

DERWENTCOTE, CO DURHAM
ARCHAEOLOGICAL SURVEY REPORT



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Mark Bowden

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1990

NZ 131 565
(centred)

DERWENTCOTE
DERWENTSIDE DISTRICT

CONSETT PARISH
CO DURHAM

Introduction

Derwentcote, sometimes referred to as Hamsterley, has long been recognised as a site of national importance for industrial archaeology because of the presence of an early and well-preserved steel cementation furnace (Buchanan 1972, 372, pl. 11). The site has been purchased by English Heritage who have initiated research excavations at the cementation furnace itself (Cranstone 1989) and a management project for the whole site (Woolerton Truscott/English Heritage 1988). As part of this process English Heritage requested an archaeological survey by RCHME to relate the cementation furnace to other historic features on the site. Architectural and archaeological details of the furnace itself will be reported upon by D Cranstone and are therefore not included in this report. The RCHME survey was carried out in January - March 1990. A closed traverse established by total-station EDM and electronic theodolite formed the control for the survey. The traverse stations were augmented by a number of subsidiary stations, including some survey markers surviving from a previous topographical survey by Plowman-Craven. Archaeological detail was then supplied using a plane table and Wild RK1 self-reducing alidade, and graphical methods. The whole area is heavily wooded and thick undergrowth was a hindrance to survey in some places.

The results of this survey are presented as a conventional hachured plan, at a scale of 1:500. An overlay sheet shows the location of waste materials visible at the time of the survey. The overlay sheet is also labelled with the numbers by which upstanding remains, archaeological features and waste materials are identified in this report. Numbers in the sequence 001-110 refer to archaeological features, numbers in the sequence 501-521 refer to waste materials.

Both the metalworking and coalmining industries are represented on this site. Broadly speaking the metalworking is earlier than the mining. A quarry at the extreme E end of the site, the Owlett Gill dam and some drift mines (see below) are excluded from the present survey. The cementation furnace (001) stands at the top of a steep, NE-facing slope descending to the floor of the Derwent valley. This slope is covered in slag heaps and other features. A number of holes of various sizes, the slighter of which are omitted from the plan, between (078) and (105) may be tree holes, the result of natural slumping or bell pits for small scale coal extraction. At the foot of the slope

are a number of stone and brick built structures including ruinous cottages (008) and the fragmentary remains of Derwent Cote Forge, industrial buildings, other features, ponds and the remains of a drift mine.

Available Ordnance Survey maps of the site are dated 1856 (published 1862), 1895, 1915 (published 1920) and 1939 (published 1947). Numbers in {brackets} refer to parcel numbers on the 1856 map.

The Archaeological Features

- 001 Cementation furnace (see Cranstone 1989)
- 002-002 Hollow way, up to 1.1m deep; this is the last in a series of tracks which survive as hollow ways in the pasture field to the W; previously a public road, it is still in use as farm access and crosses the valley floor to the N on a causeway.
- 003 Remains of a wall, up to 0.3m high; built of large lumps of slag, (see 501).
- 004 S side of leat from River Derwent supplying forge pond; its maximum depth within the survey area is 1.5m; further W the leat is up to 1.9m deep; brickwork of the inlet sluice survives in a tumbled state.
- 005 Amorphous scarps, maximum height 0.3m, perhaps connected with a building {43} shown on 1856-1895 OS maps at or adjacent to this point.
- 006 Cottage gardens {43a} defined by old hedgeline with a scarp c 0.3m high and stone edging to paths; the shape of the gardens is shown on all the OS maps 1856-1939 and the stone edging is depicted on the 1856 edition; the gardens were in use till the 1960s.
- 007 Cottage gardens similar to 006.
- 008 Three cottages {44}, stone- and brick-built; a rectangular stone building with walls 0.4-0.6m thick, not apparently of domestic character, received a brick infilling to large openings in its S side, brick partition walls with ovens/fireplaces and brick extensions to the N side; this structure was

complete by 1856 and remained in occupation until the 1960s, a slight alteration to one of the extensions being shown on the 1939 OS map; the walls survive to c 2m high. A series of brick/concrete platforms or piers along the S side of the building stand to a maximum height of c 0.3m. A brick-built outhouse to the NW of the cottage post-dates the 1939 OS map; a smaller outhouse closer to the corner of the cottages, shown on all maps, does not survive.

