Base Load Power Hub (BLPH)

BATTERY LIMIT ISOLATION PLAN and EQUIPMENT ISOLATION GUIDELINE

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Rev.	Date	Description	Prepared	Reviewed	Approved

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1. INTRODUCTION

1.1 Project Overview

Crosswind, a Shell and Eneco joint venture, was awarded the tender to develop the offshore Hollandse Kust Noord (HKN) wind farm, located 18.5km off the coast of Netherlands near the town of Egmond aan Zee. The consortium plans to have HKN operational in 2023 with an installed capacity of 759MW generating at least 3.3TWh per year. This is sufficient renewable power to supply more than 1 million Dutch households with green electricity.

Offshore wind farms produce intermittent electricity and balancing these dips and peaks and integrating this electricity into the national energy system requires new technologies. For this reason, the offshore wind farm will include several new technologies that could be implemented at full-scale in the future. The new technologies being explored include a floating solar park, a short-duration battery storage as well as long-term storage via green hydrogen produced by water electrolysis and subsequently consumed in a fuel cell. The combination of these individual measures, herein referred to as the Base Load Power Hub (BLPH) will ensure a continuous power supply regardless of the wind situation.

1.2 Project Location

The Hollandse Kust Noord (HKN) wind farm is located 18.5km off the coast of the Netherlands near the town of Egmond aan Zee.

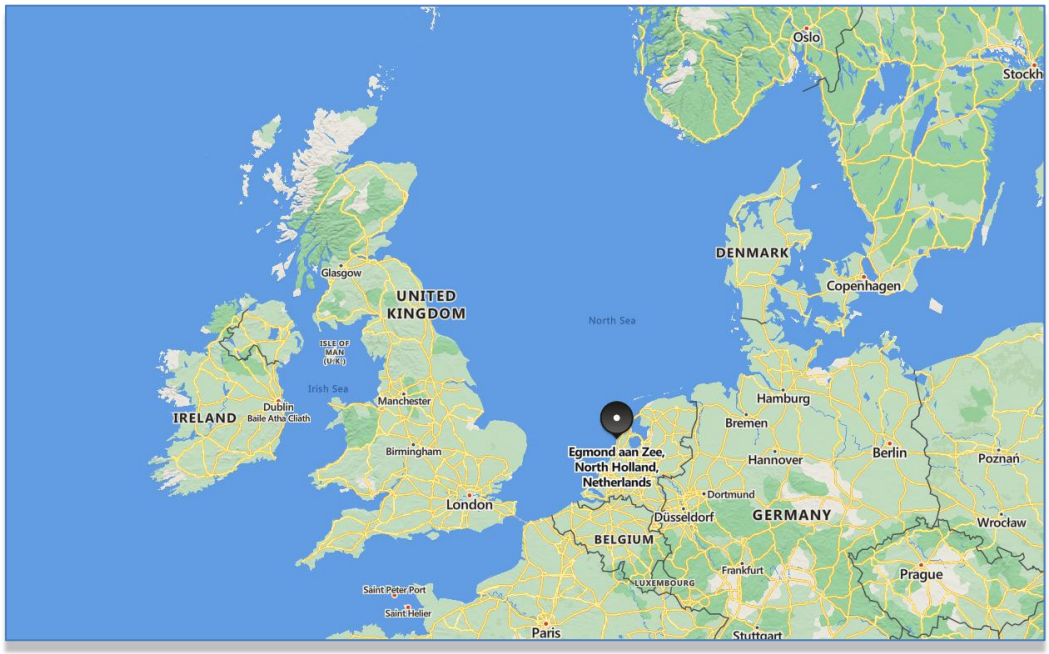


Figure 1 - HOLLANDSE KUST NOORD WIND PARK Location Map

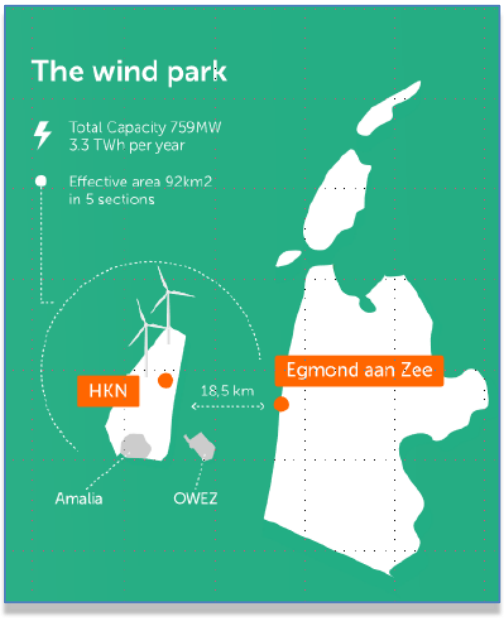


Figure 2 - Wind Park Details

The wind farm will consist of No. 69 x 11.5MW wind turbine generators each to be installed on a dedicated monopile structure. A 70th monopile is located on coordinates E 590719.1, N 5841602.3 and is reserved for installing the platform accommodating the BLPH.

The monopile structure was designed and installed by Van Oord Offshore Wind (VooW) and therefore not part of the BLPH scope.

