



We have a long and successful track record of delivering ornithological services for clients through all phases of a project lifecycle.

Our team has considerable experience of working on onshore and offshore energy projects, infrastructure schemes, and other projects such as forestry and transport infrastructure. Our advice is independent and trusted by regulators and statutory / non-statutory stakeholders, and we strive to provide cost-effective delivery of robust good practice and innovative solutions to our clients.

## Bird Surveys

- Survey design, advice and stakeholder negotiation
- Flight activity (vantage point surveys)
- General breeding bird surveys
- Breeding and overwintering raptor surveys
- Other species-specific surveys such as divers, grouse and nightjar
- Nest detection and monitoring
- Boat-based surveys
- Management of aerial surveys
- Radar ornithology
- Telemetry studies

## Data Analysis

- Collision Risk Modelling
- Population modelling such as PVA (Population Viability Analysis) and PBR (Potential Biological Removal)
- Statistical power analysis

## Impact Assessment

- Ornithology scoping and baseline characterisation
- Environmental Impact Assessment
- Habitats Regulations Appraisal/Assessment
- Peer review of EIA/HRA
- Expert witness

## Construction monitoring

- Monitoring of sensitive species by Environmental Clerk of Works
- Specialist input into mitigation and Habitat Management Plans

## Operational monitoring

- Survey design, advice and stakeholder negotiation
- Production of Ornithological Monitoring Plan
- Monitoring surveys
- Reporting and publishing

**150+**  
environmental projects

**60+**  
environmental experts

**300+**  
years environmental experience

**2.6GW**  
WTGs managed



// our team not only conducts standardised surveys, it also develops novel cost-effective impact assessment methodologies and solutions for developers and stakeholders //

**Chris Pendlebury**, Director of Ecology and Hydrology





**Case Study 1 Flight activity and breeding success of hen harrier - Paul's Hill Wind Farm, Moray, Scotland**

Natural Power has monitored hen harrier activity at Paul's Hill Wind farm since baseline surveys commenced in 2000. In response to species specific planning consent conditions, a Moorland Management Plan was implemented to ensure that suitable breeding habitat is present and maintained for hen harrier. Since operation in 2006, analysis of flight activity, nest locations and productivity (including fledgling success) has been undertaken. Using statistical analysis tools Natural Power has established that hen harrier continue to utilise the moorland management area. Analysis has demonstrated that the presence of the wind farm infrastructure has not had a negative impact upon flight activity or breeding success; and year on year productivity of the hen harriers around the wind farm continues to be higher than the national average for this species.

**Case Study 2 Boat-based ornithology surveys and Sharing Good Practice - EON & Marine Scotland**

Natural Power completed the 5th year of post-construction boat-based ornithology surveys for Robin Rigg Offshore Wind Farm in 2014. Boat surveys followed modified European Seabirds at Sea methods, which enabled surveys to be completed in a highly dynamic marine environment. New statistical methods were developed to create density surface maps of the key species across the survey area. Monitoring confirmed the very low levels of impact predicted by the Environmental Statement. We were able to show that while changes in the numbers and distributions of birds occurred, these were independent of the wind farm.



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**Case Study 3 Nightjar monitoring and mitigation - Pen y Cymoedd Wind Farm, Wales**

A planning consent condition was set to ensure that no damage of any active nightjar nest site occurred during construction. In 2005 an active nest was discovered 36 metres from the route of a proposed access track. As a result, Vattenfall was faced with either a costly delay in the construction timeframe or realigning a road. As an alternative, Natural Power developed a monitoring programme using radio tracking and nest cameras to actively monitor the nest site and the breeding pair. The programme's objective was to ensure that construction activity on the track would not lead to the nest site failing, while still allowing construction activity to progress without the need for a costly realignment. The programme was accepted by the local planning authorities as an alternative to the guidance-based planning condition. No evidence of disturbance was noted during construction works, and in addition, the nest site video footage was correlated to the movement patterns of the radio-tagged female, providing robust evidence to support the conclusion of no disturbance from construction activities. The monitoring programme, costing less than 20% of the cost of realigning the road represents Natural Power's ability to provide extremely cost-effective, mitigation advice and solutions to our clients. Our rapid response to problems minimises costly delays to construction timeframes or realignments, whilst complying with relevant legislation.

