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地址：106248臺北市和平東路3段1巷1號

承辦人：陳奕榮

電話：02-8978-8075

傳真：02-2701-8492

電子信箱：YJCHEN04@motcmpb.gov.tw

10545

臺北市松山區南京東路4段75號7樓

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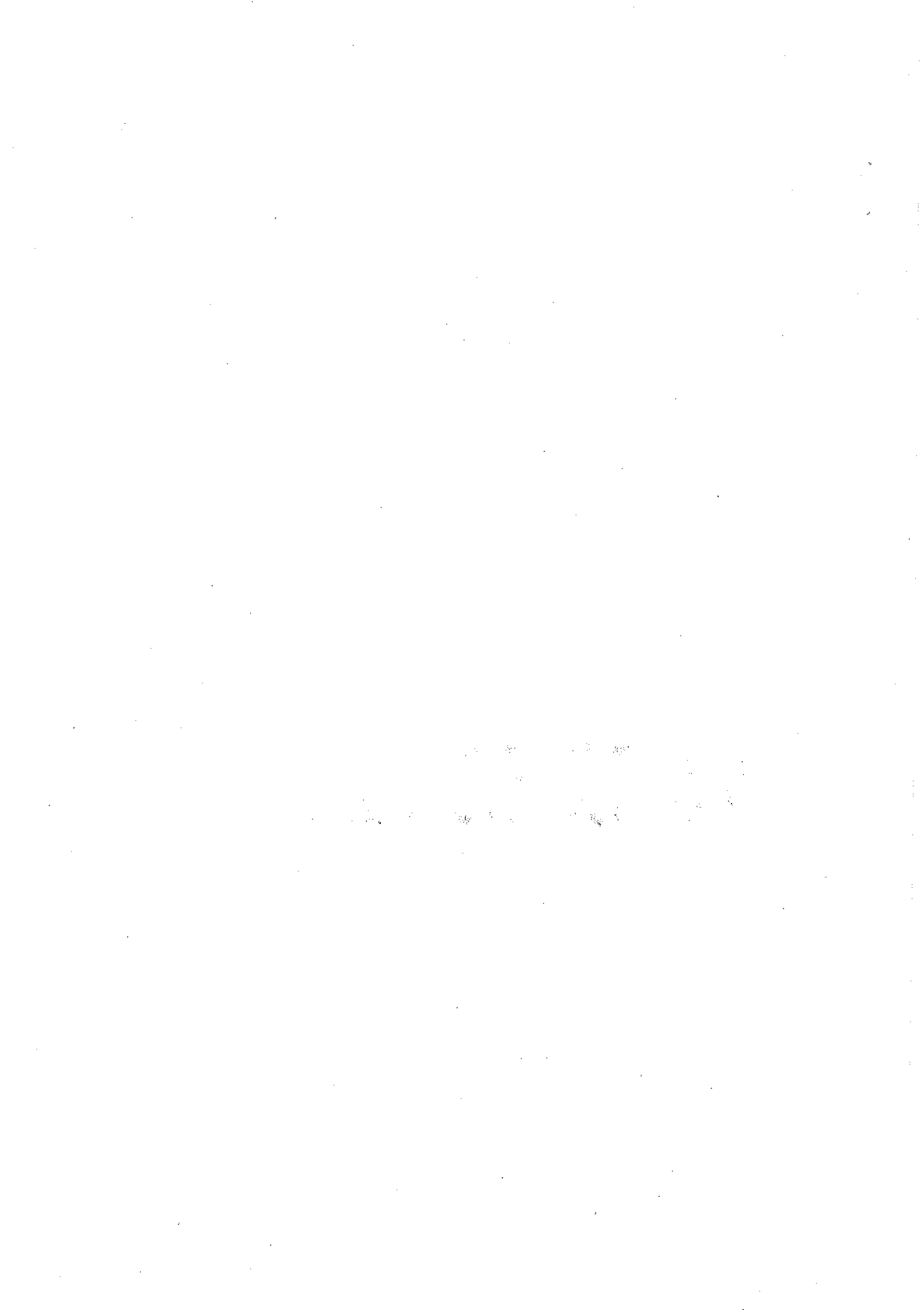
附件：如主旨

主旨：檢送本局「彰化風場航道及其航行指南」中、英文版各1份，請協助宣傳或轉知，請查照。

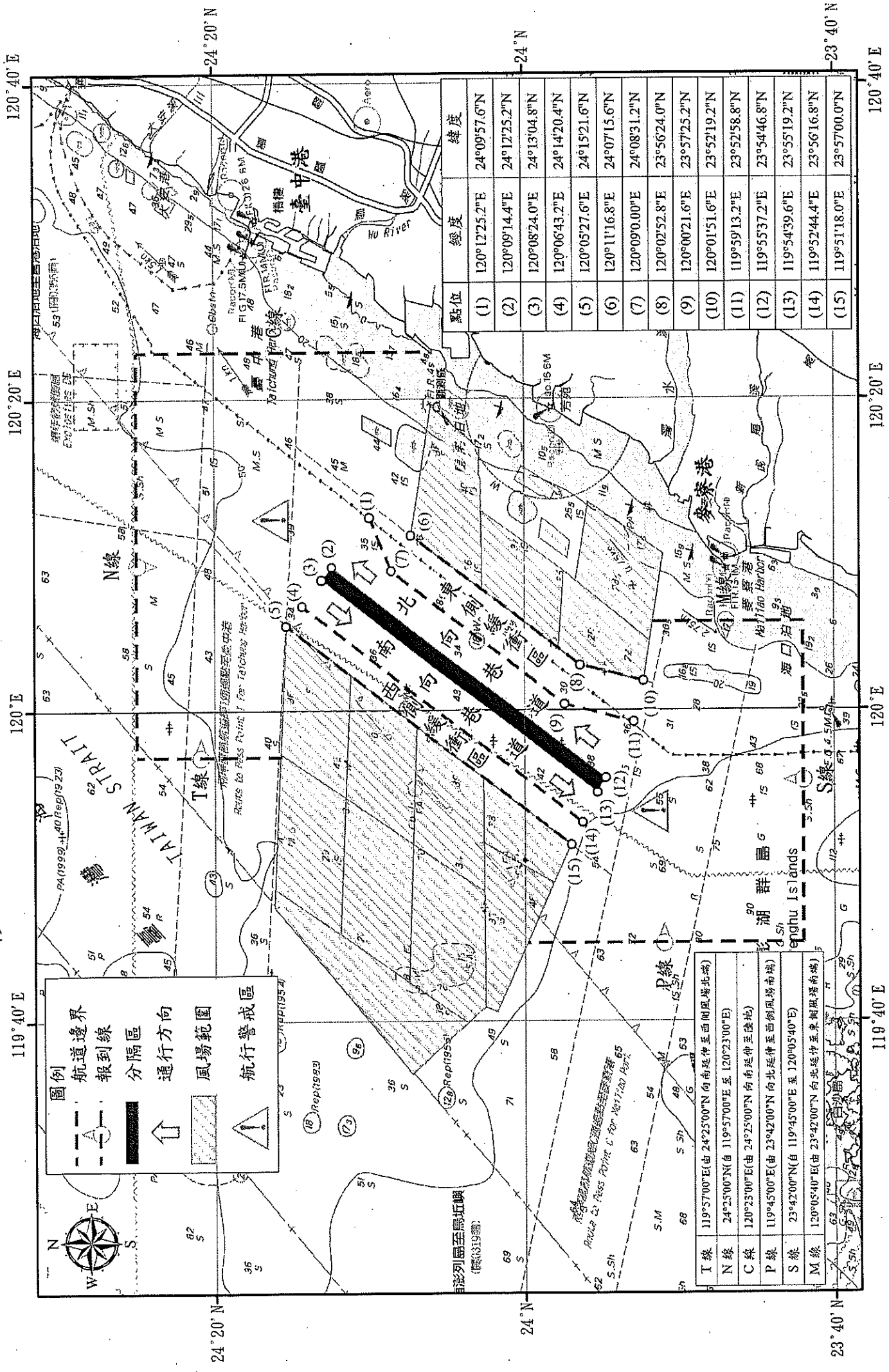
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副本：

局長葉協隆



彰化風場航道



圖例

- 航道邊界
- - - 報到線
- ▬ 分隔區
- ↑ 通行方向
- ▨ 風場範圍
- ⚠ 航行警戒區

T線	119°57'00"E由 24°25'00"N 向南延伸至西側風場北端)
N線	24°25'00"N(自 119°57'00"E 至 120°23'00"E)
C線	120°23'00"E(由 24°25'00"N 向南延伸至陸地)
P線	119°45'00"E(由 23°42'00"N 向北延伸至西側風場南端)
S線	23°42'00"N(自 119°45'00"E 至 120°05'40"E)
M線	120°05'40"E(由 23°42'00"N 向北延伸至東側風場南端)

