

NOTICE TO MARINERS

Issue Date: 10th May, 2017

Western Link Project

Deep water cable Installation Campaign 4b & 5a

This notice provides an update on the planned works for **Campaign 4b** and **Campaign 5a** using the vessels Giulio Verne & Normand Pacific. These works will be carried out in the Firth of Clyde, North Channel and Irish Sea as described below.

Firth of Clyde & North Channel: Campaign 4b & 4a

The **Campaign 4b** Pole 2 Western Link HVDC cable was surface laid on the seabed by using the Cable Laying vessel **Giulio Verne** (IMO 8302014; Call Sign IBPU) from Ardneil shore end at KP (Kilometer Post) 5 to KP 58 following on from the previous section laid in shallow water. The Giulio Verne has then completed the jointing operation of Campaign 4b to Campaign 6 and will be jointing Campaign 4a to Campaign 3 in the next two weeks. These jointing operations are located close to Ailsa Craig in the Firth of Clyde.

The **Campaign 4b** cable has been post protected by Post Lay Installation Burial (PLIB) works using **Normand Pacific** (IMO 9491977; Call Sign LAXI7). Exposed sections for **Campaign 4a & 4b** are presented in a dedicated Notice to Mariners issued today.

Irish Sea: Campaign 5a

Following Campaign 4 works the **Giulio Verne** proceeded to KP233 and completed the installation of **Campaign 5a** Pole 1 cable by surface laying it on the sea bed from KP233 to KP176 after having completed the jointing operation at KP233 from Campaign 2 to Campaign 5a, to the south of the Isle of Man.

The **Giulio Verne** is currently jointing the end of the Campaign 5a cable with the Campaign 3 cable at KP176 while the **Normand Pacific** is currently carrying out post lay installation burial works on the surface laid cable of **Campaign 5a**. See **table 2** for details of Campaign 5a.

Vessels are requested to pass at a safe speed and distance and fishing vessels are advised to remain a safe distance (approximately 1.5 nautical miles) from the areas identified. Guard Vessels have been deployed at each location to aid in monitoring the exposed areas and will advise of safe distances locally.

The vessels will monitor VHF Channel 16 at all times.



Figure 1 Cable Laying vessel - Giulio Verne



Figure 2 PLIB Support vessel - Normand Pacific

Post Lay Installation Burial (PLIB)

The post protection methods for these sections of the route is post lay installation burial (PLIB) using a jetting tool. The PLIB operations with the use of a subsea burial tool are indicated in Figure 3. The vessel will have restricted maneuverability as it completes its work scope.

Guard vessels which have previously been stationed to monitor the cable and provide advice to mariners following the cable laying will remain in position until the all of the post protection has been completed. In areas of service crossings the guard vessels will remain on location until the completion of matting or rock placement works.

