

*Appendix L1 Cumulative Statistics on Exceedances*

|                              |        | Total No. recorded in<br>this quarter | Total No. recorded<br>since project<br>commencement |
|------------------------------|--------|---------------------------------------|---|
| 1-Hr TSP                     | Action | 0                                     | 0   |
|                              | Limit  | 0                                     | 1   |
| 24-Hr TSP                    | Action | 0                                     | 2   |
|                              | Limit  | 0                                     | 0   |
| Noise                        | Action | 0                                     | 0   |
|                              | Limit  | 0                                     | 0   |
| Water Quality                | Action | 2                                     | 138   |
|                              | Limit  | 0                                     | 15  |
| Impact Dolphin<br>Monitoring | Action | 0                                     | 11  |
|                              | Limit  | 1                                     | 12  |

*Appendix L2 Cumulative Statistics on Complaints, Notifications of Summons and Successful Prosecutions*

| Reporting Period                                    | Cumulative Statistics |                             |                            |
|---|-----------------------|-----------------------------|----------------------------|
|   | Complaints            | Notifications of<br>Summons | Successful<br>Prosecutions |
| This quarter  | 0                     | 0                           | 0                          |
| Total No. received<br>since project<br>commencement | 12                    | 0                           | 0                          |

Email  
message

**Environmental  
Resources  
Management**

**To** Ramboll Hong Kong, Limited (ENPO)

**From** ERM- Hong Kong, Limited

**Ref/Project number** Contract No. HY/2012/07  
Tuen Mun – Chek Lap Kok Link – Southern  
Connection Viaduct Section

**Subject** Notification of Exceedance for Marine Water  
Quality Impact Monitoring

**Date** 03 April 2018

16/F Berkshire House,  
25 Westlands Road  
Quarry Bay, Hong Kong  
Telephone: (852) 2271 3113  
Facsimile: (852) 2723 5660  
E-mail: jovy.tam@erm.com



**ERM**

---

Dear Sir/ Madam,

Please find attached the Notification of Exceedance (NOE) of the following  
Log no.:

Action Level Exceedance  
0215660\_23 March 2018\_Depth-averaged SS\_F\_Station IS8

A total of one (1) exceedance was recorded on 23 March 2018.

Regards,



Mr Jovy Tam  
Environmental Team Leader

---

**CONFIDENTIALITY NOTICE**

This facsimile transmission is intended only for the use of the addressee and is confidential. If you are not the addressee it may be unlawful for you to read, copy, distribute, disclose or otherwise use the information in this facsimile. If you are not the intended recipient, please telephone or fax us immediately.

---



ERM-Hong Kong, Limited

CONTRACT NO. HY/2012/07

TUEN MUN – CHEK LAP KOK LINK –  
SOUTHERN CONNECTION VIADUCT SECTION

Marine Water Quality Impact Monitoring

Notification of Exceedance

|   |  |   |
|---|--|---|
| Log No.   | <p><b><u>Action Level Exceedance</u></b><br/> <b>0215660_23 March 2018_Depth-averaged SS_F_Station IS8</b></p> <p>[Total No. of Exceedances = 1]</p>   |   |
| Date  | <p>23 March 2018 (Measured)<br/> 24 March 2018 (<i>In situ</i> results received by ERM)<br/> 03 April 2018 (Laboratory results received by ERM)</p>  |   |
| Monitoring Station                                      | <p>CS(Mf)5, SR4a, SR4(N), IS8, IS(Mf)16, IS(Mf)9, CS(Mf)3(N)</p>   |   |
| Parameter(s) with Exceedance(s)                         | <p>Depth-averaged Suspended Solids (SS)</p>  |   |
| Action Levels for SS                                    | SS   | 120% of upstream control station at the same tide of the same day and 95%-ile of baseline data (i.e., 23.5 mg/L). |
| Limit Levels for SS                                     | SS   | 130% of upstream control station at the same tide of the same day and 99%-ile of baseline data. (i.e., 34.4 mg/L) |
| Measured Levels   | <p><u>Action Level Exceedance</u><br/> 1. Mid-flood at IS8 (Depth-averaged SS = 24.7mg/L).</p>   |   |
| Works Undertaken (at the time of monitoring event)      | <p>No major marine works was undertaken under this Contract on 23 March 2018.</p>  |   |
| Possible Reason for Action or Limit Level Exceedance(s) | <p>The exceedances of depth-averaged SS are unlikely to be due to the Project, in view of the following:</p> <ul style="list-style-type: none"> <li>• No marine works was undertaken under this Contract on 23 March 2018.</li> <li>• Apart from IS8, depth-averaged SS levels at all other sensitive receiver stations and impact stations were in compliance with the Action and Limit Levels during both mid-flood and mid-ebb tides on the same day.</li> <li>• Depth-averaged Turbidity levels and average DO levels at all stations were in compliance with the Action and Limit Levels during both mid-ebb and mid-flood tides on the same day.</li> <li>• No particular site observations was recorded at IS8 during the mid-flood tide on 23 March 2018 (<i>refer to site photo record</i>).</li> </ul> |   |
| Actions Taken / To Be Taken                             | <p>No immediate action is considered necessary. The ET will monitor for future trends in exceedances.</p>  |   |
| Remarks   | <p>The monitoring results on 23 March 2018 and locations of water quality monitoring stations are attached. Site photo record on 23 March 2018 is attached.</p>  |   |

