



Vermilion Exploration and Production Ireland Ltd

Corrib Marine Mammal Observations

Corrib Field Inspection and Maintenance Survey 2020



JUNE 2020



GENERAL NOTES

Title: Corrib Marine Mammal Observations: Field Inspection and Maintenance Survey 2020

Client: Vermilion E&P Ireland Ltd.

Date: 25 June 2020

Office: Helsby

Status: Final

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Date: 23 June 2020 **Date:** 25 June 2020

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1 INTRODUCTION

AMSIS has been engaged by Vermilion Exploration and Production Ireland Ltd (VEPIL) to provide marine mammal observation services during the inspection of the offshore Corrib field including the offshore gas pipeline and associated facilities.

Marine Mammal Observers (MMOs) are required to be present on vessels at the commencement of noise-generating activities (e.g. geophysical survey and dredging operations) under the code of practice agreed between VEPIL and National Parks and Wildlife Service (NPWS). Records are made of any marine mammals seen before or during inspection operations (which are delayed if marine mammals are sighted within 500m of the noise-generating vessel before it starts work), and reported monthly.

This report presents the survey activity and marine mammal observations during the Corrib field inspection survey undertaken aboard the offshore survey vessel *Edda Sun*, within Irish blocks 18,19 and 20, from 07 May to 02 June 2020. It was conducted on behalf of VEPIL and represents dedicated monitoring during the survey period.

This report covers the offshore Corrib Field and offshore section of the pipeline route to approximately KP80; The Corrib Marine Mammal Observations: Inshore Pipeline Inspection Survey 2020 report covers the inshore section of the pipeline route. The series of reports will be submitted to the Department of Communications, Climate Action and Environment (DCCA) and copied to NPWS.

2 RECORDS

2.1 Summary

From 07 May until 02 June 2020, daily watches were conducted, weather permitting, for marine mammals by one MMO aboard the offshore survey vessel, *Edda Sun*, which conducted inspection operations at the offshore Corrib Gas field and along the offshore pipeline, including on five occasions within the Broadhaven Bay Special Area of Conservation (SAC). These operations utilised a multi-beam echo sounder (MBES) and Ultra Short Baseline (USBL) systems to position the Workclass remotely operated vehicle (WROV), the Lynx ROV, and the vessel. Records from marine mammal observations during this period are presented in Appendix 1.

Previous survey sightings from the corresponding months of preceding years are included for historical context only, as the durations, locations and hours of effort vary between months and years. No survey took place in 2019. A selection of the best project photographs will be provided in the final (annual) report

2.2 Sightings

During May 2020, there were a total of thirty-two (32) marine mammal sightings comprising at least six (6) different species: common dolphin (*Delphinus delphis*), minke whale (*Balaenoptera acutorostrata*), sei whale (*Balaenoptera borealis*), fin whale (*Balaenoptera physalus*), pilot whale (*Globicephala melas*), unidentified dolphin, unidentified whale, grey seal (*Halichoerus grypus*), and basking shark (*Cetorhinus maximus*); and ninety-eight (98) individuals. There were zero (0) sightings in Broadhaven Bay SAC, twenty-six (26) at the offshore Corrib field, and six (6) elsewhere in Irish waters during transit. The sightings of the large baleen whales were often some distance from the vessel (1km to 1.5km), and these identifications are estimated from limited photos and observations of blows.

In previous years during May, effort at the offshore Corrib field resulted four (4) sightings in 2013. In Broadhaven Bay SAC, effort resulted in in twenty (20) sightings in 2016, six (6) sightings in in 2015, four (4) sightings in 2010 and nine (9) sightings in 2009.

During June 2020, there were a total of nine (9) marine mammal sightings comprising three (3) different species: minke whale (*Balaenoptera acutorostrata*), sei whale (*Balaenoptera borealis*), unidentified whale and unidentified dolphin; and thirteen (13) individuals. There were zero (0) sightings in Broadhaven Bay Special Area of Conservation (SAC), nine (9) at the offshore Corrib field, and zero (0) elsewhere in Irish waters during transit.

In previous years during June, effort at the offshore Corrib field resulted in three (3) sightings in 2016, six (6) sightings in 2012 and 2013, and three (3) sightings in 2009. In Broadhaven Bay SAC, effort resulted in fourteen (14) sightings in 2017, thirty-three (33) sightings in 2015, twenty-four (24) sightings in 2013, six (6) sightings in in 2012, and one (1) sighting in 2011.



2.3 Mitigation

Of the 111 individuals sighted, zero (0) caused a delay to operations. No marine mammals were observed within the 500m mitigation zone during the dedicated 30-minute pre-shoot watch period. All sightings were observed during ongoing operations, and there was no requirement to suspend operations once commenced.

Due to the necessity to activate the USBL positioning system immediately on entering the water for safety, this system was operating throughout the inspection operations. This system was unable to be ramped up and was therefore broadcasting at maximum power from activation and no soft start procedure could be safely implemented. This is reflected in the Operations log form included in Appendix 1. In view of this there was no requirement to soft start the MBES system as this was always activated once the USBL system was in operation. After discussion with the online surveyor, however, it was agreed that power to the MBES system would be ramped up during the 20-minute period from deployment to reaching the seabed and positioning the WROV.



APPENDIX 1 - MARINE MAMMAL OBSERVATIONS (OFFSHORE INSPECTION SURVEY AND ENVIRONMENTAL MONITORING SURVEY- MAY 2020)



Summary of Marine Mammal Sightings in May and June 2020

Sightings	Date	Time at start of encounter (UTC)	Time at end of encounter (UTC)	Observer's/operator's name	Position - degrees latitude	Position - minutes latitude	Position - degrees longitude	Position - minutes longitude	Water depth (metres)	Species or species group	Range of animal (metres)	Total number	Certainty of identification	Vessel activity	Mitigation required?
1	06/05/2020	6:23	6:25	First Officer	56	11.620	7	50.06	80.0	Common dolphin (<i>Delphinus delphis</i>)	5	2	Definite	Transit	n
2	06/05/2020	6:28	7:05	First Officer	56	11.620	7	50.06	80.0	Common dolphin (<i>Delphinus delphis</i>)	5	12	Definite	Transit	n
3	06/05/2020	7:20	7:30	First Officer	55	59.500	7	58.50	140.0	Unidentified whales	1000	6	Definite	Transit	n
4	06/05/2020	8:55	9:07	I Smith	55	48.360	8	8.74	112.5	Common dolphin (<i>Delphinus delphis</i>)	5	5	Definite	Transit	n
5	06/05/2020	10:10	10:18	I Smith	55	44.600	8	9.41	112.5	Common dolphin (<i>Delphinus delphis</i>)	5	10	Definite	Transit	n
6	06/05/2020	10:22	10:38	I Smith	55	41.400	8	11.70	91.0	Common dolphin (<i>Delphinus delphis</i>)	5	10	Definite	Transit	n
7	19/05/2020	15:57	16:46	I Smith	54	20.51	11	3.20	354.0	Grey seal (<i>Halchoerus grypus</i>)	100	1	Definite	Operational	n
8	19/05/2020	16:27	16:27	I Smith	54	20.51	11	3.20	354.0	Unidentified whales	100	1	Definite	Operational	n
9	21/05/2020	7:58	8:07	First Officer/I smith	54	20.84	11	2.25	354.0	Grey seal (<i>Halchoerus grypus</i>)	300	2	Definite	Operational	n
10	21/05/2020	8:33	8:59	First Officer/I smith	54	20.84	11	2.27	354.0	Grey seal (<i>Halchoerus grypus</i>)	150	1	Definite	Operational	n
11	21/05/2020	12:15	12:25	I Smith	54	30.94	11	23.75	354.0	Grey seal (<i>Halchoerus grypus</i>)	300	1	Definite	Operational	n
12	23/05/2020	21:25	21:30	NDuncan	54	28.01	8	25.14	26.0	Unidentified dolphins	30	8	Definite	Not operational	n
13	26/05/2020	22:00	22:05	2nd officer	54	27.84	9	44.35	85.0	Unidentified dolphins	100	5	Definite	Not operational	n
14	27/05/2020	10:45	10:53	Capt/ I, Smith	54	20.10	11	3.64	354.0	Grey seal (<i>Halchoerus grypus</i>)	300	1	Definite	Operational	n
15	27/05/2020	14:00	14:05	Capt	54	1.12	11	1.91	354.0	Unidentified whales	20	1	Definite	Operational	n
16	27/05/2020	14:53	15:23	I Smith	54	1.12	11	1.91	354.0	Minkie Whale (<i>Balaenoptera aauforostata</i>)	20	1	Definite	Operational	n
17	28/05/2020	10:19	10:30	I Smith	54	19.18	11	4.28	354.0	Minkie Whale (<i>Balaenoptera aauforostata</i>)	150	1	Possible	Not operational	n
18	28/05/2020	12:48	12:53	I Smith	54	20.36	11	3.50	354.0	Minkie Whale (<i>Balaenoptera aauforostata</i>)	200	1	Possible	Operational	n
19	29/05/2020	6:05	6:14	I Smith	54	20.00	11	2.58	354.0	Sai whale (<i>Balaenoptera boreali</i>)	600	1	Possible	Not operational	n
20	29/05/2020	7:08	7:38	I Smith	54	20.00	11	2.58	354.0	Fin Whale (<i>Balaenoptera physalus</i>)	700	1	Possible	Not operational	n
21	29/05/2020	12:48	12:50	First Officer/I Smith	54	19.94	11	4.30	354.0	Bottlenose Dolphin (<i>Tursiops truncatus</i>)	10	1	Possible	Operational	n
22	29/05/2020	15:08	15:25	I Smith	54	20.34	11	5.05	354.0	Minkie Whale (<i>Balaenoptera aauforostata</i>)	10	1	Definite	Operational	n
23	29/05/2020	15:40	16:16	I Smith	54	20.15	11	3.83	354.0	Unidentified whales	1250	3	Possible	Operational	n
24	30/05/2020	15:08	16:28	I Smith	54	20.33	11	3.53	354.0	Grey seal (<i>Halchoerus grypus</i>)	200	1	Definite	Operational	n
25	30/05/2020	20:30	20:40	2nd officer	54	20.30	11	3.50	354.0	Basking shark (<i>Cetorhinus maximus</i>)	200	1	Probable	Operational	n



