

**REPORT**



# Hornsea Project One Offshore Windfarm

## Weekly Notice of Operations

For Week Commencing	20 <sup>th</sup> November 2017
Notice Number	9
Issue Date:	20 <sup>th</sup> November 2017

Prepared Benjamin Skelly (BESKE), 6 September 2017  
Checked Benjamin Skelly (BESKE), 15 September 2017  
Accepted Marc Browne (MBROW), 15 September 2017  
Approved Ole Juulsgaard (OLEJU), 15 September 2017

Doc. no. 2919281  
Ver. no. 2919281A  
Case no. 200-15-0969

## 1.1 Ørsted Marine & Helicopter Co-ordination Centre

Routine enquiries (24 hours)	0044 (0) 207 811 1171
Emergency number (24 hours)	0044 (0) 207 811 1170
Email	<a href="mailto:MHCC_HOW01_ADM@orsted.co.uk">MHCC_HOW01_ADM@orsted.co.uk</a>

## 1.2 The UK main ports supporting current operations

Grimsby - Crew Transfer Vessels (CTV), light logistics (personnel, tools and equipment) & main vessel port logistics

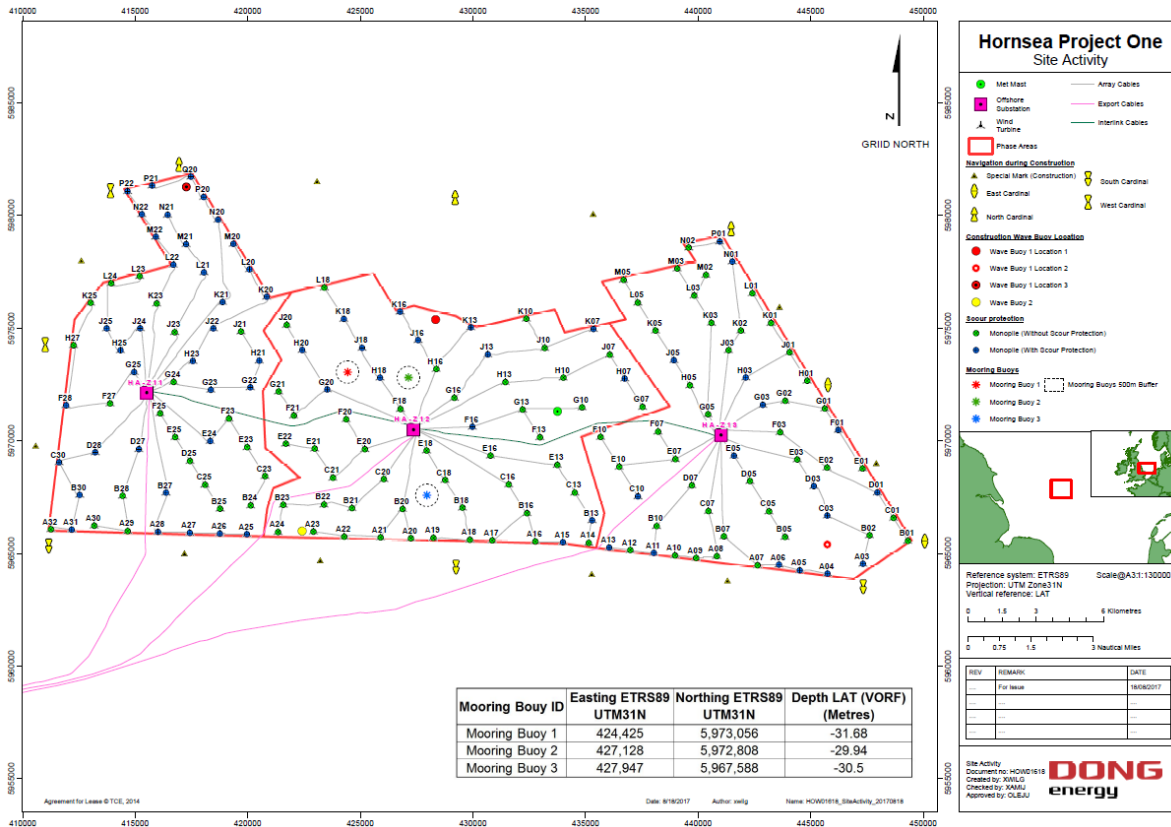
## 1.3 Safety Information

All vessels not involved in construction activities are requested to keep 500m distance from construction and dive vessels whilst transiting the area

All vessels should proceed with caution whilst navigating and/or working in the area and be aware of the statutory 50m safety zone around each fixed asset.

