

LANCASTER
UNIVERSITY
ARCHAEOLOGICAL
UNIT



July 1997

BOLTON FELL MOSS
CUMBRIA

Assessment Report

Bolton Fell Moss
Brampton
Cumbria

Archaeological Assessment Report
AUA 7722

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CONTENTS

CONTENTS.....	1
SUMMARY	2
ACKNOWLEDGEMENTS.....	3
1. INTRODUCTION	4
1.1 Contract background	4
1.2 Work undertaken	4
1.3 Report structure	4
1.4 Methodology	4
2. BACKGROUND	5
2.1 Situation	5
2.2 Modern appearance	5
2.3 Previous research	6
3. STRATIGRAPHY AND THE ORIGINS OF THE MOSS	7
3.1 Description	7
4. THE ARCHAEOLOGY OF THE MOSS.....	8
4.1 The moss and its immediate environ.....	8
5. THE IMPLICATIONS OF PEAT HARVESTING	10
5.1 The present state of knowledge.....	10
5.2 Continued cutting and the palaeoecological resource.....	10
5.3 Continued cutting and the archaeological resource	10
6. RECOMMENDATIONS	12
6.1 Palliative measures.....	12
7. BIBLIOGRAPHY	14
8. ILLUSTRATIONS.....	15
9. GAZETTEER.....	16
APPENDIX 1. PROJECT DESIGN	19

SUMMARY

Lancaster University Archaeological Unit undertook a desk-top search and produced an assessment report on the impact of continued peat harvesting at Bolton Fell, north Cumbria (*c* NY 4968). The work was commissioned by William Sinclair Horticulture in advance of a revised minerals planning application for the moss. It was undertaken in July 1997.

Through examination of the known archaeological remains of the locality, and extant palaeoecological work on the peats of Bolton Fell Moss, a number of likely results have been identified, including the removal of the upper levels of peat, which may contain stray artefacts and ecofacts of archaeological significance; the removal of an important late palaeoecological sequence; and the removal of peat which might incorporate or cover buried archaeological sites.

Several simple proposals have been made to mitigate the impact of peat-harvesting.

ACKNOWLEDGEMENTS

Thanks are due to Bette Hopkins of Cumbria Sites and Monuments Record, and to Dr Keith Barber of the Department of Geography, Southampton University, for their assistance. Robert Middleton and Colin Wells, both of the North West Wetlands Survey (Lancaster University Archaeological Unit (LUAU)) gave advice and made available the project archive for this site. David Hodgkinson, also of LUAU, made available documentary research on the moss, in advance of publication of the North West Wetlands Survey data for Cumbria.

This report was compiled by Christine Howard-Davis, and edited by Rachel Newman, who also acted as line manager.

1. INTRODUCTION

1.1 CONTRACT BACKGROUND

1.1.1 In July 1997 Lancaster University Archaeological Unit (LUAU) was commissioned by William Sinclair Horticulture to assess the impact of their revised minerals planning application upon Bolton Fell Moss in northern Cumbria. The project design upon which this work is based appears as *Appendix 1*.

1.2 WORK UNDERTAKEN

1.2.1 Work undertaken was as stipulated in the project design (*Appendix 1: section 3*) and comprised a desktop search interrogating both the Cumbria County Sites and Monuments Record, and the field archive of the North West Wetlands Survey. Dr Keith Barber of Southampton University, who has worked extensively on the palaeoecology of the moss, was approached personally for comment.

1.3 REPORT STRUCTURE

1.3.1 **Objectives:** this assessment has three objectives: to provide a statement of the archaeological importance of the moss; to define the nature of any archaeological remains within the peat; to outline mitigation measures for the identification and management of any archaeological remains found.

1.3.2 To the above end the report is presented as a series of short, discrete summaries, detailing the modern context of Bolton Fell Moss (*section 2*), the stratigraphy and origins of the moss (*section 3*), and the archaeology of the moss (*section 4*). This is followed by a review of the implications of peat harvesting at Bolton Fell Moss (*section 5*), and finally, recommendations for the mitigation of the impact of peat harvesting upon the archaeological and palaeoecological resource (*section 6*). Archaeological data is presented in gazetteer format (*section 9*).

