NORTH PENNINES ARCHAEOLOGY LTD

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CONTENTS

EXEC	OF FIGURES AND PLATES CUTIVE SUMMARY	
1 INT	TRODUCTION	7
1.1	CIRCUMSTANCES OF THE PROJECT	7
2 ME	THODOLOGY	8
2.1	PROJECT DESIGN	8
2.2	ARCHAEOLOGICAL EXCAVATION	8
2.3	ARCHIVE	8
3 BA	CKGROUND	9
3.1	LOCATION, TOPOGRAPHY AND GEOLOGY	9
3.2	HISTORICAL BACKGROUND	9
3.3	RECENT ARCHAEOLOGICAL INVESTIGATIONS	10
4 FIE	CLDWORK RESULTS	11
4.1	Introduction	11
4.2	EXCAVATION SUMMARY	11
5 FIN	NDS AND ENVIRONMENTAL EVIDENCE	18
5.1	FINDS RESULTS	18
5.2	THE POTTERY	18
5.3	FLINT AND STONEWORK (KEN DENHAM)	20
5.4	METAL WORK	22
5.5	GLASS AND CLAY PIPES	22
5.6	THE ENVIRONMENTAL EVIDENCE (PATRICIA SHAW)	22
5.7	DISCUSSION	25
5.8	DATING	26
5.9	VERTEBRATE BONE	26
5 10	CONCLUSIONS AND RECOMMENDATIONS	26
6 DIS	SCUSSION AND CONCLUSIONS	27
6.1	DISCUSSION	27
6.2	Conclusion	27
7 BIB	BLIOGRAPHY	28
APPI	ENDIX 1: CONTEXT LIST	29
APPE	ENDIX 2: FIGURES	31

LIST OF FIGURES AND PLATES

FIGURES

FIGURE 1:	SITE LOCATION	APPENDIX 1
FIGURE 2:	LOCATION OF EXCAVATION AREA	APPENDIX 1
FIGURE 3:	SURVEY PLAN OF EXCAVATION AREA	APPENDIX 1
FIGURE 4:	COBBLED AREAS (104) AND (105)	APPENDIX 1
FIGURE 5:	SLOTS 1, 2 AND 3 THROUGH GROUP FEATURE [110]	APPENDIX 1
	SECTIONS OF SLOTS 1, 2 AND 3 THROUGH GROUP FEATURE [110]	
FIGURE 7:	PLAN AND SECTION OF SLOT THROUGH [109]	APPENDIX 1
	PLANS AND SECTIONS OF SLOTS 1, 2 AND 3 IN GROUP FEATURE [111]	
	SECTION AND PLAN OF FEATURE [126]	
FIGURE 10	: MAIN SITE SECTIONS	APPENDIX 1
FIGURE 11	: DRAWN FLINT FROM AN UNSTRATIFIED DEPOSIT	APPENDIX 1
PLATES		
	ECE: VIEW OF EXCAVATION AREA FROM THE EAST	
PLATE 1:	EXAMPLE OF THE EASTERN FACING SITE SECTION SHOWING (155) JUST AB	
	LINE	
	PIT [126] BEFORE EXCAVATION	
	EAST FACING SECTION, PIT [126]	
	PLAN VIEW OF PIT [126]	
	LOOKING NORTHWEST ALONG [142]	
	EXCAVATED SLOT THROUGH [142]	
	NORTHEAST FACING SECTION THROUGH [111]	
PLATE 8:	[111] AND [109] MERGING	PAGE 15
PLATE 9:	COBBLED AREA (104) WITH [110] IN FRONT	PAGE 17
PLATE 10:	COBBLED AREAS (105) & (104)IN BACKGROUND	PAGE 17
PLATE 11:	Working shot with view north showing [111] running under (105)PAGE 17
PLATE 12:	EXAMPLES OF THE SAMIAN, NENE VALLEY AND HUNTCLIFF WARES	PAGE 19
PLATE 13:	THE FLINT AND WORKED STONE RECOVERED FROM SITE	PAGE 21
TABLES		
	QUANTIFICATION OF FINDS RECOVERED FROM THE EXCAVATION	
	DETAILS OF SAMPLES AND CONTEXTS	
TABLE 3:	CONTENTS OF FLOT AND RETENT RESIDUES FROM SAMPLES	PAGE 22

EXECUTIVE SUMMARY

In September 2007, North Pennines Archaeology Limited (NPAL) was commissioned by Lowther Manelli Properties Limited in association with Manning Elliot Architects to undertake an archaeological excavation, in advance of a proposed development, which would involve the construction of a football stadium, car park area and an access road on land at Frenchfields, Penrith, Cumbria (centred on NGR NY 53921 29421). Cumbria County Council Historic Environment Service (CCCHES) recommended a programme of archaeological work to be undertaken in accordance with a written scheme of investigation submitted to, and approved by CCCHES. This work was prompted by the results of a geophysical survey undertaken by Stratascan in 2006, which highlighted several linear features of possible archaeological interest. These were targeted by a subsequent desk-based assessment and a series of archaeological evaluation trenches undertaken by NPAL in June 2007, and revealed a number of features and layers of archaeological interest in the field that formed the focus of the excavation and this subsequent report (Sowerby and Gaskell 2007).

The opportunity to further the investigation of the archaeology at Frenchfields was welcomed, given the results of earlier investigations in the field immediately to the west of the present study area (Carlisle Archaeology, Martin 1999 and 2001). The evaluation of the field to the west of the present study area in 1999 recovered fragments of flint tools and Roman pottery. The second phase of excavation in 2000 confirmed the existence of substantial Roman occupation in the area, mainly in the form of a 'ribbon' style settlement along side the Roman road that extends from *Brovacum* (Brougham) Roman Fort, just to the south of the proposed development area.

The results arising from this excavation further revealed the development and subsequent land use of the field earmarked for the football stadium. As the results of the geophysical survey showed, the proximity of the field to the River Eamont means that it is low lying and very flood prone. Broad linear anomalies seen on the survey, consequently targeted by the evaluation and following excavation displayed several naturally accumulated layers, brought around by various water channels or courses, moving at various speeds over time. The larger the component pieces (boulders or large stones) were within the layers being an indication of a greater speed of water than where fine silt or clay layers had formed.

The cobbled area uncovered during the course of the excavation may have been an attempt to create a surface above what may have been very wet ground. It was concluded that the full extent of it was uncovered although its primary function could not be ascertained as it did not enclose anything, nor did it extend to the riverbank. Given the nature of the features the cobble layer was found in association with, it might be surmised that it was built to create a pathway for human and animal traffic through a particularly wet area of pasture, much in the same way that modern day farmers use stone hardcore through field gateways where the 'paddling' effect of many animal hooves creates a very uneven and hazardous surface.

As the field is set quite a way back from the Roman road that leads out of Brougham, the usage of it appears not to have been as a settlement base. The interpretation of the narrow ditch features encountered within the excavation area were as boundary ditches, perhaps for fields used for crop growing or pasture land or as boundary markers for the back of plot divisions. Certainly not all the finds of Roman and Romano-British pottery encountered came from distinct features, but also from the naturally accumulated layers themselves, possibly deposited as broken items that were mixed in with other waste as manure for the fields, or as general rubbish taken away from the settlement area, although the concentration of the ceramic finds was not great, only 15 pieces in total were recovered.

EXECUTIVE SUMMARY

In conclusion, the area investigated by this excavation has positively proved the existence of archaeological remains, although they may be peripheral to the settlement focus just to the south, which lie closer to the Roman road and fort, and probably are of an agricultural nature, most likely a stock enclosure area, away from the main settlement.

ACKNOWLEDGEMENTS

Thanks are due to Manning Elliot Architects and Lowther Manelli Properties Ltd for commissioning and supporting the work and to Jeremy Parsons, Assistant Archaeologist for Cumbria County Council Historic Environment Service (CCCHES), for his advice and assistance during the course of the project.

In addition to the above, the author would like to thank for their hard work and dedication all those North Pennines Archaeology Ltd staff who worked on the excavation, in what were frequently difficult and extremely wet conditions. The fieldwork was undertaken by Angus Clark, David Jackson, Joseph Jackson, Claire Mason and Kevin Mounsey, whilst Alan James carried out the metal detector survey. The excavation was jointly supervised on site by Nicola Gaskell and Martin Sowerby.

Nicola Gaskell compiled this report. The finds assessment was carried out both in-house by NPAL staff with the lithics being reviewed by Ken Denham, whilst the bone and environmental report was written by Patricia Shaw NPAL Environmental Supervisor. The project was managed by Frank Giecco, Technical Director for NPAL and the report was edited by Juliet Reeves.

