McCONNELL DOWELL
CREATIVE CONSTRUCTION

Kaden 基利

Macdow - Kaden Joint Venture

Your ref :
Our ref : 1123/13.02/12/0344/L
Date : 30 May 2012

By Hand & Email

Environmental Protection Department
Branch Office
27/F., Southorn Centre
130 Hennessy Road, Wan Chai
Hong Kong

Attn: Mr Billy Ma
Dear Sirs,

Contract No. GSPD/SP/TKW-NP/089/2011
Installation of Submarine Gas Pipelines and Associated Facilities
from To Kwa Wan to North Point for Former Kai Tak Airport Development
Submission of Frame Type Silt Curtain (Rev.3)

Further to the comments by your good self and Mr KK Chan/EPD on 22 May 2012, regarding our submission of frame type silt curtain, we submit herewith the revision 3 of the captioned method statement for your approval. Please note the content has been amended with our response to comment on 17 May 2012 (letter ref. 1123/13.02/12/0292/L) and additional information as requested by KK Chan on 22 May 2012.

Should you have any queries regarding this application, please do not hesitate to contact the undersigned at 9093 2409.

Yours faithfully,
For and on behalf of
Macdow – Kaden Joint Venture

Dick Ip
Site Agent

DI/di
Encl.

cc.: Hong Kong and China Gas Co. Ltd — Mr Edmond Fong (By Email) – (w/ encl.)
Mott MacDonald Hong Kong Ltd. — Mr. James Kam (By Email) – (w/ encl.)

Units 601-605A, 6/F., Tower B, Manulife Financial Centre, 223 Wai Yip Street, Kwun Tong, Kowloon, Hong Kong Tel: (852) 2272 3680 Fax: (852) 2375 3655
香港九龍宮塘偉業街 223 號宏利金融中心 B 座六樓 601 至 605A 室 電話: (852) 2272 3680 傳真: (852) 2375 3655

McCONNELL DOWELL CREATIVE CONSTRUCTION™ Kaden 基利

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HKCG – Installation of Submarine Gas Pipelines and Associated Facilities from To Kwa Wan and North Point for Formation of Kai Tak Airport Development
Contract No.: GSPD/SP/TKW-NP-089/2011

Method Statement for Frame Type Silt Curtain Design and Deployment Plan

Rev.	Date of Issue	Prepared by		Approved by		ET's Certification		IEC's Verification	
		Name	Sign	Name	Sign	Name	Sign	Name	Sign
0	26 Mar 2012	HL		DI					
1	10 Apr 2012	HL		DI		Winnie Ko			
2	23 May 2012	HL		DI		Winnie Ko			
3	25 May 2012	HL		DI		Winnie Ko		Anne Kerr	

Table of Content

1. Introduction

The proposed frame silt curtain is used for fully enclosing the dredging location and containing local pollution caused by the closed grab dredger. It is used as a primary measure to reduce the dispersion of suspended solids, from the dredging area to the adjacent area, during dredging operation. While dredging taken place near To Kwa Wan (TKW) breakwater, a secondary silt curtain will be fixed to provide additional measure, for protecting the coral communities observed in that area. The arrangement of the secondary silt curtain will be submitted in separate cover. The primary silt curtain shall be supported by a steel frame with dimensions of approximately 15m x 12m and extended from seawater level to the bottom of seabed in order to cover the entire water column. This document shall outline the design and deployment plan of the frame type silt curtain which is expected to achieve a performance standard of reducing sediment loss to outside by a factor of 4.

As the dredging work will be conducted in a harbor region with intensive marine traffic and under the season sudden weather changes, we may need to dismiss from work site at soonest possible. The less mobility of hanging type silt curtain and the space it required cannot fulfill our intention of minimizing the impact to the environmental and maintaining the work progress at the same time. Hence single frame silt curtain will be deployed instead of combined installation of silt curtain (i.e. frame type and hanging type)

The design and deployment plan of the secondary silt curtain for the dredging working adjacent to TKW breakwater has been submitted to EPD on 15 May 2012 (letter ref. 1123/13.02/12/0283/L)

2. Frame Type Silt Curtain Design and Deployment Plan

2.1 100mm x 50mm steel channel will be used to form an approximate 15m x 12m rectangular shape steel frame. The frame shall be fixed alongside the grab dredger with a movement joint and be floating on water at all time when dredging works are in progress.

