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STATION HOTEL, GILSLAND NORTHUMBERLAND

Archaeological Evaluation Report

Station Hotel
Gilsland
Northumberland

Archaeological Evaluation Report

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SUMMARY

In March 1999, an archaeological field evaluation took place on the site of the former auction mart in Gilsland, Northumberland (NY 6362 6626). The auction mart had occupied a position immediately north of Hadrian's Wall, the south-western corner of the mart actually cutting into the ditch to the north of the wall. In response to a planning application for a residential development on the site, Northumberland County Council required that an archaeological evaluation be undertaken to investigate the survival of archaeological remains within the study area. The southern part of the study area, containing the predicted extent of the ditch and counter-scarp bank is protected as a scheduled ancient monument (SAM 26071).

A preliminary site inspection and geophysical survey were undertaken prior to the evaluation. The site inspection demonstrated that the Wall ditch and associated counterscarp bank survived in good condition just on either side of the study area, but within the study area there was no obvious ditch; this suggested that the ditch had been filled and the counterscarp bank truncated. There was, however, a residual fragment of the counterscarp bank apparently surviving at the western edge of the road. The remainder of the field was occupied by a series of metalled strips corresponding to the pens of the cattle market.

The geophysical survey was undertaken primarily using magnetometry as resistivity was severely restricted due to the cobble surfaces that had been used to infill the livestock pens. However, resistivity was in the event used at the southernmost part of the study area, to the south of the pens; this identified a series of features at a different angle to the pens. The magnetometry demonstrated a series of anomalies that correspond to the observed livestock pens. Numerous bi-polar anomalies were also present, probably originating from ferrous debris from the mart and possibly also the site of a now demolished forge.

The evaluation trenching comprised a total length of 52m, towards the southern end of the proposed development, close to the former location of the Wall ditch and counterscarp bank. No excavation took place in the scheduled part of the monument.

The results of the evaluation suggested that the majority of the proposed re-development area had been severely truncated, and that therefore there was little likelihood of significant archaeological remains still being present. In the far south-eastern corner of the proposed development area, however, some survival of original soil profiles was observed, and it is possible that there was slight survival of *in situ* Roman counterscarp bank material in this location.

In one of the trenches, in the south-eastern part of the site, a medium-sized ditch was encountered, of uncertain but clearly post-medieval date, cutting through the line of the Roman counterscarp bank in a south-east / north-west alignment. This feature is of some interest, suggesting either a deliberate gap in the Roman bank at this point, or substantial erosion of the bank in the post-medieval period.

ACKNOWLEDGEMENTS

Thanks are due to C & D Property Services, for commissioning and supporting the work, and to Webster Plant Hire for supplying and operating a mechanical excavator. We are also grateful to the local residents for their interest.

The geophysical survey was undertaken by Timescape Archaeological Surveys, and was assisted by Adam Frank. Timescape are grateful to Dr Roger Walker (Geoscan Research) for allowing access to the β -test version of Geoplot 3 before general release.

The trial trenching and preliminary survey were undertaken by Neil Wearing, Chris Scurfield, Julian Cotton, and Jamie Quartermaine (LUAU). The soils analysis was undertaken by David Passmore (Newcastle University), pollen assessment was provided by Elizabeth Huckerby (LUAU), and the final drawings were produced by Mark Tidmarsh. The report was written by Julian Cotton, with contributions by Alan Biggins, Julia Robinson, David Passmore and Elizabeth Huckerby; it was edited by Jamie Quartermaine and Rachel Newman. The project was managed by Jamie Quartermaine.

1. INTRODUCTION

1.1 CIRCUMSTANCES OF THE PROJECT

- 1.1.1 Outline planning permission had been obtained by C & D Property Services for a housing development on the site of the former auction mart at Gilsland, in Northumberland (NY 6362 6626). The site (Fig 1) is directly to the north of the line of Hadrian's Wall, and the southern boundary of the development site corresponds to the edge of the Scheduled Monument (Monument No SM 26071). It was required by Northumberland County Council, as a planning condition, that an archaeological evaluation be undertaken to inform the development design, and provide a basis for any subsequent archaeological mitigation.
- 1.1.2 At the request of C & D Property Services, Lancaster University Archaeological Unit (LUAU) provided a project design (*Appendix 2*) in accordance with a project brief (*Appendix 1*) produced by Northumberland County Council. This project design was approved by the County Archaeologist, and LUAU was commissioned to undertake the work.

1.2 SITE DESCRIPTION

- 1.2.1 Gilsland stands on the border between Northumberland and Cumbria, on the watershed between two major river systems. The River Irthing flows past the village towards the west to enter the Eden, whilst the Tipalt Burn to the east enters the South Tyne. North of the village is the land known as the Bewcastle Waste, comprising rough pasture and moorland. Previously the village had been known as Rose Hill, after a prominent outcrop, which was levelled to make way for the railway station. Much of the Roman Wall which extends through the village, was probably removed to assist in the construction of the medieval Thirlwall Castle and only a short section of the Wall remains visible in the vicarage garden, although there is a section to the west of Gilsland which is one of the best preserved sections in Cumbria.
- 1.2.2 The development site (NY 6362 6626) is situated in a rough pasture field in the southern part of Gilsland, to the south of the Station Hotel (Fig 2), and was formerly occupied by Gilsland Auction Mart (Plate 3). The site is characterised by a levelled gently north-sloping terrace forming the platform on which the mart was constructed. It would appear from the configuration of the site that this platform is a result of the levelling of the counterscarp bank and the filling of the Wall ditch.
- 1.2.3 The site lies at approximately 145m AOD, and the underlying geological deposits consist of melt-out debris and fluvio-glacial deposits dating from the Devensian period.

1.3 ARCHAEOLOGICAL BACKGROUND

- 1.3.1 Hadrian's Wall passes through the southern portion of the site, with the well preserved remains of the Poltross Burn Milecastle (MC 48) situated c100m west of the survey area. This milecastle is thought, because of style characteristics (standard B) and its similarity to MC 47, to have been constructed by *Legio XX Valeria Victrix*. It contains two small buildings on either side of a central area, each of which were sub-divided into four partitions. As is usual an oven was situated in the north-west interior of the milecastle (Breeze and Dobson 1987). It has been estimated, by extrapolation, that a flight of stone stairs extended upwards a height of c12 feet to the top of the Milecastle, with a watch

tower over each gate (Daniels 1978); this would also suggest the approximate height of Hadrian's Wall. Excavation demonstrated that it continued in use into the fourth century AD.

- 1.3.2 Although the counterscarp bank of Hadrian's Wall in this area appears to have been largely destroyed by the construction of the auction mart, and the associated wall ditch has been filled in, both the counterscarp bank and Wall ditch are very well preserved as a substantial earthwork to the east of the proposed development site, beyond the C300 minor road. The counterscarp bank (where it survives) and Wall ditch are within the scheduled area of Hadrian's Wall, and form part of the protected Ancient Monument (in this section SM 26071).
- 1.3.3 In a number of instances along the line of Hadrian's Wall, significant archaeological finds have been made beneath or just to the north of the surviving counterscarp bank. On Tarraby Lane (Balaam 1978) a buried land surface was found, and at Birdoswald (Biggins and Taylor forthcoming), evidence of Roman buildings has been identified. It was entirely possible therefore that Roman or other sub-surface archaeological remains might have survived at depth on the auction mart site, outside the scheduled area, despite the evident high levels of truncation.
- 1.3.4 In May 1998, LUAU undertook a watching brief (LUAU 1998) at Gilsland, during construction of a stile on the Hadrian's Wall Path National Trail, on behalf of the Countryside Commission, across the wall on the eastern side of the site. It revealed a 0.1m deep layer of reddish brown gravelly sandy loam, above a buried organic soil layer (0.23m deep) over a gravelly sandy loam which was similar to that on the surface. It is thought likely that the ground surface was buried during works associated with the livestock mart (LUAU 1998).

1.4 MANAGEMENT FRAMEWORK

- 1.4.1 The entire length of Hadrian's Wall and its immediate environs has been designated a World Heritage Site, and as such appreciation of the extent and importance of the archaeology is necessary for its curation and conservation. The Hadrian's Wall Management Plan (1996) for the first time sets out a framework whereby the World Heritage Site is to be managed and conserved. It is, however, acknowledged (*ibid* 4.3.8) that the exact course of the Wall, and the quality or nature of its survival, is still unknown in a number of places.
- 1.4.2 The Management Plan delineates not only the extent of the area encompassed as a Scheduled Monument, but also recommends an agreed setting (or buffer zone) around the monument. At present these scheduled areas are protected by the 1979 Ancient Monument and Archaeological Areas Act; however, the zone constituting the setting is not. In neither area is there any restriction to established agricultural operations because of existing Class Consents. The Management Plan (*ibid* 6.1.4) states '*Unscheduled archaeological sites have protection from development through the procedure set out in Planning Policy Guidance Note 16*'.

2. METHODOLOGY

2.1 PROJECT DESIGN

- 2.1.1 A project design (*Appendix 2*) was submitted by LUAU in response to a request from C & D Property Services for an archaeological evaluation and Geophysical Survey of the study area. It was designed in accordance with a project brief (*Appendix 1*) by Northumberland County Council. Where practicable this project design was adhered to in full, and the work was otherwise consistent with the relevant standards and procedures of the Institute of Field Archaeologists, and generally accepted best practice.
- 2.1.2 The results of the evaluation and geophysical survey are presented within the present report.

2.2 SITE INVESTIGATION

- 2.2.1 A rapid survey was undertaken of the surviving earthworks and other above-ground evidence within and immediately adjacent to the proposed development area. A close examination of the surface was undertaken, and the earthworks were recorded using total station recording equipment, with respect to local survey control. The survey data was drawn up in the field and was superimposed in a CAD system (AutoCad) with digitised data from Ordnance Survey mapping at 1:2500, and is shown in Fig 2.

