

# Botanical and Invertebrate Biodiversity surveys of Land at the Triangle adjacent to Stratfield Brake East Woodland

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For Friends of Stratfield Brake

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Triangle northern ride flowers and central area with Osier coppice and Fleabane in flower  
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## Summary

- Results are presented of six species survey visits to the Triangle site from Late June to mid-August, ideal timing for recording plants and for summer invertebrates by sweep netting.
- Considerable biodiversity of plants and invertebrates was found to exist (including uncommon to rare species) although these surveys report only a small proportion of the total invertebrate biodiversity which might be expected here, with further surveys at different times of year using different methods.
- Thick species-rich marginal scrub and woodland belts with mature trees surround the central area planted up with Osier willows, harvested annually in blocks for fencing, and with wide mown access rides, provide a valuable combination providing a diverse **mosaic of habitats** beneficial to overall biodiversity.
- The willow (Osier) coppice generates only light shade and has temporary glades resulting from willow cutting, so there is a complete rich ground flora under all the blocks as well as in glades and the rides.
- The winter-wet heavy clay soil has developed a specific flora of a number of marsh or wetland plants adapted to the soil completely drying out in summer. The most abundant wetland plant on site is a vast population of Common Fleabane with golden daisy-type flowers in many thousands in mid-August which feed many pollinator insects.
- Specific insects were found which breed in the Fleabane, one of them a rare fly.

- A number of uncommon wild roses are present on site with a probable rare hybrid.
- Very good numbers of common butterflies are found, with the possibility of rarer Hairstreak butterflies using the site as they are recorded in habitats adjacent.
- The willow (Osier) coppice supports dependent insects, some of them (willow beetles) in vast numbers, which will provide much food for insectivorous birds.
- The Triangle habitats support and connect via mobile species (like deadwood-breeding beetles) to the Ancient Woodland Priority Habitat (Cherwell District Wildlife Site) of Stratfield Brake, the east section of which is contiguous with the southern margin of the Triangle.

## **Introduction**

I am an experienced 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). My particular expertise is identification of plants, invertebrates and fungi, I have 45 years of experience of the first group and 30 years of experience in identifications of the other groups. I am a regular voluntary species recorder in these groups for Thames Valley Environmental Records Centre (TVERC) and I am a member of the Biodiversity Strategy Steering Group for Oxford City.

I received permission to enter The Triangle and record plants and invertebrates from the tenant who runs the willow coppice business. The invertebrates were recorded by general observation, sweep netting and photography.

## **Aim**

To catalogue as much of the plant, invertebrate and fungal biodiversity as possible that currently exists in The Triangle through survey visits from the end of June to the end of August. A much richer biodiversity is very likely to be found with more visits spaced out through the year and covering additionally spring, early summer and autumn.

During summer 2023, a first visit was carried out on 25<sup>th</sup> June, subsequent visits were on: 9<sup>th</sup> July, 20<sup>th</sup> July, 27<sup>th</sup> July, 12<sup>th</sup> August and 19<sup>th</sup> August. All visits were in warm, sunny conditions, ideal for recording flying insects. Approximately three hours were spent on site at each visit. All the rides and scrub margins were visited and swept with a long handled net. Willow coppice blocks were walked through and swept as was the northern fenced off scrub area. The hedgerows/ belts of trees and scrub on the west and east margins were viewed from outside on roads and from the inside of the Triangle, but not entered, due to the difficulty of access; mostly plant species were recorded in these marginal areas.

Several site visits are usually sufficient to locate the vast majority of all plant species on site, but are inadequate to assess the full invertebrate biodiversity present. Four or five visits spaced throughout the year in good weather and using a variety of trapping methods are necessary to have a reasonable assessment of invertebrate biodiversity. The invertebrates found in the current surveys will be only some of the many species which probably live there. Very many more are to be expected by surveys at other times of year and using additional methods such as pitfall trapping, suction sampling, rearing from fungi and deadwood, use of pheromone lures and light-trapping for moths.

## The Triangle, History and Habitats present

This triangular plot of land (just under 5 hectares, central Grid Ref. SP4986 1206) is bounded to the south by a strip of Ancient Woodland (termed here Stratfield Brake East) which was once connected to the Stratfield Brake main woodland section (here termed Stratfield Brake West) on the west side of Frieze Way (A4260). This historic connection of the two woodland strips is obvious from examination of older maps of the area (1). The construction of Frieze Way must have bisected the Ancient Woodland. That this southern woodland strip is Ancient Woodland is indicated for example by the large population of native Bluebells present in the ground flora, easily visible in flower in spring as one walks along the verge on Frieze Way. 'Stratfield Brake' (both sections either side of Frieze Way) is part of a designated Cherwell District Wildlife Site (DWS) Code 41V21, area 20.98ha.

On the **western margin of the Triangle**, the open area is bounded by a thick belt of trees and scrub of 5-6m wide adjacent to the raised ground along which Frieze Way runs. Within this strip there is a drainage ditch for part of the distance plus one wooden fence and, in some places, two wire fences. No street lighting is present along Frieze Way.

On the **eastern margin of the Triangle** the open area is bounded by a thick belt of trees and scrub of 12-15m wide along the margin of the A4165 Oxford Road on raised ground. Within this marginal belt there are the remains of an old wooden fence plus two newer wire fences to the inside of this. For part of the distance a drainage ditch runs through this belt and in one place it widens out to a long wet hollow. Street lighting is present along Oxford Road.

To the north, in the truncated 'point' of the Triangle is a wire fenced-off section (approximately 0.46ha inside the marginal hedge/tree belts ) which has developing diverse scrub inside thick hedge/tree belts, with four large Lombardy poplar trees (*Populus nigra var italica*) in the very northern margin just south of the roundabout. There is an area with dumped rubble just inside the fenced-off scrub, to the north of the access gate off Oxford Road. The ground slopes down gently from this north end adjacent to the roundabout, to the south end adjacent to Stratfield Brake East woodland.

The history of the Triangle area from personal observations since I moved to Kidlington in 1984 and some research is as follows:

It was an arable field in 1984 when I first knew it. The area of scrub at the north end of the triangle was planted with ash trees in 2008 by the Oxfordshire Woodland Group with the aim of providing tree cover, wood fuel and eventually high quality ash timber (2) (It is not known what happened to the ash but this area is now mixed scrub (I estimate around 15years old), predominantly Common Hawthorn, with few Ash and with some evidence of planting of species like Guelder Rose, Hazel and Dogwood (remains of tree tubes around bases). Just inside this fenced-off scrub area is a wooden plinth with a metal plate inscribed with the comment that this area was 'woodland *planting in memory of a friend and colleague RICHARD CURRY, 27.1.68 - 7.6.09*'.

The willow coppice (Osier) occupying the Triangle site centre (Short Rotation Coppice or SRC, harvested every 3-4years) was first planted around 2004, with the aim of producing wood fuel to heat a primary school. The first harvest of willow wood was winter 2007 (3).

Currently the willow coppice is harvested regularly several times a year for construction of fencing by the land tenant as part of his 'Wonderwood' business.

The willow species planted in blocks appears to be the fast growing Common Osier *Salix viminalis*, which has long narrow leaves and very upright growing stems, meaning the coppice stools can be planted quite closely and numerous straight long branches are produced. The willow coppice has therefore been on site just short of 20 years. Because the willow has very upright branches, it casts only very light shade, so that a rich ground cover flora has developed under and between the coppice stools.

Around and between the coppice willow blocks are wide rides with herbaceous vegetation. These look as if they are occasionally cut short to ensure access; this mowing will have helped to preserve the biodiversity of herbaceous flora. At the northern end a wider area is cut short running west-east to the south of the fenced off scrub. This open area is under over-head cabling, maybe a 'way leave' that would have had to be left unplanted by willow to allow any access to the cabling for maintenance.

When the coppice sections have branches cut down to the 'bole' a temporary open 'glade' is created which lasts until the willow grows up again. Thus open glade areas move around the site as willow sections are harvested. This temporary glade creation benefits overall biodiversity by stopping the willow becoming tall and dominant and providing new warm sunny sheltered open areas for herbaceous plants (forbs) and invertebrates to colonise.

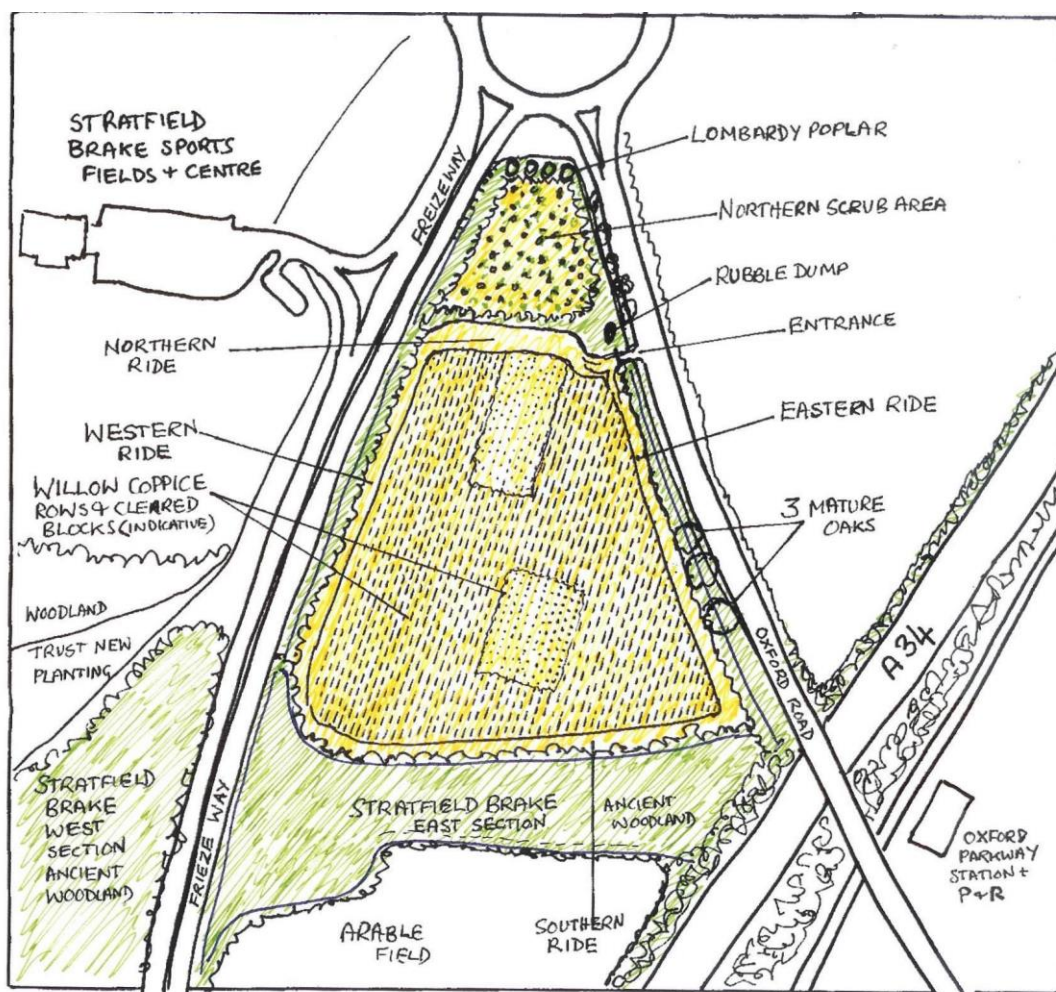


Fig 1. Sketch map of the Triangle and Habitats Present

## **Vegetation types (habitats) present today in the Triangle**

- Marginal diverse mature scrub/tree belts and ancient woodland including wet ditches
- Young diverse mostly naturally regenerating scrub (some shrubs planted)
- Willow (Osier) coppice (essentially pure willow held at scrub stage by rotational cutting)
- Ground cover herbaceous vegetation, partly shaded within the willow coppice blocks
- Grassy flowery rides and temporary open glades in full sun within willow coppice and around site margins

