

COUNTY : LEICESTERSHIRE

SITE NAME: KETTON QUARRIES

DISTRICT: RUTLAND

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

Local Planning Authority: RUTLAND DISTRICT COUNCIL

National Grid Reference: SK 973056                      Area: 142.8 (ha.) 352.9 (ac.)

Ordnance Survey Sheet 1:50,000: 141                      1:10,000: SK 90 NE

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

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

Other Information:

Reasons for Notification:

Ketton Quarries contain nationally important exposures of Jurassic Limestone. The older workings contain some of the largest remaining examples of semi-natural limestone grassland and scrub in Leicestershire.

Biological

A complex mosaic of grassland, scrub and woodland vegetation has developed in disused pits and on spoil heaps.

The grassland areas are largely dominated by tor-grass *Brachypodium pinnatum* and red fescue *Festuca rubra*, with a range of typical lime-loving plants including quaking-grass *Briza media*, yellow-wort *Blackstonia perfoliata*, autumn gentian *Gentianella amarella*, glaucous sedge *Carex flacca*, bee orchid *Ophrys apifera*, common restharrow *Ononis repens*, dwarf thistle *Cirsium acaule*, common rock-rose *Helianthemum nummularium* and viper's-bugloss *Echium vulgare* and locally rare species such as woolly thistle *Cirsium eriophorum*.

The dominant scrub species is hawthorn *Crataegus monogyna*; associated shrubs include privet *Ligustrum vulgare*, common whitebeam *Sorbus aria*, buckthorn *Rhamnus catharticus* and roses *Rosa* spp. Yellow oatgrass *Trisetum flavescens*, marjoram *Origanum vulgare*, ploughman's spikenard *Inula conyza*, common twayblade *Listera ovata*, common spotted-orchid *Dactylorhiza fuchsii* and deadly nightshade *Atropa bella-donna* occur where the scrub canopy is fairly open.

Stands of secondary ash *Fraxinus excelsior* woodland have developed on the oldest spoil heaps. The woodland flora beneath is poorly developed but a few characteristic species such as ivy *Hedera helix*, hairy brome *Bromus ramosus* and sweet violet *Viola odorata* are found in these areas.

An area of beech *Fagus sylvatica* plantation supports yellow bird's-nest *Monotropa hypopitys* which is rare in Leicestershire.

Geological

Ketton Quarries provide one of the largest and most extensive continuous exposures in the Bathonian 'Estuarine Series' and the underlying Bajocian Lincolnshire Formation. It is thus of considerable importance for both stratigraphical and sedimentological research and also for teaching purposes.

The Lincolnshire Limestone is very well exposed in the quarries here, and provides an important section through the whole formation. The development of small-scale depositional cycles and gastropod-rich *Nerinea* Beds in the Lower Lincolnshire Limestone is particularly significant. Ketton Main Quarry has been designated the type-section of the Rutland Formation of the Bathonian, and the full Rutland Formation succession is excellently displayed here. This consists of the Stamford Member overlain by six shallowing-upwards sedimentary rhythms. The section forms a standard for the interpretation of Rutland Formation exposures throughout the East Midlands. The Grange Quarry shows a complete White Limestone section, fairly typical for the outcrop north of a line drawn between Kettering and Peterborough; across this line important changes occur, both within the White Limestone and in the Middle Jurassic succession generally. This section is critical for the comparison and interpretation of the northern White Limestone exposures between this line and the River Humber. This is a critical site of considerable importance for lithostratigraphic and facies analysis in the Bathonian rocks of Southern Britain.

Date Notified: 7 October 1986