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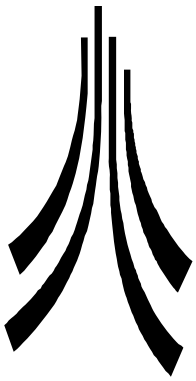

June 1996

KIRKBY-IN-FURNESS

SLATE QUARRIES

CUMBRIA

Archaeological Evaluation

commissioned and funded by:

Burlington Slate Limited

Kirkby-in-Furness
Slate Quarries
Cumbria

Archaeological Evaluation

Checked by Project Manager. ..... Date
Passed for submission to client. ..... Date

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June 1996

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Thanks go to Mike Dickinson of Burlington Slate Limited for his support and assistance throughout, and to the tenant farmer, for allowing access to the fields and for coping with the disruption. We are also indebted to Mike Daniells of Cumbria County Council for his invaluable advice.

The field work was undertaken by Mark Chesterman and James Wright, and the trenches were located by Andy Croft. The finds were examined by Chris Howard-Davis, Figure 1 was prepared by Dick Danks, and Figure 2 by Andy Croft. The report was written by James Wright. Jamie Quartermaine managed the project and edited the report.

EXECUTIVE SUMMARY

In December 1995, at the request of Burlington Slate Limited, Lancaster University Archaeological Unit (LUAU) undertook an archaeological assessment of the land in advance of the extension of a spoil tip. The assessment incorporated a documentary study and a field reconnaissance of the area of the proposal and on the basis of this work the assessment report recommended further evaluation. In May 1996, at the request of Burlington Slate Limited, LUAU prepared a project design for an archaeological evaluation of the study area on Kirkby Moor (NGR SD245843), in accordance with a verbal brief by the County Archaeologist. The present report presents the results of this work.

Thirty trenches, measuring 30m by 1.8m, were mechanically excavated, under archaeological supervision, prior to being cleaned and inspected by an experienced archaeologist.

Two small areas of ridge and furrow had already been revealed by a previous survey, and a further small field containing the same ploughing remains was discovered during the trial trenching. This ridge and furrow is fairly broad in width; it could potentially be of medieval date and its survival reflects the subsequent pastoral use of the land. The present stone walls, however, are likely to be a product of eighteenth or nineteenth century Parliamentary enclosure.

Charcoal was found in two possible features, one of which appeared to pre-date the ridge and furrow ploughing. However, even after manual excavation, it was not possible to determine how the charcoal was deposited, nor could any cut features be positively observed. The nature of these two possible features, therefore, remain unresolved.

Overall the archaeological resource, identified from the evaluation, was insufficient to justify recommending any further archaeological work.

1. INTRODUCTION

1.1 Project background

In December 1995, at the request of Burlington Slate Limited, Lancaster University Archaeological Unit (LUAU) undertook an archaeological assessment of an area of farming land on Kirkby Moor (NGR SD245843) in advance of the extension of a spoil tip. The assessment incorporated a documentary study and a field reconnaissance of the area of the proposal. The report (LUAU 1995) highlighted areas of archaeological potential, and recommended further work.

In May 1996, at the request of Burlington Slate Limited, LUAU prepared a project design (*Appendix)* for further work by trial trenching, in accordance with a verbal brief by the County Archaeologist. The work was undertaken between 20th and 23rd May 1996 and this report presents the results of the evaluation.

1.2 Topographic and Historical background

1.2.1 Topography

The study area comprises *c*6.1ha of upland pasture, and lies at *c*150m AOD on a southern outlier of the Cumbrian Massif. The solid geology is slate of the Upper Ordovician or Silurian periods, but no drift has been mapped. At the time of the trial trenching the area was under grass. The Palaeozoic rocks form a steep-sided ridge running in approximately a north/south direction, and the area investigated was on a slight shoulder in the slope, which provided some relatively level ground. Towards the south of the area a survival of harder rock formed a promontory, from which the ground fell sharply to east, south, and west.

1.2.2 Prehistory

The assessment (LUAU 1995) demonstrated that upland areas adjacent to the coast in Cumbria have considerable potential for prehistoric settlement and agricultural remains (Quartermaine 1989). There is also considerable evidence of Bronze Age activity from around the area, particularly to the north of the study area (Heathwaite Fell; Quartermaine 1988). The surface features from this period typically comprise burial cairns, cairnfields (agricultural clearances) and occasional settlements remains.