Sightings	Date	Time at start of encounter (UTC)	Time at end of encounter (UTC)	Observer's/ operator's name	Position - degrees latitude	Position - minutes latitude	Position - degrees longitude	Position - minutes longitude	Water depth (metres)	Species or species group	Range of animal (metres)	Total number	Certainty of identification	Vessel activity	Mitigation required?
26	31/05/2020	7:38	9:07	I Smith	54	21.31	11	1.07	354.0	Pilot Whales (<i>Globicephala melas</i>).	700	6	Probable	Operational	n
27	31/05/2020	9:32	9:53	I Smith	54	21.30	11	1.26	354.0	Minke Whale (<i>Balaenoptera acutorostata</i>)	700	1	Possible	Operational	n
28	31/05/2020	12:30	12:50	I Smith	54	51.44	10	1.27	354.0	Unidentified Whales	700	4	Definite	Operational	n
29	31/05/2020	12:50	13:00	I Smith	54	20.59	10	1.26	354.0	Unidentified Whales	1000	1	Definite	Operational	n
30	31/05/2020	12:58	14:10	I Smith	54	20.59	10	1.26	354.0	Unidentified Whales	700	1	Definite	Operational	n
31	31/05/2020	13:50	14:32	I Smith	54	21.49	10	59.05	354.0	Unidentified Whales	1000	4	Definite	Operational	n
32	31/05/2020	12:00	12:10	S Crowley	54	21.44	10	1.27	354.0	Minke Whale (<i>Balaenoptera acutorostata</i>)	5	1	Definite	Operational	n
33	01/06/2020	5:48	6:10	M. Purver	54	21.01	10	51.43	354.0	Minke Whale (<i>Balaenoptera acutorostata</i>)	500	1	Possible	Operational	n
34	01/06/2020	6:30	6:35	I Smith	54	21.13	10	55.75	354.0	Unidentified Dolphins	600	3	Definite	Not operational	n
35	01/06/2020	8:10	8:20	I Smith	54	21.17	10	59.08	354.0	Minke Whale (<i>Balaenoptera acutorostata</i>)	700	1	Possible	Operational	n
36	01/06/2020	8:45	9:05	I Smith	54	21.17	10	59.08	354.0	Unidentified whales	700	1	Definite	Operational	n
37	01/06/2020	9:28	9:55	I Smith	54	21.50	10	58.77	354.0	Minke Whale (<i>Balaenoptera acutorostata</i>)	200	1	Definite	Operational	n
38	01/06/2020	10:22	10:35	I Smith	54	21.53	10	57.61	354.0	Minke Whale (<i>Balaenoptera acutorostata</i>)	500	2	Possible	Operational	n
39	01/06/2020	10:45	12:05	I Smith	54	21.50	10	57.58	354.0	Minke Whale (<i>Balaenoptera acutorostata</i>)	100	1	Definite	Operational	n
40	01/06/2020	15:10	15:20	I Smith	54	19.17	10	27.38	126.0	Sei whale (<i>Balaenoptera borealis</i>)	1000	2	Possible	Not operational	n
41	01/06/2020	15:18	15:20	I Smith	54	19.17	10	27.38	126.0	Minke Whale (<i>Balaenoptera acutorostata</i>)	200	1	Definite	Not operational	n

Field Notes

Sightings	Date	Species or species group	Range of animal (metres)	Total number	Vessel activity	Mitigation required?
1	06/05/2020	Common dolphin (<i>Delphinus delphis</i>)	5	2	Transit	n
2	06/05/2020	Common dolphin (<i>Delphinus delphis</i>)	5	12	Transit	n
3	06/05/2020	Unidentified whales	1000	6	Transit	n
4	06/05/2020	Common dolphin (<i>Delphinus delphis</i>)	5	5	Transit	n
5	06/05/2020	Common dolphin (<i>Delphinus delphis</i>)	5	10	Transit	n
6	06/05/2020	Common dolphin (<i>Delphinus delphis</i>)	5	10	Transit	n
7	19/05/2020	Grey seal (<i>Halichoerus grypus</i>)	100	1	Operational	n
8	19/05/2020	Unidentified whales	100	1	Operational	n



Sightings	Date	Species or species group	Range of animal (metres)	Total number	Vessel activity	Mitigation required?
9	21/05/2020	Grey seal (<i>Halichoerus grypus</i>)	300	2	Operational	n
10	21/05/2020	Grey seal (<i>Halichoerus grypus</i>)	150	1	Operational	n
11	21/05/2020	Grey seal (<i>Halichoerus grypus</i>)	300	1	Operational	n
12	23/05/2020	Unidentified dolphins	30	8	Not operational	n
13	26/05/2020	Unidentified dolphins	100	5	Not operational	
14	27/05/2020	Grey seal (<i>Halichoerus grypus</i>)	300	1	Operational	n
15	27/05/2020	Unidentified whales	20	1	Operational	n
16	27/05/2020	Minke Whale (<i>Balaenoptera acutorostrata</i>)	20	1	Operational	n
17	28/05/2020	Minke Whale (<i>Balaenoptera acutorostrata</i>)	150	1	Not operational	n
18	28/05/2020	Minke Whale (<i>Balaenoptera acutorostrata</i>)	200	1	Operational	n
19	29/05/2020	Sei whale (<i>Balaenoptera borealis</i>)	600	1	Not operational	n
20	29/05/2020	Fin Whale (<i>Balaenoptera physalus</i>)	700	1	Not operational	n
21	29/05/2020	Bottlenose Dolphin (<i>Tursiops truncatus</i>)	10	1	Operational	n
22	29/05/2020	Minke Whale (<i>Balaenoptera acutorostrata</i>)	10	1	Operational	n
23	29/05/2020	Unidentified whales	1250	3	Operational	n
24	30/05/2020	Grey seal (<i>Halichoerus grypus</i>)	200	1	Operational	n
25	30/05/2020	Basking shark (<i>Cetorhinus maximus</i>)	200	1	Operational	n
26	31/05/2020	Pilot Whales (<i>Globicephala melas</i>).	700	6	Operational	n
27	31/05/2020	Minke Whale (<i>Balaenoptera acutorostrata</i>)	700	1	Operational	n
28	31/05/2020	Unidentified Whales	700	4	Operational	n
29	31/05/2020	Unidentified Whales	1000	1	Operational	n
30	31/05/2020	Unidentified Whales	700	1	Operational	n
31	31/05/2020	Unidentified Whales	1000	4	Operational	n
32	31/05/2020	Minke Whale (<i>Balaenoptera acutorostrata</i>)	5	1	Operational	n

Sightings	Date	Species or species group	Range of animal (metres)	Total number	Vessel activity	Mitigation required?
33	01/06/2020	Minke Whale (<i>Balaenoptera acutorostrata</i>)	500	1	Operational	n
34	01/06/2020	Unidentified Dolphins	600	3	Not operational	n
35	01/06/2020	Minke Whale (<i>Balaenoptera acutorostrata</i>)	700	1	Operational	n
36	01/06/2020	Unidentified whales	700	1	Operational	n
37	01/06/2020	Minke Whale (<i>Balaenoptera acutorostrata</i>)	200	1	Operational	n
38	01/06/2020	Minke Whale (<i>Balaenoptera acutorostrata</i>)	500	2	Operational	n
39	01/06/2020	Minke Whale (<i>Balaenoptera acutorostrata</i>)	100	1	Operational	n
40	01/06/2020	Sei whale (<i>Balaenoptera borealis</i>)	1000	2	Not operational	n
41	01/06/2020	Minke Whale (<i>Balaenoptera acutorostrata</i>)	200	1	Not operational	n

Sighting 1, 2, 4, 5, and 6 on 06/05/2020, several different pods of common dolphins (*Delphinus delphis*) observed travelling alongside and bow-riding during the transit to the infield site of the survey vessel *Edda Sun*, no mitigation was required.

Sighting 8 on 19/05/2020, one unidentified whale was observed 300m from the offshore survey vessel, *Edda Sun*, whilst on transit to Corrib.in-field site. Only a single blow and fin was observed. Operations were ongoing and no mitigation was required.

Sighting 7 on 19/05/2020; Sighting 9 on 21/05/2020; Sighting 10, 11 and 12 on 21/05/2020; Sighting 14 on 25/05/2020; and Sighting 24 on 30/05/2020, one grey seal (*Halichoerus grypus*) was observed during operations at the Corrib in-field site. Operations were ongoing and the MBES/USBL beacon was active. No mitigation was required.

Sighting 16 on 27/05/2020; Sighting 17 and 18 on 28/05/2020; Sighting 32 on 31/05/2020; Sightings 33,34,35,37,38,39 and 41 on 01/06/2020 of minke whale (*Balaenoptera acutorostrata*); no mitigation required.

Sighting 19 on 29/05/2020 and Sighting 40 On 01/06/2020 of possible sei whale (*Balaenoptera borealis*); no mitigation required.

Sighting 20 on 29/05/2020 of possible fin whale (*Balaenoptera physalus*); no mitigation required.

Sighting 25 on 30/05/2020 of a basking shark (*Cetorhinus maximus*), no mitigation required.

