MOTT MACDONALD

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

Attn: Mr. Xavier Lam / Mr. Billy Lao – Environmental Officer

Contract No. HY/2013/04 Hong Kong-Zhuhai-Macao Bridge (HZMB)

Hong Kong Boundary Crossing Facilities – Infrastructure Works Stage II (Southern Portion)

Regular Marine Travel Routes Plan

22 September 2017

By Email

Dear Sir,

In accordance with Condition 2.8 of the Environmental Permit (EP-353/2009/K) covering the captioned contract, we hereby certify the Regular Marine Travel Routes Plan dated 14 September 2017 for your onward submission.

Yours faithfully
For MOTT MACDONALD HONG KONG LIMITED

Gary Chow
Environmental Team Leader

Encl.

cc.
AECOM – Mr. Alfred Cheng (By Email)
Ramboll Environ Hong Kong Limited – Mr. Raymond Dai (By Email)

Our Reference
TC/GC/bw/T355861/02/02/L079

20/F AIA Kowloon Tower
Landmark East
100 How Ming Street
Kwun Tong
Kowloon
Hong Kong

T +852 2828 5757
F +852 2827 1823
mottmac.hk

RAMBOLL ENVIRON

Ref.: HYDHZMBEEM00_0_5850L.17

22 September 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. Alfred Cheng

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/2013/04 – HZMB HKBCF – Infrastructure Works Stage II (Southern Portion)
Regular Marine Travel Routes Plan

Reference is made to the Environmental Team's submission of the Regular Marine Travel Routes Plan certified by the ET Leader (ET's ref.: "JFP/GC/bw/T355861/02/02/L079" dated 22 September 2017) and provided to us via e-mail on 22 September 2017.

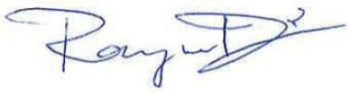
We are pleased to inform you that we have no adverse comment on the captioned submission. We write to verify the captioned submission in accordance with Condition 2.8 of EP-353/2009/K.

Please be reminded that it is the Contractor's/ET's responsibility to ensure the plan is effectively implemented by all the relevant parties, monitored and appropriately recorded for on-going checking of the travel route(s) and vessel speed. To ensure proper implementation, all training to captain and supervising staff shall include but not limited to the standard operating procedures and the specific precautionary measures as per Sections 5.0 and 4.0 of the submission respectively.

Please also be reminded that any proposed changes to the marine travel route(s) should be documented in an updated plan and be deposited to EPD as required by the EP before the changes are implemented.

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

Q:\Projects\HYDHZMBEEM00\02_Proj_Mgt\02_Corr\HYDHZMBEEM00_0_5850L.17.doc

Ramboll Environ Hong Kong Limited 英環香港有限公司
21/F, BEA Harbour View Centre, 56 Gloucester Road, Wanchai, Hong Kong Tel: 852.3465 2888 Fax: 852.3465 2899
www.Ramboll-Environ.com

c.c.	HyD	Mr. Vico Cheung	(By Fax: 3188 6614)
	HyD	Mr. Horace Hong	(By Fax: 3188 6614)
	MMHK	Mr. Gary Chow	(By Fax: 2827 1823)
	CSCE	Mr. Eddie Tang	(By Fax: 2459 4336)

Internal: DY, YH, PSC, ENPO Site

Ramboll Environ Hong Kong Limited 英環香港有限公司
21/F, BEA Harbour View Centre, 56 Gloucester Road, Wanchai, Hong Kong Tel: 852.3465 2888 Fax: 852.3465 2899
www.Ramboll-Environ.com

REGULAR MARINE TRAVEL ROUTES PLAN

Position	Name	Signature	Date
Prepared by Environmental Officer	Billy Lao		14 September 2017
Checked by Site Agent	Jason Chung		14 September 2017
Approved by Project Manager	Eddie Tang		14 September 2017

Table of Contents

List of Appendices

1.0 Introduction

During the tendering stage of the Hong Kong – Zhuhai – Macao Bridge, Hong Kong Boundary Crossing Facilities – Infrastructure Works Stage II (Southern Portion) Contract No. HY/2013/04 (the Contract), the location for loading/unloading pre-cast bridge segments transported by sea was not accessed and assumed to be share use with other Contract, i.e. HY/2013/02.

Until commencement of the Contract and actual access to different portions on BCF Island, original loading/unloading point which was managed by other Contract might not be effective. Under this circumstance, the marine travel route shall be considered and established to cater with transportation of the pre-cast bridge segments under this Contract.

Pursuant to the Environmental Permit (Permit no. EP-353/2009/K) Condition 2.8 and conforming to the requirement in the EIA Report, marine travel routes of vessels moving to and from the Contract work sites shall be prepared and verified by the IEC and submitted to Environmental Protection Department (EPD) at least 2 weeks before the commencement of the construction. Any subsequent changes to the regular routes shall be verified by the IEC. Therefore, a Regular Marine Travel Routes Plan (RMTRP) is prepared and submitted.

This RMTRP shall describe the design consideration for selection of regular marine travel routes, method of implementation & monitoring and precautionary measures to minimize any potential impacts to Chinese White Dolphin (CWD) and the existing navigation channel.

Pursuant to EPD's memo Ref. No. (20) in Ax(9) to EP2/G/A/146 Pt.2 dated 24 November 2016, the marine travel route shall be adjusted whenever opportunity arises in the course of future realignment / removal of perimeter silt curtains as to avoid encroaching onto the proposed Brother Marine Park as far as possible. Since the silt curtain previously maintained by the Reclamation Contract, HY/2010/02, was removed in June 2017, an updated regular marine travel route is proposed to fulfill the requirement of EPD.

