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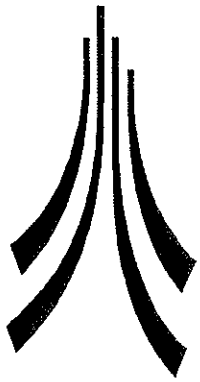

October 1995

HOLCOMBE MOOR TRAINING CENTRE
BURY
GREATER MANCHESTER

Archaeological Assessment

For the use of:

Ministry of Defence

HOLCOMBE MOOR TRAINING CENTRE
BURY
GREATER MANCHESTER

An Archaeological Assessment

Checked by Project Manager. ..... Date
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October 1995

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ILLUSTRATIONS

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This report was compiled by Jane Kenney, with contributions on the documentary research by Nigel Neil, and additions by Jeremy Ashbee and Mark Fletcher. Fieldwork was carried out by Jane Kenney and Ian Miller. Overall project management and report editing was undertaken by Mark Fletcher.

EXECUTIVE SUMMARY

Lancaster University Archaeological Unit, at the request of the Defence Lands Service, Ministry of Defence, undertook an archaeological assessment of the Holcombe Moor Training Centre, near Bury, in Greater Manchester, in February 1995. This was requested to allow appropriate land management strategies to be enacted.

The assessment consisted of a search of existing records of archaeological sites in the area, an appraisal of relevant published, manuscript, cartographic, and photographic documentation, and a field inspection of the land holdings related to the Training Centre.

The desk-based study has revealed evidence for a considerable amount of archaeological activity within the study area. Prehistoric activity on Bull Hill, in the north, was already well-attested, with finds of Mesolithic artefacts being recorded in published antiquarian literature. A denuded cairn at Pilgrims' Cross, also on Bull Hill, was probably of Bronze Age origin. Palaeoenvironmental work at Deep Clough, adjacent to the study area, has demonstrated local woodland clearance in several phases during the prehistoric and historic periods.

There was no evidence for either Roman or pre-Conquest activity within the study area, but the Pilgrims' Cross (now destroyed) was certainly of medieval origin, probably being established as a wayside cross on a long established (prehistoric?) routeway across Holcombe Moor.

Although no evidence was found for any medieval occupation within the study area, it is likely that some of the post-medieval farmsteads may have had medieval antecedents. The long-held assumption of Tudor iron-working at Cinder Hill is dismissed as erroneous, with the physical remains here being demonstrated as relating to later industrial activity.

The tenement farms within the study area were certainly established prior to the 1794 survey, with Cinder Hill Farm being recorded as early as 1688. The sites of all of these were still visible, some containing remains in excess of a metre in height. The intermittent post-medieval ridge and furrow relating to the tenant farms was located and briefly described.

Within the valley bottom, the earthworks and various features related to the early nineteenth century textile mill, Cinder Hill Factory, were identified and described. The area contains numerous small quarry scoops; in addition a small-scale coal mine and associated building remains were located at over 365m AOD, on Holcombe Moor.

It is clear that the archaeological remains within the study area represent a rare palimpsest of a wide variety of past human activity. Recommendations are made for additional research and consolidation works in order to interpret and preserve this resource as part of the MOD's land management strategy.

1. INTRODUCTION

An archaeological assessment was undertaken by Lancaster University Archaeological Unit on behalf of the Ministry of Defence at the Holcombe Moor Training Centre, north of Bury, in Greater Manchester. The project was designed following the brief supplied by Greater Manchester Archaeological Unit, to identify the extent and nature of archaeological features within the area of the Training Centre, and suggest the need for preservation, or the potential for onsite interpretation and further research. The designated area extends from Bull Hill, at the summit of Holcombe Moor, to the Spenleach area, just north of the A676 road. The east and west boundaries of the Training Centre run roughly north-south, enclosing the majority of the steep-sided Holcombe Brook valley. The field survey was carried out between 7th and 10th February, 1995. A draft report was submitted to Robina McNeil, the archaeological curator for the area, and a final report provided in the light of her comments.

2. BACKGROUND

2.1. Physical Background

2.1.1. Topography

Holcombe Brook, known as Red Brook at its northern end, runs southwards from the relatively flat plateau of Holcombe Moor, along the bottom of a small glacial valley with a distinctive U-shaped profile. The stream has carved a steep gully into the rather undulating valley floor, and is joined at the southern end of the survey area by a tributary which flows in a glacial overflow channel (Geological Survey 1925). Between them is a spur of land known as "The Ridge". At the southern end of the designated area, the Red Brook turns to flow south-east, and the valley opens out somewhat into undulating terrain. The highest point on Holcombe Moor is Bull Hill at 418m AOD, and the lower southern end of the survey area lies at *c*175m AOD. A very steep, rocky scarp divides the heather covered moors from the lower valley slopes, which are covered largely with rough grassland, though in parts this has been improved for sheep pasture.

2.1.2. Geology and Soils

Geologically, the study area is located on the southern limb of the Hercynian Rossendale anticline. Denudation of this east-west trending feature has resulted in the formation of what is known as the West Pennine Uplands, a variable landscape comprising high moorland plateaux, deep glaciated valleys, and intervening steep scarp slopes.

The solid geology within the study area consists of Carboniferous Millstone Grit, overlain by an outlier of Lower Coal Measures, forming Bull Hill and the higher parts of Holcombe Moor. The alternating bands of millstone grit and shale outcrop produce the sharply shelving 'edge and ledge' topography characteristic of this area, with their gentle dip towards the north-east. The Millstone Grit Series is also exposed at surface level where Holcombe Brook has cut down through the drift geology, in the south of the study area. The Sand Rock Mine coal seam outcrops on the moorland at the head of Red Brook, while the Six Inch Mine coal seam outcrops at a higher level, on the western slopes of Bull Hill.

Englacial boulder clays of Pleistocene origin mask the solid geology up to an altitude of between 300m and 340m AOD, underlying much of the lower ground of the study area. Overlying the boulder clays are occasional isolated mounds of glacial sand and gravel. Thick peat deposits have accumulated on the high plateau areas of Holcombe Moor (Tallis and McGuire 1972, Geological Survey 1925).

Throughout the survey area soils are base-deficient, because of the high rainfall and the nature of the solid geology. Soil types vary in relation to parental material, gradient and drainage (Tallis and McGuire 1972). On the footslopes, above *c*180m AOD, the soils are predominantly peaty gley soils and organic soils of the Wilcocks association (Hall and Folland 1970, 54-8). On the steep scarp slopes and terraced slopes of Bull Hill and Harcles Hill, the soils are of the Belmont Association, being peaty gleyed podzols. Some rankers (acid mats of raw humus overlying sandstone or shale) are also present, or are replaced by bare rock and scree (Hall and Folland

1970, 47). On the high plateau areas, Winter Hill Association hill peat is present (Hall and Folland 1970, 42-4).

2.1.3. Vegetation

The Holcombe Brook valley has few trees, although there are pockets of woodland next to the stream and a small wood, Saplin Wood, on the eastern slope. The most common species are sycamore, alder and birch, with oak trees in Saplin Wood. Occasional other trees, mostly sycamore, survive round the abandoned farms. Most of the upper valley is covered in rough grassland, with heather moorland on the upland plateau. The southern part of the valley has considerable areas of improved grassland, and occasional fields in the upper valley have also been improved. Rough grass and heather have colonised the firing range areas on the west of the study area.

Documentary evidence suggests that the area would have been quite heavily forested at the start of the medieval period, and the forest was protected by law for hunting until the early sixteenth century. However, the woodland was exploited during this period and deterioration occurred. Piecemeal enclosure of the area occurred from 1507, but much of the area was still common land which was harvested for timber. The woodland in Rossendale had been considerably depleted by 1507, and an increase in settlement after this date must have lead to the removal of much of the remaining woodland (Tallis and McGuire 1972).

2.1.4. Palaeoenvironmental evidence

The deep peat deposits of the Pennines have encouraged considerable palaeoenvironmental work on the hills. There are several sites located within a few miles of the survey area, including an important dated pollen diagram from Red Moss, near Horwich (Hibbert, Switsur and West 1971, 161-176), which provides the type site for the date of Flandrian vegetation changes in northern England. Closer to the survey area are pollen diagrams from Wet Moss (SD762195) and Deep Clough (SD777169) (Tallis and McGuire 1972).

The Deep Clough site has the most detailed diagram, and is located just over the watershed to the east of the survey area. Before the Neolithic period it is probable that the whole survey area was wooded, with the possible exception of the exposed summit of Bull Hill. The diagram shows several phases of woodland decline and regeneration. The earlier phases may be natural events, but during the Bronze Age they were clearly anthropogenic, and on a much larger scale. However, it is likely that some Neolithic clearance also occurred on the uplands, and peat formation had begun by the Bronze Age. The pollen diagram shows a prolonged clearance phase probably during the Iron Age and Roman period, although a pollen diagram from immediately below the Roman road at Ainsworth, about 4km to the south-west of the study area, shows that there was still dense forest in the valleys. At Deep Clough the forest regenerated after the Iron Age/Roman clearance, although the peat continued to spread on the uplands. At the start of the medieval period the area was almost as heavily wooded as before the Bronze Age clearances (Tallis and McGuire 1972).

The other palynological work in the area generally supports the findings at Deep Clough. The Red Moss site shows the normal progression of vegetation from the

sparse scrub at the end of the last glaciation to fully mixed oak forest, with evidence for disturbance in this forest environment possibly starting during the early Neolithic period. Although phases of clearances seem to have occurred, no large scale, permanent clearance had taken place by the end of the Bronze Age (Hibbert, Switsur and West 1971, 161-176).

Another diagram from Anglezarke Moor, near Bolton (Barnes and Bain 1985) covers the vegetational history from the late Bronze Age to the start of the Romano-British period. This shows that marginal slopes were cleared of the secondary woodland, which had regenerated after earlier Bronze Age clearances, and there is evidence for both arable and pastoral farming, and finally increased woodland regeneration towards the top of the diagram (Barnes and Bain 1985).

2.2. History

2.2.1. Mesolithic and Neolithic

For over a century concentrations of flint weapons (barbs for arrowheads and similar forms) and waste flakes of Mesolithic date (*c*8000-3000 bc) [dates are quoted in uncalibrated radiocarbon years] have been collected in the Saddleworth/Marsden area, especially along the Millstone Edge ridge and the neighbourhood of Pule Hill. This has been described as the "most densely occupied area of Mesolithic Britain" (Stonehouse 1988, 5). Recent work around Ramsbottom and Holcombe has, however, been much more restricted.

Barnes (1982, 25) considers it possible that this distribution has been inflated by the greater dispersion of artefacts in the deeper soil of the valleys and lowlands of the Central Pennines. In some instances the flint scatters have been found associated with hearths and fire pits. Artefactual studies in Lancashire and beyond allow us to divide such sites into Broad and Narrow-bladed Industries. The sites in the Pennines are considered to represent summer hunting forays, from people who spent the winter somewhere between the Humber and Trent (Barnes 1982, 36).

During the subsequent Neolithic period, sea levels rose, perhaps causing the Mersey and Ribble estuaries to penetrate further inland. This, together with the growth of peat mosses, appears to have resulted in reduced settlement in the lowlands of Lancashire and Cheshire during the Neolithic and Bronze Age. Forest clearance for agriculture began with slight inroads into marginal woodlands fringing the Rossendale uplands and western Pennines. While some used clearance tools have been found, more important to the economy of the area was probably the establishment of trade routes for stone axes from the factories of Cumbria (e.g. Langdale), through the Central Pennines. Ceramics were mostly locally produced.

2.2.2. Bronze Age and Iron Age

Bronze Age evidence in the Central Pennine area is dominated by metalwork (over 70 find spots), together with 'flat' cemeteries, funerary earthworks and stone-built monuments. Flat cemeteries are frequently associated with circular monuments, though there is some overlap within the Pennines with the enclosed cremation and ring-cairn traditions. Settlement evidence is marked by its paucity, as in other parts of the country. Hunting has been shown to continue as a means of food-gathering, alongside agriculture. By the Late Bronze Age, some defended farmsteads begin to appear (Barnes 1982, 71).

A supposed large Bronze Age barrow called Carve Hill lies *c*400m from the site boundary, just west of Hawkshaw Wood (SD75491589; LSMR 0175; Barnes 1982, 97 No 5). The mound may be of natural origin.

Iron Age evidence from the Pennines consists almost exclusively of earthworks, both defensive (hill forts) and agricultural; artefacts and weaponry are largely absent. The closest defended settlement to the survey area is at Castle Steads, near Bury, *c*3km to the south-east of the study area (NGR SD797130). This is a native-style settlement, located on a promontory jutting into the River Irwell, which produced four radiocarbon dates with a calibrated range of 550 BC to AD 247 at one standard deviation (Fletcher 1992). 'Celtic' field systems and lynchets are conspicuous by their absence in the Pennines and North Yorkshire. Palaeoenvironmental evidence suggests a mixed arable and pastoral economy. In the Eastern Pennines there is evidence for agriculture up to *c*300m AOD, occupation being in the form of small homesteads in earthwork enclosures.

2.2.3. Roman

During the Roman occupation, the Pennines were controlled from forts, later linked by roads, at Ribchester, Elslack, Ilkley, and Newton Kyme, and also the chain between Manchester, Castleshaw, Slack, and Newton Kyme. At Broadwood Edge Farm, *c*1.1km to the east of the Pilgrims' Cross on Holcombe Moor, and in places running parallel to and to the east of Helmshore Road, is a very straight linear earthwork. This has been tentatively identified (P Iles, LSMR, pers comm) as a Roman road (NGR SD78401821 to SD78421938; LSMR PRN 1987), running for a length of *c*1km. The proven line of the Manchester to Ribchester Roman road runs at *c*2km to the south-west of the study area.