### 1.4 Site Boundary and Navigation Aids

The offshore site boundary for HOW01 is shown as below, and will be marked by standard IALA navigation marks. All buoys have been deployed as per below tables.



HOW01 Offshore Site Deployed demarcation buoys WGS84	
STATION	BROADCAST DETAILS
<b>HOW01 DELTA</b>	53° 49.170' N 002° 06.502' E CHARACTERISTICS: SPECIAL MARK, YELLOW PILLAR, YELLOW CROSS LIGHT: FL Y 5S
<b>HOW01 ECHO</b>	53° 49.283' N 002° 01.003' E CHARACTERISTICS: : SPECIAL MARK, YELLOW PILLAR, YELLOW CROSS LIGHT: FL Y 5S
<b>HOW01 ALPHA</b>	53° 57.903' N 002° 00.863' E CHARACTERISTICS: SPECIAL MARK, YELLOW PILLAR, YELLOW CROSS LIGHT: FL Y 5S

<b>HOW01 BRAVO</b>	53° 55.734' N 002° 08.474' E CHARACTERISTICS: SPECIAL MARK, YELLOW PILLAR, YELLOW CROSS LIGHT: FL Y 5S
<b>HOW01 CHARLIE</b>	53° 52.021' N 002° 12.474' E CHARACTERISTICS: SPECIAL MARK, YELLOW PILLAR, YELLOW CROSS LIGHT: FL Y 5S
<b>HOW01 FOXTROT</b>	53° 49.510' N 001° 50.006' E CHARACTERISTICS: SPECIAL MARK, YELLOW PILLAR, YELLOW CROSS LIGHT: FL Y 5S
<b>HOW01 GOLF</b>	53° 49.623' N 001° 44.506' E CHARACTERISTICS: SPECIAL MARK, YELLOW PILLAR, YELLOW CROSS LIGHT: FL Y 5S
<b>HOW01 HOTEL</b>	53° 52.133' N 001° 38.400' E CHARACTERISTICS: SPECIAL MARK, YELLOW PILLAR, YELLOW CROSS LIGHT: FL Y 5S
<b>HOW01 INDIA</b>	53° 56.589' N 001° 40.109' E CHARACTERISTICS: SPECIAL MARK, YELLOW PILLAR, YELLOW CROSS LIGHT: FL Y 5S
<b>HOW01 JULIET</b>	53° 58.586' N 001° 49.624' E CHARACTERISTICS: SPECIAL MARK, YELLOW PILLAR, YELLOW CROSS LIGHT: FL Y 5S
<b>HOW01 WEST</b>	53° 54.551' N 001° 38.708' E CHARACTERISTICS: WEST CARDINAL YELLOW BLACK YELLOW PILLAR, Q (9) 15s, 2 CONES APEX INWARDS
<b>HOW01 WEST NORTH WEST</b>	53° 58.263' N 001° 41.238' E CHARACTERISTICS: WEST CARDINAL YELLOW BLACK YELLOW PILLAR, VQ (9) 10s, 2 CONES APEX INWARDS
<b>HOW01 SOUTH</b>	53° 49.396' N 001° 55.504' E

	<p>CHARACTERISTICS: SOUTH CARDINAL YELLOW OVER BLACK PILLAR: 2 CONES APEX DOWNWARDS</p> <p>LIGHT: Q (6) + 1L FL 15s</p>
<b>HOW01 SOUTH WEST</b>	<p>53° 49.500' N 001° 39.007' E</p> <p>CHARACTERISTICS: SOUTH CARDINAL YELLOW OVER BLACK PILLAR: 2 CONES APEX DOWNWARDS</p> <p>LIGHT: VQ (6) + 1L FL 10s</p>
<b>HOW01 NORTH WEST</b>	<p>53° 58.928' N 001° 44.004' E</p> <p>CHARACTERISTICS: NORTH CARDINAL, BLACK OVER YELLOW PILLAR, VQ, TOPMARK; 2 CONES APEX UPWARDS</p>
<b>HOW01 NORTH</b>	<p>53° 58.244' N 001° 55.244' E</p> <p>CHARACTERISTICS: NORTH CARDINAL, BLACK OVER YELLOW PILLAR, Q, TOPMARK; 2 CONES APEX UPWARDS</p>
<b>HOW01 NORTH EAST</b>	<p>53° 57.590' N 002° 06.473' E</p> <p>CHARACTERISTICS: NORTH CARDINAL, BLACK OVER YELLOW PILLAR, VQ, 2 CONES APEX UPWARDS</p>
<b>HOW01 EAST</b>	<p>53° 53.878' N 002° 10.474' E</p> <p>CHARACTERISTICS: EAST CARDINAL BLACK YELLOW BLACK PILLAR, Q(3) 10s, 2 CONES APEX OUTWARDS</p>
<b>HOW01 SOUTH EAST</b>	<p>53° 50.165' N 002° 14.470' E</p> <p>CHARACTERISTICS: EAST CARDINAL BLACK YELLOW BLACK PILLAR, VQ(3) 5s, 2 CONES APEX OUTWARDS</p>
<b>HOW01 SOUTH SOUTH EAST</b>	<p>53° 49.056' N 002° 12.000' E</p> <p>CHARACTERISTICS: SOUTH CARDINAL YELLOW OVER BLACK PILLAR, VQ (6) + L FL 10s, 2 CONES APEX DOWNWARDS</p>