2.0 Scope of Works under Contract HY/2013/04

- Construction of vehicular bridges and at-grade roads at south of Hong Kong Boundary Crossing Facilities (HKBCF) Island
- Construction of associated street lighting, street furniture, road marking, road signage, box culverts and outfalls, drainage, sewerage, fresh water and flushing water supply, irrigation, landscape, electrical and mechanical (E&M), utilities and services works
- Provisioning of civil engineering works and power supply for Traffic Control and Surveillance System (TCSS)

The above works are land-based. Therefore, no marine activity for this contract is involved except the marine transportation of pre-cast bridge segments. There will be no transportation of construction waste, passengers or other general use using marine vessel. The anticipated frequency of delivery of segment is three (3) times per week.

The site location plan is shown in **Appendix A.**

3.0 Design Consideration for Regular Marine Travel Routes

3.1 Design Criteria for Marine Travel Routes

3.1.1 Hotspot of Chinese White Dolphin

A hotspot of CWD in Brothers Island, located at North-east of Lantau, was identified in the Environmental Monitoring & Audit (EM&A) Manual of the Contract. The marine travel routes shall minimize the extent of going through the hotspot of CWD to prevent clashing of dolphin by the working vessels of the Contract.

3.1.2 Practice of Navigation Safety

The marine travel route shall be adjusted to accommodate with any natural constraints such as wind, current and wave as well as other marine operators such as speed boats, turbo jets, container vessels and river trade vessels to ensure safe navigation with proper travel routes.

Marker buoys and navigation buoys will be adopted to demarcate navigation channel. The captain shall use marker buoys and navigation buoys to determine proper travel routes based on actual situation and any unexpected incidents.

3.1.3 Existing Navigation Channel and Marine Traffic

Existing navigation channels, Ma Wan Channel and Urmston Road Channel, are located east and north-east to the HKBFC Island respectively. These navigation channels are main inshore passage connecting northwest end of the Victoria Harbour and the month of Pearl River. The layout of the navigation channels are shown in **Appendix B**.

3.1.4 Airport Height Restriction (AHR)

In accordance with regulation 23 of the Shipping and Port Control Regulation (Cap. 313A), there are eight (8) Areas designated as Airport Approach Restricted Areas. The details of the Areas are as follows (also refer to **Appendix C** for map):

Except with the permission of the Director of Marine Department,

(i) No vessel shall enter or pass through Area No. 1, 2, 3, 4.
(ii) No vessel which has a height exceeding 15 m above the sea level shall enter or pass through Area No. 5, 6.
(iii) No vessel which has a height exceeding 30 m above the sea level shall enter or pass

through Area No. 7, 8.

The airport height restriction shall also govern the travel routes of pre-cast bridge segments transportation. The layout of AHR is shown in **Appendix D**.

3.1.5 Other Site Limitations

The draft of the barge is a critical issue for determining the loading and unloading point due to the existing seabed level of the BCF coast is quite shallow and varies.

Location of marine park shall be considered in the planning of potential marine travel route. It is recognized that one existing marine park is located at Sha Chau/Lung Kwu Chau and one approved marine park is located at Brothers Island.

Location of anchorage areas shall be considered when deciding the potential marine travel route. The potential marine travel route may pass through two (2) anchorage areas. One of the anchorage areas is located at Sham Shui Kok, approximate 1.5 km east to the BCF artificial island. The other one is known as Tuen Mun Immigration Anchorage, which is approximate 4 km north to the BCF artificial island.

3.2 Construction Activities involving the Regular Marine Travel Routes

The vehicular bridges construction requires to transport the pre-cast bridge segments from Zhongshan pre-cast fabrication yard to Hong Kong for installation. The completed segments shall be transported to Hong Kong by the marine travel method. The transportation is tentatively scheduled to start in November 2016 and completed in February 2018 subjected to actual site possession progress. The general layout of the selected marine travel route shall refer to **Appendix C**.

In instance of the occurrence of silt curtain installation/re-deployment works, a dolphin exclusion zone of 250 m beyond the works area shall be implemented.

4.0 Precautionary Measures

Two marine travel routes from the fabrication yard in Zhongshan to the Site are considered and are as shown in **Appendix C**. This section will identify the precautionary

measures of the above mentioned design considerations and present the selection of the routes

4.1 Hotspot of Chinese White Dolphin

The major ecological risk of marine vessel is a moving vessel striking and injuring CWD during travel and navigation. Information regarding the locations of frequent sighting of CWD near the proposed vessel route indicated that the following measures shall also be adopted to minimize the chance of a vessel striking marine mammals.

- A vessel speed limit control has been proposed by the EM&A Manual of the contract. As a minimum requirement, a speed limit of 5 knots shall be enforced within boundaries of the Sha Chau/Lung Kwu Chau Marine Park and the Approved Brothers Marine Park (BMP) to prevent dolphin from clashing by the working vessels.
- If any dolphins are sighted within 250 m of a vessel then the vessel will slow to a speed no greater than 5 knots for at least 3 minutes after the last sighting.
- All captains and the supervisory staff shall conduct training to learn about local dolphins and porpoises. They shall be trained to be aware of the protocol for “dolphin friendly” vessel operation. All the relevant training records shall be submitted to SO, IEC/ENPO at monthly interval to demonstrate the conformance to the EM&A documents.

4.2 Practice of Navigation Safety

The licensed captain shall be the only authorized person to control the working fleets in accordance with all safe navigation requirement and international practice with assistance from navigation aids and marine traffic control team of Marine Department.

Skipper training will be provided to licensed captain. The training will cover local dolphins and porpoises and operation procedures of potential situation encountered when using the marine travel route. Detailed contents of the training and the qualification of the trainer will be submitted to the Environmental Project Office upon the confirmation of marine logistic company to be hired.

4.3 Existing Navigation Channel and Marine Traffic

The width of Urmston Road is approximate 3 km width. The main fairway is located at northern side of Urmston Road, which is close to the coast of Tuen Mun. The proposed marine travel route is located at the southern side of Urmston Road (north to the BCF Island) to avoid clash with the heavy marine traffic.

