KENTMERE HORSESHOE, LAKE DISTRICT NATIONAL PARK, CUMBRIA

Archaeological Evaluation

Client: Lake District National Park Authority
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Non-Technical Summary

As part of a programme of repairs to the footpath between Froswick and Thornthwaite Crag, which forms part of the Kentmere Horseshoe and follows the line of the High Street Roman road, an archaeological evaluation and associated topographic survey was commissioned by the Lake District National Park Authority. The repairs to the footpath were to comprise the building of a raised surface using a mechanical excavator, so not only was there considerable risk to the remains of the road, but it provided an opportunity to utilise the excavator during the investigation, thus enabling the work to take place. The investigation was intended to record the extant earthworks prior to the construction of the new footpath and evaluate the presumed route of it in three places.

The Roman road running between Froswick and Thornthwaite Crag forms the southern end of a route thought to link the fort at Brougham near Penrith with those at Ambleside and Kendal. The exact route south of Froswick towards Troutbeck has always been uncertain, however, and there are at least two possible alternatives. Previous investigation of this route has been limited, probably in part due to the difficult topography, to small-scale excavations carried out in the 19th century, which seem to have been some distance to the north of the survey area. These produced varying results; although a 'paved' surface of some description was apparently present the road had clearly been eroded by subsequent use.

The topographic survey revealed that the earthworks in the survey area formed three distinct blocks, with those at the far north end including possible quarries, and the two sections delineating the route of the road separated by an area with no surviving earthworks. The road itself was visible as a bank cut into the hillside to form a level terrace. The evaluation identified the road surface in all three trenches, although it was clearly eroded and built largely of gravels and pebbles. In each trench, however, there were additional features clearly related to attempts to keep water and peat from encroaching onto the road. In one trench this took the form of a large gravel-filled ditch, and in the other two, a large bank built of clay and gravel.

The construction of the road is perhaps not typical for the Roman period, but this is most probably due to the difficult terrain and the practical requirements of the location, which necessitated a number of water-management features. While nothing was found that could directly date the road, the level of engineering, design and amount of time that evidently went into building it would suggest that it is of Roman origin.

Acknowledgements

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The desk-based assessment and topographic survey were carried out by Daniel Elsworth and Jo Dawson, and the evaluation was carried out by Daniel Elsworth, Craig Appley, and Jo Dawson. The samples were processed by Craig Appley and assessed by Scott Timpany of Headland Archaeology, following advice from Tim Holden, also of Headland Archaeology. The drawings were produced by Craig Appley, Daniel Elsworth, and Sam Whitehead. The report was written by Daniel Elsworth and edited by Jo Dawson.

1. Introduction

1.1 Circumstances of the Project

1.1.1 The Lake District National Park Authority (LDNPA) was undertaking footpath repair work on the route from Froswick to Thornthwaite Crag in Kentmere (*Appendix 1*). As a result, it was considered likely that the route of the High Street Roman road would be affected (centred on NY 4325 0911; Fig 1), as the line of the footpath follows this in places. In order to assess the effect that this might have, and record the remains prior to any work being carried out, a programme of archaeological work was devised. This was to comprise a topographic survey of the affected section of the Roman road, and the excavation of three evaluation trenches across it.

1.2 Location, Geology and Topography

1.2.1 The hill known as High Street rises to a height of approximately 750m above sea level (Ordnance Survey 2002), and the Roman road examined crosses it at almost its highest point, making it the most elevated in the country. The section of road being investigated is at a height of up to 704m above sea level (Plate 20). The topography at this point is extremely steep, and dominated by mountainous conditions, but in the more general area it varies considerably and the ridges and crags are contrasted with more sheltered valleys containing woodland, streams, and lakes (Countryside Commission 1998, 31). The solid geology of the wider area is complex, but around High Street it largely comprises Borrowdale volcanics (Moseley 1978, plate 1), which are made up of re-worked layers of lavas and volcanic sediments (Countryside Commission 1998, 33).

1.3 Previous Work

1.3.1 There has been a limited amount of archaeological investigation of the Roman road on High Street, all of which was done during the 19th century. This is outlined below and included in the background (*Section 3*) and discussion (*Section 6*) where relevant.

- ***Nicholson 1861***: in the second edition of the *Annals of Kendal* Nicholson states that he exposed '*the Roman pavement in two or three places*' on High Street (Nicholson 1861, 7). It is not clear from his description where this was, or at which date these excavations were carried out, although it was presumably some time between 1832 (the date of the first edition of the *Annals of Kendal*) and 1861. The road is described as being one foot beneath the turf, but no other details are given (*ibid*);
- ***Haverfield 1898***: in 1898 two sections of the road were excavated by Mr Grundy and Mr Parkin, the results of which were reported in the *Transactions of the Cumberland and Westmorland Antiquarian and Archaeological Society*. The first of these was near Loadpot Hill and Elder Beck, where the road was found to be constructed from four layers or gravel and/or stone (Haverfield 1898, 361). The second trench was approximately two miles north, and was bounded by curbs but the majority of it had been severely affected by later use (*op cit*, 362).

2. Methodology

2.1 Introduction

2.1.1 Various techniques were utilised during the investigation of the site in line with the project brief and project design (*Appendices 1* and *2*, respectively*)*. These are individually described below.

2.2 Rapid Desk-Based Assessment

2.2.1 An examination of both primary and secondary sources from the area around High Street was carried out in order to assess the archaeological resource of the area, the results of previous work, and provide a historical and archaeological background to the site. This allows the results of the survey and evaluation to be placed in their local context and be compared with previous work. All aspects of the desk-based assessment were carried out according to the standards and guidance of the Institute of Field Archaeologists (IFA 2001a).

2.2.2 The desk-based assessment included a large element of map regression, which was able to show early depictions of the route of the Roman road and provide information about any other features that may have affected it. In addition, any other relevant primary sources relating to the area were also consulted in order to establish additional information about the site. Secondary sources relating specifically to studies of the Roman road and to the general history of the local area were also examined to provide a historical context for the results of the investigation. A number of sources of information were used during the desk-based assessment:

- ***Lake District Historic Environment Record (LDHER)***: this is a list of all the known sites of archaeological interest within the Lake District National Park, which is maintained by the LDNPA and is the primary source of information for an investigation of this kind. A list of the known sites of archaeological interest in and around High Street was acquired; the entry for each site includes a grid reference, description and source and any additional information referenced was also examined as necessary. The vertical aerial photograph coverage for the site was also examined;
- ***Cumbria Historic Environment Record (HER)***: additional oblique photographs of the High Street Roman road were examined at the Cumbria HER in Kendal (CCC n.d.; MU CS n.d.) but these did not provide any useful additional information about the site;
- ***Cumbria County Record Office, Kendal (CRO(K))***: this was visited in order to examine early maps and plans of the site, and local and regional histories and other secondary sources;
- ***Greenlane Archaeology***: additional secondary sources held by Greenlane Archaeology were also examined, in particular the *Transactions of the Cumberland and Westmorland Antiquarian and Archaeological Society*, in order to provide further information for the site background.

2.3 Site Visit

2.3.1 A brief visit to the site was carried out with Eleanor Kingston on the 5th July 2006 in order to assess the likelihood of any impediments to fieldwork, establish the extent of the earthworks and the area to be surveyed, and position pegs. In addition the location of two of the evaluation trenches was agreed, and their positions were recorded, and this information was then passed on to English Nature by Eleanor

Kingston. This was done because the site lies within a Site of Special Scientific Interest (SSSI).

2.3.2 The pegs and trench locations were positioned using a hand-held GPS accurate to within 1m provided by the LDNPA.

2.4 Earthwork Survey

2.4.1 The earthwork survey was carried out using a total station connected to a portable tablet computer operating TheoLT and AutoCAD LT. This enabled the survey data to be inputted directly into the computer in real-time and at a scale of 1:1, which ensured that the results were extremely accurate and that any errors could be identified on site and corrected. For each earthwork the line of the top and bottom break of slope was plotted, and, in addition, the outline of other features such as the limits of the present footpath was plotted. Profiles were also taken across the presumed line of the road to produce a cross-sectional view of the earthworks.

2.4.2 The resulting survey information was then printed onto paper at a suitable scale, typically 1: 100 or 1: 200 for the earthworks and 1: 50 or 1: 100 for the profiles. These print-outs were then hand-annotated with any necessary detail on drawing film overlays to produce complete hard-copies of all of the earthworks. More detailed written records were also made and black and white print and colour digital photographs were taken.

2.5 Archaeological Evaluation

2.5.1 Three archaeological evaluation trenches were excavated across the presumed line of the Roman road, covering an area of approximately 24m^2. These were positioned in relation to earthworks visible on the site during the site visit, and intended to identify the form, character and survival of the road in this area. Each trench was excavated stratigraphically using a mix of machine and hand excavation techniques. Three trenches were excavated, each approximately 5m long and 1.6m wide (Plate 21), and in each case a number of recording techniques were used:

- ***Written record***: descriptive records of all deposits and structures were made using Greenlane Archaeology *pro forma* record sheets. In addition, a general record of each trench and the day's events was also made;
- ***Photographs****:* photographs in both 35mm black and white print and colour digital format were taken of significant deposits or features uncovered during the evaluation, general views of the evaluation trenches, the surrounding landscape, and working shots. A selection of the colour digital photographs is included in this report, and the remainder is presented on the accompanying CD. A written record of all of the photographs was also made on Greenlane Archaeology *pro forma* record sheets;
- ***Drawings***: drawings were produced for each trench. These comprised:
    i. plans of the features within each trench, at 1:20;
    ii. one long-section of each trench, at 1:20;

2.5.2 The location of each trench was recorded using a total station, and levels were added to all of the plans and sections in the same way. These were tied in to the survey pegs positioned during the site visit, which had heights above sea level provided using the GPS. All aspects of the evaluation were carried out according to the standards and guidance of the Institute of Field Archaeologists (IFA 2001b).

2.6 Finds

2.6.1 All deposits beneath the topsoil were examined by hand in a systematic fashion, in which manner any finds that were present would be recovered. The overlying topsoil was in all cases a thick layer of waterlogged peat, although this was sample excavated by hand where possible. In general, however, this was found to be extremely difficult and the peat had to be removed using the machine or with a mattock and shovel in many cases, although lumps were broken open and examined for finds periodically while this was carried out.

2.7 Environmental Samples

2.7.1 ***On-site sampling:*** bulk samples were taken from contexts (see *Appendix 4*) according to the sampling strategy set out in the project design (*Appendix 2*).

2.7.2 ***Processing:*** all samples were processed using flotation techniques, with 250µm and 500µm sieves used for the flots, and a 1mm mesh used for the retents. The flots and retents were then naturally air dried.

2.7.3 ***Retent sorting:*** the retents were sorted systematically by eye, and ecofacts were removed and bagged for retention (artefacts would also have been removed had any been present). The remaining portion of the retents was recorded on *pro forma* sheets, and it was then discarded. Any ecofacts retrieved from the retents were recorded on the same *pro forma* sheets, and were rapidly assessed for their suitability for radiocarbon dating by the relevant specialist (see *Acknowledgements*).

2.7.4 ***Flot assessment:*** a rapid visual assessment of the flots for ecofacts and charred remains, specifically those that could be used for radiocarbon dating, was carried out by the relevant specialist (see *Acknowledgements*).

2.8 Archive

2.8.1 A comprehensive archive of the project has been produced in accordance with the project design (*Appendix 2*), and current IFA and English Heritage guidelines (Ferguson and Murray n.d.; English Heritage 1991; see index in *Appendix 5*). The paper and digital archive and a copy of this report will be deposited in the Cumbria Record Office in Kendal on completion of the project. Four copies of this report will be deposited with the Lake District National Park Authority Historic Environment Record (HER), and one will be retained by Greenlane Archaeology. In addition, a digital copy will be offered to the NMR and a record of the project will be made on the OASIS scheme.

2.8.2 It is envisaged that all of the ecofacts recovered during the evaluation will be discarded as they have no further potential.

3. Desk-Based Assessment

3.1 Background History

3.1.1 ***Introduction***: for a Roman road the High Street has a remarkably complex history, even though it was apparently not recorded as such until the beginning of the 19th century. Many of the early writers (Nicolson and Burn 1777; West 1802) apparently made no mention of it, and the first published reference to it seems to be in the *Beauties of England and Wales* published in 1814 (Britton *et al* 1814).

3.1.2 ***Early History***: the date of origin of the road across High Street is not known for certain, although the general assumption is that it connected the fort at Brougham to a road between the forts at Kendal and Ambleside (see for example Hindle 1977a, 10). This would suggest it was likely to have been constructed during the late 1st to early 2nd century AD, the period in which the latter two forts were established (Shotter 2004, 53).

3.1.3 It has been suggested that the Roman road followed a trade route that was already in existence, and that had its origins in the Neolithic (Plint 1962, 19). This notion is, however, based on the presence of stray finds along an assumed high-level route connecting the axe factories to the south-west with settlements at Bampton Common and Shap (*ibid*), and has no other evidence to support it. Proof of a Roman date has also not been forthcoming however, although the name evidence alone is enough to suggest that this is very likely (Hindle 1984, 15), and the obvious presence of earthworks supports this. The place-name evidence also demonstrates that a road was known, and possibly even in use, during the early medieval period (Smith 1967, 167; Hindle 1977b, 83), and this is, in a sense, the first written record.

3.1.4 There are, however, early references to what is thought to be the Roman road dating to the 13th century. A charter from between 1220 and 1247 relating to land in the area states that the '*Bretstrett*' (interpreted as meaning 'road of the Britons' (Hindle 1984, 16), or possibly from the Norse meaning 'broad road' (*op cit*, 179)) formed one of the boundaries (Ragg 1910, 436). Place-name evidence from the area around High Street has also been taken to suggest that the road may have played an important route for incomers following the collapse of Roman Empire (Higham 1986, 328), and whether this was the case or not it was almost certainly in use for some time after (RCHME 1936, xliv). One earlier commentator also named part of the route 'Scot-raik' or 'Scot-rake' (Nicholson 1861, 7). 'Rake' is probably derived from the Norse word for a path up a hillside, while 'Scot' suggests it may have been used during the Scottish raids of the 14th century (Gambles 1994, 50).

3.1.5 ***Later history***: the identification of the Roman road on High Street in the early 19th century was, perhaps surprisingly, not followed by an immediate investigation, at least as far is known. It certainly caught the interest of many antiquarians and archaeologists during the mid to late 19th century, however, although most only visited or commented on it – the severe terrain clearly dissuaded excavation. Ferguson, writing in 1877, noted that the High Street had been used as a packhorse route (Ferguson 1877, 65), a comment enlarged upon by Haverfield writing 20 years later: '*these packhorse tracks represent a trail across the fells used frequently by peat-carriers taking peat down to Windermere in the days before railways made coal abundant*' (Haverfield 1898, 362). The railway between Kendal and Windermere was constructed in 1847 (Marshall and Davies-Shiel 1969, 190), so this traffic presumably stopped shortly after this date and was something of a distant memory by 1898, and perhaps even 1877.

3.1.6 The earliest discussion of the road concentrated on its construction, which was considered to be similar to the road over Whinfell (Wilson 1884, 94). This was found to be '*formed in a very durable and substantial manner, it is raised above the ordinary level of the surrounding ground; it has been paved, channelled, and thoroughly drained, and has been dry and hard, and available for a rapid heavy traffic in all weathers. The width is uniform throughout*' (*ibid*). The first excavation of part of the High Street appears to have been carried out by Cornelius Nicholson some time prior to 1861, but he gives little detail of his discoveries or the location of his trenches (see *Section 1.3*; Nicholson 1861).

