



***CARAVAN CLUB ECOLOGICAL
SITE APPRAISAL***

Ferry Meadows
Caravan Club Site
Ham Lane
Peterborough
PE2 5UU



General Information

Site Name and County: Ferry Meadows Caravan Club site, Cambridgeshire

Grid Reference: TL151 975

Area: 30 acres

Date: 23/07/2007

Recorder: Rodney West , JUST ECOLOGY Environmental Consultancy

Weather Conditions: Bright, warm (22°C), light wind

Site Description

The site is divided into two sections – an east site and a west site – Ham Lane divides the two. All the hard standings (104) are in the west site. The 254 grass pitches are found almost totally in the east site.

The areas of amenity grassland are subdivided by linear groupings of mature hardwood tree and shrub species – which, particularly in the east site, give a feel of wooded glades.

The site is low lying and adjacent to several large lakes much used for leisure activities but also attractive to wetland animals such as wildfowl, dragonflies and amphibians.

Context

The site abuts the Ferry Meadows Country Park, an area of nearly 200 hectares which lies in a bend of the River Nene. It is part of a much larger area (around 1000 hectares) known as Nene Park, which stretches along the River Nene from Peterborough town centre out to Wansford on the A1, some 9 km away.

Originally arable farmland with riverside meadows, the lakes were formed by the extraction of gravel between 1972 and 1978. As well as the lake complex other habitats have been created: a 16 hectare nature reserve, numerous tree belts and grasslands with varying management regimes.

Castor Flood Meadows are some 5 kms distant and are a remnant example of the once extensive species-rich alluvial grasslands within the floodplain of the River Nene.



Habitat Information

Broad Habitats Present: Amenity grassland, broad-leaved woodland

BAP Priority Habitats Present: None

Caravan Club cBAP features: None

Subsidiary Habitats Present: None

Plant Communities Present:

Grassland Communities:

Both east and west sites are laid down to amenity grassland which is closely mown and is species-poor. Several grass species are present including Annual Meadow Grass *Poa annua*, Common Bent *Agrostis tenuis*, Yorkshire Fog *Holcus lanatus* and Perennial Rye Grass *Lolium repens*. In some areas the grassland sward is interspersed with other perennials including; Daisy *Bellis perennis*, Dandelion *Taraxacum officinale*, Selfheal *Prunella vulgaris*, Creeping Buttercup, White Clover *Trifolium repens*, Greater Mullien *Verbascum thapsus*, Spear Thistle *Cirsium vulgare* and Greater Plantain *Plantago major*.

The grassland sward immediately beneath the boundary woodland and therefore influenced by drier conditions recorded other perennials present including Scarlet Pimpernel *Anagallis arvensis*, White Campion *Silene alba*, Spear Thistle, Perennial Sow-thistle *Sonchus arvensis* and Creeping Thistle *C. arvense*.

Beneath some of the 'island' plantings in the east site the grass has been allowed to grow longer along with further ruderal species such as Lords and Ladies *Arum maculatum*, Common Nettle *Urtica dioica*, and White Campion.

Woodland:

Groups of pitches are divided with areas of planted mixed hardwood tree and shrub species, particularly so in the east site. The east site also has areas of 'island' planting. Species found in both these areas include Field maple *Acer campestre*, Sycamore *A. pseudoplatanus*, Ash *Fraxinus excelsior*, Rowan *Sorbus aucuparia*, Silver Birch *Betula pubescens*, White Poplar *Salix alba* sp, Horse Chestnut *Aesculus hippocastanum*, Whitebeam *Sorbus aria*, Alder *Alnus glutinosa*, Norway Maple *A. platanoides*, Tamarisk *Tamarix gallica*, Elderberry *Sambucus nigra* and Aspen *Populus tremula*.

Hedgerow:

Around the boundaries of both east and west sites there is a continuous cover of planted mixed hardwoods which also include the species mentioned above, but also more hedgerow type species such as Blackthorn *Prunus spinosa*, Hawthorn *Crataegus monogyna*, Elderberry, Hazel *Corylus avellana*, Cherry *Prunus avium* and Snowberry *Symphoricarpos rivularis*.



