

# Maiden Erlegh Park Local Nature Reserve

Beech Lane, Earley, Reading, Berkshire

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## Notes for Students

### Introduction

The Park is located within the Civil Parish of Earley in the District of Wokingham, Berkshire. (O.S. Grid Ref. SU 750710). The site is surrounded on all sides by housing development, which began in the late 1950s. To south of the Park lies Lower Earley, the largest private housing development in England.

Maiden Erlegh park covers an area of about 10 hectares and is made up of four areas of woodland; Oak Wood, Old Pond Copse, Moor Copse and Old Lane Wood. The site also contains a six-acre lake, a woodland pond and meadow. With the exception of Old Lane Wood all the wooded areas are classified as ancient woodland. All the wooded areas are County Wildlife Heritage Sites and the whole park is designated a site of Urban Landscape value. In 1996 the park was declared a *Local Nature Reserve (LNR)* under the National Parks & Access to the Countryside Act. Historically the area was part of the Maiden Erlegh Estate, founded in 1362, its last owner being Solomon Joel until his death in 19931. Earley Parish Council, now Town Council, took control of the site in 1965.

Due to heavy development within the Earley and Central Berkshire area ancient woodlands are a rarity. Whilst about 13.5% of total land area within Berkshire has tree cover, only about 3.2% of the county has ancient woodland. Ancient woodland sites have been continuously wooded since at least 1600 AD and have grown naturally rather than being plantations.

Ancient woodlands are the most important of woodland habitats supporting the greatest diversity of wildlife and rare species. Most of Maiden Erlegh Park has had woodland cover for over three hundred years and could have been part of Windsor Forest, which reached the edge of Reading.

Today the woods are managed in a traditional way thus endeavouring to maintain this rare and important habitat.

Maiden Erlegh Lake has been shown on local maps for three centuries. There is some debate as to its naturalness, but all waterbodies in Britain have been managed or changed by humans over the years. Local people state that it was used as a boating lake up until the late 1940s; the mooring rings still exist around the large island. The lake also contains a small island.

A number of conservation measures are carried out by our Park Ranger service with the assistance of local volunteers to help sustain and improve the delicate and varied ecosystems of this site.

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## Geology

The site is based on the heavy soils of gravelly drift Tidmarsh series of Brown Earth (with Greyling) and the Swanswick series of Non-Calcareous Gley soils. In the wood areas, notably Old Pond Copse these heavy soils lend the area to heavy surface waterlogging during the wetter months. Ground spring water compounds the surface water conditions, sustaining a marshy pond area on the eastern edges of Old Pond Copse. The Lake is fed by surface water run-off, storm drains and springs. The Lake feeds the Maiden Erlegh Brook (aka Silverdale Road Drain), which meanders through Old Pond Copse, Moor Copse before leaving the park to enter the Loddon some 1.5 km away.

## History

There is evidence of human activity within the immediate area dating back to the Late Palaeolithic period around 35,000 years ago. In 1961, a pointed handaxe was found from this era near Maiden Erlegh Lake. Over the years, other artefacts have been discovered around the immediate area of the Park. A settlement existed near the Thames on what is now the Thames Valley Business Park less than 2 miles from the current Park. This was inhabited from the Neolithic period until Roman times. People from this settlement during Neolithic times probably began the clearance of the original wildwood. At the time of Domesday some 100 people lived in *Herleil*, the settlement's Medieval name. The number of people living in the area remained low until the 1930s and has continued to grow ever since. Today Earley's population stands at around 30,000.

The 1820 Maps of Enclosures outline the wooded area and Lake at Maiden Erlegh as do the Tithe Maps of 1884. OS maps of 1887 show the area as an inclusive site of Moor Copse, Oak Wood and Old Lane Copse with Old Lane Wood being a thin strip to the end of Moor Copse following a track which led to Buckhurst Copse to the north. Old Lane Copse was built on during the 1950-60s. Old Lane Wood on the other hand was allowed to succeed onto the pasture land nearby. Most of this woodland has grown in the last hundred years. However, a number of mature trees do exist on its fringe. A line of old pollarded Hornbeam, *Carpinus betula* can be viewed along its eastern edge. A pocket of Buckhurst Copse still exists today within the grounds of Maiden Erlegh School to the north of the Park.

