



**CARAVAN CLUB ECOLOGICAL
SITE APPRAISAL**



The Covert Caravan Club Site
High Ash
Hillborough
Thetford
IP26 5BZ



General Information

Site Name and County: The Covert, High Ash, Hillborough, Norfolk

Grid Reference: TL809968

Area: 5 hectares

Date: 28/07/2005

Recorder: Mike Lush, Just Ecology

Weather Conditions: Damp and overcast, with occasional light rain

Site Description

Most of the pitches are situated on an old concrete road, with some pitches on mown grass. Buildings on site are limited, without toilet blocks or any major buildings. A small number of flowerbeds were present around the site within the mown verges and in gaps in the concrete. The whole site is surrounded by and set within a large coniferous plantation with some broad-leaved tree species interspersed

Context

The Covert is situated within a large area of coniferous plantation between the villages of Ickburgh and Hilborough in Norfolk. The geology is typical of Breckland, being complicated mixes of sand, chalk, clay and flints.

The surrounding plantation is within the Breckland Forest SSSI, though the site itself is excluded from the designation. The Breckland Forest is internationally important for breeding woodlark (*Lullula arborea*) and nightjar (*Caprimulgus europaeus*). Twenty-one rare species of plant occur within the Forest, including five legally protected species, mainly on the paths and open areas. In addition over 150 rare invertebrates have been recorded from the Forest¹.

The Covert is situated on an area that was the base for the 7th Armoured Division, the 'Desert Rats', during the Second World War. This has resulted in a wealth of history, with elements of the base still visible, including concrete roads and the bases of buildings. It is one of the concrete roads that the campsite is currently situated on. The area was afforested after the 7th Armoured Division was disbanded.



Habitat Information

Broad Habitats Present: Coniferous woodland, acid grassland, improved grassland

BAP Priority Habitats Present: Lowland Dry Acid Grassland

Subsidiary Habitats Present: Dead wood

Plant Communities Present:

Grassland Communities:

The majority of the grassland within The Covert was improved or semi-improved acid grassland. The improved grassland was typical of high-use amenity areas, with a predominance of perennial rye-grass (*Lolium perenne*), as well as species such as annual meadow-grass (*Poa annua*) and daisy (*Bellis perennis*).

Toward the northern end of the site was a small patch of less improved acid grassland that graded into the more improved areas. This included species such as ribwort plantain (*Plantago lanceolata*), Yorkshire fog (*Holcus lanatus*), yarrow (*Achillea millefolium*), common bird's-foot-trefoil (*Lotus corniculatus*) and very scattered lady's bedstraw (*Galium verum*). These species continued around the grassland edges outside of this area.

The grassland was mown right up to the woodland edge, with only a very small gradation from grassland to woodland. However, some of the plants found scattered

along this very narrow woodland-grassland interface are worth mentioning. These included false-oat grass (*Arrhenatherum elatius*), climbing corydalis (*Ceratocarpus claviculata*), black horehound (*Ballota nigra*), mugwort (*Artemisia vulgaris*), white bryony (*Bryonia dioica*) and greater burdock (*Arctium major*). This shows a mix of species suited to woodland and acid scrub communities, and hints at the woodland-grassland interface community that could develop if mowing was relaxed immediately around the woodlands. Also present in this area was oat (*Avena sativa*), probably resulting from the numerous bird feeders that were present (but empty) at the time of the visit.

Immediately outside of the site more interesting communities occurred, with mown semi-improved grassland and unimproved neutral grassland occurring. The semi-improved acid grassland was along the road to the south and was mown by the site warden. It had a good species diversity, including: lady's bedstraw, ribwort plantain, Yorkshire fog, yarrow, white clover (*Trifolium repens*), perennial rye-grass, field woodrush (*Luzula campestre*), sheep's fescue (*Festuca ovina*), autumn hawkbit (*Leontodon autumnalis*), common ragwort (*Senecio jacobaea*), lesser trefoil (*Trifolium dubium*), pill sedge (*Carex pilulifera*), dove's-foot crane's-bill (*Geranium molle*), daisy, germander speedwell (*Veronica chamaedrys*), common bird's-foot-trefoil and abundant moss.

