2	89	29.5	7.9	7.9	26.7	26.7	88.9	5.9	18.5	6	96																		

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 October 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	Value	DA	Value	DA	Value	DA
IM9	Cloudy	Rough	17:16	7.8	Surface	1.0	0.2	100	30.1	7.9	7.9	22.8	22.8	90.8	90.8	6.0	6.0	5.3	6.0	5	93	95	822101	808826	<0.2	1.6	1.3	<0.2	1.7							
						1.0	0.3	106	30.1	7.9	7.9	22.8	22.8	90.8	90.8	6.0	6.0	5.3	6.0	4	93	95	822101	808826	<0.2	1.7	1.3	<0.2	1.4							
						3.9	0.3	112	29.9	7.9	7.9	25.3	25.3	90.6	90.6	6.0	6.0	11.8	14.6	5	95	95	822101	808826	<0.2	1.6	1.3	<0.2	1.4							
						3.9	0.3	113	29.9	7.9	7.9	25.3	25.3	90.6	90.6	6.0	6.0	11.8	14.6	5	94	94	822101	808826	<0.2	1.6	1.3	<0.2	1.4							
						6.8	0.2	77	29.8	7.9	7.9	25.4	25.4	91.2	91.2	6.0	6.0	26.7	6.0	23	97	97	822101	808826	<0.2	0.8	1.3	<0.2	1.6							
						6.8	0.2	84	29.8	7.9	7.9	25.4	25.4	91.2	91.2	6.0	6.0	26.7	6.0	20	97	97	822101	808826	<0.2	0.9	1.3	<0.2	1.2							
IM10	Cloudy	Rough	17:24	7.0	Surface	1.0	0.4	114	30.1	7.8	7.8	21.1	21.1	87.6	87.6	5.9	5.9	6.6	6.0	6	93	96	822231	809824	<0.2	1.8	1.7	<0.2	2.0							
						1.0	0.4	119	30.1	7.8	7.8	21.1	21.1	87.6	87.6	5.9	5.9	6.6	6.0	5	94	94	822231	809824	<0.2	1.8	1.7	<0.2	2.0							
						3.5	0.4	93	29.9	7.9	7.9	23.1	23.1	87.4	87.4	5.8	5.8	9.8	9.0	4	96	96	822231	809824	<0.2	1.8	1.7	<0.2	1.8							
						3.5	0.4	94	29.9	7.9	7.9	23.1	23.1	87.4	87.4	5.8	5.8	9.8	9.0	5	96	96	822231	809824	<0.2	1.4	1.7	<0.2	1.5							
						6.0	0.2	101	29.8	7.9	7.9	25.4	25.4	88.6	88.6	5.9	5.9	10.5	5.9	9	97	97	822231	809824	<0.2	2.0	1.7	<0.2	1.5							
						6.0	0.3	103	29.8	7.9	7.9	25.4	25.4	88.6	88.6	5.9	5.9	10.5	5.9	10	97	97	822231	809824	<0.2	1.2	1.7	<0.2	1.2							
IM11	Cloudy	Rough	17:35	8.4	Surface	1.0	0.4	95	30.0	7.9	7.9	22.9	22.9	90.3	90.3	6.0	6.0	15.0	6.0	8	94	96	821520	810541	<0.2	1.6	1.2	<0.2	1.6							
						1.0	0.4	96	30.0	7.9	7.9	22.9	22.9	90.3	90.3	6.0	6.0	15.0	6.0	9	94	96	821520	810541	<0.2	1.6	1.2	<0.2	1.6							
						4.2	0.3	80	29.8	7.9	7.9	25.4	25.4	89.1	89.1	5.9	5.9	17.4	17.7	13	96	96	821520	810541	<0.2	1.3	1.2	<0.2	1.3							
						4.2	0.3	81	29.8	7.9	7.9	25.4	25.4	89.1	89.1	5.9	5.9	17.4	17.7	12	96	96	821520	810541	<0.2	1.4	1.2	<0.2	1.4							
						7.4	0.2	84	29.6	7.9	7.9	26.4	26.4	87.9	87.9	5.8	5.8	20.8	5.8	20	98	98	821520	810541	<0.2	0.6	1.2	<0.2	0.6							
						7.4	0.3	91	29.6	7.9	7.9	26.4	26.4	87.9	87.9	5.8	5.8	20.8	5.8	22	99	99	821520	810541	<0.2	0.6	1.2	<0.2	0.6							
IM12	Cloudy	Rough	17:42	9.3	Surface	1.0	0.4	91	29.9	7.9	7.9	23.5	23.5	89.3	89.3	5.9	5.9	10.0	6.0	12	94	96	821172	811523	<0.2	1.3	1.1	<0.2	1.3							
						1.0	0.4	93	29.9	7.9	7.9	23.5	23.5	89.3	89.3	5.9	5.9	10.1	6.0	13	94	96	821172	811523	<0.2	1.3	1.1	<0.2	1.3							
						4.7	0.3	99	29.8	7.9	7.9	25.4	25.4	85.8	85.8	5.7	5.7	11.0	12.1	11	96	96	821172	811523	<0.2	1.1	1.1	<0.2	1.2							
						4.7	0.3	100	29.8	7.9	7.9	25.4	25.4	85.8	85.8	5.7	5.7	11.0	12.1	12	97	96	821172	811523	<0.2	1.2	1.1	<0.2	1.2							
						8.3	0.2	113	29.6	7.9	7.9	26.7	26.7	85.9	85.9	5.7	5.7	15.3	5.7	16	99	99	821172	811523	<0.2	0.6	1.1	<0.2	1.0							
						8.3	0.2	113	29.6	7.9	7.9	26.7	26.7	85.9	85.9	5.7	5.7	15.3	5.7	16	98	98	821172	811523	<0.2	1.0	1.1	<0.2	1.0							
SR2	Cloudy	Moderate	18:04	5.0	Surface	1.0	0.3	87	29.9	7.9	7.9	25.1	25.1	91.5	91.5	6.0	6.0	4.7	6.0	7	95	96	821479	814173	<0.2	0.9	0.8	<0.2	0.9							
						1.0	0.4	89	29.9	7.9	7.9	25.1	25.1	91.5	91.5	6.0	6.0	4.7	6.0	8	96	96	821479	814173	<0.2	0.9	0.8	<0.2	0.9							
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
						4.0	0.2	88	29.7	7.9	7.9	26.7	26.7	89.1	89.1	5.9	5.9	10.0	5.9	7	97	97	821479	814173	<0.2	0.7	0.8	<0.2	0.7							
						4.0	0.2	92	29.7	7.9	7.9	26.7	26.7	89.1	89.1	5.9	5.9	10.0	5.9	7	97	97	821479	814173	<0.2	0.7	0.8	<0.2	0.7							
SR3	Cloudy	Rough	17:01	9.3	Surface	1.0	0.2	94	30.2	7.8	7.8	21.1	21.1	91.0	91.0	6.1	6.1	5.9	6.1	5	-	-	822145	807555	-	-	-	-	-	-						
						1.0	0.2	98	30.2	7.8	7.8	21.1	21.1	91.0	91.0	6.1	6.1	5.9	6.1	4	-	-	822145	807555	-	-	-	-	-	-						
						4.7	0.4	58	29.9	7.9	7.9	24.9	24.9	91.2	91.2	6.0	6.0	12.8	6.1	5	-	-	822145	807555	-	-	-	-	-	-						
						4.7	0.4	59	29.9	7.9	7.9	24.9	24.9	91.2	91.2	6.0	6.0	12.8	6.1	5	-	-	822145	807555	-	-	-	-	-	-						
						8.3	0.2	66	29.6	7.9	7.9	26.6	26.6	91.0	91.0	6.0	6.0	21.3	6.0	8	-	-	822145	807555	-	-	-	-	-	-						
						8.3	0.3	69	29.6	7.9	7.9	26.6	26.6	91.0	91.0	6.0	6.0	21.3	6.0	10	-	-	822145	807555	-	-	-	-	-	-						
SR4A	Fine	Moderate	18:25	8.6	Surface	1.0	0.5	93	29.7	7.9	7.9	26.3	26.3	96.4	96.4	6.3	6.3	13.2	6.3	13	-	-	817190	807796	-	-	-	-	-	-						
						1.0	0.5	97	29.7	7.9	7.9	26.3	26.3	96.4	96.4	6.3	6.3	13.4	6.3	13	-	-	817190	807796	-	-	-	-	-	-						
						4.3	0.4	104	29.7	7.9	7.9	26.3	26.3	95.9	95.9	6.3	6.3	13.3	6.3	12	-	-	817190	807796	-	-	-	-	-	-						
						4.3	0.4	113	29.7	7.9	7.9	26.2	26.2	95.9	95.9	6.3	6.3	13.5	6.3	12	-	-	817190	807796	-	-	-	-	-	-						
						7.6	0.3	63	29.7	7.9	7.9	26.6	26.6	94.5	94.6	6.2	6.2	19.2	6.2	12	-	-	817190	807796	-	-	-	-	-	-						
						7.6	0.3	64	29.7	7.9	7.9	26.5	26.5	94.6	94.6	6.2	6.2	17.7	6.2	12	-	-	817190	807796	-	-	-	-	-	-						
SR5A	Fine	Calm	18:40	5.3	Surface	1.0	0.1	86	29.8	7.9	7.9	27.0	27.0	98.1	98.1	6.4	6.4	7.7	6.4	9	-	-	816594	810700	-	-	-	-	-	-						
						1.0	0.2	90	29.8	7.9	7.9	27.0	27.0	98.0	98.0	6.4	6.4	7.7	6.4	8	-	-	816594	810700	-	-	-	-	-	-						
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	816594	810700	-	-	-	-	-	-			
						4.3	0.1	100	29.8	7.9	7.9	27.1	27.1	96.8	96.8	6.3	6.3	6.8	6.3	7	-	-	816594	810700	-	-	-	-	-	-						
						4.3	0.1	104	29.8	7.9	7.9	27.1	27.1	96.0	96.0	6.3	6.3	6.9	6.3	8	-	-	816594	810700	-	-	-	-	-	-						
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	816594	810700	-	-	-	-	-				
SR6	Fine	Calm	19:03	4.3	Surface	1.0	0.1	111	29.8	7.9	7.9	26.4	26.4	92.0	92.0	6.0	6.0	11.9	6.0	7	-	-	817893	814658	-	-										

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

Water Quality Monitoring

Water Quality Monitoring Results on **12 October 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	DA	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA
									Value	DA	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA
C1	Sunny	Moderate	13:07	8.4	Surface	1.0	0.4	75	29.8	7.9	7.9	25.4	25.4	94.0	93.9	6.2	6.1	5.2	11.9	10	9	89	92	815607	804266	<0.2	0.8	0.6		
						1.0	0.4	79	29.8	7.9	7.9	25.4	25.4	93.8	93.9	6.2	6.1	5.4	9	89	92									
					Middle	4.2	0.4	54	29.3	29.3	7.9	7.9	26.8	26.8	90.6	90.6	6.0	6.1	8.9	8	92	9	92	92	<0.2	0.7				
						4.2	0.4	54	29.3	29.3	7.9	7.9	26.8	26.8	90.6	90.6	6.0	6.1	9.0	8	92	9	92	92	<0.2	0.7				
					Bottom	7.4	0.4	48	29.1	29.1	7.9	7.9	28.0	28.0	88.6	88.6	5.8	5.8	21.6	5.8	8	96	8	96	96	<0.2	1.5			
						7.4	0.4	50	29.1	29.1	7.9	7.9	27.9	28.0	88.6	88.6	5.8	5.8	21.0	5.8	8	96	8	96	96	<0.2	0.6			
C2	Sunny	Moderate	14:10	11.7	Surface	1.0	0.2	343	30.3	30.3	7.8	7.8	20.6	20.6	82.3	82.3	5.5	5.5	6.9	14.3	6	5	92	94	825668	806936	<0.2	1.6		
						1.0	0.2	345	30.3	30.3	7.8	7.8	20.6	20.6	82.3	82.3	5.5	5.5	6.9	5	92	6	94	94	<0.2	1.5				
					Middle	5.9	0.2	355	29.9	29.9	7.8	7.8	23.9	23.9	81.8	81.8	5.4	5.4	12.4	6	95	6	95	95	<0.2	1.6				
						5.9	0.2	327	29.9	29.9	7.8	7.8	23.9	23.9	81.8	81.8	5.4	5.4	12.4	6	95	6	96	96	<0.2	1.0				
					Bottom	10.7	0.3	343	29.7	29.7	7.8	7.8	27.2	27.2	85.4	85.4	5.6	5.6	23.5	5.6	17	18	96	18	96	96	<0.2	1.0		
						10.7	0.3	344	29.7	29.7	7.8	7.8	27.2	27.2	85.4	85.4	5.6	5.6	23.5	5.6	18	18	96	18	96	96	<0.2	1.0		
C3	Sunny	Moderate	12:23	12.0	Surface	1.0	0.6	256	29.8	29.8	7.9	7.9	26.8	26.8	88.6	88.6	5.8	5.6	4.2	9.2	6	5	95	97	822107	817805	<0.2	1.0		
						1.0	0.6	275	29.8	29.8	7.9	7.9	26.8	26.8	88.6	88.6	5.8	5.6	4.2	5	94	6	96	96	<0.2	0.9				
					Middle	6.0	0.5	252	29.5	29.5	7.9	7.9	27.9	27.9	83.0	83.0	5.4	5.4	7.8	9	96	6	96	96	<0.2	0.9				
						6.0	0.6	256	29.5	29.5	7.9	7.9	27.9	27.9	83.0	83.0	5.4	5.4	7.8	8	97	6	96	96	<0.2	1.2				
					Bottom	11.0	0.4	269	29.5	29.5	7.9	7.9	28.4	28.4	85.1	85.1	5.6	5.6	15.5	5.6	10	10	99	10	99	98	<0.2	1.2		
						11.0	0.4	293	29.5	29.5	7.9	7.9	28.4	28.4	85.1	85.1	5.6	5.6	15.5	5.6	10	10	98	10	98	98	<0.2	0.7		
IM1	Sunny	Moderate	13:24	7.4	Surface	1.0	0.4	21	29.6	29.6	7.9	7.9	25.8	25.8	91.0	91.0	6.0	5.9	6.7	15.4	7	6	88	92	818350	806446	<0.2	1.1		
						1.0	0.4	21	29.6	29.6	7.9	7.9	25.8	25.8	90.9	91.0	6.0	5.9	6.9	6	89	6	91	91	<0.2	1.0				
					Middle	3.7	0.4	8	29.1	29.1	7.9	7.9	27.6	27.6	88.6	88.6	5.8	5.8	14.6	5.8	6	6	91	6	91	91	<0.2	1.3		
						3.7	0.5	8	29.1	29.1	7.9	7.9	27.6	27.6	88.5	88.6	5.8	5.8	14.8	5.8	6	6	92	6	92	92	<0.2	1.1		
					Bottom	6.4	0.3	355	29.1	29.1	7.9	7.9	27.8	27.8	88.2	88.2	5.8	5.8	24.9	5.8	15	15	96	15	96	96	<0.2	1.4		
						6.4	0.3	327	29.1	29.1	7.9	7.9	27.8	27.8	88.2	88.2	5.8	5.8	24.7	5.8	17	17	96	17	96	96	<0.2	1.3		
IM2	Sunny	Moderate	13:30	8.3	Surface	1.0	0.3	14	29.9	29.9	7.9	7.9	24.4	24.4	90.5	90.6	6.0	6.0	5.3	12.2	8	6	89	92	818858	806182	<0.2	1.2		
						1.0	0.3	14	29.9	29.9	7.9	7.9	24.4	24.4	90.6	90.6	6.0	6.0	5.4	6	90	7	91	91	<0.2	1.2				
					Middle	4.2	0.4	8	29.4	29.4	7.9	7.9	26.2	26.2	89.8	89.8	5.9	5.9	6.9	7	91	7	91	91	<0.2	1.0				
						4.2	0.4	8	29.4	29.4	7.9	7.9	26.2	26.2	89.8	89.8	5.9	5.9	7.1	7	91	7	91	91	<0.2	0.9				
					Bottom	7.3	0.3	356	29.0	29.0	7.9	7.9	28.0	28.0	87.0	87.1	5.7	5.7	24.2	5.7	8	8	94	8	94	94	<0.2	1.3		
						7.3	0.3	328	29.0	29.0	7.9	7.9	28.0	28.0	87.1	87.1	5.7	5.7	24.1	5.7	8	8	94	8	94	94	<0.2	1.2		
IM3	Sunny	Moderate	13:39	8.6	Surface	1.0	0.3	21	29.8	29.8	7.9	7.9	24.6	24.6	90.5	90.5	6.0	6.0	5.1	11.8	5	5	91	94	819393	806015	<0.2	0.8		
						1.0	0.3	22	29.8	29.8	7.9	7.9	24.5	24.6	90.5	90.5	6.0	6.0	5.3	5	92	5	92	92	<0.2	1.3				
					Middle	4.3	0.5	20	29.3	29.3	7.9	7.9	26.7	26.7	88.7	88.7	5.9	5.9	9.3	8	94	6	94	94	<0.2	0.7				
						4.3	0.5	20	29.3	29.3	7.9	7.9	26.7	26.7	88.7	88.7	5.9	5.9	9.6	9	94	6	94	94	<0.2	0.6				
					Bottom	7.6	0.3	9	29.1	29.1	7.9	7.9	28.3	28.3	86.7	86.8	5.7	5.7	20.8	5.7	19	19	96	19	96	96	<0.2	0.5		
						7.6	0.3	9	29.1	29.1	7.9	7.9	28.3	28.3	86.8	86.8	5.7	5.7	20.9	5.7	20	20	96	20	96	96	<0.2	0.4		
IM4	Sunny	Moderate	13:46	7.8	Surface	1.0	0.3	-	29.6	29.6	7.9	7.9	25.1	25.1	90.4	90.4	6.0	5.9	7.3	14.1	7	7	91	94	819553	805053	<0.2	1.0		
						1.0	0.3	-	29.6	29.6	7.9	7.9	25.1	25.1	90.3	90.4	6.0	5.9	7.3	7	91	7	91	91	<0.2	1.1				
					Middle	3.9	0.4	42	29.2	29.2	7.9	7.9	27.2	27.2	88.4	88.5	5.8	5.8	11.3	5.8	8	8	94	6	94	94	<0.2	1.0		
						3.9	0.4	44	29.2	29.2	7.9	7.9	27.2	27.2	88.5	88.5	5.8	5.8	11.2	5.8	6	6	94	6	94	94	<0.2	1.1		
					Bottom	6.8	0.4	13	29.1	29.1	7.9	7.9	27.9	27.9	87.3	87.3	5.8	5.8	23.7	5.8	10	10	96	10	96	96	<0.2	0.9		
						6.8	0.4	13	29.1	29.1	7.9	7.9	27.8	27.9	87.4	87.4	5.8	5.8	23.7	5.8	8	8	97	8	97	97	<0.2	0.8		
IM5	Sunny	Moderate	13:56	7.1	Surface	1.0	0.5	15	29.7	29.7	7.9	7.9	25.1	25.1	91.7	91.7	6.1	6.0	7.1	18.5	6	7	93	96	820567	804914	<0.2	1.0		
						1.0	0.6	15	29.7	29.7	7.9	7.9	25.1	25.1	91.6	91.7	6.1	6.1	7.5	7	94	7	96	96	<0.2	1.0				
					Middle	3.6	0.4	13	29.2	29.2	7.9	7.9	27.3	27.3	88.1	88.1	5.8	5.8	23.1	5.8	7	7	97	7	97	97	<0.2	1.3		
						3.6	0.5	14	29.2	29.2	7.9	7.9	27.3	27.3	88.1	88.1	5.8	5.8	23.2	5.8	7	7	97	7	97	97	<0.2	1.2		
					Bottom	6.1	0.4	10	29.2	29.2	7.9	7.9	27.3	27.3	88.0	88.1	5.8	5.8	25.0	5.8	20	20	97	20	97	97	<0.2	0.7		
						6.1	0.4	10	29.2	29.2	7.9	7.9	27.3	27.3	88.1	88.1	5.8	5.8	25.0	5.8	20	20	97	20	97	97	<0.2	1.0		
IM6	Sunny	Moderate	14:03	6.9	Surface	1.0	0.4	10	30.2	30.2	7.8	7.8	20.7	20.8	88.2	88.2	5.9	5.9	4.5	12.9	5	5	91	94	821065	805845	<0.2	2.1		
						1.0	0.4	10	30.2	30.2	7.8	7.8	20.8	20.8	88.2	88.2	5.9	5.9	4.7	5	92	5	94	94	<0.2	2.2				
					Middle	3.5	0.3	30	29.5	29.5	7.9	7.9	25.4	25.4	88.1	88.1	5.8	5.8	9.8	5.8	8	8	94	7	94	94	<0.2	1.9		
						3.5	0.4	32	29.5	29.5	7.9	7.9	25.4	25.4	88.0	88.1	5.8	5.8	9.8	5.8	7	7	94	7	94	94				





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

**Water Quality Monitoring**

**Water Quality Monitoring Results on 14 October 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	Value	DA	Value	DA	Value	DA
C1	Cloudy	Rough	08:00	9.1	Surface	1.0	0.3	211	28.1	8.0	8.0	30.3	30.3	94.5	94.5	6.2	6.1	4.5	9.0	4	8	86	91	815605	804229	<0.2	0.4	<0.2	0.4							
						1.0	0.3	213	28.1	8.0	8.0	30.3	30.3	94.4	94.5	6.2	6.1	4.5	9.0	4	8	87	91													
					Middle	4.6	0.4	209	28.2	28.2	8.0	8.0	30.3	30.3	91.6	91.6	6.0	6.0	8.3	6.1	7	7	91	91	<0.2	0.4	<0.2	0.4								
						4.6	0.5	211	28.2	28.2	8.0	8.0	30.3	30.3	91.6	91.6	6.0	6.0	8.3	6.1	5	5	92	92	<0.2	0.4	<0.2	0.4								
					Bottom	8.1	0.3	188	28.9	28.9	8.0	8.0	31.7	31.7	91.7	91.7	5.9	5.9	14.3	5.9	13	12	93	94	<0.2	0.2	<0.2	0.2								
						8.1	0.3	190	28.9	28.9	8.0	8.0	31.7	31.7	91.7	91.7	5.9	5.9	14.3	5.9	12	12	94	94	<0.2	0.2	<0.2	0.2								
					C2	Cloudy	Rough	09:23	12.1	Surface	1.0	0.9	166	28.6	28.6	7.9	7.9	27.7	27.7	90.0	90.0	6.0	5.9	7.4	11.3	7	8	92	94	825671	806954	<0.2	0.8	<0.2	1.0	
											1.0	0.9	168	28.6	28.6	7.9	7.9	27.7	27.7	90.0	90.0	6.0	5.9	7.4	11.3	7	8	91	94	<0.2	1.0	<0.2	1.1			
Middle	6.1	0.6	165	29.0						29.0	7.9	7.9	28.3	28.3	87.0	87.0	5.7	5.7	12.4	6.0	8	8	94	95	<0.2	0.9	<0.2	1.0								
	6.1	0.6	178	29.0						29.0	7.9	7.9	28.3	28.3	87.0	87.0	5.7	5.7	12.4	6.0	7	8	95	96	<0.2	0.9	<0.2	1.0								
Bottom	11.1	0.3	164	29.1						29.1	7.9	7.9	30.4	30.4	92.9	92.9	6.0	6.0	14.0	6.0	8	10	97	98	<0.2	0.8	<0.2	0.8								
	11.1	0.3	167	29.1						29.1	7.9	7.9	30.4	30.4	92.9	92.9	6.0	6.0	14.0	6.0	10	10	96	96	<0.2	0.8	<0.2	0.8								
C3	Cloudy	Rough	07:15	12.4						Surface	1.0	0.3	71	28.7	28.7	7.9	7.9	30.8	30.8	86.8	86.8	5.7	5.7	2.6	3.9	6	6	94	97	822125	817797	<0.2	1.5	<0.2	1.5	
											1.0	0.3	76	28.7	28.7	7.9	7.9	30.8	30.8	86.8	86.8	5.7	5.7	2.6	3.9	4	4	95	97	<0.2	1.3	<0.2	1.3			
					Middle	6.2	0.4	95	29.1	29.1	7.9	7.9	31.3	31.3	86.7	86.7	5.6	5.6	4.4	6.0	5	6	97	97	<0.2	0.2	<0.2	0.2								
						6.2	0.4	102	29.1	29.1	7.9	7.9	31.3	31.3	86.7	86.7	5.6	5.6	4.4	6.0	7	6	97	99	<0.2	0.2	<0.2	0.2								
					Bottom	11.4	0.2	93	29.1	29.1	7.9	7.9	31.4	31.4	87.7	87.7	5.7	5.7	4.6	5.7	6	5	99	98	<0.2	0.2	<0.2	0.2								
						11.4	0.2	99	29.1	29.1	7.9	7.9	31.4	31.4	87.7	87.7	5.7	5.7	4.6	5.7	5	5	98	98	<0.2	0.2	<0.2	0.2								
IM1	Cloudy	Rough	08:24	7.7	Surface	1.0	0.3	182	28.2	28.2	8.0	8.0	29.7	29.7	92.0	92.0	6.1	6.1	7.6	9.6	6	7	89	91	818338	806444	<0.2	0.4	<0.2	0.4						
						1.0	0.3	186	28.2	28.2	8.0	8.0	29.7	29.7	92.0	92.0	6.1	6.1	7.6	9.6	6	7	89	91	<0.2	0.4	<0.2	0.4								
					Middle	3.9	0.3	172	28.4	28.4	8.0	8.0	29.7	29.7	91.5	91.5	6.0	6.0	9.9	6.0	9	9	91	92	<0.2	0.4	<0.2	0.4								
						3.9	0.3	182	28.4	28.4	8.0	8.0	29.7	29.7	91.5	91.5	6.0	6.0	9.9	6.0	9	9	92	93	<0.2	0.4	<0.2	0.4								
					Bottom	6.7	0.3	196	28.8	28.8	8.0	8.0	31.3	31.3	92.7	92.7	6.0	6.0	11.3	6.0	8	8	93	94	<0.2	<0.2	<0.2	<0.2								
						6.7	0.3	209	28.8	28.8	8.0	8.0	31.3	31.3	92.7	92.7	6.0	6.0	11.3	6.0	8	8	94	94	<0.2	<0.2	<0.2	<0.2								
IM2	Cloudy	Rough	08:31	8.6	Surface	1.0	0.3	198	28.2	28.2	8.0	8.0	29.7	29.7	92.8	92.8	6.1	6.1	7.6	11.1	8	8	89	90	818860	806185	<0.2	0.3	<0.2	0.3						
						1.0	0.4	217	28.2	28.2	8.0	8.0	29.7	29.7	92.8	92.8	6.1	6.1	7.6	11.1	8	8	90	91	<0.2	0.3	<0.2	0.3								
					Middle	4.3	0.3	192	28.2	28.2	8.0	8.0	30.1	30.1	92.1	92.1	6.1	6.1	9.3	6.1	9	9	91	91	<0.2	0.2	<0.2	0.2								
						4.3	0.4	210	28.2	28.2	8.0	8.0	30.1	30.1	92.1	92.1	6.1	6.1	9.3	6.1	8	8	91	94	<0.2	0.3	<0.2	0.2								
					Bottom	7.6	0.3	182	28.7	28.7	8.0	8.0	31.1	31.1	92.9	92.9	6.0	6.0	16.5	6.0	9	9	94	94	<0.2	0.4	<0.2	0.4								
						7.6	0.3	196	28.7	28.7	8.0	8.0	31.1	31.1	92.9	92.9	6.0	6.0	16.5	6.0	7	7	94	94	<0.2	0.2	<0.2	0.2								
IM3	Cloudy	Rough	08:40	8.8	Surface	1.0	0.5	191	27.9	27.9	8.0	8.0	29.9	29.9	93.7	93.7	6.2	6.2	6.2	6.2	6	6	91	91	819419	806038	<0.2	0.3	<0.2	0.3						
						1.0	0.6	201	27.9	27.9	8.0	8.0	29.9	29.9	93.7	93.7	6.2	6.2	6.2	6.2	5	5	91	94	<0.2	0.3	<0.2	0.3								
					Middle	4.4	0.4	194	28.2	28.2	8.0	8.0	30.2	30.2	92.6	92.6	6.1	6.1	8.8	6.1	5	5	94	94	<0.2	0.3	<0.2	0.3								
						4.4	0.4	195	28.2	28.2	8.0	8.0	30.2	30.2	92.6	92.6	6.1	6.1	8.8	6.1	5	5	94	96	<0.2	0.3	<0.2	0.3								
					Bottom	7.8	0.3	205	28.4	28.4	8.0	8.0	30.4	30.4	94.2	94.2	6.2	6.2	10.5	6.2	8	8	96	96	<0.2	0.3	<0.2	0.3								
						7.8	0.4	205	28.4	28.4	8.0	8.0	30.4	30.4	94.2	94.2	6.2	6.2	10.5	6.2	7	7	96	96	<0.2	0.2	<0.2	0.2								
IM4	Cloudy	Rough	08:48	8.0	Surface	1.0	0.7	185	28.1	28.1	8.0	8.0	30.1	30.1	92.7	92.7	6.1	6.1	7.9	10.6	5	6	91	92	819588	805026	<0.2	0.2	<0.2	0.2						
						1.0	0.7	196	28.1	28.1	8.0	8.0	30.1	30.1	92.7	92.7	6.1	6.1	7.9	10.6	5	6	92	94	<0.2	0.2	<0.2	0.2								
					Middle	4.0	0.5	183	28.3	28.3	8.0	8.0	30.2	30.2	91.7	91.7	6.0	6.0	10.8	6.0	6	6	94	94	<0.2	0.2	<0.2	0.2								
						4.0	0.5	190	28.3	28.3	8.0	8.0	30.2	30.2	91.7	91.7	6.0	6.0	10.8	6.0	6	6	94	96	<0.2	0.3	<0.2	0.3								
					Bottom	7.0	0.5	192	28.6	28.6	8.0	8.0	30.9	30.9	93.1	93.1	6.1	6.1	13.1	6.1	8	8	96	96	<0.2	0.2	<0.2	0.2								
						7.0	0.5	197	28.6	28.6	8.0	8.0	30.9	30.9	93.1	93.1	6.1	6.1	13.1	6.1	6	6	96	96	<0.2	0.3	<0.2	0.3								
IM5	Cloudy	Rough	09:04	7.1	Surface	1.0	0.6	185	28.0	28.0	8.0	8.0	29.7	29.7	93.1	93.1	6.2	6.2	11.9	15.4	13	15	91	92	820567	804936	<0.2	0.4	<0.2	0.3						
						1.0	0.6	188	28.0	28.0	8.0	8.0	29.7	29.7	93.1	93.1	6.2	6.2	11.9	15.4	12	12	92	93	<0.2	0.3	<0.2	0.3								
					Middle	3.6	0.5	189	28.1	28.1	8.0	8.0	29.9	29.9	92.6	92.6	6.1	6.1	15.2	6.1	13	13	93	94	<0.2	0.3	<0.2	0.3								
						3.6	0.5	207	28.1	28.1	8.0	8.0	29.9	29.9	92.6	92.6	6.1	6.1	15.2	6.1	13	13	94	96	<0.2	0.3	<0.2	0.3								
					Bottom	6.1	0.5	188	28.3	28.3	8.0	8.0	30.2	30.2	93.8	93.8	6.2	6.2	19.2	6.2	20	21	96	96	<0.2	0.3	<0.2	0.3								
						6.1	0.5	200	28.3	28.3	8.0	8.0	30.2	30.2	93.8	93.8	6.2	6.2	19.2	6.2	21	21	96	96	<0.2	0.3	<0.2	0.3								
IM6	Cloudy	Rough	09:13	7.0	Surface	1.0	0.5	189																												











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

**Water Quality Monitoring**

**Water Quality Monitoring Results on 17 October 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	Value	DA		
					Value	DA			Value	DA	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA
C1	Cloudy	Moderate	17:23	8.2	Surface	1.0	0.6	44	27.1	8.0	8.0	32.2	32.2	93.9	93.9	6.2	6.2	12.9	6.2	13	13	88	88	92	815612	804228	<0.2	0.4	0.4	0.4		
						1.0	0.6	44	27.1	8.0	8.0	32.2	32.2	93.9	93.9	6.2	6.2	12.9	6.2	11	11	89	89				<0.2	0.3				
					Middle	4.1	0.5	44	27.1	27.1	8.0	8.0	32.2	32.2	93.3	93.3	6.2	6.2	23.7	6.2	23.7	13	13				91	91			<0.2	0.3
						4.1	0.5	46	27.1	27.1	8.0	8.0	32.2	32.2	93.3	93.3	6.2	6.2	23.4	6.2	23.4	13	13				91	91			<0.2	0.3
					Bottom	7.2	0.5	45	27.1	27.1	8.0	8.0	32.2	32.2	95.0	95.0	6.3	6.3	29.4	6.3	29.4	15	15				95	95			<0.2	0.4
						7.2	0.5	47	27.1	27.1	8.0	8.0	32.2	32.2	95.1	95.1	6.3	6.3	29.2	6.3	29.2	14	14				95	95			<0.2	0.4
C2	Cloudy	Moderate	16:12	11.4	Surface	1.0	0.3	184	27.4	27.4	7.9	7.9	29.1	29.1	91.3	91.3	6.1	6.1	8.0	6.1	10	10	89	89	91	825670	806926	<0.2	1.1	1.0	1.0	
						1.0	0.4	191	27.4	27.4	7.9	7.9	29.1	29.1	91.2	91.3	6.1	6.1	8.1	6.1	9	9	89	89				<0.2	1.0			
					Middle	5.7	0.2	220	27.5	27.5	7.9	7.9	30.7	30.7	89.6	89.6	6.0	6.0	15.0	6.0	15.0	11	11	91				91	<0.2			1.0
						5.7	0.2	228	27.5	27.5	7.9	7.9	30.7	30.7	89.5	89.5	6.0	6.0	15.2	6.0	15.2	10	10	91				91	<0.2			1.0
					Bottom	10.4	0.2	257	27.5	27.5	7.9	7.9	30.8	30.8	89.2	89.2	5.9	5.9	16.6	5.9	16.6	10	10	93				93	<0.2			0.8
						10.4	0.2	276	27.5	27.5	7.9	7.9	30.7	30.8	89.2	89.2	5.9	5.9	16.4	5.9	16.4	11	11	94				94	<0.2			0.8
C3	Rainy	Moderate	18:09	12.1	Surface	1.0	0.4	262	27.8	27.8	7.9	7.9	31.8	31.8	88.5	88.5	5.8	5.8	3.9	5.8	8	8	89	89	91	822096	817795	<0.2	0.4	0.4	0.4	
						1.0	0.4	263	27.8	27.8	7.9	7.9	31.8	31.8	88.4	88.5	5.8	5.8	4.3	5.8	8	8	89	89				<0.2	0.4			
					Middle	6.1	0.4	259	28.0	28.0	7.9	7.9	31.9	31.9	86.3	86.3	5.7	5.7	23.9	5.7	23.9	7	7	91				91	<0.2			0.4
						6.1	0.5	264	28.0	28.0	7.9	7.9	31.9	31.9	86.2	86.3	5.7	5.7	24.0	5.7	24.0	8	8	92				92	<0.2			0.4
					Bottom	11.1	0.3	267	28.0	28.0	7.9	7.9	31.9	31.9	85.5	85.4	5.6	5.6	25.2	5.6	25.2	27	27	93				93	<0.2			0.4
						11.1	0.3	274	28.0	28.0	7.9	7.9	31.9	31.9	85.3	85.4	5.6	5.6	25.2	5.6	25.2	28	28	94				94	<0.2			0.4
IM1	Cloudy	Moderate	17:01	7.4	Surface	1.0	0.4	11	27.1	27.1	8.0	8.0	31.7	31.7	92.8	92.8	6.2	6.2	13.0	6.2	12	12	89	89	91	818356	806438	<0.2	0.4	0.4	0.4	
						1.0	0.5	11	27.1	27.1	8.0	8.0	31.7	31.7	92.8	92.8	6.2	6.2	13.0	6.2	14	14	89	89				<0.2	0.4			
					Middle	3.7	0.4	18	27.1	27.1	8.0	8.0	31.8	31.8	92.7	92.7	6.2	6.2	16.1	6.2	16.1	13	13	91				91	<0.2			0.4
						3.7	0.4	18	27.1	27.1	8.0	8.0	31.8	31.8	92.7	92.7	6.2	6.2	16.2	6.2	15	15	91	91				<0.2	0.4			
					Bottom	6.4	0.4	26	27.0	27.0	8.0	8.0	31.8	31.8	94.5	94.5	6.3	6.3	32.4	6.3	32.4	15	15	94				94	<0.2			0.4
						6.4	0.4	27	27.0	27.0	8.0	8.0	31.8	31.8	94.5	94.5	6.3	6.3	32.4	6.3	32.4	14	14	94				94	<0.2			0.4
IM2	Cloudy	Moderate	16:55	8.1	Surface	1.0	0.2	15	27.1	27.1	8.0	8.0	32.0	32.0	92.6	92.6	6.2	6.2	11.2	6.2	10	10	91	91	93	818842	806196	<0.2	0.4	0.5	0.5	
						1.0	0.2	16	27.1	27.1	8.0	8.0	32.0	32.0	92.6	92.6	6.2	6.2	11.4	6.2	10	10	92	92				<0.2	0.4			
					Middle	4.1	0.2	358	27.1	27.1	8.0	8.0	32.1	32.1	91.7	91.8	6.1	6.1	18.2	6.1	18.2	9	9	92				92	<0.2			0.5
						4.1	0.2	329	27.1	27.1	8.0	8.0	32.1	32.1	91.8	91.8	6.1	6.1	18.2	6.1	18.2	10	10	93				93	<0.2			0.4
					Bottom	7.1	0.2	-	27.1	27.1	8.0	8.0	32.1	32.1	94.3	94.4	6.3	6.3	21.1	6.3	21.1	10	10	93				93	0.4			0.6
						7.1	0.2	-	27.1	27.1	8.0	8.0	32.1	32.1	94.4	94.4	6.3	6.3	21.0	6.3	21.0	10	10	94				94	<0.2			0.4
IM3	Cloudy	Moderate	16:47	8.0	Surface	1.0	0.2	292	27.0	27.0	8.0	8.0	31.6	31.7	93.9	93.9	6.3	6.3	15.2	6.3	15	15	91	91	92	819426	806016	<0.2	0.5	0.5	0.5	
						1.0	0.2	302	27.0	27.0	8.0	8.0	31.7	31.7	93.9	93.9	6.3	6.3	15.2	6.3	15	15	91	91				<0.2	0.5			
					Middle	4.0	0.2	307	26.9	26.9	8.0	8.0	31.7	31.7	93.7	93.7	6.3	6.3	18.9	6.3	18.9	17	17	91				91	<0.2			0.6
						4.0	0.2	312	26.9	26.9	8.0	8.0	31.7	31.7	93.7	93.7	6.3	6.3	19.0	6.3	19.0	17	17	92				92	<0.2			0.6
					Bottom	7.0	0.2	306	27.0	27.0	8.0	8.0	31.8	31.8	94.3	94.4	6.3	6.3	33.7	6.3	33.7	18	18	93				93	<0.2			0.5
						7.0	0.2	318	27.0	27.0	8.0	8.0	31.8	31.8	94.4	94.4	6.3	6.3	32.9	6.3	32.9	17	17	93				93	<0.2			0.6
IM4	Cloudy	Moderate	16:38	7.5	Surface	1.0	0.3	307	27.1	27.1	8.0	8.0	31.6	31.6	92.5	92.5	6.2	6.2	19.7	6.2	15	15	91	91	93	819571	805028	<0.2	0.6	0.5	0.5	
						1.0	0.3	326	27.1	27.1	8.0	8.0	31.6	31.6	92.5	92.5	6.2	6.2	19.8	6.2	19.8	16	16	92				92	<0.2			0.5
					Middle	3.8	0.3	315	27.1	27.1	8.0	8.0	31.6	31.6	92.4	92.4	6.2	6.2	21.9	6.2	21.9	19	19	93				93	<0.2			0.4
						3.8	0.3	319	27.1	27.1	8.0	8.0	31.6	31.6	92.4	92.4	6.2	6.2	21.9	6.2	21.9	17	17	94				94	<0.2			0.4
					Bottom	6.5	0.3	312	27.1	27.1	8.0	8.0	31.6	31.6	92.4	92.4	6.2	6.2	24.4	6.2	24.4	18	18	93				93	<0.2			0.5
						6.5	0.3	330	27.1	27.1	8.0	8.0	31.6	31.6	92.4	92.4	6.2	6.2	24.5	6.2	24.5	18	18	92				92	<0.2			0.4
IM5	Cloudy	Moderate	16:26	6.6	Surface	1.0	0.4	311	27.2	27.2	8.0	8.0	31.4	31.4	93.3	93.3	6.2	6.2	16.5	6.2	17	17	91	91	91	820577	804907	<0.2	0.6	0.6	0.6	
						1.0	0.4	336	27.2	27.2	8.0	8.0	31.4	31.4	93.3	93.3	6.2	6.2	16.5	6.2	18	18	91	91				<0.2	0.6			
					Middle	3.3	0.3	323	27.2	27.2	8.0	8.0	31.6	31.6	93.1	93.1	6.2	6.2	21.0	6.2	21.0	18	18	89				89	<0.2			0.6
						3.3	0.4	352	27.2	27.2	8.0	8.0	31.6	31.6	93.1	93.1	6.2	6.2	21.2	6.2	21.2	18	18	89				89	<0.2			0.6
					Bottom	5.6	0.3	331	27.1	27.1	8.0	8.0	31.6	31.6	94.7	94.7	6.3	6.3	26.1	6.3	26.1	26	26	92				92	<0.2			0.7
						5.6	0.4	331	27.1	27.1	8.0	8.0	31.6	31.6	95.6	95.6	6.4	6.4	26.0	6.4	26.0	24	24	92				92	<0.2			0.5
IM6	Cloudy	Moderate	16:19	6.5	Surface	1.0	0.4	274	27.3	27.3	7.9	7.9	31.2	31.2	93.0	93.0	6.2	6.2	17.0	6.2	14	14	87	87	89	821065	805836	<0.2	0.6	0.6	0.6	
						1																										





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

**Water Quality Monitoring**

**Water Quality Monitoring Results on 19 October 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)					
					Surface	Bottom			Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA	Value	DA
C1	Cloudy	Moderate	12:24	7.6	Surface	1.0	0.5	182	27.2	8.0	8.0	32.1	32.1	94.1	94.1	6.2	6.2	12.8	12.8	11	94	94	94	<0.2	0.5	815619	804229	<0.2	0.4					
						1.0	0.5	200	27.2	8.0	8.0	32.1	32.1	94.1	94.1	6.2	6.2	12.8	12.8	12	94	94	94	<0.2	0.4									
						3.8	0.5	179	27.2	8.0	8.0	32.2	32.2	93.9	93.9	6.2	6.2	13.5	13.5	14	94	94	94	<0.2	0.4									
						3.8	0.5	179	27.2	8.0	8.0	32.2	32.2	93.9	93.9	6.2	6.2	13.6	13.6	13	94	94	94	<0.2	0.4									
						6.6	0.4	185	27.3	8.0	8.0	32.3	32.3	95.6	95.6	6.3	6.3	14.8	14.8	15	97	97	97	<0.2	0.4									
						6.6	0.4	195	27.3	8.0	8.0	32.3	32.3	96.1	95.9	6.4	6.4	14.7	14.7	14	97	97	97	<0.2	0.4									
C2	Cloudy	Moderate	13:52	11.6	Surface	1.0	0.7	171	27.6	7.9	7.9	31.0	31.0	92.4	92.4	6.1	6.1	9.1	9.1	8	96	96	96	<0.2	0.7	825697	806937	<0.2	0.8					
						1.0	0.8	178	27.6	7.9	7.9	31.0	31.0	92.4	92.4	6.1	6.1	9.1	9.1	7	96	96	96	<0.2	0.8									
						5.8	0.7	174	27.5	7.9	7.9	31.0	31.0	91.8	91.8	6.1	6.1	16.4	16.4	8	98	98	98	<0.2	0.8									
						5.8	0.7	179	27.5	7.9	7.9	31.0	31.0	91.8	91.8	6.1	6.1	16.4	16.4	8	98	98	98	<0.2	0.8									
						10.6	0.5	162	27.4	7.9	7.9	31.4	31.4	91.9	91.9	6.1	6.1	56.5	56.5	11	99	99	99	<0.2	0.6									
						10.6	0.6	174	27.4	7.9	7.9	31.4	31.4	91.9	91.9	6.1	6.1	56.5	56.5	12	100	100	100	<0.2	0.8									
C3	Cloudy	Moderate	11:35	13.1	Surface	1.0	0.2	95	28.0	7.9	7.9	31.9	31.9	85.3	85.3	5.6	5.6	4.7	4.7	6	97	97	97	<0.2	0.4	822122	817813	<0.2	0.5					
						1.0	0.2	98	28.0	7.9	7.9	31.9	31.9	85.3	85.3	5.6	5.6	4.7	4.7	7	97	97	97	<0.2	0.4									
						6.6	0.3	80	27.9	7.9	7.9	31.8	31.8	84.8	84.8	5.6	5.6	5.5	5.5	6	100	100	100	<0.2	0.5									
						6.6	0.3	80	27.9	7.9	7.9	31.8	31.8	84.8	84.8	5.6	5.6	5.5	5.5	6	100	100	100	<0.2	0.5									
						12.1	0.3	84	27.9	7.9	7.9	31.8	31.8	85.1	85.1	5.6	5.6	9.4	9.4	9	105	105	105	<0.2	0.5									
						12.1	0.3	84	27.9	7.9	7.9	31.8	31.8	85.1	85.1	5.6	5.6	9.4	9.4	9	105	105	105	<0.2	0.5									
IM1	Cloudy	Moderate	12:46	8.6	Surface	1.0	0.4	170	27.2	8.0	8.0	32.0	32.0	93.6	93.6	6.2	6.2	9.1	9.1	9	102	102	102	<0.2	0.5	818355	806446	<0.2	0.5					
						1.0	0.4	170	27.2	8.0	8.0	32.0	32.0	93.6	93.6	6.2	6.2	9.4	9.4	7	102	102	102	<0.2	0.5									
						4.3	0.3	171	27.2	8.0	8.0	32.2	32.2	93.2	93.2	6.2	6.2	13.7	13.7	9	100	100	100	<0.2	0.4									
						4.3	0.3	183	27.2	8.0	8.0	32.2	32.2	93.2	93.2	6.2	6.2	13.6	13.6	8	101	101	101	<0.2	0.5									
						7.6	0.2	180	27.2	8.0	8.0	32.3	32.3	94.4	94.7	6.3	6.3	15.9	15.9	15	99	99	99	<0.2	0.5									
						7.6	0.2	189	27.2	8.0	8.0	32.3	32.3	94.9	94.7	6.3	6.3	15.8	15.8	13	99	99	99	<0.2	0.5									
IM2	Cloudy	Moderate	12:52	8.8	Surface	1.0	0.4	186	27.2	8.0	8.0	32.3	32.3	93.2	93.2	6.2	6.2	15.2	15.2	13	96	96	96	<0.2	0.4	818851	806203	<0.2	0.4					
						1.0	0.4	192	27.2	8.0	8.0	32.3	32.3	93.1	93.2	6.2	6.2	15.5	15.5	14	96	96	96	<0.2	0.4									
						4.4	0.3	192	27.2	8.0	8.0	32.3	32.3	92.8	92.8	6.2	6.2	18.2	18.2	13	93	93	93	<0.2	0.4									
						4.4	0.3	197	27.2	8.0	8.0	32.3	32.3	92.8	92.8	6.2	6.2	18.9	18.9	13	93	93	93	<0.2	0.4									
						7.8	0.3	195	27.2	8.0	8.0	32.3	32.3	93.7	93.9	6.2	6.2	21.5	21.5	15	99	99	99	<0.2	0.4									
						7.8	0.3	209	27.2	8.0	8.0	32.3	32.3	94.0	93.9	6.2	6.2	21.5	21.5	15	100	100	100	<0.2	0.4									
IM3	Cloudy	Moderate	13:00	8.7	Surface	1.0	0.4	192	27.1	8.0	8.0	32.1	32.1	93.9	93.9	6.2	6.2	14.2	14.2	15	101	101	101	<0.2	0.4	819429	806008	<0.2	0.5					
						1.0	0.4	196	27.1	8.0	8.0	32.1	32.1	93.9	93.9	6.2	6.2	14.3	14.3	16	101	101	101	<0.2	0.5									
						4.4	0.4	203	27.2	8.0	8.0	32.2	32.2	93.3	93.4	6.2	6.2	19.9	19.9	15	99	99	99	<0.2	0.6									
						4.4	0.4	207	27.2	8.0	8.0	32.2	32.2	93.4	94.0	6.2	6.2	19.9	19.9	16	99	99	99	<0.2	0.4									
						7.7	0.3	202	27.2	8.0	8.0	32.2	32.2	94.0	94.3	6.2	6.3	22.5	22.5	16	104	104	104	<0.2	0.5									
						7.7	0.4	220	27.2	8.0	8.0	32.2	32.2	94.5	94.3	6.3	6.3	22.5	22.5	16	104	104	104	<0.2	0.5									
IM4	Cloudy	Moderate	13:08	7.7	Surface	1.0	0.6	183	27.1	8.0	8.0	32.0	32.0	94.0	94.0	6.3	6.3	17.4	17.4	15	97	97	97	<0.2	0.5	819562	805029	<0.2	0.5					
						1.0	0.6	197	27.1	8.0	8.0	32.0	32.0	94.0	94.0	6.3	6.3	17.4	17.4	14	98	98	98	<0.2	0.4									
						3.9	0.5	187	27.1	8.0	8.0	32.0	32.0	93.4	93.4	6.2	6.2	21.7	21.7	15	100	100	100	<0.2	0.5									
						3.9	0.6	193	27.1	8.0	8.0	32.0	32.0	93.4	93.4	6.2	6.2	21.8	21.8	15	100	100	100	<0.2	0.5									
						6.7	0.4	186	27.1	8.0	8.0	32.1	32.1	93.0	93.0	6.2	6.2	27.1	27.1	18	103	103	103	<0.2	0.5									
						6.7	0.5	202	27.1	8.0	8.0	32.1	32.1	93.0	93.0	6.2	6.2	27.1	27.1	18	103	103	103	<0.2	0.5									
IM5	Cloudy	Moderate	13:20	6.4	Surface	1.0	0.5	184	27.1	8.0	8.0	31.7	31.7	92.8	92.8	6.2	6.2	11.3	11.3	12	96	96	96	<0.2	0.6	820544	804922	<0.2	0.6					
						1.0	0.5	191	27.1	8.0	8.0	31.7	31.7	92.8	92.8	6.2	6.2	11.6	11.6	14	96	96	96	<0.2	0.6									
						3.2	0.5	175	27.1	8.0	8.0	31.7	31.7	92.9	93.0	6.2	6.2	13.3	13.3	14	99	99	99	<0.2	0.6									
						3.2	0.5	175	27.1	8.0	8.0	31.7	31.7	93.0	93.0	6.2	6.2	13.3	13.3	14	99	99	99	<0.2	0.6									
						5.4	0.6	185	27.1	8.0	8.0	31.8	31.8	93.3	93.3	6.2	6.2	13.0	13.0	13	101	101	101	<0.2	0.6									
						5.4	0.6	185	27.1	8.0	8.0	31.8	31.8	93.3	93.3	6.2	6.2	12.7	12.7	13	101	101	101	<0.2	0.6									
IM6	Cloudy	Moderate	13:30	6.6	Surface	1.0	0.4	185	27.1	8.0	8.0	31.7	31.7	92.8	92.8	6.2	6.2	10.6	10.6	14	93	93	93	<0.2	0.5	821051	805836	<0.2	0.6					
						1.0	0.4	191	27.1	8.0	8.0	31.7	31.7	92.8	92.8	6.2	6.2	10.6	10.6	13	93	93	93	<0.2	0.5									
						3.3	0.5	186	27.1	8.0	8.0	31.7	31.7	92.6	92.6	6.2	6.2	12.7	12.7	12	101	101	101	<0.2	0.6									
						3.3	0.5	191	27.1	8.0	8.0	31.7	31.7	92.6	92.6	6.2	6.2	12.7	12.7	12	101	101	101	<0.2	0.6									
						5.6	0.5	183	27.1	8.0	8.0	31.9	31.9	93.2	93.2	6.2	6.2	23.4	23.4	13	100	100	100	<0.2	0.6									
						5.6	0.6	189	27.1	8.0	8.0	31.9	31.9	93.2	93.2	6.2	6.2	23.6	23.6	12	100	100	100	<0.2	0.6									
IM7	Cloudy																																	

