



*CARAVAN CLUB ECOLOGICAL
SITE APPRAISAL*



**Rookesbury Park Caravan Club Site
Hundred Acres Road
Wickham
Fareham
PO17 6JR
England**



General Information

Site Name and County: Rookesbury Park

Grid Reference: SU 596122

Area: 6.07 hectares

Date: 15/06/04

Recorder: Tilly Tilbrook and Jessica Arnold, Ecologists with Just Ecology Environmental Consultancy.

Weather Conditions: Hot and sunny, with a light breeze.

Site Description

There are tarmac roads leading to gravel pitches, which are surrounded by mown grass. To the west of the site is an area of disused ground which is to be developed for 30 more pitches, and to the east is a well-drained hill that is used as a recreation area, and supports a diverse biological community. The blocks of pitches are interspersed with small areas of planted woodland.

Context

This rural site is surrounded by woodland, and is a former sand extraction pit. It is close to Wickham, and is within easy reach of Fareham. The woodland surrounding the site on all sides is the former Royal Forest of Bere.



Habitat Information

Broad Habitats Present: Amenity grassland, planted predominantly broadleaved woodland, scrub, acid grassland.

BAP Priority Habitats Present: Lowland acid grassland.

Subsidiary Habitats Present: Dead wood.

Plant Communities Present:

Grassland Communities:

The grassland between the pitches is all species poor, and whilst the patchy and desiccated nature of the grass made species identification difficult, it is likely to be predominantly perennial rye grass (*Lolium perenne*), and some areas with daisy (*Bellis perennis*) were also noted. There was one area at the site boundary where red campion (*Silene dioica*) has managed to establish. Diversity increases greatly both to the east and west ends of the site. To the east is a hillside that is closely mown with little diversity towards the bottom, but which is far more diverse above this mown area. This area is designated for recreation, and contains horsetail (*Equisetum spp.*), vetch (*Vicia sativa*), heath spotted orchids (*Dactylorhiza fuchsii*), creeping buttercup (*Ranunculus repens*), yarrow (*Achillea millefolium*), cocksfoot (*Dactylis glomerata*), Yorkshire fog grass (*Holcus lanatus*), white clover (*Trifolium repens*), stitchwort (*Stellaria graminea*), rush (*Juncus spp.*), dock (*Rumex obtusifolius*), spear thistle (*Cirsium vulgare*), bird's foot trefoil (*Lotus corniculatus*), oxeye daisy (*Chrysanthemum leucanthemum*), selfheal (*Prunella vulgaris*) and crested dogstail (*Cynosurus cristatus*). There are also sparsely planted trees, predominantly silver birch (*Betula pendula*). To the west is an area of disused ground that is to be developed for a further 30 pitches. This also yielded a more interesting flora inside the fenced area, though to the outside of this fence the grassland appears less diverse and is suffering from encroachment of dock (*Rumex spp.*) and nettles (*Urtica dioica*). Within the fenced area, a tall herb community has established comprising cocksfoot (*Dactylis glomerata*), bramble (*Rubus fruticosus*), common vetch (*Vicia sativa*), bush vetch (*Vicia sepium*), stitchwort (*Stellaria graminea*), scarlet pimpernel (*Anagallis arvensis*), spear thistle (*Cirsium vulgare*), gorse (*Ulex europaeus*), foxglove (*Digitalis purpurea*), poppy (*Papaver rhoeas*), scentless mayweed (*Tripleurospermum maritimum*), bird's foot trefoil (*Lotus corniculatus*), Yorkshire fog grass (*Holcus lanatus*), creeping thistle (*Cirsium arvense*), yarrow (*Achillea millefolium*), pineappleweed (*Matricaria matricarioides*), ribwort plantain (*Plantago lanceolata*), greater

plantain (*Plantago major*), ragwort (*Senecio jacobaea*), dandelion (*Taraxacum officinale*), white clover (*Trifolium repens*), black medic (*Medicago lupulina*), weld (*Reseda luteola*) and marsh willowherb (*Epilobium palustre*). This area also contains an area of scrub, predominantly silver birch (*Betula pendula*), brambles (*Rubus fruticosus*) and conifer species.

