



*CARAVAN CLUB ECOLOGICAL
SITE APPRAISAL*



Freshwater East
Caravan Club Site
Trewent Hill
Freshwater East
Pembroke
SA71 5LJ



General Information

Site Name and County: Freshwater East Caravan Club Site, Pembrokeshire

Grid Reference: SS 015 979

Area: 5.05 hectares

Date: 30/06/06

Recorder: David Plant, JUST ECOLOGY

Weather Conditions: Sunny, hot and 5% cloud

Site Description

The site comprises a strip of grassland with scrub running along the northern boundary, along a slope overlooking the rest of the site. The topography of the site is gently sloping from north east to south west, with one steeper grassy slope. The site's 130 pitches are mainly on hard standing surrounded by mown amenity grassland and are arranged in a series of rows either side of the looping metalled track, running through the site.

Context

The site lies within the Pembrokeshire Coast National Park, two and a half miles south east of Pembroke and just to the west of the village of Freshwater East. The land to the north and west of the site is farmland, including both pasture and arable fields. To the south is a shallow river valley with very wet areas of vegetation. To the east is the village of Freshwater East and a coastal strip of sand and vegetation. The rough semi-natural grassland occurring on sloping ground within the site is fairly unusual in a local context, as land to the south supports wetter habitat, and to the north there is intensively managed farmland. The small area of woodland adjacent to south of the site is fairly small and appears to be a remnant of what was probably once a much larger area. There is a larger extent of woodland to the west of the site.



Habitat Information

Broad Habitats Present: Improved grassland, Neutral Grassland, Calcareous Grassland, Boundary and Linear Features

BAP Priority Habitats Present: Lowland Calcareous Grassland, Ancient/Species Rich Hedgerow

Subsidiary Habitats Present: Drainage ditches, deadwood

Amenity grassland:

Most of the areas in and around the caravan pitches across the site supports short mown amenity grassland. The sward here is largely improved, and dominated by Perennial Rye-grass *Lolium perenne* with other grasses including Annual Meadow-grass *Poa annua*, Yorkshire Fog *Holcus lanatus* and herbs such as Daisy *Bellis perennis*, Creeping Buttercup *Ranunculus repens*, Greater Plantain *Plantago major*, Procrumbent Pearlwort *Sagina procumbens*, White Clover *Trifolium repens* with species such as Selfheal *Prunella vulgaris* and Common Mouse-ear *Cerastium fontanum* occurring occasionally.

Wet grassland:

An interesting wetter area of grassland close to the warden's hut contained Oval Sedge *Carex ovalis*, Thyme-leaved Speedwell *Veronica serpyllifolia*, Jointed Rush

Juncus articulatus, Hairy Sedge *Carex hirta*, Agrimony *Agrimonia eupatoria*, Yarrow *Alchemilla millefolium*, Silverweed *Potentilla anserina*, Toad Rush *Juncus bufo*, along with many of more commonplace grassland species.

Unimproved grassland with scrub:

The area of sloping ground on the north eastern part of the site supports rough, unmanaged grassland and areas of scrub. Common grasses occurring throughout this area are Yorkshire Fog, Timothy *Phleum pratensis*, False Oat-grass *Arrhenatherum elatius*, Cocksfoot *Dactylis glomerata* and Common Bent *Agrostis capillaris*, with herbs include Common Vetch *Vicia sativa*, White Clover, Curled Dock *Rumex crispus*, Meadow Buttercup and Ribwort Plantain *Plantago lanceolata*. Other interesting plants in this area include Rough Chervil *Chaerophyllum temulum*, Small Crane's-bill *Geranium pusillum*, Creeping Cinquefoil *Potentilla reptans*, Crested Dog's-tail *Cynosurus cristatus*, Common Knapweed, Glaucous Sedge *Carex flacca*, Ox-eye Daisy *Leucanthemum vulgare*, Ladies bedstraw *Galium verum*, Bird's-foot Trefoil *Lotus corniculatus* and Burnet Rose *Rosa pimpinellifolia*.

The scrub consists of Blackthorn *Prunus spinosa*, Hawthorn *Crataegus monogyna*, Ash *Fraxinus excelsior*, a Whitebeam *Sorbus* sp., Rowan *Sorbus aucuparia*, Pedunculate Oak *Quercus robur*, Silver Birch *Betula pendula*, European Gorse *Ulex europaeus* and Broom *Cytisus scoparius*. Bracken *Pteridium aquilinum* occurred locally, to the east end of the unimproved grassland.