## **Soil and ground conditions within the Triangle area**

During my surveys, the soil was observed to be heavy clay, with evidence of much winter water-logging. This evidence is deep rutting from wheeled vehicles in the ride areas indicating difficult access at wetter times of year. All the clay was dried hard and cracked in June, July and August. In the ruts there was evidence of dried mats of dead filamentous algae that had lived earlier when ruts full of water and in one case dead mats of a moss typical of very water-logged conditions. There were other wetland plant indicators of very wet conditions discussed further below. Over the years, travelling on the bus to Oxford along the A4165 I have often observed the south west corner of the site, (just before the start of the bridge over the A34) to be badly flooded in winter with the hedge plants and a mature oak tree surrounded by standing water often for some weeks.

This winter water-logging has seemed to be prevalent despite the deep ditches which run all around the Triangle except on the northern section margins. These marginal ditches are noted to receive piped road run-off at intervals.

Such very wet winter soil conditions are ideal for the growth of willows, which are, in the majority, wetland species which thrive in waterlogged soil.

## **Results of species surveying**

Where possible rough abundance or numbers of species was estimated. Invertebrate species were recorded by sweep-netting, hand collection and photography. I'm grateful for the help of beetle expert John Paul for some of the identifications. Two birds, two mammals and an amphibian were incidentally identified during the visits; otherwise the plants, invertebrates and fungi found were the main focus. Photographs of habitats and notable species found are Appendix I. Tables of all species recorded are in Appendix II.

## **Plants**

In total **127** species of Vascular Plants were found in the Triangle. **This is a very good total for a site of this area that has a lot of one type of shrub (Osier willows).**

## **Herbaceous Plants (forbs) and Mosses**

**104** species of forbs were found in the scrub and wood margins, the rides and in ground flora under the willow (sallow) coppice. This includes 15 species of grasses, four species of rush and nine species of sedge plus one horsetail. Additionally four species of common moss were present on the soil of the very winter-wet areas.

All forbs were common, except two. The first is the **Narrow-leaved Bird's-foot Trefoil** *Lotus tenuis*, which is Scarce in Oxfordshire, being on the county Rare Plants Register (4). Five plants of this were found along the southernmost open ride (see Appendix I) It is local in eastern and south eastern England south of the Humber, rarer elsewhere. One of its Oxfordshire sites is the grassy verges to Frieze Way (I helped record it there), so it is perhaps not surprising it has colonised the Triangle from the adjacent verges. Frieze Way is one of only 10 sites for this species in the County. The second uncommon species is **Corn Mint** *Mentha arvensis* which is on the New England Red List (5) due to declines. Large clonal patches of this plant are present mostly under the light shade of the Osiers in the wettest areas of coppice and along some rides.

There were a number of common species characteristic of drier soils such as: Oxeye Daisy, Common Vetch, Grass Vetchling, Hairy St John's-wort, Perforate St John's Wort, Common Bird's-foot Trefoil, Black Medick, Wild Carrot, Hogweed, Prickly Ox-tongue, Common Ragwort, Wild Parsnip, Smooth Tare, Common Centaury, Red Clover, Hop Trefoil, Black Medick, Agrimony, Common Ragwort and Self Heal. Notable amongst the drier flora in June were **43 Pyramidal Orchids** and, more typical of moist/wetter soils, were **52 Common Spotted Orchids**. A lot of these orchids occurred in the light shade under the willow coppice amongst Common Fleabane. I will not have found all the orchids on site due to limited time of surveying; both orchid counts will be underestimates. Pyramidal Orchids seem to be benefitting from Climate Change and are increasing on roadside verges and dry meadows in Oxfordshire but a site with good numbers of two species of orchids is still a valuable one.

Most notable, however, was the greater number of forb species of **wet and waterlogged soils** – **four** species of rush (*Juncus* or *Eleocharis* sp.) and **nine** species of sedge (*Carex* sp.) and a less common rhizomatous grass of wet woods, ditches and fens – Wood Small Reed, plus the wet-tolerant grasses: Creeping Bent Grass, Marsh Foxtail and Black Bent. Broad-leaved forbs of wet soils included: Bugle, Greater Bird's-foot Trefoil, Cuckoo Flower, Amphibious Bistort, Teasel, Great Willow-herb, Square-stalked St John's Wort, Hoary Ragwort, Tufted Vetch, Hemp Agrimony, Curled Dock, Corn Mint and, lastly and most spectacularly - vast swathes of **Common Fleabane** which extend from the rides as a monoculture understory to the majority of the willow coppice occupation area. In mid- to late-August the yellow daisy-type flowers of this plant resemble a '**golden flood**', alive with insects seeking nectar and pollen (see photographs in Appendix I). Areas of willow coppice not dominated by Common Fleabane on the ground on the west side were dominated by a wetland ground flora of rushes, sedges, Creeping Bent Grass and Corn Mint. Extensive mats of inundation-tolerant Kneiff's Hook-moss indicate raised water levels for prolonged periods in winter.

The majority of the ground flora could be described as belonging to wet grassland or even marsh habitat (especially all the rushes, sedges and Fleabane super-abundance). However this is an unusual wetland flora that tolerates complete drying-out to hard cracked clay every summer. This vegetation type is probably impossible to assign to any of the broad UK Habitat types. Because it does not neatly fit into any classification, it does not mean it lacks important wildlife and therefore conservation value. The nearest habitat classification perhaps might be possibly be a type of wet Neutral Grassland; but the presence of Compact Rush may indicate the development of a degree of acidity, common on waterlogged clay soils. The source of the water will be only rainwater, so relatively low nutrient conditions are likely.

Common flowers present such as Fleabane, Hogweed, Wild Carrot and Wild Parsnip are known big pollen and nectar attractants in summer; and the flowers of these on site were well visited by butterflies, bees, flies, beetles and wasps, many of which were identified.

Species probably relict of the field's arable past (i.e. 'arable weeds') seen occasionally included: Scarlet Pimpernel, Twitch/Couch-grass, a presumed Fodder Vetch, Field Forget-me-not, Cleavers, and Black Bent Grass.

## Woody Plant Species

**18** woody species were found in the area including the northern scrub section. **Scrub** is typically Bramble of various types, Dewberry, Blackthorn, Common Hawthorn, Grey Willow (sallow) Oak, Hazel, English and Small-leaved Elm, Common Dog Rose, rarely Buckthorn, Hazel and Guelder Rose. Of course the willow coppice Osier blocks are a type of scrub monoculture. Additionally and unusually, a number of wild **Sweet Briar** roses (**Eglantine**, with glandular apple-scented leaves and pink flowers, see Appendix I) are present on margins, but also spreading into the willow coppice. Wild **rose hybrids** are also present and one very unusual, very **small-leaved Sweet Briar Rose** with white flowers is probable rare hybrid, found on the eastern fence line at the site margin. This needs more expert botanical opinion on its identity; with more time this can be achieved.

**Trees** present included: Crack Willow, Pedunculate Oak, Ash, Field Maple, English Elm (mostly affected by Dutch Elm Disease) and an unknown Elm species resembling Small-leaved Elm, which is present in an extensive suckered thicket (most likely originally planted) all along the western margin to Frieze Way. Four large planted Lombardy Poplars (a variety of Black Poplar) are at the northern end of the site nearest the roundabout. Three mature Pedunculate Oaks are present on the Oxford Road margin, the largest of which was estimated to have a trunk diameter at chest height of 72cm, meaning it could be over 100 years old, in my experience.

## Willow Coppice

This occupies a large area of the site centre and is composed of one species of planted willow known as **Common Osier** (*Salix viminalis*) which has very long upright branches and long narrow leaves with silver undersides. This central area might be assumed to be of low ecological value as a monoculture of species held by cutting at the young scrub stage; however this would be a wrong assumption. Willow can support a big diversity of invertebrate species; one quote is up to 450 dependent species, which will include: bugs, bees, beetles, flies and moths. Willow is a hugely important nectar and pollen source from the flowers (catkins) in spring and a big proportion of the willow branches are old enough to flower. This is not to say all those associated species will be present here, but my brief surveys do indicate a small number of willow-associated insect species. Also the Osiers restricted and vertical growth ensures only a very light leaf canopy, casting little shade and thus allowing enough light through to result in a complete ground cover flora underneath the coppice blocks with a diversity of species including Common Fleabane, Corn Mint (England Red List), wetland grasses, sedges and rushes with notably **Common Spotted** and **Pyramidal Orchids** (see photographs in Appendix I). This adds considerably to the total diversity of the willow blocks.

The amounts of **Common Fleabane** under the willow coppice are truly extraordinary. As mentioned, in late August the thousands of yellow daisy-type flowers open here present a short-lived stunning spectacle which makes the willow coppice look like a flower garden..

## Marginal mixed scrub, woodland and marginal woodland belts

Lowland Mixed Deciduous Woodland habitat adjacent to the Triangle to the south in Stratfield Brake East is a Priority Habitat (Habitat of Principal Importance) and features mainly mature Pedunculate



Oaks, Ash, Sycamore and various scrub species. It fulfils all the criteria for Ancient Woodland. The Triangle east and west margins provide a thick and valuable habitat with abundant Bramble, Dewberry, Sallow, Hawthorn, Elms and Blackthorn with occasional trees as above. The ditches within the margins provide linear shaded wetland habitat for much of each year, benefitting mostly specific invertebrates. Scrub is the most valuable habitat for bird diversity and will support many insects plus the marginal strips will be corridors for foraging, hunting bats. The lack of street lighting along Frieze Way makes the marginal belt on the west side especially important to commuting bats.