Habitat Evaluation

Although the large areas of amenity grassland are botanically species-poor, as a habitat many invertebrates and bird species like thrushes and wagtails will find the grassland areas a suitable food resource.

The groupings of mature hardwood tree and shrub species are now well enough developed to also be a valuable food resource for insects, birds and mammals. In

some places the grass has been allowed to grow longer under the trees and this is a very good practice as it increases the biodiversity of the habitat (Figure 1).

Many of the trees and shrub groupings are already a breeding habitat for several bird species and this will probably increase over time as the habitat develops.

These same tree groups are valuable shelter resource for many species of invertebrate and birds. Probably, mammal species like bats will begin to use the resource as the trees grow larger and older. The tree/shrub edge was used by dragonfly species on the survey date. Two species were identified but probably several further species use the same habitat during the flying periods.



Figure 1: The present mowing regime has left areas under trees. This has allowed the grass to grow longer and mature, with other species of plant also colonising – this will have a positive influence on for biodiversity.



Figure 2: This small temporary water feature was much used by birds for drinking and bathing and by butterflies for drinking.



Species Information

BAP Species Seen: None

Caravan Club cBAP species: None

BAP Species Potential: *Pipistrelle Pipistrellus pipistrellus* and other bat species are priority species listed in the UK Biodiversity Action Plans. Bats have been seen on the site.

Other Notable Species: None

Flora:

The amenity grass areas on the site contain species indicative of improved or re-seeded grassland such as Perennial Rye-grass, Dandelion and White Clover. Some additional biodiversity value could be added in strategic areas.

Shrub planting found within the site is undoubtedly beneficial to flying insects and some bird species. There is the potential to increase the nectar sources with further inter-planting or management.

Avifauna:

The maturing hardwood tree species within the numerous plantings give the site a 'wooded' feel and this is borne out by the bird species recorded during the survey period. These include a good representative example of woodland species, amongst others.

On the day of the survey a total of 13 bird species were recorded; other species will also use the site such as woodpeckers and owls. These species recorded during the

survey are undoubtedly augmented by further bird species including wagtails, owls and other woodland species. During the winter months when the site is very quiet the short turf areas would probably attract winter visitors such as Scandinavian Redwing *Turdus iliacus*, Fieldfare *Turdus pilaris* and Blackbird *Turdus merula* and other thrushes. Whilst the trees will provide not only a food resource but also roosting opportunities and nesting sites for most of the bird species recorded during the survey.

Birds recorded using the site during the survey visit included:

Blackbird *Turdus merula* (breeding)
Dunnock *Prunella modularis*
Goldfinch *Carduelis carduelis*
Greenfinch *Carduelis chloris*
House Sparrow *Passer domesticus*
Mistle Thrush *Turdus viscivorus*
Robin *Erithacus rubecula*
Starling *Sturnus vulgaris*
Green Woodpecker *Picus viridis*
Great Tit *Parus major*
Blue Tit *Parus cinerea*
Magpie *Pica pica*
Carrion Crow *Corvus corone*
Long-tailed Tit *Aegithalos caudatus*
Collared Dove *Streptopelia decaocto*
Wood Pigeon *Columba palumbus*

Species identified as using the site and are of particular note:

House Sparrow populations have fluctuated greatly over the centuries, with a gradual decline over the last 100 years. A change from horse-drawn vehicles to motorised ones caused the sparrow population in many cities to drop by two thirds, with the removal of an important food supply - the cereal fed to horses. Recent declines have been caused by a combination of reduced plant food in winter, reduced insect availability for chicks, and reduction in available nest sites. On farmland, these are attributed to changes in agricultural practices.

