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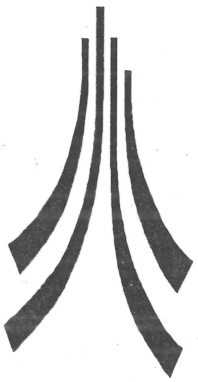

October 1998

KEEKLE HEAD OPEN CAST COAL SITE CUMBRIA

Archaeological Survey and Evaluation Report

Commissioned by: Roxylight Agricultural Land (Cumbria) Ltd

Keekle Head Open Cast Coal Site
Cumbria

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The field evaluation was undertaken by Ian Scott and Mark Tidmarsh. The survey drawings were generated by Mark Tidmarsh and Anthony Padgett. The report was compiled by Ian Scott and edited by Jamie Quartermaine and Rachel Newman. The project was managed by Jamie Quartermaine.

SUMMARY

The Lancaster University Archaeological Unit (LUAU) was commissioned by Roxylight Agricultural Land (Cumbria) Ltd to undertake an archaeological mitigation survey and evaluation in advance of an opencast coal scheme at Keekle Head, Cumbria (NY 034216). This follows on from an earlier archaeological assessment undertaken by LUAU (1998b). The survey was undertaken in advance of the first phase of the opencast development and the archaeological works were accordingly limited to the extent of this phase. The recording involved the landscape survey of three mining sites: Venture Pit (Site 22), Keekle Head Mine Shafts (Site 24) and Green Spot water system (Site 08); a fabric survey of Sandbeds Farm and the evaluation of two documented mining sites (Sites 01 and 24) were also undertaken.

The principal mining site was the Venture Pit (Site 22), which was sunk in 1852 by Thomas Hinde. He worked the Venture Pit for only eight years and, in 1860, he leased it to Joseph Ward and others; it was eventually discontinued in 1865. The survey of the Venture Pit revealed a large spoil mound, three areas of localised surface extraction, and a substantial tramway which led to the main Ullock / Pica road. The shaft associated with the large spoil mound was not identified by the present survey and has probably been buried by subsequent spoil deposition.

The survey revealed a water system extending along the slope, to the east of Green Spot farm. It did not lead directly to any of the mining / extraction areas and was probably intended to drain water off the fell and away from mining areas downslope.

The fabric survey of Sandbeds Farm showed that the original farmhouse was largely unchanged from its original construction and was of a 'double pile' building type. Parts of the original roof survived, which included at least one original roughly sawn purlin. The barn was contemporary with the farmhouse, but had been substantially altered in the nineteenth or early twentieth centuries. On the basis of documentary sources, the building layout and construction style, it is considered that the date of the original build was probably some time in the second half of the eighteenth century.

The evaluation trenching of Sites 01 and 24 revealed limited deposits of mining spoil but no associated shafts. As the evaluation did not identify a significant archaeological resource, it is recommended that no further archaeological recording be undertaken in advance of the first phase of the development. It is, however, recommended that a further programme of recording be undertaken on those areas that will be affected by the second phase of the development.

1. INTRODUCTION

1.1 Project Background

1.1.1 In June 1998 an archaeological assessment was undertaken by Lancaster University Archaeological Unit (LUAU), on behalf of Roxylight Agricultural Land (Cumbria) Ltd, in advance of a proposed opencast coal site at Keekle Head, near Pica, West Cumbria (NGR (NY 034216) (LUAU 1998b). This highlighted 26 sites of potential archaeological significance, that would be affected by the proposed development. As a consequence, the County Archaeologist required that a programme of mitigation survey be undertaken of the identified mining landscape in conjunction with trial trenching to evaluate the potential for extant sub-surface remains. It was also required that a basic fabric survey be undertaken of two farms: Sandbeds and Green Spot, which will be demolished in the course of the development programme.

1.1.2 At the opencast development will be undertaken on a phased basis, it was agreed, with the client and the County Archaeologist, that the archaeological works also be undertaken on a phased basis in order to comply with the tight developmental timetable. The extent of the first phase of opencast working is shown on Fig. 2, and will affect Sites 01, 8, 22, 24 and Sandbeds Farm (Site 02) and it was therefore agreed that the present programme of archaeological evaluation would examine only these sites at this stage. The final programme of survey and evaluation will be undertaken in 1999, subject to the proposed timetable of the development.

1.1.2 The first evaluation phase of the programme was undertaken by LUAU in August 1998 in accordance with a project design (*Appendix 1*). It involved the mitigation survey of Sites 8, 22 and 24, the evaluation of Sites 01 and 24, and a fabric survey of Sandbeds Farm (Site 02). This report presents the results of this programme of work.

1.2 Topographical Background

3.1.1 The assessment area is situated across the boundary of two parishes, Distington and Arlecdon (Fig 1). The area is an region of enclosed pasture land on the south side of Dean Moor, it is characterised by undulating countryside on a well-dissected plateau (Eastwood *et al* 1931, 2), and 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 study area, the upper division mainly lacking coal seams, whilst the lower divisions were productive measures (Eastwood *et al* 1931, 7).

1.3 Historical Background

1.3.1 ***Prehistory:*** no prehistoric monuments or features were identified from within the study area during assessment; however, there is a stone circle at a distance of only 210m beyond the northern boundary (NGR 03990 2234). 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. 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).

1.3.2 ***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. 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, Frizington, and Whillimoor (Whellan 1860, 370), of which the latter contains the southern part of the study area. The manor of Arlecdon was granted by William de Meschines to Michael le Fleming in the late eleventh or twelfth century (Whellan 1860, 371), but through various sales ended up in the hands of the Lowther family by the beginning of the fifteenth century (Sugden 1897, 2; Hutchinson 1794, 89).

1.3.3 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).

1.3.4 ***Post-Medieval Settlement:*** the buildings that lie within or close to the study area are on modern Ordnance Survey maps and 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.

1.3.5 ***Post-medieval Coal Working:*** both Distington (Nicholson and Burn 1777, 50; Hutchinson 1794, 99) and Arlecdon (Hutchinson 1794, 89) were recorded in the eighteenth century 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 on only 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), but 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 study area.

1.3.6 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 ft 6 ins (*c* 0.75m) thick. The lower seam, known as the China Band, was found at 26 fathoms (48m) and was 3 ft (*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 operated 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.

2. METHODOLOGY

2.1 Project Design

2.1.1 A project design (*Appendix 1*) was submitted by LUAU in response to a request from Roxylight Agricultural Land (Cumbria) Ltd, for an archaeological survey and evaluation of the proposed Keekle Head Opencast site, near Distington, West Cumbria.

2.1.2 The project design was produced in accordance with a verbal brief by Philip Holdsworth (then Development Control Officer) of Cumbria County Council. This involved a mitigative archaeological survey of industrial landscapes, a fabric survey of Sandbeds farm, and a programme of evaluation trenching at two coal mine sites. The work has been carried out in accordance with the project design. This written report presents the results of the recording programme.

2.2 Landscape Survey

2.2.1 A mitigative LUAU Level 3 survey was undertaken of selected elements of the mining landscape which had been identified within the study area by the earlier identification survey (LUAU 1998b). A Level 3 survey defines the extent and character of all surface archaeological features, in relation to the main topographical elements, and plots the interpretative nature of each archaeological element. It is a detailed level of survey undertaken to assess the internal character of archaeological features and serves to provide a mitigative record of a landscape in advance of development.

2.2.2 All the internal survey control was undertaken by closed traverse using a total station and was able to maintain an internal control accuracy of better than +/- 0.05m. The control was located by the use of a Global Positioning System (GPS) 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 (OS) national grid. The accuracy of the method is +/- 1.0m but is adequate for the general location of the sites.

2.2.3 The archaeological detail and also significant topographical detail were surveyed using a Zeiss ELTA 3 total station and data-logger. The digital survey data were transferred, via DXF file format, into a CAD system. The archaeological detail was drawn up in the field with respect to field plots of the survey data and these edits were then transferred onto the raw survey data within the CAD system.

2.3 Fabric Survey

2.3.1 The requirements for the fabric survey were for an assessment of the internal and external fabric, in conjunction with a ground plan of the farm and outbuildings and a photographic survey of the structure.

2.3.2***Graphic Survey:*** the fabric survey was undertaken by a combination of instrument and hand survey techniques. The outline plan frame was surveyed by the use of a total station, and this provided an accurate framework for subsequent enhancement by manual survey techniques. The final manual drawing was then digitised into an industry standard Computer Aided Draughting (CAD) system

(AutoCad14) to provide the final enhanced drawings.

2.3.3 ***Photographic Survey:*** a general oblique photographic record was produced of the internal elements of the buildings as well as all external elevations in both colour and black and white 35mm formats.

2.3.4 ***Fabric analysis and interpretation:*** a *pro-forma* context recording sheet was completed for each structural element, defining the location, form and fabric of the individual contexts. This laid particular emphasis on the relative phasing of building alterations.

2.4 Evaluation Trial Trenching

2.4.1 ***Excavation Methodology:*** the excavation trenching was undertaken by a mechanical excavator (a tracked 360° excavator) fitted with a 1.8m toothless ditching bucket, and this was followed by hand cleaning for the purposes of examining archaeological detail. By virtue of the potential presence of only partially filled shafts which could collapse under the weight of the machine, mechanical excavation was undertaken at a safe distance from any visible shafts and machine excavation was to be halted if shafts were revealed in the course of the evaluation.

2.4.2 Excavation was undertaken to the depth of the natural subsoil in all trenches. The trenches were then mechanically backfilled. All excavation was carried out stratigraphically, whether by machine or by hand.

2.4.3 ***Recording:*** the recording methods employed by LUAU accord with those recommended by English Heritage's Central Archaeology Service (CAS). Recording was in the form of *pro-forma* Trench Sheets for each trench, which recorded the orientation, length, and depth of machining, and described the nature of the topsoil, subsoil (where applicable), and geological deposits. Where possible features were observed, they were manually sampled with a full textual, drawn, and photographic record being maintained. Any finds recovered were bagged and recorded by either the trench number or, where appropriate, by the number of the context from where they were recovered.

2.4.4 The positions of the trenches were recorded using a total station and the data was superimposed onto the survey CAD drawings.

3. LANDSCAPE SURVEY RESULTS

3.1 Introduction

3.1.1 The study area has been subject to considerable coal mine exploration during the post-medieval period and all the sites requiring more detailed survey are related elements of this industry: Green Spot Drain (Site 08), Venture Pit and associated tramway (Site 22) and Keekle Head mine shaft (Site 24). The detailed results of the survey are presented within the survey gazetteer (*Appendix 2*), and summary descriptions are presented below.

3.2 Green Spot Drain (Site 08)

3.2.1 The Green Spot Drain runs across a steeply sloping area of rough pasture to the south-east of Green Spot farm. It feeds into a natural water course flowing into an area of marshy ground, from which a field drain takes the overflow into the River Keekle.

3.2.2 The drain (Site 08.1) was a 'V'-shaped ditch with a well-defined linear bank on the northern side, which extended along the entire length of the channel. It was aligned broadly north-east/south-west and was set immediately north of a dry-stone wall, which also defined the southern boundary of the study area. The south-western part of the drain ran along the southern side of the same boundary and was therefore outside the study area; it continued to a point south of quarry Site 04.

3.2.3 The drain led into a natural watercourse (Site 08.2) within a deep narrow gully, which in turn led down to the line of a field boundary at the base of the steep slope. The watercourse at the top of the gully has been modified to divert the flow from the drain into it and away from the line of the former feeding stream. Similarly, the flow at the base of the gully has been diverted to lead into a channel that follows the line of the field boundary and converges with the River Keekle. The field boundary was of typical 'Cumbrian Bank' construction, comprising a linear earthen bank with sub-rounded stone set into the sides. These boundaries are typical of those of early post-medieval and usually pre-nineteenth century date. Clearly the construction of the drains, then at the top and bottom, post-date the establishment of the field system. The drainage channel was possibly designed to collect any water running off High Park to the south and divert it past both the Green Spot mine workings (Site 07) and quarry Site 04.

3.3 Venture Pit and Tramway (Site 22)

3.3.1 The Venture Pit and tramway are situated within an area of pasture to the north of Green Spot farm and to the south of Sandbeds. The site comprises three groups of shaft depressions with associated mounds (Extraction areas 22A, 22B and 22C), a large spoil heap to the south (Site 22.3) and a tramway (Site 22.1), which led from the mine workings to the Moresby / Ullock road at Wilson Park.

3.3.2 ***Extraction Area A (Site 22.04-14):*** on the west of the site group was an ill-defined area of heavy disturbance (Area A), which was surrounded by waterlogged ground to the east, north and west and by a field boundary to the south. It comprised a platform, raised above the adjacent mire, which has nine depressions set into the surface (Sites 22.5-7, 22.9-14). The depressions were characterised by their small,

well-defined and entirely earthfast nature with shallow sides and a concave base, they were interpreted as shaft hollows. One feature (Site 22.8) in the centre of the platform comprised a kidney-shaped annular mound with shallow sides and a concave, hollowed interior base; it had a narrow entrance to the west. This would appear also to be associated with a shaft. The whole platform would appear to be formed from the spoil produced from these shafts.

3.3.3 ***Extraction Area B (Site 22.17-26):*** a further ill-defined area of heavily disturbed ground (Area B) was identified between Groups A and C, in the approximate centre of the site. It was surrounded by waterlogged ground to the east, north and west and by spoil heap 22.3 to the south-east. It had similar characteristics to Site A; it was also raised above the mire and would appear to have been formed entirely from the upcast from a series of shafts set into the platform. There was a total of eleven putative shaft hollows, which are typically small, sub-circular, ill-defined hollows with steep sides and a concave base. At the western side of the platform was a well-defined spoil heap (Site 22.17) which was adjacent to the point where tramway 22.1 merges with the mine workings. The spoil heap was linear in plan, aligned east/west and was entirely earthfast, the spoil perhaps being tipped here before being moved on to the line of the tramway.

3.3.4 ***Extraction Area C (Sites 22.28-37):*** a further ill-defined area of heavily disturbed ground (Area C) lay to the east of the main mine workings and contained a series of shaft hollows (Sites 22.29-.37). It was surrounded by waterlogged ground to the north and west and by field boundaries to the south and east, its surface was raised above the mire by up to 0.85m and would appear to have been formed of upcast from shafts. The shafts identified within this area were similar in type and character to those encountered within Areas A and B and were characterised by their small, well-defined and entirely earthfast nature with shallow sides and concave bases.

3.3.5 ***Large Spoil Mound:*** to the south-east of the three extraction areas was a large spoil heap which was opposite the end of the tramway (Site 22.1). It was extremely well-defined and very prominent, standing to a height of 2.1m, with a sub-triangular plan and north-west/south-east alignment. It has steeply sloping sides, with the highest point towards the north. The spoil heap has spread over the Group B mine workings; however, the present field boundary (Site 22.38) has been constructed over this north-western edge of the spoil mound and was clearly a later feature. The upper surface of the spoil mound contained three small depressions, and on the western side of the mound was a modern trackway aligned north-west/south-east which has formed a hollow way through the area of spoil. Towards the south of the mound, recent excavation has revealed an area of black upcast which evidently forms the matrix of the mound. There was no obvious ramp onto the mound and consequently it was not evident which shafts generated the spoil. The depressions on the top of the mound were raised up to 2m above the adjacent ground surface and were fairly small, low-lying features, thus they were not necessarily ideal candidates for the source shafts. The other possibility is that the spoil was transported onto the mound from the adjacent mining areas by aerial rope-way or by a wooden or similarly ephemeral ramp which has not survived to the present.

3.3.6 Field boundary 22.38 delimited the surviving mine workings along the east and south extremes and extends over spoil heap 22.3. It was a linear bank with occasional sub-rounded stone protruding from the surface, aligned north-east/south-west, and butted a further boundary, of similar style aligned at right angles to it. A stone platform was encountered towards the western end of this boundary.

3.3.7 ***Tramway (Site 22.1):*** the tramway (22.1) extended north-west from the Venture Pit to a crossing point of the River Keekle and then due north up to the road, following the line of the present field boundary. The northernmost section of the tramway was outside the study area. For the most part the tramway comprised a broad and very prominent, flat topped embankment, which was up to 1.7m high in places, the width of the tramway top was typically *c*5m and at the base it was *c* 9.5m. The tramway was almost entirely earthfast, but, localised exposures, particularly at the river crossing, show that it was composed of angular stones and loam interspersed with flecks of coal. It would appear to have been largely constructed of spoil, probably originating from the venture pit. The most prominent sections of the tramway were near the Venture Pit, and it was noticeably less substantial on the northern side of the river crossing. In particular there was one section which was relatively ill-defined (22.1a), to the south of the Wilson Park land holding, where it passes through an area of mire and only short sections of the eastern side of the embankment were discernible.

