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**KEEKLE HEAD OPEN CAST COAL
SITE
CUMBRIA**

Assessment Report

Keekle Head Open Cast Coal Site Cumbria

Archaeological Assessment Report

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The documentary research was undertaken by Caron Newman and the field survey by Ian Scott. The report was compiled by Caron Newman and Ian Scott, and edited by Jamie Quartermaine (Project Manager) and Rachel Newman (Deputy Director). The project was managed by Jamie Quartermaine.

SUMMARY

An archaeological assessment was carried out in advance of a proposed opencast coal scheme (centred on NGR NY 034216) at Keekle Head, in West Cumbria. The work was undertaken by the Lancaster University Archaeological Unit on behalf of Roxylight Agricultural Land (Cumbria) Ltd. The study area consists of an area of enclosed pasture land straddling the parish boundary between Arlecdon and Distington, and comprised a desk-based study, compiling data from the Cumbria Sites and Monuments Record and the Cumbria Record Offices in Whitehaven, as well as a rapid identification survey.

The moorland was enclosed in the late eighteenth century in Distington, but was mostly enclosed at an earlier date in Arlecdon. There are records which shows that some coal mining, on a small scale, had taken place from before 1700 in Distington, although, it was only in the nineteenth century that mining was undertaken there as a commercial venture. The main pit, called Venture pit, was in existence for only 13 years, between 1852 and 1865. The origins of the other pits are not known, but at least two were in operation in the mid-nineteenth century.

The Sites and Monuments Record (SMR) contained four sites within the study area, including ridge and furrow (SMR 16632: Site 25) and the remains of three coal mining sites (SMR 11700 (Site 24), 11701 (Site 22) and 11705 (Site 1)). The assessment area also contains two settlement sites, Sandbeds and Green Spot, which are shown on the Ordnance Survey 1st edition maps of 1863 and 1865. Sandbeds appears to have been in existence in 1822, when it is shown on the enclosure map (CROW YDX/111/54); but this map does not extend to the area of Green Spot farm.

In addition to the documentary study, the identification survey identified a further eighteen features within the study area. Of these the majority relate to mining activity associated with a vein which was aligned north-west/south-east in an area to the north of Green Spot farm. These mine workings reflect a period of activity from small scale extractions of the eighteenth century to larger scale commercial mining centred around the Venture Pit during the nineteenth century.

The survey involved a more detailed assessment of the two farms, Sandbeds and Green Spot, and involved the examination of both the external fabric of the farm buildings and their interiors in order to assess the archaeological survival and architectural significance of the buildings. Both farmhouses have a 'double-pile' plan form, which typically dates to between the mid eighteenth and the mid nineteenth centuries.

It is recommended that a programme of archaeological evaluation be undertaken, and would be targeted on areas of potential identified by the present assessment. It is also recommended that a mitigation record is produced of the surface features and the farms. The landscape survey should examine Sites 4, 8, 9-20, 22 and 24. The fabric survey should the generation of ground plans in conjunction with a photographic survey. The trial trenching is recommended to examine areas where there is the greatest sub-surface potential and also investigate documented sites where there is no longer a surface expression. It is recommended that the following sites be subject to evaluation trenching: Site 01, 02, 03, 04, 9-20, 23 and 24.

1. INTRODUCTION

1.1 Circumstances of Project

- 1.1.1 An archaeological assessment was undertaken by the Lancaster University Archaeological Unit (LUAU) on behalf of Roxylight Agricultural Land (Cumbria) Ltd, in advance of a proposed opencast coal scheme (centred on NGR NY 034216) at Keekle Head, West Cumbria. The study area consists of enclosed pasture land straddling the parish boundary between Arlecdon and Distington (Fig 1). The area includes two farms, Sandbeds and Green Spot, which will also be directly affected by the proposed development.
- 1.1.2 The purpose of the assessment was to provide an accurate archaeological assessment of the designated area, within its broader context. The survey was to collate existing information on the archaeology of the site and to determine the significance of the archaeological resource. It involved a desk-based study in conjunction with a field inspection of the study area and a more detailed fabric assessment of the Sandbeds and Green Spot farms. The desk-based survey and the field inspection were undertaken between the 4th and the 19th June 1998.
- 1.1.3 This report sets out the results of the work as a gazetteer in conjunction with a methodology statement, a brief text description of desk-based and field results, an assessment of the archaeological potential within the study area, an evaluation of the impact that the development proposals will have upon the archaeological resource, and recommendations for further archaeological investigation.
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2. METHODOLOGY

2.1 Project Design

- 2.1.1 A project design (*Appendix 2*) was submitted by LUAU in response to a request from Roxylight Agricultural Land (Cumbria) Ltd, in advance of a proposed opencast coal scheme (centred on NGR NY 034216). This was designed to meet the requirements of a project brief (*Appendix 1*) provided by the Cumbria County Archaeologist.
- 2.1.2 The project design provided for an initial archaeological assessment involving a desk-based survey, an identification survey and a fabric assessment of the two farms (Sandbeds and Green Spot); the results are presented in the present report. The work has been carried out entirely in accordance with the project design.

2.2 Desk-based Study

- 2.2.1 Existing archaeological information was obtained from the Cumbria Sites and Monuments Record (SMR). Manuscript maps and selected other documents were studied in the Cumbria Record Offices in Whitehaven (CROW), along with published antiquarian sources. The availability of manuscript maps in the CROW was limited, but included enclosure maps of 1767-8 (CROW YSPC/13/90) and 1822 (CROW YDX/111/54) and a survey map of 1699 (CROW D/Lons/W6/survey), although only the enclosure maps covered land within the assessment area. There were no tithe maps for either Distington or Arlecdon. Copies of the first edition Ordnance Survey (25 inches to one mile, Sheets 61.12, 1863, and 62.9, 1865) maps were obtained. Much of the land in the parishes of Distington and Arlecdon was bought by the Lowther family in the seventeenth and eighteenth centuries (Wilson 1905, 370), and it is possible that there may be relevant documents contained within the Lowther archives in Carlisle. However, a brief scan of the catalogues at the CROW of Lowther documents did not reveal any likely sources. A list of the relevant documents is provided within the bibliography (*Section 7*).

2.3 Identification Survey

- 2.3.1 Reconnaissance was undertaken in a systematic fashion, walking on approximately 30m wide transects within the extent of the defined study area. The surface of much of the area was obscured by mature grass crops, which restricted the identification survey in some areas. The sites were located by Global Positioning System (GPS) techniques which 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.
- 2.3.2 There were two post-medieval farms within the extent of the study area, Green Spot and Sandbeds. The site survey included examination of both the external fabric of the farm buildings and also their interiors in order to assess the archaeological survival and architectural significance of the buildings.
- 2.3.3 A photographic record was undertaken simultaneously. All archaeological information collected in the course of field inspection was recorded in standardised form, and

includes accurate national grid references forming the basis of a gazetteer, submitted as part of the report.

2.4 Gazetteer of Sites

- 2.4.1 The collated information on the site has been presented in the form of a gazetteer in conjunction with an annotated map showing the locations of the sites. Locations are given as eight or ten figure National Grid References, as appropriate to the extent of the site and the accuracy of survey. A summary description of each site is provided in conjunction with a reference to the source of the information with references as appropriate.

2.5 Archive

- 2.5.1 An archive has been compiled in accordance with the project design (*Appendix 2*). A copy of the report, including a synopsis of the archive, will be deposited with the Sites and Monuments Record and the archive will be deposited with the Cumbria County Record Office.
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3. TOPOGRAPHY AND GEOLOGY

3.1 Topography and Geology

- 3.1.1 The assessment area is situated across the boundary of two parishes, Distington and Arlecdon (Fig 1). It is an area of enclosed pasture land on the south side of Dean Moor, bounded to the north by a lane. The area is characterised by undulating countryside on a well-dissected plateau (Eastwood *et al* 1931, 2) (Fig 2). This part of the plateau has a ridge of higher ground (High Park), extending from Weddicar to Dean Moor (Eastwood *et al* 1931, 2).
- 3.1.2 The underlying geology comprises part of the Carboniferous Westphalian limestone on the West Cumberland coal field (Moseley 1978, 180-2). The Coal Measures are made up of two divisions, both of which are found within the assessment area: the upper division mainly lacking in coal seams, and the lower productive measures (Eastwood *et al* 1931, 7).
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4. ASSESSMENT OF ARCHAEOLOGICAL POTENTIAL

4.1 Desk-Based Study

- 4.1.1 **Prehistory:** no prehistoric monuments or features were identified from within the study area; however, there is a stone circle (Site 26) at a distance of only 210m beyond the northern boundary (NGR 03990 2234 (not shown on enclosed mapping). The circle is particularly large, measuring 25.9m by 32.8m, although, the stones are very low and some are partly buried. The stone circle comprises seven stones, although there is evidence of another five stones just above or below the ground surface (Waterhouse 1985). Within the circle is a round cairn (c 6.7m diameter) which was excavated in the early 1920s (Mason and Valentine 1925); this revealed that it was carefully constructed and incorporated several large flat slabs. Although the cairn displays the characteristics of a funerary monument, the excavators were not able to identify any human remains. The funerary mound is a typical Bronze Age feature, but the large open form of the stone circle is more appropriate for a Neolithic date. Burl considers that a central burial cairn is an unusual feature in a stone circle of this size and has therefore postulated that the cairn is a later feature (Waterhouse 1985, 73).
- 4.1.2 **Medieval:** the study area lies within the parishes of Arlecdon and Distington, straddling the River Keekle which forms the parish boundary; Arlecdon is to the south of the river and Distington to the north (Fig 2). The name of Arlecdon is probably derived from Old English *earn* + *lacu* + *dene*, which means the valley of the stream frequented by eagles (Mills 1991, 11), although Hutchinson thought it was derived from Old Irish (Hutchinson 1794, 89). The parish comprised the townships of Arlecdon, Frisington, and Whillimoor (Whellan 1860, 370), of which the latter contains the southern part of the assessment area. The manor of Arlecdon was granted by William de Meschines to Michael le Fleming in the twelfth century or late eleventh centuries (Whellan 1860, 371), but through various sales ended up in the hands of the Lowther family at the beginning of the fifteenth century (Sugden 1897, 2; Hutchinson 1794, 89).
- 4.1.3 The origins of the name of Distington are more obscure than those of Arlecdon. The ending derives from the Old English *tun*, but the meaning of the first part is not known, although it may derive from a personal name (Mills 1991, 106). The manor of Distington was held by Gilbert de Dundraw in the late eleventh century, and eventually passed into the hands of the Dyke family by the end of the fourteenth century (Hutchinson 1794, 98; Whellan 1860, 375). By the early post-medieval period, the manor had passed into the hands of the Fletcher family and, after the death of the last of that family, it was sold to James Brougham in 1720 (Whellan 1860, 375). In 1737, he sold it to Sir James Lowther, and it thereafter remained in the possession of the Earls of Lonsdale (Whellan 1860, 375).
- 4.1.4 The assessment area lies on land that once formed part of Whillimoor Common, the name of which probably derives from Old English *wilig* and Old Scandinavian *mor*, meaning moor, or barren upland, with willow trees (Mills 1991, 383-4). The land in Distington parish was enclosed in 1768 (CROW YSPC/13/90), and the regular field shapes and sizes reflect the late enclosures. However, in 1777 (Nicholson and Burn 1777, 50) and in 1794 (Hutchinson 1794, 99), the tenants still had large common rights and turbary on part of Whillimoor. That part of the moor which lies within Arlecdon parish was partly enclosed at an earlier date, forming the township of Whillimoor and this is reflected within the field pattern, which typically has small irregular fields within an intake of land between the present-day farms of Keekle Head

and Sandbeds. There is a further enclosure intake centred around Midtown farm and between the two was a 200m wide outrake corridor of a drove route (Fig 3). The external boundaries of the intakes converged towards the drove route so as to provide a 'funnel' to assist the driving of stock from the open moorland into the drove route and is a common design feature. The area of the drove route was subsequently enclosed, at some time before the enclosure map of 1822, which depicts the area of the former drove as 'Thomas Hindes Old Inclosure' (CROW YDX/111/54). Green Spot farm is situated within this later enclosure of the drove route and may potentially be contemporary with the enclosure. The presence of broad ridge and furrow, noted on aerial photographs (Site 25; NY 0368 2160), reinforces the supposition that this intake was possibly of medieval date.

- 4.1.5 **Post-Medieval Settlement:** the buildings that lie within or close to the assessment are on modern Ordnance Survey maps can all be traced back to at least the mid-nineteenth century. Wilson Park, Sandbeds (Site 02), and Green Spot (Site 03), within the study area, are all marked on the Ordnance Survey maps of 1863 and 1865. Sandbeds also appears to be marked on the Arlecdon enclosure map of 1822 (CROW YDX/111/54), although it is not named. Immediately adjacent to the assessment area, Studfold (Greyhound Inn), Wilson Park, Redgate Foot and Midtown are all marked and named in 1863 and 1865, and the building to the west of Midtown is named as Blacklands. In addition, there is a building called Whillimoor Head (Site 23; Fig 3) marked on the 1865 map, just inside the eastern limit of the assessment area, but which is not marked on modern maps and was not identified by the field survey. The farm known as Keekle Head on modern maps is called Coal Race on the Ordnance Survey 1865 map, and was possibly associated with the coal shafts (Site 24), just to the north.
- 4.1.6 **Post-medieval Coal Working:** both Distington (Nicholson and Burn 1777, 50; Hutchinson 1794, 99) and Arlecdon (Hutchinson 1794, 89) were recorded as sources of coal and iron ore, and in both parishes the Earls of Lonsdale played a major part in the workings. However, coal working was undertaken only on a small scale until the nineteenth century and the opening of the Workington collieries which followed the introduction of the steam engine (Wilson 1905, 366). In Distington, the development of mining was undertaken by the Fletchers from the early seventeenth century. In 1614 they leased coal royalties belonging to John Fearon, buying them in 1624, and adding to them in 1633 (Wood 1988, 2). In 1675, they sold the royalties to the Lowthers (Wood 1988, 2), who concentrated on buying up the rights to work coal in the area throughout the seventeenth and eighteenth centuries (Wilson 1905, 370). The Lowthers planned to dominate coal mining, and they bought further estates and leased more coal royalties, including more in Distington in 1714 and those for Whillimoor in 1753 (Wood 1988, 25). In Distington, coal mines were worked throughout the eighteenth century, although there are no records of mines from within the assessment area. There are no coal workings marked within the Distington parish part of the assessment area on the Ordnance Survey 25 inches to 1 mile map of 1865 (sheet 62.9), but, by 1867 (1st edn 6" map) a mine shaft is marked close to the eastern edge of the assessment area (Site 01). On the modern Ordnance Survey 1:10,000 map this shaft is marked as disused, and is the only indication of mine working within the Distington parish part of the assessment area.
- 4.1.7 Although coal had been worked from before 1700 in the township of Whillimoor (Wilson 1905 373), coal mining tended to be carried out on a small scale in the parish of Arlecdon until the nineteenth century (Wilson 1905, 373). In 1852, the Venture Pit (Site 22) was sunk at Whillimoor by Thomas Hinde on land that was already in his

possession at the time of the enclosures in 1822 (CROW YDX/111/54). The upper coal seam at the Venture Pit was found at 14 fathoms (c 26m), and was 2 feet 6 inches (c 0.75m) thick. The lower seam, known as the China Band, was found at 26 fathoms (48m) and was 3 feet (c 0.92m) thick (Wilson 1905, 373). Thomas Hinde worked the Venture Pit for only eight years, and in 1860, he leased it to Joseph Ward and others (Wood 1988, 161). However, the mine only continued on for another five years and was discontinued in 1865. The working pit is marked on the Ordnance Survey 1st edition maps of 1863 and 1867, with a tramway leading from it to the north, across the River Keekle and up to the road next to the property known as Wilson Park. Although the pit and tramway are no longer marked on the current Ordnance Survey map, it does show earthworks on the site of the mine. Two more coal shafts are marked on the Ordnance Survey map of 1863, to the north-west of Keekle Head Farm (Site 24), and they may have been situated on land belonging to the Earl of Lonsdale (CROW YDX/111/54). There is no sign of these shafts on the modern Ordnance Survey maps and the identification survey established that they are now very degraded.