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

**Water Quality Monitoring Results on 19 October 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 (µg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)								
					Value	Average			Value	Average	Value	Average	Value	Average	Value	DA	Value	DA		Value	DA	Value	DA			Value	DA	Value	DA	Value	DA					
IM9	Cloudy	Moderate	13:08	7.4	Surface	1.0	0.5	119	27.3	8.0	8.0	31.8	31.8	93.1	93.1	6.2	6.2	17.3	6.2	17.3	6.2	6.2	16	96	98	822086	808804	<0.2	0.5	0.5	0.5					
						1.0	0.5	126	27.3	27.3	8.0	8.0	31.8	31.8	93.1	93.1	6.2	6.2	17.3	6.2	17.3	6.2	17.3	6.2	16	96	98	<0.2	0.5	0.5	0.5					
					Middle	3.7	0.4	126	27.3	27.3	8.0	8.0	31.9	31.9	93.4	93.4	6.2	6.2	24.7	6.2	24.7	6.2	24.7	6.2	14	98	99	<0.2	0.6	0.6	0.6	0.6				
						3.7	0.5	126	27.3	27.3	8.0	8.0	31.9	31.9	93.4	93.4	6.2	6.2	24.7	6.2	24.7	6.2	24.7	6.2	14	99	99	<0.2	0.6	0.6	0.6	0.6				
					Bottom	6.4	0.4	106	27.3	27.3	8.0	8.0	31.9	31.9	94.4	94.4	6.3	6.3	24.8	6.3	24.8	6.3	24.8	6.3	22	100	100	<0.2	0.5	0.5	0.5	0.5	0.5	0.5		
						6.4	0.4	106	27.3	27.3	8.0	8.0	31.9	31.9	94.4	94.4	6.3	6.3	24.8	6.3	24.8	6.3	24.8	6.3	22	99	99	<0.2	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
IM10	Cloudy	Moderate	12:59	8.2	Surface	1.0	0.6	107	27.3	8.0	8.0	31.5	31.5	93.7	93.7	6.2	6.2	12.7	6.2	12.7	6.2	8	95	97	822246	809835	<0.2	0.6	0.6	0.6	0.6					
						1.0	0.6	108	27.3	27.3	8.0	8.0	31.5	31.5	93.7	93.7	6.2	6.2	12.7	6.2	12.7	6.2	12.7	6.2	8	96	97	<0.2	0.7	0.7	0.7	0.7				
					Middle	4.1	0.5	96	27.3	27.3	8.0	8.0	32.0	32.0	93.2	93.2	6.2	6.2	22.1	6.2	22.1	6.2	22.1	6.2	9	97	97	<0.2	0.6	0.6	0.6	0.6	0.6	0.6	0.6	
						4.1	0.6	98	27.3	27.3	8.0	8.0	32.0	32.0	93.2	93.2	6.2	6.2	22.1	6.2	22.1	6.2	22.1	6.2	8	97	97	<0.2	0.6	0.6	0.6	0.6	0.6	0.6	0.6	
					Bottom	7.2	0.4	101	27.3	27.3	8.0	8.0	32.1	32.1	93.4	93.4	6.2	6.2	36.6	6.2	36.6	6.2	36.6	6.2	44	99	100	<0.2	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
						7.2	0.4	110	27.3	27.3	8.0	8.0	32.1	32.1	93.4	93.4	6.2	6.2	36.6	6.2	36.6	6.2	36.6	6.2	47	100	100	<0.2	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
IM11	Cloudy	Moderate	12:42	7.8	Surface	1.0	0.5	98	27.4	27.4	8.0	8.0	32.1	32.1	94.1	94.1	6.2	6.2	14.5	6.2	14.5	6.2	13	95	98	821509	810531	<0.2	0.6	0.6	0.6	0.6				
						1.0	0.5	107	27.4	27.4	8.0	8.0	32.1	32.1	94.1	94.1	6.2	6.2	14.5	6.2	14.5	6.2	14.5	6.2	14	96	97	<0.2	0.5	0.5	0.5	0.5	0.5	0.5		
					Middle	3.9	0.5	100	27.3	27.3	8.0	8.0	32.1	32.1	93.8	93.8	6.2	6.2	22.6	6.2	22.6	6.2	22.6	6.2	24	97	98	<0.2	0.4	0.4	0.4	0.4	0.4	0.4	0.4	
						3.9	0.5	109	27.3	27.3	8.0	8.0	32.1	32.1	93.8	93.8	6.2	6.2	22.6	6.2	22.6	6.2	22.6	6.2	26	98	99	<0.2	0.4	0.4	0.4	0.4	0.4	0.4	0.4	
					Bottom	6.8	0.4	100	27.3	27.3	8.0	8.0	32.2	32.2	94.4	94.4	6.2	6.2	28.8	6.2	28.8	6.2	28.8	6.2	69	101	101	<0.2	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
						6.8	0.4	106	27.3	27.3	8.0	8.0	32.2	32.2	94.4	94.4	6.2	6.2	28.8	6.2	28.8	6.2	28.8	6.2	75	99	99	<0.2	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
IM12	Cloudy	Moderate	12:31	9.8	Surface	1.0	0.6	96	27.4	27.4	8.0	8.0	31.8	31.8	92.7	92.7	6.1	6.1	16.8	6.1	16.8	6.1	10	96	98	821171	811527	<0.2	0.5	0.5	0.5	0.5				
						1.0	0.6	102	27.4	27.4	8.0	8.0	31.8	31.8	92.7	92.7	6.1	6.1	16.8	6.1	16.8	6.1	16.8	6.1	10	97	97	<0.2	0.5	0.5	0.5	0.5	0.5	0.5		
					Middle	4.9	0.5	101	27.4	27.4	8.0	8.0	31.8	31.8	91.6	91.6	6.1	6.1	23.3	6.1	23.3	6.1	23.3	6.1	21	98	98	<0.2	0.6	0.6	0.6	0.6	0.6	0.6	0.6	
						4.9	0.5	106	27.4	27.4	8.0	8.0	31.8	31.8	91.6	91.6	6.1	6.1	23.3	6.1	23.3	6.1	23.3	6.1	20	98	99	<0.2	0.6	0.6	0.6	0.6	0.6	0.6	0.6	
					Bottom	8.8	0.4	89	27.4	27.4	8.0	8.0	31.9	31.9	91.4	91.4	6.1	6.1	28.8	6.1	28.8	6.1	28.8	6.1	32	99	99	<0.2	0.6	0.6	0.6	0.6	0.6	0.6	0.6	
						8.8	0.5	92	27.4	27.4	8.0	8.0	31.9	31.9	91.4	91.4	6.1	6.1	28.8	6.1	28.8	6.1	28.8	6.1	33	99	99	<0.2	0.7	0.7	0.7	0.7	0.7	0.7	0.7	
SR2	Cloudy	Moderate	12:01	4.6	Surface	1.0	0.3	94	27.6	27.6	7.9	7.9	31.6	31.6	89.6	89.6	5.9	5.9	10.9	5.9	10.9	5.9	10	97	98	821455	814184	<0.2	0.6	0.6	0.6	0.6				
						1.0	0.3	102	27.6	27.6	7.9	7.9	31.6	31.6	89.6	89.6	5.9	5.9	10.9	5.9	10.9	5.9	10.9	5.9	8	97	97	<0.2	0.5	0.5	0.5	0.5	0.5	0.5		
					Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	98	821455	814184	<0.2	0.5	0.5	0.5	0.5	
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	98	821455	814184	<0.2	0.5	0.5	0.5	0.5
					Bottom	3.6	0.2	91	27.6	27.6	7.9	7.9	31.6	31.6	90.0	90.0	6.0	6.0	13.0	6.0	13.0	6.0	13.0	6.0	12	98	99	<0.2	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
						3.6	0.2	98	27.6	27.6	7.9	7.9	31.6	31.6	90.0	90.0	6.0	6.0	13.0	6.0	13.0	6.0	13.0	6.0	12	99	99	<0.2	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
SR3	Cloudy	Moderate	13:26	8.4	Surface	1.0	0.6	176	27.3	27.3	7.9	7.9	31.3	31.3	94.5	94.5	6.3	6.3	14.2	6.3	14.2	6.3	14	-	-	822137	807571	-	-	-	-	-				
						1.0	0.7	176	27.3	27.3	7.9	7.9	31.3	31.3	94.5	94.5	6.3	6.3	14.2	6.3	14.2	6.3	14.2	6.3	14	-	-	822137	807571	-	-	-	-	-	-	
					Middle	4.2	0.5	178	27.3	27.3	7.9	7.9	31.4	31.4	94.5	94.5	6.3	6.3	17.9	6.3	17.9	6.3	17.9	6.3	13	-	-	822137	807571	-	-	-	-	-	-	
						4.2	0.5	192	27.3	27.3	7.9	7.9	31.4	31.4	94.5	94.5	6.3	6.3	17.9	6.3	17.9	6.3	17.9	6.3	14	-	-	822137	807571	-	-	-	-	-	-	
					Bottom	7.4	0.3	195	27.3	27.3	7.9	7.9	31.8	31.8	94.5	94.5	6.3	6.3	30.8	6.3	30.8	6.3	30.8	6.3	15	-	-	822137	807571	-	-	-	-	-	-	
						7.4	0.3	197	27.3	27.3	7.9	7.9	31.8	31.8	94.5	94.5	6.3	6.3	30.8	6.3	30.8	6.3	30.8	6.3	15	-	-	822137	807571	-	-	-	-	-	-	
SR4A	Cloudy	Moderate	12:05	9.4	Surface	1.0	0.4	66	27.2	27.2	8.0	8.0	32.2	32.2	92.6	92.6	6.1	6.1	15.5	6.1	15.5	6.1	14	-	-	817177	807805	-	-	-	-	-				
						1.0	0.4	72	27.2	27.2	8.0	8.0	32.2	32.2	92.6	92.6	6.1	6.1	15.6	6.1	15.6	6.1	15.6	6.1	13	-	-	817177	807805	-	-	-	-	-		
					Middle	4.7	0.3	61	27.1	27.1	8.0	8.0	32.3	32.3	92.2	92.2	6.1	6.1	19.4	6.1	19.4	6.1	19.4	6.1	16	-	-	817177	807805	-	-	-	-	-	-	
						4.7	0.3	66	27.1	27.1	8.0	8.0	32.3	32.3	92.2	92.2	6.1	6.1	19.4	6.1	19.4	6.1	19.4	6.1	16	-	-	817177	807805	-	-	-	-	-	-	
					Bottom	8.4	0.2	61	27.1	27.1	8.0	8.0	32.3	32.3	91.9	91.9	6.1	6.1	22.8	6.1	22.8	6.1	22.8	6.1	17	-										

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

Water Quality Monitoring

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

Table with 28 columns: 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). Data is organized by station (C1-C3, IM1-IM8) and depth (Surface, Middle, Bottom).

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 October 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	Value	DA						
IM9	Fine	Moderate	17:33	7.3	Surface	1.0	0.2	272	27.6	7.9	7.9	31.2	31.2	92.5	92.5	6.1	6.1	11.5	13.8	10	96	99	822091	808793	<0.2	0.6	0.6	0.6								
						1.0	0.2	283	27.6	7.9	7.9	31.2	31.2	92.5	92.5	6.1				11.5	9				96	<0.2			0.5							
					Middle	3.7	0.3	259	27.6	7.9	7.9	31.2	31.2	92.4	92.4	6.1	6.1	14.0	18.8	12	98				<0.2	0.6										
						3.7	0.3	272	27.6	7.9	7.9	31.2	31.2	92.4	92.4	6.1				14.0	12				99	<0.2			0.5							
					Bottom	6.3	0.3	268	27.6	7.9	7.9	31.2	31.2	92.8	92.8	6.2	6.2	16.0	23.3	10	102				<0.2	0.6										
						6.3	0.3	271	27.6	7.9	7.9	31.2	31.2	92.8	92.8	6.2				16.0	12				101	<0.2			0.6							
IM10	Fine	Moderate	17:41	6.7	Surface	1.0	0.5	297	27.4	8.0	8.0	31.5	31.5	92.5	92.5	6.1	6.1	13.4	21.5	11	96	98	822248	809854	<0.2	0.5	0.5	0.5								
						1.0	0.5	302	27.4	8.0	8.0	31.5	31.5	92.5	92.5	6.1				13.4	12				95	<0.2			0.6							
					Middle	3.4	0.5	297	27.4	8.0	8.0	31.5	31.5	92.5	92.5	6.1	6.1	22.1	31.2	16	98				<0.2	0.5										
						3.4	0.5	321	27.4	8.0	8.0	31.5	31.5	92.5	92.5	6.1				22.1	17				99	<0.2			0.5							
					Bottom	5.7	0.4	301	27.4	8.0	8.0	31.5	31.5	93.3	93.3	6.2	6.2	28.9	40.5	22	100				<0.2	0.5										
						5.7	0.4	310	27.4	8.0	8.0	31.5	31.5	93.3	93.3	6.2				28.9	23				99	<0.2			0.5							
IM11	Fine	Moderate	17:53	8.3	Surface	1.0	0.3	274	27.4	8.0	8.0	31.8	31.8	94.4	94.4	6.3	6.3	13.5	19.2	8	97	99	821515	810564	<0.2	0.5	0.5	0.5								
						1.0	0.3	284	27.4	8.0	8.0	31.8	31.8	94.4	94.4	6.3				13.5	9				96	<0.2			0.5							
					Middle	4.2	0.4	284	27.4	8.0	8.0	31.8	31.8	94.2	94.2	6.3	6.3	16.8	25.2	12	99				<0.2	0.5										
						4.2	0.4	286	27.4	8.0	8.0	31.8	31.8	94.2	94.2	6.3				16.8	12				99	<0.2			0.5							
					Bottom	7.3	0.4	283	27.4	8.0	8.0	31.8	31.8	94.8	94.8	6.3	6.3	27.2	36.2	35	102				<0.2	0.5										
						7.3	0.4	299	27.4	8.0	8.0	31.8	31.8	94.8	94.8	6.3				27.2	33				101	<0.2			0.4							
IM12	Fine	Moderate	18:01	8.9	Surface	1.0	0.7	282	27.5	8.0	8.0	31.8	31.8	92.4	92.4	6.1	6.1	13.5	22.7	17	95	99	821145	811537	<0.2	0.4	0.5	0.5								
						1.0	0.8	306	27.5	8.0	8.0	31.8	31.8	92.4	92.4	6.1				13.5	15				96	<0.2			0.5							
					Middle	4.5	0.7	281	27.5	8.0	8.0	31.8	31.8	92.4	92.4	6.1	6.1	22.8	31.2	17	99				<0.2	0.5										
						4.5	0.7	283	27.5	8.0	8.0	31.8	31.8	92.4	92.4	6.1				22.8	18				98	<0.2			0.5							
					Bottom	7.9	0.6	278	27.5	8.0	8.0	31.9	31.9	93.5	93.5	6.2	6.2	31.7	43.5	44	101				<0.2	0.5										
						7.9	0.6	303	27.5	8.0	8.0	31.9	31.9	93.5	93.5	6.2				31.7	47				102	<0.2			0.5							
SR2	Fine	Moderate	18:28	5.1	Surface	1.0	0.3	276	27.5	8.0	8.0	31.8	31.8	90.2	90.2	6.0	6.0	22.1	24.5	18	97	98	821455	814178	<0.2	0.4	0.5	0.5								
						1.0	0.3	284	27.5	8.0	8.0	31.8	31.8	90.2	90.2	6.0				22.1	18				97	<0.2			0.4							
					Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				-	-			-	-	-	-	-	-	-	-
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				-	-			-	-	-	-	-	-	-	-
					Bottom	4.1	0.2	272	27.6	8.0	8.0	31.7	31.7	91.1	91.1	6.0	6.0	26.8	36.2	26	99				<0.2	0.5										
						4.1	0.3	295	27.6	8.0	8.0	31.7	31.7	91.1	91.1	6.0				26.8	26				100	<0.2			0.5							
SR3	Fine	Moderate	17:19	8.8	Surface	1.0	0.3	215	27.5	7.9	7.9	30.3	30.3	93.1	93.1	6.2	6.2	5.6	10.4	5	-	-	822165	807589	-	-	-	-								
						1.0	0.3	221	27.5	7.9	7.9	30.3	30.3	93.1	93.1	6.2				5.6	5				-	-			-							
					Middle	4.4	0.3	253	27.5	7.9	7.9	30.5	30.5	93.0	93.0	6.2	6.2	7.1	15.2	5	-				-	-										
						4.4	0.3	270	27.5	7.9	7.9	30.5	30.5	93.0	93.0	6.2				7.1	5				-	-			-							
					Bottom	7.8	0.4	272	27.5	7.9	7.9	30.6	30.6	93.5	93.5	6.2	6.2	18.4	26.2	9	-				-	-										
						7.8	0.4	295	27.5	7.9	7.9	30.6	30.6	93.5	93.5	6.2				18.4	9				-	-			-							
SR4A	Fine	Moderate	18:31	8.5	Surface	1.0	0.3	249	27.2	8.0	8.0	31.4	31.4	91.6	91.6	6.1	6.1	16.0	19.9	12	-	-	817171	807795	-	-	-	-								
						1.0	0.3	269	27.2	8.0	8.0	31.4	31.4	91.7	91.7	6.1				16.5	12				-	-										
					Middle	4.3	0.2	246	27.3	8.0	8.0	31.6	31.6	92.0	92.1	6.1	6.1	20.2	28.2	13	-				-	-										
						4.3	0.2	264	27.3	8.0	8.0	31.6	31.6	92.2	92.1	6.1				20.2	14				-	-			-							
					Bottom	7.5	0.2	252	27.3	8.0	8.0	31.6	31.6	95.8	96.1	6.4	6.4	23.0	32.2	14	-				-	-										
						7.5	0.2	256	27.3	8.0	8.0	31.6	31.6	96.4	96.4	6.4				23.4	12				-	-			-							
SR5A	Fine	Moderate	18:49	4.7	Surface	1.0	0.3	291	27.3	8.0	8.0	31.2	31.2	91.5	91.6	6.1	6.1	14.3	16.4	18	-	-	816590	810689	-	-	-	-								
						1.0	0.3	305	27.3	8.0	8.0	31.2	31.2	91.6	91.6	6.1				14.4	19				-	-										
					Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				-	-			-	-	-	-	-	-	-	-
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				-	-			-	-	-	-	-	-	-	
					Bottom	3.7	0.3	298	27.3	8.0	8.0	31.2	31.2	92.9	93.2	6.2	6.2	18.3	26.2	19	-				-	-										
						3.7	0.3	307	27.3	8.0	8.0	31.2	31.2	93.5	93.2	6.2				18.5	19				-	-			-							
SR6	Fine	Moderate	19:13	4.4	Surface	1.0	0.1	245	27.4	8.0	8.0	31.8	31.8	90.7	90.7	6.0	6.0	14.2	16.8	13	-	-	817909	814664	-	-	-	-								
						1.0	0.1	246	27.4	8.0	8.0	31.8	31.8	90.6	90.7	6.0				14.4	14				-	-										
					Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				-	-			-	-	-	-	-	-		
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				-	-			-	-	-	-	-	-		
					Bottom	3.4	0.1	233	27.3	8.0	8.0	31.9	31.9	90.5	90.5	6.0	6.0	19.3	26.2	14	-				-	-										
						3.4	0.1	251	27.3	8.0	8.0	31.9	31.9	90.8	90.7	6.0				19.1	13				-	-			-							
SR7	Fine	Moderate	19:27	17.2	Surface	1.0	0.2	42	27.9	7.9	7.9	31.9	31.9	84.9	84.9	5.6	5.6	13.8	17.7	10	-	-	823630	823753	-	-	-	-								
						1.0	0.2	42	27.9	7.9	7.9	31.9	31.9	84.9	84.9	5.6				13.9	13				-	-										
					Middle	8.6	0.3	47	27.9	7.9	7.9	31.9	31.9	85.2	85.2	5.6	5.6	19.8	27.2	20	-				-	-										
						8.6	0.3	47	27.9	7.9	7.9	31.9	31.9	85.2	85.2	5.6				19.8	21				-	-			-							
					Bottom	16.2	0.2	37	27.9	7.9	7.9	31.9	31.9	86.7	86.7	5.7	5.7	19.5	27.2	23	-				-	-										
						16.2	0.2	38	27.9	7.9	7.9	31.9	31.9	86.7	86.7	5.7				19.5	25				-	-			-							
SR8	Fine	Moderate	18:09	4.3	Surface	1.0	-	-	27.4	27.4	8.0	8.0	31.7	31.7	94.2	94.2	6.2	6.2	11.9	12.7	10	-	-	820246	811418	-	-	-	-							
						1.0	-	-	27.4	27.4	8.0	8.																								

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

**Water Quality Monitoring**

**Water Quality Monitoring Results on 21 October 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	Value	DA
C1	Sunny	Moderate	13:17	9.1	Surface	1.0	0.5	47	26.6	26.6	8.0	8.0	32.7	32.7	95.6	95.6	6.4	6.4	13.5	13	96	96	815625	804261	<0.2	0.6	0.4			
						1.0	0.5	51	26.6	8.0	8.0	32.7	32.7	95.6	95.6	6.4	6.4	13.5	13	96	96	<0.2	0.5							
					Middle	4.6	0.4	51	26.5	26.5	8.0	8.0	32.7	32.7	95.5	95.6	6.4	6.4	15.0	14	99	99	<0.2	0.4						
						4.6	0.4	53	26.5	26.5	8.0	8.0	32.7	32.7	95.7	95.6	6.4	6.4	15.2	15	99	99	<0.2	0.4						
					Bottom	8.1	0.4	40	26.5	26.5	8.0	8.0	32.7	32.7	97.3	97.6	6.5	6.5	17.1	14	99	99	<0.2	0.3						
						8.1	0.4	41	26.5	26.5	8.0	8.0	32.7	32.7	97.8	97.6	6.5	6.5	17.2	15	100	100	<0.2	0.4						
C2	Sunny	Moderate	12:10	12.3	Surface	1.0	0.4	344	26.9	26.9	7.9	7.9	31.1	31.1	92.0	92.0	6.2	6.2	12.2	14	94	94	825682	806959	<0.2	0.6	0.5			
						1.0	0.4	316	26.9	26.9	7.9	7.9	31.1	31.1	92.0	92.0	6.2	6.2	12.2	14	95	95	<0.2	0.5						
					Middle	6.2	0.4	348	26.8	26.8	8.0	8.0	31.3	31.3	91.9	91.9	6.2	6.2	17.8	18	96	96	<0.2	0.5						
						6.2	0.4	320	26.8	26.8	8.0	8.0	31.3	31.3	91.9	91.9	6.2	6.2	17.8	18	96	96	<0.2	0.5						
					Bottom	11.3	0.4	347	26.6	26.6	8.0	8.0	31.6	31.6	91.9	91.9	6.2	6.2	26.8	18	98	98	<0.2	0.6						
						11.3	0.4	319	26.6	26.6	8.0	8.0	31.6	31.6	91.9	91.9	6.2	6.2	26.8	18	99	99	<0.2	0.5						
C3	Sunny	Moderate	13:45	12.1	Surface	1.0	0.5	262	27.8	27.8	7.9	7.9	32.2	32.2	89.3	89.3	5.9	5.9	5.4	5	97	97	822112	817793	<0.2	0.3	0.3			
						1.0	0.5	286	27.8	27.8	7.9	7.9	32.2	32.2	89.3	89.3	5.9	5.9	5.4	5	96	96	<0.2	0.3						
					Middle	6.1	0.4	271	27.7	27.7	7.9	7.9	32.1	32.1	90.2	90.2	5.9	5.9	8.6	5	99	99	<0.2	0.3						
						6.1	0.5	294	27.7	27.7	7.9	7.9	32.1	32.1	90.2	90.2	5.9	5.9	8.6	4	100	100	<0.2	0.3						
					Bottom	11.1	0.3	276	27.6	27.6	7.9	7.9	32.0	32.0	93.8	93.8	6.2	6.2	13.1	4	102	102	<0.2	0.4						
						11.1	0.4	278	27.6	27.6	7.9	7.9	32.0	32.0	93.8	93.8	6.2	6.2	13.1	5	101	101	<0.2	0.4						
IM1	Sunny	Moderate	12:59	8.0	Surface	1.0	0.4	14	26.6	26.6	8.0	8.0	32.6	32.6	96.2	96.2	6.4	6.4	13.0	10	94	94	818342	806462	<0.2	0.4	0.4			
						1.0	0.4	15	26.6	26.6	8.0	8.0	32.6	32.6	96.2	96.2	6.4	6.4	13.2	10	94	94	<0.2	0.5						
					Middle	4.0	0.4	24	26.6	26.6	8.0	8.0	32.6	32.6	95.9	95.9	6.4	6.4	13.9	13	96	96	<0.2	0.3						
						4.0	0.4	25	26.6	26.6	8.0	8.0	32.6	32.6	95.9	95.9	6.4	6.4	14.1	12	96	96	<0.2	0.4						
					Bottom	7.0	0.5	17	26.5	26.5	8.0	8.0	32.5	32.6	96.9	97.2	6.5	6.5	16.1	13	99	99	<0.2	0.3						
						7.0	0.5	17	26.5	26.5	8.0	8.0	32.6	32.6	97.5	97.2	6.5	6.5	16.4	14	99	99	<0.2	0.3						
IM2	Sunny	Moderate	12:54	8.8	Surface	1.0	0.5	10	26.6	26.6	8.0	8.0	32.6	32.6	95.5	95.5	6.4	6.4	15.6	12	96	96	818858	806193	<0.2	0.4	0.4			
						1.0	0.5	10	26.6	26.6	8.0	8.0	32.6	32.6	95.5	95.5	6.4	6.4	15.9	12	96	96	<0.2	0.4						
					Middle	4.4	0.5	8	26.5	26.5	8.0	8.0	32.6	32.6	95.0	95.1	6.4	6.4	20.9	13	98	99	<0.2	0.4						
						4.4	0.5	8	26.5	26.5	8.0	8.0	32.6	32.6	95.1	95.1	6.4	6.4	20.8	12	99	99	<0.2	0.4						
					Bottom	7.8	0.4	15	26.4	26.4	8.0	8.0	32.6	32.6	97.1	97.7	6.5	6.5	24.2	17	101	101	<0.2	0.4						
						7.8	0.4	16	26.4	26.4	8.0	8.0	32.6	32.6	98.3	97.7	6.6	6.6	24.2	18	101	101	<0.2	0.3						
IM3	Sunny	Moderate	12:47	9.3	Surface	1.0	0.5	19	26.7	26.7	8.0	8.0	32.5	32.5	95.9	95.9	6.4	6.4	15.1	12	94	94	819401	806019	<0.2	0.5	0.5			
						1.0	0.6	20	26.7	26.7	8.0	8.0	32.5	32.5	95.9	95.9	6.4	6.4	15.4	13	94	94	<0.2	0.5						
					Middle	4.7	0.4	18	26.5	26.5	8.0	8.0	32.6	32.6	95.7	95.7	6.4	6.4	20.7	14	97	97	<0.2	0.6						
						4.7	0.4	18	26.5	26.5	8.0	8.0	32.6	32.6	95.7	95.7	6.4	6.4	21.0	13	97	97	<0.2	0.6						
					Bottom	8.3	0.4	15	26.5	26.6	8.0	8.0	32.5	32.5	97.9	98.3	6.6	6.6	24.3	14	99	99	<0.2	0.3						
						8.3	0.4	15	26.6	26.6	8.0	8.0	32.5	32.5	98.7	98.3	6.6	6.6	24.5	14	99	99	<0.2	0.4						
IM4	Sunny	Moderate	12:39	8.4	Surface	1.0	0.5	4	26.7	26.7	8.0	8.0	32.7	32.7	95.4	95.4	6.4	6.4	15.0	14	94	94	819582	805022	<0.2	0.6	0.6			
						1.0	0.5	4	26.7	26.7	8.0	8.0	32.7	32.7	95.4	95.4	6.4	6.4	14.9	15	94	94	<0.2	0.5						
					Middle	4.2	0.5	6	26.5	26.5	8.0	8.0	32.7	32.7	94.5	94.5	6.3	6.3	20.7	16	96	96	<0.2	0.6						
						4.2	0.5	6	26.5	26.5	8.0	8.0	32.7	32.7	94.5	94.5	6.3	6.3	20.5	16	96	96	<0.2	0.6						
					Bottom	7.4	0.4	20	26.5	26.5	8.0	8.0	32.7	32.7	95.2	95.2	6.4	6.4	27.5	16	98	98	<0.2	0.7						
						7.4	0.5	21	26.5	26.5	8.0	8.0	32.7	32.7	95.2	95.2	6.4	6.4	27.3	15	98	98	<0.2	0.7						
IM5	Sunny	Moderate	12:29	7.6	Surface	1.0	0.5	15	26.5	26.5	8.0	8.0	32.5	32.5	94.7	94.7	6.3	6.3	11.4	13	94	94	820552	804913	<0.2	0.4	0.4			
						1.0	0.5	16	26.5	26.5	8.0	8.0	32.5	32.5	94.7	94.7	6.3	6.3	11.2	12	95	95	<0.2	0.4						
					Middle	3.8	0.5	20	26.4	26.4	8.0	8.0	32.5	32.5	94.4	94.5	6.3	6.3	17.8	15	99	99	<0.2	0.8						
						3.8	0.6	20	26.4	26.4	8.0	8.0	32.5	32.5	94.5	94.5	6.3	6.3	17.5	14	96	96	<0.2	0.4						
					Bottom	6.6	0.4	16	26.5	26.5	8.0	8.0	32.6	32.6	94.6	94.7	6.3	6.3	21.7	15	99	99	<0.2	0.4						
						6.6	0.4	17	26.5	26.5	8.0	8.0	32.6	32.6	94.7	94.7	6.3	6.3	21.5	15	99	99	<0.2	0.4						
IM6	Sunny	Moderate	12:22	7.6	Surface	1.0	0.3	26	26.5	26.5	8.0	8.0	32.5	32.5	95.6	95.6	6.4	6.4	10.4	15	97	97	821043	805845	<0.2	0.8	0.8			
						1.0	0.3	26	26.5	26.5	8.0	8.0	32.5	32.5	95.6	95.6	6.4	6.4	10.4	15	97	97	<0.2	0.8						
					Middle	3.8	0.3	24	26.4	26.4	8.0	8.0	32.5	32.6	95.4	95.8	6.4	6.4	16.2	15	99	99	<0.2	0.8						
						3.8	0.3	26	26.4	26.4	8.0	8.0	32.6	32.6	96.1	95.8	6.4	6.4	16.0	16	99	99	<0.2	0.8						
					Bottom	6.6	0.3	26	26.4	26.4	8.0	8.0	32.5	32.5	97.0	97.0	6.5	6.5	23.3	16	99	99	<0.2	0.9						
						6.6	0.3	28	26.5	26.5	8.0	8.0	32.5	32.5	97.8	97.4	6.6	6.6	23.1	15	100	100	<0.2	0.8						
IM7	Sunny	Moderate	12:11	9.1	Surface	1.0	0.3	75	26.5	26.5	8.0	8.0	32.7	32.7	95.6	95.6	6.4	6.4	17.4	16	99	99	821358	806838	<0.2	1.1	0.9			
						1.0	0.3	75	26.5	26.5	8.0	8.0	32.7	32.7	95.6	95.6	6.4	6.4	17.6	15	100	100	<0.2	0.9						
					Middle	4.6	0.2	51	26.4	26.4	8.0	8.0	32.7	32.7	95.6	95.6	6.4	6.4	21.8	19	100	100	<0.2	1.0						
						4.6	0.2	54	26.4	26.4																				

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

**Water Quality Monitoring**

**Water Quality Monitoring Results on 21 October 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 (µg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)				
									Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA			
IM9	Sunny	Moderate	12:39	7.7	Surface	1.0	0.2	341	26.7	8.0	8.0	32.1	32.1	96.2	96.2	6.4	6.4	15.6	6.4	15	15	96	96	822081	808798	<0.2	<0.2	0.5	0.5				
						1.0	0.3	314	26.7	8.0	8.0	32.1	32.1	96.2	96.2	6.4	6.4	15.6	6.4	15	15	95	95			<0.2	<0.2	0.4	0.4				
					Middle	3.9	0.2	332	26.7	26.7	8.0	8.0	32.2	32.2	96.2	96.2	6.4	6.4	18.2	6.4	14	14	97	97			<0.2	<0.2	0.5	0.5			
						3.9	0.3	342	26.7	26.7	8.0	8.0	32.2	32.2	96.2	96.2	6.4	6.4	18.2	6.4	14	14	97	97			<0.2	<0.2	0.6	0.6			
					Bottom	6.7	0.3	329	26.7	26.7	8.0	8.0	32.2	32.2	98.2	98.2	6.6	6.6	32.5	6.6	15	15	99	99			<0.2	<0.2	0.4	0.4			
						6.7	0.3	337	26.7	26.7	8.0	8.0	32.2	32.2	98.2	98.2	6.6	6.6	32.5	6.6	15	15	98	98			<0.2	<0.2	0.5	0.5			
IM10	Sunny	Moderate	12:46	7.7	Surface	1.0	0.6	323	27.0	8.0	8.0	31.9	31.9	94.3	94.3	6.3	6.3	15.1	6.3	16	14	95	96	822257	809844	<0.2	<0.2	0.6	0.5				
						1.0	0.6	334	27.0	27.0	8.0	8.0	31.9	31.9	94.3	94.3	6.3	6.3	15.1	6.3	14	14	96	96			<0.2	<0.2	0.6	0.5			
					Middle	3.9	0.6	320	27.0	27.0	8.0	8.0	32.0	32.0	93.6	93.6	6.2	6.2	16.2	6.2	14	14	97	97			<0.2	<0.2	0.6	0.6			
						3.9	0.6	329	27.0	27.0	8.0	8.0	32.0	32.0	93.6	93.6	6.2	6.2	16.2	6.2	14	14	98	98			<0.2	<0.2	0.5	0.5			
					Bottom	6.7	0.5	316	27.2	27.2	8.0	8.0	32.1	32.1	95.9	95.9	6.4	6.4	17.0	6.4	14	14	100	100			<0.2	<0.2	0.5	0.5			
						6.7	0.5	325	27.2	27.2	8.0	8.0	32.1	32.1	95.9	95.9	6.4	6.4	17.0	6.4	14	14	99	99			<0.2	<0.2	0.5	0.5			
IM11	Sunny	Moderate	12:57	9.4	Surface	1.0	0.6	290	27.2	27.2	8.0	8.0	32.1	32.1	92.6	92.6	6.2	6.2	13.9	6.2	13	13	96	96	821505	810533	<0.2	<0.2	0.4	0.5			
						1.0	0.6	291	27.2	27.2	8.0	8.0	32.1	32.1	92.6	92.6	6.2	6.2	13.9	6.2	13	13	96	96			<0.2	<0.2	0.4	0.4			
					Middle	4.7	0.5	290	27.2	27.2	8.0	8.0	32.1	32.1	93.2	93.2	6.2	6.2	16.4	6.2	14	14	96	96			<0.2	<0.2	0.6	0.6			
						4.7	0.5	313	27.2	27.2	8.0	8.0	32.1	32.1	93.2	93.2	6.2	6.2	16.4	6.2	15	15	97	97			<0.2	<0.2	0.4	0.4			
					Bottom	8.4	0.4	296	27.1	27.1	8.0	8.0	32.1	32.1	96.6	96.6	6.4	6.4	17.7	6.4	16	16	98	98			<0.2	<0.2	0.5	0.5			
						8.4	0.4	301	27.1	27.1	8.0	8.0	32.1	32.1	96.6	96.6	6.4	6.4	17.7	6.4	14	14	99	99			<0.2	<0.2	0.4	0.4			
IM12	Sunny	Moderate	13:04	9.6	Surface	1.0	0.7	275	27.2	27.2	8.0	8.0	32.1	32.1	90.7	90.7	6.0	6.0	10.4	6.0	7	7	95	96	821170	811525	<0.2	<0.2	0.4	0.4			
						1.0	0.7	290	27.2	27.2	8.0	8.0	32.1	32.1	90.7	90.7	6.0	6.0	10.4	6.0	7	7	97	97			<0.2	<0.2	0.4	0.4			
					Middle	4.8	0.6	278	27.1	27.1	8.0	8.0	32.1	32.1	90.4	90.4	6.0	6.0	16.0	6.0	8	8	97	97			<0.2	<0.2	0.4	0.4			
						4.8	0.7	278	27.1	27.1	8.0	8.0	32.1	32.1	90.4	90.4	6.0	6.0	16.0	6.0	7	7	98	98			<0.2	<0.2	0.4	0.4			
					Bottom	8.6	0.4	283	27.0	27.0	8.0	8.0	32.0	32.0	91.1	91.1	6.1	6.1	21.7	6.1	7	7	99	99			<0.2	<0.2	0.4	0.4			
						8.6	0.5	297	27.0	27.0	8.0	8.0	32.0	32.0	91.1	91.1	6.1	6.1	21.7	6.1	6	6	100	100			<0.2	<0.2	0.4	0.4			
SR2	Sunny	Moderate	13:25	4.9	Surface	1.0	0.1	171	27.5	27.5	7.9	7.9	32.2	32.2	90.7	90.7	6.0	6.0	15.0	6.0	6	7	96	95	821448	814152	<0.2	<0.2	0.3	0.4			
						1.0	0.1	173	27.5	27.5	7.9	7.9	32.2	32.2	90.7	90.7	6.0	6.0	15.0	6.0	7	7	95	95			<0.2	<0.2	0.4	0.4			
					Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
					Bottom	3.9	0.1	114	27.4	27.4	7.9	7.9	32.2	32.2	91.9	91.9	6.1	6.1	19.8	6.1	7	7	99	99			<0.2	<0.2	0.4	0.4			
						3.9	0.1	122	27.4	27.4	7.9	7.9	32.2	32.2	91.9	91.9	6.1	6.1	19.8	6.1	6	6	98	98			<0.2	<0.2	0.3	0.3			
SR3	Sunny	Moderate	12:27	8.7	Surface	1.0	0.2	1	26.8	26.8	8.0	8.0	31.8	31.8	97.0	97.0	6.5	6.5	15.7	6.5	13	13	-	-	822153	807568	-	-	-	-			
						1.0	0.2	1	26.8	26.8	8.0	8.0	31.8	31.8	97.0	97.0	6.5	6.5	15.7	6.5	13	13	-	-	-	-	-	-	-	-			
					Middle	4.4	0.3	12	26.7	26.7	8.0	8.0	31.9	31.9	96.8	96.8	6.5	6.5	19.8	6.5	15	15	-	-	-	-	-	-	-	-	-	-	
						4.4	0.3	12	26.7	26.7	8.0	8.0	31.9	31.9	96.8	96.8	6.5	6.5	19.8	6.5	15	15	-	-	-	-	-	-	-	-	-		
					Bottom	7.7	0.3	8	26.6	26.6	8.0	8.0	31.8	31.8	97.6	97.6	6.5	6.5	25.7	6.5	13	13	-	-	-	-	-	-	-	-	-	-	
						7.7	0.3	8	26.6	26.6	8.0	8.0	31.8	31.8	97.6	97.6	6.5	6.5	25.7	6.5	14	14	-	-	-	-	-	-	-	-	-		
SR4A	Sunny	Calm	13:37	8.5	Surface	1.0	0.3	244	26.4	26.4	8.0	8.0	32.4	32.4	94.7	94.7	6.4	6.4	17.3	6.4	15	14	-	-	817178	807828	-	-	-	-			
						1.0	0.3	249	26.4	26.4	8.0	8.0	32.4	32.4	94.7	94.7	6.4	6.4	17.7	6.4	14	14	-	-	-	-	-	-	-				
					Middle	4.3	0.3	240	26.4	26.4	8.0	8.0	32.5	32.5	95.1	95.1	6.4	6.4	20.5	6.4	15	15	-	-	-	-	-	-	-	-			
						4.3	0.3	244	26.4	26.4	8.0	8.0	32.5	32.5	95.1	95.1	6.4	6.4	20.6	6.4	15	15	-	-	-	-	-	-	-				
					Bottom	7.5	0.2	270	26.4	26.4	8.0	8.0	32.5	32.5	96.8	97.1	6.5	6.5	23.4	6.5	19	19	-	-	-	-	-	-	-	-			
						7.5	0.2	285	26.3	26.3	8.0	8.0	32.5	32.5	97.3	97.3	6.5	6.5	23.1	6.5	19	19	-	-	-	-	-	-	-				
SR5A	Sunny	Calm	13:51	5.2	Surface	1.0	0.3	303	26.7	26.7	8.0	8.0	31.6	31.6	95.0	95.0	6.4	6.4	6.9	6.4	7	6	-	-	816603	810692	-	-	-	-			
						1.0	0.4	305	26.7	26.7	8.0	8.0	31.6	31.6	94.9	94.9	6.4	6.4	7.0	6.4	6	6	-	-	-	-	-	-					
					Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
					Bottom	4.2	0.3	306	26.5	26.5	8.0	8.0	31.6	31.6	96.0	96.5	6.5	6.5	7.5	6.5	7	7	-	-	-	-	-	-	-				
						4.2	0.3	319	26.5	26.5	8.0	8.0	31.6	31.6	96.9	96.5	6.5	6.5	7.6	6.5	6	6	-	-	-	-	-	-	-				
SR6	Sunny	Calm	14:12	4.3	Surface	1.0	0.1	248	27.1	27.1	8.0	8.0	31.7	31.7	98.5	98.6	6.6	6.6	5.8	6.6	5	5	-	-	817889	814643	-	-	-	-			
						1.0	0.1	250	27.1	27.1	8.0	8.0	31.7	31.7	98.6	98.6	6.6	6.6	6.0	6.6	5	5	-	-	-	-							

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

Water Quality Monitoring

Water Quality Monitoring Results on 21 October 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
					Value	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value			Value	Value	Value	Value
C1	Sunny	Rough	07:54	8.5	Surface	1.0	0.2	168	26.3	8.0	8.0	32.3	32.3	94.3	94.3	6.4	6.4	15.4	23	93	93	<0.2	1.3	815608	804250	<0.2	0.6	1.0		
						1.0	0.2	177	26.3	26.3	8.0	8.0	32.3	32.3	94.3	94.3	6.4	6.4	15.6	22	94	94	<0.2			1.4				
						4.3	0.3	200	26.3	26.3	8.0	8.0	32.4	32.4	94.0	94.0	6.3	6.3	21.5	23	98	98	<0.2			0.7				
					4.3	0.3	212	26.3	26.3	8.0	8.0	32.4	32.4	94.0	94.0	6.3	6.3	21.5	25	98	98	<0.2	1.0							
					7.5	0.1	219	26.3	26.3	8.0	8.0	32.4	32.4	94.0	94.0	6.3	6.3	27.1	24	96	96	<0.2	0.6							
					7.5	0.1	220	26.3	26.3	8.0	8.0	32.4	32.4	94.0	94.0	6.3	6.3	27.0	24	96	96	<0.2	0.8							
C2	Sunny	Moderate	08:40	12.1	Surface	1.0	0.1	91	26.9	7.9	7.9	31.2	31.2	91.4	91.4	6.1	6.1	17.2	15	95	95	<0.2	0.6	825681	806958	<0.2	0.6	0.6		
						1.0	0.1	96	26.9	26.9	7.9	7.9	31.2	31.2	91.4	91.4	6.1	6.1	17.2	14	95	95	<0.2			0.7				
						6.1	0.2	60	26.9	26.9	7.9	7.9	31.2	31.2	92.0	92.0	6.2	6.2	22.9	16	97	97	<0.2			0.6				
					6.1	0.2	64	26.9	26.9	7.9	7.9	31.2	31.2	92.0	92.0	6.2	6.2	22.9	16	96	96	<0.2	0.6							
					11.1	0.2	12	26.9	26.9	7.9	7.9	31.1	31.1	92.8	92.8	6.2	6.2	24.2	16	98	98	<0.2	0.5							
					11.1	0.2	12	26.9	26.9	7.9	7.9	31.1	31.1	92.8	92.8	6.2	6.2	24.2	14	99	99	<0.2	0.6							
C3	Fine	Moderate	06:52	11.3	Surface	1.0	0.5	98	27.4	7.9	7.9	32.0	32.0	85.9	86.0	5.7	5.7	11.8	7	96	96	<0.2	0.3	822099	817814	<0.2	0.3	0.3		
						1.0	0.5	98	27.4	27.4	7.9	7.9	32.0	32.0	86.0	86.0	5.7	5.7	12.0	8	96	96	<0.2			0.3				
						5.7	0.4	89	27.4	27.4	7.9	7.9	32.0	32.0	86.0	86.0	5.7	5.7	18.0	8	98	98	<0.2			0.4				
					5.7	0.5	89	27.4	27.4	7.9	7.9	32.0	32.0	86.0	86.0	5.7	5.7	18.0	8	99	99	<0.2	0.3							
					10.3	0.4	84	27.4	27.4	7.7	7.7	32.0	32.0	86.2	86.2	5.7	5.7	26.6	6	101	101	<0.2	0.3							
					10.3	0.4	87	27.4	27.4	7.7	7.7	32.0	32.0	86.2	86.2	5.7	5.7	26.6	9	102	102	<0.2	0.3							
IM1	Sunny	Rough	08:12	7.6	Surface	1.0	0.1	136	26.2	8.0	8.0	31.8	31.8	94.1	94.1	6.4	6.4	16.8	23	96	96	<0.2	0.5	818333	806448	<0.2	0.6	0.6		
						1.0	0.1	138	26.2	26.2	8.0	8.0	31.8	31.8	94.1	94.1	6.4	6.4	17.0	21	97	97	<0.2			0.6				
						3.8	0.0	92	26.2	26.2	8.0	8.0	31.9	31.9	93.9	93.9	6.3	6.3	20.9	22	98	98	<0.2			0.6				
					3.8	0.0	97	26.2	26.2	8.0	8.0	31.9	31.9	93.9	93.9	6.3	6.3	20.8	23	99	99	<0.2	0.6							
					6.6	0.0	285	26.2	26.2	8.0	8.0	31.9	31.9	94.4	94.4	6.4	6.4	25.6	21	100	100	<0.2	0.7							
					6.6	0.0	311	26.2	26.2	8.0	8.0	31.9	31.9	94.4	94.4	6.4	6.4	25.4	22	101	101	<0.2	0.7							
IM2	Sunny	Rough	08:20	8.3	Surface	1.0	0.1	121	26.2	8.0	8.0	31.7	31.7	94.2	94.2	6.4	6.4	14.5	19	94	94	<0.2	0.8	818849	806205	<0.2	0.8	0.7		
						1.0	0.1	122	26.2	26.2	8.0	8.0	31.7	31.7	94.2	94.2	6.4	6.4	14.2	19	94	94	<0.2			0.8				
						4.2	0.1	89	26.2	26.2	8.0	8.0	31.7	31.7	93.6	93.6	6.3	6.3	19.5	19	96	96	<0.2			0.8				
					4.2	0.1	89	26.2	26.2	8.0	8.0	31.7	31.7	93.6	93.6	6.3	6.3	19.7	19	96	96	<0.2	0.8							
					7.3	0.0	110	26.2	26.2	8.0	8.0	31.7	31.7	94.1	94.1	6.4	6.4	24.0	19	98	98	<0.2	0.6							
					7.3	0.0	111	26.2	26.2	8.0	8.0	31.7	31.7	94.1	94.1	6.4	6.4	24.1	21	98	98	<0.2	0.6							
IM3	Sunny	Rough	08:27	8.5	Surface	1.0	0.2	87	26.2	8.0	8.0	31.7	31.7	94.0	94.0	6.4	6.4	13.5	16	94	94	<0.2	0.9	819406	806036	<0.2	1.0	0.9		
						1.0	0.2	88	26.2	26.2	8.0	8.0	31.7	31.7	94.0	94.0	6.4	6.4	13.5	17	94	94	<0.2			1.0				
						4.3	0.2	88	26.3	26.3	8.0	8.0	31.7	31.7	93.4	93.4	6.3	6.3	17.6	16	96	96	<0.2			0.8				
					4.3	0.2	95	26.3	26.3	8.0	8.0	31.7	31.7	93.4	93.4	6.3	6.3	17.4	15	96	96	<0.2	1.0							
					7.5	0.1	32	26.3	26.3	8.0	8.0	31.7	31.7	94.0	94.1	6.4	6.4	21.5	16	98	98	<0.2	0.9							
					7.5	0.1	32	26.3	26.3	8.0	8.0	31.7	31.7	94.1	94.1	6.4	6.4	21.6	18	98	98	<0.2	1.0							
IM4	Sunny	Rough	08:37	7.7	Surface	1.0	0.1	54	26.2	8.0	8.0	31.9	31.9	94.3	94.3	6.4	6.4	16.4	17	96	96	<0.2	1.0	819585	805019	<0.2	0.6	0.8		
						1.0	0.2	58	26.2	26.2	8.0	8.0	31.9	31.9	94.3	94.3	6.4	6.4	16.2	16	97	97	<0.2			1.0				
						3.9	0.1	78	26.2	26.2	8.0	8.0	32.0	32.0	93.9	93.9	6.3	6.3	19.6	16	96	96	<0.2			1.0				
					3.9	0.1	85	26.2	26.2	8.0	8.0	32.0	32.0	93.9	93.9	6.3	6.3	19.5	15	99	99	<0.2	0.9							
					6.7	0.1	8	26.2	26.2	8.0	8.0	32.0	32.0	94.3	94.3	6.4	6.4	26.3	16	100	100	<0.2	0.5							
					6.7	0.1	8	26.2	26.2	8.0	8.0	32.0	32.0	94.3	94.3	6.4	6.4	26.1	16	100	100	<0.2	0.6							
IM5	Sunny	Rough	08:46	7.1	Surface	1.0	0.1	19	26.3	8.0	8.0	31.7	31.7	94.1	94.1	6.4	6.4	11.0	13	96	96	<0.2	0.5	820573	804933	<0.2	0.5	0.8		
						1.0	0.1	19	26.3	26.3	8.0	8.0	31.7	31.7	94.1	94.1	6.4	6.4	11.2	14	96	96	<0.2			0.5				
						3.6	0.1	30	26.3	26.3	8.0	8.0	31.8	31.8	93.5	93.5	6.3	6.3	16.4	14	99	99	<0.2			1.1				
					3.6	0.2	32	26.3	26.3	8.0	8.0	31.8	31.8	93.5	93.5	6.3	6.3	16.7	17	99	99	<0.2	1.1							
					6.1	0.1	57	26.3	26.3	8.0	8.0	31.8	31.8	93.6	93.6	6.3	6.3	21.3	14	101	101	<0.2	0.8							
					6.1	0.1	57	26.3	26.3	8.0	8.0	31.8	31.8	93.7	93.7	6.3	6.3	21.5	16	101	101	<0.2	1.0							
IM6	Sunny	Rough	08:56	7.0	Surface	1.0	0.1	45	26.4	8.1	8.1	31.8	31.8	92.9	92.9	6.3	6.3	15.8	17	94	94	<0.2	0.7	821077	805820	<0.2	0.6	0.6		
						1.0	0.1	49	26.4	26.4	8.1	8.1	31.8	31.8	92.9	92.9	6.3	6.3	15.6	17	95	95	<0.2			0.6				
						3.5	0.1	38	26.4	26.4	8.0	8.0	31.8	31.8	92.8	92.8	6.3	6.3	21.7	19	96	96	<0.2			0.6				
					3.5	0.1	40	26.4	26.4	8.0	8.0	31.8	31.8	92.8	92.8	6.3	6.3	22.0	17	96	96	<0.2	0.7							
					6.0	0.1	41	26.4	26.4	8.0	8.0	31.8	31.8	94.0	94.0	6.3	6.3	27.2	19	99	99	<0.2	0.6							
					6.0	0.1	44	26.4	26.4	8.0	8.0	31.8	31.8	94.0	94.0	6.3	6.3	27.4	19	100	100	<0.2	0.6							
IM7	Sunny	Rough	09:04	8.5	Surface	1.0	0.2	72	26.3	8.0	8.0	32.0	32.0	93.1	93.1	6.3	6.3	11.7	10	96	96	<0.2	1.2	821368	806846	<0.2	0.9	0.8		
						1.0	0.3	74	26.3	26.3	8.0	8.0	32.0	32.0	93.1	93.1	6.3	6.3	11.7	12	97	97	<0.2			0.7				
						4.3	0.2	66	26.3	26.3	8.0	8.0	32																	