1 INTRODUCTION

1.1 CIRCUMSTANCES OF THE PROJECT

- 1.1.1 Cumbria County Council Historic Environment Service (CCCHES) were consulted by Lowther Manelli Properties Limited in association with Manning Elliot Chartered Architects, with regards to a proposed development of a greenfield site to accommodate a new football stadium, car parking area and associated access road on land at Frenchfields, Penrith, Cumbria (NGR NY 53921 29421 Fig 1). The site is within an area of high archaeological potential, as highlighted by a geophysical survey undertaken by Stratscan in 2006 and an archaeological Desk Based Assessment and Evaluation that was conducted in 2007, which uncovered evidence of possible prehistoric and Roman activity in the area (Sowerby and Gaskell, 2007).
- 1.1.2 In June 2007 North Pennines Archaeology Limited (NPAL) carried out a field evaluation, which comprised the excavation of twelve linear trial trenches in order to provide a predictive model of surviving archaeological remains, detailing zones of relevant importance against known development proposals. It proved that a number of tentative archaeological features still remained in-situ, which dated to the later prehistoric and Roman periods (*op cit*).
- 1.1.3 Consequently, CCCHES advised that an archaeological excavation would be necessary in order for the development proposal to continue. North Pennines Archaeology Ltd (NPAL) were commissioned by Lowther Manelli Properties Limited to undertake the required archaeological excavation within the development area which covered an area measuring 1000m², this was focussed over two of the preceding evaluation trenches that contained archaeological features and layers.
- 1.1.4 This report sets out the results of the work in the form of a short document outlining the findings, followed by a statement of the archaeological potential of the area. The principal objective of this excavation was to establish the presence/absence, nature, extent and state of preservation of any archaeological remains and to record these where they were observed.

2 METHODOLOGY

2.1 PROJECT DESIGN

2.1.1 A project design was prepared in response to a brief prepared by Cumbria County Council Historic Environment Service (CCCHES) for an archaeological field excavation (Giecco 2007). This included a detailed specification of works to be carried out, and a programme of post excavation and reporting (Parsons 2007).

2.2 ARCHAEOLOGICAL EXCAVATION

- 2.2.1 The archaeological excavation consisted of the excavation of a large open area, which measured approximately 1000m² and was positioned according to the findings made in a prior evaluation of the site (Sowerby and Gaskell 2007). The main aims of the excavation were as follows:
 - to establish the presence/absence, nature, extent and state of preservation of archaeological remains and to record these were they were observed;
 - to establish the character of those features in terms of cuts, soil matrices and interfaces:
 - to recover artefactual material, especially that useful for dating purposes;
 - to recover palaeoenvironmental material where it survived in order to understand site and landscape formation processes.
- 2.2.2 The area was mechanically excavated, under archaeological supervision, by a 7.5 tonne tracked 360° excavator equipped with a toothless ditching bucket. The area was then manually cleaned, and any putative archaeological features were investigated.
- 2.2.3 Photography was undertaken using Canon EOS 100 and EOS 300V Single Lens Reflex (SLR) cameras. A photographic record was made using digital photography, 400 ISO Black and White Print and 200 ISO Colour Slide film.
- 2.2.4 All work was undertaken in accordance with the Institute of Field Archaeologists Standards and Guidance for Archaeological Field Excavations (IFA 1994).

2.3 ARCHIVE

2.3.1 A full professional archive has been compiled in accordance with the project design, and in accordance with current UKIC (1990) and English Heritage guidelines (1991). The archive will be deposited within an appropriate repository and a copy of the report given to the County Historic Environment Record, where viewing will be available on request. The archive can be accessed under the unique project identifier NPA 07 FRF-B.

3 BACKGROUND

3.1 LOCATION, TOPOGRAPHY AND GEOLOGY

- 3.1.1 Frenchfields lies within the undulating farmland of the Eden Valley approximately 1km east of Penrith, and 35.2 km south of Carlisle, in eastern Cumbria. The Eden Valley lies between the Lake District fells to the west and the Pennine escarpment to the east, the valley contains some of the richest agricultural land in Cumbria (Countryside Commission 1998) (Figure 1). The site lies at a height of approximately 113m AOD and is positioned close to the confluence of the rivers Lowther and Eamont. The site is situated on a large river terrace created by the Eamont and is bounded to the north and east by the steep slopes of the terrace which rises to height of 138m AOD at Sceugh Farm and to the south by the River Eamont. The land immediately to the west of the site has been developed to provide sporting facilities for the town of Penrith.
- 3.1.1 The underlying geology is Permian basal breccias, sandstone and mudstone (British Geological Survey North Sheet, Third Edition Solid 1979) with overlying Moraninic Drift, glacial sand, gravel and Alluvium (British Geological Survey North Sheet, First Edition Quaternary, 1977). The overlying soils are known as Wick 1 soils, which are typical brown earths. These consist of glaciofluvial or river terrace drift (Soil Survey of England and Wales, Sheet 4 Eastern England).

3.2 HISTORICAL BACKGROUND

- 3.2.1 The history and development of the area of Frenchfields is not overly documented. Much attention has been focussed west of the present study area, where the Roman Fort of *Brovacum* lies, strategically well placed at the centre of the Eden Valley, at an intersection of three major roads; the east-west road from York to Carlisle (Road 7e), the road from Ambleside (Road 74) and the road north from the Fort at Low Borrow Bridge in the Tebay Gorge (Road 7b) (Margery 1973), and close to a crossing point on the River Eamont. The fort is partially overlaid by Brougham Castle, the earliest known date for which is approximately 1215 (Summerson 1998). It is highly likely that the readily available supply of dressed stone from the fort would have been plundered to aid the construction of the castle. The castle passed through various ownerships until all its fixtures and fittings were sold by the Earl of Thanet in 1676, after which it subsequently fell into ruin (Holmes 2001).
- 3.2.2 Frenchfields farmhouse is shown on the Tithe Map for the area that was produced in 1840, earlier buildings appear on Clarke's Map of 1787, and are labelled Frenchfields, but they appear to be in a different location and of a different composition. Hunter Hall School now occupies the later buildings, seen from 1840 onwards. On cartographic sources it appears to be a typical example of a planned and regular courtyard farm, perhaps replacing an earlier one.

3.3 RECENT ARCHAEOLOGICAL INVESTIGATIONS

- 3.3.1 An archaeological evaluation was undertaken in June 2007 by NPAL, which identified archaeological layers in two of the twelve trenches. These two trenches, when investigated contained a drain feature, which was first highlighted on a geophysical survey of the site conducted by Stratascan in 2006. The geophysical survey also noted several other linear features that informed the scheme of works for the subsequent evaluation. The anomalies were targeted by the trial trenches and were found to be geological in origin.
- 3.3.2 Both the evaluation and excavation were conducted in the field immediately to the west of the present study area in 1999 and 2000 by Carlisle Archaeology, followed by a afurther watching brief in 2000 (Reeves 2000) the evaluation uncovering pieces of Roman Pottery and a flint tool fragment which led to an excavation where substantial Roman occupation was confirmed by the presence of a ribbon development along the side of the Roman road that extends from out of Brougham Fort (*Brovacum*) (Martin 2001).

4 FIELDWORK RESULTS

4.1 Introduction

- 4.1.1 Summary results of the excavation are presented below. The context list is reproduced in Appendix 1, with Figure 2 showing the location of the features within the excavation.
- 4.1.2 The archaeological potential for this part of the site was highlighted during an archaeological evaluation in June 2007 (Sowerby and Gaskell 2007). The evaluation indicated that of all the excavated trenches, Trenches five and six showed the highest archaeological potential, therefore the mitigation strategy focused on the position of those trenches (Figure 2).
- 4.1.3 The excavation area was stripped using a mechanical excavator, and measured 25m by 40m. The excavation was positioned over the location of features located in Trenches 5 and 6 from the evaluation phase of the works (Figure 2).

4.2 EXCAVATION SUMMARY

4.2.1 The character of the natural substrate varied considerably across the site. It appeared to have been deposited in layers varying in content from grey water borne cobbles and stones, to bands of clay alternating in colour between oranges and greys. Different layers were seen in each of the site sections although some corresponded across the excavation area. The lowest and earliest layer observed (146), was moderately compacted brownish grey mixed gravels that had frequent inclusions of blue/grey stones of small to medium size. This context was observed in the eastern part of the site and was probably created by moderate water movement. It was overlain by (155), an organic layer comprising of many pieces of tree root and small branches, perhaps an indication of the gradual colonisation of a slow moving or stagnant area of water under the detritus of plants and trees to form a peat layer within anaerobic conditions. Environmental sampling of this layer showed that silver birch were present in this area (Samples <6> and <7>), which are themselves early colonisers of wet ground along with other species like willow. A northern and southern extent was observed for this layer showing how this material had accumulated within a hollow or depression in the ground, like that of a pond or oxbow lake (see Figure 10).



Plate 1: Example of the eastern facing site section showing (155) just above the water line

- 4.2.2 Further natural layers, gradually deposited above the organic layer such as (148), (149) and (152), display elements of the ground at Frenchfields undergoing varying degrees of wetness over time. Fine clay sediments combining to measure up to 0.50m in depth cover and seal (155), with layer (156) being the deposit that all the features recorded during the excavation cut into. Layer (156) measured up to 0.35m in thickness, was firm and compacted pale orangey grey clay that carried up to 40% small rounded stone inclusions.
- 4.2.3 The features that cut into natural layer (156) included post-medieval land drains, a pit feature and possibly three ditch features (Figure 3). Also stratigraphically above (156) were two discreet areas of stone cobbling, deliberately placed to form a surface or surfaces.
- 4.2.4 Drain feature [103] was observed for a length of approximately 12m and on average measured 0.60m in width and 0.30m in depth, with a square cut profile. It ran in a northeast-southwest alignment extending from the south facing section of the excavation area towards feature [110]. It contained a single fill (102) that was a mix of pale grey clay and medium and large sized sub-rounded and sub-angular cobbles and stones. Interpreted as a modern field drain, when excavated it provided no datable artefacts. Drain [107] had a cut that measured 0.20m in width and 0.15m in depth and could be seen crossing the excavation area in an approximate north-south direction for a total distance of 33m. The cut was completely filled by a red ceramic horseshoe type field drain (106) that could be attributed to the latter half of the 19th century. The individual pieces were approximately 0.20m in length with a maximum diameter of 0.12m (see Figure 3).