Effort Form – Edda Sun

Ship/ platform name	Date	Visual watch or PAM?	Observer's / operator's name(s)	Time of start of section of watch (UTC)	Time of end of section of watch (UTC)	Source activity	Start position - degrees latitude	Start position - minutes latitude	Start position - north/ south	Start position - degrees longitude	Start position - minutes longitude	Start position east/ west	Depth of water at start position (metres)	End position - degrees latitude	End position - minutes latitude	End position - north/ south	End position - degrees longitude	End position - minutes longitude	End position east/ west	Depth of water at end position (metres)	Speed of vessel (knots)	Wind direction	Wind force (Beaufort)	Sea state	Swell	Visibility (visual watch only)	Sun glare (visual watch only)	Precipita tion	Comments	
Edda Sun	05/05/2020	v	I Smith	5:36	6:31	n	58	16.87	n	2	29.30	w	59.0	58	24.50	n	2	38.14	w	56.0	9.6	w	3	s	m	g	n	n	In transit to site	
Edda Sun	05/05/2020	v	I Smith	6:31	6:55	n	58	24.50	n	2	38.14	w	56.0	58	26.90	n	2	41.75	w	56.0	9.6	sw	2	s	m	g	n	n	In transit to site	
Edda Sun	05/05/2020	v	I Smith	7:32	8:43	n	58	31.90	n	2	47.85	w	73.0	58	38.98	n	2	58.81	w	71.0	9.6	sw	2	s	o	g	wb	n	n	break for HOD meeting
Edda Sun	05/05/2020	v	I Smith	8:43	9:30	n	58	38.98	n	2	58.81	w	71.0	58	42.76	n	3	12.90	w	71.5	9.6	sw	3	s	o	g	sb	n	n	In transit to site
Edda Sun	05/05/2020	v	I Smith	9:30	9:50	n	58	42.76	n	3	12.90	w	71.5	58	42.65	n	3	19.60	w	60.0	11.5	w	5	s	o	g	sf	n	n	break for 11am meeting
Edda Sun	05/05/2020	v	I Smith	10:50	11:54	n	58	42.24	n	3	43.67	w	93.5	58	41.79	n	4	8.34	w	80.1	12.4	w	5	s	o	g	sf	n	n	In transit to site
Edda Sun	05/05/2020	v	I Smith	11:54	13:43	n	58	41.79	n	4	8.34	w	80.1	58	40.39	n	4	50.41	w	63.5	12.0	w	5	s	o	g	sf	n	n	break for meetings at 13:00, 14:00 and 14:20
Edda Sun	05/05/2020	v	I Smith	13:43	14:43	n	58	40.39	n	4	50.41	w	63.5	58	35.15	n	5	13.00	w	70.0	12.0	w	6	s	o	g	sf	n	n	In transit to site
Edda Sun	05/05/2020	v	I Smith	14:43	15:54	n	58	35.15	n	5	13.00	w	70.0	58	26.90	n	5	28.69	w	104.0	12.0	w	5	s	o	g	wf	n	n	In transit to site
Edda Sun	05/05/2020	v	I Smith	15:54	16:35	n	58	26.90	n	5	28.69	w	104.0	58	21.54	n	5	39.12	w	112.0	11.5	sw	4	g	o	g	wf	n	n	In transit to site
Edda Sun	05/05/2020	v	I Smith	16:35	16:56	n	58	21.54	n	5	39.12	w	112.0	58	18.83	n	5	44.29	w	116.0	11.3	sw	4	g	o	g	sf	n	n	In transit to site
Edda Sun	05/05/2020	v	I Smith	16:56	17:40	n	58	18.83	n	5	44.29	w	116.0	58	12.80	n	5	54.32	w	104.5	10.9	s	4	g	o	g	sf	n	n	In transit to site
Edda Sun	06/05/2020	v	I Smith	4:00	5:00	n	56	32.28	n	7	35.12	w	177.5	56	24.37	n	7	40.85	w	161.0	10.5	s	4	s	o	g	n	n	n	In transit to site
Edda Sun	06/05/2020	v	I Smith	5:00	6:08	n	56	24.37	n	7	40.85	w	161.0	56	18.83	n	7	48.61	w	89.0	10.0	s	3	s	o	g	sb	n	n	In transit to site
Edda Sun	06/05/2020	v	I Smith	6:08	6:28	n	56	18.83	n	7	48.61	w	89.0	56	11.62	n	7	50.06	w	80.0	9.9	s	5	s	o	g	sb	n	n	In transit to site
Edda Sun	06/05/2020	v	I Smith	6:28	7:38	n	56	11.62	n	7	50.06	w	80.0	55	59.89	n	7	58.50	w	140.0	10.2	s	5	s	o	g	sb	n	n	In transit to site
Edda Sun	06/05/2020	v	I Smith	7:38	8:04	n	55	59.89	n	7	58.50	w	140.0	55	40.67	n	8	10.93	w	173.0	10.0	se	5	s	o	g	sf	n	n	In transit to site
Edda Sun	06/05/2020	v	I Smith	8:04	8:55	n	55	40.67	n	8	10.93	w	173.0	55	48.36	n	8	6.74	w	112.5	10.0	se	5	s	o	g	sf	n	n	In transit to site
Edda Sun	06/05/2020	v	I Smith	8:55	9:38	n	55	48.36	n	8	6.74	w	112.5	55	41.40	n	8	11.70	w	91.0	9.6	se	5	s	o	g	wf	n	n	In transit to site
Edda Sun	06/05/2020	v	I Smith	9:38	10:35	n	55	41.40	n	8	11.70	w	91.0	55	33.96	n	8	17.06	w	82.0	9.7	se	5	s	o	g	wf	n	n	In transit to site
Edda Sun	06/05/2020	v	I Smith	10:35	11:30	n	55	33.96	n	8	17.06	w	82.0	55	22.51	n	8	22.99	w	87.0	9.6	se	5	s	o	g	wf	n	n	In transit to site
Edda Sun	06/05/2020	v	I Smith	11:30	12:38	n	55	22.51	n	8	22.99	w	87.0	55	14.63	n	8	30.58	w	75.2	9.9	se	3	s	o	g	wf	n	n	In transit to site
Edda Sun	06/05/2020	v	I Smith	13:46	15:16	n	55	3.83	n	8	38.14	w	72.7	54	50.17	n	8	47.75	w	70.5	10.3	e	2	s	o	g	sf	n	n	In transit to site
Edda Sun	06/05/2020	v	I Smith	15:16	16:25	n	54	50.17	n	8	47.75	w	70.5	54	39.85	n	8	53.38	w	89.0	9.8	e	2	s	o	g	sf	n	n	In transit to site
Edda Sun	06/05/2020	v	I Smith	16:25	18:38	n	54	39.85	n	8	53.38	w	89.0	54	35.59	n	8	29.20	w	35.0	8.3	se	5	s	o	g	sb	n	n	In transit to site
Edda Sun	06/05/2020	v	I Smith	18:38	18:38	n	54	35.59	n	8	29.20	w	35.0	54	35.59	n	8	29.20	w	35.0	6.4	e	5	s	o	g	sb	n	n	In transit to site
Edda Sun	07/05/2020	v	I Smith	6:30	8:00	n	54	35.96	n	8	29.10	w	34.0	54	32.42	n	8	57.70	w	75.0	11.0	se	1	s	o	g	n	n	n	In transit to site
Edda Sun	07/05/2020	v	I Smith	8:00	9:21	n	54	32.42	n	8	57.70	w	75.0	54	30.06	n	9	23.29	w	89.0	11.2	se	3	s	o	g	n	n	n	In transit to site
Edda Sun	07/05/2020	v	I Smith	9:21	10:30	n	54	30.06	n	9	23.29	w	89.0	54	28.09	n	9	44.56	w	83.0	11.0	se	3	s	o	g	n	n	n	In transit to site
Edda Sun	07/05/2020	v	I Smith	10:30	12:30	n	54	28.09	n	9	44.56	w	83.0	54	24.59	n	10	20.18	w	118.0	11.1	se	3	s	o	g	sb	n	n	In transit to site
Edda Sun	07/05/2020	v	I Smith	12:30	13:30	n	54	24.59	n	10	20.18	w	118.0	54	22.79	n	10	38.19	w	185.0	10.3	se	4	s	o	g	n	n	n	In transit to site
Edda Sun	07/05/2020	v	I Smith	13:30	14:50	n	54	22.79	n	10	38.19	w	185.0	54	20.62	n	11	0.33	w	345.0	10.2	se	4	s	o	g	n	n	n	In transit to site
Edda Sun	07/05/2020	v	I Smith	14:50	15:32	n	54	20.62	n	11	0.33	w	345.0	54	20.81	n	11	1.68	w	345.0	10.3	se	4	s	o	m	n	n	n	In transit to site
Edda Sun	07/05/2020	v	I Smith	15:32	15:50	n	54	20.81	n	11	1.68	w	345.0	54	20.83	n	11	2.24	w	345.0	10.0	se	4	s	o	m	n	n	n	In transit to site
Edda Sun	07/05/2020	v	I Smith	15:50	16:30	n	54	20.83	n	11	2.24	w	345.0	54	20.83	n	11	2.24	w	345.0	1.0	se	4	s	o	p	n	n	n	Arrived on field, commence Dp set up
Edda Sun	07/05/2020	v	I Smith	16:30	16:30	v	54	20.83	n	11	2.24	w	345.0	54	20.83	n	11	2.24	w	345.0	1.0	s	4	s	o	g	n	n	n	USBL Calibration and commence inspection
Edda Sun	08/05/2020	v	I Smith	5:00	6:27	f	54	20.90	n	11	2.21	w	345.0	54	20.90	n	11	2.21	w	345.0	0.6	s	4	s	o	g	n	n	n	In transit to site
Edda Sun	08/05/2020	v	I Smith	6:27	7:45	f	54	20.80	n	11	2.21	w	345.0	54	20.84	n	11	2.24	w	345.0	0.9	n	4	s	o	p	n	n	n	low mist Less than 1000m vis
Edda Sun	08/05/2020	v	I Smith	7:45	8:37	f	54	20.84	n	11	2.24	w	345.0	54	20.84	n	11	2.24	w	345.0	0.9	ne	4	s	o	m	n	n	n	low mist less than 500m vis