Hedgerows:

Hedgerows extend from the south east corner of the site and continue around the southern edge, north along the western edge of the site finally finishing by the grassy slope at the north west corner. For a significant part of its length the hedge runs along a woodland edge which means more woody species are present. Woody species here include Blackthorn, Goat Willow *Salix caprea*, Ash, Hawthorn, Hazel *Corylus avellana*, Elder *Sambucus nigra*, Alder *Alnus glutinosa*, Silver birch and European Gorse while some of the planted trees include Apple *Malus domestica*, a Whitebeam and White poplar *Populus alba*.

Grasses present at the hedge base include Creeping Bent *Agrostis capillaris*, Red Fescue *Festuca rubra*, Tufted Hair-grass and in the wetter parts of the south west corner of the site, Common Reed *Phragmites australis*. There are also many common herb species including Herb Robert *Geranium robertianum*, Field Rose *Rosa arvensis*, Common Nettle *Urtica dioica* and Bramble *Rubus fruticosus* agg. Meadow Buttercup were particularly common, and in one area Winter Heliotrope *Petasites fragrans* was recorded. Plants occurring less frequently included Soft Shield Fern *Polystichum setiferum*, Wood Dock *Rumex sanguineus*, Bittersweet, Foxglove *Digitalis purpurea*, Hemp Agrimony *Eupatorium cannabinum*, Enchanter's Nightshade *Circaea lutetiana*, Water Figwort *Scrophularia auriculata*, Meadow Vetchling *Lathyrus pratensis* and Lesser Stitchwort *Stellaria graminea*.

Other:

There were many Pyramidal orchids *Anacamptis pyramidalis* growing on the road verge at the turning off from the main road.



Habitat Evaluation

The grassland on the slope is semi-natural in character, as demonstrated by the good range of both grass and herb species characteristic of areas which have not undergone agricultural improvement, and also the presence of nest mounds of the Yellow meadow ant *Lasius flavus* which would have been destroyed with any modifications to this habitat. The presence of calcicole (lime-loving) species such as Ladies Bedstraw and Glaucous Sedge suggest a possible calcareous grassland. Unimproved Lowland Calcareous Grassland is a Priority Habitat on the UK's Biodiversity Action Plan.

This patch of grassland is a rather isolated feature in a landscape of more intensively managed farmland; although this habitat was probably formally quite common in this area. The grassland is currently being encroached by scrub; note that while some scrub is good for habitat diversity and provision of a variety of microclimates for invertebrates, it could soon shade out large areas of the grassland. This would then create an unsuitable environment for many of the grassland flora and fauna. A slightly shorter sward would increase the plant species diversity, and help the Yellow Meadow Ants to flourish. These ants need direct sunlight hitting their nests to survive.

The small patch of wet grassland is also of some botanical interest, and adds interesting diversity to the site.

The established mature hedgerows are also valuable habitat on site. Such hedges are legally protected by the Hedgerow Regulations (1997) which prevent extraction of this valuable habitat without appropriate consent. Species-rich hedgerows have a Habitat Action Plan (HAP) in the UK. Hedgerows are a key habitat for many priority species and are especially important for butterflies and moths, farmland birds, bats, dormice and other small mammals. Hedgerows are of great importance as they are often the most significant wildlife habitat over large swathes of farmed land, providing an essential refuge for a large number of woodland and farmland plants and animals. Hedges provide winter food, shelter for a range of species, and in particular harbour predatory insects that can help control crop pests. Veteran trees are also often found in hedgerows. Hedgerows may also act as wildlife corridors for many species allowing dispersal and movement between other habitats and can provide important connections between other habitat blocks such as woodland and ponds.

The limited standing and fallen dead wood in the hedges provide an important habitat for a variety of invertebrates including wood boring beetles, solitary wasps and bees.



Species Information

BAP Species Seen: None

BAP Species Potential: Bats

Other Noteworthy Species: Yellow Meadow Ant, House Sparrow, Swallow, Goldcrest

Flora:

The site's flora was more interesting in the types of plant community present rather than for the rarity of any particular species. The amenity grassland, although very short mown, did contain quite a good range of common plant species and the hedgerow was particularly diverse in terms of woody species. The area of perhaps the highest ecological interest is the semi-natural grassland on the slope, which supports a good range of grassland species indicative of unimproved, possibly calcareous conditions. It was also noticeable that the site was near the coast with plants such as Burnet Rose present which is of strongly coastal distribution in Wales.