Plate 2: Pit [126] before excavation

4.2.5 A single pit feature [126] (Figure 9) was present on site and was fully excavated. It measured approximately 1.40m in diameter and was up to 0.27m in depth containing

three fills. The primary fill (125) was well compacted mid to dark grey clay in composition, measuring only 0.03-0.04m thick and pressed around the edge of the pit cut, possibly to act as a lining to the pit when it was in use for either burning or containing hot ashes. Overlying this was (124) a moderately well compacted dark grey to black slightly clayey soft silt that contained up to 40% medium sized angular stone inclusions. It was present across the extent of the pit and reached a maximum thickness of 0.16m. This context was environmentally sampled with 30 litres removed to assess the charcoal content (Sample <3>), although no datable artefacts were recovered from this context. The uppermost and final layer within pit [126] was (123) a moderately well compacted light greyish brown slightly silty clay that held up to 75% medium sized angular stones that appeared burnt or heat affected. This context was as wide as the pit cut and was up to 0.11m in thickness. No datable artefacts were retrieved from this layer, but the nature of the stones indicates that they had either been in a fire (possibly within the pit) or transferred to the pit to heat something else.





Plate 3: East facing section, Pit [126]

Plate 4: Plan view of Pit [126]

4.2.6 A small linear feature to the east of cobble area (105) was recorded and investigated. Linear [142] was observed for a maximum length of 3.45m, running in a northwest-southeast direction and was measured as being 0.10m on average in width and depth. It contained a single mid-grey moderately compacted silty-clay fill (160) that contained no inclusions. A total of nine slots, each measuring between 0.20-0.30m in length were excavated along the length of the feature in order to ascertain its function or to observe if there were any stake holes within the feature that were not visible from the surface and in an attempt to retrieve any datable artefacts that may have been present within the fill. This feature may possibly have been traced as extending over the cobbles that formed (105) although it proved difficult to be absolutely certain this was the case as some of the cobbles had been disturbed during the machining process. The implications of the linear feature overlying the cobbles would identify it as being later than layer (105). The small dimensions of this feature do not recommend themselves to interpretation as a ditch and fill, rather a possible plough mark or scratch (Figure 3).





Plate 5: Looking northwest along [142]

Plate 6: Excavated slot through [142]

- 4.2.7 A feature that has been interpreted as a ditch was feature [111] recorded for a length of approximately 32m, which extended from the northern boundary of the excavation area in an almost north-south direction (Figure 8). Four interventions were excavated along the visible length of the feature and a fifth was dug through layer (105) in an attempt to establish the survival of the feature underneath and to achieve a stratigraphic relationship. Slot 1 (numbered [118]) was the most northerly intervention dug, was 1m in length and recorded one fill (117) within the cut. The fill was moderately compacted clayey silt that varied in colour between light to mid mottled grey to mottled orange. It contained only occasional small sub-rounded stone inclusions, and no datable artefacts were found within it, the cut maintained the profile of a slightly flat-bottomed U-shape. Slot 2, (numbered [116]) positioned a few metres to the south of Slot 1 was also found to contain one fill (115) very similar in its composition to (117). This section of fill, however, contained within it a single piece of Roman pottery, possibly Huntcliff Ware (Giecco pers comm.), which was common in the 4th century AD.
- 4.2.8 The cut of feature [111] in Slot 2, measured 0.76m in width and up to 0.15 m in depth, and was observed for a metre. The sides of the cut sloped gradually and the base was largely flat, again, very similar to that seen in Slot 1. Slot 3 (numbered [114]) showed evidence of two fills within the cut, which at this point was 0.78m in width and up to 0.26m in depth. The primary fill (113) was fairly loose light grey silty sand that had minimal very small sized stone inclusions and is likely to have formed as the result of the gradual erosion of the sides of the ditch into the base and reached a maximum thickness of 0.10m. No datable artefacts were recovered from this context. The uppermost fill (112) was, in its composition, akin to both (115) and (117) and its maximum depth reached 0.14m. Slot 4 (numbered [145]) was excavated against the northern edge of the cobble surface (105) to establish the relationship between the two features. The cut was U-shaped in profile and was 1.29m wide at the top of the cut with a maximum depth of 0.41m. It contained a single fill (144) that again was moderately

compacted mid grey clayey silt that had less than 10% small sub-rounded stone inclusions contained within it. From this fill three pieces of Roman or Romano-British pottery were found, two of which have been described as Huntcliff ware and one piece of Nene Valley ware (Section **5.2**). These pieces help to establish the *terminus post quem* for the ditch; that is the date before which it was created, given the 4th century date of the pottery sherds found within it.



Plate 7: Northeast facing section through[111]

Plate 8: [111] and [109] merging

- 4.2.9 The final intervention excavated through group feature [111] was Slot 5 numbered [158]. This was wholly beneath cobble layer (105) and was completed in order to establish the line of the ditch feature and the state of preservation of the ditch beneath the later cobble layer. The cut within this slot, was recorded as being 0.85m in width and up to 0.35m in depth and the profile was of a shallow V-shape. It contained a single fill (159) that seemed consistent with all the other fills recorded along the length of group feature [111] the mid grey clayey-silt.
- 4.2.10 Another linear feature that was seen extending from the northern edge of the excavation area was [109] a linear that was on average 0.30m in width and 0.12m in depth (Figure 6). It was observed for a length of approximately 5.5m at which point it merged with feature [111]. It contained a single fill (108) that was moderately compacted light to mid grey silty clay that contained less than 5% very small rounded stones. As this feature was quite narrow, a suggested interpretation for its function has been as a fence line or palisade, possibly for a stock or animal enclosure, although no individual post or stake holes could be seen within the excavated slot in the feature. After its convergence with [111] the fills became indistinguishable from one another, which possibly indicates that they were functioning at the same point in time, as they were filled by almost identical grey silty clay.
- 4.2.11 Two major features present on the site were cobble areas (104) and (105), which overlaid (156) (Figure 4). Two separate numbers were issued to these similarly constructed features as [110] ran between them, effectively separating them. The area of (104) was the smaller of the two and the most easterly, measuring approximately 4m

east-west by 3.2m north-south. Where a section was excavated soil layer (143) was observed directly beneath it that interfaced with (156). This comprised compact reddish brown silty clay that contained moderate amounts of small sized stone inclusions. The construction of (104) appeared to be made up from river worn rounded cobbles, varying in size between small and large. They were poorly sorted throughout the area, not laid in any particular pattern or with any kind of design. The area had been truncated on its western side by the later drain [110] and was therefore almost certainly connected to (105) prior to this intervention. No artefacts came from this area of cobbling, so no specific date could be ascertained for it.

- 4.2.12 The area of cobbling that constituted (105) measured approximately 11m east-west by 10m north-south. The area had no clear defined edges, the concentration of stones merely petered out, some stones may have been removed during the machining process others may have been disturbed prior to this investigation or even removed for uses elsewhere. No specific function could be ascribed to the cobbled area, it did not appear to head in any particular direction as a track-way might, and no evidence could been seen for it having a surrounding ditch, bank, fence or posthole line. The only other features it came into direct contact with were [111] which (105) overlaid and [107] and [110] two drain features that cut the cobble layer. Drain [110] cut (105) on its northeastern side, where the cobbles had narrowed slightly. During investigation of the area one animal tooth (Section 5.9) was recovered, as was one small piece of flint (Section **5.3**). A tentative date that may be apportioned to the layer, based on the flint analysis is either late Prehistoric or Romano-British, given the typology of known sites in close proximity to Frenchfields, as discussed in the earlier Desk-Based Assessment report (Sowerby and Gaskell 2007). The layer was probably approximately 800m to the east of the settlement findings of Carlisle Archaeology in 2000 (Martin 2001), set away from the main focus of activity, it may have been in use at the same time as a thoroughfare for animals over wet ground from pasture land by the river towards the settlement itself, much in the same way as modern day farmers lay hardcore through field entrances and gates where the ground is heavily trodden.
- 4.2.13 The most visually obvious feature on site after the cobbled areas was group feature [110] (Figures 5 and 6). First identified as a drain in the evaluation phase of the site's investigation, it was only observed for a total of 2m in length and gave no dating evidence. Its construction from sandstone pieces meant that a Roman date for it could not be ruled out at that particular time, as it was seen in immediate proximity to the layer (155), where the flint and organic material were obtained from. During the excavation three slots were dug at intervals along the visible length of [110], which was approximately 32m in a north-south direction. Each slot covered the width of the feature and was 1m in length. Slot 1 began against the northern section of the site, Slot 2 was 6.5m further south while Slot 3 was 11m further south than Slot 2 and deliberately positioned between the cobble areas of (104) and (105) in an attempt to establish the extent of the damage caused by the insertion of the drain. All three of the investigative slots uncovered the sandstone drain at the bottom of the cut. The drain was still working effectively and had not silted up, possibly because of its relatively recent formation.
- 4.2.14 Within the backfill of [110] in Slot 3 some cobbles from both (104) and (105) were recorded as having slipped in from the sides, probably as a result of the 'settling' period of the backfill of the drain allowing movement. Within the backfill of Slot 2 modern

bottle glass was retrieved but not retained. The glass was the first conclusive evidence for the modern date of origin for the drain.