The northern scrub area contains planted species not found elsewhere (Hazel, Guelder Rose and Dogwood) with an abundance of Common Hawthorn, Sallow and Bramble patches. The bushes are young enough to mostly still have a rich and varied ground flora between them. As in the willow coppice to the south, Common Fleabane is very abundant with the addition of occasional large patches of Michaelmas Daisy.

## **Deadwood**

The marginal hedge/tree and scrub belts contain much deadwood. This should not be seen as detrimental or a problem because it is an important food and habitat resource for specific wildlife. The English Elm which occupies a good stretch of the eastern margin to Oxford Road is affected by Dutch Elm Disease (DED) and most trees are now standing dead or fallen thus offering much opportunity for deadwood (saproxylic) invertebrate breeding. Trees may be dead but the English Elm as a species is very much alive - abundantly suckering new growth is present and not yet large enough to be subject to DED. Elm foliage-breeding insects will still be supported.

Within the Willow (Osier) coppice blocks there are occasional piles of small diameter dead willow wands (harvested but presumably unsuitable for use) which provide an important deadwood-breeding resource within the site centre for saproxylic invertebrates that use small diameter wood. See discussion of such invertebrate species found below.

## **Fungi**

Five fungal species were found, one not yet fully identified. In my experience these are all common. Two species of toadstool were found near willows (an *Inocybe* and *Hebeloma sacchariolens*) and are known mycorrhizal root associates of willow. Further fungal species associated with tree roots and deadwood might be expected to emerge in the autumn.

## **Vertebrates**

Two species of deer use the site. A Muntjac was heard barking and twice a female Roe Deer was surprised in the Willow coppice, and on both occasions she immediately ran off to the south and into the Stratfield Brake East woodland strip. One adult and a number of juvenile (3cm long) Common Frogs were seen. There is limited potential for frog breeding on site, depending on how long water remains in the marginal ditches, especially where one is widened to a long temporary pool on the eastern margin. All the frogs are big enough to have been able to cross Frieze Way from the wetland near the Woodland Trust new planting, although traffic would limit this. I can identify few birds, but Chiff Chaffs and Wrens were heard and adult Wrens and a group of Wren fledglings were seen foraging for food within the Osier coppice. Not seen here at these summer visits, but it is known that birds as varied as Blue Tit and Reed Bunting can feed on nectar and pollen from willow catkins in spring.

The Triangle habitats probably represent a good foraging area for any bats using the nearby Ancient Woodland, which does have mature trees and plenty of standing deadwood with peeling loose bark for roosting. A bat survey is needed. Moths are an important source of food for bats and these flying insects will be generated by caterpillars feeding on scrub and trees including the coppice Osiers and other willows. Currently Frieze Way has no street lights so there is little to dissuade bats from commuting across it from the bigger Stratfield Brake western woodland block and Woodland Trust plantings.

## Invertebrates

**127** invertebrate species so far have been identified, but there are more collected that have not yet been examined due to time constraints. The greater the plant species diversity on any site, the greater the expected invertebrate diversity of generalists plus highly specialised invertebrates linked to specific habitat conditions or specific food plants. Just one example of the latter is the finding of the **St John's-wort beetle** *Cryptocephalus moraei* which lives on the leaves of St John's Worts (three species: Hairy, Perforate and Square-stalked St John's Worts are present on site).

The willow (Osier) coppice has been in place on site for just short of 20 years. This is plenty of time to accumulate a good associated invertebrate fauna feeding on the leaves and flowers. Much damage to the willow leaves caused by the grazing of larvae of leaf beetles was seen (see Appendix I). These larvae were likely of the common **Brown Willow Beetle** and **Willow Leaf Beetle**, seeing as a numerous adults of both these species were swept from the site in July. The willows probably therefore provide abundant food resource for insect-eating birds and bats.

Willow catkins are a very important food source for spring bees; both specific solitary bee species and especially newly emerged Bumble Bee queens building up resources to found new colonies. Spring insect surveys are much needed.

Less common invertebrates found breeding specifically in willows include for example the **Red-tipped Clearwing Moth**, larvae of which breed in willow branches, particularly Osiers (see Appendix I). One adult was found, but this could be more frequent on site. All clearwing moths are rarely recorded unless using specific pheromone lures to attract males during the flight period.

Common plants can support rare insects; this is the case for the Common Fleabane on site. It was a surprise to sweep several individuals of the small rare picture wing fly (Tephritid) *Myopites inulaedyssentericae* which breeds in Fleabane flower-heads forming a specific gall there (see discussion below and Appendix I). I regularly sweep fleabane in other fen wetlands in Oxfordshire at the right time, but have never before found this fly. Two other insects breeding in the Fleabane were found, the **Dusky Plume Moth** (see Appendix I) and a leaf-mining fly.

Nearly all common species of Bumble Bee were recorded on site visiting the abundant summer flowers for nectar and pollen: **Buff-tailed, Red-tailed, White-tailed, Common Carder** and **Early Bumble Bees** were seen (workers and newly emerged Queens). Common Carders were the most numerous. A number of smaller solitary bees were seen, but not yet identified. By far the most numerous type of bee on all flowers (but particularly the Fleabane) was workers of the **Honeybee** *Apis mellifera* – perhaps foraging out to the Triangle from kept hives in a south Kidlington garden.

There are numerous **anthills** in the drier parts of the site. Mostly these are the Common Black Ant, but there are also numbers of anthills produced by a yellowish ant, which remains to be identified.

The density of anthills is responsible for my record of the associated unusual **Ant Ladybird** *Platynaspis luteorubra*, the first time I have seen this.

A good range of common **butterflies** (16 species) was found on site, most in small numbers. Seen between June and August were: **Red Admiral, Meadow Brown, Peacock, Common Blue, Brimstone, Comma, Large White, Green-veined White, Small White, Ringlet, Speckled Wood, Marbled White, Small Skipper, Large Skipper, Gatekeeper** and **Brown Argus**. The most numerous were Gatekeepers, seen on the wing in July and Speckled Woods, on the wing in August. It is likely that caterpillar food plants for all these are present, so likely breeding on site. Earlier spring butterflies like Orange Tip will have been missed in these late visits, but are likely present because the food plant Cuckoo Flower is found. Whilst not found in these surveys, **White-letter Hairstreak** may be present due to a record on Frieze Way three years ago (discussed below). There is plenty of Blackthorn around the site margins, so searches specifically for rare **Black Hairstreak** and **Brown Hairstreak** butterflies need to be carried out by specialist butterfly recorders. **Black Hairstreaks** are known from Blackthorn in the Woodland Trust planting area only just over Frieze Way from the Triangle. **Purple Hairstreaks** are also known from Stratfield Brake oak trees.

**Common Blue Damselflies, Blue-tailed Damselflies, Common Darter** and **Emperor Dragonfly** were seen to be using the Triangle as a hunting ground to catch flies; but their breeding site will almost certainly be the nearby Stratfield Brake constructed wetland or the canal adjacent to that. They will have crossed Frieze Way to access the Triangle for food.

Three species of dead-wood breeding (saproxylic) long-horn beetles were found as single specimens out in the Triangle rides feeding on flowers such as Wild Carrot, Hogweed and Fleabane. They are **Striped Longhorn, Spotted Longhorn** and **Four-spotted Longhorn**. Whilst none of these are rare nationally, they are biggish impressive beetles found in low numbers and are indicative of the importance of nearby deadwood for their larval development on site or in the adjacent Stratfield Brake Woodland East. The **pintail or tumbling flower beetle** *Variimorda villosa* (no common name) is uncommon and local, discussed below. See photographs of all these beetles in Appendix I.

## Comments on Invertebrates of Conservation Importance found

*Myopites inulaedyssentericae*. A **picture-wing (Tephritid) fly** with no common name (could be imagined to be the '**Fleabane Picture-wing**') which only breeds in the flower-heads of Common Fleabane. Several individuals were swept and on one occasion a female was seen ovi-positing (egg-laying) in a fleabane flower. See photographs in Appendix I. This still has a **Conservation Status of 'RARE (RDB3)**' in older assessment texts (6), but seems to be likely to be increasing with Climate Change and discussion with other entomologists indicates it is now being found more widely. However, it seems to require large stands of Fleabane for a breeding population - small patches or one or two plants are not enough to support this species. This is the first time I have found this fly in Oxfordshire, despite regularly sweep-netting in wetlands with Common Fleabane in small patches. Distribution maps produced by a specialist in this group of flies (7) show no previous Oxfordshire records at all.

*Paraphotistus nigricornis*. A **click Beetle (Elateridae)** See photograph in Appendix I. One was swept from a flowery ride on 25<sup>th</sup> June. This is a beetle I have previously only rarely encountered in ancient diverse and protected Oxfordshire meadows. Specifically Oxford Meadows SAC and New Marston Meadows SSSI, neither of which are a long way away. **Current Conservation Status 'RARE (RDB3)**. Its habitat is quoted as wet meadows, wet broadleaved woodland and wetland

especially near Sallows. Larvae apparently develop in waterlogged soil. It has a scattered distribution in southern England to northern England, with an old record for south Wales (8).

***Variimorda villosa*** (a tumbling flower beetle or pintail beetle, family Mordellidae). See photograph in Appendix I) Nine adults of this species were swept from flowers on 9<sup>th</sup> July and similar numbers swept from flowers on every visit thereafter. Adults feed on pollen and nectar. Larvae are likely to be in deadwood or plant stems and it is often found near willows; could be breeding in the piles of dead willow poles left from coppicing or in the abundant deadwood in the nearby mature woodland. I have previously encountered this beetle only rarely in Oxon and never seen the frequent numbers found here. Currently this species is described as ‘**widespread though very local in woodlands across the south of England and Wales**’ (9).

**Cinnabar Moth *Tyria jacobaea***. The banded yellow and black caterpillars of this striking black and red day-flying moth species were noted feeding on Hoary Ragwort on 9<sup>th</sup> July. This species has Conservation Status as a Section 41 Species of Principal Importance under the 2006 NERC Act in England (Previously UK BAP Priority Species). It is however fairly common in good habitats with ragworts in Oxfordshire.

