



The University of Aberdeen's Oceanlab is the first purpose-built ocean LANDER laboratory in the world. Local to the North Sea oil industry and close to Aberdeen and Dyce Airport, yet set in established grounds of woodland and water, Oceanlab at Newburgh, is integrated within some of the most sophisticated subsea industry suppliers in the world.

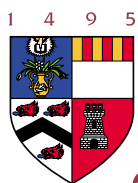
The 1100m² facility is one of the most comprehensive subsea proving and test suites in Europe.

This new facility encourages industry and scientists to work together and provides access to its state of the art facilities on a commercial and/or collaborative basis. The University of Aberdeen's world-class scientists have developed an enviable reputation for research, investigating the ecology and behaviour of marine animals. Time-lapse benthic imagery of benthic-pelagic fish, benthic epifaunal and infaunal invertebrates, provides a technologically leading quality of data for analysis. This ability is increasingly of commercial interest for environmental assessments, decommissioning and bioturbation investigations.

Areas of expertise extend to development of new technology, particularly acoustic telemetry, robust low power data logging controllers, and advanced systems for controlled depth investigation of the deep-sea environment. Autonomous LANDERS carrying cameras, sonars, and specific scientific instrumentation is the primary delivery system used for data collection. This technology extends to equipment and components rated as deep as 12,000 metres (7miles).

From the long standing and proven track record of the University of Aberdeen's Zoology Department and now borne out of Oceanlab's facilities this LANDER laboratory has created a world-class capability for exploring the oceans.

At Oceanlab exists the newly formed Business Unit which links customer contracts and test requirements to the expertise and facilities, bringing onshore proving to off shore technology. Industry aware and with a strong customer focus the Unit has undertaken Certificated Testing, Laboratory, and Fieldwork contracts for many of the world's leading manufacturers, energy providers and consultancy companies.



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Oceanlab Facilities

Subsea is one of the most challenging environments for instrumentation and technology. Sub sea systems need to withstand pressures, shocks, accelerations and temperature changes associated with operations from the tropics to polar regions and down to the deep sea. Oceanlab's flexible facilities enable us to deal with large and small projects thus appealing to all sizes of companies from SMEs to multi-nationals. The range of facilities includes:

Hanger Space

All facilities are within a large hanger space with 2.5 tonne overhead crane. Trucks can drive in and unload equipment in a heated "shirt sleeve" environment. Fork lift available also.

High Pressure test vessel

For testing equipment and certifying housings to 7000m depth. Internal dimensions 750mm diameter, 1800mm long and capability for chilling to 2°C for replicating abyssal ocean conditions. 6 ports allow power up and testing items at full ocean pressure.

Vibration table

Designed for subjecting equipment to accelerations and vibrations to prove reliability. Fully software controlled, a 30kVA amplifier drives the table from DC to 2400Hz with peak acceleration of 490m.s²

Environment Chamber

Provides environments from -40°C to +180°C with humidity up to 98% (depending on temperature) allowing a suite of comprehensive software controlled test cycles to prove system reliability under the most harsh conditions on earth.

Immersion tank

5m x 5m x 5m freshwater filled and with a lid designed to exclude light. This is capable of accommodating entire vehicle assemblies for testing. Matt walls and the blackout lid allows testing of cameras and lights under realistic conditions. This tank is large enough for acoustic calibrations, reference hydrophones are available. The 2.5t crane has access to all parts of the tank.

Sea water tanks

If sea water is important for tests, these tanks have a chilled, re-circulated filtered supply and have view ports on all four sides.

Large - length 3.5m, width 2m, depth 2m

Small - length 2m, width 2m, depth 2m

Access to Field Test Sites

A boat house and slip way on the River Ythan estuary provides access for field testing of gear either on muddy/sandy substrates or on the water of the estuary at high tide. Access to deep water sea loch test sites of the west coast of Scotland is also undertaken by arrangement through the Business Unit.

For more information, please contact:

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