Stratfield Brake East Woodland, south of The Triangle
Survey of Plants, Invertebrates and Fungi

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For Friends of Stratfield Brake (FoSB)

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Woodland interior and view in autumn from Frieze Way

Contents

Summary

Species records for plants, fungi and some invertebrates are presented for the Lowland Deciduous Woodland Priority Habitat on this site. There is sufficient evidence from coppice and pollard tree structure, flora, fungi and old marginal earthen wood banks present to conclude this is Ancient Woodland, despite the lack of map evidence of existence before 1600. In the absence of such documentary evidence Natural England has indicated this woodland will be mapped as 'Long Established Woodland' which does not preclude existence before 1600. An extraordinary variety of fungi and the beginnings of a good invertebrate list featuring deadwood-breeding species has been achieved. Many of the standing dead and dying trees have an abundance of rot holes, peeling loose bark and dense ivy which will provide ample bat roosting opportunities and provide for fungal and invertebrate species of deadwood.

Aim

To make a preliminary assessment of the biodiversity of this woodland strip (central grid reference SP 4985 1191, estimated area 1.42ha) and look for features and species indicative of Ancient Woodland habitat in this land which is directly adjacent and to the south of the '**Triangle'**, an area of ex-arable field with thick hedgerows and marginal tree belts. This adjacent area having been occupied by managed willow coppice for the last 20 years.

Introduction

I am an experienced Independent Freelance Ecologist who has lived in Kidlington since 1984. I have been employed on species survey work in Oxfordshire by Natural England, BBOWT, Oxford City Council, private landowners and Local Wildlife Groups. I am very

familiar with the habitats in the general Stratfield Brake area, especially the hedgerows and verges (I have assisted in botanical verge survey of Frieze Way with a local Natural History Society). I and my family helped plant some of the Woodland Trust new woodland areas at Stratfield Brake in the 1990s. My particular expertise is identification of plants, invertebrates and fungi; I have 45 years of experience of the first group and 30years of experience in identifications of the other groups, being one of the main species recorders for the Fungus Survey of Oxfordshire Group. I am a regular voluntary species recorder in these groups for Thames Valley Environmental Records Centre (TVERC).

Visits

This woodland strip was visited on the following dates; time spent varying from one to three hours at each visit:
12.08.2023
09.08.2023
19.08.2023
02.09.2023
01.10.2023
08.10.2023
22.10.2023
27.10.2023
11.11.2023
17.11.2023

At each visit, flowering plants, ferns, mosses, invertebrates and fungi were identified. Two visits were adequate to record the majority of plants on this small site, except for spring-flowering species which die back by midsummer. It was an exceptional year for fungal fruiting because of the high rainfall throughout the autumn and very many species were found. More visits would be needed to get any reasonable assessment of the diversity of invertebrates on site, but the beginnings of a good list has been achieved. Some photographs of species and habitats of this site are in Appendix I. Tables of species found are in Appendix II.

History

The site is marked as woodland **with almost the same outline as today** on the earliest maps available to view from 1882-1887 (1). If this woodland once belonged to nearby Frieze Farm, this reference to coppices (3) may be the earliest to detail woodland on site (my emphasis):

'In 1730 and 1783 Fries farm comprised the Mead (10 a.), ***two coppices*** *(1 1/2 a.), and 6 grounds and 2 closes (*c. *186 a.), at least one of which, Wheat close (11 a.), may have been arable…..By 1863 the farm had been reduced to 160 a., of which* c. *120 were arable,* c. *37 a. grass or meadow, and 1 1/2 a.* ***wood'****'*

The Stratfield Brake East section of mature woodland (estimated to be **1.42ha**) was obviously once continuous with the current Stratfield Brake West section mature woodland which I estimate has a total area of **2.9ha** (thus total for the mature section of Stratfield Brake woodland suggested to be Ancient Woodland approximately **4.32ha**). The aerial photo collection of the USAAF from 1943-44 show the two halves of the wood still connected (2).

In these aerial photos relic 'ridge and furrow' marks of historic arable cultivation in the open field system (before enclosures) run right up to the woodland margins, so there is no evidence in these fields that the woodland was ever any bigger than it currently is, at least for many centuries. The construction of Frieze Way happened in the early 1960s, bisecting the mature woodland (according to available dated OS maps) going through the widest section. It is a dual carriageway road, travelling on a **raised embankment** through the centre and lowest part of the woodland. This dual carriageway road took out a significant chunk of such a small mature woodland site.

There must have been the loss of some old trees in Frieze Way construction, but it is interesting to note that remaining oak trees on the new road margins (including a couple of large old coppice stools) appear to have been given careful protection from embankment spoil of constructed **stone wall circles, capped by cement**. These are now somewhat crumbling after 50 years, but still clearly detectable (see photos in Appendix). Presumably these stone walls prevented spoil being heaped up immediately adjacent to the trees and causing root death. Such care shows the recognised value of the old oaks in this woodland strip.

The construction of the A34 chopped off part of the easternmost end of the woodland strip. This small woodland is completely isolated (and probably has been for a very long time) from other local Ancient Woodland areas I know such as at Wytham, Begbroke, Bladon and Woodeaton.

The origin of the name '**Stratfield Brake'** is still unclear, despite research. 'Stratfield' could mean 'street field' which is interesting in the context of the discovery of a raised wide wood-bank or trackway at the southern margin of the wood on the Kidlington Parish Boundary (see discussion below). The 'shadow' of this ancient raised route can be traced on current Google aerial image out into the adjacent arable field to the west, progressing to the margin of the canal. On the other side of the canal is old ridge and furrow but possibly this route predates that cultivation and was heading to ancient Yarnton village. 'Brake' is often used to describe an area with a lot of Bracken (a fern) but no bracken has yet been found on site.

Conservation Designation and Strategic Significance for Nature Recovery

This strip of woodland is part of the designated **Cherwell District Wildlife Site (DWS)** '**Stratfield Brake**' **Code 41V21** (including both mature woodland sections either side of Frieze Way and the woodland newly planted in the 1990s) with a total area of 20.98ha. The main part of this wildlife site is Stratfield Brake West on the western side of Frieze Way. The proposed **Nature Recovery Network for Oxfordshire** by Thames Valley Environmental Record Centre (4) maps the whole of Stratfield Brake woodland old and newer) either side of this road as **dark green** i.e. part of a '**Core Zone'** of the 'highest nature value', existing wildlife areas. Areas next to this Core Zone have '**Strategic Significance'** in the network for future Nature Recovery as they can allow natural colonisation from the rich core or 'hub' areas as planned in the forthcoming **Oxfordshire Local Nature Recovery Strategy** (LNRS) which addresses the requirements of the Environment Act 2021.

Personal Enquires of Natural England (who are reviewing the Ancient Woodland mapping layer) about this specific site have produced the information that Stratfield Brake mature woodland is to go on the '**Long Established Woodland' Inventory** layer but not on the new layer for the **Ancient Woodland Inventory (AWI).**

This means it is therefore confirmed to have been present since the 1700-1800 timeframe. Updated map layers for the woodland inventories are not yet publically available.

Site Margins

Deep drainage (or boundary) ditches surround the Stratfield Brake East woodland section on all sides. On the north side, two wire fences approximately 1-2m apart separate the woodland ditch from the open area of the Triangle. On the southern side a **raised bank** (5-6m wide), or possibly an **old raised trackway** (in light of the width) is apparent on the inside of the woodland on the inside of the ditch separating the site from the arable field to the south (see discussion below and photo in Appendix I). This is in the location of Kidlington Parish Boundary according to the most recent O.S. map. A wire fence separates the ditch from the arable field on higher ground to the south.

Topography, hydrology and Soil Conditions

The land in the Triangle to the north slopes gently down towards this woodland strip at the south. The arable field to the south slopes gently down northwards to this woodland. Thus this strip of **woodland would appear to occupy a shallow valley** between the southern arable field and the Triangle. Water currently pools in the Triangle, which is an exceptionally wet clay-soil site but it would have tended to move south towards the woodland in the past, making a very wet site, before the marginal deep ditches were dug. The soil in the woodland is obviously heavy, mainly clay, but was rarely waterlogged even in this last wettest of winters. At the summer and autumn visits, the clayey soil still showed cracking despite summer rainfall. Marginal ditches did not fill up until January, despite exceptional rainfall.

The woodland may have survived the past arable cultivation of all surrounding fields (typical '**ridge and furrow'** patterns of historic open-field arable are visible all around from older aerial photographs such as the USAAF series) because the clay soil here was regularly too wet to plough (before the ability to insert land-drains as today). In running through this woodland in the shallow valley, Frieze Way dual carriageway of the 1960s had to be on raised ground, 1.0-1.5m at least higher than the adjacent old woodland.