3.3.8 At the river crossing point there was a substantial gap between the two extant terminals of the tramway, which was, in part, a result of water erosion but may also reflect the span of the original bridge. Part of a bridge abutment survived in the northern face of the southern embankment terminal and comprises a short length of large earthfast stones (22.1b); there was, however, no evidence of any abutment on the northern side of the crossing.

3.3.9 The section to the south-east of the crossing was extremely well-defined and very prominent. It was extremely broad (9.8m across) and comprises two fairly level parallel tramway surfaces which were separated by a shallow ditch. It is evident that this section at least was intended for two-way traffic. The eastern end of this section of tramway has been cut back by a small stream which leads into the River Keekle to the north (22.1c). No evidence of any deliberate crossing of the stream was observed, and it would appear, therefore, that any bridge or conduit remains have been eroded away.

3.3.10 The south-easternmost section of the tramway was aligned north-west/south-east and converges with the Venture Pit workings, leading out from between two areas of extraction (Sites 22.5-14 and 22.17-26). This section was very prominent, but the overall width was narrower than that identified to the south of River Keekle; it does, however, incorporate a raised bank along the north-eastern side of the embankment, for most of its length, which may correspond to one side of a parallel tracked tramway. There is, though, no adequate evidence for a corresponding south-western tramway surface. At the northern end of this section the tramway was crossed by a modern field boundary which was aligned north-east/south-west alongside a waterlogged area to the north.

3.4 Keekle Head Mine Shafts (Site 24)

3.4.1 The identification of the Keekle Head Mine Shafts (Site 24) was based largely on cartographic evidence as the surface features were particularly ill-defined and very low-lying. There was a low, sub-circular and very ill-defined flat-topped mound in the area, which corresponded with the southern shaft shown on the OS 1st edition map (1863). It was entirely earthfast and highly degraded, distinguished by its level area to the top and its shallow sloping sides, which contrast with the gentle slope of

the natural topography surrounding it. No surface evidence was observed for the northernmost shaft or the tramway, both of which are shown on the OS 1st edition map.

3.4.2 The surface of the field containing the mining features was generally very smooth, albeit slightly undulating, and the ground has evidently been improved. It is probable, therefore, that the surface evidence for the mining features has been lost as a result of intensive plough action.

4. SANDBEDS FARM FABRIC SURVEY

4.1 Introduction

4.1.1 The individual room descriptions of the building are presented within *Appendix 3*, and a structural assessment, presented below, describes the character of each of three construction phases. The analysis is based solely on the surviving fabric, which was in places substantially obscured by plaster and rendered surfaces; the possibility therefore exists that there were additional sub-phases which could not be adequately defined. Because of the considerable thickness of external rendering, the phased analysis was based for the most part on the assessment of the interior.

4.1.2 ***Topographic Context:*** Sandbeds Farm (Site 02) lay towards the centre of the study area and was accessed via a linear track from the road forming the northern extent of the study area and by a modern concrete bridge over the River Keekle. The farm was 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 intake enclosure (LUAU 1998b).

4.2 Phase I

4.2.1 The initial construction was rectangular in plan, aligned east/west, and comprised a farmhouse to the west and an attached barn to the east. Internally the farmhouse was divided into five separate compartments (four rooms and the stairwell), on each floor, by dividing walls. The barn comprised a central bay with a hay loft at either side, below which animal housing was provided. The layout of the farm follows the Laithe-house arrangement, whereby the farmhouse barn and stable were arranged in a line with no cross passage (Brunskill 1978).

4.2.2 ***Farmhouse (Fig 9):*** the farmhouse had a 'double-pile' form of ground plan (Brunskill 1978, 65) and was, as far as could be assessed, of single phase construction. The farmhouse, as with most houses of this type, had four rooms on each floor with a living room (Room 9) and parlour (Room 8) in the front and a former kitchen ((now a larder) (Room 5)) and former dairy ((now a bathroom) Room 7) at the rear. The principal access was set in the middle of the northern facade, through a timber panel door with single light, and led into the square living room in the north-west corner of the building. The double pile house is a variant of the continuous out-shut type of farmhouse (Brunskill 1978) and as such had a stairwell in the middle of the back wall opposite the main entrance. The stairwell was set against southern elevation, had a square plan, housing a timber spiral staircase with access to the first floor. The staircase had 11 treads and rotated anti-clockwise around a central newell with a stopped chamfer detail.

4.2.3 Following the selective removal of the plaster covering, it was evident that all walls, including the partition walls, were built in stone. However, it was apparent that the southern wall of Rooms 8 and 9 was not keyed into the other faces and was therefore an internal wall. This is one of the prime discriminators between the double pile type and the pure expression of the earlier continuous out-shut house, where the main load-bearing wall is typically at the rear of the parlour/living rooms, rather than at the rear of the building as is the case with Sandbeds.

4.2.4 The western side of the northern elevation had a window with brick blocking, which had evidently been blocked when the first extension was constructed (Phase II (*Section*

4.3.4)). The eastern side of the northern elevation had a window of similar size and with a similar style of moulding to the blocked example on the western side.

4.2.5 The western gable elevation had a single repaired six light mullion and transom timber sash window to the north with *ovolo* mouldings, providing light into Room 9; there was also a fireplace on the southern side of Room 9. This was constructed in three distinct phases, starting with a large fireplace with brick surround and lintel which was subsequently filled with modern brick to leave a smaller stone fireplace; this was then similarly filled to leave a much smaller iron and tiled fireplace.

4.2.6 The southern wall had a blocked doorway at the eastern end of the southern face which now houses a modern single light casement window. There was a further single casement window in the southern elevation, illuminating the spiral stair case, and a further two light casement window was situated on the eastern side of the stairwell illuminating Room 5; a further window illuminates the first floor Room 15. Selective removal of the wall plaster showed that the walls of the stairwell butted the southern external wall.

4.2.7 To the east of the stairwell, and at the rear of the farmhouse, was the former kitchen (now a small rectangular larder (Room 5)) which had a sandstone meatslab along the south and east elevations, supported on a series of five brick pillars. Above this was the scar of a higher shelf, now removed, above the present slab.

4.2.8 The eastern wall of Rooms 5 and 8 divided the farmhouse from the barn and was bonded into both the north and south walls. A fireplace was located to the centre of the eastern elevation, constructed from brick with a rendered breast above.

4.2.9 ***Farmhouse First Floor (Fig 10):*** the floor level of the farmhouse had broadly the same internal arrangement as that of the ground floor, with two rooms to the front (north). and two to the rear (south) on either side of the stairwell and all within the essentially square plan of the farmhouse. This duplication on the first floor of the ground floor room structure is a typical characteristic of the double pile house. Rooms 18 and 19 were heated by hearths using the same flues as the hearths on the ground floor.

4.2.10 ***Farmhouse Roof Structure:*** the roof of the farmhouse comprised a series of two side purlins to each side of a central ridge purlin, supported by the existing wall structure at either extreme and by the internal partition walls which extended above the level of the first floor ceiling. There were no trusses within the farmhouse, instead the purlins were supported by the gable and internal walls. The roof had been subject to recent repair with large-scale replacement of the original timbers; the recent timbers were generally of machine cut timber with little evidence of decay suggesting a recent date for insertion. Only one original timber was encountered and this was a roughly sawn purlin which had a sinuous shape, that reflected the shape of the original tree from which it was cut.

4.2.11 ***Barn:*** the barn was constructed as an integral element of the farm and as such was contemporary with the farmhouse. The fabric of this element of the structure was of haphazardly arranged stone with an apparent lime-based mortar, subject to a render finish on both its internal and external facades. It was originally constructed as a single cell with a central threshing floor accessed via a large central doorway with haylofts at either side, below which animal housing would have been provided. It had a similar style of roof structure to that encountered within the farmhouse, utilising simple tie-beam trusses.

4.3 Phase II

4.3.1 Although the farmhouse does not appear to have been significantly altered as part of this phase, there were some significant additions to the outbuildings as the agricultural

requirements of the farm altered. Butted onto the eastern end of the building was a rectangular byre/stable constructed from stone and brick. Originally it had a single large barn entrance, but subsequently it was divided with a breeze-block wall (Phase III). There were no windows but there were ventilation holes set into the north and south walls.

4.3.2 In this phase the eastern end of the Phase I barn was substantially altered to produce a long north/south byre. An extension was added to the northern side of the barn and a wall was constructed across the length of the original barn complementing the extension to the north. This wall was originally constructed in stone as evidenced by stone stub foundations but was subsequently rebuilt within the recent past using breeze-blocks. A door was introduced through the eastern gable wall of the original barn and a further aperture was opened in the northern wall of the barn to provide access into the extension. The net effect was to produce a single large cow house, which was provided with six cattle stalls.

4.3.3 At approximately the same broad time, a further division of the barn was constructed, and an additional doorway was set through the north wall of the barn to provide access to Room 4.

4.3.4 A single storey extension was added to the northern wall of the farmhouse, constructed in brick. It had a single doorway through the eastern wall, and the original window in the west side of the north elevation of the farmhouse was probably blocked at this stage. The roof of the extension had a single ridge purlin with two side purlins and timber wall plates.

4.4 Phase III

4.4.1 The final phase of the farm's development comprises a series of relatively modern minor additions. A small out-building was constructed onto the east side of the Phase II byre (Rooms 1 and 12); a further small addition (1.5m x 2.2m) was constructed onto the east side of the Phase II cow house (Room 2); a relatively recent breeze-block, single storey, porch (Room 11) was added to the front of the farmhouse, largely surrounding the earlier Phase II extension (Room 10). As part of the same construction, a privy was built onto the west side of Room 10, but had access from the Room 11 porch.

5. EVALUATION RESULTS

5.1 Introduction

5.1.1 The assessment (LUAU 1998b) identified two documented mining sites (Sites 01 and 24), which were both in areas of previously cultivated land and have become very degraded. Neither have a definitive surface expression and trial trenching was therefore required to investigate the sub-surface survival of these mines.

5.1.2 ***Trench locations (Fig 8):*** the documented location of Site 01, to the south-west of the Greyhound Inn, corresponds to a low, broad ill-defined mound which would appear to have been an area of spoil rather than the shaft itself. Two trenches (Trenches 6 and 7) were excavated at the up-slope side of this broad mound, where it was anticipated that the shaft may have been situated .

5.1.3 At Site 24 there was no surface survival for the documented tramway but there was a low, ill-defined mound which may correspond to the northernmost of the two documented shafts. One trench (Trench 3) was excavated out from this mound, two trenches (Trenches 4 and 5) were excavated perpendicular to the alignment of the documented tramway, and the remaining two (Trenches 1 and 2) were excavated on the site of the southernmost documented shaft.

5.2 Trial Trenching Results

5.2.1 The detailed results of the trenching are presented within *Appendix 4*, and summary descriptions are presented below.

5.2.2 ***Base Stratigraphy:*** all trenches displayed the same stratigraphic profile, characterised by a naturally occurring clay deposit ranging from orange brown to pale grey in colour. This deposit was generally located between 0.21m and 0.27m below the ground surface and contained approximately 5% angular and sub-angular stones. This deposit was overlain by a mixed deposit of clay and loam, which was on average between 0.03m and 0.05m in depth. This was in turn overlain by a turf and topsoil deposit of very dark grey clay loam, approximately 0.17-19m in depth.

5.2.3 ***Site 01:*** Trench 6 contained a shallow stone-filled field drain, 0.20m in depth and 0.20m wide, which was aligned north-east/south-west and cut into the base stratigraphy. The stones themselves were typically of medium size and sub-angular. This drain was at a greater depth than the later ceramic drains encountered throughout the trenching programme and may indicate that the study area has been subject to agricultural improvement for an extended period.

5.2.4 A narrow band of silty dark-grey material, 0.15m deep, was encountered midway along the eastern section of Trench 7, directly below the topsoil layer. This silty grey material contained a high proportion of small coal flecks, and small stone fragments, and was clearly upcast from the nearby mining activity; however, no evidence for an associated shaft was identified within the trench. Two further stone-filled field drains of similar size and character to that encountered within Trench 6 were identified.

5.2.5 ***Site 24:*** Trenches 1-5 recorded for the most part non-archaeological stratigraphy, albeit with localised disturbance for field drains. The only evidence for any mining activity was from the southern end of Trench 2 where a shallow (0.05m deep) lens of coal flecked loam with small angular stones was identified. This was localised in extent (*c*0.4m from the end of the trench) and was immediately beneath the topsoil. It

was probably spoil from nearby coal extraction, but no evidence was identified for the documented tramway or either of the two shafts.

6. DISCUSSION

6.1 Introduction

6.1.1 The present programme of survey and evaluation has provided new information which has produced considerably more detail about the character and functions of the archaeological resource affected by the proposed development. However, in most cases it has not radically altered our understanding of the investigated sites, the only possible exception being Site 08 (See below (*Section 6.2.1*)).

6.2 Coal Mining Industry

6.2.1 ***Green Spot (Site 08):*** Site 08 was obscured by very dense and impenetrable gorse vegetation, but it was evident even during the assessment that the area contained a very deep hollow. The site was interpreted during the assessment (LUAU 1998b) as a mining related feature but it was not clear from the brief examination undertaken at that stage as to its precise function. The more detailed examination, during the present survey, has established that it was predominantly a natural feature although the south-eastern end has been substantially altered with an artificial water course feeding into it and also a channel was built out from its base, leading ultimately to the River Keekle. It was evident that some care had been taken with this water management system; however, its exact function remains unclear. It is possible that the leat served to provide a consistent supply of water for washing or flushing purposes, but as it does not lead directly to an area of extraction or mine working this seems unlikely. The most probable explanation is that it served as a drain to divert the water from the moor and thereby prevent the inundation of the Green Spot mines (Site 7) and quarry (Site 4).

6.2.2 ***Venture Pit (Site 22):*** the survey provided a wealth of information in respect of the surface configuration of the surviving remains of Venture Pit. A substantial spoil heap in the south-eastern part of the site was ringed to the north and west by three distinct areas of disturbance containing a complex arrangement of shaft depressions and subsidiary mounds, perhaps indicative of multiple extractions. Adjacent to these is a large spoil heap (Site 22.3) and also a long and very prominent tramway embankment, both of which are made up of mining spoil. The tramway in particular represents a considerable volume of spoil and on the basis of the survey results it is possible to provide a crude estimate of its volume. Assuming that the southern part of the tramway had a consistent height of 1.5m in height the tramway comprises *c*2100m^3 of spoil. By comparison the large spoil heap (Site 22.3) comprises a volume of only *c*1750m^3. The spoil for the tramway ultimately came from the large number of shafts at Venture Pit, and may reflect either that the ongoing output of the shafts was used to create the tramway or that the material was abstracted from a previously created spoilheap. The greater prominence of the tramway at the southern shaft end may reflect the need to pass through a poorly drained area, but may also reflect that the cost of transporting the spoil to the far end of the tramway, would have restricted its overall volume in these areas.

6.2.3 The exact relationship between the component parts of the pit and the associated

tramway (Site 22.1) to the north-west was unclear, but it seems likely from surface evidence that the central areas of pit disturbance (Areas A and B) post-date the initial construction of the tramway. The tramway would therefore have led directly towards the large spoil heap and this would therefore suggest that the spoil heap also pre-dated extraction Areas A and B. This has may significant affect our understanding of the function and purpose of the spoil heap. There is no obvious shaft associated with the spoil heap and the only adjacent identified shafts were those within Areas A-C; there is also no ramp linking the spoil heap with these extraction areas to provide for the deposition. It can be surmised that the shaft supplying the large spoil heap was in the broad centre of the spoil heap, possibly corresponding to one or more of the shallow depressions on the summit of the spoil heap. If this is the case, then the entrance to the shaft has been considerably degraded since its abandonment or has been overlain by spoil from other shafts.

6.2.4 ***Keekle Head Mine Shaft (Site 24):*** the surface survey identified only tentative evidence for the two mine shafts and an associated tramway which were shown on the OS 1st edition map (1863). There was no physical evidence for the tramway or the southern shaft; however, there was an irregular, amorphous flat-topped mound in the area of the northern shaft which has been interpreted as possibly being the shaft or its associated spoil.

6.2.5 The survey was followed by a programme of evaluation trenching; Trenches 1-5 were set across the line of the tramway and the anticipated locations of the shafts. The results were inconclusive, although a shallow lens of coal-flecked loam was identified as possibly being mining spoil. The absence of both physical and sub-surface remains probably indicates that the area has been subject to considerable disturbance subsequent to the abandonment of the mines.