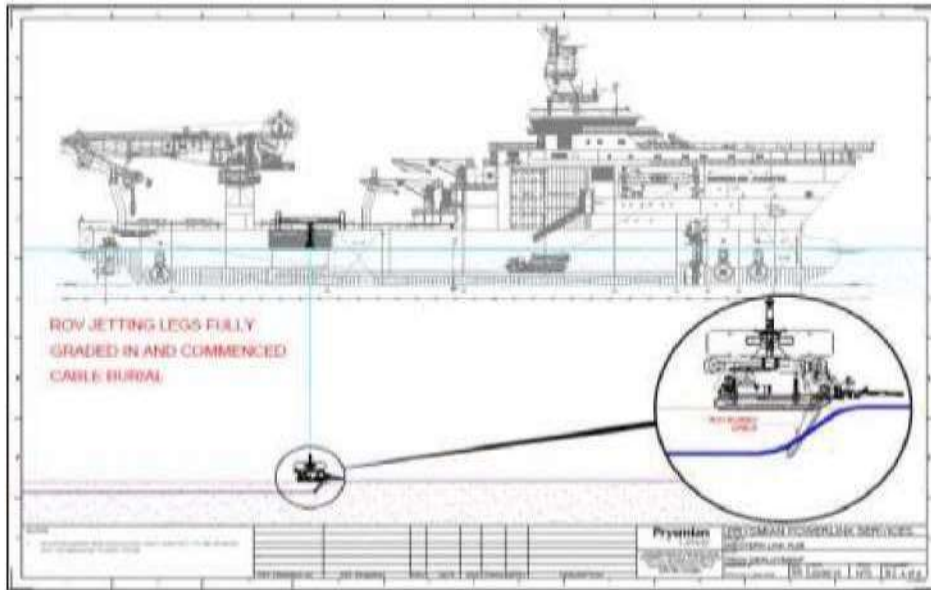


Figure 3 – PLIB general arrangement

PLIB Works Overview

The locations of the exposed sections of Campaign 5a that will be protected by PLIB are shown in Table 2 of this Notice.

Table 1 – Campaign 4b installation section route

| ID (Position Name / Event) | WGS84 - UTM 30 N | | WGS84 | | Water Depth referred to LAT (m) | Geodetic | | | | Turning Angle (deg) |
|----------------------------------|------------------|----------|--------------|---------------|--|-----------------------------|----------------------------|-------------------------------|------------------|------------------------|
| | Easting | Northing | Latitude | Longitude | | Partial Distance (km) | KP (km) from Ardneil | RKP (km) from Wirral | Bearing (deg) | |
| JB_ARDNEIL | 381725 | 6173953 | 55° 41.815'N | 004° | - | - | 0.000 | 387.161 | - | - |
| HDD_SEA_END | 381465 | 6173437 | 55° 41.533'N | 004° | 1 | 0.579 | 0.579 | 386.582 | 205.2 | 7.5 |
| AC_1 | 381280 | 6172908 | 55° 41.246'N | 004° | 10 | 0.560 | 1.139 | 386.022 | 197.7 | 15.0 |
| 10m | 381277 | 6172867 | 55° 41.224'N | 004° 53.309'W | 10 | 0.041 | 1.179 | 385.981 | 182.7 | 0.0 |
| AC_2 | 381216 | 6172048 | 55° 40.781'N | 004° | 16 | 0.821 | 2.001 | 385.160 | 182.7 | 2.1 |
| AC_3 | 381192 | 6171389 | 55° 40.426'N | 004° | 20 | 0.660 | 2.661 | 384.499 | 180.6 | 30.0 |
| AC_4 | 381015 | 6171108 | 55° 40.272'N | 004° | 22 | 0.332 | 2.993 | 384.168 | 210.6 | 19.1 |
| AC_5 | 380853 | 6170978 | 55° 40.199'N | 004° | 25 | 0.208 | 3.201 | 383.960 | 229.6 | 12.3 |
| AC_6 | 380611 | 6170857 | 55° 40.130'N | 004° | 46 | 0.271 | 3.472 | 383.689 | 242.0 | 30.3 |
| AC_7 | 380408 | 6170547 | 55° 39.961'N | 004° | 53 | 0.370 | 3.842 | 383.319 | 211.7 | 19.7 |
| AC_8 | 380174 | 6169573 | 55° 39.432'N | 004° | 60 | 1.002 | 4.844 | 382.316 | 192.0 | 0.9 |
| AC_9 | 379460 | 6166398 | 55° 37.711'N | 004° | 79 | 3.255 | 8.099 | 379.062 | 191.1 | 10.0 |
| AC_10 | 379389 | 6164909 | 55° 36.907'N | 004° | 79 | 1.492 | 9.591 | 377.570 | 181.1 | 2.8 |
| AC_11 | 379339 | 6164389 | 55° 36.626'N | 004° | 81 | 0.522 | 10.113 | 377.048 | 183.9 | 3.8 |
| AC_12 | 379172 | 6163361 | 55° 36.070'N | 004° | 87 | 1.042 | 11.155 | 376.006 | 187.7 | 2.5 |

