

Ref.: HYDHZMBEEM00\_0\_7807L.19

24 December 2019

By Fax (3468 2076) and By Post

AECOM Asia Co. Ltd.  
The PRE's Office  
550 Cheung Tung Road, Lantau  
Hong Kong

Attention: Mr. Joseph Yau

Dear Sir,

**Re: Agreement No. CE 48/2011 (EP)  
Environmental Project Office for the  
HZMB Hong Kong Link Road, HZMB Hong Kong Boundary Crossing  
Facilities, and Tuen Mun-Chek Lap Kok Link – Investigation**

**Contract No. HY/2013/01  
HZMB HKBCF – Passenger Clearance Building  
Quarterly EM&A Report No. 18 for December 2018 to January 2019**

Reference is made to the Environmental Team's submission of Quarterly EM&A Report No. 18 for December 2018 to January 2019 (Revision 2) certified by the ET Leader (ET's ref.: "5126871/19.10/OC161/KC/RL" dated 23 December 2019) and provided to us via e-mail on 23 December 2019.

We are pleased to inform you that we have no adverse comments on the captioned Quarterly EM&A Report for December 2018 to January 2019.

Thank you very much for your attention and please feel free to contact the undersigned should you require further information.

Yours faithfully,  
For and on behalf of  
Ramboll Hong Kong Limited



Ray Yan  
Independent Environmental Checker

|      |        |                |                     |
|------|--------|----------------|---------------------|
| c.c. | HyD    | Mr. Cheng Pan  | (By Fax: 3188 6614) |
|      | HyD    | Ms. Iris Ng    | (By Fax: 3188 6614) |
|      | Atkins | Mr. Keith Chau | (By Fax: 2890 6343) |
|      | LCWJV  | Mr. Owen Leung | (By Fax: 3621 0180) |

Internal: DY, YH, HW, ENPO Site

**Contract No. HY/2013/01**

**Hong Kong-Zhuhai-Macao Bridge  
Hong Kong Boundary Crossing Facilities – Passenger Clearance  
Building**

**Quarterly EM&A Report No. 18  
(Covering the Period from 1 December 2018 to 31 January 2019)**

18 December 2019

Revision 2

**Main Contractor**



**Leighton - Chun Wo  
Joint Venture**

**Environmental Team**



## Contents

### Executive Summary

|          |   |           |
|----------|---|-----------|
| <b>1</b> | <b>Introduction .....</b>   | <b>6</b>  |
| 1.1      | Basic Project Information .....   | 6         |
| 1.2      | Project Organisation .....  | 6         |
| 1.3      | Construction Programme .....  | 7         |
| 1.4      | Construction Works Undertaken During the Reporting Period .....                                   | 7         |
| <b>2</b> | <b>EM&amp;A Requirement.....</b>  | <b>8</b>  |
| 2.1      | Summary of EM&A Requirements.....   | 8         |
| 2.2      | Monitoring Requirements .....   | 12        |
| 2.3      | Action and Limit Levels .....   | 12        |
| 2.4      | Event Action Plans .....  | 14        |
| 2.5      | Mitigation Measures .....   | 14        |
| <b>3</b> | <b>Environmental Monitoring and Audit .....</b>   | <b>15</b> |
| 3.1      | Air Quality Monitoring Results .....  | 15        |
| 3.2      | Noise Monitoring Results .....  | 15        |
| 3.3      | Water Quality Monitoring Results .....  | 15        |
| 3.4      | Dolphins Monitoring Results.....  | 16        |
| 3.5      | Implementation of Environmental Measures .....  | 18        |
| 3.6      | Advice on the Solid and Liquid Waste Management Status.....                                       | 18        |
| 3.7      | Environmental Licenses and Permits .....  | 18        |
| <b>4</b> | <b>Summary of Exceedance, Complaint, Notification of Summons and Successful Prosecution .....</b> | <b>19</b> |
| 4.1      | Summary of Exceedance of the Environmental Quality Performance Limit .....                        | 19        |
| 4.2      | Summary of Complaints, Notification of Summons and Successful Prosecution .....                   | 19        |
| <b>5</b> | <b>Comments, Recommendations and Conclusion.....</b>  | <b>19</b> |
| 5.1      | Comments .....  | 19        |
| 5.2      | Recommendations .....   | 19        |
| 5.3      | Conclusions.....  | 20        |

### **Figures**

- Figure 2.1 Location of Air Quality and Noise Monitoring Stations
- Figure 2.2 Location of Water Quality Monitoring Stations
- Figure 2.3 Impact Dolphins Monitoring Line Transect Layout Map

### **Appendices**

- Appendix A Landscape Checklist
- Appendix B Location of Works Areas
- Appendix C Project Organization for Environmental Works
- Appendix D Event and Action Plan
- Appendix E Implementation Schedule for Environmental Mitigation Measures (EMIS)
- Appendix F Statistics on Environmental Complaints, Notification of Summons and Successful Prosecutions

## Executive Summary

This Quarterly Environmental Monitoring and Audit (EM&A) Report is prepared for Contract HY/2013/01 Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities (HKBCF) – Passenger Clearance Building (hereafter referred to as “the Contract”) (includes the construction works of Contract No. HY/2013/06 Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities – Automatic Vehicle Clearance Support System within Contract No. HY/2013/01 works area) for the Highways Department of Hong Kong Special Administrative Region (HKSAR). The Contract was awarded to Leighton – Chun Wo Joint Venture (construction works of Contract No. HY/2013/06 was awarded to ATAL Technologies Limited within Contract No. HY/2013/01 works area) (hereafter referred to as “the Contractor”) and Atkins China Limited was appointed as the Environmental Team (ET) by the Contractor.

The Contract is part of Hong Kong – Zhuhai – Macao Bridge HKBCF which is a “Designated Project”, under Schedule 2 of the Environmental Impact Assessment Ordinance (EIAO) (Cap 499) and Environmental Impact Assessment (EIA) Report (Register No. AEIAR-145/2009) was prepared for the Project. The current Environmental Permit (EP) No. EP-353/2009/K for HKBCF was issued on 11 April 2016. These documents are available through the EIA Ordinance Register. Site preparation works of the Contract started on 26 September 2014 and the construction works of the Contract commenced on 6 October 2014. The construction works of the Contract No. HY/2013/06 within Contract No. HY/2013/01 works area commenced on 20 February 2018.

Atkins China Limited has been appointed by the Contractor to implement the Environmental Monitoring & Audit (EM&A) programme for the Contract in accordance with the Updated EM&A Manual for HKBCF (Version 1.0) and will be providing environmental team services to the Contract.

This is the eighteenth Quarterly EM&A Report for the Contract which summaries findings of the EM&A works during the reporting period from 1 December 2018 to 31 January 2019. (includes the construction works of Contract No. HY/2013/06 within Contract No. HY/2013/01 works area)

Landscape Checklist is shown in **Appendix A**.

## Environmental Monitoring and Audit Progress

The EM&A programme was undertaken in accordance with the Updated EM&A Manual for HKBCF (Version 1.0). The air quality, noise, water quality and dolphin monitoring works under Contract HY/2013/01 “HZMB HKBCF – Passenger Clearance Building were suspended from 1 October 2018. The ET of Contract No. HY/2013/04 is required and continues the same implementation of environmental monitoring commencing on 1 October 2018. It should be noted that the air quality monitoring station (AMS6) is covered by Contract No. HY/2011/03 Hong Kong-Zhuhai-Macao Bridge Hong Kong Link Road – Section between Scenic Hill and HKBCF. If the impact air quality monitoring at AMS6 is no longer covered under Contract No. HY/2011/03, it is required to continue such monitoring at AMS6 as part of EM&A programme. However, this is subject to ENPO’s final decision on which ET should carry out the monitoring work at these stations.

The works site area in Hong Kong-Zhuhai-Macao Bridge was handed over to the relevant authorities since 24 October 2018 and the site had been changed to a closed area, no site inspection was conducted for the Contract HY/2013/01 during the reporting period.

## Breaches of Action and Limit Levels :

Summary of Action and Limit Level exceedance of 1-hr TSP level and 24-hr TSP level at AMS6 shall be referred to the monthly EM&A report prepared by Contract No. HY/2011/03.

There was no Action and Limit Level exceedance of 1-hr TSP level and 24-hr TSP level recorded at AMS7B by the Environmental Team of Contract No. HY/2013/04 during the reporting period.

There was no Action and Limit Level exceedance for noise recorded at NMS2 and NMS3C by the ET of Contract No. HY/2013/04 during the reporting period.

6 exceedances of water quality (consisting of five Action Level exceedances and 1 Limit Level exceedance of suspended solids) were recorded by the Environmental Team of Contract No. HY/2013/04 during the reporting period.

### **Implementation of Environmental Measures**

The works area in Hong Kong-Zhuhai-Macao Bridge was handed over to the relevant authorities since 24 October 2018 and the site area was changed to closed area, no site inspection was conducted for the Contract No. HY/2013/01 during the reporting period.

The landscape works for Contract No. HY/2013/01 was commenced on 1 March 2018. As the works area in Hong Kong-Zhuhai-Macao Bridge was handed over to the relevant authorities since 24 October 2018 and the site area was changed to closed area, no inspection for landscape works (construction phase) was conducted for Contract No. HY/2013/01 during the reporting period.

### **Complaint Log**

There was no complaint received in relation to the environmental impact during reporting period.

### **Notifications of Summons and Successful Prosecutions**

There was no notification of summon or prosecution received during this reporting period.

### **Reporting Change**

There was no reporting change during the reporting period.

## 1 Introduction

### 1.1 Basic Project Information

- 1.1.1 This Quarterly Environmental Monitoring and Audit (EM&A) Report is prepared for Contract HY/2013/01 Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities – Passenger Clearance Building (hereafter referred to as “the Contract”) (includes the construction works of Contract No. HY/2013/06 Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities – Automatic Vehicle Clearance Support System within Contract No. HY/2013/01 works area) for the Highways Department of Hong Kong Special Administrative Region. The Contract was awarded to Leighton – Chun Wo Joint Venture (construction works of Contract No. HY/2013/06 was awarded to ATAL Technologies Limited within Contract No. HY/2013/01 works area) (hereafter referred to as “the Contractor”) and Atkins China Limited was appointed as the Environmental Team (ET) by the Contractor.
- 1.1.2 The Contract is part of Hong Kong – Zhuhai – Macao Bridge Hong Kong Boundary Crossing Facilities (HKBCF) which is a “Designated Project”, under Schedule 2 of the Environmental Impact Assessment Ordinance (EIAO) (Cap 499). An Environmental Impact Assessment (EIA) Report (Register No. AEIAR-145/2009) was prepared for the Project. The current Environmental Permit (EP) No. EP-353/2009/K for HKBCF was issued on 11 April 2016. These documents are available through the EIA Ordinance Register. Site preparation work of the Contract started on 26 September 2014 and the construction works of the Contract commenced on 6 October 2014. The construction works of the Contract No. HY/2013/06 within Contract No. HY/2013/01 works area commenced on 20 February 2018. The works areas of the Contract are shown in **Appendix B**.
- 1.1.3 This is the eighteenth Quarterly EM&A Report for the Contract which summarizes the audit findings of the EM&A programme during the reporting period from 1 December 2018 to 31 January 2019.

### 1.2 Project Organisation

- 1.2.1 The project organization structure and lines of communication with respect to the on-site environmental management structure is shown in **Appendix C**. The key personnel contact names and numbers are summarized in **Table 1.1**.

**Table 1.1 Contact Information of Key Personnel**

| Party  | Position                            | Name                            | Telephone              | Fax       |
|--|-------------------------------------|---------------------------------|------------------------|-----------|
| <u>For Contract No. HY/2013/01</u>   |                                     |                                 |                        |           |
| Engineer or Engineer's Representative (AECOM Asia Co. Ltd.)                                  | Chief Resident Engineer             | Malcolm Sage                    | 3958 7330              | 3468 2076 |
| Environmental Project Office / Independent Environmental Checker (Ramboll Hong Kong Limited) | Environmental Project Office Leader | Y. H. Hui                       | 3465 2888              | 3465 2899 |
|  | Independent Environmental Checker   | Raymond Dai (until 31 Dec 2018) | 3465 2888              | 3465 2899 |
|  |                                     | Ray Yan (from 1 Jan 2019)       | 3465 2836<br>5181 8401 | 3465 2899 |
|  | Project Manager                     | Owen Leung                      | 9232 5750              | 3621 0180 |

|   |   |                                    |                        |           |
|---|---|------------------------------------|------------------------|-----------|
| Contractor<br>(Leighton – Chun Wo Joint<br>Venture)   | Environmental Officer                   | Stephen Tsang                      | 9686 0787              | 3621 0180 |
| Environmental Team<br>(Atkins China Limited)  | Environmental Team<br>Leader            | Keith Chau                         | 2972 1721              | 2890 6343 |
| 24 hours complaint hotline  | ---                                     | ---                                | 3958 7300              | ---       |
| <u>For Contract No. HY/2013/06 within Contract No. HY/2013/01 works area</u>                          |   |                                    |                        |           |
| Engineer or Engineer's<br>Representative<br>(AECOM Asia Co. Ltd.)                                     | Chief Registered<br>Architect           | Malcolm Sage                       | 3958 7330              | 3468 2076 |
| Environmental Project Office /<br>Independent Environmental<br>Checker (Ramboll Hong Kong<br>Limited) | Environmental Project<br>Office Leader  | Y. H. Hui                          | 3465 2888              | 3465 2899 |
|   | Independent<br>Environmental<br>Checker | Raymond Dai (until<br>31 Dec 2018) | 3465 2888              | 3465 2899 |
|   |   | Ray Yan (from 1 Jan<br>2019)       | 3465 2836<br>5181 8401 | 3465 2899 |
| Contractor<br>(ATAL Technologies Limited)   | Site Agent                              | Mr. Eric Yim                       | 2565 3355              | 3162 5217 |
|   | Environmental Officer                   | Mr. W. Li                          | 2565 3137              | 3162 5217 |
| Environmental Team<br>(Atkins China Limited)  | Environmental Team<br>Leader            | Keith Chau                         | 2972 1721              | 2890 6343 |
| 24 hours complaint hotline  | ---                                     | ---                                | 6509 0375              | ---       |

### 1.3 Construction Programme

- 1.3.1 As all the sections under Contract No. HY/2013/01 and HY/2013/06 were handed over to the relevant authorities on 24 October 2018 and the site had been changed to closed area, no construction works undertaken during the reporting period.

### 1.4 Construction Works Undertaken During the Reporting Period

- 1.4.1 As all the sections under Contract No. HY/2013/01 and HY/2013/06 were handed over to the relevant authorities on 24 October 2018 and the site had been changed to closed area, no construction works undertaken during the reporting period.



## 2 EM&A Requirement

### 2.1 Summary of EM&A Requirements

- 2.1.1 The EM&A programme was undertaken in accordance with the Updated EM&A Manual for HKBCF (Version 1). The air quality, noise, water quality and dolphin monitoring works under Contract No. HY/2010/02 Hong Kong-Zhuhai-Macao Bridge HKBCF – Reclamation Works were suspended from 1 September 2017. The ET of Contract No. HY/2013/01 is required and continues the same implementation of environmental monitoring commencing on 1 September 2017. It should be noted that the air quality monitoring station (AMS 6) is covered by Contract No. HY/2011/03 Hong Kong-Zhuhai Macao Bridge Hong Kong Link Road – Section between Scenic Hill and HKBCF.
- 2.1.2 The permission to carry out impact air quality monitoring work at AMS7 (Hong Kong SkyCity Marriott Hotel) was not granted after 31 January 2015. The impact air quality monitoring location (AMS7) was relocated to a nearby air sensitive receiver, Chu Kong Air-Sea Union Transportation Co. Ltd. (AMS7A), from 5 February 2015 to 30 December 2015. The alternative location at Chu Kong Air-Sea Union Transportation Co. Ltd. was approved by EPD on 5 February 2015. However, AMS7A was relocated back to its original location (AMS7-Hong Kong SkyCity Marriott Hotel) on 30 December 2015. The relocation of air quality monitoring location, AMS7A, back to AMS7 was approved by EPD on 21 December 2015. The baseline and action/limit level for air quality as derived from the baseline monitoring data recorded at Hong Kong SkyCity Marriott Hotel (AMS7) was adopted for the air quality monitoring location. As the permission to carry out air quality monitoring at Hong Kong SkyCity Marriott Hotel was not granted after the end of January 2018, as such, a proposal for the monitoring location relocated to 3RS Site Office(AMS7B) was justified by the ET Leader for Contract No. HY/2013/01 on 22 January 2018; verified by the IEC on 24 January 2018; and submitted to EPD on 30 January 2018, and the AQM has been carrying out at AMS7B with EPD’s consent since 6 February 2018.
- 2.1.3 The air quality monitoring station AMS2 and AMS7B and noise monitoring station NMS2 are covered by Contract No. HY/2013/04 since 1 October 2018. The ET of the Contract or another ET of the HZMB project is required to conduct air quality station (AMS7B) and noise monitoring stations (NMS2 and NMS3C) are no longer covered under Contract No. HY/2013/04.
- 2.1.4 A summary of air and noise monitoring locations are presented in **Table 2.1**. The location of air quality and noise monitoring stations are shown as in **Figure 2.1**.

**Table 2.1 Summary of Impact EM&A Requirements**

| Environmental Monitoring | ID                         | Location Description                     |
|--------------------------|----------------------------|--|
| Air Quality              | AMS6 <sup>(2)</sup>        | Dragonair/CNAC (Group) Building          |
|                          | AMS7B <sup>(1)(2)(3)</sup> | 3RS Site Office                          |
| Noise                    | NMS2 <sup>(4)(7)</sup>     | Seaview Crescent                         |
|                          | NMS3C <sup>(4)(5)(6)</sup> | Ying Tung Estate Refuse Collection Point |

Remarks:

- (1) Air quality monitoring at AMS7B have been undertaking by the ET for Contract No. HY/2013/04 since 1 October 2018.
- (2) The ET of this Contract should conduct impact air quality monitoring at the Air Monitoring Station listed in the table as part of EM&A programme according to the latest notification from ENPO when the monitoring station(s) is/are no longer covered by another ET of the HZMB project.
- (3) The original monitoring location was at Hong Kong SkyCity Marriott Hotel (AMS7). As the permission to carry out air quality monitoring at Hong Kong SkyCity Marriott Hotel was not granted after 31 January 2015, the monitoring location was relocated to Chu Kong Air-Sea Union Transportation Co. Ltd. (AMS7A) from 5 February 2015 to 30 December 2015. The alternative monitoring location at Chu Kong Air-Sea Union Transportation Co. Ltd. was approved by EPD on 5 February 2015. However, AMS7A was relocated back to its original location (AMS7-Hong Kong SkyCity Marriott Hotel) on 30 December 2015. The relocation of air quality monitoring location, AMS7A, back to AMS7 was approved by EPD on 21 December 2015. As the

permission to carry out air quality monitoring at Hong Kong SkyCity Marriott Hotel was not granted after the end of January 2018, as such, a proposal for the monitoring location relocated to 3RS Site Office(AMS7B) was justified by the ET Leader for Contract No. HY/2013/01 on 22 January 2018; verified by the IEC on 24 January 2018; and submitted to EPD on 30 January 2018, and the AQM has been carrying out at AMS7B with EPD's consent since 6 February 2018.

- (4) The ET of this Contract should conduct impact noise monitoring at the Noise Monitoring Station listed in the table as part of EM&A programme according to the latest notification from ENPO when the monitoring station(s) is/are no longer covered by another ET of the HZMB project.
- (5) Limit Level for schools will be applied for NMS3C. Day time noise Limit Level of 70 dB(A) applies to education institutions, while 65 dB(A) applies during the school examination period.
- (6) Noise Monitoring at NMS3C has been undertaking by the ET for Contract No. HY/2013/04 since 20 August 2018.
- (7) Noise Monitoring at NMS2 has been undertaking by the ET for Contract No. HY/2013/04 since 1 October 2018.

2.1.5 The water quality monitoring works for the Contract before 1 September 2017 are covered by Contract No. HY/2010/02 Hong Kong-Zhuhai-Macao Bridge HKBCF – Reclamation Works. The water quality works under Contract No. HY/2010/02 Hong Kong-Zhuhai-Macao Bridge HKBCF – Reclamation Works were suspended from 1 September 2017. Water quality monitoring works are covered by the ET of Contract No. HY/2013/01 from 1 September 2017 to 30 September 2018. The ET of Contract No. HY/2013/04 are required and continues the same implementation of water quality monitoring works commencing since 1 October 2018. A total of twenty-one stations (nine Impact Stations (IS), seven Sensitive Receiver Stations (SR) and five Control/Far Field Stations (CS)) are covered by the current EM&A programme.

2.1.6 The water quality monitoring stations at CS(Mf)3 (Coordinate: 809989E, 821117N), IS10 (Coordinate: 812577E, 820670N) and SR5 (811489E, 820455N) have been occupied by the marine work of a designated project - Expansion of Hong Kong International Airport into a Three-Runway System (3RS Project). The alternative water quality monitoring station at CS(Mf)3(N) (Coordinate: 808814E, 822355N), IS10(N) (Coordinate: 812942E, 820881N) and SR5(N) (812569E, 8201475N) were justified and verified by the ET Leader for Contract No. HY/2010/02 and the IEC respectively on 24 March 2017 and it was approved by EPD on 12 May 2017.

2.1.7 The impact water quality monitoring requirements are detailed in the monthly EM&A Reports prepared by Contract No. HY/2013/04 since 1 October 2018. If exceedance(s) at these survey transect(s) is/are recorded by the ET of the Contract or referred by the other ET under the HZMB project to the Contract, the ET of the Contract will carry out an investigation and findings will be reported in the monthly EM&A Report.

2.1.8 **Table 2.2** and **Figure 2.2** show the locations of water quality monitoring stations.

**Table 2.2 Impact Water Quality Monitoring Stations**

| Station  | Description                                       | East   | North  |
|----------|---|--------|--------|
| IS5      | Impact Station (Close to HKBCF construction site) | 811579 | 817106 |
| IS(Mf)6  | Impact Station (Close to HKBCF construction site) | 812101 | 817873 |
| IS7      | Impact Station (Close to HKBCF construction site) | 812244 | 818777 |
| IS8      | Impact Station (Close to HKBCF construction site) | 814251 | 818412 |
| IS(Mf)9  | Impact Station (Close to HKBCF construction site) | 813273 | 818850 |
| IS10     | Impact Station (Close to HKBCF construction site) | 812577 | 820670 |
| IS10(N)* | Impact Station (Close to HKBCF construction site) | 812942 | 820881 |
| IS(Mf)11 | Impact Station (Close to HKBCF construction site) | 813562 | 820716 |
| IS(Mf)16 | Impact Station (Close to HKBCF construction site) | 814328 | 819497 |
| IS17     | Impact Station (Close to HKBCF construction site) | 814539 | 820391 |
| SR3(N) ^ | Sensitive receivers (San Tau SSSI)                | 810689 | 816591 |

|             |  |        |        |
|-------------|--|--------|--------|
| SR4(N)      | Sensitive receivers (Tai Ho)                                 | 814705 | 817859 |
| SR5         | Sensitive receivers (Artificial Reef in NE Airport)          | 811489 | 820455 |
| SR5(N)*     | Sensitive receiver (Artificial Reef in NE Airport)           | 812569 | 821475 |
| SR6         | Sensitive receivers (Sha Chau and Lung Kwu Chau Marine Park) | 805837 | 821818 |
| SR7         | Sensitive receivers (Tai Mo Do)                              | 814293 | 821431 |
| SR10A(N) ^  | Sensitive receivers (Ma Wan FCZ) 1                           | 823644 | 823484 |
| SR10B(N2) ^ | Sensitive receivers (Ma Wan FCZ) 2                           | 823689 | 823159 |
| CS(Mf)3     | Control Station  | 809989 | 821117 |
| CS(Mf)3(N)* | Control Station  | 808814 | 822355 |
| CS(Mf)5     | Control Station  | 817990 | 821129 |
| CS4         | Control Station  | 810025 | 824004 |
| CS6         | Control Station  | 817028 | 823992 |
| CSA         | Control Station  | 818103 | 823064 |

Remarks:

\* Alternative water quality monitoring stations at CS(Mf)3(N), SR5(N) and IS10(N) were justified and verified by the ET Leader for Contract No. HY/2010/02 and the IEC respectively on 24 March 2017 and it was approved by EPD on 12 May 2017.

^ Alternative water quality monitoring stations at SR3, SR10A and SR10B(N) were justified by the ET Leader on 8 November 2017 and verified by IEC on 13 November 2017; and submitted to EPD on 29 November 2017 and it was approved by EPD on 22 December 2017.

- 2.1.9 The dolphin monitoring works for the Contract before 1 September 2017 are covered by Contract No. HY/2010/02 Hong Kong-Zhuhai-Macao Bridge HKBCF – Reclamation Works. The dolphin monitoring works under Contract No. HY/2010/02 Hong Kong-Zhuhai-Macao Bridge HKBCF – Reclamation Works were suspended from 1 September 2017. The ET of Contract No. HY/2013/01 (September 2018) and the ET of Contract No. HY/2013/04 (since 1 October 2018) are required to conduct dolphin monitoring at the twenty-four transects. The monitoring requirements are detailed in the correspondent monthly EM&A Reports prepared by Contract No. HY/2013/04.
- 2.1.10 The dolphin monitoring should adopt line-transect vessel survey method. The survey follows pre-set and fixed transect lines in the two areas defined by AFCD as: Northeast Lantau survey area; and Northwest Lantau survey area. The change of transect lines 2, 3, 4, 5, 6 and 7 and new vessel-based transect line 24 for dolphin monitoring have been proposed due to the marine work of a designated project - Expansion of Hong Kong International Airport into a Three-Runway System (3RS Project). It was justified and verified by the ET Leader for Contract No. HY/2010/02 and the IEC respectively on 24 March 2017 and it was approved by EPD on 12 May 2017.
- 2.1.11 The co-ordinates for the transect lines showing the transect lines and are shown in **Table 2.3** and **Figure 2.3** shows the layout map.

**Table 2.3 Impact Dolphin Monitoring Line Transect Co-ordinates**

| Transect ID | HK Grid System |        |
|-------------|----------------|--------|
|             | East           | North  |
| 1*          | 804671         | 815456 |
|             | 804671         | 831404 |
| 2           | 805476         | 820800 |
|             | 805476         | 826654 |
| 3           | 806464         | 821150 |
|             | 806464         | 822911 |
| 4           | 807518         | 821500 |
|             | 807518         | 829230 |
| 5           | 808504         | 821850 |
|             | 808504         | 828602 |
| 6           | 809490         | 822150 |
|             | 809490         | 825352 |
| 7           | 810499         | 822000 |
|             | 810499         | 824613 |
| 8*          | 811508         | 821123 |
|             | 811508         | 824254 |
| 9*          | 812516         | 821303 |
|             | 812516         | 824254 |
| 10*         | 813525         | 820827 |
|             | 813525         | 824657 |
| 11#         | 814556         | 818853 |
|             | 814556         | 820992 |
| 12          | 815542         | 818807 |
|             | 815542         | 824882 |
| 13          | 816506         | 819480 |
|             | 816506         | 824859 |
| 14          | 817537         | 820220 |
|             | 817537         | 824613 |
| 15          | 818568         | 820735 |
|             | 818568         | 824433 |
| 16          | 819532         | 821420 |
|             | 819532         | 824209 |
| 17          | 820451         | 822125 |
|             | 820451         | 823671 |
| 18          | 821504         | 822371 |
|             | 821504         | 823761 |
| 19          | 822513         | 823268 |
|             | 822513         | 824321 |
| 20          | 823477         | 823402 |
|             | 823477         | 824613 |
| 21          | 805476         | 827081 |
|             | 805476         | 830562 |
| 22          | 806464         | 824033 |
|             | 806464         | 829598 |
| 23          | 814559         | 821739 |
|             | 814559         | 824768 |
| 24          | 805476         | 815900 |
|             | 805476         | 819100 |

Remarks:

- (a) \* Due to the presence of deployed silt curtain systems at the site boundaries of the Contract, some of the transect lines shown in Figure 5.1 could not be fully surveyed during the regular survey. Transect 10 is reduced from 6.4km to approximately 3.6km in length due to the HKBCF construction site. Therefore the total transect length for both NEL and NWL combined is reduced to approximately 108km
- (b) # Coordinates for transect lines 1, 8, 9 and 11 have been updated in respect to the Proposal for Alteration of Transect Line for Dolphin Monitoring approved by EPD on 19 August 2015.
- (c) The change of transect lines 2, 3, 4, 5, 6 and 7 and new vessel-based transect line 24 for dolphin monitoring have been proposed due to the marine work of a designated project-Expansion of Hong Kong International Airport into a Three-Runway System (3RS Project). It was justified and verified by the ET Leader for Contract No. HY/2010/02 and the IEC respectively on 24 March 2017 and it was approved by EPD on 12 May 2017.

- (d) Due to marine work of the Expansion of Hong Kong International Airport into a Three-Runway System (3RS Project), original transect lines of dolphin monitoring 2, 3, 4, 5, 6 and 7 are enclosed by works boundary of 3RS Project. Alternative dolphin monitoring transect lines 2, 3, 4, 5, 6, 7 and 24 are adopted starting from 17 May 2017 to replace the original transect lines.

## 2.2 Monitoring Requirements

- 2.2.1 The monitoring requirements, monitoring equipment, monitoring parameters, frequency and duration, monitoring methodology, monitoring schedule, meteorological information are detailed in the correspondent monthly EM&A report prepared by Contract No. HY/2013/04.

## 2.3 Action and Limit Levels

- 2.3.1 The Action and Limit Level for 1-hr TSP and 24-hr TSP are provided in **Table 2.4** and **Table 2.5**, respectively.

**Table 2.4 Action and Limit Levels for 1-hour TSP**

| Monitoring Station                            | Action Level, $\mu\text{g}/\text{m}^3$ | Limit Level, $\mu\text{g}/\text{m}^3$ |
|---|--|---------------------------------------|
| AMS6 – Dragonair/CNAC (Group) Building (HKIA) | 360                                    | 500                                   |
| AMS7B – 3RS Site Office                       | 370                                    |                                       |

**Table 2.5 Action and Limit Levels for 24-hour TSP**

| Monitoring Station                            | Action Level, $\mu\text{g}/\text{m}^3$ | Limit Level, $\mu\text{g}/\text{m}^3$ |
|---|--|---------------------------------------|
| AMS6 – Dragonair/CNAC (Group) Building (HKIA) | 173                                    | 260                                   |
| AMS7B – 3RS Site Office                       | 183                                    |                                       |

- 2.3.2 The Action and Limit Levels for construction noise are defined in **Table 2.6**.

**Table 2.6 Action and Limit Level for Construction Noise**

| Monitoring Station   | Time Period                        | Action Level                               | Limit Level  |
|----------------------|------------------------------------|--|--------------|
| NMS2                 | 0700-1900 hours on normal weekdays | When one documented complaint is received. | 75 dB(A)     |
| NMS3C <sup>(i)</sup> |                                    |  | 70/65 dB(A)* |

Notes :

If works are to be carried out during restricted hours, the conditions stipulated in the construction noise permit issued by the Noise Control Authority have to be followed.

(i) Noise monitoring at NMS3C has been undertaken by the ET for Contract No. HY/2013/04 since 20 August 2018.

\* Reduce to 70 dB(A) for schools and 65 dB(A) during school examination period. The Limit Level for schools will be applied for NMS3C. Daytime noise Limit Level of 70 dB(A) applies to education institutions, while 65 dB(A) applies during the school examination period.

- 2.3.3 The Action and Limit Levels for water quality are provided in **Table 2.7**.

**Table 2.7 Action and Limit Levels for Water Quality**

| Parameters  | Action  | Limit  |
|---|---|--|
| DO in mg L <sup>-1</sup><br>(Surface, Middle & Bottom)                                    | Surface and Middle<br>5.0<br>Bottom<br>4.7  | Surface and Middle<br>4.2 (except 5 mg/L for FCZ)<br>Bottom<br>3.6   |
| SS in mg L <sup>-1</sup> (depth-averaged) at all monitoring stations and control stations | 23.5 and 120% of upstream control station's SS at the same tide of the same day*        | 34.4 and 130% of upstream control station's SS at the same tide of the same day and 10mg/L for WSD Seawater intakes* |
| Turbidity in NTU<br>(depth-averaged)  | 27.5 and 120% of upstream control station's turbidity at the same tide of the same day* | 47.0 and 130% of upstream control station's turbidity at the same tide of the same day*                              |

\* Remarks: Reference is made to EPD approval of adjustment of water quality assessment criteria issued and became effective on 18 February 2013.

