This specialist business was established over 25 years ago (Seacore Ltd) and has become a market leader in its field.

The Business is a Tier 2 Contractor operating globally; specialising in the design, build and delivery of innovative marine solutions utilising its in-house knowledge of jack-up barges and large diameter drilling design (up to 8 m) and operation.

Contracts up to GBP 20,000,000 are delivered successfully.

There is a highly trained and capable workforce of designers, engineers, project management and commercial teams.
DESIGN & INNOVATION

Range flexibility has always been an important element of service. In-house design and engineering teams are continually innovating and testing for technical and operational ability, to provide safe, effective and bespoke drilling solutions, that meet the exacting requirements of each new project.

The accredited HSSEQ system generates feedback, producing continual improvement, both operationally and technically.

- Professional engineers.
- Mechanical, electrical and hydraulic systems, civil engineering disciplines.
- IMechE MPDS scheme for graduate engineers.
- CAD software: AutoCAD, Solidworks, EPDM document management system.
- Analysis: STAAD-Pro, FEA.
- Experienced in working to IACS society rules DNV-GL, Lloyd's, NKK and in associated design approval processes.
- Experience in producing FEED and Feasibility study reports.

JACK-UP BARGE DESIGN
CAPABILITY & ENGINEERING

Jack-up barges (static 4 leg and walking 8 leg):
- Analysis: SRA’s, transit, towing and stability analyses, operating nomograms.
- Modular pontoon and monohull construction.
- Jacking units, legs, leg jetting systems, power units, control systems, support and access systems.
- Propulsion systems.
- Cranes and davits.
WORKSHOP & FABRICATION

All equipment is built and serviced at a purpose-built workshop in Falmouth, Cornwall, in the UK. From the drills themselves, to the containers they are shipped in, everything is designed, procured, made, protected, function tested and certified to the highest standards at an extensive on-site facility. The project tool and preparation phase starts here and continues through mobilisation, delivery and demobilisation, culminating in the careful storage of equipment in readiness for the next project.

- Fully operational and adaptable fabrication facility employing full-time multi-discipline fabricators.
- Capable of 20 t of fabrication per month at standard production, which can be increased to in excess of 100 t per month with prior planning.
- Able to facilitate 24 hour fabrication production with prior notification.
- Solid and Flux core MIG, as well as stainless steel and aluminium TIG welding capabilities.
- 30 t workshop lift capability.
- On-site profile cutter and various held stock enables rapid reaction and production capability.

Paint facility:
- Fully operational indoor blasting, painting and baking facility.
- Employing full-time, dedicated painters.
- Capable of offering three coat offshore grade paint schemes within a three day time frame.
- Capable of blasting to grade SA2.5 during painting preparation.
- $13.2 \times 5 \times 3.7 \text{ m (L,W,H)}$ blasting and painting bays, capable of accommodating a 40 ft container.

Lifting equipment inspection facility:
- Fully manned, LEEA accredited lifting department employing full-time members of staff.
- Capable of carrying out lifting and rigging equipment inspections under LOLER in any global location.
- Certified container inspectors.
- Able to carry out 6 and 12 monthly LOLER inspections on all types of installed fixed mechanical lifting equipment, including: Derrick mounted lifting equipment, lorry mounted Hi-AB’s, vessel/fixed mounted cranes, winch and wire inspections.

MECHANICAL & ELECTRICAL FITTING FACILITY

- Fully operational indoor mechanical and electrical fitting shop.
- Employing full-time mechanical fitters and full-time electricians.
- 30 t workshop lift capability.
- “Gates” BFPA qualified hydraulic hose manufacturing facility.
- British Fluid Power Association (BFPA) CETOP Level 3 hydraulic qualified fitters.
- Fully mobile, reactive mechanical and electrical service, deployable worldwide within an hour’s notice.
- PLC programming conversant electrical department.
- The diversity of the mechanics’ experience means many of them are fully qualified vehicle mechanics as well as hydraulic fitters.

