

Appendix L

Cumulative Statistics on
Exceedances, Complaints,
Notifications of Summons
and Successful Prosecutions

Appendix L1 Cumulative Statistics on Exceedances

		Total No. recorded in this quarter	Total No. recorded since project 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	48	224
	Limit	5	24
Impact Dolphin Monitoring	Action	0	11
	Limit	1	14

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

Reporting Period	Cumulative Statistics		
	Complaints	Notifications of Summons	Successful Prosecutions
This quarter	0	0	0
Total No. received since project commencement	14	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 04 September 2018

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



ERM

Dear Sir/ Madam,

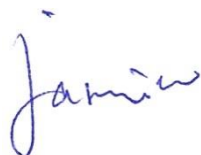
Please find attached the Notification of Exceedance (NOE) of the following
Log no.:

Action Level Exceedance

0215660_03 September 2018_ Surface and Middle-depth DO_E_Station IS(Mf)16
0215660_03 September 2018_ Bottom-depth DO_E_Station IS(Mf)16
0215660_03 September 2018_ Surface and Middle-depth DO_E_SR4(N)
0215660_03 September 2018_ Bottom-depth DO_E_Station SR4(N)
0215660_03 September 2018_ Surface and Middle-depth DO_E_Station IS8
0215660_03 September 2018_ Bottom-depth DO_E_Station IS8
0215660_03 September 2018_ Surface and Middle-depth DO_E_Station IS(Mf)9
0215660_03 September 2018_ Bottom-depth DO_E_Station IS(Mf)9
0215660_03 September 2018_ Bottom-depth DO_F_Station IS(Mf)16
0215660_03 September 2018_ Bottom-depth DO_F_Station SR4a

A total of ten exceedances were recorded on 03 September 2018.

Regards,



Dr Jasmine Ng
Environmental Team Leader

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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></p> <p style="text-align: center;">0215660_03 September 2018_ Surface and Middle-depth DO_E_Station IS(Mf)16 0215660_03 September 2018_ Bottom-depth DO_E_Station IS(Mf)16 0215660_03 September 2018_ Surface and Middle-depth DO_E_SR4(N) 0215660_03 September 2018_ Bottom-depth DO_E_Station SR4(N) 0215660_03 September 2018_ Surface and Middle-depth DO_E_Station IS8 0215660_03 September 2018_ Bottom-depth DO_E_Station IS8 0215660_03 September 2018_ Surface and Middle-depth DO_E_Station IS(Mf)9 0215660_03 September 2018_ Bottom-depth DO_E_Station IS(Mf)9 0215660_03 September 2018_ Bottom-depth DO_F_Station IS(Mf)16 0215660_03 September 2018_ Bottom-depth DO_F_Station SR4a</p> <p style="text-align: center;">[Total No. of Exceedance = 10]</p>	
Date	<p style="text-align: center;">03 September 2018 (Measured) 04 September 2018 (<i>In situ</i> results received by ERM) 07 September 2018 (Laboratory results received by ERM)</p>	
Monitoring Station	<p style="text-align: center;">CS(Mf)5, SR4a, SR4(N), IS8, IS(Mf)16, IS(Mf)9, CS(Mf)3(N)</p>	
Parameter(s) with Exceedance(s)	<p style="text-align: center;">Surface and Middle-depth DO, Bottom DO</p>	
Action Levels for DO	Surface and Middle-depth DO	5.0 mg/L
	Bottom-depth DO	4.7 mg/L
Limit Levels for DO	Surface and Middle-depth DO	4.2 mg/L
	Bottom-depth DO	3.6 mg/L
Measured Levels	<p>Please refer to the attached data.</p>	
Works Undertaken (at the time of monitoring event)	<p>Demolition of marine platform was undertaken at Viaduct E under this Contract on 03 September 2018.</p>	
Possible Reason for Action or Limit Level Exceedance(s)	<p>The exceedances of DO are unlikely to be due to the Project, in view of the following</p> <ul style="list-style-type: none"> • All monitored parameters, except 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. • Surface and Middle-depth and Bottom-depth DO levels during mid-ebb tide at IS(Mf)16, SR4(N), IS8 and IS(Mf)9 were similar to the upstream control station CS(Mf)3(N), in which the recorded level of Surface and Middle-depth and Bottom-depth DO were low. • Low Bottom-depth DO during both mid-ebb and mid-flood tide is likely due to relatively higher Salinity recorded at the bottom level which 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. • No particular observation was reported at IS(Mf)16, SR4a, SR4(N), IS8 and IS(Mf)9. 	
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 03 September 2018 and locations of water quality monitoring stations are attached. Site photo record on 03 September 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	2018-09-03	Mid-Ebb	CS(Mf)5	5:27	Surface	1	27.9	7.9	14.9	4.9	4.7	1.6	3.4	2.4	3.7
TMCLKL	HY/2012/07	2018-09-03	Mid-Ebb	CS(Mf)5	5:27	Surface	2	27.9	7.9	15.1	4.9		3.3		3.3	
TMCLKL	HY/2012/07	2018-09-03	Mid-Ebb	CS(Mf)5	5:27	Middle	1	27.3	8.0	20.0	4.4		2.5		4.7	
TMCLKL	HY/2012/07	2018-09-03	Mid-Ebb	CS(Mf)5	5:27	Middle	2	27.3	8.0	20.3	4.4		3.8		5.3	
TMCLKL	HY/2012/07	2018-09-03	Mid-Ebb	CS(Mf)5	5:27	Bottom	1	25.7	8.0	27.5	4.0	4.0	4.9	3.4	2.6	3.7
TMCLKL	HY/2012/07	2018-09-03	Mid-Ebb	CS(Mf)5	5:27	Bottom	2	25.7	8.0	27.9	4.0		4.3		3.7	
TMCLKL	HY/2012/07	2018-09-03	Mid-Ebb	CS(Mf)3(N)	5:54	Surface	1	28.2	7.7	13.7	4.5	4.4	4.3	6.9	6.2	5.5
TMCLKL	HY/2012/07	2018-09-03	Mid-Ebb	CS(Mf)3(N)	5:54	Surface	2	28.1	7.7	13.7	4.5		4.0		3.9	
TMCLKL	HY/2012/07	2018-09-03	Mid-Ebb	CS(Mf)3(N)	5:54	Middle	1	27.5	7.8	19.9	4.2		8.1		6.0	
TMCLKL	HY/2012/07	2018-09-03	Mid-Ebb	CS(Mf)3(N)	5:54	Middle	2	27.4	7.8	20.1	4.2		8.0		6.0	
TMCLKL	HY/2012/07	2018-09-03	Mid-Ebb	CS(Mf)3(N)	5:54	Bottom	1	27.3	7.8	21.0	4.3	4.3	8.6	3.5	5.4	3.9
TMCLKL	HY/2012/07	2018-09-03	Mid-Ebb	CS(Mf)3(N)	5:54	Bottom	2	27.2	7.8	21.1	4.3		8.4		5.2	
TMCLKL	HY/2012/07	2018-09-03	Mid-Ebb	IS(Mf)16	5:58	Surface	1	27.6	7.9	19.3	4.3	4.3	2.7	3.5	3.9	3.9
TMCLKL	HY/2012/07	2018-09-03	Mid-Ebb	IS(Mf)16	5:58	Surface	2	27.6	7.9	19.5	4.3		4.4		4.7	
TMCLKL	HY/2012/07	2018-09-03	Mid-Ebb	IS(Mf)16	5:58	Middle	1					4.2		3.5		3.9
TMCLKL	HY/2012/07	2018-09-03	Mid-Ebb	IS(Mf)16	5:58	Middle	2									
TMCLKL	HY/2012/07	2018-09-03	Mid-Ebb	IS(Mf)16	5:58	Bottom	1	27.4	7.9	20.2	4.2	4.2	3.6	3.5	3.4	3.9
TMCLKL	HY/2012/07	2018-09-03	Mid-Ebb	IS(Mf)16	5:58	Bottom	2	27.4	7.9	20.5	4.2		3.3		3.7	
TMCLKL	HY/2012/07	2018-09-03	Mid-Ebb	SR4a	6:09	Surface	1	27.3	8.0	16.2	6.3	6.3	3.4	3.3	4.1	3.9
TMCLKL	HY/2012/07	2018-09-03	Mid-Ebb	SR4a	6:09	Surface	2	27.4	8.0	16.4	6.3		4.1		3.2	
TMCLKL	HY/2012/07	2018-09-03	Mid-Ebb	SR4a	6:09	Middle	1									
TMCLKL	HY/2012/07	2018-09-03	Mid-Ebb	SR4a	6:09	Middle	2									
TMCLKL	HY/2012/07	2018-09-03	Mid-Ebb	SR4a	6:09	Bottom	1	27.2	8.0	16.4	6.4	6.4	2.5	3.3	3.6	3.9
TMCLKL	HY/2012/07	2018-09-03	Mid-Ebb	SR4a	6:09	Bottom	2	27.2	8.0	16.6	6.4		3.1		4.8	
TMCLKL	HY/2012/07	2018-09-03	Mid-Ebb	SR4(N)	6:14	Surface	1	27.7	7.9	17.4	4.3	4.3	3.7	4.2	5.1	6.4
TMCLKL	HY/2012/07	2018-09-03	Mid-Ebb	SR4(N)	6:14	Surface	2	27.8	7.9	17.6	4.3		4.2		6.0	
TMCLKL	HY/2012/07	2018-09-03	Mid-Ebb	SR4(N)	6:14	Middle	1									
TMCLKL	HY/2012/07	2018-09-03	Mid-Ebb	SR4(N)	6:14	Middle	2									
TMCLKL	HY/2012/07	2018-09-03	Mid-Ebb	SR4(N)	6:14	Bottom	1	27.7	7.9	18.8	4.2	4.2	4.2	3.3	7.2	3.1
TMCLKL	HY/2012/07	2018-09-03	Mid-Ebb	SR4(N)	6:14	Bottom	2	27.7	7.9	19.0	4.2		4.8		7.1	
TMCLKL	HY/2012/07	2018-09-03	Mid-Ebb	IS8	6:20	Surface	1	27.7	7.9	17.2	4.7	4.7	4.9	4.1	2.0	2.4
TMCLKL	HY/2012/07	2018-09-03	Mid-Ebb	IS8	6:20	Surface	2	27.7	7.9	17.6	4.6		3.6		2.7	
TMCLKL	HY/2012/07	2018-09-03	Mid-Ebb	IS8	6:20	Middle	1									
TMCLKL	HY/2012/07	2018-09-03	Mid-Ebb	IS8	6:20	Middle	2									
TMCLKL	HY/2012/07	2018-09-03	Mid-Ebb	IS8	6:20	Bottom	1	27.6	7.9	19.6	4.2	4.2	4.5	3.3	2.4	3.1
TMCLKL	HY/2012/07	2018-09-03	Mid-Ebb	IS8	6:20	Bottom	2	27.6	7.9	19.7	4.1		3.3		2.4	
TMCLKL	HY/2012/07	2018-09-03	Mid-Ebb	IS(Mf)9	6:28	Surface	1	27.8	7.9	16.7	4.9	4.9	1.8	3.3	2.7	3.1
TMCLKL	HY/2012/07	2018-09-03	Mid-Ebb	IS(Mf)9	6:28	Surface	2	27.8	7.9	17.0	4.9		3.5		3.0	
TMCLKL	HY/2012/07	2018-09-03	Mid-Ebb	IS(Mf)9	6:28	Middle	1									
TMCLKL	HY/2012/07	2018-09-03	Mid-Ebb	IS(Mf)9	6:28	Middle	2									
TMCLKL	HY/2012/07	2018-09-03	Mid-Ebb	IS(Mf)9	6:28	Bottom	1	27.8	7.9	17.9	4.4	4.4	4.0	3.3	3.8	3.1
TMCLKL	HY/2012/07	2018-09-03	Mid-Ebb	IS(Mf)9	6:28	Bottom	2	27.8	7.9	18.2	4.4		3.9		2.9	

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	2018-09-03	Mid-Flood	CS(Mf)5	12:58	Surface	1	28.1	7.9	16.6	4.7	4.1	3.1	4.2	3.4	4.2
TMCLKL	HY/2012/07	2018-09-03	Mid-Flood	CS(Mf)5	12:58	Surface	2	28.2	7.9	16.6	4.8		2.2		4.7	
TMCLKL	HY/2012/07	2018-09-03	Mid-Flood	CS(Mf)5	12:58	Middle	1	25.9	8.0	26.7	3.5		2.0		3.8	
TMCLKL	HY/2012/07	2018-09-03	Mid-Flood	CS(Mf)5	12:58	Middle	2	25.9	8.0	26.9	3.5		3.3		4.7	
TMCLKL	HY/2012/07	2018-09-03	Mid-Flood	CS(Mf)5	12:58	Bottom	1	24.6	8.0	31.1	3.4	3.4	7.2	4.2	4.3	4.2
TMCLKL	HY/2012/07	2018-09-03	Mid-Flood	CS(Mf)5	12:58	Bottom	2	24.7	8.0	31.4	3.4		7.1		4.2	
TMCLKL	HY/2012/07	2018-09-03	Mid-Flood	CS(Mf)3(N)	11:47	Surface	1	28.6	7.5	8.6	4.4	4.4	6.1	5.9	6.5	6.0
TMCLKL	HY/2012/07	2018-09-03	Mid-Flood	CS(Mf)3(N)	11:47	Surface	2	28.6	7.5	8.5	4.4		5.9		5.7	
TMCLKL	HY/2012/07	2018-09-03	Mid-Flood	CS(Mf)3(N)	11:47	Middle	1	28.3	7.6	9.7	4.4		5.7		5.7	
TMCLKL	HY/2012/07	2018-09-03	Mid-Flood	CS(Mf)3(N)	11:47	Middle	2	28.2	7.6	9.9	4.4		5.5		5.9	
TMCLKL	HY/2012/07	2018-09-03	Mid-Flood	CS(Mf)3(N)	11:47	Bottom	1	27.9	7.6	16.6	4.2	4.2	6.3	4.2	4.8	6.1
TMCLKL	HY/2012/07	2018-09-03	Mid-Flood	CS(Mf)3(N)	11:47	Bottom	2	27.9	7.6	16.7	4.2		5.9		7.4	
TMCLKL	HY/2012/07	2018-09-03	Mid-Flood	IS(Mf)16	12:31	Surface	1	27.9	7.9	15.2	5.2	5.2	5.3	11.8	5.4	6.1
TMCLKL	HY/2012/07	2018-09-03	Mid-Flood	IS(Mf)16	12:31	Surface	2	28.0	7.9	15.3	5.2		5.3		4.1	
TMCLKL	HY/2012/07	2018-09-03	Mid-Flood	IS(Mf)16	12:31	Middle	1									
TMCLKL	HY/2012/07	2018-09-03	Mid-Flood	IS(Mf)16	12:31	Middle	2									
TMCLKL	HY/2012/07	2018-09-03	Mid-Flood	IS(Mf)16	12:31	Bottom	1	27.6	7.9	18.7	4.6	4.6	18.6	9.0	6.5	3.8
TMCLKL	HY/2012/07	2018-09-03	Mid-Flood	IS(Mf)16	12:31	Bottom	2	27.7	7.9	19.0	4.5	18.0	8.4			
TMCLKL	HY/2012/07	2018-09-03	Mid-Flood	SR4a	12:21	Surface	1	28.2	7.8	13.5	5.1	5.1	7.6	9.0	2.8	3.8
TMCLKL	HY/2012/07	2018-09-03	Mid-Flood	SR4a	12:21	Surface	2	28.2	7.9	13.6	5.1		6.8		3.4	
TMCLKL	HY/2012/07	2018-09-03	Mid-Flood	SR4a	12:21	Middle	1									
TMCLKL	HY/2012/07	2018-09-03	Mid-Flood	SR4a	12:21	Middle	2									
TMCLKL	HY/2012/07	2018-09-03	Mid-Flood	SR4a	12:21	Bottom	1	27.8	7.8	19.1	4.3	4.3	11.0	9.0	4.5	3.8
TMCLKL	HY/2012/07	2018-09-03	Mid-Flood	SR4a	12:21	Bottom	2	27.8	7.9	19.2	4.2	10.6	4.5			
TMCLKL	HY/2012/07	2018-09-03	Mid-Flood	SR4(N)	12:16	Surface	1	28.4	7.9	14.0	5.2	5.2	4.2	5.7	5.6	4.8
TMCLKL	HY/2012/07	2018-09-03	Mid-Flood	SR4(N)	12:16	Surface	2	28.4	7.9	14.1	5.2		4.6		5.6	
TMCLKL	HY/2012/07	2018-09-03	Mid-Flood	SR4(N)	12:16	Middle	1									
TMCLKL	HY/2012/07	2018-09-03	Mid-Flood	SR4(N)	12:16	Middle	2									
TMCLKL	HY/2012/07	2018-09-03	Mid-Flood	SR4(N)	12:16	Bottom	1	28.0	7.9	17.1	4.9	5.0	7.0	7.3	5.1	2.8
TMCLKL	HY/2012/07	2018-09-03	Mid-Flood	SR4(N)	12:16	Bottom	2	28.0	7.9	17.1	5.0		7.1		2.7	
TMCLKL	HY/2012/07	2018-09-03	Mid-Flood	IS8	12:11	Surface	1	28.1	7.9	13.9	5.0	5.0	6.2	7.3	2.6	2.8
TMCLKL	HY/2012/07	2018-09-03	Mid-Flood	IS8	12:11	Surface	2	28.2	7.9	14.0	5.0		6.1		3.5	
TMCLKL	HY/2012/07	2018-09-03	Mid-Flood	IS8	12:11	Middle	1									
TMCLKL	HY/2012/07	2018-09-03	Mid-Flood	IS8	12:11	Middle	2									
TMCLKL	HY/2012/07	2018-09-03	Mid-Flood	IS8	12:11	Bottom	1	28.0	7.9	16.2	4.9	4.9	8.7	7.3	2.5	2.8
TMCLKL	HY/2012/07	2018-09-03	Mid-Flood	IS8	12:11	Bottom	2	28.0	7.9	16.4	4.9		8.3		2.6	
TMCLKL	HY/2012/07	2018-09-03	Mid-Flood	IS(Mf)9	12:03	Surface	1					5.1		7.2		4.6
TMCLKL	HY/2012/07	2018-09-03	Mid-Flood	IS(Mf)9	12:03	Surface	2									
TMCLKL	HY/2012/07	2018-09-03	Mid-Flood	IS(Mf)9	12:03	Middle	1	27.9	7.9	16.8	5.1		7.1		5.0	
TMCLKL	HY/2012/07	2018-09-03	Mid-Flood	IS(Mf)9	12:03	Middle	2	28.0	7.9	17.0	5.1		7.2		4.2	
TMCLKL	HY/2012/07	2018-09-03	Mid-Flood	IS(Mf)9	12:03	Bottom	1							7.2		4.6
TMCLKL	HY/2012/07	2018-09-03	Mid-Flood	IS(Mf)9	12:03	Bottom	2									