- Notes:
1. "depth-averaged" is calculated by taking the arithmetic means of reading of all three depths.
  2. For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits.
  3. For turbidity, SS, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.
  4. All the figures given in the table are used for reference only and the EPD may amend the figures whenever it is considered as necessary.
  5. The 1%-ile of baseline data for dissolved oxygen (surface and middle) and dissolved oxygen (bottom) are 4.2 mg/L and 3.6 mg/L respectively.

2.3.4 The Action and Limit Levels for Chinese White Dolphin Monitoring are provided in **Table 2.8** and **Table 2.9**, respectively.

**Table 2.8 Action and Limit Levels for Chinese White Dolphin Monitoring - Approach to Define Action Level (AL) and Limit Level (LL)**

|              | North Lantau Social Cluster  |  |
|--------------|--|--|
|              | NEL  | NWL  |
| Action Level | (STG < 70% of baseline) &<br>(ANI < 70% of baseline)   | (STG < 70% of baseline) &<br>(ANI < 70% of baseline) |
| Limit Level  | [(STG < 40% of baseline) & (ANI < 40% of baseline)] AND<br>[(STG < 40% of baseline) & (ANI < 40% of baseline)] |  |

**Table 2.9 Derived Value of Action Level (AL) and Limit Level (LL) for Chinese White Dolphin Monitoring**

|              | North Lantau Social Cluster                                  |                            |
|--------------|--|----------------------------|
|              | NEL  | NWL                        |
| Action Level | (STG < 4.2) & (ANI < 15.5)                                   | (STG < 6.9) & (ANI < 31.3) |
| Limit Level  | [(STG < 2.4) & (ANI < 8.9)] AND [(STG < 3.9) & (ANI < 17.9)] |                            |

## 2.4 Event Action Plans

- 2.4.1 The Event Actions Plans for air quality, noise, water quality and dolphin monitoring are provided in **Appendix D**.

## 2.5 Mitigation Measures

- 2.5.1 The works site area of Contract No. HY/2013/01 was handed over to the relevant authorities since 24 October 2018, therefore, no environmental mitigation measure is recorded. **Appendix E** lists the recommended mitigation measures and the implementation status.

### 3 Environmental Monitoring and Audit

#### 3.1 Air Quality Monitoring Results

- 3.1.1 In accordance with the Contract Specific EM&A Manual, impact 1-hour Total Suspended Particulates (TSP) monitoring was conducted for at least three times every 6 days, while impact 24-hour TSP monitoring was carried out for at least once every 6 days.
- 3.1.2 Confirmed by ENPO, the air quality monitoring (both 1-hr and 24-hr TSP) have been undertaken by the ET for Contract No. HY/2013/04 at AMS3C respectively since 20 August 2018. The responsible contract for the air quality monitoring at station AMS7B under the EM&A programme for the HZMB HKBCF Project has been changed from Contract No. HY/2013/01 to Contract No. HY/2013/04 since 1 October 2018.
- 3.1.3 Under the influence of the northeast monsoon, the weather of Hong Kong was generally fine in the first two days of December 2018. Affected by a relatively warm and humid maritime airstream, local weather became exceptionally warm in the next two days. The northeast monsoon behind the cold front brought cooler weather together with a few rain patches in mid of December 2018. Under the influence of the intense winter monsoon, local weather became windy with temperatures falling progressively towards the end of the month. The weather was cloudy and cool with a few rain patches of first few days of January 2019. With the monsoon moderating, there were sunny intervals with local temperatures rising gradually in the next two days of January 2019. Affected by the northeast monsoon over the south China coastal areas, it was cooler with some rain patches during mid of January 2019. Under the influence of the dry northeast monsoon and its subsequent replenishment, the weather of Hong Kong turned generally fine and dry with cool in end of January 2019.
- 3.1.4 The monitoring results for AMS6 and AMS7B are reported in the monthly EM&A Reports prepared for Contract Nos. HY/2011/03 and HY/2013/04, respectively.
- 3.1.5 Summary of Action and Limit Level exceedance of 1-hr TSP level and 24-hr TSP level at AMS6 shall be referred to the monthly EM&A Reports (for December 2018 to January 2019) prepared by Contract No. HY/2011/03. There was no Action and Limit Level exceedance of 1-hr TSP level and 24-hr TSP level recorded at AMS7B recorded by the ET of Contract No. HY/2013/04 during the reporting period.

#### 3.2 Noise Monitoring Results

- 3.2.1 In accordance with the Contract Specific EM&A Manual, impact noise monitoring was conducted for at least once per week during the construction phase of the Contract.
- 3.2.2 The monitoring results for NMS2 and NMS3C are reported in the monthly EM&A Reports prepared for Contract No. HY/2013/04. No noise exceedances were recorded at stations NMS2 and NMS3C by the ET of Contract No. HY/2013/04 during the reporting period. The event and action plan is provided in **Appendix D**.

#### 3.3 Water Quality Monitoring Results

- 3.3.1 Impact water quality monitoring was carried out to ensure that any deterioration of water quality was detected, and that timely action was taken to rectify the situation. For impact water quality monitoring, measurement were taken in accordance with the Contract Specific EM&A Manual.
- 3.3.2 The monitoring results for the monitoring stations are reported in the monthly EM&A Reports prepared for Contract No. HY/2013/04.
- 3.3.3 No Action Level and Limit Level exceedances of dissolved oxygen were recorded at mid-ebb tide and mid-flood tide by the ET of Contract No. HY/2013/04 during the reporting period.



- 3.3.4 No Action Level and Limit Level exceedances of turbidity were recorded at mid-ebb tide and mid-flood tide by the ET of Contract No. HY/2013/04 during the reporting period.
- 3.3.5 Four Action Level exceedances of suspended solid were recorded at mid-flood tide on 7 and 12 December 2018 by the ET of Contract No. HY/2013/04 and one Action Level exceedance of suspended solid was recorded at mid-ebb tide on 10 December 2018 by the ET of Contract No. HY/2013/04 during the reporting period. One Limit Level exceedance of suspended solid was recorded at mid-flood tide on 12 December 2018 by the ET of Contract No. HY/2013/04 during the reporting period.
- 3.3.6 For investigations and the findings with respect to December 2018 to January 2019 can be referred to the corresponding monthly EM&A Report prepared for Contract No. HY/2013/04.

## 3.4 Dolphins Monitoring Results

### Data Analysis

- 3.4.1 Distribution Analysis – The line-transect survey data was integrated with the Geographic Information System (GIS) in order to visualize and interpret different spatial and temporal patterns of dolphin distribution using sighting positions. Location data of dolphin groups were plotted on map layers of Hong Kong using a desktop GIS (ArcView® 3.1) to examine their distribution patterns in details. The dataset was also stratified into different subsets to examine distribution patterns of dolphin groups with different categories of group sizes, young calves and activities.
- 3.4.2 Encounter rate analysis – Encounter rates of Chinese white dolphins (number of on-effort sightings per 100 km of survey effort, and total number of dolphins sighted on-effort per 100 km of survey effort) were calculated in NEL and NWL survey areas in relation to the amount of survey effort conducted during each month of monitoring survey. Dolphin encounter rates were calculated in two ways for comparisons with the HZMB baseline monitoring results as well as to AFCD long-term marine mammal monitoring results.
- 3.4.3 Notably, throughout the present quarterly progress report, the previous monitoring data obtained under Contract No. HY/2011/03 (i.e. HKLR03) are referenced and compared to the present quarterly monitoring data collected for the HKBCF-PCB project, as both HKBCF-PCB and HKLR03 project data was collected by the same HKCRP survey team, to ensure 100% consistency in monitoring methodology including vessel survey method as well as various analyses. On the contrary, the previous monitoring data collected under HZMB HKBCF-Reclamation Works contract (Contract No. HY/2010/02) was from a different survey team that have adopted different survey methodology (e.g. two observers and one data recorder under HKBCF-Reclamation Works contract, as compared to one primary observer and one data recorder under HKLR03 and HKBCF-PCB contract). Therefore, the previous HKLR03 monitoring data was adopted for comparison with the present quarterly findings. This approach was also adopted in previous four verified quarterly reports (i.e. EM&A quarterly reports no. 13<sup>th</sup>, 14<sup>th</sup>, 15<sup>th</sup> and 16<sup>th</sup>).
- 3.4.4 Firstly, for the comparison with the HZMB baseline monitoring results, the encounter rates were calculated using primary survey effort alone, and only data collected under Beaufort 3 or below condition would be used for encounter rate analysis. The average encounter rate of sightings (STG) and average encounter rate of dolphins (ANI) were deduced based on the encounter rates from six events during the present quarter (i.e. six sets of line-transect surveys in North Lantau), which was also compared with the one deduced from the six events during the baseline period (i.e. six sets of line-transect surveys in North Lantau).
- 3.4.5 Secondly, the encounter rates were calculated using both primary and secondary survey effort collected under Beaufort 3 or below condition as in AFCD long-term monitoring study. The encounter rate of sightings and dolphins were deduced by dividing the total number of on-effort

sightings (STG) and total number of dolphins (ANI) by the amount of survey effort for the present quarterly period.

- 3.4.6 Quantitative grid analysis on habitat use – To conduct quantitative grid analysis of habitat use, positions of on-effort sightings of Chinese White Dolphins collected during the quarterly impact phase monitoring period were plotted onto 1-km<sup>2</sup> grids among NWL and NEL survey areas on GIS. Sighting densities (number of on-effort sightings per km<sup>2</sup>) and dolphin densities (total number of dolphins from on-effort sightings per km<sup>2</sup>) were then calculated for each 1 km by 1 km grid with the aid of GIS. Sighting density grids and dolphin density grids were then further normalized with the amount of survey effort conducted within each grid. The total amount of survey effort spent on each grid was calculated by examining the survey coverage on each line-transect survey to determine how many times the grid was surveyed during the study period. For example, when the survey boat traversed through a specific grid 50 times, 50 units of survey effort were counted for that grid. With the amount of survey effort calculated for each grid, the sighting density and dolphin density of each grid were then normalized (i.e. divided by the unit of survey effort).
- 3.4.7 The newly-derived unit for sighting density was termed SPSE, representing the number of on-effort sightings per 100 units of survey effort. In addition, the derived unit for actual dolphin density was termed DPSE, representing the number of dolphins per 100 units of survey effort. Among the 1-km<sup>2</sup> grids that were partially covered by land, the percentage of sea area was calculated using GIS tools, and their SPSE and DPSE values were adjusted accordingly. The following formulae were used to estimate SPSE and DPSE in each 1-km<sup>2</sup> grid within the study area:

$$\text{SPSE} = ((S / E) \times 100) / \text{SA}\%$$
$$\text{DPSE} = ((D / E) \times 100) / \text{SA}\%$$

where S = total number of on-effort sightings  
D = total number of dolphins from on-effort sightings  
E = total number of units of survey effort  
SA% = percentage of sea area

- 3.4.8 Behavioural analysis – When dolphins were sighted during vessel surveys, their behaviour was observed. Different activities were categorized (i.e. feeding, milling/resting, traveling, socializing) and recorded on sighting datasheets. This data was then input into a separate database with sighting information, which can be used to determine the distribution of behavioural data with a desktop GIS. Distribution of sightings of dolphins engaged in different activities and behaviours would then be plotted on GIS and carefully examined to identify important areas for different activities of the dolphins.
- 3.4.9 Ranging pattern analysis – Location data of individual dolphins that occurred during the 3-month impact phase monitoring period were obtained from the dolphin sighting database and photo-identification catalogue. To deduce home ranges for individual dolphins using the fixed kernel methods, the program Animal Movement Analyst Extension, was loaded as an extension with ArcView© 3.1 along with another extension Spatial Analyst 2.0. Using the fixed kernel method, the program calculated kernel density estimates based on all sighting positions, and provided an active interface to display kernel density plots. The kernel estimator then calculated and displayed the overall ranging area at 95% UD level.

#### **Summary of Survey Effort and Dolphin Sightings**

- 3.4.10 Impact dolphin monitoring results at all transects in reporting period are reported in the EM&A Reports prepared for Contract No. HY/2013/04.

#### **Action Level / Limit Level Exceedance**

- 3.4.11 The details of the dolphin monitoring exceedances can be referred to in the Quarterly EM&A reports under Contract No. HY/2013/04.

### 3.5 Implementation of Environmental Measures

- 3.5.1 The works site area of Contract No. HY/2013/01 was handed over to the relevant authorities since 24 October 2018, therefore, no environmental mitigation measure is recorded. A summary of the Implementation Schedule of Environmental Mitigation Measures (EMIS) is presented in **Appendix E**.

### 3.6 Advice on the Solid and Liquid Waste Management Status

- 3.6.1 The works site area of Contract No. HY/2013/01 was handed over to the relevant authorities since 24 October 2018 and no chemical waste and general refuse were generated during reporting period.

### 3.7 Environmental Licenses and Permits

- 3.7.1 The work site area of Contract No. HY/2013/01 was handed over to the relevant authorities since 24 October 2018, therefore, no environmental licenses and permits is required in reporting period.

## 4 Summary of Exceedance, Complaint, Notification of Summons and Successful Prosecution

### 4.1 Summary of Exceedance of the Environmental Quality Performance Limit

- 4.1.1 For air quality monitoring, summary of Action and Limit Level exceedance of 1-hour TSP level and 24-hour TSP level at AMS6 are referred to the monthly EM&A report prepared by Contract No. HY/2011/03. No Action and Limit level exceedance of 1-hr TSP level and 24-hr TSP level recorded AMS7B by the Environmental Team of Contract No. HY/2013/04 during the reporting period.
- 4.1.2 There were no Action and Limit Level exceedance for noise recorded at NMS2 and NMS3C by the ET of Contract No. HY/2013/04 during the reporting period.
- 4.1.3 For water quality monitoring, no Action Level and Limit Level exceedance of dissolved oxygen were recorded at mid-ebb tide and mid-flood tide by the ET of Contract No. HY/2013/04 during the reporting period.
- 4.1.4 No Action Level and Limit Level exceedance of turbidity was recorded at mid-ebb tide and mid-flood tide by the ET of Contract No. HY/2013/04 during the reporting period.
- 4.1.5 Four Action Level exceedances of suspended solid were recorded at mid-flood tide on 7 and 12 December 2018 by the ET of Contract No. HY/2013/04 and one Action Level exceedance of suspended solid was recorded at mid-ebb tide on 10 December 2018 by the ET of Contract No. HY/2013/04 during the reporting period. One Limit Level exceedance of suspended solid was recorded at mid-flood tide on 12 December 2018 by the ET of Contract No. HY/2013/04 during the reporting period.
- 4.1.6 Impact dolphin monitoring results at all transects are reported in the EM&A Reports prepared for Contract No. HY/2013/04 during the reporting period.

### 4.2 Summary of Complaints, Notification of Summons and Successful Prosecution

- 4.2.1 There was no complaint received in relation to the environmental impact during the reporting period. The details of cumulative statistics of Environmental Complaints are provide in **Appendix F**.
- 4.2.2 No notification of summons and prosecution was received during the reporting period.
- 4.2.3 Statistics on notifications of summons and successful prosecutions are summarized in **Appendix F**.

## 5 Comments, Recommendations and Conclusion

### 5.1 Comments

- 5.1.1 The works area in Hong Kong-Zhuhai-Macao Bridge was handed over to the relevant authorities since 24 October 2018 and the site area was changed to closed area, no site inspection was conducted for the Contract No. HY/2013/01 in reporting period.
- 5.1.2 A summary of the Implementation Schedule of Environmental Mitigation Measures (EMIS) is presented in **Appendix E**.

### 5.2 Recommendations

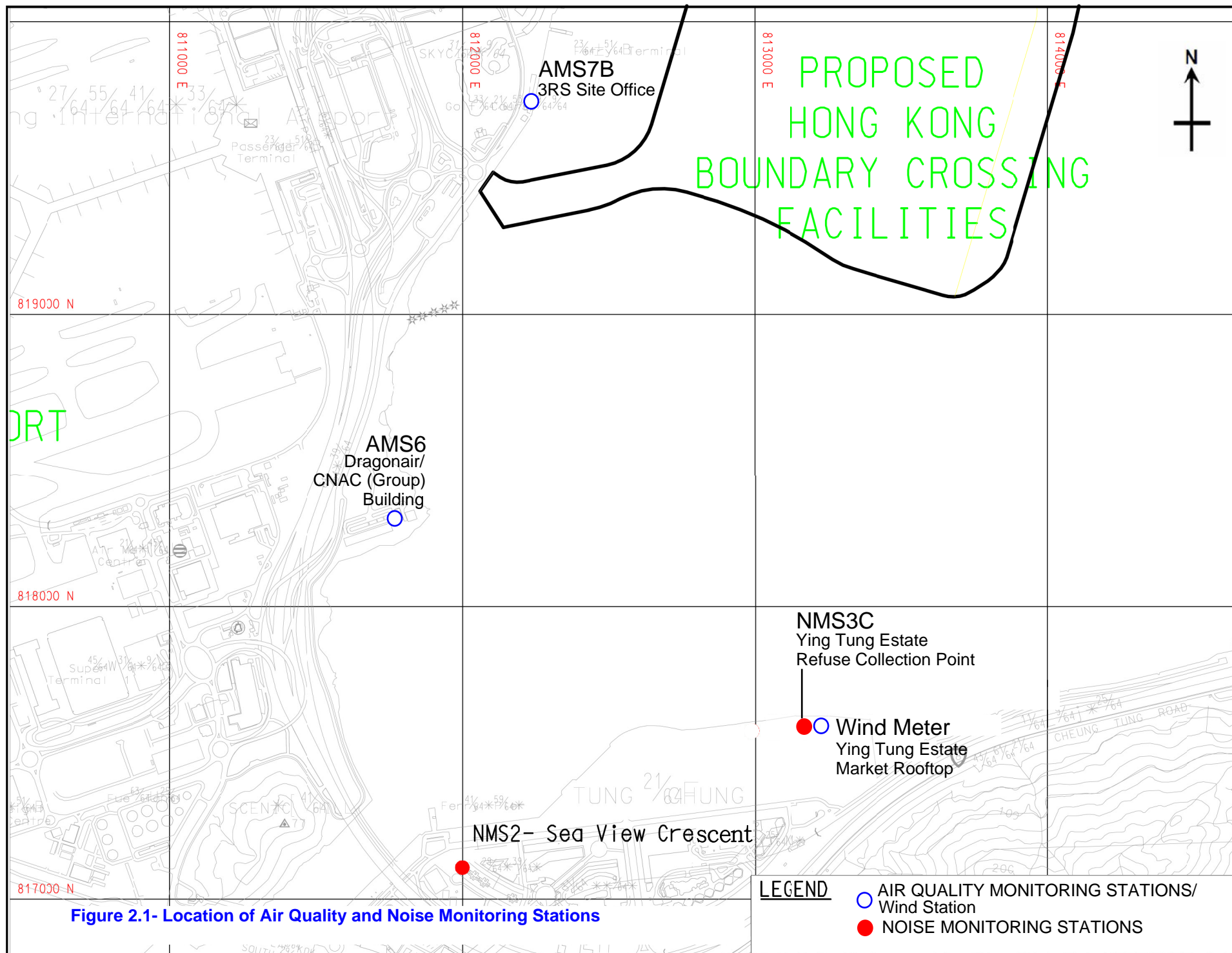
- 5.2.1 The works area in Hong Kong-Zhuhai-Macao Bridge was handed over to the relevant authorities since 24 October 2018 and the site area was changed to closed area. No particular recommendation was advised for the improvement of the programme.

### 5.3 Conclusions

- 5.3.1 The site preparation work of the Contract started on 26 September 2014 and the construction works of the Contract commenced on 6 October 2014. The construction works of the Contract No. HY/2013/06 within Contractor No. HY/2013/01 works area commenced on 20 February 2018. This is the eighteenth Quarterly EM&A Report summaries findings of the EM&A works during the reporting period from 1 December 2018 to 31 January 2019 (included the construction works of Contract No. HY/2013/06 within Contract No. HY/2013/01 works area). The works area in Hong Kong-Zhuhai-Macao Bridge was handed over to the owner since 24 October 2018.
- 5.3.2 For air quality monitoring, summary of Action and Limit Level exceedance of 1-hour TSP level and 24-hour TSP level at AMS6 are referred to the monthly EM&A report prepared by Contract No. HY/2011/03. No Action and Limit level exceedance of 1-hr TSP level and 24-hr TSP level recorded AMS7B by the Environmental Team of Contract No. HY/2013/04 during the reporting period. Summary of Action and Limit Level exceedance of 1-hr TSP level and 24-hr TSP level at AMS7B shall be referred to the monthly EM&A report prepared by Contract No. HY/2013/04 – Hong Kong-Zhuhai-Macao Bridge HKBCF - Infrastructure Works Stage II (Southern Portion) since 1 October 2018.
- 5.3.3 For construction noise, no Action and Limit Level exceedance for noise recorded NMS2 and NMS3C by the ET of Contract No. HY/2013/04 during the reporting period. Summary of Action and Limit Level exceedance at NMS2 and NMS3C shall be referred to the monthly EM&A report prepared by Contract No. HY/2013/04 – Hong Kong-Zhuhai-Macao Bridge HKBCF - Infrastructure Works Stage II (Southern Portion) since 1 October 2018.
- 5.3.4 For water quality monitoring, no Action Level and Limit Level exceedance of dissolved oxygen were recorded at mid-ebb tide and mid-flood tide by the ET of Contract No. HY/2013/04 during the reporting period. No Action Level and Limit Level exceedances of turbidity was recorded at mid-ebb tide and mid-flood tide by the ET of Contract No. HY/2013/04 during the reporting period. Four Action Level exceedances of suspended solid were recorded at mid-flood tide on 7 and 12 December 2018 by the ET of Contract No. HY/2013/04 and one Action Level exceedance of suspended solid was recorded at mid-ebb tide on 10 December 2018 by the ET of Contract No. HY/2013/04 during the reporting period. One Limit Level exceedance of suspended solid was recorded at mid-flood tide on 12 December 2018 by the ET of Contract No. HY/2013/04 during the reporting period. Summary of Action and Limit Level exceedance for water quality monitoring shall be referred to the monthly EM&A report prepared by Contract No. HY/2013/04 – Hong Kong-Zhuhai-Macao Bridge HKBCF - Infrastructure Works Stage II (Southern Portion) since 1 October 2018.
- 5.3.5 Impact dolphin monitoring results at all transects are reported in the EM&A Reports prepared for Contract No. HY/2013/04 during reporting period.
- 5.3.6 The works area in Hong Kong-Zhuhai-Macao Bridge was handed over to the relevant authorities since 24 October 2018 and the site area was changed to closed area, no site inspection was conducted for the Contract No. HY/2013/01 during reporting period. Landscape Checklist is shown in **Appendix A**.
- 5.3.7 There was no complaint received in relation to the environmental impact during the reporting period.
- 5.3.8 No notification of summons and successful prosecution was received during the reporting period.

## FIGURES

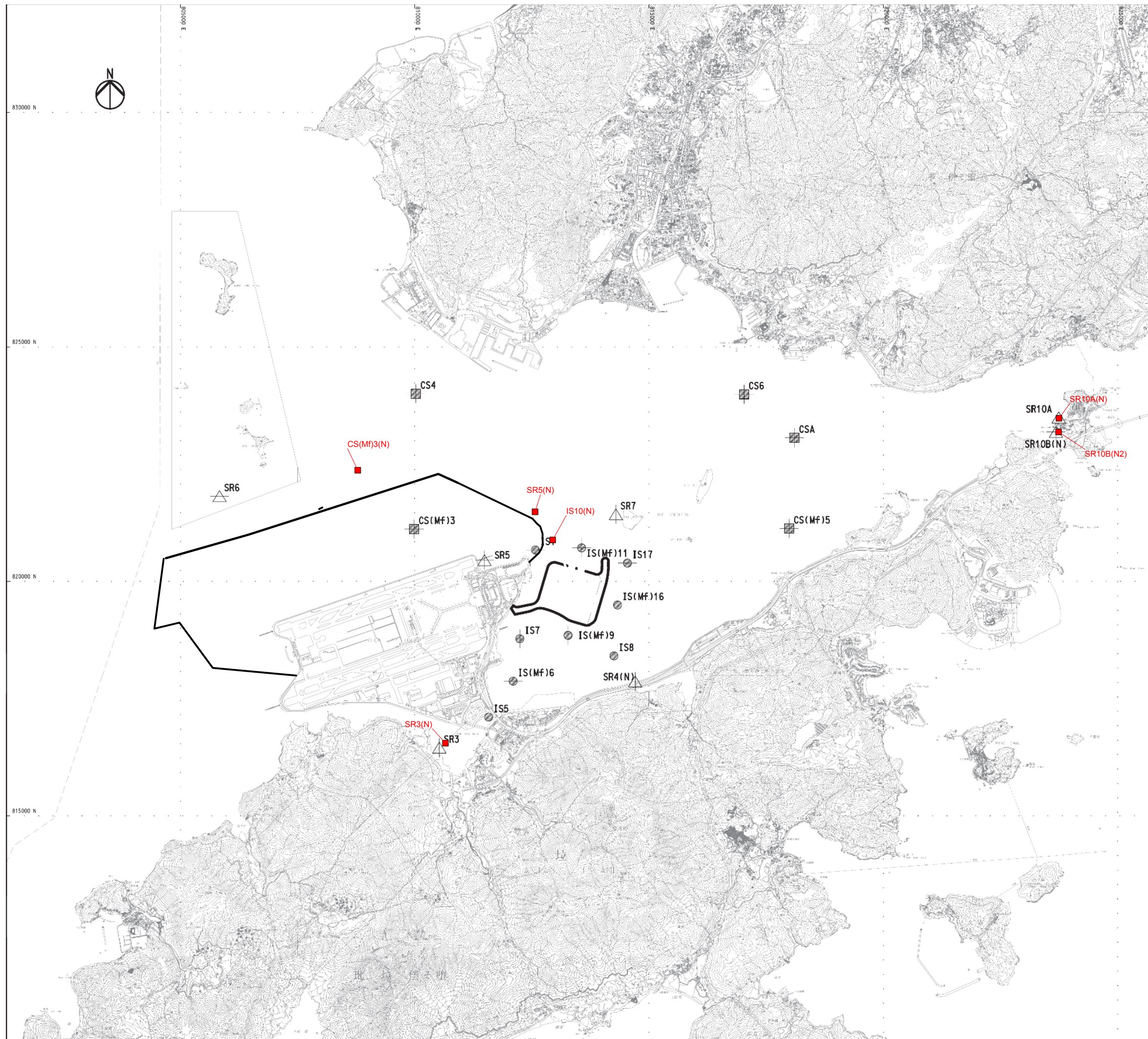
---



**Figure 2.1- Location of Air Quality and Noise Monitoring Stations**

**LEGEND**

- AIR QUALITY MONITORING STATIONS/  
Wind Station
- NOISE MONITORING STATIONS



| Station    | East   | North  |
|------------|--------|--------|
| IS5        | 811579 | 817106 |
| IS(Mf)6    | 812101 | 817873 |
| IS7        | 812244 | 818777 |
| IS8        | 814251 | 818412 |
| IS(Mf)9    | 813273 | 818850 |
| IS10(N)    | 812942 | 820881 |
| IS(Mf)11   | 813562 | 820716 |
| IS(Mf)16   | 814328 | 819497 |
| IS17       | 814539 | 820391 |
| SR3(N)     | 810689 | 816591 |
| SR4(N)     | 814705 | 817859 |
| SR5(N)     | 812569 | 821475 |
| SR6        | 805837 | 821818 |
| SR7        | 814293 | 821431 |
| SR10A(N)   | 823644 | 823484 |
| SR10B(N2)  | 823689 | 823159 |
| CS(Mf)3(N) | 808814 | 822355 |
| CS(Mf)5    | 817990 | 821129 |
| CS4        | 810025 | 824004 |
| CS6        | 817028 | 823992 |
| CSA        | 818103 | 823064 |

