

---

## **Experience Summary**

- 35 years post-graduate experience in offshore geotechnical and foundation engineering worldwide.
- Expert Witness experienced in writing technical reports and giving oral evidence in arbitration hearings.
- Core competence is the acquisition, description and interpretation of offshore and near-shore seabed and sub-seabed data for marine construction projects and subsequent foundation engineering and installation analyses.
- Design, management and interpretation of offshore surveys.
- In-depth experience of geotechnical laboratory testing (specification, management and interpretation of results).
- Significant foundation design and installation experience (e.g. driven piles, drive/drill/drive piles, drilled & grouted piles, suction caissons, gravity-based structures, monopiles, marine anchors and mooring systems).
- Trenching engineering assessments for cables and pipelines, upheaval buckling assessments, dredging, rock dump and on-bottom stability assessments
- Geotechnical analysis of dredging and offshore reclamation/artificial island schemes.
- Significant period spent offshore managing and supervising site surveys and trenching, piling and rock placement operations.
- Invited speaker at numerous conferences and seminars.

## **Qualifications and Affiliations**

- MEng BSc (hons) Civil Engineering, University of Manchester (1990)
- Certified Expert Witness, Cardiff University (2017)
- Chartered Engineer (CEng MIMarEST)
- Member of the Academy of Experts (Practicing Geotechnical Engineer)
- Fellow of UK Society for Underwater Technology (SUT)
- Member and former Chairman of UK SUT OSIG committee
- Member of the UK Offshore Engineering Society

## **Summary of Professional Experience**

### September 2016 to Date

Ternan Energy  
Founder & CEO / Principal Engineer

### May 1997 to August 2002

Coflexip Stena Offshore  
Senior / Principal Geotechnical Engineer

### September 2008 to September 2016

Senergy (acquired by Lloyds Register)  
Geotechnical Director

### March 1992 to May 1997

Brown & Root  
Foundation Engineer

### April 2005 to September 2008

ISIS Energy (acquired by Senergy)  
Founding Director

### August 1990 to March 1992

Fugro McClelland  
Senior Geotechnical Engineer

### August 2002 to April 2005

Hydrosearch (RPS Energy)  
Manager Geotechnical Engineering

---

## **Selected Expert Witness Experience**

- **2025**  
Fugro vs KFW  
Korea  
Site survey and site investigation for floating offshore wind farm  
Expert Report for proposed litigation - Singapore (June 2026)
- **2025**  
Nexans vs Celtic Interconnector  
Ireland / France  
Trenching of OWF interconnector cables  
Claims support and *ad hoc* advice
- **2024/2025**  
DEME vs EDF  
Scotland  
Trenching of OWF Inter Array Cables  
Expert Report and on-going advice for proposed litigation - London
- **2024**  
HSEI vs JOWP  
Korea  
Monopile run and jack-up spud can penetration issues  
Expert Reports and *ad hoc* technical advice
- **2024**  
Seaway 7 vs Changfang Wind Power Co & Xidao Wind Power  
Taiwan  
Seabed preparation (CFE) and trenching of subsea power cables  
Expert Reports and *ad hoc* technical advice
- **2022**  
Prime Capital Maldives vs Government of Maldives  
Republic of the Maldives  
Reclamation of artificial islands  
Expert Reports, Experts Joint Report and oral evidence in arbitration - Singapore
- **2021 & 2022**  
LSC vs Boskalis  
Singapore/Malaysia  
Installation of subsea power cables, Singapore / Malaysia  
Expert Report & oral evidence in arbitration - Singapore
- **2021**  
ADNOC vs NMDC  
UAE  
Design of artificial islands, offshore UAE  
Expert Report and (virtual) technical advice in Expert Determination
- **2020**  
Boskalis vs Vattenfall  
Scotland  
Design of suction caisson foundations & trenching of export cables for offshore wind farm  
Expert Reports & (virtual) oral evidence in arbitration - Edinburgh

- **2020**  
BIC vs BGC  
Iraq  
Umm Qasar Jetty 3. Nearshore pile design and installation.  
Oil offloading jetty, Iraq  
Expert Reports & oral evidence in arbitration – Dubai
- **2019**  
Boskalis vs Titan-2  
Finland  
Nearshore rock and soil dredging  
Expert Reports & oral evidence in arbitration - Helsinki
- **2016/2017**  
SPT vs SEP  
Dutch North Sea  
Design and installation of suction caissons, Dutch North Sea  
Expert Reports, Joint Report & oral evidence in arbitration - Rotterdam

## **Detailed Professional Experience**

### **September 2016 to Date**

Ternan Energy

Founder, Managing Director and Principal Geotechnical Engineer

Assessment of offshore survey data, gap analyses and advice on adequacy of datasets.

Engineering analyses and risk assessments to inform project execution offshore.

Advice to clients on how to manage seabed risks on their projects.

Expert Witness for seabed surveys, trenching and burial projects and foundation design for offshore structures.

### **March 2005 to September 2016**

Senergy (acquired by Lloyds Register)

Geotechnical Director

Review and assessment of offshore soils data and engineering design based on this data.

Engineering analyses and risk assessments to inform project execution offshore.

Expert Witness instructions.

Independent review of geotechnical information and engineering analyses.