點位	經度	緯度
(1)	120°12'25.2"E	24°09'57.6"N
(2)	120°09'14.4"E	24°17'25.2"N
(3)	120°08'24.0"E	24°13'04.8"N
(4)	120°06'43.2"E	24°14'20.4"N
(5)	120°05'27.6"E	24°15'21.6"N
(6)	120°11'16.8"E	24°07'15.6"N
(7)	120°09'00.0"E	24°08'31.2"N
(8)	120°02'52.8"E	23°56'24.0"N
(9)	120°00'21.6"E	23°57'25.2"N
(10)	120°01'51.6"E	23°52'19.2"N
(11)	119°59'13.2"E	23°52'58.8"N
(12)	119°55'37.2"E	23°54'46.8"N
(13)	119°54'39.6"E	23°55'19.2"N
(14)	119°52'44.4"E	23°56'16.8"N
(15)	119°51'18.0"E	23°57'00.0"N

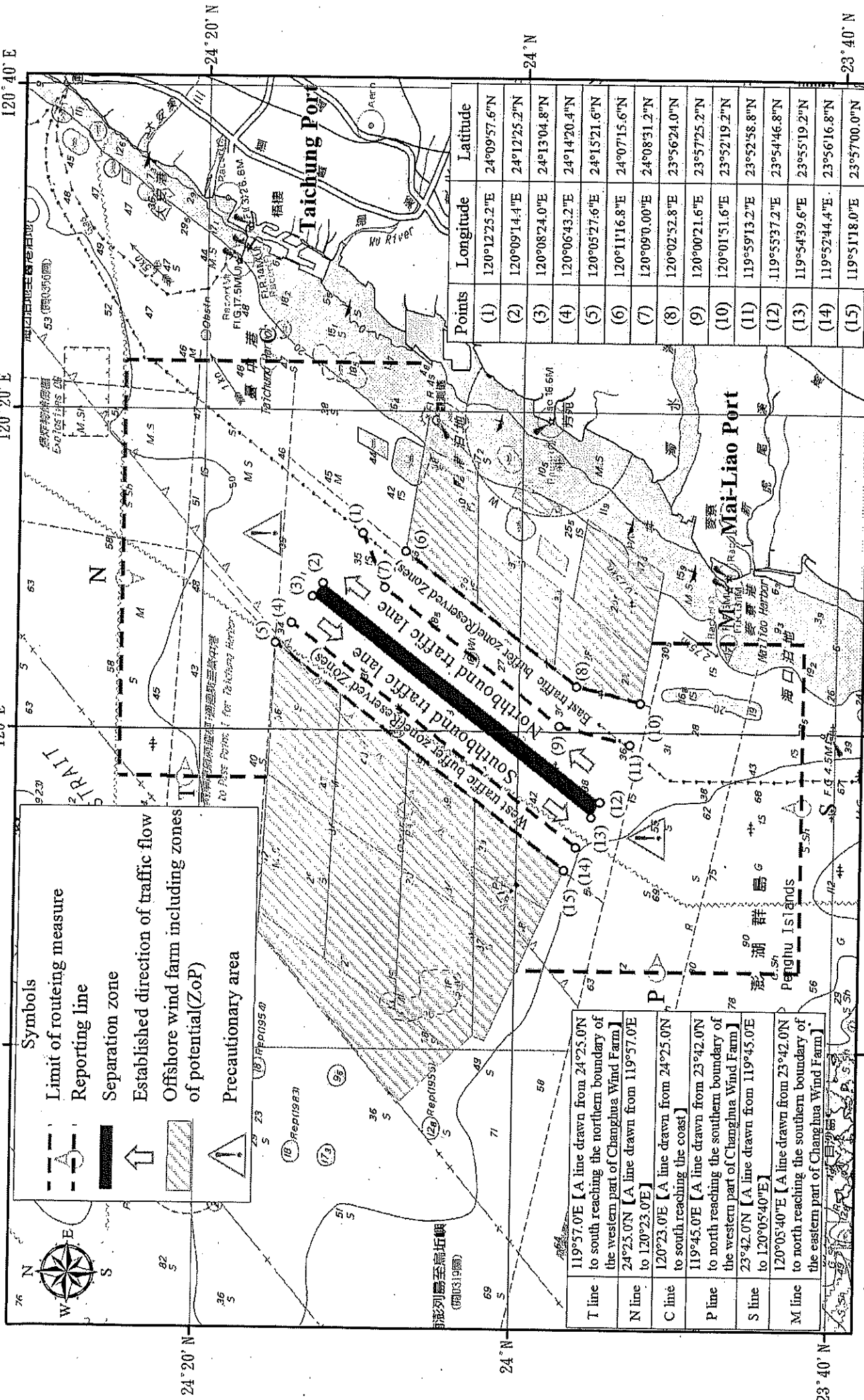
Changhua wind farm channel

119° 40' E

120° E

120° 20' E

120° 40' E



Symbols

- Limit of routing measure
- Reporting line
- Separation zone
- Established direction of traffic flow
- Offshore wind farm including zones of potential (ZoP)
- Precautionary area

T line	119°57.0'E [A line drawn from 24°25.0'N to south reaching the northern boundary of the western part of Changhua Wind Farm]
N line	24°25.0'N [A line drawn from 119°57.0'E to 120°23.0'E]
C line	120°23.0'E [A line drawn from 24°25.0'N to south reaching the coast]
P line	119°45.0'E [A line drawn from 23°42.0'N to north reaching the southern boundary of the western part of Changhua Wind Farm]
S line	23°42.0'N [A line drawn from 119°45.0'E to 120°05'40"E]
M line	120°05'40"E [A line drawn from 23°42.0'N to north reaching the southern boundary of the eastern part of Changhua Wind Farm]

Points	Longitude	Latitude
(1)	120°12'25.2"E	24°09'57.6"N
(2)	120°09'14.4"E	24°12'25.2"N
(3)	120°08'24.0"E	24°13'04.8"N
(4)	120°06'43.2"E	24°14'20.4"N
(5)	120°05'27.6"E	24°15'21.6"N
(6)	120°11'16.8"E	24°07'15.6"N
(7)	120°09'0.0"E	24°08'31.2"N
(8)	120°02'52.8"E	23°56'24.0"N
(9)	120°00'21.6"E	23°57'25.2"N
(10)	120°01'51.6"E	23°52'19.2"N
(11)	119°59'13.2"E	23°52'58.8"N
(12)	119°55'37.2"E	23°54'46.8"N
(13)	119°54'39.6"E	23°55'19.2"N
(14)	119°52'44.4"E	23°56'16.8"N
(15)	119°51'18.0"E	23°57'00.0"N

119° 40' E

120° E

120° 20' E

120° 40' E

24° 20' N

24° N

23° 40' N

24° N

23° 40' N

彰化風場航道航行指南

SAILING DIRECTION FOR THE CHANGHUA WIND FARM CHANNEL

壹、前言

本指南主要目的係為律定彰化風場航道之船舶航行秩序，以維護及提高航行安全與效率。強烈建議在彰化離岸航行海域航行之船舶應將本指南置放於駕駛臺，俾隨時做為航行及航路規劃參考。

貳、總則

一、彰化離岸航行海域

係指彰化外海離岸風場外之水域範圍(臺中港至麥寮港)，北至北端報到線(N)，南至南端報到線(S)，其中包含彰化風場航道、航行警戒區及彰化外海近岸航行區。

二、彰化風場航道

彰化風場航道採分道通航制(TSS)，航道之各點位及報到線座標臚列如下，航行巷道邊界及報到線位置示意圖請參閱附圖。

(一) 航道劃分及其位置

分為北向巷道、南向巷道、分隔區、東側緩衝區及西側緩衝區，各分區邊界座標如下：

1. 北向巷道：
(1) $24^{\circ}09'57.6''N, 120^{\circ}12'25.2''E$
(7) $24^{\circ}08'31.2''N, 120^{\circ}09'00.0''E$
(9) $23^{\circ}57'25.2''N, 120^{\circ}00'21.6''E$
(11) $23^{\circ}52'58.8''N, 119^{\circ}59'13.2''E$
(12) $23^{\circ}54'46.8''N, 119^{\circ}55'37.2''E$
(2) $24^{\circ}12'25.2''N, 120^{\circ}09'14.4''E$
2. 南向巷道：
(3) $24^{\circ}13'04.8''N, 120^{\circ}08'24.0''E$
(13) $23^{\circ}55'19.2''N, 119^{\circ}54'39.6''E$
(14) $23^{\circ}56'16.8''N, 119^{\circ}52'44.4''E$
(4) $24^{\circ}14'20.4''N, 120^{\circ}06'43.2''E$
3. 分隔區：
(2) $24^{\circ}12'25.2''N, 120^{\circ}09'14.4''E$