4.4 Airport Height Restriction (AHR)

It is anticipate that segment delivery barge will be adopted for the transportation of pre-cast bridge segments. Since the maximum height of the barge used during travel is approximate 18 m above sea level (refer **Appendix E** for details), the proposed marine travel route shall not entry the AHR with the minimum height restriction of 30 m.

4.5 Other Site Limitations

The maximum draft of the working vessels is approximate 2.3 m; however, the actual operating draft of the working vessels will be limited at approximate 2.0 m to avoid unpredictable shallow sea bed condition. With reference to the Nautical Chart (dated January 2016) prepared by BMT Asia Pacific Ltd., the water depth at east of the BCF Island (refer to **Appendix F** for details) varies from 4 m to 10 m, with occasional shallow sea bed with water depth of 2.4 m. Therefore, the chance for vessels to get stranded at the proposed marine travel route is minimal along the east side of the BCF Island. The shallowest sea bed is located south to the BCF Island. The shallowest water depth is 2.3 m. With the approximate 0.3 m buffer, the working vessels may still risk stranding at unknown occasional high spot on the sea bed during the occurrence of low tide event. To avoid stranding of the working vessels, the Contractor shall schedule the delivery of materials in accordance with the predicted tides of Hong Kong Observatory. All working vessels shall travel into work site at high tide in order to reduce sediment plume at shallow water of the works area and minimize mooring at Sham Shui Kok.

The proposed marine travel route does not pass through the boundary of Sha Chau/Lung Kwu Chau Marine Park. The proposed route marine travel route is at the east of the BCF Island and western side to the approved BMP (as shown in **Appendix B**). To avoid from entering the approved BMP, the proposed marine travel route shall be close to the seawall at east of the BCF Island as possible. The trips of delivering shall also be reduced by selecting a possible largest size barge.

The proposed route shall be strictly followed. No entry of BMP will be allowed. In order to avoid any deviation from the route due to heavy traffic of other contracts at the east of the BCF islands, the following measures shall be maintained:

1. Forecast and develop a delivery schedule with actual delivery date and time.
2. Notify other contracts the delivery schedule during the monthly marine works liaison meeting to ensure the proposed route is not obstructed during the delivery.

3. If the proposed route is accidentally obstructed during the delivery, the delivery shall be stopped immediately. The responsible foreman/engineer shall inform the parties caused the obstruction and continue the delivery only after the obstruction has been cleared.

5.0 Method of Implementation and Monitoring for RMTR

5.1 Supervisory Staffs

The Project Director is the decisive person for minimizing environmental impacts from marine operation. Works Supervisors including Site Manager, Project Manager, Site Agent, Construction Manager, Engineer, Site Forman and the representative of subcontractors will assist the Project Director onsite to implement all precautionary and mitigation measures during the whole construction.

5.2 Method of Implementation and Monitoring

The construction of vehicular bridge is divided into onsite and offsite works.

Onsite works include piling construction, pile caps, piers, parapets and E&M installation. No marine works are involved for those onsite works.

Offsite works mainly comprise the transportation and delivery of concrete pre-cast segments from Zhongshan pre-cast fabrication yard to Hong Kong for installation.

All barges and other vessels including tug boat, anchor boat and other self-propelled working fleets shall be equipped with Very High Frequency or/and GPS for track logging of vessels.

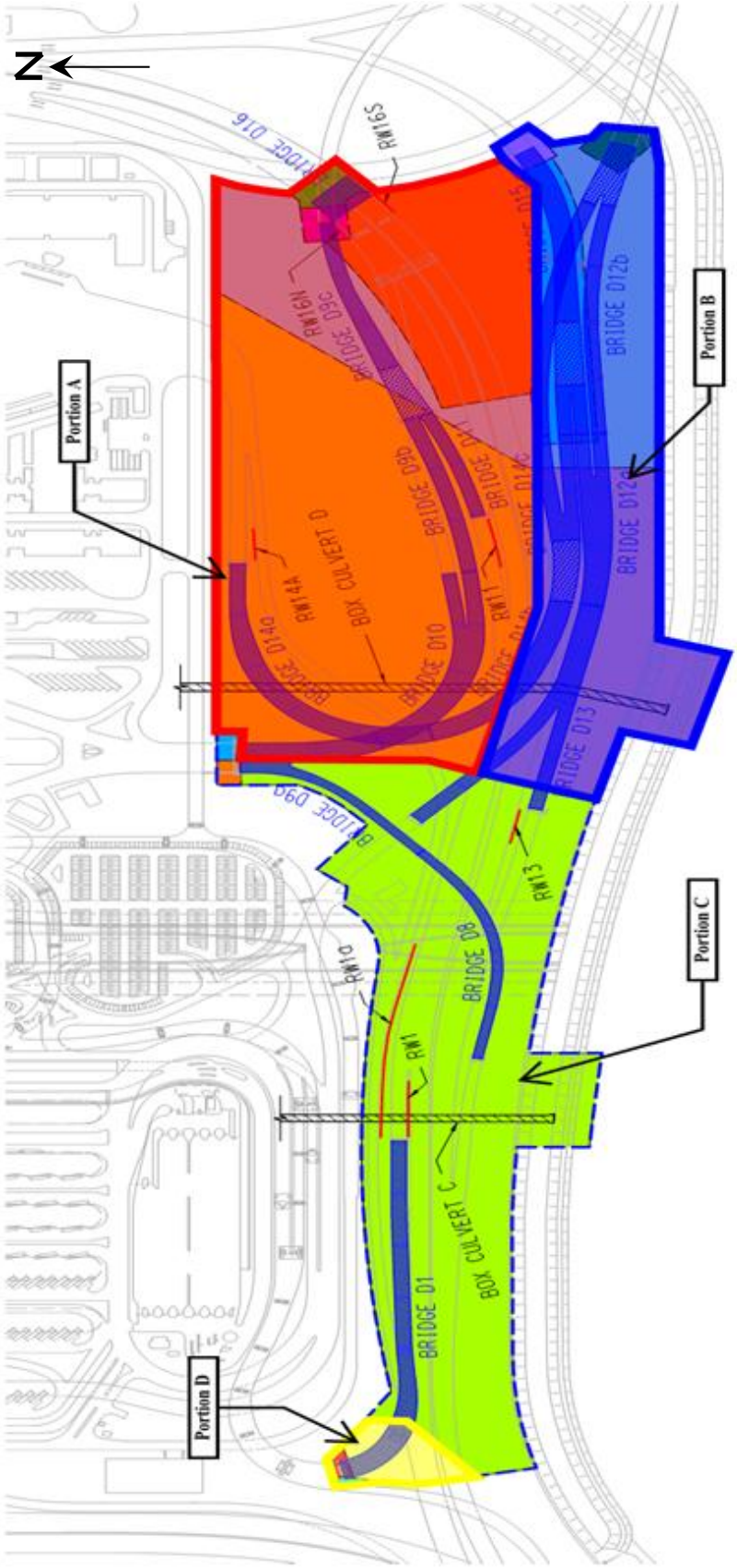
Induction training shall be provided to the captain and crew of the shipping company. The content of training shall cover the location of the proposed marine travel route, anchorage areas, the boundary of adjacent marine parks and its corresponding speed limit. Training shall also introduce the sign of encountering CWD and the applicable precautionary measure of striking CWD, such as, speed limit. Review training shall be provided to the captain and crew on a six-month basis to increase their awareness.