4.2.15 Three putative features at first thought to be postholes were examined archaeologically but were found to be shallow depressions in the ground where stones had previously sat; these were recorded as they were investigated as (139), (140) and (141).



Plate 9: Cobbled area (104) with [110] in front



Plate 10: Cobbled areas (105) & (104)in background

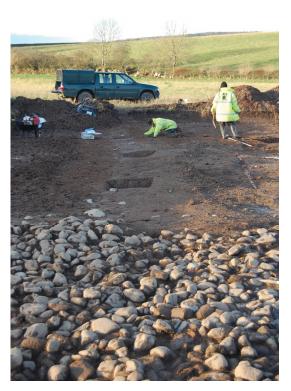


Plate 11: Working shot with view north showing [111] running under (105)

5 FINDS AND ENVIRONMENTAL EVIDENCE

5.1 FINDS RESULTS

5.1.1 The pottery was cleaned and packaged according to standard guidelines, and recorded under the supervision of F Giecco (NPAL Technical Director). Any metalwork retained has been placed in a stable environment and will be monitored for corrosion. At this stage only initial quantification and identification has been undertaken. The bulk finds and small finds are quantified in Table 1 below.

		No. of	Weight			
Context	Description	Finds	(kg)	Period		
105	Worked stone	1	0.001	Uknown		
105	Animal Tooth	1	0.003	Unknown		
115	Pottery	1	0.004	Roman		
115	Lithic flake	1	0.0001	Unknown		
121	Bottle Glass	9	0.462	Modern		
128	Pottery	2	0.006	Post-Medieval		
129	Lithic flake	1	0.002	Unknown		
129	Fe Pieces	3	0.010	Post-Medieval		
144	Pottery	3	0.010	Roman		
U/S	Clay Pipe Stem Pieces	2	0.007	Post-Medieval		
U/S	Pottery	3	0.044	Post-Medieval		
U/S	Pottery – Slot 1 Group [110]	1	0.005	Post-Medieval		
U/S	Bottle Glass	3	0.028	Modern		
U/S	Window Glass	1	0.001	Modern		
U/S	Fe Pieces inc. Horseshoe	18	1.325	Post-Medieval		
U/S	Fe Square Headed Nail	2	0.031	Roman		
U/S	Samian Pottery	2	0.047	Roman		
U/S	Pottery / CBM	8	0.064	Roman		
U/S	Pottery	2	0.002	Medieval		
U/S	Flint and Worked Stone	5	0.037	Unknown		
	SF 1 Cu Alloy Round					
U/S	Button	1	0.009	Unknown		
	SF 2 Cu Alloy Round					
U/S	Fitting	1	0.011	Roman		

Table 1: Quantification of finds recovered from the excavation

5.2 THE POTTERY

- 5.2.1 In total 9 fragments of Roman pottery were recovered (weighing 0.182kg) along with 5 fragments of Roman ceramic building material (undiagnostic tile pieces), 2 fragments of medieval pottery were recovered (weighing 0.004kg) during the excavation.
- 5.2.2 The Roman pottery (Plate 12) has been recorded in detail on pro-forma sheets and analysed according to the fabric series used by the now defunct Carlisle Archaeological Unit. The total amount of 9 sherds of Roman pottery was made up of 4 pieces of Huntcliff Ware (Fabric 22), which is soapy-textured, grey or black fabric, heavily charged with white calcite grit or having voids left by dissolved grit, and hand rather than wheel made. Two of these four pieces came from (144) one from (115) and one

was unstratified. Two pieces were oxidised ware (Fabric 4), where the base material is orange with a white/cream slip, often locally made, the pieces could be the product of more than one source, both of these pieces were unstratified finds. One piece was Nene Valley colour-coated ware from (144), where the fabric is white or pink in colour and fairly hard, with a colour coating anywhere from dark grey to orangey-brown (Howe et al 1980).

- 5.2.3 Two pieces of Samian pottery (originating from Gaul) were within this assemblage, both were abraded and were recovered from unstratified deposits. One fragment had a small hole through it (2mm in diameter), which appeared to have been rounded or smoothed (possibly by a drill) and is likely to have been to house a lead repair rivet. The other Roman ceramic material comprised 5 fragments of tile, which was bright red, hard fired fabric, which is likely to have been produced locally.
- 5.2.4 The presence of Nene Valley and Huntcliff pottery within the excavation area could indicate some form of activity close to the site that extended into the 4th century, although it is misguided to over interpret such a small assemblage of pottery.



Plate 12: Examples of the Samian, Nene Valley and Huntcliff Wares

- 5.2.5 Two pieces of medieval pottery were also retrieved, both were small abraded sherds of red gritty ware of the late 12th or early 13th century. They may have been deposited within the excavation area by some form of agricultural process like manuring.
- 5.2.6 Six pieces of post-medieval pottery were recovered from the excavation, four from unstratified contexts and two pieces from context (128). Within the four unstratified pieces one was a transfer printed willow pattern plate rim sherd that was 31mm in length and up to 3mm thick. One piece was made from off-white clay, glazed cream both on the outside and the inside and possibly from a small jug and measured 27mm in length 20mm in width and 3mm in section. The third piece was red buff clay in section, glazed dark brown on both the inner and outer faces with 5 ridges running horizontally around the outer side; this piece was the largest, measuring 89mm in length, 35mm in width and 7mm in thickness, it may have come from a large storage jar. The fourth piece was buff orange clay with small white calcite inclusions and was only glazed on

- the inner side, possibly denoting it as a storage jar, or bowl or dish. The glaze was dark brown with a yellow possibly circular pattern.
- 5.2.7 The first piece recovered from context (128) was red buff clay in section, measuring 26mm in length, 17mm in width and 6mm in section and coated on both faces by a black shiny glaze. The second piece was white clay with a pale blue glaze on one face. It appeared as though the piece had originally been thicker and had maybe split, as the unglazed side is rough and uneven. It measured 28mm in length, 25mm in width and was a maximum of 3mm thick.

5.3 FLINT AND STONEWORK (KEN DENHAM)

- 5.3.1 A total of eight separate lithic finds were recovered from the excavation (Plate 13) (Figure 11). Three came from within specific contexts and the remainder were unstratified. From context (105) was a small flake of dark grey chert that measured 10mm x 8mm, which appeared to have been truncated along its proximal and distal extremeties. It may possibly be debitage from the manufacture of a small blade. The nature of the chert used may suggest its source was from the Shap area, a little to the south of the present site.
- 5.3.2 From context (115) a microlith was recovered. It is of a type described as a scalene triangle. It measured 13mm in length and 4.5mm in width and is of grey chert. The dorsal face shows evidence of the removal of two prior narrow blades and has been acutely blunted along its left hand margin. The ventral face displays a slight bulb of percussion. The nature of the material used may suggest that the lithic source was again from the Shap area.
- 5.3.3 The third piece came from context (129) and was a small discoidal flint flake measuring 16mm x 15mm with a light brownish green colour. The dorsal face was concave with a small area of highly abraded cortex visible in one corner. The ventral face may display evidence of the removal of two narrow blades although this is somewhat inconclusive as much as one half of the ventral face has suffered from pot-lidding. The colouration and condition of the remaining cortex would suggest that the lithic source may have been the Solway or West Cumbrian coastal area.
- 5.3.4 The first of the five unstratified pieces was a flake of dark grey flint, 31.5mm long by 9mm wide. A small working platform was evident at its proximal end and a horizontal truncation was seen at its distal end. The dorsal face showed the remains of abraded cortex along its left hand margin. The right hand margin showed evidence for the removal of three previous flakes or blades. The ventral face had a distinctly conchoidal profile. The colouration and quality suggests that the material was imported from another area or was sourced as a glacial erratic. The presence of the cortex suggests that the piece is a debitage flake discarded during the earlier stages of tool production from a core.
- 5.3.5 The second flint flake was light brownish green in colour and measured 41mm x 21mm. There was evidence for the removal of one flake from the proximal right hand margin on the dorsal face. The broad truncation of the distal end appeared to be natural. The ventral face displayed a moderate conchoidal profile. The distinct bulb of percussion also displayed a large eraillure scar, which suggests the manufacturer encountered some difficulty in removing the flake. The piece appeared to be a debitage

flake and its colouration suggests that it was sourced on the Solway or West Cumbrian coastal area.

- 5.3.6 The third piece was a 'thumbnail' or button scraper of dark grey flint, which measured 26mm x 22mm. It was possibly manufactured from a flake as the dorsal face displays evidence for the prior removal of three flakes or blades. The distal has been invasively retouched by pressure flaking into a rounded shape in plan. The proximal end has been truncated, thereby removing any evidence of a bulb of percussion. The left hand margin of the dorsal face appeared to have suffered some thermal damage. The ventral face had a slight concoidal profile and also appeared to have sustained slight thermal damage or 'pot-lidding' near to its left hand margin. The colouration and quality of the material would suggest that it had been imported. The piece is a typical example of a 'thumbnail' or button scraper attributable to the Late Neolithic or Early Bronze Age.
- 5.3.7 The fourth unstratified piece was identified as a flake of light green tuff, 40mm in length by 25mm in width. The dorsal face had three flakes removed from it, two of which cut into the remnants of a polished face. The proximal end had a distinct working platform and a pronounced bulb of percussion on the ventral face. The distal end terminated in a step fracture. This piece is probably a fragment of a Group VI polished axe, produced from the lithic sources of the Borrowdale volcanics, which were made in the Early to Mid Neolithic. The final piece was a fragment of dark grey chert that measured 15mm x 11mm but showed no conclusive evidence of being modified by human effort.



