

# NOTICE TO MARINERS

## WESTERN LINK PROJECT- POWER CABLE INSTALLATION IN LIVERPOOL

UPDATE  
17<sup>th</sup> November 2014

This Notice to Mariners provides an update with progress and plans for the installation of the Western HVDC Link between Hunterston in the Firth of Clyde and Leasowe on the Wirral.

This notice contains information about:-

1. Completion of inshore cable installation
2. Installation of temporary concrete mattresses at two locations in Liverpool Bay
3. Installation of a trial cable length on the seabed

Further information is given below

### **1. Inshore cable installation completed**

#### **a) Notice of completion**

The inshore cable installation has been successfully completed by the vessel Atalanti. Installation commenced on the 5<sup>th</sup> October 2014 and was completed on the 4<sup>th</sup> November 2014.

The route of the inshore cable section is shown in the chart attached at Figure 1, and the coordinates used for laying this section of the route are given in the attached table (Table 1). Please note that these are not the as-laid coordinates; the actual cable route will be made available

Post Lay survey on the route has also been completed. Some areas were identified where the desired cable burial depth was not achieved for unforeseen soil conditions, and these are detailed under item (2) below

#### **b) Subsea buoy**

A subsea buoy has been used to mark the end of a 100m length of wire cable that is attached to the end of the power cables. This has been placed to assist with cable recovery when cable laying resumes in this area and it is floating 2m above the seabed.

The buoy location is:-

- Lat 53° 31.592' N      Long 003° 33.628'W

This buoy does not present a hazard to navigation, but is not designed to be over-trawlable.

## 2. Installation of temporary concrete mattresses

After survey of the installed cable it has been found that the expected cable burial depth was not achieved in two locations due to unforeseen soil conditions (see chart attached at Figure 2 of this notice).

Temporary protection by concrete mattresses has been placed in such location that will remain in place until final protection will be carried out (likely to be with rock placement).

The locations of the concrete mattresses are:-

- a) **Cable KP35.330 – KP35.332 (2m of cable, 1 mattress)**
  - Lat 53° 31.713' N Long 003° 33.303' W to
  - Lat 53° 31.715' N Long 003° 33.298' W
- b) **Cable KP35.338 – KP35.343 (5m of cable, 1 mattress)**
  - Lat 53° 31.712' N Long 003° 33.305' W to
  - Lat 53° 31.710' N Long 003° 33.309' W
- c) **Cable KP35.353 – KP35.359 (6m of cable, 1 mattress)**
  - Lat 53° 31.708' N Long 003° 33.318' W to
  - Lat 53° 31.706' N Long 003° 33.323' W
- d) **Cable KP35.447 – KP35.455 (2 mattresses)**
  - Lat 53° 31.684' N Long 003° 33.389' W to
  - Lat 53° 31.680' N Long 003° 33.397' W

The concrete mattresses may stand up to 15cm (6") above the level of the surrounding seabed. They do not present a hazard to navigation in the area. They have not been tested to determine that they are over-trawlable.

## 3. Trial cable length installed on seabed

A 200m length of power cable has been deliberately placed on the seabed close to the exclusion zone around the Douglas oil platform. Each cable end is moored by means of 100m steel wire terminated with a clump weight. This length of cable will be used to check the operation of equipment before the main installation phases of the project planned to start in March 2015

