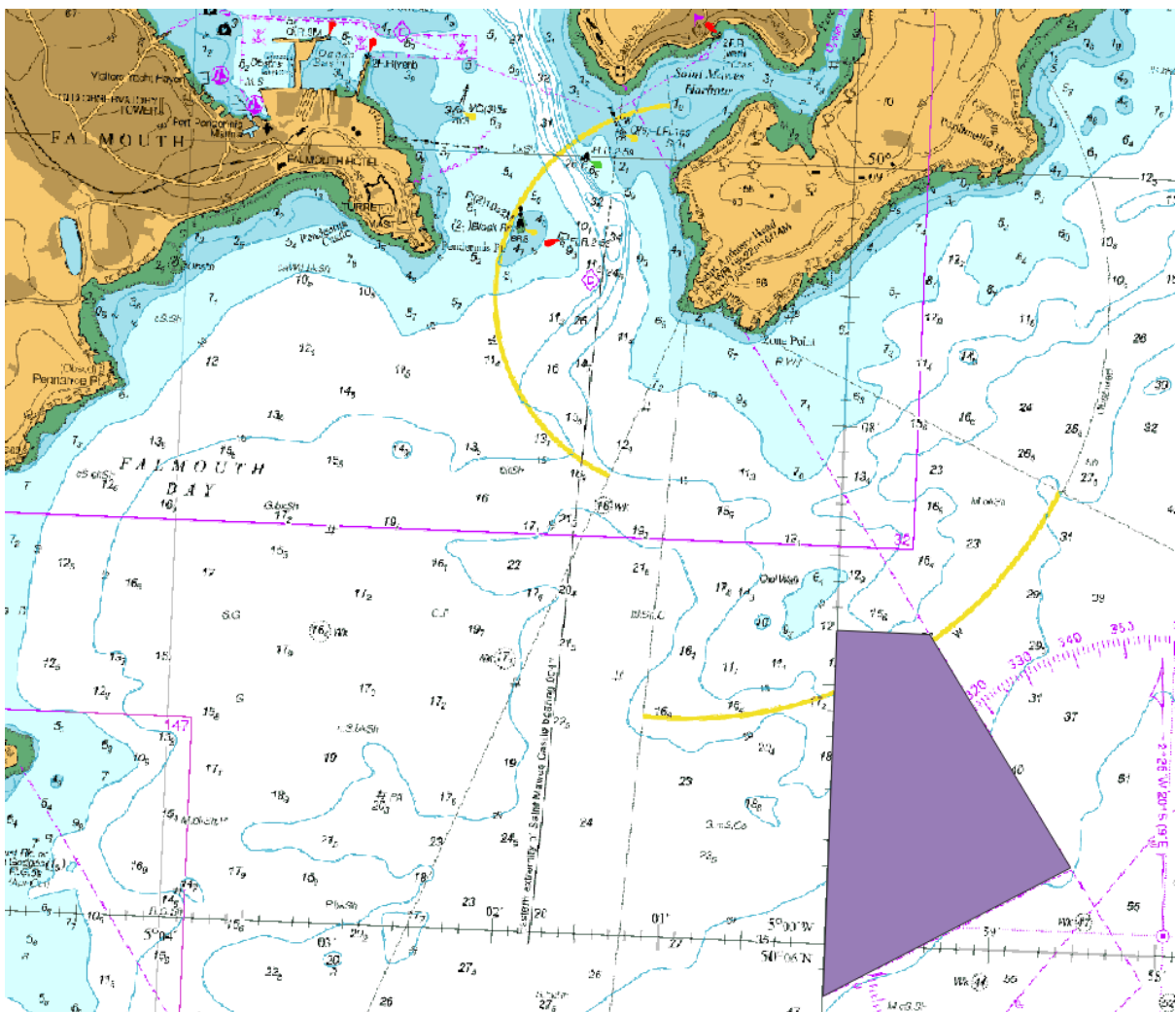


FAQs – FaBTest & Buoyant Productions

What is FaBTest?

