

SEA OUTFALL SERVICES

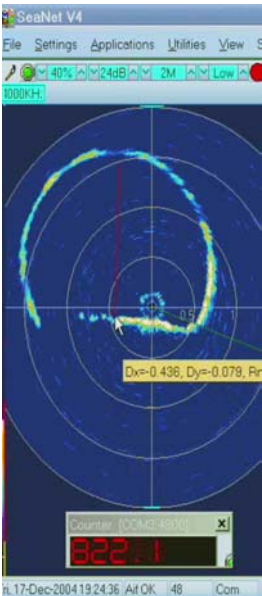
inspection • testing • cleaning • rehabilitation • tracking

We provide a turnkey solution for all aspects of outfall inspection, testing and rehabilitation.

Outfall surveys can present more challenges than other pipe surveys in terms of accessibility, dependency on weather and the identification of deterioration patterns.

Exposure to the splash zone combined with an aggressive internal and external environment can serve to create widely varied corrosion and damage patterns.

External surveys provide valuable information on general condition, but little of the information required to determine outfall performance and longevity.



Internal inspection & testing services

Sonar profiling - silt/debris/damage levels

Ultrasonic wall thickness testing

Magnetic Flux Leakage (MFL)

3D Gyroscopic outfall mapping

Certain critical aspects of outfall performance and longevity can often only be determined accurately from within the pipe.

We understand the difficulties associated with obtaining the data required to effectively assess the condition and potential life-span of an outfall.

To this end, we combine unique inspection systems with cutting edge technology to obtain data from locations previously considered inaccessible.

Internal inspection & testing

An internal inspection is of vital importance in determining silt/debris levels, damage and deformation, all of which have a direct impact on outfall performance.

Internal Non-Destructive Testing (NDT) including Ultrasonics and Magnetic Flux Leakage techniques (MFL), provide critical condition and longevity data.

Outfall tracking

Outfall tracking, plotting the 'x y z' axis of the pipe, enables a comparative study to be made against the 'as-built' drawings, in order to determine whether pipe migration has occurred.

External inspection & testing services

Side - scan and bottom profiling sonar

Pipe location and tracking

Ultrasonic wall thickness testing

CCTV/Video - still photographic

Cathodic protection system testing

External inspection & testing

A detailed external inspection by divers will determine general condition including: extent of outfall burial/exposure, stabilisation & pipe saddle structural condition, condition and function of diffusers and localised wall thickness testing. The survey can be tied in to the internal survey with any internal anomalies being checked externally by diver. A detailed CCTV survey provides a permanent record.



Vessel charter

Vessels from 6m - 60m - Barges - Tugs - Amphibious vehicles

Outfall cleaning

We combine traditional High Pressure water jetting techniques with our unique winched scraper system to clean pipes varying between 400 - 1800mm diameter for lengths in excess of 700m.

The winching system is 'low-impact' and presents none of the damage hazards associated with traditional winching such as abrasion damage and joint displacement. The system is easily deployed by divers.



All-terrain HP jetting rig deployed at beach access hatch to support pipe-cleaning operation on remote access location



Hi-vac lorry jetting unit and portable dive trailer on work barge during 700m outfall cleaning operation

Outfall rehabilitation

We provide a comprehensive range of rehabilitation services which include: placement of Fabric Formwork shuttering for pumped concrete containment on pipe stabilisation, pipe support and scour protection operations. Fabrication and installation of pipe saddles for localised repair and sectional replacement. Diffuser clean, repair and replacement.

Under-scouring is the major cause of joint displacement and subsequent failure. The problem is easily overcome by the timely placement of concrete stabilisation mattress.



Placement of concrete stabilisation mattress to support section of pipe spanning sea bed

TOTAL CLIENT SUPPORT

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