

SCHEDULE ENTRY COPY

ENTRY IN THE SCHEDULE OF MONUMENTS COMPILED AND MAINTAINED BY THE SECRETARY OF STATE UNDER SECTION 1 OF THE ANCIENT MONUMENTS AND ARCHAEOLOGICAL AREAS ACT 1979 AS AMENDED.

MONUMENT: Medieval iron working remains at Stanley monastic grange

PARISH: STANLEY

DISTRICT: EREWASH

COUNTY: DERBYSHIRE

NATIONAL MONUMENT NO: 29983

NATIONAL GRID REFERENCE(S): SK42504064

DESCRIPTION OF THE MONUMENT

The monument includes the below ground remains of medieval iron working at Stanley Grange. The site is situated on the north side of Stanley Brook, a tributary of the River Erewash. The geology is predominantly Lower Coal Measures, which provide a source of Black Rake ironstone.

Stanley Grange formed part of extensive estates within Stanley and Dale Abbey parishes which were granted to Dale Abbey during the 12th and 13th centuries. Documentary sources relating to Dale Abbey make no direct reference to ironworking at Stanley Grange or at any other of the abbey's properties, but antiquarian references to medieval iron ore mining in rakes (ore extraction works which follow the line of the vein from the ground surface) at Dale Abbey, Stanton and West Hallam suggest that iron ore was actively extracted from the coal measures around Stanley Grange during the Middle Ages.

The core of the monastic grange is thought to have lain within the curtilage of the present farm, not least as the present buildings include a lot of reused stone. The area of the present farm is, however, not included within the area of protection because the survival of any archaeological remains here has not been confirmed. The area of protection therefore focuses on the industrial activity to the north.

The monument survives as a series of buried remains which have been recorded through a programme of archaeological evaluation, systematic fieldwalking, partial excavation and geophysical survey. The remains were recorded in fields to the south east, north, north east and north west of Stanley Grange.

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DESCRIPTION OF THE MONUMENT (Continued)

Systematic fieldwalking revealed a scatter of medieval pottery and iron working slag, including tap slag (slag which has been removed from the furnace by a process of tapping and shows the flow marks of the once molten iron). Geophysical survey followed by a series of excavated trenches indicated that the artefact scatters represented the surface remains of a number of buried furnaces.

Total excavation of some of the remains was carried out in advance of open cast mining in the field to the north east of Stanley Grange. The central section of the field was mined, but remains of furnaces which were identified from field walking and geophysical survey have been preserved within the narrow margin around the edge of the open cast area.

From the excavation, the remains of eight furnaces and evidence of ore preparation, smelting, bloom refining and some evidence of secondary smithing were recorded. Archaeomagnetic dates for the iron working place the activities between AD 1220 and 1315. The form of the furnaces in use at Stanley Grange is varied and novel and includes forms associated with ore roasting and crushing. The range of furnace types indicates a degree of technical innovation, particularly with the use of wind power to provide the draft for smelting. The area of protection only includes the remains which were not subjected to total excavation.

All modern fences and track surfaces are excluded from the scheduling, although the ground beneath these is included.

ASSESSMENT OF IMPORTANCE

A monastic grange was a farm owned and run by a monastic community and independent of the secular manorial system of communal agriculture and servile labour. The function of granges was to provide food and raw materials for consumption within the parent monastic house itself, and also to provide surpluses for sale for profit. The first monastic granges appeared in the 12th century but they continued to be constructed and used until the Dissolution. This system of agriculture was pioneered by the Cistercian order but was soon imitated by other orders. Some granges were worked by resident lay-brothers (secular workers) of the order but others were staffed by non-resident labourers. The majority of granges practised a mixed economy but some were specialist in their function. Five types of grange are known: agrarian farms, bercaries (sheep farms), vaccaries (cattle ranches), horse studs and industrial complexes. A monastery might have more than one grange and the wealthiest houses had many. Frequently a grange was established on lands immediately adjacent to the monastery, this being known as the home grange.

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ASSESSMENT OF IMPORTANCE (Continued)

Other granges, however, could be found wherever the monastic site held lands. On occasion these could be located at some considerable distance from the parent monastery. Granges are broadly comparable with contemporary secular farms although the wealth of the parent house was frequently reflected in the size of the grange and the layout and architectural embellishment of the buildings. Additionally, because of their monastic connection, granges tend to be much better documented than their secular counterparts. No region was without monastic granges. The exact number of sites which originally existed is not precisely known but can be estimated, on the basis of numbers of monastic sites, at several thousand. Of these, however, only a small percentage can be accurately located on the ground today. Of this group of identifiable sites, continued intensive use of many has destroyed much of the evidence of archaeological remains. In view of the importance of granges to medieval rural and monastic life, all sites exhibiting good archaeological survival are identified as nationally important.

Iron has been produced in England from at least 500 BC. The iron industry, spurred on by a succession of technological developments, has played a major part in the history of the country, its production and overall importance peaking with the Industrial Revolution. Iron ores occur in a variety of forms across England, giving rise to several different extraction techniques, including open casting, seam-based mining similar to coal mining, and underground quarrying, and resulting in a range of different structures and features at extraction sites. Ore was originally smelted into iron in small, relatively low-temperature furnaces known as bloomeries. These were replaced from the 16th century by blast furnaces which were larger and operated at a higher temperature to produce molten metal for cast iron. Cast iron is brittle, and to convert it into malleable wrought iron or steel it needs to be remelted. This was originally conducted in an open hearth in a finery forge, but technological developments, especially with steel production, gave rise to more sophisticated types of furnaces. A comprehensive survey of the iron and steel industry has been conducted to identify a sample of sites of national importance that represent the industry's chronological range, technological breadth and regional diversity.

The buried remains of medieval iron working activities at Stanley Grange provide a rare example of this type of site. Archaeological excavation, field walking and geophysical survey have shown that the buried remains are both well preserved and extensive. The various forms of furnaces recorded indicate a degree of technical innovation and provide evidence of a smelting technique not yet recognised elsewhere. Combined with documentary evidence of land

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ASSESSMENT OF IMPORTANCE (Continued)

ownership, the physical remains will enhance our knowledge and understanding of the medieval industrial landscape and, in this case, its association with Dale Abbey.

MAP EXTRACT

The site of the monument is shown on the attached map extract.

MONUMENT INCLUDED IN THE SCHEDULE ON 5th January 2001

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