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

**Water Quality Monitoring**

**Water Quality Monitoring Results on 21 October 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	08:03	7.3	Surface	1.0	0.3	82	26.9	26.9	8.0	8.0	31.9	31.9	91.5	91.5	6.1	6.2	19.7	21.6	14	15	96	97	822097	808819	<0.2	0.7	0.7					
						1.0	0.3	84	26.9		8.0	8.0	31.9	31.9	91.5	91.5	6.1		19.7		15		95				<0.2	0.7						
					Middle	3.7	0.3	77	26.9	26.9	8.0	8.0	31.9	31.9	92.3	92.4	6.2	6.3	22.2	21.6	14	14	97	97	97	822097	808819	<0.2	0.6	0.6				
						3.7	0.3	78	26.9	26.9	8.0	8.0	31.9	31.9	92.4	92.4	6.2		22.4		14		97					<0.2	0.6					
					Bottom	6.3	0.3	71	26.9	26.9	8.0	8.0	31.9	31.9	94.5	94.5	6.3	6.3	22.9	21.6	17	15	98	99	99	97	822097	808819	<0.2	0.7	0.7			
						6.3	0.3	71	26.9	26.9	8.0	8.0	31.9	31.9	94.5	94.5	6.3		22.9		15		99						<0.2	0.6				
IM10	Sunny	Moderate	07:56	6.7	Surface	1.0	0.3	101	26.7	26.7	8.0	8.0	32.1	32.1	93.5	93.5	6.3	6.3	12.6	20.9	19	18	96	98	822257	809848	<0.2	0.7	0.7					
						1.0	0.3	109	26.7		8.0	8.0	32.1	32.1	93.5	93.5	6.3		12.6		20		95				<0.2	0.7						
					Middle	3.4	0.3	104	26.7	26.7	8.0	8.0	32.1	32.1	93.9	93.9	6.3	6.4	21.6	21.6	18	17	97	98	98	98	822257	809848	<0.2	0.7	0.7			
						3.4	0.3	110	26.7	26.7	8.0	8.0	32.1	32.1	93.9	93.9	6.3		21.6		18		98						<0.2	0.6				
					Bottom	5.7	0.2	104	26.7	26.7	8.0	8.0	32.1	32.1	95.8	95.8	6.4	6.4	28.4	28.4	17	19	100	99	99	98	822257	809848	<0.2	0.6	0.6			
						5.7	0.2	112	26.7	26.7	8.0	8.0	32.1	32.1	95.8	95.8	6.4		28.4		19		99						<0.2	0.6				
IM11	Sunny	Moderate	07:45	8.0	Surface	1.0	0.4	92	26.9	26.9	8.0	8.0	31.4	31.4	91.4	91.4	6.1	6.2	13.5	19.1	20	21	95	97	821489	810542	<0.2	0.6	0.6					
						1.0	0.4	100	26.9		26.9	8.0	8.0	31.4	31.4	91.4	91.4		6.1		13.5		20				96	<0.2		0.7				
					Middle	4.0	0.4	99	26.9	26.9	8.0	8.0	31.9	31.9	92.2	92.2	6.2	6.3	17.6	21.6	18	20	97	99	99	97	821489	810542	<0.2	0.6	0.6			
						4.0	0.4	101	26.9	26.9	8.0	8.0	31.9	31.9	92.2	92.2	6.2		17.6		20		97						<0.2	0.5				
					Bottom	7.0	0.3	91	26.9	26.9	8.0	8.0	31.7	31.7	93.5	93.5	6.3	6.3	26.3	26.3	21	23	99	98	98	98	821489	810542	<0.2	0.5	0.5			
						7.0	0.3	96	26.9	26.9	8.0	8.0	31.7	31.7	93.5	93.5	6.3		26.3		23		98						<0.2	0.5				
IM12	Sunny	Moderate	07:38	8.5	Surface	1.0	0.3	111	27.0	27.0	7.9	7.9	31.9	31.9	89.8	89.8	6.0	6.0	16.4	22.8	15	15	95	97	821171	811502	<0.2	0.4	0.4					
						1.0	0.3	121	27.0		27.0	7.9	7.9	31.9	31.9	89.8	89.8		6.0		16.4		15				96	<0.2		0.4				
					Middle	4.3	0.3	113	27.0	27.0	8.0	8.0	31.9	31.9	89.6	89.6	6.0	6.0	18.8	33.3	16	20	97	99	99	97	821171	811502	<0.2	0.3	0.3			
						4.3	0.3	117	27.0	27.0	8.0	8.0	31.9	31.9	89.6	89.6	6.0		18.8		16		97						<0.2	0.5				
					Bottom	7.5	0.3	103	27.0	27.0	8.0	8.0	31.9	31.9	90.1	90.1	6.0	6.0	33.3	33.3	20	19	99	99	99	97	821171	811502	<0.2	0.4	0.4			
						7.5	0.4	112	27.0	27.0	8.0	8.0	31.9	31.9	90.1	90.1	6.0		33.3		19		99						<0.2	0.4				
SR2	Fine	Moderate	07:13	4.9	Surface	1.0	0.4	99	27.1	27.1	7.9	7.9	32.0	32.0	90.1	90.1	6.0	6.0	15.4	19.8	9	10	96	97	821463	814151	<0.2	0.5	0.5					
						1.0	0.4	99	27.1		27.1	7.9	7.9	32.0	32.0	90.1	90.1		6.0		15.4		9				95	<0.2		0.6				
					Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
					Bottom	3.9	0.3	105	27.1	27.1	7.9	7.9	32.0	32.0	91.8	91.8	6.1	6.1	24.2	24.2	11	12	99	98	98	97	821463	814151	<0.2	0.4	0.5			
						3.9	0.3	113	27.1	27.1	7.9	7.9	32.0	32.0	91.8	91.8	6.1		24.2		12		98						<0.2	0.5				
SR3	Sunny	Moderate	08:18	8.8	Surface	1.0	0.3	79	26.8	26.8	8.0	8.0	31.7	31.7	91.9	91.9	6.2	6.2	13.7	19.7	11	12	-	-	822155	807587	-	-	-					
						1.0	0.3	82	26.8		26.9	8.0	8.0	31.7	31.7	91.9	91.9		6.2		13.7		11				-	-		-				
					Middle	4.4	0.3	63	26.9	26.9	8.0	8.0	31.7	31.7	92.1	92.1	6.2	6.2	17.4	27.9	12	12	-	-	-	-	822155	807587	-	-	-			
						4.4	0.3	69	26.9	26.9	8.0	8.0	31.7	31.7	92.1	92.1	6.2		17.4		12		-						-	-				
					Bottom	7.8	0.3	47	26.9	26.9	8.0	8.0	31.8	31.8	93.4	93.4	6.2	6.2	27.9	27.9	12	12	-	-	-	-	822155	807587	-	-	-			
						7.8	0.3	49	26.9	26.9	8.0	8.0	31.8	31.8	93.4	93.4	6.2		27.9		12		-						-	-				
SR4A	Sunny	Moderate	07:33	9.5	Surface	1.0	0.4	71	26.4	26.4	8.0	8.0	31.6	31.6	89.4	89.5	6.0	6.0	14.4	17.6	13	14	-	-	817182	807822	-	-	-					
						1.0	0.4	74	26.4		26.4	8.0	8.0	31.6	31.6	89.5	89.5		6.0		14.6		14				-	-		-				
					Middle	4.8	0.3	75	26.4	26.4	8.0	8.0	31.6	31.6	89.2	89.2	6.0	6.1	19.2	19.2	16	17	-	-	-	-	817182	807822	-	-	-			
						4.8	0.4	75	26.4	26.3	8.0	8.0	31.6	31.6	89.2	89.2	6.0		19.2		17		-						-	-				
					Bottom	8.5	0.3	67	26.3	26.3	8.0	8.0	31.6	31.6	89.7	89.9	6.1	6.1	19.0	19.1	20	21	-	-	-	-	817182	807822	-	-	-			
						8.5	0.3	68	26.3	26.3	8.0	8.0	31.6	31.6	90.1	89.9	6.1		19.1		21		-						-	-				
SR5A	Sunny	Moderate	07:16	4.3	Surface	1.0	0.1	324	26.3	26.3	8.0	8.0	31.5	31.5	90.6	90.7	6.1	6.1	11.3	11.0	11	12	-	-	816603	810684	-	-	-					
						1.0	0.1	343	26.3		26.3	8.0	8.0	31.5	31.5	90.8	90.8		6.1		11.6		12				-	-		-				
					Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
					Bottom	3.3	0.1	318	26.3	26.3	8.0	8.0	31.4	31.4	92.7	93.0	6.3	6.3	10.6	10.6	11	12	-	-	-	-	816603	810684	-	-	-			
						3.3	0.1	346	26.3	26.3	8.0	8.0	31.4	31.4	93.2	93.0	6.3		10.6		12		-						-	-				
SR6	Sunny	Moderate	06:47	4.0	Surface	1.0	0.1	51	26.5	26.5	7.9	7.9	30.8	30.8	90.3	90.2	6.1	6.1	9.5	10.1	10	10	-	-	817898	814671	-	-	-					
						1.0	0.1	52	26.5		26.5	7.9	7.9	30.8	30.8	90.3	90.2		6.1		9.7		10				-	-		-				
					Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
					Bottom	3.0	0.1	40	26.5	26.5	7.9	7.9	30.3	29.9	92.3	94.7	6.3	6.5	11.0	10.2	8	8	-	-	-	-	817898	814671	-	-	-			
						3.0	0.1	41	26.5	26.5	7.9	7.9	29.5	29.9	97.0	94.7	6.6		10.2		8		-						-	-				
SR7	Fine	Moderate	06:17	16.6	Surface	1.0	0.2	94	27.5	27.5	7.9	7.9	32.0	32.0	85.7	85.7	5.7	5.7	8.6	13.9	9	9	-	-	823641	823743	-	-	-					
						1.0	0.2	96	27.5		27.5	7.9	7.9	32.0	32.0	85.7	85.7		5.7		8.6		9				-	-		-				
					Middle	8.3	0.3	89	27.5	27.5	7.9	7.9	32.0	32.0	86.1	86.1	5.7	5.8	14.7	18.3	8	9	-	-	-	-	823641	823743	-	-	-			
						8.3	0.3	93	27.5																									



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

**Water Quality Monitoring**

**Water Quality Monitoring Results on 24 October 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	DA	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA
					Value	DA	Value	DA																								
C1	Sunny	Moderate	15:10	8.9	Surface	1.0	0.1	194	26.4	8.0	8.0	32.5	32.5	95.2	95.2	6.4	6.4	7.9	6	97			<0.2	0.4	815613	804231		<0.2	0.3			
						1.0	0.1	194	26.4	8.0	8.0	32.5	32.5	95.1	95.2	6.4	6.4	7.9	7	97			<0.2	0.3								
					Middle	4.5	0.1	222	26.2	26.2	8.0	8.0	32.7	32.7	93.8	93.8	6.3	6.3	10.3	9	104	8	104								<0.2	0.4
						4.5	0.1	228	26.2	26.2	8.0	8.0	32.7	32.7	93.8	93.8	6.3	6.3	10.4	8	104	8	104								<0.2	0.4
					Bottom	7.9	0.1	238	26.2	26.2	8.0	8.0	32.7	32.7	94.6	94.6	6.4	6.4	12.0	10	106	10	106								<0.2	0.3
						7.9	0.1	245	26.2	26.2	8.0	8.0	32.7	32.7	94.6	94.6	6.4	6.4	12.1	10	106	10	106								<0.2	0.3
C2	Sunny	Moderate	13:56	12.2	Surface	1.0	0.2	66	26.5	7.9	7.9	30.2	30.2	93.0	93.0	6.3	6.3	12.0	5	94			<0.2	1.1	825667	806961		<0.2	1.1			
						1.0	0.2	71	26.5	7.9	7.9	30.2	30.2	93.0	93.0	6.3	6.3	12.0	4	95			<0.2	1.1								
					Middle	6.1	0.1	77	26.2	26.2	7.9	7.9	30.9	30.9	92.0	92.0	6.3	6.3	17.3	6	97	7	96								<0.2	1.3
						6.1	0.1	82	26.2	26.2	7.9	7.9	30.9	30.9	92.0	92.0	6.3	6.3	17.3	6	96	7	96								<0.2	1.0
					Bottom	11.2	0.2	307	26.2	26.2	8.0	8.0	31.8	31.8	92.7	92.7	6.3	6.3	21.5	9	98	9	99								<0.2	1.1
						11.2	0.2	308	26.2	26.2	8.0	8.0	31.8	31.8	92.7	92.7	6.3	6.3	21.5	9	99	9	99								<0.2	1.1
C3	Sunny	Moderate	15:45	12.4	Surface	1.0	0.4	96	27.0	7.9	7.9	32.2	32.2	86.1	86.1	5.7	5.7	4.9	6	96			<0.2	0.5	822125	817796		<0.2	0.4			
						1.0	0.4	99	27.0	7.9	7.9	32.2	32.2	86.1	86.1	5.7	5.7	4.9	5	97			<0.2	0.4								
					Middle	6.2	0.4	90	27.0	27.0	7.9	7.9	32.1	32.1	85.8	85.8	5.7	5.7	7.2	5	99	5	99								<0.2	0.4
						6.2	0.4	92	27.0	27.0	7.9	7.9	32.1	32.1	85.8	85.8	5.7	5.7	7.2	6	99	5	101								<0.2	0.3
					Bottom	11.4	0.3	80	27.0	27.0	7.9	7.9	32.1	32.1	86.5	86.5	5.8	5.8	10.2	5	101	5	101								<0.2	0.3
						11.4	0.3	85	27.0	27.0	7.9	7.9	32.1	32.1	86.5	86.5	5.8	5.8	10.2	5	102	5	102								<0.2	0.4
IM1	Sunny	Moderate	14:51	7.8	Surface	1.0	0.1	51	26.3	8.0	8.0	32.6	32.6	96.3	96.3	6.5	6.5	8.0	8	96			<0.2	0.3	818360	806458		<0.2	0.3			
						1.0	0.1	54	26.3	8.0	8.0	32.6	32.6	96.3	96.3	6.5	6.5	8.0	7	97			<0.2	0.3								
					Middle	3.9	0.1	44	26.2	26.2	8.0	8.0	32.6	32.6	95.7	95.7	6.4	6.4	8.8	7	104	9	104								<0.2	0.4
						3.9	0.1	44	26.2	26.2	8.0	8.0	32.6	32.6	95.7	95.7	6.4	6.4	8.8	8	104	9	104								<0.2	0.3
					Bottom	6.8	0.0	285	26.1	26.1	8.0	8.0	32.6	32.6	95.8	95.8	6.5	6.5	8.6	12	106	10	106								<0.2	0.3
						6.8	0.0	295	26.1	26.1	8.0	8.0	32.6	32.6	95.8	95.8	6.5	6.5	8.6	10	106	10	106								<0.2	0.3
IM2	Sunny	Moderate	14:45	8.8	Surface	1.0	0.1	73	26.5	8.0	8.0	32.6	32.6	96.2	96.2	6.4	6.4	8.8	9	94			<0.2	0.3	818867	806188		<0.2	0.3			
						1.0	0.1	73	26.5	8.0	8.0	32.6	32.6	96.2	96.2	6.4	6.4	8.8	8	96			<0.2	0.3								
					Middle	4.4	0.0	52	26.1	26.1	8.0	8.0	32.6	32.6	94.3	94.3	6.4	6.4	11.9	8	102	8	102								<0.2	0.2
						4.4	0.0	53	26.1	26.1	8.0	8.0	32.6	32.6	94.3	94.3	6.4	6.4	12.0	7	101	8	101								<0.2	0.3
					Bottom	7.8	0.1	19	26.0	26.0	8.0	8.0	32.6	32.6	95.3	95.4	6.4	6.4	13.8	9	104	9	104								<0.2	0.3
						7.8	0.1	19	26.0	26.0	8.0	8.0	32.6	32.6	95.4	95.4	6.4	6.4	13.8	9	105	9	105								<0.2	0.3
IM3	Sunny	Moderate	14:38	8.7	Surface	1.0	0.1	55	26.3	8.0	8.0	32.5	32.5	96.0	96.0	6.5	6.5	9.7	9	96			<0.2	0.3	819408	806020		<0.2	0.3			
						1.0	0.1	59	26.3	8.0	8.0	32.5	32.5	95.9	96.0	6.5	6.5	9.8	9	96			<0.2	0.3								
					Middle	4.4	0.1	7	26.0	26.0	8.0	8.0	32.6	32.6	93.7	93.8	6.3	6.3	15.6	10	102	10	101								<0.2	0.3
						4.4	0.1	7	26.0	26.0	8.0	8.0	32.6	32.6	93.8	93.8	6.3	6.3	15.7	11	101	10	101								<0.2	0.3
					Bottom	7.7	0.1	350	26.0	26.0	8.0	8.0	32.6	32.6	94.2	94.3	6.4	6.4	20.3	11	105	11	105								<0.2	0.3
						7.7	0.1	322	26.0	26.0	8.0	8.0	32.6	32.6	94.4	94.4	6.4	6.4	20.2	12	105	11	105								<0.2	0.3
IM4	Sunny	Moderate	14:31	8.2	Surface	1.0	0.1	37	26.3	8.0	8.0	32.5	32.5	96.2	96.2	6.5	6.5	9.5	11	94			<0.2	0.3	819582	805028		<0.2	0.3			
						1.0	0.1	37	26.3	8.0	8.0	32.5	32.5	96.2	96.2	6.5	6.5	9.6	9	95			<0.2	0.4								
					Middle	4.1	0.1	326	26.0	26.0	8.0	8.0	32.5	32.5	93.8	93.8	6.3	6.3	18.4	10	101	10	99								<0.2	0.3
						4.1	0.1	352	26.0	26.0	8.0	8.0	32.5	32.5	93.8	93.8	6.3	6.3	18.4	10	99	10	99								<0.2	0.3
					Bottom	7.2	0.1	305	25.9	25.9	8.0	8.0	32.5	32.5	93.9	93.9	6.4	6.4	20.1	11	104	11	104								<0.2	0.4
						7.2	0.1	307	25.9	25.9	8.0	8.0	32.5	32.5	93.9	93.9	6.4	6.4	20.0	11	104	11	104								<0.2	0.3
IM5	Sunny	Moderate	14:20	7.3	Surface	1.0	0.2	71	26.2	8.0	8.0	32.3	32.3	97.1	97.1	6.6	6.6	8.0	7	96			<0.2	0.4	820545	804910		<0.2	0.4			
						1.0	0.2	75	26.2	8.0	8.0	32.3	32.3	97.1	97.1	6.6	6.6	8.0	7	95			<0.2	0.4								
					Middle	3.7	0.1	54	25.9	25.9	8.0	8.0	32.6	32.6	94.7	94.7	6.4	6.4	14.3	7	100	9	100								<0.2	0.4
						3.7	0.1	54	25.9	25.9	8.0	8.0	32.6	32.6	94.7	94.7	6.4	6.4	14.3	8	100	9	100								<0.2	0.4
					Bottom	6.3	0.1	62	25.9	25.9	8.0	8.0	32.6	32.6	95.4	95.4	6.5	6.5	18.3	13	103	13	103								<0.2	0.3
						6.3	0.1	63	25.9	25.9	8.0	8.0	32.6	32.6	95.4	95.4	6.5	6.5	18.3	11	104	13	104								<0.2	0.4
IM6	Sunny	Moderate	14:12	7.4	Surface	1.0	0.2	36	26.1	8.0	8.0	32.5	32.5	96.0	96.0	6.5	6.5	13.2	10	96			<0.2	0.4	821077	805827		<0.2	0.4			
						1.0	0.3	37	26.1	8.0	8.0	32.5	32.5	96.0	96.0	6.5	6.5	13.2	12	95			<0.2	0.4								
					Middle	3.7	0.1	48	26.1	26.1	8.0	8.0	32.6	32.6	95.6	95.7	6.5	6.5	14.1	11	101	12	102								<0.2	0.4
						3.7	0.1	48	26.1	26.1	8.0	8.0	32.6	32.6	95.7	95.7	6.5	6.5	14.2	13	102	12	102								<0.2	0.4
					Bottom	6.4	0.1	56	26.0	26.0	8.0	8.0	32.6	32.6	96.0	96.0	6.5	6.5	16.1	11	104											



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

**Water Quality Monitoring**

**Water Quality Monitoring Results on 24 October 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	Value	DA
C1	Sunny	Moderate	10:03	8.7	Surface	1.0	0.6	34	25.9	25.9	8.0	8.0	32.6	32.6	93.7	93.7	6.3	6.3	14.5	22.1	21	22	94	100	815635	804256	<0.2	<0.2	0.4	0.4		
						1.0	0.7	35	25.9	8.0	8.0	32.6	32.6	93.7	93.7	6.3	6.3	14.7	22.1	22	22	95	99	<0.2	<0.2	0.4	0.4					
						4.4	0.6	19	25.9	8.0	8.0	32.6	32.6	93.1	93.2	6.3	6.3	22.1	22.4	20	20	101	100	<0.2	<0.2	0.6	0.6					
					Middle	4.4	0.6	19	25.9	25.9	8.0	8.0	32.6	32.6	93.2	93.2	6.3	6.3	22.4	22.4	20	20	100	100	<0.2	<0.2	0.4	0.4				
						7.7	0.5	18	25.9	25.9	8.0	8.0	32.6	32.6	93.0	93.0	6.3	6.3	29.5	29.5	23	23	103	103	<0.2	<0.2	0.4	0.4				
						7.7	0.5	18	25.9	25.9	8.0	8.0	32.6	32.6	93.0	93.0	6.3	6.3	29.3	29.3	25	25	105	105	<0.2	<0.2	0.4	0.4				
C2	Sunny	Moderate	10:38	11.8	Surface	1.0	0.2	340	26.3	26.3	7.9	7.9	29.4	29.4	90.7	90.7	6.2	6.2	7.3	19.2	6	6	95	97	825668	806954	<0.2	<0.2	1.2	1.2		
						1.0	0.2	313	26.3	26.3	7.9	7.9	29.4	29.4	90.7	90.7	6.2	6.2	7.3	19.2	6	6	96	96	<0.2	<0.2	1.2	1.2				
						5.9	0.3	345	26.5	26.5	7.9	7.9	31.1	31.1	89.9	89.9	6.1	6.1	11.8	11.8	9	9	97	97	<0.2	<0.2	0.7	0.7				
					Middle	5.9	0.4	357	26.5	26.5	7.9	7.9	31.1	31.1	89.9	89.9	6.1	6.1	11.8	11.8	9	9	97	97	<0.2	<0.2	0.8	0.8				
						10.8	0.2	333	26.5	26.5	7.9	7.9	31.1	31.1	91.2	91.2	6.2	6.2	38.6	38.6	11	11	99	99	<0.2	<0.2	1.0	1.0				
						10.8	0.2	354	26.5	26.5	7.9	7.9	31.1	31.1	91.2	91.2	6.2	6.2	38.6	38.6	12	12	99	99	<0.2	<0.2	1.0	1.0				
C3	Sunny	Moderate	08:52	11.1	Surface	1.0	0.2	252	26.4	26.4	8.0	8.0	32.1	32.1	91.3	91.3	6.1	6.1	9.7	10.6	11	10	97	99	822128	817817	<0.2	<0.2	0.3	0.3		
						1.0	0.2	262	26.4	26.4	8.0	8.0	32.1	32.1	91.3	91.3	6.1	6.1	9.7	10.6	10	10	96	99	<0.2	<0.2	0.3	0.3				
						5.6	0.2	254	26.4	26.4	8.0	8.0	32.0	32.0	90.9	90.9	6.1	6.1	10.5	10.5	9	9	99	99	<0.2	<0.2	0.3	0.3				
					Middle	5.6	0.2	266	26.4	26.4	8.0	8.0	32.0	32.0	90.9	90.9	6.1	6.1	10.5	10.5	9	9	99	99	<0.2	<0.2	0.3	0.3				
						10.1	0.2	254	26.4	26.4	7.9	7.9	32.0	32.0	90.8	90.8	6.1	6.1	11.6	11.6	13	13	102	102	<0.2	<0.2	0.4	0.4				
						10.1	0.2	263	26.4	26.4	7.9	7.9	32.0	32.0	90.8	90.8	6.1	6.1	11.6	11.6	12	12	101	101	<0.2	<0.2	0.3	0.3				
IM1	Sunny	Moderate	10:22	7.4	Surface	1.0	0.4	6	25.7	25.7	8.0	8.0	32.3	32.3	95.4	95.4	6.5	6.5	12.4	16.7	7	8	96	101	818341	806446	<0.2	<0.2	0.4	0.4		
						1.0	0.4	6	25.7	25.7	8.0	8.0	32.3	32.3	95.4	95.4	6.5	6.5	12.4	16.7	8	8	96	102	<0.2	<0.2	0.4	0.4				
						3.7	0.4	355	25.6	25.6	8.0	8.0	32.4	32.4	95.0	95.0	6.5	6.5	16.8	16.8	9	9	102	101	<0.2	<0.2	0.5	0.5				
					Middle	3.7	0.4	327	25.6	25.6	8.0	8.0	32.4	32.4	95.0	95.0	6.5	6.5	16.8	16.8	9	9	101	102	<0.2	<0.2	0.4	0.4				
						6.4	0.3	354	25.6	25.6	8.0	8.0	32.4	32.4	97.5	97.5	6.6	6.6	21.0	21.0	10	10	104	104	<0.2	<0.2	0.5	0.5				
						6.4	0.3	357	25.6	25.6	8.0	8.0	32.4	32.4	97.5	97.5	6.6	6.6	21.0	21.0	10	10	105	105	<0.2	<0.2	0.4	0.4				
IM2	Sunny	Moderate	10:27	8.3	Surface	1.0	0.4	12	25.7	25.7	8.0	8.0	32.2	32.2	95.2	95.2	6.5	6.5	12.0	17.0	10	10	94	100	818860	806206	<0.2	<0.2	0.5	0.5		
						1.0	0.4	13	25.7	25.7	8.0	8.0	32.2	32.2	95.2	95.2	6.5	6.5	12.0	17.0	10	10	95	100	<0.2	<0.2	0.4	0.4				
						4.2	0.4	15	25.6	25.6	8.0	8.0	32.2	32.2	94.6	94.6	6.4	6.4	17.8	17.8	9	9	100	100	<0.2	<0.2	0.3	0.3				
					Middle	4.2	0.4	15	25.6	25.6	8.0	8.0	32.2	32.2	94.6	94.6	6.4	6.4	17.8	17.8	9	9	100	100	<0.2	<0.2	0.3	0.3				
						7.3	0.4	16	25.6	25.6	8.0	8.0	32.2	32.2	94.6	94.7	6.4	6.5	21.2	21.2	10	10	104	104	<0.2	<0.2	0.3	0.3				
						7.3	0.4	16	25.6	25.6	8.0	8.0	32.2	32.2	94.7	94.7	6.5	6.5	21.3	21.3	10	10	105	105	<0.2	<0.2	0.3	0.3				
IM3	Sunny	Moderate	10:34	8.6	Surface	1.0	0.5	18	25.7	25.7	8.0	8.0	32.2	32.2	95.4	95.4	6.5	6.5	11.5	20.2	8	8	96	100	819400	806020	<0.2	<0.2	0.3	0.3		
						1.0	0.5	18	25.7	25.7	8.0	8.0	32.2	32.2	95.3	95.3	6.5	6.5	11.7	20.2	8	8	95	98	<0.2	<0.2	0.4	0.4				
						4.3	0.4	18	25.6	25.6	8.0	8.0	32.2	32.2	94.3	94.3	6.4	6.4	22.6	22.2	9	9	101	101	<0.2	<0.2	0.4	0.4				
					Middle	4.3	0.4	18	25.6	25.6	8.0	8.0	32.2	32.2	94.3	94.3	6.4	6.4	22.2	22.2	9	9	98	101	<0.2	<0.2	0.3	0.3				
						7.6	0.3	18	25.6	25.6	8.0	8.0	32.2	32.2	94.5	94.6	6.4	6.4	26.7	26.7	12	12	103	103	<0.2	<0.2	0.3	0.3				
						7.6	0.3	18	25.6	25.6	8.0	8.0	32.2	32.2	94.6	94.6	6.4	6.4	26.7	26.7	11	11	105	105	<0.2	<0.2	0.3	0.3				
IM4	Sunny	Moderate	10:41	7.9	Surface	1.0	0.4	4	25.8	25.8	8.0	8.0	32.2	32.2	94.9	94.9	6.4	6.4	12.8	20.7	8	8	95	100	819557	805050	<0.2	<0.2	0.3	0.3		
						1.0	0.4	4	25.8	25.8	8.0	8.0	32.2	32.2	94.9	94.9	6.4	6.4	12.8	20.7	8	8	95	99	<0.2	<0.2	0.2	0.2				
						4.0	0.4	12	25.7	25.7	8.0	8.0	32.2	32.2	94.6	94.6	6.4	6.4	15.9	15.9	9	9	101	101	<0.2	<0.2	0.4	0.4				
					Middle	4.0	0.4	12	25.7	25.7	8.0	8.0	32.2	32.2	94.6	94.6	6.4	6.4	15.9	15.9	8	8	100	100	<0.2	<0.2	0.3	0.3				
						6.9	0.3	16	25.7	25.7	8.0	8.0	32.3	32.3	94.7	94.7	6.4	6.4	33.3	33.3	11	11	104	104	<0.2	<0.2	0.4	0.4				
						6.9	0.3	16	25.7	25.7	8.0	8.0	32.3	32.3	94.7	94.7	6.4	6.4	33.3	33.3	9	9	106	106	<0.2	<0.2	0.4	0.4				
IM5	Sunny	Moderate	10:51	7.1	Surface	1.0	0.5	2	26.0	26.0	8.0	8.0	31.9	31.9	94.0	94.0	6.4	6.4	8.4	20.6	8	8	96	100	820563	804935	<0.2	<0.2	0.4	0.4		
						1.0	0.5	2	26.0	26.0	8.0	8.0	31.9	31.9	94.0	94.0	6.4	6.4	8.5	21.5	8	8	94	100	<0.2	<0.2	0.4	0.4				
						3.6	0.4	357	25.8	25.8	8.0	8.0	32.2	32.2	93.3	93.3	6.3	6.3	21.4	21.4	10	10	99	99	<0.2	<0.2	0.3	0.3				
					Middle	3.6	0.4	328	25.8	25.8	8.0	8.0	32.2	32.2	93.3	93.3	6.3	6.3	21.4	21.4	10	10	99	99	<0.2	<0.2	0.3	0.3				
						6.1	0.4	1	25.8	25.8	8.0	8.0	32.2	32.2	93.2	93.2	6.3	6.3	32.0	32.0	15	15	106	106	<0.2	<0.2	0.5	0.5				
						6.1	0.4	1	25.8	25.8	8.0	8.0	32.2	32.2	93.2	93.2	6.3	6.3	31.9	31.9	16	16	105	105	<0.2	<0.2	0.4	0.4				
IM6	Sunny	Moderate	10:59	7.5	Surface	1.0	0.3	36																								

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

Water Quality Monitoring Results on **24 October 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	Value	DA	Value	DA	Value
IM9	Sunny	Moderate	10:04	7.2	Surface		1.0	0.2	14	26.2	8.0	8.0	30.7	30.7	92.7	92.7	6.3	6.3	8.3	6.3	9	9	95	95	822102	808791	<0.2	<0.2	0.8	0.8			
					Middle		1.0	0.2	14	26.2	26.2	8.0	8.0	30.7	30.7	92.7	92.7	6.3	6.3	8.3	6.3	8	8	95			95	<0.2	<0.2	0.8	0.8		
					Bottom		3.6	0.3	350	26.1	26.1	8.0	8.0	31.2	31.2	92.5	92.5	6.3	6.3	12.3	6.3	8	8	97			97	<0.2	<0.2	0.7	0.7		
							3.6	0.3	322	26.1	26.2	8.0	8.0	31.2	31.2	92.5	92.5	6.3	6.3	12.3	6.3	9	9	97			97	<0.2	<0.2	0.8	0.8		
							6.2	0.3	318	26.2	26.2	8.0	8.0	31.7	31.7	92.8	92.8	6.3	6.3	11.4	6.3	13	13	99			99	<0.2	<0.2	0.2	0.2		
							6.2	0.3	332	26.2	26.2	8.0	8.0	31.7	31.7	92.8	92.8	6.3	6.3	11.4	6.3	13	13	100			100	<0.2	<0.2	0.7	0.7		
IM10	Sunny	Moderate	09:57	7.7	Surface		1.0	0.5	312	26.1	26.1	8.0	8.0	32.3	32.3	93.7	93.7	6.3	6.3	15.4	6.3	18	18	95	95	<0.2	<0.2	0.2	0.2				
					Middle		1.0	0.5	339	26.1	26.0	8.0	8.0	32.3	32.3	93.7	93.7	6.3	6.3	15.4	6.3	19	19	96	96	<0.2	<0.2	0.3	0.3				
					Bottom		3.9	0.5	317	26.0	26.0	8.0	8.0	32.3	32.3	93.4	93.4	6.3	6.3	22.6	6.3	18	18	98	98	<0.2	<0.2	0.2	0.2				
							3.9	0.5	327	26.0	26.0	8.0	8.0	32.3	32.3	93.4	93.4	6.3	6.3	22.6	6.3	18	18	99	99	<0.2	<0.2	0.3	0.3				
							6.7	0.4	319	26.0	26.0	8.0	8.0	32.3	32.3	93.3	93.3	6.3	6.3	28.9	6.3	22	22	100	100	<0.2	<0.2	0.2	0.2				
							6.7	0.4	350	26.0	26.0	8.0	8.0	32.3	32.3	93.3	93.3	6.3	6.3	28.9	6.3	22	22	99	99	<0.2	<0.2	0.3	0.3				
IM11	Sunny	Moderate	09:45	6.7	Surface		1.0	0.5	290	26.1	26.1	8.0	8.0	32.3	32.3	93.2	93.2	6.3	6.3	14.8	6.3	20	20	96	96	<0.2	<0.2	0.3	0.3				
					Middle		1.0	0.5	303	26.1	26.1	8.0	8.0	32.3	32.3	93.2	93.2	6.3	6.3	14.8	6.3	21	21	96	96	<0.2	<0.2	0.3	0.3				
					Bottom		3.4	0.5	297	26.1	26.1	8.0	8.0	32.3	32.3	93.1	93.1	6.3	6.3	22.6	6.3	19	19	97	97	<0.2	<0.2	0.2	0.2				
							3.4	0.5	304	26.1	26.1	8.0	8.0	32.3	32.3	93.1	93.1	6.3	6.3	22.6	6.3	19	19	98	98	<0.2	<0.2	0.3	0.3				
							5.7	0.4	295	26.1	26.1	8.0	8.0	32.3	32.3	93.0	93.0	6.3	6.3	31.6	6.3	32	32	99	99	<0.2	<0.2	0.3	0.3				
							5.7	0.4	310	26.1	26.1	8.0	8.0	32.3	32.3	93.0	93.0	6.3	6.3	31.6	6.3	33	33	100	100	<0.2	<0.2	0.3	0.3				
IM12	Sunny	Moderate	09:37	7.4	Surface		1.0	0.6	275	26.3	26.3	8.0	8.0	32.1	32.1	91.5	91.5	6.2	6.2	13.8	6.2	14	14	96	96	<0.2	<0.2	0.2	0.2				
					Middle		1.0	0.7	287	26.3	26.3	8.0	8.0	32.1	32.1	91.5	91.5	6.2	6.2	13.8	6.2	12	12	97	97	<0.2	<0.2	0.3	0.3				
					Bottom		3.7	0.5	274	26.3	26.3	8.0	8.0	32.1	32.1	91.3	91.3	6.2	6.2	22.3	6.2	16	16	98	98	<0.2	<0.2	0.2	0.2				
							3.7	0.6	286	26.3	26.3	8.0	8.0	32.1	32.1	91.3	91.3	6.2	6.2	22.3	6.2	14	14	98	98	<0.2	<0.2	0.3	0.3				
							6.4	0.5	274	26.2	26.2	8.0	8.0	32.0	32.0	91.4	91.4	6.2	6.2	27.8	6.2	20	20	100	100	<0.2	<0.2	0.3	0.3				
							6.4	0.5	290	26.2	26.2	8.0	8.0	32.0	32.0	91.4	91.4	6.2	6.2	27.8	6.2	20	20	99	99	<0.2	<0.2	0.3	0.3				
SR2	Sunny	Moderate	09:15	4.2	Surface		1.0	0.1	64	26.2	26.2	8.0	8.0	32.1	32.1	91.5	91.5	6.2	6.2	19.4	6.2	16	16	96	96	<0.2	<0.2	0.3	0.3				
					Middle		1.0	0.2	67	26.2	26.2	8.0	8.0	32.1	32.1	91.5	91.5	6.2	6.2	19.4	6.2	15	15	97	97	<0.2	<0.2	0.2	0.2				
					Bottom		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
							3.2	0.1	62	26.2	26.2	8.0	8.0	32.1	32.1	91.6	91.6	6.2	6.2	20.8	6.2	19	19	99	99	<0.2	<0.2	0.3	0.3				
							3.2	0.1	67	26.2	26.2	8.0	8.0	32.1	32.1	91.6	91.6	6.2	6.2	20.8	6.2	17	17	98	98	<0.2	<0.2	0.3	0.3				
							-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SR3	Sunny	Moderate	10:18	8.6	Surface		1.0	0.3	16	26.3	26.3	7.9	7.9	30.5	30.5	91.6	91.6	6.2	6.2	5.4	6.2	6	6	-	-	822148	807556	-	-	-	-		
					Middle		1.0	0.3	16	26.3	26.2	7.9	7.9	30.5	30.5	91.6	91.6	6.2	6.2	5.4	6.2	6	6	-	-			-	-	-	-		
					Bottom		4.3	0.3	11	26.2	26.2	7.9	7.9	30.6	30.6	91.0	91.0	6.2	6.2	6.1	6.2	7	7	-	-			-	-	-	-		
							4.3	0.3	11	26.2	26.2	7.9	7.9	30.6	30.6	91.0	91.0	6.2	6.2	6.1	6.2	6	6	-	-			-	-	-	-		
							7.6	0.1	14	26.2	26.2	7.9	7.9	30.8	30.8	91.2	91.2	6.2	6.2	7.0	6.2	7	7	-	-			-	-	-	-		
							7.6	0.2	14	26.2	26.2	7.9	7.9	30.8	30.8	91.2	91.2	6.2	6.2	7.0	6.2	6	6	-	-			-	-	-	-		
SR4A	Sunny	Moderate	09:40	8.3	Surface		1.0	0.2	228	25.6	25.6	8.0	8.0	32.2	32.2	93.1	93.1	6.3	6.3	11.3	6.3	11	11	-	-	817196	807790	-	-	-	-		
					Middle		1.0	0.2	233	25.6	25.6	8.0	8.0	32.2	32.2	93.1	93.1	6.3	6.3	11.4	6.3	12	12	-	-			-	-				
					Bottom		4.2	0.1	219	25.6	25.6	8.0	8.0	32.2	32.2	92.6	92.6	6.3	6.3	12.8	6.3	13	13	-	-			-	-				
							4.2	0.2	234	25.6	25.6	8.0	8.0	32.2	32.2	92.6	92.6	6.3	6.3	12.8	6.3	13	13	-	-			-	-				
							7.3	0.1	230	25.6	25.6	8.0	8.0	32.2	32.2	92.5	92.5	6.3	6.3	13.2	6.3	14	14	-	-			-	-				
							7.3	0.1	233	25.6	25.6	8.0	8.0	32.2	32.2	92.5	92.5	6.3	6.3	13.3	6.3	15	15	-	-			-	-				
SR5A	Sunny	Moderate	09:24	4.7	Surface		1.0	0.2	309	25.6	25.6	8.0	8.0	32.0	32.0	93.8	93.8	6.4	6.4	9.5	6.4	8	8	-	-	816600	810689	-	-	-	-		
					Middle		1.0	0.2	333	25.6	25.6	8.0	8.0	32.0	32.0	93.8	93.8	6.4	6.4	9.6	6.4	8	8	-	-			-	-				
					Bottom		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-		
							3.7	0.2	308	25.6	25.6	8.0	8.0	32.1	32.1	94.6	94.6	6.4	6.4	9.6	6.4	10	10	-	-			-	-				
							3.7	0.2	314	25.6	25.6	8.0	8.0	32.1	32.1	94.6	94.6	6.4	6.4	9.6	6.4	10	10	-	-			-	-				
							-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-			
SR6	Sunny	Moderate	09:01	4.1	Surface		1.0	0.1	245	26.1	26.1	7.9	7.9	31.3	31.3	91.9	91.9	6.2	6.2	7.2	6.2	9	9	-	-	817905	814644	-	-	-	-		
					Middle		1.0	0.1	265	26.1	26.1	7.9	7.9	31.3	31.3	91.9	91.9	6.2	6.2	7.2	6.2	9	9	-	-			-	-				
					Bottom		3.1	0.1	245	26.1	26.1	7.9	7.9	31.1	31.1	92.7	92.7	6.3	6.3	7.7	6.3	10	10	-	-			-	-				
							3.1	0.1	268	26.1	26.1	7.9	7.9	31.0	31.0	92.7	92.7	6.3	6.3	7.7	6.3	9	9</										