2.2.4. Medieval

The only clear evidence for early medieval settlement in the study area comes from place names. The site lies within the township of Tottington, a name which is attested as *Totinton* in 1212 and *Totington* in 1233. It is thought to derive from the Old English personal name Totta + *-ingatun*, meaning 'the hamlet (*tun*) belonging to Totta'. An alternative explanation of 'Tot' is 'a look-out, or look-out hill' (Mills 1986, 46 and 141). At the time of the Domesday survey (1086), Tottington formed part of the Barony of Montbegon, probably formed soon after the Conquest (VCH 1, 319). In 1176 the manor was given by Roger de Montbegon III to the monastery of Monk Bretton, near Barnsley in Yorkshire, a gift confirmed in 1236. Henry de Monewden inherited the de Montbegon lands in 1226/7 and, in 1235, sold Tottington to John de Lacy, earl of Lincoln. However, the monks appear to

have had difficulties in collecting rent, resulting in 1295/6 to an entry in the de Lacy *compotus* of:

> 'loss of rent in Tottington of one plot of land surrendered to the Prior of Brettone [i.e. Monk Bretton] as his right. In future to be effaced from the *compotus*... 5s 9.5d' (Lyons 1884, 184; Tyson 1989, 1).

In 1346 the Prior of Monk Bretton made a claim against the dowager Queen Isabella, widow of Edward II, for 1500 acres of pasture in Tottington, and the same of wood, lands of which Henry de Lacy had disseised a former prior in the time of Edward I. In the time of Richard II, Holcombe became annexed to the Duchy of Lancaster, but the monks' claim was admitted and they received the *advowson* (right to present a clergyman to a rectory, vicarage or curacy) of Darton, near Monk Bretton as compensation. The powerful de Lacy family founded an abbey at Barnoldswick, and expenses such as this were funded by reorganising and developing their tenanted lands, by improving the expanses of woodland and moorland waste. A valuation taken in 1311 recognised four classes of tenant (in ascending order of status: cottars, customary tenants or villeins, tenants at will, and freeholders).

2.2.5. Post-medieval

After the Dissolution, the monastery's lands were in 1546 granted to John Braddyll of Whalley, though much of the land was re-sold to the Holt family of Stubley Hall, near Rochdale (VCH 1, 312-13, 319-22, and 325; VCH 5, 143-8; Coupe 1987, 8; Tyson 1989, 1). During the Civil Wars, the area was Royalist, and the estates of the Holt family were confiscated by the Commonwealth (Coupe 1977, 96).

The manor of Tottington, a part of Bury Parish, was very large during the medieval period, and included Shuttleworth, Musbury, and Cowpe Lench, which became incorporated into the hundred of Blackburn. In the seventeenth or eighteenth century what remained, in the hundred of Salford, was divided into Tottington Lower and Higher Ends. With the exception of Bull Hill (in Higher End), the Training Centre lies within Tottington Lower End. Tottington Higher End ceased to exist in 1894, being divided between Ramsbottom, Rawtenstall, and Haslingden (VCH 5, 144).

3. METHODOLOGY

3.1 Documentary and Cartographic Research

The documentary research involved an appraisal of the County Sites and Monuments Records of both Greater Manchester and Lancashire, early maps, and primary documentation from the Bury Archive Service and Lancashire Record Office, Preston, and the appropriate sections of the *Victoria County History*. Limited photographic material in Bury Central Library was studied, as were aerial photographs held at the Greater Manchester Geological Unit, and the Department of Archaeology, both in the University of Manchester. This part of the project was carried out in accordance with the Interim Draft Standard and Guidance for Archaeological Desk-based Assessments compiled by the IFA (August 1993, as amended August 1994).

The first stage in the assessment of the archaeological potential of the area was to compile a list of sites from the Greater Manchester Sites and Monuments Record (GMSMR), and selected neighbouring areas covered by the Lancashire SMR (LSMR). The SMR data provided an archaeological and historical profile of the area in question. The public libraries at Bury, Ramsbottom, Tottington and Rawtenstall were also consulted. Copies of recent, unpublished reports on archaeological work concerned with two areas within the Training Centre (the Spenleach area, and Cinder Hill) were obtained from Greater Manchester Archaeological Contracts, as was a documentary survey and re-interpretation of the latter site by N Tyson of Bury Archaeological Group. This documentary survey was updated by telephone conversation. Relatively little work has been done in recent years on the prehistoric archaeology of North East Lancashire. Barnes' (1982) study, with a useful index of sites and casual finds, remains the most reliable synoptic work. Sites within the study area, located during the desk-based assessment, are included in the Results section, while those in adjacent areas are included in the Historical Summary.

A vast resource of material is available for the evaluation of rural areas, and the choice of material consulted must be appropriate to the level of work required. The basis of the initial assessment of the Training Centre is a survey of published works on county and local topography and history, together with maps ranging from the eighteenth century county and estate maps and tithe maps of the nineteenth century, to early editions of the large-scale Ordnance Survey maps, and recent editions at various scales. The maps provide a visible record of changes in the landscape, particularly with regard to roads, structures, and property boundaries.

Detailed examination of primary documentation is not considered appropriate to the scope of an initial assessment, nor could such a study be achieved within the limited timescale available. Accordingly, study in this area was limited to a rapid appraisal of the available sources of potential importance, with specific reference to documents relating to the setting up of the Training Centre in 1915 (Bury Archive Service, BAS) and eighteenth century surveys (Lancashire Record Office, LRO). Some other medieval and post-medieval documentary sources had already been

examined for N Tyson's (1989) report, and comments derived from it have been repeated, with the author's consent.

In conjunction with the documentary sources, the available aerial photographs were assessed. An extensive collection of vertical coverage, from the RAF series of 1946-8 to modern colour series, is available from Greater Manchester Geological Unit. Sites were plotted at 1:10,000 scale from as many of these photographs as could be studied in the time available.

3.2. Statutory and non-statutory archaeology planning constraints

There are no Scheduled Ancient Monuments within the study area, nor any Conservation Areas. Immediately adjacent to the study area (SD77101555), there are two Grade II listed buildings. These are a late seventeenth century former farmhouse, disused as a dwelling, and a sixteenth or seventeenth century cruck-framed barn, both on the south side of the yard of Hollingrove Farm, Redisher Lane. The former farm name, *Hollingreave*, may denote that the cruck barn was a storage place for the local grieve, or estate manager (DoE 1985, 46, Nos 3/159-160). The monument built on Holcombe Hill in 1852 in memory of Sir Robert Peel, *c*550m east of the study area, is also a Grade II listed building (DoE 1985, 28, No 3/127). The Training Centre should be aware of the desirability of avoiding development which could compromise the 'setting' of listed buildings.

The Greater Manchester SMR denotes a large area of upland on OS 1:10,000 quarter sheets SD 71 NE, 81 NW, and 81 SW as an 'Area (Area A) of Archaeological Sensitivity' (GMAU 1992, 6). This is a non-statutory local designation, intended to raise awareness of the presence of archaeological sites and the potential disturbance development of the area may cause.

3.3. Field Survey

The field survey was a systematic inspection of the designated area to establish the existence and nature of archaeological features within that area. This conformed to the Level 1 survey defined by LUAU (LUAU 1995), based on guidelines produced by the Royal Commission for the Historical Monuments of England. There are few existing records in the County Sites and Monuments Record for the designated area, and all new sites identified were recorded by a brief written description and an accurate ten figure National Grid reference. The use of a Global Positioning System (GPS) to locate the sites enabled this to be carried out with considerable accuracy despite the short time scale of the survey.

A Midas II GPS was used, which obtains a positional fix in latitude and longitude by electronic distance measurement along radio frequencies to satellites. This system uses both a mobile receiver and a base station, allowing post processing of the data to achieve accuracies of between +/-0.5m and +/-2m in relation to the OS National Grid, and internal accuracies within the survey of +/-0.3m or better, depending largely on the number of satellites available when the readings are taken. The results of the survey were translated into a CAD system (FastCAD), enabling them to be combined with information digitised from the relevant OS 1:10,000 map sheet, and plotted at relevant scales.

Small, discrete features were located with a single central point, while linear features, such as field boundaries, were surveyed as a single line down the middle of the feature. Only those boundaries not shown on the 1982 1:10,000 OS map sheet were surveyed, (ie those now deemed as defunct). Ridge and furrow could be seen from a distance in many parts of the valley, but only that which could be easily detected on the ground was recorded during the field survey. A more thorough inspection of the valley as part of a Level 2 or 3 survey would certainly add to the ridge and furrow recorded in the present survey. Where areas of ridge and furrow were recorded, the extent of the visible ridges was surveyed and a typical furrow surveyed along its length to give an example of the orientation and shape of the furrows. In the final plan lines have been drawn parallel to the surveyed furrow to give an indication of the area of ridge and furrow, but the actual width of the ridges has not been represented.

The component features of each site and their condition were noted at the time of the site visit and a preliminary interpretation was made. This information, combined with the results of documentary, cartographic and pictorial research, has allowed the project team to assess the archaeological character of different parts of the site and to make informed judgements as to the most significant features within the study area. These are discussed in section 4.2 below.

The southern portion of the designated survey area has been inspected at Level 1 by the Greater Manchester Archaeological Unit (GMAU 1992), and the information from their survey has been appended to that produced by the present fieldwork and documentary research to form a full gazetteer of sites.

4. RESULTS

4.1. Documentary evidence

4.1.1. Prehistoric

Although only a very few prehistoric finds have been recovered within the study area, the Lancashire side of Bull Hill has produced a chipping floor of probable Mesolithic date, in addition to further finds of microliths, flakes, and later arrowheads of Neolithic date (SD76781873; LSMR PRN 1074; Anon 1887; Anon 1888).

One chance find of Bronze Age date has been recovered from close to the study area, and a more dubious example from within it. An Early Bronze Age axe-hammer was found at Holcombe in 1904 at SD782166 (Barnes 1982, 102 No 70), while a 'battle axe' found the same year at Cinder Hill (SD767169; GMSMR 3801; Barnes 1982, 102 No 69) is a natural clay-ironstone nodule, at best retouched by man. Both are now in Bolton Museum.

4.1.2. Medieval

The base of the Whewell Cross, or Pilgrims' Cross, on Holcombe Moor, on the Training Centre boundary existed until 1901, when it was wilfully destroyed; following which a memorial stone was erected on the spot in 1902. No description of the cross itself has been found, but it was said to have existed in 1176 (LSMR PRN 1073; VCH 5, 144; Dowsett 1902, 109-29). This is the only site within the study area of certain medieval date, and there is no evidence to date any of the farmhouse sites before the late seventeenth century (Tyson 1989, 1). The number of houses shown (none are named) by Yates (1786) seems to approximate to those still in existence in 1893 (OS 1893).

Early documentary evidence for medieval iron working in Tottington cannot be attributed with complete certainty to the Cinder Hill area; the place-name may be significant nevertheless. The ascription 'Cinder Hill' seems to have originated from slag heaps from earlier, possibly medieval, smelting which were still visible in the nineteenth century. Elderly residents interviewed by Kerr and Dowsett remembered that these heaps of *scoriae*, or clinker, were largely removed for road building during the nineteenth century (Kerr 1872, 60-1; Dowsett 1901, 86-7). There is a small amount of documentary evidence for iron working in Rossendale during the thirteenth century, but none between the fourteenth and sixteenth centuries (Tupling 1927, 29).

4.1.3. Post-medieval

Other early references to industry in Bury Parish include a dispute in the 1580s or 1590s concerning coal mines, and the mention of iron making in the 1530s, by John Leland (VCH 5, 123). In 1618, following the setting up of a Commission by James I, a decree was directed at the tenants of Tottington, which refers to the unlawful enclosure of land, and quarrying of coal, slate and other stone, and to peat cutting. However, the matter was not resolved until 1681, under a Composition of Charles II, by way of a payment by the tenants of £1,420 13s 4d, together with increased rents for the enclosed and improved lands (Dowsett 1902, 24-36). The resolution of this dispute over enclosure both dates the change in farming practice in the area,

away from open fields, and also explains the lack of an eighteenth century enclosure map and Act for Tottington.

Following Greater Manchester Archaeological Unit's (1989) survey, Tyson (1989, 2) carried out more detailed documentary survey, specifically for Cinder Hill, at Red Brook (GMSMR 71), than was considered appropriate for the rest of the Training Centre during the present assessment. This demonstrated that Cinder Hill Farm (site 24) was occupied from at least 1688. In 1794 the Cinder Hill premises included an engine house, and Tyson (1989, 2) considers that the mill pond and upper leat in the valley bottom (see site 05) date from this time. The main Cinder Hill Factory (site 50) and associated head race were probably constructed shortly after 1823, closed temporarily in 1868, and finally abandoned in 1876 (Tyson 1989).

The 1794 survey gives the most complete picture of the Holcombe Brook valley, against which the disuse of buildings may be assessed. It was not considered appropriate to the present survey to attempt to list all the fields named on the 1842 tithe map (LRO DRM 1/98). By way of example, however, it should be noted that a number of pasture fields on the southern slopes of Bull Hill, shown on the tithe map, had ceased to be shown in any form by 1893. The estates named in the 1794 survey are as follows:

Taylor's Tenement, Higher Ridge, Hamlet's Tenement, Nook, Sinder [sic] Hill, Holcome Head, Stanley Rake, Grainings, Holcome Hey, Boardman's, Parks, Withins, Clough Bottom, Hawkshaw, Lower Ash, Higher Ash, Higher House, New Hoyle's, Old Hoyle's, Old Meadows, Simon's, Hollingreave, Spenleach, Bleak Low, Kenyon's, Hawkshaw Lane and Finny Cote, Bromiley's, and Croichlow.

By 1913, when arrangements were being made to purchase land for the Training Centre (opened 1915), only the following 15 were under consideration (Bury Archive Service I 41.9 GL/36/4):

Hamlets, Nook, Cinder Hill, Holcombe Head, Three Acres and Lark Hill, Holcombe Hey Fold, Parks, Withins, New Hoyles, Higher Ashe, and Higher House.