6.2.6 ***Greyhound Inn (Site 01):*** Trenches 6 and 7, positioned to investigate the locality of a shaft depicted on the OS 1st edition map (1863), failed to find the shaft itself, but provided good corroborative evidence in the form of layers of coal waste exposed in the trench sides. Also revealed in these trenches was a network of deep stone-filled field drains, undated, but possibly from an early phase of land improvement.

6.2.7 ***Conclusion:*** the programme of survey and evaluation, when considered together with the assessment data, provides an illuminating glimpse into the changing agriculture and industry of this part of west Cumberland. The early agricultural enclosures were progressively superimposed with mining features which, as well as imposing mines and waste mounds into the extant field systems, caused significant alterations to the drainage, access and in some cases field layout. This is especially true of the mid- part of the nineteenth century, when coal extraction was continuing to expand, and the pace of change was rapid. To put things into a broader perspective, the annual coal output of Britain between 1851 and 1861 (the main operative years of the Venture Pit (Site 22)) increased from 54, 000, 000 tons to 98, 150, 000 tons (Wood 1988).

6.3 SAndbeds Farm

6.3.1 The fabric survey produced a detailed archive of the form and construction of Sandbeds Farm. Despite problems caused by the abundant layers of render which had been applied to the external wall faces, it was possible to demonstrate from the internal details that

the building had been subject to a number of structural modifications including extensions, a three-phase fireplace, and alterations to the window arrangements.

6.3.2 ***Chronology:*** the earliest cartographic depiction for the farm is on an enclosure map of 1822 (CROW/YDX/111/54), which shows a farm in this location but does not provide a name. The farm was clearly imposed onto an earlier field system and therefore there was likely to have been an earlier farm site in the vicinity, probably Keekle Head or Whillimoor (LUAU 1998b). The layout of the farm exhibits the common 'Laithe-house' arrangement with the farmhouse at one end and the barn and stable all set in a single line (Brunskill 1978, 78); this is a typical eighteenth century Cumbrian design. The farmhouse had the classic 'double pile' arrangement which is also a very common design in Cumbria; these, on the basis of date stones, are usually found to date between 1770 and 1850, although a limited number have been found to date from the early to mid eighteenth century (Brunskill 1978, 65). The roof of the farmhouse was found to have had no trusses, and instead the purlins were supported on the gable and internal walls, which again is a common eighteenth century arrangement (Brunskill 1978, 108). Although the farmhouse roof has been severely altered there is one surviving original purlin which is rough hand sawn and had a sinuous character, which would suggest a relatively early date. The barn had a kingpost truss, which is typically of nineteenth century date, but the timbers were machine-cut and do not appear to be original and this would suggest that the barn has been reroofed. In general the range of dating evidence would suggest that the building probably dates from the second half of the eighteenth century.

7. IMPACT AND RECOMMENDATIONS

7.1 Impact

7.1.1 The survey and evaluation has established that the study area contained a multi-phased agricultural and mining landscape. The landscape was exploited during the post-medieval period and the latest phase of mining activity was probably initiated in the second half of the nineteenth century. It was not possible to examine by trial trenching all parts of the study area; however, this work has established the character of the sub-surface deposits. In general the only features identified by trenching were also represented on the surface.

7.1.3 The opencast extraction will involve the destruction of all features within the study area.

7.2 Recommendations

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

7.2.2 The landscape and fabric surveys have provided a mitigative record of Sites 08 and 22 and Sandbeds Farm and there is thus no requirement for a further programme of archaeological recording of these sites in advance of their destruction.

7.2.3 The evaluation of Sites 01 and 24 was not able to identify the existence of the documented mine shafts even though limited deposits of mining spoil were discovered. By virtue of the limited sub-surface and above ground survival it is recommended that no further archaeological recording be undertaken at these sites.

7.2.4 The present programme of recording was limited to the extent of the first phase of the opencast development. There is an outstanding requirement for further recording of those sites that will be affected by the second stage of opencast working. This would entail the landscape recording of Sites 4, and 8-20, the fabric survey of Green Spot Farm, and the evaluation of sites 2-4, 9-20 and 23.

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APPENDIX 1

PROJECT DESIGN

Lancaster University Archaeological Unit

August 1998

KEEKLE HEAD OPENCAST COAL SITE

CUMBRIA

ARCHAEOLOGICAL SURVEY AND EVALUATION

Proposals

The following project design is offered in response to a request from Roxylight Agricultural

Land (Cumbria) Ltd for an archaeological survey and evaluation 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 survey and evaluation of an area of pasture land at Keekle Head, near Distington, West Cumbria, in advance of a proposed open cast coal scheme. This follows on from an archaeological assessment undertaken by LUAU (1998) which identified that there was a wealth of mining remains within the extent of the study area, particularly centred on the Venture Pit at the south western end of the study area and also potentially earlier remains around Green Spot farm. The study area also contains an early agricultural intake 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 evaluation be undertaken to inform the planning process and a survey be undertaken to mitigate the destruction of the archaeology in the course of the development. The project design is in accordance with a verbal brief by Philip Holdsworth of Cumbria County Planning Department. The development will be implemented in two stages, the first will be undertaken this year and will affect the areas shown on the attached map, the second will be undertaken in 1999. In order to speed up the evaluation process for the first stage of the development the present project design will involve the evaluation and survey only of those sites that will be affected by the stage 1 development. A further programme of evaluation, landscape survey and fabric survey will be undertaken at a later date, but well in advance of the second stage of the development.

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 1997) 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 verbal brief provided by Philip Holdsworth of Cumbria County Council to provide an accurate archaeological assessment of the designated area, within its broader context. The required stages to achieve these ends are as follows:

2.2 ***Field Survey***

A landscape survey to the equivalent of RCHM(E) level 3 to record the character of the extant earthworks and mine-workings within the study area and provide an assessment of the archaeological significance of the earthwork remains. This will involve the recording of sites 22, 24 and 8. Only part of site 22 will be affected by the Stage 1 development, but it is proposed to undertake the survey of the whole site as part of this phase of the archaeological evaluation and survey.

2.3 ***Trial Trenching Programme***

A limited programme of trial excavations, as recommended by the County Archaeologist, will be undertaken to establish the nature, extent, chronology, and preservation of any archaeological deposits encountered. In general these will be targeted at the identified physical remains, but will be extended away from the known sites to explore other areas more remote from the physical remains. It is proposed to examine Sites 01 and 24, neither of which have clearly defined surface representations and therefore the trenching will be defined to explore both the limited physical remains and also the documented locations. Suitable samples recovered will be assessed for their palaeoenvironmental potential.

2.4 ***Fabric Survey***

A basic level ((RCHM(E) level 2) fabric survey will be undertaken of the Sandbeds farmhouse and associated farm buildings. It would also involve an oblique photographic survey of the structure.

2.5 ***Evaluation Report***

A written evaluation report will assess the significance of the data generated by this programme within

a local and regional context. It will advise on the mitigation measures necessary to protect and/or record (to appropriate levels) identified archaeological features and deposits, including any appropriate further evaluation, excavation, and recording strategies.

3. 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 Landscape Survey

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

3.2.2 It is proposed to undertake a level 3 survey (see LUAU survey levels, Appendix 1) of the study area, which is equivalent to RCHM(E) level 3. The survey will involve the detailed mapping of all surface features within the extent of Sites 8, 22 and 24. Site 22 is the large Venture Pit and has a tramway extending first north-west and then north through the study area towards Wilson Park. The survey will involve the recording of both the shaft complex and the associated tramway. Site 24 has been extensively landscaped and there is only very limited surface survival, the survey of the limited remains will be intended to provide an appropriate context for the evaluation trenching that will follow. All appropriate survey detail will be recorded to provide an appropriate context for the archaeological detail. Although the survey data will include altitude information this will not be used for the production of the level 3 survey.

3.2.3 Survey control will be established over the site by closed traverse and internally will be accurate to +- 15mm; the control network will be located with respect to field boundaries. It will be located onto the Ordnance Survey National Grid by the use of Global Positioning Survey (GPS), which will locate to an accuracy of +- 1m.

3.2.4 The surface features will be surveyed by EDM tacheometry using a total station linked to a data logger, the accuracy of detail generation will be appropriate for a 1:250/500 output. The digital data is transferred onto a portable computer for manipulation and transfer to other digital or hard mediums. Film plots will be output via a plotter. The archaeological detail is drawn up in the field as a dimensioned drawing on the plots with respect to survey markers. Most topographic detail is also surveyed, particularly if it is archaeologically significant or is in the vicinity of archaeological features. The survey drawings will be generated within a CAD system and can be output at any scale. The survey would be plotted using RCHM(E) draughting conventions and line thicknesses would be appropriate for reproduction and reduction.

3.2.5 In conjunction with the archaeological survey a photographic archive will be generated, which will record significant features and general landscapes.

3.2.6 The survey would be accompanied by a detailed gazetteer description of individual archaeological features, which will relate directly to the survey mapping. This stage of the survey will involve a detailed assessment of the industrial site and its general context.

3.3 Trial Trenching

3.3.1 ***Targeted trenching:*** This programme of trenching will establish the presence or absence of any archaeological deposits and, if established, will then briefly test their date, nature, and quality of preservation. This element of the trial trenching is invaluable in order to assess those parts, within the proposed study area, where there is a potential for archaeological deposits to survive which are not visible on the surface. This also reduces the possibility of the discovery of any important archaeological features within those areas during groundworks, so as to minimise the possibility of any disruption at that late stage.

3.3.2 The possible surface expression of Site 01 is an ill-defined level platform, but there is also the possibility that this is not the shaft itself. It is therefore proposed to excavate a single trench across the platform and a further two trenches nearby if the first does not reveal the shaft. The first trench would be 30m long and would extend away from the identified platform. The locations of the other two possible trenches would be dependant upon the results of the first. The costs for these two additional trenches are defined as a separate contingency cost.

3.3.3 The surface expression of Site 24 is a very low, ill-defined, flat topped mound which corresponds with

the location of one of the two documented shafts. There is no surface expression for the southernmost of the two shafts or the documented tramway which extended north from the northernmost shaft. It is proposed to excavate one 30m trench across each end of the documented line of the tramway to examine the sub-surface survival of this feature. One 30m long trench will be excavated out from the identified shaft and a further two trenches will be excavated through the area of the southernmost documented shaft.

3.3.4 For safety reasons it is proposed to excavate out from the centre of any putative shafts using the extended arm of the mechanical excavator. The machine will not be allowed to drive over the centre of any putative shafts in case of collapse of the shaft.

3.3.3 ***Methodology:*** To maximise the speed and efficiency of the operation the removal of overburden will be undertaken by machine (with a standard five or six foot toothless ditching bucket), although in areas where ephemeral remains are encountered elements may be hand dug.

3.3.4 All trenches will be excavated in a stratigraphical manner, whether by machine or by hand. Trenches will be accurately located with regard to surrounding features, by use of a total station survey instrument or Global Positioning Equipment as appropriate.

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

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

3.4 Fabric Survey

3.4.1 ***Structural Assessment:*** a rapid inspection of Sandbeds will be undertaken, which will involve the selective stripping of the internal plaster surfaces to expose wall junctions and the roof structure. This will primarily generate a description and assessment of the period and significance of the building.

3.4.2 ***Photographic Recording:*** a photographic survey will be undertaken of the external faces of the building as well as selected internal detail, particularly where plaster has been stripped. This will be undertaken using both monochrome and colour photography in order to provide a general record of the building. Semi-rectified photography will also be generated of the external facades which will allow the production of elevations, if required in the future.

3.4.3 ***Graphic Recording:*** the graphic survey will involve the production of a ground plan of the farm house and associated out buildings. The survey will be undertaken using a combination of total station survey in conjunction with manual survey techniques. The outline plan frame will be surveyed by the use of a total station, and the external and internal detail will be generated by manual survey. The graphic results of the survey will be digitised into an industry standard Computer Aided Draughting (CAD) system to enhance the manipulation and presentation of the results.

3.5 Evaluation Report

3.5.1 ***Archive:*** The results of Stages 3.1-3 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.

3.5.2 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, 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. 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.

3.5.3 ***Report:*** One bound and one unbound copy of a written synthetic report will be submitted to the Client, and a further copy submitted to the Cumbria County Archaeologist. The report will include a copy of this project design, and indications of any agreed departure from that design. It will present, summarise, and interpret the results of the programme detailed above and will include a full index of archaeological features identified in the course of the project, together with appropriate illustrations, including a survey mapping of the industrial monuments and the fabric survey of Sandbeds. It will incorporate a structural assessment of Sandbeds Farm. It will incorporate a gazetteer of the elements of the three sites recorded by the landscape survey and an assessment of the surviving features. 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. It will include an assessment of the overall stratigraphy of the trenches, together with appropriate illustrations, including detailed plans and sections indicating the locations of archaeological features. Any finds recovered from the excavations will be assessed with reference to other local material and any particular or unusual features of the assemblage will be highlighted and the potential of the site for palaeoenvironmental analysis will be considered. The report will also include a complete bibliography of sources from which data has been derived, and a list of further sources identified during the programme of work, but not examined in detail.

3.5.4 This report will identify areas of defined archaeology, the location of trenches, and whether the results of the sampling were positive or negative. An assessment and statement of the actual and potential archaeological significance of the site within the broader context of regional and national archaeological priorities will be made. Illustrative material will include a location map, section drawings, survey plans and trench plans; it can be tailored to the specific requests of the client (eg particular scales etc), subject to discussion. The report will be in the same basic format as this project design; a copy of the report can be provided on 3.5" disk (IBM compatible format).

3.5.5 ***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 resource 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.

3.5.6 ***Confidentiality:*** The evaluation report is designed as a document for the specific use of the client, for the particular purpose as defined in the project 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.

3.6 Other Matters

3.6.1 ***Health and Safety:*** Full regard will, of course, be given to all constraints (services etc) during the excavation of the trenches, as well as to all Health and Safety considerations. LUAU provides a Health and Safety Statement for all projects and maintains a Unit Safety policy. All site procedures are in accordance with the guidance set out in the Health and Safety Manual compiled by the Standing Conference of Archaeological Unit Managers (1991) and risk assessments are implemented for all projects. As a matter of course the Unit uses a U-Scan device prior to any excavation to test for services. It is assumed that the client will provide any available information regarding services within the study area, if available. Trenching be undertaken only from the edge of known shafts or areas of possible subterranean voids, to ensure the safety of LUAU personnel; the machine will not be allowed to drive over the top of a known shaft.

3.5.2 ***Reinstatement:*** land disturbed as a result of this work will be reinstated by backfilling and LUAU, as a matter of course, replaces material in a stratigraphic manner. It is presumed that the Client will have responsibility for site security. LUAU would take responsibility for temporary fencing

arrangements to exclude livestock or any other farming activities as required. In addition, any deep sections of open trench would be fenced off to prevent any accidents occurring to LUAU/client staff.

3.5.3 ***Accommodation:*** the present costs assume that one of the two farms can be used for staff accommodation in the course of the survey and evaluation. If neither of the farms are unavailable or the electric power is switched off, then an additional charge for staff accommodation is defined in section 6 below.

3.6 **Project Monitoring**

3.6.1 ***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.

3.6.2 ***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. LUAU will arrange a preliminary meeting, if required.

4. WORK TIMETABLE

The phases of work will comprise:

4.1 ***Landscape Survey***
A four day period is required for the identification survey fieldwork

4.2 ***Trial Trenching Programme***
A two day period is required to undertake the targeted trenching programme

4.3 ***Fabric Survey***
A two day period is required to undertake the fabric survey of Sandbeds Farm

4.3 ***Prepare Evaluation Report***
An six 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. Subject to being awarded the project with at least a weeks lead in, we would be able to initiate the project on the 17th of August.

5. OUTLINE RESOURCES

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

5.1 ***Landscape Survey***
4 man-day Project Supervisor
4 man-day Project Assistant

5.2 ***Trial Trenching Programme***
2 man-day Project Supervisor
2 man-day Project Assistant

5.3 ***Fabric Survey***
1 man-day Project Officer
2 man-day Project Supervisor
2 man-day Project Assistant

5.4 ***Evaluation Report***
3 man-days Project Supervisor
4 man-days Draughtsman
2 man-days Project Assistant

5.5 The project will be under the project management of **Jamie Quartermaine, BA Surv Dip MIFA** (LUAU Project Manager) to whom all correspondence should be addressed. All Unit staff are experienced, qualified archaeologists, each with several years professional expertise.