Ship/ platform name	Date	Visual watch or PAM?	Observer's / operator's name(s)	Time of start of watch (UTC)	Time of end of watch (UTC)	Source activity	Start position - degrees latitude	Start position - minutes latitude	Start position - north/ south	Start position - degrees longitude	Start position - minutes longitude	Start position - east/ west	Depth of water at start position (metres)	End position - degrees latitude	End position - minutes latitude	End position - north/ south	End position - degrees longitude	End position - minutes longitude	End position - east/ west	Depth of water at end position (metres)	Speed of vessel (knots)	Wind direction	Wind force (Beaufort)	Sea state	Swell	Visibility (visual watch only)	Sun glare (visual watch only)	Precipit ation	Comments
Edda Sun	08/05/2020	v	I Smith	8:37	9:30	f	54	20.84	n	11	2.24	w	345.0	54	20.84	n	11	2.24	w	345.0	0.9	n	4	s	o	g	n	n	
Edda Sun	08/05/2020	v	I Smith	9:30	10:32	f	54	20.84	n	11	2.24	w	345.0	54	20.84	n	11	2.24	w	345.0	0.9	n	4	s	o	g	n	n	
Edda Sun	08/05/2020	v	I Smith	10:32	11:30	f	54	20.84	n	11	2.24	w	345.0	54	20.84	n	11	2.24	w	345.0	0.9	n	4	s	o	g	n	n	
Edda Sun	08/05/2020	v	I Smith	11:30	12:30	f	54	20.84	n	11	2.24	w	345.0	54	20.84	n	11	2.24	w	345.0	0.9	n	4	s	o	g	n	n	
Edda Sun	08/05/2020	v	I Smith	12:30	13:30	f	54	20.84	n	11	2.24	w	345.0	54	20.84	n	11	2.24	w	345.0	0.9	n	4	s	o	g	n	n	
Edda Sun	08/05/2020	v	I Smith	13:30	14:31	f	54	20.84	n	11	2.24	w	345.0	54	20.84	n	11	2.24	w	345.0	0.6	ne	4	s	o	g	n	n	
Edda Sun	08/05/2020	v	I Smith	14:31	15:29	f	54	20.84	n	11	2.24	w	345.0	54	20.84	n	11	2.24	w	345.0	0.6	ne	3	s	o	g	wf	n	
Edda Sun	08/05/2020	v	I Smith	15:29	16:30	f	54	20.84	n	11	2.24	w	345.0	54	20.84	n	11	2.24	w	345.0	0.6	ne	3	s	o	g	wf	n	
Edda Sun	08/05/2020	v	I Smith	16:30	17:00	f	54	20.84	n	11	2.24	w	345.0	54	20.84	n	11	2.24	w	345.0	0.6	n	3	s	o	g	wf	n	
Edda Sun	09/05/2020	v	I Smith	5:00	5:10	f	54	20.84	n	11	2.24	w	345.0	54	20.83	n	11	2.23	w	345.0	0.5	ne	2	s	o	p	n	n	Heavy mist. Less than 100m vis
Edda Sun	09/05/2020	v	I Smith	13:00	13:10	f	54	20.83	n	11	2.23	w	345.0	54	20.83	n	11	2.23	w	345.0	0.2	ne	3	s	o	p	n	n	Heavy mist. Less than 100m vis
Edda Sun	09/05/2020	v	I Smith	17:00	17:10	f	54	20.83	n	11	2.23	w	345.0	54	20.83	n	11	2.23	w	345.0	0.0	n	4	s	o	g	n	n	Mist lifted at end of watch
Edda Sun	10/05/2020	v	I Smith	5:00	5:10	n	54	20.56	n	11	2.47	w	345.0	54	20.56	n	11	2.47	w	345.0	0.5	ne	8	r	m	m	n	n	VOV Gusting 43 kts
Edda Sun	10/05/2020	v	I Smith	9:00	9:10	n	54	20.58	n	11	3.36	w	345.0	54	20.58	n	11	3.36	w	345.0	0.1	ne	8	r	l	m	sf	n	VOV Gusting 43 kts
Edda Sun	10/05/2020	v	I Smith	12:37	12:45	n	54	21.13	n	11	3.37	w	345.0	54	21.13	n	11	3.37	w	345.0	0.4	ne	8	r	l	m	n	n	VOV Gusting 47 kts
Edda Sun	10/05/2020	v	I Smith	14:41	14:45	n	54	22.26	n	11	3.17	w	345.0	54	22.26	n	11	3.17	w	345.0	0.6	ne	8	r	l	p	sf	n	Low/Thick cloud. Too dark to start watch.
Edda Sun	11/05/2020	v	I Smith	3:30	3:50	n	54	20.69	n	11	2.17	w	345.0	54	20.37	n	11	2.26	w	345.0	0.7	ne	6	r	m	p	n	n	
Edda Sun	11/05/2020	v	I Smith	3:50	4:35	n	54	20.37	n	11	2.26	w	345.0	54	20.84	n	11	2.25	w	345.0	0.2	ne	6	c	m	m	n	n	Start of watch End of watch, USBL activated start inspection operation
Edda Sun	11/05/2020	v	I Smith	4:35	5:35	f	54	20.84	n	11	2.25	w	345.0	54	20.84	n	11	2.25	w	345.0	0.1	ne	6	c	m	g	n	n	
Edda Sun	11/05/2020	v	I Smith	6:10	7:00	f	54	20.85	n	11	2.23	w	345.0	54	20.85	n	11	2.23	w	345.0	0.3	e	6	c	m	g	n	n	
Edda Sun	11/05/2020	v	I Smith	7:00	8:00	f	54	20.85	n	11	2.23	w	345.0	54	20.86	n	11	2.22	w	345.0	0.3	e	5	c	m	g	n	n	
Edda Sun	11/05/2020	v	I Smith	8:00	9:00	f	54	20.86	n	11	2.22	w	345.0	54	20.85	n	11	2.19	w	345.0	0.3	e	7	c	m	g	wf	n	
Edda Sun	11/05/2020	v	I Smith	9:19	10:30	f	54	20.85	n	11	2.19	w	345.0	54	20.86	n	11	2.25	w	345.0	0.2	e	6	c	m	g	sf	n	
Edda Sun	11/05/2020	v	I Smith	10:30	10:45	f	54	20.86	n	11	2.25	w	345.0	54	20.80	n	11	2.24	w	345.0	0.1	ne	5	c	m	g	n	n	
Edda Sun	11/05/2020	v	I Smith	12:30	13:25	f	54	20.80	n	11	2.24	w	345.0	54	20.81	n	11	2.33	w	345.0	0.1	ne	5	c	m	g	n	n	
Edda Sun	11/05/2020	v	I Smith	13:25	14:00	n	54	20.81	n	11	2.33	w	345.0	54	20.80	n	11	2.23	w	345.0	0.1	ne	5	c	m	g	n	n	Line 42 back to deck and shut down during ship to ship transfer of crate. Suspend inspection
Edda Sun	11/05/2020	v	I Smith	14:00	14:20	n	54	20.80	n	11	2.23	w	345.0	54	20.35	n	11	3.39	w	345.0	0.1	ne	5	c	m	g	n	n	Complete transfer, relocate to P1 well and recommence inspection survey. USBL full power
Edda Sun	11/05/2020	v	I Smith	15:30	16:00	f	54	20.35	n	11	3.41	w	345.0	54	20.34	n	11	3.41	w	345.0	0.1	n	5	c	m	g	sb	n	continue inspection
Edda Sun	11/05/2020	v	I Smith	16:00	16:00	f	54	20.34	n	11	3.41	w	345.0	54	20.34	n	11	3.41	w	345.0	0.2	n	5	c	m	g	sb	n	continue inspection
Edda Sun	12/05/2020	v	I Smith	5:00	6:00	f	54	20.31	n	11	3.38	w	345.0	54	20.31	n	11	3.51	w	345.0	0.2	n	3	s	o	g	sb	n	continue inspection. Break for meeting.
Edda Sun	12/05/2020	v	I Smith	6:00	7:00	f	54	20.31	n	11	3.51	w	345.0	54	20.31	n	11	3.51	w	345.0	0.5	n	3	s	o	g	sb	n	continue inspection
Edda Sun	12/05/2020	v	I Smith	8:00	8:30	f	54	20.34	n	11	3.42	w	345.0	54	20.35	n	11	3.40	w	345.0	0.4	nw	3	s	o	g	sf	n	continue inspection
Edda Sun	12/05/2020	v	I Smith	9:05	10:05	f	54	20.35	n	11	3.39	w	345.0	54	20.33	n	11	3.40	w	345.0	0.1	nw	3	s	o	g	sf	n	continue inspection
Edda Sun	12/05/2020	v	I Smith	10:05	10:40	f	54	20.33	n	11	3.40	w	345.0	54	20.34	n	11	3.40	w	345.0	0.0	n	3	s	o	g	n	n	continue inspection
Edda Sun	12/05/2020	v	I Smith	11:45	12:45	f	54	20.34	n	11	3.41	w	345.0	54	20.34	n	11	3.41	w	345.0	0.0	nw	3	s	o	g	wf	n	continue inspection
Edda Sun	12/05/2020	v	I Smith	14:08	16:08	f	54	20.35	n	11	3.42	w	345.0	54	20.35	n	11	3.49	w	345.0	0.1	n	3	s	o	g	wf	n	continue inspection