FaBTest is an area that Falmouth Harbour Commissioners lease from the Crown Estate. This site has been strategically pre-selected to support the sustainable development of the marine energy sector in the UK and for the purpose of acting as a nursery site for the testing of prototype, demonstrator or experimental devices designed to generate electricity from the motion of the waves or currents or floating wind energy devices and ancillary cables, instruments and sub-systems. The pre-determined designation of the site helps to ensure alignment with key policies whilst minimising any potential conflict with other marine plan policy areas. The area designation has also been through a previous optioneering process with the Crown Estate to determine the most suitable location for this type of test and demonstration asset to deliver most value to the marine energy sector with the least risk.

Where is the FaBTest site?



© UKHO. Not for navigation

The FaBTest site is located in Falmouth Bay some 4.5 km from Falmouth Harbour Entrance. Falmouth lies on the south coast of Cornwall in SW England and is reputed to be the world's 3rd largest deep water port. FaBTest is situated in the Southeast corner of Falmouth Harbour waters in Falmouth Bay.

It is outside the Fal and Helford Special Area of Conservation. Part of the site sits within the Falmouth Bay to St Austell Bay Special Protection Area for 3 species of overwintering birds which is relevant from October to March each year. The project has been designed to ensure the majority of the device sits outside of the SPA boundary and also is carried out in months of the year that are not covered by the SPA designation.

Device location

A specific location within the FaBTest site boundaries has been allocated; 4.979913°W, 50.106231°N

The in-test area site allocation process has made a number of key considerations. The location in the Southeast corner of the test area maximizes separation from the Special Protection Area (SPA) designation off the coastline with the nearest anchoring point sitting 18.7m outside of the SPA boundary. Further separation is not feasible due to the outer boundary location of the FaBTest lease area.

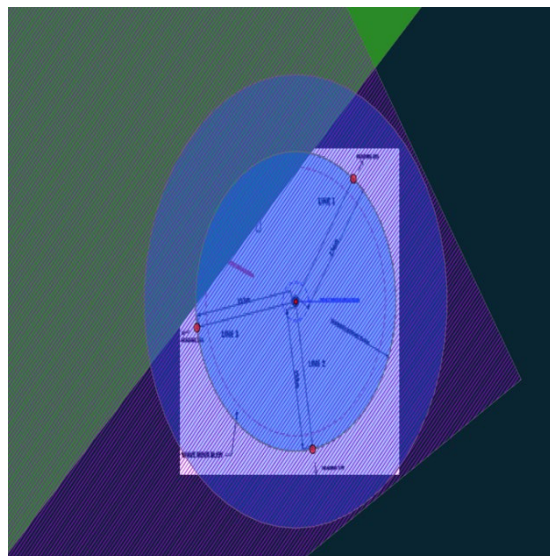


Figure 1 BPT device location and SPA boundary

The planned test schedule seeks to avoid the main over wintering bird season, which is the reason for the SPA's designation.

The location achieves the required water depths of approximately 50m whilst decreasing any minimal visual inference to the coastline.

The location avoids known sensitive seagrass and maerl habitats that are present in other parts of the FaBTest site. The temporary mooring system selected for the project

will utilise a gravity based system to avoid ground penetration and enable easy removal of the system post testing with minimal impact and sediment disturbance.

What is the device that will be deployed at FaBTest?

The proposed project positively aligns with a number of National and Regional Policies including the National Policy Statement, UK Marine Policy Statement and Southwest Marine Plan.

The BPT demonstrator is a cylindrical shaped floating structure made of two cylinders. The lower part of the hull (lower buoy) has a large diameter that connects to the main hull (slender cylinder) by a conical transition piece. The structure is designed to demonstrate BPT unmanned facility operations at scale. The demonstrator equipment list includes an e-house, a wind turbine, solar panels, emergency generators, communication equipment and a fuel tank to service the generator. Due to novelty in the Floating NUI spar-buoy hull form, the technology is currently at a pre-commercial stage of development. Technology qualification is required to test key aspects of the design performance, equipment functionality, and demonstrate the system is ready for commercial projects. Consequently, the functionality of the small scale system has been specified to achieve the functional testing required for the qualification of the technology. Information on the device that will be deployed is available from the Buoyant Productions website - <https://www.buoyantproduction.com/>

The device dimensions are as follows:

Moulded Depth – 8.30 m

Lower Buoy Height – 3.00 m

Operational Draught – 6.30 m

Lower Buoy Diameter – 8.50 m

Central Column Diameter 4.80 m

Airskirt Height – 1.20 m

Operational Displacement – 192 t

Max height above waterline –

Max width above waterline -

How will the device be secured to the seabed?

