



Notice of Operations at London Array Offshore Wind Farm

Date of Notice:	29th September 2019	Notice no:	490
------------------------	---------------------------------------	-------------------	------------

The intention of this notice is to give an overview of operations and maintenance activities within the London Array Wind Farm and the vessels involved.

London Array Offshore Wind Farm

For general information on the London Array project, see: www.londonarray.com

If you have any questions on the offshore activities, or request further information, please direct them to: marinecoordinators@londonarray.com

- **Work planned for period 30/09/2019 to 06/10/2019**

1. Vessels on site:

- Crew transfer vessels: **Windcat 18, Windcat 21, Windcat 27, Windcat 29, Windcat 36 and Windcat 39** will take offshore technicians to the Offshore Wind Turbine Generators and Offshore Substations for routine operations and maintenance works.
- Survey Vessels **Spectrum 1 and Spectrum 2** will be conducting survey ops and HV / fibre optics works in and around the windfarm along with crew transfers and Guano cleaning as required.
- Crew Transfer Vessel **Dalby Wharfe** will be conducting HV works around the windfarm.

For details of vessels on site, see attached vessel data matrix.

2. Installations

All 175 wind turbines and two sub-station structures as built locations please see the appendix at the end of this notice.

3. Array cables

All Array cables have been installed and the cables have been buried

4. Wave Buoys:

The London Array wave buoys have now been removed and are expected to be replaced with turbine mounted wave radars

4.1 Foulgers Gat Safe passage marker buoys

Identity	Lat (WGS 84)	Long (WGS 84)	Light
Long Sand Inner	51°38.77' N	001°25.43' E	Iso. 2 sec
Long Sand Outer	51°34.61' N	001°28.33' E	Iso. 2 sec
Long Sand Middle	51°35.60' N	001°26.45' E	Iso. 5 sec

Characteristics (all buoys) Spherical with Red and White vertical stripes

5. Relevant plans for current activity

	Name
A	Contractors method statements and risk assessments
B	Marine Coordination Procedure
C	Notices to Mariners issued
D	Marine Licence
E	London Array Emergency Response Cooperation Plan (ERCOP)

6. Other notes:

Reduced clearances at the Kentish Flats and BritNed cable crossings. A Notice to Mariners was issued by the Hydrographic Office regarding amendment of buoyage at Kentish Flats crossing and placing of an additional buoy at BritNed crossing.

- **Kentish Flats** Three special marks and a South Cardinal Mark have been installed to mark the four rock berms on the crossing of the Kentish Flats and London Array Export cable. At these crossings, the typical sea bed level was -4m LAT. Due to the newly installed rock beam the depth in some areas is now -1.0m LAT.

Kentish Flats/London array cable crossings have marker buoys at the following locations:

51° 25.56N 001° 06.45E (KFSM1)

51° 25.00N 001° 06.44E (KFSM2)

51° 24.86N 001° 05.77E (KFSM3)

51° 25.41N 001° 05.69E (KFSM4)

- **BritNed** cable crossing (51° 28'.583N, 001° 17'.417E). At this crossing the seabed level varies: From -6.5m LAT to -9m LAT.
Due to the newly installed rock beam the depth in some areas is now -4m LAT.

A North Cardinal Buoy has been installed in the following position: - Named BRIT NORTH

51°28.718N 001° 17.50E North Cardinal Exhibiting Q light characteristic

7. Safe distances within the Offshore Wind farm:

- A 50m radius advisory caution zone is established around each wind turbine and offshore sub-station platform.
- A short term **500-meter exclusion zone** has been implemented around **C17 - (51° 37.132'N 01° 25.641'E)** this location stands in the Foulgers Gat channel and a wide approach is requested.

ALL VESSELS WISHING TO TRANSIT THROUGH THE LONDON ARRAY WIND FARM SHOULD MONITOR VHF CH16 AND MAKE EVERY EFFORT TO CONTACT LAL VESSELS ON SITE PRIOR TO ANY ENTRY.

8. Contact details

All crew transfer vessels can be contacted on VHF Ch16

The address of the London Array Management office and O&M Management is:

London Array Limited.
Operations and Maintenance Building,
Port of Ramsgate,
Military Road,
Ramsgate,
CT11 9LG, UK

The Marine Coordinators office is manned 24hrs, and can be contacted on Land line +44 (0)1843 855795 or via email: marinecoordinators@londonarray.com

9. Latest Notice to Mariners applicable to London Array area.

London Array Notices to Mariners:

03/2018 – Potential exposed cable around Wind turbine generator E16 in location
51° 37'43.37"N 001° 27'10.97"E
~~02/2019 – Cable Works, Cancelled 24.09.2019~~

Port of London Notices to Mariners:

None currently active for the London Array area.

Trinity House Notice to Mariners:

None currently active for the London Array area.