Avifauna:

The mature woodland edge and hedgerows on the site provides a good foraging resource and cover for insectivorous and seed-eating birds. Species recorded feeding in the area during the survey included Goldcrest *Regulus regulus*, Blue Tit *Parus caeruleus*, Blackbird *Turdus merula*, Pied Wagtail *Motacilla alba*, Jay *Garrulus glandarius* and House Sparrow *Passer domestica*. Other species recorded throughout the area included Chaffinch *Fringilla coelebs*, Wren *Troglodytes troglodytes* which frequented the scrub, Robin *Erithacus rubecula*, Swallow *Hirundo rustica* which was feeding its young on site, Goldfinch *Carduelis carduelis* and Wood Pigeon *Columba palumbus*.

Invertebrates:

The site supports excellent potential invertebrate habitat. This includes sparsely vegetated banks in sunny, sheltered conditions, woodland edge nectar resources with flowering plants provided by Bramble blossom, and flowers of species such as umbellifers, willowherbs and composites such as Black knapweed. The Hawthorn and Blackthorn on the slope undoubtedly provides a valuable early summer nectar resource for many species including bees, wasps, beetles, flies and bugs.

On the sunny grassy slope and in amongst the scrub, several common species of hoverfly (Syrphidae) were recorded, these included a species of the genus *Scaeva*. Hoverflies and other warmth loving and nectar feeding invertebrate assemblages occurred wherever there were suitable food resources in sunny conditions. A number of nectar feeding beetles were found including Red-tipped Flower Beetle *Malachius bipustulatus*, Black-tipped Soldier Beetle *Rhagozycha fulva* and the Thick-legged Flower-beetle *Oedemera nobilis*. A number of common butterflies and moths species were recorded mostly from the grassy slope. These were Meadow Brown, Small Skipper, Common Blue, Cinnabar Moth, 5-spot Burnet Moth, Barred Yellow and Silver-Y Moths; suggesting there is a good supply of nectar sources and larval foodplants in the area. Only two species of grasshopper were recorded, the Field

Grasshopper *Chorthippus brunneus* and the Meadow Grasshopper *Chorthippus parallelus*, though it is likely that other common Orthoptera are also present on site. Many other invertebrate species were seen including Small Garden Bumblebee *Bombus hortorum*, Scorpion Fly *Panorpa sp.*, Common Black Ant *Lasius niger*, Yellow Meadow Ant *Lasius flavus*, Common Froghopper *Philaenus spumarius*, Brown-Lipped Snail *Cepaea nemoralis* and White Lipped Snail *Cepaea hortensis*. The grassland on site provides good invertebrate habitat.

Herptofauna:

No species of reptile or amphibian was recorded on the site at the time of survey. However the drier grassland slope habitat provides suitable habitat for reptiles such as Common Lizard *Lacerta vivipara*, whilst the Bramble scrub edge habitat provides potentially suitable habitat for Adder *Vipera berus* and Slow Worm *Anguis fragilis*. The habitat is also potentially suitable for Grass Snake *Natrix natrix* - this species is more commonly associated with wetland habitats though can also occur in drier areas on sandy soils and scrub. The close proximity to wetland habitat at the south west corner of the site may increase the chances of this species occurring here. Furthermore, although there were no ponds on the site, the numerous hiding places in tree roots, under fallen deadwood and crevices beneath rocks and stones within the hedgerows and nearby woodland habitat provide suitable refuges and hibernation sites for amphibians such as Common Toad *Bufo bufo* and newts *Triturus* spp. The chance of amphibians occurring is increased by the close proximity to wetland habitats.

Mammals:

The only mammal recorded during the survey was Rabbit *Oryctolagus cuniculus*. Other mammals reported by wardens include Fox *Vulpes vulpes* and Grey Squirrel *Sciurus carolinensis*. The wooded habitat and especially some of the steep, vegetated scarps, provide potential bat roosts and feeding opportunities.



Species Evaluation

The most interesting bird species recorded during the survey included House Sparrow, Goldcrest and Swallow. The House Sparrow is on the Red list of bird species meaning it is of high conservation concern due to there being a greater than 50% decline in the breeding population in the last 25 years. The Goldcrest and Swallow are on the amber list and hence are of medium conservation concern. The Goldcrest is a species which usually favours pine woodland but on this occasion was observed in broadleaved woodland. This may mean that the Goldcrest was not breeding on site. The House sparrow was however thought to be breeding on site, as were a number of the other common bird species.