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

**Water Quality Monitoring Results on 26 October 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	16:54	8.8	Surface	1.0	0.1	82	26.2	8.0	8.0	31.2	31.2	101.3	101.1	6.9	6.7	3.2	5.9	4	96	98	815613	804236	<0.2	1.0	<0.2	1.2		
						1.0	0.1	85	26.2	26.2	8.0	8.0	31.2	31.2	100.8	101.1	6.8	6.7	3.3	5.9	4	96	98	<0.2	1.0					
					Middle	4.4	0.1	135	26.2	26.2	8.0	8.0	32.1	32.1	96.8	96.8	6.5	6.5	5.9	6.0	4	99	99	815613	804236	<0.2			1.0	
						4.4	0.1	147	26.2	26.2	8.0	8.0	32.1	32.1	96.7	96.8	6.5	6.5	6.0	6.0	3	99	99	<0.2	1.0					
					Bottom	7.8	0.1	48	26.2	26.2	8.0	8.0	32.3	32.3	96.9	96.9	6.5	6.5	8.2	8.2	6	99	99	815613	804236	<0.2			1.2	
						7.8	0.1	52	26.2	26.2	8.0	8.0	32.3	32.3	97.5	97.2	6.6	6.6	8.5	8.5	4	99	99	<0.2	2.2					
C2	Sunny	Moderate	15:55	12.7	Surface	1.0	0.1	97	26.6	7.9	7.9	27.3	27.3	94.7	94.7	6.5	6.4	4.2	9.1	5	94	96	825662	806925	<0.2	2.9	<0.2	1.8		
						1.0	0.2	100	26.6	26.6	7.9	7.9	27.3	27.3	94.7	94.7	6.5	6.4	4.2	9.1	4	94	96	<0.2	1.8					
					Middle	6.4	0.1	71	26.3	26.3	7.9	7.9	30.0	30.0	91.6	91.6	6.2	6.2	10.9	10.9	6	96	96	825662	806925	<0.2			2.3	
						6.4	0.1	75	26.3	26.3	7.9	7.9	30.0	30.0	91.6	91.6	6.2	6.2	10.9	10.9	7	96	96	<0.2	1.4					
					Bottom	11.7	0.2	312	26.4	26.4	7.9	7.9	31.4	31.4	92.4	92.4	6.2	6.2	12.2	12.2	11	98	98	825662	806925	<0.2			1.1	
						11.7	0.2	321	26.4	26.4	7.9	7.9	31.4	31.4	92.4	92.4	6.2	6.2	12.2	12.2	9	99	99	<0.2	1.0					
C3	Cloudy	Moderate	17:26	12.2	Surface	1.0	0.2	80	26.6	26.6	8.0	8.0	31.6	31.6	93.5	93.5	6.3	6.1	1.6	2.4	5	96	99	822121	817806	<0.2	0.7	<0.2	0.7	
						1.0	0.2	82	26.6	26.6	8.0	8.0	31.6	31.6	93.5	93.5	6.3	6.1	1.6	2.4	6	96	99	<0.2	0.8					
					Middle	6.1	0.2	95	26.9	26.9	8.0	8.0	31.9	31.9	88.8	88.8	5.9	5.9	1.8	1.8	5	98	98	822121	817806	<0.2	0.6			
						6.1	0.2	104	26.9	26.9	8.0	8.0	31.9	31.9	88.8	88.8	5.9	5.9	1.8	1.8	4	99	99	<0.2	0.7					
					Bottom	11.2	0.1	84	26.8	26.8	7.9	7.9	32.1	32.1	91.7	91.7	6.1	6.1	3.8	3.8	5	101	101	822121	817806	<0.2	0.6			
						11.2	0.1	89	26.8	26.8	7.9	7.9	32.1	32.1	91.7	91.7	6.1	6.1	3.8	3.8	5	101	101	<0.2	0.5					
IM1	Cloudy	Moderate	16:37	7.6	Surface	1.0	0.1	210	26.4	26.4	8.0	8.0	30.5	30.6	103.9	103.7	7.1	6.9	2.7	4.0	6	96	98	818362	806441	<0.2	1.1	<0.2	1.3	
						1.0	0.1	228	26.4	26.4	8.0	8.0	30.6	30.6	103.4	103.7	7.0	6.9	2.8	4.0	5	96	98	<0.2	1.1					
					Middle	3.8	0.1	312	26.2	26.2	8.0	8.0	31.9	31.9	100.5	100.4	6.8	6.8	4.0	4.0	6	98	98	818362	806441	<0.2	1.6			
						3.8	0.1	341	26.2	26.2	8.0	8.0	31.9	31.9	100.3	100.3	6.8	6.8	4.1	4.1	5	99	99	<0.2	1.6					
					Bottom	6.6	0.1	354	26.1	26.1	8.0	8.0	32.1	32.1	100.1	100.3	6.8	6.8	5.1	5.1	6	100	100	818362	806441	<0.2	1.1			
						6.6	0.1	326	26.1	26.1	8.0	8.0	32.1	32.1	100.5	100.3	6.8	6.8	5.0	5.0	5	100	100	<0.2	1.1					
IM2	Cloudy	Moderate	16:33	8.9	Surface	1.0	0.1	66	26.2	26.2	8.0	8.0	30.6	30.6	102.4	101.8	7.0	6.8	2.9	4.2	3	96	98	818843	806211	<0.2	1.1	<0.2	1.2	
						1.0	0.1	69	26.2	26.2	8.0	8.0	30.6	30.6	101.1	101.8	6.9	6.8	3.0	3.0	2	97	98	<0.2	1.1					
					Middle	4.5	0.1	254	26.0	26.0	8.0	8.0	31.7	31.6	99.0	98.9	6.7	6.7	4.5	4.7	7	98	98	818843	806211	<0.2	1.4			
						4.5	0.1	276	26.0	26.0	8.0	8.0	31.6	31.6	98.7	98.9	6.7	6.7	4.7	4.7	6	98	98	<0.2	1.5					
					Bottom	7.9	0.0	229	26.0	26.0	8.0	8.0	32.0	32.0	100.3	101.0	6.8	6.9	5.0	5.0	6	99	99	818843	806211	<0.2	1.1			
						7.9	0.0	245	26.0	26.0	8.0	8.0	32.0	32.0	101.7	101.0	6.9	6.9	4.8	4.8	6	100	100	<0.2	1.1					
IM3	Cloudy	Moderate	16:25	8.5	Surface	1.0	0.1	82	26.2	26.2	8.0	8.0	30.6	30.6	102.9	102.7	7.0	6.9	3.0	5.0	4	98	99	819418	806027	<0.2	1.5	<0.2	1.6	
						1.0	0.1	84	26.2	26.2	8.0	8.0	30.6	30.6	102.4	102.7	7.0	6.9	3.0	3.0	4	98	99	<0.2	1.6					
					Middle	4.3	0.0	314	26.0	26.0	8.0	8.0	31.6	31.6	98.4	98.2	6.7	6.7	4.9	5.0	5	99	99	819418	806027	<0.2	1.5			
						4.3	0.0	340	26.0	26.0	8.0	8.0	31.6	31.6	98.0	98.2	6.7	6.7	5.0	5.0	5	99	99	<0.2	1.7					
					Bottom	7.5	0.0	242	26.0	26.0	8.0	8.0	32.0	32.0	97.6	97.8	6.6	6.6	7.1	7.1	4	100	100	819418	806027	<0.2	1.8			
						7.5	0.0	243	26.0	26.0	8.0	8.0	32.0	32.0	98.0	97.8	6.6	6.6	7.1	7.1	4	101	101	<0.2	1.6					
IM4	Cloudy	Moderate	16:17	6.7	Surface	1.0	0.2	37	26.1	26.1	8.0	8.0	30.8	30.8	100.3	100.1	6.8	6.7	5.1	6.5	5	96	98	819562	805058	<0.2	1.3	<0.2	1.3	
						1.0	0.2	37	26.1	26.1	8.0	8.0	30.8	30.8	99.8	99.8	6.8	6.7	5.3	5.3	6	96	98	<0.2	1.3					
					Middle	3.4	0.1	15	25.9	25.9	8.0	8.0	31.3	31.3	97.1	97.1	6.6	6.6	7.3	7.2	5	98	98	819562	805058	<0.2	1.3			
						3.4	0.1	16	25.9	25.9	8.0	8.0	31.3	31.3	97.0	97.0	6.6	6.6	7.2	7.2	7	98	98	<0.2	1.5					
					Bottom	5.7	0.0	12	25.8	25.8	8.0	8.0	31.6	31.5	98.2	98.6	6.7	6.8	7.0	7.0	5	100	100	819562	805058	<0.2	1.3			
						5.7	0.0	12	25.8	25.8	8.0	8.0	31.5	31.5	99.0	98.6	6.8	6.8	6.8	6.8	5	100	100	<0.2	1.3					
IM5	Cloudy	Moderate	16:07	7.1	Surface	1.0	0.1	87	26.2	26.2	8.0	8.0	30.5	30.5	100.5	100.0	6.8	6.7	4.4	7.2	4	96	97	820559	804941	<0.2	1.0	<0.2	1.2	
						1.0	0.1	88	26.2	26.2	8.0	8.0	30.5	30.5	99.5	99.5	6.8	6.7	5.0	5.0	6	96	99	<0.2	1.1					
					Middle	3.6	0.1	25	25.8	25.8	8.0	8.0	31.5	31.5	96.4	96.4	6.6	6.6	8.1	8.2	6	99	99	820559	804941	<0.2	1.3			
						3.6	0.1	27	25.8	25.8	8.0	8.0	31.5	31.5	96.4	96.4	6.6	6.6	8.2	8.2	5	99	99	<0.2	1.2					
					Bottom	6.1	0.1	28	25.8	25.8	8.0	8.0	31.6	31.6	97.8	98.2	6.7	6.7	8.7	8.7	8	97	97	820559	804941	<0.2	1.2			
						6.1	0.1	28	25.8	25.8	8.0	8.0	31.6	31.6	98.6	98.2	6.7	6.7	8.7	8.7	7	97	97	<0.2	1.1					
IM6	Cloudy	Moderate	16:00	7.0	Surface	1.0	0.1	160	26.2	26.2	8.0	8.0	28.1	28.1	99.6	99.5	6.9	6.8	3.5	4.6	4	96	94	821046	805840	<0.2	1.7	<0.2	1.9	
						1.0	0.1	173	26.2	26.2	8.0	8.0	28.2	28.1	99.4	99.5	6.9	6.8	3.5	3.5	5	96	94	<0.2	1.9					
					Middle	3.5	0.1	70	26.1	26.1	8.0	8.0	29.7	29.7	98.1	98.1	6.7	6.7	5.1	5.2	5	91	92	821046	805840	<0.2	2.0			
						3.5	0.1	70	26.1	26.1	8.0	8.0	29.7	29.7	98.1	98.1	6.7	6.7	5.2	5.2	6	92	92	<0.2	1.9					
					Bottom	6.0	0.2	78	26																					

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

Water Quality Monitoring

Water Quality Monitoring Results on 26 October 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	Value	DA	Value	DA								
									Value	Average	Value	Average	Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA	Value	DA	Value	DA						
IM9	Sunny	Moderate	16:22	7.7	Surface	1.0	0.4	98	26.5	26.5	8.0	8.0	27.4	27.4	95.5	95.5	6.6	6.6	9.6	17.8	6	95	97	822094	808801	<0.2	2.2	2.0	-													
						1.0	0.4	99	26.5		8.0	8.0	27.4	27.4	95.5	95.5	6.6		9.6		6	96				<0.2	1.9															
					Middle	3.9	0.3	105	26.3	26.3	8.0	8.0	29.5	29.5	94.3	94.3	6.5	6.5	17.0	7	7	97	10	4	97	97	822248	809831	<0.2	1.7	1.7	-										
						3.9	0.3	106	26.3		8.0	8.0	29.5	29.5	94.3	94.3	6.5		17.0		6	97		<0.2	2.2																	
						6.7	0.3	96	26.1		8.0	8.0	30.8	30.8	94.4	94.4	6.4		26.7		8	99		<0.2	1.7																	
						6.7	0.4	101	26.1		8.0	8.0	30.8	30.8	94.4	94.4	6.4		26.7		9	98		<0.2	1.7																	
					Bottom	6.7	0.3	85	26.5	26.5	8.0	8.0	28.2	28.2	98.1	98.1	6.7	6.7	8.2	9.6	5	95	97	5	96	97	821486	810560	<0.2	1.7	1.5	-										
						1.0	0.4	93	26.5		8.0	8.0	28.2	28.2	98.1	98.1	6.7		8.2		4	96		<0.2	1.8																	
						4.0	0.3	96	26.3		8.0	8.0	30.3	30.3	98.5	98.5	6.7		4.6		8	97		<0.2	1.4																	
						4.0	0.3	105	26.3		8.0	8.0	30.3	30.3	98.5	98.5	6.7		4.6		9	97		<0.2	1.5																	
IM10	Sunny	Moderate	16:28	7.7	Surface	1.0	0.3	85	26.5	26.5	8.0	8.0	29.5	29.5	97.9	97.9	6.7	6.7	13.2	9.6	4	97	97	822248	809831	<0.2	1.7	1.7	-													
						1.0	0.4	93	26.5		8.0	8.0	29.5	29.5	97.9	97.9	6.7		13.2		4	97				<0.2	1.7															
					Middle	3.9	0.4	74	26.4	26.4	8.0	8.0	29.5	29.5	97.9	97.9	6.7	6.7	13.2	10	4	97	97	20	99	97	821486	810560	<0.2	1.4	1.4	-										
						3.9	0.4	74	26.4		8.0	8.0	29.5	29.5	97.9	97.9	6.7		13.2		4	97		<0.2	1.7																	
						6.7	0.3	49	26.3		8.0	8.0	31.1	31.1	97.6	97.6	6.6		7.3		20	99		<0.2	1.4																	
						6.7	0.3	53	26.3		8.0	8.0	31.1	31.1	97.6	97.6	6.6		7.3		21	98		<0.2	1.4																	
					Bottom	6.7	0.3	96	26.4	26.4	8.0	8.0	29.1	29.1	99.5	99.5	6.8	6.8	5.6	4.4	6	95	97	6	96	97	821486	810560	<0.2	1.7	1.5	-										
						1.0	0.3	104	26.4		8.0	8.0	29.1	29.1	99.5	99.5	6.8		5.6		7	96		<0.2	1.7																	
						4.0	0.3	96	26.3		8.0	8.0	30.3	30.3	98.5	98.5	6.7		4.6		8	97		<0.2	1.4																	
						4.0	0.3	105	26.3		8.0	8.0	30.3	30.3	98.5	98.5	6.7		4.6		9	97		<0.2	1.5																	
IM11	Cloudy	Moderate	16:37	8.0	Surface	1.0	0.3	96	26.4	26.4	8.0	8.0	29.1	29.1	99.5	99.5	6.8	6.8	5.6	4.4	6	95	97	821486	810560	<0.2	1.7	1.5	-													
						1.0	0.3	104	26.4		8.0	8.0	29.1	29.1	99.5	99.5	6.8		5.6		7	96				<0.2	1.7															
					Middle	4.0	0.3	96	26.3	26.3	8.0	8.0	30.3	30.3	98.5	98.5	6.7	6.7	4.6	8	8	97	97	10	98	97	821486	810560	<0.2	1.4	1.5	-										
						4.0	0.3	105	26.3		8.0	8.0	30.3	30.3	98.5	98.5	6.7		4.6		9	97		<0.2	1.5																	
						7.0	0.3	104	26.4		8.0	8.0	31.5	31.5	98.4	98.4	6.7		3.1		10	98		<0.2	1.2																	
						7.0	0.3	112	26.4		8.0	8.0	31.5	31.5	98.4	98.4	6.7		3.1		9	99		<0.2	1.3																	
					Bottom	1.0	0.4	73	26.6	26.6	8.0	8.0	29.0	29.0	101.3	101.3	6.9	6.9	6.0	7.1	5	96	98	5	96	98	821164	811531	<0.2	1.6	1.5	-										
						1.0	0.4	79	26.6		8.0	8.0	29.0	29.0	101.3	101.3	6.9		6.0		5	96		<0.2	1.7																	
						4.6	0.2	89	26.3		8.0	8.0	31.6	31.6	97.3	97.3	6.6		10.0		4	97		<0.2	1.6																	
						4.6	0.2	93	26.3		8.0	8.0	31.6	31.6	97.3	97.3	6.6		10.0		6	98		<0.2	1.6																	
IM12	Cloudy	Moderate	16:43	9.2	Surface	1.0	0.2	89	26.3	26.3	8.0	8.0	31.6	31.6	97.3	97.3	6.6	6.6	10.0	7.1	4	97	98	821164	811531	<0.2	1.6	1.5	-													
						1.0	0.4	79	26.6		8.0	8.0	29.0	29.0	101.3	101.3	6.9		6.0		5	96				<0.2	1.7															
					Middle	4.6	0.2	89	26.3	26.3	8.0	8.0	31.6	31.6	97.3	97.3	6.6	6.6	10.0	10	4	97	97	6	98	97	821164	811531	<0.2	1.6	1.5	-										
						4.6	0.2	93	26.3		8.0	8.0	31.6	31.6	97.3	97.3	6.6		10.0		6	98		<0.2	1.6																	
						8.2	0.3	92	26.3		8.0	8.0	31.7	31.7	98.0	98.0	6.6		5.3		5	99		<0.2	1.1																	
						8.2	0.3	99	26.3		8.0	8.0	31.7	31.7	98.0	98.0	6.6		5.3		6	99		<0.2	1.1																	
					Bottom	1.0	0.2	68	26.5	26.5	8.0	8.0	31.1	31.1	100.2	100.2	6.8	6.8	2.4	4	4	96	98	4	96	98	821456	814178	<0.2	1.0	0.9	-										
						1.0	0.3	68	26.5		8.0	8.0	31.1	31.1	100.2	100.2	6.8		2.5		4	96		<0.2	1.0																	
						-	-	-	-		-	-	-	-	-	-	-		-		-	-		-	-				-	-			-	-	-	-	-	-	-	-	-	-
						-	-	-	-		-	-	-	-	-	-	-		-		-	-		-	-				-	-			-	-	-	-	-	-	-	-	-	-
Bottom	3.6	0.2	64	26.5	26.5	8.0	8.0	31.2	31.2	100.1	100.1	6.8	6.8	2.9	4	4	99	98	4	99	98	821456	814178	<0.2	0.8	0.9	-															
	3.6	0.2	67	26.5		8.0	8.0	31.2	31.2	100.1	100.1	6.8		2.9		4	99		<0.2	0.9																						
	-	-	-	-		-	-	-	-	-	-	-		-		-	-		-	-				-	-			-	-	-	-	-	-	-	-	-	-	-				
	-	-	-	-		-	-	-	-	-	-	-		-		-	-		-	-				-	-			-	-	-	-	-	-	-	-	-	-	-				
SR2	Cloudy	Moderate	17:06	4.6	Surface	1.0	0.2	107	26.3	26.3	8.0	8.0	28.5	28.5	97.6	97.6	6.7	6.7	3.8	6.4	4	-	6	822158	807579	-	-	-	-													
						1.0	0.2	117	26.3		8.0	8.0	28.5	28.5	97.6	97.6	6.7		3.8		4	-				-	-															
					Middle	4.3	0.2	80	26.2	26.2	8.0	8.0	29.0	29.0	96.9	96.9	6.7	6.7	6.1	6	6	-	7	6	-	7	821456	814178	<0.2	1.0	0.9	-										
						4.3	0.2	83	26.2		8.0	8.0	29.0	29.0	96.9	96.9	6.7		6.1		5	-		-	-																	
						7.6	0.2	69	26.1		8.0	8.0	30.4	30.4	96.1	96.1	6.6		9.2		8	-		-	-																	
						7.6	0.3	71	26.1		8.0	8.0	30.4	30.4	96.1	96.1	6.6		9.2		7	-		-	-																	
					Bottom	1.0	0.2	82	26.5	26.5	8.0	8.0	31.4	31.4	103.0	102.8	7.0	6.9	4.8	6.6	6	-	7	7	-	7	821188	807797	-	-	-	-										
						1.0	0.2	82	26.5		8.0	8.0	31.4	31.4	103.0	102.6	6.9		5.0		7	-		-																		
						4.2	0.1	61	26.5		8.0	8.0	31.9	31.9	101.2	101.2	6.8		7.4		6	-		-																		
						4.2	0.1	65	26.5		8.0	8.0	31.9	31.9	101.1	101.1	6.8		7.3		6	-		-																		
SR3	Sunny	Moderate	16:11	8.6	Surface	1.0	0.2	107	26.3	26.3	8.0	8.0	28.5	28.5	97.6	97.6	6.7	6.7	3.8	6.4	4	-	6	822158	807579	-	-	-	-													
						1.0	0.2	117	26.3		8.0	8.0	28.5	28.5	97.6	97.6	6.7		3.8		4	-				-																
					Middle	4.3	0.2	80	26.2	26.2	8.0	8.0	29.0	29.0	96.9	96.9	6.7	6.7	6.1	6	6	-	7	6	-	7	821456	814178	<0.2	1.0	0.9	-										
						4.3	0.2	83	26.2		8.0	8.0	29.0	29.0	96.9	96.9																										



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

**Water Quality Monitoring**

**Water Quality Monitoring Results on 26 October 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	Value	DA	Value	DA
IM9	Sunny	Moderate	12:24	7.2	Surface	1.0	0.2	42	26.7	7.9	7.9	26.1	26.1	96.7	96.7	6.7	6.7	4.0	6.4	5	96	97	822107	808792	<0.2	2.9	<0.2	2.4						
						1.0	0.2	42	26.7	7.9	7.9	26.1	26.1	96.7	96.7	6.7	6.7	4.0	6.4	4	96	97	<0.2	3.0	<0.2	2.8								
						3.6	0.1	48	26.3	8.0	8.0	28.7	28.7	96.0	96.0	6.6	6.6	7.3	6.4	3	96	97	<0.2	2.4	<0.2	1.7								
						3.6	0.1	51	26.3	8.0	8.0	28.7	28.7	96.0	96.0	6.6	6.6	7.3	6.4	5	97	97	<0.2	2.4	<0.2	1.7								
						6.2	0.2	290	26.3	8.0	8.0	30.0	30.0	95.7	95.7	6.5	6.5	7.9	6.5	8	96	97	<0.2	2.4	<0.2	1.7								
						6.2	0.2	296	26.3	8.0	8.0	30.0	30.0	95.7	95.7	6.5	6.5	7.9	6.5	6	99	97	<0.2	1.7	<0.2	1.2								
						6.2	0.2	296	26.3	8.0	8.0	30.0	30.0	95.7	95.7	6.5	6.5	7.9	6.5	6	99	97	<0.2	1.7	<0.2	1.2								
IM10	Sunny	Moderate	12:16	6.6	Surface	1.0	0.4	320	26.4	8.0	8.0	30.6	30.6	98.2	98.2	6.7	6.7	5.0	11.1	3	95	97	822223	809831	<0.2	1.0	<0.2	1.0						
						1.0	0.4	351	26.4	8.0	8.0	30.6	30.6	98.2	98.2	6.7	6.7	5.0	11.1	5	96	97	<0.2	0.9	<0.2	1.0								
						3.3	0.3	321	26.2	8.0	8.0	30.7	30.7	96.4	96.4	6.6	6.6	10.0	6.4	4	97	97	<0.2	1.0	<0.2	1.0								
						3.3	0.3	350	26.2	8.0	8.0	30.7	30.7	96.4	96.4	6.6	6.6	10.0	6.4	3	97	97	<0.2	1.0	<0.2	1.0								
						5.6	0.2	323	26.0	8.0	8.0	31.2	31.2	95.1	95.1	6.5	6.5	18.4	6.5	27	99	98	<0.2	0.7	<0.2	1.2								
						5.6	0.2	343	26.0	8.0	8.0	31.2	31.2	95.1	95.1	6.5	6.5	18.4	6.5	27	98	98	<0.2	1.0	<0.2	1.2								
						5.6	0.2	343	26.0	8.0	8.0	31.2	31.2	95.1	95.1	6.5	6.5	18.4	6.5	27	98	98	<0.2	1.0	<0.2	1.2								
IM11	Sunny	Moderate	12:04	7.9	Surface	1.0	0.3	311	26.2	8.0	8.0	30.9	30.9	98.4	98.4	6.7	6.7	3.6	6.9	4	95	97	821512	810544	<0.2	1.0	<0.2	1.3						
						1.0	0.3	331	26.2	8.0	8.0	30.9	30.9	98.4	98.4	6.7	6.7	3.6	6.9	5	96	97	<0.2	1.0	<0.2	0.8								
						4.0	0.3	302	26.2	8.0	8.0	31.5	31.5	97.9	97.9	6.6	6.6	5.6	6.6	7	97	97	<0.2	1.0	<0.2	1.0								
						4.0	0.3	312	26.2	8.0	8.0	31.5	31.5	97.9	97.9	6.6	6.6	5.6	6.6	7	97	97	<0.2	0.7	<0.2	0.7								
						6.9	0.2	307	26.0	8.0	8.0	31.6	31.6	96.6	96.6	6.6	6.6	11.4	6.6	14	99	99	<0.2	1.0	<0.2	1.2								
						6.9	0.2	323	26.0	8.0	8.0	31.6	31.6	96.6	96.6	6.6	6.6	11.4	6.6	13	99	99	<0.2	0.7	<0.2	0.7								
						6.9	0.2	323	26.0	8.0	8.0	31.6	31.6	96.6	96.6	6.6	6.6	11.4	6.6	13	99	99	<0.2	0.7	<0.2	0.7								
IM12	Sunny	Moderate	11:56	7.0	Surface	1.0	0.4	300	26.4	8.0	8.0	31.2	31.2	98.7	98.7	6.7	6.7	4.6	7.0	4	95	97	821172	811507	<0.2	1.0	<0.2	1.0						
						1.0	0.4	329	26.4	8.0	8.0	31.2	31.2	98.7	98.7	6.7	6.7	4.6	7.0	3	96	97	<0.2	1.0	<0.2	1.0								
						3.5	0.4	299	26.3	8.0	8.0	31.3	31.3	97.5	97.5	6.6	6.6	6.1	6.6	5	97	97	<0.2	1.0	<0.2	0.8								
						3.5	0.4	320	26.3	8.0	8.0	31.3	31.3	97.5	97.5	6.6	6.6	6.1	6.6	6	97	97	<0.2	1.0	<0.2	1.0								
						6.0	0.3	283	26.1	8.0	8.0	31.6	31.6	96.5	96.5	6.5	6.5	10.3	6.5	7	99	99	<0.2	0.7	<0.2	0.7								
						6.0	0.3	286	26.1	8.0	8.0	31.6	31.6	96.5	96.5	6.5	6.5	10.3	6.5	8	99	99	<0.2	0.7	<0.2	0.7								
						6.0	0.3	286	26.1	8.0	8.0	31.6	31.6	96.5	96.5	6.5	6.5	10.3	6.5	8	99	99	<0.2	0.7	<0.2	0.7								
SR2	Sunny	Moderate	11:22	4.5	Surface	1.0	0.2	344	26.4	8.0	8.0	31.4	31.4	96.1	96.1	6.5	6.5	7.3	6.4	4	96	98	821481	814179	<0.2	0.9	<0.2	0.9						
						1.0	0.2	359	26.4	8.0	8.0	31.4	31.4	96.1	96.1	6.5	6.5	7.3	6.4	6	97	97	<0.2	0.9	<0.2	0.9								
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
						3.5	0.1	335	26.3	8.0	8.0	31.7	31.7	95.2	95.2	6.4	6.4	5.5	6.4	7	99	99	<0.2	0.9	<0.2	1.0								
						3.5	0.1	340	26.3	8.0	8.0	31.7	31.7	95.2	95.2	6.4	6.4	5.5	6.4	7	99	99	<0.2	0.9	<0.2	1.0								
						3.5	0.1	340	26.3	8.0	8.0	31.7	31.7	95.2	95.2	6.4	6.4	5.5	6.4	7	99	99	<0.2	0.9	<0.2	1.0								
SR3	Sunny	Moderate	12:39	9.0	Surface	1.0	0.0	13	26.6	7.9	7.9	26.8	26.8	93.9	93.9	6.5	6.5	2.6	5.9	2	-	-	822137	807569	-	-	-	-						
						1.0	0.0	13	26.6	7.9	7.9	26.8	26.8	93.9	93.9	6.5	6.5	2.6	5.9	2	-	-	-	-	-	-	-	-						
						4.5	0.1	23	26.2	7.9	7.9	28.3	28.3	92.6	92.6	6.4	6.4	3.6	6.4	2	-	-	-	-	-	-	-	-						
						4.5	0.1	23	26.2	7.9	7.9	28.3	28.3	92.6	92.6	6.4	6.4	3.6	6.4	3	-	-	-	-	-	-	-	-	-					
						8.0	0.1	107	26.3	7.9	7.9	30.4	30.4	93.6	93.6	6.4	6.4	4.5	6.4	3	-	-	-	-	-	-	-	-	-					
						8.0	0.1	117	26.3	7.9	7.9	30.4	30.4	93.6	93.6	6.4	6.4	4.5	6.4	4	-	-	-	-	-	-	-	-	-					
						8.0	0.1	117	26.3	7.9	7.9	30.4	30.4	93.6	93.6	6.4	6.4	4.5	6.4	4	-	-	-	-	-	-	-	-	-					
SR4A	Sunny	Moderate	11:48	9.2	Surface	1.0	0.1	240	26.0	8.0	8.0	32.1	32.1	97.1	97.1	6.6	6.6	6.2	6.4	6	-	-	817177	807816	-	-	-	-						
						1.0	0.1	244	26.0	8.0	8.0	32.1	32.1	97.1	97.1	6.6	6.6	6.3	6.4	7	-	-	-	-	-	-	-							
						4.6	0.0	122	26.0	8.0	8.0	32.2	32.2	96.5	96.5	6.5	6.5	6.2	6.4	6	-	-	-	-	-	-	-							
						4.6	0.0	129	26.0	8.0	8.0	32.2	32.2	96.5	96.5	6.5	6.5	6.3	6.4	7	-	-	-	-	-	-	-	-						
						8.2	0.0	287	25.9	8.0	8.0	32.2	32.2	96.6	96.6	6.6	6.6	6.5	6.6	11	-	-	-	-	-	-	-	-						
						8.2	0.0	292	25.9	8.0	8.0	32.2	32.2	96.6	96.6	6.6	6.6	6.6	6.6	9	-	-	-	-	-	-	-	-						
						8.2	0.0	292	25.9	8.0	8.0	32.2	32.2	96.6	96.6	6.6	6.6	6.6	6.6	9	-	-	-	-	-	-	-	-						
SR5A	Sunny	Moderate	11:32	4.8	Surface	1.0	0.1	295	26.0	8.0	8.0	31.9	31.9	101.5	101.5	6.9	6.9	5.3	5.9	7	-	-	816576	810707	-	-	-	-						
						1.0	0.1	323	26.0	8.0	8.0	31.9	31.9	101.4	101.4	6.9	6.9	5.5	6.8	7	-	-	-	-	-	-								
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
						3.8	0.1	295	25.9	8.0	8.0	31.9	31.9	100.3	100.3	6.8	6.8	6.4	6.8	11	-	-	-	-	-	-	-	-						
						3.8	0.1	300	25.9	8.0	8.0	31.9	31.9	100.4	100.4	6.8	6.8	6.4	6.8	10	-	-	-	-	-	-	-	-						
						3.8	0.1	300	25.9	8.0	8.0	31.9	31.9	100.4	100.4	6.8	6.8	6.4	6.8	1														



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

**Water Quality Monitoring**

**Water Quality Monitoring Results on 28 October 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	DA	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA
C1	Fine	Moderate	06:21	8.9	Surface	1.0	0.4	223	25.5	8.0	8.0	30.6	30.6	97.4	97.3	6.7	1.9	6.6	4	92	95	815606	804230	<0.2	1.2	1.2				
						1.0	0.4	226	25.5	25.5	8.0	8.0	30.6	30.6	97.2	97.3	6.7	2.0	6.6	6	91	95	<0.2	1.1						
						4.5	0.4	217	26.0	26.0	8.0	8.0	32.1	32.1	94.1	94.1	6.4	5.1	6.6	2	94	95	<0.2	1.2						
					Middle	4.5	0.4	226	26.0	26.0	8.0	8.0	32.1	32.1	94.1	94.1	6.4	5.1	6.6	4	95	99	<0.2	1.1						
						7.9	0.2	226	26.0	26.0	8.0	8.0	32.2	32.2	97.2	97.3	6.6	7.0	6.6	10	98	99	<0.2	1.1						
						7.9	0.3	230	26.0	26.0	8.0	8.0	32.2	32.2	97.4	97.3	6.6	7.0	6.6	8	99	99	<0.2	1.2						
C2	Cloudy	Moderate	07:06	11.4	Surface	1.0	0.6	166	26.2	7.9	7.9	28.9	28.9	92.2	92.1	6.3	3.8	6.2	5	94	97	825683	806930	<0.2	2.4	1.6				
						1.0	0.6	166	26.2	26.2	7.9	7.9	29.0	28.9	91.9	92.1	6.3	3.8	6.2	3	94	97	<0.2	2.1						
						5.7	0.4	162	26.6	26.6	7.9	7.9	31.5	31.6	90.7	90.7	6.1	3.3	6.1	6	97	97	<0.2	1.5						
					Middle	5.7	0.4	175	26.6	26.6	7.9	7.9	31.6	31.6	90.7	90.7	6.1	3.6	6.1	4	97	97	<0.2	1.5						
						10.4	0.2	139	26.6	26.6	7.9	7.9	31.8	31.8	94.0	94.0	6.3	4.7	6.3	4	98	99	<0.2	1.0						
						10.4	0.2	150	26.6	26.6	7.9	7.9	31.8	31.8	95.2	94.6	6.4	4.2	6.4	5	99	99	<0.2	0.9						
C3	Cloudy	Moderate	05:08	11.7	Surface	1.0	0.1	101	26.2	8.0	8.0	30.9	31.0	95.2	95.1	6.5	1.4	6.3	2	94	96	822095	817783	<0.2	1.1	1.0				
						1.0	0.1	104	26.2	26.2	8.0	8.0	31.0	31.0	94.9	94.9	6.4	1.3	6.3	4	95	96	<0.2	1.0						
						5.9	0.2	68	26.5	26.5	8.0	8.0	31.8	31.8	92.3	92.2	6.2	1.3	6.2	4	96	96	<0.2	1.0						
					Middle	5.9	0.2	69	26.5	26.5	8.0	8.0	31.8	31.8	92.0	92.2	6.2	1.3	6.2	5	96	98	<0.2	1.0						
						10.7	0.1	69	26.7	26.7	7.9	7.9	32.2	32.2	92.9	93.2	6.2	2.4	6.2	6	98	98	<0.2	1.0						
						10.7	0.1	71	26.7	26.7	7.9	7.9	32.2	32.2	93.5	93.2	6.3	2.4	6.3	8	98	98	<0.2	1.0						
IM1	Sunny	Moderate	06:42	7.4	Surface	1.0	0.3	196	25.4	25.4	8.0	8.0	30.0	30.0	97.1	97.1	6.7	3.6	6.5	6	88	94	818342	806457	<0.2	1.4	1.3			
						1.0	0.3	204	25.4	25.4	8.0	8.0	30.0	30.0	97.1	97.1	6.7	3.6	6.5	6	89	94	<0.2	1.4						
						3.7	0.2	191	26.0	26.0	8.0	8.0	31.7	31.7	93.4	93.4	6.3	4.5	6.3	7	94	95	<0.2	1.5						
					Middle	3.7	0.2	195	26.0	26.0	8.0	8.0	31.7	31.7	93.4	93.4	6.3	4.5	6.3	5	95	97	<0.2	1.2						
						6.4	0.2	164	26.0	26.0	8.0	8.0	31.9	31.9	94.2	94.3	6.4	5.4	6.4	6	97	98	<0.2	1.0						
						6.4	0.2	177	26.0	26.0	8.0	8.0	31.9	31.9	94.3	94.3	6.4	5.4	6.4	6	98	98	<0.2	1.0						
IM2	Sunny	Moderate	06:48	8.2	Surface	1.0	0.5	223	25.4	25.4	8.0	8.0	29.5	29.5	100.6	100.6	7.0	3.9	6.9	6	92	95	818848	806208	<0.2	1.3	1.2			
						1.0	0.5	228	25.4	25.4	8.0	8.0	29.5	29.5	100.6	100.6	7.0	4.0	6.9	4	92	94	<0.2	1.2						
						4.1	0.4	214	25.7	25.7	8.0	8.0	30.5	30.5	97.8	97.8	6.7	4.2	6.7	6	94	94	<0.2	1.2						
					Middle	4.1	0.4	233	25.7	25.7	8.0	8.0	30.5	30.5	97.8	97.8	6.7	4.2	6.7	4	94	94	<0.2	1.3						
						7.2	0.3	209	26.0	26.0	8.0	8.0	31.9	31.9	94.2	94.3	6.4	6.9	6.4	6	99	100	<0.2	1.2						
						7.2	0.3	209	26.0	26.0	8.0	8.0	31.9	31.9	94.3	94.3	6.4	6.9	6.4	7	100	100	<0.2	1.2						
IM3	Sunny	Moderate	06:55	8.5	Surface	1.0	0.3	213	25.5	25.5	8.0	8.0	30.0	30.1	101.1	101.1	7.0	3.6	6.8	4	91	95	819424	806001	<0.2	1.3	1.3			
						1.0	0.3	221	25.5	25.5	8.0	8.0	30.1	30.1	101.0	101.0	7.0	3.7	6.8	4	92	94	<0.2	1.3						
						4.3	0.4	204	25.9	25.9	8.0	8.0	31.2	31.2	96.4	96.4	6.6	7.0	6.6	6	94	95	<0.2	1.3						
					Middle	4.3	0.4	219	25.9	25.9	8.0	8.0	31.2	31.2	96.4	96.4	6.6	7.0	6.6	4	95	97	<0.2	1.3						
						7.5	0.3	196	25.9	25.9	8.0	8.0	31.4	31.4	98.3	98.3	6.7	7.4	6.7	5	97	98	<0.2	1.2						
						7.5	0.3	205	25.9	25.9	8.0	8.0	31.4	31.4	98.3	98.3	6.7	7.4	6.7	7	98	98	<0.2	1.3						
IM4	Sunny	Moderate	07:02	7.8	Surface	1.0	0.4	201	25.3	25.3	8.0	8.0	29.5	29.5	101.0	101.0	7.0	2.2	6.8	7	90	95	819580	805020	<0.2	1.2	1.2			
						1.0	0.4	212	25.3	25.3	8.0	8.0	29.5	29.5	100.9	100.9	7.0	2.2	6.8	5	91	95	<0.2	1.1						
						3.9	0.3	181	25.8	25.8	8.0	8.0	30.2	30.2	96.6	96.6	6.6	3.8	6.6	5	95	95	<0.2	1.4						
					Middle	3.9	0.4	184	25.8	25.8	8.0	8.0	30.2	30.2	96.5	96.5	6.6	3.9	6.6	6	95	99	<0.2	1.3						
						6.8	0.3	184	26.0	26.0	8.0	8.0	31.5	31.5	95.9	95.9	6.5	5.6	6.5	9	99	99	<0.2	1.2						
						6.8	0.3	192	26.0	26.0	8.0	8.0	31.5	31.5	95.9	95.9	6.5	5.6	6.5	9	98	98	<0.2	1.2						
IM5	Sunny	Moderate	07:14	6.8	Surface	1.0	0.5	192	25.3	25.3	8.0	8.0	28.5	28.5	100.3	100.3	7.0	2.3	6.9	5	90	95	820572	804928	<0.2	1.7	1.6			
						1.0	0.5	208	25.3	25.3	8.0	8.0	28.5	28.5	100.2	100.2	7.0	2.3	6.9	5	91	95	<0.2	1.6						
						3.4	0.4	193	25.6	25.6	8.0	8.0	30.3	30.2	99.1	99.1	6.8	3.3	6.8	4	94	95	<0.2	1.6						
					Middle	3.4	0.4	195	25.6	25.6	8.0	8.0	30.2	30.2	99.0	99.1	6.8	3.3	6.8	7	95	99	<0.2	1.6						
						5.8	0.3	192	26.0	26.0	8.0	8.0	31.3	31.3	97.1	97.2	6.6	5.3	6.6	4	99	100	<0.2	1.6						
						5.8	0.3	206	26.0	26.0	8.0	8.0	31.3	31.3	97.2	97.2	6.6	5.3	6.6	6	100	100	<0.2	1.6						
IM6	Sunny	Moderate	07:22	6.7	Surface	1.0	0.4	195	25.3	25.3	8.0	8.0	28.7	28.7	100.1	100.1	7.0	2.4	6.6	6	94	97	821051	805826	<0.2	1.7	1.7			
						1.0	0.4	205	25.3	25.3	8.0	8.0	28.7	28.7	100.1	100.1	7.0	2.4	6.6	5	94	98	<0.2	1.7						
						3.4	0.4	193	25.4	25.4	8.0	8.0	28.7	28.7	98.5	98.5	6.9	3.2	6.9	5	97	98	<0.2	1.6						
					Middle	3.4	0.4	193	25.4	25.4	8.0	8.0	28.7	28.7	98.4	98.5	6.9	3.2	6.9	6	98	100	<0.2	1.5						
						5.7	0.4	194	25.9	25.9	8.0	8.0	30.9	30.9	98.1	98.1	6.7	5.2	6.7	6	100	101	<0.2	1.8						
						5.7	0.4	196	25.9	25.9	8.0	8.0	30.9	30.9	98.3	98.2	6.7	5.2	6.7	6	101	101	<0.2	1.6						
IM7	Sunny	Moderate	07:30	8.1	Surface	1.0	0.3	211	25.6	25.6	8.0	8.0	29.1	29.1	96.8	96.8	6.7	3.5	6.6	4	95	98	821348	806843	<0.2	1.7	1.5			
						1.0	0.3	226	25.6	25.6	8.0	8.0	29.1	29.1	96.7	96.7	6.7	3.6	6.6	6	95	98	<0.2	1.8						
						4.1	0.2	171	25.9	25.9	8.0	8.0	30.6	30.6	95.2	95.2	6.5	5.8	6.5	4	98	99	<0.2	1.5						
					Middle	4.1	0.2	174	25.9	25.9	8.0	8.0	30.6	30.6	95.2	95.2	6.5	5.8	6.5	4	99	101	<0.2	1.7						
						7.1	0.1	174	25.9	25.9																				

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

Water Quality Monitoring

Water Quality Monitoring Results on 28 October 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 (µg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (Northing)	Coordinate HK Grid (Easting)	Chromium (µg/L)		Nickel (µg/L)					
									Value	Average	Value	Average	Value	Average	Value	DA	Value	DA		Value	DA	Value	DA			Value	DA	Value	DA				
IM9	Cloudy	Moderate	06:29	7.2	Surface	1.0	0.3	148	25.7	8.0	8.0	28.5	28.5	100.4	100.2	7.0	6.9	1.8	6.9	4	5	96	96	822084	808824	<0.2	<0.2	1.7	1.5				
						1.0	0.3	160	25.7	8.0	8.0	28.5	28.5	99.9	99.2	1.6	1.6	5	5	96	96	<0.2	<0.2	1.6	1.3								
						3.6	0.2	145	26.2	8.0	8.0	29.1	29.1	98.3	98.3	3.4	3.4	5	5	99	99	<0.2	<0.2	1.3	1.4								
					Middle	3.6	0.2	154	26.2	8.0	8.0	29.1	29.1	98.3	98.3	6.8	6.8	3.3	3.3	4	4	99	99	<0.2	<0.2	1.5	1.4						
						6.2	0.1	67	26.2	8.0	8.0	30.7	30.7	98.2	98.2	6.7	6.7	4	4	99	99	<0.2	<0.2	1.4	1.4								
						6.2	0.1	69	26.2	8.0	8.0	30.7	30.7	98.2	98.2	6.7	6.7	5	5	100	100	<0.2	<0.2	1.2	1.2								
IM10	Cloudy	Moderate	06:21	7.6	Surface	1.0	0.4	125	25.7	8.0	8.0	28.4	28.4	99.7	99.6	6.9	6.9	2.6	2.6	5	5	96	96	822220	809846	<0.2	<0.2	2.0	1.7				
						1.0	0.4	128	25.8	8.0	8.0	28.4	28.4	99.5	99.2	2.8	2.8	3	3	96	96	<0.2	<0.2	1.8	1.6								
						3.8	0.3	115	26.1	8.0	8.0	29.7	29.6	99.2	99.1	4.2	4.2	4	4	98	98	<0.2	<0.2	1.6	1.7								
					Middle	3.8	0.4	124	26.2	8.0	8.0	29.6	29.6	99.0	99.0	4.3	4.3	3	3	98	98	<0.2	<0.2	1.7	1.4								
						6.6	0.2	104	26.2	8.0	8.0	30.6	30.6	99.1	99.1	6.0	6.0	7	7	100	100	<0.2	<0.2	1.4	1.4								
						6.6	0.3	113	26.2	8.0	8.0	30.7	30.6	99.4	99.3	6.8	6.8	9	9	100	100	<0.2	<0.2	1.4	1.4								
IM11	Cloudy	Moderate	06:09	8.3	Surface	1.0	0.3	97	25.9	8.0	8.0	29.2	29.2	100.7	100.7	6.9	6.9	2.7	2.7	3	3	94	94	821514	810540	<0.2	<0.2	1.7	1.5				
						1.0	0.3	104	25.9	8.0	8.0	29.2	29.2	100.7	100.7	6.9	6.9	3.0	3.0	5	5	95	95	<0.2	<0.2	1.7	1.7						
						4.2	0.3	99	26.1	8.0	8.0	29.8	29.8	99.8	99.7	6.8	6.8	5.5	5.5	5	5	96	96	<0.2	<0.2	1.6	1.4						
					Middle	4.2	0.3	106	26.1	8.0	8.0	29.8	29.8	99.6	99.6	6.8	6.8	5.3	5.3	5	5	96	96	<0.2	<0.2	1.4	1.3						
						7.3	0.2	104	26.2	8.0	8.0	30.5	30.5	99.4	99.4	6.8	6.8	7.3	7.3	6	6	99	99	<0.2	<0.2	1.3	1.3						
						7.3	0.2	109	26.2	8.0	8.0	30.5	30.5	99.7	99.6	6.8	6.8	7.2	7.2	5	5	99	99	<0.2	<0.2	1.2	1.2						
IM12	Cloudy	Moderate	06:00	8.9	Surface	1.0	0.3	132	25.8	8.0	8.0	28.9	28.9	100.5	100.6	7.0	7.0	3.0	3.0	3	3	94	94	821152	811511	<0.2	<0.2	1.5	1.7				
						1.0	0.3	144	25.8	8.0	8.0	28.9	28.9	100.6	100.6	7.0	7.0	3.1	3.1	4	4	94	94	<0.2	<0.2	1.6	1.6						
						4.5	0.3	90	25.9	8.0	8.0	29.0	29.0	100.4	100.5	6.9	6.9	4.9	4.9	3	3	97	97	<0.2	<0.2	1.8	1.7						
					Middle	4.5	0.3	98	25.9	8.0	8.0	29.0	29.0	100.5	100.5	6.9	6.9	5.4	5.4	5	5	97	97	<0.2	<0.2	1.9	1.9						
						7.9	0.3	85	26.0	8.1	8.1	29.4	29.4	100.6	100.6	6.9	6.9	6.6	6.6	4	4	99	99	<0.2	<0.2	1.7	1.7						
						7.9	0.3	92	26.0	8.1	8.1	29.4	29.4	100.6	100.6	6.9	6.9	6.6	6.6	4	4	99	99	<0.2	<0.2	1.7	1.7						
SR2	Cloudy	Moderate	05:33	4.8	Surface	1.0	0.3	120	25.8	8.0	8.0	29.1	29.1	98.6	98.6	6.8	6.8	2.7	2.7	3	3	94	94	821449	814172	<0.2	<0.2	1.9	1.6				
						1.0	0.3	129	25.8	8.0	8.0	29.1	29.1	98.5	98.5	6.8	6.8	2.8	2.8	4	4	94	94	<0.2	<0.2	1.6	1.6						
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.2	<0.2	1.7	1.7	
					Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.2	<0.2	1.8	1.8
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.2	<0.2	1.8	1.7
						3.8	0.3	107	26.2	8.0	8.0	29.8	29.9	99.1	99.3	6.8	6.8	2.6	2.6	4	4	96	96	<0.2	<0.2	1.8	1.7						
SR3	Cloudy	Moderate	06:44	8.7	Surface	1.0	0.3	182	25.6	8.0	8.0	28.3	28.3	98.6	98.5	6.9	6.9	1.4	1.4	3	3	-	-	822154	807588	-	-	-	-				
						1.0	0.4	190	25.7	8.0	8.0	28.3	28.3	98.3	98.3	6.8	6.8	1.4	1.4	4	4	-	-	-	-	-	-	-	-	-			
						4.4	0.1	183	26.4	8.0	8.0	29.9	29.9	96.7	96.7	6.6	6.6	3.4	3.4	6	6	-	-	-	-	-	-	-	-	-			
					Middle	4.4	0.1	197	26.3	8.0	8.0	29.9	29.9	96.7	96.7	6.6	6.6	3.5	3.5	7	7	-	-	-	-	-	-	-	-	-	-		
						7.7	0.1	190	26.3	8.0	8.0	30.8	30.8	98.2	98.2	6.7	6.7	5.4	5.4	6	6	-	-	-	-	-	-	-	-	-	-		
						7.7	0.1	192	26.3	8.0	8.0	30.8	30.8	99.1	99.1	6.7	6.7	5.2	5.2	6	6	-	-	-	-	-	-	-	-	-	-		
SR4A	Fine	Calm	06:03	9.8	Surface	1.0	0.1	106	25.6	8.0	8.0	30.5	30.5	95.3	95.3	6.6	6.6	4.0	4.0	6	6	-	-	821784	807805	-	-	-	-				
						1.0	0.1	110	25.6	8.0	8.0	30.5	30.5	95.2	95.2	6.5	6.5	4.0	4.0	5	5	-	-	-	-	-	-	-	-				
						4.9	0.0	145	25.9	8.0	8.0	31.5	31.5	94.7	94.7	6.4	6.4	5.1	5.1	7	7	-	-	-	-	-	-	-	-				
					Middle	4.9	0.0	151	25.9	8.0	8.0	31.5	31.5	94.7	94.7	6.4	6.4	5.2	5.2	5	5	-	-	-	-	-	-	-	-	-			
						8.8	0.1	22	25.9	8.0	8.0	31.5	31.5	96.5	96.6	6.6	6.6	5.4	5.4	8	8	-	-	-	-	-	-	-	-				
						8.8	0.1	23	25.9	8.0	8.0	31.5	31.5	96.6	96.6	6.6	6.6	5.4	5.4	7	7	-	-	-	-	-	-	-	-				
SR5A	Fine	Calm	05:46	3.8	Surface	1.0	0.1	106	25.6	8.0	8.0	30.7	30.7	101.6	101.6	7.0	7.0	3.0	3.0	5	5	-	-	8216576	810700	-	-	-	-				
						1.0	0.1	114	25.6	8.0	8.0	30.7	30.7	101.6	101.6	7.0	7.0	3.0	3.0	6	6	-	-	-	-	-	-	-					
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
					Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
						2.8	0.1	49	25.6	8.0	8.0	30.9	30.9	101.0	101.0	6.9	6.9	3.2	3.2	8	8	-	-	-	-	-	-	-	-				
						2.8	0.1	53	25.6	8.0	8.0	30.9	30.9	101.0	101.0	6.9	6.9	3.2	3.2	6	6	-	-	-	-	-	-	-					
SR6	Fine	Calm	05:19	4.5	Surface	1.0	0.2	2	26.1	8.0	8.0	30.7	30.7	105.9	106.0	7.2	7.2	3.3	3.3	8	8	-	-	8217886	814669	-	-	-	-				
						1.0	0.2	2	26.1	8.0	8.0	30.7	30.7	106.0	106.0	7.2	7.2	3.3	3.3	8	8	-	-	-	-	-	-						
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
					Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
						3.5	0.1	29	26.4	8.0	8.0	30.9	30.9	105.9	105.9	7.2	7.2	3.8	3.8	7	7	-	-	-	-	-	-	-					
						3.5	0.1	29	26.4	8.0	8.0	30.9	30.9	105.9	105.9	7.2	7.2	3.8	3.8	8	8	-	-	-	-	-	-	-					
SR7	Cloudy	Moderate	04:32	19.1	Surface	1.0	0.2	74	26.5	7.9	7.9	32.0	32.0	88.2	88.3	5.9	5.9	1.3	1.3	2	2	-											