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

Photo 1 - Mid-Ebb at IS(Mf)16 on 03 September 2018



Photo 2 - Mid-ebb at SR4(N) on 03 September 2018



Photo 3 - Mid-ebb at IS8 on 03 September 2018



Photo 4 - Mid-ebb at IS(Mf)9 on 03 September 2018

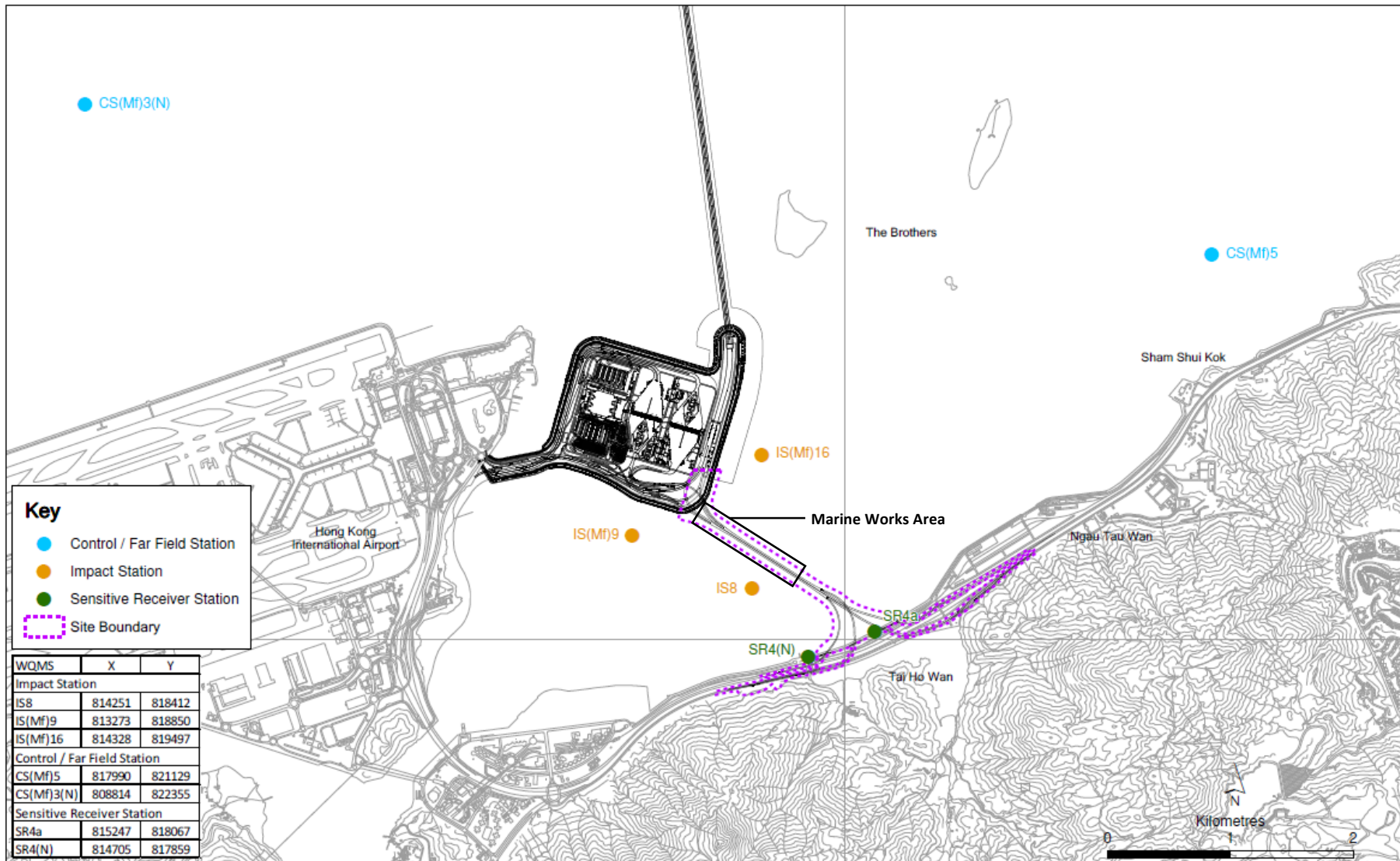


Photo 5 - Mid-Flood at IS(Mf)16 on 03 September 2018



Photo 6 - Mid-Flood at SR4a on 03 September 2018





Key

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

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

Locations of Water Quality Monitoring Stations

Email
message

Environmental
Resources
Management

To Ramboll Hong Kong Limited (ENPO)

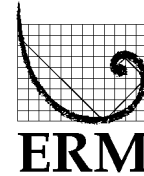
From ERM- Hong Kong, Limited

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 06 September 2018

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



Dear Sir/ Madam,

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

Action Level Exceedance

0215660_05 September 2018_ Bottom-depth DO_E_Station IS(Mf)16
0215660_05 September 2018_ Bottom-depth DO_E_Station SR4a
0215660_05 September 2018_ Surface and Middle-depth DO_E_SR4(N)
0215660_05 September 2018_ Bottom-depth DO_F_Station SR4a

Limit Level Exceedance

0215660_05 September 2018_ Bottom-depth DO_E_Station SR4(N)

A total of five exceedances were recorded on 05 September 2018.

Regards,

Dr Jasmine Ng
Environmental Team Leader

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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></p> <p style="text-align: center;">0215660_05 September 2018_ Bottom-depth DO_E_Station IS(Mf)16 0215660_05 September 2018_ Bottom-depth DO_E_Station SR4a 0215660_05 September 2018_ Surface and Middle-depth DO_E_SR4(N) 0215660_05 September 2018_ Bottom-depth DO_F_Station SR4a</p> <p style="text-align: center;"><u>Limit Level Exceedance</u></p> <p style="text-align: center;">0215660_05 September 2018_ Bottom-depth DO_E_Station SR4(N)</p> <p style="text-align: center;">[Total No. of Exceedance = 5]</p>	
Date	<p style="text-align: center;">05 September 2018 (Measured) 06 September 2018 (<i>In situ</i> results received by ERM) 10 September 2018 (Laboratory results received by ERM)</p>	
Monitoring Station	<p style="text-align: center;">CS(Mf)5, SR4a, SR4(N), IS8, IS(Mf)16, IS(Mf)9, CS(Mf)3(N)</p>	
Parameter(s) with Exceedance(s)	<p style="text-align: center;">Surface and Middle-depth DO, Bottom DO</p>	
Action Levels for DO	Surface and Middle-depth DO	5.0 mg/L
	Bottom-depth DO	4.7 mg/L
Limit Levels for DO	Surface and Middle-depth DO	4.2 mg/L
	Bottom-depth DO	3.6 mg/L
Measured Levels	<p>Refer to the attached data.</p>	
Works Undertaken (at the time of monitoring event)	<p>Demolition of marine platform was undertaken at Viaduct E under this Contract on 05 September 2018.</p>	
Possible Reason for Action or Limit Level Exceedance(s)	<p>The exceedances of DO are unlikely to be due to the Project, in view of the following</p> <ul style="list-style-type: none"> • All monitored parameters, except 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. • Apart from marginal exceedance of Surface and Middle-depth DO level at SR4(N), all Surface and Middle-depth DO at all monitoring stations were in compliance with the Action and Limit Levels during both tides. • Low Bottom-depth DO during both mid-ebb and mid-flood tide is likely due to relatively higher Salinity recorded at the bottom level which 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. • No particular observation was reported at IS(Mf)16, SR4a and SR4(N). 	
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 05 September 2018 and locations of water quality monitoring stations are attached. Site photo record on 05 September 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	2018-09-05	Mid-Ebb	CS(Mf)5	8:26	Surface	1	28.3	7.9	14.6	5.3	5.2	3.0	2.7	2.6	2.3
TMCLKL	HY/2012/07	2018-09-05	Mid-Ebb	CS(Mf)5	8:26	Surface	2	28.3	7.9	14.6	5.2		2.9		2.6	
TMCLKL	HY/2012/07	2018-09-05	Mid-Ebb	CS(Mf)5	8:26	Middle	1	28.3	7.9	14.9	5.1		3.0		2.0	
TMCLKL	HY/2012/07	2018-09-05	Mid-Ebb	CS(Mf)5	8:26	Middle	2	28.3	7.9	14.9	5.1	2.8	1.9			
TMCLKL	HY/2012/07	2018-09-05	Mid-Ebb	CS(Mf)5	8:26	Bottom	1	26.1	8.0	26.3	4.1	2.6	2.1			
TMCLKL	HY/2012/07	2018-09-05	Mid-Ebb	CS(Mf)5	8:26	Bottom	2	26.1	8.0	26.3	4.0	4.1	1.6	2.3		
TMCLKL	HY/2012/07	2018-09-05	Mid-Ebb	CS(Mf)3(N)	9:47	Surface	1	28.9	7.7	10.7	5.6	5.2	8.8	8.4	2.5	1.9
TMCLKL	HY/2012/07	2018-09-05	Mid-Ebb	CS(Mf)3(N)	9:47	Surface	2	28.9	7.8	10.8	5.6		8.7		1.8	
TMCLKL	HY/2012/07	2018-09-05	Mid-Ebb	CS(Mf)3(N)	9:47	Middle	1	28.3	7.8	14.3	4.7		8.2		1.0	
TMCLKL	HY/2012/07	2018-09-05	Mid-Ebb	CS(Mf)3(N)	9:47	Middle	2	28.4	7.8	14.3	4.7	8.1	1.4			
TMCLKL	HY/2012/07	2018-09-05	Mid-Ebb	CS(Mf)3(N)	9:47	Bottom	1	27.3	7.7	21.9	4.9	5.0	8.2		2.3	
TMCLKL	HY/2012/07	2018-09-05	Mid-Ebb	CS(Mf)3(N)	9:47	Bottom	2	27.2	7.7	22.6	5.0	5.0	8.1	2.4		
TMCLKL	HY/2012/07	2018-09-05	Mid-Ebb	IS(Mf)16	8:57	Surface	1	28.8	8.0	13.9	5.6	5.6	3.7	4.9	3.0	2.5
TMCLKL	HY/2012/07	2018-09-05	Mid-Ebb	IS(Mf)16	8:57	Surface	2	28.9	8.0	13.9	5.6		3.1		2.6	
TMCLKL	HY/2012/07	2018-09-05	Mid-Ebb	IS(Mf)16	8:57	Middle	1									
TMCLKL	HY/2012/07	2018-09-05	Mid-Ebb	IS(Mf)16	8:57	Middle	2									
TMCLKL	HY/2012/07	2018-09-05	Mid-Ebb	IS(Mf)16	8:57	Bottom	1	27.5	7.8	20.1	3.7	3.7	6.7		2.4	
TMCLKL	HY/2012/07	2018-09-05	Mid-Ebb	IS(Mf)16	8:57	Bottom	2	27.6	7.9	20.1	3.7	3.7	6.1	2.0		
TMCLKL	HY/2012/07	2018-09-05	Mid-Ebb	SR4a	9:06	Surface	1	28.9	7.9	13.1	5.6	5.6	4.5	6.9	1.7	2.5
TMCLKL	HY/2012/07	2018-09-05	Mid-Ebb	SR4a	9:06	Surface	2	28.9	8.0	13.1	5.6		3.7		2.3	
TMCLKL	HY/2012/07	2018-09-05	Mid-Ebb	SR4a	9:06	Middle	1									
TMCLKL	HY/2012/07	2018-09-05	Mid-Ebb	SR4a	9:06	Middle	2									
TMCLKL	HY/2012/07	2018-09-05	Mid-Ebb	SR4a	9:06	Bottom	1	27.6	7.8	19.5	3.8	3.8	9.5		2.9	
TMCLKL	HY/2012/07	2018-09-05	Mid-Ebb	SR4a	9:06	Bottom	2	27.6	7.8	19.5	3.8	3.8	9.7	3.1		
TMCLKL	HY/2012/07	2018-09-05	Mid-Ebb	SR4(N)	9:14	Surface	1	28.9	7.9	13.7	4.9	4.9	7.2	12.8	1.2	2.6
TMCLKL	HY/2012/07	2018-09-05	Mid-Ebb	SR4(N)	9:14	Surface	2	28.9	7.9	13.7	4.9		6.5		2.1	
TMCLKL	HY/2012/07	2018-09-05	Mid-Ebb	SR4(N)	9:14	Middle	1									
TMCLKL	HY/2012/07	2018-09-05	Mid-Ebb	SR4(N)	9:14	Middle	2									
TMCLKL	HY/2012/07	2018-09-05	Mid-Ebb	SR4(N)	9:14	Bottom	1	27.8	7.7	18.9	3.0	3.0	18.7		3.3	
TMCLKL	HY/2012/07	2018-09-05	Mid-Ebb	SR4(N)	9:14	Bottom	2	27.8	7.8	18.9	3.0	3.0	18.9	3.8		
TMCLKL	HY/2012/07	2018-09-05	Mid-Ebb	IS8	9:20	Surface	1	29.1	7.9	14.2	5.6	5.6	4.8	4.7	2.2	1.8
TMCLKL	HY/2012/07	2018-09-05	Mid-Ebb	IS8	9:20	Surface	2	29.1	8.0	14.2	5.5		4.0		1.4	
TMCLKL	HY/2012/07	2018-09-05	Mid-Ebb	IS8	9:20	Middle	1									
TMCLKL	HY/2012/07	2018-09-05	Mid-Ebb	IS8	9:20	Middle	2									
TMCLKL	HY/2012/07	2018-09-05	Mid-Ebb	IS8	9:20	Bottom	1	28.7	7.9	15.4	5.1	5.1	5.3		1.0	
TMCLKL	HY/2012/07	2018-09-05	Mid-Ebb	IS8	9:20	Bottom	2	28.8	7.9	15.4	5.0	5.1	4.8	2.4		
TMCLKL	HY/2012/07	2018-09-05	Mid-Ebb	IS(Mf)9	9:27	Surface	1	29.1	7.9	14.0	5.8	5.8	3.7	3.5	2.3	2.2
TMCLKL	HY/2012/07	2018-09-05	Mid-Ebb	IS(Mf)9	9:27	Surface	2	29.1	8.0	14.0	5.8		2.7		2.9	
TMCLKL	HY/2012/07	2018-09-05	Mid-Ebb	IS(Mf)9	9:27	Middle	1									
TMCLKL	HY/2012/07	2018-09-05	Mid-Ebb	IS(Mf)9	9:27	Middle	2									
TMCLKL	HY/2012/07	2018-09-05	Mid-Ebb	IS(Mf)9	9:27	Bottom	1	28.9	7.9	14.8	5.4	5.4	4.1		1.7	
TMCLKL	HY/2012/07	2018-09-05	Mid-Ebb	IS(Mf)9	9:27	Bottom	2	29.0	8.0	14.8	5.4	5.4	3.4	2.0		

