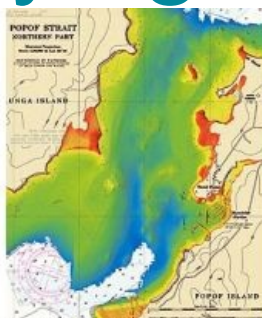


# TENIX LADS CORPORATION

## Coastal Surveying Capabilities



Tenix LADS Corporation (TLC) is a private company based in Adelaide (Australia) with offices in Cairns (Australia), Biloxi (USA) and Dubai (United Arab Emirates), and specialises in contract airborne LiDAR bathymetric services. TLC operates the latest generation laser airborne depth sounder (LADS) LiDAR system, a fast and efficient tool for bathymetric survey in shallow coastal

waters.

### Laser airborne depth

sounder (LADS) technology has a development history going back to the 1970s with the needs of the Royal Australian Navy (RAN) driving the development of a system to chart the vast tracts of the Australian marine environment. Originally set up by Australian government scientists in the 1980s, Tenix LADS Corporation (TLC) designed and developed their airborne LiDAR bathymetry technology in the early 1990s for hydrographic survey of the Great Barrier Reef. International contract survey operations started in the late 1990s, followed by the opening of offices in Biloxi in 2003 and Dubai in 2006.



### Diverse Staff

Nowadays, TLC employs approximately 65 people across various technical and management disciplines. The commercial survey services are provided by an experienced team of surveyors, all are qualified to IHO category A, IHO category B or degree-qualified in an aligned discipline. The surveyors are supported in the field by logistics and technical staff, pilots and aircraft engineers. An experienced in-house engineering group is responsible for all development and support of the LADS technology, both for the RAN and the company's commercial survey business. This group provides TLC the ability to control the development of the technology and ensures unparalleled operational maintenance and support capability.

### Detailed Planning

Tenix's management focuses on delivering the lowest risk solution to clients as a means to provide value for money. Integral to this approach is a thorough understanding of the clients' needs and how best the technology can be applied to the requirement. The approach is summed up by TLC's general manager Mark Sinclair, "Airborne LiDAR bathymetry surveys require detailed planning; we strive to agree a plan for the survey with the client and then deliver to that plan."

### Advanced Technology

Designed, developed and manufactured by TLC in Adelaide, the company proudly operates the latest generation LADS LiDAR system. The system, introduced into worldwide survey operations in 1998, was designed to survey complex shallow-water areas. Since then, the technology has evolved and is now available for the provision of contract shallow-water survey services for a broad range of applications including charting, supporting oil and gas exploration, coastal infrastructure development, climate change adaptation, coastal management, environmental studies and habitat mapping. Typical deliverables for LADS surveys include shallow-water bathymetry, near-shore topography, digital imagery, seabed relative reflectivity and optical diversity classifications, as well as a standard range of reports and products.

### Extensive Surveys

TLC has provided operational support services to the RAN LADS unit since 1993 with the current contract - supporting a new LADS system delivered in September 2008 - expected to continue until 2019. The company started offering commercial survey services in 1998

using a LADS system in an aircraft capable of global transits and operations. Commercial survey projects have been conducted for government agencies and private companies throughout the USA, Europe, the Middle East and Australasia. Since 2003, extensive surveys for nautical charting have been conducted for the National Oceanic and Atmospheric Administration (NOAA) in the USA. These surveys were carried out by the Biloxi office. "We are proud of our track record, internationally and in Australia; we have successfully delivered surveys large and small all over the world for a range of requirements," Sinclair notes.

## **New Market**

Over the last five years the use of airborne LiDAR bathymetric technology as a survey tool has increased substantially. The systems are well suited to surveying in clear, coastal water. Because airborne LiDAR bathymetric systems are able to operate in areas where acoustic, vessel-mounted systems suffer significant inefficiencies, a new segment of the bathymetric survey market has been identified: contract surveys for airborne LiDAR bathymetric systems. Seamlessly and safely surveying clear areas - it does not matter if they are shallow, complex or dry - is possible with an airborne platform and, because the swath width of the systems is independent of water depth, shallow areas are surveyed with no loss of efficiency.

## **Continuing Progress**

The ongoing development of airborne LiDAR bathymetry systems will be driven by evolving customer requirements, Sinclair believes. The area is most likely to see developments for coastal surveying, as user requirements in this area are still evolving and not uniform. The delivery of data sets that allow a range of mapping products to be delivered in this area is important to the user who is generally interested in more than just an elevation model.

E-mail: [robe...@tenixlads.com](mailto:robe...@tenixlads.com)

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<https://www.hydro-international.com/content/article/coastal-surveying-capabilities>

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