1.3 Project Concept

All components included in the BLPH will be integrated onshore on a topside and installed in an offshore location within the boundaries of the HKN wind farm.

At its simplest, the BLPH will store energy during periods of high electricity generation from renewable sources (a wind turbine generator and the floating solar PV farm) and release it during periods of low generation.

It is expected that the energy stored will supplement generation from renewable sources to ensure that at least 1.0MW of power is exported to the electrical grid regardless of wind/solar availability.

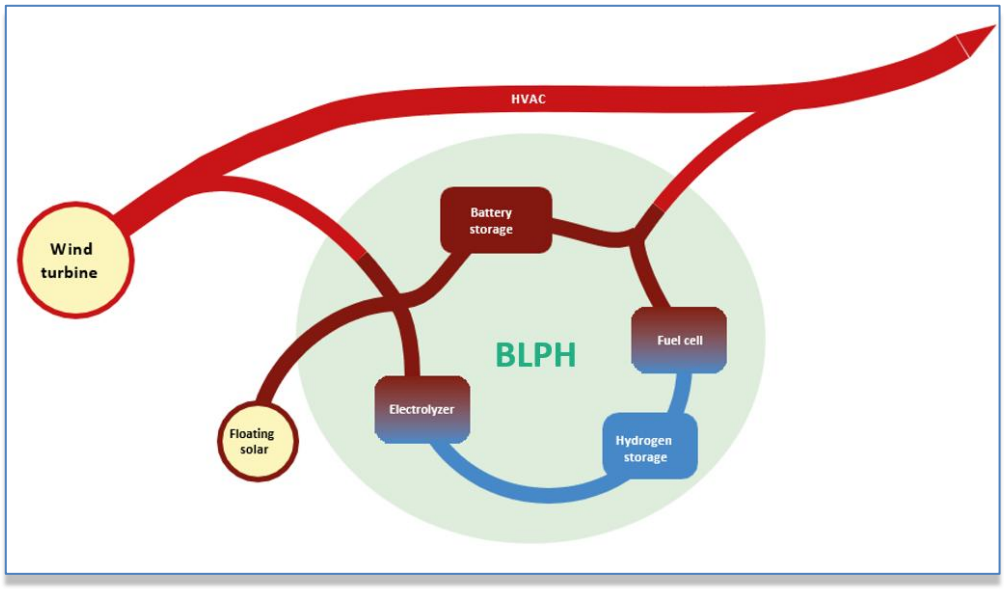


Figure 3 – BLPH Concept

Electricity in the BLPH will be stored in the form of electrons in a battery energy storage system (BESS) as well as converted into green hydrogen via water electrolysis.

When the power output from the connecting wind turbine drops to below 1 MWe, the BLPH will return its stored energy to supplement the remaining power output. This will be by discharging the BESS, while stored hydrogen will be converted back into electricity using a fuel cell to extend the discharge duration.

The purpose of the BLPH is to function as a testbed for the integration of energy storage technologies with renewable generation. It is expected that equipment installed on the BLPH will operate as Normally Unmanned Installation for at least two (2) years with no or minimal maintenance and it will have its own independent control room with the ability to communicate with Crosswind's control room.

2. DOCUMENT SCOPE AND PURPOSE

Further to the changes in the contractual scope of works that required installation of BLPH at a new designated onshore location at Eemshaven in NL, the final handover status of the platform in terms of electrical and mechanical isolations had been duly defined, registered and signed off between all parties.

The n.3 signed off registers are attached to this document.

Attachment 1 – LO-LC Register at BLPH Sail Away

ROSETTI MARINO

CROSSWIND

"HOLLANDSE KUST NOORD WIND PARK Project
Contract No. CW-I-WP4-2023-05"