4.2 Field Survey

Only on the moor top has any trace of prehistoric activity survived, and in the valley more recent agriculture has obscured any medieval or earlier occupation which might have been present. However, the archaeological landscape preserved within the training centre at Holcombe Moor provides a surprisingly complete view of the more recent history of the area, with both field systems and industrial features preserved.

Peat generally started forming on the moors in this area in the late Bronze Age, though in some places it seems to have been accumulating since the Neolithic (Barnes and Bain 1985, 12-13). Therefore most prehistoric remains have been buried under a considerable depth of peat and can only be identified where the peat

is eroding. This is occurring on the summit of Bull Hill, where it has revealed flint scatters of various periods. The effects of erosion caused by visitors to the Pilgrims' Cross has also exposed the probable cairn here, which is c10m in diameter, and is most probably of Bronze Age date.

In the valley the field survey revealed a landscape reflecting the economic necessities of the area over the last few centuries. Although largely a pastoral landscape by 1842 (Tithe Award 1842), the field survey revealed that much of the valley floor and its lower slopes were cultivated prior to that time. Ridge and furrow is evident up to a height of *c*320m AOD, and is found on slopes which would now be considered far too steep, and the soil too thin and poor for arable agriculture. Though the present vegetation of rough grass and moorland, which covers most of the valley, now exaggerates its unfavourable appearance, it is likely that the land was always marginal as far as arable cultivation was concerned. However, the number of deserted farm sites extending up the valley demonstrates that it supported a population of some size, and oats can be grown in these situations (Tallis and McGuire 1972).

The nature of the ridge and furrow is significant. Although some fields, such as site 27, show traces of a sinusoidal curve, typical of earlier cultivation, the majority is both straight and narrow, rarely exceeding 2.5m between ridges. This indicates that post-medieval cultivation is represented. This is further confirmed by the close relationship between the ridge and furrow and the existing or recent field boundaries, indicating that the ridge and furrow dates from after the enclosure of the valley.

Henry VII's disafforestation order of 1507 removed the Forest Law that had controlled activities in the area. From this date the enclosure of waste land in Lancashire was permitted, and in Rossendale enclosure was carried out piecemeal through to the eighteenth century (Tallis and McGuire 1972). Enclosure was still closely controlled in Tottington in 1618, and probably was rare before 1681 when problems over the legality of enclosure were resolved (Dowsett 1902, 24-36). Enclosure in Tottington appears to have been a gradual process instead of a sudden response to an Act of Parliament in the late eighteenth or early nineteenth centuries. Some of the field boundaries and ridge and furrow recorded in the Holcombe Brook valley could, therefore, date from the early sixteenth century, but it seems likely that most date from after 1681. By 1842 (Tithe map) the majority of fields were under pasture, giving a period of only 160 years during which the majority of the ridge and furrow was probably formed. The ridges themselves attest to their short use. Most are very low, few are over 0.2m in height, demonstrating that they have not had long to form and build up height.

The historical record shows that this community did not rely solely on agriculture and industrial outwork was common. By the eighteenth century this section of the economy was enhanced by the construction of textile mills in the valley (Coupe 1977). Though the mill buildings themselves have largely disappeared numerous associated features, including the ponds which powered the mills, can be seen along the Holcombe Brook.

The survey uncovered no evidence, either in the field, or in documentary sources, for any iron-working site at Cinder Hill. The GMAU survey (GMAU 1989) which interpreted this site as a post-medieval bloomery, replete with hammer ponds and blast furnaces, was a highly speculative interpretation of what was in fact an early nineteenth century textile mill site, as confirmed by subsequent documentary research by a local amateur archaeologist (Tyson 1989).

The industrial remains which can be seen in the valley are comparable, although to a lesser degree, to those contained within the Cheesden Valley, *c*5km to the east of the study area, where an early industrial landscape, possibly of national archaeological significance, has survived due to remoteness from modern redevelopment. The survival of similar remains at Holcombe Moor results from isolation within a deep valley on the moorland fringes, reflecting a period when industry was heavily dependent upon water-supplies, and less so upon factors which determined industrial location during the later nineteenth century, such as the transport infrastructure and concentrated pools of labour.

Many small quarry scoops were recorded, presumably for extraction of both drift deposits (clays) and solid rock (shales, sandstones, and gritstones). The small scale of these works, however, means that such features have rarely left any record in the historical, documented evidence, and hence cannot be securely dated. The only evidence for coal mining was represented by a single adit mine adjacent to the Red Brook on the Holcombe Moor plateau; the location was very exposed and remote, and there is again no documentary evidence to suggest when this mine may have been worked, although the decayed condition of the adjacent building would suggest the eighteenth or nineteenth century.

5. DISCUSSION

5.1 Preservation

The LUAU survey has determined that the area of the Holcombe Moor Training Centre has considerable archaeological potential, in particular relating to the transitional period whereby the embryo rural-based textile industry was operating hand-in-hand with a well-established agricultural economy. Two factors clearly contribute to this potential:

5.1.1 Landscape survival

The marginal agricultural situation, which has ensured that no intensive farming activity had occurred within the study area since the early nineteenth century 'high-water mark' of agrarian activity which resulted as a consequence of the Napoleonic Wars. The effect of this was that the late eighteenth/early nineteenth century landscape was 'fossilised' *in-situ*, in common with that of many other isolated Pennine valleys, such as at Watergrove, near Rochdale, *c*12km to the east of the study area.

The occupation of the area by the Ministry of Defence since the early twentieth century has forestalled any modern alteration to the post-medieval landscape, with the only recent physical developments throughout the area comprising the shooting ranges and butts themselves.

5.2 Site significance

Within the limited confines of this assessment report and the scope of the project brief, no attempt has been made to grade any of the individual sites with respect to the scheduling criteria outlined by the Secretary of State to define the archaeological significance of sites, in terms of their local, regional, or national importance. Such an exercise, dependent upon a an assessment of several inter-related factors, namely **period, rarity, documentation, group value, survival/condition, fragility/vulnerability, diversity,** and **potential**, would be potentially counter-productive, as it would ignore the main strength of the area, which is the diversity and articulation of features and activities within the study area, with none of the individual features being of great importance in their own right (see below).

Additionally, without access to an English Heritage Monuments Protection Programme-type database for the Holcombe Moor area, any attempted grading on the basis of the above criteria, presumably into nil/local/regional significance, would be highly subjective and biased according to the experience of the individual undertaking the work (Wessex Archaeology 1993). It is far more important in this case to stress the significance of the entire landscape which can certainly be regarded as a regionally significant historic landscape for its excellent survival of articulated post-medieval remains and the likely survival beneath the upland peat cover of earlier remains.

5.3 Overall significance

The resulting diversity of archaeological remains located by the survey of this relatively small area is significant, and it would be most beneficial to continue the preservation of this landscape as a whole, although the conservation of its constituent elements is obviously important. None of the individual features described in it's own right is rare, visually impressive or historically important.

All the remains are set in the context of a landscape, however, in which traces of several of the more important regional activities of the last 400 years, such as upland arable agriculture and textile manufacture, can be detected. The landscape of Holcombe Moor is greater than just the sum of its parts: it contains abundant evidence for a broad spectrum of historical development, and would amply justify its designation as an Area of Archaeological Sensitivity. The removal of, or damage to, any of the components of this landscape will reduce its overall merit. If possible all the sites listed should be free from interference. If this proves not to be possible, and bearing in mind the above comments, particular care should be taken to avoid any damage to the suspected prehistoric cairn (site 55), the Moorbottom Road farms, and the industrial remains at Cinder Hill.

6. RECOMMENDATIONS

As a responsible land-owning body, the Ministry of Defence have acknowledged the value of the archaeological potential of their holdings at Holcombe Moor in commissioning this LUAU study. However, this exercise is obviously only a first step in addressing the problems involved in managing a landscape rich with the evidence for mans' past activity. It is suggested that some or all of the following recommendations are instigated in order to ensure the understanding and preservation of this rich archaeological resource.

The aim of the LUAU survey was to identify archaeological sites within the designated area. The extent of the archaeology which has been identified suggests that considerably more information relevant to the study areas future management could be recovered on the use and development of the Holcombe Brook valley if several more detailed surveys, over limited areas, were to be undertaken.

Obvious choices for such additional work could include the following:

- A detailed field survey of the 'ribbon' of deserted tenement farms which follow Moorbottom Road, to record the *in-situ* physical remains of these buildings before any further deterioration occurs.

- Further field survey of the ridge and furrow and related field boundaries would determine the extent, type, and approximate dating of these features, and in combination with the available documentary and cartographic evidence, would allow for some tentative interpretation of the local agrarian economy, including reconstruction of the individual tenements.

- A new and accurate earthwork and fabric survey of the industrial remains at Cinder Hill, which would allow the various elements to be interpreted in the light of the available documentary evidence, and allow the identification of further related features. The minimum requirement for this work would entail a Level II, or preferably a Level III survey, of the site and it's immediate environs (LUAU 1995).

Following on from the above, it is suggested that some or all of the physical remains of the many ruined farmbuildings should be consolidated in-situ in order to forestall any further deterioration, and at such sites where public access is already possible via footpaths, this ought to be complimented by the placement on-site of interpretation panels to explain the original function and significance of such remains.

Similarly, efforts should be made to consolidate the complex of earthworks at Cinder Hill against any further natural erosion, and also a display board could be erected in order to explain the original functions of the surviving features, including a reconstruction drawing to indicate the early-nineteenth century appearance of the textile mill site.

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p22 Taylor's Tenement, Higher Ridge, Hamlet's Tenement
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p24 Holcome Head, Stanley Rake, Grainings, Holcome Hey (Lawr Brandwood)
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p26 Boardman's, Parks, Withins
p27 Clough Bottom, Hawkshaw, Lower Ash
p28 Higher Ash, Higher House, New Hoyle's
p29 Old Hoyle's, Old Meadows, Simon's, Hollingreave
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p32 Bromiley's, Croichlow

DDX/118/154/1 Assessment of Tottington lower end for Bury Church, nd

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DRM 1/98 Tithe Award and Apportionment, Tottington Lower End, 1842 [Negs 1584 and 1725]
Field Nos, which estate attached to, and use, for those not in cultivation in 1893 (i.e. at time of 1 edn, OS 1:2500):
m = meadow; p = pasture
Holcome Head, f96
1389a [building], barn listed under Nook, James ? Hampson, f87
1397 House, barn, cowhouse, yard garden and ?land
1398 Stands, m
1398a Plantation, wood
1399 Great meadow, m
1400 Paddock
1401 Red earth, m
1402 Three Closed Meadow, p
1403/4 Long Close, p
1405 New Close, p
1406 Calf Field, p
1407 Woodland & Brow, p
1408 Rough pasture, wood and p
1408a Plantation, wood
1409 Round Hill, wood and p
1410 Corn Bank, p
1411 Long Field, p
1412 Great Hey, p
1413 Little Hey, p
1414 Lamb Field, p
1414a Plantation
1415 Little Lamb Field, p
1416 ?Driving Lane
1428 [Cinder Hill Factory] Samuel Newton, 'Factory, Goits, Lodges etc.', f97
1429 [Bottoms] cottages, listed under Cinder Hill, f97

PUB 1/11 to 1/28 Tottington Lower End, rate books 1859-89

PUB 8/22 Valuation lists, Tottington Lower End, 1864

GAZETTEER OF SITES

Site No:	**1**	
Site type:	Weir	
NGR:	SD 76755 17051	
Height OD:	236m	
Landuse:	MOD Training Centre	
Topography:	Stream	
Vegetation:	Rough grassland	
Visited by:	Ian Miller and Jane Kenney	Date: 7/2/95

Section of the stream which has been canalised and the stream bed has been laid with large stone slabs to form a small weir.

Documentary evidence
Shown on 1910 OS 25" map as a weir.

Site no.:	**2**	
Site type:	Quarry	
NGR:	SD 76460 17001	
Height OD:	285m	
Landuse:	MOD Training Centre	
Topography:	Fell slope	
Vegetation:	Rough grassland	
Visited by:	Ian Miller and Jane Kenney	Date: 7/2/95

A large scoop quarried from the western fell side. The quarry has an opening *c*6m across and extends back into the slope for *c*3m. It is steep sided with a flat base, and there is some evidence of upcast at the quarry entrance.

Site no.:	**3**	
Site type:	Ridge and furrow	
NGR:	SD 76354 16971	
Height OD:	300m	
Landuse:	MOD Training Centre	
Topography:	Fell slope/moorland	
Vegetation:	Heather	
Visited by:	Ian Miller and Jane Kenney	Date: 7/2/95

Though ridge and furrow could be seen from a distance it was difficult to identify on the ground because of the tussocky grass. A small section that was identified was cut into very thin soil and may be drainage furrows or old afforestation ploughing.

Aerial photographic evidence
The aerial photographs show two patches of ridge and furrow, one orientated nearly north-south, and the other north-west to south-east. These are straight and narrow and respect existing field boundaries.

Site no.:	**4**	
Site type:	Enclosure/pond bay	
NGR:	SD 76697 17155	
Height OD:	254m	
Landuse:	MOD Training Centre	
Topography:	Valley bottom	
Vegetation:	Rough grassland	
Visited by:	Ian Miller and Jane Kenney	Date: 7/2/95

A semi-circular area of flat land bounded by a low earthwork bank. Set into the gentle slope above the main stream gully. Though a much slighter feature, its shape and size are very similar to the adjacent pond bay (feature 21), and feature 4 may have been an earlier pond bay.

Documentary evidence
Not shown on the OS 25" maps in either 1893 or 1910.

Site no.:	**5**	
Site type:	Pond/mill site	
Site name:	Bottoms	
NGR:	SD 76728 16977	
Height OD:	232m	
Landuse:	MOD Training Centre	
Topography:	Valley bottom	
Vegetation:	Grassland/scrub	
Visited by:	Ian Miller and Jane Kenney	Date: 7/2/95

A sub-rectangular area of flat land bounded by an earthwork bank on its eastern and southern sides. To the north and west the area is terraced into the western slope of the main stream gully. The banks are *c*0.75m high, and there is a ruined flagstone sluice in the south-eastern corner. The brief inspection failed to reveal any traces of the adjacent building. An embanked channel running north from the pond is the remains of a leat which fed it from the weir (feature 1) (Tyson 1989).