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	2018-09-05	Mid-Flood	CS(Mf)5	16:19	Surface	1	29.7	8.1	12.4	7.0	5.4	2.7	4.7	1.4	2.1		
TMCLKL	HY/2012/07	2018-09-05	Mid-Flood	CS(Mf)5	16:19	Surface	2	29.7	8.2	13.1	7.0		2.2		1.2			
TMCLKL	HY/2012/07	2018-09-05	Mid-Flood	CS(Mf)5	16:19	Middle	1	26.1	7.9	25.7	3.8		4.3		2.5			
TMCLKL	HY/2012/07	2018-09-05	Mid-Flood	CS(Mf)5	16:19	Middle	2	26.1	8.0	25.7	3.8		4.0		2.8			
TMCLKL	HY/2012/07	2018-09-05	Mid-Flood	CS(Mf)5	16:19	Bottom	1	24.6	8.0	31.2	3.5	3.5	7.3	4.7	2.3			
TMCLKL	HY/2012/07	2018-09-05	Mid-Flood	CS(Mf)5	16:19	Bottom	2	24.6	8.0	31.2	3.4		7.8		2.4			
TMCLKL	HY/2012/07	2018-09-05	Mid-Flood	CS(Mf)3(N)	15:03	Surface	1	30.0	7.7	8.1	6.1	5.5	5.9	7.0	4.4	4.7		
TMCLKL	HY/2012/07	2018-09-05	Mid-Flood	CS(Mf)3(N)	15:03	Surface	2	29.9	7.8	8.2	6.1		5.3		4.6			
TMCLKL	HY/2012/07	2018-09-05	Mid-Flood	CS(Mf)3(N)	15:03	Middle	1	28.5	7.7	12.9	4.8		8.1		4.9			
TMCLKL	HY/2012/07	2018-09-05	Mid-Flood	CS(Mf)3(N)	15:03	Middle	2	28.5	7.7	12.9	4.8		8.2		5.8			
TMCLKL	HY/2012/07	2018-09-05	Mid-Flood	CS(Mf)3(N)	15:03	Bottom	1	27.8	7.6	16.8	5.0	5.0	7.5	4.7	4.6			
TMCLKL	HY/2012/07	2018-09-05	Mid-Flood	CS(Mf)3(N)	15:03	Bottom	2	27.8	7.7	16.7	5.0		7.1		4.0			
TMCLKL	HY/2012/07	2018-09-05	Mid-Flood	IS(Mf)16	15:41	Surface	1	29.4	8.1	13.7	7.1	7.2	6.3	6.5	5.0	4.8		
TMCLKL	HY/2012/07	2018-09-05	Mid-Flood	IS(Mf)16	15:41	Surface	2	29.4	8.2	13.7	7.2		6.6		5.4			
TMCLKL	HY/2012/07	2018-09-05	Mid-Flood	IS(Mf)16	15:41	Middle	1											
TMCLKL	HY/2012/07	2018-09-05	Mid-Flood	IS(Mf)16	15:41	Middle	2											
TMCLKL	HY/2012/07	2018-09-05	Mid-Flood	IS(Mf)16	15:41	Bottom	1	28.5	7.9	15.7	5.3	5.3	6.3	6.5	3.8			
TMCLKL	HY/2012/07	2018-09-05	Mid-Flood	IS(Mf)16	15:41	Bottom	2	28.5	8.0	15.8	5.3		6.8		5.0			
TMCLKL	HY/2012/07	2018-09-05	Mid-Flood	SR4a	15:31	Surface	1	30.3	8.2	13.1	7.3	7.4	6.6	10.9	6.8	5.9		
TMCLKL	HY/2012/07	2018-09-05	Mid-Flood	SR4a	15:31	Surface	2	30.3	8.3	13.1	7.4		6.1		5.3			
TMCLKL	HY/2012/07	2018-09-05	Mid-Flood	SR4a	15:31	Middle	1											
TMCLKL	HY/2012/07	2018-09-05	Mid-Flood	SR4a	15:31	Middle	2											
TMCLKL	HY/2012/07	2018-09-05	Mid-Flood	SR4a	15:31	Bottom	1	28.2	7.8	17.5	4.0	4.0	15.7	6.8	5.2	5.6		
TMCLKL	HY/2012/07	2018-09-05	Mid-Flood	SR4a	15:31	Bottom	2	28.3	7.8	17.5	4.0	15.0	6.1					
TMCLKL	HY/2012/07	2018-09-05	Mid-Flood	SR4(N)	15:26	Surface	1	29.7	8.0	13.3	7.0	7.0	6.0		6.8		5.8	
TMCLKL	HY/2012/07	2018-09-05	Mid-Flood	SR4(N)	15:26	Surface	2	29.8	8.1	13.3	6.9		5.1				5.8	
TMCLKL	HY/2012/07	2018-09-05	Mid-Flood	SR4(N)	15:26	Middle	1					6.3		6.3				
TMCLKL	HY/2012/07	2018-09-05	Mid-Flood	SR4(N)	15:26	Middle	2											
TMCLKL	HY/2012/07	2018-09-05	Mid-Flood	SR4(N)	15:26	Bottom	1	29.3	8.0	13.9	6.3		8.1		5.4			
TMCLKL	HY/2012/07	2018-09-05	Mid-Flood	SR4(N)	15:26	Bottom	2	29.3	8.1	13.9	6.3		8.1		5.3			
TMCLKL	HY/2012/07	2018-09-05	Mid-Flood	IS8	15:20	Surface	1	29.7	8.1	13.3	7.0	7.0	5.1	6.3	6.0	6.3		
TMCLKL	HY/2012/07	2018-09-05	Mid-Flood	IS8	15:20	Surface	2	29.7	8.1	13.3	7.0		5.5		5.8			
TMCLKL	HY/2012/07	2018-09-05	Mid-Flood	IS8	15:20	Middle	1											
TMCLKL	HY/2012/07	2018-09-05	Mid-Flood	IS8	15:20	Middle	2											
TMCLKL	HY/2012/07	2018-09-05	Mid-Flood	IS8	15:20	Bottom	1	29.4	8.1	13.5	6.7	6.7	7.3	6.3	7.4			
TMCLKL	HY/2012/07	2018-09-05	Mid-Flood	IS8	15:20	Bottom	2	29.5	8.1	13.5	6.7		7.2		5.8			
TMCLKL	HY/2012/07	2018-09-05	Mid-Flood	IS(Mf)9	15:13	Surface	1					6.8		6.4		4.9		
TMCLKL	HY/2012/07	2018-09-05	Mid-Flood	IS(Mf)9	15:13	Surface	2											
TMCLKL	HY/2012/07	2018-09-05	Mid-Flood	IS(Mf)9	15:13	Middle	1	29.5	8.1	13.9	6.7		6.3		4.9			
TMCLKL	HY/2012/07	2018-09-05	Mid-Flood	IS(Mf)9	15:13	Middle	2	29.6	8.2	13.8	6.8		6.5		4.9			
TMCLKL	HY/2012/07	2018-09-05	Mid-Flood	IS(Mf)9	15:13	Bottom	1					6.8		6.4				
TMCLKL	HY/2012/07	2018-09-05	Mid-Flood	IS(Mf)9	15:13	Bottom	2											

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

Photo 1 - Mid-Ebb at IS(Mf)16 on 05 September 2018



Photo 2 - Mid-Ebb at SR4a on 05 September 2018

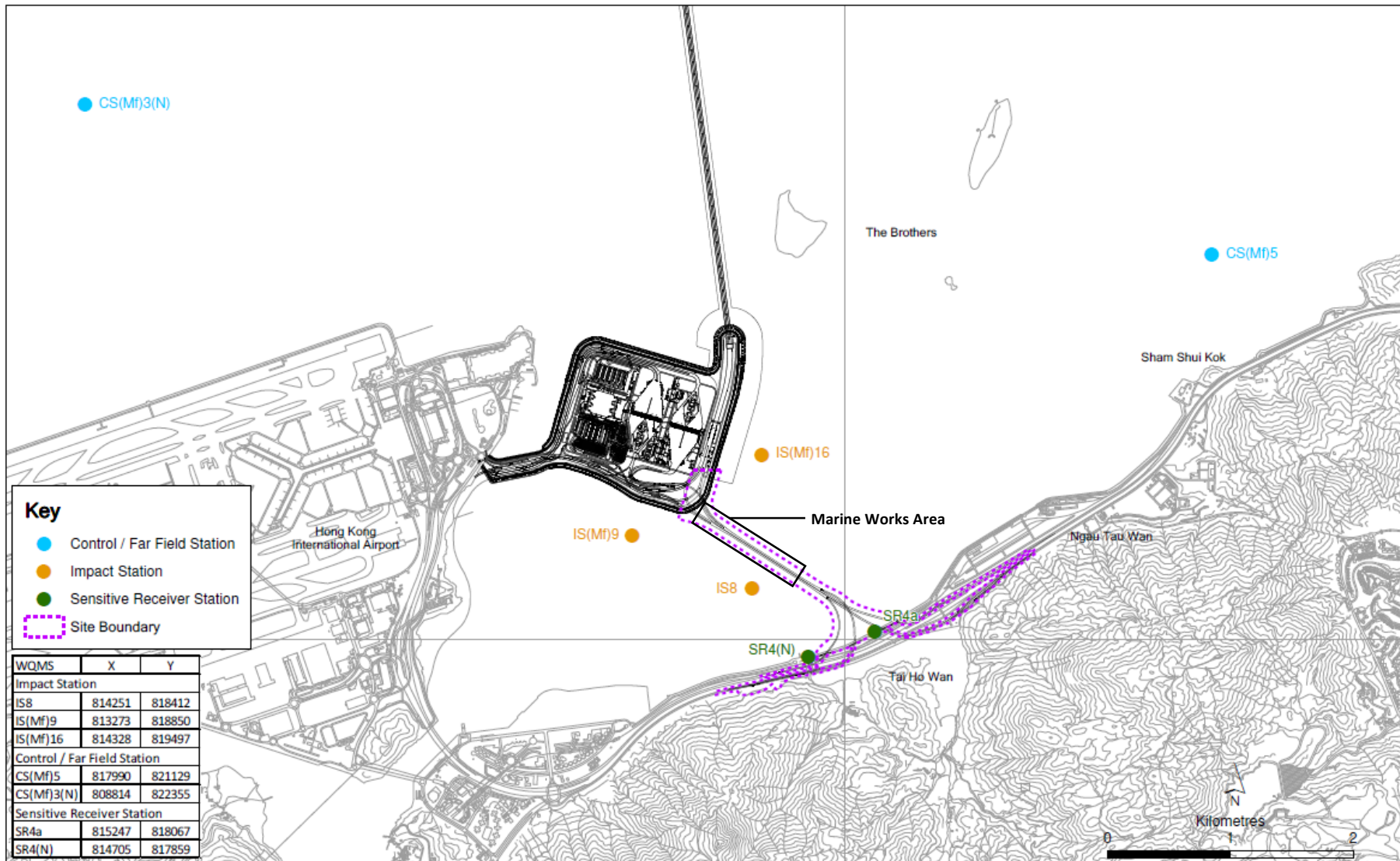


Photo 3 - Mid-Ebb at SR4(N) on 05 September 2018



Photo 4 - Mid-Flood at SR4a on 05 September 2018





Key

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

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

Locations of Water Quality Monitoring Stations

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 10 September 2018

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



ERM

Dear Sir/ Madam,

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

Action Level Exceedance

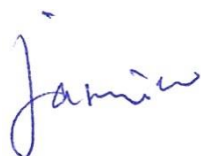
0215660_07 September 2018_ Bottom-depth DO_E_Station IS(Mf)16
0215660_07 September 2018_ Bottom-depth DO_E_Station SR4a
0215660_07 September 2018_ Surface and Middle-depth DO_E_SR4(N)
0215660_07 September 2018_ Bottom-depth DO_E_Station SR4(N)
0215660_07 September 2018_ Bottom-depth DO_F_Station SR4a

Limit Level Exceedance

0215660_07 September 2018_ Bottom-depth DO_E_Station IS8

A total of six exceedances were recorded on 07 September 2018.

Regards,



Dr Jasmine Ng
Environmental Team Leader

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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></p> <p style="text-align: center;">0215660_07 September 2018_ Bottom-depth DO_E_Station IS(Mf)16 0215660_07 September 2018_ Bottom-depth DO_E_Station SR4a 0215660_07 September 2018_ Surface and Middle-depth DO_E_SR4(N) 0215660_07 September 2018_ Bottom-depth DO_E_Station SR4(N) 0215660_07 September 2018_ Bottom-depth DO_F_Station SR4a</p> <p style="text-align: center;"><u>Limit Level Exceedance</u></p> <p style="text-align: center;">0215660_07 September 2018_ Bottom-depth DO_E_Station IS8</p> <p style="text-align: center;">[Total No. of Exceedance = 6]</p>	
Date	<p style="text-align: center;">07 September 2018 (Measured) 08 September 2018 (<i>In situ</i> results received by ERM) 17 September 2018 (Laboratory results received by ERM)</p>	
Monitoring Station	<p style="text-align: center;">CS(Mf)5, SR4a, SR4(N), IS8, IS(Mf)16, IS(Mf)9, CS(Mf)3(N)</p>	
Parameter(s) with Exceedance(s)	<p style="text-align: center;">Surface and Middle-depth DO, Bottom DO</p>	
Action Levels for DO	Surface and Middle-depth DO	5.0 mg/L
	Bottom-depth DO	4.7 mg/L
Limit Levels for DO	Surface and Middle-depth DO	4.2 mg/L
	Bottom-depth DO	3.6 mg/L
Measured Levels	Refer to the attached data.	
Works Undertaken (at the time of monitoring event)	Demolition of marine platform was undertaken at Viaduct E under this Contract on 07 September 2018.	
Possible Reason for Action or Limit Level Exceedance(s)	<p>The exceedances of DO are unlikely to be due to the Project, in view of the following</p> <ul style="list-style-type: none"> • All monitored parameters, except 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. • Bottom-depth DO levels at IS(Mf)16, SR4a, SR4(N) and IS8 were similar to the corresponding control stations, CS(Mf)3(N) and CS(Mf)5, during mid-ebb and mid-flood tides respectively, in which the recorded Bottom-depth DO levels at the corresponding control stations were below Action Level. • Low Bottom-depth DO during both mid-ebb and mid-flood tide is likely due to relatively higher Salinity recorded at the bottom level which 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. • Surface and Middle-depth DO level at SR4(N) was comparable with the corresponding control station CS(Mf)3(N) at mid-ebb tide where the surface and middle-depth DO was below Action Level. • No particular observation was reported at IS(Mf)16, SR4a, SR4(N) and IS8. 	
Actions Taken / To Be Taken	No immediate action is considered necessary. The ET will monitor for future trends in exceedances.	

