

Humber Gateway Offshore Wind Farm: Project Overview for Mariners

Introduction to Humber Gateway Offshore Wind Farm:

The Humber Gateway Offshore Wind Farm (*Humber Gateway*, hereafter), operated by RWE, comprises of 73 Vestas V112 3.0 MW Wind Turbine Generator's (WTG) interconnected by an array of subsea cabling network with a maximum total generating capacity of 219MW. WTG parameters can be found in Table 1 below.

Humber Gateway is located north of the mouth of the River Humber, within an area of sea 8km off the Holderness coast of East Yorkshire covering an area of approximately 35km² and is situated in water depths of around 15m. See Figure 1 for chart of HGOWF.

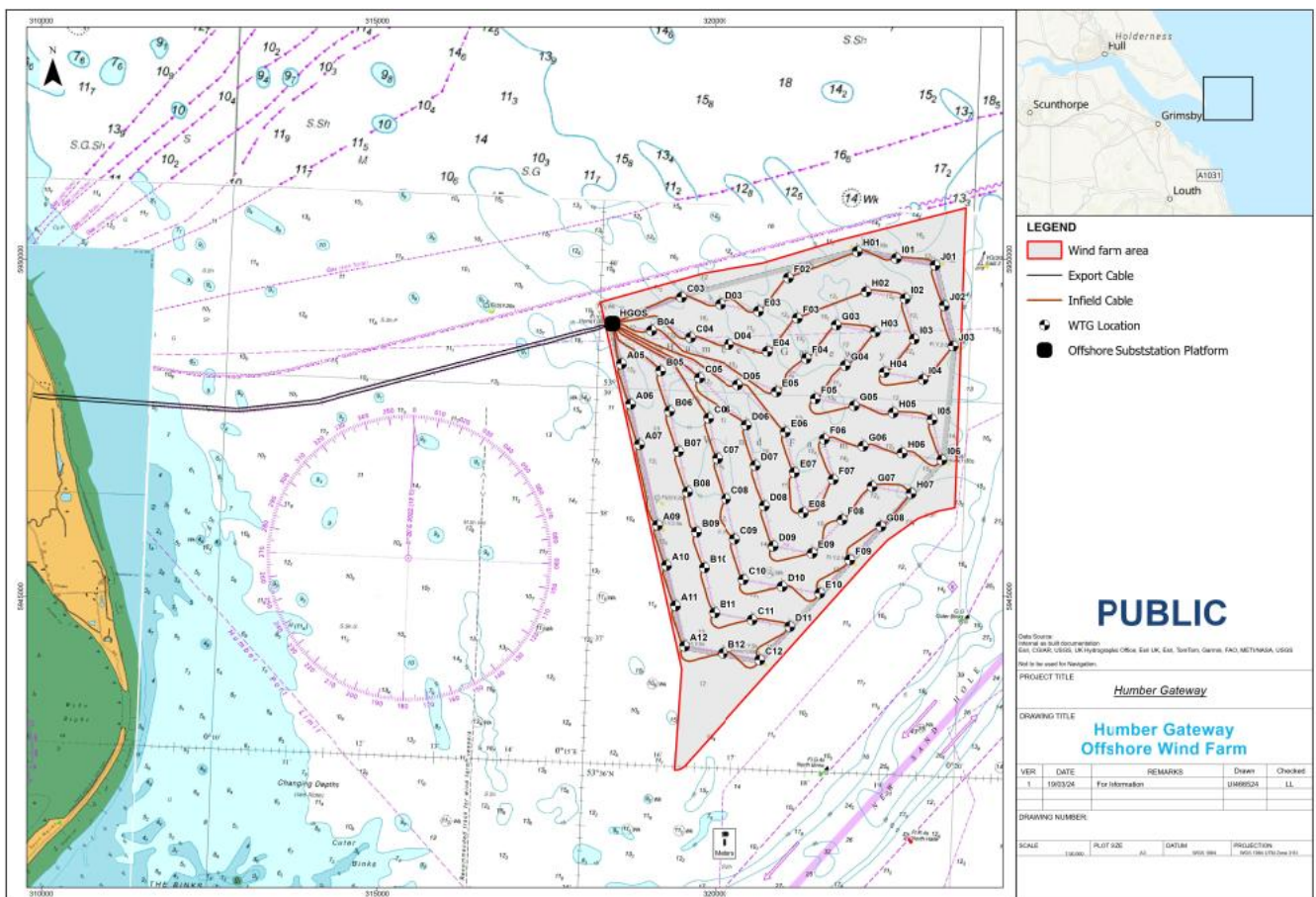


Figure 1: Chart of Humber Gateway Offshore Wind Farm situated off the Holderness coast of East Yorkshire.

The WTGs are mounted on monopile foundations; the offshore substation platform (OSP) is mounted on a jacket foundation. This is illustrated in Figure 2 below.