Trees

Relatively few species of full-sized trees are present. The most impressive feature of this woodland on entering is the remaining large mature Pedunculate Oak *Quercus robur* and Ash *Fraxinus excelsior* trees still standing. Some of these are mature 'maiden' single trunk trees (standards) presumably left for timber; others show evidence of past pollarding (major limbs branching at head height) or are **outgrown old coppice stools** with multiple trunks arising from a single base (see photos in Appendix I). Some of these coppice stools are likely very old due to their measured basal diameters. Exceptional sizes are one Ash coppice stool of 2m basal diameter and one large Oak coppice stool of 3m basal diameter. Ancient woodland expert Oliver Rackham (10) quotes an ash stool of 5ft (1.5m) diameter as at least **400 years old** and says they can get much larger and older than this. Identifying the extent of old coppice stools can be difficult. It may not be recognised that a group of oak trunks growing quite close together actually represent an old coppice stool where the centre has rotted away, leaving the 'poles' to grow to separate trees. Coppice stools are completely self-renewing and capable of living indefinitely as long as they are not over-shadowed by maiden timber trees.

Historically oak coppice shoots were cut on a **10 to 25 year cycle** to provide small diameter poles for building and fencing. On difficult waterlogged heavy soils such as this, growth would be much slower than on good soils, so coppice stools expand more slowly than average. For Oak, one source suggests an increase in stool diameter of **0.3m per 100years**, which would put this **3m diameter Oak stool at 1000years old** (5). Of course growth rates may vary and not all coppice stools of this size may be that old, but certainly several hundred years is probable. **Most ancient woodlands actually have a history of coppice wood management**, rather than timber tree management (8). Ash and Elm are known to be very tolerant of waterlogging, Oak less so.

The other prominent trees are old Field Maples *Acer campestre* (some old coppice stools) and some single- trunked Horse Chestnuts *Aesculus hippocastanum* and Sycamores *Acer pseudoplatanus* (both non-native later introductions). Obviously the woodland has been mainly harvested for wood products in the past, although active coppicing has long since discontinued. Common Hawthorns *Crataegus monogyna* are present in more open glade areas, and several Midland Hawthorn *Crataegus laevigata* are found in lightly-shaded areas. It is possible that some of the dead standing trees might have been Ash affected by Ash Dieback (*Chalara*). English Elm trees *Ulmus procera* must have once been common on the southern margin bank, but these are now represented mostly by fallen dead trunks and young sucker growth due to the effects of Dutch Elm Disease, a fungal infection which kills young trees above a certain trunk diameter. Live English Elm is therefore present mostly only as young suckering growth in the understory. One wild Crab Apple tree *Malus sylvestris* and a couple of Hollies *Ilex aquifolium* are also present. Several Crack Willows *Salix fragilis* are present along the marginal ditch on the northern side. Common Ivy *Hedera helix* is present as a climber with dense foliage growth on the trunks of two of the mature oak trees; ivy covering may provide roosting sites for bats.

At least four mature maiden or standard Oaks have died and fallen and are now dead large horizontal trunks which have mostly lost their bark; one still has bark on. Oak wood is very resistant to decay and such trunks last for many decades, whilst fallen Ash or Elm trunks rot quickly. The presence of English Elm on the south side is typical of the fact that the raised trackway there is along the parish boundary as such ancient boundaries are commonly where English Elm was planted; likely originally as a hedge next to the deep ditch to the arable field at the very wood edge.

Shrub layer (Understory)

The shrub layer includes areas with occasional Elder *Sambucus nigra*, Dewberry *Rubus cesius*, and Bramble *Rubus fruticosus* agg. (some of which is the Hedgehog Bramble *Rubus echinatus*) or locally abundant suckers of Blackthorn *Prunus spinosa* and suckers of English Elm with some Common Hawthorn, a Midland Hawthorn, occasional Sweet Briar Rose *Rosa rubiginosa*, Wild Privet *Ligustrum vulgare*, one Spindle *Euonymus europaeus* and a Grey Willow *Salix cinerea* on the southern margin. Unusually, big patches of Wild Honeysuckle *Lonicera periclymenum* (normally a climber) carpet the soil in a couple of areas rather than growing up the trees.

Ground Flora (Field Layer)

The ground flora comprises 30 species so far found including locally frequent Wood False Brome *Brachypodium sylvaticum*, Wood Meadow-grass *Poa nemoralis*, Herb Robert *Geranium robertianum*, Ground Ivy *Glechoma hederacea*, Garlic Mustard *Alliaria petiolata*

and small amounts of Tufted Hair Grass *Deschampsia cespitosa*, Cuckoo Pint *Arum maculatum*, Wood Sedge *Carex sylvatica*, Hairy Brome *Bromopsis ramosa*, Wood Avens *Geum urbanum*, Dog's Mercury *Mercurialis perennis*, Enchanter's Nightshade *Circaea lutetiana*, Three-nerved Sandwort *Moehringia trinervia* and two fern species (Male Fern *Dryopteris filix-mas* and Broad Buckler Fern *Dryopteris dilatata*). Native Bluebells *Hyacinthoides non scripta* (known to be present) were indicated by dead stalks and empty pods in August. Early Dog Violet *Viola reichenbachiana*, Bugle *Ajuga reptans* Wood Speedwell *Veronica montana* and Red Campion *Silene dioica* are present but rare. The presence of small numbers of Foxglove *Digitalis purpurea* in the centre of the woodland indicates slightly acid soil conditions; as sometimes occurs with waterlogged clay. Towards the eastern end, nearest the A34 patches of Cowslips *Primula veris* are to be found, indicating a more open glade or non-woodland past.

A small area on the south side has a big patch of Common Nettle *Urtica dioica*, Cleavers *Galium aparine* and Hemlock *Conium maculatum* indicating local nutrient enrichment. I notice this is common in many woodlands. The nutrient enrichment is possibly from nitrate and phosphate from fertilizer drift from arable fields nearby, or NOX deposition from traffic exhaust fumes from nearby roads.

Ash regeneration was evident as a swarm of less than 50cm high saplings towards the eastern end of the wood. No regeneration of Oak (no seedlings) was seen, this is a very common situation in rather shady woods today. Oak seedlings need the higher light levels of glades or open ground such as would be generated by a return to the historic coppicing cycle.

Eight moss species and one liverwort species were found either on the woodland floor or on tree boles and bark. All are common. It is very unusual to find a lot of **Foxtail Feather-moss** on the soil either as characteristic mounds or detached 'balls' in the western section. This moss indicates more mildly base-rich conditions than in the centre of the wood where the Foxgloves are growing.

Ancient Woodland Vascular Plant Indicator Species Present

All these ground flora species mentioned are very typical of deciduous woodland. In the context of the Oxfordshire flora, the most impressive visual ground flora Ancient Woodland species are swathes of Native Bluebells *Hyacinthoides non-scripta* and the carpets of Wood Meadow Grass *Poa nemoralis*. Dog's Mercury *Mercurialis perennis*, Enchanter's Nightshade *Circaea lutetiana* and Foxglove are moderately indicative of old woodland locally, in combination with the stronger indicators. It is very unusual to find Wall Lettuce *Mycelis muralis* in this part of Oxon (a Chilterns species). Further surveys in spring will probably reveal more species.

Typical plants faithful to ancient woodland are ones that have remarkable persistence on a site and *extremely limited dispersal abilities,* which is why they do not appear in planted woodlands or natural secondary woodlands (unless such woodlands are immediately adjacent to ancient woodland and then colonisation can be extremely slow).

They are effectively 'marooned' or isolated within their surviving Ancient Woodland patches, too often (as here) surrounded by arable cultivation or barriers such as roads. They can't get out to anywhere else, so they live or die on the spot, depending how their woodland home is treated.