| | | | | | | | | | | |
|-----------------------|--------|---------|--------------|---------------|----|-------|--------|---------|-------|------|
| AC_13 | 378876 | 6160871 | 55° 34.724'N | 004° 55.282'W | 92 | 2.508 | 13.662 | 373.498 | 185.2 | 8.0 |
| AC_14 | 378904 | 6159599 | 55° 34.039'N | 004° 55.222'W | 91 | 1.273 | 14.935 | 372.226 | 177.2 | 4.1 |
| AC_15 | 379012 | 6158456 | 55° 33.425'N | 004° 55.090'W | 84 | 1.148 | 16.083 | 371.077 | 173.0 | 5.8 |
| AC_16 | 379009 | 6158019 | 55° 33.189'N | 004° 55.081'W | 82 | 0.437 | 16.520 | 370.640 | 178.8 | 2.4 |
| AC_17 | 378997 | 6157779 | 55° 33.060'N | 004° 55.086'W | 82 | 0.240 | 16.761 | 370.400 | 181.2 | 13.3 |
| AC_18 | 379089 | 6157284 | 55° 32.794'N | 004° 54.986'W | 75 | 0.504 | 17.265 | 369.896 | 167.9 | 11.8 |
| AC_19 | 379078 | 6156780 | 55° 32.523'N | 004° 54.983'W | 76 | 0.504 | 17.769 | 369.392 | 179.7 | 0.8 |
| AC_20 | 379069 | 6155475 | 55° 31.819'N | 004° 54.958'W | 76 | 1.305 | 19.074 | 368.086 | 178.8 | 5.8 |
| AC_21 | 378771 | 6152732 | 55° 30.337'N | 004° 55.168'W | 75 | 2.759 | 21.833 | 365.327 | 184.6 | 20.2 |
| AC_22 | 378850 | 6152417 | 55° 30.168'N | 004° 55.085'W | 76 | 0.325 | 22.159 | 365.002 | 164.4 | 19.2 |
| AC_23 | 379010 | 6152173 | 55° 30.039'N | 004° 54.927'W | 75 | 0.292 | 22.451 | 364.710 | 145.2 | 6.2 |
| Sirius_North_(2)_Cabl | 379124 | 6152034 | 55° 29.966'N | 004° 54.815'W | 75 | 0.180 | 22.630 | 364.530 | 139.0 | 0.0 |
| Sirius_North_(1)_Cabl | 379129 | 6152028 | 55° 29.963'N | 004° 54.810'W | 75 | 0.007 | 22.638 | 364.523 | 139.0 | 0.0 |
| AC_24 | 379272 | 6151855 | 55° 29.872'N | 004° 54.670'W | 76 | 0.225 | 22.862 | 364.298 | 139.0 | 3.1 |
| Lanis_3_Cable_IS | 380434 | 6150276 | 55° 29.038'N | 004° 53.526'W | 81 | 1.961 | 24.823 | 362.337 | 142.0 | 0.0 |
| AC_25 | 380962 | 6149561 | 55° 28.660'N | 004° 53.007'W | 79 | 0.889 | 25.712 | 361.448 | 142.1 | 14.8 |
| AC_26 | 381055 | 6149324 | 55° 28.534'N | 004° 52.912'W | 76 | 0.255 | 25.967 | 361.193 | 156.9 | 19.6 |
| AC_27 | 381100 | 6148046 | 55° 27.846'N | 004° 52.837'W | 76 | 1.278 | 27.246 | 359.915 | 176.5 | 1.5 |
| AC_28 | 381116 | 6145941 | 55° 26.712'N | 004° 52.768'W | 74 | 2.105 | 29.351 | 357.809 | 178.0 | 16.8 |
| AC_29 | 380993 | 6145520 | 55° 26.483'N | 004° 52.874'W | 72 | 0.439 | 29.790 | 357.370 | 194.8 | 6.7 |
| AC_30 | 380800 | 6145068 | 55° 26.237'N | 004° 53.045'W | 71 | 0.492 | 30.282 | 356.878 | 201.5 | 6.4 |
| AC_31 | 380248 | 6144089 | 55° 25.702'N | 004° 53.542'W | 70 | 1.123 | 31.406 | 355.755 | 207.9 | 7.1 |