The 33kV subsea array cables installed connect the WTGs to the offshore substation and are buried into the seabed and configured in open rings to the offshore substation whilst two export cables run from the shore at Easington back to the offshore substation forming the electrical infrastructure. The Humber Gateway Operations and Maintenance (O&M) Building is located at the Grimsby Fish Docks, this is where operational crews transfer out to the windfarm via crew transfer vessels.

Table 1: Wind Turbine Generator (WTG) Parameters.

WTG Parameter	Height above LAT	Height above MHWS
Total height (to blade tip)	179m (587ft 3.2in)	172m (564ft 3.7in)
Hub height	104m (341ft 2.5in)	97m (318ft 2.9in)
Interface height (foundation to transition piece)	22m (72ft 2.1in)	15m (49ft 2.6in)
Spacing between turbines	550m (1804 ft 5.5in)	
Blade Diameter	112m	

For reference:

- HAT above LAT: 7.4m (24ft 3in)
- MHWS above LAT: 6.6m (21ft 7.8in)
- MSL above LAT: 3.78m (12ft 4.8in)
- MLWS above LAT: 0.9m (2ft 11.4in)

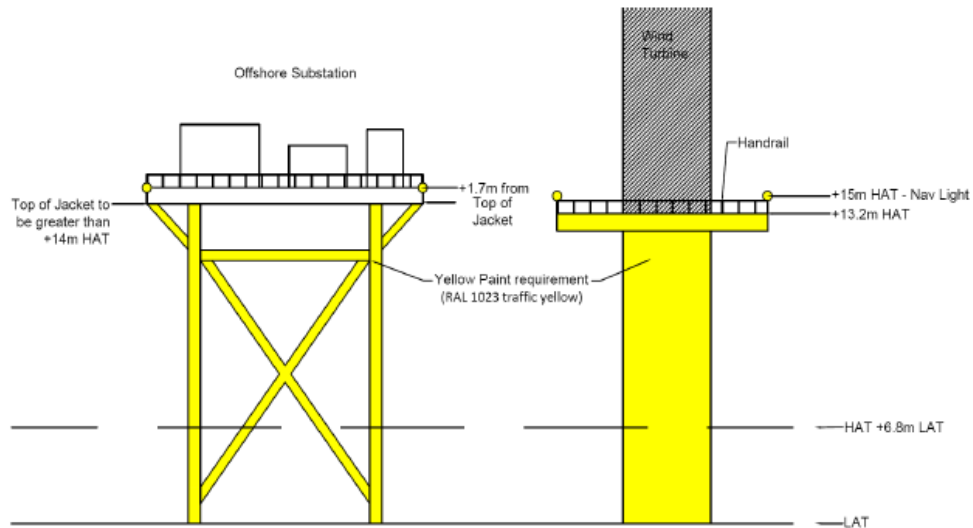


Figure 2: Diagram of jacket foundation and monopile foundation used for the Offshore Substation Platform (OSP) and Wind Turbine Generators (WTGs) at Humber Gateway Offshore Wind Farm respectively.