| Project | Works      | Date (yyyy-mm-dd) | Tide    | Station    | Start Time | Level   | Replicate | Temperature (°C) | pH  | Salinity (ppt) | DO (mg/L) | Average DO (mg/L) | Turbidity (NTU) | Depth-Averaged Turbidity | SS (mg/L) | Depth-Averaged SS |
|---------|------------|-------------------|---------|------------|------------|---------|-----------|------------------|-----|----------------|-----------|-------------------|-----------------|--------------------------|-----------|-------------------|
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Ebb | CS(Mf)5    | 16:57      | Surface | 1         | 20.1             | 8.0 | 30.1           | 6.9       | 6.9               | 4.0             | 5.4                      | 5.6       | 7.6               |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Ebb | CS(Mf)5    | 16:57      | Surface | 2         | 19.8             | 8.1 | 30.1           | 6.9       |                   | 4.1             |                          | 6.8       |                   |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Ebb | CS(Mf)5    | 16:57      | Middle  | 1         | 19.9             | 8.0 | 30.2           | 6.8       |                   | 5.2             |                          | 7.6       |                   |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Ebb | CS(Mf)5    | 16:57      | Middle  | 2         | 19.7             | 8.1 | 30.2           | 6.9       |                   | 5.1             |                          | 7.5       |                   |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Ebb | CS(Mf)5    | 16:57      | Bottom  | 1         | 19.8             | 8.0 | 30.6           | 6.7       | 6.8               | 6.8             |                          | 9.8       |                   |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Ebb | CS(Mf)5    | 16:57      | Bottom  | 2         | 19.5             | 8.1 | 30.6           | 6.8       |                   | 7.1             |                          | 8.0       |                   |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Ebb | CS(Mf)3(N) | 15:41      | Surface | 1         | 20.1             | 8.0 | 29.5           | 8.1       | 8.2               | 4.9             | 6.4                      | 5.9       | 7.1               |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Ebb | CS(Mf)3(N) | 15:41      | Surface | 2         | 20.1             | 8.1 | 29.5           | 8.1       |                   | 4.9             |                          | 6.2       |                   |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Ebb | CS(Mf)3(N) | 15:41      | Middle  | 1         | 19.9             | 8.1 | 30.5           | 8.2       |                   | 7.4             |                          | 6.9       |                   |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Ebb | CS(Mf)3(N) | 15:41      | Middle  | 2         | 19.9             | 8.1 | 30.5           | 8.2       |                   | 7.4             |                          | 8.3       |                   |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Ebb | CS(Mf)3(N) | 15:41      | Bottom  | 1         | 19.9             | 8.1 | 30.5           | 8.1       | 8.1               | 6.9             |                          | 7.6       |                   |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Ebb | CS(Mf)3(N) | 15:41      | Bottom  | 2         | 19.9             | 8.1 | 30.5           | 8.0       |                   | 7.0             |                          | 7.4       |                   |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Ebb | IS(Mf)16   | 16:28      | Surface | 1         | 20.7             | 8.0 | 29.6           | 7.0       | 7.1               | 6.6             | 7.4                      | 9.6       | 11.4              |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Ebb | IS(Mf)16   | 16:28      | Surface | 2         | 20.5             | 8.1 | 29.7           | 7.1       |                   | 7.1             |                          | 10.6      |                   |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Ebb | IS(Mf)16   |            | Middle  | 1         |                  |     |                |           |                   |                 |                          |           |                   |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Ebb | IS(Mf)16   |            | Middle  | 2         |                  |     |                |           |                   |                 |                          |           |                   |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Ebb | IS(Mf)16   | 16:28      | Bottom  | 1         | 20.0             | 8.0 | 29.8           | 6.8       | 6.9               | 7.7             |                          | 12.0      |                   |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Ebb | IS(Mf)16   | 16:28      | Bottom  | 2         | 19.8             | 8.1 | 29.9           | 6.9       |                   | 8.1             |                          | 13.4      |                   |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Ebb | SR4a       | 16:17      | Surface | 1         | 20.4             | 8.0 | 29.6           | 6.8       | 6.9               | 8.4             | 10.1                     | 10.6      | 11.7              |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Ebb | SR4a       | 16:17      | Surface | 2         | 20.2             | 8.1 | 29.7           | 6.9       |                   | 8.2             |                          | 10.7      |                   |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Ebb | SR4a       |            | Middle  | 1         |                  |     |                |           |                   |                 |                          |           |                   |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Ebb | SR4a       |            | Middle  | 2         |                  |     |                |           |                   |                 |                          |           |                   |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Ebb | SR4a       | 16:17      | Bottom  | 1         | 20.3             | 8.0 | 29.7           | 6.9       | 6.9               | 11.9            |                          | 13.0      |                   |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Ebb | SR4a       | 16:17      | Bottom  | 2         | 20.0             | 8.1 | 29.7           | 6.9       |                   | 12.0            |                          | 12.6      |                   |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Ebb | SR4(N)     | 16:11      | Surface | 1         | 21.9             | 8.0 | 29.1           | 7.2       | 7.3               | 4.3             | 4.8                      | 7.5       | 7.4               |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Ebb | SR4(N)     | 16:11      | Surface | 2         | 21.6             | 8.1 | 29.2           | 7.3       |                   | 4.3             |                          | 6.4       |                   |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Ebb | SR4(N)     |            | Middle  | 1         |                  |     |                |           |                   |                 |                          |           |                   |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Ebb | SR4(N)     |            | Middle  | 2         |                  |     |                |           |                   |                 |                          |           |                   |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Ebb | SR4(N)     | 16:11      | Bottom  | 1         | 21.3             | 8.0 | 29.4           | 7.1       | 7.2               | 5.1             |                          | 7.2       |                   |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Ebb | SR4(N)     | 16:11      | Bottom  | 2         | 21.0             | 8.1 | 29.5           | 7.2       |                   | 5.4             |                          | 8.3       |                   |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Ebb | IS8        | 16:05      | Surface | 1         | 20.8             | 8.0 | 29.6           | 6.9       | 6.9               | 6.6             | 7.1                      | 9.7       | 10.7              |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Ebb | IS8        | 16:05      | Surface | 2         | 20.5             | 8.1 | 29.6           | 6.9       |                   | 6.6             |                          | 9.1       |                   |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Ebb | IS8        |            | Middle  | 1         |                  |     |                |           |                   |                 |                          |           |                   |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Ebb | IS8        |            | Middle  | 2         |                  |     |                |           |                   |                 |                          |           |                   |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Ebb | IS8        | 16:05      | Bottom  | 1         | 20.6             | 8.0 | 29.6           | 6.9       | 6.9               | 7.6             |                          | 13.0      |                   |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Ebb | IS8        | 16:05      | Bottom  | 2         | 20.3             | 8.1 | 29.7           | 6.9       |                   | 7.4             |                          | 11.1      |                   |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Ebb | IS(Mf)9    | 15:54      | Surface | 1         | 21.6             | 8.0 | 29.4           | 7.2       | 7.3               | 6.0             | 6.3                      | 6.7       | 7.7               |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Ebb | IS(Mf)9    | 15:54      | Surface | 2         | 21.3             | 8.1 | 29.6           | 7.3       |                   | 6.2             |                          | 6.7       |                   |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Ebb | IS(Mf)9    |            | Middle  | 1         |                  |     |                |           |                   |                 |                          |           |                   |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Ebb | IS(Mf)9    |            | Middle  | 2         |                  |     |                |           |                   |                 |                          |           |                   |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Ebb | IS(Mf)9    | 15:54      | Bottom  | 1         | 20.7             | 8.0 | 29.6           | 7.1       | 7.2               | 6.8             |                          | 8.8       |                   |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Ebb | IS(Mf)9    | 15:54      | Bottom  | 2         | 20.4             | 8.1 | 29.7           | 7.2       |                   | 6.2             |                          | 8.6       |                   |

