

Established in 1997, Primo Marine is an independent specialist with a wealth of experience in subsea cable engineering, from landfalls to subsea marine infrastructures.

With an extensive track record, including the provision of onshore and offshore expertise to many of the largest European cable installation.

Primo Marine provides the full spectrum of onshore and offshore expertise covering Engineering, Project, Tender and Quality, Health, Safety and Environment Management (QHSE) to Offshore Management & Client Representation.

Primo Marine provides industry leading solutions to all installation, protection and maintenance challenges, throughout the lifecycle of the project, by combining real theoretical knowledge with hands on practical onshore and offshore experience.

Primo Marine – delivering:

- Clever Cable Care.
- Cable Strategy (Response & Repair) Solutions.
- Helpdesk for offshore installation, protection and maintenance challenges.
- 24/7 Emergency Accessibility.



Theoretical Expertise



meets



Practical Experience



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Onshore & Offshore Engineering and Management of Subsea Cables and Pipelines

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Extensive Knowledge of Subsea Installation and Protection







Practical Experience

Combined Knowledge

Primo Marine identifies the "unknown" and provides combined engineering and technical solutions based on three core principles:

- 1. A solid theoretical background
- 2. Applying all the lessons learned from all projects completed (practical experience)
- 3. Flexible deployment of exact expertise

Introduction

Established in 1997, Primo Marine is an independent specialist with a wealth of experience in subsea cable engineering, from landfalls to subsea marine infrastructures.

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Expertise Delivering Industry Leading Solutions

Cable Strategy (Response & Repair) Solutions

Primo Marine provides practical cable strategies covering Business Continuity and Emergency Response Solutions, including prevention (maintenance), preparedness, response and repair.

The summarised results:

- Prevention: Limitation of risk profile against damages and/or the development of failures; as part of
- Preparedness: Systems to improve prevention and response.
- Response: Reduced repair time (in the event of unfortunate damage and/or failures).

Clever Cable Care

Primo Marine provides solutions from Engineering to Offshore Management focused on delivering **Clever Cable Care** throughout its lifetime, aiming at minimising cost and risk thus leading to a more

realistic CAPEX/OPEX balance. Throughout the stages of licensing, design and installation to the aftercare requirements of operations and maintenance.

"Owner's Engineer" a Core Differentiator

Cable Installation & Protection CAPEX/OPEX

Primo Marine creates solutions focusing firmly on providing realistic CAPEX/OPEX comparisons, especially in terms of ensuring correct cable

installation management and protection to the cable by effective route engineering & burial throughout the cable's lifetime.

Owner's Engineer

Primo Marine considers its role of "Owner's Engineer" as a core differentiator. Our independence ensures adherence to all corporate, project, financial and legislative specifications including permitting requirements in regard to cable burial and installation.

Primo Marine closes the gap in regard to resources by being a "central hub" of independent expertise, utilised to achieve the best results for our clients' requirements.

Comprehensive Service Portfolio

Services

Primo Marine provides the full spectrum of onshore and offshore expertise covering Engineering, Project, Tender and Quality, Health, Safety and Environment Management (QHSE) to Offshore Management & Client Representation.

Engineering

Primo Marine offers an extensive Engineering capability, covering:

- The Pre-Construction Stage: Comprehensive offering of analysis, optimisation and protection is designed to focus completely on reducing (1) installation risk (2) installation cost (3) cost of seabed preparation (4) claims (by differing parties/stakeholders).
- Installation Stage: Comprehensive offering designed to focus completely on risk to cable installation and achieved burial depth of time, in order to reduce cost of maintenance over the lifetime of cables.

Project Management, Offshore Burial & Installation Specialists

Primo Marine has extensive experience, knowledge and expertise to provide Project Management solutions tailored to the requirements of offshore Dredging, Oil and Gas, Renewable Energy and Power Sectors. Including the provision of offshore Installation & Burial Specialists, to provide expertise on submarine cable burial and protection during the preparation and execution of the cable installation tender as well as during the cable installation.

Survey Management & Engineering

Primo Marine offers a comprehensive expertise, including full capabilities i.e. Geologist, Geophysicist and Hydrographic Surveyors for the management of data acquisition. Services including tender support, onshore and offshore representation, technical and contractual reviews, interpretation of data and management of survey performance.

QHSE Management

Primo Marine provides a portfolio of QHSE expertise covering both Corporate & Project requirements including the provision of offshore and onshore Quality Control and Safety Engineers and Managers. Primo Marine also provides independent expertise relating to Vessel Assurance, Assessment & Auditing, ISO accreditation, Investigations, Risk and Incident Management.

Offshore Management

Primo Marine has extensive expertise and experience to ensure effective planning, scheduling and thorough execution of all offshore project scopes relating to Trenching, Burial, Dredging, Installation, Survey, Operations & Maintenance, Cable Repairs and Construction Support (including rock-placement, heavy lifting and piling).

Client Representation

Primo Marine has assembled a dedicated offshore Client Representative team, each with over 25 years' experience related to offshore construction works. All members have been carefully selected due to their vast operational experience relating to Trenching, Burial, Dredging, Installation, Survey, Operations & Maintenance, Cable Repairs and Construction Support (including rock-placement, heavy lifting and piling).

Tender, Procurement & Financial Support

Primo Marine provides a comprehensive service including technical support, EU procurement regulations, documentation i.e. pre-qualification, from preparation and evaluation, to verification, selection and negotiation, including full procurement and contractual management.