Here follows the full list of Ancient Woodland Vascular Plant (AWVP) species present in Stratfield Brake (East section plus West section i.e. the original old wood before Frieze Way) that are indicative of Ancient Woodland in the south area of the UK according to expert Francis Rose (10). His lists being based on a report for the Nature Conservancy Council (now Natural England) and part of the basis of the current on-going mapping for the **Ancient Woodland Inventory (AWI) by Natural England:**

Field Maple *Acer campestre*
Wood Sedge *Carex sylvatica*
Pendulous Sedge *Carex pendula*
Midland Hawthorn *Crataegus laevigata*
Wood Meadow-grass *Poa nemoralis*
Bluebell *Hyacinthoides non-scripta*
Crab Apple *Malus sylvestris*
Three-nerved Sandwort *Moehringia trinervia*
Wood Speedwell *Veronica montana*
Early Dog-violet *Viola reichenbachiana*
Holly *Ilex aquifolium*
Giant Fescue *Festuca gigantea*
Hairy Brome *Bromopsis ramosa*
Wood Melick *Melica uniflora* (mostly in West section)
Primrose *Primula vulgaris* (in the West section)
Remote Sedge *Carex remota* (West section)
Goldilocks Buttercup *Ranunculus auricomus* (noted in spring survey by BBOWT in report for FoSB)

In total 17 AWVP species present. This is a very respectable total for such a small area of 4.32ha in total, almost all of them are to be found in the smaller East section of 1.42ha. Altogether the floral assemblage is good evidence that this woodland strip is Ancient Woodland. How does this compare to other Oxfordshire Ancient Woods? Rose (10) quotes Wytham Woods SSSI at 426 ha with 62 AWVPs and tiny Sidlings Copse SSSI woodland area at only 2ha with 46 AWVPs. Marren (9) states any woodland with over 20AWVPs is '*likely to have a long and interesting history'*. But AWVP score is not sometimes the most important criterion in mapping. Some sites mapped as Ancient Woodland have low AWVP scores because of good documentary map evidence pre 1600 and other good features like old large coppice stools and earthen wood banks. Sometimes the only ground flora of note is an Ancient Woodland is absolutely wall-to-wall native Bluebells (one AWVP only), but who then would deny the value of such a wood where the spectacle in late April is of a blue mist of flowers under the trees where from their profusion they seem '*like the heavens up-breaking through the earth'* (a quote from botanist GC Druce in the Flora of Oxfordshire in 1927).

Native English Bluebells flowering in an Oxfordshire Ancient Wood (from my photo archive)

Rose concludes in talking about AWVPs '*The floristic diversity of any wood is not always linked to its antiquity, but a high score in a site is a very practical guide to its conservation value*' (10).

Deadwood

In any natural valuable biodiverse woodland, as well as the living trees and understory and ground plants **50% of trees should be dead** (standing or fallen deadwood) and of the **overall biodiversity of any wood** (even including all the birds, bats, mammals, insects on leaves and butterflies etc.), **90% of the total biodiversity will be associated with the deadwood** (mostly saproxylic beetles, flies & fungi). Elton (1966) estimated that 20% of British fauna depends on dead or dying wood (6). Deadwood is essential to the ecological integrity of woodland (7).

This site is notable for the amount of standing dying trees and fallen deadwood of all sizes as well as dead stumps and rotting coppice stools. This means that there is a lot of habitat for fungi specific to deadwood and for saproxylic (deadwood-breeding) insects contributing to a potentially high biodiversity of those insect types. Standing, dying trees exhibited some rot holes or possible woodpecker holes and flaking peeling bark on standing dead trees was commonly encountered, likely providing good potential for roosting bats. (For examples see Appendix I). It is critical for maximum biodiversity that **deadwood of all sizes should not be removed or burnt** in any woodland ecosystem.

Fungi

In total **147 species** of fungi could be recognised from the visits to Stratfield Brake East, although some old woody bracket fungi were past being identifiable. This is an extraordinarily high total for a woodland area of only 1.42ha. Most are common to mature deciduous woodland although there was one rarity. Photos of some are included in Appendix I. Such a high diversity of fungi as found here is typical of Ancient Woodland. Unusually 2023 has had rain from July onwards throughout all autumn, winter and early spring. This rain stimulated fungal fruiting much earlier and in much greater abundance than would be normally expected and this has been the best fruiting year for the last 20years in my experience. Only fungal fruitbodies (caps, brackets, toadstools) are identifiable and they are commonly ephemeral, lasting only a week or so, so repeated visits are necessary to obtain

good evidence of fungal biodiversity. Fruiting may not occur every year and some species go many years between appearances.

Relatively common fungi associated with the roots of the oak trees (mycorrhizal species) included two species of Earth balls *Scleroderma* sp., Bluefoot Boletes *Xerocomellus cisalpinus* and numerous caps of the bright red-capped Scarlet Brittle gill *Russula pseudointegra.* Generally common fungi found on deadwood included Turkey tail *Trametes versicolor*, Smoky Bracket *Bjerkandera adusta*, Blueing Bracket *Postia subcesia*, Branching Oyster *Pleurotus cornucopiae*, Oak Curtain Crust *Hymenochaete rubiginosa*, Tripe Fungus *Auricularia mesenterica*, Bay Polypore *Polyporus badius* and Beefsteak bracket *Fistulina hepatica*. The abundant dead Elm wood means that Wrinkled Peach *Rhodotus palmatus* brackets are frequent (only grows on dead elm). Leaf litter species were represented by White-laced Shank *Megacollybia platyphylla*, Common Puffballs *Lycoperdon perlatum*, Collared Earthstars *Geastrum triplex*, abundant Clouded Funnels *Clitocybe nebularis*, Common Funnels *Clitocybe gibba*, Shaggy Parasols *Chlorophyllum rhacodes*, Butter-caps *Rhodocollybia butyracea*, Tawny Funnels *Paralepista flaccida* Amethyst Deceivers *Laccaria amethystina* and particularly Tufted Wood Mushrooms *Agaricus impudicus*. Some of these were fruiting in great number in enormous rings (indicating great age) throughout the wood. The forests of 1000s of pale brown Slender Clubs sprouting everywhere from the leaf litter in November was quite a remarkable sight. The star find of a rare species was a group of caps of the large **Medusa Mushroom *Agaricus bohusii***, with dinner-plate sized caps sprouting from a pile of deadwood in mid-August. This is a very rarely recorded fungus and possibly a first record for Oxon (first time I or any other member of the Fungus Survey of Oxfordshire Group have ever seen it). The odd weather pattern this summer obviously stimulated its fruiting.

The characteristic black 'bootlaces' or rhizomorphs of **Honey Fungus *Armillaria* sp**. were seen under the loose bark of one of the large fallen trees, later characteristic toadstools were seen. This probably means the tree was killed by this parasitic fungus. Honey Fungus colonisation could be the reason other mature oaks and other trees have died, along with other current tree diseases. The presence of this fungus could be negatively affecting natural tree regeneration.

Vertebrates

Two juvenile (3cm) Common Frogs were encountered whilst surveying. I consider it likely these may have crossed Frieze Way from the wetlands complex on the other side of the road. Roe deer have been seen in the general area and a skull of this species was found on the woodland floor in the autumn. A green woodpecker was noted in October.

Invertebrates

74 invertebrate species are so far recorded, mostly flies and beetles. This will be the mere beginning of a long species list for such an old woodland site. It is notable that 20 species of fungus-gnats (breed only in fungi) were collected with a sweep net after rain in August, reflecting the quite rich fungal diversity on site. Fungal fruitbodies (caps brackets toadstools) are important as food for larvae of a number of specific insects, especially flies and beetles and indeed a couple of important fly records were achieved from fungi; one rare (Red Data Book listed) small black fly *Seri obscuripennis* was reared from brackets of the Bay Polypore. A good fungal diversity means a good insect diversity in these groups. The

presence of a number of rot holes and a couple of sap-runs on the mature oaks also provides opportunities for breeding of specific invertebrates.

Deadwood-breeding (saproxylic) insects, mostly beetles and flies, may be more recordable as adults off-site outside any shady woodland, as they travel out from their breeding site to the margins and to nearby open areas in May to find flowers. Here they will search for pollen and nectar on flowers of ground flora or shrubs like hawthorns to build up reserves to complete their life cycles. They will therefore depend on flowering plants outside this woodland, showing how the woodland species are connected to surrounding green diverse habitat of flowering hedgerows and willow coppice. Such a flowery '**sustenance zone'** is abundantly available in the adjacent Triangle area (see my report on the Triangle wildlife) at least three deadwood-breeding (saproxylic) longhorn beetles are recorded on flowers there; these must have travelled out from Stratfield Brake East deadwood for food.

I have been informed by FoSB that Purple Hairstreak butterflies have been seen in summer 2023 in the oak canopy that overhangs out from the wood to the margin of the Triangle area.

