

21 June 2017

By Fax (3468 2076) and By Post

AECOM Asia Co. Ltd.
The PRE's Office
5 Ying Hei Road, Tung Chung, Lantau
Hong Kong

Attention: Mr. Ringo Tso

Dear Sir,

**Re: Agreement No. CE 48/2011 (EP)
Environmental Project Office for the
HZMB Hong Kong Link Road, HZMB Hong Kong Boundary Crossing Facilities,
and Tuen Mun-Chek Lap Kok Link – Investigation**

**Contract No. HY/2013/02 – HZMB HKBCF – Infrastructure Works Stage I
(Western Portion)
Dolphin Watching Plan**

Reference is made to the Environmental Team's submission of the Dolphin Watching Plan certified by the ET Leader (ET's ref.: "OC/70342/CLL" dated 21 June 2017) and provided to us via e-mail on 21 June 2017.

We are pleased to inform you that we have no adverse comment on the captioned submission. We write to verify the captioned submission in accordance with Condition 2.6 of the Environmental Permit No. EP-353/2009/K.

With respect to no anticipated night-time marine works for this contract stated in this plan, please be reminded that this plan shall be revised to include the necessary arrangement for satisfying Condition 3.1 of the EP regarding the implementation of Passive Acoustic Monitoring for the detection of dolphin prior to any execution of marine works outside the daylight hours considered to be inevitable.

Thank you very much for your attention and please feel free to contact the undersigned should you require further information.

Yours faithfully,
For and on behalf of
Ramboll Environ Hong Kong Limited



Raymond Dai
Independent Environmental Checker

c.c.	HyD	Mr. Vico Cheung	(By Fax: 3188 6614)
	HyD	Mr. Chee-Kuen Yu	(By Fax: 3188 6614)
	ETS	Mr. C. L. Lau	(By Fax: 2695 3944)
	CHEC	Mr. Kenny Yu	(By Fax: 3915 0300)

Internal: DY, YH, PSC, ENPO Site

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Your Ref. : ---
Our Ref. : OC/70342/CLL

21 June 2017

China Harbour Engineering Co., Ltd
19/F, China Harbour Building,
370-374 King's Road,
North Point,
Hong Kong

By Hand and E-mail

Attn: Mr. Lawrence So (Deputy General Manager)

Dear Mr. So,

Contract No. HY/2013/02
Hong Kong – Zhuhai – Macao Bridge
Hong Kong Boundary Crossing Facilities – Infrastructure Works Stage I (Western Portion)
Certification of Dolphin Watching Plan (Rev. 1)

ETS-Testconsult Ltd, in the capacity of Environmental Team Leader, certified that the Dolphin Watching Plan (Rev. 1) dated 22 May 2017, conforms the requirements provided in Condition 2.6 of the Environmental Permit No. EP-353/2009/K.

Yours faithfully,
ETS-TESTCONSULT LIMITED

Mr. C. L. Lau
Environmental Team Leader

CLL/pn



CHINA HARBOUR ENGINEERING CO., LTD.

Dolphin Watching Plan

for

Contract No. HY/2013/02

Hong Kong – Zhuhai – Macao Bridge
Hong Kong Boundary Crossing Facilities
– Infrastructure Works Stage I (Western Portion)



Highways Department
The Government of the Hong Kong Special Administrative Region

Issue No. : 0

Revision No.: 1

Date : 22nd May, 2017

Prepared by :

A blue ink signature of the Environmental Officer, written over a horizontal line.

Environmental Officer

Endorsed by :

A blue ink signature of the Project Manager, written over a horizontal line.

Project Manager

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1.0 Introduction

China Harbour Engineering Company Limited (CHEC) are the Contractor responsible for the execution of the construction work for the **Contract HY/2013/02 – Hong Kong – Zhuhai – Macao Bridge Hong Kong Boundary Crossing Facilities – Infrastructure Works Stage I (Western Portion)**.

The Dolphin Watching Plan (DWP) is required under and condition 2.6 of Environmental Permit No. EP-353/2009/K that the DWP must be submitted to EPD one month prior to the commencement of marine works and specifically, the DWP must include;

“..regular inspection of the silt curtains, visual inspection of waters surrounded by the curtains, and an action plan shall be devised to cope with any unprecedented incidents such as the case that Chinese White Dolphin is found within the waters surrounded by the silt curtains.”