(12)23°54'46.8"N, 119°55'37.2"E

(13)23°55'19.2N, 119°54'39.6"E

(3)24°13'04.8"N, 120°08'24.0"E

4. 東側緩衝區：(6)24°07'15.6"N, 120°11'16.8"E

(8)23°56'24.0"N, 120°02'52.8"E

(10)23°52'19.2"N, 120°01'51.60"E

(11)23°52'58.8"N, 119°59'13.2"E

(9)23°57'25.2"N, 120°00'21.6"E

(7)24°08'31.2"N, 119°09'00.0"E

(1)24°09'57.6"N, 120°12'25.2"E

5. 西側緩衝區：(4)24°14'20.4"N, 120°06'43.2"E

(14)23°56'16.8"N, 119°52'44.4"E

(15)23°57'00.0"N, 119°51'18.0"E

(5)24°15'21.6"N, 120°05'27.6"E

(二)報到線

為確實掌握並有效管控進入本航道之船舶，設有六個報到線：

1. T線：119°57.0'E (由24°25.0'N向南延伸至西側風場北端)

2. N線：24°25.0'N (自120°00.0'E至120°23.0'E)

3. C線：120°23.0'E (由24°25.0'N向南延伸至陸地)

4. P線：119°45.0'E (由23°42.0'N向北延伸至西側風場南端)

5. S線：23°42.0'N (自119°45.0'E至120°05.40'E)

6. M線：120°05.40'E (由23°42.0'N向北延伸至東側風場南端)

三、航行警戒區

考量彰化風場航道北端及南端為進入或離開航道、進出附近港口以及往來船流之匯集區域，船舶航向及動態均難以預測，爰於彰化風場航道北端及南端劃設航行警戒區，提醒船舶於本警戒區航行時應特別謹慎注意周遭環境，包括與其他船舶之關係及可能存在之逼近風險。

四、彰化外海近岸航行區

係彰化風場航道東側之彰化沿岸航行區域，該區域因與彰化風場航道分隔，較不受南北向巷道之交通流影響，爰主要提供總噸位未滿三百之船舶及中華民國籍漁船依照本指南航行，確保其航行安全。

五、彰化離岸風場航道船舶交通服務系統(本指南中簡稱「彰化 VTS」)

依據一九七四年國際海上人命安全公約 (SOLAS) 規定建立之船舶交通服務系統，主要負責監控航行於彰化風場航道之船舶，並適時提供航行警告等相關服務及協助，以下簡稱彰化 VTS。

參、彰化 VTS 報告機制

一、應遵循彰化 VTS 報告機制(含預報及報到)之船舶：

- (一)所有穿越及航行彰化風場航道(包括南北向巷道、東西側緩衝區及分隔區)之船舶。
- (二)因緊急情況須穿越彰化風場航道，或須使用彰化風場航道之緩衝區或分隔區以避免急迫危險之船舶(無須預報)。

二、通信

- (一)所有穿越及航行彰化風場航道之船舶應裝設 AIS、VHF 及符合 GMDSS 規定 A1 及 A2 海域之無線電設備，並正確設定相關資訊且全程開啟，VHF 守值國際通用第 16 頻道及指定之頻道；DSB 及 SSB 守值指定之頻率，並透過指定頻道/頻率向彰化 VTS 進行預報及報到。

- (二)彰化 VTS 之 VHF 通信指定頻道使用如下：

頻道	功能
16	呼叫和安全通報。
68	報到
74	安全信文播送

(三)彰化 VTS 之 DSB 及 SSB 通信指定頻率使用如下：

設備	頻率	功能
SSB	8806 KHz	報到及安全信文播送
DSB	27.120 MHz	報到及安全信文播送

※4372/8803/13194KHZ 作為 SSB 之備用頻率。

(四)向彰化 VTS 報告與通訊之標準語言為中文及英語，必要時得使用國際海事組織「標準海事通信用語(SMCP)」。

三、預報

(一)任何船舶(軍艦、公務船及中華民國籍漁船除外)於進入彰化風場航道前8小時應先以電子郵件向彰化 VTS 預報：

電子信箱	owfvts@motcmpb.gov.tw
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(二)船舶預報之內容應包含下列資訊，預報單格式如附件：

1. 船名、呼號、MMSI 及 IMO 或船舶編號。
2. 船舶種類及總噸位。
3. 船長及船寬。
4. 艙艵吃水。
5. 預計通過之報到線及抵達時間。
6. 前一港。
7. 目的港/目標風場及預計抵達時間。
8. 載貨種類及數量。
9. 船員、乘客及全船人數。
10. 本國代理行及合作之海難救助廠商。
11. 其他需向彰化 VTS 報告或被要求提供有關航行安全之事項(例如：是否載運危險貨物、存有影響船舶結構、貨物或船舶設備之損壞、缺陷或可能影響船舶依據 IMO 相關公約規定安全航行之情況)。

(三)確認預報：船舶預報之相關資訊經彰化 VTS 確認登錄，並回復「確認預報」後，始得於抵達報到線時辦理報到程序。

(四)重新預報：如船舶遇有下列情形，應重新提交預報予彰化 VTS：

1. 抵達報到線前4小時仍未接獲彰化 VTS 回復確認者。
2. 預計進入彰化風場航道時間與原預報時間相差4小時以上(含)者。

四、報到

(一)當船舶穿越下列報到位置時，應依指定之通信頻道及語言向彰化 VTS 報到：

1. 欲進入南向巷道之船舶，穿越報到線 T、N 或 C 時。
2. 欲進入北向巷道之船舶，穿越報到線 P、S 或 M 時。
3. 欲進入東側緩衝區之漁船、離岸風電工作船或總噸位未滿三百之船舶，於進入該緩衝區東側邊界前1浬或穿越任一報到線時。
4. 欲進入西側緩衝區之漁船、離岸風電工作船或總噸位未滿三百之船舶，於進入該緩衝區西側邊界前1浬或穿越任一報到線時。
5. 欲穿越彰化風場航道之漁船或總噸位未滿三百之船舶，於進入南、北向巷道外側邊界前1浬時。

(二)報到內容：

1. 船名、呼號（中華民國籍軍事建制之艦艇及公務船僅需提供船名）。
2. 船位(經緯度)。
3. 航向及航速。
4. 其他需向彰化 VTS 報告或被要求提供有關航行安全之事項。
(詳參三、預報內容第11點)

(三)確認報到：所有依規定完成預報及報到程序之船舶，俟彰化 VTS 核對其資訊無誤且符合無害通過之條件，並回復「同意通行」

後，始得進入或穿越彰化風場航道。

五、彰化 VTS 及港口 VTS 之監視權責

- (一)由臺中港或麥寮港出港之船舶，如欲進入彰化風場航道，應依規定向彰化 VTS 報到並確認報到後，由彰化 VTS 監視之。
- (二)彰化風場航道內之船舶受彰化 VTS 監視，自駛離彰化風場航道後，即脫離彰化 VTS 之監視；如欲進入臺中港或麥寮港，應依規定向各港 VTS 報到。
- (三)臺中港及麥寮港 VTS 之通訊頻道如下，其他詳細資訊請參閱各港進出港指南或船舶交通服務指南：

港口	呼號	VHF 頻道	用途
臺中港	臺中港 VTS	CH14	船舶報到、船岸及船舶與引水人間訊息交換使用。
		CH16	遇險、緊急或安全信文呼叫使用。
麥寮港	麥寮港務臺	CH13	預計抵達時間(ETA)、船岸或船舶與引水人間訊息交換使用。
		CH16	遇險、緊急或安全信文呼叫使用

肆、船舶航行規定

一、通則規定：

- (一)航行於彰化風場航道或彰化離岸航行海域應遵守「一九七二年國際海上避碰規則(COLREG)」有關分道航行制，及該規則其他關於號燈號標顯示、避讓及穿越等規定，並以安全速度航行。
- (二)船舶應盡可能避免橫越航行巷道，如需橫越時，應向彰化 VTS 報告並經其同意，盡可能以垂直於巷道交通流向之艏向快速橫越，不得無故逗留或妨礙其他船舶通行。
- (三)除中華民國籍軍事建制之艦艇及公務船外，總噸位未滿三百之船舶及中華民國籍漁船，原則上應由彰化外海近岸航行區通行；惟