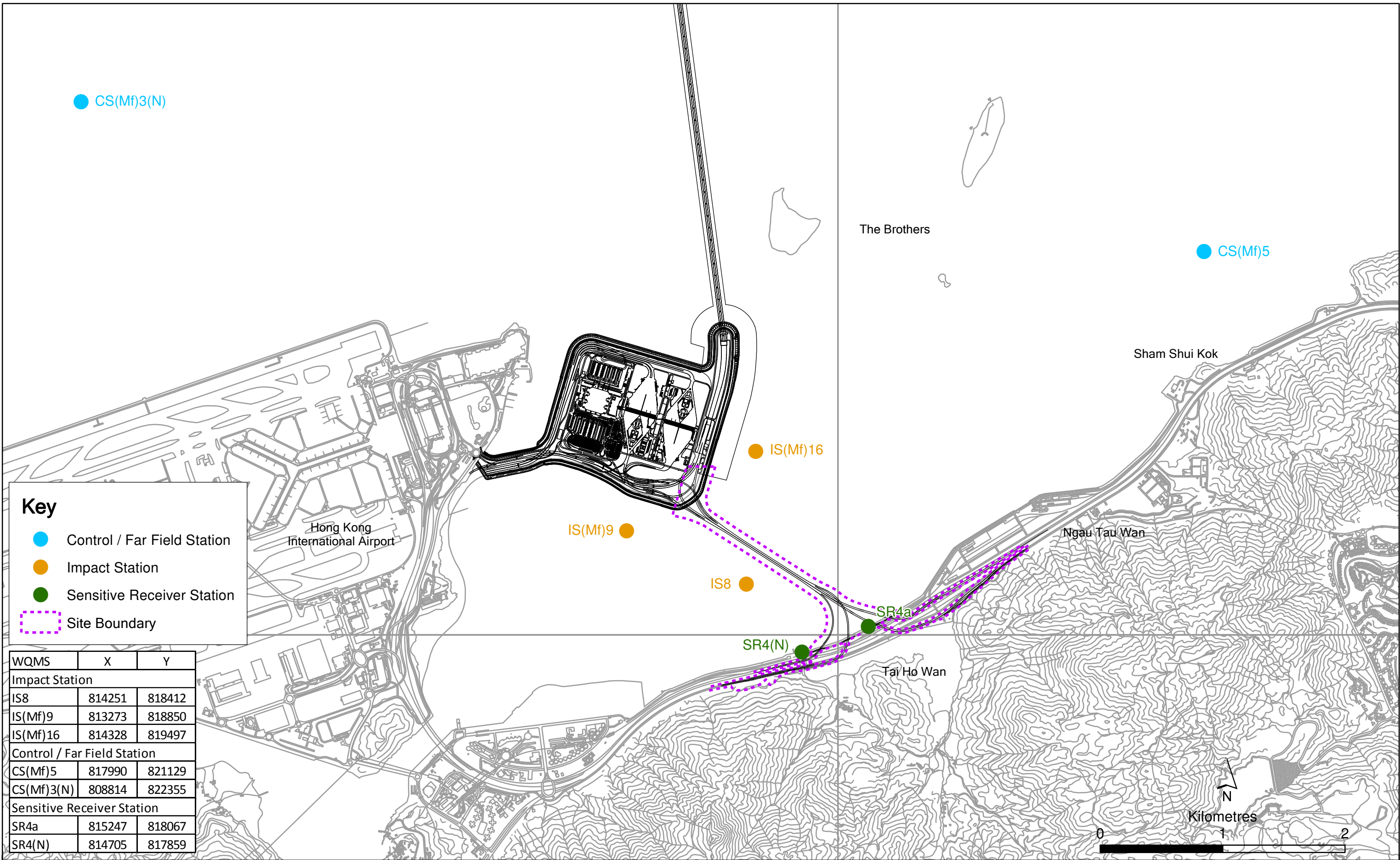
| Project | Works      | Date (yyyy-mm-dd) | Tide      | Station    | Start Time | Level   | Replicate | Temperature (°C) | pH  | Salinity (ppt) | DO (mg/L) | Average DO (mg/L) | Turbidity (NTU) | Depth-Averaged Turbidity | SS (mg/L) | Depth-Averaged SS |  |  |
|---------|------------|-------------------|-----------|------------|------------|---------|-----------|------------------|-----|----------------|-----------|-------------------|-----------------|--------------------------|-----------|-------------------|--|--|
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Flood | CS(Mf)5    | 9:30       | Surface | 1         | 19.7             | 8.1 | 29.9           | 7.1       | 7.0               | 2.1             | 5.9                      | 3.7       | 5.1               |  |  |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Flood | CS(Mf)5    | 9:30       | Surface | 2         | 20.0             | 8.0 | 29.8           | 7.0       |                   | 2.5             |                          | 4.7       |                   |  |  |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Flood | CS(Mf)5    | 9:30       | Middle  | 1         | 19.6             | 8.1 | 30.1           | 6.9       |                   | 2.4             |                          | 6.3       |                   |  |  |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Flood | CS(Mf)5    | 9:30       | Middle  | 2         | 19.9             | 8.0 | 30.0           | 6.8       |                   | 2.6             |                          | 5.3       |                   |  |  |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Flood | CS(Mf)5    | 9:30       | Bottom  | 1         | 19.5             | 8.1 | 30.6           | 6.9       | 6.9               | 13.0            | 5.9                      | 5.2       | 5.1               |  |  |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Flood | CS(Mf)5    | 9:30       | Bottom  | 2         | 19.8             | 8.0 | 30.5           | 6.8       |                   | 12.7            |                          | 5.1       |                   |  |  |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Flood | CS(Mf)3(N) | 10:25      | Surface | 1         | 19.9             | 8.0 | 28.9           | 7.8       | 7.8               | 3.8             | 5.0                      | 6.2       | 7.3               |  |  |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Flood | CS(Mf)3(N) | 10:25      | Surface | 2         | 19.9             | 8.0 | 28.9           | 7.8       |                   | 3.8             |                          | 7.7       |                   |  |  |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Flood | CS(Mf)3(N) | 10:25      | Middle  | 1         | 19.8             | 8.0 | 29.1           | 7.7       |                   | 6.1             |                          | 6.7       |                   |  |  |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Flood | CS(Mf)3(N) | 10:25      | Middle  | 2         | 19.8             | 8.0 | 29.1           | 7.7       |                   | 6.1             |                          | 7.5       |                   |  |  |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Flood | CS(Mf)3(N) | 10:25      | Bottom  | 1         | 19.8             | 8.0 | 29.0           | 7.7       | 7.7               | 5.2             | 5.0                      | 7.7       | 7.3               |  |  |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Flood | CS(Mf)3(N) | 10:25      | Bottom  | 2         | 19.8             | 8.0 | 29.1           | 7.7       |                   | 5.2             |                          | 7.9       |                   |  |  |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Flood | IS(Mf)16   | 9:59       | Surface | 1         | 19.8             | 8.1 | 29.8           | 7.0       | 7.0               | 6.7             | 6.7                      | 10.6      | 11.2              |  |  |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Flood | IS(Mf)16   | 9:59       | Surface | 2         | 20.1             | 8.0 | 29.7           | 7.0       |                   | 6.2             |                          | 11.0      |                   |  |  |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Flood | IS(Mf)16   |            | Middle  | 1         |                  |     |                |           |                   |                 |                          |           |                   |  |  |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Flood | IS(Mf)16   |            | Middle  | 2         |                  |     |                |           |                   |                 |                          |           |                   |  |  |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Flood | IS(Mf)16   | 9:59       | Bottom  | 1         | 19.8             | 8.1 | 29.8           | 7.0       | 7.0               | 7.2             | 6.7                      | 11.2      | 15.8              |  |  |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Flood | IS(Mf)16   | 9:59       | Bottom  | 2         | 20.0             | 8.0 | 29.7           | 7.0       |                   | 6.7             |                          | 11.9      |                   |  |  |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Flood | SR4a       | 10:08      | Surface | 1         | 19.7             | 8.1 | 29.8           | 7.0       | 7.0               | 10.0            | 10.0                     | 16.1      | 15.8              |  |  |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Flood | SR4a       | 10:08      | Surface | 2         | 20.0             | 8.0 | 29.7           | 6.9       |                   | 10.2            |                          | 16.7      |                   |  |  |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Flood | SR4a       |            | Middle  | 1         |                  |     |                |           |                   |                 |                          |           |                   |  |  |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Flood | SR4a       |            | Middle  | 2         |                  |     |                |           |                   |                 |                          |           |                   |  |  |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Flood | SR4a       | 10:08      | Bottom  | 1         | 19.7             | 8.0 | 29.8           | 7.0       | 7.0               | 10.0            | 6.7                      | 15.1      | 20.8              |  |  |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Flood | SR4a       | 10:08      | Bottom  | 2         | 20.0             | 8.0 | 29.7           | 6.9       |                   | 9.8             |                          | 15.2      |                   |  |  |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Flood | SR4(N)     | 10:16      | Surface | 1         | 19.7             | 8.0 | 29.7           | 6.8       | 6.8               | 12.2            | 12.8                     | 18.3      | 20.8              |  |  |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Flood | SR4(N)     | 10:16      | Surface | 2         | 20.0             | 8.0 | 29.6           | 6.8       |                   | 12.6            |                          | 19.8      |                   |  |  |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Flood | SR4(N)     |            | Middle  | 1         |                  |     |                |           |                   |                 |                          |           |                   |  |  |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Flood | SR4(N)     |            | Middle  | 2         |                  |     |                |           |                   |                 |                          |           |                   |  |  |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Flood | SR4(N)     | 10:16      | Bottom  | 1         | 19.7             | 8.0 | 29.7           | 6.9       | 7.0               | 13.2            | 6.7                      | 21.7      | 24.7              |  |  |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Flood | SR4(N)     | 10:16      | Bottom  | 2         | 20.0             | 8.0 | 29.6           | 7.0       |                   | 13.0            |                          | 23.3      |                   |  |  |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Flood | IS8        | 10:23      | Surface | 1         | 19.8             | 8.1 | 29.7           | 6.9       | 6.9               | 16.5            | 16.0                     | 24.6      | 24.7              |  |  |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Flood | IS8        | 10:23      | Surface | 2         | 19.8             | 8.0 | 29.7           | 6.9       |                   | 16.4            |                          | 25.4      |                   |  |  |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Flood | IS8        |            | Middle  | 1         |                  |     |                |           |                   |                 |                          |           |                   |  |  |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Flood | IS8        |            | Middle  | 2         |                  |     |                |           |                   |                 |                          |           |                   |  |  |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Flood | IS8        | 10:23      | Bottom  | 1         | 19.8             | 8.1 | 29.8           | 6.9       | 6.9               | 15.5            | 6.7                      | 24.4      | 15.5              |  |  |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Flood | IS8        | 10:23      | Bottom  | 2         | 19.8             | 8.0 | 29.7           | 6.9       |                   | 15.4            |                          | 24.4      |                   |  |  |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Flood | IS(Mf)9    | 10:31      | Surface | 1         | 19.9             | 8.1 | 29.6           | 6.9       | 6.9               | 9.6             | 10.1                     | 15.8      | 15.5              |  |  |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Flood | IS(Mf)9    | 10:31      | Surface | 2         | 20.2             | 8.0 | 29.5           | 6.8       |                   | 9.5             |                          | 15.6      |                   |  |  |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Flood | IS(Mf)9    |            | Middle  | 1         |                  |     |                |           |                   |                 |                          |           |                   |  |  |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Flood | IS(Mf)9    |            | Middle  | 2         |                  |     |                |           |                   |                 |                          |           |                   |  |  |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Flood | IS(Mf)9    | 10:31      | Bottom  | 1         | 19.9             | 8.1 | 29.7           | 6.9       | 6.9               | 10.7            | 6.7                      | 14.6      | 15.5              |  |  |
| TMCLKL  | HY/2012/07 | 2018-03-23        | Mid-Flood | IS(Mf)9    | 10:31      | Bottom  | 2         | 20.2             | 8.0 | 29.6           | 6.8       |                   | 10.4            |                          | 16.0      |                   |  |  |