A woodland earth bank exists, separating Old Pond Copse from Moor Copse. This embankment is lined on one side by mature Oaks, *Quercus robur*. Maps from 1887 indicate that there was a track along this bank. There are also the remains of what is believed to be a Victorian culvert in the Brook nearby over which the track passed. This embankment may have also served as a dam - thus flooding most of Old Pond Copse during the winter months. This may explain why the pond within this copse appears much larger on early maps. Small sections of Victorian iron fencing can be seen at the Lake end of Old Pond Copse. The same style of fencing can also be seen in Maiden Erlegh Drive – all remnants of the Maiden Erlegh Estate.

## The Woodlands

The areas known as Old Pond Copse and Moor Copse are evidently remnant coppice woodland of Oak-Ash, Hazel and Oak-Alder. Within Old Pond Copse there are some fine examples of mature pedunculated Oak, *Quercus robur*, strong indications of the age of the woodlands. A feature indicative of ancient woodland can be found in examples of Wild Service Trees, *Sorbus torminalis*, which exists in Oak Wood, and Crab Apple, *Malus sylvestris*, within Old Pond Copse. Ground flora within the wood is varied, with examples of Bluebell, *Hyacinthoides nonscripta*, Wood Anemone, *Anemone nemorosa*, and Lesser Celandine, *Ranunculus ficaria*. A variety of grass species can also be seen throughout the park in the spring. Despite its name Oak Wood contains very few of these trees; it does,

however contain a dominance of English Elm *Ulmus Procera*, most of which are suffering from Dutch Elm Disease. *DED*.

The wet conditions within Old Pond Copse have favoured the growth of wetland species such as Pedunculate Sedge, *Carex pendula*, Purple Loosestrife, *Lythrum salicaria*, Enchanters Nightshade, *Circaea lutetiana*, and Yellow Flag, *Iris pseudocarus*, amongst many others.

The fauna supported by the woodland structure include Bullfinch, *Pyrrhula pyrrhula*, Song Thrush, *Turdus philomelos*, Jay, *Garulus glandarius*, Grey Wagtail, *Motocilla cinerea*, Nuthatch, *Sitta ropaea*, Woodpeckers, *Dendrocopus major*, *Picus viridis*, Red Fox, *Vulpus vulpus*, Common Mole, *Talpa europaea*, and the Pipistrelle bat, *Pipistrellus pipistrellus*. The Park supports some thirty different species of birds, fifty types of fungi, over fifty species of moths and twenty species of butterflies, including the Large White, *Pieris brassicae*, Small Copper, *Lycaena phaeas*, Painted Lady, *Cynthia cardui*, and Speckled Wood, *Pararge aegeria*. The Park contains some 33 species of mollusc. Old Pond Copse is a rich site for molluscs with over twenty species recorded; these include *Lauria cylindracea*, *Discus rotundatus*, *Carychium spp* and *Azeca goodalli*, the latter being confined to ancient woodlands. Oak Wood also supports a number of molluscs including *Carychium tridentatum*, an ancient wood indicator species.

### The Lake

The Lake's size is about 6acres, 2.43ha in size with a depth varying between 2' to 7', 60cm to 2.1m; its capacity is around 24,000m<sup>3</sup>. It is designated a Reservoir under the Reservoirs Act. There is a deep channel on the north side of the Lake possibly the old Brook bed. The Lake is fed by a brook flowing under Beech Lane, by road and land drainage and rainfall. Water drains from the Lake in to Maiden Erlegh Brook which runs through the ancient woodlands of Maiden Erlegh Park eventually feeding the Loddon River. Maiden Erlegh Lake differs from many of the regional gravel pit water bodies in its clay base.

Then areas bordering the lake support trees such Crack Willow, *Salix fragilis* and Alder *Alnus glutinosa*. On the margins of the Lake can be found Reed *Glyceria maxima*, Flag Iris, *Iris pseudocarpus*, and Water Mint, *Mentha aquatic*. However, due to excessive predation by Common Carp, *Carassius carassius*, there are no aquatic plants within the main water body of the Lake, and the invertebrate population is low. The population of Roach *Rutilus rutilus* is also very high, possibly due to a low density of predator fish. The Lake is Eutrophic and very rich in Diatom algae during the Summer months.

Native fish species include Roach, *Rutilus rutilus*, Perch, *Perca fluviatilis*, Chub, *Leuciscus cephalus*, Gudgeon, *Gobio spp*, and Pike, *Esox lucius*. The non-native fish include various carp, *Carassius spp*, including Goldfish *Carassius auratus* and Catfish *Silurus glanis*.

