# Notice to Mariners - update

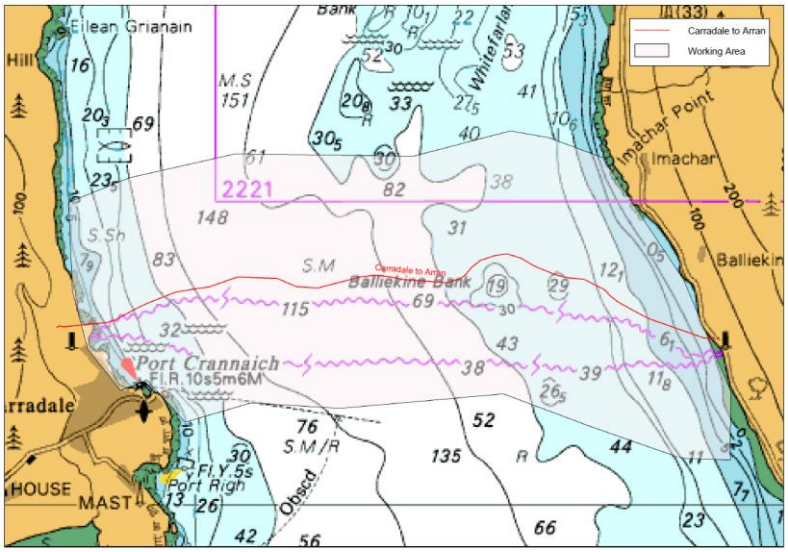
**Scottish Hydro Electric Power Distribution (SHEPD) - Carradale - Arran & Mull - Coll**
**Date of Issue: 4th December 2020**

## Overview

Please be advised that Fugro (on behalf of SHEPD) will be undertaking a geophysical and geotechnical survey of the proposed Carradale to Arran and the Mull to Coll submarine electricity cable routes. The purpose of this update is to outline the working area for the vessels at each location. The survey will utilise three different vessels to complete survey operations:

- Fugro Frontier (offshore vessel)
- MV Valkyrie (nearshore vessel)
- Fugro Seeker (nearshore vessel)

An overview of the cable routes are shown below in Figure 1: Mull - Coll




and Figure 2.