Woodland:

There are several areas of woodland on the site which serve to provide pitches with some seclusion, and which divide the pitches. These were surveyed individually, though broadly speaking they contained the same species, which are listed below. Bramble, nettle (*Urtica dioica*), bracken (*Pteridium aquilinum*), gorse cleavers (*Galium aparine*), willow (*Salix* spp.), hawthorn (*Crataegus monogyna*), turkey oak (*Quercus cerris*), dogwood (*Cornus controversa*), cherry (*Prunus* spp.), lime (*Tilia europaea*), hazel (*Corylus avellana*), rowan (*Sorbus aucuparia*), sweet chestnut (*Castanea sativa*), ivy (*Hedera helix*), guelder rose (*Viburnum opulus*), elder (*Sambucus nigra*), silver birch (*Betula pendula*), Corsican pine (*Pinus nigra* var. *maritima*), sycamore (*Acer pseudoplatanus*), horse chestnut (*Aesculus hippocastanum*), alder (*Alnus glutinosa*), apple (*Malus* spp.), ash (*Fraxinus excelsior*), wayfaring tree (*Viburnum lantana*). Generally speaking, there was little understorey vegetation with the exception of some areas of ivy, although there was some dead wood which would provide valuable habitat for invertebrates.

Hedgerows:

There were no hedgerows as such on site, although in places the hawthorn in the blocks of woodland separating the pitches had grown into dense hedges that would provide good habitat for nesting birds. In addition, there were some areas of new planting that in time will develop into good hedgerow habitats with a high diversity of species. The species present included beech (*Fagus sylvatica*), guelder rose (*Viburnum opulus*), yew (*Taxus baccata*), blackthorn (*Prunus spinosa*), privet (*Ligustrum* spp.), hazel (*Corylus avellana*), elder (*Sambucus nigra*), field maple (*Acer campestre*), silver birch (*Betula pendula*), willow (*Salix* spp.) and rowan (*Sorbus aucuparia*).

Wetland:

There were no wetland habitats on site, although an upturned dustbin lid had been provided as water for birds and small mammals to use.



Habitat Evaluation

The grassland areas to the east and west of the site are diverse and provide good quality habitats, though of very different natures, with the one to the west being more disturbed and colonisation is patchy. Overall, the hillside to the east is of better quality. The grassland between the pitches is of little ecological value, being very closely mown and rather desiccated. The patches of woodland are useful habitats for birds, and could be improved somewhat by thinning to encourage some understorey flora to develop.



Species Information

BAP Species Seen: Bumblebees and butterflies

BAP Species Potential: Various species of bats have action plans in the Hampshire BAP, and there were several trees near pitches 74-76 that had good potential as bat roosts.

Other Notable Species: Two song thrushes were seen on the site, which is to be the location for the launch of the Caravan Club as the species champion for the song thrush, which is a Red List species.

Flora:

The grassland areas have species indicative of a more acidic soil, and several areas show good diversity, with heath spotted orchids present on the east of the site. In addition, although the woodland areas have little in the way of understorey vegetation, they are well developed with a mix of native and planted garden species, and are a useful habitat for nesting birds.

Avifauna:

On the day of the site visit, a number of species were noted, including wood pigeon (*Columba livia*), song thrush (*Turdus philomelos*), robin (*Erithacus rubecula*), great tit (*Parus major*) and blue tit (*Parus caeruleus*). The woodland provides areas for shelter, nesting and feeding opportunities. Birds have been encouraged to the site by the placing of bird feeders and an upturned dustbin lid as a watering and bathing area. Anecdotal evidence from a 'wildlife spotted' book in the information room also suggests that green woodpecker (*Picus viridis*), chaffinch (*Fringilla coelebs*), warbler (*Sylvia* spp.) and nightjar (*Caprimulgus europaeus*) may visit the site, with a buzzard (*Buteo buteo*) having been seen overhead.