4.2 Identification Survey (Sites 3 and 4)

- 4.2.1 **Sandbeds Farm (Site 02)(Figs 5 and 6):** the farm is situated beside the River Keekle at the edge of Arlecdon Parish and also at the western edge of a clearly defined intake of land between it and Keekle Head Farm (Section 4.1.3). The field system has not developed around the farm, instead it appears that the farm was a later insertion into one of the intake fields. In terms of the field pattern, Keekle Head Farm is more integrated into the field system than Sandbeds and is more likely to be the site of the original farm; however, it is also possible that the original intake was farmed from a completely different site altogether.
- 4.2.2 The Sandbeds farmhouse is a two storey structure constructed from sandstone, but the external fabric was obscured by a modern cement-based render. The northern front facade has three timber six-light sash windows with a doorway on the western side. In front of this doorway is a single storey extension, constructed from breeze blocks, which surrounds an earlier extension, that appears to have been contemporary with the main building. It is evident that the internal fabric of the farmhouse has been subject to considerable alteration but it was not possible to establish the precise development sequence of the building because of plaster and wallpaper which obscures the walls.
- 4.2.3 To the east and butting the farmhouse is a barn which was constructed from similar material to the farmhouse. It comprised a central bay with hay loft bays on either side and stall accommodation below. These stall areas had concrete floors with three timber divisions; they were separated from the main threshing bay by modern brick and sandstone walls. The bridging joists forming the hayloft floors would appear to have been re-used and may potentially have derived from an earlier structure, either on the site or in the vicinity. The roof of this barn comprised a ridge purlin with two side purlins on either side and two truss members supported on the main walls and had stone slates. An owl hole was situated on the eastern gable with further ventilation on the southern face.
- 4.2.4 A further structure, butted onto the northern side of the barn, comprised a two storey structure containing two timber stall divisions and which was, at the time of survey, still in use. A fourth, more modern, building has been constructed to the east of and butting the barn. It comprised a two storey structure built from sandstone with a concrete floor and a single stall with timber hayrack and ceramic trough indicating

that the building was constructed for the housing of a single horse. Neither of these two extensions are depicted on the OS 1:2500 1st edition map (1863) and were evidently constructed subsequent to that date.

- 4.2.5 All the barn structures were similarly roofed and are of typical late eighteenth / nineteenth century construction; however, access was not available to the farm house roof. The farmhouse has a 'double-pile' form of ground plan, which typically dates to between 1770 and 1850 (Brunskill 1978, 65). The layout of the farm follows the Laithe-house arrangement, whereby the farmhouse, barn, stable and cowhouse were arranged in a line with no cross passage; this type of farm layout was common throughout the eighteenth century.
- 4.2.6 **Green Spot Farm (Site 03) (Figs 7 and 8):** the farm is situated towards the south of the study area and at the base of a steeply sloping area. It is within an area of 'fill-in' enclosure between two earlier intakes (Section 4.1.3). The farmhouse is a two storey rectangular structure, constructed entirely of sandstone and all elevations are obscured by modern cement render. It has four timber 12-light transom and mortice windows on the rear, western facade. It has a porch to the rear entrance which may suggest the principal facade has been reversed, and a smaller modern brick single storey extension to the east of the porch (Fig 7). The east facade has four timber sash windows of comparable size and style to those found on the rear facade and a doorway at ground floor level. The roof of this building was of stone slab. Internally the fabric of the building was obscured by plaster and wallpaper but it would appear that at ground floor level the arrangement of rooms has been substantially altered.
- 4.2.7 To the north and butting the farmhouse is a barn which is 30m in length and was constructed from a similar material to the farmhouse. It comprised a single phase gable structure with a large doorway to the northern end of the eastern facade which has been subject to recent repair with the insertion of a steel lintel. Further doorways exist at both ground and first floor level. Although there is no external access to the first floor entrances, it is likely that they were served by a moveable ramp for the purposes of loading and unloading hay into a loft, a fairly common arrangement for this form of barn. The barn is divided into five bays by the insertion of modern brick walls and there are also modern concrete stall divisions within these bays. Butting on to the west side of this barn is a modern prefabricated steel structure which has been constructed on what would appear to be the foundation platform of an earlier building (Fig 7). The platform is aligned at a tangent to the standing buildings and may correspond to an extension to the barn shown on the OS 1:2500 1st edition map (1865).
- 4.2.8 To the east of the barn, and separated by a yard, is a further building. At present it is only a single storey building but it would appear that an original upper floor of this building has been destroyed with the subsequent application of a flat tin roof. There are three phases of construction, the earliest being at the southern end. This earliest phase has a wide arched entrance which is a common feature of eighteenth/nineteenth century barns and was typically to provide a broad access for a cart (Fig 8).
- 4.2.9 The present layout of the farm is little changed from that shown on the OS 1:2500 1st edition map (1865), the only noticeable change being the addition of the modern pre-fabricated structure on the west side of the barn. In general the farm has a typical Laithe-house plan, whereby the farm buildings were built in a line onto the end of the farmhouse (Brunskill 1978, 81). There was no cross passage and no direct communication between the farmhouse and out-buildings, a configuration typically of

eighteenth century date. The Green Spot farmhouse, like the Sandbeds farmhouse, has a conventional double-pile plan (Brunskill 1978) which typically dates to between c 1770 and 1850.

- 4.2.10 **Small scale mining:** small scale extraction is for the most part confined to an area north of Green Spot farm and comprises a series of shafts extending along the line of a principal coal seam (Sites 9-16), although there is also a separate, but adjacent group, of three shafts (Sites 17-19). The extant remains fall within three basic categories: shaft mounds, shaft hollows and spoil-heaps.
- 4.2.11 Three shaft mounds (Sites 09, 11 and 13) were identified. They are characterised by an annular bank with an entrance at one side and a shallow depression within the centre. All the examples were entirely earthfast and the majority are very well defined, which would suggest that the land has not been subject to intensive recent cultivation. By contrast shaft mound 01, in the northern part of the study area, is very degraded as a result of plough action.
- 4.2.12 A group of three shaft depressions (Sites 17-19) are situated to the east of the line of shaft mounds (Sites 9-16) and are all characterised by an earthfast depression, c1.5m in diameter, with no associated annular mound. They contrast, in terms of their character, with the nearby shaft mounds and potentially reflect a different episode of mining activity.
- 4.2.13 **Large Scale Mining:** large scale extraction of coal measures within the designated area is characterised by four separate mine workings. The first of these (Site 08) is located to the south-east of Green Spot farm on an area of steeply sloping pasture and was heavily obscured by gorse. It comprised a complex series of workings extending into the natural slope, the base of which was obscured by standing water. A heavily disturbed area of spoil-heaps extended to the east and there was a leat, aligned east / west, at the southern, upper, end of the workings possibly to drive pit gear. The mine workings are not shown on the OS 1st edition map (1865) and therefore were probably of a later date.
- 4.2.14 At about 100m to the west of these workings and to the south-west of Green Spot farm, was a further area of extraction (Site 04). This is shown on the OS 1st edition map (1865) as a quarry but the site is now characterised by remains of a mining landscape; it comprised a large hollow and associated workings on an area of steeply sloping pasture. The hollow may correspond to the former quarry but it has only gentle sloping sides, rather than the typical sheer sides of a quarry and if it is the quarry then it must have been substantially filled, presumably with mine waste. The southernmost of the associated workings extends beyond the study area and comprises a complex series of shallow depressions. Within the study area is a further series of depressions and spoil heaps, the majority of which were obscured by gorse; these are delimited on the west by a leat leading into a marshy area directly below the workings. A well defined earthfast bank extends to the west and may form the remains of an earlier field boundary truncated by the mine workings. At the northern base of these workings is a large spoil heap suggesting that spoil was taken away to the north.
- 4.2.15 The largest of the mining areas (Site 22) corresponds with the documented Venture Pit (Section 4.1.5). It comprised a large well defined spoil heap, which has been disturbed on its southern side. Adjacent to this spoil heap is a complex area of further smaller, spoil-heaps and depressions extending north and forming a raised platform above the natural topography. An equally well defined tramway extends north-west of this area for a distance of c100m at which point it bends to the west and continues for a further

30m up to a bridge crossing over the River Keekle. From there it extended north to Wilson Park and survives as a broad boundary bank.

- 4.2.16 At the eastern side of the site is a further major mining area, comprising two shafts and a tramway extending north from them (Site 24), which was depicted on the OS 1st edition OS map (1865). The area, however, was under a deep grass crop at the time of the survey, which obscured any earthworks. Although there are extant indications of the mining remains the extent is not evident, and it is possible that in some areas the mining features only survive as sub-surface remains.
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5. DISCUSSION

5.1 Prehistory

- 5.1.1 The only prehistoric feature reported within the vicinity of the study area is the large Dean Moor stone circle (Site 26), which is situated c 220m to the north. Such ritual/funerary monuments are quite often positioned in remote locations away from areas of known settlement, either on prominent landmarks or on communication routes; its presence therefore is not necessarily an indication of prehistoric occupation in the locale. However, equally there are also examples of settlement associated with stone circles, notably the large Burnmoor cairnfields which are constructed around five stone circles (Quartermaine and Leech forthcoming). The potential for extant prehistoric remains within the study area should perhaps be considered.

5.2 Agricultural Landscapes (Fig 3)

- 5.2.1 The earliest elements of the landscape within the study area would appear to be selected elements of the field system within Arlecdon parish. The two intakes, that centred on Midtown farm and that between Sandbeds and Keekle Head farms, were divided by a 'broad corridor' that is now filled by straight bounded enclosed fields. These fields contrast dramatically with the irregular fields of the intakes and are an indication that the area has been subject to 'fill in' enclosure. This broad corridor displays the characteristics of an outrake, that is the part of a drove route that extends through enclosed land and leads onto upland pasture. Drove routes are a typical feature of the medieval upland landscape and their outrakes are well documented particularly during the sixteenth century (Winchester 1987, 90). Some were abandoned following the dissolution (AD1536-40) and the corresponding loss of monastic influence upon upland farming, but many would have continued in use into the post-medieval period (Millward and Robinson 1980, 198). Certainly these two intakes and the drove route had been enclosed at some time prior to Parliamentary Enclosure and were shown as 'Old Inclosures' on the 1822 enclosure map (CROW YDX/111/54). However, the area is documented in c 1447 as having been a part of Whillimoor, which was a medieval common and comprised the contiguous wastes of the post-medieval townships of Distington, Moresby, Weddicar and Whillimoor (Winchester 1987, 85). The implication is that the intakes were enclosed subsequent to this date and would have formed on either side of an existing drove route.
- 5.2.2 The field boundaries of these two intakes may themselves prove significant; they for the most part, have a 'Cumbrian Bank' type of construction, which involves the stone revetment of an earthen bank. This is a common form of boundary marker in the Lake District and is often a product of early enclosure; it may therefore date to the early/mid post-medieval period (LUAU 1997a).
- 5.2.3 The land within these two intakes appears to have been of poor quality (Eastwood *et al* 1931, 2), and would have only supported a few scattered families. However, there is evidence of broad ridge and furrow within the easternmost intake (Site 25), which indicates that the land was cultivated at some stage. Such broad ridge and furrow can date from the medieval period; however, there is also an area of broad ridge and furrow (Site 20) within the filled in outrake area and consequently its presence can not be relied on as an indicator of early cultivation.

- 5.2.4 By contrast with the land of the Arlecdon parish, that part of the study area that is within the neighbouring Distington parish was part of barren, open moorland until enclosure in 1768 (CROW YSPC/13/90), and there is no evidence of medieval or early post-medieval settlement in this area.

5.3 Settlements

- 5.3.1 Although the two intakes may be of relatively early date the farms associated with them were not necessarily contemporary; Sandbeds farm, for example, is seemingly inserted into an already existing field system. Even if there were a relationship between the farm site and the field system, the present structures are not necessarily contemporary with the enclosure of the intake. It is not evident from the field pattern which was the original farm, but it is likely to be either Keekle Head, because of its relatively pivotal position within the field system, or Whillimoor Head (Site 23), on the east side of the study area, because its place name bears that of the township and the moor from which it was enclosed. The latter is shown on the OS 1st edition map of 1865 but this no longer survives as a surface feature and is not shown on modern maps.
- 5.3.2 The Sandbeds and Green Spot farms display considerable similarities in both their layout and the design of the farmhouses. Typologically they are similar and appear to be broadly contemporary. The Laithe-house arrangement exhibited at both farms is typically an eighteenth century design. The farm houses both have a characteristic double-pile plan, which normally date between 1770 and 1850. Although it was not possible to examine the roofs of the farmhouses, it was possible to examine those of the adjacent barns, which were probably contemporary with the houses. They had king post trusses strapped with iron bolts and the design is typically of nineteenth century date. The cumulated evidence would therefore suggest that the farms were of late eighteenth or even possibly early nineteenth century date.
- 5.3.3 A late eighteenth / nineteenth century date for Sandbeds farm is later than the surrounding enclosure and the farm is likely to have been a later intrusion into the field system. The Green Spot farm is within an area of enclosure filling a disused drove route and potentially was contemporary with that enclosure.

5.4 Mining Landscapes (Figs 3 and 4)

- 5.4.1 Coal mining in Whillimoor has been documented from the early post-medieval period but previously has been unrecorded. The survey has revealed several localised extraction features (Sites 09-19) which would appear to pre-date the Venture Pit extraction complex (Site 22), and are similar in character to those encountered at nearby Kidburngill (LUAU 1998). However, the first large scale exploitation did not come until the mid-nineteenth century and was relatively short-lived. The largest mine, the Venture Pit, was in operation for just 13 years from 1852 but it is not known how long its contemporary pit (Site 24) was operational. Although these mines were worked on a much larger scale than the earlier mining operations within the study area, they were nevertheless small by comparison with other pits in the region, eg

Dyon and Gilgarren just to the north of the assessment area (Wood 1988, 124), which were controlled by the Earls of Lonsdale. The Venture Pit (Site 22) and the other larger commercial mining operations (Sites 04 and 08) are in particular characterised by a paucity of spoil, although the construction of a tramway at both sites (Sites 22 and 24) may have absorbed much of the debris from the earlier phase of mining.

6. ARCHAEOLOGICAL IMPACT AND RECOMMENDATIONS

6.1 Impact

- 6.1.1 This assessment has highlighted the potential for prehistoric activity within the locality, although no direct evidence was identified within the study area. It has shown that there was a medieval or early post-medieval enclosure on the Arlecdon parish side of the study area; however, it has not been possible to establish which, if any, of the farms were contemporary with this enclosure. The extant farms appear to be of late eighteenth or early nineteenth century date, Sandbeds farm being in existence by 1822 (CROW YDX/111/54). There is one farm, Whillimoor Head, which was depicted on the OS 1st edition map (1865) but no longer survives on the surface; however, it could potentially survive as a sub-surface feature.
- 6.1.2 The principal archaeological resource identified, however, was the remains of nineteenth century mining activity and given that coal was exploited in Whillimoor from before 1700, there is the possibility that the small scale shaft workings (Sites 9-19) relate to a pre-nineteenth century episode of mining.
- 6.1.3 Any surface or sub-surface remains, and any buildings within the assessment area, would be completely destroyed by the proposed opencast mine, as would any other sites not detectable by documentary study or surface inspection.

6.2 Recommendations

- 6.2.1 Current policy dictates that wherever possible identified sites of archaeological importance are preserved *in-situ* as embodied in the Institute of Field Archaeologists' Code of Conduct and the Department of Environment *Planning Policy Guidance Notes 16*. The present preliminary assessment, being restricted in its scope, was able to establish areas of archaeological potential but other sites not detectable by desk-top study or identification survey may exist. It is therefore recommended that a programme of archaeological evaluation be undertaken, and would be targeted on areas of potential identified by the present assessment. This is intended to investigate the significance of the archaeological resource and assess the implications of the proposed development. It is also recommended that a mitigation record is produced of the surface features and the farms.
- 6.2.2 **Landscape Survey:** a detailed LUAU Level 2b landscape survey should be undertaken to establish the nature and extent of selected mining landscapes and thereby provide a mitigation record of the surface features in advance of the proposed development. It is recommended that the following sites be subject to survey recording: Sites 4, 8, 9-20, 22 and 24.
- 6.2.3 **Fabric Survey:** it is recommended that the farms be subject to mitigative recording in advance of their demolition. However, as they are not of particular antiquity or archaeological significance, this need only be a RCHM(E) level 2 survey and would involve the generation of ground plans of the two farm house and associated farm buildings in conjunction with a photographic survey of the structures.
- 6.2.4 **Trial Trenching:** in conjunction with the survey a programme of targeted trial trenching is recommended to examine areas where there is the greatest sub-surface potential and also investigate documented sites where there is no longer a surface

expression. However, any trenching must be subject to rigorous health and safety requirements, as there is a potential for collapsing shafts. In particular it is recommended that trenching is not undertaken at Site 8, where there is standing water, which potentially is obscuring an open shaft and may result in surface instabilities during any machine excavation. In other areas there may be a requirement to examine extant shaft mounds, but this should be done by machine and only the external part of the mounds should be investigated lest there is a collapse of the central shaft. It is recommended that the following sites be subject to evaluation trenching: Sites 01, 02, 03, 04, 9-20, 23 and 24.