All invertebrate species found were common widespread species, though with a dedicated invertebrate survey there is the strong possibility some of the more scarce and notable species would be found within the site.

Management Recommendations

- The area of wet grassland next to the warden's hut which left longer and only cut once or twice a year from the end of July. Once the vegetation gets a little longer invertebrates will soon take up residence which would be an added interest to the site. This is because a different suite of insects would use this wet area and the plants that occur here. This area will need to be monitored to ensure that scrub and trees do not invade, though note that it should not be cut too intensively.
- Encroachment of scrub, including European gorse and Bracken especially on the grassy slope must be halted in order to maintain the diversity of the grassland species both flora and fauna. However it is important to keep some scrub for habitat structure and this will also increase the invertebrate interest.
- Where possible, create and maintain wide margins of longer sward adjacent to the hedgerows. This will promote a greater diversity of habitat structure and enable flowering hedgerow plants to flourish, providing a vital nectar resource for bees, butterflies and other insects. These margins should be 2m or greater where possible and ideal be cut once or twice per year, ideally in late July/Early August and in the Autumn to allow wildflowers and favourable grasses time to set seed. Cut vegetation should be removed from the buffer zone to avoid die back and swamping by ruderal species, and be disposed of wisely. Buffer zones can be further enhanced by the introduction of wild meadow or flower seed mix. Again seed mixes should be native and of local provenance if possible.
- Where it occurs, leave at least some fallen and standing deadwood *in situ* or consolidated into hibernacula, this provides habitat for dead wood invertebrates, which, in turn provides a valuable food resource for insectivorous woodland birds such as woodpeckers and warblers, particularly if in a sunny spot. Outside of the breeding season in spring, fallen dead wood also provides shelter for amphibians.
- Coarse stone or rubble could be placed in discrete piles around the site to create hibernation sites for a range of wildlife including reptiles, amphibians and invertebrates. These would be ideally located in area of scrub and longer grassland.
- If any mature or dead trees are marked for surgery or felling it is advisable to get them checked by a bat expert.
- If any lighting is to be installed on site regard should be made in to the activity of bats on site and the impacts the lighting may have.

Further Suggestions to Enhance the Wildlife Value of the Site

- **Nest boxes** - Positioned in suitable locations both in the open caravan park and along the woodland edge, to provide nesting sites for birds and enhance the

site's interest for campers. These should be both the open-fronted and conventional single hole (32mm diam.) boxes, this would give the opportunity for a range of bird species to breed on the site.

- **Bat boxes** - Positioned within the woodland area to provide roosts and encourage bats in the woodland and foraging on site.
- **Bug boxes** - Consider positioning these boxes which contain short lengths of bamboo. Insects such as solitary bees and wasps can use the bamboo tubes for nesting. These can be fixed onto trees in sheltered locations at the woodland edge or scrub.
- **Wildlife pond** - Consider creating a pond on the site. Ecological advice should be sought regarding the pond's location, construction and stocking of wetland plants. A wildlife pond should be stocked only with native aquatic plant species, ideally of local provenance and ponds should not be stocked with ornamental fish.
- **Bird feeding stations** – Feeding stations could be added at a few places throughout the site. Two or three feeders at each station could hold a variety of food. One with niger seed; one with husked sunflower seed and a third with general purpose food plus fat balls. Large plastic dishes are available to place beneath feeders to catch most of the fallen debris, which attract birds unable to use hanging feeders, these can be cleaned periodically.
- **Shrub, hedgerow & tree planting** – New planting on site should use native species, ideally of a local provenance. Generally the commonest tree and shrub species are most beneficial to invertebrates and many produce autumn nuts and berries such as rowan, hawthorn, holly and hazel. Ash, birch, blackthorn, field maple and oak are also desirable species. In the case of any new hedgerow planting a mix of the above should be used with occasional standards to increase structural diversity. Limited inter-planting with species such as honeysuckle that is attractive and highly scented will provide a nectar source for moths. Invasive shrubs giving dense ground cover should be avoided in any new planting.
- **Wildlife Information** - Consider promoting the wildlife value of the site as a feature by providing interpretation material (leaflets /posters) and /or setting up a nature trail through the woodland. The presence of a number of habitats in such close proximity of each other lends themselves to such a trail.
- **Wildlife recording** – Hold a wildlife records book and/or board for casual observations and sightings. This will aid monitoring of wildlife on site and promote the role of the Caravan Club members in building biodiversity on site. Important sightings of rare flora and fauna should be passed on to the Local Biodiversity Records Centre.

