COUNTY: CAMBRIDGESHIRE/SUFFOLK **SITE NAME:** NEWMARKET HEATH

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

Local Planning Authorities: East Cambridgeshire District Council

National Grid Reference: TL 615620
TL 662647

Ordnance Survey Sheet 1:50,000: 154 **1:10,000:** TL 56 SE, TL 66 SW
TL 66 SE, TL 66 NE

Date Notified (Under 1949 Act): **Date of Last Revision:**

Date Notified (Under 1981 Act): 1993 **Date of Last Revision:**

Area: 288.12 ha 711.9 ac

Other information: This is a new site on the Cambridgeshire/Suffolk Schedule. The Devil's Dyke SSSI lies adjacent to part of this site.

Description and Reasons for Notification

This site lies on the Middle Chalk near Newmarket. It is by far the largest expanse of unimproved chalk grassland remaining in Cambridgeshire. Grasslands of this type are now very scarce in Britain, largely as a result of reclamation for agriculture. Newmarket Heath is of particular importance for the presence of areas of chalk heath, a rare vegetation type in Britain as a whole. This is the sole Cambridgeshire example and is of great geographical importance in providing a link between the Brecklands heaths and the chalk heaths of the Chilterns. There is a high diversity of flowering plants, including a large population of a nationally rare species listed in the British Red Data Book[1] and at least five nationally uncommon species.

The site is of geomorphological interest by reason of the occurrence of close spaced polygonal patterning of periglacial origin. Such polygons, usually 5-8m in diameter, are most regular and distinct on the higher, more level land but, on areas of steeper land, the polygons extend into a fine stripe pattern. These patterns, widespread in Breckland where similar substrates occur, are attributed to frost heave in a periglacial climate causing upthrust of the underlying chalk rubble ultimately producing areas of shallow highly calcareous soils surrounded by a polygonal network of deeper, more acidic soils. The number of sites where such polygons are preserved beneath semi-natural swards is small; such an association is of particular interest at Newmarket Heath since the presence of polygons exerts a strong influence upon the distribution here of chalk-loving and acid-loving plants.

The chalk grassland is representative of the type found in eastern England. It is characterised by the dominance of upright brome *Bromus erectus* and sheep's-fescue *Festuca ovina,* with areas of meadow oat-grass *Avenula pratensis* and tor-grass *Brachypodium pinnatum*. Other grasses of interest include quaking-grass *Briza media* and crested hair-grass *Koeleria macrantha*. A very wide variety of characteristic chalkland herbs are present including salad burnet *Sanguisorba minor,* common rock-rose *Helianthemum nummularium,* dropwort *Filipendula vulgaris,* autumn gentian *Gentianella amarella,* wild thyme *Thymus praecox,* horseshoe vetch *Hippocrepis comosa,* purple milk-vetch *Astragalus danicus,* sainfoin *Onobrychis viciifolia,* kidney vetch *Anthyllis vulneraria* and lesser meadow-rue *Thalictrum minus.* Of particular interest is the number of nationally scarce species present, many of which are restricted to areas of calcareous grassland in eastern England. They include pasqueflower *Pulsatilla vulgaris,* spring cinquefoil *Potentilla tabernaemontani,* bastard-toadflax *Thesium humifusum,* field fleawort *Senecio integrifolius* and an uncommon eyebright *Euphrasia pseudokerneri.*

Areas of chalk heath occur where windborne glacial drift covers the chalk and gives rise to more acid soils. Here both chalk-loving and acid-loving plants grow together in an intimate mixture. Characteristic acid-loving plants include heath-grass *Danthonia decumbens,* heather *Calluna vulgaris,* tormentil *Potentilla erecta,* heath dog-violet *Viola canina* and saw-wort *Serratula tinctoria.* Of additional interest is the presence of a large population of the nationally rare spiked speedwell *Veronica spicata* ssp. *spicata,* which has its centre of distribution in nearby Breckland.

A number of rare and uncommon insects have been recorded in the past, and some entomological interest may still remain.

[1] Perring, F.H. & Farrell, L. 1983. *British Red Data Books: 1 Vascular Plants* (2nd Edition). Lincoln, Royal Society for Nature Conservation.