Figure 2.2 – LOCATION OF WATER QUALITY MONITORING STATIONS



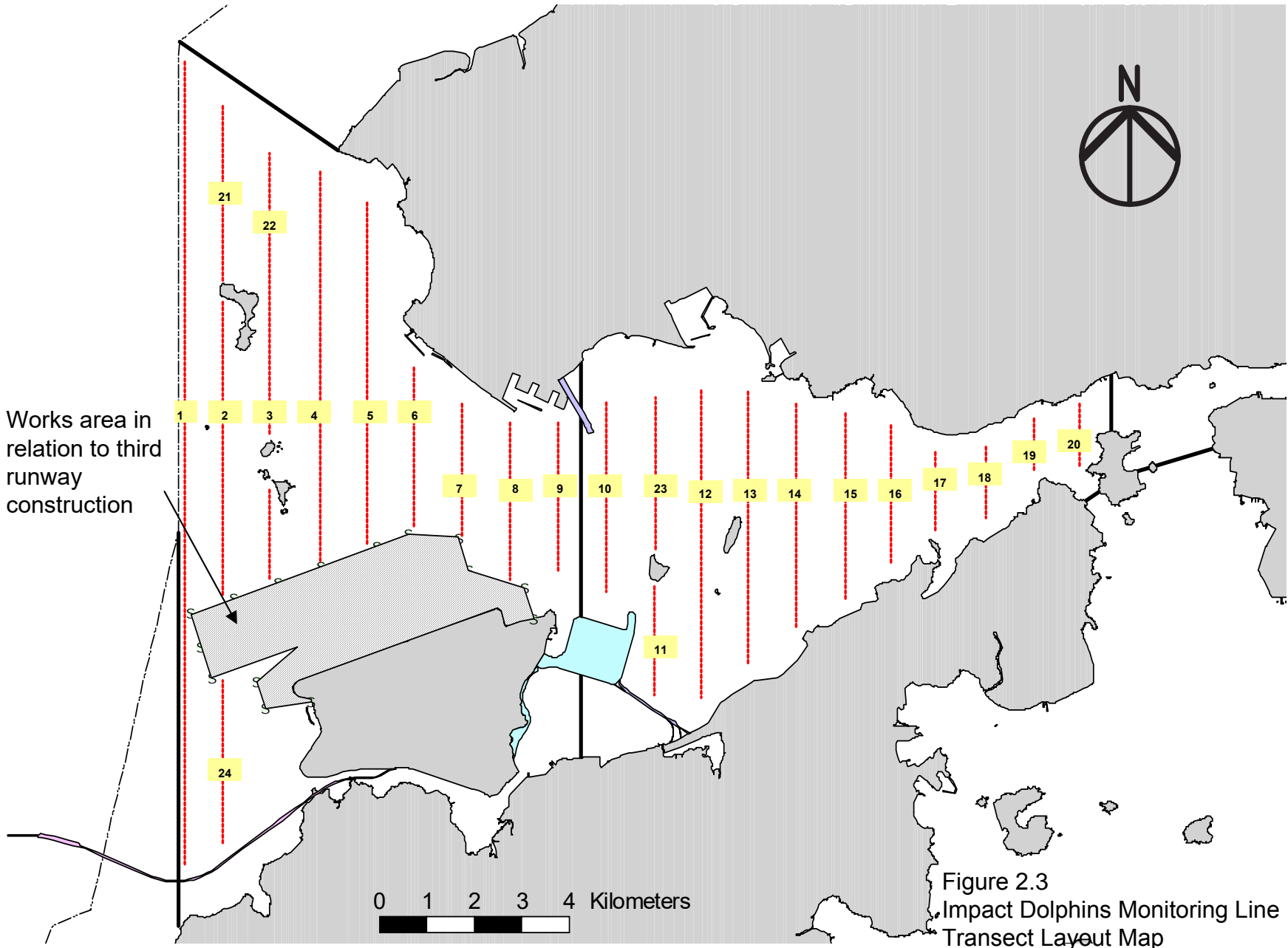


Figure 2.3  
Impact Dolphins Monitoring Line  
Transect Layout Map

# APPENDIX A

---

## Landscape Checklist

**Covering Period:** No.01: 24 Oct 2018 to 23 Dec 2018 **Reported By:** Keith Chau

**Time:** --- **Weather Condition:** ---

|          |  | N/A or not observed      | Yes                                 | No                       | Remarks / Photo |
|----------|--|--------------------------|-------------------------------------|--------------------------|-----------------|
| <b>1</b> | <b>At-grade planting west of Passenger Clearance Building</b>  |                          |                                     |                          |                 |
| 1.1      | Is watering provided to all plants to ensure satisfactory growth and health (manual and automatic irrigation)?   | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Remark [1]      |
| 1.2      | Are tree stakes, guys and ties provided properly for safety and avoid chaffing of bark?  | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Remark [1]      |
| 1.3      | Are trees or limb overhanging branches pruned?   | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Remark [1]      |
| 1.4      | After exceptional weather conditions, are proper action implemented to replace dead plants, repair damaged plants, bed in all plants that have blown over, firm up all other plants and immediately thereafter, remove dead plants and plant debris from the site? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Remark [1]      |
| 1.5      | Are litter and debris removed?   | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Remark [1]      |
| 1.6      | Are planting areas matched with the approved landscape plan?   | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Remark [1]      |
| 1.7      | Is planting pattern matched with the approved landscape plan?  | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Remark [1]      |
| 1.8      | Are planting locations and spacing matched with the approved landscape plan?   | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Remark [1]      |
| 1.9      | Are the planting species on site matched with Figure 3.6 of the approved landscape plan?   | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Remark [1]      |
| 1.10     | Are the plants in satisfied condition?   | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Remark [1]      |
| <b>2</b> | <b>At-grade planting east of Passenger Clearance Building</b>  |                          |                                     |                          |                 |
| 2.1      | Is watering provided to all plants to ensure satisfactory growth and health (manual and automatic irrigation)?   | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Remark [1]      |
| 2.2      | Are tree stakes, guys and ties provided properly for safety and avoid chaffing of bark?  | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Remark [1]      |
| 2.3      | Are trees or limb overhanging branches pruned?   | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Remark [1]      |
| 2.4      | After exceptional weather conditions, are proper action implemented to replace dead plants, repair damaged plants, bed in all plants that have blown over, firm up all other plants and immediately thereafter, remove dead plants and plant debris from the site? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Remark [1]      |
| 2.5      | Are litter and debris removed?   | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Remark [1]      |
| 2.6      | Are planting areas matched with the approved landscape plan?   | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Remark [1]      |
| 2.7      | Is planting pattern matched with the approved landscape plan?  | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Remark [1]      |
| 2.8      | Are planting locations and spacing matched with the approved landscape plan?   | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Remark [1]      |
| 2.9      | Are the planting species on site matched with Figure 3.6 of the approved landscape plan?   | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Remark [1]      |
| 2.10     | Are the plants in satisfied condition?   | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Remark [1]      |

| <b>3</b> | <b>Planting in Outdoor Planters of Passenger Clearance Building</b>  | <b>N/A or not observed</b> | <b>Yes</b>                          | <b>No</b>                | <b>Remarks / Photo</b> |
|----------|--|----------------------------|-------------------------------------|--------------------------|------------------------|
| 3.1      | Is watering provided to all plants to ensure satisfactory growth and health (manual and automatic irrigation)?   | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Remark [1]             |
| 3.2      | Are tree stakes, guys and ties provided properly for safety and avoid chaffing of bark?  | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Remark [1]             |
| 3.3      | Are trees or limb overhanging branches pruned?   | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Remark [1]             |
| 3.4      | After exceptional weather conditions, are proper action implemented to replace dead plants, repair damaged plants, bed in all plants that have blown over, firm up all other plants and immediately thereafter, remove dead plants and plant debris from the site? | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Remark [1]             |
| 3.5      | Are litter and debris removed?   | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Remark [1]             |
| 3.6      | Are planting areas matched with the approved landscape plan?   | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Remark [1]             |
| 3.7      | Is planting pattern matched with the approved landscape plan?  | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Remark [1]             |
| 3.8      | Are planting locations and spacing matched with the approved landscape plan?   | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Remark [1]             |
| 3.9      | Are the planting species on site matched with Figure 3.6 of the approved landscape plan?   | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Remark [1]             |
| 3.10     | Are the plants in satisfied condition?   | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Remark [1]             |

| <b>4</b> | <b>Planting in Indoor Planters of Passenger Clearance Building</b>   | <b>N/A or not observed</b> | <b>Yes</b>                          | <b>No</b>                | <b>Remarks / Photo</b> |
|----------|--|----------------------------|-------------------------------------|--------------------------|------------------------|
| 4.1      | Is watering provided to all plants to ensure satisfactory growth and health (manual and automatic irrigation)?   | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Remark [1]             |
| 4.2      | Are tree stakes, guys and ties provided properly for safety and avoid chaffing of bark?  | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Remark [1]             |
| 4.3      | Are trees or limb overhanging branches pruned?   | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Remark [1]             |
| 4.4      | After exceptional weather conditions, are proper action implemented to replace dead plants, repair damaged plants, bed in all plants that have blown over, firm up all other plants and immediately thereafter, remove dead plants and plant debris from the site? | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Remark [1]             |
| 4.5      | Are litter and debris removed?   | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Remark [1]             |
| 4.6      | Are planting areas matched with the approved landscape plan?   | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Remark [1]             |
| 4.7      | Is planting pattern matched with the approved landscape plan?  | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Remark [1]             |
| 4.8      | Are planting locations and spacing matched with the approved landscape plan?   | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Remark [1]             |
| 4.9      | Are the planting species on site matched with Figure 3.6 of the approved landscape plan?   | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Remark [1]             |
| 4.10     | Are the plants in satisfied condition?   | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Remark [1]             |

| <b>10</b> | <b>General Document</b>  | <b>N/A or not observed</b> | <b>Yes</b>                          | <b>No</b>                | <b>Remarks / Photo</b> |
|-----------|--|----------------------------|-------------------------------------|--------------------------|------------------------|
| 11.1      | Are the records of watering, fertilizing, weeding, pruning and mowing kept for checking? | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Remark [1]             |

|   |
|---|
| <p><b>Follow up actions for previous Site Audit:</b></p> <p>N/A</p>   |
| <p><b>Observations:</b></p> <p>N/A</p>  |
| <p><b>Corrective Actions (if any):</b></p> <p>N/A</p>   |
| <p><b>Remark:</b></p> <p>[1] This Checklist is prepared based on the information from "Soft Landscape works – Monthly Maintenance Report (16 October 2018 to 15 November 2018" (CSF No.: H2620-CSF-LCJ-CON-007674) and "Soft Landscape works – Monthly Maintenance Report (16 November 2018 to 15 December 2018" (CSF No.: H2620-CSF-LCJ-CON-007662), which prepared by Contractor and submitted to Engineer's Representative.</p>  |
| <p><b>General Conclusion:</b></p> <ol style="list-style-type: none"> <li>1. A standby signal no. 1 was hoisted on 31 October 2018 for 28 hours; a strong wind signal no. 3 was hoisted on 1 November 2018 for 13 hours and 30 minutes; and a standby signal no. 1 was hoisted on 2 November 2018 for six hours during the reporting period.</li> <li>2. A number of trees were affected by Typhoon Manghut (Typhoon signal No.10) on 16 September 2018. Close monitoring and necessary maintenance actions has been carried out. All trees in reasonably good condition.</li> <li>3. All plants (shrubs, ground cover and turf) were in reasonably good condition.</li> <li>4. The establishment works followed the maintenance programme.</li> </ol> |

Reported by (ET's Representative): Keith Chau Title: ET Leader

Signature:  Date: 15 July 2019

Reviewed by (AECOM Landscape Representative): CHAN Pak Kiu Title: RSFO(2)


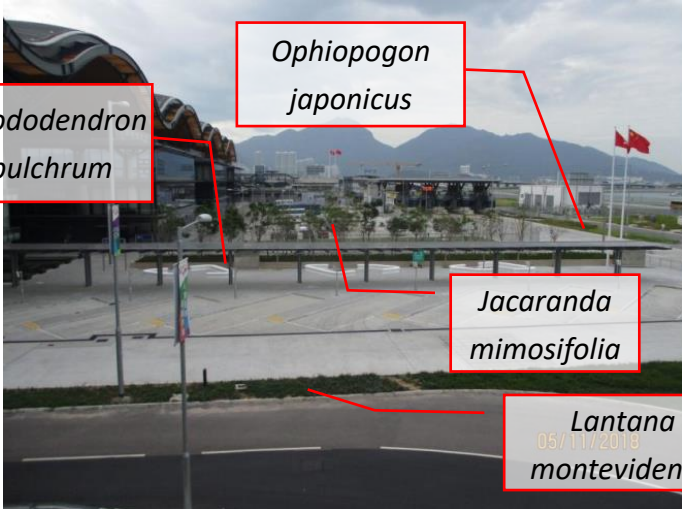

Signature:  Date: 15 JUL 2019


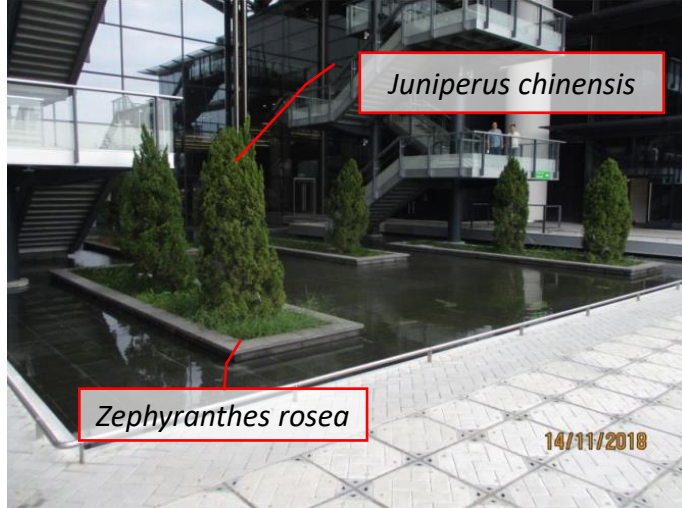
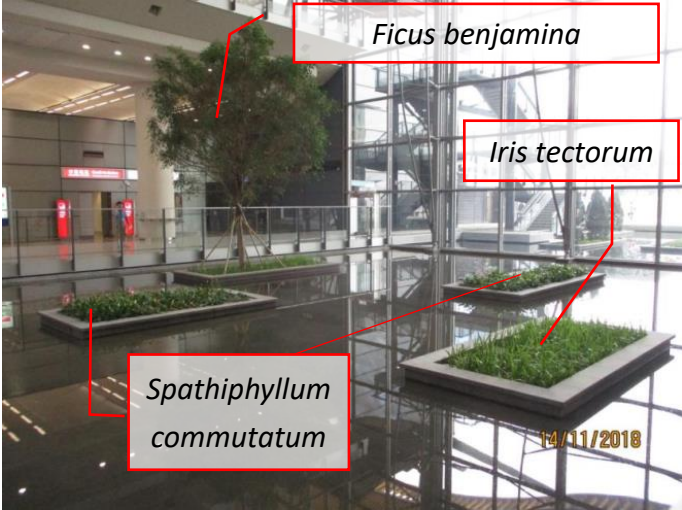
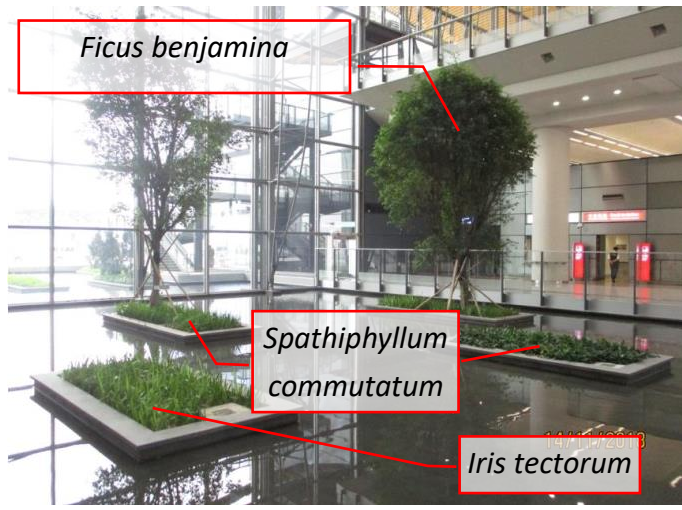
Contractor's Representative: Stephen Tsang Title: Environmental Officer

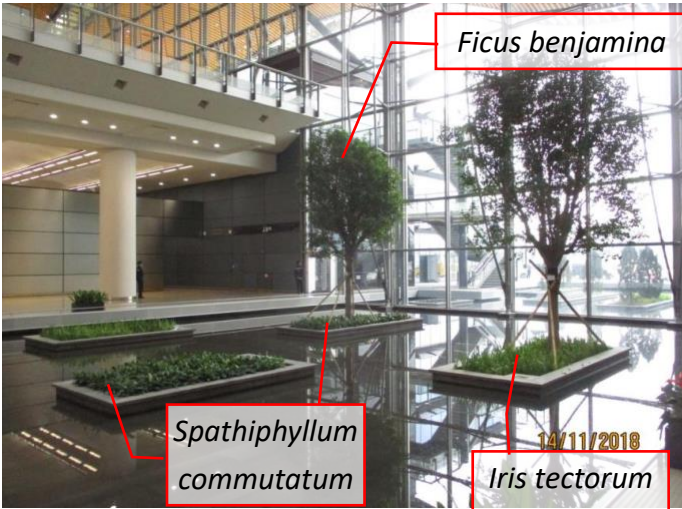
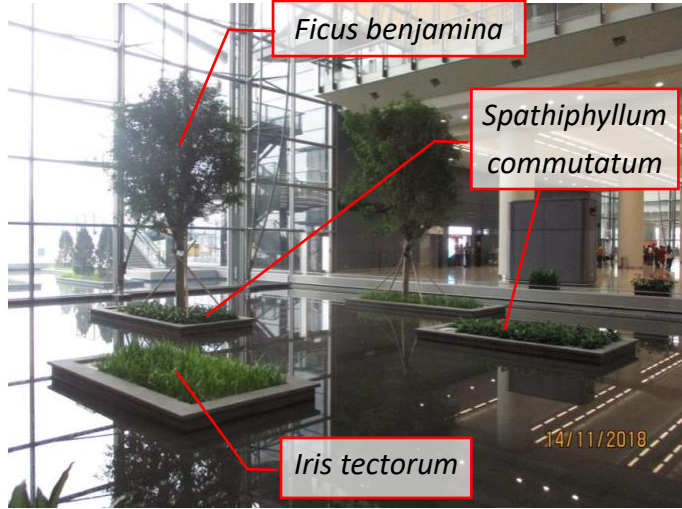
Signature:  Date: 15 July 2019

Checked by (IEC's Representative): Harris Wong Title: ESS

Signature:  Date: 30 July 2019

| Location   | Photo Record [1]   |         |         |  |   |  |
|--|--|---------|---------|--|---|--|
| <p><b>At-grade planting of Passenger Clearance Building</b></p> <table border="1" data-bbox="208 435 439 536"> <tr> <td data-bbox="208 435 322 483">Photo 1</td> <td data-bbox="322 435 439 483">Photo 2</td> </tr> <tr> <td data-bbox="208 483 322 536">Photo 3</td> <td data-bbox="322 483 439 536"></td> </tr> </table> | Photo 1  | Photo 2 | Photo 3 |  |  <p><i>Zoysia sp.</i></p> <p><i>Parthenocissus dalzielii,</i><br/><i>Pyrostegia venusta</i></p> <p>06/11/2018</p> |  <p><i>Rhododendron pulchrum</i></p> <p><i>Ophiopogon japonicus</i></p> <p><i>Jacaranda mimosifolia</i></p> <p><i>Lantana montevidensis</i></p> <p>05/11/2018</p> |
| Photo 1  | Photo 2  |         |         |  |   |  |
| Photo 3  |  |         |         |  |   |  |
|  |  <p><i>Rhododendron pulchrum</i></p> <p><i>Bauhinia variegata</i></p> <p>05/11/2018</p> |         |         |  |   |  |

| Location  | Photo Record [1] |         |   |  |  |   |
|---|------------------|---------|---|--|--|---|
| <p>Planting in Outdoor Planters of Passenger Clearance Building</p> <table border="1" data-bbox="208 435 439 488"> <tr> <td>Photo 4</td> <td>Photo 5</td> </tr> </table>  | Photo 4          | Photo 5 |  <p><i>Juniperus chinensis</i></p> <p><i>Zephyranthes rosea</i></p> <p><i>Wedelia trilobata</i></p> <p>14/11/2018</p> |  <p><i>Juniperus chinensis</i></p> <p><i>Zephyranthes rosea</i></p> <p>14/11/2018</p> |  |   |
| Photo 4   | Photo 5          |         |   |  |  |   |
| <p>Planting in Indoor Planters of Passenger Clearance Building</p> <table border="1" data-bbox="208 922 439 975"> <tr> <td>Photo 6</td> <td>Photo 7</td> </tr> </table> <table border="1" data-bbox="208 975 439 1027"> <tr> <td>Photo 8</td> <td>Photo 9</td> </tr> </table> | Photo 6          | Photo 7 | Photo 8   | Photo 9  |  <p><i>Ficus benjamina</i></p> <p><i>Iris tectorum</i></p> <p><i>Spathiphyllum commutatum</i></p> <p>14/11/2018</p> |  <p><i>Ficus benjamina</i></p> <p><i>Spathiphyllum commutatum</i></p> <p><i>Iris tectorum</i></p> <p>14/11/2018</p> |
| Photo 6   | Photo 7          |         |   |  |  |   |
| Photo 8   | Photo 9          |         |   |  |  |   |

| Location | Photo Record [1]   |   |
|----------|--|---|
|          |  |  |

Note: [1] Extract from “Soft Landscape works – Monthly Maintenance Report (16 October 2018 to 15 November 2018)” (CSF No.: H2620-CSF-LCJ-CON-007674) and “Soft Landscape works – Monthly Maintenance Report (16 November 2018 to 15 December 2018)” (CSF No.: H2620-CSF-LCJ-CON-007662), which prepared by Contractor and submitted to Engineer’s Representative.

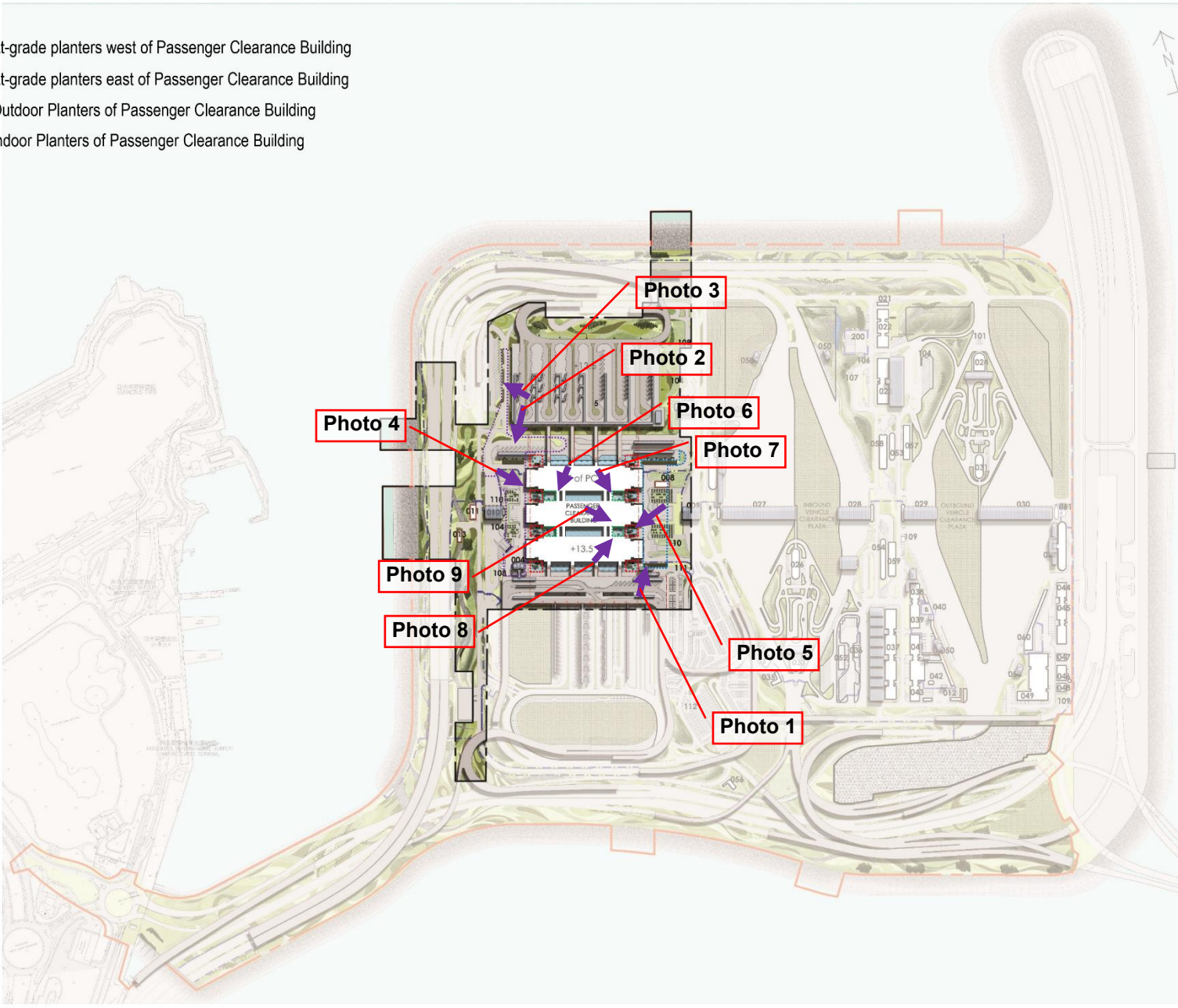


- At-grade planters west of Passenger Clearance Building
- At-grade planters east of Passenger Clearance Building
- Outdoor Planters of Passenger Clearance Building
- Indoor Planters of Passenger Clearance Building

**LEGEND:**

- HKSBC site boundary
- Elevated bridges with bridge pier/decks/ footbridges
- Boundary fence (1m maintenance path on both sides of fence)
- Planting (shrubs & groundcover)
- Hydroseeding
- Multi-purpose Areas (Footpath/ At Grade Carriageway/ Amenity Area)
- Multi-purpose Areas with Granite finish (Footpath/ At Grade Carriageway/ Amenity Area)
- Green roof
- Gentle landscape berm
- Tree planting
- Water features (around and inside PCB area)
- Attenuation pond and bioswale
- Stone swathe feature
- Stone gravel finish (for future development)
- Ancillary building
- Vertical greening

- KEY LOCATION:**
- 001 PASSENGER CLEARANCE BUILDING
  - 002 CAFE/OBSERVATION GUARD ROOMS
  - 003 SHEN FAR ROAD PUBLIC TRANSPORT INTERCHANGE PUBLIC TOILET
  - 004 SHUTTLE BUS KIOSKS
  - 005 WASTE STORAGE AND MATERIAL RECOVERY CHAMBER
  - 006 DEPARTURE COACH KIOSKS
  - 007 ARRIVAL COACH KIOSKS
  - 008 EMERGENCY GENERATOR ROOM
  - 009 EMERGENCY CONTROL CENTRE
  - 010 SEAWATER PUMP HOUSE
  - 011 CAFE/DANGER/GOODS STORE
  - 012 CAFE CUSTOMER DETECTION DOGS DIVISION KIOSK DOG BASE
  - 013 CAFE OUTBOUND CARGO EXAMINATION BUILDING
  - 014 CAFE OUTBOUND PRIVATE CAR EXAMINATION BUILDING
  - 015 ARRIVAL PRIVATE CAR PASSENGER CLEARANCE ANNEX
  - 016 IMMIGRATION BUILDING (ARRIVAL)
  - 017 ARRIVAL PRIVATE CAR KIOSKS
  - 018 DEPARTURE GOODS VEHICLE KIOSKS
  - 019 DEPARTURE PRIVATE CAR KIOSKS
  - 020 IMMIGRATION BUILDING (DEPARTURE)
  - 021 DEPARTURE PRIVATE CAR PASSENGER CLEARANCE ANNEX
  - 022 CAFE INBOUND PRIVATE CAR EXAMINATION BUILDING
  - 023 SHUTTLE BUS COLLECTION POINT
  - 024 SEWAGE PUMPING STATION
  - 025 POLICE WREST STATION
  - 026 CAFE INBOUND CARGO EXAMINATION BUILDING
  - 027 ACCESS BUILDING
  - 028 POLICE BASE
  - 029 AIR STATION CLAM AMBULANCE DEPOT
  - 030 DSH GUARANTEE BUILDING
  - 031 SEM MAINTENANCE BUILDING
  - 032 HIGHWAYS DEPOT AND ADMINISTRATION BUILDING
  - 033 VEHICLE CLEARANCE PLAZA WASTE COLLECTION POINT
  - 034 FRESH WATER PUMPING STATION
  - 035 RECLAIMED WATER PUMPING STATION
  - 036 SEWAGE TREATMENT PLANT
  - 037 ARRIVAL PRIVATE CAR CLEARANCE PLAZA PUBLIC TOILET
  - 038 ARRIVAL GOODS VEHICLE CLEARANCE PLAZA PUBLIC TOILET
  - 039 DEPARTURE GOODS VEHICLE CLEARANCE PLAZA PUBLIC TOILET
  - 040 DEPARTURE PRIVATE CAR VEHICLE CLEARANCE PLAZA PUBLIC TOILET
  - 041 ZONE 3 TRANSFORMER BUILDING
  - 042 ZONE 4 TRANSFORMER BUILDING
  - 043 CAFE OUTBOUND VEHICLE RAY EXAMINATION BUILDING
  - 044 CAFE INBOUND VEHICLE RAY EXAMINATION BUILDING
  - 045 REFINISHED ROAD DRAINAGE PAVEMENT CONTROL ROOM
  - 046 ZONE 2 TRANSFORMER BUILDING
  - 047 CAFE INBOUND VEHICLE RAY SCANNING SYSTEM BUILDING
  - 048 CAFE INBOUND VEHICLE RAY SCANNING SYSTEM BUILDING
  - 049 SEM AND HIGHWAYS MAINTENANCE SUPPORT BUILDING
  - 050 ELEC TRON BUILDING
  - 051 CAFE INBOUND TRAFFIC CONTROL KIOSK
  - 052 CAFE OUTBOUND TRAFFIC CONTROL KIOSK
  - 053 POLICE ENHANCED UNDER VEHICLE SURVEILLANCE SYSTEM (ANCHORING ROOM)
  - 054 POLICE INSPECTION KIOSK
  - 055 DSH SECONDARY SCREENING STATIONS
  - 056 IMMIGRATION GUARD ROOMS
  - 057 CAFE VEHICLE DETENTION AREA GUARD ROOM
  - 058 CAFE MOBILE RAY OPERATION OFFICE (INBOUND CARGO)
  - 059 CAFE MOBILE RAY OPERATION OFFICE (OUTBOUND CARGO)
  - 060 CAFE MOBILE RAY OPERATION OFFICE (INBOUND COACH)
  - 061 CAFE MOBILE RAY OPERATION OFFICE (OUTBOUND COACH / SHUTTLE BUS)
  - 062 IMMIGRATION GUARD ROOMS
  - 063 TAXI QUEUING AREA KIOSK
  - 064 ACCESS CONTROL KIOSKS
  - 065 CAFE VEHICLE DETENTION AREA
  - 066 CAFE MOBILE RAY OPERATION AREA (INBOUND CARGO)
  - 067 CAFE MOBILE RAY OPERATION AREA (OUTBOUND CARGO)
  - 068 CAFE OUTBOUND COACH / SHUTTLE BUS EXAMINATION AREA
  - 069 CAFE MOBILE RAY OPERATION AREA (OUTBOUND COACH / SHUTTLE BUS)
  - 070 CAFE MOBILE RAY OPERATION AREA (INBOUND COACH)
  - 071 CAFE MOBILE RAY OPERATION AREA (INBOUND PRIVATE CAR)
  - 072 CAFE MOBILE RAY OPERATION AREA (INBOUND PRIVATE CAR)
  - 073 HKSBC GOODS VEHICLE PARKING BAYS (ARRIVAL)
  - 074 HKSBC GOODS VEHICLE PARKING BAYS (DEPARTURE)



|         |         |             |          |
|---------|---------|-------------|----------|
| SCALE   | NA      | DATE        | APR 2018 |
| CHECK   | ELK     | DRAWN       | TRT      |
| JOB No. | AECMP01 | DRAWING No. | B.1b     |
|         |         | REV         | -        |

| TREE PLANTING <sup>(1)</sup> |                              |              |                                    |             |
|------------------------------|------------------------------|--------------|------------------------------------|-------------|
| SPECIES CODE                 | BOTANICAL NAME               | CHINESE NAME | SIZE [mm]                          | SPACING [m] |
| AL **                        | <i>Albizia lebeck</i>        | 大葉合歡         | 4000-5000(H) x 3000(SP) x 100(DBH) | 3 - 4       |
| BV                           | <i>Bauhinia variegata</i>    | 宮粉羊蹄甲        | 4000-5000(H) x 3000(SP) x 100(DBH) | 3 - 4       |
| CV                           | <i>Callistemon viminalis</i> | 串錢柳          | 4000-5000(H) x 3000(SP) x 100(DBH) | 3 - 4       |
| CS **                        | <i>Cassia siamea</i>         | 鐵刀木          | 4000-5000(H) x 3000(SP) x 100(DBH) | 3 - 4       |
| GR                           | <i>Grevillea robusta</i>     | 銀樺           | 4000-5000(H) x 3000(SP) x 100(DBH) | 3 - 4       |
| JA                           | <i>Jacaranda mimosifolia</i> | 藍花楸          | 4000-5000(H) x 3000(SP) x 100(DBH) | 3 - 4       |
| JC **                        | <i>Juniperus chinensis</i>   | 龍柏           | 4000-5000(H) x 3000(SP) x 100(DBH) | 3 - 4       |
| TP **                        | <i>Thespesia populnea</i>    | 恒春黃槿         | 4000-5000(H) x 3000(SP) x 100(DBH) | 3 - 4       |

| SHRUB PLANTING <sup>(1)</sup> |   |              |                   |              |
|-------------------------------|---|--------------|-------------------|--------------|
| SPECIES CODE                  | BOTANICAL NAME                          | CHINESE NAME | SIZE [mm]         | SPACING [mm] |
| Aod                           | <i>Aglaiia odorata</i>                  | 米仔蘭          | 700(H) x 500(SP)  | 400          |
| Cha                           | <i>Calliandra haematocephala</i>        | 紅絨球          | 700(H) x 500(SP)  | 400          |
| Fmi **                        | <i>Ficus microcarpa 'golden leaves'</i> | 黃金榕          | 1000(H) x 700(SP) | 600          |
| Ite                           | <i>Iris tectorum</i>                    | 鳶尾           | 300(H) x 200(SP)  | 150          |
| Ich *                         | <i>Ixora chinensis</i>                  | 龍船花          | 500(H) x 400(SP)  | 350          |
| Mar                           | <i>Malva viscus arboreus</i>            | 大紅袍          | 700(H) x 500(SP)  | 450          |
| Mfi                           | <i>Michelia figo</i>                    | 含笑           | 800(H) x 500(SP)  | 400          |
| Pmy                           | <i>Phyllanthus myrtifolius</i>          | 榴梿葉下珠        | 400(H) x 300(SP)  | 250          |
| Rpu                           | <i>Rhododendron pulchrum</i>            | 錦繡杜鵑         | 600(H) x 400(SP)  | 300          |
| Rsi *                         | <i>Rhododendron simsii</i>              | 紅杜鵑          | 600(H) x 400(SP)  | 300          |
| SCO                           | <i>Spathiphyllum commutatum</i>         | 白掌           | 300(H) x 300(SP)  | 200          |
| Sre                           | <i>Strelitzia reginae</i>               | 天堂鳥蕉         | 500(H) x 400(SP)  | 350          |

| GREEN ROOF GROUND COVER PLANTING <sup>(1)</sup> |                             |              |                  |              |
|---|-----------------------------|--------------|------------------|--------------|
| SPECIES CODE                                    | BOTANICAL NAME              | CHINESE NAME | SIZE [mm]        | SPACING [mm] |
| Zan   | <i>Zephyranthes candida</i> | 蔥蓮           | 100(H) x 100(SP) | 100          |

| CLIMBER PLANTING <sup>(1)</sup> |                                 |              |                  |              |
|---------------------------------|---------------------------------|--------------|------------------|--------------|
| SPECIES CODE                    | BOTANICAL NAME                  | CHINESE NAME | SIZE [mm]        | SPACING [mm] |
| Pda                             | <i>Parthenocissus dalzielii</i> | 異葉爬山虎        | 300(H) x 250(SP) | 250          |
| Pve **                          | <i>Pyrostegia venusta</i>       | 炮仗花          | 300(H) x 250(SP) | 250          |

**NOTES:**

<sup>(1)</sup> All proposed plant species and specifications are subject to change during construction to suit the site conditions.

