



ENVIRONMENTAL ASSESSMENT

SOLUTIONS TO SAFEGUARD
THE ENVIRONMENT

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ENVIRONMENTAL ASSESSMENT

MINIMISING ENVIRONMENTAL IMPACTS

Environmental concerns loom large in our collective consciousness today. The wind industry has a responsibility to ensure that the environmental impact of the industry's activities is as low as possible. Therefore environmental considerations play a key role in all wind projects.

At Ramboll we have a highly specialised team of environmental consultants who are experts at building bridges between the technical and environmental requirements of our customers' projects, while still ensuring that they stay on schedule. Our services cover the spectrum from theoretical studies to offshore work.

We believe that the key to success is a close interaction between windengineers, designers and environmental specialists.

Environmental Impact Assessment (EIA)

The so-called EIA is used to identify and assess environmental effects, compare alternatives, and design mitigation measures and environmental management plans. Further EIA reports are subject to public consultations before a project receives final clearance.

EIAs are an integrated part of all major wind projects. At Ramboll we can advise our customers throughout the entire EIA process hereby ensuring that all environmental implications are taken into account before any decisions are made.

Ramboll handles the whole EIA process including baseline studies, public consultations and related authority management as well as screenings of development projects.

Strategic Environmental Assessment (SEA)

Ramboll has extensive experience in facilitating and carrying out SEAs for national authorities

and for the EU Commission. Our experience covers development plans and programmes at cross-border, national, regional and local levels as well as specific sector plans.

We also focus on the strategic aspects of the capacity development of SEA by focusing on the systematic strengthening of institutional linkages, organisations and human resources. We take an integrated approach to SEA in the belief that the process should be closely linked with policy, planning and decision making.

Authorisation

An important part of our service portfolio involves authorisation and authority relations. Basically we contact the necessary authorities and secure their approval of all development-decisions and the definition of the environmental issues in the early stages of a project. We also handle consultations with government institutions and the public. For cross-border projects that may have a transboundary impact, we also assist in acquiring intergovernmental agreements.

In keeping with the current EIA regulations, the following areas of concern are usually considered:

- Best Available Technology (BAT)
- Life Cycle Assessment (LCA)
- Best Environmental Practice (BEP)
- Environmental cost-benefit analyses

Site Assessment

Ramboll performs detailed site assessments of areas suitable for the development of offshore wind farms. At Ramboll the assessment is often carried out with the help of GIS tools and may include the following areas:

- Geographical information
- Site conditions
- Wind farm infrastructure
- Human constraints
- Environmental constraints

Environmental sampling and monitoring

Sampling and monitoring produce important information that inform the choice of technical solutions for a given project. At Ramboll we have a team of specialists trained for offshore sampling and

monitoring jobs including:

- Seabed sampling
- Biological, physical, chemical and hydrographical parameters
- Habitat inspection by diving biologist
- Marine archaeology by diving archaeologist

Geophysics

Ramboll performs planning, undertaking, supervision and interpretation of geophysical surveys including:

- Bathymetry
- Seismic
- Side scan sonar
- Geodesy and geographical coordinate systems
- Uxo-survey

Modelling and Chemical Assessment

Modelling and chemical assessments is often part of an EIA or it may simply be used to give a better understanding of complex pollution issues. The chemical assessment in connection with offshore installations has in several wind projects included corrosion assessment.

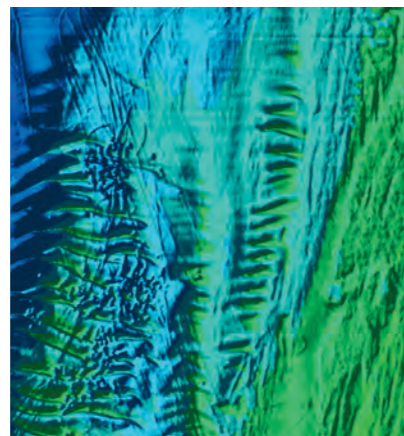
Ramboll performs modelling including:

- Discharge of contaminated water
- Offshore oil spill
- Leaking contaminants from offshore installations
- Mud and sediment transport and settling at the seabed
- Water currents

For further information please contact

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TEAM OF SPECIALISTS

Our team of specialists consists of engineers, biologists, geologists, geographers and geophysics with work experience within the following fields: site assessment, geophysical and environmental surveys, environmental legislation, HSE management, chemicals, numerical modelling, graphical presentation, communication and public participation.

ENVIRONMENTAL STUDIES

Examples:

- Anholt Offshore Windfarm
- Nysted Windfarm
- Klasården Windfarm
- Middelgrunden Windfarm
- Omø Windfarm
- Arklow Bank Windfarm
- Long Island Offshore Windfarm

WHO WE ARE

The Offshore Wind Region is part of the Ramboll Group. Ramboll is a leading engineering, design and consultancy company founded in Denmark in 1945. Today, we employ more than 10,000 ambitious experts and have a significant presence in Northern Europe, India, Russia and the Middle East. With our close to 200 offices in 23 countries we emphasise local expertise combined with a global knowledge-base. We constantly strive to achieve inspiring and exacting solutions that make a genuine difference to our customers, the end-users and society as a whole. Ramboll operates within the areas of: Buildings & Design, Infrastructure & Transport, Energy & Climate, Environment & Nature, Industry & Oil/Gas, IT & Telecom and Management & Society. www.ramboll.com