Smarter Pilot Boarding: Making Decisions from the Data

For Harwich Haven Authority, the pilot boarding area sits at the beginning of delivering safe and efficient marine operations. Until recently, there was no sure-fire way to measure local wave conditions at that exact point, which made planning harder and more time consuming than it needed to be.

Our Approach

Harwich came to OceanWise as the specialists with the experience to advise on the full spectrum of monitoring solutions. We listened carefully to their requirements and provided a range of viable options, ensuring they could confidently select the most effective approach for their operations.

They chose a Datawell Wave Buoy, supplied by RS Aqua – a highly accurate accelerometer-based system offering precise, resilient wave measurements ideal for critical boarding operations.

Before deployment, our engineers tested, configured and prepared the buoy, and installed the onshore receiver. We supported the project end-to-end to ensure everything worked seamlessly.

> *Accurate wave data at our pilot boarding areas has delivered an immediate operational benefit. When used alongside the experience of our pilot launch coxswains and VTS teams, and supported by weather and wave forecasts, it enables more informed, real-time decisions based on actual conditions. The quality of the data and the support from OceanWise throughout the project have been excellent.*

William Barker,
Marine Director & Harbour Master

The Impact

The buoy was successfully deployed and is delivering live, high-precision wave data directly into **Port-Log** (our cloud-based data platform), displayed alongside Harwich's wider environmental information such as weather, tide and AIS. The data is now being used by **VTS teams, Hydrographers and Pilots** and will be available on their public website www.hha.co.uk.

The wave data will also be used to continuously improve local wave forecasting by validating and refining existing forecast models against observed conditions at the pilot station. Over time, this will build a more accurate understanding of how offshore wave conditions translate into operational constraints at the boarding area. The data will additionally be ingested into an operational AI-enabled digital twin, allowing historic and real-time conditions to be analysed together to better predict periods when the pilot station is likely to become non-operable due to wave conditions. This will support earlier, more confident decision-making and improved planning across pilotage, VTS and marine operations.

If you have a specific data visualisation requirement or another challenge that you'd like our help with, please contact us today:

✉ info@oceanwise-global.com

📞 +44 (0)1420 768262

🌐 www.oceanwise-global.com

Harwich Haven Authority

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