



The Eelmoor Marsh Project

20 years of grazing management
40 years of biological recording



QinetiQ



Highland cattle
Bos taurus

Restoring the Marsh

Eelmoor Marsh is a 79 hectare (195 acre) remaining fragment of the formerly extensive Cove Common that underwent rapid change in recent history. Throughout the 19th and 20th Centuries, the cessation of traditional land use, the advent of a pine plantation, and extensive drainage brought about dramatic changes that threatened the existence of this fragile ecosystem.

Since 1995, continuous, year round, low intensity grazing by **Przewalski's horses** and **Highland cattle** has helped to restore ecological processes. Mechanical methods have also been employed to remove invasive trees, stimulate the seed bank, modify hydrology to retain water, and diversify neglected habitats.

Restoration activities have been matched with extensive biological surveys and monitoring, and a series of studies.

These have been critical for determining the results of habitat management and planning future work, while adding to our wider knowledge.

- Over 1,000 days of habitat restoration have been carried out by specialist contractors.
- Around 400 volunteer days have helped site management.
- A third of **Eelmoor Marsh** has been restored from pine woodland, increasing the area of valuable habitat by around 20 ha.
- 157 survey reports, and 17 student projects have been produced in the last 20 years.



Przewalski's horse
Equus ferus przewalskii

A special place

Eelmoor Marsh is an exceptional and precious ecosystem. The rich complex of wet, humid and dry heath, species rich grassland, mire, and woodland communities now support 400 species of conservation concern, and are a haven for:

- 6 species of insectivorous plants.
- 11 species of orchid.
- 32 grassland indicator species.
- The rare **nail fungus** *Poronia punctata*.
- Over a third of Britain's dragonfly and damselfly species.
- Nearly half of Britain's butterfly species.
- A variety of bees, ants and wasps including records of the rare **ruby-tailed wasp** *Chrysis fulgida*.
- 4 out of 7 native species of amphibian.
- 4 out of 6 native species of reptile.
- Breeding **nightjar**, **woodlark** and **Dartford warbler**, and wintering birds such as **lapwing**, **snipe** and **jack snipe**.



Nightjar
Caprimulgus europaeus

Floral recovery

The recovery of plant communities and populations of notable species at **Elmoor Marsh** has been remarkable.