APPENDIX 2
SURVEY GAZETTEER

Only those elements of the survey gazetteer compiled for the assessment report (LUAU 1998), which formed part of this survey, are included here. The numbering is as given in the assessment gazetteer.

GREEN SPOT DRAIN
SITE 08

Site number **08.1**
Site name Green Spot farm
NGR NY 23736,01168 - 23788,01221
Site type Drain/Leat
Source LUAU 1998 / Detail Survey 1998
Figure no: 4
Description
A drainage ditch is located to the south-east of Green Spot farm running across an area of steeply sloping pasture. It is 1.05m in width and 0.55m in depth, with an associated bank, 0.45m in height and 0.50m in width. It is broadly aligned north-east / south-west and is located immediately to the north of a drystone wall delimiting the southern edge of the study area. Only part of the ditch (a length of 46m) was within the study area, further south it followed the southern side of the field boundary, and continued to a point beyond the quarry workings to the west (Site 04). The leat was probably designed to collect any water running off High Park to the south and to divert it past both the mine workings (Site 07) and the nearby quarry (Site 04).

Site number **08.2**
Site name Green Spot farm
NGR NY 23788,01221 - 23708,01312
Site type Modified watercourse
Source LUAU 1998 / Detail Survey 1998
Figure no: 4
Description
The north-eastern end of the drain (Site 08.1) fed into a water-course (Site 08.2), within a steeply sloping gully, and was crossed by a Cumbrian Bank-type field boundary (Site 08.3) at the northern end. Whilst largely a natural feature it would appear that the water-course has been modified, firstly by diverting the line of the drain into the gully and effectively blocking off the line of the original stream. Secondly, at the base of the ,gully the line of the outflow has been diverted along the line of the Cumbrian Bank field boundary and from here into the River Keekle.

Site number **08.3**
Site name Green Spot farm
NGR NY 23681,01276 - 23718,01325
Site type Field Boundary
Source LUAU 1998 / Detail Survey 1998
Figure no: 4

Description
A modern field boundary (Site 08.3) was located at the northern base of the gully (Site 08.2). It is of typical Cumbrian Bank construction comprising a largely earthfast linear bank with occasional sub-rounded stone protruding from the surface. It is aligned north-east/south-west from the north of Green Spot farm.

VENTURE PIT AND TRAMWAY
Site 22

Site number **22.1**
Site name Venture Pit
NGR NY 23096,01806 - 23338,01408
Site type Tramway
Source LUAU 1998 / SMR 11701 / Wilson 1905, 373 / Wood 1988, 161
Figure no: 5, 6, 7
Description
A tramway leads north from Venture Pit (Site 22) to the Ullock-Moresby road. The tramway extends broadly north-west/south-east to a crossing of the River Keekle, it then extends due north up to the road, past Wilson Park. The tramway is extremely ill-defined on the northernmost section where it transects an area of mire. For the most part it comprises a broad and very prominent, flat-topped embankment, which is up to 1.7m high in places; the width of the tramway top is typically *c*5m and at the base it is *c*9.5m. The tramway is almost entirely earthfast, although, localised exposures, particularly at the river crossing, show that it is composed of angular stone and loam interspersed with flecks of coal. It would appear to be spoil and probably originated from the Venture Pit.

At the crossing point over the River Keekle the tramway has been subject to heavy erosion and the only surviving element of the former crossing is a short length of stone abutment along the southern side of the river. It was 0.95m by 0.35m and to a height of 0.15m along the southern bank of the river.

To the south of this river crossing is a short length of tramway, aligned east/west. This section was very well-defined with the upper face standing to a height of 1.55m to the north and 0.45m to the south. The section to the south-east of the crossing is extremely well-defined and very prominent. It is extremely broad and comprises two fairly level parallel tramway surfaces which are separated by a shallow ditch. It is evident that this section, at least, was intended for two-way traffic. The eastern end of this section of tramway has been cut back by a small stream which leads into the River Keekle to the north (22.1c). No evidence of any deliberate crossing of the stream was observed, and it would appear, therefore, that any bridge or conduit remains have been eroded away.

The remaining section of the tramway was aligned north-west/south-east and leads to the northern extreme of the Venture Pit mine workings. This section of tramway was well defined, with a height of 1.25m to the east and 0.55m to the west. No further evidence of any parallel level areas were encountered, although a linear bank, 0.35m in height and with a width of 0.40m, was observed along the eastern edge for most of its length.

Site number **22.2**
Site name Venture Pit
NGR NY 23207, 01508
Site type Platform?
Source LUAU 1998 / SMR 11701 / Wilson 1905, 373 / Wood 1988, 161
Figure no: 6
Description
A triangular area of level ground stands 0.55m above the upper surface of the tramway, on its western side, adjacent to the point at which the north / south section leading from Venture Pit turns to the west. Whilst it is possible that this is an entirely natural feature, formed within an area bounded by modern field boundaries to the west and south and by the tramway to the north and west, the relative height of this well-defined earthfast feature suggests that a substantial amount of cleared material has been placed on it.

Site number **22.3**
Site name Venture Pit
NGR NY 23388,01400 - 23405,01384
Site type Spoil heap
Source LUAU 1998 / SMR 11701 / Wilson 1905, 373 / Wood 1988, 161
Figure no: 7
Description
A large, linear spoil heap was identified to the south of the main group of mine workings on the opposite side of the tramway (22.1). It is extremely well-defined and stands to a height of 2.1m, it is aligned north/south, and is largely earthfast. The upper surface of this feature would appear to have been subjected to multiple excavation, with the presence of at least three small depressions on the top. It is sub-triangular in plan, with steeply sloping sides and the highest point towards the north. The spoil heap extends over the central section of mine workings (Area B) and below the current field boundary (22.38) separating the mine workings from the spoil heap. On the western side of the mound, a modern trackway aligned north/south creates a hollow within the spoil. Towards the south recent excavation has revealed an area of black upcast forming the matrix of the mound and it is likely that this feature is formed of material mined to the north, although no direct ramp was identified for this purpose.

Site number **22.4**
Site name Venture Pit
NGR NY 23375,01381
Site type Spoil heap
Source LUAU 1998 / SMR 11701 / Wilson 1905, 373 / Wood 1988, 161
Figure no: 7
Description
A relatively small spoil heap lies to the west of 22.3 and possibly forms a component of it. It is entirely earthfast and bounded by field boundaries to the north and west and by the modern trackway to the east. It stands to approximately 0.60m in height with its highest point to the east.

Site number **22.5**
Site name Venture Pit

NGR NY 23338,01376
Site type Shaft depression
Source LUAU 1998 / SMR 11701 / Wilson 1905, 373 / Wood 1988, 161
Figure no: 7
Description
A possible shaft depression was identified to the west of the main workings, truncated by a modern field boundary to the south. It is a well-defined and measures 3.1m in diameter with a depth of 0.35m. It has shallow sides and a concave base and is within an area of heavily disturbed ground (Area A).

Site number **22.6**
Site name Venture Pit
NGR NY 23337,01381
Site type Shaft depression
Source LUAU 1998 / SMR 11701 / Wilson 1905, 373 / Wood 1988, 161
Figure no: 7
Description
An ill-defined shaft depression was found to the west of the main workings and to the north of 22.5. It measures 2.6m in diameter and has a depth of 0.30m. It is sub-circular in plan, with shallow sides and a concave base, and is also within the downslope area of heavily disturbed ground (Area A).

Site number **22.7**
Site name Venture Pit
NGR NY 23336,01386
Site type Shaft depression
Source LUAU 1998 / SMR 11701 / Wilson 1905, 373 / Wood 1988, 161
Figure no: 7
Description
A well-defined depression of a shaft to the west of the main workings and to the north of 22.6. It measures 2.9m in diameter and has a depth of 0.40m. It is sub-circular in plan with shallow sides and a concave base and is also within the downslope area of heavily disturbed ground (Area A).

Site number **22.8**
Site name Venture Pit
NGR NY 23343,01382
Site type Shaft mound
Source LUAU 1998 / SMR 11701 / Wilson 1905, 373 / Wood 1988, 161
Figure no: 7
Description
An ill-defined mound surrounding a shaft was recorded to the west of the main workings (Area A) and to the east of 22.5 - 22.7. It measures 2.9m in diameter and is 0.25m deep. It is kidney shaped in plan, aligned east/west, with shallow sides and a concave base. It has an associated mound 0.20m in height with a narrow entrance to the west.

Site number **22.9**

Site name Venture Pit
NGR NY 23347,01380
Site type Shaft depression
Source LUAU 1998 / SMR 11701 / Wilson 1905, 373 / Wood 1988, 161
Figure no: 7
Description
A well-defined depression to the south of the main workings and to the east of 22.5. It is clearly a shaft, 3.75m in diameter and 0.40m deep. It is sub-circular in plan with shallow sides and a concave base, and is truncated by the modern field boundary to the south.

Site number **22.10**
Site name Venture Pit
NGR NY 23349,01385
Site type Shaft depression
Source LUAU 1998 / SMR 11701 / Wilson 1905, 373 / Wood 1988, 161 /
Figure no: 7
Description
A well-defined depression of a shaft towards the centre of the main workings (Area A). It is 0.25m deep, sub-circular in plan, and measures 1.85m in diameter. It has shallow sides and a concave base with no associated spoil heap.

Site number **22.11**
Site name Venture Pit
NGR NY 23353,01384
Site type Shaft depression
Source LUAU 1998 / SMR 11701 / Wilson 1905, 373 / Wood 1988, 161 /
Figure no: 7
Description
A well-defined depression of a shaft towards the centre of the main workings (Area A) and to the east of 22.10. It is sub-circular in plan, 1.95m in diameter, with shallow sides and a concave base with no associated spoil heap; it is up to 0.3m deep.

Site number **22.12**
Site name Venture Pit
NGR NY 23356,01385
Site type Shaft depression
Source LUAU 1998 / SMR 11701 / Wilson 1905, 373 / Wood 1988, 161
Figure no: 7
Description
A well-defined depression from a shaft, towards the centre of the main workings (Area A) and to the east of 22.11. It measures 1.65m in diameter, 0.35m deep. It is sub-circular in plan, with shallow sides and a concave base. There is no associated spoil heap.

Site number **22.13**
Site name Venture Pit
NGR NY 23352,01389
Site type Shaft depression

Source LUAU 1998 / SMR 11701 / Wilson 1905, 373 / Wood 1988, 161
Figure no: 7
Description
A well-defined depression indicating a shaft, towards the centre of the main workings (Area A) and to the north of 22.11. It is 2.85m in diameter, 0.35m deep. It is sub-circular in plan, with shallow sides and a concave base. There is no associated spoil heap.

Site number **22.14**
Site name Venture Pit
NGR NY 23346,01392
Site type Shaft depression
Source LUAU 1998 / SMR 11701 / Wilson 1905, 373 / Wood 1988, 161
Figure no: 7
Description
An ill-defined depression presumably indicating a shaft, towards the north of the main workings (Area A) and to the west of 22.13. It measure 0.95m in diameter and 0.20m deep. It is sub-circular in plan, with shallow sides and a concave base. There is no associated spoil heap.

Site number **22.16**
Site name Venture Pit
NGR NY 23338,01399
Site type Shaft depression
Source LUAU 1998 / SMR 11701 / Wilson 1905, 373 / Wood 1988, 161
Figure no: 7
Description
An ill-defined depression, presumably a shaft, within an area of poorly drained ground to the north of upcast Area A. It has shallow sloping sides and a diameter of 1.95m. The base of this feature is entirely obscured by standing water and it is possible that it is the remains of an air shaft, which has filled due to a raising of the water table.

Site number **22.17**
Site name Venture Pit
NGR NY 23344,01410
Site type Spoil heap
Source LUAU 1998 / SMR 11701 / Wilson 1905, 373 / Wood 1988, 161
Figure no: 7
Description
A well-defined spoil heap to the north-west of the mine workings (Area B) and adjacent to the point where tramway 22.1 connects with those workings. It is linear in plan, measures 3.2m by 1.05m, and stands to a height of 0.55m. It is aligned east/west.

Site number **22.18**
Site name Venture Pit
NGR NY 23359,01412
Site type Shaft depression
Source LUAU 1998 / SMR 11701 / Wilson 1905, 373 / Wood 1988, 161

Figure no: 7
Description
An ill-defined depression, presumably indicating a shaft, within upcast Area B. It is sub-circular in plan, with shallow sloping sides and a diameter of 1.5m. The base is concave and there is no associated mound.

Site number **22.19**
Site name Venture Pit
NGR NY 23357,01419
Site type Shaft depression
Source LUAU 1998 / SMR 11701 / Wilson 1905, 373 / Wood 1988, 161
Figure no: 7
Description
An ill-defined depression, presumably indicating a shaft, within upcast Area B and to the north of 22.18. It is sub-circular in plan with shallow sloping sides to a depth of 0.25m; it has a diameter of 1.05m. The base is concave and there is no associated mound.

Site number **22.20**
Site name Venture Pit
NGR NY 23361,01417
Site type Shaft depression
Source LUAU 1998 / SMR 11701 / Wilson 1905, 373 / Wood 1988, 161
Figure no: 7
Description
An well-defined depression, indicating a shaft, within upcast Area B and to the north of 22.18. It is sub- circular in plan with shallow sloping sides. It is 0.30m deep with a diameter of 1.40m. The base is concave and there is no associated mound.

Site number **22.21**
Site name Venture Pit
NGR NY 23366,01410
Site type Shaft depression
Source LUAU 1998 / SMR 11701 / Wilson 1905, 373 / Wood 1988, 161
Figure no: 7
Description
An ill-defined depression, presumably indicating a shaft, within upcast Area B and to the east of 22.20. It is sub-circular in plan with shallow sloping sides. It measures 0.35m deep with a diameter of 1.45m. The base is concave and there is no associated mound.

Site number **22.22**
Site name Venture Pit
NGR NY 23372,01406
Site type Shaft depression
Source LUAU 1998 / SMR 11701 / Wilson 1905, 373 / Wood 1988, 161
Figure no: 7
Description
An ill-defined depression, presumably indicating a shaft, within and to the south of upcast

area (Area B) and to the east of 22.20. It is sub-circular in plan, with shallow sloping sides. It measures 0.25m deep with a diameter of 1.85m. The base is concave and there is no associated mound.

Site number **22.23**
Site name Venture Pit
NGR NY 23375,01410
Site type Shaft depression
Source LUAU 1998 / SMR 11701 / Wilson 1905, 373 / Wood 1988, 161
Figure no: 7
Description
A well-defined depression, indicating a shaft, within and to the south of upcast Area B and to the east of 22.20. It is sub-oval in plan, and is aligned north-west to south-east. It has steeply sloping sides to a depth of 0.35m and measures 2.85m long. The base is concave and there is no associated mound.

Site number **22.24**
Site name Venture Pit
NGR NY 23376,01417
Site type Shaft depression
Source LUAU 1998 / SMR 11701 / Wilson 1905, 373 / Wood 1988, 161
Figure no: 7
Description
A well-defined depression, indicating a shaft, within and to the south of upcast Area B and to the east of 22.20. It is sub-circular in plan, with steeply sloping sides. It measures 0.25m deep and 0.95m long. The base is concave and there is no associated mound.

Site number **22.25**
Site name Venture Pit
NGR NY 23373,01422
Site type Shaft depression
Source LUAU 1998 / SMR 11701 / Wilson 1905, 373 / Wood 1988, 161
Figure no: 7
Description
A well-defined depression, indicating a shaft, within and to the south of upcast Area B and to the east of 22.20. It is sub-circular in plan with steeply sloping sides. It measures 0.30m deep and 1.65m diameter. The base is concave and there is no associated mound.

Site number **22.26**
Site name Venture Pit
NGR NY 23367,01427
Site type Shaft depression
Source LUAU 1998 / SMR 11701 / Wilson 1905, 373 / Wood 1988, 161
Figure no: 7
Description
A well-defined depression, indicating a shaft, within and to the north of upcast Area B. It is sub-circular in plan, with steeply sloping sides. It measures 0.35m deep and has a diameter of

1.35m. The base is concave and there is no associated mound.

Site number **22.29**
Site name Venture Pit
NGR NY 23406,01436
Site type Shaft depression
Source LUAU 1998 / SMR 11701 / Wilson 1905, 373 / Wood 1988, 161
Figure no: 7
Description
A well-defined depression, indicating a shaft, within and to the north of upcast Area C. It is sub-circular in plan, with steeply sloping sides. It measures 0.35m deep and has a diameter of 1.35m. The base is concave and there is no associated mound.