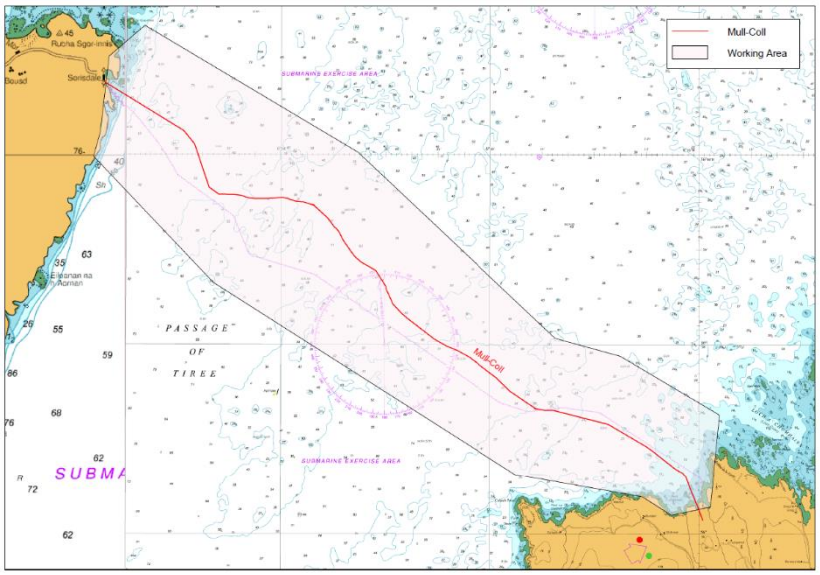



*Figure 1: Mull - Coll*

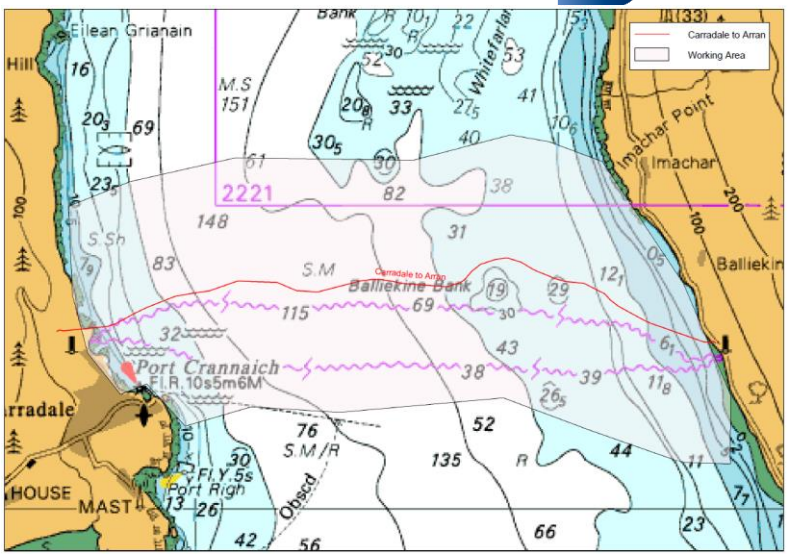



*Figure 2: Carradale - Arran Route Overview*

Mull-Coll Boundary Area of Operations

| Point | Easting | Northing | Longitude | Latitude | Longitude | Latitude |
|---|---|---|---|---|---|---|
| 1 | 668111.61 | 6278555.13 | 56°37'15.56"N | 6°15'36.04"W | 56° 37.25940'N | 006° 15.60060'W |
| 2 | 668005.46 | 6276743.17 | 56°36'17.16"N | 6°15'46.50"W | 56° 36.28620'N | 006° 15.77520'W |
| 3 | 667250.21 | 6276550.26 | 56°36'11.90"N | 6°16'31.19"W | 56° 36.19860'N | 006° 16.51980'W |
| 4 | 666666.59 | 6276892.37 | 56°36'23.70"N | 6°17'04.58"W | 56° 36.39480'N | 006° 17.07660'W |
| 5 | 664166.30 | 6277234.14 | 56°36'37.92"N | 6°19'30.26"W | 56° 36.63180'N | 006° 19.50420'W |
| 6 | 658124.07 | 6280763.38 | 56°38'39.42"N | 6°25'16.50"W | 56° 38.65680'N | 006° 25.27500'W |
| 7 | 655693.65 | 6283139.82 | 56°39'59.14"N | 6°27'33.86"W | 56° 39.98580'N | 006° 27.56460'W |
| 8 | 655807.27 | 6283616.46 | 56°40'14.40"N | 6°27'26.16"W | 56° 40.24020'N | 006° 27.43620'W |
| 9 | 655924.91 | 6285100.85 | 56°41'02.22"N | 6°27'16.02"W | 56° 41.03700'N | 006° 27.26700'W |
| 10 | 656600.51 | 6285728.01 | 56°41'21.67"N | 6°26'34.98"W | 56° 41.36100'N | 006° 26.58300'W |
| 11 | 660847.60 | 6283413.07 | 56°40'01.69"N | 6°22'30.84"W | 56° 40.02840'N | 006° 22.51380'W |
| 12 | 664842.45 | 6279928.89 | 56°38'04.12"N | 6°18'44.46"W | 56° 38.06880'N | 006° 18.74100'W |
| 13 | 666131.61 | 6279630.07 | 56°37'52.83"N | 6°17'29.58"W | 56° 37.88040'N | 006° 17.49300'W |
| 14 | 668047.28 | 6278594.20 | 56°37'16.90"N | 6°15'39.72"W | 56° 37.28160'N | 006° 15.66180'W |
| 15 | 668111.61 | 6278555.13 | 56°37'15.56"N | 6°15'36.04"W | 56° 37.25940'N | 006° 15.60060'W |

