

附件一 Appendix 1

一、作業區域 (Construction Area)

本作業包含海纜鋪設與埋設，區域為中能離岸風場輸出海纜廊道，範圍內海域水深約在4公尺至40公尺間，如圖1標示綠色範圍，輸出海纜廊道邊界座標點如表1所示。

The operation includes cable laying and trenching. The area is composed of Zhong Neng Offshore Export Cable Corridor, where the water depth is about 4 to 40 meters. The area is shown green color in Figure 1, and the boundary coordinates of export cable corridor is listed in Table 1.

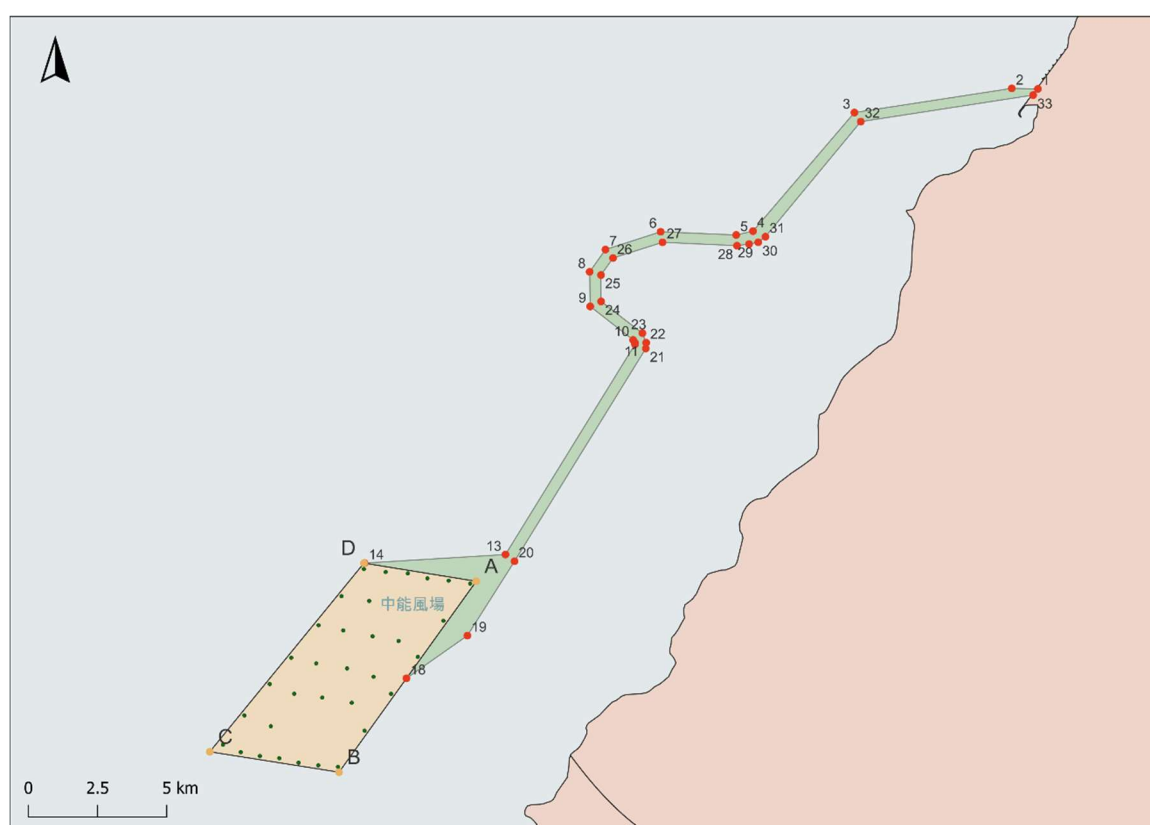


圖1、本計畫工作區域 Figure 1 ZN project area

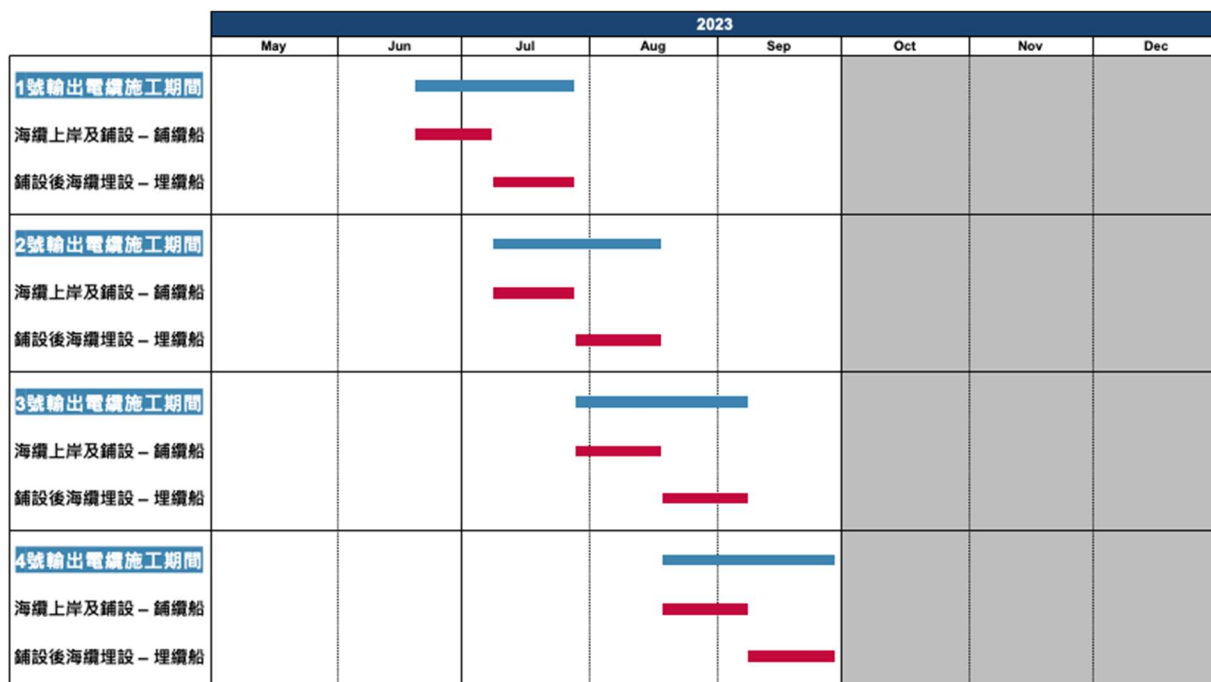
表1、輸出海纜廊道邊界座標點位
Table 1 The boundary of cable corridor

ID	WGS 84		TWD 97	
	Long (X座標)	Lat (Y座標)	X	Y
1	120°23'10.669"	24°6'9.908"	187609.75	2666539.16
2	120°22'37.295"	24°6'10.617"	186667.37	2666565.15
3	120°19'16.227"	24°5'39.705"	180984.56	2665640.47
4	120°17'6.619"	24°3'8.229"	177300.41	2660998.49
5	120°16'45.25"	24°3'3.377"	176695.94	2660852.30
6	120°15'8.667"	24°3'7.468"	173967.92	2660992.42
7	120°13'58.158"	24°2'44.746"	171972.12	2660304.09
8	120°13'37.94"	24°2'16.311"	171396.07	2659432.44
9	120°13'38.67"	24°1'32.079"	171409.23	2658071.52
10	120°14'33.507"	24°0'49.277"	172951.72	2656746.28