Humber Gateway has been open to fishing since construction works ceased in 2014. Regular operations and maintenance works are ongoing. Urgent works, major maintenance activities or works out with regular

maintenance activities, will be notified to fishers via Notice to Mariners (NtMs) as required. Humber Gateway will endeavour to circulate NtMs 14 days in advance of works, in line with licence conditions. The project may also notify fishers of hazards, such as dropped objects or exposed cables through NtMs. The project's as-built data can be found on KIS-ORCA or can be provided in plotter format upon request by contacting the Humber Gateway Fisheries Liaison Officer (FLO): d.proctor@precisionmarine.co.uk and n.proctor@precisionmarine.co.uk. Full coordinates of WTG locations can be found in Appendix 1.

Vessels Regularly on site:

Humber Gateway will primarily have long term charter of Crew Transfer Vessels to support ongoing Operations and Maintenance activities throughout the year.

The vessels currently under long term charter to Humber Gateway are listed below. Communications channels for those vessels will be monitored during normal and abnormal operations and are as follows: VTS Channels 12/14, VHF Channel 16, VHF DSC Channel 70, VHF DSC Channel 74 (Grimsby Fish Dock).

Windcat 31

MMSI - 235097407

Call Sign - 2GHJ7



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MarineTraffic.com

Figure 3: Image of Windcat 31

Windcat 33

MMSI - 235103062

Call Sign - 2HER9



Figure 4: Image of Windcat 33

Additionally, for specific campaign works such as surveys or major component changes, other vessels will be chartered on a short-term basis. An NtM will be issued for these campaign works which will include a picture and details of additional vessels which may be working on site, including their work scope requirements.

Vessels under charter to Humber Gateway will endeavour to maintain safe distances from fishing vessels. Site vessels will keep 150m distance where possible when fishers are actively working (hauling fishing gear, trawling) and vessels will reduce their speed while passing working fishing vessels.

Contact Details:

Offshore coordination will be 24-hour point of contact. Fishers are requested to inform Marine Coordination of their planned activities on approach to site, using the contact details provided below and may contact project vessels operational on site. In response, marine coordination will update on ongoing and upcoming works/hazards and also notify vessels onsite of the mariners' presence for the awareness and safety of all. Mariners can also contact marine coordination in advance, sharing fishing gear locations for the awareness of site and so that best efforts can be made to avoid manoeuvre around fishing gear on site where possible.

Project vessels are listening VHF Channel 16 (CH16) and the Humber Gateway Control Room can be contacted on humbergateway.controlroom@rwe.com

Requests and Advice:

Mariners are requested to **monitor VHF CH16 at all times**. Mariners can communicate with Humber Gateway O&M vessels via CH16. Communications can be held over working channels once initial contact is established over CH16. Mariners are requested to keep their AIS on while transiting/operating through or within the vicinity of Humber Gateway.

Mariners are requested to keep safe distances of **at least 50m away from all infrastructure** (WTG and OSP) at any given time and to keep safe working distances from all site vessels. Where major maintenance works are ongoing, it is typical that safe working distances will be extended and mariners will be requested to keep a safe working distance of **500m** from upcoming works areas, and around the vessel as it is manoeuvring into position and whilst engaged in operations.

Mariners are also typically requested to observe a safe distance of at least **250m** when rope access works are occurring. Safety broadcasts are transmitted internally to notify the wind farm CTVs of this activity and on receipt of this information, the CTVs will advise any third-party vessels that may be affected. Where communications cannot be established, the CTVs will intercept third party vessels as necessary in the interests of their safety and those on the affected WTG.

NtMs will always clearly state requests for safe working distances and mariners are requested to take heed of those requests detailed in the specific NtM.

