

EXTRACT FROM ENGLISH HERITAGE'S RECORD OF SCHEDULED MONUMENTS

MONUMENT: Hillcarr Sough and associated lime kiln and paved track

PARISH: STANTON

DISTRICT: DERBYSHIRE DALES

COUNTY: DERBYSHIRE

NATIONAL MONUMENT NO: 27222

NATIONAL GRID REFERENCE(S): SK25686372 - SK26006371

DESCRIPTION OF THE MONUMENT

The monument is located below the eastern edge of Stanton Moor in the eastern gritstone moorlands of Derbyshire. It includes part of Hillcarr Sough, a lime kiln associated with the construction and maintenance of the sough and a paved trackway extending between three shafts sunk down to the sough. Also included is a large spoil tip containing material removed during the excavation of the sough. Further remains relating both to the sough and to other industries survive in Hillcarr Wood. These additional remains are not included in the scheduling, however, as their full extent and state of preservation is not sufficiently understood.

The entrance to Hillcarr Sough lies at the bottom of a steep east-facing slope in Hillcarr Wood and consists of a corbelled gritstone arch measuring c.1.5m wide by c.1.5m high. In the keystone of the arch is a metal pin which once hinged a cover. This cover, a metal grille, lies discarded to the north of the entrance.

Next to the entrance is a small flight of steps which relates to a track approaching from the north. The steps are flanked by a jetty and both steps and jetty relate to the removal of material from the sough by boat. This material was stacked in spoil heaps, an example of which lies immediately to the north. The spoil heap consists of a roughly oval flat-topped mound measuring c.30m by c.20m by c.3m high.

Eastwards from the entrance, the sough comprises a leat or water channel lined with gritstone blocks and extending for c.160m to the River Derwent. Although partly collapsed in places, the section of the leat through Hillcarr Wood shows its construction very clearly and illustrates that the sough was originally c.1.5m wide by c.1m deep. Upon leaving the wood, it widens and, in places, is up to c.3m wide due to the collapse of the sides. Its original width outside the wood would have been in the region of 2m. The water flowing through the open section is c.1m deep.

Two bridges cross the section of the sough outside Hillcarr Wood: one at the edge of the wood and one where it opens into the river. The latter is the narrower, being c.2m wide while the other is c.3m wide. Both are corbelled gritstone structures but the wider one has been repaired and mortared whereas the narrower retains its original unmortared appearance. Immediately west of the riverside bridge, the sough widens into two diamond-shaped ponds divided by a weir. The pond west of the weir is c.10m in diameter whereas the one to the east is c.5m in diameter. Originally there was a sluice-gate in the weir but this is no longer extant. The weir has been repaired with concrete but

much of the original construction remains. Two drains with metal covers empty into the smaller pond.

Immediately south of where the sough meets the river are the remains of a circular limestone structure with a diameter of c.4m. A partly buried draw tunnel, visible in the side facing the river, shows it to have been a lime kiln used in the production of quicklime. Its well constructed appearance and its association with the sough indicate that it was not the ephemeral type of lime kiln known as a 'pudding' or 'pie' kiln, but the longer-lived 'running' kiln in which limestone was stacked with combustible material and the stack replenished through the top of the kiln as it burned down. Quicklime was sometimes used in blasting at lead-related sites but gunpowder is documented as being in use in the excavation of Hillcarr Sough, so it is more likely that the quicklime from this kiln was used for mortar inside the underground sections of the sough. The limestone would have been imported into the region from the limestone plateau to the south.

Westward from its entrance, the sough lies underground. To understand the remains west of the entrance, it must be appreciated how the construction of the sough was carried out.

Underground excavation proceeded by sinking a shaft to the level of the sough then excavating horizontally through the hillside to meet it. When this objective was achieved, a second shaft was sunk further on and the process repeated. Further shafts would have been sunk as necessary, the whole excavation being carried out over a long period of time on a pre-surveyed route. On the hillside above Hillcarr Sough there are three shaft mounds located west of the entrance at 50m intervals. They are believed to represent a construction period of between 15 and 30 years dating to the early stages of the sough.

The longevity of the operation is indicated by the construction of a 1m wide stepped paved track from the sough entrance, up over the first two shaft mounds to the third. The exact purpose of this track is unclear but it was clearly to facilitate the movement of men and materials since, from the bottom of the hill, it joins a 2m wide cart track which parallels the open section of the sough on its south side and extends as far as the bridge on the edge of the wood. In addition, around the sough entrance there is a great deal of broken roof slate and building stone, including a dump of partly buried dressed stone. These remains relate to site buildings and represent a long period of occupation. This is also indicated by the third shaft mound which is not only reveted with drystone walling but is flanked by an enclosed rectangular space interpreted as a yard. The yard measures c.20m by c.10m and is reached via the paved track which, at this point, ends on a walled track approaching from the north. The third shaft mound is of particular interest because it includes a lined open shaft, capped with dressed stone sleepers, adjacent to a platform for winding gear. It is not clear why this shaft is a more complex arrangement than the other two but it may be speculated that it relates to an operation additional to the excavation of the sough. Also of note is the occurrence of slag on the third shaft mound. Slag is a waste material from the process of lead smelting, but it is not clear whether the slag here relates to a smelting mill in the vicinity of the sough or whether it has been imported.

Hillcarr Sough was begun in 1776 and was both surveyed and constructed for the specific purpose of draining the lead mines of the Alport region. Throughout the 18th and 19th centuries, various branches and extensions were added and, by the 1840s, there were four water pressure engines in place to pump water up from mineworkings sunk to a level deeper than the sough itself. After the installation of these engines, many of the mines were worked to over 100 feet below the level of the sough. However, by the 1850s, fluctuations in the lead market led to the engines being advertised for sale and all the Alport mines but Prospect Mine being closed. The efficiency of the sough as a drain and its good state of preservation are both still evident in current outflow of water. A modern drain north of the weir, modern walling and fencing crossing the

monument, a modern stile and the surface of the track leading to the gamekeeper's lodge in Hillcarr Wood, are all excluded from the scheduling though the ground underneath is included.

ASSESSMENT OF IMPORTANCE

Soughs were horizontal tunnels dug specifically for draining water away from underground mine workings. Although they are common features in association with Derbyshire lead mines, they are rare elsewhere in the country. Well preserved examples are, therefore, considered to be of national importance. Hillcarr Sough is a functioning, well preserved and well documented example associated with the important lead working landscape centred on Alport. Its importance is further enhanced by its association with other well preserved remains relating to the survey and construction of the sough.

SCHEDULING HISTORY

Monument included in the Schedule on 9th October 1979 as:

COUNTY/NUMBER: Derbyshire 260

NAME: Hillcar Sough

The reference of this monument is now:

NATIONAL MONUMENT NUMBER: 27222

NAME: Hillcarr Sough and associated lime kiln and paved track

SCHEDULING REVISED ON 13th June 1996