The daily record of marine travel route of all offsite working fleets shall be collected and

filed by the supervising staff for inspection and monitoring purposes. Graphical plots of all the vessel tracks overlaid on Hong Kong base map shall be provided at monthly interval to the ER, ETL, IEC/ENPO to demonstrate the conformance of the vessel to the proposed route. If any vessel track log indicating the selected and approved marine travel route is not followed, formal warning shall be issued to the captain and his shipping company or material supplier.

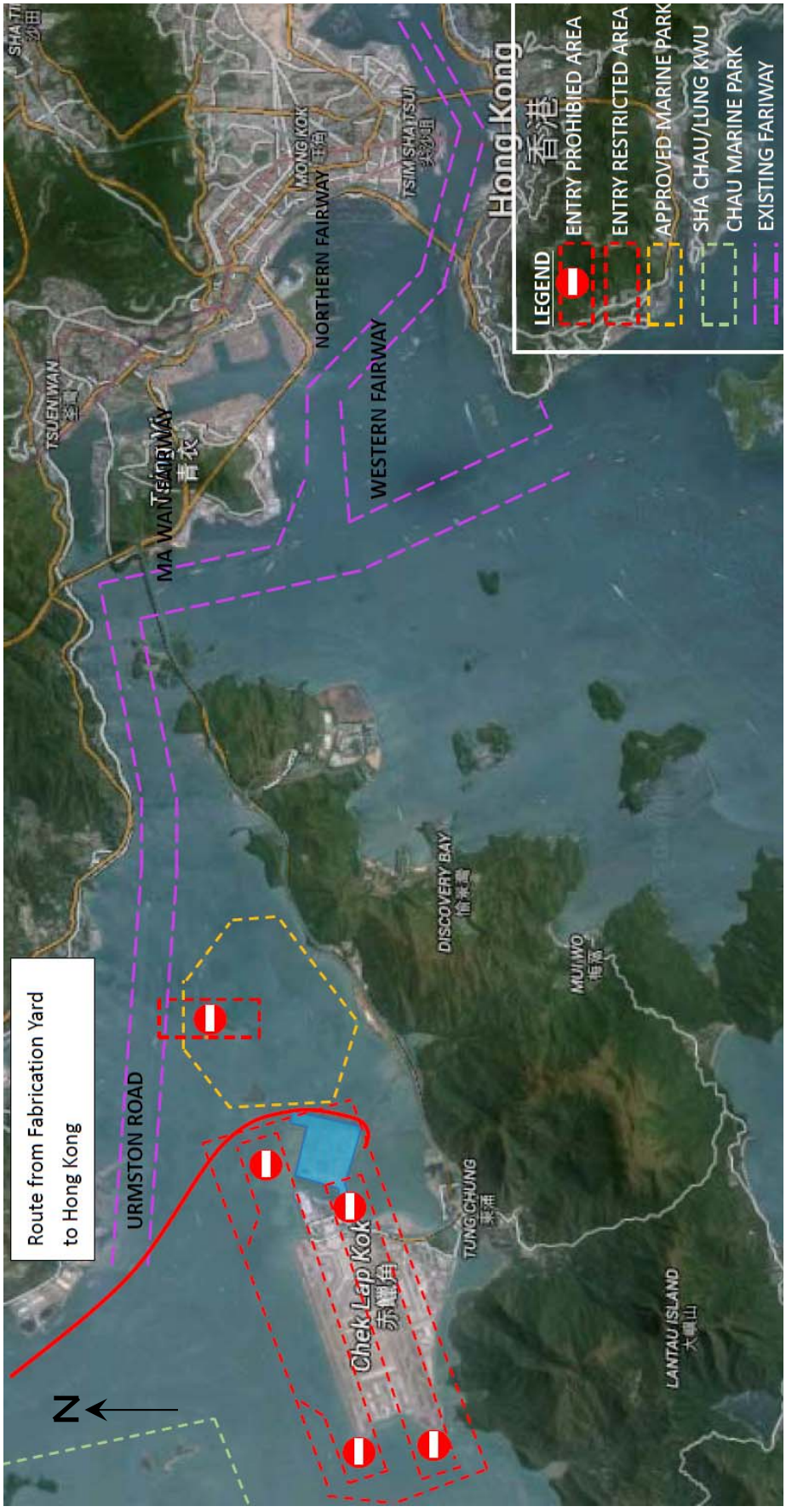
Appendix A

Site Location Plan


N
RW16S
RW16N
BRIDGE D9C
BRIDGE D12b
Portion B
Portion A
BRIDGE D12a
BRIDGE D9b
BRIDGE D11
BRIDGE D14a
RW14A
BOX CULVERT D
BRIDGE D10
RW11
BRIDGE D13
BRIDGE D9a
RW13
Portion C
RW10
BRIDGE D8
RW1
BRIDGE D1
BOX CULVERT C
Portion D