2.2 300mm diameter plastic buoys shall be linked up together by a net and fixed with the steel frame for hanging up the silt curtain.

2.3 A permeable, durable and abrasion resistant membrane, SG 100/100

GEOTEXTILE or similar type is proposed as a silt curtain to retain the silt within the dredging area. The specification of such geotextile will be submitted separately to the Engineer for approval.

2.4 The top end of the geotextile shall be tie up with the buoys net and the bottom end of the geotextile shall be tie up with sinker by nylon string. Such arrangement shall maintain the geotextile in vertical position during the course of dredging.

2.5 The length of geotextile shall be adjustable in order to suit the existing seabed condition. Ranged from 8m to 16m. (The seabed level varies from -5.12 to -13.34mPD and taken the estimated high tide, 2.4mPD into account)

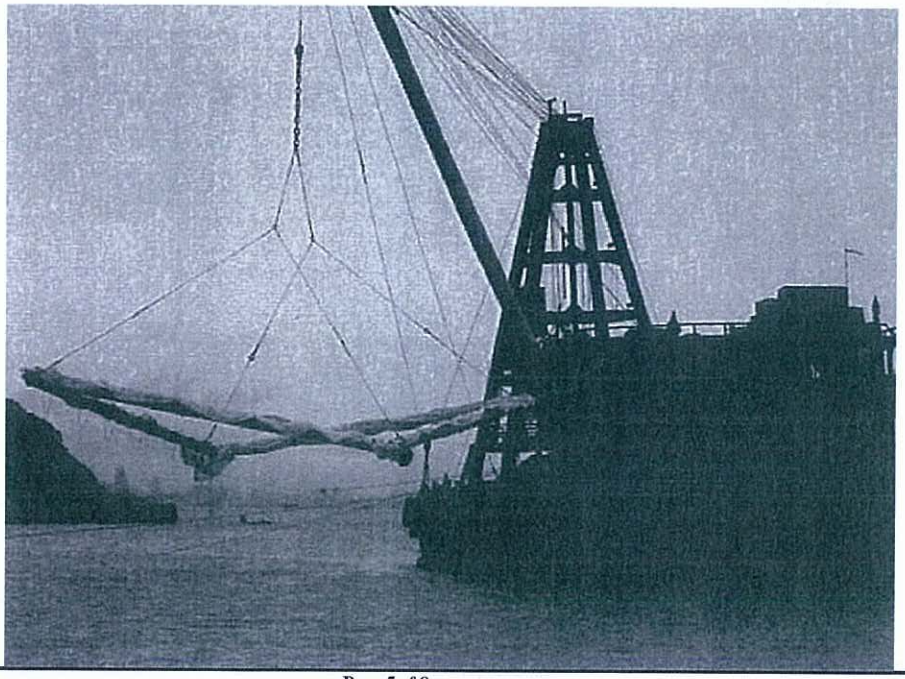
2.6 Considering the dredging work will be executed at the channel of Victoria Harbor, the stiffness of the silt curtain has to be enhanced to maintain its service. The attached sketch 1123/SK/039 in Appendix A illustrating the arrangement of frame type silt curtain to be deployed while deep sea depth (i.e. >16m) and rough current are encountered:-

- Check the length of silt curtain is long enough so that the bottom of the silt curtain is slightly touching the seabed.
- Fix a stiffening steel wire (dia 1" metal wire) at the middle height of the silt curtain.
- Connect tire wire to the stiffening steel wire to the barge body. This can maintain the curtain body in good shape and its serviceability.
- If the current is too rough, connect tire wire to the bottom of the counter weight to the barge body. This can further enhancement of the silt curtain under the rough sea condition.