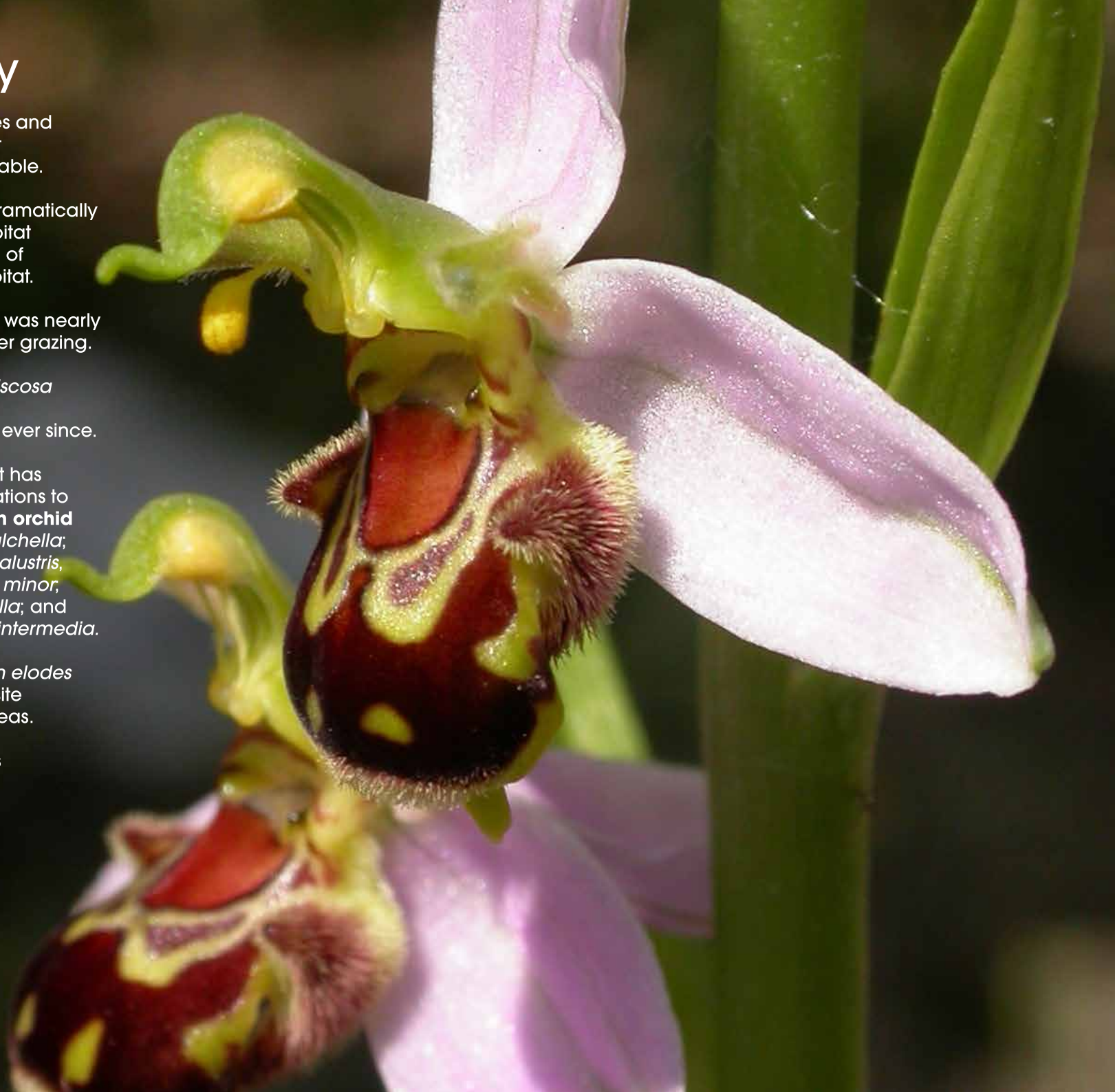
Species richness has increased dramatically because of grazing, targeted habitat management and the restoration of extensive areas of heathland habitat.

- **Pale heath violet** *Viola lactea* was nearly lost but recovered rapidly under grazing.
- **Yellow bartsia** *Parentucellia viscosa* reappeared following grazing management and has thrived ever since.
- Targeted habitat management has helped perilously small populations to multiply, including: **Early marsh orchid** *Dactylorhiza incarnata* spp. *pulchella*; **Marsh helleborine** *Epipactis palustris*; **lesser bladderwort** *Utricularia minor*; **bog pimpernel** *Anagallis tenella*; and **long leaved sundew** *Drosera intermedia*.
- **Bog St. John's wort** *Hypericum elodes* appeared for the first time on site following turf scrapes in wet areas.

Number of vascular plant species recorded in 1994 = 282.

Total number of vascular plant species recorded by 2015 = 492.

Bee orchid
Ophrys apifera



Butterflies

Butterfly sightings naturally fluctuate with weather conditions, but **Eelmoor Marsh** now supports a diversity of species, with stable populations of those breeding on site.

- Number of butterfly species seen in 1994 = 21.
- Average number of species recorded per year = 27.
- Highest number of species recorded in a single year = 31 (in 2013).
- Total number of species recorded in the last 20 years = 39.



Grizzled skipper
Pyrgus malvae



Dragonflies & Damselflies

Diversification of aquatic habitats has seen dragonflies and damselflies thrive, and **Eelmoor Marsh** has become an important place for **small red damselfly** *Ceriagrion tenellum*, **keeled skimmer** *Orthetrum coerulescens* and **hairy dragonfly** *Brachytron pratense*.

