

2 May 2013
Our Ref: 8954/0126

By Email and Post

China State Construction Engineering (Hong Kong) Ltd.
29/F, China Overseas Building
139 Hennessy Road
Hong Kong

Attention: Mr. Tse Shun Yau

Dear Sirs

**CONTRACT NO. HY/2011/03
HONG KONG-ZHUHAI-MACAO BRIDGE HONG KONG LINK ROAD SECTION
BETWEEN SCENIC HILL AND HONG KONG BOUNDARY CROSSING FACILITIES
(BCF) AND ROADLINKS BETWEEN THE PROPOSED HKBCF AND HONG KONG
INTERNATIONAL AIRPORT
- ACTION / LIMIT LEVELS AND EVENT ACTION PLAN FOR DOLPHIN MONITORING**

As requested by the ENPO, we submit the Action Level (AL) and Limit Level (LL) together with the Event and Action Plan (EAP) for the dolphin impact monitoring for Contract No. HY/2011/03.

Should you have any queries, please feel free to contact me.

Yours faithfully
BMT Asia Pacific Limited



Claudine Lee
Environmental Team Leader

Enc

To define the AL and LL in comparison with the baseline dolphin encounter rate, the seasonal fluctuation of dolphin encounter rate in Northwest Lantau (NWL) and Northeast Lantau (NEL) should be considered by comparing dolphin encounter rates across the four seasons in order to take the natural fluctuation of dolphin occurrence into account. Notably, the natural fluctuation among different seasons can differ by as much as 30%, and in a few extreme cases up to 40-60% upon review of dolphin historical data in North Lantau waters. Therefore, the approach of 30% and 60% percentage reduction to define the AL and LL respectively is reasonable to determine whether the construction activities of HKLR03 project have caused real significant impact on dolphin occurrence, instead of triggering false alarms prematurely. Although the exact percentages (30%/60%) for the AL and LL are set somewhat arbitrarily, this is based on careful consideration of the natural fluctuation of dolphin occurrences among different seasons as explained above.

The proposed AL and LL are shown below:

Table 1 AL and LL for Dolphin Impact Monitoring

	North Lantau Social Cluster	
	NEL	NWL
Action Level	STG < 70% of baseline & ANI < 70% of baseline	STG < 70% of baseline & ANI < 70% of baseline
Limit Level	STG < 40% of baseline & ANI < 40% of baseline	

Remarks:

1. STG means quarterly encounter rate of number of dolphin sightings.
2. ANI means quarterly encounter rate of total number of dolphins.
3. For North Lantau Social Cluster, AL will be trigger if either NEL **or** NWL fall below the criteria; LL will be triggered if both NEL **and** NWL fall below the criteria.

Table 2 Derived Value of Action Level (AL) and Limit Level (LL)

	North Lantau Social Cluster	
	NEL	NWL
Action Level	STG < 4.2 & ANI < 15.5	STG < 6.9 & ANI < 31.3
Limit Level	(STG < 2.4 & ANI < 8.9) and (STG < 3.9 & ANI < 17.9)	

Remarks:

1. STG means quarterly encounter rate of number of dolphin sightings.
2. ANI means quarterly encounter rate of total number of dolphins.
3. For North Lantau Social Cluster, AL will be trigger if either NEL **or** NWL fall below the criteria; LL will be triggered if both NEL **and** NWL fall below the criteria.

The proposed EAP is shown below:

Table 3 Event and Action Plan for Dolphin Impact Monitoring

Event	ET Leader	IEC	ER / SOR	Contractor
Action Level	<ol style="list-style-type: none"> 1. Repeat statistical data analysis to confirm findings; 2. Review all available and relevant data, including raw data and statistical analysis results of other parameters covered in the EM&A, to ascertain if differences are as a result of natural variation or previously observed seasonal differences; 3. Identify source(s) of impact; 4. Inform the IEC, ER/SOR and Contractor; 5. Check monitoring data. 6. Review to ensure all the dolphin protective measures are fully and properly implemented and advise on additional measures if necessary. 	<ol style="list-style-type: none"> 1. Check monitoring data submitted by ET and Contractor; 2. Discuss monitoring results and findings with the ET and the Contractor. 	<ol style="list-style-type: none"> 1. Discuss monitoring with the IEC and any other measures proposed by the ET; 2. If ER/SOR is satisfied with the proposal of any other measures, ER/SOR to signify the agreement in writing on the measures to be implemented. 	<ol style="list-style-type: none"> 1. Inform the ER/SOR and confirm notification of the non-compliance in writing; 2. Discuss with the ET and the IEC and propose measures to the IEC and the ER/SOR; 3. Implement the agreed measures.
Limit Level	<ol style="list-style-type: none"> 1. Repeat statistical data analysis to confirm findings; 2. Review all available and relevant data, including raw data and statistical analysis results of other parameters covered in the EM&A, to ascertain if differences are as a result of natural variation or previously observed seasonal differences; 3. Identify source(s) of impact; 4. Inform the IEC, ER/SOR and Contractor of 	<ol style="list-style-type: none"> 1. Check monitoring data submitted by ET and Contractor; 2. Discuss monitoring results and findings with the ET and the Contractor; 3. Attend the meeting to discuss with ET, ER/SOR and Contractor the necessity of additional dolphin monitoring and any other potential mitigation measures; 4. Review proposals for additional monitoring and any other mitigation measures submitted by ET and 	<ol style="list-style-type: none"> 1. Attend the meeting to discuss with ET, IEC and Contractor the necessity of additional dolphin monitoring and any other potential mitigation measures; 2. If ER/SOR is satisfied with the proposals for additional dolphin monitoring and/or any other mitigation measures submitted by ET and Contractor and verified by IEC, ER/SOR to signify the agreement in writing on such proposals and any 	<ol style="list-style-type: none"> 1. Inform the ER/SOR and confirm notification of the non-compliance in writing; 2. Attend the meeting to discuss with ET, IEC and ER/SOR the necessity of additional dolphin monitoring and any other potential mitigation measures; 3. Jointly submit with ET to IEC a proposal of additional dolphin monitoring and/or any other mitigation measures when necessary; 4. Implement the agreed additional dolphin

Event	ET Leader	IEC	ER / SOR	Contractor
	<p>findings;</p> <p>5. Check monitoring data;</p> <p>6. Repeat review to ensure all the dolphin protective measures are fully and properly implemented and advise on additional measures if necessary;</p> <p>7. If ET proves that the source of impact is caused by any of the construction activity by the works contract, ET to arrange a meeting to discuss with IEC, ER/SOR and Contractor the necessity of additional dolphin monitoring and/or any other potential mitigation measures (e.g., consider to modify the perimeter silt curtain or consider to control/temporarily stop relevant construction activity etc.) and submit to IEC a proposal of additional dolphin monitoring and/or mitigation measures where necessary.</p>	<p>Contractor and advise ER/SOR of the results and findings accordingly;</p> <p>5. Supervise / Audit the implementation of additional monitoring and/or any other mitigation measures and advise ER/SOR the results and findings accordingly.</p>	<p>other mitigation measures;</p> <p>3. Supervise the implementation of additional monitoring and/or any other mitigation measures.</p>	<p>monitoring and/or any other mitigation measures.</p>