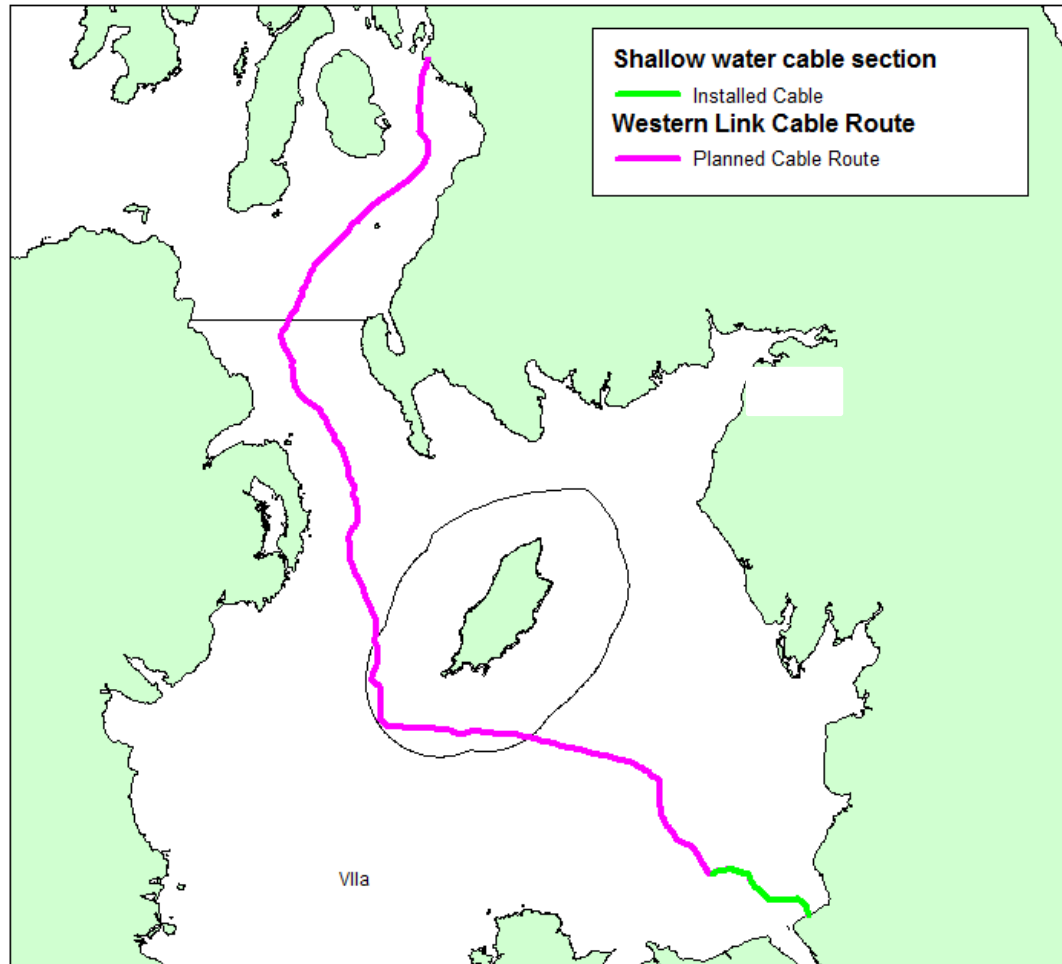
The cable is marked with subsea buoys. Its location is given below and illustrated in the attached chart (Figure 3 & 4).

- **Trial cable section, Liverpool Bay:** section of cable placed on seabed on 4<sup>th</sup> November 2014. Details are shown in Figures 2 and 3 of this notice and summarised below:
  - The 400m metres of cable section is marked with subsea buoys attached to clump weights, between:
    - Lat 53° 32.659'N Long 03° 36.769'W to
    - Lat 53° 32.475'N Long 03° 36.581'W

All of the coordinates for the buoys and cable location are given in the table in Figure 4 of this notice.

Mariners are advised that the length of cable will not present any hazard to vessels on passage. It is not designed to be over-trawlable.

Figure 1 – Western Link cable route: map of shallow inshore section that has been laid (route coordinates given in Table 1)



**Figure 2 – Location of concrete mattresses. Inset map shows general location of mattresses on the cable route to the south-east of the Douglas oil platform.**