10. Distribution of this Notice

The distribution of this notice is as per email recipient's header. If you are not the appropriate recipient of these notices, or do not wish to receive the notices in the future, please contact us at the address at the head of this notice or reply to this email.

11. Attachments

- As built locations of wind farm structures (At the end of this document)
- Lay out of wind farm. (At the end of this document)
- Vessel Matrix (Separate attachment to this e-mail)

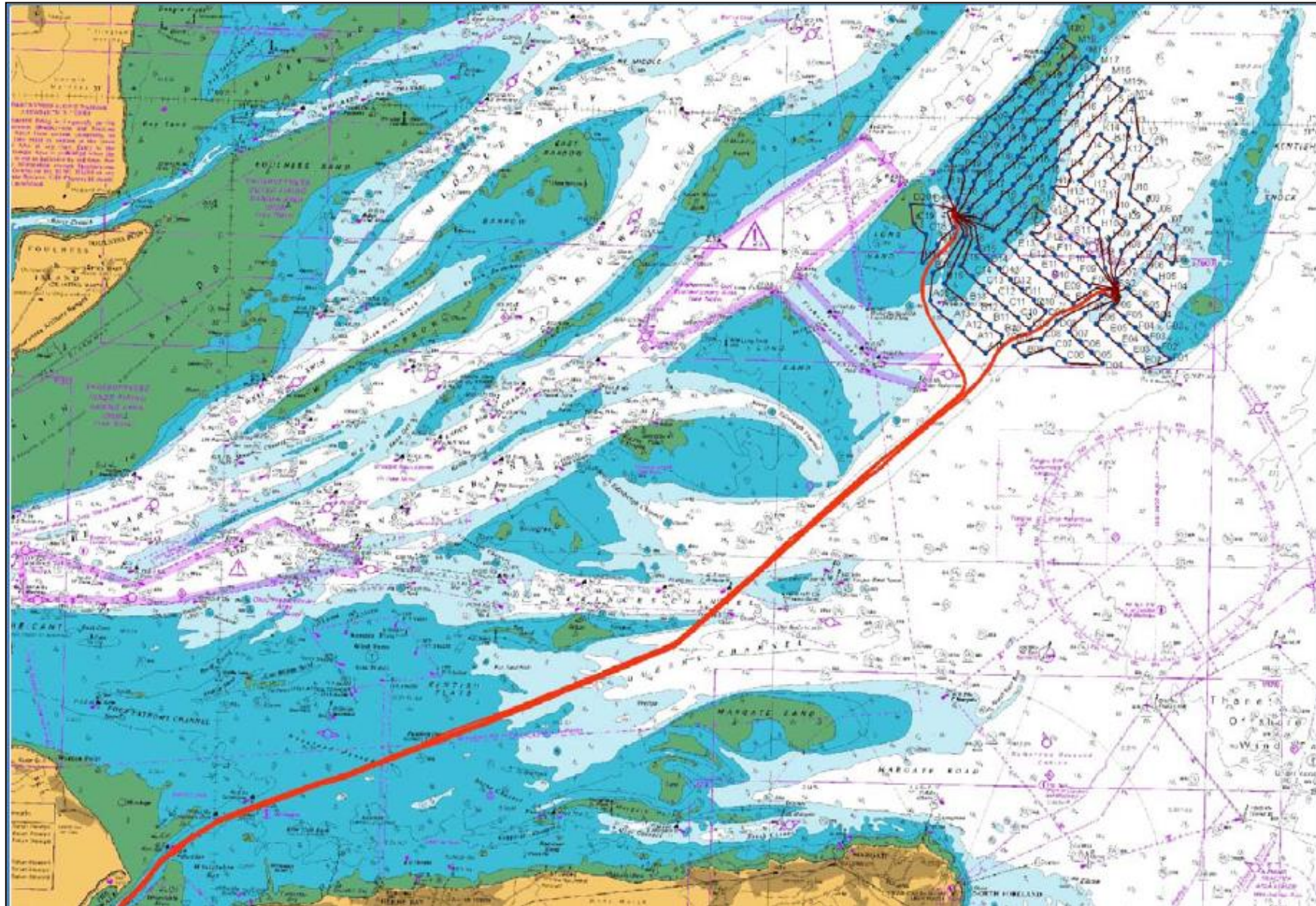
Report made by:

Duty Marine Coordinator
Email: marinecoordinators@londonarray.com
Land line: +44 (0)1843 855795 – (24 hours).