- 009 Brick and concrete outhouse, built between 1915 and 1939.
- 010 Brick and stone outhouse backing onto a wall; built before 1856, it went out of use between 1915 and 1939.
- 011 Stone wall, surviving to a maximum height of 1.2m, connects (010) and (013); already existing in 1856, when it formed part of an enclosure {45} with (020), it went out of use after 1915.
- 012 Drainage gully, 0.5m deep maximum to S and 0.3m to N; this feature seems to follow approximately the line of the original fence to the N of the cottages (008).
- 013 Brick building surviving up to 1.6m high; a building stood in this position in 1856 but had been reduced substantially to its present form by 1895; by 1939 only its Wmost end was roofed though the side walls were still standing; possibly it had always been open ended to the E, facing the pond (016).
- 014 Low mound with large stones, up to 0.4m high to E but less than 0.1m high to W; this feature appears on the 1915 map but has gone by 1939.
- 015 Slight L-shaped scarp, no more than 0.2m high; this scarp represents a boundary line shown on the 1915 map and the N side of the building represented by (019), part of building complex {47}.
- 016 Depression, up to c 1m deep; some stonework visible at E end; shown as a pond {46} with a sluice at the E end on 1856 and 1895 maps; out of use

by 1915 though part of its periphery is still depicted; gone by 1939.

- 017 Brick building, survives over 2m high; stone wall footings up to 0.2m high extend from its E end; the brick building appears to be depicted on the 1915 and 1939 maps though the dimensions do not exactly match the present survey; the stone footings correspond to a building depicted on the 1939 map only.
- 018 Sub-rectangular depression, 0.2-0.3m deep; part of a building complex {47}; the top of the scarp also corresponds to the W wall of this part of the complex, a hard line on the 1915 map after this part of the forge buildings had been unroofed.
- 019 Stone wall footings, tumbled rubble and stony scarps, not higher than 0.5m; remains of part of a forge building complex {47}, pre-dating 1856; this part of the complex, with plan modified after 1895, was still roofed in 1915.
- 020 Stone wall, 0.3m-0.4m high, revetting side of track (103); on 1856 map this wall has returns which connect to (010) and (013) and, with (011), form an enclosure {45}; disappearing from subsequent maps it is depicted again, in slightly modified form, in 1939.
- 021 Sub-rectangular platform, 0.4-0.5m high; part of forge building complex {47}; this part was unroofed by 1915 though the walls were apparently still standing.
- 022 Mound, 0.8m high, see (503).
- 023-023 Forge pond {40}, silted but still over 1.5m deep at E end; stone revetting wall survives in places up to 1.2m high; the pond is shown on the 1856 and 1895 maps but was out of use by 1915.
- 024-024 Massive stone-built dam, retaining forge pond (023); breached in two places, one of which is certainly on the line of an original sluice; wall on downstream side, which must have been an internal face to building {48}

survives up to 2m high.

- 025 L-shaped depression, c 1m deep; a short length of stone wall, up to 0.4m high, on the N side perhaps a remnant of the forge building {48} which straddled the main outflow channel (now the stream course) at this point on the 1856 and 1895 maps but may be simply part of channel revetment.
- 026 Hole with stone surround, situated at the top of a N-facing scarp up to 0.4m high; part of the forge building complex {47}.
- 027 Low elongated stony mound, up to 0.2m high; remains of a wall, part of the forge building complex {47}; the part of the building represented by this feature and (026) seems to have been demolished before the rest because, though it is shown on the 1895 map, it is not depicted on the 1915 map outline.
- 028 Slight sub-rectangular depression, c 0.2m deep; this feature falls within the area covered by forge building {47}.
- 029 Pond or water channel, up to 1.0m deep; some stone revetting survives up to 0.4m high; to W there is an apparently solid stone wall though there may be an inlet channel from (016); to E the water originally flowed into a brick arched culvert, now slightly damaged; this section of water course was entirely covered by the forge building {47}, part of the brick and stone N wall of which survives in a tumbled state along the present fence at the W end of the pond.
- 030 Scarp, less than 0.3m high; represents the position of the S wall of forge building {47}.
- 031 Amorphous mound, up to 0.3m high; represents position of Nmost corner of forge building {48}.
- 032 Long pond or water channel, c 1.3m deep maximum; stone wall delimiting W end, surviving to a height of c 0.5m, is E wall of building {47} and corner of building {48}; a damaged brick arch below this wall is

the end of the culvert from (029); the channel shallows to the E and the outfall into the stream is now silted.