Remarks	The monitoring results on 07 September 2018 and locations of water quality monitoring stations are attached. Site photo record on 07 September 2018 is attached.
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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	2018-09-07	Mid-Ebb	CS(Mf)5	10:36	Surface	1	27.8	8.1	20.8	5.3	4.7	2.8	6.0	3.6	5.9
TMCLKL	HY/2012/07	2018-09-07	Mid-Ebb	CS(Mf)5	10:36	Surface	2	27.8	8.1	21.1	5.3		3.0		4.0	
TMCLKL	HY/2012/07	2018-09-07	Mid-Ebb	CS(Mf)5	10:36	Middle	1	26.5	8.0	25.5	4.1		4.5		6.1	
TMCLKL	HY/2012/07	2018-09-07	Mid-Ebb	CS(Mf)5	10:36	Middle	2	26.5	8.1	25.5	4.1		4.3		5.6	
TMCLKL	HY/2012/07	2018-09-07	Mid-Ebb	CS(Mf)5	10:36	Bottom	1	25.2	8.0	29.8	3.9	3.9	10.3		8.0	
TMCLKL	HY/2012/07	2018-09-07	Mid-Ebb	CS(Mf)5	10:36	Bottom	2	25.3	8.1	29.7	3.8		10.9		8.2	
TMCLKL	HY/2012/07	2018-09-07	Mid-Ebb	CS(Mf)3(N)	11:48	Surface	1	28.4	8.0	17.5	4.8	4.6	8.8	10.4	5.0	5.9
TMCLKL	HY/2012/07	2018-09-07	Mid-Ebb	CS(Mf)3(N)	11:48	Surface	2	28.4	7.9	17.7	4.8		8.4		5.4	
TMCLKL	HY/2012/07	2018-09-07	Mid-Ebb	CS(Mf)3(N)	11:48	Middle	1	27.7	8.0	20.0	4.3		9.0		5.8	
TMCLKL	HY/2012/07	2018-09-07	Mid-Ebb	CS(Mf)3(N)	11:48	Middle	2	27.6	7.9	20.2	4.3		9.6		5.5	
TMCLKL	HY/2012/07	2018-09-07	Mid-Ebb	CS(Mf)3(N)	11:48	Bottom	1	27.0	8.0	23.2	4.1	4.1	13.1		6.4	
TMCLKL	HY/2012/07	2018-09-07	Mid-Ebb	CS(Mf)3(N)	11:48	Bottom	2	27.0	7.9	23.5	4.1		13.2		7.2	
TMCLKL	HY/2012/07	2018-09-07	Mid-Ebb	IS(Mf)16	11:09	Surface	1	27.9	8.1	21.8	5.0	5.0	4.4	7.5	5.8	6.4
TMCLKL	HY/2012/07	2018-09-07	Mid-Ebb	IS(Mf)16	11:09	Surface	2	27.9	8.2	21.8	5.0		4.2		5.5	
TMCLKL	HY/2012/07	2018-09-07	Mid-Ebb	IS(Mf)16	11:09	Middle	1									
TMCLKL	HY/2012/07	2018-09-07	Mid-Ebb	IS(Mf)16	11:09	Middle	2									
TMCLKL	HY/2012/07	2018-09-07	Mid-Ebb	IS(Mf)16	11:09	Bottom	1	26.9	7.9	25.0	3.6	3.6	11.0		7.1	
TMCLKL	HY/2012/07	2018-09-07	Mid-Ebb	IS(Mf)16	11:09	Bottom	2	26.9	8.0	25.0	3.6	10.4	7.0			
TMCLKL	HY/2012/07	2018-09-07	Mid-Ebb	SR4a	11:17	Surface	1	28.3	8.1	20.0	5.5	5.5	3.2	10.0	3.8	4.7
TMCLKL	HY/2012/07	2018-09-07	Mid-Ebb	SR4a	11:17	Surface	2	28.3	8.2	20.0	5.5		3.4		3.7	
TMCLKL	HY/2012/07	2018-09-07	Mid-Ebb	SR4a	11:17	Middle	1									
TMCLKL	HY/2012/07	2018-09-07	Mid-Ebb	SR4a	11:17	Middle	2									
TMCLKL	HY/2012/07	2018-09-07	Mid-Ebb	SR4a	11:17	Bottom	1	27.0	7.9	23.6	3.6	3.6	16.4		5.4	
TMCLKL	HY/2012/07	2018-09-07	Mid-Ebb	SR4a	11:17	Bottom	2	27.1	8.0	23.6	3.6	16.8	5.7			
TMCLKL	HY/2012/07	2018-09-07	Mid-Ebb	SR4(N)	11:23	Surface	1	27.8	8.0	21.4	4.3	4.3	8.6	9.0	7.9	8.1
TMCLKL	HY/2012/07	2018-09-07	Mid-Ebb	SR4(N)	11:23	Surface	2	27.8	8.0	21.3	4.3		8.1		8.4	
TMCLKL	HY/2012/07	2018-09-07	Mid-Ebb	SR4(N)	11:23	Middle	1									
TMCLKL	HY/2012/07	2018-09-07	Mid-Ebb	SR4(N)	11:23	Middle	2									
TMCLKL	HY/2012/07	2018-09-07	Mid-Ebb	SR4(N)	11:23	Bottom	1	27.2	7.9	23.0	3.7	3.7	9.4		7.9	
TMCLKL	HY/2012/07	2018-09-07	Mid-Ebb	SR4(N)	11:23	Bottom	2	27.2	8.0	23.0	3.6	10.0	8.2			
TMCLKL	HY/2012/07	2018-09-07	Mid-Ebb	IS8	11:29	Surface	1	28.5	8.1	20.3	5.7	5.7	4.7	9.6	6.3	6.2
TMCLKL	HY/2012/07	2018-09-07	Mid-Ebb	IS8	11:29	Surface	2	28.5	8.2	20.4	5.7		4.5		5.9	
TMCLKL	HY/2012/07	2018-09-07	Mid-Ebb	IS8	11:29	Middle	1									
TMCLKL	HY/2012/07	2018-09-07	Mid-Ebb	IS8	11:29	Middle	2									
TMCLKL	HY/2012/07	2018-09-07	Mid-Ebb	IS8	11:29	Bottom	1	27.3	7.9	23.3	3.5	3.5	14.5		6.3	
TMCLKL	HY/2012/07	2018-09-07	Mid-Ebb	IS8	11:29	Bottom	2	27.3	8.0	23.3	3.5	14.5	6.2			
TMCLKL	HY/2012/07	2018-09-07	Mid-Ebb	IS(Mf)9	11:38	Surface	1	28.8	8.2	19.4	6.6	6.7	3.3	6.1	4.6	5.4
TMCLKL	HY/2012/07	2018-09-07	Mid-Ebb	IS(Mf)9	11:38	Surface	2	28.9	8.3	19.4	6.7		4.0		4.7	
TMCLKL	HY/2012/07	2018-09-07	Mid-Ebb	IS(Mf)9	11:38	Middle	1									
TMCLKL	HY/2012/07	2018-09-07	Mid-Ebb	IS(Mf)9	11:38	Middle	2									
TMCLKL	HY/2012/07	2018-09-07	Mid-Ebb	IS(Mf)9	11:38	Bottom	1	27.8	8.0	21.2	4.7	4.7	8.1		6.0	
TMCLKL	HY/2012/07	2018-09-07	Mid-Ebb	IS(Mf)9	11:38	Bottom	2	27.9	8.1	21.2	4.7		9.0		6.3	

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	2018-09-07	Mid-Flood	CS(Mf)5	18:14	Surface	1	27.1	8.1	24.4	5.1	4.8	2.3	5.2	6.4	6.9
TMCLKL	HY/2012/07	2018-09-07	Mid-Flood	CS(Mf)5	18:14	Surface	2	27.1	8.1	24.3	5.1		2.8		6.0	
TMCLKL	HY/2012/07	2018-09-07	Mid-Flood	CS(Mf)5	18:14	Middle	1	25.7	8.0	28.9	4.4		4.0		6.0	
TMCLKL	HY/2012/07	2018-09-07	Mid-Flood	CS(Mf)5	18:14	Middle	2	25.8	8.1	28.8	4.4	3.6	4.7	5.2	6.4	6.9
TMCLKL	HY/2012/07	2018-09-07	Mid-Flood	CS(Mf)5	18:14	Bottom	1	25.2	8.0	29.8	3.6		8.8		8.3	
TMCLKL	HY/2012/07	2018-09-07	Mid-Flood	CS(Mf)5	18:14	Bottom	2	25.2	8.1	29.8	3.6	5.1	8.4	5.9	8.0	5.8
TMCLKL	HY/2012/07	2018-09-07	Mid-Flood	CS(Mf)3(N)	16:47	Surface	1	29.3	7.7	12.0	5.2		5.8		5.0	
TMCLKL	HY/2012/07	2018-09-07	Mid-Flood	CS(Mf)3(N)	16:47	Surface	2	29.3	7.8	12.0	5.2		5.4		5.4	
TMCLKL	HY/2012/07	2018-09-07	Mid-Flood	CS(Mf)3(N)	16:47	Middle	1	29.2	7.7	13.0	5.0	4.8	5.9	5.9	5.7	5.8
TMCLKL	HY/2012/07	2018-09-07	Mid-Flood	CS(Mf)3(N)	16:47	Middle	2	29.2	7.8	12.9	5.0		5.5		5.8	
TMCLKL	HY/2012/07	2018-09-07	Mid-Flood	CS(Mf)3(N)	16:47	Bottom	1	28.4	7.7	16.0	4.8	4.8	6.5	7.0	6.3	8.4
TMCLKL	HY/2012/07	2018-09-07	Mid-Flood	CS(Mf)3(N)	16:47	Bottom	2	28.4	7.8	15.7	4.8		6.3		6.5	
TMCLKL	HY/2012/07	2018-09-07	Mid-Flood	IS(Mf)16	17:45	Surface	1	28.6	8.2	20.4	7.2	7.2	4.1	7.0	7.8	8.4
TMCLKL	HY/2012/07	2018-09-07	Mid-Flood	IS(Mf)16	17:45	Surface	2	28.6	8.3	20.3	7.2		4.6		8.3	
TMCLKL	HY/2012/07	2018-09-07	Mid-Flood	IS(Mf)16	17:45	Middle	1									
TMCLKL	HY/2012/07	2018-09-07	Mid-Flood	IS(Mf)16	17:45	Middle	2					5.1		7.0		8.4
TMCLKL	HY/2012/07	2018-09-07	Mid-Flood	IS(Mf)16	17:45	Bottom	1	27.6	8.0	22.4	5.1		9.4		8.8	
TMCLKL	HY/2012/07	2018-09-07	Mid-Flood	IS(Mf)16	17:45	Bottom	2	27.6	8.1	22.3	5.1	6.5	9.8	11.2	8.7	8.9
TMCLKL	HY/2012/07	2018-09-07	Mid-Flood	SR4a	17:34	Surface	1	29.0	8.1	18.0	6.5		6.9		6.1	
TMCLKL	HY/2012/07	2018-09-07	Mid-Flood	SR4a	17:34	Surface	2	29.0	8.2	18.0	6.5		7.2		5.9	
TMCLKL	HY/2012/07	2018-09-07	Mid-Flood	SR4a	17:34	Middle	1					6.5		11.2		8.9
TMCLKL	HY/2012/07	2018-09-07	Mid-Flood	SR4a	17:34	Middle	2									
TMCLKL	HY/2012/07	2018-09-07	Mid-Flood	SR4a	17:34	Bottom	1	27.4	8.0	23.0	4.3	4.3	15.7			
TMCLKL	HY/2012/07	2018-09-07	Mid-Flood	SR4a	17:34	Bottom	2	27.5	8.0	23.0	4.3	4.3	15.1			
TMCLKL	HY/2012/07	2018-09-07	Mid-Flood	SR4(N)	17:29	Surface	1	28.9	8.2	18.4	6.7	6.8	5.8	7.6	6.3	6.9
TMCLKL	HY/2012/07	2018-09-07	Mid-Flood	SR4(N)	17:29	Surface	2	28.9	8.3	18.4	6.8		5.3		6.5	
TMCLKL	HY/2012/07	2018-09-07	Mid-Flood	SR4(N)	17:29	Middle	1					6.8		7.6		6.9
TMCLKL	HY/2012/07	2018-09-07	Mid-Flood	SR4(N)	17:29	Middle	2									
TMCLKL	HY/2012/07	2018-09-07	Mid-Flood	SR4(N)	17:29	Bottom	1	28.9	8.2	19.5	7.3	7.3	9.3	9.3	7.4	8.2
TMCLKL	HY/2012/07	2018-09-07	Mid-Flood	SR4(N)	17:29	Bottom	2	28.9	8.3	19.4	7.3		9.8		7.2	
TMCLKL	HY/2012/07	2018-09-07	Mid-Flood	IS8	17:23	Surface	1					6.4		9.3		8.2
TMCLKL	HY/2012/07	2018-09-07	Mid-Flood	IS8	17:23	Surface	2									
TMCLKL	HY/2012/07	2018-09-07	Mid-Flood	IS8	17:23	Middle	1	28.6	8.1	19.3	6.4	6.4	9.4	9.3	8.3	8.2
TMCLKL	HY/2012/07	2018-09-07	Mid-Flood	IS8	17:23	Middle	2	28.6	8.2	19.2	6.4		9.1		8.1	
TMCLKL	HY/2012/07	2018-09-07	Mid-Flood	IS8	17:23	Bottom	1					7.2		11.2		8.9
TMCLKL	HY/2012/07	2018-09-07	Mid-Flood	IS8	17:23	Bottom	2									
TMCLKL	HY/2012/07	2018-09-07	Mid-Flood	IS(Mf)9	17:14	Surface	1					7.2		11.2		8.9
TMCLKL	HY/2012/07	2018-09-07	Mid-Flood	IS(Mf)9	17:14	Surface	2									
TMCLKL	HY/2012/07	2018-09-07	Mid-Flood	IS(Mf)9	17:14	Middle	1	28.5	8.2	20.7	7.2	7.2	11.1	11.2	8.5	8.9
TMCLKL	HY/2012/07	2018-09-07	Mid-Flood	IS(Mf)9	17:14	Middle	2	28.6	8.3	20.6	7.2		11.3		9.2	
TMCLKL	HY/2012/07	2018-09-07	Mid-Flood	IS(Mf)9	17:14	Bottom	1					7.2		11.2		8.9
TMCLKL	HY/2012/07	2018-09-07	Mid-Flood	IS(Mf)9	17:14	Bottom	2									

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

Photo 1 - Mid-Ebb at IS(Mf)16 on 7 September 2018



Photo 2 - Mid-Ebb at SR4a on 7 September 2018



Photo 3 - Mid-Ebb at SR4(N) on 7 September 2018

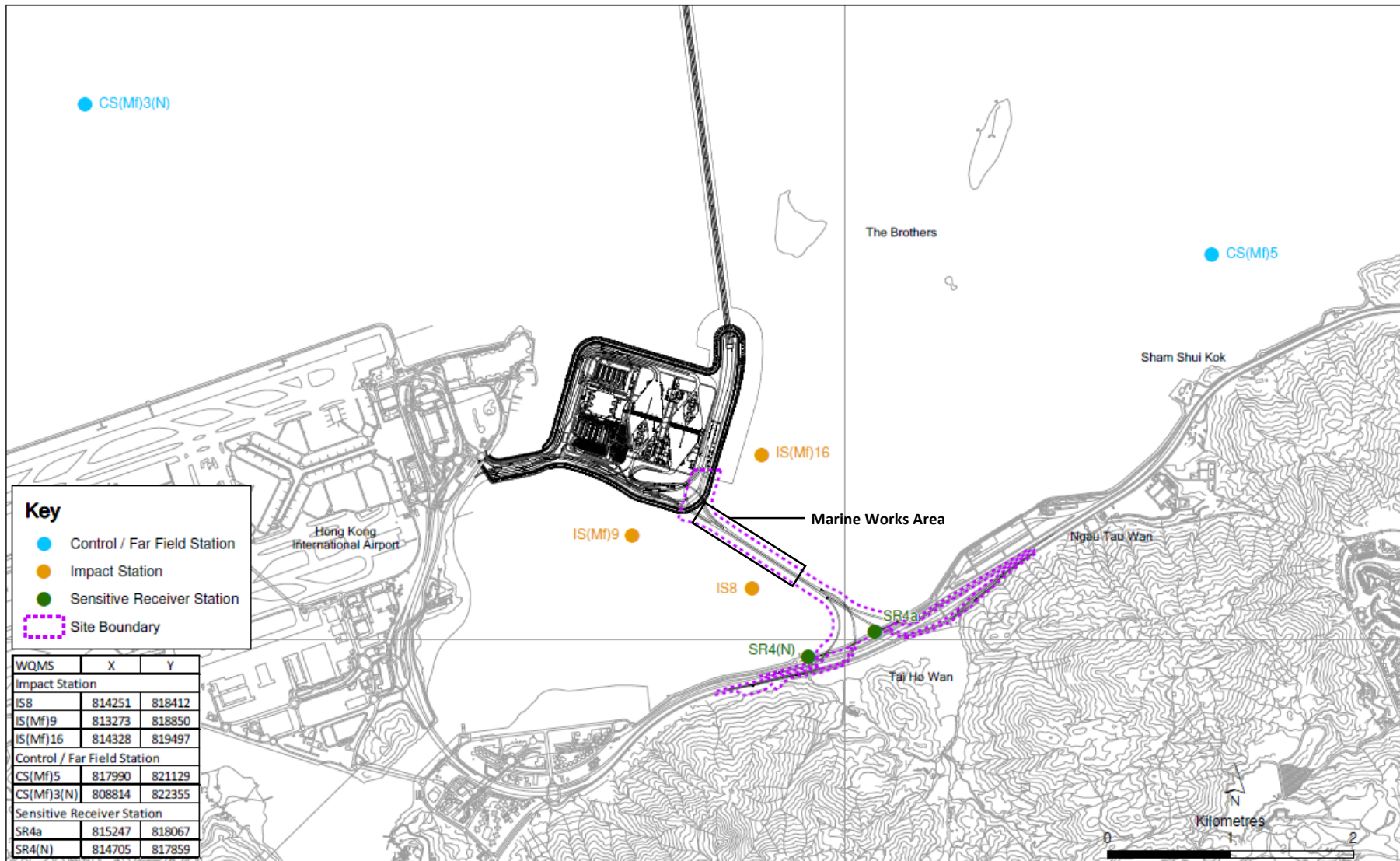


Photo 4 - Mid-Ebb at IS8 on 7 September 2018



Photo 5 - Mid-Flood at SR4a on 7 September 2018





Key

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

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

Locations of Water Quality Monitoring Stations

Email
message

Environmental
Resources
Management

To Ramboll Hong Kong Limited (ENPO)

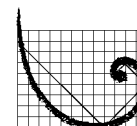
From ERM- Hong Kong, Limited

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 12 September 2018

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



ERM

Dear Sir/ Madam,

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

Action Level Exceedance

0215660_10 September 2018_ Bottom-depth DO_E_Station IS(Mf)16
0215660_10 September 2018_ Bottom-depth DO_E_Station SR4a
0215660_10 September 2018_ Surface and Middle-depth DO_E_SR4(N)
0215660_10 September 2018_ Bottom-depth DO_E_Station SR4(N)
0215660_10 September 2018_ Surface and Middle-depth DO_E_Station IS8
0215660_10 September 2018_ Surface and Middle-depth DO_E_Station IS(Mf)9
0215660_10 September 2018_ Surface and Middle-depth DO_F_Station IS(Mf)16
0215660_10 September 2018_ Bottom-depth DO_F_Station IS(Mf)16
0215660_10 September 2018_ Bottom-depth DO_F_Station SR4a
0215660_10 September 2018_ Surface and Middle-depth DO_F_SR4(N)
0215660_10 September 2018_ Bottom-depth DO_F_Station SR4(N)
0215660_10 September 2018_ Surface and Middle-depth DO_F_Station IS8
0215660_10 September 2018_ Bottom-depth DO_F_Station IS8
0215660_10 September 2018_ Surface and Middle-depth DO_F_Station IS(Mf)9
0215660_10 September 2018_ Bottom-depth DO_F_Station IS(Mf)9

Limit Level Exceedance

0215660_10 September 2018_ Surface and Middle-depth DO_E_Station IS(Mf)16
0215660_10 September 2018_ Surface and Middle-depth DO_E_Station SR4a
0215660_10 September 2018_ Surface and Middle-depth DO_F_Station SR4a

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Email
message

A total of eighteen exceedances were recorded on 10 September 2018.