Wood-banks and Ditches

Ancient lowland woodland coppices had boundaries fixed and marked by a bank inside the wood and a ditch to the outside area (8). The ditch was not only for drainage but to define a boundary and deter stock entry. This is exactly the situation with banks around Stratfield Brake East (and in the west section from a brief look) except the southern side internal bank at 5-6m wide is so wide as to more likely to have been a causeway or old raised trackway. The banks would have been reinforced by a hedge or a wall or oak paling fence to the outside edge, in order to prevent domestic stock or deer entering the wood to eat down the new sprouts from the coppice stools in the first few vulnerable years of re-growth after the pole wood harvest (8). Relic hedges are present along both the north and south banks at Stratfield Brake East and west, the southern side trackway bank characteristically the richest place in English Elm trees and suckers, which would have been planted on the bank and later spread by clonal spread into the wood itself.

Survival of Ancient Woodlands

Ancient woodlands are still disappearing despite recognition of their value and that they are irreplaceable. Direct destruction (e.g. for HS2) is still common. Apart from building ON an Ancient Woodland, destruction can occur by development near or immediately adjacent to an Ancient Woodland. Damage can occur then by hydrology change, light pollution, noise pollution, too much public access and trampling of flora (bluebells die from trampling, this also eliminates fungal fruiting) litter, flower-picking/digging, fires destroying trees or deadwood. To survive in the current pressurised countryside in the south an Ancient Woodland needs a wide undeveloped green unlit buffer of 100s of metres and absolutely minimal strictly controlled public access, in some cases access only for essential woodland management. It is regrettable that Natural England's Standing Advice is for a minimum of **15m** buffer to Ancient Woodland (far too little) .

In their '**Planners' Manual for Ancient Woodland and Veteran Trees'** (2019) the Woodland Trust state in relation to providing adequate buffers:

'*Although there is no 'one size fits all' with buffer design, each one should be designed to fulfil the specific requirements of its location and the type of proposed development… As a*

*precautionary principle, a **minimum 50 metre buffer** should be maintained between a development and the ancient woodland, including through the construction phase, unless the applicant can demonstrate very clearly how a smaller buffer would suffice*.'

In 2021 the House of Lords passed an amendment to the Environment Bill to introduce an '**Ancient Woodland Standard'** for England to give enhanced protections for ancient woodland, one of the key points being:

'Any development adjacent to ancient woodland must incorporate a minimum 50-metre buffer to provide protection, reduce indirect damage and provide space for natural regeneration.'

But in October 2021 the Government rejected the Lords amendments. In its place the government has committed to a review of the NPPF and the strengthening of protections afforded to ancient woodland within it. In addition, the government will update the Town and Country Planning (Consultation) (England) Direction 2021 so that local planning authorities must consult the Secretary of State if they want to grant planning permission for developments affecting ancient woodland.

The adjacent Triangle site is subject to a major planning application extremely close to the northern edge of this woodland.

Both 15m and 50m buffers are nowhere near wide enough according to my direct observation and experience of local ancient woodlands adjacent to development.

Discussion and Conclusions

Stratfield Brake East is a strip of mature Lowland Mixed Deciduous Woodland, **a Priority UK BAP Habitat (Habitat of Principal Importance, NERC Act 2006).** In combination with the West section it has a good suite of plants (**17**) which are known Ancient Woodland Vascular Plant indicators, a remarkable total for such a small site. An exceptional range of 147 species of fungi has been found; associated with the roots of the oak trees, soil and leaf litter and with the deadwood of the variety of tree species present. Out-grown oak pollards and particularly old out-grown oak and ash coppice stools of large basal diameters (2-3m) provide very important evidence of long existence of those tree species on site, at least several hundred years. An earthen wood bank exists on the northern margin on the wood side of the ditch and an old earthen raised track-way bank is present in the wood along the southern margin on the wood side of the ditch. This southern raised trackway is at the edge of Kidlington Parish boundary. Such wood bank/trackway features adjacent to ditches are also typical of Ancient Woods.

It therefore readily fits the criteria for Ancient Woodland even though it does not appear on any map (that has yet been located) showing it before 1600. It is therefore not mapped as Ancient Woodland but is to be mapped by Natural England as '**Long Established Woodland**'. **Such designation and mapping does not preclude it being older than 1600** and thus 'Ancient'. This is certainly what the flora list, fungal list and other features indicate. It should be treated as Ancient Woodland which is **'Irreplaceable Habitat' in the NPPF.**

So, these are the key features that are indicative of its antiquity:

- Contains old tree pollards and large diameter old coppice stools

- On a parish boundary
- Enclosed by earthen banks and ditches
- 17 AWVP species so far found
- Excellent diversity and abundance of woodland fungi
- A growing list of saproxylic (deadwood) invertebrates

In my view it is therefore an important small parcel of Ancient Woodland for the County even though it is somewhat affected by nutrient enrichment. I have seen a lot of ancient woodlands locally and have not seen many that have **not** been affected by fertilizer drift from adjacent intensive arable fields; this has not detracted from them still being recognised as very important and valuable features for Oxfordshire.

Acknowledgements

I'm grateful to other entomologists Steve Gregory and Roger Booth for help with some invertebrate identification.

References

1. British History online https://www.british-history.ac.uk/os-1-to-10560/oxfordshire/033
2. UAAAF photos 1942-43 online https://historicengland.org.uk/images-books/archive/collections/aerial-photos/record/us_7ph_gp_loc271_v_5014
3. Paragraph on 'Fries Farm' in https://www.british-history.ac.uk/vch/oxon/vol12/pp194-203
4. Proposed Nature Recovery Network for Oxfordshire: https://www.wildoxfordshire.org.uk/oxfordshires-nature/oxfordshires-nature-recovery-network
5. Calculating age of old coppice stools: https://www.westberkscountryside.org.uk/media/other/39803/10a.VeteranTreesonAshampsteadCommon.pdf
6. Elton C.S. (1966) The Patterns of Animal Communities. John Wiley, New York.
7. https://www.woodlandtrust.org.uk/media/49219/ancient-woodland-restoration-maximising-ecological-integrity.pdf
8. Rackham, O. (1986) *The History of the Countryside*. J M Dent
9. Marren, P. (1990) *Woodland Heritage – (Britain's Ancient Woodlands*). The Nature Conservancy Council. David & Charles, Newton Abbot.
10. Rose, F. (1999) Indicators of Ancient Woodland: The use of vascular plants in evaluating ancient woods for nature conservation. *British Wildlife*, Vol.10, No. 4, 241-251

Appendix I Photographs

Mature maiden (standard) oak tree with rot-hole and sap- run and largest maiden oak with extensive ivy growth on trunk

Left: Oak tree on northern earthen bank showing evidence of past pollarding at head height. Right: old oak coppice stool adjacent to Frieze Way protected by circular low stone wall.19.08.2023

Fox-tail Feather Moss Thamnobryum alopecurum carpets some areas of soil

Outgrown old Oak Coppice stool of basal diameter 3m indicating great age, 100s, possibly 1000years. Basket for scale, side 32cm. Adjacent to Frieze Way.

Out grown very old Ash coppice stool, base 2m in diameter (the three apparent groups of trunks are actually all one large coppice stool where the middle has rotted away). Basket for scale, length of side 32cm.

Understory shrubs, Bramble, Honeysuckle and open area flora. Foxglove and leaves of Cowslips, Wood sedge and Early Dog Violet. 02.09.2023

Two views of the raised old earthen wood-bank or raised trackway (5-6m width) to the south margin of the wood, on Kidlington Parish Boundary. Mature oaks and relic hedgerow.

Deadwood and invertebrates


Long-fallen oaks, bark still on (left) and fallen de-barked oak, moss covered (right)


Standing dead trees with much loose bark and cavities, ideal bat roosting habitat

The Batman Hoverfly Myathropa florea breeds in rot holes in dead wood 02.09.2023

Fungi


*The rare large **Medusa Mushroom Agaricus bohusii**, dinner-plate sized caps in groups growing from deadwood*


***Earth ball Scleroderma verrucosum** associated with the roots of oaks and **Bay Polypore Polyporus badius** on deadwood*

***Oak Curtain Crust Hymenochaete rubiginosa** brackets on dead fallen oak trunk19.08.2023*

Three species of fungi found associated with the roots of oak trees, red-capped ***Scarlet Brittle Gills*** *(left) an* ***Earth Ball*** *(centre) and two* ***Bluefoot Boletes*** *(right*). 19.08.2023

Shaggy Polypore Inonotus hispidus *bracket on an Ash tree trunk and* ***Beefsteak bracket Fistulina hepatica*** *on old dead Oak.19.08.2023*

Tufted Wood Mushrooms Agaricus impudicus

***Wrinkled Peach Rhodotus palmatus**, bracket fungus only on dead Elm and **Collared Earthstars Geastrum triplex** on leaf litter. 29.08.2023*

