COUNTY: DERBYSHIRE SITE NAME: GANG MINE

DISTRICT: DERBYSHIRE DALES SITE REF:

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

Local Planning Authority: DERBYSHIRE COUNTY COUNCIL, Derbyshire Dales District Council

National Grid Reference: SK 287558 Area: 8.2 (ha.) 20.3 (ac.)

Ordnance Survey Sheet 1:50,000: 119 1:10,000: SK 25 NE

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

Date Notified (Under 1981 Act): 1988 Date of Last Revision: –

Other Information:
New site.

Description and Reasons for Notification:
Within the Carboniferous Limestone in Derbyshire the area to the north-west of Wirksworth is the most highly mineralised and has a long history of mineral exploitation. Gang Mine lies some 2 km north of Wirksworth at the southernmost point of the Eyam Limestone Series where it borders the Millstone Grits to the east. In 1652 it was recorded as being an ancient lead mine. The associated 'gangue' minerals of calcite, fluorite and baryte were deposited as waste dumps around the shafts and it is these spoil heaps with their high levels of lead and cadmium in particular that now support a unique assemblage of plants. Only a small number of characteristic species are able to tolerate these spoil conditions and flourish here because of the reduced competition from other plants. Such communities are very restricted in extent being confined to mineralised limestone areas of England and Wales.

Gang Mine has a substantial area of large hummocky spoil heaps which are unusual in retaining a great diversity of spoil materials of varying levels of metal contamination, from very fine spoil to large rock fragments. This has resulted in a range of colonisation from unstable and bare areas, through to closed turf. Good populations of the metallophyte (metal tolerant) species most closely associated with toxic spoil in the South Pennines are present. The open spoil areas support large populations of the rare alpine penny-cress *Thlaspi alpestre* – a plant almost wholly confined to mineral spoil in Britain – and spring sandwort *Minuartia verna* which is the most characteristic and frequently found metallophyte species of the Southern Pennines. The bare spoil grades into a more closed turf which also contains important assemblages of lichens including species of *Cladonia* and *Peltigera*. In this more closed turf, two further plants associated with the spoil are present, mountain pansy *Viola lutea* and a small fern, moonwort *Botrychium lunaria* for which this site holds the highest known density on mineral spoil in the country. This closed calcerous turf is rich in species and supports many plants characteristic of calcerous grassland such as kidney vetch *Anthyllis vulneraria*, common rock-rose *Helianthemum nummularium*, small scabious *Scabiosa columbaria*, fairy flax *Linum catharticum*, glaucous sedge *Carex flacca*, spring-sedge *Carex caryophyllea*, crested hair-grass *Koeleria macrantha*, and the nationally rare limestone bedstraw *Galium sterneri*. Unusually for this habitat, the locally uncommon dyer's greenweed *Genista tinctoria* is also present. Altogether these spoil heaps are considered an outstanding and unique site in the Southern Pennines orefield. Outside the spoil heaps the habitat is mostly unimproved neutral grassland with

abundant red fescue *Festuca rubra* and crested dog's-tail *Cynosurus cristatus* and herbs such as yarrow *Achillea millefolium*, lady's bedstraw *Galium verum*, mouse-ear hawkweed *Hieracium pilosella*, bush vetch *Vicia sepium*, and pignut *Conopodium majus*.

The northern and eastern parts of the site in particular have been colonised by scrub species including hawthorn *Crataegus monogyna*, blackthorn *Prunus spinosa*, and ash *Fraxinus excelsior*.