Note: Indicates Exceedance of Action Level  
Indicates Exceedance of Limit Level

Photo 1 - Mid-Flood at IS8 on 23 March 2018







**Key**

- Control / Far Field Station
- Impact Station
- Sensitive Receiver Station
- Site Boundary

| WQMS                               | X      | Y      |
|------------------------------------|--------|--------|
| <b>Impact Station</b>              |        |        |
| IS8                                | 814251 | 818412 |
| IS(Mf)9                            | 813273 | 818850 |
| IS(Mf)16                           | 814328 | 819497 |
| <b>Control / Far Field Station</b> |        |        |
| CS(Mf)5                            | 817990 | 821129 |
| CS(Mf)3(N)                         | 808814 | 822355 |
| <b>Sensitive Receiver Station</b>  |        |        |
| SR4a                               | 815247 | 818067 |
| SR4(N)                             | 814705 | 817859 |

Locations of Water Quality Monitoring Stations

File: T:\GIS\CONTRACT\0215660\Mxd\0215660\_WQMS.mxd  
Date: 20/3/2018

Email  
message

**Environmental  
Resources  
Management**

**To** Ramboll Hong Kong Limited (ENPO)

**From** ERM- Hong Kong, Limited

**Ref/Project number** Contract No. HY/2012/07  
Tuen Mun – Chek Lap Kok Link – Southern  
Connection Viaduct Section

**Subject** Notification of Exceedance for Marine Water  
Quality Impact Monitoring

**Date** 29 May 2018

2507,  
25/F One Harbourfront,  
18 Tak Fung Street,  
Hung Hom, Hong Kong  
Telephone: (852) 2271 3113  
Facsimile: (852) 2723 5660  
E-mail: jovy.tam@erm.com



**ERM**

---

Dear Sir/ Madam,

Please find attached the Notification of Exceedance (NOE) of the following  
Log no.:

Action Level Exceedance  
0215660\_25 May 2018\_ Bottom-depth DO\_E\_Station IS8

A total of one exceedance was recorded on 25 May 2018.

Regards,

A handwritten signature in black ink, appearing to be 'Jovy Tam'.

Mr Jovy Tam  
Environmental Team Leader

---

**CONFIDENTIALITY NOTICE**

This facsimile transmission is intended only for the use of the addressee and is confidential. If you are not the addressee it may be unlawful for you to read, copy, distribute, disclose or otherwise use the information in this facsimile. If you are not the intended recipient, please telephone or fax us immediately.

---





ERM-Hong Kong, Limited

CONTRACT NO. HY/2012/07

TUEN MUN – CHEK LAP KOK LINK –  
SOUTHERN CONNECTION VIADUCT SECTION

*Marine Water Quality Impact Monitoring*

**Notification of Exceedance**

|   |  |          |
|---|--|----------|
| Log No.   | <p style="text-align: center;"><u>Action Level Exceedance</u><br/>0215660_25 May 2018_ Bottom-depth DO_E_Station IS8</p> <p style="text-align: center;">[Total No. of Exceedances = 1]</p>   |          |
| Date  | <p style="text-align: center;">25 May 2018 (Measured)<br/>26 May 2018 (<i>In situ</i> results received by ERM)<br/>01 June 2018 (Laboratory results received by ERM)</p>   |          |
| Monitoring Station                                      | <p style="text-align: center;">CS(Mf)5, SR4a, SR4, IS8, IS(Mf)16, IS(Mf)9, CS(Mf)3(N)</p>  |          |
| Parameter(s) with Exceedance(s)                         | <p style="text-align: center;">Bottom-depth Dissolved Oxygen (DO)</p>  |          |
| Action Levels for DO                                    | Bottom-depth DO  | 4.7 mg/L |
| Limit Levels for DO                                     | Bottom-depth DO  | 3.6 mg/L |
| Measured Levels   | <p><u>Action Level Exceedance</u><br/>1. Mid-ebb at IS8 (Bottom-depth DO = 4.5mg/L)</p>  |          |
| Works Undertaken (at the time of monitoring event)      | <p>No major marine works was undertaken under this Contract on 25 May 2018.</p>  |          |
| Possible Reason for Action or Limit Level Exceedance(s) | <p>The exceedances of surface and middle and bottom-depth DO are unlikely to be due to the Project, in view of the following:</p> <ul style="list-style-type: none"> <li>• No marine works was undertaken under this Contract on 25 May 2018.</li> <li>• Apart from marginal DO exceedance at IS8, levels of DO at all monitoring stations were in compliance with the Action and Limit Levels during both mid-ebb and mid-flood tides on the same day.</li> <li>• DO levels were generally lower at water quality monitoring stations due to two possible reasons of natural variation:             <ol style="list-style-type: none"> <li>1. Natural ability for water to hold dissolved oxygen is reduced due to higher water temperature in summer months.</li> <li>2. The higher Salinity recorded at the bottom level of IS8 was possibly caused by the stratification of seawater during summer when the freshwater discharged from the Pearl River tended to form a surface layer of lower salinity water, which is probably responsible for the lower Salinity recorded at the surface and middle levels compared to the higher Salinity recorded at the bottom level of the monitoring stations. The stratification of seawater in the water column is likely a contributing factor to the results of lower levels of DO at the bottom level.</li> </ol> </li> </ul> |          |
| Actions Taken/ To Be Taken                              | <p>No immediate action is considered necessary. The ET will monitor for future trends in exceedances.</p>  |          |
| Remarks   | <p>The monitoring results on 25 May 2018 and locations of water quality monitoring stations are attached. Site photo record on 25 May 2018 is attached.</p>  |          |