***Blueing Bracket Postia subcesia** on unidentified fallen dead log and **Aniseed Toadstool Clitocybe odora** on leaf litter*

***Shaggy Parasol toadstool Chlorophyllum rhacodes and Amethyst Deceivers, Laccaria amethystina,** both woodland leaf litter fungi. 22.10.2023*

Appendix II Tables of Species Records

(YELLOW highlighting indicates notable or rare species or Ancient Woodland Indicator Plants)

Stratfield Brake East woodl.	J A Webb Species Surveys	2023						
Scientific name	**Common name**	**group**	**date**	**Grid ref**	**Abundance**	**Method**	**Habitat**	**Comment**
FLOWERING PLANTS								
Acer campestre	Field Maple	flowering plant	19.08.2023	SP4985 1191	occasional	field observation	deciduous woodland	
Acer pseudoplatanus	Sycamore	flowering plant	19.08.2023	SP4985 1191	occasional	field observation	deciduous woodland	
Aesculus hippcastanum	Horse Chestnut	flowering plant	19.08.2023	SP4985 1191	1	field observation	deciduous woodland	
Ajuga reptans	Bugle	flowering plant	01.10.2023	SP4985 1191	occasional	field observation	deciduous woodland	
Anthriscus sylvestris	Cow Parsley	flowering plant	19.08.2023	SP4985 1191	occasional	field observation	deciduous woodland	
Arum maculatum	Cuckoo-pint	flowering plant	12.08.2023	SP4985 1191	occasional	field observation	deciduous woodland	
Brachypodium sylvaticum	Wood False Brome	flowering plant	12.08.2023	SP4985 1191	occasional	field observation	deciduous woodland	
Bromopsis ramosa	Hairy Brome	flowering plant	12.08.2023	SP4985 1191	occasional	field observation	deciduous woodland	
Carex pendula	Pendulous Sedge	flowering plant	12.08.2023	SP4985 1191	rare	field observation	deciduous woodland	
Carex sylvatica	Wood Sedge	flowering plant	12.08.2023	SP4985 1191	loc.frequent	field observation	deciduous woodland	
Circaea lutetiana	Enchanter's Nightshade	flowering plant	19.08.2023	SP4985 1191	rare	field observation	deciduous woodland	
Conium maculatum	Hemlock	flowering plant	19.08.2023	SP4985 1191	occasional	field observation	deciduous woodland	south side
Crataegus laevigata	Midland Hawthorn	flowering plant	19.08.2023	SP4985 1191	2	field observation	deciduous woodland	
Crataegus monogyna	Common Hawthorn	flowering plant	12.08.2023	SP4985 1191	frequent	field observation	deciduous woodland	
Dactylis glomerata	Cock's foot	flowering plant	01.10.2023	SP4985 1191	occasional	field observation	deciduous woodland	
Deschampsia cespitosa	Tufted Hair-gGrass	flowering plant	19.08.2023	SP4985 1191	occasional	field observation	deciduous woodland	
Digitalis purpurea	Foxglove	flowering plant	12.08.2023	SP4985 1191	occasional	field observation	deciduous woodland	
Euonymus europaeus	Spindle	flowering plant	12.08.2023	SP4985 1191	rare	field observation	deciduous woodland	
Festuca gigantea	Giant Fescue	flowering plant	19.08.2023	SP4985 1191	rare	field observation	deciduous woodland	
Fraxinus excelsior	Ash	flowering plant	12.08.2023	SP4985 1191	frequent	field observation	deciduous woodland	
Galeopsis tetrahit	Common Hemp Nettle	flowering plant	12.08.2023	SP4985 1191	rare	field observation	deciduous woodland	
Geranium robertianum	Herb Robert	flowering plant	12.08.2023	SP4985 1191	frequent	field observation	deciduous woodland	
Geum urbanum	Wood Avens	flowering plant	19.08.2023	SP4985 1191	occasional	field observation	deciduous woodland	
Glechoma hederacea	Ground Ivy	flowering plant	12.08.2023	SP4985 1191	frequent	field observation	deciduous woodland	
Hedera helix	Ivy	flowering plant	19.08.2023	SP4985 1191	on 2 oaks	field observation	deciduous woodland	
Holcus lanatus	Yorkshire Fog	flowering plant	19.08.2023	SP4985 1191	rare	field observation	deciduous woodland	
Humulus lupulus	Wild Hop	flowering plant	27.10.2023	SP4985 1191	1	field observation	deciduous woodland	
Hyacinthoides non-scripta	native Bluebell	flowering plant	19.08.2023	SP4985 1191	loc.frequent	field observation	deciduous woodland	as dead stalks with seed pods
Ilex aquifolium	Holly	flowering plant	01.10.2023	SP4985 1191	occasional	field observation	deciduous woodland	
Ligustrum vulgare	Wild Privet	flowering plant	19.08.2023	SP4985 1191	occasional	field observation	deciduous woodland	
Lonicera periclymenum	Wild Honeysuckle	flowering plant	12.08.2023	SP4985 1191	loc.frequent	field observation	deciduous woodland	
Malus sylvestris	Crab apple	flowering plant	19.08.2023	SP4985 1191	1	field observation	deciduous woodland	
Mercurialis perennis	Dog's Mercury	flowering plant	12.08.2023	SP4985 1191	rare	field observation	deciduous woodland	
Moehringia trinervia	Three-nerved Sandwort	flowering plant	12.08.2023	SP4985 1191	occasional	field observation	deciduous woodland	
Mycelis muralis	Wall Lettuce	flowering plant	22.10.2023	SP4985 1191	1	field observation	deciduous woodland	
Myosotis sp.	a Forget-me -not	flowering plant	19.08.2023	SP4985 1191	occasional	field observation	deciduous woodland	
Poa nemoralis	Wood Meadow-grass	flowering plant	12.08.2023	SP4985 1191	loc. abundant	field observation	deciduous woodland	mostly dead at survey time
Primula veris	Cowslip	flowering plant	01.10.2023	SP4985 1191	rare	field observation	deciduous woodland	