- Number of dragonfly & damselfly species seen in 1994 = 14.
- Average number species recorded = 21.
- Highest number of species recorded in a single year = 25 (in 2000).
- Total number of species recorded in the last 20 years = 27.

Small red damselfly
Ceriagrion tenellum

Special status

The ecological value of **Eelmoor Marsh** has been recognised nationally and as a Site of Special Scientific Interest since 1978 and internationally as part of the Thames Basin Heaths Special Protection Area since 2005.

This European designation was conferred with the arrival of **Dartford warbler** *Sylvia undata* responding to improvements in vegetation structure, and the confirmation of breeding pairs of **woodlark** *Lullula arborea* and **nightjar** *Caprimulgus europaeus* which also benefited from targeted habitat management.

Habitat management and evidence from biological recording then led to an additional area being recognised locally as a Site of Importance for Nature Conservation and increasing the overall size of **Eelmoor Marsh**.



Dartford Warbler
Sylvia undata

Business, Biodiversity & the Community

Eelmoor Marsh is owned by **QinetiQ** and has been managed in partnership **Marwell Wildlife** for two decades, sharing the challenges and achievements of conserving this valuable area and helping wildlife to flourish. **Eelmoor Marsh** has been particularly important as a flagship project at **QinetiQ's** headquarters in Farnborough and as a key example of conservation across the company's extensive land holdings.

The site provides **QinetiQ** employees and tenants with access to nature on their doorstep with many taking time to relax and enjoy the surroundings.

Each year **QinetiQ** and **Marwell** host visits by wildlife professionals, interest groups and students to share the experiences of managing the site or just to enjoy the remarkable array of flora, fauna and fungi.

The site also benefits from community volunteer groups generously giving their time and effort to help with annual list of habitat management tasks.

Devil's-bit scabious
Succisa pratensis



Key events

- 1975: Biological recording begun by the then Royal Aircraft Establishment Conservation Group.
- 1978: **Eelmoor Marsh** designated as a Site of Special Scientific Interest (SSSI) under the National Parks & Access to the Countryside Act (1949)
- 1984: **Eelmoor Marsh** SSSI designation updated under the Wildlife & Countryside Act (1981).
- 1990: Habitat restoration begins with pine clearance on Pyestock Hill, with further scrub and ditch clearance across the site in the subsequent four years.
- 1993: **Eelmoor Marsh** SSSI boundary extended to include areas of acid grassland and dry heath.
- 1994: Baseline botanical survey commissioned by the Hampshire Heathlands Project
- 1995: Grazing management begins with the release of **Przewalski's horses**.
- 1995: Hampshire Country Council Countryside Award recognises grazing management at Eelmoor Marsh.
- 1996: **Highland cattle** join the horses to provide complementary grazing management.
- 1996: 'Silver Otter' award for best conservation project on MOD land.

- 1997: Annual programme of mechanical habitat restoration and management commences and continues to this day.
- 1998: English Nature SSSI Managers' Award recognises the positive management of Eelmoor Marsh.
- 1999: Achievements of the **Eelmoor Marsh** project cited in Parliament.
- 2000: Grazing management extended to include the dry heath of Pyestock Hill.
- 2000: Additional area of habitat recognised as a Site of Importance for Nature Conservation.
- 2002: Two thirds of **Eelmoor Marsh** is considered to be in 'favourable' condition by Natural England, with the remainder 'unfavourable, recovering'.
- 2004: Grazing management extended to a further area of wet heath adjacent to Pyestock Hill
- 2005: **Eelmoor Marsh** included within the Thames Basin Heaths Special Protection Area under the EU Birds Directive.
- 2013: The whole of **Eelmoor Marsh** is considered to be in 'favourable' condition by Natural England.
- 2014: 20 years of continuous botanical monitoring.
- 2015: 20 years of grazing management.
- 2015: 40 years of biological recording.





Cross-leaved heath
Erica tetralix



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Martin Wilkie; Tim Woodfine; Betty Hansell.
Marwell Wildlife, registered charity number 275433.