

SITE NOTIFIED TO THE SECRETARY OF STATE ON 15 APRIL 1988

COUNTY: TYNE AND WEAR

SITE NAME: TUNSTALL HILLS AND
RYHOPE CUTTING

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

Local Planning Authority: SUNDERLAND METROPOLITAN BOROUGH
COUNCIL

National Grid Reference: NZ 391546, 393540 and 399537

Ordnance Survey Sheets 1:50,000: 88 1:10,000: NZ 35 SE

Area: 15.8 (ha.) 39.0 (ac.)

First Notified: 1968*

Date of Revision: 1988

Description:

Tunstall Hills is a complex site of considerable geological and botanical interest in an urban setting to the south of Sunderland. Its geological interest centres upon numerous rock exposures which occur on the Maiden Paps, in disused quarries and in cuttings above the reclaimed Ryhope railway line, whilst the species-rich grassland which has developed on shallow soils overlying the Magnesian Limestone, is botanically important. In addition to the calcareous grassland a range of other habitats are also represented here, including scrub and woodland.

Gentle slopes on the Maiden Paps support species-rich Magnesian Limestone grassland dominated by upright brome *Bromus erectus*, blue moor-grass *Sesleria albicans*, crested hair-grass *Koeleria macrantha*, red fescue *Festuca rubra*, glaucous sedge *Carex flacca* and herbs such as common rock-rose *Helianthemum nummularia*, salad burnet *Sanguisorba minor*, fairy flax *Linum catharticum*, wild thyme *Thymus praecox*, pignut *Conopodium majus*, small scabious *Scabiosa columbaria* and sea plantain *Plantago maritima*. Of particular note is a small population of perennial flax *Linum anglicum*, which occurs here towards the northern limit of its distribution range in Great Britain, and locally uncommon plants such as frog orchid *Coeloglossum viride*, autumn gentian *Gentianella amarella*, purple milk-vetch *Astragalus danicus* and thrift *Armeria maritima*. Steep south facing slopes above the reclaimed railway line support a more open, herb-rich grassland characterised by common quaking-grass *Briza media*, blue moor-grass, crested hair-grass and red fescue with yarrow *Achillea millefolium*, hairy violet *Viola hirta*, hoary ragwort *Senecio erucifolius*, and fragrant orchid *Gymnadenia conopsea*. Other uncommon plants include pale St. John's-wort *Hypericum montanum*, lesser meadow-rue *Thalictrum minus*, and black bryony *Tamus communis*.

Scrub, dominated by hawthorn *Crataegus monogyna*, is widespread and is invading the ungrazed grasslands, whilst south west facing slopes have been colonised by secondary ash *Fraxinus excelsior* woodland with a ground flora containing dog's mercury *Mercurialis perennis*, wood avens *Geum urbanum*, bluebell *Hyacinthoides non-scripta*, ivy *Hedera helix* and bramble *Rubus fruticosus*.

Tunstall Hills has been known for many years as one of the best areas for the study of Middle Magnesian Limestone reef fossils and facies of the Tunstall member of the Ford Formation. Numerous type specimens have been collected from the area and the outcrops display various reef facies not seen at other localities. Several of

these are not dolomitised or have only been partially dolomitised. Undolomitised outcrops, particularly those in the reef-base coquina, have yielded a diverse and superbly preserved shelly fauna, including colour-banded gastropods, which are unknown from equivalent carbonate rocks deposited during the first cycle of the Zechstein in northwest Europe. The reef-base coquina also contains a vertebrate fauna.

Other Information:

1. Part of this site is identified as of national importance in the Geological Conservation Review under the name Tunstall Hills.
2. Magnesian Limestone is itself restricted to a narrow belt between Nottingham and Durham. The associated semi-natural grasslands are concentrated in South East Tyneside and County Durham, although even here quarrying and agricultural intensification has reduced the original area, with the result that good examples of Magnesian Limestone grassland are somewhat scattered and tend to be small in area.
3. During the 1987 revision the boundary of the site has been amended to include land not previously notified*.

*Under Section 23 of the National Parks and Access to the Countryside Act, 1949.