

Ørsted

The People Behind Offshore Wind Power



About Ørsted

Headquartered in Denmark, Ørsted is a renewable energy company that takes tangible action to create a world that runs entirely on green energy.

Our aim is to develop and deploy market leading renewable energy solutions that benefit the planet and our customers alike, driving down the cost of green energy.

We have invested significantly in the UK, where we develop, construct and operate offshore wind farms and innovative waste-to-energy technology. We also provide smart energy products to our commercial and industrial customers.

Who are the people behind our offshore wind farms?



Ørsted is the global leader in offshore wind power. We employ people with a wide ranging skill set in a variety of roles to support the development, construction and operation of our offshore wind farms.

Here, members of our team share the routes they've taken through education and employment which have led to careers in offshore wind power.

Investing in the UK



We are investing heavily within the UK. £8 billion invested to date.



We will be investing at least another £4 billion by the end of 2020.



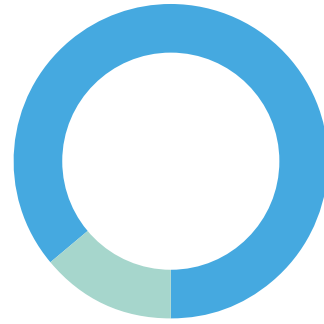
We are investing in people, growing our business with almost 900 direct employees within the UK.



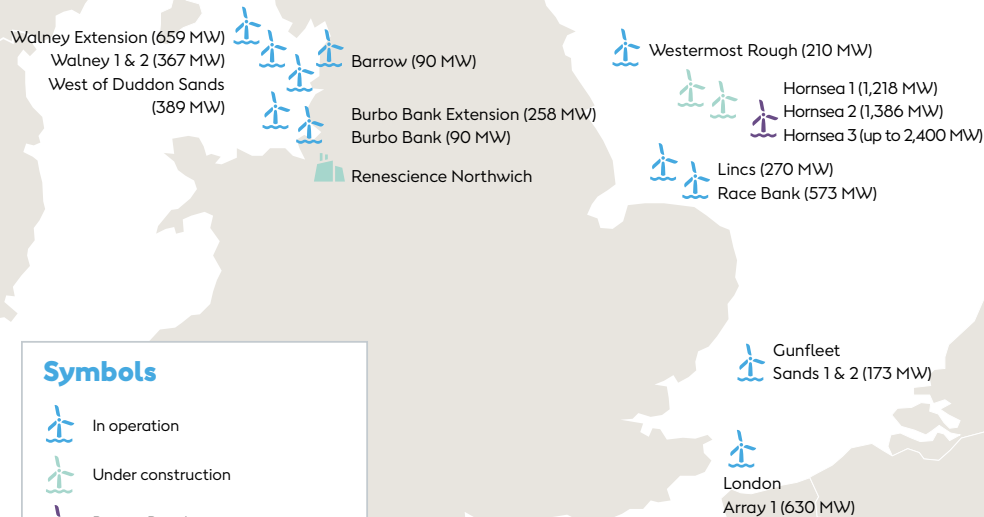
We are creating long term operation and maintenance jobs in areas near our projects. These include the Humber, Barrow, Brightlingsea, Ramsgate and Liverpool.

Ørsted wind farms in the UK

25 Years
Operations and
Maintenance



3-4 Years
Construction

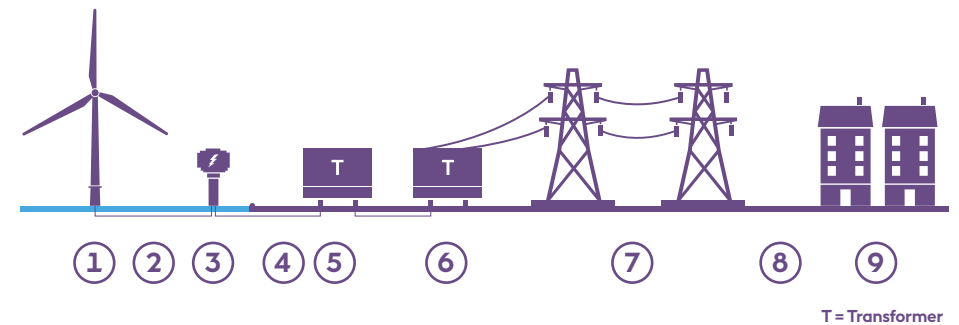


Symbols

- In operation
- Under construction
- Project Development
- (MW)** Total wind farm capacity
- In operation
- Under construction

Building an offshore wind farm

An offshore wind farm comprises several key components. Offshore turbines generate electricity which travels through underwater cables via an offshore substation towards shore. Underground cables then transfer the electricity to an onshore substation where it is converted to the correct voltage so that it can be transmitted to the electricity network.