| Project | Works      | Date (yyyy-mm-dd) | Tide    | Station    | Start Time | Level   | Replicate | Temperature (°C) | pH  | Salinity (ppt) | DO (mg/L) | Average DO (mg/L) | Turbidity (NTU) | Depth-Averaged Turbidity | SS (mg/L) | Depth-Averaged SS |
|---------|------------|-------------------|---------|------------|------------|---------|-----------|------------------|-----|----------------|-----------|-------------------|-----------------|--------------------------|-----------|-------------------|
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Ebb | CS(Mf)5    | 9:57       | Surface | 1         | 28.1             | 8.1 | 24.2           | 6.6       | 6.5               | 3.0             | 3.3                      | 3.8       | 3.9               |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Ebb | CS(Mf)5    | 9:57       | Surface | 2         | 28.1             | 8.1 | 24.0           | 6.8       |                   | 3.1             |                          | 4.1       |                   |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Ebb | CS(Mf)5    | 9:57       | Middle  | 1         | 27.1             | 8.1 | 25.7           | 6.1       |                   | 3.2             |                          | 4.5       |                   |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Ebb | CS(Mf)5    | 9:57       | Middle  | 2         | 27.1             | 8.0 | 25.5           | 6.3       |                   | 3.3             |                          | 3.5       |                   |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Ebb | CS(Mf)5    | 9:57       | Bottom  | 1         | 26.5             | 8.0 | 30.5           | 5.0       | 5.1               | 3.6             |                          | 3.7       |                   |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Ebb | CS(Mf)5    | 9:57       | Bottom  | 2         | 26.5             | 8.1 | 30.2           | 5.2       |                   | 3.7             |                          | 3.5       |                   |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Ebb | CS(Mf)3(N) | 11:11      | Surface | 1         | 29.5             | 8.0 | 18.1           | 7.2       | 6.6               | 2.9             | 5.5                      | 4.1       | 5.6               |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Ebb | CS(Mf)3(N) | 11:11      | Surface | 2         | 29.1             | 8.1 | 18.2           | 7.2       |                   | 2.9             |                          | 5.0       |                   |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Ebb | CS(Mf)3(N) | 11:11      | Middle  | 1         | 28.9             | 7.9 | 21.4           | 5.9       |                   | 5.9             |                          | 6.5       |                   |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Ebb | CS(Mf)3(N) | 11:11      | Middle  | 2         | 28.5             | 8.0 | 21.5           | 5.9       |                   | 5.9             |                          | 7.0       |                   |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Ebb | CS(Mf)3(N) | 11:11      | Bottom  | 1         | 28.6             | 7.9 | 22.9           | 5.5       | 5.5               | 7.6             |                          | 5.6       |                   |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Ebb | CS(Mf)3(N) | 11:11      | Bottom  | 2         | 28.2             | 7.9 | 23.0           | 5.5       |                   | 7.9             |                          | 5.1       |                   |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Ebb | IS(Mf)16   | 10:28      | Surface | 1         | 28.6             | 8.2 | 23.5           | 7.2       | 7.2               | 4.5             | 5.3                      | 2.8       | 3.3               |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Ebb | IS(Mf)16   | 10:28      | Surface | 2         | 28.6             | 8.2 | 23.0           | 7.2       |                   | 4.6             |                          | 2.9       |                   |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Ebb | IS(Mf)16   | 10:28      | Middle  | 1         |                  |     |                |           |                   |                 |                          |           |                   |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Ebb | IS(Mf)16   | 10:28      | Middle  | 2         |                  |     |                |           |                   |                 |                          |           |                   |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Ebb | IS(Mf)16   | 10:28      | Bottom  | 1         | 28.0             | 8.1 | 25.3           | 6.5       | 6.6               | 6.1             |                          | 3.6       |                   |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Ebb | IS(Mf)16   | 10:28      | Bottom  | 2         | 28.0             | 8.1 | 25.1           | 6.6       |                   | 6.1             |                          | 4.0       |                   |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Ebb | SR4a       | 10:38      | Surface | 1         | 28.6             | 8.1 | 23.0           | 6.2       | 6.2               | 7.5             | 10.2                     | 4.1       | 5.6               |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Ebb | SR4a       | 10:38      | Surface | 2         | 28.6             | 8.1 | 22.7           | 6.2       |                   | 7.6             |                          | 4.0       |                   |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Ebb | SR4a       | 10:38      | Middle  | 1         |                  |     |                |           |                   |                 |                          |           |                   |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Ebb | SR4a       | 10:38      | Middle  | 2         |                  |     |                |           |                   |                 |                          |           |                   |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Ebb | SR4a       | 10:38      | Bottom  | 1         | 27.8             | 8.0 | 26.0           | 5.1       | 5.1               | 12.8            |                          | 6.2       |                   |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Ebb | SR4a       | 10:38      | Bottom  | 2         | 27.8             | 8.0 | 25.6           | 5.1       |                   | 12.9            |                          | 8.0       |                   |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Ebb | SR4(N)     | 10:45      | Surface | 1         | 29.1             | 8.2 | 21.5           | 7.5       | 7.5               | 6.1             | 6.1                      | 3.1       | 4.4               |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Ebb | SR4(N)     | 10:45      | Surface | 2         | 29.1             | 8.2 | 21.2           | 7.5       |                   | 6.2             |                          | 4.7       |                   |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Ebb | SR4(N)     | 10:45      | Middle  | 1         |                  |     |                |           |                   |                 |                          |           |                   |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Ebb | SR4(N)     | 10:45      | Middle  | 2         |                  |     |                |           |                   |                 |                          |           |                   |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Ebb | SR4(N)     | 10:45      | Bottom  | 1         | 29.1             | 8.2 | 21.4           | 7.5       | 7.5               | 6.0             |                          | 5.2       |                   |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Ebb | SR4(N)     | 10:45      | Bottom  | 2         | 29.1             | 8.2 | 21.2           | 7.5       |                   | 6.0             |                          | 4.6       |                   |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Ebb | IS8        | 10:52      | Surface | 1         | 29.2             | 8.3 | 21.2           | 7.8       | 7.8               | 2.5             | 2.9                      | 3.5       | 3.9               |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Ebb | IS8        | 10:52      | Surface | 2         | 29.2             | 8.3 | 21.0           | 7.8       |                   | 2.6             |                          | 4.7       |                   |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Ebb | IS8        | 10:52      | Middle  | 1         |                  |     |                |           |                   |                 |                          |           |                   |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Ebb | IS8        | 10:52      | Middle  | 2         |                  |     |                |           |                   |                 |                          |           |                   |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Ebb | IS8        | 10:52      | Bottom  | 1         | 28.2             | 7.8 | 24.6           | 4.4       | 4.5               | 3.2             |                          | 3.9       |                   |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Ebb | IS8        | 10:52      | Bottom  | 2         | 28.2             | 7.8 | 24.2           | 4.5       |                   | 3.2             |                          | 3.5       |                   |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Ebb | IS(Mf)9    | 11:01      | Surface | 1         | 29.2             | 8.3 | 21.8           | 8.6       | 8.6               | 5.9             | 6.0                      | 3.0       | 2.6               |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Ebb | IS(Mf)9    | 11:01      | Surface | 2         | 29.1             | 8.3 | 21.6           | 8.6       |                   | 5.9             |                          | 2.5       |                   |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Ebb | IS(Mf)9    | 11:01      | Middle  | 1         |                  |     |                |           |                   |                 |                          |           |                   |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Ebb | IS(Mf)9    | 11:01      | Middle  | 2         |                  |     |                |           |                   |                 |                          |           |                   |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Ebb | IS(Mf)9    | 11:01      | Bottom  | 1         | 29.2             | 8.2 | 21.8           | 8.7       | 8.7               | 6.0             |                          | 2.2       |                   |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Ebb | IS(Mf)9    | 11:01      | Bottom  | 2         | 29.1             | 8.3 | 21.6           | 8.6       |                   | 6.1             |                          | 2.5       |                   |