<sup>(2)</sup> Minimum requirement of grass seed mix for hydroseeding shall follow General Specification for Civil Engineering Works Clause 3.26(3).

\* Species native to Hong Kong according to the Hong Kong Herbarium website <<http://www.herbarium.gov.hk>>

\*\* Species which is salt spray tolerant

| GROUND COVER PLANTING <sup>(1)</sup> |                                 |              |                  |              |
|--------------------------------------|---------------------------------|--------------|------------------|--------------|
| SPECIES CODE                         | BOTANICAL NAME                  | CHINESE NAME | SIZE [mm]        | SPACING [mm] |
| Aag                                  | <i>Agave angustifolia</i>       | 狹葉龍舌蘭        | 200(H) x 300(SP) | 200          |
| Aam                                  | <i>Agave americana</i>          | 龍舌蘭          | 100(H) x 100(SP) | 100          |
| Asl                                  | <i>Aglaonema 'Silver King'</i>  | 銀王粗肋草        | 150(H) x 150(SP) | 100          |
| Ave                                  | <i>Alternanthera versicolor</i> | 錦繡莧 紅草       | 100(H) x 100(SP) | 100          |
| Ite                                  | <i>Iris tectorum</i>            | 鳶尾           | 100(H) x 100(SP) | 100          |
| Lmo                                  | <i>Lantana montevidensis</i>    | 鋪地臭金鳳        | 200(H) x 300(SP) | 200          |
| Lsp *                                | <i>Liriope spicata</i>          | 山麥冬          | 100(H) x 100(SP) | 100          |
| Nex *                                | <i>Nephrolepis hirsutula</i>    | 毛葉腎蕨         | 150(H) x 200(SP) | 150          |
| Oja *                                | <i>Ophiopogon japonicus</i>     | 麥冬           | 150(H) x 150(SP) | 100          |
| Rds                                  | <i>Rhoeo discolor</i>           | 紫背萬年青        | 150(H) x 200(SP) | 100          |
| Spo **                               | <i>Synгонium podophyllum</i>    | 合果芋          | 200(H) x 200(SP) | 150          |
| Wtr **                               | <i>Wedelia trilobata</i>        | 蟛蜞菊          | 100(H) x 100(SP) | 100          |
| Zan                                  | <i>Zephyranthes candida</i>     | 蔥蓮           | 100(H) x 100(SP) | 100          |
| Zro                                  | <i>Zephyranthes rosea</i>       | 玫瑰蔥蓮         | 150(H) x 200(SP) | 100          |

| TURFING <sup>(1)</sup> |                   |              |           |
|------------------------|-------------------|--------------|-----------|
| SPECIES CODE           | BOTANICAL NAME    | CHINESE NAME | SIZE [mm] |
| Zja **                 | <i>Zoysia sp.</i> | 朝鮮草          | 25(H)     |

| HYDROSEEDING <sup>(1),(2)</sup> |  |              |
|---------------------------------|--|--------------|
| SPECIES CODE                    | BOTANICAL NAME                                 | CHINESE NAME |
| Cda * **                        | <i>Cynodon dactylon</i>                        | 百慕達草         |
| Pno                             | <i>Paspalum notatum</i>                        | 百喜草          |
| Eop * / Lpe                     | <i>Eremochloa ophiuroides / Lolium perenne</i> | 假儉草 / 黑麥草    |

| INDOOR PLANTING IN PASSENGER CLEARANCE BUILDING <sup>(1)</sup> |                                 |              |                               |             |
|--|---------------------------------|--------------|-------------------------------|-------------|
| SPECIES CODE   | BOTANICAL NAME                  | CHINESE NAME | SIZE [mm]                     | SPACING [m] |
| <b>TREE</b>  |                                 |              |                               |             |
| FB **  | <i>Ficus benjamina</i>          | 垂榕           | 5000(H) x 4000(SP) x 150(DBH) | N.A.        |
| <b>SHRUB</b>   |                                 |              |                               |             |
| Ite  | <i>Iris tectorum</i>            | 鳶尾           | 300(H) x 200(SP)              | 150         |
| SCO  | <i>Spathiphyllum commutatum</i> | 白掌           | 300(H) x 300(SP)              | 200         |



**Covering Period:** No.2: 24 Dec 2018 to 23 Feb 2019 **Reported By:** Keith Chau

**Time:** --- **Weather Condition:** ---

|          |  | N/A or not observed                 | Yes                                 | No                       | Remarks / Photo |
|----------|--|-------------------------------------|-------------------------------------|--------------------------|-----------------|
| <b>1</b> | <b>At-grade planting west of Passenger Clearance Building</b>  |                                     |                                     |                          |                 |
| 1.1      | Is watering provided to all plants to ensure satisfactory growth and health (manual and automatic irrigation)?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Remark [1]      |
| 1.2      | Are tree stakes, guys and ties provided properly for safety and avoid chaffing of bark?  | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Remark [1]      |
| 1.3      | Are trees or limb overhanging branches pruned?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Remark [1]      |
| 1.4      | After exceptional weather conditions, are proper action implemented to replace dead plants, repair damaged plants, bed in all plants that have blown over, firm up all other plants and immediately thereafter, remove dead plants and plant debris from the site? | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | Remark [1]      |
| 1.5      | Are litter and debris removed?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Remark [1]      |
| 1.6      | Are planting areas matched with the approved landscape plan?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Remark [1]      |
| 1.7      | Is planting pattern matched with the approved landscape plan?  | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Remark [1]      |
| 1.8      | Are planting locations and spacing matched with the approved landscape plan?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Remark [1]      |
| 1.9      | Are the planting species on site matched with Figure 3.6 of the approved landscape plan?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Remark [1]      |
| 1.10     | Are the plants in satisfied condition?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Remark [1]      |
| <b>2</b> | <b>At-grade planting east of Passenger Clearance Building</b>  |                                     |                                     |                          |                 |
| 2.1      | Is watering provided to all plants to ensure satisfactory growth and health (manual and automatic irrigation)?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Remark [1]      |
| 2.2      | Are tree stakes, guys and ties provided properly for safety and avoid chaffing of bark?  | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Remark [1]      |
| 2.3      | Are trees or limb overhanging branches pruned?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Remark [1]      |
| 2.4      | After exceptional weather conditions, are proper action implemented to replace dead plants, repair damaged plants, bed in all plants that have blown over, firm up all other plants and immediately thereafter, remove dead plants and plant debris from the site? | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | Remark [1]      |
| 2.5      | Are litter and debris removed?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Remark [1]      |
| 2.6      | Are planting areas matched with the approved landscape plan?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Remark [1]      |
| 2.7      | Is planting pattern matched with the approved landscape plan?  | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Remark [1]      |
| 2.8      | Are planting locations and spacing matched with the approved landscape plan?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Remark [1]      |
| 2.9      | Are the planting species on site matched with Figure 3.6 of the approved landscape plan?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Remark [1]      |
| 2.10     | Are the plants in satisfied condition?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Remark [1]      |

| <b>3</b> | <b>Planting in Outdoor Planters of Passenger Clearance Building</b>  | <b>N/A or not observed</b>          | <b>Yes</b>                          | <b>No</b>                | <b>Remarks / Photo</b> |
|----------|--|-------------------------------------|-------------------------------------|--------------------------|------------------------|
| 3.1      | Is watering provided to all plants to ensure satisfactory growth and health (manual and automatic irrigation)?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Remark [1]             |
| 3.2      | Are tree stakes, guys and ties provided properly for safety and avoid chaffing of bark?  | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Remark [1]             |
| 3.3      | Are trees or limb overhanging branches pruned?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Remark [1]             |
| 3.4      | After exceptional weather conditions, are proper action implemented to replace dead plants, repair damaged plants, bed in all plants that have blown over, firm up all other plants and immediately thereafter, remove dead plants and plant debris from the site? | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | Remark [1]             |
| 3.5      | Are litter and debris removed?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Remark [1]             |
| 3.6      | Are planting areas matched with the approved landscape plan?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Remark [1]             |
| 3.7      | Is planting pattern matched with the approved landscape plan?  | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Remark [1]             |
| 3.8      | Are planting locations and spacing matched with the approved landscape plan?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Remark [1]             |
| 3.9      | Are the planting species on site matched with Figure 3.6 of the approved landscape plan?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Remark [1]             |
| 3.10     | Are the plants in satisfied condition?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Remark [1]             |

| <b>4</b> | <b>Planting in Indoor Planters of Passenger Clearance Building</b>   | <b>N/A or not observed</b>          | <b>Yes</b>                          | <b>No</b>                | <b>Remarks / Photo</b> |
|----------|--|-------------------------------------|-------------------------------------|--------------------------|------------------------|
| 4.1      | Is watering provided to all plants to ensure satisfactory growth and health (manual and automatic irrigation)?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Remark [1]             |
| 4.2      | Are tree stakes, guys and ties provided properly for safety and avoid chaffing of bark?  | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Remark [1]             |
| 4.3      | Are trees or limb overhanging branches pruned?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Remark [1]             |
| 4.4      | After exceptional weather conditions, are proper action implemented to replace dead plants, repair damaged plants, bed in all plants that have blown over, firm up all other plants and immediately thereafter, remove dead plants and plant debris from the site? | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | Remark [1]             |
| 4.5      | Are litter and debris removed?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Remark [1]             |
| 4.6      | Are planting areas matched with the approved landscape plan?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Remark [1]             |
| 4.7      | Is planting pattern matched with the approved landscape plan?  | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Remark [1]             |
| 4.8      | Are planting locations and spacing matched with the approved landscape plan?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Remark [1]             |
| 4.9      | Are the planting species on site matched with Figure 3.6 of the approved landscape plan?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Remark [1]             |
| 4.10     | Are the plants in satisfied condition?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Remark [1]             |

| <b>10</b> | <b>General Document</b>  | <b>N/A or not observed</b> | <b>Yes</b>                          | <b>No</b>                | <b>Remarks / Photo</b> |
|-----------|--|----------------------------|-------------------------------------|--------------------------|------------------------|
| 11.1      | Are the records of watering, fertilizing, weeding, pruning and mowing kept for checking? | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Remark [1]             |

|   |
|---|
| <p><b>Follow up actions for previous Site Audit:</b></p> <p>N/A</p>   |
| <p><b>Observations:</b></p> <p>N/A</p>  |
| <p><b>Corrective Actions (if any):</b></p> <p>N/A</p>   |
| <p><b>Remark:</b></p> <p>[1] This Checklist is prepared based on the information from "Soft Landscape works – Monthly Maintenance Report (16 December 2018 to 15 January 2019)" (CSF No.: H2620-CSF-LCJ-CON-007675) and "Soft Landscape works – Monthly Maintenance Report (16 January 2019 to 15 February 2019)" (CSF No.: H2620-CSF-LCJ-CON-007678), which prepared by Contractor and submitted to Engineer's Representative.</p> |
| <p><b>General Conclusion:</b></p> <ol style="list-style-type: none"> <li>1. No typhoon signal was issued during the reporting period.</li> <li>2. All trees in reasonably good condition.</li> <li>3. All plants (shrubs, ground cover and turf) were in reasonably good condition.</li> <li>4. The establishment works followed the maintenance programme.</li> </ol>  |

Reported by  
(ET's Representative): Keith Chau Title: ET Leader

Signature:  Date: 15 July 2019

Reviewed by  
(AECOM Landscape Representative): CHAN Pak Kin Title: RSF0(2)

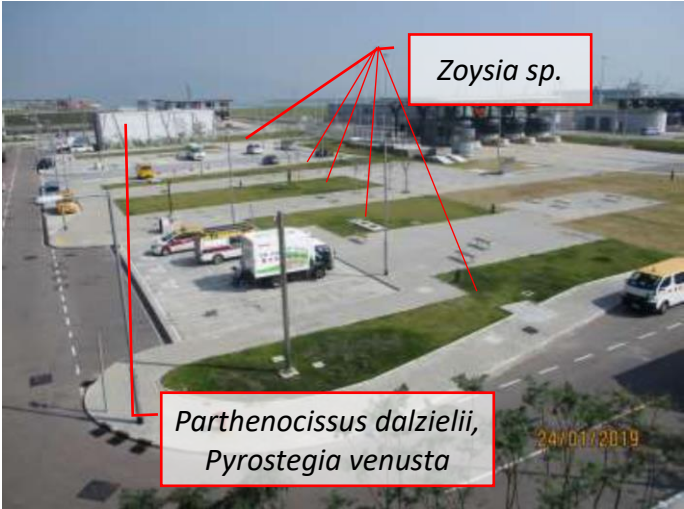
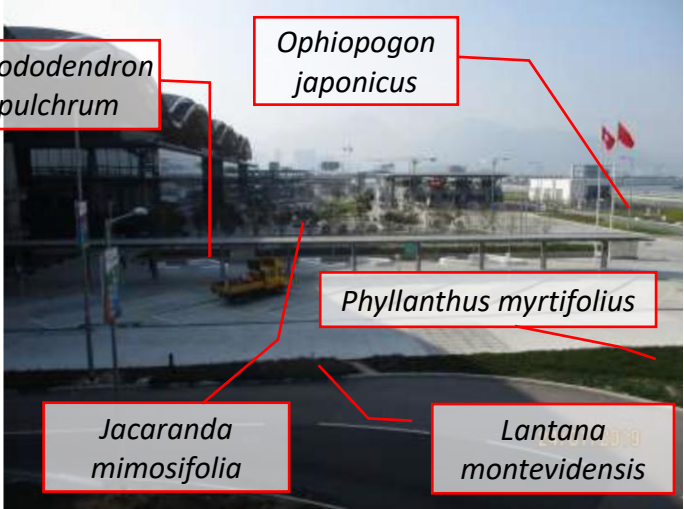


Signature:  Date: 15 JUL 2019

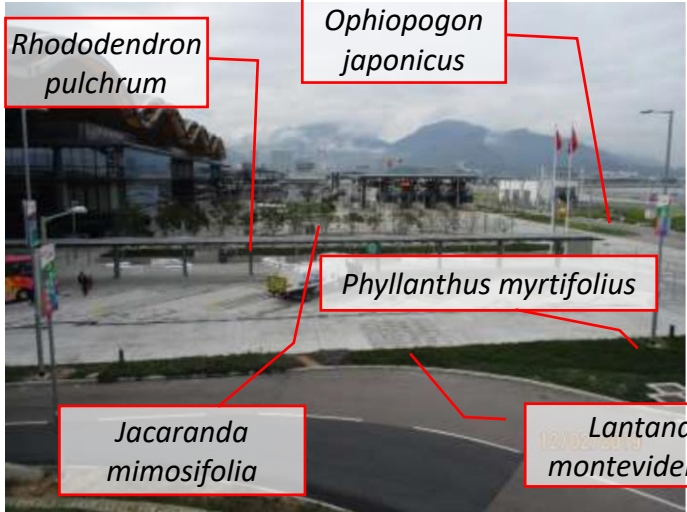

Contractor's Representative: Stephen Tsang Title: Environmental Officer


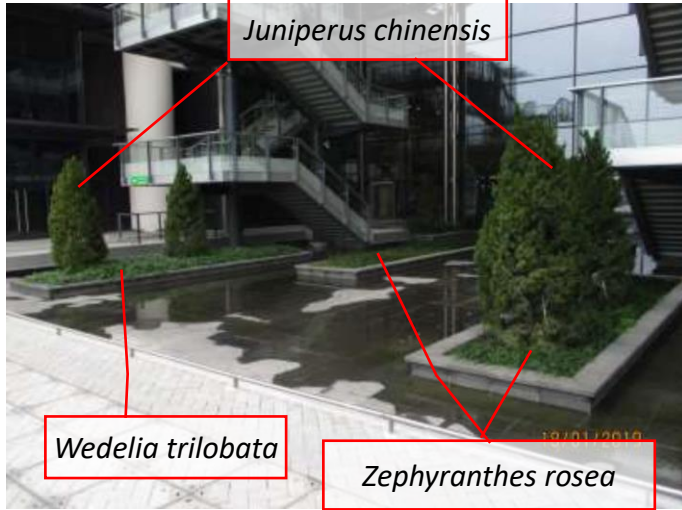

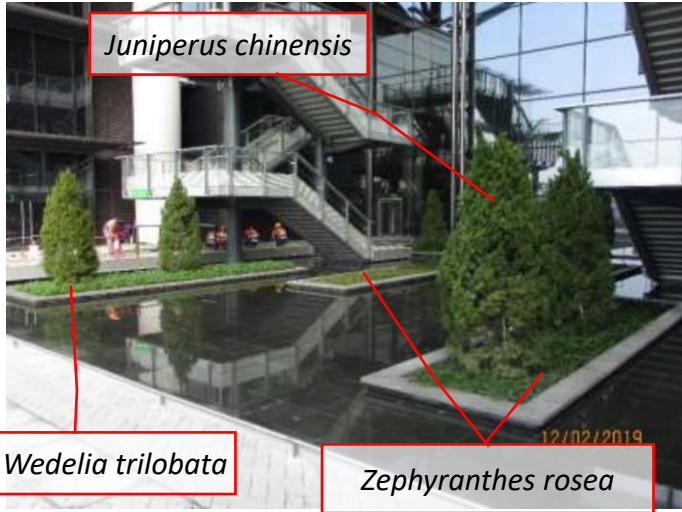
Signature:  Date: 15 July 2019

Checked by  
(IEC's Representative): Harris Wong Title: ESS

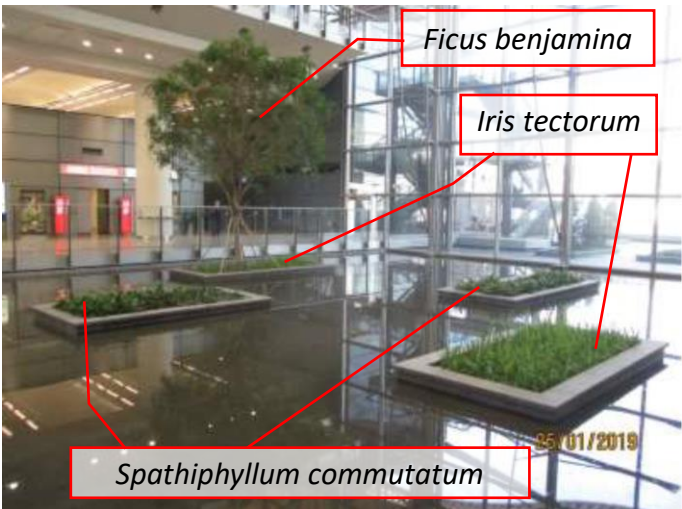
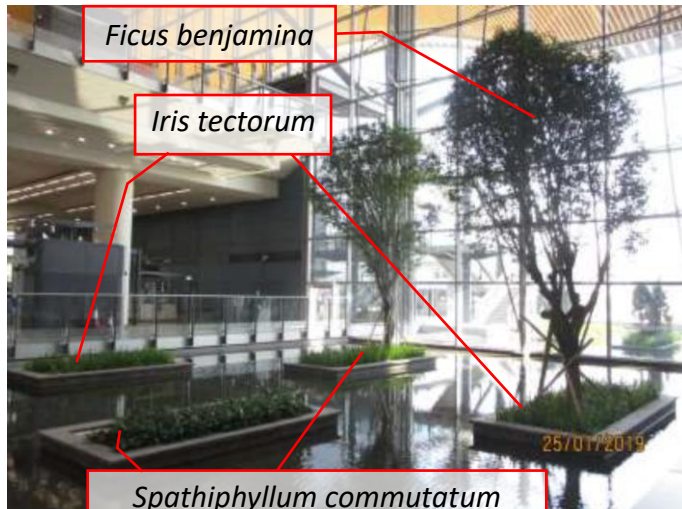
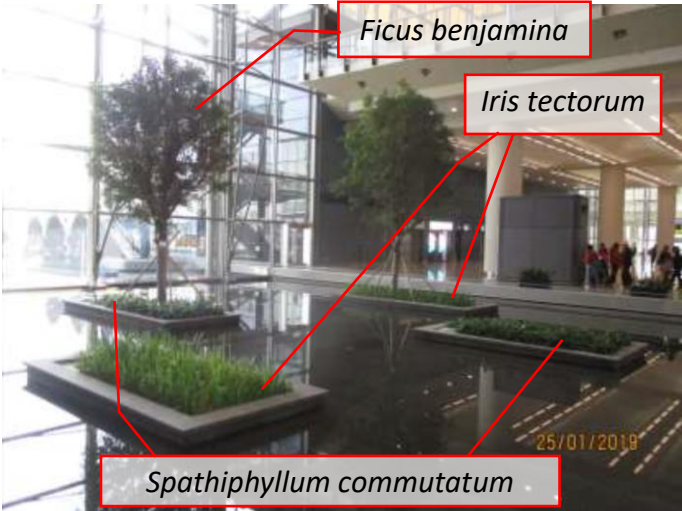
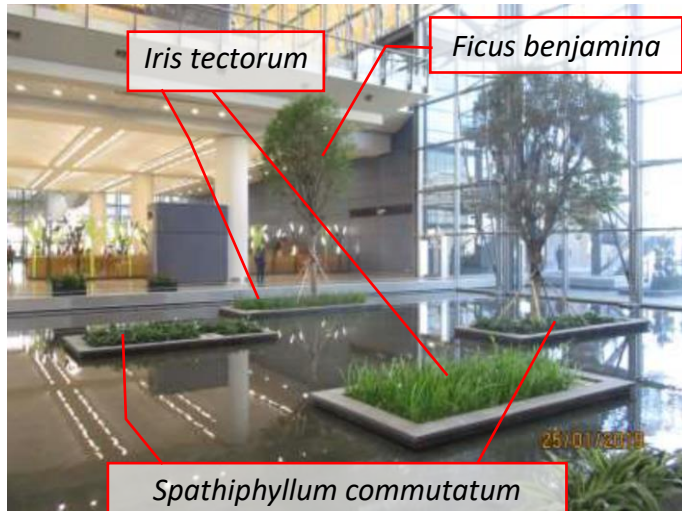
Signature:  Date: 30 July 2019

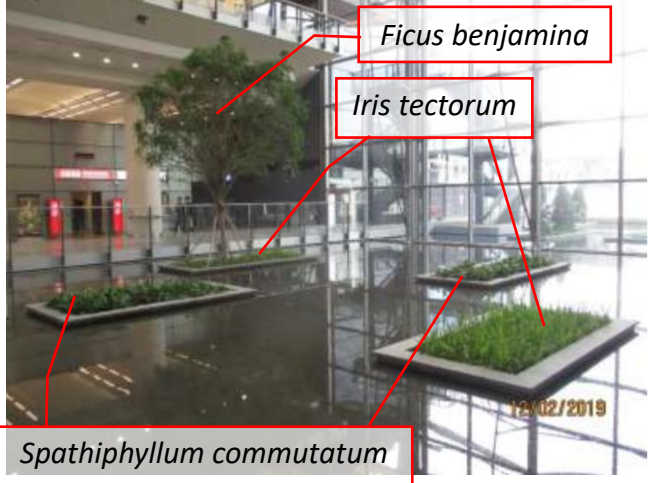
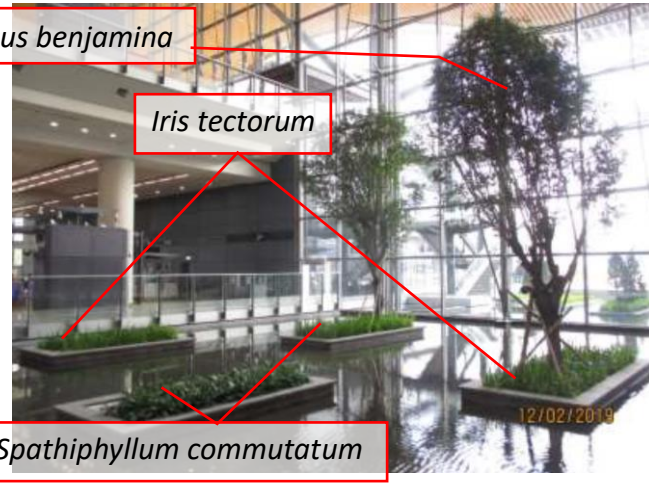
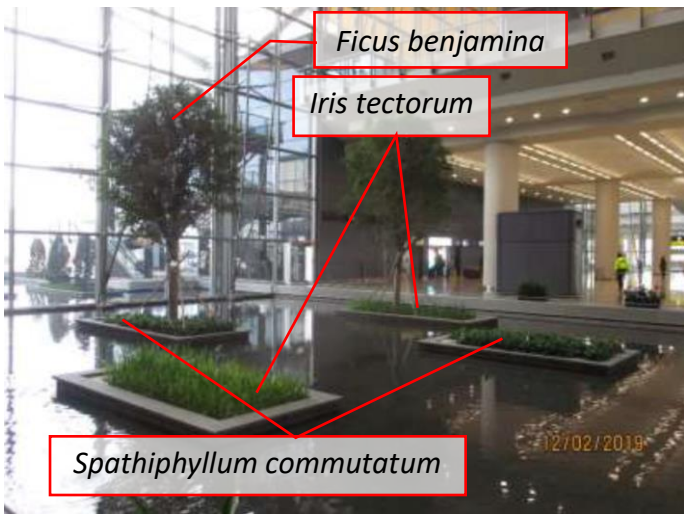
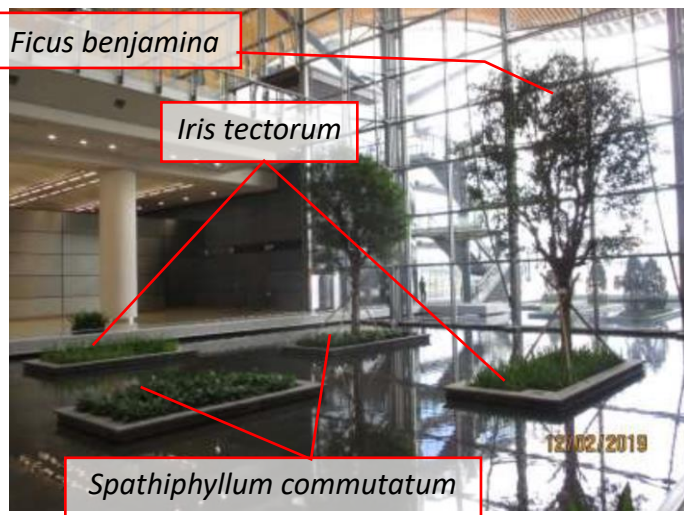
| Location   | Photo Record <sup>[1]</sup>   |  |         |         |         |         |  |   |
|--|---|--|---------|---------|---------|---------|--|---|
| <p><b>At-grade planting of Passenger Clearance Building</b></p> <table border="1" data-bbox="208 435 439 584"> <tr> <td>Photo 1</td> <td>Photo 2</td> </tr> <tr> <td>Photo 3</td> <td>Photo 4</td> </tr> <tr> <td>Photo 5</td> <td>Photo 6</td> </tr> </table> | Photo 1   | Photo 2  | Photo 3 | Photo 4 | Photo 5 | Photo 6 |  |  |
| Photo 1  | Photo 2   |  |         |         |         |         |  |   |
| Photo 3  | Photo 4   |  |         |         |         |         |  |   |
| Photo 5  | Photo 6   |  |         |         |         |         |  |   |
|  |  |  |         |         |         |         |  |   |

| Location | Photo Record <sup>[1]</sup>   |  |
|----------|---|--|
|          |  <p><i>Rhododendron pulchrum</i></p> <p><i>Ophiopogon japonicus</i></p> <p><i>Phyllanthus myrtifolius</i></p> <p><i>Jacaranda mimosifolia</i></p> <p><i>Lantana montevidensis</i></p> |  <p><i>Rhododendron pulchrum</i></p> <p><i>Bauhinia variegata</i></p> |

| Location   | Photo Record <sup>[1]</sup>   |  |         |          |  |   |
|--|---|--|---------|----------|--|---|
| <p>Planting in Outdoor Planters of Passenger Clearance Building</p> <table border="1" data-bbox="208 387 439 488"> <tr> <td>Photo 7</td> <td>Photo 8</td> </tr> <tr> <td>Photo 9</td> <td>Photo 10</td> </tr> </table> | Photo 7   | Photo 8  | Photo 9 | Photo 10 |  |  |
| Photo 7  | Photo 8   |  |         |          |  |   |
| Photo 9  | Photo 10  |  |         |          |  |   |
|  |  |  |         |          |  |   |



| Location   | Photo Record <sup>[1]</sup>   |          |          |          |          |          |          |          |   |  |
|--|---|----------|----------|----------|----------|----------|----------|----------|---|--|
| <p>Planting in Indoor Planters of Passenger Clearance Building</p> <table border="1" data-bbox="208 387 439 587"> <tr> <td>Photo 11</td> <td>Photo 12</td> </tr> <tr> <td>Photo 13</td> <td>Photo 14</td> </tr> <tr> <td>Photo 15</td> <td>Photo 16</td> </tr> <tr> <td>Photo 17</td> <td>Photo 18</td> </tr> </table> | Photo 11  | Photo 12 | Photo 13 | Photo 14 | Photo 15 | Photo 16 | Photo 17 | Photo 18 |  <p>Indoor planter containing <i>Ficus benjamina</i>, <i>Iris tectorum</i>, and <i>Spathiphyllum commutatum</i>. A date stamp '25/01/2019' is visible in the bottom right corner.</p> |  <p>Indoor planter containing <i>Ficus benjamina</i>, <i>Iris tectorum</i>, and <i>Spathiphyllum commutatum</i>. A date stamp '25/01/2019' is visible in the bottom right corner.</p> |
| Photo 11   | Photo 12  |          |          |          |          |          |          |          |   |  |
| Photo 13   | Photo 14  |          |          |          |          |          |          |          |   |  |
| Photo 15   | Photo 16  |          |          |          |          |          |          |          |   |  |
| Photo 17   | Photo 18  |          |          |          |          |          |          |          |   |  |
|  <p>Indoor planter containing <i>Ficus benjamina</i>, <i>Iris tectorum</i>, and <i>Spathiphyllum commutatum</i>. A date stamp '25/01/2019' is visible in the bottom right corner.</p>   |  <p>Indoor planter containing <i>Iris tectorum</i>, <i>Ficus benjamina</i>, and <i>Spathiphyllum commutatum</i>. A date stamp '25/01/2019' is visible in the bottom right corner.</p> |          |          |          |          |          |          |          |   |  |

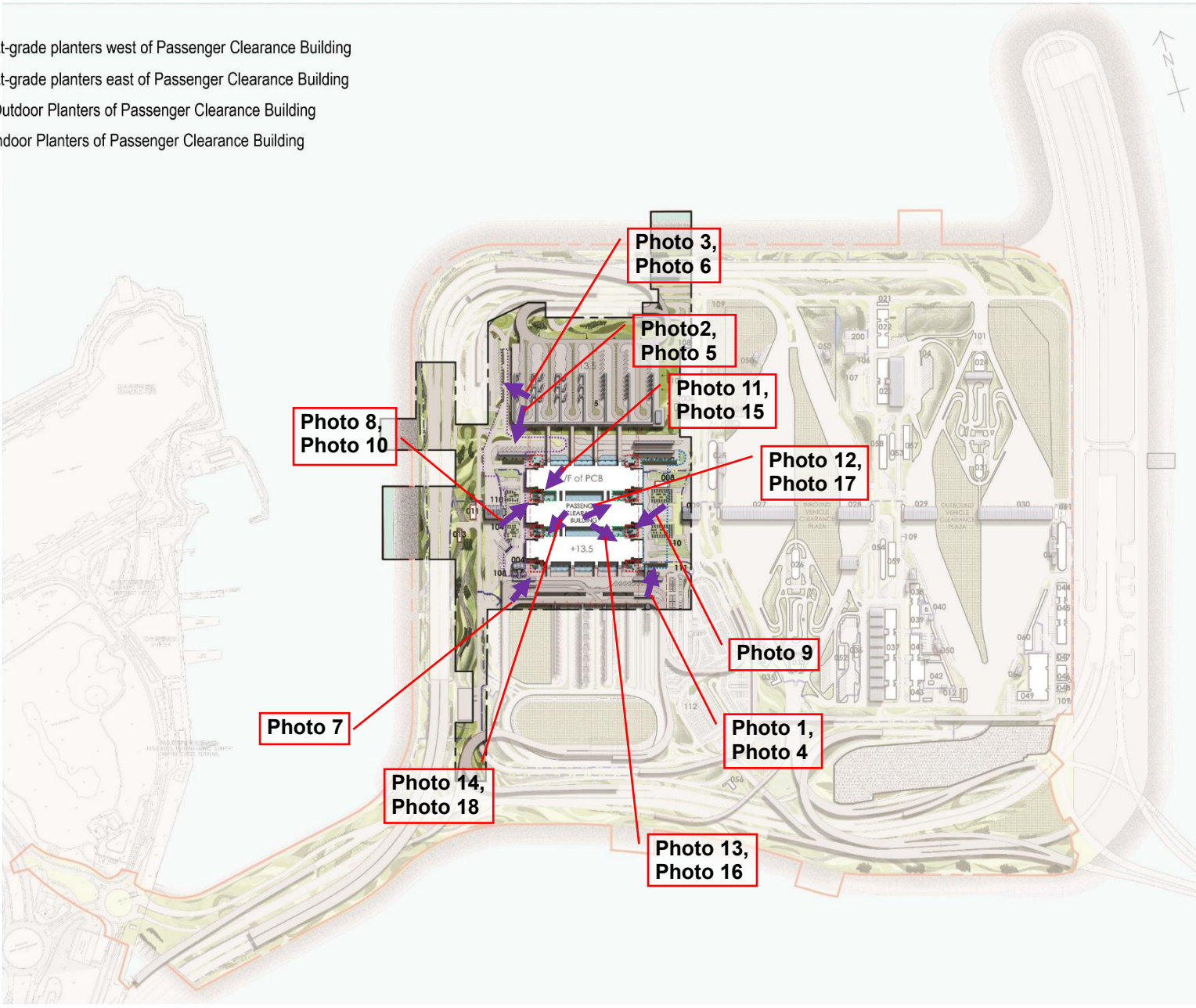
| Location | Photo Record <sup>[1]</sup>   |  |
|----------|---|--|
|          |   |   |
|          |  |  |

Note: [1] Extract from “Soft Landscape works – Monthly Maintenance Report (16 December 2018 to 15 January 2019)” (CSF No.: H2620-CSF-LCJ-CON-007675) and “Soft Landscape works – Monthly Maintenance Report (16 January 2019 to 15 February 2019)” (CSF No.: H2620-CSF-LCJ-CON-007678), which prepared by Contractor and submitted to Engineer’s Representative.