Site number **22.30**
Site name Venture Pit
NGR NY 23407,01434
Site type Shaft depression
Source LUAU 1998 / SMR 11701 / Wilson 1905, 373 / Wood 1988, 161
Figure no: 7
Description
A well-defined depression, indicating a shaft, within and to the north of upcast Area C. It is sub-circular in plan, with steeply sloping sides. It measures 0.35m deep and has a diameter of 0.2m. The base is concave and there is no associated mound.

Site number **22.31**
Site name Venture Pit
NGR NY 23410,01431
Site type Shaft depression
Source LUAU 1998 / SMR 11701 / Wilson 1905, 373 / Wood 1988, 161
Figure no: 7
Description
A well-defined depression, indicating a shaft, within and to the north of upcast Area C. It is sub-circular in plan, with steeply sloping sides. It measures 0.40m deep and has a diameter of 1.35m. The base is concave and there is no associated mound.

Site number **22.32**
Site name Venture Pit
NGR NY 23409,01427
Site type Shaft depression
Source LUAU 1998 / SMR 11701 / Wilson 1905, 373 / Wood 1988, 161
Figure no: 7
Description
A well-defined depression, indicating a shaft, within and to the north of upcast Area C. and to the immediate south of 22.31. It is sub-circular in plan, with steeply sloping sides. It measures 0.40m deep and has a diameter of 1.35m. The base is concave and there is no associated mound.

Site number **22.33**
Site name Venture Pit
NGR NY 23406,01426
Site type Shaft Mound
Source LUAU 1998 / SMR 11701 / Wilson 1905, 373 / Wood 1988, 161
Figure no: 7
Description
A well-defined mound surrounding a shaft, within and to the north of upcast Area C. It is sub-circular in plan, with steeply sloping sides. It measures 0.50m deep and 1.35m in diameter. The base is level and there is a associated mound to the east, 0.20m in height and 1.05m in length. Although the mound does not appear to circle the depression, it has a clear spatial association, thus classifying the monument as a shaft mound.

Site number **22.34**
Site name Venture Pit
NGR NY 23400,01438
Site type Shaft Mound
Source LUAU 1998 / SMR 11701 / Wilson 1905, 373 / Wood 1988, 161
Figure no: 7
Description
A well-defined mound surrounding a shaft, within and to the north of upcast Area C. It is sub-circular in plan, with steeply sloping sides. It measures 0.40m deep and has a diameter of 1.35m. The base is concave and the associated mound extends around the depression, with an entrance on the southern side.

Site number **22.35**
Site name Venture Pit
NGR NY 23405,01440
Site type Shaft depression
Source LUAU 1998 / SMR 11701 / Wilson 1905, 373 / Wood 1988, 161
Figure no: 7
Description
A well-defined depression, indicating a shaft, within and to the north of upcast Area C. It is sub-circular in plan, with steeply sloping sides. It measures 0.30m deep and has a diameter of 1.15. The base is concave and there is no associated mound.

Site number **22.36**
Site name Venture Pit
NGR NY 23403,01443
Site type Shaft depression
Source LUAU 1998 / SMR 11701 / Wilson 1905, 373 / Wood 1988, 161
Figure no: 7
Description
A well-defined depression, indicating a shaft, within and to the north of upcast Area C and to the immediate north of 22.35. It is sub-circular in plan, with steeply sloping sides. It measures 0.30m deep and has a diameter of 1.10m. The base is concave and there is no associated mound.

Site number **22.37**
Site name Venture Pit
NGR NY 23395,01439
Site type Shaft depression
Source LUAU 1998 / SMR 11701 / Wilson 1905, 373 / Wood 1988, 161
Figure no: 7
Description
A well-defined depression, indicating a shaft, within and to the north of upcast Area C. It is sub-circular in plan, with shallow sloping sides It is 0.20m deep and has a diameter of 1.15m. The base is concave and there is no associated mound.

Site number **22.38**
Site name Venture Pit
NGR NY 23410,01450 - 23374,01393
Site type Field Boundary
Source LUAU 1998 / SMR 11701 / Wilson 1905, 373 / Wood 1988, 161
Figure no: 7
Description
A field boundary delimits the surviving mine workings 22.4- 22.37 along the eastern and southern extremes, and lies above spoil heap 22.3. It is of typical *Cumbrian Bank* construction, with a linear bank 0.45m in height, largely earthfast with occasional sub-rounded stone protruding from the surface, and is aligned north-east to south-west and butting a further boundary aligned at right angles to it. A stone platform, measuring 0.85m by 0.65m and 0.65m high, was encountered towards the west of this boundary. There is no evident bonding material.

KEEKLE HEAD MINE SHAFT

Site 24

Site number **24**
Site name Keekle Head Mine Shaft
NGR NY 23570, 01992
Site type Mine Shaft ?
Source LUAU 1998
Figure no: 8
Description
An ill-defined mound was identified in an area of waterlogged pasture to the north of Keekle Head Farm, and on the site of a documented shaft. It is roughly sub-circular in plan and highly degraded, distinguished by its level area to the top and its shallow sloping sides, in contrast to the gentle slope of the natural topography surrounding it. No depression was visible within the surface remains, and the absence of surface remains probably reflects that the land has been subject intensive improvement.

APPENDIX 3
SANDBEDS FARM: ROOM DESCRIPTIONS

Room No 1 - Barn

Description: this is an outbuilding, aligned north/south, and measuring 4m x 2.75m x 2.25m tall. It is constructed from stone and brick, with a whitewashed interior and a roughly rendered exterior. There is a single door in the north wall, measuring 2m x 1m, the top and bottom halves of which open and close independently, and there are two blocked ventilation holes in the same wall. The south wall contains two blocked ventilation holes, a hay rack and a feed trough. There are no windows. The floor is bricks laid on stretchers with a stone door step. There is a breeze-block subdivision standing 0.4m high positioned halfway along the south wall to make two separate stalls. The floor in this area is raised by 0.1m and is covered with concrete. The ceiling consists of the exposed joists and floor boards of the room above. The room appears to be a subdivision of a larger barn. It was used as animal housing.

Room No 2 - Barn

Description: this is an outbuilding measuring 10m x 2.5m x 2.3m tall and aligned north/south. It is of stone and brick construction, with a roughly rendered exterior and a partially smooth-rendered interior with whitewash. There is a single door with a timber lintel in the north wall, measuring 0.9m x 1.95m, and there is a single ventilation hole in the same wall. A recessed single light window with a fertiliser bag in it was visible in the west wall . It has a timber frame and lintel and is set in a area of brick blocking a former doorway. There are two recessed windows in the south wall, both with timber frames and lintels. One has a single light, the other has six lights; both are glazed with plain glass. There is a door in the east wall which measures 2m x 1m and has a stone lintel. The southern half of the room was part of the original barn and the present dividing wall of this barn was the former external wall of the barn. This wall has an opening (but no door) measuring 1.6m x 1.9m beneath a substantial timber lintel. There are east/west orientated timber and concrete partitions which extend halfway across the floor to form six animal stalls. The floor is formed from concrete and stone setts and contains drainage channels. The exposed joists and floor boards of an upper room form the ceiling.

Room No 3 - Barn

Description: this outbuilding measures 2.5m x 4m and is aligned east/west. The north wall contains a large doorway, measuring 3m x 2.5m, which is filled with large double doors (one of which is split in two). It has an iron lintel. The west wall is stone built and partially rendered. The east wall is constructed of breeze-blocks on top of the original stone stub. The south wall is stone built with a brick-blocked window. The ceiling is deliberately open to the upper floor of the barn, giving access to the main hay loft which extends the full length of the original barn and has access to the upper floors of the additional outbuildings.

The hayloft is aligned east/west and extends the full length of the upper level of the original barn, with access into the upper levels of the additional outbuildings. The west wall is the stone gable end of the house; there are no visible features within this. The south wall is stone built, and contains three evenly spaced angled ventilation slits with rough dressed stone surrounds. The east wall is the stone gable end of the original barn. It contains a single rectangular owl hole at the apex and a central doorway into the loft space of the additional buildings. The north wall is stone built and contains a large access hole into the loft space of the later outbuildings. The loft has a pitched slate roof with two A-frame timber trusses.

Room No 4 - Barn

Description: this outbuilding is aligned north/south and measures 4m x 2m x 2.5m tall. It is of stone construction with a whitewashed interior and a roughly rendered exterior. There is a recessed six-light window with a timber frame in the south wall. The doorway in the north wall has roughly dressed stone jambs and lintel and a single wooden door. The door has three vertical slots parallel to each other, *c* 0.1m wide and 0.3m high. The building has a concrete floor with a raised step running north/south, and there are two timber animal stall partitioned at right angles to the west wall. The partition creating the south stall is the original wooden construction; the partition of the north stall has been replaced by breeze-blocks. The south-east corner of the floor is obscured by a large quantity of polythene sheeting.

Room No 5 - Ground Floor

Description: this is a small larder located in the south-east corner of the building. It is rectangular in plan, aligned east/west, and has a sandstone flag floor. It is plastered on all four elevations. There is a two-light transom timber-framed window in the centre of the south elevation with an upper opening (measuring 1.02m x 0.73m). There are two timber lintels above it, each measuring 1.28m x 0.28m x 0.14m; these are painted white and have six iron bolts protruding in a haphazard arrangement. The wall is recessed by 0.24m, at an angle, at 0.54m above the floor to a height of 1.25m. There is a single door constructed of five match boards and measuring 0.95m x 1.86m, to the north of the west wall. It has three rails with an iron catch lock and iron strap hinges, hinged to the north. The timber lintel above it, 0.8m high, extends by 1.26m to the south of the door frame and is roughly worked and painted. The ceiling is plasterboard; the wallpaper has been removed. There are scars of two shelves extending over the whole face of the east elevation at 1.2m and 1.7m above the floor, and sandstone shelves along the south and east elevations at 0.6m. These are supported on five brick pillars, measuring 0.5m tall by 0.67m deep, resting on a 0.1m tall sandstone foot. The two outermost pillars are painted, the rest are constructed of smooth red brick.

Room No 6 - Ground Floor

Description: this is the central room, aligned east/west, to the south of the farmhouse and it belongs to the same construction phase as Room 1. It is rectangular in plan and forms a stairwell. The walls are roughly plastered above stone cobble, with occasional patches of woodchip and ?anaglypta painted over. There is a timber skirting board, 0.1m tall, with a rounded profile. In the east corner of the north elevation is a timber door, possibly formerly a ?table-top, leading to Room 9. It is chipboard-covered with wood-effect formica, 15mm thick, and hinged to the east. The door frame is of painted timber, 0.1m x 0.1m, and the doorway is 0.92m x 1.84m. In the centre of the east elevation is a door leading to Room 1; the stairs are attached to this wall at first floor level. The south elevation contains a window at first floor level. The west elevation contains a timber doorway measuring 0.93m x 1.86m which is butted to the north elevation. It leads through to Room 7. The door frame measures 0.12m x 0.08m. The door is constructed of five match boards with three braces and an iron catchlock and an iron strap hinge to the north within Room 7. The timber lintel above the door measures 1.12m x 0.14m. The floor is concrete with a parquet-effect vinyl covering. The ceiling is plasterboard with a painted woodchip covering. The staircase is timber and rotates 180° round a central timber post, which has a stopped chamfer to the south-west. There are ten risers, 0.84m wide, and they are nailed in place. The stair cupboard is accessed by a door to the east, which is constructed of five match boards with three braces and has an iron hinge to the north and west and no catch. There is no wall paper or floor covering within the

cupboard.

Room No 7 - Ground Floor

Description: this is the bathroom in the south-west corner of the farmhouse. It is rectangular in plan and is accessed by the door at the north end of the east elevation (described in Room 6, above). The walls have a roughly rendered finish, the floor is painted concrete and the ceiling is plasterboard. The south elevation contains a two-light casement window of plain glass which measures 0.6m wide and 0.45m tall and is within a ?blocked doorway? which is recessed 0.35m. Next to the window is a niche recessed 0.2m, 0.52m wide and 0.4m tall with a timber interior. There is a white cast iron bath standing beside the west wall.

Room No 8 - Ground Floor

Description: this room is in the north-east corner of the farmhouse and is of the same construction phase as the rest of the house. It is rectangular in plan and is aligned north/south. The roughly rendered walls are painted, the floor is of red quarry stone and the ceiling is plasterboard. The room is accessed via a door in the south of the west elevation, which measures 0.86m x 1.85m and is constructed of two match boards with three braces and iron strap hinges to the south on the internal side. There is no catch. The door lintel is timber. A six light timber-framed sash window, measuring 1.03m wide and 1.32m tall, with ovolo moulding at 0.84m above the floor, is in the north elevation. There is a fireplace in the centre of the east wall, measuring 1.12m wide and 1.02m high, which has a brick lintel and surround with a rendered chimney breast above.

Room No 9 - Ground Floor

Description: this room is in the north-west corner of the farmhouse. It is square in plan and has doors connecting it to Rooms 8, 6, and 11. The door to Room 11 is a panel door with a single light of wired plain glass and a chrome handle. It is at the east end of the north elevation. In the centre of the same elevation is a blocked window, filled with brick to the rear and a shelved cupboard to the front. To the north of the west elevation is a six light sash window, although the bottom three lights have been replaced by a single light. It is similar to the window in Room 8 and is within a recess. To the south of the window is a fireplace which shows evidence of three phases of use, Phases I and II being visible as scars. It was originally 1.98m wide and 1.73m tall, but was reduced in size to 1.27m wide and 1.51m tall and then, when the present iron and tile range, measuring 1.26m square, was introduced, the opening was reduced accordingly. The walls are roughly rendered, painted and wallpapered, and a dado rail runs along the north, east and south elevations at 0.3m below the ceiling. The floor is flagged, with the stones aligned north/south, and the ceiling is plasterboard.

Room No 10 - Ground Floor

Description: this room is a single storey extension to the north of the farmhouse. It butts the farmhouse and is of the second phase of construction. It has a slated gable roof with lead flashing, plastic guttering and an iron down pipe to the rear. The walls are roughly rendered, the floor is flagged, and the ceiling is constructed of timber boards nailed to the rafters. The roof is a single ridge purlin with two side purlins and the wall plates are timber. All the timber is machine-sawn. There is a doorway to the south of the east elevation; at the time of visiting, the single-light panel door was off its hinges and propped in the doorway. There is a six light timber mullion and transom window, 0.84m high, in the centre of the east elevation. It has

two courses of brick underneath, and the wall plate acts as a lintel.

Room No 11 - Ground Floor

Description: this is a modern breeze-block extension to the north of the farmhouse. It is rectangular in plan and is aligned north/south with a corridor running east/west to the north of Room 10 to give access to Room 14. The breeze-block construction is five courses high, 1.25m, on top of which is a 36 light timber mullion and transom window extending along the entire west face to the ceiling. It is timber framed, probably re-used. The north wall contains a timber match board door measuring 1.95m x 0.8m with a boarded single light in the upper area. It is separated from the east wall by a single light casement window above breeze-blocks. To the west is a 2 x 8 light mullion and transom window, 1.75m long, where the breeze-blocks extend up to the ceiling (nine courses). The roof is tin sheets nailed to timber rafters and is attached to the roof of Room 10; it appears to be flat. The ceiling is patterned, highly degraded, concrete. In the north-western corner of the room the breeze-block has been repaired in brick with a four light mullion and transom window in the corner. A piece of clear corrugated plastic forms a window on the west face above the bricks. This room possibly functioned as a porch.

Room No 12 - Barn

Description: this outbuilding measures 4m x 2.75m x 2.25m tall at the east end, and is aligned north/south. It is of stone and brick construction with a whitewashed interior and a roughly rendered exterior. There is a single door, the top and bottom halves of which open and close independently, and two ventilation holes in the north wall. The south wall contains two vents, a hay rack and a feed trough. There is a sandstone lintel over the doorway. The floor consists of bricks laid on stretchers with a stone door step, and the ceiling consists of the exposed joists and floorboards of the room above. There are no windows. This and room 1 are divided parts of a single cow house extended onto the original barn (Rooms 2-4).

Room No 13 - Barn

Description: this east/west aligned outbuilding measures 1.5m x 2.2m x 2.4m tall and butts onto the external wall of the phase II cow house - Room 2. It is constructed of brick and has a smoothly rendered interior and a roughly rendered exterior. There is a single door in the east wall which measures 0.8m x 2m and has a timber lintel. Also in the east wall, there is a four light, timber-framed, mullioned window, glazed with plain glass. A metal pipe protrudes from the west wall. The single pitched roof is constructed of corrugated asbestos sheets and the floor is of concrete. The room may have been used as animal housing.