London Array WTG and Substations coordinates as built (WGS 84)

WTG	Latitude	Longitude	WTG	Latitude	Longitude	WTG	Latitude	Longitude
A10	51° 34.715'N	01° 27.455'E	E18	51° 38.183'N	01° 26.331'E	I08	51° 37.511'N	01° 32.871'E
A11	51° 34.925'N	01° 27.018'E	E19	51° 38.413'N	01° 25.904'E	I09	51° 37.741'N	01° 32.446'E
A12	51° 35.174'N	01° 26.607'E	F01	51° 34.679'N	01° 34.143'E	I10	51° 37.971'N	01° 32.020'E
A13	51° 35.400'N	01° 26.175'E	F02	51° 34.909'N	01° 33.716'E	I11	51° 38.201'N	01° 31.594'E
A14	51° 35.634'N	01° 25.755'E	F03	51° 35.139'N	01° 33.290'E	I12	51° 38.431'N	01° 31.168'E
A15	51° 35.865'N	01° 25.443'E	F04	51° 35.369'N	01° 32.864'E	I13	51° 38.662'N	01° 30.742'E
B08	51° 34.660'N	01° 28.881'E	F05	51° 35.599'N	01° 32.438'E	I14	51° 38.892'N	01° 30.316'E
B09	51° 34.886'N	01° 28.448'E	F06	51° 35.834'N	01° 32.004'E	I15	51° 39.122'N	01° 29.890'E
B10	51° 35.121'N	01° 28.029'E	F07	51° 36.059'N	01° 31.586'E	I16	51° 39.352'N	01° 29.464'E
B11	51° 35.351'N	01° 27.603'E	F08	51° 36.289'N	01° 31.160'E	I17	51° 39.582'N	01° 29.038'E
B12	51° 35.581'N	01° 27.177'E	F09	51° 36.519'N	01° 30.735'E	I18	51° 39.812'N	01° 28.612'E
B13	51° 35.811'N	01° 26.751'E	F10	51° 36.749'N	01° 30.309'E	I19	51° 40.042'N	01° 28.186'E
B15	51° 36.271'N	01° 25.900'E	F11	51° 36.988'N	01° 29.896'E	I20	51° 40.276'N	01° 27.753'E
B16	51° 36.501'N	01° 25.473'E	F12	51° 37.210'N	01° 29.457'E	J06	51° 37.452'N	01° 34.282'E
B17	51° 36.738'N	01° 25.090'E	F13	51° 37.440'N	01° 29.031'E	J07	51° 37.681'N	01° 33.856'E
C06	51° 34.607'N	01° 30.302'E	F14	51° 37.670'N	01° 28.605'E	J08	51° 37.918'N	01° 33.442'E
C07	51° 34.837'N	01° 29.876'E	F15	51° 37.900'N	01° 28.179'E	J09	51° 38.150'N	01° 33.019'E
C08	51° 35.085'N	01° 29.418'E	F16	51° 38.130'N	01° 27.753'E	J10	51° 38.380'N	01° 32.593'E
C09	51° 35.298'N	01° 29.025'E	F17	51° 38.360'N	01° 27.327'E	J11	51° 38.610'N	01° 32.167'E
C10	51° 35.528'N	01° 28.599'E	F18	51° 38.590'N	01° 26.901'E	J12	51° 38.840'N	01° 31.741'E
C11	51° 35.758'N	01° 28.173'E	F19	51° 38.820'N	01° 26.475'E	J13	51° 39.070'N	01° 31.315'E
C12	51° 35.988'N	01° 27.747'E	F20	51° 39.050'N	01° 26.048'E	J14	51° 39.300'N	01° 30.889'E
C13	51° 36.220'N	01° 27.324'E	G03	51° 35.546'N	01° 33.860'E	J15	51° 39.530'N	01° 30.463'E
C14	51° 36.448'N	01° 26.895'E	G04	51° 35.776'N	01° 33.434'E	J16	51° 39.760'N	01° 30.037'E
C15	51° 36.678'N	01° 26.469'E	G05	51° 36.006'N	01° 33.008'E	J17	51° 39.990'N	01° 29.611'E
C17	51° 37.138'N	01° 25.616'E	G06	51° 36.244'N	01° 32.601'E	J18	51° 40.220'N	01° 29.185'E
C18	51° 37.369'N	01° 25.191'E	G07	51° 36.466'N	01° 32.156'E	J19	51° 40.451'N	01° 28.759'E
C19	51° 37.599'N	01° 24.765'E	G08	51° 36.701'N	01° 31.757'E	J20	51° 40.681'N	01° 28.332'E
D04	51° 34.554'N	01° 31.724'E	G09	51° 36.927'N	01° 31.305'E	K11	51° 39.017'N	01° 32.736'E
D05	51° 34.784'N	01° 31.298'E	G10	51° 37.151'N	01° 30.871'E	K12	51° 39.257'N	01° 32.292'E