**1.5 RCS Site**

<b>HOW01 RCS S</b>	Type: <b>South Cardinal</b> Characteristics: <b>VQ (6) +LFI 10s (White)</b> Top Mark: <b>South</b> Day Mark: <b>Yellow Black</b> Racon: <b>Tango</b> Position: <b>53°37.385'N 000°56.164'E</b>
<b>HOW01 RCS E</b>	Type: <b>East Cardinal</b> Characteristics: <b>VQ (3) 5s (White)</b> Top Mark: <b>East</b> Day Mark: <b>Black Yellow Black</b> Position: <b>53°37.586'N 000°56.619'E</b>
<b>HOW01 RCS N</b>	Type: <b>North Cardinal</b> Characteristics: <b>VQ (White)</b> Top Mark: <b>North</b> Day Mark: <b>Black Yellow</b> Position: <b>53°37.925'N 000°56.164'E</b>
<b>HOW01 RCS W</b>	Type: <b>West Cardinal</b> Characteristics: <b>VQ (9) 10s (White)</b> Top Mark: <b>West</b> Day Mark: <b>Yellow Black Yellow</b> Position: <b>53°37.754'N 000°55.689'E</b>

**1.6 Mooring buoys**

<b>HOW01 MOORING 3</b>	53° 51.107' N 001° 54.279' E CHARACTERISTICS: : SPECIAL MARK, YELLOW PILLAR, NO TOPMARK LIGHT:FL Y 5S
<b>HOW01 MOORING 2</b>	53° 53.915' N 001° 53.457' E CHARACTERISTICS: : SPECIAL MARK, YELLOW PILLAR, NO TOPMARK LIGHT:FL Y 5S
<b>HOW01 MOORING 1</b>	53° 54.025' N 001° 50.986' E CHARACTERISTICS: : SPECIAL MARK, YELLOW PILLAR, NO TOPMARK LIGHT:FL Y 5S

**1.7 Wave Buoys**

<b>HOW01 Wave 1</b>	53° 55.316' N 001° 54.519' E CHARACTERISTICS: SPECIAL MARK YELLOW BOUY, Q (5) 20s – (YELLOW) TOPMARK; YELLOW CROSS
<b>HOW01 Wave 2</b>	53° 50.203' N 001° 49.253' E CHARACTERISTICS: SPECIAL MARK YELLOW BUOY: YELLOW CROSS LIGHT: Q (5) 20s (YELLOW)

## 1.8 HOW01 Vessel Update

Below is a list of vessels working on the Hornsea One Project.

VCC – Vessel Clearance Certificate, this ensure all procedure have been followed to allow a vessel to begin operations.

### 1.8.1 Guard Vessels

Esvagt Castor

### 1.8.2 Other Vessels

Vessel	Start/Arrive	Package	VCC issued	VCC Number
Siem Ruby	07-09-2017	Cables	09-09-2017	HOW01-VCC-001
Galatea	15-09-2017	Construction	15-09-2017	HOW01-VCC-002
Ginny Louise	18-09-2017	Measurements	19-09-2017	HOW01-VCC-003
Lange Wapper	24-09-2017	Cables	24-09-2017	HOW01-VCC-004
Foryd Bay	26-09-2017	Cables	25-09-2017	HOW01-VCC-005
Noordhoek Pathfinder	08-10-2017	Cables	26-09-2017	HOW01-VCC-006
Smit Kamera	09-10-2017	Site Investigation	09-10-2017	HOW01-VCC-007
Sea Fox	09-10-2017	Site Investigation	09-10-2017	HOW01-VCC-008
Esvagt Castor	24-10-2017	Construction	27-10-2017	HOW01-VCC-009
Huntress	07-11-2017	Consents		HOW01-VCC-010
TMS Bittern	07-11-2017	Consents		HOW01-VCC-011
Eden Rose	07-11-2017	Construction	07-11-2017	HOW01-VCC-012