基於航行安全考量，必須航行彰化風場航道時，應依「參、彰化 VTS 報告機制」及「肆、船舶航行規則」有關彰化 VTS 報告及船舶航行之規定，並盡實際可能由東側或西側緩衝區通行。

(四)除上開規定外，船舶尚應遵守下列針對各類型船舶之航行規定。

二、一般船舶航行規定：

(一)彰化風場航道之南、北向巷道僅提供下列船舶航行：

1. 中華民國籍軍事建制之艦艇及公務船。
2. 無論其噸位大小之載客船舶。
3. 無論其噸位大小之非中華民國籍漁船。
4. 無論其噸位大小，凡載運 MSC. 433(98)決議案「船舶報告系統標準」第1.4所定義之有害物質(Hazardous Cargoes)之船舶。
5. 除前開所列船舶外，總噸位300（含）以上且非屬本國籍漁船之船舶。

(二)無論其噸位大小，正進行拖帶或推頂作業之船舶，應航行於彰化風場航道之東、西側緩衝區。

(三)非中華民國籍之軍事建制艦艇或外國公務船，未經依法申請同意，禁止通行彰化風場航道。

三、中華民國籍漁船航行及作業規定：

(一)漁船應由東、西側緩衝區、彰化外海近岸航行區通行，並儘量避免進入南北向巷道及分隔區。

(二)漁船不得於彰化風場航道之北向巷道、南向巷道及分隔區進行漁業行為，避免妨礙於該等巷道行駛之任何船舶安全通行。

四、離岸風電工作船航行規定：

(一)欲前往西側風場之工作船，應自南、北端航行警戒區轉向進入西側緩衝區後，再駛至目標風場；另欲前往東側風場之工作船，則應自南、北端航行警戒區轉向進入東側緩衝區後，再駛至目標風場。

(二)如欲前往東側風場，且認為船舶吃水及龍骨下餘裕水深足以安全

運轉，得由彰化外海近岸航行區航行至東側目標風場。

五、錨泊或其他作業規定：

- (一)除漁船外之任何船舶，未經彰化 VTS 同意，不得航行於風場範圍。
- (二)任何船舶均不得於彰化風場航道及南北端部附近水域錨泊；如為緊急避難之緣故，應向彰化 VTS 報告，依其建議至緩衝區或分隔區暫時錨泊，顯示適當之號燈號標，並於緊急危難原因消除後，儘速駛離。
- (三)任何航行於彰化風場航道之船舶，非經彰化 VTS 許可，不得擅自進行浚深、探測等水下、水面或水上之各項作業。

伍、船舶交通服務(VTS)運作規則

一、主管機關

彰化離岸風場航道船舶交通服務系統(彰化 VTS)，呼號：

Changhua VTS，由交通部航港局營運管理，其職責包含監控彰化風場航道船舶航行動態，必要時，協助通報海上搜救或海洋委員會海巡署等有關單位。

二、執行事項

- (一)接受進入彰化航道船舶之報到。
- (二)持續守聽 VHF CH16 和工作頻道。
- (三)利用包括雷達、AIS 和 VHF 等設備，監視彰化航道船舶航行狀況。
- (四)提供船舶航行安全相關之信息。
- (五)發現危險情勢發展時，隨時提醒船舶注意航行或給予建議。
- (六)向違反彰化航道航行指南之船舶提出警告。
- (七)海事事務之通報聯繫。
- (八)船舶發生遇險、緊急狀況、海難或海上事故時，經主管機關同意，即通知該船舶合作之海難救助廠商前往處理。

三、船舶違反本指南之應處

- (一)船舶未依規定報告或航行，彰化 VTS 應將船舶名單提供港口國管

制單位加強查核，必要時得將相關資訊提送船旗國主管機關進行調查處置。

(二)下列情形主管機關得請海洋委員會海巡署協處，以維海域秩序與安全：

1. 船舶不接受彰化 VTS 之建議及相關管理規定，經主管機關認有非屬「無害通過」之態樣或可能性時。
2. 船舶未經彰化 VTS 回復「同意通行」，即擅自闖入彰化風場航道。
3. 未顯示 AIS 信號且已進入彰化風場航道之船舶。

陸、附則

一、彰化離岸航行海域航行風險

- (一)考量原南北向往來船隻大部分均匯集於彰化風場航道，爰交通密度及船隻數量較多，航經彰化風場航道之船隻應注意周遭環境之變化，避免風險。
- (二)慮及各風場海域開放船舶穿越航行，爰於彰化風場航道之各區域存有船舶隨時竄出之可能風險，航行員應保持嚴密之瞭望及當值行為，以提升航行安全。
- (三)如船長經評估可能風險後，認為航行於彰化離岸航行海域或彰化風場航道恐影響其安全時，應考量船舶特性、裝載情形及水文環境等條件，另覓其他安全適航之水路並妥善研擬航行計畫；惟不建議從澎湖目斗嶼與彰化外海西側風場間海域穿行。

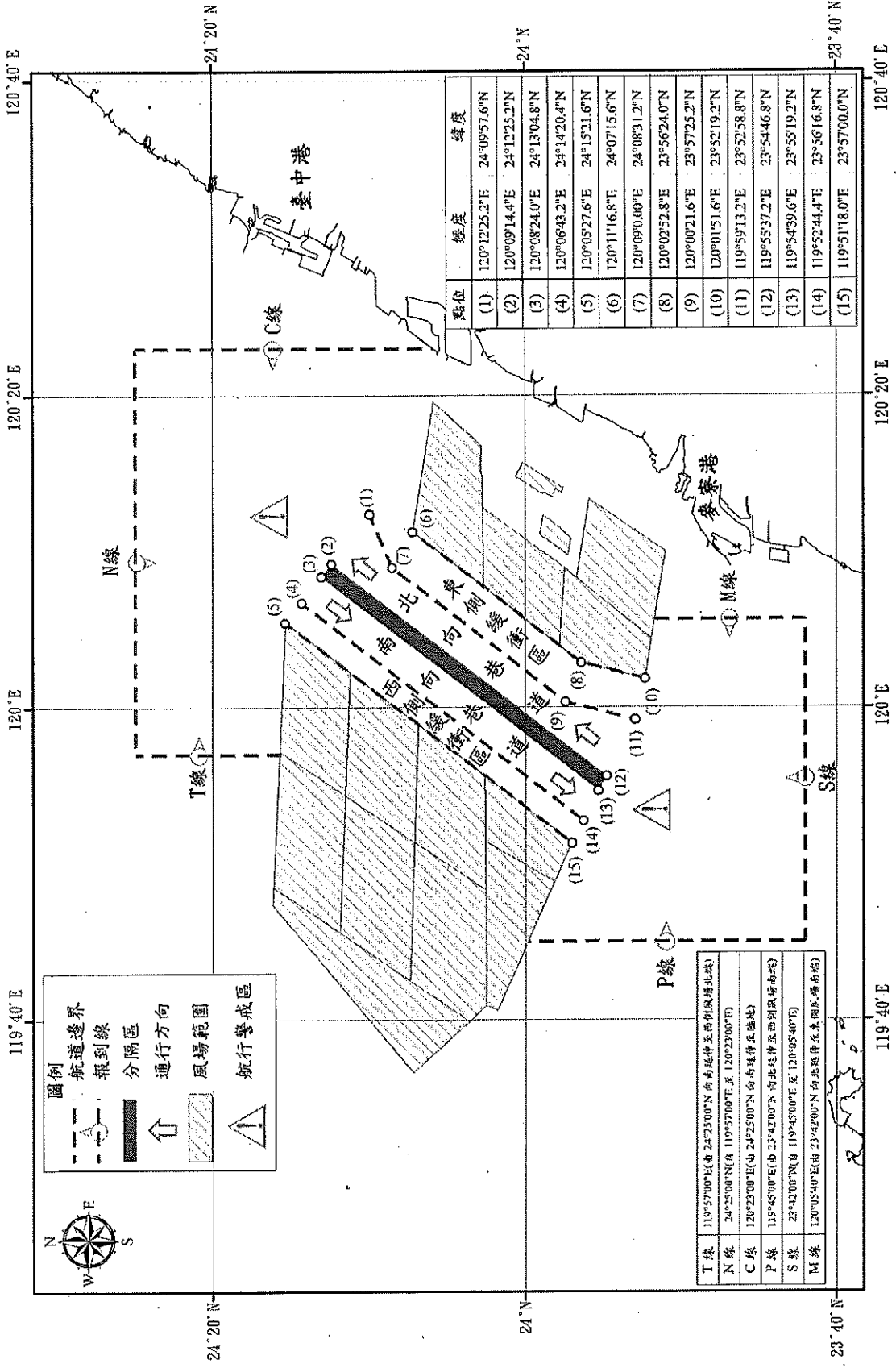
二、船舶航行於彰化離岸航行海域注意事項

- (一)彰化 VTS 僅提供航行安全相關資訊及原則性建議，不免除「航海人員訓練、發證及航行當值標準國際公約(STCW)」、相關公約及法令，規定船長及當值航行員之職責；船長仍應對船舶與船上人員之安全負有其責任及義務。
- (二)非前往中華民國任一港口之船舶，在安全無虞之情形下，建議儘可能由公海水域通行。