Comprehensive Expertise

Expertise

Primo Marine is pleased to offer the following comprehensive portfolio of expertise related to onshore and offshore Engineering, Project, Tender and Quality, Health, Safety and Environment Management (QHSE) to Offshore Management & Client Representation.

Engineering (Pre-Construction)

Risk Based Route Analysis, Route Optimisation and Protection:

- Route engineering, design and preparation, focused on reducing installation risk and cost.
- Risk Based Burial Depth (Cable Burial Risk Assessments) determining how deep to bury.
- Seabed assessing presence of mobile seabed features and overcoming challenges to ensure safe installation and protection.
- Interface management i.e. authorities and permits.

Risk Based Studies, Design and Analysis. Soils:

- Burial Assessment Studies determining how to bury.
- Trenching Assessments determining capability of trencher.
- Cable and Pipeline Protection & Stability Studies.

Weather:

- Workability Studies optimising the performance of all construction activities.
- · Metocean studies.

Beach/Shore:

 HDD Feasibility Studies, Landfall Design and Shore Approach Installation.

Verification Studies, Design & Analysis.

- Peer reviews and provision of subject matter expertise including pro-active problem solving of events, challenges and issues (including the arranging and management of third parties).
- · Installation equipment specification.

Engineering (Installation)

- Reviewing methodologies, procedures for diverse activities such as crossings, permits, HDD entry and exit points.
- Recommending cable protection and seabed intervention methodologies.
- Recommendation to installation in mobile seabeds.
- Seabed Preparation & Levelling.
- Translation of technical issues into contract and permit requirements.
- UXO Desk Top Studies.
- Route Preparation: PLGR, Route Clearance and Seabed Intervention.

Project Management

Independent Interface Management of either individual work scopes or the full project lifecycle, covering responsibility for performance, cost and budgetary control. Also the provision of offshore installation and burial specialists.

QHSE Management – Corporate & Project

- Development of management systems to achieve and maintain ISO accreditations.
- QHSE Management related to the full onshore and offshore lifecycle of projects.
- Provision of onshore and offshore QC/Safety Engineers and Managers.
- Vessel and Equipment Assurance from compliance to monitoring.
- Risk Management.
- Auditing, Investigations & Assessments.
- Incident Management.

Offshore Operations & Maintenance and Construction Support

- Management of survey campaigns including specialist packages such as UXO.
- Management of cable installation, trenching, burial, dredging and protection campaigns.
- The management of emergency campaigns i.e. cable repair.
- The management of maintenance campaigns i.e. remedial, deeper burial and lowering.
- The management of construction campaigns i.e. piling, rock-placement, scour, crossing and heavy lifting.

Client Representation

Primo Marine offers, as part of its overall Offshore Management & Client Representation packages, the following comprehensive service:

- Independent service.
- The management of provision sum activities.
- Logistical & Crew Management.
- Guaranteeing the quality of works through management of works and safe operations.
- · Management of reporting and meetings.
- The following of IMCA compliant handbooks.

Tender, Procurement & Financial Support

Tendering - Technical Support, summary services include:

- Providing input to the Invitation to Tender (ITT) documents.
- Soil types a multitude of studies and subject matter expertise to ensure sufficient assessment of soils to avoid an increased risk on burial performance and high tender and installation costs.
- Conducting all technical capability reviews relating to selected parties.

Tendering - Commercial & Contractual Support including Evaluation, summary services include:

- Completing verification, evaluation and selection of selected parties on defined criteria.
- The conducting of contractual negotiations (including all clarification meetings).
- Assisting with the contract award phase including complete contractual management and meeting attendance.
- Procurement Management including resource identification.

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Track Record



1. Subsea Products

- Interconnectors
- Export & Grid Systems
- Inter Array & Power Connecting
- Cable Protection Systems

- Pipelines & Flexible O&G Products
- Dynamic Risers & Mooring Chains
- Telecommunication, Seismic & Defence

Track Record

Primo Marine has an extensive track record, having completed near-on 200 projects, since being established in 1997, with involvement for transmission system operators in the installation of many of the largest interconnector projects i.e. NordLink, NorNed, BritNed.

Primo Marine also has an extensive track record in providing onshore and offshore solutions in grid connection systems and offshore wind farm projects for clients ranging cable manufacturers, developers and installation contractors'. Primo Marine is presently providing solutions from installation to maintenance on multiple subsea power cables systems.



- Dredging
- Oil & Gas

- Renewables
- Power

3. Scopes

- Engineering
- Installation & Trenching
- Landfalls, Crossings and Seabed Preparation
- Offshore Management & Client Representation
- Construction, Piling and Heavy Lifting
- Project Management
- Protection, Dredging and Remedial
- QHSE
- Tendering & Contractual Management
- Response & Repairs

Primo Marine

Helpdesk for Offshore Installation, Protection and Maintenance Challenges

Primo Marine provides practical experience & expertise to overcome offshore protection, installation & maintenance challenges.

Operations & Maintenance – Emergency Response – Cable Repair Solutions

Primo Marine provides solutions for the prevention of or recovery from cable damage or faults for both predictable and unpredictable events. Solutions for minimizing costs and mitigating risks. The thorough planning of all necessary steps to be taken by all stakeholders, vessel and manpower identification and planning, storage & rental, permitting and authorities, responding, repairing and claim management.

24/7 Emergency Accessibility

Primo Marine offers a 24/7 Emergency Response and Accessibility service, throughout the lifetime of the project, specialist response covering:

- Cable Repair, Emergency Response & Cable Fault Finding Services.
- Subject Matter expertise in support of safety, regulatory and operational issues.
- Advisory services covering a range of enquiries including the sourcing of required resources or services.