1.2.3 Medieval

The area under investigation was a part of the Kirkby Ireleth manor, held by Earl Tostig before the Norman conquest (Faull *et al* 1986), and subsequently became a part of the land controlled by Furness Abbey. It is possible that the Abbey grange, established at Ireleth by the Cistercians (Trescatheric 1993), continued after the dissolution of the monasteries as an independent farm, and that the field systems may have remained in place until the Parliamentary enclosures of the late eighteenth and early nineteenth centuries.

1.2.4 Slate Industry

Quarrying had probably been in existence from as early as 1680 on Kirkby Moor (Geddes 1975). A rapid upturn in slate quarrying occurred during the Industrial Revolution (from *c*1760 onwards) mainly as a result of a population influx resulting in the need for more houses, many of which were furnished with slate roofs. Then in 1771 Lord John Cavendish purchased the manor of Kirkby Ireleth from Lord Mulgrave and in 1793 he also bought the slate quarries (Marshall 1958). The Burlington Slate Quarries at Kirkby-in-Furness were founded by Lord William Cavendish (second Earl of Burlington) in 1843, which meant that the Kirkby quarries were united under the ownership of one company, instead of the numerous farmers and entrepreneurs who had previously been competing against one another. In 1846 the Furness railway arrived at Kirkby and was used to transport the slate to Barrow for export by sea (Geddes 1975). The industry continued to prosper through the nineteenth century and is still thriving today.

2. METHODOLOGY

2.1 Project Design

A project design was compiled at the request of Burlington Slate Limited, and in accordance with a verbal brief by the County Archaeologist (Mr Mike Daniells), for an evaluation of the land on Kirkby Moor that will be affected by the extension of the present spoil tip.

The project design (Appendix) provided for an evaluation involving a greenfield and targeted trenching programme to examine the subterranean potential of the area. The work has been carried out in accordance with the project design.

2.2 Field Evaluation

2.2.1 Greenfield and targeted trenches

The greenfield trenches were used as a survey technique to examine archaeological deposits not evident from the surface and were excavated in areas with no previously known archaeological features. Their aim was to establish the presence or absence of any previously unsuspected archaeological deposits, and, if established, to define their character, date, and state of survival.

The County Archaeologist requested that trenches should be excavated in a 30m grid pattern along the extent of the study area, in order to examine 3.5% of the greenfield area identified in the assessment report, that will be affected by the proposed development. The study area covers 6.1sqkm, and, taking into account limited areas of extreme topography, this would indicate that a maximum of 33 trenches (30m x 2m) would be necessary to examine the area. Because of the steep terrain and the outcrops of bedrock, difficulties were encountered in adhering to a strict lattice, although this was maintained as much as possible. Some trenches were also targeted to intersect and investigate those archaeological features identified by the assessment. In the event 30 trenches (both greenfield and targeted) were excavated, and the shortfall from the stated maximum was due to the presence of unfavourable topography and outcrops of bedrock.

2.2.2 Excavation methodology

Trenches were excavated, under supervision, using a wheeled mechanical excavator, fitted with a toothless, 1.8m wide bucket, and the trenches were manually cleaned and inspected by experienced archaeologists for either *in situ* deposits or artefacts of antiquity. Excavation was undertaken to the depth of natural subsoils or bedrock in all trenches. The trenches were mechanically backfilled.

The positions of the trenches were recorded using a Global Positioning System (GPS). The GPS consists of two receivers, one stationary in a known location and a second mobile one used in the field, both of which recorded data transmitted from earth-orbiting satellites. Comparison of the data from the two receivers enables the location of the mobile one to be determined to an accuracy of better than *c*1m.

The recording methods employed by LUAU accord with those recommended by English Heritage's Central Archaeology Service (CAS). Recording was in the form of *pro forma*

Trench Sheets for each trench, which recorded the orientation, length, and depth of machining, and described the nature of the topsoil, subsoil (where applicable), and geological deposits. Where potential features were observed they were manually sampled with a full textual, drawn, and photographic record being maintained. Any finds recovered were bagged and recorded by either the trench number or, where appropriate, by the context number from where they were recovered.

2.3 Health and safety

Both Lancaster University and LUAU maintain Safety Policies, the latter based on the SCAUM (Standing Conference of Unit Managers) Health and Safety Manual (1991). In keeping with current Health and Safety at Work Regulations, prior to commencing on-site work, a risk assessment for each activity was completed. The only services in the area were electricity cables, which were laid over ground and clearly visible. It is, however, LUAU standard practice to scan the positions of all trenches for underground cables using a U-scan meter.