- 6.2.5 The examination of the farm sites (02 and 03) should involve limited trenching but this should be limited to the footprint of the farmhouses following their demolition. This demolition process should therefore be undertaken with particular care to ensure that the below ground deposits are not disturbed.
- 6.2.6 The distribution and extent of any trenching programme, however, should be subject to the specific archaeological recommendations of the County Archaeological Officer, whose views should be sought prior to proceeding with any further work on the site. Subject to the results of the proposed evaluation, there may be a requirement, by the County Archaeological Officer, for a further programme of detailed archaeological mitigation recording to anticipate the destruction of the archaeological resource by the open-cast extraction proposals.
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*APPENDIX 1
PROJECT BRIEF*

APPENDIX 2
PROJECT DESIGN

MAY 1998

**LANCASTER
UNIVERSITY
ARCHAEOLOGICAL
UNIT**

**KEEKLE HEAD OPENCAST COAL SITE
CUMBRIA**

ARCHAEOLOGICAL ASSESSMENT

Proposals

The following project design is offered in response to a request from Roxylight Agricultural Land (Cumbria) Ltd for an archaeological assessment at the Keekle Head opencast coal site.

1. INTRODUCTION

- 1.1 LUAU has been invited by Roxylight Agricultural Land (Cumbria) Ltd to submit a project design and costs for an archaeological assessment of an area of pasture land at Keekle Head, near Distington, West Cumbria, in advance of a proposed open cast coal scheme. The study area contains known coal mining landscapes; comprising at least two former coal mines. The study area contains an agricultural landscape centred around three post-medieval farms, two of which (Sandbeds and Green Spot) will be directly affected by the proposed open cast scheme. There are areas of preserved broad ridge and furrow within the field system.
- 1.2 A requirement of the County Structure Plan, the forthcoming Minerals and Waste Local Plan and PPG 16, is that an archaeological assessment be undertaken to inform the planning process. The project design is in accordance with a project brief prepared by the Cumbria County Archaeologist.
- 1.3 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 undertook an assessment, landscape survey and evaluation on the nearby Kidburngill site (LUAU 1997a and b) in advance of an open cast development. 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

- 2.1 The following programme has been designed in accordance with a brief provided by Philip Holdsworth of Cumbria County Council to provide an accurate archaeological assessment of the designated area, within its broader context. The principal purpose of the assessment is to collate existing information about the archaeology of the site, to determine the significance of the identified archaeological resource and to provide recommendations for any further archaeological investigation. The required stages to achieve these ends are as follows:
- 2.2 **Desk Top Survey**
To accrue an organised body of data to inform the field inspection.
- 2.3 **Identification Survey**
An identification survey to record the character of the extant earthworks within the study area and provide an assessment of the archaeological significance of the earthwork remains.
- 2.4 **Assessment Report**
A written assessment report will assess the significance of the data generated by this programme within a local and regional context. It will advise on the requirements for further evaluation or recording measures as necessary.

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 survey**
- 3.2.1 The following will be undertaken as appropriate, depending on the availability of source material. The level of such work will be dictated by the timescale of the project.
- 3.2.2 **Documentary and cartographic material:** This work will rapidly address the full range of potential sources of information. It will include an appraisal of the Cumbria Sites and Monuments Record, as well as appropriate sections of County histories, early maps, and such primary documentation (tithe and estate plans etc.) as may be reasonably available. Particular attention will be paid to field and 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 Offices will also be studied. Published documentary sources will also be examined and assessed. This work will involve visits to the County Record Office in Carlisle and the Leconfield Archive (Cockermouth) will be consulted. The assessment will examine the results of the recording programme at the adjacent Kidburngill site.

3.2.3 **Aerial photography:** A survey of the extant air photographic cover will be undertaken. This may indicate the range and survival of archaeological and structural features in the designated area, and if appropriate coverage is available, allow an assessment of the rate and progress 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), although, within the timescale available, it is unlikely that prints will be forthcoming from this body for inclusion in this report.

3.2.4 **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 the archaeological features in context but also serves to provide predictive data, that will increase the efficiency of the field inspection.

3.3 Field inspection

3.3.1 **Access:** Liaison for basic site access will be undertaken through Roxylight Agricultural Land (Cumbria) Ltd.

3.3.2 It is proposed to undertake a level 1 survey of the study area which extends over an area of 1.01sqkm. This is a rapid survey undertaken alongside a desk top study as part of a site assessment. It is an initial site inspection which helps the local planning authority to consider fully the archaeological implications of a development and also serves as the basis for undertaking and planning further archaeological work on the site. It represents the minimum standard of record and is appropriate to exploratory survey aimed at the discovery of previously unrecorded sites. Its aim is to record the existence, location and extent of any such site. The emphasis for the recording is on the written description which should record type and period and would not normally exceed c50 words. The extent of a site is defined for sites or features greater than 50m in size and smaller sites are shown with a cross.

3.3.3 The reconnaissance will be undertaken in a systematic fashion, walking on approximately 30m wide transects within the extent of the defined study area. It is proposed to use Global Positioning System (GPS) techniques to locate and record the features. GPS instrumentation 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. The use of GPS techniques has proved to be an essential and extremely cost effective means of locating monuments, which can achieve accuracy of better than +/- 1m.

3.3.4 There are two post-medieval farms within the extent of the study area, Green Spot and Sandbeds. The site survey will involve an examination of both the external fabric of the farm buildings and also their interiors if access is available. The study will assess the archaeological survival and architectural significance of the buildings.

3.3.5 A photographic record will be undertaken simultaneously. An early surface inspection such as this is highly recommended, as such work can frequently double the amount of archaeological information for an area. This fieldwork will result in the production of plans at a scale of 1:2,500 or any other scale required, recording the location of each of the sites listed in the gazetteer. All archaeological information collected in the course of field inspection will be recorded in standardised form, and will include accurate national grid references. This will form the basis of a gazetteer, to be submitted as part of the report.

3.3.6 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 now being implemented for all projects.

3.4 Assessment Report

- 3.4.1 **Archive:** The results of Stages 3.2-3.3 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 any features and finds 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.
- 3.4.2 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 (as appropriate), and a synthesis (in the form of the index to the archive and the report) will be deposited with the Cumbria Sites and Monuments Record. A copy of the archive will also be available for deposition in 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, should any material be recovered, with the material archive (artefacts, ecofacts, and samples, at this stage from surface collections) with an appropriate museum.
- 3.4.3 **Collation of data:** The data generated by 3.2 and 3.3 (above) will be collated and analysed in order to provide an assessment of the nature and significance of the known surface and subsurface remains within the designated area. It will also serve as a guide to the archaeological potential of the area to be investigated, and the basis for the formulation of any detailed field programme and associated sampling strategy, should these be required in the future.
- 3.4.4 **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 report will include a copy of the project brief, 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, 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. 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.
- 3.4.5 This report will identify areas of defined archaeology, an assessment and statement of the actual and potential archaeological significance of any features within the broader context of regional and national archaeological priorities will be made. Illustrative material will include a location map, which 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).
- 3.4.6 **Proposals:** The report will make a clear statement of the likely archaeological implications of the intended development. It will also make recommendations for any further evaluation of the identified archaeological potential deemed necessary or desirable for individual sites. It will seek to achieve, as a first option, the preservation *in situ* of all significant archaeological features, and possible strategies for the mitigation of the development, including design modifications, will be considered. Where conservation is neither possible, nor practical, it may be appropriate to recommend a further stage of more intensive archaeological work in order to mitigate the effects of development.
- 3.4.7 **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.
- 3.5 **Project Monitoring**
- 3.5.1 **Roxylight Agricultural Land (Cumbria) Ltd:** LUAU will consult with the Client regarding access to land within the study area. This consultation will include, if required, the attendance of the

Cumbria County Archaeologist.

- 3.5.2 **Cumbria County Council:** Any proposed changes to the project brief or the project design will be agreed with the County Archaeologist, Cumbria County Council, in conjunction with the client.

4. WORK TIMETABLE

The phases of work will comprise:

4.1 **Desk Top Study**

A two day period is required to collate all the available data.

4.2 **Field Inspection**

A two day period is required for the identification survey.

4.3 **Prepare Assessment Report**

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

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

5. OUTLINE RESOURCES

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

5.1 **Desk Top Study**

2 man-days External Consultant

5.2 **Field Survey**

2 man-day Project Supervisor

5.3 **Assessment Report**

2 man-days External Consultant

1 man-days Project Supervisor

1 man-days Illustrator

- 5.4 The project will be under the management of **Jamie Quartermaine, BA, Surv Dip, MIFA** (Unit Project Manager) to whom all correspondence should be addressed. All Unit staff are experienced, qualified archaeologists, each with several years professional expertise. Project Officers in Unit terminology are senior field archaeologists, capable of organising and running complex projects and undertaking less complex work quickly and efficiently to a high standard.

APPENDIX 3

GAZETTEER OF SITES

Site number	01
Site name	Greyhound Inn
NGR	NY 0375 2205
Site type	Shaft
Period	Post-medieval
Source	Identification Survey 1998 / Current 1:10,000 OS map Documentary Survey 1998 / SMR 11705

Description

The site of a shaft in the north-east corner of the study area; it is shown on the current OS edition map but is not shown on the OS 1st edition map (1863). Whilst no definite depression was located, an ill-defined level platform (10m in diameter) was identified which is of artificial origin, and may correspond to a shaft mound degraded by cultivation.

Site number	02
Site name	Sandbeds Farm
NGR	NY 0345 2165
Site type	Farm Buildings
Period	Mid eighteenth/early nineteenth century
Source	Identification Survey 1998 / Current 1:10,000 OS map Documentary Survey 1998 / CROW YDX/111/54 / 1822; OS 1st edition map 1863

Description

Sandbeds farm is shown on the current OS edition map and was, at the time of assessment, still occupied. It comprised a two storey farmhouse rectangular in plan (10m by 8m) and constructed of sandstone to which a cement-based render has been applied. Three timber six-light sash windows were encountered on the northern, front facade with a doorway on the eastern side. In front of this doorway was a single storey extension (8m by 6m) constructed from breeze blocks, which surrounded an earlier extension (4m by 3m) that apparently was constructed at the same time as the main building. Internally the building appears to have been subject to considerable alteration although the elevations were obscured by plaster and wallpaper.

To the east and butting the farmhouse was a barn constructed from similar material; it comprised a central bay with hay-loft bays at either side and stall accommodation below. These stall areas had three timber stall divisions with concrete floors and are separated from the main threshing bay by the addition of modern walls constructed from brick and sandstone. The bridging joists, forming the hayloft floors, would appear to have been re-used. The roof of this barn comprised a ridge purlin with two side purlins on either side and two truss members supported on the main walls. The roof has a nineteenth century character. An owl hole was situated on the eastern gable with further ventilation on the southern face.

A further building was constructed alongside the existing barn and comprised a two storey structure containing two timber stall divisions; it was still in use at the time of survey.

A fourth, more modern, building has been constructed to the east of, and butting the barn. It comprised a two storey structure built from sandstone with a concrete floor and a single stall with timber hayrack and ceramic trough indicating that the building was constructed for the housing of a single horse.

Site number	03
Site name	Green Spot Farm
NGR	NY 03671 21269
Site type	Farm Buildings
Period	Mid eighteenth/early nineteenth century
Source	Identification Survey 1998 / Current 1:10,000 OS map Documentary Survey 1998 / OS 1st ed. map 1863

Description

Green Spot farm is situated at the southern side of the study area, at the base of a steeply sloping area. It is still occupied. It is constructed entirely of sandstone and comprised a two storey rectangular structure (8m by 7m) with four timber 12-light transom and mortice windows to the rear, north, facade and it has a porch (2m by 2m) with a smaller modern brick extension extending to the east of this. The north facade had four timber sash windows of comparable size and style to those found on the rear facade and a doorway at ground floor level. The roof of this building is of stone and all facades are covered by cement render. Internally the fabric of the building is obscured by plaster and wallpaper and it would appear that at ground floor level the arrangement of rooms has been substantially altered.

To the east and butting the farmhouse was a barn (30m in length). It was constructed from similar material to the farmhouse and comprised a single phase gable structure (10m in width) with a large doorway (3.5m in width). The eastern end of the southern facade has been subject to recent repair with the insertion of a steel lintel. There are further doorways (1.2m in width) at both ground and first floor level. Although there was no external access to these first floor entrances, it is likely that they were constructed for the purposes of loading and unloading hay from ramps as is typical for this class of building. This barn is still in use with modern concrete stalls forming the entire length of the interior which was divided into five bays by the insertion of modern brick walls. Located to the north of this barn and butting the north facade is a modern prefabricated steel structure which has been constructed on what would appear to be the foundation platform of an earlier building.

To the south of the barn and separated by a 5m wide yard, is a further building. It stands only to a single storey but would appear that an original upper floor has been destroyed, with the subsequent application of a flat tin roof. It is a product of three distinct phases and there is a large arch in the earliest, western phase.

Site number	04
Site name	Green Spot farm
NGR	NY 03630 21098
Site type	Quarry / mine
Period	Post-medieval
Source	Identification Survey 1998 / Current Edition OS map Documentary Survey 1998 / OS 1st edition map (1865)

Description

The site of a quarry is shown on the OS edition map of 1865 to the south-west of Green Spot farm, but the site is now characterised by the remains of a mining landscape. This comprises a large hollow and associated workings on an area of steeply sloping pasture. The hollow may correspond to the former quarry but it has only gently sloping sides, rather than the typical sheer sides of a quarry; if it is the quarry then it must have been substantially filled, presumably with mine waste. The southernmost of the associated workings extend beyond the study area and comprise a complex series of shallow depressions. Within the study area is a further series of depressions and spoil heaps, the majority of which were obscured by gorse; these were delimited on the west by a leat leading into a marshy area directly below the workings. A well defined earthfast bank extends to the west and may form the remains of an earlier field boundary truncated by the mine workings. At the northern base of these workings a large spoil-heap was encountered suggesting that recovered material was taken away to the north.

Site number	05
Site name	Green Spot farm
NGR	NY 03665 21241 - 03713 21149
Site type	Hollow-way
Period	Post-medieval
Source	Identification Survey 1998 OS 1st edition 1865 map Documentary Survey 1998 /SMR 11700 / OS 1st edition map (1865)

Description

A well defined earthfast hollow-way extends for 35m south from Green Spot farm and comprises a linear depression 2m in depth with a width of 6m at the top and 2m at the base and extending for 35m. There was no direct association with the quarry workings (Site 04) to the west suggesting that this feature is a product of farm practice and probably post-dates those workings.

Site number 06
Site name Green Spot Farm
NGR NY 03683 21196
Site type Enclosure?
Period Post-medieval
Source Identification Survey 1998

Description

A possible enclosure to the south of and truncating Hollow-way Site 05 is defined by a prominent earthfast bank (0.45m in height) with medium to large sub-angular and sub-rounded stone protruding from the surface. The enclosure is 15m x 10m and its southern bank is largely destroyed.

Site number 07
Site name Green Spot Farm
NGR NY 03700 21222
Site type Platform
Period Post-medieval
Source Identification Survey 1998

Description:

A well defined and earthfast platform is situated within steeply sloping pasture land to the south of Green Spot farm. It stands to a height of 1.2m to the north and is level with the slope to the south. It is rectangular in plan with a level top and measures 10m by 8m. It is the remains of a building platform.

Site number 08
Site name Green Spot farm
NGR NY 0375 2123
Site type Mine working
Period Post-medieval
Source Identification Survey 1998

Description

A series of mine-workings (40m x 30m) is situated located to the south-east of Green Spot farm on an area of steeply sloping pasture and is almost entirely obscured by gorse. It comprises a large level working platform (4m in depth and 2.5m in width) set into the natural slope. It was obscured by standing water and is surrounded by a heavily disturbed area of spoil heaps extending to the east. There was a leat (40m in length) orientated north-east/south-west at the southern, upper, end of the workings.