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

Water Quality Monitoring Results on 28 October 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	DA	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA
					Value	Average			Value	Average	Value	Average	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA
C1	Fine	Moderate	18:14	8.9	Surface	1.0	0.1	117	25.8		8.1	8.1	29.5	29.5	109.2	109.2	7.5	7.5	7.0	5.4		5		91	91			<0.2	1.7	
						1.0	0.1	128	25.8		8.1	8.1	29.5	29.5	109.2	109.2	7.5	7.5	7.0	5.4		7		91	91			<0.2	1.5	
						4.5	0.2	57	26.1	26.1	8.0	8.0	32.4	32.4	96.3	96.3	6.5	6.5	10.4	11.3		8		97	97			<0.2	1.5	
					Middle	4.5	0.2	59	26.1		8.0	8.0	32.4	32.4	96.3	96.3	6.5	6.5		11.3		6		96	96			<0.2	1.6	
						7.9	0.2	39	26.1	26.1	8.0	8.0	32.5	32.5	101.0	101.0	6.8	6.8		14.6		8		102	102			<0.2	1.6	
						7.9	0.2	39	26.1		8.0	8.0	32.5	32.5	101.0	101.0	6.8	6.8		14.6		6		102	102			<0.2	1.4	
C2	Cloudy	Moderate	17:10	11.5	Surface	1.0	0.2	355	26.6	26.6	8.1	8.1	27.9	28.0	119.5	119.5	8.2	8.2	7.5	1.7		5		94	94			<0.2	2.4	
						1.0	0.2	327	26.6		8.1	8.1	28.0	28.0	119.4	119.4	8.2	8.2		1.7		4		94	94			<0.2	2.2	
						5.8	0.4	319	26.4	26.4	8.0	8.0	30.6	30.6	100.0	100.0	6.8	6.8		5.9	4.2	4		96	96			<0.2	2.1	
					Middle	5.8	0.4	340	26.4		8.0	8.0	30.6	30.6	100.0	100.0	6.8	6.8		6.0		5		96	96			<0.2	1.6	
						10.5	0.2	322	26.5	26.5	7.9	7.9	31.0	31.0	100.7	101.1	6.8	6.8		5.0		9		99	99			<0.2	1.4	
						10.5	0.2	341	26.5		7.9	7.9	31.1	31.1	101.4	101.1	6.9	6.9		4.9		7		99	99			<0.2	1.4	
C3	Cloudy	Moderate	18:45	12.2	Surface	1.0	0.1	163	26.5	26.5	8.0	8.0	31.6	31.6	93.4	93.2	6.3	6.3	6.3	1.4		3		96	96			<0.2	0.6	
						1.0	0.1	174	26.5		8.0	8.0	31.6	31.6	92.9	93.2	6.3	6.3		1.4		2		96	96			<0.2	0.5	
						6.1	0.0	211	26.7	26.7	7.9	7.9	31.9	31.9	92.3	92.7	6.2	6.2		3.1	2.7	5		99	99			<0.2	0.4	
					Middle	6.1	0.0	231	26.7		7.9	7.9	31.9	31.9	93.0	92.7	6.2	6.2		3.2		5		99	99			<0.2	0.4	
						11.2	0.0	306	26.7	26.7	7.9	7.9	31.9	31.9	98.1	98.9	6.6	6.6		3.6		6		99	99			<0.2	0.4	
						11.2	0.0	322	26.7		7.9	7.9	32.0	31.9	99.7	99.7	6.7	6.7		3.5		5		100	100			<0.2	0.3	
IM1	Fine	Moderate	17:55	7.7	Surface	1.0	0.3	87	26.0	26.0	8.1	8.1	30.4	30.4	120.4	120.4	8.2	8.2	8.1	2.9		2		90	90			<0.2	0.7	
						1.0	0.3	91	26.0		8.1	8.1	30.4	30.4	120.3	120.3	8.2	8.2		2.9		4		89	89			<0.2	1.0	
						3.9	0.3	81	26.1	26.1	8.1	8.1	30.6	30.6	116.6	116.5	8.0	8.0		4.6	5.0	4		95	95			<0.2	0.8	
					Middle	3.9	0.3	84	26.1		8.1	8.1	30.6	30.6	116.4	116.5	7.9	7.9		4.7		2		97	97			<0.2	0.8	
						6.7	0.0	115	26.2	26.2	8.1	8.1	31.0	31.0	111.8	111.8	7.6	7.6		7.4		5		101	101			<0.2	0.8	
						6.7	0.0	123	26.2		8.1	8.1	31.0	31.0	111.7	111.8	7.6	7.6		7.4		6		102	102			<0.2	0.9	
IM2	Fine	Moderate	17:50	8.5	Surface	1.0	0.2	102	25.9	25.9	8.1	8.1	30.3	30.3	117.5	117.5	8.0	8.0	7.9	3.6		4		92	92			<0.2	0.9	
						1.0	0.2	110	25.9		8.1	8.1	30.3	30.3	117.5	117.5	8.0	8.0		3.6		5		91	91			<0.2	0.8	
						4.3	0.1	181	26.0	26.0	8.1	8.1	30.7	30.7	113.5	113.5	7.7	7.7		4.9	5.2	4		96	96			<0.2	0.8	
					Middle	4.3	0.1	187	26.0		8.1	8.1	30.7	30.7	113.4	113.5	7.7	7.7		4.9		4		97	97			<0.2	0.9	
						7.5	0.1	137	26.1	26.1	8.0	8.0	31.2	31.2	109.6	109.6	7.5	7.5		7.0		4		100	100			<0.2	0.8	
						7.5	0.1	150	26.1		8.0	8.0	31.2	31.2	109.6	109.6	7.5	7.5		7.1		5		99	99			<0.2	0.7	
IM3	Fine	Moderate	17:43	8.8	Surface	1.0	0.1	67	26.0	26.0	8.1	8.1	30.1	30.1	115.5	115.4	7.9	7.9	7.7	3.4		3		90	90			<0.2	0.8	
						1.0	0.1	72	26.0		8.1	8.1	30.1	30.1	115.3	115.4	7.9	7.9		3.4		4		89	89			<0.2	0.7	
						4.4	0.2	21	26.0	26.0	8.1	8.1	30.6	30.6	108.8	108.7	7.4	7.4		4.6	5.1	3		93	93			<0.2	1.1	
					Middle	4.4	0.2	21	26.0		8.1	8.1	30.6	30.6	108.6	108.7	7.4	7.4		4.6		3		93	93			<0.2	1.0	
						7.8	0.1	34	25.9	25.9	8.0	8.0	31.3	31.3	103.0	103.0	7.0	7.0		7.4	7.0	4		99	99			<0.2	1.0	
						7.8	0.2	35	25.9		8.0	8.0	31.3	31.3	103.0	103.0	7.0	7.0		7.4		4		99	99			<0.2	1.0	
IM4	Sunny	Moderate	17:36	8.0	Surface	1.0	0.1	92	25.9	25.9	8.1	8.1	29.9	29.9	111.2	111.0	7.6	7.6	7.1	4.9		6		92	92			<0.2	1.2	
						1.0	0.1	93	25.9		8.1	8.1	29.9	29.9	111.8	111.0	7.6	7.6		5.0		4		92	92			<0.2	1.1	
						4.0	0.2	98	25.9	25.9	8.0	8.0	31.4	31.4	97.4	97.4	6.6	6.6		10.0	9.5	4		96	96			<0.2	1.0	
					Middle	4.0	0.2	106	25.9		8.0	8.0	31.4	31.4	97.4	97.4	6.6	6.6		10.0		5		96	96			<0.2	1.4	
						7.0	0.1	65	25.9	25.9	8.0	8.0	31.4	31.4	98.3	98.4	6.7	6.7		13.6		6		101	101			<0.2	0.8	
						7.0	0.1	70	25.9		8.0	8.0	31.4	31.4	98.4	98.4	6.7	6.7		13.7		6		101	101			<0.2	0.7	
IM5	Sunny	Moderate	17:24	7.2	Surface	1.0	0.2	66	25.9	25.9	8.1	8.1	29.7	29.7	112.6	112.2	7.7	7.7	7.1	5.4		6		89	89			<0.2	1.0	
						1.0	0.2	67	25.9		8.1	8.1	29.7	29.7	111.7	112.2	7.7	7.7		5.6		5		89	89			<0.2	1.2	
						3.6	0.1	44	25.9	25.9	8.0	8.0	31.3	31.3	95.5	95.5	6.5	6.5		13.3	10.7	6		94	94			<0.2	0.9	
					Middle	3.6	0.1	44	25.9		8.0	8.0	31.3	31.3	95.5	95.5	6.5	6.5		13.3		5		94	94			<0.2	1.0	
						6.2	0.1	29	26.0	26.0	8.0	8.0	31.5	31.5	97.6	97.6	6.6	6.6		13.2		5		98	98			<0.2	1.0	
						6.2	0.1	29	26.0		8.0	8.0	31.5	31.5	97.6	97.6	6.6	6.6		13.2		4		98	98			<0.2	1.1	
IM6	Sunny	Moderate	17:15	7.0	Surface	1.0	0.1	99	25.9	25.9	8.1	8.1	29.7	29.7	114.1	114.1	7.8	7.8	7.5	4.5		4		90	90			<0.2	1.3	
						1.0	0.1	100	25.9		8.1	8.1	29.7	29.7	114.0	114.1	7.8	7.8		4.6		6		88	88			<0.2	1.4	
						3.5	0.1	7	26.0	26.0	8.1	8.1	30.3	30.3	105.1	105.1	7.2	7.2		6.5	7.0	4		94	94			<0.2	1.1	
					Middle	3.5	0.2	7	26.0		8.1	8.1	30.4	30.3	105.0	105.1	7.2	7.2		6.5		5		94	94			<0.2	1.2	
						6.0	0.2	35	26.0	26.0	8.0	8.0	30.9	30.9	102.1	102.1	7.0	7.0		9.9	7.0	4		99	99			<0.2	1.2	
						6.0	0.2	38	26.0		8.0	8.0	30.9	30.9	102.1	102.1	7.0	7.0		9.9		4		99	99			<0.2	1.3	
IM7	Sunny	Moderate	17:06	8.6	Surface	1.0	0.1	137	26.0	26.0	8.1	8.1	28.5	28.5	116.0	116.0	8.0	8.0	7.7	4.4		6		92	92			<0.2	1.9	
						1.0	0.2	146	26.0		8.1	8.1	28.5	28.5	115.9	116.0	8.0	8.0		4.4		6		92	92			<0.2	2.0	
						4.3	0.1	52	26.0	26.0	8.1	8.1	29.4	29.4	107.4	107.4	7.4	7.4		6.6	7.1	6		96	96			<0.2	1.8	
					Middle	4.3	0.1	54	26.0		8.1	8.1	29.4	29.4	107.4	107.4	7.4	7.4		6.6		6		96	96			<0.2	1.7	
						7.6	0.2	70	26.0	26.0	8.0	8.0	30.9	30.9	103.3	103.4	7.0	7.0		10.1										



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

Water Quality Monitoring

Water Quality Monitoring Results on 31 October 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	DA	Value	DA		Value	DA	Value	DA			Value	DA	Value	DA
C1	Sunny	Moderate	09:55	9.1	Surface	1.0	0.3	197	25.1	8.0	8.0	32.8	32.8	98.6	98.6	6.8	6.8	5.8	7	92			<0.2	1.7	815627	804246	<0.2	1.6	
						1.0	0.3	209	25.1	25.1	8.0	8.0	32.8	32.8	98.6	98.6	6.8	6.8	5.9	7	92								
					Middle	4.6	0.3	197	25.1	25.1	8.0	8.0	32.8	32.8	99.0	99.0	6.8	6.8	6.8	6	96			<0.2					1.5
						4.6	0.3	214	25.1	25.1	8.0	8.0	32.8	32.8	99.0	99.0	6.8	6.8	6.8	6	96								
					Bottom	8.1	0.3	204	25.1	25.1	8.0	8.0	32.8	32.8	102.2	102.2	7.0	7.0	9.1	8	98			<0.2					1.6
						8.1	0.3	204	25.1	25.1	8.0	8.0	32.8	32.8	102.2	102.2	7.0	7.0	9.1	10	98			<0.2					1.4
C2	Fine	Moderate	10:41	11.6	Surface	1.0	0.5	169	25.4	8.1	8.1	31.5	31.5	114.6	114.3	7.9	7.9	4.3	6	94			<0.2	2.4	825682	806930	<0.2	1.9	
						1.0	0.6	175	25.4	25.4	8.1	8.1	31.5	31.5	114.0	114.3	7.8	7.8	4.2	6	95								
					Middle	5.8	0.4	168	25.6	25.6	8.0	8.0	31.9	31.9	103.6	103.6	7.1	7.1	14.5	13	96			<0.2					2.2
						5.8	0.4	179	25.6	25.6	8.0	8.0	31.9	31.9	103.5	103.6	7.1	7.1	14.3	12	96								
					Bottom	10.6	0.3	174	25.7	25.7	8.0	8.0	32.0	32.0	102.9	102.9	7.0	7.0	18.2	15	99			<0.2					1.6
						10.6	0.4	187	25.7	25.7	8.0	8.0	32.0	32.0	103.0	103.0	7.0	7.0	18.2	15	99			<0.2					1.4
C3	Fine	Moderate	08:46	12.6	Surface	1.0	0.2	90	26.1	7.9	7.9	32.8	32.8	90.6	90.7	6.1	6.1	2.4	6	93			<0.2	0.6	822119	817791	<0.2	0.4	
						1.0	0.2	96	26.1	26.1	7.9	7.9	32.8	32.8	90.7	90.7	6.1	6.1	2.4	7	93								
					Middle	6.3	0.2	101	26.1	26.1	7.9	7.9	32.8	32.8	90.7	90.7	6.1	6.1	1.8	5	95			<0.2					0.4
						6.3	0.2	104	26.1	26.1	7.9	7.9	32.8	32.8	90.7	90.7	6.1	6.1	1.9	5	96								
					Bottom	11.6	0.2	88	26.1	26.1	7.9	7.9	32.9	32.9	91.5	91.7	6.2	6.2	2.3	5	99			<0.2					0.4
						11.6	0.2	92	26.1	26.1	7.9	7.9	32.9	32.9	91.8	91.7	6.2	6.2	2.3	6	98			<0.2					0.3
IM1	Sunny	Moderate	10:14	7.3	Surface	1.0	0.3	171	24.8	8.0	8.0	32.6	32.6	101.8	101.8	7.0	7.0	4.7	6	92			<0.2	0.7	818343	806474	<0.2	0.8	
						1.0	0.3	178	24.8	24.8	8.0	8.0	32.6	32.6	101.8	101.8	7.0	7.0	4.7	5	92								
					Middle	3.7	0.3	166	24.7	24.7	8.0	8.0	32.7	32.7	99.4	99.4	6.9	6.9	6.7	6	95			<0.2					0.8
						3.7	0.3	181	24.7	24.7	8.0	8.0	32.7	32.7	99.4	99.4	6.9	6.9	6.8	7	94								
					Bottom	6.3	0.2	166	24.8	24.8	8.0	8.0	32.8	32.8	98.3	98.3	6.8	6.8	11.0	10	96			<0.2					0.8
						6.3	0.2	178	24.8	24.8	8.0	8.0	32.8	32.8	98.3	98.3	6.8	6.8	11.1	10	96			<0.2					0.9
IM2	Sunny	Moderate	10:20	8.3	Surface	1.0	0.2	184	24.7	8.1	8.1	32.6	32.6	102.4	102.4	7.1	7.1	4.3	6	92			<0.2	0.9	818842	806211	<0.2	0.8	
						1.0	0.3	190	24.7	24.7	8.1	8.1	32.6	32.6	102.3	102.4	7.1	7.1	4.4	7	91								
					Middle	4.2	0.2	182	24.7	24.7	8.0	8.0	32.7	32.7	99.4	99.4	6.9	6.9	6.2	6	93			<0.2					0.8
						4.2	0.2	199	24.7	24.7	8.0	8.0	32.7	32.7	99.4	99.4	6.9	6.9	6.2	6	92								
					Bottom	7.3	0.2	161	24.8	24.8	8.0	8.0	32.8	32.8	98.7	98.7	6.8	6.8	10.3	9	97			<0.2					0.8
						7.3	0.2	168	24.8	24.8	8.0	8.0	32.8	32.8	98.7	98.7	6.8	6.8	10.3	11	96			<0.2					0.7
IM3	Sunny	Moderate	10:29	8.4	Surface	1.0	0.4	168	24.7	8.0	8.0	32.8	32.8	99.1	99.1	6.8	6.8	6.4	8	92			<0.2	0.8	819418	806037	<0.2	0.9	
						1.0	0.5	174	24.7	24.7	8.0	8.0	32.8	32.8	99.0	99.0	6.8	6.8	6.5	9	92								
					Middle	4.2	0.4	176	24.7	24.7	8.0	8.0	32.8	32.8	98.3	98.3	6.8	6.8	10.7	7	95			<0.2					0.7
						4.2	0.4	180	24.7	24.7	8.0	8.0	32.8	32.8	98.3	98.3	6.8	6.8	10.7	7	95								
					Bottom	7.4	0.3	172	24.7	24.7	8.0	8.0	32.8	32.8	98.8	98.8	6.8	6.8	12.0	6	98			<0.2					1.0
						7.4	0.3	181	24.7	24.7	8.0	8.0	32.8	32.8	98.8	98.8	6.8	6.8	12.1	7	98			<0.2					1.0
IM4	Sunny	Moderate	10:36	7.7	Surface	1.0	0.5	214	24.8	8.0	8.0	32.8	32.8	100.1	100.1	6.9	6.9	6.4	6	91			<0.2	1.2	819581	805053	<0.2	1.0	
						1.0	0.5	215	24.8	24.8	8.0	8.0	32.8	32.8	100.1	100.1	6.9	6.9	6.4	5	91								
					Middle	3.9	0.4	214	24.8	24.8	8.0	8.0	32.8	32.8	99.6	99.6	6.9	6.9	8.7	4	95			<0.2					1.0
						3.9	0.4	220	24.8	24.8	8.0	8.0	32.8	32.8	99.6	99.6	6.9	6.9	8.7	6	95								
					Bottom	6.7	0.3	204	24.8	24.8	8.0	8.0	32.8	32.8	100.0	100.1	6.9	6.9	11.0	9	98			<0.2					1.4
						6.7	0.3	205	24.8	24.8	8.0	8.0	32.8	32.8	100.1	100.1	6.9	6.9	11.1	9	98			<0.2					0.8
IM5	Sunny	Moderate	10:49	6.5	Surface	1.0	0.4	161	24.7	8.0	8.0	32.7	32.7	103.6	103.6	7.2	7.2	9.1	8	92			<0.2	1.0	820573	804918	<0.2	1.0	
						1.0	0.4	167	24.7	24.7	8.0	8.0	32.7	32.7	103.6	103.6	7.2	7.2	9.1	6	92								
					Middle	3.3	0.4	164	24.7	24.7	8.0	8.0	32.7	32.7	103.5	103.5	7.1	7.1	10.7	8	95			<0.2					0.9
						3.3	0.4	168	24.7	24.7	8.0	8.0	32.7	32.7	103.5	103.5	7.1	7.1	10.7	8	94								
					Bottom	5.5	0.3	170	24.7	24.7	8.0	8.0	32.7	32.7	103.9	104.0	7.2	7.2	14.0	12	99			<0.2					1.0
						5.5	0.3	186	24.7	24.7	8.0	8.0	32.7	32.7	104.0	104.0	7.2	7.2	14.2	11	98			<0.2					1.1
IM6	Sunny	Moderate	10:57	6.8	Surface	1.0	0.3	156	24.7	8.1	8.1	32.6	32.6	108.1	108.1	7.5	7.5	7.1	9	91			<0.2	1.3	821057	805815	<0.2	1.3	
						1.0	0.4	166	24.7	24.7	8.1	8.1	32.6	32.6	108.1	108.1	7.5	7.5	7.0	9	92								
					Middle	3.4	0.3	161	24.7	24.7	8.1	8.1	32.6	32.6	107.1	107.0	7.4	7.4	8.8	8	95			<0.2					1.1
						3.4	0.3	171	24.7	24.7	8.1	8.1	32.6	32.6	106.9	107.0	7.4	7.4	9.9	8	95								
					Bottom	5.8	0.3	166	24.6	24.6	8.1	8.1	32.6	32.6	106.8	106.8	7.4	7.4	12.1	9	98			<0.2					1.2
						5.8	0.3	171	24.6	24.6	8.1	8.1	32.6	32.6	106.8	106.8	7.4	7.4	12.1	10	98			<0.2					1.3
IM7	Sunny	Moderate	11:05	8.4	Surface	1.0	0.3	191	24.9	8.2	8.2	32.0	32.0	125.3	125.1	8.7	8.7	3.7	5	92			<0.2	1.9	821354	806841	<0.2	1.8	
						1.0	0.4	209	24.9	24.9	8.2	8.2	32.0	32.0	124.8	125.1	8.6	8.6	3.6	7	92								
					Middle	4.2	0.3	177	24.7	24.7	8.1	8.1	32.2	32.3	108.0	107.7	7.5	7.5	5.8	5	97			<0.2					1.8
						4.2	0.3	185	24.7	24.7	8.1	8.1	32.3	32.3	107.3	107.7	7.4	7.4	6.1	6	96								
					Bottom	7.4	0.2	162	24.7	24.7	8.0	8.0	32.6	32.6	105.0	105.0	7.2	7.2	8.6	8	98			<0.2					1.7

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

**Water Quality Monitoring Results on 31 October 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	DA	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA
IM9	Fine	Moderate	10:03	7.3	Surface	1.0	0.3	104	24.9		8.1	8.1	32.2	32.2	105.6	105.6	7.3		6.1		8		94		822111	808791	<0.2	2.2	2.1	
						1.0	0.3	106	24.9	24.9	8.1	8.1	32.2	32.2	105.6	105.6	7.3	7.3	6.3		8		94				<0.2	2.2		
						3.7	0.3	101	25.0	25.0	8.0	8.0	32.3	32.3	104.3	104.3	7.2		10.5		6		96				<0.2	2.3		
					Middle	3.7	0.3	101	25.0	25.0	8.0	8.0	32.3	32.3	104.3	104.3	7.2		10.6		7		96				<0.2	2.0		
						6.3	0.2	99	25.0	25.0	8.0	8.0	32.3	32.3	104.1	104.1	7.2	7.2	10.8		9		98				<0.2	2.1		
						6.3	0.2	106	25.0	25.0	8.0	8.0	32.3	32.3	104.1	104.1	7.2	7.2	11.1		10		98				<0.2	2.0		
IM10	Fine	Moderate	09:54	7.0	Surface	1.0	0.4	107	25.1	25.1	8.1	8.1	31.7	31.7	112.7	112.7	7.7		4.9		9		94		822253	809819	<0.2	2.2	2.2	
						1.0	0.4	110	25.1	25.1	8.1	8.1	31.7	31.7	112.2	112.2	7.7	7.6	5.1		7		95				<0.2	2.3		
						3.5	0.4	98	25.0	25.0	8.1	8.1	31.9	31.9	107.5	107.5	7.4		8.2		7		99				<0.2	2.4		
					Middle	3.5	0.4	98	25.0	25.0	8.1	8.1	31.9	31.9	107.5	107.5	7.4		8.3		7		99				<0.2	2.3		
						6.0	0.3	93	25.0	25.0	8.1	8.1	32.2	32.2	104.7	104.7	7.2	7.2	17.9		12		99				<0.2	2.1		
						6.0	0.4	95	25.0	25.0	8.1	8.1	32.2	32.2	104.8	104.8	7.2	7.2	18.0		14		99				<0.2	2.0		
IM11	Fine	Moderate	09:42	8.5	Surface	1.0	0.3	112	25.2	25.2	8.1	8.1	31.7	31.6	110.8	110.8	7.6		4.9		5		94		821499	810561	<0.2	1.5	1.4	
						1.0	0.3	121	25.2	25.2	8.1	8.1	31.6	31.6	110.8	110.8	7.6	7.6	5.1		6		94				<0.2	1.5		
						4.3	0.3	104	25.2	25.2	8.1	8.1	31.7	31.7	109.4	109.4	7.5		5.4		8		96				<0.2	1.4		
					Middle	4.3	0.3	112	25.2	25.2	8.1	8.1	31.7	31.7	109.4	109.4	7.5		5.5		8		96				<0.2	1.2		
						7.5	0.2	106	25.1	25.1	8.1	8.1	31.7	31.7	107.4	107.4	7.4		5.8		12		98				<0.2	1.2		
						7.5	0.2	112	25.1	25.1	8.1	8.1	31.7	31.7	107.3	107.3	7.4	7.4	5.9		13		98				<0.2	1.4		
IM12	Fine	Moderate	09:33	8.5	Surface	1.0	0.4	102	25.6	25.6	8.0	8.0	31.8	31.8	102.6	102.6	7.0		4.1		6		94		821151	811534	<0.2	1.3	1.3	
						1.0	0.4	107	25.6	25.6	8.0	8.0	31.8	31.8	102.6	102.6	7.0	7.0	4.4		7		94				<0.2	1.3		
						4.3	0.3	110	25.6	25.6	8.0	8.0	31.8	31.8	100.7	100.6	6.9		5.1		7		96				<0.2	1.2		
					Middle	4.3	0.3	118	25.6	25.6	8.0	8.0	31.8	31.8	100.4	100.6	6.9		5.5		7		96				<0.2	1.3		
						7.5	0.3	108	25.7	25.7	8.0	8.0	32.0	32.0	100.4	100.6	6.8	6.9	10.7		8		98				<0.2	1.1		
						7.5	0.3	110	25.7	25.7	8.0	8.0	32.0	32.0	100.7	100.6	6.9	6.9	10.8		8		98				<0.2	1.4		
SR2	Fine	Moderate	09:09	5.0	Surface	1.0	0.3	79	25.7	25.7	8.0	8.0	31.9	31.9	99.4	99.4	6.8		4.0		6		96		821460	814177	<0.2	1.4	1.5	
						1.0	0.3	84	25.7	25.7	8.0	8.0	31.9	31.9	99.3	99.3	6.8		4.0		6		96				<0.2	1.7		
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-		-				<0.2		-
					Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-		-				<0.2	-		
						-	-	-	-	-	-	-	-	-	-	-	-	-	-		-		-				<0.2	-		
						4.0	0.3	79	25.9	25.9	7.9	7.9	32.4	32.4	98.6	99.2	6.7	6.8	3.1		7		98				<0.2	1.4		
SR3	Fine	Moderate	10:18	8.5	Surface	1.0	0.3	173	25.0	25.0	8.1	8.1	32.0	32.0	110.2	110.2	7.6		6.4		7		-		822135	807583	-	-	-	
						1.0	0.3	181	25.0	24.9	8.1	8.1	32.0	32.1	110.2	107.6	7.6		6.4		7		-				-	-		
						4.3	0.2	164	24.9	24.9	8.1	8.1	32.1	32.1	107.6	107.6	7.4		6.7		8		-				-	-		
					Middle	4.3	0.2	168	24.9	24.9	8.1	8.1	32.1	32.1	107.6	106.9	7.4		6.6		9		-				-	-		
						7.5	0.1	177	24.9	24.9	8.1	8.1	32.1	32.1	106.9	106.9	7.4	7.4	6.0		9		-				-	-		
						7.5	0.1	179	24.9	24.9	8.1	8.1	32.1	32.1	106.9	106.9	7.4	7.4	6.1		9		-				-	-		
SR4A	Sunny	Moderate	09:34	9.3	Surface	1.0	0.2	52	24.7	24.7	8.1	8.1	32.0	32.0	104.4	104.4	7.2		4.1		4		-		817205	807792	-	-	-	
						1.0	0.2	54	24.7	24.7	8.1	8.1	32.0	32.0	104.4	104.4	7.2		4.2		5		-				-	-		
						4.7	0.2	61	24.8	24.8	8.0	8.0	32.7	32.7	98.7	98.7	6.8		7.8		8		-				-	-		
					Middle	4.7	0.3	63	24.8	24.8	8.0	8.0	32.7	32.7	98.7	98.7	6.8		7.9		7		-				-	-		
						8.3	0.2	51	24.8	24.8	8.0	8.0	32.7	32.7	100.2	100.3	6.9	6.9	8.7		7		-				-	-		
						8.3	0.2	55	24.8	24.8	8.0	8.0	32.7	32.7	100.3	100.3	6.9	6.9	8.7		8		-				-	-		
SR5A	Sunny	Moderate	09:17	4.6	Surface	1.0	0.0	79	24.7	24.7	8.3	8.3	31.1	31.1	134.2	134.2	9.3		4.5		7		-		816600	810710	-	-	-	
						1.0	0.0	79	24.7	24.7	8.3	8.3	31.1	31.1	134.1	134.1	9.3		4.5		9		-				-	-		
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-		-				-		-
					Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-		-				-	-		
						-	-	-	-	-	-	-	-	-	-	-	-	-	-		-		-				-	-		
						3.6	0.1	119	24.9	24.9	8.1	8.1	31.6	31.6	119.5	119.5	8.3	8.3	6.8		11		-				-	-		
SR6	Sunny	Moderate	08:52	5.1	Surface	1.0	0.1	55	24.9	24.9	8.2	8.2	30.3	30.3	126.9	126.9	8.8		6.1		11		-		817912	814673	-	-	-	
						1.0	0.2	58	24.9	24.9	8.2	8.2	30.3	30.3	126.9	126.9	8.8		6.1		10		-				-	-		
						-	-	-	-	-	-	-	-	-	-	-	-	-	-		-		-				-	-		
					Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-		-				-	-		
						-	-	-	-	-	-	-	-	-	-	-	-	-	-		-		-				-	-		
						4.1	0.1	60	25.5	25.5	8.0	8.0	30.7	30.7	105.3	105.3	7.3	7.3	9.8		14		-				-	-		
SR7	Fine	Moderate	08:07	18.3	Surface	1.0	0.2	136	26.1	26.1	7.9	7.9	32.7	32.7	90.2	90.3	6.1		3.4		8		-		823648	823728	-	-	-	
						1.0	0.2	140	26.1	26.1	7.9	7.9	32.7	32.7	90.3	90.3	6.1		3.4		8		-				-	-		
						9.2	0.2	169	26.1	26.1	7.9	7.9	32.9	32.9	89.9	89.9	6.1		3.9		8		-				-	-		
					Middle	9.2	0.2	174	26.1	26.1	7.9	7.9	32.9	32.9	89.9	89.9	6.1		3.7		7		-				-	-		
						17.3	0.1	165	26.1	26.1	7.9	7.9	32.9	32.9	89.8	89.9	6.0	6.0	4.3		8		-				-	-		
						17.3	0.1	169	26.1	26.1	7.9	7.9	32.9	32.9	89.9	89.9	6.0	6.0	4.4		7		-				-	-		
SR8	Fine	Moderate	09:26	4.6	Surface	1.0	-	-	25.7	25.7	8.0	8.0	31.9	31.9	100.5	100.6	6.8		12.4		10		-		820388	811717	-	-	-	
						1.0	-	-	25.7	25.7	8.0	8.0	31.9	31.9	100.6	100.6	6.9	6.9	12.6		11		-				-	-		
						-	-	-	-	-	-	-	-	-	-	-	-	-	-		-		-				-	-		
					Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-		-				-	-		
						-	-	-	-	-	-	-	-	-	-	-	-	-	-		-		-				-	-		
						3.6	-	-	25.7	25.7	8.0	8.0	32.0	32.1	100.9	101.0	6.9	6.9	10.5		15		-				-	-		
3.6	-	-	25.7	25.7	8.0	8.0	32.1	32.1	101.1	101.1	6.9	6.9	10.2		17		-		-	-										

DA: Depth-Averaged

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

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

Water Quality Monitoring

Water Quality Monitoring Results on **31 October 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	DA	Value	DA		Value	DA	Value	DA			Value	DA	Value	DA	Value	DA
									Value	DA	Value	DA	Value	DA	Value	DA	Value	DA		Value	DA	Value	DA			Value	DA	Value	DA	Value	DA
C1	Fine	Moderate	16:13	8.7	Surface	1.0	0.4	49	25.1	8.0	8.0	32.8	32.8	101.4	101.4	6.9	7.8	8	92	96	815632	804241	<0.2	0.4	0.4						
						1.0	0.4	51	25.1	8.0	8.0	32.8	32.8	101.3	101.4	6.9	7.8	8	93				<0.2	0.4							
					Middle	4.4	0.4	48	25.1	8.0	8.0	32.8	32.8	100.2	100.2	6.9	10.3	6	97				<0.2	0.4							
						4.4	0.5	49	25.1	8.0	8.0	32.8	32.8	102.5	100.2	6.9	10.4	7	97				<0.2	0.4							
					Bottom	7.7	0.4	46	25.1	8.0	8.0	32.8	32.8	102.5	102.6	7.0	11.7	13	99				<0.2	0.4							
						7.7	0.4	47	25.1	8.0	8.0	32.8	32.8	102.6	102.6	7.0	11.8	11	99				<0.2	0.5							
C2	Fine	Moderate	15:06	11.5	Surface	1.0	0.1	268	25.6	8.0	8.0	31.0	31.0	109.5	109.3	7.5	4.0	6	93	96	825695	806938	<0.2	0.7	0.6						
						1.0	0.1	276	25.6	8.0	8.0	31.0	31.0	109.0	109.3	7.5	4.4	5	93				<0.2	0.6							
					Middle	5.8	0.1	301	25.7	8.0	8.0	31.8	31.8	106.9	107.0	7.3	8.7	9	96				<0.2	0.6							
						5.8	0.1	302	25.7	8.0	8.0	31.8	31.8	107.1	107.0	7.3	8.7	11	96				<0.2	0.6							
					Bottom	10.5	0.1	320	25.6	8.0	8.0	31.9	31.9	108.4	108.5	7.4	8.8	15	98				<0.2	0.5							
						10.5	0.1	329	25.6	8.0	8.0	31.9	31.9	108.5	108.5	7.4	8.7	13	99				<0.2	0.4							
C3	Fine	Moderate	16:56	12.1	Surface	1.0	0.4	280	26.2	8.0	8.0	32.4	32.4	94.5	94.4	6.4	2.7	3	95	97	822108	817789	<0.2	0.4	0.4						
						1.0	0.4	288	26.2	8.0	8.0	32.4	32.4	94.2	94.4	6.3	3.0	5	95				<0.2	0.5							
					Middle	6.1	0.3	276	26.2	7.9	7.9	32.5	32.5	92.3	92.3	6.2	5.2	6	96				<0.2	0.4							
						6.1	0.4	295	26.2	7.9	7.9	32.5	32.5	92.3	92.3	6.2	5.4	8	96				<0.2	0.4							
					Bottom	11.1	0.3	280	26.1	7.9	7.9	32.4	32.4	93.6	93.7	6.3	6.9	11	98				<0.2	0.4							
						11.1	0.3	299	26.1	7.9	7.9	32.4	32.4	93.7	93.7	6.3	7.0	9	99				<0.2	0.4							
IM1	Fine	Moderate	15:54	7.4	Surface	1.0	0.3	17	25.1	8.2	8.2	32.2	32.2	131.8	131.8	9.1	3.3	7	93	95	818350	806476	<0.2	0.5	0.5						
						1.0	0.3	18	25.1	8.2	8.2	32.2	32.2	131.8	131.8	9.1	3.3	7	93				<0.2	0.4							
					Middle	3.7	0.3	30	25.1	8.2	8.2	32.3	32.3	127.4	127.4	8.8	3.6	7	95				<0.2	0.5							
						3.7	0.3	30	25.1	8.2	8.2	32.3	32.3	127.3	127.4	8.8	3.6	7	96				<0.2	0.5							
					Bottom	6.4	0.2	33	25.0	8.1	8.1	32.4	32.4	125.2	125.2	8.6	5.6	13	96				<0.2	0.4							
						6.4	0.3	34	25.0	8.1	8.1	32.4	32.4	125.2	125.2	8.6	5.6	12	97				<0.2	0.4							
IM2	Fine	Moderate	15:48	8.4	Surface	1.0	0.2	20	25.1	8.2	8.2	32.3	32.3	130.5	130.5	9.0	2.7	7	92	95	818851	806205	<0.2	0.4	0.4						
						1.0	0.2	20	25.1	8.2	8.2	32.3	32.3	130.4	130.5	9.0	2.7	8	92				<0.2	0.4							
					Middle	4.2	0.3	32	24.9	8.1	8.1	32.5	32.5	115.0	115.0	7.9	7.3	6	93				<0.2	0.4							
						4.2	0.3	32	24.9	8.1	8.1	32.5	32.5	115.0	115.0	7.9	7.3	6	94				<0.2	0.5							
					Bottom	7.4	0.3	39	24.9	8.1	8.1	32.5	32.5	114.9	115.0	7.9	7.9	10	97				<0.2	0.5							
						7.4	0.3	41	24.9	8.1	8.1	32.5	32.5	115.0	115.0	7.9	11.3	9	99				<0.2	0.4							
IM3	Fine	Moderate	15:41	8.5	Surface	1.0	0.1	295	25.1	8.2	8.2	32.0	32.0	137.5	137.4	9.5	4.5	5	93	96	819430	806004	<0.2	0.4	0.5						
						1.0	0.1	302	25.1	8.2	8.2	32.0	32.0	137.2	137.4	9.4	4.6	4	93				<0.2	0.4							
					Middle	4.3	0.1	357	25.0	8.1	8.1	32.6	32.6	111.8	111.8	7.7	6.1	5	96				<0.2	0.7							
						4.3	0.1	328	25.0	8.1	8.1	32.6	32.6	111.8	111.8	7.7	6.1	6	96				<0.2	0.6							
					Bottom	7.5	0.1	353	24.9	8.1	8.1	32.6	32.6	110.1	110.2	7.6	8.9	9	98				<0.2	0.4							
						7.5	0.1	325	24.9	8.1	8.1	32.6	32.6	110.2	110.2	7.6	8.9	11	99				<0.2	0.4							
IM4	Fine	Moderate	15:32	7.8	Surface	1.0	0.3	307	25.0	8.2	8.2	32.0	32.0	125.2	125.2	8.6	7.4	8	91	96	819570	805047	<0.2	0.4	0.4						
						1.0	0.3	311	25.0	8.2	8.2	32.0	32.0	125.1	125.2	8.6	7.5	9	92				<0.2	0.4							
					Middle	3.9	0.2	334	24.8	8.1	8.1	32.3	32.3	112.9	112.9	7.8	9.5	9	96				<0.2	0.4							
						3.9	0.3	334	24.8	8.1	8.1	32.3	32.3	112.8	112.9	7.8	9.5	10	96				<0.2	0.4							
					Bottom	6.8	0.2	4	24.8	8.1	8.0	32.7	32.7	109.7	109.8	7.6	13.5	12	99				<0.2	0.4							
						6.8	0.3	4	24.8	8.0	8.0	32.7	32.7	109.8	109.8	7.6	13.5	11	99				<0.2	0.5							
IM5	Fine	Moderate	15:22	6.7	Surface	1.0	0.2	331	25.0	8.2	8.2	31.9	31.9	128.4	128.4	8.9	4.4	5	92	95	820595	804920	<0.2	0.4	0.4						
						1.0	0.2	352	25.0	8.2	8.2	31.9	31.9	128.3	128.4	8.8	4.4	6	93				<0.2	0.4							
					Middle	3.4	0.2	7	24.9	8.1	8.1	32.2	32.2	119.9	119.9	8.3	5.4	8	95				<0.2	0.4							
						3.4	0.3	7	24.9	8.1	8.1	32.2	32.2	119.9	119.9	8.3	5.4	8	96				<0.2	0.4							
					Bottom	5.7	0.2	7	24.8	8.1	8.1	32.3	32.3	118.1	118.1	8.2	8.4	8	98				<0.2	0.4							
						5.7	0.2	7	24.8	8.1	8.1	32.3	32.3	118.1	118.1	8.2	8.4	10	98				<0.2	0.5							
IM6	Fine	Moderate	15:13	6.7	Surface	1.0	0.3	315	25.3	8.1	8.1	31.8	31.8	126.9	126.9	8.7	3.2	6	93	96	821045	805825	<0.2	0.5	0.5						
						1.0	0.3	341	25.3	8.1	8.1	31.8	31.8	126.8	126.9	8.7	3.4	8	93				<0.2	0.5							
					Middle	3.4	0.3	331	25.1	8.2	8.2	31.9	31.9	125.0	125.0	8.6	4.5	8	95				<0.2	0.4							
						3.4	0.3	332	25.1	8.2	8.2	31.9	31.9	124.9	125.0	8.6	4.6	6	95				<0.2	0.5							
					Bottom	5.7	0.3	338	24.9	8.1	8.1	32.0	32.0	122.6	122.6	8.5	8.9	13	99				<0.2	0.4							
						5.7	0.3	353	24.9	8.1	8.1	32.0	32.0	122.6	122.6	8.5	9.0	11	99				<0.2	0.4							
IM7	Fine	Moderate	15:06	8.2	Surface	1.0	0.3	283	25.3	8.1	8.1	31.6	31.6	122.4	122.4	8.4	2.7	6	92	96	821366	806851	<0.2	0.6	0.7						
						1.0	0.4	301	25.3	8.1	8.1	31.6	31.6	122.4	122.4	8.4	2.7	5	93				<0.2	0.6							
					Middle	4.1	0.4	280	25.3	8.1	8.1	31.7	31.7	122.2	122.2	8.4	3.8	6	97				<0.2	0.8							
						4.1	0.4	307	25.3	8.1	8.1	31.7	31.7	122.2	122.2	8.4	3.6	7	97				<0.2	0.6							
					Bottom	7.2	0.2	288	25.3	8.1	8.1	31.8	31.8	122.8	122.8	8.4	5.1	7	98				<0.2	0.6							
						7.2	0.2	292	25.3	8.1	8.1	31.8	31.8	122.8	122.8	8.4	5.1	7	99				<0.2	0.7							
IM8	Fine	Moderate	15:31	7.9	Surface	1.0	0.1	213	25.7	8.1	8.1	31.7	31.7	129.7	129.8	8.9	1.4	6	92	94	821705	807840	<0.2	0.6	0.5						
						1.0	0.1	225	25.7	8.1	8.1	31.7	31.7	129.9	129.9	8.9	1.5	6	92				<0.2	0.5							
					Middle	4.0	0.1	245	25.6	8.2	8.2	31.7	31.7	128.6	128.5	8.8	2.3	5	94				<0.2	0.6							
						4.0	0.1	260	25.6	8.2	8.2	31.7	31.7	128.3	128.5	8.8	2.3	7	94				<0.2	0.4							
					Bottom	6.9	0.1	244	25.3	8.2	8.2	31.7	31.7	124.3	124.0	8.5	3.7	9	97				<0.2	0.5							
						6.9	0.1	250	25.3	8.2	8.2	31.7	31.7	123.7	123.7	8.5	3.6	7	97				<0.2	0.5							

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

Note: Access to SR8 was blocked by barge and its wire on 31 October. The monitoring at SR8 was slightly shifted to the closest safe and accessible location temporarily.