Ship/ platform name	Date	Visual watch or PAM?	Observer's / operator's name(s)	Time of start of watch (UTC)	Time of end of section of watch (UTC)	Source activity	Start position - degrees latitude	Start position - minutes latitude	Start position - north/ south	Start position - degrees longitude	Start position - minutes longitude	Start position - east/ west	Depth of water at start position (metres)	End position - degrees latitude	End position - minutes latitude	End position - north/ south	End position - degrees longitude	End position - minutes longitude	End position - east/ west	Depth of water at end position (metres)	Speed of vessel (knots)	Wind direction	Wind force (Beaufort)	Sea state	Swell	Visibility (visual watch only)	Sun glare (visual watch only)	Precipitation	Comments
Edda Sun	12/05/2020	v	I Smith	14:08	16:08	f	54	20:35	n	11	3:42	w	345.0	54	20:35	n	11	3:49	w	345.0	0.1	n	3	s	o	g	wf	n	continue inspection
Edda Sun	13/05/2020	v	I Smith	16:08	17:05	f	54	20:35	n	11	3:49	w	345.0	54	20:34	n	11	3:44	w	345.0	0.1	ne	4	s	o	g	n	n	continue inspection
Edda Sun	13/05/2020	v	I Smith	5:00	6:00	f	54	20:34	n	11	3:44	w	345.0	54	20:23	n	11	3:44	w	345.0	0.1	ne	5	s	o	g	sf	n	continue inspection
Edda Sun	13/05/2020	v	I Smith	8:00	7:00	f	54	20:23	n	11	3:44	w	345.0	54	20:34	n	11	3:45	w	345.0	0.1	ne	5	s	m	g	sf	n	continue inspection
Edda Sun	13/05/2020	v	I Smith	9:30	9:30	f	54	20:34	n	11	3:46	w	345.0	54	20:34	n	11	3:46	w	345.0	0.1	ne	5	c	m	g	sf	n	continue inspection
Edda Sun	13/05/2020	v	I Smith	9:30	10:40	f	54	20:34	n	11	3:46	w	345.0	54	20:34	n	11	3:44	w	345.0	0.0	ne	5	c	o	g	sf	n	continue inspection
Edda Sun	13/05/2020	v	I Smith	12:30	13:30	f	54	20:35	n	11	3:46	w	345.0	54	23:35	n	11	3:62	w	345.0	0.0	ne	5	c	o	g	sb	n	continue inspection
Edda Sun	13/05/2020	v	I Smith	13:30	14:05	f	54	20:35	n	11	3:62	w	345.0	54	19:18	n	11	4:30	w	345.0	0.6	ne	5	c	o	g	wb	n	continue inspection Pellicola to P5 well and commence inspection
Edda Sun	13/05/2020	v	I Smith	14:05	15:00	f	54	19:18	n	11	4:30	w	345.0	54	19:21	n	11	4:28	w	345.0	0.1	ne	5	c	m	g	sb	n	Continue inspection P5
Edda Sun	13/05/2020	v	I Smith	15:00	16:00	f	54	19:21	n	11	4:28	w	345.0	54	19:21	n	11	4:28	w	345.0	0.0	ne	5	c	m	g	wb	n	Continue inspection P5
Edda Sun	13/05/2020	v	I Smith	16:00	17:00	f	54	19:23	n	11	4:28	w	345.0	54	19:20	n	11	4:28	w	345.0	0.1	ne	5	c	m	g	sb	n	continue inspection P2
Edda Sun	14/05/2020	v	I Smith	5:00	6:00	f	54	19:17	n	11	2:91	w	345.0	54	20:35	n	11	3:57	w	345.0	5.6	ne	3	s	m	g	sf	n	Transit to start of Pipeline
Edda Sun	14/05/2020	v	I Smith	6:00	7:00	f	54	20:35	n	11	3:57	w	345.0	54	20:37	n	11	2:51	w	345.0	0.1	ne	3	s	o	g	sf	n	Start Pipeline survey
Edda Sun	14/05/2020	v	I Smith	8:00	9:30	f	54	20:55	n	11	3:14	w	345.0	54	21:02	n	11	2:10	w	345.0	0.5	ne	2	s	m	g	sf	n	Continue Pipeline survey
Edda Sun	14/05/2020	v	I Smith	9:30	10:40	f	54	21:02	n	11	2:10	w	345.0	54	21:27	n	11	1:35	w	345.0	0.5	n	2	s	m	g	sf	n	Continue Pipeline survey
Edda Sun	14/05/2020	v	I Smith	12:34	13:30	f	54	21:46	n	10	59:39	w	352.0	54	21:48	n	10	57:37	w	339.0	0.3	nw	2	s	m	g	wf	n	Continue Pipeline survey
Edda Sun	14/05/2020	v	I Smith	13:30	14:30	f	54	21:48	n	10	57:37	w	339.0	54	21:26	n	10	55:16	w	327.0	1.1	n	2	s	m	g	n	n	Continue Pipeline survey
Edda Sun	14/05/2020	v	I Smith	16:00	17:00	f	54	21:08	n	10	51:66	w	305.2	54	21:04	n	10	49:94	w	295.6	1.3	n	2	s	o	g	n	n	Continue Pipeline survey
Edda Sun	15/05/2020	v	I Smith	5:00	6:30	f	54	20:59	n	10	24:78	w	130.0	54	19:82	n	10	23:75	w	127.8	1.3	nw	4	s	m	g	wf	n	Continue Pipeline survey
Edda Sun	15/05/2020	v	I Smith	6:30	7:00	f	54	19:82	n	10	20:75	w	127.8	54	19:82	n	10	20:75	w	127.1	0.0	nw	4	s	m	g	sf	n	Continue Pipeline survey
Edda Sun	15/05/2020	v	I Smith	7:30	9:00	f	54	20:50	n	10	19:79	w	123.5	54	20:47	n	10	16:36	w	116.1	1.2	nw	3	s	m	g	sf	n	Continue Pipeline survey
Edda Sun	15/05/2020	v	I Smith	9:00	10:00	f	54	20:47	n	10	16:36	w	116.1	54	23:46	n	10	14:60	w	110.9	1.3	nw	3	s	m	g	sf	n	Continue Pipeline survey
Edda Sun	15/05/2020	v	I Smith	10:00	10:30	f	54	23:46	n	10	14:60	w	110.9	54	20:41	n	10	10:43	w	102.0	1.3	nw	3	s	m	g	wf	n	Continue Pipeline survey
Edda Sun	15/05/2020	v	I Smith	12:00	13:15	f	54	20:41	n	10	10:43	w	102.0	54	20:25	n	10	7:45	w	96.2	1.3	nw	4	s	m	g	sf	n	Continue Pipeline survey
Edda Sun	15/05/2020	v	I Smith	13:15	14:35	f	54	20:25	n	10	7:45	w	96.2	54	20:25	n	10	5:35	w	90.3	1.3	nw	3	s	m	g	sb	n	Continue Pipeline survey
Edda Sun	15/05/2020	v	I Smith	14:35	15:30	f	54	20:25	n	10	5:35	w	90.3	54	20:07	n	10	3:59	w	83.0	1.1	w	4	s	o	g	sb	n	Continue Pipeline survey
Edda Sun	15/05/2020	v	I Smith	15:30	16:30	f	54	20:07	n	10	3:59	w	83.0	54	20:14	n	10	1:49	w	79.0	1.2	w	4	s	m	g	sb	n	Continue Pipeline survey
Edda Sun	15/05/2020	v	I Smith	16:30	17:00	f	54	20:14	n	10	1:49	w	79.0	54	20:04	n	10	0:80	w	78.2	1.4	w	4	s	m	g	n	n	Continue Pipeline survey
Edda Sun	15/05/2020	v	I Smith	18:20	18:50	n	54	19:73	n	9	59:41	w	71.0	54	19:73	n	9	59:41	w	71.0	0.1	w	3	s	m	g	n	n	Operation suspended for Vessel to Vessel transfer
Edda Sun	16/05/2020	v	I Smith	5:00	6:16	f	54	17:41	n	9	54:00	w	36.5	54	17:83	n	9	55:0	w	40.8	0.6	w	4	s	o	g	n	n	Continue Umbilical survey
Edda Sun	16/05/2020	v	I Smith	6:16	7:00	f	54	17:83	n	9	55:0	w	40.8	54	18:04	n	9	55:2	w	43.7	0.5	w	4	s	o	g	n	n	Continue Umbilical survey
Edda Sun	16/05/2020	v	I Smith	7:00	7:51	f	54	18:04	n	9	55:2	w	43.7	54	18:24	n	9	56:0	w	40.0	0.7	w	4	s	m	g	n	n	Continue Umbilical survey
Edda Sun	16/05/2020	v	I Smith	7:51	8:25	n	54	18:24	n	9	56:0	w	40.0	54	16:97	n	9	52:7	w	25.0	0.2	w	4	s	o	g	n	n	Continue Umbilical survey
Edda Sun	16/05/2020	v	I Smith	8:25	9:08	f	54	16:97	n	9	52:7	w	25.0	54	17:01	n	9	52:9	w	27.0	0.0	w	4	s	o	g	n	n	Continue Umbilical survey
Edda Sun	16/05/2020	v	I Smith	9:08	10:04	f	54	17:01	n	9	52:9	w	27.0	54	17:19	n	9	22:5	w	30.5	0.4	w	4	s	o	g	n	n	Continue Umbilical survey
Edda Sun	16/05/2020	v	I Smith	10:04	10:25	n	54	17:19	n	9	22:5	w	30.5	54	18:22	n	9	55:90	w	44.1	0.6	w	4	s	o	g	n	n	Vessel move 3.1km,FCV recovered and MBES stopped. Re-run part of survey due to anomalies
Edda Sun	16/05/2020	v	I Smith	12:25	13:26	f	54	18:59	n	9	56:83	w	46.3	54	18:94	n	9	57:67	w	46.6	0.6	sw	4	s	o	g	n	n	Continue Umbilical survey
Edda Sun	16/05/2020	v	I Smith	13:26	14:28	f	54	18:94	n	9	57:67	w	46.6	54	19:29	n	9	58:52	w	53.4	0.6	sw	4	s	o	g	n	n	Continue Umbilical survey
Edda Sun	16/05/2020	v	I Smith	14:28	16:15	f	54	19:29	n	9	58:52	w	53.4	54	19:29	n	9	58:52	w	53.4	0.7	sw	5	s	o	g	n	n	Continue Umbilical survey