D06	51° 35.015'N	01° 30.872'E	G11	51° 37.390'N	01° 30.446'E	K13	51° 39.477'N	01° 31.885'E
D07	51° 35.247'N	01° 30.433'E	G12	51° 37.617'N	01° 30.027'E	K14	51° 39.707'N	01° 31.458'E
D08	51° 35.475'N	01° 30.021'E	G13	51° 37.847'N	01° 29.601'E	K15	51° 39.954'N	01° 30.995'E
D09	51° 35.705'N	01° 29.595'E	G14	51° 38.077'N	01° 29.176'E	K16	51° 40.167'N	01° 30.607'E
D10	51° 35.935'N	01° 29.169'E	G15	51° 38.307'N	01° 28.749'E	K17	51° 40.402'N	01° 30.164'E
D11	51° 36.170'N	01° 28.733'E	G16	51° 38.537'N	01° 28.323'E	K18	51° 40.621'N	01° 29.773'E
D12	51° 36.395'N	01° 28.317'E	G17	51° 38.768'N	01° 27.897'E	K19	51° 40.858'N	01° 29.328'E
D13	51° 36.625'N	01° 27.891'E	G18	51° 39.006'N	01° 27.482'E	K20	51° 41.100'N	01° 28.879'E
D14	51° 36.855'N	01° 27.465'E	G19	51° 39.228'N	01° 27.045'E	L11	51° 39.424'N	01° 33.306'E
D15	51° 37.086'N	01° 27.039'E	G20	51° 39.458'N	01° 26.619'E	L12	51° 39.654'N	01° 32.880'E
D16	51° 37.316'N	01° 26.613'E	H04	51° 36.183'N	01° 34.004'E	L13	51° 39.862'N	01° 32.455'E
D17	51° 37.535'N	01° 26.206'E	H05	51° 36.413'N	01° 33.579'E	L14	51° 40.114'N	01° 32.028'E
D19	51° 38.006'N	01° 25.335'E	H06	51° 36.644'N	01° 33.152'E	L15	51° 40.345'N	01° 31.602'E
D20	51° 38.024'N	01° 24.612'E	H07	51° 36.857'N	01° 32.766'E	L16	51° 40.575'N	01° 31.176'E
E02	51° 34.501'N	01° 33.146'E	H08	51° 37.104'N	01° 32.301'E	L17	51° 40.805'N	01° 30.750'E
E03	51° 34.732'N	01° 32.720'E	H09	51° 37.334'N	01° 31.876'E	L18	51° 41.035'N	01° 30.324'E
E04	51° 34.962'N	01° 32.294'E	H10	51° 37.564'N	01° 31.450'E	L19	51° 41.265'N	01° 29.899'E
E05	51° 35.192'N	01° 31.868'E	H11	51° 37.794'N	01° 31.023'E	L20	51° 41.481'N	01° 29.523'E
E06	51° 35.422'N	01° 31.442'E	H12	51° 38.024'N	01° 30.598'E	M14	51° 40.473'N	01° 32.617'E
E07	51° 35.652'N	01° 31.016'E	H13	51° 38.254'N	01° 30.172'E	M15	51° 40.752'N	01° 32.173'E
E08	51° 35.882'N	01° 30.590'E	H14	51° 38.484'N	01° 29.746'E	M16	51° 40.982'N	01° 31.747'E
E09	51° 36.112'N	01° 30.165'E	H15	51° 38.714'N	01° 29.319'E	M17	51° 41.212'N	01° 31.320'E
E10	51° 36.330'N	01° 29.727'E	H16	51° 38.945'N	01° 28.894'E	M18	51° 41.428'N	01° 30.864'E
E11	51° 36.573'N	01° 29.313'E	H17	51° 39.192'N	01° 28.435'E	M19	51° 41.672'N	01° 30.468'E
E12	51° 36.802'N	01° 28.886'E	H18	51° 39.405'N	01° 28.041'E	M20	51° 41.902'N	01° 30.042'E
E13	51° 37.033'N	01° 28.461'E	H19	51° 39.626'N	01° 27.631'E	Sub Stations		
E14	51° 37.263'N	01° 28.035'E	H20	51° 39.865'N	01° 27.190'E	SS1	51° 37.815'N	01° 26.209'E
E15	51° 37.493'N	01° 27.609'E	I05	51° 36.845'N	01° 34.146'E	SS2	51° 36.148'N	01° 32.085'E
E16	51° 37.723'N	01° 27.183'E	I06	51° 37.051'N	01° 33.723'E	Met Mast		
E17	51° 37.953'N	01° 26.757'E	I07	51° 37.281'N	01° 33.297'E	MM	51° 35.640'N	01° 23.138'E

Layout of London Array Offshore Wind Farm, and Export cable route



Name & Registered Office: London Array Limited. Registered at: 22 Mount Ephraim, Tunbridge Wells, Kent TN4 8AS Registered in England and Wales No 04344423.