

Table K1 *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	21	21
	Limit	2	2
24-Hr TSP	Action	5	5
	Limit	1	1
Water Quality	Action	5	5
	Limit	0	0
Impact Dolphin Monitoring	Action	1	1
	Limit	0	0

Table K2 *Cumulative Statistics on Complaints, Notifications of Summons and Successful Prosecutions*

Reporting Period	Cumulative Statistics		
	Complaints	Notifications of Summons	Successful Prosecutions
This Reporting Period (Nov 2013 to Feb 2014)	0	0	0
Total No. received since project commencement	0	0	0

Email
message

Environmental
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To ENVIRON - Hong Kong, Limited (ENPO)

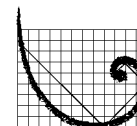
From ERM- Hong Kong, Limited

Ref/Project number Contract No. HY/2012/08 Tuen Mun-Chek Lap
Kok Link-Northern Connection Sub-sea Tunnel
Section

Subject Notification of Exceedance for Impact Dolphin
Monitoring

Date 9 April 2014

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



ERM

Dear Sir or Madam,

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

0212330_Dec2013/Feb2014_dolphin_STG&ANI_NEL

A total of one action exceedance was recorded in the quarterly impact
dolphin monitoring data between December 2013 and February 2014.

Regards,

A handwritten signature in black ink, appearing to be 'Jovy Tam', written in a cursive style.

Mr Jovy Tam
Environmental Team Leader

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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_Dec2013/Feb2014_dolphin_STG&ANI_NEL [Total No. of Exceedances = 1]	
Date	December 2013 to February 2014 (monitored) 03 April 2014 (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 < 2.34 & ANI < 8.9 and NWL: STG < 3.9 & ANI < 17.9
Recorded Levels	NEL	STG = 0.4 & ANI = 1.3
	NWL	STG = 8.2 & ANI = 32.6
	Action Level Exceedance is recorded in the quarterly impact dolphin monitoring between December 2013 and February 2014.	
Statistical Analyses	A two-way ANOVA with repeated measures and unequal sample size was conducted using Period (2 levels: baseline vs impact) and Location (2 levels: NEL and NWL) as fixed factors to examine whether there were any significant differences in the averages encounter rates between the baseline and impact monitoring periods. By setting $\alpha = 0.1$ as the significance level in the statistical tests, a significant difference in STG ($p = 0.0774$) between baseline and present quarter was detected but not in ANI ($p = 0.1671$).	
Works Undertaken (in the monitoring quarter)	In the quarter between December 2013 and February 2014, the major marine works under <i>Contract No. HY/2012/08</i> included: <ul style="list-style-type: none"> • Dredging works at Portions N-A and N-B • Removal of existing seawall • Vertical seawall and sloping seawall constructions • Marine sheet piling for box culvert extension 	

Possible Reason for Action or Limit Level Exceedance(s)	<p>The exceedance is considered to be the natural variation of Chinese white dolphin (CWD) <i>Sousa chinensis</i> ranging pattern and unlikely to be due to the Project, in view of the following:</p> <ul style="list-style-type: none"> • According to the long-term monitoring results of marine mammals collected by AFCD, the CWD in winter months (December to February) are usually ranging in waters around Sha Chau, Lung Kwu Chau and north Lantau, with some of them in the east and south of Lantau waters and outer Deep Bay, but less frequently at NEL • As per the findings from the EIA report (Section 8.11.9), the major influences on the 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/B and the updated EM&A Manual. Likewise, dredging works were undertaken within the working rate described in the EP and the approved EIA Report by a closed grab dredger with silt curtains being deployed throughout the dredging period. No reclamation/ filling works was undertaken in the reporting quarter. • Seasonal variation in individual ranging pattern has been well documented in the long-term monitoring of marine mammals conducted by AFCD and in the literatures ⁽¹⁾⁽²⁾. • According to the findings of EIA report (Section 8.9) and Baseline Dolphin Monitoring, dolphin sightings at the northeast Lantau are not particularly high, which is commensurate with the quarterly findings that dolphin sightings at NEL is relatively lower than that at NWL.
Actions Taken/ To Be Taken	<p>With reference to the site inspection records in this quarter, the respective marine ecological mitigation measures (including 250 m dolphin exclusion zone, passive acoustic monitoring, underwater acoustic decoupling plan and 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>
Remarks	<p>The quarterly monitoring results and the transact location of impact dolphin monitoring are attached.</p>

(1) Jefferson & Hung (2010) A review of the status of the Indo-Pacific Humpback Dolphin (*Sousa chinensis*) in Chinese Waters. Aquatic Mammals (30): 149 – 158.

(2) Chen et al., (2010) Distribution, abundance, and individual movements of Indo-Pacific humpback dolphins (*Sousa chinensis*) in the Pearl River Estuary, China. Mammalia (74): 117 – 125.