Housing of livestock in inaccessible buildings, mechanisation of grain harvest and more effective storage of grain and animal feeds all reduced sparrows access to food. Recent cereal hygiene regulations mean that farm buildings are sealed, and therefore offer fewer nesting sites. In towns lack of food and nest sites are contributing to the decline, but we do not yet fully understand the decline.

In the 1950s, the UK house sparrow population was estimated at 9.5 million. They increased to 12 million by the early 1970s, then declined. The population crashed during the 1990s. Over 25 years the population has declined by 62%. Because of this decline in numbers, the house sparrow is now Red Listed as a species of high conservation concern.

Invertebrates:

The weather during the survey day was ideal for flying insects and various family representatives were recorded. Undoubtedly more species use the site, though pollen and nectar bearing plants were generally scarce within the site due to the relatively intensive mowing regime. Insects were attracted to the hardwood plantings within the site and this is an area which could possibly be expanded upon. Dragonfly species were using the tree/shrub edge to hawk along.

Invertebrates recorded using the site during the survey visit included:

Large White Butterfly *Pieris brassicae*
Meadow Brown *Maniola jurtina*

Rufus-tailed Bumblebee *Bombus lapidarius*
Buff-tailed Bumblebee *Bombus terrestris*

Various species of Hoverfly (family Syrphidae)
Emperor Dragonfly *Anax imperator*
Brown Hawker *Aeshna grandis*

Herptofauna:

Common Frog *Rana temporaria* was recorded on the site which with its proximity to wetland habitats probably means other amphibian species are also present.

Mammals:

During the survey Rabbit and Grey Squirrel were recorded but other small mammals such as Long-tailed Fieldmouse *Apodemus sylvatica*, Field Vole *Microtus agrestis* and Common Shrew *Sorex araneus* probably use the site as will their predators Stoat *Mustela erminea* and Weasel *Mustela nivalis*.

Certain species of bats use the site, anecdotal evidence suggest they hawk for moths around the electric lights on site. These could be various species of bats especially those favouring wetland areas. The most likely species will probably be Pipistrelle Bats *Pipistrellus pipistrellus*, which are priority species in the UK Biodiversity Action Plans. 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 (see Appendix 1).



Species Evaluation

The grassland around the pitches was found to be relatively species-poor and is kept short by frequent mowing, thus it is of little value in biodiversity terms. Grassland around the perimeter of the site and also bordering the small copses, has a slightly

higher floral diversity, providing a nectar source for butterflies, bees and other flying insects. Also the areas under the tree clumps ('island plantings'), that were allowed to grow to maturity also had several species of ruderals accompanying the grass species, which were an additional subtle habitat feature and were attracting hoverflies and bees. It would very likely be an attractive food resource for many other invertebrates species like both moths and butterflies.

The gravel-based hard stand areas between the mown grass are valuable basking areas for reptiles such as the common lizard and also important for ground-dwelling and burrowing invertebrates such as beetles and ants. These areas are of particularly important if south-facing, as they will provide a warm micro-climate. Common Frog was recorded – the site's association with nearby wetlands will undoubtedly mean that other amphibians also use the site.

A good variety of bird species was recorded during the visit and it is very likely that many other species, not recorded on the day also use the site. The areas of small tree/shrub planting will be of value at blossom time as a resource for pollen and nectar feeding invertebrates and will also provide useful food source for birds during the winter months when food is scarce. Species such as Rowan, Cherry (both found on the site) are of particularly valuable in this respect. The addition of several feeding and watering stations around the site would undoubtedly enhance the site's bird interest.

The number of butterflies and flying insects were generally low. This was most likely due to a lack of suitable grassland habitat and associated wildflowers to provide a nectar resource. Around the site's perimeter beyond the mown sward an increase in flying insects was noted, particularly favoured by dragonflies. Diversity could be improved by management of the planted tree species using coppicing and some diversification of grassland habitats wherever possible (one metre wide taller grass margins).

Mammal use of the site is low, though many unrecorded small mammals probably use the site. Although bats were not recorded during the survey, it is highly likely that one or two species are present within the site.