11	120°14'35.831"	24°0'45.755"	173016.82	2656637.58
12	120°14'35.886"	24°0'43.688"	173018.01	2656573.97
13	120°11'50.357"	23°56'15.239"	168293.03	2648341.04
14	120°8'50.302"	23°56'4.3"	163199.56	2648034.35
D	120°8'49.502"	23°56'4.233"	163176.93	2648032.43
A	120°11'12.975"	23°55'41.034"	167229.94	2647294.79
18	120°9'43.858"	23°53'37.081"	164687.16	2643496.08
19	120°11'1.771"	23°54'31.648"	166900.77	2645161.96
20	120°12'1.967"	23°56'6.619"	168619.85	2648073.99
21	120°14'49.711"	24°0'38.412"	173407.85	2656409.57
22	120°14'50.22"	24°0'45.763"	173423.45	2656635.63
23	120°14'45.348"	24°0'57.932"	173287.78	2657010.76
24	120°13'52.574"	24°1'38.443"	171803.20	2658265.13
25	120°13'52.42"	24°2'12.148"	171804.51	2659302.10
26	120°14'7.859"	24°2'33.908"	172244.39	2659969.17
27	120°15'11.034"	24°2'53.951"	174032.61	2660576.19
28	120°16'46.209"	24°2'49.676"	176720.87	2660430.65
29	120°17'1.624"	24°2'51.743"	177156.70	2660492.02
30	120°17'13.358"	24°2'54.015"	177488.57	2660560.24
31	120°17'22.574"	24°3'1.079"	177750.03	2660776.24
32	120°19'24.398"	24°5'28.086"	181213.60	2665281.90
33	120°23'4.6"	24°6'2.002"	187437.28	2666296.69