Plate 13: The flint and worked stone recovered from site

5.4 METAL WORK

- 5.4.1 In total 72 fragments of iron were recovered from the excavation (weighing 0.531kg). The iron objects were all recovered using a metal detector during the topsoil strip. The iron objects were identified as modern nails, broken horseshoes and plough tips as well as other modern farm detritus. Most of these finds were discarded on site, however a record of what was found was kept for the report. Two pieces of iron were retained as they possibly form one Roman square headed nail. Together the pieces measure 86mm in length although the distal end shows a modern clean break 20mm from the point, the diameter across the head of the nail is approximately 14mm.
- Two copper alloy pieces were also found by the metal detector survey, one of which is very likely to be of Roman origin due to its design (SF2). It was complete with a large almost flat circular head with three incised concentric rings. The head is raised at the centre to form a dome. The shank is rectangular in section and is tapered. The diameter of the head is 30mm; the shank length is 0.14mm and 5mm in width. It may have been affixed to leatherwork, either as a decorative fitting for an outfit for a person or horse harness trappings. The second Cu alloy object (SF1) is thought to be 19th century in date and looks to be a button from a jacket. The diameter of the head is 27mm and only 1mm in thickness. A Cu alloy loop is attached to the underside in the middle to allow fixing to an item of clothing. There remains a faint design around the outer edge on the surface of the head, of four neatly inscribed wavy lines.

5.5 GLASS AND CLAY PIPES

5.5.1 In total 10 fragments of modern bottle glass were recovered from the excavation, but were not retained. Two pieces of clay pipe stem were recovered from unstratified contexts. One measured 40mm in length and showed the beginning of a flare at one end for the pipe bowl and was 7mm in diameter with an aperture of 2mm throughout the stem. The second piece was 35mm in length, 7mm in diameter with an aperture of 3mm. The second piece was in a more poor condition than the first, being more yellow in colour with the outer edges more worn and the breaks on the stem being smoother due to abrasion.

5.6 THE ENVIRONMENTAL EVIDENCE (PATRICIA SHAW)

- 5.6.1 During the excavation 7 contexts were considered for environmental sampling. Each sample was recovered from stratified deposits. Samples <1>, <2>, <3> and <5> were all fills. Sample <4> was a layer and Samples <6> and <7> were removed from the same deposit in different areas. All 7 of the whole earth samples were selected for processing in order to assess their environmental potential. This will help provide further information as to the depositional processes involved in their formation. The methodology employed required that the whole earth sample be broken down and split into their various different components. This was achieved by a combination of water washing and flotation. The recovered remains were then assessed for content.
- 5.6.2 Flotation separates the organic, floating fraction of the sample from the heavier mineral and finds content of sands, silts, clays, stones, artefacts and waterlogged material. Heavy soil and sediment content measuring less than 1mm falls through the retentive mesh to settle on the bottom of the tank. Flotation produces a 'flot' and a 'residue' (or retent) for examination, whilst the heavier sediment retained in the tank is discarded. The method relies purely on the variation in density of the recovered material to

separate it from the soil matrix, allowing for the recovery of ecofacts and artefacts from the whole earth sample.

5.6.3 The retent, like the residue from wet sieving, will contain any larger items of bone, or artefacts. The flot or floating fraction will generally contain organic material such as plant matter, fine bones, cloth, leather and insect remains. A rapid scan at this stage will allow further recommendations to be made as to the potential for further study by entomologists or palaeobotanists, with a view to retrieving vital economic information from the samples. Favourable preservation conditions can lead to the retrieval of organic remains that may produce a valuable suite of information in respect of the depositional environment of the material, which may include anthropogenic activity, seasonality and climate and elements of the economy. Nomenclature follows Stace (1997). The contents of the samples are listed below in Tables 2 and 3.

SAMPLE NUMBER	CONTEXT NUMBER	SUB-SAMPLE SIZE (litres)	FLOT SIZE (cm ³)	RETENT SIZE (cm³)
1	112	10	20	200
2	123	10	20	200
3	124	10	30	500
4	129	10	30	500
5	144	10	20	300
6	155	10	1000	1000
7	155	10	1500	200

Table 2: Details of samples and contexts

DETAILS RETENT FRACTION				LIG	TH	FF	RAG	CTI	ON														
Sample number	Context number	Context type	Coal	Charred wood	Waterlogged wood	Iron pan	Bone	Gravel	Stones	Leaf buds	Charred wood	Root material	Coal	Cenococcum	Seed unidentified	Leaf buds	Chenopodium sp.	Polygonum lapathifolium	Elder (S <i>ambucus</i> sp.)	Spurge (<i>Euphorbia</i> sp.)	Urtica dioica	Bark/wood frags	Vegetative plant
1	112	F	0	0	0	1	0	3	2	0	0	1	1	0	0	0	0	0	0	0	0	0	0
2	123	F	0	1	0	0	0	2	3	0	1	3	0	1	0	0	0	0	0	0	0	0	0
3	124	F	0	1	0	0	0	3	2	0	3	2	0	0	0	0	0	0	0	0	0	0	1
4	129	L	1	1	0	0	0	3	1	0	1	3	1	1	1	0	1	1	0	0	0	0	0
5	144	F	0	0	0	1	0	3	2	0	1	3	0	0	0	0	1	0	0	1	1	0	0
6	155	D	0	1	1	0	0	3	1	1	1	0	0	1	1	0	0	0	1	1	0	2	3
7	155	D	0	0	3	0	0	2	1	1	0	3	0	1	0	1	0	0	1	0	1	2	1

Table 3: Contents of flot and retent residues from samples

Key to tables: D = deposit, F = fill, L = layer. Contents assessed by scale of richness 0 to 3. 0 = not present, 1 = present, 2 = common, 3 = abundant.

- 5.6.4 **SAMPLE <1> (CONTEXT 112)** this moderately compacted mid grey silty clay had a high inclusion of gravel. It was recovered from the secondary fill of a ditch. The retent consisted of mainly gravel with some small stones and a small amount of iron pan.
- 5.6.5 Inclusions from the flot were a small amount of root material and small fragments of coal. There was only a very small amount of flot present and no seeds or other organic material was recovered from this sample.
- 5.6.6 **SAMPLE <2> (CONTEXT 123)** this sample was moderately compacted light greyish brown silty clay. There were a lot of medium sized angular stones and the feature from which the sample came was tentatively identified as the upper fill of a fire pit. There were a lot of heat affected and fire cracked stone inclusions.
- 5.6.7 The retent contained a quantity of heat-affected medium and small sized stones. There was also some gravel and a small amount of charcoal. The flot consisted mainly of small sand sized particles. Root material was the main organic component with a small amount of charcoal also present. Spores of the soil fungus, *Cenococcum geophilum*, were also present.
- 5.6.8 SAMPLE <3> (CONTEXT 124) this moderately to well-compacted sample was the largest and secondary fill in pit [126]. The matrix was very fine and soft and largely black with a texture of slightly clayey soft silts. Again there were a lot of medium sized angular stone inclusions. It may be the result of burning, as the matrix is fine, soft and mostly black.
- 5.6.9 The retent is mainly gravel with some medium and small stones. There was also a small amount of charcoal present. The flot consisted of mainly charcoal. Roots were also present and plant stalks, possibly of grasses.
- 5.6.10 **SAMPLE <4> (CONTEXT 129)** this firm red-brown sandy loam had frequent inclusions of stones of various sizes. It was the sub soil fill of group feature [110].
- 5.6.11 The main constituent of the retent was gravel. Small stones were also present with a small amount of coal and charcoal. The flot consisted mainly of root material, again with a small amount of coal and charcoal present. Seeds present were *Chenopodium* sp. and Pale persicaria. Another seed present was unidentifiable due to its fragmentary condition. Again spores of the soil fungus *Cenococcum geophilum* were also present.
- 5.6.12 SAMPLE <5> (CONTEXT 144) this fill of the U shaped ditch [145] was a moderately compacted mid grey clayey silt. The fill was mixed with a cobbled surface indicating that the ditch was open when the cobbled surface was laid. Romano British age ceramics were recovered from this context.
- 5.6.13 Gravel was the main constituent of the retent and a few small stones were present as well. There was also a small amount of iron pan recovered. The flot consisted mainly of root material. There was a small amount of charcoal present as well. Seeds recovered were *Chenopodium* sp., *Euphorbia* sp. and *Urtica dioica*, the common nettle.
- 5.6.14 SAMPLE <6> (CONTEXT 155) this deposit was a fairly compacted black organic silt clay matrix. There were a large number of stone inclusions and occasional river boulders. There was also a large amount of organic material as twigs and larger tree bases, probably silver birch.