Documentary evidence
The 1893 and 1910 OS 25" maps show a rectangular earthwork feature in this location with a building referred to as "Bottoms" immediately to the south. The 1850 6" OS map also shows the Bottoms and a pond to the north of it, and it is mentioned in the 1794 survey and under the Cinder Hill Factory entry in the 1842 Tithe Award, f97. The Bottoms was a textile mill, probably constructed in the late eighteenth century, and the pond probably powered an overshot water wheel (Tyson 1989). See site 50 for further details on documentary sources.

Site no.:	**6**	
Site type:	Depression	
NGR:	SD 76666 16811	
Height OD:	224m	
Landuse:	MOD Training Centre	
Topography:	Valley bottom	
Vegetation:	Grass/scrub	
Visited by:	Ian Miller and Jane Kenney	Date: 7/2/95

A large, steep sided, circular depression, adjacent to the stream in the valley bottom. It is *c*5m in diameter and 1.75m deep. The bottom appeared to be rounded, though the shape of the feature is somewhat masked by vegetation. The depression has a narrow entrance in the south-eastern side.

Site no.:	**7**	
Site type:	Quarry	
NGR:	SD 76643 16788	
Height OD:	227m	
Landuse:	MOD Training Centre	
Topography:	Valley bottom	
Vegetation:	Grassland/scrub	
Visited by:	Ian Miller and Jane Kenney	Date: 7/2/95

A quarry hewn from the western side of the main stream gully. It is sub-rectangular in plan. The western side is *c*2.5m high, and it opens to the south-east. Another, smaller, quarry is located immediately to the south, and at a lower level. Both quarries are steep sided with flat bottoms. A small amount of upcast is visible below the entrance to the large quarry.

Site no.:	**8**	
Site type:	Culvert	
NGR:	SD 76651 16805	
Height OD:	224m	
Landuse:	MOD Training Centre	
Topography:	Valley bottom	
Vegetation:	Grassland/scrub	
Visited by:	Ian Miller and Jane Kenney	Date: 7/2/95

Stone-lined, underground culvert, oriented south-east to north-west. The culvert is rectangular in section, *c*0.5m by 0.4m. It presumably acted as a drain.

Site no.:	**9**	
Site type:	Channel	
NGR:	SD 76608 16776-76711 16961	
Height OD:	240-232m	
Landuse:	MOD Training Centre	
Topography:	Valley side	
Vegetation:	Grassland/scrub	
Visited by:	Ian Miller and Jane Kenney	Date: 7/2/95

A channel, *c*2m wide, terraced into the hill slope and defined by an earthen bank on its eastern side, runs roughly north-south from the south-western corner of the pond (feature 5). It follows the valley side above the western bank of the stream for *c*215m until it turns sharply south-east and drops steeply towards the stream.

Documentary evidence
This feature is probably the head race for the Cinder Hill Factory, and would presumably have fed an overshot wheel (Tyson 1989). It is not shown on either the 1893 or 1910 OS 25" maps.

Site no.:	**10**	
Site type:	Structure	
NGR:	SD 76608 16795	
Height OD:	235m	
Landuse:	MOD Training Centre	
Topography:	Valley side	
Vegetation:	Grassland/scrub	
Visited by:	Ian Miller and Jane Kenney	Date: 7/2/95

A rectilinear stone structure located adjacent to feature 9, on its western side. The structure is 4m in length and 1.5m wide, with an open eastern end and three stone steps in the western end. The south-facing internal elevation has a number of drainage pipes built into it, and the whole structure is terraced into the hill slope. Remnants of a corrugated iron roof are visible, suggesting the structure was formerly roofed.

Site no.:	**11**	
Site type:	Flight of steps	
NGR:	SD 76622 16782	
Height OD:	222-235m	
Landuse:	MOD Training Centre	
Topography:	Valley side	
Vegetation:	Scrub	
Visited by:	Ian Miller and Jane Kenney	Date: 7/2/95

A flight of large stone slab steps leading east from feature 10 down to the valley floor. Some of the flight has been disturbed, and much of it is obscured by vegetation. Near the foot of the steps, to the south, is a roughly rectangular platform, which appears to be the remains of a small structure.

Site no.:	**12**	
Site type:	Track and quarry	
NGR:	SD 76585 16693	
Height	OD: 219-233m	
Landuse:	MOD Training Centre	
Topography:	Valley side	
Vegetation:	Grassland	
Visited by:	Ian Miller and Jane Kenney	Date: 7/2/95

A straight section of a hollowway running south-west to north-east, presumably towards the Cinder Hill Factory. The hollowway is *c*1.5m wide and *c*0.75m deep. It is cut by a large quarry, which opens towards the stream, where upcast is evident near the quarry opening.

Site no.:	**13**	
Site type:	Field	
NGR:	SD 76833 17372	
Height OD:	257m	
Landuse:	MOD Training Centre	
Topography:	Valley bottom	
Vegetation:	Heather	
Visited by:	Ian Miller and Jane Kenney	Date: 8/2/95

Field bounded on the eastern side by a curving bank, composed of earth covering a stone core. To the north it is bounded by a ditch, with a short section of bank at its western end, and to the west the field is bounded by the stream. The field contains north-south orientated ridge and furrow, only a part of which can be easily detected. The ridges are fairly straight, and are *c*2.5m wide and less than 0.1m high. Those close to the stream have been truncated by landslips into the stream.

Site no.:	**14**
Site type:	Field
NGR:	SD 76830 17415
Height OD:	264m
Landuse:	MOD Training Centre
Topography:	Valley bottom
Vegetation:	Heather
Visited by:	Ian Miller and Jane Kenney Date: 8/2/95

Rectangular field defined by earth-covered, stone banks on its northern and eastern sides, a ditch to the south and the stream on the west. The field contains east-west aligned ridge and furrow, *c*2.5m wide and less than 0.1m high. The ridges are short, but have a slight sinusoidal curve.

Site no.:	**15**
Site type:	Field boundary
NGR:	SD 76892 17619-76993 17384
Height OD:	270-290m
Landuse:	MOD Training Centre
Topography:	Valley side
Vegetation:	Heather
Visited by:	Ian Miller and Jane Kenney Date: 8/2/95

Field boundary consisting of a stone core covered in earth, and standing less than 1m in height. It is orientated roughly north-south and runs along a contour on the eastern fell slope. To the west of feature 15 north-east to south-west aligned ridge and furrow can be seen when viewed from a distance, but it is barely detectable on the ground. The ridges appear to be narrow, but curving.

Site no.:	**16**
Site type:	Field boundary
NGR:	SD 76917 17542-76852 17482
Height OD:	265-280m
Landuse:	MOD Training Centre
Topography:	Valley side
Vegetation:	Heather
Visited by:	Ian Miller and Jane Kenney Date: 8/2/95

Field boundary with stone core covered in earth, which runs obliquely down the hill slope from feature 15 towards the stream (roughly north-west to south-east). It is cut halfway down its length by a depression, which appeared to be caused by a spring. The western end of feature 16 crosses, and blocks the entrance to a quarry (feature 17).

Site no.:	**17**
Site type:	Quarry
NGR:	SD 76862 17480
Height OD:	265m
Landuse:	MOD Training Centre
Topography:	Valley side
Vegetation:	Heather
Visited by:	Ian Miller and Jane Kenney Date: 8/2/95

A large scoop in the valley slope, which is probably a quarry. It opens to the west and is circular in plan, measuring *c*12m in diameter. The sides of the quarry slope fairly gently, and the bottom is fairly flat. There is some evidence of upcast below the quarry mouth. The quarry is bounded to the north by feature 16, which also largely blocks its mouth.

Site no.:	**18**
Site type:	Quarry
NGR:	SD 76990 17192
Height OD:	280m
Landuse:	Sheep pasture
Topography:	Fell slope
Vegetation:	Heather
Visited by:	Ian Miller and Jane Kenney Date: 8/2/95

A small, shallow scoop in a hillock overlooking Holcombe Head Farm. Ovoid in plan it opens to the west and measures *c*3m by 1.5m. The depression is steep sided, with a depth of less than 1m. Stones are exposed in the bottom of the depression.

Site no.:	**19**
Site type:	Farm buildings
Site name:	Holcombe Head Farm
NGR:	SD 76953 17128
Height OD:	254m
Landuse:	Sheep pasture
Topography:	Valley side
Vegetation:	Rough grassland
Visited by:	Ian Miller and Jane Kenney Date: 8/2/95

A building complex on the eastern slope of the valley, which includes several ruinous stone structures, and one timber-framed building. There are numerous large timber beams around the complex, some of which have been burnt. The timber-framed building is the only one still standing. It has stone foundations and the timber superstructure may represent the reuse of an earlier building. Some stone flag floors are visible, although vegetation obscures most details.

Documentary evidence
Shown on the 1850 6" and 1893 25" OS maps, and with additions on the 1910 map. It is included in the 1794 survey, p24, the 1842 Tithe Award, f96, and the rates are given for 1912/3 (BAS GL/36/4).

Site no.	**20**
Site type:	Field
NGR:	SD 76897 17364
Height OD:	266m
Landuse:	Sheep pasture
Topography:	Valley side
Vegetation:	Grassland
Visited by:	Ian Miller and Jane Kenney Date: 8/2/95

A field bounded by broad, shallow ditches on the southern and eastern sides. A steep natural escarpment defines the western side and an existing dry-stone wall may lie on the northern boundary. The field contains low, north-south aligned ridge and furrow. The ridges are straight and *c*2.5m wide, and 0.1m in height.

Site no.	**21**
Site type:	Pond bay
NGR:	SD 76645 17037
Height OD:	245m
Landuse:	Sheep pasture
Topography:	Terrace on fell slope
Vegetation:	Rough grassland
Visited by:	Ian Miller and Jane Kenney Date: 8/2/95

An oval pond formed by the creation of a pond bay, up to 1m in height externally. The pond has recently been extensively renovated, and is now known as Paddies Pond, but formerly it probably powered the mills at Bottoms and Cinder Hill Factory (Tyson 1989).

Documentary evidence
Shown on the 1893 and 1910 25", and 1850 6" OS maps.

Site no.	**22**
Site type:	Field boundary
NGR:	SD 76864 17177
Height OD:	262-249m
Landuse:	Sheep pasture
Topography:	Valley side
Vegetation:	Rough grassland
Visited by:	Ian Miller and Jane Kenney Date: 8/2/95

Low earthen bank running east-west down the hill slope. At its western end a shallow ditch runs parallel to it on the northern side. The bank is up to 0.2m high, but becomes very slight in places.

Site no.	**23**
Site type:	Field
NGR:	SD 76863 17080
Height OD:	258-240m
Landuse:	Sheep pasture
Topography:	Valley slope
Vegetation:	Rough grassland
Visited by:	Ian Miller and Jane Kenney Date: 8/2/95

Field defined on northern side by a broad shallow ditch, *c*2m wide, with a low bank to its north. At its western end the ditch turns southwards, and though it is less well defined, seems to form the western boundary to the field. A short section of an east-west gully may indicate the southern boundary of the field. No ridge and furrow was identified in this area, and although aerial photographs show rectilinear features here none were identified on the ground.

Site no.	**24**
Site type:	Farm buildings
Site name:	Cinder Hill Farm
NGR:	SD 76900 16978
Height OD:	250m
Landuse:	Sheep pasture
Topography:	Valley side
Vegetation:	Grassland

Visited by: Ian Miller and Jane Kenney Date: 8/2/95

A sunken rectangular feature, 1m deep, with stone revetting walls. It has an opening in the western wall. There are the remains of other ruinous stone structures immediately to the south. Some timber beams can be seen.

Documentary evidence
These features are the remains of Cinder Hill Farm, as shown on the 1893 and 1910 25", and 1850 6" OS maps. It is included in the 1794 survey, p23, as "Sinder Hill", and the rates for 1912/13 are given (BAS GL/36/4). Dowsett (1901, 86-7) mentions the presence of cinders and forge waste near the farm in the early nineteenth century, which led to the suggestion that there had been a bloomery on the site. There was iron working in Tottington manor in the medieval and Tudor periods, but there is little evidence to date the Cinder Hill Farm workings firmly(Tyson 1989).
Summary of a detailed documentary survey carried out by N Tyson on Cinder Hill (Tyson 1989):
In 1688, Thomas Ainsworth, whose family had been resident in Holcombe since the fifteenth century, was sub-tenant at Cinder Hill, where the tenement (literally 'holding', but generally a subdivision of a house at this date) comprised:

> 'a messuage [dwelling], other buildings, and 12 acres of ancient copyhold land' (LRO DDHcl 3/202)

There is evidence, from a formerly existing date-stone inscribed 1715 (Rooney 1947, 28), for renewed occupancy, by the Brandwood family, at Holcombe Hey Fold and Cinder Hill, but there are no associated references concerning the cutler trade, or smelting.
There is a small amount of *Documentary evidence* for iron working in Rossendale for the thirteenth century, but none between the fourteenth and sixteenth centuries (Tupling 1927, 29).
An entry in the de Lacy *compoti* for 1295-6:

> '... nothing for oaks, *Hucetum* [bedding of dried leaves], and ore this year...' (Lyons 1884, 120)

implies that ore had previously been obtained for sale there. The earliest positive reference is in the 1305-6 *compoti* where:

> 'Brushwood/firewood for 1 forge for 16 weeks ... 16s 8d' is recorded (Lyons 1884, 177).

Kerr identified two other bloomery sites in Rossendale as belonging to the Ashworth family of cutlers during the Tudor period.