3. EVALUATION RESULTS

Thirty trenches (23 greenfield and seven targeted) were excavated during this phase of archaeological evaluation. The locations of the trenches are shown on Figure 2. The generalised summary of the evaluation results and the background stratigraphy are assessed in Section *3.1* and the detailed results of trenches that produced evidence of human activity are described in Section *3.2;* the finds are described in Section *3.3.*

3.1 General Trench Descriptions

The following general trench descriptions examine the background stratigraphy identified from the trenches throughout the extent of the study area.

Trenches were 30.0m long unless constrained by topology, or where excavated specifically to resolve uncertainties. Thus Trenches 7 and 23 were extended to ensure that they intersected, respectively, a relict field boundary and a linear hollow. Trenches 15, 16, 19, and 25 were shortened because of the presence of solid outcrops or extremely steep slopes. Three trenches: 20, 24, and 28, were all less than 8.0m long; Trench 20 was located to intersect a ruined wall at the base of a steep slope; Trench 24 sectioned a tumble of rubble which was thought to be the remains of a building, and Trench 28 was placed across a slight hollow, which could have been a hut platform, at the top of a very steep slope. Trench 19 was expanded to a total width of 7.0m over a length of 6.4m, and Trench 21 to a width of 4.0m, in order to investigate potential features fully.

The natural deposits encountered were principally moderately stony to very stony yellowish brown silty clays (Trenches 1 to 7, 9 to 15, 17, 20, and 21). The stones were small to large in size, and derived from the underlying slates. In addition to the above deposits, solid bedrock was uncovered in Trenches 25 to 28, whilst in the remaining trenches (8, 16, 18, 19, 22 to 24, 26, 27, and 29) the same silty clay layers with slate-stones contained rounded boulders.

The topsoil was generally between 0.25m and 0.15m thick, and comprised a grey silty loam, with a strongly developed granular structure, and many fine roots. Its stoniness varied with that of the underlying deposits, but the stones present were often at a depth of 0.10m to 0.15m below the ground surface.

In most of the trenches, bedrock or natural subsoils were identified at a depth of *c*0.30m, although in Trench 17 a build-up of ploughwash - soil loosened by agricultural practices and redeposited especially in hollows - meant that 0.45m of overburden had to be removed. In Trench 28 it was neither possible nor necessary to remove more than between 0.05m and 0.10m of topsoil because bedrock was close to the surface.

3.2 Detailed Trench Descriptions

3.2.1 Targeted trenches

Trenches 7 and 8 both sectioned field boundary Site 7 (LUAU 1995, 13), which could be seen to extend in an east/west direction following a natural south-facing slope. In both trenches this boundary had the form of a steepening of the incline, with a slight accumulation of topsoil, which increased from 0.25m to 0.30m, from south to north. No

finds were recovered from either trench, nor were there any of the large stones which could be seen in places along the relict field boundary. It had a classic lynchet profile indicating that it had formerly defined the edge of a cultivated area.

Trench 11 was located to investigate field boundary 3 , and showed it to be a 0.2m high bank. No finds were recovered.

Trenches 13 to 16 were all located either within the area of ridge and furrow (Figure 2: LUAU 1995, Site 6), or across boundaries defining it. No finds were retrieved from these trenches and the field boundaries when viewed in section were similar to boundary site 7 (Figure 2: LUAU 1995).

The remains of the stone structure which formed a part of Site 3 (LUAU 1995), comprised much stone rubble and consequently its measured dimensions (4m x 3m) are imprecise. It was butted into the corner of a former field, and may have been a small field barn. The field boundaries appear to be a product of the Parliamentary enclosure (eighteenth/nineteenth centuries) and therefore the barn must be of a later date. The building is shown on the 6" first edition OS map (1850) and was therefore of an earlier date. It was cleared in Trench 24 to reveal large flat stones that had been laid as a wall foundation, but again there was no artefact dating evidence.

A relict wall which had enclosed a small steeply sloping area was cleared to natural deposits in Trench 20. No finds were uncovered, but the lack of vegetation around and between the stones suggested that the wall was not of great antiquity.

3.2.2 Greenfield trenches

A field boundary was identified within Trench 2, had the same lynchet/bank form as Field boundary 7; again there was a lack of artefacts. The boundary was mid way along the trench, and subsequent inspection showed that, between it and the top of a steep slope to the north-west, was an area containing the remains of ridge and furrow ploughing. The distance between the crests of the ridges was *c*4.5m.