Site number 09
Site name Green Spot farm
NGR NY 03679 21354
Site type Shaft mound
Period Post-medieval
Source Identification Survey 1998

Description

A series of mine workings was located to the north of Green Spot farm in an area of level pasture. It is sub-circular in plan (5m in diameter and 0.3m in height) and entirely earthfast. A shallow depression towards the centre of this mound is probably the central shaft. It is orientated with a series of similar shafts (Sites 10-16) and is probably also a shaft mound.

Site number 10
Site name Green Spot farm
NGR NY 03670 21370
Site type Spoil heap
Period Post-medieval
Source Identification Survey 1998

Description

A well defined spoil heap with a rounded profile was identified to the north of shaft mound 09. It is entirely earthfast, measuring 5m by 2m and standing to a height of 0.8m; it was aligned north-west/ south-east and is on the same line as a series of similar shafts and these probably reflect mining along a seam.

Site number	11
Site name	Green Spot farm
NGR	NY 03647 21400
Site type	Shaft mound
Period	Post-medieval
Source	Identification Survey 1998

Description

A well defined shaft mound was located to the north of Green Spot farm in an area of level pasture. It is sub-circular in plan (8m diam) and entirely earthfast. It comprised an annular mound (0.45m in height) with a shallow depression (1.5m diam) towards the centre. The entrance is to the south.

Site number	12
Site name	Green Spot farm
NGR	NY 03633 21424
Site type	Spoil heap
Period	Post-medieval
Source	Identification Survey 1998

Description

A well defined spoil heap (8m by 2m, height 0.4m), with a rounded profile and is entirely earthfast. It is to the north of shaft mound 11 and is aligned north-west/south-east. It is also aligned with shafts 9-16 and they were evidently aligned along the line of a seam.

Site number	13
Site name	Green Spot farm
NGR	NY 03631 21432
Site type	Shaft mound
Period	Post-medieval
Source	Identification Survey 1998

Description

A well defined earthfast shaft mound (8m diameter, height 0.4m) with a rounded profile lies to the north of spoil heap 12. It was largely destroyed to the south and west with only a quarter of the ring surviving. A shallow depression (1.5m diam) was located towards the north-west indicating that this feature may form the remains of a shaft mound.

Site number	14
Site name	Green Spot farm
NGR	NY 03628 21441
Site type	Spoil heap
Period	Post-medieval
Source	Identification Survey 1998

Description

A well defined earthfast spoil heap (6m x 1.5m and 0.4m high) and has a rounded profile. It is part of a line of shafts (9-16) which is orientated north-west/south-east following the line of a seam.

Site number	15
Site name	Green Spot farm
NGR	NY 03617 21453
Site type	Spoil heap
Period	Post-medieval
Source	Identification Survey 1998

Description

A well defined earthfast spoil heap (6m by 1.5m, 0.4m high) with a rounded profile; it is orientated east/west. The mound is in line with shafts 9-16 which were probably following the line of a seam; the alignment is orientated north-west/south-east.

Site number	16
Site name	Green Spot farm
NGR	NY
Site type	Shaft Hollow
Period	Post-medieval
Source	Identification Survey 1998

Description

A small shaft hollow was located in an area of level pasture to the north of Green Spot farm. It is the north-westernmost shaft of a group of eight similar shafts (Sites 9-16). It comprised a shallow depression (1.5m in diameter) with no associated spoil heap.

Site number	17
Site name	Green Spot farm
NGR	NY 03655 21440
Site type	Shaft Hollow
Period	Post-medieval
Source	Identification Survey 1998

Description

A small shaft hollow was located in an area of level pasture to the north of Green Spot farm. It is the westernmost shaft hollow of a group of three similar features (Sites 17-19). It comprised a shallow depression (1.5m diam) with no adjacent spoil heap.

Site number	18
Site name	Green Spot farm
NGR	NY 03665 21438
Site type	Shaft Hollow
Period	Post-medieval
Source	Identification Survey 1998

Description

A small shaft hollow was located in an area of level pasture to the north of Green Spot farm. It is part of a group of similar features (Sites 17-19). It comprised a shallow depression (1.5m diameter) with no associated spoil heap.

Site number	19
Site name	Green Spot farm
NGR	NY 03671 21433
Site type	Shaft Hollow
Period	Post-medieval
Source	Identification Survey 1998

Description

A small shaft hollow was located in an area of level pasture to the north of Green Spot farm. It is part of a group of similar features (Sites 17-19). It comprised a shallow depression (1.5m diam) with no adjacent spoil heap.

Site number	20
Site name	Green Spot farm
NGR	NY 0368 2143
Site type	Ridge and furrow
Period	Post-medieval
Source	Identification Survey 1998

Description

An area of broad ridge and furrow was aligned south-west to north-east in the same area of level pasture as the small scale mine workings (Sites 09-19). It appears to have been truncated by these workings, suggesting that this ridge and furrow pre-dates the mine activity. The ridge and furrow is severely degraded but would appear to encompass an area of 50m by 40m. It does not appear to respect the current field boundaries.

Site number	21
Site name	Green Spot farm
NGR	NY 03539 21273
Site type	Spoil heap
Period	Post-medieval
Source	Identification Survey 1998

Description

A large spoil heap (6m by 3m) is adjacent to a modern field boundary and has no direct association with any other mining feature. It is well defined with a rounded profile and stands to a height of 2.1m. It is aligned north/south and is adjacent to a stream.

Site number	22
Site name	Venture Pit
NGR	NY 03389 21393
Site type	Mine workings / Tramway
Period	Post-medieval
Source	Identification Survey 1998; current OS 1:10,000 map; OS 1st edition map (1865) Documentary Survey 1998; SMR 11701; Wilson 1905, pg 373; Wood 1988, pg 161

Description

An extensive series of mine workings are marked on the current OS edition map and also the OS 1st edition map (18654). It comprises a large well defined spoil heap (12m by 8m and 2.4m high), which has been considerably disturbed on its southern side. Adjacent to this spoil heap is a complex area of further smaller, spoil heaps and depressions extending for 30m to the north, forming a raised area 0.65m above the natural topography. An equally well defined tramway extends to the north of this area for a distance of c 100m at which point it bends to the west and continues for 30m.

Site number	23
Site name	Whillimoor Head
NGR	NY 04288 21744
Site type	Building
Period	Post-medieval
Source	Identification Survey 1998 Documentary Survey 1998; OS 1st edition map 1863

Description

The site of a building is shown on the OS 1863 1st edition map. No evidence for this feature was identified during the identification survey.

Site number	24
Site name	Keekle Head
NGR	NY 03935 21840 - 03967 21729
Site type	Mine shaft
Period	Post-medieval
Source	Identification Survey 1998 Documentary Survey 1998; OS 1st edition map 1865, SMR 11700

Description

Two mine shafts and an associated tramway are shown on the OS 1st edition map (1865). Elements of the shaft and spoil mounds were identified but are generally very degraded. The site was obscured by a high grass crop at the time of survey, which limited the definition of the features. The earthwork features are limited by

comparison with the documented extent and it is possible that some mining features survive only as sub-surface remains.

Site number	25
Site name	Keekle Head
NGR	NY 9368 2160
Site type	Ridge and Furrow
Period	Medieval/ Post-medieval
Source	Identification Survey 1998 OS 1st edition map 1863, Documentary Survey 1998; SMR 16632; AP CL10/29a

Description

Traces of broad ridge and furrow are shown on an oblique aerial photograph. Examination of the aerial photograph revealed that the ridge and furrow was in a different field to that defined within the SMR. The area was under a grass crop at the time of survey, which did not identify any surface features in this area.

Site number	26
Site name	Dean Moor Stone Circle
NGR	NY 03990 22340
Site type	Stone Circle
Period	Bronze Age
Source	Documentary Survey 1998, Current OS 1:10,000 map; SMR 3048 Scheduled Ancient Monument SAM 27707, Waterhouse 1985, Mason and Valentine 1925

Description

A stone circle contains a central cairn. The circle is very large, measuring 25.9m by 32.8m; however, the stones are particularly low and some are partly buried. The stone circle comprises seven stones, although there is evidence of another five stones just above or below the ground surface (Waterhouse 1985). The cairn is c 6.7m in diameter and was subject to excavation in the early 1920s (Mason and Valentine 1925); this revealed that it was carefully constructed and incorporated several large flat slabs. The cairn has the characteristics of a funerary monument, but the excavators were not able to identify any human remains, perhaps an indication of robbing in antiquity.

Burl considers that a central burial cairn is an unusual feature in a stone circle of this size and has postulated that the cairn is a later feature (Waterhouse 1985, 73).

ILLUSTRATIONS

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The documentary research was undertaken by Caron Newman and the field survey by Ian Scott. The report was compiled by Caron Newman and Ian Scott, and edited by Jamie Quartermaine (Project Manager) and Rachel Newman (Deputy Director). The project was managed by Jamie Quartermaine.

SUMMARY

An archaeological assessment was carried out in advance of a proposed opencast coal scheme (centred on NGR NY 034216) at Keekle Head, in West Cumbria. The work was undertaken by the Lancaster University Archaeological Unit on behalf of Roxylight Agricultural Land (Cumbria) Ltd. The study area consists of an area of enclosed pasture land straddling the parish boundary between Arlecdon and Distington, and comprised a desk-based study, compiling data from the Cumbria Sites and Monuments Record and the Cumbria Record Offices in Whitehaven, as well as a rapid identification survey.

The moorland was enclosed in the late eighteenth century in Distington, but was mostly enclosed at an earlier date in Arlecdon. There are records which shows that some coal mining, on a small scale, had taken place from before 1700 in Distington, although, it was only in the nineteenth century that mining was undertaken there as a commercial venture. The main pit, called Venture pit, was in existence for only 13 years, between 1852 and 1865. The origins of the other pits are not known, but at least two were in operation in the mid-nineteenth century.

The Sites and Monuments Record (SMR) contained four sites within the study area, including ridge and furrow (SMR 16632: Site 25) and the remains of three coal mining sites (SMR 11700 (Site 24), 11701 (Site 22) and 11705 (Site 1)). The assessment area also contains two settlement sites, Sandbeds and Green Spot, which are shown on the Ordnance Survey 1st edition maps of 1863 and 1865. Sandbeds appears to have been in existence in 1822, when it is shown on the enclosure map (CROW YDX/111/54); but this map does not extend to the area of Green Spot farm.

In addition to the documentary study, the identification survey identified a further eighteen features within the study area. Of these the majority relate to mining activity associated with a vein which was aligned north-west/south-east in an area to the north of Green Spot farm. These mine workings reflect a period of activity from small scale extractions of the eighteenth century to larger scale commercial mining centred around the Venture Pit during the nineteenth century.

The survey involved a more detailed assessment of the two farms, Sandbeds and Green Spot, and involved the examination of both the external fabric of the farm buildings and their interiors in order to assess the archaeological survival and architectural significance of the buildings. Both farmhouses have a 'double-pile' plan form, which typically dates to between the mid eighteenth and the mid nineteenth centuries.

It is recommended that a programme of archaeological evaluation be undertaken, and would be targeted on areas of potential identified by the present assessment. It is also recommended that a mitigation record is produced of the surface features and the farms. The landscape survey should examine Sites 4, 8, 9-20, 22 and 24. The fabric survey should the generation of ground plans in conjunction with a photographic survey. The trial trenching is recommended to examine areas where there is the greatest sub-surface potential and also investigate documented sites where there is no longer a surface expression. It is recommended that the following sites be subject to evaluation trenching: Site 01, 02, 03, 04, 9-20, 23 and 24.

1. INTRODUCTION

1.1 Circumstances of Project

- 1.1.1 An archaeological assessment was undertaken by the Lancaster University Archaeological Unit (LUAU) on behalf of Roxylight Agricultural Land (Cumbria) Ltd, in advance of a proposed opencast coal scheme (centred on NGR NY 034216) at Keekle Head, West Cumbria. The study area consists of enclosed pasture land straddling the parish boundary between Arlecdon and Distington (Fig 1). The area includes two farms, Sandbeds and Green Spot, which will also be directly affected by the proposed development.
 - 1.1.2 The purpose of the assessment was to provide an accurate archaeological assessment of the designated area, within its broader context. The survey was to collate existing information on the archaeology of the site and to determine the significance of the archaeological resource. It involved a desk-based study in conjunction with a field inspection of the study area and a more detailed fabric assessment of the Sandbeds and Green Spot farms. The desk-based survey and the field inspection were undertaken between the 4th and the 19th June 1998.
 - 1.1.3 This report sets out the results of the work as a gazetteer in conjunction with a methodology statement, a brief text description of desk-based and field results, an assessment of the archaeological potential within the study area, an evaluation of the impact that the development proposals will have upon the archaeological resource, and recommendations for further archaeological investigation.
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2. METHODOLOGY

2.1 Project Design

- 2.1.1 A project design (*Appendix 2*) was submitted by LUAU in response to a request from Roxylight Agricultural Land (Cumbria) Ltd, in advance of a proposed opencast coal scheme (centred on NGR NY 034216). This was designed to meet the requirements of a project brief (*Appendix 1*) provided by the Cumbria County Archaeologist.
- 2.1.2 The project design provided for an initial archaeological assessment involving a desk-based survey, an identification survey and a fabric assessment of the two farms (Sandbeds and Green Spot); the results are presented in the present report. The work has been carried out entirely in accordance with the project design.

2.2 Desk-based Study

- 2.2.1 Existing archaeological information was obtained from the Cumbria Sites and Monuments Record (SMR). Manuscript maps and selected other documents were studied in the Cumbria Record Offices in Whitehaven (CROW), along with published antiquarian sources. The availability of manuscript maps in the CROW was limited, but included enclosure maps of 1767-8 (CROW YSPC/13/90) and 1822 (CROW YDX/111/54) and a survey map of 1699 (CROW D/Lons/W6/survey), although only the enclosure maps covered land within the assessment area. There were no tithe maps for either Distington or Arlecdon. Copies of the first edition Ordnance Survey (25 inches to one mile, Sheets 61.12, 1863, and 62.9, 1865) maps were obtained. Much of the land in the parishes of Distington and Arlecdon was bought by the Lowther family in the seventeenth and eighteenth centuries (Wilson 1905, 370), and it is possible that there may be relevant documents contained within the Lowther archives in Carlisle. However, a brief scan of the catalogues at the CROW of Lowther documents did not reveal any likely sources. A list of the relevant documents is provided within the bibliography (*Section 7*).

2.3 Identification Survey

- 2.3.1 Reconnaissance was undertaken in a systematic fashion, walking on approximately 30m wide transects within the extent of the defined study area. The surface of much of the area was obscured by mature grass crops, which restricted the identification survey in some areas. The sites were located by Global Positioning System (GPS) techniques which 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.
- 2.3.2 There were two post-medieval farms within the extent of the study area, Green Spot and Sandbeds. The site survey included examination of both the external fabric of the farm buildings and also their interiors in order to assess the archaeological survival and architectural significance of the buildings.
- 2.3.3 A photographic record was undertaken simultaneously. All archaeological information collected in the course of field inspection was recorded in standardised form, and

includes accurate national grid references forming the basis of a gazetteer, submitted as part of the report.

2.4 Gazetteer of Sites

- 2.4.1 The collated information on the site has been presented in the form of a gazetteer in conjunction with an annotated map showing the locations of the sites. Locations are given as eight or ten figure National Grid References, as appropriate to the extent of the site and the accuracy of survey. A summary description of each site is provided in conjunction with a reference to the source of the information with references as appropriate.