Invertebrates:

Meadow brown (*Maniola jurtina*) and an unidentified blue butterfly were both seen several times on the site. In addition, a number of moths including cinnabar moths (*Tyria jacobaeae*) were spotted. Several species of spider were seen, as were grasshoppers, the larvae of a seven-spot ladybird (*Coccinella 7-punctata*) and aculeate hymenoptera. The dead wood under the woodland areas provides suitable habitat for invertebrates, particularly detritivores and other litter dwellers.

Herptofauna:

None were noted during the site visit, though common frog (*Rana temporaria*) has been reported to be present. The area of wasteland that is due to be developed may provide suitable habitat for the common species of reptile, such as common lizard *Lacerta vivipara* and slowworm *Anguis fragilis*. The open, scrubby nature of this patch of land makes it a suitable habitat for reptiles which may bask in the open areas of bare ground and shelter under grassy clumps or within log piles. It is likely that, if present, they are in small numbers and will be able to remain on site when pitches are created in this area.

Mammals:

No mammals were seen during the site visit, though there was evidence of rabbits (*Oryctolagus cuniculus*) in several areas. Anecdotal evidence suggests hedgehog (*Erinaceus europaeus*), grey squirrel (*Sciurus carolinensis*), fox (*Vulpes vulpes*) and several deer species frequent the site. Although the woodland areas do contain hazel (*Corylus avellana*), which is an important food source for dormice (*Muscardinus avellanarius*), the areas are too isolated and not large enough to support this species. However several mature oak trees (*Quercus* spp.) were seen just outside the site boundary between pitches 74-76 that could be suitable habitat for bat roosts. The buildings on the site were unsuitable for bats, and no evidence of use by bats was found.



Species Evaluation

The grassland around the pitches is species poor and is kept short by frequent mowing. The areas to the west and east, which have taller grass communities, have higher species diversity and are good habitats for small mammals such as wood mice (*Apodemus sylvaticus*) and field voles (*Microtus agrestis*), and for invertebrates. The woodland areas are all of a similar age structure, but do provide shelter and feeding opportunities for birds. The hill to the east of the site is the most valuable biologically, and has the greatest species diversity.

Management Recommendations

- 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 perimeter of the site, and if left to grow longer, should be mown once a year in late August, and the arisings removed. Margins of long grass can provide a valuable habitat for wildlife and also be aesthetically pleasing with flowering plants and grasses. Many 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.
- Some aculeate hymenoptera species do have rarities associated with sandy soils on the south coast, and so it would be worth keeping areas of bare ground as habitat for these burrowing insects.
- There is considerable potential for improving the botanical value, and therefore aesthetic appeal, of the grassland away from the edges. This could be done in one of two ways:
 - The first would involve stripping the existing turf in parts of the site (in order to remove both the existing species and the topsoil layer), creating a fine seedbed and broadcasting a locally sourced wildflower seed mix (Appendix I) onto the bare ground.
 - The second would involve broadcasting of the same locally sourced wildflower seed mix into the existing sward. Harrowing of the existing turf would be required in order to create gaps for seedling germination. The sward would need to be mown quite short prior to harrowing and broadcasting and kept short for the first 10 days after broadcasting in order to reduce competition to the germinating seedlings from the established grasses. No fertilisation would be required.

The former method is the most reliable; the latter method is a less disruptive way to increase the wild flower value of the sward, but carries the risk that a greater

proportion of the seed will fail to establish both due to competition from the existing grasses and to the higher fertility of the soil.

Seed rates would not need to be high – 2 to 6 grams per square metre is a typical seed rate for this form of diversification.

If a mix with low growing species is used, the sward can be maintained as a short lawn from October to April and mown infrequently (i.e. every six to eight weeks) during the growing season in order to maintain an average height of roughly 10 cm.