3.1.7 A more detailed excavation was carried out by Grundy and Parkin in 1898, although this was some distance to the north of the present area of investigation (Haverfield 1898, 360-363). In the trench closest to the site (although this was still over 8km to the north of the study site) the road was found to be about ten feet wide at the top, 15-16 feet wide at the bottom, and constructed from four layers: '*first the surface and a layer of vegetable matter… then, a layer of gravel, like river gravel save that the stones were not rounded, 9ins. thick on the crown of the road but tapering off at the side: thirdly, a layer of peat, 8ins thick, and lastly a layer of larger stones, rough but obviously quarried and more than two feet thick*' (*op cit*, 362). There was no trace of any curb stones. The other trench, which was approximately two miles further north, found curb stones nine inches across, but the road surface was severely worn by packhorse tracks and could not easily be distinguished (*ibid*). A subsequent note records that the peat enabled the preservation of 'fascines' (RCHME 1936, xliii) - long bundles of timber used for lining or filling trenches (Fowler and Fowler 1977, 295).

3.1.8 By the beginning of the 20th century research into the High Street had begun to concentrate its attention on the route the road was taking and its position within the wider network of roads and forts that had been identified by that time. Nicholson had already stated that there were two roads leading from the south onto High Street; one running along the valley bottom from Troutbeck and up a steep path called 'Scot-Raik' (Nicholson 1861, 7). The other ran from Kendal, along the edge of 'Hill Bell' (Ill Bell) and Froswick and joined the lower road at High Street (*ibid*). This description, it seems, confused subsequent investigation, and Haverfield complained less than 40 years later of being '*only able to identify what I suppose Nicholson calls the "Scot-raik" – a well marked road or packhorse track*' (Haverfield 1898, 360). In 1882 remains of a Roman road thought to be heading towards High Street were also said to be situated near a prehistoric settlement site at Hugill (Wilson 1882, 86), although it is not certain what this is referring to.

3.1.9 Clearly two routes were still visible at around this time as a party visiting the site only five years before Haverfield appear to have descended into the Troutbeck valley via a higher route than the 'Scot-Raik' (Anon 1893, 84). This confusion clearly developed during the early 20th century, and WG Collingwood's gazetteer of sites in the county describes the Roman road and '*Scot's Rake*' as one and the same (Collingwood 1926, 26). Shortly afterwards RG Collingwood examined the route in more detail, and concluded that the Roman road actually followed the lower route into the valley, and that the road skirting Ill Bell was later in date and connected with Garburn pass (Collingwood 1930, 118). He also considered the Roman road to continue in the direction of Allen Knott (which has a univallate enclosure on it, considered by WG Collingwood to be post-Roman (Collingwood 1913, 145), but more recently interpreted as Early Iron Age (Lowndes 1964, 96)), rather than towards the fort at Ambleside (Collingwood 1930, 118).

3.1.10 Slightly later commentators noted the considerable amount of erosion that had occurred along the route of the road (which had been mentioned before),

particularly in relation to the effects of severe weather and solifluction (Hay 1938). The 'Shepherd's' meet', occurred on part of the hillside, where tests of '*strength and skill in athletic exercise*' took place (Allom and Rose 1858, 64), and on an area of the mountain called 'Racecourse Hill', as the name suggests, horse races were also held (*op cit*, 47; Thompson 1942, 41). These events undoubtedly also increased the erosion of the local topography. Debate has continued ever since, however, regarding the date, use and direction of the road over High Street (Birley 1948, 16; Simpson 1958, 69-70; Plint 1962, 19; Hindle 1977a, 83-4; 1977b, 9; 1984, 18-19). Whichever route is correct, assuming both are not, it does not appear to be running towards the fort at Ambleside (Hindle 1984, 17). However, it may have been intended to join the road known to have connected Kendal and Ambleside, which has potentially been identified as running to the south of Allen Knott on a north-west/south-east alignment (Thornton 1989). Most recently it has been suggested that difficult roads such as High Street were likely to have been largely used for communication rather than for economic purposes, and that they were an important part of the postal service (Higham 1986, 222).

3.2 Map Regression

3.2.1 ***Introduction***: several maps were examined, ranging from those covering the whole county, to more specific maps of the parish. In each case information was acquired from a study of the various maps. The area, being rural, was not surveyed by the Ordnance Survey at 1:2500 scale, and so only maps at 1:10,560 were available. In addition, the landscape changed little, and so there was no edition produced in 1938 and the 1950s. Later 20th century maps that were produced of the area were not held in Cumbria Record Office (Kendal) and so were not examined. Although the enclosure map of 1850 was examined, it did not apparently include the relevant area (CRO(K) WQR/I44 1850).

3.2.2 ***Early County Maps***: several maps from the late 18th and early 19th century were examined (Jefferys 1770; West 1802; Cary 1805; 1829; Greenwood 1824), none of which show the line of the road, but many of which named High Street. None of these provided any additional useful information.

3.2.3 ***Hodgson 1828***: this is apparently the earliest map to not only show High Street, but also the line of the road (Plate 1). It is depicted as skirting round the west side of Ill Bell and Froswick, but the north and south ends are not completed, so it is not clear what the destination to the south is.

3.2.4 ***Corn Rent map c1835*** (CRO(K) WQ/R/C/9 *c*1835): this shows the Kentmere township boundary to the north of the area subject to corn rent (Plate 2). The boundary passes 'Hill Bell' (2436 ft high) and Froswick, before taking a sharp turn south-east. It then goes in a north-easterly direction between 'Hays or East Water' to the north, and 'High Street' (2700 ft high) to the south, and this section of the township boundary is marked 'Roman road' (Plate 3). The section of the road that is examined as part of this study site is not shown on this map. Curiously Hindle (1984, 19) states that '*A corn rent map of 1838 marks two short lengths of track on Yoke at 436062 which are marked as 'Roman Road'; this indicates at least that the track had been constructed, and was then regarded as ancient*'. It is not clear which map he is referring to, as this is not what is shown on the corn rent map of *c*1835.

3.2.5 ***Ordnance Survey 1863:*** this map names 'Scot Rake (Roman Road)' and delineates it with a pair of dashed lines (Plate 4). It is shown as discontinuous between a wider central portion and a narrower southern portion. The northern portion is again narrower before it is cut by a quarry or natural depression. The watershed boundary lies just to the east of the road for most of this section, although

the two cross each other to the south of the possible quarry. The boundary is punctuated by frequent mounds and piles of stones.

3.2.6 ***Ordnance Survey 1899:*** the road is shown and named in essentially the same way as on the previous map (Plate 5). The only significant difference is that whereas there was a clear discontinuity between the central and southern portions of the road shown in 1863, it is now shown as effectively continuous. The boundary previously marked as a watershed boundary has become the Parliamentary County Division Boundary, and the mounds and some of the piles of stones are no longer shown.

3.2.7 ***Ordnance Survey 1919:*** the road is shown and named in the same way as the 1863 map, with the discontinuity present which was not shown in 1899 (Plate 6). The boundary is shown in the same way as on the 1899 map.

3.3 Aerial Photographs

3.3.1 Several aerial photographs covering the survey area were examined in order to identify any visible remains relating to the route of the Roman road. In many of these it was possible to discern the road as a discolouration within the vegetation, presumably representing a parch mark or as a result of upstanding earthworks creating a shadow in low sunlight. A number of features of interest could be discerned, as summarised below.

3.3.2 ***Ordnance Survey 1972***: the entire route of the road between the erosion gulley near Thornthwaite Crag and Froswick is visible in these photographs. It is evident that the road divides immediately to the north-west of Froswick, and while the down hill section is clearly visible the line of the upper route is not clear, although it appears to meet the line of the present footpath along the Kentmere Horseshoe. The section running down hill becomes more dispersed and meanders over a relatively wide area.

3.3.3 ***MAFF 1983***: the route of the road is still visible at this stage, although it is not as clear as it was in the previous photograph; it meanders considerably and has clearly become more eroded. The junction near Froswick is still visible, although it is not as clear.

3.3.4 ***Countryside Commission 1988***: again, the entire route is easily visible as a pale parch mark. The junction near Froswick is still discernable, but it is clearly much eroded and seems to show the road dividing into three separate routes. Immediately west of Froswick is what appears to be a large oval enclosure, but this is probably just part of the natural topography. Further south both a high route along the top of the slope beyond Ill Bell and a low route into the Troutbeck Valley are visible, and it is not clear which is the most likely to be the line of the Roman road, although an obvious linear parch mark is evident on the east side of Hagg Gill part way along the valley.

3.4 Conclusion

3.4.1 The examination of both primary and secondary sources, maps, and aerial photographs demonstrates that there is no consensus of opinion on the most likely route of the Roman road within the survey area. Subsequent use, ranging from pack horses to modern fell-walkers, and possibly including invading Angles, Vikings, and Scots, has also added to the difficulties of interpretation by causing massive erosion in many places. The likelihood is that there are at least two routes leading up onto High Street via Froswick and Thornthwaite Crag, at least one of which is Roman in origin. The other is probably a later addition generated as a packhorse trail, but both

meet on top of the plateau between Froswick and Thornthwaite Crag, where the original line of the Roman road continues north-east onto High Street proper.

4. Earthwork Survey

4.1 Site Visit

4.1.1 The site visit identified three areas of earthworks thought to relate to the line of the Roman road in proximity to the area of footpath repairs. The most northerly of these comprised a series of semi-circular scoops cut into the slope, associated with low terraces on the southern edge of a collapse gulley. Immediately south-west of these the line of the road was visible as a shallow L-shaped terrace cut into the slope, crossed and eroded by the line of a footpath, and then lost in an area of boggy ground at its south end. The remaining visible section was towards the south-west end of the affected area, and comprised a linear collection of earthworks, again formed by a terrace cut into the slope. On the east side of the southern section, between the line of the road and the present footpath, are a collection of shallow irregular and sub-rectangular scoops cut into the ground, which appear to be the remains of areas of peat cutting. Between the two areas of visible earthworks the line of the road is not visible, but it is assumed to follow the line of the present footpath towards Troutbeck.

4.2 Survey Results

4.2.1 The earthworks along the line of the Roman road were found to be in three distinct groups, as identified during the site visit (see *Section 4.1*, above), and have been described below as northern, central and southern.

4.2.2 ***Northern section***: the features at the north end of the survey area comprise a group of cuts into the hill side, principally formed by two large semi-circular scoops (Fig 4; Plate 7). The north-eastern of these is approximately 5m in diameter, and up to 2m deep, with a smaller scoop *c*3m long and 1m wide on the south-west side. The south-western scoop is up to 10m long, 3m wide and 2m deep. To the south-east of the scoops are three parallel terraces orientated north-east/south-west, each only up to 1m wide and 0.4m tall. These terraces and the north-eastern scoop are all truncated by a large collapsed gulley at the north-east end.

4.2.3 ***Central section***: this is formed by a single bank cut into the hillside forming its west edge up to 1.2m tall and 2m, with a terrace 10-11m wide with a slight edge in places along the east side, which has been eroded by the line of the main footpath (Plate 8). The northern end is orientated north-east/south-west, but it turns approximately southwards after a short distance where it crosses the line of the parish boundary and is severely eroded by an offshoot from the footpath running towards a cairn to the north-west. Two fence posts forming part of the parish boundary remain at this point; these comprise iron posts set into large boulders with iron ‘cogs’ attached, presumably for winding wire around. Immediately to the east of the terrace is a steep slope dropping down into the valley beyond. At approximately the centre of the line of the terrace there is a slight bank set almost perpendicular across it forming a vertical edge with several large stones projecting from it (Fig 5).

4.2.4 ***Southern section***: this is formed by a flat-topped bank along the east side between 1-2m wide and 0.8-1.4m tall (Plate 9). To the west of this is a rough terrace between the bank and the steep edge of the hillside, which marks its full extent. It has a slight camber in places and there is an artificial edge visible along parts of the west side up to 0.4m tall (Fig 6).

4.2.5 ***Other earthworks***: between the southern section of the road and the main footpath were a number of large shallow hollows. These were not examined in detail, as they evidently did not form part of the road, but were recorded during the survey

(Fig 3). These were typically sub-rectangular or irregular in plan, and 0.5m deep with vertical sides. The size of each hollow varied, but they ranged from as little as a few meters across to tens of meters in area.

4.3 Interpretation

4.3.1 The earthworks identified appear to represent a number of features, not all of which evidently relate to the line of the Roman road. The scoops at the northern end are most likely to be small quarries (Plate 7), while the terraces immediately to the south-east probably relate to the line of the road. Dating the quarries is difficult, although their close relationship to the supposed line of the road makes a Roman date likely. The central section of the earthworks evidently represents the line of the road, which appears to be situated on a terrace between a bank, formed by cutting into the hillside, and the edge of the slope to the east. The perpendicular feature running across the terrace is less easy to identify. It is possible that it represents the edge of an excavation cut into the surface of the road (perhaps left by one of the previous antiquarian explorations), and therefore that the stones evident within it are the remains of a former cobbled surface of the road, which has been removed further south. The southern section of earthworks has evidently been formed in a similar way to the central section, but with a slight camber present where the surface of the road is presumably situated, although this is not obvious in all places (Fig 7). Erosion caused by the present footpath is evident along the edge of both the central and southern sections of the road as a narrow worn patch in the vegetation with deep erosion scars present in various places (Fig 7).

4.3.2 The earthworks between the southern section and the present footpath almost certainly represent the remains of peat cutting. This may explain the disappearance of the route of the road between the central and southern sections of earthworks, as it has been buried beneath spoil. However, it was also observed that there was a dark green patch of vegetation in this area, apparently representing a particularly boggy part of the hillside, which may be partially responsible for this.

4.3.3 Away from the survey area it was also observed that southern section of the road divides; one section turning south-west downhill along the line of the present footpath and the other continuing to the south along the edge of the slope (Fig 2). There are also apparently earthworks running in a southerly direction continuing along the slope, which may actually represent the line of the road.

5. Archaeological Evaluation

5.1 Introduction

5.1.1 Three trenches were excavated across the presumed line of the road (Figs 3 and 5). In all three the remains of a road surface were identified, and in each case this was associated with other features of interest. A summary context list is provided in *Appendix 3*.

5.2 Results

5.2.1 ***Trench 1***: this was approximately 5m long and 1.6m wide and orientated east/west (Fig 8; Plate 11). Beneath the turf the entire trench was covered by a layer of dark brown to black peat (***100***) between 0.2m and 0.3m thick. Beneath this, at the west end of the trench was a layer of mid brown to orange firm silty clay containing 75% angular gravels and pebbles covering an area extending approximately 2.6m long and 0.2m thick (***101***). At the east end of the trench was the presumed road surface, which was made up of a series of deposits forming irregular patches, some of which were very similar. These comprised a soft mid orange to brown silt containing a very few inclusions (***102***), a soft mid orange to brown silt containing 98% angular gravels and pebbles (***103***), a mid orange silty clay containing 85% angular and sub-rounded gravels and pebbles (***105***), and a mid yellowish-green soft sandy silt (***106***). Between these layers and the layer to the north-west (***101***) was an apparent linear feature running across the width of the trench filled by a mid orange-brown firm silty clay containing a small quantity of angular gravels and pebbles (***104***; Plate 10).

5.2.2 A sondage was cut along the north side of the trench which demonstrated that these deposits were formed in several layers, which had been worn through on the surface. The upper layer was, in effect, formed by deposits ***102***, ***103***, and ***104***, which was not actually a linear feature. Beneath these was layer ***105***, followed by ***106***, beneath which was a mid grey-brown soft silt up to 0.1m thick, but little more than 0.02m thick at the east end (***107***). This sealed a smaller layer of pale greenish and orange-green soft silty clay (***108***), which contained approximately 45% sub-round and angular gravels and pebbles. This was on top of a loose pale greyish or yellowish green sandy silt, containing 20% angular gravels and pebbles (***109***), considered to be the underlying natural. A shallow depression forming a roughly level terrace had been cut into this surface (***112***), on top of which the layers making the road surface had been laid. At the west end of the trench, beneath layer ***101***, was a steep-sided U-shaped ditch at least 1m wide and up to 0.4m deep (***111***), cut into the natural ***109*** (Plate 12). This had been filled with a loose mid orange-brown sandy clay containing 98% sub-angular and rounded gravels and pebbles (***110***).