1. **Wind turbine** – Electricity is produced as the wind turns the rotor blades. The blades turn a shaft containing magnets inside loops of copper wires.
2. **Array cables** – These cables link the turbines to one another and to the offshore substation.
3. **Offshore substation** – Converts electricity to a higher voltage so less energy is lost as it transmits to shore.
4. **Export cables** – Connect the offshore substation to the onshore substation
5. **Project specific onshore substation** – Connects the electricity supplied from the offshore wind farm to the national grid.
6. **National Grid onshore substation** – Converts the electricity to the voltage of the onshore transmission network.
7. **Transmission** – Transmission lines carry electricity at high voltages over long distances from power plants to communities.
8. **Distribution** – Electricity from transmission lines is reduced to lower voltages at a substation prior to distribution to communities.
9. **Homes** – Electricity is used to light our homes, power our appliances and make our lives more comfortable.

Constructing an offshore wind farm



Construction phase can typically last 3-4 years.



Construction involves between 250-1,000 people.



An array of professionals are involved in the design and construction of the substations, cable routes and turbines.



Roles within construction are varied. We employ locally, UK wide and from around the world to obtain the necessary expertise.



More than 100 roles are involved in the construction phase from operations coordinators and electrical engineers through to commercial managers and everyone in between.



Specialist Ørsted staff design and oversee the building of each wind farm. We also use a range of contractors who employ local people to help us build things like the onshore substation and the operation and maintenance facilities.

Meet the team



Engineers



Project Managers



Health & Safety Managers



Offshore Coordinators



Stakeholder Relations & Communications



Partnerships



Finance



Legal



Jason Ledden
Construction Project Manager
 Race Bank Project

My job is to manage and coordinate all activities in the Construction Design Management area with a high focus on safety, quality and programme delivery. I am responsible for managing other project managers, budgets, time schedule and identifying project risks. I also manage contracts and relations with our suppliers.

Qualifications

- HSE Commercial diver, Parts:4,3,2&1
- IMCA diver Medic
- IMCA Diving supervisor
- NVQ Level 5 Occupational Health and Safety practice
- NEBOSH General Certificate
- IOSH Graduate Member

Previous employment

- Royal Marines
- Civil Engineering Diver
- Saturation Diver (closed bell)
- Diving Coordinator (Wind farm construction)
- HSE package lead (Cable installation)
- Offshore facilities manager
- Deputy Construction Project Manager



Steven Nicholson
Health Safety & Environmental Engineer
 Race Bank Project

I am responsible for supporting the project in all matters relating to Health, Safety and Environment. This involves liaising with contractors to ensure statutory compliance and monitoring all construction activities.

Qualifications

- NVQ Level 4 Diploma Occupational Safety and Health
- NEBOSH General Certificate
- IOSH Graduate Member

Previous employment

- Offshore Rigging Supervisor at Subsea 7
- Business Owner - Fabrication/ Machinery Moving/Steel Erection
- Offshore Rigging Supervisor/HSE Coach at Subsea 7
- HSE Advisor at Siemens Wind Power
- HSE Engineer on the Westermost Rough Project at Ørsted



Rebecca Goff
Senior Maritime Specialist
 Race Bank Project

My job is incredibly diverse and can range from being the single point of contact for support across all east coast UK sites, to managing the technical management and mobilisation of our new Service Operations Vessel, the Edda Passat.