- Removal of grass cuttings instead of leaving them in situ. This will help to gradually reduce the fertility of the soil and coarse grass species will cease to outcompete the finer, less vigorous grasses and wildflowers.
- The area on the hill to the east of the site should continue to be managed for wildlife. The path that is currently cut in this area should be maintained, as it helps to prevent the weedier species, such as dock and thistle, near the site entrance from encroaching. Ideally, these weedier species should be contained in this area, and not allowed to spread further. One cut in late summer or early autumn should help to maintain the interest on the hill, and although it is recommended that the arisings be removed, the angle of the slope means that if this is not possible, it is likely that they will be disbursed by the wind, and so will not present a significant problem if left in situ.

Further Suggestions to Enhance the Wildlife Value of the Site

- If there is space to create a pond either in the area which is to be developed for new pitches, or in the area to be retained for wildlife, then this would add considerably to the wildlife value of the site. Creation of a relatively shallow pond (certainly no smaller than 4 m² and no shallower than 2.5 feet at its deepest point), would encourage amphibians (newts, frogs and toads) and dragonflies. Any pond that is constructed should:
 - Be made of natural materials as much as possible.
 - Be sheltered from the wind, but not the sun.
 - Not be overshadowed by trees, or it will fill with leaves.
 - Have tall (not closely mown) grass and some bushes surrounding it in order to provide cover for amphibians and perching sites for dragonflies.
 - Have sloping and irregular sides (rather than steep and flat ones).
 - Have a mixture of bankside, emergent and submerged aquatic plants, although the actual choice of species to plant is less important (see Appendix I).
 - Not be stocked with fish (as they are major predators)
- Part of it (no more than 25%) should be cleared of emergent and submerged vegetation in autumn/winter each year in order to retain areas of open water while at the same time maintaining some aquatic vegetation and structural variation.

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- The grassland area outside of the section fenced for new pitch development is less interesting than that on the hill area, and in places is becoming dominated by nettles and docks. This area is to be managed for wildlife, and as such would benefit from a mowing regime designed to improve the interest in this area. By cutting the sward twice a year for the first two years in May and again in September, then once a year in September after this period. The arisings should be removed. This will allow less competitive species to establish in the sward, which will increase its diversity and interest.
 - Bat and bird boxes could be put up across the site on trees and buildings to encourage these species.
 - Consider creating log piles, piles of rubble and rocks and other artificial hibernacula to be used by reptiles in the area to the west, which is going to be kept free from caravan pitches. Planting a species rich hedge along this boundary instead of using fencing will increase the diversity of habitats and will provide feeding and nesting opportunities for birds, and shelter for small mammals.

Further Survey or Information Requirements

No further surveys are required for this site, although it would be worth investigating which aculeate hymenoptera are utilising the site as some of these species are rarities associated with sandy soils on the south coast.

Appendix I. Example list of pond plants

Because many ponds contain non-native, potentially invasive plants or non-native animals, introducing plants from another pond should be done so using extreme care making sure that they do not contain such species. It is unwise, and in the case of some species illegal, to introduce or assist the spread of non-native invasive organisms. A list of **suitable** plants include:

Submerged:

spiked water-milfoil *Myriophyllum spicatum*
 whorled water-milfoil *M verticillatum*
 curled pondweed *Potamogeton crispus*
 hornwort *Ceratophyllum demersum*
 water starwort *Callitriche stagnalis*
 common spike-rush *Eleocharis palustris*
 willow moss *Fontinalis antipyretica*
 marestalk *Hippurus vulgaris*
 water violet *Hottonia palustris*
 water crowfoot *Ranunculus aquatilis*

Floating:

white water lily *Nymphaea alba*
 ivy-leaved duckweed *Lemna trisulca*
 frogbit *Hydrocharis morsus ranae*
 water soldier *Stratiotes aloides*

Emergent:

yellow iris *Iris pseudacorus*

meadowsweet *Filipendula ulmaria*

purple loosestrife *Lythrum salicaria*

rushes *Juncus spp*

sedges *Carex spp*

greater spearwort *Ranunculus lingua*

water mint *Mentha aquatica*

water forget-me-not *Myosotis scorpioides*