5.2.3 ***Trench 2***: this was also approximately 5m by 1.6m and orientated east/west (Fig 9; Plate 14). Beneath the turf was a dark brown to black layer of soft peat filling the entire trench (***200***). Beneath this, at the east end of the trench, was a layer of mid orange-brown firm sandy clay containing 98% angular and sub-angular gravels and pebbles (***201***), presumed to be the road surface. In the centre of the trench this formed a raised bank orientated north/south, perpendicular to the trench, which was constructed from a mid brown firm sandy clay containing 98% angular and sub-angular gravels and pebbles (***209***), essentially a continuation of ***201*** (Plates 13 and 15). This was constructed on a layer of pale yellowish-brown and greyish-orange soft silt (***202***), which was in turn laid on a soft dark brown to black peat containing 20% small degraded stone fragments (***205***). The west end of the trench was filled with a mid greyish-brown soft peaty clay containing 20% degraded sub-angular gravel and

pebble fragments (***207***), similar to layer ***205***. On top of this, against the north-west side of the trench was a layer of mid orange firm sandy clay containing 98% sub-rounded and sub-angular gravels and pebbles forming a possible platform (***203***). This was laid on a layer of pale brownish or buff coloured soft silty clay only 0.03m thick (***204***).

5.2.4 A sondage was excavated along the south side of the trench, which revealed that the top of the bank, layer ***209***, was actually laid on top of layer ***201*** and was up to 0.15m thick. Beneath it layers ***201*** and ***202*** appeared to butt each other. Layer ***201*** was on top of a pale yellowish green-grey firm silty clay with 10% gravels and pebbles (***211***), which was in turn on top of a mid yellowish grey-green compacted sandy clay containing up to 70% angular pebbles and gravels (***208***) considered to be the natural. As in Trench 1, a shallow depression forming a roughly level terrace had been cut into this surface (***210***), approximately on top of which the layers making the road surface had been laid. West of the central bank a layer of pale yellowish grey-green soft silty clay between 0.05m and 0.1m thick (***206***) was situated below ***202*** and ***205***, and beneath this and ***207*** was the natural ***208***. An additional sondage was cut along the west end of the trench through ***203*** and ***204***, which confirmed the arrangement of the deposits in this area. Due to flooding, a narrow drain was excavated by hand in the south-east corner to allow water to escape.

5.2.5 ***Trench 3***: this too was approximately 5m long and 1.6m wide, but was orientated approximately north-west/south-east (Fig 10). Beneath the turf was a thick layer of soft dark brown or black peat covering the entire trench (***300***). Beneath this, at the south end of the trench was a layer of mid orange-brown firm sandy clay containing 98% sub-angular gravels and pebbles (***301***), which was assumed to be the surface of the road. At the north end of the trench, beneath peat ***300***, was a layer of soft dark brownish-grey peat with 20% fragments of decayed gravels and pebbles, up to 0.04m thick (***303***). The north-west and south-east ends of the trench were divided by a raised bank constructed from a soft mid orange-brown silty clay with 10% angular and sub-angular gravels and pebbles up to 0.15m thick (***307***; Plates 16 and 18).

5.2.6 A sondage excavated along the north-east side of the trench revealed that the presumed road surface ***301*** was laid on a firm light orangey-brown silty clay containing a small amount of degraded gravels and pebbles, thought to be the natural (***306***). To the north-west of the bank, peat ***303*** was found to lie on another layer of dark brownish grey peat with no inclusions, up to 0.06m thick (***304***), which in turn lay on another layer of dark greyish-brown silty clay peat with 20% degraded gravel and pebble fragments and some rounded cobbles (***305***; Plates 17 and 19). The top of the bank ***307*** was laid on a thin lense of yellowish grey soft silty clay (***302***), which was then laid on a firm mid orange-brown silty clay containing 98% angular gravels and pebbles typically 0.05m thick (***308***), very similar to ***301***, which was on top of ***304*** and ***305***. An additional sondage was cut through ***305*** in the north-west corner of the trench, which confirmed the arrangement of deposits here was the same as on the east side of the trench. Due to excessive flooding a large drain was excavated using the machine in the south-west corner to allow water to escape.

5.3 Artefacts and Environmental Remains

5.3.1 ***Artefacts:*** no artefacts were encountered during the evaluation, and none were discovered within the retents from the twenty bulk samples, either (*Appendix 4*).

5.3.2 ***Environmental remains:*** twenty bulk samples were collected (*Appendix 4*) and all of these were wet sieved and floated as per the methodology (see *Section 2.7*) with the intension of recovering small finds, environmental remains and carbonised material that could be used for radiocarbon dating. A rapid visual

inspection of the flots and retents revealed that there were no preserved environmental remains and no charred material large enough or suitable for radiocarbon dating.

6. Discussion

6.1 Introduction

6.1.1 The survey and evaluation of the features present on High Street has provided a useful opportunity to examine these remains for the first time in over 100 years. However, the results of this investigation are quite different to those of the earlier investigations, and have not been able to confirm the assumed date of the road. They have, however, provided useful evidence about its character, form and construction, and the route that it takes. In addition, it has given some indication of the nature of the local environment at the time of the road's construction, which could be used in the future to provide a more detailed understand of its local context and, possibly, date it.

6.1.2 The lack of any finds or dateable material in the samples means that it has had to be assumed that the features recorded in the three trenches are of Roman origin, based on previous research into the site. For this reason they will be discussed as if they are.

6.1.3 In each trench six phases of activity were identified.

6.2 Phasing

6.2.1 ***Trench 1***: the majority of phases identified within this trench appear to relate to the construction of the Roman road, and probably therefore happened in quick succession over a short period of time. They are outlined below:

- ***Phase 1***: the earliest deposit is layer ***109***, which is undoubtedly natural in origin. This underlies or is cut into by all of the other deposits or features;
- ***Phase 2***: the earliest stage in construction of the road seems to have been the cutting of a shallow slope (***112***) into the hillside to create a level terrace on which the road could be laid. At approximately the same time a large ditch (***111***) was excavated along the north-west side of the road running parallel with it, which was almost immediately filled with loose gravely soil (***110***);
- ***Phase 3***: the first layer of the road to be deposited was a rough stony layer (***108***), which did not apparently form a well-defined surface, and may therefore relate more to an initial phase of ground clearance rather than road construction proper;
- ***Phase 4***: a thin layer of stones and clay developed across the north-west side of the trench (***101***), sealing the filled ditch ***111***. This appears to be contemporary with a thin grey-brown silt that developed across the south-east side of the trench (***107***). It is not certain what this phase represents, but it may be related to the ongoing construction of features related to the road, rather than the road surface itself, which caused the build-up of a stony deposit (***101***) on the uphill side (perhaps deliberately laid) and allowed a thin silt (***107***) to gather on the proposed road surface;
- ***Phase 5***: a succession of layers was deposited on top of ***107*** (***102-106***), all of which appear to have formed layers of the Roman road. These were probably laid over a short period of time;
- ***Phase 6***: the upper surface of the road was probably severely eroded following this (perhaps over a long period of time), before being covered with a thick layer of peat (***100***).

6.2.2 ***Trench 2***: again, the majority of phases of activity within this trench appear to relate to the construction of the road. These are outlined below:

- ***Phase 1***: the earliest deposit is layer ***208***, which is undoubtedly natural in origin and underlies or is cut by all of the other deposits or features. This is overlain at the north-west end of the trench by a peat layer (***207***), which was presumably in existence prior to the construction of the road;
- ***Phase 2***: as in Trench 1, the first phase in constructing the road seems to have been the cutting of a shallow slope into the hillside to form a level terrace (***210***), although the topography is already relatively level in this area;
- ***Phase 3***: prior to the construction of the road surface proper the existing layer of peat to the north-west (***207***) was probably cut back and a deposit of silty clay acting as a capping placed on top of it (***206***). At the same time a further layer of firm silty clay (***211***) was deposited over the terrace to the south-east;
- ***Phase 4***: a thin layer of peat (***205***) was deposited or formed on top of ***206***, on top of which a layer of silty-clay was deposited (***202***), which formed the base of the bank (***209***) and was possibly intended to act as a watertight capping to seal the peat to the north-west. At probably the same time another layer of silty-clay (***204***) was deposited on top of the peat (***207***), which acted as a bedding layer for a stone platform of unknown function (***203***). At approximately the same time the stony layer forming the road surface (***201***) was laid;
- ***Phase 5***: on top of the north-west side of the road surface (***201***) and the deposits forming the road and associated clay 'capping' a bank of stones and sandy clay was created (***209***);
- ***Phase 6***: following the abandonment of the road all of the upper deposits were covered by a thick layer of peat (***200***).

6.2.3 ***Trench 3***: again, the majority of phases within this trench appear to relate to the construction of the road. In addition, several layers of peat were also present, some of which probably developed naturally. These are outlined below:

- ***Phase 1***: the earliest deposit is layer ***306***, which is undoubtedly natural in origin and underlies all of the other deposits. In the north end of the trench this was overlain by a layer of peat (***305***), which was presumably in existence prior to the construction of the road;
- ***Phase 2***: part of peat layer ***305*** was cut away and a layer of stony clay (***301***) forming the road surface was laid on top of the underlying deposit (***306***) in the southern end of the trench. There does not appear to have been a shallow cut dug into the slope at this point as the topography was already quite level. The flecks of stone present within this deposit suggest that it was present while the road was being constructed and that material was consequently dropped into it;
- ***Phase 3***: a further layer of peat (***304***) was either deposited to the north of road surface or developed naturally. The lack of any stone flecking might suggest the latter;
- ***Phase 4***: additional layers of clay (***308***) and stony clay (***307***) were heaped along the north side of the road forming a bank. The lower of these was apparently dumped on top of the peat (***304***) that had developed or been deposited since the road had been constructed. This bank effectively raised the north side of the road above the level of the peat beyond, and may have replaced curb stones;

- ***Phase 5***: following the construction of the bank a thin layer of peat developed or was deposited against the north side of it (***303***). The presence of stone flecks within it suggests that it was present during construction or repair of some element of the road or bank building, but it appears to overly the lower edge of the bank and so presumably post-dates it;
- ***Phase 6***: following the abandonment of the road a thick layer of peat developed across it (***300***).

6.3 Conclusion

6.3.1 The complex nature of the features recorded in the three trenches, the lack of dating evidence, and the small size of the areas examined makes a confident assessment of the development of the features and their sequence difficult. What is evident, however, is the presence of a number of features that appear to relate to attempts to prevent flooding, or more particularly, the encroachment of peat onto the road surface. In Trench 1 this is represented by the large ditch excavated parallel to the west side of the road and then filled with gravel, presumably to act as a soakaway or barrier to water running down slope from the north-west.

6.3.2 The banks in Trenches 2 and 3 may have been created to prevent the encroachment of wet and peaty ground onto the road, an area of which is still visible to the west and north-west of Trenches 2 and 3. The occurrence of 'bog bursts' in lower areas of wetland, where a raised mire moves due to excessive rainfall causing increased hydration and a collapse of the structural integrity of the ground have been recorded in more recent history (Hodgkinson *et al* 2000, 173), and this may also have been a consideration during the construction of the roads. It is not clear, however, whether these banks were conceived and built as part of the original road, or added at a later date once the problem had become apparent. Environmental evidence suggests that this area is likely to have been wet and boggy from at least the Roman period, and it was, very astutely, suggested that this '*must have led to drainage problems in places*' (Pearsall and Pennington 1989, 233), something that appears to have been a serious consideration when it came to the construction, use and maintenance of the road.

6.3.3 Dating the road remains difficult, however, although the documentary sources, place-name evidence and general degree of effort put into construction suggest a Roman origin. In addition, the route, in the past and today, forms a local land boundary, another indicator of a feature of some age and something that Roman roads are often found to do (Winchester 2000, 34).

6.3.4 The structure of the road surface is, in general, not what might be described as typical for the Roman period (see for example Bagshawe 1985), but it does have some similarities with other roads of Roman date, not least Haverfield's description of the same road north of Loadpot Hill (Haverfield 1898, 362). The lack of an upper cobbled surface could be due to a number of factors, not least erosion caused by subsequent use by packhorses (see *Section 3.1.3*). In other cases the upper road surface has been removed by ploughing and similar agricultural activity (e.g. Jermy 1967a; 1967b), which seems unlikely to have been the case at High Street. The close proximity of the parish boundary, which early maps show was marked with mounds of stones in1863 (Plate 4), and which clearly utilised some large stones to support upright iron posts, may also have been responsible for the removal of any large cobbles or curb stones. There was little evidence for these having existed in Trenches 2 and 3, however, although this may have been due to the need to build a bank to prevent flooding.

6.3.5 In Trench 1 it is considered likely that the 'linear' feature ***104*** was simply a scar left by the removal of curb stones, which had been laid on one of the layers making up the road surface. The irregular nature of the surface in this trench and the visible presence of some large stones exposed in a possible cutting through the road surface to the north (Fig 5), does suggest that the route has been severely eroded or deliberately removed for some purpose. There is no recorded evidence for any excavation having been carried out in this area, although this may have happened, so removal for use in the parish boundary is perhaps the most likely explanation.

6.3.6 The fundamental principle behind the construction of the road appears to have been a need for practicality and pragmatism in a difficult environment. All of the material was probably derived from the immediate environs, for obvious reasons, most likely including the small scooped quarries at the north end. Roman quarrying in Cumbria has not been examined in detail, apart from those associated with Hadrian's Wall (Davies 1968, 22) and an example on the banks of the River Gelt at Helbeck Scar including an inscription (Davies 1968). Dating the shallow scoops present between Froswick and Thornthwaite is therefore as difficult as identifying their exact function. Material used in building Hardknott fort, a short distance to the north-west and on similar geology, is considered likely to have been partially gathered during initial clearance of the site (Bidwell *et al* 1999, 4). It is considered likely that the High Street road was built in a similar way, and that these features are therefore contemporary with it.

6.3.7 In areas where timber was more readily available it might have been expected that the road would have been placed on a corduroy layer where it had to cross the area of boggy ground close to Trenches 2 and 3. In fact, the road seems to have been slightly diverted to the east, around this area, and the peat simply cut away to allow the road to be built. Pollen evidence from the area around Hardknott fort suggests that it was surrounded by oak trees when it was built, probably in the early 2nd century, but that in the following centuries this was gradually cleared (Pearsall and Pennington 1989, 233-234). However, it has been found that in areas of higher altitude such as that around High Street any woodland would have been removed and peat was already forming prior to the Roman period (*op cit*, 233).

6.3.8 Despite its poor condition and the lack of dating evidence the survey and evaluation carried out during this project have been extremely useful in understanding the nature and condition of the High Street Roman road in this location. The work has confirmed the presence of a metalled surface, albeit severely eroded, which corresponds to the surviving earthworks, which is almost certainly of Roman origin. There is no apparent evidence for an earlier road surface, and it is evident that it remained a visible monument as late as the medieval period and was still being exploited as late as the 19th century, as indeed it is today. Features outside of the survey area, observed during the evaluation, have also shed some light on the likely route of the road to the south. Within the evaluation trenches evidence for two different forms of water management system (a ditch and a bank) were also identified. While ditches are a common feature alongside Roman roads, the bank may be unique to this site – a necessity of the difficult terrain, and is an important discovery in its own right. The presence of peat deposits, some of which appear to be contemporary with the use of the road, is also significant in understanding the environmental history of the site and the practical difficulties that were presented to the road's engineers and builders.

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8. Illustrations

8.1 List of Figures

8.2 List of Plates

Plate 20: General view of site during back-filling, looking north

Plate 21: Working shot, Trench 3, looking south

Appendix 1: Project Brief

Lake District
National Park Authority

ARCHAEOLOGICAL EVALUATION

At the Kentmere Horseshoe, Lake District National Park

April 2006

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Brief for Archaeological Field Evaluation

Location: Kentmere Horseshoe, Lake District National Park
Proposed: Upland Footpath Repair Work

Summary

The Lake District National Park Authority is undertaking footpath repair work on the route from Froswick to Thornthwaite Crag in Kentmere (FP 545003). The footpath follows the course of the High Street Roman Road in places. It is probable that the repair work may affect remains from the Roman period.