- At-grade planters west of Passenger Clearance Building
- At-grade planters east of Passenger Clearance Building
- Outdoor Planters of Passenger Clearance Building
- Indoor Planters of Passenger Clearance Building

- LEGEND:**
- HKSBC site boundary
  - Elevated bridges with bridge pier/decks/footbridges
  - Boundary fence (1m maintenance path on both sides of fence)
  - Planting (shrubs & groundcover)
  - Hydroseeding
  - Multi-purpose Areas (Footpath/ At Grade Carriageway/ Amenity Area)
  - Multi-purpose Areas with Granite finish (Footpath/ At Grade Carriageway/ Amenity Area)
  - Green roof
  - Gentle landscape berm
  - Tree planting
  - Water features (around and inside PCB area)
  - Attenuation pond and bioswale
  - Stone swathe feature
  - Stone gravel finish (for future development)
  - Ancillary building
  - Vertical greening

- KEY LOCATION:**
- 001 PASSENGER CLEARANCE BUILDING
  - 002 CAFE/OBSERVATION GUARD ROOMS
  - 003 SHEN FAR ROAD PUBLIC TRANSPORT INTERCHANGE PUBLIC TOILET
  - 004 SHUTTLE BUS KIOSKS
  - 005 WASTE STORAGE AND MATERIAL RECOVERY CHAMBER
  - 006 DEPARTURE COACH KIOSKS
  - 007 ARRIVAL COACH KIOSKS
  - 008 EMERGENCY GENERATOR ROOMS
  - 009 DSH GENERATION CHAMBER
  - 010 SEAWATER PUMP HOUSE
  - 011 CAFE/DANGER/GOODS STORE
  - 012 CAFE CUSTOMER DETECTION DOGS DIVISION K9MB DOG BASE
  - 013 CAFE OUTBOUND CARGO EXAMINATION BUILDING
  - 014 CAFE OUTBOUND PRIVATE CAR EXAMINATION BUILDING
  - 015 ARRIVAL PRIVATE CAR PASSENGER CLEARANCE ANNEX
  - 016 IMMIGRATION BUILDING (ARRIVAL)
  - 017 ARRIVAL GOODS VEHICLE KIOSKS
  - 018 DEPARTURE GOODS VEHICLE KIOSKS
  - 019 DEPARTURE PRIVATE CAR KIOSKS
  - 020 IMMIGRATION BUILDING (DEPARTURE)
  - 021 DEPARTURE PRIVATE CAR PASSENGER CLEARANCE ANNEX
  - 022 CAFE INBOUND PRIVATE CAR EXAMINATION BUILDING
  - 023 SHUTTLE BUS COLLECTION POINT
  - 024 SEWAGE PUMPING STATION
  - 025 POLICE WREST STATION
  - 026 CAFE INBOUND CARGO EXAMINATION BUILDING
  - 027 ACCESS BUILDING
  - 028 POLICE BASE
  - 029 AIR STATION CLAM AMBULANCE DEPOT
  - 030 DSH GUARANTINE BUILDING
  - 031 SEM MAINTENANCE BUILDING
  - 032 HIGHWAYS DEPOT AND ADMINISTRATION BUILDING
  - 033 VEHICLE CLEARANCE PLAZA WASTE COLLECTION POINT
  - 034 FRESH WATER PUMPING STATION
  - 035 RECLAIMED WATER PUMPING STATION
  - 036 SEWAGE TREATMENT PLANT
  - 037 ARRIVAL PRIVATE CAR CLEARANCE PLAZA PUBLIC TOILET
  - 038 ARRIVAL GOODS VEHICLE CLEARANCE PLAZA PUBLIC TOILET
  - 039 DEPARTURE PRIVATE CAR VEHICLE CLEARANCE PLAZA PUBLIC TOILET
  - 040 DEPARTURE GOODS VEHICLE CLEARANCE PLAZA PUBLIC TOILET
  - 041 ZONE 1 TRANSFORMER BUILDING
  - 042 ZONE 4 TRANSFORMER BUILDING
  - 043 CAFE OUTBOUND VEHICLE RAY EXAMINATION BUILDING
  - 044 CAFE INBOUND VEHICLE RAY EXAMINATION BUILDING
  - 045 REFINISHED ROAD DRAINAGE RAY HOUSE CUM SWITCH ROOM
  - 046 ZONE 2 TRANSFORMER BUILDING
  - 047 CAFE INBOUND VEHICLE RAY SCANNING SYSTEM BUILDING
  - 048 CAFE INBOUND VEHICLE RAY SCANNING SYSTEM BUILDING
  - 049 SEM AND HIGHWAYS MAINTENANCE SUPPORT BUILDING
  - 050 SEM AND HIGHWAYS MAINTENANCE SUPPORT BUILDING
  - 051 ELEC TRON BUILDING
  - 052 CAFE INBOUND TRAFFIC CONTROL KIOSK
  - 053 CAFE OUTBOUND TRAFFIC CONTROL KIOSK
  - 054 POLICE ENHANCED UNDER VEHICLE SURVEILLANCE SYSTEM (ANCHORING ROOM)
  - 055 POLICE INSPECTION KIOSK
  - 056 DSH SECONDARY SCREENING STATIONS
  - 057 IMMIGRATION GUARD ROOMS
  - 058 CAFE VEHICLE DETENTION AREA GUARD ROOM
  - 059 CAFE MOBILE RAY OPERATION OFFICE (INBOUND CARGO)
  - 060 CAFE MOBILE RAY OPERATION OFFICE (OUTBOUND CARGO)
  - 061 CAFE MOBILE RAY OPERATION OFFICE (INBOUND COACH)
  - 062 CAFE MOBILE RAY OPERATION OFFICE (OUTBOUND COACH / SHUTTLE BUS)
  - 063 CAFE MOBILE RAY OPERATION AREA (INBOUND CARGO)
  - 064 CAFE MOBILE RAY OPERATION AREA (OUTBOUND CARGO)
  - 065 CAFE MOBILE RAY OPERATION AREA (INBOUND COACH)
  - 066 CAFE MOBILE RAY OPERATION AREA (OUTBOUND PRIVATE CAR)
  - 067 CAFE MOBILE RAY OPERATION AREA (INBOUND PRIVATE CAR)
  - 068 H9H GOODS VEHICLE PARKING BAYS (ARRIVAL)
  - 069 H9H GOODS VEHICLE PARKING BAYS (DEPARTURE)



|         |         |             |          |
|---------|---------|-------------|----------|
| SCALE   | NA      | DATE        | APR 2018 |
| CHECK   | ELK     | DRAWN       | TRT      |
| JOB No. | AECMP01 | DRAWING No. | B.1b     |
|         |         | REV         | -        |

| TREE PLANTING <sup>(1)</sup> |                              |              |                                    |             |
|------------------------------|------------------------------|--------------|------------------------------------|-------------|
| SPECIES CODE                 | BOTANICAL NAME               | CHINESE NAME | SIZE [mm]                          | SPACING [m] |
| AL **                        | <i>Albizia lebbek</i>        | 大葉合歡         | 4000-5000(H) x 3000(SP) x 100(DBH) | 3 - 4       |
| BV                           | <i>Bauhinia variegata</i>    | 宮粉羊蹄甲        | 4000-5000(H) x 3000(SP) x 100(DBH) | 3 - 4       |
| CV                           | <i>Callistemon viminalis</i> | 串錢柳          | 4000-5000(H) x 3000(SP) x 100(DBH) | 3 - 4       |
| CS **                        | <i>Cassia siamea</i>         | 鐵刀木          | 4000-5000(H) x 3000(SP) x 100(DBH) | 3 - 4       |
| GR                           | <i>Grevillea robusta</i>     | 銀樺           | 4000-5000(H) x 3000(SP) x 100(DBH) | 3 - 4       |
| JA                           | <i>Jacaranda mimosifolia</i> | 藍花楸          | 4000-5000(H) x 3000(SP) x 100(DBH) | 3 - 4       |
| JC **                        | <i>Juniperus chinensis</i>   | 龍柏           | 4000-5000(H) x 3000(SP) x 100(DBH) | 3 - 4       |
| TP **                        | <i>Thespesia populnea</i>    | 恒春黃槿         | 4000-5000(H) x 3000(SP) x 100(DBH) | 3 - 4       |

| SHRUB PLANTING <sup>(1)</sup> |   |              |                   |              |
|-------------------------------|---|--------------|-------------------|--------------|
| SPECIES CODE                  | BOTANICAL NAME                          | CHINESE NAME | SIZE [mm]         | SPACING [mm] |
| Aod                           | <i>Aglaiia odorata</i>                  | 米仔蘭          | 700(H) x 500(SP)  | 400          |
| Cha                           | <i>Calliandra haematocephala</i>        | 紅絨球          | 700(H) x 500(SP)  | 400          |
| Fmi **                        | <i>Ficus microcarpa 'golden leaves'</i> | 黃金榕          | 1000(H) x 700(SP) | 600          |
| Ite                           | <i>Iris tectorum</i>                    | 鳶尾           | 300(H) x 200(SP)  | 150          |
| Ich *                         | <i>Ixora chinensis</i>                  | 龍船花          | 500(H) x 400(SP)  | 350          |
| Mar                           | <i>Malva viscus arboreus</i>            | 大紅袍          | 700(H) x 500(SP)  | 450          |
| Mfi                           | <i>Michelia figo</i>                    | 含笑           | 800(H) x 500(SP)  | 400          |
| Pmy                           | <i>Phyllanthus myrtifolius</i>          | 瘤腺葉下珠        | 400(H) x 300(SP)  | 250          |
| Rpu                           | <i>Rhododendron pulchrum</i>            | 錦繡杜鵑         | 600(H) x 400(SP)  | 300          |
| Rsi *                         | <i>Rhododendron simsii</i>              | 紅杜鵑          | 600(H) x 400(SP)  | 300          |
| SCO                           | <i>Spathiphyllum commutatum</i>         | 白掌           | 300(H) x 300(SP)  | 200          |
| Sre                           | <i>Strelitzia reginae</i>               | 天堂鳥蕉         | 500(H) x 400(SP)  | 350          |

| GREEN ROOF GROUND COVER PLANTING <sup>(1)</sup> |                             |              |                  |              |
|---|-----------------------------|--------------|------------------|--------------|
| SPECIES CODE                                    | BOTANICAL NAME              | CHINESE NAME | SIZE [mm]        | SPACING [mm] |
| Zan   | <i>Zephyranthes candida</i> | 蔥蓮           | 100(H) x 100(SP) | 100          |

| CLIMBER PLANTING <sup>(1)</sup> |                                 |              |                  |              |
|---------------------------------|---------------------------------|--------------|------------------|--------------|
| SPECIES CODE                    | BOTANICAL NAME                  | CHINESE NAME | SIZE [mm]        | SPACING [mm] |
| Pda                             | <i>Parthenocissus dalzielii</i> | 異葉爬山虎        | 300(H) x 250(SP) | 250          |
| Pve **                          | <i>Pyrostegia venusta</i>       | 炮仗花          | 300(H) x 250(SP) | 250          |

**NOTES:**

<sup>(1)</sup> All proposed plant species and specifications are subject to change during construction to suit the site conditions.

<sup>(2)</sup> Minimum requirement of grass seed mix for hydroseeding shall follow General Specification for Civil Engineering Works Clause 3.26(3).

\* Species native to Hong Kong according to the Hong Kong Herbarium website <<http://www.herbarium.gov.hk>>

\*\* Species which is salt spray tolerant

| GROUND COVER PLANTING <sup>(1)</sup> |                                 |              |                  |              |
|--------------------------------------|---------------------------------|--------------|------------------|--------------|
| SPECIES CODE                         | BOTANICAL NAME                  | CHINESE NAME | SIZE [mm]        | SPACING [mm] |
| Aag                                  | <i>Agave angustifolia</i>       | 狹葉龍舌蘭        | 200(H) x 300(SP) | 200          |
| Aam                                  | <i>Agave americana</i>          | 龍舌蘭          | 100(H) x 100(SP) | 100          |
| Asl                                  | <i>Aglaonema 'Silver King'</i>  | 銀王粗肋草        | 150(H) x 150(SP) | 100          |
| Ave                                  | <i>Alternanthera versicolor</i> | 錦繡草 紅草       | 100(H) x 100(SP) | 100          |
| Ite                                  | <i>Iris tectorum</i>            | 鳶尾           | 100(H) x 100(SP) | 100          |
| Lmo                                  | <i>Lantana montevidensis</i>    | 鋪地臭金鳳        | 200(H) x 300(SP) | 200          |
| Lsp *                                | <i>Liriope spicata</i>          | 山麥冬          | 100(H) x 100(SP) | 100          |
| Nex *                                | <i>Nephrolepis hirsutula</i>    | 毛葉腎蕨         | 150(H) x 200(SP) | 150          |
| Oja *                                | <i>Ophiopogon japonicus</i>     | 麥冬           | 150(H) x 150(SP) | 100          |
| Rds                                  | <i>Rhoeo discolor</i>           | 紫背萬年青        | 150(H) x 200(SP) | 100          |
| Spo **                               | <i>Syngronium podophyllum</i>   | 合果芋          | 200(H) x 200(SP) | 150          |
| Wtr **                               | <i>Wedelia trilobata</i>        | 蟛蜞菊          | 100(H) x 100(SP) | 100          |
| Zan                                  | <i>Zephyranthes candida</i>     | 蔥蓮           | 100(H) x 100(SP) | 100          |
| Zro                                  | <i>Zephyranthes rosea</i>       | 玫瑰蔥蓮         | 150(H) x 200(SP) | 100          |

| TURFING <sup>(1)</sup> |                   |              |           |
|------------------------|-------------------|--------------|-----------|
| SPECIES CODE           | BOTANICAL NAME    | CHINESE NAME | SIZE [mm] |
| Zja **                 | <i>Zoysia sp.</i> | 朝鮮草          | 25(H)     |

| HYDROSEEDING <sup>(1),(2)</sup> |  |              |
|---------------------------------|--|--------------|
| SPECIES CODE                    | BOTANICAL NAME                                 | CHINESE NAME |
| Cda * **                        | <i>Cynodon dactylon</i>                        | 百慕達草         |
| Pno                             | <i>Paspalum notatum</i>                        | 百喜草          |
| Eop * / Lpe                     | <i>Eremochloa ophiuroides / Lolium perenne</i> | 假儉草 / 黑麥草    |

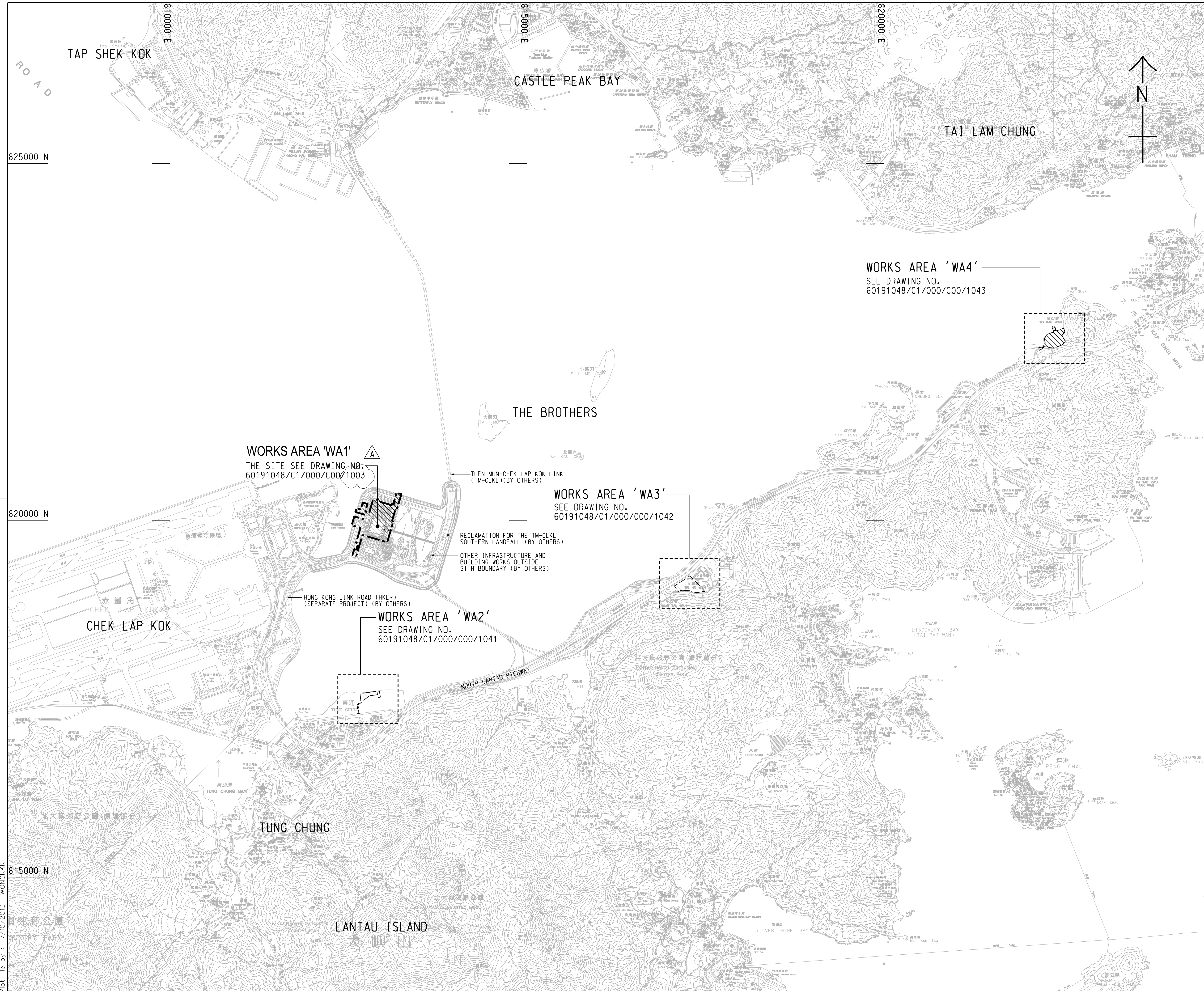
| INDOOR PLANTING IN PASSENGER CLEARANCE BUILDING <sup>(1)</sup> |                                 |              |                               |             |
|--|---------------------------------|--------------|-------------------------------|-------------|
| SPECIES CODE   | BOTANICAL NAME                  | CHINESE NAME | SIZE [mm]                     | SPACING [m] |
| <b>TREE</b>  |                                 |              |                               |             |
| FB **  | <i>Ficus benjamina</i>          | 垂榕           | 5000(H) x 4000(SP) x 150(DBH) | N.A.        |
| <b>SHRUB</b>   |                                 |              |                               |             |
| Ite  | <i>Iris tectorum</i>            | 鳶尾           | 300(H) x 200(SP)              | 150         |
| SCO  | <i>Spathiphyllum commutatum</i> | 白掌           | 300(H) x 300(SP)              | 200         |



## **APPENDIX B**

---

### Location of Works Areas



**NOTES:**

1. COORDINATES ARE RELATED TO HONG KONG METRIC GRID (1980).
2. DIMENSIONS ARE IN MILLIMETER AND CHAINAGE ARE IN METRES UNLESS OTHERWISE SHOWN.
3. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DRAWING NOS. 60191048/C1/000/C00/1041 TO 1043.

**LEGEND:**

- SITE BOUNDARY
- WORKS AREA

WORKS AREA 'WA4'  
SEE DRAWING NO.  
60191048/C1/000/C00/1043

WORKS AREA 'WA1'  
THE SITE SEE DRAWING NO.  
60191048/C1/000/C00/1003

WORKS AREA 'WA3'  
SEE DRAWING NO.  
60191048/C1/000/C00/1042

WORKS AREA 'WA2'  
SEE DRAWING NO.  
60191048/C1/000/C00/1041

TUEN MUN-CHEK LAP KOK LINK  
(TM-CLKL) (BY OTHERS)

RECLAMATION FOR THE TM-CLKL  
SOUTHERN LANDFALL (BY OTHERS)

OTHER INFRASTRUCTURE AND  
BUILDING WORKS OUTSIDE  
SITE BOUNDARY (BY OTHERS)

HONG KONG LINK ROAD (HKLR)  
(SEPARATE PROJECT) (BY OTHERS)

|            |                       |                 |
|------------|-----------------------|-----------------|
| B          | WORKING DRAWING       | BWCW SCI JUN.14 |
| A          | TENDER ADDENDUM NO. 1 | BWCW SCI OCT.13 |
| -          | TENDER DRAWING        | BWCW SCI SEP.13 |
| REV.<br>修訂 | DESCRIPTION<br>內容摘要   | DATE<br>日期      |

**路政署 HIGHWAYS DEPARTMENT**  
**港珠澳大橋香港工程管理處**  
 Hong Kong - Zhuhai - Macao Bridge Hong Kong Project Management Office

HONG KONG-ZHUHAI-MACAO BRIDGE  
 HONG KONG BOUNDARY CROSSING FACILITIES  
 - PASSENGER CLEARANCE BUILDING

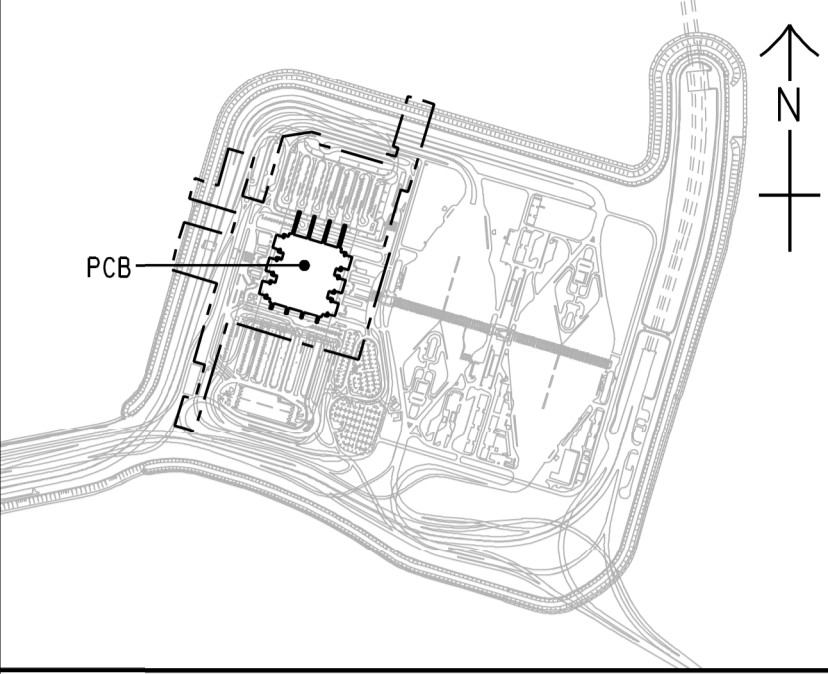
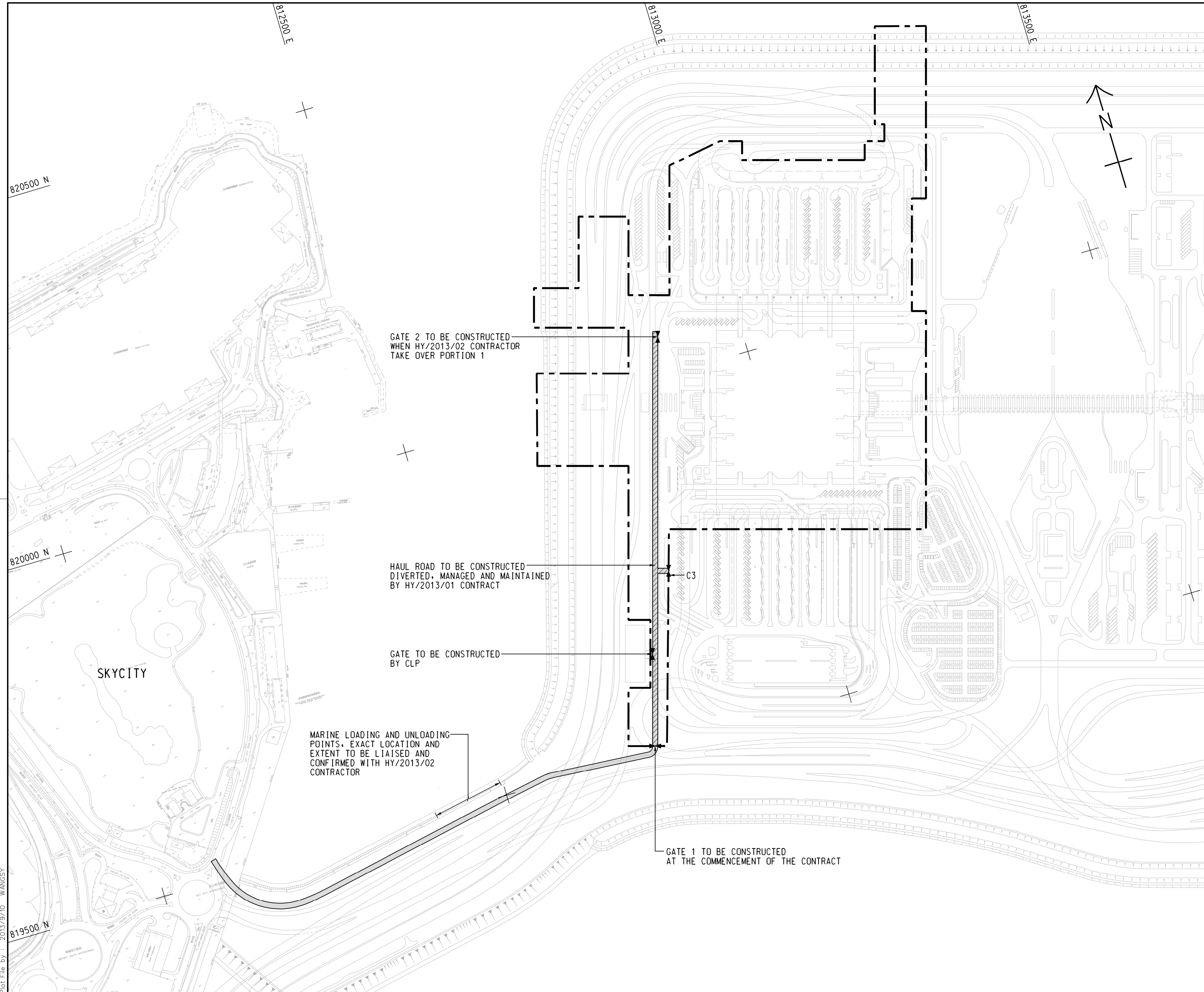
**SITE LOCATION PLAN**

**AECOM** + +  
**Rogers Stirk Harbour + Partners** **Aedas**  
 BURO HAPPOLD ATKINS ADI + +

DRG.NO: 60191048/C1/000/C00/1000B  
 圖紙編號

|                               |              |                                  |                        |                         |     |
|-------------------------------|--------------|----------------------------------|------------------------|-------------------------|-----|
| DESIGNED BY<br>設計             | BWCW         | CONTRACT NO.<br>合約編號             | HY/2013/01             | P. DIR. APPROVED<br>批准人 | TKH |
| DRAWN BY<br>繪圖                | WSY          | STATUS<br>階段                     | <b>WORKING DRAWING</b> |                         |     |
| SCALE<br>比例                   | A1 1 : 25000 | DIMENSIONS ARE IN<br>尺寸單位 METRES |                        |                         |     |
| © COPYRIGHT RESERVED<br>版權所 有 |              |                                  |                        |                         |     |

Plot File by : 7/10/2013 WONGKKK



LOCATION PLAN  
SCALE 1 : 20000

- NOTES:**
- COORDINATES ARE BASED ON HONG KONG METRIC GRID (1980) UNLESS OTHERWISE NOTED.
  - LEVELS ARE IN METRES RELATIVE TO HONG KONG PRINCIPAL DATUM (mPD) UNLESS OTHERWISE NOTED.
  - DIMENSIONS ARE IN METRES UNLESS OTHERWISE STATED.
  - SETTING OUT, DIMENSIONS, LEVELS, COORDINATES ARE TO BE CALCULATED BY THE CONTRACTOR. NO INFORMATION SHOULD BE SCALED PHYSICALLY OR ELECTRONICALLY FROM THE DRAWINGS OR FILES.
  - SITE ACCESS SHALL BE HARD PAVED WITH PROPER DRAINAGE PROVIDED. IT SHALL BE KEPT UNOBSTRUCTED AND UNDISRUPTED AT ALL TIMES.