Room No 14 - Ground Floor

Description: this is a small toilet block to the west of Room 10 and accessed through a match board door in the north wall, leading from Room 11. It is square in plan, with no windows. The walls are roughly rendered, the roof is tin and the floor is concrete. There is a WC on the south wall.

Room No 15 - First Floor

Description: this is a small room at the south-east end of the building, on the first floor. It is accessed through a timber panelled door in the north of the west elevation. The door is painted and has iron hinges and an iron catch lock; the door lintel is timber. The north, east and west walls are covered in horsehair plaster with timber ovolo skirting boards; the south wall has a similar skirting board. The plaster has been removed from the western elevation to reveal stone fabric with a slate band 0.02m thick at 0.93m above the floor. There is a single light non-opening casement window, measuring 0.77m x 0.77m, 0.9m above the floor, with a timber lintel 1.12m x 0.22m above it. To the west of the window a brick repair forms the window opening. The sandstone window sill is 0.12m high. The ceiling is painted plasterboard and the floor is constructed of timber boards, averaging 0.17m wide, aligned north/south.

Room No 16 - First Floor

Description: the staircase into this room is described in Room 6 above. The room is rectangular in plan and all walls are plastered, painted and wallpapered. There is no skirting board. At floor level in the south wall there is a single light casement which measures 0.77m x 0.77m. It has an ovolo moulding with a timber lintel and sill and brick repairs to either side. The east wall contains the door into Room 15. The west wall contains, at the north end, a timber-panelled door with iron fittings, leading to Room 17, with a six light timber-framed mullion and transom window above it. The north elevation contains a timber door constructed of six match boards and three braces, with iron fittings, which leads into Room 19. The stair banister rail is 1.23m long and has six timber spindles, 0.04m x 0.02m and 0.92m tall. The ceiling has a single ridge purlin and is constructed of tongue and groove boards aligned east/west. It is modern and painted. The floor boards extend beneath the dividing wall between this Room and Room 17.

Room No 17 - First Floor

Description: this is a small room in the south-western corner of the first floor of the building. It is rectangular in plan and has a door in the north of the east elevation leading to room 16 (described above). The walls are stone, covered with plaster and wallpaper. The north wall is a partition wall and has a skirting board. The ceiling is of timber boards and has a single side purlin aligned east/west which has been painted. Above it is a small iron skylight, which measures 0.35m x 0.28m.

Room No 18 - First Floor

Description: this is a rectangular room aligned north/south in the north-east corner of the first floor of the farmhouse. The walls are plastered, painted and wallpapered with a chamfered skirting board, 0.12m high. Above it is brick to roof height; no bond was established. The east wall contains a chimney breast 0.75m wide which is angled towards the south at the top. The north elevation contains in the centre a six light timber-framed mullion and transom window, with a timber lintel and sill. The west elevation contains a door at the south end. It comprises of two timber match boards with three braces and has an iron strap hinge and fittings. The ceiling is plasterboard, painted above three modern joists which are aligned north/south. There is access into the roof space in the south-west corner. The floor is the same as in Room 15; the dividing wall being constructed on the floor boards.

Room No 19 - First Floor

Description: this room is in the north-west corner of the first floor of the house. It is square in plan. The walls are plastered and wallpapered and have ovolo skirting boards. There is a window west of centre in the north wall. The south elevation contains, in the east corner, the door leading to Room 16, and the door to Room 18 is in the south corner of the east elevation. The west elevation contains a fireplace, 0.48m x 0.79m, which has an iron front piece, but no hearth, and brick behind. Within the chimney breast, it is 1.21m wide and is angled towards the south at the top. The ceiling is of lathe and plaster construction and is papered and painted.

Room No 20 - Barn

Description: this small outbuilding measures 4m x 2m and is aligned north/south. It is situated at the east end of the site. It is stone built with a roughly rendered exterior and a smoothly rendered interior. There is a single door in the north wall which measures 1.9m x 0.9m and has a stone lintel over, and a single two light window in the east wall, which measures 1.1m x 0.55m. There is a hay rack on the south wall. Next to the door in the north wall is a blocked ventilation hole. The floor is concrete with a stone door step. The single pitched roof is constructed of slate and the ceiling is plasterboard. This room is thought to be later than the adacent Room 2, but the join is not visible. The room was possibly used as animal housing.

APPENDIX 4
DETAILED TRENCH DESCRIPTIONS

Trench No **1**
Site 24
Alignment East/west
Length 30m
Width 1.82m
Description
A naturally occurring clay deposit ranging from orange brown to pale grey in colour,as identified between 0.2m and 0.28m below the ground surface and contained approximately 5% angular and sub-angular stones. This deposit was overlain by a mixed deposit of clay and loam, which was on average between 0.03m and 0.04m in depth. This was in turn overlain by a turf and topsoil deposit of very dark grey clay loam, approximately 0.17-0.19m in depth. Four modern ceramic field drains, aligned north-west/south-east, were encountered directly above the natural clay deposits.

No features of archaeological significance were identified within the trench.

Trench No **2**
Site 24
Alignment East/west
Length 32m
Width 1.82m
Description
A naturally occurring clay deposit, ranging from orange brown to pale grey in colour, was identified between 0.2m and 0.26m below the ground surface and contained approximately 5% angular and sub-angular stones. This deposit was overlain by a mixed deposit of clay and loam, which was on average between 0.03m and 0.05m in depth. This was in turn overlain by a turf and topsoil deposit of very dark grey clay loam, *c*0.17m in depth. Two modern ceramic field drains aligned north-west/south-east were encountered directly above the natural clay deposits.

At the southern end of the trench, and immediately beneath topsoil was a shallow lens (*c*0.05m deep) of coal flecked loam, incorporating small stone fragments. This would appear to be a small localised deposit of spoil from the nearby mines.

Trench No **3**
Site 24
Alignment East/west
Length 29m
Width 1.82m
Description
A naturally occurring clay deposit, ranging from orange brown to pale grey in colour, was identified between 0.21m and 0.27m below the ground surface and contained approximately 5% angular and sub-angular stones. This deposit was overlain by a mixed deposit of clay and loam, which was on average *c* 0.4m in depth. This was in turn overlain by a turf and topsoil deposit of very dark grey clay loam, *c*0.18m in depth. Two cuts for field drains, each 0.24m

by 0.24m and aligned north-west/south-east, were encountered directly above the natural clay deposits.

No features of archaeological significance were identified within the trench.

Trench No **4**
Site 24
Alignment East/west
Length 31m
Width 1.82m
Description
A naturally occurring clay deposit, ranging from orange brown to pale grey in colour, was identified between 0.21m and 0.25m below the ground surface and contained approximately 5% angular and sub-angular stones. This deposit was overlain by a mixed deposit of clay and loam, which was on average between 0.03m and 0.05m in depth. This was in turn overlain by a turf and topsoil deposit of very dark grey clay loam, approximately 0.19m in depth. Two modern ceramic field drains aligned north-west/south-east were encountered directly above the natural clay deposits.

No features of archaeological significance were identified within the trench.

Trench No **5**
Site 24
Alignment East/west
Length 31m
Width 1.82m
Description
A naturally occurring clay deposit, ranging from orange brown to pale grey in colour, was identified between 0.23m and 0.28m below the ground surface and contained approximately 5% angular and sub-angular stones. This deposit was overlain by a mixed deposit of clay and loam, which was on average *c* 0.05m in depth. This was in turn overlain by a turf and topsoil deposit of very dark grey clay loam, approximately 0.15-0.2m in depth. Three modern ceramic field drains aligned north-west/south-east were encountered directly above the natural clay deposits.

No features of archaeological significance were identified within the trench.

Trench No **6**
Site 01
Alignment East/west
Length 29m
Width 1.82m
Description
A naturally occurring clay deposit, ranging from orange brown to pale grey in colour, was identified between 0.25m and 0.28m below the ground surface and contained approximately 5% angular and sub-angular stones. This deposit was overlain by a mixed deposit of clay and loam, which was on average 0.03m in depth. This was in turn overlain by a turf and topsoil

deposit of very dark grey clay loam, approximately 0.17-0.18m in depth. modern ceramic field drains aligned north-west/south-east were encountered directly above the natural clay deposits.

The trench contained a shallow stone-filled field drain, 0.20m in depth and 0.20m wide, which was aligned north-east/south-west and cut into the based stratigraphy. The stones themselves were typically of medium size and sub-angular. This drain was at a greater depth than the later ceramic drains encountered throughout the trenching programme and may indicate that the study area had been subject to agricultural improvement for a relatively long period.

Trench No **7**
Site 01
Alignment North/south
Length 31m
Width 1.82m
Description
A naturally occurring clay deposit, ranging from orange brown to pale grey in colour, was identified between 0.25m and 0.32m below the ground surface and contained approximately 5% angular and sub-angular stones. This deposit was overlain by a mixed deposit of clay and loam, which was on average between 0.04m and 0.05m in depth. This was in turn overlain by a turf and topsoil deposit of very dark grey clay loam, approximately 0.17-20m in depth. Five modern ceramic field drains aligned north-west/south-east were encountered directly above the natural clay deposits.

A narrow band of silty dark grey material, 0.15m deep, was encountered midway along the eastern section of the trench directly below the topsoil. This silty grey material contained a high proportion of small coal flecks and small stone fragments. It may provide evidence of upcast resulting from nearby mining activity although no shaft was encountered. Two further stone-filled drains of a similar size and character to that encountered within Trench 6 were also identified.

ILLUSTRATIONS

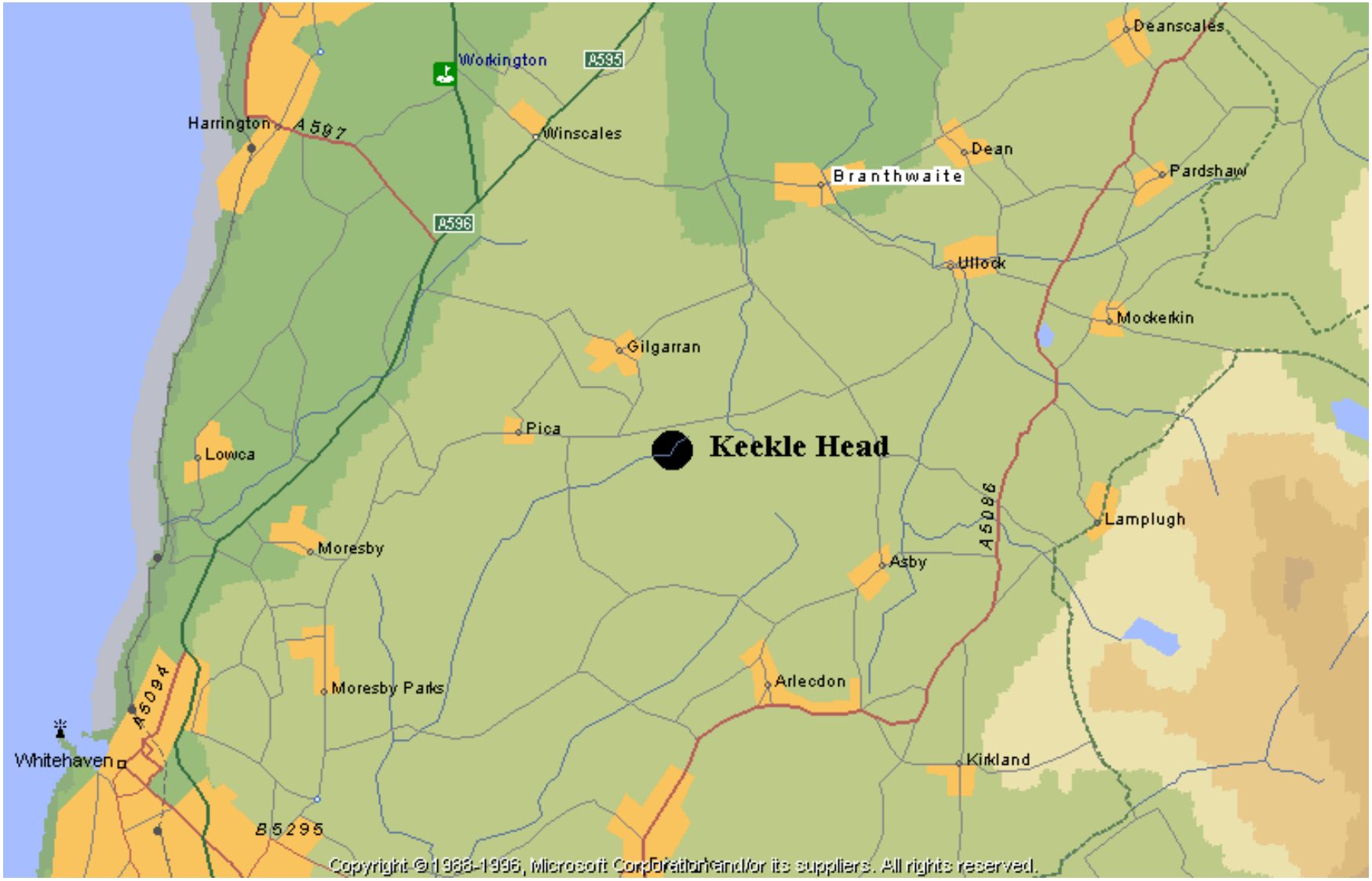


Fig 1 Keekle Head Location Plan

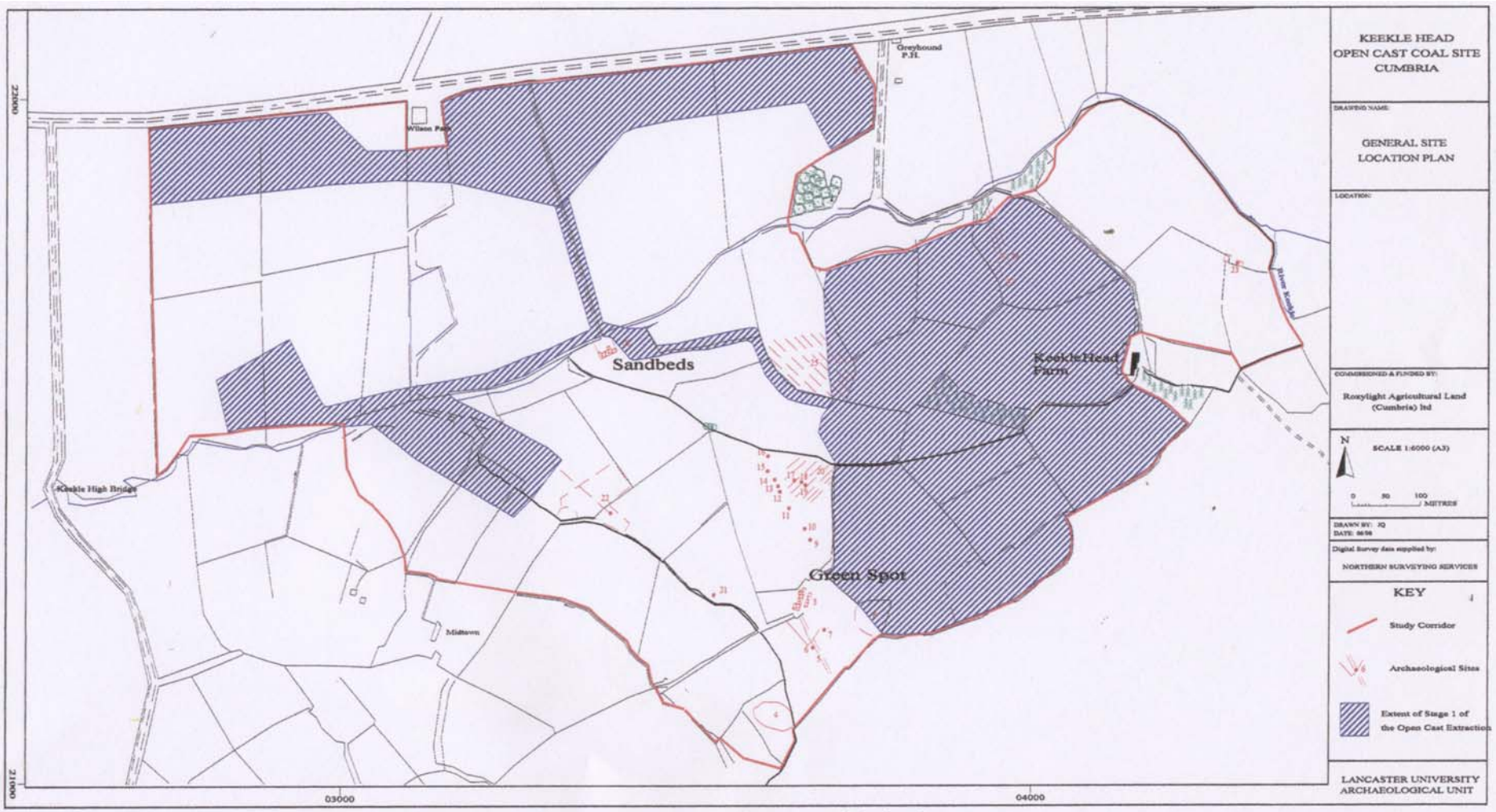


Fig 2 General Site Location Plan showing the proposed 1st stage of the development

