

## KEY BUSINESS: COASTAL AND HYDROMETRIC SURVEYS

# Titan Environmental Surveys Limited

Following the privatisation of the UK Water industry, Titan Environmental Surveys Limited was established in March 2000 through a Management Buyout of elements of the Scientific Services Section of the Laboratories and Sciences Division of Hyder Consulting Limited.

However, Titan's history spans more than thirty years. In the beginning the company's main business activity was performing cable-route landfalls, but over the past few years markets have started to shift and Titan's services are now developing towards marine renewables and, more recently, archaeological investigations. Today, Titan Environmental Surveys is a leading UK contractor in the environmental survey and monitoring business. In May 2005 Titan joined the Gardline Marine Sciences Group, the world's largest independently owned survey group.

### Key Business

Located in Ogmore by Sea in the Welsh county of Mid. Glamorgan, Titan currently employs 27 professional qualified staff with broad expertise in surveying and measuring the environment: oceanographers, hydrographic surveyors, geologists/geophysicists, chemists, biologists, microbiologists, hydrometric engineers and process specialists. The company's key business areas are coastal and hydrometric survey; however, Titan also undertakes specialist projects such as process-treatment studies and environmental monitoring. The provision of survey support for marine archaeology investigations is proving to be another key business area.

### Coastal Survey

Titan's coastal survey section specialises in nearshore measurements in coastal and estuarine waters. It has a wealth of experience in hydrographic/geophysical surveying and ecological studies and maintains a substantial pool of equipment, including the latest in DGPS positioning, integrated digital data capture and display/post-processing software. Having such a diverse range of expertise across so many specialist areas is unique within the industry and enables Titan to provide cost-effective services on all engineering projects associated with the coastal environment. Clients include water utilities, environmental regulators, oil & gas companies, port and harbour authorities, the construction industry, the power industry, marine renewables, dredging companies and engineering/environmental consultants. The company has wide survey experience, including projects throughout the UK, Ireland, Northern and Southern Europe, Far and Middle Eastern Countries, North Africa and the West Indies.

### Survey Vessels

Titan owns and operates three small survey vessels, all of which have been specifically designed and built for nearshore surveying. The Titan Surveyor and Titan Voyager are 7.9m catamarans and are compliant with Category 3 of the MCA Code of Practice for Workboats. The Titan Explorer is a 9.7m catamaran and is Category 6-compliant. All three are road transportable, so they can be quickly and cost-effectively mobilised throughout the UK and Europe.

### River/Sewer Flow

The Hydrometric Survey Division specialises in measuring river/sewer flows plus water/effluent-quality monitoring, and combining the data to determine pollutant loading rates in all aqueous environments (effluent streams, rivers, groundwater, leachates, lakes, reservoirs, treatment processes etc.) Traditionally having provided influent flow and loading information for the design of domestic or trade treatment processes, it is now frequently employed by regulators to measure pollutant loads in effluents and surface waters. Services have been provided throughout the UK, but also in Spain, the West Indies and China. Titan's Hydrometric team, like its Coastal Division, also maintains an extensive pool of equipment, with calibration facilities, and employs data-systems specialists to provide efficient data acquisition and processing software. All staff are fully trained in confined space entry, possess relevant health-and-safety equipment and work under stringent H&S protocols for river and sewer entry under Company System procedures. Clients include water utilities, environmental regulators, industrial dischargers, engineering consultants, process and Water Quality (WQ) modellers.

### Supporting Studies

Titan's hydrometric survey capabilities prove invaluable in supporting other environmental studies. For example, the ability to accurately measure flow and loads on either side of treatment processes allows plant performance to be assessed in detail. Similarly, the ability to measure riverine and outfall discharge in inshore waters (chemical and bacterial load rates) complements coastal survey capability when data is being collected for water-quality modelling. The team has developed in-house software for rapid QA and processing of flow and loading data. The same software is used to provide a high-quality graphical output or data files formatted to client's needs. The extensive expertise in flow measurement techniques and structures is regularly applied to investigate defective or poorly installed flow-measurement structures and to produce proposals and recommendations for upgrading these to meet relevant British Standard guidelines.

### Special Projects

In addition to specifying and managing environmental monitoring programmes, the company's Special Projects division undertakes a wide range of studies required to support capital investment planning or enhance operational procedures for water-treatment processes. Drawing on expertise throughout the company, it either directly conducts complex/intensive surveys or manages long-term monitoring programmes using cost-effective strategies.

### Titan's Team

Titan's managing director Malcolm Houston has been a marine scientist for over 25 years and has a wealth of experience in water-authority and coastal-survey work. A specialist in marine biology, oceanography and microbiology, Mr Houston spent sixteen years working for Southern Water, providing technical expertise primarily on coastal disposal or regulatory issues. Following privatisation of the industry, he developed a regional environmental assessment unit for Southern Science to support Southern's long sea outfall programme, before joining Titan Environmental Surveys Ltd (formerly Hyder Environmental) as survey manager in 1990. He has overall technical and commercial responsibility for the company.

Looking after the hydrometric survey and special-projects teams is Dan Owens, who has extensive knowledge of the hydrometric market, ranging from flow and loadings surveys to investigative and environmental monitoring and remote data acquisition. In addition, and following the Gardline Marine Sciences acquisition, Gardline environmental general manager Phil Durrant was appointed a director of Titan. Phil, who joined Gardline just over a year ago, has been instrumental in the company's recent growth and development in the area of nearshore and coastal surveys. He will work closely with Malcolm Houston to ensure that Gardline continues to develop as an environmental-survey specialist providing clients with a fully integrated service.

### Today's Focus

Titan continues to provide environmental monitoring and seabed-mapping services, and is now particularly active in the marine renewable-energy market, with a significant share of survey activities required by UK offshore wind farms. More recently there has been rapid growth in Titan's work with marine archaeological investigations; and this, along with shoreline surveys for coastal-defence studies, is an area that Malcolm believes offers his company great future potential. The more traditional markets of water, ports and harbours industries also continue to provide Titan with projects, both within the UK and overseas. In addition, Titan's hydrometric business continues to provide survey support for the UK Water industry Asset Management Programme. Titan turnover for the last year was in the region of 1.5 million, but Malcolm Houston hopes to achieve a figure closer to 2 million this year.

### The Future

The Gardline Marine Sciences acquisition complements current Gardline environmental, oceanographic and coastal survey activities undertaken by Gardline Environmental Limited (GEL). The future for both companies is very optimistic, as they collaborate to optimise services to clients. Future developments are expected to include investment in the existing fleet of coastal survey vessels, possibly adding to the four vessels (in addition to Titan's three small survey vessels, GEL owns the near-shore coastal survey vessel, Coastal Surveyor) currently operated by the two companies. This will enable Titan and GEL to develop existing markets and to venture into new sectors. Titan is also keen to further develop and expand the hydrometric side of its business and, utilising the international expertise of its new parent organisation, to overall offer services on a more global market.