- (三)各船舶於彰化離岸航行海域發現任何違反本指南之情事、影響航行安全之礙航物、設備損害，或其他緊急情況時，應即通報彰化 VTS。
- (四)公務船執行試驗調查任務時，得在彰化 VTS 許可後，關閉 AIS、穿越彰化風場航道或於其中進行經許可之作業，惟應注意周邊船舶動態及防止碰撞發生。
- (五)公務船執行救難、查緝、海洋污染防治等各項緊急或特殊任務時，得在航行安全無虞情形下，關閉 AIS、穿越彰化風場航道或進入風場海域，並在不影響任務遂行時，通報彰化 VTS，惟應注意周邊船舶動態及防止碰撞發生。

附圖

彰化風場航空道



彰化風場航道 船舶預報單

Pre-Arrival Notification Form of Changhua wind farm Channel

船舶資訊 Ship's Particular and Contact Details			
IMO 編號/船舶編號 IMO No.		呼號 Call Sign	
船名(英文) Ship's Name		船名(中文) Ship's Name (in Chinese, if any)	
總噸位 Gross Tonnage		船舶種類 Type of Ship	
船旗國 Flag State		水上行動業務識別碼 MMSI No.	
船長 Length (LOA)		船寬 Breadth	
所屬公司名稱及其24小時聯絡資訊 Name of Company with 24hr Contact Details		Company: Title / Name: TEL:	
本國代理行及其24小時聯絡資訊 Name of Agent with 24hr Contact Details		Agent: Title / Name: TEL:	
合作之海難救助廠商及其24小時聯絡資訊 Name of Salvage Contractor with 24hr Contact Details		Contractor: Title / Name: TEL:	
航程資訊 Voyage Information			
艏吃水 Draft Forward		艉吃水 Draft Aft	
船員人數 No. of Crew		乘客人數 No. of Passengers	
目的港口設施/風場 Destination (Port or Windfarm)		前一停靠港 Last port of call	
預計抵達港口設施/風場時間 ETA to the Destined Port Facility/ Windfarm		Date(UTC): yyyy/mm/dd Time(UTC):	
貨物名稱/種類 Name/ Class of Cargo		實際載貨量 Cargo Laden	
船上剩餘燃油(重油) Fuel Oil (R. O. B)		船上剩餘燃油(柴油) Diesel Oil (R. O. B)	
船上剩餘壓艙水 Ballast on Board		全船總人數 Total No. of people	
是否載運危險貨物(特別是第1類及第7類)? Do you have DG Cargo on board? (Especially Class 1 and 7)		(請提供危險貨物清單 please attach the DG list)	<input type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No

<p>是否載運其他有害/潛在污染貨物 Do you have any Hazardous and/or Potentially Polluting cargo onboard?</p>	<p>(請提供是類貨物清單 please attach the such cargo list)</p>	<p><input type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No</p>
<p>有關彰化風場航道事項 Information related to ChangHua wind farm Channel</p>		
<p>預計通過之報到線及通過時間 Name and Time of Reporting Line to cross</p>	<p><input type="checkbox"/> T <input type="checkbox"/> N <input type="checkbox"/> C <input type="checkbox"/> P <input type="checkbox"/> S <input type="checkbox"/> M line Date(UTC): yyyy/mm/dd Time(UTC):</p>	
<p>其他需向主管機關報告或被要求提供航行安全相關之事項 Any Other Circumstances Related to Navigation Safety and/or Asked to Report to the Authority (Optional)</p>		

✦ 如預報資訊有變更，請即時以電子郵件向彰化 VTS 更新之。
It must submit to Changhua VTS by Email immediately if any update.

SAILING DIRECTION FOR THE CHANGHUA WIND FARM CHANNEL

A. Foreword

The main purpose of the Sailing Direction is to establish the sailing order of vessels in the Changhua Wind Farm Channel in order to maintain and improve navigation safety and efficiency. Vessels using the Changhua offshore navigation areas are strongly advised to place this Sailing Direction on the bridge as reference for navigation and routes planning.

B. General Provisions

I. Changhua offshore navigation areas

Changhua offshore navigation areas refer to the water areas surrounded the Changhua offshore wind farms (from the Port of Taichung to the Port of Mailiao) of which the northern border is the north reporting line and its southern border is the south reporting line including the Changhua Wind Farm Channel, precautionary areas, and the inshore traffic zone of Changhua.

II. Changhua Wind Farm Channel

The traffic separation scheme (TSS) is adopted for the Changhua Wind Farm Channel. The coordinates for each point and reporting line of the Channel are listed below. The boundaries of the shipping lanes and reporting lines can be found from the figure in the annex.

(I) The Traffic Separation Scheme(TSS)

The Channel is separated into the northbound traffic lane, southbound traffic lane, separation zone, east traffic buffer zone, and west traffic buffer zone. The boundary coordinates of such areas are as follows:

1. Northbound traffic lane : A traffic lane, two miles wide, for northbound traffic is established between the separation zone and a line connecting the following geographical positions:

(1)24°09'57.6"N, 120°12'25.2"E

(7)24°08'31.2"N, 120°09'00.0"E

(9)23°57'25.2"N, 120°00'21.6"E

(11)23°52'58.8"N, 119°59'13.2"E

2. Southbound traffic lane : A traffic lane, two miles wide, for southbound traffic is established between the separation zone and a line connecting the following geographical positions:

(14)23°56'16.8"N, 119°52'44.4"E

(4)24°14'20.4"N, 120°06'43.2"E

3. Separation zone : A separation zone, one mile wide, is bounded by a line connecting the following geographical positions:

(2)24°12'25.2"N, 120°09'14.4"E

(12)23°54'46.8"N, 119°55'37.2"E

(13)23°55'19.2"N, 119°54'39.6"E

(3)24°13'04.8"N, 120°08'24.0"E

4. East traffic buffer zone(Reserved Zone) : The East traffic buffer zone(Reserved Zone) is established between the northbound traffic lane and a line connecting the following geographical positions:

(6)24°07'15.6"N, 120°11'16.8"E

(8)23°56'24.0"N, 120°02'52.8"E

(10)23°52'19.2"N, 120°01'51.60"E

5. West traffic buffer zone(Reserved Zone) : The West traffic buffer zone(Reserved Zone) is established between the southbound traffic lane and a line connecting the following geographical positions:

(15)23°57'00.0"N, 119°51'18.0"E

(5)24°15'21.6"N, 120°05'27.6"E

(II) Reporting lines

Six reporting lines have been established so that vessel traffic in the Channel can be effectively monitored and organized: :

1. T Line : 119°57.0'E 【 A line drawn from 24°25.0'N to south reaching the northern boundary of the western part of Changhua Wind Farm】
2. N Line : 24°25.0'N 【A line drawn from 119°57.0'E to 120°23.0'E】
3. C Line : 120°23.0'E 【 A line drawn from 24°25.0'N to south reaching the coast】
4. P Line : 119°45.0'E 【 A line drawn from 23°42.0'N to north reaching the southern boundary of the western part of Changhua Wind Farm】
5. S Line : 23°42.0'N 【A line drawn from 119°45.0'E to 120°05'40'E】
6. M Line : 120°05'40"E 【 A line drawn from 23°42.0'N to north reaching the southern boundary of the eastern part of Changhua Wind Farm】

III. Precautionary areas

Given that the northern and southern ends of Changhua Wind Farm Channel are the areas with high shipping traffic density in which vessels entering or exiting the Channel and inbound and outbound traffic gather, ship movements are difficult to predict. Precautionary areas are accordingly established for the north and south ends of the Changhua Wind Farm to recommend vessels to pay close attention to the surrounding situations, including proximity risks during transit.