What may have been a trackway was intersected by Trench 9, and was found to have two slight depressions in the ground surface.

In Trench 19 a possible pit was uncovered, and the trench was widened for further investigation. The fill of this possible pit was a silty loam containing many stones, and small pieces of charcoal. The feature was quadranted and this demonstrated that there was no distinction between what was thought to be the fill and the geological deposits; it would therefore suggest that the possible pit was of natural origin. A sherd of nineteenth century pottery was recovered from the trench and it is possible that the charcoal had been spread on the field whilst manuring. Similarly, in Trench 21, a greyish brown silty loam containing charcoal and large rounded stones was half-sectioned to show that the possible feature was 1.70m long, 1.05m wide, and extended 0.30m into natural deposits. There were no clear edges to this silty loam soil, which therfore may have been of either a geological or human origin.

3.3 Finds

Pottery, of a nineteenth or early twentieth century date, was found in Trenches 2 (one sherd), Trench 9 (five sherds), Trench 13 (one sherd), Trench 16 (three sherds), and Trench 22 (one sherd). A single sherd of pottery of a mid-eighteenth century, or later, date was recovered from Trench 17.

4. DISCUSSION

The remains of several field boundaries were seen as earthworks and described in the assessment report (LUAU 1995), and another small field boundary was discovered during the trial trenching (Section *3.2.2* above). The date of the ridge and furrow ploughing has not been positively established by the trial trenching, as only a few sherds of pottery have been retrieved, and none of these were securely stratified beneath a boundary marker related to the ridge and furrow. However, the observed distance between the crests of the ridges is more consistent with the ridge and furrow being of a medieval, rather than a post-medieval date; later examples are normally more closely spaced, at about 2-3m. In Britain the decline in population in the fourteenth and fifteenth centuries caused by plague reduced the pressure on land, and cultivation became less intense, particularly on marginal land, where arable practices were replaced by pastoral (Taylor 1975, 71-95). With the decline in demand for crops following the decrease in population, it is possible to envisage that fields, where the hard bedrock must have constantly damaged plough shares, and where access for a team of oxen must have been arduous, would have been given over to pasture. This, therefore, could potentially suggest a date of before the fifteenth century for the observed ridge and furrow. The present boundaries, however, are certainly a product of Parliamentary enclosure in the late eighteenth or early nineteenth centuries, which may have largely replaced earlier field patterns.

Two possible features, both containing charcoal, were uncovered in Trenches 19 and 21. These trenches were *c*110m apart, both were on horizontal land at the top of the same dry valley, and, in the case of Trench 19, the possible feature was sealed by ridge and furrow. The fill of the possible feature in Trench 21 comprised rounded stones with charcoal found only at the top of this fill. The rounded stones appeared to tail off into natural deposits, suggesting that the feature was of natural origin. The same was applicable in Trench 19, where a feature appeared to be clearly defined, but on excavation it was found that this 'fill' also merged into natural geological deposits. The pieces of charcoal seen at the top of both putative features had dimensions of up to *c*20mm, and were unlikely to have been redeposited by the action of worms or other biological activity. It was not possible precisely to delineate either feature precisely, and as no stratified dating evidence was recovered, their function or origin must remain speculative.

5. RECOMMENDATIONS

LUAU conducts evaluations in accordance with the Institute of Field Archaeologists' Code of Conduct and best practices, and also in the light of *The management of archaeological projects* (English Heritage 2nd edition 1991). Our concern must be to protect and preserve archaeological sites wherever possible, and only where this is not feasible are destructive techniques advocated. Our aim is to recommend the appropriate action which will achieve recording objectively, without any waste of resources.

The evaluation has gathered useful information about the agricultural practices on a southern outlier of the Cumbrian mountains, and has raised the possibility that there may have been an earlier perhaps more ephemeral, human presence. However, it is considered that these evaluation results do not warrant a programme of mitigation recording prior to the development.

It is understood from the Client that the topsoil strip prior to the spoil tip extension will be undertaken by bulldozer, which restricts examination of the exposed soils, because of the movement of the tracked vehicles over the ground following stripping. Unless the topsoil will be stripped by backactor machine there would be little value in undertaking a watching brief during such a stripping programme and such an action is consequently not recommended.