**White-letter Hairstreak *Satyrium W-album***. Whilst not found in the current surveys actually on the Triangle site, I found a single caterpillar of this butterfly under an Elm leaf on Frieze Way on 15<sup>th</sup> May 2020 (see photograph in Appendix I). It is therefore highly likely to be also breeding on the Elms on the Frieze Way side of the Triangle as well, or the Elms in Stratfield Brake East woodland. It is a habitat specialist butterfly that has shown national decline. The charity Butterfly Conservation records and calculates population trends in butterflies. They calculate an abundance trend of -30% for White Letter Hairstreak (State of UK Butterflies 2022). Adults can move regularly between trees up to 300m apart. Many colonies are restricted to a small group of trees, but dispersal appears quite common and individuals have been seen several kilometres from known breeding sites (10). This species has **Conservation Status as a Section 41 Species of Principal Importance** under the 2006 NERC Act in England (Previously UK BAP Priority Species).

## Conclusions and Discussion

The Triangle has been shown here to be a site with considerable biodiversity of plants and invertebrates, with some rare species and interesting records in a few other groups. Any assumption that the big area of willow coppice in the site centre means low biodiversity has been shown to be wrong, mainly because (unknown before these surveys) underneath the coppice is a complete herb layer with a diversity of herbaceous plants, flowering in abundance in summer, dominated by Fleabane, with the red-listed Corn Mint and including two species of Orchids. This community is adapted to the heavy clay winter-wet soil plus the management regime and in my opinion would be very difficult to re-create. The tenant’s non-intensive willow coppice management of the site centre is the best thing that could have happened here to maximise biodiversity, especially of flowers and invertebrates. Abundance of common insects is important as well as diversity. The sheer abundance of common leaf-feeding beetles on the osier coppice growth will be important as a food resource for all species higher up the food web, particularly insectivorous birds. Recent decline of insect populations is causing much concern, but insect decline is not observable here.

Apart from the good overall invertebrate biodiversity it is particularly notable how the abundant summer and late summer flower resource supports the needs of all vital pollinating insects (bees, flies

etc.) at a time when flower resource in other habitats, such as verges or meadows, is not available (due to being in seed or cut for hay).

### ***Why is the Triangle so rich in biodiversity?***

- 20 years undisturbed natural colonisation of an abandoned field - wildlife has had plenty of time to move in.
- No public access. No dog mess and nutrient pollution. No fires to damage deadwood.
- Low nutrient clay soil (20 years since likely fertilizer input and willow harvesting removes nutrients) - wildflowers thrive in low nutrient soil.
- No use of pesticides, in particular insecticides.
- Diversity of soil type and hydrology - some areas drier soil, much of the site wetter heavy clay soil, (even small scale variation like deep rutting from heavy vehicles creates localised micro-wetland habitats in water-filled ruts).
- Winter waterlogging selects for range of wetland plants that can tolerate inundation BUT also stand complete summer soil drying, such as: Common Fleabane, Great Willow Herb, and Corn Mint that provide an **abundant late summer pollen and nectar resource for all pollinating insects**,
- Marginal species rich old thick hedgerows or tree belts - good colonisation by seed of plant species from these edges and from the ancient woodland (to south) allowing species previously limited to margins to move in and colonise centre quite quickly.
- Proximity to Stratfield Brake East to the south and Stratfield Brake West ancient woodland and Woodland Trust new tree-planting and the new wetland complex on the western side of Frieze Way, nearer the sports ground. Mobile species from all these areas can cross Frieze Way to use the food resources available in the Triangle (frogs, dragonflies, damselflies)
- Planting of a big area of the centre of the site with Osiers for harvesting for fencing. A species of Willow – all species of Willow tree can support a great diversity of invertebrates.
- Planting of a diversity of trees and scrub at the northern end – intention to create a new diverse woodland with shrubs, somewhat limited by subsequent ash dieback removing some planted trees; but with natural colonisation by grey willow and hawthorn compensating for this loss.
- Coppice management of rotational cutting keeps willow at the shrub stage and the upright (non-spreading) growth of the Osier branches prevents excessive shade developing underneath, therefore many different herbaceous plants can live actually under and between the Osiers.
- ROTATIONAL Willow coppicing (cutting down blocks of willow shoots) moves around the site annually – the regular creation of new sunny sheltered glades is ideal for warmth-loving insects like butterflies that like to bask. By the time the willow in a block has re-grown again, a new sunny glade is being formed nearby.
- This results in the site centre being a mosaic of old uncut tall willow, half regrown sprouting willow and newly cut bare areas. Vegetation mosaics are always good for overall biodiversity, especially of invertebrate life.
- Cutting of the access rides vegetation annually (at least) provides a type of meadow management that promotes herbaceous plant diversity in these permanently open sunny areas.

**I consider there is sufficient diversity of plants and invertebrates at this Triangle site for it to be worthy of consideration for District Wildlife Site Status, it would be a good extension to the existing Stratfield Brake DWS. Currently the Triangle habitats and species are valuable in themselves, but they also perform a very important role in supporting and protecting the wildlife of the narrow strip of priority Ancient Woodland to the south which is also in the core zone of the Proposed Nature Recovery Network for the County. Without the Triangle under its current management, this woodland would be very likely damaged by isolation and consequent loss of species.**

## **Acknowledgement**

I am very grateful to the tenant who manages the sustainable willow coppice for access to the site, sometimes at short notice.

## **References**

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2. <https://www.oxfordmail.co.uk/news/2186840.growing-problem-no-longer/>.
3. [http://www.dave-cushman.net/bee/changing\\_willow.html](http://www.dave-cushman.net/bee/changing_willow.html) If you search for 'Kidlington' on the page you will find reference to the Triangle planting in the middle of this text:  
"*Slough Heat and Power is part of Thames Valley Energy, committed to growing biomass alternatives. This field is owned by Oxfordshire County Council and is growing coppice Willow to be harvested and used to heat Shortenills Primary School. It had the first cut Figure 6 Field at Kidlington Oxford. Map Ref FP 499121 (author's photo) in winter 2007 and will now be grown on for three more years before being harvested. At that time the Willow will be expected to be yielding about 10 od tonnes / ha (oven-dried tonnes/fuel per hectare) It can continue being harvested every two or three years for up to twenty years.*" ]
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## Appendix I

### Photographs of Vegetation types (Habitats) present in the Triangle and Species of Note (all photographs are my own)



Northern fenced scrub and tree planted area, Fleabane field layer just starting to flower  
12.08.2023



**Northern fenced off mixed scrub area. Berryng Hawthorn with Flowering Fleabane field layer (left) and berryng Guelder Rose (right).12.08.2023.**



**Eastern ride adjacent to marginal tree belt along Oxford Road. Very winter-wet sedge-dominated area at the south (on left) 12.08.2023, Fleabane dominated eastern ride further north (on right) 19.08.2023**



**Southern most grassy and Fleabane-rich ride adjacent to Stratfield Brake (left) - 29.07.2023. Western margin of thick Elm and bramble scrub margin adjacent to Frieze Way (right) - 25.06.2023.**





**Eastern marginal ride adjacent to Oxford Road, yellow Wild parsnip flowers in foreground (left). Mature Oak trees and Blackthorn scrub on this margin further to the south (right) - both 29.07.2023.**



**English Elm on eastern margin next to Oxford Road, dying due to Dutch Elm Disease, much standing deadwood. Flower-rich scrub and buried fence in the foreground. 29.07.2023**



**Two views of the wide grassy ride at north end of site in full flower, wet meadow-like flora with abundant flowers of yellow Fleabane, white Wild Carrot and pink Great Willow herb. Under overhead cabling - 12.08.2023.**



**Monoculture of Common Fleabane in full golden flower under Osier coppice blocks -  
06.08.2023 & 12.08.2023**

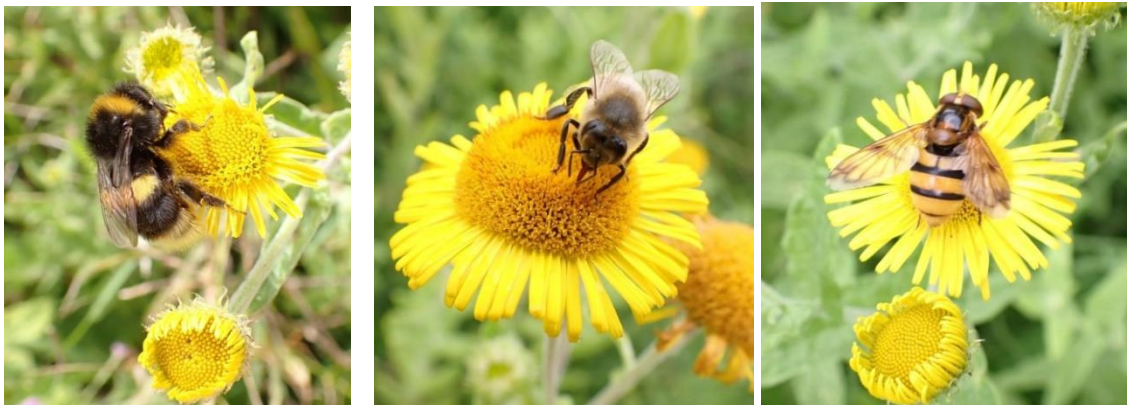


**Osier willows cut and bundled ready for use. A new temporary glade created - 29.07.2023**

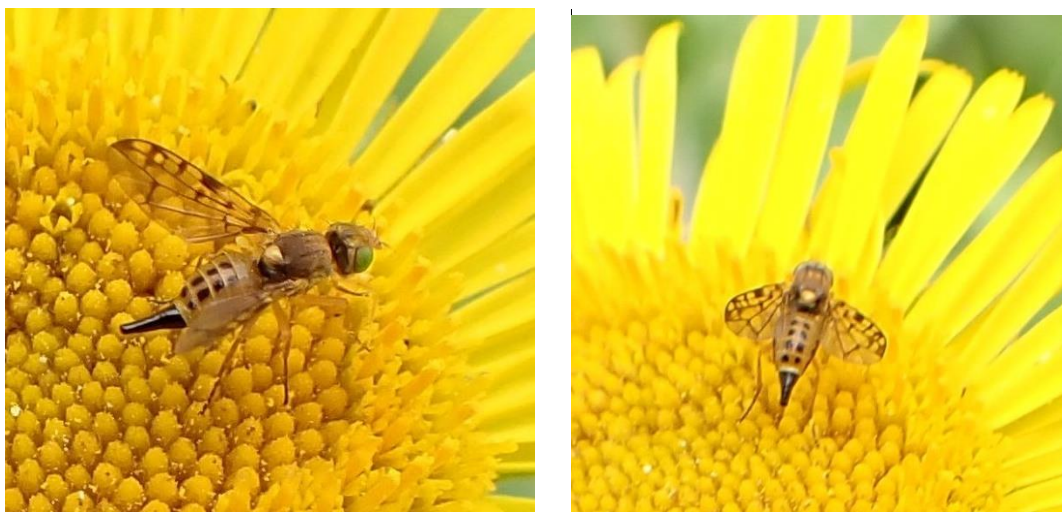
**Photographs of species of note found in the Triangle**



Osier willow leaves extensively grazed by beetle larvae of various common leaf beetles and the Willow Leaf Beetle *Lochmaea caprea* (one of the several species responsible for the feeding damage).