123A90A.11CC - ELECTRICAL & MECHANICAL ISOLATION REGISTER

LAST UPDATE
DATE 26/07/2025 15:22
REV. N° 00

KEY N.	FLOOR	SWITCHBOARD				DESCRIPTION	TO/(FROM)	NOTE	SUBSYSTEM	ICC STATUS	ISOLATION			DE-ISOLATION			NOTE
MEC. 0001C	UPPERDECK	A-20000			MV-003	ELECTROLYSER PACKAGE	CLOSE		25-07	O	25/07/2025	14:00	Tassinari				
MEC. 0002A	UPPERDECK	A-20000			MV-466	ELECTROLYSER PACKAGE	CLOSE		25-07	O	25/07/2025	14:00	Tassinari				
MEC. 0004A	UPPERDECK	H2 VESSELS HEADER INLET			MV-010	HYDROGEN STORAGE VESSELS HEADER (INLET)	CLOSE		64-10	O	25/07/2025	14:00	Tassinari				
MEC. 0009A	UPPERDECK	H2 VESSELS HEADER OUTLET			MV-018	HYDROGEN STORAGE VESSELS HEADER (OUTLET)	CLOSE		25-08	O	25/07/2025	14:00	Tassinari				
MEC. 0010A	UPPERDECK	A-80000			MV-006	FUEL CELL PACKAGE	CLOSE		25-08	O	25/07/2025	14:00	Tassinari				
MEC. 0013A	UPPERDECK	A-80000			MV-007	FUEL CELL PACKAGE	CLOSE		25-08	O	25/07/2025	14:00	Tassinari				
MEC. 0014A	UPPERDECK	A-80000			MV-016	FUEL CELL PACKAGE	CLOSE		25-08	O	25/07/2025	14:00	Tassinari				
MEC. 0018	UPPERDECK	V-43001			MV-417	HYDROGEN VENT DRUM	CLOSE		43-00	O	25/07/2025	14:00	Tassinari				
MEC. 0020A	UPPERDECK	V-25001 A			MV-087	HYDROGEN STORAGE VESSEL A	CLOSE		64-10	O	25/07/2025	14:00	Tassinari				
MEC. 0022A	UPPERDECK	V-25001 A			MV-089	HYDROGEN STORAGE VESSEL A	CLOSE		25-01	O	25/07/2025	14:00	Tassinari				
MEC. 0023A	UPPERDECK	V-25001 A			MV-032	HYDROGEN STORAGE VESSEL A	CLOSE		25-01	O	25/07/2025	14:00	Tassinari				
MEC. 0026A	UPPERDECK	V-25001 A			MV-034	HYDROGEN STORAGE VESSEL A	CLOSE		25-01	O	25/07/2025	14:00	Tassinari				
MEC. 0027A	UPPERDECK	V-25001 A			MV-086	HYDROGEN STORAGE VESSEL A	CLOSE		25-01	O	25/07/2025	14:00	Tassinari				
MEC. 0028A	UPPERDECK	V-25001 B			MV-206	HYDROGEN STORAGE VESSEL B	CLOSE		64-10	O	25/07/2025	14:00	Tassinari				
MEC. 0030A	UPPERDECK	V-25001 B			MV-385	HYDROGEN STORAGE VESSEL B	CLOSE		25-02	O	25/07/2025	14:00	Tassinari				
MEC. 0031A	UPPERDECK	V-25001 B			MV-266	HYDROGEN STORAGE VESSEL B	CLOSE		25-02	O	25/07/2025	14:00	Tassinari				
MEC. 0034A	UPPERDECK	V-25001 B			MV-222	HYDROGEN STORAGE VESSEL B	CLOSE		25-02	O	25/07/2025	14:00	Tassinari				
MEC. 0035A	UPPERDECK	V-25001 B			MV-384	HYDROGEN STORAGE VESSEL B	CLOSE		25-02	O	25/07/2025	14:00	Tassinari				
MEC. 0036A	UPPERDECK	V-25001 C			MV-390	HYDROGEN STORAGE VESSEL C	CLOSE		64-10	O	25/07/2025	14:00	Tassinari				
MEC. 0038A	UPPERDECK	V-25001 C			MV-193	HYDROGEN STORAGE VESSEL C	CLOSE		25-03	O	25/07/2025	14:00	Tassinari				
MEC. 0039A	UPPERDECK	V-25001 C			MV-389	HYDROGEN STORAGE VESSEL C	CLOSE		25-03	O	25/07/2025	14:00	Tassinari				
MEC. 0042A	UPPERDECK	V-25001 C			MV-387	HYDROGEN STORAGE VESSEL C	CLOSE		25-03	O	25/07/2025	14:00	Tassinari				
MEC. 0043A	UPPERDECK	V-25001 C			MV-192	HYDROGEN STORAGE VESSEL C	CLOSE		25-03	O	25/07/2025	14:00	Tassinari				
MEC. 0044C	UPPERDECK	V-25001 D			MV-029	HYDROGEN STORAGE VESSEL D	CLOSE		64-10	O	25/07/2025	14:00	Tassinari				
MEC. 0046C	UPPERDECK	V-25001 D			MV-098	HYDROGEN STORAGE VESSEL D	CLOSE		25-04	O	25/07/2025	14:00	Tassinari				
MEC. 0047A	UPPERDECK	V-25001 D			MV-416	HYDROGEN STORAGE VESSEL D	CLOSE		25-04	O	25/07/2025	14:00	Tassinari				
MEC. 0050A	UPPERDECK	V-25001 D			MV-423	HYDROGEN STORAGE VESSEL D	CLOSE		25-04	O	25/07/2025	14:00	Tassinari				
MEC. 0051A	UPPERDECK	V-25001 D			MV-195	HYDROGEN STORAGE VESSEL D	CLOSE		25-04	O	25/07/2025	14:00	Tassinari				
MEC. 0052C	UPPERDECK	V-25001 E			MV-426	HYDROGEN STORAGE VESSEL E	CLOSE		64-10	O	25/07/2025	14:00	Tassinari				
MEC. 0054C	UPPERDECK	V-25001 E			MV-198	HYDROGEN STORAGE VESSEL E	CLOSE		25-05	O	25/07/2025	14:00	Tassinari				
MEC. 0055A	UPPERDECK	V-25001 E			MV-433	HYDROGEN STORAGE VESSEL E	CLOSE		25-05	O	25/07/2025	14:00	Tassinari				
MEC. 0058A	UPPERDECK	V-25001 E			MV-431	HYDROGEN STORAGE VESSEL E	CLOSE		25-05	O	25/07/2025	14:00	Tassinari				
MEC. 0059A	UPPERDECK	V-25001 E			MV-197	HYDROGEN STORAGE VESSEL E	CLOSE		25-05	O	25/07/2025	14:00	Tassinari				
MEC. 0060C	UPPERDECK	V-25001 F			MV-434	HYDROGEN STORAGE VESSEL F	CLOSE		64-10	O	25/07/2025	14:00	Tassinari				
MEC. 0062C	UPPERDECK	V-25001 F			MV-211	HYDROGEN STORAGE VESSEL F	CLOSE		25-06	O	25/07/2025	14:00	Tassinari				
MEC. 0063A	UPPERDECK	V-25001 F			MV-442	HYDROGEN STORAGE VESSEL F	CLOSE		25-06	O	25/07/2025	14:00	Tassinari				
MEC. 0066A	UPPERDECK	V-25001 F			MV-440	HYDROGEN STORAGE VESSEL F	CLOSE		25-06	O	25/07/2025	14:00	Tassinari				
MEC. 0067A	UPPERDECK	V-25001 F			MV-200	HYDROGEN STORAGE VESSEL F	CLOSE		25-06	O	25/07/2025	14:00	Tassinari				