Ship/ platform name	Date	Visual watch or PAM?	Observer's / operator's name(s)	Time of start of section of watch (UTC)	Time of end of section of watch (UTC)	Source activity	Start position - degrees latitude	Start position - minutes latitude	Start position - north/ south	Start position - degrees longitude	Start position - minutes longitude	Start position - east/ west	Depth of water at start position (metres)	End position - degrees latitude	End position - minutes latitude	End position - north/ south	End position - degrees longitude	End position - minutes longitude	End position - east/ west	Depth of water at end position (metres)	Speed of vessel (knots)	Wind direction	Wind force (Beaufort)	Sea state	Swell	Visibility (visual watch only)	Sun glare (visual watch only)	Precipit ation	Comments
Edda Sun	20/05/2020	v	I Smith	18.00	18.30	n	54	20.34	n	11	2.37	w	354.0	54	20.34	n	11	2.27	w	354.0	0.2	s	6	c	l	m	n	n	Pre-shoot watch prior to restart after WGV.
Edda Sun	21/05/2020	v	I Smith	5.00	5.25	f	54	20.31	n	11	3.48	w	354.0	54	20.32	n	11	3.55	w	354.0	0.3	sw	4	s	m	g	n	n	Inspection infield survey continues
Edda Sun	21/05/2020	v	I Smith	5.25	6.01	f	54	20.32	n	11	3.55	w	354.0	54	19.98	n	11	3.70	w	354.0	0.5	sw	4	s	m	g	zb	n	Inspection infield survey continues
Edda Sun	21/05/2020	v	I Smith	6.01	6.55	f	54	19.98	n	11	3.70	w	354.0	54	20.29	n	11	3.43	w	354.0	0.7	sw	4	s	m	g	zb	n	Inspection infield survey continues
Edda Sun	21/05/2020	v	I Smith	6.55	8.12	n	54	20.29	n	11	3.43	w	354.0	54	20.84	n	11	2.25	w	354.0	0.3	sw	4	s	m	g	sb	n	Inspection infield survey continues
Edda Sun	21/05/2020	v	I Smith	8.12	9.20	f	54	20.84	n	11	2.25	w	354.0	54	20.84	n	11	2.27	w	354.0	0.1	sw	4	s	m	g	sb	n	Inspection infield survey continues
Edda Sun	21/05/2020	v	I Smith	9.20	10.20	f	54	20.84	n	11	2.27	w	354.0	54	20.84	n	11	2.23	w	354.0	0.1	sw	4	s	m	g	sb	n	Inspection infield survey continues
Edda Sun	21/05/2020	v	I Smith	12.15	12.39	f	54	20.84	n	11	2.26	w	354.0	54	20.84	n	11	2.26	w	354.0	0.3	sw	5	c	m	g	zb	n	Inspection infield survey continues
Edda Sun	21/05/2020	v	I Smith	12.39	13.30	n	54	30.34	n	8	23.75	w	354.0	54	20.34	n	11	3.54	w	354.0	0.3	s	5	c	m	g	sf	n	FCV recovered to deck and reconfigured. Vessel move 1.8km
Edda Sun	21/05/2020	v	I Smith	13.30	15.15	f	54	20.34	n	11	3.54	w	354.0	54	19.71	n	11	4.12	w	354.0	0.2	s	5	c	m	g	n	n	Inspection infield survey continues
Edda Sun	21/05/2020	v	I Smith	15.15	16.15	f	54	19.71	n	11	4.12	w	354.0	54	19.18	n	11	4.26	w	354.0	0.7	se	5	s	m	g	n	n	Inspection infield survey continues
Edda Sun	21/05/2020	v	I Smith	16.15	17.00	f	54	19.18	n	11	4.26	w	354.0	54	28.24	n	8	27.22	w	354.0	0.1	se	5	s	m	g	n	n	Inspection infield survey continues
Edda Sun	21/05/2020	v	I Smith	17.00	17.00	f	54	28.24	n	8	27.22	w	354.0	54	28.24	n	8	27.22	w	354.0	0.1	se	5	s	m	g	n	n	Inspection infield survey continues
Edda Sun	22/05/2020	v	I Smith	5.00	6.10	n	54	28.31	n	8	39.52	w	50.0	54	28.74	n	8	25.61	w	28.5	6.7	s	7	s	o	g	n	m	Transit to Mullaghmore Bay for shelter
Edda Sun	22/05/2020	v	I Smith	6.10	7.50	n	54	28.74	n	8	25.61	w	28.5	54	28.30	n	8	25.62	w	25.2	0.1	sw	9	r	o	m	n	m	Sheltering in Mullaghmore Bay
Edda Sun	23/05/2020	v	I Smith	5.00	6.27	n	54	28.57	n	8	25.32	w	210	54	28.57	n	8	25.32	w	210	0.1	sw	8	r	m	m	n	m	Sheltering in Mullaghmore Bay
Edda Sun	23/05/2020	v	I Smith	13.30	14.11	n	54	28.07	n	8	25.72	w	17.4	54	28.09	n	8	25.72	w	16.3	0.1	w	8	r	m	g	n	n	Sheltering in Mullaghmore Bay
Edda Sun	24/05/2020	v	I Smith	5.00	6.25	n	54	31.30	n	8	28.62	w	54.0	54	32.48	n	8	29.89	w	60.5	1.2	w	6	c	m	m	n	n	Sheltering in Mullaghmore Bay
Edda Sun	24/05/2020	v	I Smith	6.25	8.00	n	54	32.48	n	8	29.89	w	60.5	54	35.12	n	8	29.58	w	24.0	1.3	w	6	c	m	m	n	n	Sheltering in Mullaghmore Bay
Edda Sun	24/05/2020	v	I Smith	8.00	8.35	n	54	35.12	n	8	29.58	w	24.0	54	37.75	n	8	26.26	w	20.0	7.3	w	4	s	o	g	n	n	Transit to Killbegs. Arrived alongside Killbegs
Edda Sun	26/05/2020	v	I Smith	15.56	16.58	n	54	37.75	n	8	26.26	w	19.0	54	33.91	n	8	29.82	w	50.0	5.8	sw	4	s	o	g	sf	n	Transit to Corrib site
Edda Sun	27/05/2020	v	I Smith	4.00	4.35	n	54	19.14	n	11	2.88	w	354.0	54	19.14	n	11	2.90	w	354.0	0.1	e	3	s	m	g	n	l	Inspection infield survey continues
Edda Sun	27/05/2020	v	I Smith	4.35	5.30	f	54	19.14	n	11	2.90	w	354.0	54	19.14	n	11	2.88	w	354.0	0.1	e	3	s	m	g	n	l	Inspection infield survey continues
Edda Sun	27/05/2020	v	I Smith	5.30	6.30	f	54	19.14	n	11	2.88	w	354.0	54	19.13	n	11	3.37	w	354.0	0.1	e	3	s	l	g	n	m	Inspection infield survey continues
Edda Sun	27/05/2020	v	I Smith	6.30	7.30	f	54	19.13	n	11	3.37	w	354.0	54	19.41	n	11	4.19	w	354.0	0.6	e	4	s	l	g	n	m	Inspection infield survey continues
Edda Sun	27/05/2020	v	I Smith	7.30	10.00	f	54	19.41	n	11	4.19	w	354.0	54	20.24	n	11	3.49	w	354.0	1.0	e	4	s	m	g	n	n	Inspection infield survey continues
Edda Sun	27/05/2020	v	I Smith	10.00	11.00	f	54	20.24	n	11	3.49	w	354.0	54	20.16	n	11	3.67	w	354.0	0.8	se	4	s	m	g	zb	n	Inspection infield survey continues
Edda Sun	27/05/2020	v	I Smith	11.00	12.00	f	54	20.16	n	11	3.67	w	354.0	54	19.23	n	11	3.90	w	354.0	0.9	se	4	s	m	g	zb	n	Inspection infield survey continues
Edda Sun	27/05/2020	v	I Smith	12.00	13.00	f	54	19.23	n	11	3.90	w	354.0	54	19.23	n	11	3.81	w	354.0	0.5	s	4	s	m	g	n	n	Inspection infield survey continues
Edda Sun	27/05/2020	v	I Smith	14.30	15.16	f	54	1.12	n	11	1.91	w	354.0	54	1.12	n	11	1.91	w	354.0	0.6	s	3	s	m	g	sf	n	Inspection infield survey continues
Edda Sun	27/05/2020	v	I Smith	15.16	15.43	n	54	1.12	n	11	1.91	w	354.0	54	20.84	n	11	2.23	w	354.0	0.1	s	2	s	m	g	sf	n	Inspection infield survey continues
Edda Sun	27/05/2020	v	I Smith	15.43	15.58	f	54	20.84	n	11	2.23	w	354.0	54	20.84	n	11	2.23	w	354.0	0.1	s	3	s	m	g	sf	n	Inspection infield survey continues
Edda Sun	27/05/2020	v	I Smith	15.58	16.12	n	54	20.84	n	11	2.23	w	354.0	54	20.84	n	11	2.23	w	354.0	0.2	s	3	s	m	g	wf	n	Inspection infield survey continues
Edda Sun	27/05/2020	v	I Smith	16.12	16.12	f	54	20.84	n	11	2.23	w	354.0	54	20.84	n	11	2.23	w	354.0	0.2	s	4	s	m	g	sf	n	Inspection infield survey continues
Edda Sun	28/05/2020	v	I Smith	6.00	6.00	f	54	19.18	n	11	4.22	w	354.0	54	19.18	n	11	4.22	w	354.0	0.1	se	4	s	o	g	sf	n	Inspection infield survey continues
Edda Sun	28/05/2020	v	I Smith	6.00	7.00	f	54	19.18	n	11	4.22	w	354.0	54	19.18	n	11	4.22	w	354.0	0.1	se	4	s	o	g	sf	n	Inspection infield survey continues
Edda Sun	28/05/2020	v	I Smith	7.00	8.00	f	54	19.18	n	11	4.22	w	354.0	54	19.16	n	11	4.29	w	354.0	0.1	e	4	s	o	g	sf	n	Inspection infield survey continues
Edda Sun	28/05/2020	v	I Smith	8.00	9.30	f	54	19.16	n	11	4.29	w	354.0	54	19.19	n	11	4.28	w	354.0	0.2	e	4	s	o	g	sf	n	Inspection infield survey continues
Edda Sun	28/05/2020	v	I Smith	10.19	10.50	n	54	19.18	n	11	4.28	w	354.0	54	20.36	n	11	3.54	w	354.0	0.1	se	4	s	o	g	wf	n	Inspection infield survey continues