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6.2 Maps

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APPENDIX
PROJECT DESIGN

Lancaster University Archaeological Unit

April 1996

KIRKBY-IN-FURNESS SLATE QUARRY,

KIRKBY MOOR,

CUMBRIA

ARCHAEOLOGICAL EVALUATION

Proposals

The following project design is offered in response to a request from Mr M Dickinson, of Burlington Slate Limited, for an archaeological evaluation in advance of a proposed extension to a spoil heap at Kirkby-in-Furness Quarry, north-west of Ulverston, in Cumbria.

1. INTRODUCTION

Kirkby-in-Furness Quarry is located on Kirkby Moor (NGR SD 245843), *circa* 2km to the north-west of Kirkby-in-Furness, in Cumbria. At *circa* 150m OD, the quarry lies upon a southern outlier of the Cumbrian Mountains. Such moorland areas were commonly exploited during the later prehistoric period, and evidence for such activity may be encountered, such as bronze age clearance cairns or field systems.

In September 1995 at the request of Burlington Slate Limited, Lancaster University Archaeological Unit produced an archaeological assessment of an area of agricultural land threatened by the extension of a quarry spoil heap. The rapid field scan revealed seven sites of archaeological interest, although only five of these will be directly affected by the proposed scheme. These five sites comprised mainly relict field boundaries, although ridge and furrow and a small structure (Site 3) were also identified. All of the sites (with the exception of site 6) are visible on the Ordnance Survey first edition map dating to 1850, and appear to represent the remains of a post-medieval field system.

Following on from this assessment the County Archaeologist has requested an archaeological evaluation of the pastoral fields within the study area. This evaluation is aimed at evaluating sub-surface remains and also assessing the quantity, period and quality of such sites in the context of the surrounding landscape.

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.

2. OBJECTIVES

The following programme has been designed, in consultation with the County Archaeologist, to provide an accurate archaeological evaluation of the designated area, within its broader context. The required stages to achieve these ends are as follows:

2.1 Field Evaluation

A limited programme of trial excavations, as recommended by the County Archaeologist, will be undertaken to establish the nature, extent, chronology, and preservation of any archaeological deposits encountered. This will examine the decayed stone structure (Site 3) and also those parts of the study area where archaeological deposits may survive with no surface trace. Suitable samples recovered will be assessed for their palaeoenvironmental potential.

2.2 Evaluation Report

A written evaluation report will assess the significance of the data generated by this programme within a local and regional context. It will advise on the mitigation measures necessary to protect and/or record (to appropriate levels) identified archaeological features and deposits, including any appropriate further evaluation, excavation, and recording strategies.

3. METHOD STATEMENT

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

3.1 Field Evaluation

3.1.1 Access
Liaison for basic site access will be undertaken with the Client. The precise location of any services within the study area will also be established.

3.1.2 Greenfield evaluation
This programme of trenching will establish the presence or absence of any previously unsuspected archaeological deposits and, if established, will then briefly test their date, nature, and quality of preservation. Excavation will normally be limited to the upper surface of significant archaeological deposits, unless further work is regarded by ourselves and the county archaeologist as essential in order to complete the full evaluation. This element of the trial trenching is invaluable in order to assess those accessible plots within the proposed study area where there is a potential for archaeological deposits to survive which are not visible on the surface. This also reduces the possibility of the discovery of any important archaeological features within those designated plots during groundworks, so as to minimise the possibility of any disruption at that late stage.

The 'greenfield' trenching would be undertaken using a conventional 30m alternate trench configuration, which provides a 3.5% coverage of the investigated area. This would involve the excavation of trenches measuring 30m in length, by 2m in width, and the orientations of the trenches would be varied to improve the likelihood of them crossing linear features. It is required by the county archaeologist that the whole of the study area (6.1 hectares) be examined by this trenching programme; however, any areas of extreme topography can be omitted from the evaluation. There are up to three areas of localised outcrop and associated steep terrain which would restrict the placement of trenches. Incorporating these topographic restrictions the programme would warrant the excavation of approximately 33 trenches. The precise locations of the trenches would be determined in discussions with the client and county archaeologist at the outset of the project.

3.1.3 Targeted evaluation
Trial trenching will also be required to target features of suspected archaeological significance which are visible as earthworks or linear features identified from the assessment. Site 3, a decayed stone structure, will require the excavation of a single trench across it to establish any chronological evidence and to identify any contextual relationship with nearby agricultural features.

