

JET Connectivity Scotland Marine Licence **Application for Moorings Supporting Information**

Background Project Information

This project builds upon JET Engineering System Solutions (JET-ESS) existing 5G buoy technologies and capabilities to develop a first-of-kind deployable multi-sensor 5G floating network to the offshore wind sector, enabling high-speed communications and integrated edge-processing multi-sensor payloads. This project aims to deliver a deployable linear multi-hop network, enabling multi-dimensional situational awareness and communication channels at sea, to fast-track the assessment and installation phases of wind farm development. The proposed buoy network fulfils the current market-pull in a previously unexploited avenue of offshore wind farm assessment and installation, removing the reliance on costly/slow satellite communication channels, manned vessels and aerial solutions.

Buoy Location and Supporting Maps

The deployment system will consist of 3 Anchors and associated Chains, which will connect in 3 places (one to each Floatation Vessel) and will reside within the hexagon of coordinates surrounding the Buoy position. The approx. co-ordinates are provided in the application. Maps are attached with the application.

Our location is chosen based on these considerations:

- In shallower water, to simplify the mooring and to reduce the area of seabed potentially affected by the mooring.
- Limited interference with 3rd parties, such as shipping and fishing companies.

Scotland Marine Plan Considerations – Offshore Waters

All policies of the Scotland Marine Plan have been considered and only applicable policies have been referenced and commented on as per below:

- 7. Aquaculture
- 11. Offshore Wind and Marine Renewable Energy
- 13. Shipping, Ports, Harbours and Ferries

Detection by Mariners

The primary method to deconflict fixed infrastructure and vessels is up to date charts, used skilfully in a vessel who knows her own position and course. In these ideal conditions, our buoy presents no hazard as long as it remains on station. The rest of this section considers how mariners can detect and avoid the buoy, without knowledge of location.

In poor visibility the buoy structure is largely metal, with the container side (2.4x2.4m) having multiple corrugations. This will generate decent reflections for both S and X band radars - and a radar reflector can be added if needed. (We acknowledge many recreational vessels do not carry or always operate radar).

Most commercial and many recreational vessels will be carrying AIS receiving equipment - and the buoy will carry a class B+ (SOTDMA) AIS transponder, with its antenna at 10m asl. This should be received out to 10nm from the buoy. The vessel name will end 'BUOY' - thus ensuring bridge personnel are aware this is a static object. We will notify the Hydrographic Office once deployment dates are confirmed also so maps can be updated.

Location Relative to Likely Navigation Tracks

The considered location does not interfere with commercial navigation tracks for any shipping or fishing companies.