2.5 Archive

- 2.5.1 An archive has been compiled in accordance with the project design (*Appendix 2*). A copy of the report, including a synopsis of the archive, will be deposited with the Sites and Monuments Record and the archive will be deposited with the Cumbria County Record Office.
-

3. TOPOGRAPHY AND GEOLOGY

3.1 Topography and Geology

- 3.1.1 The assessment area is situated across the boundary of two parishes, Distington and Arlecdon (Fig 1). It is an area of enclosed pasture land on the south side of Dean Moor, bounded to the north by a lane. The area is characterised by undulating countryside on a well-dissected plateau (Eastwood *et al* 1931, 2) (Fig 2). This part of the plateau has a ridge of higher ground (High Park), extending from Weddicar to Dean Moor (Eastwood *et al* 1931, 2).
- 3.1.2 The underlying geology comprises part of the Carboniferous Westphalian limestone on the West Cumberland coal field (Moseley 1978, 180-2). The Coal Measures are made up of two divisions, both of which are found within the assessment area: the upper division mainly lacking in coal seams, and the lower productive measures (Eastwood *et al* 1931, 7).
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4. ASSESSMENT OF ARCHAEOLOGICAL POTENTIAL

4.1 Desk-Based Study

- 4.1.1 **Prehistory:** no prehistoric monuments or features were identified from within the study area; however, there is a stone circle (Site 26) at a distance of only 210m beyond the northern boundary (NGR 03990 2234 (not shown on enclosed mapping). The circle is particularly large, measuring 25.9m by 32.8m, although, the stones are very low and some are partly buried. The stone circle comprises seven stones, although there is evidence of another five stones just above or below the ground surface (Waterhouse 1985). Within the circle is a round cairn (c 6.7m diameter) which was excavated in the early 1920s (Mason and Valentine 1925); this revealed that it was carefully constructed and incorporated several large flat slabs. Although the cairn displays the characteristics of a funerary monument, the excavators were not able to identify any human remains. The funerary mound is a typical Bronze Age feature, but the large open form of the stone circle is more appropriate for a Neolithic date. Burl considers that a central burial cairn is an unusual feature in a stone circle of this size and has therefore postulated that the cairn is a later feature (Waterhouse 1985, 73).
- 4.1.2 **Medieval:** the study area lies within the parishes of Arlecdon and Distington, straddling the River Keekle which forms the parish boundary; Arlecdon is to the south of the river and Distington to the north (Fig 2). The name of Arlecdon is probably derived from Old English *earn* + *lacu* + *dene*, which means the valley of the stream frequented by eagles (Mills 1991, 11), although Hutchinson thought it was derived from Old Irish (Hutchinson 1794, 89). The parish comprised the townships of Arlecdon, Frisington, and Whillimoor (Whellan 1860, 370), of which the latter contains the southern part of the assessment area. The manor of Arlecdon was granted by William de Meschines to Michael le Fleming in the twelfth century or late eleventh centuries (Whellan 1860, 371), but through various sales ended up in the hands of the Lowther family at the beginning of the fifteenth century (Sugden 1897, 2; Hutchinson 1794, 89).
- 4.1.3 The origins of the name of Distington are more obscure than those of Arlecdon. The ending derives from the Old English *tun*, but the meaning of the first part is not known, although it may derive from a personal name (Mills 1991, 106). The manor of Distington was held by Gilbert de Dundraw in the late eleventh century, and eventually passed into the hands of the Dyke family by the end of the fourteenth century (Hutchinson 1794, 98; Whellan 1860, 375). By the early post-medieval period, the manor had passed into the hands of the Fletcher family and, after the death of the last of that family, it was sold to James Brougham in 1720 (Whellan 1860, 375). In 1737, he sold it to Sir James Lowther, and it thereafter remained in the possession of the Earls of Lonsdale (Whellan 1860, 375).
- 4.1.4 The assessment area lies on land that once formed part of Whillimoor Common, the name of which probably derives from Old English *wilig* and Old Scandinavian *mor*, meaning moor, or barren upland, with willow trees (Mills 1991, 383-4). The land in Distington parish was enclosed in 1768 (CROW YSPC/13/90), and the regular field shapes and sizes reflect the late enclosures. However, in 1777 (Nicholson and Burn 1777, 50) and in 1794 (Hutchinson 1794, 99), the tenants still had large common rights and turbary on part of Whillimoor. That part of the moor which lies within Arlecdon parish was partly enclosed at an earlier date, forming the township of Whillimoor and this is reflected within the field pattern, which typically has small irregular fields within an intake of land between the present-day farms of Keekle Head

and Sandbeds. There is a further enclosure intake centred around Midtown farm and between the two was a 200m wide outrake corridor of a drove route (Fig 3). The external boundaries of the intakes converged towards the drove route so as to provide a 'funnel' to assist the driving of stock from the open moorland into the drove route and is a common design feature. The area of the drove route was subsequently enclosed, at some time before the enclosure map of 1822, which depicts the area of the former drove as 'Thomas Hindes Old Inclosure' (CROW YDX/111/54). Green Spot farm is situated within this later enclosure of the drove route and may potentially be contemporary with the enclosure. The presence of broad ridge and furrow, noted on aerial photographs (Site 25; NY 0368 2160), reinforces the supposition that this intake was possibly of medieval date.

- 4.1.5 **Post-Medieval Settlement:** the buildings that lie within or close to the assessment are on modern Ordnance Survey maps can all be traced back to at least the mid-nineteenth century. Wilson Park, Sandbeds (Site 02), and Green Spot (Site 03), within the study area, are all marked on the Ordnance Survey maps of 1863 and 1865. Sandbeds also appears to be marked on the Arlecdon enclosure map of 1822 (CROW YDX/111/54), although it is not named. Immediately adjacent to the assessment area, Studfold (Greyhound Inn), Wilson Park, Redgate Foot and Midtown are all marked and named in 1863 and 1865, and the building to the west of Midtown is named as Blacklands. In addition, there is a building called Whillimoor Head (Site 23; Fig 3) marked on the 1865 map, just inside the eastern limit of the assessment area, but which is not marked on modern maps and was not identified by the field survey. The farm known as Keekle Head on modern maps is called Coal Race on the Ordnance Survey 1865 map, and was possibly associated with the coal shafts (Site 24), just to the north.
- 4.1.6 **Post-medieval Coal Working:** both Distington (Nicholson and Burn 1777, 50; Hutchinson 1794, 99) and Arlecdon (Hutchinson 1794, 89) were recorded as sources of coal and iron ore, and in both parishes the Earls of Lonsdale played a major part in the workings. However, coal working was undertaken only on a small scale until the nineteenth century and the opening of the Workington collieries which followed the introduction of the steam engine (Wilson 1905, 366). In Distington, the development of mining was undertaken by the Fletchers from the early seventeenth century. In 1614 they leased coal royalties belonging to John Fearon, buying them in 1624, and adding to them in 1633 (Wood 1988, 2). In 1675, they sold the royalties to the Lowthers (Wood 1988, 2), who concentrated on buying up the rights to work coal in the area throughout the seventeenth and eighteenth centuries (Wilson 1905, 370). The Lowthers planned to dominate coal mining, and they bought further estates and leased more coal royalties, including more in Distington in 1714 and those for Whillimoor in 1753 (Wood 1988, 25). In Distington, coal mines were worked throughout the eighteenth century, although there are no records of mines from within the assessment area. There are no coal workings marked within the Distington parish part of the assessment area on the Ordnance Survey 25 inches to 1 mile map of 1865 (sheet 62.9), but, by 1867 (1st edn 6" map) a mine shaft is marked close to the eastern edge of the assessment area (Site 01). On the modern Ordnance Survey 1:10,000 map this shaft is marked as disused, and is the only indication of mine working within the Distington parish part of the assessment area.
- 4.1.7 Although coal had been worked from before 1700 in the township of Whillimoor (Wilson 1905 373), coal mining tended to be carried out on a small scale in the parish of Arlecdon until the nineteenth century (Wilson 1905, 373). In 1852, the Venture Pit (Site 22) was sunk at Whillimoor by Thomas Hinde on land that was already in his

possession at the time of the enclosures in 1822 (CROW YDX/111/54). The upper coal seam at the Venture Pit was found at 14 fathoms (c 26m), and was 2 feet 6 inches (c 0.75m) thick. The lower seam, known as the China Band, was found at 26 fathoms (48m) and was 3 feet (c 0.92m) thick (Wilson 1905, 373). Thomas Hinde worked the Venture Pit for only eight years, and in 1860, he leased it to Joseph Ward and others (Wood 1988, 161). However, the mine only continued on for another five years and was discontinued in 1865. The working pit is marked on the Ordnance Survey 1st edition maps of 1863 and 1867, with a tramway leading from it to the north, across the River Keekle and up to the road next to the property known as Wilson Park. Although the pit and tramway are no longer marked on the current Ordnance Survey map, it does show earthworks on the site of the mine. Two more coal shafts are marked on the Ordnance Survey map of 1863, to the north-west of Keekle Head Farm (Site 24), and they may have been situated on land belonging to the Earl of Lonsdale (CROW YDX/111/54). There is no sign of these shafts on the modern Ordnance Survey maps and the identification survey established that they are now very degraded.

4.2 Identification Survey (Sites 3 and 4)

- 4.2.1 **Sandbeds Farm (Site 02)(Figs 5 and 6):** the farm is situated beside the River Keekle at the edge of Arlecdon Parish and also at the western edge of a clearly defined intake of land between it and Keekle Head Farm (Section 4.1.3). The field system has not developed around the farm, instead it appears that the farm was a later insertion into one of the intake fields. In terms of the field pattern, Keekle Head Farm is more integrated into the field system than Sandbeds and is more likely to be the site of the original farm; however, it is also possible that the original intake was farmed from a completely different site altogether.
- 4.2.2 The Sandbeds farmhouse is a two storey structure constructed from sandstone, but the external fabric was obscured by a modern cement-based render. The northern front facade has three timber six-light sash windows with a doorway on the western side. In front of this doorway is a single storey extension, constructed from breeze blocks, which surrounds an earlier extension, that appears to have been contemporary with the main building. It is evident that the internal fabric of the farmhouse has been subject to considerable alteration but it was not possible to establish the precise development sequence of the building because of plaster and wallpaper which obscures the walls.
- 4.2.3 To the east and butting the farmhouse is a barn which was constructed from similar material to the farmhouse. It comprised a central bay with hay loft bays on either side and stall accommodation below. These stall areas had concrete floors with three timber divisions; they were separated from the main threshing bay by modern brick and sandstone walls. The bridging joists forming the hayloft floors would appear to have been re-used and may potentially have derived from an earlier structure, either on the site or in the vicinity. The roof of this barn comprised a ridge purlin with two side purlins on either side and two truss members supported on the main walls and had stone slates. An owl hole was situated on the eastern gable with further ventilation on the southern face.
- 4.2.4 A further structure, butted onto the northern side of the barn, comprised a two storey structure containing two timber stall divisions and which was, at the time of survey, still in use. A fourth, more modern, building has been constructed to the east of and butting the barn. It comprised a two storey structure built from sandstone with a concrete floor and a single stall with timber hayrack and ceramic trough indicating

that the building was constructed for the housing of a single horse. Neither of these two extensions are depicted on the OS 1:2500 1st edition map (1863) and were evidently constructed subsequent to that date.

- 4.2.5 All the barn structures were similarly roofed and are of typical late eighteenth / nineteenth century construction; however, access was not available to the farm house roof. The farmhouse has a 'double-pile' form of ground plan, which typically dates to between 1770 and 1850 (Brunskill 1978, 65). The layout of the farm follows the Laithe-house arrangement, whereby the farmhouse, barn, stable and cowhouse were arranged in a line with no cross passage; this type of farm layout was common throughout the eighteenth century.
- 4.2.6 **Green Spot Farm (Site 03) (Figs 7 and 8):** the farm is situated towards the south of the study area and at the base of a steeply sloping area. It is within an area of 'fill-in' enclosure between two earlier intakes (Section 4.1.3). The farmhouse is a two storey rectangular structure, constructed entirely of sandstone and all elevations are obscured by modern cement render. It has four timber 12-light transom and mortice windows on the rear, western facade. It has a porch to the rear entrance which may suggest the principal facade has been reversed, and a smaller modern brick single storey extension to the east of the porch (Fig 7). The east facade has four timber sash windows of comparable size and style to those found on the rear facade and a doorway at ground floor level. The roof of this building was of stone slab. Internally the fabric of the building was obscured by plaster and wallpaper but it would appear that at ground floor level the arrangement of rooms has been substantially altered.
- 4.2.7 To the north and butting the farmhouse is a barn which is 30m in length and was constructed from a similar material to the farmhouse. It comprised a single phase gable structure with a large doorway to the northern end of the eastern facade which has been subject to recent repair with the insertion of a steel lintel. Further doorways exist at both ground and first floor level. Although there is no external access to the first floor entrances, it is likely that they were served by a moveable ramp for the purposes of loading and unloading hay into a loft, a fairly common arrangement for this form of barn. The barn is divided into five bays by the insertion of modern brick walls and there are also modern concrete stall divisions within these bays. Butting on to the west side of this barn is a modern prefabricated steel structure which has been constructed on what would appear to be the foundation platform of an earlier building (Fig 7). The platform is aligned at a tangent to the standing buildings and may correspond to an extension to the barn shown on the OS 1:2500 1st edition map (1865).
- 4.2.8 To the east of the barn, and separated by a yard, is a further building. At present it is only a single storey building but it would appear that an original upper floor of this building has been destroyed with the subsequent application of a flat tin roof. There are three phases of construction, the earliest being at the southern end. This earliest phase has a wide arched entrance which is a common feature of eighteenth/nineteenth century barns and was typically to provide a broad access for a cart (Fig 8).
- 4.2.9 The present layout of the farm is little changed from that shown on the OS 1:2500 1st edition map (1865), the only noticeable change being the addition of the modern pre-fabricated structure on the west side of the barn. In general the farm has a typical Laithe-house plan, whereby the farm buildings were built in a line onto the end of the farmhouse (Brunskill 1978, 81). There was no cross passage and no direct communication between the farmhouse and out-buildings, a configuration typically of

eighteenth century date. The Green Spot farmhouse, like the Sandbeds farmhouse, has a conventional double-pile plan (Brunskill 1978) which typically dates to between c 1770 and 1850.

- 4.2.10 **Small scale mining:** small scale extraction is for the most part confined to an area north of Green Spot farm and comprises a series of shafts extending along the line of a principal coal seam (Sites 9-16), although there is also a separate, but adjacent group, of three shafts (Sites 17-19). The extant remains fall within three basic categories: shaft mounds, shaft hollows and spoil-heaps.
- 4.2.11 Three shaft mounds (Sites 09, 11 and 13) were identified. They are characterised by an annular bank with an entrance at one side and a shallow depression within the centre. All the examples were entirely earthfast and the majority are very well defined, which would suggest that the land has not been subject to intensive recent cultivation. By contrast shaft mound 01, in the northern part of the study area, is very degraded as a result of plough action.
- 4.2.12 A group of three shaft depressions (Sites 17-19) are situated to the east of the line of shaft mounds (Sites 9-16) and are all characterised by an earthfast depression, c1.5m in diameter, with no associated annular mound. They contrast, in terms of their character, with the nearby shaft mounds and potentially reflect a different episode of mining activity.
- 4.2.13 **Large Scale Mining:** large scale extraction of coal measures within the designated area is characterised by four separate mine workings. The first of these (Site 08) is located to the south-east of Green Spot farm on an area of steeply sloping pasture and was heavily obscured by gorse. It comprised a complex series of workings extending into the natural slope, the base of which was obscured by standing water. A heavily disturbed area of spoil-heaps extended to the east and there was a leat, aligned east / west, at the southern, upper, end of the workings possibly to drive pit gear. The mine workings are not shown on the OS 1st edition map (1865) and therefore were probably of a later date.
- 4.2.14 At about 100m to the west of these workings and to the south-west of Green Spot farm, was a further area of extraction (Site 04). This is shown on the OS 1st edition map (1865) as a quarry but the site is now characterised by remains of a mining landscape; it comprised a large hollow and associated workings on an area of steeply sloping pasture. The hollow may correspond to the former quarry but it has only gentle sloping sides, rather than the typical sheer sides of a quarry and if it is the quarry then it must have been substantially filled, presumably with mine waste. The southernmost of the associated workings extends beyond the study area and comprises a complex series of shallow depressions. Within the study area is a further series of depressions and spoil heaps, the majority of which were obscured by gorse; these are delimited on the west by a leat leading into a marshy area directly below the workings. A well defined earthfast bank extends to the west and may form the remains of an earlier field boundary truncated by the mine workings. At the northern base of these workings is a large spoil heap suggesting that spoil was taken away to the north.
- 4.2.15 The largest of the mining areas (Site 22) corresponds with the documented Venture Pit (Section 4.1.5). It comprised a large well defined spoil heap, which has been disturbed on its southern side. Adjacent to this spoil heap is a complex area of further smaller, spoil-heaps and depressions extending north and forming a raised platform above the natural topography. An equally well defined tramway extends north-west of this area for a distance of c100m at which point it bends to the west and continues for a further

30m up to a bridge crossing over the River Keekle. From there it extended north to Wilson Park and survives as a broad boundary bank.