Qualifications

- BA (Hons) Business Studies; University of Liverpool
- Commercial background in Marketing and PR following on from degree
- Maritime qualifications:
- Master 200gt CoC (MCA) / OOW
- Deck 500gt
- GMDSS GOC
- MCA Approved Engine Course
- STCW 95 Basic Training
- ENG 1 Medical Fitness Certificate

Previous employment

- Vessel Master at Seacat Services
- Marine Manager Race Bank Project



Jessica Westcott-Hayes
Senior Installation Lead
Offshore Foundations and Structures Installation

Borselle 01 & 02 Project

I am currently involved in the first Dutch Windfarm for Ørsted; Borssele 01 & 02. I am responsible for the transport and installation of the wind turbine foundations. My role and responsibilities are varied and cover procurement, engineering, installation and handover to Operations and Maintenance. More specifically, I oversee and manage the foundation contractor and approve their engineering methods to help ensure the scope is delivered safely, on time and within budget.

Qualifications

- BSc Geology with Oceanography; Southampton University
- MSc Coastal Engineering and Environmental Studies; Southampton University
- IOSH Managing Safely

Previous employment

- Project Superintendent for Dredging and Offshore projects at Van Oord DMC
- Project Engineer and Operations in Offshore Wind Projects at Van Oord OWP



Michael Schmidt Nielsen
Graduate Engineer

Burbo Bank Extension Project

I am on the Graduate Scheme working as an Interface Manager for the Burbo Bank Extension onshore substation. I am responsible for overseeing the installation of the low voltage system and the cable schedule at our onshore substation, making sure we meet National Grid's standards of high power quality.

Qualifications

- **BSc Electrical Engineering; Technical University of Denmark (DTU)**
- **BSc Exchange in Singapore Nanyang Technological University (NTU)**
- **MSc Electrical Engineering with specialization in Electric Energy Systems; Technical University of Denmark (DTU)**

Previous employment

- **Work experience as an Electrician**



Edward Ridgway
Technical Project Manager

Wind Farm Development

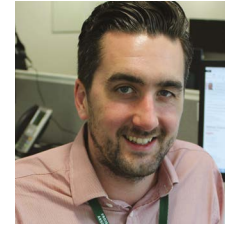
I am part of a team that designs and turns future potential wind farm ideas into reality. We are constantly looking at the latest technology to see how this can be put into our next wind farm to make it better and cheaper. My role also looks at how we install these wind turbines in ever deeper water, in larger wind farms and further away from the coast.

Qualifications

- **BEng Mechanical Engineering; University of Edinburgh**

Previous employment

- **Engineering technician at Edinburgh Designs – making wave machines for research institutions so they can test their models in a lab**
- **Technical Project / Sales Manager at Siemens Wind Power**
- **Engineer and Project Manager at Pelamis Wave Power – Start-up Company making a device to harness wave energy**



Gordon Pope
Deputy Construction Project Manager

Hornsea Project One

Supporting the Construction Project Manager, I facilitate daily coordination of site management, HSE engineers, Offshore Marine Managers and logistics and commissioning for the construction of the wind farm.

Qualifications

- **MEng Civil Engineering; Glasgow University**

Previous employment

- **Intern for Scottish and Southern Energy (SSE)**
- **Civil Engineering Manager for Griffin Wind farm**
- **Lead Engineer on a further three onshore windfarms**
- **Project Manager, onshore 132/275kV substations, Stonehaven**
- **Deputy Construction Project Manager for the Walney Extension Project**



John Vernon
Senior Health & Safety Environment Manager

Burbo Bank Extension Project

My role is to provide Ørsted managers and employees with advice, guidance and direction on all aspects of health, safety and environmental issues.

Qualifications

- **NEBOSH Diploma (part 2) in Occupational Safety & Health**
- **Institute of Environmental Management Certificate in Environmental Management**
- **HNC Engineering**
- **Chartered Member of the Institute of Occupational Safety and Health**

Previous employment

- **Trainee Electronic Technician in the Royal Air Force**
- **18 Years in Plastic Manufacturing Industry in a variety of roles including: Machine operator, Engineer, Safety and Systems Manager and Production Manager**
- **8 years in a Health, Safety and Environment management role in a variety of organisations (Public Transport, NHS and Construction)**
- **8 years as HSE Manager (Burbo Bank Wind Farm) at Ørsted**



Gabriel Davies
Lead Commercial Manager and
Head of Programme Commercial
Management

Hornsea Project Two

Reporting to the Asset Director, and working as part of the Hornsea Two Programme Leadership Team, I provide commercial support to the project. This includes commercial contract negotiation, divestment transaction support, government subsidy contract management and ongoing development of third party stakeholder engagement.