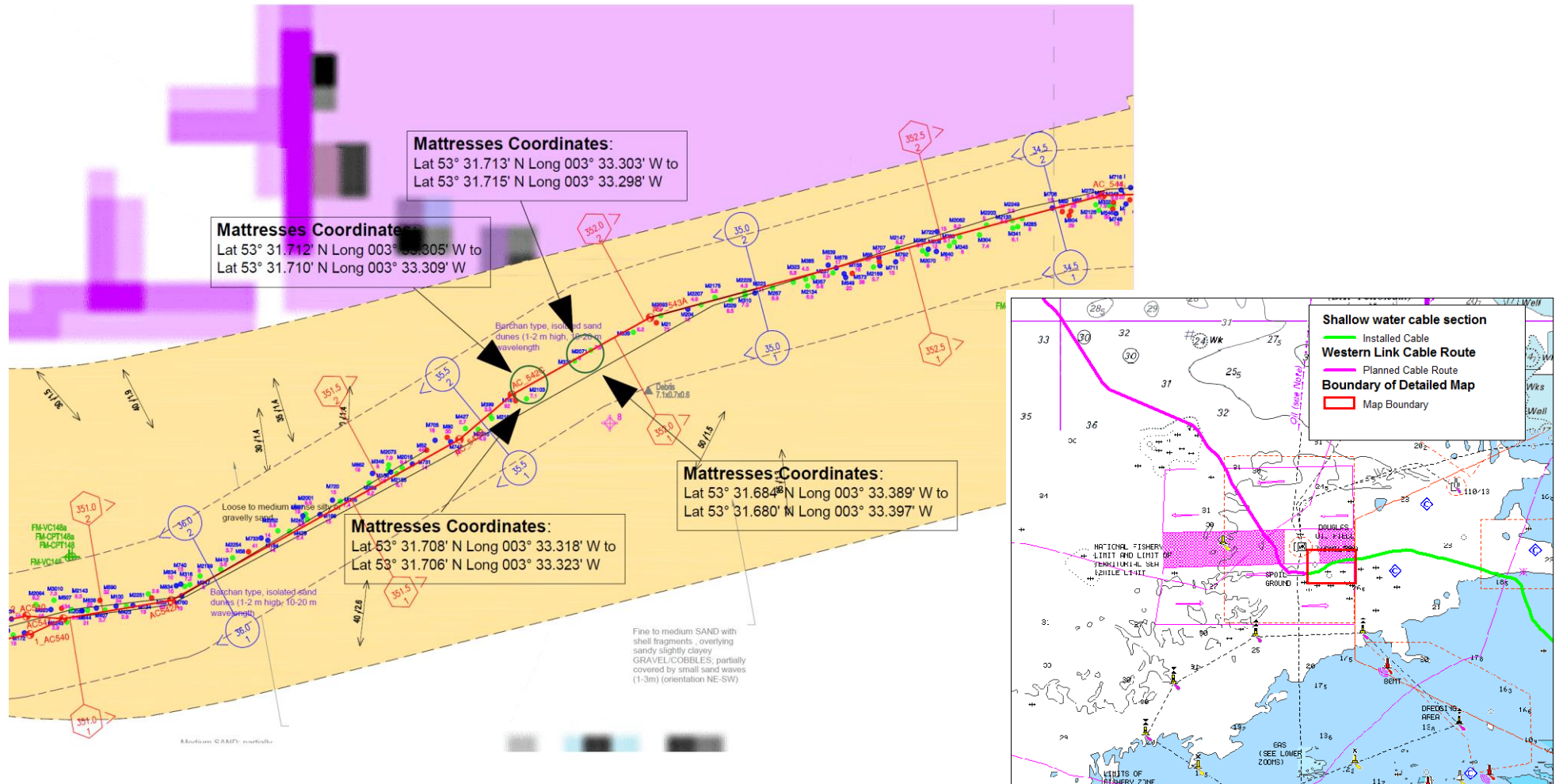
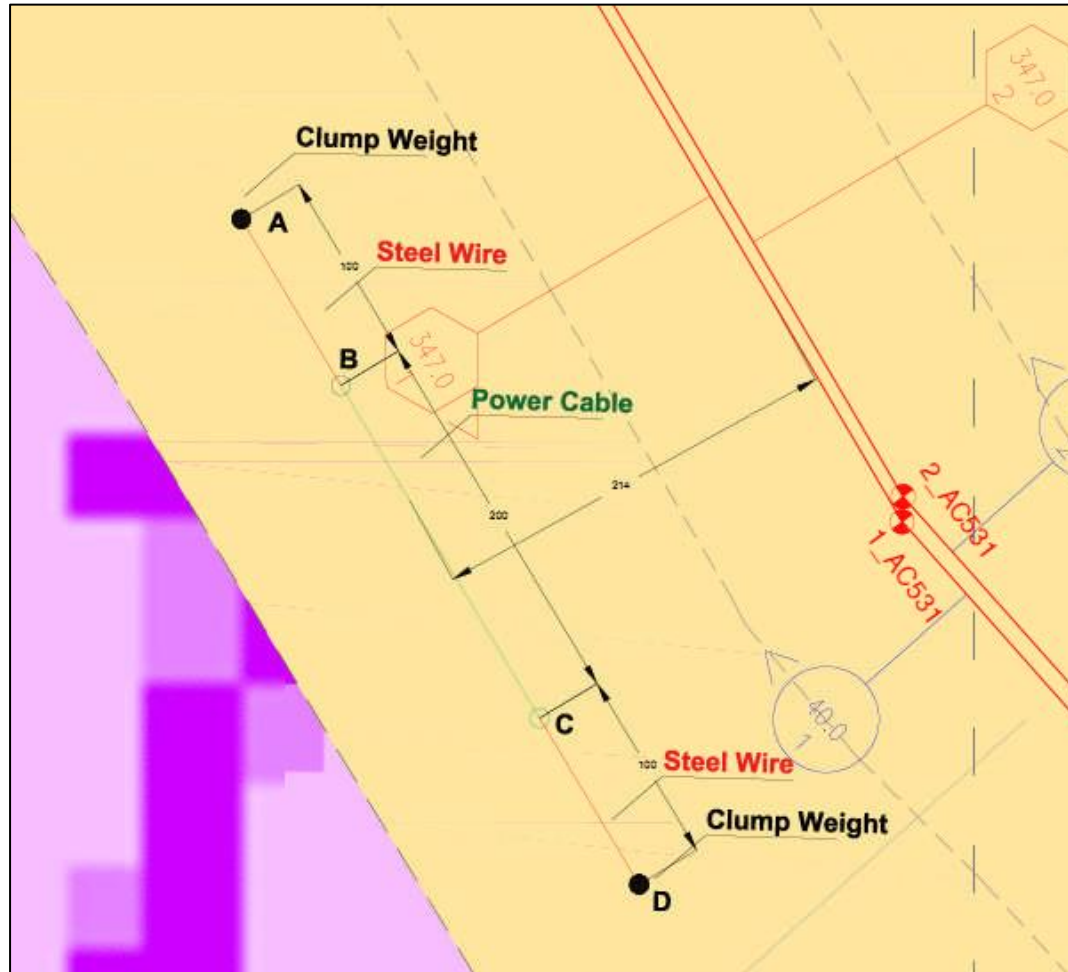