Because of the high potential of the site a scheme of archaeological work is required to be undertaken at the site. The work will be an archaeological evaluation to assess the nature and potential of the site.

Detailed proposals and tenders are invited from appropriately resourced, qualified and experienced archaeological contractors to undertake the archaeological project outlined by this Brief and to produce a report on that work. The work should be under the direct management of either an Associate or Member of the Institute of Field Archaeologists, or equivalent. No fieldwork may commence until approval of a specification has been issued by the Lake District National Park Authority.

1. Location.

1.1 The site is centred around national grid reference NY 4325 0911, in the parish of the Lakes. The total length of the footpath repair work on the Kentmere Horseshoe affects some 3.5 km, which is presently in use as footpath and fell.

1.2 The underlying geology of the site is Borrowdale Volcanics.

2. Archaeological Background

2.1 The site of the proposed footpath work lies on and adjacent to the High Street Roman Road (LD HER No. 1522).

2.2 There are a number of other sites or finds in the immediate area:

LD HER No. 1923 Round Cairn 250m South-South-West of Bluegill Fold NY 4273 0773
LD HER No. 1924 Round Cairn 200m South-South-West of Bluegill Fold NY 4274 0779
LD HER No. 17119 High Mere Slate Quarry NY 4292 0692

Further details of these sites can be obtained from the Lake District National Park Authority, Murley Moss, Oxenholme Road, Kendal, LA9 7RL. Tel. 01539 792712/Fax. 01539 740822/Email Eleanor.Kingston@lake-district.gov.uk

3. Requirement for an Evaluation

3.1 The proposed footpath repair work would severely damage or destroy any archaeological remains which may be present on the site. It has therefore been recommended that an archaeological evaluation should take place to obtain further information on the presence and preservation of any archaeological deposits.

3.2 The objectives of the evaluation should be to gather sufficient information to establish presence/absence, character, extent, state of preservation, date, condition and significance of any archaeological deposits within the area of the footpath repair work.

3.3 An adequate representative sample of all areas where archaeological remains are potentially threatened should be studied.

4. Evaluation Techniques

Land use at the time fieldwork is carried out will influence the methods used. The techniques chosen should be selected to cause the minimum amount of destruction and should comply with all relevant health and safety regulations. The work required will take place within the Troutbeck Site of Special Scientific Interest (SSSI). Therefore, conditions have been placed on the evaluation regarding size of trenches and deposition of spoil. These conditions **must** be discussed with the National Park Archaeologist prior to any work commencing.

It is envisaged that the following work would be required:

Stage One
4.1 A rapid review of the published and unpublished information relevant to the site and its immediate surroundings will be undertaken. This will aim to review the currently available archaeological information for the site and its locality, with particular reference to recent archaeological work in the vicinity. It will also investigate the past use of the site through an examination of the historic mapping of the area. Sources consulted should include: data held by the Lake District Historic Environment Record; maps (printed and manuscript); aerial photographs and other illustrative evidence; place and field name evidence; published and unpublished documentary sources and other relevant background material.

4.2 Visual inspection of the entire site. This should include examination of any available exposures (eg. recently-cut field ditches and geological test pits).

4.3 A topographic survey of the earthwork remains of the possible Roman Road in the immediate vicinity of the proposed footpath repairs prior to excavation.

Stage Two
4.4 A programme of trial trenching, excavated across the site, in order to establish the extent, date, nature and preservation of archaeological deposits. Three trenches should be excavated across the site. The locations and proportions of trenches should be confirmed upon completion of the desk based work, visual inspection and survey of the site and **must** be agreed with the National Park Archaeologist, prior to the start of work. Initial topsoil removal can be undertaken by machine, but subsequent cleaning and investigation must be by hand.

4.5 A sufficient sample of features and deposits should be investigated to understand the full stratigraphic sequence in each trench, down to natural deposits. All deposits should be fully recorded on appropriate context sheets, photographs, scale plans and sections.

4.6 An assessment of the artefact content of the topsoil. Techniques might include measured surface artefact collection, a series of topsoil test pits, or sampling of the topsoil from trial trenching. The proposed strategy should be agreed with the National Park Archaeologist and will be expected to take account of the prevailing ground conditions on the site.

4.7 The evaluation should include a programme of sampling of appropriate materials for environmental and/or other scientific analysis and a basic analysis of suitable deposits (restricted at this stage to establishing the presence or absence of significant material). Special attention should be paid to sampling securely dated deposits and features and specifically any waterlogged and/or burnt deposits encountered.

4.8 The following analyses should form part of the evaluation, as appropriate. If any of these areas of analysis are not considered viable or appropriate, their exclusion should be justified in the subsequent report.

- Advice is to be sought from a suitably qualified specialist in faunal remains on the potential of sites for producing bones of fish and small mammals. If there is potential, a sieving programme should be undertaken. Faunal remains, collected by hand and sieved, are to be assessed and analysed, if appropriate.

- The advice from a suitably qualified soil scientist should be sought on whether a soil micromorphological study or any other analytical techniques will enhance understanding site formation processes of the site, including the amount of truncation to buried deposits and the preservation of deposits within negative features. If so, analysis should be undertaken.

5. Evaluation Proposal

A **detailed** evaluation proposal, including the following, should be prepared by potential contractors in accordance with the recommendations of the *Management of Archaeological Projects 2nd Ed.* (1991) and submitted to the National Park Archaeologist for approval:

5.1 A consideration of the whole range of investigative techniques and a statement justifying the proposed omission of any technique.

5.2 An explanation of the sampling strategies to be used.

5.3 A description of the proposed methods of survey and excavation, and recording system.

5.4 A projected timetable for work on site, including machine hire time and staff structure and numbers.

5.5 A projected timetable for all post excavation work, including staff numbers and specialist sub-contractors.

5.6 The names of the project director, supervisors, specialists and any sub-contractors to be employed on the project (including details of qualifications and experience of the key project personnel).

5.7 A separate itemised estimate of costs (core/project staff, specialist fees, travel/subsistence, site works, equipment/materials, archive preparation and copying, report preparation, finds storage fees, overheads, contingency, specified other costs).

5.8 Any significant variations to the proposal must be agreed by the National Park Archaeologist in advance.

6. Site Monitoring

6.1 The National Park Archaeologist will be responsible for monitoring the evaluation. A minimum of one week's notice of the commencement of fieldwork must be given by the archaeological contractor to the Lake District National Park Authority so that arrangements for monitoring can be made.

6.2 Site inspections will be arranged so that the general site stratigraphy can be assessed in the initial stages of trial trenching, and/or so that the site can be inspected when fieldwork is near to completion but before any trenches have been backfilled.

7. Reporting Requirements

7.1 The evaluation should result in a report including:

- a concise non-technical summary of the results;
- a description of the methodology employed;
- a location plan at an appropriate scale;
- a summary of the historical and archaeological background;
- excavation plan(s) and section(s) at an appropriate scale showing location and position of trenches dug and features located;
- section drawings should include heights OD;
- excavation plan(s) should include OD spot heights for all principal strata and features;

- a list of and date for any significant finds recovered;
- topographic survey plans and drawings;
- photographs where appropriate;
- a description of archaeological features and deposits identified;
- an interpretation of the results and of their potential archaeological significance;
- a statement of the likely archaeological implications of the proposed development;
- a full bibliography of sources consulted and a list of any further sources identified but not consulted;
- an index to the project archive;
- a copy of the brief and agreed project design and an indication of any variations.

7.2 The objective account of the archaeological evidence recovered should be clearly distinguished from the interpretation of those features. The methodology used should be critically reviewed.

7.3 Any recommendations for mitigating measures should be presented in the form of a separate annexe to the main report.

7.4 4 copies of the evaluation report should be deposited with the National Park Authority, on the understanding that it will be made available as a public document after an appropriate period (not exceeding 6 months from the completion of fieldwork). Copies will be forwarded to the National Monuments Record.

7.5 The results of the work should be published in an appropriate journal or other publication and should include an account of any structures located and full details of significant finds, illustrated as appropriate. Details of the place and date of publication must be notified to the National Park Authority.

7.6 The Lake District Historic Environment Record (LDHER) supports the Online Access to Index of Archaeological Investigations (OASIS) project. The overall aim of the OASIS project is to provide an online index to the mass of archaeological grey literature that has been produced as a result of the advent of large-scale developer funded fieldwork. The archaeological contractor must therefore complete the online OASIS form at http://ads.ahds.ac.uk/project/oasis/. Contractors are advised to contact the LDHER prior to completing the form. Once a report has become a public document by submission to or incorporation into the HER, the LDHER may place the information on a web-site. Please ensure that you and your client agree to this procedure in writing as part of the process of submitting the report to the archaeological officer at the LDHER.

8. Deposition of Archive and Finds

8.1 The archive must be prepared in accordance with the recommendations of the *Management of Archaeological Projects 2nd Ed.* (1991) and should be deposited in an appropriate local institution, in a format to be agreed with that institution. The National Park Authority must be notified of the arrangements made. Any finds of archaeological interest should be appropriately conserved and deposited in an appropriate institution: any finds which cannot be so deposited should be fully analysed and published.

9. Further Requirements

9.1 The Code of Conduct of the Institute of Field Archaeologists must be followed.

9.2 It is the archaeological contractor's responsibility to establish safe working practices in terms of current health and safety legislation, to ensure site access and to obtain notification of hazards (eg. services, contaminated ground).

9.3 The involvement of the Lake District National Park Authority should be acknowledged in any report or publication generated by this project.

Looking north towards Thornthwaite Crag (© Eleanor Kingston, LDNPA).

Looking south towards Froswick (© Eleanor Kingston, LDNPA).

Appendix 2: Project Design
KENTMERE HORSESHOE, LAKE DISTRICT NATIONAL PARK

Archaeological Evaluation Method Statement

Client: Lake District National Park Authority

May 2006

Commercial in confidence

1. Introduction

1.1 Project Background

1.1.1 The Lake District National Park Authority (hereafter 'the client') is carrying out a programme of footpath repair. Part of this, between Froswick and Thornthwaite Crag (FP 545003) partially follows the supposed route of a Roman road known as 'High Street' (centred around NY 4325 0911). It is considered likely that the Roman road will be adversely affected by the proposed repairs, and so a programme of archaeological recording has been recommended by the Lake District Historic Environment Service (HES).

1.1.2 This work is to comprise a rapid desk-based assessment and site visit followed by survey of any surviving earthworks related to 'High Street' (or any other features of archaeological interest), and the excavation of a number of evaluation trenches across the affected area. This is intended record any areas of archaeological interest that may be damaged or destroyed during the repairs to the footpath, and in particular establish the location of the course of the Roman road in the area.

2. Objectives

2.1 Rapid Desk-Based Assessment

2.1.1 To undertake a rapid review of the available published and unpublished sources relating to the site in order to establish the nature and extent of the known archaeological resource at the site, with particular regard to the presence of the High Street Roman road.

2.2 Site Visit

2.2.1 To examine the whole of the site in order to identify the location of any features of archaeological interest, compare the surviving features to those recorded during the desk-based assessment, identify areas of significance for the earthwork survey, any possible constraints to further work and health and safety considerations, and areas suitable for evaluation.

2.3 Earthwork Survey

2.3.1 To carry out a topographic survey of the surviving remains of the possible Roman road or any other features of archaeological interest identified during the desk-based assessment and site visit.

2.4 Archaeological Evaluation

2.4.1 To excavate a series of evaluation trenches or test pits across the affected area based on the results of the desk-based assessment, site visit, and earthwork survey. These will assess the presence or absence of features of archaeological interest within the area, their extent, date and significance, and in particular will seek to determine the accurate location of the Roman road.

2.5 Report

2.5.1 To produce a report detailing the results of the desk-based assessment, earthwork survey, and evaluation, and assess the potential of the site and significance of the remains.

2.6 Archive

2.6.1 Produce a full archive of the results of the project.

3. Methodology

3.1 Rapid Desk-Based Assessment

3.1.1 Prior to any field work taking place a rapid desk-based assessment will be carried out. This will examine both primary and secondary sources, including early maps, local histories, antiquarian accounts, unpublished reports and previous archaeological work. A number of sources will be used in order to acquire this information:

- **Lake District Historic Environment Record (HER)**: this is a database linked to GIS of all of the known sites of archaeological interest within the Lake District National Park, and is the primary source of information for any archaeological desk-based

assessment. It contains information about all of the sites including a description, location and details of any relevant sources;

- **Cumbria Record Office Kendal (CRO(K))**: primary and secondary sources will be consulted at the archives in Kendal, principally early maps of the site and earlier published accounts of work carried out in the area. These will be used to identify areas of archaeological potential and assess the form and survival of archaeological deposits in the area;
- **Greenlane Archaeology**: Greenlane Archaeology holds a number of copies of published sources and unpublished reports relating to archaeology in Cumbria, including a near-complete run of the *Transaction of the Cumberland and Westmorland Archaeological and Antiquarian Society*. In addition, its staff hold a number of sources relating to local history and archaeology. These will be used to provide additional background information relating to the site as necessary.

3.2 Site Visit

3.2.1 A brief site visit will be carried out in order to assess several elements of the site. It will allow a comparison to be made with the results of the desk-based assessment and enable the identification of any earthworks relating to sites of archaeological interest, whether previously recorded or not. It will also enable suitable areas for evaluation trenching to be identified and allow any constraints to further work or issues of health and safety to be assessed and recorded. In addition, it will allow the examination of any areas of exposed ground, particularly erosion gullies, to take place, which will aid the interpretation of local soil and geological conditions, and potentially identify deposits of archaeological interest.

3.2.2 It is envisaged that either as part of this site visit, or on a separate occasion (see *Appendix 1*), Eleanor Kingston of the Lake District HES will accompany Greenlane Archaeology's staff to the site, and will bring the LDNPA's backpack GPS. Several survey points will then be created, and these can then be used to tie in the earthwork survey and evaluation trenches by using Greenlane Archaeology's total station, thus providing accurate national grid locations and heights above mean sea level for all survey data.

3.3 Earthwork Survey

3.3.1 Earthworks, thought to be the remains of part of the Roman road known as 'High Street' are likely to be affected by the proposed programme of repairs to the footpath. Prior to the repair work and the excavation of any evaluation trenches, these earthworks will be surveyed. This will be carried out using a total station with an internal data logger linked to a portable tablet computer running AutoCAD Lt and TheoLt. This allows the data to be inputted directly into AutoCAD on site, which increases the speed at which the information can be processed and allows it to be checked in real-time. For each earthwork the top and bottom break of slope will be recorded as a line of points, these will then be utilised to produce a hachure drawing denoting the shape of each earthwork and their relationship to each other. The survey data will be tied in using points established earlier by GPS (see 3.2.2, above).

3.3.2 In addition, written descriptions will be made of each of the features being surveyed in order to aid interpretation and provide a more detailed account of their construction, form and inter-relationships.

3.4 Archaeological Evaluation

3.4.1 It is envisaged that three trenches, each 5m long by 1.6m wide, will be excavated (contingency costs have been provided should Lake District HES determine that larger trenches are required, see *Appendix 1*). These will be excavated until significant archaeological deposits or the natural geology are reached, or to a depth of 1.2m. They will target the areas identified during the map regression as having the greatest archaeological potential, whilst taking into account hazards and constraints on the site. The proposed trench location plan will be submitted to the Lake District HES for approval prior to any evaluation trenching taking place.