Qualifications

- **BA (Hons.) American History & Politics; University of Manchester**
- **Graduate Diploma and Legal Practice Certificate; Nottingham Law School**

Previous employment

- **2 years as Lead Commercial Manager for the Walney Extension Project**
- **6 years in private practice law firms specialising in major infrastructure planning and energy law**
- **Two years on secondment at DONG Energy as in house legal counsel advising development projects on planning and commercial issues**



Mark West
Wind Turbine Installation Specialist

Race Bank Project

I manage the transfer of turbine components, including the blades, nacelle and tower, and installation of the wind turbines offshore. This involves managing both a vessel supplier and a turbine installation contractor to ensure that we erect the turbines in a safe manner, but also on time and to budget.

Qualifications

- **BSc Mechanical and Manufacture Engineering; Portsmouth University**

Previous employment

- **Field technician on high speed rotating machinery at Angelus Machine Corp**
- **Wind turbine technician (Onshore) at Nordex**
- **Wind Turbine Commissioning Engineer (Lincs Offshore Wind Farm) at RES**



Sally Holroyd
Lead Consent Project Manager

Walney Extension Project

I make sure we build the wind farm without causing harm to the local environment. During the project development phase, my team is responsible for undertaking environmental surveys and studies, along with applying for the key environmental consents. We ensure that our onshore and offshore site contractors remain compliant with all required environmental constraints.

Qualifications

- **BSc (Hons) Applied and Environmental Biology; University of York**
- **MSc Crop Production in the Changing Environment; Essex University**
- **Pg. Dip Geographical Information Systems; University of Portsmouth**

Previous employment

- **Environmental Scientist at Oakwood Environmental: EIA and consenting for the marine aggregates industry**
- **Principal Consultant at Intertek Metoc: EIA and consenting for the cables and marine renewables industries**



Thomas Rosier
Offshore Installation Manager

Walney Extension Project

I manage the activities of our contractor whilst they construct the wind farm. It is important that they install the structures according to our precise technical requirements, staying within the schedule and cost of the project. Keeping everyone safe, we adapt to the challenges of the offshore environment and ensure the operations are closely controlled.

