

COUNTY: LEICESTERSHIRE

SITE NAME: BRADGATE PARK &
CROPSTON RESERVOIR

DISTRICT: CHARWOOD

Status: Site of Special Scientific Interest (SSSI) notified under Section 28 of the Wildlife and Countryside Act, 1981.

Local Planning Authority: CHARNWOOD BOROUGH COUNCIL

National Grid Reference: SK 537108 Area: 392.6 (ha.) 970.1 (ac.)

Ordnance Survey Sheet 1:50,000: 129 & 140 1:10,000: SK 50 NW, SK 51 SW,
SK 51 SE

Date Notified (Under 1949 Act): 1956 Date of Last Revision: 1981

Date Notified (Under 1981 Act): 1987 Date of Last Revision: –

Other Information:

This site was formerly part of Bradgate Park, Swithland Wood, The Brand and Cropston Reservoir SSSI. Part of the site is managed as a Country Park.

Description and Reasons for Notification:

Bradgate Park is one of the finest remaining examples of ancient parkland in Leicestershire. It contains some of the last remaining fragments of wet heathland in the County. Cropston Reservoir exhibits unusual marginal plant communities. Both areas support diverse breeding bird communities. Several nationally important geological features are located in the Park.

Biology

Bradgate Park has traditionally been managed as a deer park. It is enclosed by high stone walls and has never been agriculturally improved.

Rocky outcrops in the north of the Park support rich saxicolous lichen communities. Associated dry acidic grassland contains patches of bilberry *Vaccinium myrtillus*, which is scarce in the East Midlands.

Marshy ground to the north-east is dominated by purple moor-grass *Molinia caerulea*. A number of locally rare plants occur in this area, namely moonwort *Botrychium lunaria*, cross-leaved heath *Erica tetralix*, lemon-scented fern *Oreopteris limbosperma*, creeping willow *Salix repens* and lesser skullcap *Scutellaria minor*. Small pools contain bog moss *Sphagnum* spp., and support breeding broad-bodied chaser dragonfly *Libellula depressa* and the water beetles *Hydroporus gyllenhali* and *H. longulus*, which are rare in Leicestershire.

Much of the southern part of the Park is dominated by bracken *Pteridium aquilinum*. Groves of old oak trees *Quercus* spp occur throughout this area: most are over 300 years old and many are hollow or decaying. Younger oaks have been planted in a series of walled enclosures. The ancient oaks support a range of characteristic invertebrate species including the nationally rare spider *Tetrilus macrophthalmus*.

The Park supports a good variety of breeding birds including woodcock, sparrowhawk, barn owl, whinchat, redstart, tree pipit and 3 species of woodpecker.

The marginal plant communities of Cropston Reservoir are unusual as they include some species characteristic of northern upland lakes, such as shore-weed *Littorella uniflora* and others more typical of lowland open waters, such as amphibious bistort *Polygonum amphibium*. Several nationally scarce species occur in the draw-down zone, namely orange foxtail grass *Alopecurus aequalis*, needle spike-rush *Eleocharis acicularis*, small waterpepper *Polygonum minus* and golden dock *Rumex maritimus*.

A flooded brickpit nearby supports the only known colony in Leicestershire of the scarce aquatic liverwort *Ricciocarpus natans*. The locally rare minute water cricket *Microvelia reticulata* has also been recorded at this pond.

A variety of birds breed around the Reservoir margins including great-crested grebe, teal, mute swan and occasionally little-ringed plover and gadwall.

Geology

The excellent and much visited exposures of Charnian rocks in Bradgate Park include the type sections for no less than 4 members of the formal, recently revised stratigraphic sequence. These are the Tuffaceous Pelites Member of the Beacon Hill Formation; the Sliding Stone Slump Breccia Member and Hallgate Member, together comprising the Bradgate Formation; and the Stable Pit Quartzose Arenite Member of the Brand Hills Formation. The last named has been proved to be of great value as a stratigraphic marker horizon in Charnwood Forest. The site also covers exposures of the Hanging Rock Conglomerate Member of the Brand Hills Formation. The Hallgate Member has yielded some of the extremely rare fossil coelenterate impressions for which the Charnian is renowned and the Sliding Stone Slump Breccia Member provides some of the most spectacular exposures of volcanic slump breccias in England. Of additional interest are good exposures of granophyric Southern Diorite, recently the subject of important radiometric age investigations.

Rocks of the probable late Precambrian Old John Member of the Maplewell Group (Charnian Supergroup) are exposed in the north of the Park. Bedding-planes show a number of discoid impression fossils and possible trace fossils (trails of "worms"). The nearby "Memorial Crags" show the Hallgate Member of the Maplewell Group. Bedding-planes exhibit nearly 50 discoid impressions, about 6 frondose organisms and *Charnia masoni*. The fauna of these outcrops (unique to this area of Britain) shows similarities to fossils found in Newfoundland, Russia and South Australia, making it a site of great importance to the study of Precambrian palaeontology.

Bradgate Park is important in studies of drainage development in the Midlands. It is a particularly good example of a transverse gorge characteristic of the discordant drainage noted in the Charnwood Forest area. The Ulverscroft stream flows generally southward in a valley developed almost exclusively in Pleistocene deposits, before turning abruptly eastwards through a 300 m long gorge cut in Charnian igneous rock. Early views on the origin of the Gorge and related features stressed in the process of superimposition from a cover of Triassic rocks. More recent interpretations, however, have favoured the importance of glacial meltwaters and possible superimposition from glacial deposits.