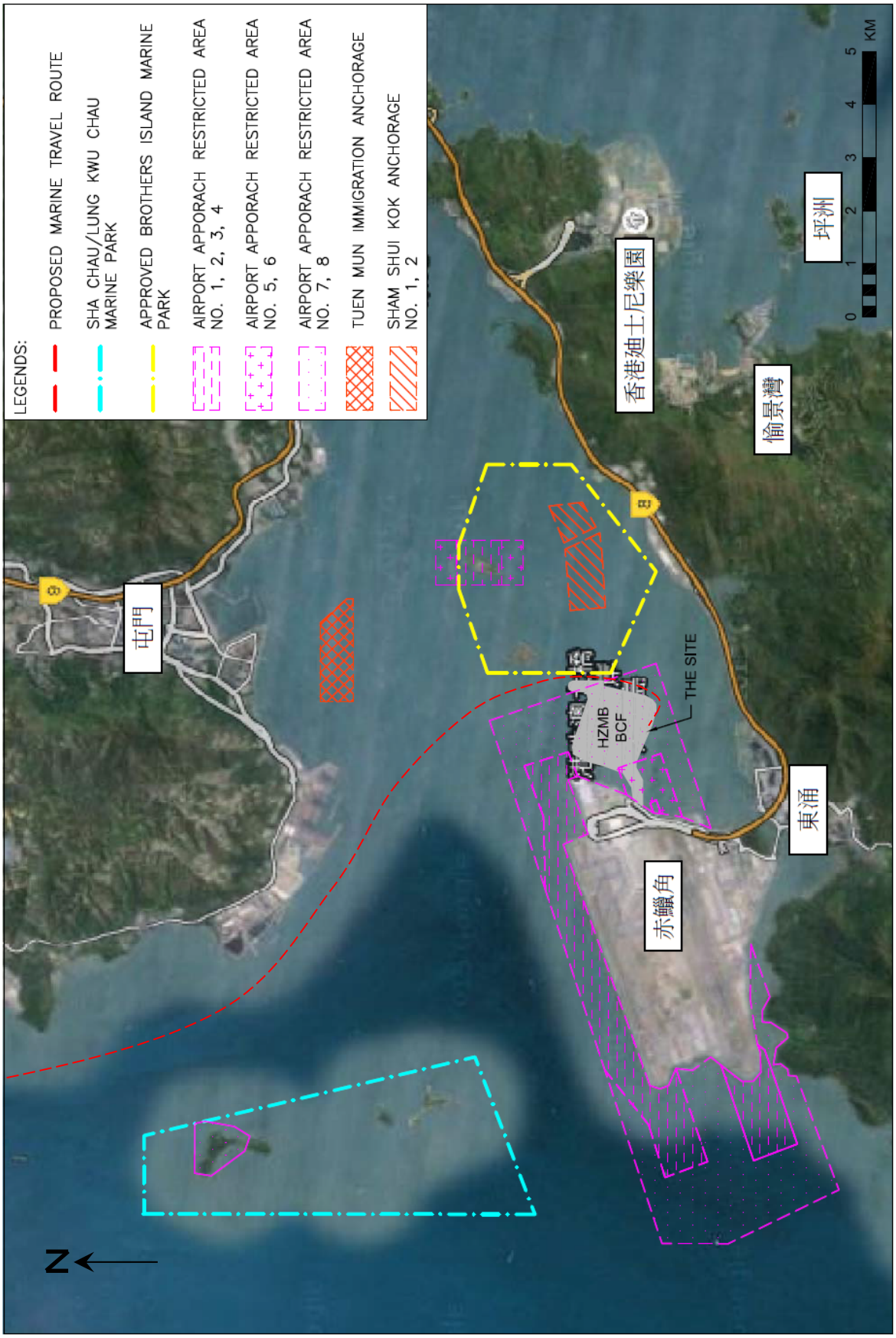
Appendix B

Existing Navigation Channel Layout


LEGEND
ENTRY PROHIBIED AREA
ENTRY RESTRICTED AREA
APPROVED MARINE PARK
SHA CHAU/LUNG KWU
CHAU MARINE PARK
EXISTING FARIWAY
Hong Kong
香港
NORTHERN FAIRWAY
WESTERN FAIRWAY
MA WAI FAIRWAY
TSUEN WAN
MONG KOK
TSIM SHA TSUI
DISCOVERY BAY
MUI WO
TUNG CHUNG
LANTAU ISLAND
Chek Lap Kok
URMSTON ROAD
Route from Fabrication Yard
to Hong Kong
N

Appendix C

Regular Marine Travel Route


LEGENDS:
PROPOSED MARINE TRAVEL ROUTE
SHA CHAU/LUNG KWU CHAU MARINE PARK
APPROVED BROTHERS ISLAND MARINE PARK
AIRPORT APPORACH RESTRICTED AREA NO. 1, 2, 3, 4
AIRPORT APPORACH RESTRICTED AREA NO. 5, 6
AIRPORT APPORACH RESTRICTED AREA NO. 7, 8
TUEN MUN IMMIGRATION ANCHORAGE
SHAM SHUI KOK ANCHORAGE NO. 1, 2
屯門
香港迪士尼樂園
愉景灣
坪洲
東涌
赤鱲角
HZMB BCF
THE SITE
0 1 2 3 4 5 KM
N

