

Appendix J

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

*Appendix J1 Cumulative Statistics on Exceedances*

		Total No. recorded in this quarter	Total No. recorded since contract commencement
1-Hr TSP	Action	0	0
	Limit	0	2
24-Hr TSP	Action	0	2
	Limit	0	0
Noise	Action	0	0
	Limit	0	0
Water Quality	Action	0	272
	Limit	0	27
Impact Dolphin Monitoring	Action	0	11
	Limit	1	19

*Appendix J2 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 contract 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 Impact Dolphin  
Monitoring

**Date** 23 April 2020

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



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Dear Sir or Madam,

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

**0215660\_December2019/February2020\_dolphin\_STG&ANI\_NEL&NWL**

A total of one limit level exceedance was recorded in the quarterly impact  
dolphin monitoring data between December 2019 and February 2020.

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_ Dec2019/Feb2020_dolphin_STG&ANI_NEL&NWL [Total No. of Exceedance = 1]	
Date	December 2019 – February 2020 (monitored) 30 April 2020 (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 = 0.62 & ANI = 1.55
	One Limit Level Exceedance was recorded in the quarterly impact dolphin monitoring at NEL and NWL between December 2019 to February 2020. The exceedance was reported in the approved <i>Seventy-sixth Monthly EM&amp;A Report</i> dated 12 March 2020.	
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, December 2019 to February 2020) 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 = 0.0035</math>) and ANI (<math>p = 0.0239</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 February 2020) 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 = 0.00001</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 December 2019 to February 2020, no marine works were 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> <p>Blocking of CWD travelling corridor:</p> <ul style="list-style-type: none"> <li>• The Monitoring of Marine Mammals in Hong Kong Waters (2018 - 19) <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> </ul> <p>Marine works of the Contract:</p> <ul style="list-style-type: none"> <li>• As per the findings from the EIA report (Section 8.11.9), the major influences on the Chinese White Dolphin (CWD) <i>Sousa chinensis</i> under this Contract are marine traffics and bored piling works. The Monitoring of Marine Mammals in Hong Kong Waters (2018-2019) reported that CWD decline were likely influenced by reclamation works from construction activities.</li> <li>• 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 EP-354/2009/D and the updated EM&amp;A Manual. 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. As informed by the Contractor on 1 July 2019 and confirmed by SOR on 21 August 2019, no marine works would be undertaken under the Contract. 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> </ul> <p>Impact on water quality:</p> <ul style="list-style-type: none"> <li>• According to the Updated EM&amp;A Manual, a post-construction water quality monitoring shall be carried out upon completion of all marine-based construction activities. Post-construction water quality monitoring was undertaken three days per week for at least 4 weeks in accordance with the Updated EM&amp;A Manual. The proposal for post-construction water quality monitoring was approved by EPD on 19 November 2019. The post construction water quality monitoring commenced on 27 November 2019 and completed on 23 December 2019. Post-construction water quality monitoring results and graphical presentations are provided in the approved <i>Seventy-fourth Monthly EM&amp;A Report</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>
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(1) Hung SKY (2019). Prepared for AFCD. Available at: [https://www.afcd.gov.hk/english/conservation/con\\_mar/con\\_mar\\_chi/con\\_mar\\_chi\\_chi/files/Final\\_Report\\_2018\\_19.pdf](https://www.afcd.gov.hk/english/conservation/con_mar/con_mar_chi/con_mar_chi_chi/files/Final_Report_2018_19.pdf)

<b>Actions Taken / To Be Taken</b>	<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. Acoustic decoupling plan;</li> <li>2. Training to workers;</li> <li>3. Offsite vessel routing control in accordance with Regular Marine Travel Routes Plan, including routing control within existing marine park boundaries;</li> <li>4. Vessels speed limited at 5 knots and 10 knots within existing marine park boundaries and site boundary respectively;</li> <li>5. 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>ET shall keep reviewing the implementation status of the dolphin related mitigation measures and remind the contractors to ensure the relevant measures are fully implemented. 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 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 should avoid the BMP. The marine works footprint and vessels for the marine works should also 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 Sky Pier. The CWDs in the area should be closely followed.</p>
<b>Remarks</b>	<p>The results of impact dolphin monitoring and the status of implemented marine ecological mitigation measures are documented in the approved <i>Seventy-Fourth to Seventy-Sixth Monthly EM&amp;A Reports</i>.</p>