Scientific name	Common name	group	date	Grid ref	Abundance	Method	Habitat	Comment
Prunus spinosa	Blackthorn	flowering plant	12.08.2023	SP4985 1191	occasional	field observation	deciduous woodland	
Quercus robor	Pedunculate Oak	flowering plant	12.08.2023	SP4985 1191	frequent	field observation	deciduous woodland	
Rosa rubiginosa	Sweet briar or Eglantine	flowering plant	27.10.2023	SP4985 1191	1 bush	field observation	deciduous woodland	
Rubus cesius	Dewberry	flowering plant	12.08.2023	SP4985 1191	loc.frequent	field observation	deciduous woodland	
Rubus echinatus	Echinate or Hedgehog bramb	flowering plant	11.11.2023	SP4985 1191	occasional	field observation	deciduous woodland	
Rubus fruticosus agg	Blackberry	flowering plant	19.08.2023	SP4985 1191	loc.frequent	field observation	deciduous woodland	
Rumex sanguineus	Wood Dock	flowering plant	12.08.2023	SP4985 1191	occasional	field observation	deciduous woodland	
Salix cinerea	Grey Willow	flowering plant	19.08.2023	SP4985 1191	rare	field observation	deciduous woodland	south side
Salix cinerea ssp cinerea	Grey Willow	flowering plant	11.11.2023	SP4985 1191	rare	field observation	deciduous woodland	
Sambucus nigra	Elder	flowering plant	12.08.2023	SP4985 1191	occasional	field observation	deciduous woodland	
Silene dioica	Red Campion	flowering plant	19.08.2023	SP4985 1191	rare	field observation	deciduous woodland	
Sorbus sp	a rowan	flowering plant	11.11.2023	SP4985 1191	rare seedlings	field observation	deciduous woodland	
Stachys sylvatica	Hedge Woundwort	flowering plant	12.08.2023	SP4985 1191	rare	field observation	deciduous woodland	
Ulmus procera	English Elm	flowering plant	19.08.2023	SP4985 1191	loc.frequent	field observation	deciduous woodland	mostly southern side, dying
Urtica dioica	Common Nettle	flowering plant	19.08.2023	SP4985 1191	one patch	field observation	deciduous woodland	
Veronica montana	Wood speedwell	flowering plant	01.10.2023	SP4985 1191	one patch	field observation	deciduous woodland	
Viola reichenbachiana	Early Dog-violet	flowering plant	12.08.2023	SP4985 1191	rare	field observation	deciduous woodland	
FERNS, MOSSES, LIVERWORTS								
Dryopteris dilatata	Broad Buckler Fern	fern	19.08.2023	SP4985 1191	rare	field observation	deciduous woodland	
Dryopteris filix mas	Male Fern	fern	19.08.2023	SP4985 1191	rare	field observation	deciduous woodland	
Frullania dilatata	Dilated Scalewort	liverwort	19.08.2023	SP4985 1191	rare	field observation	deciduous woodland	on tree bark
Atrichum undulatum	Common Smooth-cap	moss	19.08.2023	SP4985 1191	rare	field observation	deciduous woodland	on soil, east end
Brachythecium rutabulum	Rough-stalked Feather-moss	moss	19.08.2023	SP4985 1191	occasional	field observation	deciduous woodland	on soil & logs
Homalothecium sericium	Silky Wall Feather moss	moss	19.08.2023	SP4985 1191	rare	field observation	deciduous woodland	on tree bases
Hypnum cupressiforme	Cypress-leaved Plaitmoss	moss	19.08.2023	SP4985 1191	rare	field observation	deciduous woodland	on trees & fallen trunks
Kindbergia praelonga	Common Feather-moss	moss	19.08.2023	SP4985 1191	occasional	field observation	deciduous woodland	on soil & logs
Plagiomnium undulatum	Hart's-tongue Thyme-moss	moss	19.08.2023	SP4985 1191	rare	field observation	deciduous woodland	on soil
Rhynchostegium confertum	Clustered Feather-moss	moss	19.08.2023	SP4985 1191	rare	field observation	deciduous woodland	on tree bases
Thamnobryum alopecurum	Fox-tail Feather-moss	moss	19.08.2023	SP4985 1191	loc.frequent	field observation	deciduous woodland	on soil west end
Plagiothecium sp	a silk moss	moss	01.10.2023	SP4985 1191	10cm patch	field observation	deciduous woodland	base of an oak tree
Mnium hornum	Swan's-neck Thyme-moss	moss	17.11.2023	SP4985 1191	rare	field observation	deciduous woodland	on stump
FUNGI								
Agaricus bohusii	Medusa Mushroom	fungus	12.08.2023	ntre SP4985 11	5 caps	field observation	deciduous woodland	in bunch on dead wood
Agaricus impudicus	Tufted Wood-mushroom	fungus	12.08.2023	SP4985 1191	7 caps	field observation	deciduous woodland	on soil with leaf litter
Agaricus impudicus	Tufted Wood Mushroom	fungus	22.10.2023	SP4985 1191	1	field observation	deciduous woodland	on soil and leaf litter
Agaricus impudicus	Tufted Wood Mushroom	fungus	27.10.2023	SP4985 1191	9	field observation	deciduous woodland	on soil and leaf litter
Agaricus impudicus	Tufted Wood Mushroom	fungus	11.11.2023	SP4985 1191	numerous	field observation	deciduous woodland	on soil and leaf litter
Agaricus sylvaticus	Blushing Wood Mushroom	fungus	116.11.2023	SP4985 1191	few caps	field observation	deciduous woodland	on soil and leaf litter
Ampulloclitocybe clavipes	Club-foot Mushroom	fungus	08.10.2023	SP4985 1191	4	field observation	deciduous woodland	on soil and leaf litter
Ampuloclitocybe clavipes	Clubfoot Mushroom	fungus	27.10.2023	SP4985 1191	2	field observation	deciduous woodland	on soil and leaf litter
Armillarea mellea	Honey fungus	fungus	11.11.2023	SP4985 1191	5 caps	field observation	deciduous woodland	on deadwood
Armillaria sp	Honey Fungus	fungus	19.08.2023	SP4985 1191	occasional	field observation	deciduous woodland	rhizomorphs on fallen oak trunk

Scientific name	Common name	group	date	Grid ref	Abundance	Method	Habitat	Comment
Auricularia auricula judae	Jelly Ear	fungus	22.10.2023	SP4985 1191	4	field observation	deciduous woodland	on fallen dead elder wood
Auricularia auricula-judae	Jelly Ear	fungus	12.08.2023	SP4985 1191	rare	field observation	deciduous woodland	on dead elder
Auricularia auricula-judae	Jelly ear	fungus	17.11.2023	SP4985 1191	occasional	field observation	deciduous woodland	on field maple - V unusual host
Auricularia mesenterica	Tripe fungus	fungus	19.08.2023	SP4985 1191	rare	field observation	deciduous woodland	on deadwood
Auricularia mesenterica	Tripe Fungus	fungus	11.11.2023	SP4985 1191	rare	field observation	deciduous woodland	on one dead elm log
Bjerkandera adusta	Smoky Bracket	fungus	19.08.2023	SP4985 1191	rare	field observation	deciduous woodland	on deadwood
Cerioporus squamosus	Dryad's Saddle	fungus	12.08.2023	SP4985 1191	3 brackets	field observation	deciduous woodland	on Horse Chestnut trunk
Cerioporus squamosus	Dryad's Saddle	fungus	22.10.2023	SP4985 1191	3caps	field observation	deciduous woodland	on horse chestnut tree
Chlorophyllum rhacodes	Shaggy Parasol	fungus	19.08.2023	SP4985 1191	3 caps	field observation	deciduous woodland	on soil and leaf litter
Chlorophyllum rhacodes	Shaggy Parasol	fungus	08.10.2023	SP4985 1191	15 caps	field observation	deciduous woodland	on soil and leaf litter
Chlorophyllum rhacodes	Shaggy Parasol	fungus	22.10.2023	SP4985 1191	2	field observation	deciduous woodland	on soil and leaf litter
Chlorophyllum rhacodes	Shaggy Parasol	fungus	11.11.2023	SP4985 1191	numerous	field observation	deciduous woodland	big rings on soil and leaf litter
Clitcybe gibba	Common Funnel	fungus	27.10.2023	SP4985 1191	numerous	field observation	deciduous woodland	on soil and leaf litter
Clitocybe nebulosa	Clouded Funnel	fungus	11.11.2023	SP4985 1191	numerous	field observation	deciduous woodland	big rings on soil and leaf litter
Clitocybe odora	Aniseed Funnel	fungus	22.10.2023	SP4985 1191	5	field observation	deciduous woodland	on soil and leaf litter
Clitocybe odora	Aniseed Toadstool	fungus	27.10.2023	SP4985 1191	1	field observation	deciduous woodland	on soil and leaf litter
Clitocybe phyllophylla	Frosty Funnel	fungus	22.10.2023	SP4985 1191	4	field observation	deciduous woodland	on soil and leaf litter
Clitocybe vibecina	Mealy Funnel	fungus	27.10.2023	SP4985 1191	2	field observation	deciduous woodland	on soil and leaf litter
Coprinellus disseminatus	Fairy Inkcap	fungus	27.10.2023	SP4985 1191	numerous	field observation	deciduous woodland	on deadwood
Crepidotus applanatus	Flat Oysterling	fungus	11.11.2023	SP4985 1191	on one log	field observation	deciduous woodland	on dead elm
Daldinia concentrica	Cramp Ball	Fungus	01.10.2023	SP4985 1191	occasional	field observation	deciduous woodland	on dead ash
Dendrothele acerina	Maple Whitewash	fungus	08.10.2023	SP4985 1191	rare	field observation	deciduous woodland	on bark of Field Maple
Fistulina hepatica	Beefsteak fungus	Fungus	01.10.2023	SP4985 1191	3 brackets	field observation	deciduous woodland	at base of three separate oaks, one dead
Galerina marginata	Funeral Bell	fungus	22.10.2023	SP4985 1191	7	field observation	deciduous woodland	on fallen dead trunk
Galerina marginata	Funeral Bell	fungus	11.11.2023	SP4985 1191	20	field observation	deciduous woodland	on dead log
Geastrum triplex	Collared Earthstar	fungus	22.10.2023	SP4985 1191	2	field observation	deciduous woodland	on soil and leaf litter
Gymnopilus junonius	Spectacular Rustgill	Fungus	01.10.2023	SP4985 1191	5 caps	field observation	deciduous woodland	at base of standing dead oak tree
Gymnopus dryophilus	Russet Toughshank	fungus	19.08.2023	SP4985 1191	4	field observation	deciduous woodland	on soil under trees
Gymnopus dryophilus	Russet Toughshank	fungus	22.10.2023	SP4985 1191	3	field observation	deciduous woodland	on soil and leaf litter
Gymnopus fusipes	Spindleshank	fungus	22.10.2023	SP4985 1191	group of 5	field observation	deciduous woodland	at the base of oak tree
Hebeloma sp	a poisen pie toadstool	fungus	11.11.2023	SP4985 1191	3	field observation	deciduous woodland	on soil and leaf litter
Hymenochaete rubiginosa	Oak Curtain Crust	fungus	19.08.2023	SP4985 1191	rare	field observation	deciduous woodland	on dead oak wood trunk
Hypomyces chrysospermus	Bolete Mould	fungus	22.10.2023	SP4985 1191	on one bolete	field observation	deciduous woodland	on rotting old boletes
Hypomyces chrysospermus	Bolete Mould	fungus	27.10.2023	SP4985 1191	on 2 boletes	field observation	deciduous woodland	on old boletes
Infundibulicybe gibba	Common Funnel Mushroom	fungus	08.10.2023	SP4985 1191	numerous	field observation	deciduous woodland	on soil and leaf litter
Infundibulicybe gibba	Common Funnel	fungus	22.10.2023	SP4985 1191	2	field observation	deciduous woodland	on soil and leaf litter
Inonotus hispidus	Shaggy Polypore	fungus	19.08.2023	SP4985 1191	rare	field observation	deciduous woodland	on live ash tree trunk
Laccaria amethystina	Amethyst Deceiver	fungus	11.11.2023	SP4985 1191	rare	field observation	deciduous woodland	on soil and leaf litter
Laccaria laccata	The Deceiver	fungus	11.11.2023	SP4985 1191	3	field observation	deciduous woodland	on soil and leaf litter
Lactarius fulvissimus	Tawny Milkcap	fungus	22.10.2023	SP4985 1191	1	field observation	deciduous woodland	on soil and leaf litter
Lactarius quietus	Oak Bug Milkcap	fungus	22.10.2023	SP4985 1191	2	field observation	deciduous woodland	on soil and leaf litter
Lactarius quietus	Oakbug Milkcap	fungus	11.11.2023	SP4985 1191	2	field observation	deciduous woodland	on soil and leaf litter