Figure 3 – Trial cable location (inside red doughnut)



Figure 4: Detail of trial cable location (this cable is on the surface of the seabed)



**COORDINATES**

- **POINT A – Start of North Steel Wire / Clump Weight**
  - Lat 53° 32.659' N
  - Long 03° 36.769' W
- **POINT B – End of North Steel Wire / Power cable Head**
  - Lat 53° 32.613' N
  - Long 03° 36.723' W
- **POINT C – Power cable head / Start of South Steel Wire**
  - Lat 53° 32.518' N
  - Long 03° 36.625' W
- **POINT D – End of South Steel Wire / Clump Weight**
  - Lat 53° 32.475' N
  - Long 03° 36.581' W

**Table 1: Cable coordinates for shallow water section of cable.**

RKP (km) from Wirral	WGS84		WGS84 - UTM 30 N	
	Latitude	Longitude	Easting	Northing
0.000	53° 24.700'N	003° 07.850'W	491303	5918075
0.630	53° 25.038'N	003° 07.903'W	491246	5918702
1.435	53° 25.470'N	003° 07.971'W	491172	5919503
1.500	53° 25.503'N	003° 07.988'W	491153	5919565
1.597	53° 25.556'N	003° 07.984'W	491158	5919662
2.426	53° 26.001'N	003° 08.054'W	491082	5920487
2.823	53° 26.198'N	003° 08.196'W	490926	5920852
3.267	53° 26.376'N	003° 08.463'W	490631	5921184
3.566	53° 26.488'N	003° 08.656'W	490417	5921392
4.075	53° 26.651'N	003° 09.026'W	490008	5921695
5.830	53° 27.269'N	003° 10.227'W	488681	5922843
6.274	53° 27.350'N	003° 10.605'W	488264	5922995
6.929	53° 27.349'N	003° 11.196'W	487610	5922994
13.748	53° 27.273'N	003° 17.354'W	480794	5922876
14.132	53° 27.268'N	003° 17.700'W	480411	5922869
14.837	53° 27.264'N	003° 18.337'W	479706	5922865
15.086	53° 27.300'N	003° 18.554'W	479466	5922932
15.390	53° 27.368'N	003° 18.803'W	479191	5923060
17.300	53° 28.084'N	003° 20.043'W	477825	5924394
18.695	53° 28.606'N	003° 20.952'W	476824	5925365
18.837	53° 28.653'N	003° 21.053'W	476713	5925453
20.473	53° 29.271'N	003° 22.108'W	475552	5926606
21.007	53° 29.470'N	003° 22.457'W	475168	5926976
21.571	53° 29.684'N	003° 22.819'W	474770	5927376
21.693	53° 29.729'N	003° 22.900'W	474681	5927459
22.047	53° 29.851'N	003° 23.146'W	474410	5927686
22.253	53° 29.933'N	003° 23.271'W	474272	5927839
22.487	53° 30.035'N	003° 23.394'W	474137	5928030
22.789	53° 30.164'N	003° 23.563'W	473952	5928269
22.921	53° 30.230'N	003° 23.603'W	473908	5928393
23.371	53° 30.460'N	003° 23.737'W	473762	5928819
23.772	53° 30.662'N	003° 23.867'W	473621	5929194
24.298	53° 30.929'N	003° 24.027'W	473447	5929690
24.655	53° 31.113'N	003° 24.118'W	473348	5930033
24.742	53° 31.148'N	003° 24.171'W	473290	5930098
24.849	53° 31.201'N	003° 24.210'W	473247	5930196
24.991	53° 31.258'N	003° 24.294'W	473155	5930303
25.073	53° 31.288'N	003° 24.351'W	473093	5930358
25.163	53° 31.303'N	003° 24.428'W	473008	5930386
25.247	53° 31.333'N	003° 24.485'W	472945	5930442
25.355	53° 31.352'N	003° 24.577'W	472844	5930478
25.506	53° 31.369'N	003° 24.711'W	472696	5930511
25.598	53° 31.375'N	003° 24.793'W	472605	5930522
25.683	53° 31.386'N	003° 24.867'W	472523	5930544
25.786	53° 31.397'N	003° 24.959'W	472422	5930564
25.902	53° 31.425'N	003° 25.052'W	472319	5930617
26.109	53° 31.452'N	003° 25.235'W	472118	5930668
26.260	53° 31.456'N	003° 25.370'W	471968	5930677
26.434	53° 31.480'N	003° 25.523'W	471800	5930723
27.008	53° 31.577'N	003° 26.016'W	471256	5930906
27.226	53° 31.624'N	003° 26.197'W	471057	5930994
27.365	53° 31.635'N	003° 26.322'W	470919	5931014