All common insects love Fleabane flowers. Buff tailed Bumble bee queen (left). Large numbers of honey bees (centre) also use the flowers as do hoverflies (right). 12.08.2023



*Myopites inulaedyssentericae*. A rare small picture-wing (Tephritid) fly which breeds in the flower heads of Common Fleabane. Here females are shown, one (right) actually in the process of oviposition (egg-laying) into the Fleabane flower head - 20.07.2023.



**White Letter Hairstreak butterfly adult and caterpillar. Adult photo from my personal archive, (not within the Triangle) but the caterpillar on right was found on an elm leaf on adjacent Frieze Way on 15.05.2020**



**Red-tipped Clearwing Moth *Synanthedon formicaeformis* (left). Caterpillars breed in willow twigs, especially Osiers. Found in the Triangle on 06.08.2023. Dusky Plume moth *Oidaematophorus lithodactyla* (right). Caterpillars breed in Fleabane flowers. 20.07.2023.**



**The deadwood-breeding pin-tail Mordellid beetle *Variimorda villosa*.** 29.07.2023 The right hand photo shows this beetle (centre) and 3 other metallic green beetles *Oedemera lurida* on the flowerhead of Wild Carrot at the Triangle, A maroon single flower in the centre is normal for Wild Carrot.



***Paraphotistus nigricornis*.** A rare click beetle swept from a ride at the Triangle on 25.08.2023. Note the golden hairs which tend to rub off. Photo from my personal photo archive, from Oxford Meadows SAC in 2016, a site a short distance to the south-west of the Triangle.



**Three deadwood-breeding Longhorn Beetles found on flowers in the Triangle. Spotted Longhorn beetles *Rutpela maculata*,** mating pair on Hogweed flowers (left). **Four-spotted Longhorn *Leptura quadrifasciata*** on Teasel flowers (centre) and **Black-striped Longhorn *Stenurella melanura*** on Rose flower (right). All common, but spectacular deadwood breeding beetles. Various dates in July and August.



**Narrow-leaved Bird's-foot Trefoil *Lotus tenuis*** (Scarce in Oxon, in county Rare Plants Register) on 09.07.2023 in a ride (left) and **Corn Mint *Mentha arvensis*** under Osier coppice (on New England Red List) 29.07.2023 (right).



**Sweet Briar (Eglantine, apple scented leaves) wild rose** (left) and the rare small-leaved **hybrid white flowered Sweet Briar Rose** that awaits identification by a wild rose expert (right).

This last on the eastern ride along the wire fence line 09.07.2023.



**Common spotted orchids (left) and Pyramidal orchids (right) under willow coppice and surrounded by Common Fleabane plants, 25.07.2023**



**Fungi. Sweet Poison Pie *Hebeloma sacchariolens* (left) and a Fibre cap *Inocybe* sp. (right). Both mycorrhizal with the roots of the Willows (Osiers) 12.08.2023 & 29.07.2023.**





## Appendix II Tables of Species Recorded in the Triangle

**(YELLOW highlighting indicates species of especial note or designated Conservation Status - see discussions in main text above)**

### Conservation Status definitions and criteria for rarity:

**UKBAP** - UK Biodiversity Action Plan Priority Species, now known as **Species of Principal Importance or Section 41** species in the NERC Act 2006.

**RDB** - Red Data Book listed

**RDB1** - Endangered (at risk of extinction)

**RDB2** - Vulnerable (species declining or in vulnerable habitats, or with low populations, likely to move to Endangered due to factors such as habitat destruction)

**RDB3** – Rare / Lower Risk (Near Threatened) (small populations, at risk, species estimated to exist in only 15 or fewer modern 10km squares nationally)

**NT** - Near Threatened (as above)

**N or NS Notable / Nationally Scarce** - Lower Risk species estimated to occur within the range of only 16-100 modern 10km squares nationally ('a' category more uncommon than 'b' category)

**Local** - Restricted distribution, usually confined to specific habitats

**RPR - Rare Plants Register** for Oxfordshire, produced by the Ashmolean Natural History Society of Oxfordshire (published as 'Oxfordshire's Threatened Plants'). A species is included in the final register, if it occurs in 10 or fewer sites in the county (scarce) and three or fewer sites (rare). Also included are all species on the UKBAP priority list, irrespective of how common they are in Oxfordshire, and species on the national red list.

The Triangle	Grid Ref SP4986 1206	J A Webb				
Scientific name	Common name	group	date	Abundance	Habitat	Comment
<b>PLANTS, INC HORSETAIL &amp; MOSSES</b>						
<i>Acer campestre</i>	Field Maple	flowering plant	29.07.2023	numerous	hedge line along eastern side	
<i>Agrimonia eupatoria</i>	Agrimony	flowering plant	25.06.2023	rare	open grassy flowery rides	drier areas
<i>Agrostis gigantea</i>	Black Bent	flowering plant	12.08.2023	locally frequent	open grassy flowery rides	east and southern side
<i>Agrostis stolonifera</i>	Creeping Bent	flowering plant	25.06.2023	frequent	open rides and under willow coppice	
<i>Ajuga reptans</i>	Bugle	flowering plant	25.06.2023	occasional	open grassy flowery rides	wetter areas
<i>Alliaria petiolata</i>	Garlic Mustard	flowering plant	09.07.2023	rare	under trees on west side tree belt	
<i>Alopecurus geniculatus</i>	Marsh Foxtail	flowering plant	29.07.2023	1 x 4m patch	willow coppice	
<i>Anacamptis pyramidalis</i>	Pyramidal Orchid	flowering plant	25.06.2023	43	open rides and under willow coppice	
<i>Anagallis arvensis</i>	Scarlet Pimpernel	flowering plant	09.07.2023	rare	open rides and wayleave area	
<i>Arctium minus</i>	Lesser Burdock	flowering plant	29.07.2023	1	southern most ride margin	
<i>Arrhenatherum elatius</i>	False Oat-grass	flowering plant	25.06.2023	occasional	open grassy flowery rides	
<i>Aster sp.</i>	Michaelmas Daisy	flowering plant	25.06.2023	locally frequent	thern scrub & open grassy flowery rid	most in northern scrub area
<i>Bellis perennis</i>	Common Daisy	flowering plant	25.06.2023	rare	near entrance, path	east side
<i>Betula pendula</i>	Silver Birch	flowering plant	12.08.2023	rare	scrub	northern area
<i>Betula pubescens</i>	Brown Birch	flowering plant	12.08.2023	rare	scrub	northern area
<i>Brachypodium sylvaticum</i>	Wood False-brome	flowering plant	25.06.2023	occasional	open grassy flowery rides	south side
<i>Bromopsis ramosa</i>	Hairy Brome	flowering plant	29.07.2023	rare	woodland margin	margin to Frieze way
<i>Bromus hordeaceus</i>	Soft Brome	flowering plant	25.06.2023	locally frequent	open grassy flowery rides	
<i>Bromus racemosus</i>	Smooth Brome	flowering plant	25.06.2023	occasional	open rides and under willow coppice	
<i>Calamagrostis epigejos</i>	Wood Small-reed	flowering plant	29.07.2023	large clonal patch	under willow coppice	
<i>Calystegia sepium</i>	Hedge Bindweed	flowering plant	25.06.2023	locally frequent	marginal scrub/tree belt	
<i>Cardamine pratensis</i>	Cuckoo Flower	flowering plant	25.06.2023	rare	open grassy flowery rides	
<i>Carex disticha</i>	Brown sedge	flowering plant	29.07.2023	rare 2 patches	willow coppice	
<i>Carex flacca</i>	Glaucous Sedge	flowering plant	25.06.2023	locally frequent	open rides and under willow coppice	
<i>Carex hirta</i>	Hairy Sedge	flowering plant	25.06.2023	occasional	open grassy flowery rides	
<i>Carex otrubae</i>	False Fox-sedge	flowering plant	25.06.2023	occasional	open rides and under willow coppice	
<i>Carex pendula</i>	Pendulous Sedge	flowering plant	25.06.2023	locally frequent	open grassy flowery rides	south-east corner
<i>Carex remota</i>	Remote Sedge	flowering plant	09.07.2023	rare	marginal hedge/tree belt	Frieze way side
<i>Carex riparia</i>	Greater Pond-sedge	flowering plant	09.07.2023	one 5m patch	under willow coppice	west side
<i>Carex spicata</i>	Spiked Sedge s.l.	flowering plant	25.06.2023	rare	open grassy flowery rides	
<i>Carex sylvatica</i>	Wood Sedge	flowering plant	25.06.2023	occasional	open rides and willow coppice area	
<i>Centaurea nigra</i>	Black knapweed	flowering plant	12.08.2023	1 plant	northern scrub area	
<i>Centaureum erythraea</i>	Common Centaury	flowering plant	09.07.2023	rare	open rides and wayleave area	