WHEN YOU FINISH YOUR JOBS AND HAVE RESTORED ALL SAFETY SYSTEMS YOU MUST GO TO THE PTW OFFICE TO SIGNE AT THE "END WORK"

ISOLATION AUTHORITY	SAEP	DATA	REQUESTED BY	HSE PTW RESPONSIBLE	DATA
name			name	name	
Gabriele tassinari	signature	day 25/07/2025 time 14:30	Wolmer Borghi	Daniele	signature  day 25/07/2025
	signature	day time	dept. Construction	Ricci Picciloni	time

- □ **THE WORKS ARE TERMINATED AND CAN BE RESTORED NORMAL SITUATION**
- □ **THE WORKS ARE TERMINATED AND REMAIN ISOLATED FOR:**
  - □ **PRESERVATION**
  - □ **WAITING SPARE PARTS**
  - □ **OTHER: *TO PERMITT THE COSTRUCTION ACTIVITIES***

NAME	SIGNATURE	DATE / TIME

VERIFY THE VOLTAGE WITH TESTER BEFORE TO OPERATE
THE TEST WILL BE PERFORMED WITH COMMISSIONING ELECTRICIAN ASSISTANCE

ISOLATION CERTIFICATE

PTW NR

ICC NR

SAIL AWAY

Attachment 2 – EMS 001 Electrical & Mechanical Isolation Register

ROSETTI MARINO

CROSSWIND

"HOLLANDSE KUST NOORD WIND PARK Project
Contract No. CW-I-WP4-2023-05"

