



OSIL

# Systems



Cutting edge  
solutions

for marine, freshwater and  
environmental problems



**OSIL**

where science  
&  
business meet

When it comes to providing cutting edge solutions for marine, freshwater and environmental problems, OSIL has established a global presence that is second to none.

From the leading commercial company to the major academic institute, the OSIL team always aligns business requirements with the latest science to get the job done to the highest possible standard, safely and efficiently – on time, every time.

## You provide the **problem**



OSIL is the first choice for many because it understands its clients' goals and provides a tailored scientific solution that best meets their operational needs.

OSIL listens carefully to the brief and systematically works through a problem-solving process that draws on each area of its skills and expertise:



. **Unrivalled technical knowledge of equipment and instrumentation**

. **Access to OSIL's network of partner organisations and specialist know-how**

. **Custom products & solutions**



. **Highly competent technicians for installation, repairs and maintenance**

. **Project management & training**

. **Consultancy**

## We provide the **solution**



OSIL's solutions not only provide a distinguished technical capability, but also a range of support services from installation to repair.

With 60% of sales generated from outside the UK, OSIL is a trusted supplier of comprehensive solutions for the international community in a cross-section of industries.

- . **Marine & oceanographic**
- . **Coastal & ports**
- . **Estuaries & rivers**
- . **Land based monitoring**
- . **Commercial**
- . **Research & academic**
- . **Water treatment**
- . **Meteorological**

# Complete solutions

**PROFILE: BP Exploration**  
**AREA: Caspian Sea, Azerbaijan**



## THE PROBLEM:

As part of its exploration programme in the Caspian Sea, BP was keen to broaden its knowledge of drilling impact on the environment by monitoring a deep shelf site off the coast of Azerbaijan.

The chosen site presented a unique seabed environment that would require state-of-the-art equipment to accurately monitor the benthic processes and communities.

## THE SOLUTION:

OSIL supplied a complete package that carefully addressed each of the rigorous demands with a unique and elegant solution.

It revolved around the supply of a Bathysnap system, specially developed by SOC (Southampton Oceanography Centre). The system is designed for deep-sea photographic work whilst also collecting information on deepsea currents and can be used for periods of up to 24 months.

OSIL developed and installed a second camera system so that BP could also make rapid photographic assessment of the shelf site in the short term. This camera used an innovative 'pogo' device to move up and down to take shots at set depths.

To carry out environmental assessments of the seabed, OSIL also supplied a Bowers & Connelly Multiple Corer, which had been used with great success all over the world.

The Corer proved ideal for studying the fine detrital surface sediments through the collection of an undisturbed sediment sample.



# from start to finish

**PROFILE: Bellozane Sewage Works.**  
**AREA: Jersey, UK**



## THE PROBLEM:

For Jersey's main sewage treatment plant, measuring the waterflow quickly and accurately is central to the UV sterilisation process. Without this capability, there is always the chance of untreated effluent getting into the environment; the need for reliability is paramount.

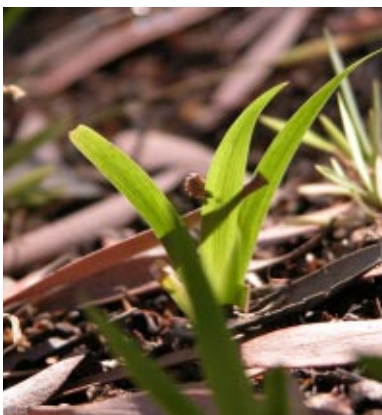
Traditional methods to measure water flow have always proved less than accurate, time-consuming and difficult to implement. Bellozane needed a solution that heightened accuracy and helped cut operational time and costs.

## THE SOLUTION:

OSIL used specialised Doppler Technology to provide a radical solution complete with accurate and up-to-the-minute data.

Using the very latest acoustic flow monitoring instrumentation, designed especially for shallow water, Bellozane experienced dramatic and immediate benefits ranging from reduced operating costs to improvements in water quality.

OSIL mounted the system on the bottom of the channel with ease and efficiency. Two acoustic beams measured the profile of water velocity, whilst a third measured the water level. Combining velocity and water level data with the channel geometry, the total flow could be monitored and UV levels adjusted. The whole process proved quick, exact and easy to use; staff spent less time analysing data and benefited from a highly efficient system.