2.3 GEOPHYSICAL SURVEY

- 2.3.1 This survey was undertaken by Timescape Archaeological Surveys, under the overall control of LUAU; it was conducted on 12th March 1999. A baseline was established along the northern limit of the scheduled area using a Leica TC403L Total Station. From this baseline, 30m survey grids were constructed. The location of the grid in relation to the surrounding wall/fence interiors was measured with respect to the local control (Fig 5). Data was downloaded using a surveying CAD programme (TerraModel) and, after manipulation, was converted in EasyCad as .ecw, .dxf and .wmf files. All map information derived from the Ordnance Survey is reproduced under the Licence Number PR 10240P.
- 2.3.2 The area surveyed measured a maximum length of 70m north/south and 60m east/west (c0.54ha). Due to the restricted area, the grid was aligned approximately with the line of the southern field boundary, which runs parallel with the line of Hadrian's Wall and its ditch.
- 2.3.3 **Magnetometry:** the magnetometer survey was conducted on 30m by 30m grids using a FM 36 fluxgate gradiometer (Geoscan Research) with 0.1n Tesla sensitivity. The survey employed 0.5m sample and 1.0m north/south parallel traverse intervals, with the application of drift correction. Magnetometry survey was restricted to within 2-5m of the perimeter fence and other numerous ferrous components which were present on site. The direction of traverse taken during the survey was at right angles to Hadrian's Wall (north/south).
- 2.3.4 Processing of the magnetometry data was carried out in Geoplot 2 and Geoplot 3 (β -test version, Geoscan Research) processing software. Data was downloaded and analysed using Geoplot 3 software and was subjected to edge matching and despiking at a tolerance

of ± 1.5 SDs. Data smoothing was achieved by interpolation along the X and Y coordinates using a tolerance factor of 0.125.

- 2.3.5 **Resistivity:** ground conditions (including electrode contact) precluded the use of resistivity over much of the site and was therefore conducted within a limited area in the southern part of the site (Figs. 4 and 6). The survey was conducted at 1m sample and 1m zigzag traverse intervals using a Geoscan RM15 resistivity meter with a twin electrode configuration and a probe separation of 0.5m. Resistivity data was treated similarly to that derived from the magnetometry survey, with the addition of a desloping procedure. On this site, large pebbles had been used to infill the remnant foundations of livestock pens and concrete foundations prevented the use of resistivity over much of the rest, restricting it therefore to an area adjacent to the scheduled area.

2.4 TRIAL TRENCHING

- 2.4.1 Initially, three 15m trenches were required (*Appendix 2*), equally spaced along the southern perimeter of the proposed development, where the archaeological potential was perceived to be greatest. Subsequently, however, several variations were made to this layout, all with the approval of the County Archaeologist and the Client. These variations included, in the first instance, digging two small trenches (Trenches 1 and 2), instead of one large one, in the south-western corner as there was insufficient space between the scheduled area and a ruined building to fit a single 15m trench. Some additional trenching (Trenches 5 and 6) in the far south-eastern corner was undertaken to clarify the stratigraphic sequence encountered in Trench 4.
- 2.4.2 The final arrangement of the trenches is shown in Fig 2 and was accurately located by total station surveying. Trenches 1 and 2 both measured 7.5m by 1.6m, Trench 3 measured 15m by 1.6m, and Trench 4 measured 16m by 1.6m. Trench 5 measured 2.7m by 1.6m, and Trench 6 measured 4.3m by 1.6m.
- 2.4.3 The trenches were excavated by a JCB wheel-digger, employing a 1.6m wide toothless ditching bucket, working under full archaeological supervision. Mechanical excavation continued down to the level of the first potentially significant archaeological deposit, or to natural deposits, whichever was uppermost. All subsequent excavation was by hand.
- 2.4.4 All the trenches were cleaned, in their entirety, by hand, and displaced material (stored in appropriate spoil-heaps at the sides of the trenches) was scanned for the presence of archaeological artefacts and other potentially significant materials.
- 2.4.6 Recording was by means of the standard LUAU context recording system, with trench records and supporting registers and indices etc. A full photographic record in colour slide, monochrome, and digital formats was made, and scaled plan and section drawings were made of the trenches at appropriate scales.
- 2.4.7 Samples for the assessment of palaeoenvironmental potential were taken from soil horizons that appeared to have potential for environmental analysis, and an assessment of the general palaeoenvironmental significance and pedology of the site was made.
- 2.4.8 On completion of the site works, the trenches were backfilled to the instructions of the client, but not otherwise reinstated.
- 2.4.9 Soil samples were taken for sediment analysis. See *Section 4.8*.

2.5 PALYNOLOGICAL ASSESSMENT

- 2.5.1 The samples were prepared chemically for pollen analysis using the standard techniques of sodium hydroxide, hydrofluoric acid and acetolysis (Faegri and Iversen 1989). The samples were then mounted in silicone oil and examined with an Olympus BH-2 microscope using x400 magnification routinely and x1000 for critical grains. Counting was continued until a sum of at least 150 grains had been reached on two or more complete slides, which was done to reduce the possible effects of differential dispersal under the coverslips (Brooks and Thomas 1967). Pollen identification was carried out using the standard keys of Faegri and Iversen (1989) and Moore *et al* (1991) and with respect to a limited reference collection held by LUAU. The limited nature of the collection restricted the identification of the more unusual grains. Cereal-type grains were defined using the criteria of Andersen (1979) and indeterminate grains were recorded using groups based on those of Birks (1973). The presence of charcoal was noted.

2.6 ARCHIVE

- 2.6.1 A full professional archive has been compiled in accordance with the project design (*Appendix 2*) in a manner currently accepted as best practice.
- 2.6.2 The paper and digital archive will be deposited in the Northumberland Records Office in Morpeth, and a copy of this report, together with an index to the archive, will be sent to Northumberland County Council, for inclusion in their Sites and Monuments Record. The Society of Antiquaries Museum, Newcastle, will receive the material archive.

3. SURVEY RESULTS

3.1 SITE INVESTIGATION

- 3.1.1 The preliminary site investigation demonstrated that there was a dramatic difference between the earthwork survival of the Wall ditch and counterscarp bank within the study area and those elements within areas immediately beyond. The Wall ditch did not survive and the south-western part of the proposed development area in particular appears to have been subjected to particularly severe terracing. In the south-eastern corner was a raised area (Fig 2 (iii)), which, on surface examination at least, appeared to be the northern remains (albeit very badly truncated) of the counterscarp bank. Along the southernmost end of the site was a terrace edge (Fig 2 (ii)), which broadly corresponded to the line of the southern side of the Wall ditch as defined by the surviving sections of ditch on either side of the study area (Plate 4).
- 3.1.2 In the central part of the site, the layout of the former auction mart was still plainly visible on the ground, as lines of stony infill, and disturbed areas of turf (Plate 3). The western edge of the site appeared to have been affected by severe building disturbance, with concrete slabs, inset corrugated sheeting, and footing pads still in evidence. At the western edge of the site was a series of parallel, low, narrow banks (Fig 2 (i)), which would appear to correspond to the foundations of a recent structure in the area, and indeed are shown on the Ordnance Survey 2nd edition map.
- 3.1.3 The evidence would suggest that the vast majority of the upstanding archaeological earthworks that would formerly have been present on the site (outside the area now scheduled) had been levelled. Part of the ditch has been filled and the only surviving element would appear to be the terrace along the southern edge of the plot, which may be either the surviving southern edge of the ditch with its berm to the south, or a more recent earthwork constructed following the line of the Wall.

3.2 GEOPHYSICAL SURVEY

- 3.2.1 The resistivity survey (Fig 4), although restricted in its area of application, does show a number of anomalies which may be of archaeological significance. The south-western corner, immediately adjacent to the scheduled area, and probably within the area of the counterscarp bank, shows a number of low resistance rectilinear features (Fig 8: 1); these were subsequently explored by Trench 1. An additional high resistance linear area (Fig 8: 2), approximating to an east/west orientation, is probably the site of temporary holding pens.
- 3.2.2 The magnetometry survey (Fig 5) was influenced by the location of the sheep pens, which were observed as linear features running approximately east/west. Towards the eastern edge of the survey, the location of another pen (orientation approximately north/south) was also seen. The north-western sector of the survey area (the site of the office buildings) was presented as a highly anomalous area (Fig 8: 3) and a number of bi-polar anomalies were also visible (Fig 8: eg 4). The resistivity anomalies observed (Fig 8: 1) were reflected by similar magnetometry anomalies (Fig 8: 5). Although these features seem to adopt a differing alignment to the more obvious sheep pens, it is uncertain whether these anomalies have any archaeological significance, or were merely part of former holding pens. None of the anomalies could, with confidence, be ascribed an archaeological origin.

4. TRENCHING RESULTS

4.1 TRENCH 1

- 4.1.1 Trench 1 is a 7.5m long trench at the western most edge of the study area. The uppermost deposit removed in Trench 1 was a thin layer of turf [1] comprising a dark brown sandy loam containing occasional small pebbles. Beneath the turf, over the whole extent of the trench, was a layer of dark brown sand [2] containing abundant coal ash and occasional variable gravel. This deposit [2] varied in thickness between 0.19m and 0.35m, and was clearly a layer of modern infill.
- 4.1.2 Beneath deposit [2], but only present in the mid-part of the trench, was a mid-brown sandy loam [3] containing occasional clay and cinders. This deposit [3] was also quite clearly a layer of modern infill (lengths of plastic sheeting were observed in it) and was typically 0.25m in thickness. At the southern end of the trench only, another deposit appearing to represent an earlier phase of infill (layer [4]) was observed, apparently dipping towards the south [5], and reaching a maximum thickness of 0.32m at the southern end of the trench. There was no means of reliably dating this layer.
- 4.1.3 Beneath the various layers of infill, towards the base of the trench, was deposit [6], an orange brown, fine, slightly humic sand. This appeared to form the base of a severely truncated soil profile developed on the underlying orange-brown pleistocene sands and gravels [7 and 8], but it was not possible to be sure of this interpretation. Deposit [6] was up to 0.25m in thickness and was box-sampled for pollen analysis.
- 4.1.4 **Summary:** Trench 1 was dug to a mean depth of 0.45m, and was characterised by modern infill directly overlying a severely truncated subsoil. It is possible that deposit [4] represents part of the deliberate infilling of the Wall-ditch to the south, probably immediately before the construction of the auction mart. No evidence of any cut archaeological features was found in the base of Trench 1, and no archaeological artefacts were found during excavation.

4.2 TRENCH 2

- 4.2.1 Trench 2 was a 7.5m long trench to the east of Trench 1. The uppermost deposits encountered in Trench 2 [9 and 10] correspond to deposits [1] and [2] in Trench 1, and represent a similar modern sequence of thin turf overlying a band of ashy gravel and sand, amounting to a total depth of up to 0.3m. Beneath [10] was deposit [11], a grey brown uniform sand, which was up to 0.15m in thickness but only occurred in the southern two-thirds of the trench. Deposit [11] was almost certainly a dump of modern builders' sand.
- 4.2.2 Below [11], in the southern half of the trench only, was deposit [12], a reddish-brown clay loam that once again was clearly interpretable as recent infill, as items of modern rubber were observed in its matrix. Deposit [12] was up to 0.15m in thickness, and directly overlaid natural deposits. In the northern half of the trench only, below deposit [12], was a band of material [13] which was similar to [12] but more stony. Deposit [13] was typically 0.12m in thickness, and seems to represent the base of the infill sequence.
- 4.2.3 Below the infill sequence was a truncated soil horizon similar to deposit [6] in Trench 1. This soil horizon [14] consisted of a mid - dark brown orange hued fine humic sand,

containing no inclusions, and was lain directly on the underlying Pleistocene gravels. This deposit was an average 0.15m in thickness, and was box-sampled for pollen assessment.

