SITE NOTIFIED TO THE SECRETARY OF STATE ON 11 APRIL 1986

COUNTY: PEAK DISTRICT, DERBYSHIRE SITE NAME: LONG DALE & GRATTON DALE

DISTRICT: WEST DERBYSHIRE SITE REF: 15 WLF

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

Local Planning Authority: PEAK PARK JOINT PLANNING BOARD, West Derbyshire District Council

National Grid Reference: SK 202596 Area: 82.15 (ha.) 203 (ac.)

Ordnance Survey Sheet 1:50,000: 119 1:10,000: SK 15 NE, SK 25 NW, SK 16 SE, SK 26 SW

Date Notified (Under 1949 Act): 1965 Date of Last Revision: 1972

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

Other Information:
Part National Nature Reserve.

Description and Reasons for Notification:
The White Peak of Derbyshire and Staffordshire is one of the most important masses of carboniferous limestone in Britain. It lies both in latitude and altitude between the other notable areas of carboniferous limestone, the Mendips and the Craven area of north Yorkshire. The limestone is cut by valleys, the 'dales', which expose areas of high geological interest and contain a range of woodlands, scrub, grassland and streams.

The dales vary in their orientation. Those that run east-west show a strong contrast between the south facing slopes which are warm and dry and the north facing slopes which are cool and moist. Dales running north-south have only slightly cooler east facing than west facing slopes. Soils vary considerably; large areas are covered by a shallow black soil that is frequently leached and sometimes strongly acid. Richer moister soils occur in the floor of the dales where material has washed from the slopes and where there may also be variable deposits laid down in recent geological time.

The woodlands of the dales are dominated by ash *Fraxinus excelsior*. In those areas that are regarded as being the oldest this is associated with wych elm *Ulmus glabra*. Small-leaved lime *Tilia cordata* is present in variable quantities but oak *Quercus robur* is absent except in the western dales. The understorey is mostly hazel *Corylus avellana* coppice with rowan *Sorbus aucuparia* and field maple *Acer campestre*. On rock outcrops yew *Taxus baccata* and rock whitebeam *Sorbus rupicola* are present. Woodland shrubs include bird cherry *Prunus padus*, dogwood *Cornus sanguinea* and guelder rose *Viburnum opulus*. The ground flora is dominated by dog's mercury *Mercurialis perennis* or tufted hair-grass *Deschampsia cespitosa* with a very wide range of other woodland plants. In moist areas ferns and bryophytes form an important component.

Scrub in the dales is varied; much is derived from hawthorn *Crataegus monogyna* encroachment onto the grassland, some of it being 80–100 years old. This scrub is enriched with blackthorn *Prunus spinosa*, buckthorn *Rhamnus catharticus*, and rose *Rosa* spp. In several dales there is a distinctive type of scrub known as

'retrogressive scrub', typically developed on poor soils and over limestone screes. Here hazel forms a fairly open habitat with the ground between colonised by a rich plant community often dominated by bloody cranesbill *Geranium sanguineum* with Nottingham catchfly *Silene nutans* and stone bramble *Rubus saxatilis*.

Grasslands in the dales are very rich in species. Meadow oat *Avenula pratense* and carnation sedge *Carex flacca* are abundant. The richness and type of grassland varies according to aspect, grazing and soil conditions. On more acid areas mat-grass *Nardus stricta* and wavy hair-grass *Deschampsia flexuosa* are locally dominant occasionally with bilberry *Vaccinium myrtillus* and more rarely heather *Calluna vulgaris*. Tall, dry, herb-rich grasslands contain marjoram *Origanum vulgare* and field scabious *Knautia arvensis*, damper tall grasslands have abundant meadow sweet *Filipendula ulmaria* with water avens *Geum rivale* and hogweed *Heracleum sphondylium*.

Other habitats in the dales include rock outcrops and scree. In the White Peak, dog's mercury colonises scree along with oat-grass *Arrhenatherum elatius* and mouse-eared hawkweed *Hieracium pilosella*. Rock outcrops are typically colonised by early flowering species such as rue-leaved saxifrage *Saxifraga tridactylites* and shining cranesbill *Geranium lucidum*.

Many dales are dry but some have streams in winter only and some, permanent or semi-permanent rivers. These streams are fringed by reed-grass *Phalaris arundinacea* and in the water courses fool's watercress *Apium nodiflorum* and the bryophytes *Cinclidotus fontinaloides* and *Fontinalis antipyretica* are abundant.

The dales woodlands attract a range of typical woodland birds but are particularly noted for the high density of nesting pairs compared with the surrounding areas. Those include hole-nesting species such as redstart *Phoenicurus phoenicurus.* In the open grasslands of the upper valley slopes and near walls wheatears *Oenanthe oenanthe* are common. The cliffs attract kestrels *Falco tinnunculus* and jackdaws *Corvus monedula*. Associated with the streams are a variety of birds notably dipper *Cinclus cinclus* and grey wagtail *Motacilla cinerea*.

Long Dale and Gratton Dale are two dry limestone dales with a variety of soil types and slopes of all aspects. They are of considerable phytogeo-graphical importance because of the presence of many southern species not well represented elsewhere in the Midlands and Northern England.

These two dales form a continuous unit with their axes joined at right angles so that the majority of the slopes face north-east, south-east, north-west, south-west. The grasslands of these dales bear a greater similarity to chalk grassland than those of any other Derbyshire dales, notably through the abundance of the characteristic chalk species stemless thistle *Cirsium acaule* and dropwort *Filipendula vulgaris.*

There is a wide range of grassland, from that characterised by meadow oat and carnation sedge through less calcareous types to an acidic heath grassland mosaic with heather, bilberry, dwarf gorse *Ulex gallii* and many other calcifuge (lime-hating) species. This heath grades into a taller scrub dominated by dwarf gorse. On the leached acidic grasslands mountain pansy *Viola lutea* is abundant. Gratton Dale also has developing scrub of hawthorn and elder *Sambucus nigra*.

Many of the variations in the vegetation are related to a range of soil types which may have resulted from deposition of Triassic sands and clays. Several of the limestone soils in the area are red possibly as a result of the release of iron when the limestones in parts of these dales were changed into magnesian limestone by dolomitisation.

Lead was mined in the dale leading from Long Dale to Pike Head, and on the old spoil heaps there is an abundance of spring sandwort *Minuartia verna* and alpine pennycress *Thlaspi alpestre* species particularly associated with such sites but scarce elsewhere in the country.

In moist crevices in dolomite outcrops in Gratton Dale green spleenwort *Asplenium viride* occurs, with mossy saxifrage *Saxifraga hypnoides* and brittle bladder fern *Cystopteris fragilis.*