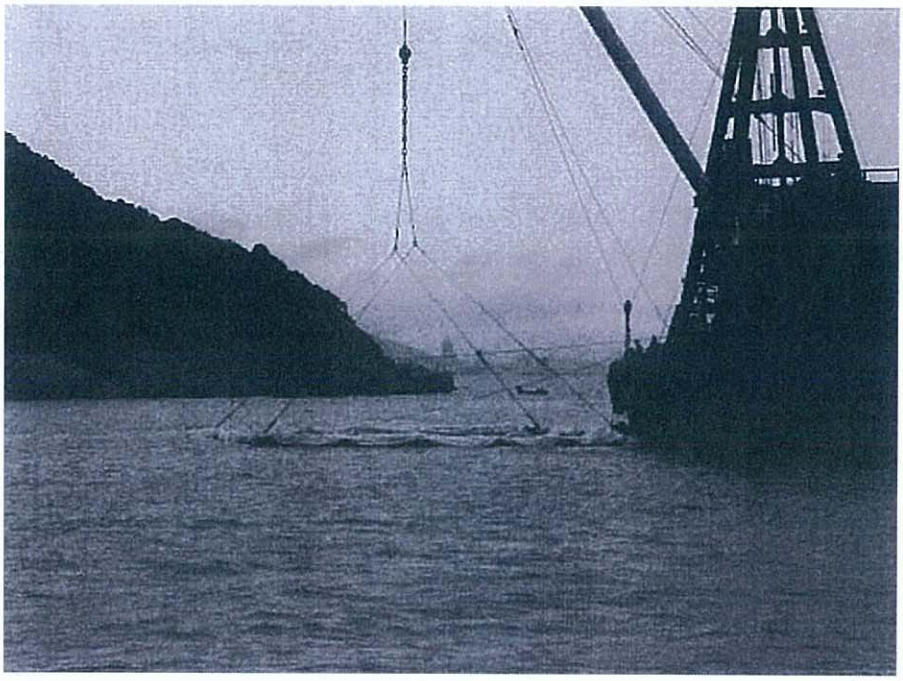
Dredging with in Silt Curtain

Setting up of Silt Curtain

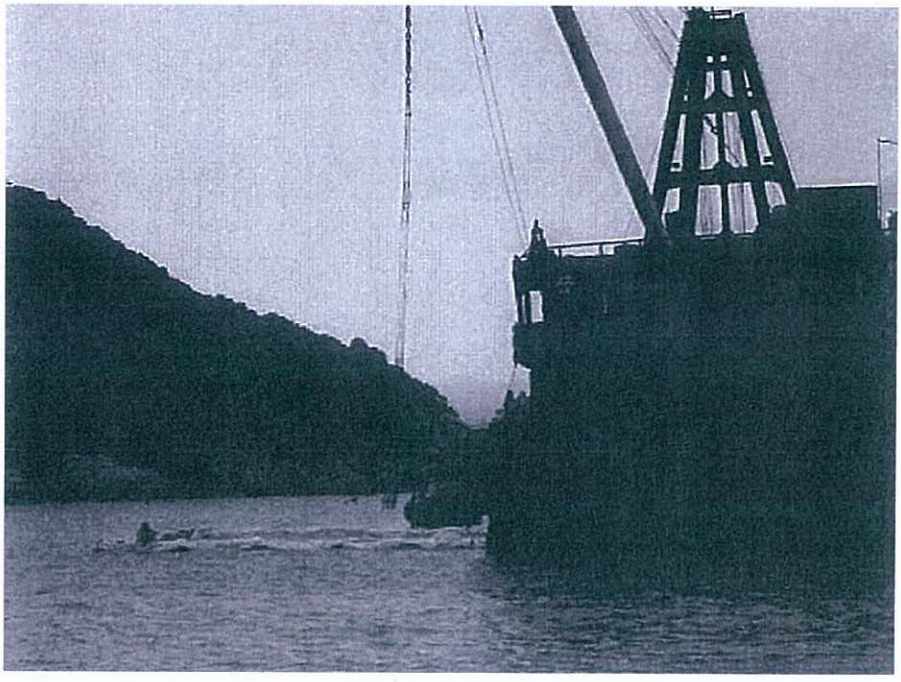
Step 1: Deliver the fabricated steel frame to site and join the silt curtain to the frame