- 4.2.4 **Summary:** Trench 2 was dug to a mean depth of 0.5m, and displayed a similar broad stratigraphic sequence to Trench 1, with modern infill directly overlying severely truncated soil profiles or natural sands and gravels. No cut archaeological features were found in the base of the trench, and no archaeological artefacts were found in the trench.

4.3 TRENCH 3

- 4.3.1 Trench 3 was a 15m trench in the centre of the study area. Only one deposit was removed in Trench 3, a dark brown sand loam containing numerous large rounded pebbles and cobbles [17]. This deposit [17] varied from 0.10m to 0.33m in thickness, and came straight down onto orange-brown natural sands and gravels [21 and 22]. The locality of the trench had clearly been subjected to very severe truncation, and no archaeological deposits, features or artefacts were found in it. In the middle of the trench, a putative ditch was located [18-20], but on excavation it was demonstrated to be very shallow, amounting to no more than a slight variation within the natural deposits.

4.4 TRENCH 4

- 4.4.1 Trench 4 was located at the eastern edge of the study area. Trench 4 is best described in two parts, as the northern part of the trench was very different to the southern third. In the northern part of the trench, modern infill was found to overlie directly truncated natural deposits throughout, this part of the trench varying between 0.4m and 0.6m in depth. The uppermost deposit was a thin turf [23] consisting of a dark brown sandy loam. Beneath this was a dark brown sandy loam with frequent gravel and abundant coal ash and modern objects (not collected) [24]. This deposit [24] was typically 0.35m in depth and rested on top of orange natural sand and gravel [29].
- 4.4.2 The southern third of the trench displayed a more complex and interesting sequence (Fig 11). Beneath the infill described above, was a dark band of greyish brown sand loam [25], up to 0.3m in thickness, containing mid-nineteenth century artefacts only, and seeming to represent a surviving soil layer pre-dating the auction mart. Beneath this, at the extreme southern end of the trench only, was a layer of coarse gravel [37], which might be interpreted (*Section 5.4*) as a truncated remnant of Roman bank material.
- 4.4.3 Stratigraphically earlier than [37], and also truncated by [25], was a soil horizon [26], consisting of a mid brown slightly humic well-sorted sandy loam / clayey sand, some 0.15m in thickness. This soil horizon was sampled for pollen assessment and assessed in terms of its palaeoenvironmental potential, but no artefacts were found within it. Beneath the soil horizon was a thin deposit [27] of small-medium rounded pebbles and cobbles resting on top of natural sands (Fig 11). Deposit [27] was thought to be anthropogenic when first encountered, but subsequent detailed inspection suggested it to be of probable fluvio-glacial origin.

4.5 TRENCH 5

- 4.5.1 Trench 5 was only 2.7m long and was located between Trench 4 and the field boundary; it was dug to a maximum depth of 0.8m. It was excavated in order to establish whether the deposits of possible archaeological interest located in Trench 4 extended any distance to

the east. All the deposits removed within Trench 5 appeared in fact to be modern infill, and the base of this infill sequence cut directly into natural sands and gravels.

- 4.5.2 The upper part of the infill was composed of a thin turf [23] overlying redeposited orange sand and clay [24], reaching a maximum thickness of 0.22m at the southern end of the trench. Beneath this was a thick band of coal ash and coke [25].

4.6 TRENCH 6

- 4.6.1 Trench 6 was 4.3m long and was excavated to the west out from Trench 4; it was dug to an average depth of 0.7m. The upper parts of the exposed soil sequence [23, 24, and 25] consisted of recent deposits identical to those in Trench 4, and amounted to a total thickness of up to 0.55m. Below [25] was a mid-dark brown mixed sandy loam of uncertain pedogenesis, containing occasional gravel [35]. This deposit [35] was a mean thickness of 0.18m, and appeared to extend right across the trench.
- 4.6.2 Towards the eastern end of the trench (Fig 10) a ditch [36] was encountered, crossing the trench in a south-east/north-west alignment. The upper fill of this ditch was sealed by deposit [35], and the ditch was a maximum of 2.5m wide and 0.65m deep, displaying a gently graded 'U'-shaped profile. Ditch [36] was filled successively by deposits [34], [33], [32], [31] and [30].
- 4.6.3 Fill [34] consisted of a light yellow sand containing some charcoal, and occurred in the base of the ditch cut along the eastern edge of the feature only. Fill [33] consisted of a thin band of coarse gravel, in the eastern part of the ditch, and fill [32] consisted of a thicker band of mottled yellow-brown loamy sand, again in the eastern part of the ditch.
- 4.6.4 Fill [31] was stratigraphically later than [32], and was present throughout the ditch, consisting of a light-brown clayey sand containing occasional fine rounded gravel. The latest fill, occurring towards the centre of the ditch, was a mid-brown clayey sand containing occasional fine rounded gravel [30], and two sherds of post-medieval pottery. Full details of this ditch are held in archive.

4.7 FINDS

- 4.7.1 A summary of the artefacts recovered from the works is presented below by context and by number. There were no Roman finds and even the post-medieval finds are comparatively late.

4.7.2	Layer 3 (Trench 1)	Stone tile fragment	Modern
	Layer 25 (Trench 4)	One purple slate	Nineteenth Century
		Three clay pipe stems	Nineteenth Century
		Six sherds of blue and white ware	Nineteenth Century
		One sherd of red ware	Nineteenth Century
		One sherd of garden ware	Nineteenth Century

Ditch fill 30 (Trench 4) Two sherds of brown glazed ware Eighteenth Century

4.8 SOIL AND SEDIMENT PROFILES - D PASSMORE

4.8.1 **Introduction:** this report comprises four section logs and interpretations made during a field visit on 18th March 1999. This was intended to evaluate soil and sediment profiles for evidence of human disturbance and/or buried soils that may have resulted from the construction of Hadrian's Wall or other local activity. Representative sections from each of four evaluation trenches (1-4) were cleaned and logged, and are described below:

4.8.2 **Trench 1:** east-facing section recorded at the southern limit of the trench.

0-100mm	Made-ground (including ash).
100-350mm	Reddish-brown structureless silty fine or medium sandy gravel, frequent root penetration. Upper levels disturbed and truncated. Gradual contact to deposit below.
350-600mm	Brown fine-coarse sandy matrix-supported gravels. End of section.

4.8.3 **Interpretation:** a truncated sub-soil profile developed in fluvioglacial sand and gravel parent material.

4.8.4 **Trench 2:** west-facing section recorded 1m from the northern limit of the trench.

0-220mm	Angular gravelly made-ground.
220-400mm	Dark brown structureless silty fine sandy with frequent gravel inclusions, charcoal flecks and root penetration. Gradual contact to deposit below.
400-700mm	Brown structureless silty fine-medium sand with frequent fine gravel and granule inclusions. Some root penetration. Gradual contact to deposit below.
700mm-	Orange-brown well-sorted fine-medium matrix-supported sandy gravel (maximum B-axis 100mm). Some root penetration and traces of animal burrows. End of section.

4.8.5 **Interpretation:** a truncated sub-soil profile developed in fluvioglacial sand and gravel parent material.

4.8.6 **Trench 3:** east-facing section recorded 6m from the southern trench limit.

0-300mm	Turf over made-ground.
300-400mm	Red-brown structureless silty fine-medium sand with gravel inclusions. Frequent root penetration. End of section.

4.8.7 **Interpretation:** truncated sub-soil profile developed in fluvioglacial sand and gravel parent material.

4.8.8 **Trench 4:** east-facing section recorded between 2m and 3.5m from the southern trench limit.

0-280mm	Turf over stony topsoil made-ground. Occasional ceramic sherds. Equivalent to [23] and [24].
280-380mm	Mid-brown silty fine-medium sand subsoil with occasional gravel inclusions. Frequent root penetration. Equivalent to [26]. Gradual contact to deposit below.

380-430mm	Mid-dark brown silty sandy matrix-supported fine gravel and cobbles. Frequent root penetration. Equivalent to [27]. Abrupt contact to deposit below.
430-500mm	Mid-light brown silty medium-coarse sands with occasional fine gravels and traces of lamination, some bioturbation. Equivalent to [28]. Abrupt contact to deposit below.
500mm-	Light brown sandy matrix-supported sub-rounded gravel (maximum B-axis 100mm). Equivalent to [29]. End of section.

- 4.8.9 **Interpretation:** basal sands and gravels [29] are ice-contact fluvioglacial (probably kame) deposits associated with Late Devensian de-glaciation of the locality. Overlying sand deposits [26-28] with gravel inclusions and some traces of lamination [28] are interpreted as a truncated subsoil representing pedogenic alteration of the upper horizons of these fluvioglacial sediments. Overlying deposits [23/24] comprise relatively modern made-ground and turf.
- 4.8.10 **Summary:** all recorded sections comprise basal fluvioglacial sand and gravel deposits (associated with regional de-glaciation) with soil profiles developed in their upper levels. The profiles have been truncated by relatively modern made ground. The most complex stratigraphic sequence was evident in Trench 4 where a thin bed of fine gravelly sands with traces of lamination lies interbedded with sandy gravels [26 - 28]. These fluviually sorted sediments are interpreted here as comprising the upper part of the basal fluvioglacial depositional sequence. With the exception of modern truncation of sequences in all trenches, no evidence of human disturbance or buried soils was evident in the sections recorded during this site visit.

4.9 PALYNOLOGICAL ASSESSMENT (TRENCH 4) - E HUCKERBY

- 4.9.1 **Introduction:** four sub-samples from sample 3, horizon 26, in Trench 4 were sub-sampled in the laboratory for palynological assessment. The sub-samples were from depths of 290-300mm, 330-340mm, 350-360mm and 380-39mm below the present ground surface. The stratigraphy of the trench is shown in Fig 11 and a description of the sediments is defined in the soil and sediment report (*Section 4.8*). The data are presented in Tables 1 and 2 as percentage values of the total land pollen and spores recorded.
- 4.9.2 **Results:** the preservation of the pollen was poor with the percentage of corroded pollen being as much as >66%. However, the quantity of pollen that was identifiable enabled an assessment of the samples to be carried out, although the interpretation must of necessity be cautious as some pollen types are more easily recognisable when preservation is extremely poor, in particular Alder (*Alnus*) and dandelion-type (*Liguliflorae*). Oak and grass pollen were poorly preserved.
- 4.9.3 Arboreal pollen was recorded at values of less than 50% in all samples, with alder as the major component and some hazel (*Corylus avellana*-type) and birch (*Betula*). The non-arboreal pollen and spores were mainly from grasses (Gramineae), heathers (Ericales and *Calluna*), dandelion-type, undifferentiated ferns and Sphagnum. This suggests that the landscape around the site was mainly cleared of trees when the sediments were developed. There are some variations in the pollen profile with a greater representation of heather pollen at 290-300mm and 380-390mm, but more birch pollen at 350-360mm when herb pollen is at slightly lower values. Cereal-type pollen was tentatively recorded in the two upper samples but the general state of preservation was too poor for an unambiguous identification to be made.