The more neutral grassland occurred immediately to the southwest of the site and was on very sandy soil, indicating that it may have been a degraded sand-dune community. The herb cover here was very high with very little grass, including hare's-foot clover (*Trifolium arvense*), common ragwort, yarrow, viper's bugloss (*Echium vulgare*), ribwort plantain, Yorkshire fog, lesser trefoil, buck's-horn plantain (*Plantago coronopus*), vervain (*Verbena officinalis*), red clover (*Trifolium pratense*), white clover, wild parsnip (*Pastinaca sativa*) and frequent dog-lichens (*Peltigera* sp.).

Woodland:

The woodland within The Covert consisted mainly of pine (*Pinus* sp.) plantation, with some larch (*Larix* sp.) in the southeast. Some of the plantation has a larger quantity of broad-leaved species and can be classified as mixed plantation, though the ground flora remains broadly the same. A small amount of deadwood occurred within the woodland.

Within the pine plantation were silver birch (*Betula pendula*), pedunculate oak (*Quercus robur*), elder (*Sambucus nigra*), hawthorn (*Crataegus monogyna*), privet (*Ligustrum vulgare*), hazel (*Corylus avellana*), field maple (*Acer campestre*) and broom (*Cytisus scoparius*). The composition of the mixed areas was similar, but with a greater abundance of these latter broad-leaved species. These all appear to have developed naturally, rather than being planted.

The area of larch was fairly similar, with sweet chestnut (*Castanea sativa*), pedunculate oak, silver birch and sycamore (*Acer pseudoplatanus*).

The ground flora throughout consisted of three types. The densest areas of woodland were dominated by common nettle (*Urtica dioica*), with cleavers (*Galium aparine*), false-oat grass, herb robert (*Geranium robertianum*), ivy (*Hedera helix*), bramble (*Rubus fruticosus* agg.), wood dock (*Rumex sanguineus*), ground ivy (*Glechoma*

hederacea), wood avens (*Geum urbanum*) and cow parsley (*Anthriscus sylvestris*). Where the trees were thinner and the canopy was more open to the north and west of the site the ground flora either became dominated by bracken (*Pteridium aquilinum*) or a dense bramble understorey developed.

In addition to the coniferous and mixed plantations was a small area of mature pedunculate oaks with a common nettle ground flora.

Other:

Flowerbeds occurred rarely throughout the site, intended by the warden to add some colour to, but not detract from, the feel of the site. Hoverflies were observed feeding from some of these plants, but the weather conditions were not suitable for ascertaining the overall value of these flowerbeds as a nectar source.

A gravel pile, previously left by road contractors, occurred to the southwest of the site. Here a sparse ruderal flora was developing, including Canadian fleabane (*Conyza canadensis*) and viper's bugloss.



Habitat Evaluation

The woodland at The Covert provides useful cover for mammals and birds, particularly woodlark and the nightjar that have been recorded from the surrounding SSSI¹. Otherwise the woodland has a low value in its current state, though this could be improved by a gradual removal of the conifers to allow broadleaved species to establish.

The grasslands within the site itself also have a low biodiversity value, though the less improved areas have a higher value. Gradually decreasing the intensity of the mowing regime and eliminating any fertiliser applications that may currently occur could probably increase the diversity.

The grasslands just outside The Covert are much higher value, and give a good indication of how the grassland within the site could potentially develop given the correct management regime. Diversity is much higher here, with the Lowland Dry Acid Grassland BAP Priority Habitat occurring in a thin strip along the roadside. It is these track and open areas within the Breckland Forest that provide the most important areas for rare plants and invertebrates.

The flowerbeds may provide important nectar sources for bees, wasps and flies.



Species Information

BAP Species Seen: None, though nightjar, song thrush (*Turdus philomelos*), bullfinch (*Pyrrhula pyrrhula*) and brown hare (*Lepus capensis*) have all been previously recorded around the site by campersⁱⁱ.

BAP Species Potential: In addition to the above, woodlark have been found in high numbers in the surrounding plantation and may also be present near to the siteⁱ.