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

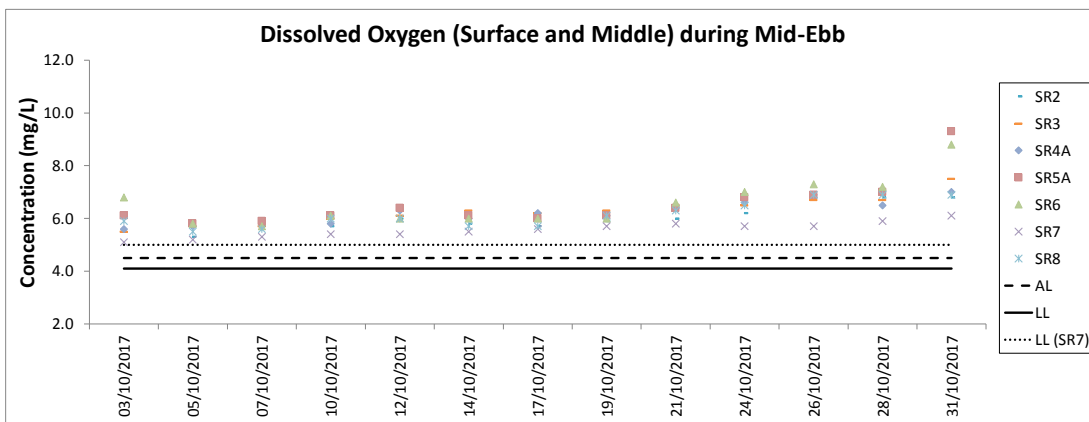
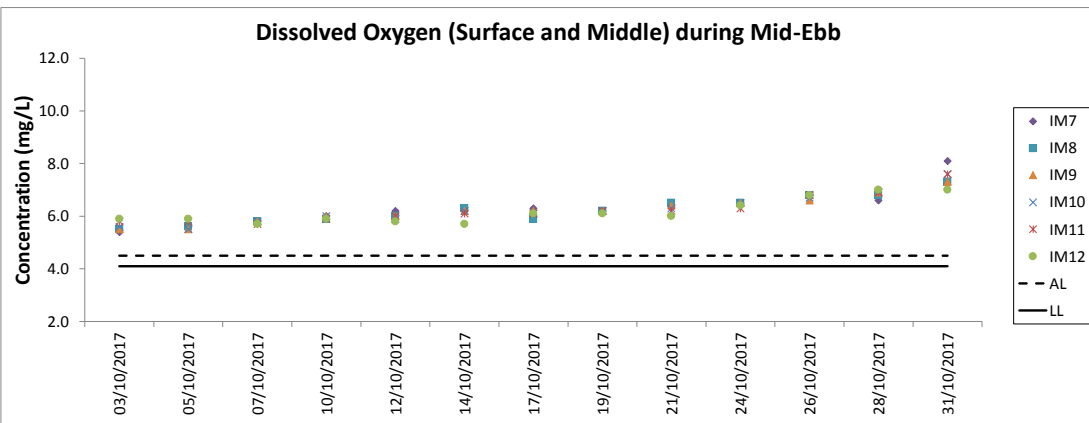
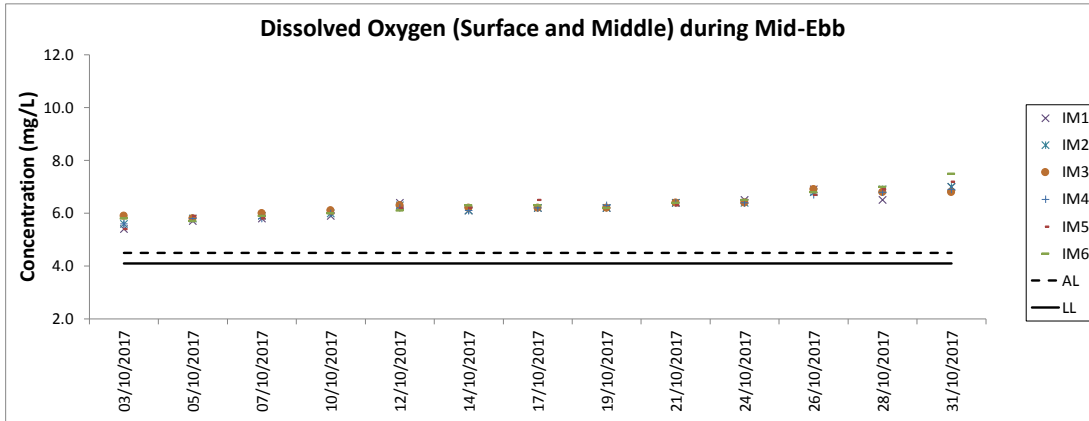
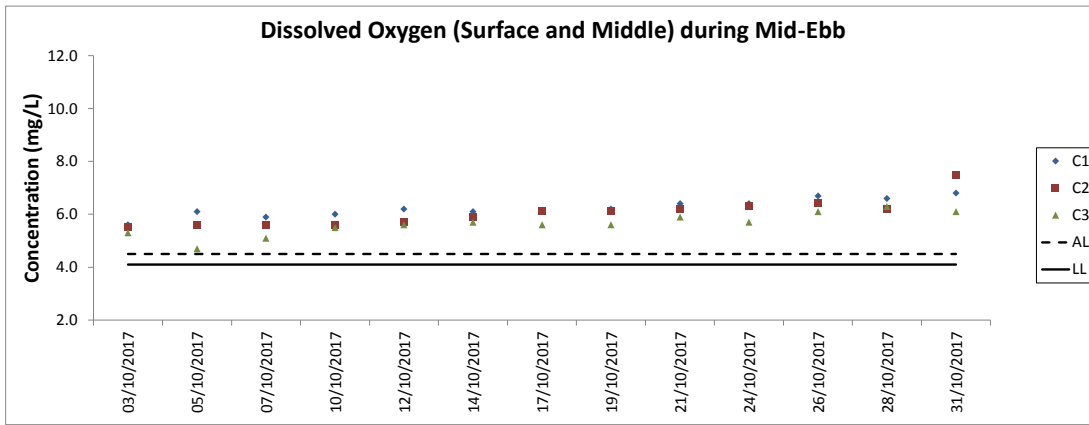
**Water Quality Monitoring**

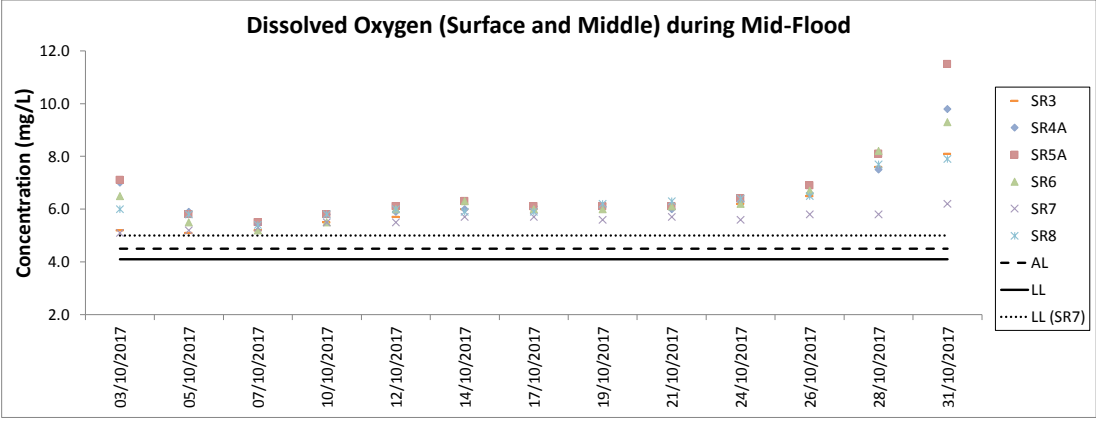
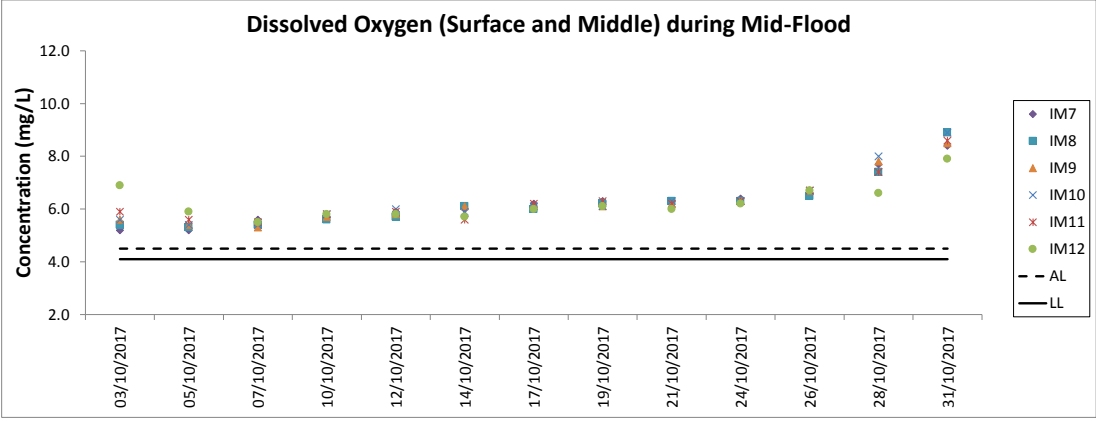
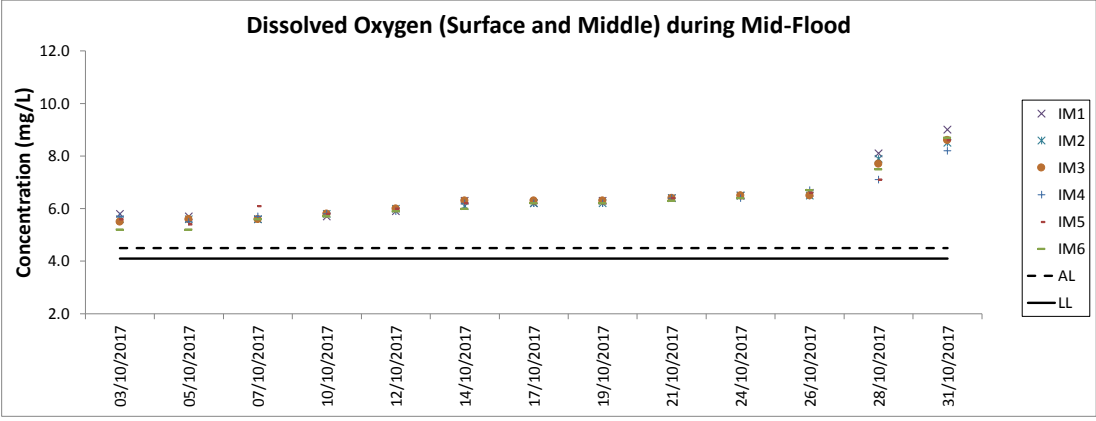
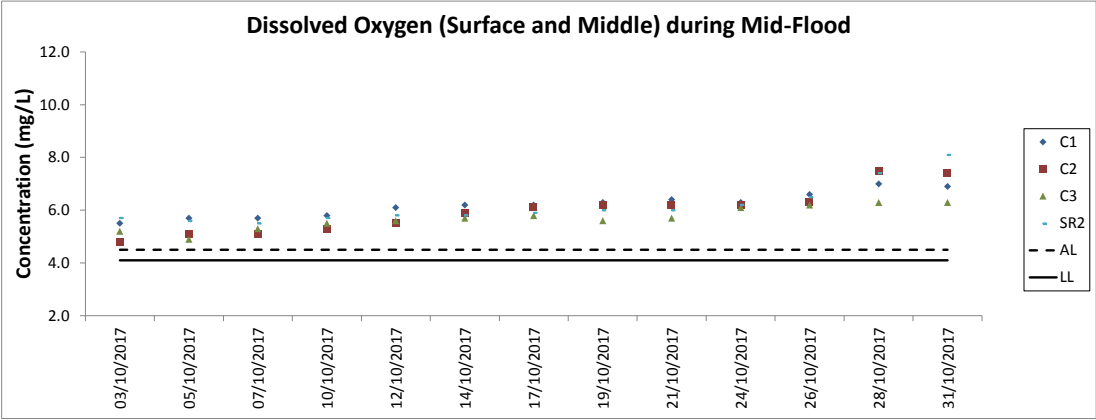
**Water Quality Monitoring Results on**

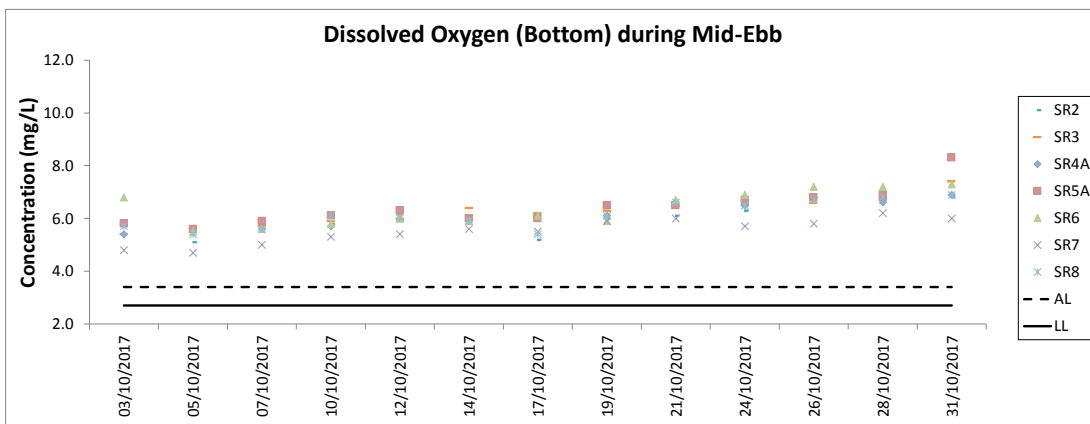
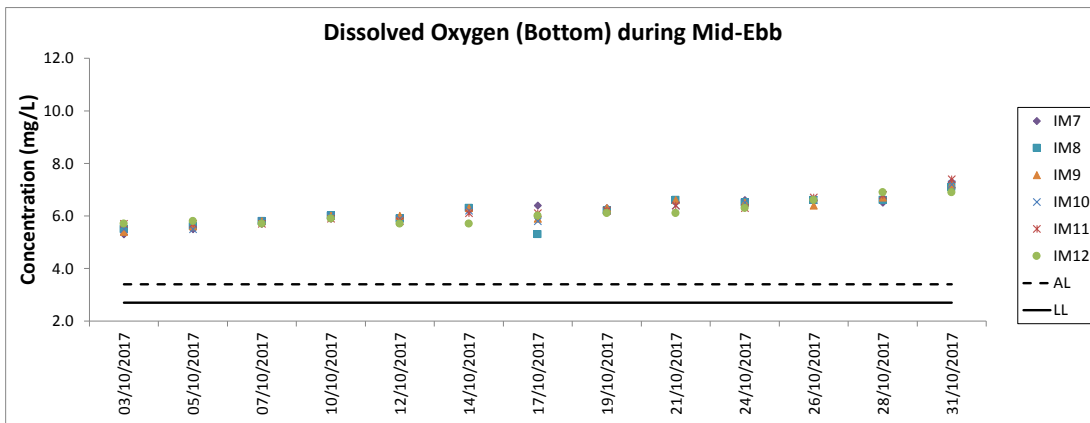
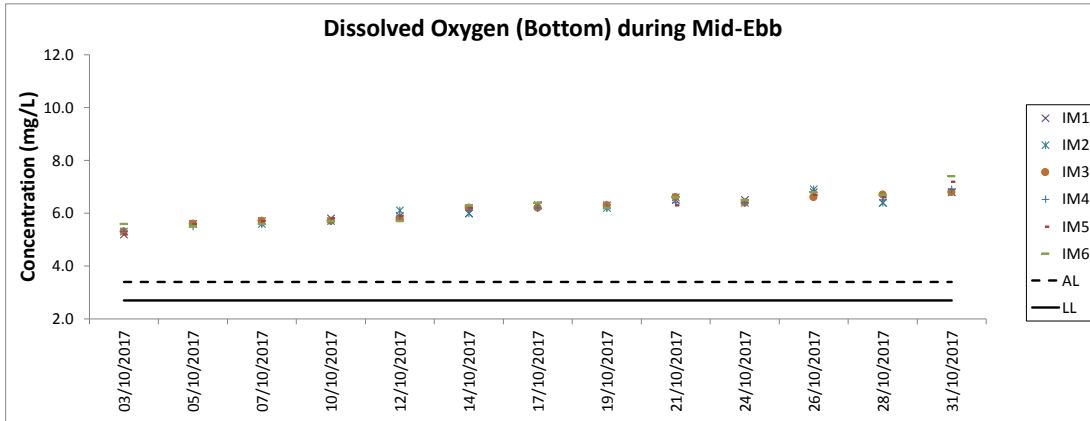
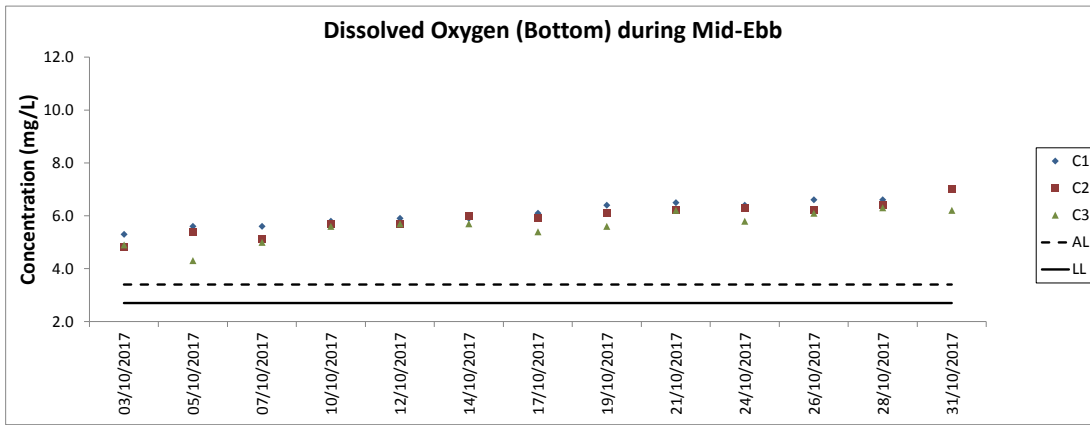
**31 October 17 during Mid-Flood Tide**

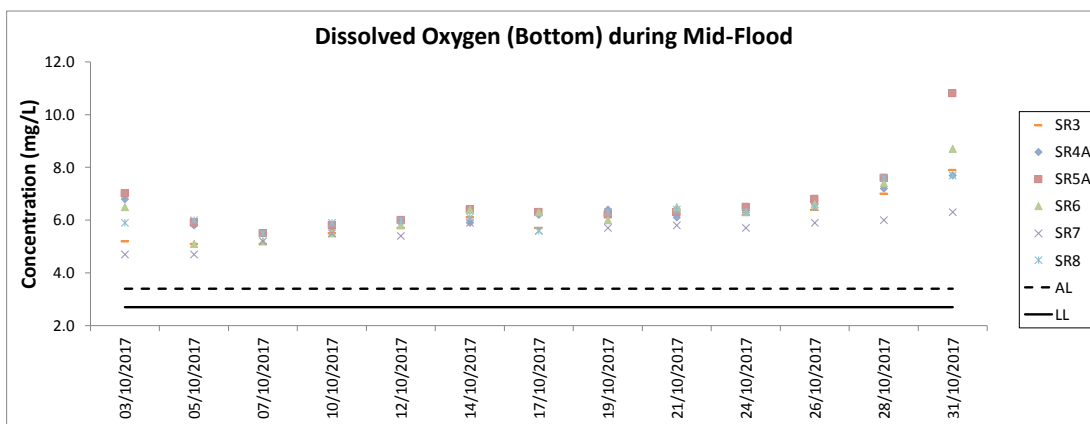
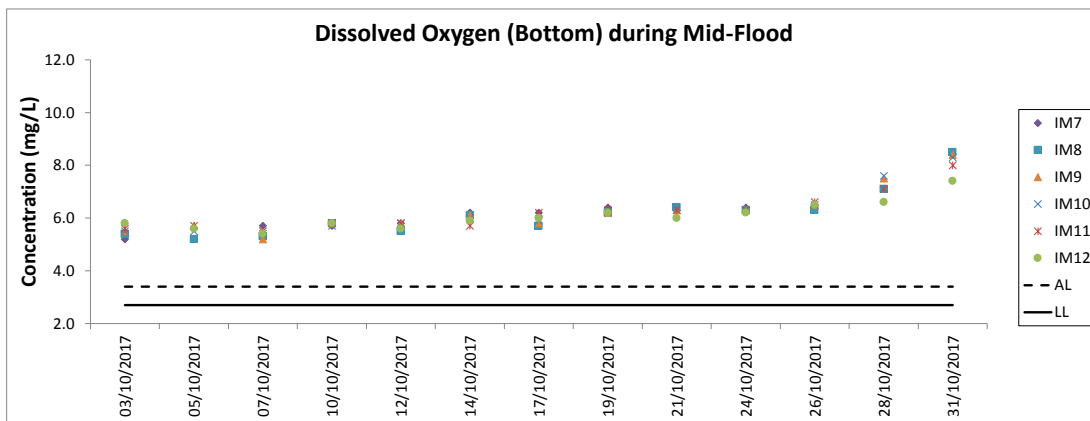
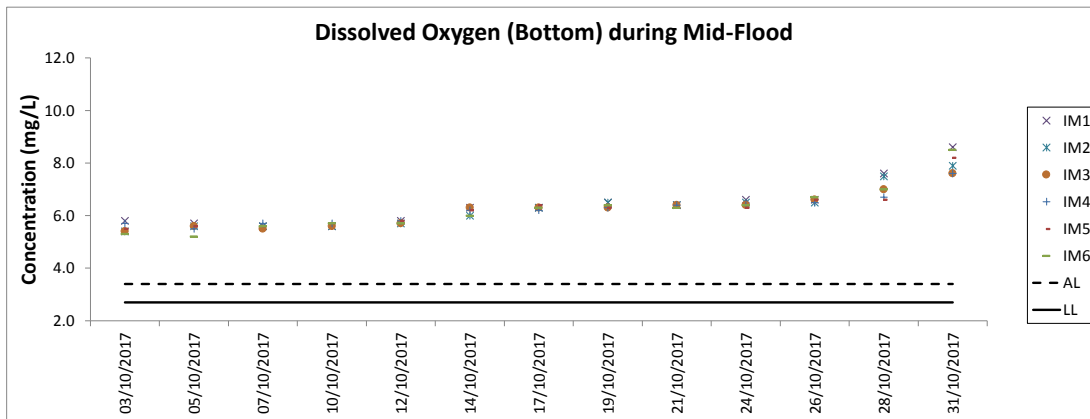
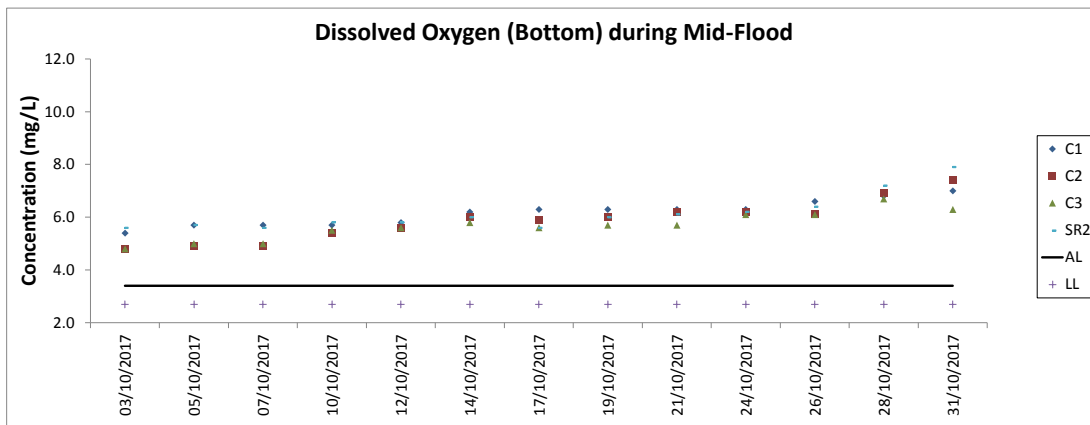
Monitoring Station	Weather Condition	Sea Condition	Sampling Time	Water Depth (m)	Sampling Depth (m)		Current Speed (m/s)	Current Direction	Water Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen		Turbidity (NTU)		Suspended Solids (mg/L)		Total Alkalinity (ppm)		Coordinate HK Grid (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		
									Value	DA	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA	Value	DA			Value	DA	Value	DA	Value	DA
IM9	Fine	Moderate	15:39	7.0	Surface	1.0	0.1	315	25.3	8.2	8.2	31.9	31.9	124.5	124.5	8.5	5.7	9	94	8	94	8	94	822107	808819	<0.2	0.4	<0.2	0.5			
						1.0	0.1	322	25.3	25.3	8.2	8.2	31.9	31.9	124.4	124.5	8.5	5.8	8	96	8	96	8	96	96	822107	808819	<0.2	0.5	<0.2	0.5	
						3.5	0.1	313	25.2	25.2	8.1	8.1	32.0	32.0	122.8	122.8	8.4	7.2	8	96	8	96	8	96	96	822107	808819	<0.2	0.4	<0.2	0.4	
					Middle	3.5	0.1	340	25.2	25.2	8.1	8.1	32.0	32.0	122.7	122.8	8.4	7.4	10	96	10	96	10	96	10	96	822107	808819	<0.2	0.4	<0.2	0.4
						6.0	0.1	308	25.2	25.2	8.1	8.1	31.9	31.9	121.5	121.5	8.3	7.4	9	99	9	99	9	99	9	99	822107	808819	<0.2	0.4	<0.2	0.5
						6.0	0.1	336	25.2	25.2	8.1	8.1	31.9	31.9	121.5	121.5	8.4	7.6	9	99	9	99	9	99	9	99	822107	808819	<0.2	0.5	<0.2	0.5
IM10	Fine	Moderate	15:48	7.7	Surface	1.0	0.4	289	25.6	8.2	8.2	31.9	31.9	135.5	135.5	9.3	3.8	7	93	6	94	6	94	822238	809827	<0.2	0.6	<0.2	0.6			
						1.0	0.4	299	25.6	25.6	8.2	8.2	31.9	31.9	134.7	135.1	9.2	3.6	8	94	8	94	8	94	96	822238	809827	<0.2	0.6	<0.2	0.6	
						3.9	0.4	290	25.5	25.5	8.2	8.2	32.0	32.0	126.1	126.0	8.6	4.6	6	95	6	95	6	95	96	822238	809827	<0.2	0.6	<0.2	0.6	
					Middle	3.9	0.4	311	25.5	25.5	8.2	8.2	32.0	32.0	125.9	126.0	8.6	4.6	6	95	6	95	6	95	6	95	822238	809827	<0.2	0.6	<0.2	0.6
						6.7	0.3	276	25.2	25.2	8.1	8.1	32.1	32.1	120.3	120.3	8.3	8.4	9	98	9	98	9	98	9	98	822238	809827	<0.2	0.6	<0.2	0.6
						6.7	0.3	291	25.2	25.2	8.1	8.1	32.1	32.1	120.3	120.3	8.3	8.3	8	98	8	98	8	98	8	98	822238	809827	<0.2	0.6	<0.2	0.6
IM11	Fine	Moderate	15:59	7.8	Surface	1.0	0.5	285	25.8	8.2	8.2	32.0	32.0	135.7	135.6	9.2	2.6	3	94	5	94	5	94	821514	810539	<0.2	0.6	<0.2	0.6			
						1.0	0.5	301	25.8	25.8	8.2	8.2	32.0	32.0	135.5	135.6	9.2	2.7	5	96	5	96	5	96	96	821514	810539	<0.2	0.6	<0.2	0.7	
						3.9	0.3	284	25.2	25.2	8.1	8.1	32.2	32.2	117.0	117.0	8.0	8.3	5	96	4	96	4	96	96	821514	810539	<0.2	0.6	<0.2	0.7	
					Middle	3.9	0.3	304	25.2	25.2	8.1	8.1	32.2	32.2	117.0	117.0	8.0	8.4	4	96	4	96	4	96	4	96	821514	810539	<0.2	0.6	<0.2	0.7
						6.8	0.2	288	25.1	25.1	8.1	8.1	32.3	32.3	115.7	115.7	8.0	9.1	12	98	12	98	12	98	12	98	821514	810539	<0.2	0.7	<0.2	0.7
						6.8	0.2	293	25.1	25.1	8.1	8.1	32.3	32.3	115.7	115.7	8.0	9.2	10	98	10	98	10	98	10	98	821514	810539	<0.2	0.7	<0.2	0.7
IM12	Fine	Moderate	16:07	9.0	Surface	1.0	0.5	278	25.6	8.2	8.2	31.7	31.7	121.9	121.7	8.3	4.9	7	94	6	94	6	94	821154	811512	<0.2	0.6	<0.2	0.6			
						1.0	0.6	289	25.6	25.6	8.2	8.2	31.8	31.7	121.5	121.7	8.3	5.2	6	94	6	94	6	94	96	821154	811512	<0.2	0.6	<0.2	0.6	
						4.5	0.4	273	25.6	25.6	8.0	8.0	32.0	32.0	109.6	109.6	7.5	10.6	8	96	8	96	8	96	8	96	821154	811512	<0.2	0.6	<0.2	0.6
					Middle	4.5	0.5	290	25.6	25.6	8.0	8.0	32.0	32.0	109.6	109.6	7.5	10.8	8	97	8	96	8	96	8	96	821154	811512	<0.2	0.6	<0.2	0.6
						8.0	0.3	272	25.3	25.3	8.1	8.1	32.0	32.0	108.4	108.4	7.4	21.2	16	98	16	98	16	98	16	98	821154	811512	<0.2	0.7	<0.2	0.6
						8.0	0.3	291	25.3	25.3	8.1	8.1	32.0	32.0	108.4	108.4	7.4	21.0	18	98	18	98	18	98	18	98	821154	811512	<0.2	0.6	<0.2	0.6
SR2	Fine	Moderate	16:31	4.1	Surface	1.0	0.2	153	25.9	8.1	8.1	31.9	31.9	119.4	119.3	8.1	4.0	8	96	8	96	8	96	821466	814146	<0.2	0.7	<0.2	0.6			
						1.0	0.2	156	25.9	25.9	8.1	8.1	31.9	31.9	119.2	119.3	8.1	4.0	10	96	10	96	10	96	97	821466	814146	<0.2	0.6	<0.2	0.6	
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	821466	814146	<0.2	0.6	<0.2	0.6
					Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	821466	814146	<0.2	0.6	<0.2	0.6
						3.1	0.2	154	26.0	26.0	8.1	8.1	32.1	32.1	116.3	116.3	7.9	4.2	11	97	11	97	11	97	11	97	821466	814146	<0.2	0.5	<0.2	0.6
						3.1	0.2	160	26.0	26.0	8.1	8.1	32.1	32.1	116.3	116.3	7.9	4.4	9	97	9	97	9	97	9	97	821466	814146	<0.2	0.6	<0.2	0.6
SR3	Fine	Moderate	15:25	8.5	Surface	1.0	0.2	243	25.7	8.1	8.1	31.4	31.4	119.7	119.7	8.2	1.6	5	-	5	-	5	-	822133	807585	-	-	-	-			
						1.0	0.2	258	25.7	25.7	8.1	8.1	31.4	31.4	119.7	119.7	8.2	1.5	6	-	6	-	6	-	96	822133	807585	-	-	-	-	
						4.3	0.2	300	25.7	25.7	8.1	8.1	31.6	31.6	117.6	117.6	8.0	4.3	5	-	5	-	5	-	96	822133	807585	-	-	-	-	
					Middle	4.3	0.2	325	25.7	25.7	8.1	8.1	31.6	31.6	117.6	117.6	8.0	4.4	5	-	5	-	5	-	96	822133	807585	-	-	-	-	
						7.5	0.2	287	25.6	25.6	8.1	8.1	31.7	31.7	115.0	114.8	7.9	4.2	7	-	7	-	7	-	96	822133	807585	-	-	-	-	
						7.5	0.2	299	25.6	25.6	8.1	8.1	31.7	31.7	114.6	114.8	7.8	4.7	9	-	9	-	9	-	96	822133	807585	-	-	-	-	
SR4A	Fine	Moderate	16:33	9.2	Surface	1.0	0.2	276	25.4	8.3	8.3	31.5	31.5	155.0	155.0	10.7	4.3	9	-	9	-	9	-	817202	807808	-	-	-	-			
						1.0	0.2	286	25.4	25.4	8.3	8.3	31.5	31.5	154.9	155.0	10.6	4.3	9	-	9	-	9	-	96	817202	807808	-	-	-	-	
						4.6	0.1	282	25.2	25.2	8.2	8.2	31.8	31.8	130.0	129.9	8.9	9.2	10	-	10	-	10	-	96	817202	807808	-	-	-	-	
					Middle	4.6	0.1	287	25.2	25.2	8.2	8.2	31.8	31.8	129.7	129.9	8.9	9.1	12	-	12	-	12	-	96	817202	807808	-	-	-	-	
						8.2	0.1	265	24.8	24.8	8.1	8.1	32.3	32.3	112.1	112.2	7.7	12.3	13	-	13	-	13	-	96	817202	807808	-	-	-	-	
						8.2	0.1	282	24.8	24.8	8.1	8.1	32.3	32.3	112.2	112.2	7.7	12.2	12	-	12	-	12	-	96	817202	807808	-	-	-	-	
SR5A	Fine	Moderate	16:51	4.5	Surface	1.0	0.2	266	25.3	8.4	8.4	31.2	31.2	167.5	167.5	11.5	5.9	11	-	11	-	11	-	816611	810702	-	-	-	-			
						1.0	0.2	278	25.3	25.3	8.4	8.4	31.2	31.2	167.4	167.5	11.5	6.0	9	-	9	-	9	-	96	816611	810702	-	-	-	-	
						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	816611	810702	-	-	-	-
					Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	816611	810702	-	-	-	-
						3.																										

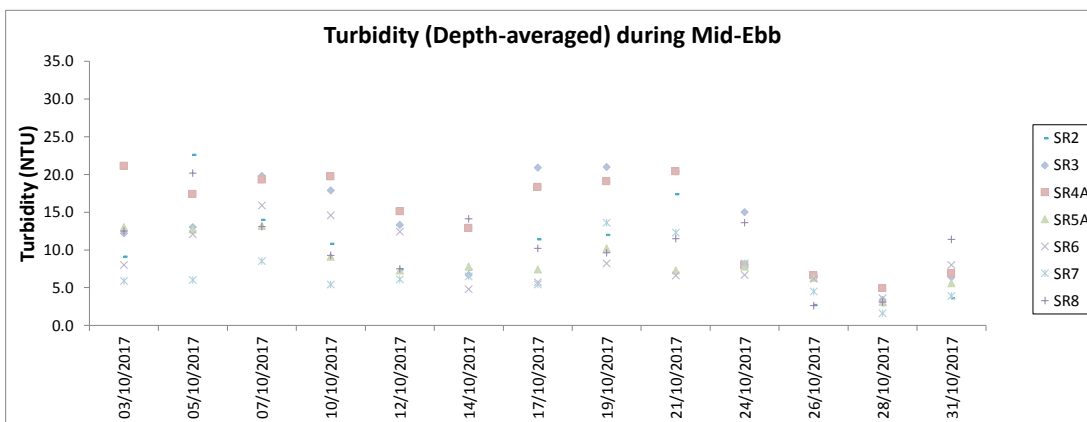
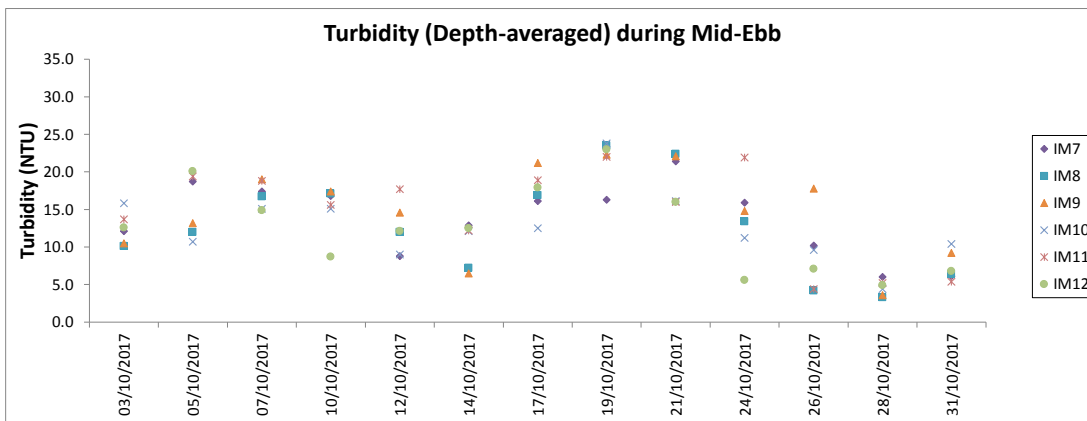
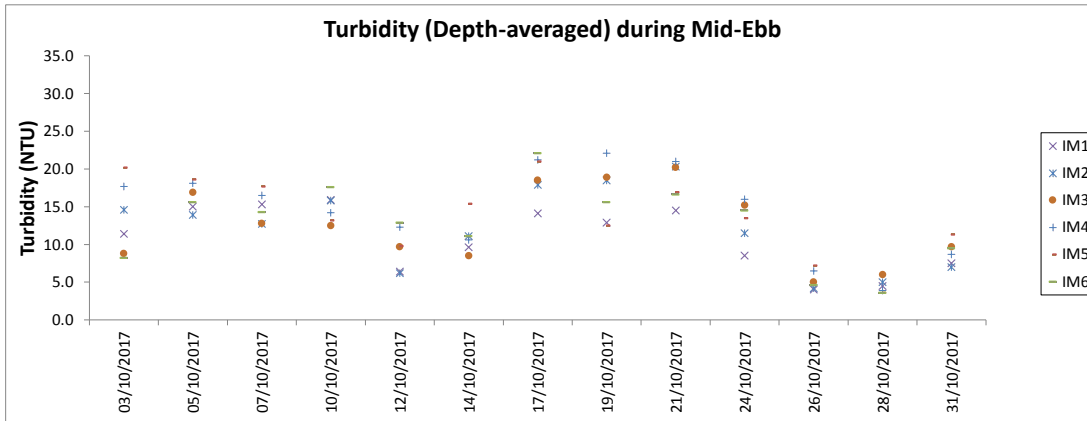
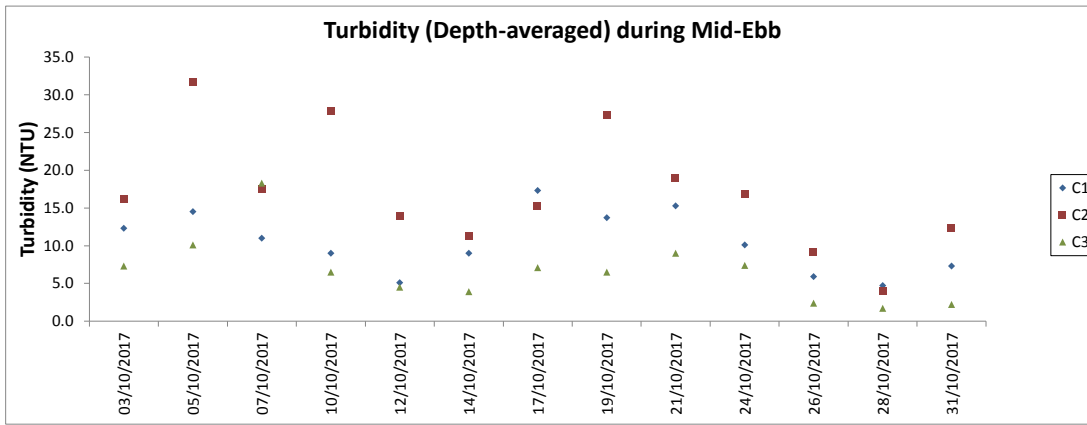




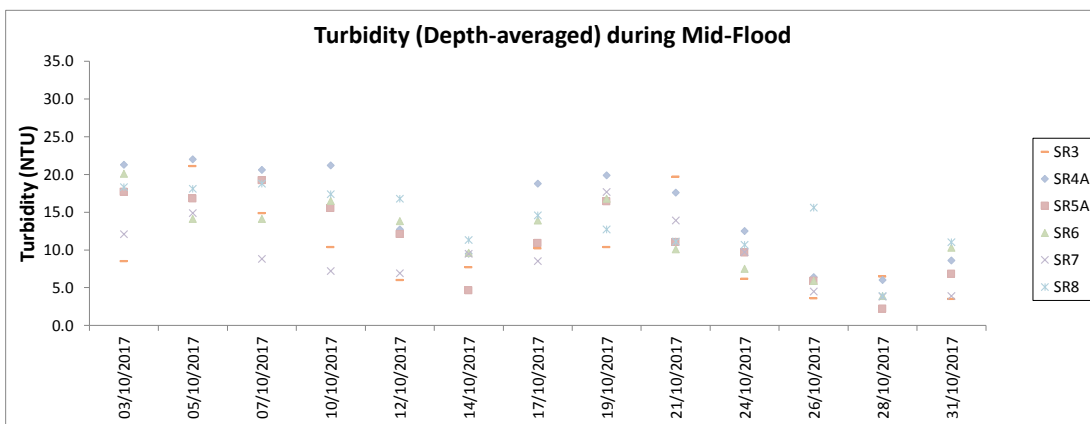
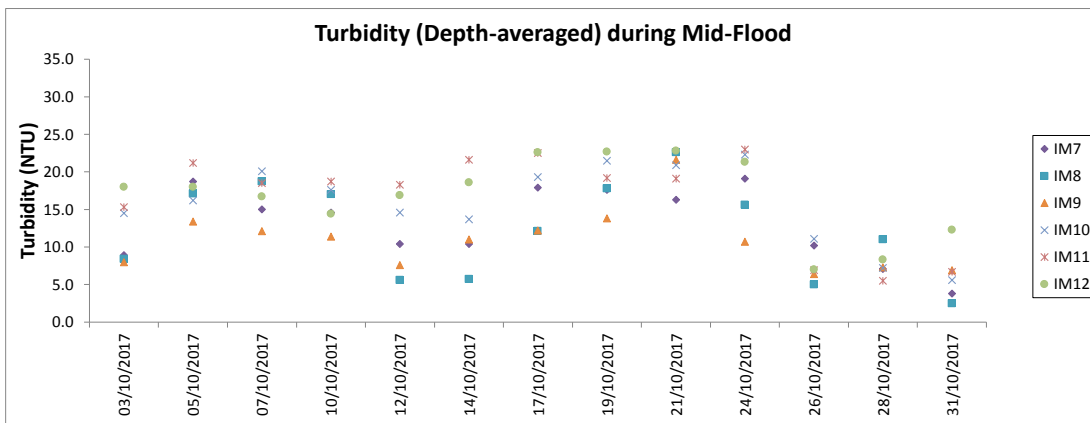
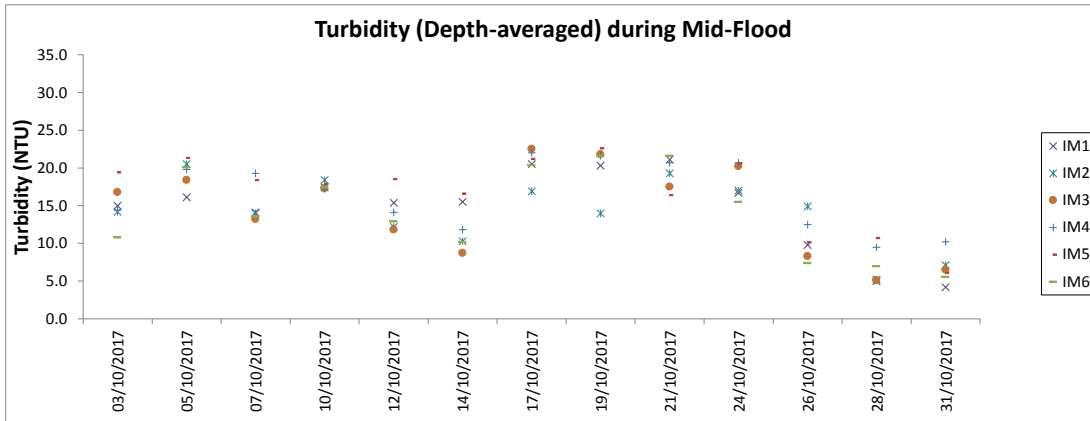
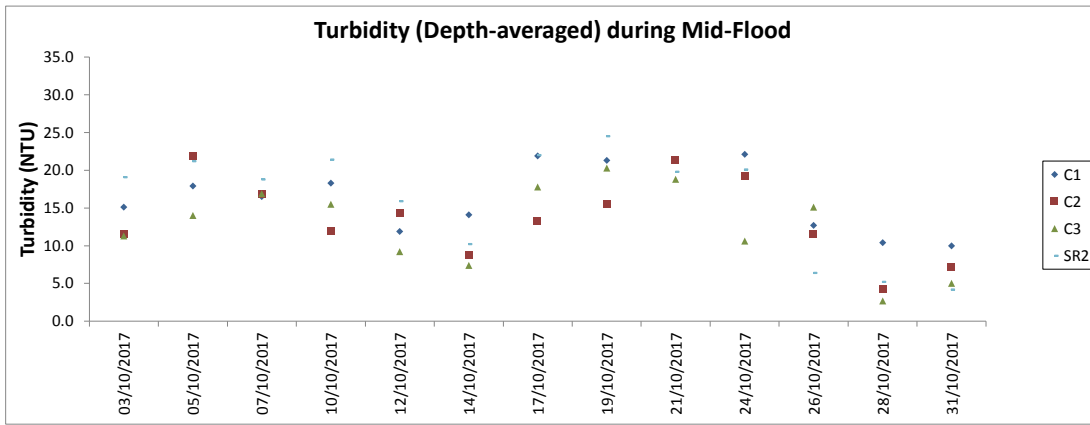




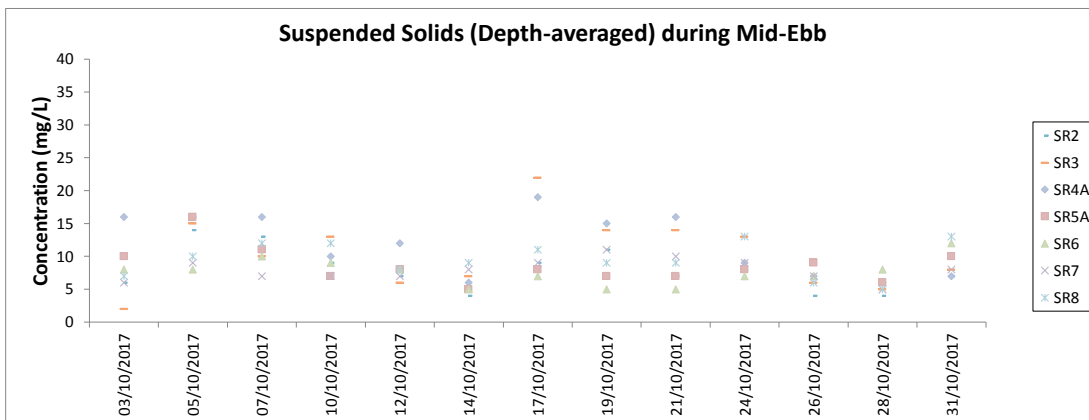
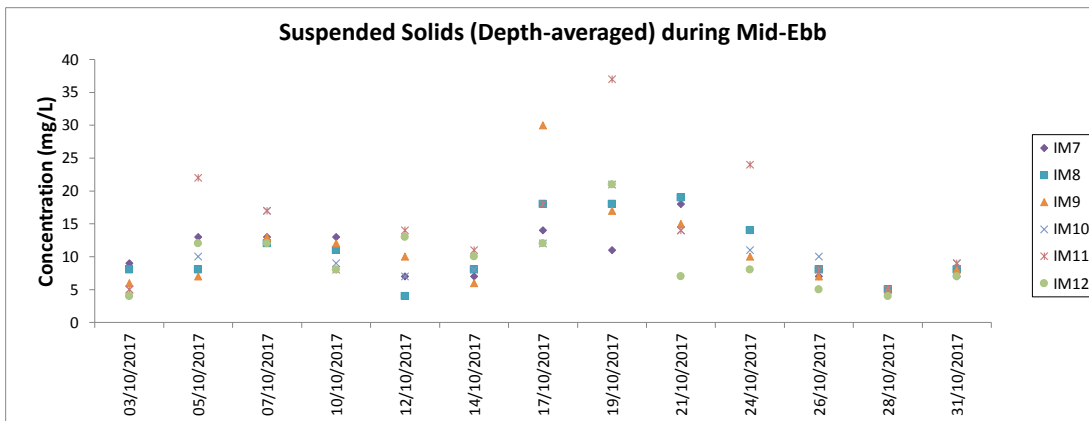
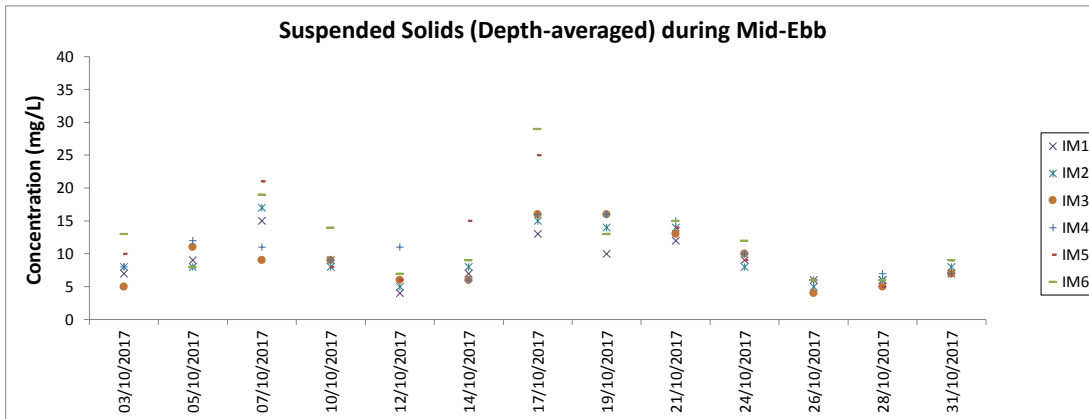
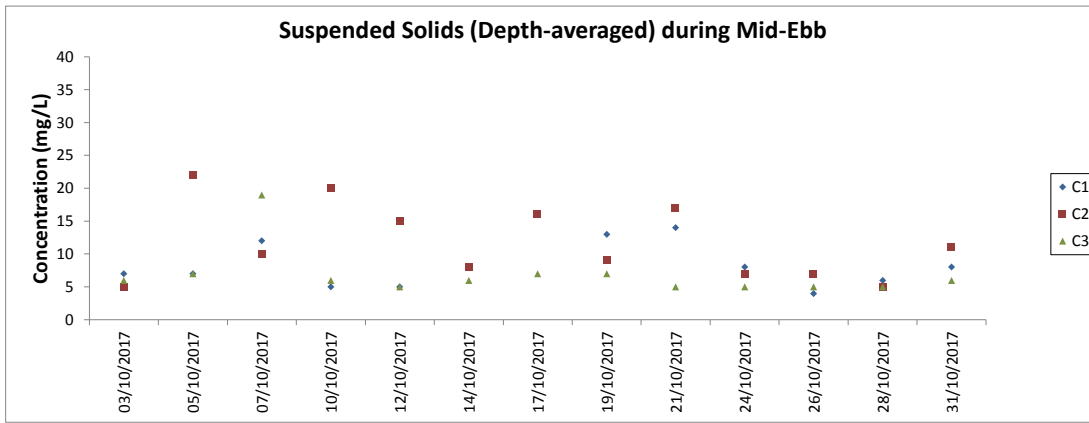




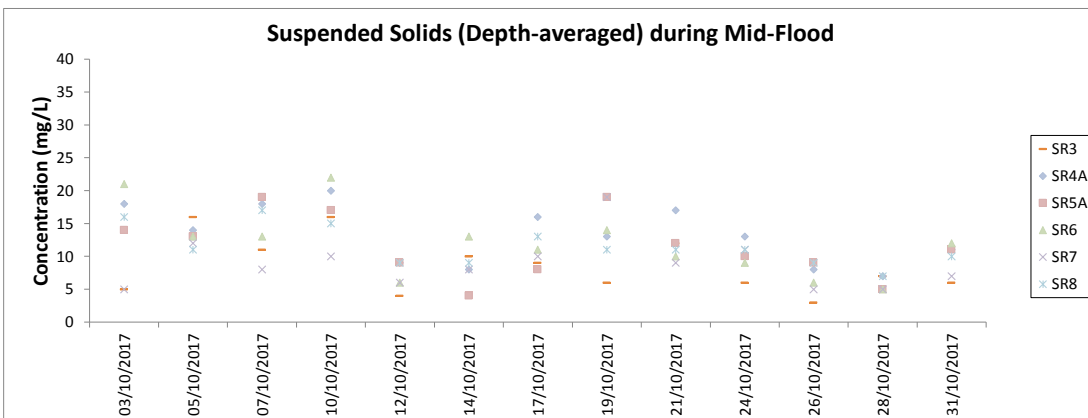
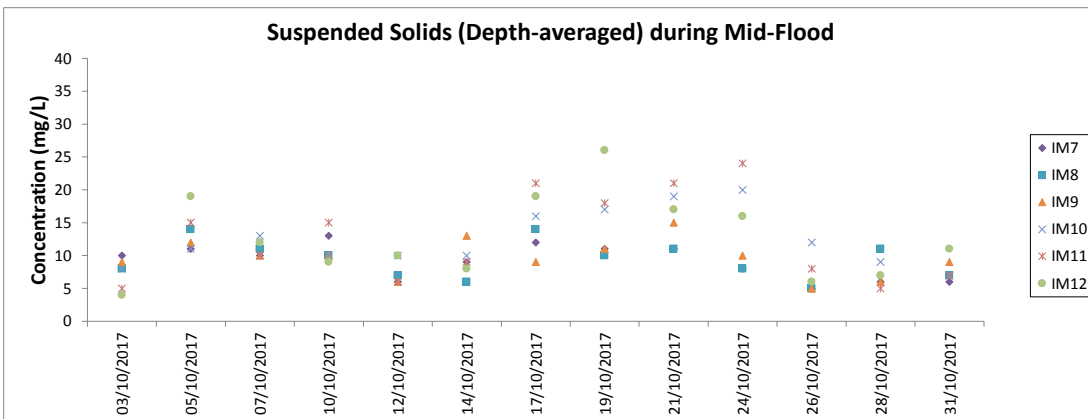
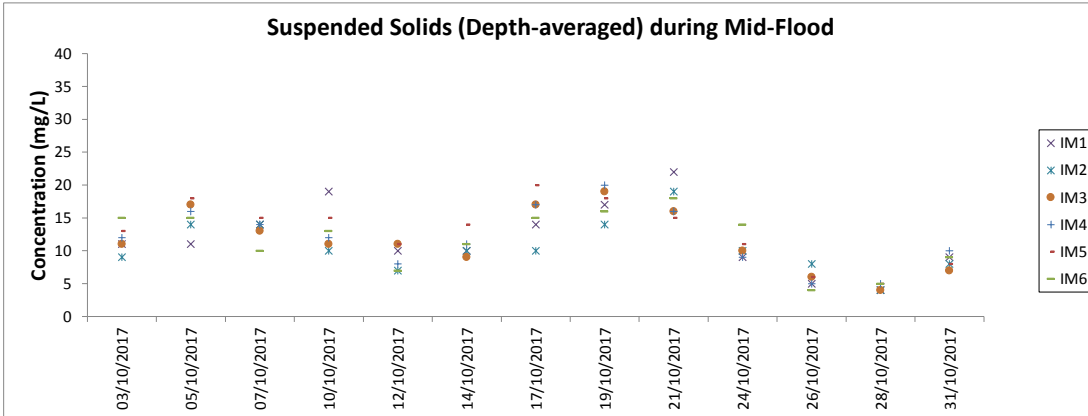
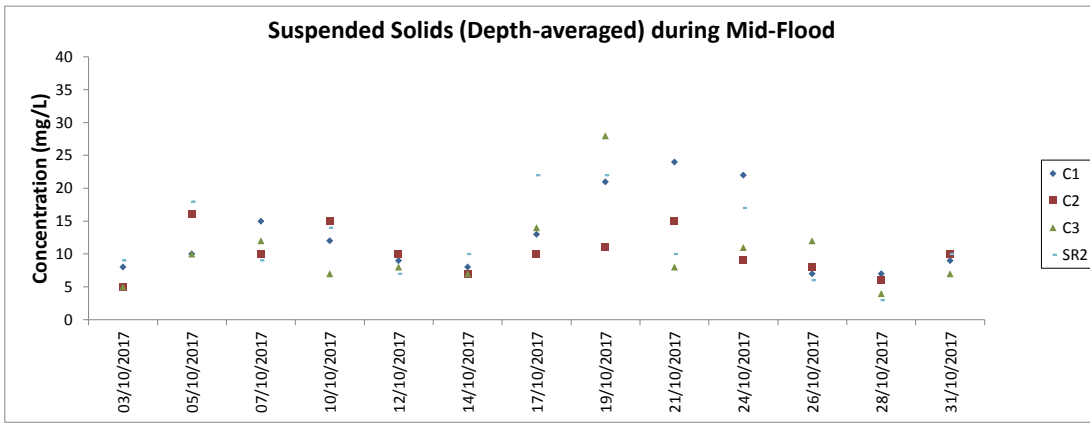
Note: The Action and Limit Level of turbidity can be referred to Table 4.2 of the monthly EM&A report.