Pollen taxa	290-300mm	330-340mm	350-360mm	380-390mm
Betula	4.6	4.3	11.4	5.7
Alnus	25.4	24.2	28.2	29.1
Quercus	0.4	0.5	0	0.7
Pinus	0.7	1	0.5	0
Corylus avellana-type	8.8	13.5	8.9	8.5
Salix	0.4	0	0	0
Ilex	0	0	0.5	0
Calluna	1.4	1.9	1	0
Ericales undiff	9.5	5.8	5	13.5
Gramineae	21.1	15.9	9.9	14.2
Cerealia	1.1	0.5	0	0
Cyperaceae	1.1	2.4	0	0.7
Liguliflorae	7.7	7.2	13.4	11.3
Tubuliflorae	0	0.5	0.5	0.7
Plantago lanceolata	0	0	0.5	0
Artemisia	0	0	0.5	0
Filipendula	0	0	0.5	0
Caryophyllaceae	0.4	0	0	0
Succisa pratensis	0.7	0	0	0
Potentilla	0.4	0	0	0.7
Rosaceae	0	0.5	0	0
Umbelliferae	0.7	0	0.5	2.1
Leguminosae	0.4	0	0	0
Sphagnum	6.7	6.8	4.4	3.5
Polypodium	1.8	1	1	2.8
Pteridium	0.4	0	0	0.7
Filicales	1.7	14	13.4	5.7

Table 1: Pollen as percentage of total land pollen and spores

% TLPS	290-300mm	330-340mm	350-360mm	380-390mm
Trees and shrubs	40.1	43.5	49.5	44
Herbs	33.5	26.6	25.7	29.8
Ericales	10.9	7.7	5.9	13.5
Fern spores	6.5	14	14.4	9.2
Sphagnum spores	6.7	6.8	4.4	3.5
Corroded grains	98.2	66.2	79.7	86.5
Concealed grains	0.4	1	0	0
Crumpled grains	0	1.4	0	0

Table 2: Summary of percentage of groups of Total land pollen and spores

- 4.9.4 **Conclusions:** the sediments have been interpreted as a fluvioglacial depositional sequence (Section 4.8), however, the pollen data is somewhat confused and may suggest a more recent origin for the samples analysed palynologically. The percentages of alder and hazel pollen would suggest that the samples were of a post-Flandrian I date, unless these pollen types resulted from more recent contamination. Alder is not normally recorded at values below 10% before the Flandrian I/II transition (Hibbert *et al* 1971) and the values recorded in these samples are less than 24%, which make a fluvioglacial origin uncertain but not impossible if contamination is a factor. Finally the palynological assessment provides no firm evidence as to the date of the sediments analysed and a direct comparison with the soil profiles from near Hadrian's Wall at Tarraby Lane (Balaam 1978) cannot be made as no soil profiles were recorded there.

5. DISCUSSION

5.1 SURFACE EVIDENCE

- 5.1.1 It was apparent that the site has been badly disturbed by the construction of the sheep mart and most physical evidence of the counterscarp has been erased, although evidence of the supporting berm for the Wall can be observed towards the south, within the scheduled area. Relatively recent housing and gardens now cover the sector where the Wall is thought to have been constructed.
- 5.1.2 The entire site has been cleared of the former mart holding pens, constructed primarily of wood which had been burnt, leaving that evidence, together with numerous nails and other ferrous material. The foundations of the pens survive, however, comprising areas of large cobbles. The western edge of the site housed the office area, which had a concrete (or hardcore) base. Further south was the clear outline (as a slight earthwork c10m x 5m) of a partitioned building (or pens).
- 5.1.3 The area of the Old Forge has evidently been excavated below the previous ground level, to a maximum depth of c2m. The road passing north/south between the site of the Old Forge and Forge Cottage had, in antiquity, produced a hollow-way, which extended east of the evaluation area, effectively cutting the Wall and associated features. Immediately beyond this, and also to the west of the proposed development area, the Wall, ditch and counterscarp bank are well preserved.

5.2 SUB-SURFACE EVIDENCE

- 5.2.1 It was clear from the data collected during the evaluation that the majority of the proposed development area had, as expected, been severely truncated. The only part of the site where original or only slightly truncated profiles were encountered was in the south-east corner, at the southern end of Trench 4. Even in this location, however, the visible bank was demonstrated to be of nineteenth century rather than Roman origin.
- 5.2.2 The geophysical anomaly located in the south-western part of the site was not easily explained by the observed profiles in Trench 1, although it is possible that clay bands within deposit [4] might be responsible. As largely expected, the anomalies located in the western part of the site had a straightforward modern explanation.
- 5.2.3 The ditch encountered in Trench 6 was a sizeable feature that must have penetrated through the line of the Roman counterscarp bank at some time in the post-medieval period. Whether there was already a gap in the Roman earthworks at that time and at this point is, however, difficult to assess.
- 5.2.4 Because the southern end of soil horizon [26] in Trench 4 appears to have a largely intact profile, developed directly above natural deposits, there is some possibility that deposit [37] represents part of the original Roman upcast from the Wall ditch, forming the counterscarp bank, albeit in extremely limited and damaged form. It is anticipated, however, that this deposit would become more extensive and significant further to the south, within the scheduled area.

6. IMPACT AND RECOMMENDATIONS

6.1 IMPACT

- 6.1.1 The evaluation has established that the majority of the site has been extensively disturbed in the course of the construction of the auction mart, and that in these areas there is no surviving archaeological deposits or features. However, at the south-easternmost corner of the study area, in an area coinciding with the ground bank explored by Trench 4 (Fig 2 (iii)), there was the survival of stratigraphy which may be Roman upcast from the Wall ditch forming part of the counterscarp bank
- 6.1.2 Hadrian's Wall is a World Heritage Site and the location of a housing development within the immediate proximity to the line of the Wall, will have a direct impact upon the visual setting of that monument.

6.2 RECOMMENDATIONS

- 6.2.1 It is recommended that no development at all take place in the far south-east corner of the site close to the deposits of potential archaeological interest found at the southern end of Trench 4. It is suggested that the best way of defining this would be to regard the scheduled area as having been extended outwards to the north by a further 3m, in a zone extending from the western end of Trench 6 to the C300 minor road. The extent of this exclusion is shown on Fig 12.
- 6.2.2 It is also recommended that an archaeological watching brief be maintained during the course of any ground-intrusive development activity on the site, with particular emphasis on the southern part of the site. In the first instance, the current boundaries of the scheduled area would need to be respected during any development works, and it is important that an archaeologist is present to ensure that damaging, unauthorised or accidental, intrusions into the scheduled area do not occur during the course of construction. Secondly, despite the high level of truncation observed during this evaluation, it cannot be guaranteed that archaeological features, particularly substantial cut and fill features, do not exist on the site.

7. BIBLIOGRAPHY

- Andersen, ST, 1979 Identification of wild grass and cereal pollen. *Danm Geol Unders Årbog* 1978, 69-92
- Balaam, N, 1978 (in Smith, GH) Excavation on Hadrian's Wall at Tarraby Lane, *Britannia*, **9**, 54-56
- Behre, KE, 1981, The interpretation of anthropogenic indicators in pollen diagrams, *Pollen et Spores*, **23**, 225-245.
- Bennet, J, 1998 The Roman Frontier from Wallsend to Rudchester Burn Reviewed, *Archaeol Aeliana*, **5**, **26**, 17-37
- Birks, HJB, 1973, *Past and present vegetation of the Isle of Skye: A palaeoecological study*. Cambridge.
- Breeze, DJ, and Dobson, B, 1987 *Hadrian's Wall* (3rd Edition), London
- Brooks, D, and Thomas, KW, 1967 The distribution of pollen grains on microscope slides. 1: The non randomness of the distribution. *Pollen and Spores*, **9**, 621-629.
- Daniels, CM, 1978 *Handbook to the Roman Wall with the Cumbrian coast and outpost forts* (J Collingwood Bruce) 13th ed, Newcastle upon Tyne
- David, A, 1995 *Geophysical survey in archaeological field evaluation*, Ancient Monuments Laboratory, London.
- Dimbleby, GW, 1985, The palynology of archaeological sites, *Studies in Archaeological science*, London
- English Heritage, 1991 *Management of Archaeological Projects*, 2nd edn, London
- English Heritage, 1996 *Hadrian's Wall World Heritage Site Management Plan*, London
- Faegri, K. and Iversen, J, 1989 *Textbook of modern pollen analysis*, 4th edn (Revised by K Faegri, PE Kaaland and K Krzywinski), Chichester
- Fraser, GM, 1971 *The Steel Bonnets*, London
- Hibbert, FS, Switzer, VR, and West, RG, 1971 Radiocarbon dating of Flandrian pollen zones at Red Moss, Lancashire, *Proc Roy, Soc, London B* **177**, 161-76
- Jenkinson, HI, 1884 *Guide to Carlisle, Gilsland, Roman Wall Etc*, London
- Lancaster University Archaeological Unit (LUAU) 1998 *Hadrian's Wall Footpath, Gilsland, Northumberland*, Unpubl rep
- Moore, PD, Webb, JA, and Collinson, ME, 1991 *Pollen analysis*, 2nd edn, Oxford
- Needham, S and Macklin, MG, 1992 *Alluvial Archaeology in Britain*, **27**, Oxford
- Watson, G, 1974, *The Border Reivers*, Newcastle
- Wilmott, T, 1995, *Birdoswald Roman Fort*, Carlisle

APPENDIX 1 PROJECT BRIEF

APPENDIX 2 PROJECT DESIGN

Lancaster
University
Archaeological
Unit

March 1999

STATION HOTEL, GILSLAND

NORTHUMBERLAND

**ARCHAEOLOGICAL EVALUATION
PROJECT DESIGN**

Proposals

The following project design is offered in response to a request by C & D Property Services in accordance with a brief by the Archaeological Service of Northumberland County Council, for an archaeological evaluation at Gilsland, Northumberland.