- 033 Sub-rectangular hollow, up to 1.3m deep, with stone revetted sides including some surviving fragments of facing; a mound of tumbled rubble to the E is c 0.4m high; part of building {48}.
- 034 Scarp, up to 0.4m high; contains some slag (504); in part this scarp, including a slight offshoot bank, 0.2m high, connecting it with (033), is probably connected with the internal arrangements of building {48}; however, the Wmost end seems to be defining the track shown on the 1939 map, which post-dates the demolition of the forge.
- 035 Gully, c 0.4m deep; lies within area of building {48}.
- 036 Pond, c 1.3m deep, shallower to E; remains of stone revetting wall at W end may be part of E wall of building {48}; scarp forming N side of pond continues to E as shown by hard line on OS maps 1856-1939 inclusive.
- 037 Earthen bank or mound, c 1.6-2.0m high to N, up to 0.4m high to S; has an appearance of dumped material overlying an older scarp, probably a natural river cliff; some scraps of ?coal mining waste.
- 038 Scarp, c 1m high maximum; continues line of N side of (032); modified stream bank.
- 039 Scarp, up to 0.4m high at W rising to 1.0m to E; this scarp represents the course of the forge outflow channel as shown on OS maps 1856-1939 inclusive; stream now cuts in sharply to join River Derwent at edge of survey area but channel is extant to the E.
- 040 Mound, 0.2-0.3m high.
- 041 Mound, c 0.3m high.
- 042 Embanked gully, 1.5m deep maximum with fragments of stone revetting

wall; with (095) forms ?overflow channel from forge pond (023) shown on OS maps 1856-1915; course of outflow to stream not visible but underground outlet discharges into stream 5m E of (109); this channel is now also fed by a spring to the E, probably resulting from an attempt to drain the Forge Drift mine - this is not the (?natural) spring shown on OS maps which occupies the position of the later drift.

- 043 Depression, 1.5m deep to E, 0.1m deep to W; the E end has a stone retaining wall c 0.5m high with a bank above; the counterscarp of the bank is up to 0.3m high; E of the centre is a large block of stone or concrete, probably not in situ; this feature seems to be marked on the 1939 OS map as a pecked line terminal to a track and is presumably a loading bay for wagons taking on coal from the Forge Drift mineral lines shown on the same map.
- 044 Scarp, up to c 1m high; this may represent the S side of the enclosure {52} depicted on the 1856 and 1895 maps; this enclosure was not depicted in 1915 and has now been obliterated by (043).
- 045 Scarp, up to c 2m high.
- 046 Mound, c 1.2m high (see 505).
- 047 Concrete platform, part of Forge Drift workings and associated mineral lines.
- 048 Concrete edged hole, at least 0.7m deep, part of Forge Drift workings.
- 049 Collapse of natural slope over entrance to Forge Drift mine.
- 050 Scarp, 0.4m high, with a hollow, 0.2m deep, at its E end, above a mound, 1.8m high, of mining waste (506).
- 051 Sub-rectangular depression, 1.8m deep maximum; possibly a building platform.

- 052 Massive tip of mining waste, c 4.5m high maximum, (507); overlies track (102/?056); first appears on 1939 map.
- 053 Stone-built structure within triangular mound, 1.3m high maximum.
- 054 Depression in top of (052), 0.3m deep maximum.
- 055 Depression in top of (052), 0.3m deep maximum.
- 056 Trackway, hollowed to a depth of c 0.5m; in its first phase this was an extension of (102) on maps 1856-1915; overlain by (052) thereafter; in its later phase it links the Forge Drift to the dam (057) and thence to the far side of Bairn's Gill; the scarp issuing from the E corner of (053) marks the change of alignment; a branch mineral line on the 1939 map seems to run along this track.
- 057 Remains of dam or bridge abutments on both sides of Bairn's Gill; maximum height c 2.3m, no visible stonework; the flat top carried track (056) which is shown on maps 1856-1939 inclusive.
- 058 Mound, c 2m high; probably part of (059) originally, the gully between them would appear to have been dug out (see 508).
- 059 Large waste heap (509), c 4m high, with hollow way leading up spine from the S; the orientation of this track indicates that this waste was derived from the Coal Drift marked on the 1915 and 1939 maps on the W bank of Bairn's Gill (outside area of present survey - see below).
- 060 Small brick structure.
- 061 Stone wall, 0.7m high, revetting stream and also carrying a bridge for the track shown on 1915 and 1939 maps.
- 062 Drain, 0.3m deep maximum.
- 063 Depression, 0.8m deep maximum.