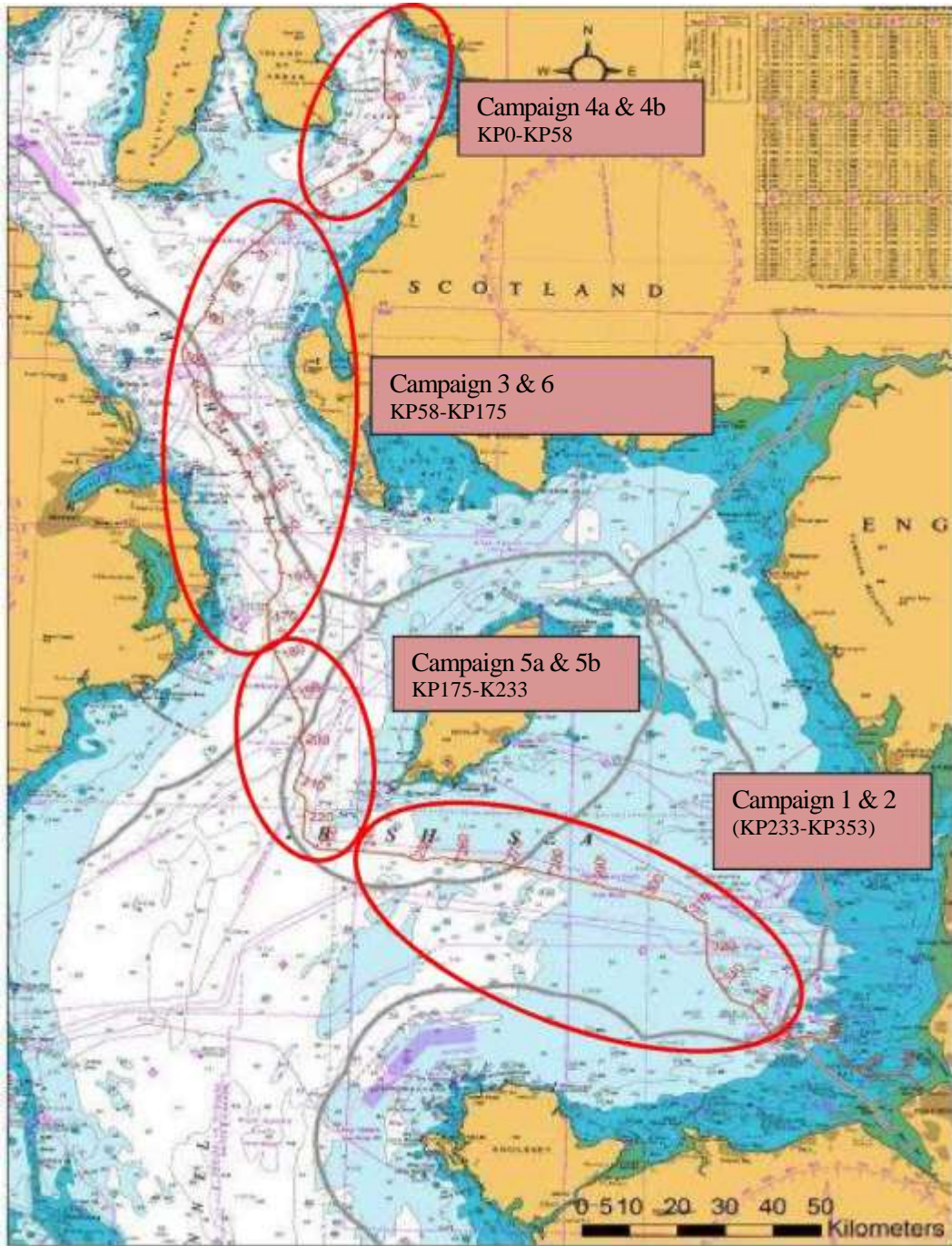
| | | | | | | | | | | |
|-------|--------|---------|--------------|---------------|----|--------|--------|---------|-------|------|
| AC_32 | 379758 | 6142893 | 55° 25.050'N | 004° 53.976'W | 66 | 1.294 | 32.699 | 354.461 | 200.7 | 19.3 |
| AC_33 | 379457 | 6142554 | 55° 24.863'N | 004° 54.252'W | 66 | 0.453 | 33.152 | 354.008 | 220.0 | 2.1 |
| AC_34 | 378674 | 6141735 | 55° 24.410'N | 004° 54.973'W | 63 | 1.133 | 34.286 | 352.875 | 222.1 | 0.2 |
| AC_35 | 378147 | 6141187 | 55° 24.107'N | 004° 55.457'W | 62 | 0.760 | 35.046 | 352.115 | 222.3 | 0.6 |
| AC_36 | 375226 | 6138084 | 55° 22.390'N | 004° 58.141'W | 56 | 4.263 | 39.309 | 347.852 | 221.7 | 11.8 |
| AC_37 | 374305 | 6137442 | 55° 22.030'N | 004° 58.995'W | 56 | 1.123 | 40.432 | 346.728 | 233.5 | 1.4 |
| AC_38 | 363859 | 6130550 | 55° 18.150'N | 005° 08.675'W | 50 | 12.516 | 52.949 | 334.212 | 235.0 | 14.6 |
| AC_39 | 360198 | 6126500 | 55° 15.907'N | 005° 12.012'W | 47 | 5.460 | 58.409 | 328.752 | 220.4 | 18.0 |
| AC_40 | 359783 | 6126262 | 55° 15.772'N | 005° 12.396'W | 47 | 0.478 | 58.887 | 328.273 | 238.4 | 16.8 |