1. INTRODUCTION

- 1.1 This project design is offered in response to a request by Mr Steel of C & D Property Services for an archaeological evaluation in advance of a residential development at Gilsland, Northumberland (NY 6362 6626). The proposal is in accordance with a project brief by the Archaeological Services of Northumberland County Council.

1.2 ARCHAEOLOGICAL BACKGROUND:

- 1.2.1 The area of the proposed development is immediately north of Hadrian's Wall and the associated Wall ditch. Locally evidence of the counterscarp bank or *glacis* of the Wall, has been identified, but much of this northern counterscarp has been levelled in this area. This is in contrast with the well preserved ditch and counterscarp on the eastern side of the minor road that runs through Gilsland (C300), which defines the eastern boundary of the development site. The extent of survival of the Roman defensive earthworks or indeed any earlier ground surfaces is therefore uncertain. It is likely that levelling of any Roman earthworks was carried out as preparatory works in advance of the development of the site as a livestock market, and as well as the levelling of the *glacis*, it is likely that levelling/ballasting was carried out on the northern side of the site to create a level surface. The only visible remains of the market now consists of a series of linear stone features marking the original position of the livestock pens (LUAU 1998).
- 1.2.2 **Previous Archaeological Work:** LUAU carried out a watching brief in May 1998, on behalf of the Countryside Commission, at Gilsland in the course of the establishment of the Hadrian's Wall Path National Trail. The watching brief was undertaken during the construction of a step stile across the wall on the eastern side of the site. It revealed a 0.1m deep layer of reddish brown gravelly sandy loam, above a buried organic soil layer (0.23m deep) over a gravelly sandy loam which was similar to that on the surface. It is thought likely that the ground surface was buried during works associated with the livestock mart (LUAU 1998). This would suggest that there is potential for archaeological survival on either side of the site.

1.3 LANCASTER UNIVERSITY ARCHAEOLOGICAL UNIT (LUAU)

- 1.3.1 LUAU has considerable experience of the archaeological evaluation of sites and monuments of all periods, having undertaken a great number of small and large projects during the past 18 years. Evaluations have taken place within the planning process, to fulfil the requirements of clients and planning authorities, to very rigorous timetables. LUAU has undertaken evaluations and excavations at many of the forts and *vicii* in the North-West, notably the forts / *vicii* at Papcastle (Cockermouth), Burgh -by-Sands, Kirkby Thore, Low Borrowbridge, Watercrock (Kendal), Walton-le-Dale, Lancaster, Ribchester, Kirkham and Chester.
- 1.3.2 LUAU has considerable experience of sub-surface investigation on the line of the Roman frontier system. LUAU acts as the archaeological consultant to the Countryside Commission during the establishment of the Hadrian's Wall Path National Trail, and staff have carried out numerous watching briefs during works associated with this footpath; of note in relation to this project design a watching brief has been undertaken at Gilsland (*Section 1.2.2*). LUAU has also been commissioned by North West Water Ltd to undertake a major watching brief programme during the replacement of a cast iron water main in the Banks to Birdoswald sector of the Wall, which involved monitoring the excavation of trenches on both the north and south sides of the Wall ditch.
- 1.3.3 LUAU has the professional expertise and resources to undertake the project detailed below to a high level of quality and efficiency. LUAU and all its members of staff operate subject to the Institute of Field Archaeologists (IFA) Code of Conduct and LUAU is an IFA registered organisation.

2. OBJECTIVES

- 2.1 The following programme has been designed in accordance with a written brief by the Assistant Archaeologist of Northumberland County Council to enable an evaluation of the development area. The required stages to achieve the project objectives are as follows:

2.2 SITE INVESTIGATION

- 2.2.1 The site will be subject to a surface inspection before the commencement of geophysical survey or evaluation trenching in order to establish the potential for extant archaeological features. This would investigate any available exposures. A survey grid, tied into the OS National Grid, will be established over the site.

2.3 GEOPHYSICAL SURVEY

- 2.3.1 A geophysical survey will be undertaken and the methodology will be subject to advice from geophysical specialists and initial tests which will examine the potential for both resistance and gradiometry techniques.

2.4 EVALUATION TRENCHING

- 2.4.1 Three trenches (15m x 1.5m wide) will be excavated, using a mechanical excavator to remove overburden down on to the upper archaeological horizons and sampled manual excavation will be undertaken to assess the character, survival and depth of archaeological deposits. A further 5m trench will be excavated to examine anomalies identified by the geophysical survey.
- 2.4.2 Specialist advice and sampling will be undertaken by a soil micromorphologist/palaeoenvironmentalist. A pollen monolith will be taken through the most complete profile exposed, the summary analytical results will be presented in conjunction with other comparable pollen analysis studies. The potential for C14 or archaeomagnetic dating will be assessed and implemented if appropriate.

2.5 EVALUATION REPORT

- 2.5.1 A written evaluation report will assess the significance of the data generated by this programme within a local and regional context.

3. METHOD STATEMENT

- 3.1 The southern boundary of the development site corresponds to the edge of the Scheduled Ancient Monument (Monument SM No 26071), and no geophysical survey or below ground investigation will be undertaken within the extent of the Scheduled Area in contravention of the 1979 Ancient Monuments Act. In line with the objectives and stages of the archaeological work stated above the following work programme is submitted.

3.2 SITE INVESTIGATION

- 3.2.1 It is proposed to undertake a site investigation survey of the site, which will rapidly examine the extent of the development area and will assess the potential for surface survival of archaeological remains. Features identified by this investigation will be subject to sketch surveyed and located on digitised Ordnance Survey mapping (1:2,500).
- 3.2.2 A site grid, located with respect to the OS National Grid will be established, which will serve as the frame for the geophysical survey and the location of the trenches.
- 3.2.3 The precise boundary of the Scheduled Ancient Monument will be established and will be marked on the ground.

3.3 GEOPHYSICAL SURVEY

- 3.3.1 It is proposed to undertake tests of both resistance and magnetometry techniques within the development area. However, by virtue of a hard-core surface extending over the majority of the site resistance techniques will not be appropriate for this survey. There is, however, the potential for the use of magnetometry survey which will be undertaken over the extent of the development area where surface conditions allow. There is an area of concrete foundations at the northern end of the

site, which is 40m x 20m in extent, and the survey will not be undertaken here. A small localised sample area will be examined by resistance techniques in order to test for the potential of this technique.

- 3.3.2 **Magnetometer Survey:** the survey area will be divided into 20m x 20m grids within which data collection is taken. The individual grids are matched together to produce an overall plan of the surveyed area, the results being analysed using a variety of software. A report, including diagrams, text and interpretation on a CAD system, will then be prepared.

3.4 EVALUATION TRENCHING

- 3.4.1 This programme of trenching will establish the presence or absence of any archaeological deposits and, if established, will then briefly test their date, nature, and quality of preservation. This element of the work is invaluable in order to assess those parts within the proposed study area where there is a potential for archaeological deposits to survive which are not visible on the surface.
- 3.4.2 Three trenches will be positioned extending out from the line of the wall ditch and will be each 15m x 1.5m in extent, the precise locations are defined within the project brief. A further trench or trenches, of 5m overall length, will be excavated in areas highlighted by the geophysical survey and will be subject to agreement with the Assistant Archaeologist (Northumberland County Council).
- 3.4.3 **Methodology:** to maximise the speed and efficiency of the operation the removal of topsoil and overburden will be undertaken by machine, where accessible, under careful archaeological supervision (with a standard five foot toothless ditching bucket). The mechanical excavation will be undertaken in level spits down to the level of the highest significant archaeological horizon, and below that level excavation will be by manual techniques. If further mechanical excavation proves necessary it will be subject to agreement with the assistant archaeologist. The sections and trench floors will be manually cleaned prior to undertaking any manual excavation.
- 3.4.4 Manual excavation will examine all sensitive deposits, and will enable an assessment of the nature, date and survival of deposits. The deposits will be investigated sufficiently to establish their character but the full depth of the deposits to natural will not necessarily be established across the whole trench. All trenches will be excavated in a stratigraphical manner, whether by machine or by hand. All features exposed will be sample excavated, which typically would involve the excavation of 50% of discrete features and 25% of linear features. No feature or structure will be wholly excavated as the intention is simply to evaluate only the archaeological resource at this stage. Similarly structures or features worthy of preservation will not be unduly excavated.
- 3.4.5 **Soil Micromorphology and Environmental Sampling:** specialist advice on the soil composition and development will be obtained from an experienced site micromorphologist, and this will involve a site visit. The environmental sampling and analysis will be undertaken by the LUAU environmental specialist. The following environmental sampling procedures have been discussed and agreed with Jacqui Huntley at the Biological Laboratory, Department of Archaeology, University of Durham. One monolith (0.50m 0x 0.10m x 0.10m) will be taken through the most complete buried soil profile, identified in the evaluation trenches by the soil micromorphologist. This will be subsampled by an environmental archaeology specialist in the laboratory and then archived in cold storage for further examination. Four pollen samples will be prepared chemically so that an assessment of the pollen content can be made. The samples will be examined microscopically and a minimum of one hundred pollen grains will be counted and identified where possible. Pollen preservation will be assessed and recorded. From this data it will be possible to provide evidence of the type of vegetation and possible changes occurring during the period that the soil was forming. The environmental archaeologist will be provided with a detailed drawing and photographic record of the section by the excavators. In the final report the data will be compared with other pollen analytical studies of the counterscarp bank (eg Balaam 1978). If further environmental work is required it will be subject to contingency costing.
- 3.4.6 **Dating Methods:** the deposits will be assessed for their potential for radiocarbon and archaeomagnetic dating and costs for such work have been included in the contingency fund. The contingency costs allow for two AMS dates, which would be undertaken under the supervision of Dr Gordon Cook at the Scottish Universities Research and Reactor Centre at East Kilbride.
- 3.4.7 **Evaluation Recording:** all elements of the work will, as a matter of course, be recorded in accordance with current English Heritage guidelines (*Management of Archaeological Projects*, 2nd edition 1991) and the best practices formulated by English Heritage's Central Archaeology Service.

All excavation, by whatever method, will be recorded by the compilation of context records, and of object records for any finds, and the production of manually drawn accurately scaled plans and section drawings (probably at scales of 1:20 and/or 1:10). A photographic record will be maintained within 35mm black and white and colour transparency formats and a photographic gazetteer will be maintained. The stratigraphy of all trenches will be recorded irrespective of whether archaeological deposits have been identified. Where stratified deposits are identified a 'Harris' matrix will be compiled. Trenches will be accurately located with respect to the original LUAU survey control, by use of a total station survey instrument, and the trenches will be depicted on a digitised 1:2,500 OS map of the area. All archaeological features within the trenches will be planned by manual techniques.