123A90A.11CC - ELECTRICAL & MECHANICAL ISOLATION REGISTER

LAST UPDATE
DATE 13/10/2025 09:40
REV. N° 00

KEY N.	FLOOR	SWITCHBOARD				DESCRIPTION	TO/(FROM)	NOTE	SUBSYSTEM	ICC STATUS	ISOLATION			DE-ISOLATION			NOTE
0001	LOWER DECK /"B200"	SG-200N1	A3	+03	QF1	DB - LIGHTING & SMALL POWER - BoP	TO DP-200N1		83-20	C	10/10/2025	15:00	Tassinari	10/10/2025	17:15	Tassinari	
	LOWER DECK /"B200"	SG-200N1	A1	+05	QF1	INCOMING TRANSFORMER	FROM TR-200DE1	KEYS N.: 150901 / 151733	82-40	O	10/10/2025	15:00	Tassinari				keys in office
	LOWER DECK /"B200"	SG-200N1	A1	+08	QF1	ELCTROLYSER AUXILIARY LOAD	TO A-20000	KEYS N.: 159083 / 10259	20-00	O	10/10/2025	15:00	Tassinari				keys in office
0002	LOWER DECK /"B200"	SG-200N1	A2	+04	QF1	AC UPS F&G - 8H - UP-200F4 BYPASS	TO UP-200F4		84-20	O	10/10/2025	15:00	Tassinari				
0003	LOWER DECK /"B200"	SG-200N1	A2	+05	QF1	SPARE (TEMPORARY POWER FOR YOKOGAWA CONTAINER)			83-00	O	10/10/2025	15:00	Tassinari				
0004	LOWER DECK /"B200"	SG-200N1	A2	+08	QF1	TEMPORARY GENERATOR / MOBILE BATTERY PACK	TO JB-200E2		83-00	C	10/10/2025	15:00	Tassinari	10/10/2025	17:15	Tassinari	
0008	LOWER DECK /"B200"	SG-200N1	A3	+01	QF1	AC UPS - 30 MIN UP-200F3 LENE A	TO UP-200F3		84-10	O	10/10/2025	15:00	Tassinari				
0400	LOWER DECK /"B200"	SG-200N1	A3	+02	QF1	SPARE (ALIMENTAZIONE TEMPORANEA AUTOCLAVE MECCANICI)			83-00	O	10/10/2025	15:00	Tassinari				
0042	LOWER DECK /"B200"	SG-200N1	A3	+04	QF1	CRANE	TO JB-200E3		99-00	O	10/10/2025	15:00	Tassinari				
0015	LOWER DECK /"B200"	SG-200N1	A3	+05	QF1	SPARE			83-00	O	10/10/2025	15:00	Tassinari				
0181	LOWER DECK /"B200"	SG-200N1	A3	+08	QF1	WATER PACKAGE	TO JB-500E8		50-10	O	10/10/2025	15:00	Tassinari				
0029	LOWER DECK /"B200"	SG-200N1	A4	+01	QF1	AC UPS PAS - 30 MIN UP-200F3 - LINE B	TO UP-200F3		84-10	O	10/10/2025	15:00	Tassinari				
0021	LOWER DECK /"B200"	SG-200N1	A4	+02	QF1	HVAC PANELS HV ROOM	TO B100-HSB-001		77-10	O	10/10/2025	15:00	Tassinari				
0027	LOWER DECK /"B200"	SG-200N1	A4	+03	QF1	FUEL CELL AUXILIARY LOAD	TO A-80000		80-00	O	10/10/2025	15:00	Tassinari				
0023	LOWER DECK /"B200"	SG-200N1	A4	+04	QF1	BESS PCS CABINET	TO CP-850F03		85-00	C	10/10/2025	15:00	Tassinari	13/10/2025	17:15	Tassinari	
0020	LOWER DECK /"B200"	SG-200N1	A4	+05	QF1	SPARE			83-00	O	10/10/2025	15:00	Tassinari				
0024	LOWER DECK /"B200"	SG-200N1	A4	+06	QF1	SPARE			83-00	O	10/10/2025	15:00	Tassinari				
0026	LOWER DECK /"B200"	SG-200N1	A4	+08	QF1	INSTRUMENTS AIR PACKAGE 01A	TO K-63001-A		63-00	O	10/10/2025	15:00	Tassinari				
0028	LOWER DECK /"B200"	SG-200N1	A5	+01	QF1	SPARE			83-00	O	10/10/2025	15:00	Tassinari				
0022	LOWER DECK /"B200"	SG-200N1	A5	+02	QF1	HVAC PANELS - LV ROOM	TO B200-HSB-001		77-20	O	10/10/2025	15:00	Tassinari				
0407	LOWER DECK /"B200"	SG-200N1	A5	+03	QF1	HVAC PANELS - UPS ROOM	TO B300-HSB-001		77-30	O	10/10/2025	15:00	Tassinari				
0014	LOWER DECK /"B200"	SG-200N1	A5	+04	QF1	HVAC PANELS - ITER ROON	TO B400-HSB-001		77-40	O	10/10/2025	15:00	Tassinari				
0012	LOWER DECK /"B200"	SG-200N1	A5	+05	QF1	IMPRESSED CURR. CATOTHODIC PROTECTION (ICCP) SYSTEM	TO CN-200N1		83-60	O	10/10/2025	15:00	Tassinari				
0019	LOWER DECK /"B200"	SG-200N1	A5	+06	QF1	SPARE			83-00	O	10/10/2025	15:00	Tassinari				
0326	LOWER DECK /"B200"	SG-200N1	A5	+08	QF1	INSTRUMENTS AIR PACKAGE 01B	TO K-63001-A		63-00	O	10/10/2025	15:00	Tassinari				
0180	LOWER DECK /"B200"	SG-200N1	A6	+01	QF1	SEA WATER PUMP B	PM-50001B		50-00	O	10/10/2025	15:00	Tassinari				
0047	LOWER DECK /"B200"	SG-200N1	A6	+02	QF1	BESS LV2 CABINET (+DISTR 2)	TO 19-NL-JB-201-14-01		85-00	C	10/10/2025	15:00	Tassinari	13/10/2025	17:15	Tassinari	
0541	LOWER DECK /"B200"	SG-200N1	A6	+03	QF1	BESS LV1 CABINET (+DISTR 1)	TO 19-EL-JB-201-15-01		85-00	C	10/10/2025	15:00	Tassinari	13/10/2025	17:15	Tassinari	
0010	LOWER DECK /"B200"	SG-200N1	A6	+04	QF1	SPARE			83-00	O	10/10/2025	15:00	Tassinari				
0032	LOWER DECK /"B200"	SG-200N1	A6	+05	QF1	AC UPS F&G - 8H UP-200F4 - LINE A	TO UP-200F4		84-20	O	10/10/2025	15:00	Tassinari				
0011	LOWER DECK /"B200"	SG-200N1	A6	+06	QF1	AC UPS F&G - 8H UP-200F4 - LINE B	TO UP-200F4		84-20	O	10/10/2025	15:00	Tassinari				
0034	LOWER DECK /"B200"	SG-200N1	A6	+08	QF1	WELDING SOCKETS (TOP DECK)	TO ESW-200N1		83-50	O	10/10/2025	15:00	Tassinari				
0038	LOWER DECK /"B200"	SG-200N1	A7	+01	QF1	SEA WATER PUMP A	PM-50001 A		50-00	O	10/10/2025	15:00	Tassinari				
0031	LOWER DECK /"B200"	SG-200N1	A7	+02	QF1	AC UPS PAS - 30 MIN. UP-200F3 - BYPASS	TO UP-200F3		84-10	O	10/10/2025	15:00	Tassinari				
0039	LOWER DECK /"B200"	SG-200N1	A7	+03	QF1	DC BATTERY SYSTEM SWITG CONTROL - FEEDE A	TO UP-200F1		84-00	O	10/10/2025	15:00	Tassinari				
0035	LOWER DECK /"B200"	SG-200N1	A7	+04	QF1	DC BATTERY SYSTEM SWITG CONTROL - FEEDE B	TO UP-200F1		84-00	O	10/10/2025	15:00	Tassinari				
0405	LOWER DECK /"B200"	SG-200N1	A7	+05	QF1	NAVAID SISTEM FEEDER A	TO UP-200F2		72-00	O	10/10/2025	15:00	Tassinari				
0554	LOWER DECK /"B200"	SG-200N1	A7	+06	QF1	NAVAID SISTEM FEEDER B	TO UP-200F2		72-00	O	10/10/2025	15:00	Tassinari				
0542	LOWER DECK /"B200"	SG-200N1	A7	+08	QF1	WELDING SOCKETS (LOWER DECK)	TO ESW-200N2		83-50	O	10/10/2025	15:00	Tassinari				

