

Nearshore & Littoral Zones Breakthrough



SCOTLAND: AUV UXO Survey



Tiburon Subsea was contracted to perform an unexploded ordinance (UXO) magnetometer survey of two high voltage DC cable routes in support of a new offshore wind farm installation in the Moray Firth of Scotland. The routes extended onshore to the high water line requiring surveying in the tidal and surf zones. Due to tidal currents, surf and shallow waters it can be very difficult to acquire high quality data sets in these zones using typical hull mounted or towed magnetometer systems. The seafloor geology presented additional challenges and hazards such as large boulder formations which were scattered throughout the survey area.

Tiburon Subsea was able to collect stable and high quality AUV magnetometer, side-scan sonar and bathymetric data sets in this highly dynamic environment. The AUV significantly reduced project risk as the support vessel was able to standby offshore more than 300m while the AUV was sent into the surf zone to acquire high quality data sets in water as shallow as 2m. The lightweight and man portable AUV allowed the survey team to operate using a small boat platform. The entire AUV UXO survey was performed using an 11m RIB out of the port of Buckie, Scotland in August of 2016.

The concept of AUV SIMOPs and contingency (which Tiburon Subsea is offering to the survey and inspection market) further enhances the options available with this equipment. A cost effective fleet of AUVs mobilized onsite on a small vessel will revolutionize traditional survey data acquisition from towed equipment, as well as SROV systems. Larger AUV systems requiring rated launch and recovery gear have restricted use in shallower water. They are costly and unreliable compared to traditional towed survey spreads and often require a more sophisticated and expensive ship to

operate

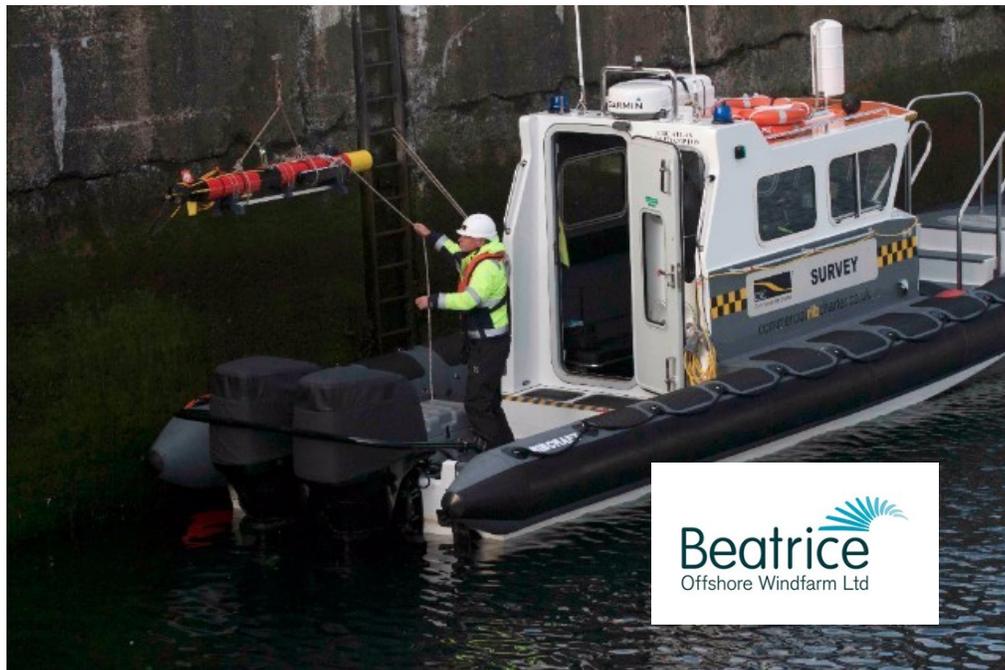
from.

Tiburon Subsea's one person portable AUV's and operational procedures have proven to be an excellent solution for high quality data acquisition. Tiburon Subsea reduces project risk in the surf zones and in choppy, shallow waters. We has harnessed the autonomous vehicle tool to successfully provide access the normally 'hard-to-get' parts of any route survey.

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"Their compact man deployable systems are ideal for near shore and remote access locations; The INS enhanced subsurface positioning and GPS give very good acquisition positions, well within acceptable survey tolerances. The resulting data is high resolution, high quality and acquired without the high time budget that often accompanies near shore survey. Pre-planned dive missions ensure that coverage is systematic and does not require additional infill and additional tide restrictions on vessels and towed spreads. Best of all it is a low cost solution, and well aligned with the industry's need to reduce costs during the current squeeze on hydrographic survey costs. Tiburon Subsea provides all the support required to ensure the system is calibrated, operated and the data QCed onsite. Their team is professional, thorough and highly experienced to provide AUV services worldwide. They get the job done!" **Fiona Stewart of *Hi-Res Subsea Services, LTD*** [Link >>>>>](#)



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