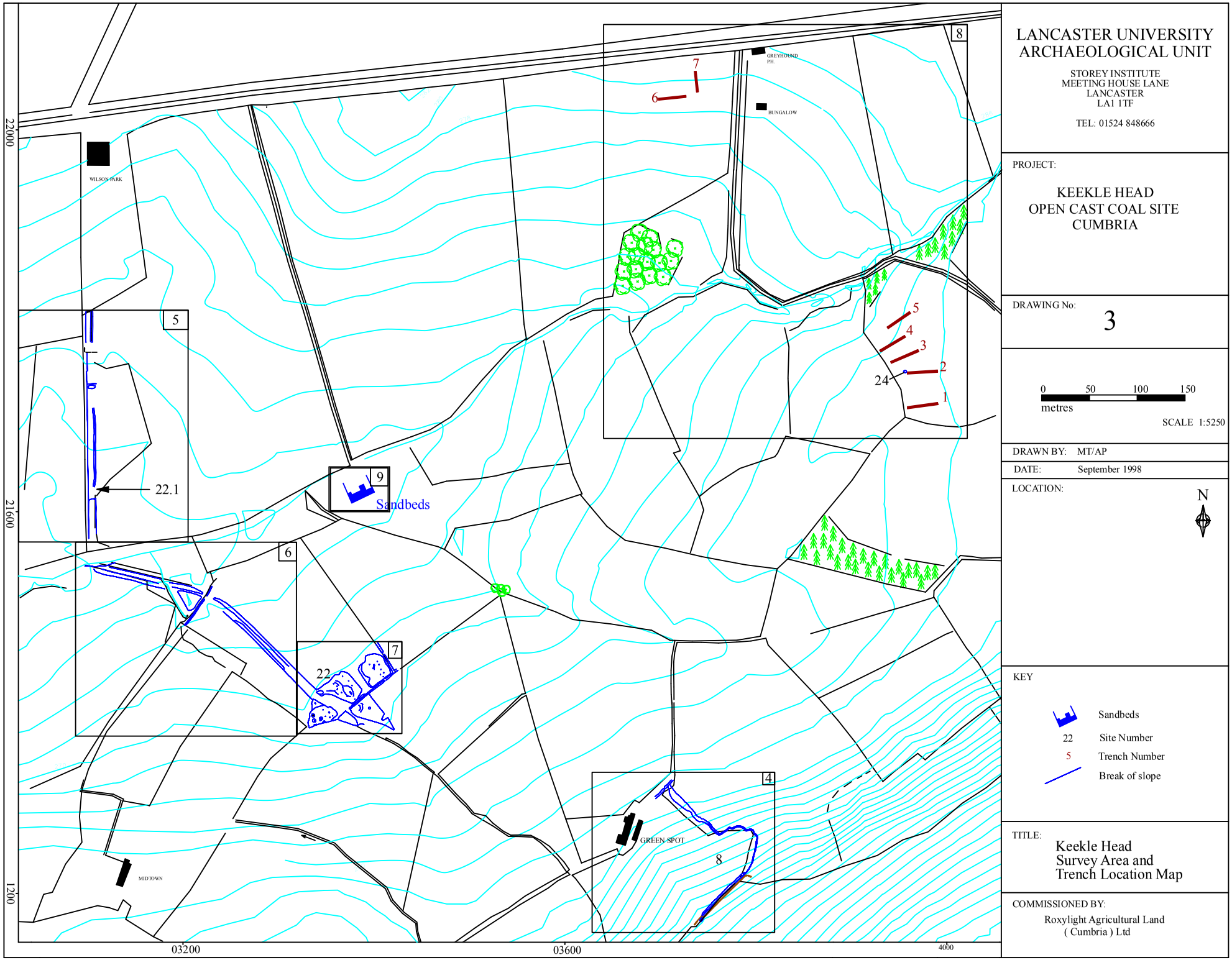


Fig 3: Keekle Head - Survey Area and Trench Location Map

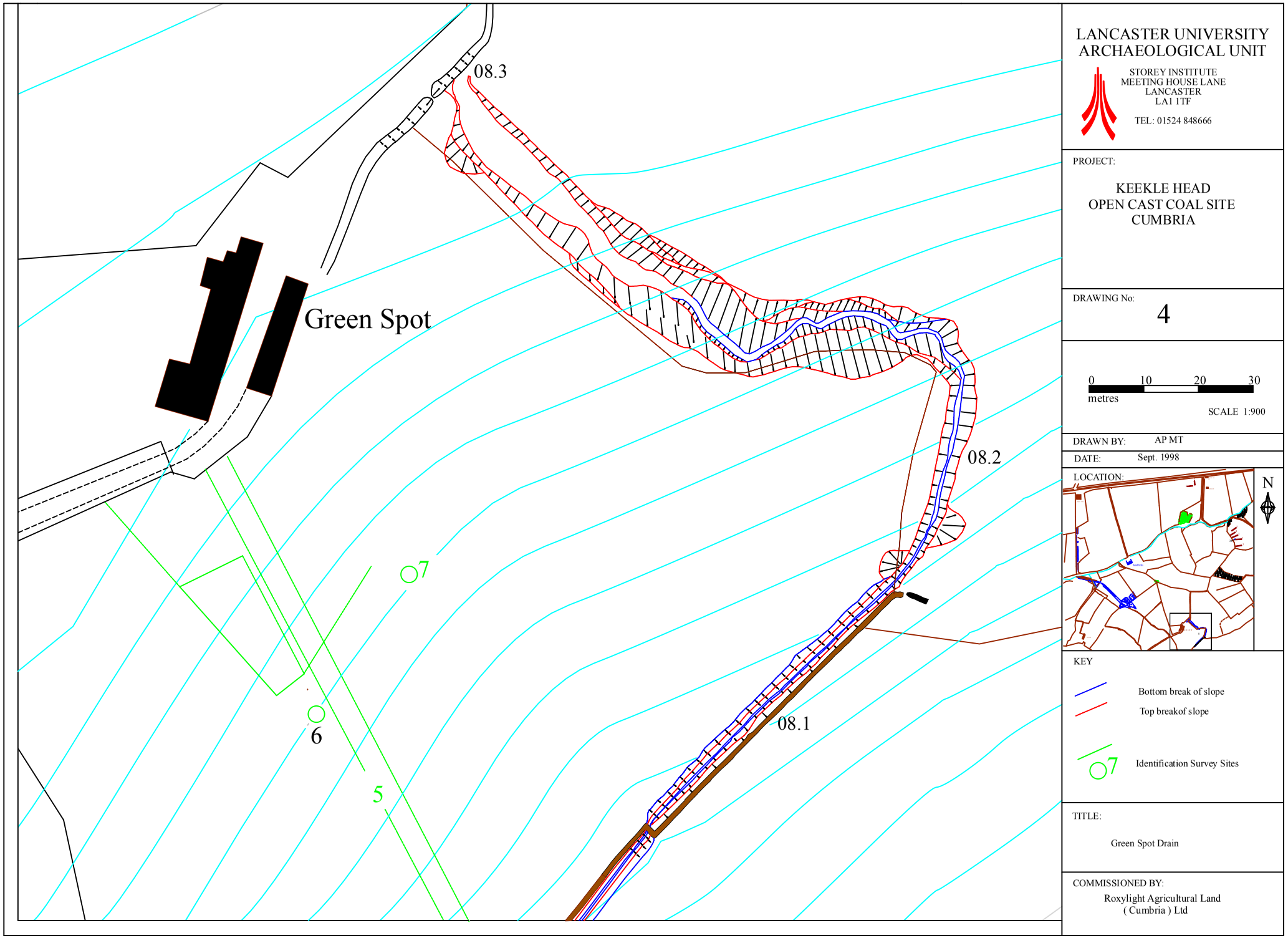


Fig 4 Green Spot Drain (Site 08)

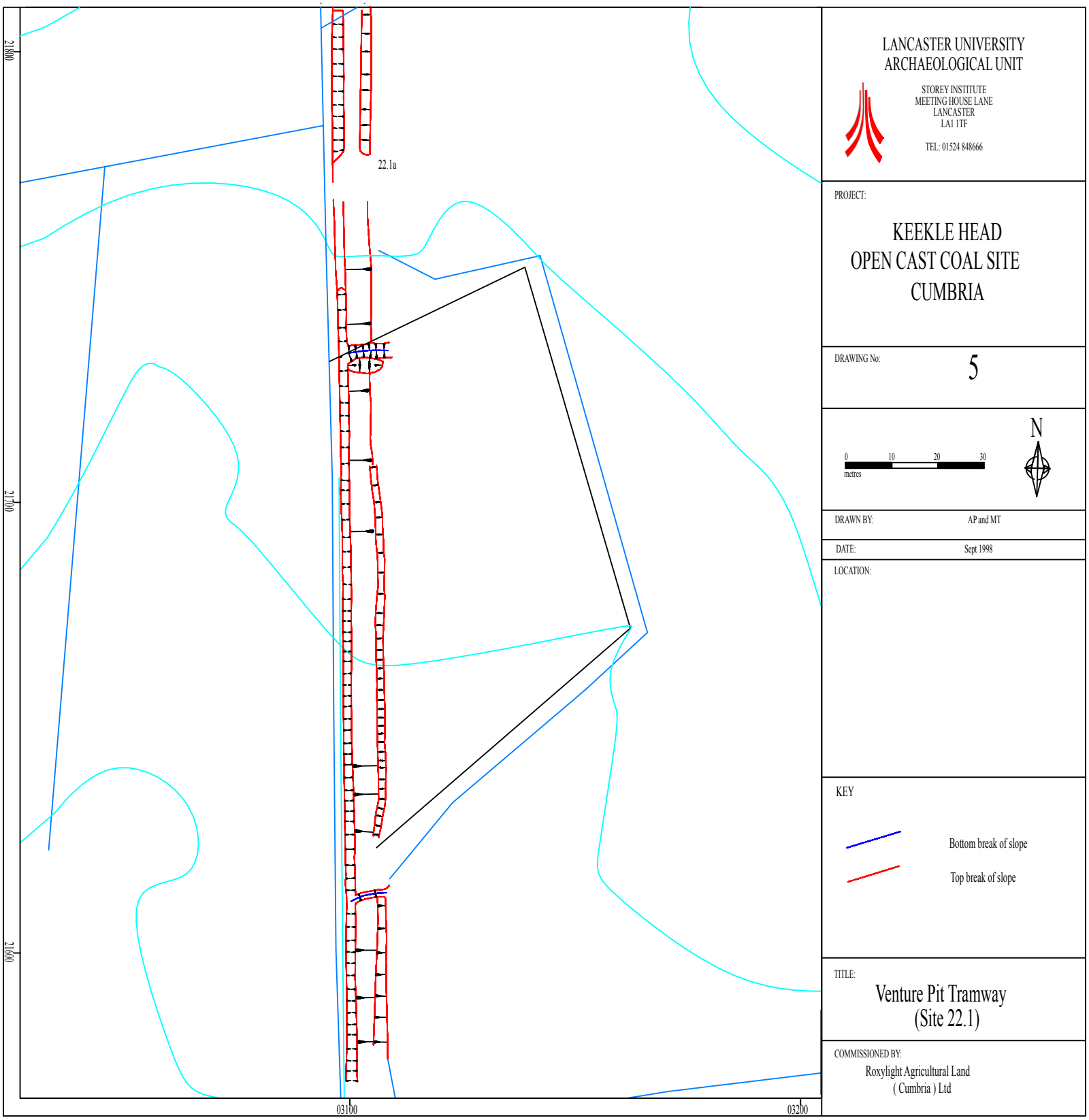
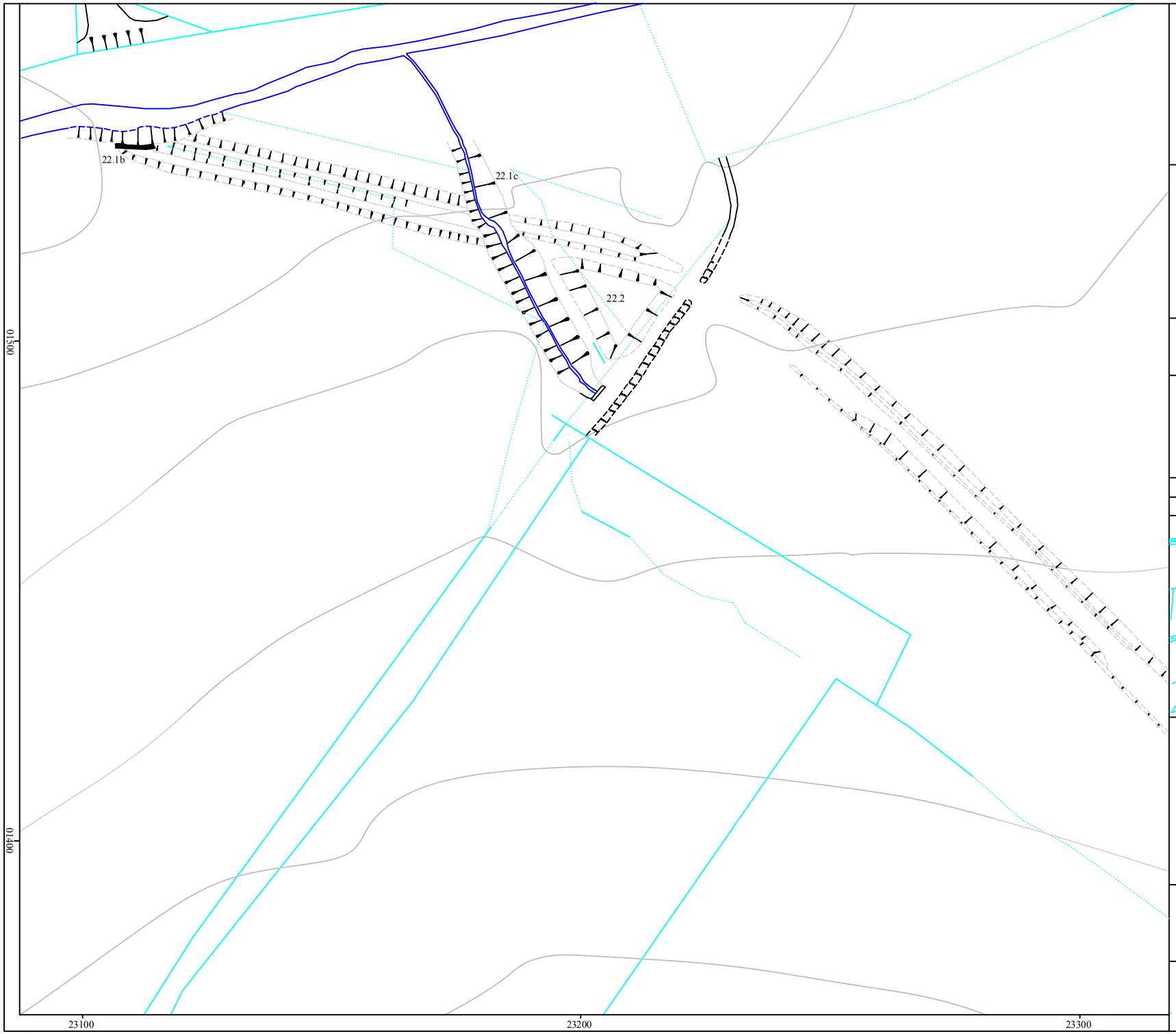


Fig 5 Venture Pit Tramway (Site 22.1) - Northern Section



LANCASTER UNIVERSITY
ARCHAEOLOGICAL UNIT

STOREY INSTITUTE
MEETING HOUSE LANE
LANCASTER
LA1 1TF

TEL: 01524 848666

PROJECT:

KEEKLE HEAD
OPEN CAST COAL SITE
CUMBRIA

DRAWING No:

6

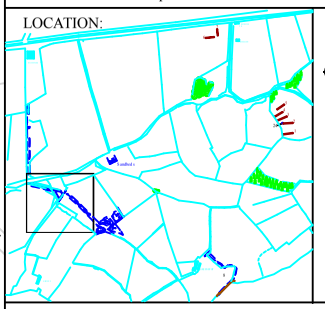
0 10 20 30
metres

SCALE 1:1100

DRAWN BY: AP MT

DATE: Sept. 1998

LOCATION:



KEY

Break of slope

Field Boundary

Fenced Field Boundary

22.2 Site number

TITLE:

Venture Pit Tramway (Site 22.1)

COMMISSIONED BY:

Roxylight Agricultural Land
(Cumbria) Ltd

Fig 6 Venture Pit Tramway (Site 22.1) - Southern Section

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STOREY INSTITUTE
MEETING HOUSE LANE
LANCASTER
LA1 1TF

TEL: 01524 848666

PROJECT:

KEEKLE HEAD
OPEN CAST COAL SITE
CUMBRIA

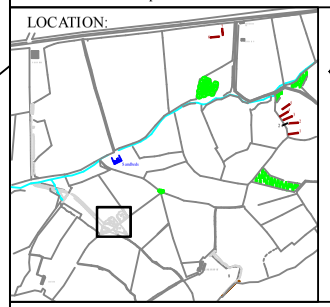
DRAWING No: 7

0 5 10 15
metres

DRAWN BY: I.S. A.P. M.T.