All fishing gear markers should remain at least 50m away from infrastructure at all times in line with advice from the MCA and UKHO so as not to obstruct access. It is especially important that fishing gear markers are kept 50m clear of the boat landing locations, taking into account tidal change, to minimise risks and hazards to fishing gear and vessels, as well as infrastructure, Project vessels and equipment.

All static fishing gear must be sufficiently marked in line with [UK legislation](#) and any local bylaws, to enhance visibility of fishing gear and minimise the risk of negative interactions between site vessels and fishing gear.

Mariners are expected to adhere to Convention on the International Regulations for Preventing Collisions at Sea (COLREGS), 1972 and The International Convention for the Safety of Life at Sea (SOLAS), 1974 and are reminded that further safety information related to fishing within wind farms can be found in “The Risks of Fishing Near Cables and Renewable Energy Structures”, published on the [KIS-ORCA website](#).

General safety information can be found on the [Kingfisher Bulletins](#) by Seafish. All mariners are requested to make themselves aware of their obligations for conducting activities over buried and protected cables under International and UK Cable (Subsea) Protection Legislation.

Mariners are reminded to familiarise themselves Marine Guidance Notes (MGN) issued by The Maritime and Coastguard Agency (MCA), which to notify mariners of safety considerations, hazards and their responsibilities while operating, within the vicinity of offshore wind farms, including but not limited to:

[MGN 372 Amendment 1 \(M+F\) Safety of Navigation: Guidance to Mariners Operating in the Vicinity of UK Offshore Renewable Energy Installations \(OREIs\).](#)

[MGN 661 \(M+F\) Navigation - safe and responsible anchoring and fishing practices.](#)

Appendix 1: Coordinates of Wind Turbine Generators at Humber Gateway Offshore Wind Farm