YARD BUILD & TEST FACILITY

- 90 t on-site permanent crane capability.
- Ability to hire additional crane capacities.
- Industrial jet wash facility with multi-stage waste water filtration system.
Fugro is one of the leading players in the global large diameter drilling and foundation installation market with a fleet of subsea drill systems, ancillary equipment and jack-up barges to deliver construction related services in nearshore and offshore environments.

**HIGH-SPECIFICATION DRILLING EQUIPMENT**

Fugro’s fleet consists of 11 owned drills as well as 3 monohull jack-up barges and 1 Joint Venture (JV) walking jack-up barge owned and operated through a long term “Joint Venture agreement” on a 50/50 basis.

The drill fleet consists of 11 drills, mostly in-house designed and manufactured with additional grouting equipment, lifting equipment and desanding units.

**UNIQUE IN-HOUSE CAPABILITIES**

Unique in-house tooling, drill manufacturing, jack-up and pile handling and engineering capabilities, providing a comprehensive and integral service offering.

Capability to deliver a full spectrum of marine, civil and pile installation services.

Full range of integrated jack-up barge and vessel based subsea services from nearshore civil engineering, heavy construction support and installation, renewable foundation installation and nuclear nearshore shaft drilling support.

**GLOBAL FOOTPRINT**

Fugro is organised to access and target global markets in the energy, power and infrastructure sectors.
PILE TOP DRILL FLEET

Fugro has developed some of the largest drill assemblies in the world. Bottom-hole assemblies (BHAs) are generally shrouded to maintain hole integrity during drilling and are designed to be container transportable and quick to fabricate on-site. Qualified, experienced drill crews are multiskilled, often having internationally recognised certificates in welding, crane driving and seamanship. This ensures that once embarked upon a project, every contingency is accounted for and can be overcome.

- The largest known fleet of specialist pile top and jack-up mounted drilling rigs in the market.
- All are fully containerised and modular.
- All designed, engineered and fabricated in-house.
- Flexible reconfiguration for each and every project.
- Cost effective solutions for a variety of marine piling and foundation/shaft drilling requirements.
- Capable of drilling shafts from 0.5 m to more than 7 m in diameter.

REVERSE CIRCULATION DRILLING SYSTEMS

- Reverse circulation and forward circulation power swivels 3 t.m to 120 t.m.
- Pile top drills capable of drilling from 0.7 m to 8 m diameter.
- Reverse circulation downhole equipment.
- Drill control and monitoring systems.
- Spoil management and separation systems.
- Pile handling, pile gate and leader leg systems.
- Bespoke handling and lifting equipment.
- Grouting systems.
### TEREDO RANGE

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<th>T10 MK2</th>
<th>T40SL</th>
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### PILE TOP DIAMETER GUIDE

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Fugro’s technical expertise, sound safety record, and environmental sensitivity have led to successful contracts on every continent. The business works as principal contractor, sub-contractor and within joint ventures, for many long-standing and new clients each year.

**GLOBAL CONTRACTS**

Australia’s largest offshore gas platform - achieving drilling speeds of up to 36 m/h, these two high-performance, pile top rigs were designed, built and operated for Heerema Marine Contractors.

**BESPOKE PROJECTS**

Fugro can reconfigure its marine drills or mobilise alternative in-house drilling systems for installation onto floating vessels and barges. These heave compensated solutions allow drilling of sockets up to 7 m diameter in water depths beyond the reach of jack-ups. Example applications include wind farm monopiles, anchored moorings, pier/jetty foundations, mudline cellars and subsea mining.

**HEAVE COMPENSATED DRILLING**

Woodside’s development of the Greater Western Flank area in Northwest Australia involved the installation of subsea moorings for Mobile Offshore Drilling Units. The requirement to operate in water depths exceeding 100 m led to the innovative development of a heave compensated drilling solution capable of drilling rock sockets over 2 m in diameter.
WAVE & TIDAL ENERGY

Fugro have worked on multiple wave and tidal installation contracts, such as the projects successfully completed for Marine Current Turbines and Aquamarine Power at Lynmouth, Strangford Loch and on the Orkneys.