Qualifications

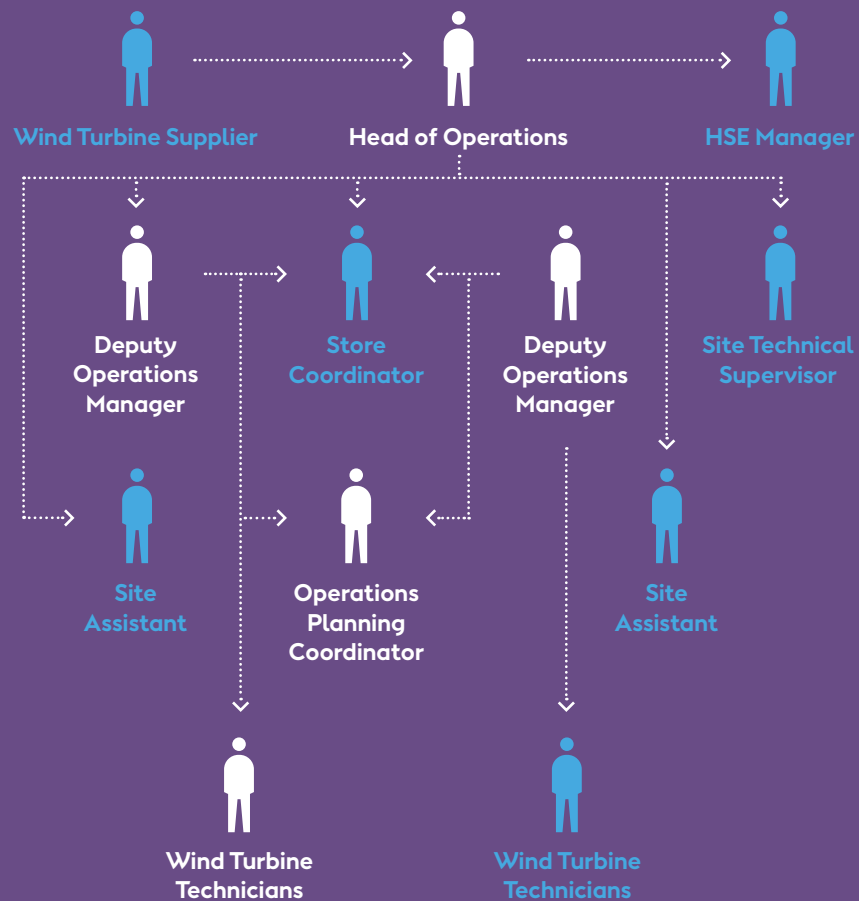
- **MEng Engineering Design, Bristol.**

Previous employment

- **3 month student placement Seaway Heavy Lifting, The Hague.**
- **12 month student placement RWE Innogy, Swindon.**

Operating & maintaining an offshore wind farm

Today's offshore wind farms will produce clean electricity for 25 years. It can take around 35-100 people to operate and maintain an offshore wind farm. A large proportion of these people will be locally based.





Andrew Greenleaf Head of Site Operations

Gunfleet Sands Project

I lead the team who operate Gunfleet Sands windfarm. My team maintain, repair and upgrade the site's offshore wind turbines. My role is to ensure the team work safely in what is a challenging offshore environment, while also motivating and facilitating my people to ensure the turbines are fully operational.

Qualifications

- 4 year mechanical / electrical apprenticeship.
- HNC Electrical Engineering
- BSc and LLB
- MSc – Management
- NEBOSH qualification in safety.

Previous employment

- Various engineering roles in the Electricity Supply industry
- Operational management roles in EGT, NTL and Arqiva
- Senior operational management role in Virgin Media.



Paul Hazell Offshore Coordinator

Westermest Rough Project

As the Offshore Coordinator, I am responsible for coordinating marine operations via both helicopter and sea vessels. I plan both proactive and reactive maintenance, responding to emergency situations.

Qualifications

- NEBOSH General Certificate
- Facilities Management Certificate
- Level 7 Diploma in Strategic Leadership & Management
- NVQ Level 3 Logistics
- Coach and Mentor
- GWO certification (First Aid, Sea Survival, Manual Handling, Fire Awareness & Working at Heights)

Previous employment

- Site Planner at Siemens – (11 Months)
- Learning and development officer/ Logistics offshore/Communications instructor in the Royal Artillery, British Army – (26 Years)



Nicole Read Offshore Coordinator

Race Bank Project

I am responsible for coordinating the vessels and personnel working offshore, from setting up the vessels to working on our site. I monitor safety whilst the team are working offshore. We ensure safe and effective transit to the offshore assets and in the event of something going wrong coordinate emergency response. Every day brings different challenges that require fast solutions.

Qualifications

- Master 200GT CoC/OOW deck 500gt
- BSc (hons) Computing & Business
- VHF/DSC GOC operator
- STCW basic training
- ENG 1 medical fitness certificate
- ex RNLI Crew & Navigator
- RYA Advanced Powerboat Instructor

Previous employment

- 12 years as windfarm CTV master



Ryan Marsland Technical Site Supervisor

West of Duddon Sands Project

I provide technical support to fix turbine components, undertake maintenance and find faults. I work with the technical departments such as Wind Turbine Systems, Diagnostics and Technical support. I also work closely with our other wind farms so we can share lessons learnt.

Qualifications

- BSc Mechanical Engineering; University of Lancaster (Furness College)
- NVQ level 2 & 3. Key skills level 3
- ONC, HNC and HND in Mechanical Engineering and CAE

Previous employment

- 4 year Mechanical Maintenance
- Engineering Apprenticeship at a local paper production and converting factory
- 5 years as a shift mechanical resource
- 6 years offshore turbine experience with Ørsted on the Siemens 3.6 MW turbine
- 5 years as an Authorised Technician carrying out fault finding/trouble shooting tasks and servicing
- 6 months as a Supervisory Technician before moving into the Technical Site Supervisor role



Andrew Bell
Warehouse Manager & Coordinator
 Burbo Bank Project

I am responsible for looking after technicians along with ordering spare parts, Personal Protective Equipment, tools and lifting equipment. I deal with all deliveries in and out of the warehouse and work closely with local suppliers to procure the necessary parts.