1.4 METHODOLOGY

1.4.1 The major sources of archaeological information were examined. These included the Cumbria Sites and Monuments Record and the archive of the North West Wetlands Survey (NWWS), which has undertaken fieldwork throughout the lowland wetlands of Cumbria. In addition to the requirements of the tender, a brief literature search was also undertaken, and the results of current documentary research on Bolton Fell Moss (as part of the NWWS) have been included.

2. BACKGROUND

2.1 SITUATION

- 2.1.1 Bolton Fell Moss lies to the north of Brampton, in north-east Cumbria (approximate centre NY 4968). It is sub-circular in shape and covers an area of some four square kilometres in extent, which lies to the immediate north of Walton and Broomhill Moss, and in essence forms part of the same raised complex, the division being marked by Hether Burn, which drains westwards, ultimately into the Solway Firth. A number of small burns and streams rise from the bog, flowing in all directions; those from Bolton Fell Moss predominantly run north into the river Lyne, or south to Hether Burn.
- 2.1.2 The moss overlies glacial deposits, including lake alluvia and the modern limits of the raised mire are defined by pasture land, some of which presumably comprises reclaimed organic soils.
- 2.1.3 The original edges of the moss have been removed by long-term piecemeal cutting, and evidence suggests a significant bog-burst has occurred in the north-east quadrant (Barber 1981, 46).

2.2 MODERN APPEARANCE

- 2.2.1 The surface of the moss today presents a patchwork of vegetation and levels which record the past history of peat cutting. Four broad zones can be defined (after Coles 1995, 62).
- 2.2.2 **Active peat harvesting:** this occupies a substantial area of the eastern and southern sides of the moss. It is currently harvested by block cutting and milling, with the result that much of the present surface comprises bare peat, with drains between 12m and 15m intervals. In places milling runs over the old block cutting faces. The drains vary in depth (between 0.5m and 0.6m) with the level of the surface.
- 2.2.3 **Former commercially-cut areas:** large areas of the moss, including part of the current actively cut area, have seen block cutting in recent years. It is drained by dykes between 4m and 7m apart, which mark individual holdings. Much of this land is held as Common land.
- 2.2.4 **Former hand-cut areas:** the fringes of the moss have all been truncated by hand-cutting for domestic use. The southern and western edges of the moss are marked by 'Peat Awards' (individual strips of moss from which peat could be cut for fuel. Each was marked by shallow dykes, which appear now to mark individual properties).
- 2.2.5 **Intact peat:** In the centre of the moss there is an area which has seen no peat cutting. This still supports an intact peatland vegetation. There is no evidence to suggest that the peat in this area is in any way truncated. Most of this area is protected as a Site of Special Scientific Interest.

2.3 PREVIOUS RESEARCH

- 2.3.1 The moss has seen no prior conventional archaeological work. Some research on the peat sequence was undertaken in the early 1960s by Professor Frank Oldfield, and an extended programme of detailed palaeoecological research has been undertaken by Dr Keith Barber of Southampton University.
- 2.3.2 Air photograph coverage of the moss and its surroundings has been intermittent, and mainly incidental to the examination of Hadrian's Wall and Roman settlement to the south, in the environs of the Wall.
- 2.3.3 The moss has been visited twice in the course of the North West Wetlands Survey, in 1991 and 1994, and on each occasion a summary record of the state of the moss was made (see NWS archive, held at LUAU offices in Lancaster).