Scientific name	Common name	group	date	Grid ref	Abundance	Method	Habitat	Comment
Psathyrella sp	a brittlestem mushroom	fungus	11.11.2023	SP4985 1191	2	field observation	deciduous woodland	on soil and leaf litter
Radulomyces molaris	Oak Toothcrust	fungus	17.11.2023	SP4985 1191	10cm patch	field observation	deciduous woodland	on fallen dead oak branch
Rhodocollybia butyracea	Buttercap	fungus	11.11.2023	SP4985 1191	numerous	field observation	deciduous woodland	on soil and leaf litter
Rhodotus palmatus	Wrinkled Peach	fungus	22.10.2023	SP4985 1191	2	field observation	deciduous woodland	on fallen dead Elm wood
Rhodotus palmatus	Wrinkled Peach	fungus	11.11.2023	SP4985 1191	numerous	field observation	deciduous woodland	on dead elm logs
Rhodotus palmatus	Wrinkled Peach	fungus	19.08.2023	SP4985 1191	2	field observation	deciduous woodland	on dead fallen elm wood
Russula pseudointegra	Scarlet Brittlegill	fungus	19.08.2023	SP4985 1191	numerous	field observation	deciduous woodland	on soil under oak trees, west end
Russula sp 1	yellow green grey cap	fungus	11.11.2023	SP4985 1191	2	field observation	deciduous woodland	on soil
Russula sp 2	light red brown cap	fungus	11.11.2023	SP4985 1191	1	field observation	deciduous woodland	on soil
Scleroderma areolatum	Leopard Earthball	fungus	22.10.2023	SP4985 1191	2	field observation	deciduous woodland	on soil and leaf litter
Scleroderma areolatum	Leopard Earthball	fungus	19.08.2023	SP4985 1191	1	field observation	deciduous woodland	on soil under trees
Scleroderma verrucosum	Scaly Earthball	fungus	12.08.2023	SP4985 1191	6	field observation	deciduous woodland	on soil under trees
Scleroderma verrucosum	Scaly Earthball	fungus	22.10.2023	SP4985 1191	4	field observation	deciduous woodland	on soil and leaf litter
Scleroderma verrucosum	Scaly Earthball	fungus	17.11.2023	SP4985 1191	3	field observation	deciduous woodland	on soil and leaf litter
Trametes versicolor	Turkey tail	fungus	19.08.2023	SP4985 1191	rare	field observation	deciduous woodland	on deadwood
Tricholoma album group	White Knight	fungus	11.11.2023	SP4985 1191	3	field observation	deciduous woodland	on soil and leaf litter
Tricholoma sulphureum	Sulphur Knight	fungus	11.11.2023	SP4985 1191	15 caps	field observation	deciduous woodland	on soil and leaf litter
Xerocomellus cisalpinus	Bluefoot Bolete	fungus	12.08.2023	SP4985 1191	3 caps	field observation	deciduous woodland	on soil and leaf litter
Xerocomellus cisalpinus	Bluefoot Bolete	fungus	08.10.2023	SP4985 1191	5	field observation	deciduous woodland	on soil and leaf litter
Xerocomellus cisalpinus	Bluefoot Bolete	fungus	22.10.2023	SP4985 1191	1	field observation	deciduous woodland	on soil and leaf litter
Xerocomellus porosporus	Sepia bolete	fungus	22.10.2023	SP4985 1191	1	field observation	deciduous woodland	on soil and leaf litter
Xerocomellus porosporus	Sepia Bolete	fungus	27.10.2023	SP4985 1191	2	field observation	deciduous woodland	on soil and leaf litter
VERTEBRATES								
Capreolous capreolus	Roe Deer	mammal	01.10.2023	SP4985 1191	1 skull	field observation	deciduous woodland	
Rana temporaria	Common Frog	amphibian	19.08.2023	SP4985 1191	2 juvenile	field observation	deciduous woodland	
Rana temporaria	Common Frog	amphibian	22.10.2023	SP4985 1191	1	field observation	deciduous woodland	
Picus viridis	Green Woodpecker	bird	01.10.2023	SP4985 1191	1	field observation	deciduous woodland	call heard
INVERTEBRATES								
Limex maximus	Leopard Slug	mollusc	22.10.2023	SP4985 1191	1	field observation	deciduous woodland	
Cepaea nemoralis	Brown-lipped Banded Snail	mollusc	27.10.2023	SP4985 1191	1	field observation	deciduous woodland	
Cameraria ohridella	Horse chestnut leaf miner	moth	19.08.2023	SP4985 1191	numerous	field observation	deciduous woodland	
Tetrix subulata	slender groundhopper	orthoptera	22.10.2023	SP4985 1191	1	field observation	deciduous woodland	
Limonia nubeculosa	a cranefly	true fly (Diptera)	19.08.2023	SP4985 1191	1	swept	deciduous woodland	swept from ground flora & shrubs
Lonchoptera lutea	Yellow Spear-winged Fly	true fly (Diptera)	19.08.2023	SP4985 1191	3	swept	deciduous woodland	swept from ground flora & shrubs
Meiosimyza decempunctata	a lauxaniid fly	true fly (Diptera)	19.08.2023	SP4985 1191	3	swept	deciduous woodland	swept from ground flora & shrubs
Myathropa florea	Batman Hoverfly	true fly (Diptera)	02.09.2023	SP4985 1191	3	field observation	deciduous woodland	sunning on leaves
Cheilosia scutellata	a hoverfly	true fly (Diptera)	col 12.08.2023 em 07.09.2023	SP4985 1191	3	reared	deciduous woodland	reared from fungus Xerocomellus cisalpinus
Suillia variegata	a heleomyzid fly	true fly (Diptera)	col 12.08.2023 em 09.09.2023	SP4985 1191	3	reared	deciduous woodland	from fungus Agaricus impudicus
Tipula paludosa	a cranefly	true fly (Diptera)	08.10.2023	SP4985 1191	2	field observation	deciduous woodland	seen flying
Ula sp	small craneflies	true fly (Diptera)	em 18-27.10.2023	SP4985 1191	numerous	rearing	deciduous woodland	reared frm fungus Gymnopilus junonius
Agathomyia antennata	a platypezid fly	true fly (Diptera)	col 19.08.2023 em 22.09.2023	SP4985 1191	numerous	reared	deciduous woodland	reared from fungus Bjerkandera adusta