- LEGEND:**
- SITE BOUNDARY
  - 7.3m CLEAR WIDTH CONSTRUCTION HAUL ROAD
  - INDICATIVE 20m WIDE VEHICULAR ACCESS BY RECLAMATION CONTRACT HY/2010/02

GATE 2 TO BE CONSTRUCTED WHEN HY/2013/02 CONTRACTOR TAKE OVER PORTION 1

HAUL ROAD TO BE CONSTRUCTED DIVERTED, MANAGED AND MAINTAINED BY HY/2013/01 CONTRACT

GATE TO BE CONSTRUCTED BY CLP

MARINE LOADING AND UNLOADING POINTS, EXACT LOCATION AND EXTENT TO BE LIAISED AND CONFIRMED WITH HY/2013/02 CONTRACTOR

GATE 1 TO BE CONSTRUCTED AT THE COMMENCEMENT OF THE CONTRACT

|                  |                  |            |         |
|------------------|------------------|------------|---------|
| - TENDER DRAWING |                  | BWCW SCI   | SEP.13  |
| REV. 修改          | DESCRIPTION 工程圖號 | CHECKED 審核 | DATE 日期 |

路政署 HIGHWAYS DEPARTMENT  
港珠澳大橋香港工程管理局  
Hong Kong - Zhuhai - Macao Bridge Hong Kong Project Management Office

HONG KONG-ZHUHAI-MACAO BRIDGE  
HONG KONG BOUNDARY CROSSING FACILITIES  
- PASSENGER CLEARANCE BUILDING

WORKS AREA WA1

**AECOM** +  
Rogers Stirk Harbour + Partners  
BURO HAPPOLD ATKINS ADI +

**Aedas**

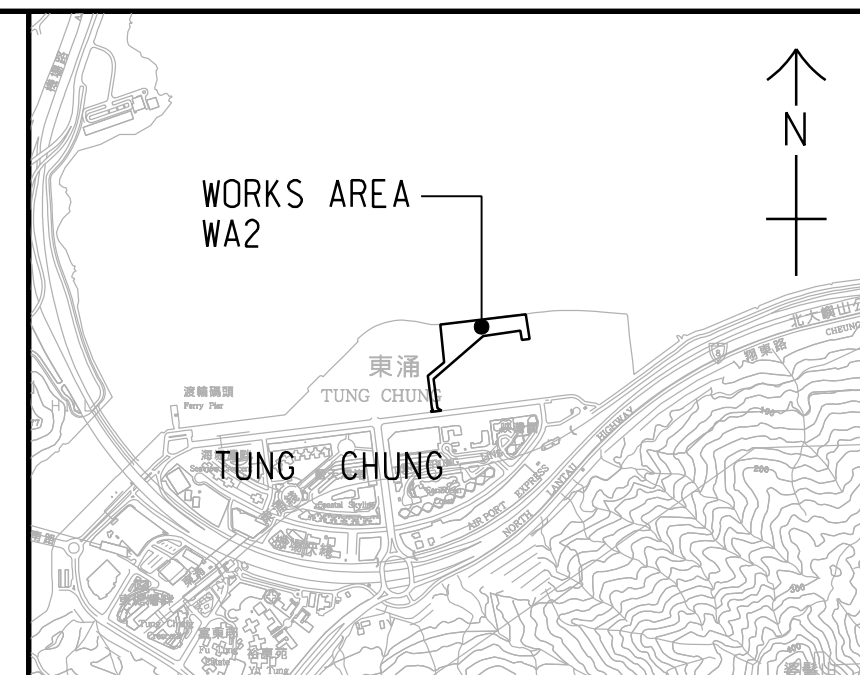
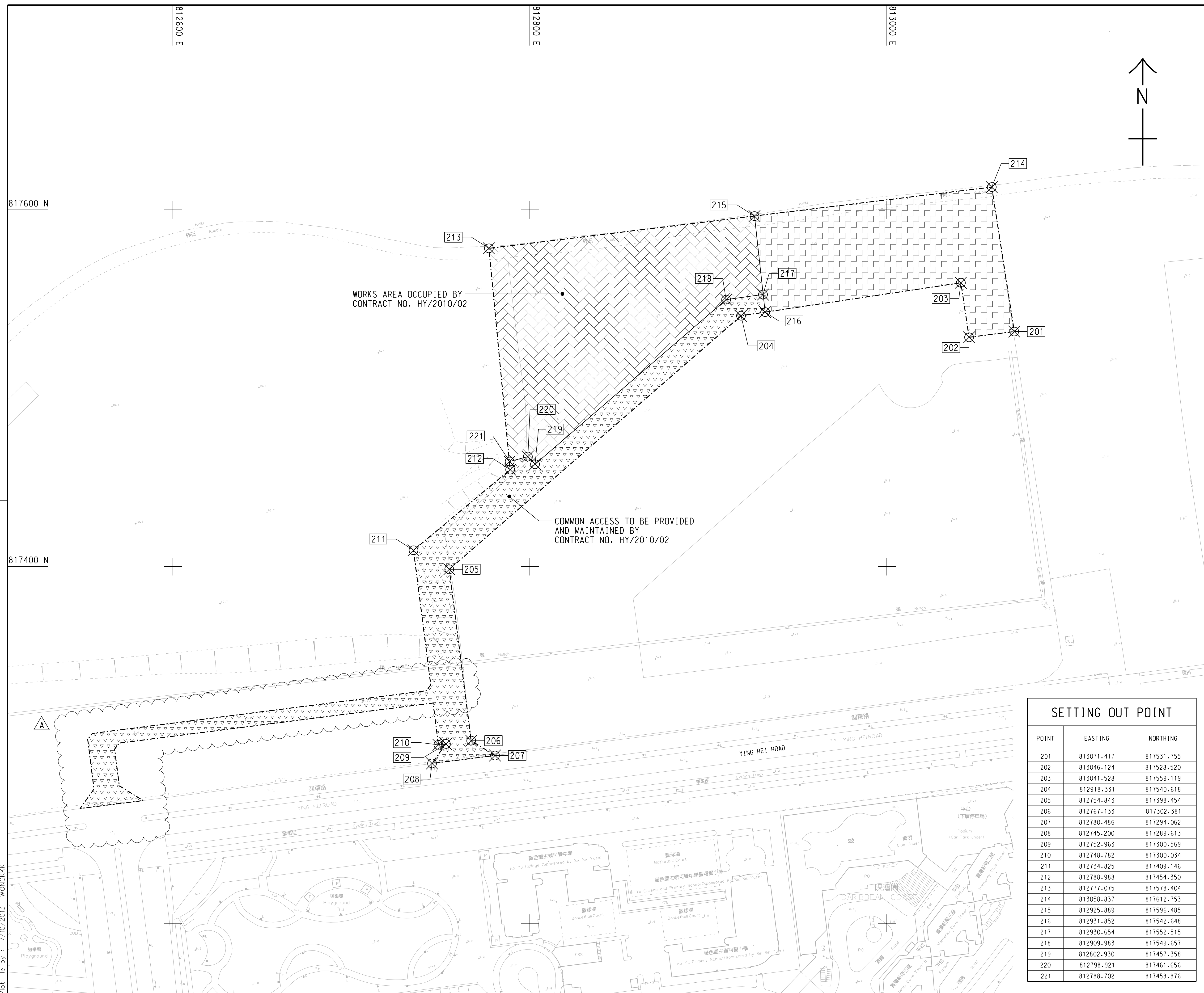
DRG.NO. 60191048/C1/000/C00/1044  
圖紙編號

|                     |                              |                           |
|---------------------|------------------------------|---------------------------|
| DESIGNED BY 設計 BWCW | CONTRACT NO. 合約編號 HY/2013/01 | P. Dir. APPROVED 批准人 EMSC |
|---------------------|------------------------------|---------------------------|

|                      |           |
|----------------------|-----------|
| DRAWN BY 繪圖 WSY      | STATUS 階段 |
| SCALE 比例 A1 1 : 2500 |           |

DIMENSIONS ARE IN 尺寸單位 METRES  
© COPYRIGHT RESERVED 版權所有

Plot File by : 2013/9/10 WANGSY



**LOCATION PLAN**  
SCALE 1 : 25000

- NOTES:**
- COORDINATES ARE RELATED TO HONG KONG METRIC GRID (1980).
  - DIMENSIONS ARE IN MILLIMETER AND CHAINAGE ARE IN METRES UNLESS OTHERWISE SHOWN.

- LEGEND:**
- WORKS AREA BOUNDARY
  - [Hatched Pattern] PORTION 2.1
  - [Cross-hatched Pattern] PORTION 2.2
  - [Triangle Pattern] PORTION 2.3

|      |                       |          |         |
|------|-----------------------|----------|---------|
| B    | WORKING DRAWING       | BWCW SCI | JUN. 14 |
| A    | TENDER ADDENDUM NO. 1 | BWCW SCI | OCT. 13 |
| -    | TENDER DRAWING        | BWCW SCI | SEP. 13 |
| REV. | DESCRIPTION           | CHECKED  | DATE    |
| 01   | 內務圖則                  | 曾啟       |         |

**路政署 HIGHWAYS DEPARTMENT**  
**港珠澳大橋香港工程管理有限公司**  
 Hong Kong - Zhuhai - Macao Bridge Hong Kong Project Management Office

HONG KONG-ZHUHAI-MACAO BRIDGE  
 HONG KONG BOUNDARY CROSSING FACILITIES  
 - PASSENGER CLEARANCE BUILDING

**WORKS AREA WA2**

**AECOM** **Aedas**  
 Rogers Stirk Harbour + Partners  
 BURO HAPPOLD ATKINS ADI

DRG. NO. 60191048/C1/000/C00/1041B  
 圖紙編號

|                          |                            |                              |
|--------------------------|----------------------------|------------------------------|
| DESIGNED BY<br>BWCW      | CONTRACT NO.<br>HY/2013/01 | P. DIR. APPROVED<br>TKH      |
| DRAWN BY<br>WSY          | STATUS<br>釋放               | <b>WORKING DRAWING</b>       |
| SCALE<br>A1 1 : 1000     |                            |                              |
| DIMENSIONS ARE IN METRES |                            | © COPYRIGHT RESERVED<br>版權所有 |

**SETTING OUT POINT**

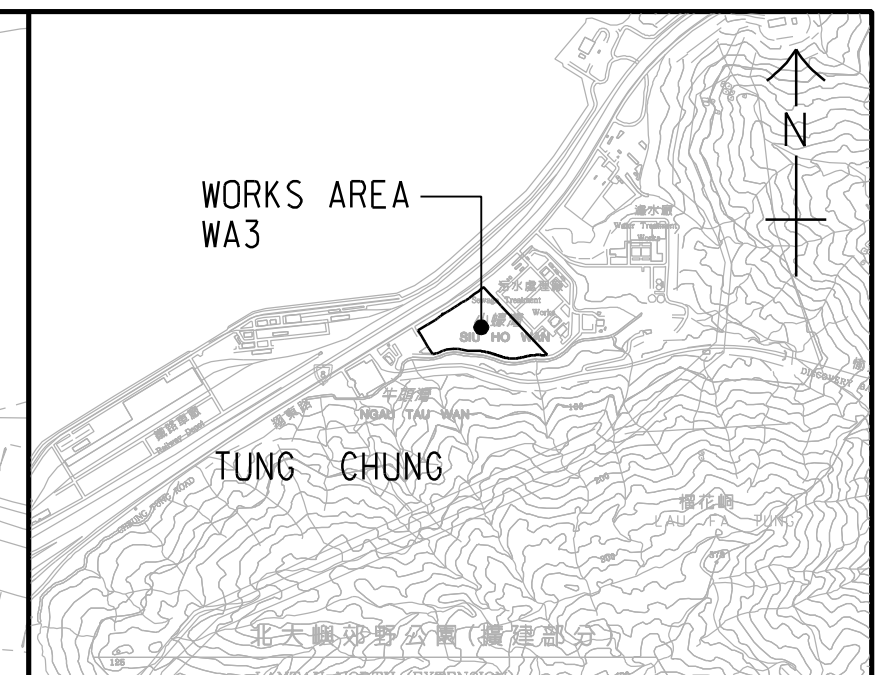
| POINT | EASTING    | NORTHING   |
|-------|------------|------------|
| 201   | 813071.417 | 817531.755 |
| 202   | 813046.124 | 817528.520 |
| 203   | 813041.528 | 817559.119 |
| 204   | 812918.331 | 817540.618 |
| 205   | 812754.843 | 817398.454 |
| 206   | 812767.133 | 817302.381 |
| 207   | 812780.486 | 817294.062 |
| 208   | 812745.200 | 817289.613 |
| 209   | 812752.963 | 817300.569 |
| 210   | 812748.782 | 817300.034 |
| 211   | 812734.825 | 817409.146 |
| 212   | 812788.988 | 817454.350 |
| 213   | 812777.075 | 817578.404 |
| 214   | 813058.837 | 817612.753 |
| 215   | 812925.889 | 817596.485 |
| 216   | 812931.852 | 817542.648 |
| 217   | 812930.654 | 817552.515 |
| 218   | 812909.983 | 817549.657 |
| 219   | 812802.930 | 817457.358 |
| 220   | 812798.921 | 817461.656 |
| 221   | 812788.702 | 817458.876 |

Plot File by : 7/10/2013 WONGKKK



SETTING OUT POINT

| POINT | EASTING    | NORTHING   |
|-------|------------|------------|
| 301   | 817467.265 | 819162.683 |
| 302   | 817314.741 | 819069.828 |
| 303   | 817327.338 | 819049.295 |
| 304   | 817440.865 | 819117.811 |
| 305   | 817340.825 | 819027.314 |
| 306   | 817387.350 | 819023.403 |
| 307   | 817387.861 | 819043.396 |
| 308   | 817466.133 | 819091.047 |
| 309   | 817469.783 | 819087.181 |
| 310   | 817513.449 | 819113.764 |
| 311   | 817347.717 | 819016.082 |
| 312   | 817526.774 | 819020.578 |
| 313   | 817531.659 | 819021.641 |
| 314   | 817531.154 | 819001.065 |
| 315   | 817533.345 | 818991.306 |
| 316   | 817620.269 | 819000.620 |



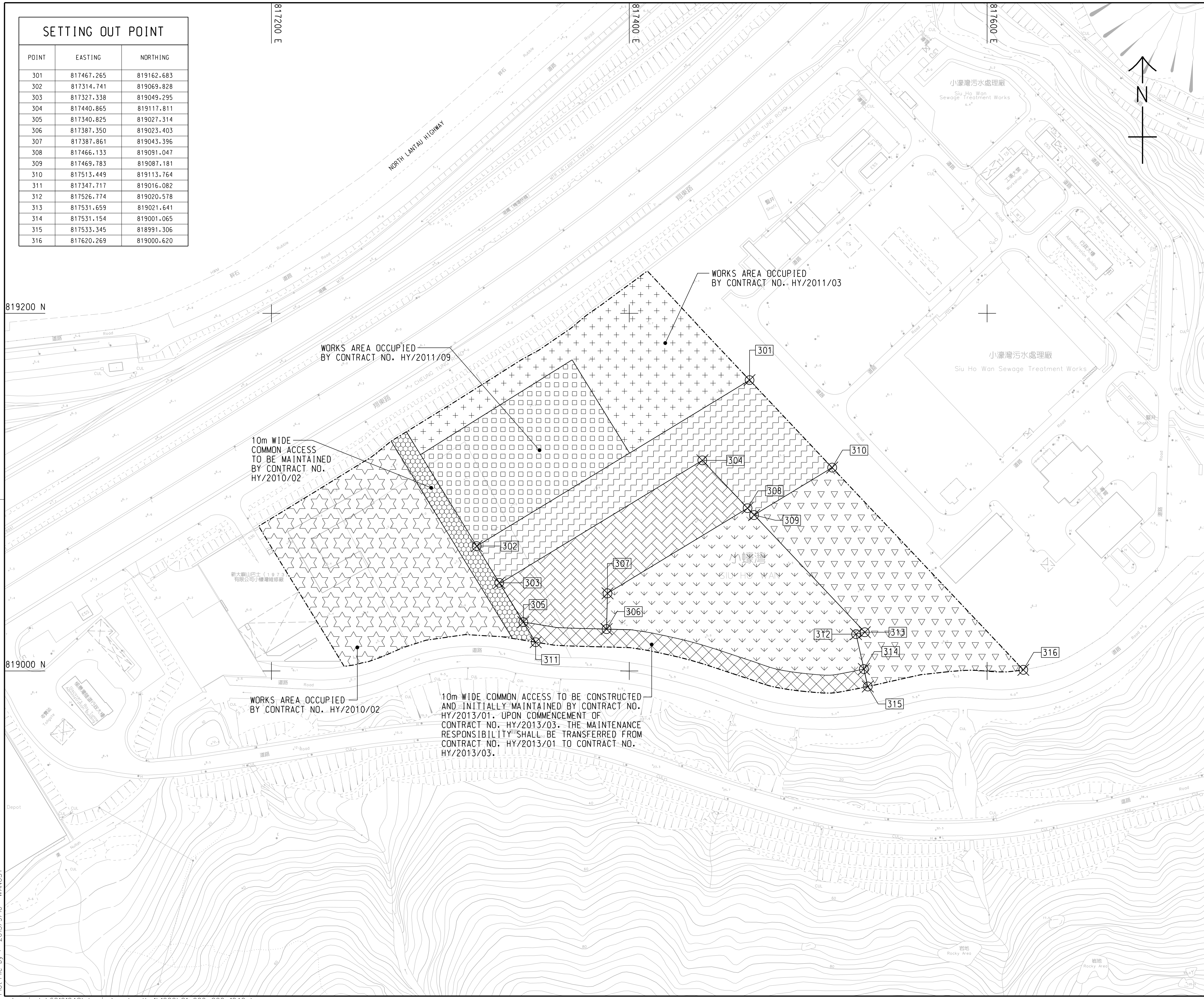
LOCATION PLAN  
SCALE 1 : 25000

NOTES:

- COORDINATES ARE RELATED TO HONG KONG METRIC GRID (1980).
- DIMENSIONS ARE IN MILLIMETER AND CHAINAGE ARE IN METRES UNLESS OTHERWISE SHOWN.

LEGEND:

|  |                     |
|--|---------------------|
|  | WORKS AREA BOUNDARY |
|  | PORTION 3.1         |
|  | PORTION 3.2         |
|  | PORTION 3.3         |
|  | PORTION 3.4         |
|  | PORTION 3.5         |
|  | PORTION 3.6         |
|  | PORTION 3.7         |
|  | PORTION 3.8         |
|  | PORTION 3.9         |



|      |                   |                  |
|------|-------------------|------------------|
| A    | WORKING DRAWING   | BWCW SCI JUN. 14 |
| -    | TENDER DRAWING    | BWCW SCI SEP. 13 |
| REV. | DESCRIPTION       | DATE             |
| 01   | ISSUED FOR TENDER | SEP. 13          |

路政署 HIGHWAYS DEPARTMENT  
 港珠澳大橋香港工程管理局  
 Hong Kong - Zhuhai - Macao Bridge Hong Kong Project Management Office

HONG KONG-ZHUHAI-MACAO BRIDGE  
 HONG KONG BOUNDARY CROSSING FACILITIES  
 - PASSENGER CLEARANCE BUILDING

WORKS AREA WA3

**AECOM** Aedas  
 Rogers Stirk Harbour + Partners  
 BURO HAPPOLD ATKINS ADI

DRG.NO. 60191048/C1/000/C00/1042A  
 圖紙編號

|                      |                             |                         |
|----------------------|-----------------------------|-------------------------|
| DESIGNED BY<br>BWCW  | CONTRACT NO.<br>HY/2013/01  | P. DIR. APPROVED<br>TKH |
| DRAWN BY<br>WSY      | STATUS<br>CHECKED           | <b>WORKING DRAWING</b>  |
| SCALE<br>1:1000      | DIMENSIONS ARE IN<br>METRES |                         |
| © COPYRIGHT RESERVED |                             |                         |

Plot File by : 2013/9/10 WANGSY

SETTING OUT POINT

| POINT | EASTING    | NORTHING   |
|-------|------------|------------|
| 401   | 822488.151 | 822632.315 |
| 402   | 822640.593 | 822689.415 |
| 403   | 822515.608 | 822559.848 |
| 404   | 822610.940 | 822599.642 |
| 405   | 822629.428 | 822607.359 |
| 406   | 822526.988 | 822529.813 |
| 407   | 822618.348 | 822567.950 |
| 408   | 822542.232 | 822489.581 |
| 409   | 822584.983 | 822507.426 |
| 410   | 822606.866 | 822516.561 |
| 411   | 822560.278 | 822441.956 |
| 412   | 822602.949 | 822460.010 |
| 413   | 822621.914 | 822467.959 |
| 414   | 822624.130 | 822470.998 |
| 415   | 822651.725 | 822508.856 |

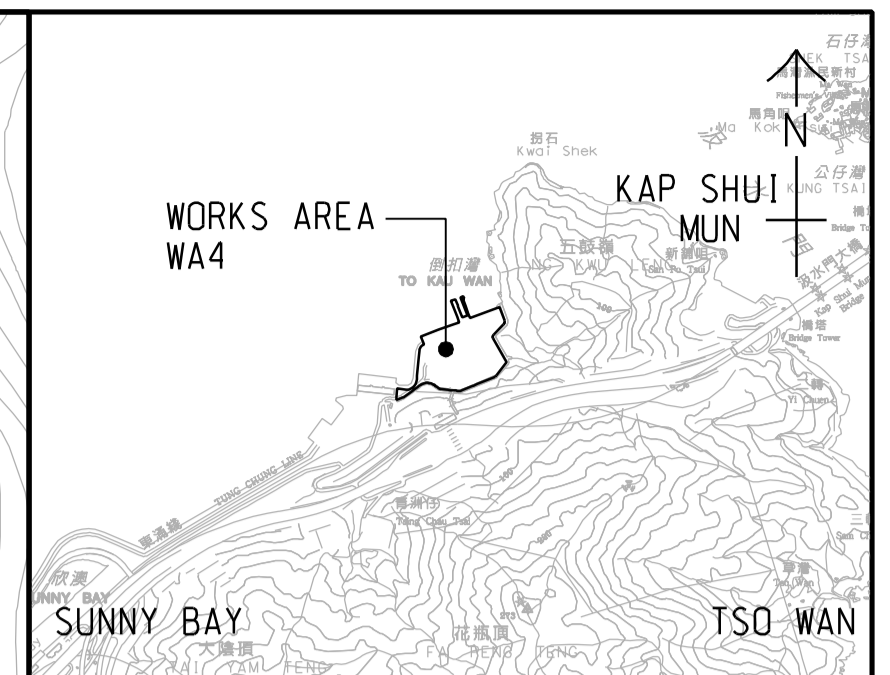
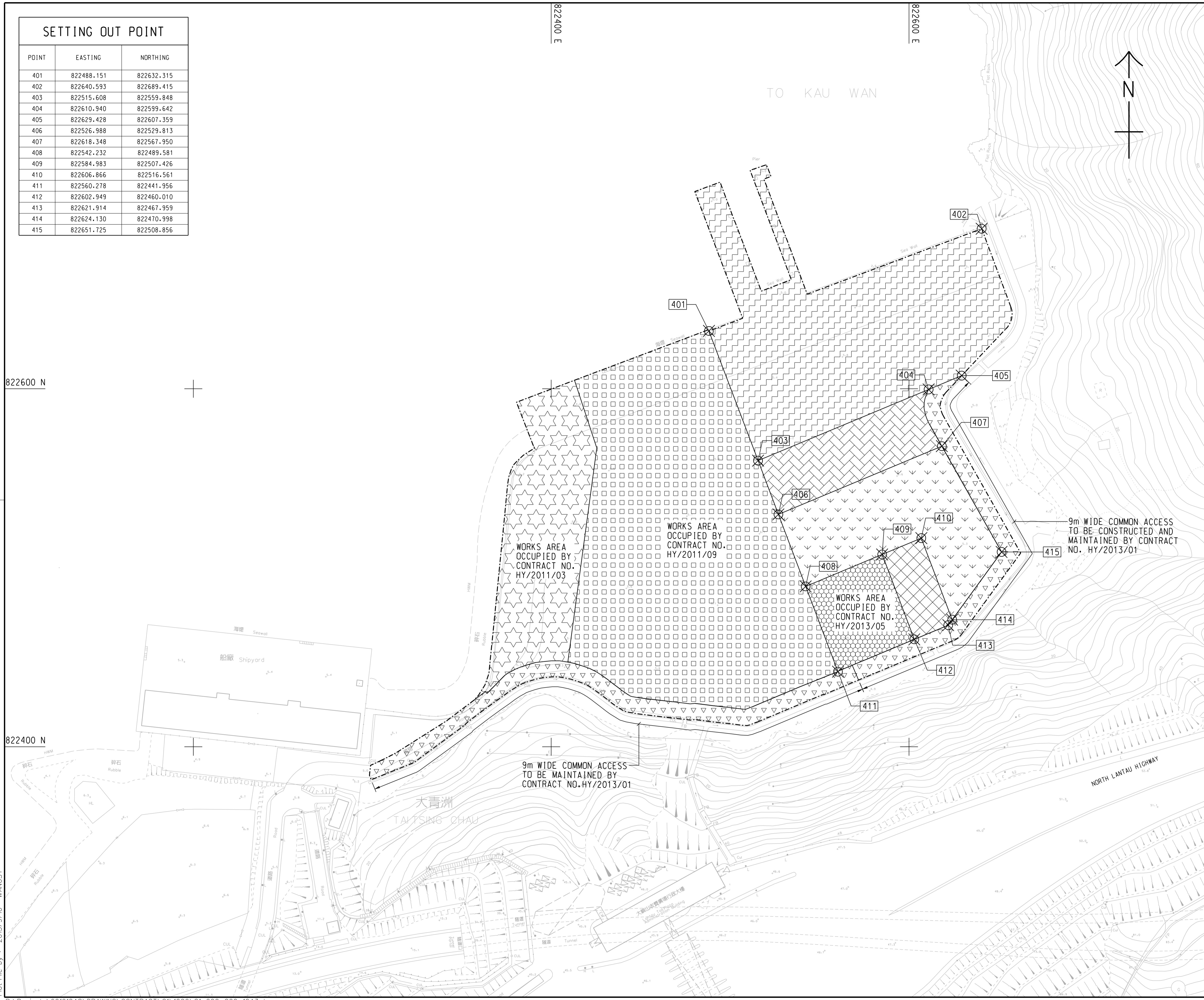
822400 E

822600 E

822600 N

822400 N

Plot File by : 2013/9/10 WANGSY



LOCATION PLAN  
SCALE 1 : 25000

NOTES:

- COORDINATES ARE RELATED TO HONG KONG METRIC GRID (1980).
- DIMENSIONS ARE IN MILLIMETER AND CHAINAGE ARE IN METRES UNLESS OTHERWISE SHOWN.

LEGEND:

- WORKS AREA BOUNDARY
- [Hatched Pattern 1] PORTION 4.1
- [Hatched Pattern 2] PORTION 4.2
- [Hatched Pattern 3] PORTION 4.3
- [Hatched Pattern 4] PORTION 4.4
- [Hatched Pattern 5] PORTION 4.5
- [Hatched Pattern 6] PORTION 4.6
- [Hatched Pattern 7] PORTION 4.7
- [Hatched Pattern 8] PORTION 4.8

|      |                |        |
|------|----------------|--------|
| REV. | DESCRIPTION    | DATE   |
| 1    | TENDER DRAWING | SEP.13 |

路政署 HIGHWAYS DEPARTMENT  
港珠澳大橋香港工程管理局  
Hong Kong - Zhuhai - Macao Bridge Hong Kong Project Management Office

HONG KONG-ZHUHAI-MACAO BRIDGE  
HONG KONG BOUNDARY CROSSING FACILITIES  
- PASSENGER CLEARANCE BUILDING

WORKS AREA WA4

**AECOM** Aedas  
Rogers Stirk Harbour + Partners  
BURO HAPPOLD ATKINS ADI

DRG.NO. 60191048/C1/000/C00/1043  
圖紙編號

|                       |                            |                          |
|-----------------------|----------------------------|--------------------------|
| DESIGNED BY<br>W.S.Y. | CONTRACT NO.<br>HY/2013/01 | P. Dir. APPROVED<br>EMSC |
|-----------------------|----------------------------|--------------------------|

SCALE 1:1000  
比例尺

DIMENSIONS ARE IN METRES  
尺寸單位

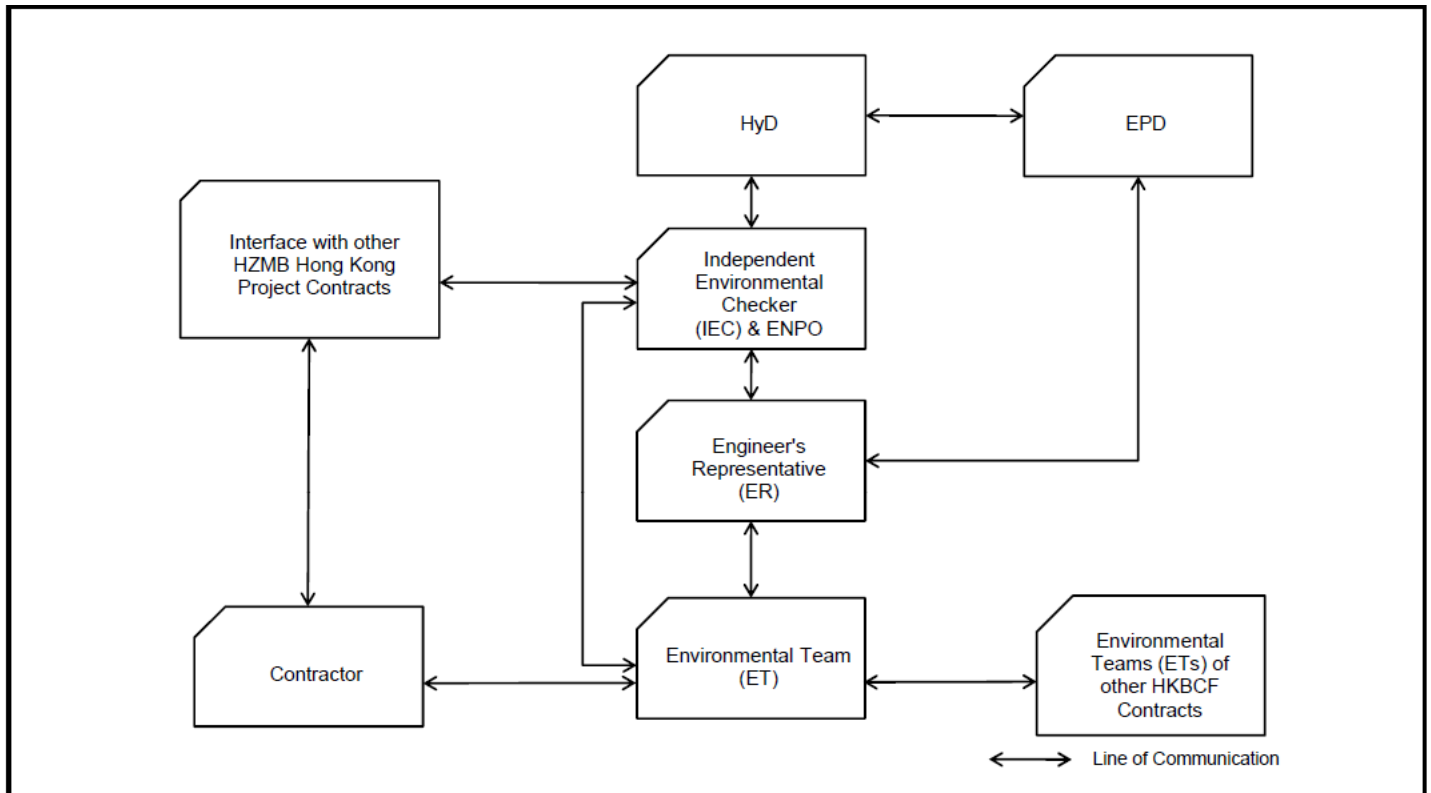
© COPYRIGHT RESERVED  
版權所有

# APPENDIX C

---

## Project Organization for Environmental Works

## Project Organisation for Environmental Works



# APPENDIX D

---

## Event and Action Plan

## Event/Action Plan for Air Quality Monitoring

| EVENT   | ACTION  |   |   |  |
|---|---|---|---|--|
|   | ET  | IEC   | ER  | CONTRACTOR   |
| <b>ACTION LEVEL</b>                               |   |   |   |  |
| 1. Exceedance for one sample                      | <ol style="list-style-type: none"> <li>1. Identify source, investigate the causes of exceedance and propose remedial measures;</li> <li>2. Inform IEC and ER;</li> <li>3. Repeat measurement to confirm finding;</li> <li>4. Increase monitoring frequency to daily.</li> </ol>   | <ol style="list-style-type: none"> <li>1. Check monitoring data submitted by ET;</li> <li>2. Check Contractor's working method.</li> </ol>  | <ol style="list-style-type: none"> <li>1. Notify Contractor.</li> </ol>   | <ol style="list-style-type: none"> <li>1. Rectify any unacceptable practice;</li> <li>2. Amend working methods if appropriate.</li> </ol>  |
| 2. Exceedance for two or more consecutive samples | <ol style="list-style-type: none"> <li>1. Identify source;</li> <li>2. Inform IEC and ER;</li> <li>3. Advise the ER on the effectiveness of the proposed remedial measures;</li> <li>4. Repeat measurements to confirm findings;</li> <li>5. Increase monitoring frequency to daily;</li> <li>6. Discuss with IEC and Contractor on remedial actions required;</li> <li>7. If exceedance continues, arrange meeting with IEC and ER;</li> <li>8. If exceedance stops, cease additional monitoring.</li> </ol> | <ol style="list-style-type: none"> <li>1. Check monitoring data submitted by ET;</li> <li>2. Check Contractor's working method;</li> <li>3. Discuss with ET and Contractor on possible remedial measures;</li> <li>4. Advise the ER on the effectiveness of the proposed remedial measures;</li> <li>5. Supervise Implementation of remedial measures.</li> </ol> | <ol style="list-style-type: none"> <li>1. Confirm receipt of notification of failure in writing;</li> <li>2. Notify Contractor;</li> <li>3. Ensure remedial measures properly implemented.</li> </ol> | <ol style="list-style-type: none"> <li>1. Submit proposals for remedial to ER within 3 working days of notification;</li> <li>2. Implement the agreed proposals;</li> <li>3. Amend proposal if appropriate.</li> </ol> |

| EVENT   | ACTION   |   |  |   |
|---|--|---|--|---|
|   | ET   | IEC   | ER   | CONTRACTOR  |
| <b>LIMIT LEVEL</b>                                |  |   |  |   |
| 1. Exceedance for one sample                      | <ol style="list-style-type: none"> <li>1. Identify source, investigate the causes of exceedance and propose remedial measures;</li> <li>2. Inform ER, Contractor and EPD;</li> <li>3. Repeat measurement to confirm finding;</li> <li>4. Increase monitoring frequency to daily;</li> <li>5. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results.</li> </ol>  | <ol style="list-style-type: none"> <li>1. Check monitoring data submitted by ET;</li> <li>2. Check Contractor's working method;</li> <li>3. Discuss with ET and Contractor on possible remedial measures;</li> <li>4. Advise the ER on the effectiveness of the proposed remedial measures;</li> <li>5. Supervise implementation of remedial measures.</li> </ol> | <ol style="list-style-type: none"> <li>1. Confirm receipt of notification of failure in writing;</li> <li>2. Notify Contractor;</li> <li>3. Ensure remedial measures properly implemented.</li> </ol>  | <ol style="list-style-type: none"> <li>1. Take immediate action to avoid further exceedance;</li> <li>2. Submit proposals for remedial actions to IEC within 3 working days of notification;</li> <li>3. Implement the agreed proposals;</li> <li>4. Amend proposal if appropriate.</li> </ol>  |
| 2. Exceedance for two or more consecutive samples | <ol style="list-style-type: none"> <li>1. Notify IEC, ER, Contractor and EPD;</li> <li>2. Identify source;</li> <li>3. Repeat measurement to confirm findings;</li> <li>4. Increase monitoring frequency to daily;</li> <li>5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented;</li> <li>6. Arrange meeting with IEC and ER to discuss the remedial actions to be taken;</li> <li>7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results;</li> <li>8. If exceedance stops, cease additional monitoring.</li> </ol> | <ol style="list-style-type: none"> <li>1. Discuss amongst ER, ET, and Contractor on the potential remedial actions;</li> <li>2. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly;</li> <li>3. Supervise the implementation of remedial measures.</li> </ol>                                    | <ol style="list-style-type: none"> <li>1. Confirm receipt of notification of failure in writing;</li> <li>2. Notify Contractor;</li> <li>3. In consultation with the IEC, agree with the Contractor on the remedial measures to be implemented;</li> <li>4. Ensure remedial measures properly implemented;</li> <li>5. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated.</li> </ol> | <ol style="list-style-type: none"> <li>1. Take immediate action to avoid further exceedance;</li> <li>2. Submit proposals for remedial actions to IEC within 3 working days of notification;</li> <li>3. Implement the agreed proposals;</li> <li>4. Resubmit proposals if problem still not under control;</li> <li>5. Stop the relevant portion of works as determined by the ER until the exceedance is abated.</li> </ol> |