3. STRATIGRAPHY AND THE ORIGINS OF THE MOSS

3.1 DESCRIPTION

- 3.1.1 Bolton Fell Moss is a former raised mire which has witnessed many different episodes of peat cutting, for different purposes, over several centuries. It is clear, however, that a considerable depth of peat still survives (over 10m). The centre of the moss is occupied by a wooded 'island' of boulder clay, covered only by shallow peats with wood and charcoal at their base, with, in places, the subsoils visible. Moss development appears to have continued uninterrupted, and in presently uncut parts there is a substantial survival of recent *Sphagnum* peats.
- 3.1.2 **Stratigraphic analysis:** no recent detailed stratigraphic analysis has been published, although Barber described the moss in detail in 1981 (Barber 1981, especially 79-194). Recently Dumayne has published a pollen curve for the moss (Dumayne 1995, 29) in a discussion of the Bronze Age and later environment in northern Cumbria. The later stratigraphic sequence of the moss appears, from profiles examined in the course of North West Wetland Survey field visits in 1991 and 1994, to be a fairly simple development of *Sphagnum* mosses with varying amounts of wood and brushwood fragments, *Calluna* etc, although it must be admitted that none of the profiles examined covered the entire peat sequence. Earlier analysis (Oldfield 1963, reported in Innes 1988, Barber 1981) recorded pollen evidence for human activity in the form of clearance episodes and the presence of cereal pollens, for the prehistoric and Roman periods.
- 3.1.3 **Development of the moss:** analysis undertaken in the early 1960s (Innes *op cit*) charted a typical development for the moss from lake to reedswamp to Fen-Carr swamp and so on. A programme of almost thirty years of research has been undertaken on the moss by Dr Keith Barber, much of his data is currently unpublished, but the development of the bog was summarised by him in 1981 (Barber 1981), alongside stratigraphic detail and a number of radiocarbon dates. He has stressed the importance of the palaeoenvironmental record as a mirror of larger-scale human activity within the landscape, and his work and those of his researchers have produced dated pollen sequences for the bog. It seems likely, however, that the deeper peats will remain unaffected by the present proposal. Much of the *Sphagnum* development recorded in the field appears to be of post-medieval date, *c* AD 1800 (Barber 1981, Middleton *pers comm*). Radiocarbon dates were obtained for the sequence examined by Oldfield, and radiocarbon dates were mentioned but not cited by Dumayne in her article on the inter-relationship of archaeological and palynological events in north Cumbria (Dumayne 1995) but it seems likely that further dates are required for a full understanding of the moss' development.

4. THE ARCHAEOLOGY OF THE MOSS

4.1 THE MOSS AND ITS IMMEDIATE ENVIRON

- 4.1.1 Very little conventional archaeological evidence has been gathered from either Bolton Fell Moss, or its immediate environs. A survey of the known prehistory of the lowland wetlands of north-western England undertaken for English Heritage in 1988 recorded no evidence at all for Bolton Fell (Howard-Davis *et al* 1988, 12-14). This presumably, in terms of the moss, reflects the lack of peat cutting and disturbance until a relatively recent date, as well as the generally inhospitable nature of the surrounding area, which is, even today, only sparsely inhabited. Pollen evidence from the moss indicates that the environs of the moss were heavily wooded in the Bronze Age, and continued to be so until well into the Roman period (Dumayne 1995, 30)
- 4.1.2 Despite pollen evidence for a later prehistoric, Roman, and later presence in the area, there are no significant artefacts known to have been recovered from the bog. Dumayne (*op cit*, 30) suggests a period of tree clearance reflected in several north Cumbrian mosses between *c* cal AD 125 and *c* cal AD 395, and offers a date of *c* AD 163 for Bolton Fell moss in particular. This coincides with the main period of Roman activity in the area, and suggests that felling and clearance represents, amongst other things, the demand for fuel and building material generated by groups such as the garrisons of the five Roman forts which lay within a 10km radius.
- 4.1.3 Air photography has recorded several rectilinear enclosures to the south-east of the Bolton Fell/Walton Moss complex, in the vicinity of Seat Hill Farm, north-west of Newtown, but these are at a sufficient distance to be of little significance to a study of Bolton Fell Moss, and more likely to relate to Romano-British activity associated with Hadrian's Wall further to the south.
- 4.1.4 Again, apart from pollen evidence suggesting a regeneration of woodland, and thus probably a decline in population and/or agricultural activity (Dumayne 1995, 30) there is no indication of Early Medieval activity in the vicinity of the moss. Higham (1986, 245) offers a date of *c* AD 780 for this period of regeneration, suggesting that it started rather later at Bolton Fell than in other parts of north Cumbria.
- 4.1.5 Little of significance can be ascertained for the medieval period. Pollen evidence indicates that woodland regeneration continued until a period that Dumayne associates with monastic clearance in the region (*op cit*). It might be reasonable to expect that the moss was being cut on a small scale for fuel for local use, although it seems clear that the local population was very sparse indeed. Bolton Fell is first named in 1384, being then within Scotland, and again in 1592 when it lay on the Border (Armstrong *et al* 1950, 91). The survey of the Barony of Gilsland, compiled in 1603 (Graham 1934), records an extant boundary running across the moss, originating from Solmain at the western extremity (*c* NY 525675), and surviving today as a line of natural and artificial watercourses running north and then west. At this time Bolton Fell Moss was described as '*A great pece of comon pasture and moare.... extendinge from Houghton Crosse and Levenholme on the weste to*

Kirkamocke on the easte' and given as 2010 acres in extent (Graham 1934, 14).