- 5.6.15 Again the main constituent of the retent was small gravel. There were also a few small stones and small amounts of waterlogged wood and charcoal were also present. The flot was a large amount of mainly woody plant parts and wood fragments. There was a small amount of charcoal present and some small wood that had also been waterlogged. Seeds of *Euphorbia*, *Sambucus* and *Rubus* species were also present but in very small amounts. There were also spores of the soil fungus *Cenococcum geophilum*.
- 5.6.16 **SAMPLE <7> (CONTEXT 155)** from the same context as Sample <6>, this material was taken from a different area. Although it was from the same organic layer, the matrix of the 2 samples was slightly different. A large stone was recovered from the retent of sample <7> and small twigs were also present in the matrix. These and small wood formed most of this material, only a small amount of gravel and small stones being present.
- 5.6.17 Most of the matrix from this flot was root material with bark as well. There was a small amount of small wood and also a few well-preserved leaf buds present, but it could not be determined to which species they belonged as they had only just begun to sprout.

5.7 DISCUSSION

- 5.7.1 The presence of the iron pan in samples <1> (112) and <5> (144) is interesting in that it indicates a slow build up of the metal concretion around the roots of plants from the iron salts dissolved in the water surrounding them. The water is usually stagnant or very slow flowing. The roots then die off leaving the small 'tube' of rusty looking iron pan. Sample <1> is from a ditch fill and Sample <5> was the primary fill of another ditch. This implies the ditches were either waterlogged or had standing water in them and so the iron salts were deposited.
- 5.7.2 Sample <1> context (112) is the upper fill of a ditch. There was very little organic material recovered from this context so nothing meaningful can be said about this material.
- 5.7.3 Sample <2> from context (123) was the tertiary and final fill of feature [126]. There were a few spores of *Cenococcum geophilum* and a small amount of charcoal present. The only real indicator of this feature being a fire pit is the fire cracked stones; again there is no other indicator as to its purpose.
- 5.7.4 The secondary fill of feature [126] thought to be a fire pit, was Sample <3> (124). No charred plant remains were associated with this sample although there was a small amount of charcoal recovered. Root material was the main constituent of the flot, probably due to the matrix being easier to infiltrate for plants and their roots being able to penetrate further into the soil. The matrix was fine, black and richly organic but there were no indicators as to its purpose.
- 5.7.5 The sclerotia of the soil fungus *Cenococcum geophilum* would have probably lived in the upper layers of woodland soil. It is an ectomycorrhizal species that has mutualistic associations with some tree roots, particularly members of the Fagaceae, Pinaceae and Betulaceae (which includes hazel and alder) (Hudson 1986). It is not clear how old this woodland was though. These were recovered from Samples <2>, <4>, <6> and <7>.
- 5.7.6 Material recovered from Samples <2> and <4> suggest that the sclerotia were part of the upper soil layers as there was a lot of root material present. Samples <6> and <7>,

both from context (155), contained a lot of bark and wood with some vegetative plant matter. It is possible this material was trapped by the slow isolation of the matrix during the formation of an oxbow lake in the area.

5.8 DATING

5.8.1 It was not thought necessary to carry out any scientific dating methods for the contexts recovered from this site, as the information retrieved from the archaeological features was very limited.

5.9 VERTEBRATE BONE

5.9.1 Only one fragment of vertebrate bone was recovered from the site. This was the juvenile molar of a cow, the sex of which cannot be determined. It is not recommended that any further work be done on this tooth.

5 10 CONCLUSIONS AND RECOMMENDATIONS

- 5.10.1 Although the information retrieved from the samples was limited it indicates prehistoric activity on the site as shown by the worked stone and lithics present. There was also a small amount of Roman pottery recovered. Most of the other material recovered has been allocated to a Post-Medieval date.
- 5.10.2 Such low numbers of macrofossils as have been recovered from the site provide little palaeoenvironmental or economic information. The plant remains do not provide any information about the age of these contexts. It is therefore recommended that no further analysis be recommended for this material, especially as no firm dates can be assigned to most of the contexts.
- 5.10.3 The presence of the soil fungus *Cenococcum geophilum* suggests woodland in the locality. This fungus would have probably lived in the upper layers of the woodland soil. It is an ectomycorrhizal species, which has mutualistic associations with some tree roots, particularly members of the Fagaceae, Pinaceae and Betulaceae (Hudson 1986). The presence of the spores could however be explained by the continuous flooding that occurred and still does on this floodplain, the material being redepositted with the flood waters.
- 5.10.4 The occurrence of charcoal and coal may indicate the disposal of industrial or domestic fuel waste, probably as part of soil management practices. These could have come from any or all of the periods with which the site is associated as there is no firm dating evidence.

6 DISCUSSION AND CONCLUSIONS

6.1 DISCUSSION

- 6.1.1 Some of the information that was drawn from the results of this excavation was surprising given that certain features that were exposed were unexpected, such as the cobble areas of (104) and (105). They had not been noticed by the geophysical survey by Stratascan in 2006, nor were they encountered in the evaluation phase of work.
- 6.1.2 The cobble areas proved informative even though there was a lack of definite dating evidence forthcoming from them beyond the one piece of flint recovered from the cleaning phase of work. The point that they overlie the ditch feature [111] may show continuity of use of the area. Feature [111] may represent a ditch with possible associated palisade (although no evidence was seen for this feature [109] may well be contemporary with [111]), enclosing an area for animal management. The cobbles themselves may have been where an area, as an access or egress point from the animal holding enclosure, had been heavily trodden by livestock and become treacherous and muddy and therefore consolidated by the laying down of stones to help maintain the integrity of the area in much the same way as is done today.
- 6.1.3 The linear features considered to be archaeological, ([111], [109] and [142]), were not noticed by the geophysical survey methodology employed, this may be because no burnt material was noted in them and the fills were very similar in composition to the surrounding natural strata.
- 6.1.4 The single pit feature [126] that contained burnt stones did not have any parallels within the excavation area, it remained an isolated feature, possibly something that was only used once, as a fire or cooking pit.
- 6.1.5 The main feature highlighted in the geophysical survey by Stratascan in 2006 turned out to be a rather extensive 20^{th} century land drain that the previous owner of the field had placed c.40 years ago, and as such has little bearing on the interpretation of the other features present on the site.

6.2 CONCLUSION

- 6.2.1 The proposed development has provided a unique opportunity to study an area of land on the fringes of the known *vicus* that extends from the fort at Brougham, now on the other side of the A66, and had the potential of providing a better understanding of the development, layout and activities on this plot of land.
- 6.2.2 The spatial gap of at least 500m between this excavation and that undertaken by Carlisle Archaeology in 2000 means that no direct link between activities on the two sites can definitely be made, only inferences drawn. As the site is close to the river and is suitable as pasture, is in close proximity to the *vicus* and therefore the fort, it could be an area of food production in the form of animal meat, also producing as by-products a good supply of hide and possibly horn to meet the requirements of those both within and outside of the fort at Brougham.

7 BIBLIOGRAPHY

- Countryside Commission, 1998, Countryside Character Volume 2: North-west The character of England's natural and man-made landscape, Cheltenham
- English Heritage, 1991, Management of Archaeological Projects (MAP2), London: English Heritage.
- Giecco, F, 2007, Project Design for an Archaeological Excavation at Frenchfields, Penrith, Cumbria, NPAL CP555/07
- Holmes, M, 2001, Proud Northern Lady, Phillmore and Co, London
- Hudson, JH, 1986, Fungal Biology, London: Edward Arnold
- IFA, 1994, Standards and Guidance for Archaeological Excavation. Reading: Institute of Field Archaeologists
- Martin, G, 1999, *Archaeological Evaluation at Frenchfields, Cumbria*, Carlisle Archaeological Unit, Unpublished Client Report
- Martin, G, 2001, *Archaeological Excavation at Frenchfields, Cumbria*, Carlisle Archaeological Unit, Unpublished Client Report
- Parsons, J, 2007, Project Brief for an Archaeological Excavation at Frenchfields, Penrith, Cumbria
- Sowerby, M and Gaskell, N, 2007, Archaeological Desk Based Assessment and Field Evaluation for a Proposed Development at Frenchfields, Penrith, Cumbria, NPAL Unpublished Client Report CP468/07
- Stace, C, 1997, New Flora of the British Isles. 2nd Edition. Cambridge: CUP
- Summerson, H, et al, 1998, Brougham Castle, Cumbria A Survey and Documentary History, TCWAAS, Research Series, 8

APPENDIX 1: CONTEXT LIST

Context Number	Туре	Interpretation
100	Layer	Topsoil
101	Layer	Subsoil
102	Fill	Stone cobble fill in [103]
103	Cut	Drain cut
104	Structure	Stone cobble surface
105	Structure	Stone cobble surface
106	Fill	Fill of drain [107]
107		Drain cut
107	Cut Fill	Fill of linear [109]
1		
109	Cut	Narrow linear feature
110	Cut	Group number
111	Cut	Group number
112	Fill	Fill of [114]
113	Fill	Fill of [114]
114	Cont	Third intervention through
114	Cut	[111]
115	Fill	Fill of [116]
116	Cvit	Second intervention through
116	Cut Fill	[111]
117	ГШ	Fill of [118]
118	Cut	First intervention through [111]
110	Cui	
119	Fill	Fill of [120] – Second intervention through [110]
117	1.111	Drain cut – Second
120	Cut	intervention through [110]
120	Cui	Fill of [122] – Second
121	Fill	intervention through [110]
121		Drain cut – Second
122	Cut	intervention through [110]
123	Fill	Fill of [126]
124	Fill	Fill of [126]
125	Fill	Fill of [126]
126	Cut	Sub-square pit cut
120	Cut	Drain cut – Third
127	Cut	intervention through [110]
128	Fill	Fill of [127]
		Subsoil layer observed in
		third intervention through
129	Layer	[110]
	•	Clay deposit within third
130	Layer	intervention through [110]