*Table 1: General Operational Area*

Carradale-Arran Boundary Area of Operations

| Point | Easting | Northing | Longitude | Latitude | Longitude | Latitude |
|---|---|---|---|---|---|---|
| 1 | 344177.41 | 6164439.92 | 55°36'03.30"N | 5°28'23.88"W | 55° 36.05520'N | 005° 28.39800'W |
| 2 | 344170.24 | 6165255.04 | 55°36'29.63"N | 5°28'25.95"W | 55° 36.49380'N | 005° 28.43280'W |
| 3 | 344733.54 | 6165460.39 | 55°36'36.92"N | 5°27'54.20"W | 55° 36.61560'N | 005° 27.90360'W |
| 4 | 345702.70 | 6165645.07 | 55°36'44.00"N | 5°26'59.24"W | 55° 36.73320'N | 005° 26.98740'W |
| 5 | 347325.98 | 6165565.44 | 55°36'43.27"N | 5°25'26.39"W | 55° 36.72120'N | 005° 25.44000'W |
| 6 | 348227.05 | 6165765.89 | 55°36'50.76"N | 5°24'35.34"W | 55° 36.84600'N | 005° 24.58920'W |
| 7 | 348578.16 | 6165689.66 | 55°36'48.69"N | 5°24'15.14"W | 55° 36.81180'N | 005° 24.25260'W |
| 8 | 349053.10 | 6165494.61 | 55°36'42.92"N | 5°23'47.63"W | 55° 36.71520'N | 005° 23.79360'W |
| 9 | 349754.66 | 6164356.09 | 55°36'06.90"N | 5°23'05.34"W | 55° 36.11520'N | 005° 23.08920'W |
| 10 | 350150.14 | 6163323.70 | 55°35'33.97"N | 5°22'40.74"W | 55° 35.56620'N | 005° 22.67880'W |

| | | | | | | |
|---|---|---|---|---|---|---|
| 11 | 350123.82 | 6162689.28 | 55°35'13.44"N | 5°22'41.01"W | 55° 35.22420'N | 005° 22.68360'W |
| 12 | 349702.50 | 6162717.16 | 55°35'13.87"N | 5°23'05.10"W | 55° 35.23140'N | 005° 23.08500'W |
| 13 | 348844.91 | 6163050.92 | 55°35'23.70"N | 5°23'54.70"W | 55° 35.39520'N | 005° 23.91180'W |
| 14 | 348077.65 | 6163369.54 | 55°35'33.14"N | 5°24'39.12"W | 55° 35.55240'N | 005° 24.65220'W |
| 15 | 346572.04 | 6163289.05 | 55°35'28.84"N | 5°26'04.88"W | 55° 35.48040'N | 005° 26.08140'W |
| 16 | 345769.46 | 6163368.53 | 55°35'30.50"N | 5°26'50.85"W | 55° 35.50860'N | 005° 26.84760'W |
| 17 | 345161.96 | 6163211.95 | 55°35'24.74"N | 5°27'25.20"W | 55° 35.41260'N | 005° 27.42000'W |
| 18 | 344826.00 | 6163609.71 | 55°35'37.22"N | 5°27'45.18"W | 55° 35.62020'N | 005° 27.75300'W |
| 19 | 344583.15 | 6163523.19 | 55°35'34.14"N | 5°27'58.86"W | 55° 35.56920'N | 005° 27.98100'W |
| 20 | 344297.30 | 6163910.24 | 55°35'46.32"N | 5°28'15.96"W | 55° 35.77200'N | 005° 28.26600'W |
| 21 | 344194.31 | 6164365.25 | 55°36'00.91"N | 5°28'22.76"W | 55° 36.01500'N | 005° 28.37940'W |
| 22 | 344177.41 | 6164439.92 | 55°36'03.30"N | 5°28'23.88"W | 55° 36.05520'N | 005° 28.39800'W |

*Table 2: General Operational Area*

## Schedule of Operations

The planned geophysical and geotechnical survey operations are shown below in Table 3 and Table 4.

*Table 3: Schedule of Operations (Mull - Coll)*

| Dates | Operation | Vessel(s) |
|---|---|---|
| 05/01/21 - 03/02/21 | Nearshore survey | Fugro Seeker |
| 11/01/21 - 28/01/21 | Nearshore Survey | Fugro Valkyrie |
| 17/01/21 - 02/03/21 | Offshore survey | Fugro Frontier |

*Table 4: Schedule of Operations (Carradale - Arran)*

| Dates | Operation | Vessel(s) |
|---|---|---|
| 19/12/20 - 13/01/21 | Nearshore survey | Fugro Seeker |
| 09/01/21 - 15/01/21 | Offshore survey | Fugro Frontier |

## Vessel and Equipment Details

The vessels that will carry out the survey activities are shown below.