- 3.4.8 **Finds Processing:** finds recovery and sampling programmes will be in accordance with best practice (current IFA guidelines for finds work). All typologically significant and closely datable finds will be contextually recorded. All artefacts and ecofacts will be handled and stored according to standard practice (following current Institute of Field Archaeologists guidelines) in order to minimise deterioration. Finds storage during fieldwork and any post-excavation assessment and analysis (if appropriate) will follow professional guidelines (UKIC). Emergency access to conservation facilities is maintained by LUAU. Any discard policy for finds should be formulated with care, and with advice from the Northumberland County Council. All finds will be washed, marked and packaged as appropriate. Small finds will be individually packaged, in a manner appropriate to the find type.

- 3.4.9 The artefact assemblage will be examined by the LUAU finds specialist, and the potential for further examination will be assessed. A summary report on the significance, character and date range of the assemblage will be generated.

3.5 EVALUATION REPORT

- 3.5.1 **Archive:** the results of Stages 3.1-3.4 above will form the basis of a full archive to professional standards, in accordance with current English Heritage guidelines (*Management of archaeological projects*, 2nd edition, 1991). The project archive represents the collation and indexing of all the data and material gathered during the course of the project. The deposition of a properly quantified, ordered, and indexed project archive in an appropriate repository is considered an essential and integral element of all archaeological projects by the Institute of Field Archaeologists in that organisation's Code of Conduct. This archive will be provided in the English Heritage Central Archaeology Service format, as a printed document, and a synthesis (the evaluation report and index of the archive) will be submitted to the relevant Sites and Monuments Record. The archive will be deposited with the County SMR within 6 months of the end of the fieldwork.

- 3.5.2 All drawings will be produced on dimensionally stable drafting film on standard 'A' size sheets and in metric format. Each sheet will be fully titled. Line thicknesses will be chosen to allow for ease of duplication and/or reduction. Particular attention will be paid to achieving drawings of the highest quality and accuracy.

- 3.5.3 The archive will be formed of all the primary documentation, including the following:

- Survey Information
- Context Records
- Finds Records
- Sample Records
- Field / Inked Drawings and digital copies of CAD data
- Photographic negatives, prints and colour transparencies
- Written report
- Administrative records
- Conservation records.

- 3.5.4 **Report:** two copies of a written synthetic report will be submitted to the client and a further copy to the SMR. The report will present, summarise, and interpret the results of the programme detailed in Stages 3.1-3.4 above, and will include an index of archaeological features identified in the course of

the project, with an assessment of the sites development. It will incorporate appropriate illustrations, including a location map, geophysical survey results, copies of the site plans and section drawings, and the trench location plan all reduced to an appropriate scale. The report will consist of an acknowledgements statement, list of contents, executive summary, introduction summarising the brief and project design and any agreed departures from them, methodology, interpretative account of the archaeological stratigraphy and details of the features and stratigraphy recorded from each trench, table of contexts, a complete bibliography of sources from which data has been derived, and a list of further sources identified during the programme of work. If required the report will make recommendations for further mitigative recording. The report will be in the same basic format as this project design. A copy of the report can be provided on 3.5" floppy disk in either ASCII or Word for Windows format and the drawings can be provided as DXF or DWG files if required.

- 3.5.5 **Publication:** subject to the results of the evaluation and survey a summary publication report will be produced for the Conservation Team annual archaeological newsletter.

3.6 GENERAL CONDITIONS

- 3.6.1 **Access:** it is understood that access there will be unrestricted access for pedestrian and plant traffic to the site.
- 3.6.2 **Health and Safety:** full regard will, of course, be given to all constraints (services) during the survey, as well as to all Health and Safety considerations. The LUAU Health and Safety Statement conforms to all the provisions of the SCAUM (Standing Conference of Unit Managers) Health and Safety manual. Risk assessments are undertaken as a matter of course for all projects. The Unit Safety Policy Statement will be provided to the client, if required. Trenches will be excavated up to one metre away from any standing walls to present any risk of destabilisation of structures.
- 3.6.3 **Confidentiality:** The report is designed as a document for the specific use of the client for the particular purpose as defined in this project design, and should be treated as such. Any requirement to revise or reorder the material for submission or presentation to third parties or for any other explicit purpose can be fulfilled, but will require separate discussion and funding.
- 3.6.4 **Project Monitoring:** any proposed changes to this project design will be agreed with the client, and the Assistant Archaeologist, Northumberland County Council. If required a meeting with the archaeological curator and the client can be established at the outset of the project.
- 3.6.5 **Insurance:** the insurance in respect of claims for personal injury to or the death of any person under a contract of service with the unit and arising out of an in the course of such person's employment shall comply with the employers' liability (Compulsory Insurance) Act 1969 and any statutory orders made there under. For all other claims to cover the liability of LUAU, in respect of personal injury or damage to property by negligence of LUAU or any of its employees, there applies the insurance cover of £1m for any one occurrence or series of occurrences arising out of one event.
- 3.6.6 **Contingencies:** a contingency cost is submitted to cover the eventuality of further machining or additional areas of trenching, and the possibility of carbon / archaeomagnetic dating. The environmental work provides for a basic level of analysis of two samples; if further environmental samples need to be analysed (in the event of discovering rich archaeological deposits) or if more detailed analysis is required this will also be covered by the contingency. If removal of any burials is required this will be subject to a variation.
- 3.6.7 The contingency cost (*Section 6*) provides for two conventional carbon dates or a single accelerator date. The defined contingency cost is an upper limit, inclusive of all required contingencies; the actual cost for any element will be agreed with the client prior to implementation. Any further work will be subject to discussions with the assistant archaeologist Northumberland County Council and the client.

4. WORK TIMETABLE

- 4.1 It is envisaged that the various stages of the project outlined above would follow on consecutively, where appropriate. The phases of work would comprise:

- i* **Site Investigation**
1 day (on site)
 - ii* **Geophysical Survey**
1 day (on site)
 - iii* **Evaluation Trenching**
4 days (on site)
 - iv* **Evaluation Report**
2 days (desk-based).
- 4.1.2 LUAU can execute projects at very short notice once an agreement has been signed with the client. The project (field work, report and archive) is scheduled for completion within one month from the completion of the field work.
- 4.1.3 The project will be under the project management of **Jamie Quartermaine, BA Surv Dip MIFA** (LUAU Project Manager) to whom all correspondence should be addressed. All Unit staff are experienced, qualified archaeologists, each with several years professional expertise.

APPENDIX 3 SUMMARY CONTEXT LIST

Context No.	Site Subdivision	Description
1	Trench 1	Turf
2	Trench 1	Made ground
3	Trench 1	Made ground
4	Trench 1	Infill (recent)
5	Trench 1	Cut filled by 4
6	Trench 1	Subsoil profile
7	Trench 1	Natural
8	Trench 1	Natural
9	Trench 2	Turf
10	Trench 2	Topsoil / quarry waste
11	Trench 2	Made ground - sand
12	Trench 2	Made ground - clay loam
13	Trench 2	Made ground - pebbly
14	Trench 2	Uncertain
15	Trench 2	Soil profile
16	Trench 2	Natural
17	Trench 3	Made ground
18	Trench 3	Localised soil variation - not significant
19	Trench 3	Localised soil variation - not significant
20	Trench 3	Localised soil variation - not significant
21	Trench 3	Natural (gravel)
22	Trench 3	Natural (clayey sand)
23	Trench 4	Turf
24	Trench 4	Gravelly infill / made ground
25	Trench 4	Dark layer

26	Trench 4	Soil profile
27	Trench 4	Cobble layer
28	Trench 4	Possible subsoil profile beneath cobbles
29	Trench 4	Natural sands and gravels
30	Trench 6	Fill of ditch 36
31	Trench 6	Fill of ditch 36
32	Trench 6	Fill of ditch 36
33	Trench 6	Fill of ditch 36
34	Trench 6	Fill of ditch 36
35	Trench 6	Soil above ditch 36
36	Trench 6	Ditch cut
37	Trench 4	Possible bank material above buried soil profile 26

ILLUSTRATIONS

- Fig 1 Gilsland Site Location Map
- Fig 2 General Site Map, showing trench locations
- Fig 3 Location of the Geophysical Survey
- Fig 4 Location of the Resistivity Pilot Survey
- Fig 5 Magnetometer survey illustrated as a shade plot
- Fig 6 Enlargement of the shade plot for the Resistivity Survey
- Fig 7 Correlation between map and magnetometry survey
- Fig 8 Interpretation diagram of the geophysical surveys
- Fig 9 Trench plan overlain on Magnetometer survey
- Fig 10 Trenches 4, 5 and 6 Detail plan
- Fig 11 Trench 4: Section of southern end, west face
- Fig 12 Scheduled Area Boundary and Recommended Exclusion Area



Fig 1: Gilsland Site Location Map



PROJECT:

Gilsland
Archaeological
Evaluation

DRAWING No:

Fig 2

View 1.dwg



DRAWN BY: M.T.

DATE: April 99

LOCATION:



KEY



TITLE:

General Site Map

COMMISSIONED BY:

C & D Property Services

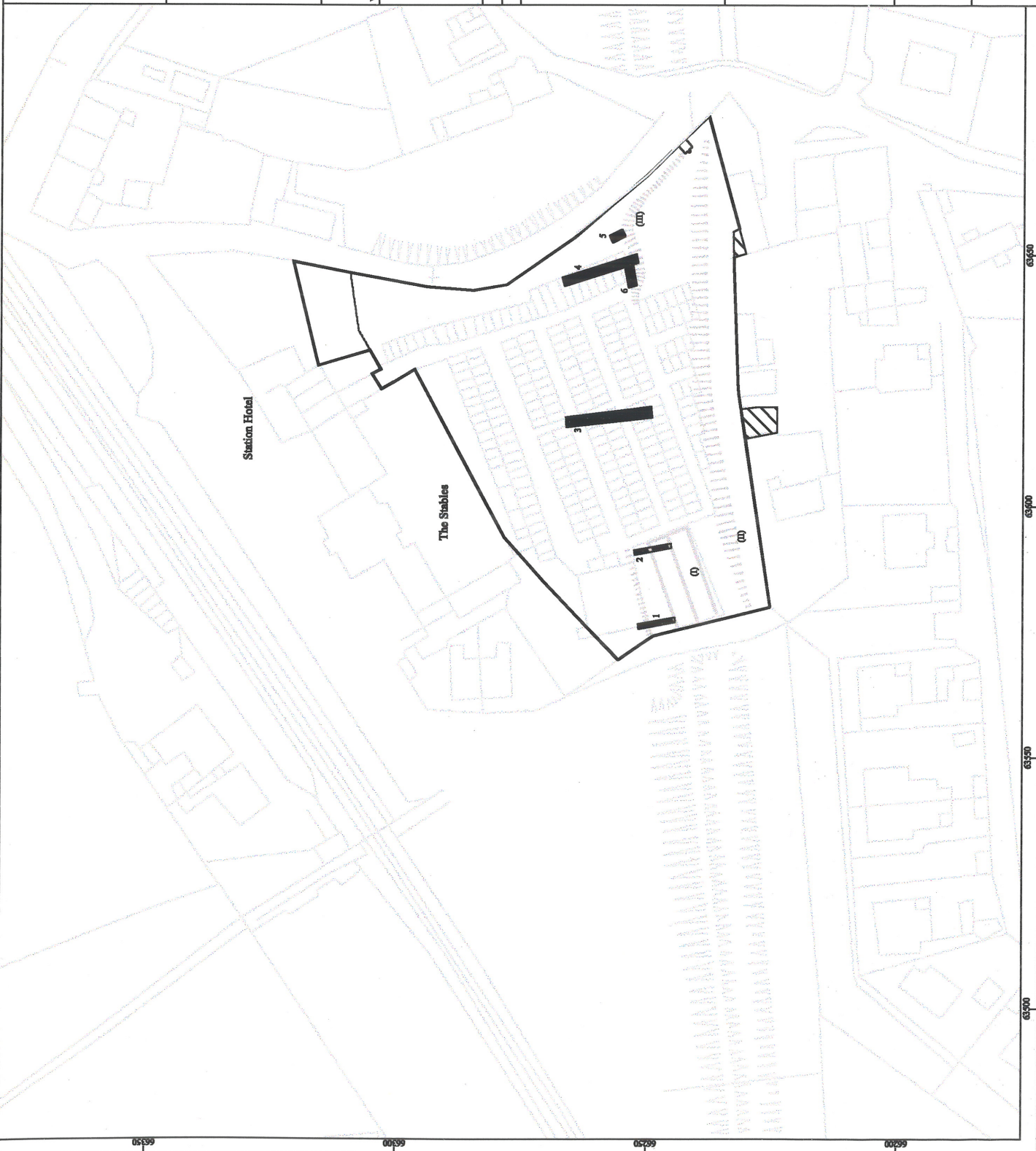


Fig 2 General Site Map showing trench locations

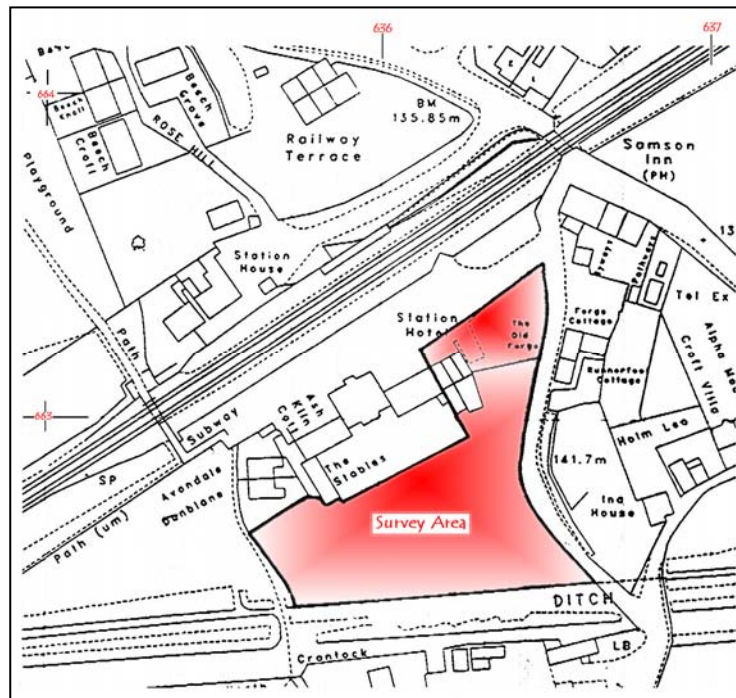


Fig. 3 Location of the Geophysical Survey

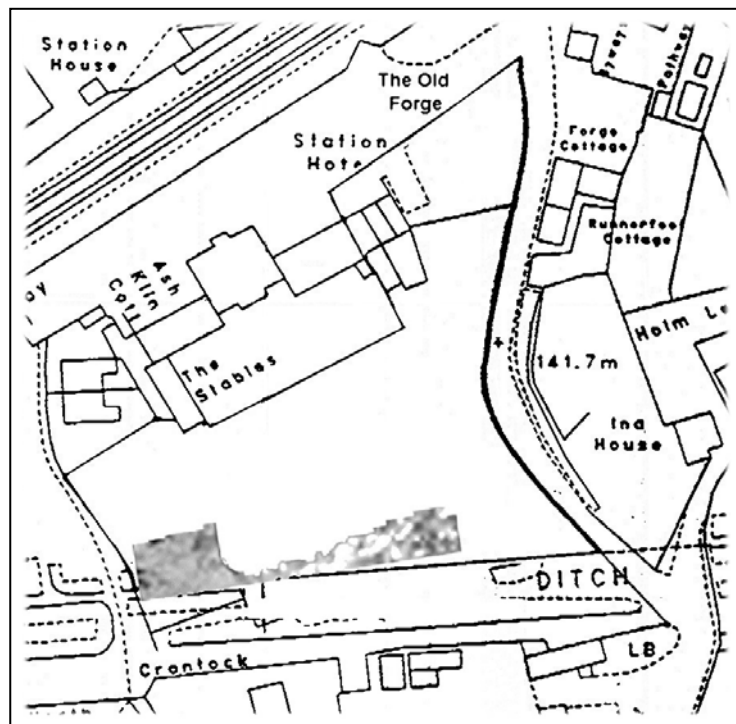


Fig 4 Location of the Resistivity Pilot Survey

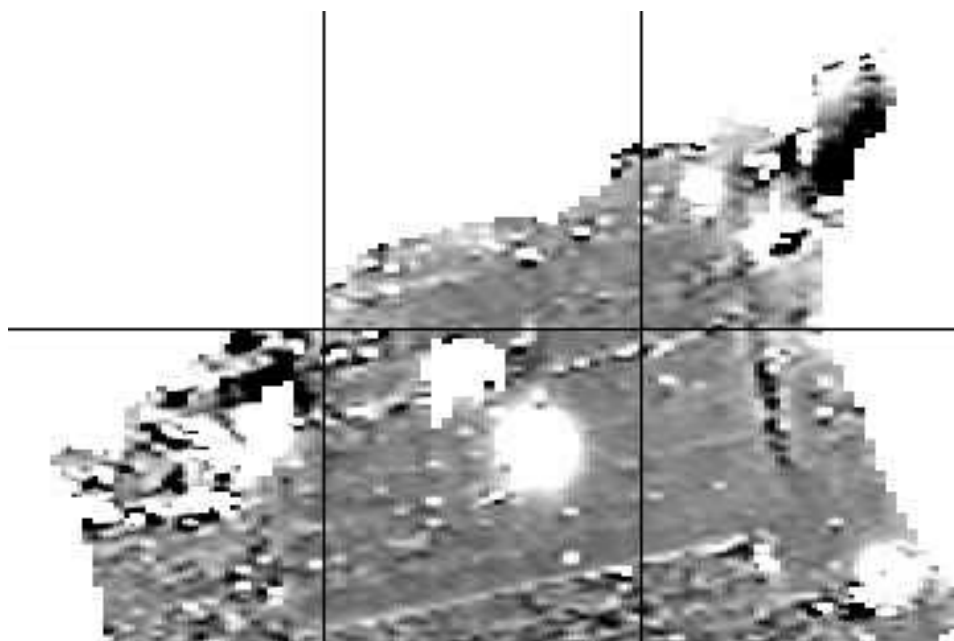
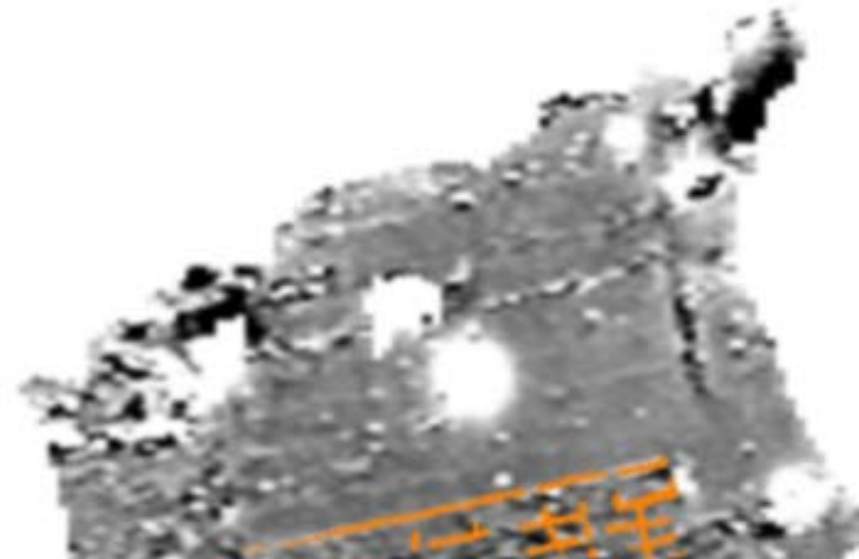


Fig 5 Magnetometer survey illustrated as a shade plot



Fig 6 Enlargement of the shade plot for the Resistivity Survey



The map indicates the location of holding pens for livestock and remnants of these pens were identified by the geophysical survey. The Correlation between anomalies from the magnetometry survey and map information is illustrated above (orange lines).