3.4.2 The excavation methodology will be as follows:

- The trenches will be focussed on areas of high archaeological interest or potential identified during the desk-based assessment and site visit, and avoiding areas which are likely to have been damaged or truncated by later activity, unless they are considered to have a particularly high potential;
- The overburden (which is likely to largely comprise turf and topsoil) will be removed by machine under the supervision of an archaeologist until the first deposit beneath it is reached;
- All deposits below the overburden will be examined by hand in a stratigraphic manner, using shovels, mattocks, or trowels as appropriate for the scale. Deposits will only be sampled, rather than completely removed, below the first identified level of archaeological interest, unless specified by the Lake District HES, with the intension of preserving as much *in situ* as possible;
- The position of any features, such as ditches, pits, or walls, will be recorded and where necessary these will be investigated in order to establish their full extent, date, and relationship to any other features. Negative features such as ditches or pits will be examined by sample excavation, typically half of a pit or similar feature and approximately 10% of a linear feature;
- All recording of features will include hand-drawn plans and sections, typically at a scale of 1:20 and 1:10, respectively;
- The trenches will be surveyed using a total station with an internal data logger linked to a portable tablet computer running AutoCAD Lt and TheoLt. The survey data will be tied in using points established earlier by GPS (see 3.2.2, above).
- Photographs in both 35mm black and white print and colour digital format will be taken of any features identified during the evaluation. In addition, general photographs will be taken of the trenches, the site's environs and the evaluation in progress;
- All deposits, trenches, drawings and photographs will be recorded on Greenlane Archaeology *pro forma* record sheets, which are based on systems commonly used during archaeological excavations and derived from MoLAS (1994);
- All finds will be recovered during the evaluation for further assessment as far as is practically and safely possible. An assessment of the artefact content of the topsoil will be carried out through limited trial excavation (of *c*10% of the topsoil in each trench) by hand. Should significant amounts of finds be encountered an appropriate sampling strategy will be devised in consultation with the Lake District HES;
- All faunal remains will also be recovered by hand during the excavation, but where it is considered likely that there is potential for the bones of fish or small mammals to be present appropriate volumes of samples (between 10 and 40 litres) will be taken for sieving;
- Deposits that are considered likely to have preserved environmental remains or the potential for study of soil micromorphology will be sampled. Bulk samples of between 10 and 40 litres in volume, depending on the size and potential of the deposit, will be collected from stratified undisturbed deposits and will particularly target negative features (gullies, pits and ditches) and occupation deposits such as hearths and floors. An assessment of the environmental potential of the site will be undertaken through the examination of suitable deposits by specialist sub-contractors (see *Section 1.3.4* above), who will examine the potential for further analysis, typically by processing and assessing 10 litres from each context sampled. All samples will be processed using methods appropriate to the preservation conditions and the remains present;
- Any human remains discovered during the evaluation will be left *in situ*, and, if possible, covered. The Lake District HES will be immediately informed as will the local coroner. Should it be considered necessary to remove the remains this will

require a Home Office licence, under Section 25 of the Burial Act of 1857, which will be applied for should the need arise;

- Any objects defined as 'treasure' by the Treasure Act of 1996 (HMSO 1996) will be immediately reported to the local coroner and securely stored off-site, or covered and protected on site if immediate removal is not possible;
- Each evaluation trench will be backfilled following excavation although it is not envisaged that any further reinstatement to its original condition will be carried out.

3.4.3 Should any significant archaeological deposits be encountered during the evaluation these will immediately be brought to the attention of the Lake District HES so that the need for further work can be confirmed. Any additional work and ensuing costs will be agreed with the client and according to the requirements of the Lake District HES, and subject to a variation to this project design.

3.5 Report

3.5.1 The results of the evaluation will be compiled into a report, which will include the following sections:

- A front cover including the appropriate national grid reference (NGR);
- A concise non-technical summary of results, including the date the project was undertaken and by whom;
- Acknowledgements;
- Project Background;
- Methodology, including a description of the work undertaken;
- Results of the rapid desk-based assessment, particularly where these relate to remains encountered in the evaluation trenches;
- Results of the earthwork survey;
- Results of the evaluation including descriptions of any deposits identified, their extent, form and potential date, and an assessment of any finds or environmental remains recovered during the evaluation, and the potential for examination of the soil micromorphology;
- Results of any finds and environmental assessment work including a list of and dates for any significant finds;
- Discussion of the results including an assessment of the significance of any archaeological remains present within the study area, areas of further archaeological potential, areas in which further work is recommended, and appropriate types of further work;
- Bibliography, including both primary and secondary sources;
- Illustrations at appropriate scales including:

  - a site location plan related to the national grid;

  - a plan showing the location of the study area in relation to nearby structures and the local landscape;

  - a plan showing the results of the earthwork survey related to the local topography;

  - a plan showing the position of the evaluation trenches and their position relative to the surveyed earthworks;

  - plans and sections of the evaluation trenches showing any features of archaeological interest;

  - copies of early maps and plans, as appropriate in illustrating the results of the earthwork survey and evaluation;

- photographs of the evaluation, including both detailed and general shots of features of archaeological interest and the trenches;

- illustrations of individual artefacts as appropriate.

3.6 Archive

3.6.1 The archive, comprising the drawn, written, and photographic record of the evaluation, formed during the project, will be stored by Greenlane Archaeology until it is completed. Upon completion it will be deposited with the Cumbria Record Office in Kendal (CRO(K)). A copy will also be offered to the National Monuments Record (NMR). The archive will be compiled according to the standards and guidelines of the IFA (Ferguson and Murray n.d.), and in accordance with English Heritage guidelines (English Heritage 1991). In addition details of the project will be submitted to the Online AccesS to the Index of archaeological investigationS (OASIS) scheme. This is an internet-based project intended to improve the flow of information between contractors, local authority heritage managers and the general public.

3.6.2 A copy of the report will be deposited with the archive at the Cumbria Record Office in Kendal, one will be supplied to the client, and within two months of the completion of fieldwork, four copies will be provided for the Lake District HES. In addition, Greenlane Archaeology Ltd will retain one copy.

4. Work timetable

4.1 Greenlane Archaeology will be available to commence the project on **12th May 2006**, or at another date convenient to the client. It is envisaged that the project will involve the following tasks (to be read in conjunction with Appendix 1):

Task 1: rapid desk-based assessment and site visit – 2.5 person days (1 person);

Task 2: earthwork survey – scope of survey to be determined by Lake District HES (2 people);

Task 3: submission of proposed evaluation trench location plan to Lake District HES for approval;

Task 4: archaeological evaluation - 15 person days (2 people, 7.5 days – contingency provided for greater than 15m linear of 1.6m wide trenching, see Appendix 1);

Task 5, to be completed within 2 months of completion of field work: post-excavation work on archaeological evaluation, including production of draft report and illustrations - 5 person days (1 person 5 days – writing and CAD, see contingency regarding post-excavation work);

Task 6: feedback, editing and production of final report - 1 person day (1 person);

Task 7: finalisation and deposition of archive.

5. Other matters

5.1 Access

5.1.1 Access to the site for the site visit will be organised through co-ordination with the client and/or their agent.

6. Bibliography

English Heritage, 1991 *The Management of Archaeological Projects*, 2nd edn, London

Ferguson, LM, and Murray, DM, n.d. *Archaeological Documentary Archives*, IFA Paper **1**, Reading

Her Majesty's Stationary Office (HMSO), 1996 *Treasure Act*, http://www.opsi.gov.uk/acts/acts1996/1996024.htm

Museum of London Archaeology Service (MoLAS), 1994 *Archaeological Site Manual*, 3rd edn, London

Appendix 3: Summary Context List

N.B. Contexts ***100***-***111*** are from Trench 1, ***200***-***211*** from Trench 2, and ***300***-***308*** from Trench 3

Context	Type	Description	Interpretation
100	Deposit	Dark brownish black soft peat	Peat topsoil
101	Deposit	Mid brownish orange firm silty clay with 75% angular gravels and pebbles	Upper layer of natural
102	Deposit	Mid orangey brown soft silt	Silt filling depression
103	Deposit	Mid orangey brown soft silt with 98% angular gravels and pebbles	Road surface
104	Deposit	Mid orangey brown firm silty clay with 10% angular gravels and pebbles	Layer of road
105	Deposit	Mid orange loose silty clay with 85% angular and sub-rounded gravels and pebbles	Layer of road
106	Deposit	Mid yellowish green/grey soft sandy silt	Layer of road
107	Deposit	Mid greyish brown soft silt	Burning layer
108	Deposit	Pale greyish orange/green soft silty clay	Layer of road
109	Deposit	Pale greyish green/yellow loose sandy silt with 20% angular gravels and pebbles	Natural
110	Deposit	Mid orangey brown loose sandy clay with 98% sub-rounded and angular gravels and pebbles	Fill of ditch ***111***
111	Cut	Linear with vertical sides, orientated north/south	Ditch
200	Deposit	Dark brownish black soft peat	Peat topsoil
201	Deposit	Mid orangey brown firm sandy clay with 98% angular and sub-angular gravels and pebbles	Road surface, raising to bank on west side
202	Deposit	Pale yellowish grey/orange soft silt	Bedding for ***201***
203	Deposit	Mid orange firm sandy clay with 98% sub-rounded and sub-angular pebbles	Stony surface
204	Deposit	Pale brownish buff/yellow soft silty clay	Bedding for ***203***
205	Deposit	Dark brownish black soft peat with 20% small degraded stone flecks	Peat with stone flecks/working debris?
206	Deposit	Pale yellowish grey/green soft silty clay	Dumped layer of bank
207	Deposit	Mid greyish brown soft peaty clay with 20% sub-angular degraded gravel and pebble fragments	Lower peat layer
208	Deposit	Mid yellowish grey/green compact sandy clay with 70% angular gravels and pebbles	Natural
209	Deposit	Mid brown firm sandy clay with 98% angular and sub-angular gravels and pebbles	Top of bank, same as ***201***
210	Cut	Linear with shallow sides, orientated north/south	Cut for road
211	Deposit	Pale yellowish green/grey firm silty clay with 10% gravels and pebbles	Lower surface of road?
300	Deposit	Dark brownish black soft peat	Peat topsoil
301	Deposit	Mid orangey brown firm sandy clay	Road surface

Context	Type	Description	Interpretation
		with 98% sub-angular gravels and pebbles	
302	Deposit	Yellowish-grey soft silty clay	Bedding for ***301***
303	Deposit	Dark brownish grey soft peat with light greenish-white speckles and 20% light greenish-white fragments of decayed gravels and pebbles	Buried peat deposit
304	Deposit	Dark brownish grey soft peat	Buried peat layer
305	Deposit	Dark greyish brown soft silty clay with orange/white speckles and 20% orange and pale yellow/white degraded gravels and pebbles, and a sparse, uneven spread of light orangey white cobbles	Buried peat deposit
306	Deposit	Light orangey brown firm silty clay with some small, orange fragments of degraded gravels and pebbles	Natural
307	Deposit	Mid orangey brown silty clay with 10% angular and sub-angular gravels and pebbles	Top of bank
308	Deposit	Mid-dark orangey brown firm silty clay with 98% angular gravels and pebbles	Layer within bank similar to ***301***

Appendix 4: Summary Sample List

Sample	Context	Volume (litres)	Waterlogged?	Description
1	***104***	3.5	No	Road surface (layer)
2	***106***	7	No	Road surface (layer)
3	***106***	9	No	Road surface (layer)
4	***107***	7	No	Burning layer
5	***108***	1.5	No	Road surface (layer)
6	***101***	3	No	Stony layer
7	***110***	5	No	Fill of ditch ***111***
8	***201***	2	No	Road surface raising to bank
9	***202***	2	No	Bedding for ***201*** and ***209***
10	***203***	2	No	Stony surface
11	***204***	2	No	Bedding for ***203***
12	***205***	2	Yes	Peat with stone flecks
13	***206***	2.5	No	Dumped layer of bank
14	***207***	2.5	Yes	Lower peat layer
15	***301***	2	No	Road surface
16	***302***	0.5	No	Bedding for ***301***
17	***303***	0.5	Yes	Buried peat deposit (flecks)
18	***304***	0.5	Yes	Buried peat deposit (dark)
19	***307***	0.5	No	Top of bank
20	***308***	1	No	Layer within bank, similar to ***301***

Appendix 5: Archive Index

Description	Material	Size	Quantity
Day record sheets	Paper	A4	3 sheets, single-sided
Trench record sheets	Paper	A4	3 sheets, single-sided
Context index	Paper	A4	1 sheet, single-sided
Context sheets	Paper	A4	34 sheets, single-sided
Photo record sheets	Paper	A4	4 sheets, single-sided
Working matrix	Paper	A4	1 sheet, single-sided
Drawing index	Paper	A4	1 sheet, single-sided
Drawings	Permatrace	A4	3 sheets, single-sided
Drawings	Paper	A4	17 sheets, single-sided
Drawings	Permatrace	Approx. A2	4 sheets, single-sided
Sample index	Paper	A4	1 sheet, single-sided
Field walking/survey record sheets	Paper	A4	3 sheets, single-sided
GPS Co-ordinates sheet	Paper	A4	1 sheet, single-sided
Survey peg heights	Paper	A4	1 sheet, double-sided
Retent sorting sheets	Paper	A4	20 sheets, single-sided
Photographs	Black and white photographic gloss prints	4 inches x 6 inches	66 prints
Negatives	Negative film	6 inches x 1 inch (approx)	18 strips
Digital archive index	Paper	A4	1 sheet, double-sided
Digital archive	CD	-	1