- 064 Positive lynchet, c 4m high.
- 065 Scarp, 0.5m high; slight modification of natural slope.
- 066 Depression, c 0.8m deep; ?tree hole.
- 067 Hole, c 1m deep uphill side; ?tree hole. ?bell pit.
- 068 Hole, 1.2m deep uphill side; ?tree hole, ?bell pit.
- 069 Scarp, c 0.5m high.
- 070 Scarp, c 0.5m high.
- 071 Hole, 0.5m deep, with subsidiary hollow/scarp, 0.4m deep; ?tree hole. ?slumping, ?bell pit.
- 072 Substantial rectangular hole, 1.2m deep; ?calcining oven (D Cranstone pers comm).
- 073 Depression, up to c 1m deep; ?tree hole, ?slumping, ?bell pit.
- 074 Irregular elongated hole, 1.2m deep uphill side; ?bell pit.
- 075 Hole, 0.3m deep maximum, with scarp, 0.3m high, round downhill side; ?tree hole, ?bell pit.
- 076 Hole, 0.4m deep uphill side; ?tree hole, ?bell pit.
- 077 Hole, 0.3m deep uphill side; ?tree hole. ?bell pit.
- 078 Depression, up to 0.5m deep; ?tree hole, ?slumping, ?bell pit.
- 079 Scarp, c 0.8m high.

- 080 Large hollow, perhaps a quarry, up to 1.5m deep.
- 081-081-081 Track, slightly hollowed at bottom, 0.3m deep, and top but a double lynchets way in between, the lynchets up to 0.4m high; this track appears on the maps of 1856 and 1895; it linked (093/102) to (088), crossing channel (042) on a bridge of which one abutment, on the S, survives.
- 082 Depression, 0.3m deep.
- 083 Mound c 2-3m high, formed partly of slag (510), though little is visible; a possible track runs up the E side (see 084) and track (081) runs up the N side.
- 084 Scarp, less than 0.2m high; the W arm may form the side of a track extending from the E side of (083) and curving round below (085).
- 085 Scarp, c 2.5m high; might be, in part, a positive lynchets continuing line of (064); possible track runs along bottom.
- 086 Boggy depression with drain issuing from N side; marked as 'well' on 1856 OS map but not depicted thereafter.
- 087 Remains of stone building within hollow formed by scarp, up to 1.5m high; not enough visible to be sure of plan; the hollow and scarp leading away to the N are depicted as hard line on 1856 map but no building is shown; (see also 511).
- 088 Track defined by lynchets, 0.3m high, to E; this track, which is depicted on OS maps of 1856 and 1895, is a continuation of (081) connecting with the present track (002); another branch lead around the N end of the cementation furnace (001) to join (002) lower down (see Cranstone 1989).
- 089 Scarp, c 0.5m high.
- 090 Scarp, c 0.3m high.

- 091-091 Large heap of stone, tile and slag (512, 513, 514, 515, 516), c 4m high.
- 092 Scarp, c 1m high maximum.
- 093-093-093 Double lynchet track, lynchets up to c 0.8m high at W, up to 1.5m high to E; this track, shown on OS maps 1856-1915 inclusive, connects (002) to (102) and is joined by (081); it crossed channel (042) twice, the Emost crossing marked 'Ford' on the maps.
- 094 Mound, c 0.3m high.
- 095 Drain, on line of channel (042).
- 096 Scarp, up to c 1m high, forms N side of track (093).
- 097 Slight scarp, c 0.2m high.
- 098 Scarp, 1.0-1.2m high, continues line of N side of forge pond (023) below dam (024); possible secondary sluice channel (?).
- 099 Scarp, c 0.3m high.
- 100 Wall, surviving c 0.2m high, made of slag (518); this wall is shown, defining the W end of an enclosure {100a} on the OS maps of 1856 and 1895.
- 101 Mound, 0.4m high maximum, with scarp, c 0.3m high, leading off to the S; see (520).
- 102 Track marked by scarp, up to 0.4m high, on S side; a large squared stone block lies in this scarp; this track, which is a continuation of (093) and (056), was overlain and blocked by (052) after 1915.
- 103-103 Track connecting (002) and forge building {47} on OS maps of 1856 and 1895; after demolition of forge, post-1915, it extended to the E to link (002) with Forge Drift mine; still in use as access to cottages (008) etc.

until recently.

- 104 Scarp, 0.4m high.
- 105 Hole, 0.3m deep; ?tree hole, ?bell pit.
- 106 Mound, 0.4m high.
- 107 Mound, 0.3m high, see (521).
- 108 Stone wall revetting channel/stream culvert; part of building {48}?
- 109 Stone wall revetting channel/stream culvert; part of building {48}?
- 110 Scarp, c 1.2m high; ?natural river cliff cut back, probably to facilitate drainage.