Various bats have also been recorded in the Forest, including pipistrelle (*Pipistrellus pipistrellus*) and barbastelle (*Barbastella barbastellus*), which probably forage in the siteⁱⁱⁱ. In addition various other BAP species occur within the surrounding SSSI that may utilise the site.

Other Noteworthy Species: Barn owl (*Tyto alba*) and muntjac deer (*Muntiacus reevesi*) have also been previously recorded around the site by campersⁱⁱ.

Flora:

The woodland flora is fairly poor with no notable species recorded. Predominantly the ground flora consisted of common nettle, bramble or bracken communities, though it is possible that there may be more of interest earlier in the year.

The unimproved and semi-improved grasslands contained interesting flora indicative of sandy acid grassland or sand dune conditions, including common bird's-foot-trefoil, lady's bedstraw, pill sedge, hare's-foot clover, viper's bugloss and buck's-horn plantain. It is possible that some of the rare plants found in the surrounding SSSI may be found within or near to the site.

Avifauna:

The most important feature of this site is the presence of nightjar in the surrounding SSSI, as this population has international importanceⁱ. In addition, previous records of song thrush, bullfinch and barn owl add considerable importance to the bird fauna overallⁱⁱ. It is also likely that woodlark are found in the surrounding woodland.

A range of common woodland birds have also been recorded previously within the site, including chaffinch (*Fringilla coelebs*), treecreeper (*Certhia familiaris*), robin (*Erithacus rubecula*), woodpigeon (*Columba palumbus*), jay (*Garrulus glandarius*), willow warbler (*Phylloscopus trochilus*), chiffchaff (*Phylloscopus collybita*), blackcap (*Sylvia atricapilla*), wren (*Troglodytes troglodytes*), willow tit (*Parus montanus*), marsh tit (*Parus palustris*), great tit (*Parus major*), long-tailed tit (*Aegithalos caudatus*), green woodpecker (*Picus viridis*), sparrowhawk (*Accipiter nisus*), goldcrest (*Regulus regulus*), tawny owl (*Strix aluco*), little owl (*Athene noctua*) and great spotted woodpecker (*Dendrocopos major*)ⁱⁱ.

Invertebrates:

Because of the poor weather conditions few invertebrates were recorded during the survey, though seventeen common butterflies have been recorded on the site. These include common blue (*Polyommatus icarus*), small skipper (*Thymelicus sylvestris*), Essex skipper (*Thymelicus sylvestris*), small copper (*Lycaena phlaeas*) and brimstone (*Gonepteryx rhamni*)ⁱⁱ.

Hoverflies were the only invertebrate group abundantly visible at the time of the visit, and many of these had been infected by the parasitic fungus *Entomophthora muscae*. In addition a single small white willow (*Salix alba*) on the road outside the site had a double infestation of the gall sawfly *Pontania proxima* and other, free-living sawfly caterpillars.

Four species of ants were recorded from the site: *Lasius niger*, *Formica fusca*, *Myrmica sabuleti* and *Myrmica schencki*. Of these the most interesting is *M. schencki*, which is Nationally Notable B and is therefore restricted to 100 10km squares in the UK and appears not to have been recorded from Norfolk or Breckland before. This species, together with *M. sabuleti*, is highly thermophilic (heat loving) and indicates that had the weather been warmer and drier the invertebrate fauna recorded may have been much richer.

Herptofauna:

No herptofauna was recorded on the visit, but it is likely to be suitable for adder (*Vipera berus*), viviparous lizard (*Lacerta vivipara*) and slow-worm (*Anguis fragilis*), which have been recorded in the surrounding area^{iv}.

Mammals:

Mammals recorded during the visit were grey squirrel (*Sciurus carolinensis*), European mole (*Talpa europaea*), muntjac deer and rabbit (*Oryctolagus cuniculus*). However, a number of mammal species had been recorded previously, including roe deer (*Capreolus capreolus*), hedgehog (*Erinaceus europaeus*), red fox (*Vulpes vulpes*), stoat (*Mustela erminea*), weasel (*Mustela nivalis*), brown hare, voles and miceⁱⁱ.