Site no.	**25**
Site type:	Farm building
Site name:	Cinder Hill Farm
NGR:	SD 76865 16928
Height OD:	245m
Landuse:	Sheep pasture
Topography:	Valley slope
Vegetation:	Rough grassland
Visited by:	Ian Miller and Jane Kenney Date: 8/2/95

Small rectangular stone structure, measuring 4m by 1m. Open on the western side and largely obscured by vegetation.

Documentary evidence
The 1910 25" map shows this to be the remains of outbuildings associated with Cinder Hill Farm.

Site no.	**26**
Site type:	Field
NGR:	SD 76798 16850
Height OD:	242m
Landuse:	Sheep pasture
Topography:	Terrace
Vegetation:	Grassland
Visited by:	Ian Miller and Jane Kenney Date: 8/2/95

Area of ridge and furrow, orientated east-west, on a terrace on the eastern side of the stream. The ridges are straight and are *c*4m wide and less than 0.1m high.

Site no.	**27**
Site type:	Field
NGR:	SD 76909 16730
Height OD:	245m
Landuse:	Sheep pasture
Topography:	Valley side
Vegetation:	Grassland
Visited by:	Ian Miller and Jane Kenney Date: 8/2/95

An area of north-south orientated ridge and furrow running roughly along the contours of a steep hill slope. The ridges are relatively straight and are *c*2.5m wide and *c*0.2m high. It is unusual for ridge and furrow to run along the contours of a steep slope, but the very regular nature of the ridges indicate that they are the result of a ploughing regime, rather than soil slippage.

Site no.	**28**
Site type:	Farm buildings
Site name:	Nook Farm
NGR:	SD 77039 16995
Height OD:	276m
Landuse:	Sheep pasture
Topography:	Valley side
Vegetation:	Grassland
Visited by:	Ian Miller and Jane Kenney Date: 8/2/95

Several rectilinear, ruinous stone structures, none surviving to a height in excess of 1m. Several timber beams are evident.

Documentary evidence
Shown on 1893 and 1910 25", and 1850 6" OS maps. Included in the 1794 survey, p23, and the 1842 Tithe Award, f87.

Site no.	**29**
Site type:	Farm building
NGR:	SD 77051 16887
Height OD:	280m
Landuse:	Sheep pasture
Topography:	Valley side
Vegetation:	Grassland
Visited by:	Ian Miller and Jane Kenney Date: 8/2/95

A ruinous rectangular stone structure, measuring *c*10m by 5m. The upstanding remains are not higher than 0.75m. A number of timber beams are evident amongst the stone rubble. The structure has two adjacent entrances in the west-facing wall. Other buildings along the track between Nook Farm and Hamlets Farm are largely constructed of concrete, and are therefore relatively modern.

Documentary evidence
Shown on the 1893 25" OS map and as a ruin on the 1910 map. It is not clear to which farm it belonged.

Site no.	**30**	
Site type:	Farm buildings	
Site name:	Hamlets Farm	
NGR:	SD 77067 16715	
Height OD:	280m	
Landuse:	Sheep pasture	
Topography:	Valley side	
Vegetation:	Grassland	
Visited by:	Ian Miller and Jane Kenney	Date: 8/2/95

Five ruinous stone-built rectangular structures. One large building in the northern part of the complex, which has walls standing to a height of *c*1m and internal partitions, appears to be the farmhouse. The other buildings are all small outbuildings except for a large square structure to the south of the farmhouse, which has walls standing to a maximum height of *c*2m.

Documentary evidence
Shown on the 1893 and 1910 25", and 1850 6" OS maps. Included in 1794 survey, p22, as "Hamlet's Tenement". The building to the south of the main complex is a separate farm, called "West Mount" (OS 1982).

Site no.	**31**	
Site type:	Structure	
NGR:	SD 76728 17349	
Height OD:	257m	
Landuse:	MOD Training Centre	
Topography:	Valley side	
Vegetation:	Grassland	
Visited by:	Ian Miller and Jane Kenney	Date: 9/2/95

A small, rectangular structure of dry-stone construction set into the western side of the valley. The rear (western) wall is *c*1.5m high and appears to function as a retaining wall. The front wall is less than 0.5m high, with the northern and southern walls graduated between the two. The structure measures *c*2m by 1.5m, with the long axis orientated east-west. There is some stone tumble adjacent to the eastern wall, but no evidence of a roof.

Documentary evidence
Not shown on the OS maps.

Site no.	**32**	
Site type:	Structure	
NGR:	SD 76774 17516	
Height OD:	264m	
Landuse:	MOD Training Centre	
Topography:	Valley side	
Vegetation:	Rough grassland	
Visited by:	Ian Miller and Jane Kenney	Date: 9/2/95

A low rectangular platform of dry-stone construction, built into the fell slope. It survives to a height of less than 0.5m, and measures *c*1.75m by 2m, although its precise extent is obscured by vegetation.

Documentary evidence
Not shown on the OS maps.

Site no.	**33**	
Site type:	Field	
NGR:	SD 76791 17698	
Height OD:	297m	
Landuse:	MOD Training Centre	
Topography:	Valley side	
Vegetation:	Rough grassland	
Visited by:	Ian Miller and Jane Kenney	Date: 9/2/95

Earth-covered stone bank running north-west to south-east, with a slight curve. To the north of this boundary ridge and furrow runs parallel to it. The ridges also curve slightly, and are 2.5m wide and *c*0.2m high. To the north of a small stream channel the ridges are straight and follow a slightly different alignment, running west-north-west to east-south-east; these are *c*1.7m wide. In both cases the ridges end just above the main stream, after crossing some particularly steep slopes. A small patch of straight, narrow ridge and furrow could be seen on the opposite side of the stream, when viewed from a distance, though little could be detected on the ground.

Site no.	**34**	
Site type:	Fields	
NGR:	SD 76590 16176	
Height OD:	220m	
Landuse:	MOD Training Centre	
Topography:	Valley plain	
Vegetation:	Rough grassland	
Visited by:	Ian Miller and Jane Kenney	Date: 9/2/95

An area of ridge and furrow running nearly north-south on the valley plain. The ridges are straight and are *c*2.5m wide and *c*0.2m high. Immediately to the south is an area of ridge and furrow running east-west. The remains of associated field boundaries are visible as low banks.

Site no.	**35**
Site type:	Field
NGR:	SD 76658 17655
Height OD:	309m
Landuse:	MOD Training Centre
Topography:	Valley side
Vegetation:	Rough grassland
Visited by:	Ian Miller and Jane Kenney Date: 9/2/95

Field defined to the south-east and south-west by an earth-covered stone bank and the north by an existing dry-stone wall. The northern end of the south-western boundary is composed of large stone slabs, *c*1m high, placed on their edges to form a monolithic wall. Within the field is slight, straight ridge and furrow, *c*2m wide, running north-west to south-east down the slope.

Aerial photographic evidence
The photographs suggest that the south-western boundary continued down to the stream, and there was a small structure on its western side.

Site no.	**36**
Site type:	Field boundary
NGR:	SD 76493 17479-76656 17296
Height OD:	323-277m
Landuse:	MOD Training Centre
Topography:	Valley slope
Vegetation:	Rough grassland
Visited by:	Ian Miller and Jane Kenney Date: 9/2/95

Earth-covered stone bank running nearly west-east down the hill slope. Near its eastern end is the start of a similar bank, which runs south until it reaches the head of a small stream.

Aerial photographic evidence
The photographs show various features in this area. Field boundaries and a small patch of what appears to be ridge and furrow can be seen, as well as less regular features, which may be natural. Only the two boundaries described above were identified on the ground.

Site no.	**37**
Site type:	Field boundary
NGR:	SD 76472 17268
Height OD:	305-288m
Landuse:	MOD Training Centre
Topography:	Valley side
Vegetation:	Rough grassland
Visited by:	Ian Miller and Jane Kenney Date: 9/2/95

Earth-covered stone bank running roughly north-west to south-east, down the hill slope. At its north-western end the bank turns 90 degrees and continues to a similar bank, which is marked as a boundary on the 1:10,000 OS map.

Site no.	**38**
Site type:	Farm buildings
Site name:	Stanley Rake
NGR:	SD 76351 17294
Height OD:	320m
Landuse:	MOD Training Centre
Topography:	Valley side
Vegetation:	Rough grassland
Visited by:	Ian Miller and Jane Kenney Date: 9/2/95

A large ruinous structure of dry-stone construction. It is rectangular in plan with several internal dividing walls less than 1m in height. The walls are substantial, up to 0.75m wide. The long axis is aligned east-west along the contours of the slope. There is some evidence of timber roof beams. A trackway to the north leads across the slope behind the building.

Documentary evidence
Shown in use on the 1850 6", and 1893 25" OS maps, and as a ruin on the 1910 map. Included in 1794 survey, p24.

Site no.	**39**
Site type:	Field boundaries
NGR:	SD 76443 17191
Height OD:	300m
Landuse:	MOD Training Centre
Topography:	Terrace
Vegetation:	Heather
Visited by:	Ian Miller and Jane Kenney Date: 9/2/95

Short stretches of field boundaries composed of earth-covered stone banks. Traces of ridge and furrow appear in this area, but are difficult to identify under the tussocky grass. The ridges are straight and *c*2.5m wide.

Site no.	**40**
Site type:	Ridge and furrow
NGR:	SD 76443 15965
Height OD:	210m
Landuse:	MOD Training Centre
Topography:	Valley plain
Vegetation:	Heather
Visited by:	Ian Miller and Jane Kenney Date: 9/2/95

An area of straight, narrow ridge and furrow running north-east to south-west on the plain in the valley bottom. The ridges are *c*2m wide and *c*0.1m high.

Aerial photographic evidence
The photographs show irregular features in the southern end of this field which are probably natural. To the east is an area of straight, narrow ridge and furrow, which was not identified on the ground.

Site no.	**41**
Site type:	Farm site
Site name:	Old Meadows
NGR:	SD 76553 16309
Height OD:	228m
Landuse:	MOD Training Centre
Topography:	Valley plain
Vegetation:	Grassland
Visited by:	Ian Miller and Jane Kenney Date: 9/2/95

A square tank, measuring *c*3m by 3m, set into the northern side of an artificial bank. The tank is lined with wooden planks and has large wooden posts at each corner. When inspected the tank held at least 0.2m of water.

Aerial photographic evidence
To the south and east of the tank straight, narrow ridge and furrow can be seen on the aerial photographs, and can be faintly seen on the ground.

Documentary evidence
The 1893 and 1910 25", and 1850 6" OS maps show a building called Old Meadows in this location, and the tank may be associated with this, most of the farm having been demolished for the rifle range. Old Meadows is included in the 1794 survey, p29.

Site no.	**42**
Site type:	Quarry
NGR:	SD 76834 16300
Height OD:	220m
Landuse:	Sheep pasture
Topography:	Valley plain
Vegetation:	Grassland
Visited by:	Ian Miller and Jane Kenney Date: 9/2/95

A possible quarry located on the valley plain. It is circular in plan (*c*12m in diameter), with gently sloping sides and it opens to the south.

Site no.:	**43**
Site type:	Farm buildings
Site name:	Higher and Middle Ridge
NGR:	SD 76943 16288
Height OD:	234m
Landuse:	Sheep pasture
Topography:	Valley plain
Vegetation:	Grassland
Visited by:	Ian Miller and Jane Kenney Date: 9/2/95

Two ruinous, rectangular stone structures. The northern one is of cemented stone construction, with several internal dividing walls, which survive to a height of *c*1m. Some of the exterior elevations are rendered, and there is a large amount of stone rubble and timber beams. A trackway leads to it from the west and there are the remains of a large gatepost. The southern structure is of similar construction and in a similar state of preservation, but it is smaller in size. It has a track leading to it, and a large opening in the western side of the building suggests the existence of a barn.

Documentary evidence
On the modern OS map the northern building is called "Higher Ridge" and the southern one, "Middle Ridge". Although both are shown on the 1893 and 1910 25", and 1850 6" OS maps, only Higher Ridge is named. Higher Ridge is included in 1794 survey, p22.

Site no.	**44**	
Site type:	Farm buildings	
Site name:	Lower Ridge	
NGR:	SD 77120 15791	
Height OD:	212m	
Landuse:	MOD Training Centre	
Topography:	Ridge between streams	
Vegetation:	Rough grassland	
Visited by:	Ian Miller and Jane Kenney	Date: 9/2/95

A ruinous, rectangular stone structure, largely obscured by vegetation, including trees. The walls survive to a maximum height of 1.5m, and there is considerable stone rubble.

Documentary evidence
Shown on 1893 and 1910 25", and 1850 6" OS maps.

Site no.	**45**	
Site type:	Farm buildings	
Site name:	Clarke's Tenement Farm	
NGR:	SD 77220 16213	
Height OD:	280m	
Landuse:	Sheep pasture	
Topography:	Valley side	
Vegetation:	Grassland	
Visited by:	Ian Miller and Jane Kenney	Date: 10/2/95

Four ruinous, stone structures with walls standing to a height of 2m. There is considerable stone rubble and some timber beams. Downslope, to the west, is a sub-rectangular feature composed of earth-covered stone tumble. It measures *c*7m by 5m, and is less than 1m high. The eastern side is terraced into the slope, and there is a possible entrance on the northern side. This is perhaps a former sheep shelter. To the north-west of the farm building is a small patch of ridge and furrow, 2.5m wide and 0.2m high.

Documentary evidence
Shown on the 1893 and 1910 25", and 1850 6" OS maps as Clarke's Farm; the sheep fold is not shown.

Site no.	**46**	
Site type:	Farm building	
Site name:	Taylor's Farm	
NGR:	SD 77121 16519	
Height OD:	285m	
Landuse:	Sheep pasture	
Topography:	Valley side	
Vegetation:	Grassland	
Visited by:	Ian Miller and Jane Kenney	Date: 10/2/95

A ruinous farm comprising one large rectangular structure and a small square structure immediately to the south. The larger building is constructed of cemented stone with walls surviving to a height of 1.5m. The long axis is orientated north-south, and there are several internal dividing walls. The smaller structure is of brick construction, and is probably a later addition. Downslope, to the west, is a spring with a square brick and concrete wellhead structure, as well as stones indicating the presence of earlier structures.