Further Survey or Information Requirements

- Further invertebrate surveys particularly of the grassy slope to record species suite that use this area, the hedgerow may also be an interesting place for a survey as well as any deadwood invertebrates.
- Specialist bat surveys to establish the species of bat and suitability of habitat for bats on the site.

Species lists

Grassland area with scrub species list

Flora	
Common name	Scientific name
Ash	<i>Fraxinus excelsior</i>
Birds foot trefoil	<i>Lotus corniculatus</i>
Bittersweet	<i>Solanum dulcamara</i>
Blackthorn	<i>Prunus spinosa</i>
Bracken	<i>Pteridium aquilinum</i>
Broom	<i>Cytisus scoparius</i>
Burnet rose	<i>Rosa pimpinellifolia</i>
Bush vetch	<i>Vicia sepium</i>
Cocksfoot	<i>Dactylis glomerata</i>
Common bent	<i>Agrotis capillaris</i>
Common knapweed	<i>Centaurea nigra</i>
Common sorrel	<i>Rumex acetosella</i>
Common vetch	<i>Vicia sativa</i>
Creeping cinquefoil	<i>Potentilla</i>
Creeping thistle	<i>Cirsium areense</i>
Crested dog's-tail	<i>Cynosurus cristatus</i>
Curled dock	<i>Rumex crispus</i>
Dog rose	<i>Rosa canina</i>
European gorse	<i>Ulex europeaus</i>
False oat-grass	<i>Arrhenatherum elatius</i>
Field scabious	<i>Knautia arvensis</i>
Glaucous sedge	<i>Carex flacca</i>
Ground ivy	<i>Glechoma hederacea</i>
Hawthorn	<i>Crataegus monogyna</i>
Hedge bindweed	<i>Calystegia sepium</i>
Hogweed	<i>Heracleum sphondylium</i>
Lady's bedstraw	<i>Galium verum</i>
Lesser stitchwort	<i>Stellaria graminea</i>
Lesser trefoil	<i>Trifolium dubium</i>
Meadow buttercup	<i>Ranunculus acris</i>
Meadow vetchling	<i>Lathyrus pratensis</i>
Ox-eye daisy	<i>Leucanthemum vulgare</i>
Pedunculate oak	<i>Quercus robur</i>
Ragwort	<i>Senecio jacobaea</i>

Red clover	<i>Trifolium pratense</i>
Red fescue	<i>Festuca rubra</i>
Ribwort plantain	<i>Plantago lanceolata</i>
Rough chervil	<i>Chaerophyllum temulum</i>
Rowan	<i>Sorbus aucuparia</i>
Selfheal	<i>Prunella vulgaris</i>
Silver birch	<i>Betula pendula</i>
Small cranesbill	<i>Geranium pusillum</i>
Sweet vernal grass	<i>Anthoxanthum odoratum</i>
Timothy	<i>Phleum pratensis</i>
Tufted hair-grass	<i>Deschampsia cespitosa</i>
White clover	<i>Trifolium repens</i>
a whitebeam	<i>Sorbus sp.</i>
Yarrow	<i>Alchemilla millefolium</i>
Yorkshire fog	<i>Holcus lanatus</i>
Fauna	
Common name	Scientific name
5-spot burnet	<i>Zygaena trifolii</i>
a hoverfly	<i>Scaeva sp.</i>
A leaf beetle	<i>Gastrophysa viridis</i>
Barred yellow	<i>Cidaria fulvata</i>
Black-tipped soldier beetle	<i>Rhagonycha fulva</i>
Brown lipped snail	<i>Cepaea nemoralis</i>
Cinnabar	<i>Tyria jacobaeae</i>
Common black ant	<i>Lasius niger</i>
Common blue	<i>Polyommatus icarus</i>
Common froghopper	<i>Philaenus spumarius</i>
Field grasshopper	<i>Chorthippus brunneus</i>
Grey flesh fly	<i>Sarcophaga carnaria</i>
Meadow brown	<i>Maniola jurtina</i>
Meadow grasshopper	<i>Chorthippus parallelus</i>
a picture-winged fly	<i>Xyphosia millaria</i>
Red-tipped flower beetle	<i>Malachius bipustulatus</i>
Scorpion fly	<i>Panorpa sp.</i>
Silver-Y	<i>Autographa gamma</i>
Small skipper	<i>Thymelicus sylvestris</i>
Thick-legged flower beetle	<i>Oedemera nobilis</i>
White lipped snail	<i>Cepaea hortensis</i>
Yellow meadow ant	<i>Lasius flavus</i>