Context Number	Type	Interpretation
		Drain within third
131	Cut	intervention through [110]
132	Fill	Fill of [131]
133	Fill	Upper fill of [122]
		Fill within first intervention
134	Fill	through [110]
		Sandstone drain within first
135	Cut	intervention through [110]
136	Fill	Fill of (135)
		Drain cut observed in first
137	Cut	intervention through [110]
138	Deposit	Clay area bounded by (105)
139	Cut?	Stone depression
140	Cut?	Stone depression
141	Cut?	Stone depression
142	Cut	Linear feature
143	Deposit	Natural layer
144	Fill	Fill of [145]
		Ditch cut seen in fourth
145	Cut	intervention through [111]
146	Layer	Natural layer
147	Layer	Natural layer
148	Layer	Natural layer
149	Layer	Natural layer
150	Layer	Natural layer
151	Layer	Natural layer
152	Layer	Natural layer
153	Layer	Natural layer
154	Layer	Natural layer
155	Layer	Natural layer
156	Layer	Natural layer
157	Layer	Rubble spread
	<u>, </u>	Ditch cut seen in fifth
158	Cut	intervention through [111]
159	Fill	Fill of [158]
160	Fill	Fill of [142]

APPENDIX 2: FIGURES

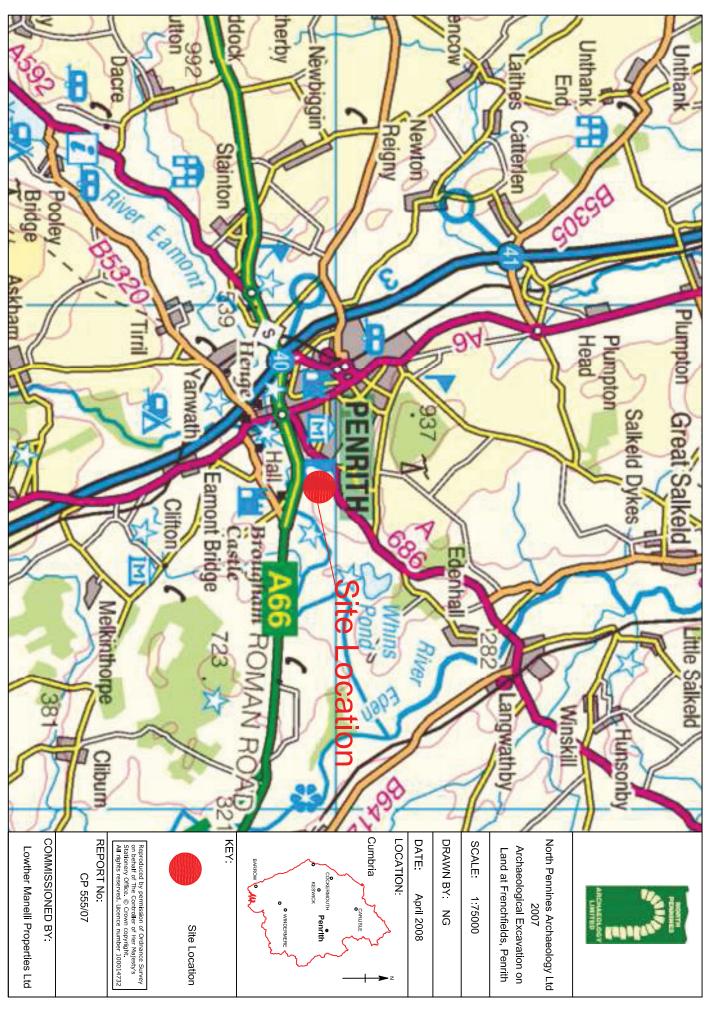


Figure 1: Site Location

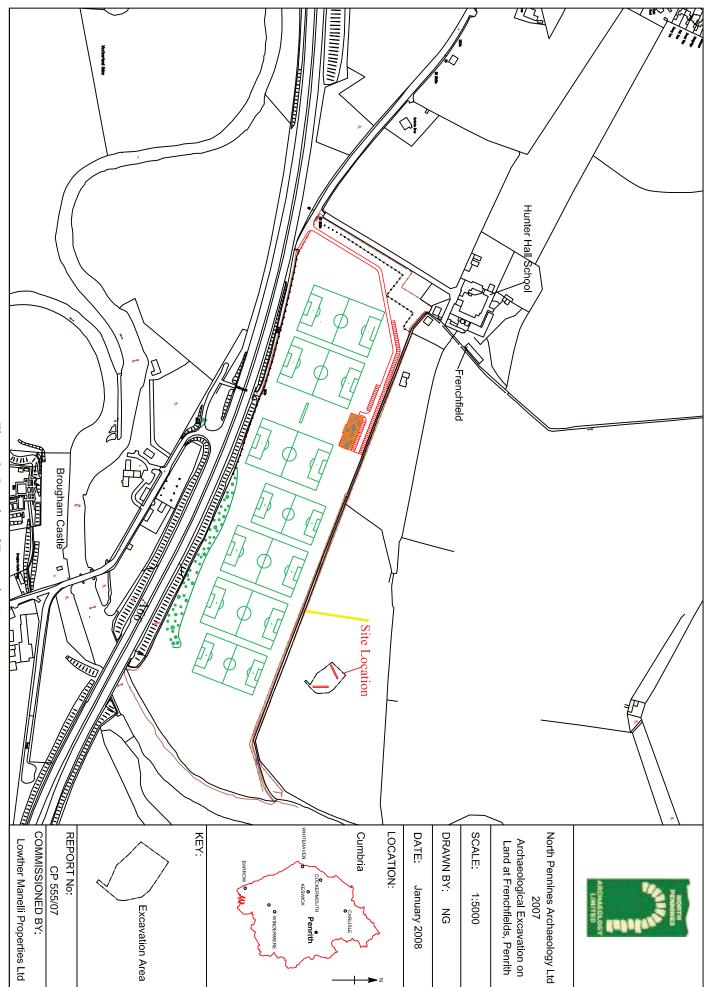


Figure 2: Location of Excavation Area

Figure 3: The excavation area with all features

Figure 4: Cobbled Areas (104) and (105)

Figure 5: Slots 1, 2 and 3 through Group Feature [110]

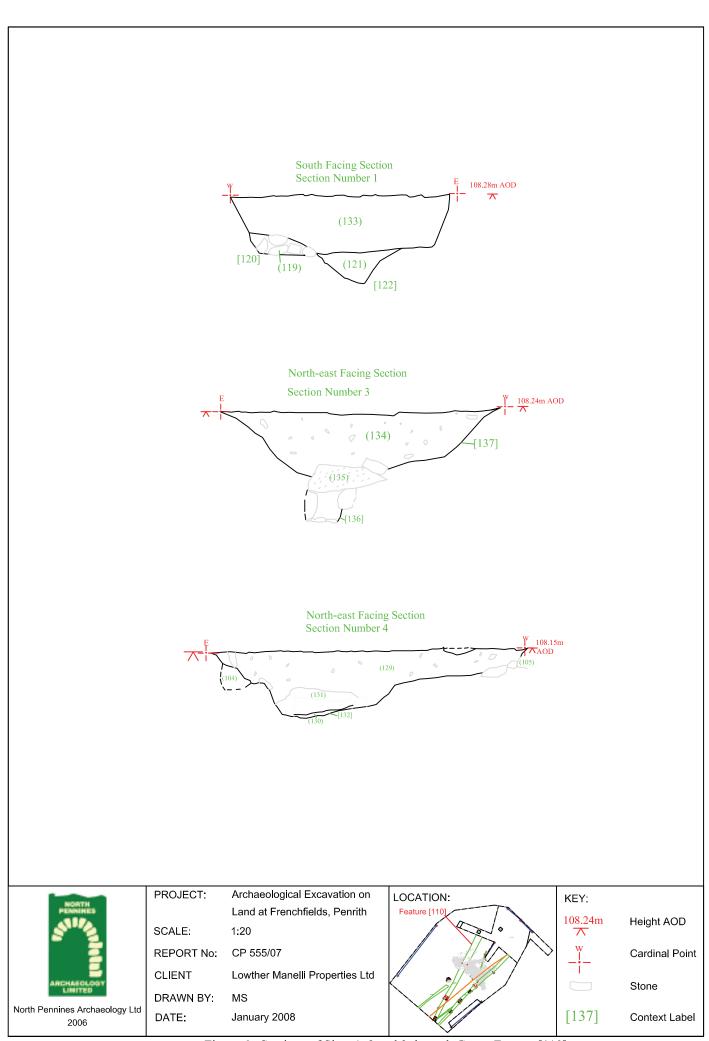
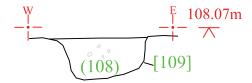
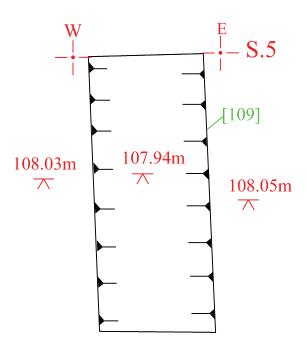