Birdlife supported on and around the Lake include Grey Heron, *Ardea cinerae*, Kingfisher, *Alcedo atthis*, Great Crested Grebe, *Podiceps christatus*, Moorhen, *Gallinula chloropus*, Coot, *Fulica atra* and Common Terns, *Sterna hirundo*. The invasive Canada Goose, *Branta canadensis*, is also present on the water. The Water Vole, *Arvicola terrestris*, was recently sighted in 1966 and is still present.

Three *Conservation Zones* have been created on the Lake in which no angling is permitted at any time. This has been implemented to reduce disturbance to Wildfowl. The Closed Season is also enforced.

### Woodland Pond

Within Old Pond Copse at its eastern end is a small woodland pond from which the wood gains its name. The pond is shown on Tithe maps of the 1800s as being considerably larger

than today. Originally it was fed by the brook which passes nearby. Today it gains its water supply from run-off and rain water. The pond edge supports Yellow Flag, *Iris psedocorus*, Marsh Marigold, *Caltha palustris*, Yellow Loosestrife, *Lysimachia vulgaris*, and Opposite-leaved Golden Saxifrage, *Chryospleniurn oppositifolium*. In the Spring a large number of Common Frogs, *Rana temporaria*, return to mate. By the end of the Summer the pond has dried up but the marshy area remains as an important wetland habitat for both plant and animal life.

### Maiden Erlegh Brook

This stream is fed by Maiden Erlegh Lake via the Weir. The water quality of this waterway appears to be good. A diversity of invertebrates can be found in this Brook including Caddis fly larvae, *Trichoptera spp*, Mayfly nymphs, *Ephemera spp*, Stonefly nymphs. *Plectoptera spp*, Shrimps *Gammanus*, Alderfly larvae, *Megaloptera spp*, River limpets, *Ancylastrum fluviatile*, Jenkins' spire shell, *Potamopyrgus antipodarum*, Pea-shells, *Pisidium spp*, and the Wandering Snail. *Lymnaea peregra*. Small fish such as Sticklebacks, *Gasterosteus aculeatus*, and Gudgeon *Gobio gobio* survive well as do leeches, *Erpoddella octoculata*. It is also host to Britain's rarest crustacean – the White Clawed Crayfish, *Austropotamobius pallipes*.

### Grassland

The main area of grassland with conservation value is Oak Wood Field on the west of the site. This is a popular feeding site for the Green Woodpecker and for bats during the night. Historically this field had been a meadow up until the 1940s. For the first time in many years the field was left uncut during the summer of 1996 to create an improved habitat for butterflies, bees, crickets and other invertebrates. A small area at the northern end of the field had its top soil removed and a native wildflower mix sown, *Emorsgate EM2*, in March 1996. This has led to a number of wild flowers Returning, reminiscent of traditional countryside views; these include Musk Mallow, *Malva moschata*, Moon Daisy, *Leucanthemum vulgare*, and Ragged Robin, *Lychnis flos-cuculi*. This area is now cut and raked-off every September thus helping to maintain this summer meadow.

### Recreation

Casual informal recreation such as walking and running do occur within the park. Some 10,000 people live within a 10 minute walk of the area. Local schools use the Park for cross country Running and orienteering. Activities such as bird watching and dog walking are also popular. Angling by local people is permitted on the Lake subject to the individual purchasing a Fishing permit from the Town Council and having a current EA Rod Licence. A copy of the current Angling Rules is available from the Council Offices.

### Conservation, Management

#### Woodland

Apart from Coppicing, explained below, a number of other management practices are carried out within the woodlands of Maiden Erlegh Park. A number of dead trees are left standing so as to create feeding sites for woodpeckers and other birds. These trees can also provide holes for nesting birds or for bat roosts. It is worth noting that in a natural deciduous woodland some 40 – 50% of trees would be dead or dying. It is these trees that can support a large diversity of invertebrates, molluscs, mosses, fungi and lichens. It also the case that mature and over mature veteran trees are often the best for wildlife.

Dangerous branches or trees near official footpaths or roads are made safe or removed. The wood is used to create habitat piles or dead hedges, also an important habitat. These hedges

help prevent visitors from trampling the forest floor and destroying vegetation. Logs are also used for path edging and for revetment work within the Lake. Some wood is given away to local craftspeople and local schools for educational purposes; a small amount is given away as firewood. We very rarely burn dead wood, due to its ecological importance and the damage done to the woodland floor by fires.

### Coppicing

This is an old woodland practice dating back to the Stone Age. Certain species of trees are pruned to the ground in such a way that they re-grow with many stems. This increases the life of the tree, lets light on to the woodland floor, provides a habitat for more species and produces a sustainable supply of timber. By about 1840 the practice of coppicing Hazel in this area had almost died out and with it many species were endangered.