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

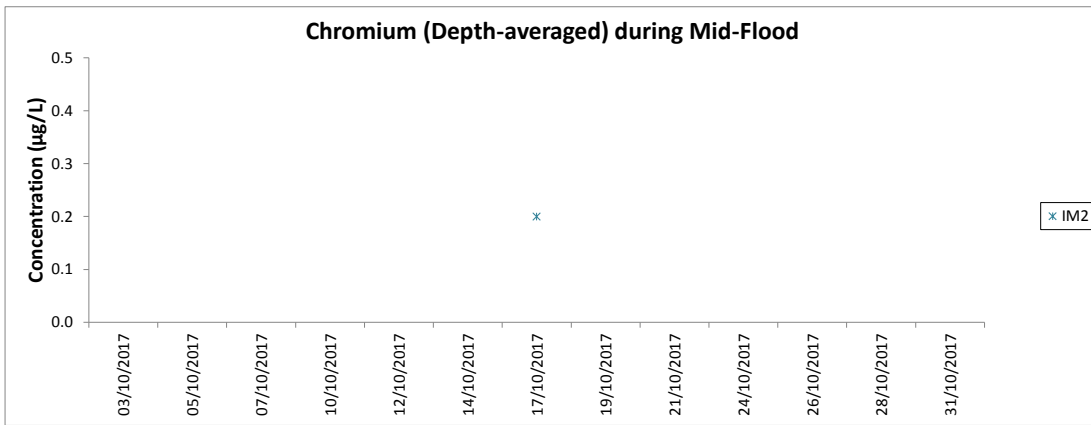


Note: The Action and Limit Level of suspended solids can be referred to Table 4.2 of the monthly EM&A report.

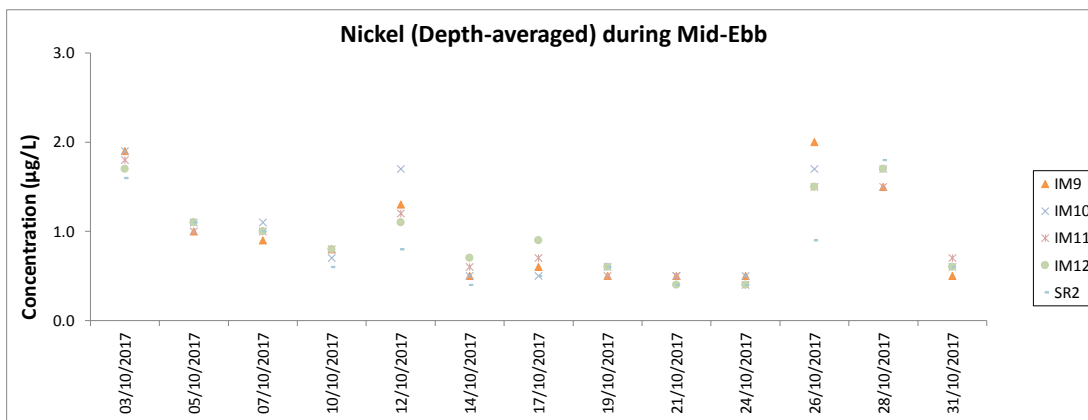
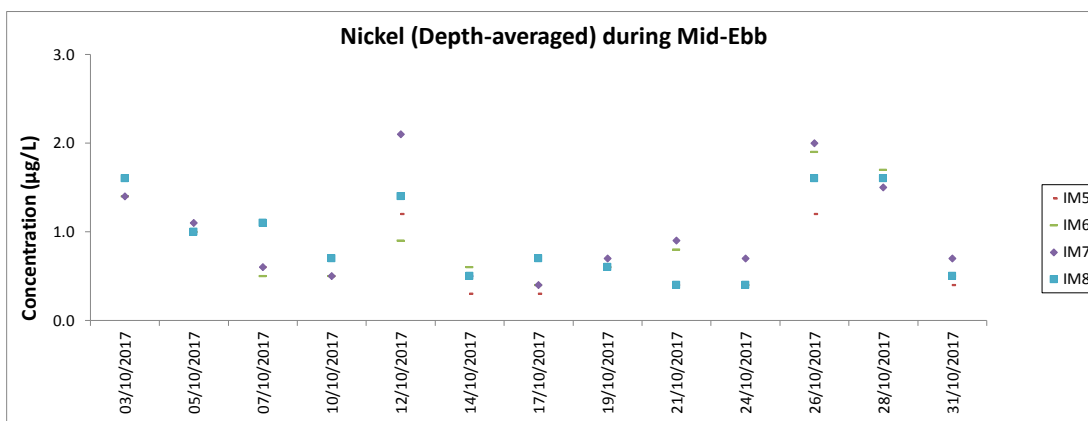
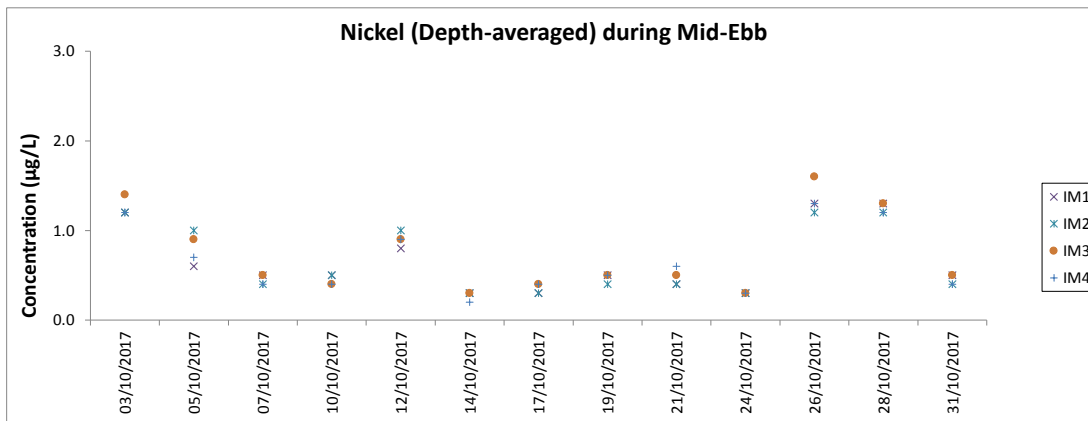
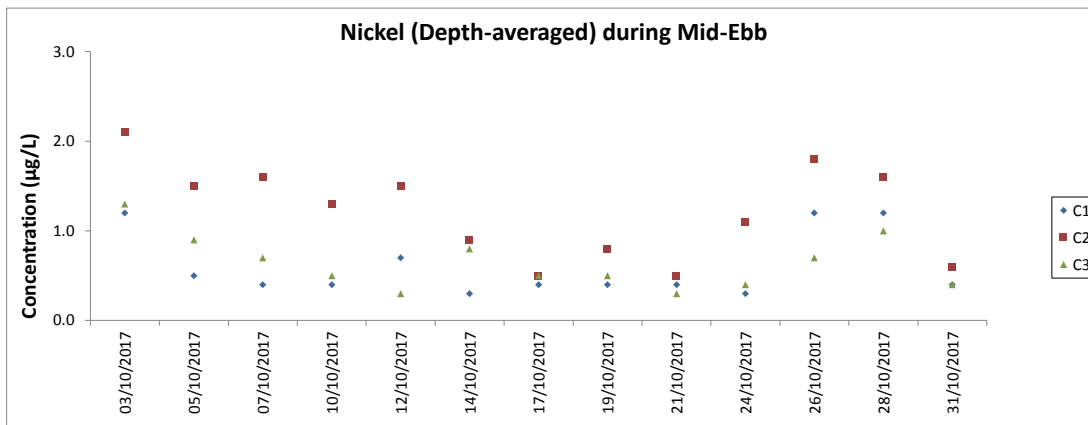


Note: The Action and Limit Level of suspended solids can be referred to Table 4.2 of the monthly EM&A report.

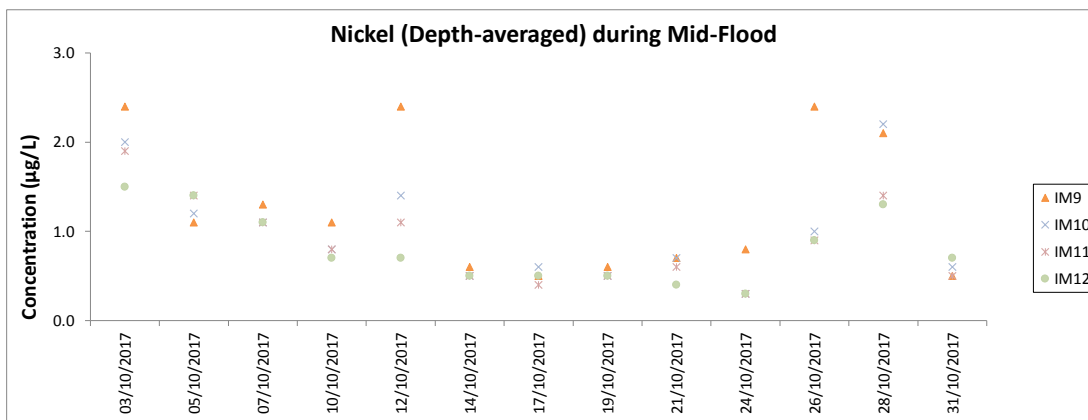
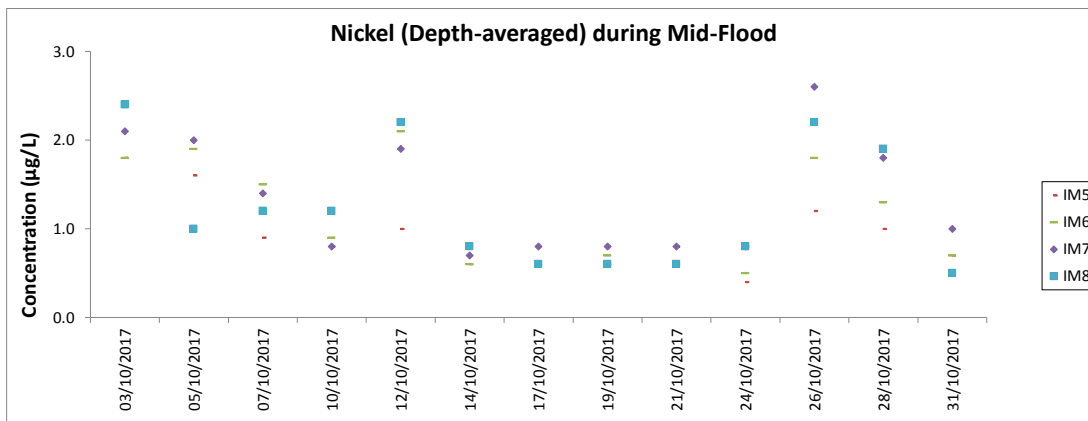
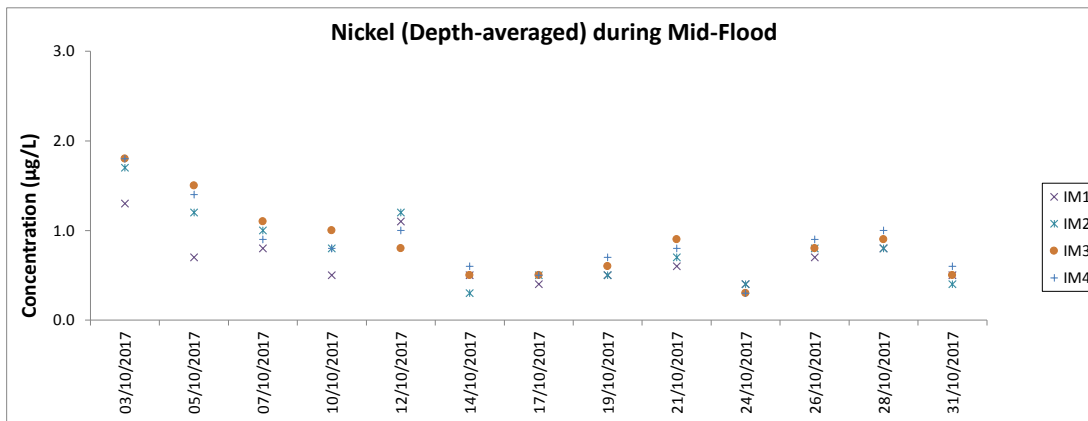
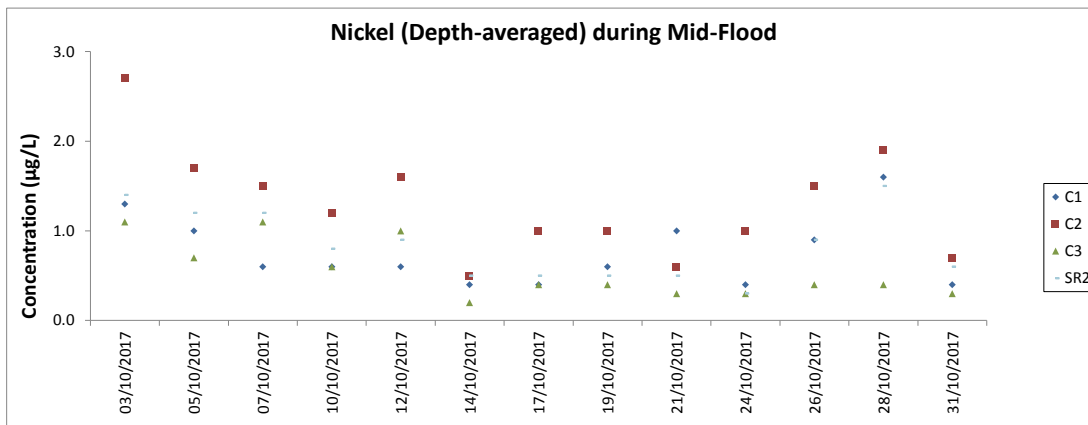




Note: All other chromium results in the reporting period were below the reporting limit 0.2 µg/L.



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



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

# **Chinese White Dolphin Monitoring Results**

## CWD Small Vessel Line-transect Survey

## Survey Effort Data

DATE	AREA	BEAU	KM SEARCHED	SEASON	VESSEL	TYPE
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
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

DATE	AREA	BEAU	KM SEARCHED	SEASON	VESSEL	TYPE
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
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
09-Oct-17	NEL	2	12.420	AUTUMN	32166	3RS ET
09-Oct-17	NEL	3	30.880	AUTUMN	32166	3RS ET
09-Oct-17	NEL	4	3.500	AUTUMN	32166	3RS ET
18-Oct-17	NEL	2	43.800	AUTUMN	32166	3RS ET
18-Oct-17	NEL	3	3.000	AUTUMN	32166	3RS ET
19-Oct-17	SWL	2	3.260	AUTUMN	32166	3RS ET
19-Oct-17	SWL	3	32.800	AUTUMN	32166	3RS ET
19-Oct-17	SWL	4	26.700	AUTUMN	32166	3RS ET
23-Oct-17	SWL	2	19.370	AUTUMN	32166	3RS ET
23-Oct-17	SWL	3	41.060	AUTUMN	32166	3RS ET
23-Oct-17	SWL	4	2.300	AUTUMN	32166	3RS ET
24-Oct-17	NWL	2	35.250	AUTUMN	32166	3RS ET
24-Oct-17	NWL	3	39.850	AUTUMN	32166	3RS ET
25-Oct-17	NWL	1	2.320	AUTUMN	32166	3RS ET
25-Oct-17	NWL	2	48.270	AUTUMN	32166	3RS ET
25-Oct-17	NWL	3	23.420	AUTUMN	32166	3RS ET
26-Oct-17	AW	2	4.880	AUTUMN	32166	3RS ET
26-Oct-17	WL	2	25.367	AUTUMN	32166	3RS ET
26-Oct-17	WL	3	7.387	AUTUMN	32166	3RS ET
26-Oct-17	SWL	2	6.890	AUTUMN	32166	3RS ET
27-Oct-17	SWL	2	3.450	AUTUMN	32166	3RS ET
27-Oct-17	SWL	3	3.360	AUTUMN	32166	3RS ET
27-Oct-17	WL	2	5.730	AUTUMN	32166	3RS ET
27-Oct-17	WL	3	20.457	AUTUMN	32166	3RS ET
27-Oct-17	WL	4	7.333	AUTUMN	32166	3RS ET

DATE	AREA	BEAU	KM SEARCHED	SEASON	VESSEL	TYPE
27-Oct-17	AW	2	4.890	AUTUMN	32166	3RS ET

Notes:

CWD monitoring survey data of the two preceding survey months (i.e. August and September 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.
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
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



DATE	STG #	TIME	CWD/FP	GP SZ	AREA	BEAU	PSD	EFFORT	TYPE	DEC LAT	DEC LON	SEASON	BOAT ASSOC.
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
19-Oct-17	1	1228	CWD	3	SWL	3	420	ON	3RS ET	22.2031	113.9085	AUTUMN	NONE
19-Oct-17	2	1351	CWD	4	SWL	3	176	ON	3RS ET	22.2053	113.9197	AUTUMN	GILLNET
19-Oct-17	3	1436	FP	1	SWL	3	11	ON	3RS ET	22.1671	113.9271	AUTUMN	NONE
23-Oct-17	1	1110	FP	2	SWL	3	105	ON	3RS ET	22.1654	113.9271	AUTUMN	NONE

DATE	STG #	TIME	CWD/FP	GP SZ	AREA	BEAU	PSD	EFFORT	TYPE	DEC LAT	DEC LON	SEASON	BOAT ASSOC.
23-Oct-17	2	1133	CWD	1	SWL	2	18	ON	3RS ET	22.2050	113.9222	AUTUMN	NONE
24-Oct-17	1	1114	CWD	3	NWL	2	1096	ON	3RS ET	22.3346	113.8782	AUTUMN	NONE
25-Oct-17	1	1126	CWD	5	NWL	2	178	ON	3RS ET	22.3628	113.8779	AUTUMN	NONE
25-Oct-17	2	1158	CWD	4	NWL	2	459	ON	3RS ET	22.3878	113.8775	AUTUMN	NONE
26-Oct-17	1	1024	CWD	6	WL	2	174	ON	3RS ET	22.2689	113.8519	AUTUMN	NONE
26-Oct-17	2	1052	CWD	5	WL	3	84	ON	3RS ET	22.2605	113.8508	AUTUMN	NONE
26-Oct-17	3	1116	CWD	2	WL	2	814	ON	3RS ET	22.2507	113.8338	AUTUMN	GILLNET
26-Oct-17	4	1142	CWD	2	WL	3	396	ON	3RS ET	22.2413	113.8383	AUTUMN	NONE
26-Oct-17	5	1206	CWD	3	WL	3	427	ON	3RS ET	22.2410	113.8320	AUTUMN	NONE
26-Oct-17	6	1233	CWD	3	WL	3	199	ON	3RS ET	22.2323	113.8309	AUTUMN	NONE
26-Oct-17	7	1301	CWD	6	WL	2	916	ON	3RS ET	22.2237	113.8239	AUTUMN	SHRIMP TRAWLER
26-Oct-17	8	1326	CWD	4	WL	2	67	ON	3RS ET	22.2140	113.8143	AUTUMN	NONE
26-Oct-17	9	1410	CWD	4	WL	2	57	ON	3RS ET	22.1962	113.8343	AUTUMN	NONE
26-Oct-17	10	1511	CWD	2	SWL	2	143	ON	3RS ET	22.1987	113.8593	AUTUMN	NONE
27-Oct-17	1	1236	CWD	5	WL	3	35	ON	3RS ET	22.2415	113.8334	AUTUMN	NONE
27-Oct-17	2	1304	CWD	4	WL	3	257	ON	3RS ET	22.2508	113.8474	AUTUMN	NONE
27-Oct-17	3	1402	CWD	1	WL	2	320	ON	3RS ET	22.2886	113.8613	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. August and September 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 October 2017 encounter rates STG and ANI in the whole survey area (NEL, NWL, AW, WL, SWL):

A total of 418.111 km of survey effort was collected under Beaufort Sea State 3 or below with favourable visibility; total no. of 19 on-effort sightings and total number of 67 dolphins from on-effort sightings were collected under such condition. Calculation of the encounter rates in October 2017 are shown as below:

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

$$STG = \frac{19}{418.111} \times 100 = 4.54$$

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

$$ANI = \frac{67}{418.111} \times 100 = 16.02$$

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

A total of 1170.333 km of survey effort was collected under Beaufort Sea State 3 or below with favourable visibility; total no. of 69 on-effort sightings and total number of 223 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)









$$STG = \frac{69}{1170.333} \times 100 = 5.90$$

Running Quarterly Encounter Rate by Number of Dolphins (ANI)

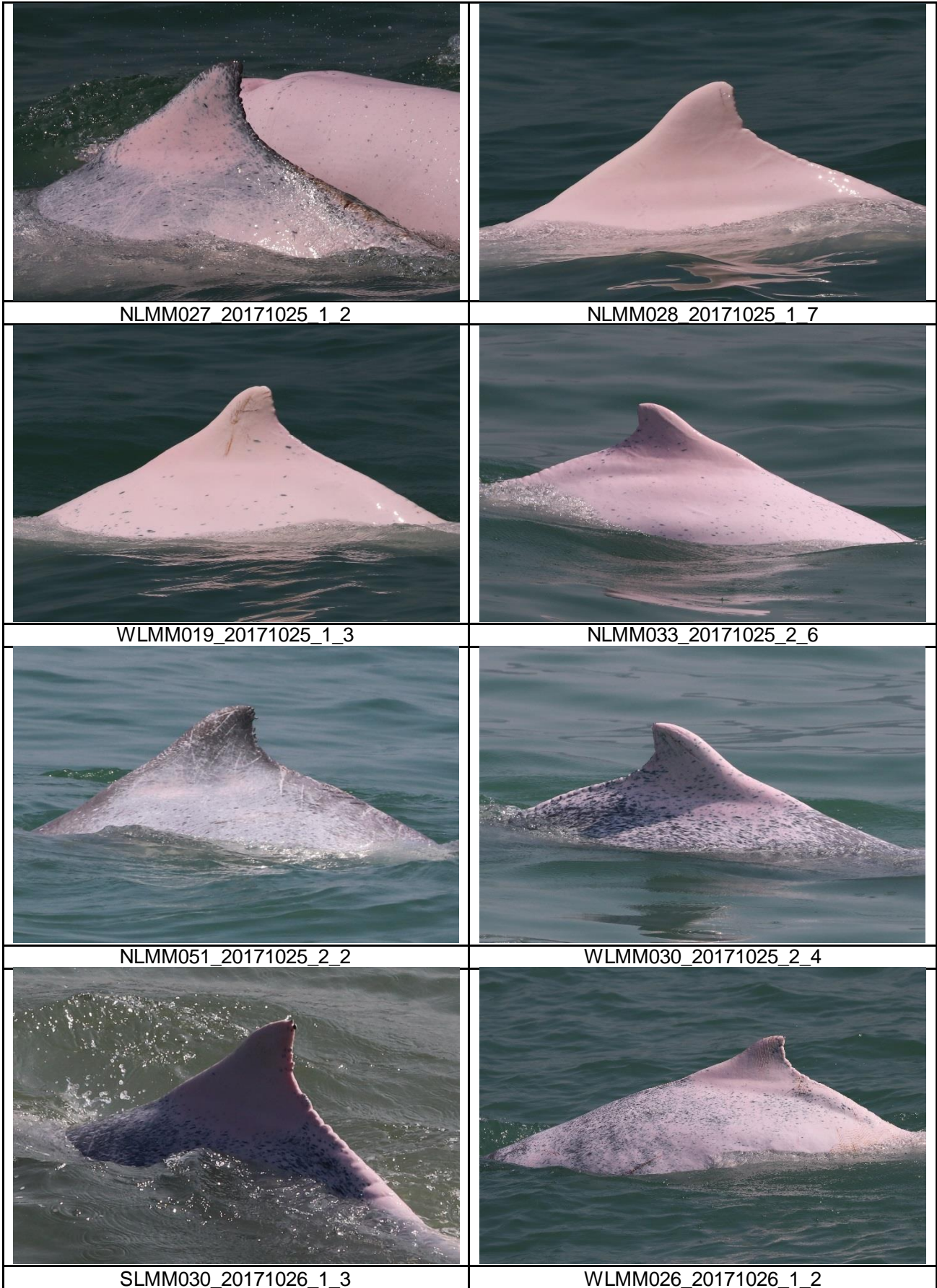
$$ANI = \frac{223}{1170.333} \times 100 = 19.05$$

CWD Small Vessel Line-transect Survey

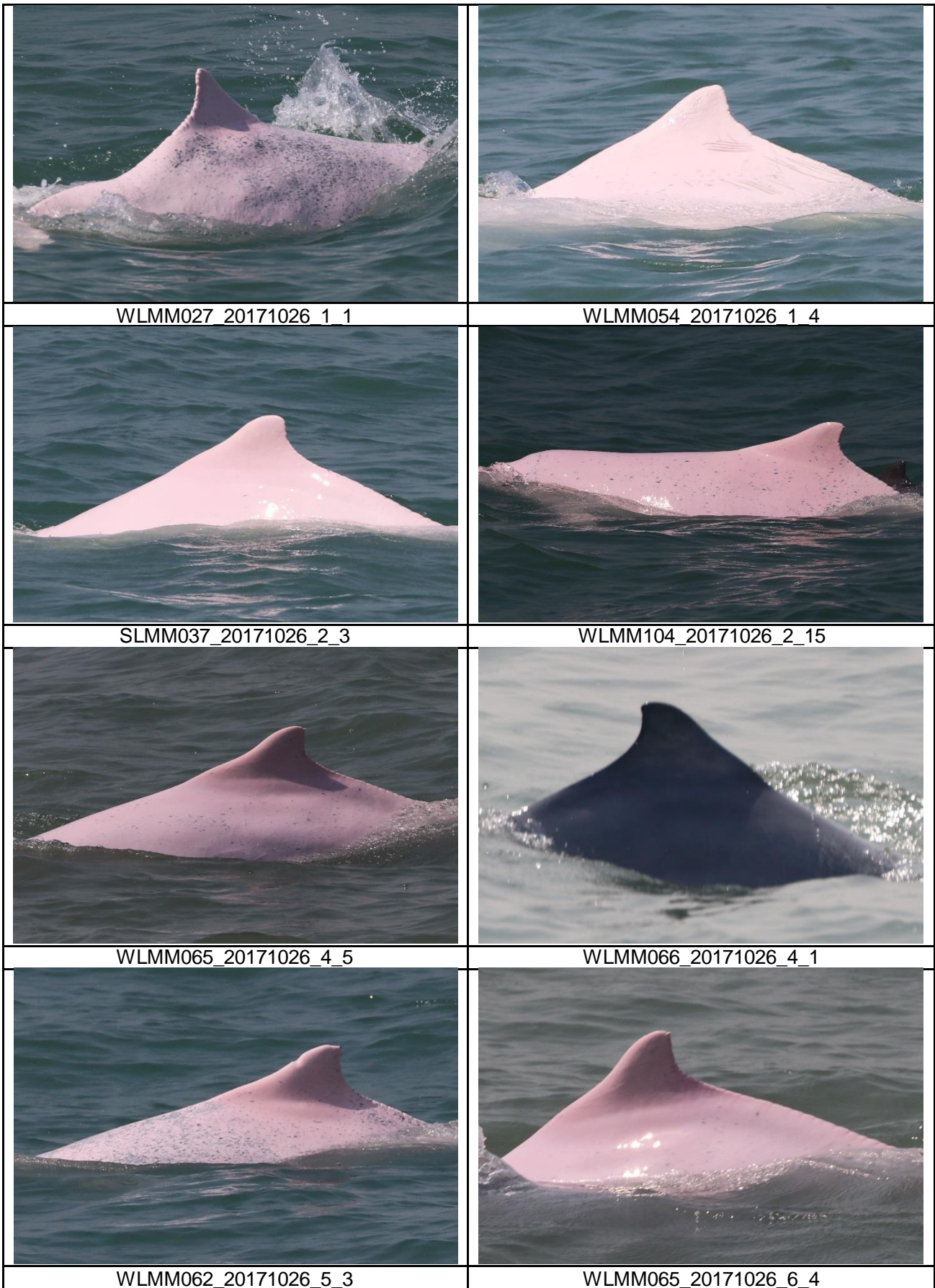
Photo Identification

	
SLMM030_20171019_1_3	SLMM015_20171019_2_1
	
SLMM021_20171019_2_1	SLMM018_20171023_2_1
	
WLMM019_20171024_1_1	WLMM100_20171024_1_4
	
NLMM002_20171025_1_1	NLMM010_20171025_1_5


























	
WLMM066_20171026_6_4	WLMM091_20171026_7_4
	
WLMM093_20171026_7_1	WLMM094_20171026_7_2
	
SLMM023_20171026_8_1	WLMM105_20171026_8_2
	
WLMM106_20171026_8_6	WLMM107_20171026_8_3



	
SLMM031_20171026_10_3	WLMM021_20171027_1_3
	
WLMM056_20171027_1_4	WLMM065_20171027_2_5
	
WLMM066_20171027_2_4_Left	WLMM075_20171027_2_3
	
NLMM015_20171027_3_6	



## 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
20/Oct/17	Lung Kw u Chau	8:52	14:52	6:00	2-3	2	4	1-4
23/Oct/17	Lung Kw u Chau	8:42	14:42	6:00	3-4	3	6	2-4
25/Oct/17	Sha Chau	8:46	14:46	6:00	2	3	0	N/A
26/Oct/17	Sha Chau	9:01	15:01	6:00	2	3	0	N/A
27/Oct/17	Lung Kw u Chau	8:48	14:48	6:00	2-3	2	6	1-6

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 egret area on Sheung Sha Chau and the HDD works**



Photo record of View 1



Photo record of View 2



## **Appendix E. Calibration Certificates**



## EQUIPMENT CALIBRATION RECORD

Type : Laser Dust Monitor  
 Manufacturer / Brand : SIBATA  
 Model No.: LD-3B  
 Equipment No.: LD-3B-001  
 Serial No.: 934393  
 Sensitivity Adjustment Scale Setting : 640 CPM

### Standard Equipment

Equipment : MFC High Volume Air Sampler  
 Venue : Dragonair Building  
 Model No.: TE-5170 Total Suspended Particulate  
 Serial No.: S/N3693  
 Previous Calibration Date : 24/08/2017

### Calibration Result

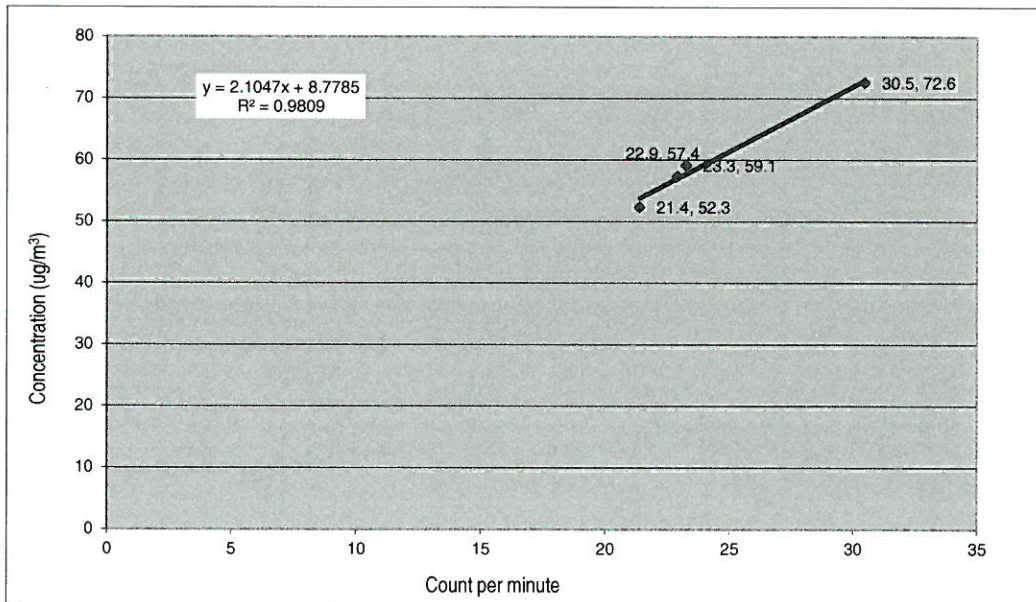
Sensitivity Adjustment Scale Setting (Before Calibration) : 640 CPM  
 Sensitivity Adjustment Scale Setting (After Calibration) : 640 CPM

Hour	Date (dd-mmm-yy)	Time		Ambient Condition		Concentration (ug/m <sup>3</sup> ) Y-axis	Total Count	Count/Minute X-axis
				Temp (°C)	R.H. (%)			
1	11-Oct-17	13:00	14:00	34	45%	72.6	1829	30.5
2	11-Oct-17	14:08	15:08	34	45%	59.1	1395	23.3
3	11-Oct-17	15:13	16:13	34	45%	52.3	1283	21.4
4	11-Oct-17	16:20	17:20	34	45%	57.4	1374	22.9

Be Linear Regression of Y or X

Slope (K-factor): 2.1047 Intercept, b: 8.778  
 Correlation coefficient : 0.9904

Remark: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_



Recorded by: William Chan

Signature: 

Date: 23/10/2017

Checked by: Keith Chau

Signature: 

Date: 23/10/2017

## EQUIPMENT CALIBRATION RECORD

Type : Laser Dust Monitor  
 Manufacturer / Brand : SIBATA  
 Model No.: LD-3B  
 Equipment No.: LD-3B-002  
 Serial No.: 974350  
 Sensitivity Adjustment Scale Setting : 622 CPM

### Standard Equipment

Equipment : MFC High Volume Air Sampler  
 Venue : Dragonair Building  
 Model No.: TE-5170 Total Suspended Particulate  
 Serial No.: S/N3693

Previous Calibration Date 24/08/2017

### Calibration Result

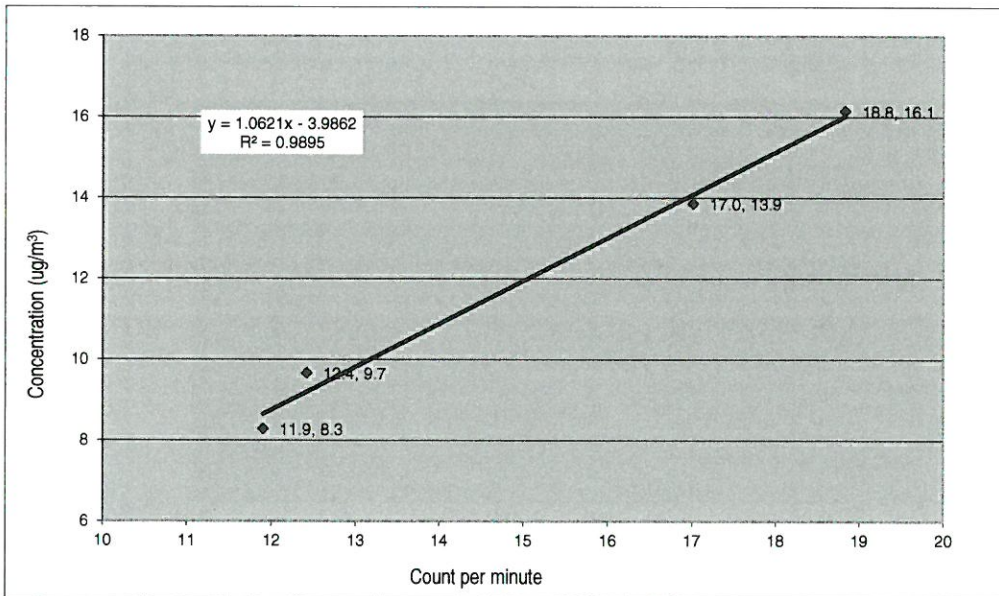
Sensitivity Adjustment Scale Setting (Before Calibration) : 622  
 Sensitivity Adjustment Scale Setting (After Calibration) : 622

Hour	Date (dd-mmm-yy)	Time		Ambient Condition		Concentration (ug/m <sup>3</sup> ) Y-axis	Total Count	Count/Minute X-axis
				Temp (°C)	R.H. (%)			
1	11-Sep-17	13:51	14:51	33	60%	9.7	745	12.42
2	11-Sep-17	15:01	16:01	33	60%	8.3	714	11.90
3	11-Sep-17	16:05	17:05	33	60%	13.9	1021	17.02
4	11-Sep-17	17:05	18:05	33	60%	16.1	1130	18.83

Be Linear Regression of Y or X

Slope (K-factor): 1.062 Intercept,b: -3.986  
 Correlation coefficient (R): 0.9947

Remark: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_



Recorded by: William Chan

Signature: 

Date: 20/10/2017

Checked by: Keith Chau

Signature: 

Date: 20/10/2017

## EQUIPMENT CALIBRATION RECORD

Type : Laser Dust Monitor  
 Manufacturer / Brand : SIBATA  
 Model No.: LD-3B  
 Equipment No.: LD-3B-003  
 Serial No.: 276018  
 Sensitivity Adjustment Scale Setting : 799 CPM

### Standard Equipment

Equipment : MFC High Volume Air Sampler  
 Venue : Dragonair Building  
 Model No.: TE-5170 Total Suspended Particulate  
 Serial No.: S/N3693

Previous Calibration Date 24/08/2017

### Calibration Result

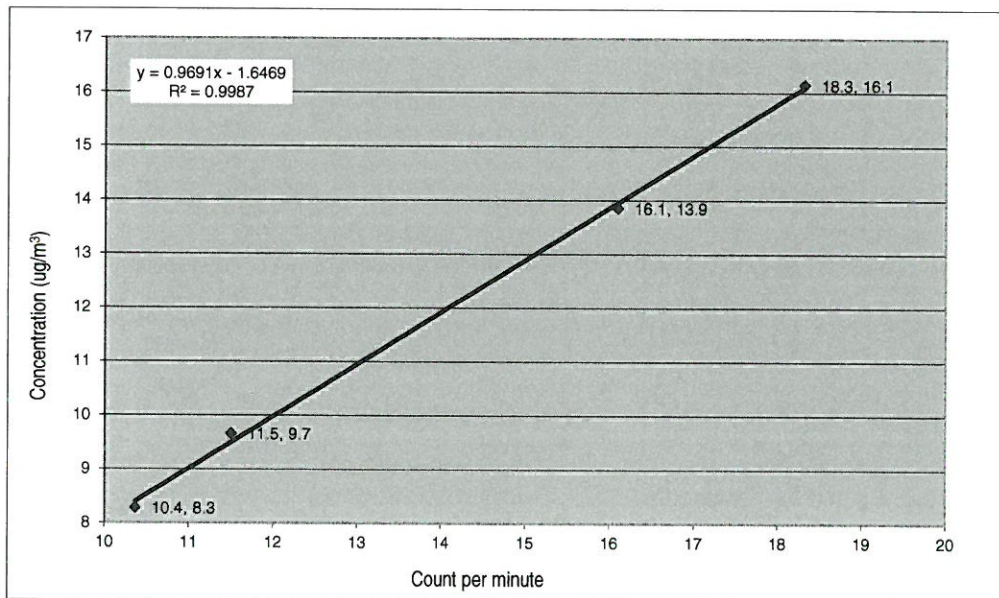
Sensitivity Adjustment Scale Setting (Before Calibration) : 799 CPM  
 Sensitivity Adjustment Scale Setting (After Calibration) : 800 CPM

Hour	Date (dd-mmm-yy)	Time		Ambient Condition		Concentration (ug/m <sup>3</sup> ) Y-axis	Total Count	Count/Minute X-axis
				Temp (°C)	R.H. (%)			
1	11-Sep-17	13:51	14:51	33	60%	9.7	690	11.50
2	11-Sep-17	15:01	16:01	33	60%	8.3	622	10.37
3	11-Sep-17	16:05	17:05	33	60%	13.9	966	16.10
4	11-Sep-17	17:05	18:05	33	60%	16.1	1099	18.32

Be Linear Regression of Y or X

Slope (K-factor): 0.9691 Intercept,b: -1.6469  
 Correlation coefficient (R): 0.9993

Remark: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_



Recorded by: William Chan

Signature: 

Date: 20/10/2017

Checked by: Keith Chau

Signature: 

Date: 20/10/2017



ENVIROTECH SERVICES CO.

**High-Volume TSP Sampler**  
**5-Point Calibration Record**

Location : AMS6(Dragonair Building)  
Calibrated by : P.F.Yeung  
Date : 24/08/2017

**Sampler**

Model : TE-5170  
Serial Number : S/N3639

**Calibration Orifice and Standard Calibration Relationship**

Serial Number : 2454  
Service Date : 20 March 2017  
Slope (m) : 2.08464  
Intercept (b) : -0.036840  
Correlation Coefficient(r) : 0.99994

**Standard Condition**

Pstd (hpa) : 1013  
Tstd (K) : 298.18

**Calibration Condition**

Pa (hpa) : 1004  
Ta(K) : 305

Resistance Plate	dH [green liquid] (inch water)	Z	X=Qstd (cubic meter/min)	IC	Y
1   18 holes	11.5	3.337	1.618	54	53.14
2   13 holes	9.0	2.952	1.434	49	48.22
3   10 holes	7.0	2.604	1.267	42	41.33
4   7 holes	4.6	2.111	1.030	36	35.43
5   5 holes	2.8	1.647	0.808	28	27.55

Notes:  $Z = \sqrt{dH(Pa/Pstd)(Tstd/Ta)}$ ,  $X = Z/m - b$ ,  $Y(\text{Corrected Flow}) = IC * \{\sqrt{Pa/Pstd}(Tstd/Ta)\}$

**Sampler Calibration Relationship**

Slope(m): 31.521      Intercept(b): 2.322      Correlation Coefficient(r): 0.9978

Checked by: Magnum Fan

Date: 28/08/2017

## 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 until 13 Feb 2018
		Sheung Sha Chau	GW-RS0345-17	Superseded by GW-RW0533-17 on 12 Oct 2017
		Sheung Sha Chau	GW-RW0533-17	Valid until 8 Apr 2018
		Stockpiling Area	GW-RS0719-17	Valid until 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	Registration was updated on 29 Sep 2017	
	Sheung Sha Chau	WPN 5111-434-L2902-03	Completion of Registration on 6 Oct 2017	
	Stockpiling Area	WPN 5213-951-L2902-02	Registration was updated on 3 Oct 2016	
	Bill Account for disposal		A/C 7023982	Approval granted from EPD on 14 Dec 2015
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-RS0816-17	Superseded by GW-RS0863-17 on 16 Oct 2017
		Works area of 3201	GW-RS0863-17	Valid until 5 Apr 2018
	Registration as Chemical Waste Producer	Works area of 3201	WPN 5213-951-P3231-01	Completion of Registration on 9 Sep 2016

Contract No.	Description	Location	Permit/ Reference No.	Status
	Bill Account for disposal		A/C 7025760	Approval granted from EPD on 31 Aug 2016
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-RS0759-17	Superseded by GW-RS0864-17 on 16 Oct 2017
		Works area of 3202	GW-RS0864-17	Valid until 5 Apr 2018
		Site Office of 3202	GW-RS0469-17	Valid until 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-RS0796-17	Superseded by GW-RS0865-17 on 16 Oct 2017
		Works area of 3203	GW-RS0865-17	Valid until 5 Apr 2018
	Registration as Chemical Waste Producer	Works area of 3203	WPN 5213-951-S3954-01	Registration was updated 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-RS0803-17	Superseded by GW-RS0866-17 on 16 Oct 2017
		Works Area of 3204	GW-RS0866-17	Valid until 5 Apr 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

Contract No.	Description	Location	Permit/ Reference No.	Status
	Registration as Chemical Waste Producer	Works Area of 3205	WPN 5213-951-B2502-01	Registration was updated on 25 Sep 2017
		Works Area of 3205	WPN 5111-421-B2509-01	Registration was updated on 25 Sep 2017
	Construction Noise Permit (General Works)	Works Area of 3205	GW-RS0806-17	Superseded by GW-RS0867-17 on 16 Oct 2017
		Works Area of 3205	GW-RS0867-17	Valid until 5 Apr 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)	Works Area of 3206	GW-RS0430-17	Superseded by GW-RS0868-17 on 9 Oct 2017
		Works Area of 3206	GW-RS0868-17	Valid until 30 Mar 2018
Works Area of 3206 (PVD works)		GW-RS0791-17	Superseded by GW-RS0860-17 on 16 Oct 2017	
Works Area of 3206 (PVD works)	GW-RS0860-17	Valid until 8 Dec 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 until 31 Jan 2018
		Works area of 3301	GW-RS0712-17	Valid until 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

Contract No.	Description	Location	Permit/ Reference No.	Status
	Construction Noise Permit (General Works)	Works area of 3501	GW-RS0667-17	Valid until 17 Feb 2018
3502	Notification of Construction Work under APCO	Works area of 3502	417511	Receipt acknowledged by EPD on 2 Jun 2017
	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-RS0784-17	Valid until 10 Mar 2018
3602	Notification of Construction Work under APCO	Works area of 3602	421278	Receipt acknowledged by EPD on 18 Sep 2017
	Registration as Chemical Waste Producer	Works area of 3602	WPN 5296-951-N2673-01	Completion of Registration on 9 Oct 2017
	Bill Account for disposal	Works area of 3602	A/C 7028942	Approval granted from EPD on 6 Oct 2017
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 until 9 Oct 2017 (Superseded by GW-RS0875-17 on 9 Oct 2017)
		Works area of 3801	GW-RS0875-17	Valid until 5 Apr 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	0	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 31 October 2017)**

**Data of SkyPier HSF Movements to/from Zhuhai and Macau (between 1 and 31 October 2017)**

Date	Time [Arrival at / Departure from HKIA SkyPier]	Ferry No.	Connecting Port [XZM - Macao (Maritime Ferry Terminal) YFT - Macao (Taipa) ZUL - 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-Oct	08:22	3A061	YFT	Arrival	11.9	-	-
01-Oct	08:38	8S210	XZM	Arrival	11.5	-	-
01-Oct	09:55	3A062	YFT	Arrival	12.6	-	-
01-Oct	10:48	8S212	XZM	Arrival	11.4	-	-
01-Oct	11:07	8S121	XZM	Departure	12.2	-	-
01-Oct	11:19	3A063	YFT	Arrival	11.9	-	-
01-Oct	12:23	3A168	YFT	Departure	11	-	-
01-Oct	12:51	8S215	XZM	Arrival	11.7	-	-
01-Oct	13:05	3A064	YFT	Arrival	11.3	-	-
01-Oct	13:19	8S123	XZM	Departure	11.4	-	-
01-Oct	14:19	3A164	YFT	Departure	11.9	-	-
01-Oct	15:08	3A065	YFT	Arrival	11.7	-	-
01-Oct	16:12	3A167	YFT	Departure	10.6	-	-
01-Oct	16:51	8S218	XZM	Arrival	11.1	-	-
01-Oct	17:08	3A067	YFT	Arrival	11.5	-	-
01-Oct	17:15	8S126	XZM	Departure	12.9	-	-
01-Oct	19:04	3A166	YFT	Departure	13.2	-	-
01-Oct	20:48	8S2113	XZM	Arrival	12.4	-	-
01-Oct	21:01	3A169	YFT	Departure	13.3	-	-
01-Oct	21:55	8S522	XZM	Departure	12.9	-	-
02-Oct	08:15	8S210	XZM	Arrival	13.7	-	-
02-Oct	08:19	3A061	YFT	Arrival	12.5	-	-
02-Oct	09:44	3A062	YFT	Arrival	11.6	-	-
02-Oct	10:37	8S212	XZM	Arrival	12.4	-	-
02-Oct	11:00	8S121	XZM	Departure	12.5	-	-
02-Oct	11:21	3A063	YFT	Arrival	12	-	-
02-Oct	12:18	3A168	YFT	Departure	11.7	-	-
02-Oct	12:53	8S215	XZM	Arrival	11.8	-	-
02-Oct	12:58	3A064	YFT	Arrival	11.8	-	-
02-Oct	13:17	8S123	XZM	Departure	9.5	-	-
02-Oct	14:14	3A164	YFT	Departure	12.1	-	-
02-Oct	14:59	3A065	YFT	Arrival	11.7	-	-
02-Oct	16:14	3A167	YFT	Departure	11.7	-	-
02-Oct	16:54	8S218	XZM	Arrival	11.6	-	-
02-Oct	16:55	3A067	YFT	Arrival	11.9	-	-
02-Oct	17:22	8S126	XZM	Departure	12.6	-	-