## Event / Action Plan for Construction Noise Monitoring

| EVENT        | ACTION   |  |  |   |
|--------------|--|--|--|---|
|              | ET   | IEC  | ER   | CONTRACTOR  |
| Action Level | <ol style="list-style-type: none"> <li>1. Notify IEC and Contractor;</li> <li>2. Identify source, investigate the causes of exceedance and propose remedial measures;</li> <li>3. Report the results of investigation to the IEC, ER and Contractor;</li> <li>4. Discuss with the Contractor and formulate remedial measures;</li> <li>5. Increase monitoring frequency to check mitigation effectiveness.</li> </ol>  | <ol style="list-style-type: none"> <li>1. Review the analysed results submitted by the ET;</li> <li>2. Review the proposed remedial measures by the Contractor and advise the ER accordingly;</li> <li>3. Supervise the implementation of remedial measures.</li> </ol>  | <ol style="list-style-type: none"> <li>1. Confirm receipt of notification of failure in writing;</li> <li>2. Notify Contractor;</li> <li>3. Require Contractor to propose remedial measures for the analysed noise problem;</li> <li>4. Ensure remedial measures are properly implemented.</li> </ol>  | <ol style="list-style-type: none"> <li>1. Submit noise mitigation proposals to IEC;</li> <li>2. Implement noise mitigation proposals.</li> </ol>  |
| Limit Level  | <ol style="list-style-type: none"> <li>1. Inform IEC, ER, EPD and Contractor;</li> <li>2. Identify source;</li> <li>3. Repeat measurements to confirm findings;</li> <li>4. Increase monitoring frequency;</li> <li>5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented;</li> <li>6. Inform IEC, ER and EPD the causes and actions taken for the exceedances;</li> <li>7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results;</li> <li>8. If exceedance stops, cease additional monitoring.</li> </ol> | <ol style="list-style-type: none"> <li>1. Discuss amongst ER, ET, and Contractor on the potential remedial actions;</li> <li>2. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly;</li> <li>3. Supervise the implementation of remedial measures.</li> </ol> | <ol style="list-style-type: none"> <li>1. Confirm receipt of notification of failure in writing;</li> <li>2. Notify Contractor;</li> <li>3. Require Contractor to propose remedial measures for the analysed noise problem;</li> <li>4. Ensure remedial measures properly implemented;</li> <li>5. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated.</li> </ol> | <ol style="list-style-type: none"> <li>1. Take immediate action to avoid further exceedance;</li> <li>2. Submit proposals for remedial actions to IEC within 3 working days of notification;</li> <li>3. Implement the agreed proposals;</li> <li>4. Resubmit proposals if problem still not under control;</li> <li>5. Stop the relevant portion of works as determined by the ER until the exceedance is abated.</li> </ol> |



## Event / Action Plan for Water Quality Monitoring

| EVENT  | ACTION   |   |   |   |
|--|--|---|---|---|
|  | ET   | IEC   | ER  | CONTRACTOR  |
| Action level being exceeded by one sampling day                      | <ol style="list-style-type: none"> <li>1. Repeat in situ measurement to confirm findings;</li> <li>2. Identify source(s) of impact;</li> <li>3. Inform IEC, contractor and ER;</li> <li>4. Check monitoring data, all plant, equipment and Contractor's working methods;</li> <li>5. Discuss mitigation measures with IEC, ER and Contractor;</li> <li>6. Ensure mitigation measures are implemented;</li> <li>7. Repeat measurement on next day of exceedance to confirm findings.</li> </ol>   | <ol style="list-style-type: none"> <li>1. Check monitoring data submitted by ET and Contractor's working methods;</li> <li>2. Discuss with ET and Contractor on possible remedial actions;</li> <li>3. Review the proposed mitigation measures submitted by Contractor and advise the ER accordingly;</li> <li>4. Assess the effectiveness of the implemented mitigation measures.</li> </ol> | <ol style="list-style-type: none"> <li>1. Confirm receipt of notification of non-compliance in writing;</li> <li>2. Discuss with IEC on the proposed mitigation measures;</li> <li>3. Make agreement on mitigation measures to be implemented;</li> <li>4. Ensure mitigation measures are properly implemented.</li> </ol>  | <ol style="list-style-type: none"> <li>1. Inform the ER and confirm notification of the non-compliance in writing;</li> <li>2. Rectify unacceptable practice;</li> <li>3. Check all plant and equipment and consider changes of working methods;</li> <li>4. Discuss with ET and IEC on possible remedial actions and propose mitigation measures to IEC and ER;</li> <li>5. Implement the agreed mitigation measures.</li> <li>6. Amend working methods if appropriate.</li> </ol>   |
| Action level being exceeded by two or more consecutive sampling days | <ol style="list-style-type: none"> <li>1. Repeat in situ measurement to confirm findings;</li> <li>2. Identify source(s) of impact;</li> <li>3. Inform IEC, Contractor and ER;</li> <li>4. Check monitoring data, all plant, equipment and Contractor's working methods;</li> <li>5. Discuss mitigation measures with IEC, ER and Contractor;</li> <li>6. Ensure mitigation measures are implemented;</li> <li>7. Increase the monitoring frequency to daily until no exceedance of Action level;</li> <li>8. Repeat measurement on next day of exceedance to confirm findings.</li> </ol> | <ol style="list-style-type: none"> <li>1. Check monitoring data submitted by ET and Contractor's working method;</li> <li>2. Discuss with ET and Contractor on possible remedial actions;</li> <li>3. Review the proposed mitigation measures submitted by Contractor and advise the ER accordingly;</li> <li>4. Assess the effectiveness of the implemented mitigation measures.</li> </ol>  | <ol style="list-style-type: none"> <li>1. Confirm receipt of notification of non-compliance in writing;</li> <li>2. Discuss with IEC on the proposed mitigation measures;</li> <li>3. Make agreement on mitigation measures to be implemented;</li> <li>4. Ensure mitigation measures are properly implemented;</li> <li>5. Assess the effectiveness of the implemented mitigation measures.</li> </ol> | <ol style="list-style-type: none"> <li>1. Inform the Engineer and confirm notification of the non-compliance in writing;</li> <li>2. Rectify unacceptable practice;</li> <li>3. Check all plant and equipment and consider changes of working methods;</li> <li>4. Discuss with ET and IEC on possible remedial actions and propose mitigation measures to IEC and ER within 3 working days of notification;</li> <li>5. Implement the agreed mitigation measures;</li> <li>6. Amend working methods if appropriate.</li> </ol> |

| EVENT   | ACTION   |  |   |  |
|---|--|--|---|--|
|   | ET   | IEC  | ER  | CONTRACTOR   |
| Limit level being exceeded by one sampling day                      | <ol style="list-style-type: none"> <li>1. Repeat <i>in-situ</i> measurement to confirm findings;</li> <li>2. Identify source(s) of impact;</li> <li>3. Inform IEC, Contractor, ER and EPD;</li> <li>4. Check monitoring data, all plant, equipment and Contractor's working methods;</li> <li>5. Discuss mitigation measures with IEC, ER and Contractor;</li> <li>6. Ensure mitigation measures are implemented;</li> <li>7. Increase the monitoring frequency to daily until no exceedance of Limit level.</li> </ol>                          | <ol style="list-style-type: none"> <li>1. Check monitoring data submitted by ET and Contractor's working method;</li> <li>2. Discuss with ET and Contractor on possible remedial actions;</li> <li>3. Review the proposed mitigation measures submitted by Contractor and advise the ER accordingly;</li> <li>4. Assess the effectiveness of the implemented mitigation measures.</li> </ol> | <ol style="list-style-type: none"> <li>1. Confirm receipt of notification of failure in writing;</li> <li>2. Discuss with IEC, ET and Contractor on the proposed mitigation measures;</li> <li>3. Request Contractor to critically review the working methods;</li> <li>4. Ensure mitigation measures are properly implemented;</li> <li>5. Assess the effectiveness of the implemented mitigation measures.</li> </ol>   | <ol style="list-style-type: none"> <li>1. Inform the ER and confirm notification of the non-compliance in writing;</li> <li>2. Rectify unacceptable practice;</li> <li>3. Check all plant and equipment and consider changes of working methods;</li> <li>4. Submit proposal of mitigation measures to ER within 3 working days of notification and discuss with ET, IEC and ER;</li> <li>5. Implement the agreed mitigation measures;</li> <li>6. Amend working methods if appropriate.</li> </ol>  |
| Limit level being exceeded by two or more consecutive sampling days | <ol style="list-style-type: none"> <li>1. Repeat <i>in-situ</i> measurement to confirm findings;</li> <li>2. Identify source(s) of impact;</li> <li>3. Inform IEC, contractor, ER and EPD;</li> <li>4. Check monitoring data, all plant, equipment and Contractor's working methods;</li> <li>5. Discuss mitigation measures with IEC, ER and Contractor;</li> <li>6. Ensure mitigation measures are implemented;</li> <li>7. Increase the monitoring frequency to daily until no exceedance of Limit level for two consecutive days.</li> </ol> | <ol style="list-style-type: none"> <li>1. Check monitoring data submitted by ET and Contractor's working method;</li> <li>2. Discuss with ET and Contractor on possible remedial actions;</li> <li>3. Review the Contractor's mitigation measures whenever necessary to assure their effectiveness and advise the ER accordingly.</li> </ol>   | <ol style="list-style-type: none"> <li>1. Confirm receipt of notification of failure in writing;</li> <li>2. Discuss with IEC, ET and Contractor on the proposed mitigation measures;</li> <li>3. Request Contractor to critically review the working methods;</li> <li>4. Make agreement on the mitigation measures to be implemented;</li> <li>5. Ensure mitigation measures are properly implemented;</li> <li>6. Assess the effectiveness of the implemented mitigation measures;</li> <li>7. Consider and instruct, if necessary, the Contractor to slow down or to stop all or part of the construction activities until no exceedance of Limit level.</li> </ol> | <ol style="list-style-type: none"> <li>1. Inform the ER and confirm notification of the non-compliance in writing;</li> <li>2. Take immediate action to avoid further exceedance;</li> <li>3. Rectify unacceptable practice;</li> <li>4. Check all plant and equipment and consider changes of working methods;</li> <li>5. Submit proposal of mitigation measures to ER within 3 working days of notification and discuss with ET, IEC and ER;</li> <li>6. Implement the agreed mitigation measures;</li> <li>7. Resubmit proposals of mitigation measures if problem still not under control;</li> <li>8. As directed by the Engineer, to slow down or to stop all or part of the construction activities until no exceedance of Limit level.</li> </ol> |

## Event / Action Plan for Dolphin Monitoring

| EVENT        | ACTION  |   |   |  |
|--------------|---|---|---|--|
|              | ET  | IEC   | ER  | CONTRACTOR   |
| Action Level | <ol style="list-style-type: none"> <li>1. Repeat statistical data analysis to confirm findings;</li> <li>2. Review all available and relevant data, including raw data and statistical analysis results of other parameters covered in the EM&amp;A, to ascertain if differences are as a result of natural variation or previously observed seasonal differences;</li> <li>3. Identify source(s) of impact;</li> <li>4. Inform the IEC, ER/SOR and Contractor;</li> <li>5. Check monitoring data.</li> <li>6. Review to ensure all the dolphin protective measures are fully and properly implemented and advise on additional measures if necessary.</li> </ol> | <ol style="list-style-type: none"> <li>1. Check monitoring data submitted by ET and Contractor;</li> <li>2. Discuss monitoring results and finding with the ET and the Contractor.</li> </ol> | <ol style="list-style-type: none"> <li>1. Discuss monitoring with the IEC and any other measures proposed by the ET;</li> <li>2. If ER/SOR is satisfied with the proposal of any other measures, ER/SOR to signify the agreement in writing on the measures to be implemented.</li> </ol> | <ol style="list-style-type: none"> <li>1. Inform the ER/SOR and confirm notification of the non-compliance in writing;</li> <li>2. Discuss with the ET and the IEC and propose measures to the IEC and the ER/SOR;</li> <li>3. Implement the agreed measures.</li> </ol> |

| EVENT       | ACTION  |   |   |   |
|-------------|---|---|---|---|
|             | ET  | IEC   | ER  | CONTRACTOR  |
| Limit Level | <ol style="list-style-type: none"> <li>1. Repeat statistical data analysis to confirm findings;</li> <li>2. Review all available and relevant data, including raw data and statistical analysis results of other parameters covered in the EM&amp;A, to ascertain if differences are as a result of natural variation or previously observed seasonal differences;</li> <li>3. Identify source(s) of impact;</li> <li>4. Inform the IEC, ER/SOR and Contractor of findings;</li> <li>5. Check monitoring data;</li> <li>6. Repeat review to ensure all the dolphin protective measures are fully and properly implemented and advise on additional measures if necessary.</li> <li>7. If ET proves that the source of impact is caused by any of the construction activity by the works contract, ET to arrange a meeting to discuss with IEC, ER/SOR and Contractor the necessity of additional dolphin monitoring and/or any other potential mitigation measures (e.g., consider to modify the perimeter silt curtain or consider to control/temporarily stop relevant construction activity etc.) and submit to IEC a proposal of additional dolphin monitoring and/or mitigation measures where necessary.</li> </ol> | <ol style="list-style-type: none"> <li>1. Check monitoring data submitted by ET and Contractor;</li> <li>2. Discuss monitoring results and findings with the ET and the Contractor;</li> <li>3. Attend the meeting to discuss with ET, ER/SOR and Contractor the necessity of additional dolphin monitoring and any other potential mitigation measures.</li> <li>4. Review proposals for additional monitoring and any other mitigation measures submitted by ET and Contractor and advise ER/SOR of the results and findings accordingly.</li> <li>5. Supervise / Audit the implementation of additional monitoring and/or any other mitigation measures and advise ER/SOR the results and findings accordingly.</li> </ol> | <ol style="list-style-type: none"> <li>1. Attend the meeting to discuss with ET, IEC and Contractor the necessity of additional dolphin monitoring and any other potential mitigation measures.</li> <li>2. If ER/SOR is satisfied with the proposals for additional dolphin monitoring and/or any other mitigation measures submitted by ET and Contractor and verified by IEC, ER/SOR to signify the agreement in writing on such proposals and any other mitigation measures.</li> <li>3. Supervise the implementation of additional monitoring and/or any other mitigation measures.</li> </ol> | <ol style="list-style-type: none"> <li>1. Inform the ER/SOR and confirm notification of the non-compliance in writing;</li> <li>2. Attend the meeting to discuss with ET, IEC and ER/SOR the necessity of additional dolphin monitoring and any other potential mitigation measures.</li> <li>3. Jointly submit with ET to IEC a proposal of additional dolphin monitoring and/or any other mitigation measures when necessary.</li> <li>4. Implement the agreed additional dolphin monitoring and/or any other mitigation measures.</li> </ol> |

## **APPENDIX E**

---

### Implementation Schedule for Environmental Mitigation Measures (EMIS)

Contract No. HY/2013/01 – Hong Kong Zhuhai and Macao Bridge Hong Kong Boundary Crossing Facilities – Passenger Clearance Building

Implementation Schedule for Environmental Mitigation Measures

| EIA Ref.           | EM&A Log Ref | Recommended Mitigation Measures   | Objectives of the Recommended Measures & Main Concerns to address  | Who to implement the measures? | Location of the measures | When to implement the measures? | What requirements or standards for the measures to achieve?  | Implementation Status   |
|--------------------|--------------|---|--|--------------------------------|--------------------------|---------------------------------|--|---|
| <b>Air Quality</b> |              |   |  |                                |                          |                                 |  |   |
| S5.5.6.1           | A1           | 1) The contractor shall follow the procedures and requirements given in the Air Pollution Control (Construction Dust) Regulation  | Good construction site practices to control the dust impact at the nearby sensitive receivers to within the relevant criteria. | Contractor                     | All construction sites   | Construction stage              | To control the dust impact to within the HKAQO and TM-EIA criteria (Ref. 1- hr and 24hr TSP levels are 500 $\mu\text{g}\text{m}^{-3}$ and 260 $\mu\text{g}\text{m}^{-3}$ , respectively) | N/A<br>The works site area in Hong Kong-Zhuhai-Macao Bridge was handed over to the relevant authorities since 24 October 2018 and the site had been changed to a closed area. |
| S5.5.6.2           | A2           | 2) Proper watering of exposed spoil should be undertaken throughout the construction phase: <ul style="list-style-type: none"> <li>Any excavated or stockpile of dusty material should be covered entirely by impervious sheeting or sprayed with water to maintain the entire surface wet and then removed or backfilled or reinstated where practicable within 24 hours of the excavation or unloading;</li> <li>Any dusty materials remaining after a stockpile is removed should be wetted with water and cleared from the surface of roads;</li> <li>A stockpile of dusty material should not be extend beyond the pedestrian barriers, fencing or traffic cones.</li> <li>The load of dusty materials on a vehicle leaving a construction site should be covered entirely by impervious sheeting to ensure that the dusty materials do not leak from the vehicle;</li> <li>Where practicable, vehicle washing facilities with high pressure water jet should be provided at every discernible or designated vehicle exit point. The area where vehicle washing takes place and the road section between the washing facilities and the exit point should be paved with concrete, bituminous materials or hardcores;</li> <li>The portion of any road leading only to construction site that is within 30m of a vehicle entrance or exit should be kept clear of dusty materials;</li> <li>Surfaces where any pneumatic or power-driven drilling, cutting, polishing or other mechanical breaking operation takes place should be sprayed with water or a dust suppression chemical continuously;</li> <li>Any area that involves demolition activities should be sprayed with water or a dust suppression chemical immediately prior to, during and immediately after the activities so as to maintain the entire surface wet;</li> </ul> | Good construction site practices to control the dust impact at the nearby sensitive receivers to within the relevant criteria. | Contractor                     | All construction sites   | Construction stage              | To control the dust impact to within the HKAQO and TM-EIA criteria (Ref. 1- hr and 24hr TSP levels are 500 $\mu\text{g}\text{m}^{-3}$ and 260 $\mu\text{g}\text{m}^{-3}$ , respectively) | N/A<br>The works site area in Hong Kong-Zhuhai-Macao Bridge was handed over to the relevant authorities since 24 October 2018 and the site had been changed to a closed area. |

| EIA Ref. | EM&A Log Ref | Recommended Mitigation Measures   | Objectives of the Recommended Measures & Main Concerns to address  | Who to implement the measures? | Location of the measures | When to implement the measures? | What requirements or standards for the measures to achieve?  | Implementation Status   |
|----------|--------------|---|--|--------------------------------|--------------------------|---------------------------------|--|---|
| S5.5.6.2 | A2           | <ul style="list-style-type: none"> <li>Where a scaffolding is erected around the perimeter of a building under construction, effective dust screens, sheeting or netting should be provided to enclose the scaffolding from the ground floor level of the building, or a canopy should be provided from the first floor level up to the highest level of the scaffolding;</li> <li>Any skip hoist for material transport should be totally enclosed by impervious sheeting;</li> <li>Every stock of more than 20 bags of cement or dry pulverised fuel ash (PFA) should be covered entirely by impervious sheeting or placed in an area sheltered on the top and the 3 sides;</li> <li>Cement or dry PFA delivered in bulk should be stored in a closed silo fitted with an audible high level alarm which is interlocked with the material filling line and no overfilling is allowed;</li> <li>Loading, unloading, transfer, handling or storage of bulk cement or dry PFA should be carried out in a totally enclosed system or facility, and any vent or exhaust should be fitted with an effective fabric filter or equivalent air pollution control system; and</li> <li>Exposed earth should be properly treated by compaction, turfing, hydroseeding, vegetation planting or sealing with latex, vinyl, bitumen, shotcrete or other suitable surface stabiliser within six months after the last construction activity on the construction site or part of the construction site where the exposed earth lies.</li> </ul> | Good construction site practices to control the dust impact at the nearby sensitive receivers to within the relevant criteria. | Contractor                     | All construction sites   | Construction stage              | To control the dust impact to within the HKAQO and TM-EIA criteria (Ref. 1- hr and 24hr TSP levels are 500 $\mu\text{g}\text{m}^{-3}$ and 260 $\mu\text{g}\text{m}^{-3}$ , respectively) | N/A<br>The works site area in Hong Kong-Zhuhai-Macao Bridge was handed over to the relevant authorities since 24 October 2018 and the site had been changed to a closed area. |
| S5.5.6.4 | A3           | The Contractor should undertake proper watering on all exposed spoil (with at least 8 times per day) throughout the construction phase.   | Control construction dust  | Contractor                     | All construction sites   | Construction stage              | To control the dust impact   | N/A   |
| S5.5.6.5 | A4           | Engineer to incorporate the controlled measures into the Particular Specification (PS) for the civil work. The PS should also draw the contractor's attention to the relevant latest Practice Notes issued by EPD.  | Control construction dust  | Engineer                       | All construction sites   | Design Stage                    | Air Pollution Control (Construction Dust) Regulation   | N/A<br>The works site area in Hong Kong-Zhuhai-Macao Bridge was handed over to the relevant authorities since 24 October 2018 and the site had been changed to a closed area  |

| EIA Ref. | EM&A Log Ref | Recommended Mitigation Measures   | Objectives of the Recommended Measures & Main Concerns to address   | Who to implement the measures? | Location of the measures                        | When to implement the measures? | What requirements or standards for the measures to achieve?   | Implementation Status   |
|----------|--------------|---|---|--------------------------------|---|---------------------------------|---|---|
| S5.5.6.5 | A5           | Implement regular dust monitoring under EM&A programme during the construction stage.   | Monitor the 24 hr and 1hr TSP levels at the representative dust monitoring stations to ensure compliance with relevant criteria throughout the construction period. | Contractor                     | Selected representative dust monitoring station | Construction stage              | <ul style="list-style-type: none"> <li>Air Pollution Control (Construction Dust) Regulation</li> <li>To control the dust impact to within the HKAQO and TM-EIA criteria (Ref. 1- hr and 24hr TSP levels are 500 <math>\mu\text{g}\text{m}^{-3}</math> and 260 <math>\mu\text{g}\text{m}^{-3}</math>, respectively)</li> </ul> | <p>✓<br/>(Dust monitoring station AMS6 is covered by Contract No. HY/2011/03. And dust monitoring station AMS7B is covered by Contract No. HY/2013/04)</p>                            |
| S5.5.7.1 | A6           | <p>The following mitigation measures should be adopted to prevent fugitive dust emissions for concrete batching plant:</p> <ul style="list-style-type: none"> <li>Loading, unloading, handling, transfer or storage of any dusty materials should be carried out in totally enclosed system;</li> <li>All dust-laden air or waste gas generated by the process operations should be properly extracted and vented to fabric filtering system to meet the emission limits for TSP;</li> <li>Vents for all silos and cement/pulverised fuel ash (PFA) weighing scale should be fitted with fabric filtering system;</li> <li>The materials which may generate airborne dusty emissions should be wetted by water spraysystem;</li> <li>All receiving hoppers should be enclosed on three sides up to 3m above unloading point;</li> <li>All conveyor transfer points should be totally enclosed;</li> <li>All access and route roads within the premises should be paved and wetted; and</li> <li>Vehicle cleaning facilities should be provided and used by all concrete trucks before leaving the premises to wash off any dust on the wheels and/or body.</li> </ul> | Monitor the 24 hr and 1hr TSP levels at the representative dust monitoring stations to ensure compliance with relevant criteria throughout the construction period. | Contractor                     | Selected representative dust monitoring station | Construction stage              | <ul style="list-style-type: none"> <li>Air Pollution Control (Construction Dust) Regulation</li> <li>To control the dust impact to within the HKAQO and TM-EIA criteria (Ref. 1- hr and 24hr TSP levels are 500 <math>\mu\text{g}\text{m}^{-3}</math> and 260 <math>\mu\text{g}\text{m}^{-3}</math>, respectively)</li> </ul> | <p>N/A<br/>The works site area in Hong Kong-Zhuhai-Macao Bridge was handed over to the relevant authorities since 24 October 2018 and the site had been changed to a closed area.</p> |



|          |    |  |                           |            |                        |                    |  |   |
|----------|----|--|---------------------------|------------|------------------------|--------------------|--|---|
| S5.5.2.7 | A7 | <p>The following mitigation measures should be adopted to prevent fugitive dust emissions at barging point:</p> <ul style="list-style-type: none"> <li>• All road surface within the barging facilities will be paved;</li> <li>• Dust enclosures will be provided for the loading ramp;</li> <li>• Vehicles will be required to pass through designated wheels wash facilities; and</li> <li>• Continuous water spray at the loading points.</li> </ul> | Control construction dust | Contractor | All construction sites | Construction stage | Air Pollution Control (Construction Dust) Regulation | <p>N/A<br/>The works site area in Hong Kong-Zhuhai-Macao Bridge was handed over to the relevant authorities since 24 October 2018 and the site had been changed to a closed area.</p> |
|----------|----|--|---------------------------|------------|------------------------|--------------------|--|---|

| EIA Ref.                              | EM&A Log Ref | Recommended Mitigation Measures  | Objectives of the Recommended Measures & Main Concerns to address   | Who to implement the measures? | Location of the measures | When to implement the measures? | What requirements or standards for the measures to achieve? | Implementation Status   |
|---------------------------------------|--------------|--|---|--------------------------------|--------------------------|---------------------------------|---|---|
| <b>Construction Noise (Air borne)</b> |              |  |   |                                |                          |                                 |   |   |
| S6.4.10                               | N1           | 1) Use of good site practices to limit noise emissions by considering the following: <ul style="list-style-type: none"> <li>• only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction programme;</li> <li>• machines and plant (such as trucks, cranes) that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum;</li> <li>• plant known to emit noise strongly in one direction, where possible, be orientated so that the noise is directed away from nearby NSRs;</li> <li>• silencers or mufflers on construction equipment should be properly fitted and maintained during the construction works;</li> <li>• mobile plant should be sited as far away from NSRs as possible and practicable;</li> <li>• material stockpiles, mobile container site office and other structures should be effectively utilised, where practicable, to screen noise from on-site construction activities.</li> </ul> | Control construction airborne noise by means of good site practices | Contractor                     | All construction sites   | Construction stage              | Noise Control Ordinance                                     | N/A<br>The works site area in Hong Kong-Zhuhai-Macao Bridge was handed over to the relevant authorities since 24 October 2018 and the site had been changed to a closed area. |

|         |    |   |   |            |   |                    |   |   |
|---------|----|---|---|------------|---|--------------------|---|---|
| S6.4.11 | N2 | 2) Install temporary hoarding located on the site boundaries between noisy construction activities and NSRs. The conditions of the hoardings shall be properly maintained throughout the construction period. | Reduce the construction noise levels at low-level zone of NSRs through partial screening. | Contractor | All construction sites  | Construction stage | <ul style="list-style-type: none"> <li>Noise Control Ordinance</li> <li>Annex 5, TM-EIA</li> </ul>  | N/A<br>The works site area in Hong Kong-Zhuhai-Macao Bridge was handed over to the relevant authorities since 24 October 2018 and the site had been changed to a closed area. |
| S6.4.12 | N3 | 3) Install movable noise barriers (typically density @ 14kg/m <sup>2</sup> ), acoustic mat or full enclosure close to noisy plants including air compressor, generators, saw.                                 | Screen the noisy plant items to be used at all construction sites                         | Contractor | For plant items listed in Appendix 6D of the EIA report at all construction sites | Construction stage | <ul style="list-style-type: none"> <li>Noise Control Ordinance</li> <li>Annex 5, TM-EIA</li> <li>75dB(A) for residential premises</li> <li>The movable barrier should achieve at least 5dB(A) and the full enclosure should be designed to achieve 10dB(A)</li> </ul> | N/A<br>The works site area in Hong Kong-Zhuhai-Macao Bridge was handed over to the relevant authorities since 24 October 2018 and the site had been changed to a closed area. |