By reintroducing coppicing to small areas of our wood it is possible to improve the habitat for wildlife. However, this has to be done in a sensitive way remembering that invertebrates such as spiders often prefer older trees. Another example is the Dormouse, *Muscardinus arvellanarius*, which requires mature Hazel trees to nest in and will only move in aerial corridors created by touching branches. Within every coppiced area, known as a Coupe, a few mature standard trees must be left. A recent survey revealed Sycamore, *Acer pseudoplatanus*, provided Dormice with large quantities of Greenfly to eat, which may amend some thinking amongst nature reserve managers. (Subject to approval by English Nature a Dormice Survey should be carried out in Old Pond Copse during the Autumn of 1998.)

Coppicing is known to increase ground flora diversity. In June 1997 two Common Spotted Orchids *Dactylorhiza fuschii* were sighted within Old Pond Copse, in a recently coppiced area. These were a common sight in the 1940s, and have occasionally appeared in small numbers since the 1980s. This plant is known to benefit from the coppicing of nearby trees.

### Rhododendron and Sycamore Control

Both of these species were introduced to this country. The Rhododendron, *Rhododendron ponticum*, was encouraged by Victorians, and Sycamore, *Acer pseudoplatanus*, is now believed to have been introduced in the 17<sup>th</sup> Century rather than by the Romans. Both species can out-compete native species for light, particularly Rhododendron which creates a monoculture.

British wildlife needs native flora to glean food from. Many exotic species of plants do not support wildlife. In case of Rhododendron, *Rhododendron ponticum*, it also changes the pH of the soil which can lead to toxins leaching into nearby waterways. A large amount of Rhododendron exists in Moor Copse on the embankment and also near the Lake in Oak Wood. Sycamore has invaded sections of Old Lane Wood and Oak Wood. However, Sycamore does support a large amount of aphids and thus can be beneficial to birds and beetles whilst its flowers are attractive to bees.

### Fisheries Management

The Town Council's Park Ranger Service has successfully established special Fibre Rolls containing native bankside vegetation including the attractive Yellow Flag Iris, *Iris pseudacorus*. Reeds are also transplanted from other ponds in the area. Some two thousand plants have been added to the margins of the Lake during the two years.

The problem of algae is also being addressed. Excessive algal blooms occur when a lake is enriched with minerals. This often happens quickly particularly in hot weather. Some of these algae release toxins which can kill fish and mammals. They also exclude light from reaching aquatic plants causing them to die. The death of these plants plus the ultimate death of the

algae contribute to the dead organic matter which sinks to the bed of the lake. This in turn robs the water of oxygen as the Decomposers get to work. When this point is reached, bacteria release pollutants, making the water unfit for most forms of water life. In the early stages, fish deaths of large specimen fish, Roach, *Rutilus rutilus*, and Pike, *Esox Lucius*, may occur.

To improve the health of the Lake and to improve the ecological balance of fish stocks and other wildlife a number of actions are to be taken. The Pollarding of overhanging Alder trees to prevent leaves entering the water; placing Barley Straw Bales which release Humic acid which destroys algae, and removal of overstocked and diseased fish.

Once Common Carp and Roach numbers have been reduced, algae levels will fall and invertebrate numbers should increase. Aquatic plants will be introduced into the Lake to further improve water quality and thus the habitat for invertebrates, fish, amphibian and bird life.

Before embarking on the above programme the Town council has sought professional advice. All the above actions will guarantee a healthy and sustainable Lake for future generations to enjoy.

#### Further Reading

The following books give more information on practical conservation, wildlife, habitat management and other related matters.

Berkshire Environmental Action pack. Babbie Public Services. Berkshire County Council.

Berkshire's Wildlife Heritage Sites. Berkshire Nature Conservation Forum.

Earley Residents Guide 1998. Earley Town Council.

Freshwater Fish of the British Isles. Giles. Swan Hill Press.

Managing habitats for Conservation. Sutherland and Hall. Cambridge University Press.

A Nature Conservation Strategy for Berkshire. Berkshire Nature Conservation Forum.

Trees & Woodland in the British Landscape. Rackham.

Waterways and Wetlands. A Practical Handbook. BTCV.

Wildlife After Gravel, Giles. Game Conservancy.

The Wild Woods – A Regional Guide to Britain's Ancient Woodlands. Marren.

Woodland Conservation and Management. Peterkin. Chapman and Hall.

Woodlands: A Practical Handbook. BTCV.

# MAIDEN ERLEGH PARK

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