Regards,

A handwritten signature in blue ink that reads "Jasmine". The signature is written in a cursive style with a small dot above the 'i'.

Dr Jasmine Ng
Environmental Team Leader



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></p> <p style="text-align: center;">0215660_10 September 2018_ Bottom-depth DO_E_Station IS(Mf)16 0215660_10 September 2018_ Bottom-depth DO_E_Station SR4a 0215660_10 September 2018_ Surface and Middle-depth DO_E_SR4(N) 0215660_10 September 2018_ Bottom-depth DO_E_Station SR4(N) 0215660_10 September 2018_ Surface and Middle-depth DO_E_Station IS8 0215660_10 September 2018_ Surface and Middle-depth DO_E_Station IS(Mf)9 0215660_10 September 2018_ Surface and Middle-depth DO_F_Station IS(Mf)16 0215660_10 September 2018_ Bottom-depth DO_F_Station IS(Mf)16 0215660_10 September 2018_ Bottom-depth DO_F_Station SR4a 0215660_10 September 2018_ Surface and Middle-depth DO_F_SR4(N) 0215660_10 September 2018_ Bottom-depth DO_F_Station SR4(N) 0215660_10 September 2018_ Surface and Middle-depth DO_F_Station IS8 0215660_10 September 2018_ Bottom-depth DO_F_Station IS8 0215660_10 September 2018_ Surface and Middle-depth DO_F_Station IS(Mf)9 0215660_10 September 2018_ Bottom-depth DO_F_Station IS(Mf)9</p> <p style="text-align: center;"><u>Limit Level Exceedance</u></p> <p style="text-align: center;">0215660_10 September 2018_ Surface and Middle-depth DO_E_Station IS(Mf)16 0215660_10 September 2018_ Surface and Middle-depth DO_E_Station SR4a 0215660_10 September 2018_ Surface and Middle-depth DO_F_Station SR4a</p> <p style="text-align: center;">[Total No. of Exceedance = 18]</p>	
Date	10 September 2018 (Measured) 11 September 2018 (<i>In situ</i> results received by ERM) 20 September 2018 (Laboratory results received by ERM)	
Monitoring Station	CS(Mf)5, SR4a, SR4(N), IS8, IS(Mf)16, IS(Mf)9, CS(Mf)3(N)	
Parameter(s) with Exceedance(s)	Surface and Middle-depth DO, Bottom DO	
Action Levels for DO	Surface and Middle-depth DO	5.0 mg/L
	Bottom-depth DO	4.7 mg/L
Limit Levels for DO	Surface and Middle-depth DO	4.2 mg/L
	Bottom-depth DO	3.6 mg/L
Measured Levels	Refer to the attached data.	
Works Undertaken (at the time of monitoring event)	Demolition of marine platform was undertaken at Viaduct E under this Contract on 10 September 2018.	

Possible Reason for Action or Limit Level Exceedance(s)	<p>The exceedances of DO are unlikely to be due to the Project, in view of the following</p> <ul style="list-style-type: none"> • All monitored parameters, except 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. • Bottom-depth DO levels at IS(Mf)16, SR4a and SR4(N) were similar to the corresponding control station, CS(Mf)3(N), during mid-ebb tide, in which the recorded Bottom-depth DO levels at the corresponding control station were below Action Level. • Bottom-depth DO levels at IS(Mf)16, SR4a, SR4(N), IS8 and IS(Mf)9 were similar to the corresponding control stations, CS(Mf)5, during mid-flood tide, in which the recorded Bottom-depth DO levels at the corresponding control station were below Action Level. • Surface and Middle-depth DO levels at IS(Mf)16, SR4a, SR4(N), IS8 and IS(Mf)9 were comparable with the corresponding control stations, CS(Mf)3(N) and CS(Mf)5, during mid-ebb and mid-flood tides where the surface and middle-depth DO was below Action Level. • No particular observation was reported at all monitoring stations.
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 10 September 2018 and locations of water quality monitoring stations are attached. Site photo record on 10 September 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	2018-09-10	Mid-Ebb	CS(Mf)5	12:51	Surface	1	26.2	8.1	27.0	3.8	3.7	7.2	7.4	7.8	8.3
TMCLKL	HY/2012/07	2018-09-10	Mid-Ebb	CS(Mf)5	12:51	Surface	2	26.2	8.0	27.0	3.8		7.4		8.3	
TMCLKL	HY/2012/07	2018-09-10	Mid-Ebb	CS(Mf)5	12:51	Middle	1	25.8	8.1	28.1	3.6		7.4		8.0	
TMCLKL	HY/2012/07	2018-09-10	Mid-Ebb	CS(Mf)5	12:51	Middle	2	25.7	8.0	28.2	3.6		7.5		8.2	
TMCLKL	HY/2012/07	2018-09-10	Mid-Ebb	CS(Mf)5	12:51	Bottom	1	25.9	8.1	28.0	3.7		7.3		8.7	
TMCLKL	HY/2012/07	2018-09-10	Mid-Ebb	CS(Mf)5	12:51	Bottom	2	25.8	8.0	28.0	3.7	3.7	7.4	8.8		
TMCLKL	HY/2012/07	2018-09-10	Mid-Ebb	CS(Mf)3(N)	12:16	Surface	1	27.0	7.9	23.3	4.3	4.2	6.2	9.6	8.0	9.1
TMCLKL	HY/2012/07	2018-09-10	Mid-Ebb	CS(Mf)3(N)	12:16	Surface	2	27.0	8.0	23.0	4.3		6.7		8.1	
TMCLKL	HY/2012/07	2018-09-10	Mid-Ebb	CS(Mf)3(N)	12:16	Middle	1	26.8	7.9	24.5	4.0		8.3		9.3	
TMCLKL	HY/2012/07	2018-09-10	Mid-Ebb	CS(Mf)3(N)	12:16	Middle	2	26.8	8.0	24.3	4.1		8.8		8.9	
TMCLKL	HY/2012/07	2018-09-10	Mid-Ebb	CS(Mf)3(N)	12:16	Bottom	1	26.2	7.9	25.8	3.9		3.9		14.0	
TMCLKL	HY/2012/07	2018-09-10	Mid-Ebb	CS(Mf)3(N)	12:16	Bottom	2	26.2	8.0	25.6	3.9	3.9	13.8	10.2		
TMCLKL	HY/2012/07	2018-09-10	Mid-Ebb	IS(Mf)16	12:29	Surface	1	26.4	8.1	26.5	4.1	4.1	4.8	4.4	7.0	7.4
TMCLKL	HY/2012/07	2018-09-10	Mid-Ebb	IS(Mf)16	12:29	Surface	2	26.4	8.0	26.6	4.1		4.9		6.8	
TMCLKL	HY/2012/07	2018-09-10	Mid-Ebb	IS(Mf)16	12:29	Middle	1									
TMCLKL	HY/2012/07	2018-09-10	Mid-Ebb	IS(Mf)16	12:29	Middle	2									
TMCLKL	HY/2012/07	2018-09-10	Mid-Ebb	IS(Mf)16	12:29	Bottom	1	25.9	8.1	27.8	3.9		4.0		3.8	
TMCLKL	HY/2012/07	2018-09-10	Mid-Ebb	IS(Mf)16	12:29	Bottom	2	25.9	8.0	27.8	4.0	4.0	3.9	8.0		
TMCLKL	HY/2012/07	2018-09-10	Mid-Ebb	SR4a	12:20	Surface	1	26.6	8.0	25.4	3.9	3.9	9.6	10.5	11.0	13.2
TMCLKL	HY/2012/07	2018-09-10	Mid-Ebb	SR4a	12:20	Surface	2	26.6	8.0	25.5	3.9		9.7		11.3	
TMCLKL	HY/2012/07	2018-09-10	Mid-Ebb	SR4a	12:20	Middle	1									
TMCLKL	HY/2012/07	2018-09-10	Mid-Ebb	SR4a	12:20	Middle	2									
TMCLKL	HY/2012/07	2018-09-10	Mid-Ebb	SR4a	12:20	Bottom	1	26.6	8.0	25.7	3.9		4.0		11.3	
TMCLKL	HY/2012/07	2018-09-10	Mid-Ebb	SR4a	12:20	Bottom	2	26.5	8.0	25.7	4.0	4.0	11.4	15.2		
TMCLKL	HY/2012/07	2018-09-10	Mid-Ebb	SR4(N)	12:17	Surface	1	26.9	8.1	24.4	4.4	4.4	7.6	7.7	9.0	9.8
TMCLKL	HY/2012/07	2018-09-10	Mid-Ebb	SR4(N)	12:17	Surface	2	26.9	8.0	24.5	4.4		7.7		9.4	
TMCLKL	HY/2012/07	2018-09-10	Mid-Ebb	SR4(N)	12:17	Middle	1									
TMCLKL	HY/2012/07	2018-09-10	Mid-Ebb	SR4(N)	12:17	Middle	2									
TMCLKL	HY/2012/07	2018-09-10	Mid-Ebb	SR4(N)	12:17	Bottom	1	26.9	8.1	24.5	4.4		4.4		7.7	
TMCLKL	HY/2012/07	2018-09-10	Mid-Ebb	SR4(N)	12:17	Bottom	2	26.9	8.0	24.5	4.4	4.4	7.9	10.7		
TMCLKL	HY/2012/07	2018-09-10	Mid-Ebb	IS8	12:12	Surface	1	27.2	8.1	24.9	4.6	4.6	4.4	4.4	7.6	8.3
TMCLKL	HY/2012/07	2018-09-10	Mid-Ebb	IS8	12:12	Surface	2	27.2	8.0	24.9	4.6		4.5		7.2	
TMCLKL	HY/2012/07	2018-09-10	Mid-Ebb	IS8	12:12	Middle	1									
TMCLKL	HY/2012/07	2018-09-10	Mid-Ebb	IS8	12:12	Middle	2									
TMCLKL	HY/2012/07	2018-09-10	Mid-Ebb	IS8	12:12	Bottom	1	27.2	8.1	24.8	4.7		4.7		4.2	
TMCLKL	HY/2012/07	2018-09-10	Mid-Ebb	IS8	12:12	Bottom	2	27.2	8.0	24.9	4.7	4.7	4.3	9.1		
TMCLKL	HY/2012/07	2018-09-10	Mid-Ebb	IS(Mf)9	12:05	Surface	1	27.2	8.1	24.8	4.7	4.7	4.1	4.2	8.9	10.3
TMCLKL	HY/2012/07	2018-09-10	Mid-Ebb	IS(Mf)9	12:05	Surface	2	27.2	8.0	24.9	4.7		4.2		9.5	
TMCLKL	HY/2012/07	2018-09-10	Mid-Ebb	IS(Mf)9	12:05	Middle	1									
TMCLKL	HY/2012/07	2018-09-10	Mid-Ebb	IS(Mf)9	12:05	Middle	2									
TMCLKL	HY/2012/07	2018-09-10	Mid-Ebb	IS(Mf)9	12:05	Bottom	1	27.3	8.1	24.8	4.7		4.7		4.2	
TMCLKL	HY/2012/07	2018-09-10	Mid-Ebb	IS(Mf)9	12:05	Bottom	2	27.3	8.0	24.8	4.7	4.7	4.4	11.2		

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	2018-09-10	Mid-Flood	CS(Mf)5	6:02	Surface	1	26.4	8.1	25.7	4.2	4.0	4.7	6.9	8.3	9.1
TMCLKL	HY/2012/07	2018-09-10	Mid-Flood	CS(Mf)5	6:02	Surface	2	26.4	8.0	25.8	4.2		4.8			
TMCLKL	HY/2012/07	2018-09-10	Mid-Flood	CS(Mf)5	6:02	Middle	1	25.7	8.1	27.5	3.8		8.4			
TMCLKL	HY/2012/07	2018-09-10	Mid-Flood	CS(Mf)5	6:02	Middle	2	25.6	8.0	27.7	3.7		8.5			
TMCLKL	HY/2012/07	2018-09-10	Mid-Flood	CS(Mf)5	6:02	Bottom	1	26.0	8.1	28.8	3.7	3.7	7.3	6.9	10.1	9.1
TMCLKL	HY/2012/07	2018-09-10	Mid-Flood	CS(Mf)5	6:02	Bottom	2	26.0	8.0	29.0	3.7		7.4		9.6	
TMCLKL	HY/2012/07	2018-09-10	Mid-Flood	CS(Mf)3(N)	7:20	Surface	1	26.9	7.9	22.2	4.5	4.5	15.2	17.1	30.9	27.9
TMCLKL	HY/2012/07	2018-09-10	Mid-Flood	CS(Mf)3(N)	7:20	Surface	2	26.9	7.9	22.4	4.5		15.8		30.7	
TMCLKL	HY/2012/07	2018-09-10	Mid-Flood	CS(Mf)3(N)	7:20	Middle	1	26.9	7.9	22.3	4.4		16.6		25.4	
TMCLKL	HY/2012/07	2018-09-10	Mid-Flood	CS(Mf)3(N)	7:20	Middle	2	26.9	7.9	22.5	4.4		16.0		25.8	
TMCLKL	HY/2012/07	2018-09-10	Mid-Flood	CS(Mf)3(N)	7:20	Bottom	1	26.9	7.9	22.3	4.4	4.4	19.5	17.1	27.1	27.9
TMCLKL	HY/2012/07	2018-09-10	Mid-Flood	CS(Mf)3(N)	7:20	Bottom	2	26.9	7.9	22.5	4.4		19.4		27.6	
TMCLKL	HY/2012/07	2018-09-10	Mid-Flood	IS(Mf)16	6:27	Surface	1	26.6	8.1	24.8	4.3	4.3	4.5	5.5	7.7	8.3
TMCLKL	HY/2012/07	2018-09-10	Mid-Flood	IS(Mf)16	6:27	Surface	2	26.6	8.0	24.8	4.3		4.6		7.2	
TMCLKL	HY/2012/07	2018-09-10	Mid-Flood	IS(Mf)16	6:27	Middle	1									
TMCLKL	HY/2012/07	2018-09-10	Mid-Flood	IS(Mf)16	6:27	Middle	2									
TMCLKL	HY/2012/07	2018-09-10	Mid-Flood	IS(Mf)16	6:27	Bottom	1	26.5	8.1	25.5	4.2	4.2	6.4	7.4	9.1	10.1
TMCLKL	HY/2012/07	2018-09-10	Mid-Flood	IS(Mf)16	6:27	Bottom	2	26.5	8.0	25.6	4.2		6.5		9.3	
TMCLKL	HY/2012/07	2018-09-10	Mid-Flood	SR4a	6:36	Surface	1	26.6	8.0	24.9	4.1	4.1	7.1	7.4	9.8	10.1
TMCLKL	HY/2012/07	2018-09-10	Mid-Flood	SR4a	6:36	Surface	2	26.6	8.0	24.9	4.1		7.2		10.0	
TMCLKL	HY/2012/07	2018-09-10	Mid-Flood	SR4a	6:36	Middle	1									
TMCLKL	HY/2012/07	2018-09-10	Mid-Flood	SR4a	6:36	Middle	2									
TMCLKL	HY/2012/07	2018-09-10	Mid-Flood	SR4a	6:36	Bottom	1	26.6	8.0	24.9	4.2	4.2	7.6	7.4	10.2	10.1
TMCLKL	HY/2012/07	2018-09-10	Mid-Flood	SR4a	6:36	Bottom	2	26.6	8.0	24.9	4.1		7.8		10.5	
TMCLKL	HY/2012/07	2018-09-10	Mid-Flood	SR4(N)	6:43	Surface	1	26.6	8.1	24.8	4.2	4.2	6.2	6.3	9.2	9.1
TMCLKL	HY/2012/07	2018-09-10	Mid-Flood	SR4(N)	6:43	Surface	2	26.6	8.0	24.9	4.2		6.3		9.1	
TMCLKL	HY/2012/07	2018-09-10	Mid-Flood	SR4(N)	6:43	Middle	1									
TMCLKL	HY/2012/07	2018-09-10	Mid-Flood	SR4(N)	6:43	Middle	2									
TMCLKL	HY/2012/07	2018-09-10	Mid-Flood	SR4(N)	6:43	Bottom	1	26.6	8.1	24.8	4.3	4.3	6.2	6.3	8.9	9.9
TMCLKL	HY/2012/07	2018-09-10	Mid-Flood	SR4(N)	6:43	Bottom	2	26.6	8.0	24.8	4.2		6.3		9.3	
TMCLKL	HY/2012/07	2018-09-10	Mid-Flood	IS8	6:49	Surface	1	26.6	8.1	24.9	4.2	4.2	6.2	6.7	8.1	9.9
TMCLKL	HY/2012/07	2018-09-10	Mid-Flood	IS8	6:49	Surface	2	26.6	8.0	25.0	4.2		6.3		8.5	
TMCLKL	HY/2012/07	2018-09-10	Mid-Flood	IS8	6:49	Middle	1									
TMCLKL	HY/2012/07	2018-09-10	Mid-Flood	IS8	6:49	Middle	2									
TMCLKL	HY/2012/07	2018-09-10	Mid-Flood	IS8	6:49	Bottom	1	26.6	8.1	25.2	4.2	4.2	7.1	6.7	11.3	9.9
TMCLKL	HY/2012/07	2018-09-10	Mid-Flood	IS8	6:49	Bottom	2	26.5	8.0	25.3	4.2		7.2		11.7	
TMCLKL	HY/2012/07	2018-09-10	Mid-Flood	IS(Mf)9	6:57	Surface	1	26.5	8.1	25.2	4.2	4.2	5.1	5.1	7.3	9.1
TMCLKL	HY/2012/07	2018-09-10	Mid-Flood	IS(Mf)9	6:57	Surface	2	26.5	8.0	25.3	4.2		5.2		7.2	
TMCLKL	HY/2012/07	2018-09-10	Mid-Flood	IS(Mf)9	6:57	Middle	1									
TMCLKL	HY/2012/07	2018-09-10	Mid-Flood	IS(Mf)9	6:57	Middle	2									
TMCLKL	HY/2012/07	2018-09-10	Mid-Flood	IS(Mf)9	6:57	Bottom	1	26.6	8.1	25.1	4.2	4.2	5.0	5.1	10.8	9.1
TMCLKL	HY/2012/07	2018-09-10	Mid-Flood	IS(Mf)9	6:57	Bottom	2	26.5	8.0	25.2	4.2		5.1		11.2	