2.0 Site Characteristics

The site area of **Hong Kong – Zhuhai – Macao Bridge Hong Kong Boundary Crossing Facilities – Infrastructure Works Stage I (Western Portion)** is located at the western side of the Hong Kong Boundary Crossing Facilities (HKBCF). A temporary loading and unloading point (TLUP) was constructed at Portion A1 for facilitating the delivery of viaduct segment etc and will be dismantled.

During the construction of TLUP, the works area was covered by HZMB's Contract HY/2010/02's perimeter silt curtain, therefore the adoption of DWP by Contract No. HY/2010/02 is considered sufficient. During dismantled and associated remedial work at TLUP, in case the perimeter silt curtain maintained by Contract No. HY/2010/02 is removed, Contract No. HY/2013/02 will adopt this DWP until the completion of all marine works.

The proposed site location plan **Figure 1** and silt curtain layout plan **Figure 2** is included for reference.

3.0 Dolphin Watching Plan

This DWP was developed based on the characteristics of the site as described in Section 2, and shall be implemented after the silt curtains are in place. The DWP includes regular inspection of silt curtains, visual inspection of the waters surrounded by the silt curtains prior the start of works each day, and an action plan in case Chinese White Dolphin (CWD) is found within the water surrounded by the silt curtain.

3.1 Regular Inspection of the Silt Curtain

Before each day of work, the silt curtain should be visually inspected by maintenance team of the contractor to ensure that it is intact and the ends of the silt curtain are connected properly to form an enclosed area.

Damaged silt curtain should be repaired or replaced before conducting any construction activity within the silt curtain. The construction work will only commence after confirming the integrity of the silt curtain.

For the silt curtain maintenance inspection itself, there will be maintenance team that shall conduct dive inspections on a monthly basis, other than the daily patrols conducted by maintenance team of the contractor. Additional checks will be required after typhoon that may have damaged or dislodged the curtain, or cases of trapped dolphins that may indicate presence of holes. All necessary repairs should be performed before any marine construction work to commence.

3.2 Visual inspection of the water surrounded by the curtains

Dolphin watcher will scan the waters surrounded by the silt curtains prior to the start of marine work. He will look for any presence of dolphin inside the silt curtain with naked eyes/binoculars. Prior to the commencement of work for each day, the area surrounded by the silt curtain should be scanned for 30 minutes by the dolphin watcher. The dolphin watcher will observe on a land viewing platform which has a clear view of the whole silt curtain. The construction work will only commence after confirming 30 minutes of absence of dolphins.

All dolphin watchers will be trained by dolphin specialist, so that the dolphin watcher will have adequate knowledge to identify presence of dolphins. The refreshment training will be held half-yearly.

The location of proposed viewing platforms is shown in **Figure 2**. Should other nearer location with easy access and can provide clear view of the waters surrounded by the silt curtains be available, it will be also be considered for use as viewing platform.

It is anticipated no night marine work will be carried out.

3.3 Action Plan to be devised to cope with unpredicted incidents Chinese White Dolphin is found within the waters surrounded by the silt curtains

An action plan is prepared in case of any dolphin is found accidentally trapped inside the silt curtain enclosed area.

The dolphin watcher will continue to monitor for dolphins in the silt curtain during marine work on the viewing platform.

If a dolphin is found within the silt curtain area, the dolphin watcher should notify the site supervisor and construction manager immediately through handheld transceiver or mobile phone. All marine work within the silt curtain should cease until further notice. Also, maintenance team should be allocated to check the silt curtain for any openings that may be missed during the daily silt curtain check. A action plan & communication flow chart and emergency contact list is found in **Appendix A**.

The dolphin watcher should closely observe the movement of the dolphin and search for appearance of other dolphins within the silt curtain surrounded area. During the course of the action plan implementation, a China White Dolphin (CWD) intrusion record, including the date, time, group size, behavior, location and movement pattern of the CWD within the area of silt curtain shall be recorded in details and shall be submitted to Engineer Representative (ER) and IEC/ENPO within 3 working days for reference. The construction work can only re-commence if no dolphin is found within the observation area for 30 minutes. During re-installation of the silt curtain, dolphin exclusion zone will be implemented.

If dolphin watcher finds that the dolphin has difficulty in escaping from the silt curtain surrounded area for an extended period of time (e.g.30 mins.), The Environmental Team's dolphin specialist shall consulted immediately. The curtain should be closed to its original state afterwards.