Scientific name	Common name	group	date	Abundance	Habitat	Comment
<i>Cirsium arvense</i>	Creeping Thistle	flowering plant	25.06.2023	occasional	open grassy flowery rides	
<i>Cornus sanguinea</i>	Dogwood	flowering plant	09.07.2023	occasional	northern scrub area	planted
<i>Corylus avellana</i>	Hazel	flowering plant	09.07.2023	occasional	northern scrub area	planted
<i>Crataegus monogyna</i>	Common Hawthorn	flowering plant	25.06.2023	frequent	marginal scrub/trees	
<i>Cynosurus cristatus</i>	Crested Dog's Tail	flowering plant	09.07.2023	rare	open grassy flowery rides	
<i>Dactylis glomerata</i>	Cocksfoot grass	flowering plant	25.06.2023	rare	open grassy flowery rides	
<i>Dactylorhiza fuchsii</i>	Common Spotted Orchid	flowering plant	25.06.2023	52 flower spikes	grassy rides around willow coppice	also under willow coppice
<i>Daucus carota</i>	Wild Carrot	flowering plant	25.06.2023	occasional	open grassy flowery rides	
<i>Deschampsia cespitosa</i>	Tufted Hair-grass	flowering plant	25.06.2023	occasional	open grassy flowery rides	
<i>Dioscorea communis</i>	Black Bryony	flowering plant	29.07.2023	rare	woodland margin	margin to Frieze way
<i>Dipsacus fullonum</i>	Teasel	flowering plant	25.06.2023	occasional	open rides in wetter ruts	
<i>Eleocharis palustris</i>	Common Spike-rush	flowering plant	25.06.2023	occasional	under willow coppice	in the winter wettest areas
<i>Elymus repens</i>	Common Couch or Twitch	flowering plant	25.06.2023	locally frequent	open grassy flowery rides	
<i>Epilobium hirsutum</i>	Great Willow-herb	flowering plant	09.07.2023	locally frequent	open rides and under willow coppice	winter wettest areas
<i>Epilobium parviflorum</i>	Hoary willow herb	flowering plant	12.08.2023	rare	open grassy flowery rides	
<i>Epilobium tetragonum</i>	Square-stalked Willow-herb	flowering plant	09.07.2023	onal to locally fre	open grassy flowery rides	
<i>Erigeron acer</i>	Blue Fleabane	flowering plant	29.07.2023	1 plant	open grassy flowery ride	
<i>Euonymus europaeus</i>	Spindle	flowering plant	29.07.2023	1	southern margin next to Stratf brake east	
<i>Eupatorium cannabinum</i>	Hemp Agrimony	flowering plant	25.06.2023	occasional	northern scrub & open grassy flowery rides	
<i>Festuca rubra</i>	Red Fescue	flowering plant	09.07.2023	rare	open grassy flowery rides	
<i>Galium aparine</i>	Cleavers	flowering plant	25.06.2023	rare	open grassy flowery rides	
<i>Geranium dissectum</i>	Cut-leaved Crane's-bill	flowering plant	25.06.2023	frequent	open grassy flowery rides	
<i>Glechoma hederacea</i>	Ground Ivy	flowering plant	25.06.2023	occasional	margins nr woodlland	
<i>Helminthotheca echioides</i>	Prickly Ox-tongue	flowering plant	25.06.2023	locally frequent	open grassy flowery rides	
<i>Heracleum sphondylium</i>	Hogweed	flowering plant	09.07.2023	occasional	open grassy flowery rides	south ride
<i>Holcus lanatus</i>	Yorkshire Fog	flowering plant	25.06.2023	frequent	open grassy flowery rides	
<i>Hypericum hirsutum</i>	Hairy St John's-wort	flowering plant	25.06.2023	occasional	open rides and under willow coppice	
<i>Hypericum perforatum</i>	Perforate St John's-wort	flowering plant	25.06.2023	rare	open grassy flowery rides	
<i>Hypericum tetrapterum</i>	Square-stalked St John's Wo	flowering plant	09.07.2023	occasional	open rides and under willow coppice	
<i>Jacobaea erucifolia</i>	Hoary Ragwort	flowering plant	25.06.2023	occasional	open grassy flowery rides	
<i>Jacobaea vulgaris</i>	Common Ragwort	flowering plant	09.07.2023	occasional	open rides and wayleave area	
<i>Juncus conglomeratus</i>	Compact Rush	flowering plant	25.06.2023	locally frequent	open rides and under willow coppice	in the winter wettest areas
<i>Juncus effusus</i>	Soft Rush	flowering plant	25.06.2023	occasional	open rides and under willow coppice	in the winter wettest areas

Scientific name	Common name	group	date	Abundance	Habitat	Comment
<i>Juncus inflexus</i>	Hard Rush	flowering plant	25.06.2023	locally frequent	open rides and under willow coppice	in the winter wettest areas
<i>Lathyrus nissolia</i>	Grass Vetchling	flowering plant	25.06.2023	locally frequent	open grassy flowery rides	in the drier northern areas
<i>Leucanthemum vulgare</i>	Oxeye Daisy	flowering plant	25.06.2023	occasional	open grassy flowery rides	
<i>Lolium perenne</i>	Perennial Rye	flowering plant	25.06.2023	locally frequent	open grassy flowery rides	
<i>Lotus corniculatus</i>	Bird's-foot Trefoil	flowering plant	29.07.2023	occasional	open grassy flowery rides	drier areas to north
<i>Lotus pedunculatus</i>	Greater Bird's-foot Trefoil	flowering plant	09.07.2023	locally frequent	rides and under the willow coppice	
<i>Lotus tenuis</i>	Narrow-leaved Bird's-foot T	flowering plant	09.07.2023	5 small clumps	open ride in ruts	south side, winter wet area
<i>Medicago lupulina</i>	Black Medick	flowering plant	25.06.2023	occasional	open rides and wayleave area	
<i>Melilotus officinalis</i>	Ribbed Melilot	flowering plant	29.07.2023	1 plant	open grassy flowery ride	
<i>Mentha arvensis</i>	Corn Mint	flowering plant	29.07.2023	locally frequent	willow coppice	
<i>Myosotis arvensis</i>	Field Forget-me-not	flowering plant	25.06.2023	occasional	open grassy flowery rides	
<i>Odonites vernus</i>	Red Bartsia	flowering plant	25.06.2023	occasional	open grassy flowery rides	
<i>Pastinaca sativa</i>	Wild Parsnip	flowering plant	25.06.2023	occasional	open grassy flowery rides	
<i>Persicaria amphibia</i>	Amphibious Bistort	flowering plant	09.07.2023	rare	open grassy flowery rides	
<i>Phleum bertolonii</i>	Smaller Cat's-tail	flowering plant	09.07.2023	occasional	open rides and wayleave area	
<i>Plantago lanceolata</i>	Ribwort Plantain	flowering plant	25.06.2023	rare	open grassy flowery rides	
<i>Plantago major</i>	Greater Plantain	flowering plant	25.06.2023	occasional	open grassy flowery rides	
<i>Poa nemoralis</i>	Wood Meadow-grass	flowering plant	29.07.2023	rare	woodland margin	Frieze way side south
<i>Poa trivialis</i>	Rough-stalked Meadow-grass	flowering plant	25.06.2023	occasional	open grassy flowery rides	
<i>Potentilla reptans</i>	Cinquefoil	flowering plant	25.06.2023	locally abundant	open ride and under willow coppice	
<i>Prunella vulgaris</i>	Self-heal	flowering plant	25.06.2023	locally frequent	open rides and under willow coppice	
<i>Prunus spinosa</i>	Blackthorn	flowering plant	25.06.2023	locally frequent	hedgerows and Willow coppice	
<i>Pulicaria dysenterica</i>	Common Fleabane	flowering plant	25.06.2023	abundant	ssy rides, scrub & under willow coppice	
<i>Quercus robur</i>	Pedunculate Oak	flowering plant	09.07.2023	occasional	marginal hedge/tree belt	
<i>Rhamnus cathartica</i>	Purging Buckthorn	flowering plant	25.06.2023	rare	marginal hedge/scrub and tree belt	
<i>Rosa canina</i>	Dog Rose	flowering plant	25.06.2023	occasional	marginal hedge/scrub and tree belt	
<i>Rosa canina hybrids</i>	hybrid Dog Roses	flowering plant	25.06.2023	occasional	marginal hedge/scrub and tree belt	
<i>Rosa rubiginosa</i>	Sweet Briar rose	flowering plant	25.06.2023	occasional	within coppice area and margins	mostly southern end
<i>Rosa sp., agrestis hybrid</i>	a Sweet Briar hybrid rose	flowering plant	25.06.2023	1 bush	marginal hedge/scrub and tree belt	east side next to wire fence
<i>Rubus cespitosus</i>	Dewberry	flowering plant	25.06.2023	locally frequent	marginal hedge/scrub and tree belt	
<i>Rubus fruticosus agg.</i>	Bramble	flowering plant	25.06.2023	locally frequent	marginal hedge/scrub and tree belt	
<i>Rumex conglomeratus</i>	Clustered Dock	flowering plant	09.07.2023	occasional	open grassy flowery rides	
<i>Rumex crispus</i>	Curled Dock	flowering plant	25.06.2023	occasional	open grassy flowery rides	wettest areas
<i>Rumex obtusifolius</i>	Broad-leaved Dock	flowering plant	25.06.2023	rare	open grassy flowery rides	
<i>Rumex sanguineus</i>	Wood Dock	flowering plant	25.06.2023	locally frequent	open rides and scrub margins	

Scientific name	Common name	group	date	Abundance	Habitat	Comment
<i>Salix cinerea</i>	Grey Willow or Sallow	flowering plant	25.06.2023	locally frequent	marginal scrub/woodland strips	
<i>Salix fragilis</i>	Crack Willow	flowering plant	09.07.2023	2 trees	marginal hedge/tree belt	south & next to Frieze Way
<i>Salix viminalis</i>	Osier willow	flowering plant	25.06.2023	abundant	willow coppice, site centre	
<i>Sambucus nigra</i>	Elder	flowering plant	09.07.2023	occasional	marginal hedge/tree belt	
<i>Schedonorus arundinaceu</i>	Tall Fescue	flowering plant	25.06.2023	occasional	open grassy flowery rides	
<i>Sison amomum</i>	Stone Parsley	flowering plant	09.07.2023	occasional	open grassy flowery rides	north side
<i>Sonchus arvensis</i>	Perennial Sow-thistle	flowering plant	06.08.2023	rare	open grassy flowery rides	
<i>Stachys sylvatica</i>	Hedge Woundwort	flowering plant	29.07.2023	rare	woodland margin	margin to Frieze way
<i>Torilis japonica</i>	Upright Hedge Parsley	flowering plant	25.06.2023	rare	open grassy flowery rides	
<i>Trifolium campestre</i>	Hop Trefoil	flowering plant	25.06.2023	rare	open grassy flowery rides	
<i>Trifolium pratense</i>	Red Clover	flowering plant	25.06.2023	rare	open grassy flowery rides	drier areas, near entrance
<i>Trifolium repens</i>	White Clover	flowering plant	25.06.2023	occasional	open grassy flowery rides	
<i>Tussilago farfara</i>	Coltsfoot	flowering plant	29.07.2023	rare	open grassy flowery rides	
<i>Ulmus procera</i>	English Elm	flowering plant	25.06.2023	locally frequent	woodland/hedge strip	east side, to Oxford Road
<i>Ulmus sp.cf. U minor</i>	poss. Small-leaved Elm	flowering plant	25.06.2023	locally frequent	woodland/hedge strip	west side to Frieze Way
<i>Urtica dioica</i>	Common Nettle	flowering plant	25.06.2023	occasional	site margins to woodland	
<i>Veronica persica</i>	Common Field-speedwell	flowering plant	06.08.2023	rare	open grassy flowery rides	
<i>Veronica serpyllifolia</i>	Thyme-leaved Speedwell	flowering plant	25.06.2023	rare	open grassy flowery rides	
<i>Viburnum opulus</i>	Guelder Rose	flowering plant	29.07.2023	few	northern scrubby area	
<i>Vicia cf. narbonensis</i>	possibly a fodder vetch	flowering plant	09.07.2023	2 plants	near the entrance	
<i>Vicia cracca</i>	Tufted Vetch	flowering plant	25.06.2023	occasional	marginal scrub/woodland tree belts	
<i>Vicia sativa</i>	Common Vetch	flowering plant	25.06.2023	occasional	open rides and wayleave area	
<i>Vicia tetrasperma</i>	Smooth Tare	flowering plant	25.06.2023	locally abundant	open grassy flowery rides	
<i>Viola sp</i>	a violet	flowering plant	12.08.2023	rare	western margin	
<i>Equisetum arvense</i>	Field Horsetail	horsetail	25.06.2023	occasional	open grassy flowery rides	
<i>Brachythecium rutabulum</i>	Rough-stalked Feather-moss	moss	25.06.2023	locally frequent	rides and willow coppice & scrub	
<i>Calliergonella cuspidata</i>	Common Spear-moss	moss	25.06.2023	locally frequent	rides and willow coppice	wetter areas
<i>Cratoneuron filicinum</i>	Fern-leaved Hook -moss	moss	09.07.2023	rare	under willow coppice	
<i>Drepanocladus aduncus</i>	Kneiff's Hook-moss	moss	25.06.2023	locally frequent	open rides & under willow coppice	in the winter wettest areas