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

Photo 1 - Mid-Ebb at IS(Mf)16 on 10 September 2018



Photo 2 - Mid-Ebb at SR4a on 10 September 2018



Photo 3 - Mid-Ebb at SR4(N) on 10 September 2018



Photo 4 - Mid-Ebb at IS8 on 10 September 2018



Photo 5 - Mid-Ebb at IS(Mf)9 on 10 September 2018



Photo 6 - Mid-Flood at IS(Mf)16 on 10 September 2018



Photo 7 - Mid-Flood at SR4a on 10 September 2018

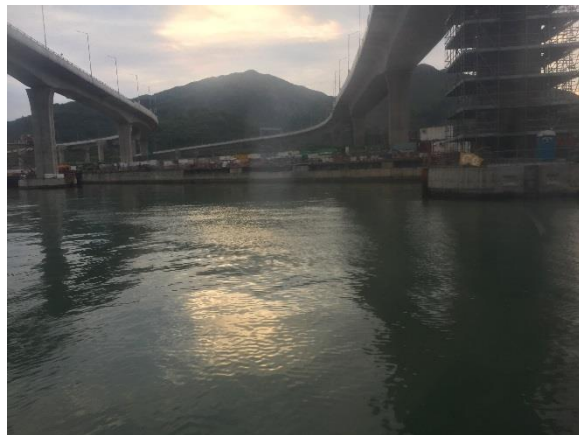


Photo 8 - Mid-Flood at SR4(N) on 10 September 2018



Photo 9 - Mid-Flood at IS8 on 10 September 2018

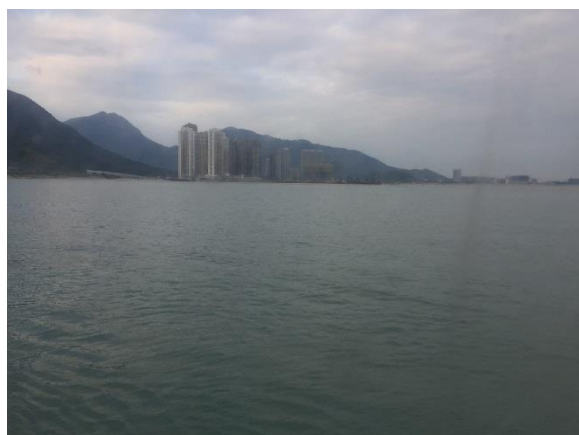
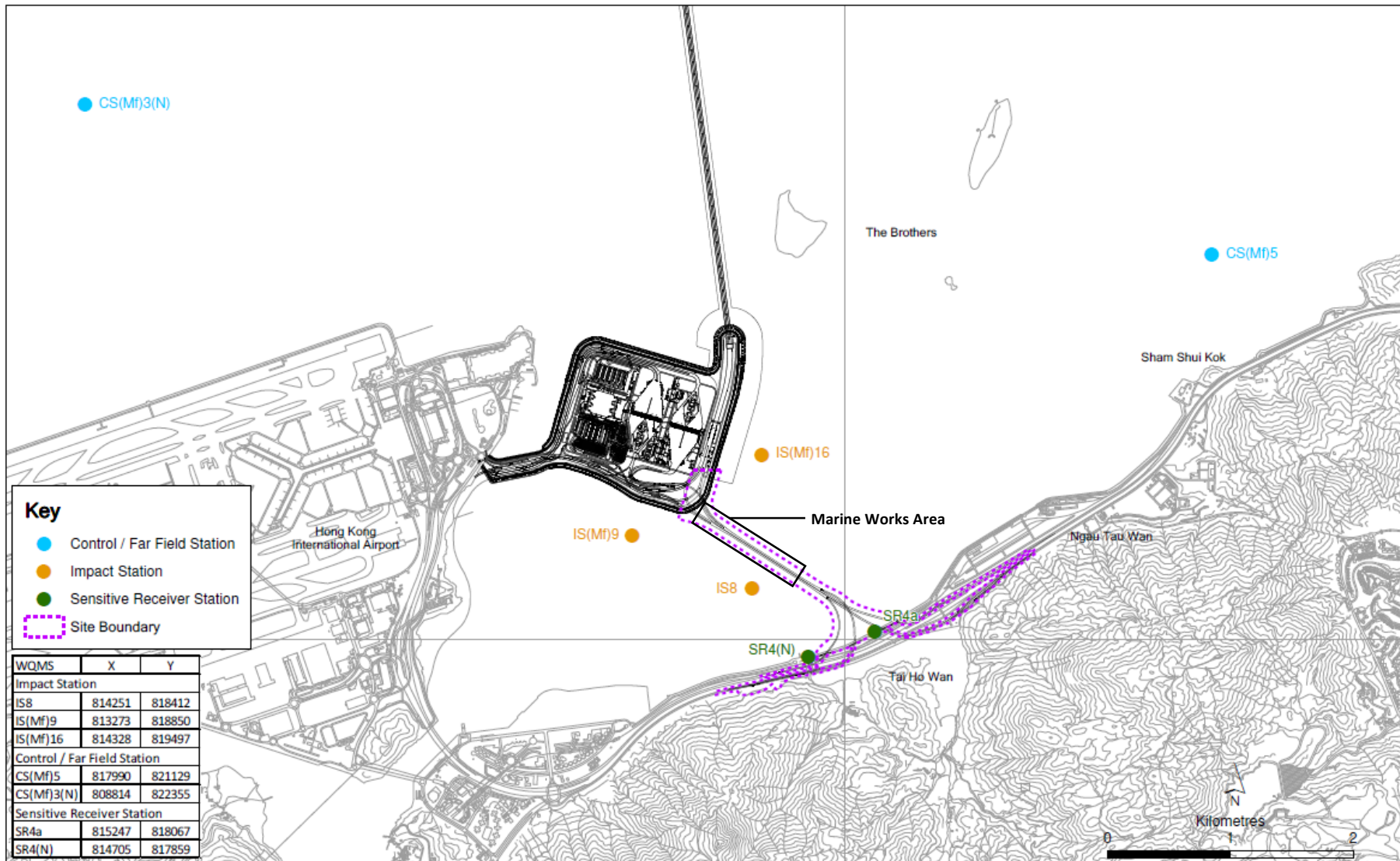


Photo 10 - Mid-Flood at IS(Mf)9 on 10 September 2018





Key

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

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

Locations of Water Quality Monitoring Stations

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 14 September 2018

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



ERM

Dear Sir/ Madam,

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

Action Level Exceedance

0215660_12 September 2018_ Surface and Middle-depth DO_F_Station IS(Mf)16
0215660_12 September 2018_ Bottom-depth DO_F_Station IS(Mf)16
0215660_12 September 2018_ Surface and Middle-depth DO_F_Station SR4a
0215660_12 September 2018_ Surface and Middle-depth DO_F_SR4(N)
0215660_12 September 2018_ Bottom-depth DO_F_Station SR4(N)
0215660_12 September 2018_ Surface and Middle-depth DO_F_Station IS8
0215660_12 September 2018_ Bottom-depth DO_F_Station IS8
0215660_12 September 2018_ Surface and Middle-depth DO_F_Station IS(Mf)9
0215660_12 September 2018_ Bottom-depth DO_F_Station IS(Mf)9

A total of nine exceedances were recorded on 12 September 2018.

Regards,

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

Dr Jasmine Ng
Environmental Team Leader

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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></p> <p style="text-align: center;">0215660_12 September 2018_ Surface and Middle-depth DO_F_Station IS(Mf)16 0215660_12 September 2018_ Bottom-depth DO_F_Station IS(Mf)16 0215660_12 September 2018_ Surface and Middle-depth DO_F_Station SR4a 0215660_12 September 2018_ Surface and Middle-depth DO_F_SR4(N) 0215660_12 September 2018_ Bottom-depth DO_F_Station SR4(N) 0215660_12 September 2018_ Surface and Middle-depth DO_F_Station IS8 0215660_12 September 2018_ Bottom-depth DO_F_Station IS8 0215660_12 September 2018_ Surface and Middle-depth DO_F_Station IS(Mf)9 0215660_12 September 2018_ Bottom-depth DO_F_Station IS(Mf)9</p> <p style="text-align: center;">[Total No. of Exceedance = 9]</p>	
Date	<p style="text-align: center;">12 September 2018 (Measured) 13 September 2018 (<i>In situ</i> results received by ERM) 20 September 2018 (Laboratory results received by ERM)</p>	
Monitoring Station	<p style="text-align: center;">CS(Mf)5, SR4a, SR4(N), IS8, IS(Mf)16, IS(Mf)9, CS(Mf)3(N)</p>	
Parameter(s) with Exceedance(s)	<p style="text-align: center;">Surface and Middle-depth DO, Bottom DO</p>	
Action Levels for DO	Surface and Middle-depth DO	5.0 mg/L
	Bottom-depth DO	4.7 mg/L
Limit Levels for DO	Surface and Middle-depth DO	4.2 mg/L
	Bottom-depth DO	3.6 mg/L
Measured Levels	Refer to the attached data.	
Works Undertaken (at the time of monitoring event)	No marine works was undertaken under this Contract on 12 September 2018.	
Possible Reason for Action or Limit Level Exceedance(s)	<p>The exceedances of DO are unlikely to be due to the Project, in view of the following</p> <ul style="list-style-type: none"> • No marine works was carried out on 12 September 2018. • All monitored parameters, except DO, at all monitoring stations were in compliance with the Action and Limit Levels during mid-flood tides on the same day. • Bottom-depth DO levels at IS(Mf)16, SR4(N), IS8 and IS(Mf)9 were similar to the corresponding control stations, CS(Mf)5, during the same tide, in which the recorded Bottom-depth DO level at the corresponding control station was below Action Level. • Surface and Middle-depth DO level at IS(Mf)16, SR4a, SR4(N), IS8 and IS(Mf)9 were similar to the corresponding control stations, CS(Mf)5, during the same tide, in which the recorded Surface and Middle-depth DO level at the corresponding control station was below Action Level. • No particular observation was reported at IS(Mf)16, SR4a, SR4(N), IS8 and IS(Mf)9. 	
Actions Taken/ To Be Taken	No immediate action is considered necessary. The ET will monitor for future trends in exceedances.	
Remarks	The monitoring results on 12 September 2018 and locations of water quality monitoring stations are attached. Site photo record on 12 September 2018 is attached.	