The device will be secured using a 3-point gravity anchor design. Each anchor will consist of the following: Line 1 – Three 12te gravity anchors, Line 2 – Four 12te gravity anchors and Line 3 – Four 12te gravity anchors. It is expected that the footprint of a 12te bundle will be around 5m². A Mooring design report has accompanied our Marine

Licence application including an update to reflect the worst-case scenario drift radius (236 meters) of the gravitational anchors. Anchor drag assessments have been conducted for a 50-year storm both with all lines intact and in a one-line broken condition.

Where is the device being fabricated?

The device is being fabricated at the A&P facilities at Falmouth Docks.

When is the project planned for?

Trail duration will be 5 months from June 2025 – October 2025. In October the entire device and all moorings will be removed. A decommissioning plan has been included in the Marine Licence application.

What are the likely visual impacts of this device deployment?

We expect temporary visual inference to be minimal from the coastline. The likely visible freeboard of the platform is around 4m in height and up to 7m in width, the device will be deployed around 4.5km from the nearest shore so it is very unlikely to be able to be seen unaided. This is by design to reduce the visual impact as much as possible by selecting the far Southeast corner of the site. If the device is visible above the horizon, the impact will be equivalent to that of a small vessel such as a fishing boat. Other devices of a similar size installed at FaBTest in the past have not received complaints in relation to visual impact. A similar sized device installed was the Fred Olsen Bolt with a freeboard of up to 4m in height. More information is available here [Bolt Lifesaver Technical Introduction – Boltseapower](#)

How have you minimised the environmental impact of this device?

Careful consideration has been given to minimise the environmental impacts associated with the temporary installation of this device and a comprehensive review of the Demonstrator design, to identify pollutants that might cause a risk to the marine environment during offshore operations have been included in the Pollution Control document and risks are identified as low or very low.

Pollution – A pollution document has been included with the license application.

Seabed impacts – Benthic surveys were carried out in 2011 as part of the set up FaBTest site. The impact of dragging anchors, if in an unlikely event it occurs, is the disturbance and abrasion of the seabed in a localised area. There is no risk to benthic systems such as Maerl in zone 2 and there are no fisheries on the FaBTest site.

Invasive Non-Native Species – A demonstrator offshore pollution controls document relating to this project has been submitted with the licensing application. This document evaluates managing the environmental risk of pollution to the marine environment through operating the BPT Demonstrator at the FABTEST site. The chain

which will be used for the drag anchors will have been previously used in the marine environment. However, it is very likely that the chain will have been drying on a quayside for a period between deployments, therefore no impact is anticipated from this short-term temporary installation

Underwater noise – Preliminary baseline assessment of Anthropogenic underwater noise took place at the FabTest site during June 2011. Acoustic pollution from the device is very unlikely as the wind turbines that will be used are very small (1.25kw which are comparable to those used on small yachts).

Green House Gas emissions – Exhaust from operations poses air quality pollution risk. However, the diesel generator will be run for a low amount of hours due to wind and solar being primary sources of power, it will be a newbuilt engine to modern standards that will limit exhaust emissions and will be air cooled with no water discharge.

How has navigational safety been achieved?

Falmouth Harbour has carried out a navigational risk assessment to ensure that risks are minimised. The Harbour Master team has worked with Buoyant Productions Technology to ensure that the platform will be appropriately marked and lit.

A notice to mariners will be issued prior to deployment to ensure that essential information is communicated to harbour users and the project has engaged directly with the Falmouth Harbour Users Group.