In case injured, live-stranded or dead cetaceans are found within the silt curtain area, the AFCD will be contacted immediately through "1823" marine mammal stranding hotline. Existing AFCD/OPC procedures may then proceed.

Figure 1. Site Location Plan for loading and unloading point

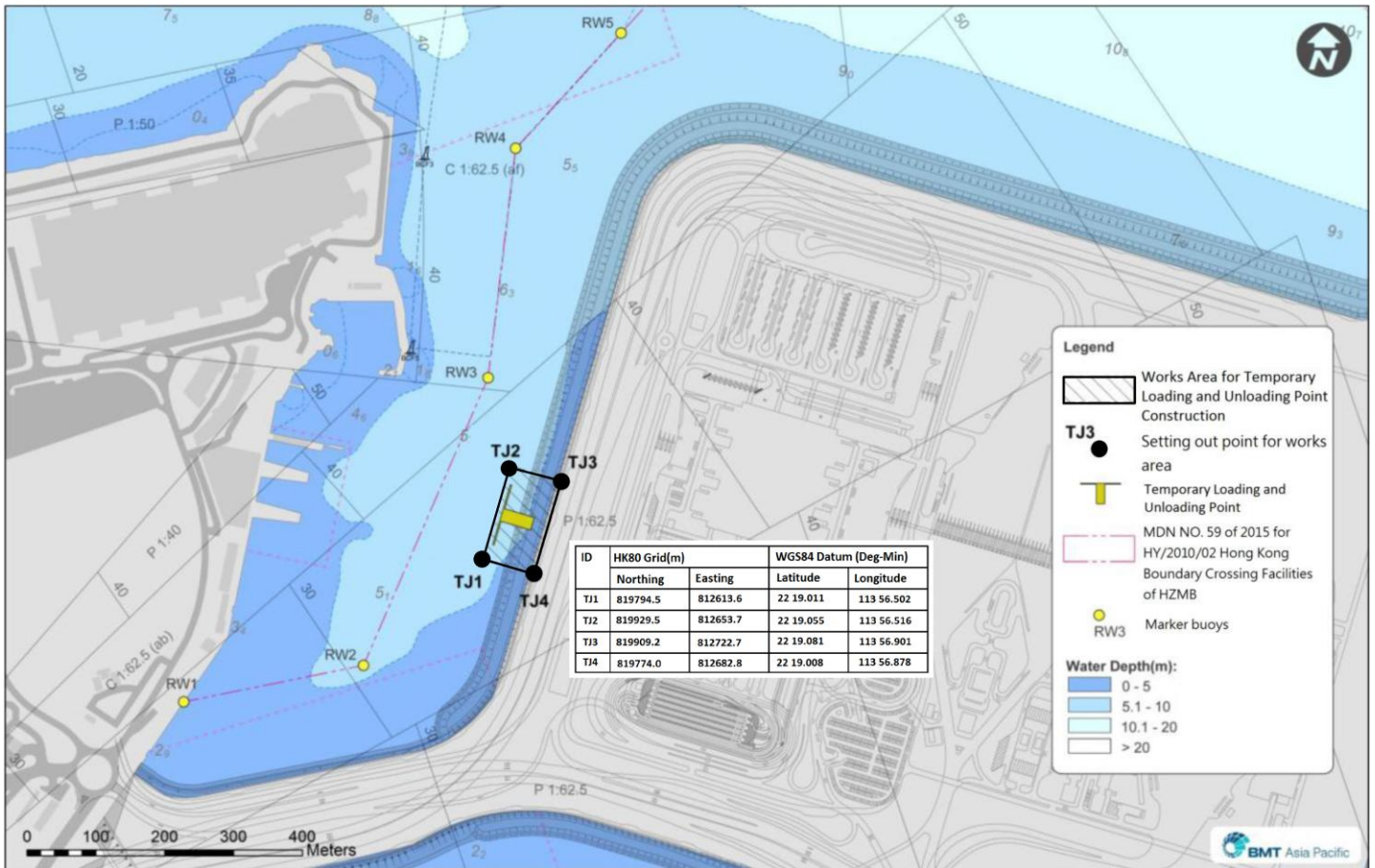
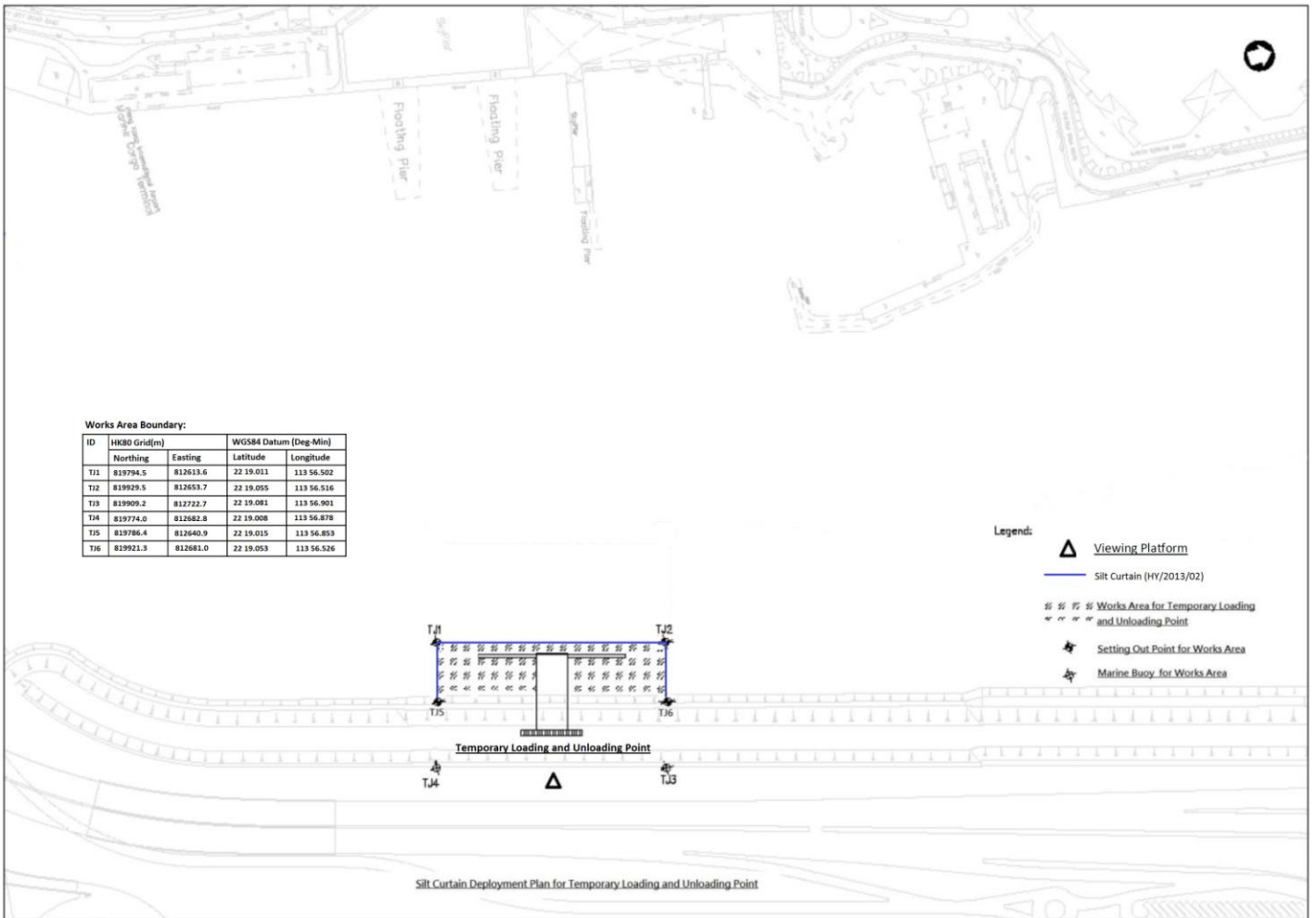