WHEN YOU FINISH YOUR JOBS AND HAVE RESTORED ALL SAFETY SYSTEMS YOU MUST GO TO THE PTW OFFICE TO SIGNE AT THE "END WORK"

ISOLATION AUTHORITY	SAEP	DATA	REQUESTED BY	HSE PTW RESPONSIBLE	DATA
name	signature	day / time	name	name	signature / day / time
Gabriele Tassinari	signature	day 13/10/2025 time	Gianluca De Maglie	Daniele	day 13/10/2025
	signature	day / time	dept. Construction	Ricci Picciloni	time

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  - □ **PRESERVATION**
  - □ **WAITING SPARE PARTS**
  - □ **OTHER: *TO PERMITT THE COSTRUCTION ACTIVITIES***

NAME	SIGNATURE	DATE / TIME

VERIFY THE VOLTAGE WITH TESTER BEFORE TO OPERATE
THE TEST WILL BE PERFORMED WITH COMMISSIONING ELECTRICIAN ASSISTANCE

ISOLATION CERTIFICATE

PTW NR

ICC NR

EMS: 001

Attachment 3 – EMS 002 Electrical & Mechanical Isolation Register

ROSETTI MARINO

CROSSWIND

"HOLLANDSE KUST NOORD WIND PARK Project
Contract No. CW-I-WP4-2023-05"