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	2018-09-12	Mid-Flood	CS(Mf)5	7:46	Surface	1	26.7	8.0	24.7	4.1	4.1	13.2	12.3	7.9	6.3
TMCLKL	HY/2012/07	2018-09-12	Mid-Flood	CS(Mf)5	7:46	Surface	2	26.8	8.1	24.6	4.3		13.1		6.5	
TMCLKL	HY/2012/07	2018-09-12	Mid-Flood	CS(Mf)5	7:46	Middle	1	26.3	8.0	27.1	3.9		11.5		6.0	
TMCLKL	HY/2012/07	2018-09-12	Mid-Flood	CS(Mf)5	7:46	Middle	2	26.3	8.1	27.0	3.9	3.9	11.4	12.3	5.2	
TMCLKL	HY/2012/07	2018-09-12	Mid-Flood	CS(Mf)5	7:46	Bottom	1	26.4	8.0	27.2	3.9		12.3		5.9	
TMCLKL	HY/2012/07	2018-09-12	Mid-Flood	CS(Mf)5	7:46	Bottom	2	26.4	8.1	27.2	3.9	4.5	12.2	16.9	6.3	20.2
TMCLKL	HY/2012/07	2018-09-12	Mid-Flood	CS(Mf)3(N)	8:39	Surface	1	27.2	7.9	21.0	4.5		13.8		20.9	
TMCLKL	HY/2012/07	2018-09-12	Mid-Flood	CS(Mf)3(N)	8:39	Surface	2	27.2	7.8	21.2	4.5		13.5		19.2	
TMCLKL	HY/2012/07	2018-09-12	Mid-Flood	CS(Mf)3(N)	8:39	Middle	1	27.2	7.9	21.0	4.5	4.5	16.5	16.9	19.1	
TMCLKL	HY/2012/07	2018-09-12	Mid-Flood	CS(Mf)3(N)	8:39	Middle	2	27.2	7.8	21.2	4.5		16.5		22.7	
TMCLKL	HY/2012/07	2018-09-12	Mid-Flood	CS(Mf)3(N)	8:39	Bottom	1	27.2	7.9	21.0	4.5	4.5	20.4	16.9	19.7	
TMCLKL	HY/2012/07	2018-09-12	Mid-Flood	CS(Mf)3(N)	8:39	Bottom	2	27.2	7.8	21.2	4.4		20.6		19.5	
TMCLKL	HY/2012/07	2018-09-12	Mid-Flood	IS(Mf)16	8:10	Surface	1	27.0	8.0	24.0	4.2	4.2	12.6	12.0	7.4	7.0
TMCLKL	HY/2012/07	2018-09-12	Mid-Flood	IS(Mf)16	8:10	Surface	2	27.1	8.0	23.9	4.2		12.4		7.2	
TMCLKL	HY/2012/07	2018-09-12	Mid-Flood	IS(Mf)16	8:10	Middle	1									
TMCLKL	HY/2012/07	2018-09-12	Mid-Flood	IS(Mf)16	8:10	Middle	2					4.2		12.0		7.0
TMCLKL	HY/2012/07	2018-09-12	Mid-Flood	IS(Mf)16	8:10	Bottom	1	27.0	8.0	24.3	4.2		11.6		6.9	
TMCLKL	HY/2012/07	2018-09-12	Mid-Flood	IS(Mf)16	8:10	Bottom	2	27.0	8.0	24.2	4.2	4.2	11.5	10.3	6.4	
TMCLKL	HY/2012/07	2018-09-12	Mid-Flood	SR4a	8:19	Surface	1	27.1	8.0	23.8	4.5		10.1		9.3	
TMCLKL	HY/2012/07	2018-09-12	Mid-Flood	SR4a	8:19	Surface	2	27.1	8.0	23.7	4.5	4.5	10.0	10.3	11.8	10.3
TMCLKL	HY/2012/07	2018-09-12	Mid-Flood	SR4a	8:19	Middle	1									
TMCLKL	HY/2012/07	2018-09-12	Mid-Flood	SR4a	8:19	Middle	2					4.7		10.3		
TMCLKL	HY/2012/07	2018-09-12	Mid-Flood	SR4a	8:19	Bottom	1	26.9	8.0	23.9	4.7		10.5		9.9	
TMCLKL	HY/2012/07	2018-09-12	Mid-Flood	SR4a	8:19	Bottom	2	27.0	8.0	23.8	4.6	4.7	10.4	10.3	10.0	
TMCLKL	HY/2012/07	2018-09-12	Mid-Flood	SR4(N)	8:24	Surface	1	27.1	8.0	23.8	4.3		12.2		7.4	
TMCLKL	HY/2012/07	2018-09-12	Mid-Flood	SR4(N)	8:24	Surface	2	27.1	8.0	23.8	4.4	4.4	12.1	12.1	8.6	8.2
TMCLKL	HY/2012/07	2018-09-12	Mid-Flood	SR4(N)	8:24	Middle	1									
TMCLKL	HY/2012/07	2018-09-12	Mid-Flood	SR4(N)	8:24	Middle	2					4.4		12.1		
TMCLKL	HY/2012/07	2018-09-12	Mid-Flood	SR4(N)	8:24	Bottom	1	27.1	8.0	23.9	4.4		12.0		9.0	
TMCLKL	HY/2012/07	2018-09-12	Mid-Flood	SR4(N)	8:24	Bottom	2	27.1	8.0	23.8	4.4	4.4	11.9	11.2	7.7	7.5
TMCLKL	HY/2012/07	2018-09-12	Mid-Flood	IS8	8:30	Surface	1	27.1	8.0	23.8	4.3		11.2		7.8	
TMCLKL	HY/2012/07	2018-09-12	Mid-Flood	IS8	8:30	Surface	2	27.1	8.0	23.7	4.3	4.3	11.1	11.2	7.9	
TMCLKL	HY/2012/07	2018-09-12	Mid-Flood	IS8	8:30	Middle	1									
TMCLKL	HY/2012/07	2018-09-12	Mid-Flood	IS8	8:30	Middle	2					4.3		11.2		
TMCLKL	HY/2012/07	2018-09-12	Mid-Flood	IS8	8:30	Bottom	1	27.1	8.0	23.8	4.3		11.2		6.1	
TMCLKL	HY/2012/07	2018-09-12	Mid-Flood	IS8	8:30	Bottom	2	27.1	8.0	23.7	4.3	4.3	11.1	11.2	8.0	
TMCLKL	HY/2012/07	2018-09-12	Mid-Flood	IS(Mf)9	8:38	Surface	1	27.0	8.0	24.5	4.2		10.2		8.0	
TMCLKL	HY/2012/07	2018-09-12	Mid-Flood	IS(Mf)9	8:38	Surface	2	27.0	8.0	24.5	4.2	4.2	10.1	9.8	9.5	7.7
TMCLKL	HY/2012/07	2018-09-12	Mid-Flood	IS(Mf)9	8:38	Middle	1									
TMCLKL	HY/2012/07	2018-09-12	Mid-Flood	IS(Mf)9	8:38	Middle	2					4.2		9.8		
TMCLKL	HY/2012/07	2018-09-12	Mid-Flood	IS(Mf)9	8:38	Bottom	1	27.0	8.0	24.6	4.3		9.4		6.3	
TMCLKL	HY/2012/07	2018-09-12	Mid-Flood	IS(Mf)9	8:38	Bottom	2	27.0	8.0	24.6	4.3	4.3	9.3	9.8	7.0	
TMCLKL	HY/2012/07	2018-09-12	Mid-Flood	IS(Mf)9	8:38	Bottom	2	27.0	8.0	24.6	4.3		9.3		7.0	

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

Photo 1 - Mid-Flood at IS(Mf)16 on 12 September 2018



Photo 2 - Mid- Flood at SR4a on 12 September 2018



Photo 3 - Mid- Flood at SR4(N) on 12 September 2018

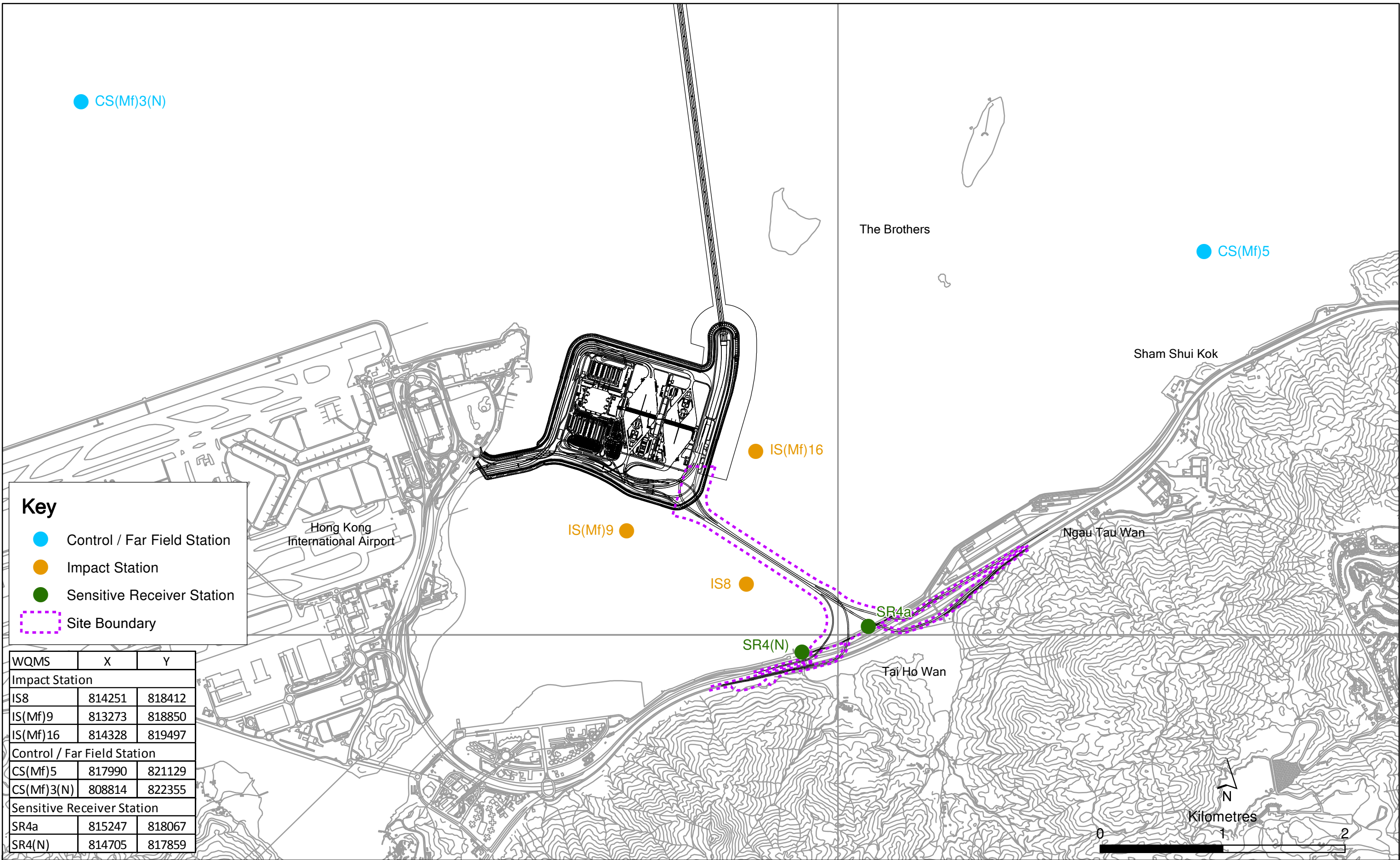


Photo 4 - Mid- Flood at IS8 on 12 September 2018



Photo 5 - Mid- Flood at IS(Mf)9 on 12 September 2018





Key

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

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

Locations of Water Quality Monitoring Stations

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 17 September 2018

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



ERM

Dear Sir/ Madam,

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

Action Level Exceedance

0215660_14 September 2018_ Surface and Middle-depth DO_E_Station IS(Mf)16
0215660_14 September 2018_ Surface and Middle -depth DO_F_Station IS(Mf)16
0215660_14 September 2018_ Surface and Middle-depth DO_F_SR4(N)
0215660_14 September 2018_ Surface and Middle-depth DO_F_Station IS8
0215660_14 September 2018_ Surface and Middle-depth DO_F_Station IS(Mf)9

A total of five exceedances were recorded on 14 September 2018.

Regards,

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

Dr Jasmine Ng
Environmental Team Leader

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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></p> <p style="text-align: center;">0215660_14 September 2018_ Surface and Middle-depth DO_E_Station IS(Mf)16 0215660_14 September 2018_ Surface and Middle -depth DO_F_Station IS(Mf)16 0215660_14 September 2018_ Surface and Middle-depth DO_F_SR4(N) 0215660_14 September 2018_ Surface and Middle-depth DO_F_Station IS8 0215660_14 September 2018_ Surface and Middle-depth DO_F_Station IS(Mf)9</p> <p style="text-align: center;">[Total No. of Exceedance = 5]</p>	
Date	<p style="text-align: center;">14 September 2018 (Measured) 15 September 2018 (<i>In situ</i> results received by ERM) 27 September 2018 (Laboratory results received by ERM)</p>	
Monitoring Station	<p style="text-align: center;">CS(Mf)5, SR4a, SR4(N), IS8, IS(Mf)16, IS(Mf)9, CS(Mf)3(N)</p>	
Parameter(s) with Exceedance(s)	<p style="text-align: center;">Surface and Middle-depth DO</p>	
Action Levels for DO	Surface and Middle-depth DO	<p style="text-align: right;">5.0 mg/L</p>
Limit Levels for DO	Surface and Middle-depth DO	<p style="text-align: right;">4.2 mg/L</p>
Measured Levels	Refer to the attached data.	
Works Undertaken (at the time of monitoring event)	Demolition of marine platform was undertaken at Viaduct E under this Contract on 14 September 2018.	
Possible Reason for Action or Limit Level Exceedance(s)	<p>The exceedances of DO are unlikely to be due to the Project, in view of the following</p> <ul style="list-style-type: none"> • All monitored parameters, except 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. • Marginal DO exceedances were observed at Surface and Middle-depth at IS(Mf)16, SR4(N), IS8 and IS(Mf)9 during mid-flood tide. The marginal DO exceedances at these stations were similar to the corresponding control stations, CS(Mf)5, in which the recorded Surface and Middle-depth DO level at the corresponding control station was below Action Level. • Marginal DO exceedance were only observed at Surface and Middle-depth at IS(Mf)16 during mid-ebb tide. No DO exceedance was observed at IS8 and IS(Mf)9 which are both nearby the works area. • No particular observation was reported at IS(Mf)16, SR4(N), IS8 and IS(Mf)9. 	
Actions Taken/ To Be Taken	No immediate action is considered necessary. The ET will monitor for future trends in exceedances.	
Remarks	The monitoring results on 14 September 2018 and locations of water quality monitoring stations are attached. Site photo record on 14 September 2018 is attached.	

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	2018-09-14	Mid-Ebb	CS(Mf)5	15:45	Surface	1	27.1	8.0	25.8	4.8	4.7	13.9	13.3	8.8	9.0
TMCLKL	HY/2012/07	2018-09-14	Mid-Ebb	CS(Mf)5	15:45	Surface	2	27.1	8.0	25.7	4.8		13.9		9.0	
TMCLKL	HY/2012/07	2018-09-14	Mid-Ebb	CS(Mf)5	15:45	Middle	1	26.8	8.0	26.3	4.6		13.5		8.8	
TMCLKL	HY/2012/07	2018-09-14	Mid-Ebb	CS(Mf)5	15:45	Middle	2	26.8	8.1	26.3	4.5		13.7		8.5	
TMCLKL	HY/2012/07	2018-09-14	Mid-Ebb	CS(Mf)5	15:45	Bottom	1	26.3	8.0	28.0	4.4	4.4	12.1		9.3	
TMCLKL	HY/2012/07	2018-09-14	Mid-Ebb	CS(Mf)5	15:45	Bottom	2	26.3	8.1	27.9	4.3		12.6		9.6	
TMCLKL	HY/2012/07	2018-09-14	Mid-Ebb	CS(Mf)3(N)	14:47	Surface	1	27.6	7.8	21.5	5.0	5.0	6.4	9.5	3.6	5.6
TMCLKL	HY/2012/07	2018-09-14	Mid-Ebb	CS(Mf)3(N)	14:47	Surface	2	27.6	7.9	21.4	5.0		6.7		4.3	
TMCLKL	HY/2012/07	2018-09-14	Mid-Ebb	CS(Mf)3(N)	14:47	Middle	1	27.2	7.9	23.1	5.0		10.9		5.5	
TMCLKL	HY/2012/07	2018-09-14	Mid-Ebb	CS(Mf)3(N)	14:47	Middle	2	27.2	8.0	22.9	5.0		10.8		5.0	
TMCLKL	HY/2012/07	2018-09-14	Mid-Ebb	CS(Mf)3(N)	14:47	Bottom	1	27.2	7.9	23.7	5.0	5.0	11.3		7.6	
TMCLKL	HY/2012/07	2018-09-14	Mid-Ebb	CS(Mf)3(N)	14:47	Bottom	2	27.3	8.0	23.6	5.0		11.1		7.7	
TMCLKL	HY/2012/07	2018-09-14	Mid-Ebb	IS(Mf)16	15:22	Surface	1	27.2	8.0	25.6	4.9	4.9	12.3	13.3	3.1	4.3
TMCLKL	HY/2012/07	2018-09-14	Mid-Ebb	IS(Mf)16	15:22	Surface	2	27.2	8.0	25.5	4.9		12.0		2.8	
TMCLKL	HY/2012/07	2018-09-14	Mid-Ebb	IS(Mf)16	15:22	Middle	1									
TMCLKL	HY/2012/07	2018-09-14	Mid-Ebb	IS(Mf)16	15:22	Middle	2									
TMCLKL	HY/2012/07	2018-09-14	Mid-Ebb	IS(Mf)16	15:22	Bottom	1	26.8	8.0	26.3	4.7	4.7	14.6		5.4	
TMCLKL	HY/2012/07	2018-09-14	Mid-Ebb	IS(Mf)16	15:22	Bottom	2	26.8	8.0	26.2	4.7		14.4		5.7	
TMCLKL	HY/2012/07	2018-09-14	Mid-Ebb	SR4a	15:10	Surface	1	28.1	8.0	25.0	5.4	5.4	15.4	13.6	7.4	7.3
TMCLKL	HY/2012/07	2018-09-14	Mid-Ebb	SR4a	15:10	Surface	2	28.1	8.0	24.9	5.4		15.3		7.3	
TMCLKL	HY/2012/07	2018-09-14	Mid-Ebb	SR4a	15:10	Middle	1									
TMCLKL	HY/2012/07	2018-09-14	Mid-Ebb	SR4a	15:10	Middle	2									
TMCLKL	HY/2012/07	2018-09-14	Mid-Ebb	SR4a	15:10	Bottom	1	27.3	8.0	25.2	5.0	5.0	11.7		7.4	
TMCLKL	HY/2012/07	2018-09-14	Mid-Ebb	SR4a	15:10	Bottom	2	27.3	8.0	25.2	5.0		11.9		7.2	
TMCLKL	HY/2012/07	2018-09-14	Mid-Ebb	SR4(N)	15:06	Surface	1	27.7	8.0	25.0	5.2	5.2	13.8	13.8	5.9	6.0
TMCLKL	HY/2012/07	2018-09-14	Mid-Ebb	SR4(N)	15:06	Surface	2	27.7	8.0	25.0	5.2		13.5		6.4	
TMCLKL	HY/2012/07	2018-09-14	Mid-Ebb	SR4(N)	15:06	Middle	1									
TMCLKL	HY/2012/07	2018-09-14	Mid-Ebb	SR4(N)	15:06	Middle	2									
TMCLKL	HY/2012/07	2018-09-14	Mid-Ebb	SR4(N)	15:06	Bottom	1	27.7	8.0	25.0	5.3	5.3	13.9		6.0	
TMCLKL	HY/2012/07	2018-09-14	Mid-Ebb	SR4(N)	15:06	Bottom	2	27.7	8.1	25.0	5.2		13.9		5.8	
TMCLKL	HY/2012/07	2018-09-14	Mid-Ebb	IS8	15:01	Surface	1	27.6	8.0	25.1	5.4	5.4	14.3	14.5	5.2	6.9
TMCLKL	HY/2012/07	2018-09-14	Mid-Ebb	IS8	15:01	Surface	2	27.6	8.1	25.0	5.3		14.4		5.1	
TMCLKL	HY/2012/07	2018-09-14	Mid-Ebb	IS8	15:01	Middle	1									
TMCLKL	HY/2012/07	2018-09-14	Mid-Ebb	IS8	15:01	Middle	2									
TMCLKL	HY/2012/07	2018-09-14	Mid-Ebb	IS8	15:01	Bottom	1	27.5	8.0	25.1	5.4	5.4	14.2		8.5	
TMCLKL	HY/2012/07	2018-09-14	Mid-Ebb	IS8	15:01	Bottom	2	27.6	8.1	25.0	5.3		15.0		8.8	
TMCLKL	HY/2012/07	2018-09-14	Mid-Ebb	IS(Mf)9	14:52	Surface	1	28.0	8.0	25.2	5.5	5.5	15.5	14.4	7.1	8.1
TMCLKL	HY/2012/07	2018-09-14	Mid-Ebb	IS(Mf)9	14:52	Surface	2	28.1	8.1	25.2	5.5		15.0		6.9	
TMCLKL	HY/2012/07	2018-09-14	Mid-Ebb	IS(Mf)9	14:52	Middle	1									
TMCLKL	HY/2012/07	2018-09-14	Mid-Ebb	IS(Mf)9	14:52	Middle	2									
TMCLKL	HY/2012/07	2018-09-14	Mid-Ebb	IS(Mf)9	14:52	Bottom	1	27.3	8.0	25.4	5.2	5.2	13.5		9.4	
TMCLKL	HY/2012/07	2018-09-14	Mid-Ebb	IS(Mf)9	14:52	Bottom	2	27.3	8.1	25.3	5.2		13.5		9.0	