Waste Materials

- 501 Slag; hard, purple black, vesicular, smooth surfaces.
- 502 Cache of crucible lids.
- 503 Domestic refuse.
- 504 Slag; hard, blue-purple-black, vesicular, no smooth surfaces apparent.
- 505 Coal mining waste.
- 506 Coal mining waste.
- 507 Coal mining waste?
- 508 Coal mining waste.
- 509 Coal mining waste.

- 510 Slag; different types:- i) hard, black, vesicular; ii) hard, grey-black, vesicular with pale buff/blue-grey ceramic-like adhesions; iii) ditto with hard, purple-red grainy inclusions in pale grey ceramic-like material; iv) hard, black, vesicular with red inclusions; v) hard, black, vesicular with stony red inclusions and purple 'flows'.
- 511 Scattered pieces of slag; hard, black, vesicular with 'flows'.
- 512 Slag; hard, purple-black 'flow' with ?cooling cracks in the top and adhesion of grainy material on bottom.
- 513 Slag; hard, purple-black, vesicular, mostly in small pieces.
- 514 Slag; different types:- i) soft, grainy, red lumps; ii) hard, orange and light blue-grey, slightly vesicular; iii) charcoal grey-black vesicular with ?cooling cracks and adhesions of grainy, grey-orange vesicular.
- 515 Slag; predominantly soft, grainy pink-red.
- 516 Slag; different types:- i) large lumps of orange/grey, vesicular 'flows'; ii) grainy, charcoal grey material with ?cooling cracks; iii) soft, grainy pink-red.
- 517 Slag; hard, purple-black 'flows', no vesicles.
- 518 Slag; different types:- i) hard, blue-black 'flows'; ii) slightly grainy, dull rusty coloured lumps.
- 519 Slag; hard, smooth, black, vesicular with some rust coloured patches, some bits concreted with stone; half a crucible lid.
- 520 Black cindery material.
- 521 Black cindery material.

Note on Drift Mines

Three drift mines are marked on the maps of 1915 and 1939 by Bairn's Gill outside the present survey area. The most northerly one has not been located. The central one is clearly visible between the track and the stream; it has a concrete emplacement marked 'G. TURNbULL 1920'. The position of the Smost drift is visible as a slight earthwork.

References

Buchanan R A 1972 Industrial Archaeology in Britain. Penguin Books. Harmondsworth.

Cranstone D 1989 'Derwentcote cementation furnace: interim note on excavations, Spring 1988.' CBA Group 3 Newsbulletin vol 3 No 11. 35-42.

Woolerton Truscott/English Heritage 1988 Derwentcote Steel Furnace Landscape Development Strategy.