Table 2 – Campaign 5a installation section route

| ID (Position Name / Event) | WGS84 - UTM 30 N | | WGS84 | | Water Depth referred to LAT (m) | Geodetic | | | | Turning Angle (deg) |
|--|------------------|----------|--------------|---------------|--|-----------------------------|----------------------------|----------------------------|------------------|------------------------|
| | Easting | Northing | Latitude | Longitude | | Partial Distance (km) | KP (km) from Ardneil | RKP (km) from Wirral | Bearing (deg) | |
| AC_292 | 354483 | 6028508 | 54° 23.011'N | 005° 14.447'W | 112 | 0,488 | 173,505 | 213,655 | 175,3 | 1,3 |
| AC_293 | 354567 | 6025426 | 54° 21.352'N | 005° 14.279'W | 110 | 3,083 | 176,588 | 210,572 | 176,6 | 19,8 |
| AC_294 | 354867 | 6024659 | 54° 20.944'N | 005° 13.980'W | 105 | 0,823 | 177,411 | 209,749 | 156,9 | 1,6 |
| AC_295 | 355951 | 6022094 | 54° 19.580'N | 005° 12.906'W | 97 | 2,786 | 180,197 | 206,963 | 155,3 | 9,9 |
| AC_296 | 356208 | 6021696 | 54° 19.370'N | 005° 12.658'W | 114 | 0,474 | 180,671 | 206,490 | 145,4 | 8,8 |
| AC_297 | 358422 | 6016720 | 54° 16.726'N | 005° 10.475'W | 117 | 5,447 | 186,118 | 201,043 | 154,2 | 19,5 |
| Manx- Northern_Ireland_Cable_IS | 358485 | 6015925 | 54° 16.299'N | 005° 10.394'W | 115 | 0,797 | 186,915 | 200,246 | 173,7 | 0,0 |
| AC_298 | 358583 | 6014691 | 54° 15.635'N | 005° 10.269'W | 113 | 1,239 | 188,154 | 199,007 | 173,7 | 20,4 |
| Northern_Ireland/International waters | 358689 | 6014463 | 54° 15.514'N | 005° 10.165'W | 113 | 0,251 | 188,405 | 198,755 | 153,3 | 0,0 |
| AC_299 | 361798 | 6007772 | 54° 11.960'N | 005° 07.119'W | 125 | 7,379 | 195,784 | 191,377 | 153,3 | 16,1 |
| AC_300 | 361874 | 6007280 | 54° 11.696'N | 005° 07.035'W | 127 | 0,498 | 196,282 | 190,879 | 169,4 | 15,4 |
| International/Isle of Man waters | 361403 | 6003215 | 54° 09.498'N | 005° 07.356'W | 126 | 4,093 | 200,375 | 186,786 | 184,9 | 0,0 |
| AC_301 | 361242 | 6001826 | 54° 08.747'N | 005° 07.465'W | 123 | 1,399 | 201,773 | 185,387 | 184,9 | 13,7 |
| AC_302 | 361296 | 6001391 | 54° 08.513'N | 005° 07.404'W | 121 | 0,439 | 202,212 | 184,949 | 171,2 | 15,2 |

