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HATFIELD MOOR GAS STORAGE FACILITY BIODIVERSITY INFORMATION

SCOTTISHPOWER
Energy Wholesale

OVERVIEW

The Hatfield Gas storage facility stores supplies for 250,000 domestic customers in an underground reservoir.

During the planning phase of the project, detailed consultations were carried out with environmental and wildlife bodies, including Natural England. No objections were raised, subject to a number of conditions, designed to protect the environment, being met. A three-year ornithological study has concluded the operation of the facility has had no adverse impact on bird life or on adjacent habitats.

SITE DESCRIPTION

Hatfield Moor works in harmony with the environment in an area that has been recognised at an international level for its importance to wildlife.

The Thorne and Hatfield Moors, the largest remaining raised bog wilderness in lowland Britain, are designated as a Special Protection Area (SPA), Special Area of Conservation (SAC) and a Site of Special Scientific Interest (SSSI).

The moorland tract also forms part of the Humberhead Peatland National Nature Reserve where Natural England is restoring the area after years of commercial peat extraction.

The gas storage facility consists of four separate areas – the Lindholme Compression Site, Beltoft, Hatfield Moor Well and the pipe network.

The 3.3 hectare Lindholme plant is adjacent to the SSSI while the Hatfield Moor Well is within the protected area.

The compounds are maintained without vegetation so that operations are not impaired and, in general, they represent impoverished habitats for wildlife. However, there are areas of rough grassland, woodland and shrubs, and a hedgerow – particularly at Lindholme – all of which are being managed or improved for wildlife.

CONTACT US

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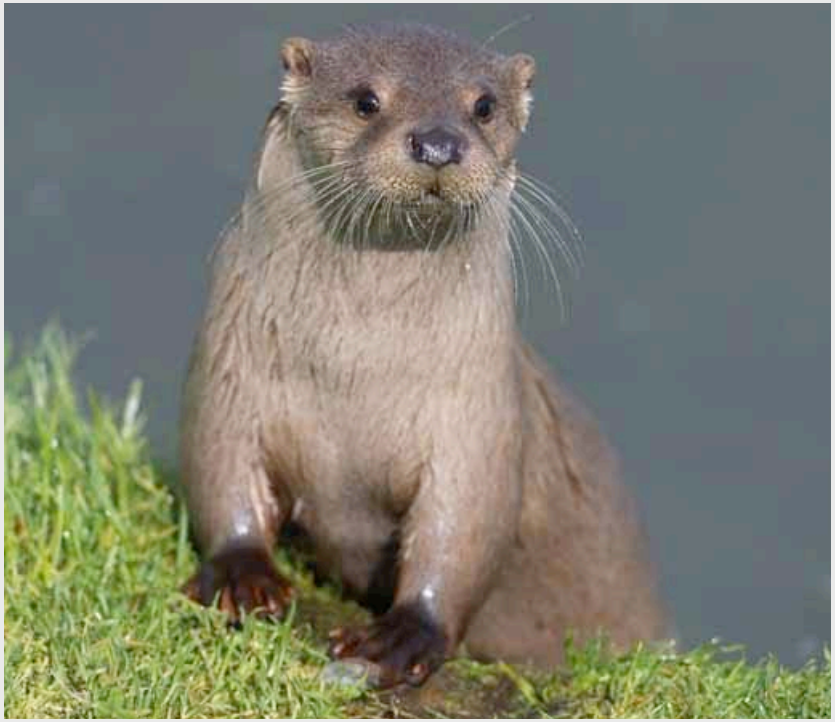


■ *UK BAP species at Hatfield Moor include the Otter (top), Lapwing (below) and Brown Hare*

PRIORITY HABITATS AND SPECIES

Lowland raised bogs are one of Europe's most-threatened habitats. Since the start of the 19th Century, around 94% of the UK's active lowland raised mire has disappeared, mainly due to drainage and peat and aggregate extraction.

Only around 6,000 hectares of this special habitat remains – with around 1,200 ha at Hatfield Moor.

The moorland and mire near to Lindholme is the only area on Hatfield Moor not to have suffered greatly from degradation.

Hatfield Moor Gas Storage Facility was surveyed in 2005 to identify the habitats and protected species present, prior to the formation of a site biodiversity action plan.

Lowland raised mires support a range of distinctive plants and animals including many wetland birds and invertebrates.

In excess of 50 Red Data Book insect species have been recorded from Thorne and Hatfield Moors (Skidmore 2006).

The sites are notable as the only British localities for a type of ground beetle *Bembidion humerale* and the Mire Pill Beetle – both of which have been recorded at Lindholme's two areas of meadow grassland.

Other notable species at Lindholme include a Muscid fly *Phaonia jaroschwskii*, a population of solitary bees and other peatland specialists.

UK BAP listed butterflies are represented by Grizzled and Dingy Skippers, Small and Large Heaths, Wall and Grayling, along with the Scarce Vapourer moth.

Among the reptiles and amphibians present at the Hatfield Moor sites, Grass Snake and Common Toad are on the UK BAP, along with mammals, Brown Hare, Otter and Water Vole.