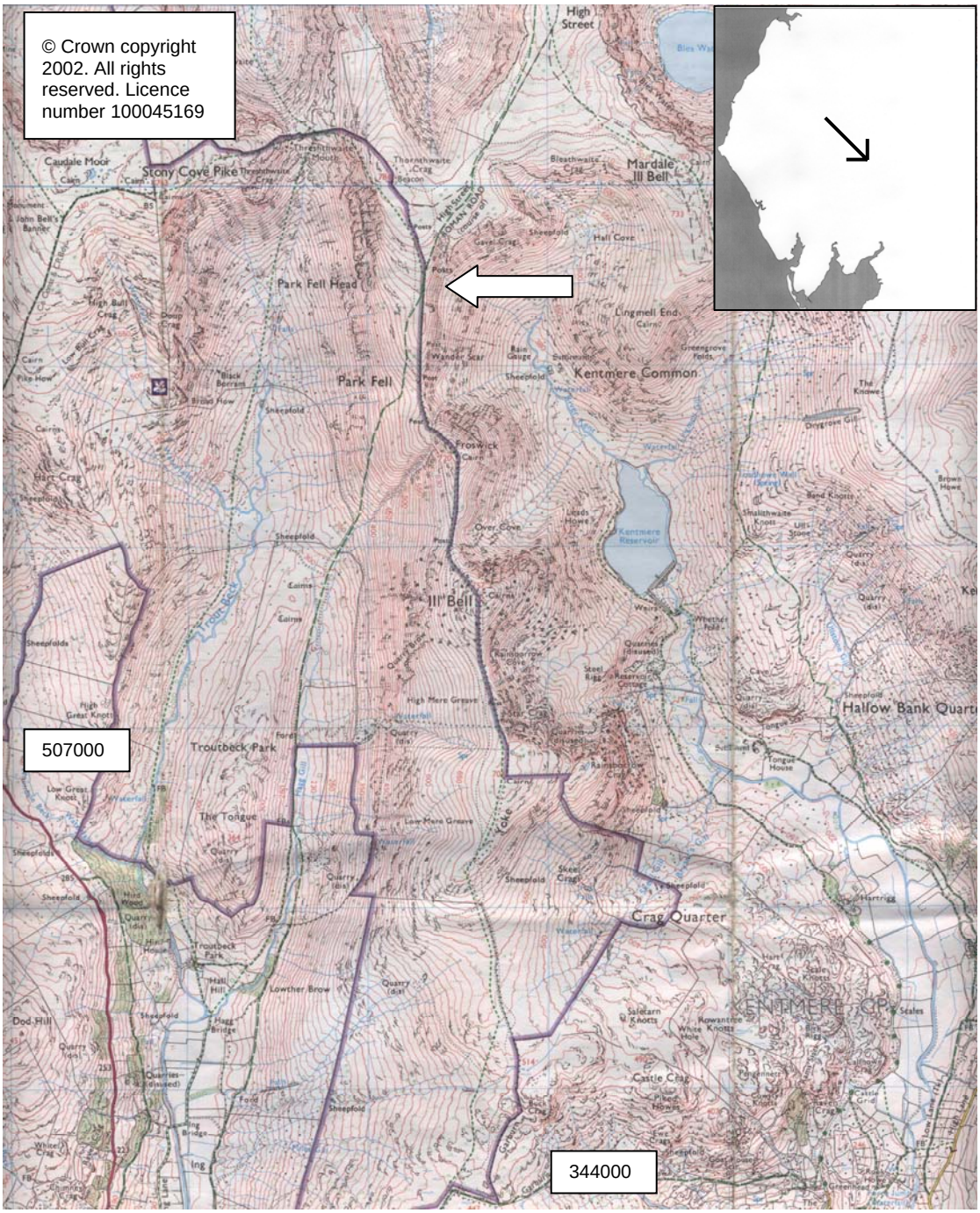


Figure 1: Site location, showing surrounding hills and valleys

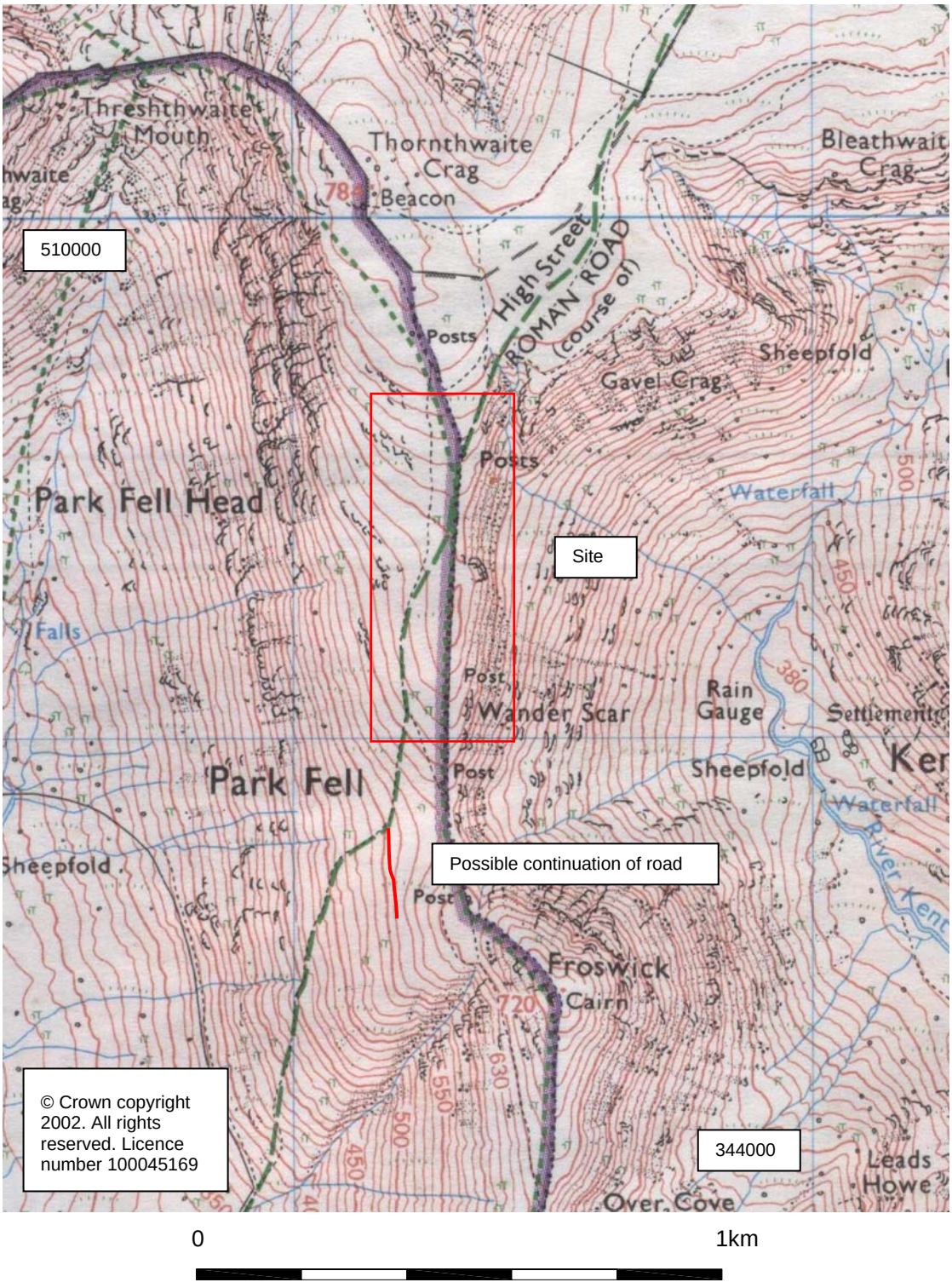


Figure 2: Site location, showing topography in immediate surroundings

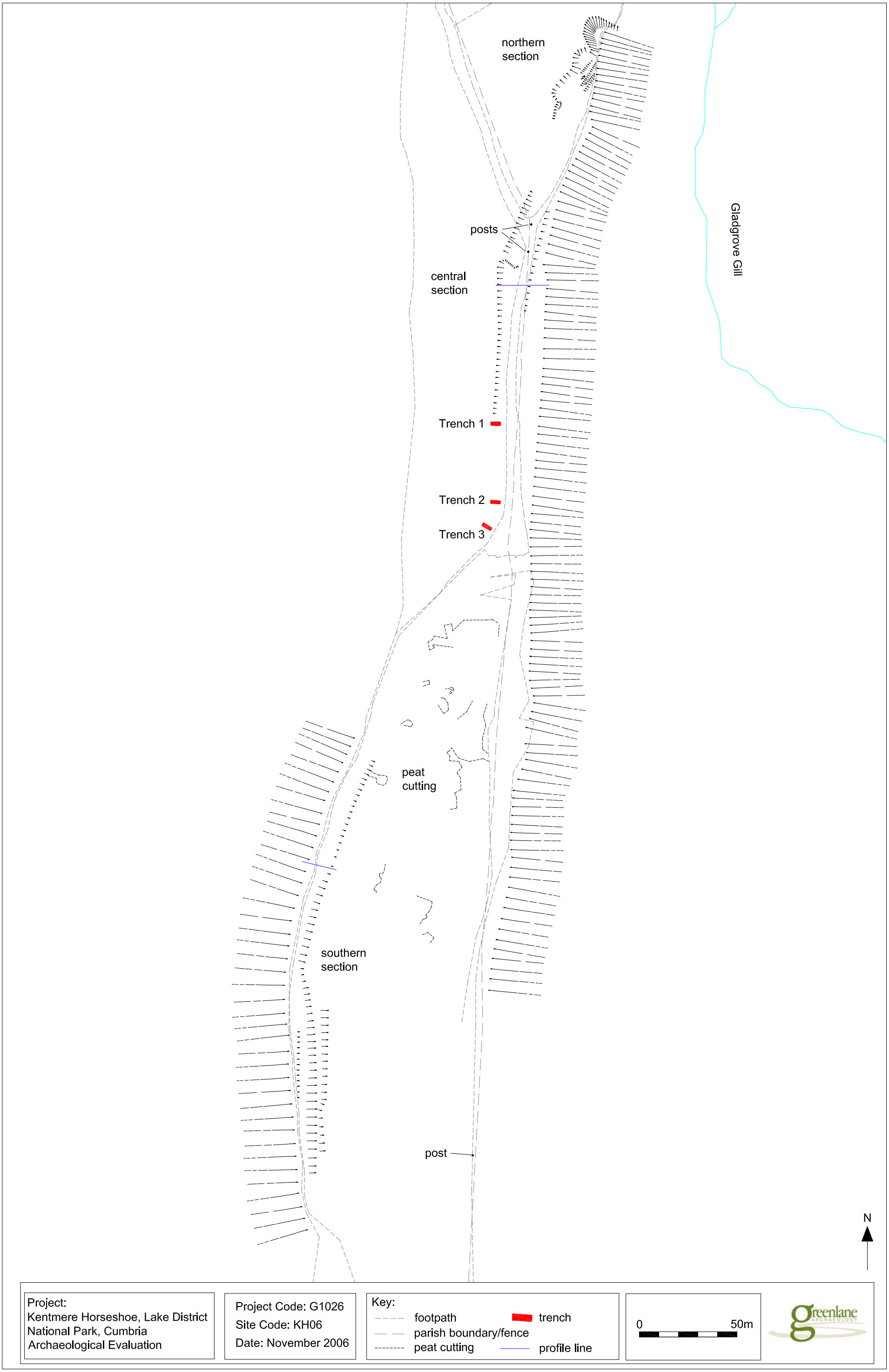


Figure 3: Plan of earthwork features

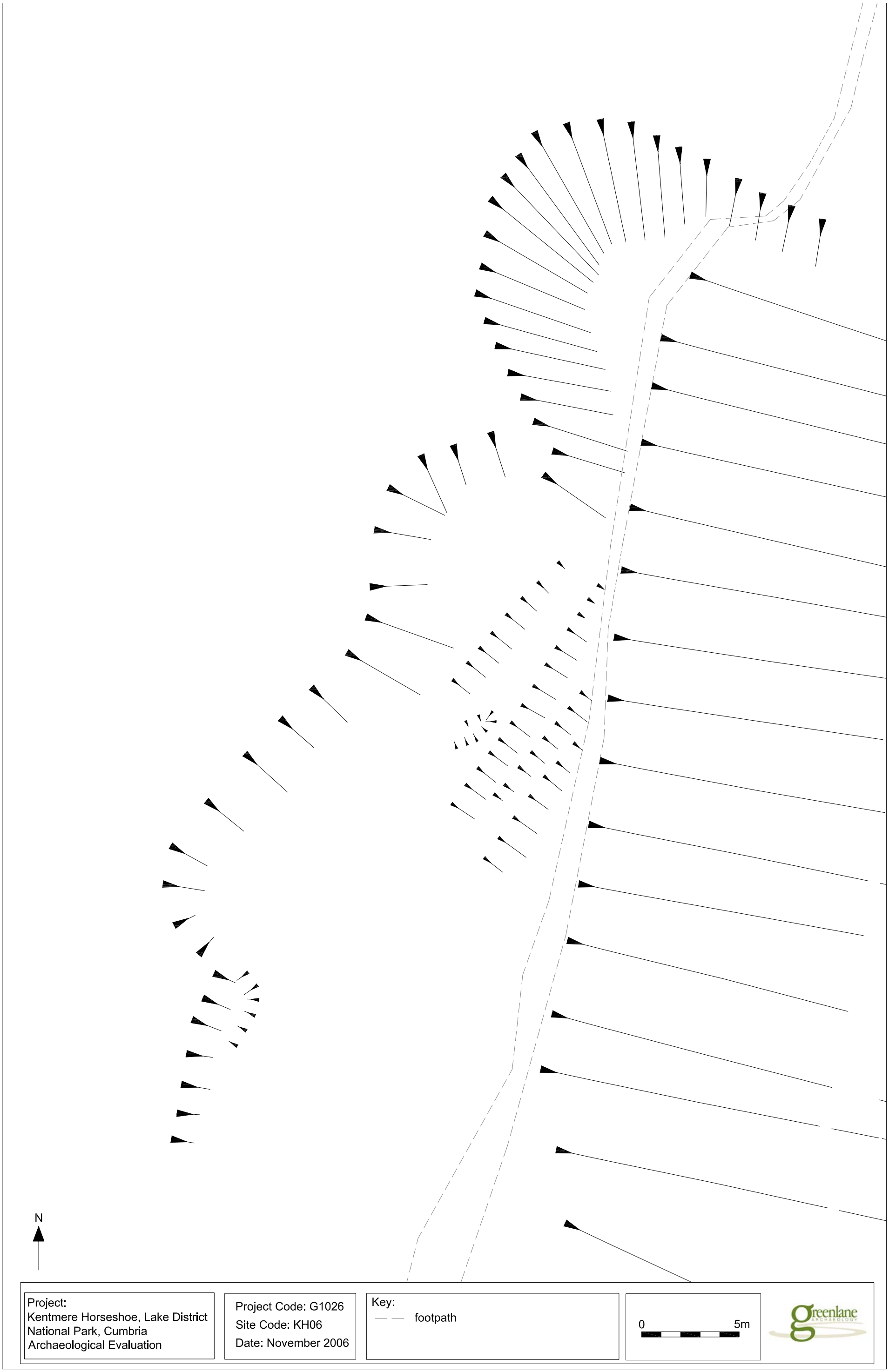


Figure 4: Detail of earthwork features in northern section

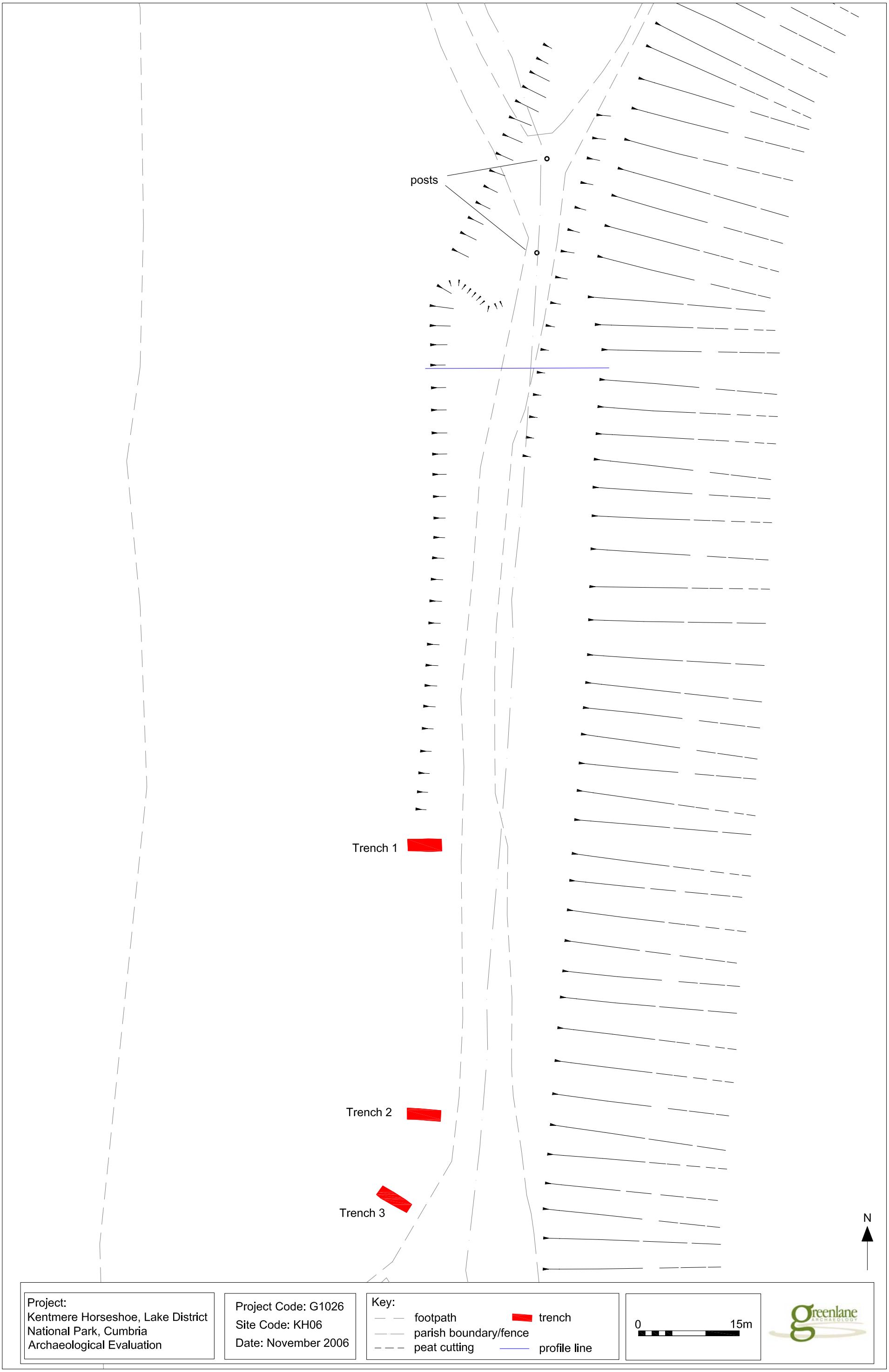


Figure 5: Detail of earthwork features in central section

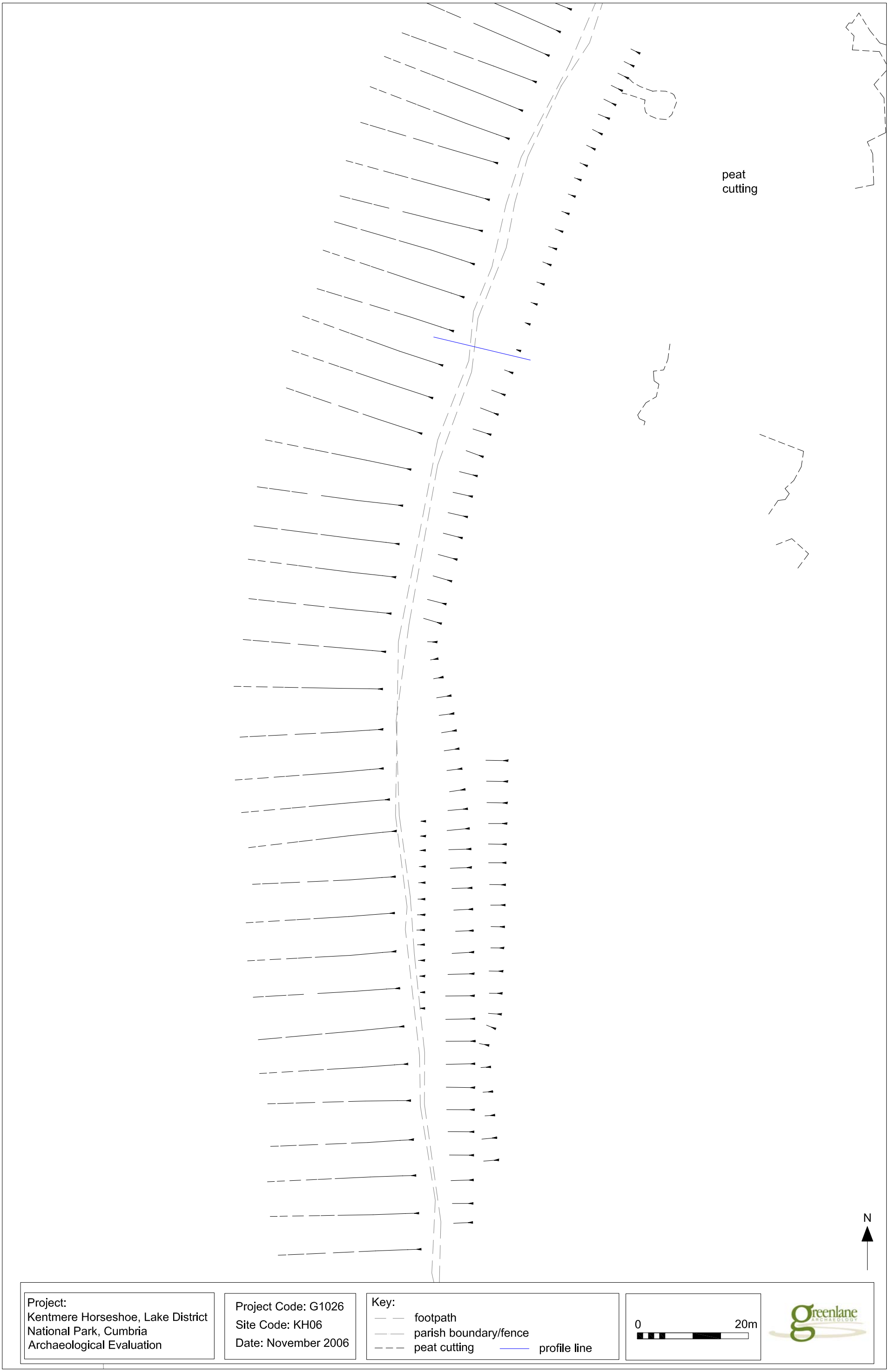


Figure 6: Detail of earthwork features in southern section