Documentary evidence
Shown on the 1850 6", and 1910 25" OS map. Included in the 1794 survey, p22, as Taylor's Tenement.

Site no.	**47**	
Site type:	Field system	
NGR:	SD 76779 16550	
Height OD:	235m	
Landuse:	MOD Training Centre	
Topography:	Valley plain	
Vegetation:	Rough grassland	
Visited by:	Ian Miller and Jane Kenney	Date: 10/2/95

Three fields of straight, narrow ridge and furrow, all ridges *c*2.5m in width and *c*0.1m high. In the northern field the ridges run north-east to south-west, in the middle one they run east-north-east to west-south-west, and the southern ridges run north-west to south-east. The ridges generally relate to existing boundaries.

Site no.	**48**	
Site type:	Farm site	
Site name:	Stonerooks	
NGR:	SD 76479 16615	
Height OD:	265m	
Landuse:	MOD Training Centre	
Topography:	Valley plain	
Vegetation:	Grass/heather	
Visited by:	Ian Miller and Jane Kenney	Date: 9/2/95

Area landscaped for rifle range, no trace of the farm buildings remain.

Documentary evidence
Shown on 1893 and 1910 25", and 1850 6" OS maps. Rates on this property given for 1912/3 (BAS GL/36/4).

Site no.	**49**	
Site type:	Farm site	
Site name:	Further Meadows	
NGR:	SD 76521 16898	
Height OD:	275m	
Landuse:	MOD Training Centre	
Topography:	Valley plain	
Vegetation:	Rough grassland	
Visited by:	Ian Miller and Jane Kenney	Date: 9/2/95

No trace could be found of the farm buildings and as the site is on the edge of the rifle range it was probably completely demolished during the construction of the range.

Documentary evidence
Shown on the 1893 and 1910 25", and 1850 6" OS maps.

Site no.	**50**	
Site type:	Mill site	
Site name:	Cinder Hill Factory	
NGR:	SD 76630 16747	
Height OD:	215m	
Landuse:	MOD Training Centre	
Topography:	Valley bottom	
Vegetation:	Grassland/scrub	
Visited by:	Ian Miller and Jane Kenney	Date: 9/2/95

Little can be seen of the factory building itself, though other features probably associated with it are listed above, most notably the head race (feature 9).

Documentary evidence
The factory is shown as a large building on the 1893 and 1910 25" OS maps, but is not named. Cinder Hill Factory is mentioned in the 1842 Tithe Award, f97, and shown on the 1850 OS 6" map. The factory was constructed, to spin cotton, along with its head race, shortly after 1823, and it supplemented the mill already upstream (feature 5). The mill was converted from water power to steam by 1859, changed to woollen weaving and was abandoned in 1868. The mill was briefly reused between 1871 and 1875 as a bleach works and finally closed in 1876 (Tyson 1989). The site of a possible bloomery mentioned by Dowsett (1901, 86-7) is located near Cinder Hill Farm and is not associated with the textile mills in the valley bottom.

In 1794 the Cinder Hill premises, tenanted by Lawrence Brandwood, included an engine house (LRO DDX/118/139/29, parcel 26). Tyson (1989, 2) considers that the mill pond and upper leat at Cinder Hill (feature 05) date from the Brandwood tenancy, being upgraded a century later by the Parker family. In 1767 John Brandwood, fustian weaver, took on the eight-year-old James Shuttleworth as an apprentice (Bury Reference Lib L21/3/22).The detailed 1794 survey refers also to five other engine houses, six factories (including Cinder Hill), two walk mills, three engine buildings, and the mill complex at Berwood Lee. The 1794 survey stated that:

> 'All mills, factory and engine buildings are valued ¼ higher than common cottage buildings of the same size, because of the advantage of the water which works the machinery.'

The rateable value of the Cinder Hill engine house was £4 out of £19 for the whole tenement.

Between 1802 and 1811, the Cinder Hill engine house was in the hands of a cotton carder, John Pennington, and from then till 1823 by his relation Thomas Pennington. The adjacent farm was not always in the same tenancy during this period. In 1823 the entire tenement passed to John Parker who converted the engine house to cottages (named 'Bottoms'), and extended the mill leat for *c*200m downstream to a new cotton factory. Access rights were negotiated across Holcombe Hey Fold estate (LRO DDHcl Lib QQ; Tyson 1989, 2-3). The factory remained in Parker hands until 1851, and cart roads and embankments were improved during this period. Thomas Ogden was the occupant by 1859 and the mill had been converted to steam, and changed from cotton spinning to wool weaving. As a result of the cotton famine, the factory closed in 1868.

Parker's mill at Cinder Hill is described by Tyson (1989, 3) from primary documents (LRO PUB 8/22), but the detail is unnecessary here. The building was of three stories with an area of 731 sq yds, further extended in 1864.

The mill was used briefly as a bleach works between 1871 and 1875, closing the following year (LRO PUB 11/1-28). By the time the first edition of the OS 1:2500 map was published in 1893, the factory was entirely disused.

Site no.	**51**
Site type:	Farm site
Site name:	Brashwood
NGR:	SD 76597 17110
Height OD:	280m
Landuse:	MOD Training Centre
Topography:	Valley bottom
Vegetation:	Rough grassland
Visited by:	Ian Miller and Jane Kenney Date: 9/2/95

Nothing could be seen of the farm buildings, which were presumably completely demolished when the range was constructed.

Documentary evidence
Appears as small structure on the 1850 6" OS map.

Site no.	**52**
Site type:	Farm site
Site name:	Old Hoyles
NGR:	SD 76456 16046
Height OD:	215m
Landuse:	MOD Training Centre
Topography:	Valley plain
Vegetation:	Grassland
Visited by:	Ian Miller and Jane Kenney Date: 9/2/95

No traces of farm buildings were visible on the ground, presumably having been removed for construction of the MOD range.

Documentary evidence
Shown on the 1893 and 1910 25", and 1850 6" OS maps. Included in the 1794 survey, p29.

Site no.	**53**
Site type:	Flint scatters
Site name:	Bull Hill
NGR:	SD 76780 18730
Height OD:	418m
Landuse:	Sheep pasture
Topography:	Upland plateau
Vegetation:	Heather
Visited by:	Mark Fletcher

The peat-covered flanks of Bull Hill have been eroded away around this location to expose the underlying weathered bedrock. Presumably the flints were recovered from this interface. A cursory inspection did not reveal any new artefacts.

Documentary evidence
"On Bull Hill are remains of an early neolithic floor" (VCH, 144). Various flint flakes and tools were found on Bull Hill in 1886, including a scraper, one lozenge-shaped and a barb and tanged arrowhead. Fifty or sixty flakes and a core were found at one spot in 1877, and the summit of

Bull Hill still yields occasional finds as the peat on the hill top is eroding. Most of the pieces described appear to be Neolithic or Bronze Age, but apparently some Mesolithic flints have also been found (Lancashire SMR, PRN 1074).

Site no.	**54**
Site type:	Boundary
Site name:	"Old Gray Wall"
NGR:	SD 7709 1769 to 7721 1729
Height OD:	375m
Landuse:	Sheep pasture
Topography:	Edge of upland plateau
Vegetation:	Heather
Visited by:	Ian Miller and Jane Kenney Date: 9/2/95

No trace of this feature could be identified at the location indicated on the map, and it is probably buried under peat. Further north, by the path leading to the Pilgrims' Cross, is a slight bank which may represent the continuation of this boundary.

Documentary evidence
Shown on the 1850 OS 6" map running roughly north-west to south-east. Contrary to the note in Dowsett (1901, 40), the map shows the wall turns a right angle at its southern end to run roughly south-west. Dowsett (1901, 40) reports that only the lowest courses of the wall were visible.

Site no.	**55**
Site type:	Site of cross/cairn
Site name:	Pilgrims or Whewell Cross
NGR:	SD 77170 18190
Height OD:	368m
Landuse:	Sheep pasture
Topography:	Upland plateau
Vegetation:	Heather
Visited by:	Ian Miller and Jane Kenney Date: 9/2/95

A massive rectangular monolith of gritstone, set upon a masonry base, now marks the site of the Pilgrims' Cross. Around the base of this marker are the much denuded remains of what appears to be a large cairn, possibly of late prehistoric origin. This measured *c*10m in diameter, with a maximum height of *c*0.5m, and is not now clearly discernible, as it has been badly eroded by visitors to the Pilgrims' Cross. The cairn was first identified by members of the Bury Archaeological Group.

Documentary evidence
The Pilgrims' Cross is mentioned in 1176, in the charter between Roger de Montbegon and Monk Bretton Priory, and its base, with a socket for the cross, survived until 1901. In 1902 a memorial stone was set up on the site (Lancashire SMR , PRN 1073; Dowsett 1902, 107-129).

Site no.	**56**
Site type:	Coal mine
NGR:	SD 7648 1829
Height OD:	373m
Landuse:	Sheep pasture
Topography:	Upland plateau
Vegetation:	Heather
Visited by:	Mark Fletcher Date: 9/2/95

The choked-up mouth of a mine adit is visible on the west bank of the Red Brook, almost certainly utilised to exploit the Sand Rock Mine seam, which dips gently to the north-east, a factor which would obviate pumping problems or coal transport to the surface.

Documentary evidence
The Sand Rock Mine seam is indicated upon the 1867 Geological Survey.

Site no.:	**56A**
Site type:	Coal mine related structure
NGR:	SD76501831
Height OD:	373m
Landuse:	Sheep pasture
Topography:	Upland plateau
Vegetation:	Heather
Visited by:	Mark Fletcher Date: 9/2/95

On the east bank of the Red Brook, directly opposite to feature 56, is a small stone-built structure, comprising a narrow stone-lined trough, *c*1m below ground level, which runs for *c*9m eastwards from the stream, into a square stone lined chamber, measuring *c*3m by 3m. The whole of this is ruined, and appears to be of drystone walling, using local gritstone as a building material. it is clearly related to the adit (56) on the opposite side of the stream, but the function is unknown. To the south are several banks of tipped spoil, now overgrown, and it is suggested that these may well represent spoil from the mine.

Site no.	**57**
Site type:	Pond
GMAU no.:	2
NGR:	SD 7681 1586
Height OD:	220m
Landuse:	Sheep pasture
Topography:	Undulating lowland
Vegetation:	Grassland
Visited by:	GMAU Date: March 1992

'Pond, may be a water-filled marl pit'.

Documentary evidence
Shown on 1850 6" OS map.

Site no.	**58**
Site type:	Depression
GMAU no.:	3
NGR:	SD 7697 1579
Height OD:	215m
Landuse:	Sheep pasture
Topography:	Undulating lowland
Vegetation:	Grassland
Visited by:	GMAU Date: March 1992

'A grassed over depression in the corner of the field. May be the result of clay extraction.'

Site no.	**59**
Site type:	Lane
GMAU no.:	4
NGR:	SD 7687 1582
Height OD:	215m
Landuse:	Sheep pasture
Topography:	Undulating lowland
Vegetation:	Grassland
Visited by:	GMAU Date: March 1992

'A sunken lane, *c*4m wide'.

Documentary evidence
Appears on the 1786 map.

Site no.	**60**
Site type:	Pond
GMAU no.:	5
NGR:	SD 7687 1573
Height OD:	215m
Landuse:	Sheep pasture
Topography:	Undulating lowland
Vegetation:	Grassland
Visited by:	GMAU Date: March 1992

'Pond, possible water-filled marl pit'.

Site no.	**61**
Site type:	Depression
GMAU no.:	6
NGR:	SD 7696 1570
Height OD:	210m
Landuse:	Sheep pasture
Topography:	Undulating lowland
Vegetation:	Grassland
Visited by:	GMAU Date: March 1992

'A large grassed over depression, which may be the result of clay extraction'.

Site no.	**62**
Site type:	Farm
Site name:	Higher Spendleach
GMAU no.:	7
NGR:	SD 7655 1544
Height OD:	200m
Landuse:	Sheep pasture
Topography:	Undulating lowland
Vegetation:	Grassland
Visited by:	GMAU Date: March 1992

'

There are no visible remains of the building apart from stone debris which may be related to it'.

Aerial photographic evidence
To the north and west of the site of Higher Spendleach traces of ridge and furrow and possible field boundaries can be seen in the aerial photographs, though little is evident on the ground.

Documentary evidence
Shown in 1786, and as a rectangular structure with a porch on the south side on the 1842 Tithe Map. The site is vacant on the 1894 map.

Site no.	**63**
Site type:	Farm
Site name:	Spenleach (formerly Lower Spenleach)
GMAU no.:	8
NGR:	SD 7660 1535
Height OD:	195m
Landuse:	Sheep pasture
Topography:	Undulating lowland
Vegetation:	Grassland
Visited by:	GMAU Date: March 1992

'The site is now vacant, but the foundations of some of the structures are still visible. Much of the debris is machined brick, but there are some stone remains'.

Documentary evidence
This appears on the 1786 map and as an L-shaped structure and two rectangular structures on the 1842 Tithe Map. Three structures are shown on the 1894 map.

Site no.	**64**
Site type:	Farm
Site name:	Gibraltar
GMAU no.:	9
NGR:	SD 7675 1547
Height OD:	195m
Landuse:	Sheep pasture
Topography:	Undulating lowland
Vegetation:	Grassland
Visited by:	GMAU Date: March 1992

'The site is now vacant. Some stone debris and what appears to be a house platform remain'.

Aerial photographic evidence
Around the site of Gibraltar Farm traces of ridge and furrow and possible field boundaries can be seen in the aerial photographs, though little is evident on the ground.

Documentary evidence
The 1842 Tithe Map shows two rectangular structures described as farmhouse, barn and cowhouse. Shown on 1893 25" OS map, but not on 1910 map.