# On time, in full

## THE PROBLEM:

For the Port of Mostyn, operational safety is a prerequisite for all activities. When P&O planned to operate two ferries from the port, having never berthed such large vessels there, safety was once again a key concern.

For years, vessels entering the port had been reliant on tide tables to ensure their passage in shallow waters. But these were not always reliable and P&O wished for more guaranteeable data to ensure a high service for both cargo and passengers. It was clear that a highly sensitive and accurate system was needed.

## THE SOLUTION:

OSIL set to work developing a monitoring system that would benefit its users around the clock. With an emphasis on fast knowledge and data transfer, the OSIL team chose a complex system of pressure, tide and meteorological sensors to gather accurate data on wave height, current speed and direction, tidal depth and wind speed. The chosen equipment meant that data could be transmitted in real-time direct to ships and the harbour master's office, by telemetry.

OSIL installed the system at two locations on the Dee Estuary and used a wireless modem link to ensure data could be transmitted to both incoming vessels and the shore stations. The system was designed to be as maintenance free as possible for year round operation. The sensors are calibrated annually to ensure accuracy and this is done in a pre-determined down period. Both vessels can now rely on immediate access to essential data as and when it is needed to assess depth, currents and weather conditions before entering port.



**PROFILE: Port of Mostyn in association with P&O Ferries**  
**AREA: Dee Estuary, Wales, UK**



# throughout the world

## THE PROBLEM:

Over the years, Kuwait's marine environment has suffered serious disruption. The impact of the Gulf War, industrialisation and extensive residential development have all taken their toll on the environment.

The EPA selected OSIL to help them monitor the situation with a view to moving the marine environment forward. They needed a state-of-art monitoring system that would continuously assess pollution levels and collect data for forecasting purposes.

## THE SOLUTION:

Carefully considering EPA's objectives, OSIL set about designing and implementing one of the most advanced monitoring systems in the world.

The solution used a network of eight oceanographic data buoys as the central means to monitor the environment. Each buoy was designed to deliver absolute accuracy and reliability.

The OSIL team then installed the buoys, overseeing their maintenance on an ongoing basis. Each buoy was supplied fully equipped with extensive capabilities. Cutting-edge instrumentation allowed the swift and easy collection of biological, chemical, oceanographic and meteorological data in real-time.

In the event of the breach of preset thresholds, each buoy would also transmit an alert to the EPA, allowing them to implement a secondary monitoring programme.



**PROFILE: Environmental Public Authority (EPA)**  
**AREA: Kuwait Coast**





**OSIL**

Services  
& Capabilities

## Services

Systems configuration  
Design & build  
Installation  
Ongoing support  
Comprehensive technical problem solving  
Chemical consulting  
Oceanography  
Meteorological systems  
Data collection systems  
Real-time telemetry  
Solutions to problems  
Dedicated project team  
Full audit trail  
Engineering  
Fully documented ISO 9001-2002

## Clients: commercial

BP, UK  
TOTAL, France  
Fugro GEOS, UK  
Associated British Ports (ABP), UK  
Jacobs, UK  
Southern & Scottish Energy, UK  
Clyde & Co, UK  
Environment Public Authority, Kuwait  
TINRO, Russia  
Safege, France  
Qinetiq, UK  
Thales, France  
Emu Ltd, UK  
Det Norske Veritas AS, Norway  
Associated Petroleum Consultants, UK  
Royal Malaysian Navy, Malaysia  
RWE Nukem, UK  
Van Oord, Belgium  
WS Atkins, UK  
Halliburton, UK

## Clients: academic

Southampton Oceanography Centre, UK  
Woods Hole Oceanographic Institution, USA  
Scripps Institute of Oceanography, USA  
NIO, India  
Alfred-Wegener Institute for Polar and Marine Research, Germany  
British Antarctic Survey, UK  
BMM, Belgium  
CEFAS, UK  
Ifremer, France  
CSIRO, Australia  
DOE, NI  
Environment Agency, UK  
Centre of Ecology & Hydrology, UK  
International Atomic Energy Authority, UK  
KORDI, Korea  
Proudman Oceanographic Laboratory, UK  
Scottish Environmental Protection Agency (SEPA), UK