*Figure 3: Fugro Frontier*




*Figure 4: MV Valkyrie*




*Figure 5: Fugro Seeker*

**Survey Description**

The survey will involve the full coverage of dedicated survey lines with a full suite of geophysical survey systems including Multibeam Echo Sounder, Side Scan Sonar, Sub-bottom profiler and magnetometers mounted on the vessel or towed from the stern of the vessel.

Other vessels should maintain an appropriate and safe distance of 500m when passing the survey vessels whilst undertaking survey operations and should pass at the lowest speed to avoid vessel wash effects. The Fugro Frontier will be working 24 hour operations and will display appropriate day shapes and lights during reduced visibility and night operations. The MV Valkyrie and Fugro Seeker will be working during the hours of daylight (approx. 8 hours).

**Fugro Frontier**

| Primary equipment | Towed/ Hull mounted/ Sampling | Approx. tow length (m) |
|---|---|---|
| Multibeam Echo Sounder | Hull mounted | N/A |
| Side Scan Sonar | Towed | 50-80m from stern |
| Sub-bottom Profiler | Hull mounted | N/A |
| Magnetometer single | Towed | Attached to SSS, 70 - 100m from stern |
| 2 x scanfish plus 8 x mag | Towed | 110 - 180m from stern |
| CPT | Sampling | N/A |
| Vibrocore | Sampling | N/A |

**MV Valkyrie and Fugro Seeker**

| Primary equipment | Towed/ Hull mounted/ Sampling | Approx. tow length (m) |
|---|---|---|
| Multibeam Echo Sounder | Hull mounted | N/A |
| Side Scan Sonar | Towed | 10-20m from stern |
| Sub-bottom Profiler | Hull mounted | N/A |
| Magnetometers (x2) | Towed | Attached to SSS, 70 - 100m from stern |
| 2 x scanfish plus 8 x mag | Towed | 40m from stern |
| Grab sample | Sampling | N/A |

## Contact Details

The vessel contact details are given below:

| **Fugro Frontier** | |
|---|---|
| Call sign | C6BH4 |
| Bridge telephone | +31107130936 |
| Bridge email | bridge@fro.fugro.com |
| Party Chief telephone | +31107130938 |
| Email | pc@fro.fugro.com |
| Onshore Site Manager | Kate Jackson<br>k.jackson@fugro.com |

| **MV Valkyrie** | |
|---|---|
| Call sign | 2BWA9 |
| Bridge | Nick Praed +44 7980 971 245<br>Giles Simmons +44 7557 607 751 |
| Offshore Manager / Party Chief | Khash Long +44 7980 987 725<br>Craig Dyer +44 7411 168 716 |
| Email | Master.valkyrie@fugro.com |
| Onshore Site Manager | Andrew Eastmond<br>a.eastmond@fugro.com |

| **Fugro Seeker** | |
|---|---|
| Call sign | 2HCS2 |
| Bridge | Will Rand +44 7585 992459<br>Mark Shelley +44 7766 000208 |
| Offshore Manager / Party Chief | Alli Hartley +44 7766 448 697<br>Dan Goodall +44 7961 046376 |
| Email | master.fugroseeker@fugro.com |
| Onshore Site Manager | Daniel Ferguson<br>d.ferguson@fugro.com |

## Fishing Liaison Officers

Fishing liaison for the cable surveys will be co-ordinated by Brown and May Marine (BMM). For any commercial fishery queries please contact the Company Fishing Liaison Officers (CFLOs):

Alex Winrow-Giffin 07760 160039, alex@brownmay.com, or
Meg Kalafat 07702 710176, meg.kalafat@brownmay.com

Also in place to liaise with the vessels and fishing operations in the area will be the local Fishing Industries Representative (FIR):

George White 07761 873965, georgewhite0@gmail.com