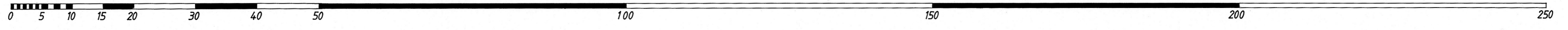
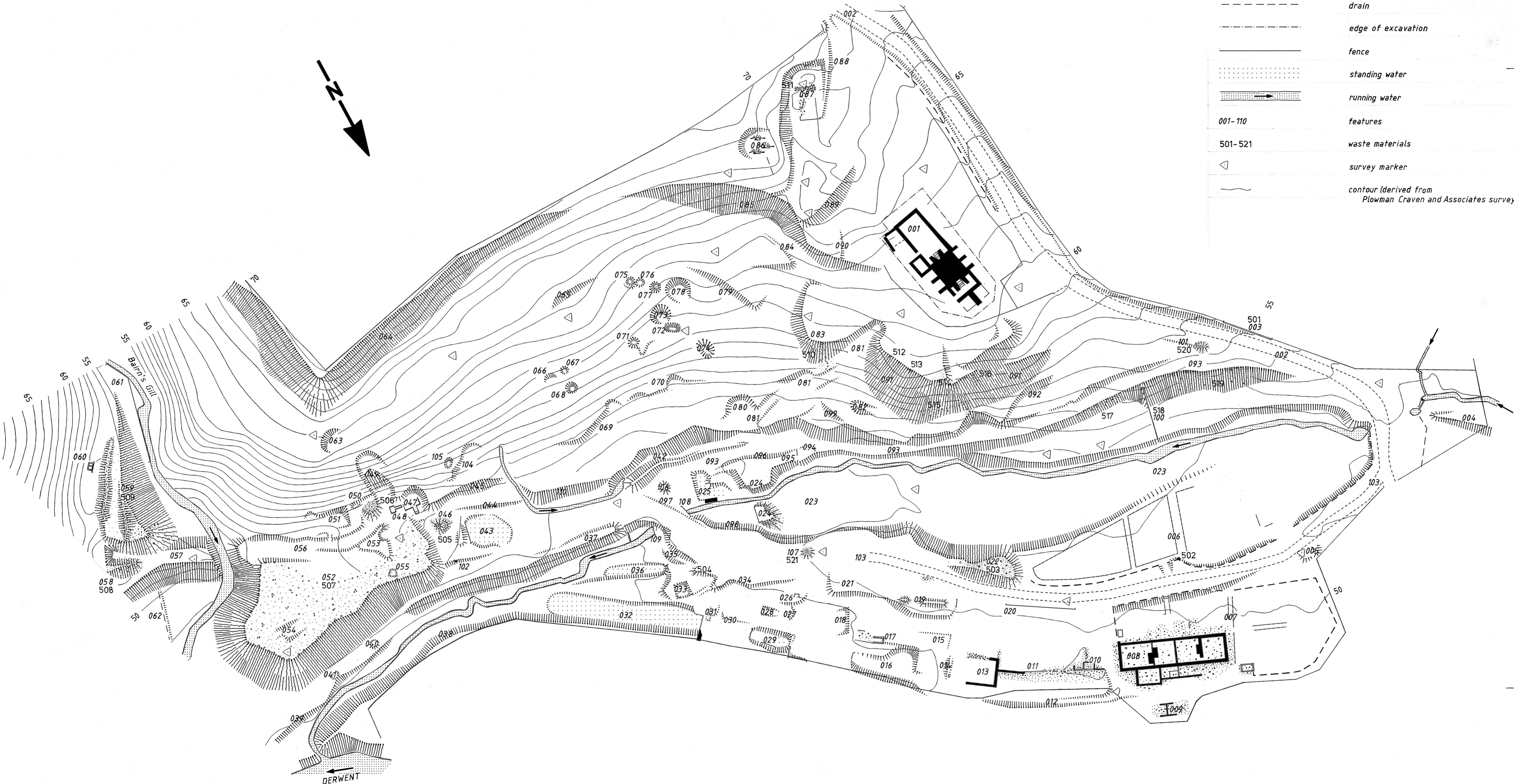
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Newcastle upon Tyne

March 1990



	track
	stone edging
	old hedgeline
	standing masonry
	exposed wall face
	drain
	edge of excavation
	fence
	standing water
	running water
001-110	features
501-521	waste materials
	survey marker
	contour (derived from Plowman Craven and Associates survey)



Appendix

In January 1991 undergrowth was cleared from an area to the S of the steel cementation furnace at Derwentcote. This clearance revealed features not recorded in the RCHME survey of January-March 1990. These features consist of scarps, up to 0.2m high, forming a length of the hollow way shown as a track on OS maps of 1856 and 1895 and other parts of which are depicted on the previous RCHME survey (081-088).