Scientific name	Common name	group	date	Grid ref	Abundance	Method	Habitat	Comment
Phaeonia subventa	a muscid fly	true fly (Diptera)	em 29-31.10.2023	SP4985 1191	numerous	rearing	deciduous woodland	reared from fungus Gymnopilus junonius
Seri obscuripennis	a platypezid fly	true fly (Diptera)	06-08.11.2023	SP4985 1191	numerous	rearing	deciduous woodland	reared from fungus Polyporus badius
Neoplatyura modesta	a fungus gnat	true fly (Diptera)	19-08-23	SP4985 1191	4m 2f	swept	deciduous woodland	
Macrocera stigmoides	a fungus gnat	true fly (Diptera)	19-08-23	SP4985 1191	1m	swept	deciduous woodland	
Macrocera vittata	a fungus gnat	true fly (Diptera)	19-08-23	SP4985 1191	1m	swept	deciduous woodland	
Leia cylindrica	a fungus gnat	true fly (Diptera)	19-08-23	SP4985 1191	1m	swept	deciduous woodland	
Leia crucigera	a fungus gnat	true fly (Diptera)	19-08-23	SP4985 1191	1f	swept	deciduous woodland	
Leia fascipennis	a fungus gnat	true fly (Diptera)	19-08-23	SP4985 1191	1f	swept	deciduous woodland	
Synapha fasciata	a fungus gnat	true fly (Diptera)	19-08-23	SP4985 1191	1m	swept	deciduous woodland	
Boletina nitida	a fungus gnat	true fly (Diptera)	19-08-23	SP4985 1191	1f	swept	deciduous woodland	
Mycetophila fungorum	a fungus gnat	true fly (Diptera)	19-08-23	SP4985 1191	1m	swept	deciduous woodland	
Sceptonia flavipuncta	a fungus gnat	true fly (Diptera)	19-08-23	SP4985 1191	1m	swept	deciduous woodland	
Sceptonia membranacea	a fungus gnat	true fly (Diptera)	19-08-23	SP4985 1191	2m	swept	deciduous woodland	
Schwenckfeldina carbonaria	a fungus gnat	true fly (Diptera)	19-08-23	SP4985 1191	5m	swept	deciduous woodland	
Phytosciara flavipes	a fungus gnat	true fly (Diptera)	02-09-23	SP4985 1191	1f	swept	deciduous woodland	
Leptosciarella trochanterata	a fungus gnat	true fly (Diptera)	02-09-23	SP4985 1191	1m	swept	deciduous woodland	
Diadocidia ferruginosa	a fungus gnat	true fly (Diptera)	02-09-23	SP4985 1191	1m	swept	deciduous woodland	
Macrocera centralis	a fungus gnat	true fly (Diptera)	02-09-23	SP4985 1191	1m	swept	deciduous woodland	
Macrocera vittata	a fungus gnat	true fly (Diptera)	02-09-23	SP4985 1191	1m 1f	swept	deciduous woodland	
Neoplatyura modesta	a fungus gnat	true fly (Diptera)	02-09-23	SP4985 1191	1f	swept	deciduous woodland	
Mycetophila occultans	a fungus gnat	true fly (Diptera)	02-09-23	SP4985 1191	1m	swept	deciduous woodland	
Epicypta aterrima	a fungus gnat	true fly (Diptera)	02-09-23	SP4985 1191	1m	swept	deciduous woodland	
Araneus diadematus	Garden Spider	arachnida	22.10.2023	SP4985 1191	1f	field observation	deciduous woodland	
Pisaura mirabilis	Nursery Web spider	arachnida	01.10.2023	SP4985 1191	numerous	field observation	deciduous woodland	
Dicranopalpus ramosus s.str.	harvestman	arachnida	22-10-23	SP4985 1191	1f	swept	deciduous woodland	
Dicranopalpus ramosus s.str.	harvestman	arachnida	19-08-23	SP4985 1191	2f	swept	deciduous woodland	
Ero cambridgei/furcata	a spider	arachnida	01.10.2023	SP4985 1191	1	swept	deciduous woodland	
Linyphia hortensis	a spider	arachnida	22-10-23	SP4985 1191	1m	swept	deciduous woodland	
Metallina segmanta	a spider	arachnida	19-08-23	SP4985 1191	1f	swept	deciduous woodland	
Pardosa prativaga	a spider	arachnida	01.10.2023	SP4985 1191	1	swept	deciduous woodland	
Paroligolophus agrestis	harvestman	arachnida	02-09-23	SP4985 1191	1f	swept	deciduous woodland	
Philodromus sp.	a spider	arachnida	01.10.2023	SP4985 1191	1	swept	deciduous woodland	
Piasura mirabilis	a spider	arachnida	22-10-23	SP4985 1191	several	swept	deciduous woodland	
Tetragnatha montana	a spider	arachnida	01.10.2023	SP4985 1191	1	swept	deciduous woodland	
Xysticus sp.	a spider	arachnida	22-10-23	SP4985 1191	1	swept	deciduous woodland	
Stenus impressus	a beetle	beetle	01.10.2023	SP4985 1191	1m,4f	swept	deciduous woodland	
Autalia longicornis	a beetle	beetle	01.10.2023	SP4985 1191	1m	swept	deciduous woodland	
Atheta (s. str.) aquatica	a beetle	beetle	01.10.2023	SP4985 1191	1f	swept	deciduous woodland	
Atheta crassicornis	a beetle	beetle	01.10.2023	SP4985 1191	1m	swept	deciduous woodland	
Loricera pilicornis	a beetle	beetle	01.10.2023	SP4985 1191	1m	swept	deciduous woodland	
Stenus impressus	a beetle	beetle	01.10.2023	SP4985 1191	1m	swept	deciduous woodland	

Scientific name	Common name	group	date	Grid ref	Abundance	Method	Habitat	Comment
Atheta (Mocyta) fungi	a beetle	beetle	01.10.2023	SP4985 1191	2f	swept	deciduous woodland	
Corticarina minuta	a beetle	beetle	01.10.2023	SP4985 1191	1m	swept	deciduous woodland	
Protapion apricans	a beetle	beetle	01.10.2023	SP4985 1191	1m	swept	deciduous woodland	
Protapion dichroum	a beetle	beetle	01.10.2023	SP4985 1191	1f	swept	deciduous woodland	
Proteinus brachypterus	a beetle	beetle	22.10.2023	SP4985 1191	1f	swept	deciduous woodland	
Tachyporus hypnorum	a beetle	beetle	22.10.2023	SP4985 1191	1m	swept	deciduous woodland	
Stilbus testaceus	a beetle	beetle	22.10.2023	SP4985 1191	1f	swept	deciduous woodland	
Rhyzobius chrysomeloides	a beetle	beetle	22.10.2023	SP4985 1191	1f	swept	deciduous woodland	
Aphthona euphorbiae	a beetle	beetle	22.10.2023	SP4985 1191	1f	swept	deciduous woodland	
Protapion dichroum	a beetle	beetle	22.10.2023	SP4985 1191	1m,1f	swept	deciduous woodland	
Ishnopterapion loti	a beetle	beetle	22.10.2023	SP4985 1191	1m,1f	swept	deciduous woodland	
Eutrichapion vorax	a beetle	beetle	22.10.2023	SP4985 1191	1f	swept	deciduous woodland	
Parethelcus pollinarius	a beetle	beetle	22.10.2023	SP4985 1191	1f	swept	deciduous woodland	
Armadillidium vulgare	pill woodlouse	crustacea	01.10.2023	SP4985 1191	if	hand searching	deciduous woodland	
Bryocoris pteridis	Fern bug	hemiptera	19.08.2023	SP4985 1191	3	swept	deciduous woodland	swept from ground flora & shrubs
Pentatoma rufipes	Forest Bug	hemiptera	19.08.2023	SP4985 1191	1	swept	deciduous woodland	swept from ground flora & shrubs
Stenodema calcaratum	a bug	hemiptera	19.08.2023	SP4985 1191	3	swept	deciduous woodland	swept from ground flora & shrubs
Palomina prasina	Common Green Shieldbug	hemiptera	22.10.2023	SP4985 1191	1	field observation	deciduous woodland	
Andricus quercuscalicis	Knopper gall wasp on oak	hymenoptera	01.10.2023	SP4985 1191	occasional	field observation	deciduous woodland	
Andricus quercuscorticis	Barnacle gall wasp galls	hymenoptera	17.11.2023	SP4985 1191	group of galls	field observation	deciduous woodland	on bark fallen from Oak tree
Cynips quercusfolii	Cherry Gall wasp on oak lvs	hymenoptera	27.10.2023	SP4985 1191	1 gall	field observation	deciduous woodland	
Cynips quercusfolii	Cherry Gall wasp on oak lvs	hymenoptera	08.10.2023	SP4985 1191	2 galls	field observation	deciduous woodland	
Vespula sp	a social wasp	hymenoptera	11.11.2023	SP4985 1191	nest fragments	field observation	deciduous woodland	on ground under oak tree with hole