More than 70 types of birds have been recorded, including the priority-list species Grey Partridge, Lapwing, Curlew, Skylark, Tree Pipit, Nightjar, Song Thrush, Spotted Flycatcher, Yellow Wagtail, Starling, Linnet, Lesser Redpoll, Bullfinch, Yellowhammer and Reed Bunting.

Almost 400 species of plants are found at Hatfield and Thorne Moors, including four insect-eating species and four Red Data species.

The Yellow Rattle, which grows at Lindholme, is a high-priority species in the Doncaster BAP.

ROUND-LEAVED SUNDEW

The Round-leaved Sundew is a characteristic plant of peatlands and is common at Hatfield Moor and the Lindholme site.

In the nutrient-poor soils, sundews supplement their food by trapping small insects on sticky drops on the hairs at the end of their leaves.

The hairs curl over the unfortunate victim, holding it fast, while it is digested by the insectivorous plant.

OUR BIODIVERSITY ACTION PLAN

The gas storage facility's biodiversity action plan (BAP) aims to provide elements of habitat continuity between the site's landholdings and the adjacent nationally-important peatlands of Hatfield Moor.

The site launched its BAP in 2006 after an ecological survey concluded the site had great potential for the enhancement of habitats. The BAP sets out a series of targets for habitat management and creation projects to encourage priority species and habitats on its sites.

Several initiatives have now been successfully launched. A key objective is to extend the woodland area of the adjacent Hatfield Moor SSSI by sensitive planting of native species at Lindholme.

These include Scot's Pine, Silver Birch, Oak, Hawthorn and Alder – species that reflect the neighbouring mature woodland of the Hatfield Moor.

The use of herbicide has ceased in planted areas and a mowing regime is increasing the diversity of plants and invertebrates in areas of grassland and wildflower meadow in the north and south of the Lindholme site.

Nestboxes were put in place at Beltoft and Hatfield Well in 2009 while bird boxes are already in place at Lindholme.

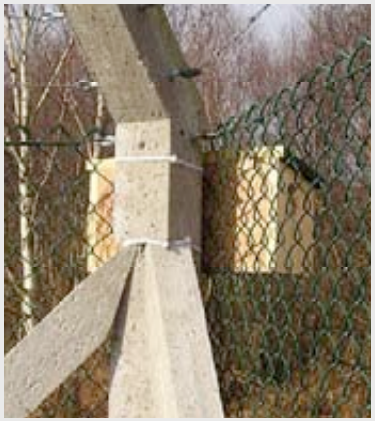
Hatfield Moor's BAP is due to be reviewed and updated in 2010 and will incorporate proposals for Hatfield Moor Well for the first time.

ScottishPower makes an annual payment to Natural England to subsidise the cost of ongoing habitat management, including birch clearance, to improve habitat for Nightjars.

An annual financial contribution is also paid to Thorne and Hatfield Moors Conservation Forum to help with their ongoing fieldwork and research.

ScottishPower was a joint sponsor of the important monograph *An Inventory of the Invertebrates of Thorne & Hatfield Moors*, by the late Peter Skidmore, which lists and provides information on the 4,790 insect species recorded at the sites.

A swathe of Cotton Grass characterises the peatland habitat found at Hatfield Moor (picture Natural England)



Nestboxes at Hatfield Moor Well

AN INSIGHT INTO THE PAST

The Hatfield Moor is a site of significant archaeological interest and ScottishPower helps to fund research into the area's palaeoecology – the study of fossil plants and animals.

Payments are made every three years and Sheffield University's archaeology department and Natural England assess the suitability of research topics.

Pine and oak trees preserved in the moor's peat are used to study the impact of environmental and climatic change around 3,000 years ago. Meanwhile, at least 16 species of prehistoric beetle have been found at Hatfield and Thorne Moors.

The area also forms the richest area in Britain for the recovery of bog bodies – remarkably preserved remains of our ancestors.

In October 2005, a 5,000-year-old wooden roadway was unearthed on Hatfield Moor.

It had been built by Neolithic tribesmen between 2900 and 2500 BC so they could negotiate the boggy terrain.

NIGHTJAR STUDIES AT OUR LINDHOLME SITE

An estimated 70 pairs of Nightjars nest at Hatfield Moor – a stronghold for the species in the North of England.

The nocturnal species has suffered a sharp decline in the UK, with its range contracting by about 50% between 1968 and 1988 – although targeted conservation efforts has since seen an encouraging increase to 4,000 breeding pairs.

Studies have been ongoing at Hatfield Moor Gas Storage Facility to gauge the site's impact on local birds – particularly in relation to process noise from Lindholme and fugitive light emissons from the plant. The studies have found that no Nightjars breed on the Lindholme site – the nearest territories were 300 metres to the east of the facility.

Meanwhile, to minimise disturbance to Nightjars, which display and feed at dusk and night, the facility minimises light pollution by ensuring outdoor lights are turned off at night whenever possible.

The site employs low-pressure sodium lights and hoods that cast any glare towards the ground, minimising disturbance.

Further studies have considered the potential impact on local Nightjars during the construction and operation of Hatfield West.

The project team have put in place conditions to prevent or minimise any possible disturbance due to increased noise, light or vibration.

These are detailed in an Environment Statement, published in September 2009.

Nightjar studies are continuing at Lindholme