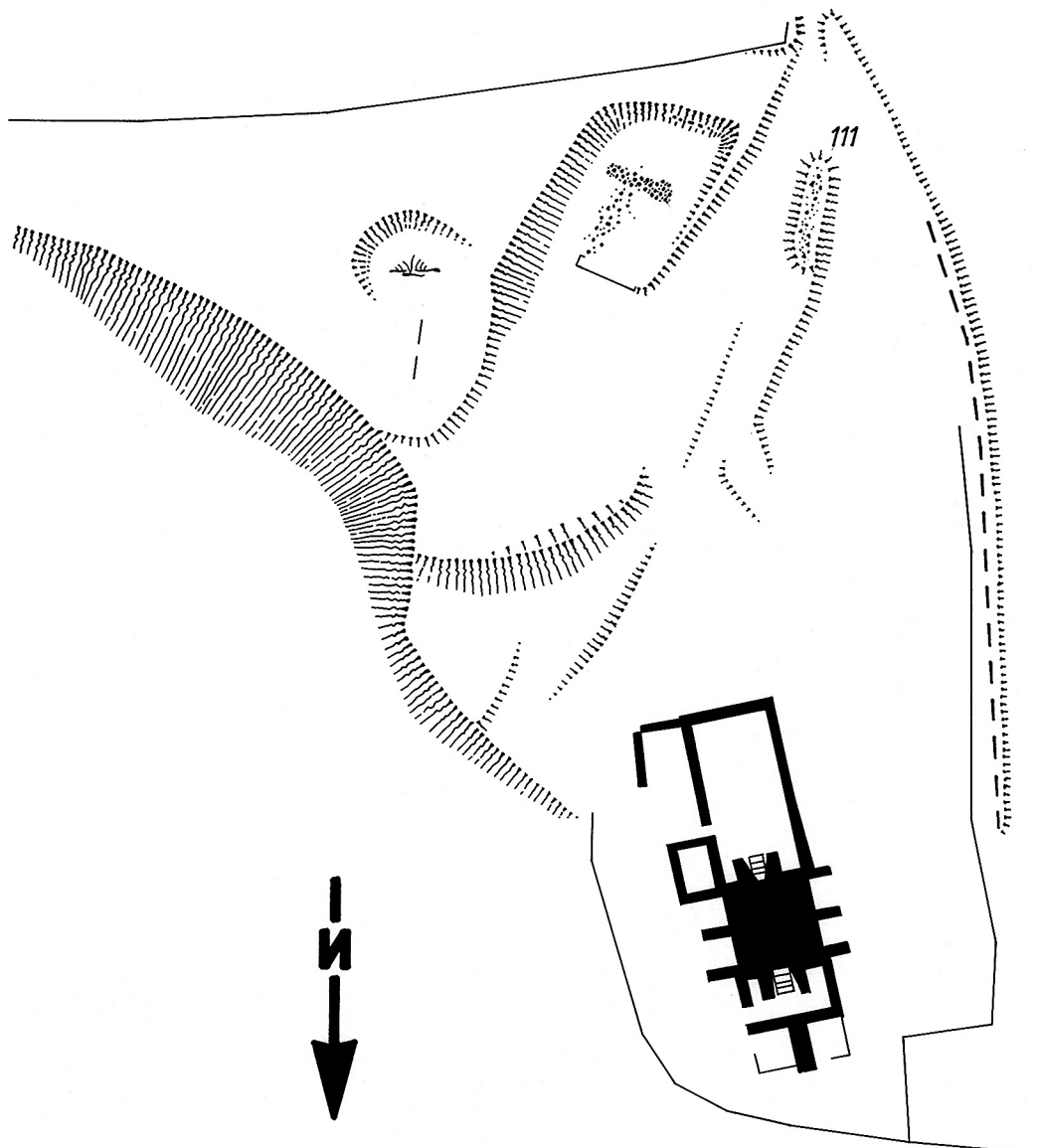
In addition a stony mound (111), 0.4m high, lies on the W side of the hollow way. It probably represents a structural feature but certain identification is not possible without further investigation.

It is also possible that another building stood on the flat area to the N of building (087).