- 4.2.16 At the eastern side of the site is a further major mining area, comprising two shafts and a tramway extending north from them (Site 24), which was depicted on the OS 1st edition OS map (1865). The area, however, was under a deep grass crop at the time of the survey, which obscured any earthworks. Although there are extant indications of the mining remains the extent is not evident, and it is possible that in some areas the mining features only survive as sub-surface remains.
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5. DISCUSSION

5.1 Prehistory

- 5.1.1 The only prehistoric feature reported within the vicinity of the study area is the large Dean Moor stone circle (Site 26), which is situated c 220m to the north. Such ritual/funerary monuments are quite often positioned in remote locations away from areas of known settlement, either on prominent landmarks or on communication routes; its presence therefore is not necessarily an indication of prehistoric occupation in the locale. However, equally there are also examples of settlement associated with stone circles, notably the large Burnmoor cairnfields which are constructed around five stone circles (Quartermaine and Leech forthcoming). The potential for extant prehistoric remains within the study area should perhaps be considered.

5.2 Agricultural Landscapes (Fig 3)

- 5.2.1 The earliest elements of the landscape within the study area would appear to be selected elements of the field system within Arlecdon parish. The two intakes, that centred on Midtown farm and that between Sandbeds and Keekle Head farms, were divided by a 'broad corridor' that is now filled by straight bounded enclosed fields. These fields contrast dramatically with the irregular fields of the intakes and are an indication that the area has been subject to 'fill in' enclosure. This broad corridor displays the characteristics of an outrake, that is the part of a drove route that extends through enclosed land and leads onto upland pasture. Drove routes are a typical feature of the medieval upland landscape and their outrakes are well documented particularly during the sixteenth century (Winchester 1987, 90). Some were abandoned following the dissolution (AD1536-40) and the corresponding loss of monastic influence upon upland farming, but many would have continued in use into the post-medieval period (Millward and Robinson 1980, 198). Certainly these two intakes and the drove route had been enclosed at some time prior to Parliamentary Enclosure and were shown as 'Old Inclosures' on the 1822 enclosure map (CROW YDX/111/54). However, the area is documented in c 1447 as having been a part of Whillimoor, which was a medieval common and comprised the contiguous wastes of the post-medieval townships of Distington, Moresby, Weddicar and Whillimoor (Winchester 1987, 85). The implication is that the intakes were enclosed subsequent to this date and would have formed on either side of an existing drove route.
- 5.2.2 The field boundaries of these two intakes may themselves prove significant; they for the most part, have a 'Cumbrian Bank' type of construction, which involves the stone revetment of an earthen bank. This is a common form of boundary marker in the Lake District and is often a product of early enclosure; it may therefore date to the early/mid post-medieval period (LUAU 1997a).
- 5.2.3 The land within these two intakes appears to have been of poor quality (Eastwood *et al* 1931, 2), and would have only supported a few scattered families. However, there is evidence of broad ridge and furrow within the easternmost intake (Site 25), which indicates that the land was cultivated at some stage. Such broad ridge and furrow can date from the medieval period; however, there is also an area of broad ridge and furrow (Site 20) within the filled in outrake area and consequently its presence can not be relied on as an indicator of early cultivation.

- 5.2.4 By contrast with the land of the Arlecdon parish, that part of the study area that is within the neighbouring Distington parish was part of barren, open moorland until enclosure in 1768 (CROW YSPC/13/90), and there is no evidence of medieval or early post-medieval settlement in this area.

5.3 Settlements

- 5.3.1 Although the two intakes may be of relatively early date the farms associated with them were not necessarily contemporary; Sandbeds farm, for example, is seemingly inserted into an already existing field system. Even if there were a relationship between the farm site and the field system, the present structures are not necessarily contemporary with the enclosure of the intake. It is not evident from the field pattern which was the original farm, but it is likely to be either Keekle Head, because of its relatively pivotal position within the field system, or Whillimoor Head (Site 23), on the east side of the study area, because its place name bears that of the township and the moor from which it was enclosed. The latter is shown on the OS 1st edition map of 1865 but this no longer survives as a surface feature and is not shown on modern maps.
- 5.3.2 The Sandbeds and Green Spot farms display considerable similarities in both their layout and the design of the farmhouses. Typologically they are similar and appear to be broadly contemporary. The Laithe-house arrangement exhibited at both farms is typically an eighteenth century design. The farm houses both have a characteristic double-pile plan, which normally date between 1770 and 1850. Although it was not possible to examine the roofs of the farmhouses, it was possible to examine those of the adjacent barns, which were probably contemporary with the houses. They had king post trusses strapped with iron bolts and the design is typically of nineteenth century date. The cumulated evidence would therefore suggest that the farms were of late eighteenth or even possibly early nineteenth century date.
- 5.3.3 A late eighteenth / nineteenth century date for Sandbeds farm is later than the surrounding enclosure and the farm is likely to have been a later intrusion into the field system. The Green Spot farm is within an area of enclosure filling a disused drove route and potentially was contemporary with that enclosure.

5.4 Mining Landscapes (Figs 3 and 4)

- 5.4.1 Coal mining in Whillimoor has been documented from the early post-medieval period but previously has been unrecorded. The survey has revealed several localised extraction features (Sites 09-19) which would appear to pre-date the Venture Pit extraction complex (Site 22), and are similar in character to those encountered at nearby Kidburngill (LUAU 1998). However, the first large scale exploitation did not come until the mid-nineteenth century and was relatively short-lived. The largest mine, the Venture Pit, was in operation for just 13 years from 1852 but it is not known how long its contemporary pit (Site 24) was operational. Although these mines were worked on a much larger scale than the earlier mining operations within the study area, they were nevertheless small by comparison with other pits in the region, eg

Dyon and Gilgarren just to the north of the assessment area (Wood 1988, 124), which were controlled by the Earls of Lonsdale. The Venture Pit (Site 22) and the other larger commercial mining operations (Sites 04 and 08) are in particular characterised by a paucity of spoil, although the construction of a tramway at both sites (Sites 22 and 24) may have absorbed much of the debris from the earlier phase of mining.

6. ARCHAEOLOGICAL IMPACT AND RECOMMENDATIONS

6.1 Impact

- 6.1.1 This assessment has highlighted the potential for prehistoric activity within the locality, although no direct evidence was identified within the study area. It has shown that there was a medieval or early post-medieval enclosure on the Arlecdon parish side of the study area; however, it has not been possible to establish which, if any, of the farms were contemporary with this enclosure. The extant farms appear to be of late eighteenth or early nineteenth century date, Sandbeds farm being in existence by 1822 (CROW YDX/111/54). There is one farm, Whillimoor Head, which was depicted on the OS 1st edition map (1865) but no longer survives on the surface; however, it could potentially survive as a sub-surface feature.
- 6.1.2 The principal archaeological resource identified, however, was the remains of nineteenth century mining activity and given that coal was exploited in Whillimoor from before 1700, there is the possibility that the small scale shaft workings (Sites 9-19) relate to a pre-nineteenth century episode of mining.
- 6.1.3 Any surface or sub-surface remains, and any buildings within the assessment area, would be completely destroyed by the proposed opencast mine, as would any other sites not detectable by documentary study or surface inspection.

6.2 Recommendations

- 6.2.1 Current policy dictates that wherever possible identified sites of archaeological importance are preserved *in-situ* as embodied in the Institute of Field Archaeologists' Code of Conduct and the Department of Environment *Planning Policy Guidance Notes 16*. The present preliminary assessment, being restricted in its scope, was able to establish areas of archaeological potential but other sites not detectable by desk-top study or identification survey may exist. It is therefore recommended that a programme of archaeological evaluation be undertaken, and would be targeted on areas of potential identified by the present assessment. This is intended to investigate the significance of the archaeological resource and assess the implications of the proposed development. It is also recommended that a mitigation record is produced of the surface features and the farms.
- 6.2.2 **Landscape Survey:** a detailed LUAU Level 2b landscape survey should be undertaken to establish the nature and extent of selected mining landscapes and thereby provide a mitigation record of the surface features in advance of the proposed development. It is recommended that the following sites be subject to survey recording: Sites 4, 8, 9-20, 22 and 24.
- 6.2.3 **Fabric Survey:** it is recommended that the farms be subject to mitigative recording in advance of their demolition. However, as they are not of particular antiquity or archaeological significance, this need only be a RCHM(E) level 2 survey and would involve the generation of ground plans of the two farm house and associated farm buildings in conjunction with a photographic survey of the structures.
- 6.2.4 **Trial Trenching:** in conjunction with the survey a programme of targeted trial trenching is recommended to examine areas where there is the greatest sub-surface potential and also investigate documented sites where there is no longer a surface

expression. However, any trenching must be subject to rigorous health and safety requirements, as there is a potential for collapsing shafts. In particular it is recommended that trenching is not undertaken at Site 8, where there is standing water, which potentially is obscuring an open shaft and may result in surface instabilities during any machine excavation. In other areas there may be a requirement to examine extant shaft mounds, but this should be done by machine and only the external part of the mounds should be investigated lest there is a collapse of the central shaft. It is recommended that the following sites be subject to evaluation trenching: Sites 01, 02, 03, 04, 9-20, 23 and 24.

- 6.2.5 The examination of the farm sites (02 and 03) should involve limited trenching but this should be limited to the footprint of the farmhouses following their demolition. This demolition process should therefore be undertaken with particular care to ensure that the below ground deposits are not disturbed.
- 6.2.6 The distribution and extent of any trenching programme, however, should be subject to the specific archaeological recommendations of the County Archaeological Officer, whose views should be sought prior to proceeding with any further work on the site. Subject to the results of the proposed evaluation, there may be a requirement, by the County Archaeological Officer, for a further programme of detailed archaeological mitigation recording to anticipate the destruction of the archaeological resource by the open-cast extraction proposals.
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*APPENDIX 1
PROJECT BRIEF*

APPENDIX 2
PROJECT DESIGN

MAY 1998

**LANCASTER
UNIVERSITY
ARCHAEOLOGICAL
UNIT**

**KEEKLE HEAD OPENCAST COAL SITE
CUMBRIA**

ARCHAEOLOGICAL ASSESSMENT

Proposals

The following project design is offered in response to a request from Roxylight Agricultural Land (Cumbria) Ltd for an archaeological assessment at the Keekle Head opencast coal site.

1. INTRODUCTION

- 1.1 LUAU has been invited by Roxylight Agricultural Land (Cumbria) Ltd to submit a project design and costs for an archaeological assessment of an area of pasture land at Keekle Head, near Distington, West Cumbria, in advance of a proposed open cast coal scheme. The study area contains known coal mining landscapes; comprising at least two former coal mines. The study area contains an agricultural landscape centred around three post-medieval farms, two of which (Sandbeds and Green Spot) will be directly affected by the proposed open cast scheme. There are areas of preserved broad ridge and furrow within the field system.
- 1.2 A requirement of the County Structure Plan, the forthcoming Minerals and Waste Local Plan and PPG 16, is that an archaeological assessment be undertaken to inform the planning process. The project design is in accordance with a project brief prepared by the Cumbria County Archaeologist.
- 1.3 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 undertook an assessment, landscape survey and evaluation on the nearby Kidburngill site (LUAU 1997a and b) in advance of an open cast development. 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

- 2.1 The following programme has been designed in accordance with a brief provided by Philip Holdsworth of Cumbria County Council to provide an accurate archaeological assessment of the designated area, within its broader context. The principal purpose of the assessment is to collate existing information about the archaeology of the site, to determine the significance of the identified archaeological resource and to provide recommendations for any further archaeological investigation. The required stages to achieve these ends are as follows:
- 2.2 **Desk Top Survey**
- To accrue an organised body of data to inform the field inspection.
- 2.3 **Identification Survey**
- An identification survey to record the character of the extant earthworks within the study area and provide an assessment of the archaeological significance of the earthwork remains.
- 2.4 **Assessment Report**
- A written assessment report will assess the significance of the data generated by this programme within a local and regional context. It will advise on the requirements for further evaluation or recording measures as necessary.

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 survey**
- 3.2.1 The following will be undertaken as appropriate, depending on the availability of source material. The level of such work will be dictated by the timescale of the project.
- 3.2.2 **Documentary and cartographic material:** This work will rapidly address the full range of potential sources of information. It will include an appraisal of the Cumbria Sites and Monuments Record, as well as appropriate sections of County histories, early maps, and such primary documentation (tithe and estate plans etc.) as may be reasonably available. Particular attention will be paid to field and 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 Offices will also be studied. Published documentary sources will also be examined and assessed. This work will involve visits to the County Record Office in Carlisle and the Leconfield Archive (Cockermouth) will be consulted. The assessment will examine the results of the recording programme at the adjacent Kidburngill site.

3.2.3 **Aerial photography:** A survey of the extant air photographic cover will be undertaken. This may indicate the range and survival of archaeological and structural features in the designated area, and if appropriate coverage is available, allow an assessment of the rate and progress 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), although, within the timescale available, it is unlikely that prints will be forthcoming from this body for inclusion in this report.

3.2.4 **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 the archaeological features in context but also serves to provide predictive data, that will increase the efficiency of the field inspection.

3.3 Field inspection

3.3.1 **Access:** Liaison for basic site access will be undertaken through Roxylight Agricultural Land (Cumbria) Ltd.

3.3.2 It is proposed to undertake a level 1 survey of the study area which extends over an area of 1.01sqkm. This is a rapid survey undertaken alongside a desk top study as part of a site assessment. It is an initial site inspection which helps the local planning authority to consider fully the archaeological implications of a development and also serves as the basis for undertaking and planning further archaeological work on the site. It represents the minimum standard of record and is appropriate to exploratory survey aimed at the discovery of previously unrecorded sites. Its aim is to record the existence, location and extent of any such site. The emphasis for the recording is on the written description which should record type and period and would not normally exceed c50 words. The extent of a site is defined for sites or features greater than 50m in size and smaller sites are shown with a cross.

3.3.3 The reconnaissance will be undertaken in a systematic fashion, walking on approximately 30m wide transects within the extent of the defined study area. It is proposed to use Global Positioning System (GPS) techniques to locate and record the features. GPS instrumentation 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. The use of GPS techniques has proved to be an essential and extremely cost effective means of locating monuments, which can achieve accuracy of better than +/- 1m.

3.3.4 There are two post-medieval farms within the extent of the study area, Green Spot and Sandbeds. The site survey will involve an examination of both the external fabric of the farm buildings and also their interiors if access is available. The study will assess the archaeological survival and architectural significance of the buildings.

3.3.5 A photographic record will be undertaken simultaneously. An early surface inspection such as this is highly recommended, as such work can frequently double the amount of archaeological information for an area. This fieldwork will result in the production of plans at a scale of 1:2,500 or any other scale required, recording the location of each of the sites listed in the gazetteer. All archaeological information collected in the course of field inspection will be recorded in standardised form, and will include accurate national grid references. This will form the basis of a gazetteer, to be submitted as part of the report.

3.3.6 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 now being implemented for all projects.

3.4 Assessment Report

- 3.4.1 **Archive:** The results of Stages 3.2-3.3 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 any features and finds 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.
- 3.4.2 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 (as appropriate), and a synthesis (in the form of the index to the archive and the report) will be deposited with the Cumbria Sites and Monuments Record. A copy of the archive will also be available for deposition in 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, should any material be recovered, with the material archive (artefacts, ecofacts, and samples, at this stage from surface collections) with an appropriate museum.
- 3.4.3 **Collation of data:** The data generated by 3.2 and 3.3 (above) will be collated and analysed in order to provide an assessment of the nature and significance of the known surface and subsurface remains within the designated area. It will also serve as a guide to the archaeological potential of the area to be investigated, and the basis for the formulation of any detailed field programme and associated sampling strategy, should these be required in the future.
- 3.4.4 **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 report will include a copy of the project brief, 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, 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. 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.
- 3.4.5 This report will identify areas of defined archaeology, an assessment and statement of the actual and potential archaeological significance of any features within the broader context of regional and national archaeological priorities will be made. Illustrative material will include a location map, which 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).
- 3.4.6 **Proposals:** The report will make a clear statement of the likely archaeological implications of the intended development. It will also make recommendations for any further evaluation of the identified archaeological potential deemed necessary or desirable for individual sites. It will seek to achieve, as a first option, the preservation *in situ* of all significant archaeological features, and possible strategies for the mitigation of the development, including design modifications, will be considered. Where conservation is neither possible, nor practical, it may be appropriate to recommend a further stage of more intensive archaeological work in order to mitigate the effects of development.
- 3.4.7 **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.
- 3.5 **Project Monitoring**
- 3.5.1 **Roxylight Agricultural Land (Cumbria) Ltd:** LUAU will consult with the Client regarding access to land within the study area. This consultation will include, if required, the attendance of the

Cumbria County Archaeologist.

- 3.5.2 **Cumbria County Council:** Any proposed changes to the project brief or the project design will be agreed with the County Archaeologist, Cumbria County Council, in conjunction with the client.