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|---|--------|---------|--------------|---------------|-----|-------|---------|---------|-------|------|
| Interconnector_2_Pipeline_IS | 361767 | 6000238 | 54° 07.899'N | 005° 06.940'W | 114 | 1,245 | 203,457 | 183,703 | 156,1 | 0,0 |
| AC_303 | 361980 | 5999716 | 54° 07.621'N | 005° 06.730'W | 111 | 0,564 | 204,022 | 183,139 | 156,1 | 10,6 |
| AC_304 | 362080 | 5999231 | 54° 07.361'N | 005° 06.625'W | 108 | 0,495 | 204,517 | 182,644 | 166,7 | 10,4 |
| Ballyhornan-Port Erin_No3_Coax_Cable_OOS | 362097 | 5998454 | 54° 06.943'N | 005° 06.588'W | 104 | 0,777 | 205,294 | 181,867 | 177,1 | 0,0 |
| AC_305 | 362121 | 5997310 | 54° 06.327'N | 005° 06.535'W | 98 | 1,145 | 206,439 | 180,722 | 177,1 | 19,5 |
| AC_306 | 361291 | 5994795 | 54° 04.958'N | 005° 07.226'W | 93 | 2,648 | 209,088 | 178,073 | 196,6 | 8,3 |
| AC_307 | 361183 | 5994181 | 54° 04.625'N | 005° 07.308'W | 93 | 0,624 | 209,711 | 177,449 | 188,2 | 11,0 |
| AC_308 | 360869 | 5993362 | 54° 04.179'N | 005° 07.574'W | 92 | 0,877 | 210,589 | 176,572 | 199,3 | 2,1 |
| AC_309 | 360108 | 5991137 | 54° 02.968'N | 005° 08.210'W | 72 | 2,351 | 212,940 | 174,220 | 197,2 | 11,4 |
| AC_310 | 360001 | 5990326 | 54° 02.529'N | 005° 08.286'W | 74 | 0,819 | 213,759 | 173,402 | 185,8 | 20,0 |
| AC_311 | 360073 | 5989997 | 54° 02.353'N | 005° 08.210'W | 73 | 0,337 | 214,096 | 173,065 | 165,8 | 19,1 |
| AC_312 | 360225 | 5989750 | 54° 02.222'N | 005° 08.064'W | 71 | 0,289 | 214,385 | 172,776 | 146,7 | 20,0 |
| Interconnector_1_Pipeline_IS | 360962 | 5989166 | 54° 01.919'N | 005° 07.373'W | 70 | 0,941 | 215,326 | 171,834 | 126,7 | 0,0 |
| AC_313 | 362082 | 5988278 | 54° 01.459'N | 005° 06.324'W | 69 | 1,429 | 216,755 | 170,405 | 126,7 | 20,0 |
| AC_314 | 362266 | 5987978 | 54° 01.300'N | 005° 06.147'W | 68 | 0,352 | 217,107 | 170,053 | 146,7 | 15,2 |
| AC_315 | 362346 | 5987707 | 54° 01.155'N | 005° 06.067'W | 68 | 0,283 | 217,390 | 169,771 | 161,9 | 20,0 |
| AC_316 | 361807 | 5979165 | 53° 56.543'N | 005° 06.328'W | 64 | 8,560 | 225,950 | 161,211 | 181,9 | 20,0 |
| AC_317 | 361897 | 5978858 | 53° 56.379'N | 005° 06.237'W | 64 | 0,321 | 226,271 | 160,890 | 162,0 | 12,0 |
| AC_318 | 362049 | 5978575 | 53° 56.229'N | 005° 06.090'W | 64 | 0,321 | 226,592 | 160,569 | 150,0 | 19,9 |
| AC_319 | 364565 | 5976326 | 53° 55.057'N | 005° 03.733'W | 69 | 3,375 | 229,967 | 157,194 | 130,1 | 18,5 |
| AC_320 | 365034 | 5976125 | 53° 54.956'N | 005° 03.299'W | 70 | 0,511 | 230,477 | 156,683 | 111,6 | 18,5 |
| AC_321 | 366140 | 5976034 | 53° 54.924'N | 005° 02.287'W | 57 | 1,110 | 231,587 | 155,574 | 93,0 | 3,1 |