Site no.	**65**
Site type:	Lane
Site name:	Spenleach Lane
GMAU no.:	11
NGR:	SD 7664 1526
Height OD:	175-200m
Landuse:	Sheep pasture
Topography:	Undulating lowland
Vegetation:	Grassland
Visited by:	GMAU Date: March 1992

Documentary evidence
Appears on the 1786 map.

Site no.	**66**
Site type:	Depression
GMAU no.:	12
NGR:	SD 7663 1519
Height OD:	195m
Landuse:	Sheep pasture
Topography:	Undulating lowland
Vegetation:	Grassland
Visited by:	GMAU Date: March 1992

'A large overgrown depression which may have been produced as a result of clay extraction'.

Figure 5

Figure 4

Figure 3

Figure 2

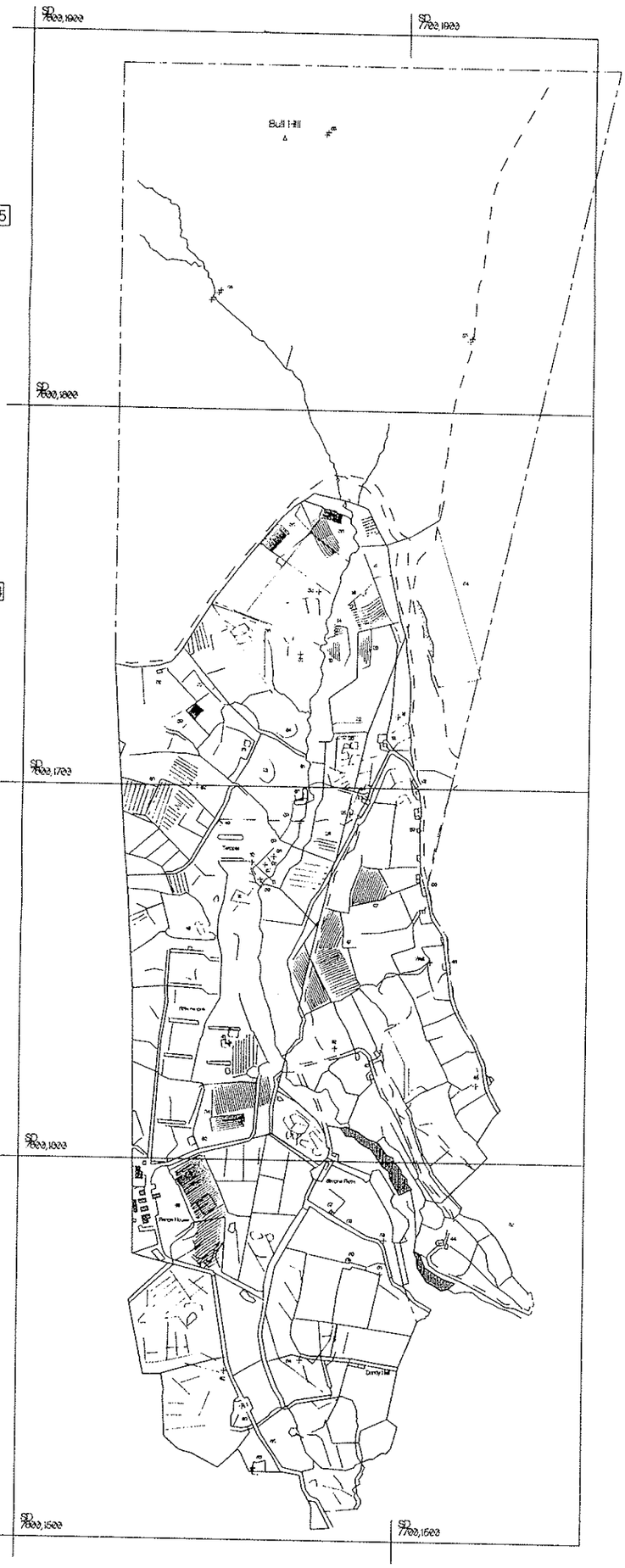
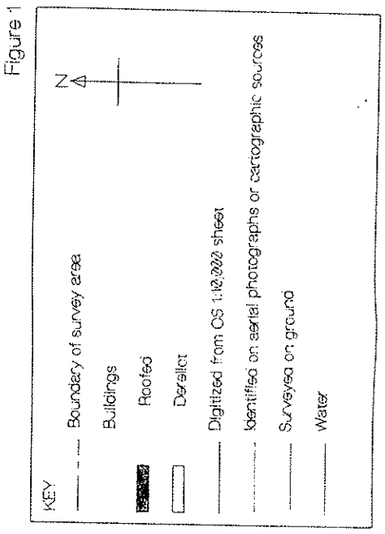


Figure 1



HOLCOMBE MOOR TRAINING AREA	PLAN NAME Figure 1	L.U.A.U. 1995 Commissioned and funded by: Ministry of Defence	300m	DRAWN BY JK	SCALE
				DATE 5-1995	SHEET NO.
				LANCASTER UNIVERSITY ARCHAEOLOGICAL UNIT	

SD
7600,1600

SD
7600,1500

SD
7700,1500

PROJECT

DRAWING ARCHIVE No.

SITE PLAN/SECTION

Figure 2

KEY

- Boundary of survey area
- Buildings
  - Roofed
  - Derelict
- Digitized from OS 1:10000 sheet
- Identified on aerial photographs or cartographic sources
- Surveyed on ground
- Water

Contour Interval is 5m

N

LANCASTER UNIVERSITY ARCHAEOLOGICAL UNIT	PROJECT HOLCOMBE MOOR TRAINING AREA	PLAN Figure 2	DRAWN BY JK
		SCALE 200m	DATE 5-1995

SD
7600,1700

SD
7600,1600

PROJECT

DRAWING ARCHIVE No.

SITE PLAN/SECTION

Figure 3

KEY

- Boundary of survey area
- Buildings
- Roofed
- Derelict
- Digitized from OS 1:2500 sheet
- Identified on aerial photographs or cartographic sources
- Surveyed on ground
- Water

Contour interval is 5m

N

LANCASTER UNIVERSITY ARCHAEOLOGICAL UNIT	PROJECT HOLCOMBE MOOR TRAINING AREA	PLAN Figure 3	DRAWN BY JK
		SCALE 200m	DATE 5-1995

PROJECT

DRAWING ARCHIVE No.

SITE PLAN/SECTION

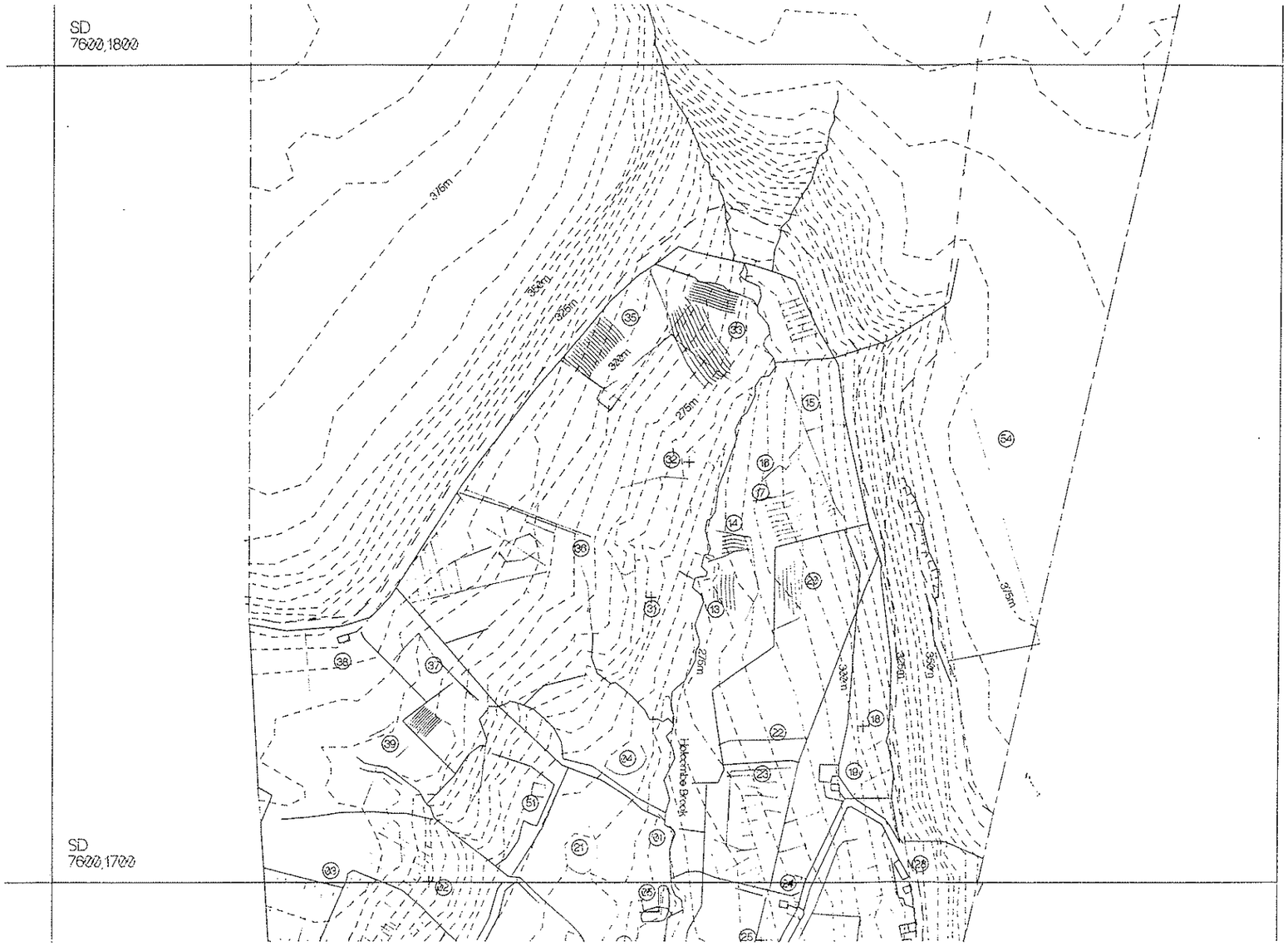


Figure 4

KEY

N

Boundary of survey area

Buildings

Roofed

Derelict

Digitized from OS 1:10,000 sheet

Identified on aerial photographs or cartographic sources

Surveyed on ground

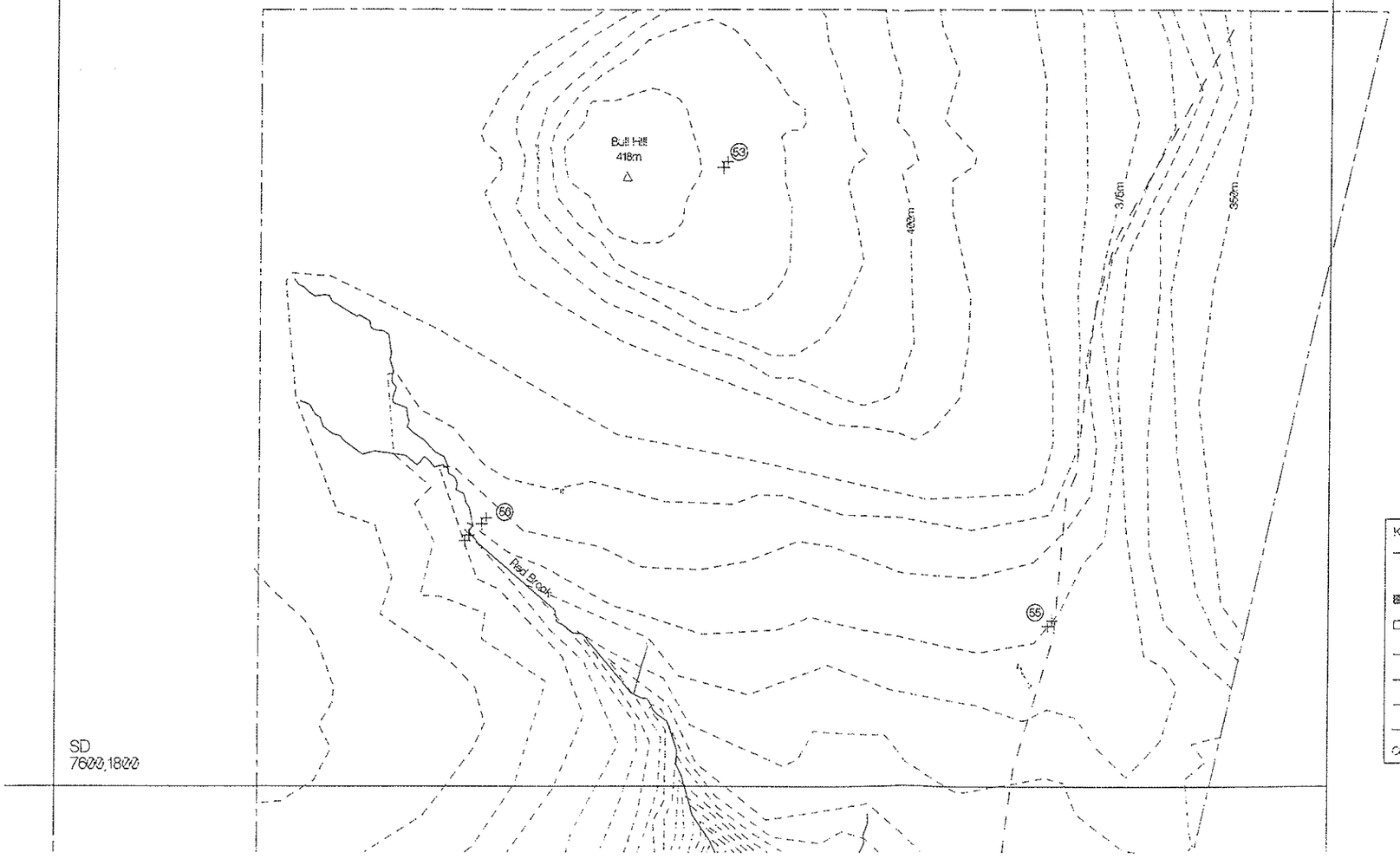
Water

Contour interval is 5m

LANCASTER UNIVERSITY ARCHAEOLOGICAL UNIT	PROJECT HOLCOMBE MOOR TRAINING AREA	PLAN Figure 4	DRAWN BY JK
		SCALE 200m	DATE 6-1995

SD
7600,1900

SD
7700,1900



SD
7600,1800

PROJECT

DRAWING ARCHIVE No.