Wind Turbine Coordinates															
String	Site ID	Circuit	Turbine ID	Latitude		Longitude		Site ID	Circuit	Turbine ID	Latitude		Longitude		String
				Deg/Mins Decimal	N/S	Deg/Mins Decimal	E/W				Deg/Mins Decimal	N/S	Deg/Mins Decimal	E/W	
String 1	A05	1	200662	53° 39.1969'	North	0° 15.3141'	East	D05	2	200690	53° 39.0659'	North	0° 16.897'	East	String 5
	A06	1	200663	53° 38.8775'	North	0° 15.4559'	East	E06	2	200700	53° 38.7026'	North	0° 17.5655'	East	
	A07	1	200664	53° 38.5588'	North	0° 15.5969'	East	E07	2	200701	53° 38.3837'	North	0° 17.707'	East	
	A09	1	200665	53° 37.9201'	North	0° 15.8804'	East	E08	2	200702	53° 38.0644'	North	0° 17.8476'	East	
	A10	1	200666	53° 37.6013'	North	0° 16.0212'	East	F07	2	200710	53° 38.3396'	North	0° 18.2338'	East	
	A11	1	200667	53° 37.282'	North	0° 16.1629'	East	F06	2	200709	53° 38.659'	North	0° 18.0924'	East	
	A12	1	200668	53° 36.9627'	North	0° 16.3045'	East	G06	2	200716	53° 38.6149'	North	0° 18.6202'	East	
	B12	1	200677	53° 36.9192'	North	0° 16.831'	East	H06	2	200724	53° 38.5712'	North	0° 19.1479'	East	
String 2	C12	1	200687	53° 36.8768'	North	0° 17.3383'	East	I06	2	200731	53° 38.5274'	North	0° 19.6847'	East	String 6
	B05	1	200670	53° 39.1534'	North	0° 15.842'	East	B04	2	200669	53° 39.4722'	North	0° 15.7002'	East	
	B06	1	200671	53° 38.8341'	North	0° 15.9829'	East	E05	2	200699	53° 39.0219'	North	0° 17.4239'	East	
	B07	1	200672	53° 38.5148'	North	0° 16.1246'	East	F04	2	200707	53° 39.2972'	North	0° 17.8102'	East	
	B08	1	200673	53° 38.1955'	North	0° 16.2664'	East	G03	2	200713	53° 39.5724'	North	0° 18.1966'	East	
	B09	1	200674	53° 37.8767'	North	0° 16.4071'	East	H03	2	200721	53° 39.5288'	North	0° 18.7246'	East	
	B10	1	200675	53° 37.595'	North	0° 16.532'	East	G04	2	200714	53° 39.2536'	North	0° 18.3382'	East	
	B11	1	200676	53° 37.238'	North	0° 16.6903'	East	F05	2	200708	53° 38.9778'	North	0° 17.9518'	East	
String 3	C11	1	200686	53° 37.1945'	North	0° 17.2169'	East	G05	2	200715	53° 38.9342'	North	0° 18.4787'	East	String 7
	D11	1	200696	53° 37.1521'	North	0° 17.7248'	East	H05	2	200723	53° 38.89'	North	0° 19.0065'	East	
	C06	1	200681	53° 38.7901'	North	0° 16.5107'	East	I05	2	200730	53° 38.8464'	North	0° 19.5334'	East	
	C07	1	200682	53° 38.4713'	North	0° 16.6516'	East	C04	2	200679	53° 39.4288'	North	0° 16.2273'	East	
	C08	1	200683	53° 38.152'	North	0° 16.7932'	East	D04	2	200689	53° 39.3848'	North	0° 16.7552'	East	
	C09	1	200684	53° 37.8326'	North	0° 16.9348'	East	E04	2	200698	53° 39.3418'	North	0° 17.2832'	East	
	C10	1	200685	53° 37.5133'	North	0° 17.0754'	East	F03	2	200706	53° 39.6166'	North	0° 17.6687'	East	
	D10	1	200695	53° 37.4698'	North	0° 17.603'	East	H02	2	200720	53° 39.8482'	North	0° 18.5832'	East	
String 4	E10	1	200704	53° 37.4273'	North	0° 18.1109'	East	I02	2	200727	53° 39.804'	North	0° 19.1102'	East	String 8
	F09	1	200712	53° 37.703'	North	0° 18.4949'	East	I03	2	200728	53° 39.4846'	North	0° 19.2517'	East	
	G08	1	200718	53° 37.9788'	North	0° 18.8992'	East	H04	2	200722	53° 39.2094'	North	0° 18.8651'	East	
	C05	1	200680	53° 39.1094'	North	0° 16.369'	East	I04	2	200729	53° 39.1657'	North	0° 19.393'	East	
	D06	1	200691	53° 38.7466'	North	0° 17.0377'	East	C03	2	200678	53° 39.7481'	North	0° 16.0865'	East	
	D07	1	200692	53° 38.4273'	North	0° 17.1793'	East	D03	2	200688	53° 39.7041'	North	0° 16.6136'	East	
	D08	1	200693	53° 38.1079'	North	0° 17.3209'	East	E03	2	200697	53° 39.6601'	North	0° 17.1416'	East	
	D09	1	200694	53° 37.7891'	North	0° 17.4615'	East	F02	2	200705	53° 39.9359'	North	0° 17.528'	East	
String 5	E09	1	200703	53° 37.745'	North	0° 17.9891'	East	H01	2	200719	53° 40.167'	North	0° 18.4417'	East	String 9
	F08	1	200711	53° 38.0203'	North	0° 18.3752'	East	I01	2	200726	53° 40.1234'	North	0° 18.9697'	East	
	G07	1	200717	53° 38.2955'	North	0° 18.7615'	East	J01	2	200732	53° 40.0792'	North	0° 19.4969'	East	
	H07	1	200725	53° 38.2518'	North	0° 19.2883'	East	J02	2	200733	53° 39.7603'	North	0° 19.6382'	East	
								J03	2	200734	53° 39.4409'	North	0° 19.7796'	East	