123A90A.11CC - ELECTRICAL & MECHANICAL ISOLATION REGISTER

LAST UPDATE	
DATE	15/10/2025 14:28
REV. N°	00

KEY N.	FLOOR	SWITCHBOARD				DESCRIPTION	TO/FROM	NOTE	SUBSYSTEM	ICC STATUS	ISOLATION			DE-ISOLATION			NOTE
0070	LOWER DECK /"B200"	DP-200N1	+03		Q41	AC UPS PAS AUXILIARY	TO UP-200F3		84-10	O	10/10/2025	15:00	Tassinari				
0071	LOWER DECK /"B200"	DP-200N1	+03		Q42	AC UPS F&G AUXILIARY	TO UP-200F4		84-20	O	10/10/2025	15:00	Tassinari				
0072	LOWER DECK /"B200"	DP-200N1	+03		Q43	DC BATTERY SYSTEM AUXILIARY	TO UP-200F1		84-00	O	10/10/2025	15:00	Tassinari				
0009	LOWER DECK /"B200"	DP-200N1	+01		Q1	GENERAL INCOMER	FROM SG-200N1 A3 / +03		83-20	C	10/10/2025	15:00	Tassinari	10/10/2025	17:15	Tassinari	
0075	LOWER DECK /"B200"	DP-200N1	+01		QS1	SURGE ARREST			83-20	O	10/10/2025	15:00	Tassinari				
0076	LOWER DECK /"B200"	DP-200N1	+01		QT1	TWLIGHT SWITCH AND AUXILIARY			83-20	C	10/10/2025	15:00	Tassinari	10/10/2025	17:15	Tassinari	
0077	LOWER DECK /"B200"	DP-200N1	+01		Q2	NORMAL LIGHT UPPER DECK	TO EJB-200N1-02-L1-01		83-40	C	10/10/2025	15:00	Tassinari	10/10/2025	17:15	Tassinari	
0078	LOWER DECK /"B200"	DP-200N1	+02		Q3	NORMAL LIGHT LOWER DECK	TO EJB-200N1-03-L2-01		83.41	C	10/10/2025	15:00	Tassinari	10/10/2025	17:15	Tassinari	
0079	LOWER DECK /"B200"	DP-200N1	+02		Q4	NORMAL LIGHT STAIRS	TO EJB-200N1-04-L3-01		83.42	C	10/10/2025	15:00	Tassinari	10/10/2025	17:15	Tassinari	
0080	LOWER DECK /"B200"	DP-200N1	+02		Q44	NORMAL LIGHT SPARE			83-20	O	10/10/2025	15:00	Tassinari				
0081	LOWER DECK /"B200"	DP-200N1	+02		Q8	EMERGENCY LIGHTING UPPER DECK	TO EJB-200N1-08-L1-01		83-35	C	10/10/2025	15:00	Tassinari	10/10/2025	17:15	Tassinari	
0082	LOWER DECK /"B200"	DP-200N1	+02		Q9	EMERGENCY LIGHTING LOWER DECK	TO EJB-200N1-09-L2-01		83.38	C	10/10/2025	15:00	Tassinari	10/10/2025	17:15	Tassinari	
0083	LOWER DECK /"B200"	DP-200N1	+02		Q10	EMERGENCY LIGHT STAIRS	TO EJB-200N1-10-L3-01		83.37	C	10/10/2025	15:00	Tassinari	10/10/2025	17:15	Tassinari	
0084	LOWER DECK /"B200"	DP-200N1	+02		Q45	EMERGENCY LIGHT SPARE			83-20	O	10/10/2025	15:00	Tassinari				
0085	LOWER DECK /"B200"	DP-200N1	+02		Q13	TRACE HEATER MAIN C.B.			83-85	O	10/10/2025	15:00	Tassinari				
0086	LOWER DECK /"B200"	DP-200N1	+02		Q14	TRACE HEATER - PROCES LINES - FEEDER 1 (SWS LINES)	TO ETB-200N1-14-L1-01		83-65	O	10/10/2025	15:00	Tassinari				
0087	LOWER DECK /"B200"	DP-200N1	+02		Q15	TRACE HEATER - PROCES LINES - FEEDER 2 (CI LINES)	TO ETB-200N1-15-L2-01		83-65	O	10/10/2025	15:00	Tassinari				
0088	LOWER DECK /"B200"	DP-200N1	+02		Q16	TRACE HEATER - PROCES LINES - FEEDER 3 (DM LINE)	TO ETB-200N1-16-L3-01		83-65	O	10/10/2025	15:00	Tassinari				
0036	LOWER DECK /"B200"	DP-200N1	+03		Q17	TRACE HEATER - PROCES LINES - FEEDER 4 (WW LINES)	TO ETB-200N1-17-L1-01		83-65	O	10/10/2025	15:00	Tassinari				
0037	LOWER DECK /"B200"	DP-200N1	+03		Q18	TRACE HEATER - PROCES LINES - FEEDER 5 (VASSEL KO DRUM) SPARE	TO ETB-200N1-18-L2-01		83-65	O	10/10/2025	15:00	Tassinari				
0030	LOWER DECK /"B200"	DP-200N1	+03		Q19	TRACE HEATER - PROCES LINES - FEEDER 6 (H2 VENT)	TO ETB-200N1-19-L3-01		83-65	O	10/10/2025	15:00	Tassinari				
0018	LOWER DECK /"B200"	DP-200N1	+03		Q20	TRACE HEATER - PROCES LINES - FEEDER 5 (SEA WATER PUMPS)	TO ETB-200N1-20-L1-01		83-65	O	10/10/2025	15:00	Tassinari				
0051	LOWER DECK /"B200"	DP-200N1	+03		Q21	TRACE HEATER - SPARE .			83-65	O	10/10/2025	15:00	Tassinari				
0053	LOWER DECK /"B200"	DP-200N1	+03		Q5	SMALL POWER SOCKET (UPPER DECK)	TO ESO-200N1-05-L1-01		83-55	O	10/10/2025	15:00	Tassinari				
0056	LOWER DECK /"B200"	DP-200N1	+03		Q6	SMALL POWER SOCKET (LOWER DECK)	TO ESO-200N1-06-L2-01		83-55	O	10/10/2025	15:00	Tassinari				
0052	LOWER DECK /"B200"	DP-200N1	+03		Q7	SPARE			83-20	O	10/10/2025	15:00	Tassinari				
0054	LOWER DECK /"B200"	DP-200N1	+03		Q11	SPARE SPACE HEATERS JB WIND FARM SUBSEA CABLE	TO ESH-200N1-11-L1-01	19/12/2024 SPARE	81-00	O	10/10/2025	15:00	Tassinari				
0048	LOWER DECK /"B200"	DP-200N1	+03		Q12	SPARE SPACE HEATERS JB WIND FARM SUBSEA CABLE	TO ESH-200N1-12-L2-01	19/12/2024 SPARE	82-50	O	10/10/2025	15:00	Tassinari				
0404	LOWER DECK /"B200"	DP-200N1	+03		Q23	SIS - CONTROLLER AND I/O CABINET - AUXILIARY	TO B400-SIS-001		79-00	O	10/10/2025	15:00	Tassinari				
0537	LOWER DECK /"B200"	DP-200N1	+03		Q24	PCS - CONTROLLER AND I/O CABINET - AUXILIARY	TO B400-PCS-001		87-10	O	10/10/2025	15:00	Tassinari				
0169	LOWER DECK /"B200"	DP-200N1	+03		Q25	EMCS - CONTROLLER AND I/O CABINET - AUXILIARY	TO B400-EMCS-001		87-00	O	10/10/2025	15:00	Tassinari				
0548	LOWER DECK /"B200"	DP-200N1	+03		Q26	FGS FIRE & GAS PANEL - AUXILIARY	TO B400-FGS-001		70-00	O	10/10/2025	15:00	Tassinari				
0478	LOWER DECK /"B200"	DP-200N1	+03		Q27	SYSTEM SERVER / NETWORK CABINET - AUXILIARY	TO B400-NET-001		86-00	O	10/10/2025	15:00	Tassinari				
0123	LOWER DECK /"B200"	DP-200N1	+03		Q28	SERVER CABINET ITER - AUXILIARY	TO B400-SRV-001		86-00	O	10/10/2025	15:00	Tassinari				
0428	LOWER DECK /"B200"	DP-200N1	+03		Q29	UCP - INSTRUMENT AIR PACKAGE - A-63000 - AUXILIARY	TO CP-630E1		63-00	O	10/10/2025	15:00	Tassinari				
0176	LOWER DECK /"B200"	DP-200N1	+03		Q30	UCP - N2 PACKAGE - AUXILIARY	TO CP-640F1		84-00	O	10/10/2025	15:00	Tassinari				
0455	LOWER DECK /"B200"	DP-200N1	+03		Q31	AUXILIARY TRAFO OLTC	TO CP-100E2		81-20	O	10/10/2025	15:00	Tassinari				
0532	LOWER DECK /"B200"	DP-200N1	+03		Q32	AUXILIARY TRAFO AVR	TO CP-100E3		81-20	O	10/10/2025	15:00	Tassinari				
0059	LOWER DECK /"B200"	DP-200N1	+03		Q33	AUXILIARY TRAFO 7 MVA	TO CP-100E4		81-20	O	10/10/2025	15:00	Tassinari				
0547	LOWER DECK /"B200"	DP-200N1	+03		Q34	AUXILIARY NER	TO RR-100D1		81-20	O	10/10/2025	15:00	Tassinari				
0342	LOWER DECK /"B200"	DP-200N1	+03		Q35	AUXILIARY TRAFO 1,6 MVA	TO CP-200E1		82-40	O	10/10/2025	15:00	Tassinari				
0553	LOWER DECK /"B200"	DP-200N1	+03		Q36	AUXILIARY TRAFO SOLAR 0,5 MVA	TO CP-200E2		82-50	O	10/10/2025	15:00	Tassinari				
0479	LOWER DECK /"B200"	DP-200N1	+03		Q37	AUXILIARY GIS	TO CP-100E1		81-10	O	10/10/2025	15:00	Tassinari				
0017	LOWER DECK /"B200"	DP-200N1	+03		Q38	AUXILIARY 6,6KV SWITCHBOARD	TO SG-100D1		82-00	O	10/10/2025	15:00	Tassinari				
0025	LOWER DECK /"B200"	DP-200N1	+03		Q39	AUXILIARY LV SWITCHBOARD	TO SG-200N1		83-00	O	10/10/2025	15:00	Tassinari				
0380	LOWER DECK /"B200"	DP-200N1	+03		Q40	AUXILIARY LV SWITCHBOARD 800 / 460V	TO SG-200D2		83-10	O	10/10/2025	15:00	Tassinari				
0325	LOWER DECK /"B200"	DP-200N1	+03		Q46	INS CABINET - SPARE AUXILIARY			83-20	O	10/10/2025	15:00	Tassinari				
0216	LOWER DECK /"B200"	DP-200N1	+03		Q47	SPARE			83-20	O	10/10/2025	15:00	Tassinari				
0551	LOWER DECK /"B200"	DP-200N1	+03		Q48	SPARE			83-20	O	10/10/2025	15:00	Tassinari				
0546	LOWER DECK /"B200"	DP-200N1	+03		Q49	SPARE			83-20	O	10/10/2025	15:00	Tassinari				
0179	LOWER DECK /"B200"	DP-200N1	+03		Q50	SPARE			83-20	O	10/10/2025	15:00	Tassinari				
0540	LOWER DECK /"B200"	DP-200N1	+03		Q51	SPARE			83-20	O	10/10/2025	15:00	Tassinari				
0403	LOWER DECK /"B200"	DP-200N1	+02		QH1	TRACE HEATING POWER ON AUXILIARY CIRCUIT			83-20	O	10/10/2025	15:00	Tassinari				