Ship/ platform name	Date	Visual watch or PAM?	Observer's / operator's name(s)	Time of start of section of watch (UTC)	Time of end of section of watch (UTC)	Source activity	Start position - degrees latitude	Start position - minutes latitude	Start position - north/ south	Start position - degrees longitude	Start position - minutes longitude	Start position - east/ west	Depth of water at start position (metres)	End position - degrees latitude	End position - minutes latitude	End position - north/ south	End position - degrees longitude	End position - minutes longitude	End position - east/ west	Depth of water at end position (metres)	Speed of vessel (knots)	Wind direction	Wind force (Beaufort)	Sea state	Swell	Visibility (visual watch only)	Sun glare (visual watch only)	Precipitation	Comments
Edda Sun	28/05/2020	v	I Smith	11:50	11:30	f	54	20:36	n	11	3:54	w	354.0	54	20:36	n	11	3:51	w	354.0	0.1	se	4	s	o	g	wf	n	Inspection infield survey continues
Edda Sun	28/05/2020	v	I Smith	11:30	12:30	f	54	20:36	n	11	3:51	w	354.0	54	20:38	n	11	3:52	w	354.0	0.1	se	4	s	o	g	wf	n	Inspection infield survey continues
Edda Sun	28/05/2020	v	I Smith	12:30	13:30	f	54	20:38	n	11	3:52	w	354.0	54	20:36	n	11	3:49	w	354.0	0.0	se	4	s	o	g	wb	n	Inspection infield survey continues
Edda Sun	28/05/2020	v	I Smith	15:00	16:00	f	54	20:34	n	11	3:51	w	354.0	54	20:34	n	11	3:51	w	354.0	0.1	se	4	s	o	g	sb	n	Inspection infield survey continues
Edda Sun	29/05/2020	v	I Smith	5:00	5:15	f	54	20:38	n	11	3:51	w	354.0	54	20:38	n	11	3:51	w	354.0	0.1	se	6	e	o	g	n	n	Inspection infield survey continues
Edda Sun	29/05/2020	v	I Smith	5:15	6:41	n	54	20:38	n	11	3:51	w	354.0	54	20:00	n	11	2:58	w	354.0	0.1	se	6	e	o	g	n	n	FCV up transit to different site, Lyrn left in the water
Edda Sun	29/05/2020	v	I Smith	6:41	6:45	f	54	20:00	n	11	2:58	w	354.0	54	20:00	n	11	2:58	w	354.0	0.1	s	6	e	m	g	n	n	Start Environmental sampling. USBL used
Edda Sun	29/05/2020	v	I Smith	6:45	7:45	n	54	20:00	n	11	2:58	w	354.0	54	20:00	n	11	2:58	w	354.0	0.0	s	6	e	m	g	n	n	FCV recovered as camera breakdown
Edda Sun	29/05/2020	v	I Smith	7:45	8:40	f	54	20:00	n	11	2:58	w	354.0	54	20:03	n	11	2:57	w	354.0	0.1	s	6	e	m	g	n	n	FCV deployed again, resume survey
Edda Sun	29/05/2020	v	I Smith	8:40	9:30	f	54	20:03	n	11	2:57	w	354.0	54	19:38	n	11	2:55	w	354.0	0.0	s	6	e	m	g	wf	n	Environmental survey
Edda Sun	29/05/2020	v	I Smith	9:30	10:05	f	54	19:38	n	11	2:55	w	354.0	54	19:38	n	11	2:50	w	354.0	0.2	s	6	e	m	g	wf	n	Environmental survey
Edda Sun	29/05/2020	v	I Smith	10:05	10:33	n	54	19:38	n	11	2:50	w	354.0	54	19:35	n	11	4:28	w	354.0	0.4	s	6	e	m	g	sb	n	Transit to F3, FCV recovered to deck
Edda Sun	29/05/2020	v	I Smith	12:00	13:00	f	54	19:34	n	11	4:30	w	354.0	54	20:30	n	11	5:03	w	354.0	0.1	s	6	e	m	g	sf	n	Environmental survey
Edda Sun	29/05/2020	v	I Smith	13:00	14:00	f	54	20:30	n	11	5:03	w	354.0	54	20:34	n	11	5:06	w	354.0	0.0	s	5	e	m	g	wf	n	Environmental survey
Edda Sun	29/05/2020	v	I Smith	14:00	16:20	f	54	20:34	n	11	5:06	w	354.0	54	20:15	n	11	3:83	w	354.0	0.2	s	5	e	m	g	sf	n	Environmental survey
Edda Sun	29/05/2020	v	I Smith	16:20	17:00	f	54	20:15	n	11	3:83	w	354.0	54	20:13	n	11	3:84	w	354.0	0.1	sw	4	e	m	g	sf	n	Environmental survey
Edda Sun	30/05/2020	v	I Smith	5:00	6:30	f	54	20:31	n	11	2:87	w	354.0	54	20:74	n	11	2:22	w	354.0	0.1	s	4	s	o	m	n	n	Environmental survey
Edda Sun	30/05/2020	v	I Smith	6:30	7:30	f	54	20:74	n	11	2:22	w	354.0	54	20:72	n	11	2:26	w	354.0	0.0	s	4	s	o	m	n	n	Environmental survey
Edda Sun	30/05/2020	v	I Smith	7:30	8:30	f	54	20:72	n	11	2:26	w	354.0	54	21:24	n	11	1:39	w	354.0	0.0	s	3	s	o	g	wf	n	Environmental survey
Edda Sun	30/05/2020	v	I Smith	8:30	9:30	f	54	21:24	n	11	1:39	w	354.0	54	21:24	n	11	2:00	w	354.0	1.0	se	4	s	o	g	sf	n	Environmental survey
Edda Sun	30/05/2020	v	I Smith	9:30	10:30	f	54	21:24	n	11	2:00	w	354.0	54	21:24	n	11	1:39	w	354.0	0.1	se	4	s	o	g	sf	n	Environmental survey
Edda Sun	30/05/2020	v	I Smith	11:00	11:40	n	54	21:13	n	11	2:20	w	354.0	54	20:35	n	11	3:54	w	354.0	5.6	se	3	s	o	g	n	n	Environmental survey
Edda Sun	30/05/2020	v	I Smith	11:40	12:50	f	54	20:35	n	11	3:54	w	354.0	54	20:35	n	11	3:54	w	354.0	0.1	se	2	s	o	g	sf	n	Lyrn 42 deployed survey to replace manifold canopy.
Edda Sun	30/05/2020	v	I Smith	14:30	15:30	f	54	20:35	n	11	3:54	w	354.0	54	20:33	n	11	3:53	w	354.0	0.1	se	2	s	o	g	wf	n	replace manifold canopy.
Edda Sun	30/05/2020	v	I Smith	15:30	16:40	f	54	20:33	n	11	3:53	w	354.0	54	20:33	n	11	3:53	w	354.0	0.0	s	1	s	m	g	wf	n	Inspection infield survey continues
Edda Sun	30/05/2020	v	I Smith	16:40	5:00	f	54	20:33	n	11	3:53	w	354.0	54	21:43	n	10	59:03	w	354.0	0.0	sw	2	s	o	g	sf	n	Inspection infield survey continues
Edda Sun	31/05/2020	v	I Smith	5:00	6:50	f	54	21:43	n	10	59:03	w	354.0	54	21:43	n	10	59:01	w	354.0	0.0	s	3	s	o	g	sf	n	Inspection infield survey continues
Edda Sun	31/05/2020	v	I Smith	6:50	8:00	f	54	21:43	n	10	59:01	w	354.0	54	21:44	n	10	59:73	w	354.0	0.6	sw	3	s	o	g	sf	n	Inspection infield survey continues
Edda Sun	31/05/2020	v	I Smith	8:00	9:15	f	54	21:44	n	10	59:73	w	354.0	54	21:30	n	10	1:13	w	354.0	0.1	w	1	s	m	g	sf	n	Rock dumping free span infills
Edda Sun	31/05/2020	v	I Smith	9:15	10:15	f	54	21:30	n	10	1:13	w	354.0	54	21:30	n	10	1:26	w	354.0	1.1	n	1	s	m	g	wf	n	Rock dumping free span infills
Edda Sun	31/05/2020	v	I Smith	10:15	11:30	f	54	21:30	n	10	1:26	w	354.0	54	21:44	n	10	59:84	w	354.0	0.1	ne	2	s	o	g	wf	n	Rock dumping free span infills
Edda Sun	31/05/2020	v	I Smith	12:30	13:30	f	54	21:44	n	10	1:27	w	354.0	54	20:59	n	10	1:26	w	354.0	0.2	e	2	s	o	g	wb	n	Rock dumping free span infills
Edda Sun	31/05/2020	v	I Smith	13:30	14:35	f	54	20:59	n	10	1:26	w	354.0	54	21:49	n	10	59:04	w	354.0	0.1	ne	3	s	o	g	wb	n	Rock dumping free span infills
Edda Sun	31/05/2020	v	I Smith	14:35	15:50	f	54	21:49	n	10	59:04	w	354.0	54	21:45	n	10	59:82	w	354.0	0.4	ne	5	s	o	g	sf	n	Rock dumping free span infills
Edda Sun	31/05/2020	v	I Smith	15:50	16:40	f	54	21:45	n	10	59:82	w	354.0	54	21:42	n	11	0:33	w	354.0	1.2	ne	4	s	m	g	sb	n	Rock dumping free span infills
Edda Sun	01/06/2020	v	I Smith	5:00	6:10	f	54	21:01	n	10	51:43	w	354.0	54	21:01	n	10	51:43	w	354.0	0.0	ne	3	s	o	g	sf	n	Rock dumping free span infills
Edda Sun	01/06/2020	v	I Smith	6:10	6:45	n	54	21:01	n	10	51:43	w	354.0	54	21:12	n	10	56:17	w	354.0	0.6	se	2	s	o	g	sf	n	Rock dumping free span infills
Edda Sun	01/06/2020	v	I Smith	6:45	7:10	n	54	21:12	n	10	56:17	w	354.0	54	21:28	n	11	1:33	w	354.0	8.0	sw	3	s	m	g	sb	n	Rock dumping free span infills