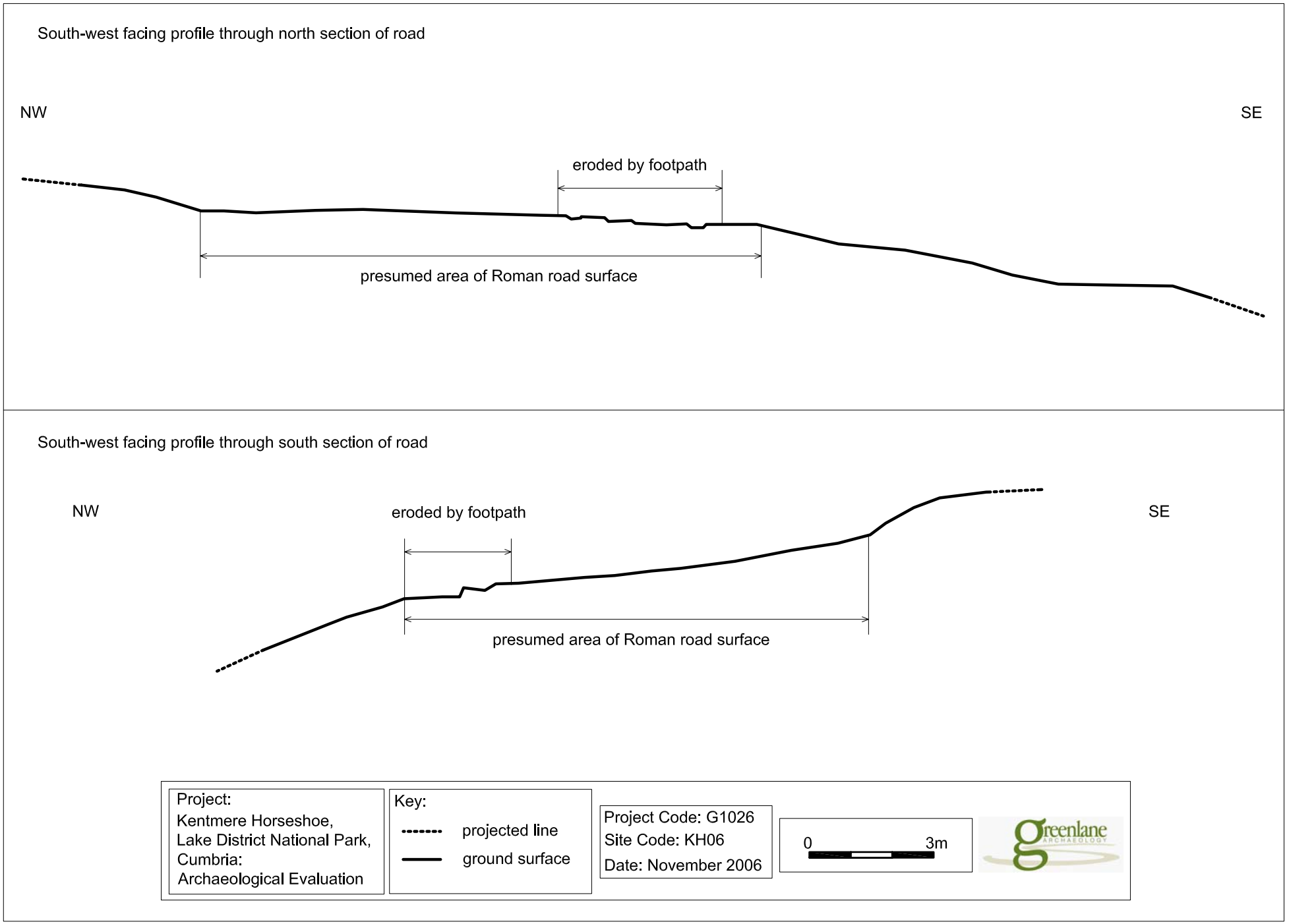
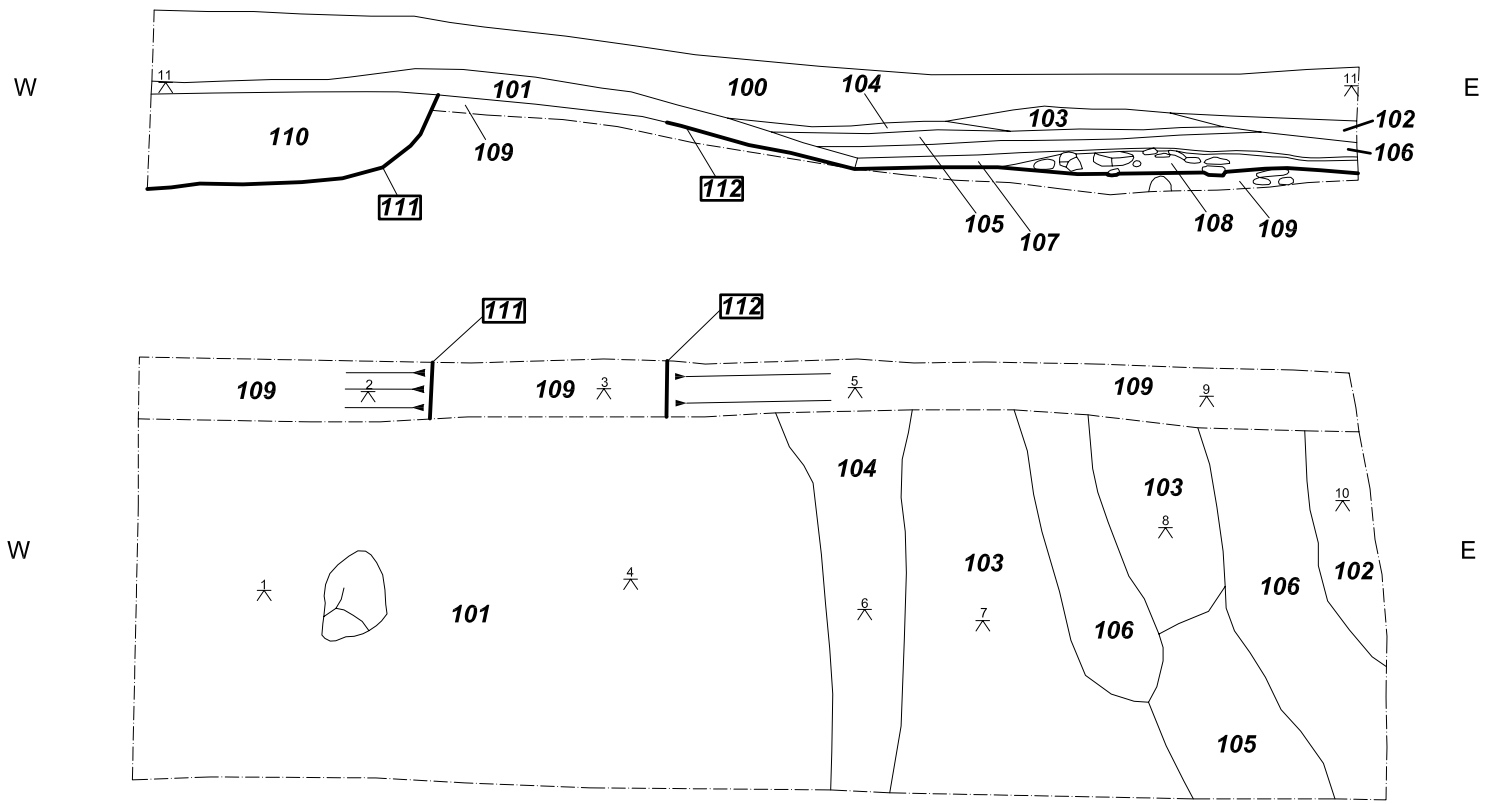
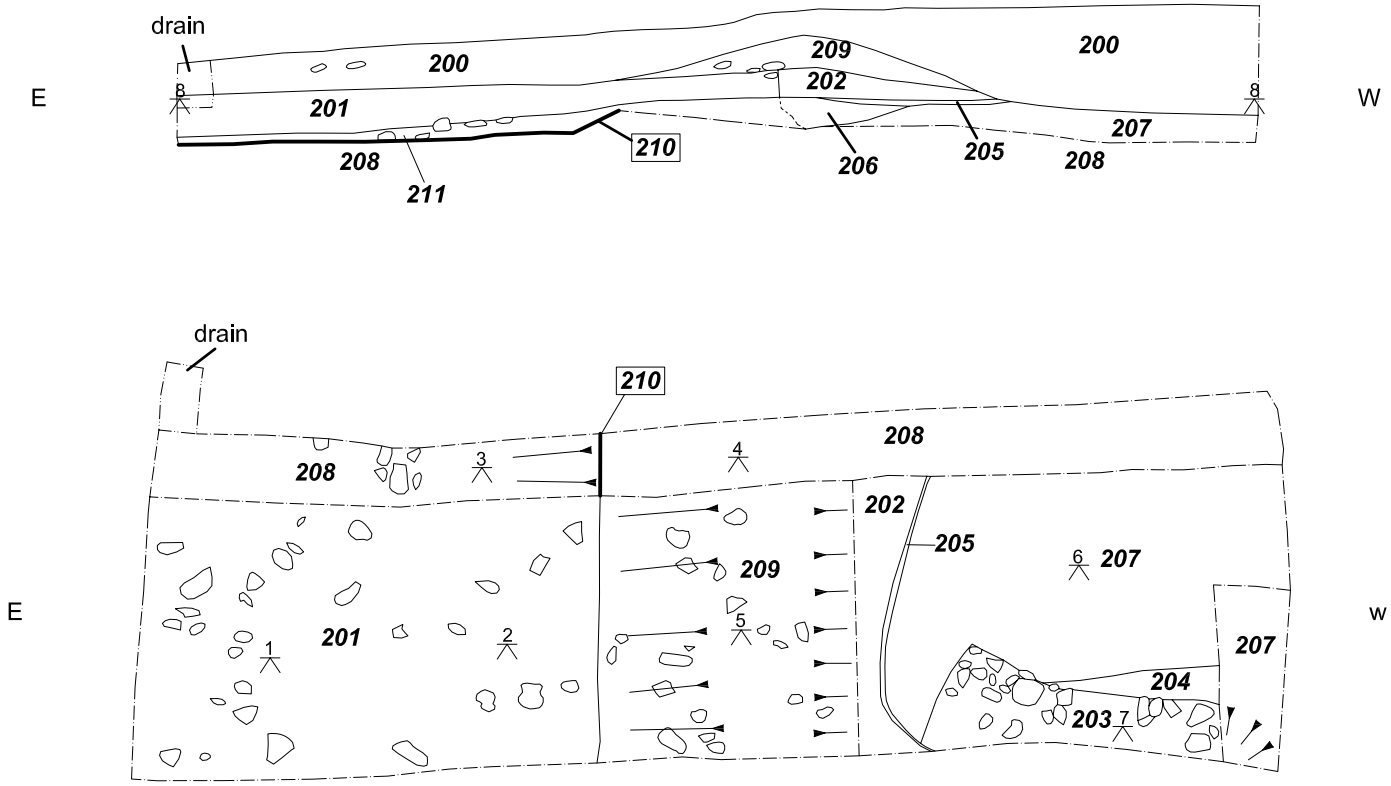


Figure 7: Profiles taken through the road



Project:	Key:	Spot heights (AOD):	
Kentmere Horseshoe, Lake District National Park, Cumbria: Archaeological Evaluation	101 context number extent of excavation edge of context 4 spot height cut feature	1 - 704.41m 6 - 704.26m 11 - 704.63m 2 - 704.23m 7 - 704.31m 3 - 704.45m 8 - 704.37m 4 - 704.34m 9 - 704.16m 5 - 704.22m 10 - 704.37m	Project Code: G1026 Site Code: KH06 Date: November 2006 0 1m