The brown hare are worthy of further mention, as they have declined markedly since the 1960's and are a UK BAP species. In addition, species such as the grey squirrel and muntjac deer may have a detrimental effect on biodiversity, as the grey squirrels may compete with the nearby red squirrel (*Sciurus vulgaris*) population and the muntjac deer are an introduced and often quite destructive species.

Bats are also likely to utilise the site as part of their foraging range and may roost in the woodland. A number of species have been recorded in the surrounding SSSI, including pipistrelle and barbastelle, both of which are BAP speciesⁱ.

Fungi:

Whilst no fungi were recorded during the visit (except for *Entomophthora muscae*, see below) it is likely that woodland fungal diversity within and around the site will be very high, due to the sandy free-draining nature of the soil.



Species Evaluation

The Covert provides a great deal of potential for a number of plant and animal groups. Due to the type of soil it is possible that some of the twenty-one rare plants found within the surrounding SSSI could potentially grow within or very near to the site. With sensitive management the grassland within the campsite could become more

suitable for many of these interesting plant species and could lead to an increase in the abundance of the acid-loving plants already present.

The site also has great potential for fungi, given the free-draining nature of the soil and the large area of surrounding woodland. It is very likely that further study would lead to the discovery of a rich fungal flora.

The invertebrate faunal diversity at The Covert is also likely to be high. As well as the Nationally Notable species found during this visit it is likely that some of the 166 rare invertebrate species recorded within the Breckland Forest SSSI could be found within the siteⁱ. Had the visit taken place in better weather conditions it is likely that many more invertebrate species would have been recorded.

It was surprising that there was no evidence of invertebrate nest-holes in the south-facing banks edging some of the northern pitches. In addition, the lack of unimproved grassland and deadwood within the site will limit the invertebrate diversity of the site itself. It is therefore likely that many of the invertebrate species are likely to be from populations in the surrounding SSSI and not necessarily within the campsite itself. However, the campsite may be useful for particular parts of the lifecycle of some invertebrates, as illustrated by the number of hoverflies nectaring on the flowers around the site.

The site and surrounding area has a very rich bird fauna of international importance, with very high numbers of woodlark and nightjarⁱ, the latter of which has been recorded near the site. In addition three other important bird species have been recorded around the siteⁱⁱ. It is likely that the bird fauna is the most significant feature for biodiversity at The Covert.

No reptiles were recorded during the visit, but it is likely that the parts of the site are suitable for some species, particularly in warm areas surrounded by scrub or tall vegetation.

The mammal community that utilises the site is quite varied, with a range of herbivorous and carnivorous species recorded. In addition, the campsite and surrounding area supports a population of the brown hareⁱⁱ, a BAP species that underwent substantial declines in the early 1960s, but appears to have had a stable population over the last 10 years^v.

Management Recommendations

- Manage the grassland without fertiliser or pesticide inputs and either gradually reduce the regularity of the mowing regime or increase the cut-height to allow some plants to flower. The arisings (cuttings) should be removed to prevent the build up of nutrients. This should allow an increase in plant diversity that will benefit many other species.
- Reduce mowing intensity immediately around the woodland, to a width of about 1 metre. If mown once or twice a year it should allow a woodland-grassland interface to develop that will benefit many species.
- Allow some build up of deadwood, especially of broadleaved species, within the woodland for deadwood invertebrates.

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- Allow some areas of dense scrub to develop within the woodland to provide cover for birds and mammals.
 - It is also recommended that the list of operations likely to damage the special interest in the surrounding SSSI are taken into consideration when planning any management of the site, as although the campsite is not part of the SSSI it is still a part of the same ecosystem and may therefore be damaged by certain operations. Those operations likely to damage any special interest that may apply to the campsite can be found in Appendix 1.

Further Suggestions to Enhance the Wildlife Value of the Site

- Plant nectar-rich flowers in the flowerbeds to provide a useful source of food for flying invertebrates.
- Provide bird-feeding stations in addition to the existing bird feeders to provide food for bird species. 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 would attract the abundant birdlife in the surrounding area and provide a useful attraction for visitors to watch.
- Provide bird and bat boxes to encourage woodland birds and bats to nest and roost on the site. The bird nest boxes can be 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.