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|--------|--------|---------|--------------|---------------|----|-------|---------|---------|-------|------|
| AC_322 | 366767 | 5976017 | 53° 54.925'N | 005° 01.714'W | 60 | 0,627 | 232,214 | 154,946 | 90,0 | 6,3 |
| AC_323 | 367185 | 5975958 | 53° 54.900'N | 005° 01.332'W | 62 | 0,422 | 232,636 | 154,525 | 96,3 | 8,9 |
| AC_324 | 367466 | 5975963 | 53° 54.906'N | 005° 01.075'W | 62 | 0,282 | 232,917 | 154,243 | 87,4 | 3,2 |
| AC_325 | 367817 | 5975988 | 53° 54.925'N | 005° 00.755'W | 66 | 0,352 | 233,269 | 153,892 | 84,3 | 5,6 |
| AC_326 | 368688 | 5975965 | 53° 54.926'N | 004° 59.959'W | 68 | 0,872 | 234,141 | 153,020 | 89,9 | 19,8 |
| AC_327 | 369780 | 5975539 | 53° 54.713'N | 004° 58.952'W | 66 | 1,172 | 235,313 | 151,847 | 109,7 | 15,1 |



Contact Details:

Further enquiries should be addressed to the following contacts:

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|---------------------------|--|
| AWJ Marine | Jim Andrews <i>(who will also coordinate the Fisheries liaison for this operation)</i> jim@awjmarine.co.uk Office: +44 (0) 845-880-2540, Mobile: +44 (0) 7908-225865, |
| Prysmian Project Manager | Alberto Pirovano alberto.pirovano@prysmiangroup.com Office: +39 02 6449 33590 Mobile: +39 335 5962819 |
| Master of Giulio Verne | master@gverne.it VSAT: +39 0553 921155 Mobile: +39 335 5261462 SAT: 00870 773240838 |
| Master of Normand Pacific | pacific.bridge@pacific.solstad.no VSAT: +47 52 85 60 70 SAT: +870 765 064 841 |