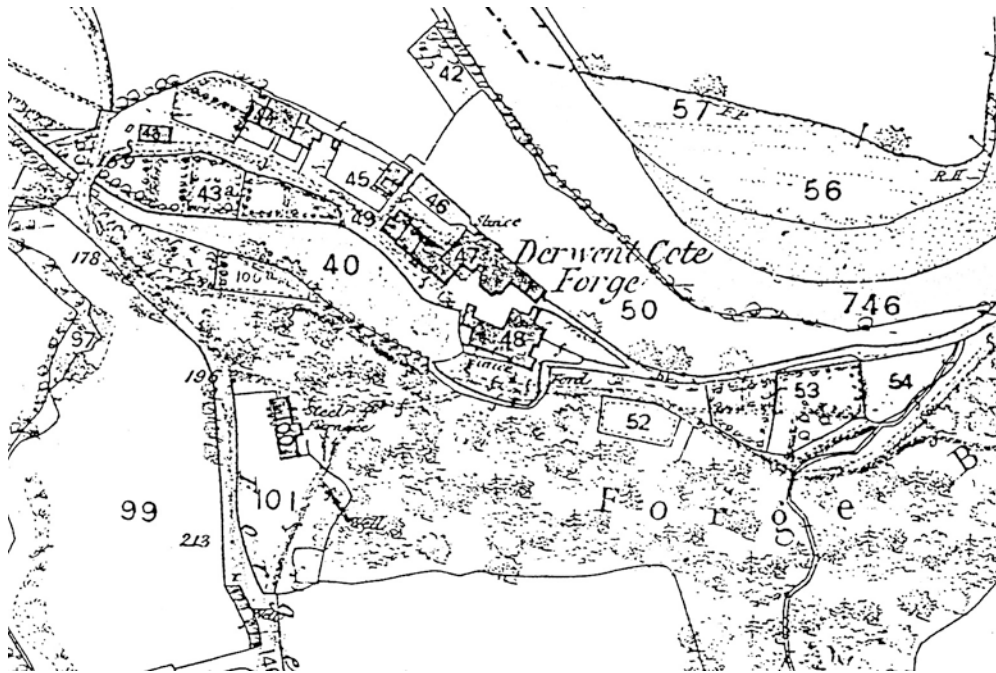
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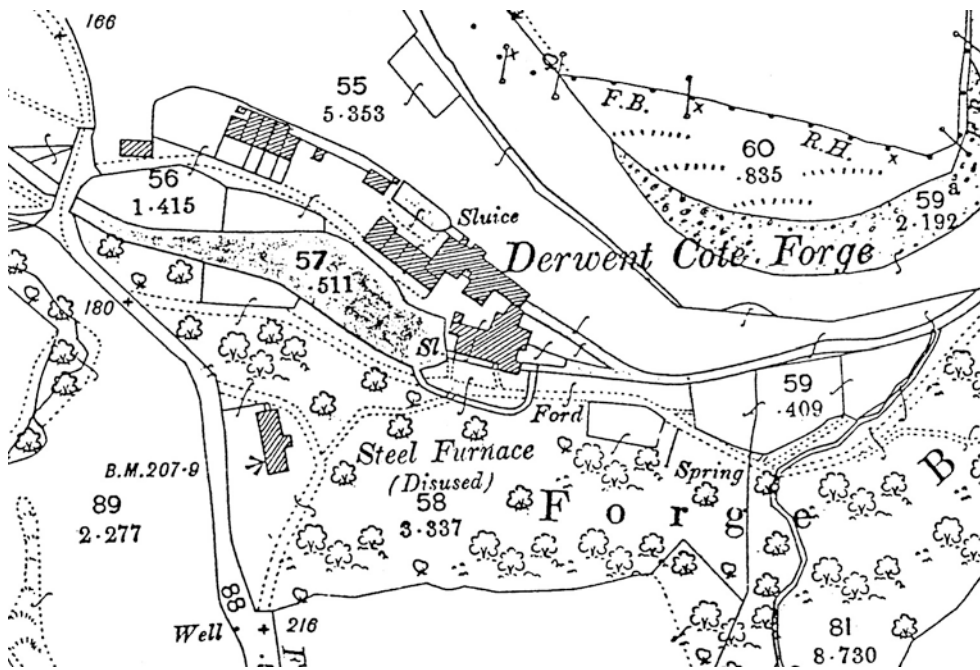
February 1991



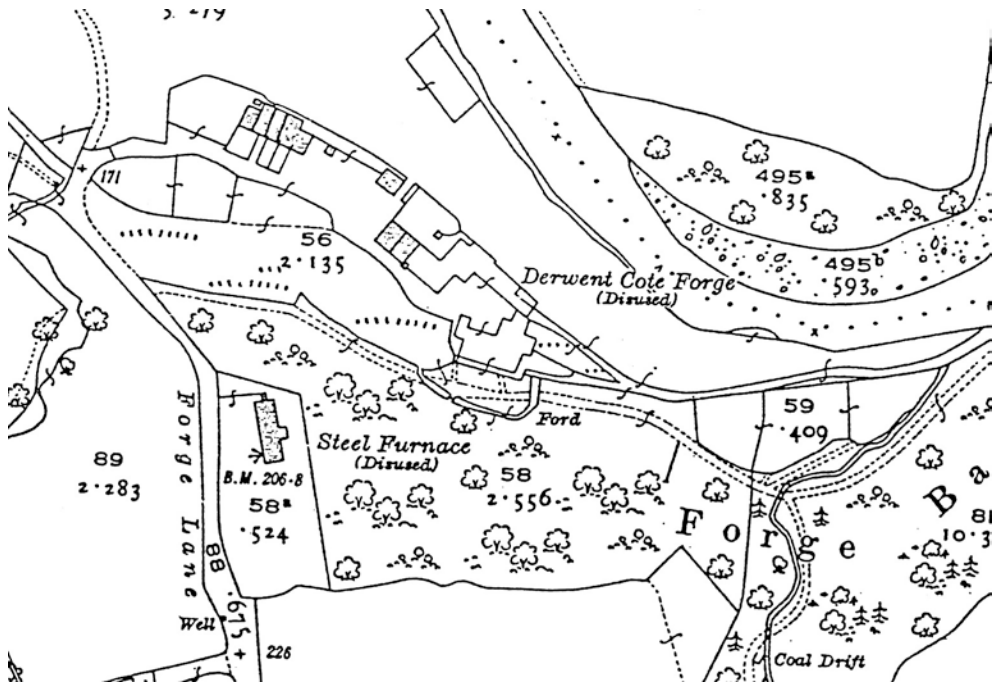
Historic OS maps



1856



1895



1915



1939