Figure 8: Trench plan and south facing section of Trench 1

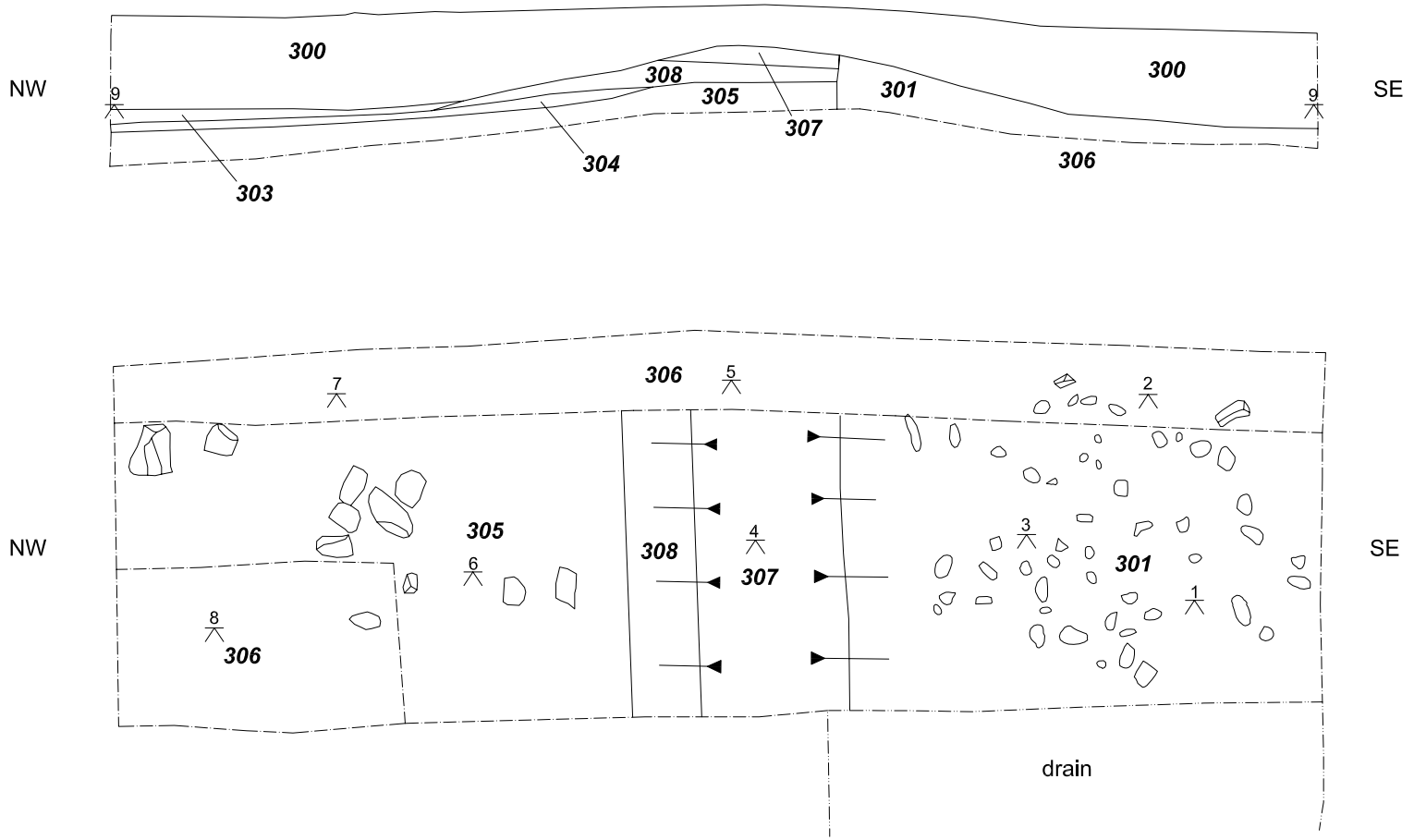


Project:	Key:	Spot heights (AOD):	
Kentmere Horseshoe, Lake District National Park, Cumbria: Archaeological Evaluation	201 context number extent of excavation truncation edge of context 4 spot height cut feature	1 - 698.82m 2 - 698.72m 3 - 698.60m 4 - 698.59m 5 - 699.04m	6 - 698.82m 7 - 698.02m 8 - 698.81m

Project Code: G1026
Site Code: KH06
Date: November 2006

0 1m

Figure 9: Trench plan and north facing section of Trench 2



Project:	Key:	Spot heights (AOD):		Project Code: G1026
Kentmere Horseshoe, Lake District National Park, Cumbria: Archaeological Evaluation	301 context number extent of excavation truncation edge of context 4 spot height	1 - 697.31m 2 - 697.33m 3 - 697.35m 4 - 697.60m 5 - 697.43m	6 - 697.35m 7 - 697.37m 8 - 697.25m 9 - 697.62m	Site Code: KH06 Date: November 2006

0 1m

Figure 10: Trench plan and south-west facing section of Trench 3

Plate 1: Part of Hodgson's plan of 1828 showing the line of the Roman road

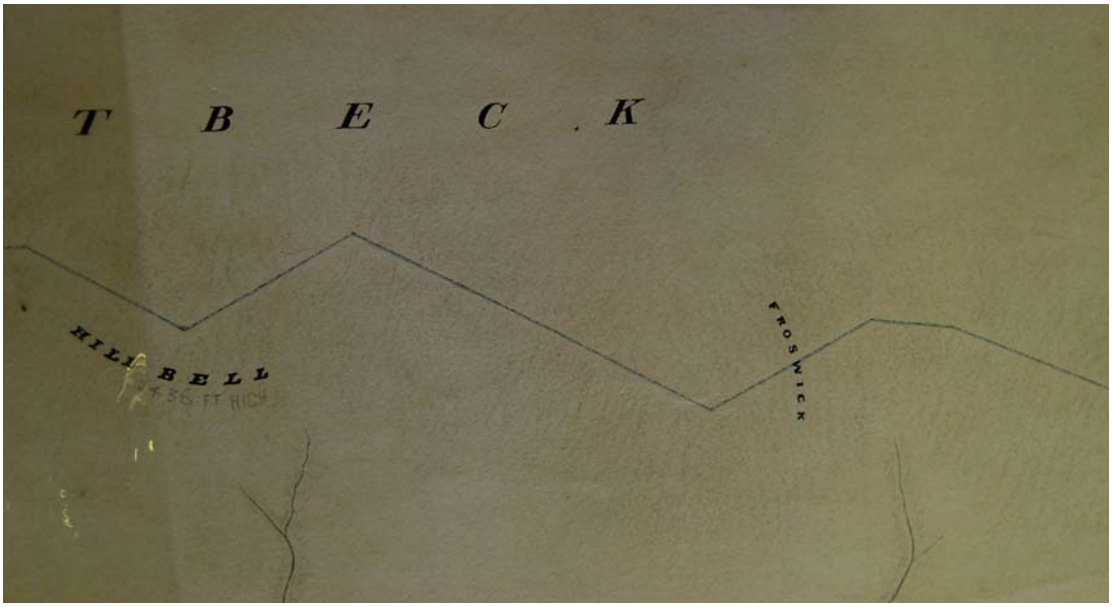


Plate 2: Part of the corn rate map of *c*1835 (CRO(K) WQ/R/C/9 *c*1835) showing the parish boundary within the site at 'Hill Bell' and Froswick (north is to the left)

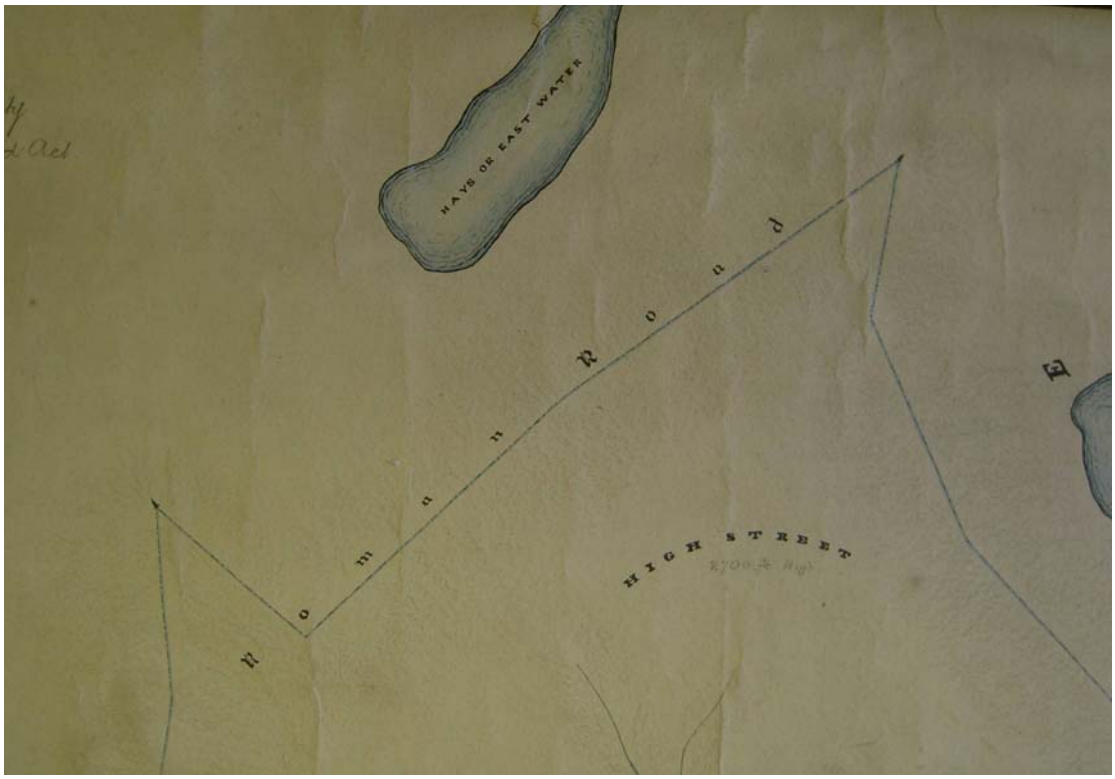


Plate 3: The Roman road to the north of the study area as depicted on the corn rent map of *c*1835 (CRO(K) WQ/R/C/9 *c*1835)

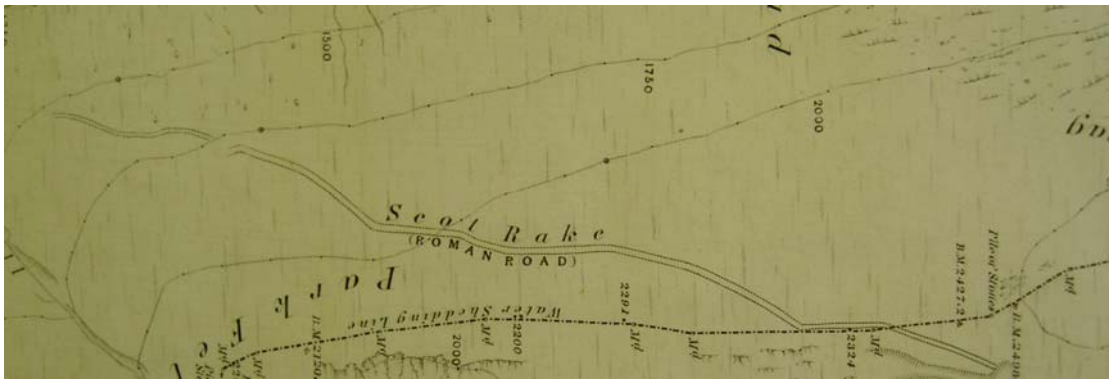


Plate 4: Part of the Ordnance Survey map of 1863 showing the route of the 'Scot Rake' (north is to the right)

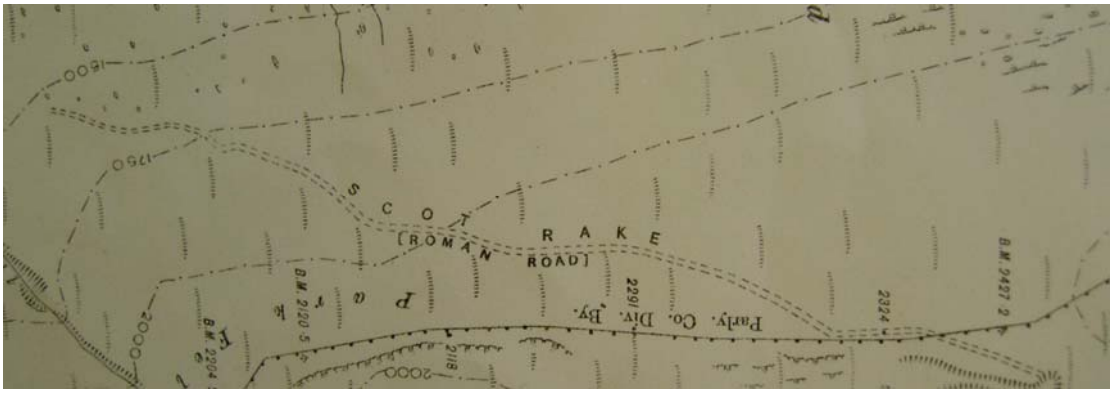


Plate 5: Part of the Ordnance Survey map of 1899 showing the route of the 'Scot Rake' (north is to the right)

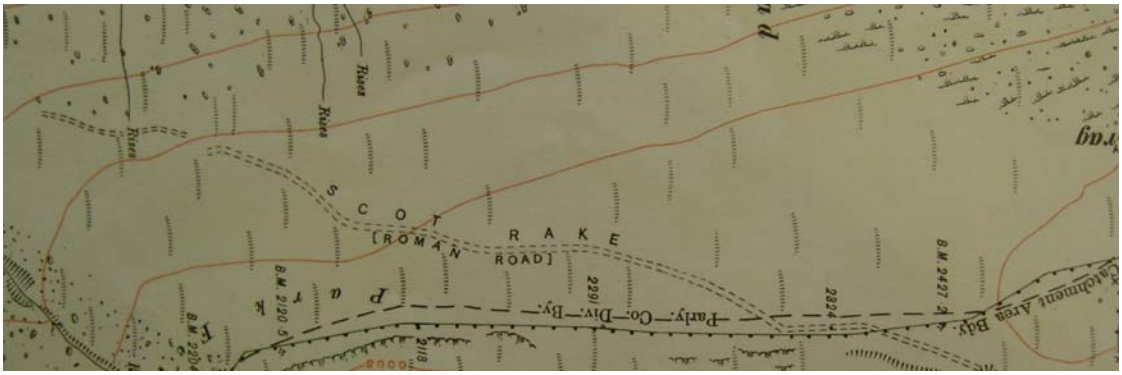


Plate 6: Part of the Ordnance Survey map of 1919 showing the route of the 'Scot Rake' (north is to the right)

Plate 7: Probable quarries at the north end of the survey area, looking north

Plate 8: Earthwork forming the central road section, looking south

Plate 9: Earthworks forming the southern road section, looking north

Plate 10: Road surface, linear feature ***104*** and surface ***101*** in Trench 1, looking west

Plate 11: Section through the road surface in Trench 1, looking north

Plate 12: Section through ditch ***111***, in Trench 1, looking north

Plate 13: Road surface ***201*** and bank ***209*** in Trench 2, looking west

Plate 14: Peat layer ***207***, surface ***203*** and bank ***209*** in Trench 2, looking east

Plate 15: Section through bank ***209*** in Trench 2, looking south

Plate 16: Road surface ***301*** and bank ***307*** in Trench 3, looking north-west

Plate 17: Peat layer ***305*** and bank ***307*** in Trench 3, looking south-east

Plate 18: Section through bank ***307*** in Trench 3, looking north-east

Plate 19: Layers of peat ***300***, ***303-305*** at north-west end of Trench 3, looking north

Plate 20: General view of site during back-filling, looking north

Plate 21: Working shot, Trench 3, looking south