Amenity grassland plant species

Common name	Scientific name
Agrimony	<i>Agrimonia eupatoria</i>
Annual meadow-grass	<i>Poa annua</i>
Bird's-foot trefoil	<i>Lotus corniculatus</i>
Cock's-foot	<i>Dactylis glomerata</i>
Common cat's-ear	<i>Hypochoeris radicata</i>
Common knapweed	<i>Centaurea nigra</i>
Common mouse-ear	<i>Cerastium fontanum</i>
Common ragwort	<i>Senecio jacobaea</i>
Creeping buttercup	<i>Ranunculus repens</i>
Daisy	<i>Bellis perennis</i>
Dandelion	<i>Taraxacum officinale</i> agg.
False oat-grass	<i>Arrhenatherum elatius</i>
Fleabane	<i>Pulicaria dysenterica</i>
Greater plantain	<i>Plantago major</i>
Ground ivy	<i>Glechoma hederacea</i>
Hairy sedge	<i>Carex hirta</i>
Hoary willowherb	<i>Epilobium parviflorum</i>
Jointed rush	<i>Juncus articulatus</i>
Lesser trefoil	<i>Trifolium dubium</i>
Oval sedge	<i>Carex ovalis</i>
Ox-eye daisy	<i>Leucanthemum vulgare</i>
Perennial rye-grass	<i>Lolium perenne</i>
Procumbent pearlwort	<i>Sagina procumbens</i>
Ribwort plantain	<i>Plantago lanceolata</i>
Rough meadow-grass	<i>Poa trivialis</i>
Scarlet pimpernel	<i>Anagallis arvensis</i>
Selfheal	<i>Prunella vulgaris</i>
Silverweed	<i>Potentilla anserina</i>
Sweet vernal grass	<i>Anthoxanthum odoratum</i>
Thyme-leaved speedwell	<i>Veronica serpyllifolia</i>
Toad rush	<i>Juncus bufo</i>
Wall speedwell	<i>Veronica arvensis</i>
White clover	<i>Trifolium repens</i>
Yarrow	<i>Alchemilla millefolium</i>
Yorkshire fog	<i>Holcus lanatus</i>

Hedgerow plant species

Common name	Scientific name
a whitebeam	<i>Sorbus sp.</i>
Alder	<i>Alnus glutinosa</i>
Apple	<i>Malus domestica</i>
Ash	<i>Fraxinus excelsior</i>
Barren strawberry	<i>Waldsteinia ternata</i>
Bittersweet	<i>Solanum dulcamara</i>
Blackthorn	<i>Prunus spinosa</i>
Bracken	<i>Pteridium aquilinum</i>
Bramble	<i>Rubus fruticosus agg.</i>
Bush vetch	<i>Vicia sepium</i>
Cleavers	<i>Galium aparine</i>
Common nettle	<i>Urtica dioica</i>
Common reed	<i>Phragmites australis</i>
Common sorrel	<i>Rumex acetosella</i>
Compact rush	<i>Juncus conglomeratus</i>
Couch	<i>Elytrigia repens</i>
Creeping bent	<i>Agrostis stolonifera</i>
Creeping thistle	<i>Cirsium arvense</i>
Dog rose	<i>Rosa canina</i>
Elder	<i>Sambucus nigra</i>
Enchanter's nightshade	<i>Circaea lutetiana</i>
European gorse	<i>Ulex europaeus</i>
False-brome	<i>Brachypodium sylvaticum</i>
Field rose	<i>Rosa arvensis</i>
Foxglove	<i>Digitata purpurea</i>
Germander speedwell	<i>Veronica chamaedrys</i>
Goat willow	<i>Salix caprea</i>
Great willowherb	<i>Epilobium hirsutum</i>
Greater bird's-foot trefoil	<i>Lotus pedunculatus</i>
Hawthorn	<i>Crataegus monogyna</i>
Hazel	<i>Corylus avellana</i>
Hedge bindweed	<i>Calystegia sepium</i>
Hemlock water-dropwort	<i>Oenanthe crocata</i>
Hemp agrimony	<i>Eupatorium cannabinum</i>
Herb Robert	<i>Geranium robertium</i>
Honeysuckle	<i>Lonicera periclymenum</i>
Ivy	<i>Hedera helix</i>
Lesser stitchwort	<i>Stellaria graminea</i>
Marsh thistle	<i>Cirsium palustre</i>
Meadow buttercup	<i>Ranunculus repens</i>
Meadow vetchling	<i>Lathyrus pratensis</i>
Meadowsweet	<i>Filipendula ulmaria</i>
Red campion	<i>Silene dioica</i>
Red fescue	<i>Festuca rubra</i>
Rough chervil	<i>Chaerophyllum temulum</i>
Silver birch	<i>Betula pendula</i>