IV. Inshore traffic zone of Changhua

Inshore traffic zone of Changhua refers to the navigation areas between the Changhua coast and the eastern part of Changhua Wind Farm

Channel. They are separated from Changhua Wind Farm Channel and are less affected by the north-south traffic using the TSS, therefore is mainly provided for vessels of less than 300 gross tonnage and fishing boats registered under the flag of the Republic of China to navigation under the guidance of this Sailing Directions to ensure their safety in navigation.

V. Changhua Offshore Wind Farm Vessel Traffic Services (referred to as "Changhua VTS" in the Sailing Directions)

The Vessel Traffic Services (VTS) are established in accordance with the 1974 International Convention for the Safety of Life at Sea (SOLAS). The VTS is established to monitor vessels sailing in Changhua Wind Farm Channel to provide navigational warnings and other related assistances. Changhua Offshore Wind Farm Vessel Traffic Services shall be referred to as Changhua VTS.

C. Changhua VTS Reporting Mechanisms

I. Vessels required to comply with the reporting mechanisms:

- (I) All vessels passing and using the Changhua Wind Farm Channel for navigation are required to report to Changhua VTS, including pre-arrival notifications and reporting on arrival.
- (II) Vessels that must pass through the Changhua Wind Farm Channel due to an emergency or must use the traffic buffer zones or the separation zone of the Changhua Wind Farm Channel to avoid imminent danger, pre-arrival notification is not required.

II. Communication

- (I) All vessels passing and sailing in the Changhua Wind Farm Channel must be equipped with AIS, VHF, and radio equipment defined in the Global Maritime Distress and Safety System (GMDSS) for Sea Area A1 and A2. The AIS must be kept operational and correctly set with updated information. For VHF, Channel 16 and designated channels

must be watched throughout the passage. For vessels using DSB and SSB, the designated frequencies must be watched. Report to Changhua VTS through the designated channels/frequencies for pre-Arrival notification and reporting upon arrival.

(II) Changhua VTS designated VHF channels and Channel:

Channel	Function
16	Distress, urgency and safety calling
68	Reporting upon arrival
74	Promulgation of Maritime Safety Information

(III) Changhua VTS designated DSB and SSB frequencies:

Equipment	Frequency	Function
SSB	8806 KHz	Reporting upon arrival and promulgation of Maritime Safety Information
DSB	27.120 MHz	Reporting upon arrival and promulgation of Maritime Safety Information

*4372/8803/13194KHZ are backup frequencies for SSB.

(IV) The standard languages used for reporting and communication with Changhua VTS shall be Chinese or English, using the IMO Standard Marine Communication Phrases (SMCP), where necessary.

III. Pre-Arrival Notification

(I) All vessels (excluding military vessels, Republic of China government ships, and fishing boats registered under the flag of Republic of China) are to declare the required information using the annexed Pre-Arrival Notification Form (PAN) 8 hours before entering Changhua Wind

Farm Channel :

E-mail	owfvts@motempb.gov.tw
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(II) The contents of the Pre-Arrival Notification shall include the following information. The format of the Pre-Arrival Notification is provided in the attachment:

1. Vessel name, vessel call sign, MMSI, and IMO or ship number.
2. Vessel type and gross tonnage.
3. Vessel length and width.
4. Fore and aft draft.
5. Estimated reporting line of passage and arrival time.
6. Previous port.
7. Destination port/destination wind farm and estimated time of arrival.
8. Cargo type and quantity.
9. Number of seafarers, passengers, and total number of people on board.
10. Shipping agency in the Republic of China and partner marine casualty rescue operator.
11. Other matters regarding navigation safety which must be reported to Changhua VTS or requested to provide (e.g., any DG cargo on board, existence of damage or defects which may affect vessel structure, cargo, or vessel equipment, or conditions which may affect the vessel's navigation safety based on related IMO Conventions).

(III) Confirmation of Pre-Arrival Notification : Only after the Pre-Arrival Notification is logged by Changhua VTS that subsequently responds

with "Pre-Arrival Notification received" may the vessel proceed the reporting procedure when arriving at the reporting line.

(IV) Resubmission of Pre-Arrival Notification : Under any of the following circumstances, Pre-Arrival Notification should be resubmitted to Changhua VTS:

1. Confirmation from Changhua VTS is not received 4 hours before arrival at the reporting line.
2. The estimated time of entry into the Changhua Wind Farm Channel deviates by 4 hours or more from the original estimated time.

IV. Reporting upon arrival

(I) Vessels shall report to Changhua VTS using the designated communication channel and language when they cross respective reporting positions, as follows:

1. Vessels planning to enter the southbound traffic lane should report when they pass through Reporting Lines T, N, or C.
2. Vessels planning to enter the northbound traffic lane should report when they pass through Reporting Lines P, S, or M.
3. Fishing boats, offshore wind farm work vessels or vessels less than 300 gross tonnage planning to enter the east traffic buffer zone should report when they are within the range of 1 nautical mile ahead of the eastern border of the traffic buffer zone or pass through any reporting line.
4. Fishing boats, offshore wind farm work vessels or vessels less than 300 gross tonnage planning to enter the west traffic buffer zone should report when they are within the range of 1 nautical mile ahead of the western border of the traffic buffer zone or pass through any reporting line.
5. Fishing boats or vessels less than 300 gross tonnage planning to

pass through Changhua Wind Farm Channel should report when they are within the range of 1 nautical mile ahead of the outer limits of the traffic lanes.

(II) Contents of report:

1. Vessel name and call sign (military vessels and Republic of China government ships are only required to provide the vessel name).
2. Vessel position (latitude and longitude).
3. Course and speed.
4. Other matters regarding navigation safety which must be reported to Changhua VTS or is requested to provide (refer to C. III. (II) Point 11 of the report contents)

(III) Verification of report upon arrival: Vessels which have completed the Pre-Arrival Notification and Reporting Upon Arrival are permitted to enter or pass through Changhua Wind Farm Channel only after the verification and confirmation conducted by Changhua VTS under the principle of innocent passage with the response of "Entry is permitted".

V. Surveillance authority and responsibility of Changhua VTS and port VTS

- (I) Vessels departing from the Ports of Taichung or the Port of Mailiao and planning to enter Changhua Wind Farm Channel shall report to Changhua VTS according to this Sailing Direction and acknowledge the Reporting upon Arrival confirmation prior to surveillance.
- (II) Vessels shall be monitored by Changhua VTS when they are on Changhua Wind Farm Channel. They shall be discharged from the Changhua VTS surveillance after they leave Changhua Wind Farm Channel. Vessels bound for the Port of Taichung or the Port of Mailiao shall report to the local VTS centers of the respective ports in

accordance with their port regulations.

(III) The VTS communication channels of the Ports of Taichung and Mailiao are as follows. Please refer to the 「GUIDE TO TAICHUNG PORT ENTRY」 and the 「GUIDE TO MAILIAO PORT ENTRY」 for further information.

Port	Call sign	VHF channel	Purpose
Port of Taichung	Taichung VTS	CH14	Vessel reporting upon arrival, ship-shore communication, and exchange of information between vessel and pilots.
		CH16	Distress, urgency and safety calling
Port of Mailiao	Mailiao Port Radio	CH13	Estimated time of arrival (ETA), ship-shore communication, or exchange of information between vessel and pilots.
		CH16	Distress, urgency and safety calling

D. Vessel Navigation Regulations

I. General provisions:

- (I) Vessels navigating in the Changhua Wind Farm Channel or Changhua offshore navigation area should comply with the "1972 International Regulations for Preventing Collisions at Sea (COLREG), as amended", in particular Rule 10 applicable to the traffic separation scheme and regulations therein regarding the display of signals and lights, crossing as well as giving way to avoid collision. Every vessel shall at all times proceed at a safe speed.
- (II) A vessel shall, so far as practicable, avoid crossing traffic lanes but if obliged to do so shall report to Changhua VTS to obtain approval and cross quickly on a heading as nearly as practicable at right angles to the

general direction of traffic flow. This minimizes the time a crossing vessel is in the lane irrespective of the tidal stream, and should lead to a clear encounter situation with vessels passing through the traffic lanes.

- (III) Except for military vessels, Republic of China government ships, vessels with less than 300 gross tonnage and fishing boats registered under the flag of the Republic of China shall, as a principle, sail in the inshore traffic zone of Changhua. However, if obliged to use the Changhua Wind Farm Channel due to navigation safety concerns, they must follow relevant regulations in "III. Changhua VTS Reporting Mechanisms" and "IV. Vessel Navigation Regulations" and pass through the East or West traffic buffer zones whenever possible.
- (IV) In addition to the aforementioned provisions, vessels are also required to comply with the following regulations specified for different categories of vessels.

