

Table I1 *Cumulative Statistics on Exceedances*

Monitoring Parameters	Action/Limit Level	Total No. recorded in this reporting quarter	Total No. recorded since project commencement
1-Hr TSP	Action	0	30
	Limit	0	2
24-Hr TSP	Action	0	5
	Limit	0	1
Water Quality	Action	0	6
	Limit	0	1
Impact Dolphin Monitoring	Action	2	9
	Limit	0	3

Table I2 *Cumulative Statistics on Complaints, Notifications of Summons and Successful Prosecutions*

Reporting Period	Cumulative Statistics		
	Complaints	Notifications of Summons	Successful Prosecutions
This Reporting Period (September 2015 to November 2015)	0	0	0
Total No. received since project commencement	4	0	0



ERM-Hong Kong, Limited

CONTRACT NO. HY/2012/08

TUEN MUN – CHEK LAP KOK LINK –
NORTHERN CONNECTION SUB-SEA TUNNEL SECTION

Impact Dolphin Monitoring
Notification of Exceedance

Log No.	0212330_Sep2015/Nov2015_dolphin_STG&ANI_NEL&NWL [Total No. of Exceedances = 2 Action Level Exceedances]	
Date	September 2015 to November 2015 (monitored) 7 January 2016 (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 = 0.0 & ANI = 0.0
	NWL	STG = 3.94 & ANI = 21.05
	Two Action Level Exceedances were recorded in the quarterly impact dolphin monitoring at NEL and NWL between September 2015 and November 2015. The exceedance was reported in the approved <i>Twenty-fifth Monthly EM&A Report</i> dated 10 December 2015.	
Statistical Analyses	<p>Further to the review of the available and relevant dolphin monitoring data in the EM&A programme by 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 quarter, September 2015 to November 2015) 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 difference in STG ($p = 0.0079$) was detected between Periods but not in ANI ($p = 0.071$). • 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 2015) 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 quarters. By setting $\alpha = 0.0001$ as the significance level in the statistical tests, significant difference in STG ($p = 0.00009$) and in ANI ($p = 0.00003$) between Cumulative Period and Location were detected. <p>*Note: The commencement date under <i>Contract No. HY/2012/08</i> is 1 November 2013.</p>	
Works Undertaken (in the monitoring quarter)	In the quarter between September 2015 and November 2015, no marine works was carried out in this Contract.	

Possible Reason for Action or Limit Level Exceedance(s)	<p>The exceedance is considered not caused by the Project, in view of the following:</p> <ul style="list-style-type: none"> • The <i>Monitoring of Marine Mammals in Hong Kong Waters (2014 – 15)</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 project), which is likely a contributing factor for the decrease in dolphin abundances in NEL. • As per the findings from the EIA report (Section 8.11.9), the major influences on the Chinese White Dolphin (CWD) are marine traffics, dredging works and reclamation/filling works. The Contractor has implemented the marine traffic control as per the requirements in the EP-354/2009/D and the updated EM&A Manual. No marine works were carried out during the monitoring quarter. During this quarter of dolphin monitoring, no unacceptable impact on CWD due to the activities under this Contract was observed.
Actions Taken/ To Be Taken	<p>With reference to the site inspection records in this quarter, the respective marine ecological mitigation measures (including marine traffic control) have been implemented properly by the Contractor throughout the marine works period. No immediate additional action is considered necessary. The ET will monitor for future trends in exceedance(s).</p> <p>A joint team meeting was held on 15 January 2016 for discussion on CWD trend, with attendance of ENPO, HyD, Representatives of Resident Site Staff (RSS), Environmental Team (ET) for Contract No. HY/2010/02, HY2011/03, HY/2012/07 and HY/2012/08, and Representatives of Main Contractor for Contract No. 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 nor 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 contractor to ensure the relevant measures are fully implemented. The participants were requested by ENPO to collect and report the marine traffic statistics. It was recommended that the marine works of HZMB projects should be completed as soon as possible so as to reduce the overall duration of impacts and allow the dolphins population to recover as early as possible. Further protection measures (e.g. speed limit control) should be carried out as soon as possible to minimize the disturbance to the proposed Brothers Marine Park (BMP). The Marine Travel Route Plan for this Project should be updated once the boundary of BMP is gazetted.</p>
Remarks	<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>Twenty-third to Twenty-fifth EM&A Monthly Reports</i>.</p>

(1) Hung SKY (2015). Prepared for AFCD. Available from: http://www.afcd.gov.hk/english/conservation/con_mar/con_mar_chi/con_mar_chi_chi/con_mar_chi_chi.html