Soft shield fern	<i>Polystichum setiferum</i>
Spear thistle	<i>Cirsium vulgare</i>
Timothy	<i>Phleum pratensis</i>
Tufted hair-grass	<i>Deschampsia cespitosa</i>
Tufted vetch	<i>Vicia cracca</i>
Water figwort	<i>Scrophularia auriculata</i>
White poplar	<i>Populus alba</i>
Winter heliotrope	<i>Petasites fragrans</i>
Wood dock	<i>Rumex sanguineus</i>

Bird species recorded over the site

Common name	Scientific name
Jackdaw	<i>Corvus monedula</i>
Greenfinch	<i>Carduelis chloris</i>
Wood pigeon	<i>Columba palumbus</i>
Swallow	<i>Hirundo rustica</i>
Goldcrest	<i>Regulus regulus</i>
Wren	<i>Troglodytes troglodytes</i>
Blackbird	<i>Turdus merula</i>
Robin	<i>Erithacus rubecula</i>
Pied wagtail	<i>Motacilla alba</i>
Chaffinch	<i>Fringilla coelebs</i>
House sparrow	<i>Passer domestica</i>
Goldfinch	<i>Carduelis carduelis</i>
Jay	<i>Garrulus glandarius</i>
Blue tit	<i>Parus caeruleus</i>

Other species recorded over the site

Common name	Scientific name
a mining bee	<i>Andrena sp.</i>
Green nettle weevil	<i>Phyllobius pomaceus</i>
Greenbottle	<i>Lucilia Caesar</i>
Large crane fly	<i>Tipula maxima</i>
Rabbit	<i>Oryctolagus cuniculus</i>
Small garden bumblebee	<i>Bombus hortorum</i>

Appendix 1 - Bats

Certain species of bats may use the site for foraging (flying insects) and some may roost in convenient trees on the site or nearby. These will probably be pipistrelle bats *Pipistrellus sp.*

Although it remains the most abundant and widespread bat species in the UK, the pipistrelle is thought to have undergone a significant decline in numbers this century. Estimates from the National Bat Colony Survey suggest a population decline of approximately 70% between 1978 and 1993. The current pre-breeding population estimate for the UK stands at approximately 2,000,000.

Females form maternity roosts of up to several hundred adults from May, often in house roofs but also in woodland. They give birth to a single live young in July. Males are much more solitary. Hibernation takes place from November to March. Pipistrelles forage for small insects in varied habitats but woodland edges, hedgerows and waterways are particularly important.

The pipistrelle bat is listed on Appendix III of the Bern Convention, Annex IV of the EC Habitats Directive and Appendix II of the Bonn Convention (and is included under the Agreement on the Conservation of Bats in Europe). It is protected under Schedule 2 of the Conservation (Natural Habitats, etc.) Regulations, 1994 (Regulation 38) and Schedules 5 and 6 of the WCA 1981.

Appendix 2 - Birds

In Britain all wild birds are granted legal protection under the Wildlife & Countryside Act 1981, the Bern Convention and the EC Birds Directive. This legislation protects the birds, their eggs and nests whilst being built or in use. Such protection makes it an offence to intentionally kill, injure, take or have in possession any wild bird or egg. It is also an offence to intentionally damage or destroy the nest of any wild bird whilst it is being built or in use. Any vegetation clearance and tree works should preferably take place outside of the bird-nesting season to minimise disturbance. The nesting season varies from year to year, according to the weather conditions but generally begins in March, peaks during May and June and continues until August.



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