### 1.9 Foundations Scour Protection, Monopiles (MP), Transition piece (TP) and Turbine Installation Progress

 - Complete

WTG ID	Foundation			Turbine			WTG ID	Foundation			Turbine		
	Scour	MP	TP	Tower	Nacelle	Blades		Scour	MP	TP	Tower	Nacelle	Blades
A03							C03						
A04							C05						
A05							C07						
A06							C10						
A07							C13						
A08							C16						
A09							C18						
A10							C20						
A11							C21						
A12							C23						
A13							C25						
A14							C30						
A15							D01						
A16							D03						
A17							D05						
A18							D07						
A19							D25						
A20							D27						
A21							D28						
A22							E01						
A23							E02						
A24							E03						
A25							E05						
A26							E07						
A27							E10						
A28							E13						
A29							E16						
A30							E18						
A31							E20						
A32							E21						
B01							E22						
B02							E23						
B05							E24						
B07							E25						
B10							F01						
B13							F03						
B16							F07						
B18							F10						
B20							F13						
B21							F16						
B22							F18						
B23							F20						
B24							F21						
B25							F23						
B27							F25						
B28							F27						
B30							F28						
C01							G01						

WTG ID	Foundation			Turbine			WTG ID	Foundation			Turbine		
	Scour	MP	TP	Tower	Nacelle	Blades		Scour	MP	TP	Tower	Nacelle	Blades
G02							J25						
G03							K01						
G05							K02						
G07							K03						
G10							K05						
G13							K07						
G16							K10						
G20							K13						
G21							K16						
G22							K18						
G23							K20						
G24							K21						
G25							K23						
H01							K25						
H03							L01						
H05							L03						
H07							L05						
H10							L18						
H13							L20						
H16							L21						
H18							L22						
H20							L23						
H21							L24						
H23							M02						
H25							M03						
H27							M05						
J01							M20						
J03							M21						
J05							M22						
J07							N01						
J10							N02						
J13							N20						
J16							N21						
J18							N22						
J20							P01						
J21							P20						
J22							P21						
J23							P22						
J24							Q20						

## 1.10 Cable Progress

### 1.11 Inter - Array Cable Status

**Black: Designed Red: Laid Green: Cable Fully Buried Blue: Accepted**

E03-D03 F03-E02 J01-H01 N01-P01 G02-G01 Z13-J03 H05-J05 J03-K02 K05-L05 L03-M03 L05-M05  
 K03-L03 E05-D05 G03-G02 Z13-G05 C03-B02 D01-C01 B02-A03 C01-B01 D05-C05 B10-A11  
 A12-A13 E10-C10 B07-A07 A08-A09 D07-B10 Z13-C07 Z13-E03 Z13-E05 Z13-D07 Z13-F03 L03-M02  
 E10-F10 B28-A29 Z13-E07 A11-A12 A09-A10 C07-A08 Z13-B07 A07-A06 A06-A05 A05-A04 C05-B05  
 E02-D01 Z13-G03 G01-F01 F01-E01 H03-J01 J01-K01 K01-L01 Z13-H03 K02-N01 P01-N02 G05-K03  
 J05-K05 Z13-H05 D03-C03 E07-F07 E07-E10 B30-A31 D27-B28 A28-A27 A27-A26 A26-A25 D25-C25  
 E25-D25 F25-E25 F23-E23 E23-C23 H21-J21 B27-A28 A31-A32 D28-C30 C30-B30 C23-B24 G24-G23  
 A29-A30 E24-F23 G23-G22 C25-B25 G22-H21 Z12-H16 H16-J16 H16-K13 J16-K16 Z12-G16 G16-J13  
 J10-K07 J10-K10 J13-J10 Z12-H13 H07-G07 H10-J07 H13-H10 J07-H07 Z12-F16 F16-G13 G13-F13  
 G13-G10 Z12-E16 B13-A14 C13-B13 E13-C13 E16-E13 Z12-C16 A16-A15 B16-A16 B16-A17 C16-B16  
 Z12-E18 A18-A19 B18-A18 C18-B18 E18-C18 Z12-B20 A21-A22 A22-A23 B20-A20 B20-A21 Z12-C20  
 B21-B22 B22-B23 B23-A24 C20-B21 Z12-E20 C21-E21 E20-C21 E20-F20 E21-E22 Z12-G20 G20-H20  
 H20-J20 F21-G21 G20-F21 Z12-F18 H18-J18 J18-K18 K18-L18 F18-H18 F27-F28 F28-H27 G25-F27  
 H27-K25 Z11-G25 H25-J25 J24-H25 J25-L24 L24-L23 Z11-J24 K23-L22 L22-M22 M22-N22 N22-P22  
 Z11-K23 J23-L21 L21-M21 M21-N21 Z11-J23 K21-N20 N20-P20 P20-Q20 Q20-P21 Z11-K21 H23-J22  
 J22-K20 K20-L20 L20-M20 Z11-H23 Z11-B27 Z11-D27 Z11-D28 Z11-E24 Z11-F25 Z11-G24