II. General vessel navigation regulations:

- (I) The southbound and northbound traffic lanes of the Changhua Wind Farm Channel are only provided for navigation by the following categories of vessels:
1. Military vessels and Republic of China government ships.
 2. Passenger ships regardless of gross tonnage.
 3. Fishing boats not registered under the flag of Republic of China regardless of gross tonnage.
 4. Vessels carrying hazardous cargoes defined in Article 1.4 of Resolution MSC. 433(98) "Guidelines and Criteria for Ship Reporting Systems" regardless of gross tonnage.
 5. In addition to the aforementioned vessel categories, vessels of 300 gross tonnage and upwards which are not fishing boats registered under the flag of Republic of China.

(II) Vessels in towing or pushing operations, regardless of gross tonnage, must use the East and West traffic buffer zones of the Changhua Wind Farm Channel for navigation.

(III) Foreign military vessels and government ships must not pass through the Changhua Wind Farm Channel without prior application and permission.

III. Navigation and operation regulations for fishing boats registered under the flag of Republic of China:

(I) Fishing boats should pass through the East and West traffic buffer zones and the inshore traffic zone of Changhua and they should avoid entering the southbound and northbound traffic lanes and separation zone.

(II) Fishing boats are prohibited from conducting fishing activities in the northbound traffic lanes, southbound traffic lanes, and separation zone of the Changhua Wind Farm Channel, and should avoid impeding the safe passage of any vessel following the traffic lanes.

IV. Navigation regulations for offshore wind farm service vessels:

(I) Vessels bound for the west wind farm must turn into the west traffic buffer zone from the south or north precautionary areas before proceeding to the destination wind farm. Vessels bound for the east wind farm must turn into the east traffic buffer zone from the south or north precautionary areas before proceeding to the destination wind farm.

(II) Vessels bound for the east wind farm may proceed through the inshore traffic zone of Changhua, if considering their under keel clearance as sufficient for safe passage.

V. Anchoring or other operation regulations:

(I) Except for fishing boats, no vessels may use the wind farm area for

navigation without the permission from Changhua VTS.

- (II) No vessel may anchor on Changhua Wind Farm Channel and near the northern or southern ends of the Channel. If a vessel needs to anchor due to emergency, the vessel must report to Changhua VTS and follow its advices for temporary anchoring in the traffic buffer zone or separation zone. (Note that there are submarine power cables crossing the Channel and an LNG pipeline along the East buffer zone.) Such vessels must display appropriate lights and signals according to COLREG and immediately leave the area once the cause of emergency or crisis is eliminated.
- (III) Vessels sailing on Changhua Wind Farm Channel are prohibited from undertaking any underwater, surface or overwater operations such as dredging and surveying without prior permission of Changhua VTS.

E. Vessel Traffic Services (VTS) Operation Rules

I. Competent authority

Changhua Vessel Traffic Services (call sign : Changhua VTS) is operated and managed by the Maritime and Port Bureau (MPB), Ministry of Transportation and Communications (MOTC). Duties of the Changhua VTS include monitoring vessel movements in Changhua Wind Farm Channel and, where necessary, assisting in notifications to maritime search and rescue authorities, the Coast Guard Administration of the Ocean Affairs Council, or other related government agencies.

II. Implementation Items

- (I) Accept reporting upon arrival from vessels planning to enter Changhua Wind Farm Channel.
- (II) Watch VHF CH16 and working channels continuously.
- (III) Use equipment including RADAR, AIS, and VHF to monitor navigation status of vessels in the Changhua Wind Farm Channel.

- (IV) Provide navigation safety related information to vessels.
- (V) Remind vessels of cautions in navigation or give advices when developing dangerous situations are discovered.
- (VI) Issue navigational warnings to vessels violating the guidance of Sailing Directions for Changhua Wind Farm Channel.
- (VII) Notify and liaise in maritime incidents.
- (VIII) In the event of a distress, emergency, marine casualty or incident involving a vessel, notify the cooperating rescue or salvage operators of the vessel to respond, with the approval of the competent authority.

III. Actions for vessels in violation of this Sailing Directions

- (I) Vessel that fails to report or navigate in accordance with the Sailing Directions, shall be reported by Changhua VTS to the Port State Control agency for intensive ship inspections. Where necessary, related information may be reported to the competent authority of the flag state for investigation and penalty.
- (II) The competent authority may request assistance from the Coast Guard Administration of the Ocean Affairs Council to maintain order and safety at sea under the following circumstances:
 - 1. Where a vessel refuses recommendations or related administrative provisions of Changhua VTS and the competent authority deems that its actions are or may be inconsistent with "innocent passage" principles.
 - 2. Where a vessel enters Changhua Wind Farm Channel without an entry permission from Changhua VTS.
 - 3. Where a vessel in the Changhua Wind Farm Channel is without displaying AIS signal.

F. Supplemental Provisions

I. Navigation risks in Changhua offshore navigation areas

- (I) Considering that most southbound and northbound vessel traffic merges to Changhua Wind Farm Channel, thus the increase in traffic density, all vessels passing through Changhua Wind Farm Channel should pay close attention to changes in their surroundings to prevent risks.
- (II) Considering that the wind farm areas are open for passage, there are risks at all sections of the Changhua Wind Farm Channel that vessels may come out from wind farm areas. Seafarers should keep a sharp lookout and watchkeeping to enhance navigation safety.
- (III) Whenever the captain, after evaluating possible risks, believing that navigating in the Changhua offshore navigation areas or Changhua Wind Farm Channel may affect the vessel safety, may consider the characteristics of the vessel, loading conditions, and water environment, seek other safe ways suitable for navigation, and formulate appropriate sailing plans. However, it is not advisable to pass through the area between Mudouyu Island of Penghu and the western part of the wind farm off the coast of Changhua.

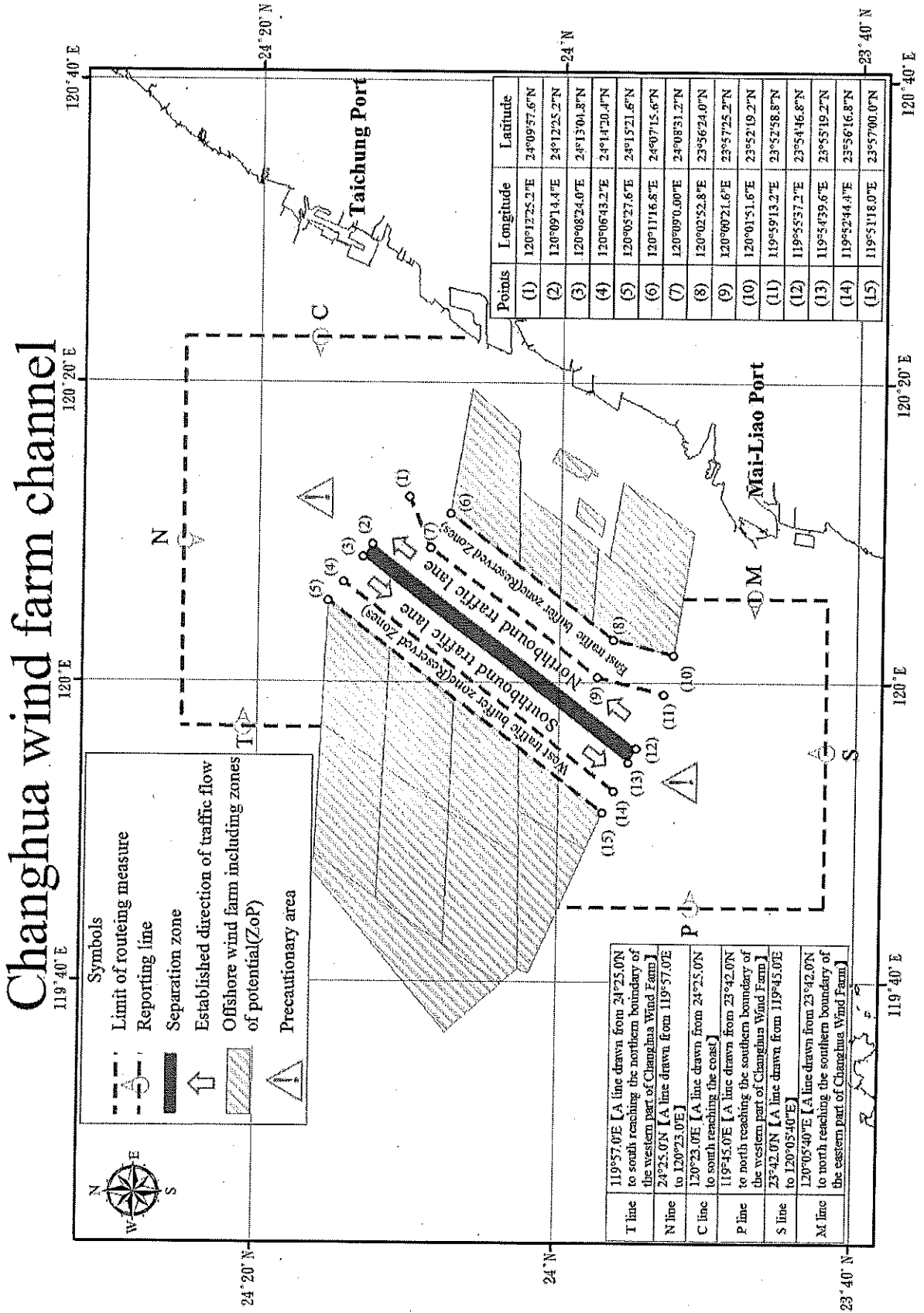
II. Notices for ships in Changhua offshore navigation areas