- 4.1.5 Information for the post-medieval period is equally sparse. The settlement pattern shown on the OS 1:10,560 coverage of 1865 is little different to that of today, except to note some encroachment further into the moss of the long, narrow holdings which presumably mark peat cuttings along the western and southern edges of the moss, and in some cases, their further subdivision. The 1991 NWWS visit recorded the finding of a 'Civil War' musket ball and World War II cartridge cases by those stacking peat.
- 4.1.6 The area cut for peat today incorporates a substantial tranche of Common land, and has to a degree fossilised the practices of the Commoners with regard to peat gathering (Middleton pers comm), thereby preserving an element of the earlier land-holdings.
- 4.1.7 The late nineteenth and twentieth centuries have seen accelerated peat cutting across the northern and eastern parts of the moss. The peat was cut by hand by the Boothby Peat Co. from 1956 until 1968, when small block-cutting machines were introduced, but hand-cutting persisted until around 1970. The railway serving commercial cutting on the moss is presumably of recent origin. Most of the peats cut to date have been the upper, unhumified *sphagnum* peats. In some places the peat is now completely removed.

5. THE IMPLICATIONS OF PEAT HARVESTING

5.1 THE PRESENT STATE OF KNOWLEDGE

- 5.1.1 A review of the available archaeological information has indicated that no finds of significance have been made from within the areas that have been, or are currently, harvested. This does not, however, mean that the site has no archaeological significance, or that the potential for important finds is diminished as peat cutting encroaches upon layers earlier in the depositional sequence of the mire.

5.2 CONTINUED CUTTING AND THE PALAEOECOLOGICAL RESOURCE

- 5.2.1 Peat harvesting will continue to remove deposits whose study will give a valuable insight into the manner in which the moss originated and developed. It appears that the mire has been forming throughout the post-glacial period (Barber 1981), thereby accruing a long and unbroken palaeoecological record, of significance both to archaeological and palaeoenvironmental understanding of the locality. Such information adds significantly to the body of knowledge concerning the use and exploitation of the landscape by our forbears.

5.3 CONTINUED CUTTING AND THE ARCHAEOLOGICAL RESOURCE

- 5.3.1 Harvesting will remove the late *Sphagnum* peats from the moss, and has already, in some places, completely removed peat, exposing bedrock or boulder clays. These peats are important for information regarding the late exploitation of the moss and its environs, and may possibly contain objects of archaeological significance.
- 5.3.2 Once the upper layers have been removed, there is the possibility that the mire might contain finds deposited within the Roman period. Whilst there is no immediate evidence for Roman activity, the line of Hadrian's Wall runs within a five or six kilometres and there remains a slight but not discountable possibility of deposits such as hoards, votive objects, and animal and human remains having been made in the moss as the late Iron Age and Romano-British period was one in which such ritual deposits were commonly made, perhaps the most well-known being Lindow Man in Cheshire.
- 5.3.3 Should peat cutting remove deeper deposits, then peats laid down during the prehistoric period will be encountered. The only evidence for prehistoric activity in the area comes from the moss itself in the form of pollen evidence for clearance episodes and cereal cultivation. This must, however, reflect more tangible human activity in the environ. Whilst the potential for such evidence within the moss is slight, it is clear that our knowledge of the lower levels of the peat sequence cannot be defined with clarity. The early development of the moss is, however, associated with a body of open water, and then reed-swamp etc. The attraction of wetlands and their multiplicity of resources to prehistoric groups is now not in dispute, nor is the fact that Bronze Age groups, at least,

saw the deposition of artefacts in watery places as a significant act (Coles and Coles 1989, 173ff). Thus the potential for the recovery of information or finds of prehistoric date, whilst not high, or predictable, must always be borne in mind.