Appendix D

Airport Height Restriction /Airport Approach Restricted Area Layout

Appendix D1

Airport Height Restriction Layout

812000 E
813000 E
814000 E
820000 N
819000 N
C 1:62.5 (af)
P 1:50
P 1:40
P 1:62.5
C 1:62.5 (af)
P 1:50
P 1:40
P 1:7
P 1:7
C 1:30 (af)
SKYCITY
P 1:62.5
C 1:62.5 (ab)
P 1:40
HONG KONG INTERNATIONAL AIRPORT
C 1:30 (ab)
P 1:62.5
P 1:7
P 1:7
HONG KONG LINK ROAD (HKLR) (SEPARATE PROJECT)
P 1:50
P 1:50
P 1:40
P 1:7
C 1:62.5 (ab)
C 1:30 (ab)
TUEN MUN-CHEK LAP KOK LINK (TM-CLKL)(BY OTHERS)
HONG KONG BOUNDARY CROSSING FACILITIES (HKBCF)
RECLAMATION FOR HKBCF ISLAND (BY OTHERS)
53
53
N
N
WORKS AREA
CHEK LAP KOK
TUNG CHUNG

LOCATION PLAN
SCALE 1 : 50000

NOTE:

1. THIS DRAWING TO BE READ IN CONJUNCTION WITH PS SECTION 1.

LEGEND:

SITE BOUNDARY

20 / 30 — THE FIGURE IMMEDIATELY ABOVE OR BELOW GRIDLINE IS THE RESTRICTED HEIGHT IN METRES ABOVE HONG KONG PRINCIPAL DATUM ALONG THAT LINE. SUCH LINES ARE TO BE REFERRED TO AS HEIGHT RESTRICTION CONTOURS

230 — THE FIGURE WITHIN ANY AREA BOUNDED BY GRIDLINES IS THE RESTRICTED HEIGHT IN METRES ABOVE HONG KONG PRINCIPAL DATUM FOR THAT AREA

P 1:25 — THE LETTER 'P' WITHIN ANY AREA BOUNDED BY GRIDLINES INDICATES THAT THE RESTRICTED HEIGHT IS DEFINED BY AN INCLINED PLANE PASSING THROUGH THE HEIGHT RESTRICTION CONTOURS SHOWN AND HAVING A GRADIENT AS REPRESENTED BY THE RATIO ALONGSIDE THE LETTER

C 1:25(aq) — THE LETTER 'C' WITHIN ANY AREA BOUNDED BY GRIDLINES INDICATES THAT THE RESTRICTED HEIGHT IS DEFINED BY A CONICAL SURFACE PASSING THROUGH THE HEIGHT RESTRICTION CONTOURS SHOWN AND HAVING A GRADIENT AS REPRESENT THE NAME OF THE APEX OF THE CONE

NAME	HONG KONG GRID REFERENCE	
(aq)	817404.0 N	807244.4 E
(ab)	818524.5 N	810866.9 E
(af)	820268.0 N	810463.2 E
(ak)	820312.2 N	810960.0 E

REV. 修訂	DESCRIPTION 內容摘要	D.C. / P.E. CHECKED 審核	DATE 日期
A	WORKING DRAWING	BWCW SCI	APR.15
-	TENDER DRAWING	BWCW SCI	FEB.14

路政署 HIGHWAYS DEPARTMENT
港珠澳大橋香港工程管理處 Hong Kong - Zhuhai - Macao Bridge Hong Kong Project Management Office

HONG KONG-ZHUHAI-MACAO BRIDGE
HONG KONG BOUNDARY CROSSING FACILITIES
- INFRASTRUCTURE WORKS STAGE II (SOUTHERN PORTION)

SITE CONSTRAINT- AIRPORT HEIGHT RESTRICTION

AECOM
Rogers Stirk Harbour + Partners
BURO HAPPOLD ATKINS ADI
Aedas

DRG.NO. 圖紙編號 60191048/C4/000/C00/1071A

DESIGNED BY 設計	BWCW	CONTRACT NO. 合約編號	HY/2013/04
DRAWN BY 繪圖	WSY	P. Dir. APPROVED 批准人	TKH
SCALE 比例	A1 1 : 5000	STATUS 階段	WORKING DRAWING
DIMENSIONS ARE IN 尺寸單位	METRES	© COPYRIGHT RESERVED 版權所有	

Plot File by : 2014/2/26 WANGSY
p:\projects\60191048\drawing\contract\c4\1000\C4_000_C00_1071.dgn

Appendix D2

Airport Approach Restricted Area Layout

Drawing attached to Guidance Notes on
Application for Vessel's Entry Permit into the HKIA Approach Areas