- (I) Changhua VTS only provides navigation safety information and principled advices. This does not relieve the duties of the captain and watchkeeping seafarers specified in International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW) and other international instruments and regulations. The captain has the ultimate responsibility and obligation for maintaining the safety of the vessel, cargo and persons onboard.
- (II) Where there are no safety concerns, vessels not destined to a port of Republic of China are advised to pass through the high seas.
- (III) Vessels that discover any violation of this Sailing Directions, obstacles affecting navigation safety, equipment damage, or other emergency in

the Changhua offshore navigation area shall report to Changhua VTS immediately.

- (IV) The Republic of China government ships carrying out test and survey missions may, after acquiring permissions from Changhua VTS, switch off the AIS, cross Changhua Wind Farm Channel, or undertake approved operations thereon. However, they shall pay attention to the movements of ships in vicinity and avoid collisions.
- (V) The Republic of China government ships carrying out search and rescue missions, reconnaissance tasks or pollution prevention assignments may, given the assurance of navigation safety, switch off the AIS, cross Changhua Wind Farm Channel, or enter the wind farm areas. They may report to Changhua VTS provided that such notifications do not affect the execution of their missions. However, they shall pay attention to the movement of ships in vicinity and avoid collisions.

Attached Figure

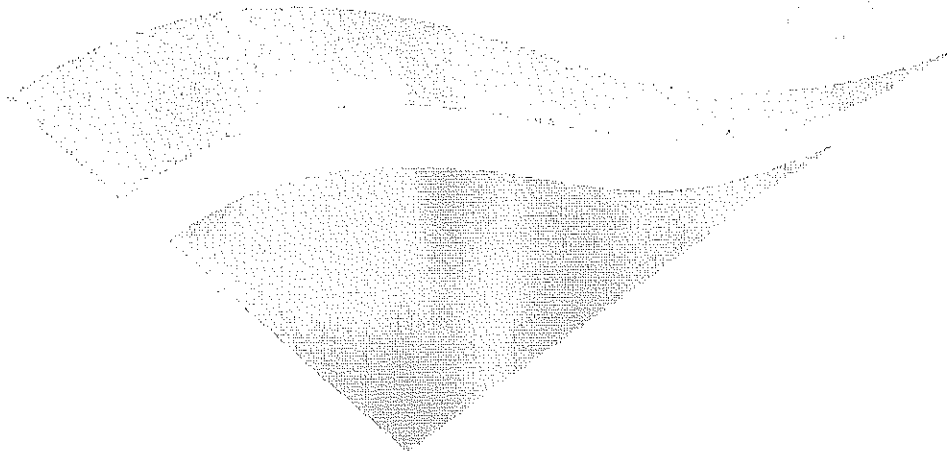


Pre-Arrival Notification Form of Changhua wind farm Channel

Ship's Particular and Contact Details			
IMO No.		Call Sign	
Ship's Name		Ship's Name (in Chinese, if any)	
Gross Tonnage		Type of Ship	
Flag State		MMSI No.	
Length (LOA)		Breadth	
Name of Company with 24hr Contact Details		Company:	
		Title / Name:	
		TEL:	
Name of Agent with 24hr Contact Details		Agent:	
		Title / Name:	
		TEL:	
Name of Salvage Contractor with 24hr Contact Details		Contractor:	
		Title / Name:	
		TEL:	
Voyage Information			
Draft Forward		Draft Aft	
No. of Crew		No. of Passengers	
Destination (Port or Windfarm)		Last port of call	
ETA to the Destined Port Facility/ Windfarm		Date(UTC): yyyy/mm/dd Time(UTC):	
Name/ Class of Cargo		Cargo Laden	
Fuel Oil (R.O.B)		Diesel Oil (R.O.B)	
Ballast on Board		Total No. of people	
Do you have DG Cargo on board? (Especially Class 1 and 7)		(please attach the DG list)	<input type="checkbox"/> Yes <input type="checkbox"/> No
Do you have any Hazardous and/or Potentially Polluting cargo onboard?		(please attach the such cargo list)	<input type="checkbox"/> Yes <input type="checkbox"/> No
Information related to ChangHua wind farm Channel			
Name and Time of Reporting Line to cross	<input type="checkbox"/> T <input type="checkbox"/> N <input type="checkbox"/> C <input type="checkbox"/> P <input type="checkbox"/> S <input type="checkbox"/> M line Date(UTC): yyyy/mm/dd Time(UTC):		
Any Other Circumstances Related to Navigation Safety and/or Asked to Report to the Authority (Optional)			

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- * The form must be submitted to Changhua VTS by Email immediately if any update.



彰化風場航道 船舶預報單

Pre-Arrival Notification Form of Changhua wind farm Channel

船舶資訊 Ship's Particular and Contact Details			
IMO 編號/船舶編號 IMO No.		呼號 Call Sign	
船名(英文) Ship's Name		船名(中文) Ship's Name (in Chinese, if any)	
總噸位 Gross Tonnage		船舶種類 Type of Ship	
船旗國 Flag State		水上行動業務識別碼 MMSI No.	
船長 Length (LOA)		船寬 Breadth	
所屬公司名稱及其24小時聯絡資訊 Name of Company with 24hr Contact Details		Company:	
		Title / Name:	
		TEL:	
本國代理行及其24小時聯絡資訊 Name of Agent with 24hr Contact Details		Agent:	
		Title / Name:	
		TEL:	
合作之海難救助廠商及其24小時聯絡資訊 Name of Salvage Contractor with 24hr Contact Details		Contractor:	
		Title / Name:	
		TEL:	
航程資訊 Voyage Information			
艏吃水 Draft Forward		艉吃水 Draft Aft	
船員人數 No. of Crew		乘客人數 No. of Passengers	
目的港口設施/風場 Destination (Port or Windfarm)		前一停靠港 Last port of call	
預計抵達港口設施/風場時間 ETA to the Destined Port Facility/ Windfarm		Date(UTC): yyyy/mm/dd Time(UTC):	
貨物名稱/種類 Name/ Class of Cargo		實際載貨量 Cargo Laden	
船上剩餘燃油(重油) Fuel Oil (R. O. B)		船上剩餘燃油(柴油) Diesel Oil (R. O. B)	
船上剩餘壓艙水 Ballast on Board		全船總人數 Total No. of people	
是否載運危險貨物(特別是第1類及第7類)? Do you have DG Cargo on board? (Especially Class 1 and 7)		(請提供危險貨物清單 please attach the DG list)	<input type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No

是否載運其他有害/潛在汙染貨物 Do you have any Hazardous and/or Potentially Polluting cargo onboard?	(請提供是類貨物清單 please attach the such cargo list)	<input type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No
有關彰化風場航道事項 Information related to ChangHua wind farm Channel		
預計通過之報到線及通過時間 Name and Time of Reporting Line to cross	<input type="checkbox"/> T <input type="checkbox"/> N <input type="checkbox"/> C <input type="checkbox"/> P <input type="checkbox"/> S <input type="checkbox"/> M line Date(UTC): yyyy/mm/dd Time(UTC):	
其他需向主管機關報告或被要求提供航行安全相關之事項 Any Other Circumstances Related to Navigation Safety and/or Asked to Report to the Authority (Optional)		
(Empty space for reporting other circumstances)		

✦ 如預報資訊有變更，請即時以電子郵件向彰化 VTS 更新之。
 It must submit to Changhua VTS by Email immediately if any update.