6. RECOMMENDATIONS

6.1 PALLIATIVE MEASURES

- 6.1.1 A number of measures can be suggested which may mitigate the effects of continued peat harvesting on the archaeological and palaeoecological resource. The wetland context, however, means that these must differ from normal archaeological practice for the evaluation and recording of landscapes. It can be argued that, under wetland conditions, the excavation of a series of small trenches intended to evaluate the survival of the archaeological resource is not the viable strategy that it is on dry land sites. Any large-scale evaluative trenching would be impractical and unsafe in deep peats, and the trenches excavated would do much in themselves to diminish the potential for archaeological survival, by further influencing the drainage of the peat. Similarly the wetland archaeological resource, by its very nature, is difficult to predict and easy to misinterpret in limited evaluations (Howard-Davis and Buxton forthcoming).
- 6.1.2 The following measures are, therefore recommended, allowing an optimal record of the remaining archaeological and palaeoecological data to be obtained both before and during peat harvesting.
- 6.1.3 **Staff training:** employees of William Sinclair Horticulture should be made aware, if they are not already, of the archaeological potential of the moss. Materiel should be prepared which would outline and illustrate the main classes of archaeological remains that might be encountered during operations on the moss. Similarly employees should be advised of the most appropriate response to the discovery of archaeological remains during operations.
- 6.1.4 **Hydrological regime:** the current state of knowledge makes it clear that the only significant archaeological information for the moss lies within the palaeoecological record preserved by the peat (Barber pers comm). It is therefore suggested that all reasonable attempts be made to safeguard the hydrology of the surviving uncut peats. This will require close liaison with other interested bodies, such as English Nature, and Dr Keith Barber, Department of Geography, University of Southampton.
- 6.1.5 **Stratigraphic monitoring:** further monitoring of the moss, recording all the visible peat layers and potential archaeological deposits within exposed faces, should be made during any renewed peat harvesting. This would permit a greater understanding of the context of any archaeological remains likely to be preserved within, or beneath, the surviving peat.
- 6.1.6 **Radiocarbon dating:** in association with the stratigraphic survey proposed above, further radiocarbon determinations should be obtained on significant events within the peat stratigraphy, thereby providing a reliably dated chronological framework for consideration of the origins and development of the moss, and for the fuller understanding of any significant archaeological remains encountered in the course of harvesting.

- 6.1.7 **Economic history:** Middleton (pers comm) has drawn attention to the survival of traditional practice with regard to the handling of peat on Common land within the moss. Some record should be made of these practices.
- 6.1.8 **Monitoring:** a programme of long-term monitoring should be instituted, so that the effects of continued harvesting on both the palaeoecological and archaeological record can be judged and recorded.