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)
02-Oct	18:59	3A166	YFT	Departure	12.6	-	-
02-Oct	20:58	8S2113	XZM	Arrival	12.9	-	-
02-Oct	21:00	3A169	YFT	Departure	13.3	-	-
02-Oct	22:01	8S522	XZM	Departure	13	-	-
03-Oct	08:18	3A061	YFT	Arrival	13.4	-	-
03-Oct	08:28	8S210	XZM	Arrival	12	-	-
03-Oct	09:45	3A062	YFT	Arrival	12.1	-	-
03-Oct	10:37	8S212	XZM	Arrival	12.2	-	-
03-Oct	11:06	8S121	XZM	Departure	12.1	-	-
03-Oct	11:20	3A063	YFT	Arrival	12.8	-	-
03-Oct	12:14	3A168	YFT	Departure	12.6	-	-
03-Oct	12:49	8S215	XZM	Arrival	12.5	-	-
03-Oct	12:55	3A064	YFT	Arrival	13.3	<= 5	< 1min
03-Oct	13:21	8S123	XZM	Departure	12.9	-	-
03-Oct	14:21	3A164	YFT	Departure	12.2	-	-
03-Oct	14:57	3A065	YFT	Arrival	12.6	<= 5	< 1min
03-Oct	16:13	3A167	YFT	Departure	12.5	-	-
03-Oct	16:46	8S218	XZM	Arrival	11.8	-	-
03-Oct	16:59	3A067	YFT	Arrival	12.2	-	-
03-Oct	17:10	8S126	XZM	Departure	13.6	-	-
03-Oct	19:07	3A166	YFT	Departure	12.5	-	-
03-Oct	21:00	8S2113	XZM	Arrival	12.3	-	-
03-Oct	21:03	3A169	YFT	Departure	12.2	-	-
03-Oct	22:02	8S522	XZM	Departure	13	-	-
04-Oct	08:13	3A061	YFT	Arrival	13.6	-	-
04-Oct	08:33	8S210	XZM	Arrival	12.5	-	-
04-Oct	09:53	3A062	YFT	Arrival	11.8	-	-
04-Oct	10:56	8S212	XZM	Arrival	12	-	-
04-Oct	10:58	3A081	ZUI	Arrival	12.8	-	-
04-Oct	11:12	8S121	XZM	Departure	12.2	-	-
04-Oct	11:17	3A063	YFT	Arrival	10.9	-	-
04-Oct	12:16	3A168	YFT	Departure	11.5	-	-
04-Oct	12:18	3A181	ZUI	Departure	10.6	-	-
04-Oct	12:50	8S215	XZM	Arrival	13	-	-
04-Oct	12:55	3A064	YFT	Arrival	13.5	-	-
04-Oct	13:18	8S123	XZM	Departure	13	-	-
04-Oct	14:16	3A164	YFT	Departure	13.5	-	-
04-Oct	14:56	3A065	YFT	Arrival	11.6	-	-
04-Oct	16:17	3A167	YFT	Departure	11.5	-	-

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)
04-Oct	16:49	8S218	XZM	Arrival	11.7	-	-
04-Oct	16:50	3A083	ZUI	Arrival	13.4	<= 5	< 1min
04-Oct	16:52	3A067	YFT	Arrival	13.4	-	-
04-Oct	17:06	3A183	ZUI	Departure	12.2	-	-
04-Oct	17:14	8S126	XZM	Departure	13.5	-	-
04-Oct	19:01	3A166	YFT	Departure	12.8	-	-
04-Oct	20:59	8S2113	XZM	Arrival	12.5	-	-
04-Oct	20:59	3A169	YFT	Departure	12.9	-	-
04-Oct	21:52	8S522	XZM	Departure	12.4	-	-
05-Oct	08:19	3A061	YFT	Arrival	11.5	-	-
05-Oct	08:26	8S210	XZM	Arrival	13.3	-	-
05-Oct	09:47	3A062	YFT	Arrival	12.1	-	-
05-Oct	10:42	8S212	XZM	Arrival	11.8	-	-
05-Oct	10:45	3A081	ZUI	Arrival	12.4	-	-
05-Oct	11:03	8S121	XZM	Departure	12.7	-	-
05-Oct	11:20	3A063	YFT	Arrival	11.5	-	-
05-Oct	12:16	3A168	YFT	Departure	11.1	-	-
05-Oct	12:20	3A181	ZUI	Departure	12.7	-	-
05-Oct	12:50	8S215	XZM	Arrival	12.4	-	-
05-Oct	13:00	3A064	YFT	Arrival	11.3	-	-
05-Oct	13:16	8S123	XZM	Departure	11.9	-	-
05-Oct	14:17	3A164	YFT	Departure	10.9	-	-
05-Oct	14:57	3A065	YFT	Arrival	11.8	-	-
05-Oct	16:19	3A167	YFT	Departure	11.3	-	-
05-Oct	16:51	8S218	XZM	Arrival	11.6	-	-
05-Oct	16:51	3A083	ZUI	Arrival	12.6	-	-
05-Oct	16:56	3A067	YFT	Arrival	11.4	-	-
05-Oct	17:12	3A183	ZUI	Departure	12.2	-	-
05-Oct	17:14	8S126	XZM	Departure	13.3	-	-
05-Oct	19:08	3A166	YFT	Departure	12.6	-	-
05-Oct	21:02	8S2113	XZM	Arrival	12.5	-	-
05-Oct	21:13	3A169	YFT	Departure	12.8	-	-
05-Oct	22:01	8S522	XZM	Departure	12.9	-	-
06-Oct	08:20	3A061	YFT	Arrival	12.1	-	-
06-Oct	08:24	8S210	XZM	Arrival	12.2	-	-
06-Oct	09:54	3A062	YFT	Arrival	12.2	-	-
06-Oct	10:38	8S212	XZM	Arrival	12.1	-	-
06-Oct	10:42	3A081	ZUI	Arrival	13.7	-	-
06-Oct	11:06	8S121	XZM	Departure	12.7	-	-

Date	Time [Arrival at / Departure from HKIA SkyPier]	Ferry No.	Connecting Port [XZM - Macao (Maritime Ferry Terminal) YFT - Macao (Taipa) ZUI - Zhuhai Jiuzhou]	Travel Direction [Arrival at / Departure from HKIA SkyPier]	Average Speed within Speed Control Zone (knots)	Extent of Instantaneous Speeding by SkyPier HSFs across SCZ (knots)	Duration of the Instantaneous Speeding (min)
06-Oct	11:20	3A063	YFT	Arrival	12.2	-	-
06-Oct	12:11	3A181	ZUI	Departure	13.4	-	-
06-Oct	12:13	3A168	YFT	Departure	12	-	-
06-Oct	12:51	8S215	XZM	Arrival	11.2	-	-
06-Oct	12:59	3A064	YFT	Arrival	10.5	-	-
06-Oct	13:19	8S123	XZM	Departure	10.7	-	-
06-Oct	14:22	3A164	YFT	Departure	13.2	-	-
06-Oct	15:03	3A065	YFT	Arrival	10.5	-	-
06-Oct	16:25	3A167	YFT	Departure	11.4	-	-
06-Oct	16:48	8S218	XZM	Arrival	11.1	-	-
06-Oct	16:53	3A067	YFT	Arrival	12.8	-	-
06-Oct	16:54	3A083	ZUI	Arrival	12.5	-	-
06-Oct	17:09	3A183	ZUI	Departure	11.8	-	-
06-Oct	17:10	8S126	XZM	Departure	No AIS Data	-	-
06-Oct	19:10	3A166	YFT	Departure	12.9	-	-
06-Oct	20:57	3A169	YFT	Departure	13.2	-	-
06-Oct	21:00	8S2113	XZM	Arrival	11.7	-	-
06-Oct	22:02	8S522	XZM	Departure	13	-	-
07-Oct	08:20	3A061	YFT	Arrival	11.9	-	-
07-Oct	08:35	8S210	XZM	Arrival	10.6	-	-
07-Oct	09:58	3A062	YFT	Arrival	13.6	-	-
07-Oct	10:44	8S212	XZM	Arrival	11.9	-	-
07-Oct	10:48	3A081	ZUI	Arrival	13.1	-	-
07-Oct	11:15	8S121	XZM	Departure	12	-	-
07-Oct	11:20	3A063	YFT	Arrival	11.9	-	-
07-Oct	12:17	3A168	YFT	Departure	12.7	-	-
07-Oct	12:19	3A181	ZUI	Departure	13.3	-	-
07-Oct	13:02	3A064	YFT	Arrival	12.6	-	-
07-Oct	13:03	8S215	XZM	Arrival	12	-	-
07-Oct	13:29	8S123	XZM	Departure	12.9	-	-
07-Oct	14:34	3A164	YFT	Departure	12.4	-	-
07-Oct	14:58	3A065	YFT	Arrival	12.4	-	-
07-Oct	16:17	3A167	YFT	Departure	12.5	-	-
07-Oct	16:45	8S218	XZM	Arrival	11.4	-	-
07-Oct	16:51	3A083	ZUI	Arrival	12.3	-	-
07-Oct	17:15	3A067	YFT	Arrival	12.2	-	-
07-Oct	17:16	8S126	XZM	Departure	12.9	-	-
07-Oct	17:17	3A183	ZUI	Departure	12	-	-
07-Oct	19:12	3A166	YFT	Departure	13.4	-	-

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)
07-Oct	21:05	8S2113	XZM	Arrival	12.2	-	-
07-Oct	21:07	3A169	YFT	Departure	No AIS Data	-	-
07-Oct	22:10	8S522	XZM	Departure	12.1	-	-
08-Oct	08:18	3A061	YFT	Arrival	11.7	-	-
08-Oct	08:21	8S210	XZM	Arrival	12.5	-	-
08-Oct	09:59	3A062	YFT	Arrival	11	-	-
08-Oct	10:36	8S212	XZM	Arrival	13.3	-	-
08-Oct	10:43	3A081	ZUI	Arrival	13.7	-	-
08-Oct	11:12	8S121	XZM	Departure	13.2	-	-
08-Oct	11:21	3A063	YFT	Arrival	12.6	-	-
08-Oct	12:19	3A168	YFT	Departure	12.6	-	-
08-Oct	12:25	3A181	ZUI	Departure	13.3	-	-
08-Oct	12:58	8S215	XZM	Arrival	10.4	-	-
08-Oct	13:00	3A064	YFT	Arrival	12.4	-	-
08-Oct	13:21	8S123	XZM	Departure	11	-	-
08-Oct	14:21	3A164	YFT	Departure	12.6	-	-
08-Oct	14:59	3A065	YFT	Arrival	13.1	<= 5	< 1min
08-Oct	16:23	3A167	YFT	Departure	12.3	-	-
08-Oct	16:53	8S218	XZM	Arrival	11.8	-	-
08-Oct	17:03	3A083	ZUI	Arrival	12.6	-	-
08-Oct	17:21	3A067	YFT	Arrival	11.9	-	-
08-Oct	17:32	8S126	XZM	Departure	12.4	-	-
08-Oct	17:35	3A183	ZUI	Departure	11.9	-	-
08-Oct	19:29	3A166	YFT	Departure	12.7	> 15	< 2min
08-Oct	21:14	8S2113	XZM	Arrival	11.1	-	-
08-Oct	21:20	3A169	YFT	Departure	12.6	-	-
08-Oct	22:13	8S522	XZM	Departure	11.2	-	-
09-Oct	08:20	3A061	YFT	Arrival	11.5	-	-
09-Oct	08:43	8S210	XZM	Arrival	11.5	-	-
09-Oct	09:47	3A062	YFT	Arrival	12.6	-	-
09-Oct	10:42	8S212	XZM	Arrival	10.4	-	-
09-Oct	10:49	3A081	ZUI	Arrival	12.4	-	-
09-Oct	11:08	8S121	XZM	Departure	12.2	-	-
09-Oct	11:18	3A063	YFT	Arrival	13.4	-	-
09-Oct	12:23	3A168	YFT	Departure	13.5	-	-
09-Oct	12:31	3A181	ZUI	Departure	13.9	-	-
09-Oct	12:57	8S215	XZM	Arrival	11.4	-	-
09-Oct	13:00	3A064	YFT	Arrival	12.6	-	-
09-Oct	13:19	8S123	XZM	Departure	11.8	-	-

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)
09-Oct	14:19	3A164	YFT	Departure	13	-	-
09-Oct	14:57	3A065	YFT	Arrival	13.5	-	-
09-Oct	16:13	3A167	YFT	Departure	13.5	<= 5	< 1min
09-Oct	16:40	8S218	XZM	Arrival	12.2	-	-
09-Oct	16:45	3A083	ZUI	Arrival	13.1	-	-
09-Oct	16:57	3A067	YFT	Arrival	13	<= 5	< 1min
09-Oct	17:00	3A183	ZUI	Departure	13.7	-	-
09-Oct	17:14	8S126	XZM	Departure	13.4	-	-
09-Oct	19:12	3A166	YFT	Departure	12.2	-	-
09-Oct	20:57	8S2113	XZM	Arrival	12.8	-	-
09-Oct	21:05	3A169	YFT	Departure	13	-	-
09-Oct	22:12	8S522	XZM	Departure	13.3	-	-
10-Oct	08:14	3A061	YFT	Arrival	12.1	-	-
10-Oct	08:23	8S210	XZM	Arrival	12.5	-	-
10-Oct	10:05	3A062	YFT	Arrival	11.6	-	-
10-Oct	10:43	8S212	XZM	Arrival	11.2	-	-
10-Oct	10:50	3A081	ZUI	Arrival	12.4	-	-
10-Oct	11:09	8S121	XZM	Departure	11.6	-	-
10-Oct	11:21	3A063	YFT	Arrival	10.8	-	-
10-Oct	12:16	3A168	YFT	Departure	11.7	-	-
10-Oct	12:20	3A181	ZUI	Departure	13.8	-	-
10-Oct	12:55	8S215	XZM	Arrival	10.9	-	-
10-Oct	13:01	3A064	YFT	Arrival	11.6	-	-
10-Oct	13:17	8S123	XZM	Departure	12.4	-	-
10-Oct	14:25	3A164	YFT	Departure	12.5	-	-
10-Oct	15:02	3A065	YFT	Arrival	11.2	-	-
10-Oct	16:17	3A167	YFT	Departure	11.4	-	-
10-Oct	16:54	3A083	ZUI	Arrival	11.5	-	-
10-Oct	16:59	8S218	XZM	Arrival	11.2	-	-
10-Oct	17:02	3A067	YFT	Arrival	12.8	-	-
10-Oct	17:14	3A183	ZUI	Departure	12.8	-	-
10-Oct	17:20	8S126	XZM	Departure	12.9	-	-
10-Oct	19:06	3A166	YFT	Departure	10.4	-	-
10-Oct	20:46	8S2113	XZM	Arrival	12.8	-	-
10-Oct	21:06	3A169	YFT	Departure	12.7	-	-
10-Oct	22:24	8S522	XZM	Departure	13.6	-	-
11-Oct	08:19	3A061	YFT	Arrival	13.2	-	-
11-Oct	08:43	8S210	XZM	Arrival	12.4	-	-
11-Oct	10:17	3A062	YFT	Arrival	11.8	-	-

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)
11-Oct	10:44	8S212	XZM	Arrival	11.2	-	-
11-Oct	10:48	3A081	ZUI	Arrival	12.5	-	-
11-Oct	11:14	8S121	XZM	Departure	12.9	-	-
11-Oct	11:20	3A063	YFT	Arrival	12.4	-	-
11-Oct	12:20	3A168	YFT	Departure	12.7	-	-
11-Oct	12:26	3A181	ZUI	Departure	13.3	-	-
11-Oct	12:55	8S215	XZM	Arrival	12.3	-	-
11-Oct	13:02	3A064	YFT	Arrival	11.5	-	-
11-Oct	13:24	8S123	XZM	Departure	12.5	-	-
11-Oct	14:14	3A164	YFT	Departure	12.3	-	-
11-Oct	14:56	3A065	YFT	Arrival	11	-	-
11-Oct	16:14	3A167	YFT	Departure	12.4	-	-
11-Oct	16:53	8S218	XZM	Arrival	12.3	-	-
11-Oct	16:56	3A083	ZUI	Arrival	12.4	-	-
11-Oct	17:00	3A067	YFT	Arrival	12.3	-	-
11-Oct	17:14	3A183	ZUI	Departure	13.3	-	-
11-Oct	17:15	8S126	XZM	Departure	13.4	-	-
11-Oct	18:56	3A166	YFT	Departure	11.8	-	-
11-Oct	20:51	8S2113	XZM	Arrival	12.7	-	-
11-Oct	21:16	3A169	YFT	Departure	No AIS data	-	-
11-Oct	22:05	8S522	XZM	Departure	13.2	-	-
12-Oct	08:19	3A061	YFT	Arrival	11.6	-	-
12-Oct	08:22	8S210	XZM	Arrival	12.5	-	-
12-Oct	09:56	3A062	YFT	Arrival	12.1	-	-
12-Oct	10:39	8S212	XZM	Arrival	12.5	-	-
12-Oct	10:54	3A081	ZUI	Arrival	13.2	-	-
12-Oct	11:07	8S121	XZM	Departure	12.6	-	-
12-Oct	11:18	3A063	YFT	Arrival	12	-	-
12-Oct	12:23	3A181	ZUI	Departure	11.2	-	-
12-Oct	12:24	3A168	YFT	Departure	12.6	-	-
12-Oct	12:59	8S215	XZM	Arrival	10.6	-	-
12-Oct	13:05	3A064	YFT	Arrival	11.3	-	-
12-Oct	13:22	8S123	XZM	Departure	10.8	-	-
12-Oct	14:19	3A164	YFT	Departure	11.7	-	-
12-Oct	14:58	3A065	YFT	Arrival	11.6	-	-
12-Oct	16:26	3A167	YFT	Departure	12.4	-	-
12-Oct	16:50	8S218	XZM	Arrival	11.2	-	-
12-Oct	16:51	3A083	ZUI	Arrival	12.8	-	-
12-Oct	17:01	3A067	YFT	Arrival	11.5	-	-

Date	Time [Arrival at / Departure from HKIA SkyPier]	Ferry No.	Connecting Port [XZM - Macao (Maritime Ferry Terminal) YFT - Macao (Taipa) ZUI - Zhuhai Jiuzhou]	Travel Direction [Arrival at / Departure from HKIA SkyPier]	Average Speed within Speed Control Zone (knots)	Extent of Instantaneous Speeding by SkyPier HSFs across SCZ (knots)	Duration of the Instantaneous Speeding (min)
12-Oct	17:17	3A183	ZUI	Departure	12.9	-	-
12-Oct	17:18	8S126	XZM	Departure	10.2	-	-
12-Oct	19:05	3A166	YFT	Departure	13.1	-	-
12-Oct	20:53	8S2113	XZM	Arrival	12.1	-	-
12-Oct	21:09	3A169	YFT	Departure	12.7	-	-
13-Oct	08:23	3A061	YFT	Arrival	12.4	-	-
13-Oct	08:37	8S210	XZM	Arrival	11.4	-	-
13-Oct	09:46	3A062	YFT	Arrival	11.8	-	-
13-Oct	10:41	8S212	XZM	Arrival	11.9	-	-
13-Oct	10:50	3A081	ZUI	Arrival	12.3	-	-
13-Oct	11:04	8S121	XZM	Departure	12.2	-	-
13-Oct	11:17	3A063	YFT	Arrival	12.1	-	-
13-Oct	12:31	3A168	YFT	Departure	12.1	-	-
13-Oct	12:35	3A181	ZUI	Departure	13.5	-	-
13-Oct	12:53	8S215	XZM	Arrival	12.3	-	-
13-Oct	12:58	3A064	YFT	Arrival	11.8	-	-
13-Oct	13:24	8S123	XZM	Departure	11.2	-	-
13-Oct	14:20	3A164	YFT	Departure	12.7	-	-
13-Oct	14:59	3A065	YFT	Arrival	12.1	-	-
13-Oct	16:15	3A167	YFT	Departure	12.3	-	-
13-Oct	16:40	8S218	XZM	Arrival	11.8	-	-
13-Oct	16:46	3A083	ZUI	Arrival	12.9	-	-
13-Oct	16:56	3A067	YFT	Arrival	12.4	-	-
13-Oct	17:10	3A183	ZUI	Departure	12.9	-	-
13-Oct	17:10	8S126	XZM	Departure	12.6	-	-
13-Oct	19:12	3A166	YFT	Departure	12	-	-
13-Oct	20:47	8S2113	XZM	Arrival	11.4	-	-
13-Oct	21:07	3A169	YFT	Departure	12.5	-	-
14-Oct	08:20	3A061	YFT	Arrival	12	-	-
14-Oct	08:37	8S210	XZM	Arrival	12.5	-	-
14-Oct	09:56	3A062	YFT	Arrival	12.8	-	-
14-Oct	10:34	8S212	XZM	Arrival	12.5	-	-
14-Oct	10:53	3A081	ZUI	Arrival	13.3	-	-
14-Oct	10:59	8S121	XZM	Departure	13	-	-
14-Oct	11:22	3A063	YFT	Arrival	12.3	-	-
14-Oct	12:25	3A181	ZUI	Departure	12.9	<= 5	< 1min
14-Oct	12:26	3A168	YFT	Departure	12.2	-	-
14-Oct	12:55	8S215	XZM	Arrival	10.9	-	-
14-Oct	13:02	3A064	YFT	Arrival	11.5	-	-

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)
14-Oct	13:19	8S123	XZM	Departure	11.7	-	-
14-Oct	14:21	3A164	YFT	Departure	11.9	-	-
14-Oct	15:05	3A065	YFT	Arrival	11.9	-	-
14-Oct	16:20	3A167	YFT	Departure	12.2	-	-
14-Oct	16:38	8S218	XZM	Arrival	12.1	-	-
14-Oct	16:53	3A083	ZUI	Arrival	12.7	-	-
14-Oct	16:58	3A067	YFT	Arrival	12.3	-	-
14-Oct	17:03	8S126	XZM	Departure	14	<= 5	< 2min
14-Oct	17:10	3A183	ZUI	Departure	11.9	-	-
14-Oct	19:13	3A166	YFT	Departure	13	-	-
14-Oct	21:10	8S2113	XZM	Arrival	12.9	-	-
14-Oct	21:16	3A169	YFT	Departure	11.9	-	-
14-Oct	22:05	8S522	XZM	Departure	12.8	-	-
15-Oct	08:36	8S210	XZM	Arrival	12	-	-
16-Oct	08:30	3A061	YFT	Arrival	12.1	-	-
16-Oct	08:37	8S210	XZM	Arrival	11.2	-	-
16-Oct	10:21	3A062	YFT	Arrival	12.6	-	-
16-Oct	10:43	8S212	XZM	Arrival	12.6	-	-
16-Oct	11:19	3A063	YFT	Arrival	12	-	-
16-Oct	11:25	8S121	XZM	Departure	12.6	-	-
16-Oct	12:31	3A168	YFT	Departure	12	-	-
16-Oct	12:59	8S215	XZM	Arrival	11.9	-	-
16-Oct	13:08	3A064	YFT	Arrival	12.3	-	-
16-Oct	13:26	8S123	XZM	Departure	12.9	-	-
16-Oct	14:41	3A164	YFT	Departure	12.8	-	-
16-Oct	15:03	3A065	YFT	Arrival	12.4	-	-
16-Oct	16:28	3A167	YFT	Departure	12.3	-	-
16-Oct	16:44	8S218	XZM	Arrival	10.8	-	-
16-Oct	16:49	3A083	ZUI	Arrival	12.6	-	-
16-Oct	17:07	3A067	YFT	Arrival	12.4	-	-
16-Oct	17:19	3A183	ZUI	Departure	14	-	-
16-Oct	17:23	8S126	XZM	Departure	11.5	-	-
16-Oct	17:42	3A161	YFT	Departure	13.1	-	-
16-Oct	19:28	3A166	YFT	Departure	12.1	-	-
16-Oct	20:57	8S2113	XZM	Arrival	12	-	-
16-Oct	21:16	3A169	YFT	Departure	12.4	-	-
17-Oct	08:31	3A061	YFT	Arrival	12.2	-	-
17-Oct	08:38	8S210	XZM	Arrival	11.4	-	-
17-Oct	10:03	3A062	YFT	Arrival	11.5	-	-



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)
17-Oct	10:44	8S212	XZM	Arrival	12	-	-
17-Oct	10:51	3A081	ZUI	Arrival	12.9	-	-
17-Oct	11:10	8S121	XZM	Departure	11.7	-	-
17-Oct	11:20	3A063	YFT	Arrival	12.3	-	-
17-Oct	12:21	3A181	ZUI	Departure	12.6	-	-
17-Oct	12:22	3A168	YFT	Departure	11.6	-	-
17-Oct	12:58	3A064	YFT	Arrival	12.7	-	-
17-Oct	13:00	8S215	XZM	Arrival	11.7	-	-
17-Oct	13:28	8S123	XZM	Departure	10.3	-	-
17-Oct	14:16	3A164	YFT	Departure	12.2	-	-
17-Oct	14:59	3A065	YFT	Arrival	11.7	-	-
17-Oct	16:14	3A167	YFT	Departure	10.7	-	-
17-Oct	16:47	3A083	ZUI	Arrival	12.5	-	-
17-Oct	16:48	8S218	XZM	Arrival	12.7	<= 5	< 5min
17-Oct	16:56	3A067	YFT	Arrival	12.1	-	-
17-Oct	17:07	3A183	ZUI	Departure	13.8	-	-
17-Oct	17:37	8S126	XZM	Departure	12.8	-	-
17-Oct	19:06	3A166	YFT	Departure	13.3	-	-
17-Oct	21:01	8S2113	XZM	Arrival	11.3	-	-
17-Oct	21:12	3A169	YFT	Departure	13.3	-	-
17-Oct	22:05	8S522	XZM	Departure	11.2	-	-
18-Oct	08:21	3A061	YFT	Arrival	12.3	-	-
18-Oct	08:29	8S210	XZM	Arrival	10.7	-	-
18-Oct	09:47	3A062	YFT	Arrival	11.3	-	-
18-Oct	10:36	8S212	XZM	Arrival	11	-	-
18-Oct	10:45	3A081	ZUI	Arrival	13.6	-	-
18-Oct	11:10	8S121	XZM	Departure	12.4	-	-
18-Oct	11:21	3A063	YFT	Arrival	12	-	-
18-Oct	12:18	3A168	YFT	Departure	12	-	-
18-Oct	12:21	3A181	ZUI	Departure	12.8	-	-
18-Oct	12:42	8S215	XZM	Arrival	13.1	-	-
18-Oct	13:08	3A064	YFT	Arrival	12.6	-	-
18-Oct	13:19	8S123	XZM	Departure	12.6	-	-
18-Oct	14:14	3A164	YFT	Departure	12.1	-	-
18-Oct	14:55	3A065	YFT	Arrival	12.3	-	-
18-Oct	16:21	3A167	YFT	Departure	11.6	-	-
18-Oct	16:46	3A083	ZUI	Arrival	12.3	-	-
18-Oct	16:51	8S218	XZM	Arrival	12.3	-	-
18-Oct	17:04	3A067	YFT	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)
18-Oct	17:04	3A183	ZUI	Departure	12.3	-	-
18-Oct	17:13	8S126	XZM	Departure	13.2	-	-
18-Oct	19:03	3A166	YFT	Departure	13.4	-	-
18-Oct	21:02	8S2113	XZM	Arrival	12.3	-	-
18-Oct	21:03	3A169	YFT	Departure	12.3	-	-
19-Oct	08:20	3A061	YFT	Arrival	13.4	-	-
19-Oct	08:23	8S210	XZM	Arrival	12.3	-	-
19-Oct	09:59	3A062	YFT	Arrival	11.5	-	-
19-Oct	10:43	8S212	XZM	Arrival	12.2	-	-
19-Oct	10:48	3A081	ZUI	Arrival	12.3	-	-
19-Oct	11:10	8S121	XZM	Departure	12	-	-
19-Oct	11:16	3A063	YFT	Arrival	12	-	-
19-Oct	12:23	3A168	YFT	Departure	11.7	-	-
19-Oct	12:24	3A181	ZUI	Departure	13.2	-	-
19-Oct	12:44	8S215	XZM	Arrival	12.8	-	-
19-Oct	12:59	3A064	YFT	Arrival	13.5	-	-
19-Oct	13:21	8S123	XZM	Departure	12.5	-	-
19-Oct	14:17	3A164	YFT	Departure	13.5	-	-
19-Oct	14:56	3A065	YFT	Arrival	11.7	-	-
19-Oct	16:17	3A167	YFT	Departure	11.5	-	-
19-Oct	16:39	8S218	XZM	Arrival	12.3	-	-
19-Oct	16:41	3A083	ZUI	Arrival	12.8	-	-
19-Oct	16:54	3A067	YFT	Arrival	12.9	-	-
19-Oct	17:02	8S126	XZM	Departure	13.5	-	-
19-Oct	17:03	3A183	ZUI	Departure	13.3	-	-
19-Oct	19:03	3A166	YFT	Departure	12.7	-	-
19-Oct	20:56	8S2113	XZM	Arrival	11.4	-	-
19-Oct	21:03	3A169	YFT	Departure	13.1	-	-
20-Oct	08:17	3A061	YFT	Arrival	11.4	-	-
20-Oct	08:47	8S210	XZM	Arrival	12.4	-	-
20-Oct	09:56	3A062	YFT	Arrival	12	-	-
20-Oct	10:43	8S212	XZM	Arrival	12.3	-	-
20-Oct	10:48	3A081	ZUI	Arrival	12.5	-	-
20-Oct	11:14	8S121	XZM	Departure	12.6	-	-
20-Oct	11:18	3A063	YFT	Arrival	11.5	-	-
20-Oct	12:16	3A168	YFT	Departure	11.3	-	-
20-Oct	12:16	3A181	ZUI	Departure	13.7	-	-
20-Oct	12:41	8S215	XZM	Arrival	12.2	-	-
20-Oct	12:56	3A064	YFT	Arrival	11.8	-	-

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)
20-Oct	13:15	8S123	XZM	Departure	12	-	-
20-Oct	14:17	3A164	YFT	Departure	11.6	-	-
20-Oct	14:53	3A065	YFT	Arrival	12.1	-	-
20-Oct	16:12	3A167	YFT	Departure	11.2	-	-
20-Oct	16:42	8S218	XZM	Arrival	12.4	-	-
20-Oct	16:45	3A083	ZUI	Arrival	12.7	-	-
20-Oct	16:58	3A067	YFT	Arrival	11.3	-	-
20-Oct	17:03	3A183	ZUI	Departure	13.5	-	-
20-Oct	17:04	8S126	XZM	Departure	12.8	-	-
20-Oct	19:05	3A166	YFT	Departure	12.7	-	-
20-Oct	21:00	3A169	YFT	Departure	12	-	-
20-Oct	21:05	8S2113	XZM	Arrival	11.2	-	-
21-Oct	08:17	3A061	YFT	Arrival	12.4	-	-
21-Oct	08:27	8S210	XZM	Arrival	12.1	-	-
21-Oct	09:49	3A062	YFT	Arrival	11.7	-	-
21-Oct	10:36	8S212	XZM	Arrival	12.3	-	-
21-Oct	10:47	3A081	ZUI	Arrival	0.0 **	-	-
21-Oct	11:16	8S121	XZM	Departure	13.1	-	-
21-Oct	11:22	3A063	YFT	Arrival	11.9	-	-
21-Oct	12:28	3A181	ZUI	Departure	10.2	-	-
21-Oct	12:35	3A168	YFT	Departure	11.3	-	-
21-Oct	12:56	3A064	YFT	Arrival	12.6	-	-
21-Oct	12:57	8S215	XZM	Arrival	9.3	-	-
21-Oct	13:18	8S123	XZM	Departure	11	-	-
21-Oct	14:15	3A164	YFT	Departure	12.8	-	-
21-Oct	15:24	3A065	YFT	Arrival	11.9	-	-
21-Oct	16:14	3A167	YFT	Departure	11.4	-	-
21-Oct	16:44	8S218	XZM	Arrival	11.6	-	-
21-Oct	16:51	3A083	ZUI	Arrival	13.2	-	-
21-Oct	16:59	3A067	YFT	Arrival	12.7	-	-
21-Oct	17:10	3A183	ZUI	Departure	13.5	-	-
21-Oct	17:11	8S126	XZM	Departure	10.7	-	-
21-Oct	19:09	3A166	YFT	Departure	12.5	-	-
21-Oct	20:52	8S2113	XZM	Arrival	13.2	-	-
21-Oct	20:58	3A169	YFT	Departure	11.9	-	-
21-Oct	22:07	8S522	XZM	Departure	13.1	-	-
22-Oct	08:22	3A061	YFT	Arrival	11.2	-	-
22-Oct	08:26	8S210	XZM	Arrival	12.6	-	-
22-Oct	09:48	3A062	YFT	Arrival	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)
22-Oct	10:34	8S212	XZM	Arrival	12.9	-	-
22-Oct	11:03	3A081	ZUI	Arrival	12.7	-	-
22-Oct	11:05	8S121	XZM	Departure	11.8	-	-
22-Oct	11:19	3A063	YFT	Arrival	12	-	-
22-Oct	12:16	3A181	ZUI	Departure	11.7	-	-
22-Oct	12:20	3A168	YFT	Departure	12.2	-	-
22-Oct	12:41	8S215	XZM	Arrival	12.9	-	-
22-Oct	13:02	3A064	YFT	Arrival	11.9	-	-
22-Oct	13:16	8S123	XZM	Departure	11.7	-	-
22-Oct	14:15	3A164	YFT	Departure	11.1	-	-
22-Oct	15:02	3A065	YFT	Arrival	12.6	-	-
22-Oct	16:20	3A167	YFT	Departure	12.3	-	-
22-Oct	16:53	8S218	XZM	Arrival	12.3	-	-
22-Oct	16:57	3A083	ZUI	Arrival	13.3	-	-
22-Oct	17:02	3A067	YFT	Arrival	12.4	-	-
22-Oct	17:19	3A183	ZUI	Departure	12.5	-	-
22-Oct	17:23	8S126	XZM	Departure	13.4	-	-
22-Oct	19:06	3A166	YFT	Departure	13.1	-	-
22-Oct	20:53	8S2113	XZM	Arrival	13	-	-
22-Oct	21:17	3A169	YFT	Departure	13.7	-	-
23-Oct	08:19	3A061	YFT	Arrival	11.3	-	-
23-Oct	08:23	8S210	XZM	Arrival	12.1	-	-
23-Oct	09:49	3A062	YFT	Arrival	11.2	-	-
23-Oct	10:39	8S212	XZM	Arrival	12.7	-	-
23-Oct	10:49	3A081	ZUI	Arrival	11.5	-	-
23-Oct	11:29	8S121	XZM	Departure	13.2	-	-
23-Oct	11:36	3A063	YFT	Arrival	12.1	-	-
23-Oct	12:22	3A168	YFT	Departure	12.6	-	-
23-Oct	12:26	3A181	ZUI	Departure	13.3	-	-
23-Oct	13:01	3A064	YFT	Arrival	12.8	-	-
23-Oct	13:02	8S215	XZM	Arrival	11.7	-	-
23-Oct	13:36	8S123	XZM	Departure	12.5	-	-
23-Oct	14:15	3A164	YFT	Departure	11.8	-	-
23-Oct	15:06	3A065	YFT	Arrival	12.7	-	-
23-Oct	16:27	3A167	YFT	Departure	12.2	-	-
23-Oct	16:54	3A083	ZUI	Arrival	12.7	-	-
23-Oct	16:56	8S218	XZM	Arrival	12.7	-	-
23-Oct	17:02	3A067	YFT	Arrival	12.6	-	-
23-Oct	17:16	8S126	XZM	Departure	13.2	-	-

Date	Time [Arrival at / Departure from HKIA SkyPier]	Ferry No.	Connecting Port [XZM - Macao (Maritime Ferry Terminal) YFT - Macao (Taipa) ZUI - Zhuhai Jiuzhou]	Travel Direction [Arrival at / Departure from HKIA SkyPier]	Average Speed within Speed Control Zone (knots)	Extent of Instantaneous Speeding by SkyPier HSFs across SCZ (knots)	Duration of the Instantaneous Speeding (min)
23-Oct	17:16	3A183	ZUI	Departure	13.2	-	-
23-Oct	19:19	3A166	YFT	Departure	13.1	-	-
23-Oct	20:55	8S2113	XZM	Arrival	12.7	-	-
23-Oct	21:06	3A169	YFT	Departure	13.6	-	-
24-Oct	08:20	3A061	YFT	Arrival	12.6	-	-
24-Oct	08:29	8S210	XZM	Arrival	11.7	-	-
24-Oct	09:38	3A062	YFT	Arrival	12.4	-	-
24-Oct	10:40	8S212	XZM	Arrival	11.9	-	-
24-Oct	10:46	3A081	ZUI	Arrival	12.8	-	-
24-Oct	11:14	8S121	XZM	Departure	12.9	-	-
24-Oct	11:14	3A063	YFT	Arrival	13.3	-	-
24-Oct	12:15	3A181	ZUI	Departure	13	-	-
24-Oct	12:16	3A168	YFT	Departure	12.9	-	-
24-Oct	12:41	8S215	XZM	Arrival	12.2	-	-
24-Oct	13:11	3A064	YFT	Arrival	12.4	-	-
24-Oct	13:16	8S123	XZM	Departure	12.6	-	-
24-Oct	14:18	3A164	YFT	Departure	13.1	-	-
24-Oct	14:53	3A065	YFT	Arrival	13.4	-	-
24-Oct	16:21	3A167	YFT	Departure	13.4	-	-
24-Oct	16:40	8S218	XZM	Arrival	11.8	-	-
24-Oct	16:41	3A083	ZUI	Arrival	12.5	-	-
24-Oct	16:58	3A067	YFT	Arrival	12.8	-	-
24-Oct	17:06	3A183	ZUI	Departure	13.2	-	-
24-Oct	17:11	8S126	XZM	Departure	13	-	-
24-Oct	19:11	3A166	YFT	Departure	12.6	-	-
24-Oct	20:50	8S2113	XZM	Arrival	12.2	-	-
24-Oct	20:58	3A169	YFT	Departure	12.3	-	-
25-Oct	08:12	3A061	YFT	Arrival	12.1	-	-
25-Oct	08:25	8S210	XZM	Arrival	11.9	-	-
25-Oct	09:51	3A062	YFT	Arrival	11.7	-	-
25-Oct	10:37	8S212	XZM	Arrival	11.6	-	-
25-Oct	10:47	3A081	ZUI	Arrival	12.3	-	-
25-Oct	11:02	8S121	XZM	Departure	12.2	-	-
25-Oct	11:19	3A063	YFT	Arrival	11.4	-	-
25-Oct	12:16	3A181	ZUI	Departure	13.3	-	-
25-Oct	12:18	3A168	YFT	Departure	11.2	-	-
25-Oct	12:47	8S215	XZM	Arrival	12.6	-	-
25-Oct	12:54	3A064	YFT	Arrival	12.5	-	-
25-Oct	13:14	8S123	XZM	Departure	11.9	-	-

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-Oct	14:18	3A164	YFT	Departure	12.4	-	-
25-Oct	15:02	3A065	YFT	Arrival	11.6	-	-
25-Oct	16:15	3A167	YFT	Departure	10.7	-	-
25-Oct	16:32	8S218	XZM	Arrival	12.2	-	-
25-Oct	16:44	3A083	ZUI	Arrival	12.9	-	-
25-Oct	16:56	3A067	YFT	Arrival	12.6	-	-
25-Oct	17:01	3A183	ZUI	Departure	11	-	-
25-Oct	17:08	8S126	XZM	Departure	13.7	-	-
25-Oct	19:04	3A166	YFT	Departure	13.4	-	-
25-Oct	21:02	8S2113	XZM	Arrival	11	-	-
25-Oct	21:10	3A169	YFT	Departure	12.8	-	-
26-Oct	08:24	3A061	YFT	Arrival	13	-	-
26-Oct	08:33	8S210	XZM	Arrival	12.7	-	-
26-Oct	10:03	3A062	YFT	Arrival	12.4	-	-
26-Oct	10:52	3A081	ZUI	Arrival	12.2	-	-
26-Oct	10:52	8S212	XZM	Arrival	11.9	-	-
26-Oct	11:21	8S121	XZM	Departure	11.7	-	-
26-Oct	11:27	3A063	YFT	Arrival	12.2	-	-
26-Oct	12:10	3A181	ZUI	Departure	13.5	-	-
26-Oct	12:15	3A168	YFT	Departure	12.2	-	-
26-Oct	12:54	8S215	XZM	Arrival	11.8	-	-
26-Oct	13:02	3A064	YFT	Arrival	12.4	-	-
26-Oct	13:17	8S123	XZM	Departure	13.4	-	-
26-Oct	14:19	3A164	YFT	Departure	11.6	-	-
26-Oct	14:56	3A065	YFT	Arrival	11.6	-	-
26-Oct	16:17	3A167	YFT	Departure	12.9	-	-
26-Oct	16:41	3A083	ZUI	Arrival	12.7	-	-
26-Oct	16:44	8S218	XZM	Arrival	12.1	-	-
26-Oct	17:01	3A067	YFT	Arrival	13.4	<= 5	< 1min
26-Oct	17:04	8S126	XZM	Departure	13.2	-	-
26-Oct	17:06	3A183	ZUI	Departure	13.3	-	-
26-Oct	18:56	3A166	YFT	Departure	12.8	-	-
26-Oct	21:03	8S2113	XZM	Arrival	12.8	-	-
26-Oct	21:04	3A169	YFT	Departure	11.7	-	-
27-Oct	08:20	3A061	YFT	Arrival	11.4	-	-
27-Oct	08:41	8S210	XZM	Arrival	13.1	-	-
27-Oct	09:54	3A062	YFT	Arrival	12.2	-	-
27-Oct	10:33	3A081	ZUI	Arrival	12.6	-	-
27-Oct	10:38	8S212	XZM	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)
27-Oct	11:10	8S121	XZM	Departure	12.5	-	-
27-Oct	11:18	3A063	YFT	Arrival	11.7	<= 5	< 1min
27-Oct	12:14	3A168	YFT	Departure	11.4	-	-
27-Oct	12:21	3A181	ZUI	Departure	12	-	-
27-Oct	13:01	3A064	YFT	Arrival	11.7	-	-
27-Oct	13:03	8S215	XZM	Arrival	0.0 **	-	-
27-Oct	13:30	8S123	XZM	Departure	0.0 **	-	-
27-Oct	14:20	3A164	YFT	Departure	11.9	-	-
27-Oct	15:01	3A065	YFT	Arrival	11.1	-	-
27-Oct	16:18	3A167	YFT	Departure	11.9	-	-
27-Oct	16:52	8S218	XZM	Arrival	12.2	-	-
27-Oct	16:56	3A083	ZUI	Arrival	11.9	-	-
27-Oct	16:58	3A067	YFT	Arrival	12.2	-	-
27-Oct	17:15	3A183	ZUI	Departure	12.9	-	-
27-Oct	17:22	8S126	XZM	Departure	12.2	-	-
27-Oct	19:01	3A166	YFT	Departure	12.3	-	-
27-Oct	21:06	3A169	YFT	Departure	13.1	-	-
27-Oct	21:12	8S2113	XZM	Arrival	12.5	-	-
28-Oct	08:20	3A061	YFT	Arrival	12.2	-	-
28-Oct	08:31	8S210	XZM	Arrival	11.7	-	-
28-Oct	09:49	3A062	YFT	Arrival	12.4	-	-
28-Oct	10:39	8S212	XZM	Arrival	11.9	-	-
28-Oct	10:44	3A081	ZUI	Arrival	12.6	-	-
28-Oct	11:03	8S121	XZM	Departure	11.3	-	-
28-Oct	11:20	3A063	YFT	Arrival	11.9	-	-
28-Oct	12:17	3A168	YFT	Departure	11.7	-	-
28-Oct	12:21	3A181	ZUI	Departure	13.7	-	-
28-Oct	12:51	8S215	XZM	Arrival	10.6	-	-
28-Oct	13:00	3A064	YFT	Arrival	12.4	-	-
28-Oct	13:21	8S123	XZM	Departure	11.2	-	-
28-Oct	14:22	3A164	YFT	Departure	11.8	-	-
28-Oct	15:01	3A065	YFT	Arrival	11.9	-	-
28-Oct	16:20	3A167	YFT	Departure	11.9	-	-
28-Oct	16:45	8S218	XZM	Arrival	12.8	-	-
28-Oct	16:50	3A083	ZUI	Arrival	13.2	-	-
28-Oct	17:01	3A067	YFT	Arrival	12.4	-	-
28-Oct	17:08	3A183	ZUI	Departure	12.8	-	-
28-Oct	17:12	8S126	XZM	Departure	13.7	-	-
28-Oct	19:10	3A166	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)
28-Oct	20:56	8S2113	XZM	Arrival	12.5	-	-
28-Oct	20:56	3A169	YFT	Departure	12.8	-	-
28-Oct	22:01	8S522	XZM	Departure	12.2	-	-
29-Oct	08:19	3A061	YFT	Arrival	12	-	-
29-Oct	08:23	8S210	XZM	Arrival	12.9	-	-
29-Oct	09:51	3A062	YFT	Arrival	12	-	-
29-Oct	10:36	8S212	XZM	Arrival	12.8	-	-
29-Oct	10:43	3A081	ZUI	Arrival	13.3	-	-
29-Oct	11:04	8S121	XZM	Departure	13	-	-
29-Oct	11:26	3A063	YFT	Arrival	12	-	-
29-Oct	12:10	3A181	ZUI	Departure	12.1	-	-
29-Oct	12:15	3A168	YFT	Departure	11.7	-	-
29-Oct	12:54	8S215	XZM	Arrival	11.9	-	-
29-Oct	13:01	3A064	YFT	Arrival	11.7	-	-
29-Oct	13:19	8S123	XZM	Departure	12.5	-	-
29-Oct	14:22	3A164	YFT	Departure	11.6	-	-
29-Oct	15:06	3A065	YFT	Arrival	12.3	-	-
29-Oct	16:19	3A167	YFT	Departure	13.2	-	-
29-Oct	16:47	8S218	XZM	Arrival	11.9	-	-
29-Oct	16:52	3A083	ZUI	Arrival	13.1	-	-
29-Oct	16:55	3A067	YFT	Arrival	11.5	-	-
29-Oct	17:12	3A183	ZUI	Departure	12.7	-	-
29-Oct	17:24	8S126	XZM	Departure	13.4	-	-
29-Oct	19:10	3A166	YFT	Departure	12.1	-	-
29-Oct	21:01	8S2113	XZM	Arrival	11.8	-	-
29-Oct	21:04	3A169	YFT	Departure	12.8	-	-
30-Oct	08:17	3A061	YFT	Arrival	11.4	-	-
30-Oct	08:19	8S210	XZM	Arrival	13.2	-	-
30-Oct	09:47	3A062	YFT	Arrival	11.9	-	-
30-Oct	10:39	8S212	XZM	Arrival	12.5	-	-
30-Oct	10:50	3A081	ZUI	Arrival	11.9	-	-
30-Oct	11:09	8S121	XZM	Departure	12.5	-	-
30-Oct	11:16	3A063	YFT	Arrival	12	-	-
30-Oct	12:14	3A168	YFT	Departure	12.6	-	-
30-Oct	12:23	3A181	ZUI	Departure	13	-	-
30-Oct	12:53	8S215	XZM	Arrival	11.5	-	-
30-Oct	13:01	3A064	YFT	Arrival	11.7	-	-
30-Oct	13:18	8S123	XZM	Departure	10.7	-	-
30-Oct	14:19	3A164	YFT	Departure	12.1	-	-



Date	Time [Arrival at / Departure from HKIA SkyPier]	Ferry No.	Connecting Port [XZM - Macao (Maritime Ferry Terminal) YFT - Macao (Taipa) ZUI - Zhuhai Jiuzhou]	Travel Direction [Arrival at / Departure from HKIA SkyPier]	Average Speed within Speed Control Zone (knots)	Extent of Instantaneous Speeding by SkyPier HSFs across SCZ (knots)	Duration of the Instantaneous Speeding (min)
30-Oct	14:56	3A065	YFT	Arrival	11.4	-	-
30-Oct	16:15	3A167	YFT	Departure	13.1	-	-
30-Oct	16:38	3A083	ZUI	Arrival	11.6	-	-
30-Oct	16:49	8S218	XZM	Arrival	11	-	-
30-Oct	16:55	3A067	YFT	Arrival	11.3	-	-
30-Oct	17:00	3A183	ZUI	Departure	12.9	-	-
30-Oct	17:13	8S126	XZM	Departure	12.1	-	-
30-Oct	19:05	3A166	YFT	Departure	11.7	-	-
30-Oct	21:01	8S2113	XZM	Arrival	11	-	-
30-Oct	21:03	3A169	YFT	Departure	13.5	-	-
31-Oct	08:15	3A061	YFT	Arrival	12.8	-	-
31-Oct	08:44	8S210	XZM	Arrival	11.2	-	-
31-Oct	09:58	3A062	YFT	Arrival	12.3	-	-
31-Oct	10:39	8S212	XZM	Arrival	12.6	-	-
31-Oct	10:49	3A081	ZUI	Arrival	13.6	-	-
31-Oct	11:03	8S121	XZM	Departure	12.4	-	-
31-Oct	11:17	3A063	YFT	Arrival	11.6	-	-
31-Oct	12:13	3A181	ZUI	Departure	13.1	-	-
31-Oct	12:17	3A168	YFT	Departure	11.8	-	-
31-Oct	12:53	8S215	XZM	Arrival	11.6	-	-
31-Oct	12:55	3A064	YFT	Arrival	13.3	-	-
31-Oct	13:20	8S123	XZM	Departure	12.3	-	-
31-Oct	14:21	3A164	YFT	Departure	13.3	-	-
31-Oct	14:57	3A065	YFT	Arrival	12.1	-	-
31-Oct	16:18	3A167	YFT	Departure	12.2	-	-
31-Oct	16:39	8S218	XZM	Arrival	12	-	-
31-Oct	16:45	3A083	ZUI	Arrival	12.6	-	-
31-Oct	16:58	3A067	YFT	Arrival	11.6	-	-
31-Oct	17:06	3A183	ZUI	Departure	12.9	-	-
31-Oct	17:17	8S126	XZM	Departure	13.5	-	-
31-Oct	19:06	3A166	YFT	Departure	12.4	-	-
31-Oct	20:57	8S2113	XZM	Arrival	12.1	-	-
31-Oct	21:14	3A169	YFT	Departure	12.8	-	-

#### Follow-up on instantaneous speeding

Referring to the data of SkyPier HSF movements in October 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 12 HSF movements of which the duration of instantaneous speeding of 9 HSF movements were less than one minute, 2 HSF movement was less than two minutes and 1 HSF movement was less than 5 minutes. 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.

Three HSF movements with no AIS data and four HSFs with insufficient transmission of AIS data were received in October 2017. Vessel captain was also requested to provide the AIS plots to indicate the vessel entered the SCZ through the gate access point with no speeding in the SCZ.