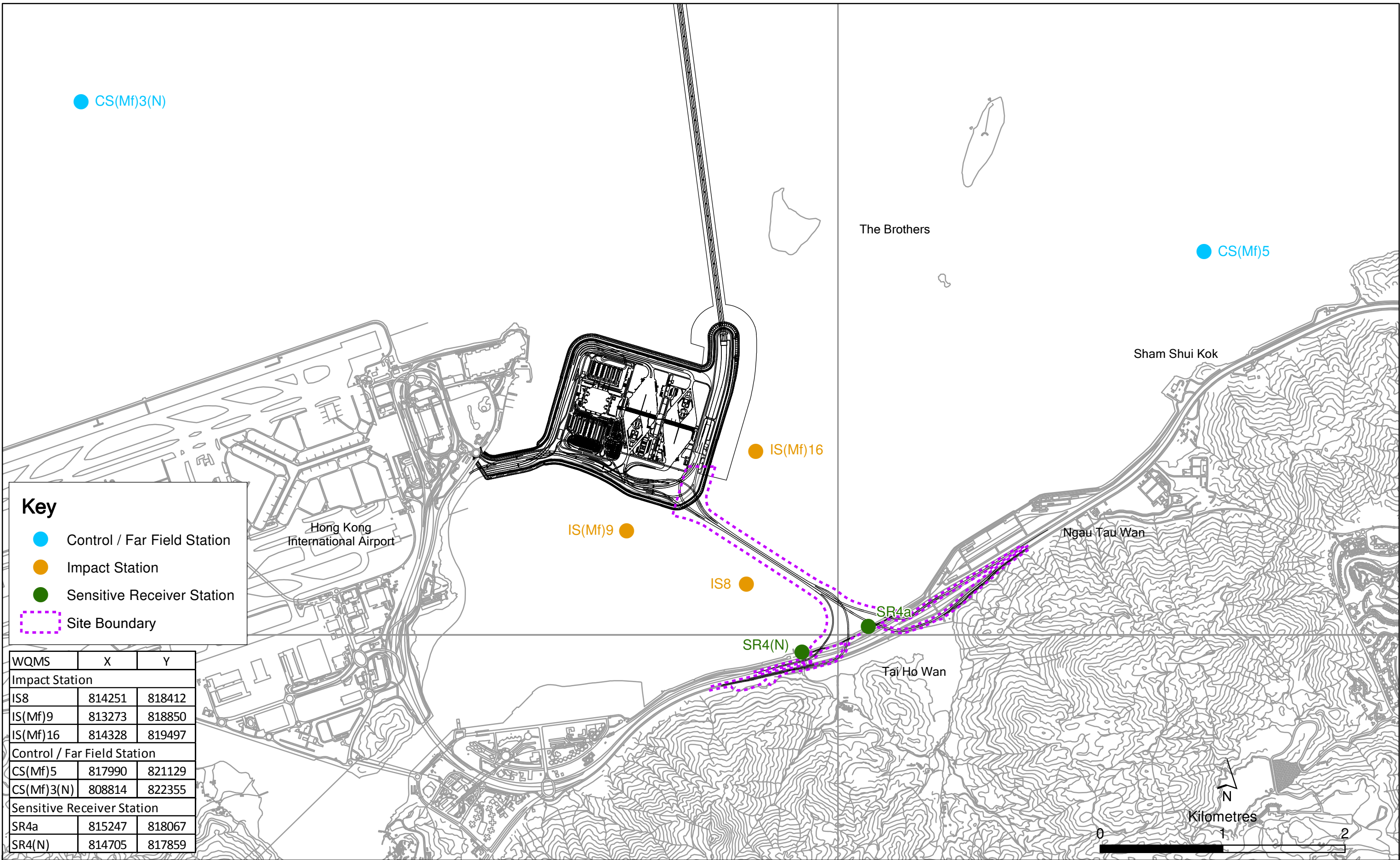
| Project | Works      | Date (yyyy-mm-dd) | Tide      | Station    | Start Time | Level   | Replicate | Temperature (°C) | pH  | Salinity (ppt) | DO (mg/L) | Average DO (mg/L) | Turbidity (NTU) | Depth-Averaged Turbidity | SS (mg/L) | Depth-Averaged SS |
|---------|------------|-------------------|-----------|------------|------------|---------|-----------|------------------|-----|----------------|-----------|-------------------|-----------------|--------------------------|-----------|-------------------|
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Flood | CS(Mf)5    | 16:03      | Surface | 1         | 29.2             | 8.2 | 20.6           | 7.9       | 7.1               | 2.7             | 5.4                      | 5.3       | 5.4               |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Flood | CS(Mf)5    | 16:03      | Surface | 2         | 29.2             | 8.2 | 20.8           | 7.9       |                   | 2.7             |                          | 5.8       |                   |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Flood | CS(Mf)5    | 16:03      | Middle  | 1         | 27.1             | 8.0 | 25.7           | 6.2       |                   | 7.3             |                          | 5.3       |                   |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Flood | CS(Mf)5    | 16:03      | Middle  | 2         | 27.2             | 8.0 | 25.9           | 6.2       | 5.8               | 7.5             | 5.4                      | 5.4       | 5.4               |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Flood | CS(Mf)5    | 16:03      | Bottom  | 1         | 26.8             | 7.9 | 29.0           | 5.7       |                   | 6.0             |                          | 5.1       |                   |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Flood | CS(Mf)5    | 16:03      | Bottom  | 2         | 26.8             | 8.0 | 29.3           | 5.8       | 7.4               | 6.0             | 4.8                      | 5.3       | 4.8               |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Flood | CS(Mf)3(N) | 14:55      | Surface | 1         | 29.8             | 8.1 | 16.8           | 8.0       |                   | 5.8             |                          | 4.8       |                   |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Flood | CS(Mf)3(N) | 14:55      | Surface | 2         | 30.2             | 8.0 | 16.7           | 8.1       |                   | 5.7             |                          | 3.8       |                   |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Flood | CS(Mf)3(N) | 14:55      | Middle  | 1         | 29.0             | 8.0 | 19.1           | 6.8       | 6.2               | 4.3             | 4.8                      | 5.0       | 4.8               |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Flood | CS(Mf)3(N) | 14:55      | Middle  | 2         | 29.4             | 7.9 | 19.0           | 6.8       |                   | 4.3             |                          | 5.3       |                   |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Flood | CS(Mf)3(N) | 14:55      | Bottom  | 1         | 28.5             | 7.9 | 22.1           | 6.2       | 9.3               | 4.4             | 2.9                      | 4.9       | 4.2               |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Flood | CS(Mf)3(N) | 14:55      | Bottom  | 2         | 28.9             | 7.9 | 22.1           | 6.2       |                   | 4.2             |                          | 5.1       |                   |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Flood | IS(Mf)16   | 15:37      | Surface | 1         | 29.2             | 8.3 | 21.1           | 9.3       | 9.4               | 2.6             | 6.2                      | 4.3       | 6.3               |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Flood | IS(Mf)16   | 15:37      | Surface | 2         | 29.2             | 8.3 | 21.3           | 9.3       |                   | 2.6             |                          | 4.4       |                   |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Flood | IS(Mf)16   | 15:37      | Middle  | 1         |                  |     |                |           |                   |                 |                          |           |                   |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Flood | IS(Mf)16   | 15:37      | Middle  | 2         |                  |     |                |           | 9.4               |                 | 2.9                      |           | 4.2               |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Flood | IS(Mf)16   | 15:37      | Bottom  | 1         | 29.2             | 8.3 | 21.2           | 9.3       |                   | 3.1             |                          | 4.3       |                   |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Flood | IS(Mf)16   | 15:37      | Bottom  | 2         | 29.2             | 8.3 | 21.5           | 9.4       | 8.4               | 3.2             | 6.2                      | 3.8       | 6.3               |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Flood | SR4a       | 15:27      | Surface | 1         | 29.0             | 8.2 | 21.1           | 8.4       |                   | 6.4             |                          | 6.2       |                   |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Flood | SR4a       | 15:27      | Surface | 2         | 29.0             | 8.3 | 21.4           | 8.4       |                   | 6.6             |                          | 6.7       |                   |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Flood | SR4a       | 15:27      | Middle  | 1         |                  |     |                |           | 6.7               |                 | 6.2                      |           | 6.3               |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Flood | SR4a       | 15:27      | Middle  | 2         |                  |     |                |           |                   |                 |                          |           |                   |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Flood | SR4a       | 15:27      | Bottom  | 1         | 28.0             | 8.0 | 25.3           | 6.7       | 9.1               | 5.8             | 3.3                      | 7.2       | 4.7               |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Flood | SR4a       | 15:27      | Bottom  | 2         | 27.9             | 8.0 | 25.7           | 6.7       |                   | 5.9             |                          | 5.2       |                   |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Flood | SR4(N)     | 15:21      | Surface | 1         | 29.7             | 8.3 | 21.3           | 9.0       |                   | 3.1             |                          | 4.4       |                   |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Flood | SR4(N)     | 15:21      | Surface | 2         | 29.7             | 8.3 | 21.5           | 9.1       | 9.1               | 3.3             | 3.3                      | 6.0       | 4.7               |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Flood | SR4(N)     | 15:21      | Middle  | 1         |                  |     |                |           |                   |                 |                          |           |                   |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Flood | SR4(N)     | 15:21      | Middle  | 2         |                  |     |                |           | 9.1               |                 | 3.3                      |           | 4.7               |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Flood | SR4(N)     | 15:21      | Bottom  | 1         | 29.7             | 8.3 | 21.3           | 9.0       |                   | 3.3             |                          | 4.3       |                   |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Flood | SR4(N)     | 15:21      | Bottom  | 2         | 29.7             | 8.3 | 21.6           | 9.1       | 9.4               | 3.4             | 1.8                      | 4.2       | 3.7               |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Flood | IS8        | 15:16      | Surface | 1         | 29.9             | 8.3 | 21.5           | 9.3       |                   | 1.8             |                          | 3.5       |                   |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Flood | IS8        | 15:16      | Surface | 2         | 29.9             | 8.3 | 21.7           | 9.4       |                   | 1.8             |                          | 3.2       |                   |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Flood | IS8        | 15:16      | Middle  | 1         |                  |     |                |           | 9.4               |                 | 1.8                      |           | 3.7               |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Flood | IS8        | 15:16      | Middle  | 2         |                  |     |                |           |                   |                 |                          |           |                   |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Flood | IS8        | 15:16      | Bottom  | 1         | 30.0             | 8.3 | 21.4           | 9.3       | 9.4               | 1.6             | 1.8                      | 4.4       | 2.8               |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Flood | IS8        | 15:16      | Bottom  | 2         | 30.0             | 8.3 | 21.6           | 9.4       |                   | 1.8             |                          | 3.7       |                   |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Flood | IS(Mf)9    | 15:07      | Surface | 1         |                  |     |                |           | 9.1               |                 | 1.8                      |           | 2.8               |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Flood | IS(Mf)9    | 15:07      | Surface | 2         |                  |     |                |           |                   |                 |                          |           |                   |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Flood | IS(Mf)9    | 15:07      | Middle  | 1         | 30.0             | 8.3 | 21.6           | 9.0       | 9.1               | 1.7             | 1.8                      | 2.3       | 2.8               |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Flood | IS(Mf)9    | 15:07      | Middle  | 2         | 30.0             | 8.3 | 21.8           | 9.1       |                   | 1.8             |                          | 3.2       |                   |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Flood | IS(Mf)9    | 15:07      | Bottom  | 1         |                  |     |                |           |                   |                 |                          |           |                   |
| TMCLKL  | HY/2012/07 | 2018-05-25        | Mid-Flood | IS(Mf)9    | 15:07      | Bottom  | 2         |                  |     |                |           |                   |                 |                          |           |                   |