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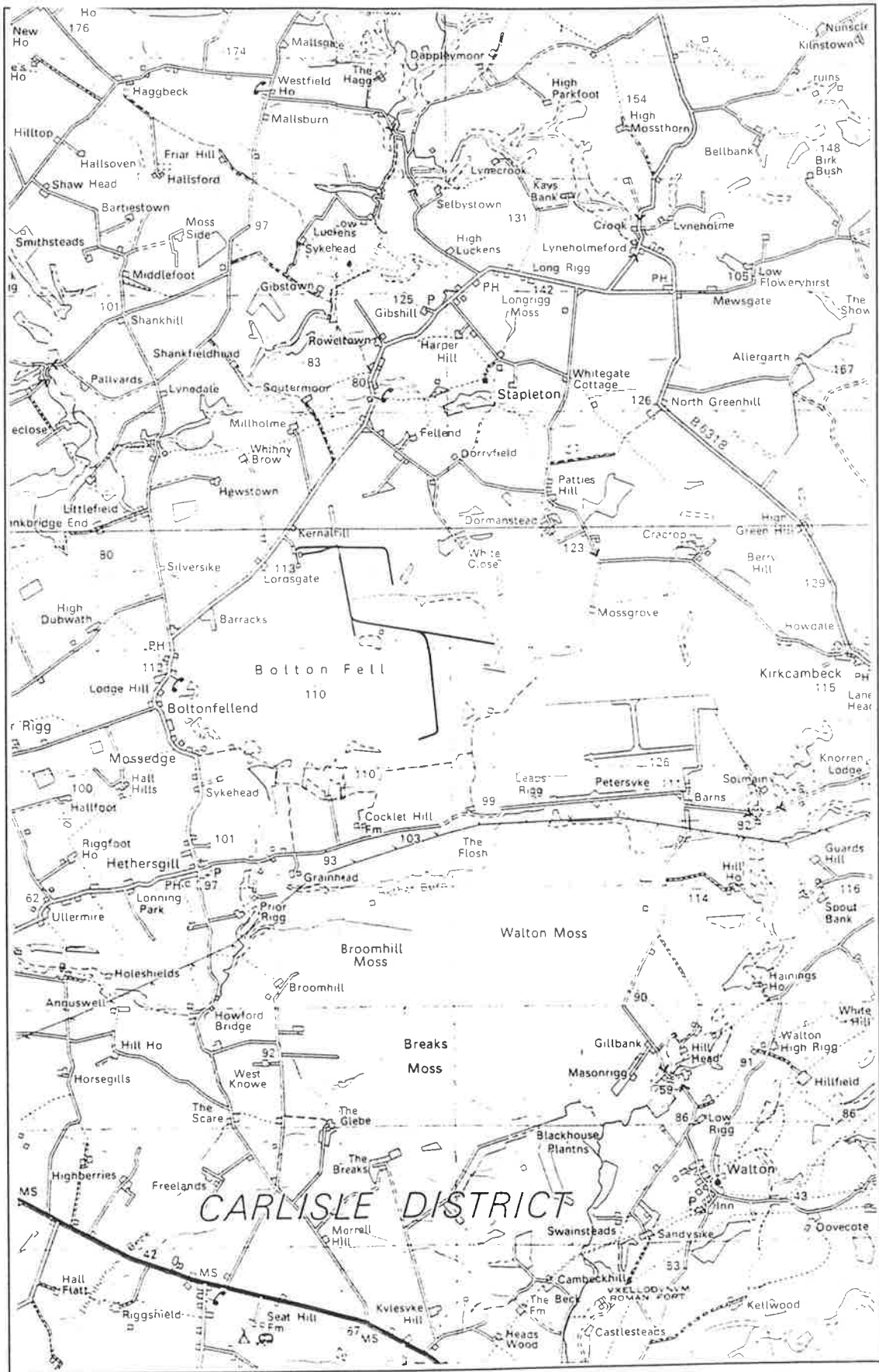


Figure 1. The location of Bolton Fell

9. GAZETTEER

SMR Number 42
Site Name Soutermoor
Parish Stapleton
NGR NY 48890 71120
Type Fortified Building
Source Documentary
Period Medieval/Post-medieval
Assessment: This site is beyond the area of the moss.

SMR Number 110
Site Name Stapleton
Parish Stapleton
NGR NY 50300 71300
Type Deserted Village
Source Circumstantial
Period Medieval
Assessment: This site is beyond the area of the moss.

SMR Number 3874
Site Name Brides Well, Stapleton
Parish Stapleton
NGR NY 50390 71190
Type Holy Well
Source Structure
Period ?Medieval
Assessment: This site is beyond the area of the moss.

SMR Number 3875
Site Name Harperhill
Parish Stapleton
NGR NY 50070 71590
Type Fortified Building
Source Documentary
Period Medieval
Assessment: This site is beyond the area of the moss.

SMR Number 3876
Site Name Harperhill
Parish Stapleton
NGR NY 50000 71700
Type Earthworks
Source Earthworks
Period Unknown

Assessment: This site is beyond the area of the moss.

SMR Number 10052
Site Name Cracrop
Parish Stapleton
NGR NY 51840 69530
Type Tile Kiln
Source Site Of
Period Unknown

Assessment: This site is beyond the area of the moss.

SMR Number 10077
Site Name Mossgrove
Parish Stapleton
NGR NY 51840 69530
Type Pit
Source Site Of
Period Unknown

Assessment: This site is beyond the area of the moss.

SMR Number 11198
Site Name Crossbridge
Parish Stapleton
NGR NY 52000 71970
Type Tilery
Source Site Of
Period Unknown

Assessment: This site is beyond the area of the moss.

SMR Number 11325
Site Name Roweltown
Parish Hethersgill
NGR NY 498110 71690
Type Quarry
Source Site Of
Period Unknown

Assessment: This site is beyond the area of the moss.

Site Number 11338
Site Name Bogs
Parish Stapleton
NGR NY 51670 70620
Type Buildings
Source Site Of

Period Unknown

Assessment: This site is beyond the area of the moss.