WHEN YOU FINISH YOUR JOBS AND HAVE RESTORED ALL SAFETY SYSTEMS YOU MUST GO TO THE PTW OFFICE TO SIGNE AT THE "END WORK"

ISOLATION AUTHORITY	SAEP	DATA	REQUESTED BY	HSE PTW RESPONSIBLE	DATA
name	signature	day time	name	name	signature day time
Gabriele Tassinari		13/10/2025	Gianluca De Maglie	Daniele	15/10/2025
	signature	day time	dept.	Ricci Picciloni	
			Construction		

- □ **THE WORKS ARE TERMINATED AND CAN BE RESTORED NORMAL SITUATION**
- □ **THE WORKS ARE TERMINATED AND REMAIN ISOLATED FOR:**
  - □ **PRESERVATION**
  - □ **WAITING SPARE PARTS**
  - □ **OTHER: *TO PERMITT THE COSTRUCTION ACTIVITIES***

NAME	SIGNATURE	DATE / TIME
JAMIE MCALLISTER		15/10/25

VERIFY THE VOLTAGE WITH TESTER BEFORE TO OPERATE
THE TEST WILL BE PERFORMED WITH COMMISSIONING ELECTRICIAN ASSISTANCE

ISOLATION CERTIFICATE

PTW NR

ICC NR

EMS: 002