機場進口航道限制區

除經海事處處長允許外，

(i) 任何船隻不得進入或通過機場進口航道區第1、2、3或4區；

(ii) 凡高度超過海拔15米的船隻，不得進入或通過機場進口航道區第5或6區；

(iii) 凡高度超過海拔30米的船隻，不得進入或通過機場進口航道區第7或8區。

詳情參閱《船舶及港口管制規例》(第313A章)第23條。

Airport Approach Restricted Areas

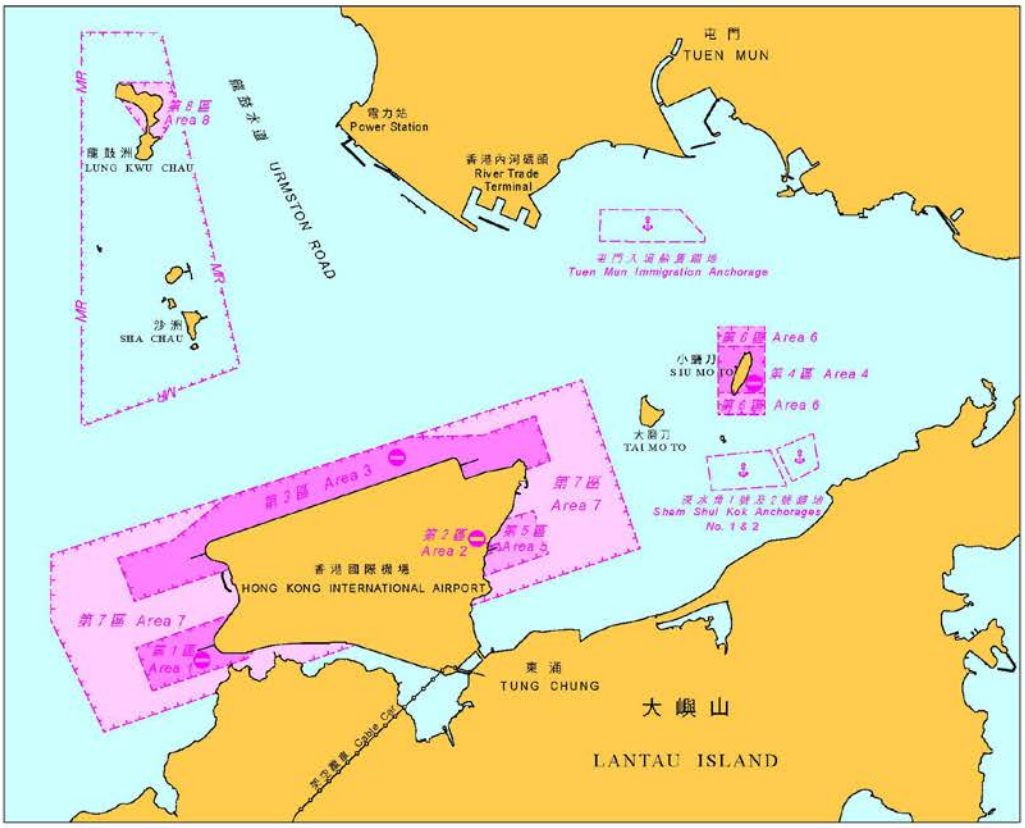
Except with the permission of the Director of Marine,

(i) no vessel shall enter or pass through the Airport Approach Area No. 1, 2, 3 or 4;

(ii) no vessel which has a height exceeding 15 metres above sea level shall enter or pass through the Airport Approach Area No. 5 or 6;

(iii) no vessel which has a height exceeding 30 metres above sea level shall enter or pass through the Airport Approach Area No. 7 or 8.

See regulation 23 of the *Shipping and Port Control Regulations (Cap.313A)* for details.



第 1 - 4 區：任何船隻不得進入或通過。
Area No. 1 - 4 : No vessel shall enter or pass through.

第 5 - 6 區：凡高度超過海拔15米的船隻，不得進入或通過。
Area No. 5 - 6 : No vessel which has a height exceeding 15 metres above sea level shall enter or pass through.

第 7 - 8 區：凡高度超過海拔30米的船隻，不得進入或通過。
Area No. 7 - 8 : No vessel which has a height exceeding 30 metres above sea level shall enter or pass through.

Appendix E

Information for Working Vessels

海

香港特別行政區政府——海事處 編號 Serial No. 1899790

The Government of the Hong Kong SAR—Marine Department

根據《商船(本地船隻)(證明書及牌照事宜)規例》第15條
Pursuant to Section 15 of Merchant Shipping (Local Vessels)(Certification and Licensing) Regulation

運作牌照 (正式) (FULL)
Operating Licence

擁有權證明書號碼: Certificate of Ownership Number: B142385	有效期 (包括在內) Validity Period (Inclusive) 由 From 23/12/2016 至 To 22/12/2017

第一部 Part I 船隻資料 Particulars of Vessel

船隻名稱: Name of Vessel: --- WEI HAI

類型: 非自航駁船 Type: Dumb Lighter

類別: Class:	II	總長度(米): Length Overall (m):	49.63	最大寬度(米): Extreme Breadth (m):	25.34
深度(米): Depth (m):	4.60	總噸位: Gross Tonnage:	1,966.00	淨噸位: Net Tonnage:	589.00

船體物料: 鋼 Material of Hull: STEEL

船體顏色: 黑 / 灰 Colour of Hull: BLACK / GRAY

附屬船隻(數目): Ancillary Vessel (No.): ---

推進引擎(數目): Propulsion Engine (No.): ---

製造商 Maker	類型 Type	編號 Serial No.	功率(千瓦) Power(kW)
---	---	---	---

第二部 Part II 牌照條件 Licence Conditions

1. 船員要求及運載人數:
Crew requirement and carrying capacity:

最少船員人數: Minimum No. of Crew:	允許運載乘客人數: No. of Passenger Permitted to Carry:	允許運載總人數: Total No. of Person Permitted to Carry:
---	---	6

2. 此船不得進入香港仔，銅鑼灣，三家村，筲箕灣，船灣 及 鹽田仔 避風塘。
The vessel is prohibited from entering the following typhoon shelters: Aberdeen T/S, Causeway Bay T/S, Sam Ka Tsuen T/S, Shaukeiwan T/S, Shuen Wan T/S and Yim Tin Tsai T/S.

3. 此船不得進入汲水門大橋附近區域、深圳灣公路大橋附近區域、青荃橋及青衣大橋附近區域、鴨脷洲大橋附近區域、東涌大橋附近區域，或在該些高度限制區內航行或逗留。
This vessel is prohibited from entering, navigating or remaining in the vicinity of the Kap Shui Mun Bridge Area, the Shenzhen Bay Bridge Area, the Tsing Tsuen and Tsing Yi Bridges Area, the Ap Lei Chau Bridge Area and the Tung Chung Bridge Area.

4. 此船不得運載繳費乘客。
No fare-paying passenger is allowed to be carried on this vessel.