Note: Indicates Exceedance of Action Level  
Indicates Exceedance of Limit Level

Photo 1 - Mid-Ebb at IS8 on 25 May 2018







**Key**

- Control / Far Field Station
- Impact Station
- Sensitive Receiver Station
- Site Boundary

| WQMS                               | X      | Y      |
|------------------------------------|--------|--------|
| <b>Impact Station</b>              |        |        |
| IS8                                | 814251 | 818412 |
| IS(Mf)9                            | 813273 | 818850 |
| IS(Mf)16                           | 814328 | 819497 |
| <b>Control / Far Field Station</b> |        |        |
| CS(Mf)5                            | 817990 | 821129 |
| CS(Mf)3(N)                         | 808814 | 822355 |
| <b>Sensitive Receiver Station</b>  |        |        |
| SR4a                               | 815247 | 818067 |
| SR4(N)                             | 814705 | 817859 |

Locations of Water Quality Monitoring Stations

File: T:\GIS\CONTRACT\0215660\Mxd\0215660\_WQMS.mxd  
Date: 20/3/2018

Email  
message

**Environmental  
Resources  
Management**

**To** Ramboll Hong Kong, Limited (ENPO)

**From** ERM- Hong Kong, Limited

**Ref/Project number** Contract No. HY/2012/07 Tuen Mun–Chek Lap  
Kok Link–Southern Connection Viaduct Section

**Subject** Notification of Exceedance for Impact Dolphin  
Monitoring

**Date** 05 September 2018

2507  
25/F  
One Harbourfront  
18 Tak Fung Street  
Hung Hom  
Kowloon  
Hong Kong  
Telephone: (852) 2271 3113  
Facsimile: (852) 2723 5660  
E-mail: jasmine.ng@erm.com



---

Dear Sir or Madam,

Please find attached the Notification of Exceedance (NOE) of the following  
Log no.:

**0215660\_Mar/May2018\_dolphin\_STG&ANI\_NEL&NWL**

A total of one limit level exceedance was recorded in the quarterly impact  
dolphin monitoring data between March and May 2018.

Regards,

A handwritten signature in blue ink that reads 'Jasmine'.

Dr Jasmine Ng  
*Environmental Team Leader*

---

**CONFIDENTIALITY NOTICE**

This email transmission is intended only for the use of the addressee and is confidential.  
If you are not the addressee it may be unlawful for you to read, copy, distribute, disclose or  
otherwise use the information in this email. If you are not the intended recipient, please  
telephone or fax us.

