

RYE HOUSE POWER STATION: BIODIVERSITY INFORMATION

Key facts:

- Opened in 1993, acquired 2001
- 685MW capacity, Combined Cycle Gas Turbine station (CCGT)
- Located near Hoddesdon, Hertfordshire, about 18 miles north of London
- CCGT is an efficient form of electricity generation with fewer emissions per unit produced



Site Description

Built on a brownfield site, formerly partly occupied by a coal-fired power station, Rye House sits within an area of light industry and commercial warehousing.

The Station is located on the edge of Lee Valley Regional

Park, a major centre for wildlife and leisure that stretches from London to Hertfordshire. An exceptional area for birdlife, with more than 200 species recorded, it lays claim to being one of the most important sites in the UK for Bittern – a UK Biodiversity Action Plan (UK BAP) priority species.

The station is also near to Rye Meads Nature Reserve, which is listed as a Special Protection Area (SPA) and Site of Special Scientific Interest (SSSI) for its wetland bird communities.

While Rye House has limited landholdings – mostly areas of open ground and hardstanding – efforts have been made to encourage aspects of the area's wetland environment.

As part of the initial landscaping scheme, native trees and hedgerows were planted. These have formed natural screening to mitigate against the visual impact of the power station and to help minimise potential noise disturbance.



The pond in the wildlife garden is flourishing and plays home to a number of species, including Goldfish

Priority Habitats and Species:

Rye House Power Station is named as a key example of a naturally regenerating urban habitat in the Hertfordshire Biodiversity Action Plan (HBAP).

The HBAP document 'A 50-year Vision for the Wildlife and Natural Habitats of Hertfordshire', recognizes the special conditions at Rye House caused by the banks of pulverised fuel ash (PFA).

A legacy of the coal-fired power station, the banks are a by-product of the coal combustion process and are important for flowering plants. One such plant is the Early Marsh Orchid, of the sub-species pulchella, which is described as 'endangered' on the Red Data List of Britain's flowers but grows in numbers at Rye House.

To protect other members of the species, many orchids were transplanted to safe new areas during construction of the station in the early 1990s.

In 2003, wildlife and habitats surveys were commissioned at Rye House to help in the preparation of a site biodiversity action plan (BAP). This plan is now reviewed and updated in 5 yearly cycles to manage biodiversity on site.

Rye House sits in an area which is exceptional for birdlife and the woodlands and hedgerows planted at the station now play host to several nesting priority-listed birds including Song Thrush, Dunnock, House Sparrow and Starling.

Other UK BAP priority-listed species include Water Voles, which live in the reedy wetland areas, and Great Crested Newts which have long been recorded on site. At a time when they are declining at other sites in Hertfordshire, the newts appear to be thriving at ponds near to the station but are not thought to be using the pond on site for breeding.

The Fairy Shrimp, a Species of Conservation Concern in the UK BAP, has also been sighted in the station pond.



A Mistle Thrush pops in for a flying visit



Early Marsh Orchid:

The Early Marsh Orchid, with its deep mauve flowers, is sparsely distributed throughout the British Isles and has declined markedly during the last century.

The orchid's favoured damp meadow habitat has been heavily drained and improved for agriculture over much of Southeast England.

However, the mineral-rich ash banks found at Rye House replicate that habitat and the orchid has flourished.

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Our Biodiversity Action Plan

Rye House Power Station formalised its approach to helping wildlife and habitats on site with the launch in 2004 of a biodiversity action plan (BAP). Rye House's BAP seeks to entrench the existing good practice shown at the station and contribute to the ongoing development of habitats. It also lists ongoing targets and timescales for measures to improve the site for its wildlife and is reviewed annually.

The station's potential impact on the environment was considered during its construction in the late 1990s, with the developers preparing a landscaping strategy, including the formation of a 3.6 hectare ecological conservation area. This helped harmonise Rye House with surrounding features and reduce potential process noise by natural screening with native trees – including Oak, Willow, and Poplar – and various shrubs.

Over the past 10 years, these habitats have matured, providing a home for a wide range of animals. The wetlands are used by Common Frogs, Common Toads and newts while birds recorded in the woodlands have included Green Woodpecker. Interesting moth species have also been recorded – the spectacular Elephant, Lime and Privet Hawkmoths and the bright red Cinnabar. Floral diversity and invertebrate populations are also encouraged by leaving areas of amenity grasslands to grow naturally over summer moths and create little meadows.

A 48m² pond was created in 2005 as a key feature of a wildlife garden to encourage wetland flora and fauna. Its wet margins have been planted up with a range of native plants, including Reed Mace, and Common Frogs were soon among the first species to be recorded.

The pond is now teeming with aquatic life including Water Boatmen, various beetles and larvae, and also attracts many species of dragonfly and mayfly including the large Brown Hawker.

Station staff and contractors take a keen interest in the pond's development and help its maintenance by clearing weed and planting around the pond.

The station's BAP also includes five boxes for bats which have been erected around the grounds to benefit species like the Common Pipistrelle, while a nestbox has also been created for Robins. Bird feeders and a bird table have also been introduced.

Mallards have raised a brood of ducklings at the station. The young birds had to be rescued by station staff from the steep-sided water retention pit and were moved successfully to the wildlife pond, while the retention pit has now had 'duckling safe' fencing installed.

To promote biodiversity in the wider community, Rye House has become a Gold Corporate Member of the Hertfordshire and Middlesex Wildlife Trust, which seeks to protect wildlife for future generations. The Wildlife Trust was founded in 1964 and manages 45 nature reserves – including the nearby Rye Meads Nature Reserve, in partnership with the Royal Society for the Protection of Birds (RSPB). Station staff also have access to material published by the Herts Moth Group and the Natural History Museum.



Great Crested Newts:

Rye House's nearby wetland areas host populations of several amphibians including the Common Frog, Common Toad and types of newt.

Great Crested Newts – a UK BAP species – have been recorded on the station site and are known to be breeding in ponds formed on part of the old station's site. It is hoped the newts may move to the pond created in the wildlife garden, helping to increase their population.

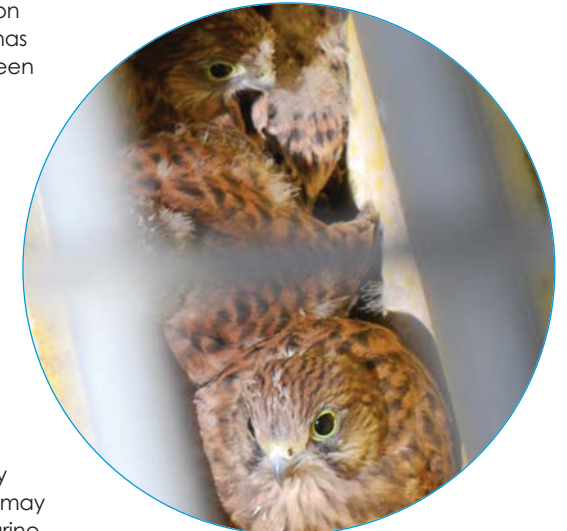
The Great Crested Newt is just one of several species of amphibian that call Rye House their home

Nesting Falcons:

Kestrels have bred at Rye House in previous years. Amber listed as a species of conservation concern the UK Kestrel population has reduced by almost a third between 1994-2007.

The Rye House pair nested high on one of the station's three chimneys and successfully raised three or four young birds.

The station has discussed the possibility of erecting a nesting box for the birds with the Herts Raptor Study Group who advised it may even be used by Peregrine Falcons recorded in the area.



Nesting Kestrels



Water lilies in the pond in Rye House's wildlife garden