| EIA Ref.        | EM&A Log Ref | Recommended Mitigation Measures  | Objectives of the Recommended Measures & Main Concerns to address                        | Who to implement the measures? | Location of the measures  | When to implement the measures? | What requirements or standards for the measures to achieve?  | Implementation Status   |
|-----------------|--------------|--|--|--------------------------------|---|---------------------------------|--|---|
| S6.4.13         | N4           | 4) Select "Quiet plants" which comply with the BS 5228 Part 1 or TM standards.   | Reduce the noise levels of plant items   | Contractor                     | For plant items listed in Appendix 6D of the EIA report at all construction sites | Construction stage              | <ul style="list-style-type: none"> <li>Noise Control Ordinance &amp; its TM</li> <li>Annex 5, TM-EIA</li> </ul>                              | N/A<br>The works site area in Hong Kong-Zhuhai-Macao Bridge was handed over to the relevant authorities since 24 October 2018 and the site had been changed to a closed area. |
| S6.4.14         | N5           | 5) Sequencing operation of construction plants where practicable.  | Operate sequentially within the same work site to reduce the construction airborne noise | Contractor                     | All construction sites where practicable  | Construction stage              | <ul style="list-style-type: none"> <li>Noise Control Ordinance</li> <li>Annex 5, TM-EIA</li> </ul>   | N/A<br>The works site was handed over to the relevant authorities since 24 October 2018 and the site had been changed to a closed area.                                       |
| S6.4.14         | N6           | 6) Implement a noise monitoring under EM&A programme.  | Monitor the construction noise levels at the selected representative locations           | Contractor                     | Selected representative noise monitoring station                                  | Construction stage              | <ul style="list-style-type: none"> <li>Noise Control Ordinance</li> <li>Annex 5, TM-EIA</li> <li>75dB(A) for residential premises</li> </ul> | ✓<br>(Noise monitoring stations NMS2 and NMS3C are covered by Contract No. HY/2013/04.)   |
| <b>Sediment</b> |              |  |  |                                |   |                                 |  |   |
| S7.3            | S1           | 1) The requirements as recommended in ETWB TC 34/2002 Management of Dredged/Excavated Sediment shall be included in the Particular Specification as appropriate. | Develop sediment disposal arrangement  | Engineer                       | All construction sites  | Design stage                    | <ul style="list-style-type: none"> <li>Waste Disposal Ordinance</li> <li>ETW B TC 34/2002</li> </ul>   | N/A<br>The works site area in Hong Kong-Zhuhai-Macao Bridge was handed over to the relevant authorities since 24 October 2018 and the site had been changed to a closed area. |

| EIA Ref.                                     | EM&A Log Ref | Recommended Mitigation Measures   | Objectives of the Recommended Measures & Main Concerns to address   | Who to implement the measures? | Location of the measures | When to implement the measures? | What requirements or standards for the measures to achieve?  | Implementation Status   |
|--|--------------|---|---|--------------------------------|--------------------------|---------------------------------|--|---|
| <b>Waste Management (Construction Waste)</b> |              |   |   |                                |                          |                                 |  |   |
| S8.3.8                                       | WM1          | <p><u>Construction and Demolition Material</u></p> <p>The following mitigation measures should be implemented in handling the waste:</p> <ul style="list-style-type: none"> <li>Maintain temporary stockpiles and reuse excavated fill material for backfilling and reinstatement;</li> <li>Make provisions in the Contract documents to allow and promote the use of recycled aggregates where appropriate;</li> <li>Adopt 'Selective Demolition' technique to demolish the existing structures and facilities with a view to recovering broken concrete effectively for recycling purpose, where possible;</li> <li>Implement a trip-ticket system for each works contract to ensure that the disposal of C&amp;D materials are properly documented and verified; and</li> <li>Implement an enhanced Waste Management Plan similar to ETW BTC (Works) No. 19/2005 – “Environmental Management on Construction Sites” to encourage on-site sorting of C&amp;D materials and to minimize their generation during the course of construction.</li> <li>In addition, disposal of the C&amp;D materials onto any sensitive locations such as agricultural lands, etc. should be avoided. The Contractor shall propose the final disposal sites to the Project Proponent and get its approval before implementation.</li> </ul> | Good site practice to minimize the waste generation and recycle the C&D materials as far as practicable so as to reduce the amount for final disposal | Contractor                     | All construction sites   | Construction stage              | <ul style="list-style-type: none"> <li>Land (Miscellaneous Provisions) Ordinance</li> <li>Waste Disposal Ordinance</li> <li>ETW BTC 19/2005</li> </ul> | N/A<br>The works site area in Hong Kong-Zhuhai-Macao Bridge was handed over to the relevant authorities since 24 October 2018 and the site had been changed to a closed area. |
| S8.3.8                                       | WM1          | <ul style="list-style-type: none"> <li>Implement an enhanced Waste Management Plan similar to ETW BTC (Works) No. 19/2005 – “Environmental Management on Construction Sites” to encourage on-site sorting of C&amp;D materials and to minimize their generation during the course of construction.</li> <li>In addition, disposal of the C&amp;D materials onto any sensitive locations such as agricultural lands, etc. should be avoided. The Contractor shall propose the final disposal sites to the Project Proponent and get its approval before implementation.</li> </ul>   | Good site practice to minimize the waste generation and recycle the C&D materials as far as practicable so as to reduce the amount for final disposal | Contractor                     | All construction sites   | Construction stage              | <ul style="list-style-type: none"> <li></li> </ul>   | N/A<br>The works site area in Hong Kong-Zhuhai-Macao Bridge was handed over to the relevant authorities since 24 October 2018 and the site had been changed to a closed area. |
| S8.3.9-S8.3.11                               | WM2          | <p><u>C&amp;D Waste</u></p> <ul style="list-style-type: none"> <li>Standard formwork or pre-fabrication should be used as far as practicable in order to minimise the arising of C&amp;D materials. The use of more durable formwork or plastic facing for the construction works should be considered. Use of wooden hoardings should not be used, as in other projects. Metal hoarding should be used to enhance the possibility of recycling. The purchasing of construction</li> </ul>  | Good site practice to minimize the waste generation and recycle the C&D materials as far as practicable so as to reduce the amount for final disposal | Contractor                     | All construction sites   | Construction stage              | <ul style="list-style-type: none"> <li>Land (Miscellaneous Provisions) Ordinance</li> <li>Waste Disposal Ordinance</li> </ul>                          | N/A<br>The works site area in Hong Kong-Zhuhai-Macao Bridge was handed over to the relevant   |

|                 |     |   |  |            |                        |                    |  |  |
|-----------------|-----|---|--|------------|------------------------|--------------------|--|--|
|                 |     | <p>materials will be carefully planned in order to avoid over ordering and wastage.</p> <ul style="list-style-type: none"> <li>The Contractor should recycle as much of the C&amp;D materials as possible on-site. Public fill and C&amp;D waste should be segregated and stored in different containers or skips to enhance reuse or recycling of materials and their proper disposal. Where practicable, concrete and masonry can be crushed and used as fill. Steel reinforcement bar can be used by scrap steel mills. Different areas of the sites should be considered for such segregation and storage.</li> </ul>   |  |            |                        |                    | <ul style="list-style-type: none"> <li>ETWB TC 19/2005</li> </ul>  | <p>authorities since 24 October 2018 and the site had been changed to a closed area.</p>   |
| S8.2.12-S8.3.15 | WM3 | <p><u>Chemical Waste</u></p> <ul style="list-style-type: none"> <li>Chemical waste that is produced, as defined by Schedule 1 of the Waste Disposal (Chemical Waste) (General) Regulation, should be handled in accordance with the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes.</li> <li>Containers used for the storage of chemical wastes should be suitable for the substance they are holding, resistant to corrosion, maintained in a good condition, and securely closed; have a capacity of less than 450 liters unless the specification has been approved by the EPD; and display a label in English and Chinese in accordance with instructions prescribed in Schedule 2 of the regulation.</li> <li>The storage area for chemical wastes should be clearly labelled and used solely for the storage of chemical waste; enclosed on at least 3 sides; have an impermeable floor and bunding of sufficient capacity to accommodate 110% of the volume of the largest container or 20 % of the total volume of waste stored in that area, whichever is the greatest; have adequate ventilation; covered to prevent rainfall entering; and arranged so that incompatible materials are adequately separated.</li> </ul> | Control the chemical waste and ensure proper storage, handling and disposal. | Contractor | All construction sites | Construction stage | <ul style="list-style-type: none"> <li>Waste Disposal (Chemical Waste) (General) Regulation</li> <li>Code of Practice on the Packaging, Labelling and Storage of Chemical Waste</li> </ul> | <p>N/A</p> <p>The works site area in Hong Kong-Zhuhai-Macao Bridge was handed over to the relevant authorities since 24 October 2018 and the site had been changed to a closed area.</p> |

| EIA Ref.            | EM&A Log Ref | Recommended Mitigation Measures  | Objectives of the Recommended Measures & Main Concerns to address                  | Who to implement the measures? | Location of the measures | When to implement the measures? | What requirements or standards for the measures to achieve?                | Implementation Status   |
|---------------------|--------------|--|--|--------------------------------|--------------------------|---------------------------------|--|---|
| S8.2.12-<br>S8.3.15 | WM3          | <ul style="list-style-type: none"> <li>Disposal of chemical waste should be via a licensed waste collector; be to a facility licensed to receive chemical waste, such as the Chemical Waste Treatment Centre which also offers a chemical waste collection service and can supply the necessary storage containers; or be to a reuser of the waste, under approval from the EPD.</li> </ul>  | Control the chemical waste and ensure proper storage, handling and disposal.       | Contractor                     | All construction sites   | Construction stage              |  | N/A<br>The works site area in Hong Kong-Zhuhai-Macao Bridge was handed over to the relevant authorities since 24 October 2018 and the site had been changed to a closed area. |
| S8.3.16             | WM4          | <p><u>Sewage</u></p> <ul style="list-style-type: none"> <li>Adequate numbers of portable toilets should be provided for the workers. The portable toilets should be maintained in a state, which will not deter the workers from utilizing these portable toilets. Night soil should be collected by licensed collectors regularly.</li> </ul>   | Proper handling of sewage from worker to avoid odour, pest and litter impacts      | Contractor                     | All construction sites   | Construction stage              | <ul style="list-style-type: none"> <li>Waste Disposal Ordinance</li> </ul> | N/A<br>The works site area in Hong Kong-Zhuhai-Macao Bridge was handed over to the relevant authorities since 24 October 2018 and the site had been changed to a closed area. |
| S8.3.17             | WM5          | <p><u>General Refuse</u></p> <ul style="list-style-type: none"> <li>General refuse generated on-site should be stored in enclosed bins or compaction units separately from construction and chemical wastes.</li> <li>A reputable waste collector should be employed by the Contractor to remove general refuse from the site, separately from construction and chemical wastes, on a daily basis to minimize odour, pest and litter impacts. Burning of refuse on construction sites is prohibited by law.</li> <li>Aluminium cans are often recovered from the waste stream by individual collectors if they are segregated and made easily accessible. Separate labelled bins for their deposit should be provided if feasible.</li> <li>Office wastes can be reduced through the recycling of paper if volumes are large enough to warrant collection. Participation in a</li> </ul> | Minimize production of the general refuse and avoid odour, pest and litter impacts | Contractor                     | All construction sites   | Construction stage              | <ul style="list-style-type: none"> <li>Waste Disposal Ordinance</li> </ul> | N/A<br>The works site area in Hong Kong-Zhuhai-Macao Bridge was handed over to the relevant authorities since 24 October 2018 and the site had been changed to a closed area. |

local collection scheme should be considered by the Contractor. In addition, waste separation facilities for paper, aluminum cans, plastic bottles etc., should be provided.

- Training should be provided to workers about the concepts of site cleanliness and appropriate waste management procedure, including reduction, reuse and recycling of wastes.



| EIA Ref.                                  | EM&A Log Ref | Recommended Mitigation Measures  | Objectives of the Recommended Measures & Main Concerns to address | Who to implement the measures? | Location of the measures | When to implement the measures? | What requirements or standards for the measures to achieve? | Implementation Status   |
|---|--------------|--|---|--------------------------------|--------------------------|---------------------------------|---|---|
| <b>Water Quality (Construction Phase)</b> |              |  |   |                                |                          |                                 |   |   |
| S.9.11.1.7                                | W1           | <p>Mitigation during the marine works to reduce impacts to within acceptable levels have been recommended and will comprise a series of measures that restrict the method and sequencing of backfilling, as well as protection measures. Details of the measures are provided below:</p> <ul style="list-style-type: none"> <li>Reclamation filling for the Project shall not proceed until at least 200m of leading seawall at the reclamation area formed above +2.2mPD, unless otherwise agreement was obtained from EPD, except for the 300m gaps for marine access. All underwater filling works shall be carried out behind seawalls to avoid dispersion of suspended solids outside the Project limit;</li> </ul>   | To control construction water quality                             | Contractor                     | During filling           | Construction stage              | TM-EIAO   | N/A<br>The works site area in Hong Kong-Zhuhai-Macao Bridge was handed over to the relevant authorities since 24 October 2018 and the site had been changed to a closed area. |
| S.9.11.1.7                                | W1           | <ul style="list-style-type: none"> <li>Except for the filling of the cellular structures, not more than 15% public fill shall be used for reclamation filling below +2.5mPD during construction of the seawall;</li> <li>After the seawall is completed except for the 300m marine access as indicated in the EPs, not more than 30% public fill shall be used for reclamation filling below +2.5mPD, unless otherwise agreement from EPD was obtained;</li> <li>Upon completion of 200m leading seawall, no more than a total of 60 filling barge trips per day shall be made with a cumulative maximum daily filling rate of 60,000 m3 for HKBCF and TMCLKL southern landfall reclamation during the filling operation; and</li> <li>Upon completion of the whole section of seawall except for the 300m marine access as indicated in the EPs, no more than a total of 190 filling barge trips per day shall be made with a cumulative maximum daily filling rate of 190,000 m3 for the remaining filling operations for HKBCF and TMCLKL southern landfall reclamation.</li> <li>Floating type perimeter silt curtains shall be around the HKBCF site before the commencement of marine works. Staggered layers of silt curtain shall be provided to prevent sediment loss at navigation accesses. The length of each staggered layers shall be at least 200m;</li> <li>Single layer silt curtain to be applied around the North-east airport water intake;</li> <li>The silt-curtains should be maintained in good condition to ensure the sediment plume generated from filling be confined effectively within the site boundary;</li> <li>The filling works shall be scheduled to spread the works evenly over a working day;</li> <li>Cellular structure shall be used for seawall construction;</li> <li>A layer of geotextile shall be placed on top of the seabed before any filling activities take place inside the cellular structures to form the seawall;</li> </ul> | To control construction water quality                             | Contractor                     | During filling           | Construction stage              | TM-EIAO   | N/A<br>The works site area in Hong Kong-Zhuhai-Macao Bridge was handed over to the relevant authorities since 24 October 2018 and the site had been changed to a closed area. |

| EIA Ref.   | EM&A Log Ref | Recommended Mitigation Measures   | Objectives of the Recommended Measures & Main Concerns to address | Who to implement the measures? | Location of the measures | When to implement the measures? | What requirements or standards for the measures to achieve? | Implementation Status   |
|------------|--------------|---|---|--------------------------------|--------------------------|---------------------------------|---|---|
| S.9.11.1.7 | W1           | <ul style="list-style-type: none"> <li>The conveyor belts shall be fitted with windboards and conveyor release points shall be covered with curtain to prevent any spillage of filling materials onto the surrounding waters; and</li> <li>An additional layer of silt curtain shall be installed near the active stone column installation points. A layer of geotextile with stone blanket on top shall be placed on the seabed prior to stone column installation works.</li> </ul>  | To control construction water quality                             | Contractor                     | During filling           | Construction stage              | TM-EIAO   | N/A<br>The works site area in Hong Kong-Zhuhai-Macao Bridge was handed over to the relevant authorities since 24 October 2018 and the site had been changed to a closed area. |
| S.9.11.1.7 | W2           | <p><u>Land Works</u><br/>General construction activities on land should also be governed by standard good working practice. Specific measures to be written into the works contracts should include:</p> <ul style="list-style-type: none"> <li>wastewater from temporary site facilities should be controlled to prevent direct discharge to surface or marine waters;</li> </ul>  | To control construction water quality                             | Contractor                     | Land-based works areas   | Construction stage              | TM-EIAO   | N/A<br>The works site area in Hong Kong-Zhuhai-Macao Bridge was handed over to the relevant authorities since 24 October 2018 and the site had been changed to a closed area. |
| S.9.11.1.7 | W2           | <ul style="list-style-type: none"> <li>sewage effluent and discharges from on-site kitchen facilities shall be directed to Government sewer in accordance with the requirements of the WPCO or collected for disposal offsite. The use of soakaways shall be avoided;</li> <li>storm drainage shall be directed to storm drains via adequately designed sand/silt removal facilities such as sand traps, silt traps and sediment basins. Channels, earth bunds or sand bag barriers should be provided on site to properly direct stormwater to such silt removal facilities. Catchpits and perimeter channels should be constructed in advance of site formation works and earthworks;</li> <li>silt removal facilities, channels and manholes shall be maintained and any deposited silt and grit shall be removed regularly, including specifically at the onset of and after each rainstorm;</li> <li>temporary access roads should be surfaced with crushed stone or gravel;</li> <li>rainwater pumped out from trenches or foundation excavations should be discharged into storm drains via silt removal facilities;</li> <li>measures should be taken to prevent the washout of construction materials, soil, silt or debris into any drainage system;</li> <li>open stockpiles of construction materials (e.g. aggregates and sand)</li> </ul> | To control construction water quality                             | Contractor                     | Land-based works areas   | Construction stage              | TM-EIAO   | N/A<br>The works site area in Hong Kong-Zhuhai-Macao Bridge was handed over to the relevant authorities since 24 October 2018 and the site had been changed to a closed area. |

|  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|
|  | <p>on site should be covered with tarpaulin or similar fabric during rainstorms;</p> <ul style="list-style-type: none"><li>• manholes (including any newly constructed ones) should always be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris from getting into the drainage system, and to prevent storm run-off from getting into foul sewers;</li><li>• discharges of surface run-off into foul sewers must always be prevented in order not to unduly overload the foul sewerage system;</li></ul> |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|

| EIA Ref.  | EM&A Log Ref | Recommended Mitigation Measures  | Objectives of the Recommended Measures & Main Concerns to address | Who to implement the measures? | Location of the measures                                 | When to implement the measures? | What requirements or standards for the measures to achieve?  | Implementation Status   |
|-----------|--------------|--|---|--------------------------------|--|---------------------------------|--|---|
| S9.11.1.7 | W2           | <ul style="list-style-type: none"> <li>all vehicles and plant should be cleaned before they leave the construction site to ensure that no earth, mud or debris is deposited by them on roads. A wheel washing bay should be provided at every site exit;</li> <li>wheel wash overflow shall be directed to silt removal facilities before being discharged to the storm drain;</li> <li>the section of construction road between the wheel washing bay and the public road should be surfaced with crushed stone or coarse gravel;</li> <li>wastewater generated from concreting, plastering, internal decoration, cleaning work and other similar activities, shall be screened to remove large objects;</li> <li>vehicle and plant servicing areas, vehicle wash bays and lubrication facilities shall be located under roofed areas. The drainage in these covered areas shall be connected to foul sewers via a petrol interceptor in accordance with the requirements of the WPCO or collected for off site disposal;</li> <li>the contractors shall prepare an oil / chemical cleanup plan and ensure that leakages or spillages are contained and cleaned up immediately;</li> <li>waste oil should be collected and stored for recycling or disposal, in accordance with the Waste Disposal Ordinance;</li> <li>all fuel tanks and chemical storage areas should be provided with locks and be sited on sealed areas. The storage areas should be surrounded by bunds with a capacity equal to 110% of the storage capacity of the largest tank; and</li> <li>surface run-off from bunded areas should pass through oil/grease traps prior to discharge to the stormwater system.</li> </ul> | To control construction water quality                             | Contractor                     | Land-based works areas                                   | Construction stage              | TM-EIAO  | N/A<br>The works site area in Hong Kong-Zhuhai-Macao Bridge was handed over to the relevant authorities since 24 October 2018 and the site had been changed to a closed area. |
| S.9.14    | W3           | <ul style="list-style-type: none"> <li>Implement a water quality monitoring programme.</li> </ul>  | To control water quality  | Contractor                     | Selected representative water quality monitoring station | Construction stage              | <ul style="list-style-type: none"> <li>TM-EIAO</li> <li>Water Pollution Control Ordinance</li> </ul> | ✓<br>(Water quality monitoring are covered by Contract No. HY/2013/04.)   |

| EIA Ref.                            | EM&A Log Ref | Recommended Mitigation Measures   | Objectives of the Recommended Measures & Main Concerns to address | Who to implement the measures? | Location of the measures  | When to implement the measures? | What requirements or standards for the measures to achieve? | Implementation Status   |
|-------------------------------------|--------------|---|---|--------------------------------|---------------------------|---------------------------------|---|---|
| <b>Ecology (Construction Phase)</b> |              |   |   |                                |                           |                                 |   |   |
| S10.7                               | E1           | <ul style="list-style-type: none"> <li>• Install siltcurtain during the construction</li> <li>• Limit works fronts</li> <li>• Construct seawall prior to reclamation filling where practicable</li> <li>• Good site practices</li> <li>• Strict enforcement of no marine dumping</li> <li>• Site runoff control</li> <li>• Spill response plan</li> </ul> | Prevent Sedimentation from Land-based works areas                 | Contractor                     | Seawall, reclamation area | During construction             | TM-Water  | N/A<br>The works site area in Hong Kong-Zhuhai-Macao Bridge was handed over to the relevant authorities since 24 October 2018 and the site had been changed to a closed area. |
| S10.7                               | E2           | <ul style="list-style-type: none"> <li>• Watering to reduce dust generation; prevention of siltation of freshwater habitats; Site runoff should be desilted, to reduce the potential for suspended sediments, organics and other contaminants to enter streams and standing freshwater.</li> </ul>  | Prevent Sedimentation from Land-based works areas                 | Contractor                     | Land-based works areas    | During construction             | TM-Water  | N/A<br>The works site area in Hong Kong-Zhuhai-Macao Bridge was handed over to the relevant authorities since 24 October 2018 and the site had been changed to a closed area. |
| S10.7                               | E3           | <ul style="list-style-type: none"> <li>• Good site practices, including strictly following the permitted works hours, using quieter machines where practicable, and avoiding excessive lightings during night time</li> </ul>   | Prevent disturbance to terrestrial fauna and habitats             | Contractor                     | Land-based works areas    | During construction             | TM-Water  | N/A<br>The works site area in Hong Kong-Zhuhai-Macao Bridge was handed over to the relevant authorities since 24 October 2018 and the site had been changed to a closed area. |

| EIA Ref.         | EM&A Log Ref | Recommended Mitigation Measures   | Objectives of the Recommended Measures & Main Concerns to address | Who to implement the measures? | Location of the measures       | When to implement the measures? | What requirements or standards for the measures to achieve? | Implementation Status   |
|------------------|--------------|---|---|--------------------------------|--------------------------------|---------------------------------|---|---|
| S10.7            | E4           | <ul style="list-style-type: none"> <li>Dolphin Exclusion Zone</li> <li>Dolphin Watching plan</li> </ul>   | Minimise marine traffic disturbance on dolphins                   | Contractor                     | Marine Works                   | During construction             | TM-Water  | N/A<br>The works site area in Hong Kong-Zhuhai-Macao Bridge was handed over to the relevant authorities since 24 October 2018 and the site had been changed to area.          |
| S10.7            | E5           | <ul style="list-style-type: none"> <li>Decouple compressors and other equipment on working vessels</li> <li>Proposal on design and implementation of acoustic decoupling measures applied during reclamation works</li> <li>Avoidance of percussive piling</li> </ul> | Minimise marine traffic disturbance on dolphins                   | Contractor                     | Marine Works                   | During construction             | TM-Water  | N/A<br>The works site area in Hong Kong-Zhuhai-Macao Bridge was handed over to the relevant authorities since 24 October 2018 and the site had been changed to a closed area. |
| S10.7            | E6           | <ul style="list-style-type: none"> <li>Control vessel speed</li> <li>Skipper training</li> <li>Predefined and regular routes for working vessels; avoid Brother Islands.</li> <li>.</li> </ul>  | Minimise marine traffic disturbance on dolphins                   | Contractor                     | Marine Traffic                 | During construction             | TM-Water  | √<br>√<br>√   |
| S10.7            | E7           | Vessel based dolphin monitoring   | Minimise marine traffic disturbance on dolphins                   | Contractor                     | Northeast and Northwest Lantau | During construction             | TM-Water  | √<br>(Dolphins monitoring are covered by Contract No. HY/2013/04.)  |
| <b>Fisheries</b> |              |   |   |                                |                                |                                 |   |   |

|   |     |  |  |                   |                           |                  |  |                  |
|---|-----|--|--|-------------------|---------------------------|------------------|--|------------------|
| S11.7   | F1  | <ul style="list-style-type: none"> <li>Reduce re-suspension of sediments</li> <li>Limit works fronts</li> <li>Good site practices</li> <li>Strict enforcement of no marine dumping</li> </ul> Spill response plan  | Minimise impacts on marine water quality impacts | Marine Department | Seawall, reclamation area | During operation |  | ✓<br>✓<br>✓<br>✓ |
| S11.7   | F2  | Install silt-grease trap in the drainage system collecting surface runoff  | Minimise impacts on marine water quality impacts | Marine Department | Reclamation area          | During operation |  | ✓                |
| S11.7   | F4  | <ul style="list-style-type: none"> <li>Maritime Oil Spill Response Plan (MOSRP);</li> <li>Contingency plan.</li> </ul>   | Minimise impacts on marine water quality impacts | Marine Department | HKBCF                     | During operation |  | N/A              |
| <b>Landscape &amp; Visual (Detailed Design Phase)</b> |     |  |  |                   |                           |                  |  |                  |
| S14.3.3.1   | LV1 | General design measures include: <ul style="list-style-type: none"> <li>Roadside planting and planting along the edge of the HKBCF Island is proposed;</li> <li>Transplanting of mature trees in good health and amenity value where appropriate and reinstatement of areas disturbed during construction by compensatory hydro-seeding and planting;</li> <li>Protection measures for the trees to be retained during construction activities;</li> <li>Optimizing the sizes and spacing of the bridge columns; Fine-tuning the location of the bridge columns to avoid visually-sensitive locations;</li> <li>Maximizing new tree, shrub and other vegetation planting to compensate tree felled and vegetation removed;</li> <li>Providing planting area around peripheral of HKBCF for tree planting screening effect;</li> <li>Providing salt-tolerant native trees along the planter strip at affected seawall and newly reclaimed coastline;</li> </ul> | Minimise visual & landscape impact               | Detailed designer | HKBCF                     | Design Stage     |  | N/A              |
| S14.3.3.1   | LV1 | <ul style="list-style-type: none"> <li>For HKBCF, providing aesthetic architectural design on the related buildings (e.g. similar materials for PCB building facade to Airport buildings, roof planting and subtle materials for other facilities buildings and so on), and the related infrastructure (e.g. parapet planting and transparent cover for elevated footbridges) to provide harmonious atmosphere of the HKBCF; and</li> <li>Fine-tuning the sizes of the structural members to minimize the bulkiness of buildings and adjustment of building arrangement to minimise disturbance to surrounding vegetation in the HKBCF.</li> </ul>   | Minimise visual & landscape impact               | Detailed designer | HKBCF                     | Design Stage     |  | N/A              |

| EIA Ref.   | EM&A Log Ref | Recommended Mitigation Measures   | Objectives of the Recommended Measures & Main Concerns to address | Who to implement the measures? | Location of the measures | When to implement the measures? | What requirements or standards for the measures to achieve?                                     | Implementation Status  |
|--|--------------|---|---|--------------------------------|--------------------------|---------------------------------|---|--|
| <b>Landscape &amp; Visual (Construction Phase)</b> |              |   |   |                                |                          |                                 |   |  |
| S14.3.3.3  | LV2          | <p>Mitigate both Landscape and Visual Impacts</p> <ul style="list-style-type: none"> <li>Grass-hydroseed bare soil surface and stock pile areas.</li> <li>Add planting strip and automatic irrigation system if appropriate at some portions of bridge footbridge to screen bridge and traffic.</li> <li>Not applicable as this is for HKLR.</li> <li>For HKBCF, providing aesthetic architectural design on the related buildings (e.g. similar materials for PCB building facade to Airport buildings, roof planting and subtle materials for other facilities buildings and so on), and the related infrastructure (e.g. parapet planting and transparent cover for elevated footbridges) to provide harmonious atmosphere of the HKBCF.</li> <li>Vegetation reinstatement and upgrading to disturbed areas</li> <li>Maximizing new tree shrub and other vegetation planting to compensate tree felled and vegetation removed</li> <li>Providing planting area around peripheral of HKBCF for tree planting screening effect;</li> <li>Plant salt-tolerant native and shrubs etc along the planter strip at affected seawall.</li> <li>Reserve of loose natural granite rocks for re-use. Provide new coastline to adopt "natural-look" by means of using armour rocks in the form of natural rock materials and planting strip area accommodating screen buffer to enhance "natural-look" of the new</li> </ul> | Minimise visual & landscape impact                                | Contractor                     | HKBCF                    | Construction stage              |   | <p>N/A</p> <p>√</p> <p>N/A</p> <p>√</p> <p>N/A</p> <p>√</p> <p>√</p> <p>N/A</p> <p>N/A</p> |
| S14.3.3.3  | LV3          | <p><u>Mitigate Visual Impacts</u></p> <ul style="list-style-type: none"> <li>V1.Minimize time for construction activities during construction period.</li> <li>Not applicable to the Project HKBCF</li> </ul>   |   |                                |                          |                                 |   | <p>√</p> <p>N/A</p>  |
| <b>EM&amp;A</b>                                    |              |   |   |                                |                          |                                 |   |  |
| S15.2.2  | EM1          | An Independent Environmental Checker needs to be employed as per the EM&A Manual.   | Control EM&A Performance  | Project Proponent              | All construction sites   |                                 | <ul style="list-style-type: none"> <li>EIAO Guidance Note No.4/2002</li> <li>TM-EIAO</li> </ul> | √  |



| EIA Ref.      | EM&A Log Ref | Recommended Mitigation Measures   | Objectives of the Recommended Measures & Main Concerns to address | Who to implement the measures? | Location of the measures | When to implement the measures? | What requirements or standards for the measures to achieve?                                     | Implementation Status   |
|---------------|--------------|---|---|--------------------------------|--------------------------|---------------------------------|---|---|
| S15.5 - S15.6 | EM2          | <ul style="list-style-type: none"> <li>An Environmental Team needs to be employed as per the EM&amp;A Manual.</li> <li>Prepare a systematic Environmental Management Plan to ensure effective implementation of the mitigation measures.</li> <li>An environmental impact monitoring needs to be implementing by the Environmental Team to ensure all the requirements given in the EM&amp;A Manual are fully complied with.</li> </ul> | Perform environmental monitoring & auditing                       | Contractor                     | All construction sites   |                                 | <ul style="list-style-type: none"> <li>EIAO Guidance Note No.4/2002</li> <li>TM-EIAO</li> </ul> | <ul style="list-style-type: none"> <li>√</li> <li>√</li> <li>√</li> </ul> |

Legends: √ = Implemented; X = Not implemented; N/A = Not applicable

## **APPENDIX F**

---

### **Statistics on Environmental Complaints, Notification of Summons and Successful Prosecutions**

### Statistics on Environmental Complaints, Notifications of Summons and Successful Prosecutions

For Contract No. HY/2013/01

| Reporting Period   | Cumulative Statistics |                          |                         |
|--|-----------------------|--------------------------|-------------------------|
|  | Complaints            | Notifications of Summons | Successful Prosecutions |
| This reporting period  | 0                     | 0                        | 0                       |
| From commencement date of contract to end of reporting month | 11                    | 0                        | 0                       |

For Contract No. HY/2013/06 within Contract No. HY/2013/01 works area

| Reporting Period   | Cumulative Statistics |                          |                         |
|--|-----------------------|--------------------------|-------------------------|
|  | Complaints            | Notifications of Summons | Successful Prosecutions |
| This reporting period  | 0                     | 0                        | 0                       |
| From commencement date of contract to end of reporting month | 0                     | 0                        | 0                       |