4. WORK TIMETABLE

The phases of work will comprise:

4.1 **Desk Top Study**

A two day period is required to collate all the available data.

4.2 **Field Inspection**

A two day period is required for the identification survey.

4.3 **Prepare Assessment Report**

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

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

5. OUTLINE RESOURCES

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

5.1 **Desk Top Study**

2 man-days External Consultant

5.2 **Field Survey**

2 man-day Project Supervisor

5.3 **Assessment Report**

2 man-days External Consultant

1 man-days Project Supervisor

1 man-days Illustrator

- 5.4 The project will be under the management of **Jamie Quartermaine, BA, Surv Dip, MIFA** (Unit Project Manager) to whom all correspondence should be addressed. All Unit staff are experienced, qualified archaeologists, each with several years professional expertise. Project Officers in Unit terminology are senior field archaeologists, capable of organising and running complex projects and undertaking less complex work quickly and efficiently to a high standard.

APPENDIX 3

GAZETTEER OF SITES

Site number	01
Site name	Greyhound Inn
NGR	NY 0375 2205
Site type	Shaft
Period	Post-medieval
Source	Identification Survey 1998 / Current 1:10,000 OS map Documentary Survey 1998 / SMR 11705

Description

The site of a shaft in the north-east corner of the study area; it is shown on the current OS edition map but is not shown on the OS 1st edition map (1863). Whilst no definite depression was located, an ill-defined level platform (10m in diameter) was identified which is of artificial origin, and may correspond to a shaft mound degraded by cultivation.

Site number	02
Site name	Sandbeds Farm
NGR	NY 0345 2165
Site type	Farm Buildings
Period	Mid eighteenth/early nineteenth century
Source	Identification Survey 1998 / Current 1:10,000 OS map Documentary Survey 1998 / CROW YDX/111/54 / 1822; OS 1st edition map 1863

Description

Sandbeds farm is shown on the current OS edition map and was, at the time of assessment, still occupied. It comprised a two storey farmhouse rectangular in plan (10m by 8m) and constructed of sandstone to which a cement-based render has been applied. Three timber six-light sash windows were encountered on the northern, front facade with a doorway on the eastern side. In front of this doorway was a single storey extension (8m by 6m) constructed from breeze blocks, which surrounded an earlier extension (4m by 3m) that apparently was constructed at the same time as the main building. Internally the building appears to have been subject to considerable alteration although the elevations were obscured by plaster and wallpaper.

To the east and butting the farmhouse was a barn constructed from similar material; it comprised a central bay with hay-loft bays at either side and stall accommodation below. These stall areas had three timber stall divisions with concrete floors and are separated from the main threshing bay by the addition of modern walls constructed from brick and sandstone. The bridging joists, forming the hayloft floors, would appear to have been re-used. The roof of this barn comprised a ridge purlin with two side purlins on either side and two truss members supported on the main walls. The roof has a nineteenth century character. An owl hole was situated on the eastern gable with further ventilation on the southern face.

A further building was constructed alongside the existing barn and comprised a two storey structure containing two timber stall divisions; it was still in use at the time of survey.

A fourth, more modern, building has been constructed to the east of, and butting the barn. It comprised a two storey structure built from sandstone with a concrete floor and a single stall with timber hayrack and ceramic trough indicating that the building was constructed for the housing of a single horse.

Site number	03
Site name	Green Spot Farm
NGR	NY 03671 21269
Site type	Farm Buildings
Period	Mid eighteenth/early nineteenth century
Source	Identification Survey 1998 / Current 1:10,000 OS map Documentary Survey 1998 / OS 1st ed. map 1863

Description

Green Spot farm is situated at the southern side of the study area, at the base of a steeply sloping area. It is still occupied. It is constructed entirely of sandstone and comprised a two storey rectangular structure (8m by 7m) with four timber 12-light transom and mortice windows to the rear, north, facade and it has a porch (2m by 2m) with a smaller modern brick extension extending to the east of this. The north facade had four timber sash windows of comparable size and style to those found on the rear facade and a doorway at ground floor level. The roof of this building is of stone and all facades are covered by cement render. Internally the fabric of the building is obscured by plaster and wallpaper and it would appear that at ground floor level the arrangement of rooms has been substantially altered.

To the east and butting the farmhouse was a barn (30m in length). It was constructed from similar material to the farmhouse and comprised a single phase gable structure (10m in width) with a large doorway (3.5m in width). The eastern end of the southern facade has been subject to recent repair with the insertion of a steel lintel. There are further doorways (1.2m in width) at both ground and first floor level. Although there was no external access to these first floor entrances, it is likely that they were constructed for the purposes of loading and unloading hay from ramps as is typical for this class of building. This barn is still in use with modern concrete stalls forming the entire length of the interior which was divided into five bays by the insertion of modern brick walls. Located to the north of this barn and butting the north facade is a modern prefabricated steel structure which has been constructed on what would appear to be the foundation platform of an earlier building.

To the south of the barn and separated by a 5m wide yard, is a further building. It stands only to a single storey but would appear that an original upper floor has been destroyed, with the subsequent application of a flat tin roof. It is a product of three distinct phases and there is a large arch in the earliest, western phase.

Site number	04
Site name	Green Spot farm
NGR	NY 03630 21098
Site type	Quarry / mine
Period	Post-medieval
Source	Identification Survey 1998 / Current Edition OS map Documentary Survey 1998 / OS 1st edition map (1865)

Description

The site of a quarry is shown on the OS edition map of 1865 to the south-west of Green Spot farm, but the site is now characterised by the remains of a mining landscape. This comprises a large hollow and associated workings on an area of steeply sloping pasture. The hollow may correspond to the former quarry but it has only gently sloping sides, rather than the typical sheer sides of a quarry; if it is the quarry then it must have been substantially filled, presumably with mine waste. The southernmost of the associated workings extend beyond the study area and comprise a complex series of shallow depressions. Within the study area is a further series of depressions and spoil heaps, the majority of which were obscured by gorse; these were delimited on the west by a leat leading into a marshy area directly below the workings. A well defined earthfast bank extends to the west and may form the remains of an earlier field boundary truncated by the mine workings. At the northern base of these workings a large spoil-heap was encountered suggesting that recovered material was taken away to the north.

Site number	05
Site name	Green Spot farm
NGR	NY 03665 21241 - 03713 21149
Site type	Hollow-way
Period	Post-medieval
Source	Identification Survey 1998 OS 1st edition 1865 map Documentary Survey 1998 /SMR 11700 / OS 1st edition map (1865)

Description

A well defined earthfast hollow-way extends for 35m south from Green Spot farm and comprises a linear depression 2m in depth with a width of 6m at the top and 2m at the base and extending for 35m. There was no direct association with the quarry workings (Site 04) to the west suggesting that this feature is a product of farm practice and probably post-dates those workings.

Site number 06
Site name Green Spot Farm
NGR NY 03683 21196
Site type Enclosure?
Period Post-medieval
Source Identification Survey 1998

Description

A possible enclosure to the south of and truncating Hollow-way Site 05 is defined by a prominent earthfast bank (0.45m in height) with medium to large sub-angular and sub-rounded stone protruding from the surface. The enclosure is 15m x 10m and its southern bank is largely destroyed.

Site number 07
Site name Green Spot Farm
NGR NY 03700 21222
Site type Platform
Period Post-medieval
Source Identification Survey 1998

Description:

A well defined and earthfast platform is situated within steeply sloping pasture land to the south of Green Spot farm. It stands to a height of 1.2m to the north and is level with the slope to the south. It is rectangular in plan with a level top and measures 10m by 8m. It is the remains of a building platform.

Site number 08
Site name Green Spot farm
NGR NY 0375 2123
Site type Mine working
Period Post-medieval
Source Identification Survey 1998

Description

A series of mine-workings (40m x 30m) is situated located to the south-east of Green Spot farm on an area of steeply sloping pasture and is almost entirely obscured by gorse. It comprises a large level working platform (4m in depth and 2.5m in width) set into the natural slope. It was obscured by standing water and is surrounded by a heavily disturbed area of spoil heaps extending to the east. There was a leat (40m in length) orientated north-east/south-west at the southern, upper, end of the workings.

Site number 09
Site name Green Spot farm
NGR NY 03679 21354
Site type Shaft mound
Period Post-medieval
Source Identification Survey 1998

Description

A series of mine workings was located to the north of Green Spot farm in an area of level pasture. It is sub-circular in plan (5m in diameter and 0.3m in height) and entirely earthfast. A shallow depression towards the centre of this mound is probably the central shaft. It is orientated with a series of similar shafts (Sites 10-16) and is probably also a shaft mound.

Site number 10
Site name Green Spot farm
NGR NY 03670 21370
Site type Spoil heap
Period Post-medieval
Source Identification Survey 1998

Description

A well defined spoil heap with a rounded profile was identified to the north of shaft mound 09. It is entirely earthfast, measuring 5m by 2m and standing to a height of 0.8m; it was aligned north-west/ south-east and is on the same line as a series of similar shafts and these probably reflect mining along a seam.

Site number	11
Site name	Green Spot farm
NGR	NY 03647 21400
Site type	Shaft mound
Period	Post-medieval
Source	Identification Survey 1998

Description

A well defined shaft mound was located to the north of Green Spot farm in an area of level pasture. It is sub-circular in plan (8m diam) and entirely earthfast. It comprised an annular mound (0.45m in height) with a shallow depression (1.5m diam) towards the centre. The entrance is to the south.

Site number	12
Site name	Green Spot farm
NGR	NY 03633 21424
Site type	Spoil heap
Period	Post-medieval
Source	Identification Survey 1998

Description

A well defined spoil heap (8m by 2m, height 0.4m), with a rounded profile and is entirely earthfast. It is to the north of shaft mound 11 and is aligned north-west/south-east. It is also aligned with shafts 9-16 and they were evidently aligned along the line of a seam.

Site number	13
Site name	Green Spot farm
NGR	NY 03631 21432
Site type	Shaft mound
Period	Post-medieval
Source	Identification Survey 1998

Description

A well defined earthfast shaft mound (8m diameter, height 0.4m) with a rounded profile lies to the north of spoil heap 12. It was largely destroyed to the south and west with only a quarter of the ring surviving. A shallow depression (1.5m diam) was located towards the north-west indicating that this feature may form the remains of a shaft mound.

Site number	14
Site name	Green Spot farm
NGR	NY 03628 21441
Site type	Spoil heap
Period	Post-medieval
Source	Identification Survey 1998

Description

A well defined earthfast spoil heap (6m x 1.5m and 0.4m high) and has a rounded profile. It is part of a line of shafts (9-16) which is orientated north-west/south-east following the line of a seam.

Site number	15
Site name	Green Spot farm
NGR	NY 03617 21453
Site type	Spoil heap
Period	Post-medieval
Source	Identification Survey 1998

Description

A well defined earthfast spoil heap (6m by 1.5m, 0.4m high) with a rounded profile; it is orientated east/west. The mound is in line with shafts 9-16 which were probably following the line of a seam; the alignment is orientated north-west/south-east.

Site number	16
Site name	Green Spot farm
NGR	NY
Site type	Shaft Hollow
Period	Post-medieval
Source	Identification Survey 1998

Description

A small shaft hollow was located in an area of level pasture to the north of Green Spot farm. It is the north-westernmost shaft of a group of eight similar shafts (Sites 9-16). It comprised a shallow depression (1.5m in diameter) with no associated spoil heap.

Site number	17
Site name	Green Spot farm
NGR	NY 03655 21440
Site type	Shaft Hollow
Period	Post-medieval
Source	Identification Survey 1998

Description

A small shaft hollow was located in an area of level pasture to the north of Green Spot farm. It is the westernmost shaft hollow of a group of three similar features (Sites 17-19). It comprised a shallow depression (1.5m diam) with no adjacent spoil heap.

Site number	18
Site name	Green Spot farm
NGR	NY 03665 21438
Site type	Shaft Hollow
Period	Post-medieval
Source	Identification Survey 1998

Description

A small shaft hollow was located in an area of level pasture to the north of Green Spot farm. It is part of a group of similar features (Sites 17-19). It comprised a shallow depression (1.5m diameter) with no associated spoil heap.

Site number	19
Site name	Green Spot farm
NGR	NY 03671 21433
Site type	Shaft Hollow
Period	Post-medieval
Source	Identification Survey 1998

Description

A small shaft hollow was located in an area of level pasture to the north of Green Spot farm. It is part of a group of similar features (Sites 17-19). It comprised a shallow depression (1.5m diam) with no adjacent spoil heap.

Site number	20
Site name	Green Spot farm
NGR	NY 0368 2143
Site type	Ridge and furrow
Period	Post-medieval
Source	Identification Survey 1998

Description

An area of broad ridge and furrow was aligned south-west to north-east in the same area of level pasture as the small scale mine workings (Sites 09-19). It appears to have been truncated by these workings, suggesting that this ridge and furrow pre-dates the mine activity. The ridge and furrow is severely degraded but would appear to encompass an area of 50m by 40m. It does not appear to respect the current field boundaries.

Site number	21
Site name	Green Spot farm
NGR	NY 03539 21273
Site type	Spoil heap
Period	Post-medieval
Source	Identification Survey 1998

Description

A large spoil heap (6m by 3m) is adjacent to a modern field boundary and has no direct association with any other mining feature. It is well defined with a rounded profile and stands to a height of 2.1m. It is aligned north/south and is adjacent to a stream.

Site number	22
Site name	Venture Pit
NGR	NY 03389 21393
Site type	Mine workings / Tramway
Period	Post-medieval
Source	Identification Survey 1998; current OS 1:10,000 map; OS 1st edition map (1865) Documentary Survey 1998; SMR 11701; Wilson 1905, pg 373; Wood 1988, pg 161

Description

An extensive series of mine workings are marked on the current OS edition map and also the OS 1st edition map (18654). It comprises a large well defined spoil heap (12m by 8m and 2.4m high), which has been considerably disturbed on its southern side. Adjacent to this spoil heap is a complex area of further smaller, spoil heaps and depressions extending for 30m to the north, forming a raised area 0.65m above the natural topography. An equally well defined tramway extends to the north of this area for a distance of c 100m at which point it bends to the west and continues for 30m.

Site number	23
Site name	Whillimoor Head
NGR	NY 04288 21744
Site type	Building
Period	Post-medieval
Source	Identification Survey 1998 Documentary Survey 1998; OS 1st edition map 1863

Description

The site of a building is shown on the OS 1863 1st edition map. No evidence for this feature was identified during the identification survey.

Site number	24
Site name	Keekle Head
NGR	NY 03935 21840 - 03967 21729
Site type	Mine shaft
Period	Post-medieval
Source	Identification Survey 1998 Documentary Survey 1998; OS 1st edition map 1865, SMR 11700

Description

Two mine shafts and an associated tramway are shown on the OS 1st edition map (1865). Elements of the shaft and spoil mounds were identified but are generally very degraded. The site was obscured by a high grass crop at the time of survey, which limited the definition of the features. The earthwork features are limited by

comparison with the documented extent and it is possible that some mining features survive only as sub-surface remains.

Site number	25
Site name	Keekle Head
NGR	NY 9368 2160
Site type	Ridge and Furrow
Period	Medieval/ Post-medieval
Source	Identification Survey 1998 OS 1st edition map 1863, Documentary Survey 1998; SMR 16632; AP CL10/29a

Description

Traces of broad ridge and furrow are shown on an oblique aerial photograph. Examination of the aerial photograph revealed that the ridge and furrow was in a different field to that defined within the SMR. The area was under a grass crop at the time of survey, which did not identify any surface features in this area.

Site number	26
Site name	Dean Moor Stone Circle
NGR	NY 03990 22340
Site type	Stone Circle
Period	Bronze Age
Source	Documentary Survey 1998, Current OS 1:10,000 map; SMR 3048 Scheduled Ancient Monument SAM 27707, Waterhouse 1985, Mason and Valentine 1925

Description

A stone circle contains a central cairn. The circle is very large, measuring 25.9m by 32.8m; however, the stones are particularly low and some are partly buried. The stone circle comprises seven stones, although there is evidence of another five stones just above or below the ground surface (Waterhouse 1985). The cairn is c 6.7m in diameter and was subject to excavation in the early 1920s (Mason and Valentine 1925); this revealed that it was carefully constructed and incorporated several large flat slabs. The cairn has the characteristics of a funerary monument, but the excavators were not able to identify any human remains, perhaps an indication of robbing in antiquity.

Burl considers that a central burial cairn is an unusual feature in a stone circle of this size and has postulated that the cairn is a later feature (Waterhouse 1985, 73).