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<b>FUNGI</b>						
<i>Inocybe sp</i>	a fibre cap toadstool	fungus	29.07.2023	1	willow coppice	associated with roots of willow
<i>Hebeloma sacchariolenis</i>	Sweet Poisonpie	fungus	12.08.2023	5caps	open grassy flowery rides	adjacent to grey willow shrub
<i>Laccaria laccata</i>	The Deciever	fungus	06.08.2023	4 caps	under fence east side	east side margin
<i>Phellinus pomaceus</i>	Cushion Bracket	fungus	06.08.2023	1 bracket	marginal scrub	ondead blackthorn
<i>Psathyrella candoleana</i>	Common Brittlestem	fungus	12.08.2023	2	open grassy flowery rides	on soil
<b>ANIMALS</b>						
<b>VERTEBRATES</b>						
<i>Rana temporaria</i>	Common Frog	amphibian	06.08.2023	5 juveniles	open grassy flowery rides	2-3cm juveniles
<i>Rana temporaria</i>	Common Frog	amphibian	12.08.2023	1 juvenile	open grassy flowery rides	open grassy flowery rides
<i>Rana temporaria</i>	Common Frog	amphibian	29.07.2023	1 adult	open grassy flowery rides	
<i>Capreolus capreolus</i>	Roe Deer	mammal	29.07.2023	1	willow coppice	
<i>Capreolus capreolus</i>	Roe Deer	mammal	12.08.2023	1 female	open grassy flowery rides	southern ride
<i>Muntiacus reevesii</i>	Muntjac deer	mammal	25.06.2023	1	woodland margin	heard barking
<i>Phylloscopus collybita</i>	Chiff chaff	bird	25.06.2023	1	scrub woodland margins	heard calling
<i>Troglodytes troglodytes</i>	Wren	bird	09.07.2023	1	woodland	heard singing
<i>Troglodytes troglodytes</i>	Wren	bird	29.07.2023	2 fledglings	willow coppice	
<b>INVERTEBRATES</b>						
<i>Altica lythri</i>	a flea beetle	beetle	09.07.2023	2	open grassy flowery rides	
<i>Aphthona lutescens</i>	a leaf beetle	beetle	29.07.2023	1	open grassy flowery rides	
<i>Cassida rubiginosa group</i>	a tortoise beetle	beetle	29.07.2023	1	open grassy flowery rides	
<i>Chaetocnema concinna</i>	Mangold Flea Beetle	beetle	09.07.2023	1	open grassy flowery rides	
<i>Coccidula rufa</i>	a small ladybird	beetle	29.07.2023	1	open grassy flowery rides	
<i>Coccinella septempunctata</i>	Seven-spot Ladybird	beetle	25.06.2023	6	open grassy flowery rides	
<i>Crepidodera aurata</i>	Willow Flea Beetle	beetle	09.07.2023	2	rides and willow coppice	
<i>Crepidodera fulvicornis</i>	a leaf beetle	beetle	29.07.2023	1	open grassy flowery rides	
<i>Crepidodera plutus</i>	a leaf beetle	beetle	29.07.2023	1	open grassy flowery rides	
<i>Cryptocephalus moraei</i>	a leaf beetle	beetle	25.06.2023	1	open grassy flowery rides	from Hairy St John's Wort
<i>Cryptocephalus pusillus</i>	a leaf beetle	beetle	09.07.2023	3	open grassy flowery rides	
<i>Galerucella lineola</i>	Brown Willow Beetle	beetle	09.07.2023	5	rides and willow coppice	
<i>Gastroidea viridula</i>	Green Dock Beetle	beetle	25.06.2023	1	open grassy flowery rides	
<i>Gastrophysa viridula</i>	Green Dock Beetle	beetle	09.07.2023	3	on dock leaves	

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<i>Harmonia axyridis</i>	Harlequin Ladybird	beetle	06.08.2023	2	open grassy flowery rides	
<i>Hypera meles</i>	a weevil	beetle	29.07.2023	1	open grassy flowery rides	
<i>Leptura quadrfasciata</i>	Four-banded Longhorn Beetle	beetle	12.08.2023	1	open grassy flowery rides	south, on teasel flowers
<i>Lochmaea caprea</i>	Willow Leaf Beetle	beetle	29.07.2023	numerous	from osiers & willow scrub	
<i>Meligethes gagathinus</i>	a pollen beetle	beetle	29.07.2023	1	open grassy flowery rides	
<i>Oedemera lurida</i>	a flower beetle	beetle	09.07.2023	3	open grassy flowery rides	on wild carrot flowers
<i>Oedemera nobilis</i>	Thick-kneed Flower-beetle	beetle	09.07.2023	1f	open grassy flowery rides	
<i>Paraphotistus nigricornis</i>	a click beetle	beetle	25.06.2023	1	open grassy flowery rides	
<i>Perapion hydrolapathi</i>	a small grey-green weevil	beetle	09.07.2023	1	open grassy flowery rides	
<i>Phratora vulgatissimus</i>	Blue Willow Beetle	beetle	29.07.2023	1	open grassy flowery rides	
<i>Phyllotreta vittata</i>	a leaf beetle	beetle	29.07.2023	1	open grassy flowery rides	
<i>Platynaspis luteorubra</i>	Ant Ladybird	beetle	29.07.2023	1	open grassy flowery rides	
<i>Propylea 14-punctata</i>	14 Spot Ladybird	beetle	09.07.2023	2	open grassy flowery rides	
<i>Protapion trifolii</i>	Lesser Clover Seed Weevil	beetle	09.07.2023	2	open grassy flowery rides	
<i>Psyllobora vigintiduopunc</i>	22 spot Ladybird	beetle	29.07.2023	1	open grassy flowery ride	
<i>Rhagonycha fulva</i>	Orange Soldier Beetle	beetle	09.07.2023	numerous	open rides, site margins	on hogweed flowers
<i>Rutpela maculata</i>	Spotted Longhorn	beetle	09.07.2023	mating pair	woodland edge	on hogweed flower
<i>Sitona lineatus</i>	Pea Leaf Weevil	beetle	09.07.2023	1	open grassy flowery rides	
<i>Stenurella melanura</i>	Black-striped Longhorn	beetle	25.06.2023	1	scrub margin	feeding on rose flower
<i>Variimorda villosa</i>	a pintail beetle(Mordellidae)	beetle	09.07.2023	9	open grassy flowery rides	
<i>Aglais io</i>	Peacock	butterfly	29.07.2023	1	open grassy flowery rides	
<i>Aphantopus hyperantus</i>	Ringlet	butterfly	09.07.2023	1	open grassy flowery rides	
<i>Aricia agrestis</i>	Brown Argus	butterfly	29.07.2023	3	open grassy flowery rides	
<i>Gonepteryx rhamni</i>	Brimstone	butterfly	09.07.2023	1m	open grassy flowery rides	
<i>Maniola jurtina</i>	Meadow Brown	butterfly	25.06.2023	1	open grassy flowery rides	
<i>Maniola jurtina</i>	Meadow Brown	butterfly	09.07.2023	2	open grassy flowery rides	
<i>Melanargia galathea</i>	Marbled White	butterfly	25.06.2023	1	open grassy flowery rides	
<i>Ochlodes sylvanus</i>	Large skipper	butterfly	09.07.2023	1	open grassy flowery rides	
<i>Parage aegeria</i>	Speckled Wood	butterfly	06.08.2023	5	scrub margin	west side
<i>Pieris brassicae</i>	Large White	butterfly	09.07.2023	2	open grassy flowery rides	
<i>Pieris brassicae</i>	Large White	butterfly	06.08.2023	1m	open grassy flowery rides	
<i>Pieris napi</i>	Green -veined White	butterfly	09.07.2023	1	open grassy flowery rides	
<i>Pieris rapae</i>	Small White	butterfly	29.07.2023	3	open grassy flowery rides	
<i>Polygonia C-album</i>	Comma	butterfly	25.06.2023	1	open grassy flowery rides	
<i>Polyommatus icarus</i>	Common Blue	butterfly	29.07.2023	1m	open grassy flowery ride	