RKP (km) from Wirral	WGS84		WGS84 - UTM 30 N	
	Latitude	Longitude	Easting	Northing
27.499	53° 31.665'N	003° 26.432'W	470798	5931071
27.588	53° 31.687'N	003° 26.502'W	470720	5931113
27.751	53° 31.708'N	003° 26.646'W	470562	5931153
27.891	53° 31.732'N	003° 26.766'W	470429	5931197
27.931	53° 31.740'N	003° 26.800'W	470392	5931213
28.341	53° 31.789'N	003° 27.161'W	469993	5931307
28.514	53° 31.808'N	003° 27.315'W	469824	5931342
28.653	53° 31.826'N	003° 27.437'W	469689	5931377
28.798	53° 31.853'N	003° 27.560'W	469553	5931427
28.864	53° 31.853'N	003° 27.620'W	469487	5931429
29.109	53° 31.896'N	003° 27.830'W	469256	5931510
29.320	53° 31.923'N	003° 28.015'W	469052	5931561
29.432	53° 31.925'N	003° 28.116'W	468940	5931565
29.690	53° 31.959'N	003° 28.343'W	468690	5931630
29.752	53° 31.978'N	003° 28.389'W	468639	5931665
30.061	53° 32.018'N	003° 28.660'W	468340	5931741
30.188	53° 32.021'N	003° 28.775'W	468213	5931748
30.489	53° 32.062'N	003° 29.039'W	467922	5931826
30.591	53° 32.079'N	003° 29.126'W	467826	5931859
30.642	53° 32.086'N	003° 29.172'W	467776	5931871
30.712	53° 32.101'N	003° 29.229'W	467713	5931900
30.831	53° 32.117'N	003° 29.333'W	467598	5931930
30.921	53° 32.119'N	003° 29.415'W	467508	5931935
31.141	53° 32.134'N	003° 29.612'W	467290	5931964
31.412	53° 32.131'N	003° 29.858'W	467019	5931961
31.918	53° 32.108'N	003° 30.314'W	466515	5931922
32.293	53° 32.061'N	003° 30.644'W	466149	5931837
32.709	53° 32.000'N	003° 31.006'W	465749	5931726
32.781	53° 31.985'N	003° 31.066'W	465682	5931699
32.863	53° 31.977'N	003° 31.139'W	465601	5931684
33.082	53° 31.943'N	003° 31.329'W	465391	5931624
33.297	53° 31.922'N	003° 31.521'W	465179	5931585
33.623	53° 31.876'N	003° 31.805'W	464864	5931503
33.827	53° 31.867'N	003° 31.989'W	464661	5931488
33.904	53° 31.877'N	003° 32.057'W	464586	5931506
34.270	53° 31.863'N	003° 32.387'W	464221	5931484
34.421	53° 31.860'N	003° 32.524'W	464070	5931479
35.179	53° 31.752'N	003° 33.186'W	463337	5931285
35.435	53° 31.685'N	003° 33.388'W	463113	5931162
35.546	53° 31.646'N	003° 33.464'W	463028	5931091
36.079	53° 31.506'N	003° 33.885'W	462561	5930835
36.256	53° 31.490'N	003° 34.043'W	462386	5930806
36.593	53° 31.455'N	003° 34.342'W	462055	5930744



**Contact Details:**

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