Piles embedded in the seabed rock, through pile top drilling, provide the optimum stability to resist the loads from modern wave and tidal generators. On the Orkneys in Scotland, rock sockets for the 800 KW Oyster wave energy converters were drilled 20 m into hard rock, providing the stability to withstand North Atlantic storms.

NUCLEAR

Nuclear power plants require vast quantities of water from the sea or rivers to cool the reactors. Fugro successfully carries out ‘reverse circulation drilling’ to create the offshore ‘riser’ shafts needed to meet the intake/outfall water tunnels mined from the shore.

Fugro pioneered the first shaft of its kind at Flamanville Power Station in Northern France, using the T90 to create a 63 m deep, 6.5 m diameter shaft in iron ore infused granite. This bespoke drill overcame the challenges of installing a shaft in open sea with strong currents and 20 m water depth.
OIL & GAS

Highly experienced in harsh working environments, Fugro regularly provide seabed drilling services for the foundations of offshore structures required by global oil and gas production companies.

Whether drilling with heave compensation from a vessel, or being installed on a jacket structure, this business has the ability to design, create and operate the equipment needed to meet the complex challenges encountered working in this sector.

Typical of the Company’s capability was a request from the BP Shah Deniz Field to adapt downhole equipment to carry large diameter casings through 103 m of water of the Caspian Sea; drill them 27 m into the ocean floor to secure the project’s seabed template.

WIND POWER

Following the installation of the foundation piles for the world’s first offshore wind farm of its type in Gotland, Sweden, Fugro has gone on to successfully install many more. The majority of projects involve the installation of large diameter monopile foundations for wind turbines and meteorological masts. Fugro’s drilling systems are designed to meet the challenge of delivering these in the most testing conditions.
BRIDGE FOUNDATIONS

Large diameter ‘rock socketing’ for concrete bridge foundations provides a cost-effective and safe alternative to cofferdam bridge construction. Whether it’s for a new pier or to strengthen existing piers, Fugro offers a vibration-free method through ‘reverse circulation drilling’.

This method was used to safely install the pier foundations for Kincardine Bridge on the Firth of Forth in Scotland for Morgan Vinci JV. Fugro used its T40 reverse circulation drills to create sealed rock sockets that were filled with reinforced concrete to create bases upon which the piers were constructed.

DESALINATION PLANTS

Similar to nuclear power, desalination plants also need to process vast quantities of seawater for the desalination process. Fugro drills large diameter offshore shafts through the seabed to provide the connection to the tunnels from the plant. This method avoids the environmental intrusion of trenching and protects the natural habitat of the seabed.

Shafts drilled for contractor Geocan S.A. for the Escondida Water Supply in Chile demonstrated the efficiency of using this process, despite the requirement to work in 30 m of water on the exposed Pacific Ocean coast with long wave periods.
PORTS, HARBOURS & JETTIES

To install new terminals or repair existing berths, Fugro has equipment to drill foundations to depth, offering basic ‘relief drilling’ or large diameter ‘rock socketing’ to cope with the loads associated with today’s ships.

Fugro has provided drilling services to ports from Cape Lambert in Australia to Falmouth in the UK.

WORLDWIDE OPERATION

Just some of our Clients...

Just some of the places in the world we have worked...
‘Fugro completed the site works so successfully in the winter months, an achievement that should not be underestimated’

Morgan Vinci JV

‘The fact that Fugro drilled twice as fast as the other drill on the project is testimony to excellent performance of both the drill and the Fugro personnel.’

RWE Innogy

Fugro GeoServices, the No 1 overwater drilling contractor:
- We understand the problem
- We design the equipment
- We build the equipment
- We operate the equipment to provide the solution

Falmouth Office
Bickland Industrial Park
Falmouth TR11 4TA
Tel +44 (0) 1326 254500
Fax +44 (0) 1326 254501
Email geoservices.uk@fugro.com
Website www.fugro.com

Registered Office
Fugro House
Hithercroft Road
Wallingford
OX10 9RB
Registered number 1284352
VAT number 133170409