Figure 6: Sections of Slots 1, 2 and 3 through Group Feature [110]

South-west Facing Section Section 5





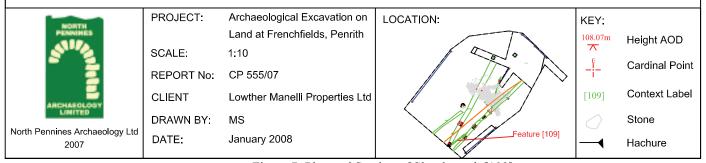


Figure 7: Plan and Section of Slot through [109]

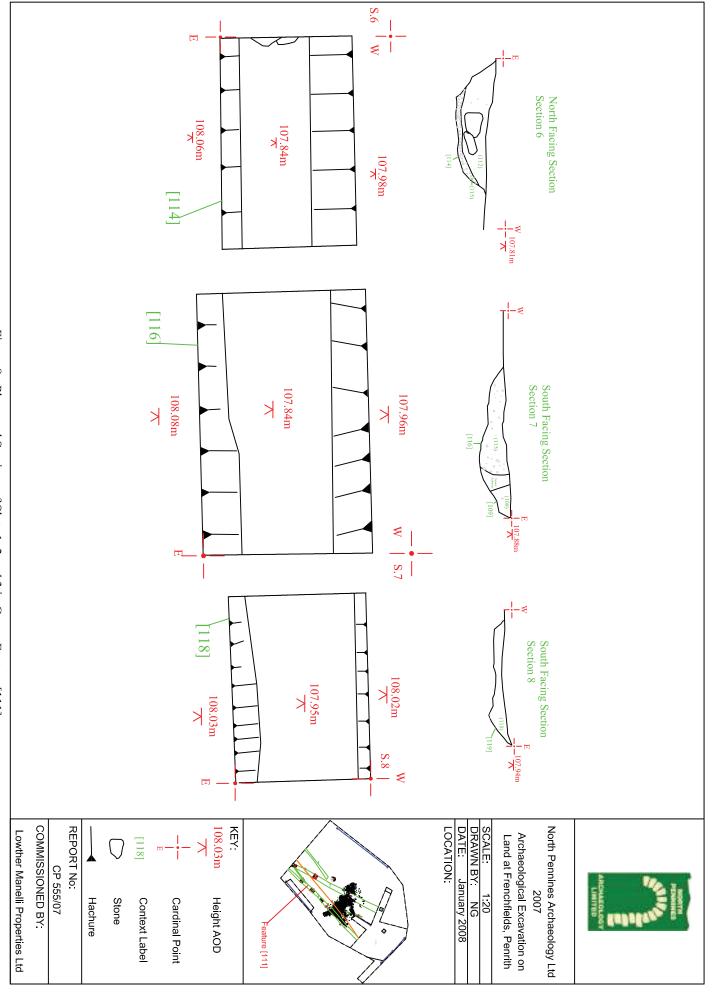
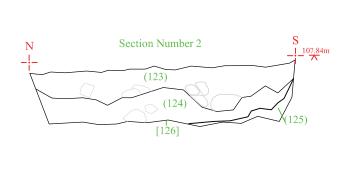
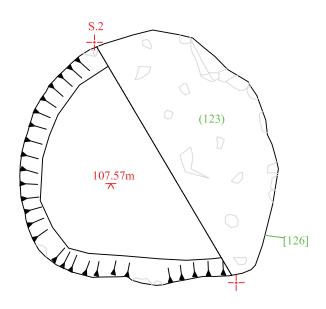


Figure 8 : Plans and Sections of Slots 1, 2 and 3 in Group Feature [111]







North Pennines Archaeology Ltd 2006

PROJECT: Archaeological Excavation on

Land at Frenchfields, Cumbria

SCALE: 1:20

REPORT No: CP 555/07

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DRAWN BY: MS

DATE: January 2008

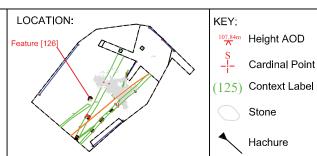
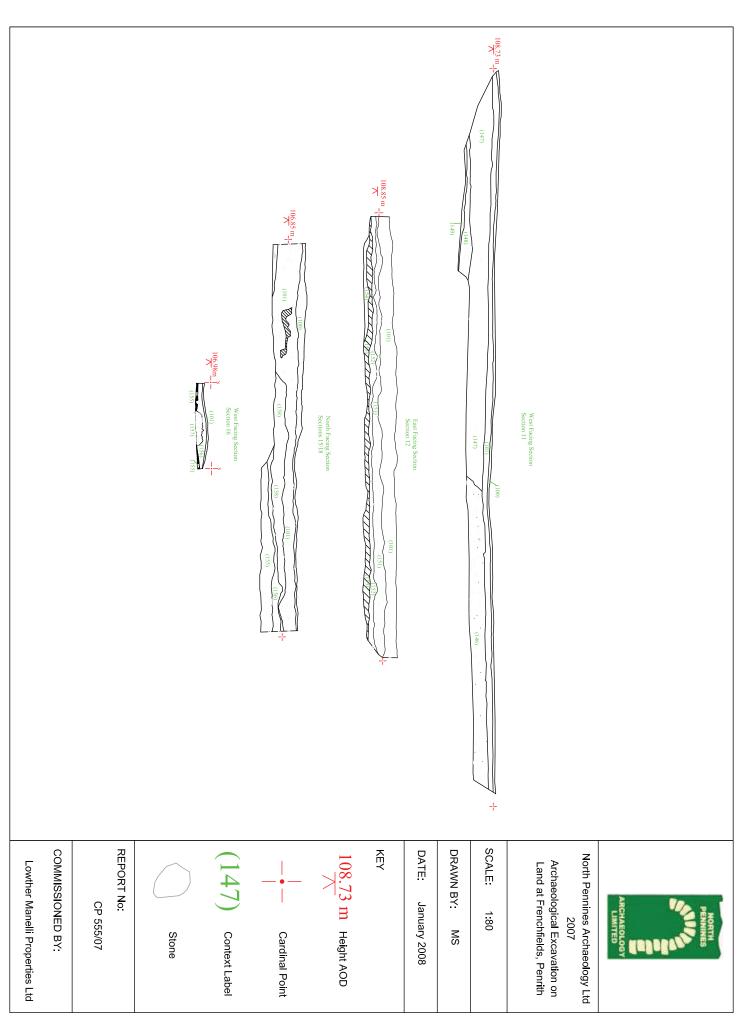
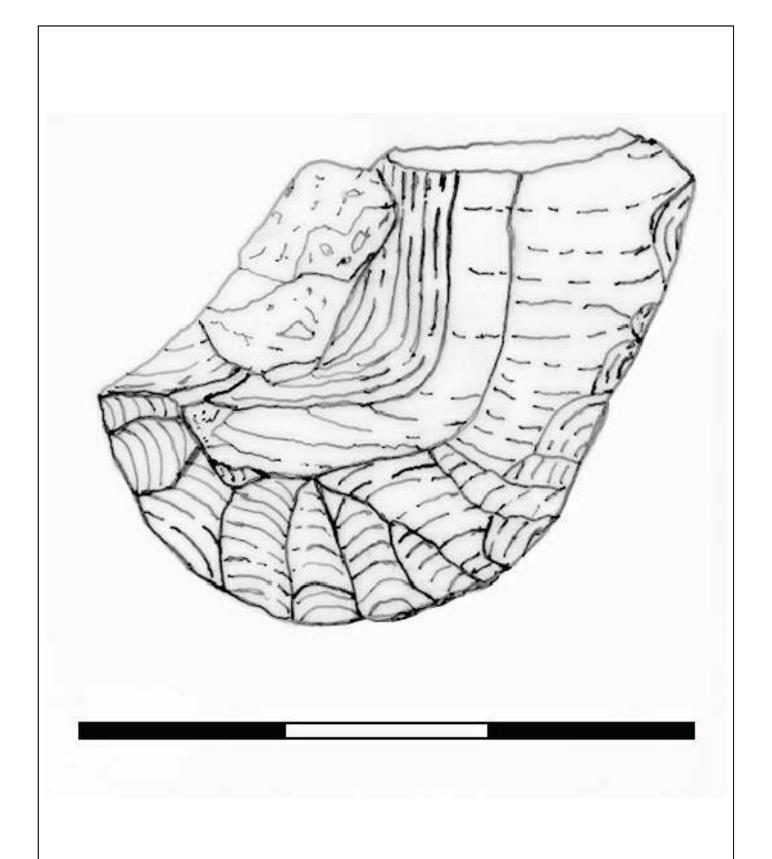


Figure 9: Section and Plan of Feature [126]







North Pennines Archaeology Ltd 2007

PROJECT: Title as in report

SCALE: Scalebar represents 3cm

REPORT No: CP 555/07

CLIENT Lowther Manelli Properties Ltd

DRAWN BY: TL

DATE: April 2008

Figure 11: Drawn Flint from an Unstratfied Deposit