Step 2: Lift and Place the steel frame to the sea



Step 3: Unwrap the silt curtain and tie the steel frame to the barge

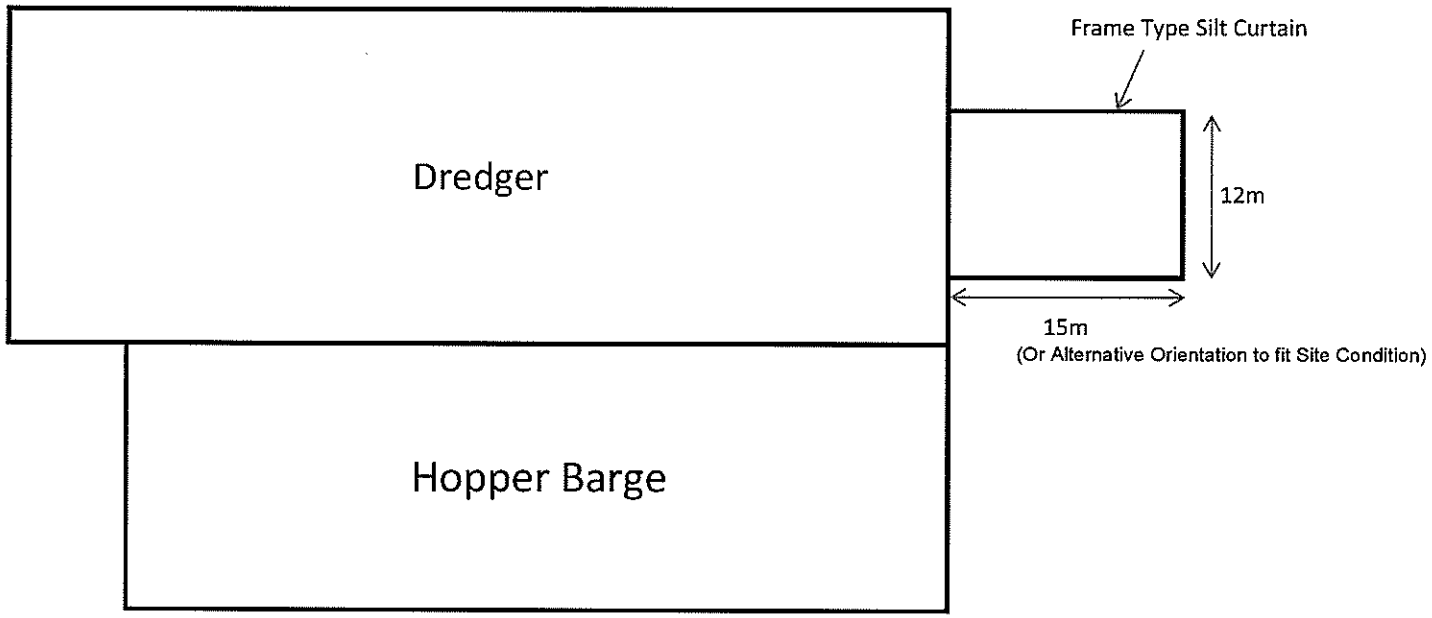


3. Repairing and Maintenance

The on-board supervisor shall check the condition of the silt curtain before commencement of dredging activity every working day. The checking record shall be kept on board for inspection at all times.