### 1.12 Export Cable Status

**Black: Designed Red: Laid Green: Cable Fully Buried Blue: Accepted**

Landfall – RCS – Z11

Landfall – RCS – Z12

Landfall – RCS – Z13

### 1.13 OSS Interlink Cable Status

**Black: Designed Red: Laid Green: Cable Fully Buried Blue: Accepted**

Z11 – Z12

Z12 – Z13

**1.14 Notice to Mariners updates**

Below is a list of the current Notice to Mariners;

Date	Subject	Updates
15/09/2017	Export Cable Trenching Works – Tideway Offshore (Lange Wapper)	Vessels work for next 7 days per below map.
07/09/2017	Export Cable Boulder Clearance Works	Vessels work for next 7 days per below map.
20/10/2017	Hornsea One UXO Detonation, Update 8.	UXO detonation delayed due to weather
03/11/2017	Met mast Works	None
17/11/2017	offshore boulder clearance works in the offshore wind farm area	
17/11/2017	offshore installation works in the offshore Wind Farm area with the installation of scour protection and foundations	

**1.15 Safety Zones active**

The table below indicates the Safety Zones that are active.

Vessel / Asset	Size	Duration
None		

420000

430000

440000

450000

# Hornsea Project One

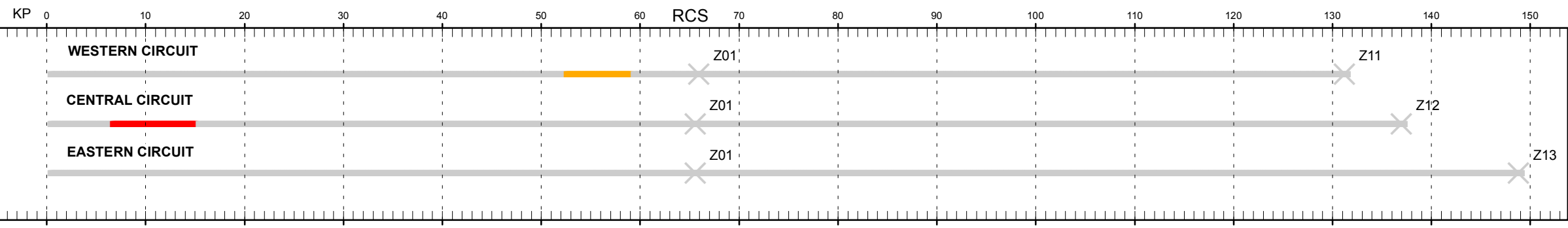
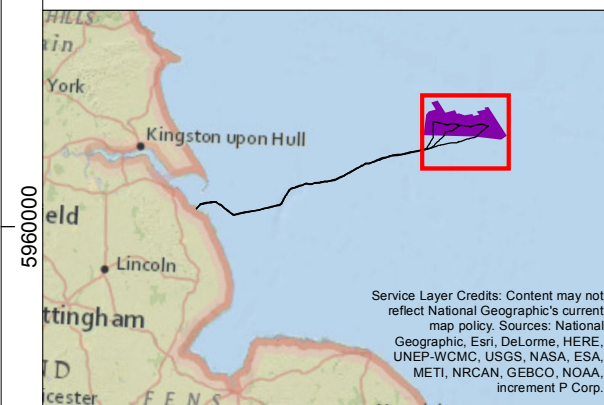
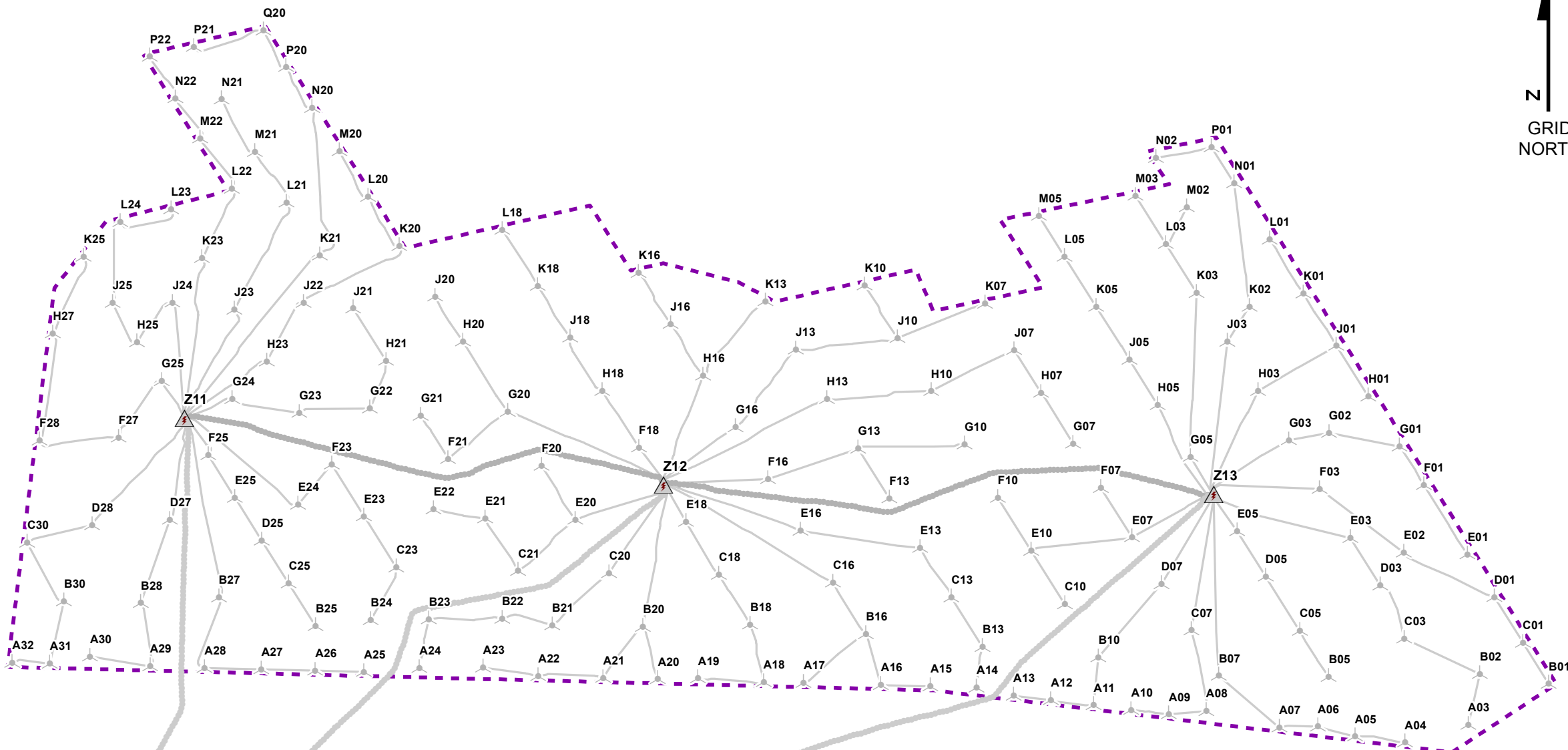
## Weekly Look Ahead

Monday, 20 November, 2017

### Vessel at Work

- Nordhoek Pathfinder
- Siem Ruby
- No Planned Work
- Wind Farm Boundary

N  
GRID  
NORTH



Reference system: ETRS89 Scale@A3:1:125000

Projection: UTM Zone31N

Vertical reference: LAT(VORF)

0 1 2 3 4 5 Kilometres

0 1 2 3 Nautical Miles

WeeklyLookAhead  
 Document no: HOW01651  
 Created by: XMAOH  
 Checked by: EADBR  
 Approved by: OLEJU

