COUNTY: OXFORDSHIRE SITE NAME: HOOK NORTON CUTTING AND BANKS

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

1981

Local Planning Authorities: Cherwell District Council

National Grid Reference: SP360320

Ordnance Survey Sheet 1:50,000: 151 1:10,000: SP33 SE

Date Notified (Under 1949 Act): 1971 Date of Last Revision: 1977

Date Notified (Under 1981 Act): 1986 Date of Last Revision:

Area: 6.8 ha 16.7 ac

Other information: Site boundary revised in 1972 and 1985.

Description and Reasons for Notification

(a) <u>Geological</u>

Jurassic rock sections here form the type-section of the widely recognised late Bajocian/early Bathonian 'Hook Norton Member' of the Chipping Norton Formation. The cuttings are amongst the most important sections of the formation in existence, particularly as they lie in the type-area of this rock unit. They are of considerable regional stratigraphic importance, potentially exhibiting a section from the top of the Upper Lias (Toarcian) up to at least the Sharp's Hill Formation (Middle Bathonian). The section is a vital one for understanding some of the fundamental changes which occur within the Middle Jurassic successions as they are traced from the Gloucestershire/Oxfordshire area into the east Midlands.

(b) Biological

This site contains a variety of sheltered, semi-natural and man-made habitats associated with the limestone outcrops all within a comparatively small area. It is of particular interest for its calcareous grassland flora, and bee and butterfly fauna, which include rare and uncommon species.

Unimproved species-rich calcareous grassland covers most of the slopes of the southernmost section. The community is dominated by upright brome *Bromus erectus*, false oat grass *Arrhenatherum elatius*, common quaking grass *Briza media* and glaucous sedge *Carex flacca*. Common broadleaved species include field scabious *Knautia arvensis*, burnet saxifrage *Pimpinella saxifraga*, bird's-foot trefoil *Lotus corniculatus*, cowslip *Primula veris*, ox-eye daisy *Leucanthemum vulgare* and centaury *Centaurium erythraea*. Kidney vetch *Anthyllis vulneraria* and wild carrot *Daucus carota* are notably abundant.

The railway track (from which the ballast was never removed) possesses a distinctive flora which includes woolly thistle *Cirsium eriophorum*, common spotted orchid *Dactylorhiza fuchsii* and basil thyme *Acinos arvensis* in the southern section and rosebay willowherb *Epilobium angustifolium*, common figwort *Scrophularia nodosa*, nettle *Urtica dioica*, meadow cranesbill *Geranium pratense*, hedgerow cranesbill *G. pyrenaicum* and brooklime *Veronica beccabunga* in the damper northern section.

The retaining walls along the railway track support lichens which include *Caloplaca aurantia, Lecanora calcarea* and *Xanthoria parietina*. Rue-leaved saxifrage *Saxifraga tridactylites* and biting stonecrop *Sedum acre* also occur. Berms extending back from the walls in the southern section support the uncommon mosses *Polytrichum piliferum, Racomitrium heterostichium* and *R. lanuginosum*.

Since the closure of the railway in 1965, scrub, principally of hawthorn, blackthorn and brambles has spread into the cutting from boundary hedges. The reversion to woodland is apparent on the steep slopes of the north section of the cutting which are covered by mature secondary woodland dominated by ash and pedunculate oak with occasional field maple and sycamore. The shrub layer is mainly of crack willow, sallow, hawthorn and brambles. Areas of scree within the wood support male fern *Dryopteris filix-mas*, hart's-tongue *Phyllitis scolopendrium*, bracken *Pteridium aquilinum* and ploughman's spikenard *Inula conyza*. On the lower slopes some grassland species survive, including adder's tongue *Ophioglossum vulgatum* and wild basil *Clinopodium vulgare*.

Hook Norton Cutting is notable for its bee fauna. One species, *Andrena bucephala*, is recorded from only three other sites in Britain. The site is unusual in having eight species of the genus *Lasioglossum* (family Halictidae) occurring in close proximity. Butterflies recorded include marbled white, meadow brown, dark green fritillary and white-letter hairstreak.

Forty-seven species of bird have been recorded of which greater spotted woodpecker, green woodpecker, cuckoo, garden warbler, blackcap, whitethroat, lesser whitethroat and goldcrest are thought to breed.

Common lizards occur in open areas and badgers are active with setts present in the north section of the cutting.

Hook Norton Bank is an area of steep, south facing, close-grazed limestone grassland by the River Swere. The herb-rich sward includes abundant autumn felwort *Gentianella amarella*, common eyebright *Euphrasia nemorosa*, harebell *Campanula rotundifolia*, clustered bellflower *C. glomerata*, horseshoe vetch *Hippocrepis comosa*, common rockrose *Helianthemum nummularium*, basil thyme *Acinos arvensis*, devil's-bit scabious *Succisa pratensis*, carline thistle *Carlina vulgaris*, dropwort *Filipendula vulgaris* and mouse-ear hawkweed *Hieracium pilosella*. Bee orchids *Ophrys apifera* occur on the eastern side of the bank.

At the base of the slope the grass is tall and dominated by water mint *Mentha aquatica* with hard rush *Juncus inflexus*, hairy sedge *Carex hirta*, hairy bird's-foot trefoil *Lotus subbiflorus* and marsh marigold *Caltha palustris*.

The hedge at the western end of the field includes buckthorn, English elm, blackthorn and elder.

Invertebrates recorded from the limestone areas include the butterflies small blue, large skipper and small skipper, and the molluscs *Monacha cantiana* and *Helicella itala*, the latter being typically associated with dry calcareous grassland with a long stable history.