ILLUSTRATIONS

- Fig 1 Keekle Head Location Map
- Fig 2 Keekle Head Study Area
- Fig 3 General Site Location Plan
- Fig 4 Site Distribution Green Spot Farm Area
- Fig 5 Sandbeds Farm, photograph of the rear (southern) facade of the farmhouse and barn
- Fig 6 Sandbeds farm, photograph of the eastern end of the barn
- Fig 7 Green Spot Farm, photograph of the rear (western) facade of the farm, showing the modern superstructure constructed on top of an earlier platform
- Fig 8 Green Spot Farm, photograph of the earlier phase of the eastern barn complex showing the large arched entrance

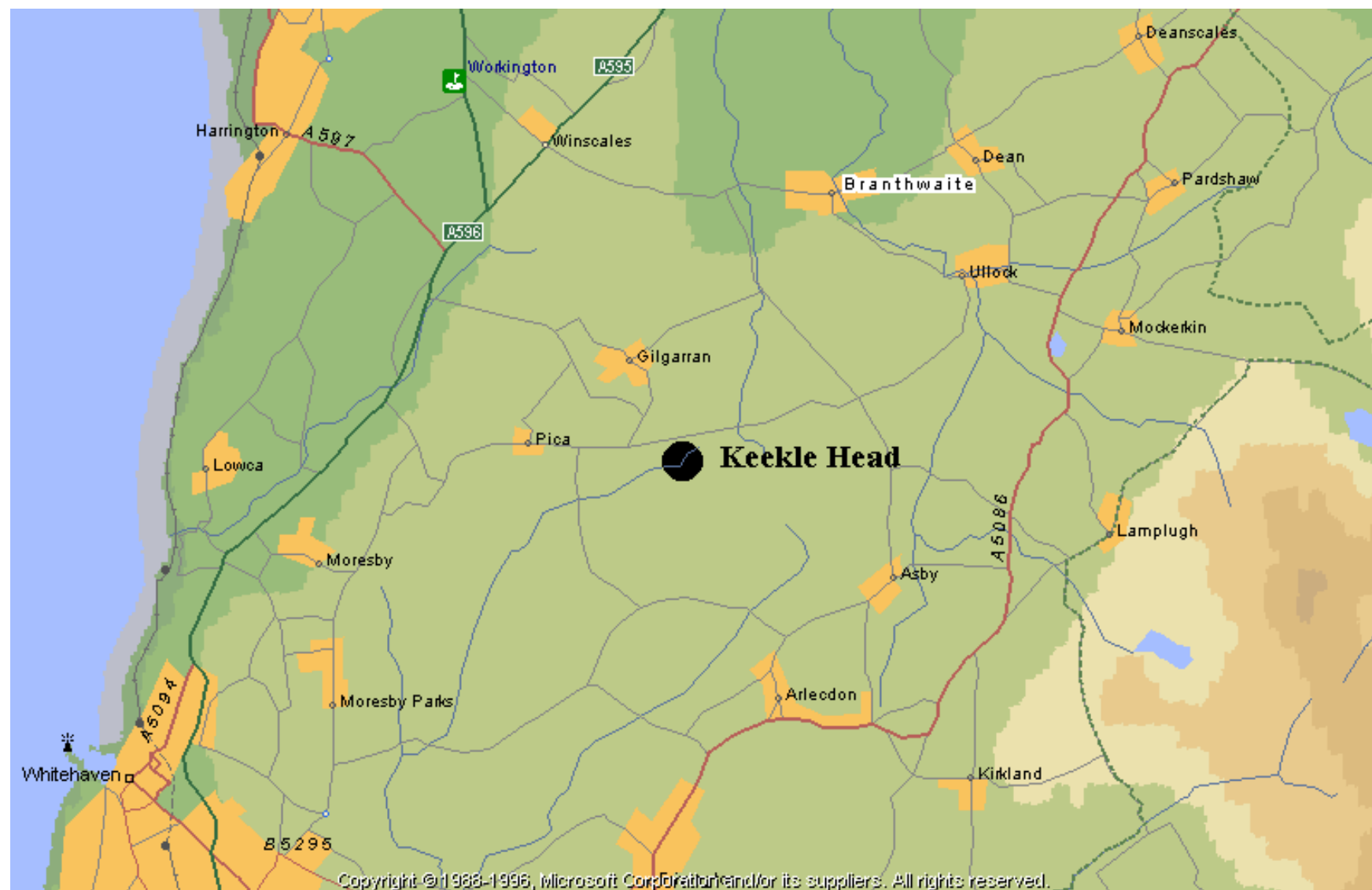


Fig 1 Keekle Head Location Plan

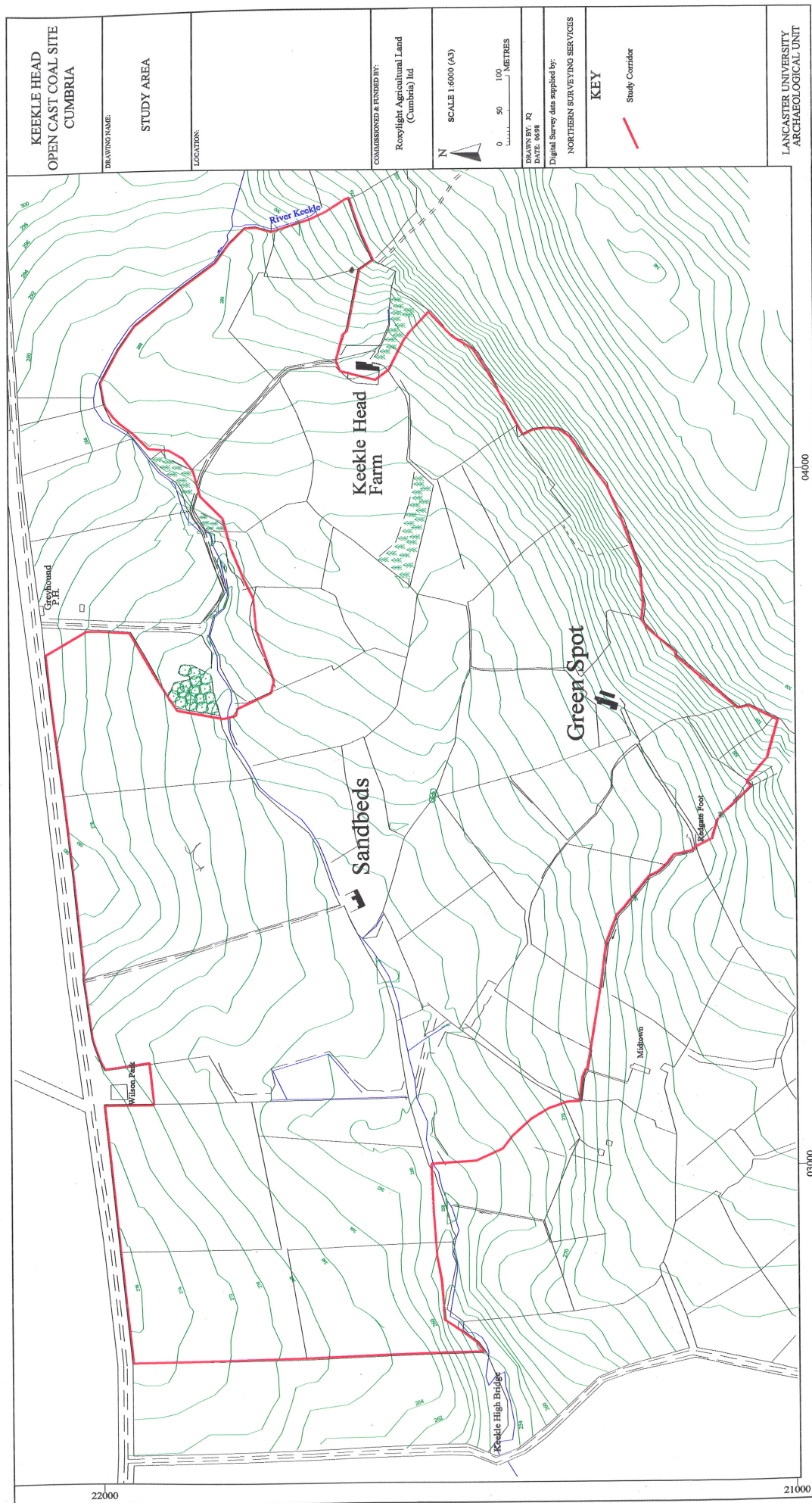


Fig 2 Keele Head Study Area

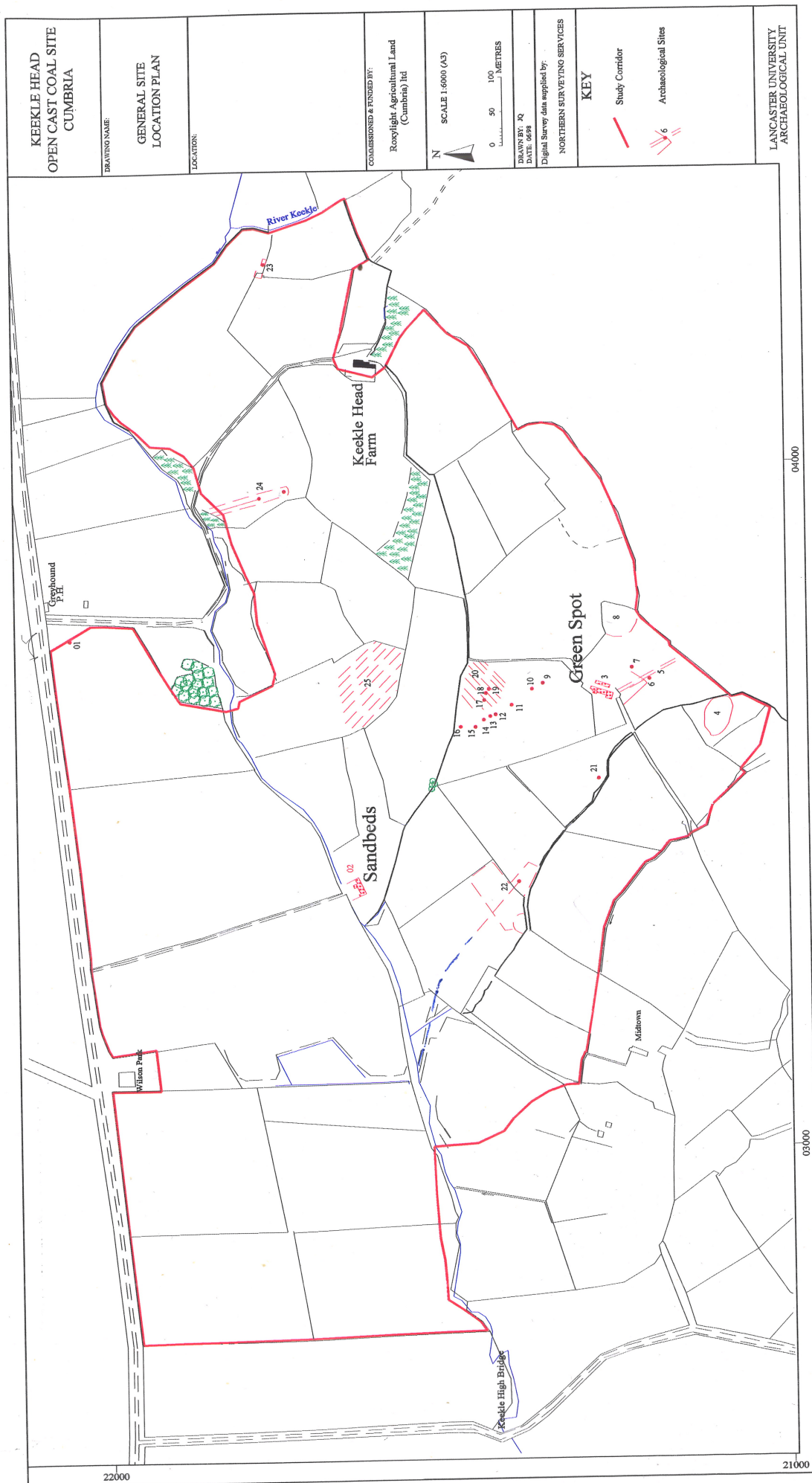


Fig 3 General Site Location Plan

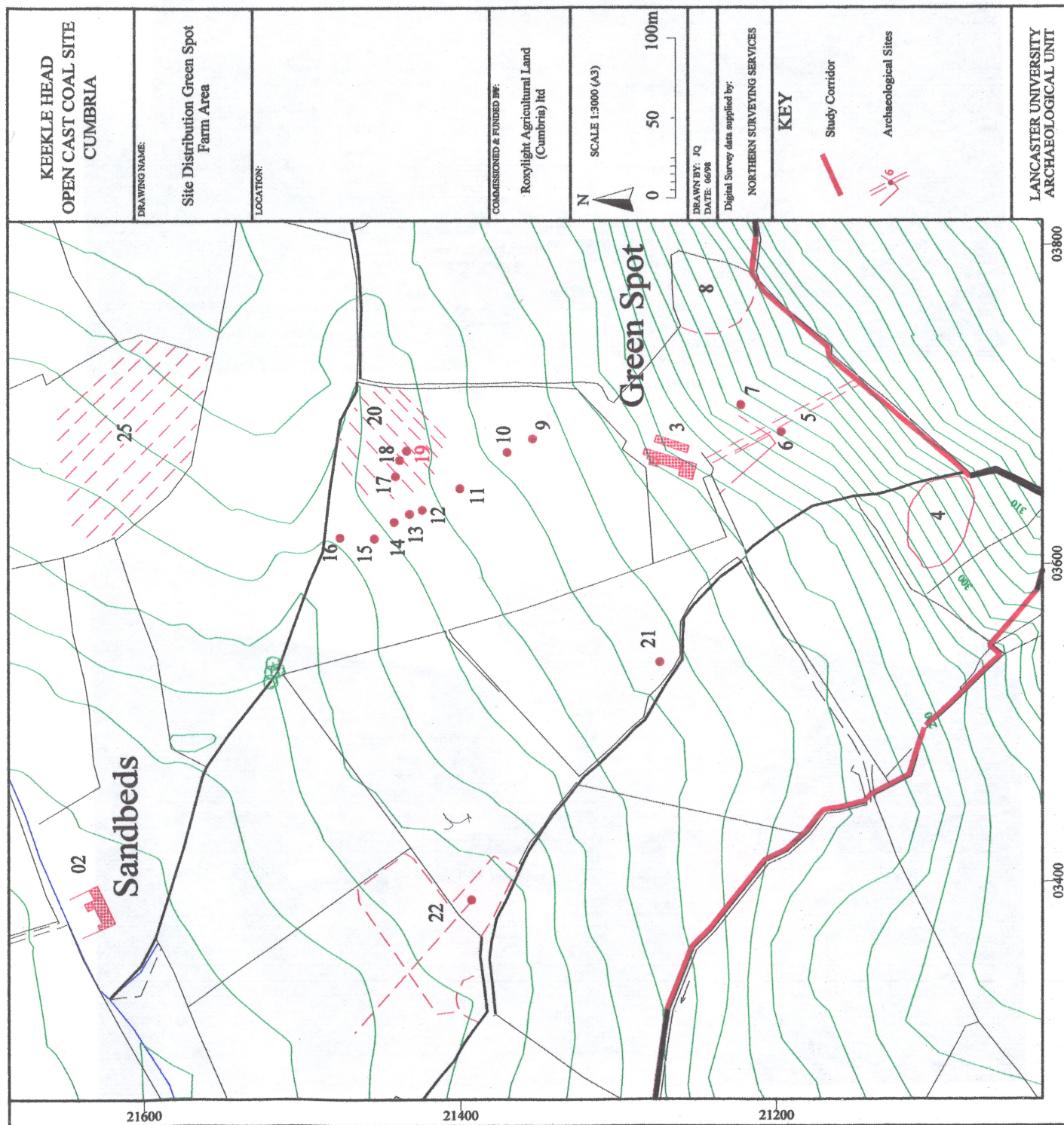


Fig 4 Site Distribution Green Spot Farm Area



Fig 5 Sandbeds Farm; photograph of the rear (southern) facade of the farmhouse and Barn



Fig 6 Sandbeds farm, photograph of the eastern end of the barn



Fig 7 Green Spot Farm, photograph of the rear (western) facade of the farm, showing the modern superstructure constructed on top of an earlier platform



Fig 8 Green Spot Farm, photograph of the earlier phase of the eastern barn complex showing the large arched entrance.