Management Recommendations

- **Nestboxes** – both open-fronted and conventional single hole (32mm diam.) could be added to selective trees in the secluded areas of the site. Nestboxes need cleaning out each autumn.
- **Bird feeding stations** – the warden already has a feeding station by the reception area and this was much in use by young, inexperienced birds during the survey visit. Further feeding stations could be added at two or three additional sites 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, these can be cleaned periodically.

-
- **Habitat piles** - When cutting grass or hardwood cut and stack in 'habitat piles' in out of the way places – in sunny areas if possible. Try not to burn material. At present the grass cuttings are heaped beyond the most northerly boundary and in this instance would seem to be a good practice as it catches the sun and is near water which might encourage grass snakes.
 - **Tree stumps, log piles and mounds** – Left *in-situ* or consolidated in to hibernacula, these will provide excellent invertebrate, reptile and amphibian habitat, particularly if left in a sunny spot. Increased insect diversity will in turn attract more bird species to the area. Coarse stone, rubble or deadwood 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.
 - **Bats and Trees** - If any mature trees are marked for cutting down it is advisable to get them checked by a bat expert. Felling and scrub clearance should be conducted between October and early February, to avoid the potential risk to nesting birds (see Appendix 2).
 - **Diversification of grassland** - Less frequent mowing of some areas of the site would be beneficial for a range of insect, mammal and bird species, and would help to diversify the grass sward near the pitches. This could be done at a 1 metre width around the play area part of the site and elsewhere where feasible, and if left to grow longer, should be mown once a year in late August. This is already done under the 'island' tree plantings and is a significant biodiversity plus.

All cuttings should be removed. Margins of long grass can provide a valuable habitat for wildlife. Invertebrates, including the caterpillars of butterflies and moths, feed on grasses. Long grass is also favoured by many small mammals, reptiles and amphibians which in turn will attract kestrels, owls and other predators. Bats frequently hunt for insects over long grass. A variety of lengths will produce a range of habitats and species assemblages. Keeping areas of longer grass also creates an important transition zone between the mature woodland and the short grass, creating a greater range of habitats and thus a greater diversity of plants, birds, small mammals and insects.

- **Edges** – Buffer zones of longer grass adjacent to woodland edges or hedgerows should be extended beyond the 0.5-1m currently in place to 2m or greater where possible. This would provide additional invertebrate habitat and also provide greater cover for small mammals, reptiles and amphibians. These 'buffer' zones should 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. Species such as Foxglove, Red Campion, Wood Avens, Common Dog Violet and vetches are suited to the woodland edge and may well come in naturally to buffer zones if a suitable cutting regime is adopted. Cut vegetation should be removed from the buffer zone to avoid die back and swamping by ruderal species. 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.

-
- **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 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. Hedges can be trimmed every other year at most to allow greater fruiting of shrubs for animals and invertebrates.

 - **Nectar sources for butterflies and flying insects** - Amongst the more formal planting around the fences and borders on site, species such as buddleia and honeysuckle could be added. These will attract butterflies and moths and also smell pleasant in the evenings whilst people are sitting outside. Stonecrop (*Sedum telephium*) is an attractive plant that provides excellent cover, and is a favourite of butterflies such as Small Tortoiseshell, Red Admiral, Painted Lady, and Peacock

 - **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 Cambridgeshire Biodiversity Records Centre.

Appendix 1 - Pipistrelle 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.

The common pipistrelle is the smallest British bat with a wingspan of about 20cms and weighing around six grams. It is the most abundant and widespread bat throughout the UK and have suffered large losses in numbers over the last twenty years.

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. It is also a priority species listed in the UK Biodiversity Action Plans.

Current threats to bats:

- Exclusion from roosts by human intervention
- Destruction or damage to roosts as a result of building work/development
- Barn conversions and modifications to buildings such as security lights
- Toxic effects of remedial timber treatment in roofs and other parts of buildings
- Loss and damage to natural habitats such as woodlands and older trees with crevices and cavities.

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.