3.1.4 Methodology
To maximise the speed and efficiency of the operation the removal of overburden will be undertaken by machine (with a standard five or six foot toothless ditching bucket), although in areas where ephemeral remains are encountered elements may be hand dug. The costs assume that an appropriate type of excavation machine and driver will be provided by Burlington Slate Limited, with a 5' or 6' wide toothless ditching bucket.

All trenches will be excavated in a stratigraphical manner, whether by machine or by hand. Trenches will be accurately located with regard to surrounding features, by use of a Total Station.

Full regard will, of course, be given to all constraints (services etc) during the excavation of the trenches, as well as to all Health and Safety considerations. LUAU provides a Health and Safety Statement for all projects and maintains a Unit Safety policy. 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 risk assessments are implemented for all projects. As a matter of course the Unit uses a U-Scan device prior to any excavation to test for services.

Land disturbed as a result of this work will be reinstated to the Client's satisfaction, although LUAU as a matter of course replaces material in a stratigraphic manner and relays the surface, if possible. It is presumed that the Client will have responsibility for site security. LUAU would take responsibility for temporary fencing arrangements to exclude livestock or any other farming activities. In addition, any deep sections of open trench would be fenced off to prevent any accidents occurring to LUAU/client staff.

3.1.5 Timetable
All excavation will be undertaken within constraints agreed with the client.

3.1.6 Recording

All information identified in the course of the site works will be recorded stratigraphically, with sufficient pictorial record (plans, sections and both black and white and colour photographs) to identify and illustrate individual features. Primary records will be available for inspection at all times.

Results of the field investigation will be recorded using a system, adapted from that used by Central Archaeology Service of English Heritage. The archive will include both a photographic record and accurate large scale plans and sections at an appropriate scale (1:50, 1:20, and 1:10). All artefacts and ecofacts will be recorded using the same system, and will be handled and stored according to standard practice (following current Institute of Field Archaeologists guidelines) in order to minimise deterioration. Samples will be collected for technological, pedological, palaeoenvironmental and chronological analysis as appropriate, but it is only intended to process such material for assessment at this stage. If necessary, access to conservation advice and facilities can be made available. LUAU maintains close relationships with Ancient Monuments Laboratory staff at the Universities of Durham and York and, in addition, employs artefact and palaeoecology specialists with considerable expertise in the investigation, excavation and finds management of sites of all periods and types, who are readily available for consultation.

3.2 Evaluation Report

3.2.1 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 can be provided in the English Heritage Central Archaeology Service format, both as a printed document and on computer disks as ASCII files, and a synthesis (in the form of the index to the archive and the report) will be included in the Cumbria Sites and Monuments Record. A copy of the archive can also be made available for deposition with the National Archaeological Record in Southampton. LUAU practice is to deposit the original record archive of projects (paper, magnetic and plastic media) with the appropriate County Record Office (Barrow), and a full copy of the record archive (microform or microfiche) together with the 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 this 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.

3.2.2 Evaluation 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 report will include a copy of this 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 stratigraphy, together with appropriate illustrations, including detailed plans and sections indicating the locations of archaeological features. Any finds recovered from the excavations will be assessed with reference to other local material and any particular or unusual features of the assemblage will be highlighted and the potential of the site for palaeoenvironmental analysis will be considered. 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, the location of trenches, and whether the results of the sampling were positive or negative. An assessment and statement of the actual and potential archaeological significance of the site within the broader context of regional and national archaeological priorities will be made. Illustrative material will include a location map, section drawings, and plans if 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).

3.2.3 Proposals

The report will make a clear statement of the likely archaeological implications of the quarry extension. It will highlight whether, as a first option, the preservation *in situ* of significant archaeological features should take place and possible strategies for the mitigation of the impact of the development will be considered. When preservation is neither possible, nor practical, a further stage of archaeological work may be required. In this case, recommendations for such mitigation measures will be submitted. It should also be made clear that the results of this stage 2 archaeological evaluation should only be considered as representative of the below ground archaeological potential of those areas presently accessible for trial trenching.

3.2.4 Confidentiality

The evaluation report is designed as a document for the specific use of the Client, for the particular purpose as defined in the 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 Project Monitoring

3.3.1 Burlington Slate Limited

LUAU will consult with Burlington Slate Limited regarding access to land within the study area. Whilst the work is undertaken for Burlington Slate Limited, the Cumbria County Archaeologist will be kept fully informed of the work and its results. Any proposed changes to the project design will be agreed with him in co-ordination with the Client. LUAU will arrange a preliminary meeting, if requested, and the Cumbria County Archaeologist will be informed in writing at the commencement of the project.