SMR Number 13925

Site Name Walton, Solmain Farm

Parish Walton

NGR NY 52500 68000

Type Dykes, Ridge and Furrow, Earthworks

Source Earthworks

Period Unknown

Assessment: This site is beyond the area of the moss.

APPENDIX 1. PROJECT DESIGN

July 1997

**Lancaster
University
Archaeological
Unit**

BOLTON FELL MOSS

CUMBRIA

ARCHAEOLOGICAL ASSESSMENT

Proposals

The following project design is offered in response to a request from William Sinclair Horticulture, for an archaeological assessment in advance of their revised minerals planning application for Bolton Fell Moss in Cumbria.

1. INTRODUCTION

- 1.1 An archaeological assessment is required in advance of a revised minerals planning application for Bolton Fell Moss, in northern Cumbria. The site is a known palaeoenvironmental resource of great importance, and therefore the Cumbria County Archaeologist has recommended that an archaeological assessment be undertaken to comment on the archaeological potential and sub-surface survival of the affected study area.
- 1.2 The Lancaster University Archaeological Unit has considerable experience of the evaluation 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. 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.
- 1.3 LUAU has been undertaking an eight year programme of assessment and survey of the lowland mosses of north-west England (the North West Wetlands Survey) on behalf of English Heritage, and have undertaken work at Bolton Fell moss as part of the Cumbrian section of this project.

2. OBJECTIVES

- 2.1 The following programme has been designed, in accordance with the wishes of the Cumbria County Archaeologist, to provide an accurate archaeological comment on the designated area, within its broader context. The aims of the assessment are to inform a decision on the revised minerals planning application. The required stages to achieve these ends are as follows:
- 2.2 ***Desk Top Search***
To accrue an organised body of data to inform the field inspection.
- 2.3 ***Assessment Report***
A written assessment report will assess the significance of the data generated within a local and regional context.

3. METHODS STATEMENT

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

3.2 DESK TOP SEARCH

3.2.1 The following will be undertaken:

3.2.2 **North West Wetlands Survey:** The database and archive compiled by the North West Wetlands Survey will be thoroughly searched for information that can inform the revised minerals planning application.

3.2.3 **Other research:** Dr Keith Barber of Southampton University will be contacted to establish the relevance and significance of his recent research in informing the revised minerals planning application.

3.3 ASSESSMENT REPORT

3.3.1 **Assessment Report:** One bound and one unbound copy of a written synthetic report will be submitted to the Client, and a further copy submitted to the Cumbria County Archaeologist. The final report will present, summarise, and interpret the results of the programme detailed above, together with appropriate illustrations, including a map and gazetteer of known or suspected sites identified within or immediately adjacent to the study area. It will also include a complete bibliography of sources from which the data has been derived, and a list of further sources identified during the programme of work, but not examined in detail.

3.3.2 This report will give an assessment of the actual and potential archaeological significance of the moss within the broader context of regional and national archaeological priorities. Illustrative material 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).

3.3.3 **Confidentiality:** The assessment report is designed as a document for the specific use of the client, for the particular purpose as defined in the project brief and this 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.

4. PROJECT MONITORING

- 4.1 ***Cumbria Sites and Monuments Record:*** Any proposed changes to the project brief or the project design will be agreed with the Cumbria County Archaeologist in coordination with the client. LUAU will arrange a preliminary meeting, if required, and the Cumbria SMR will be informed of the commencement of the project in writing.

5. WORK TIMETABLE AND PERSONNEL

The phases of work will comprise:

5.1 ***Desk Top Search***

A one and an half day period is required to collate all the available data.

5.2 ***Prepare Assessment Report***

A one day period would be required to complete this element.

- 5.3 LUAU can execute projects at very short notice once an agreement has been signed with the client.

- 5.4 The project will be under the management of **Rachel Newman BA** (Unit Deputy Director) to whom all correspondence should be addressed. The report will be compiled by either **Mark Leah** or **Chris Howard-Davis** (both Unit Project Officers), depending on the precise timetable of the project. Mark is currently the senior archaeologist on the North West Wetlands Survey, and Chris undertook the pilot Wetlands programme, which collated all existing data on the wetlands of Cumbria, Lancashire, Merseyside/Greater Manchester, and Cheshire.