Further Survey or Information Requirements

- A fungal survey of the site and the surrounding area would probably produce a great diversity of interesting species and is worth carrying out. This should be carried out in September and October, ideally over a number of years to account for years that are not as good for fungal fruiting. If arranged on a regular basis it may provide a useful activity for visitors.
- Any invertebrate survey would be most appropriate if it covered the surrounding area containing the campsite, rather than the campsite itself. As a result a general invertebrate survey for the campsite alone is not recommended. However, it may be useful to study selected invertebrate groups, for example a moth trapping survey may add a great deal to the knowledge of the site and would be easier to carry out on site rather than in the surrounding woodland, as a generator would not be necessary¹.

¹ However, this would have to be balanced with the requirements of the campers, as the bright light may be an issue for some campers but regular moth trapping may be an interesting activity that could attract some visitors back.

Appendix 1 Operations likely to damage the special interest (edited)

Site name: Breckland Forest, Suffolk

OLD2000443

Ref. No. Type of Operation

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| 1 | Cultivation, including ploughing, rotovating, harrowing and re-seeding. |
| 3 | The introduction of stock feeding and alterations to stock feeding practice. |
| 5 | Application of manure, slurry, silage liquor, fertilisers and lime. |
| 6 | Application of pesticides, including herbicides (weedkillers) whether terrestrial or aquatic, and veterinary products. |
| 7 | Dumping, spreading or discharge of any materials. |
| 8 | Burning and alterations to the pattern or frequency of burning. |
| 9 | Release into the site of any wild, feral, captive-bred or domestic animal*, plant, seed or micro-organism (including genetically modified organisms). |
| 10 | Killing, injuring, taking or removal of any wild animal*, (including dead animals or parts thereof), or their eggs and nests, including pest control and disturbing them in their places of shelter. |
| 11 | Destruction, displacement, removal or cutting of any plant or plant remains, including tree, shrub, herb, hedge, dead or decaying wood, moss, lichen, fungus, leaf-mould, turf and peat. |
| 12 | Tree and/or woodland management and alterations to tree and/or woodland management (including planting, felling, pruning and tree surgery, thinning, coppicing, changes in species composition, removal of fallen timber). |
| 13a | Drainage (including moor-gripping, the use of mole, tile, tunnel or other artificial drains). |
| 14 | Alterations to water levels and tables and water utilisation (including irrigation, storage and abstraction from existing water bodies and through boreholes). Also the modification of current drainage operations. |
| 15 | Infilling or digging of ditches, dykes, drains, marshes and ponds. |
| 20 | Extraction of minerals, including sand and gravel, topsoil, subsoil, chalk, and spoil. |
| 21 | Destruction, construction, removal, rerouting, or regrading of roads, tracks, walls, fences, hardstands, banks, ditches or other earthworks, including soil and soft rock exposures or the laying, maintenance or removal of pipelines and cables, above or below ground. |
| 22 | Storage of materials. |
| 23 | Erection of permanent or temporary structures or the undertaking of engineering works, including drilling. |
| 24a | Modification of natural or man-made features and clearance of boulders, large stones, loose rock or scree. |
| 28 | Game management and hunting practices and alterations to game management and hunting practice. |

* 'animal' includes any mammal, reptile, amphibian, bird, fish or invertebrate (including honey bees).

ⁱ Breckland Forest SSSI Citation, available from English Nature or from http://www.english-nature.gov.uk/special/sssi/sitedocuments.cfm?type=citation&sssi_id=2000443.

ⁱⁱ List of animals that had been recorded from the site by campers provided by the wardens.

ⁱⁱⁱ The NBN Gateway, (www.searchnbn.net): English Nature. 'Batsites inventory for Britain' dataset. Reptile records from the Biological Records Centre 'Reptiles and Amphibians Dataset'.

^{iv} The NBN Gateway, (www.searchnbn.net): Biological Records Centre. 'Reptiles and Amphibians Dataset'.

^v Joint Nature Conservation Committee. (2004). *Species Action Plan for the Brown Hare* (*Lepus europaeus*). <http://www.ukbap.org.uk/UKPlans.aspx?ID=410>.