3.3.2 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.

4. WORK TIMETABLE

The phases of work would comprise:

4.1 Evaluation

A four day period is required to undertake the trenching programme.

4.2 Prepare evaluation report

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

LUAU can execute projects at very short notice once an agreement has been signed with the client. LUAU would be able to submit the report to the client within three weeks from the commencement of the project.

5. OUTLINE RESOURCES

The following resource base will be necessary to achieve the proposals detailed above.

5.1 Evaluation

5 man-days Project Officer
4 man-days Project Assistant

5.2 Evaluation report

3 man-days Project Officer
2 man-days Draughtsman

The project will be under the direct line management of **Jamie Quartermaine, BA, Surv Dip, MIFA** (Unit Project Manager) to whom all correspondence should be addressed.

ILLUSTRATIONS

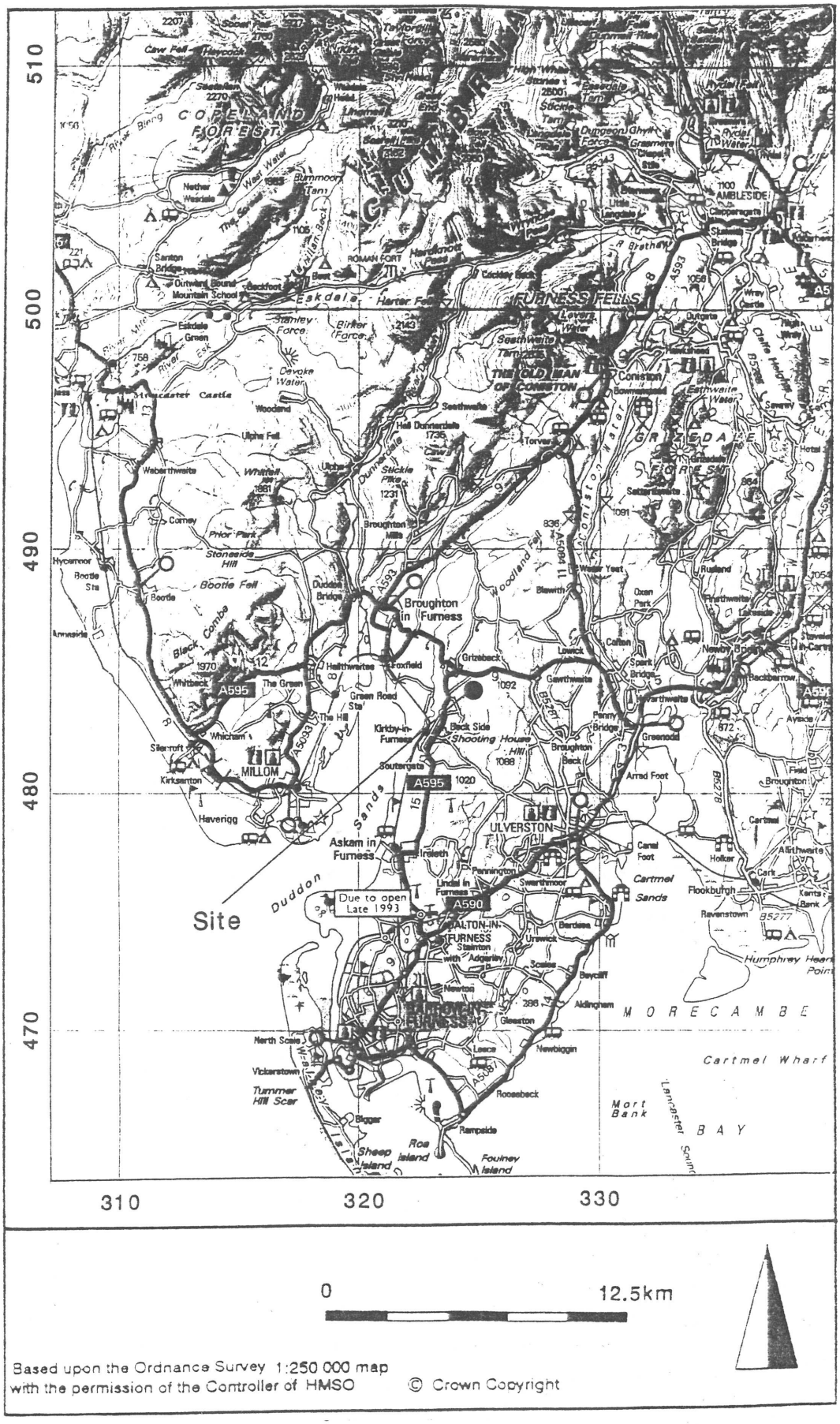

Figure 1 Site Location

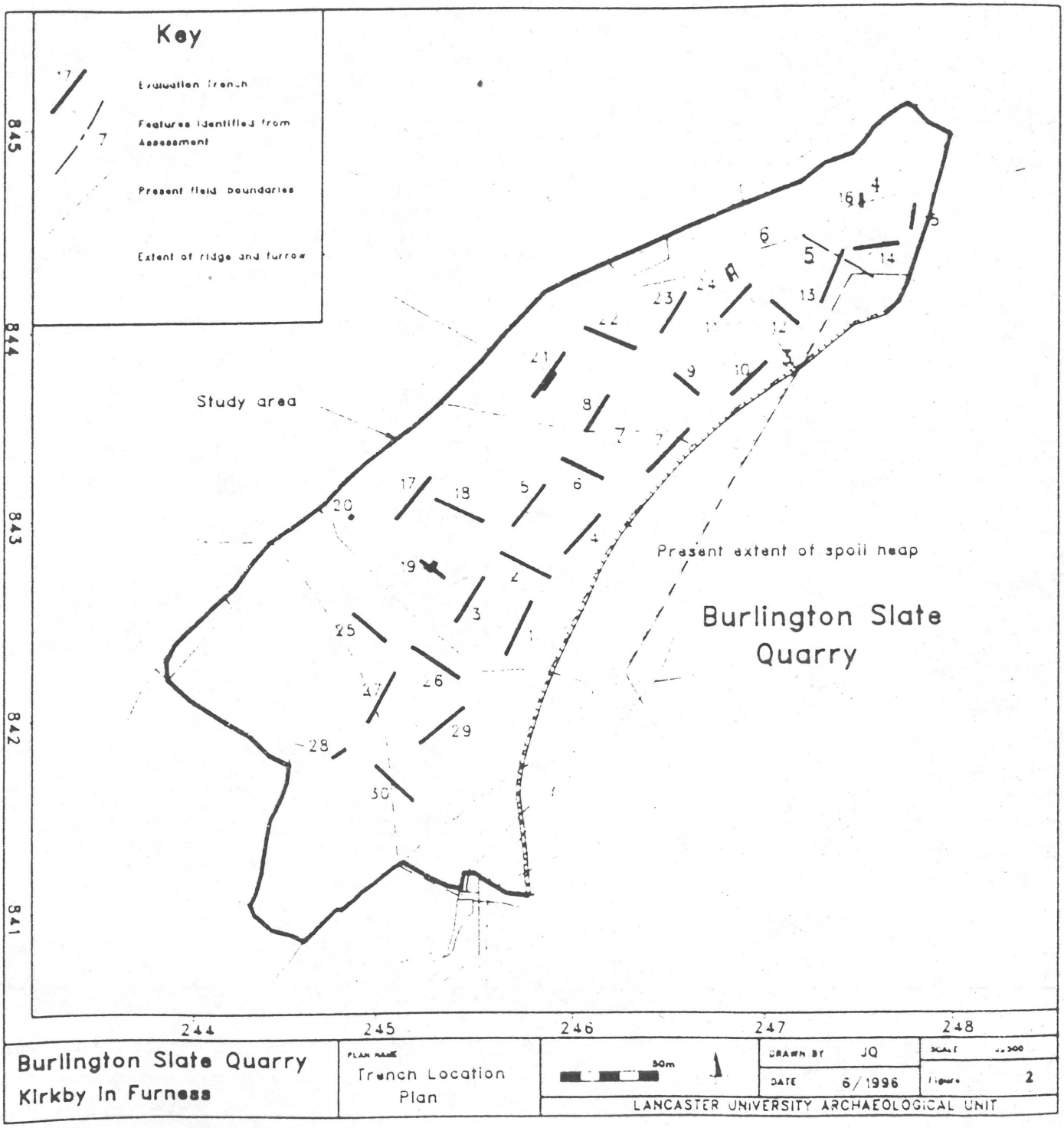

Figure 2 Trench location Map