SITE PLAN/SECTION

Figure 5

KEY

- Boundary of survey area
- Buildings
- Roofed
- Derelict
- Digitized from OS 1:2,500 sheet
- Identified on aerial photographs or cartographic sources
- Surveyed on ground
- Water

Contour interval is 5m

N

LANCASTER UNIVERSITY ARCHAEOLOGICAL UNIT	PROJECT HOLCOMBE MOOR TRAINING AREA	PLAN Figure 5	DRAWN BY JK
		SCALE 1:2500 at 100m	DATE 5-1995

Lancaster
University
Archaeological
Unit

December 1994

HOLCOMBE MOOR TRAINING CENTRE, NEAR BURY,

LANCASHIRE

ARCHAEOLOGICAL STATEMENT SURVEY

Proposals

The following project design is offered in response to a letter dated 25 November 1994 from the Defence Lands Service of the Ministry of Defence, inviting submission of a Tender for an archaeological survey of the Holcombe Moor Training Centre area, with the aim of assessing the archaeological resource to allow appropriate management strategies to be enacted.

1. INTRODUCTION

The area of the Holcombe Moor Training Centre contains a number of known archaeological sites. Comprising a mixture of high moorland with low-lying pastureland, it has the potential to contain upstanding archaeological monuments; such landscapes have considerable potential for prehistoric activity, particularly from the Bronze Age. In addition, the area has been exploited for mineral resources, and clearly contains evidence for post-medieval industrial and agrarian activity.

The Lancaster University Archaeological Unit has considerable experience of the evaluation, survey and excavation of sites of all periods, having undertaken a great number of small and large scale projects during the past 15 years. Evaluations have taken place within the planning process, to fulfil the requirements of clients and planning authorities, to very rigorous timetables. In addition, advice has been supplied to clients for the preparation of Environmental Statements. LUAU has the professional expertise and resource to undertake the project detailed below to a high level of quality and efficiency. LUAU and all its members of staff operate subject to the Institute of Field Archaeologists (IFA) Code of Conduct.

LUAU has undertaken a large number of upland landscape surveys for a variety of clients (both private and national agencies such as English Heritage, North West Water, and RCHM(E)), these include the Lake District and Yorkshire Dales National Parks, and the Anglezarke/Rivington Moors.

2. OBJECTIVES

The following programme has been designed to provide an accurate archaeological survey of the designated areas, within their broader contexts. The aims of this work would be to provide information to allow appropriate safeguards to be installed for important sites, to indicate any potential for on-site interpretation, and to identify and where appropriate to prioritise needs for further research.The required stages to achieve these ends are as follows:

2.1 Desk Top Survey

A limited programme to accrue an organised body of data.

2.2 Field Validation

The designated area would be visited to identify the existence, extent, and, if possible, quality of any surviving archaeological features from a detailed visual inspection.

2.3 Report

An archive compiled in line with Museum and Galleries Commission and IFA

standards will be collated and deposited in an approved repository. A written report will document the significance of the data generated by this programme within a local and regional context and will make recommendation of measures that may be considered to manage the archaeological resource.

3. METHOD STATEMENT

The following work programme is submitted in line with the objectives of the archaeological work summarised above.

3.1 Desk Top Survey

The following will be undertaken as appropriate, depending on the availability of material. The level of such work will be dictated by the timescale of the project. The method statement is based on the *Standard and Guidance for Archaeological Desk-based Assessments* compiled by the IFA.

3.1.1 *Documentary and cartographic material*
This work should concentrate on two sources of information: that contained in the County Sites and Monuments Record, and early maps, (including estate plans etc) as may be reasonably available. Particular attention will be paid to place-names recorded on early cartographic sources as these often provide important evidence of archaeological activity. Any photographic material lodged in either the County Sites and Monuments Record or the County Record Office will also be studied. The public libraries at Bury, Ramsbottom, Tottington, and Rawtenstall will be consulted, as will the Record Office at Bury.

3.1.2 Aerial photography
A survey of the extant air photographic cover will be undertaken. This will aid the identification of surviving archaeological and structural features in the designated area, and, if appropriate coverage is available, allow the assessment of the rate of erosion of archaeological features. It will also facilitate the rapid recognition and plotting of archaeological features including those no longer visible at ground level. Aerial photographic work may entail liaison with the Royal Commission on the Historical Monuments (England) and their list of photographs will be consulted.

3.1.3 Physical environment
A rapid desk based compilation of geological (both solid and drift), pedological, topographical, and palaeoenvironmental information will be undertaken. This will not only set any archaeological features in context but also serves to provide predictive data, that will increase the efficiency of the field investigation.

3.1.4 Access
It is assumed that all access arrangements will be made by the Client, although as a matter of courtesy, LUAU will contact tenants (where readily available) before entering their land.

3.1.5 Collation of data
The data generated by 3.1.1-4 above will be collated and analysed to provide an assessment of the nature and significance of the known surface and subsurface remains. It will also serve as a guide to the archaeological potential of the area to

be investigated.

3.2 Field Validation

Systematic surface inspection (in approximately 40m wide transects) will record the location, extent, and nature of any visible surviving archaeological remains within the designated area. This conforms to the Level 1 survey defined by LUAU, based on guidelines produced by the Royal Commission for the Historical Monuments of England. Those sites already contained within the County Sites and Monuments Record will be checked against their entry and this will be enhanced, if appropriate. When a previously unknown site is identified, a written description, including an accurate ten figure National Grid Reference, will be given and it will be mapped on to a 1:2500 or 1:10,000 scale Ordnance Survey base, as appropriate. A photographic record will be undertaken simultaneously. If any finds are identified during such surface inspection they will be handled according to current best practice, as defined by English Heritage and the IFA.

Because of the remote nature of the study areas (particularly from carefully surveyed Ordnance Survey points), the sites will need to be located by instrument, and experience has demonstrated that the most cost-effective technique (in terms of accuracy and speed) is the use of a satellite Global Positioning System (GPS). This uses electronic distance measurement along radio frequencies to satellites to enable a positional fix in latitude and longitude which can be converted mathematically to Ordnance Survey national grid, allowing accuracies of between +/- 0.5m and 2m even at remote locations. It should be noted that the recovery level from such a survey will be affected by the time of the year that this work is undertaken, the winter months being obviously most suitable.

The results will be translated into a CAD system to facilitate the generation of overlay plots. This dispenses with the manual production of drawings and considerably increases the efficiency of the preparation of completed overlays, as well as enhancing the flexibility of map output. Time will be saved if the Client can provide DXF copies of map GIS data, onto which the results of this survey can be superimposed.

LUAU undertakes a Health and Safety Risk Assessment for all projects. Copies of the Unit Safety Policy are available on request. All site procedures are in accordance with the guidance set out in the Health and Safety Manual compiled by the Standing Conference of Archaeological Unit Managers (1991 and 1993).

3.3 Report

3.3.1 *Archive*

The results of the fieldwork will form the basis of a full archive to professional standards, in accordance with current English Heritage guidelines (*The Management of Archaeological Projects, 2nd edition, 1991*). The project archive represents the collation and indexing of all the data and material gathered during the course of the project. It will include summary processing and analysis of all features, finds, or palaeoenvironmental data recovered during fieldwork. The deposition of a properly ordered and indexed project archive in an appropriate repository is considered an essential and integral element of all archaeological projects by the IFA in that organisation's code of conduct. LUAU conforms to best practice in the preparation of project archives for long-term storage. The expense of preparing such an archive is part of the project cost, but only represents a very small proportion of the total. This archive will be provided in the English Heritage Central Archaeological Services format, both as a printed document and on computer disks as ASCII files, if appropriate, and a synthesis (normally the index to the archive and the report) should be placed in the Greater Manchester Sites and Monuments Record. A copy of the archive will be available for deposition with the National Archaeological Record in London. LUAU practice is to deposit the original record archive of projects (paper, magnetic and plastic media) with the appropriate County Record Office, and a full copy of the record archive (microform or microfiche) together with any material archive (artefacts, ecofacts, and samples) with an appropriate museum. The actual details of the arrangements for the deposition/loan and long term storage of such material will be agreed with the landowner, and the receiving institution. Wherever possible, LUAU recommends the deposition of such material in a local museum approved by the Museums and Galleries Commission, and would make appropriate arrangements with the designated museum at the outset of the project for the proper labelling, packaging, and accessioning of all material recovered. The archive costs include a single payment of £11/m3 to the receiving museum as a one-off contribution towards the cost of long term storage and curation.

3.3.2 Report

One bound and one unbound copy of a written synthetic report will be submitted to the Client. The report will include a copy of the agreed project design, and indications of any agreed departure from that design. It will present, summarise, and interpret the results of the programme detailed above and will include a full index of archaeological features identified in the course of the project, with an assessment of the overall significance, together with appropriate illustrations indicating the locations of archaeological features. Any finds recovered from the work will be assessed with reference to other local material and any particular or unusual features of the assemblage will be highlighted. The report will also include a complete bibliography of sources from which data has been derived, and a list of further sources identified during the programme of work, but not examined in detail.

This report will identify areas of defined archaeology. An assessment and

statement of the actual and potential archaeological significance of the material within the broader context of regional and national archaeological priorities will be made. Illustrative material will include a location map and plans, where appropriate; it can be tailored to the specific requests of the client (eg particular scales etc), subject to discussion. The report will be in the same basic format as this project design; a copy of the report can be provided on 3.5" disk (IBM compatible format), if required.

3.3.3 Proposals
The report will make a clear statement of the archaeological potential of individual sites within the Training Centre area and will highlight any sites of such importance as to require particular measures to safeguard their integrity. It will also indicate where any potential may exist for on-site interpretation and will identify and prioritise the need for any further work, including documentary research, or more detailed survey, either to establish the true significance of the site or as an aid to on-site interpretation.

3.3.4 Confidentiality
The report is designed as a document for the specific use of the Client, for the particular purpose as defined in the project brief and project design, and should be treated as such; it is not suitable for publication as an academic report, or otherwise, without amendment or revision. Any requirement to revise or reorder the material for submission or presentation to third parties beyond the project brief and project design, or for any other explicit purpose can be fulfilled, but will require separate discussion and funding.

3.3.5 Ministry of Defence Conservation Magazine "Sanctuary"
A summary of the findings will be prepared for submission to "Sanctuary", including appropriate illustrative material.

3.4 Project Monitoring

3.4.1 Greater Manchester Archaeological Unit
Whilst the work is undertaken for the Client, nevertheless, the County Archaeological Curator for Greater Manchester would be kept fully informed of the work and its results. Any proposed changes to the project design would be agreed with the Client and the GMAU. LUAU will arrange a preliminary meeting, if requested, and the Greater Manchester Sites and Monuments Record will be informed in writing at the commencement of the project.

3.4.2 *Defence Lands Service, Ministry of Defence*
LUAU will consult closely with the Client about the archaeological work required. This consultation will include the attendance of a representative of the Client at any meetings convened with the County Archaeological Curator to discuss the work programme. The various management options will be discussed with the Client before submission of the report.

4. WORK TIMETABLE

The various stages of the project would comprise:

4.1 Desk Top Survey
Three days are required to acquire and to collate the data into a form whereby it is best utilised for stages 4.2 and 4.3.

4.2 Field Validation
Three and a half days of fieldwork are required to assess the area of land shown as hatched blue on plan no. 1407/94.

One and a half further days of fieldwork is required to assess the outlying areas within the M.O.D. freehold boundary as edged red on the plan no. 1407/94.

4.3 Report
Six days would be required to produce a report for the Training Centre area, as requested in the GMAU specification. This would include production of a gazetteer and drawings.

4.4 Timetabling
LUAU can execute projects at very short notice once an agreement has been signed with the client. The project field validation would be undertaken within the times stipulated in the 'Invitation to Tender', and the project would be wholly completed by 14 March, 1995.

5. OUTLINE RESOURCES

The following resource base will be necessary to achieve the proposals detailed above. The breakdown of the total cost of the project is provided on the accompanying project costing form.

The total cost quoted on the accompanying sheet is a fixed price, inclusive of all management, overheads, and other disbursement costs (travel and expenses), to undertake the programme of work as defined in the project brief and this project design. Any other variations from this programme of work at the Clients' direction will require recosting.

5.1 Desk Top Survey
3 man-days

5.2 Field Validation
5 man days
5 man days

5.3 Data manipulation
1 man day digitising OS 1:10,000 plan
2 man days CAD work on plans

5.4 Report production
2 man days gazetteer writing
2 days report writing

5.5 Archive production
0.5 man days

5.6 Writing of "Sanctuary" article
1.0 man days

5.7 Personnel

The project will be under the direct line management of **Mark Fletcher, BSc, MAAIS** (Unit Project Manager) to whom all correspondence should be addressed.
He has a detailed knowledge of all aspects of archaeology in the area of the West Pennines, having undertaken survey work at Cheetham Close, Turton, on prehistoric sites, and at the Two Brooks Valley, Tottington, and Burrs and Nuttall, in the Upper Irwell Valley, as a consultant to Bury M.B.C. He specialises in the analysis and interpretation of rural industrial landscapes, and is already familiar

with such sites within the Training Centre area.

Dr Jane Kenny, BA, PhD (Unit Supervisor) will lead the survey team. She holds a doctorate in prehistoric upland archaeology, and was formerly employed as a Field Surveyor with the Royal Commission on Historic Monuments (England). She has extensive experience of landscape survey, including work on the Lake District National Park Survey for LUAU.