

EXTRACT FROM ENGLISH HERITAGE'S RECORD OF SCHEDULED MONUMENTS

MONUMENT: Bonsall Leys lead mines

PARISH: BONSALL

DISTRICT: DERBYSHIRE DALES

COUNTY: DERBYSHIRE

NATIONAL MONUMENT NO: 30940

NATIONAL GRID REFERENCE(S): SK26765715
SK26575746

DESCRIPTION OF THE MONUMENT

The monument includes the ruined structures, earthworks and buried remains of the Bonsall Leys (or Lees) lead mining area within two areas of protection. Lead mining took place at Bonsall from the 1540s to the 19th century, and the associated field remains are typical of lead working from extremely shallow ore bodies. The earthworks include shallow pits and opencuts, with associated hillocks of spoil and upcast. Open-cut workings are most densely concentrated in the north eastern corner of the monument, where at least ten parallel rakes or 'scrins' (shallow open-cut workings following a vein close to the surface) can be seen. These surface features are thought to be good evidence of early smallholder-miners working the area in teams. A scarcity of small storage buildings known as coes in the immediate area reinforces this interpretation, being characteristic of early workings. By contrast well-preserved coes in the area south of the road, topping vertical shafts and close to a ruined lime kiln, demonstrate a continuity of lead exploitation paralleled by developing technology. Large vertical shafts are seen throughout the site, some cutting earlier open-cut features.

The monument therefore includes a range of archaeological remains which illustrate the nature and evolution of lead mining as it was practised in Derbyshire. In addition to visible earthworks, buried remains will be preserved beneath later development, providing further evidence of mining activities.

The southern of the two areas lies south of Bonsall Lane, centred on SK 2676 5715, and includes earthworks, buried remains and other features including two intact rectangular buddles (stone-line troughs where crushed ore was raked against a flow of water to separate lead-rich particles). The water for these was supplied from the mechanical drainage of a nearby shaft. This arrangement is particularly illustrative of mining technology in Derbyshire, where topography did not usually allow the use of water power. Further shafts lie to the south of the buddles, and shaft mounds, spoil heaps, earthworks, buried remains and ruined structures give additional context to the buddle-and-shaft complex to the east.

Immediately south of Bonsall Lane is a group of well-preserved coes. These are particularly good examples of their type, and amongst them are two double coes containing double shafts. The second area of protection lies north of the first, occupying land within a right angle formed by a bend in Bonsall Lane. In its northernmost section there is a series of roughly parallel rakes

(sequences of open cuts following a lead vein close to the surface) and narrow opencuts on a north west-south east alignment. All of these cuts are associated with hillocks of spoil and dressing waste. A rectangular stone-lined buddle survives on one such bank at SK 2666 5756, and a semi-circular buddle served by a stone-lined channel is found on the opposite (northern) side of the same rake. Both buddles are well preserved, and it is thought that stratigraphy in this area will be valuable in understanding the associated water management system. Most of the rakes are 1m-2m deep, approximately 2m wide and up to 40m long, but the largest and most westerly runs for over 50m. The north western end of this rake which terminates in a large shaft has been obscured by stones and spoil dumping from modern land clearance. These remains are not included in the scheduling. Numerous shafts of varying size and depth are cut into or close to pre-existing rakes. In the south of this area further opencuts and pits can be seen. In addition there are substantial dispersed shafts and shallow pits, with spoil heaps and other earthworks, some associated with ruined coes. Their character and date will be different to the northern opencuts. Nearby features are expected to include the remains of dressing floors. Modern field boundaries and the surfaces of roads and paths are excluded from the monument, although the ground beneath them is included.

ASSESSMENT OF IMPORTANCE

Approximately 10,000 lead industry sites are estimated to survive in England, spanning nearly three millennia of mining history from the later Bronze Age (c.1000 BC) until the present day, though before the Roman period it is likely to have been on a small scale. Two hundred and fifty one lead industry sites, representing approximately 2.5% of the estimated national archaeological resource for the industry, have been identified as being of national importance. This selection of nationally important monuments, compiled and assessed through a comprehensive survey of the lead industry, is designed to represent the industry's chronological depth, technological breadth and regional diversity.

Lead rakes are linear mining features along the outcrop of a lead vein resulting from the extraction of relatively shallow ore. They can be broadly divided between: rakes consisting of continuous rock-cut clefts; rakes consisting of lines of interconnecting or closely-spaced shafts with associated spoil tips and other features; and rakes whose surface features were predominantly produced by reprocessing of earlier waste tips (normally in the 19th century). In addition, some sites contain associated features such as coes (miners' huts), gin circles (the circular track used by a horse operating simple winding or pumping machinery), and small-scale ore-dressing areas and structures, often marked by tips of dressing waste.

The majority of rake workings are believed to be of 16th-18th century date, but earlier examples are likely to exist, and mining by rock-cut cleft has again become common in the 20th century. Rakes are the main field monuments produced by the earlier and technologically simpler phases of lead mining. They are very common in Derbyshire, where they illustrate the character of mining dominated by regionally distinctive Mining Laws, and moderately common in the Pennine and Mendip orefields; they are rare in other lead mining areas. A sample of the better preserved examples from each region, illustrating the typological range, will merit protection.

The Bonsall Leys site is thought to be unique in its representation of intensive, small-scale lead working in post-medieval Derbyshire. It is believed that the site's complexity is unparalleled, both in this orefield and nationally. Many of its workings are characterised by the small scale and low-technology approach which were typical of Derbyshire lead mining in the post-medieval period. However, mining activity was by no means confined at any time to only one part of the monument, whose richness of archaeology depends

partly on the complex relationships between its components.

The dense and well preserved surface remains will supply information on the technology, history and development of lead mining. In addition to the earthworks, buried remains are expected to include dressing floors and information on early winding and/or drainage systems. Such remains can add substantially to an understanding of technological and historical development in this industry.

The components of this mining landscape are therefore essential to a full understanding of its exploitation. Preserved buddles, two of which are found in association with a shaft and two with open cut workings, give a particularly clear demonstration of continuity in a changing technology. The buddle and shaft complex provides a good illustration of arrangements to link drainage and dressing functions. Two double coes containing double shafts are particularly uncommon nationally.

SCHEDULING HISTORY

Monument included in the Schedule on 9th October 1986 as:

COUNTY/NUMBER: Derbyshire 276

NAME: Bonsall Moor lead workings

The reference of this monument is now:

NATIONAL MONUMENT NUMBER: 30940

NAME: Bonsall Leys lead mines

SCHEDULING REVISED ON 24th February 1998