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	2018-09-14	Mid-Flood	CS(Mf)5	9:18	Surface	1	26.9	8.1	25.6	4.7	4.6	14.3	11.4	5.5	7.7
TMCLKL	HY/2012/07	2018-09-14	Mid-Flood	CS(Mf)5	9:18	Surface	2	26.9	8.0	25.6	4.7		14.8		5.9	
TMCLKL	HY/2012/07	2018-09-14	Mid-Flood	CS(Mf)5	9:18	Middle	1	26.7	8.1	26.4	4.5		13.5		8.6	
TMCLKL	HY/2012/07	2018-09-14	Mid-Flood	CS(Mf)5	9:18	Middle	2	26.6	8.0	26.5	4.5	4.4	13.8	11.4	8.5	7.7
TMCLKL	HY/2012/07	2018-09-14	Mid-Flood	CS(Mf)5	9:18	Bottom	1	26.4	8.1	27.3	4.4		5.8		9.0	
TMCLKL	HY/2012/07	2018-09-14	Mid-Flood	CS(Mf)5	9:18	Bottom	2	26.4	8.0	27.4	4.4	5.1	5.9	10.2	8.8	10.0
TMCLKL	HY/2012/07	2018-09-14	Mid-Flood	CS(Mf)3(N)	10:39	Surface	1	27.6	7.8	20.6	5.1		6.2		8.3	
TMCLKL	HY/2012/07	2018-09-14	Mid-Flood	CS(Mf)3(N)	10:39	Surface	2	27.6	7.9	20.6	5.1		6.4		9.0	
TMCLKL	HY/2012/07	2018-09-14	Mid-Flood	CS(Mf)3(N)	10:39	Middle	1	27.5	7.8	21.1	5.1	5.1	9.7	10.2	9.6	10.0
TMCLKL	HY/2012/07	2018-09-14	Mid-Flood	CS(Mf)3(N)	10:39	Middle	2	27.5	7.9	21.0	5.1		9.7		10.3	
TMCLKL	HY/2012/07	2018-09-14	Mid-Flood	CS(Mf)3(N)	10:39	Bottom	1	27.3	7.8	22.3	5.1	5.1	14.3	10.2	11.6	10.0
TMCLKL	HY/2012/07	2018-09-14	Mid-Flood	CS(Mf)3(N)	10:39	Bottom	2	27.3	7.9	22.2	5.0		14.6		11.4	
TMCLKL	HY/2012/07	2018-09-14	Mid-Flood	IS(Mf)16	9:44	Surface	1	27.2	8.1	24.8	4.9	4.9	14.3	13.3	5.6	7.0
TMCLKL	HY/2012/07	2018-09-14	Mid-Flood	IS(Mf)16	9:44	Surface	2	27.2	8.0	24.8	4.9		14.1		6.5	
TMCLKL	HY/2012/07	2018-09-14	Mid-Flood	IS(Mf)16	9:44	Middle	1									
TMCLKL	HY/2012/07	2018-09-14	Mid-Flood	IS(Mf)16	9:44	Middle	2					4.8		13.3		7.0
TMCLKL	HY/2012/07	2018-09-14	Mid-Flood	IS(Mf)16	9:44	Bottom	1	27.0	8.0	25.5	4.8		12.4		7.8	
TMCLKL	HY/2012/07	2018-09-14	Mid-Flood	IS(Mf)16	9:44	Bottom	2	26.9	8.0	25.5	4.8	5.1	12.5	13.3	8.1	10.4
TMCLKL	HY/2012/07	2018-09-14	Mid-Flood	SR4a	9:53	Surface	1	27.2	8.1	25.1	5.0		13.5		8.1	
TMCLKL	HY/2012/07	2018-09-14	Mid-Flood	SR4a	9:53	Surface	2	27.2	8.0	25.2	5.1		13.1		7.7	
TMCLKL	HY/2012/07	2018-09-14	Mid-Flood	SR4a	9:53	Middle	1					5.1		13.3		10.4
TMCLKL	HY/2012/07	2018-09-14	Mid-Flood	SR4a	9:53	Middle	2									
TMCLKL	HY/2012/07	2018-09-14	Mid-Flood	SR4a	9:53	Bottom	1	27.1	8.1	25.2	5.1	5.2	13.2	13.3	12.6	10.4
TMCLKL	HY/2012/07	2018-09-14	Mid-Flood	SR4a	9:53	Bottom	2	27.1	8.0	25.2	5.2		13.4		13.0	
TMCLKL	HY/2012/07	2018-09-14	Mid-Flood	SR4(N)	10:00	Surface	1	27.1	8.0	25.1	4.9	4.9	12.8	12.5	7.8	8.3
TMCLKL	HY/2012/07	2018-09-14	Mid-Flood	SR4(N)	10:00	Surface	2	27.1	8.0	25.1	4.9		12.6		7.4	
TMCLKL	HY/2012/07	2018-09-14	Mid-Flood	SR4(N)	10:00	Middle	1									
TMCLKL	HY/2012/07	2018-09-14	Mid-Flood	SR4(N)	10:00	Middle	2					4.9		12.5		8.3
TMCLKL	HY/2012/07	2018-09-14	Mid-Flood	SR4(N)	10:00	Bottom	1	27.0	8.0	25.3	4.8		12.3		9.0	
TMCLKL	HY/2012/07	2018-09-14	Mid-Flood	SR4(N)	10:00	Bottom	2	27.0	8.0	25.4	4.9	4.9	12.4	12.6	8.8	7.2
TMCLKL	HY/2012/07	2018-09-14	Mid-Flood	IS8	10:06	Surface	1	27.1	8.0	25.2	4.9		13.1		6.1	
TMCLKL	HY/2012/07	2018-09-14	Mid-Flood	IS8	10:06	Surface	2	27.1	8.0	25.2	4.9	4.9	12.3	12.6	6.8	7.2
TMCLKL	HY/2012/07	2018-09-14	Mid-Flood	IS8	10:06	Middle	1									
TMCLKL	HY/2012/07	2018-09-14	Mid-Flood	IS8	10:06	Middle	2									
TMCLKL	HY/2012/07	2018-09-14	Mid-Flood	IS8	10:06	Bottom	1	27.0	8.0	25.4	4.8	4.9	12.2	12.6	7.7	5.5
TMCLKL	HY/2012/07	2018-09-14	Mid-Flood	IS8	10:06	Bottom	2	27.0	8.0	25.4	4.9		12.8		8.0	
TMCLKL	HY/2012/07	2018-09-14	Mid-Flood	IS(Mf)9	10:14	Surface	1	27.1	8.0	25.2	4.9	4.9	14.2	13.6	5.3	5.5
TMCLKL	HY/2012/07	2018-09-14	Mid-Flood	IS(Mf)9	10:14	Surface	2	27.1	8.0	25.2	4.9		14.8		4.9	
TMCLKL	HY/2012/07	2018-09-14	Mid-Flood	IS(Mf)9	10:14	Middle	1									
TMCLKL	HY/2012/07	2018-09-14	Mid-Flood	IS(Mf)9	10:14	Middle	2					4.8		13.6		5.5
TMCLKL	HY/2012/07	2018-09-14	Mid-Flood	IS(Mf)9	10:14	Bottom	1	27.0	8.0	25.5	4.8		12.7		5.6	
TMCLKL	HY/2012/07	2018-09-14	Mid-Flood	IS(Mf)9	10:14	Bottom	2	27.0	8.0	25.5	4.8	4.8	12.6	6.0		

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

Photo 1 - Mid-Ebb at IS(Mf)16 on 14 September 2018



Photo 2 - Mid-Flood at IS(Mf)16 on 14 September 2018



Photo 3 - Mid-Flood at SR4(N) on 14 September 2018

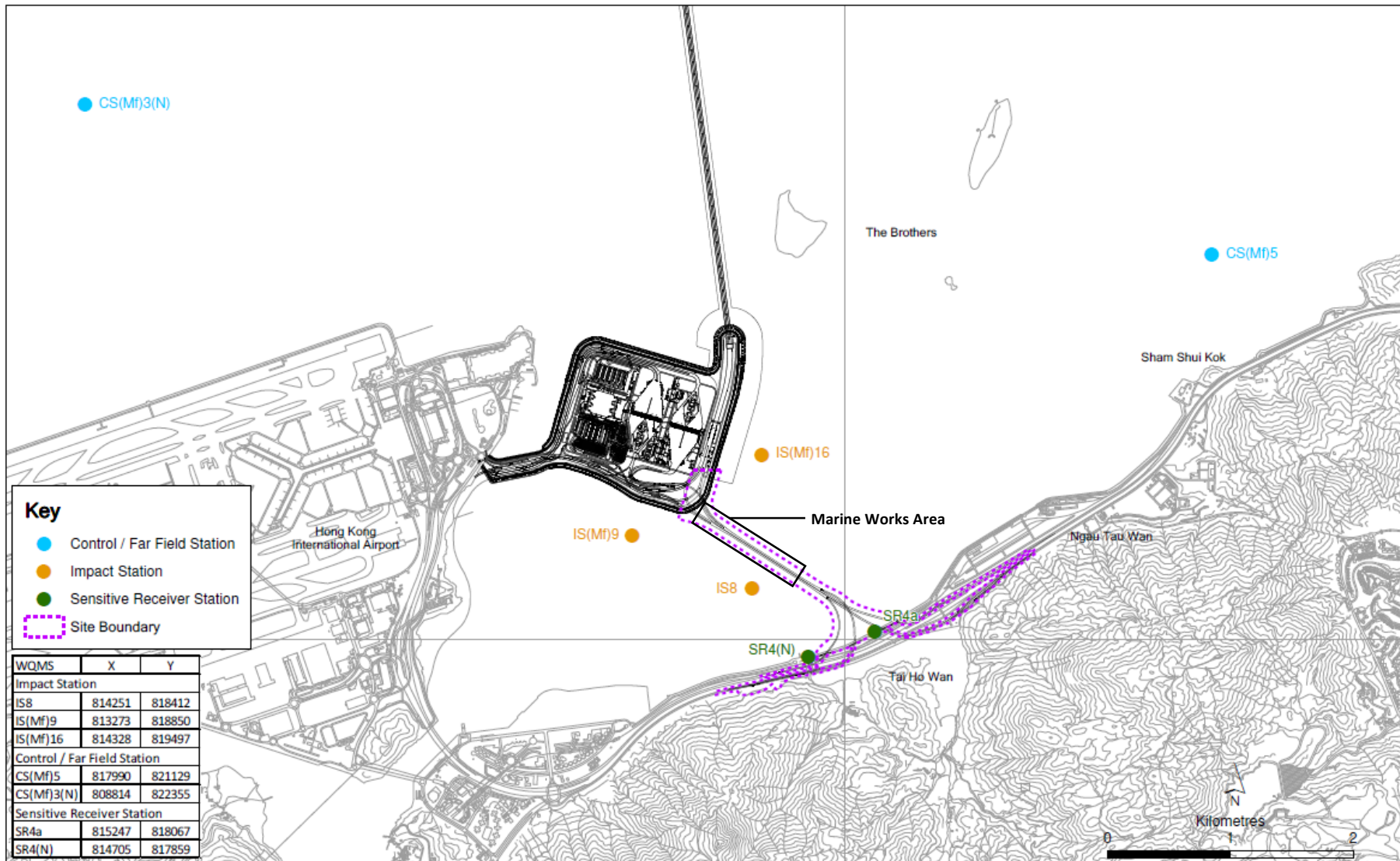


Photo 4 - Mid-Flood at IS8 on 14 September 2018



Photo 5 - Mid- Flood at IS(Mf)9 on 14 September 2018





Key

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

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

Locations of Water Quality Monitoring Stations

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 2 January 2019

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_September/November2018_dolphin_STG&ANI_NEL&NWL

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

Regards,

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

Dr Jasmine Ng
Environmental Team Leader

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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_Sep/Nov2018_dolphin_STG&ANI_NEL&NWL [Total No. of Exceedance = 1]	
Date	September to November 2018 (monitored) 31 December 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) Quarterly encounter rate of total number of dolphins (ANI)	
Action Levels	North Lantau Social cluster	NEL: STG < 4.2 & ANI < 15.5 or NWL: STG < 6.9 & ANI < 31.3
Limit Levels		NEL: STG < 2.4 & ANI < 8.9 and NWL: STG < 3.9 & ANI < 17.9
Recorded Levels	NEL	STG = 0 & ANI = 0
	NWL	STG = 1.51 & ANI = 2.70
	One Limit Level Exceedance was recorded in the quarterly impact dolphin monitoring at NEL and NWL between September and November 2018. The exceedance was reported in the approved <i>sixty-first Monthly EM&A Report</i> dated 14 December 2018.	
Statistical Analyses	<p>Further to the review of the available and relevant dolphin monitoring data in the EM&A under this Contract, statistical analyses were conducted as follows:</p> <ul style="list-style-type: none"> A two-way ANOVA with repeated measures and unequal sample size was conducted using Period (2 levels: baseline vs impact – present impact quarter, September to November 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 $\alpha = 0.05$ as the significance level in the statistical tests, significant differences in STG ($p = 0.0029$) and ANI ($p = 0.0143$) were detected between Periods. 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 November 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 $\alpha = 0.00001$ as the significance level in the statistical tests, significant difference in STG ($p = 0.000000$) and in ANI ($p = 0.000000$) between Cumulative Period (baseline and impact phases) and Location (NEL and NWL) were detected. <p>* Note: The commencement date under <i>Contract No. HY/2012/07</i> is 31 October 2013.</p>	
Works Undertaken (in the monitoring quarter)	In the quarter between September and November 2018, marine works was undertaken under <i>Contract No. HY/2012/07</i> include uninstallation of marine piling platform.	

<p>Possible Reason for Action or Limit Level Exceedance(s)</p>	<p>The potential factors that may have contributed to the observed exceedance are reviewed below:</p> <ul style="list-style-type: none"> • Blocking of CWD travelling corridor: The <i>Monitoring of Marine Mammals in Hong Kong Waters (2017 – 18)</i> ⁽¹⁾ 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. • Marine works of the Contract: 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. 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&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. • Impact on water quality: According to the findings in the water quality monitoring results at the impact monitoring stations between September to November 2018, there were forty-eight (48) Action Level and five (5) Limit 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>20th Quarterly EM&A Report (September –November 2018)</i>. <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>
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(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>Actions Taken / To Be Taken</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"> 1. 250m dolphin exclusion zone; 2. Acoustic decoupling plan; 3. Training to workers; 4. Offsite vessel routing control in accordance with Regular Marine Travel Routes Plan, including routing control within existing marine park boundaries; 5. Vessels speed limited at 5 knots and 10 knots within existing marine park boundaries and site boundary respectively; 6. Idling and mooring of working vessels within site boundary <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>Remarks</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-ninth to sixty-first Monthly EM&A Reports</i>. Comparison on water quality between impact and baseline periods is elaborated in the <i>20th Quarterly EM&A Report</i>.</p>