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<i>Pyronia tithonus</i>	Gatekeeper	butterfly	09.07.2023	more than 10	open rides and scrub margins	especially on bramble flowers
<i>Thymelicus sylvestris</i>	Small Skipper	butterfly	25.06.2023	2	open grassy flowery rides	
<i>Vanessa atalanta</i>	Red Admiral	butterfly	09.07.2023	1	on oak leaves	
<i>Acronicta rumicis</i>	Knot Grass	moth	12.08.2023	2 caterpillars	open grassy flowery rides	eating leaves of fleabane
<i>Archips podana</i>	Large Fruit-tree Tortrix	moth	25.06.2023	1f	open grassy flowery rides	
<i>Autographa gamma</i>	Silver Y moth	moth	09.07.2023	1	open grassy flowery rides	
<i>Oidaematophorus lithodactyla</i>	Dusky Plume moth	moth	29.07.2023	2	open grassy flowery ride	on Fleabane flowers
<i>Synanthedon formicaeformis</i>	Red-tipped Clearwing	moth	06.08.2023	1	southern most ride	sitting on leaves near osiers
<i>Tyria jacobaeae</i>	Cinnabar moth	moth	09.07.2023	7 caterpillars	open grassy flowery rides	on hoary ragwort plant
<i>Chrysoperla carnea</i>	Common Green Lacewing	neuroptera	06.08.2023	1	open grassy flowery rides	
<i>Anax imperator</i>	Emperor Dragonfly	odonata	09.07.2023	1f	open grassy flowery rides	hunting down rides
<i>Enallagma cyathigerum</i>	Common Blue Damselfly	odonata	25.06.2023	numerous	open grassy flowery rides	
<i>Ischnura elegans</i>	Blue-tailed Damselfly	odonata	25.06.2023	1m,1f	open grassy flowery rides	
<i>Sympetrum striolatum</i>	Common Darter	odonata	09.07.2023	1	open grassy flowery rides	
<i>Aelia acuminata</i>	Bishop's Mitre Bug	hemiptera	09.07.2023	3	open grassy flowery rides	
<i>Aphrophora alni</i>	Alder Spittlebug	hemiptera	25.06.2023	3	open grassy flowery rides	
<i>Capsus ater</i>	a black bug	hemiptera	25.06.2023	1	open grassy flowery rides	
<i>Cicadella viridis</i>	Green leafhopper	hemiptera	29.07.2023	1	willow coppice	
<i>Coreus marginatus</i>	Dock Bug	hemiptera	25.06.2023	many nymphs	open grassy flowery rides	swept from docks
<i>Deraeocoris ruber</i>	a bug	hemiptera	09.07.2023	1m	scrub margin	
<i>Dicyphus epilobi</i>	a bug on willow herb	hemiptera	29.07.2023	1	open grassy flowery rides	
<i>Dolycoris baccarum</i>	Hairy Shieldbug	hemiptera	29.07.2023	1	eastern hedge line	
<i>Eurydema oleracea</i>	Brassica Bug	hemiptera	12.08.2023	1	open grassy flowery rides	on Wild carrot flowers
<i>Eurygaster testudinaria</i>	Tortoise bug	hemiptera	29.07.2023	1	open grassy flowery ride	
<i>Leptopterna dolabrata</i>	a grass bug	hemiptera	25.06.2023	1m,1f	open grassy flowery rides	
<i>Orthonotus rufifrons</i>	a small bug	hemiptera	09.07.2023	1f	open grassy flowery rides	
<i>Palomina prasina</i>	Common Green Shield bug	hemiptera	06.08.2023	1	open grassy flowery rides	on fleabane flower
<i>Pentatoma rufipes</i>	Forest bug	hemiptera	09.07.2023	2	scrub margin	on elm leaves
<i>Philaenus spumarius</i>	Spittle bug	hemiptera	25.06.2023	3	open grassy flowery rides	
<i>Tetraneura ulmi</i>	fig gall on Elm leaves, aphid	hemiptera	25.06.2023	4 galls	on elms in western tree belt	caused by aphids
<i>Zicrona caerulea</i>	Blue Shield-bug	hemiptera	09.07.2023	1	open grassy flowery rides	
<i>Andricus quercuscalicis</i>	Knopper Gall-wasp	hymenoptera	06.08.2023	occasional galls	on oak leaves, east scrub/tree	east margin
<i>Apis mellifera</i>	Honey Bee	hymenoptera	12.08.2023	numerous	open grassy flowery rides	on fleabane fls



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<i>Bombus lapidarius</i>	Red Tailed Bumble Bee	hymenoptera	25.06.2023	1 worker	on bramble scrub margin	
<i>Bombus lucorum agg</i>	White -tailed Bumble Bee	hymenoptera	25.06.2023	1	on bramble scrub margin	
<i>Bombus pascuorum</i>	Common Carder Bumble Be	hymenoptera	25.06.2023	1 worker	on bramble scrub margin	
<i>Bombus pratorum</i>	Early Bumblebee	hymenoptera	12.08.2023	1 worker	open grassy flowery rides	on flowers of hoary ragwort
<i>Bombus terrestris</i>	Buff-tailed Bumble Bee	hymenoptera	12.08.2023	2 workers	open grassy flowery rides	on fleabane& ragwort fls
<i>Gasteruption assectator</i>	Wild Carrot wasp	hymenoptera	09.07.2023	1	open grassy flowery rides	on wild carrot flowers
<i>Hylaeus dilatatus</i>	Chalk Yellow-face Bee	hymenoptera	12.08.2023	1f	open grassy flowery rides	on wild carrot flowers
<i>Ichneumon sarcitorius</i>	White-striped Darwin Wasp	hymenoptera	12.08.2023	1f	open grassy flowery rides	on Wild carrot flowers
<i>Lasius niger</i>	Common Black Ant	hymenoptera	09.07.2023	3	open grassy flowery rides	
<i>Lasius sp.</i>	yellow ants	hymenoptera	06.08.2023	numerous	open grassy flowery rides	east side
<i>Megachile ligniseca</i>	Wood-carving Leafcutter Be	hymenoptera	06.08.2023	1f	open grassy flowery rides	
<i>Chorthippus albomarginatus</i>	Lesser Marsh Grasshopper	orthoptera	29.07.2023	1	open grassy flowery rides	
<i>Chorthippus paralellus</i>	Meadow Grasshopper	orthoptera	12.08.2023	1f	open grassy flowery rides	
<i>Conocephalus fuscus</i>	Long-winged Conehead	orthoptera	29.07.2023	1f	open grassy flowery rides	
<i>Leptphyes punctatissima</i>	Speckled Bush Cricket	orthoptera	06.08.2023	1m	elm scrubby margin	
<i>Roeseliana roeselii</i>	Roesel's bush cricket	orthoptera	29.07.2023	1f	open grassy flowery rides	
<i>Tetrix undulata</i>	Common Ground-hopper	orthoptera	06.08.2023	1	open grassy flowery rides	
<i>Chloromyia formosa</i>	Broad Centurion	true fly (Diptera)	29.07.2023	1f	open grassy flowery rides	
<i>Chrysops caecutiens</i>	Splayed Deerfly	true fly (Diptera)	12.08.2023	1m	open grassy flowery rides	on fleabane flower
<i>Coremacera marginata</i>	Sieve-winged Snail-killer	true fly (Diptera)	06.08.2023	1	northern ride	under power lines
<i>Episyrphus balteatus</i>	Marmalade Hoverfly	true fly (Diptera)	12.08.2023	2	open grassy flowery rides	on Fleabane flower
<i>Eristalis nemorum</i>	Stripe-faced Drone fly	true fly (Diptera)	12.08.2023	1m	open grassy flowery rides	on fleabane flowers
<i>Eustalomyia sp.</i>	an Anthomyid fly	true fly (Diptera)	25.06.2023	1	on leaf at woodland margin	
<i>Herina lugubris</i>	a picture winged fly	true fly (Diptera)	06.08.2023	3	open grassy flowery rides	
<i>Limnia sp</i>	a snail killing fly	true fly (Diptera)	06.08.2023	2	open grassy flowery rides	
<i>Lucilia sericata</i>	Common Greenbottle fly	true fly (Diptera)	06.08.2023	3	open grassy flowery rides	
<i>Melieria crassipennis</i>	a picture wing fly	true fly (Diptera)	29.07.2023	1	open grassy flowery rides	
<i>Myathropa florea</i>	Batman Hoverfly	true fly (Diptera)	06.08.2023	1	open grassy flowery rides	on fleabane flowers
<i>Myopites inulaedyssentericae</i>	a picture wing fly	true fly (Diptera)	09.07.2023	1	open grassy flowery rides	
<i>Myopites inulaedyssentericae</i>	a picture wing fly	true fly (Diptera)	29.07.2023	3	northern scrubby area & ride	
<i>Myopites inulaedyssentericae</i>	a picture wing fly	true fly (Diptera)	06.08.2023	1	open grassy flowery rides	
<i>Nyctia halterata</i>	a flesh fly	true fly (Diptera)	29.07.2023	1	open grassy flowery rides	on fleabane flowers
<i>Phasia pusilla</i>	a Tachinid fly	true fly (Diptera)	06.08.2023	1m	open grassy flowery rides	

Scientific name	Common name	group	date	Abundance	Habitat	Comment
<i>Phytomyza conyzae</i>	an Agromyzid fly	true fly (Diptera)	12.08.2023	leaf mine	open grassy flowery rides	on leaves of Fleabane
<i>Pipiza sp</i>	a hoverfly	true fly (Diptera)	12.08.2023	1	open grassy flowery rides	on fleabane flower
<i>Sphaerophoria scripta</i>	a hoverfly	true fly (Diptera)	29.07.2023	1	open grassy flowery rides	
<i>Sphenella marginata</i>	a picture winged fly	true fly (Diptera)	06.08.2023	1	open grassy flowery rides	
<i>Tephritis cometa</i>	a picture winged fly	true fly (Diptera)	06.08.2023	1	open grassy flowery rides	
<i>Tephritis neesii</i>	a picture winged fly	true fly (Diptera)	06.08.2023	1	open grassy flowery rides	
<i>Tetanocera phyllophora</i>	a snail killing fly	true fly (Diptera)	29.07.2023	1	open grassy flowery rides	
<i>Trypetoptera punctulata</i>	a snail killing fly	true fly (Diptera)	29.07.2023	1	open grassy flowery ride	
<i>Urophora cardui</i>	a picture winged fly	true fly (Diptera)	29.07.2023	6 galls	grassy ride southern end	
<i>Volucella inanis</i>	a wasp mimic hoverfly	true fly (Diptera)	19.08.2023	1	grassy ride southern end	on fleabane flower
<i>Volucella pellucens</i>	Great Pied hoverfly	true fly (Diptera)	09.07.2023	1	open grassy flowery rides	
<i>Cepaea nemoralis</i>	Brown-lipped Banded snail	mollusc	29.07.2023	2	open grassy flowery rides	
<i>Monacha cantiana</i>	Kentish Snail	mollusc	09.07.2023	1	open grassy flowery rides	
<i>Araneus sp</i>	a spider	arachnida	25.06.2023	1	open grassy flowery rides	
<i>Tetragnatha sp</i>	a stretch spider	arachnida	09.07.2023	1	open grassy flowery rides	
<i>Tibellus oblongus</i>	a spider	arachnida	06.08.2023	1	open grassy flowery rides	