核數號碼 Audit Control No. A 288986

M.O. 892

格式 ZSB-1/4

船名:穗富航622　　船检登记号:2008A5100382

船 舶 主 要 项 目

船舶类型 甲板货船　船舶呼号 —

安放龙骨日期 2008年07月23日　建造完工日期 2008年10月31日　改建日期 —

船舶制造厂 广州市番禺区石楼秀祥船舶修造厂

船舶改建厂 —

船舶经营人 广州市富航船务有限公司

船舶所有人 广州市富航船务有限公司

船 体 部 分

总长	49.00 m	船长	47.20 m	满载水线长	48.24 m
船宽	14.00 m	最大船宽	14.30 m	型深	3.15 m
最大船高	13.50 m	空载吃水	1.061 m	满载吃水	2.250 m
满载排水量	1137.354 t	空载排水量	404.354 t	结构型式	混合骨架式
航区	A级	急流航段	—	船体材料	钢质
货舱的数量	—	货舱盖型式	—	水密横舱壁数	4

参考载货量		
航区		A级
载货量(t)		733.00

强力甲板材料 钢质　强力甲板位置 主甲板

双层底位置 —　防撞边舱位置 —

固定压载		
数量(t)		24.00
位置		17#-24#肋

进水角位置 机舱门槛　抗沉性 无要求

设 备 部 分

锚设备

舾装数 792　锚数量 3　锚机数量 2

	名称	型式	重量(kg)
锚	右艏锚	霍尔锚	400.00
	左艏锚	霍尔锚	400.00
	艉锚	双齿锚	150.00

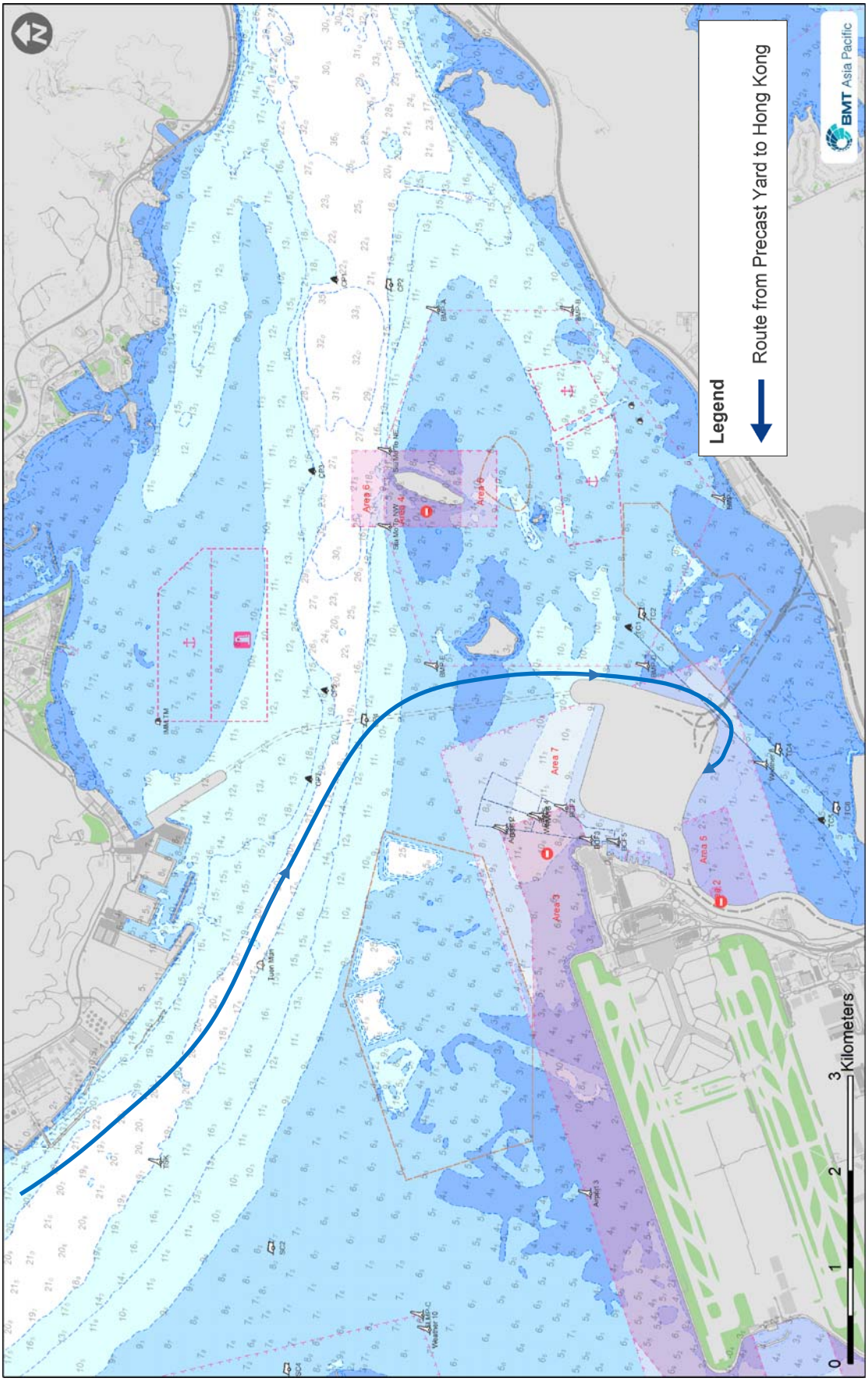
	名称	型号	功率(kW)	制造厂
锚机	艉锚机	人力绞车	7.50	广州市番禺石楼秀祥船舶修造厂
	艏锚机	DMA-22	8.50	佛山市顺德区信德船舶机械有限公司

	名称	直径(mm)	长度(m)	等级	材料
锚链	右艏锚链	22.00	125.00	AM2级	2级链钢
	左艏锚链	22.00	150.00	AM2级	2级链钢
	艉锚链	12.50	100.00	—	钢丝绳


22 05 2016

Appendix F

Nautical Chart


Legend
Route from Precast Yard to Hong Kong
BMT Asia Pacific
Area 7
Area 5
Area 3
Area 2
0
1
2
3
Kilometers