Selected projects:

- SSE  
Caithness-Moray-Shetland HVDC Cable  
for all geotechnical aspects of project including route assessments and prediction of trenching performance and risks.
- AGIP KCO  
Kashagan Development  
Support to geotechnical design works for offshore, ice-resistant artificial islands for drilling wellhead and central facilities for oil development in Caspian Sea.
- Numerous Sites Worldwide (including North Sea, Persian Gulf, Far East, West Africa)  
Jack-up emplacement analyses, remedial foundation solutions, interaction and removal. Risk assessments. Application of HSE Offshore Information Sheet 3/2008 procedures.
- EDF Energies Nouvelle  
French Offshore Wind Farms  
Geotechnical and foundation design and installation support

## Mark FINCH

CEng MEng BSc (hons) MAE

Technical Authority – Offshore Geotechnical Engineering



- 
- London Array Offshore Wind Farm  
Site Investigation Design and Management  
Expert Witness support regarding installation vessel emplacement
  - GDF  
Cygnus Development  
Technical Authority for jacket pile design and installation engineering.  
Geotechnical overview of in-field and export pipeline installation.

### **April 2005 to September 2008**

ISIS Energy (acquired by Senergy)

Founding Director

Broad range of offshore geotechnical and construction advice to Clients worldwide. Key areas were geotechnical site and route assessments, trenching and burial engineering. Advice on emplacement of jack-up vessels and potential seabed risks. Frequent trips offshore to manage site investigations and trenching projects.

### **August 2002 to April 2005**

Hydrossearch (RPS Energy)

Manager Geotechnical Engineering

Broad range of offshore geotechnical site assessments and interpretation of soils conditions for engineering.  
Detailed foundation designs for offshore structures.

### **May 1997 to August 2002**

Coflexip Stena Offshore

Principal Geotechnical Engineer

Responsible for all geotechnical engineering (mainly trenching and subsea structure foundation designs) for CSO worldwide.

Numerous trenching and burial projects (> 60 projects). A typical project included the review of route specific geotechnical information and the engineering analysis of trenching operations and identification of risks and mitigation strategies.  
Responsible for all soils aspects of deep water dredging of seabed pits offshore Canada.

### **March 1992 to May 1997**

Brown & Root

Foundation Engineer

Detailed foundation design projects included:

- Hamilton Brothers  
Liverpool Bay Development
- Conoco  
Ganymede Development
- ONGC  
Bombay High, SHW platforms

All projects included in-depth review of soil conditions at site, development of design geotechnical parameters and detailed engineering for foundation piles and their installation.

Frequent trips offshore (approximately 250 days spent offshore, mainly in West Africa and the North Sea) to supervise piling operations.

---

## **August 1990 to May 1992**

Fugro McClelland

Senior Geotechnical Engineer

Offshore Geotechnical Engineer for site investigation projects worldwide

Approximately 300 days spent offshore on site investigation vessels.

Responsible for acquisition and interpretation of geotechnical data, writing of factual reports etc.

Foundation engineering including pile design, pile driveability, gravity base design etc.

## **Publications**

1. Georgiopolou, A., Lipp, P., Abel, L., O'Brien, J., Lauder, K., Searle, A., **Finch, M.**, Bagaria, P., 'A Geological and Geotechnical Assessment of the UK and Irish Celtic Sea Seabed for Floating Wind Energy', Proceedings of OSIG Conference, London, 2023.
2. Moran, P., **Finch, M.**, Brianso Del Rio, J., Orlowska, M., 'Geotechnical Characterisation of Soils Containing a High Silt Content, Proceedings of OSIG Conference, London, 2017.
3. Palmer, A., White, D., Baumgard, A., Bolton, M., Barefoot, A., **Finch, M.**, Powell, T., 'Uplift resistance of buried submarine pipelines: comparison between centrifuge modelling and full-scale tests', Geotechnique, Vol. 53, Issue 10, June 2005.
4. **Finch, M.**, 'Managing Seabed Risk in Developing Offshore Renewables', Proceedings of Oceanology, June 2004
5. **Finch, M.**, 'Optimising Site Investigations for Offshore Windfarm Projects', Proceedings of UK Offshore Wind Conference, London, 2003.
6. Maconichie, A., Fisher, R. and **Finch, M.**, 'Assessing Pile Driving Risks in Carbonate Soils and Rocks', Proceedings of BGA International Conference on Foundations, London, 2003.
7. Jenner, C., Finlayson, K. and **Finch, M.**, 'Optimising Integrated Site Investigation for Offshore Renewable Energy Projects', Proceedings of OSIG Conference, London, 2002.
8. Cowie, M. and **Finch, M.**, 'Backfill Improvement Techniques – Optimizing Pipeline Burial Solutions', Proceedings of Offshore Technology Conference, Houston, 2001.
9. Machin, J., Messina, F., Mangal, J., Girard, J., Finch, M., 'Recent Research on Stiff Clay Jetting', Proceedings of Offshore Technology Conference, Houston, 2001.
10. **Finch, M.** and Machin, J., 'Meeting the Challenges of Deepwater Cable and Pipeline Burial', Proceedings of Offshore Technology Conference, Houston, 2001.
11. **Finch, M.** and Fisher, R., 'An Integrated Approach to Pipeline Burial in the 21st Century', Proceedings of Deep Offshore Technology Conference, New Orleans, 2000.
12. **Finch, M.**, 'Upheaval Buckling and Floatation of Rigid Pipelines: The Influence of Recent Geotechnical Research on the Current State of the Art', Proceedings of Offshore Technology Conference, Houston, 1999.
13. **Finch, M.** and Machin, J., 'Pipeline Foundation Considerations', Proceedings of OSIG Conference, London, 1998.
14. **Finch, M.**, 'Glory Hole Construction and Trenching Challenges Offshore Canada', Proceedings of OSIG Conference, London, 1998.
15. **Finch, M.** and Fisher, R., 'The Right Tool for the Job', Proceedings of Subsea Geotechnics Conference, Aberdeen, 1998.
16. **Finch, M.**, 'A Novel Deepwater Excavation System for Harsh Offshore Environments', Proceedings of Subsea Geotechnics Conference, Aberdeen, 1998.