DATE: September 1998

LOCATION:



KEY

Break of slope

22.3 Site sub-division

TITLE:

Venture Pit

COMMISSIONED BY:

Roxylight Agricultural Land
(Cumbria) Ltd

Fig 7: Venture Pit (Site 22)

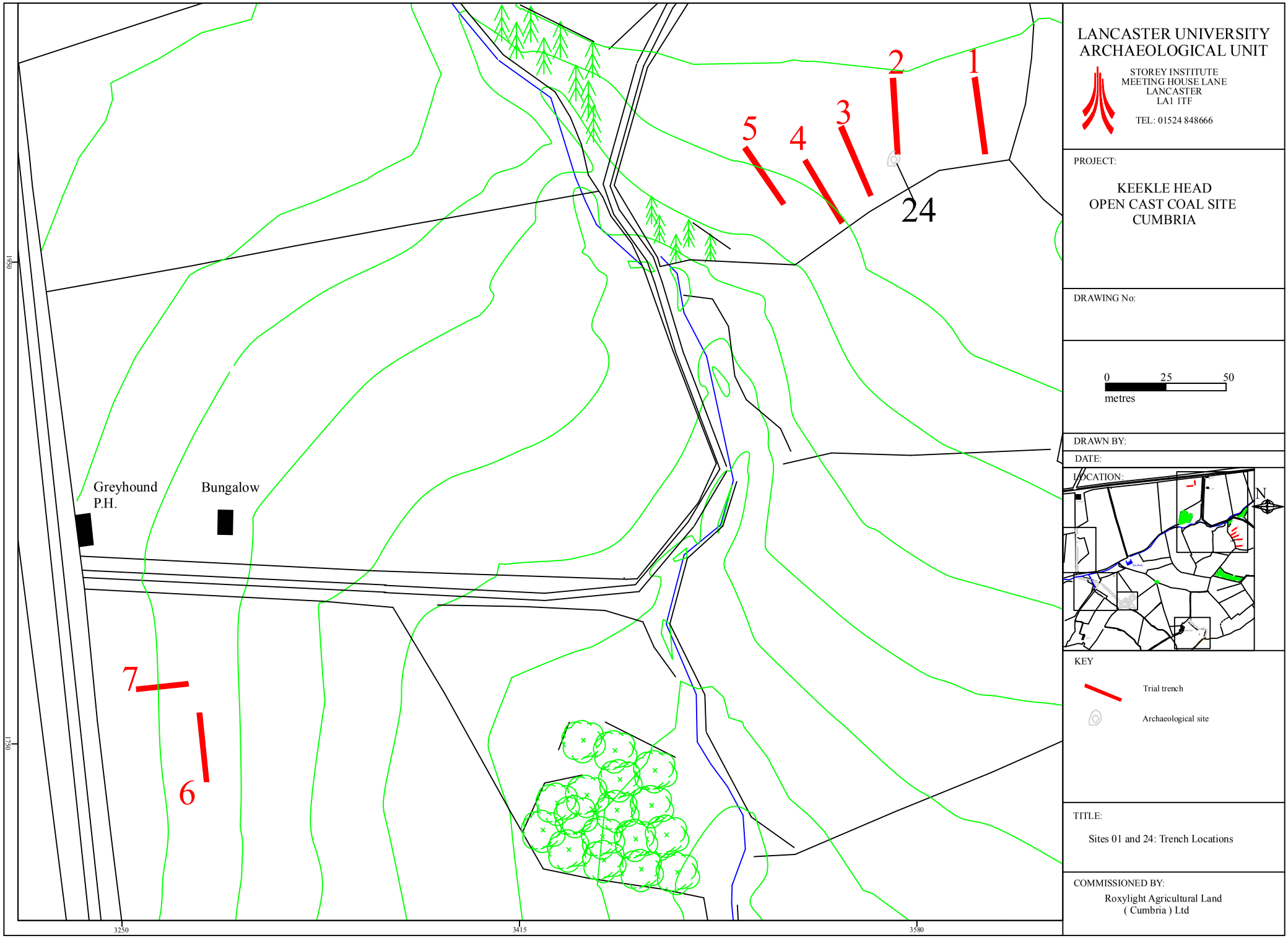


Fig 8 Sites 01 and 24: Trench Locations

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STOREY INSTITUTE
MEETING HOUSE LANE
LANCASTER
LA1 1TF

TEL: 01524 848666

PROJECT:

KEEKLE HEAD
OPEN CAST
COAL SITE

DRAWING No:

9

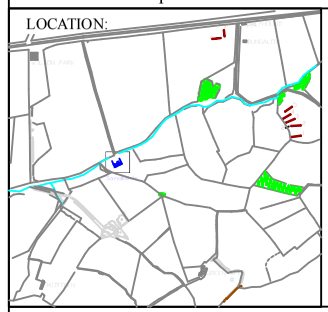
0 1 2 3 4
metres

SCALE 1:150

DRAWN BY: A.P.

DATE: September 1998

LOCATION:



KEY

- sandstone
- brick
- timber
- breeze-block
- window

TITLE:

Ground Floor Plan

COMMISSIONED BY:

ROXYLIGHT AGRICULTURAL
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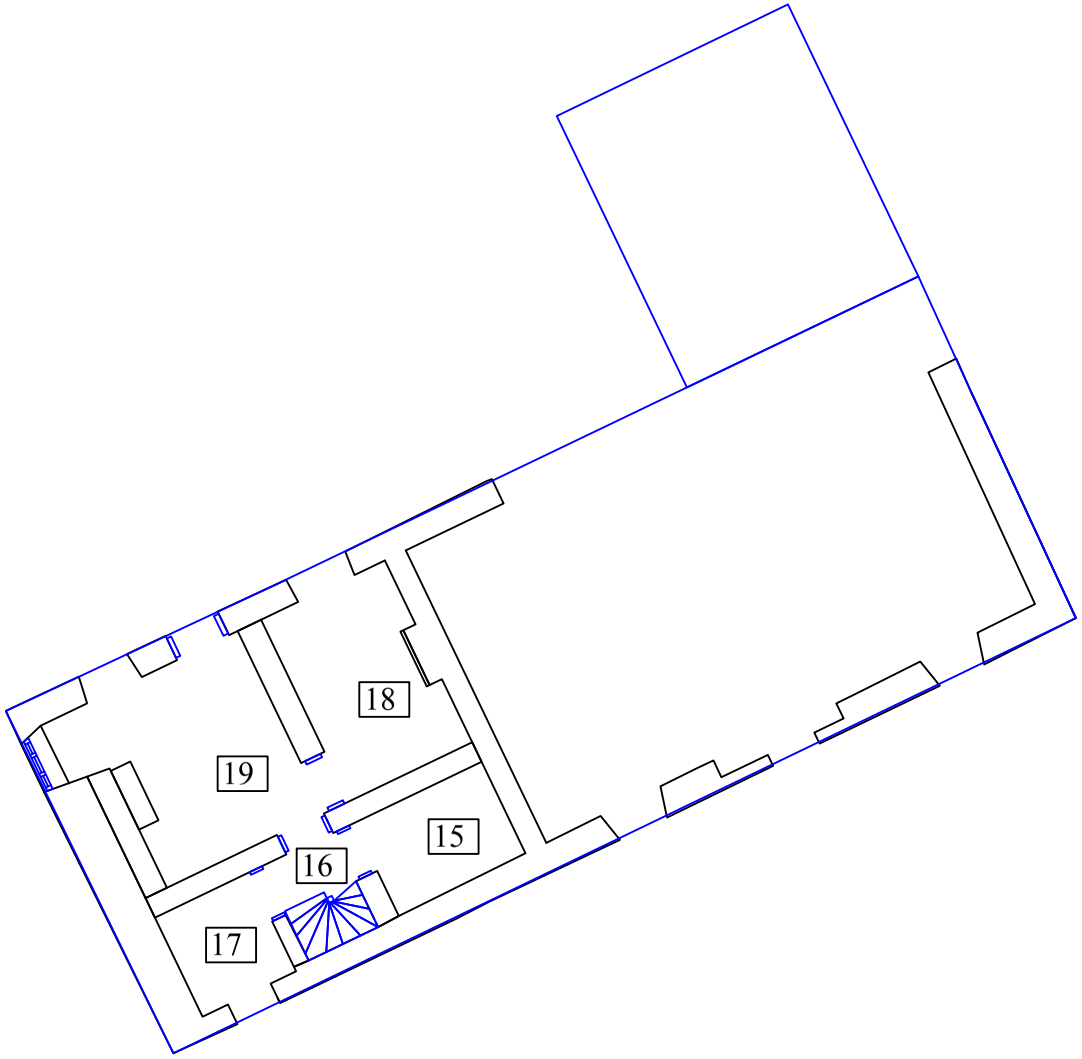
Fig 9: Ground Plan- Sandbeds Farm



21630
21620
21610

03380 03390 03400

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MEETING HOUSE LANE
LANCASTER
LA1 1TF

TEL: 01524 848666

PROJECT:

KEEKLE HEAD
OPEN CAST
COAL SITE

DRAWING No:

10

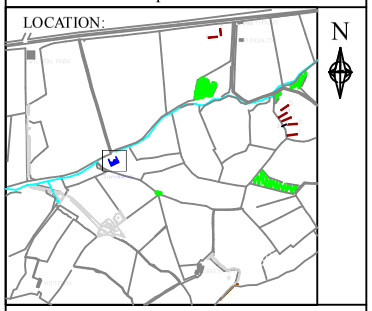
0 1 2 3 4
metres

SCALE 1:150

DRAWN BY: A.P.

DATE: September 1998

LOCATION:



KEY

TITLE:
First Floor Plan

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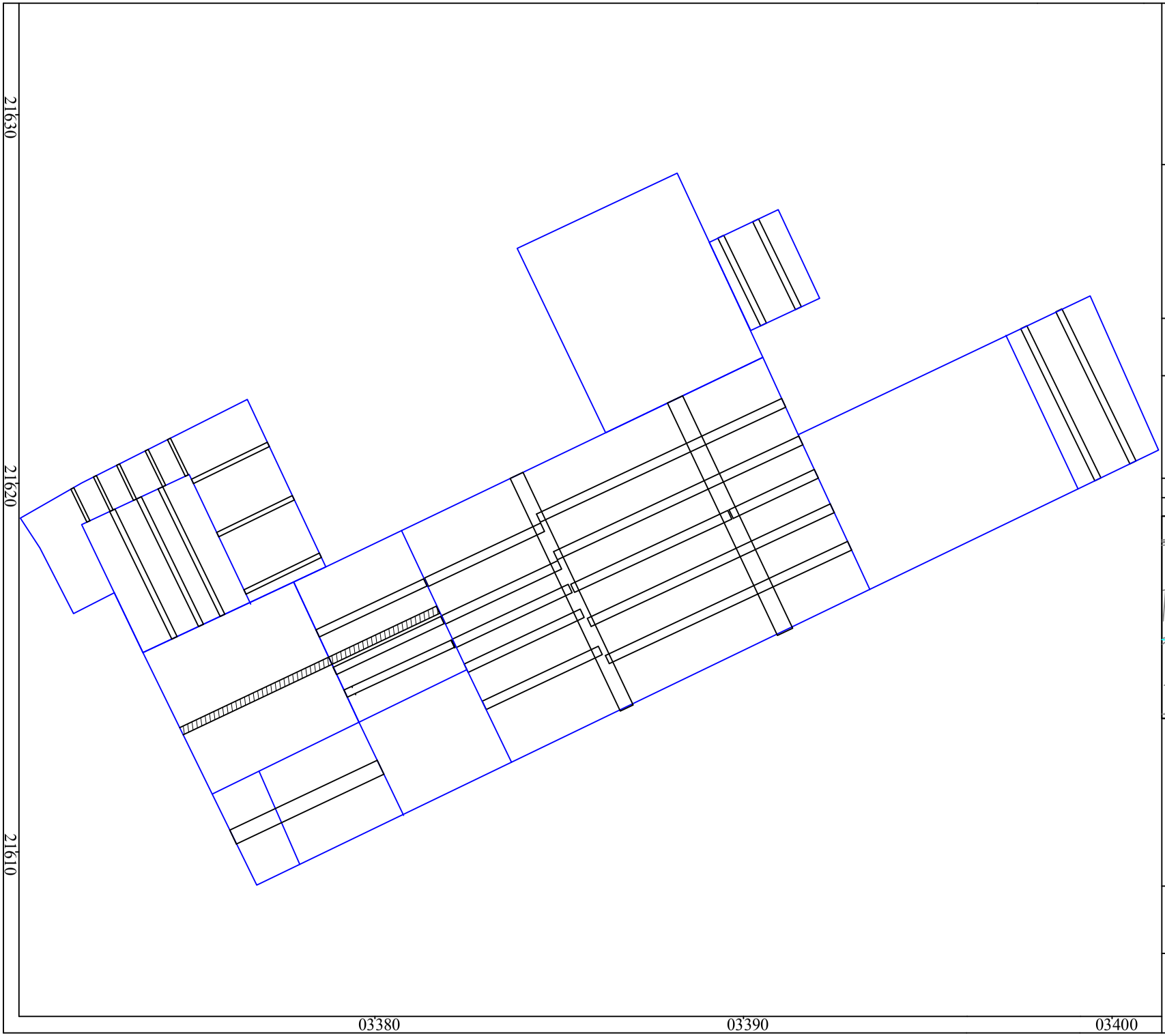
Fig 10 : First Floor - Sandbeds Farm



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LANCASTER
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PROJECT:

KEEKLE HEAD
OPEN CAST
COAL SITE

DRAWING No:

11

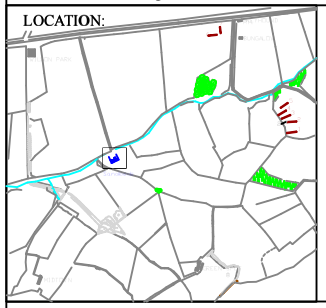
0 1 2 3 4
metres

SCALE 1:150

DRAWN BY: A.P.

DATE: September 1998

LOCATION:



KEY

original purlin

modern purlin

roof outline

TITLE:
Sketch of Roof Structure

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Fig 11 : Sketch of Roof Structure - Sandbeds Farm

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PROJECT:

KEEKLE HEAD
OPEN CAST
COAL SITE

DRAWING No:

12

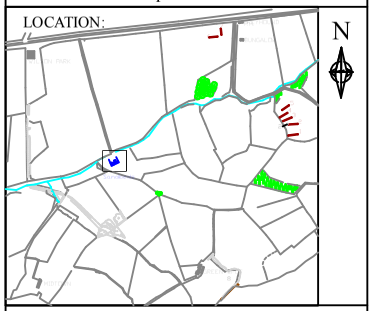
0 1 2 3 4
metres

SCALE 1:100

DRAWN BY: A.P.

DATE: September 1998

LOCATION:



KEY

phase 1

phase 2

phase 3

TITLE:
Sandbeds Phase Plan

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Fig 12: Phase Plan - Sandbeds Farm

PHOTOGRAPHS

Plate 1 Venture Pit Tramway (Site 22.1)

Plate 2 Green Spot Drain (Site 08) looking north-east

Plate 3 Sandbeds Farmhouse and Barn – South Elevation

Plate 4 Sandbeds Barn and Phase II/III Extensions – East Elevation

Plate 5 Sandbeds Farmhouse Roof, Showing Rough Sawn Purlin

Plate 6 Sandbeds Room 5