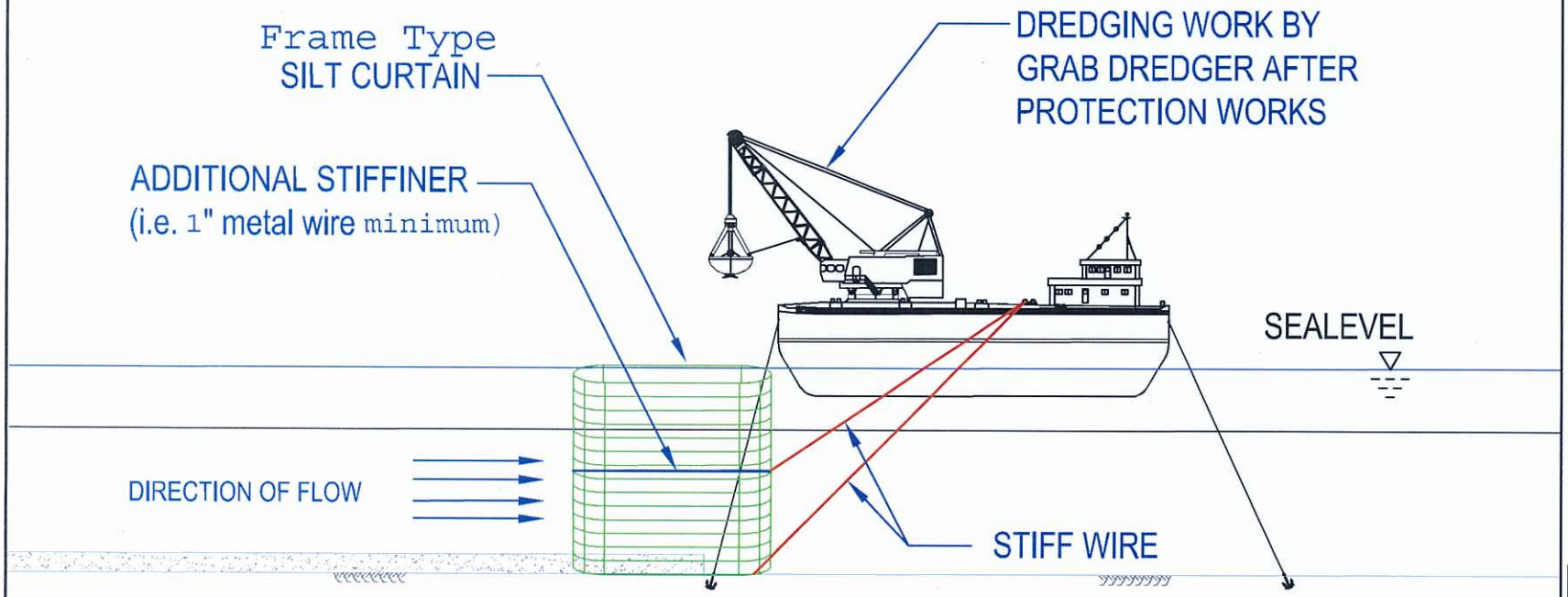
In case of any damage to the silt curtain is observed, the dredging operation shall be temporary ceased until the silt curtain has been well repaired to the acceptable condition.

APPENDIX A



Plan View of the General Arrangement of Frame Type Silt Curtain During Dredging

Sketch Ref. 1123/SK/047



Arrangement of Frame Type Silt Curtain under Rough Current

SECTION A - A
SCALE N.T.S

Rev	Description	By	Date

CLIENT
THE HONG KONG AND CHINA GAS COMPANY LIMITED.

CONSULTANT
Mott MacDonald

CONTRACTOR
McCONNELL DOWELL CREATIVE CONSTRUCTION
Kaden 基利
Macdow – Kaden Joint Venture

PROJECT
INSTALLATION OF SUBMARINE GAS PIPELINES AND ASSOCIATED FACILITIES FROM TO KWA WAN TO NORTH POINT FOR FORMER KAI TAK AIRPORT DEVELOPMENT

TITLE
MEASURE TO SECURING THE FRAME TYPE SILT CURTAIN UNDER ROUGH CURRENT

DRAWING NO. 1123/SK/039

DATE 22 MAY 2012 SCALE