Qualifications

- **GCSE equivalent (History, Maths & PE)**
- **GWO Certification (First Aid, Manual Handling, Sea Survival, Working at Heights)**
- **Forklift Licence**

Previous employment

- **Retail Manager at Scottish Power**
- **Retail Manager at SONY Centre**



Tricia Percy
Site Assistant
 Westernmost Rough Project

As the Site Assistant, I am responsible for the full administrative site support, including management and technicians. This includes travel arrangements, processing of orders and shift input, training coordination, document management, monthly reporting and analysis.

Qualifications

- **GCSE & A level equivalents**
- **RSA/Pitman typing Advanced**
- **Microsoft Office (Word, Excel, PowerPoint)**
- **Pondus/Qube**
- **GWO Certification (First Aid, Sea Survival, Fire Awareness, Manual Handling, HUET)**
- **Fire Warden**
- **Safety Rep**

Previous employment

- **PA/Site Secretary**



Josh Gallacher
Wind Turbine Technician
 Westernmost Rough Project

As an offshore wind turbine technician my main role and responsibility is to work safely and carry out a variety of manual tasks to ensure that the wind turbines are working reliably and at maximum efficiency. We work out at sea fixing the complex machinery in the wind turbines, so it is important that we communicate effectively and work together.

Qualifications

- **HNC Mechanical Engineering**
- **ECITB Level 3 Diploma – Installing engineering construction plant & systems (Mechanical)**
- **Mechanical Fitting Modern Apprenticeship**
- **ACE card**
- **IRATA Level 1 rope access**
- **NVQ Level 2 Performing Engineering Operations (Instrumentation)**

Previous employment

- **Rotating Equipment Technician at Total Lindsey Oil Refinery**



Amy Tebbs
Wind Turbine Technician
 Race Bank Project

As a wind turbine technician I'm trained to carry out routine inspections, maintaining, testing and repairing electrical and mechanical equipment.

Qualifications

- **NVQ electronics**
- **Apprenticeship**
- **GCSEs**

Previous employment

- **Royal Navy 6 years**



Tom Baker
Wind Turbine Technician

Lincs Project

I am part of a team that looks after the general maintenance of the offshore wind turbines, carrying out servicing, upgrades, inspections and troubleshooting to keep them safe and running efficiently. I am responsible for leading a small team as well as taking control of the turbine and making it safe to work on.

Qualifications

- NVQ level 3 instrumentation from BP

Previous employment

- 2 years at Humber oil refinery as an instrument technician for Phillips 66
- 4.5 years at Theddlethorpe gas terminal as a systems technician for ConocoPhillips



Georgia Grace
Wind Turbine Technician

Race Bank Project

As a maintenance technician, I lead service teams when completing routine maintenance on the turbines. I am also utilised as a team member during troubleshooting tasks and general turbine work. I currently work at Race Bank wind farm on a 2 week on 2 week off shift pattern working from a Service Operations Vessel.

Qualifications

- GCSEs
- NVQ level 3 wind turbine maintenance
- PEO level 2

Previous employment

- Shop assistant full time
- 4 year apprenticeship for Siemens in the wind industry
- Service team lead for Siemens at Lincs wind farm



List of Acronyms

ACE card	Assuring Competence in Engineering Construction
BSc	Bachelor of Science Degree
CAE	Computer-Aided Engineering
CDM	Construction Design Management
CoC	Certificate of Competency
ECITB	Engineering Construction Industry Training Board
EIA	Environmental Impact Assessment
ENG1	MCA approved medical certificate required for all crew on commercial superyachts
GMDSS	Global Maritime Distress and Safety Systems
GOC	General Operator's Certificate
GWO	Global Wind Organisation
HNC	Higher National Certificate
HND	Higher National Diploma
HSE	Health, Safety and Environment
HUET	Helicopter Underwater Escape Training
IOSH	Institution of Occupational Safety and Health
IMCA	International Marine Contractors Association
IRATA	Industrial Rope Access Trade Association
MCA	Marine Coastguard Agency
MEng	Masters of Engineering
MSc	Masters of Science Degree
NEBOSH	National General Certificate in Occupational Health and Safety
NHS	National Health Service
NVQ	National Vocational Qualification
ONC	Ordinary National Certificate
Pg. Dip	Post Graduate Diploma
PPE	Personal Protective Equipment
SHE	Safety Health Environment
STCW	Standards for Training, Certification and Watch keeping



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