---





ERM-Hong Kong, Limited

CONTRACT NO. HY/2012/07

TUEN MUN – CHEK LAP KOK LINK –  
SOUTHERN CONNECTION VIADUCT SECTION

Impact Dolphin Monitoring  
Notification of Exceedance

|  |   |  |
|--|---|--|
| Log No.                                      | 0215660_Mar/May2018_dolphin_STG&ANI_NEL&NWL<br>[Total No. of Exceedance = 1]  |  |
| Date   | March to May 2018 (monitored)<br>23 August 2018 (results received by ERM)   |  |
| Monitoring Area                              | Northeast Lantau (NEL) and Northwest Lantau (NWL)   |  |
| Parameter(s) with Exceedance(s)              | Quarterly encounter rate of dolphin sightings (STG)<br>Quarterly encounter rate of total number of dolphins (ANI)   |  |
| Action Levels                                | North Lantau Social cluster   | NEL: STG < 4.2 & ANI < 15.5<br>or<br>NWL: STG < 6.9 & ANI < 31.3 |
| Limit Levels                                 |   | NEL: STG < 2.4 & ANI < 8.9<br>and<br>NWL: STG < 3.9 & ANI < 17.9 |
| Recorded Levels                              | NEL   | STG = 0 & ANI = 0  |
|  | NWL   | STG = 2.88 & ANI = 11.12   |
|  | One Limit Level Exceedance was recorded in the quarterly impact dolphin monitoring at NEL and NWL between March and May 2018. The exceedance was reported in the approved <i>Fifty-fifth Monthly EM&amp;A Report</i> dated 13 June 2018.  |  |
| Statistical Analyses                         | <p>Further to the review of the available and relevant dolphin monitoring data in the EM&amp;A under this Contract, statistical analyses were conducted as follows:</p> <ul style="list-style-type: none"> <li>A two-way ANOVA with repeated measures and unequal sample size was conducted using Period (2 levels: baseline vs impact – present impact quarter, March to May 2018) and Location (2 levels: NEL and NWL) as fixed factors to examine whether there were any significant differences in the average encounter rates between the baseline and present impact monitoring quarter. By setting <math>\alpha = 0.05</math> as the significance level in the statistical tests, significant differences in STG (<math>p = 0.0095</math>) and ANI (<math>p = 0.0390</math>) were detected between Periods.</li> <li>A two-way ANOVA with repeated measures and unequal sample size was conducted using Cumulative Period (2 levels: baseline vs impact – cumulative quarters, December 2012 to May 2018) and Location (2 levels: NEL and NWL) as fixed factors to examine whether there were any significant differences in the average encounter rates between the baseline and cumulative impact monitoring quarter. By setting <math>\alpha = 0.00001</math> as the significance level in the statistical tests, significant difference in STG (<math>p = 0.000000</math>) and in ANI (<math>p = 0.000000</math>) between Cumulative Period (baseline and impact phases) and Location (NEL and NWL) were detected. * Note: The commencement date under <i>Contract No. HY/2012/07</i> is 31 October 2013.</li> </ul> |  |
| Works Undertaken (in the monitoring quarter) | In the quarter between March and May 2018, no marine works was undertaken under <i>Contract No. HY/2012/07</i> .  |  |

|   |  |
|---|--|
| <p><b>Possible Reason for Action or Limit Level Exceedance(s)</b></p> | <p>The potential factors that may have contributed to the observed exceedance are reviewed below:</p> <ul style="list-style-type: none"> <li>• Blocking of CWD travelling corridor:<br/>The <i>Monitoring of Marine Mammals in Hong Kong Waters (2017 – 18)</i> <sup>(1)</sup> reported that dolphin usage and traveling activities to the northern side of the airport (dolphin traveling corridor) are affected by frequent high-speed ferry traffic from Sky Pier (not related to this Contract), which is likely one of the factors resulting in the decrease in dolphin abundances in North Lantau.</li> <li>• Marine works of the Contract:<br/>As per the findings from the EIA report (<i>Section 8.11.9</i>), the major influences on the Chinese White Dolphin (CWD) <i>Sousa chinensis</i> under this Contract are marine traffics and bored piling works. The <i>Monitoring of Marine Mammals in Hong Kong Waters (2017-2018)</i> also reported that CWD decline were likely influenced by reclamation works, bored piling and intensive marine traffic from construction activities.<br/>Based on these possible reasons, implementation of mitigation measures are reviewed. This Contract does not have any reclamation works, thus no habitat loss was caused by reclamation. In the reporting period, the Contractor implemented the marine traffic control as per the requirements in the <i>EP-354/2009/D</i> and the updated <i>EM&amp;A Manual</i>. Most of the vessels of this Contract also worked within the site boundary, in which the area is seldom used by CWD. Disturbance from vessels of this Contract is considered minor. All of the marine bored piling works of this Contract was completed in September 2015. Thus, underwater noise emission from this Contract had been substantially reduced. During dolphin monitoring in this quarter, no unacceptable impact on CWD due to the activities under this Contract was observed.</li> <li>• Impact on water quality:<br/>According to the findings in the water quality monitoring results at the impact monitoring stations between March and May 2018, there were one (1) Action Level of Suspended Solids (SS) exceedances and one (1) Action Level of Dissolved Oxygen (DO) for water quality impact monitoring in the reporting period. The exceedances were considered not related to this Contract upon further investigation and the investigation reports are presented in <i>Appendix L</i> of the <i>18<sup>th</sup> Quarterly EM&amp;A Report (March – May 2018)</i>.</li> </ul> <p>In view of the above, marine ecological mitigation measures were considered properly implemented, and thus no unacceptable impact on CWD or its habitat was associated with this Contract in this quarter.</p> |
|---|--|

(1) Hung SKY (2017). Prepared for AFCD. Available at: [https://www.afcd.gov.hk/english/conservation/con\\_mar/con\\_mar\\_chi/con\\_mar\\_chi\\_chi\\_chi/files/Final\\_Report\\_2016\\_17.pdf](https://www.afcd.gov.hk/english/conservation/con_mar/con_mar_chi/con_mar_chi_chi/files/Final_Report_2016_17.pdf)

|  |  |
|--|--|
| <p><b>Actions Taken/ To Be Taken</b></p> | <p>With reference to the site inspection records in this quarter, the respective marine ecological mitigation measures have been implemented properly by the Contractor throughout the marine works period, including:</p> <ol style="list-style-type: none"> <li>1. 250m dolphin exclusion zone;</li> <li>2. Acoustic decoupling plan;</li> <li>3. Training to workers;</li> <li>4. Offsite vessel routing control in accordance with Regular Marine Travel Routes Plan, including routing control within existing marine park boundaries;</li> <li>5. Vessels speed limited at 5 knots and 10 knots within existing marine park boundaries and site boundary respectively;</li> <li>6. Idling and mooring of working vessels within site boundary</li> </ol> <p>The existing mitigation measures are recommended to be continuously implemented. Furthermore, it is also recommended to reduce the vessels for marine works as much as possible. The ET will monitor for future trends in exceedance(s).</p> <p>A joint team meeting was held on 4 September 2018 for discussion on CWD trend, with attendance of ENPO, Representatives of Resident Site Staff (RSS), Representatives of Environmental Teams (ETs) for Contract No. HY/2013/01, HY/2011/03, HY/2012/07 and HY/2012/08. The discussion/recommendation as recorded in the minutes of the meeting, which might be relevant to this Contract are summarized below. It was concluded that the HZMB works is one of the contributing factors affecting the dolphins. It was also concluded the contribution of impacts due to the HZMB works as a whole (or individual marine contracts) cannot be quantified or separate from the other stress factors. It was reminded that the ETs shall keep reviewing the implementation status of the dolphin related mitigation measures and remind the contractors to ensure the relevant measures are fully implemented. It was recommended that the marine works of HZMB projects should be completed as soon as possible to reduce the overall duration of impacts and allow the dolphins population to recover as early as possible. The participants were also reminded that the protection measures (e.g. speed limit control) for the BMP shall be implemented so as to provide a better habitat for dolphin recovery. It is noted that even though marine vessels may moor within the mooring site of BMP, commercial activities including loading / unloading / transshipment are not allowed except a permit is obtained. The HZMB works vessels were recommended to avoid the BMP. It was also recommended that the marine works footprint and vessels for the marine works should be reduced as much as possible, and vessels idling / mooring in other part of the North Lantau shall be avoided whenever possible.</p> <p>Dolphin specialists of the Projects confirmed that the CWD sighting nearby north of Sha Chau and Lung Kwu Chau Marine Park has significantly declined. The reason for the decline was likely related to the re-routing of high-speed ferry from Skypier.</p> |
| <p><b>Remarks</b></p>                    | <p>The results of impact water quality and impact dolphin monitoring, the status of implemented marine ecological mitigation measures are documented in the approved <i>Fifty-third to Fifty-fifth Monthly EM&amp;A Reports</i>. Comparison on water quality between impact and baseline periods is elaborated in the <i>18<sup>th</sup> Quarterly EM&amp;A Report</i>.</p>  |