二、作業時間表(Construction period)

本計畫船舶預計作業期程為112年6月20日至112年9月29日，惟此期程將依照現場施工或海氣象條件而有所變動。

The estimated vessel operation duration of this project is from 2023.06.20 to 2023.09.29, which will vary with actual operation situation and weather condition.




1號輸出電纜施工期間	2023/06/20	2023/07/28
海纜上岸及鋪設 - 鋪纜船	2023/06/20	2023/07/08
鋪設後海纜埋設 - 埋纜船	2023/07/09	2023/07/28
2號輸出電纜施工期間	2023/07/09	2023/08/18
海纜上岸及鋪設 - 鋪纜船	2023/07/09	2023/07/28
鋪設後海纜埋設 - 埋纜船	2023/07/29	2023/08/18
3號輸出電纜施工期間	2023/07/29	2023/09/08
海纜上岸及鋪設 - 鋪纜船	2023/07/29	2023/08/18
鋪設後海纜埋設 - 埋纜船	2023/08/19	2023/09/08
4號輸出電纜施工期間	2023/08/19	2023/09/29
海纜上岸及鋪設 - 鋪纜船	2023/08/19	2023/09/08
鋪設後海纜埋設 - 埋纜船	2023/09/09	2023/09/29

三、 作業船舶 construction vessels

本專案所將動員之鋪纜船及埋纜船如下所述：

Following vessels will be mobilised for the Scope of Work

鋪纜船基本資訊 Vessel Information	
	
Name	Topaz Installer
Call sign:	V7EN3
IMO No:	9199854
MMSI:	538007103
Vessel Type	Cable Layer
Nationality	Marshall Islands [MH]
Length & Breadth	88.20m * 24.00m
Draft	4.5m
攜帶儀器列表 Equipment List	
Offshore crane	TTS, model GPOKAC 2000-35-30 Crane: SWL 35 tonnes @ 5-30 m Auxiliary: 5 tonnes @ 30 m
Cable carousel	Maximum capacity 3600 tonnes Inside diameter 8 m Outside diameter 24 m
Tensioners	Parkburn Type: Electric 2 Trade Multi Product Maximum tension: 20 tonnes
Winches & 4 pt. mooring system	4 x Kraaijeveld electric self-tensioning winches, Forward type: 2 x 60 t, Aft type: 2 x 48 t

埋纜船基本資訊 Vessel Information



Name	Normand Baltic
Call sign:	2DAO6
IMO No:	9468190
MMSI:	235077315
Vessel Type	Offshore Support Vessel
Nationality	Isle of Man
Length & Breadth	96.30m x 20.00 m
Draft	6.66m
攜帶儀器列表 Equipment List	
Offshore Crane I	HYDRAMARINE HMC 3638LKO 250-32
Port crane	HYDRAMARINE HMC 1800LKO 100-10 SWL 10T - 10m
Starboard crane	HYDRAMARINE HMC 1077 LK 30-10 AS SWL 3.0T - 10m
Tugger winch	ODIM BRATTVAAG 150m x 18mm
ROV	IKM Subsea Merlin WR200 200HP – 3000m rated system
Trenching ROV	Aratellus Leviathan 1600hp, 1.2MW

近岸埋纜船基本資訊 Vessel Information



Name	Feng Neng 5 (風能5號)
Call sign:	BQ3014
IMO No:	N/A
MMSI:	416005838
Vessel Type	Diving Support vessel(Nearshore Trenching)
Nationality	Taiwan
Length & Breadth	12.00m x 4.03 m
Draft	0.7 m
攜帶儀器列表 Equipment List	
Diving Equipment	IMCA compliant integrated diving system (Ref. IMCA D040 & ST- 4380- PMS)
Shallow Water Trencher	Seatrench

船舶基本資訊 Vessel Information

Name	Echo 3
Call sign:	BQ3088
IMO No:	N/A
MMSI:	416008182
Vessel Type	Support vessel
Nationality	Taiwan
Length & Breadth	6.01m * 2.99 m
Draft	Approx 0.2 m