Fig 7 Correlation between map and magnetometry survey

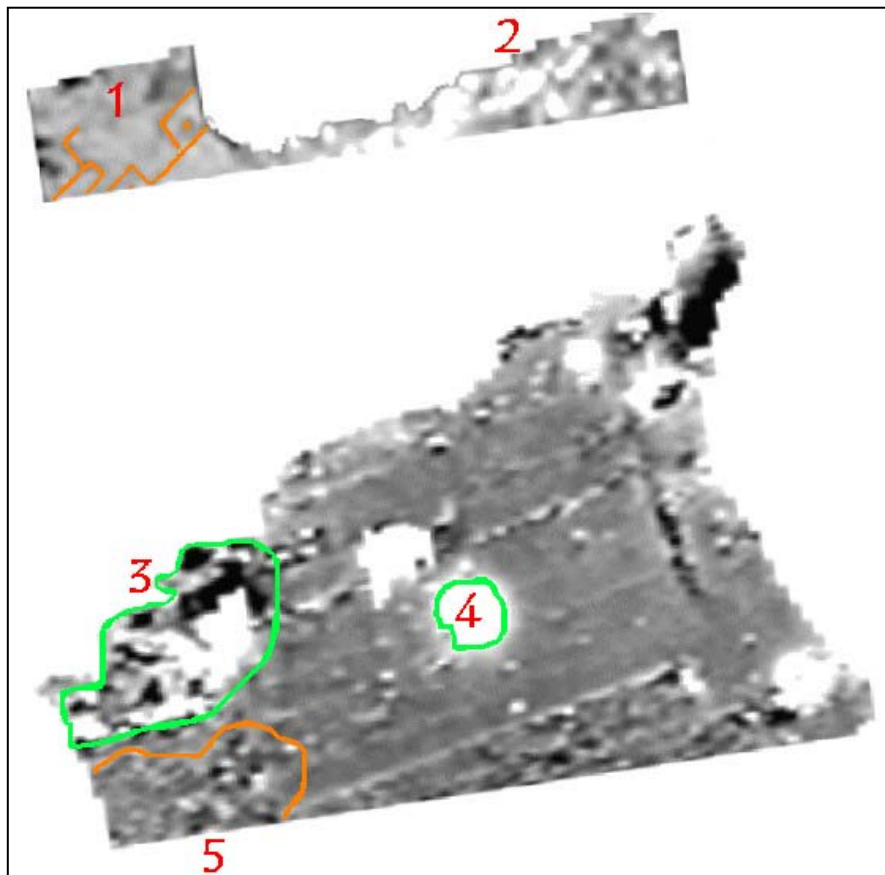


Fig 8 Interpretation diagram of the geophysical surveys



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PROJECT:

Gilsland
Archaeological
Evaluation

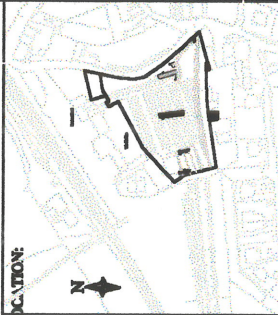
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DRAWN BY: M.T.

DATE: April 99

LOCATION:



KEY

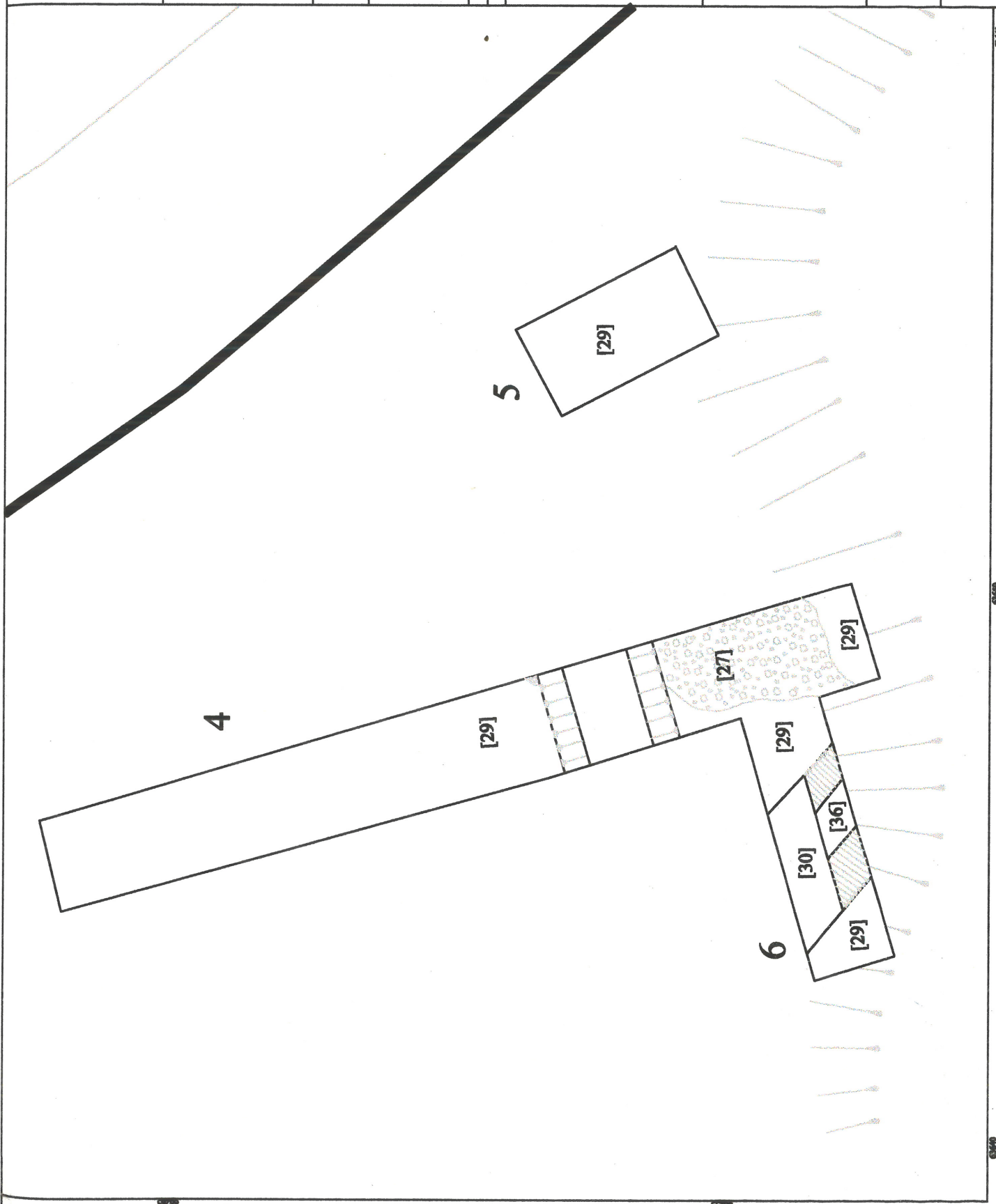
5 Trench number

[29] Cx number

TITLE:

COMMISSIONED BY:

C & D Property Services



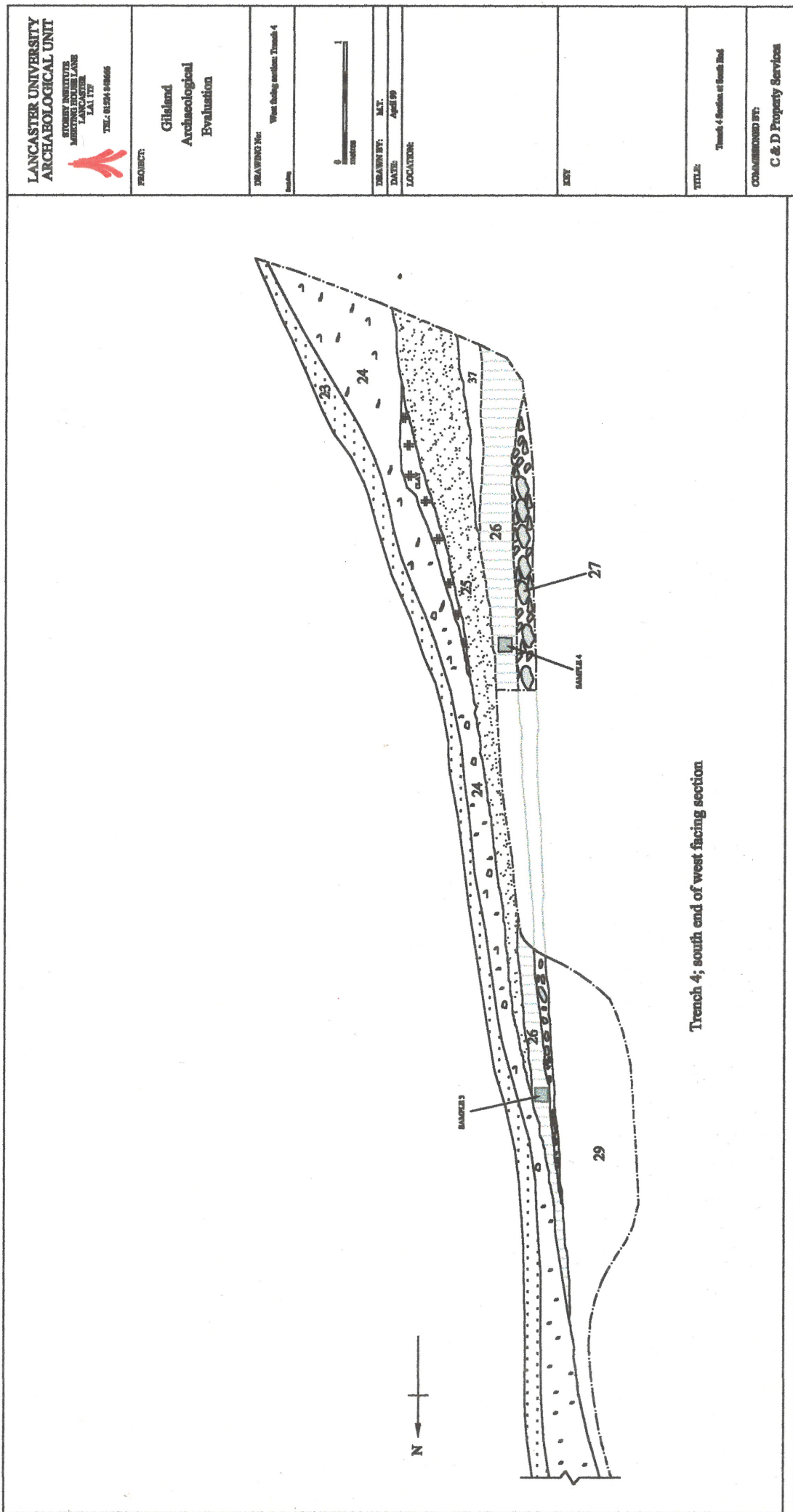


Fig 11 Trench 4: Section of southern end, West face

Fig 11 Scheduled Area Boundary and Recommended Exclusion Area

PLATES

- Plate 1 Wall ditch and counter-scarp bank immediately to the west of the study area > West
- Plate 2 Wall ditch and counter-scarp bank to the east of the study area > East
- Plate 3 Northern part of the study area, showing metalled foundation for market pens
- Plate 4 Terrace at the southern end of the site, which corresponds with the line of the filled north Wall ditch



Plate 1 Wall ditch and counterscarp bank immediately to the west of the study area > west



Plate 2 Wall ditch and counterscarp bank to the east of the study area > east



Plate 3 Northern part of the study area, showing metallised foundations for market pens



Plate 4 Terrace at the Southern end of site, which corresponds with the line of the filled north Wall ditch