Ship/ platform name	Date	Visual watch or PAM?	Observer's / operator's name(s)	Time of start of section of watch (UTC)	Time of end of section of watch (UTC)	Source activity	Start position - degrees latitude	Start position - minutes latitude	Start position - north/ south	Start position - degrees longitude	Start position - minutes longitude	Start position - east/ west	Depth of water at start position (metres)	End position - degrees latitude	End position - minutes latitude	End position - north/ south	End position - degrees longitude	End position - minutes longitude	End position - east/ west	Depth of water at end position (metres)	Speed of vessel (knots)	Wind direction	Wind force (Beaufort)	Sea state	Swell	Visibility (visual watch only)	Sun glare (visual watch only)	Precipita tion	Comments
Edda Sun	01/06/2020	v	I Smith	7:10	7:23	n	54	2128	n	11	133	w	354.0	54	2128	n	11	133	w	354.0	0.1	se	3	s	m	g	sf	n	Rock dumping free span infills
Edda Sun	01/06/2020	v	I Smith	7:23	8:30	f	54	2128	n	11	133	w	354.0	54	2128	n	11	133	w	354.0	0.0	se	3	s	o	g	sf	n	Rock dumping free span infills
Edda Sun	01/06/2020	v	I Smith	8:30	10:40	f	54	2117	n	10	59.08	w	354.0	54	2150	n	11	57.59	w	354.0	14	se	3	s	o	g	sf	n	Rock dumping free span infills
Edda Sun	01/06/2020	v	I Smith	10:40	12:05	f	54	2150	n	11	57.59	w	354.0	54	2122	n	10	54.79	w	354.0	0.1	se	2	s	o	g	wf	n	Rock dumping free span infills
Edda Sun	01/06/2020	v	I Smith	12:05	12:35	f	54	2122	n	10	54.79	w	354.0	54	2123	n	10	54.75	w	354.0	0.4	sw	2	s	o	g	wf	n	Rock dumping free span infills
Edda Sun	01/06/2020	v	I Smith	12:35	12:59	n	54	2123	n	10	54.75	w	354.0	54	2103	n	10	51.52	w	287.0	0.1	sw	4	s	o	g	wf	n	Rock dumping free span infills
Edda Sun	01/06/2020	v	I Smith	12:59	13:41	f	54	2103	n	10	51.52	w	287.0	54	2102	n	10	50.31	w	265.0	0.1	sw	3	s	o	g	wb	n	Rock dumping free span infills
Edda Sun	01/06/2020	v	I Smith	13:41	14:00	n	54	2102	n	10	50.31	w	265.0	54	20.86	n	10	49.12	w	265.0	10.4	s	3	s	o	g	wb	n	Rock dumping free span infills
Edda Sun	01/06/2020	v	I Smith	14:00	15:28	n	54	20.86	n	10	49.12	w	265.0	54	19.17	n	10	27.38	w	126.0	10.4	s	3	s	o	g	wb	n	Rock dumping free span infills
Edda Sun	01/06/2020	v	I Smith	15:28	16:25	n	54	19.17	n	10	27.38	w	126.0	54	17.69	n	10	11.03	w	64.0	11.3	se	3	s	o	g	zb	n	Transit to Env locations
Edda Sun	01/06/2020	v	I Smith	16:25	16:53	n	54	17.69	n	10	11.03	w	64.0	54	17.69	n	10	11.03	w	94.0	0.1	w	3	s	o	g	wf	n	Environmental survey
Edda Sun	01/06/2020	v	I Smith	16:53	17:00	f	54	17.69	n	10	11.03	w	94.0	54	17.69	n	10	11.03	w	94.0	0.1	w	3	s	o	g	sf	n	Environmental survey
Edda Sun	02/06/2020	v	I Smith	17:17	20:10	n	54	17.69	n	10	11.03	w	91.0	54	19.97	n	10	1.63	w	77.0	1.2	w	3	s	o	g	sf	n	Transit to Env locations
Edda Sun	02/06/2020	v	I Smith	5:00	5:33	f	54	19.95	n	9	59.56	w	73.0	54	19.95	n	9	59.56	w	73.0	0.1	w	3	s	o	p	n	n	Environmental survey
Edda Sun	02/06/2020	v	I Smith	5:33	5:50	n	54	19.95	n	9	59.56	w	73.0	54	19.95	n	9	59.56	w	73.0	0.1	w	4	s	o	p	n	n	Transit to Env locations
Edda Sun	02/06/2020	v	I Smith	5:50	6:39	f	54	19.95	n	9	59.56	w	73.0	54	19.95	n	9	59.56	w	73.0	0.1	sw	4	s	o	p	n	n	Environmental survey
Edda Sun	02/06/2020	v	I Smith	6:39	7:00	n	54	19.95	n	9	59.56	w	73.0	54	21.38	n	9	59.20	w	82.0	0.1	w	4	s	o	g	n	n	Transit to Env locations
Edda Sun	02/06/2020	v	I Smith	7:00	8:00	f	54	21.38	n	9	59.20	w	82.0	54	21.38	n	9	59.20	w	83.5	0.0	w	4	s	o	g	n	n	Environmental survey
Edda Sun	02/06/2020	v	I Smith	8:00	8:06	f	54	21.38	n	9	59.20	w	83.5	54	21.38	n	9	59.20	w	83.5	0.0	w	4	s	o	g	n	n	Environmental survey
Edda Sun	02/06/2020	v	I Smith	8:06	8:31	n	54	21.38	n	9	59.20	w	83.5	54	19.94	n	9	57.14	w	63.0	0.0	w	4	s	o	g	n	n	Transit to Env locations
Edda Sun	02/06/2020	v	I Smith	8:31	10:06	f	54	19.94	n	9	57.14	w	63.0	54	19.85	n	9	57.15	w	60.7	0.0	w	4	s	o	g	n	n	Environmental survey
Edda Sun	02/06/2020	v	I Smith	10:06	10:45	f	54	19.85	n	9	57.15	w	60.7	54	20.21	n	9	52.51	w	50.0	1.2	w	3	s	o	g	n	n	Environmental survey
Edda Sun	02/06/2020	v	I Smith	10:45	11:23	f	54	20.21	n	9	52.51	w	50.0	54	17.93	n	9	54.73	w	42.0	1.1	w	4	s	o	g	n	n	Environmental survey
Edda Sun	02/06/2020	v	I Smith	11:23	12:18	n	54	17.93	n	9	54.73	w	42.0	54	16.97	n	9	52.27	w	27.0	7.7	sw	4	s	o	g	n	n	Transit to Umbilical survey
Edda Sun	02/06/2020	v	I Smith	12:18	13:20	f	54	16.97	n	9	52.27	w	27.0	54	16.98	n	9	52.47	w	28.0	0.0	w	4	s	o	g	n	n	Umbilical survey
Edda Sun	02/06/2020	v	I Smith	13:20	14:17	f	54	16.98	n	9	52.47	w	28.0	54	16.99	n	9	52.82	w	28.0	0.5	nw	4	s	o	g	n	n	Umbilical survey

Operations Form – Edda Sun

Ship/ platform name	Date	Reason for firing	Time soft start/ ramp- up began (UTC)	Time of full power (UTC)	Time of start of line (UTC)	Time of end of line (UTC)	Time of reduced output (UTC) (if relevant)	Time airguns/ source stopped (UTC)	Time pre- shooting search began (UTC)	Time search ended (UTC)	Depth range	Was it day or night in the period prior to firing?	Was any mitigating action required?	Comments
Edda Sun	07/05/2020	I	16:50	16:50					15:50	16:50	d	d	n	ROV deployed, USBL activated. Not possible to ramp up USBL system. Essential for positioning
Edda Sun	08/05/2020	I									d	d	n	continuous inspection/maintenance work
Edda Sun	09/05/2020	I									d	d	n	continuous inspection/maintenance work
Edda Sun	10/05/2020	I						4:40			d	d	n	Operation stopped for weather at 04:40.
Edda Sun	11/05/2020	I	4:35	4:35				13:25	3:50	3:35	d	w	n	ROV deployed, USBL activated. Not possible to ramp up USBL system. Essential for positioning., 13:25 Lynx 42 back to deck and shut down during ship to ship transfer of crate. Suspend inspection.
Edda Sun	11/05/2020	I	14:20	14:20					13:25	14:20	d	d	n	Complete transfer, relocate to P1 well and recommence inspection survey. USBL full power
Edda Sun	12/05/2020	I									d	d	n	Continue inspection
Edda Sun	13/05/2020	I	14:05	14:05				13:35	13:35	14:05	d	d	n	Relocated to P5 well
Edda Sun	14/05/2020	I		5:28				5:00	5:00	5:30	d	w	n	Relocated from well P2 to start of Pipeline
Edda Sun	15/05/2020	I		18:45				18:16	18:20	18:50	d	d	n	Operations suspended for Vessel to Vessel transfer and resume continue 20" Pipeline inspection
Edda Sun	16/05/2020	I		8:25				7:51	7:51	8:25	d	d	n	Vessel move 3.1km to re-run part of survey
Edda Sun	16/05/2020	I		10:15				10:00	10:00	10:25	d	d	n	Vessel move to return to carry on survey
Edda Sun	17/05/2020	I									d	d	n	
Edda Sun	18/05/2020	I		9:43				9:05	9:05	9:43	d	d	n	FCV recovered for routine maintenance.
Edda Sun	19/05/2020	I		14:20				13:52	13:52	14:20	d	d	n	FCV recovered for and Lynx 42 deployed.
Edda Sun	20/05/2020	I		5:47				5:00	5:00	5:47	d	d	n	FCV recovered for and Lynx 31 deployed.

Ship/ platform name	Date	Reason for firing	Time soft start/ ramp- up began (UTC)	Time of full power (UTC)	Time of start of line (UTC)	Time of end of line (UTC)	Time of reduced output (UTC) (if relevant)	Time airguns/ source stopped (UTC)	Time pre- shooting search began (UTC)	Time search ended (UTC)	Depth range	Was it day or night in the period prior to firing?	Was any mitigating action required?	Comments
Edda Sun	20/05/2020	I						12:03	12:30	13:00	d	d	n	FCV recovered to reconfigure. Then WOW
Edda Sun	20/05/2020	I		18:35					18:00	18:35	d	d	n	Recommended survey
Edda Sun	21/05/2020	I		8:12				7:03	6:53	8:12	d	d	n	Vessel move 1km
Edda Sun	21/05/2020	I		13:32				12:39	12:39	13:32	d	d	n	Reconfigure FCV and Vessel move 1.6km
Edda Sun	21/05/2020	I						21:00			d	d	n	Cease operations, recover equip, transit to shelter, WOW
Edda Sun	22/05/2020	I									s	d	n	WOW Mullaghmoie Bay
Edda Sun	23/05/2020	I									s	d	n	WOW Mullaghmoie Bay
Edda Sun	24/05/2020	I									s	d	n	WOW Alongside Killybegs
Edda Sun	25/05/2020	I									s	d	n	WOW Alongside Killybegs
Edda Sun	26/05/2020	I									s	d	n	WOW Alongside Killybegs
Edda Sun	27/05/2020	I		4:35					4:00	4:35	d	w	n	Transit to Corrib Site and resume survey operations
Edda Sun	27/05/2020	I		15:48				15:16	15:16	15:48	d	d	n	FCV recovered to deck, vessel move to new location.
Edda Sun	27/05/2020	I		16:12				15:58	15:58	16:12	d	d	n	Break of less than 30mins
Edda Sun	28/05/2020	I		10:50				10:19	10:19	10:50	d	d	n	Vessel move to the Manifold
Edda Sun	29/05/2020	I		5:41				5:15	5:15	5:41	d	w	n	Transit to manifold
Edda Sun	29/05/2020	I		7:45				6:45	6:45	7:45	d	d	n	Repair faulty camera on FCV
Edda Sun	29/05/2020	I		10:33				10:05	10:05	10:33	d	d	n	Transit to another location
Edda Sun	30/05/2020	I		11:40				11:00	11:00	11:40	d	d	n	Relocate vessel to Manifold
Edda Sun	31/05/2020	I									d	d	n	
Edda Sun	01/06/2020	I		7:23				6:10	6:10	7:23	d	d	n	Relocate vessel to next sapling station

Ship/ platform name	Date	Reason for firing	Time soft start/ ramp- up began (UTC)	Time of full power (UTC)	Time of start of line (UTC)	Time of end of line (UTC)	Time of reduced output (UTC) (if relevant)	Time airguns/ source stopped (UTC)	Time pre- shooting search began (UTC)	Time search ended (UTC)	Depth range	Was it day or night in the period prior to firing?	Was any mitigating action required?	Comments
Edda Sun	01/06/2020	l		12:59				12:35	12:35	12:59	d	d	n	Relocate vessel to next sapling station
Edda Sun	01/06/2020	l		16:58				13:41	13:41	16:58	d	d	n	Relocate vessel to next sapling station
Edda Sun	01/06/2020	l		20:10				17:17	17:17	20:10	d	d	n	Relocate vessel to next sapling station
Edda Sun	02/06/2020	l		8:31				8:06	8:06	8:31	d	d	n	
Edda Sun	02/06/2020	l		12:18				11:23	11:23	12:18	d	d	n	End of Survey