

# RYE HOUSE POWER STATION BIODIVERSITY INFORMATION



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## OVERVIEW

Rye House Power Station is one of three combined cycle gas turbine (CCGT) stations operated by ScottishPower Energy Wholesale. The

company acquired the 715 megawatt (MW) plant in early 2001 to supply its customer base in England and Wales. The station is

located near the market town of Hoddesdon, Hertfordshire, about 18 miles north of London. Output from the station is

enough to meet the daily power needs of around 400,000 homes – almost the entire population of Hertfordshire.

## SITE DESCRIPTION

Rye House Power Station is located on the edge of Lee Valley Regional Park, a major centre for wildlife and leisure that stretches from London to Hertfordshire.

It is an exceptional area for birdlife, with more than 200 species recorded, and 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.

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, is near the station.

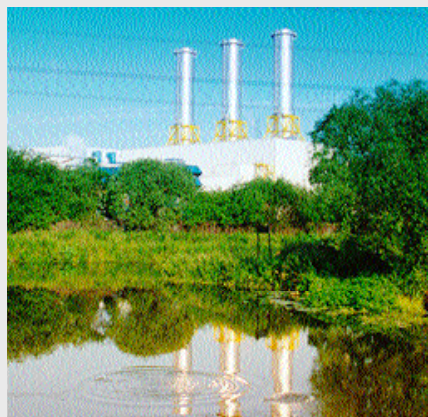
Rye House was built on a brownfield site, formerly occupied by a coal-fired power station, within an area of light industry and commercial warehousing.

The station has limited landholdings – mostly areas of open ground and hardstanding. However, efforts have been made to encourage aspects of the area's wetland environment.

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

## CONTACT US

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■ Rye House Power Station (above and left) retains wetland features that provides a home for amphibians, such as the Common Frog (below)



## 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', cites some of the valuable biodiversity aspects of the county's industrial sites.

In particular, the HBAP recognises the special conditions at Rye House that are a legacy of the coal-fired power station formerly on the site.

Banks of pulverised fuel ash (PFA), a by-product of the coal combustion process, are important for flowering plants, especially the Early Marsh Orchid, of the sub-species *pulchella*, which is described as "endangered" on the Red Data List of Britain's flowers.

### 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 mineral-rich ash banks found at Rye House replicate the orchid's favoured damp meadow habitat that has been heavily drained and improved for agriculture over much of Southeast England.



■ Song Thrushes nest in the hedgerows

Many orchids were transplanted to safe new areas during construction of the station in the late 1990s.

Wildlife and habitats surveys were commissioned at Rye House in 2003 to help in the preparation of a site biodiversity action plan (BAP).

External consultants visited the station in 2008 to assess the success of the BAP's measures and the plan was updated and revised in 2009.

Great Crested Newts – a UK BAP priority-listed amphibian – are present and appear to be thriving at Rye House's ponds, at a time when they are declining at other sites in Hertfordshire.

Water Voles – another UK BAP species – have also been recorded in the reedy wetland areas, while a Fairy Shrimp, a Species of Conservation Concern in the UK BAP, has been sighted in one of the station ponds.

Priority-listed birds that nest among the woodlands and hedgerows planted at the station include Song Thrush, Dunnock, House Sparrow and Starling.

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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).

The BAP lists ongoing targets and timescales for measures to improve the site for its wildlife. The plan was reviewed and updated in 2009.

The station's potential impact on the environment was considered during its construction in the late 1990s. The developers prepared a landscaping strategy, including the formation of a 3.6 hectare ecological conservation area, to help reduce the visual impact of the new plant, and potential process noise, by natural screening with trees and shrubs.

Many native trees – mainly Oak, Willow and Poplar – were planted along with many shrubs, to harmonise Rye House with surrounding features.

Two new ponds were dug to encourage wetland flora and fauna – including breeding Kingfishers.

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.

Two interesting moth species have also been recorded – the spectacular Lime and Privet Hawkmoths.

Rye House's BAP seeks to entrench the existing good practice shown at the station and contribute to the ongoing development of these habitats.

A 48m<sup>2</sup> pond was created in 2005 as a key feature of a wildlife garden created on a patch of ground.

Its wet margins were planted up in spring 2006 with a range of native plants, including Reed Mace.



■ The pond in Rye House's wildlife garden after its construction and, inset, station staff and contractors filling it with water

Common Frogs were among the first species to be recorded while the pond is now teeming with aquatic life including Water Boatmen and beetles.

Station staff and contractors



■ The rescued ducklings are rejoined by the mother bird at the station pond

Promanex take a keen interest in the pond's development and help its maintenance by clearing weed.

Also as part of the station's BAP, five boxes for bats have been erected around the grounds to benefit species like the Common Pipistrelle – a nestbox has also been put up for Robins. Bird feeders and a bird table have also been set up.

Meanwhile, areas of amenity grasslands are left to grow naturally over the summer to create little meadows, encouraging floral diversity and invertebrate populations.

For a second year in 2009, a pair of Mallards 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.

A temporary fence has now been erected around the pit to prevent wildlife from falling in.

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.



■ A Great Crested Newt at Rye House

## GREAT CRESTED NEWTS

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

Great Crested Newts – a UK BAP species – have been recorded in the station's water meter pit and on the redundant ash lagoons.

It is hoped the newts will spread out into the new pond created in the wildlife garden, helping to increase their population.

The station is considering further measures to ensure the protection of its newt colonies.

## NESTING FALCONS

Kestrels bred at Rye House in 2008 and measures are being discussed to provide the birds with a permanent nest site.

Kestrels are amber listed as a species of conservation concern while its UK population 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 (above).

The station is discussing with Herts Raptor Study Group the possibility of erecting a nesting box for the birds.

It might even be used by Peregrine Falcons, which have been recorded in the area.