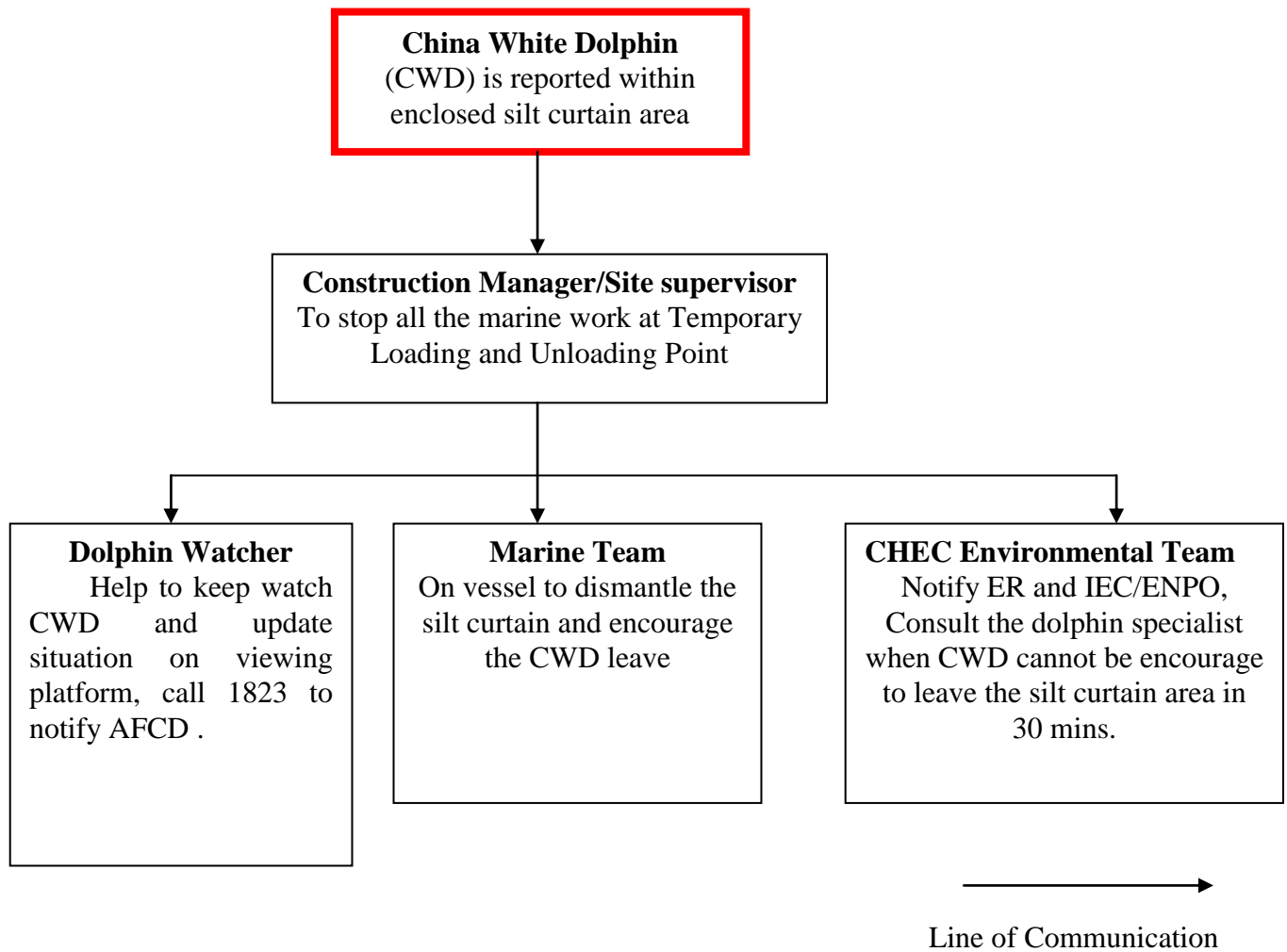


Figure 2. Silt curtain layout Plan and arrangement diagram



Appendix A. Action Plan and communication flow chart



Emergency Contact list

Post	Name	Contact No.
Emergency Co-ordinator	Kenny Yu	94852870
Construction Manager	Fung Pak Hang	93856501
Member- Construction Engineer	Simon Lau	97465843
Member – Senior Foreman	Luk Wai Keung	9135 8579
Environmental Team	Richard Ng *	5977 0593
	Paper Chan	5977 0595
	Endy Tse	5977 0594
Safety Representative	Ocean Ng	91971681
Environmental Team Leader	ETS - Mr. C.L. Lau	6190 4315
Dolphin Specialist	Dr. Lindsay Porter	9185 1516
Engineer’s Representative (ER)	CRE – Ringo Tso	9167 6903
	SRE – Bill Hon	6330 9293
	SRE (S&E) – PK Lee *	6329 8443
	RE (S&E) – Winston	6330 8293

*First contact person